



**EAT•N**

**Weatherhead**



**Hose Assembly**

Master Catalog





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## Important Safety Information

### WARNING

Flexible hose lines offer many advantages over rigid tubing including routing ease, vibration absorption, sound deafening and the ability to accommodate movement of connected components. However, hose lines require caution in use not only to provide long service, but also to guard against potentially dangerous failure.

### Important

The user should carefully observe the precautions listed in this catalog or brochure, including the recommendations on the selection of hose and fittings on the relevant pages on fluid compatibility. In addition, care should be taken not to exceed the minimum bend radius listed for each hose size and type in the hose section. Maximum operating pressure should not exceed pressures listed in the hose data. Instructions for assembling fittings to different hose should be followed carefully to ensure the performance of the completed assembly.

### WARNING

Eaton's Weatherhead fitting tolerances are engineered to match Eaton's Weatherhead hose tolerances. The use of Weatherhead fittings on hose supplied by other manufacturers and/or the use of Weatherhead hoses with fittings supplied by other manufactures may result in the production of unreliable and unsafe hose assemblies and is neither recommended nor authorized by Eaton Corporation or any of its affiliates or subsidiaries.

### WARNING

Application considerations must be observed in selecting appropriate components for the application of these products contained herein. The failure to follow the recommendations set forth in this catalog may result in an unstable application which may result in serious personal injury or property damage.

EATON CORPORATION OR ANY OF ITS AFFILIATES OR SUBSIDIARIES SHALL NOT BE SUBJECT TO AND DISCLAIMS ANY OBLIGATIONS OR LIABILITIES (INCLUDING BUT NOT LIMITED TO ALL CONSEQUENTIAL, INCIDENTAL AND CONTINGENT DAMAGES) ARISING FROM TORT CLAIMS (INCLUDING WITHOUT LIMITATION NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORIES OF LAW WITH RESPECT TO ANY HOSE ASSEMBLIES NOT PRODUCED FROM GENUINE WEATHERHEAD HOSE FITTINGS, HOSE AND WEATHERHEAD APPROVED EQUIPMENT, AND IN CONFORMANCE WITH EATON'S WEATHERHEAD PROCESS AND PRODUCT INSTRUCTIONS FOR EACH SPECIFIC HOSE ASSEMBLY.

Failure to follow these processes and product instructions and limitations could lead to premature hose assembly failures resulting in property damage, serious injury or death.

### Routing

If the user follows the recommendations on hose line routing and installation as provided for herein, improved safety and longer service life of any hose installation will result.

### Hose Installation

Proper installation of the hose is essential to the proper operation and safe use of the hose and related equipment. Improper installation of the hose can result in serious injury or property damage caused by spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from improper installation of the hose, you should carefully review the information in this catalog regarding hose installation.

Some of the factors you must consider in installing the hose properly are:

- changes in length
- proper bend radius
- protection from high temperature sources
- elbows and adapters to relieve strain
- rubbing or abrasion
- twisting
- improper hose movement

These factors and the other information in this catalog regarding hose installation should be considered by you before installing the hose.

If you have any questions regarding proper hose installation, please contact Eaton Technical Support at 1-888-258-0222.

### Hose Maintenance

Proper maintenance of the hose is essential to the safe use of the hose and related equipment. Hose should be stored in a dry place. Hose should also be visually inspected. Any hose that has a cut or gouge in the cover that exposes the reinforcement should be retired from service. Hoses should also be inspected for kinking or broken reinforcement. If the outside diameter of the hose is reduced by 20% at the spot where it is bent then the hose should be retired from service. Inadequate attention to maintenance of the hose can result in hose leakage, bursting, or other failure which can cause serious bodily injury or property damage from spraying fluids, flying projectiles, or other substances.

### Hose and Field Attachable Hose Ends

Weatherhead Hose and Field Attachable Hose Ends have been engineered and designed as a complete hose assembly system. Component compatibility along with the use of quality components insures the production of reliable hose assemblies when

assembled properly. The use or intermixing of ends and hose not specifically engineered and designed for use with each other may result in the production of unsafe or unreliable hose assemblies. This can result in hose assembly leakage, hose separation or other failures which can cause serious bodily injury or property damage from spraying fluids, flying projectiles, or other substances. The Eaton warranty is limited to apply only when Weatherhead Field Attachable Hose Ends are used on compatible Weatherhead hose. See back inside cover for warranty information.

### Coll-O-Crimp Hose, Hose Ends and Assembly Equipment Compatibility

The Coll-O-Crimp Equipment Package, Coll-O-Crimp Hose Ends and Coll-O-Crimp Hose have been engineered and designed as a complete hose assembly system. Each component of the Coll-O-Crimp hose assembly system is compatible with other Coll-O-Crimp components to which it relates. Component compatibility, along with the use of quality components, insures the production of reliable hose assemblies when assembled properly. The use or intermixing of fittings and hose not specifically engineered and designed for use with each other and Coll-O-Crimp equipment is not recommended and may result in the production of unsafe or unreliable hose assemblies. This can result in hose assembly leakage, hose separation or other failures which can cause serious bodily injury or property damage from spraying fluids, flying projectiles, or other substances. The Eaton warranty is limited to apply only when Coll-O-Crimp Hose Ends and compatible Coll-O-Crimp Hose are used with Coll-O-Crimp assembly equipment.



# Hose Selection Chart

How to use chart: Locate the hose I.D. required and move to the right to the correct pressure. Then move up or down in this column for data on material, temperature, etc. to quickly determine whether the hose meets your requirements. For complete information on any hose refer to hose catalog page number at bottom of column.



**WARNING**  
Selection of hose: Selection of the proper hose for the application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to selection of the hose for your application can result in hose leaking,

bursting, or other failure which can cause serious bodily injury or property damage from spraying fluids or flying projectiles. You should carefully review the information in this catalog.

HOSE	H069	H057	H077	H166	H213	H229	H239	H429	H039	H039H	H009	H100	H101
<b>Usage</b>	Truck & Hydraulic	Fuel & Oil	Elec. Fuel Inject.	High Temp. Truck	High Temp. Truck	Air & Hydraulic	Transmission Oil Cooler, Diesel Fuel, Air Brake	Transmission Oil Cooler, Fuel and Diesel Lines	Hydraulic Suction Vacuum	Suction	Lube	General Purpose	General Purpose
<b>Meets</b>	DOT All+ ABS	—	—	DOT All	DOT All	DOT All	DOT All	—	USCG ABS MSHA	—	USCG MSHA	—	MSHA
<b>SAE No.</b>	J1402 All 100R5	30R7	30R9	J1402 Type All	J1402 Type All	J1402 Type All	J1402 Type All	J1019	100R4 J1942/1	100R4	J1942/1, 100R6	—	—
<b>Temp. Range °F</b>	See page 36	-40°F +275°F	-30°F +275°F	See page 43	See page 39	See page 39	See page 40	-55°F +302°F	-40°F +275°F	-40 - +300°F	-40°F +212°F	-40°F +212°F	-40°F +212°F
<b>Inner Tube</b>	Nitrile	Nitrile	Fluoro-elastomer Veneer	Nitrile	CPE	Nitrile	CPE	CPE	CPE	CPE	Nitrile	Nitrile	Nitrile
<b>Reinforcement</b>	1 Fiber & Steel Braid	1 Fiber Braid	Multi Fiber Braid	1 Fiber & 1 S.S. Braid	1 Fiber & 1 Wire Braid	2 Fiber Braids	2 Fiber	1 Wire Braid	2 Fiber Ply & Helical Wire	1 helical wire, 1 Fiber braid	1 Fiber Braid	1 Fiber Braid	1 Fiber Braid
<b>Outer Tube</b>	Fiber Braid	Hypalon <sup>1</sup>	ECO	Fiber Braid	Fiber Braid	Fiber Braid	Fiber Braid	Fiber Braid	Neoprene	CPE	Neoprene	Fiber Braid	Neoprene
<b>Hose I.D. - Maximum Recommended Operating Pressure - PSI</b>													
<b>3/4</b>	3000	50		1500	2000	225	225						
<b>1/4</b>	3000	50	125	500	1500						400	350	350
<b>5/16</b>	2250	50	125	500	1500	225					400	350	350
<b>3/8</b>		50	125								400	350	350
<b>13/32</b>	2000			500	1250	225	225	250					
<b>7/16</b>		35											
<b>1/2</b>	1750			450	1000	225	225	250			400	350	350
<b>5/8</b>	1500			450	750	225	225					350	350
<b>3/4</b>									300††	300		350	350
<b>7/8</b>	800			250	400	225	225						
<b>1</b>									250††	250			
<b>1-1/8</b>	625			250			225						
<b>1-1/4</b>									200††	200			
<b>1-1/2</b>									150	150			
<b>1-3/8</b>	500												
<b>1-13/16</b>	350												
<b>2</b>									100	100			
<b>2-3/8</b>	350												
<b>3</b>	200												
<b>Hose</b>	<b>Page 36</b>	<b>Page 37</b>	<b>Page 37</b>	<b>Page 38</b>	<b>Page 39</b>	<b>Page 39</b>	<b>Page 40</b>	<b>Page 40</b>	<b>Page 41</b>	<b>Page 41</b>	<b>Page 42</b>	<b>Page 42</b>	<b>Page 43</b>
<b>Hose Ends</b>													
<b>C-O-C</b>	113-116	—	—	113-116	—	113-116 135	113-116 135	126-133 134	140, 141-158 159-169	140 141-158 159-169	106-112	—	—
<b>Field Attach.</b>	196-197 206-210	187-188	103	185, 206-210	203-205	196-197 206-210	196-197 206-210	—	198 199	198 199	186	189-191	189-191

<sup>1</sup> Hypalon® is a registered trademark of E.I. DuPont.

\*\*At 70° F.  
† When used with 'U' Series Ends.

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA



# Hose Selection Chart



## WARNING

Selection of Hose: Selection of the proper hose for the application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to

selection of the hose for your application can result in hose leaking, bursting, or other failure which can cause serious bodily injury or property damage from spraying fluids or flying projectiles. You should carefully review the information in this catalog.

HOSE	H209	H332	H400	H757	GH134W	H366	H059	H104	H017	H169	H324	H569	H338
<b>Usage</b>	Car Wash	General Purpose	Very High Pressure Hydraulic	Air Cond. R12 & R134a	Air Cond. R404a, HFC134a, R22, R407C	LPG	Fuel Oil/ Lube	Hydraulic	General Purpose Hydraulic	Hydraulic	Power Steering	A/B & Hydraulic	Air Brake
<b>Meets</b>	—	—	MSHA	—	—	UL 21	ABS NMMA USCG	USCG MSHA ABS	USCG MSHA	MSHA	—	ABS* DOT All + USCG	DOT All
<b>SAE No.</b>	—	—	—	J2064 Type C, CL-1	J2064 Type E Class 1	—	J1942/1	J1942 /1/1 100R1AT	J1942/1, 100R3	—	J188 Type 2	100R5 J1942 /1 J1402 Type All	J1402 Type A
<b>Temp. Range °F</b>	-40°F +200°F	-40 - +300°F	-40°F +212°F	See page 41	-40°F +257°F	-40°F +300°F	-4°F +212°F	-40°F +212°F	-40°F +212°F	-40°F +212°F	-40°F +250°F	See page 49	-40°F +200°F
<b>Inner Tube</b>	Nylon 11	CPE	Nitrile	Rubber/ Nylon/ Rubber	Polyamide Veneer	Nitrile	Nitrile	Nitrile	Nitrile	Nitrile	Neoprene	CPE	EPDM
<b>Reinforcement</b>	1 Fiber Braid	1 Fiber Braid	2 Steel Braids	1 Fiber Braid	Rubber Backing, 1 Fiber Braid	1 Fiber & 1 S.S. Braid	1 Wire 1 Fiber Braid	1 Steel Braid	2 Fiber Braids	1 Steel Braid	2 Fiber Braids	1 Fiber & 1 Steel Braid	Multi Fiber Braid
<b>Outer Tube</b>	Polyurethane	CPE	Vinyl Nitrile	Butyl Perforated	Chlorobutyl	Fiber Braid	Blue Neoprene	Neoprene	Neoprene	Neoprene (Perforated)	Neoprene	Blue Fiber Braid	EPDM
<b>Hose I.D. - Maximum Recommended Operating Pressure - PSI</b>													
<b>3/4</b>							500			3000		3000	
<b>1/4</b>	2250	250					500*	2750	1250	3000		3000	
<b>5/16</b>	1750			400		350	500			2250		2250	
<b>3/8</b>	1350	250			500			2250	1125		1500		225
<b>13/32</b>				400		350	500			2000		2000	
<b>7/16</b>													
<b>1/2</b>	1000	250		350	500		500	2000	1000	1750		1750	225
<b>5/8</b>		250	4000	350	500		500	1500		1500		1500	
<b>3/4</b>		250	4000		500			1250	750				
<b>7/8</b>										800		800	
<b>1</b>							500	1000	565				
<b>1-1/8</b>										625		625	
<b>1-1/4</b>								625	375				
<b>1-1/2</b>													
<b>1-3/8</b>										500			
<b>1-13/16</b>										350			
<b>2</b>													
<b>2-3/8</b>													
<b>3</b>													
<b>Hose</b>	<b>Page 43</b>	<b>Page 44</b>	<b>Page 44</b>	<b>Page 45</b>	<b>Page 45</b>	<b>Page 46</b>	<b>Page 46</b>	<b>Page 47</b>	<b>Page 47</b>	<b>Page 48</b>	<b>Page 48</b>	<b>Page 49</b>	<b>Page 49</b>
<b>Hose Ends</b>													
<b>C-O-C</b>	106-112		170-185	126-133	—	113-116	113-116 135	140 141-158 170-185	141-158	113-116	141-158	113-116	137
<b>Field Attach.</b>	—	189-191	—	—	216-241	196-197 206-210	206-210	200-202	—	196-197 206-210	—	206-210	193-195

<sup>1</sup> Hypalon® is a registered trademark of E.I. DuPont.

\*\*At 70° F.  
† When used with 'U' Series Ends.

# Hose Selection Chart



**WARNING**  
 Selection of Hose: Selection of the proper hose for the application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to

selection of the hose for your application can result in hose leaking, bursting, or other failure which can cause serious bodily injury or property damage from spraying fluids or flying projectiles. You should carefully review the information in this catalog.

HOSE	H290L	H421	H114	H145	H145R	H146	H190	H190H	H245	H280	H290	H290H	H325
<b>Usage</b>	Low Temp Flexing	Hyd. Jacking System	Ag. Hyd. & Hyd. Synthetic	Hydraulic	Construction	Ag. Hyd. & Hyd. Synthetic	Hydraulic	Hydraulics	Hydraulic	Hydraulic	Hydraulic	Hydraulics	Low Temp. Hydraulic
<b>Meets</b>	—	IJ00	MSHA	USCG MSHA	—	—	MSHA, USCG, ISO 1436a, EN 853 Type 1SN	MSHA, ISO1436a	USCG MSHA ABS	USCG, MSHA, ISO 1436, EN 857, Type 2SC	USCG, MSHA, ISO 1436, EN 853, Type 2SN	MSHA	—
<b>SAE No.</b>	100R16	—	—	J1942/1, 100R17	100R17	—	J1942/1, 100R1 AT	100R1, AT, 1SN, EB853	J1942 100R16	J1942, Code H, 100R16	J1942/1, 100R2 AT	100R2, 2SN, EN853	—
<b>Temp. Range °F</b>	-70 - +212°F	-40 - +212°F	-40°F +250°F	See Page 55	-40°F +250°F	-65°F +250°F	-40°F +212°F	-55 - +302°F	-40°F +212°F	See page 61	See page 62	-55 - +302°F	-67°F +175°F
<b>Inner Tube</b>	Nitrile	Synthetic Rubber	Hytrel <sup>1</sup>	Nitrile	Nitrile	Hytrel <sup>1</sup>	Nitrile	CPE	Nitrile	Nitrile	Nitrile	CPE	Synthetic Rubber
<b>Reinforcement</b>	2 Wire Braids	2 Wire Braids	1 Steel Braid	1 Steel Braids†	1-2 Steel Braids	1 Steel Braid	1 Steel Braid	1 Steel Braid	2 Steel Braids	2 Steel Braids	2 Steel Braids	2 Steel Braids	2 Steel Braids
<b>Outer Tube</b>	Neoprene	Synthetic Rubber	Neoprene	Neoprene	UHMWPE	Polyester Braid	Vinyl Nitrile	CPE	Neoprene	Vinyl Nitrile	Vinyl Nitrile	CPE	Synthetic Rubber
<b>Hose I.D. - Maximum Recommended Operating Pressure - PSI</b>													
<b>3/4</b>													
<b>1/4</b>	5000	10000	3000	3045	3000	3000	3265	3265	5000	5800	5800	5800	5000
<b>5/16</b>													
<b>3/8</b>	4000	10000	3000	3045	3000	3000	2610	2610	4000	4800	4800	4800	4000
<b>13/32</b>													
<b>7/16</b>													
<b>1/2</b>	3500		3000	3045	3000	3000	2320	2320	3500	4000	4000	4000	3500
<b>5/8</b>	2750			3045	3000		1885	1885	2750	3630	3630	3630	
<b>3/4</b>	2250			3045	3000		1525	1525	2250	3120	3120	3120	2250
<b>7/8</b>												2400	
<b>1</b>	2000			3045	3000		1275	1275	2000	2400	2400		2000
<b>1-1/8</b>													
<b>1-1/4</b>	1250							900	1625			2250	
<b>1-1/2</b>												1750	
<b>1-3/8</b>													
<b>1-13/16</b>													
<b>2</b>	1125											1500	
<b>2-3/8</b>													
<b>3</b>													
<b>Hose</b>	<b>Page 50</b>	<b>Page 50</b>	<b>Page 51</b>	<b>Page 51</b>	<b>Page 52</b>	<b>Page 52</b>	<b>Page 53</b>	<b>Page 53</b>	<b>Page 54</b>	<b>Pages 54</b>	<b>Pages 55</b>	<b>Page 55</b>	<b>Page 56</b>
<b>Hose Ends</b>													
<b>C-O-C</b>	170-185		140 141-158	170-185, 140 141-158 159-169	170-185	141-158	170-185	170-185	170-185 140, 141-158 159-169	170-185	170-185	170-185	141-158
<b>Field Attach.</b>			—	—		—	—	—	—	—	—	—	—

<sup>1</sup> Hypalon® is a registered trademark of E.I. DuPont.

\*\*At 70° F.

† When used with 'U' Series Ends.

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

# Hose Selection Chart



**WARNING**  
Selection of Hose: Selection of the proper hose for the application is essential to the proper operation and safe use of the hose and related equipment.

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jectiles. You should carefully review the information in this catalog.

HOSE	H345	H350	H425	H430	H430R	H464	H470	H485	H545	H0105	H0106	H115	H116
<b>Usage</b>	Pressure Washer	Hydraulic	Hydraulic	Very High Pressure Hydraulic	Very High Pressure Hydraulic	Hydraulics	Very High Pressure Hydraulic	High Pressure Hydraulics	Hydraulic	Air & Water	Air/Water Apps.	Air Tool & Water	Pneumatic Tools
<b>Meets</b>	MSHA	MSHA	USCG MSHA ABS	USCG MSHA, ABS	MSHA	MSHA	USCG** MSHA, ABS	—	—	—	—	—	—
<b>SAE No.</b>	—	—	J1942/1, 100R2AT	J1942, 100R12	100R12	EN856, 4SH <sup>†</sup>	J1942/1, 100R13	100R15	—	—	—	—	—
<b>Temp. Range °F</b>	See Page 56	-40°F +212°F	-40°F +212°F	-40°F +250°F	-40°F +250°F	-40 - +212°F	See page 60	-40 - +250°F	-40°F +250°F	See page 62	See page 62	-40°F +160°F	-40 - +180°F
<b>Inner Tube</b>	Nitrile	Synthetic Rubber	Nitrile	Neoprene	Nitrile	Nitrile	Neoprene	Nitrile	Nitrile	EPDM	EPDM	Nitrile	Nitrile
<b>Reinforcement</b>	1 Steel Braid	2 Steel Braids <sup>†</sup>	2 Steel Braids	Multi Spiral Steel	Steel Plies	4 Spiral Steel Plies	Multi Spiral Steel	Multi-Spiral Steel	1 Steel Braid*	Multi Fiber Spiral	2 Spiral	Multi Fiber Braid	Multi-Fiber Braids
<b>Outer Tube</b>	Blue Vinyl Nitrile	Neoprene	Neoprene	Hypalon	UHMW	Nitrile	EPDM	Vinyl Nitrile	Abrasive Resistant Nylon	Red EPDM	EPDM	Red Vinyl Nitrile	Vinyl Nitrile
<b>Hose I.D. - Maximum Recommended Operating Pressure - PSI</b>													
3/4													
1/4	3000		5000						3000	300†	200	300	225
5/16												300	225
3/8	3000	3500	4000	4000	4000				3000	300†	200	300	225
13/32													
7/16													
1/2	3000	3500	3500	4000	4000		5000		3000	300†	200	300	225
5/8		3500	2750	4000	4000				3000				
3/4		3500	2250	4000	4000	6090	5000		3000	300†	300	300	
7/8													
1		3500	2000	4000	4000	5510	5000	6000	3000	200†		300	
1-1/8													
1-1/4			1625	3000	3000	5075	5000	6000				225	
1-1/2			1250	2500	2500	4350	5000	6000				225	
1-3/8													
1-13/16													
2			1125	2500	2500	3625	5000						
2-3/8													
3													
<b>Hose</b>	<b>Page 56</b>	<b>Page 57</b>	<b>Page 57</b>	<b>Page 58</b>	<b>Page 59</b>	<b>Page 60</b>	<b>Page 60</b>	<b>Page 61</b>	<b>Page 61</b>	<b>Page 69</b>	<b>Page 69</b>	<b>Page 68</b>	<b>Page 68</b>
<b>Hose Ends</b>													
<b>C-O-C</b>	170-185	170-185 141-158 159-169	140, 141-158 170-185 159-169	159-169	159-169	350-359	121-125	350-359	140 141-158 159-169	141-158	141-158	141-158 159-169	141-158 159-169
<b>Field Attach.</b>	—	—	211-213	—	—	—	—	—	—	187-188 192	187-188 192	187-188 192	187-188 192

<sup>1</sup> Hypalon® is a registered trademark of E.I. DuPont.

\*4-8 Size: 1 Steel Braid;  
10-16 Size: 2 Steel Braids

\*\* At 70° F.  
† When used with 'U' Series Ends.



# Hose Selection Chart



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jectiles. You should carefully review the information in this catalog.

HOSE	H201	H243	H265	H275	H277	H335	H336	H435	H436	H900	H1571	H1719
<b>Usage</b>	General Purpose Air & Oil	Hydraulic/Air/Steam	Air, Water	Air & Water	Hydraulic/Air/Steam w/ Conductive Static Dissipating Liner	Hydraulic Non-Conductive	Hydraulic	Hydraulic Non-Conductive	Hydraulic	Propane	Air and Water Transfer	General Purpose
<b>Meets</b>	MSHA (Black only)	FDA	—	—	—	EN 855 Type R8	EN 855 Type R8	—	—	UL 21		
<b>SAE No.</b>	—	—	—	—	—	100R8 Non-Cond.	100R8	100R7	100R7			
<b>Temp. Range °F</b>	-40°F +212°F	-65°F +450°F	-20°F +180°F	-10°F +150°F	-65°F +450°F	See page 58	See page 58	-40°F +200°F	-40°F +200°F	-40-140F	-20 - 150 F	-15-150F
<b>Inner Tube</b>	Nitrile	PTFE	Modified PVC	PVC	PTFE	Nylon	Nylon	Nylon 11	Nylon 11	Nitrile	Modified PVC	Polyvinyl Chloride PVC
<b>Reinforcement</b>	1 Fiber Braid	1 S.S. Braid	2 Fiber Spirals	2 Fiber Spirals	1 S.S. Braid	Multi Yarn Braids	Multi Fiber Braids	2 Fiber Braids	2 Fiber Braids	Fiber Braid	4 Fiber Spiral	2 Fiber Spiral
<b>Outer Tube</b>	Neoprene (black), Vinyl Nitrile (colors)	Stainless Steel Braid	Blue Rubber Modified Thermoplastic	Red PVC	Stainless Steel Braid	Orange Polyurethane	Black Polyurethane Perforated	Orange Polyurethane	Polyurethane Perforated	Vinyl Nitrile Perforated	PVC/Nitrile Blend	Polyvinyl Chloride PVC
<b>Hose I.D. - Maximum Recommended Operating Pressure - PSI</b>												
<b>3/4</b>		3000			3000	5000	5000					
<b>1/4</b>	250	3000	350**	250**	3000	5000	5000	2750	2750	350		
<b>5/16</b>		2500			2500			2500	2500			
<b>3/8</b>	250	2000	350**	250**	2000	4000	4000	2250	2250	350		
<b>13/32</b>												
<b>7/16</b>												
<b>1/2</b>	250	1750	300**	250**	1750	3500	3500	2000	2000	350		
<b>5/8</b>	250											150
<b>3/4</b>	250	1000	250**	250**	1000		2250	1250	1250	350	400	150
<b>7/8</b>						2250						
<b>1</b>		1000	200**	200**	1000	2000	2000	1000	1000	350		
<b>1-1/8</b>												
<b>1-1/4</b>												
<b>1-1/2</b>												
<b>1-3/8</b>												
<b>1-13/16</b>												
<b>2</b>												
<b>2-3/8</b>												
<b>3</b>												
<b>Hose</b>	<b>Page 65</b>	<b>Page 76</b>	<b>Page 65</b>	<b>Page 66</b>	<b>Page 77</b>	<b>Page 75</b>	<b>Page 75</b>	<b>Page 73</b>	<b>Page 74</b>	<b>Page 72</b>	<b>Page 64</b>	<b>Page 70</b>
<b>Hose Ends</b>												
<b>C-O-C</b>	—	106-112	106-112 136	106-112 136	106-112	117-120	117-120	113-116 106-112 135	106-112	141-158	141-158	—
<b>Field Attach.</b>	189-191	—	—	—	—	—	—	196-197 206-210 214-215	214-215	—	—	—

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\*\*At 70° F.  
† When used with 'U' Series Ends.

# Hose Selection Chart



**WARNING**

Selection of Hose: Selection of the proper hose for the application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to

selection of the hose for your application can result in hose leaking, bursting, or other failure which can cause serious bodily injury or property damage from spraying fluids or flying projectiles. You should carefully review the information in this catalog.

HOSE	H1776/7	H1812	H1981/2	H1987	H6002	H6008	H6009	H8679	H9622	H9949
<b>Usage</b>	Pneumatic Tools	Fertilizer and Pesticides	Air and Water Transfer	General Purpose	Construction	Construction	Construction	General Purpose	Construction	General Purpose / Non-Conductive
<b>Meets</b>										
<b>SAE No.</b>										
<b>Temp. Range °F</b>	-40 - 180F	-40 - 180F	-40 - 180F	-30-160F	-40-200F	-40-200F	-40-250F	-30-160F	-40-200F	-40 - 180F
<b>Inner Tube</b>	Nitrile	EPDM	Blended Nitrile	EPDM	Nitrile	Nitrile	Nitrile	Synthetic Rubber	Nitrile	Nitrile (Non-Conductive)
<b>Reinforcement</b>	1 or 2 Fiber Braid	2 Fiber Braid	2 or 4 Spiral	2 Fiber Spiral	Fiber	1 or 2 Steel Braid	1 or 2 Steel Braid	2 Fiber Spirals	1 or 2 Steel Braid	2 Fiber Braid
<b>Outer Tube</b>	Red Vinyl Nitrile	Red EPDM	Neoprene Pinpricked	EPDM Perforated	1/2, 3/4, 1 Neoprene 1 1/4, 1 1/2, 1 1/2 Vinyl Nitrile	Yellow Neoprene	Carboxylated Nitrile/Perforated	Synthetic Rubber	Neoprene / Perforated	Vinyle Nitrile (Non-Conductive)

Hose I.D. - Maximum Recommended Operating Pressure - PSI										
<b>3/4</b>										
<b>1/4</b>	325	275	200/300							275
<b>5/16</b>	325		200/300							
<b>3/8</b>	325	275	200/300							275
<b>13/32</b>										
<b>7/16</b>										
<b>1/2</b>	325	250	200/300		400				1000	275
<b>5/8</b>	325	250	300	600				100		
<b>3/4</b>	325	250	225/300	600	400				1000	275
<b>7/8</b>										
<b>1</b>	325	250	200		400	1000			850	275
<b>1-1/8</b>										
<b>1-1/4</b>	325	250			400		800		500	
<b>1-1/2</b>	325	250				600	600		500	
<b>1-3/8</b>										
<b>1-13/16</b>										
<b>2</b>					300	600	600		500	
<b>2-3/8</b>										
<b>3</b>						400	600			
<b>Hose</b>	<b>Page 64</b>	<b>Page 70</b>	<b>Page 67</b>	<b>Page 71</b>	<b>Page 63</b>	<b>Page 62</b>	<b>Page 62</b>	<b>Page 71</b>	<b>Page 63</b>	<b>Page 66</b>

Hose Ends										
<b>C-O-C</b>	141-158 159-169	141-158 159-169	141-158	—	141-158 159-169	159-169	159-169	—	159-169	141-158
<b>Field Attach.</b>	—	—	—	—	—	—	—	—	—	—

\*\* Size -12 thru -20.

† 2 Steel Braids -06 thru -12.  
4 Steel Spirals size -16.

# Hose Selection

CHART 1. Hose Flow Rate vs. Pressure Drop

## ⚠ WARNING

For important safety information concerning hose selection, see page 4 of this catalog.

There are several factors which affect selection of a hose sized such that it will provide the desired rate of flow at the required pressure; these are:

- Hose size
- Hose length
- Hose ends
- Material conveyed
- Bends
- Static head pressure

### Hose Size

Undersized pressure lines produce excessive pressure drop with attendant energy loss and heating, and undersized suction lines cause cavitation at the pump inlet. Oversized hose assemblies, on the other hand, are excessively costly and generally too heavy.

In selecting hose for hydraulic systems, the following empirical values can be used to achieve minimum pressure drop consistent with reasonable hose size (see Chart 2):

Velocity of pressure lines 7 to 15 ft./sec. Velocity of short pressure lines to 20 ft./sec. Velocity of suction lines 2 to 5 ft./sec.

To use Chart 2, lay a straight-edge across the chart as shown by the dotted line. To minimize pressure drop, always use the next larger size hose shown if the line passes between sizes listed.

### Hose Length

Chart 1 gives the pressure drop in different-sized hoses based on hoses of 100-foot length, and is based on water as the material conveyed. For hoses of a different length, these values must be corrected. For example, a 100-foot

length of 1/2" hose causes a pressure drop of 100 lbs./in.<sup>2</sup> at a flow rate of 10 gal./min. If the hose in question is 50 feet long, the pressure drop derived from Chart 1 must be corrected by multiplying the value by the ratio of the actual length to 100 feet, or 50/100, or 0.5. Therefore, the actual pressure drop caused by a 50-foot length of 1/2" hose, at a flow rate of 10 gal./min., is 50 lbs./in.<sup>2</sup> (0.5 x 100 = 50 lb./in.<sup>2</sup>).

### Hose Ends and Fluid Conveyed

In most cases, the end fitting openings are slightly smaller than the hose itself. However, this varies widely with hose end designs from 'full-flow' ends which have the same I.D. as the hose, down to as much as 1/8" smaller I.D. than the hose bore. To allow for this, assume a 10-to-15% greater flow rate than actually measured in the system when determining pressure drop.

Chart 1 is based on water as the material conveyed, and for other fluids it is necessary to correct for the difference in specific gravity and viscosity. Chart 3 lists common fluids, their specific gravities, viscosities, and corresponding correction factors.

To determine the pressure drop for a specific fluid, first determine the pressure

drop from Chart 1 for the hose length then divide this by the correction factor found in Chart 3.

For example, the 50-foot length of 1/2" hose just de-scribed had a pressure drop of 50 lbs./in.<sup>2</sup> at a flow of 10 gal./min. of water. To determine the pressure

drop if #2 fuel oil is the material conveyed, divide by 0.752 (from Chart 3)...  $50 \div 0.752 = 66.5$  lbs./in.<sup>2</sup> pressure drop. If, on the other hand, the material conveyed is Type #3 gasoline, the pressure drop would be  $50 \div 1.19 = 42$  lbs./in.<sup>2</sup>

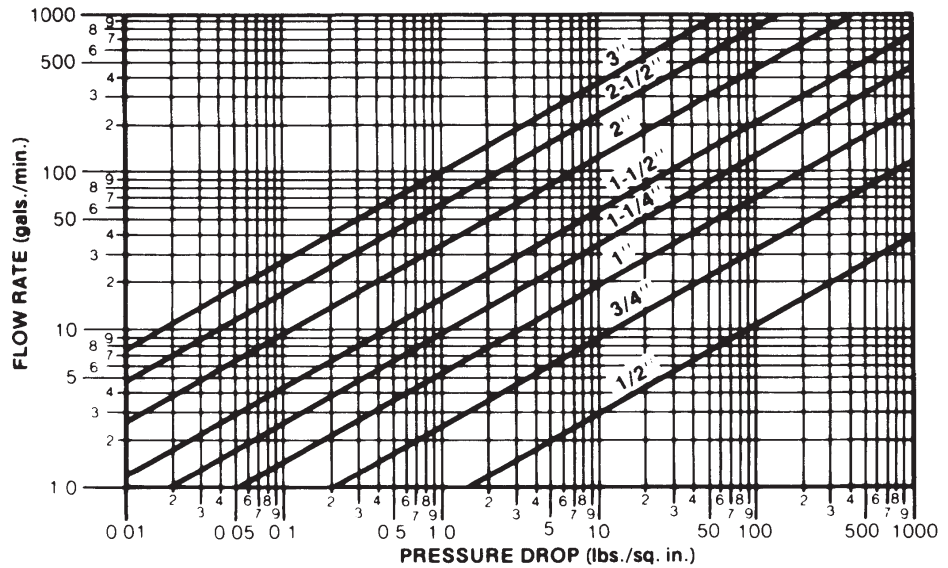
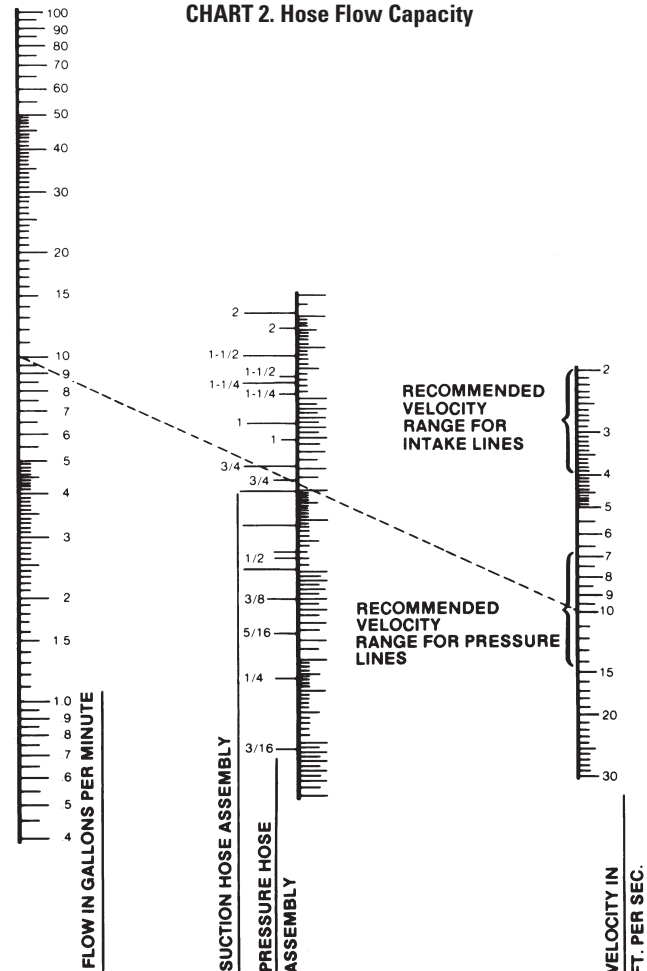


CHART 2. Hose Flow Capacity



APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA



# Hose Selection

## WARNING

For important safety information concerning hose selection, see page 4 of this catalog.

## Bends

If a hose of a given length is bent, the pressure drop will increase by some definite amount...the sharper the bend and the smaller the radius of bend the greater the pressure drop. The effect of a bend may be neglected if it is slight or if there are but few bends in a long length of hose. This is because the additional pressure drop caused by these bends is not significant when compared to the total pressure drop.

However, a dock hose may have four sharp 90° bends in a 25-foot length, and if pressure drop is important, these bends must be considered because they constitute a significant portion of the overall pressure drop.

The curves in Chart 4 show the effects of resistance due to 90° bends. This data can also be used as a guide for smooth bends less or greater than 90°. For example, a 45° bend has about 4/10 the resistance of a 90° bend.

**Problem:** Determine the equivalent length, in terms of hose inside diameters, of a 90° and a 180° bend whose relative radii are 12 inches.

**Solution:** Referring to the "total resistance curve," the equivalent length for a 90° bend is 34.5 hose diameters. The equivalent length of a 180° bend is 34.5 diameters for one 90° bend, 18.7 diameters for resistance due to length, and 15.8 ÷ 2 = 7.9 diameters for bend resistance. Adding these 34.5, 18.7, and 7.9 ÷ 2 = 3.95 diameters for a 180° bend.\* Note that

### CHART 3. Fluid Flow Correction Factors

Liquid	Specific Gravity	Viscosity		Correction Factor, R
		Centistokes (CS)	Centipoises (CP)	
Acetic Acid - 100%	1.05	-	1.3	0.975
Acetic Acid - 70%	1.07	-	2.7	0.843
Ammonia liquid - 100%	0.66	0.30	-	1.290
Ammonia liquid - 26%	0.907	-	1.3	0.943
Asphalt α 120 F	1.40	-	300	0.350
Beer	1.01	1.15	-	0.990
Benzene Benzol	0.88	744	-	1.08
Brine Calcium Chloride 25%	1.23	3.80	-	0.78
Brine Sodium Chloride 25%	1.19	2.07	-	0.88
Butyl Alcohol	0.81	3.64	-	0.783
*Castor Oil	0.96	900	-	0.27
*Crude Petroleum Typical				
1 Pennsylvania Crude α 100 F	0.80	-	3	0.78
2 California Crude α 150 F	0.915	-	9	0.64
3 α 33 API Crude α 100 F	0.86	7.2	-	0.685
4 Texas Crude α 150 F	0.875	-	3	0.792
5 Mexican Crude α 150 F	0.96	-	550	0.287
Decane n	0.73	1.24	-	0.975
Ethyl Alcohol 100%	0.794	-	1.25	0.93
Ethyl Alcohol 95%	0.808	-	1.45	0.904
Ethyl Alcohol 40%	0.939	-	3.00	0.807
Ethyl Glycol	1.12	-	24.00	0.55
Formic Acid	1.22	-	-	0.94
*Fuel Oils				
No 1 α 100 F				
Sp Gr 82 to 95				
Visc 30 to 40 SSU	0.88	2.45	-	0.85
No 2 α 100 F				
Sp Gr 82 to 95				
Visc 35 to 50 SSU	0.88	4.50	-	0.752
No 3 α 100 F				
Sp Gr 82 to 95				
Visc 55 SSU max	0.88	8.6	-	0.66
No 5 α 100 F				
Sp Gr 82 to 95				
Visc 60 to 450 SSU	0.88	55.0	-	0.47
No 6 α 122 F				
Sp Gr 82 to 95				
Visc 430 to 2900 SSU	0.88	38.0	-	0.493

\*These figures are approximate or averages of those values available.

Liquid	Specific Gravity	Viscosity		Correction Factor, R
		Centistokes (CS)	Centipoises (CP)	
*Gasoline (representative)				
Type #1	74	88	-	1.04
Type #2	72	64	-	1.11
Type #3	68	46	-	1.19
Glycerine (Glycerol) - 100% @ 150°F	1.26	-	75.0	0.45
Glycerine & Water - 50%	1.13	-	6.5	0.717
Heptane - n	684	0.60	-	1.16
Hexane - n	66	0.49	-	1.21
Hydrochloric Acid - 31.5%	1.16	-	1.92	0.92
Isobutyl Alcohol	0.817	-	3.90	0.745
Isopropyl Alcohol	0.785	-	2.20	0.828
Kerosene	0.80	2.23	-	0.892
Lubricating Oil (Machine Oil)	0.90	-	198	0.35
Lubricating Oil (Automotive)	0.893	-	110	0.39
Methyl Alcohol (Methanol) - 100%	0.79	74	0.60	1.072
Methyl Alcohol - 90%	0.824	-	0.77	1.03
Methyl Alcohol - 40%	0.937	-	2.00	0.863
*Milk	1.03	1.15	-	0.99
Motor Oil	0.893	-	110	0.39
Napthalene	1.15	0.9	-	1.04
Nitric Acid - 95%	1.50	-	1.13	1.07
Nitric Acid - 60%	1.37	-	2.35	0.913
Nonane - n	0.718	97	-	1.02
Octane - n	0.70	77	-	1.068
Olive Oil	0.91	93.0	-	0.41
Pentane - n	0.63	0.37	-	1.24
Propyl Alcohol	0.804	2.8	-	0.828
Rapeseed Oil	0.91	180	-	0.36
Sodium Hydroxide - 50%	1.53	-	95.0	0.443
Soya Bean Oil	0.924	86	-	0.418
Sperm Oil	0.88	21	-	0.55
Sugar Solution - 20%	1.08	1.9	-	0.895
Sugar Solution - 40%	1.18	5.3	-	0.728
Sugar Solution - 60%	1.29	44.0	-	0.475
Sulfuric Acid - 100%	1.83	14.6	-	0.59
Sulfuric Acid - 95%	1.83	14.5	-	0.593
Sulfuric Acid - 60%	1.50	4.4	-	0.755
Toluene	0.866	-	0.6	1.092
Turpentine	0.86	1.83	-	0.90
Water (Fresh)	1.0	1.10	-	1.00
Water (Salt)	1.03	1.10	-	1.00
Xylene (Xylol)	0.87	0.93	-	1.03

this loss is less than the sum of losses through two 90° bends separated by tangents.

## Static Head Pressure

Static head is the difference in height between the inlet and outlet ends of a hose. Before using Chart 1, it is necessary to correct for static head pressure because the values in Chart 1 are pressure losses due to friction only.

To correct for static head pressure, the difference in height is determined and multiplied by 0.433 to convert the head to an equivalent pressure in PSI (one foot of water exerts 0.433 PSI pressure).

If the inlet is higher than the outlet, the pressure equivalent is added to the pump pressure. If the outlet is higher than the inlet,

the pressure equivalent is subtracted from the pump pressure. In both cases, it is assumed that the pump pressure is the pressure available at the inlet end and that the pump is outside of the hose system.

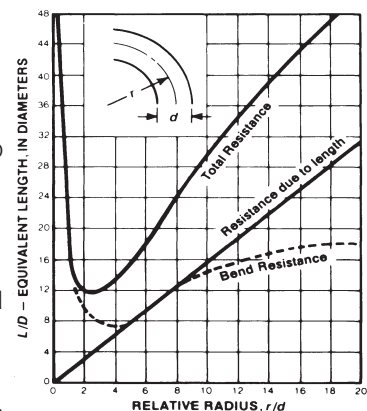
## Installation Design

Hose should not be twisted or put in torsion either during the installation or while in service. Sharp or excessive bends may cause the hose to kink or rupture.

Be sure to allow enough slack to provide for changes in length which will occur when pressure is applied. This change in length can vary from +2% to -4%.

Design the installation so the hose assembly is accessible for inspection and easy removal.

### CHART 4. Resistance of 90° Bends



\*In a continuous bend of 180 degrees the second 90 degree bend produces approximately one-half the resistance of the first bend.

Bend radius is important. A good working rule is that the minimum bend radius should be five or more times the O.D. dimension of the hose.

# Hose Selection

These tables alphabetically list commonly used materials of various chemical composition. After each fluid listing you will find the basic hose tube and fitting materials rated according to their chemical resistance to each individual fluid. The chart is intended to be used as a guide only. Consult Eaton Technical Support for further information.

## ⚠ WARNING

**Selection of Hose:** Selection of the proper hose for the application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to selection of the hose for your application can result in serious bodily injury or property damage from spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from selection of the wrong hose, you should carefully review the information in this catalog.

## ⚠ WARNING

**Proper Selection of Hose Fittings:** Selection of the proper fittings for the hose end application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to the

selection of the fittings for your application can result in serious bodily injury or property damage resulting from spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from selection of the wrong fitting, you should carefully review the information in this catalog.

## ⚠ WARNING

The following list of chemicals is offered as a guide to the chemical resistance properties of the tube material of the hoses shown. It should be used as a guide only, as the degree of resistance of any elastomer to a particular fluid depends upon such variables as temperature, concentration, pressure conditions, velocity of flow, duration of exposure, aeration, stability of the fluid, etc.

Therefore, when in doubt, it is advisable not to use the hose. If this is not practical, tests should be devised that simulate actual service conditions as nearly as possible. Eaton offers additional technical assistance. Contact your Eaton Customer Support representative for assistance or call Technical Support at 1-888-258-0222.

## Chemical Compatibility Chart

FLUID	HOSE MATERIAL											HOSE END FITTINGS		
	PVC	Nitrile	Vinyl Nitrile	Neoprene	PTFE	Nylon/Nylon II	EPDM	Hypalon <sup>2</sup>	Hytrel <sup>1</sup>	Polyurethane	CPE	Brass	Steel	316 Stainless
Acetaldehyde	X	X	X	X	G	G	F	X	X	-	X	X	G	
Acetic Acid (Concentrated)	X	X	X	X	G	X	G	X	X	X	G	X	X	G
Acetic Acid (Diluted)	F	X	X	F	G	F	F	G	X	G	X	X	X	G
Acetic Anhydride	X	G	G	X	G	X	G	F	X	X	G	X	F	F
Acetone	X	X	X	X	G	G	F	F	X	G	G	G	G	G
Acrylonitrile	G	X	X	X	G	G	X	X	-	X	G	-	G	G
Air <sup>□</sup>	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Alcohols (Methanol & Ethanol)	X	G	G	G	G	G	G	G	X	G	G	F	G	G
Aluminum Chloride	G	G	G	G	G	X	G	G	G	G	X	X	F	X
Aluminum Fluoride	G	G	G	F	G	X	G	G	-	G	X	X	X	X
Aluminum Hydroxide	G	G	G	G	G	G	G	-	G	G	X	F	G	G
Aluminum Sulfate	G	G	G	G	G	G	G	G	G	G	X	X	X	G
Alums	G	G	G	G	G	F	G	G	X	G	X	X	F	X
Ammonia, Anhydrous	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ammonia Solution (10%)	G	G	G	F	G	G	G	X	X	X	X	X	G	G
Ammonium Chloride	G	G	G	G	X	G	G	G	G	G	X	X	G	F
Ammonium Hydroxide	X	F	F	F	G	G	G	X	X	G	X	F	G	G
Ammonium Nitrate	G	G	G	G	G	G	G	X	G	-	-	-	G	G
Ammonium Phosphate	F	G	G	G	G	G	G	G	F	G	X	X	G	G
Ammonium Sulfate	G	G	G	G	G	G	G	G	G	G	X	X	F	G
Amyl Acetate	X	X	X	X	G	G	F	X	X	X	G	F	G	G
Amyl Alcohol	X	G	G	F	G	G	G	X	X	X	G	F	F	F
Aniline	X	X	X	X	G	X	X	X	X	X	X	X	G	G
Aniline Dyes	X	F	F	F	G	X	G	F	X	X	X	X	F	F
Animal Oils and Fats	G	G	G	X	G	F	F	G	X	F	G	G	G	G
Anti-Freeze (Glycol Base)	G	G	G	G	F	G	G	X	X	X	G	G	G	X
Aqua Regia	X	X	X	X	G	X	X	X	X	G	-	X	X	X
Asphalt	X	G	G	X	G	X	X	-	X	F	G	G	G	G
Barium Chloride	G	G	G	G	G	X	G	G	G	G	X	F	G	G
Barium Hydroxide	G	G	G	G	G	G	G	X	G	X	X	X	G	G
Barium Sulfide	G	G	G	G	X	G	X	G	X	G	X	X	G	G
Beet Sugar Liquors	G	G	G	G	G	X	G	G	X	G	X	G	G	G
Benzaldehyde	X	X	X	X	G	F	X	X	X	F	F	F	G	G
Benzene, Benzol	X	X	X	X	G	X	X	X	X	F	F	X	F	G
Benzoic Acid	X	X	X	G	G	X	X	X	X	F	F	X	F	F
Black Sulfate Liquor	X	F	F	F	G	F	F	G	X	F	X	G	G	G
Borax	G	F	F	G	G	G	G	G	G	G	X	X	G	G
Boric Acid	G	G	G	G	G	G	G	G	X	X	X	X	G	G
Brake Fluid (Glycol Ether Base)	X	X	X	F	G	G	X	-	X	G	G	G	G	G
Brine	G	G	G	G	G	G	G	X	G	-	X	F	G	F
Butane	Use H366 Hose Only													
Butyl Acetate	X	X	X	X	G	G	F	X	F	X	F	G	G	G

### CODES:

- G** Good resistance. □ In all applications, the cover must be pinpricked.
- F** Fair resistance. 1 Hytrel<sup>®</sup> is a registered trademarks of E.I. DuPont.
- X** Incompatible. 2 Hypalon<sup>®</sup> is a registered trademarks of E.I. DuPont
- No data available.

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# Hose Selection Chart

## Chemical Compatibility Chart

FLUID	HOSE MATERIAL											HOSE END FITTINGS			
	PVC	Nitrile	Vinyl Nitrile	Neoprene	PTFE	Nylon/Nylon II	EPDM	Hypalon <sup>2</sup>	Hytrel <sup>1</sup>	Polyurethane	CPE	Brass	Steel	316 Stainless	
Butyl Alcohol, Butanol	X	G	G	G	G	G	G	G	X	G	G	G	G	G	
Calcium Bisulfite	G	G	G	G	G	F	G	G	X	G	X	X	X	X	
Calcium Chloride	G	G	G	G	G	X	G	G	G	G	X	F	F	F	
Calcium Hydroxide	G	F	F	G	G	F	G	F	G	X	G	F	G	G	
Calcium Hypochlorite	G	F	F	F	G	F	G	F	F	X	G	F	X	F	
Cane Sugar Liquors	G	G	G	G	G	G	G	G	G	X	F	G	F	G	
Carbon Dioxide (Dry)	G	G	G	G	G	G	G	G	G	G	G	G	G	G	
Carbon Dioxide (Wet)	-	G	G	G	G	G	G	G	-	G	-	F	G	G	
Carbon Disulfide (Bisulfide)	X	X	X	X	G	X	X	X	X	X	X	G	G	G	
Carbon Monoxide (Hot)	X	F	F	F	G	X	F	G	G	F	G	X	F	G	
Carbon Tetrachloride	X	X	X	X	G	G	X	X	F	X	X	G	G	G	
Carbonic Acid	X	G	G	G	X	G	X	G	X	F	X	X	F	F	
Castor Oil	G	G	G	F	G	G	F	G	F	F	G	G	G	G	
Cellosolve Acetate	X	X	X	X	G	F	F	F	X	X	X	X	G	G	
Chlorinated Solvents	X	X	X	X	G	F	X	X	X	X	X	G	F	F	
Chloroacetic Acid	X	X	X	X	G	X	F	X	X	X	X	X	F	F	
Chlorobenzene	X	X	X	X	G	X	X	X	X	X	X	F	F	G	
Chloroform	X	X	X	X	G	G	X	X	X	X	X	G	G	G	
Chlorosulfonic Acid	X	X	X	X	G	X	X	X	X	X	X	F	X	X	
Chromic Acid (Under 25%)	F	X	X	X	G	X	G	X	X	X	X	X	X	G	
Chromic Acid (Over 25%)	X	X	X	X	G	X	G	X	X	X	X	X	F	F	
Citric Acid	G	F	F	G	G	X	G	G	G	X	X	X	G	G	
Coke Oven Gas	X	X	X	X	F	X	X	X	-	X	X	F	G	G	
Copper Chloride	G	G	G	F	G	G	G	G	G	G	X	X	X	G	
Copper Sulfate	G	G	G	G	G	G	G	G	G	G	G	X	X	G	
Corn Syrup (non-food)	G	G	G	F	G	G	G	F	G	G	-	-	G	G	
Cottonseed Oil	F	G	X	G	G	F	F	G	G	G	G	G	G	G	
Creosote	X	F	F	X	G	X	X	F	X	F	F	F	-	G	
Cresol	X	X	X	X	G	X	X	X	X	X	G	-	G	G	
Dextrose (food grade)	X	X	X	X	G	X	X	X	X	X	X	G	G	G	
Diaminoethane	X	X	X	X	G	X	F	X	-	X	-	G	G	G	
Dibromoethane	X	X	X	X	G	G	X	X	-	X	-	-	-	-	
Dichlorobenzene	X	X	X	X	G	G	X	X	X	X	X	-	-	G	
Diesel Fuel	X	G	G	X	G	G	X	F	F	F	G	G	G	G	
Diethanolamine	-	F	F	X	G	X	G	X	X	X	X	G	X	G	
Diethylenetriamine	-	F	F	X	G	X	G	X	X	X	X	G	-	-	
Dowtherm A	X	X	X	X	G	X	X	X	X	X	X	F	G	G	
Enamel (Solvent Base)	X	F	F	X	G	G	X	X	X	X	X	G	-	G	
Ethanolamine	X	F	F	X	G	X	G	X	-	X	G	X	G	G	
Ethers (Ethyl Ether)	X	X	X	X	G	F	X	X	X	F	G	G	G	G	
Ethyl Alcohol (To 150°)	F	G	G	G	G	G	G	G	G	G	F	G	G	G	
Ethyl Acetate	X	X	X	X	G	G	G	X	F	X	F	G	G	G	

**CODES:**   
**G** Good resistance.   
**F** Fair resistance.   
**X** Incompatible.   
**-** No data available.   
 Δ Use approved Freon Hose.   
 □ In all applications, the cover must be pinpricked.   
 1 Hytrel® ia a registered trademarks of Dupont.   
 2 Hypalon® ia a registered trademarks of Dupont

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FLUID	HOSE MATERIAL											HOSE END FITTINGS			
	PVC	Nitrile	Vinyl Nitrile	Neoprene	PTFE	Nylon/Nylon II	EPDM	Hypalon <sup>2</sup>	Hytrel <sup>1</sup>	Polyurethane	CPE	Brass	Steel	316 Stainless	
Ethyl Acrylate	X	X	X	X	G	G	F	X	X	X	F	-	G	G	
Ethylamine	X	X	X	X	G	X	F	X	-	X	-	G	-	G	
Ethyl Cellulose	-	F	F	F	G	G	F	F	G	F	G	F	G	F	
Ethyl Chloride	X	X	X	X	G	G	X	X	X	F	X	F	F	G	
Ethylene Dichloride	X	X	X	X	G	G	X	X	X	X	X	F	X	X	
Ethylene Glycol	G	G	G	G	G	F	G	G	G	F	G	F	G	G	
Ethylene Oxide	X	X	X	X	G	G	X	X	G	X	X	X	F	F	
Ethyl Methacrylate	X	X	X	X	G	G	F	X	X	X	F	-	F	G	
Fatty Acids	G	F	F	X	G	F	X	G	F	X	G	F	F	G	
Ferric Chloride	G	G	G	G	G	G	G	G	G	F	G	X	X	X	
Ferric Sulfate	G	G	G	G	G	G	G	G	G	G	G	X	X	F	
Fertilizer Solution (Water Base)	G	F	F	F	G	F	G	G	-	-	-	-	-	G	
Formaldehyde	X	F	F	F	G	G	G	X	F	X	G	F	X	G	
Formic Acid	X	F	F	F	G	X	G	X	X	X	G	F	X	G	
Freon 12Δ	X	F	F	F	G	G	X	X	X	X	F	G	G	G	
Fuel Oil	F	G	G	F	G	X	X	X	G	F	G	F	G	G	
Furfural	X	X	X	X	G	G	F	F	G	X	F	F	G	G	
Gasoline (Refined)	X	F	F	X	G	G	X	X	G	F	G	G	G	G	
Gasoline (Unleaded)	X	G	G	X	G	G	X	X	X	X	G	G	G	G	
Gasoline (10% Ethanol)	X	G	G	X	G	G	X	X	X	X	X	G	G	G	
Gasoline (10% Methanol)	X	F	F	X	G	G	X	X	X	X	X	G	G	G	
Glycerine, Glycerol	G	G	G	G	G	G	G	G	G	X	G	G	G	G	
Greases	G	G	G	F	G	G	X	F	G	G	G	G	G	G	
Green Sulfate Liquor	G	F	F	F	G	X	G	X	G	X	X	X	X	G	
Heptane	X	G	G	F	G	G	X	F	G	F	G	G	G	G	
Hexane	X	G	G	F	G	G	X	F	G	F	G	G	G	G	
Houghto Safe 273 to 640	F	G	G	G	G	G	G	-	-	X	G	G	G	G	
Houghto Safe 5046, 5047F	G	G	G	G	G	G	X	X	X	X	G	G	G	G	
Houghto Safe 1000 Series	X	X	X	X	G	G	G	X	-	X	-	G	G	G	
Hydraulic Oils															
Straight Petroleum Base	G	G	G	F	G	G	X	F	G	G	G	G	G	G	
Water Petroleum Emulsion	-	G	G	F	G	G	X	F	G	X	G	G	G	G	
Water Glycol	-	G	G	G	G	G	G	-	X	X	G	G	G	G	
Straight Phosphate Ester	X	X	X	X	G	G	X	-	X	G	G	G	G	G	
Phos. Ester/Petroleum Blend	X	X	X	X	G	X	X	-	X	-	G	G	G	G	
Polyol Ester	-	G	G	X	G	G	X	-	X	G	G	G	G	G	
Hydrobromic Acid	G	X	X	X	G	X	G	X	X	X	G	X	X	X	
Hydrochloric Acid	G	X	X	X	G	X	G	X	X	X	G	X	X	X	
Hydrocyanic Acid	G	F	F	X	G	X	F	G	X	X	X	F	G	G	
Hydrofluoric Acid (Under 50%)	F	X	X	X	G	X	F	G	X	X	X	X	X	G	
Hydrofluoric Acid (Over 50%)	X	X	X	X	G	X	X	G	X	X	X	X	X	X	
Hydrofluosilicic Acid	G	F	F	X	G	X	G	G	X	G	X	X	X	X	
Hydrogen	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Hydrogen Peroxide	-	X	X	X	G	X	F	X	X	-	G	X	X	G	
Hydrogen Sulfide	-	X	X	X	X	X	X	F	G	-	X	F	F	F	
Hydrolube	-	G	G	F	G	G	-	G	X	-	F	G	G	G	
Isopropyl Alcohol	G	G	G	G	G	G	G	G	X	G	G	G	G	G	
Isopropylamine	X	X	X	F	G	X	F	X	-	-	G	-	G	G	
Iso-Octane	X	G	G	F	G	G	X	F	G	X	G	G	G	G	
Jet Fuel (Transfer Only)	X	G	G	F	G	G	X	-	G	-	G	F	G	G	
Kerosene	X	G	G	F	G	G	X	F	F	G	G	G	G	G	
Lacquer	X	X	X	X	G	X	X	X	X	F	G	X	X	G	
Lacquer Solvents	G	X	X	X	G	X	X	X	F	X	F	G	X	G	
Lactic Acid	G	X	X	G	G	X	F	G	X	X	X	F	F	G	
Lime Sulfur	G	X	X	G	G	F	G	F	-	-	X	-	G	G	
Lindol	-	X	X	X	G	G	X	-	X	-	F	G	G	G	
Linseed Oil	G	G	G	X	G	G	X	F	F	F	G	F	G	G	
Lubricating Oils	G	G	G	F	G	G	X	F	G	F	G	G	G	G	



# Hose Selection Chart

## Chemical Compatibility Chart

FLUID	HOSE MATERIAL											HOSE END FITTINGS		
	PVC	Nitrile	Vinyl Nitrile	Neoprene	PTFE	Nylon/Nylon II	EPDM	Hypalon <sup>2</sup>	Hytre <sup>1</sup>	Polyurethane	CPE	Brass	Steel	316 Stainless
Lye	G	F	F	G	G	X	G	G	-	-	G	F	X	G
Magnesium Chloride	G	G	G	G	G	X	G	G	F	G	F	F	G	G
Magnesium Hydroxide	G	F	F	G	G	X	G	F	F	X	G	G	G	G
Magnesium Sulfate	G	G	G	G	G	G	G	G	X	G	F	G	G	G
Mercuric Chloride	F	F	F	G	G	X	G	G	-	G	X	X	X	X
Mercury	F	G	G	G	G	G	G	G	G	G	X	G	G	G
Methanol	X	G	G	G	G	G	G	G	F	G	F	G	G	G
Methyl Acrylate	X	X	X	X	G	X	F	X	X	X	F	G	G	G
Methyl Chloride	X	X	X	X	G	F	X	X	X	X	F	G	G	G
Methylene Chloride	X	X	X	X	G	G*	X	X	X	X	X	G	G	G
Methyl t-Butyl Ether (MTBE)	X	F	F	X	G	G	X	X	-	-	-	G	G	G
Methyl Ethyl Ketone	X	X	X	X	G	G	F	X	G	X	X	G	G	G
Methyl Isobutyl Ketone	X	X	X	X	G	G	F	X	X	X	X	G	G	G
Methyl Isopropyl Ketone	X	X	X	X	G	F	X	X	X	X	X	G	G	G
Methyl Methacrylate	X	X	X	X	G	F	X	X	X	X	-	G	G	G
Mineral Oil	F	G	G	F	G	G	X	F	G	G	G	G	G	G
Mineral Spirits	X	G	G	F	G	G	X	X	G	G	G	G	G	G
Naphtha	X	F	F	F	G	G	X	X	G	F	G	F	G	G
Napthalene	X	X	X	X	G	G	X	X	F	F	G	F	G	G
Nickel Acetate	G	X	X	G	G	G	G	-	X	-	-	-	-	-
Nickel Chloride	G	G	G	F	G	G	G	X	X	X	X	X	F	G
Nitric Acid (Under 35%)	G	X	X	X	G	X	F	F	X	X	X	X	X	X
Nitric Acid (35% to 60%)	F	X	X	X	G	X	X	X	X	X	X	X	X	G
Nitric Acid (Over 60%)	X	X	X	X	G	X	X	X	X	X	X	X	X	G
Nitrobenzene	X	X	X	X	G	G	X	X	X	X	X	F	G	G
Nitrogen Gas	G	G	G	G	G	G	-	G	G	G	-	-	-	-
Nitrous Oxide	X	X	X	X	G	X	X	X	X	X	X	G	G	G
Oleic Acid	F	F	F	X	G	F	F	F	F	F	F	F	F	G
Oleum (Fuming Sulfuric Acid)	X	F	X	X	G	X	X	X	X	X	X	F	F	G
Oxalic Acid	G	X	X	X	G	X	G	X	X	-	G	F	X	G
Paint (Solvent Base)	X	F	F	X	G	G	X	X	-	-	-	G	G	G
Palmitic Acid	F	F	F	F	G	G	F	X	G	X	G	X	F	F
Pentane	X	G	G	F	G	G	X	F	G	G	G	G	F	G
Perchloroethylene	X	X	X	X	G	G	X	X	X	X	X	F	G	G
Petroleum Ether	X	G	F	X	G	G	X	X	G	G	G	G	G	G
Petroleum Oils	G	G	G	F	G	G	X	F	G	G	G	G	G	G
Phenol	X	X	X	X	G	X	X	X	X	X	G	F	X	F
Phosphoric Acid (to 85%)	G	X	X	F	G	X	G	G	X	X	X	X	X	F
Picric Acid (Molten)	X	X	X	X	G	X	X	F	X	X	X	X	X	F
Picric Acid (Solution)	X	F	F	X	G	X	F	G	X	F	X	X	X	F
Potassium Chloride	G	G	G	G	G	G	G	G	G	G	G	F	X	G
Potassium Cyanide	G	G	G	G	G	G	G	G	G	G	G	X	G	G
Potassium Dichromate	G	X	X	X	G	F	G	X	G	G	X	G	G	G
Potassium Hydroxide	G	F	F	F	G	G	G	F	X	G	F	X	G	G
Potassium Sulfate	G	G	G	G	G	G	G	G	G	G	G	F	F	G
Propane Liquid	Use H366 Hose Only											G	G	G
Propylene Glycol	F	G	F	G	G	G	G	G	-	-	G	F	G	G
Pyridine	X	X	X	X	G	X	F	X	X	X	X	F	G	G
Sea Water	G	G	G	G	G	G	G	G	G	X	G	G	F	G
Skydrol (Transfer Only)	X	X	X	X	G	G	G	X	-	X	G	G	G	G
Soap Solution	G	G	G	F	G	G	G	G	G	G	G	G	G	G
Sodium Bisulfate	G	G	G	G	G	G	G	G	X	G	G	F	F	F
Sodium Carbonate	G	G	G	G	G	G	G	G	G	G	X	G	G	G
Sodium Chloride	G	G	G	G	G	G	G	G	G	G	X	F	G	G
Sodium Cyanide	G	G	G	G	G	G	G	G	G	G	G	X	F	G
Sodium Hydroxide	G	F	F	F	G	X	G	G	F	X	X	F	X	G
Sodium Hypochlorite	G	X	X	X	G	X	G	G	G	X	F	X	X	F
Sodium Nitrate	G	G	G	F	G	G	G	G	G	F	G	F	G	G

FLUID	HOSE MATERIAL											HOSE END FITTINGS		
	PVC	Nitrile	Vinyl Nitrile	Neoprene	PTFE	Nylon/Nylon II	EPDM	Hypalon <sup>2</sup>	Hytre <sup>1</sup>	Polyurethane	CPE	Brass	Steel	316 Stainless
Sodium Perborate	G	G	G	X	G	G	G	X	G	X	X	F	F	G
Sodium Peroxide	X	F	F	F	G	X	G	F	X	X	X	X	F	F
Sodium Phosphates	G	G	G	F	G	G	G	G	F	G	G	X	F	F
Sodium Silicate	G	G	G	G	G	G	G	G	G	G	G	F	F	G
Sodium Sulfate	G	G	G	G	G	G	G	G	G	G	G	F	F	G
Sodium Sulfide	G	G	G	G	G	G	G	G	G	G	G	X	X	G
Sodium Thiosulfate	G	G	G	G	G	G	G	G	-	G	G	X	X	G
Soybean Oil	F	G	G	F	G	G	F	G	G	G	G	G	G	G
Stannic Chloride	G	G	G	X	G	X	G	G	G	G	X	X	X	X
Steam 450°	X	X	X	X	G	X	G	X	X	X	X	F	X	G
Stearic Acid	F	F	F	F	G	G	F	F	G	G	G	X	X	G
Stoddard Solvent	X	G	G	F	G	G	X	X	G	G	G	G	G	G
Sulfur	F	X	X	X	X	X	F	-	-	-	-	G	X	X
Sulfur Chloride	X	X	X	X	G	F	X	X	-	-	G	X	X	X
Sulfur Dioxide	X	X	X	X	G	X	G	X	X	-	X	X	-	G
Sulfuric Acid (Under 50%)	G	X	X	X	G	X	G	X	X	X	X	X	X	X
Sulfuric Acid (51% to 70%)	G	X	X	X	G	X	F	G	X	X	X	X	X	X
Sulfuric Acid (71% to 95%)	X	X	X	X	G	X	F	F	X	X	X	X	X	X
Sulfuric Acid (96% to 98%)	X	X	X	X	G	X	X	X	X	X	X	X	X	X
Styrene	X	X	X	X	G	G	X	X	X	X	X	G	G	G
Tannic Acid	G	F	F	F	G	X	G	X	G	G	G	F	X	F
Tar	X	F	F	F	G	X	X	X	G	F	G	F	F	G
Tartaric Acid	G	G	G	F	G	X	G	G	G	G	G	F	X	F
Tetrachloroethane	X	X	X	X	G	X	X	X	X	-	-	-	-	-
Tetrahydrofuran (THF)	X	X	X	X	G	X	X	X	-	X	X	-	-	G
Toluene	X	X	X	X	G	G	X	X	X	X	X	G	G	G
Transmission Oil (Petrol. Based)	G	G	G	F	G	G	X	F	G	G	G	G	G	G
Trichloroethane	X	X	X	X	G	X	X	X	X	X	X	G	G	G
Trichloroethylene	X	X	X	X	G	G*	X	X	X	X	X	G	G	G
Tung Oil	-	G	G	F	G	G	X	F	G	X	X	F	G	G
Turpentine	X	F	F	X	G	G	X	X	F	X	F	F	G	G
Urea (Water Solution)	G	X	X	X	G	G	G	G	G	G	X	-	G	G
Varnish	X	X	X	X	G	X	X	-	X	F	G	G	G	G
Vegetable Oil (Non-food)	F	G	G	X	G	G	X	G	-	G	-	G	G	G
Vinyl Acetate	X	X	X	X	G	F	X	X	X	-	F	F	G	G
Water	G	G	G	G	G	G	G	G	G	G	G	G	F	F
Water-Glycol mixture	-	G	G	G	G	G	G	X	X	G	F	G	G	G
Water-Petroleum mixture	-	G	G	F	G	G	X	F	G	X	G	G	F	G
Xylene	X	X	X	X	G	G	X	X	F	X	X	X	G	G
Zinc Chloride	G	G	G	G	X	G	X	G	X	X	X	X	X	X
Zinc Sulfate	G	G	G	G	G	G	G	-	G	X	X	X	X	G

### CODES:

- G** Good resistance. □ In all applications, the cover must be pinpricked.
- F** Fair resistance. 1 Hytre<sup>1</sup> is a registered trademarks of Dupont.
- X** Incompatible. 2 Hypalon<sup>2</sup> is a registered trademarks of Dupont
- No data available.

NOTE: All data given herein is believed to be accurate and reliable, but presented without guarantee, warranty, or responsibility of any kind, express or implied, on our part. Chemical resistance will vary with the wide diversity of possible mixtures and service conditions. It is therefore not possible to give any guarantee whatsoever in individual cases.

\*This chemical has some deteriorative effects, but the elastomer is still adequate for moderate service.

For compatibility of fluids not listed with this chart, contact Technical Support at 1-888-258-0222.

# Working Pressure - Hose Ends

The maximum dynamic working pressure of a hose assembly is the lesser of the rated working pressure of the hose and the end connection used.

## Max Working Pressure (PSI)

HOSE END CONNECTION	CODE LETTER OR NUMBER	HOSE END SIZE									
		-04	-05	-06	-08	-10	-12	-16	-20	-24	-32
Male Pipe (NPTF)	100	5000		4000	4000		4000	4000	3000	2500	2500
Female Pipe (NPTF)	050, 200, 250	5000		4000	4000		2250	2000	1625		
37° JIC seat 3000	C60, 500, 550, 600, 640, 660, 680		5000	5000	4000	4000	4000	4000	4000	3000	3000
SAE Flareless	750	5000	5000	4000	3500	2750	2250	2000	1625		
Ready-Lok*	00S	5000		4000	4000		4000	4000	3000	2500	
FOR-SEAL	A20, A60, E60, J30, L60, S60	6000		6000	6000	6000	6000	6000	4000	4000	
SAE Straight Thread O-Ring Male	P00, R00, R60	5000	5000	5000	4500	4000	4000	4000	3000		
SAE Flange Code 61	G00, G40, G70, H00, H20, H50, H60, H70, H80, H90, K00, K60			5000	3000	5000	5000	4000	3000	3000	
SAE Flange Code 62	D00, D40, D60, N20, N50					5000	5000	5000	5000	5000	
THICK-FLANGE Code 62	K00, K40, K70					5000	5000	5000	5000	5000	

\*Rated pressures are for low surge, static type applications.

## International Pressure Rating Charts

### Maximum Working Pressure (PSI)

HOSE END CONNECTION	CODE LETTER OR NUMBER	HOSE END SIZE									
		-04	-05	-06	-08	-10	-12	-16	-20	-24	-32
Male British Pipe (BSP)	150	5000		4000	4000	3500	4000	3500	2500	2000	2000
Female British Pipe (BSP)	05P, 70P, 350	5000		4000	4000	3500	4000	3500	2500	2000	2000
Female Pipe (JIS) 00L		5000		5000	5000		4000	4000			

### Maximum Working Pressure (PSI)

HOSE END CONNECTION	CODE LETTER OR NUMBER	HOSE END SIZE									
		-06	-08	-10	-12	-15	-18	-22	-28	-35	-42
Din Light	00A, 00C, 00D, 50D	3625	3625	3625	3625	3625	2325	2325	1450	1450	1450

## Temperature vs. Pressure Table for Reinforced PVC Hose

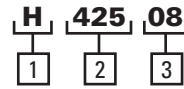
TEMPERATURE		ALLOWABLE % OF ORIGINAL WORK. PRESSURE		TEMPERATURE		ALLOWABLE % OF ORIGINAL WORK. PRESSURE	
°C	°F	2-Spiral	4-Spiral	°C	°F	2-Spiral	4-Spiral
20	68	100%	100%	50	120	40%	53%
25	77	86%	90%	55	131	33%	47%
30	86	75%	81%	60	140	27%	43%
35	95	65%	73%	65	149	23%	40%
40	104	56%	66%	70	158	20%	38%
45	113	47%	59%	75	167	17%	37%
				80	176	15%	35%

### Note:

For additional information on a specific hose, refer to the hose descriptions on pages 36-77.

## Hose

1. All Weatherhead hose is designated with the letter 'H.'<sup>\*</sup>
2. Each hose is assigned a three digit base number from 001-999, i.e., H069, H425, H470, H1571.
3. The last two digits indicate inside hose diameter (I.D.) in sixteenths of an inch. In the example used above 08 is equal to 8/16" – or 1/2" I.D. hose.



### Examples:

	ACTUAL HOSE I.D.	NOMINAL HOSE I.D.	TUBING I.D.	TUBING O.D.
H06906	5/16	3/8	5/16	3/8
H06910	1/2	5/8	1/2	5/8

**Exceptions:** H059, H069, H166, H169, H213, H229, H239, H366, H429, H569 and H757. The I.D. sizes of these hose deviate somewhat from the above standard. The sizing method used on these hoses is based on deducting twice the wall thickness from the O.D. of the connecting tubing to determine the I.D. of the hose. In other words, match the inside diameters rather than the dash sizes when going from tubing to hose. See example 1.

Table 1 shows standard hose size and H069 type hose sizes and dash numbers. Wherever these hoses are listed in this catalog, the size is listed and the dash number is the last two digits of the Catalog Number.

**Table 1 – Catalog Numbers for Hose Sizes**

ACTUAL HOSE I.D.	STANDARD CATALOG NUMBERS	H069 TYPE CATALOG NUMBERS
3/16	03	04
1/4	04	05
5/16	05	06
3/8	06	
13/32	08	
7/16	07	
1/2	08	10
5/8	10	12
3/4	12	
7/8		16
1	16	
1-1/8		20
1-1/4	20	
1-3/8		24
1-1/2	24	
1-13/16		32
2	32	
2-3/8		40
3		48

<sup>\*</sup> GH134W is the only Weatherhead hose that is not designated with the letter "H."



# Numbering Systems

## Hose Ends

Every type of Weatherhead hose end is designed to fit a certain group of hose with limiting dimensions and tolerances. For your convenience the hoses used on each end style are indicated in the hose end catalog listings.

### Crimp

1. The first two digits indicate hose size (I.D.) in sixteenths of an inch.

The exceptions to this are the spiral and truck hose.

Spiral hose ends use the hose base number as a prefix to the size. Example: 47012E.

Truck hose ends use the base number 069 as a prefix to the size. Example: 06908E.

**08 U-2 58**

① ② ③ ④

Refer to the top of the catalog page where these hose ends are detailed for recommended hose types.

- Hose end type and material. Refer to Table 2. This letter is always followed by a dash.
- The first number or letter indicates the style of the end connection. See individual hose end catalog listings or refer to the hose end configuration chart on pages 19-22.
- The last two digits indicate the size of the end connection in sixteenths of an inch. Refer to individual catalog listing for metric and specialty ends.

**425 08 N-2 58**

① ② ③ ④ ⑤

**Table 2 – Standard Hose End and Material Code**

CODE LETTER	COUPLING TYPE	MATERIAL
B	Field Attachable	Brass
C	Crimped	Brass
D	Field Attachable*	Steel*
E	Crimp	Steel
K	Clamp Type	Steel
N	Field Attachable	Steel
P	Crimp	Brass
S	Crimp	Stainless Steel
T	Field Attachable*	Brass
U	Crimp	Steel
Z	Crimp	Steel

\*High Flow Hose Assemblies

### Field Attachable

1. Description of basic hose. The exceptions are the 247 series and clamp-type ends. These ends are designed for use with a variety of hose types.

Refer to the top of the catalog page where these hose ends are detailed for recommended hose types.

2. Hose size (I.D.) in sixteenths of an inch, or as shown in Table 1.

3. Hose end type and material. Refer to Table 2. This letter is always followed by a dash.

4. The first number or letter indicates the style of the end connection. See individual hose end catalog listings or refer to the hose end configuration chart on pages 19-22.

5. The last two digits indicate the size of the end connection in sixteenths of an inch. Refer to individual catalog listing for metric and specialty ends.

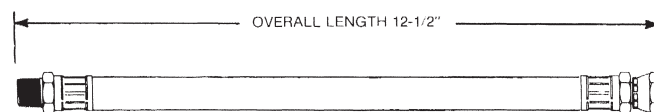
## Hose Assemblies

Catalog numbers for hose assemblies are basically the same as hose ends, except both the ends must be specified as well as the overall length. This process is detailed below:

- Type of desired hose (see hose selection guide pages 5-10 or individual hose listings).
- Hose size (I.D.) in sixteenths of an inch (04 = 4/16" = 1/4"). Exception: 13/32" I.D. hose.
- End style and material. Refer to Table 2 (above).

4-5. Style and size of each hose end. Refer to the individual hose end catalog listings or to Hose End Configuration Chart on pages 18-21 for available styles and sizes. Example: P04 Male Straight Thread O-Ring 1/4", 604 SAE 37° Female Swivel 1/4."

6. Length of assembly. The first three digits specify a length in inches. The last two digits are for fractions of an inch expressed in decimal hundredths (01250 = 12 1/2").



**425 04 U - P04 604 01250**

① ② ③ ④ ⑤ ⑥

### Note:

To determine the hose only length when making a hose assembly, subtract each hose end cut-off factor from the overall hose assembly length. Please see the individual hose end listings for cut-off factor information.

To determine Hose Cut-Off Factors reference page 23.

# Numbering Systems

The chart below is designed to offer quick identification of Weatherhead hose end series. Included in this chart are: base numbers, descriptions, hose end

series, and page number in which the configuration appears.

Catalog numbers may be derived by adding the size

in sixteenths of an inch to the base. Example: 100 series 3/4" male pipe rigid. 3/4" = 12/16" thus 100 + 12 = 112.

 = Denotes Coll-O-Crimp Hose Ends

Part # Suffix	Hose End	Style	009 'B'	057 'B'	100 'B'	105 'B'	057 'P'	338 'B'	069 'D'	'E'	069 'E'	336 'E'	470 'E'	757 'E'	'K'	039 'K'	104 'N'	213 'N'	247 'N'	425 'N'	436 'N'	229 'P'	265 'P'	338 'P'	'S'	570 'S'	069 'T'	'U'	430 'U'	'Z'
00A	Male DIN (Light)	Rigid																											182	
00C	Female DIN (Light)	Swivel																											181	
00D	Female DIN 45° (Light)	Swivel																												
00E	Female Din 24° 45° Tube Elbow	Swivel																											182	
00F	Male DIN (Heavy)	Rigid											110																183	
00K	Female 30° Flare (Komatsu)	Swivel									115																		184	
00L	Female JIS 30° Flare	Swivel								108																			184	
00P	Female Flat Face BSPP	Swivel																												
00S	Ready Lok®	Rigid																											176	
0PW	Pressure Washer	Swivel																											185	
30T	Straight Tube-Metric	Rigid																												
40P	Brit. Std. 60° Cone Parallel Female Pipe 45°	Swivel											112																180	
50C	Female DIN (Heavy)	Swivel																											182	
50D	Female DIN 90° (Light)	Swivel																												
50E	Female DIN 90° (Heavy)	Swivel																											183	
70P	Brit. Std 60° Cone Parallel Female Pipe 90°	Swivel								108			114																180	
050	Female Straight Pipe	Swivel										106																		
100	Male Pipe	Rigid	205						218	106	113	104	109																170	
150	Male Pipe, British Standard Tapered	Rigid																											181	
200	Female Pipe	Rigid										105																		
250	Female Pipe	Swivel																											170	
300	SAE 45° Male	Rigid										105																		
350	Brit. Std 60° Cone Parallel Female Pipe	Swivel								111			110																	180
380	SAE 45° Male 45° Elbow	Rigid																												
400	SAE 45° Female	Swivel							219	108	114	106																	173	
440	SAE 45° Female 90° Tube Elbow Long	Swivel																												
460	SAE 45° Female 90° Tube Elbow Short	Swivel								111	116			121																
480	SAE 45° Female 45° Tube Elbow	Swivel									115			119																
500	JIC 37° Male	Rigid							107	113	105																		173	


APPLICATION DATA  
 LOW & MEDIUM PRESSURE HOSE  
 HIGH PRESSURE HOSE  
 SPECIALTY HOSE  
 ACCESSORIES & ASSEMBLY INSTRUCTIONS  
 ADAPTERS & TUBE HOSE ENDS  
 HOSE ASSEMBLY EQUIPMENT  
 TECHNICAL DATA

# Numbering Systems

 = Denotes Coll-O-Crimp Hose Ends

Part # Suffix	Hose End	Style	HOSE ASSEMBLY EQUIPMENT										ADAPTERS & HOSE ENDS					ACCESSORIES & ASSEMBLY INSTRUCTIONS					SPECIALTY HOSE					HIGH PRESSURE HOSE					LOW & MEDIUM PRESSURE HOSE				
			009 'B'	057 'B'	100 'B'	105 'B'	057 'P'	338 'B'	069 'D'	'E'	069 'E'	336 'E'	470 'E'	757 'E'	'K'	039 'K'	104 'N'	213 'N'	247 'N'	425 'N'	436 'N'	229 'P'	265 'P'	338 'P'	570 'S'	069 'T'	'U'	430 'U'	'Z'								
550	JIC 37° Female 90° Tube Elbow	Swivel																								158											
600	JIC 37° Female	Swivel	205		210			181	108	114	96	110		221	223	227	232	237	241							147	161	171									
640	JIC 37° Female 90° Tube Elbow Long	Swivel						111			99				225		235	239								155	167	173									
660	JIC 37° Female 90° Tube Elbow	Swivel						110	116	99	113				224	228	234	239	241							156		172									
680	JIC 37° Female 45° Tube Elbow	Swivel						110	115	98	112				224	228	234	238	241							153	164	172									
750	Flareless Tube Ermeto®	Rigid						107				140					232									145											
950	Flareless Tube Ermeto® 45°	Rigid																								152											
970	Flareless Tube Ermeto® 90°	Rigid																								156											
A00	Inverted Female	Rigid			210																																
A20	Female For-Seal® 90° Tube Elbow Short	Swivel						112			108	113														157	167	175									
A60	Female For-Seal® 90° Tube Elbow Long	Swivel						112																		158	167	176									
B00	Inverted Male	Swivel			210			219	107	114							226	231								144		177									
B20	Inverted Male Swivel Extended	Swivel															231																				
B40	Inverted Male 45° Tube Elbow	Swivel						109		115																152		177									
B60	Inverted Male 90° Tube Elbow	Swivel						110																		154		177									
C00	Male Pipe 90° Elbow	Rigid			207			207																													
C30	Female Grease Tap	Rigid																										190									
C60	SAE 37° Female 60° Tube Elbow	Swivel																								146	165										
D00	Flange Straight	Code 62										111															163										
D40	Flange 45° Tube Elbow	Code 62										112															166										
D70	Flange 90° Tube Elbow	Code 62										114															168										
E00	Inverted Male 90° Elbow	Swivel								116							228	234																			
E40	Inverted Male 45° Tube Elbow	Swivel															227	233																			
E60	Male For-Seal® Straight	Rigid																								143	160	176									
G00	Flange Straight	Code 61										111							238							150	163	178									
G09	Flange Straight (Komatsu)	Special													224											150	163	185									
G40	Flange 45° Tube Elbow	Code 61										112					224									153	163	178									
G69	Flange 45° Tube Elbow (Komatsu)	Special																								154		185									

# Numbering Systems

 = Denotes Coll-O-Crimp Hose Ends

Part # Suffix	Hose End	Style	009 'B'	057 'B'	100 'B'	105 'B'	057 'P'	338 'B'	069 'D'	'E'	069 'E'	336 'E'	470 'E'	757 'E'	'K'	039 'K'	104 'N'	213 'N'	247 'N'	425 'N'	436 'N'	229 'P'	265 'P'	338 'P'	'S'	570 'S'	069 'T'	'U'	430 'U'	'Z'			
G70	Flange 90° Tube Elbow	Code 61										115					225			239								158	168	179			
G99	Flang 90° Tube Elbow	Special																											185				
H00	Flange 22-1/2" Tube Elbow	Code 61																										164	179				
H20	Flange 30" Tube Elbow	Code 61																										164					
H50	Flange 60" Tube Elbow	Code 61																										169					
H60	Flange 67-1/2" Tube Elbow	Code 61																										169	179				
H70	Flange 100" Tube Elbow	Code 61																										169					
H80	Flange 110" Tube Elbow	Code 61																										169					
H90	Flange 135" Tube Elbow	Code 61																										169					
J00	Male Pipe	Swivel							92	106																	143	160	171				
J33	Female For-Seal® 90° Tube Elbow Med.	Swivel																									157						
J63	Female For-Seal® Straight	Swivel																															
K00	Flange Straight "Thick Flange"	Code 62																															
K30	Flange 45" Tube Elbow "Thick Flange"	Code 62																															
K60	Flange 90" Tube Elbow "Thick Flange"	Code 62																															
L00	Banjo (Ford Tractor)	Special																															
L10	JIC 37" Female 30" Tube Elbow	Swivel																										151					
L40	Male 45" Tube Elbow O-Ring Port	Swivel																										151					
L60	Female 45" For-Seal® Tube Elbow	Swivel								110																		153					
M00	Male Pipe 90° Elbow	Swivel										107																154	164	175			
N20	Split Flange 30" Tube Elbow	Code 62											111																				
N50	Split Flange 60" Tube Elbow	Code 62											113																				
N60	Split Flange 67 1/2" Tube Elbow	Code 62											113																				
P00	Male Straight Thread O-Ring	Rigid										105																146	160	174			
P50	Male Pipe, Brit. Std. 60° Cone Parallel	Rigid																										142	159	181			
R00	Male Straight Thread O-Ring	Swivel																										145					
R60	Male Straight Thread O-Ring 90° Elbow	Swivel																										158					
S60	Female For-Seal® Straight	Swivel								109																		149	162	174			
T00	Straight Tube	Rigid																										151					
T50	Straight Tube-Long	Rigid																															

# Numbering Systems

 = Denotes Coll-O-Crimp Hose Ends

Part # Suffix	Hose End	Style	TECHNICAL DATA	HOSE ASSEMBLY EQUIPMENT	ADAPTERS & HOSE ENDS	ACCESSORIES & ASSEMBLY INSTRUCTIONS	SPECIALTY HOSE	HIGH PRESSURE HOSE	LOW & MEDIUM PRESSURE HOSE
W00	BumpedTube O-Ring Male	Rigid							
W40	BumpedTube O-Ring Female 45° Tube Elbow	Swivel							
W60	BumpedTube O-Ring Male 90° Tube Elbow	Rigid							
X00	SAE 45° Flare Male 90° Elbow	Rigid							
X20	30° Flare Female (P.T.T. Thread for Diesel Applications)	Swivel				114	227		
X60	SAE 37° Male 90° Elbow	Rigid							155
X80	Compressor Discharge (PTFE Hose)	Flange				109			
Y00	Hose Mender	Rigid			211				
Y20	Male Connector	Rigid							
Y30	Male Connector w/ Spring Guard	Rigid							
Y33	Hose Splicer	Special							
Y50	Air Brake Connection Tube	Rigid				107	232		
Y60	Air Brake Slider	Rigid						158	
Y70	Air Brake	Swivel						159	
Y80	Female Connector	Swivel							
Z00	BumpedTube O-Ring Male	Swivel							
Z20	BumpedTube O-Ring 45° Tube Elbow	Swivel							
Z40	BumpedTube O-Ring Female	Swivel							
Z50	BumpedTube O-Ring Female w/Service Port	Swivel							
Z60	BumpedTube O-Ring Male 90° Tube Elbow	Swivel							
Z80	BumpedTube O-Ring Female 90° Tube Elbow	Swivel							
Z90	BumpedTube O-Ring 90° Tube Elbow w/Service Port	Swivel							

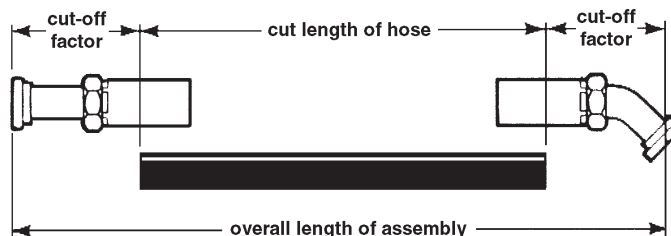


# Skiving Procedure

## Hose Cut-Off Factor

Select the proper hose and ends and cut hose to length. The cut length of the hose is determined by subtracting the cut-off factor for each

end from the overall length of the assembly. See individual catalog listings for hose cut-off factors.



## Skiving Weatherhead Hose (When using H470 hose with 470 'E' and 570 'S' series hose ends)

The outer protective covering of wire-wrapped hose must be carefully removed (skived) to the wire to allow proper installation of crimped hose ends and to assure the best possible hose service.

When skiving a hose, it is advisable to skive a practice piece of hose to determine:

- That covering is properly removed and that the hose wire-wrap reinforcements are not displaced, damaged or cut in the process.
- The hose should be checked for correct skive length.
- The hose should be checked for 100% cover removal.

## HOSE H470

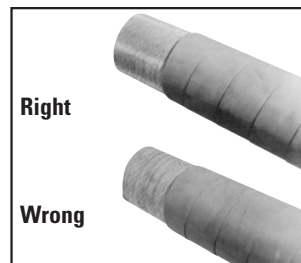
HOSE I.D.	SKIVE LENGTH	CUTTING HEAD
1/2	1-1/4	T-410-50
3/4	1-13/16	T-410-52
1	2-1/8	T-410-53
1-1/4	2-7/8	T-410-54
1-1/2	3-1/8	T-410-55
2	3-3/8	T-410-56
T-410-36 T-410-37	Handle Replacement cutting blades	

## Hand-Tool Method

Skiving heads are shipped preset for proper skive length. Depending on hose cover thickness, the skiving blade may require adjustment. The skiving blade may need periodic adjustment. Directions are packed with the skive tool.

1. Clamp hose in a vise or other suitable holding device. Be sure not to clamp so tight as to damage hose.
2. Lubricate hose I.D. and skiving tool mandrel with oil/soap solution.
3. Carefully align mandrel with hose I.D.; apply steady pressure and start mandrel into hose.

4. When cutting head contacts hose end, slowly rotate skiving tool clockwise. Cutting head will remove hose covering while threading itself to a preset skive length when bottomed against hose end. Continue to rotate skiving tool clockwise to remove excess rubber from wire wrap while slowly pulling tool from hose. (See illustration to right.)
5. Wire-brush hose end to remove any remaining cover from wire wrap.
6. Inspect skive for 100% cover removal.



### ⚠ IMPORTANT

Clean hose I.D. by brushing, blowing compressed air, or by flushing. By doing so, contaminants are kept out of operating systems.

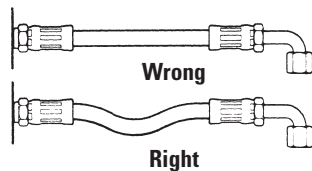
### ⚠ WARNING

Failure to completely remove the cover may result in serious personal injury or property damage due to hose ends blowing off, hose leakage, and other failures.

# Hose Installation

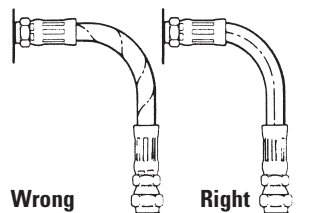
## 1. Provide for length change.

In straight hose installations, allow enough slack in the hose line to provide for changes in length that will occur when pressure is applied. This change in length can be from +2% to -4%.



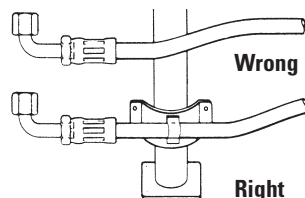
## 2. Avoid twisting and orient properly.

Do not twist hose during installation. This can be determined by the printed layline on the hose. Pressure applied to a twisted hose can cause hose failure or loosening of connections.



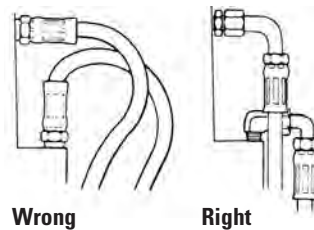
## 3. Protect from hazardous environment.

Keep hose away from hot parts. High ambient temperature will shorten hose life. If you can not route it away from the heat source, insulate it. (See Spring Guards page 78.)



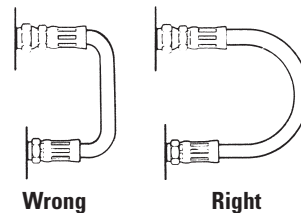
## 4. Avoid mechanical strain.

Use elbows and adapters in the installation to relieve strain on the assembly and to provide easier and neater installations that are accessible for inspection and maintenance.



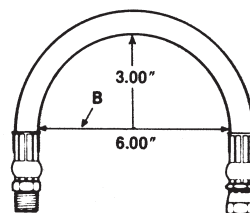
## 5. Use proper bend radius.

Keep the bend radius of the hose as large as possible to avoid collapsing of the hose and restriction of flow. Follow catalog specs on minimum bend radii.



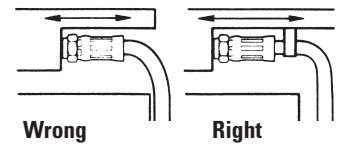
## 6. Use proper bend radius (cont'd).

Minimum bend radius is measured on the inside bend of the hose. To determine minimum bend, divide the total distance between ends (B length) by 2. For example, B=6, minimum bend radius=3.



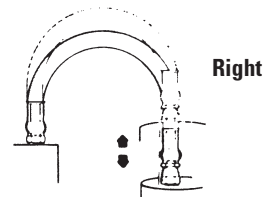
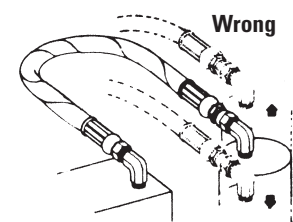
## 7. Secure for protection.

Install hose runs to avoid rubbing or abrasion. Use Weatherhead Hose Clamps to support long runs of hose or to keep hose away from moving parts. It is important that the clamps not allow the hose to move. This movement will cause abrasion and premature hose failure. See Hose Clamps pages 103-105.



## 8. Avoid improper hose movement.

Make sure relative motion of the machine components produces bending rather than twisting of the hose. Hose should be routed so that the flex is in the same plane as the equipment movement.



**⚠** Refer to safety information regarding Coll-O-Crimp hose installation on page 4.

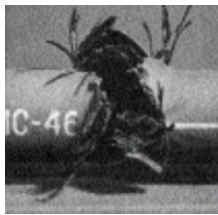
# Hose Failure Analysis

**1. Problem:** Hose has burst. Rusted wire, torn and rotted fibers are present. This was caused by abrasion damage. Exposure to elements will accelerate the deterioration.



**Solution:** Route the hose so it does not rub against other objects while under pressure. Suggest using clamps and spring guards to protect.

**2. Problem:** Hose has burst on outside bend of hose. This hose has been bent past minimum bend radius. It has also taken a set in a bent position due to a kink in the inner tube or reinforcement.



**Solution:** Check minimum bend radius for hose. Refer to page 24 to determine minimum bend radius. Utilize bend tube elbows if possible.

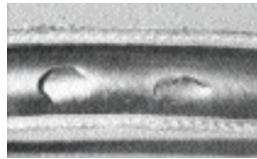
**3. Problem:** Excessive heat. Hose cover or inner tube is brittle and cracked and is not flexible at room temperature.



**Solution:** Use hose with higher temperature rating or protect from heat with shields. Examine entire system for potential heat source. For example: undersized lines, excessively long lines, too many

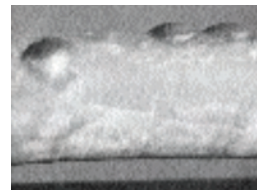
bends and/or fittings, reservoir low on oil.

**4. Problem:** Incompatible fluid. Portions of the inner tube are swollen and/or washed out. Cover may also be swollen.



**Solution:** Make sure hose used is compatible with fluid being used. Refer to chemical compatibility chart.

**5. Problem:** Hose cover blistered and pulling away from carcass. Gas has effused through the tube and become trapped under the cover.



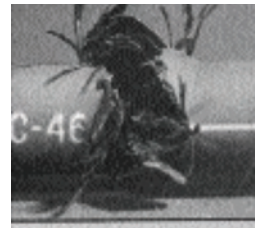
**Solution:** Use perforated, pin-pricked or fiber cover hose.

**6. Problem:** End fitting blown off. Im-proper assembly procedures, incorrect hose end series, mixing competitor's components and Weatherhead components.



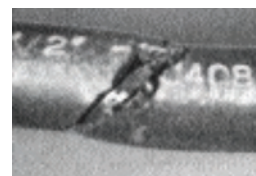
**Solution:** Refer to hose assembly procedures and Hose End and Tool Selector Chart in this catalog. NEVER intermix components. Refer to page 4 for important safety information.

**7. Problem:** Hose has burst cleanly with no random wire breakage and cover abrasion. This condition is caused by excessive pressure.



**Solution:** Use hose with higher pressure rating. Check pressure relief for damage or improper setting.

**8. Problem:** Hose has burst. Hose is permanently twisted and kinked. Many broken wires in failure area.



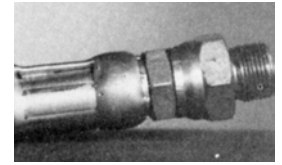
**Solution:** Hose twisting can reduce hose life 90%. Tighten ends properly. Reroute hose to eliminate twist. Route hose to flex in only one plane. Use hose layline for a guide.

**9. Problem:** End fitting blown off. This condition has been caused by improper skiving. Any remaining cover on hose in the crimping area will prohibit proper end retention.



**Solution:** Make sure hose is properly skived. Refer to page 23 for hose skiving instructions.

**10. Problem:** Hose end appears to have been pinched on one side.



**Solution:** This is an early sign of collet wear. Replace collet. New Weatherhead collets offer the feature of being rebuildable. See the tool section chart in the back of this catalog.

## ⚠ WARNING

Selection of Hose: Selection of the proper hose for the application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to selection of hose for application can result in serious bodily injury or property damage. In order to avoid serious bodily injury or property damage resulting from selection of the wrong hose, you should carefully review the information in this catalog. Refer to Selection of Hose and Hose Installation (pages 5-10 and page 24) for additional safety information. Hose failures can be caused by conditions such as excessive pressures, fluid incompatibility, extreme temperatures, and many more. Eaton has illustrated above some of the more common failures. If the conditions you are experiencing are not listed, please contact your Eaton representative for further assistance.

# Qualified Hoses for Marine Applications

## SAE J1942

HOSE NUMBER	APP CODE	HOSE ID	MAWP (PSI)	HOSE ENDS	FIRE SLEEVE REQUIRED
H009	H	1/4	400	009 'H'	--
H009	H	5/16	400	'E', 009 'H'	--
H009	H	3/8	400	'E', 009 'H'	--
H009	H	1/2	400	'E', 009 'H'	--
H017	H	1/4	1250	'U'	--
H017	H	3/8	1125	'U'	--
H017	H	1/2	1000	'U'	--
H017	H	3/4	750	'U'	--
H017	H	1	560	'U'	--
H017	H	1-1/4	375	'U'	--
H039	H	3/4	300	'U', 'S'	--
H039	H	1	250	'U', 'S'	--
H039	H	1-1/4	200	'U', 'S'	--
H039	H	1-1/2	150	430 'U'	--
H039	H	2	100	430 'U'	--
H059	F	3/16	500	069 'E', 229 'P', 247 'N'	--
H059	F	1/4	500	069 'E', 247 'N'	--
H059	F	5/16	500	069 'E', 229 'P', 247 'N'	--
H059	F	13/32	500	069 'E', 229 'P', 247 'N'	--
H059	F	1/2	500	069 'E', 229 'P', 247 'N'	--
H059	F	5/8	500	069 'E', 247 'N'	--
H059	F	7/8	500	069 'E', 247 'N'	--
H104	H	1/4	2750	'U', 104 'N', 'S', 'Z'	--
H104	H	3/8	2250	'U', 104 'N', 'S', 'Z'	--
H104	H	1/2	2000	'U', 104 'N', 'S', 'Z'	--
H104	H	5/8	1500	'U', 'Z'	--
H104	H	3/4	1250	'U', 104 'N', 'S', 'Z'	--
H104	H	1	1000	'U', 104 'N', 'S', 'Z'	--
H104	H	1-1/4	625	'U', 'S', 'Z'	--
H104*	F	1/4	500	'U', 104 'N', 'S', 'Z'	A6912
H104*	F	3/8	500	'U', 104 'N', 'S', 'Z'	A6914
H104*	F	1/2	500	'U', 104 'N', 'S', 'Z'	A6916
H104	F	5/8	500	'U', 'Z'	--
H104	F	3/4	500	'U', 104 'N', 'S', 'Z'	--
H104	F	1	500	'U', 104 'N', 'S', 'Z'	--
H104	F	1-1/4	500	'U', 'S', 'Z'	--
H145	H	1/4	3000	'U', 'Z', 'S'	--
H145	H	3/8	3000	'U', 'Z', 'S'	--
H145	H	1/2	3000	'U', 'Z', 'S'	--
H145	H	5/8	3000	'U', 'Z'	--
H145	H	3/4	3000	'U', 'S'	--
H145	H	1	3000	430 'U', 'S'	--
H190	H	1/4	3265	'Z'	--
H190	H	3/8	2610	'Z'	--
H190	H	1/2	2320	'Z'	--
H190	H	5/8	1885	'Z'	--
H190	H	3/4	1575	'Z'	--
H190	H	1	1275	'Z'	--
H245	H	1/4	5000	'U', 'S', 'Z'	--
H245	H	3/8	4000	'U', 'S', 'Z'	--
H245	H	1/2	3500	'U', 'S', 'Z'	--
H245	H	5/8	2750	'U', 'Z'	--
H245	H	3/4	2250	'U', 'S', 430 'U', 'Z'	--

HOSE NUMBER	APP CODE	HOSE ID	MAWP (PSI)	HOSE ENDS	FIRE SLEEVE REQUIRED
H245	H	1	2000	'U', 'S', 430 'U', 'Z'	--
H245	H	1-1/4	1625	'U', 'S', 430 'U', 'Z'	--
H245*	F	1/4	500	'U', 'S', 'Z'	A6912
H245*	F	3/8	500	'U', 'S', 'Z'	A6914
H245*	F	1/2	500	'U', 'S', 'Z'	A6916
H245*	F	5/8	500	'U', 'Z'	A6920
H245*	F	3/4	500	'U', 'S', 'Z'	A6924
H245*	F	1	500	'U', 'S', 'Z'	A6928
H245*	F	1-1/4	500	'U', 'S', 'Z'	A6936
H280	H	1/4	5600	'Z'	--
H280	H	3/8	4800	'Z'	--
H280	H	1/2	4000	'Z'	--
H280	H	5/8	3630	'Z'	--
H280	H	3/4	3120	'Z'	--
H280	H	1	2350	'Z'	--
H290	H	1/4	5800	'Z'	--
H290	H	3/8	4800	'Z'	--
H290	H	1/2	4000	'Z'	--
H290	H	5/8	3630	'Z'	--
H290	H	3/4	3120	'Z'	--
H290	H	1	2350	'Z'	--
H425	H	1/4	5000	'U', 'S', 'Z'	--
H425	H	3/8	4000	'U', 'S', 425 'N', 'Z'	--
H425	H	1/2	3500	'U', 'S', 425 'N', 'Z'	--
H425	H	5/8	2750	'U', 'Z'	--
H425	H	3/4	2250	'U', 'S', 430 'U', 425 'N', 'Z'	--
H425	H	1	2000	'U', 'S', 430 'U', 425 'N', 'Z'	--
H425	H	1-1/4	1625	'U', 'S', 430 'U', 425 'N', 'Z'	--
H425	H	1-1/2	1250	430 'U', 'Z'	--
H425	H	2	1125	430 'U', 425 'N', 'Z'	--
H425*	F	1/4	500	'U', 'S', 425 'N', 'Z'	A6912
H425*	F	3/8	500	'U', 'S', 425 'N', 'Z'	A6916
H425*	F	1/2	500	'U', 'S', 425 'N', 'Z'	A6920
H425*	F	5/8	500	'U', 'Z'	A6920
H425*	F	3/4	500	'U', 'S', 425 'N', 'Z'	A6924
H425*	F	1	500	'U', 'S', 425 'N', 'Z'	A6928
H425*	F	1-1/4	500	'U', 'S', 425 'N', 'Z'	A6936
H430	H	3/4	4000	430 'U'	--
H430	H	1	4000	430 'U'	--
H430	H	1-1/4	3000	430 'U'	--
H430	H	1-1/2	2500	430 'U'	--
H430	H	2	2500	430 'U'	--
H470	H	3/4	5000	470 'E'	--
H470	H	1	5000	470 'E'	--
H470	H	1-1/4	5000	470 'E'	--
H569	H	3/16	3000	069 'E'	--
H569	H	5/16	2250	069 'E', 247 'N'	--
H569	H	13/32	2000	069 'E', 247 'N'	--
H569	H	1/2	1750	069 'E', 247 'N'	--
H569	H	5/8	1500	069 'E', 247 'N'	--
H569	H	7/8	800	069 'E'	--
H569	H	1-1/8	625	069 'E'	--

### Application Codes:

MAWP - Maximum Allowable Working Pressure

H - Hydraulic service

F - Fuel and Lube service

\*Fire sleeve required for fuel applications

# Qualified Hoses for the American Bureau of Shipping

ABS Steel Vessel Rules 2000 (4-6-2/5.7)  
Intended Service: Fuel Oil, Hydraulic Fluid and Water Systems for Marine and Offshore Applications

HOSE NUMBER	HOSE ID	MAWP (PSI)	HOSE END SERIES	FIRE SLEEVE
H03912	3/4	300	'U', 'S', 039 'K', 'Z'	A6924
H03916	1	250	'U', 'S', 039 'K', 'Z'	A6928
H03920	1-1/4	200	'U', 'S', 039 'K', 'Z'	A6932
H03924	1-1/2	150	430 'U'	A6936
H03932	2	100	430 'U'	A6948
H05904	3/16	500	247 'N', 229 'P', 069 'E'	--
H05905	1/4	500	247 'N', 069 'E'	--
H05906	5/16	500	247 'N', 229 'P', 069 'E'	--
H05908	13/32	500	247 'N', 229 'P', 069 'E'	--
H05910	1/2	500	247 'N', 229 'P', 069 'E'	--
H05912	5/8	500	247 'N', 069 'E'	--
H05916	7/8	500	229 'P', 069 'E'	--
H06904	3/16	3000	069 'E', 247 'N'	--
H06905	1/4	500	069 'E', 247 'N'	--
H06906	5/16	2250	069 'E', 247 'N'	--
H06908	13/32	2000	069 'E', 247 'N'	--
H06910	1/2	1750	069 'E', 247 'N'	--
H06912	5/8	1500	069 'E', 247 'N'	--
H06916	7/8	800	069 'E', 247 'N', 069 'D'	--
H06920	1-1/8	625	069 'E'	--
H06924	1-3/8	500	069 'E'	--
H06932	1-13/16	350	069 'E'	--
H10404	1/4	2750	'U', 'S', 104 'N', 'Z'	--
H10406	3/8	2250	'U', 'S', 104 'N', 'Z'	--
H10408	1/2	2000	'U', 'S', 104 'N', 'Z'	--
H10410	5/8	1500	'U', 'Z'	--
H10412	3/4	1250	'U', 'S', 104 'N', 'Z'	--
H10416	1	1000	'U', 'S', 104 'N', 'Z'	--
H10420	1-1/4	625	'U', 'S', 'Z'	--
H24504	1/4	5000	'U', 'S', 'Z'	--
H24506	3/8	4000	'U', 'S', 'Z'	--
H24508	1/2	3500	'U', 'S', 'Z'	--
H24510	5/8	2750	'U', 'Z'	--
H24512	3/4	2250	'U', 'S', 'Z'	--
H24516	1	2000	'U', 'S', 'Z'	--
H24520	1-1/4	1625	'U', 'S', 'Z'	--

HOSE NUMBER	HOSE ID	MAWP (PSI)	HOSE END SERIES	FIRE SLEEVE
H42504	1/4	5000	'U', 'S', 425 'N', 'Z'	--
H42506	3/8	4000	'U', 'S', 425 'N', 'Z'	--
H42508	1/2	3500	'U', 'S', 425 'N', 'Z'	--
H42510	5/8	2750	'U', 'Z'	--
H42512	3/4	2250	'U', 'S', 425 'N', 'Z'	--
H42516	1	2000	'U', 'S', 425 'N', 'Z'	--
H42520	1-1/4	1625	'U', 'S', 425 'N', 'Z'	A6936
H42524	1-1/2	1250	430 'U', 425 'N', 'Z'	--
H42532	2	1125	430 'U', 425 'N', 'Z'	--
H43008	1/2	4000	430 'U'	--
H43012	3/4	4000	430 'U'	--
H43016	1	4000	430 'U'	--
H43020	1-1/4	3000	430 'U'	--
H43024	1-1/2	2500	430 'U'	--
H43032	2	2500	430 'U'	--
H47012	3/4	5000	570 'S'	--
H47016	1	5000	570 'S'	--
H47020	1-1/4	5000	570 'S'	--
H47024	1-1/2	5000	570 'S'	--
H47032	2	5000	570 'S'	--
H56906	5/16	2250	069 'E'	--
H56908	13/32	2000	069 'E'	--
H56910	1/2	1750	069 'E'	--
H56912	5/8	1500	069 'E'	--
H56916	7/8	800	069 'E'	--
H56920	1-1/8	625	069 'E'	--

**MAWP** - Maximum Allowable Working Pressure

**Note:**

Restrictions on taper thread joints in hydraulic systems for steering gear, controllable pitch propellers, or other systems associated with propulsion or propulsion control are applicable.

See SVR 2000 4-6-2/5.5.5.

Split flanges, such as 570 'S' Series, are not permitted in steering gear systems.

Each hose may only utilize end fitting series listed above.

These products/models are covered under ABS Product Design Assessment Certificate #00-HS191306-PDA dated 15/Dec/2000. It will remain valid for five years from date of issue or until rules or specifications used in the assessment are revised (whichever occurs first).

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA



# Technical Torque Specifications

## JIC 37° and SAE 45° Flare Fittings For Zinc Plated Carbon without Thread Sealant or Lubrication

SIZE	FRACTION	DECIMAL	LB./IN.	LB./FT.	NEWTON METERS	ADDT'L TURNS OF HEX-FLATS**
- 04	1/4"	0.250	130-150	11-12	15-17	2
- 05	5/16"	0.312	165-195	14-16	19-22	2
- 06	3/8"	0.375	235-265	20-22	27-30	1-1/4
- 08	1/2"	0.500	525-575	44-48	59-65	1
- 10	5/8"	0.625	600-700	50-58	68-79	1
- 12	3/4"	0.750	950-1050	79-88	107-119	1
- 16	1"	1.000	1400-1500	117-125	158-170	1
- 20	1-1/4"	1.250	1900-2100	158-175	215-237	1
- 24	1-1/2"	1.500	2250-2550	188-213	254-288	1
- 32	2"	2.000	3000-3400	250-283	339-384	1

\*\* Additional turns of Hex-Flats required after finger tightening.

THIS IS THE RECOMMENDED METHOD OF TIGHTENING BOTH 37° SWIVEL and 45° FLARE FITTINGS.

## Straight Thread O-Ring Fittings For Zinc Plated Steel without Sealant or Lubrication

SIZE	FRACTION	DECIMAL	LB./IN.	LB./FT.	NEWTON METERS
- 04	1/4"	0.250	156-180	13-15	18-20
- 05	5/16"	0.312	204-228	17-19	23-26
- 06	3/8"	0.375	264-288	22-24	30-33
- 08	1/2"	0.500	480-516	40-43	54-58
- 10	5/8"	0.625	516-576	43-48	58-65
- 12	3/4"	0.750	816-900	68-75	92-102
- 16	1"	1.000	1344-1476	112-123	152-167
- 20	1-1/4"	1.250	1752-1932	146-161	198-218
- 24	1-1/2"	1.500	1848-2040	154-170	209-231
- 32	2"	2.000	2616-2880	218-240	296-325

## For-Seal® Fittings For Zinc Plated Steel without Thread Sealant or Lubrication

SIZE	FRACTION	DECIMAL	For-Seal Swivel Nut Fitting			O-Ring Boss Straight Thread O-Ring Locknut		
			LB./IN.	LB./FT.	NEWTON METERS	LB./IN.	LB./FT.	NEWTON METERS
- 04	1/4"	0.250	120-144	10-12	14-16	168-192	14-16	19-22
- 06	3/8"	0.375	216-240	18-20	24-27	288-312	24-26	33-35
- 08	1/2"	0.500	384-420	32-35	43-48	600-720	50-60	68-81
- 10	5/8"	0.625	552-600	46-50	62-68	864-960	72-80	98-109
- 12	3/4"	0.750	780-840	65-70	88-95	1500-1620	125-135	170-183
- 16	1"	1.000	1104-1200	92-100	125-136	2400-2640	200-220	271-298
- 20	1-1/4"	1.250	1500-1680	125-140	170-190	2520-3360	210-280	285-380
- 24	1-1/2"	1.500	1800-1980	150-165	203-224	3240-4320	270-360	366-488

### TORQUE VALUE CONVERSION CHART

Lb. / Inch	=	Pound Foot (Lb./Ft.) x 12	Lb. / Foot	=	Pound Inch (Lb./In.) x 0.083
Lb. / Inch	=	Newton Meter x 8.850	Lb. / Foot	=	Newton Meter x 0.737
Newton Meter	=	Pound Inch (Lb./In.) x 0.113	Newton Meter	=	Pound Foot (Lb./Ft.) x 1.356

**Note:** See introduction page of each catalog section for specific ratings. Please consult Eaton for other material torque ratings.

# Tubing Selection



## WARNING

Refer to safety information regarding tubing selection on page 4.

To select tubing for a particular installation, two factors must be determined:

- 1.) Tubing Type - material and construction and
- 2.) Size - inside diameter (I.D.) and wall thickness. Information listed below will aid in your tubing selection.

## Tubing Types

Commercial tubing is available in a wide variety of materials, types of construction and quality. Each is best suited for certain specific applications.

**Steel Tubing** - Seamless SAE 1010 fully annealed and SAE welded types suitable for bending and flaring. This is the only tubing material approved without restrictions by SAE standards.

**Stainless Steel Tubing** - Both seamless \*18-8 fully annealed and welded types suitable for bending and flaring. Stainless steel tubing is recommended for use with very high pressures and where large diameter tubing is required. It is also suited for many applications where corrosion is a problem. \*(302, 303 and/or 304)

**Aluminum Tubing** - Seamless annealed is approved by SAE for low pressure applications.

**Copper Tubing** - Seamless fully annealed coils and fully annealed or quarter-hard straight lengths can be used for systems that do not use petroleum based fluids (copper acts as an oil-oxidation catalyst, causing sludge). Copper also tends to work harden when flared or bent and has poor resistance to vibration. Therefore, the use of copper tubing is limited to low-pressure stationary applications and air circuits.

**Special Alloy Tubing** - May be required for specific corrosion problems. Information on these applications can be obtained from your tubing supplier or from tubing manufacturers.

## Tubing Size

The two variables in tubing size are the inside diameter (ID) and the wall thickness. Each of these is dependent upon a number of factors.

**Inside Diameter** - The tubing I.D. will determine the flow and velocity of the fluid in the system. Flow is the volume of fluid that is to be moved through the line to perform a given job within a specified time. Flow rate is expressed in gallons per minute (gpm). Velocity is the rate of speed at which the fluid passes through the line. It is expressed in feet per second (fps). With a given flow rate, the velocity will increase as the inside diameter of the tubing decreases. To determine the appropriate tubing I.D. for specific flow rate and velocity, refer to the Velocity vs. Flow chart on page 31.

**Wall Thickness** - The required wall thickness of the tubing depends upon operating pressure, safety factor, temperatures, and tubing material. Operating Pressure is the pressure of the fluid in the system. It is expressed in pounds per square inch (psi). Safety Factor is a multiplier applied to the wall thickness that compensates for additional mechanical strains and hydraulic shocks to which the tubing may be subjected during operation. To determine the appropriate wall thickness, refer to the data on pages 32-35.

## Pressure Drop

Total pressure supplied to a line must equal usable pressure (or output) plus the pressure that is lost through fluid transmission, which is referred to as pressure drop. These pressure drops cause loss of energy and should be kept to a minimum. Elements which cause pressure drop in the transmission of fluids include sudden enlargements or contractions, bends, fittings and valves. Mathematical analysis of pressure drop, although possible, is not precise because of the interrelationship of factors such as fluid velocity, density, flow area and friction coefficients. Therefore, to obtain optimum efficiency, the system (or the questionable portions of the system) should be mocked-up to obtain empirical pressure drop data.

# Tubing Selection

## ⚠ WARNING

Refer to safety information regarding tubing selection on page 4.

Following is a typical problem that illustrates, step by step, the procedure for determining tube size.

Select 1010 steel tubing with the appropriate I.D. and wall thickness for the following conditions:

Flow — 5 gpm  
Velocity — not to exceed 10 fps  
Pressure — 2000 psi  
Safety Factor — 4:1

### Solution:

1. Using the Flow/Velocity chart on Page 30, follow the horizontal flow line (5 gpm) until it intersects the vertical velocity line (10fps). From this point, follow the diagonal line upward to get the required tube I.D. (.444). If the horizontal flow line and the vertical velocity line intersect between two diagonal lines, normally the larger inside diameter would be selected since it would mean less velocity.

2. Refer to the chart of Standard Size Hydraulic Tubing, at right. Note that .444 I.D. tubing is not listed. If you want to use standard tubing, select one with a larger I.D. Do not select a smaller size since this would increase the velocity to over the 10 fps limit. Therefore, by going to the next largest size, you would select the 5/8" O.D. tubing having an I.D. of .459 and a wall thickness of .083.

3. To determine whether this tubing will meet the pressure and safety factor requirements, refer to the Recommended Wall Thickness data on pages 31-34. For 5/8" O.D. tubing at 2000 psi, the chart for 1010 steel indicates that the minimum wall thickness with a safety factor of 4:1 is .04545. Since you have selected a tubing with a .083 wall, this would easily fulfill the requirements. However, for savings on weight and cost, you can select another tubing with a thinner wall that will still meet the performance requirements. Therefore, refer again to the chart on standard size tubing and select a tubing with a wall thickness closer to the minimum requirements. This would be the 5/8" O.D. tubing with a .527 I.D. and a .049 wall. This tubing will handle the pressure requirements of 2000 psi with a safety factor of 4:1, and also provides the required flow while keeping the velocity within the 10 fps limitation.

Tube O.D.	Tube I.D.	Wall	Tube O.D.	Tube I.D.	Wall
1/8"	.055	.035	3/4"	.584	.083
	.061	.032		.606	.072
	.065	.030		.620	.065
	.069	.028		.634	.058
3/16"	.117	.035		.652	.049
	.123	.032		.680	.035
	.127	.030	7/8"	.657	.109
1/4"	.120	.065		.685	.095
	.134	.058		.709	.083
	.152	.049		.731	.072
	.166	.042		.745	.065
	.180	.035		.759	.058
	.190	.030		.777	.049
5/16"	.182	.065	1"	.760	.120
	.196	.058		.782	.109
	.214	.049		.810	.095
	.228	.042		.834	.083
	.242	.035		.856	.072
	.248	.032		.870	.065
3/8"	.245	.065		.884	.058
	.259	.058		.902	.049
	.277	.049	1-1/4"	.982	.134
	.291	.042		1.010	.120
	.305	.035		1.032	.109
	.311	.032		1.060	.095
1/2"	.310	.095		1.084	.083
	.334	.083		1.106	.072
	.358	.072		1.120	.065
	.370	.065		1.134	.058
	.384	.058		1.152	.049
	.402	.049	1-1/2"	1.232	.134
	.416	.042		1.260	.120
	.430	.035		1.282	.109
.436	.032		1.310	.095	
5/8"	.435	.095		1.334	.083
	.459	.083		1.356	.072
	.481	.072		1.370	.065
	.495	.065	2"	1.732	.134
	.509	.058		1.760	.120
	.527	.049		1.782	.109
	.541	.042		1.810	.095
	.555	.035		1.834	.083
3/4"	.532	.109		1.856	.072
	.560	.095		1.870	.065

# Tubing Selection

## To Find the Required Tube I.D. Flow-20 gpm • Velocity-9 fps

Follow horizontal flow line (20 gpm) until it intersects vertical velocity line (9 fps). From this point follow diagonal line to get required Tube I.D. - (.944).

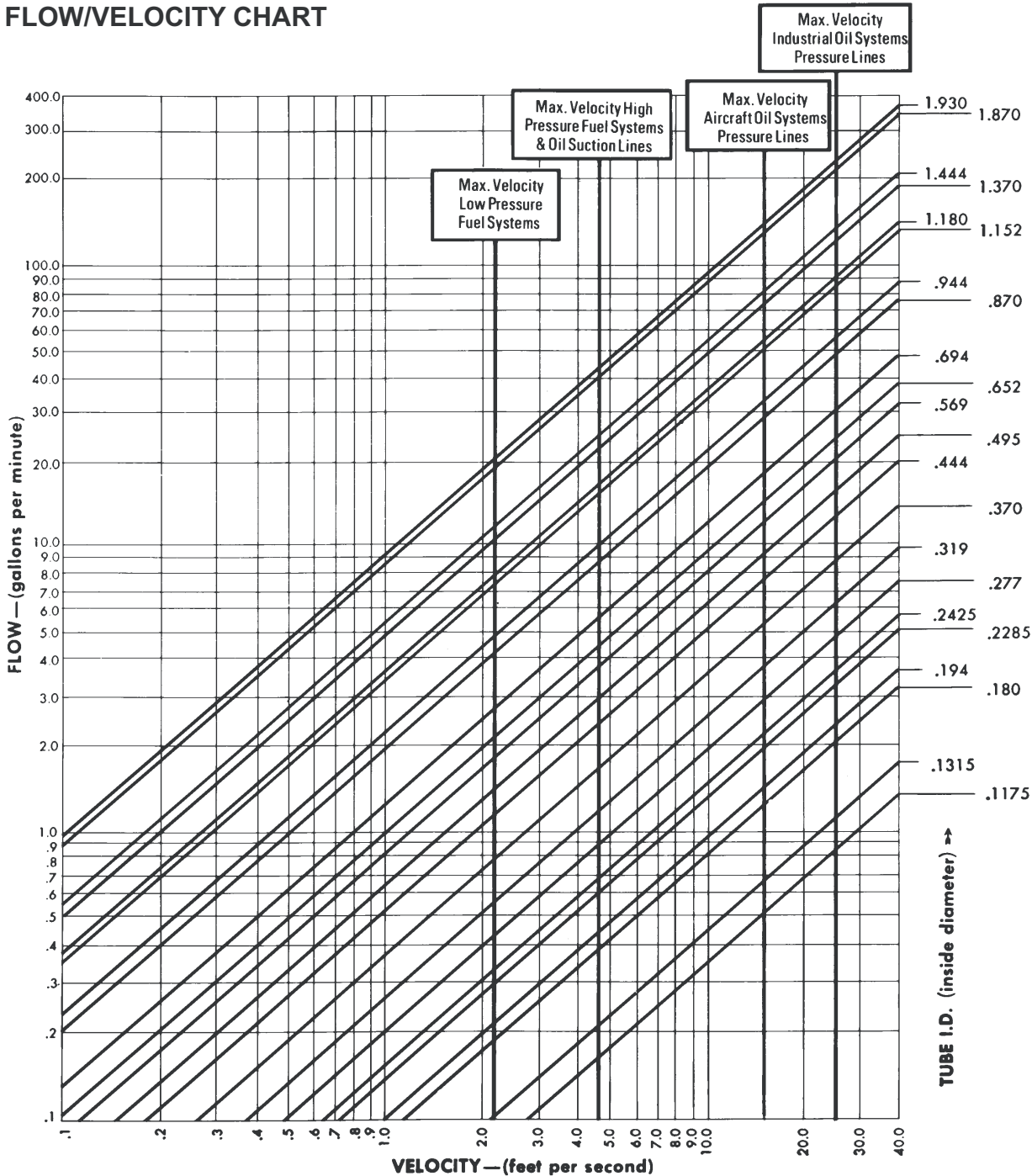
## To Find Permissible Flow Velocity-15 fps • Tube I.D.-.495

Follow vertical velocity line (15 fps) until it intersects diagonal line representing .495 tube I.D. Then project this point horizontally to get the permissible flow- (9 gpm).

## To Find Velocity of Fluid in System Flow-6 gpm • Tube I.D.-.694

Follow horizontal flow line (6 gpm) until it intersects diagonal line representing .694 tube I.D. Then project this point vertically downward to get the velocity of fluid - (5 fps).

### FLOW/VELOCITY CHART



# Tubing Selection

**WARNING** Refer to safety information regarding tubing selection on page 4.

With the following Recommended Wall Thickness tables the tubing wall can be selected that is best suited for a particular application. The data given in these tables are raw figures based on the equation –  $t = \frac{Dp(FS)}{2S}$

- t–wall thickness (inches)
- D–O.D. of tube (inches)
- p–pressure (psi)
- FS–Safety Factor
- S–tensile strength of tubing material

Therefore, many of the wall thicknesses given in these tables are not found on standard tubing, but serve to establish the minimum wall required.

**Safety Factor** – The standard safety factors indicate three grades of severity of service:  
 4:1 –mechanical and hydraulic shocks not excessive  
 6:1 –considerable mechanical strain and hydraulic shock  
 8:1 –hazardous applications with severe service conditions

**The wall thickness shown in these tables are based on ultimate strength of material and a safety factor of 4:1.**

To obtain the recommended wall for a specific pressure based on a safety factor of 6:1, multiply the wall thickness indicated in the table by 1.5. For a safety factor of 8:1, multiply by 2:

**Temperature** – The wall thickness found by using these tables can be corrected for temperature by multiplying the wall thickness by the appropriate correction factor given in the chart below. The table is based on strength reduction due to increased temperature.

Temperature	1010 Steel	Stainless Steel	Copper	Aluminum
+100F.	1.00	1.00	1.00	1.00
+200F.	1.00	1.00	1.08	1.00
+300F.	1.00	1.00	1.22	1.08
+400F.	1.00	1.00	2.30	1.41
+500F.	1.00	1.00	–	2.10
+600F.	1.00	1.00	–	–
+700F.	1.00	1.00	–	–
+800F.	1.08	1.07	–	–
+900F.	1.32	1.13	–	–
+1000F.	1.66	1.22	–	–

## RECOMMENDED WALL THICKNESS TABLES

1010 STEEL Based on 55,000#/in. <sup>2</sup> Strength (F S=4)					
TUBE O.D.	working pressure (psi)				
	1,000	2,000	3,000	4,000	5,000
1/8	.00455	.00909	.01364	.01818	.02273
3/16	.00682	.01364	.02045	.02727	.03409
1/4	.00909	.01818	.02727	.03636	.04545
5/16	.01136	.02273	.03409	.04545	.05682
3/8	.01364	.02727	.04091	.05455	.06818
1/2	.01818	.03636	.05455	.07273	.09091
5/8	.02273	.04545	.06818	.09091	.11364
3/4	.02727	.05455	.08182	.10909	.13636
7/8	.03182	.06364	.09545	.12727	.15909
1	.03636	.07273	.10909	.14545	.18182
1-1/4	.04545	.09091	.13636	.18182	.22727
1-1/2	.05455	.10909	.16364	.21818	.27273
2	.07273	.14545	.21818	.29091	.36364

1020 STEEL Based on 65,000#/in. <sup>2</sup> Strength (F S=4)					
TUBE O.D.	working pressure (psi)				
	1,000	2,000	3,000	4,000	5,000
1/8	.00385	.00790	.01154	.01538	.01923
3/16	.00577	.01154	.01731	.02308	.02885
1/4	.00769	.01538	.02308	.03077	.03846
5/16	.00962	.01923	.02885	.03846	.04808
3/8	.01154	.02308	.03462	.04615	.05769
1/2	.01538	.03077	.04615	.06154	.07692
5/8	.01923	.03846	.05769	.07692	.09615
3/4	.02308	.04615	.06923	.09231	.11538
7/8	.02692	.05385	.08077	.10769	.13462
1	.03077	.06154	.09231	.12308	.15385
1-1/4	.03846	.07692	.11538	.15385	.19231
1-1/2	.04615	.09231	.13846	.18462	.23077
2	.06154	.12308	.18462	.24615	.30769

4130 STEEL Based on 90,000#/in. <sup>2</sup> Strength (F S=4)					
TUBE O.D.	working pressure (psi)				
	1,000	2,000	3,000	4,000	5,000
1/8	.00278	.00556	.00833	.01111	.01389
3/16	.00417	.00833	.01250	.01667	.02083
1/4	.00556	.01111	.01667	.02222	.02778
5/16	.00694	.01389	.02083	.02778	.03472
3/8	.00833	.01667	.02499	.03333	.04167
1/2	.01111	.02222	.03333	.04444	.05556
5/8	.01389	.27778	.04167	.05556	.06944
3/4	.01667	.03333	.04999	.06667	.08333
7/8	.01944	.03889	.05833	.07778	.09722
1	.02222	.04444	.06667	.08889	.11111
1-1/4	.02778	.05556	.08333	.11111	.13889
1-1/2	.03333	.06667	.09999	.13333	.16667
2	.04444	.08889	.13333	.17778	.22222

BUNDYWELD Based on 42,000#/in. <sup>2</sup> Strength (F S=4)					
TUBE O.D.	working pressure (psi)				
	1,000	2,000	3,000	4,000	5,000
1/8	.00595	.01190	.01786	.02381	.02976
3/16	.00893	.01786	.02679	.03571	.04464
1/4	.01190	.02381	.03571	.04762	.05952
5/16	.01488	.02976	.04464	.05952	.07440
3/8	.01786	.03571	.05357	.07143	.08929
1/2	.02381	.04762	.07143	.09524	.11905
5/8	.02976	.05952	.08929	.11905	.14881
3/4					
1					
1-1/4					
1-1/2					
2					



# Tubing Selection

## ⚠ WARNING

Refer to safety information regarding tubing selection on page 4.

TUBE O.D.	STAINLESS STEEL (304) ANNEALED BASED ON 75,000#/IN <sup>2</sup> STRENGTH (F.S. -4)					STAINLESS STEEL (304) ANNEALED BASED ON 105,000#/IN <sup>2</sup> STRENGTH (F.S. -4)				
	working pressure (psi)					working pressure (psi)				
	1,000	2,000	3,000	4,000	5,000	1,000	2,000	3,000	4,000	5,000
1/8	.00333	.00666	.00999	.01333	.01666	.00238	.00476	.00714	.00952	.01190
3/16	.00499	.00999	.01498	.01999	.02499	.00357	.00714	.01071	.01429	.01786
1/4	.00666	.01332	.01998	.02667	.03333	.00476	.00952	.01429	.01905	.02381
5/16	.00833	.01665	.02497	.03333	.04165	.00595	.01190	.01786	.02381	.02976
3/8	.0099	.01998	.02997	.03999	.04998	.00714	.01429	.02143	.02857	.03571
1/2	.01332	.02664	.03996	.05333	.06664	.00957	.01904	.02857	.03810	.04762
5/8	.01665	.03333	.04995	.06666	.08330	.01190	.02381	.03571	.04762	.05952
3/4	.01998	.03996	.05994	.07999	.09996	.01429	.02857	.04286	.05714	.07143
7/8	.02331	.04662	.06996	.09333	.11662	.01667	.03333	.05000	.06666	.08333
1	.02664	.05328	.07992	.10666	.13328	.01904	.03810	.05714	.07619	.09524
1-1/4	.03333	.06666	.09999	.13333	.16666	.02381	.04762	.07143	.09524	.11905
1-1/2	.03996	.07992	.11988	.15999	.19992	.02857	.05714	.08371	.11429	.14286
2	.05328	.10656	.15984	.21333	.26666	.03810	.07619	.11428	.15238	.19048

TUBE O.D.	ANNEALED COPPER BASED ON 30,000#/IN <sup>2</sup> STRENGTH (F.S. -4)					COPPER (UNS C12200 LIGHT DRAWN) BASED ON 40,000#/IN <sup>2</sup> STRENGTH (F.S. -4)				
	working pressure (psi)					working pressure (psi)				
	1,000	2,000	3,000	4,000	5,000	1,000	2,000	3,000	4,000	5,000
1/8	.00833	.01667	.02500	.03333	.04167	.00625	.01250	.01875	.02500	.03125
3/16	.01250	.02499	.03750	.04999	.06250	.00938	.01875	.02812	.03750	.04688
1/4	.01667	.03333	.05000	.06666	.08333	.01250	.02500	.03750	.05000	.06250
5/16	.02083	.04167	.06250	.08333	.10417	.01562	.03125	.04688	.06250	.07812
3/8	.02499	.04999	.07500	.09999	.12499	.01875	.03750	.05625	.07500	.09375
1/2	.03333	.06667	.10000	.13333	.16667	.02500	.05000	.07500	.10000	.12500
5/8	.04167	.08333	.12500	.16666	.20883	.03125	.06250	.09375	.12500	.15625
3/4	.04999	.09999	.15000	.19999	.24999	.03750	.07500	.11250	.15000	.18750
7/8	.05833	.11667	.17500	.23333	.29166	.04375	.08750	.13125	.17500	.21875
1	.06667	.13333	.20000	.26666	.33333	.05000	.10000	.15000	.20000	.25000
1-1/4	.08333	.16667	.25000	.33333	.41667	.06250	.12500	.18750	.25000	.31250
1-1/2	.09999	.19999	.30000	.39999	.49999	.07500	.15000	.22500	.30000	.37500
2	.13333	.26667	.40000	.53333	.66667	.10000	.20000	.30000	.40000	.50000

TUBE O.D.	ALUMINUM 3003 (H-14) BASED ON 20,000#/IN <sup>2</sup> STRENGTH (F.S. -4)					ALUMINUM 5052 (H-32) BASED ON 31,000#/IN <sup>2</sup> STRENGTH (F.S. -4)				
	working pressure (psi)					working pressure (psi)				
	1,000	2,000	3,000	4,000	5,000	1,000	2,000	3,000	4,000	5,000
1/8	.01250	.02500	.3750	.05000		.00806	.01613	.02419	.03226	.04032
3/16	.01875	.03750	.05650	.07500		.01210	.02419	.03629	.04839	.06048
1/4	.02500	.05000	.07500	.10000		.01613	.03226	.04839	.06452	.08065
5/16	.03125	.06250	.09375	.12500		.02016	.04032	.06048	.08065	.10081
3/8	.03750	.07500	.11250	.15000		.02419	.04839	.07258	.09677	.12097
1/2	.05000	.10000	.15000	.20000		.03227	.06452	.09677	.12903	.16129
5/8	.06250	.12500	.18750	.25000		.04032	.08065	.12097	.16129	.20161
3/4	.07500	.15000	.22500	.30000		.04839	.09677	.14516	.19355	.24194
7/8	.08750	.17500	.26250	.35000		.05645	.11290	.16935	.22581	.28226
1	.10000	.20000	.30000	.40000		.06452	.12903	.19355	.25806	.32258
1-1/4	.12500	.25000	.37500	.50000		.08065	.16129	.24194	.32258	.40323
1-1/2	.15000	.30000	.45000	.60000		.09677	.19355	.29032	.38710	.48387
2	.20000	.40000	.60000	.80000		.12903	.25806	.38710	.51613	.64516

TUBE O.D.	CUPRO-NICKEL 30% BASED ON 52,000#/IN <sup>2</sup> STRENGTH (F.S. -4)				
	working pressure (psi)				
	1,000	2,000	3,000	4,000	5,000
1/8	.00481	.00962	.01442	.01923	.02404
3/16	.00721	.01442	.02163	.02885	.03606
1/4	.00962	.01923	.02885	.03846	.04808
5/16	.01202	.02404	.03606	.04808	.06010
3/8	.01442	.02885	.04327	.05769	.07212
1/2	.01923	.03846	.05769	.07692	.09615
5/8	.02404	.04808	.07212	.09615	.12019
3/4	.02885	.05769	.08654	.11538	.14423
7/8	.03365	.06731	.10096	.13462	.16827
1	.03846	.07692	.11538	.15385	.19231
1-1/4	.04808	.09615	.14423	.19231	.24038
1-1/2	.05769	.11538	.17308	.23077	.28846
2	.07692	.15385	.23077	.30769	.38462

### SHADED AREAS

Tubing wall thickness listed in the shaded areas are generally either too light or too heavy for practical applications, and are listed only to provide data for accurate computation.

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

# Tubing Selection



## WARNING

Refer to safety information regarding tubing selection on page 4.

These tables provide data on required wall thickness for various sizes and pressures, and when to use flared or flareless fittings.

Although heavier wall tubing can be ordered for higher operating pressures, only standard size hydraulic tubing is listed in these tables.

High temperature effects are not considered in these tables.

### 1010 STEEL TUBING WALL THICKNESS

TUBE O.D.	4:1 SAFETY FACTOR					6:1 SAFETY FACTOR					8:1 SAFETY FACTOR				
	working pressure (psi)					working pressure (psi)					working pressure (psi)				
	1,000	2,000	3,000	4,000	5,000	1,000	2,000	3,000	4,000	5,000	1,000	2,000	3,000	4,000	5,000
1/8	.028	.028	.028	.028	.028	.028	.028	.028	.028	.035	.028	.028	.028	.035	-
3/16	.030	.030	.030	.030	.035	.030	.030	.030	-	-	.030	.030	-	-	-
1/4	.030	.030	.030	.042	.049	.030	.030	.042	.058	-	.030	.035	.058	-	-
5/16	.032	.032	.035	.049	.058	.032	.032	.058	.065	-	.032	.049	.065	-	-
3/8	.032	.032	.042	.058	-	.032	.042	.058	-	-	.032	.058	-	-	-
1/2	.032	.042	.058	.072	-	.032	.058	.083	-	-	.042	.072	-	-	-
5/8	.035	.049	.072	.095	-	.035	.072	-	-	-	.049	.095	-	-	-
3/4	.035	.058	.083	.109	-	.049	.083	-	-	-	.058	.109	-	-	-
7/8	.049	.065	.095	-	-	.049	.095	-	-	-	.065	-	-	-	-
1	.049	.072	.109	-	-	.058	.109	-	-	-	.072	-	-	-	-
1-1/4	.049	.095	-	-	-	.072	-	-	-	-	.095	-	-	-	-
1-1/2	.065	.109	-	-	-	.083	-	-	-	-	.109	-	-	-	-
2	.072	-	-	-	-	.109	-	-	-	-	-	-	-	-	-

### 1020 STEEL TUBING WALL THICKNESS

TUBE O.D.	4:1 SAFETY FACTOR					6:1 SAFETY FACTOR					8:1 SAFETY FACTOR				
	working pressure (psi)					working pressure (psi)					working pressure (psi)				
	1,000	2,000	3,000	4,000	5,000	1,000	2,000	3,000	4,000	5,000	1,000	2,000	3,000	4,000	5,000
1/8	.028	.028	.028	.028	.028	.028	.028	.028	.028	.030	.028	.028	.028	.030	-
3/16	.030	.030	.030	.030	.030	.030	.030	.030	.035	-	.030	.030	.035	-	-
1/4	.030	.030	.030	.030	.042	.030	.030	.035	.049	.058	.030	.030	.049	-	-
5/16	.032	.032	.032	.042	.049	.032	.032	.042	.058	-	.032	.042	.058	-	-
3/8	.032	.032	.035	.049	.058	.032	.035	.058	.065	-	.032	.049	-	-	-
1/2	.032	.032	.049	.065	.083	.032	.049	.072	-	-	.032	.065	-	-	-
5/8	.035	.042	.058	.083	-	.035	.058	.095	-	-	.042	.083	-	-	-
3/4	.035	.049	.072	.095	-	.035	.072	.109	-	-	.049	.095	-	-	-
7/8	.049	.058	.083	-	-	.049	.083	-	-	-	.058	.109	-	-	-
1	.049	.065	.095	-	-	.049	.095	-	-	-	.065	-	-	-	-
1-1/4	.049	.083	.120	-	-	.058	.120	-	-	-	.083	-	-	-	-
1-1/2	.065	.095	-	-	-	.072	-	-	-	-	.095	-	-	-	-
2	.065	-	-	-	-	.095	-	-	-	-	.134	-	-	-	-

Both SAE 37° SINGLE FLARE FLARE-TWIN or ERMETO® flareless recommended.

ERMETO® flareless only.

**NOTE:** Only Weatherhead Ermeto flareless fittings can be used with high pressure, heavy wall tubing which is impractical to flare.

# Tubing Selection

**⚠ WARNING**  
Refer to safety information regarding tubing selection on page 4.

These tables provide data on required wall thickness for various sizes and pressures, and when to use flared or flareless fittings.

Although heavier wall tubing can be ordered for higher operating pressures, only standard size hydraulic tubing is listed in these tables.

High temperature effects are not considered in these tables.

## STAINLESS STEEL (304) ANNEALED TUBING WALL THICKNESS

TUBE O.D.	4:1 SAFETY FACTOR					6:1 SAFETY FACTOR					8:1 SAFETY FACTOR				
	working pressure (psi)					working pressure (psi)					working pressure (psi)				
	1,000	2,000	3,000	4,000	5,000	1,000	2,000	3,000	4,000	5,000	1,000	2,000	3,000	4,000	5,000
1/8	.028	.028	.028	.028	.028	.028	.028	.028	.028	.035	.028	.028	.028	.028	.035
3/16	.030	.030	.030	.030	.030	.030	.030	.030	.030	.035	.030	.030	.030	.035	-
1/4	.030	.030	.030	.030	.035	.030	.030	.030	.042	.058	.030	.030	.035	.058	.065
5/16	.032	.032	.032	.035	.042	.032	.032	.035	.058	.065	.032	.032	.049	.065	-
3/8	.032	.032	.032	.042	.058	.032	.042	.065	.083	-	.032	.042	.058	-	-
1/2	.032	.032	.042	.058	.072	.032	.042	.065	.083	-	.032	.058	.083	-	-
5/8	.035	.035	.058	.072	.083	.035	.058	.083	.095	-	.035	.065	-	-	-
3/4	.035	.049	.065	.083	.109	.035	.065	.095	-	-	.049	.083	-	-	-
7/8	.049	.049	.072	.095	-	.049	.072	.109	-	-	.049	.095	-	-	-
1	.049	.058	.083	.109	-	.049	.083	.120	-	-	.058	.109	-	-	-
1-1/4	.049	.072	.109	-	-	.058	.109	-	-	-	.065	.134	-	-	-
1-1/2	.065	.083	.120	-	-	.065	.120	-	-	-	.083	-	-	-	-
2	.065	.109	-	-	-	.083	-	-	-	-	.109	-	-	-	-

## STAINLESS STEEL (304) 1/8 HARD TUBING WALL THICKNESS

TUBE O.D.	4:1 SAFETY FACTOR					6:1 SAFETY FACTOR					8:1 SAFETY FACTOR				
	working pressure (psi)					working pressure (psi)					working pressure (psi)				
	1,000	2,000	3,000	4,000	5,000	1,000	2,000	3,000	4,000	5,000	1,000	2,000	3,000	4,000	5,000
1/8	.028	.028	.028	.028	.028	.028	.028	.028	.028	.028	.028	.028	.028	.028	.028
3/16	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.035
1/4	.030	.030	.030	.030	.030	.030	.030	.030	.030	.035	.030	.030	.030	.042	.049
5/16	.032	.032	.032	.032	.032	.032	.032	.032	.035	.049	.032	.032	.035	.049	.058
3/8	.032	.032	.032	.032	.042	.032	.032	.032	.042	.058	.032	.032	.042	.058	-
1/2	.032	.032	.032	.042	.049	.032	.032	.042	.058	.072	.032	.042	.058	.083	-
5/8	.035	.035	.042	.049	.065	.035	.035	.058	.072	.095	.035	.049	.072	.095	-
3/4	.035	.035	.049	.058	.072	.035	.049	.065	.095	.109	.035	.058	.095	-	-
7/8	.049	.049	.058	.072	.083	.049	.058	.083	.109	-	.049	.065	.109	-	-
1	.049	.049	.058	.083	.095	.049	.058	.095	-	-	.049	.072	-	-	-
1-1/4	.049	.049	.072	.095	.120	.049	.072	.109	-	-	.049	.095	-	-	-
1-1/2	.065	.065	.095	-	-	.065	.095	-	-	-	.065	-	-	-	-
2	.065	.083	.120	-	-	.065	-	-	-	-	.083	-	-	-	-

 Both SAE 37° SINGLE FLARE FLARE-TWIN or ERMETO® flareless recommended.

 ERMETO® flareless only.

**NOTE:** Only Weatherhead Ermeto flareless fittings can be used with high pressure, heavy wall tubing which is impractical to flare.

## H069 General Purpose Truck Hose

SAE 100R5,  
SAE J1402 TYPE III†,  
DOT AIII†, ABS<sup>1</sup>



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H06904 H06904-250R	4,8	0.19	3/16	13,1	0.52	33/64	206,9	3,000	827,4	12,000	76,2	3.00	7,3	16	50 250
H06905 H06905-250R	6,4	0.25	1/4	14,7	0.58	37/64	206,9	3,000	827,4	12,000	86,1	3.39	9,1	20	50 250
H06906 H06906-250R	7,9	0.31	5/16	17,1	0.67	43/64	155,1	2,250	620,6	9,000	101,6	4.00	10,4	23	50 250
H06908 H06908-250R	10,3	0.41	13/32	19,4	0.77	49/64	137,9	2,000	551,6	8,000	117,5	4.625	12,2	27	50 250
H06910 H06910-250R	12,7	0.50	1/2	23,4	0.92	59/64	120,7	1,750	482,7	7,000	139,7	5.50	16,3	36	50 250
H06912 H06912-250R	15,9	0.63	5/8	28,4	1.08	1-5/64	103,4	1,500	413,7	6,000	165,1	6.50	20,0	44	50 250
H06916 H06916-250R	22,2	0.88	7/8	31,4	1.23	1-15/64	55,2	800	220,6	3,200	187,7	7.39	20,9	46	50 250
H06920 H06920-150	28,6	1.13	1-1/8	38,1	1.50	1-1/2	44,8	650	172,4	2,500	228,6	9.00	23,1	51	50 150
H06924 H06924-100	34,9	1.38	1-3/8	44,5	1.75	1-3/4	34,5	500	137,9	2,000	266,7	10.50	28,1	62	50 150
H06932 H06932-100	46,0	1.81	1-13/16	56,4	2.22	2-7/32	24,1	350	96,5	1,400	336,6	13.25	38,6	85	50 100
H06940	60,3	2.38	2-3/8	73,0	2.88	2-7/8	24,1	350	96,5	1,400	609,6	24.00	64,9	143	50

**Inner Tube:** Nitrile

**Reinforcement:** 1 Fiber Braid - 1 Steel Braid

**Cover:** Fiber Braid

**Temp. Range:**

Hydraulic: -40°F to +212°F (-40°C to +100°C);

Air Brake: -40°F to +200°F (-40°C to +93°C);

Hot Oil: -40°F to +250°F (-40°C to +121°C);

**Typical Application:**

General purpose truck and hydraulic hose. For use in air brake, fuel, grease lines, high temperature petroleum oils and medium pressure hydraulic applications. -16 thru -40 sizes are not SAE or DOT approved for air brake applications.

†Sizes -4 thru -12 only

<sup>1</sup>See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.

**Hose End Reference**

**Page**

*C-O-C*

069 'E' Series (except size -40) 113-116

*Field Attachable*

069 'D' & 'T' Series 196-197

247 'N' Series (sizes -4 to -16) 206-210

# H057 Fuel Line Hose

SAE 30R7



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		In. Merc. Vac.		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Hg*	Kg/m	lbs/ft	feet	
H05703-25R H05703-100R	4,8	0.19	3/16	10,3	0.41	13/32	3,4	50	17,2	250	50,8	2.00	24	2,7	6	25' 100'	
H05704-25R H05704-100R	6,4	0.25	1/4	12,7	0.50	1/2	3,4	50	17,2	250	63,5	2.50	24	4,1	9	25' 100'	
H05705-25R H05705-100R	7,9	0.31	5/16	14,3	0.56	9/16	3,4	50	17,2	250	69,8	2.75	24	5,0	11	25' 100'	
H05706-25R H05706-50R H05706-250R	9,5	0.38	3/8	15,9	0.63	5/8	3,4	50	17,2	250	76,2	3.00	24	5,4	12	25' 50' 250'	
H05707-25R H05707-50R	11,1	0.47	7/16	17,5	0.69	11/16	2,4	35	9,7	140	82,6	3.25	24	7,3	16	25' 50'	

**Inner Tube:** Nitrile

**Reinforcement:** 1 Fiber Braids

**Cover:** Hypalon\*

**Temp. Range:**

-40°F to +257°F  
(-40°C to +125°C)

**Typical Application:**

Low pressure/high temperature fuel for passenger cars and light trucks; also small engine applications

Note:

Not intended for fuel injection applications.

\* Hypalon is a trademark of E.I. DuPont.

Hose End Reference	Page
Field Attachable	
057 'B' Series	187-188

# H077 Fuel Injection Hose

SAE 30R9



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
H07704-10	6,4	0.25	1/4	12,7	0.50	1/2	8,6	125	62,1	900	76,2	3.00	5,0	11	10
H07705-10	7,9	0.31	5/16	14,3	0.56	9/16	8,6	125	62,1	900	95,3	3.75	5,9	13	10
H07706-10	9,2	0.38	3/8	15,9	0.63	5/8	8,6	125	62,1	900	114,3	4.50	7,3	16	10

**Inner Tube:**

Fluoroelastomer Veneer

**Reinforcement:**

Multi-Fiber Braids

**Cover:** ECO

(Epichlorohydrin Copolymer)

**Temp. Range:**

-30°F to +275°F  
(-34°C to +135°C)

**Typical Application:**

Designed specifically for electronic fuel injection systems

Hose End Reference	Page
E.F.I.	
Clamps	103



## H166 Truck Hose

SAE J1402 TYPE AII,  
DOT AII

# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H16604 H16604-250R	4,8	0.19	3/16	13,1	0.52	33/64	103,4	1,500	413,7	6,000	38,1	1.50	5,0	11	50 250
H16605 H16605-250R	6,4	0.25	1/4	14,7	0.58	37/64	34,5	500	137,9	2,000	44,5	1.75	5,9	13	50 250
H16606 H16606-250R	7,9	0.31	5/16	17,2	0.67	43/64	34,5	500	137,9	2,000	50,8	2.00	8,2	18	50 250
H16608 H16608-250R	10,3	0.41	13/32	19,4	0.77	49/64	34,5	500	137,9	2,000	58,7	2.31	9,5	21	50 250
H16610 H16610-250R	12,7	0.50	1/2	23,4	0.92	59/64	31,0	450	124,1	1,800	69,8	2.75	13,2	29	50 250
H16612 H16612-250R	15,9	0.63	5/8	28,4	1.08	1-5/64	31,0	450	124,1	1,800	82,6	3.25	16,8	37	50 250
H16616* H16616-250R*	22,2	0.88	7/8	31,4	1.23	1-15/64	17,2	250	69,0	1,000	101,6	4.00	17,2	38	50 250
H16620*	28,6	1.13	1-1/8	38,5	1.52	1-33/64	17,2	250	69,0	1,000	139,7	5.50	20,9	46	50

**Inner Tube:** Nitrile**Reinforcement:** 1 Fiber Braid – 1 Stainless Steel Braid**Cover:** Fiber Braid**Temp. Range:**Air Brake: -40°F to +200°F  
(-40°C to +93°C)Hydraulic Fluid: -40°F to  
+250°F (-40°C to +100°C)**Typical Application:**General purpose truck hose.  
For use in air brake, fuel,  
diesel fuel and high tem-  
peratures petroleum oil ap-  
plications.\*16 and 20 sizes not SAE or DOT approved  
for air brake applications.**Hose End Reference****Page****C-O-C**

069 'E' Series 113-116

**Field Attachable**

009 'D' Series 186

247 'N' Series 206-210  
(except -20 size)

# H213 Truck Hose

SAE J1402 TYPE AI, DOT AI



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H21304 H21304-250R	4,8	0.19	3/16	12,3	0.48	31/64	137,9	2,000	551,6	8,000	19,1	.75	5,4	12	50 250
H21305 H21305-250R	6,4	0.25	1/4	13,9	0.55	35/64	103,4	1,500	413,7	6,000	25,4	1.00	5,9	13	50 250
H21306 H21306-250R	7,9	0.31	5/16	15,5	0.61	39/64	103,4	1,500	413,7	6,000	31,8	1.25	7,3	16	50 250
H21308 H21308-250R	10,3	0.41	13/32	18,7	0.73	47/64	86,2	1,250	344,8	5,000	44,5	1.75	8,6	19	50 250
H21310 H21310-250R	12,7	0.50	1/2	21,0	0.83	53/64	69,0	1,000	275,8	4,000	57,2	2.25	9,5	21	50 250
H21312 H21312-250R	15,9	0.63	5/8	24,2	0.95	61/64	51,7	750	206,9	3,000	69,8	2.75	11,8	26	50 250
H21316*	22,2	0.88	7/8	30,6	1.20	1-13/64	27,6	400	110,3	1,600	88,9	3.50	14,5	32	50

**Inner Tube:** CPE

**Reinforcement:** 1 Fiber Braid - 1 Steel Braid.

**Cover:** Fiber Braid

**Temp. Range:**

**Air Brake:** -40°F to +200°F (-40°C to +93°C)

**Hot Oil:** -50°F to +302°F (-45°C to +150°C)

**Typical Application:**

General purpose truck hose. For use in air brake, fuel, diesel fuel and high temperature petroleum oil applications.

\*16 size is not SAE J1402 or DOT approved for air brake applications.

**Hose End Reference**

*Field Attachable*

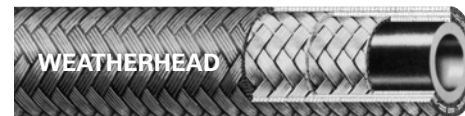
213 'N' Series

**Page**

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# H229 Truck Hose

SAE J1402 TYPE AII, DOT AII



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H22904 H22904-250R	4,8	0.19	3/16	12,7	0.50	1/2	15,5	225	137,9	2,000	38,1	1.50	3,2	7	50 250
H22906 H22906-250R	7,9	0.31	5/16	19,1	0.75	3/4	15,5	225	137,9	2,000	50,8	2.00	5,0	11	50 250
H22908 H22908-250R	10,3	0.41	13/32	23,0	0.91	29/32	15,5	225	137,9	2,000	58,7	2.31	6,4	14	50 250
H22910 H22910-250R	12,7	0.50	1/2	27,0	1.06	1-1/16	15,5	225	124,1	1,800	69,9	2.75	9,5	21	50 250
H22912 H22912-250R	15,9	0.63	5/8	31,8	1.25	1-1/4	15,5	225	124,1	1,800	82,6	3.25	12,2	27	50 250
H22916* H22916-250R*	22,2	0.88	7/8	38,1	1.50	1-1/2	15,5	225	68,9	1,000	101,6	4.00	14,1	31	50 250

**Inner Tube:** Nitrile

**Reinforcement:** 2 Fiber Braids

**Cover:** Fiber Braids

**Temp. Range:**

Hydraulic: -40°F to +300°F (-40°C to +150°C)

Air Brake: -40°F to +200°F (-40°C to +93°C)

**Typical Application:**

General purpose truck hose. High temperature hydraulic, air brake and diesel fuel applications.

\*16 size not SAE or DOT approved for air brake applications.

**Hose End Reference**

*C-O-C*

069 'E' Series

229 'P' Series (-4 to -10)

*Field Attachable*

069 'D' Series

247 'N' Series

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APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

## H239 Truck Hose

SAE J1402 TYPE AII,  
DOT AII

# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H23904 H23904-250R	4,8	0.19	3/16	12,7	0.50	1/2	15,5	225	137,9	2,000	38,1	1.50	3,2	7	50 250
H23906 H23906-250R	7,9	0.31	5/16	16,7	0.66	21/32	15,5	225	137,9	2,000	50,8	2.00	5,0	11	50 250
H23908 H23908-250R	10,3	0.41	13/32	19,1	0.75	3/4	15,5	225	137,9	2,000	58,7	2.31	6,4	14	50 250
H23910 H23910-250R	12,7	0.50	1/2	23,0	0.91	29/32	15,5	225	124,1	1,800	69,9	2.75	9,5	21	50 250
H23912 H23912-250R	15,9	0.63	5/8	27,0	1.06	1-1/16	15,5	225	124,1	1,800	82,6	3.25	12,2	27	50 250
H22916* H23916-250R*	22,2	0.88	7/8	31,8	1.25	1-1/4	15,5	225	68,9	1,000	101,6	4.00	14,1	31	50 250
H23920* H23920-250R*	28,6	1.13	1-1/8	38,1	1.50	1-1/2	15,5	225	68,9	1,000	139,7	5.50	18,6	41	50 250

**Inner Tube:** CPE**Reinforcement:**

2 Fiber Braids

**Cover:** Black Fiber Braid**Temp. Range:**Hot Oil: -40°F to +300°F  
(-40°C to +150°C)Air Brake: -40°F to +200°F  
(-40°C to +93°C)**Typical Application:**

High temperature medium pressure truck hose for use in transmission oil cooler lines, fuel lines, diesel fuel and air brake lines. Resistant to air, diesel fuel and petroleum base fluids.

\*Sizes 16 and 20 are not SAE nor DOT approved for air brake applications.

**Hose End Reference****Page***C-O-C*

069 'E' Series 113-116

229 'P' Series (-4 to -10) 135

*Field Attachable*

247 'N' Series 206-210

## H429 Truck Hose

SAE J1019



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H42908 H42908-250R	10,3	0.41	13/32	17,5	0.69	11/16	17,2	250	69,0	1,000	44,5	1.75	10,9	24	50 250
H42910 H42910-250R	12,7	0.50	1/2	19,1	0.75	3/4	17,2	250	69,0	1,000	57,2	2.25	16,8	37	50 250

**Inner Tube:** CPE**Reinforcement:**

1 Wire Braid

**Cover:** Fiber Braid**Temp. Range:**-55°F to +302°F  
(-48°C to +150°C)**Typical Application:** High temperature truck hose for use in transmission oil cooler lines, fuel lines and diesel fuel lines. Oil and temperature resistant tube.**Hose End Reference****Page***C-O-C*

757 'E' Series 126-133

057 'P' Series 134

# H039 Suction Hose

SAE 100R4  
1/2 SAE Bend Radius



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
H03912 H03912-100 H03912-150	19,1	0.75	3/4	32,5	1.28	1-9/32	20,1 6,9	300 100*	82,7 27,6	1,200 400*	63,5	2.50	20,0	44	50 100 150
H03916 H03916-100 H03916-150	25,4	1.00	1	38,1	1.50	1-1/2	17,2 4,8	250 70*	69,0 19,3	1,000 280*	76,2	3.00	23,6	52	50 100 150
H03920 H03920-100 H03920-150	31,8	1.25	1-1/4	46,4	1.83	1-53/64	113,8 3,4	200 50*	55,2 13,8	800 200*	101,6	4.00	34,0	75	50 100 150
H03924 H03924-100 H03924-150	38,1	1.50	1-1/2	52,8	2.08	2-5/64	10,3	150	41,4	600	127,0	5.00	38,6	85	50 100 150
H03932 H03932-100 H03932-150	50,8	2.00	2	66,3	2.61	2-39/64	6,9	100	27,6	400	152,4	6.00	52,6	116	50 100 150

**Inner Tube:** CPE

**Reinforcement:** 1 helical cable wire between two textile layers. 1 Fiber Braid.

**Cover:** Neoprene

**Temp. Range:**

-40°F to +275°F  
(-40°C to +135°C)

**Typical Application:**  
Hydraulic Suction Hose

**Marine Application**  
**J1942/1 - Hydraulic only.**  
**ABS<sup>1</sup>, MSHA Accepted**

<sup>1</sup>See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.

\*When used with 039 'K' and 'K' Series Ends and 6203 clamps.

**Hose End Reference** **Page**

C-O-C	
'S' Series (-12 to -20)	140
'U' Series (-12 to -20)	141-158
430 'U' Series (-24 & -32)	159-169
Field Attachable	
'K' Series (-12 to -20)	198
039 'K' Series (-12 to -20)	199

# H039H Suction Hose

SAE 100R4



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
H039H12 H039H12-100 H039H12-150	19,1	0.75	3/4	32,5	1.28	1-9/32	20,1 6,9	300 100*	82,7 27,6	1,200 400*	125,0	5.00	20,0	44	50 100 150
H039H16 H039H16-100 H039H16-150	25,4	1.00	1	38,1	1.50	1-1/2	17,2 4,8	250 70*	69,0 19,3	1,000 280*	150,0	6.00	23,6	52	50 100 150
H039H20 H039H20-100 H039H20-150	31,8	1.25	1-1/4	46,4	1.83	1-53/64	13,8 3,4	200 50*	55,2 13,8	800 200*	200,0	8.00	34,0	75	50 100 150
H039H24 H039H24-100 H039H24-150	38,1	1.50	1-1/2	52,8	2.08	2-5/64	10,3	150	41,4	600	255,0	10.00	38,6	85	50 100 150
H039H32 H039H32-100 H039H32-150	50,8	2.00	2	66,3	2.61	2-39/64	6,9	100	27,6	400	300,0	12.00	52,6	116	50 100 150

**Inner Tube:** CPE

**Reinforcement:** 1 helical cable wire between two textile layers. 1 Fiber Braid.

**Cover:** CPE Blue

**Temp. Range:**

-40°F to +300°F  
(-40°C to +150°C)

**Typical Application:**  
Hydraulic Suction Hose

<sup>1</sup>See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.

\*When used with 039 'K' and 'K' Series Ends and 6203 clamps.

**Hose End Reference** **Page**

C-O-C	
'Z' Series	170-185

## H009 General Purpose Hose

SAE 100R6



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H00904-25R H00904-50R H00904-250R	6,4	0.25	1/4	12,7	0.50	1/2	27,6	400	110,3	1,600	63,5	2.50	4,5	10	25 50 250
H00905-25R H00905-50R H00905-250R	7,9	0.31	5/16	14,3	0.56	9/16	27,6	400	110,3	1,600	76,2	3.00	5,4	12	25 50 250
H00906-25R H00906-50R H00906-250R	9,5	0.38	3/8	15,9	0.63	5/8	27,6	400	110,3	1,600	76,2	3.00	6,4	14	25 50 250
H00908-25R H00908-250R	12,7	0.50	1/2	19,8	0.78	25/32	27,6	400	110,3	1,600	101,6	4.00	9,1	20	25 250

**Inner Tube:** Nitrile**Reinforcement:** 1 Fiber Braid**Cover:** Neoprene**Temp. Range:**-40°F to +212°F  
(-40°C to +100°C)**Typical Application:**

General purpose air, oil and water lines. Low pressure hydraulic service.

<sup>1</sup>See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.**Hose End Reference**

C-O-C

'E' Series (-5 to -8)

**Page**

106-112

Field Attachable

009 'B' Series

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## H100 General Purpose Hose

(Fabric Cover)



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H10004 H10004-250R	6,4	0.25	1/4	12,7	0.50	1/2	24,1	350	96,5	1,400	76,2	3.00	4,5	10	50 250
H10005 H10005-250R	7,9	0.31	5/16	14,3	0.56	9/16	24,1	350	96,5	1,400	76,2	3.00	4,5	10	50 250
H10006 H10006-250R	9,5	0.38	3/8	15,9	0.63	5/8	24,1	350	96,5	1,400	76,2	3.00	5,0	11	50 250
H10008 H10008-250R	12,7	0.50	1/2	19,1	0.75	3/4	24,1	350	96,5	1,400	127,0	5.00	5,4	12	50 250
H10010 H10010-250R	15,9	0.63	5/8	23,0	0.91	29/32	24,1	350	96,5	1,400	152,4	6.00	8,2	18	50 250
H10012 H10012-250R	19,1	0.75	3/4	26,2	1.03	1-1/32	24,1	350	96,5	1,400	177,8	7.00	9,5	21	50 250

**Inner Tube:** Nitrile**Reinforcement:** 1 Fiber Braid**Cover:** Fiber Braid**Temp. Range:**

-40°F to +212°F (-40°C to +100°C)

**Typical Application:**

General purpose low pressure air, diesel fuel, oil, and water lines.

**Hose End Reference**

Field Attachable

100 'B' Series

**Page**

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# H101 General Purpose Hose

(Rubber Cover)



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H10104 H10104-250R	6,4	0.25	1/4	12,7	0.50	1/2	24,1	350	96,5	1,400	76,2	3.00	4,1	9	50 250
H10105 H10105-250R	7,9	0.31	5/16	14,3	0.56	9/16	24,1	350	96,5	1,400	76,2	3.00	5,0	11	50 250
H10106 H10106-250R	9,5	0.38	3/8	15,9	0.63	5/8	24,1	350	96,5	1,400	76,2	3.00	5,9	13	50 250
H10108 H10108-250R	12,7	0.50	1/2	19,1	0.75	3/4	24,1	350	96,5	1,400	127,0	5.00	6,8	15	50 250
H10110 H10110-250R	15,9	0.63	5/8	23,0	0.91	29/32	24,1	350	96,5	1,400	152,4	6.00	10,4	23	50 250
H10112 H10112-250R	19,1	0.75	3/4	26,2	1.03	1-1/32	24,1	350	96,5	1,400	177,8	7.00	11,8	26	50 250

**Inner Tube:** Nitrile

**Reinforcement:**  
1 Fiber Braid

**Cover:** Neoprene

**Temp. Range:**  
-40°F to +212°F  
(-40°C to +100°C)

**Typical Application:**

General purpose low pressure air, oil, water and diesel fuel lines.

**MSHA Accepted**

Hose End Reference	Page
Field Attachable	
100 'B' Series	189-191

# H209 General Purpose Hose



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H20904-500R	4,8	0.25	1/4	11,5	0.45	29/64	155,1	2,250	620,6	9,000	38,1	1.50	2,3	5	500
H20905-500R	7,9	0.31	5/16	12,7	0.50	1/2	120,7	1,750	482,7	7,000	44,5	1.75	2,7	6	500
H20906-250R	9,5	0.38	3/8	14,3	0.56	9/16	93,1	1,350	372,3	5,400	63,5	2.50	3,2	7	250
H20908-250R	12,7	0.50	1/2	17,9	0.70	45/64	69,0	1,000	275,8	4,000	88,9	3.50	4,1	9	250

**Inner Tube:** Nylon 11

**Reinforcement:**  
1 Fiber Braid

**Cover:** Polyurethane

**Temp. Range:**  
-40°F to +200°F  
(-40°C to +93°C)

**Typical Application:**

General hydraulic and pneumatic service; high temperature industrial cleaning and car wash applications.

Hose End Reference	Page
C-O-C	
'E' Series	106-112

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

## H332 General Purpose Hose



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H33204-50C H33204-250R	6,4	0.25	1/4	12,4	0.49	1/2	17,2	250	69,0	1,000	76,2	3.00	4,5	10	50 250
H33206-50C H33206-250R	9,5	0.38	3/8	16,0	0.63	5/8	17,2	250	69,0	1,000	76,2	3.00	5,0	11	50 250
H33208-50C H33208-250R	12,7	0.50	1/2	19,1	0.75	3/4	17,2	250	69,0	1,000	127,0	5.00	5,4	12	50 250
H33210-50C H33210-250R	15,9	0.63	5/8	23,1	0.91	29/32	17,2	250	69,0	1,000	152,4	6.00	8,2	18	50 250
H33212-50C H33212-250R	19,1	0.75	3/4	26,4	1.04	1-1/32	17,2	250	69,0	1,000	177,8	7.00	9,5	21	50 250

**Inner Tube:** CPE

**Reinforcement:**

1 Fiber Braid

**Cover:** CPE

**Temp. Range:**

-40°F to +300°F

(-40°C to +150°C)

Air not to exceed +250°F

(+121°C) and water not to exceed +180°F (+82°C).

**Typical Application:**

General purpose low pressure air, diesel fuel, oil, and water lines.

**Hose End Reference**

*Field Attachable*

100 'B' Series

**Page**

189-191

# H757 Air Conditioning Hose

SAE J2064 Type C, Class 1



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
H75706 H75706-100 H75706-250	7,9	0.31	5/16	14,3	0.56	9/16	27,6	400	137,9	2,000	50,8	2.00	4,5	10	50 100 250
H75708 H75708-100 H75708-250	10,3	0.41	13/32	17,5	0.69	11/16	27,6	400	137,9	2,000	63,5	2.50	5,4	12	50 100 250
H75710 H75710-100 H75710-250	12,7	0.50	1/2	19,1	0.75	3/4	24,1	350	120,7	1,750	76,2	3.00	5,9	13	50 100 250
H75712 H75712-100 H75712-250	15,9	0.63	5/8	23,8	0.94	15/16	24,1	350	120,7	1,750	101,6	4.00	10,4	23	50 100 250

### Inner Tube:

Rubber/Nylon/Rubber

### Reinforcement:

1 Fiber Braid

### Cover:

Butyl (perforated)

### Temp. Range:

-22°F to +248°F  
(-30°C to +120°C) for R12;  
-22°F to +257°F (-30°C to +125°C) for R134a

### Typical Application:

A refrigerant hose recommended for R134a and R12 applications. Ideal for heavy duty truck use as well as industrial and automotive applications.

### Hose End Reference

Hose End Reference	Page
C-O-C	
757 'E' Series	126-133
Black Zinc	

# GH134W Multi-Refrigerant Hose

SAE J2064 Type E, Class 1



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
GH134-6WR50	7,9	0.31	5/16	14,7	0.58	37/64	34,5	500	137,9	2,000	50,8	2.00	3,2	.09	50
GH134-8WR50	10,3	0.41	13/32	17,8	0.70	45/64	34,5	500	137,9	2,000	63,5	2.50	5,0	.12	50
GH134-10WR50	12,7	0.50	1/2	19,8	0.78	25/32	34,5	500	137,9	2,000	76,2	3.00	6,4	.15	50
GH134-12WR50	15,9	0.63	5/8	24,9	0.98	63/64	34,5	500	137,9	2,000	101,6	4.00	9,5	.18	50
*GH134-16WR50	19,1	0.75	3/4	31,2	1.23	1-11/50	34,5	500	137,9	2,000	127,0	7.00	9,5	.22	50

### Temp. Range:

-40°F to +257°F  
(-40°C to +125°C).

### Typical Application:

Transportation, refrigeration and air conditioning systems.

### R404a Effusion:

.2 lbs./ft<sup>2</sup>/yr. at 140°F  
(.8 kg./m<sup>2</sup>/yr. at 60°C)

### HFC 134a Effusion:

.50 lbs./ft<sup>2</sup>/yr. at 176°F  
(2.42 kg./m<sup>2</sup>/yr. at 80°C)

### R22 Effusion:

27.7 lbs./ft<sup>2</sup>/yr. at 158°F  
(135 kg./m<sup>2</sup>/yr. at 70°C)

### R407C Effusion:

20 kg./m<sup>2</sup>/yr. at 80°C

### Moisture Ingression:

.08 gm./in<sup>2</sup>/yr. (.013/cm<sup>2</sup>/yr.)

For more information on EZ Clip, see document #W-HOAC-MC001-E1.

\* For size 16, see document #W-HOAC-MS002-E.

Hose available in reels, by ordering part number, size and WRL

### Hose End Reference

Hose End Reference	Page
EZ Clip	
Series	216-241

## H366 LPG Hose

UL File Number MH 6776  
ULMH 10198



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H36606 H36606-250R	7,9	0.31	5/16	17,1	0.67	43/64	24,1	350	120,7	1,750	101,6	4.00	8,2	18	50 250
H36608 H36608-250R	10,3	0.41	13/32	19,4	0.77	49/64	24,1	350	120,7	1,750	117,5	4.625	9,5	21	50 250

**Inner Tube:** Nitrile

**Reinforcement:** 1 Fiber Braid – 1 Stainless Steel Braid

**Cover:** Fiber Braid

**Temp. Range:**

-40°F to +300°F  
(-40°C to +149°C)

**Typical Application:**

Most commonly used for medium pressure LP gas service. UL listed for LP gas applications

**Hose End Reference**

**Page**

*C-O-C*

069 'E' Series

113-116

*Field Attachable*

069 'D' Series

196-197

247 'N' Series

206-210

## H059 Marine Fuel-Oil-Lube Hose

SAE J1942/1, NMMA<sup>3</sup>, 33CFR183, ABS



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H05904 H05904-250R	4,8	0.19	3/16	13,1	0.52	33/64	34,5	500	137,9	2,000	19,1	.75	7,3	16	50 250
H05905 H05905-250R	6,4	0.25	1/4	14,7	0.58	37/64	34,5	500	137,9	2,000	25,4	1.00	9,1	20	50 250
H05906 H05906-250R	7,9	0.31	13/32	17,1	0.67	43/64	34,5	500	137,9	2,000	31,8	1.25	11,8	26	50 250
H05908 H05908-250R	10,3	0.41	13/32	19,4	0.77	49/64	34,5	500	137,9	2,000	44,5	1.75	13,2	29	50 250
H05910 H05910-250R	12,7	0.50	1/2	23,4	0.92	59/64	34,5	500	137,9	2,000	57,2	2.25	18,1	40	50 250
H05912 H05912-250R	15,9	0.63	5/8	28,4	1.08	1-5/64	34,5	500	137,9	2,000	69,8	2.75	20,9	46	50 250
H05916 H05916-250R	22,2	0.88	7/8	31,4	1.23	1-15/64	34,5	500	137,9	2,000	88,9	3.50	21,8	48	50 250

**Inner Tube:**

Special Blended Nitrile

**Reinforcement:**

1 Fiber Braid - 1 Steel Braid  
- 1 Nomex<sup>®</sup> Braid

**Cover:** CPE

**Temp. Range:**

-4°F to +212°F  
(-20°C to +100°C)

**Typical Application:** Marine fuel, oil and lube hose is specially designed for gas and diesel marine engines. Its blue cover makes it easily identified in marine environments.

**Marine Application SAE J1942/1 Fuel and Lube Service, ABS<sup>1</sup>**

<sup>3</sup> Size -5 Does not meet NMMA standards

® Nomex is a trademark of E.I. DuPont

**Hose End Reference**

**Page**

*C-O-C*

069 'E' Series

113-116

229 'P' Series

135

(-4, -6, -8 & -10)

*Field Attachable*

247 'N' Series

206-210

# H104 Hydraulic Hose

SAE 100R1 TYPE AT, ABS



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H10404 H10404-250R H10404-500R	6,4	0.25	1/4	13,5	0.53	17/32	189,6	2,750	758,4	11,000	101,6	4.00	6,8	15	50 250 500
H10406 H10406-250R H10406-500R	9,5	0.38	3/8	18,3	0.72	23/32	155,1	2,250	620,6	9,000	127,0	5.00	10,4	23	50 250 500
H10408 H10408-250R H10408-500R	12,7	0.50	1/2	21,4	0.84	27/32	137,9	2,000	551,6	8,000	177,8	7.00	13,2	29	50 250 500
H10410 H10410-250R	15,9	0.63	5/8	24,6	0.97	31/32	103,4	1,500	413,7	6,000	203,2	8.00	15,9	35	50 250
H10412 H10412-250R	19,1	0.75	3/4	28,6	1.13	1-1/8	86,2	1,250	344,8	5,000	241,3	9.50	18,6	41	50 250
H10416 H10416-250R	25,4	1.00	1	36,5	1.44	1-7/16	69,0	1,000	275,8	4,000	304,8	12.00	24,9	55	50 250
H10420 H10420-100	31,8	1.25	1-1/4	44,5	1.75	1-3/4	43,1	625	172,4	2,500	419,1	16.50	38,6	85	50 100

**Inner Tube:** Nitrile

**Reinforcement:** 1 Steel Braid

**Cover:** Neoprene

**Temp. Range:**

-40°F to +212°F  
(-40°C to +100°C)

**Typical Application:** Most commonly used for medium pressure hydraulic lines. Especially popular for farm implement hydraulic lines.

**MSHA Accepted**

**Marine Application**

**J1942/1/1 - Fuel and Lube Service, ABS1**

<sup>1</sup>See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.

Hose End Reference	Page
<i>C-O-C</i>	
'S' Series (except -10 size)	140
'U' Series	141-158
'Z' Series (-4 to -16)	170-185
<i>Field Attachable</i>	
104 'N' Series (except -10 size)	200-202

# H017 Hydraulic Hose

SAE 100R3



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H01704 H01704-250R	6,4	0.25	1/4	14,3	0.56	9/16	86,2	1,250	344,8	5,000	76,2	3.00	5,9	13	50 250
H01706 H01706-250R	9,5	0.38	3/8	19,1	0.75	3/4	77,6	1,125	275,8	4,000	101,6	4.00	10,0	22	50 250
H01708 H01708-250R	12,7	0.50	1/2	23,8	0.94	15/16	69,0	1,000	275,8	4,000	127,0	5.00	12,7	28	50 250
H01712 H01712-250R	19,1	0.75	3/4	31,8	1.25	1-1/4	51,7	750	206,9	3,000	152,4	6.00	19,5	43	50 250
H01716 H01716-250R	25,4	1.00	1	38,1	1.50	1-1/2	31,0	565	155,1	2,250	203,2	8.00	29,0	64	50 250
H01720 H01720-100	31,8	1.25	1-1/4	44,5	1.75	1-3/4	25,9	375	103,4	1,500	254,0	10.00	36,3	80	50 100

**Inner Tube:** Nitrile

**Reinforcement:** 2 Fiber Braids

**Cover:** Neoprene

**Temp. Range:**

-40°F to +212°F  
(-40°C to +100°C)

**Typical Application:** Low pressure fuel & oil lines. Hydraulic return lines.

**Marine Application**

**J1942/1/1 - Hydraulic only<sup>1</sup>**

**MSHA Accepted**

<sup>1</sup>See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.

Hose End Reference	Page
<i>C-O-C</i>	
'U' Series	141-158



# H169 Hydraulic Hose



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H16906 H16906-250R	7,9	0.31	5/16	17,1	0.67	43/64	155,1	2,250	620,6	9,000	101,6	4.00	10,4	23	50 250
H16908 H16908-250R	10,3	0.41	13/32	19,4	0.77	49/64	137,9	2,000	551,6	8,000	117,5	4.63	12,2	27	50 250
H16910 H16910-250R	12,7	0.50	1/2	23,4	0.92	59/64	120,7	1,750	482,7	7,000	139,7	5.50	16,3	36	50 250
H16912 H16912-250R	15,9	0.63	5/8	28,4	1.08	1-5/64	103,4	1,500	413,7	6,000	165,1	6.50	20,0	44	50 250
H16916 H16916-250R	22,2	0.88	7/8	31,4	1.23	1-15/64	55,2	800	220,6	3,200	187,7	7.39	20,9	46	50 250
H16920 H16920-150	28,6	1.13	1-1/8	38,1	1.50	1-1/2	43,1	625	172,4	2,500	228,6	9.00	23,1	51	50 150
H16924 H16924-100	34,9	1.38	1-3/8	44,5	1.75	1-3/4	34,5	500	137,9	2,000	266,7	10.50	28,1	62	50 100
H16932	46,0	1.81	1-13/16	56,4	2.22	2-7/32	24,1	350	96,5	1,400	336,6	13.25	38,6	85	50

**Inner Tube:** Nitrile

**Reinforcement:**

1 Steel Braid

**Cover:** Neoprene

**Temp. Range:**

-40°F to +212°F

(-40°C to +100°C)

**Typical Application:**

Medium pressure hydraulic, air, grease, oil, truck and power steering lines.

**MSHA Accepted**

**Hose End Reference**

**Page**

*C-O-C*

069 'E' Series

113-116

(except -32 size)

*Field Attachable*

069 'D' Series

196-197

247 'N' Series

206-210

(except -20, -24 & -32 sizes)

# H324 Power Steering Hose

SAE J188 TYPE 2



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H32406*	9,5	0.38	3/8	19,1	0.75	3/4	103,4	1,500	413,7	6,000	81,0	3.19	10,9	24	50

**Inner Tube:** Neoprene

**Reinforcement:**

2 Fiber Braids

**Cover:** Neoprene

**Temp. Range:**

-40°F to +250°F

(-40°C to +120°C)

**Typical Application:**

Passenger Car/Light Truck power steering hose (Volumetric Expansion 8 to 17 cc/ft).

\*See pages 434-435 for Power Steering Makeup information.

**Hose End Reference**

**Page**

*C-O-C*

'U' Series

141-158

# H569 Hydraulic Hose

SAE 100R5, SAE J1402 TYPE AII, DOT AII\*, ABS



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H56904 H56904-250R	4,8	0.19	3/16	13,1	0.52	33/64	206,9	3,000	827,4	12,000	76,2	3.00	7,3	16	50 250
H56905 H56905-250R	6,4	0.25	1/4	14,7	0.58	37/64	206,9	3,000	827,4	12,000	86,1	3.39	9,1	20	50 250
H56906 H56906-250R	7,9	0.31	5/16	17,1	0.67	43/64	155,1	2,250	620,6	9,000	101,6	4.00	10,4	23	50 250
H56908 H56908-250R	10,3	0.41	13/32	19,4	0.77	49/64	137,9	2,000	551,6	8,000	117,5	4.625	12,2	27	50 250
H56910 H56910-250R	12,7	0.50	1/2	23,4	0.92	59/64	120,7	1,750	482,7	7,000	139,7	5.50	16,3	36	50 250
H56912 H56912-250R	15,9	0.63	5/8	28,4	1.08	1-5/64	103,4	1,500	413,7	6,000	165,1	6.50	20,0	44	50 250
H56916 H56916-250R	22,2	0.88	7/8	31,4	1.23	1-15/64	55,2	800	220,6	3,200	187,7	7.39	20,9	46	50 250
H56920 H56920-250R	28,6	1.13	1-1/8	38,1	1.50	1-1/2	43,1	625	172,4	2,500	228,6	9.00	23,1	51	50 250

**Inner Tube:** CPE

**Reinforcement:** 2 Fiber Braids and 1 Steel Braid

**Cover:** Fiber Braid

**Temp. Range:**

Hydraulic Fluid: -55°F to 302°F (-48°C to 150°C)

Air Brake: -40°F to 200°F (-40°C to 93°C)\*

Air: -40°F to 212°F (-40°C to 100°C) Intermittent to 250°F

**Typical Application:**

General purpose truck, marine and hydraulic hose. For use in air brake\*, diesel fuel, grease lines, high temperature petroleum oils and medium pressure hydraulic applications.

\*Air brake applications, sizes -04 through -12 only.

<sup>1</sup>See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.

**Marine Application - Hydraulic only<sup>1</sup>**

**ABS approved for sizes 5/16 through 1-1/8 inches.<sup>1</sup>**

Hose End Reference	Page
C-O-C	
069 'E' Series	113-116
Field Attachable	
247 'N' Series (sizes -6 to -12)	206-210

# H338 Air Brake Hose

SAE J1402 A DOT AII



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H33806 H33806-250R	9,5	0.38	3/8	19,1	0.75	3/4	15,5	225	62,1	900	88,9	3.50	10,9	24	50 250
H33808 H33808-250R	12,7	0.50	1/2	22,2	0.88	7/8	15,5	225	62,1	900	114,3	4.00	13,2	29	50 250

**Inner Tube:**

Synthetic EPDM

**Reinforcement:**

Multi-Fiber Braids

**Temp. Range:**

-40°F to +200°F (-40°C to +93°C)

**Cover:** Synthetic EPDM

**Typical Application:**

Air brake hose lines

Hose End Reference	Page
C-O-C	
338 'P' Series	137
Field Attachable	
338 'B' Series	193-195

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

## H290L WeatherFROST™

SAE 100R16 performance



Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H290L04 H290L04-250R H290L04-500R	6,4	0.25	1/4	14,2	0.56	9/16	350,0	5,000	1400,0	20,000	50,8	2.00	0,30	0.20	50 250 500
H290L06 H290L06-250R H290L06-500R	9,7	0.38	3/8	17,3	0.68	11/16	280,0	4,000	1120,0	16,000	63,5	2.50	0,40	0.27	50 250 500
H290L08 H290L08-250R H290L08-500R	12,7	0.50	1/2	20,8	0.82	53/64	245,0	3,500	980,0	14,000	88,9	3.50	0,58	0.39	50 250 500
H290L10 H290L10-250R	15,9	0.63	5/8	24,9	0.98	63/64	192,0	2,750	770,0	11,000	101,6	4.00	0,74	0.50	50 250
H290L12 H290L12-250R	19,1	0.75	3/4	28,4	1.12	1-1/8	157,0	2,250	630,0	9,000	120,7	4.75	0,92	0.62	50 250
H290L16 H290L16-250R	25,4	1.00	1	35,8	1.41	1-13/32	140,0	2,000	560,0	8,000	152,4	6.00	1,22	0.82	50 250
H290L20 H290L20-150R	31,8	1.25	1-1/4	43,4	1.71	1-23/32	113,0	1,625	455,0	6,500	209,6	8.25	1,60	1.07	50 150
H290L24 H290L24-100R	38,1	1.50	1-1/2	51,6	2.03	2-1/16	87,0	1,250	350,0	5,000	254,0	10.00	2,11	1.42	50 100
H290L32 H290L32-100R	50,8	2.00	2	63,8	2.51	2-1/2	78,0	1,125	315,0	4,500	317,5	12.50	2,80	1.88	50 100

**Inner Tube:** Nitrile**Reinforcement:**

2 Wire Braid

**Cover:** Neoprene**Temp. Range:**-57°C to +100°C  
(-70°F to +212°F)**Typical Application:**

Low temperature flexing and hydraulic system service with petroleum and water-base fluids. For use in frigid environments on construction equipment and other mobile applications.

**Hose End Reference**

C-O-C

**Page**

'Z' Series (-4 to -32)

170-185

H421 WeatherJACK™  
10,000 PSI Jack Hose

Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H42104 H42104-250R H42104-500R	6,4	0.25	1/4	13,5	0.53	17/32	700,0	10,000	1400,0	20,000	50,8	2.00	0,3	0.22	50 250 500
H42106 H42106-250R H42106-500R	9,7	0.38	3/8	17,5	0.69	11/16	700,0	10,000	1400,0	20,000	63,5	2.50	0,4	0.29	50 250 500

**Inner Tube:**

Synthetic Rubber

**Reinforcement:** 2 Wire Braid**Cover:** Synthetic Rubber**Temp. Range:**-40°F to +212°F  
(-40°C to +100°C)**Typical Application:**

Hydraulic jacking system with petroleum and water-base fluids. Meets the performance requirements of the Material Handling Institute Specification IJ100.

**Hose End Reference**

C-O-C

**Page**

'Z' Series (-4 to -32)

170-185

# H114 Hydraulic Hose



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
H11404 H11404-250R H11404-500R	6,4	0.25	1/4	12,7	0.50	1/2	206,9	3,000	827,4	12,000	101,6	4.00	5,0	11	50 250 500
H11406 H11406-250R H11406-500R	9,5	0.38	3/8	16,3	0.64	41/64	206,9	3,000	827,4	12,000	127,0	5.00	8,2	18	50 250 500
H11408 H11408-250R H11408-500R	12,7	0.50	1/2	20,6	0.81	13/16	206,9	3,000	827,4	12,000	177,8	7.00	11,3	25	50 250 500

**Inner Tube:** Hytrel  
**Reinforcement:** 1 Steel Braid  
**Cover:** Neoprene  
**Temp. Range:**  
 -40° F to +250° F  
 (-40° C to +121° C)

**Typical Application:** 3,000 PSI continuous working pressure hose. Ideal for farm implement high temperature hydraulic lines. Will work with synthetic or petroleum-based fluids.

**MSHA Accepted**

Hose End Reference	Page
C-O-C	
'S' Series	140
'U' Series (-4 to -10)	141-158

# H145 Hydraulic Hose

SAE 100R17



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
H14504 H14504-250R H14504-500R	6,4	0.25	1/4	12,7	0.50	1/2	15,5	3,045	137,9	12,180	38,1	2.00	3,2	15	50 250 500
H14506 H14506-250R H14506-500R	9,5	0.38	3/8	16,3	0.64	41/64	15,5	3,045	137,9	12,180	50,8	2.50	5,0	23	50 250 500
H14508 H14508-250R H14508-500R	12,7	0.50	1/2	20,6	0.81	13/16	15,5	3,045	137,9	12,180	58,7	3.50	6,4	32	50 250 500
H14510 H14510-250R	15,9	0.63	5/8	24,6	0.97	31/32	15,5	3,045	124,1	12,180	69,9	4.00	9,5	51	50 250
H14512 H14512-250R	19,1	0.75	3/4	29,4	1.16	1-5/32	15,5	3,045	124,1	12,180	82,6	4.75	12,2	63	50 250
H14516 H14516-250R	25,4	1.00	1	37,3	1.47	1-15/32	15,5	3,045	68,9	12,180	101,6	6.00	14,1	91	50 250

**Inner Tube:** Nitrile  
**Reinforcement:**  
 4-6 Size: 1 Steel Braid  
 8-16 Size: 2 Steel Braids  
**Cover:** Neoprene  
**Temp. Range:**  
 4-8 Size: -40° F to +250° F  
 (-40° C to +121° C)  
 10-16 Size: -40° F to +212° F  
 (-40° C to +100° C)

**Typical Application:** Ideal for use in high pressure lines on off road construction equipment, farm equipment, and other high pressure applications where a small bend radius is needed.

<sup>1</sup>See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.

**Marine Application  
 J1942/1 - Hydraulic only<sup>1</sup>  
 MSHA Accepted**

Hose End Reference	Page
C-O-C	
'Z' Series	170-185
'S' Series (except -04 and -10)	140
'U' Series (-6 thru -12 only)	141-158
430 'U' Series (-16 only)	159-169

APPLICATION DATA  
 LOW & MEDIUM PRESSURE HOSE  
 HIGH PRESSURE HOSE  
 SPECIALTY HOSE  
 ACCESSORIES & ASSEMBLY INSTRUCTIONS  
 ADAPTERS & TUBE HOSE ENDS  
 HOSE ASSEMBLY EQUIPMENT  
 TECHNICAL DATA

# H145R RhinoHide II™ Abrasion Resistant Constant Pressure Hydraulic Hose

SAE 100R17



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H145R04 H145R04-250R H145R04-500R	5,4	0.25	1/4	12,7	0.50	1/2	206,9	3,000	827,4	12,000	50,8	2.00	6,8	15	50 250 500
H145R06 H145R06-250R H145R06-500R	9,5	0.38	3/8	16,7	0.66	21/32	206,9	3,000	827,4	12,000	63,5	2.50	10,4	23	50 250 500
H145R08 H145R08-250R H145R08-500R	12,7	0.50	1/2	20,2	0.80	51/64	206,9	3,000	827,4	12,000	88,9	3.50	14,5	32	50 250 500
H145R10 H145R10-250R	15,9	0.63	5/8	25,0	0.98	63/64	206,9	3,000	827,4	12,000	101,6	4.00	23,1	51	50 250
H145R12 H145R12-250R	19,1	0.75	3/4	28,6	1.13	1-1/8	206,9	3,000	827,4	12,000	120,7	4.75	28,6	63	50 250
H145R16 H145R16-250R	25,4	1.00	1	37,3	1.47	1-15/32	206,9	3,000	827,4	12,000	152,4	6.00	37,6	83	50 250

**Inner Tube:** Nitrile**Temp. Range:****Reinforcement:**4-8 Size: 1 Steel Braid;  
10-16 Size: 2 Steel Braids**Cover:** Abrasion resistant UHMW-40°F + 250°F  
(-40°C to +121°C)

**Typical Application:** 3,000 PSI constant working pressure hose with abrasion resistant cover. Ideal for logging, construction, mining and other off highway applications.

**Hose End Reference**

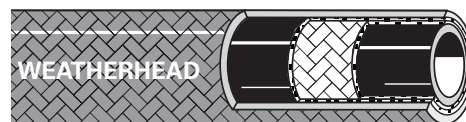
C-O-C

'Z' Series

**Page**

170-185

# H146 3000 PSI Hydraulic Hose



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H14604 H14604-250R	6,4	0.25	1/4	13,1	0.52	33/64	206,9	3,000	827,4	12,000	101,6	4.00	5,0	11	50 250
H14604 H14604-250R	9,5	0.38	3/8	17,1	0.67	43/64	206,9	3,000	827,4	12,000	127,0	5.00	8,2	18	50 250
H14604 H14604-250R	12,7	0.50	1/2	20,6	0.81	13/16	206,9	3,000	827,4	12,000	177,8	7.00	11,3	25	50 250

**Inner Tube:** Hytrel™**Reinforcement:** 1 Steel Braid**Cover:** Abrasion Resistant Fiber Braid**Temp. Range:**-65°F to +250°F  
(-53°C to +121°C)

**Typical Application:** 3,000 PSI continuous working pressure hose. Ideal for Arctic cold weather hydraulic applications, as well as for farm implement high temperature hydraulic lines. Will work with synthetic or petroleum-based fluids.

Hytrel is a trademark of E.I. DuPont.

**Hose End Reference**

C-O-C

'U' Series

**Page**

141-185



# H190 Hydraulic Hose

SAE 100R1 Type AT, EN 853 Type 1SN



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H19004 H19004-250R H19004-500R	6,4	0.25	1/4	13,5	0.53	17/32	225,1	3,265	900,5	13,060	101,6	4.00	6,8	15	50 250 500
H19006 H19006-250R H19006-500R	9,5	0.38	3/8	17,5	0.69	11/16	180,0	2,610	719,8	10,440	127,0	5.00	9,5	21	50 250 500
H19008 H19008-250R H19008-500R	12,7	0.50	1/2	20,6	0.81	13/16	160,0	2,320	639,9	9,280	177,8	7.00	12,7	28	50 250 500
H19010 H19010-250R	15,9	0.63	5/8	23,8	0.94	15/16	130,0	1,885	519,9	7,540	203,2	8.00	15,0	33	50 250
H19012 H19012-250R	19,1	0.75	3/4	27,8	1.09	1-3/32	105,1	1,525	420,6	6,100	241,3	9.50	18,6	41	50 250
H19016 H19016-250R	25,4	1.00	1	35,7	1.41	1-13/32	87,9	1,275	351,6	5,100	304,8	12.00	27,2	60	50 250
H19020 H19020-150R	31,8	1.25	1-1/4	43,4	1.71	XXX	66,0	950	260,0	3,770	419,1	16.50	1,31	0.88	50 150
H19024 H19024-100R	38,1	1.50	1-1/2	50,6	1.99	XXX	50,0	725	200,0	2,900	508,0	20.00	1,56	1.05	50 100
H19032 H19032-100R	50,8	2.00	2	64,0	2.52	XXX	40,0	580	160,0	2,320	635,0	25.00	1,95	1.31	50 100

**Inner Tube:** Nitrile

**Reinforcement:**  
1 Steel Braid

**Cover:** Vinyl Nitrile

**Typical Application:**  
Transfer of hydraulic fluid,  
water and air.

**Temp. Range:**  
Petroleum Based Hydraulic  
Fluids: -40°F to +212°F  
(-40°C to +100°C).

Water Based Hydraulic  
Fluids: -40°F to +158°F  
(40°C to +70°C).

Water: +32°F to 158°F  
(0°C to 70°).

**MSHA Accepted  
ISO 1436a**

**Marine Application  
J1942/1 Hydraulic  
Service<sup>1</sup>**

**Hose End Reference** **Page**

C-O-C	
'Z' Series	170-185

<sup>1</sup>See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.

# H190H Hydraulic Hose

SAE 100R1 Type AT, EN 853 Type 1SN



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H190H04 H190H04-250R H190H04-500R	6,4	0.25	1/4	13,5	0.53	17/32	225,1	3,265	900,5	13,060	101,6	4.00	6,8	15	50 250 500
H190H06 H190H06-250R H190H06-500R	9,5	0.38	3/8	17,5	0.69	11/16	180,0	2,610	719,8	10,440	127,0	5.00	9,5	21	50 250 500
H190H08 H190H08-250R H190H08-500R	12,7	0.50	1/2	20,6	0.81	13/16	160,0	2,320	639,9	9,280	177,8	7.00	12,7	28	50 250 500
H190H10 H190H10-250R	15,9	0.63	5/8	23,8	0.94	15/16	130,0	1,885	519,9	7,540	203,2	8.00	15,0	33	50 250
H190H12 H190H12-250R	19,1	0.75	3/4	27,8	1.09	1-3/32	105,1	1,525	420,6	6,100	241,3	9.50	18,6	41	50 250
H190H16 H190H16-250R	25,4	1.00	1	35,7	1.41	1-13/32	87,9	1,275	351,6	5,100	304,8	12.00	27,2	60	50 250
H190H20 H190H20-150R	31,8	1.25	1-1/4	43,9	1.73	XXX	62,0	900	248,0	3,600	420,0	16.50	1,26	0.85	50 150

**Inner Tube:** CPE

**Reinforcement:** 1 Steel Braid

**Cover:** CPE

**Temp. Range:** -55°F to +302°F (-48°C to +155°C).

**Typical Application:**  
Transfer of hydraulic fluid,  
water and air.

**MSHA Accepted  
ISO 1436a**

<sup>1</sup>See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.

**Hose End Reference** **Page**

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'Z' Series	170-185

# H245 High Pressure Hydraulic Hose

SAE 100R16, ABS



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H24504 H24504-250R H24504-500R	6,4	0.25	1/4	13,5	0.53	17/32	344,8	5,000	1379,0	20,000	50,8	2.00	8,6	19	50 250 500
H24506 H24506-250R H24506-500R	9,5	0.38	3/8	17,5	0.69	11/16	275,8	4,000	1103,2	16,000	63,5	2.50	13,2	29	50 250 500
H24508 H24508-250R H24508-500R	12,7	0.50	1/2	20,6	0.81	13/16	241,3	3,500	965,3	14,000	88,9	3.50	16,3	36	50 250 500
H24510 H24510-250R	15,9	0.63	5/8	23,8	0.94	15/16	189,6	2,750	758,4	11,000	101,6	4.00	19,1	42	50 250
H24512 H24512-250R	19,1	0.75	3/4	27,8	1.09	1-3/32	155,1	2,250	620,6	9,000	120,7	4.75	24,5	54	50 250
H24516 H24516-250R	25,4	1.00	1	35,7	1.41	1-13/32	137,9	2,000	551,6	8,000	152,4	6.00	36,7	81	50 250
H24520 H24520-150	31,8	1.25	1-1/4	45,2	1.78	1-25/32	112,0	1,625	448,2	6,500	209,6	8.25	51,7	114	50 150

**Inner Tube:** Nitrile Blend**Reinforcement:**

2 Steel Braids

**Cover:** Neoprene**Temp. Range:** -40°F to +212°F (-40°C to +100°C)

**Typical Application:** Most commonly used for high pressure lines on off road construction equipment, farm equipment and other high pressure applications. Compatible with water/glycol, water, generic hydraulic fluids, and diesel fuel.

<sup>1</sup>See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.

**MSHA Accepted, ABS<sup>1</sup>**  
**Marine Application J1942 - Fuel and Lube Service.<sup>1</sup>**

**Hose End Reference Page****C-O-C**

'Z' Series (sizes -4, -6, -8 & -10 only)	170-185
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'S' Series (except -10 size)	140
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'U' Series	141-158
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430 'U' Series (sizes -12, -16 & -20)	159-169
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# H280 Hydraulic Hose

100R16 EN 857 Type 2SC



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H28004 H28004-250R H28004-500R	6,4	0.25	1/4	13,5	0.53	17/32	399,9	5,800	1599,6	23,200	50,8	2.00	8,2	18	50 250 500
H28006 H28006-250R H28006-500R	9,5	0.38	3/8	17,5	0.69	11/16	331,0	4,800	1323,8	19,200	63,5	2.50	12,2	27	50 250 500
H28008 H28008-250R H28008-500R	12,7	0.50	1/2	20,6	0.81	13/16	275,8	4,000	1103,2	16,000	88,9	3.50	15,4	34	50 250 500
H28010 H28010-250R	15,9	0.63	5/8	23,8	0.94	15/16	250,3	3,630	1001,2	14,520	101,6	4.00	18,1	40	50 250
H28012 H28012-250R	19,1	0.75	3/4	27,8	1.09	1-3/32	215,1	3,120	860,5	12,480	120,7	4.75	24,4	54	50 250
H28016 H28016-250R	25,4	1.00	1	35,7	1.41	1-13/32	165,5	2,400	661,9	9,600	152,4	6.00	36,3	80	50 250
H28020 H28020-150R	31,8	1.25	1-1/4	41,9	1.65	XXX	157,0	2250	630,0	9000	209,6	8.25	1,62	1.09	50 150
H28024 H28024-100	38,1	1.50	1-1/2	51,6	2.03	XXX	124,0	1800	497,0	7200	254,0	10.00	2,08	1.40	50 100
H28032 H28032-100	50,8	2.00	2	64,3	2.53	XXX	90,0	1300	359,0	5200	317,5	12.50	2,83	1.90	50 100

**Inner Tube:** Nitrile**Reinforcement:**

2 Steel Braids

**Cover:** Vinyl Nitrile**Temp. Range:**

Petroleum based Hydraulic Fluids: -40°F to +212°F (-40°C to +100°C).

Water based Hydraulic Fluids: -40°F to +158°F (-40°C to +70°C)

**Typical Application:** High pressure hose for hydraulic fluid. Water transfer.

**MSHA Accepted, Marine Application J1942/1 - Hydraulic only<sup>1</sup>**

**Hose End Reference Page****C-O-C**

'Z' Series	170-185
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<sup>1</sup>See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.

# H290 Hydraulic Hose

100R2, EN 853, Type 2SN



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H29004 H29004-250R H29004-500R	6,4	0.25	1/4	15,1	0.59	19/32	399,9	5,800	1599,6	23,200	101,6	4.00	10,9	24	50 250 500
H29006 H29006-250R H29006-500R	9,5	0.38	3/8	19,1	0.75	3/4	331,0	4,800	1323,8	19,200	127,0	5.00	15,0	33	50 250 500
H29008 H29008-250R H29008-500R	12,7	0.50	1/2	22,2	0.88	7/8	275,8	4,000	1103,2	16,000	177,8	7.00	19,1	42	50 250 500
H29010 H29010-250R	15,9	0.63	5/8	25,4	1.00	1	250,3	3,630	1001,2	14,520	203,2	8.00	22,7	50	50 250
H29012 H29012-250R	19,1	0.75	3/4	29,4	1.16	1-5/32	215,1	3,120	860,5	12,480	241,3	9.50	28,6	63	50 250
H29016 H29016-250R	22,2	0.88	7/8	38,1	1.50	1-1/2	165,5	2,400	661,9	9,600	304,8	12.00	40,8	90	50 250
H29020 H29020-150R	31,8	1.25	1-1/4	48,8	1.92	1-7/8	157,0	2250	630,0	9000	419,1	16.50	2,29	1.54	50 150
H29024 H29024-100R	38,1	1.50	1-1/2	54,6	2.15	2-5/32	124,0	1800	497,0	7200	508,0	20.00	2,50	1.68	50 100
H29032 H29032-100R	50,8	2.00	2	63,8	2.51	2-1/2	90,0	1300	359,0	5200	635,0	25.00	3,30	2.22	50 100

**Inner Tube:** Nitrile  
**Reinforcement:** 2 Steel Braids  
**Cover:** Vinyl Nitrile  
**Temp. Range:**  
 Petroleum based Hydraulic Fluids: -40°F to +212°F (-40°C to +100°C).

Water based Hydraulic Fluids: -40°F to +158°F (-40°C to +70°C)  
**Typical Application:** High pressure hose for hydraulic fluid applications. Transfer water also.

<sup>1</sup>See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.

**MSHA Accepted**  
**Marine Application J1942/1 - Hydraulic only<sup>1</sup>**

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'Z' Series	170-185

# H290H WeatherBLAZE™

100R2, EN 853, Type 2SN



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H290H04 H290H04-250R H290H04-500R	6,4	0.25	1/4	15,1	0.59	19/32	399,9	5,800	1599,6	23,200	101,6	4.00	10,9	24	50 250 500
H290H06 H290H06-250R H290H06-500R	9,5	0.38	3/8	19,1	0.75	3/4	331,0	4,800	1323,8	19,200	127,0	5.00	15,0	33	50 250 500
H290H08 H290H08-250R H290H08-500R	12,7	0.50	1/2	22,2	0.88	7/8	275,8	4,000	1103,2	16,000	177,8	7.00	19,1	42	50 250 500
H290H10 H290H10-250R	15,9	0.63	5/8	25,4	1.00	1	250,3	3,630	1001,2	14,520	203,2	8.00	22,7	50	50 250
H290H12 H290H12-250R	19,1	0.75	3/4	29,4	1.16	1-5/32	215,1	3,120	860,5	12,480	241,3	9.50	28,6	63	50 250
H290H16 H290H16-250R	22,2	0.88	7/8	38,1	1.50	1-1/2	165,5	2,400	661,9	9,600	304,8	12.00	40,8	90	50 250
H290H20 H290H20-150	31,8	1.25	1-1/4	48,8	1.92	XXX	157,0	2250	630,0	9000	419,1	16.50	2,39	1.60	50 150
H290H24 H290H24-100	38,1	1.50	1-1/2	54,6	2.15	XXX	122,0	1750	490,0	7000	508,0	20.00	2,60	1.74	50 100
H290H32 H290H32-100	50,8	2.00	2	67,8	2.67	XXX	105,0	1500	420,0	6000	635,0	25.00	3,38	2.27	50 100

**Inner Tube:** CPE  
**Reinforcement:** 2 Steel braids  
**Cover:** CPE blue  
**Temp. Range:** -55°F to +302°F (-48°C to +155°C).

**Typical Application:** High pressure hose for hydraulic fluid applications. Transfer water also.

<sup>1</sup>See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.

**MSHA Accepted**

Hose End Reference	Page
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'Z' Series	170-185

APPLICATION DATA  
 LOW & MEDIUM PRESSURE HOSE  
 HIGH PRESSURE HOSE  
 SPECIALTY HOSE  
 ACCESSORIES & ASSEMBLY INSTRUCTIONS  
 ADAPTERS & TUBE HOSE ENDS  
 HOSE ASSEMBLY EQUIPMENT  
 TECHNICAL DATA

# H325 SUB ZERO™ High Pressure Hydraulic Hose



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H32504-250R	6,4	0.25	1/4	15,1	0.59	19/32	344,8	5,000	1379,0	20,000	101,6	4.00	11,8	26	250
H32506-250R	9,5	0.38	3/8	19,1	0.75	3/4	275,8	4,000	1103,2	16,000	127,0	5.00	16,8	37	250
H32508-250R	12,7	0.50	1/2	22,2	0.88	7/8	241,3	3,500	965,3	14,000	177,8	7.00	20,4	45	250
H32512-250R	19,1	0.75	3/4	29,4	1.16	1-5/32	155,1	2,250	620,6	9,000	241,3	9.50	30,4	67	250
H32516-250R	25,4	1.00	1	38,1	1.50	1-1/2	137,9	2,000	551,6	8,000	304,8	12.00	44,5	98	250

**Inner Tube:** Oil and heat resistant black synthetic rubber

**Reinforcement:**  
2 Steel Braids

**Cover:** Oil, abrasion and weather resistant synthetic rubber.

**Temp. Range:**

-67° to +175°F  
(-55°C to +80°C)

**Typical Application:** For non-impulse, high pressure hydraulic service, specifically designed for use in frigid environment, where temperatures to -67°F are encountered.

**Hose End Reference**

C-O-C

'U' Series

**Page**

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# H345 Pressure Washer Hose



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H34504 H34504-100 H34504-250R H34504-500R	6,4	0.25	1/4	12,3	0.48	31/64	206,9	3,000	827,4	12,000	50,8	2.00	5,9	13	50* 100* 250 500
H34506 H34506-100 H34506-250R H34506-500R	9,5	0.38	3/8	16,3	0.64	41/64	206,9	3,000	827,4	12,000	63,5	2.50	8,2	18	50* 100* 250 500
H34508 H34508-100 H34508-250R H34508-500R	12,7	0.50	1/2	19,8	0.78	25/32	206,9	3,000	827,4	12,000	88,9	3.50	12,7	28	50* 100* 250 500

**Inner Tube:** Nitrile

**Reinforcement:**  
1 Steel Braid

**Cover:** Vinyl Nitrile

**Temp. Range:**

Pressure Washer Service up to 0°F to +200°F  
(-180°C to +93°C);  
Hydraulic Service -40°F to +250°F (-40°C to +121°C)

**Typical Application:**

Pressure washer hose for cold and hot water. Resistant to usual detergents. Not for use with steam applications.

**MSHA Accepted, IC - 46/10**

\*50 and \*100 are one continuous length.

**Hose End Reference**

C-O-C

'Z' Series

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# H350 High Pressure Hydraulic Hose



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
H35006 H35006-250R	9,5	0.38	3/8	17,5	0.69	11/16	241,3	3,500	965,3	14,000	63,5	2.50	13,2	29	50 250
H35008 H35008-250R	12,7	0.50	1/2	20,6	0.81	13/16	241,3	3,500	965,3	14,000	88,9	3.50	16,3	36	50 250
H35010 H35010-250R	15,9	0.63	5/8	25,4	1.00	1	241,3	3,500	965,3	14,000	101,6	4.00	27,2	60	50 250
H35012 H35012-250R	19,1	0.75	3/4	29,4	1.16	1-5/32	241,3	3,500	965,3	14,000	120,7	4.75	31,8	70	50 250
H35016 H35016-250R	25,4	1.00	1	38,1	1.50	1-1/2	241,3	3,500	965,3	14,000	304,8	12.00	63,5	140	50 250

**Inner Tube:** Nitrile

**Reinforcement:**

6-12 sizes - 2 Steel Braids,  
16 size - 4 Spiral-Steel Plies

**Cover:** Neoprene

**Temp. Range:** -40°F to  
+212°F (-40°C to +100°C)

**Typical Application:** Most commonly used for high pressure lines on off road equipment, farm equipment and other high pressure applications. Compatible with water/glycol, water and hydraulic fluids.

Hose End Reference	Page
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'Z' Series (sizes -6 to -10 only)	170-185
'U' Series (sizes -6 & -8 only)	141-158
430 'U' Series (sizes -12 & -16 only)	159-169

# H425 High Pressure Hydraulic Hose

SAE 100R2 TYPE AT



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
H42504 H42504-250R H42504-500R	6,4	0.25	1/4	15,1	0.59	19/32	344,8	5,000	1379,0	20,000	101,6	4.00	12,7	28	50 250 500
H42506 H42506-250R H42506-500R	9,5	0.38	3/8	19,1	0.75	3/4	275,8	4,000	1103,2	16,000	127,0	5.00	17,2	38	50 250 500
H42508 H42508-250R H42508-500R	12,7	0.50	1/2	22,2	0.88	7/8	241,3	3,500	965,3	14,000	177,8	7.00	20,4	45	50 250 500
H42510 H42510-250R	15,9	0.63	5/8	25,4	1.00	1	189,6	2,750	758,4	11,000	203,2	8.00	23,1	51	50 250
H42512 H42512-250R	19,1	0.75	3/4	29,4	1.16	1-5/32	155,1	2,250	620,6	9,000	241,3	9.50	29,9	66	50 250
H42516 H42516-250R	25,4	1.00	1	38,1	1.50	1-1/2	137,9	2,000	551,6	8,000	304,8	12.00	43,1	95	50 250
H42520 H42520-100	31,8	1.25	1-1/4	47,6	1.88	1-7/8	112,0	1,625	448,2	6,500	419,1	16.50	64,4	142	50 100
H42524 H42524-100	38,1	1.50	1-1/2	54,8	2.16	2-5/32	86,2	1,250	344,8	5,000	501,0	20.00	79,8	176	50 100
H42532	50,8	2.00	2	67,5	2.66	2-21/32	77,6	1,125	310,3	4,500	635,0	25.00	94,3	208	50

**Inner Tube:** Nitrile  
(Neoprene -4 only)

**Reinforcement:**

2 Steel Braids

**Cover:** Neoprene

**Temp. Range:** -40°F to  
+212°F (-40°C to +100°C)

**Typical Application:** Most commonly used for high pressure lines on off road construction equipment, farm equipment and other high pressure applications.

<sup>1</sup>See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.

**MSHA Accepted  
Marine Application  
J1942/<sup>1</sup> - Hydraulic  
(-4 thru -32) Fuel  
(-4 through -20).<sup>1</sup>  
ABS<sup>1</sup>**

Hose End Reference	Page
C-O-C	
'S' Series (except sizes -10, -24 & -32)	140
'U' Series (except sizes -24 & -32)	141-158
'Z' Series	170-185
430 'U' Series (sizes -12 thru -32)	159-169
Field Attachable	
425 'N' Series (except size -10)	211-213

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA



# H400 General Purpose High Pressure Hose



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H40004 H40004-250R H40004-500R	6,4	0.25	1/4	15,2	0.60	19/32	4000	280,0	16000	1120,0	50,8	2.00	0,36	0.24	50 250 500
H40006 H40006-250R H40006-500R	9,7	0.38	3/8	19,3	0.76	49/64	4000	280,0	16000	1120,0	63,5	2.50	0,54	0.36	50 250 500
H40008 H40008-250R H40008-500R	12,7	0.50	1/2	22,6	0.89	57/64	4000	280,0	16000	1120,0	88,9	3.50	0,64	0.43	50 250 500
H40010 H40010-250R	16,0	0.63	5/8	25,7	1.01	1	4000	280,0	16000	1120,0	101,6	4.00	0,90	0.60	50 250
H40012 H400-250R	19,1	0.75	3/4	30,0	1.18	1-3/16	4000	280,0	16000	1120,0	120,7	4.75	1,07	0.72	50 250

**Inner Tube:** Nitrile

**Reinforcement:** 2 Steel Braids

**Cover:** Neoprene

**Temp. Range:**

-40°F to +212°F  
(-40°C to +100°C)

**Typical Application:**

High pressure lines on off-road equipment, farm equipment and other high pressure applications.

**Hose End Reference**

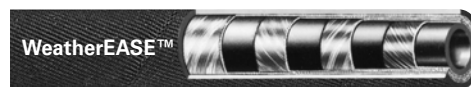
C-O-C

'Z' Series (-12 to -32)

**Page**

170-185

# H430 Very High Pressure Hydraulic Hose



SAE 100R12, ABS, 1/2 SAE Bend Radius\*

# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H43006 H43006-100	9,5	0.38	3/8	20,1	0.79	53/64	275,8	4,000	1103,2	16,000	127,0 62,5*	5.00 2.50*	21,3	47	50 100
H43008 H43008-100 H43008-150	12,7	0.50	1/2	23,4	0.92	15/16	275,8	4,000	1103,2	16,000	177,8 90,0*	7.00 350*	25,9	57	50 100 150
H43010 H43010-100 H43010-150	15,9	0.63	5/8	28,2	1.11	1-7/64	275,8	4,000	1103,2	16,000	203,2 100,0*	8.00 4.00*	31,8	70	50 100 150
H43012 H43012-100 H43012-150	19,1	0.75	3/4	30,5	1.20	1-7/32	275,8	4,000	1103,2	16,000	241,3 120,0*	9.50 4.75*	40,8	90	50 100 150
H43016 H43016-100 H43016-150	25,4	1.00	1	37,6	1.48	1-33/64	275,8	4,000	827,4	12,000	304,8 150,0*	12.00 6.00*	54,9	121	50 100 150
H43020 H43020-100 H43020-150	31,8	1.25	1-1/4	46,5	1.83	1-7/8	206,9	3,000	689,5	10,000	419,1 210,0*	16.50 8.25*	73,9	163	50 100 150
H43024 H43024-100 H43024-150	38,1	1.50	1-1/2	55,0	2.18	2-1/8	172,4	2,500	689,5	10,000	501,0 250,0*	20.00 10.00*	93,4	206	50 100 150
H43032 H43032-100 H43032-150	50,8	2.00	2	68,3	2.69	2-21/32	172,4	2,500	689,5	10,000	635,0 320,0*	25.00 12.50*	135,6	299	50 100 150

**Inner Tube:** Nitrile

**Reinforcement:** 4 Spiral Steel Plies

**Cover:** Neoprene

**Temp. Range:**

-40°F to +250°F  
(-40°C to +121°C)

**Typical Application:** For very high pressure hydraulic lines subjected to pressure surges and flexing. Typical applications include construction, mining, farming and high performance industrial equipment.

**MSHA Accepted**

**Marine Application J1942/1 - Hydraulic only<sup>1</sup>, ABS<sup>1</sup>**

\* Black covered hose only (Q1 2006)  
<sup>1</sup> See pages 25-26 for applicable service pressures, required fire sleeves and qualified hose ends.

**Hose End Reference**

C-O-C

430 'U' Series  
No Skive

**Page**

159-169

# H430R RhinoHide II™ Very High Pressure Hydraulic Hose



SAE 100R12

Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H430R06 H430R06-100	9,5	0.38	3/8	20,1	0.79	53/64	275,8	4,000	1103,2	16,000	127,0	5.00	21,3	47	50 100
H430R08 H430R08-100 H430R08-150	12,7	0.50	1/2	23,4	0.92	15/16	275,8	4,000	1103,2	16,000	177,8	7.00	26,8	59	50 100 150
H430R10 H430R10-100 H430R10-150	15,9	0.63	5/8	28,2	1.11	1-7/64	275,8	4,000	1103,2	16,000	203,2	8.00	36,3	80	50 100 150
H430R12 H430R12-100 H430R12-150	19,1	0.75	3/4	30,5	1.20	1-7/32	275,8	4,000	1103,2	16,000	241,3	9.50	41,7	92	50 100 150
H430R16 H430R16-100 H430R16-150	25,4	1.00	1	37,6	1.48	1-33/64	275,8	4,000	827,4	12,000	304,8	12.00	55,3	122	50 100 150
H430R20 H430R20-100 H430R20-150	31,8	1.25	1-1/4	46,5	1.83	1-7/8	206,9	3,000	689,5	10,000	419,1	16.50	74,4	164	50 100 150
H430R24 H430R24-100 H430R24-150	38,1	1.50	1-1/2	55,1	2.17	2-1/8	172,4	2,500	689,5	10,000	501,0	20.00	91,2	201	50 100 150
H430R32 H430R32-100 H430R32-150	50,8	2.00	2	68,3	2.69	2-21/32	172,4	2,500	689,5	10,000	635,0	25.00	133,4	294	50 100 150

**Inner Tube:** Nitrile

**Reinforcement:**  
Steel Plies

**Cover:** UHMW

**Temp. Range:**

-40°F to +250°F  
(-40°C to +121°C)

**MSHA Accepted**

**Typical Application:**

High abrasion applications. Hydraulic system service with petroleum and water-base fluids, for general industrial service.

**Hose End Reference**

*C-O-C*

430 'U' Series  
No Skive

**Page**

159-169

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

# H464 Very High Pressure Hydraulic Hose

EN856 Type 4SH



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H46412 H46412-100	19,1	0.75	3/4	32,5	1.27	1-9/32	15,5	6,090	1679,6	24,360	279,4	11.00	45,4	100	50 100
H46416 H46416-100	25,4	1.00	1	38,1	1.50	1-1/2	15,5	5,510	1519,7	22,040	339,9	13.38	62,6	138	50 100
H46420 H46420-100	31,8	1.25	1-1/4	42,2	1.79	1-25/32	15,5	5,075	1399,7	20,300	460,0	18.11	77,6	171	50 100
H46424 H46424-100	38,1	1.50	1-1/2	54,0	2.11	2-1/8	15,5	4,350	1199,7	17,400	560,1	22.05	99,8	220	50 100
H46432 H46432-100	50,8	2.00	2	68,3	2.68	2-11/16	15,5	3,625	999,8	14,500	700,0	27.56	139,7	308	50 100

**Inner Tube:** Nitrile**Reinforcement:**  
4 Spiral Steel Plies**Cover:** Nitrile**Temp. Range:**-40°F to +212°F  
(-40°C to +100°C)

**Typical Application:** Perfect for hydraulic system service with petroleum and water-based fluids requiring premium pressure performance and durability.

This hose is well suited for injection mold and drill rig applications.

**MSHA Accepted**

Hose End Reference	Page
C-O-C	
4SP Series No Skive	350-359

# H470 Very High Pressure Hydraulic Hose

SAE 100R13



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H47008	12,7	0.50	1/2	24,6	0.97	31/32	344,8	5,000	1379,0	20,000	177,8	7.00	29,5	65	50
H47012	19,1	0.75	3/4	31,8	1.26	1-1/4	344,8	5,000	1379,0	20,000	241,3	9.50	49,4	105	50
H47016	25,4	1.00	1	38,9	1.52	1-17/32	344,8	5,000	1379,0	20,000	304,8	12.00	64,4	132	50
H47020	31,8	1.25	1-1/4	50,0	1.96	1-31/32	344,8	5,000	1379,0	20,000	419,1	16.50	114,3	246	50
H47024	38,1	1.50	1-1/2	57,2	2.26	2-1/4	344,8	5,000	1379,0	20,000	501,0	20.00	147,4	316	50
H47032	50,8	2.00	2	71,4	2.80	2-13/16	344,8	5,000	1379,0	20,000	635,0	25.00	229,1	478	50

**Inner Tube:** Nitrile**Reinforcement:** Multi-Spiral Steel (8,12,16=4 plies)  
(20,24,32=6 plies)**Cover:** Black Vinyl Nitrile**Temp. Range:**-40°F to +250°F  
(-40°C to +121°C)

**Typical Application:** For very high pressure hydraulic lines subjected to pressure surges and flexing. Typical applications include construction, mining, farming and high performance industrial equipment

Black covered hose only (Q3 2006)

**MSHA Accepted****Marine Application  
J1942/1 (-12 thru -20)**

Hose End Reference	Page
C-O-C	
470 'E' Series - Black cover only - Sizes -12 thru -32	121-125
4SP Series No Skive	350-359

# H485 Very High Pressure Hydraulic Hose

SAE 100R15



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
H48516 H48516-100	25,4	1.00	1	16,7	0.66	21/32	413,7	6,000	1654,8	24,000	304,8	12.00	81,2	179	50 100
H48520 H48520-100	31,8	1.25	1-1/4	49,2	1.95	1-15/16	413,7	6,000	1654,8	24,000	419,1	16.50	110,2	243	50 100
H48524 H48524-100	38,1	1.50	1-1/2	58,7	2.30	2-5/16	413,7	6,000	1654,8	24,000	501,0	20.00	143,8	317	50 100

**Inner Tube:** Nitrile

**Reinforcement:**

Multi-Spiral Steel  
(-16 4 plies),  
(-20, -24 6 plies)

**Cover:** Vinyl Nitrile

**Temp. Range:**

-40°F to +250°F  
(-40°C to +121°C)

**Typical Application:**

High-pressure hydraulics, hydrostatic transmissions. For more information on specific fluid applications and high temperature ratings, see pages 349-355.

Hose End Reference	Page
C-O-C	
4SP/6SP Series No Skive	350-359

# H545 RhinoHide™ Abrasion Resistant Constant Pressure Hydraulic Hose



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
H54504 H54504-250R H54504-500R	6,4	0.25	1/4	13,5	0.53	17/32	206,9	3,000	827,4	12,000	50,8	2.00	6,4	14	50 250 500
H54506 H54506-250R H54506-500R	9,5	0.38	3/8	15,9	0.63	5/8	206,9	3,000	827,4	12,000	63,5	2.50	8,2	18	50 250 500
H54508 H54508-250R H54508-500R	12,7	0.50	1/2	20,6	0.81	13/16	206,9	3,000	827,4	12,000	88,9	3.50	14,5	32	50 250 500
H54510 H54510-250R	15,9	0.63	5/8	23,8	0.94	15/16	206,9	3,000	827,4	12,000	101,6	4.00	16,8	37	50 250
H54512 H54512-250R	19,1	0.75	3/4	28,6	1.13	1-1/8	206,9	3,000	827,4	12,000	120,7	4.75	24,4	54	50 250
H54516 H54516-250R	25,4	1.00	1	35,7	1.41	1-13/32	206,9	3,000	827,4	12,000	152,4	6.00	39,0	86	50 250

**Inner Tube:** Nitrile

**Reinforcement:**

4-8 Size: 1 Steel Braid;  
10-16 Size: 2 Steel Braids

**Cover:** Abrasion resistant  
(woven nylon)

**Temp. Range:**

-40°F to +250°F  
(-40°C to +121°C)

**Typical Application:** 3,000 PSI constant working pressure hose with abrasion resistant cover. Ideal for logging, construction, mining and other off highway applications.

Hose End Reference	Page
C-O-C	
'S' Series (sizes -4, -6, -8 & -12 only)	140
'U' Series (-4 to -12 only)	141-158
430 'U' Series (size -16 only)	159-169

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

## H6008 Boston Yellow Jack®

BOSTON CONCORD YELLOW JACK AIR



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Wt. Per 100 Ft.		Avail. Lengths feet
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	Kg/m	lbs/ft	
H600816 H600816-100	25,4	1.00	1	46,0	1.81	1-13/16	69,0	1,000	275,8	4,000	38,6	85	50 100
H600824* H600824-100*	38,1	1.50	1-1/2	54,0	2.13	2-1/8	41,4	600	165,5	2,400	75,3	166	50 100
H600832* H600832-100*	50,8	2.00	2	67,5	2.66	2-21/32	41,4	600	165,5	2,400	93,4	206	50 100
H600840* H600840-100*	63,5	2.50	2-1/2	80,1	3.16	3-5/32	27,6	400	110,3	1,600	108,8	240	50 100
H600848* H600848-100*	76,2	3.00	3	94,4	3.72	3-23/32	27,6	400	110,3	1,600	140,6	310	50 100

**Inner Tube:** Nitrile (RMA Class A)

**Reinforcement:** 1 or 2 Steel Braids

**Cover:** Yellow Neoprene/  
Perforated MSHA Accepted

**Temp. Range:**  
-40°F to +200°F  
(-40°C to +93°C)

**Typical Application:** On air operated construction equipment (jack-hammer, etc.) drills, boring and mining equipment.

\* 2 Braids

**Hose End Reference**

C-O-C

430 'U' Series

**Page**

159-169

## H6009 Boston Bulldog Gold®



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Wt. Per 100 Ft.		Avail. Lengths feet
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	Kg/m	lbs/ft	
H600920 H600920-100	25,4	1.00	1	46,0	1.81	1-13/16	55,2	800	220,6	3,200	51,7	114	50 100
H600924 H600924-100	38,1	1.50	1-1/2	54,0	2.13	2-1/8	41,4	600	165,5	2,400	66,2	146	50 100
H600932 H600932-100	50,8	2.00	2	67,5	2.66	2-21/32	41,4	600	165,5	2,400	95,3	210	50 100
H600940 H600940-100	63,5	2.50	2-1/2	80,1	3.16	3-5/32	41,4	600	165,5	2,400	113,4	250	50 100
H600948 H600948-100	76,2	3.00	3	94,4	3.72	3-23/32	41,4	600	165,5	2,400	142,9	315	50 100
H600964 H600964-100	101,6	4.00	4	127,0	5.00	5	34,5	500	137,9	1,000	241,3	532	50 100

**Inner Tube:** Nitrile (RMA Class A)

**Reinforcement:** 1 or 2 Steel Braids

**Cover:** Carboxylated Nitrile/  
Perforated

**Temp. Range:**  
-40°F to +250°F  
(-40°C to +121°C)

**Typical Application:** On air operated construction equipment (jack-hammer, etc.) drills, boring and mining equipment, abrasion-resistant cover..

**Hose End Reference**

C-O-C

430 'U' Series

**Page**

159-169



# H9622 Boston Contractors Air®



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	Kg/m	lbs/ft	feet
H962208 H962208-100	12,7	0.50	1/2	23,8	0.94	15/16	69,0	1,000	275,8	4,000	15,4	34	50 100
H962212 H962212-100	19,1	0.75	3/4	30,2	1.19	1-3/16	69,0	1,000	275,8	4,000	20,0	44	50 100
H962216 H962216-100	25,4	1.00	1	38,1	1.50	1-1/2	58,6	850	234,4	3,400	27,7	61	50 100
H962220 H962220-100	31,8	1.25	1-1/4	43,7	1.72	1-23/32	34,5	500	137,9	2,000	36,8	81	50 100
H962224 H962224-100	38,1	1.50	1-1/2	54,0	2.13	2-1/8	34,5	500	137,9	2,000	68,1	150	50 100
H962232 H962232-100	50,8	2.00	2	67,5	2.66	2-21/32	34,5	500	137,9	2,000	92,7	204	50 100

**Inner Tube:** Nitrile (RMA Class A)

**Reinforcement:** 1 or 2 Steel Braids

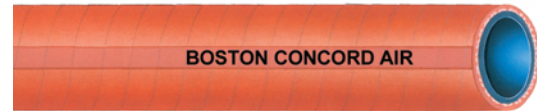
**Cover:** Neoprene/Perforated

**Temp. Range:**  
-40°F to +200°F  
(-40°C to +93°C)

**Typical Application:** On air operated construction equipment (jack-hammer, etc.) drills, boring and mining equipment.

Hose End Reference	Page
C-O-C	
430 'U' Series	159-169

# H6002 Boston Concord Air®



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	Kg/m	lbs/ft	feet
H600208 H600208-100	12,7	0.50	1/2	23,1	0.91	29/32	27,6	400	110,3	1,600	14,1	31	50 100
H600212 H600212-100	19,1	0.75	3/4	31,2	1.19	1-3/16	27,6	400	110,3	1,600	20,9	46	50 100
H600216 H600216-100	25,4	1.00	1	38,1	1.50	1-1/2	27,6	400	110,3	1,600	30,4	67	50 100
H600220 H600220-100	31,8	1.25	1-1/4	46,0	1.81	1-13/16	27,6	400	110,3	1,600	39,0	86	50 100
H600224 H600224-100	38,1	1.50	1-1/2	52,4	2.06	2-1/16	27,6	400	110,3	1,600	44,9	99	50 100
H600232 H600232-100	50,8	2.00	2	66,7	2.63	2-5/8	20,1	300	82,7	1,200	57,6	127	50 100

**Inner Tube:** Nitrile

**Reinforcement:** Fiber, 2 Braid or 2 Plies

**Cover:** 1/2", 3/4" & 1" Perforated Neoprene  
1-1/4", 1-1/2" & 2" Perforated Vinyl Nitrile

**Temp. Range:**  
-40°F to +200°F  
(-40°C to +93°C)

**Typical Application:** On air operated construction equipment (jack-hammer, etc.) drills, boring and mining equipment. Can be used to transfer water.

Hose End Reference	Page
C-O-C	
'U' Series (-08 & -20)	141-158
430 'U' Series (-24 to -32)	159-169

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

## H1571 Boston Mineforce®



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	Kg/m	lbs/ft	feet
H157112	19,1	0.75	3/4	31,2	1.19	1-3/16	27,6	400	110,3	1,600	18,1	40	50
H157112-100													100

**Inner Tube:** Modified PVC

**Reinforcement:** 4 Fiber Spirals

**Cover:** PVC/Nitrile Blend  
Wrapped Impression Finish

**Temp. Range:**

-20°F to +150°F  
(-29°C to +66°C)

**Typical Application:**

Transfer air and water. High pressure air tools and water washdown.

Stated working pressures are tested at 68°F. Working pressure decreases as temperature increases.

**Hose End Reference**

C-O-C

'U' Series

**Page**

141-158

## H1776/H1777 Boston Perfection 300®



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	Kg/m	lbs/ft	feet
H177704-500R	6,4	0.25	1/4	12,7	0.50	1/2	22,4	325	89,6	1,300	5,0	11	500
H177604-500R	6,4	0.25	1/4	15,1	0.59	19/32	22,4	325	89,6	1,300	6,8	15	500
H177705-500R	7,9	0.31	5/16	15,9	0.63	5/8	22,4	325	89,6	1,300	7,7	17	500
H177706-500R	9,5	0.38	3/8	16,7	0.66	21/32	22,4	325	89,6	1,300	7,7	17	500
H177606-500R	9,5	0.38	3/8	18,3	0.72	23/32	22,4	325	89,6	1,300	9,1	20	500
H177708-500R	12,7	0.50	1/2	20,6	0.82	13/16	22,4	325	89,6	1,300	10,9	24	500
H177608-500R	12,7	0.50	1/2	22,2	0.88	7/8	22,4	325	89,6	1,300	14,1	31	500
H177610-500R	15,9	0.63	5/8	25,4	1.00	1	22,4	325	89,6	1,300	16,3	36	500
H177612-500R	19,1	0.75	3/4	29,4	1.16	1-5/32	22,4	325	89,6	1,300	20,2	44	500
H177616-300R	25,4	1.00	1	36,5	1.44	1-7/16	22,4	325	89,6	1,300	20,9	46	300
H177620-300R	31,8	1.25	1-1/4	44,5	1.75	1-3/4	22,4	325	89,6	1,300	29,5	65	300
H177624-300R	38,1	1.50	1-1/2	50,8	2.00	2	15,5	325	89,6	1,300	37,2	82	300

**Inner Tube:** Nitrile  
(RMA Class A)

**Reinforcement:**  
1 or 2 Fiber Braids

**Cover:** Red Vinyl Nitrile

**Temp. Range:**

-40°F to +180°F  
(-40°C to +82°C)

**Typical Application:**

Pneumatic tools and conveying of air and water. High oil resistance.

**Hose End Reference**

C-O-C

'U' Series (-4 to -20)

430 'U' Series (-24 only)

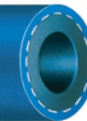
**Page**

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# H201 Boston Easy Couple General Purpose Hose

BOSTON EASY COUPLE



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H20104BK H20104BK-250R H20104BK-500R	6,4	0.25	1/4	12,7	0.50	1/2	17,2	250	69,0	1,000	76,2	3.00	4,1	9	50 250 500
H20106BK H20106BK-250R H20106BK-500R	9,5	0.38	3/8	16,7	0.65	21/32	17,2	250	69,0	1,000	76,2	3.00	5,9	13	50 250 500
H20108BK H20108BK-250R H20108BK-500R	12,7	0.50	1/2	19,1	0.75	3/4	17,2	250	69,0	1,000	127,0	5.00	6,8	15	50 250 500
H20110BK-250R	15,9	0.63	5/8	23,8	0.93	15/16	17,2	250	69,0	1,000	152,4	6.00	10,4	23	250
H20112BK-250R	19,1	0.75	3/4	26,2	1.03	1-1/32	17,2	250	69,0	1,000	177,8	7.00	11,8	26	250

**Inner Tube:** Nitrile

**Reinforcement:**

1 Fiber Braid

**Cover:** Neoprene (Black),  
Vinyl Nitrile (Colored Hoses)

**Temp. Range:**

-40°F to +200°F  
(-40°C to +100°C)

**Typical Application:**

General purpose truck hose.  
High temperature hydraulic,  
air brake and diesel fuel ap-  
plications.

**MSHA Accepted (Black only)**

**Note:**

Available in other colors on a made to order basis: Gray (GY), Red (RD), Green (GN) & Yellow (YW), Blue (BU)

**Hose End Reference**

Field Attachable

100 'B' Series

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# H265 Boston Ultraforce

BOSTON ULTRAFORCE



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	mm	in	Kg/m	lbs/ft	feet
H26504BU H26504BU-600R	6,4	0.25	1/4	12,7	0.50	1/2	24,1	350	19,1	.75	4,1	9	50 600
H26505BU H26506BU-600R	9,5	0.38	3/8	16,3	0.64	41/64	24,1	350	31,8	1.25	5,4	12	50 600
H26508BU H26508BU-500R	12,7	0.50	1/2	19,8	0.78	25/32	34,5	300	50,8	2.00	7,7	17	50 500
H26510BU-500R	15,9	0.63	5/8	22,2	0.88	7/8	17,2	250	-	-	9,1	20	500
H26512BU H26512BU-500R	19,1	0.75	3/4	26,9	1.06	1-1/16	17,2	250	63,5	2.50	11,8	26	50 500
H26514BU-200R	22,2	0.88	7/8	28,6	1.13	1-1/8	15,5	225	88,9	3.50	12,2	27	200
H26516BU H26516BU-200R	25,4	1.00	1	33,3	1.31	1-5/16	13,8	200	-	-	15,9	35	50 200
H26520BU-100	31,8	1.25	1-1/4	42,9	1.69	1-11/16	10,3	150	-	-	27,7	61	100
H26524BU-100	38,1	1.50	1-1/2	49,2	1.94	1-15/16	10,3	150	-	-	33,1	73	100
H26532BU-100	50,8	2.00	2	63,5	2.50	2-1/2	8,6	125	-	-	47,6	105	100

**Inner Tube:** Modified Vinyl

**Reinforcement:**

Fiber, 2 Spiral

**Cover:** Rubber modified,  
non-marking thermoplastic/  
pinpricked

**Temp. Range:**

-20°F to +180°F  
(-40°C to +82°C)

**Typical Application:**

Transfer air and water, air  
tools, robotics, water wash-  
down

Stated working pressures are tested at 68°F. Working pressure decreases as temperature increases. See chart on page 14 showing the relationship between working pressure and temperature for reinforced PVC hose.

**Hose End Reference**

C-O-C

'E' Series

265 'P' Series

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106-112

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## H275 Boston Polyforce II Hose

(Air/Water)

BOSTON POLYFORCE II



# Part Number	Hose I.D.			Hose O.D.			Working Press. (at 70°F)		Working Press. (at 150°F)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H27504RD H27504RD-600R	6,4	0.25	1/4	12,7	0.50	1/2	17,2	250	3,4	50	69,0	1,000	25,4	1.00	3,2	7	50 600
H27506RD H27506RD-600R	9,5	0.38	3/8	15,9	0.63	5/8	17,2	250	3,4	50	69,0	1,000	38,1	1.50	5,4	12	50 600
H27508RD H27508RD-500R	12,7	0.50	1/2	19,1	0.75	3/4	17,2	250	3,4	50	69,0	1,000	54,0	2.125	6,8	15	50 500
H27512RD H27512RD-500R	19,1	0.75	3/4	26,2	1.03	1-1/32	17,2	250	3,4	50	69,0	1,000	63,5	2.50	10,4	23	50 500
H27516RD H27516RD-200R	25,4	1.00	1	33,3	1.31	1-5/16	13,8	200	2,8	40	55,2	800	88,9	3.50	15,4	34	50 200

**Inner Tube:** PVC**Reinforcement:**

2 Fiber Spirals

**Cover:** PVC/Pinpricked**Temp. Range:**

-10°F to +150°F

(-23°C to +65°C)

**Typical Application:**

Suitable for transferring air and water.

**Note:**

Available in other colors on a made to order basis.

**Stated working pressures are tested at 70°F. Working pressure decreases as temperature increases.****See chart on page 15 showing the relationship between working pressure and temperature for reinforced PVC hose.****Hose End Reference****Page***C-0-C*

'E' Series (-06 to -16) 106-112

265 'P' Series (-04 to -12) 136

## H9949 Boston Shock-Safe®

BOSTON SHOCK SAFE



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	Kg/m	lbs/ft	feet
H994904-500R	6,4	0.25	1/4	15,1	0.59	19/32	19,0	275	75,8	1,100	6,8	15	500
H994906-500R	9,5	0.38	3/8	18,3	0.72	23/32	19,0	275	75,8	1,100	8,6	19	500
H994908-500R	12,7	0.50	1/2	22,2	0.88	7/8	19,0	275	75,8	1,100	12,2	27	500
H994912-500R	19,1	0.75	3/4	29,4	1.16	1-5/32	19,0	275	75,8	1,100	18,6	41	500
H994916-300R	25,4	1.00	1	36,5	1.44	1-7/16	19,0	275	75,8	1,100	29,0	64	300

**Inner Tube:** Nitrile (non-conductive)**Reinforcement:**

2 Fiber Braids

**Cover:** Vinyl Nitrile (non-conductive)**Temp. Range:**

-40°F to +180°F

(-40°C to +82°C)

**Typical Application:**

General purpose air and water hose where hose must be non-conductive.

Factory tested to exceed minimum electrical resistivity of one megaohm per inch at 1,000 volts D.C.

**Hose End Reference****Page***C-0-C*

'U' Series 141-158



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	Kg/m	lbs/ft	feet
H198104RD-600R	6,4	0.25	1/4	12,7	0.50	1/2	13,8	200	56	800	4,5	10	600
H198204RD-600R*	6,4	0.25	1/4	15,9	0.63	5/8	20,1	300	84	1200	5,9	13	600
H198105RD-600R	7,9	0.31	5/16	15,9	0.63	5/8	13,8	200	56	800	5,4	12	600
H198205RD-600R*	7,9	0.31	5/16	17,5	0.69	11/16	20,1	300	84	1200	5,9	13	600
H198106RD-600R	9,5	0.38	3/8	17,5	0.69	11/16	13,8	200	56	800	6,8	15	600
H198206RD-600R*	9,5	0.38	3/8	19,1	0.75	3/4	20,1	300	84	1200	8,2	18	600
H198108-600R	12,7	0.50	1/2	20,6	0.81	13/16	13,8	200	56	800	8,6	19	600
H198208-600R*	12,7	0.50	1/2	22,2	0.88	7/8	20,1	300	84	1200	10,4	23	600
H198210-600R*	15,9	0.63	5/8	26,2	1.03	1-1/32	20,1	300	84	1200	11,3	25	600
H198112-250* H198112-600R*	19,1	0.75	3/4	31,2	1.19	1-3/16	15,5	225	63	900	16,8	37	5-50's 600
H198212-250* H198212-600R*	19,1	0.75	3/4	31,2	1.19	1-3/16	20,1	300	84	1200	16,8	37	5-50's 600
H198216-400R*	25,4	1.00	1	36,5	1.44	1-7/16	13,8	200	84	1200	29,0	64	400

**Inner Tube:** Blended Nitrile

**Reinforcement:**  
2 or 4 Spiral

**Cover:** Neoprene/pinpricked

**Temp. Range:**  
-40°F to +180°F  
(-40°C to +82°C)

**Typical Application:**  
Transfer air and water  
and pneumatic tools on  
production line.

\* 4 Spirals  
Available in other colors on a made  
to order basis

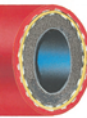
Hose End Reference	Page
C-O-C	
'U' Series (-4 to -20)	141-158



# H115 Boston Performer II Oil Resistant General Purpose Hose

(Air/Water)

BOSTON PERFORMER II



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths feet
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
H11504 H11504-550R	6,4	0.25	1/4	15,1	0.59	19/32	20,1	300	82,7	1,200	76,2	3.00	6,8	15	50 550
H11505-550R	7,9	0.31	5/16	16,7	0.66	21/32	20,1	300	82,7	1,200	88,9	3.50	7,7	17	550
H11506 H11506-550R	9,5	0.38	3/8	18,3	0.72	23/32	20,1	300	82,7	1,200	88,9	3.50	8,6	19	50 550
H11508 H11508-550R	12,7	0.50	1/2	22,2	0.88	7/8	20,1	300	82,7	1,200	114,3	4.50	12,2	27	50 550
H11512 H11512-550R	19,1	0.75	3/4	29,4	1.16	1-5/32	20,1	300	82,7	1,200	146,1	5.75	18,6	41	50 550
H11516 H11516-300R	25,4	1.00	1	36,5	1.44	1-7/16	15,5	225	62,1	900	184,2	7.25	28,1	62	50 300
H11520 H11520-300R	31,8	1.25	1-1/4	44,5	1.75	1-3/4	15,5	225	62,1	900	222,3	8.75	45,8	101	50 300
H11524 H11524-300R	38,1	1.50	1-1/2	50,8	2.00	2	15,5	225	62,1	900	254,0	10.00	48,1	106	50 300

**Inner Tube:** Nitrile**Reinforcement:** Multi-Fiber Braids**Cover:** Vinyl Nitrile**Temp. Range:**-40°F to +180°F  
(-40°C to +82°C)**Typical Application:**Medium oil resistant, water.  
Ideal for pneumatic tool operation.**Hose End Reference****Page***C-O-C*'U' Series 141-158  
(except size -05 & -24)

430 'U' Series (-24) 159-169

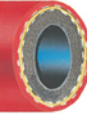
*Field Attachable*057 'B' Series 187-188  
(except size -8, -16, -20 & -24)

105 'B' Series (-4 to -12) 192

# H116 Boston Performer II Oil Resistant General Purpose Hose

(Air/Water)

BOSTON PERFORMER II



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths feet
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
H11604-550R	6,4	0.25	1/4	12,7	0.50	1/2	15,5	225	62,1	900	76,2	3.00	4,5	10	550
H11605-550R	7,9	0.31	5/16	15,9	0.63	5/8	15,5	225	62,1	900	88,9	3.50	6,4	14	550
H11606-550R	9,5	0.38	3/8	16,7	0.66	21/32	15,5	225	62,1	900	88,9	3.50	6,8	15	550
H11608-550R	12,7	0.50	1/2	20,1	0.82	13/16	15,5	225	62,1	900	114,3	4.50	9,5	21	550

**Inner Tube:** Nitrile**Reinforcement:** Multi-Fiber Braids**Cover:** Vinyl Nitrile**Temp. Range:**-40°F to +180°F  
(-40°C to +82°C)**Typical Application:**Medium oil resistant, water.  
Ideal for pneumatic tool operation.**Hose End Reference****Page***C-O-C*'U' Series 141-158  
(except size -05 & -24)

430 'U' Series (-24) 159-169

*Field Attachable*057 'B' Series 187-188  
(except size -8, -16, -20 & -24)

105 'B' Series (-4 to -12) 192

# H0105 Boston Bosflex A/W General Purpose Hose

(Air/Water)



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H010504RD H010504RD-600R	6,4	0.25	1/4	15,9	0.63	5/8	20,1 12,1	300** 175*	82,7 48,3	1,200** 700*	76,2	3.00	5,9	13	50 600
H010506RD H010506RD-600R	9,5	0.38	3/8	19,1	0.75	3/4	20,1 12,1	300** 175*	82,7 48,3	1,200** 700*	88,9	3.50	8,2	18	50 600
H010508RD H010508RD-600R	12,7	0.50	1/2	22,2	0.88	7/8	20,1 10,3	300** 150*	82,7 41,4	1,200** 600*	114,3	4.50	10,4	23	50 600
H010510RD-600R	15,9	0.63	5/8	26,2	1.03	1-1/32	20,1	300**	82,7	1,200**			13,6	30	600
H010512RD H010512RD-600R	19,1	0.75	3/4	31,2	1.19	1-3/16	15,3 10,3	225** 150*	62,1 41,4	900** 600*	146,1	5.75	16,8	37	50 600
H010516RD H010516RD-300R	25,4	1.00	1	36,5	1.44	1-7/16	13,8	200	55,2	800	184,2	7.25	27,2	60	50 300

**Inner Tube:** EPDM

**Reinforcement:**  
Multi-Fiber Spiral

**Cover:** EPDM

**Temp. Range:**

Air: -40°F to +160°F  
(-40°C to +71°C)

Water: 32°F to +180°F  
(0°C to +93°C)

**Typical Application:**

Air and water applications where petroleum contact is limited; some agricultural solutions.

\* When used with 105 'B' and 057 'B' Series Ends and 6203 clamps.

\*\*When used with 'U' Series only.

Hose End Reference	Page
<i>C-O-C</i>	
'U' Series (-6 to -16)	141-158
<i>Field Attachable</i>	
057 'B' Series (except -8 & -16)	187-188
105 'B' Series (-4 to -12)	192

# H0106 Boston Bosflex A/W General Purpose Hose

(Air/Water)



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H010604RD H010604RD-600R	6,4	0.25	1/4	12,7	0.63	1/2	20,1 12,1	200** 175*	55,1 48,3	800** 700*	76,2	3.00	5,9	13	50 600
H010605RD	9,5	0.38	3/8	15,1	0.75	23/32	20,1	200**	55,1	800**	82,5	3.25	8,2	18	50
H010606RD H010606RD-600R	9,5	0.38	3/8	17,5	0.75	11/16	20,1 12,1	200** 175*	55,1 48,3	800** 700*	88,9	3.50	8,2	18	50 600
H010608RD H010608RD-600R	12,7	0.50	1/2	20,6	0.88	13/16	20,1 10,3	200** 150*	55,1 41,4	800** 600*	114,3	4.50	10,4	23	50 600
H010610RD-600R	9,5	0.38	3/8	24,6	0.75	31/32	20,1	200**	55,1	800**	88,9	3.50	8,2	18	50
H010612RD-250R H010612RD-600R	19,1	0.75	3/4	30,2	1.19	1-3/16	20,1 10,3	300** 150*	62,1 41,4	1,200** 600*	146,1	5.75	16,8	37	50 600

**Inner Tube:** EPDM

**Reinforcement:** 2 Spiral

**Cover:** EPDM

**Temp. Range:**

Air: -40°F to +160°F  
(-40°C to +71°C)

Water: 32°F to +180°F  
(0°C to +93°C)

**Typical Application:**

Air and water applications where petroleum contact is limited; some agricultural solutions.

\* When used with 105 'B' and 057 'B' Series Ends and 6203 clamps.

\*\*When used with 'U' Series only.

**Note:** Available in black (bk) as well

Hose End Reference	Page
<i>C-O-C</i>	
'U' Series (-6 to -16)	141-158
<i>Field Attachable</i>	
057 'B' Series (except -8 & -16)	187-188
105 'B' Series (-4 to -12)	192

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

## H1812 Boston Industrial A/W

BOSTON INDUSTRIAL A/W



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	Kg/m	lbs/ft	feet
H181204-500R	6,4	0.25	1/4	15,1	0.59	19/32	19,0	275	77,0	1,100	7,3	16	500
H181206-500R	9,5	0.38	3/8	18,3	0.72	23/32	19,0	275	77,0	1,100	8,6	19	500
H181208-500R	12,7	0.50	1/2	22,2	0.88	7/8	17,2	250	70,0	1,000	12,2	27	500
H181210-500R	15,9	0.63	5/8	25,4	1.00	1	17,2	250	70,0	1,000	16,3	36	500
H181212-500R	19,1	0.75	3/4	29,4	1.16	1-5/32	17,2	250	70,0	1,000	18,6	41	500
H181216-300R	25,4	1.00	1	36,5	1.44	1-7/16	17,2	250	70,0	1,000	20,9	46	300
H181220-300R	31,8	1.25	1-1/4	44,5	1.75	1-3/4	17,2	250	70,0	1,000	29,5	65	300
H181224-300R	38,1	1.50	1-1/2	50,8	2.00	2	17,2	250	70,0	1,000	37,2	82	300

**Inner Tube:** EPDM**Reinforcement:**

2 Fiber Braids

**Cover:** Red EPDM**Temp. Range:**-40°F to +180°F  
(-40°C to +82°C)**Typical Application:**

Spraying and conveying water-based liquid fertilizers and pesticides. Transfer air and water; pneumatic tools.

**Hose End Reference****Page***C-O-C*

'U' Series (-4 to -20) 141-158

430 'U' Series (-24 only) 159-169

## H1719 Boston Contrac-Force®

BOSTON CONTRAC-FORCE

# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	Kg/m	lbs/ft	feet
H171910-50C	15,9	0.63	5/8	21,0	0.83	53/64	10,3	150	41,4	600	8,2	18	5-50's
H171912-50C	19,1	0.75	3/4	26,6	1.05	1-3/64	10,3	150	41,4	600	8,6	19	25-50's

**Inner Tube:** Polyvinyl Chloride (PVC)**Reinforcement:** 2 Fiber Spirals**Cover:** Polyvinyl Chloride (PVC)**Temp. Range:**-15°F to +150°F  
(-9°C to +66°C)**Typical Application:** Low pressure general purpose water transfer hose that is abrasion, age and ozone resistant.Stated working pressures are tested at 70° F. Working pressure decreases as temperature increases.  
MTO min. order quantity 5,000**Hose End Reference****Page***Machined brass hex head GHT*

# H8679 Boston Green Garden Hose



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	Kg/m	lbs/ft	feet
H867910-50C	15,9	0.63	5/8	12,7	23,1	0.91	6,9	100	27,6	400	8,6	19	5-50's coupled
H867910-600R	15,9	0.63	5/8	19,1	23,1	0.91	6,9	100	27,6	400	8,6	19	600

**Inner Tube:**  
Synthetic Rubber

**Reinforcement:**  
2 Fiber Spirals

**Cover:** Synthetic Rubber

**Temp. Range:**  
-30°F to +160°F  
(-34°C to +71°C)

**Typical Application:** Low pressure general purpose water transfer hose.

**Working Pressure:**  
100 PSI 3:1 safety factor

**Hose End Reference** **Page**  
*Machined brass hex head GHT*

# H1987 Boston Contractors Water®



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	Kg/m	lbs/ft	feet
H198710 H198710-50C H198710-600R	15,9	0.63	5/8	23,8	0.94	15/16	10,3	150	41,4	600	10,4	23	50 50-50's coupled 600
H198712 H198712-50C H198712-600R	19,1	0.75	3/4	27,8	1.09	1-3/32	10,3	150	41,4	600	13,6	30	50 50-50's coupled 600

**Inner Tube:** EPDM

**Reinforcement:**  
2 Fiber Spirals

**Cover:** EPDM/Perforated

**Temp. Range:**  
-30°F to +160°F  
(-34°C to +71°C)

**Typical Application:**  
Low pressure general purpose water transfer hose that is abrasion, age, heat and water resistant.

**Hose End Reference** **Page**  
*Machined brass hex head GHT*

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

# H900 Boston Black Line® Liquid Propane Gas (LPG)

UL 21 Approved LP-Gas



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	Kg/m	lbs/ft	feet
H90004-500R	6,4	0.25	1/4	14,7	0.58	37/64	24,1	350	122,0	1,750	5,4	12	500
H90006-500R	9,5	0.38	3/8	18,3	0.72	23/32	24,1	350	122,0	1,750	7,7	17	500
H90008-500R	12,7	0.50	1/2	23,1	0.91	29/32	24,1	350	122,0	1,750	10,9	24	500
H90012-500R*	19,1	0.75	3/4	27,4	1.08	1-5/64	24,1	350	122,0	1,750	18,6	41	500
H90016-150*	25,4	1.00	1	38,1	1.50	1-1/2	24,1	350	122,0	1,750	23,6	52	150
H90016-300R*													300

**Inner Tube:** Nitrile**Reinforcement:** Fiber Braid  
(1" has 2 Stainless Steel  
Static Wires)**Cover:** Vinyl Nitrile, Perforated**Temp. Range:**-40°F to +140°F (Hose is  
capable of this rating. LP-  
Gas should never be elevat-  
ed above 100°F)**Typical Application:**Transfer and delivery of  
propane and butane.

\*2 braid

**Hose End  
Reference**C-O-C

'U' Series

**Page**

141-158



# H435 Non-Conductive Hose

SAE 100R7



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H43504 H43504-500R	6,4	0.25	1/4	11,5	0.45	29/64	189,6	2,750	758,4	11,000	25,4	1.00	2,3	5	50 500
H43505 H43505-500R	7,9	0.31	5/16	14,3	0.56	9/16	172,4	2,500	689,5	10,000	38,1	1.50	3,2	7	50 500
H43506 H43506-250R	9,5	0.38	3/8	15,9	0.63	5/8	155,1	2,250	620,6	9,000	50,8	2.00	3,6	8	50 250
H43508 H43508-250R	12,7	0.50	1/2	20,6	0.81	13/16	137,9	2,000	551,6	8,000	63,5	2.50	5,4	12	50 250
H43512	19,1	0.75	3/4	27,0	1.06	1-1/16	86,2	1,250	344,8	5,000	241,3	9.50	8,6	19	50
H43516	25,4	1.00	1	34,9	1.38	1-3/8	69,0	1,000	275,8	4,000	304,8	12.00	11,3	25	50

**Inner Tube:** Nylon 11

**Reinforcement:**  
2 Fiber Braids

**Cover:** Non-Conductive  
Polyurethane

**Temp. Range:**

-40°F to +200°F  
(-40°C to +93°C)

**Typical Application:**

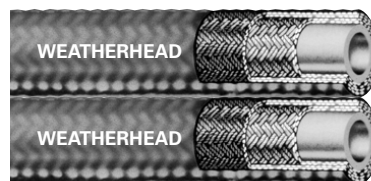
Compatible w/most hydraulic fluids, designed for use where electric shock hazards exist. Max. leakage is 50 Micro Amperes per ft. at 37.5 KV per ft. for five minutes.

**Hose End Reference**

C-O-C	Page
069 'E' Series	113-116
229 'P' Series (-4 to -10)	135
<i>Field Attachable</i>	
069 'D' Series	196-197
247 'N' Series	206-210

# H435 Twin Line Non-Conductive Hose

SAE 100R7, Multi-Tube



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	mm	in	Kg/m	lbs/ft	feet
H43544 H43544-250R	6,4	0.25	1/4	6,4	0.25	1/4	Same as H435		25,4	1.00	4,5	10	50 250
H43545 H43545-250R	6,4	0.25	1/4	7,9	0.31	5/16			38,1	1.50	5,4	12	50 250
H43546 H43546-250R	6,4	0.25	1/4	9,5	0.38	3/8			50,8	2.00	5,9	13	50 250
H43555 H43555-250R	7,9	0.31	5/16	7,9	0.31	5/16			38,1	1.50	6,4	14	50 250
H43556 H43556-250R	7,9	0.31	5/16	9,5	0.38	3/8			50,8	2.00	6,8	15	50 250
H43558 H43558-250R	7,9	0.31	5/16	12,7	0.50	1/2			63,5	2.50	8,6	19	50 250
H43566 H43566-250R	9,5	0.38	3/8	9,5	0.38	3/8			50,8	2.00	7,3	16	50 250
H43568 H43568-250R	9,5	0.38	3/8	12,7	0.50	1/2			63,5	2.50	9,1	20	50 250
H43588 H43588-250R	12,7	0.50	1/2	12,7	0.50	1/2			63,5	2.50	10,9	24	50 250

**Inner Tube:** Nylon 11

**Reinforcement:**  
2 Fiber Braids

**Cover:** Non-Conductive  
Polyurethane

**Temp. Range:**

-40°F to +200°F  
(-40°C to +93°C)

**Typical Application:**

Compatible w/most hydraulic fluids, designed for use where electric shock hazards exist. Max. leakage is 50 Micro Amperes per ft. at 37.5 KV per ft. for five minutes.

**Hose End Reference**

C-O-C	Page
'E' Series	106-112
<i>Field Attachable</i>	
436 'N' Series	214-215

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

## H436 Perforated Cover Hose

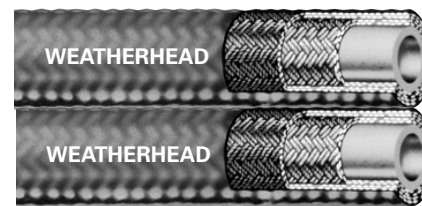
SSAE 100R7



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H43604 H43604-500R	6,4	0.25	1/4	11,5	0.45	29/64	189,6	2,750	758,4	11,000	25,4	1.00	2,3	5	50 500
H43605 H43605-500R	7,9	0.31	5/16	14,3	0.56	9/16	172,4	2,500	689,5	10,000	38,1	1.50	3,2	7	50 500
H43606 H43606-250R	9,5	0.38	3/8	15,9	0.63	5/8	155,1	2,250	620,6	9,000	50,8	2.00	3,6	8	50 250
H43608 H43608-250R	12,7	0.50	1/2	20,2	0.80	51/64	137,9	2,000	551,6	8,000	63,5	2.50	5,4	12	50 250
H43612	19,1	0.75	3/4	27,0	1.06	1-1/16	86,2	1,250	344,8	5,000	241,3	9.50	8,6	19	50
H43616	25,4	1.00	1	34,9	1.38	1-3/8	69,0	1,000	275,8	4,000	304,8	12.00	11,3	25	50

## H436 Twin Line Perforated Cover Hose

SAE 100R7, Multi-Tube



# Part Number	Hose I.D.			Hose O.D.			Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	mm	in	Kg/m	lbs/ft	feet
H43644 H43644-250R	6,4	0.25	1/4	6,4	0.25	1/4	25,4	1.00	4,5	10	50 250
H43645 H43645-250R	6,4	0.25	1/4	7,9	0.31	5/16	38,1	1.50	5,4	12	50 250
H43646 H43646-250R	6,4	0.25	1/4	9,5	0.38	3/8	50,8	2.00	5,9	13	50 250
H43648 H43648-250R	6,4	0.25	1/4	12,7	0.50	1/2	63,5	2.50	7,7	17	50 250
H43655 H43655-250R	7,9	0.31	5/16	7,9	0.31	5/16	38,1	1.50	6,4	14	50 250
H43656 H43656-250R	7,9	0.31	5/16	9,5	0.38	3/8	50,8	2.00	6,8	15	50 250
H43658 H43658-250R	7,9	0.31	5/16	12,7	0.50	1/2	63,5	2.50	8,6	19	50 250
H43666 H43666-250R	9,5	0.38	3/8	9,5	0.38	3/8	50,8	2.00	7,3	16	50 250
H43668 H43668-250R	9,5	0.38	3/8	12,7	0.50	1/2	63,5	2.50	8,2	18	50 250
H43688 H43688-250R	12,7	0.50	1/2	12,7	0.50	1/2	63,5	2.50	10,9	24	50 250

**Inner Tube:** Nylon 11**Reinforcement:** 2 Fiber Braids**Cover:** Polyurethane (Perforated)**Temp. Range:**-40°F to +200°F  
(-40°C to +93°C)

**Typical Application:** In addition to its compatibility with most hydraulic fluids, the low effusion rate of this hose makes it ideally suited for CO<sub>2</sub> and nitrogen. Perforated cover permits breathing, eliminating condensation and blistering.

\*16 size not SAE or DOT approved for air brake applications.

† Hose is also available in 250' lengths, to order in this length, add -250R to the part number (ie. H22904 becomes H22904-250R)

**Hose End Reference**

C-O-C

'E' Series 106-112

Field Attachable

436 'N' Series 214-215

# H335 Non-Conductive Hose

SAE 100R8 EN 855 Type R8



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H33503-250R	4,8	0.19	3/16	13,1	0.52	33/64	344,8	5,000	1379,0	20,000	38,1	1.50	3,6	8	250
H33504 H33504-250R H33504-500R	6,4	0.25	1/4	15,9	0.63	5/8	344,8	5,000	1379,0	20,000	50,8	2.00	5,4	12	50 250 500
H33506 H33506-250R	9,5	0.38	3/8	19,1	0.75	3/4	275,8	4,000	1103,2	16,000	63,5	2.50	6,8	15	50 250
H33508 H33508-250R	12,7	0.50	1/2	22,6	0.89	57/64	241,3	3,500	965,3	14,000	101,6	4.00	8,6	19	50 250
H33512 H33512-200R	19,1	0.75	3/4	29,0	1.14	1-9/64	155,1	2,250	620,6	9,000	165,1	6.50	11,8	26	50 200
H33516 H33516-200R	25,4	1.00	1	37,3	1.47	1-15/32	137,9	2,000	551,6	8,000	254,0	10.00	17,2	38	50 200

**Inner Tube:** Nylon  
**Reinforcement:** Multiple Fiber Braids  
**Cover:** Polyurethane

**Temp. Range:**  
 Petroleum/Synthetic based Hydraulic Fluids: -40°F to +212°F (-40°C to +100°C)  
 Water-Based Hydraulic Fluids: -32°F to +158°F (-0°C to +70°C)  
 Fire Resistant Fluids: -40°F to +158°F (-40°C to +70°C)

**Typical Application:**  
 Compatible with most hydraulic fluids, designed for use where electric shock hazards exist. Max. leakage is 50 micro amperes per ft. at 37.5 kV per ft. for five minutes.

Hose End Reference	Page
C-O-C	
336 'E' Series	117-120

# H336 Perforated Cover Hose

SAE 100R8  
 EN 855 Type R8



# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H33603 H33603-250R	4,8	0.19	3/16	13,1	0.52	33/64	344,8	5,000	1379,0	20,000	38,1	1.50	3,6	8	50 250
H33604 H33604-250R	6,4	0.25	1/4	15,9	0.63	5/8	344,8	5,000	1379,0	20,000	50,8	2.00	5,4	12	50 250
H33606 H33606-250R	9,5	0.38	3/8	19,1	0.75	3/4	275,8	4,000	1103,2	16,000	63,5	2.50	6,8	15	50 250
H33608 H33608-250R	12,7	0.50	1/2	22,6	0.89	57/64	241,3	3,500	965,3	14,000	101,6	4.00	8,6	19	50 250
H33612 H33612-200R	19,1	0.75	3/4	29,0	1.14	1-9/64	155,1	2,250	620,6	9,000	165,1	6.50	11,8	26	50 200
H33616 H33616-200R	25,4	1.00	1	37,3	1.47	1-15/32	137,9	2,000	551,6	8,000	254,0	10.00	17,2	38	50 200

**Inner Tube:** Nylon  
**Reinforcement:** Multiple Fiber Braids  
**Cover:** Perforated Polyurethane

**Temp. Range:**  
 Petroleum/Synthetic based Hydraulic Fluids: -40°F to +212°F (-40°C to +100°C)  
 Water-Based Hydraulic Fluids: -32°F to +158°F (-0°C to +70°C)  
 Fire Resistant Fluids: -40°F to +158°F (-40°C to +70°C)

**Typical Application:**  
 General hydraulic applications, High Pressure Pneumatic systems. H336 is compatible with petroleum and synthetic based hydraulic fluids.

Hose End Reference	Page
C-O-C	
336 'E' Series	117-120

APPLICATION DATA  
 LOW & MEDIUM PRESSURE HOSE  
 HIGH PRESSURE HOSE  
 SPECIALTY HOSE  
 ACCESSORIES & ASSEMBLY INSTRUCTIONS  
 ADAPTERS & TUBE HOSE ENDS  
 HOSE ASSEMBLY EQUIPMENT  
 TECHNICAL DATA

# H243 PTFE Hose



APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS &  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	
H24303 H24303-150R	4,8	0.19	3/16	7,9	0.31	5/16	206,9	3,000	827,4 661,9	12,000 9,600*	50,8	2.00	2,7	6	50 150
H24304 H24304-100R	6,4	0.25	1/4	9,1	0.36	23/64	206,9	3,000	827,4 661,9	12,000 9,600*	76,2	3.00	3,6	8	50 100
H24305 H24305-100R	7,9	0.31	5/16	10,7	0.42	27/64	172,4	2,500	689,5 551,6	10,000 8,000*	101,6	4.00	4,5	10	50 100
H24306 H24306-100R	9,5	0.38	3/8	12,7	0.50	1/2	137,9	2,000	551,6 413,7	8,000 6,000*	127,0	5.00	5,4	12	50 100
H24308 H24308-100R	12,7	0.50	1/2	16,3	0.64	41/64	120,7	1,750	482,7 379,2	7,000 5,500*	165,1	6.50	6,8	15	50 100
H24312	19,1	0.75	3/4	22,6	0.89	57/64	69,0	1,000	275,8 241,3	4,000 3,500*	228,6	9.00	10,0	22	50
H24316	25,4	1.00	1	28,6	1.13	1-1/8	69,0	1,000	275,8 224,1	4,000 3,250*	304,8	12.00	22,2	49	50

**Inner Tube:** PTFE

**Reinforcement:** Single Stainless Steel Braid, 1" Size Double Stainless Steel Braid (Type 304)

**Temp. Range:**  
-65°F to +450°F  
(-54°C to +232°C)

**Typical Application:**  
Hydraulic, air and steam-lines. Particularly suited for air compressor discharge lines where vibration and high temp are present.

**FDA Accepted Material**

\*For applications above +300°F (+149°C)

**Note:**  
Not for use in applications requiring static dissipation.

For more information on PTFE hose options refer to the Everflex Catalog, document number E-HOEV-MC001-E.

Hose End Reference	Page
C-0-C	
'E' Series	106-112

# H277 Conductive PTFE Hose



APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

# Part Number	Hose I.D.			Hose O.D.			Working Press. (PSI)		Min. Burst Pressure		Min. Bend Radius		Wt. Per 100 Ft.		Avail. Lengths
	mm	in	fraction	mm	in	fraction	bar	psi	bar	psi	mm	in	Kg/m	lbs/ft	feet
H27703 H27703-150R	4,8	0.19	3/16	7,9	0.31	5/16	206,9	3,000	827,4 661,9	12,000 9,600*	50,8	2.00	2,7	6	50 150
H27704 H27704-100R	6,4	0.25	1/4	9,1	0.36	23/64	206,9	3,000	827,4 661,9	12,000 9,600*	76,2	3.00	3,6	8	50 100
H27705 H27705-100R	7,9	0.31	5/16	10,7	0.42	27/64	172,4	2,500	689,5 551,6	10,000 8,000*	101,6	4.00	4,5	10	50 100
H27706 H27706-100R	9,5	0.38	3/8	12,7	0.50	1/2	137,9	2,000	551,6 413,7	8,000 6,000*	127,0	5.00	5,4	12	50 100
H27708 H27708-100R	12,7	0.50	1/2	16,3	0.64	41/64	120,7	1,750	482,7 379,2	7,000 5,500*	165,1	6.50	6,8	15	50 100
H27712	19,1	0.75	3/4	22,6	0.89	57/64	69,0	1,000	275,8 231,0	4,000 3,350*	228,6	9.00	10,0	22	50
H27716	25,4	1.00	1	28,6	1.13	1-1/8	69,0	1,000	275,8 231,0	4,000 3,350*	304,8	12.00	22,2	49	50

**Inner Tube:** PTFE

**Reinforcement:** Single  
Stainless Steel Braid, 1"  
Size Double Stainless Steel  
Braid (Type 304)

**Temp. Range:**  
-65°F to +450°F  
(-54°C to +232°C)

**Typical Application:**  
Hydraulic, air and steam  
lines. Particularly suited for  
air compressor discharge  
lines where vibration and  
high temp are present.

**Note:**  
For use in applications requiring static  
dissipation.

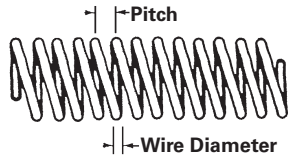
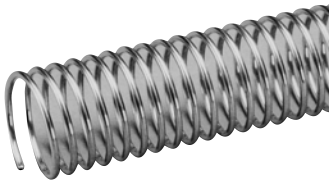
\*For applications above +300°F (+149°C)  
For more information on PTFE hose options  
refer to the Everflex Catalog, document  
number E-HOEV-MC001-E.

Hose End Reference	Page
C-O-C	
'E' Series	106-112



# Hose Sleeves and Guards

## Round Wire Spring Guard

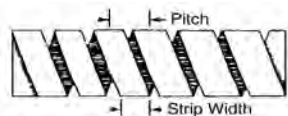


Spring guards should be considered for those applications which call for tough, steel armor protection. They offer heavy-duty hose defense against cuts and abrasion, with the added benefit of kink resistance and the ability to mold hose assembly routing for applications which require tight bends.

**Material:** Hot Dipped Galvanized steel, chemically treated and oiled.

GUARD I.D.	CATALOG NUMBER	PACKAGE LENGTH (FT)	WIRE DIAMETER	PITCH
.515	A1900	100'	.063	.188
.515	A1900-20	20'	.063	.188
.550	A1901	100'	.063	.188
.550	A1901-20	20'	.063	.188
.610	AS1902	100'	.063	.188
.610	A1902-20	20'	.063	.188
.650	A1903	100'	.080	.188
.650	A1903-20	20'	.080	.188
.750	A1904	100'	.080	.188
.750	A1904-20	20'	.080	.188
.835	A1905	100'	.080	.188
.835	A1905-20	20'	.080	.188
.900	A1906	100'	.080	.188
.900	A1906-20	20'	.080	.188
.990	A1907	100'	.080	.188
.990	A1907-20	20'	.080	.188
1.055	A1908	100'	.080	.188
1.055	A1908-20	20'	.080	.188
1.110	A1909	100'	.080	.250
1.110	A1909-20	20'	.080	.250
1.240	A1910	100'	.080	.250
1.240	A1910-20	20'	.080	.250
1.300	A1911	60'	.120	.375
1.300	A1911-20	20'	.120	.375
1.380	A1912	60'	.120	.375
1.630	A1913	60'	.120	.375
1.810	A1915	60'	.120	.375
2.000	A1916	40'	.120	.375
2.125	A1917	40'	.120	.375
2.300	A1919	40'	.120	.375

## Flat Wire Spring Guard

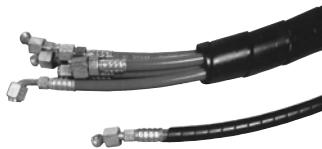


Spring guards should be considered for those applications which call for tough, steel armor protection. They offer heavy-duty hose defense against cuts and abrasion, with the added benefit of kink resistance and the ability to mold hose assembly routing for applications which require tight bends.

GUARD I.D.	CATALOG NUMBER	PACKAGE LENGTH (FT)	STRIP THICKNESS	STRIP WIDTH	PITCH
.515	A2900	100'	.028	.375	.500
.550	A2901	100'	.028	.375	.500
.610	A2902	100'	.028	.375	.500
.650	A2903	100'	.028	.375	.500
.750	A2904	100'	.028	.375	.500
.835	A2905	100'	.028	.500	.688
.900	A2906	100'	.028	.500	.688
.990	A2907	100'	.028	.500	.688
1.055	A2908	100'	.028	.500	.688
1.110	A2909	100'	.028	.500	.688
1.240	A2910	100'	.028	.500	.688
1.300	A2911	60'	.028	.500	.688
1.380	A2912	60'	.042	.500	.812
1.630	A2913	60'	.042	.500	.812
2.125	A2917	40'	.042	.500	.812
2.300	A2919	40'	.042	.500	.812

# Hose Sleeves and Guards

## Heavy Duty Poly Hose Guard



Poly Hose ID

Heavy Duty Hose Guard can be easily placed around a single or bundle of hydraulic and pneumatic hoses. It protects against abrasion, and also provides crush resistance, reducing or eliminating costly premature hose failures.

**Features:** Resists oils, lubricants, gasoline and most solvents.

**Temperature:** -100°F to +220°F

**Color:** Black

**Material:** High Density Polyethylene

GUARD I.D.	CATALOG NUMBER	WALL THICKNESS	GUARD I.D.	FOOT/ROLL
.492	A9900	.069	.630	100'
.668	A9901	.086	.840	100'
1.014	A9902	.118	1.250	100'
1.600	A9903	.150	1.900	50'
2.457	A9904	.209	2.875	50'
3.065	A9905	.218	3.500	35'

## Abrasion Sleeve

MSHA Accepted  
ISO 6945



A hose protection product used to help safeguard hose covers from abrasions and cuts. Typical areas of use include agricultural, logging, construction and mining applications. The abrasion sleeve is also useful for bundling two or more hose assemblies together, in addition to the protective qualities the sleeving provides. Available in .045" thin wall and .090" thick wall sleeving.

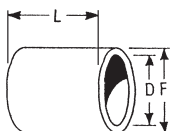
**Material:** Bulk continuous filament nylon.

**Note:** Wall thickness is for single wall.

SLEEVE I.D.	.045" THIN WALL CATALOG NO.	.090" THICK WALL CATALOG NO.	PACKAGE* LENGTH (FT)	FLAT I.D. (INCH)
.90	A4900	A3900	100'	1.32-1.51
1.06	A4901	A3901	100'	1.57-1.76
1.22	A4902	A3902	100'	1.82-2.01
1.35	A4903	A3903	100'	2.03-2.21
1.66	A4904	A3904	100'	2.63-2.87
1.81	A4905	A3905	100'	2.75-2.94
2.19	A4906	A3906	100'	3.43-3.53
2.62	A4907	A3907	100'	4.02-4.21
2.80	A4908	A3908	100'	4.43-4.62

\*Package contains two pieces that are not less than 30 feet long each.

## Locator Clamp



Locator Clamps are designed for crimping to H14510 or H42510 hydraulic hoses to provide a support for routing clamps. Popular for use in Case equipment applications.

**Note:** Crimp using collet T-400-5C and spacer ring T-400-62 (yellow), flat side up.

HOSE I.D.	CATALOG NUMBER	L	D	F
5/8	A4910	1.60	1.084	1.25

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# Hose Sleeves and Guards

## Hose Bend Restrictors



For use in protecting the last section of hose at the fitting connection, bend restrictors are designed to allow for an appropriate degree of "bend" without compromising the integrity of your hose assembly. Also recommended for hose assemblies which receive substantial handling, such as pressure washer, air, oil, and hydraulic fluid transfer applications.

Material: Plastisol MR 436  
Gloss PVC

**Note:**

Colors RD, BU, GN, YW available by special order.

RESTRICTOR I.D.	CATALOG NUMBER	RESTRICTOR LENGTH (INCH)	HOSE TYPE APPLICATION
.530	A5953	6	H14504, H00904
.625	A5962	6	H10404, H20906, H24504, H34504, H42504
.690	A5969	6	H14506, H34506
.750	A5975	7	H10406, H20908, H24506, H30006
.840	A5984	7	H10408, H14508, H24508
.875	A5987	7	H34508

## Firesleeve



Firesleeve is a flame-resistant sheathing constructed of tightly-woven fiberglass coated with a specially compounded, highly temperature-resistant, silicone rubber. Firesleeve offers you protection in hostile environments involving heat extremes. Not compatible with hydrocarbons.

**Temperature Range:**

Continuous exposure up to 500°F. Up to 2000°F for 15-20 minutes. Up to 3000°F for durations of 15-30 seconds.

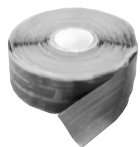
**Color:** Red-Orange

**Note:**

Refer to application chart on pages 25-26 for locating Firesleeve part numbers for specific Weatherhead hoses.

SLEEVE I.D.	CATALOG NUMBER	ROLL LENGTH
.50	A6908	100'
.63	A6910	100'
.75	A6912	100'
.88	A6914	100'
1.00	A6916	100'
1.25	A6920	100'
1.50	A6924	100'
1.75	A6928	100'
2.00	A6932	50'
2.25	A6936	50'
2.50	A6940	50'
3.00	A6948	50'

## Firesleeve Tape



**CAUTION**

Tests should be made to determine the suitability of Firesleeve product for each application.

TAPE COVERAGE	CATALOG NUMBER	ROLL LENGTH (INCH)
All sizes	A6900W	1x432

Firesleeve Tape is manufactured from a high temperature-resistant, non-adhesive, silicone elastomer. It provides a self-bonding, self-curing insulator and used in conjunction with

Eaton. Firesleeve, acts as an end sealant in preventing moisture and hydraulic oils from wicking into the inner braids of Firesleeve.

**Maximum Temperature:**  
+475° continuous.

# Hose Sleeves and Guards

HOSE TYPE	DASH SIZE	HOSE CLAMP	ROUND WIRE SPRING GUARD	FLAT WIRE SPRING GUARD	NYLON (.45) ABRASION SLEEVE	NYLON (.90) ABRASION SLEEVE	SILICONE FIBERGLASS FIRESLEEVE	POLY HOSE GUARD
H009	04	HK0913	A1901	A2901	A4900	A3900	A6910	A9901
	05	HK1013	A1902	A2902	A4900	A4900	A6914	A9901
	06	HK1113	A1903	A2903	A4901	A3901	A6916	A9901
	08	HK1313	A1905	A2905	A4901	A3901	A6916	A9902
	12	HK1813	A1909	A2909	A4902	A3902	A6920	A9903
H017	04	HK1013	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1313	A1905	A2905	A4900	A3900	A6914	A9902
	08	HK1613	A1907	A2907	A4901	A3901	A6920	A9902
	12	HK2117	A1911	A2911	A4903	A3903	A6924	A9903
	16	HK2517	A1913	A2913	A4904	A3904	A6928	A9903
	20	HK2917	A1915	A2915	A4906	A3906	A6932	A9904
H039	12	HK2117	A1913	A2913	A4904	A3904	A6928	A9903
	16	HK2517	A1915	A2915	A4905	A3605	A6932	A9904
	20	HK2917	A1915	A2915	A4906	A3906	A6932	A9904
	24	HK3317	A1917	A2917	A4907	A3907	A6936	A9904
	32	HK3817	-	-	A4908	A3908	A6948	A9905
H039H	12	HK2117	A1913	A2913	A4904	A3904	A6928	A9903
	16	HK2517	A1915	A2915	A4905	A3605	A6932	A9904
	20	HK2917	A1915	A2915	A4906	A3906	A6932	A9904
	24	HK3317	A1917	A2917	A4907	A3907	A6936	A9904
	32	HK3817	-	-	A4908	A3908	A6948	A9905
H057	03	HK0709	A1900	A2900	A4900	A3900	A6910	A9900
	04	HK1013	A1901	A2901	A4900	A3900	A6912	A9901
	05	HK1013	A1902	A2902	A4900	A3900	A6914	A9901
	06	HK1113	A1903	A2903	A4900	A3900	A6914	A9901
	07	HK1213	A1904	A2904	A4901	A3901	A6916	A9902
H059	04	HK0913	A1901	A2901	A4900	A3900	A6912	A9901
	05	HK1013	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1313	A1905	A2905	A4901	A3901	A6916	A9902
	10	HK1613	A1907	A2907	A4902	A3902	A6916	A9902
	12	HK1813	A1909	A2909	A4904	A3904	A6924	A9903
	16	HK2117	A1910	A2910	A4905	A3905	A6928	A9903
H069	04	HK0913	A1901	A2901	A4900	A3900	A6912	A9901
	05	HK1013	A1905	A2905	A4900	A3900	A6912	A9901
	06	HK1213	A1905	A2905	A4901	A3901	A6912	A9902
	08	HK1413	A1905	A2905	A4901	A3901	A6916	A9902
	10	HK1613	A1907	A2907	A4902	A3902	A6916	A9902
	12	HK1913	A1909	A2909	A4903	A3903	A6920	A9903
	16	HK2117	A1910	A2910	A4904	A3904	A6924	A9903
	20	HK2517	A1913	A4913	A4906	A3906	A6928	A9903
	24	HK2117	A1916	A2916	A4907	A3907	A6932	A9904
	32	-	A1919	A2919	-	-	A6940	A9904
H077	04	HK0913	A1902	A2902	A4900	A3900	A6912	A9901
	05	HK1013	A1902	A2903	A4900	A3900	A6914	A9901
	06	HK1113	A1903	A2903	A4901	A3901	A6914	A9901
	08	HK1313	A1905	A2905	A4901	A3901	A6916	A9902
H100	04	HK0913	A1900	A2900	A4900	A3900	A6912	A9901
	05	HK1013	A1903	A2903	A4900	A3900	A6912	A9901
	06	HK1113	A1903	A2903	A4900	A3900	A6912	A9902
	08	HK1313	A1905	A2905	A4901	A3901	A6916	A9902
	10	HK1613	A1907	A2907	A4902	A3902	A6920	A9902
12	HK1813	A1908	A2908	A4903	A3903	A6924	A9903	

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# Hose Sleeves and Guards

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HOSE TYPE	DASH SIZE	HOSE CLAMP	ROUND WIRE SPRING GUARD	FLAT WIRE SPRING GUARD	NYLON (.45) ABRASION SLEEVE	NYLON (.90) ABRASION SLEEVE	SILICONE FIBERGLASS FIBRESLEEVE	POLY HOSE GUARD
H101	04	HK0913	A1902	A2902	A4900	A3900	A6910	A9901
	05	HK1013	A1903	A2903	A4900	A3900	A6912	A9901
	06	HK1113	A1903	A2903	A4900	A3900	A6912	A9901
	08	HK1413	A1905	A2905	A4902	A3902	A6916	A9902
	10	HK1613	A1907	A2907	A4903	A3903	A6920	A9902
	12	HK1813	A1908	A2908	A4903	A3903	A6924	A9903
H104	04	HK1903	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1213	A1904	A2904	A4900	A3900	A6914	A9902
	08	HK1413	A1907	A2907	A4902	A3902	A6920	A9902
	10	HK1613	A1907	A2907	A4903	A3903	A6924	A9902
	12	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2317	A1913	A2913	A4904	A3904	A6928	A9903
	20	HK2117	A1916	A2916	A4906	A3906	A6936	A9904
H105	04	HK1113	A1903	A2903	A4900	A3900	A6914	A9901
	06	HK1313	A1905	A2905	A4903	A3903	A6914	A9902
	08	HK1513	A1907	A2907	A4904	A3904	A6924	A9902
	12	HK2017	A1910	A2910	A4904	A3904	A6924	A9903
	16	HK2517	A1913	A2913	A4906	A3906	A6932	A9903
H114	04	HK0913	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1113	A1904	A2904	A4900	A3900	A6914	A9901
	08	HK1413	A1906	A2906	A4902	A3902	A6920	A9902
H115	04	HK1113	A1902	A2902	A4900	A3900	A6912	A9901
	05	HK1113	A1904	A2904	A4900	A3900	A6912	A9901
	06	HK1213	A1904	A2904	A4900	A3900	A6914	A9902
	08	HK1513	A1907	A2907	A4901	A3901	A6920	A9902
	12	HK2017	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2317	A1913	A2913	A4904	A3904	A6928	A9903
	20	HK2117	A1916	A2916	A4906	A3906	A6936	A9904
	24	HK3317	A1917	A2917	A4907	A3907	A6940	A9904
H145	04	HK0913	A1900	A2900	A4900	A3900	A6912	A9900
	06	HK1113	A1904	A2904	A4901	A3901	A6916	A9901
	08	HK1413	A1906	A2906	A4901	A3901	A6916	A9902
	10	HK1613	A1908	A2908	A4903	A4903	A6924	A9902
	12	HK1813	A1910	A2910	A4903	A3903	A6924	A9902
	16	HK2317	A1913	A2913	A4904	A3904	A6928	A9903
H145R	04	HK0913	A1900	A2900	A4900	A3900	A6912	A9900
	06	HK1113	A1904	A2904	A4901	A3901	A6916	A9901
	08	HK1413	A1906	A2906	A4901	A3901	A6916	A9902
	10	HK1613	A1908	A2908	A4903	A4903	A6924	A9902
	12	HK1813	A1910	A2910	A4903	A3903	A6924	A9902
	16	HK2317	A1913	A2913	A4904	A3904	A6928	A9903
H146	04	HK0913	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1213	A1905	A2905	A4901	A3901	A6914	A9902
	08	HK1413	A1906	A2906	A4901	A3901	A6920	A9903
H166	04	HK0913	A1900	A2900	A4900	A3900	A6912	A9901
	05	HK1013	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1013	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1413	A1905	A2905	A4901	A3901	A6916	A9902
	10	HK1613	A1907	A2907	A4901	A3901	A6920	A9902
	12	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2117	A1911	A2911	A4905	A3905	A6932	A9903
	20	HK2517	A1913	A2913	A4905	A3905	A6940	A9903



# Hose Sleeves and Guards

HOSE TYPE	DASH SIZE	HOSE CLAMP	ROUND WIRE SPRING GUARD	FLAT WIRE SPRING GUARD	NYLON (.45) ABRASION SLEEVE	NYLON (.90) ABRASION SLEEVE	SILICONE FIBERGLASS FIRESLEEVE	POLY HOSE GUARD
H169	04	HK1013	A1901	A2901	A4900	A3900	A6914	A9901
	05	HK1113	A1902	A2902	A4900	A3900	A6914	A9901
	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1413	A1905	A2905	A4901	A3901	A6916	A9902
	10	HK1613	A1907	A2907	A4901	A3901	A6920	A9902
	12	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2117	A1912	A2912	A4905	A3905	A6932	A9903
	20	HK2517	A1913	A2913	A4904	A3904	A6940	A9903
	24	HK2917	A1916	A2916	A4907	A3907	A6948	A9904
	32	HK3417	A1919	A2919	-	-	-	A9904
H190	04	HK1013	A1902	A2902	A4900	A3900	A6914	A9901
	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1413	A1906	A2906	A4901	A3901	A6916	A9902
	10	HK1613	A1908	A2908	A4901	A3901	A6920	A9902
	12	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2517	A1913	A2913	A4905	A3905	A6932	A9903
H190H	04	HK1013	A1902	A2902	A4900	A3900	A6914	A9901
	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1413	A1906	A2906	A4901	A3901	A6916	A9902
	10	HK1613	A1908	A2908	A4901	A3901	A6920	A9902
	12	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2517	A1913	A2913	A4905	A3905	A6932	A9903
H201	04	HK0913	A1901	A2901	A4900	A3900	A3612	A9901
	06	HK1113	A1903	A2903	A4901	A3901	A6914	A9901
	08	HK1313	A1905	A2905	A4901	A3901	A6916	A9902
	10	HK1613	A1907	A2907	A4902	A3902	A6920	A9902
	12	HK1813	A1908	A2908	A4903	A3903	A6924	A9903
H209	04	HK0809	A1900	A2900	A4900	A3900	A6910	A9900
	05	HK0913	A1902	A2902	A4900	A3900	A6914	A9900
	06	HK1013	A1903	A2903	A4901	A3901	A6914	A9900
	08	HK1213	A1905	A2905	A4901	A3901	A6920	A9902
H213	04	HK0913	A1901	A2901	A4900	A3900	A6910	A9900
	05	HK1013	A1902	A2902	A4900	A3900	A6914	A9900
	06	HK1113	A1903	A2903	A4900	A3900	A6914	A9901
	08	HK1313	A1905	A2905	A4901	A3901	A6920	A9902
	10	HK1413	A1907	A2907	A4902	A3902	A6920	A9902
	12	HK1713	A1908	A2908	A4903	A3903	A6924	A9902
	16	HK2017	A1911	A2911	A4904	A3904	A6928	A9903
H229	04	HK0913	A1901	A2901	A4900	A3900	A6910	A9901
	06	HK1213	A1904	A2904	A4901	A3901	A6914	A9902
	08	HK1413	A1905	A2905	A4902	A3902	A6924	A9902
	10	HK1613	A1907	A2907	A4902	A3902	A6924	A9902
H229	12	HK2617	A1912	A2912	A4905	A3905	A6928	A9903
	16	HK2117	A1912	A2912	A4906	A3906	A6932	A9906
H239	04	HK0913	A1901	A2901	A4900	A3900	A6912	A9901
	08	HK1313	A1905	A2905	A4901	A3901	A6920	A9902
	10	HK1613	A1907	A2907	A4902	A3902	A6920	A9902
	12	HK1813	A1910	A2910	A4905	A3905	A6928	A9903
	16	HK2117	A1912	A2912	A4906	A3906	A6932	A9903
	20	HK2517	A1913	A2913	A4904	A3904	A6940	A9903

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

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HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

# Hose Sleeves and Guards

HOSE TYPE	DASH SIZE	HOSE CLAMP	ROUND WIRE SPRING GUARD	FLAT WIRE SPRING GUARD	NYLON (.45) ABRASION SLEEVE	NYLON (.90) ABRASION SLEEVE	SILICONE FIBERGLASS FIBRESLEEVE	POLY HOSE GUARD	
H243	03	HK0709	A1900	A2900	A4900	A3900	A6910	A9900	
	04	HK0709	A1900	A2900	A4900	A3900	A6914	A9900	
	05	HK0809	A1902	A2902	A4900	A3900	A6914	A9901	
	06	HK0913	A1903	A2903	A4901	A3901	A6920	A9901	
	08	HK1113	A1905	A2905	A4902	A3902	A6920	A9902	
	12	HK1513	A1909	A2909	A4904	A3904	A6924	A9903	
	16	HK1913	A1911	A2911	A4905	A3905	A6928	A9904	
H245	04	HK1013	A1902	A2902	A4900	A3900	A6914	A9901	
	06	HK1013	A1904	A2904	A4903	A3903	A6920	A9902	
	08	HK1213	A1906	A2906	A4904	A3904	A6924	A9902	
	10	HK1413	A1907	A2907	A4904	A3904	A6924	A9902	
	12	HK1613	A1910	A2910	A4905	A3905	A6928	A9903	
	16	HK2317	A1913	A2913	A4906	A3906	A6932	A9903	
	20	HK2917	A1916	A2916	A4907	A3907	A6940	A9904	
H265	04	HK0913	A1902	A2902	A4900	A3900	A6914	A9901	
	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9901	
	08	HK1413	A1905	A2905	A4902	A3902	A6920	A9902	
	12	HK1813	A1910	A2910	A4904	A3904	A6928	A9903	
	16	HK2217	A1913	A2913	A4905	A3905	A6932	A9903	
H275	03	HK0809	A1900	A2900	A4900	A3900	A6912	A9900	
	04	HK0913	A1902	A2902	A4900	A3900	A6914	A9901	
	06	HK1113	A1903	A2903	A4901	A3901	A6916	A9901	
	08	HK1413	A1905	A2905	A4902	A3902	A6920	A9902	
	12	HK1813	A1907	A2907	A4904	A3904	A6924	A9902	
	16	HK2217	A1913	A2913	A4905	A3905	A6928	A9903	
	20	HK2917	A1916	A2916	A4907	A3907	A6936	A9904	
	24	HK3217	A1917	A2917	A4908	A3908	A6940	A9904	
H277	03	HK0709	A1900	A2900	A4900	A3900	A6910	A9900	
	04	HK0709	A1900	A2900	A4900	A3900	A6914	A9900	
	05	HK0809	A1900	A2900	A4901	A3901	A6920	A9902	
	06	HK0913	A1903	A2903	A4902	A3902	A6920	A9902	
	08	HK1113	A1903	A2903	A4901	A3901	A6920	A9902	
	12	HK1513	A1907	A2907	A4904	A3904	A6928	A9903	
	16	HK1913	A1910	A2910	A4905	A3905	A6932	A9903	
	H280	04	HK1013	A1901	A2901	A4900	A3900	A6914	A9901
		06	HK1213	A1904	A2904	A4901	A3901	A6920	A9902
		08	HK1413	A1906	A2906	A4901	A3901	A6920	A9902
10		HK1613	A1907	A2907	A4904	A3904	A6928	A9903	
12		HK1913	A1910	A2910	A4904	A3904	A6928	A9903	
16		HK2517	A1913	A2913	A4905	A3905	A6932	A9903	
H285	04	HK0913	A1900	A2900	A4900	A3900	A6914	A9900	
	06	HK1213	A1903	A2903	A4901	A3901	A6916	A9901	
	08	HK1413	A1905	A2905	A4901	A3901	A6920	A9902	
	12	HK1813	A1910	A2910	A4904	A3904	A6924	A9903	
	16	HK2217	A1912	A2912	A4905	A3905	A6928	A9903	
H290	04	HK1113	A1903	A2903	A4900	A3900	A6914	A9901	
	06	HK1313	A1905	A2905	A4901	A3901	A6916	A9902	
	08	HK1513	A1907	A2907	A4902	A3902	A6920	A9902	
	10	HK1713	A1909	A2909	A4904	A3904	A6924	A9903	
	12	HK2017	A1910	A2910	A4904	A3904	A6928	A9903	
	16	HK2517	A1913	A2913	A4904	A3904	A6932	A9903	

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TECHNICAL DATA

# Hose Sleeves and Guards

HOSE TYPE	DASH SIZE	HOSE CLAMP	ROUND WIRE SPRING GUARD	FLAT WIRE SPRING GUARD	NYLON (.45) ABRASION SLEEVE	NYLON (.90) ABRASION SLEEVE	SILICONE FIBERGLASS FIRESLEEVE	POLY HOSE GUARD
H290H	04	HK1113	A1903	A2903	A4900	A3900	A6914	A9901
	06	HK1313	A1905	A2905	A4901	A3901	A6916	A9902
	08	HK1513	A1907	A2907	A4902	A3902	A6920	A9902
	10	HK1713	A1909	A2909	A4904	A3904	A6924	A9903
	12	HK2017	A1910	A2910	A4904	A3904	A6928	A9903
	16	HK2517	A1913	A2913	A4904	A3904	A6932	A9903
H324	06	HK1313	A1905	A2905	A4900	A3900	A6924	A9902
H325	04	HK1013	A1903	A2903	A4900	A3900	A6914	A9901
	06	HK1313	A1905	A2905	A4900	A3900	A3616	A9902
	08	HK1513	A1907	A2907	A4901	A3901	A6920	A9902
	12	HK2017	A1910	A2910	A4904	A3904	A6928	A9903
	16	HK2517	A1913	A4913	A4904	A3904	A3932	A9903
H332	04	HK1013	A1903	A2903	A4900	A3900	A6914	A9901
	06	HK1313	A1905	A2905	A4900	A3900	A3616	A9902
	08	HK1513	A1907	A2907	A4901	A3901	A6920	A9902
	12	HK2017	A1910	A2910	A4904	A3904	A6928	A9903
	16	HK2517	A1913	A4913	A4904	A3904	A3932	A9903
H335	03	HK0913	A1901	A2901	A4900	A3900	A6916	A9901
	04	HK1113	A1903	A2903	A4901	A3901	A6916	A9902
	06	HK1313	A1904	A2904	A4902	A3902	A6920	A9902
	08	HK1513	A1907	A2907	A4902	A3902	A6924	A9902
	12	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2517	A1913	A2913	A4905	A3905	A6928	A6603
H336	03	HK0913	A1901	A2901	A4900	A3900	A6916	A9901
	04	HK1113	A1903	A2903	A4901	A3901	A6916	A9902
	06	HK1313	A1904	A2904	A4902	A3902	A6920	A9902
	08	HK1513	A1907	A2907	A4902	A3902	A6924	A9903
	12	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2517	A1913	A2913	A4905	A3905	A6928	A9902
H338	06	HK1313	A1905	A2905	A4900	A3900	A6920	A9902
	08	HK1513	A1907	A2907	A4901	A3901	A6920	A9902
H342	04	HK1013	A1900	A2900	A4900	A3900	A6910	A9901
	06	HK1213	A1904	A2904	A4900	A3900	A6912	A9901
	08	HK1513	A1905	A2905	A4900	A3900	A6914	A9902
	10	HK1813	A1908	A2908	A4901	A3901	A6920	A9902
	12	HK2017	A1910	A2910	A4902	A3902	A6920	A9903
	16	HK2617	A1913	A2913	A4904	A3904	A6928	A9903
H345	04	HK0913	A1900	A2900	A4900	A3900	A6916	A9901
	06	HK1113	A1904	A2904	A4900	A3900	A6920	A9902
	08	HK1313	A1905	A2905	A4901	A3901	A6924	A9902
H350	06	HK1313	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1513	A1906	A2906	A4901	A3901	A6916	A9902
	10	HK1813	A1908	A2908	A4904	A3904	A6924	A9903
	12	HK2017	A1910	A2910	A4905	A3905	A6928	A9903
	16	HK2517	A1913	A4913	A4906	A3906	A6936	A9903
H366	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1413	A1905	A2905	A4901	A3901	A6916	A9902
H400	10	HK1713	A1909	A2909	A4903	A3903	A6920	A9903

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TECHNICAL DATA

# Hose Sleeves and Guards

HOSE TYPE	DASH SIZE	HOSE CLAMP	ROUND WIRE SPRING GUARD	FLAT WIRE SPRING GUARD	NYLON (.45) ABRASION SLEEVE	NYLON (.90) ABRASION SLEEVE	SILICONE FIBERGLASS FIRESLEEVE	POLY HOSE GUARD
H425	04	HK1113	A1903	A2903	A4900	A3900	A6916	A9902
	06	HK1313	A1905	A2905	A4900	A3900	A6916	A9902
	08	HK1513	A1907	A2907	A4902	A3902	A6920	A9902
	10	HK1713	A1909	A2909	A4903	A3903	A6920	A9903
	12	HK2017	A1911	A2911	A4903	A3903	A6924	A9903
	16	HK2517	A1913	A2913	A4905	A3905	A6928	A9903
	20	HK3117	A1916	A2916	A4906	A3906	A6936	A9904
	24	HK3417	A1919	A2919	A4907	A3907	A6940	A9904
	32	HK3817	-	-	-	-	-	A9905
H430	08	HK1613	A1908	A2908	A4904	A3904	A6924	A9903
	12	HK2117	A1912	A2912	A4905	A3905	A6928	A9903
	16	HK2517	A1913	A2913	A4906	A3906	A6936	A9903
	20	HK3117	A1916	A2916	A4907	A3907	A6940	A9904
	24	-	A1919	A2919	A4907	A3907	A6940	A9904
	32	HK3817	-	-	-	-	-	A9905
H430R	08	HK1613	A1908	A2908	A4904	A3904	A6924	A9903
	12	HK2117	A1912	A2912	A4905	A3905	A6928	A9903
	16	HK2517	A1913	A2913	A4906	A3906	A6936	A9903
	20	HK3117	A1916	A2916	A4907	A3907	A6940	A9904
	24	-	A1919	A2919	A4907	A3907	A6940	A9904
	32	HK3817	-	-	-	-	-	A9905
H435	04	HK0809	A1900	A2900	A4900	A3900	A6912	A9901
	05	HK1013	A1903	A2903	A4900	A3900	A6912	A9901
	06	HK1113	A1904	A2904	A4900	A3900	A6916	A9901
	08	HK1413	A1906	A2906	A4902	A3902	A6920	A9902
	12	HK1813	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2317	A1913	A2913	A4904	A3904	A6928	A9903
	20	HK3117	A1916	A2916	A4907	A3907	A6940	A9904
H436	04	HK0809	A1900	A2900	A4900	A3900	A6912	A9901
	05	HK1013	A1903	A2903	A4900	A3900	A6912	A9901
	06	HK1113	A1904	A2904	A4901	A3901	A6916	A9901
	08	HK1413	A1906	A2906	A4902	A3902	A6920	A9902
	12	HK1813	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2317	A1913	A2913	A4904	A3904	A6928	A9903
	20	HK3117	A1916	A2916	A4907	A3907	A6940	A9904
H461	08	HK1713	A1907	A2907	A4901	A3901	A6916	A9902
	12	HK2117	A1910	A2910	A4903	A3903	A6920	A9903
	16	HK2617	A1913	A2913	A4904	A3904	A6928	A9903
	20	HK3217	A1916	A2917	A4906	A3906	A6932	A9904
	24	HK3417	A1919	A1919	A4906	A3906	A6936	A9904
	32	HK3817	-	-	A4908	A3908	A6948	A9905
	36	HK4217	-	-	A4909	A3909	A6952	A9905
H464	12	HK2217	-	-	A4903	A3903	A6920	A9902
	16	HK2517	-	-	A4904	A3904	A6924	A9902
	20	HK3117	-	-	A4905	A3905	A6928	A9903
	24	HK3417	-	-	A4906	A3906	A6936	A9903
	32	HK3817	-	-	A4908	A3908	A6948	A9904
	36	HK4217	-	-	A4909	A3909	A6952	A9905
H470	08	HK1713	A1908	A2908	A4901	A3901	A6916	A9902
	12	HK2117	A1911	A2911	A4904	A3904	A6928	A9903
	16	HK2517	A1913	A2913	A4904	A3904	A6928	A9903
	20	HK3217	A1917	A2917	A4906	A3906	A6936	A9904
	24	HK3417	A1919	A2919	A4907	A3907	A6940	A9904
	32	HK3817	-	-	-	-	-	A9905

LOW & MEDIUM  
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EQUIPMENT

TECHNICAL DATA

# Hose Sleeves and Guards

HOSE TYPE	DASH SIZE	HOSE CLAMP	ROUND WIRE SPRING GUARD	FLAT WIRE SPRING GUARD	NYLON (.45) ABRASION SLEEVE	NYLON (.90) ABRASION SLEEVE	SILICONE FIBERGLASS FIRESLEEVE	POLY HOSE GUARD
H545	04	HK1013	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9901
	08	HK1513	A1906	A2906	A4901	A3901	A6916	A9902
	10	HK1713	A1907	A2907	A4903	A3903	A6924	A9902
	12	HK2017	A1910	A2910	A4904	A3904	A6928	A9903
	16	HK2517	A1913	A2913	A4906	A3906	A6936	A9903
H569	04	HK0913	A1901	A2901	A4900	A3900	A6912	A9901
	05	HK1113	A1902	A2902	A4900	A3900	A6912	A9901
	06	HK1213	A1904	A2904	A4901	A3901	A6916	A9902
	08	HK1413	A1905	A2905	A4901	A3901	A6916	A9902
	10	HK1613	A1907	A2907	A4901	A3901	A6916	A9902
	12	HK1913	A1910	A2910	A4903	A3903	A6924	A9903
	16	HK2117	A1911	A2911	A4904	A3904	A6928	A9903
	20	HK2517	A1913	A2913	A4906	A3906	A6936	A9903
H757	06	HK1013	A1902	A2902	A4900	A3900	A6916	A9901
	08	HK1213	A1904	A2904	A4900	A3900	A6920	A9902
	10	HK1313	A1905	A2905	A4901	A3901	A6920	A9902
	12	HK1613	A1907	A2907	A4902	A3902	A6924	A9902
	14	HK1913	A1910	A2910	A4903	A3903	A6924	A9903

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

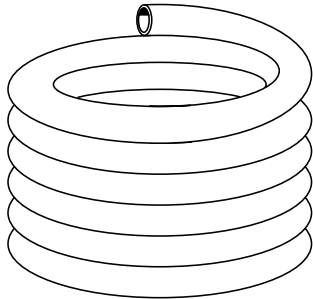
HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA



# Polycoil Brass Hose Products

## H130 Coiled Hose Polycoil Hose



HOSE I.D.	HOSE O.D.	CATALOG NUMBER	RECOM. OPER. PRESS. 76°F	MIN. BURST PRESSURE	RETRACTED LENGTH
1/4	.316	H13004-100	200	800	39-1/4
3/8	.465	H13006-100	200	800	34-1/2

### ⚠ CAUTION

Product should not be used in applications where temperature exceeds 200° F. Exceeding temperature level could result in hose rupture.

**Hose Construction:**  
Nylon 12 extruded.

**Color:** Yellow

**Temperature:** -40°F to +200°F (-40°C to +93°C)

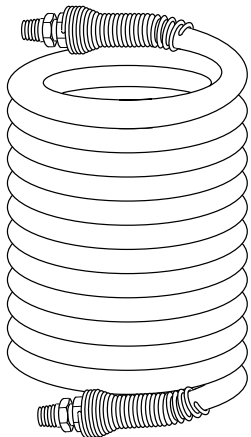
**Application:**  
All types of air tools.

**Working Length:**  
For 100' of Polycoil is 94'.

- Easy to clean.

- Self-retracting.
- Lightweight.
- Easy to handle.
- Out of the way when not in use.
- Eliminates need for reels and other expensive take-up devices.
- May also be ordered as ready-made hose assemblies. See below.

## Polycoil Assemblies



NOMINAL HOSE I.D.	MAXIMUM WORKING LENGTH	MALE PIPE RIGID	MALE PIPE SWIVEL	CATALOG NUMBER	NOMINAL COIL O.D.
1/4"	10.5'	—	1/4"	13004JJ-12†	3-1/2"
1/4"	10.5'	1/4"	1/4"	130041J-12	3-1/2"
1/4"	10.5'	1/4"	—	1300411-12*	3-1/2"
1/4"	23.5'	—	1/4"	13004JJ-25†	3-1/2"
1/4"	23.5'	1/4"	1/4"	130041J-25	3-1/2"
1/4"	23.5'	1/4"	—	1300411-25*	3-1/2"
1/4"	47'	—	1/4"	13004JJ-50†	3-1/2"
1/4"	47'	1/4"	1/4"	130041J-50	3-1/2"
1/4"	47'	1/4"	—	1300411-50*	3-1/2"
3/8"	10.5'	—	3/8"	13006JJ-12†	5-3/4"
3/8"	10.5'	3/8"	3/8"	130061J-12	5-3/4"
3/8"	10.5'	3/8"	—	1300611-12*	5-3/4"
3/8"	23.5'	—	3/8"	13006JJ-25†	5-3/4"
3/8"	23.5'	3/8"	3/8"	130061J-25	5-3/4"
3/8"	23.5'	3/8"	—	1300611-25*	5-3/4"
3/8"	47'	—	3/8"	13006JJ-50†	5-3/4"
3/8"	47'	3/8"	3/8"	130061J-50	5-3/4"
3/8"	47'	3/8"	—	1300611-50*	5-3/4"

†Male pipe swivel on both ends.

\*Male pipe rigid on both ends.

## 13000 Series Brass Hose Ends



**Typical Application:** Shop air with pneumatic air tools.

**Material:** CA360 Brass.

**Used With:** H130 Hose.

**Advantages:** Self-storing, compact and low cost.

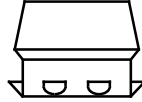
**⚠ CAUTION:**  
Overtightening may be detrimental to the connection.

# Polycoil Brass Hose Products

## Polycoil Assembly Instructions

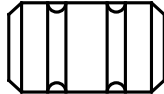
1. Assemble onto hose in this order:
  - a. Spring guard
  - b. Nut and sleeve
  - c. End fitting—make sure hose is bottomed
2. Tighten nut and sleeve onto fitting—finger tight
3. Tighten nut onto fitting 1-1/2 additional turns
4. Assemble spring guard over nut

### Sleeve (Plastic)



HOSE I.D.	CATALOG NUMBER
1/4	13004-A
3/8	13006-A

### Nut (Brass)



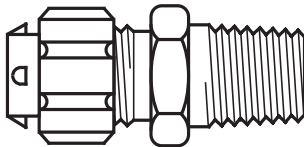
HOSE I.D.	CATALOG NUMBER
1/4	13004-B
3/8	13006-B

### Spring Guard (Steel)



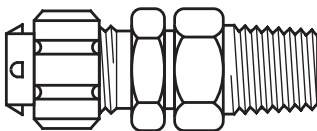
HOSE I.D.	CATALOG NUMBER
1/4	13004-C
3/8	13006-C

### Male Pipe Rigid (Brass)



HOSE I.D.	MALE PIPE SIZE	CATALOG NUMBER
1/4	1/4	13004-1
3/8	3/8	13006-1

### Male Pipe Swivel (Brass)



HOSE I.D.	MALE PIPE SIZE	CATALOG NUMBER
1/4	1/4	13004-J
3/8	3/8	13006-J

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

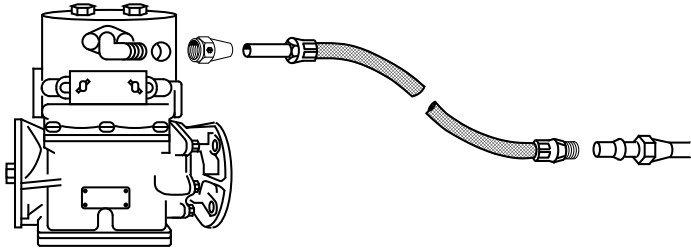
ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

# Ready-Made Hose Assemblies

## Air Compressor Discharge PTFE Hose Assembly



Replace troublesome copper tubing running from the air compressor discharge to the reservoir with ready-made PTFE assemblies. Hoses of PTFE assemblies eliminate tubing failures caused by vibration and heat. And they are easy to install with standard air brake nuts and sleeves. No special fittings or adapters needed.

**Max. Working Pressure:**  
1000 PSI

**Temperature Range:**  
-65°F to +450°F  
(-18°C to +232°C)

## Standpipe to Male Air Brake



## Standpipe to Standpipe



## SAE 45° Flare to SAE 45° Flare



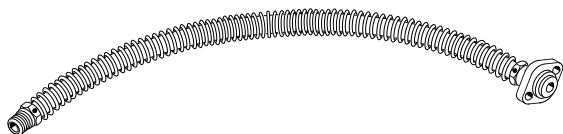
	LENGTH	CATALOG NUMBER
1/2" hose I.D. - 1/2" tube size	24"	WTY824
	30"	WTY830
	36"	WTY836
	48"	WTY848
5/8" hose I.D. - 5/8" tube size	24"	WTY024
	30"	WTY030
	36"	WTY036
	48"	WTY048
5/8" hose I.D. - 3/4" tube size	24"	WTY224
	30"	WTY230
	36"	WTY236
	48"	WTY248

	LENGTH	CATALOG NUMBER
1/2" hose I.D. - 1/2" tube size	24"	WTT824
	36"	WTT836
5/8" hose I.D. - 5/8" tube size	24"	WTT024
	36"	WTT036
5/8" hose I.D. - 3/4" tube size	24"	WTT224
	36"	WTT236

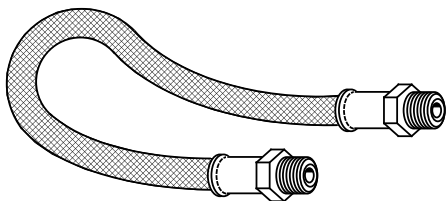
	LENGTH	CATALOG NUMBER
1/2" hose I.D. - 5/8" tube size	34"	W44034
	38"	W44038
	40"	W44040
	42"	W44042
	48"	W44048
	50"	W44050
	52"	W44052
5/8" hose I.D. - 3/4" tube size	54"	W44054
	67"	W44067
	35"	W44235
	39"	W44239
	52"	W44252

# Ready-Made Hose Assemblies

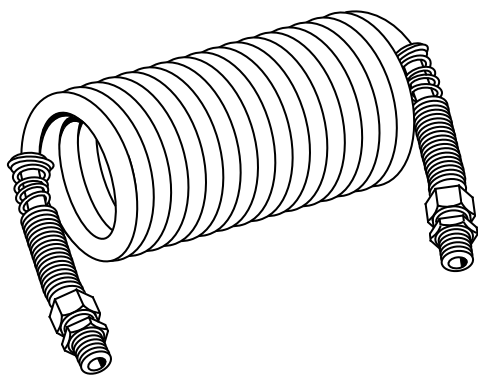
## Air Compressor Discharge PTFE Hose Assembly for GM Buses



## Fuel Line Hose Assembly



## Coiled Air Brake Tube Assemblies



	OVERALL LENGTH	CATALOG NUMBER	REPLACES GM NUMBER
3/4" male pipe to flange	27-5/8"	W67157	2267157

CATALOG NUMBER	INVERTED FLARE
11100	5/16"

11100 preformed fuel line assembly fits all Ford Escort and Mercury Lynx cars through 1986. 5/16" inverted flare swivel hose ends, steel braided cover. Replaces OEM part number E1FZ9327-F.

Air compressor discharge hose assemblies can also be made using Weatherhead's H243 hose and 'E' Series hose ends with the Coll-O-Crimp field crimping system.

CATALOG NUMBER	TUBE O.D.	MALE PIPE	WORKING LENGTH	PIGTAIL LENGTH
W1206*	1/2"	1/2"	12'	6"
W1212*	1/2"	1/2"	12'	12"
W1212-1R	1/2"	1/2"	12'	12"
W1212-1B	1/2"	1/2"	12'	12"
W1512*	1/2"	1/2"	15'	12"
W1512-1R	1/2"	1/2"	15'	12"
W1512-1B	1/2"	1/2"	15'	12"

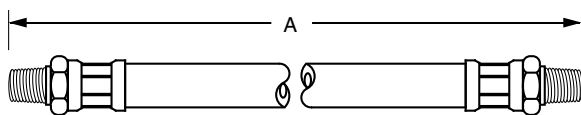
\* Each catalog number contains a coiled red assembly and a coiled blue assembly.

Conforms to SAE J844 Type B and SAE J1131.  
Conforms to DOT FMVSS 571.106.  
Brass end fittings with spring guards and 1/2" male pipe connections.  
Spring guards zinc plated for maximum corrosion resistance.

Preassembled for immediate installation.  
**Maximum Working Pressure:** 150 PSI.  
Minimum Burst: 950 PSI.  
**Temperature Range:** -40°F to +200°F (-40°C to +93°C).  
**Color Coding:** Red for emergency and blue for service.

# Ready-Made Hose Assemblies

## Grease Hose Whip Ends for High Pressure Grease Applications



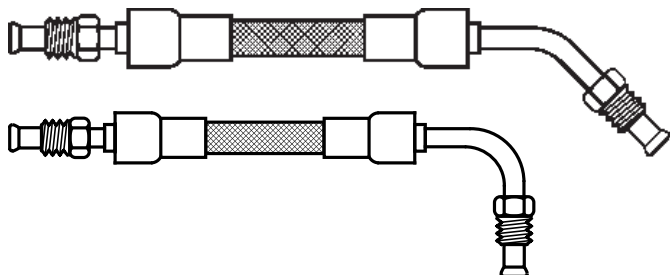
CATALOG NUMBER	PIPE THREAD	HOSE I.D.	A	HOSE MATERIAL
11312	1/8-27	3/16"	12"	Rubber
11318	1/8-27	3/16"	18"	Rubber
11352	1/8-27	3/16"	12"	Nylon
11358	1/8-27	3/16"	18"	Nylon

**Max. Working Pressure:**  
3000 PSI

**Temperature Range:** -40°F  
to +200°F (-40°C to +93°C)

**Note:**  
Use with hand operated grease gun only!

## Power Trim Hose Assembly

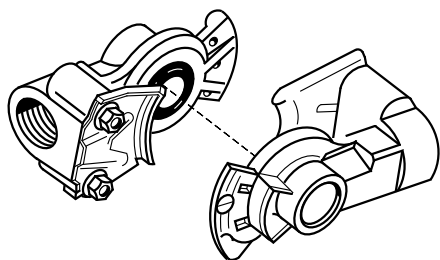


CATALOG NUMBER	OVERALL LENGTH	FITTING DESCRIPTION
1909	14-1/2"	3/16" Inv. Nut Straight x 3/16" Inv. Nut 90° Elbow
1910	14-1/2"	3/16" Inv. Nut Straight x 3/16" Inv. Nut 45° Elbow

Expand your service to marinas with the new Inboard/Outboard Power Trim PTFE Hose assemblies from Weatherhead. These hose assemblies offer a working pressure of 3000 PSI and temperature range of -65°F to +450°F.

It is available in the most popular size, 3/16" I.D., 14-1/2" long, with inverted nut end styles. You also get the non-aging and temperature resistant qualities of PTFE plus the corrosion resistance of 300 Series stainless steel fittings and braid.

## Gladhand Couplings



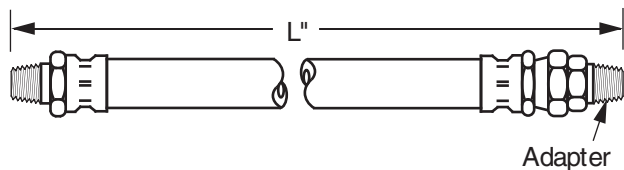
	CATALOG NUMBER
SERVICE (Signal) (Connects only to service)	W79850
EMERGENCY (Supply line) (Connects only to emergency)	W79851
UNIVERSAL (Connects to all three styles)	W76150
GLADHAND SEAL	W14630**

\*\* For use with W79850, W79851, and W76150 Gladhands.

- Die cast aluminum body
- Conforms to SAE J318
- Connects to 1/2" pipe

# Ready-Made Hose Assemblies

## Air Brake Air Chamber Hose Lines



- Low cost
- Ready to install
- Available in both 3/8" and 1/2" I.D.

### Air Brake Air Chamber Hose Lines

HOSE ASSY. I.D.	MALE PIPE	AIR BRAKE SWIVEL**	LENGTH L (INCHES)	FACTORY MADE CATALOG NUMBER*	PREVIOUS CATALOG NUMBER
1/2"	3/8"	3/8"	15"	38353-01500	
1/2"	3/8"	3/8"	16"	38353-01600	
1/2"	3/8"	3/8"	18"	38353-01800	W86471
1/2"	3/8"	3/8"	19"	38353-01900	
1/2"	3/8"	3/8"	20-3/8"	38353-02037	W86539
1/2"	3/8"	3/8"	22"	38353-02200	
1/2"	3/8"	3/8"	23"	38353-02300	
1/2"	3/8"	3/8"	24"	38353-02400	W86472
1/2"	3/8"	3/8"	26"	38353-02600	
1/2"	3/8"	3/8"	28-3/8"	38353-02837	W86473
1/2"	3/8"	3/8"	30"	38353-03000	W86550
1/2"	3/8"	3/8"	32"	38353-03200	W86552
1/2"	3/8"	3/8"	34-3/8"	38353-03437	W86554
1/2"	3/8"	3/8"	36"	38353-03600	W86555
1/2"	3/8"	3/8"	41-1/8"	38353-04112	W86559
1/2"	3/8"	3/8"	44"	38353-04400	
1/2"	3/8"	3/8"	46"	38353-04600	
1/2"	3/8"	3/8"	48"	38353-04800	
1/2"	3/8"	3/8"	60"	38353-06000	
1/2"	3/8"	3/8"	72"	38353-07200	

Air chamber hose assemblies can also be made using Weatherhead's H338 hose, 33808P-106 and 33808P-Y76 hose ends, and 1390x6x6 adapter with the Coll-O-Crimp field crimping system.  
\*\*Adapter included 3/8" A.B.S. to 3/8" male pipe. Adapter Catalog no. 1390X6X6.



# Ready-Made Hose Assemblies

## Air Brake Air Chamber Hose Lines

HOSE ASSY. I.D.	MALE PIPE	AIR BRAKE SWIVEL	LENGTH L (INCHES)	FACTORY MADE CATALOG NUMBER*	PREVIOUS CATALOG NUMBER
3/8"	1/4"	3/8"	18-1/8"	38166-01812	W28471
3/8"	1/4"	3/8"	20-3/8"	38166-02137	W28539
3/8"	1/4"	3/8"	22"	38166-02200	
3/8"	1/4"	3/8"	24-1/8"	38166-02412	W28472
3/8"	1/4"	3/8"	24-7/8"	38166-02487	
3/8"	1/4"	3/8"	26"	38166-02600	
3/8"	1/4"	3/8"	27-5/8"	38166-02762	
3/8"	1/4"	3/8"	28-3/8"	38166-02837	W28473
3/8"	1/4"	3/8"	29-1/8"	38166-02912	
3/8"	1/4"	3/8"	30-1/8"	38166-03012	W28550
3/8"	1/4"	3/8"	32"	38166-03200	W28552
3/8"	1/4"	3/8"	34"	38166-03400	
3/8"	1/4"	3/8"	34-3/8"	38166-03437	W28554
3/8"	1/4"	3/8"	36-1/8"	38166-03612	W28555
3/8"	1/4"	3/8"	38-1/8"	38166-03812	
3/8"	1/4"	3/8"	40"	38166-04000	
3/8"	1/4"	3/8"	41-1/8"	38166-04112	W28559
3/8"	1/4"	3/8"	42"	38166-04200	
3/8"	1/4"	3/8"	48"	38166-04800	
3/8"	1/4"	3/8"	60"	38166-06000	
3/8"	1/4"	3/8"	72"	38166-07200	

Air chamber hose assemblies can also be made using Weatherhead's H33806 hose, 33806P-104 and 33806P-Y76 hose ends, and 1390x6 adapter with the Coll-O-Crimp field crimping system.

\*Adapter included 3/8" A.B.S. to 1/4" male pipe. Catalog No. 1390x6.

HOSE ASSY. I.D.	MALE PIPE	AIR BRAKE SWIVEL	LENGTH L (INCHES)	FACTORY MADE CATALOG NUMBER**	PREVIOUS CATALOG NUMBER
3/8"	3/8"	3/8"	18"	38097-01800	
3/8"	3/8"	3/8"	20"	38097-02000	
3/8"	3/8"	3/8"	24"	38097-02400	
3/8"	3/8"	3/8"	26"	38097-02600	
3/8"	3/8"	3/8"	28"	38097-02800	
3/8"	3/8"	3/8"	30"	38097-03000	
3/8"	3/8"	3/8"	32"	38097-03200	
3/8"	3/8"	3/8"	34"	38097-03400	
3/8"	3/8"	3/8"	40"	38097-04000	
3/8"	3/8"	3/8"	42"	38097-04200	
3/8"	3/8"	3/8"	60"	38097-06000	
3/8"	3/8"	3/8"	72"	38097-07200	

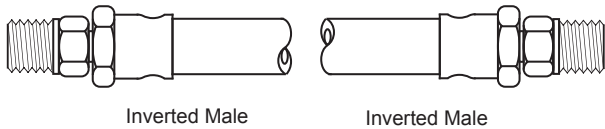
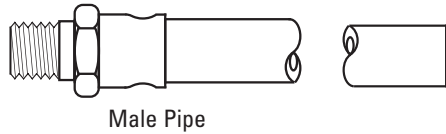
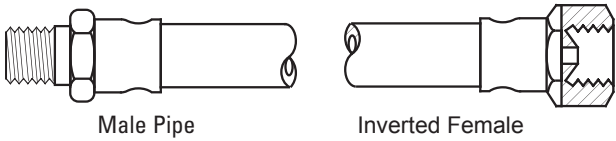
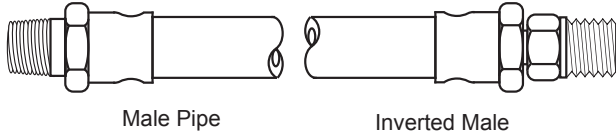
Air chamber hose assemblies can also be made using Weatherhead's H33806 hose, 33806P-106 and 33806P-Y76 hose ends, and 1390x6x6 adapter with the Coll-O-Crimp field crimping system.

\*\*Adapter included 3/8" A.B.S. to 3/8" male pipe. Catalog no. 1390X6X6.

# Ready-Made Hose Assemblies

## Automobile, Light Truck Gas/Oil Lines\*

**Max. Working Pressure:**  
50 PSI  
**Temperature Range:**  
-40°F to +257°F



CATALOG NUMBER	OVERALL LENGTH	FITTING DESCRIPTION
11461	10"	1/8" Male Pipe x 1/4" Inv. Male
11462	12"	1/8" Male Pipe x 1/4" Inv. Male
11463	13"	1/8" Male Pipe x 1/4" Inv. Male
11464	15"	1/8" Male Pipe x 1/4" Inv. Male
11465	21"	1/8" Male Pipe x 1/4" Inv. Male
11466	28"	1/8" Male Pipe x 1/4" Inv. Male
11474	19"	1/8" Male Pipe x 1/4" Inv. Male
11477	17"	1/8" Male Pipe x 1/4" Inv. Male
11478	24"	1/8" Male Pipe x 1/4" Inv. Male

CATALOG NUMBER	OVERALL LENGTH	FITTING DESCRIPTION
11079	6-5/8"	1/8" Male Pipe x 5/16" Inv. Female
11076	8-1/4"	1/8" Male Pipe x 5/16" Inv. Female
11205	8-7/8"	1/8" Male Pipe x 5/16" Inv. Female
11215	9-3/8"	1/8" Male Pipe x 5/16" Inv. Female
11093	18"	1/8" Male Pipe x 5/16" Inv. Female
11217	7-1/2"	1/4" Male Pipe x 3/8" Inv. Female
11216	9"	1/4" Male Pipe x 3/8" Inv. Female

CATALOG NUMBER	OVERALL LENGTH	FITTING DESCRIPTION
11223	15-1/4"	1/4" Male Pipe (one end only), other end blank

CATALOG NUMBER	OVERALL LENGTH	FITTING DESCRIPTION
11486	10"	1/4" Inv. Male x 1/4" Inv. Male

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

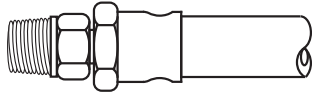
ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

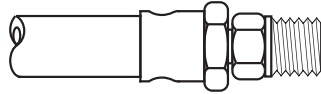
TECHNICAL DATA

# Ready-Made Hose Assemblies

## Automobile, Light Truck Gas/Oil Lines\*



Male Pipe

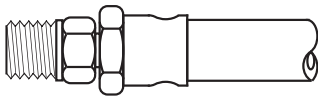


Inverted Male

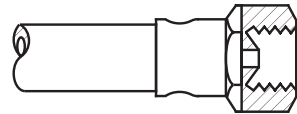
CATALOG NUMBER	OVERALL LENGTH	FITTING DESCRIPTION
11080	5"	1/4" Inv. Male x 1/4" Inv. Female
11224	7"	1/4" Inv. Male x 1/4" Inv. Female
11089	10-5/8"	1/4" Inv. Male x 1/4" Inv. Female
11078	7"	5/16" Inv. Male x 5/16" Inv. Female
11212	7-7/8"	5/16" Inv. Male x 5/16" Inv. Female
11041	9"	5/16" Inv. Male x 5/16" Inv. Female
11208	10-3/4"	5/16" Inv. Male x 5/16" Inv. Female

**Max. Working Pressure:**  
50 PSI

**Temperature Range:**  
-40°F to +257°F



Inverted Male



Inverted Female

CATALOG NUMBER	OVERALL LENGTH	FITTING DESCRIPTION
11219	6-1/4"	5/16" Inv. Female x 5/16" Inv. Female

## \*Automobile, Light Truck Universal Type Filter Lines

(1/4" SAE Swivel Nut to 1/8" Male Pipe)



CATALOG NUMBER	OVERALL LENGTH	CATALOG NUMBER	OVERALL LENGTH
81430-08	8"	81430-20	20"
81430-10	10"	81430-22	22"
81430-12	12"	81430-24	24"
81430-14	14"	81430-28	28"
81430-16	16"	81430-30	30"
81430-18	18"	81430-36	36"

**Max. Working Pressure:**  
400 PSI

**Temperature Range:**  
-40°F to +250°F

**Note:**

Hose End Material is Brass.

\*The hose assemblies listed are for automobile or light truck (up to 3/4 ton pickup truck) application only. Consult Weatherhead Technical Support prior to any other use.

# Accessories

## Hose Cleaning System



The Jetcleaner™ hose cleaning system offers a revolutionary solution for the internal cleaning of bulk hose and finished hose assemblies. Using a low pressure air gun, the Jetcleaner system routes a foam projectile through the hose to thoroughly remove debris remaining from cutting, skiving and assembly operations. Available in kit form or as individual components, the Jetcleaner hose cleaning system is the system of choice for hose assembly professionals.

## Hose Kit (P/N FT1355-01)

Includes:

Jetcleaner pistol, Hose nozzles, 1/4" through 2" ID, Adapter ring, Aluminum case, Quick disconnect coupling

Note: Hose projectiles (P/N FT1355-3-size) not included in kit.

Also available individually:

Jetcleaner pistol – FT1355-1-01

Hose nozzles – FT1355-2-size

Hose projectiles – FT1355-3-size

Coupling nozzles – FT1355-4-size

Coupling projectiles – FT1355-5-size

Adapter ring – FT1355-10-01

Carrying case – FT1355-11-02

## Hose Insertion Gages



### P/N FF90308

For use with all hose with WeatherGRIP™ hose ends.

Improve hose assembly reliability with these easy to use aluminum gages that are designed to ensure proper hose end depth during pre-assembly.

Simply bottom the hose in the appropriately marked cavity and scribe a mark on the hose flush with the top surface of the gauge. Insert the hose end until the back of the socket is aligned with scribe line.

PART NUMBER	USAGE
FF90308-01	For use with all hoses that mate with -4 through -16 WeatherGRIP™ hose ends
FF90308-02	For use with all hoses that mate with -20 WeatherGRIP™ hose ends
FF90308-03	For use with all hoses that mate with -12, -16, -20 4SP/6SP hose ends

# Accessories

## Hose Spacers



PART NUMBER	DESCRIPTION
HSM-48	Case of 48 mixed Hose Spacers

### Features:

- Prevents hose abrasion at points of contact
- Helps keep hoses organized
- Prevents damage from unrestrained hoses
- Easy to install
- Available in 4 sizes – 3/4", 1", 1 1/8", 1 3/8"
- Packed in colorful counter display boxes of 48 – cable ties included
- Also available in mixed boxes of 48 (12 each size) or refill bags of 12

## Hose Protectors



PART NUMBER	DESCRIPTION
HP4*	4" Hose Protector Case of 50
HP6*	6" Hose Protector Case of 50
HP8*	8" Hose Protector Case of 50
HP10*	10" Hose Protector Case of 10
HP12*	12" Hose Protector Case of 10
HPM*	Mixed Hose Protectors Case of 60

\*Hose protectors available in black, orange or yellow.

### Abrasion Protection For:

- Hydraulic Hoses
- Battery Cables
- Wiring Harness
- Brake Systems
- Fuel Lines
- Air Lines
- Radiator Hoses
- Oil Lines

### Features:

- Extremely high wear factor
- Formulated to resist solvents, oils, grease, gasoline, etc.
- 3 grooves protect cable ties and prevent slipping
- Operating temperature range is -40° to 430°F.
- Exceptionally cost effective
- Easy installation in minutes – no need to remove hose
- Packed in easy to assemble, colorful, counter display box
- Available in 3 sizes – 4", 6" and 8" – cable ties included

### Market Applications:

- Farming
- Industrial
- Trucking
- Mining
- Construction
- Aviation Support
- Public Transportation
- Road Maintenance
- Waste Management
- Original Equip. Manuf.

## Flaretite\* Seals

The ideal product to enhance new installations of SAE 37° connections, as well as seal off minor leaks and weeping connections.



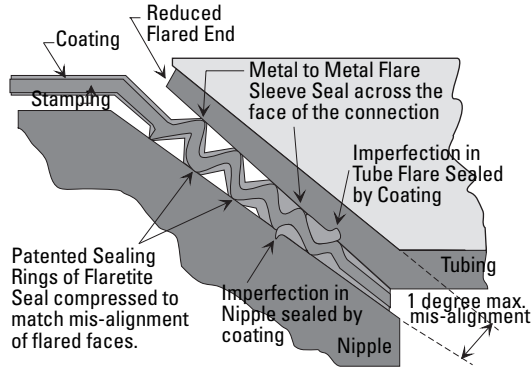
### Features

- Ribbed insert design
- Coated with Loctite\*\* sealant
- Economical method to reduce minor leaks and weeping connections
- Built-in clip to attach the Flaretite seal to the nose of the SAE 37 degree connection
- Available sizes: -04 through -32

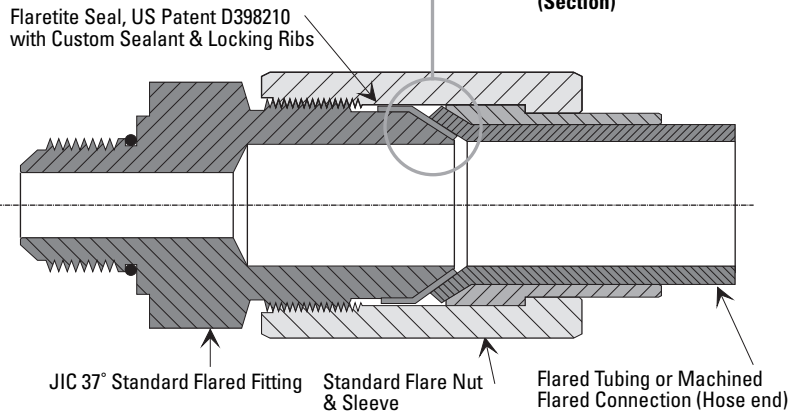
### Benefits

- Multiple surface contact points
- Locks the joint and fills surface imperfections
- Saves time & money associated with maintenance and rework
- Quick & easy assembly

**Flaretite Seal Joint Section of Applied Seal**



**Standard Flared Connection (Section)**



## Assembly and Torque Requirements

To assemble an SAE 37° connection using a Flaretite seal, simply push the Flaretite seal onto the male portion of the connection. The built-in clip will hold the Flaretite seal onto the male half.

During assembly ensure:

- The seal is fitted squarely to the conical nose of the JIC fitting -37° flare.
- The sealing faces of the flared connector part are clean and free of burrs.
- The flared joint is correctly tightened with recommended torque settings noted below.

SEAL SIZE	PACKAGE PART NUMBER	NUMBER OF SEALS PER PACKAGE
-04	FF13267	100
-06	FF13268	100
-08	FF13269	100
-10	FF13270	100
-12	FF13271	100
-16	FF13272	50
-20	FF13273	50
-24	FF13570	25
-32	FF13571	10

\* Flaretite is a registered trademark of Flaretite Inc. All photos and the name Flaretite are the property of Flaretite Inc.

\*\* Loctite is a registered trademark of Henkel Loctite Corporation.

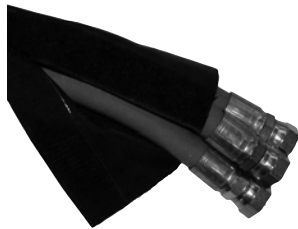
### RECOMMENDED TORQUE SETTINGS:

**Tolerance: +10% -0%**

-04 (1/4")	SAE 37°: 14lb-ft.	-10 (5/8")	SAE 37°: 80lb-ft.	-20 (1-1/4")	SAE 37°: 190lb-ft.
-06 (3/8")	SAE 37°: 26lb-ft.	-12 (3/4")	SAE 37°: 110lb-ft.	-24 (1-1/2")	SAE 37°: 220lb-ft.
-08 (1/2")	SAE 37°: 55lb-ft.	-16 (1")	SAE 37°: 140lb-ft.	-32 (2")	SAE 37°: 325lb-ft.



## Bundling Sleeves



## Specifications

PART NUMBER	FITS BUNDLE OUTER DIA.	CIRCUMFERENCE OF BUNDLE TO BE COVERED	SLEEVE WIDTH	BULK ROLL LENGTH	LENGTH TOLERANCE	ORDERING: UNIT OF MEASURE
			laid flat inches			
A4926	2.0	6	7 ¾	150	(+1 ft., - 0 ft)	Ft.
A4927	3.0	9.4	11	150	(+1 ft., - 0 ft)	Ft.
A4928	4.0	12.5	14	150	(+1 ft., - 0 ft)	Ft.
A4929	5.0	15.7	17 ¼	150	(+1 ft., - 0 ft)	Ft.
A4930	6.0	18.8	20 ¾	150	(+1 ft., - 0 ft)	Ft.

Hydraulic lines are subject to tremendous stress and wear in use. Lines that are allowed to move freely are easily abraded, crimped, or cut. But common methods for binding hydraulic lines, such as cable ties, can restrict their movement too much as they expand and contract.

We have the answer.

Our Bundling Sleeves hold lines securely in place to protect them from damage, while providing enough flexibility for normal operation.

The sleeves can be removed and replaced quickly, allowing easy access to individual hoses for repair.

## Features

- Tight bundling and secure hose containment
- Choice of sizes and colors for visibility and aesthetics
- Resistant to heat, ozone, and abrasion
- Easy removal and replacement

## Applications

- Case IH Patriot Sprayer SPX 4260 uses Sidewinder Sleeves to protect hydraulic and brake hoses
- Champion Road Machinery Sales uses Sidewinder Sleeves to protect hydraulic lines
- Rosco Manufacturing Company uses Sidewinder Sleeves on Model RA-200 Pothole Filler

## Benefits

- Increases productivity in assembly and reassembly of hose bundles
- Reduces contamination of hoses during bundle assembly
- Forces routing of hydraulic lines for safety and efficiency
- Reduces risk of hose bursts, resulting in greater operator safety
- Reduces time spent on field repairs
- Replaces inefficient bundling methods and line-damaging cable ties
- Eliminates cumbersome winding of spiral formed products
- Reduces "old sock syndrome"-bunching at end of bundled lines
- Eliminates line contamination during hose replacement

## Materials

- 1050 Ballistic Nylon, .71mm thickness

## Coating

- Urethane

## Color

- Black

## Ambient Operating Temperature Range

- 175° F

## How to order

Part numbers above are stocked in 150 ft. shrink wrapped bulk rolls as rolled up unfastened.

Orders should be for the number of rolls needed, not footage.

150 ft. bulk rolls will be one continuous length.

# Accessories

## Bundling Straps



### Merchandising kits for straps

#### Standard Duty

Part Number FF13502

#### Heavy Duty

Part Number FF13503

Contains:

Each Merchandising kit comes complete with a quantity of individually cellophane wrapped, bundling straps in both Cinch and Hanging Styles for bundling diameters of 8", 12", 16" & 20" sizes. (note the box will be stocked with approximately 1/2 of the available strap capacity to allow for lower kit pricing at start-up.) Re-supply merchandiser kit, by ordering the individually wrapped part numbers in the charts above.

The box is constructed to have a pop-up lid that can be positioned upright as an effective advertising backdrop. The box is shipped in a corrugated shipping container to prevent damage to the merchandising box.

Attached to the merchandising box by a wire lanyard, is a strap that can be used for demonstration

Bundling Straps hold hoses, cables, pipes, tubes and other items securely in place. They can be removed, adjusted and put back in place easily. The straps are made with a special hook-and-loop fastener developed for industrial applications, the safety industry and the military.

Unlike cable ties, Bundling Straps allow hoses and tubes to expand and contract in changing conditions. Cable ties must be destroyed when they are removed, but Bundling Straps can be used again and again with no loss of strength. The hook-and-loop fasteners used in Bundling Straps have superior shear strength and peel compared to those used in the garment industry.

### Features

- Easy to remove and replace
- Adjustable to any size bundle
- Industrial strength strap fabric and fasteners
- Secure containment of hoses, cables and other items
- Clean, professional appearance

Cinching Strap (CS Series) Bundling Straps are designed for economical service applications, such as hose and cable bundling. All joints are ultrasonic welded and tested.

Hanging Strap (HS Series) Bundling Straps are held in place by a 3/8" grommet. The straps can be mounted vertically or horizontally.

Both cinching and hanging straps are available in standard duty or heavy duty. Heavy duty Bundling Straps are designed for severe industrial applications, reinforced with ballistic Cordura® nylon and ultrasonic welded to 1-1/2" hook-and-loop material. All heavy duty hardware is nickel-plated steel.

### Benefits

- Reduces cost of managing cables and hoses
- Improves worker safety and productivity
- Reduces abrasion of bundled items
- Saves money through reusability

All Bundling Straps are in stock and ready for immediate shipment. They are sold in packages of 5, and discounts are available for volume quantities of 50, 100, 250, 500, and 1,000. Call to ask about special sizes, materials, colors or configurations.

### Materials

#### Standard Duty

- 1050 Ballistic Nylon II Webbing, .71mm thickness with dense nylon backing.
- Standard Cinch and Hanging straps use a delrin plastic fastening loop.

#### Heavy Duty

- 1050 Ballistic Nylon II Webbing, 3.18mm thickness with dense nylon backing.
- Cinch and Hanging straps use a nickel plated steel 12 L.14 fastening loop

### Coating

- Urethane

### Color

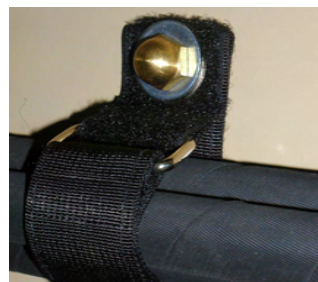
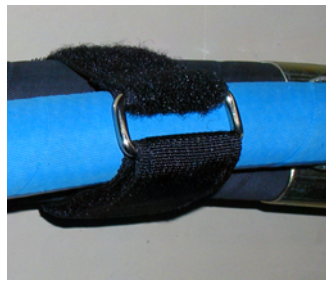
- Black

### Ambient Operating Temperature Range

- -40° - 250° F



# Accessories



## Bundling Straps

### Cinch Straps

#### Standard Duty

#### Heavy Duty

BULK PACKED	INDIVIDUALLY CELLOPHANE WRAPPED	BULK PACKED	INDIVIDUALLY CELLOPHANE WRAPPED	CIRCUMFERENCE OF HOSE BUNDLE	STRAP LENGTH (FLAT)	ORDERING MEASUREMENT
Part Number	Part Number	Part Number	Part Number	Inches	Inches	
FF90519-4	FF90520-4	FF90521-4	FF90522-4	4.0	7 3/4	Each
FF90519-6	FF90520-6	FF90521-6	FF90522-6	6.0	11	Each
FF90519-8	FF90520-8	FF90521-8	FF90522-8	8.0	14	Each
FF90519-10	FF90520-10	FF90521-10	FF90522-10	10.0	17 1/4	Each
FF90519-12	FF90520-12	FF90521-12	FF90522-12	12.0	20 3/8	Each
FF90519-14	FF90520-14	FF90521-14	FF90522-14	14.0		Each
FF90519-16	FF90520-16	FF90521-16	FF90522-16	16.0		Each
FF90519-18	FF90520-18	FF90521-18	FF90522-18	18.0		Each
FF90519-20	FF90520-20	FF90521-20	FF90522-20	20.0		Each
	FF90520-22	FF90521-22		22.0		Each
	FF90520-24	FF90521-24		24.0		Each
	FF90520-26	FF90521-26		26.0		Each

## Hanging Straps

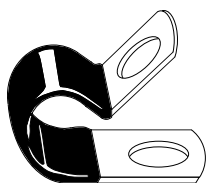
#### Standard Duty

#### Heavy Duty

BULK PACKED	INDIVIDUALLY CELLOPHANE WRAPPED	BULK PACKED	INDIVIDUALLY CELLOPHANE WRAPPED	CIRCUMFERENCE OF HOSE BUNDLE	STRAP LENGTH (FLAT)	ORDERING MEASUREMENT
Part Number	Part Number	Part Number	Part Number	Inches	Inches	
FF90523-4	FF90524-4	FF90525-4	FF90526-4	4.0	7 3/4	Each
FF90523-6	FF90524-6	FF90525-6	FF90526-6	6.0	11	Each
FF90523-8	FF90524-8	FF90525-8	FF90526-8	8.0	14	Each
FF90523-10	FF90524-10	FF90525-10	FF90526-10	10.0	17 1/4	Each
FF90523-12	FF90524-12	FF90525-12	FF90526-12	12.0	20 3/8	Each
FF90523-14	FF90524-14	FF90525-14	FF90526-14	14.0		Each
FF90523-16	FF90524-16	FF90525-16	FF90526-16	16.0		Each
FF90523-18	FF90524-18	FF90525-18	FF90526-18	18.0		Each
FF90523-20	FF90524-20	FF90525-20	FF90526-20	20.0		Each
		FF90525-22	FF90526-22	22.0		Each
		FF90525-24	FF90526-24	24.0		Each
		FF90525-26	FF90526-26	26.0		Each

# Hose and Gear Clamps

## Hose Support



### Typical Application:

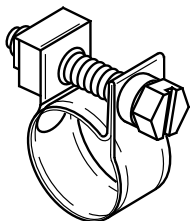
Hose support for long hose lengths. Also used to insure proper hose routing where abrasion, moving parts or heat may exist.

**Material:** C1010 steel with 1/32" thick black vinyl cushion.

**Plating:** Zinc-plated dichromate finish.

CLAMPING DIA.	CATALOG NUMBER	BOLT HOLE
1/4	HK0509	1/4
3/8	HK0709	9/32
7/16	HK0809	9/32
1/2	HK0913	13/32
9/16	HK1013	13/32
5/8	HK1113	13/32
11/16	HK1213	13/32
3/4	HK1313	13/32
13/16	HK1413	13/32
7/8	HK1513	13/32
15/16	HK1613	13/32
1	HK1713	13/32
1-1/16	HK1813	13/32
1-1/8	HK1913	13/32
1-3/16	HK2017	17/32
1-1/4	HK2117	17/32
1-3/8	HK2317	17/32
1-1/2	HK2517	17/32
1-9/16	HK2617	17/32
1-3/4	HK2917	17/32
1-7/8	HK3117	17/32
1-15/16	HK3217	17/32
2	HK3317	17/32
2-5/32	HK3417	17/32
2-21/32	HK3817	17/32

## E.F.I. Hose Clamps



### Typical Application:

Electronic fuel injection hose.

### Material:

Plated carbon steel; 23/64" (9mm) band width.

CLAMP SIZE	CATALOG NUMBER	MINIMUM DIA.	MAXIMUM DIA.	NOMINAL DIA.
04	6207-004	.433	.551	.512
05	6207-005	.472	.590	.551
06	6207-006	.551	.669	.630

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

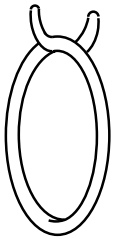
ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

# Hose and Gear Clamps

## Round Wire Clamps



### Typical Application:

Industrial, automotive, agriculture, and general market applications.

### Material:

Carbon steel spring wire.

### Plating:

Zinc-plated dichromate finish.

CLAMP SIZE	HOSE SIZE	CATALOG NUMBER	MINIMUM DIA.	MAXIMUM DIA.	NOMINAL DIA.
06	1/4	1538	.370	.380	.375
08	5/16	1539	.551	.573	.562
10	3/8	1540	.610	.640	.625

## Heavy Duty Hose Support Clamps



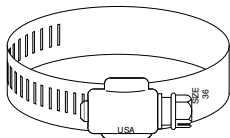
These heavy duty weld-based clamps are designed to securely hold hose in applications subject to impulsing, flexing and vibrating conditions. The clamps help prevent abrasion and extend hose life through proper routing. Clamps are rated to ambient temperature of +250°F.

### P/N FF90311

CLAMP PART NUMBER	INSIDE DIAMETER	
	(MM)	(INCH)
FF90311-127	12.70	0.50
FF90311-137	13.70	0.54
FF90311-150	15.00	0.59
FF90311-160	16.00	0.63
FF90311-171	17.10	0.67
FF90311-174	17.40	0.69
FF90311-190	19.00	0.75
FF90311-205	20.50	0.81
FF90311-222	22.20	0.87
FF90311-239	23.90	0.94
FF90311-254	25.40	1.00
FF90311-266	26.60	1.05
FF90311-280	28.00	1.10
FF90311-300	30.00	1.18
FF90311-320	32.00	1.26
FF90311-334	33.40	1.31
FF90311-357	35.70	1.41
FF90311-381	38.10	1.50
FF90311-400	40.00	1.57
FF90311-422	42.20	1.66
FF90311-445	44.50	1.75
FF90311-483	48.30	1.90
FF90311-508	50.80	2.00
FF90311-572	57.20	2.25
FF90311-635	63.50	2.50
FF90311-700	70.00	2.76

# Hose and Gear Clamps

## Full and Micro Size Partial Stainless Steel Clamps SAE J1508 Type F

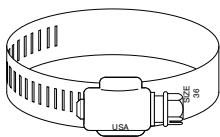


Clamps are suitable for a wide variety of uses including automotive, heavy-duty equipment, agriculture, and general industry.

Weatherhead partial stainless steel clamps utilize a 300 Series stainless steel band and housing with a steel case-hardened, zinc-plated and chromate-dipped screw. They feature a 9/16" (14.3mm) band housing with a 5/16" (8mm) hexagon and screwdriver slotted screw.

Micro part stainless clamps have a 5/16" (8mm) band and housing manufactured with a 300 Series stainless steel.

## Full and Micro Size All Stainless Steel Clamps SAE J1508 Type F



Weatherhead's all stainless steel construction offers maximum protection against corrosion. Applications include chemical, marine, food processing, dairy, automotive, electrical and plumbing.

Full size all stainless clamps are manufactured with 300 Series stainless steel. They feature a 9/16" (14.3mm) band and housing with a 5/16" (8mm) hexagon and screwdriver slotted screw.

Micro all stainless clamps have a 5/16" (8mm) band housing manufactured with a 300 Series stainless steel. The 1/4" (6.35mm) hexagon and screwdriver slotted screw features 410 stainless steel.

CLAMP SIZE	CATALOG NUMBER	MINIMUM DIA.	MAXIMUM DIA.	NOMINAL DIA.
*004	6205-004	7/32	5/8	1/4
*006	6205-006	5/16	7/8	1/2
006	6203-006	3/8	7/8	1/2
008	6203-008	7/16	1	9/16
010	6203-010	9/16	1-1/16	5/8
012	6203-012	9/16	1-1/4	3/4
016	6203-016	11/16	1-1/2	1
020	6203-020	3/4	1-3/4	1-1/4
024	6203-024	1-1/16	2	1-1/2
028	6203-028	1-5/16	2-1/4	1-3/4
032	6203-032	1-9/16	2-1/2	2
036	6203-036	1-13/16	2-3/4	2-1/4
040	6203-040	2-1/16	3	2-1/2
044	6203-044	2-5/16	3-1/4	2-3/4
048	6203-048	2-9/16	3-1/2	3
052	6203-052	2-13/16	3-3/4	3-1/4
056	6203-056	3-1/16	4	3-1/2
064	6203-064	3-9/16	4-1/2	4
072	6203-072	4-1/16	5	4-1/2
080	6203-080	4-5/8	5-1/2	5
088	6203-088	4-3/32	6	5-1/2
096	6203-096	4-1/2	6-1/2	6
104	6203-104	5	7	6-1/2

\*Micro size clamps

CLAMP SIZE	CATALOG NUMBER	MINIMUM DIA.	MAXIMUM DIA.	NOMINAL DIA.
*004	6206-004	7/32	5/8	1/4
*006	6206-006	5/16	7/8	1/2
006	6204-006	3/8	7/8	1/2
008	6204-008	7/16	1	9/16
010	6204-010	9/16	1-1/16	5/8
012	6204-012	9/16	1-1/4	3/4
016	6204-016	11/16	1-1/2	1
020	6204-020	3/4	1-3/4	1-1/4
024	6204-024	1-1/16	2	1-1/2
028	6204-028	1-5/16	2-1/4	1-3/4
032	6204-032	1-9/16	2-1/2	2
036	6204-036	1-13/16	2-3/4	2-1/4
040	6204-040	2-1/16	3	2-1/2
044	6204-044	2-5/16	3-1/4	2-3/4
048	6204-048	2-9/16	3-1/2	3
052	6204-052	2-13/16	3-3/4	3-1/4
056	6204-056	3-1/16	4	3-1/2
064	6204-064	3-9/16	4-1/2	4
072	6204-072	4-1/16	5	4-1/2
080	6204-080	4-5/8	5-1/2	5
088	6204-088	4-3/32	6	5-1/2
096	6204-096	4-1/2	6-1/2	6
104	6204-104	5	7	6-1/2

\*Micro size clamps

APPLICATION DATA  
 LOW & MEDIUM PRESSURE HOSE  
 HIGH PRESSURE HOSE  
 SPECIALTY HOSE  
 ACCESSORIES & ASSEMBLY INSTRUCTIONS  
 ADAPTERS & TUBE HOSE ENDS  
 HOSE ASSEMBLY EQUIPMENT  
 TECHNICAL DATA

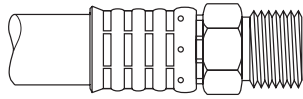


# Coll-O-Crimp

## 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

### Hose End 'E' Series



Refer to the Weatherhead Hose End and Tool Selector Chart W-HOOV-TM001-E for Qualified Sizes.

#### ⚠ WARNING

For PTFE hose applications, 'E' Series fittings must be used with H243 and H277 .030" thin wall hose only.

#### Ordering Information:

Order individually by catalog number.

⚠ Refer to important safety information on page 4.

#### Typical Application:

General purpose low- and medium-pressure hydraulics. Use H277 or H435 where shock hazards exist.

**Compatible Hose:** H009; H209; H243; H265; H275; H277; H285; H435; H436

**Pressure:** Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 16 for working pressure ratings for hose end configurations.

**Material:** Low Carbon Steel

**Plating:** Zinc; yellow dichromate finish

**Advantages:** Wide selection of hose and end configurations allowing for a diverse number of applications where hose compatibility is a problem.

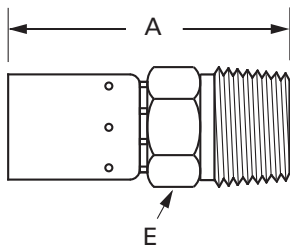
**Assemble With:** ET1000, ET4000, T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T480.

**Label Set:** FS-1200

#### Note:

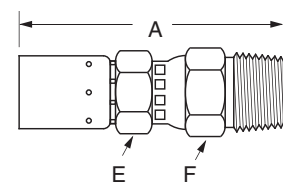
Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

### Male Pipe Rigid



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/16	1/8	03E-102	1/8-27	1.58	.75	.09	7/16
3/16	1/4	03E-104	1/4-18	1.83	1.00	.09	9/16
1/4	1/8	04E-102	1/8-27	1.60	.75	.16	7/16
1/4	1/4	04E-104	1/4-18	1.79	1.00	.16	9/16
1/4	3/8	04E-106	3/8-18	1.82	1.00	.16	11/16
5/16	1/4	05E-104	1/4-18	1.86	.94	.22	9/16
5/16	3/8	05E-106	3/8-18	1.89	1.00	.22	11/16
3/8	1/4	06E-104	1/4-18	1.90	1.00	.27	9/16
3/8	3/8	06E-106	3/8-18	1.93	1.00	.27	11/16
3/8	1/2	06E-108	1/2-14	2.17	1.25	.27	7/8
1/2	3/8	08E-106	3/8-18	2.02	1.00	.38	3/4
1/2	1/2	08E-108	1/2-14	2.27	1.25	.38	7/8
3/4	3/4	12E-112	3/4-14	2.51	1.31	.61	1-1/16
1	1	16E-116	1-11-1/2	2.95	1.63	.84	1-3/8

### Male Pipe Swivel



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04E-J04	1/4-18	2.68	1.81	.16	5/8	13/16
5/16	1/4	05E-J04	1/4-18	2.75	1.81	.22	5/8	13/16
3/8	3/8	06E-J06	3/8-18	2.79	1.81	.27	11/16	7/8
1/2	1/2	08E-J08	1/2-14	3.03	2.00	.39	3/4	7/8
3/4	3/4	12E-J12	3/4-14	3.73	2.50	.61	1-1/4	1-1/4

#### Note:

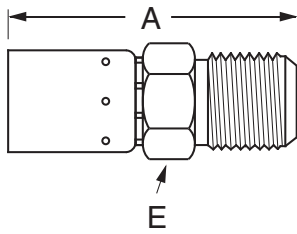
Swivel for installation purposes only. (Not for temperatures above 212°F.)

# Coll-O-Crimp

## 'E' Series

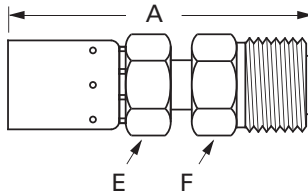
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

### JIC 37° Male Rigid



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	1/4	04E-504	7/16-20	1.78	.94	.16	1/2
1/4	5/16	04E-505	1/2-20	1.78	.94	.19	9/16
1/4	3/8	04E-506	9/16-18	1.82	1.00	.22	5/8
5/16	5/16	05E-505	1/2-20	1.86	.94	.22	9/16
3/8	3/8	06E-506	9/16-18	1.92	1.00	.27	5/8
3/8	1/2	06E-508	3/4-16	2.08	1.19	.27	13/16
1/2	1/2	08E-508	3/4-16	2.18	1.19	.27	13/16
1/2	5/8	08E-510	7/8-14	2.31	1.25	.42	15/16
3/4	3/4	12E-512	1-1/16-12	2.63	1.44	.61	1-1/8
1	1	16E-516	1-5/16-12	2.83	1.50	.84	1-3/8

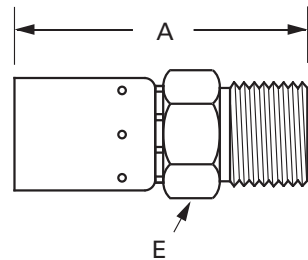
### Inverted Male Swivel Straight



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	3/16	04E-B03	3/8-24	3.06	2.19	.12	7/16	3/8
1/4	1/4	04E-B04	7/16-24	2.44	1.63	.15	7/16	7/16
1/4	5/16	04E-B05	1/2-20	3.71	2.88	.16	7/16	1/2
5/16	5/16	05E-B05	1/2-20	2.57	1.61	.21	9/16	1/2
3/8	5/16	06E-B05	1/2-20	2.56	1.63	.21	9/16	1/2
3/8	3/8	06E-B06	5/8-18	2.81	1.81	.24	5/8	5/8
1/2	1/2	08E-B08	3/4-18	3.14	2.06	.33	3/4	3/4

### Air Brake Connection - Tube

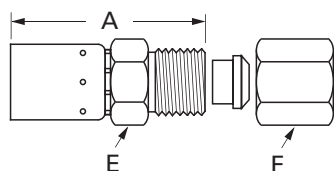
(For Use With H243 PTFE Hose Only)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	TUBE SIZE	CATALOG NUMBER SLEEVE	CATALOG NUMBER NUT
1/2	1/2	08E-Y58	11/16-20	2.12	1.06	.38	3/4	3/8	1360x6	1361x6
1/2	5/8	08E-Y60	13/16-18	2.18	1.13	.38	7/8	1/2	1360x8	1361x8
3/4	5/8	12E-Y60	13/16-18	2.31	1.13	.53	1	5/8	1360x10	1361x10
3/4	3/4	12E-Y62	1-18	2.38	1.19	.61	1	3/4	1360x12	1361x12

### Hose to Copper Tubing

### Flareless Tube Rigid (With Ermeto Nut and Sleeve)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
5/16	3/8	05E-756	9/16-18	1.88	1.00	.22	5/8	11/16
3/8	5/16	06E-755	1/2-20	1.78	.88	.23	9/16	5/8
3/8	3/8	06E-756	9/16-18	1.82	.88	.27	5/8	11/16
1/2	1/2	08E-758	3/4-16	2.08	1.06	.38	13/16	7/8

For replacement Nuts and Sleeves, see pages 310-311.

APPLICATION DATA  
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SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

# Coll-O-Crimp

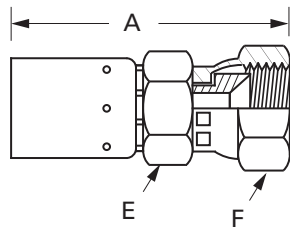
## 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

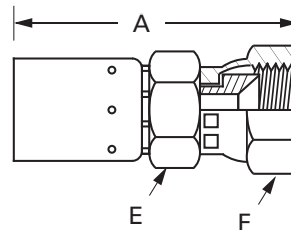
### JIC 37° Female Swivel

(Exceptions Noted)



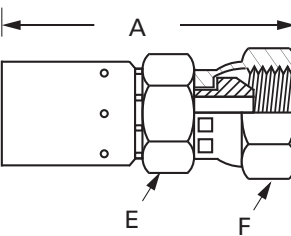
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/16	1/4	03E-604 <sup>a</sup>	7/16-20	1.89	1.00	.09	7/16	9/16
1/4	1/4	04E-604 <sup>a</sup>	7/16-20	1.92	1.13	.16	7/16	9/16
1/4	5/16	04E-605 <sup>a</sup>	1/2-20	2.00	1.19	.16	1/2	5/8
1/4	3/8	04E-606	9/16-18	2.06	1.25	.16	9/16	11/16
5/16	5/16	05E-605 <sup>a</sup>	1/2-20	2.07	1.19	.22	1/2	5/8
5/16	3/8	05E-606	9/16-18	2.12	1.19	.22	9/16	11/16
3/8	3/8	06E-606	9/16-18	2.19	1.25	.27	9/16	11/16
3/8	1/2	06E-608 <sup>a</sup>	3/4-16	2.30	1.38	.27	3/4	7/8
1/2	1/2	08E-608 <sup>a</sup>	3/4-16	2.39	1.38	.38	3/4	7/8
1/2	5/8	08E-610 <sup>a</sup>	7/8-14	2.51	1.50	.38	7/8	1
3/4	3/4	12E-612	1-1/16-12	2.76	1.56	.61	1	1-1/4
1	1	16E-616	1-5/16-12	3.05	1.75	.84	1-1/4	1-1/2

### SAE 45° Female Swivel



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
5/16	3/8	05E-406	5/8-18	2.03	1.13	.22	9/16	3/4
3/8	3/8	06E-406	5/8-18	2.06	1.13	.27	9/16	3/4
3/4	3/4	12E-412	1-1/16-14	2.76	1.56	.61	1	1-1/4

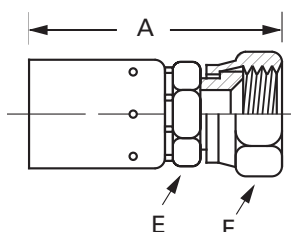
### British Standard (BSP) 60° Cone Female Pipe Swivel



HOSE I.D.	BSP PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/16	1/4	03E-354	G-1/4-19*	2.01	1.19	.16	9/16	11/16
1/4	1/4	04E-354	G-1/4-19*	2.07	1.25	.16	9/16	3/4
3/8	3/8	06E-356	G-3/8-19*	2.09	1.13	.27	3/4	7/8
3/8	1/2	06E-358	G-1/2-14*	2.47	1.50	.27	13/16	1
1/2	1/2	08E-358	G-1/2-14*	2.56	1.50	.39	13/16	1
1/2	5/8	08E-360	G-5/8-14*	2.70	1.63	.39	7/8	1-3/16
3/4	3/4	12E-362	G-3/4-14*	2.94	1.69	.61	1	1-1/4
1	1	16E-366	G-1-11*	3.38	2.00	.84	1-1/4	1-1/2

\*G As Part of Thread Size is ISO Designation for Parallel Thread.

### Female Swivel JIS 30° Flare Parallel Pipe Swivel



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04E-04L	G-1/4-19*	2.03	1.19	.16	9/16	3/4
3/8	3/8	06E-06L	G-3/8-19*	2.22	1.25	.27	11/16	7/8
1/2	1/2	08E-08L	G-1/2-14*	2.30	1.25	.39	13/16	1-1/16
3/4	3/4	12E-12L	G-3/4-14*	2.75	1.50	.81	1	1-5/16
1	1	16E-16L	G-1-11*	3.15	1.81	.84	1-1/4	1-1/2

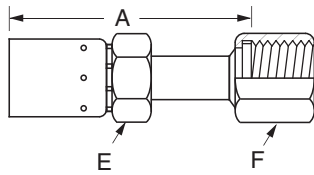
\*G As Part of Thread Size is ISO Designation for Parallel Thread.

# Coll-O-Crimp

## 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

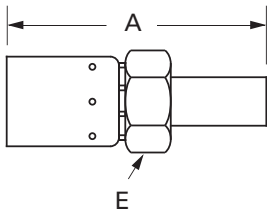
### Female FOR-SEAL Swivel Straight



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04E-S64	9/16-18	2.14	1.31	.15	5/8	11/16
1/4	3/8	04E-S66	11/16-16	2.20	1.38	.16	5/8	13/16
5/16	3/8	05E-S66	11/16-16	2.28	1.38	.22	9/16	13/16
3/8	3/8	06E-S66	11/16-16	2.37	1.44	.24	9/16	13/16
3/8	1/2	06E-S68	13/16-16	2.65	1.69	.24	5/8	15/16
1/2	1/2	08E-S68	13/16-16	2.74	1.69	.33	3/4	15/16
1/2	5/8	08E-S70	1-14	2.83	1.81	.39	3/4	1-1/8
3/4	3/4	12E-S72	1-3/16-12	3.10	1.88	.59	1	1-3/8
1	1	16E-S76	1-7/16-12	3.76	2.44	.78	1-1/4	1-5/8

### Straight Tube - Brass

(For Use With H243 PTFE Hose Only)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/2	1/2	08E-T58	3.32	2.31	.39	3/4
1/2	5/8	08E-T60	3.45	2.44	.47	3/4
3/4	5/8	12E-T60	3.66	2.44	.47	1
3/4	3/4	12E-T62	4.00	2.81	.61	1

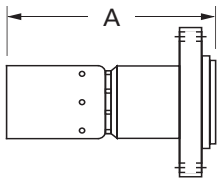
Insert - Brass  
Collar - Steel

Compatible Air Brake Nuts & Sleeves (order Separately)

TUBE SIZE	CATALOG NUMBER SLEEVE	CATALOG NUMBER NUT
1/2	1360x8	1361x8
5/8	1360x10	1361x10
3/4	1360x12	1361x12

### Compressor Discharge Flange End - GM Bus Only

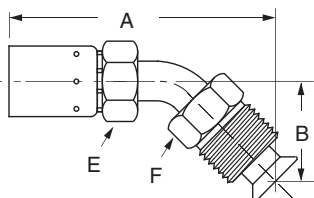
(For Use With H243 PTFE Hose Only)



HOSE I.D.	CATALOG NUMBER	A	HOSE CUT-OFF FACTOR†	HOLE DIA.
3/4	12E-X92	2.64	1.38	.61

**Note:**  
Part will not crimp in T-420 press.

### Inverted Male Swivel 45° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	3/16	04E-B43	3/8-24	2.82	.69	2.00	.12	7/16	3/8
1/4	1/4	04E-B44	7/16-24	2.94	.93	2.13	.15	7/16	7/16
3/8	5/16	06E-B45	1/2-20	3.37	1.14	2.44	.21	9/16	1/2
3/8	3/8	06E-B46	5/8-18	3.63	1.34	2.69	.24	5/8	5/8
1/2	1/2	08E-B48	3/4-18	4.32	1.58	3.25	.33	3/4	3/4
1/2	5/8	08E-B50	7/8-18	4.45	1.75	3.44	.39	3/4	7/8

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HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

# Coll-O-Crimp

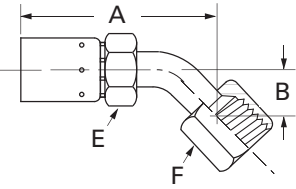
## 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

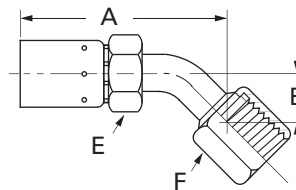
### JIC 37° Female Swivel 45° Tube Elbow

(Exceptions Noted)



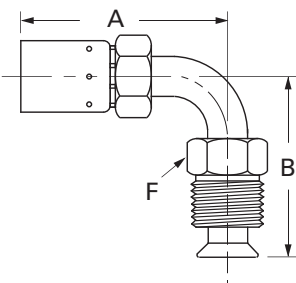
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04E-684 <sup>a</sup>	7/16-20	2.37	.33	1.56	.15	7/16	9/16
1/4	5/16	04E-685 <sup>a</sup>	1/2-20	2.50	.36	1.63	.16	7/16	5/8
5/16	3/8	05E-686	9/16-18	2.65	.39	1.69	.22	9/16	11/16
3/8	3/8	06E-686	9/16-18	2.74	.39	1.75	.24	5/8	11/16
3/8	1/2	06E-688 <sup>a</sup>	3/4-16	2.99	.56	2.00	.27	5/8	7/8
1/2	1/2	08E-688 <sup>a</sup>	3/4-16	2.88	.56	1.78	.33	3/4	7/8
1/2	5/8	08E-690 <sup>a</sup>	7/8-14	3.28	.63	2.25	.39	3/4	1
3/4	3/4	12E-692	1-1/16-12	3.72	.78	2.38	.58	1	1-1/4
1	1	16E-696	1-5/16-12	4.67	1.10	3.31	.83	1-1/4	1-1/2

### Female FOR-SEAL Swivel 45° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04E-L64	9/16-18	2.46	.41	1.63	.15	7/16	11/16
1/4	3/8	04E-L66	11/16-16	2.69	.43	1.75	.15	5/8	13/16
5/16	3/8	05E-L66	11/16-16	2.70	.43	1.75	.22	9/16	13/16
3/8	3/8	06E-L66	11/16-16	2.79	.43	1.81	.24	5/8	13/16
1/2	1/2	08E-L68	13/16-16	3.14	.60	2.13	.33	3/4	15/16
3/4	3/4	12E-L72	1-3/16-12	3.83	.83	2.63	.59	1	1-3/8
1	1	16E-L76	1-7/16-12	4.31	.94	3.00	.76	1-1/4	1-5/8

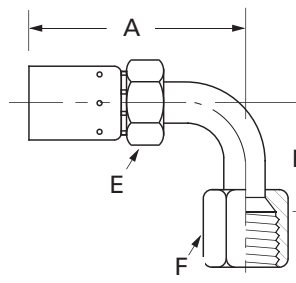
### Inverted Male Swivel 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	3/16	04E-B63	3/8-24	2.23	1.06	1.38	.12	7/16	3/8
1/4	1/4	04E-B64	7/16-24	2.25	1.36	1.31	.15	7/16	7/16
3/8	5/16	06E-B65	1/2-20	2.49	1.61	1.56	.21	9/16	1/2
3/8	3/8	06E-B66	5/8-18	2.92	1.97	1.94	.24	5/8	5/8
1/2	1/2	08E-B68	3/4-18	3.03	2.32	2.00	.33	3/4	3/4

### JIC 37° Female Swivel 90° Tube Elbow

(Exceptions Noted)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04E-664 <sup>a</sup>	7/16-20	2.27	.68	1.44	.15	7/16	9/16
1/4	5/16	04E-665 <sup>a</sup>	1/2-20	2.47	.77	1.63	.16	7/16	5/8
5/16	5/16	05E-665 <sup>a</sup>	1/2-20	2.58	.77	1.63	.21	9/16	5/8
5/16	3/8	05E-666	9/16-18	2.57	.85	1.62	.22	9/16	11/16
3/8	3/8	06E-666	9/16-18	2.63	.85	1.68	.24	5/8	11/16
3/8	1/2	06E-668 <sup>a</sup>	3/4-16	2.76	1.09	1.81	.27	5/8	7/8
1/2	1/2	08E-668 <sup>a</sup>	3/4-16	2.82	1.09	1.75	.33	3/4	7/8
1/2	5/8	08E-670 <sup>a</sup>	7/8-14	3.34	1.23	2.31	.39	3/4	1
3/4	3/4	12E-672	1-1/16-12	3.70	1.82	2.50	.59	1	1-1/4
1	1	16E-676	1-5/16-12	4.39	2.14	3.00	.83	1-1/4	1-1/2

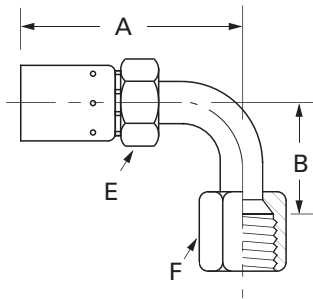
# Coll-O-Crimp

## 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

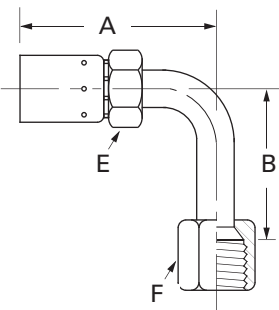
### SAE 45° Female Swivel 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/8	3/8	06E-466	5/8-18	2.72	.85	1.75	.24	5/8	3/4

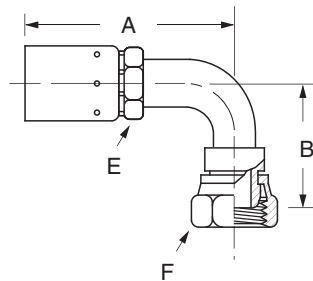
### JIC 37° Female Swivel Long Drop 90° Tube Elbow

(Exceptions Noted)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04E-644 <sup>a</sup>	7/16-20	2.27	1.80	1.42	.15	7/16	9/16
1/4	5/16	04E-645 <sup>a</sup>	1/2-20	2.51	1.80	1.63	.16	7/16	5/8
5/16	3/8	05E-646	9/16-18	2.63	2.18	1.69	.22	9/16	11/16
3/8	3/8	06E-646	9/16-18	2.66	2.18	1.69	.24	5/8	11/16
3/8	1/2	06E-648 <sup>a</sup>	3/4-16	2.83	2.43	1.88	.27	5/8	7/8
1/2	1/2	08E-648 <sup>a</sup>	3/4-16	2.82	2.43	1.75	.33	3/4	7/8
1/2	5/8	08E-650 <sup>a</sup>	7/8-14	2.96	2.57	1.94	.39	3/4	1
3/4	3/4	12E-652	1-1/16-12	3.74	3.73	2.50	.58	1	1-1/4
1	1	16E-656	1-5/16-12	4.36	4.33	3.00	.83	1-1/4	1-1/2

### British Standard (BSPP) 60° Cone Female Pipe Swivel 90° Elbow



HOSE I.D.	BSPP PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04E-74P	G-1/4-19*	2.89	1.50	2.06	.16	7/16	3/4
3/8	3/8	06E-76P	G-3/8-19*	2.96	1.66	2.00	.27	5/8	7/8
1/2	1/2	08E-78P	G-1/2-14*	2.95	1.73	1.88	.37	3/4	1
3/4	3/4	12E-82P	G-3/4-14*	3.83	2.43	2.61	.61	1	1-1/4

\*G As Part of Thread Size is ISO Designation for Parallel Thread.

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

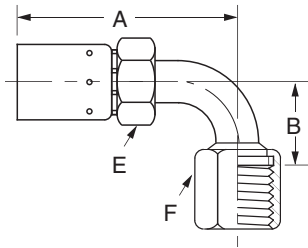


# Coll-O-Crimp

## 'E' Series

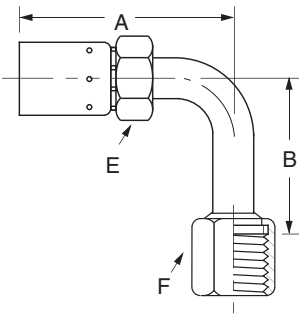
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

### Female FOR-SEAL Swivel Short Drop 90° Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04E-A24	9/16-18	2.27	.81	1.44	.21	7/16	11/16
1/4	3/8	04E-A26	11/16-16	2.54	.90	1.69	.16	5/8	13/16
5/16	3/8	05E-A26	11/16-16	2.62	.90	1.69	.22	9/16	13/16
3/8	3/8	06E-A26	11/16-16	2.71	.90	1.75	.24	5/8	13/16
3/8	1/2	06E-A28	13/16-16	2.81	1.15	1.88	.27	5/8	15/16
1/2	1/2	08E-A28	13/16-16	2.90	1.15	1.88	.33	3/4	15/16
3/4	3/4	12E-A32	1-3/16-12	3.70	1.88	2.50	.59	1	1-3/8
1	1	16E-A36	1-7/16-12	4.01	2.21	2.69	.76	1-1/4	1-5/8

### Female FOR-SEAL Swivel Long Drop 90° Tube Elbow

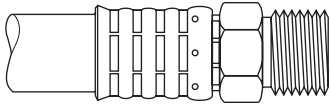


HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04E-A64	9/16-18	2.41	1.80	1.56	.21	7/16	11/16
5/16	3/8	05E-A66	11/16-16	2.73	2.12	1.81	.22	9/16	13/16
3/8	3/8	06E-A66	11/16-16	2.82	2.12	1.88	.24	5/8	13/16
3/8	1/2	06E-A68	13/16-16	2.80	2.50	1.88	.27	5/8	15/16
1/2	1/2	08E-A68	13/16-16	2.89	2.50	1.88	.33	3/4	15/16

# Coll-O-Crimp

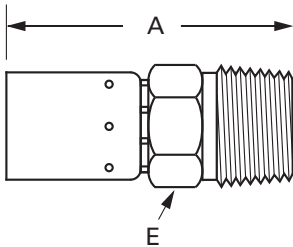
## 069 'E' Series

### Hose End 069 'E' Series

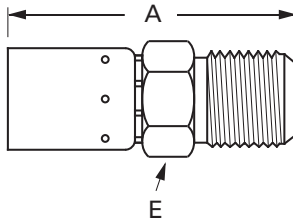


⚠ Refer to important safety information on page 4.

### Male Pipe Rigid



### JIC 37° Male Rigid



### Ordering Information:

Order individually by catalog number.

### Typical Application:

General purpose low- and medium-pressure hydraulics. Generally used for truck and off-road vehicle applications.

**Compatible Hose:** H059; H069; H166; H169; H229; H239; H366; H569

**Pressure:** Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 16 for working pressure ratings for hose end configurations.

**Material:** Low Carbon Steel

**Plating:** Zinc; yellow dichromate finish.

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

**Advantages:** Wide selection of hose and end configurations allowing for a diverse number of applications. Limited competition and economical cost.

**Assemble With:** T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T-480, ET4000.

**Label Set:** FS-1500

HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/16	1/8	06904E-102	1/8-27	1.70	.75	.13	7/16
3/16	1/4	06904E-104	1/4-18	1.88	1.00	.13	9/16
1/4	1/4	06905E-104	1/4-18	1.88	1.00	.18	9/16
5/16	1/4	06906E-104	1/4-18	2.04	1.00	.24	5/8
5/16	3/8	06906E-106	3/8-18	2.03	1.00	.24	11/16
13/32	3/8	06908E-106	3/8-18	2.04	1.00	.31	3/4
13/32	1/2	06908E-108	1/2-14	2.29	1.25	.31	7/8
1/2	1/2	06910E-108	1/2-14	2.41	1.38	.39	7/8
1/2	3/4	06910E-112	3/4-14	2.47	1.38	.39	1-1/16
5/8	3/4	06912E-112	3/4-14	2.52	1.25	.51	1-1/16
7/8	3/4	06916E-112	3/4-14	2.69	1.44	.71	1-1/8
7/8	1	06916E-116	1-11-1/2	2.88	1.63	.75	1-3/8
1-1/8	1-1/4	06920E-120	1-1/4-11-1/2	3.06	1.69	1.00	1-11/16
1-3/8	1-1/2	06924E-124	1-1/2-11-1/2	3.37	2.00	1.25	2
1-13/16	2	06932E-132	2-11-1/2	3.38	2.00	1.63	2-1/2

HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/16	1/4	06904E-504	7/16-20	1.87	1.00	.13	1/2
1/4	5/16	06905E-505	1/2-20	1.87	1.00	.18	9/16
5/16	3/8	06906E-506	9/16-18	2.03	1.00	.24	5/8
13/32	1/2	06908E-508	3/4-16	2.19	1.19	.31	13/16
1/2	5/8	06910E-510	7/8-14	2.43	1.25	.39	15/16
5/8	3/4	06912E-512	1-1/16-12	2.63	1.38	.51	1-1/8
7/8	1	06916E-516	1-5/16-12	2.85	1.50	.75	1-3/8
1-1/8	1-1/4	06920E-520	1-5/8-12	3.06	1.63	1.00	1-11/16
1-3/8	1-1/2	06924E-524	1-7/8-12	3.17	1.81	1.25	2

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

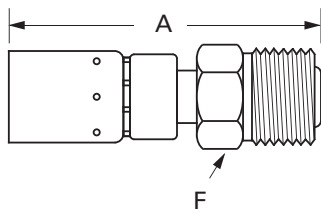
# Coll-O-Crimp

## 069 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

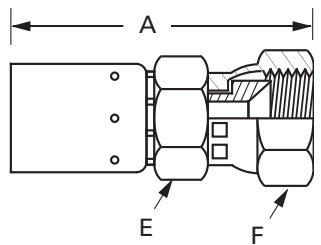
### Inverted Male Swivel Straight



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/16	1/4	06904E-B04	7/16-24	2.58	1.56	.13	7/16
1/4	5/16	06905E-B05	1/2-20	2.63	1.63	.18	1/2
5/16	3/8	06906E-B06	5/8-18	2.87	1.78	.24	5/8
13/32	1/2	06908E-B08	3/4-18	3.24	2.06	.31	3/4

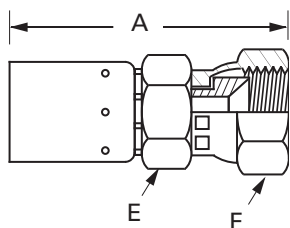
### JIC 37° Female Swivel

(Exceptions Noted)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/16	1/4	06904E-604 <sup>a</sup>	7/16-20	2.01	1.06	.13	7/16	9/16
1/4	5/16	06905E-605 <sup>a</sup>	1/2-20	2.09	1.19	.18	7/16	5/8
5/16	3/8	06906E-606	9/16-18	2.26	1.19	.24	9/16	11/16
5/16	1/2	06906E-608 <sup>a</sup>	3/4-16	2.41	1.31	.24	3/4	7/8
13/32	1/2	06908E-608 <sup>a</sup>	3/4-16	2.41	1.38	.31	3/4	7/8
1/2	1/2	06910E-608 <sup>a</sup>	3/4-16	2.53	1.44	.39	13/16	7/8
1/2	5/8	06910E-610 <sup>a</sup>	7/8-14	2.62	1.50	.39	13/16	1
5/8	3/4	06912E-612	1-1/16-12	2.77	1.50	.51	1	1-1/4
7/8	1	06916E-616	1-5/16-12	3.11	1.75	.75	1-1/4	1-1/2
1-1/8	1-1/4	06920E-620	1-5/8-12	3.30	1.81	1.00	1-9/16	2
1-3/8	1-1/2	06924E-624	1-7/8-12	3.45	2.13	1.25	2	2-1/4
1-13/16	2	06932E-632	2-1/2-12	4.15	2.81	1.63	2-1/2	3

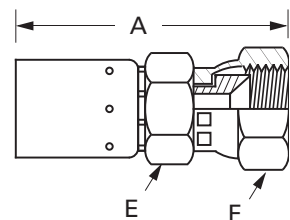
### SAE 45° Female Swivel



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
5/16	3/8	06906E-406	5/8-18	2.18	1.13	.24	9/16	3/4
5/8	3/4	06912E-412	1-1/16-14	2.81	1.50	.51	1	1-1/4

### 30° Flare Female Swivel

(PTT Thread For Diesel Applications)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
7/8	1	06916E-X26	1-5/16-14	2.96	1.69	.75	1-1/4	1-1/2

# Coll-O-Crimp

## 069 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

‡Swivel nuts are universal – both SAE 37° and 45° connections.

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

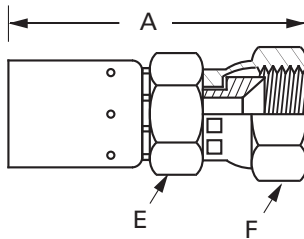
ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

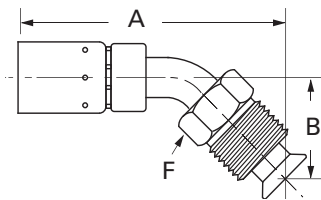
### Female Swivel 30° Flare

(Komatsu, Linkbelt)



HOSE I.D.	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
5/16	06906E-18K	M18x1.5	2.38	1.31	.24	3/4	7/8
1/2	06910E-22K	M22x1.5	2.65	1.56	.39	13/16	1
5/8	06912E-24K	M24x1.5	2.88	1.56	.52	1	1-1/4
5/8	06912E-30K	M30x1.5	2.90	1.63	.52	1-1/4	1-3/8
7/8	06916E-33K	M33x1.5	3.11	1.81	.75	1-1/4	1-1/2
1-3/8	06924E-42K	M42x1.5	3.55	2.19	1.25	2	2-1/8

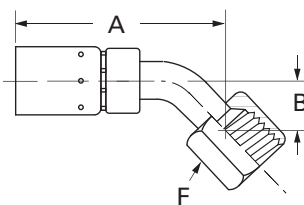
### Inverted Male Swivel 45° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/16	1/4	06904E-E44	7/16-24	3.08	.93	2.06	.12	7/16
1/4	5/16	06905E-E45	1/2-20	3.42	1.14	2.44	.18	1/2
5/16	3/8	06906E-E46	5/8-18	3.65	1.34	2.56	.21	5/8

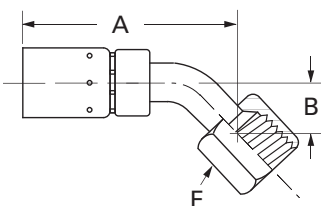
### JIC 37° Female Swivel 45° Tube Elbow

(Exceptions Noted)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/16	1/4	06904E-684 <sup>a</sup>	7/16-20	2.50	.33	1.50	.13	9/16
1/4	5/16	06905E-685 <sup>a</sup>	1/2-20	2.63	.36	1.63	.18	5/8
5/16	3/8	06906E-686	9/16-18	2.78	.38	1.69	.24	11/16
13/32	1/2	06908E-688 <sup>a</sup>	3/4-16	3.07	.55	1.83	.31	7/8
1/2	5/8	06910E-690 <sup>a</sup>	7/8-14	3.39	.63	2.31	.45	1
5/8	3/4	06912E-692	1-1/16-12	3.70	.78	2.38	.52	1-1/4
7/8	1	06916E-696	1-5/16-12	4.68	1.10	3.38	.75	1-1/2

### SAE 45° Female Swivel 45° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
5/16	3/8	06906E-486	5/8-18	2.77	.39	1.69	.24	3/4
5/8	3/4	06912E-492	1-1/16-14	3.74	.78	2.44	.52	1-1/4

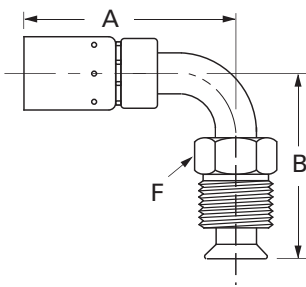
# Coll-O-Crimp

## 069 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

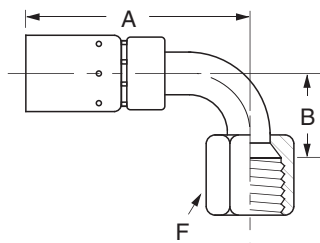
### Inverted Male Swivel 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/16	1/4	06904E-E04	7/16-24	2.31	1.36	1.25	.13	7/16
1/4	5/16	06905E-E05	1/2-20	2.59	1.61	1.56	.18	1/2
5/16	1/4	06906E-E04	7/16-24	2.43	1.36	1.31	.15	7/16
5/16	5/16	06906E-E05	1/2-20	2.66	1.61	1.56	.21	1/2
5/16	3/8	06906E-E06	5/8-18	2.94	1.97	1.85	.24	5/8
1/2	5/8	06910E-E10	7/8-18	3.27	2.58	2.30	.39	7/8

### JIC 37° Female Swivel 90° Tube Elbow

(Exceptions Noted, Refer to Footnotes)

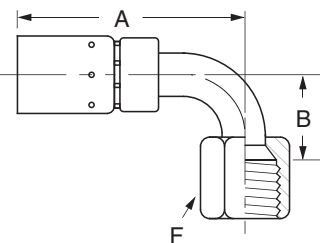


HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/16	1/4	06904E-664 <sup>a</sup>	7/16-20	2.41	.68	1.38	.13	9/16
1/4	5/16	06905E-665 <sup>a</sup>	1/2-20	2.62	.77	1.63	.21	5/8
5/16	3/8	06906E-666	9/16-18	2.73	.85	1.78	.24	11/16
13/32	1/2	06908E-668 <sup>a</sup>	3/4-16	2.87	1.09	1.75	.31	7/8
1/2	5/8	06910E-670 <sup>a</sup>	7/8-14	3.52	1.23	2.44	.39	1
5/8	3/4	06912E-672	1-1/16-12	3.66	1.82	2.31	.58	1-1/4
7/8	1	06916E-676	1-5/16-12	4.40	2.14	3.13	.76	1-1/2
1-1/8	1-1/4*	06920E-657 <sup>Δ</sup>	1-5/8-12	4.32	5.38	2.90	1.00	2
1-1/8	1-1/4*	06920E-677	1-5/8-12	4.27	3.25	2.90	1.01	2
1-3/8	1-1/2*	06924E-678	1-7/8-12	4.09	3.05	2.70	1.25	2-1/2

\* 20 and 24 size ends have crimped nuts.

<sup>Δ</sup> Long drop elbow.

### SAE 45° Female Swivel 90° Tube Elbow

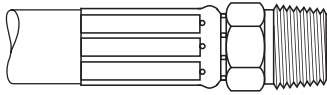


HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
5/16	3/8	06906E-466	5/8-18	2.76	.85	1.56	.24	3/4
5/8	3/4	06912E-472	1-1/16-14	3.64	1.82	2.31	.52	1-1/4

# Coll-O-Crimp


## 336 'E' Series

### Hose End 336 'E' Series



#### Ordering Information:

Order individually by catalog number.

 Refer to important safety information on page 4.

#### Typical Application:

General purpose high-pressure hydraulics. Use H335 non-conductive hose where shock hazards exist.

#### Compatible Hose:

H335; H336

**Pressure:** Determined by maximum working pressure for hose size and hose end configuration whichever is less. See page 5-10 for working pressure ratings for hose end configurations.

**Material:** Low Carbon Steel

**Plating:** Zinc; yellow dichromate finish

**Advantages:** Wide selection of hose and end configurations allowing for a diverse number of applications where hose compatibility is a problem.

#### Assemble With:

ET1000, ET4000, T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465, T-480.

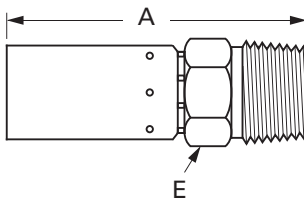
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

**Label Set:** FS-3500

#### Note:

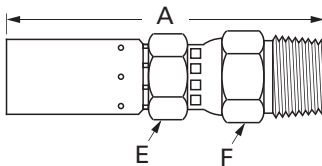
Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

### Male Pipe Rigid



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/16	1/8	33603E-102	1/8-27	1.88	1.06	.11	9/16
3/16	1/4	33603E-104	1/4-18	2.06	1.25	.11	11/16
1/4	1/8	33604E-102	1/8-27	2.13	1.06	.16	5/8
1/4	1/4	33604E-104	1/4-18	2.31	1.25	.16	11/16
1/4	3/8	33604E-106	3/8-18	2.40	1.31	.16	3/4
3/8	1/4	33606E-104	1/4-18	2.59	1.15	.28	3/4
3/8	3/8	33606E-106	3/8-18	2.59	1.15	.28	3/4
3/8	1/2	33606E-108	1/2-14	2.84	1.41	.28	15/16
1/2	3/8	33608E-106	3/8-18	2.78	1.13	.39	7/8
1/2	1/2	33608E-108	1/2-14	3.03	1.38	.39	15/16
3/4	3/4	33612E-112	3/4-14	3.22	1.38	.63	1-1/8
1	1	33616E-116	1-11-1/2	3.97	1.62	.81	1-3/8

### Male Pipe Swivel



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/16	1/4	33603E-J04	1/4-18	2.64	1.84	.11	5/8	11/16
1/4	1/4	33604E-J04	1/4-18	2.87	1.79	.16	5/8	11/16
3/8	3/8	33606E-J06	3/8-18	3.15	1.72	.28	3/4	3/4
3/8	1/2	33606E-J08	1/2-14	3.31	1.88	.28	3/4	7/8
1/2	1/2	33608E-J08	1/2-14	3.61	1.97	.39	7/8	15/16

#### Note:

Swivel for installation purposes (Not for temperatures above 212°F)

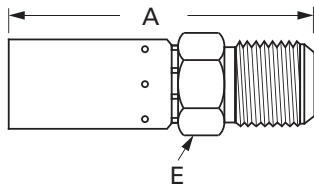


# Coll-O-Crimp

## 336 'E' Series

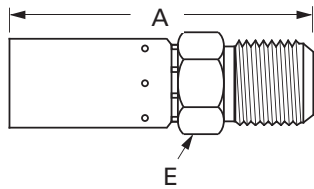
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

### JIC 37° Male Rigid



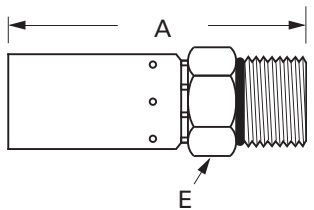
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/16	1/4	33603E-504	7/16-20	2.05	1.25	.11	9/16
1/4	1/4	33604E-504	7/16-20	2.30	1.22	.16	5/8
1/4	5/16	33604E-505	1/2-20	2.30	1.23	.16	5/8
3/8	3/8	33606E-506	9/16-18	2.59	1.13	.28	3/4
3/8	1/2	33606E-508	3/4-16	2.69	1.25	.28	13/16
1/2	1/2	33608E-508	3/4-16	2.88	1.25	.39	7/8
1/2	5/8	33608E-510	7/8-14	3.10	1.42	.39	15/16
1/2	3/4	33608E-512	1-1/16-12	3.15	1.52	.39	1-1/8
3/4	3/4	33612E-512	1-1/16-12	3.32	1.52	.61	1-1/8

### SAE 45° Flare Male Rigid



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/16	1/4	33603E-304	7/16-20	2.00	1.19	.11	9/16
3/8	3/8	33606E-306	5/8-18	2.65	1.19	.28	3/4
1/2	1/2	33608E-308	3/4-16	3.03	1.31	.39	7/8

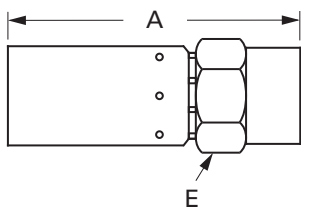
### Male Straight Thread O-Ring Rigid



HOSE I.D.	PORT SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/16	1/4	33603E-P04	7/16-20	1.86	1.06	.11	9/16
1/4	5/16	33604E-P05	1/2-20	2.11	1.03	.16	5/8
1/4	3/8	33604E-P06	9/16-18	2.14	1.06	.16	11/16
3/8	3/8	33606E-P06	9/16-18	2.42	1.00	.28	3/4
3/8	1/2	33606E-P08	3/4-16	2.47	1.03	.28	7/8
1/2	1/2	33608E-P08	3/4-16	2.78	1.03	.39	15/16
1/2	5/8	33608E-P10	7/8-14	2.84	1.16	.39	1-1/16

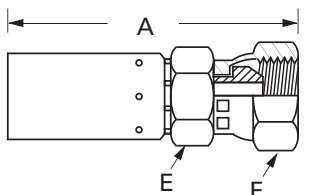
(Includes O-Ring)

### Female Pipe Rigid



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	1/4	33604E-204	1/4-18	2.34	1.25	.16	3/4
1/2	1/2	33608E-208	1/2-14	3.03	1.31	.39	1-1/16

### Female Straight Pipe Swivel



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	33604E-054	1/4-18	2.38	1.31	.16	5/8	3/4
3/8	3/8	33606E-056	3/8-18	2.66	1.22	.28	3/4	7/8
1/2	1/2	33608E-058	1/2-14	3.06	1.38	.39	1	1
3/4	3/4	33612E-062	3/4-14	3.43	1.62	.63	1-1/8	1-1/8

**Note:**

For use with male pipe fittings with internal seat.

# Coll-O-Crimp

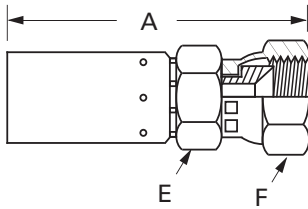
## 336 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

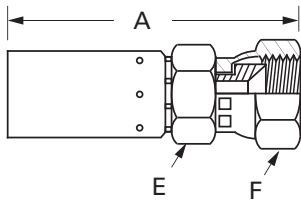
### JIC 37° Female Swivel

(Exceptions Noted)



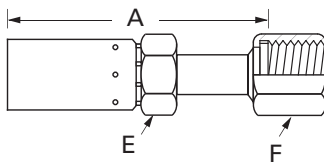
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/16	1/4	33603E-604 <sup>a</sup>	7/16-20	2.16	1.38	.11	9/16	5/8
3/16	5/16	33603E-605 <sup>a</sup>	1/2-20	2.16	1.38	.11	9/16	3/4
1/4	1/4	33604E-604 <sup>a</sup>	7/16-20	2.53	1.44	.16	5/8	5/8
1/4	5/16	33604E-605 <sup>a</sup>	1/2-20	2.53	1.44	.16	5/8	3/4
1/4	3/8	33604E-606	9/16-18	2.53	1.44	.16	5/8	3/4
3/8	3/8	33606E-606	9/16-18	2.81	1.38	.28	3/4	3/4
3/8	1/2	33606E-608 <sup>a</sup>	3/4-16	2.81	1.38	.28	3/4	15/16
1/2	1/2	33608E-608 <sup>a</sup>	3/4-16	3.16	1.63	.39	7/8	15/16
1/2	5/8	33608E-610 <sup>a</sup>	7/8-14	3.16	1.63	.39	7/8	1-1/16
3/4	3/4	33612E-612	1-1/16-12	3.44	1.63	.63	1-1/8	1-1/4
1	1	33616E-616	1-5/16-12	4.06	1.75	.81	1-3/8	1-1/2

### SAE 45° Female Swivel



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	3/8	33604E-406	5/8-18	2.53	1.44	.16	5/8	13/16
3/8	3/8	33606E-406	5/8-18	2.81	1.38	.28	3/4	13/16

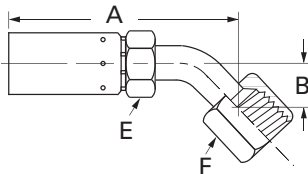
### Female FOR-SEAL® Swivel Straight



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	33604E-S64	9/16-18	2.60	1.52	.16	5/8	11/16
3/8	3/8	33606E-S66	11/16-16	2.92	1.61	.21	3/4	13/16
1/2	1/2	33608E-S68	13/16-16	3.29	1.72	.38	7/8	15/16
3/4	3/4	33612E-S72	1-3/16-12	3.71	1.95	.61	1-1/8	1-3/8
1	1	33616E-S76	1-7/16-12	4.36	2.11	.81	1-3/8	1-5/8

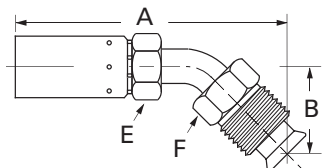
### JIC 37° Female Swivel 45° Tube Elbow

(Exceptions Noted)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/16	1/4	33603E-684 <sup>a</sup>	7/16-20	2.30	.47	1.50	.11	9/16	9/16
1/4	5/16	33604E-685 <sup>a</sup>	1/2-20	2.65	.53	1.56	.16	5/8	5/8
3/8	3/8	33606E-686	9/16-18	2.92	.59	1.48	.28	3/4	11/16
3/8	1/2	33606E-688 <sup>a</sup>	3/4-16	3.10	.71	1.66	.28	3/4	7/8
1/2	1/2	33608E-688 <sup>a</sup>	3/4-16	3.28	.71	1.66	.39	7/8	7/8
1/2	5/8	33608E-690 <sup>a</sup>	7/8-14	3.52	.84	1.84	.39	7/8	1
3/4	3/4	33612E-692	1-1/16-12	4.33	1.12	2.44	.62	1-1/8	1-1/4

### Inverted Male Swivel 45° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/8	3/8	33606E-B46	5/8-18	3.30	.97	1.88	.28	3/4	5/8

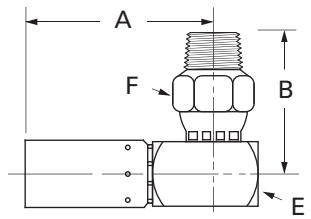
APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

# Coll-O-Crimp

## 336 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.  
<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

### Male Pipe Swivel 90° Elbow

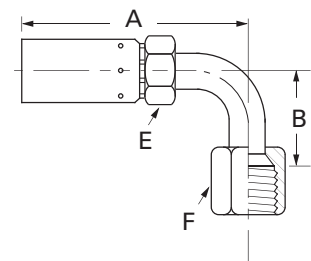


HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/8	3/8	33606E-M06	3/8-18	2.19	1.64	.88	.28	.81	3/4
1/2	1/2	33608E-M08	1/2-14	2.48	1.95	.94	.39	1	15/16

**Note:**  
 Swivel for installation purposes only.  
 (Not for temperatures above 212°F.)

### JIC 37° Female Swivel 90° Tube Elbow

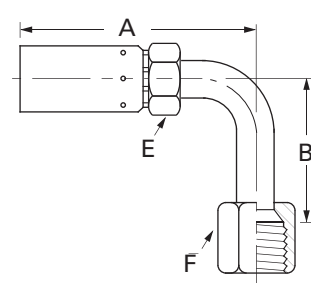
(Exceptions Noted)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	33604E-664 <sup>a</sup>	7/16-20	2.28	.88	1.31	.16	5/8	9/16
1/4	5/16	33604E-665 <sup>a</sup>	1/2-20	2.38	1.00	1.31	.16	5/8	5/8
3/8	3/8	33606E-666	9/16-18	2.63	1.13	1.19	.28	3/4	11/16
3/8	1/2	33606E-668 <sup>a</sup>	3/4-16	2.75	1.38	1.31	.28	3/4	7/8
1/2	1/2	33608E-668 <sup>a</sup>	3/4-16	2.94	1.38	1.31	.39	7/8	7/8
1/2	5/8	33608E-670 <sup>a</sup>	7/8-14	3.06	1.63	1.44	.39	7/8	1
3/4	5/8	33612E-670 <sup>a</sup>	7/8-14	3.38	1.63	1.56	.50	1-1/8	1
3/4	3/4	33612E-672	1-1/16-12	3.88	2.31	2.06	.62	1-1/8	1-1/4
1	1	33616E-676	1-5/16-12	4.75	2.50	2.31	.58	1-3/8	1-1/2

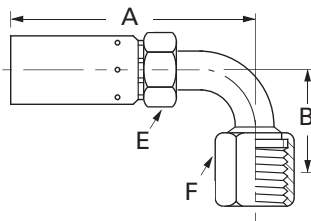
### JIC 37° Female Swivel Long Drop 90° Tube Elbow

(Exceptions Noted)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	5/16	33604E-645 <sup>a</sup>	1/2-20	2.38	1.77	1.30	.16	5/8	5/8
3/8	3/8	33606E-646	9/16-18	2.63	2.18	1.19	.28	3/4	11/16
3/8	1/2	33606E-648 <sup>a</sup>	3/4-16	2.75	2.43	1.31	.28	3/4	7/8
1/2	5/8	33608E-650 <sup>a</sup>	7/8-14	3.06	2.57	1.44	.39	7/8	1
3/4	3/4	33612E-652	1-1/16-12	3.88	3.73	2.06	.62	1-1/8	1-1/4

### Female FOR-SEAL® Swivel Short Drop 90° Elbow



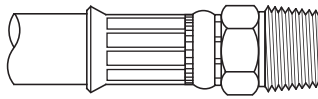
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	33604E-A24	9/16-18	2.31	.78	1.23	.16	5/8	11/16
3/8	3/8	33606E-A26	11/16-16	2.74	.90	1.43	.28	3/4	13/16
1/2	1/2	33608E-A28	13/16-16	3.04	1.15	1.48	.39	7/8	15/16
3/4	3/4	33612E-A32	1-3/16-12	3.78	1.88	2.02	.63	1-1/8	1-3/8

# Coll-O-Crimp

## 470 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

### Hose End 470 'E' Series

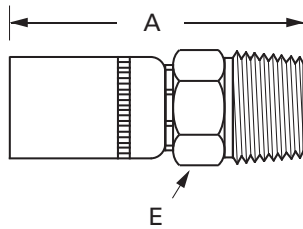


#### ⚠ WARNING

47032E ends can ONLY be crimped on the T-440 or ET4000.

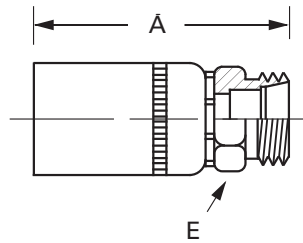
⚠ Refer to important safety information on page 4.

### Male Pipe Rigid

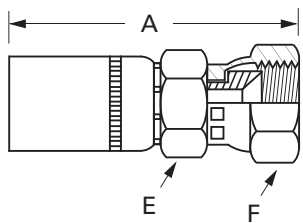


### Male DIN 24° Seat

s. Rh. (Heavy)



### JIC 37° Female Swivel



### Ordering Information:

Order individually by catalog number; reference individual hose end listings for details. For split flange kits, refer to pages 330-333.

### Typical Application:

Very high pressure hydraulic lines subjected to extreme pressure surges and flexing. Some applications include mining, construction, farming and high performance industrial equipment.

**Compatible Hose:** H470

**Pressure:** Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See pages 5-10 for working pressure ratings for hose end configurations.

**Material:** Low Carbon Steel  
**Plating:** Zinc; yellow dichromate finish

**Advantages:** SAE Code 62 High Pressure Series hose ends. Excellent series for very high pressure

hydraulics. Compatible with Caterpillar, John Deere, and most major manufacturers of equipment using high pressure applications.

### Assemble with:

T-410-1 Coll-O-Crimp II, T-420-1 Coll-O-Crimp Super I, T-440-1 Coll-O-Crimp II Plus, T-480 or ET4000 depending on size.

**Label Set:** FS-1800

HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/2	1/2	47008E-108	1/2-14	2.79	1.38	.38	7/8
3/4	3/4	47012E-112	3/4-14	3.80	1.75	.61	1-1/16
1	1	47016E-116	1-11-1/2	4.30	1.94	.80	1-3/8
1-1/4	1-1/4	47020E-120	1-1/4-11-1/2	5.56	2.44	1.00	1-3/4
1-1/2	1-1/2	47024E-124	1-1/2-11-1/2	5.61	2.25	1.25	2-1/8
2	2	47032E-132	2-11-1/2	6.53	2.75	1.56	2-3/4

HOSE I.D.	TUBE SIZE (MM)	CATALOG NUMBER	THREAD (MM)	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/4	25	47012E-25F	M36-2.0	3.56	1.61	.58	1-3/8
1	30	47016E-30F	M42-2.0	4.26	1.88	.79	1-3/4
1-1/4	38	47020E-38F	M52-2.0	5.22	3.81	1.00	2-1/4

HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/2	1/2	47008E-608	3/4-16	2.97	1.56	.39	7/8	7/8
3/4	3/4	47012E-612	1-1/16-12	3.90	1.88	.58	1-1/16	1-1/4
3/4	1	47012E-616	1-5/16-12	3.98	1.94	.58	1-1/4	1-1/2
1	1	47016E-616	1-5/16-12	4.34	2.00	.80	1-3/8	1-1/2
1-1/4	1-1/4	47020E-620	1-5/8-12	5.72	2.56	1.00	1-3/4	2
1-1/2	1-1/2	47024E-624	1-7/8-12	6.04	2.63	1.25	2-1/8	2-1/4
2	2	47032E-632 <sup>Δ</sup>	2-1/2-12	6.98	3.22	1.56	2-3/4	3

⚠ **WARNING:** <sup>Δ</sup> Before crimping this fitting on a ET4000 C-O-C machine, refer to ET4000 crimping procedures on page 384.

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

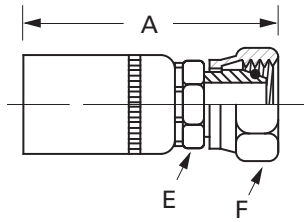
# Coll-O-Crimp

## 470 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

### Female Swivel DIN 24° Seat

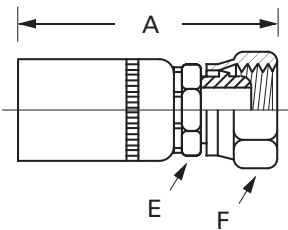
s. Rh. DKO (Heavy)



HOSE I.D.	TUBE SIZE (MM)	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/4	25	47012E-75C	M36x2.0	3.94	1.88	.58	1-5/16	1-13/16
1	30	47016E-80C	M42x2.0	4.60	2.25	.79	1-5/8	2
1-1/4	38	47020E-88C	M52x2.0	5.96	2.63	1.00	2	2-3/8

(Includes O-Ring)

### British Standard (BSPP) 60° Cone Female Pipe Swivel

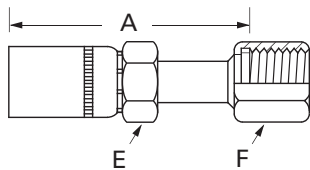


HOSE I.D.	BSPP PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/4	3/4	47012E-362	G-3/4-14*	3.99	1.69	.58	1-1/16	1-1/4
1	1	47016E-366	G-1-11*	4.75	2.23	.79	1-3/8	1-1/2
1-1/4	1-1/4	47020E-370	G-1-1/4-11*	6.26	2.44	1.00	1-7/8	1-7/8
1-1/2	1-1/2	47024E-374	G-1-1/2-11*	6.46	3.04	1.18	2	2-1/4
2	2	47032E-375	G-2-11*	6.85	3.06	1.56	2-3/4	2-3/4

\*G As Part of Thread Size is ISO Designation for Parallel Thread.

Swivel Nut Style may vary.

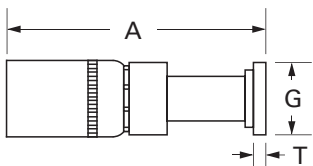
### Female FOR-SEAL Swivel Straight



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/4	3/4	47012E-S72	1-3/16-12	4.20	2.16	.55	1-1/8	1-3/8
1	1	47016E-S76	1-7/16-12	4.65	2.31	.79	1-3/8	1-5/8
1	1-1/4	47016E-S80	1-11/16-12	4.65	2.31	.79	1-3/8	1-7/8
1-1/4	1-1/4	47020E-S80	1-11/16-12	5.76	2.62	1.00	1-3/4	1-7/8

### Split Flange Straight

(SAE Code 61)



HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1/2	1/2	47008E-G08	8x252	3.79	2.38	.38	1.19	.265
3/4	3/4	47012E-G12	12x252	4.46	2.44	.58	1.50	.265
3/4	1	47012E-G16	16x252	4.46	2.44	.58	1.75	.315
1	1	47016E-G16	16x252	4.91	2.56	.77	1.75	.315
1-1/4	1-1/4	47020E-G20	20x252	5.84	2.69	1.00	2.00	.315
1-1/2	1-1/2	47024E-G24	24x252	6.83	3.50	1.25	2.38	.315
2	2	47032E-G32	32x252	7.82	4.06	1.81	2.81	.375

(For Split Flange Kits, see pages 330-333.)

# Coll-O-Crimp

## 470 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

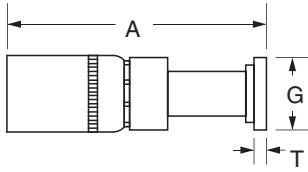
ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

### Split Flange Straight

(SAE Code 62)

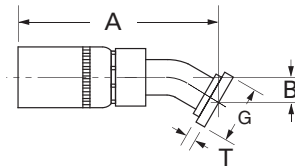


HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
3/4	3/4	47012E-D12	12x252	4.75	2.75	.58	1.62	.345
3/4	1	47012E-D16	16x252	4.94	2.88	.58	1.88	.375
1	1	47016E-D16	16x252	4.91	2.56	.77	1.88	.375
1	1-1/4	47016E-D20	20x252	5.10	2.75	.77	2.12	.405
1	1-1/2	47016E-D24	24x252	5.30	2.94	.77	2.50	.495
1-1/4	1-1/4	47020E-D20	20x252	5.73	2.63	1.00	2.12	.405
1-1/4	1-1/2	47020E-D24	24x252	5.91	2.75	1.00	2.50	.495
1-1/2	1-1/4	47024E-D20	20x252	6.87	3.44	1.00	2.12	.405
1-1/2	1-1/2	47024E-D24	24x252	6.71	3.31	1.25	2.50	.495

(For Split Flange Kits, see pages 330-333.)

### Split Flange 30° Tube Elbow

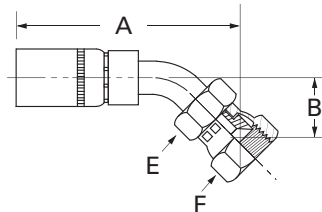
(SAE Code 62)



HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1	1-1/2	47016E-N25	24x252	6.46	1.11	4.06	.75	2.50	.495
1-1/4	1-1/2	47020E-N25	24x252	7.45	1.09	4.31	1.06	2.50	.495

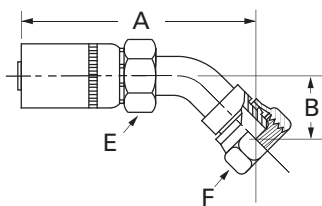
(For Split Flange Kits, see pages 330-333.)

### JIC 37° Female Swivel 45° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/2	1/2	47008E-688	3/4-16	4.24	1.14	2.81	.39	7/8	7/8
3/4	3/4	47012E-692	1-1/16-12	5.79	1.66	3.75	.61	1-1/8	1-1/4
1	1	47016E-696	1-5/16-12	6.35	1.72	3.98	.80	1-3/16	1-1/2

### British Standard (BSPP) 60° Cone Female Pipe Swivel 45° Elbow



HOSE I.D.	BSPP PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA./HEX E	HEX F
3/4	3/4	47012E-52P	G-3/4-14*	5.80	1.66	3.75	.61	1-1/16	1-1/4
1	1	47016E-56P	G-1-11*	6.54	1.92	4.19	.75	1-3/8	1-1/2

\*G As Part of Thread Size is ISO Designation for Parallel Thread.



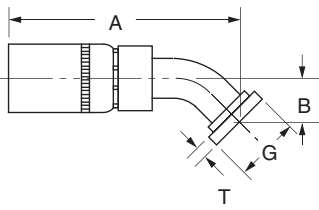
# Coll-O-Crimp

## 470 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

### Split Flange 45° Tube Elbow

(SAE Code 61)

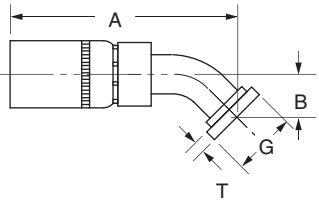


HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1/2	1/2	47008E-G41	8x252	3.94	.78	2.50	.38	1.19	.265
3/4	3/4	47012E-G42	12x252	5.50	1.38	3.46	.58	1.50	.265
1	1	47016E-G46	16x252	5.88	1.25	3.12	.75	1.75	.315
1-1/4	1-1/4	47020E-G50	20x252	7.16	1.50	4.02	1.00	2.00	.315
1-1/2	1-1/2	47024E-G54	24x252	7.81	1.41	4.38	1.25	2.38	.315
2	2	47032E-G62	32x252	9.17	2.00	5.40	1.81	2.81	.375

(For Split Flange Kits, see pages 330-333.)

### Split Flange 45° Tube Elbow

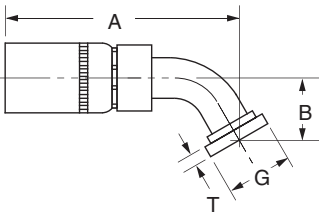
(SAE Code 62)



HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
3/4	3/4	47012E-D42	12x252	5.50	1.38	3.45	.58	1.62	.345
3/4	1	47012E-D46	16x252	5.50	1.38	3.45	.58	1.88	.375
1	1	47016E-D46	16x252	5.88	1.25	3.52	.79	1.88	.375
1	1-1/4	47016E-D50	20x252	5.88	1.25	3.52	.79	2.12	.405
1-1/4	1-1/4	47020E-D50	20x252	7.16	1.50	4.02	1.00	2.12	.405
1-1/4	1-1/2	47020E-D54	24x252	7.16	1.50	4.02	1.00	2.50	.495
1-1/2	1-1/2	47024E-D54	24x252	8.00	1.60	4.59	1.19	2.50	.495

### Split Flange 60° Tube Elbow

(SAE Code 62)

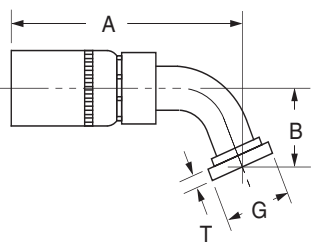


HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1-1/4	1-1/2	47020E-N55	24x252	7.36	2.28	4.21	1.06	2.50	.495

(For Split Flange Kits, see pages 330-333.)

### Split Flange 67 1/2° Tube Elbow

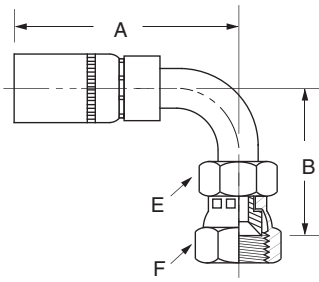
(SAE Code 62)



HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1	1	47016E-N63	16x252	6.02	2.24	3.63	.75	1.88	.375

(For Split Flange Kits, see pages 330-333.)

### JIC 37° Female Swivel 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/2	1/2	47008E-668	3/4-16	3.53	2.12	2.11	.39	7/8	7/8
3/4	3/4	47012E-672	1-1/16-12	5.00	2.88	2.95	.61	1-1/8	1-1/4
1	1	47016E-676	1-5/16-12	5.52	3.46	3.16	.80	1-3/16	1-1/2

# Coll-O-Crimp

## 470 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

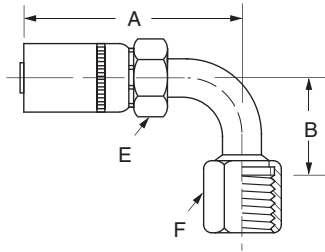
ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

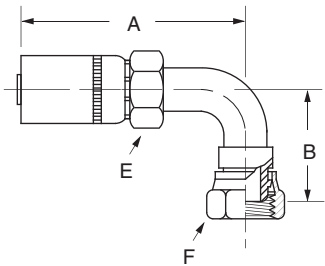
TECHNICAL DATA

### Female FOR-SEAL Swivel 90° Tube Elbow Short Drop



HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1-1/4	1-1/4	47020E-A40	1-11/16-12	6.37	2.50	3.22	1.00	1-3/4	1-7/8

### British Standard (BSPP) 60° Cone Female Pipe Swivel 90° Elbow

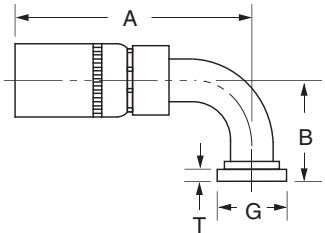


HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/4	3/4	47012E-82P	G-3/4-14*	4.98	2.49	2.94	.61	1-1/8	1-1/4
1	1	47016E-86P	G-1-11*	5.52	3.43	3.13	.75	1-3/8	1-1/2

\*G As part of thread size is ISO designation for Parallel thread.

### Split Flange 90° Tube Elbow

(SAE Code 61)

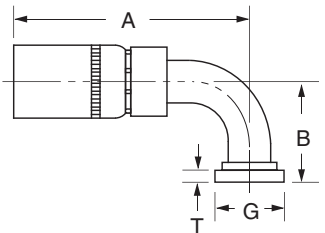


HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1/2	1/2	47008E-G71	8x252	3.59	1.62	2.17	.50	1.19	.265
3/4	3/4	47012E-G72	12x252	5.00	2.66	2.95	.61	1.50	.265
3/4	1	47012E-G76	16x252	5.00	2.66	2.95	.58	1.75	.315
1	1	47016E-G76	16x252	5.52	2.80	3.16	.75	1.75	.315
1-1/4	1-1/4	47020E-G80	20x252	6.43	2.62	3.29	1.12	2.00	.315
1-1/2	1-1/2	47024E-G84	24x252	7.66	3.13	4.24	1.44	2.38	.315
2	2	47032E-G92	32x252	8.85	4.50	5.08	1.81	2.81	.375

(For Split Flange Kits, see pages 330-333.)

### Split Flange 90° Tube Elbow

(SAE Code 62)



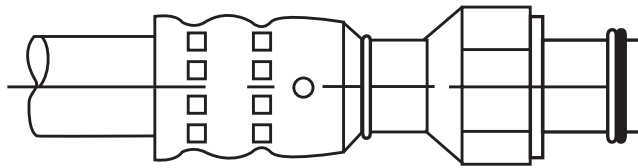
HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
3/4	3/4	47012E-D72	12x252	5.01	2.62	2.94	.64	1.62	.345
3/4	1	47012E-D76	16x252	5.01	2.81	2.94	.60	1.88	.375
1	1	47016E-D76	16x252	5.52	2.79	3.13	.86	1.88	.375
1	1-1/4	47016E-D80	20x252	5.52	2.94	3.13	.86	2.12	.405
1	1-1/2	47016E-D84	24x252	5.75	3.42	3.39	.75	2.50	.495
1-1/4	1-1/4	47020E-D80	20x252	6.61	3.02	3.50	1.03	2.12	.405
1-1/4	1-1/4	47020E-D80L47	20x252	6.61	4.70	3.50	1.03	2.12	.405
1-1/4	1-1/4	47020E-D80L60	20x252	6.61	6.00	3.50	1.03	2.12	.405
1-1/4	1-1/2	47020E-D84	24x252	6.61	3.68	3.50	1.03	2.50	.495
1-1/2	1-1/4	47024E-D80	20x252	6.77	3.02	3.38	1.03	2.12	.405
1-1/2	1-1/2	47024E-D84	24x252	7.57	3.68	4.19	1.28	2.50	.495

(For Split Flange Kits, see pages 330-333.)

# Coll-O-Crimp


## 757 'E' Series

### Hose End 757 'E' Series



#### Ordering Information:

Order individually by catalog number.

 Refer to important safety information on page 4.

#### Typical Applications:

Used with R134a and R12 applications. Ideal for heavy duty truck use as well as industrial and automotive applications.

#### Compatible Hose: H757

**Pressure:** Determined by hose burst pressure. See page 16 for working pressure ratings for hose end configurations.

**Material:** Carbon steel

**Plating:** Black; zinc with rust preventive.

**Advantages:** Wide selection of hose ends which include the flareless ends, allowing use of existing tubing. Steel hose ends handle heavy duty demands.

**Assemble With:** T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T-475-1, T-480, ET4000.

**Label Set:** FS-3200

#### Note:

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

### 757 'E' Series Air Conditioning Procedure

The Coll-O-Crimp system can be used to make original equipment assemblies using factory replacement ends as listed on page 360. If the required hose end is not found, our Flareless hose end can be used. By following the instructions on this page, a new hose assembly can be made by combining Weatherhead's hose end with the original equipment end configuration.

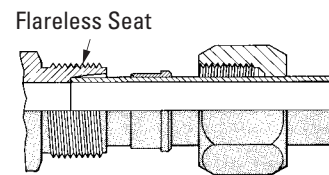
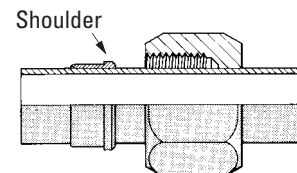
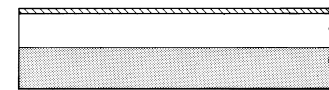
- Typical original equipment assembly.
- Typical assembly of a Flareless hose end used with an old original equipment end configuration.
- Weatherhead replacement assemblies using original equipment tubing with Weatherhead 757 'E' Series hose ends.

#### Preparation - Flareless Tube Assembly

1. Remove the bad tube assembly or if room permits, perform the cutting procedure in place. Cut the tube squarely and as close to the hose connection as possible. Allow an adequate straight area for the flareless nut and sleeve to move freely for installation purposes. Deburr the inside and outside diameters of the tubing.

#### Make Presetting Operation

1. Slide nut and then sleeve onto tube. Shoulder of sleeve must be toward nut.
2. Lubricate threads, seat in hose end and flareless sleeve with a good grade of lubricant. Insert tube into seat of hose end, making sure that tube is bottomed, **TIGHTEN HAND TIGHT** and then tighten an **ADDITIONAL 1 to 1-1/6 turns** with a wrench.



#### Note:

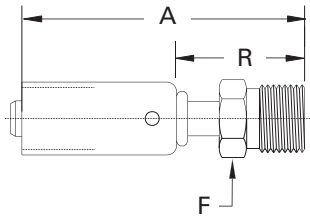
Compensate for tubing being removed by adding to the over all length of the replacement hose assembly.

# Coll-O-Crimp

## 757 'E' Series

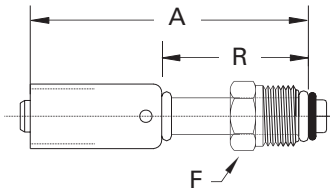
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly. All dimensions shown in inches.

### Bumped Tube O-Ring Male Rigid



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	RUN R	HOSE CUT-OFF FACTOR†	HEX F
5/16	3/8	75706E-WV06	5/8-18	2.94	1.54	1.63	5/8
13/32	1/2	75708E-WV08	3/4-16	3.26	1.86	2.00	3/4
1/2	5/8	75710E-WV10	7/8-14	3.35	1.95	2.13	7/8
5/8	5/8	75712E-WV10	7/8-14	3.56	2.06	2.25	7/8
5/8	3/4	75712E-WV12	1-1/16-14	3.56	2.06	2.25	1-1/16

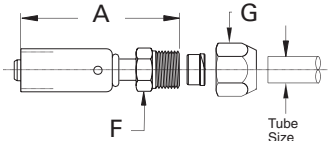
### Bumped Tube O-Ring Male Swivel



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	RUN R	HOSE CUT-OFF FACTOR†	HEX F	O-RING
5/16	3/8	75706E-Z06	5/8-18	2.94	1.54	1.63	5/8	ZW74706
5/16	1/2	75706E-Z08	3/4-18	3.15	1.75	1.88	3/4	ZW74708
13/32	1/2	75708E-Z08	3/4-18	3.26	1.86	2.00	3/4	ZW74708
1/2	5/8	75710E-Z10	7/8-18	3.35	1.95	2.13	7/8	ZW74710
1/2	3/4	75710E-Z12	1-1/16-16	3.46	2.06	2.25	1-1/16	ZW74712
5/8	5/8	75712E-Z10	7/8-18	3.56	2.06	2.25	7/8	ZW74710
5/8	3/4	75712E-Z12	1-1/16-16	3.56	2.06	2.25	1-1/16	ZW74712

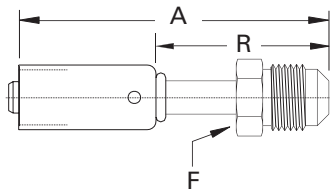
(Includes O-Ring)

### Male Rigid Compression Fitting (With Nut and Sleeve)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	HOSE CUT-OFF FACTOR†	HEX F	HEX G
5/16	3/8	75706E-756	5/8-18	2.59	1.38	5/8	3/4
5/16	1/2	75706E-758	3/4-16	2.71	1.50	3/4	7/8
13/32	3/8	75708E-756	5/8-18	2.65	1.38	5/8	3/4
13/32	1/2	75708E-758	3/4-16	2.78	1.50	3/4	7/8
13/32	5/8	75708E-760	7/8-14	2.90	1.63	7/8	1-1/16
1/2	1/2	75710E-758	3/4-16	2.84	1.63	3/4	7/8
1/2	5/8	75710E-760	7/8-14	2.90	1.63	7/8	1-1/16
5/8	5/8	75712E-760	7/8-14	3.13	1.75	7/8	1-1/16
5/8	3/4	75712E-762	1-1/16-14	3.25	1.88	1-1/16	1-1/4

### SAE 45° Male Rigid



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	RUN R	HOSE CUT-OFF FACTOR†	HEX F
5/16	3/8	75706E-306	5/8-18	3.28	1.88	2.00	5/8
13/32	1/2	75708E-308	3/4-16	3.40	2.00	2.13	3/4
1/2	5/8	75710E-310	7/8-14	3.71	2.31	2.50	7/8
5/8	3/4	75712E-312	1-1/16-14	4.00	2.50	2.75	1-1/16

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

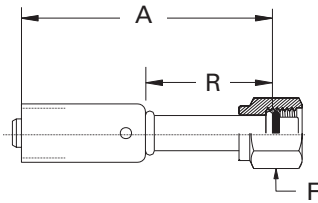
ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

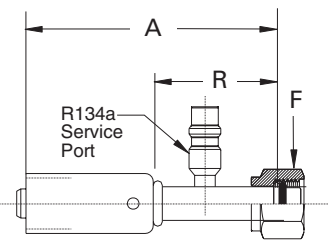
**Coll-O-Crimp****757 'E' Series**

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly. All dimensions shown in inches.

**Bumped Tube O-Ring  
Female Swivel**

HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	RUN R	HOSE CUT-OFF FACTOR†	HEX F	O-RING
5/16	3/8	75706E-Z47	5/8-18	2.78	1.38	1.50	3/4	ZW74706
5/16	1/2	75706E-Z49	3/4-16	2.90	1.50	1.63	7/8	ZW74708
13/32	1/2	75708E-Z49	3/4-16	3.06	1.66	1.75	7/8	ZW74708
13/32	5/8	75708E-Z51	7/8-14	3.09	1.69	1.88	1-1/16	ZW74710
1/2	5/8	75710E-Z51	7/8-14	3.09	1.69	1.88	1-1/16	ZW74710
1/2	3/4	75710E-Z53	1-1/16-14	3.21	1.81	2.00	1-1/4	ZW74712
5/8	5/8	75712E-Z51	7/8-14	3.31	1.81	2.00	1-1/16	ZW74710
5/8	3/4	75712E-Z53	1-1/16-14	3.31	1.81	2.00	1-1/4	ZW74712

(Includes O-Ring)

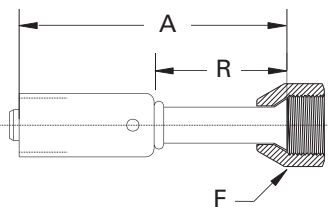
**Bumped Tube O-Ring  
Female Swivel W/R134a  
Service Port**

HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	RUN R	HOSE CUT-OFF FACTOR†	HEX F	O-RING
5/16	3/8	75706E-Z57*	5/8-18	4.28	1.88	3.00	3/4	ZW74706
13/32	1/2	75708E-Z59*	3/4-16	4.28	1.88	3.00	7/8	ZW74708
1/2	5/8	75710E-Z61**	7/8-14	4.52	2.12	3.25	1-1/16	ZW74710
5/8	5/8	75712E-Z61**	7/8-14	4.62	3.05	3.25	1-1/16	ZW74710

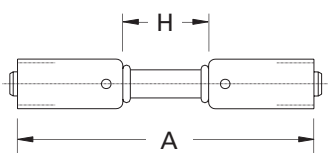
\*High Side Port

\*\*Low Side Port

(Includes O-Ring)

**SAE 45° Flare Female  
Swivel**

HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	RUN R	HOSE CUT-OFF FACTOR†	HEX F
5/16	3/8	75706E-406	5/8-18	2.78	1.38	1.50	3/4
5/16	1/2	75706E-408	3/4-16	2.90	1.50	1.75	7/8
13/32	1/2	75708E-408	3/4-16	2.84	1.44	1.56	7/8
1/2	5/8	75710E-410	7/8-14	3.09	1.69	1.81	1-1/16
5/8	5/8	75712E-410	7/8-14	3.25	1.75	2.00	1-1/16
5/8	3/4	75712E-412	1-1/16-14	3.25	1.75	2.00	1-1/4

**Hose Splicer**

HOSE I.D.	HOSE I.D.	CATALOG NUMBER	LENGTH A	RUN R	HOSE CUT-OFF FACTOR†
5/16	5/16	75706E-Y36	4.30	1.50	1.50
5/16	13/32	75706E-Y38	4.30	1.50	1.50
13/32	13/32	75708E-Y38	4.30	1.50	1.50
13/32	1/2	75708E-Y40	4.43	1.63	1.63
1/2	1/2	75710E-Y40	4.43	1.63	1.63
1/2	5/8	75710E-Y41	4.65	1.75	1.75
5/8	5/8	75712E-Y41	4.75	1.75	1.75

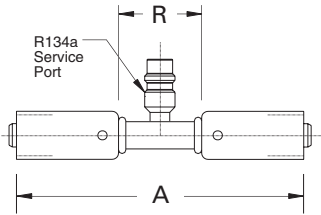
For crimping information see pages 362-367.

# Coll-O-Crimp

## 757 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly. All dimensions shown in inches.

### Hose Splicer W/R134a Service Port



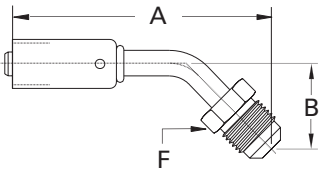
HOSE I.D.	HOSE I.D.	CATALOG NUMBER	LENGTH A	RUN A	HOSE CUT-OFF FACTOR†
5/16	5/16	75706E-Y47*	5.42	2.62	1.50
13/32	13/32	75708E-Y48*	5.42	2.62	1.50
1/2	1/2	75710E-Y49**	5.42	2.62	1.63
5/8	5/8	75712E-Y50**	5.62	2.62	1.75

For crimping information see page 362-367.

\*High Side Port

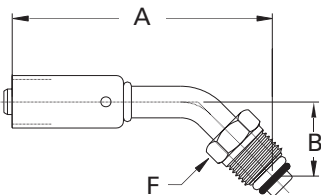
\*\*Low Side Port

### SAE 45° Flare Male Rigid 45° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	DROP B	HOSE CUT-OFF FACTOR†	HEX F
13/32	1/2	75708E-388	3/4-16	3.65	1.25	2.50	3/4
1/2	5/8	75710E-390	7/8-14	4.21	1.56	3.00	7/8

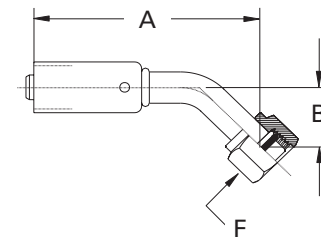
### Bumped Tube O-Ring Male Swivel 45° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	DROP B	HOSE CUT-OFF FACTOR†	HEX F	O-RING
5/16	3/8	75706E-Z26	5/8-18	3.09	.88	1.88	5/8	ZW74706
13/32	1/2	75708E-Z28	3/4-18	3.59	1.03	2.38	3/4	ZW74708
1/2	5/8	75710E-Z30	7/8-18	3.71	1.06	2.50	7/8	ZW74710
5/8	5/8	75712E-Z30	7/8-18	4.19	1.19	2.88	7/8	ZW74710
5/8	3/4	75712E-Z32	1-1/16-16	4.19	1.19	2.88	1-1/16	ZW74712

(Includes O-Ring)

### Bumped Tube O-Ring Female Swivel 45° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	DROP B	HOSE CUT-OFF FACTOR†	HEX F	O-RING
5/16	3/8	75706E-VV47	5/8-18	3.51	.68	2.25	3/4	ZW74706
13/32	1/2	75708E-VV49	3/4-16	3.63	1.05	2.25	7/8	ZW74708
1/2	5/8	75710E-VV51	7/8-14	3.65	1.19	2.50	1-1/16	ZW74710
5/8	5/8	75712E-VV51	7/8-14	4.00	1.29	2.75	1-1/16	ZW74710
5/8	3/4	75712E-VV53	1-1/16-14	3.84	.94	2.50	1-1/4	ZW74712

(Includes O-Ring)

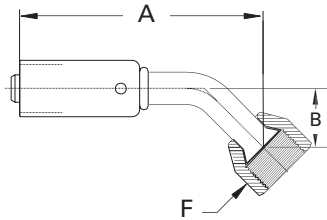


# Coll-O-Crimp

## 757 'E' Series

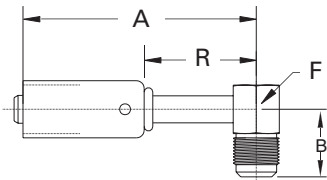
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly. All dimensions shown in inches.

### SAE 45° Flare Female Swivel 45° Tube Elbow



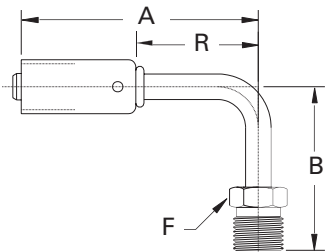
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	DROP B	HOSE CUT-OFF FACTOR†	HEX F
5/16	3/8	75706E-486	5/8-18	3.42	.55	2.00	3/4
13/32	1/2	75708E-488	3/4-16	3.72	.58	2.50	7/8
1/2	5/8	75710E-490	7/8-14	4.34	.72	3.00	1-1/16
5/8	5/8	75712E-490	7/8-14	5.00	1.00	3.50	1-1/16
5/8	3/4	75712E-492	1-1/16-14	4.44	.72	3.00	1-1/4

### SAE 45° Male Rigid 90° Elbow



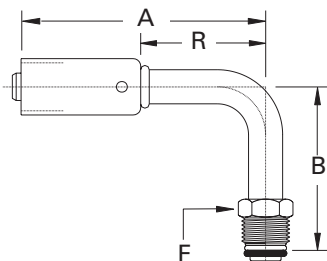
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	RUN R	DROP B	HOSE CUT-OFF FACTOR†	HEX/SQUARE F
5/16	3/8	75706E-X06	5/8-18	4.07	2.67	.91	3.00	5/8
13/32	1/2	75708E-X08	3/4-16	4.14	2.74	1.47	3.00	7/8
1/2	5/8	75710E-X10	7/8-14	4.25	2.85	1.47	3.00	7/8
5/8	3/4	75712E-X12	1-1/16-14	4.45	2.95	1.56	3.00	1-1/16

### Bumped Tube O-Ring Male Rigid 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	RUN R	DROP B	HOSE CUT-OFF FACTOR†	HEX F
5/16	3/8	75706E-W66	5/8-18	4.00	2.60	1.53	2.75	5/8
13/32	1/2	75708E-W68	3/4-16	4.07	2.67	2.12	2.75	3/4
1/2	5/8	75710E-W70	7/8-14	4.15	2.75	2.21	2.88	7/8

### Bumped Tube O-Ring Male Swivel 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	RUN R	DROP B	HOSE CUT-OFF FACTOR†	HEX F	O-RING
5/16	3/8	75706E-Z66	5/8-18	4.00	2.60	1.53	2.75	5/8	ZW74706
5/16	1/2	75706E-Z68	3/4-18	4.07	2.67	1.53	2.75	3/4	ZW74708
13/32	3/8	75708E-Z66	5/8-18	4.00	2.60	1.77	2.75	5/8	ZW74706
13/32	1/2	75708E-Z68	3/4-18	4.07	2.67	2.12	2.75	3/4	ZW74708
1/2	5/8	75710E-Z70	7/8-18	4.15	2.75	2.21	2.88	7/8	ZW74710
1/2	3/4	75710E-Z72	1-1/16-16	4.25	2.85	2.35	3.00	1-1/16	ZW74712
5/8	5/8	75712E-Z70	7/8-18	4.24	2.74	2.25	2.88	7/8	ZW74710
5/8	3/4	75712E-Z72	1-1/16-16	4.35	2.85	2.87	3.00	1-1/16	ZW74712

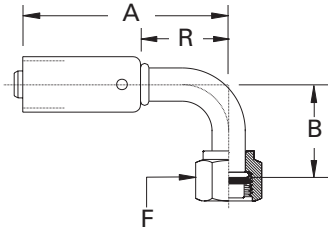
(Includes O-Ring)

# Coll-O-Crimp

## 757 'E' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly. All dimensions shown in inches.

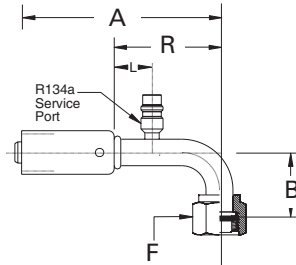
### Bumped Tube O-Ring Female Swivel 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	RUN R	DROP B	HOSE CUT-OFF FACTOR†	HEX F	O-RING
5/16	3/8	75706E-Z87	5/8-18	4.07	2.67	1.12	2.75	3/4	ZW74706
5/16	1/2	75706E-Z89	3/4-16	4.14	2.74	1.31	2.88	7/8	ZW74708
13/32	3/8	75708E-Z87	5/8-18	4.07	2.67	1.31	2.75	3/4	ZW74706
13/32	1/2	75708E-Z89	3/4-16	4.14	2.74	1.50	2.88	7/8	ZW74708
1/2	5/8	75710E-Z91	7/8-14	4.25	2.85	1.75	3.00	1-1/16	ZW74710
5/8	5/8	75712E-Z91	7/8-14	4.35	2.85	1.75	3.00	1-1/16	ZW74710
5/8	3/4	75712E-Z93	1-1/16-14	4.45	2.95	1.75	3.13	1-1/4	ZW74712

(Includes O-Ring)

### Bumped Tube O-Ring Female Swivel 90° Tube Elbow W/R134a Service Port



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	A	THREAD SIZE	RUN R	DROP B	HOSE CUT-OFF FACTOR†	HEX F	LENGTH L	O-RING
5/16	3/8	75706E-Z97*	2.52	5/8-18	2.12	1.12	2.75	3/4	1.50	ZW74706
13/32	1/2	75708E-Z99*	4.15	3/4-16	2.75	1.68	2.88	7/8	1.50	ZW74708
1/2	5/8	75710E-Z01**	3.78	7/8-14	2.38	1.50	3.00	1-1/16	1.50	ZW74710
5/8	5/8	75712E-Z01**	4.61	7/8-14	3.11	1.95	3.00	1-1/16	1.50	ZW74710

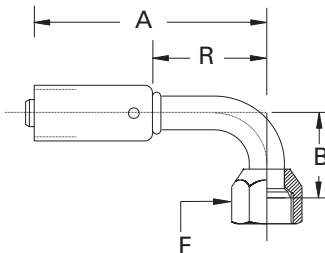
(Includes O-Ring)

For crimping information see pages 362-367.

\*High Side Port

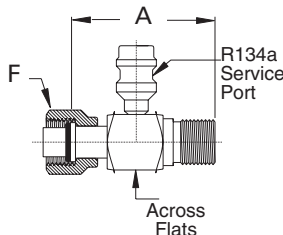
\*\*Low Side Port

### SAE 45° Flare Female Swivel 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	A	THREAD SIZE	RUN R	DROP B	HOSE CUT-OFF FACTOR†	HEX F
5/16	3/8	75706E-466	4.07	5/8-18	2.67	1.12	2.75	3/4
13/32	1/2	75708E-468	4.14	3/4-16	2.74	1.31	2.88	7/8
1/2	5/8	75710E-470	4.25	7/8-14	2.85	1.56	3.00	1-1/16
5/8	5/8	75712E-470	4.35	7/8-14	2.85	1.50	3.00	1-1/16
5/8	3/4	75712E-472	4.45	1-1/16-14	2.95	1.75	3.13	1-1/4

### Bumped Tube O-Ring Service Port Adapter W/R134a Service Port



TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	ACROSS FLATS	HEX F	O-RING
3/8	75701*	5/8-18	2.02	5/81	3/4	ZW74706
1/2	75702*	3/4-16	2.22	7/8	7/8	ZW74708
5/8	75704**	7/8-14	2.63	7/8	1-1/16	ZW74710
3/4	75706**	1-1/16-14	2.89	1-1/16	1-1/4	ZW74712

(Includes O-Ring)

\*High Side Port

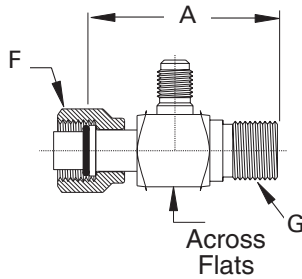
\*\*Low Side Port

# Coll-O-Crimp

## 757 'E' Series

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of the assembly. All dimensions shown in inches.

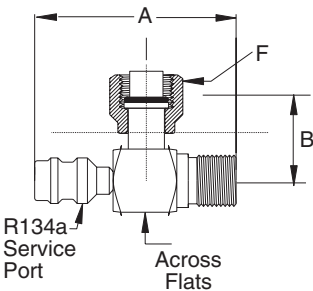
### Bumped Tube O-Ring Service Port Adapter W/R12 Service Port



TUBE SIZE	CATALOG NUMBER	THREAD SIZE G	LENGTH A	ACROSS FLATS	HEX F	SERVICE PORT THREAD	O-RING
3/8	R12-Z56*	5/8-18	2.02	5/81	3/4	3/8-24	ZW74706
1/2	R12-Z58*	3/4-16	2.22	7/8	7/8	3/8-24	ZW74708
5/8	R12-Z60**	7/8-14	2.63	7/8	1-1/16	3/8-24	ZW74710
3/4	R12-Z62**	1-1/16-14	2.89	1-1/16	1-1/4	7/16-20	ZW74712

(Includes O-Ring)  
\*High Side Port  
\*\*Low Side Port

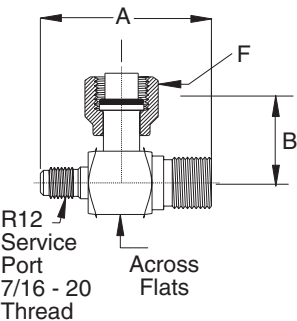
### 90° Bumped Tube O-Ring R134a Service Port Adapter



TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	DROP B	ACROSS FLATS	HEX F	O-RING
3/8	75729*	5/8-18	2.40	1.05	5/8	3/4	ZW74706
1/2	75730*	3/4-16	2.60	1.15	7/8	7/8	ZW74708
5/8	75731**	7/8-14	2.74	1.30	7/8	1-1/16	ZW74710
3/4	75732**	1-1/16-14	3.10	1.39	1-1/16	1-1/4	ZW74712

(Includes O-Ring)  
\*High Side Port  
\*\*Low Side Port

### 90° Bumped Tube O-Ring R12 Service Port Adapter



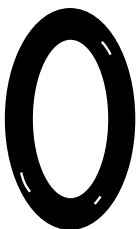
TUBE SIZE	CATALOG NUMBER	THREAD SIZE	LENGTH A	DROP B	ACROSS FLATS	HEX F	O-RING
3/8	R12-Z96*	5/8-18	2.07	1.05	5/8	3/4	ZW74706
1/2	R12-Z97*	3/4-16	2.27	1.15	7/8	7/8	ZW74708
5/8	R12-Z98**	7/8-14	2.41	1.30	7/8	1-1/16	ZW74710
3/4	R12-Z99**	1-1/16-16	2.77	1.39	1-1/16	1-1/4	ZW74712

(Includes O-Ring)

**Note:**

\*3/8-24 Thread (High Side Port)  
\*\*7/16-20 Thread (Low Side Port)

### Replacement O-Rings



TUBE O.D.	CATALOG NUMBER
3/8	ZW74706
1/2	ZW74708
5/8	ZW74710
3/4	ZW74712

**Material:** Hydrogenated Nitrile (HNBR), 70 Durometer

**Temperature Range:** -40°F to +250°F (-40°C to +121°C)

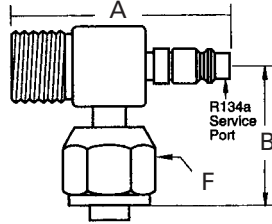
**Color:** Green

# Coll-O-Crimp

## 757 'E' Series

† To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of the assembly. All dimensions shown in inches.

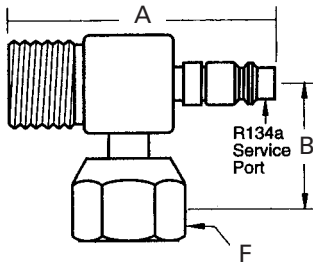
### Tube-O to Male Bumped Tube O-Ring 90° Elbow with R134a Service



TUBE SIZE	CATALOG NUMBER	LENGTH A	DROP B	TUBE-O THREAD F
1/2	75750*	2.64	1.15	3/4-16
5/8	75751**	2.78	1.29	7/8-14

\* High-Side  
\*\* Low-Side

### Rotalok to Male Bumped Tube O-Ring 90° Elbow with R134a Service

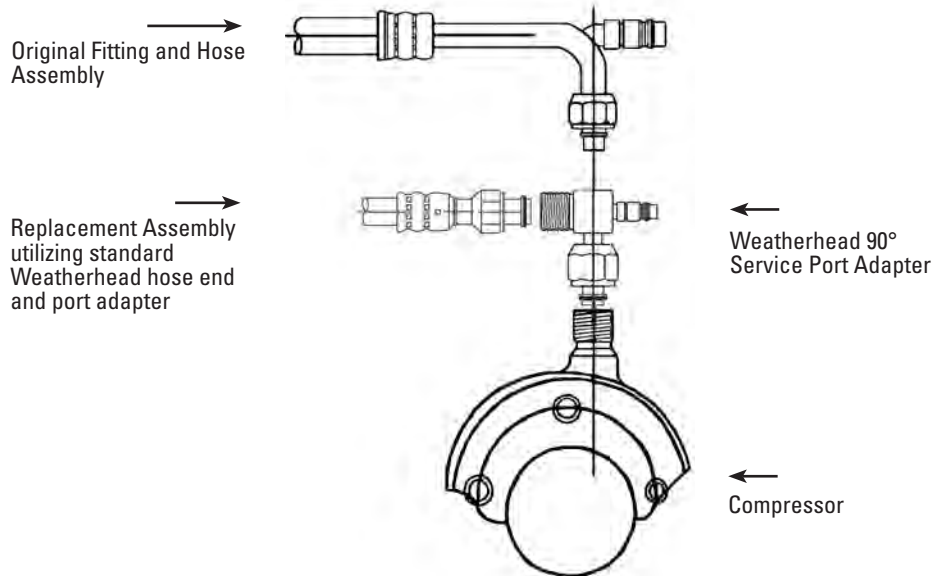


TUBE SIZE	CATALOG NUMBER	LENGTH A	DROP B	ROTALOK THREAD F
1/2	75760*	2.64	1.15	1-14
5/8	75761**	2.78	1.29	1-14

\* High-Side  
\*\* Low-Side

### Service Instructions for Replacement of Damaged O.E. Hose Assemblies

Weatherhead service port adapters offer an alternative to the high cost of replacement and time out of service which can occur when an air conditioning assembly is damaged. By using the Weatherhead adapter, service personnel can remove the damaged end and replace it with a standard Weatherhead 757 'E' series hose end used in conjunction with a Weatherhead service port adapter. This is a welcome solution to get your customer back on the road without special orders and long delays.

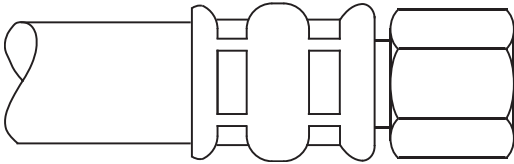


APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

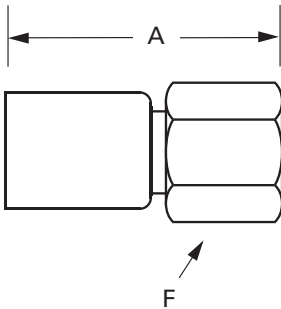
# Coll-O-Crimp

## 057 'P' Series

### Hose End 057 'P' Series



### SAE 45° Female Swivel



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/2	1/2	05708P-408	7/8-14	1.96	.99	.34	7/8
5/8	5/8	05710P-410	3/7-16	1.08	1.10	.44	1

### Ordering Information:

Order individually by catalog number.

Refer to important safety information on page 4.

**Typical Application:** High pressure truck hose for use in transmission oil cooler lines, fuel lines and diesel fuel lines.

### Compatible Hose:

**Pressure:** Determined by hose burst pressure. See page 16 for working pressure ratings for hose end configurations.

**Material:** CA 360 Brass

**Advantages:** For use with hot oil and high temperature petroleum oils.

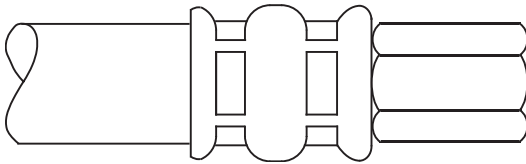
**Assemble With:** T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T-480, ET4000

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

# Coll-O-Crimp

## 229 'P' Series

### Hose End 229 'P' Series



**Note:**

**Ordering Information:**

Order individually by catalog number.

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

Refer to important safety information on page 4.

**Typical Application:**

Medium pressure air, fuel, grease, oil, truck and power steering lines.

**Compatible Hose:** H059; H229; H239

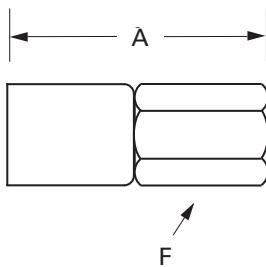
**Pressure:** Determined by maximum working pressure for hose size. See page 16 for working pressure ratings for hose end configurations.

**Material:** CA360 Brass

**Advantages:** A permanent hose end saves time and is easy to assemble. Brass material offers excellent resistance against corrosion.

**Assemble With:** T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T-480, ET4000

### SAE 45° Flare Female Swivel



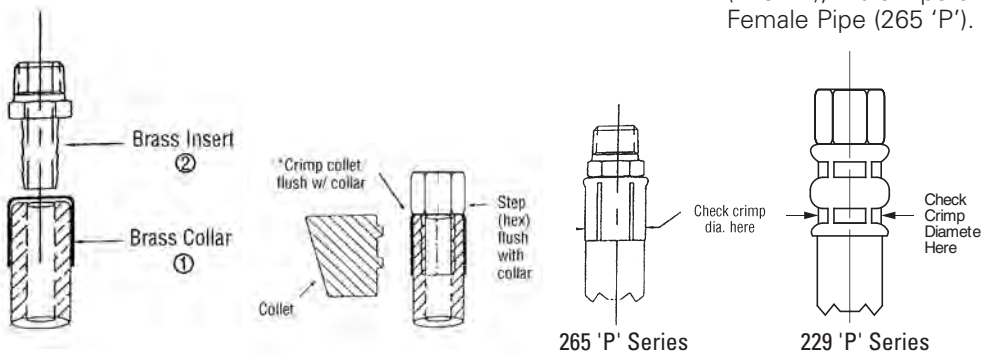
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/16	1/4	22904P-404	7/16-20	1.69	.75	.13	9/16
5/16	3/8	22906P-406	5/8-18	1.80	.81	.25	3/4
13/32	1/2	22908P-408	3/4-16	1.96	1.00	.34	7/8
1/2	5/8	22910P-410	7/8-14	2.08	1.12	.44	1

**Note:**

Collar is not attached to insert.

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

### Componentry for 229 'P' & 265 'P' Series Hose Ends



**1. Brass Collar**

**2. Brass Insert.**

Female SAE 45° Swivel (229 'P'), Male Pipe or Female Pipe (265 'P').

### Assembly Instructions for 229 'P' & 265 'P' Series Hose Ends

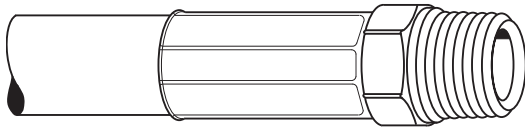
1. Push collar onto hose until bottomed.
2. Push insert into hose until step on insert (or hex) is flush with collar.
3. Check for bottoming by checking collar movement along insert. Hose is bottomed when collar cannot slide along insert.
4. Position top of collar so that it is flush with the top of the collet. Follow recommended Coll-O-Crimp operating procedures found in the back of this catalog.



# Coll-O-Crimp

## 265 'P' Series

### Hose End 265 P Series



**Note:**

For Assembly Instructions see page 135.

**Ordering Information:**

Order individually by catalog number. To order replacement collar only, use base number followed by "COO" suffix.

(Example: 26504P-COO)

 Refer to important safety information on page 4.

**Typical Application:**

General purpose low- pressure air and water lines.

**Compatible Hose:**

H265; H275; H285

**Pressure:** Determined by maximum working pressure for hose size.

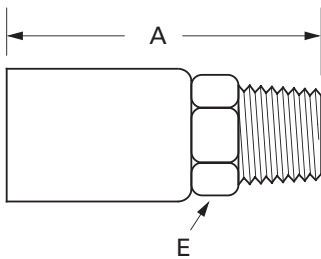
**Material:** CA360 Brass

**Advantages:** One piece construction, easy to assemble, corrosion resistant.

**Assemble With:** T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T-480, ET4000

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

### Male Pipe Rigid

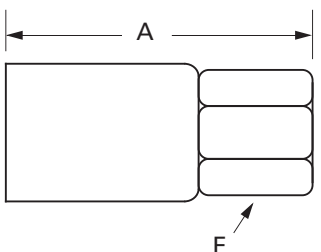


HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	1/8	26504P-102	1/8-27	1.56	.56	.18	7/16
1/4	1/4	26504P-104	1/4-18	1.63	.63	.18	9/16
1/4	3/8	26504P-106	3/8-18	1.75	.75	.18	11/16
3/8	1/8	26506P-102	1/8-27	1.56	.56	.25	7/16
3/8	1/4	26506P-104	1/4-18	1.75	.75	.31	9/16
3/8	3/8	26506P-106	3/8-18	1.74	.75	.28	11/16
3/8	1/2	26506P-108	1/2-14	1.94	1.00	.28	7/8
1/2	1/4	26508P-104	1/4-18	1.73	.75	.37	9/16
1/2	3/8	26508P-106	3/8-18	1.71	.75	.37	11/16
1/2	1/2	26508P-108	1/2-14	1.94	1.00	.37	7/8
1/2	3/4	26508P-112	3/4-18	1.94	1.00	.37	1-1/8
3/4	1/2	26512P-108	1/2-14	1.94	1.00	.37	1-1/8
3/4	3/4	26512P-112	3/4-14	1.92	1.00	.56	1-1/8

**Note:**

Collar is not attached to insert.

### Female Pipe Rigid



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	1/8	26504P-202	1/8-27	1.49	.50	.18	9/16
1/4	1/4	26504P-204	1/4-18	1.60	.63	.18	11/16
3/8	1/8	26506P-202	1/8-27	1.49	.50	.28	9/16
3/8	1/4	26506P-204	1/4-18	1.60	.63	.28	11/16
3/8	3/8	26506P-206	3/8-18	1.66	.69	.28	13/16
1/2	1/4	26508P-204	1/4-18	1.57	.63	.37	11/16
1/2	3/8	26508P-206	3/8-18	1.63	.69	.37	13/16
1/2	1/2	26508P-208	1/2-14	1.85	.88	.37	1

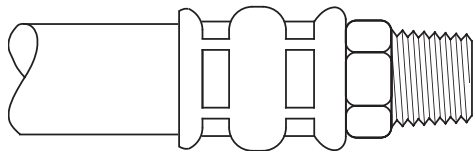
**Note:**

Collar is not attached to insert.

# Coll-O-Crimp

## 338 'P' Series

### Hose End 338 P Series



#### Note:

See page 402 for important hose labeling information.

#### Ordering Information:

Order individually by catalog number.

⚠ Refer to important safety information on page 4.

**Typical Application:** Air brake hose lines

**Compatible Hose:** H338

**Pressure:** Determined by hose burst pressure. See page 16 for working pressure ratings for hose end configurations.

**Material:** CA360 Brass

**Advantages:** A permanent hose end saves time and is easy to assemble. Brass material offers excellent resistance against corrosion.

**Assemble With:** T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465, T-480 and ET4000.

(For Field Attachable Ends refer to pages 186-215.)

**Label Set:** FS-2900

#### Componentry

1. Brass Collar
2. Brass Insert. Male pipe or brass swivel insert with brass SAE nut.
3. Brass A.B.S. insert with steel A.B.S. swivel nut.

#### Assembly Instructions

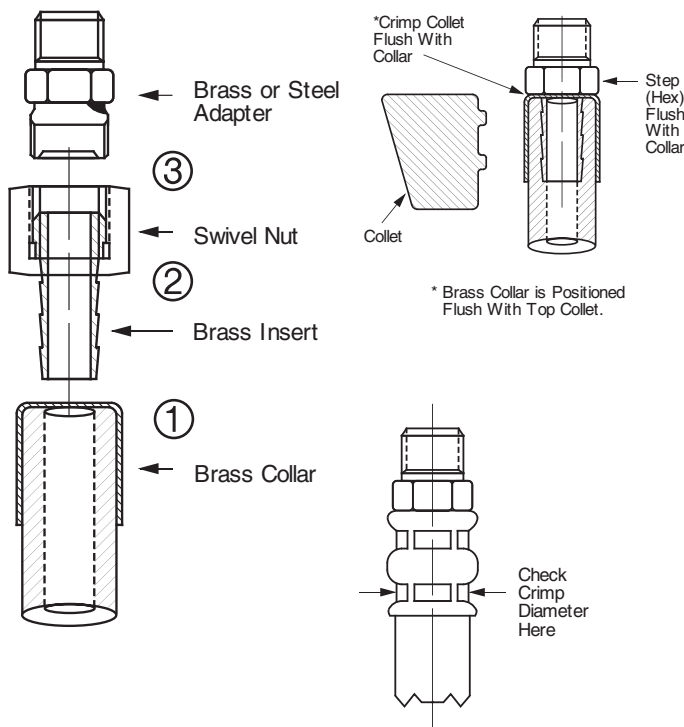
1. Push collar onto hose until bottomed.
2. Push insert into hose until step on insert (or hex) is flush with collar.

#### Note:

Swivel fittings require the use of a mandrel or an assembled adapter to push on the insert for assembly. Adapter can be removed after fitting assembly. Light lubricant may be required to assemble fitting into hose.

3. Check for bottoming by checking collar movement along insert. Hose is bottomed when collar cannot slide along insert.

4. Depending on Coll-O-Crimp system, follow recommended operating procedures.

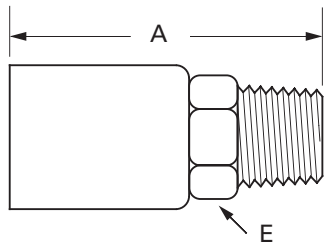


# Coll-O-Crimp

## 338 'P' Series

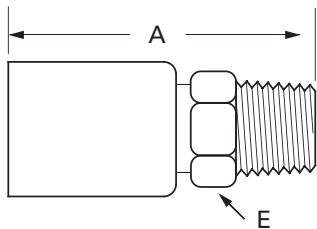
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

### Male Pipe Rigid



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/8	1/4	33806P-104	1/4-18	1.71	.75	.28	9/16
3/8	3/8	33806P-106	3/8-18	1.72	.81	.28	11/16
3/8	1/2	33806P-108	1/2-14	1.95	1.00	.28	7/8
1/2	3/8	33808P-106	3/8-18	1.73	.81	.38	11/16
1/2	1/2	33808P-108	1/2-14	1.94	1.00	.38	7/8

### Male Pipe Swivel

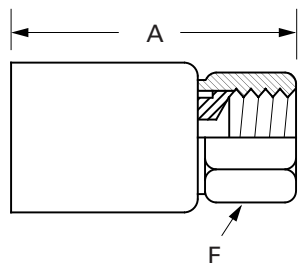


HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/8	3/8	33806P-J06	3/8-18	1.66	.81	.28	11/16

**Note:**

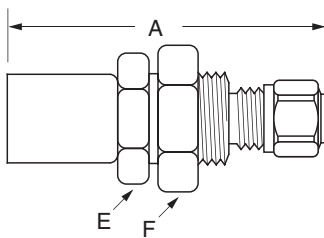
Swivel for installation purposes only.

### SAE 45° Female Swivel



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/8	3/8	33806P-406	5/8-18	1.31	1.00	.28	3/4
1/2	1/2	33808P-408	3/4-16	1.36	1.00	.38	7/8

### Air Brake Slider Line



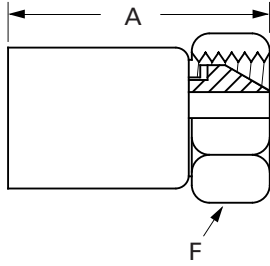
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/8	3/8	33806P-Y66	17/32-24	2.41	1.00	.28	1-1/16	1-1/8
3/8	1/2	33806P-Y68	11/16-20	2.51	1.00	.28	1-1/16	1-1/8
1/2	1/2	33808P-Y68	11/16-20	2.69	1.28	.41	7/8	13/16

# Coll-O-Crimp

## 338 'P' Series

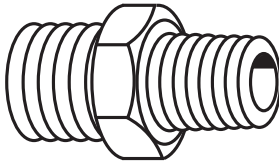
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

### Air Brake Swivel



HOSE I.D.	ABS SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/8	3/8	33806P-Y76	3/4-20	1.38	1.00	.28	7/8
1/2	3/8	33808P-Y76	3/4-20	1.38	1.00	.28	7/8
1/2	1/2	33808P-Y78	7/8-20	1.44	1.00	.38	1

### Adapter



ABS THREAD SIZE	PIPE SIZE	CATALOG NUMBER	OVERALL LENGTH	ABS THREAD SIZE
3/8	1/4	1390x6	1.18	3/4-20
3/8	3/8	1390x6x6	1.18	3/4-20
3/8	1/2	1390x6x8	1.37	3/4-20
1/2	3/8	1390x8	1.18	7/8-20
1/2	1/2	1390x8x8	1.37	7/8-20

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

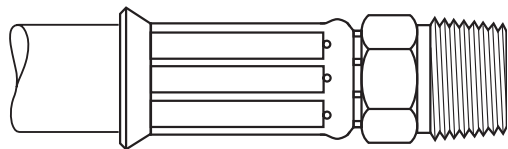
TECHNICAL DATA

# Coll-O-Crimp

## 'S' Series

### Hose End 'S' Series

(Stainless Steel)

**Note:**

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

**Ordering Information:**

Order individually by catalog number.



Refer to important safety information on page 4.

**Typical Application:** Low, medium, and high pressure hydraulic applications calling for corrosion resistance. Marine, logging, mining.

**Compatible Hose:**

H039; H104; H114; H145; H245; H425

**Pressure:** Determined by the maximum working pressure for hose size and hose end configuration whichever is lesser. See page 16 for working pressure ratings for hose end configurations.

**Material:**

316 stainless steel

**Advantages:** Stainless steel protection from the elements.

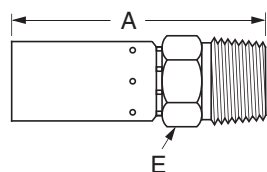
**Assemble With:**

T-400-1, T-410-1, T-420-1, T-440-1, T-460, T-462, T-465-1, T-480, ET4000

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

<sup>a</sup>Swivel nuts are universal – both SAE 45° and 37° connections.

### Male Pipe Rigid

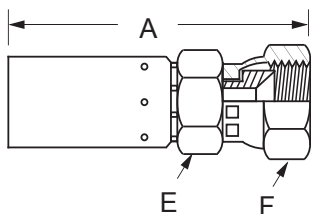


HOSE I.D	PIPE SIZE	CATALOG NUMBER	THREAD SIZE NPTF	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	1/4	04S-104	1/4-18	2.49	1.00	.16	5/8
3/8	3/8	06S-106	3/8-18	2.52	1.00	.25	3/4
1/2	1/2	08S-108	1/2-14	2.75	1.31	.36	7/8
3/4	3/4	12S-112	3/4-14	3.61	1.44	.61	1-1/8
1	1	16S-116	1-11-1/2	4.23	2.00	.81	1-3/8
1-1/4	1-1/4	*20S-120	1-1/4-11-1/2	4.61	2.31	1.02	1-11/16

\*Part number will crimp in Coll-O-Crimp ET4000, T-410-1, T-420-1, T-440-1, and T-480-1 presses only.

### JIC 37° Female Swivel

(Refer to Footnotes)



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04S-604 <sup>a</sup>	7/16-20	2.61	1.13	.16	9/16	9/16
3/8	3/8	06S-606	9/16-18	2.77	1.31	.25	11/16	11/16
1/2	1/2	08S-608 <sup>a</sup>	3/4-16	2.79	1.38	.36	13/16	7/8
1/2	5/8	08S-610 <sup>a</sup>	7/8-14	3.00	1.56	.36	13/16	1
3/4	3/4	12S-612	1-1/16-12	3.86	1.69	.61	1	1-1/4
1	1	16S-616	1-5/16-12	4.46	2.25	.81	1-1/4	1-1/2
1-1/4	1-1/4	*20S-620	1-5/8-12	4.90	2.63	1.02	1-11/16	2

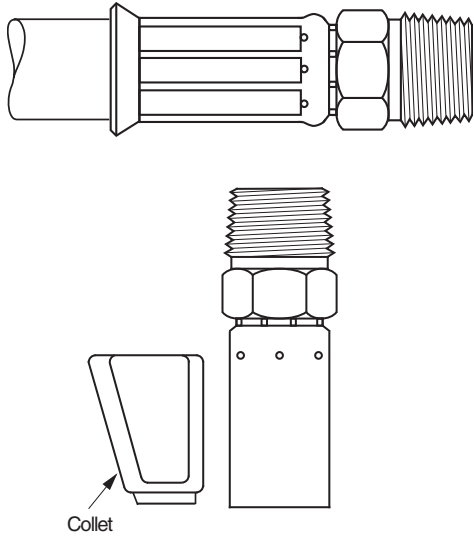
\*Part number will crimp in Coll-O-Crimp ET4000, T-410-1, T-420-1, T-440-1, and T-480-1 presses only.

# Coll-O-Crimp

## 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

### Hose End 'U' Series



#### Note:

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

#### Ordering Information:

Order individually by catalog number. O-rings not supplied with flange hose ends. Order o-rings by catalog number; reference individual listings for details. For split flange kits, refer to pages 330-333.

Refer to important safety information on page 4.

#### Typical Application:

General purpose low, medium, and high pressure hydraulic.

**Compatible Hose:** H017; H039; H104; H105; H114; H115; H145; H146; H245; H324; H325; H350; H425; H545

**Pressure:** Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 16 for working pressure ratings for hose end configurations.

**Material:** Low Carbon Steel

**Plating:** Zinc; yellow dichromate finish

#### Advantages:

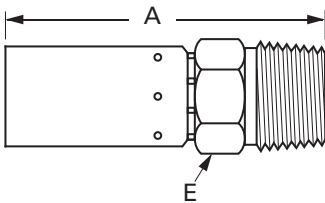
Wide selection of hose and end configurations allowing a diverse number of applications. An ideal series to introduce hydraulics.

#### Assemble With:

T-400-1, T-410-1, T-420-1, T-440, T-460, T-462, T-465, T-480, ET1000 and ET4000.

**Label Set:** FS-1100

### Male Pipe Rigid



HOSE I.D	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	1/8	04U-102	1/8-27	2.31	.75	.16	9/16
1/4	1/4	04U-104	1/4-18	2.49	.94	.16	9/16
1/4	3/8	04U-106	3/8-18	2.52	1.00	.16	11/16
1/4	1/2	04U-108	1/2-14	2.77	1.06	.16	7/8
3/8	1/4	06U-104	1/4-18	2.52	1.00	.25	11/16
3/8	3/8	06U-106	3/8-18	2.52	1.00	.25	11/16
3/8	1/2	06U-108	1/2-14	2.77	1.25	.25	7/8
1/2	1/4	08U-104	1/4-18	2.56	.88	.28	13/16
1/2	3/8	08U-106	3/8-18	2.57	1.14	.36	3/4
1/2	1/2	08U-108	1/2-14	2.75	1.31	.36	13/16
1/2	3/4	08U-112	3/4-14	2.83	1.28	.36	1-1/16
5/8	3/8	10U-106	3/8-18	3.12	1.13	.48	15/16
5/8	1/2	10U-108	1/2-14	3.31	1.38	.48	15/16
5/8	3/4	10U-112	3/4-14	3.31	1.30	.48	1-1/16
3/4	1/2	12U-108	1/2-14	3.62	1.44	.61	1
3/4	3/4	12U-112	3/4-14	3.61	1.44	.61	1-1/16
3/4	1	12U-116	1-11-1/2	3.84	1.69	.61	1-3/8
1	3/4	16U-112	3/4-14	4.23	1.88	.81	1-1/4
1	1	16U-116	1-11-1/2	3.90	1.69	.81	1-3/8
1-1/4	1-1/4	20U-120	1-1/4-11-1/2	4.61	2.31	1.02	1-11/16

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

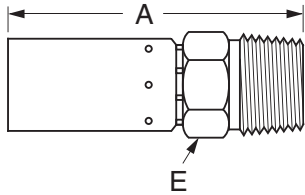


# Coll-O-Crimp

## 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

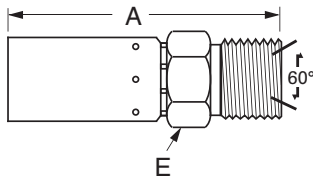
### British Standard Tapered Male Pipe (BSPT/JIS) Rigid



HOSE I.D	BSPT PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	1/4	04U-154	R-1/4-19*	2.51	1.00	.16	3/4
3/8	3/8	06U-156	R-3/8-19*	2.54	1.06	.25	11/16
1/2	1/2	08U-158	R-1/2-14*	2.78	1.31	.36	7/8
3/4	3/4	12U-162	R-3/4-14*	3.62	1.44	.61	1-1/8
1	1	16U-166	R-1-11*	4.23	2.00	.81	1-3/8

\*R As Part of Thread Size is ISO Designation for Tapered Thread.

### British Standard 60° (BSPP) Cone Male Pipe Rigid

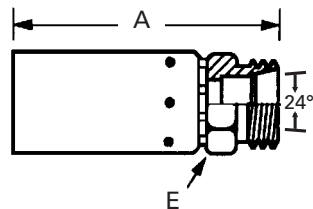


HOSE I.D	BSPP PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	1/4	04U-P54	G-1/4-19**	2.38	.88	.16	11/16
3/8	3/8	06U-P56	G-3/8-19**	2.48	.94	.25	3/4
3/8	1/2	06U-P58	G-1/2-14**	2.62	1.06	.25	1
1/2	3/8	08U-P56	G-3/8-19**	2.54	1.13	.32	13/16
1/2	1/2	08U-P58	G-1/2-14**	2.62	1.19	.36	1
5/8	5/8	10U-P60	G-5/8-14**	3.25	1.31	.48	1-1/8
3/4	3/4	12U-P62	G-3/4-14**	3.65	1.50	.61	1-1/8
1	1	16U-P66	G-1-11**	3.91	1.69	.81	1-3/8
1-1/4	1-1/4	20U-P67	G-1-1/4-11**	4.41	2.13	1.02	1-3/4

\*\*G As Part of Thread Size is ISO Designation for Parallel Thread.

### Male DIN 24° Seat

l. Rh. (Light)



HOSE I.D	TUBE SIZE (MM)	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	8	04U-08A	M14x1.5	2.27	.81	.16	9/16
1/4	10	04U-10A	M16x1.5	2.36	.88	.16	11/16
3/8	10	06U-10A	M16x1.5	2.36	.94	.25	11/16
3/8	12	06U-12A	M18x1.5	2.36	.94	.25	3/4
1/2	15	08U-15A	M22x1.5	2.42	1.00	.36	7/8
5/8	18	10U-18A	M26x1.5	2.99	1.06	.48	1-1/16
3/4	22	12U-22A	M30x2.0	3.45	1.31	.61	1-1/4
1	28	16U-28A	M36x2.0	3.73	1.50	.81	1-1/2

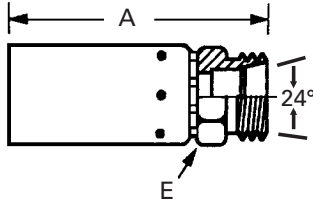
# Coll-O-Crimp

## 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

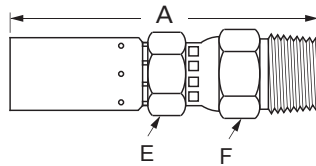
### Male DIN 24° Seat

s. Rh. (Heavy)



HOSE I.D	TUBE SIZE (MM)	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	8	04U-08F	M16x1.5	2.39	.88	.16	11/16
1/4	10	04U-10F	M18x1.5	2.40	.88	.16	3/4
3/8	10	06U-10F	M18x1.5	2.40	.94	.25	3/4
3/8	12	06U-12F	M20x1.5	2.42	1.00	.25	13/16
3/8	14	06U-14F	M22x1.5	2.50	1.06	.25	7/8
1/2	16	08U-16F	M24x1.5	2.57	1.13	.36	1
5/8	20	10U-20F	M30x2	3.21	1.28	.48	1-1/4
3/4	20	12U-20F	M30x2	3.53	1.38	.61	1-1/4
3/4	25	12U-25F	M36x2	3.71	1.56	.61	1-1/2
1	30	16U-30F	M42x2	3.98	1.75	.81	1-11/16

### Male Pipe Swivel



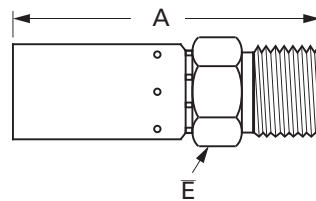
HOSE I.D	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04U-J04	1/4-18	3.38	1.88	.16	5/8	13/16
3/8	1/4	06U-J04	1/4-18	3.40	1.94	.25	11/16	13/16
3/8	3/8	06U-J06	3/8-18	3.38	1.94	.25	11/16	7/8
3/8	1/2	06U-J08	1/2-14	3.60	2.13	.25	3/4	7/8
1/2	3/8	08U-J06	3/8-18	3.45	2.00	.36	13/16	7/8
1/2	1/2	08U-J08	1/2-14	3.60	2.19	.36	13/16	7/8
3/4	3/4	12U-J12	3/4-14	4.73	2.56	.61	1	1-1/4
1	1	16U-J16	1-11-1/2	5.20	3.00	.80	1-1/4	1-3/8

**Note:**

Swivel for installation purposes only.  
(Not for temperatures above 212°F.)

### FOR-SEAL Male Rigid

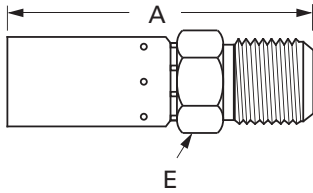
Does not include o-ring.  
See page 273 for o-rings.



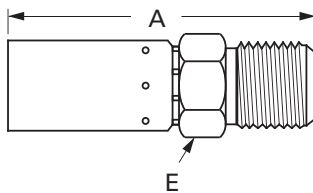
HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	O-RING	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	1/4	04U-E64	9/16-18	4629x4	2.34	.88	.16	5/8
3/8	3/8	06U-E66	11/16-16	4629x6	2.43	1.00	.25	13/16
3/8	1/2	06U-E68	13/16-16	4629x8	2.54	1.13	.38	7/8
1/2	1/2	08U-E68	13/16-16	4629x8	2.54	1.13	.36	7/8
1/2	5/8	08U-E70	1-14	4629x10	2.78	1.35	.36	1-1/16
1/2	3/4	08U-E72	1-3/16-12	4629x12	2.76	1.31	.36	1-1/4
5/8	5/8	10U-E70	1-14	4629x10	3.20	1.25	.48	1-1/16
5/8	3/4	10U-E72	1-3/16-12	4629x12	3.45	1.50	.48	1-1/4
3/4	3/4	12U-E72	1-3/16-12	4629x12	3.58	1.44	.61	1-1/4
3/4	1	12U-E76	1-7/16-12	4629x16	3.60	1.44	.61	1-1/2
1	1	16U-E76	1-7/16-12	4629x16	3.73	1.50	.81	1-1/2
1-1/4	1-1/4	20U-E80	1-11/16-12	4629x20	4.10	1.81	1.02	1-3/4

**Coll-O-Crimp****'U' Series**

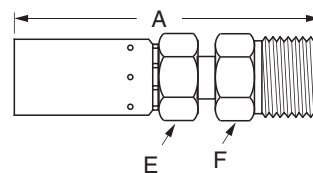
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

**JIC 37° Male Rigid**

HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	1/4	04U-504	7/16-20	2.48	1.00	.16	1/2
1/4	5/16	04U-505	1/2-20	2.51	1.00	.16	9/16
1/4	3/8	04U-506	9/16-18	2.55	1.00	.16	5/8
3/8	3/8	06U-506	9/16-18	2.54	1.00	.25	11/16
3/8	1/2	06U-508	3/4-16	2.67	1.25	.25	13/16
3/8	5/8	06U-510	7/8-14	2.83	1.31	.25	15/16
1/2	1/2	08U-508	3/4-16	2.70	1.19	.38	13/16
1/2	5/8	08U-510	7/8-14	2.83	1.31	.36	15/16
1/2	3/4	08U-512	1-1/16-12	2.87	1.44	.36	1-1/8
5/8	1/2	10U-508	3/4-16	3.22	1.31	.39	15/16
5/8	5/8	10U-510	7/8-14	3.32	1.38	.48	15/16
5/8	3/4	10U-512	1-1/16-12	3.42	1.44	.48	1-1/8
3/4	5/8	12U-510	7/8-14	3.64	1.44	.43	1
3/4	3/4	12U-512	1-1/16-12	3.74	1.56	.61	1-1/16
3/4	7/8	12U-514	1-3/16-12	3.81	1.63	.61	1-1/4
3/4	1	12U-516	1-5/16-12	3.81	1.63	.61	1-3/8
1	7/8	16U-514	1-3/16-12	4.18	1.94	.72	1-1/4
1	1	16U-516	1-5/16-12	4.20	2.00	.81	1-3/8
1	1-1/4	16U-520	1-5/8-12	4.02	1.81	.81	1-11/16
1-1/4	1-1/4	20U-520	1-5/8-12	4.60	2.31	1.02	1-11/16

**SAE 45° Flare Male Rigid**

HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/8	3/8	06U-306	5/8-18	2.60	1.13	.28	11/16
3/4	3/4	12U-312	1-1/16-14	3.87	1.69	.61	1-1/8

**Inverted Male Swivel Straight**

HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	3/16	04U-B03	3/8-24	3.75	2.25	.12	9/16	3/8
1/4	1/4	04U-B04	7/16-24	3.14	1.69	.16	9/16	7/16
1/4	5/16	04U-B05	1/2-20	3.13	1.63	.21	9/16	1/2
3/8	1/4	06U-B04	7/16-24	3.13	1.69	.16	11/16	7/16
3/8	5/16	06U-B05	1/2-20	3.16	1.75	.21	11/16	1/2
3/8	3/8	06U-B06	5/8-18	3.33	1.94	.24	11/16	5/8
3/8	7/16	06U-B07	11/16-18	3.33	1.94	.24	11/16	11/16
1/2	1/2	08U-B08	3/4-18	3.69	2.25	.33	13/16	3/4
1/2	5/8	08U-B10	7/8-18	3.43	2.00	.33	13/16	7/8

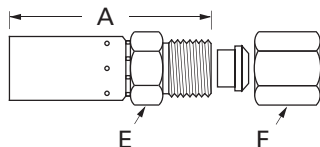
# Coll-O-Crimp

## 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

### Flareless Tube Rigid Ermeto 7000 Series

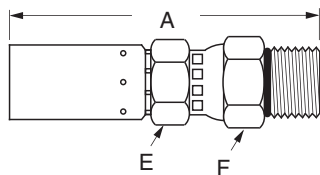
(With Nut and Sleeve)



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04U-754	7/16-20	2.38	.94	.16	9/16	9/16
1/4	5/16	04U-755	1/2-20	2.41	.93	.16	11/16	5/8
3/8	1/4	06U-754	7/16-20	2.40	1.00	.20	11/16	9/16
3/8	5/16	06U-755	1/2-20	2.40	1.00	.23	11/16	5/8
3/8	3/8	06U-756	9/16-18	2.42	1.00	.25	11/16	11/16
1/2	1/2	08U-758	3/4-16	2.51	1.13	.36	13/16	7/8
1/2	5/8	08U-760	7/8-14	2.64	1.25	.36	15/16	1
3/4	3/4	12U-762	1-1/16-12	3.55	1.38	.61	1-1/8	1-1/4
1	1	16U-766	1-5/16-12	3.98	1.75	.81	1-3/8	1-1/2
1-1/4	1-1/4	20U-770	1-5/8-12	4.35	2.00	1.02	1-11/16	2

(For replacement Ermeto Nuts and Sleeves, see page 311-312.)

### Male Straight Thread O-Ring Swivel



HOSE I.D	PORT SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04U-R04	7/16-20	3.33	1.81	.16	5/8	13/16
3/8	3/8	06U-R06	9/16-18	3.29	1.86	.25	11/16	7/8
3/8	1/2	06U-R08	3/4-16	3.25	1.75	.25	11/16	7/8
1/2	1/2	08U-R08	3/4-16	3.27	1.81	.36	13/16	7/8
1/2	5/8	08U-R10	7/8-14	3.41	2.00	.36	13/16	1-1/8
1/2	3/4	08U-R12	1-1/16-12	3.57	2.06	.36	13/16	1-1/4
5/8	1/2	10U-R08	3/4-16	3.96	1.88	.42	15/16	1-1/8
3/4	5/8	12U-R10	7/8-14	4.23	2.06	.50	1	1-1/8

(Includes O-ring. For replacement O-ring, see page 254.)

**Note:**

Swivel for installation purposes only.  
(Not for temperatures above 212°F.)

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASM'BY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

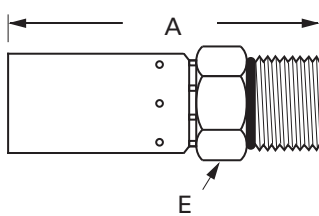
TECHNICAL DATA

# Coll-O-Crimp

## 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

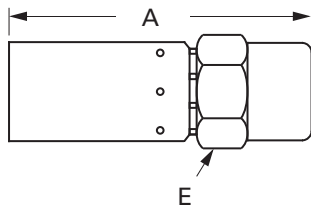
### Male Straight Thread O-Ring Rigid



HOSE I.D.	PORT SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	1/4	04U-P04	7/16-20	2.29	.81	.16	9/16
1/4	5/16	04U-P05	1/2-20	2.32	.88	.16	5/8
1/4	3/8	04U-P06	9/16-18	2.35	.88	.16	11/16
3/8	3/8	06U-P06	9/16-18	2.35	.94	.25	11/16
3/8	1/2	06U-P08	3/4-16	2.46	1.06	.25	7/8
3/8	5/8	06U-P10	7/8-14	2.57	1.13	.25	1
1/2	1/2	08U-P08	3/4-16	2.46	1.06	.36	7/8
1/2	5/8	08U-P10	7/8-14	2.55	1.13	.36	1
1/2	3/4	08U-P12	1-1/16-12	2.66	1.25	.36	1-1/4
5/8	1/2	10U-P08	3/4-16	3.00	1.13	.48	15/16
5/8	5/8	10U-P10	7/8-14	3.06	1.13	.48	1
5/8	3/4	10U-P12	1-1/16-12	3.15	1.25	.48	1-1/4
3/4	5/8	12U-P10	7/8-14	3.36	1.19	.50	1
3/4	3/4	12U-P12	1-1/16-12	3.49	1.31	.61	1-1/4
3/4	1	12U-P16	1-5/16-12	3.50	1.31	.61	1-1/2
1	1	16U-P16	1-5/16-12	3.63	1.44	.81	1-1/2
1-1/4	1-1/4	20U-P20	1-5/8-12	4.23	1.94	1.02	1-7/8

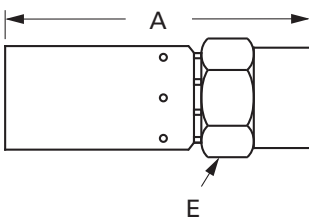
(Includes O-ring. For replacement O-ring, see page 254.)

### Female Grease Tap



HOSE I.D.	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	04U-C34	.511-27	2.45	.90	.16	3/4
3/8	06U-C36	.511-27	2.44	.90	.25	3/4

### Female Pipe Rigid



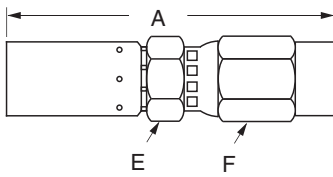
HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	1/8	04U-202	1/8-27	2.20	.75	.16	5/8
1/4	1/4	04U-204	1/4-18	2.43	.94	.16	3/4
3/8	1/4	06U-204	1/4-18	2.46	1.06	.25	3/4
3/8	3/8	06U-206	3/8-18	2.57	1.13	.25	7/8
1/2	1/2	08U-208	1/2-14	2.82	1.38	.36	1-1/8
3/4	3/4	12U-212	3/4-14	3.71	1.56	.61	1-3/8

# Coll-O-Crimp

## 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly  
<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

### Female Pipe Swivel

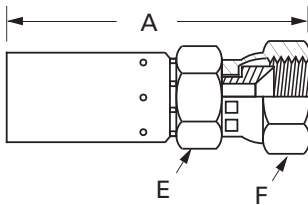


HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04U-254	1/4-18	3.52	2.06	.20	5/8	13/16
3/8	3/8	06U-256	3/8-18	3.61	2.19	.32	11/16	7/8
1/2	1/2	08U-258	1/2-14	3.85	2.38	.43	13/16	1-1/8
3/4	3/4	12U-262	3/4-14	4.81	2.63	.61	1	1-3/8
1	1	16U-266	1-11-1/2	5.26	3.06	.80	1-1/4	1-5/8

**Note:**  
 Swivel for installation purposes only.  
 (Not for temperatures above 212°F.)

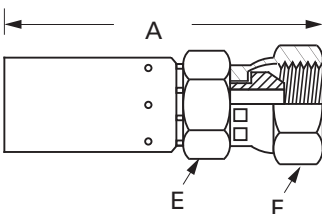
### JIC 37° Female Swivel

(Exceptions Noted)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04U-604 <sup>a</sup>	7/16-20	2.61	1.13	.16	9/16	9/16
1/4	5/16	04U-605 <sup>a</sup>	1/2-20	2.67	1.18	.16	9/16	5/8
1/4	3/8	04U-606	9/16-18	2.72	1.25	.16	9/16	11/16
3/8	1/4	06U-604 <sup>a</sup>	7/16-20	2.66	1.25	.16	11/16	9/16
3/8	3/8	06U-606	9/16-18	2.77	1.31	.25	11/16	11/16
3/8	1/2	06U-608 <sup>a</sup>	3/4-16	2.86	1.44	.25	11/16	7/8
3/8	5/8	06U-610 <sup>a</sup>	7/8-14	3.00	1.56	.25	7/8	1
3/8	3/4	06U-612	1-1/16-12	3.15	1.69	.25	1	1-1/4
1/2	3/8	08U-606	9/16-18	2.68	1.25	.30	13/16	11/16
1/2	1/2	08U-608 <sup>a</sup>	3/4-16	2.79	1.38	.36	13/16	7/8
1/2	5/8	08U-610 <sup>a</sup>	7/8-14	3.00	1.56	.36	13/16	1
1/2	3/4	08U-612	1-1/16-12	3.12	1.44	.36	1	1-1/4
1/2	1	08U-616	1-5/16-12	3.17	1.75	.36	1-1/4	1-1/2
5/8	1/2	10U-608 <sup>a</sup>	3/4-16	3.48	1.56	.39	15/16	7/8
5/8	5/8	10U-610 <sup>a</sup>	7/8-14	3.53	1.63	.48	15/16	1
5/8	3/4	10U-612	1-1/16-12	3.64	1.75	.48	1	1-1/4
3/4	5/8	12U-610 <sup>a</sup>	7/8-14	3.75	1.56	.48	1	1
3/4	3/4	12U-612	1-1/16-12	3.86	1.69	.61	1	1-1/4
3/4	7/8	12U-614	1-3/16-12	3.88	1.69	.61	1-1/8	1-3/8
3/4	1	12U-616	1-5/16-12	4.07	1.88	.61	1-1/4	1-1/2
1	3/4	16U-612	1-1/16-12	4.37	2.13	.61	1-1/4	1-1/4
1	7/8	16U-614	1-3/16-12	4.35	2.13	.72	1-1/4	1-3/8
1	1	16U-616	1-5/16-12	4.46	2.25	.81	1-1/4	1-1/2
1	1-1/4	16U-620	1-5/8-12	4.30	2.19	.81	1-5/8	2
1-1/4	1-1/4	20U-620	1-5/8-12	4.90	2.63	1.02	1-11/16	2

### Female Straight Pipe Swivel (NPSM)



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	NPSM THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04U-054	1/4-18	2.55	1.06	.16	1/2	11/16
3/8	3/8	06U-056	3/8-18	2.65	1.19	.27	11/16	7/8
1/2	1/2	08U-058	1/2-14	2.85	1.44	.36	13/16	1
3/4	3/4	12U-062	3/4-14	3.77	1.63	.61	1	1-1/4
1	1	16U-066	1-11-1/2	4.34	2.13	.81	1-1/4	1-1/2
1-1/4	1-1/4	20U-070	1-1/4-11-1/2	4.76	2.44	1.08	1-11/16	1-7/8

(Connects to male pipe fitting with internal seat.)

APPLICATION DATA  
 LOW & MEDIUM PRESSURE HOSE  
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 SPECIALTY HOSE  
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 ADAPTERS & TUBE HOSE ENDS  
 HOSE ASSEMBLY EQUIPMENT  
 TECHNICAL DATA

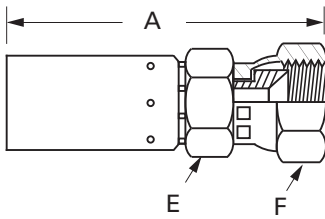


# Coll-O-Crimp

## 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

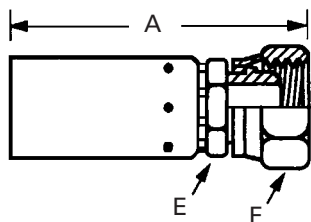
### SAE 45° Female Swivel



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/8	3/8	06U-406	5/8-18	2.68	1.25	.25	11/16	3/4
3/4	3/4	12U-412	1-1/16-14	3.86	1.69	.61	1	1-1/4

### Female Swivel DIN Universal Seat

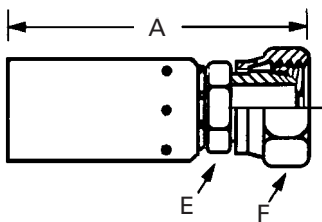
l. Rh. (Light) (DIN 3901/3902)



HOSE I.D.	TUBE SIZE (MM)	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	6	04U-06C	M12x1.5	2.73	1.25	.16	9/16	11/16
1/4	8	04U-08C	M14x1.5	2.76	1.25	.16	9/16	11/16
1/4	10	04U-10C	M16x1.5	2.82	1.38	.16	9/16	3/4
3/8	10	06U-10C	M16x1.5	2.78	1.38	.25	11/16	3/4
3/8	12	06U-12C	M18x1.5	2.93	1.50	.25	11/16	7/8
1/2	15	08U-15C	M22x1.5	2.98	1.56	.36	13/16	1-1/16
5/8	18	10U-18C	M26x1.5	3.61	1.69	.48	15/16	1-1/4
3/4	22	12U-22C	M30x2.0	4.03	1.88	.61	1-1/8	1-7/16
1	28	16U-28C	M36x2.0	4.47	2.25	.78	1-1/4	1-5/8
1-1/4	35	20U-35C	M45x2.0	4.61	2.25	1.02	1-3/4	2-1/8

### Female Swivel DIN 24° Seat

s. Rh. DKO (Heavy)

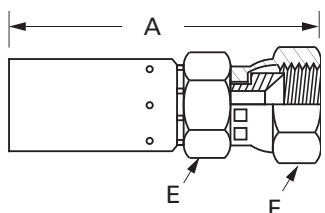


HOSE I.D.	TUBE SIZE (MM)	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	8	04U-58C	M16x1.5	2.88	1.40	.16	9/16	3/4
1/4	10	04U-60C	M18x1.5	2.78	1.31	.16	5/8	7/8
1/4	12	04U-62C	M20x1.5	2.67	1.19	.16	3/4	1
3/8	10	06U-60C	M18x1.5	2.78	1.38	.22	3/4	7/8
3/8	12	06U-62C	M20x1.5	2.87	1.44	.25	3/4	1
3/8	14	06U-64C	M22x1.5	2.92	1.50	.25	3/4	1-1/16
1/2	16	08U-66C	M24x1.5	3.06	1.63	.36	7/8	1-1/8
5/8	20	10U-70C	M30x2.0	3.46	1.69	.48	1-1/8	1-7/16
3/4	20	12U-70C	M30x2.0	3.91	1.75	.48	1-1/8	1-7/16
3/4	25	12U-75C	M36x2.0	4.24	2.06	.61	1-1/4	1-5/8
1	30	16U-80C	M42x2.0	4.34	2.13	.81	1-5/8	2
1-1/4	38	20U-88C*	M52x2.0	4.80	2.50	1.02	2	2-3/8

\*20U-88C for use with H42520 only. Crimp on Super I, COC II or COC II Plus only. Contact Eaton for crimping instructions. (Includes O-ring.)

### Female Swivel 30° Flare

(Komatsu, Linkbelt)



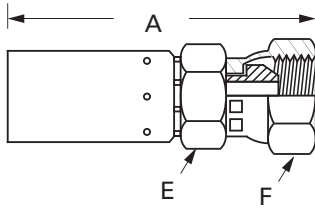
HOSE I.D.	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	04U-14K	M14x1.5	2.89	1.19	.18	9/16	3/4
3/8	06U-18K	M18x1.5	2.86	1.44	.31	11/16	7/8
1/2	08U-22K	M22x1.5	2.99	1.56	.39	13/16	1
5/8	10U-24K	M24x1.5	3.64	1.69	.50	1	1-1/4
3/4	12U-30K	M30x1.5	3.86	1.69	.61	1-1/8	1-3/8
1	16U-33K	M33x1.5	4.53	2.31	.81	1-1/4	1-5/8
1-1/4	20U-36K	M36x1.5	5.24	2.94	.92	1-5/8	1-3/4

# Coll-O-Crimp

## 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

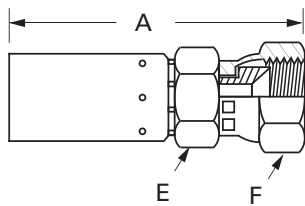
### British Standard (BSPP) 60° Cone Female Pipe Swivel



HOSE I.D	BSPP PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04U-354	G-1/4-19*	2.75	1.25	.16	9/16	3/4
1/4	3/8	04U-356	G-3/8-19*	2.84	1.38	.16	3/4	7/8
3/8	3/8	06U-356	G-3/8-19*	2.84	1.44	.25	3/4	7/8
3/8	1/2	06U-358	G-1/2-14*	2.97	1.56	.25	7/8	1-1/16
1/2	1/2	08U-358	G-1/2-14*	3.05	1.63	.36	13/16	1-1/16
1/2	5/8	08U-360	G-5/8-14*	2.96	1.56	.36	13/16	1-3/16
5/8	5/8	10U-360	G-5/8-14*	3.71	1.75	.48	15/16	1-3/16
3/4	3/4	12U-362	G-3/4-14*	3.87	1.75	.61	1	1-1/4
1	1	16U-366	G-1-11*	4.47	2.25	.81	1-1/4	1-1/2
1-1/4	1-1/4	20U-370	G-1-1/4-11*	4.81	2.50	1.02	1-5/8	1-7/8

\*G As Part of Thread Size is ISO Designation for Parallel Thread.

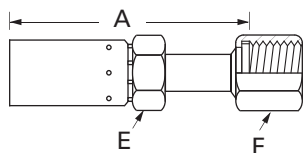
### Female JIS 30° Flare Parallel Pipe Swivel



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04U-04L	G-1/4-19	2.73	1.25	.16	9/16	3/4
3/8	3/8	06U-06L	G-3/8-19	2.84	1.38	.25	11/16	7/8
1/2	1/2	08U-08L	G-1/2-14	3.02	1.56	.36	13/16	1-1/16
5/8	3/4	10U-12L	G-3/4-14	3.52	1.56	.48	1	1-5/16
3/4	3/4	12U-12L	G-3/4-14	3.85	1.75	.61	1	1-1/4
1	1	16U-16L	G-1-11	4.13	1.94	.81	1-1/4	1-1/2

\*G As Part of Thread Size is ISO Designation for Parallel Thread.

### Female FOR-SEAL Swivel Straight



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	04U-S64	9/16-18	2.82	1.34	.16	9/16	11/16
1/4	3/8	04U-S66	11/16-16	2.85	1.37	.26	9/16	13/16
1/4	1/2	04U-S68	13/16-16	3.19	1.75	.36	11/16	15/16
3/8	1/4	06U-S64	9/16-18	2.81	1.38	.16	11/16	5/8
3/8	3/8	06U-S66	11/16-16	2.64	1.21	.26	11/16	13/16
3/8	1/2	06U-S68	13/16-16	3.22	1.79	.28	11/16	15/16
1/2	3/8	08U-S66	11/16-16	2.91	1.50	.26	13/16	13/16
1/2	1/2	08U-S68	13/16-16	2.80	1.37	.36	13/16	15/16
1/2	5/8	08U-S70	1-14	3.30	1.87	.46	13/16	1-1/8
1/2	3/4	08U-S72	1-3/16-12	3.38	1.94	.36	1	1-3/8
5/8	5/8	10U-S70	1-14	3.53	1.60	.48	15/16	1-1/8
5/8	3/4	10U-S72	1-3/16-12	3.84	1.94	.55	1	1-3/8
3/4	5/8	12U-S70	1-14	4.12	1.94	.46	1	1-1/8
3/4	3/4	12U-S72	1-3/16-12	3.95	1.80	.61	1-1/8	1-3/8
3/4	1	12U-S76	1-7/16-12	4.78	2.81	.61	1-1/4	1-5/8
1	3/4	16U-S72	1-3/16-12	4.36	2.16	.55	1-1/4	1-3/8
1	1	16U-S76	1-7/16-12	4.88	2.69	.78	1-1/4	1-5/8
1	1-1/4	16U-S80	1-11/16-12	4.53	2.31	.81	1-1/2	1-7/8
1-1/4	1-1/4	20U-S80	1-11/16-12	4.54	2.25	1.04	1-5/8	1-7/8

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

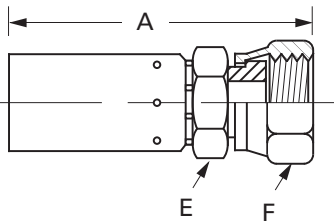
# Coll-O-Crimp

## 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

### BSPP Flat Face Female Swivel

(HIAB Cranes-Swedish)

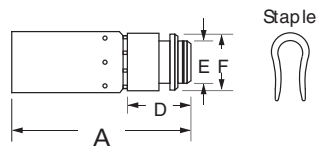


HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/8	3/8	06U-06P	G-3/8-19*	2.90	1.50	.25	11/16	7/8
3/8	1/2	06U-08P	G-1/2-14*	2.96	1.50	.25	3/4	1-1/16
1/2	1/2	08U-08P	G-1/2-14*	3.02	1.56	.36	13/16	1-1/16
1/2	3/4	08U-12P	G-3/4-14*	3.06	1.63	.36	1	1-1/4
3/4	3/4	12U-12P	G-3/4-14*	3.92	1.75	.61	1	1-1/4

\*G As Part of Thread Size is ISO Designation for Parallel Thread.

### READY-LOK Male Connector

(For Deep Mining Markets)



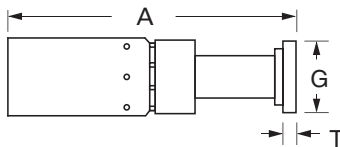
HOSE I.D.	CONNECT. SIZE	CATALOG NUMBER	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	LENGTH D	DIA. E	DIA. F
1/4	1/4	04U-04S	2.82	1.31	.16	1.13	.39	.59
3/8	3/8	06U-06S	2.84	1.31	.26	1.13	.54	.78
1/2	1/2	08U-08S	2.82	1.31	.36	1.13	.70	.94
3/4	3/4	12U-12S	3.64	1.50	.61	1.13	.94	1.14
1	1	16U-16S	3.94	1.75	.81	1.34	1.22	1.53
1-1/4	1-1/4	20U-20S	4.06	1.75	1.02	1.34	1.49	1.80

O-ring and backup ring included.

(See pages 326-329 for READY-LOK Staple and O-ring.)

### Split Flange Straight

(SAE Code 61)

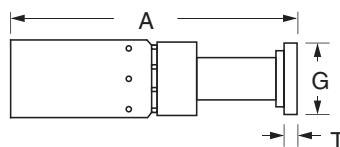


HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T
1/2	1/2	08U-G08	8x252	3.94	2.50	.33	1.19 (30mm)	.265
3/4	3/4	12U-G12	12x252	4.40	2.25	.58	1.50 (38mm)	.265
3/4	1	12U-G16	16x252	4.40	2.25	.58	1.75 (44mm)	.315
1	1	16U-G16	16x252	4.58	2.38	.77	1.75 (44mm)	.315
1	1-1/4	16U-G20	20x252	4.58	2.38	.77	2.00 (51mm)	.315
1-1/4	1-1/4	20U-G20	20x252	5.04	2.75	1.02	2.00 (51mm)	.315
1-1/4	1-1/2	20U-G24	24x252	5.12	2.81	1.02	2.38 (60mm)	.315

(See page 330 for Code 61 Split Flange Kits.)

### Split Flange Straight - Metric

(Komatsu, Linkbelt, etc.)



HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T
5/8	16mm (5/8")	10U-G09	10x252	4.18	2.25	.46	34mm (1.325")	.265

# Coll-O-Crimp

## 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

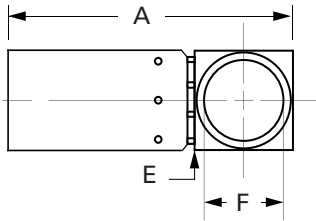
ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

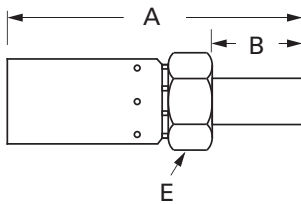
### Banjo

(Ford Tractor)



HOSE I.D.	CATALOG NUMBER	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/8	06U-L06	2.56	.69	.62	7/8

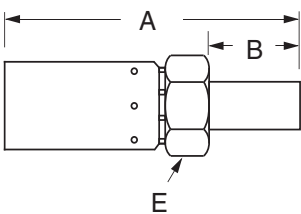
### Metric Standpipe Straight Tube



HOSE I.D.	TUBE O.D. (MM)	CATALOG NUMBER	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	8	04U-38T	3.06	1.00	1.56	.15	5/8
1/4	10	04U-40T	3.10	1.04	1.63	.15	5/8
3/8	10	06U-40T	3.10	1.04	1.63	.24	13/16
3/8	12	06U-42T	3.10	1.04	1.63	.24	13/16
3/8	14	06U-44T	3.28	1.22	1.81	.24	13/16
1/2	15	08U-45T	3.12	1.00	1.69	.35	7/8
1/2	16	08U-46T	3.34	1.22	1.91	.35	7/8
5/8	18	10U-48T	3.64	1.06	1.75	.48	1-15/16
5/8	20	10U-50T	4.00	1.42	2.06	.48	1-15/16
3/4	22	12U-52T	4.13	1.19	1.88	.61	1
3/4	25	12U-55T	4.53	1.59	2.25	.61	1
1	28	16U-58T	4.43	1.25	2.25	.81	1-1/2
1	30	16U-60T	4.89	1.71	2.69	.81	1-1/2

(See page 293 for Metric Nuts and Sleeves.)

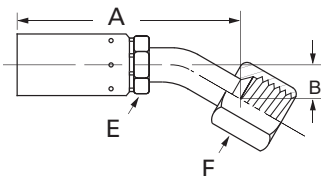
### Standpipe Straight Tube



HOSE I.D.	TUBE O.D.	CATALOG NUMBER	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	1/4	04U-T04	3.16	1.10	1.69	.15	9/16
3/8	3/8	06U-T06	3.36	1.30	1.94	.25	11/16
1/2	1/2	08U-T08	3.70	1.58	2.25	.33	3/4
5/8	5/8	10U-T10	3.92	1.34	2.00	.46	15/16
3/4	3/4	12U-T12	4.11	1.17	1.94	.58	1
1	1	16U-T16	4.48	1.30	2.31	.76	1-1/4

(See pages 311-312 for Ermeto Nuts and Sleeves.)

### SAE 37° Female Swivel 30° Tube Elbow



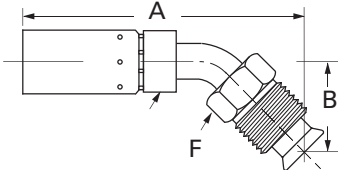
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HEX E.	HEX F
5/8	3/4	10U-L22	1-1/16-12	4.50	.46	2.56	15/16	1-1/4

# Coll-O-Crimp

## 'U' Series

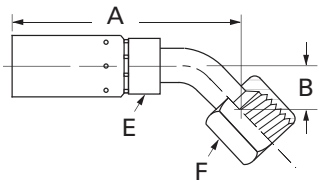
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

### Inverted Male Swivel 45° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	3/16	04U-B43	3/8-24	3.48	.69	2.00	.12	3/8
1/4	1/4	04U-B44	7/16-24	3.61	.93	2.13	.15	7/16
1/4	5/16	04U-B45	1/2-20	3.98	1.14	2.50	.21	1/2
3/8	1/4	06U-B44	7/16-24	3.59	.93	2.19	.15	7/16
3/8	5/16	06U-B45	1/2-20	4.02	1.14	2.56	.21	1/2
3/8	3/8	06U-B46	5/8-18	4.05	1.34	2.63	.24	5/8
3/8	7/16	06U-B47	11/16-18	4.05	1.34	2.63	.24	11/16
1/2	1/2	08U-B48	3/4-18	4.85	1.58	3.44	.33	3/4

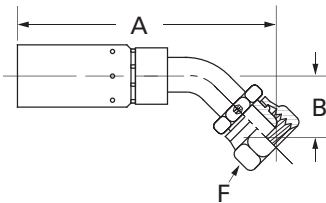
### SAE 45° Female Swivel 45° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX DIA. F	HEX F
3/8	3/8	06U-486	5/8-18	3.18	.39	1.75	.21	11/16	3/4

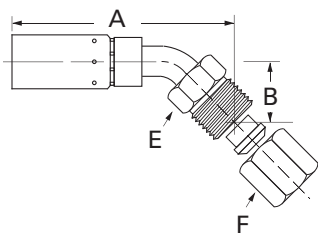
### Female Swivel DIN Universal Seat 45° Tube Elbow

l. Rh. (Light)



HOSE I.D.	TUBE SIZE (MM)	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	8	04U-08D	M14x1.5	3.08	.73	1.63	.16	11/16
1/4	10	04U-10D	M16x1.5	3.21	.79	1.75	.16	3/4
3/8	10	06U-10D	M16x1.5	3.90	.96	2.47	.25	3/4
3/8	12	06U-12D	M18x1.5	3.93	.96	2.50	.25	7/8
1/2	15	08U-15D	M22x1.5	3.48	.91	2.06	.36	1-1/16
5/8	18	10U-18D	M26x1.5	4.40	1.08	2.50	.48	1-5/16
3/4	22	12U-22D	M30x2.0	4.62	1.19	2.44	.61	1-7/16
1	28	16U-28D	M36x2.0	5.52	1.59	3.32	.81	1-5/8

### Flareless 45° Tube Elbow 7000 Ermeto Series



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/8	3/8	06U-956	9/16-18	4.08	.88	2.65	.28	11/16	11/16

For replacement nuts and sleeves see pages 311-312.

# Coll-O-Crimp

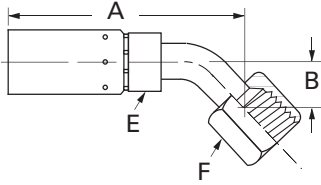
## 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

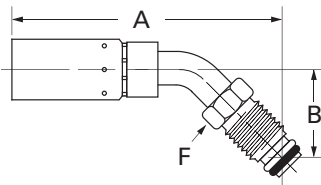
### JIC 37° Female Swivel 45° Tube Elbow

(Exceptions Noted)



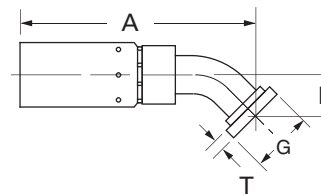
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX/DIA. E	HEX F
1/4	1/4	04U-684 <sup>a</sup>	7/16-20	2.98	.33	1.50	.15	9/16	9/16
1/4	5/16	04U-685 <sup>a</sup>	1/2-20	3.14	.36	1.69	.21	9/16	5/8
3/8	1/4	06U-684 <sup>a</sup>	7/16-20	3.08	.33	1.69	.15	11/16	9/16
3/8	3/8	06U-686	9/16-18	3.17	.39	1.75	.25	11/16	11/16
3/8	1/2	06U-688 <sup>a</sup>	3/4-16	3.51	.55	2.08	.25	3/4	7/8
1/2	1/2	08U-688 <sup>a</sup>	3/4-16	3.51	.55	2.08	.35	13/16	7/8
1/2	5/8	08U-690 <sup>a</sup>	7/8-14	3.76	.63	2.31	.36	13/16	1
5/8	5/8	10U-690	7/8-14	4.22	.63	2.22	.48	15/16	1
5/8	3/4	10U-692	1-1/16-12	4.37	.78	2.44	.48	15/16	1-1/4
3/4	3/4	12U-692	1-1/16-12	4.79	.78	2.64	.59	1	1-1/4
3/4	1	12U-696	1-5/16-12	5.18	1.10	3.00	.61	1-1/4	1-1/2
1	1	16U-696	1-5/16-12	5.28	1.10	3.06	.76	1-1/4	1-1/2

### Male Swivel 45° Tube Elbow O-Ring Port



HOSE I.D.	TUBE O.D.	CATALOG NUMBER	O-RING	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/2	5/8	08U-L50	7629x7	7/8-14	4.75	1.84	3.38	.36	7/8

### Split Flange 45° Tube Elbow (SAE Code 61)



HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOM'L
1/2	1/2	08U-G41	8x252	3.68	.78	2.25	.41	1.19 (30mm)	.265
3/4	3/4	12U-G42	12x252	5.00	1.00	2.88	.58	1.50 (38mm)	.265
3/4	1	12U-G46	16x252	5.00	1.00	2.88	.58	1.75 (44mm)	.315
1	1	16U-G46	16x252	4.82	.89	2.62	.77	1.75 (44mm)	.315
1	1-1/4	16U-G50	20x252	5.00	1.06	2.80	.77	2.00 (51mm)	.315
1-1/4	1-1/4	20U-G50	20x252	5.22	1.09	2.90	1.02	2.00 (51mm)	.315

(See page 330 for Code 61 Split Flange Kits.)

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

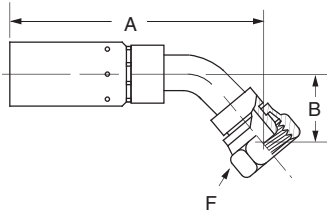


# Coll-O-Crimp

## 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

### British Standard 60° Cone (BSPP) Female Swivel 45° Tube Elbow

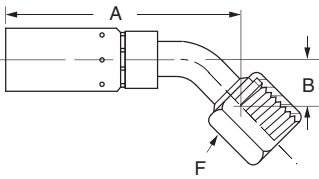


HOSE I.D.	BSP PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	1/4	04U-44P	G-1/4-19*	3.69	.91	2.25	.15	3/4
3/8	3/8	06U-46P	G-3/8-19*	3.85	.90	2.44	.25	7/8
1/2	1/2	08U-48P	G-1/2-14*	3.88	.87	2.44	.33	1-1/16
5/8	5/8	10U-50P	G-5/8-14*	4.38	.98	2.44	.46	1-3/16
3/4	3/4	12U-52P	G-3/4-14*	5.53	1.31	3.38	.61	1-1/4
1	1	16U-56P	G-1-11*	5.39	1.46	3.19	.76	1-1/2
1-1/4	1-1/4	20U-60P**	G-1 1/4-11*	5.89	1.76	3.57	1.02	1-7/8

\*G As Part of Thread Size is ISO Designation for Parallel Thread.

\*\*Part number will crimp in COC ET4000, T-410-1, T-420-1 and T-440-1 presses only.

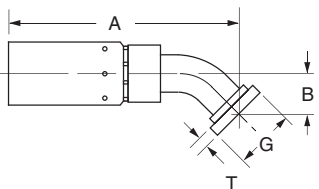
### Female FOR-SEAL Swivel 45° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	1/4	04U-L64	9/16-18	3.14	.41	1.68	.16	11/16
1/4	3/8	04U-L66	11/16-16	3.24	.43	1.75	.16	13/16
3/8	3/8	06U-L66	11/16-16	3.26	.43	1.81	.26	13/16
3/8	1/2	06U-L68	13/16-16	3.58	.60	2.15	.26	15/16
1/2	3/8	08U-L66	11/16-16	3.32	.43	1.88	.26	13/16
1/2	1/2	08U-L68	13/16-16	3.56	.60	2.13	.36	15/16
1/2	5/8	08U-L70	1-14	3.67	.65	2.25	.36	1-1/8
5/8	5/8	10U-L70	1-14	4.13	.65	2.19	.46	1-1/8
5/8	3/4	10U-L72	1-3/16-12	4.53	.84	2.63	.48	1-3/8
3/4	5/8	12U-L70	1-14	4.49	.65	2.31	.46	1-1/8
3/4	3/4	12U-L72	1-3/16-12	4.96	.84	2.81	.59	1-3/8
3/4	1	12U-L76	1-7/16-12	5.29	.94	3.13	.76	1-5/8
1	3/4	16U-L72	1-3/16-12	4.99	.83	2.79	.56	1-3/8
1	1	16U-L76	1-7/16-12	5.29	.95	3.06	.76	1-5/8
1	1-1/4	16U-L80	1-11/16-12	5.00	1.07	2.79	.81	1-7/8
1-1/4	1-1/4	20U-L80	1-11/16-12	5.15	1.05	2.85	1.01	1-7/8

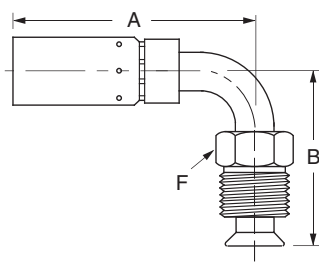
### Split Flange 45° Tube Elbow - Metric

(Komatsu, Linkbelt, etc.)



HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
5/8	16mm (5/8)	10U-G69	10x252	4.21	.94	2.25	.46	34mm (1.335)	.265

### Inverted Male Swivel 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	3/16	04U-B63	3/8-24	2.85	1.06	1.38	.12	3/8
1/4	1/4	04U-B64	7/16-24	2.89	1.36	1.38	.15	7/16
1/4	5/16	04U-B65	1/2-20	3.08	1.61	1.63	.21	1/2
3/8	1/4	06U-B64	7/16-24	2.89	1.36	1.44	.15	7/16
3/8	5/16	06U-B65	1/2-20	3.08	1.61	1.50	.21	1/2
3/8	3/8	06U-B66	5/8-18	3.40	1.97	1.88	.24	5/8
3/8	7/16	06U-B67	11/16-18	3.40	1.97	2.00	.24	11/16
1/2	1/2	08U-B68	3/4-18	3.50	2.32	2.06	.35	3/4

# Coll-O-Crimp

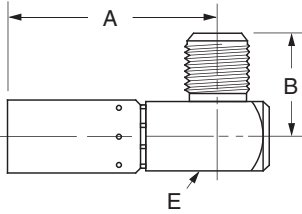
## 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

APPLICATION  
DATA

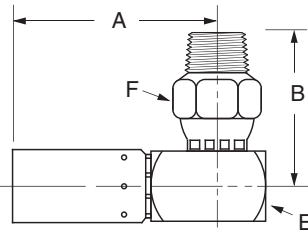
### SAE 37° Male Rigid 90° Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	SQUARE E
3/8	5/8	06U-X60	7/8-14	2.50	1.10	1.06	.36	11/16
1/2	5/8	08U-X60	7/8-14	2.75	1.13	1.31	.36	3/4
3/4	5/8	12U-X60	7/8-14	4.15	1.32	2.00	.48	1-1/8

LOW & MEDIUM  
PRESSURE HOSE

### Male Pipe Swivel 90° Elbow



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	SQUARE E	HEX F
1/4	1/4	04U-M04	1/4-18	2.43	1.79	1.00	.15	11/16	13/16
3/8	1/4	06U-M04	1/4-18	2.50	1.83	1.06	.24	11/16	13/16
3/8	3/8	06U-M06	3/8-18	2.50	1.84	1.06	.24	11/16	7/8
1/2	1/2	08U-M08	1/2-14	2.75	1.96	1.31	.35	3/4	7/8
3/4	3/4	12U-M12	3/4-14	4.15	2.46	2.00	.61	1-1/8	1-1/4

**Note:**

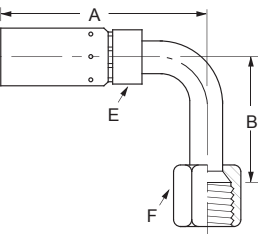
Swivel for installation purposes only.  
(Not for temperatures above 212°F.)

HIGH PRESSURE HOSE

SPECIALTY HOSE

### JIC 37° Female Swivel Long Drop 90° Tube Elbow

(Exceptions Noted)

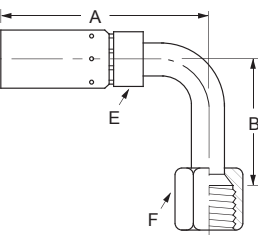


HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	1/4	04U-644 <sup>a</sup>	7/16-20	2.95	1.80	1.50	.15	9/16
3/8	1/4	06U-644 <sup>a</sup>	7/16-20	2.89	1.80	1.44	.15	9/16
3/8	3/8	06U-646	9/16-18	3.18	2.18	1.75	.24	11/16
3/8	1/2	06U-648 <sup>a</sup>	3/4-16	3.35	2.43	1.92	.24	7/8
1/2	1/2	08U-648 <sup>a</sup>	3/4-16	3.33	2.43	1.88	.35	7/8
1/2	5/8	08U-650 <sup>a</sup>	7/8-14	3.45	2.57	2.00	.36	1
3/4	3/4	12U-652	1-1/16-12	4.81	3.73	2.63	.58	1-1/4
1	1	16U-656L33	1-5/16-12	5.18	3.37	3.00	.76	1-1/2

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

### SAE 45° Female Swivel Long Drop 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/8	3/8	06U-446	5/8-18	3.19	2.18	1.75	.24	3/4

HOSE ASSEMBLY  
EQUIPMENT

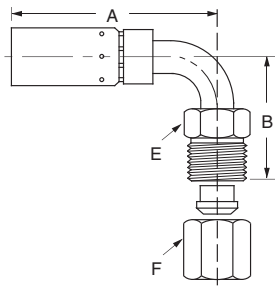
TECHNICAL DATA

# Coll-O-Crimp

## 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly  
<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

### Flareless 90° Tube 7000 Ermeto Series

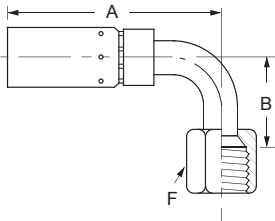


HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/8	3/8	06U-976	9/16-18	3.14	1.54	1.69	.28	5/8	11/16

For replacement nuts and sleeves see pages 311-312.

### JIC 37° Female Swivel 90° Tube Elbow

(Exceptions Noted, Refer to Footnotes)

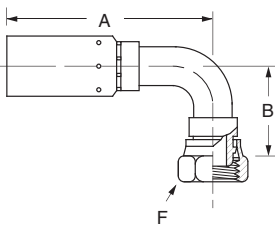


HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	1/4	04U-664 <sup>a</sup>	7/16-20	2.90	.68	1.44	.15	9/16
1/4	5/16	04U-665 <sup>a</sup>	1/2-20	3.09	.77	1.63	.21	5/8
1/4	3/8	04U-666	9/16-18	3.16	.85	1.63	.25	11/16
3/8	1/4	06U-664 <sup>a</sup>	7/16-20	2.85	.68	1.44	.15	9/16
3/8	3/8	06U-666	9/16-18	3.20	.85	1.75	.25	11/16
3/8	1/2	06U-668 <sup>a</sup>	3/4-16	3.27	1.09	1.75	.33	7/8
1/2	1/2	08U-668 <sup>a</sup>	3/4-16	3.33	1.09	1.88	.33	7/8
1/2	5/8	08U-670 <sup>a</sup>	7/8-14	3.92	1.23	2.50	.36	1
5/8	5/8	10U-670 <sup>a</sup>	7/8-14	4.36	1.23	2.44	.46	1
5/8	3/4	10U-672	1-1/16-12	4.96	1.82	3.00	.48	1-1/4
3/4	5/8	12U-670 <sup>a</sup>	7/8-14	4.29	1.23	2.14	.46	1
3/4	3/4	12U-672	1-1/16-12	4.76	1.82	2.63	.58	1-1/4
1	1	16U-676	1-5/16-12	5.03	2.14	2.81	.76	1-1/2
1	1-1/4	16U-677	1-5/8-12	5.06	3.31	2.86	.76	2
1-1/4	1-1/4	20U-677 <sup>#</sup>	1-5/8-12	5.29	3.34	2.99	1.01	2

<sup>#</sup> Crimp nut style design.

### Female Swivel Universal Seat DIN 90° Tube Elbow

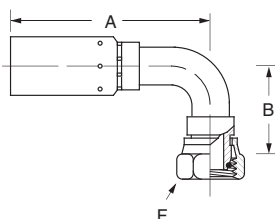
l. Rh. (Light)



HOSE I.D.	TUBE SIZE (MM)	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	8	04U-58D	M14x1.5	2.99	1.48	1.50	.16	11/16
1/4	10	04U-60D	M16x1.5	3.31	1.65	1.81	.16	3/4
3/8	10	06U-60D	M16x1.5	3.29	1.65	1.88	.25	3/4
3/8	12	06U-62D	M18x1.5	3.31	1.65	1.88	.25	7/8
1/2	15	08U-65D	M22x1.5	3.73	1.93	2.31	.36	1-1/16
5/8	18	10U-68D	M26x1.5	4.42	2.28	2.50	.48	1-1/4
3/4	22	12U-72D	M30x2.0	4.97	2.59	2.81	.61	1-7/16
1	28	16U-78D	M36x2.0	4.95	3.27	2.75	.81	1-5/8
1-1/4	35	20U-85D	M45x2.0	5.29	3.51	2.99	1.02	2-3/16

### Female 24° Swivel DIN 90° Tube Elbow

s. Rh. DKO (Heavy)



HOSE I.D.	TUBE SIZE (MM)	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/8	12	06U-62E	M20x1.5	3.25	1.53	1.82	.25	1
3/8	14	06U-64E	M22x1.5	3.61	1.63	2.19	.25	1-1/16
1/2	16	08U-66E	M24x1.5	3.69	1.95	2.25	.33	1-1/8
5/8	20	10U-70E	M30x2.0	4.46	2.47	2.50	.48	1-7/16
3/4	25	12U-75E**	M36x2.0	5.27	2.90	3.13	.61	1-5/8
1	30	16U-80E**	M42x2.0	5.19	2.79	3.00	.77	2

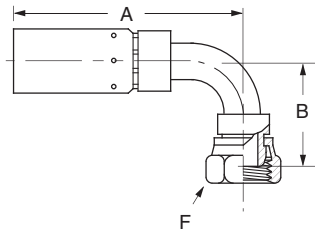
\*\*Part number will crimp in COC T-410, T-420, T-440, ET1000 and ET4000 presses only. (Includes O-ring)

# Coll-O-Crimp

## 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

### British Standard (BSPP) 60° Cone Female Pipe Swivel 90° Tube Elbow

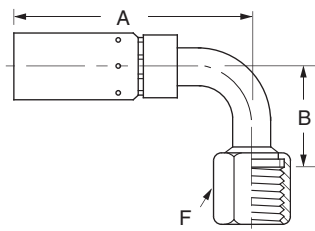


HOSE I.D	BSPP PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	1/4	04U-74P	G-1/4-19*	2.99	1.50	1.50	.16	3/4
3/8	3/8	06U-76P	G-3/8-19*	3.26	1.60	1.83	.25	7/8
3/8	1/2	06U-78P	G-1/2-14*	3.06	1.67	1.63	.25	1-1/16
1/2	1/2	08U-78P	G-1/2-14*	3.96	1.89	2.56	.36	1-1/16
1/2	5/8	08U-80P	G-5/8-14*	3.55	1.44	2.13	.36	1-1/4
5/8	5/8	10U-80P	G-5/8-14*	4.15	1.83	2.25	.49	1-3/16
3/4	3/4	12U-82P	G-3/4-14*	5.02	2.49	2.88	.58	1-1/4
1	1	16U-86P**	G-1-11*	4.95	3.09	2.75	.77	1-1/2
1-1/4	1-1/4	20U-90P**	G-1-1/4-11*	5.37	3.57	2.99	1.51	1-7/8

\*G as part of thread size is ISO designation for parallel thread.

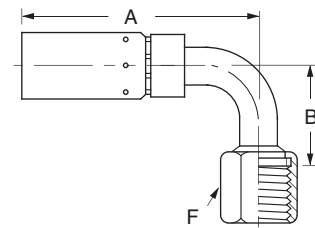
\*\*Part number will crimp in C-O-C ET4000, T-410, T-420, and T-440 presses only.

### Female FOR-SEAL Swivel Short Drop 90° Elbow



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	1/4	04U-A24	9/16-18	3.00	.81	1.50	.16	11/16
1/4	3/8	04U-A26	11/16-16	3.13	.90	1.75	.16	13/16
3/8	1/4	06U-A24	9/16-18	3.00	.81	1.56	.16	11/16
3/8	3/8	06U-A26	11/16-16	3.13	.90	1.81	.26	13/16
3/8	1/2	06U-A28	13/16-16	3.33	1.15	1.88	.26	15/16
1/2	3/8	08U-A26	11/16-16	3.13	.90	1.75	.26	13/16
1/2	1/2	08U-A28	13/16-16	3.34	1.15	1.91	.36	15/16
1/2	5/8	08U-A30	1-14	3.46	1.27	2.03	.36	1-1/8
1/2	3/4	08U-A32	1-3/16-12	3.98	1.88	2.56	.36	1-3/8
5/8	5/8	10U-A30	1-14	3.92	1.27	2.00	.46	1-1/8
5/8	3/4	10U-A32	1-3/16-12	4.37	1.88	2.44	.46	1-3/8
3/4	5/8	12U-A30	1-14	4.26	1.27	2.13	.46	1-1/8
3/4	3/4	12U-A32	1-3/16-12	4.86	1.88	2.69	.59	1-3/8
3/4	1	12U-A36	1-7/16-12	5.14	2.21	2.98	.61	1-5/8
1	1	16U-A36	1-7/16-12	5.23	2.21	3.00	.76	1-5/8
1	1-1/4	16U-A40	1-11/16-12	5.06	2.59	2.86	.81	1-7/8
1-1/4	1-1/4	20U-A40	1-11/16-12	5.29	2.50	2.99	1.02	1-7/8
1-1/4	1-1/2	20U-A44	2-12	5.29	2.67	2.99	1.02	2-1/4

### Female FOR-SEAL Swivel Medium Drop 90° Tube Elbow



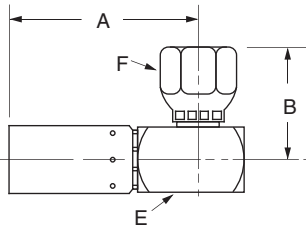
HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	1/4	04U-J34	9/16-18	3.07	1.26	1.59	.16	11/16
1/4	3/8	04U-J36	11/16-16	3.13	1.51	1.69	.16	13/16
1/4	1/2	04U-J38	13/16-16	3.37	1.62	1.88	.16	15/16
3/8	3/8	06U-J36	11/16-16	3.20	1.51	1.69	.24	13/16
3/8	1/2	06U-J38	13/16-16	3.36	1.62	1.93	.25	15/16
1/2	3/8	08U-J36	11/16-16	3.20	1.51	1.72	.24	13/16
1/2	1/2	08U-J38	13/16-16	3.37	1.62	1.94	.33	15/16
1/2	3/4	08U-J42	1-3/16-12	4.02	2.28	2.59	.36	1-3/8
5/8	5/8	10U-J40	1-14	4.29	1.85	2.13	.46	1-1/8
3/4	5/8	12U-J40	1-1/4	3.95	1.85	2.00	.46	1-1/8
3/4	3/4	12U-J42	1-3/16-12	4.83	2.28	2.69	.58	1-3/8
1	1	16U-J46	1-7/16-12	5.33	2.78	3.13	.76	1-5/8
1	1-1/4	16U-J50	1-11/16-12	5.11	3.22	3.04	.81	1-7/8
1-1/4	1-1/4	20U-J50	1-11/16-12	5.31	3.09	3.00	1.01	1-7/8

# Coll-O-Crimp

## 'U' Series

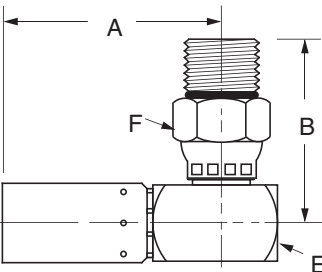
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

### JIC 37° Female Swivel 90° Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	SQUARE E	HEX F
1/4	1/4	04U-554	7/16-20	2.43	1.06	.95	.16	11/16	9/16
3/8	3/8	06U-556	9/16-18	2.50	1.18	1.06	.25	11/16	11/16
1/2	1/2	08U-558	3/4-16	2.75	1.35	1.31	.36	3/4	7/8
1/2	5/8	08U-560	7/8-14	2.75	1.34	1.31	.36	3/4	1
3/4	5/8	12U-560	7/8-14	4.15	1.54	2.00	.61	1-1/8	1
3/4	3/4	12U-562	1-1/16-12	4.15	1.62	2.00	.61	1-1/8	1-1/4
3/4	7/8	12U-564	1-3/16-12	4.15	1.68	2.00	.61	1-1/8	1-3/8

### Male Straight Thread O-Ring Swivel 90° Elbow



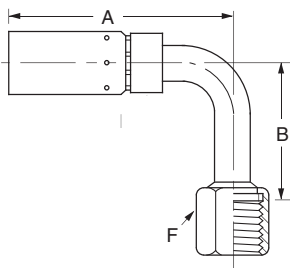
HOSE I.D.	PORT SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	SQUARE E	HEX F
1/4	3/8	04U-R66	9/16-18	2.43	1.68	.94	.16	11/16	7/8
3/8	3/8	06U-R66	9/16-18	2.50	1.68	1.06	.25	11/16	7/8
3/8	1/2	06U-R68	3/4-16	2.50	1.64	1.06	.25	11/16	7/8
3/8	5/8	06U-R70	7/8-14	2.50	1.80	1.06	.25	11/16	1
1/2	1/2	08U-R68	3/4-16	2.75	1.64	1.31	.36	3/4	7/8
1/2	5/8	08U-R70	7/8-14	2.75	1.79	1.31	.36	3/4	1-1/8
1/2	3/4	08U-R72	1-1/16-12	2.75	1.89	1.31	.36	3/4	1-1/4
3/4	3/4	12U-R72	1-1/16-12	4.15	2.24	2.00	.61	1-1/8	1-7/16

(Includes O-ring. For replacement O-ring, see page 254.)

(Not for temperatures above 212°F.)

**Note:** Swivel for installation purposes only.

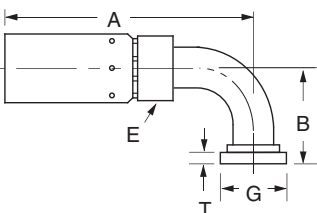
### Female FOR-SEAL Swivel Long Drop 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	1/4	04U-A64	9/16-18	3.14	1.80	1.63	.16	11/16
1/4	3/8	04U-A66	11/16-16	3.31	2.13	1.83	.16	13/16
3/8	3/8	06U-A66	11/16-16	3.34	2.13	1.91	.24	13/16
3/8	1/2	06U-A68	13/16-16	3.37	2.51	1.94	.25	15/16
1/2	1/2	08U-A68	13/16-16	3.28	2.51	1.85	.36	15/16
1/2	5/8	08U-A70	1-14	3.49	2.76	2.00	.36	1-1/8
5/8	5/8	10U-A70	1-14	3.95	2.76	2.06	.46	1-1/8
3/4	3/4	12U-A72	1-3/16-12	4.87	3.78	2.72	.59	1-3/8
1	1	16U-A76	1-7/16-12	5.34	4.50	3.13	.76	1-5/8
1-1/4	1-1/4	20U-A80	1-11/16-12	5.31	5.09	3.00	1.01	1-7/8
1-1/4	1-1/2	20U-A84	2-12	5.31	5.54	3.00	1.01	2-1/4

### Split Flange 90° Tube Elbow

(SAE Code 61)



HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T
1/2	1/2	08U-G71	8x252	3.63	1.63	2.19	.41	1.19 (30mm)	.265
3/4	3/4	12U-G72	12x252	4.75	2.13	2.63	.58	1.50 (38mm)	.265
3/4	1	12U-G76	16x252	4.78	2.13	2.56	.58	1.75 (44mm)	.315
1	1	16U-G76	16x252	5.43	2.38	3.23	.77	1.75 (44mm)	.315
1	1-1/4	16U-G80	20x252	5.43	2.38	3.23	.77	2.00 (51mm)	.315
1-1/4	1-1/4	20U-G80	20x252	5.35	2.63	3.05	1.02	2.00 (51mm)	.315
1-1/4	1-1/2	20U-G84	24x252	5.37	2.63	3.05	1.02	2.38 (60mm)	.315

(For Split Flange Kits, see pages 330-333.)

# Coll-O-Crimp

## 430 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

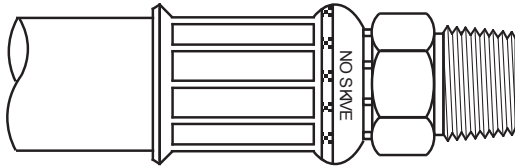
ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

### Hose End 430 'U' Series



#### Note:

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

#### Ordering Information:

Order individually by catalog number. O-rings not supplied with split flange hose ends. Order o-rings by catalog number; reference individual hose end listings for details.

Refer to important safety information on page 4.

**Typical Application:** Very high pressure hydraulic lines subjected to pressure surges and flexing. Some applications include mining, construction, farming, and high performance industrial equipment.

**Compatible Hose:** H039; H115; H145; H245; H425; H350; H430 and H430R

**Pressure:** Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 16 for working pressure ratings for hose end configurations.

**Material:** Low Carbon Steel

**Plating:** Zinc; yellow dichromate finish

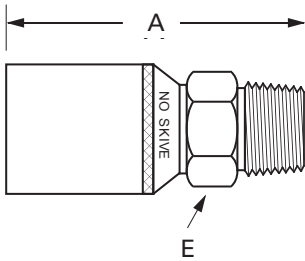
**Advantages:** Excellent selection of no-skive hose ends. Can be used with Caterpillar, John Deere, and many major manufacturers of heavy equipment.

#### Assemble With:

T-410-1, T-420-1, T-440-1, T-480, ET1000 or ET4000.

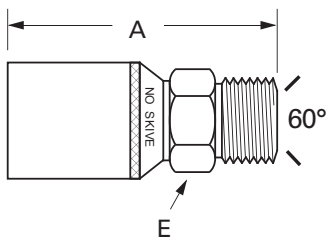
**Label Set:** FS-3100

### Male Pipe (NPTF) Rigid



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/8	1/4	43006U-108	1/8-18	2.02	1.18	.26	11/16
3/8	3/8	43006U-106	3/8-18	2.11	1.28	.26	11/16
3/8	1/2	43006U-108	12-18	2.11	1.28	.26	7/8
1/2	1/2	43008U-108	1/2-14	3.56	1.69	.34	7/8
1/2	3/4	43008U-112	3/4-14	3.29	1.38	.34	1-1/16
5/8	1/2	43010U-108	1/2-18	2.61	1.58	.50	15/16
5/8	3/4	43010U-112	3/4-14	2.43	1.40	.50	1-1/16
3/4	3/4	43012U-112	3/4-14	3.68	1.69	.61	1-1/16
3/4	1	43012U-116	1-11-1/2	3.77	1.75	.61	1-3/8
1	3/4	43016U-112	3/4-14	3.86	1.81	.71	1-1/4
1	1	43016U-116	1-11-1/2	4.05	2.00	.81	1-3/8
1	1-1/4	43016U-120	1-1/4-11-1/2	4.08	2.06	.81	1-11/16
1-1/4	1-1/4	43020U-120	1-1/4-11-1/2	4.58	2.31	1.02	1-11/16
1-1/2	1-1/2	43024U-124	1-1/2-11-1/2	4.87	2.38	1.25	2
2	2	43032U-132	2-11-1/2	5.51	2.69	1.69	2-1/2

### British Standard 60° Cone (BSPP) Male Pipe Rigid



HOSE I.D.	BSPP PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/4	3/4	43012U-P62	G-3/4-14*	3.56	1.56	.61	1-1/8
1	1	43016U-P66	G-1-11*	3.73	1.69	.81	1-3/8
1-1/4	1-1/4	43020U-P67	G-1-1/4-11*	4.41	2.13	1.02	1-3/4

\*G As Part of Thread Size is ISO Designation for Parallel Thread.

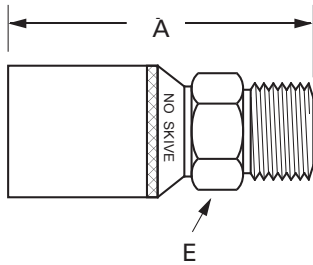


# Coll-O-Crimp

## 430 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

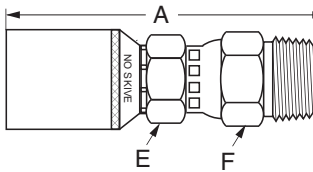
### FOR-SEAL Male Rigid



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/8	3/8	43006U-E66	11/16-06	1.83	.99	.26	3/4
3/8	1/2	43006U-E68	13/16-16	1.79	.95	.26	7/8
1/2	1/2	43008U-E68	13/16-16	3.24	1.31	.34	7/8
3/4	3/4	43012U-E72	1-3/16-12	3.57	1.56	.61	1-1/4
1	1	43016U-E76	1-7/16-12	3.55	1.50	.81	1-1/2
1-1/4	1-1/4	43020U-E80	1-11/16-12	3.90	1.56	1.04	1-3/4

Does not include O-Ring. See page 265 for O-Ring.

### Male Pipe Swivel

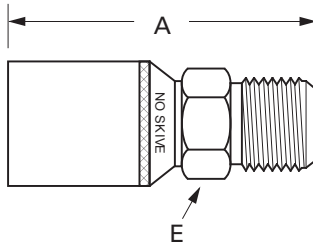


HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1	1	43016U-J16	1-11	5.02	3.00	.78	1-1/4	1-3/8

**Note:**

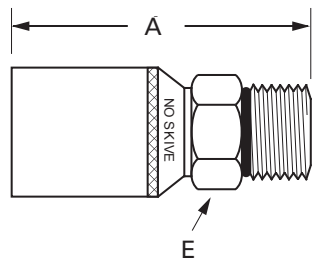
Swivel for installation purposes only.  
(Not for temperatures above 212°F.)

### SAE 37° Male Rigid



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/8	3/8	43006U-506	9/16-18	2.00	1.17	.26	11/16
3/8	1/2	43006U-508	3/4-16	1.94	1.11	.26	13/16
1/2	1/2	43008U-508	3/4-16	3.50	1.63	.34	7/8
1/2	5/8	43008U-510	7/8-14	3.30	1.38	.34	1
5/8	5/8	43010U-510	7/8-14	2.60	1.57	.50	15/16
5/8	3/4	43010U-512	1-1/16-12	2.46	1.43	.50	1-1/8
3/4	3/4	43012U-512	1-1/16-12	3.74	1.75	.61	1-1/8
3/4	7/8	43012U-514	1-3/16-12	3.81	1.81	.61	1-1/4
3/4	1	43012U-516	1-5/16-12	4.02	2.06	.61	1-3/8
1	1	43016U-516	1-5/16-12	4.02	2	.81	1-3/8
1	1-1/4	43016U-520	1-5/8-12	3.84	1.81	.81	1-11/16
1-1/4	1-1/4	43020U-520	1-5/8-12	4.57	2.31	1.02	1-11/16
1-1/2	1-1/2	43024U-524	1-7/8-12	4.95	2.50	1.25	2
2	2	43032U-532	2-1/2-12	5.57	2.75	1.69	2-5/8

### Male Straight Thread O-Ring Rigid



HOSE I.D.	PORT SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
3/8	3/8	43006U-P06	9/16-18	1.84	1.00	.26	11/16
3/8	1/2	43006U-P06	3/4-16	1.81	.98	.26	7/8
5/8	5/8	43010U-P10	7/8-14	2.34	1.31	.50	1
5/8	3/4	43010U-P12	1-1/16-12	2.26	1.23	.50	1-1/4
1	1	43016U-P16	1-5/16-12	3.45	1.44	.81	1-1/2

(Includes O-Ring)  
For replacement O-Ring see page 254.

# Coll-O-Crimp

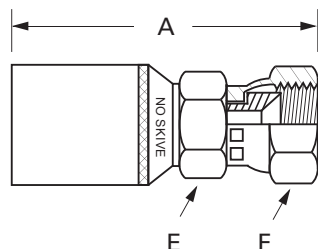
## 430 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

### JIC 37° Female Swivel

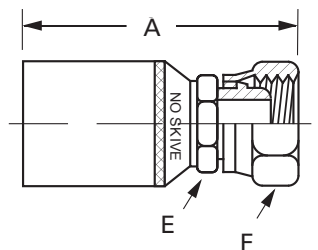
(Exceptions noted)



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/8	1/4	43006U-604	7/16-20	2.03	1.19	.17	11/16	9/16
3/8	3/8	43006U-606	9/16-18	2.12	1.28	.26	9/16	9/16
3/8	1/2	43006U-608	3/4-16	2.15	1.31	.26	11/16	7/8
1/2	3/8	43008U-606	9/16-18	3.56	1.69	.34	13/16	11/16
1/2	1/2	43008U-608 <sup>a</sup>	3/4-16	3.67	1.75	.34	13/16	7/8
1/2	5/8	43008U-610 <sup>a</sup>	7/8-14	3.72	1.81	.34	13/16	1
1/2	3/4	43008U-612	1-1/16-12	3.76	1.88	.34	1	1-1/4
5/8	5/8	43010U-610	7/8-14	2.64	1.61	.50	15/16	1
3/4	5/8	43012U-610	7/8-14	3.97	1.97	.61	1	1
5/8	3/4	43010U-612	1-1/16-12	2.59	1.57	.50	1	1-1/4
3/4	3/4	43012U-612	1-1/16-12	4.08	2.06	.61	1	1-1/4
3/4	7/8	43012U-614	1-3/16-12	3.90	1.88	.61	1-1/4	1-3/8
3/4	1	43012U-616	1-5/16-12	4.01	2.00	.61	1-1/4	1-1/2
1	3/4	43016U-612	1-1/16-12	4.19	2.19	.61	1-1/4	1-1/4
1	1	43016U-616	1-5/16-12	4.28	2.25	.81	1-1/4	1-1/2
1	1-1/4	43016U-620	1-5/8-12	4.12	2.06	.81	1-5/8	2
1-1/4	1-1/4	43020U-620	1-5/8-12	4.87	2.63	1.02	1-11/16	2
1-1/4	1-1/2	43020U-624	1-7/8-12	5.03	2.75	1.02	1-7/8	2-1/4
1-1/2	1-1/2	43024U-624	1-7/8-12	5.29	2.81	1.25	2	2-1/4
2	2	43032U-632	2-1/2-12	6.04	3.25	1.69	2-1/2	3

### Female Swivel DIN Universal Seat

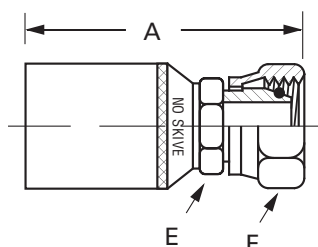
l. Rh. (Light) (DIN 3901/3902)



HOSE I.D	TUBE SIZE (MM)	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/4	22	43012U-22C	M30x2.0	4.12	2.13	.61	1-1/8	1-7/16

### Female Swivel DIN 24° Seat

s. Rh. DKO (Heavy)



HOSE I.D	TUBE SIZE (MM)	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/4	20	43012U-70C	M30x2.0	3.68	1.69	.61	1-1/8	1-7/16
3/4	25	43012U-75C	M36x2.0	4.14	2.13	.61	1-1/4	1-5/8
1	30	43016U-80C	M42x2.0	4.07	2.00	.81	1-5/8	2
1-1/4	30	43020U-80C	M42x2.0	4.32	2.00	1.02	1-5/8	2

(Includes O-Ring)

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

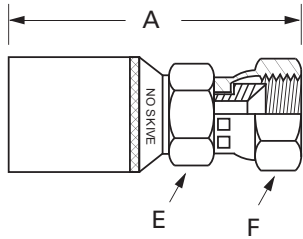
TECHNICAL DATA

**Coll-O-Crimp****430 'U' Series**

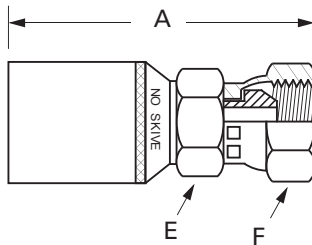
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

**Female Swivel 30°  
Flare Metric Thread**

(Komatsu, Linkbelt, etc.)

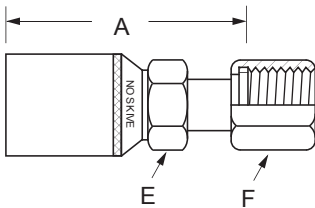


HOSE I.D.	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/2	43008U-22K	M22x1.5	3.72	1.81	.34	7/8	1
3/4	43012U-30K	M30x1.5	3.96	1.94	.61	1-1/8	1-3/8
1	43016U-33K	M33x1.5	4.27	2.25	.81	1-1/4	1-1/2
1-1/4	43020U-36K	M36x1.5	5.19	2.88	.92	1-5/8	1-3/4

**British Standard  
(BSPP) 60° Cone  
Female Pipe Swivel**

HOSE I.D.	BSPP PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/2	1/2	43008U-358	G-1/2-14*	3.78	1.88	.34	7/8	1-1/16
3/4	3/4	43012U-362	G-3/4-14*	4.09	2.06	.61	1	1-1/4
1	1	43016U-366	G-1-11*	4.29	2.25	.81	1-1/4	1-1/2
1-1/4	1-1/4	43020U-370	G-1-1/4-11*	4.76	2.50	1.02	1-5/8	1-7/8

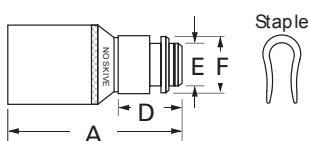
\*G As Part of Thread Size is ISO Designated for Parallel Thread.

**Female FOR-SEAL  
Swivel Straight**

HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/8	1/4	43006U-S64	9/16-18	1.98	1.15	.17	11/16	11/16
3/8	3/8	43006U-S66	11/16-16	2.07	1.24	.26	11/16	13/16
3/8	1/2	43006U-S68	13/16-16	2.16	1.32	.26	13/16	15/16
1/2	1/2	43008U-S68	13/16-16	3.30	1.42	.34	13/16	15/16
1/2	5/8	43008U-S70	1-1/4	3.40	1.52	.34	15/16	1-1/8
5/8	1/2	43010U-S68	13/16-16	2.54	1.51	.38	15/16	15/16
5/8	5/8	43010U-S70	1-1/4	2.63	1.61	.48	15/16	1-1/8
5/8	3/4	43010U-S72	1-3/16-12	2.66	1.63	.50	1-1/8	1-3/8
3/4	5/8	43012U-S70	1-1/4	4.06	2.06	.45	1	1-1/8
3/4	3/4	43012U-S72	1-3/16-12	3.85	2.09	.61	1-1/8	1-3/8
3/4	1	43012U-S76	1-7/16-12	4.15	2.13	.55	1	1-5/8
1	1	43016U-S76	1-7/16-12	4.68	2.69	.76	1-1/4	1-5/8
1	1-1/4	43016U-S80	1-11/16-12	4.33	2.31	.81	1-1/2	1-7/8
1-1/4	1-1/4	43020U-S80	1-11/16-12	4.51	2.25	1.02	1-5/8	1-7/8
1-1/2	1-1/2	43024U-S84	2-12	4.77	2.31	1.25	2	2-1/4

**READY-LOK Male  
Connector**

(For Deep Mining Markets)



HOSE I.D.	CONNECTION SIZE	CATALOG NUMBER	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	LENGTH D	DIA. E	DIA. F
3/8	3/8	43006U-06S	2.14	1.30	.26	1.04	.55	.78
3/8	1/2	43006U-08S	2.14	1.30	.26	1.04	.71	.94
1/2	1/2	43008U-08S	3.31	1.43	.34	.94	.70	.94
3/4	3/4	43012U-12S	3.53	1.50	.61	1.14	.94	1.14
1	1	43016U-16S	3.76	1.75	.81	1.34	1.21	1.53
1-1/4	1-1/4	43020U-20S	4.01	1.75	1.02	1.34	1.49	1.80
1-1/2	1-1/2	43024U-24S	5.06	2.59	1.25	2.51	1.85	2.17

(For READY-Lok Staple, O-Ring and backup ring reference pages 326-329.)

# Coll-O-Crimp

## 430 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

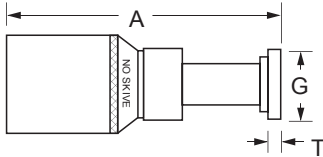
ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

### Split Flange Straight

(SAE Code 61)

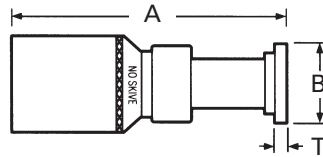


HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED) A	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1/2	1/2	43008U-G08	8x252	4.18	2.25	.34	1.19 (30mm)
1/2	3/4	43008U-G12	12x252	4.24	2.31	.34	1.50 (38mm)
3/4	3/4	43012U-G12	12x252	4.16	2.13	.56	1.50 (38mm)
3/4	1	43012U-G16	16x252	4.16	2.13	.56	1.75 (44mm)
3/4	1-1/4	43012U-G20	20x252	4.16	2.13	.56	2.00 (51mm)
5/8	3/4	43010U-G12	12x252	3.13	2.10	.50	1.50 (38mm)
1	1	43016U-G16	16x252	4.40	2.38	.76	1.75 (44mm)
1	1-1/4	43016U-G20	20x252	4.40	2.38	.76	2.00 (51mm)
1	1-1/2	43016U-G24	24x252	4.46	2.44	.76	2.38 (60mm)
1-1/4	1-1/4	43020U-G20	20x252	5.01	2.75	1.02	2.00 (51mm)
1-1/4	1-1/2	43020U-G24	24x252	5.07	2.81	1.02	2.38 (60mm)
1-1/4	1-1/2	43020U-G24L64	24x252	9.60	7.31	1.01	2.38 (60mm)
1-1/4	2	43020U-G32	32x252	5.13	2.88	1.02	2.81 (71mm)
1-1/2	1-1/2	43024U-G24	24x252	5.63	3.13	1.25	2.38 (60mm)
1-1/2	2	43024U-G32	32x252	5.83	3.31	1.25	2.81 (71mm)
2	1-1/2	43032U-G24	24x252	6.23	3.38	1.56	2.38 (60mm)
2	2	43032U-G32	32x252	6.08	3.25	1.56	2.81 (71mm)

(For Split Flange Kits, see pages 330-333.)

### Split Flange Straight

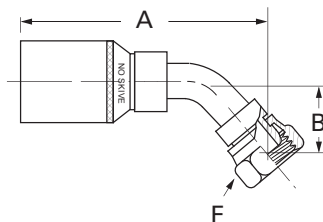
(SAE Code 62)



HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED) A	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1/2	1/2	43008U-D08	8x252	4.25	2.38	.34	1.25 (32mm)
1/2	3/4	43008U-D12	12x252	4.27	2.38	.34	1.62 (41mm)
5/8	3/4	43010U-D12	12x252	3.13	2.11	.50	1.62 (41mm)
3/4	3/4	43012U-D12	12x252	4.19	2.19	.56	1.62 (41mm)
3/4	1	43012U-D16	16x252	4.22	2.19	.56	1.88 (48mm)
1	1	43016U-D16	16x252	4.46	2.44	.76	1.88 (48mm)
1	1-1/4	43016U-D20	20x252	4.49	2.44	.76	2.12 (54mm)
1-1/4	1-1/4	43020U-D20	20x252	5.10	2.81	1.02	2.12 (54mm)
1-1/4	1-1/2	43020U-D24	24x252	5.21	2.94	1.02	2.50 (64mm)
1-1/2	1-1/2	43024U-D24	24x252	5.63	3.13	1.25	2.50 (64mm)
2	2	43032U-D32	32x252	7.18	4.38	1.56	3.12 (79mm)

(For Split Flange Kits, see pages 330-333.)

### British Standard 60° Cone (BSPP) Female Swivel 45° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	HOSE CUT-OFF FACTOR†		HOLE DIA.	HEX F
				A	B		
3/4	3/4	43012U-52P	G-3/4-14*	5.33	1.24	3.31	1-1/4
1	1	43016U-56P	G-1-11*	5.21	1.46	3.19	1-1/2

\*G As part of Thread is ISO Designation for Parallel Thread.

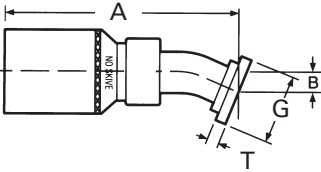
**Coll-O-Crimp****430 'U' Series**

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

**Split Flange 22-1/2°  
Tube Elbow**

(SAE Code 61)

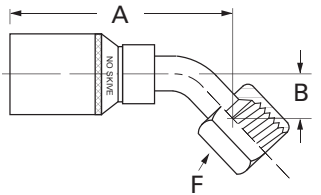


HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCL'D)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1/2	1/2	43008U-H01	8x252	4.45	.38	2.56	.34	1.19 (30mm)	.265
1/2	3/4	43008U-H02	12x252	4.50	.40	2.63	.34	1.50 (38mm)	.265
3/4	3/4	43012U-H02	12x252	4.81	.44	2.81	.56	1.50 (38mm)	.265
3/4	1	43012U-H03	16x252	4.81	.44	2.81	.56	1.75 (44mm)	.315
1	1	43016U-H03	16x252	5.09	.45	3.06	.76	1.75 (44mm)	.315
1	1-1/4	43016U-H04	20x252	6.15	.45	3.07	.76	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-H04	20x252	5.21	.50	2.94	1.02	2.00 (51mm)	.315
1-1/4	1-1/2	43020U-H05	24x252	5.21	.50	2.94	1.02	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-H05	24x252	6.16	.63	3.69	1.25	2.38 (60mm)	.315
1-1/2	2	43024U-H06	32x252	6.15	.63	3.69	1.25	2.81 (71mm)	.375
2	2	43032U-H06	32x252	7.67	.94	4.88	1.56	2.81 (71mm)	.375

(For Split Flange Kits, see pages 330-333.)

**JIC 37° Female Swivel  
45° Tube Elbow**

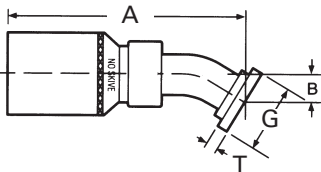
(Refer to Footnotes)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/8	3/8	43006U-686	9/16-18	2.82	.85	1.98	.24	11/16
3/8	1/2	43006U-688	3/4-16	2.98	.95	2.14	.26	7/8
1/2	1/2	43008U-688 <sup>a</sup>	3/4-16	4.08	.55	2.19	.34	7/8
1/2	5/8	43008U-690 <sup>a</sup>	7/8-14	4.28	.63	2.38	.34	1
5/8	3/4	43010U-692	1-1/16-12	3.65	1.16	2.62	.50	1-1/4
3/4	3/4	43012U-692	1-1/16-12	4.70	.78	2.69	.56	1-1/4
1	1	43016U-696	1-5/16-12	5.67	1.53	3.84	.76	1-1/2

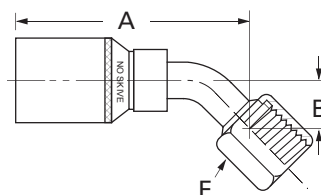
**Split Flange  
30° Tube Elbow**

(SAE Code 61)



HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCL'D)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1/2	1/2	43008U-H21	8x252	4.40	.50	2.50	.34	1.19 (30mm)	.265
1/2	3/4	43008U-H22	12x252	4.45	.53	2.56	.34	1.50 (38mm)	.265
3/4	3/4	43012U-H22	12x252	4.75	.59	2.75	.56	1.50 (38mm)	.265
3/4	1	43012U-H23	16x252	4.75	.59	2.75	.56	1.75 (44mm)	.315
1	1	43016U-H23	16x252	5.09	.64	3.06	.76	1.75 (44mm)	.315
1	1-1/4	43016U-H24	20x252	5.01	.64	3.00	.76	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-H24	20x252	5.33	.72	3.06	1.02	2.00 (51mm)	.315
1-1/4	1-1/2	43020U-H25	24x252	5.38	.75	3.13	1.02	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-H25	24x252	6.33	.91	3.81	1.25	2.38 (60mm)	.315
1-1/2	2	43024U-H26	32x252	6.50	1.01	4.00	1.25	2.81 (71mm)	.375
2	2	43032U-H26	32x252	7.88	1.31	5.44	1.56	2.81 (71mm)	.375

(For Split Flange Kits, see pages 330-333.)

**Female FOR-SEAL  
Swivel 45° Tube Elbow**

HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/8	3/8	43006U-L66	11/16-16	2.27	.43	1.43	.26	13/16
3/8	1/2	43006U-L68	13/16-16	2.58	.59	1.74	.26	15/16
1/2	1/2	43008U-L68	13/16-16	4.16	.59	2.25	.34	15/16
1/2	5/8	43008U-L70	1-14	4.48	.65	2.56	.34	1-1/8
5/8	5/8	43010U-L70	1-14	3.05	.65	2.02	.45	1-1/8
3/4	3/4	43012U-L72	1-3/16-12	4.80	.84	2.81	.56	1-3/8
1	1	43016U-L76	1-7/16-12	5.11	.95	3.06	.76	1-5/8
1-1/4	1-1/4	43020U-L80	1-11/16-12	5.07	1.05	2.85	1.01	1-7/8
1-1/2	1-1/2	43024U-L84	2-12	5.98	1.07	3.50	1.25	2-1/4

# Coll-O-Crimp

## 430 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

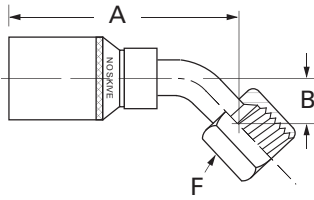
ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

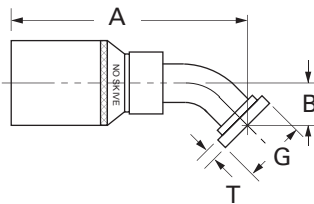
### JIC 37° Female Swivel 60° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/2	5/8	43008U-C60	7/8-14	4.48	1.00	2.63	.34	1
3/4	3/4	43012U-C62	1-1/16-12	5.12	1.71	3.13	.56	1-1/4
1	1	43016U-C66	1-5/16-12	5.74	1.53	3.69	.76	1-1/2

### Split Flange 45° Tube Elbow (SAE Code 61)

(SAE Code 61)

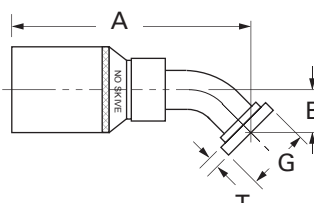


HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCL'D)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1/2	1/2	43008U-G41	8x252	4.51	.78	2.63	.34	1.19 (30mm)	.265
1/2	3/4	43008U-G42	12x252	4.55	.82	2.63	.34	1.50 (38mm)	.265
1/2	1	43008U-G46	16x252	4.86	.82	3.00	.34	1.75 (44mm)	.315
5/8	3/4	43010U-G42	12x252	3.56	1.00	2.53	.50	1.50 (38mm)	.265
3/4	3/4	43012U-G42	12x252	4.92	1.00	2.94	.56	1.50 (38mm)	.265
3/4	1	43012U-G46	16x252	4.92	1.00	2.94	.56	1.75 (44mm)	.315
1	1	43016U-G46	16x252	4.64	.89	2.62	.76	1.75 (44mm)	.315
1	1-1/4	43016U-G50	20x252	4.82	1.06	2.81	.76	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-G50	20x252	5.22	1.09	2.90	1.01	2.00 (51mm)	.315
1-1/4	1-1/2	43020U-G54	24x252	5.14	1.09	2.90	1.01	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-G54	24x252	6.39	1.41	3.93	1.25	2.38 (60mm)	.315
1-1/2	2	43024U-G62	32x252	6.39	1.41	3.93	1.25	2.81 (71mm)	.375
2	2	43032U-G62	32x252	8.04	2.00	5.23	1.56	2.81 (79mm)	.375

(For Split Flange Kits, see pages 330-333.)

### Split Flange 45° Tube Elbow (SAE Code 62)

(SAE Code 62)



HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCL'D)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1/2	1/2	43008U-D41	8x252	4.82	.94	2.94	.34	1.25 (32mm)	.345
1/2	3/4	43008U-D42	12x252	4.82	1.00	2.94	.34	1.62 (41mm)	.345
5/8	3/4	43010U-D12	12x252	3.13	1.63	2.11	.50	1.62 (41mm)	.345
3/4	3/4	43012U-D42	12x252	5.19	1.27	3.19	.56	1.62 (41mm)	.345
3/4	1	43012U-D46	16x252	5.21	1.29	3.19	.56	1.88 (48mm)	.375
1	1	43016U-D46	16x252	5.57	1.34	3.56	.76	1.88 (48mm)	.375
1	1-1/4	43016U-D50	20x252	5.56	1.44	3.50	.76	2.12 (54mm)	.405
1-1/4	1-1/4	43020U-D50	20x252	6.60	1.68	4.31	1.01	2.12 (54mm)	.405
1-1/4	1-1/2	43020U-D54	24x252	6.67	1.75	4.38	1.01	2.50 (64mm)	.495
1-1/2	1-1/2	43024U-D54	24x252	7.25	1.86	4.75	1.25	2.50 (64mm)	.495
2	2	43032U-D62	32x252	8.74	2.25	5.94	1.56	3.12 (79mm)	.495

(For Split Flange Kits, see pages 330-333.)

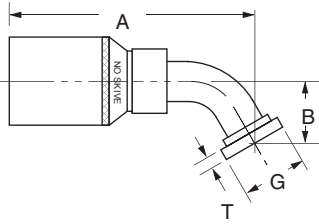


**Coll-O-Crimp****430 'U' Series**

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

**Split Flange  
60° Tube Elbow**

(SAE Code 61)

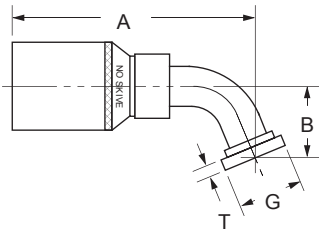


HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCL'D)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1/2	1/2	43008U-H51	8x252	4.59	1.05	2.69	.34	1.19 (30mm)	.265
1/2	3/4	43008U-H52	12x252	4.62	1.10	2.75	.34	1.50 (38mm)	.265
3/4	3/4	43012U-H52	12x252	4.98	1.38	2.94	.56	1.50 (38mm)	.265
3/4	1	43012U-H53	16x252	4.98	1.38	2.94	.56	1.75 (44mm)	.315
1	1	43016U-H53	16x252	5.47	1.51	3.44	.76	1.75 (44mm)	.315
1	1-1/4	43016U-H54	20x252	5.58	1.51	3.56	.76	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-H54	20x252	5.57	1.69	3.31	1.01	2.00 (51mm)	.315
1-1/4	1-1/2	43020U-H55	24x252	5.57	1.66	3.30	1.01	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-H55	24x252	6.51	2.08	4.00	1.25	2.38 (60mm)	.315
1-1/2	2	43024U-H56	32x252	6.61	2.25	4.13	1.25	2.81 (71mm)	.375
2	2	43032U-H56	32x252	8.19	2.87	5.38	1.56	2.81 (71mm)	.375

(For Split Flange Kits, see pages 330-333.)

**Split Flange  
67-1/2° Tube Elbow**

(SAE Code 61)



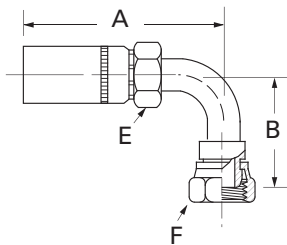
HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCL'D)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1/2	1/2	43008U-H61	8x252	4.40	1.25	2.50	.34	1.19 (30mm)	.265
1/2	3/4	43008U-H62	12x252	4.46	1.25	2.56	.34	1.50 (38mm)	.265
1/2	1	43008U-H63	16x252	4.69	1.25	2.81	.34	1.75 (44mm)	.315
3/4	3/4	43012U-H62	12x252	4.99	1.59	3.00	.56	1.50 (38mm)	.265
3/4	1	43012U-H63	16x252	4.99	1.59	3.00	.56	1.75 (44mm)	.315
3/4	1-1/4	43012U-H64	20x252	4.99	1.59	3.00	.56	2.00 (51mm)	.315
1	1	43016U-H63	16x252	5.25	1.76	3.19	.76	1.75 (44mm)	.315
1	1-1/4	43016U-H64	20x252	5.25	1.76	3.19	.76	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-H64	20x252	5.55	1.94	3.25	1.01	2.00 (51mm)	.315
1-1/4	1-1/2	43020U-H65	24x252	5.57	2.00	3.30	1.01	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-H65	24x252	6.53	2.37	4.07	1.25	2.38 (60mm)	.315
1-1/2	2	43024U-H66	32x252	6.53	2.37	4.07	1.25	2.81 (71mm)	.375
2	2	43032U-H66	32x252	8.39	3.40	5.56	1.56	2.81 (71mm)	.375

(For Split Flange Kits, see pages 330-333.)

**British Standard  
(BSPP) 60° Cone  
Female Pipe Swivel  
90° Elbow**

HOSE I.D.	BSPP SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
3/4	3/4	43012U-82P	G-3/4-14*	4.58	2.46	2.97	.56	1-1/8	1-1/4
1	1	43016U-86P	G-1-11*	4.77	3.09	2.75	.76	1-1/4	1-1/2

\*G As Part of Thread Size is ISO Designation for Parallel Thread.



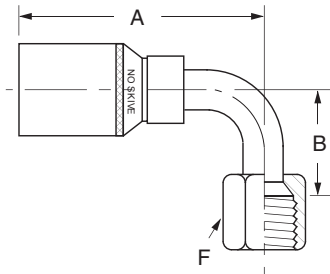
# Coll-O-Crimp

## 430 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly  
<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

### JIC 37° Female Swivel 90° Tube Elbow

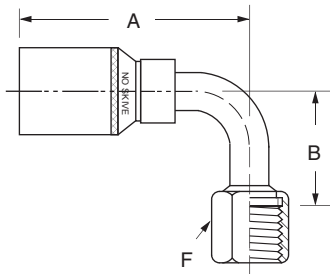
(Refer to Footnotes)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/8	3/8	43006U-666	9/16-18	2.26	1.50	1.42	.24	11/16
3/8	3/8	43006U-646	9/16-18	2.26	2.73	1.42	.24	11/16
3/8	1/2	43006U-668	3/4-16	2.55	1.87	1.71	.26	7/8
1/2	1/2	43008U-648L36 <sup>a</sup>	3/4-16	4.04	3.60	2.13	.34	7/8
1/2	1/2	43008U-648L45 <sup>a</sup>	3/4-16	4.04	4.50	2.13	.34	7/8
1/2	1/2	43008U-668 <sup>a</sup>	3/4-16	3.85	1.09	1.94	.34	7/8
1/2	5/8	43008U-650 <sup>a</sup>	7/8-14	4.14	2.57	2.25	.34	1
1/2	5/8	43008U-670 <sup>a</sup>	7/8-14	4.11	1.23	2.19	.34	1
5/8	5/8	43010U-670	7/8-14	2.94	1.52	1.91	.45	1
5/8	3/4	43010U-672	1-1/16-12	3.20	2.35	2.18	.50	1-1/4
3/4	3/4	43012U-652	1-1/16-12	4.65	3.62	2.63	.56	1-1/4
3/4	3/4	43012U-672	1-1/16-12	4.65	2.50	2.63	.56	1-1/4
1	1	43016U-656L33	1-5/16-12	5.00	3.37	3.00	.76	1-1/2
1	1	43016U-656L56	1-5/16-12	5.00	5.62	3.00	.76	1-1/2
1	1	43016U-676	1-5/16-12	5.27	3.00	3.25	.76	1-1/2
1	1	43016U-676L22	1-5/16-12	4.83	2.22	2.81	.76	1-1/2
1-1/4	1-1/4	43020U-677 +	1-5/8-12	5.21	3.34	2.99	1.01	2
1-1/2	1-1/2	43024U-678 +	1-7/8-12	6.11	3.95	3.62	1.19	2-1/4

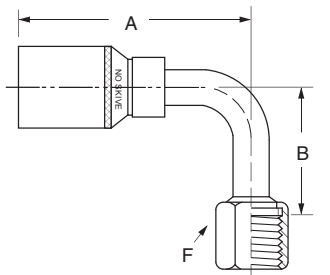
+Crimp style swivel nut.

### Female FOR-SEAL Swivel 90° Short Drop Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/8	3/8	43006U-A26	11/16-16	2.18	.90	1.34	.26	13/16
3/8	1/2	43006U-A28	13/16-16	2.46	1.15	1.62	.26	15/16
1/2	1/2	43008U-A28	13/16-16	3.90	1.15	2.00	.34	15/16
1/2	5/8	43008U-A30	1-14	4.21	1.27	2.31	.34	1-1/8
5/8	5/8	43010U-A30	1-14	2.94	1.27	1.91	.45	1-1/8
5/8	3/4	43010U-A32	1-3/16-12	3.31	1.88	2.29	.50	1-3/8
3/4	5/8	43012U-A30	1-14	4.24	1.27	2.25	.46	1-1/8
3/4	3/4	43012U-A32	1-3/16-12	4.78	1.88	2.75	.56	1-3/8
1	1	43016U-A36	1-7/16-12	4.95	2.21	2.93	.76	1-5/8
1-1/4	1-1/4	43020U-A40	1-11/16-12	5.26	2.51	3.00	1.02	1-7/8
1-1/4	1-1/2	43020U-A44	2-12	5.26	2.55	3.00	1.01	2-1/4
1-1/2	1-1/2	43024U-A44	2-12	6.11	2.70	3.63	1.25	2-1/4

### Female FOR-SEAL Swivel Long Drop 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/8	3/8	43006U-A66	11/16-16	2.18	2.13	1.34	.26	13/16
3/8	1/2	43006U-A68	13/16-16	2.55	2.50	1.71	.26	15/16
1/2	1/2	43008U-A68	13/16-16	4.32	2.51	2.44	.34	15/16
1/2	5/8	43008U-A70	1-14	4.61	2.76	2.75	.34	1-1/8
3/4	3/4	43012U-A72	1-3/16-12	4.73	3.78	2.75	.56	1-3/8
1	1	43016U-A76	1-7/16-12	5.16	4.50	3.13	.76	1-5/8
1-1/4	1-1/4	43020U-A80	1-11/16-12	5.26	5.09	3.00	1.01	1-7/8
1-1/4	1-1/2	43020U-A84	2-12	5.26	5.54	3.00	1.01	2-1/4
1-1/2	1-1/2	43024U-A84	2-12	6.11	5.54	3.63	1.25	2-1/4

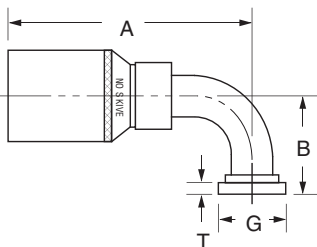
APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

**Coll-O-Crimp****430 'U' Series**

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

**Split Flange  
90° Tube Elbow**

(SAE Code 61)

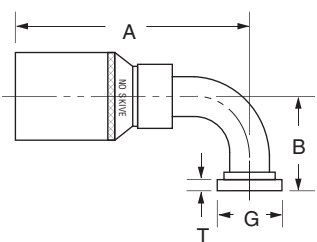


HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCL'D)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T
1/2	1/2	43008U-G71	8x252	4.18	1.63	2.25	.34	1.19 (30mm)	.265
1/2	1/2	43008U-G71L32	8x252	4.04	3.20	2.13	.34	1.19 (30mm)	.265
1/2	3/4	43008U-G72	12x252	4.53	1.68	2.63	.34	1.50 (38mm)	.265
1/2	1	43008U-G76	16x252	4.63	1.68	2.75	.34	1.75 (44mm)	.315
5/8	3/4	43010U-G72	12x252	3.31	2.13	2.29	.50	1.50 (38mm)	.265
3/4	3/4	43012U-G72	12x252	4.65	2.12	2.63	.56	1.50 (38mm)	.265
3/4	3/4	43012U-G72L37	12x252	4.65	3.75	2.63	.56	1.50 (38mm)	.265
3/4	3/4	43012U-G72L50	12x252	4.74	5.00	2.75	.56	1.50 (38mm)	.265
3/4	1	43012U-G76	16x252	4.65	2.12	2.63	.56	1.75 (44mm)	.315
3/4	1	43012U-G76L31	16x252	4.65	3.12	2.63	.56	1.75 (44mm)	.315
3/4	1-1/4	43012U-G80	20x252	5.65	2.12	3.63	.56	2.00 (51mm)	.315
1	1	43016U-G76	16x252	5.25	2.38	3.23	.76	1.75 (44mm)	.315
1	1	43016U-G76L21	16x252	5.06	2.12	3.06	.76	1.75 (44mm)	.315
1	1	43016U-G76L46	16x252	5.15	4.62	3.13	.76	1.75 (44mm)	.315
1	1-1/4	43016U-G80	20x252	5.21	2.38	2.94	.76	2.00 (51mm)	.315
1	1-1/4	43016U-G80L46	20x252	5.12	4.62	3.13	.76	2.00 (51mm)	.315
1	1-1/2	43016U-G84	24x252	5.15	2.44	3.13	.76	2.38 (60mm)	.315
1-1/4	1-1/4	43020U-G80	20x252	5.32	2.63	3.05	1.01	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-G80L31	20x252	5.32	3.00	3.05	1.02	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-G80L40	20x252	5.26	4.00	3.00	1.02	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-G80L51	20x252	5.32	5.13	3.05	1.02	2.00 (51mm)	.315
1-1/4	1-1/4	43020U-G80L66	20x252	5.26	6.62	3.00	1.02	2.00 (51mm)	.315
1-1/4	1-1/2	43020U-G84	24x252	5.37	2.63	3.05	1.01	2.38 (60mm)	.315
1-1/4	1-1/2	43020U-G84L46	24x252	5.26	4.68	3.00	1.02	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-G84	24x252	6.03	3.12	3.73	1.25	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-G84L58	24x252	6.11	5.80	3.63	1.21	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-G84L67	24x252	6.11	6.70	3.63	1.21	2.38 (60mm)	.315
1-1/2	2	43024U-G92	32x252	6.11	3.13	3.65	1.25	2.81 (71mm)	.375
1-1/2	2	43024U-G92L45	32x252	6.11	4.50	3.63	1.21	2.81 (71mm)	.375
1-1/2	2	43024U-G92L67	32x252	6.11	6.70	3.63	1.21	2.81 (71mm)	.375
2	1-1/2	43032U-G84	24x252	6.63	3.12	3.81	1.19	2.38 (60mm)	.315
2	2	43032U-G92	32x252	7.83	4.50	4.91	1.56	2.81 (71mm)	.375
2	2	43032U-G92L65	32x252	7.95	6.50	5.13	1.56	2.81 (71mm)	.375
2	2	43032U-G92L80	32x252	7.98	8.00	5.14	1.56	2.81 (71mm)	.375

(For Split Flange Kits, see pages 330-333.)

**Split Flange  
90° Tube Elbow**

(SAE Code 62)



HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCL'D)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1/2	1/2	43008U-D71	8x252	4.49	1.72	2.56	.34	1.25 (32mm)	.345
1/2	3/4	43008U-D72	12x252	4.53	1.90	2.63	.34	1.62 (41mm)	.345
3/4	3/4	43012U-D72	12x252	4.84	2.41	2.81	.56	1.62 (41mm)	.345
3/4	1	43012U-D76	16x252	4.84	2.70	2.81	.56	1.88 (48mm)	.375
1	1	43016U-D76	16x252	5.42	2.75	3.38	.76	1.88 (48mm)	.375
1	1-1/4	43016U-D80	20x252	5.31	2.90	3.25	.76	2.12 (54mm)	.405
1-1/4	1-1/4	43020U-D80	20x252	5.79	3.24	3.50	1.01	2.12 (54mm)	.405
1-1/4	1-1/2	43020U-D84	24x252	5.79	3.35	3.50	1.01	2.50 (64mm)	.405
1-1/2	1-1/2	43024U-D84	24x252	6.11	3.70	3.63	1.25	2.50 (64mm)	.495
1-1/2	2	43024U-D92	32x252	6.11	4.26	3.63	1.25	3.12 (79mm)	.495
2	2	43032U-D92	32x252	7.81	4.84	5.00	1.56	3.12 (79mm)	.495

(For Split Flange Kits, see pages 330-333.)

# Coll-O-Crimp

## 430 'U' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

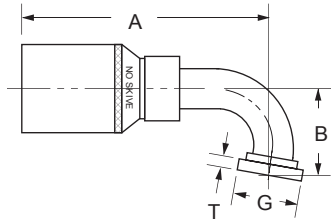
ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

### Split Flange 100° Tube Elbow

(SAE Code 61)

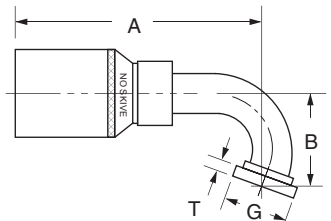


HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCL'D)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
3/4	3/4	43012U-H72	12x252	4.78	2.33	2.81	.61	1.50 (38mm)	.265
3/4	1	43012U-H73	16x252	4.94	2.33	2.81	.61	1.75 (44mm)	.315

(For Split Flange Kits, see pages 330-333.)

### Split Flange 110° Tube Elbow

(SAE Code 61)

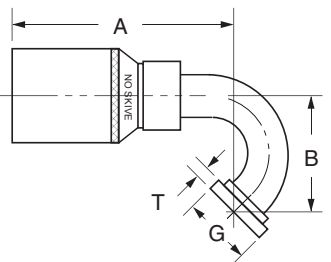


HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCL'D)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1	1	43016U-H83	16x252	4.48	2.84	2.46	.76	1.75 (44mm)	.315
1-1/4	1-1/4	43020U-H84	20x252	4.82	3.12	2.56	1.01	2.00 (51mm)	.315
1-1/4	1-1/2	43020U-H85	24x252	5.24	3.17	2.94	1.01	2.38 (60mm)	.315
1-1/2	1-1/2	43024U-H85	24x252	5.49	3.69	3.00	1.25	2.38 (60mm)	.315
2	2	43032U-H86	32x252	7.26	5.65	4.44	1.56	2.81 (71mm)	.375

(For Split Flange Kits, see pages 330-333.)

### Split Flange 135° Tube Elbow

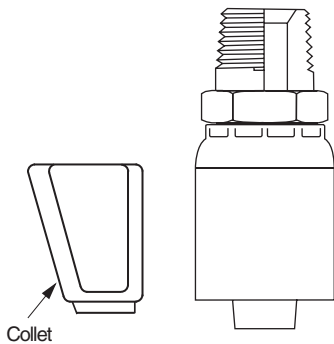
(SAE Code 61)



HOSE I.D.	NOMINAL FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCL'D)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. G	T NOMINAL
1/2	1/2	43008U-H91	8x252	4.06	2.12	2.19	.34	1.19 (30mm)	.265
3/4	3/4	43012U-H92	12x252	4.04	3.00	2.06	.61	1.50 (38mm)	.265

(For Split Flange Kits, see pages 330-333.)

## 'Z' Series

**Note:**

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

**Ordering Information:**

Order individually by catalog number. O-rings not supplied with flange hose ends. Order o-rings by catalog number; reference individual listings for details. For split flange kits, refer to pages 330-333.

**Typical Application:**

General purpose low, medium, and high pressure hydraulic.

**Compatible Hose:**

H104; H145; H145R; H190; H190H; H245; H280; H290; H290H; H290L; H345; H350; H400; H425 and H579.

**Pressure:** Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. For working pressure ratings for hose end configurations, refer to page 16.

**Material:** Low Carbon Steel

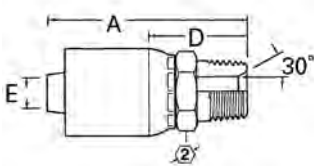
**Plating:** Zinc; yellow dichromate finish

**Advantages:**

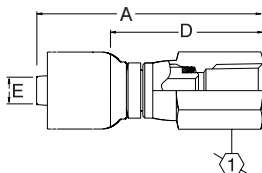
Wide selection of hose and end configurations allowing a diverse number of applications.

**Assemble With:**

T-400-1, T-410-1, T-420-1, T-440, T-460, T-462, T-465, T-480, ET1000 and ET4000.

**Male Pipe Rigid**

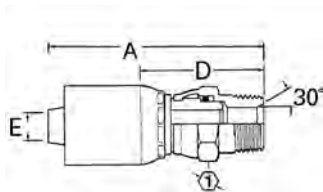
Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		②
			mm	in	mm	in	mm	in	
04Z-102	1/8-27	-04	46,7	1.84	23,4	0.92	4,3	0.17	9/16
04Z-104	1/4-18	-04	52,3	2.06	29,0	1.14	4,3	0.17	9/16
04Z-106	3/8-18	-04	48,3	1.90	24,9	0.98	4,3	0.17	11/16
06Z-104	1/4-18	-06	55,4	2.18	30,0	1.18	6,6	0.26	11/16
06Z-106	3/8-18	-06	57,7	2.27	32,5	1.28	6,6	0.26	11/16
06Z-108	1/2-14	-06	57,7	2.27	32,5	1.28	4,1	0.16	7/8
08Z-104	1/4-18	-08	61,0	2.40	31,2	1.23	7,6	0.30	13/16
08Z-106	3/8-18	-08	63,2	2.49	33,5	1.32	9,7	0.38	13/16
08Z-108	1/2-14	-08	69,6	2.74	39,6	1.56	9,7	0.38	7/8
08Z-112	3/4-14	-08	65,0	2.56	35,3	1.39	9,7	0.38	11/16
10Z-108	1/2-14	-10	69,6	2.74	40,1	1.58	12,7	0.50	15/16
10Z-112	3/4-14	-10	65,0	2.56	35,6	1.40	12,7	0.50	11/16
12Z-108	1/2-14	-12	70,6	2.78	40,6	1.60	14,2	0.56	11/8
12Z-112	3/4-14	-12	72,1	2.84	41,9	1.65	15,5	0.61	11/8
12Z-116	1-11 1/2	-12	71,1	2.80	40,9	1.61	15,5	0.61	13/8
16Z-112	3/4-14	-16	76,7	3.02	42,4	1.67	19,3	0.76	13/8
16Z-116	1-11 1/2	-16	81,8	3.22	47,2	1.86	20,8	0.82	13/8
16Z-120	1 1/4-11 1/2	-16	78,2	3.08	43,7	1.72	20,8	0.82	1 1/16
20Z-116	1-11 1/2	-20	93,0	3.66	49,0	1.93	24,1	0.95	13/4
20Z-120	1 1/4-11 1/2	-20	89,4	3.52	45,5	1.79	26,7	1.05	1 13/16

**Female Pipe Swivel**

Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		①
			mm	in	mm	in	mm	in	
04Z-254	1/4-18	-04	72,9	2.87	49,5	1.95	4,3	0.17	3/4
06Z-256	3/8-18	-06	75,4	2.97	50,0	1.97	6,6	0.26	7/8
08Z-258	1/2-14	-08	90,9	3.58	61,2	2.41	9,7	0.38	1 1/16
12Z-262	3/4-14	-12	92,2	3.63	62,0	2.44	15,5	0.61	13/8

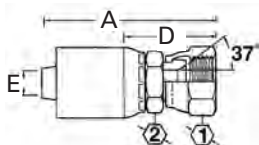
## 'Z' Series

### Male Pipe Swivel



Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		①
			mm	in	mm	in	mm	in	in
04Z-J04	1/4-18	-04	64,5	2.54	41,4	1.62	4,3	0.17	3/4
06Z-J06	3/8-18	-06	67,6	2.66	42,4	1.67	6,6	0.26	7/8
06Z-J08	1/2-14	-06	72,4	2.85	47,0	1.85	6,6	0.26	7/8
08Z-J06	3/8-18	-08	73,2	2.88	43,4	1.71	9,7	0.38	7/8
08Z-J08	1/2-14	-08	79,5	3.13	49,8	1.96	9,7	0.38	15/16
12Z-J12	3/4-14	-12	82,3	3.24	52,1	2.05	15,5	0.61	13/8
16Z-J16	1-11 1/2	-16	98,6	3.88	64,3	2.53	20,6	0.81	1 1/2

### JIC/37° Female Swivel



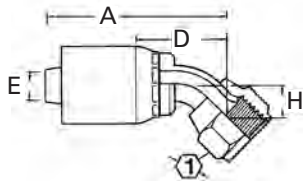
Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		①	②
			mm	in	mm	in	mm	in	in	in
04Z-603	3/8-24	-04	49,3	1.94	25,9	1.02	3,3	0.13	1/2	9/16
04Z-604	7/16-20	-04	50,8	2.00	27,2	1.07	4,3	0.17	9/16	9/16
04Z-605	1/2-20	-04	50,3	1.98	26,9	1.06	4,3	0.17	5/8	9/16
04Z-606	9/16-18	-04	51,6	2.03	28,2	1.11	4,3	0.17	11/16	9/16
06Z-604	7/16-20	-06	55,6	2.19	30,2	1.19	4,3	0.17	9/16	11/16
06Z-605	1/2-20	-06	56,9	2.24	31,5	1.24	5,8	0.23	5/8	11/16
06Z-606	9/16-18	-06	57,9	2.28	32,5	1.28	6,6	0.26	11/16	11/16
06Z-608	3/4-16	-06	58,7	2.31	33,3	1.31	6,6	0.26	7/8	11/16
08Z-608	3/4-16	-08	66,8	2.63	37,1	1.46	9,7	0.38	7/8	13/16
08Z-610	7/8-14	-08	67,1	2.64	37,3	1.47	9,7	0.38	1	13/16
08Z-612	1 1/16-12	-08	69,3	2.73	39,6	1.56	9,7	0.38	1 1/4	1
08Z-616	1 5/16-12	-08	77,7	3.06	48,0	1.89	9,7	0.38	1 1/2	1 1/4
10Z-608	3/4-16	-10	67,3	2.65	38,1	1.50	9,9	0.39	7/8	15/16
10Z-610	7/8-14	-10	70,4	2.77	40,9	1.61	12,7	0.50	1	15/16
10Z-612	1 1/16-12	-10	69,1	2.72	39,9	1.57	12,7	0.50	1 1/4	1
12Z-610	7/8-14	-12	71,4	2.81	41,4	1.63	12,2	0.48	1	1 1/8
12Z-612	1 1/16-12	-12	72,1	2.84	41,9	1.65	15,5	0.61	1 1/4	1 1/8
12Z-614	1 3/16-12	-12	72,1	2.84	41,9	1.65	15,5	0.61	1 3/8	1 1/8
12Z-616	1 5/16-12	-12	73,9	2.91	43,7	1.72	15,5	0.61	1 1/2	1 1/4
16Z-612	1 1/16-12	-16	80,0	3.15	45,7	1.80	15,5	0.61	1 1/4	1 3/8
16Z-616	1 5/16-12	-16	83,6	3.29	49,0	1.93	20,6	0.81	1 1/2	1 3/8
16Z-620	1 5/8-12	-16	80,5	3.17	46,0	1.81	20,6	0.81	2	
20Z-616	1 5/16-12	-20	87,9	3.46	43,9	1.73	21,6	0.85	1 1/2	
20Z-620	1 5/8-12	-20	91,7	3.61	47,8	1.88	26,7	1.05	2	



## 'Z' Series

**JIC/37° Female Swivel  
45° Elbow**

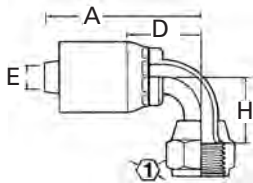
(Exceptions noted, refer to footnotes)



Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H		① in
			mm	in	mm	in	mm	in	mm	in	
04Z-684 <sup>a</sup>	7/16-20	-04	49,8	1.96	26,4	1.04	3,8	0.15	8,4	0.33	9/16
04Z-685 <sup>a</sup>	1/2-20	-04	51,8	2.04	28,4	1.12	4,3	0.17	9,4	0.37	5/8
04Z-686	9/16-18	-04	53,1	2.09	29,7	1.17	4,3	0.17	9,9	0.39	11/16
06Z-686	9/16-18	-06	58,7	2.31	33,3	1.31	6,1	0.24	9,9	0.39	11/16
06Z-688 <sup>a</sup>	3/4-16	-06	67,3	2.65	42,2	1.66	6,6	0.26	14,0	0.55	7/8
08Z-688 <sup>a</sup>	3/4-16	-08	71,6	2.82	41,9	1.65	9,4	0.37	14,0	0.55	7/8
08Z-690 <sup>a</sup>	7/8-14	-08	77,0	3.03	47,2	1.86	9,7	0.38	15,0	0.59	1
10Z-690 <sup>a</sup>	7/8-14	-10	74,7	2.94	45,5	1.79	11,7	0.46	15,0	0.59	1
10Z-692	1 1/16-12	-10	85,9	3.38	56,4	2.22	12,7	0.50	19,8	0.78	1 1/4
12Z-692	1 1/16-12	-12	87,1	3.43	56,9	2.24	14,7	0.58	19,8	0.78	1 1/4
16Z-696	1 5/16-12	-16	95,0	3.74	60,7	2.39	19,3	0.76	27,2	1.07	1 1/2
20Z-697	1 5/8-12	-20	112,8	4.44	68,8	2.71	25,7	1.01	31,0	1.22	2

<sup>a</sup> Swivel nuts are universal, both 37° and 45° connections.**JIC/37° Female Swivel  
90° Elbow**

(Exceptions noted, refer to footnotes)



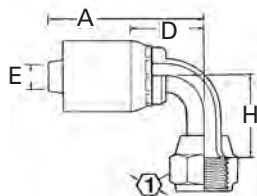
Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H		① in
			mm	in	mm	in	mm	in	mm	in	
04Z-664 <sup>a</sup>	7/16-20	-04	46,7	1.84	23,4	0.92	3,8	0.15	17,3	0.68	9/16
04Z-665 <sup>a</sup>	1/2-20	-04	48,8	1.92	25,4	1.00	4,3	0.17	19,3	0.76	5/8
04Z-666	9/16-18	-04	50,8	2.00	27,4	1.08	4,3	0.17	21,3	0.84	11/16
06Z-666	9/16-18	-06	56,1	2.21	31,0	1.22	6,1	0.24	21,3	0.84	11/16
06Z-668 <sup>a</sup>	3/4-16	-06	61,5	2.42	36,1	1.42	6,6	0.26	27,7	1.09	7/8
08Z-666	9/16-18	-08	61,7	2.43	32,0	1.26	6,1	0.24	21,3	0.84	11/16
08Z-668 <sup>a</sup>	3/4-16	-08	65,8	2.59	36,1	1.42	9,4	0.37	27,7	1.09	7/8
08Z-670 <sup>a</sup>	7/8-14	-08	70,6	2.78	41,0	1.61	9,7	0.38	30,2	1.19	1
10Z-670 <sup>a</sup>	7/8-14	-10	68,6	2.70	39,4	1.55	11,4	0.45	30,2	1.19	1
10Z-672	1 1/16-12	-10	84,1	3.31	54,9	2.16	12,7	0.50	45,7	1.80	1 1/4
12Z-672	1 1/16-12	-12	85,4	3.36	55,1	2.17	17,4	0.58	45,7	1.80	1 1/4
12Z-676	1 5/16-12	-12	85,6	3.37	55,4	2.18	15,5	0.61	60,7	2.39	1 1/2
16Z-676	1 5/16-12	-16	90,4	3.56	55,9	2.20	19,3	0.76	60,7	2.39	1 1/2
20Z-677	1 5/8-12	-20	108,0	4.25	64,0	2.52	25,7	1.01	69,9	2.75	2

<sup>a</sup> Swivel nuts are universal, both 37° and 45° connections.

## 'Z' Series

### JIC/37° Female Swivel 90° Long Drop Tube Elbow

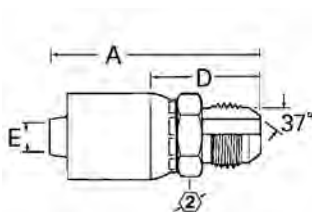
(Exceptions noted, refer to footnotes)



Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H		in
			mm	in	mm	in	mm	in	mm	in	
04Z-644 <sup>a</sup>	7/16-20	-04	46,7	1.84	23,4	0.92	3,8	0.15	45,7	1.80	9/16
04Z-645 <sup>a</sup>	1/2-20	-04	48,8	1.92	25,4	1.00	4,3	0.17	45,7	1.80	5/8
06Z-646	9/16-18	-06	56,4	2.22	31,2	1.23	6,1	0.24	55,4	2.18	11/16
06Z-648 <sup>a</sup>	3/4-16	-06	64,5	2.54	39,1	1.54	6,6	0.26	62,2	2.45	7/8
08Z-648 <sup>a</sup>	3/4-16	-08	68,8	2.71	39,1	1.54	9,4	0.37	62,2	2.45	7/8
08Z-650 <sup>a</sup>	7/8-14	-08	70,6	2.78	40,9	1.61	9,7	0.38	65,3	2.57	1
10Z-650 <sup>a</sup>	7/8-14	-10	68,6	2.70	39,1	1.54	11,7	0.46	65,3	2.57	1
12Z-652	1 1/16-12	-12	85,3	3.36	55,1	2.17	14,7	0.58	94,0	3.70	1 1/4
16Z-656	1 5/16-12	-16	90,4	3.56	55,9	2.20	19,3	0.76	116,3	4.58	1 1/2
20Z-657	1 5/8-12	-20	108,0	4.25	64,0	2.52	25,7	1.01	140,5	5.53	2

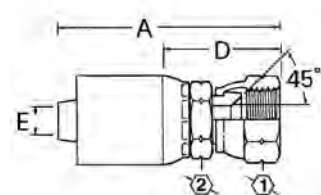
<sup>a</sup> Swivel nuts are universal - both SAE 37° and 45° connections.

### JIC 37° Male Rigid



Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		in
			mm	in	mm	in	mm	in	
04Z-504	7/16-20	-04	50,8	2.00	27,2	1.07	4,3	0.17	9/16
04Z-505	1/2-20	-04	46,7	1.84	23,4	0.92	4,3	0.17	9/16
04Z-506	9/16-18	-04	47,0	1.85	23,6	0.93	4,3	0.17	5/8
06Z-506	9/16-18	-06	54,9	2.16	29,7	1.17	6,6	0.26	11/16
06Z-508	3/4-16	-06	53,3	2.10	28,2	1.11	6,6	0.26	13/16
08Z-508	3/4-16	-08	65,3	2.57	35,8	1.41	9,7	0.38	13/16
08Z-510	7/8-14	-08	61,5	2.42	32,0	1.26	9,7	0.38	15/16
08Z-512	1 1/16-12	-08	65,8	2.59	36,1	1.42	9,7	0.38	1 1/8
10Z-510	7/8-14	-10	69,3	2.73	39,9	1.57	12,2	0.48	15/16
10Z-512	1 1/16-12	-10	65,8	2.59	36,3	1.43	12,7	0.50	1 1/8
12Z-510	7/8-14	-12	70,6	2.78	40,4	1.59	12,2	0.48	1 1/8
12Z-512	1 1/16-12	-12	74,7	2.94	44,5	1.75	15,5	0.61	1 1/8
12Z-514	1 3/16-12	-12	69,3	2.73	39,1	1.54	15,5	0.61	1 1/4
12Z-516	1 5/16-12	-12	69,9	2.75	39,6	1.56	15,5	0.61	1 3/8
16Z-516	1 5/16-12	-16	82,6	3.25	48,3	1.90	20,8	0.82	1 3/8
20Z-520	1 5/8-12	-20	98,8	3.89	54,9	2.16	26,7	1.05	1 3/4

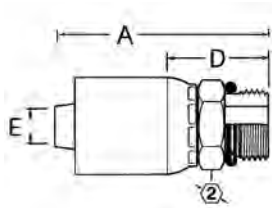
### SAE 45° Female Swivel



Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		in	in
			mm	in	mm	in	mm	in		
04Z-404	7/16-20	-04	50,8	2.00	27,2	1.07	4,3	0.17	9/16	9/16
04Z-405	1/2-20	-04	50,3	1.98	26,9	1.06	4,3	0.17	5/8	9/16
06Z-404	7/16-20	-06	55,6	2.19	30,2	1.19	4,8	0.19	9/16	11/16
06Z-406	5/8-18	-06	58,7	2.31	33,3	1.31	6,6	0.26	3/4	11/16
06Z-408	3/4-16	-06	58,7	2.31	33,3	1.31	6,6	0.26	7/8	11/16
08Z-408	3/4-16	-08	66,8	2.63	37,1	1.46	9,7	0.38	7/8	13/16
08Z-410	7/8-14	-08	67,1	2.64	37,3	1.47	9,7	0.38	1	13/16
12Z-412	1 1/16-14	-12	72,1	2.84	41,9	1.65	15,5	0.61	1 1/4	1 1/8

## 'Z' Series

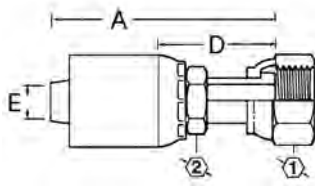
### Male Straight Thread O-Ring Rigid



Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		⊘2
			mm	in	mm	in	mm	in	in
04Z-P04	7/16-20	-04	46,7	1.84	23,4	0.92	4,3	0.17	9/16
04Z-P05	1/2-20	-04	46,7	1.84	23,4	0.92	4,3	0.17	5/8
04Z-P06	9/16-18	-04	45,2	1.78	21,8	0.86	4,3	0.17	11/16
06Z-P06	9/16-18	-06	50,8	2.00	25,4	1.00	6,6	0.26	11/16
06Z-P08	3/4-16	-06	50,0	1.97	24,9	0.98	6,6	0.26	7/8
08Z-P08	3/4-16	-08	59,9	2.36	30,2	1.19	9,7	0.38	7/8
08Z-P10	7/8-14	-08	57,4	2.26	27,7	1.09	9,7	0.38	1
08Z-P12	1 1/16-12	-08	60,7	2.39	31,0	1.22	9,7	0.38	1 1/4
10Z-P10	7/8-14	-10	62,7	2.47	33,3	1.31	12,7	0.50	1
10Z-P12	1 1/16-12	-10	60,7	2.39	31,2	1.23	12,7	0.50	1 1/4
12Z-P12	1 1/16-12	-12	62,0	2.44	31,8	1.25	15,5	0.61	1 1/4
12Z-P16	1 5/16-12	-12	65,0	2.56	34,8	1.37	15,5	0.61	1 1/2
16Z-P16	1 5/16-12	-16	69,6	2.74	35,3	1.39	20,8	0.82	1 1/2
20Z-P20	1 5/8-12	-20	92,2	3.63	48,3	1.90	26,7	1.05	1 7/8

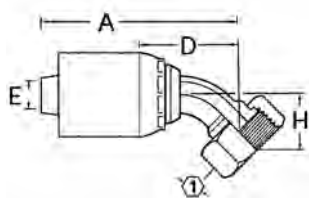
(Includes O-Ring. For replacement o-ring see page 132.)

### Female FOR-SEAL® Swivel



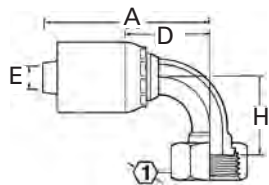
Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		⊘1	⊘2
			mm	in	mm	in	mm	in	in	in
04Z-S64	9/16-18	-04	49,5	1.95	26,2	1.03	4,3	0.17	11/16	9/16
04Z-S66	11/16-16	-04	51,8	2.04	28,4	1.12	4,3	0.17	13/16	5/8
06Z-S64	9/16-18	-06	54,4	2.14	29,2	1.15	4,3	0.17	11/16	11/16
06Z-S66	11/16-16	-06	56,6	2.23	31,5	1.24	6,6	0.26	13/16	11/16
06Z-S68	13/16-16	-06	58,9	2.32	33,5	1.32	6,6	0.26	15/16	13/16
08Z-S66	11/16-16	-08	63,8	2.51	34,0	1.34	6,6	0.26	13/16	7/8
08Z-S68	13/16-16	-08	67,8	2.67	38,1	1.50	9,7	0.38	15/16	7/8
08Z-S70	1-14	-08	67,1	2.64	37,3	1.47	9,7	0.38	1 1/8	15/16
08Z-S72	1 3/16-12	-08	71,1	2.80	41,4	1.63	9,7	0.38	1 3/8	1 1/8
10Z-S68	13/16-16	-10	67,8	2.67	38,4	1.51	9,7	0.38	15/16	15/16
10Z-S70	1-14	-10	70,1	2.76	40,9	1.61	12,2	0.48	1 1/8	15/16
10Z-S72	1 3/16-12	-10	70,9	2.79	41,4	1.63	12,7	0.50	1 3/8	1 1/8
12Z-S70	1-14	-12	71,4	2.81	41,4	1.62	12,2	0.48	1 1/8	1 1/8
12Z-S72	1 3/16-12	-12	73,9	2.91	43,7	1.72	15,5	0.61	1 3/8	1 1/8
12Z-S76	1 7/16-12	-12	75,7	2.98	45,5	1.79	15,5	0.61	1 5/8	1 3/8
16Z-S72	1 3/16-12	-16	81,8	3.22	47,2	1.86	15,5	0.61	1 3/8	1 3/8
16Z-S76	1 7/16-12	-16	83,6	3.29	49,3	1.94	20,6	0.81	1 5/8	1 3/8
16Z-S80	1 11/16-12	-16	82,6	3.25	48,3	1.90	20,6	0.81	1 7/8	1 5/8
20Z-S80	1 11/16-12	-20	103,4	4.07	59,2	2.33	25,9	1.02	1 7/8	1 3/4
20Z-S84	2-12	-20	98,6	3.88	54,6	2.15	26,7	1.05	2 1/4	1 13/16

### Female FOR-SEAL® Swivel 45° Tube Elbow



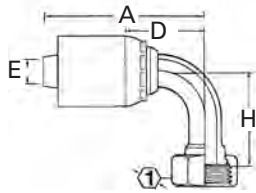
Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H		① in
			mm	in	mm	in	mm	in	mm	in	
04Z-L64	9/16-18	-04	53,8	2.12	30,5	1.20	4,3	0.17	10,2	0.40	11/16
04Z-L66	11/16-16	-04	58,4	2.30	35,1	1.38	4,3	0.17	10,9	0.43	13/16
06Z-L64	9/16-18	-06	58,4	2.30	33,0	1.30	4,3	0.17	10,4	0.41	11/16
06Z-L66	11/16-16	-06	61,7	2.43	36,3	1.43	6,6	0.26	10,9	0.43	13/16
06Z-L68	13/16-16	-06	69,6	2.74	44,2	1.74	6,6	0.26	15,0	0.59	15/16
08Z-L66	11/16-16	-08	67,3	2.65	37,6	1.48	6,6	0.26	10,9	0.43	13/16
08Z-L68	13/16-16	-08	75,2	2.96	45,5	1.79	9,1	0.36	15,0	0.59	15/16
08Z-L70	1-14	-08	80,8	3.18	51,1	2.01	9,7	0.38	16,5	0.65	1 1/8
08Z-L72	1 3/16-12	-08	89,2	3.51	59,4	2.34	9,7	0.38	21,1	0.83	1 3/8
10Z-L70	1-14	-10	77,5	3.05	51,1	2.01	11,4	0.45	16,5	0.65	1 1/8
10Z-L72	1 3/16-12	-10	89,4	3.52	59,9	2.36	12,7	0.50	21,1	0.83	1 3/8
12Z-L72	1 3/16-12	-12	90,7	3.57	60,5	2.38	14,0	0.55	21,1	0.83	1 3/8
12Z-L72	1 7/16-12	-12	102,6	4.04	72,4	2.85	15,5	0.61	23,9	0.94	1 5/8
16Z-L76	1 7/16-12	-16	107,4	4.23	73,2	2.88	19,8	0.78	23,9	0.94	1 5/8
20Z-L80	1 11/16-12	-20	129,5	5.10	85,6	3.37	25,9	1.02	25,4	1.00	1 7/8
20Z-L84	2-12	-20	139,4	5.49	95,5	3.76	25,7	1.01	27,2	1.07	2 1/4

### Female FOR-SEAL® Swivel Short Drop 90° Tube Elbow



Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H		① in
			mm	in	mm	in	mm	in	mm	in	
04Z-A24	9/16-18	-04	53,1	2.09	29,7	1.17	4,3	0.17	20,8	0.82	11/16
04Z-A26	11/16-16	-04	56,4	2.22	33,0	1.30	4,3	0.17	22,9	0.90	13/16
06Z-A24	9/16-18	-06	56,1	2.21	30,7	1.21	4,3	0.17	20,8	0.82	11/16
06Z-A26	11/16-16	-06	59,4	2.34	34,0	1.34	6,6	0.26	22,9	0.90	13/16
06Z-A28	13/16-16	-06	66,5	2.62	41,4	1.62	6,6	0.26	29,2	1.15	15/16
08Z-A26	11/16-16	-08	65,0	2.56	35,3	1.39	6,6	0.26	22,9	0.90	13/16
08Z-A28	13/16-16	-08	72,1	2.84	42,4	1.67	9,1	0.36	29,2	1.15	15/16
08Z-A30	1-14	-08	78,0	3.07	48,5	1.91	9,7	0.38	32,3	1.27	1 1/8
08Z-A32	1 3/16-12	-08	87,6	3.45	57,9	2.28	9,7	0.38	47,8	1.88	1 3/8
10Z-A30	1-14	-10	78,0	3.07	48,5	1.91	11,4	0.45	32,3	1.27	1 1/8
10Z-A32	1 3/16-12	-10	87,4	3.44	58,2	2.29	12,7	0.50	47,8	1.88	1 3/8
12Z-A30	1-14	-12	79,0	3.11	49,0	1.93	11,4	0.45	32,3	1.27	1 1/8
12Z-A32	1 3/16-12	-12	88,6	3.49	58,4	2.30	14,0	0.55	47,8	1.88	1 3/8
12Z-A36	1 7/16-12	-12	102,6	4.04	72,4	2.85	15,5	0.61	56,1	2.21	1 5/8
16Z-A36	1 7/16-12	-16	107,2	4.22	72,9	2.87	20,6	0.81	56,1	2.21	1 5/8
16Z-A40	1 11/16-12	-16	123,2	4.85	89,0	3.50	20,6	0.81	63,8	2.51	1 7/8
20Z-A40	1 11/16-12	-20	134,6	5.30	90,7	3.57	25,9	1.02	63,8	2.51	1 7/8

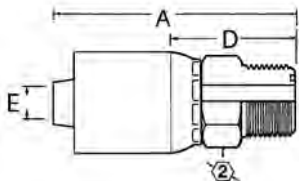
## 'Z' Series

Female FOR-SEAL®  
Swivel Long Drop  
90° Tube Elbow

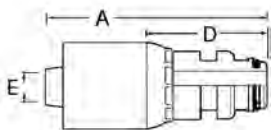
Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H		in
			mm	in	mm	in	mm	in	mm	in	
04Z-A64	9/16-18	-04	53,1	2.09	29,7	1.17	4,3	0.17	45,7	1.80	11/16
04Z-A66	11/16-16	-04	56,4	2.22	33,0	1.30	4,3	0.17	54,1	2.13	13/16
04Z-A68	13/16-16	-04	65,8	2.59	42,4	1.67	4,3	0.17	64,8	2.55	15/16
06Z-A66	11/16-16	-06	59,4	2.34	34,0	1.34	6,1	0.24	54,1	2.13	13/16
06Z-A68	13/16-16	-06	68,8	2.71	43,4	1.71	6,6	0.26	64,8	2.55	15/16
08Z-A68	13/16-16	-08	72,9	2.87	43,2	1.70	9,4	0.37	64,8	2.55	15/16
08Z-A70	1-14	-08	78,0	3.07	48,5	1.91	9,7	0.38	70,1	2.76	1 1/8
10Z-A70	1-14	-10	78,0	3.07	48,5	1.91	11,7	0.46	70,1	2.76	1 1/8
12Z-A72	13/16-12	-12	88,4	3.48	58,2	2.29	14,2	0.56	96,0	3.78	1 3/8
12Z-A76	17/16-12	-12	102,6	4.04	72,4	2.85	15,5	0.61	114,3	4.50	1 5/8
16Z-A76	17/16-12	-16	107,2	4.22	72,6	2.86	19,8	0.78	114,3	4.50	1 5/8
20Z-A80	1 11/16-12	-20	134,6	5.30	90,7	3.57	25,7	1.01	129,3	5.09	1 7/8

## FOR-SEAL® Male Rigid

Does not include o-ring.  
See page 273 for o-rings.



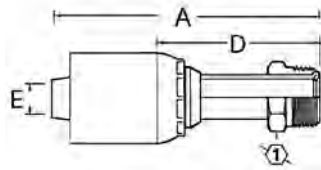
Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		in
			mm	in	mm	in	mm	in	
04Z-E64	9/16-18	-04	45,2	1.78	21,8	0.86	4,3	0.17	5/8
06Z-E66	11/16-16	-06	50,5	1.99	25,1	0.99	6,6	0.26	3/4
06Z-E68	13/16-16	-06	49,5	1.95	24,1	0.95	6,6	0.26	7/8
08Z-E68	13/16-16	-08	58,4	2.30	28,7	1.13	9,7	0.38	7/8
12Z-E72	13/16-12	-12	66,8	2.63	36,6	1.44	15,5	0.61	1 1/4
12Z-E76	17/16-12	-12	64,3	2.53	34,0	1.34	15,5	0.61	1 1/2

READY-LOK® Male  
Connector

Z-Series Part #	Connect. Size	Hose Size	A		Hose Cut-Off Factor (D)		EØ	
			mm	in	mm	in	mm	in
04Z-04S	1/4	-04	55,4	2.18	32,0	1.26	4,3	0.17
06Z-06S	3/8	-06	58,4	2.30	33,0	1.30	6,6	0.26
06Z-08S	3/8	-06	58,4	2.30	33,0	1.30	6,6	0.26
08Z-08S	1/2	-08	64,0	2.52	34,3	1.35	9,7	0.38
12Z-12S	3/4	-12	65,0	2.56	34,8	1.37	15,5	0.61
16Z-16S	1	-16	74,9	2.95	40,6	1.60	20,6	0.81
20Z-20S	1-1/4	-20	86,4	3.40	42,4	1.67	26,7	1.05

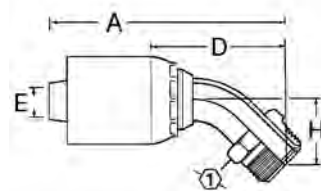
(O-ring and backup ring included. See page 329 for READY-LOK staple.)

### Inverted Male Swivel Straight



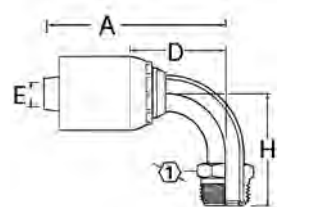
Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		① in
			mm	in	mm	in	mm	in	
04Z-B04	7/16-24	-04	60,7	2.39	37,1	1.46	4,3	0.17	7/16
06Z-B05	1/2-20	-06	66,0	2.60	40,9	1.61	6,1	0.24	1/2
06Z-B04	7/16-24	-06	64,3	2.53	38,9	1.53	4,3	0.17	7/16
06Z-B06	5/8-18	-06	66,0	2.60	40,9	1.61	6,6	0.26	5/8
08Z-B08	3/4-18	-08	70,9	2.79	41,4	1.62	9,7	0.38	3/4

### Inverted Male Swivel 45° Tube Elbow



Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H		① in
			mm	in	mm	in	mm	in	mm	in	
04Z-B44	7/16-24	-04	67,8	2.67	44,5	1.75	4,3	0.17	24,4	0.96	7/16
06Z-B44	7/16-24	-06	71,4	2.81	46,0	1.81	4,3	0.17	24,4	0.96	7/16
06Z-B46	5/8-18	-06	73,2	2.88	48,0	1.89	6,6	0.26	24,4	0.96	5/8
08Z-B48	3/4-18	-08	78,0	3.07	48,3	1.90	9,7	0.38	23,6	0.93	3/4

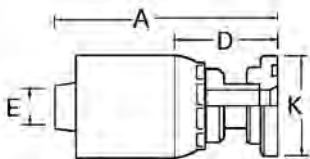
### Inverted Male Swivel 90° Tube Elbow



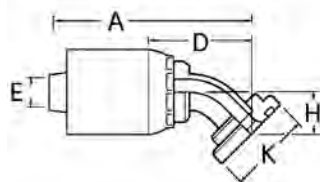
Z-Series Part #	Thd.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H		① in
			mm	in	mm	in	mm	in	mm	in	
04Z-B64	7/16-24	-04	58,2	2.29	34,8	1.37	4,3	0.17	42,3	1.69	7/16
06Z-B64	7/16-24	-06	61,7	2.43	36,6	1.44	4,3	0.17	42,3	1.69	7/16
06Z-B65	1/2-20	-06	63,8	2.51	38,4	1.51	6,1	0.24	43,9	1.73	1/2
06Z-B66	5/8-18	-06	63,8	2.51	38,4	1.51	6,6	0.26	43,9	1.73	5/8
08Z-B68	3/4-18	-08	69,3	2.73	39,6	1.56	9,7	0.38	44,5	1.75	3/4



## 'Z' Series

Split Flange Straight  
(SAE Code 61)

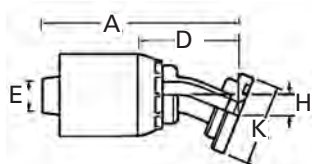
Z-Series Part #	Thd. Flange Head Dia. K Ø	Hose Size	A		Hose Cut-Off Factor (D)		EØ	
			mm	in	mm	in	mm	in
08Z-G08	1.19	-08	82,0	3.23	52,3	2.06	9,7	0.38
08Z-G12	1.50	-08	83,1	3.27	53,3	2.10	9,7	0.38
10Z-G12	1.50	-10	82,8	3.26	53,3	2.10	12,7	0.50
12Z-G12	1.50	-12	84,1	3.31	53,8	2.12	15,5	0.61
12Z-G16	1.75	-12	84,1	3.31	53,8	2.12	15,5	0.61
12Z-G20	2.00	-12	91,7	3.61	61,5	2.42	15,5	0.61
16Z-G16	1.75	-16	88,6	3.49	54,4	2.14	20,8	0.82
16Z-G20	2.00	-16	96,3	3.79	62,0	2.44	20,8	0.82
20Z-G16	1.75	-20	100,1	3.94	56,1	2.21	20,8	0.82
20Z-G20	2.00	-20	107,7	4.24	63,8	2.51	26,7	1.05
20Z-G24	2.38	-20	108,5	4.27	64,5	2.54	26,7	1.05
20Z-G32	2.81	-20	108,5	4.27	64,5	2.54	25,7	1.01

Split Flange 45° Tube  
Elbow (SAE Code 61)

Z-Series Part #	Flange Head Dia. K Ø	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H	
			mm	in	mm	in	mm	in	mm	in
08Z-G41	1.19	-08	79,0	3.11	49,3	1.94	9,4	0.37	19,8	0.78
08Z-G42	1.50	-08	92,5	3.64	62,7	2.47	9,4	0.37	25,4	1.00
10Z-G42	1.50	-10	93,5	3.68	64,3	2.53	11,7	0.46	25,4	1.00
12Z-G42	1.50	-12	93,2	3.67	63,0	2.48	14,7	0.58	25,7	1.01
12Z-G46	1.75	-12	105,7	4.16	75,4	2.97	14,7	0.58	26,9	1.06
16Z-G46	1.75	-16	110,5	4.35	76,2	3.00	19,3	0.76	26,9	1.06
16Z-G50	2.00	-16	122,2	4.81	87,6	3.45	19,3	0.76	29,2	1.15
20Z-G46	1.75	-20	121,9	4.80	77,7	3.06	19,3	0.76	26,9	1.06
20Z-G50	2.00	-20	134,1	5.28	90,2	3.55	25,7	1.01	30,0	1.18
20Z-G54	2.37	-20	150,9	5.94	106,7	4.20	25,7	1.01	35,8	1.41

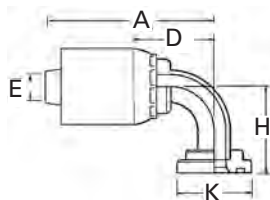
## 'Z' Series

### Split Flange 22.5° Tube Elbow (SAE Code 61)



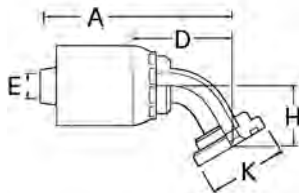
Z-Series Part #	Flange Head Dia. K Ø	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H	
			mm	in	mm	in	mm	in	mm	in
16Z-H03	1.75	-16	117,9	4.64	83,6	3.29	19,3	0.76	11,4	0.45
16Z-H04	2.00	-16	130,0	5.12	95,8	3.77	19,3	0.76	11,7	0.46
20Z-H04	2.00	-20	141,5	5.57	97,3	3.83	25,7	1.01	11,7	0.46

### Split Flange 90° Tube Elbow (SAE Code 61)



Z-Series Part #	Flange Head Dia. K Ø	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H	
			mm	in	mm	in	mm	in	mm	in
08Z-G71	1.19	-08	72,6	2.86	42,3	1.69	9,4	0.37	41,4	1.63
08Z-G72	1.50	-08	87,6	3.45	57,9	2.28	9,4	0.37	54,1	2.13
10Z-G72	1.50	-10	87,4	3.44	58,2	2.29	12,7	0.50	54,1	2.13
12Z-G72	1.50	-12	88,6	3.49	58,4	2.30	14,7	0.58	54,1	2.13
12Z-G76	1.75	-12	102,4	4.03	72,1	2.84	14,7	0.58	60,5	2.38
12Z-G80	2.00	-12	118,6	4.67	88,4	3.48	14,7	0.58	66,5	2.62
16Z-G76	1.75	-16	107,2	4.22	72,6	2.86	19,3	0.76	60,5	2.38
16Z-G80	2.00	-16	123,2	4.85	89,0	3.50	19,3	0.76	66,5	2.62
16Z-G80	2.37	-16	142,0	5.59	107,7	4.24	19,3	0.76	79,2	3.12
20Z-G76	1.75	-20	118,4	4.66	74,4	2.93	19,3	0.76	60,5	2.38
20Z-G80	2.00	-20	134,6	5.30	90,7	3.57	25,7	1.01	66,5	2.62
20Z-G84	2.37	-20	153,4	6.04	109,5	4.31	25,7	1.01	79,2	3.12

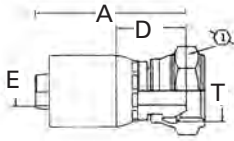
### Split Flange 60° Tube Elbow (SAE Code 61)



Z-Series Part #	Flange Head Dia. K Ø	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H	
			mm	in	mm	in	mm	in	mm	in
20Z-H64	2.00	-20	157,0	6.18	112,8	4.44	25,7	1.01	46,5	1.83

## 'Z' Series

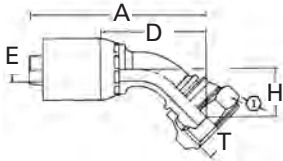
### British Standard (BSPP) 60° Cone Female Swivel Straight



Z-Series Part #	Thd. T	Hose Size	A		Hose Cut-Off Factor (D)		EØ		1	
			mm	in	mm	in	mm	in	mm	in
04Z-354	G 1/4 -19*	-04	42,3	1.66	18,9	0.74	4,2	0.16	19,0	0.75
06Z-356	G 3/8 -19*	-06	46,4	1.83	21,1	0.83	6,7	0.26	22,0	0.87
06Z-358	G 1/2 -14*	-06	47,9	1.88	22,6	0.89	6,7	0.26	27,0	1.06
08Z-358	G 1/2 -14*	-08	53,5	2.11	23,8	0.94	9,6	0.38	27,0	1.06
10Z-360	G 5/8 -14*	-10	54,1	2.13	24,7	0.97	12,8	0.50	30,0	1.18
12Z-362	G 3/4 -14*	-12	55,5	2.18	25,3	1.00	15,5	0.61	32,0	1.26
16Z-366	G 1 -11*	-16	62,0	2.44	27,6	1.09	20,7	0.81	41,0	1.61
20Z-370	G 1 1/4 -11*	-20	73,6	2.90	29,6	1.16	26,6	1.05	50,0	1.97

\* G as part of thread size is ISO Designation for parallel thread.

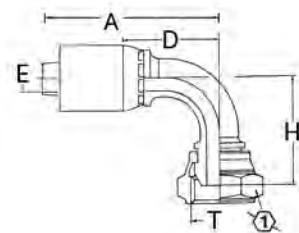
### British Standard (BSPP) 60° Cone Female 45° Tube Elbow



Z-Series Part #	Thd. T	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H		1	
			mm	in	mm	in	mm	in	mm	in	mm	in
04Z-44P	G 1/4 -19*	-04	65,3	2.57	41,9	1.65	4,2	0.16	16,5	0.65	19,0	0.75
06Z-46P	G 3/8 -19*	-06	73,8	2.90	48,5	1.91	6,7	0.26	19,0	0.75	22,0	0.87
08Z-48P	G 1/2 -14*	-08	91,5	3.60	61,8	2.43	9,6	0.38	24,8	0.98	27,0	1.06
10Z-50P	G 5/8 -14*	-10	100,4	3.95	71,0	2.79	12,8	0.50	27,4	1.08	30,0	1.18
12Z-52P	G 3/4 -14*	-12	108,8	4.28	78,6	3.09	15,5	0.61	29,4	1.16	32,0	1.26
16Z-56P	G 1 -11*	-16	126,8	4.99	92,4	3.09	20,7	0.81	33,2	1.31	41,0	1.61
20Z-60P	G 1 1/4 -11*	-20	153,6	6.05	109,6	4.31	26,6	1.05	37,2	1.46	50,0	1.97

\* G as part of thread size is ISO Designation for parallel thread.

### British Standard (BSPP) 60° Cone Female 90° Tube Elbow

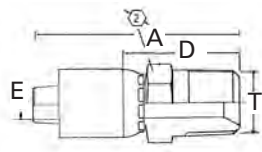


Z-Series Part #	Thd. T	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H		1	
			mm	in	mm	in	mm	in	mm	in	mm	in
04Z-74P	G 1/4 -19*	-04	45,8	1.80	22,4	0.88	4,2	0.16	24,8	0.98	17,0	0.67
06Z-76P	G 3/8 -19*	-06	58,9	2.32	33,6	1.32	6,7	0.26	35,0	1.38	22,0	0.87
06Z-78P	G 1/2 -14*	-06	75,7	2.98	50,4	1.98	6,7	0.26	47,8	1.88	27,0	1.06
10Z-80P	G 5/8 -14*	-10	90,6	3.57	61,2	1.41	12,8	0.50	56,3	2.22	27,0	1.06
12Z-82P	G 3/4 -14*	-12	82,2	3.24	52,0	2.05	15,5	0.61	47,5	1.87	32,0	1.26
16Z-86P	G 1 -11*	-16	118,2	4.65	83,8	3.30	20,7	0.81	71,5	2.81	41,0	1.61
20Z-90P	G 1 1/4 -11*	-20	146,2	5.75	102,2	4.02	26,6	1.05	82,5	3.25	50,0	1.97

\* G as part of thread size is ISO Designation for parallel thread.

## 'Z' Series

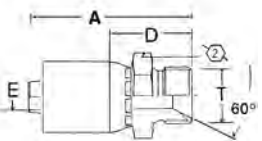
### British Standard (BSPT) Tapered Male Rigid



Z-Series Part #	Thd. T	Hose Size	A		Hose Cut-Off Factor (D)		EØ		2x	
			mm	in	mm	in	mm	in	mm	in
04Z-154	R 1/4 -19*	-04	50,6	1.99	27,2	1.07	4,2	0.16	14,0	0.55
06Z-156	R 3/8 -19*	-06	54,9	2.16	29,6	1.16	6,7	0.26	19,0	0.75
08Z-158	R 1/2 -14*	-08	66,2	2.61	36,5	1.44	9,6	0.38	22,0	0.87
12Z-162	R 3/4 -14*	-12	71,1	2.80	40,9	1.61	15,5	0.61	30,0	1.18
16Z-166	R 1 -11*	-16	81,2	3.20	46,8	1.84	20,7	0.81	36,0	1.42
20Z-20L	R 1 1/4 -11*	-20	96,2	3.79	52,2	2.05	26,6	1.05	46,0	1.81

\* R as part of thread size is ISO Designation for tapered thread.

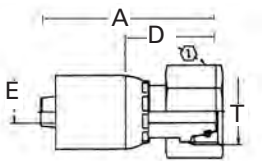
### British Standard (BSSP) 60° Cone Male Rigid



Z-Series Part #	Thd. T	Hose Size	A		Hose Cut-Off Factor (D)		EØ		2x	
			mm	in	mm	in	mm	in	mm	in
04Z-P54	G 1/4 -19*	-04	44,3	1.74	20,9	0.82	4,2	0.16	19,0	0.75
06Z-P56	G 3/8 -19*	-06	48,4	1.90	23,1	0.91	6,7	0.26	22,0	0.87
06Z-P58	G 1/2 -14*	-06	52,4	2.06	27,1	1.07	6,7	0.26	27,0	1.06
08Z-P58	G 1/2 -14*	-08	58,0	2.28	28,3	1.11	9,6	0.38	27,0	1.06
12Z-P62	G 3/4 -14*	-12	63,1	2.48	32,9	1.29	15,5	0.61	32,0	1.26
16Z-P66	G 1 -11*	-16	70,9	2.79	36,5	1.44	20,7	0.81	41,0	1.61

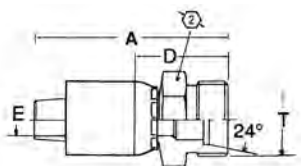
\* G as part of thread size is ISO Designation for parallel thread.

### Female Swivel DIN 24° Seat I.Rh DKO (Light)

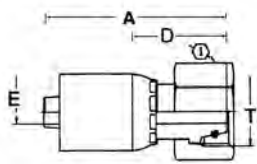


Z-Series Part #	Thd. T	Tube O.D.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		1x	
				mm	in	mm	in	mm	in	mm	in
04Z-06C	M12 x 1.5	6	-04	48,0	1.89	24,6	0.97	4,2	0.16	17,0	0.67
04Z-08C	M14 x 1.5	8	-04	46,0	1.81	22,6	0.89	4,2	0.16	17,0	0.67
06Z-10C	M16 x 1.5	10	-06	56,9	2.24	31,6	1.24	6,7	0.26	19,0	0.75
06Z-12C	M18 x 1.5	12	-06	51,2	2.01	25,9	1.02	6,7	0.26	22,0	0.87
08Z-15C	M22 x 1.5	15	-08	58,3	2.29	28,6	1.12	9,6	0.38	27,0	1.06
10Z-18C	M26 x 1.5	18	-10	59,2	2.33	29,8	1.17	12,8	0.50	32,0	1.26
12Z-22C	M30 x 2	22	-12	62,5	2.46	32,3	1.27	15,5	0.61	36,0	1.42
16Z-28C	M36 x 2	28	-16	68,2	2.68	33,8	1.33	20,7	0.81	41,0	1.61
20Z-35C	M45 x 2	35	-20	83,7	3.29	39,7	1.56	26,6	1.05	50,0	1.97

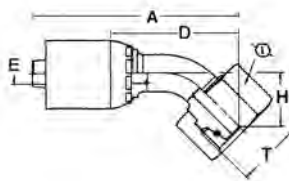
## 'Z' Series

Male DIN 24° Seat  
I.Rh (Light)

Z-Series Part #	Thd. T	Tube O.D.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		②	
				mm	in	mm	in	mm	in	mm	in
04Z-06A	M12 x 1.5	6	-04	44,7	1.76	21,3	0.84	4,2	0.16	12,0	0.47
04Z-08A	M14 x 1.5	8	-04	44,5	1.75	21,1	0.83	4,2	0.16	14,0	0.55
06Z-10A	M16 x 1.5	10	-06	52,0	2.05	26,7	1.05	6,7	0.26	17,0	0.67
06Z-12A	M18 x 1.5	12	-06	49,0	1.93	23,7	0.93	6,7	0.26	19,0	0.75
08Z-15A	M22 x 1.5	15	-08	56,0	2.20	26,3	1.03	9,6	0.38	24,0	0.94
10Z-20A	M26 x 1.5	18	-10	56,0	2.20	26,6	1.05	12,8	0.50	27,0	1.06
12Z-22A	M30 x 2	22	-12	62,0	2.44	31,8	1.25	15,5	0.61	32,0	1.26
16Z-28A	M36 x 2	28	-16	66,0	2.60	31,6	1.24	20,7	0.81	41,0	1.61
20Z-35A	M45 x 2	35	-20	79,4	3.12	35,4	1.39	26,6	1.05	46,0	1.81

Female Swivel  
DIN 24° Seat s.Rh  
DKO (Heavy)

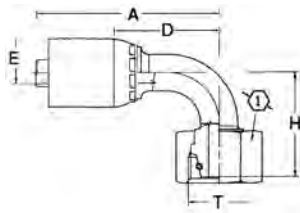
Z-Series Part #	Thd. T	Tube O.D.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		①	
				mm	in	mm	in	mm	in	mm	in
04Z-58C	M16 x 1.5	8	-04	49,6	1.95	26,2	1.03	4,2	0.16	19,0	0.75
04Z-60C	M18 x 1.5	10	-04	50,8	2.00	27,4	1.08	4,2	0.16	22,0	0.87
06Z-62C	M20 x 1.5	12	-06	53,8	2.12	28,5	1.12	6,7	0.26	24,0	0.94
06Z-64C	M22 x 1.5	14	-06	56,9	2.24	31,6	1.24	6,7	0.26	27,0	1.06
08Z-66C	M24 x 1.5	16	-08	62,4	2.46	32,7	1.29	9,6	0.38	30,0	1.18
10Z-70C	M30 x 2	20	-10	66,9	2.63	37,5	1.48	12,8	0.50	36,0	1.42
12Z-75C	M36 x 2	25	-12	72,0	2.83	41,8	1.64	15,5	0.61	46,0	1.81
16Z-80C	M42 x 2	30	-16	78,5	3.09	44,1	1.44	20,7	0.81	50,0	1.97

Female Swivel  
DIN 24° Seat 45° Tube  
Elbow s.Rh (Heavy)

Z-Series Part #	Thd. T	Tube O.D.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H		①	
				mm	in	mm	in	mm	in	mm	in	mm	in
04Z-10E	M18 x 1.5	10	-04	61,4	2.42	38,0	1.50	4,2	0.16	17,0	0.67	22,0	0.87
06Z-12E	M20 x 1.5	12	-06	68,3	2.69	43,0	1.69	6,7	0.26	19,0	0.75	24,0	0.94
06Z-14E	M22 x 1.5	14	-06	68,8	2.71	43,5	1.71	6,7	0.26	20,0	0.79	27,0	1.06
08Z-16E	M24 x 1.5	16	-08	79,7	3.14	50,0	1.97	9,6	0.38	23,0	0.90	30,0	1.18
10Z-20E	M30 x 2	20	-10	89,3	3.51	59,9	2.36	12,8	0.50	26,0	1.02	36,0	1.42
12Z-25E	M36 x 2	25	-12	107,4	4.23	77,2	3.04	15,5	0.61	32,5	1.28	46,0	1.81
16Z-30E	M42 x 2	30	-16	121,4	4.78	87,0	3.42	20,7	0.81	37,5	1.48	55,0	2.16

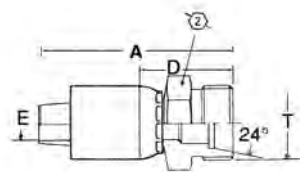
## 'Z' Series

### Female Swivel DIN 24° Seat 90° Tube Elbow s.Rh DKO (Heavy)



Z-Series Part #	Thd. T	Tube O.D.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H		①	
				mm	in	mm	in	mm	in	mm	in	mm	in
04Z-60E	M18 x 1.5	10	-04	54,5	2.14	31,0	1.22	4,2	0.16	33,5	1.32	22,0	0.87
06Z-62E	M20 x 1.5	12	-06	60,3	2.37	35,0	1.38	6,7	0.26	35,0	1.38	24,0	0.94
06Z-64E	M22 x 1.5	14	-06	63,8	2.51	38,5	1.51	6,7	0.26	42,0	1.65	27,0	1.06
08Z-66E	M24 x 1.5	16	-08	73,7	2.90	44,0	1.73	9,6	0.38	49,0	1.93	30,0	1.18
10Z-70E	M30 x 2	20	-10	82,0	3.23	52,6	2.07	12,8	0.50	53,5	2.11	36,0	1.42
12Z-75E	M36 x 2	25	-12	93,0	3.66	62,8	2.47	15,5	0.61	64,5	2.54	46,0	1.81
16Z-80E	M42 x 2	30	-16	104,0	4.09	69,6	2.74	20,7	0.81	74,0	2.91	50,0	1.97

### Male DIN 24° Seat s.Rh (Heavy)

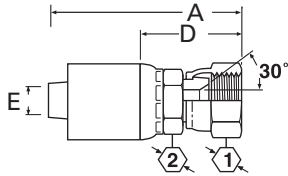


Z-Series Part #	Thd. T	Tube O.D.	Hose Size	A		Hose Cut-Off Factor (D)		EØ		②	
				mm	in	mm	in	mm	in	mm	in
04Z-06F	M12 x 1.5	6	-04	44,7	1.76	21,3	0.84	4,2	0.16	12,0	0.47
04Z-08F	M16 x 1.5	8	-04	47,5	1.87	24,1	0.95	4,2	0.16	17,0	0.67
04Z-10F	M18 x 1.5	10	-04	40,7	1.60	23,6	0.93	4,2	0.16	19,0	0.75
06Z-12F	M20 x 1.5	12	-06	50,3	1.98	25,0	0.98	6,7	0.26	22,0	0.87
06Z-14F	M22 x 1.5	14	-06	52,6	2.07	27,3	1.07	6,7	0.26	24,0	0.94
08Z-16F	M24 x 1.5	16	-08	58,0	2.28	28,3	1.11	9,6	0.38	27,0	1.06
10Z-20F	M30 x 2	20	-10	62,0	2.44	32,6	1.28	12,8	0.50	32,0	1.26
12Z-25F	M36 x 2	25	-12	65,5	2.58	35,3	1.39	15,5	0.61	41,0	1.61
16Z-30F	M42 x 2	30	-16	72,3	2.85	37,9	1.49	20,7	0.81	46,0	1.81



## 'Z' Series

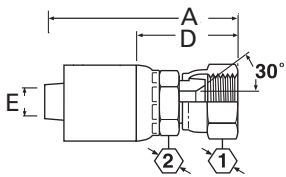
### Female JIS 30° Flare Swivel Straight



Z-Series Part #	Thd	Hose Size	A		Hose Cut-Off Factor (D)		EØ		1		2	
			mm	in	mm	in	mm	in	mm	in	mm	in
04Z-04L	G 1/4 -19*	-04	53,2	2.09	29,8	1.17	4,2	0.16	19,0	0.75	19,0	0.75
06Z-06L	G 3/8 -19*	-06	59,2	2.33	33,9	1.33	6,7	0.26	22,0	0.87	22,0	0.87
08Z-08L	G 1/2 -14*	-08	66,3	2.61	36,6	1.44	9,6	0.38	27,0	1.06	27,0	1.06
12Z-12L	G 3/4 -14*	-12	73,3	2.88	43,1	1.70	15,5	0.61	32,0	1.26	36,0	1.42
16Z-16L	G 1 - 11*	-16	83,6	3.29	49,2	1.94	20,7	0.81	41,0	1.61	41,0	1.61
20Z-20L	G 1 1/4 - 11*	-20	102,1	4.02	58,1	2.29	26,6	1.05	50,0	1.97	46,0	1.81

\* G as part of thread size is ISO Designation for parallel thread.

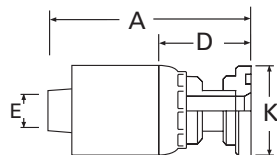
### Female Swivel 30° Flare (Komatsu, Linkbelt)



Z-Series Part #	Thd	Hose Size	A		Hose Cut-Off Factor (D)		EØ		1		2	
			mm	in	mm	in	mm	in	mm	in	mm	in
04Z-14K	M14 x 1.5	-04	56,1	2.21	32,7	1.29	42,2	1.66	19,0	0.75	19,0	0.75
06Z-18K	M18 x 1.5	-06	60,4	2.38	35,1	1.38	6,7	0.26	24,0	0.94	22,0	0.87
08Z-22K	M22 x 1.5	-08	69,5	2.74	39,8	1.57	9,6	0.38	27,0	1.06	27,0	1.06
10Z-24K	M24 x 1.5	-10	75,4	2.97	46,0	1.81	12,4	0.49	32,0	1.26	30,0	1.18
12Z-30K	M30 x 1.5	-12	81,5	3.21	51,3	2.02	15,5	0.61	36,0	1.42	36,0	1.42
16Z-33K	M33 x 1.5	-16	91,4	3.60	57,0	2.24	20,7	0.81	41,0	1.61	41,0	1.61
20Z-36K	M36 x 1.5	-20	113,4	4.46	60,4	2.38	26,6	1.05	46,0	1.81	46,0	1.81

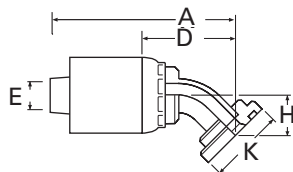
## 'Z' Series

### Metric Split Flange Straight (Komatsu, Linkbelt, etc.)



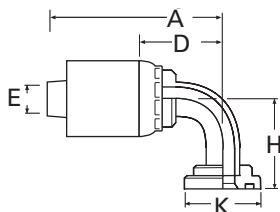
Z-Series Part #	Flange Head Dia. K Ø		Hose Size	A		Hose Cut-Off Factor (D)		EØ	
	mm	in		mm	in	mm	in	mm	in
10Z-G09	34,0	1.325	-10	94,2	0.16	64,8	2.55	11,5	0.45

### Metric Split Flange 45° Tube Elbow (Komatsu, Linkbelt, etc.)



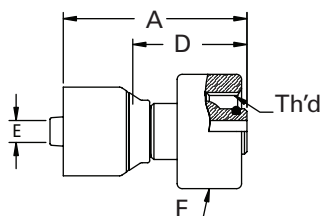
Z-Series Part #	Flange Head Dia. K Ø		Hose Size	A		Hose Cut-Off Factor (D)		EØ		H	
	mm	in		mm	in	mm	in	mm	in	mm	in
10Z-G69	34,0	1.325	-10	86,1	3.39	56,7	2.23	11,5	0.45	21,8	0.86

### Metric Split Flange 90° Tube Elbow (Komatsu, Linkbelt, etc.)



Z-Series Part #	Flange Head Dia. K Ø		Hose Size	A		Hose Cut-Off Factor (D)		EØ		H	
	mm	in		mm	in	mm	in	mm	in	mm	in
10Z-G99	34,0	1.325	-10	77,9	3.07	48,5	1.91	11,5	0.45	51,3	2.02

### Pressure Washer Threads



Z-Series Part #	Thread	Hose Size	A		Hose Cut-Off Factor (D)		EØ		H	
			mm	in	mm	in	mm	in	mm	in
04Z-6PW	M22x1.5	-04	55,4	2.18	35,3	1.39	4,2	0.17	34,9	1.38
06Z-6PW	M22x1.	-06	56,1	2.21	34,9	1.38	6,7	0.26	34,9	1.38

# Field Attachable

## 009 'B' Series


### Hose End 009 'B' Series

**Note:**

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

**Ordering Information:**

Order individually by catalog number.

 Refer to important safety information on page 4.

**Typical Application:** Low pressure air, lube and oil lines.

**Compatible Hose:** H009

Pressure: Determined by maximum working pressure for hose size. See page 16 for working pressure ratings for hose end configurations.

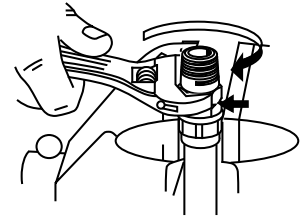
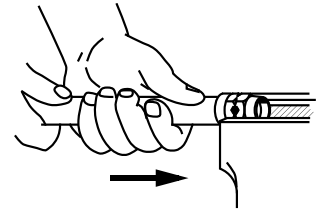
**Material:** CA360 brass

**Advantages:** Reusable and easy to assemble. An excellent fitting where low pressure applications exist and a clamp may get in the way. Good selection of configurations at a reasonable cost.

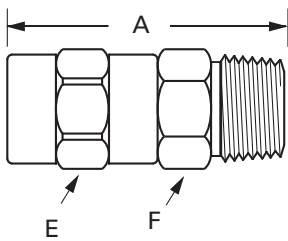
**Assembly Instructions:**

1. Lubricate insert threads and I.D. of hose.
2. Push hose into socket until it bottoms.
3. Screw insert into socket until insert hex touches socket. When assembling swivel ends, leave 1/32" clearance between swivel nut and socket.

**Label Set:** FS-400



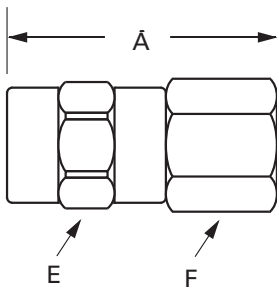
### Male Pipe Rigid



HOSE I.D	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/8	00904B-102	1/8-27	1.20	.75	.172	5/8	7/16
1/4	1/4	00904B-104	1/4-18	1.39	.94	.172	5/8	9/16

### JIC 37° Female Swivel

(Exceptions noted)



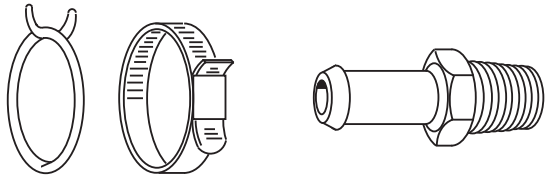
HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	00904B-604 <sup>a</sup>	7/16-20	1.31	.81	.172	5/8	9/16

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly  
<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

# Field Attachable

## 057 'B' Series

### Hose End 057 'B' Series



#### **⚠ WARNING**

Hose can be cut or damaged if over-tightened.

#### **Ordering Information:**

Order individually by catalog number.

**⚠** Refer to important safety information on page 4.

#### **Assembly Instructions:**

1. Slide clamp over hose.
2. Insert barbed end of fitting into hose.
3. Locate band clamp in the middle of 057 'B' Series inserts and tighten.
4. Position wire clamp behind bump on 057 'B' Series insert with H057 hose only.

**Typical Application:** Low pressure air, fuel and oil applications. Generally used for automotive, light truck, and small engine fuel lines.

**Compatible Hose:** H057, H0105\*, H0106\*, H115\*, H116\* hose

\*H105, H106, H115 and H116 for air applications only.

**Pressure:** Determined by maximum working pressure for hose size. See page 16 for working pressure ratings for hose end configurations.

**Material:** CA360 brass.

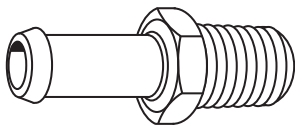
#### **Advantages:**

Easy to assemble – just push the fitting into the hose and clamp. Good selection of configurations at reasonable cost.

#### **Note:**

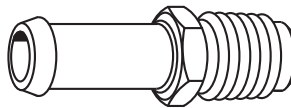
Refer to current price list for availability of

### Male Pipe Rigid



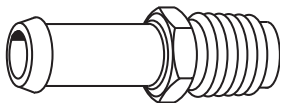
HOSE I.D	PIPE SIZE	CATALOG NUMBER
3/16	1/8	05703B-102
1/4	1/8	05704B-102
1/4	1/4	05704B-104
5/16	1/8	05705B-102
5/16	1/4	05705B-104
3/8	1/8	05706B-102
3/8	1/4	05706B-104
3/8	3/8	05706B-106
5/8	3/8	05710B-106
5/8	1/2	05710B-108
3/4	1/2	05712B-108

### SAE 45° Flare Connector



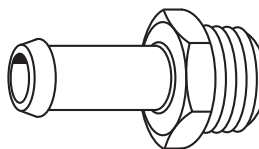
HOSE I.D	TUBE SIZE	CATALOG NUMBER
3/8	5/16	05706B-305

### Inverted Male Connector



HOSE I.D	TUBE SIZE	CATALOG NUMBER
5/16	1/4	05705B-1598
5/16	5/16	05705B-1560
5/16	3/8	05705B-1561
3/8	5/16	05706B-1568
3/8	3/8	05706B-1570

### Male Straight Thread Connector



HOSE I.D	THREAD SIZE	CATALOG NUMBER
3/8	9/16-24	05706B-1412
3/8	7/8-20	05706B-1413
3/8	5/8-20	05706B-1569

(Gasket included.)

# Field Attachable

## 057 'B' Series

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

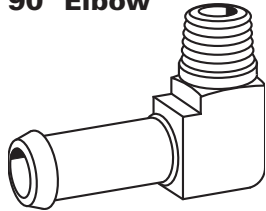
ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

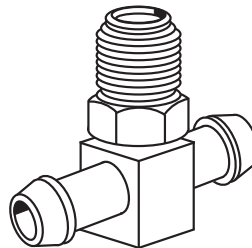
TECHNICAL DATA

### Male Pipe Rigid 90° Elbow



HOSE I.D.	PIPE SIZE	CATALOG NUMBER
1/4	1/8	05704B-C02
5/16	1/8	05705B-C02
5/16	1/4	05705B-C04
3/8	1/8	05706B-C02
3/8	1/4	05706B-C04
3/8	3/8	05706B-C06
5/8	3/8	05710B-C06

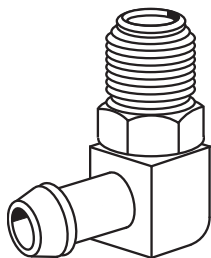
### Inverted Male Tee Swivel



HOSE I.D.	TUBE SIZE	CATALOG NUMBER
3/8	5/16	05706B-1414#
3/8	3/8	05706B-1415#

(#Chrome plated.)

### Inverted Male Swivel 90° Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER
1/4	1/4	05704B-B64
1/4	5/16	05704B-B65
5/16	5/16	05705B-B65
3/8	5/16	05706B-B65
3/8	3/8	05706B-B66
3/8	5/16	05706B-1416#
3/8	3/8	05706B-1417#

(#Chrome plated.)

### Wire Hose Clamp

(For H057 Hose Only)



HOSE I.D.	CATALOG NUMBER
3/16, 1/4	1538
5/16	1539
3/8	1540

# Coll-O-Crimp

## Field Attachable 100 'B' Series Barb-Tite™

### Hose End 100 'B' Series

#### ⚠ CAUTION

Sealing integrity may be damaged by the use of clamps.

#### Ordering Information:

Order individually by catalog number.

⚠ Refer to important safety information on page 4.

**Typical Application:** Low pressure shop or service air lines. Often used for low pressure lube and oil lines.

**Compatible Hose:** H100, H101, H201, H332

**Pressure:** Determined by maximum working pressure for hose size. See page 16 for working pressure ratings for hose end configurations.

**Material:** CA360 brass

**Advantages:** Easy to assemble – just push the fitting into the hose. No clamps needed! Low cost and a wide selection of configurations and sizes.

#### Assembly Instructions:

1. Lubricate insert.
2. Hold hose at angle as shown and push on and up over first barb.
3. Continue to push straight on until hose is seated under protective plastic cap. (Keep hand back from hose end area so that hose can expand.)

#### Disassembly Instructions:

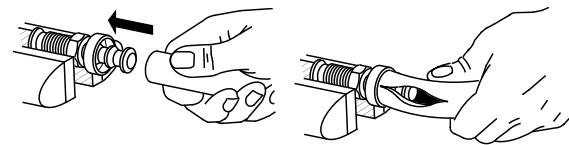
1. Split hose as shown. Do not cut completely through hose. Sealing edge of barb could be damaged.
2. Bend hose and remove with quick pull.

#### Note:

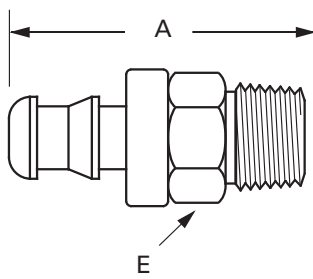
Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

**Assembly Equipment:** See pages 425-426 for optional Assembly Tools.

**Label Set:** FS-500

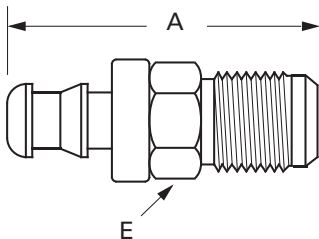


### Male Pipe Rigid



HOSE I.D	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	1/8	10004B-102	1/8-27	1.29	.65	.172	7/16
1/4	1/4	10004B-104	1/4-18	1.52	.88	.172	9/16
5/16	1/8	10005B-102	1/8-27	1.36	.69	.234	1/2
5/16	1/4	10005B-104	1/4-18	1.57	.87	.234	9/16
3/8	1/8	10006B-102	1/8-27	1.46	.69	.297	1/2
3/8	1/4	10006B-104	1/4-18	1.65	.88	.297	9/16
3/8	3/8	10006B-106	3/8-18	1.65	.88	.297	11/16
1/2	3/8	10008B-106	3/8-18	1.85	.94	.391	11/16
1/2	1/2	10008B-108	1/2-14	2.10	1.19	.391	7/8
5/8	1/2	10010B-108	1/2-14	2.60	1.19	.484	7/8
3/4	3/4	10012B-112	3/4-14	2.66	1.25	.609	1-1/16

### SAE 45° Flare Male Rigid



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	1/4	10004B-304	7/16-20	1.45	.81	.172	7/16
1/4	5/16	10004B-305	1/2-20	1.54	.94	.172	1/2
5/16	5/16	10005B-305	1/2-20	1.60	.94	.220	1/2
3/8	3/8	10006B-306	5/8-18	1.73	1.00	.297	5/8

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

#### Note:

Drawings may differ from actual parts.



# Coll-O-Crimp

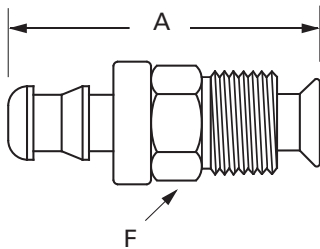
## Field Attachable 100 'B' Series Barb-Tite

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

**Note:**

Drawings may differ from actual parts..

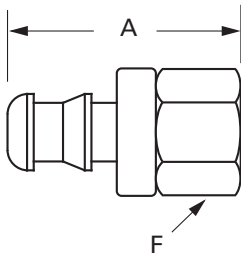
### Inverted Male Swivel



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	3/16	10004B-B03	3/8-24	1.39	1.13	.109	3/8
1/4	1/4	10004B-B04	7/16-24	1.42	1.13	.172	7/16
1/4	5/16	10004B-B05	1/2-20	1.52	1.19	.188	1/2
5/16	1/4	10005B-B04	7/16-24	1.81	1.11	.184	7/16
5/16	5/16	10005B-B05	1/2-20	1.60	.80	.234	1/2
5/16	3/8	10005B-B06	5/8-18	1.60	1.19	.234	5/8
3/8	5/16	10006B-B05	1/2-20	1.64	1.19	.234	1/2
3/8	3/8	10006B-B06	5/8-18	1.70	.97	.297	5/8
1/2	1/2	10008B-B08	3/4-18	2.24	1.25	.391	3/4

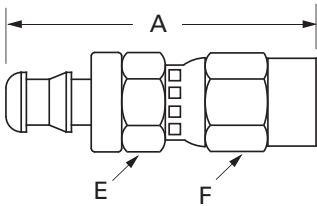
(Steel nut)

### Female Inverted Rigid



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	3/16	10004B-A03	3/8-24	1.12	.48	.172	1/2
1/4	1/4	10004B-A04	7/16-24	1.14	.50	.172	9/16
1/4	5/16	10004B-A05	1/2-20	1.18	.56	.172	5/8
5/16	5/16	10005B-A05	1/2-20	1.25	.56	.220	5/8
3/8	5/16	10006B-A05	1/2-20	1.32	.55	.297	5/8
3/8	3/8	10006B-A06	5/8-18	1.35	.63	.297	3/4
1/2	1/2	10008B-A08	3/4-18	1.73	.75	.391	7/8

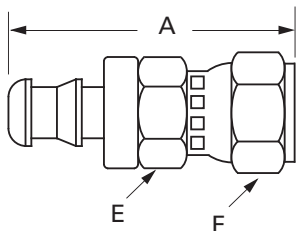
### Female Pipe Swivel



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E	HEX F
1/4	1/4	10004B-254	1/4-18	2.42	1.81	.172	3/4	5/8
3/8	3/8	10006B-256	3/8-18	2.77	2.00	.297	7/8	11/16
1/2	1/2	10008B-258	1/2-14	3.29	2.38	.391	1-1/8	7/8

### JIC 37° Female Swivel

(Refer to Footnotes)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
1/4	1/4	10004B-604 <sup>a</sup>	7/16-20	1.38	.74	.172	9/16
1/4	5/16	10004B-605 <sup>a</sup>	1/2-20	1.42	.81	.172	5/8
5/16	5/16	10005B-605 <sup>a</sup>	1/2-20	1.54	.83	.234	11/16
3/8	5/16	10006B-605 <sup>a</sup>	1/2-20	1.60	.88	.297	11/16
3/8	3/8	10006B-606	9/16-18	1.66	.88	.297	11/16
1/2	1/2	10008B-608 <sup>a</sup>	3/4-16	2.06	1.06	.391	7/8
5/8	5/8	10010B-610 <sup>a</sup>	7/8-14	2.67	1.19	.484	1
3/4	5/8	10012B-610 <sup>a</sup>	7/8-14	2.69	1.25	.511	1
3/4	3/4	10012B-612	1-1/16-12	2.69	1.19	.609	1-1/4

<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

# Coll-O-Crimp

## Field Attachable 100 'B' Series Barb-Tite

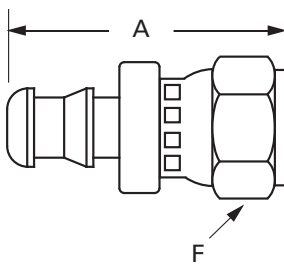
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

**Note:**

Drawings may differ from actual parts.

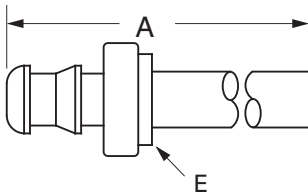
APPLICATION  
DATA

### SAE 45° Flare Female Swivel



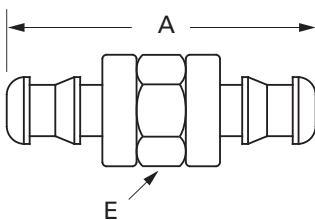
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX F
3/8	3/8	10006B-406	5/8-18	1.73	.88	.297	3/4
3/4	3/4	10012B-412	1-1/16-14	2.66	1.25	.609	1-1/4

### Straight Tube Rigid



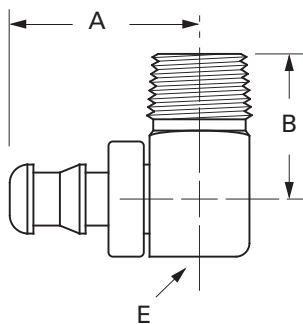
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	TUBE DIA.	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	DIA. E
1/4	3/16	10004B-X03	.188	1.77	1.13	.172	13/32
1/4	1/4	10004B-X04	.250	1.83	1.19	.172	13/32
1/4	5/16	10004B-X05	.312	1.85	1.25	.172	13/32
5/16	5/16	10005B-X05	.312	1.91	1.25	.228	7/16
3/8	3/8	10006B-X06	.375	2.04	1.27	.297	1/2

### Hose Mender



HOSE I.D.	CATALOG NUMBER	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX E
1/4	10004B-Y04	1.76	.50	.172	1/2
5/16	10005B-Y05	1.85	.44	.234	9/16
3/8	10006B-Y06	1.97	.44	.297	5/8
1/2	10008B-Y08	2.33	.50	.391	3/4

### Male Pipe Rigid 90° Elbow



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	SQUARE E
5/16	1/8	10005B-C02	1/8-27	1.02	.94	.31	.228	1/2
5/16	1/4	10005B-C04	1/4-18	1.09	.94	.38	.228	9/16
3/8	1/8	10006B-C02	1/8-27	1.08	.94	.38	.297	1/2
3/8	1/4	10006B-C04	1/4-18	1.15	.94	.38	.297	9/16

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASM'LY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

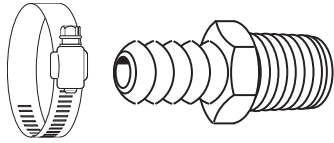
HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

# Coll-O-Crimp

## Field Attachable 105 'B' Series

### Hose End 105 'B' Series



#### ⚠ WARNING

Hose can be damaged if over-tightened.

**Ordering Information:**  
Order individually by catalog number.

⚠ Refer to important safety information on page 4.

**Typical Application:** Low pressure shop or service air lines.

**Compatible Hose:** H0105; H0106; H115; H116.

**Pressure:** Determined by maximum working pressure for hose size. See page 16 for working pressure ratings for hose end configurations.

**Material:** CA360 brass

**Advantages:** Easy to assemble – just push the fitting into the hose and clamp. Low cost and a good selection of sizes.

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly.

**Note:**

Drawings may differ from actual parts.

**Assembly Instructions:**

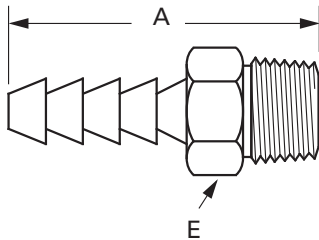
1. Slide clamp over hose.
2. Insert barbed end of fitting into hose.
3. Locate clamp in middle of insert and tighten. Use 6203/6204 Series clamps only. See page 105.

**Note:**

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

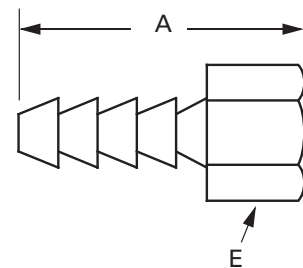
**Label Set:** FS-500

### Male Pipe (PTF Short)



HOSE I.D	PIPE SIZE	CATALOG NUMBER	A	HEX F	NUMBER OF BARBS
1/8	1/8	10502B-102	1.00	7/16	4
3/16	1/8	10503B-102	1.16	7/16	3
3/16	1/4	10503B-104	1.43	9/16	3
1/4	1/8	10504B-102	1.54	7/16	4
1/4	1/4	10504B-104	1.61	9/16	4
1/4	3/8	10504B-106	1.72	11/16	4
5/16	1/8	10505B-102	1.60	7/16	4
5/16	1/4	10505B-104	1.77	9/16	4
3/8	1/8	10506B-102	1.53	7/16	4
3/8	1/4	10506B-104	1.70	9/16	4
3/8	3/8	10506B-106	1.72	11/16	4
3/8	1/2	10506B-108	1.95	7/8	4
1/2	1/4	10508B-104	1.71	9/16	4
1/2	3/8	10508B-106	1.72	11/16	4
1/2	1/2	10508B-108	1.94	7/8	4
1/2	3/4	10508B-112	1.95	1-1/8	4
5/8	3/8	10510B-106	1.72	3/4	4
5/8	1/2	10510B-108	1.95	7/8	4
5/8	3/4	10510B-112	1.91	1-1/8	4
3/4	1/2	10512B-108	1.86	7/8	4
3/4	3/4	10512B-112	1.92	1-1/8	4

### Female Pipe (NPTF)



HOSE I.D	PIPE SIZE	CATALOG NUMBER	A	HEX F	NUMBER OF BARBS
1/8	1/8	10502B-202	.97	9/16	4
3/16	1/8	10503B-202	1.19	9/16	3
1/4	1/8	10504B-202	1.47	9/16	4
1/4	1/4	10504B-204	1.58	11/16	4
5/16	1/8	10505B-202	1.47	9/16	4
5/16	1/4	10505B-204	1.58	11/16	4
3/8	1/8	10506B-202	1.47	9/16	4
3/8	1/4	10506B-204	1.58	11/16	4
3/8	3/8	10506B-206	1.64	13/16	4
1/2	1/4	10508B-204	1.58	11/16	4
1/2	3/8	10508B-206	1.64	13/16	4
1/2	1/2	10508B-208	1.86	1	4

# Field Attachable

## 338 'B' Series


†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

### Hose End 338 'B' Series

(Parts are stamped with DOT)

#### Ordering Information:

Order individually by catalog number. Complete air brake hose assemblies can be found in the Ready-Made Hose Assemblies section of this catalog. Refer to pages 90-96.

 Refer to important safety information on page 4.

**Typical Application:** Air brake hose lines.

**Compatible Hose:** H338

**Pressure:** Determined by maximum working pressure for hose size. See page 16 for working pressure ratings for hose end configurations.

**Material:** CA360 brass

**Advantages:** Can be used for nearly any air brake line. Easy to assemble with a good selection of hose end configurations. Brass material offers excellent resistance against corrosion.

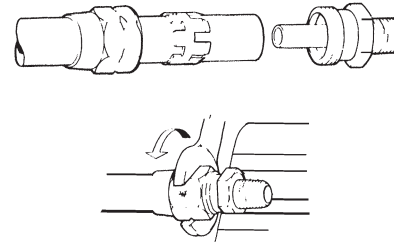
**Note:**

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

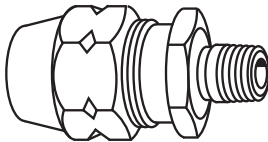
#### Assembly Instructions:

1. Slide nut and sleeve onto hose. Make sure bevel edge of sleeve faces out toward fitting.
2. Push hose into fitting until it bottoms.
3. Screw nut until contact is made with body hex.

**Label Set:** FS-800

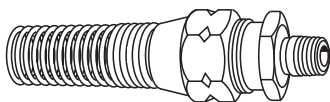


### Male Connector



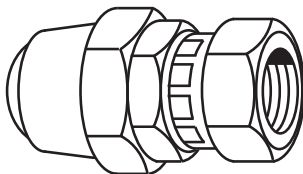
HOSE I.D	PIPE SIZE	CATALOG NUMBER	OVERALL LENGTH	HOSE CUT-OFF FACTOR†
3/8	1/4	33806B-Y24	2.26	.69
3/8	3/8	33806B-Y26	2.35	.81
3/8	1/2	33806B-Y28	2.45	.94
1/2	3/8	33808B-Y26	2.24	.75
1/2	1/2	33808B-Y28	2.40	.94

### Male Connector with Spring Guard



HO SE I.D	PIPE SIZE	CATALOG NUMBER	OVERALL LENGTH	HOSE CUT-OFF FACTOR†
3/8	1/4	33806B-Y34	4.72	.75
3/8	3/8	33806B-Y36	4.78	.81
3/8	1/2	33806B-Y38	4.88	.94
1/2	3/8	33808B-Y36	5.12	.75
1/2	1/2	33808B-Y38	4.88	.94

### Female Connector



HOSE I.D	ABS THREAD SIZE	CATALOG NUMBER	OVERALL LENGTH	HOSE CUT-OFF FACTOR†
3/8	3/4-20	33806B-Y76	2.40	.88
1/2	7/8-20	33808B-Y78	2.37	.88

(Steel Nut)

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

# Field Attachable

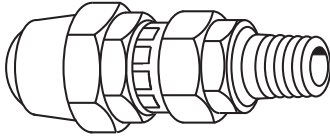
## 338 'B' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

### Female Connector with Adapter

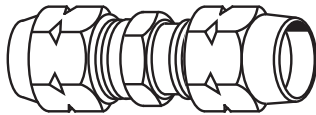
HOSE I.D.	PIPE SIZE	CATALOG NUMBER	ABS THREAD SIZE	OVERALL LENGTH	HOSE CUT-OFF FACTOR†
3/8	1/4	33806B-Y84	3/4-20	3.33	1.81
3/8	3/8	33806B-Y86	3/4-20	3.33	1.75
1/2	3/8	33808B-Y86	7/8-20	3.30	1.75

(Steel Nut)



### Hose Mender

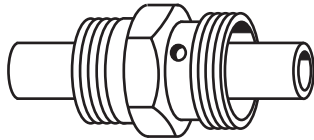
HOSE I.D.	CATALOG NUMBER	OVERALL LENGTH
3/8	33806B-Y06	3.28
1/2	33808B-Y08	3.25



### Hose Mender

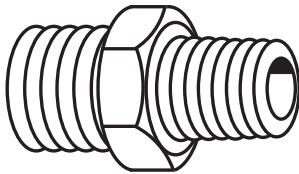
(Body Only)

HOSE I.D.	CATALOG NUMBER	OVERALL LENGTH
3/8	33806-E	2.55



### Adapter

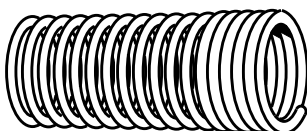
ABS THREAD SIZE	PIPE SIZE	CATALOG NUMBER	OVERALL LENGTH	ABS THREAD SIZE
3/8	1/4	1390x6	1.18	3/4-20
3/8	3/8	1390x6x6	1.18	3/4-20
3/8	1/2	1390x6x8	1.37	3/4-20
1/2	3/8	1390x8	1.18	7/8-20
1/2	1/2	1390x8x8	1.37	7/8-20



### Spring Guard

HOSE I.D.	CATALOG NUMBER
3/8	33806-C
1/2	33808-C

(Steel Nut)



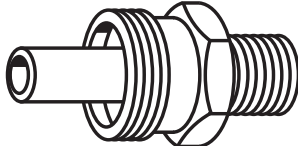
# Field Attachable

## 338 'B' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

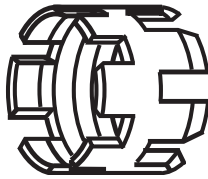
### Insert

(Body Only)



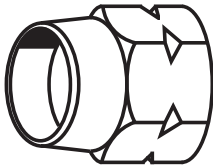
HOSE I.D.	PIPE SIZE	CATALOG NUMBER	HOLE DIA.
3/8	1/4	1391x6	.281
3/8	3/8	1391x6x6	.281
3/8	1/2	1391x6x8	.281
1/2	3/8	1391x8	.390
1/2	1/2	1391x8x8	.390

### Sleeve



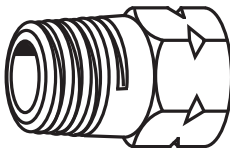
HOSE I.D.	CATALOG NUMBER
3/8	33806-A
1/2	33808-A

### Nut



HOSE I.D.	CATALOG NUMBER
3/8	33806-B
1/2	33808-B

### Nut For Spring Guard



HOSE I.D.	CATALOG NUMBER
3/8	33806-D
1/2	33808-D

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA




# Field Attachable

## 069 'D' Series

### Hose End 069 'D' Series

**Ordering Information:**

Order individually by catalog number. For mandrel, see page 425.

 Refer to important safety information on page 4.

**Typical Application:**

Medium pressure and high temperature hose lines for a variety of applications including truck, industrial, and small engine where temperature may be a problem.

**Compatible Hose:** H069, H166, H169, H229, H366.

**Pressure:** Determined by hose burst pressure. See page 16 for working pressure ratings for hose end configurations.

**Material:** AISI/SAE 12L14 carbon steel

**Plating:** Zinc; yellow dichromate finish

**Advantages:** Very popular in heavy-duty truck markets. Can be used with a variety of hoses allowing for a diverse number of applications.

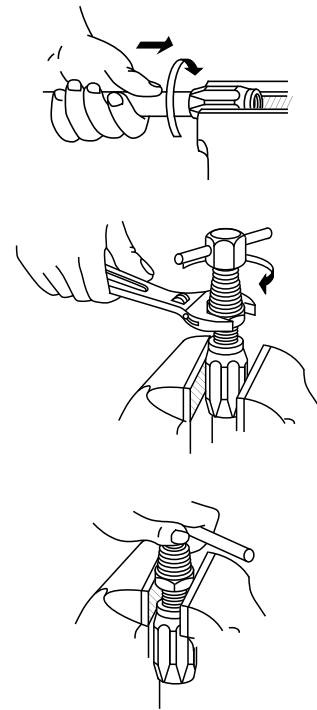
**Assembly Instructions:**

1. Lubricate mandrel, insert threads and I.D. of hose.
2. Screw hose into socket (left-hand thread) until hose bottoms. Back out 1/4 turn.
3. Place insert on mandrel. Screw insert into socket. When assembling swivel ends, leave 1/32" clearance between swivel nut and socket.

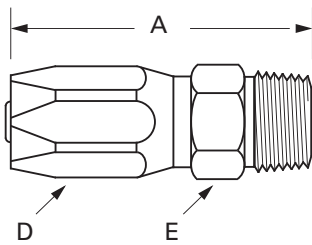
**Note:**

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

**Label Set:** FS-600



### Male Pipe Rigid



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
3/16	1/8	06904D-102	1/8-27	1.72	1.00	.17	5/8	7/16
3/16	1/4	06904D-104	1/4-18	1.90	1.19	.17	5/8	9/16
1/4	1/4	06905D-104	1/4-18	1.96	1.18	.25	11/16	9/16
5/16	1/4	06906D-104	1/4-18	2.10	1.25	.30	13/16	5/8
13/32	3/8	06908D-106	3/8-18	2.48	1.38	.39	15/16	11/16
13/32	1/2	06908D-108	1/2-14	2.73	1.58	.39	15/16	7/8
1/2	1/2	06910D-108	1/2-14	2.88	1.59	.48	1-1/8	7/8
5/8	3/4	06912D-112	3/4-14	3.24	1.67	.61	1-1/4	1-1/16
7/8	3/4	06916D-112	3/4-14	2.80	1.53	.72	1-7/16	1-1/8
7/8	1	06916D-116	1-11-1/2	3.00	1.81	.81	1-7/16	1-3/8
1-1/8	1-1/4	06920D-120	1-1/4-11-1/2	3.18	1.88	1.05	1-3/4	1-11/16
1-3/8	1-1/2	06924D-124	1-1/2-11-1/2	3.48	2.03	1.28	1-15/16	2
1-13/16	2	06932D-132	2-11-1/2	4.06	2.21	1.75	2-1/2	2-1/2
2-3/8	2-1/2	06940T-140*	2-1/2-8	5.03	3.13	2.20	3-1/8	3

\*Brass construction.

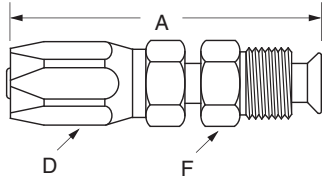
# Field Attachable

## 069 'D' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

‡Swivel nuts are universal – both SAE 37° and 45° connections.

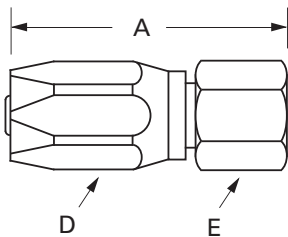
### Inverted Male Swivel Straight



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/16	1/4	06904D-B04	7/16-24	2.10	1.38	.17	5/8	7/16
1/4	5/16	06905D-B05	1/2-20	2.40	1.69	.23	11/16	1/2
5/16	3/8	06906D-B06	5/8-18	2.71	1.81	.30	13/16	5/8

### JIC 37° Female Swivel

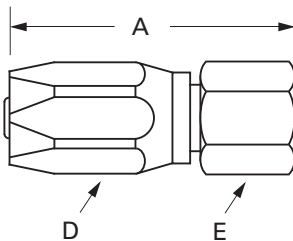
(Exceptions Noted for 45° Flare) (Refer to Footnotes)



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
3/16	1/4	06904D-604 <sup>a</sup>	7/16-20	1.74	1.06	.17	5/8	9/16
1/4	5/16	06905D-605 <sup>a</sup>	1/2-20	1.90	1.19	.24	11/16	5/8
5/16	3/8	06906D-606	9/16-18	2.05	1.15	.30	13/16	11/16
13/32	1/2	06908D-608 <sup>a</sup>	3/4-16	2.52	1.38	.39	15/16	7/8
1/2	5/8	06910D-610 <sup>a</sup>	7/8-14	2.79	1.56	.49	1-1/8	1
5/8	3/4	06912D-612	1-1/16-12	3.15	1.63	.61	1-1/4	1-1/4
7/8	1	06916D-616	1-5/16-12	2.81	1.63	.82	1-7/16	1-1/2
1-1/8	1-1/4	06920D-620	1-5/8-12	3.00	1.64	1.05	1-3/4	2
1-3/8	1-1/2	06924D-624	1-7/8-12	3.28	1.88	1.28	1-15/16	2-1/4
1-13/16	2	06932D-632	2-1/2-12	4.02	2.18	1.75	2-1/2	2-7/8
2-3/8	2-1/2	06940T-640*	3-12	4.16	2.25	2.22	3-1/8	3-3/8

\*Brass construction.

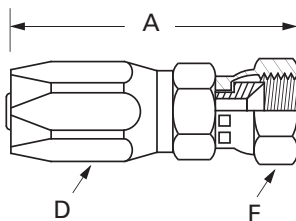
### SAE 45° Female Swivel



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
5/16	3/8	06906D-406	5/8-18	2.05	1.19	.29	13/16	3/4
5/8	3/4	06912D-412	1-1/16-14	3.02	1.44	.61	1-1/4	1-1/4

### 30° Flare Female Swivel

(PTT Thread For Diesel Applications)



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
7/8	1	06916D-X26	1-5/16-14	3.20	1.94	.81	1-7/16	1-1/2

(See page 299 for PTT Thread Adapter.)

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

# Field Attachable


## 'K' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

### Hose End 'K' Series

#### Ordering Information:

Order as a complete kit or order individual components by catalog number.

 Refer to important safety information on page 4.

**Typical Application:** Low pressure hydraulic applications and suction lines.

**Compatible Hose:**  
H039, H039H

**Pressure:** Determined by maximum working pressure for hose size. See page 16 for working pressure ratings for hose end configurations.

**Material:** 12L14 carbon steel insert; malleable iron clamp

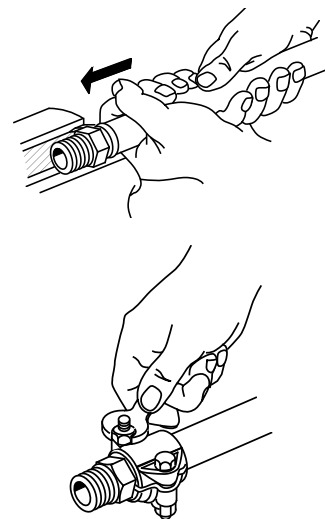
**Plating:** Zinc; yellow dichromate finish

#### Assembly Instructions:

1. Lubricate insert and hose I.D.
2. Push hose on barbed stand pipe. Be sure hose is bottomed to clamp retainer.
3. After making sure clamp shoulders will lock in recesses of insert, draw clamps together evenly.

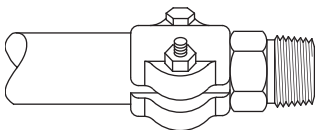
#### Note:

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.



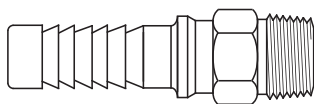
### Male Pipe

Assembly Includes Insert, Clamps, Nuts and Bolts



HOSE I.D.	PIPE SIZE	CATALOG NUMBER COMPLETE ASSEMBLY	INSERT I.D.	HOSE CUT-OFF FACTOR†	INSERT ONLY	CLAMP ASS'Y. LESS INSERT	CLAMP ONLY	NUT NO.	BOLT NO.
3/4	3/4	K12N-112	.66	1.44	IKE12N-112	K12	CK12	NK12	BK12
1	1	K16N-116	.91	1.63	IKE16N-116	K16	CK16	NK16	BK16
1-1/4	1-1/4	K20N-120	1.06	1.81	IKE20N-120	K20	CK20	NK20	BK20
1-1/2	1-1/2	K24N-124	1.30	2.06	IKE24N-124	K24	CK24	NK20	BK24
2	2	K32N-132	1.75	2.19	IKE32N-132	K32	CK32	NK32	BK32

### Male Connector Insert Only



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	PIPE THREAD	OVERALL LENGTH	HOSE CUT-OFF FACTOR†	INSERT I.D.
3/4	3/4	IKE12N-112	3/4-14	3.03	1.44	.66
1	1	IKE16N-116	1-11-1/2	3.72	1.63	.91
1-1/4	1-1/4	IKE20N-120	1-1/4-11-1/2	4.59	1.88	1.06
1-1/2	1-1/2	IKE24N-124	1-1/2-11-1/2	4.65	2.06	1.30
2	2	IKE32N-132	2-11-1/2	5.19	2.19	1.75

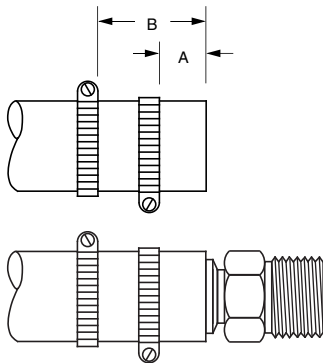
Use with H039 hose only. May be clamped with band or gear-type clamp. Used with suction hose for suction lines or return lines. For low pressure applications only.

# Field Attachable

## 039 'K'

### Hose End 039 'K' Series

(Used with H039 and H039H hose only.)



#### Ordering Information:

Order individually by catalog number.

Refer to important safety information on page 4.

#### Typical Application:

Suction and return lines; Used with suction hose for suction or return lines. For low pressure applications.

#### Compatible Hose:

H039, H039H

**Pressure:** Refer to H039 listing on page 40 when used with 039 'K' Series hose ends and 6203 Series clamps.

**Material:** AISI/SAE 12L14 carbon steel

**Plating:** Zinc; yellow dichromate finish

#### Assembly Instructions:

1. Cut hose to length. Be sure the cut is square and hose is clean. Trim sharp exposed wire to prevent injury.
2. Slide clamps onto hose.
3. Push fitting into hose. Be sure the hose is bottomed against the atop ring.
4. Position clamps as shown. Secure with a screwdriver or wrench.

#### Note:

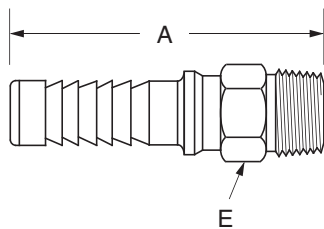
Band-It Clamps may be used in place of worm gear clamps.

Not intended for SAE 100R4 applications.

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

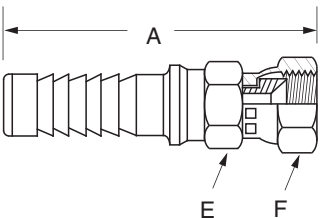
HOSE SIZE	CLAMP PART NO.	A	T B	MINIMUM
-12	6203-012	5/8	1-1/4	25 in./lbs.
-16	6203-016	5/8	1-1/4	25 in./lbs.
-20	6203-024	5/8	1-1/4	25 in./lbs.

### Male Pipe Rigid



HOSE I.D	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HEX E
3/4	3/4	03912K-112	3/4-14	3.61	1.44	1-1/16
1	1	03916K-116	1-11-1/2	3.90	1.69	1-3/8
1-1/4	1-1/4	03920K-120	1-1/4-11-1/2	4.63	2.31	1-11/16

### JIC 37° Female Swivel



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HEX E	HEX F
3/4	3/4	03912K-612	1-1/16-12	3.86	1.69	1	1-1/4
1	1	03916K-616	1-5/16-12	4.46	2.25	1-1/4	1-1/2
1-1/4	1-1/4	03920K-620	1-5/8-12	4.92	2.56	1-11/16	2

## Field Attachable

## 104 'N' Series

Hose End 104 'N'  
Series

**Ordering Information:**  
Order individually by catalog number. Order o-rings by catalog number; reference individual hose listing for details. For split flange kits, refer to pages 330-333.

**Typical Application:**  
Medium pressure hydraulic applications such as construction, farm implement and industrial equipment.

**Compatible Hose:** H104

**Pressure:** Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 16 for working pressure ratings for hose end configurations.

**Material:** AISI/SAE 12L14 carbon steel

**Plating:** Zinc; yellow dichromate finish

**Advantages:** Good selection of hose ends. Non-mandrel assembly. Wide variety of applications because of its use with H104 hose.

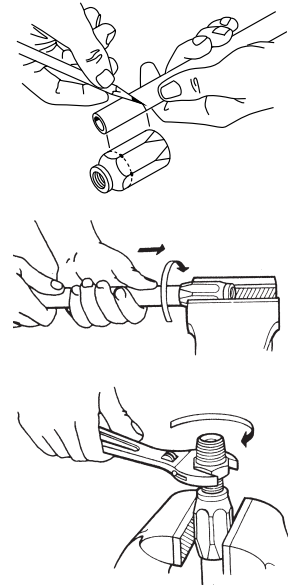
**Assembly Instructions:**  
Due to the high torque required to assemble larger sizes, it is recommended that 104 'N' Series hose ends be assembled with the T-300 (page 425) assembly machine.

1. Lubricate insert threads and I.D. of hose.
2. Measure from end of hose and mark the socket depth. Use notch on socket or see insertion depth chart below.
3. Screw hose into socket (left-hand thread) to the depth marked on hose.
4. Screw insert into socket until insert touches socket.

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

**Note:**

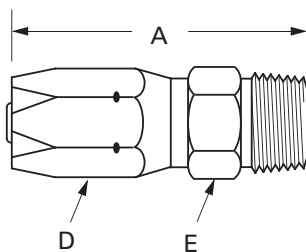
Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.



## Insertion Depth

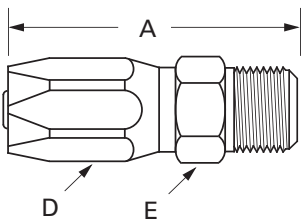
HOSE I.D.	SCREW HOSE INTO SOCKET
1/4	1"
3/8	1-5/32"
1/2	1-3/16"
3/4	1-5/16"
1	1-9/16"

## Male Pipe Rigid



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
1/4	1/8	10404N-102	1/8-27	2.18	1.19	.17	3/4	7/16
1/4	1/4	10404N-104	1/4-18	2.36	1.38	.17	3/4	9/16
3/8	1/4	10406N-104	1/4-18	2.50	1.31	.27	7/8	9/16
3/8	3/8	10406N-106	3/8-18	2.53	1.38	.27	7/8	11/16
1/2	3/8	10408N-106	3/8-18	2.58	1.38	.39	1	11/16
1/2	1/2	10408N-108	1/2-14	2.83	1.63	.39	1	7/8
1/2	3/4	10408N-112	3/4-14	2.86	1.69	.39	1	1-1/16
3/4	3/4	10412N-112	3/4-14	2.98	1.69	.61	1-3/8	1-1/16
1	1	10416N-116	1-11-1/2	3.59	2.00	.81	1-3/4	1-3/8

## JIC 37° Male Rigid



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
1/4	1/4	10404N-504	7/16-20	2.35	1.38	.17	3/4	9/16
1/4	5/16	10404N-505	1/2-20	2.35	1.38	.17	3/4	9/16
1/4	3/8	10404N-506	9/16-18	2.39	1.38	.17	3/4	5/8
3/8	3/8	10406N-506	9/16-18	2.53	1.38	.27	7/8	5/8
3/8	1/2	10406N-508	3/4-16	2.69	1.50	.27	7/8	13/16
1/2	1/2	10408N-508	3/4-16	2.74	1.56	.39	1	13/16
1/2	5/8	10408N-510	7/8-14	2.87	1.69	.39	1	15/16
3/4	3/4	10412N-512	1-1/16-12	3.09	1.75	.61	1-3/8	1-1/8
1	1	10416N-516	1-5/16-12	3.56	2.00	.81	1-3/4	1-3/8

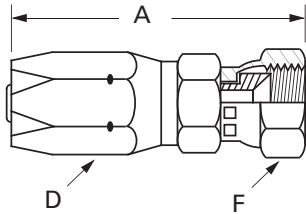
# Field Attachable

## 104 'N' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly  
<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

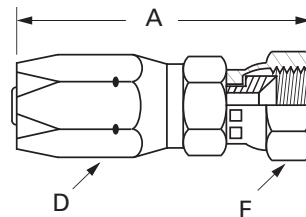
### JIC 37° Female Swivel

(Exceptions Noted for 45° Flare, Refer to Footnotes)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
1/4	1/4	10404N-604 <sup>a</sup>	7/16-20	2.49	1.50	.17	3/4	9/16
1/4	5/16	10404N-605 <sup>a</sup>	1/2-20	2.59	1.56	.17	3/4	5/8
1/4	3/8	10404N-606	9/16-18	2.65	1.63	.17	3/4	11/16
3/8	3/8	10406N-606	9/16-18	2.79	1.63	.27	7/8	11/16
3/8	1/2	10406N-608 <sup>a</sup>	3/4-16	2.96	1.81	.27	7/8	7/8
1/2	1/2	10408N-608 <sup>a</sup>	3/4-16	3.01	1.81	.39	1	7/8
1/2	5/8	10408N-610 <sup>a</sup>	7/8-14	3.02	1.88	.39	1	1
3/4	5/8	10412N-610 <sup>a</sup>	7/8-14	3.14	1.88	.46	1-3/8	1
3/4	3/4	10412N-612	1-1/16-12	3.26	2.00	.61	1-3/8	1-1/4
3/4	7/8	10412N-614	1-3/16-12	3.39	2.06	.61	1-3/8	1-3/8
1	1	10416N-616	1-5/16-12	4.19	2.63	.81	1-3/4	1-1/2

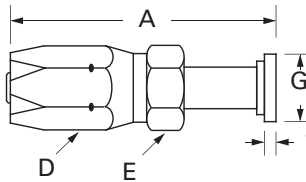
### SAE 45° Female Swivel



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/8	3/8	10406N-406	5/8-18	2.67	1.50	.27	7/8	3/4
3/4	3/4	10412N-412	1-1/16-14	3.27	2.00	.61	1-3/8	1-1/4

### Split Flange Straight

(SAE Code 61)

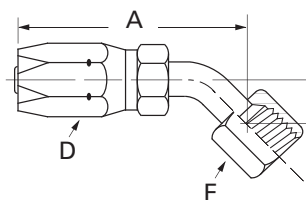


HOSE I.D.	NOM. FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E	FLANGE DIA.	T
3/4	3/4	10412N-G12	12x252	3.79	2.44	.58	1-3/8	15/16	1.500 (38mm)	.265
1	1	10416N-G16	16x252	4.21	2.63	.76	1-3/4	1-1/4	1.750 (44mm)	.315

(For Split Flange Kits, see pages 330-333.)

### JIC 37° Female Swivel 45° Tube Elbow

(Exceptions noted)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
1/4	1/4	10404N-684 <sup>a</sup>	7/16-20	2.90	.33	1.88	.15	3/4	9/16
3/8	3/8	10406N-686	9/16-18	3.22	.39	2.00	.24	7/8	11/16
1/2	1/2	10408N-688 <sup>a</sup>	3/4-16	3.61	.55	2.44	.33	1	7/8
1/2	5/8	10408N-690 <sup>a</sup>	7/8-14	3.67	.63	2.50	.39	1	1
3/4	3/4	10412N-692	1-1/16-12	4.20	.78	2.81	.58	1-3/8	1-1/4
1	1	10416N-696	1-5/16-12	5.42	1.10	3.88	.81	1-3/4	1-1/2

APPLICATION DATA  
 LOW & MEDIUM PRESSURE HOSE  
 HIGH PRESSURE HOSE  
 SPECIALTY HOSE  
 ACCESSORIES & ASSEMBLY INSTRUCTIONS  
 ADAPTERS & TUBE HOSE ENDS  
 HOSE ASSEMBLY EQUIPMENT  
 TECHNICAL DATA

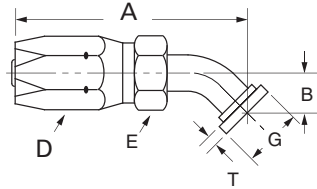
**Field Attachable****104 'N' Series**

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

**Split Flange  
45° Tube Elbow**

(SAE Code 61)

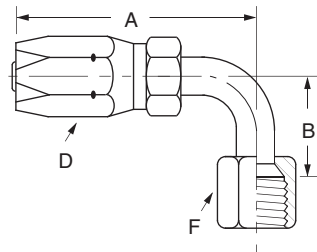


HOSE I.D.	NOM. FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E	FLANGE DIA.	T
3/4	3/4	10412N-G42	12x252	4.43	.99	3.13	.58	1-3/8	15/16	1.500 (38mm)	.265
1	1	10416N-G46	16x252	4.99	1.06	3.44	.76	1-3/4	1-1/4	1.750 (44mm)	.315

(For Split Flange Kits, see pages 330-333.)

**JIC 37° Female Swivel  
90° Tube Elbow**

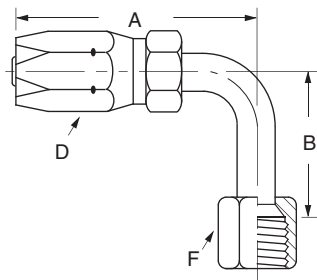
(Refer to Footnotes)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
1/4	1/4	10404N-664 <sup>a</sup>	7/16-20	2.80	.68	1.81	.15	3/4	9/16
3/8	3/8	10406N-666	9/16-18	3.15	.85	2.00	.24	7/8	11/16
1/2	1/2	10408N-668 <sup>a</sup>	3/4-16	3.44	1.09	2.25	.33	1	7/8
1/2	5/8	10408N-670 <sup>a</sup>	7/8-14	3.75	1.23	2.56	.39	1	1
3/4	3/4	10412N-672	1-1/16-12	4.07	1.82	2.75	.58	1-3/8	1-1/4
1	1	10416N-676	1-5/16-12	5.27	2.14	3.75	.81	1-3/4	1-1/2

**JIC 37° Female Swivel Long Drop  
90° Tube Elbow**

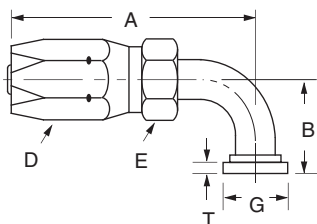
(Refer to Footnotes)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
1/4	1/4	10404N-644 <sup>a</sup>	7/16-20	2.83	1.80	1.81	.15	3/4	9/16
3/8	3/8	10406N-646	9/16-18	3.20	2.18	2.00	.24	7/8	11/16
1/2	1/2	10408N-648 <sup>a</sup>	3/4-16	3.44	2.43	2.25	.33	1	7/8
3/4	3/4	10412N-652	1-1/16-12	4.10	3.73	2.75	.58	1-3/8	1-1/4

**Split Flange  
90° Tube Elbow**

(SAE Code 61)



HOSE I.D.	NOM. FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCL'D)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E	FLANGE DIA.	T
3/4	3/4	10412N-G72	12x252	4.08	2.13	2.75	.58	1-3/8	15/16	1.500 (38mm)	.265
3/4	1	10412N-G76	16x252	4.08	2.13	2.75	.83	1-3/8	15/16	1.750 (44mm)	.315
1	1	10416N-G76	16x252	4.81	2.38	3.25	.83	1-3/4	1-1/4	1.750 (44mm)	.315

(For Split Flange Kits, see pages 330-333.)



# Field Attachable

## 213 'N' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS


ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

### Hose End 213 'N' Series

**Ordering Information:**  
Order individually by catalog number.

 Refer to important safety information on page 4.

**Typical Application:**  
Medium pressure and high temperature hose lines for a variety of applications including truck, industrial, and small engines where high temperatures exist.

**Compatible Hose:** H213

**Pressure:** Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 16 for working pressure ratings for hose end configurations.

**Material:** AISI/SAE 12L14 carbon steel

**Plating:** Zinc; yellow dichromate finish

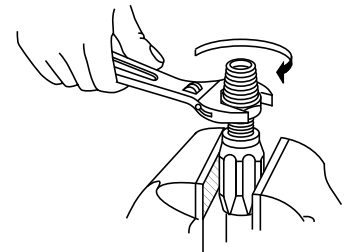
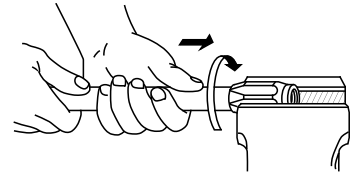
**Advantages:** Very popular in heavy-duty truck markets. Good selection of hose ends, including brass. Non-mandrel assembly.

**Assembly Instructions:**

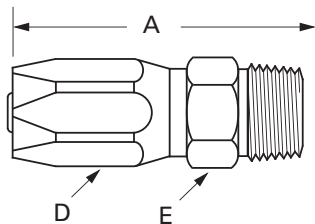
1. Lubricate insert threads and I.D. of hose.
2. Screw hose into socket (left-hand thread) until hose bottoms. Back out 1/4 turn.
3. Screw insert into socket until insert touches socket.

**Note:**

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

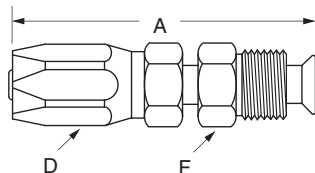


### Male Pipe Rigid



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/16	1/8	21304N-102	1/8-27	1.59	.94	.12	9/16	7/16
3/16	1/4	21304N-104	1/4-18	1.78	1.13	.12	9/16	9/16
1/4	1/4	21305N-104	1/4-18	1.80	1.06	.17	5/8	9/16
5/16	3/8	21306N-106	3/8-18	1.96	1.19	.23	3/4	11/16
13/32	1/2	21308N-108	1/2-14	2.36	1.44	.33	7/8	7/8
1/2	1/2	21310N-108	1/2-14	2.45	1.44	.42	1	7/8
5/8	3/4	21312N-112	3/4-14	2.56	1.50	.55	1-1/8	1-1/16
7/8	1	21316N-116	1-11-1/2	2.71	1.69	.80	1-3/8	1-3/8

### Inverted Male Swivel Straight



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/16	1/4	21304N-B04	7/16-24	2.43	1.69	.15	9/16	7/16
1/4	5/16	21305N-B05	1/2-20	2.47	1.75	.21	5/8	1/2
5/16	1/4	21306N-B04	7/16-24	2.50	1.63	.15	3/4	7/16
5/16	5/16	21306N-B05	1/2-20	2.57	1.75	.21	3/4	1/2
5/16	3/8	21306N-B06	5/8-18	2.74	1.88	.25	3/4	5/8
13/32	1/2	21308N-B08	3/4-18	3.26	2.25	.33	7/8	3/4

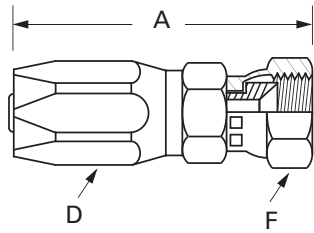
**Field Attachable****213 'N' Series**

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

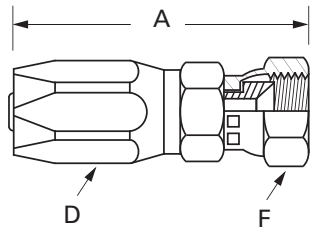
<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

**JIC 37° Female Swivel**

(Exceptions Noted for 45° Flare, Refer to Footnotes)



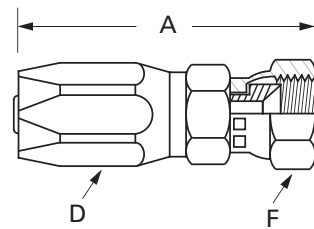
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/16	1/4	21304N-604 <sup>a</sup>	7/16-20	1.92	1.25	.15	9/16	9/16
1/4	5/16	21305N-605 <sup>a</sup>	1/2-20	2.01	1.25	.20	5/8	5/8
5/16	3/8	21306N-606	9/16-18	2.20	1.38	.26	3/4	11/16
13/32	1/2	21308N-608 <sup>a</sup>	3/4-16	2.49	1.50	.36	7/8	7/8
1/2	5/8	21310N-610 <sup>a</sup>	7/8-14	2.69	1.63	.45	1	1
5/8	3/4	21312N-612	1-1/16-12	2.91	1.75	.57	1-1/8	1-1/4
7/8	1	21316N-616	1-5/16-12	2.95	1.88	.82	1-3/8	1-1/2

**SAE 45° Female Swivel**

HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
5/16	3/8	21306N-406	5/8-18	2.14	1.38	.26	3/4	3/4
5/8	3/4	21312N-412	1-1/16-14	2.85	1.75	.57	1-1/8	1-1/4

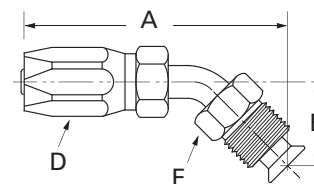
**30° Flare Female Swivel**

(PTT Thread For Diesel Applications)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
7/8	1	21316N-X26	1-5/16-14	2.78	1.69	.81	1-3/8	1-1/2

(See page 299 for PTT Thread Adapter.)

**Inverted Male Swivel 45° Tube Elbow**

HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/16	1/4	21304N-E44	7/16-24	2.91	.93	2.19	.15	9/16	7/16
1/4	5/16	21305N-E45	1/2-20	3.30	1.14	2.63	.21	5/8	1/2
5/16	1/4	21306N-E44	7/16-24	3.10	.93	2.25	.15	3/4	7/16
5/16	5/16	21306N-E45	1/2-20	3.40	1.14	2.63	.21	3/4	1/2
5/16	3/8	21306N-E46	5/8-18	3.26	.94	2.38	.25	3/4	5/8
13/32	1/2	21308N-E48	3/4-18	3.70	.94	2.69	.33	7/8	3/4

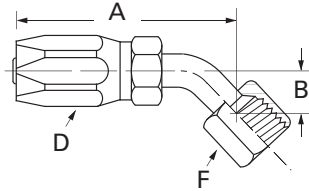
# Field Attachable

## 213 'N' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly  
<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

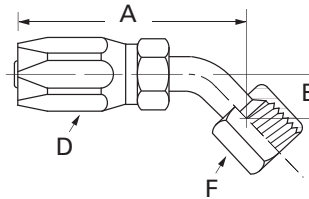
### SAE 37° Female Swivel 45° Tube Elbow

(Exceptions Noted for 45° Flare, Refer to Footnotes)



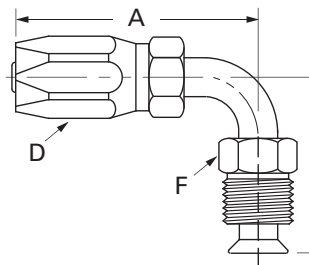
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/16	1/4	21304N-684 <sup>a</sup>	7/16-20	2.34	.33	1.63	.15	9/16	9/16
1/4	5/16	21305N-685 <sup>a</sup>	1/2-20	2.44	.36	1.69	.21	5/8	5/8
5/16	3/8	21306N-686	9/16-18	2.61	.39	1.75	.25	3/4	5/8
13/32	1/2	21308N-688 <sup>a</sup>	3/4-16	3.13	.55	2.13	.33	7/8	7/8

### SAE 45° Female Swivel 45° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
5/16	3/8	21306N-486	5/8-18	2.85	.39	1.81	.25	3/4	3/4

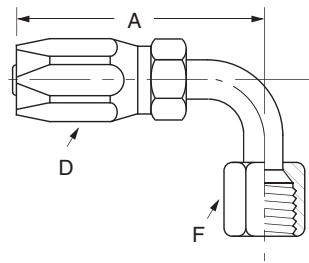
### Inverted Male Swivel 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/16	1/4	21304N-E04	7/16-24	1.69	1.36	1.50	.13	9/16	7/16
3/16	5/16	21304N-E05	1/2-20	2.30	1.61	1.56	.13	9/16	1/2
1/4	5/16	21305N-E05	1/2-20	2.49	1.61	1.75	.17	5/8	1/2
5/16	1/4	21306N-E04	7/16-24	2.58	1.65	1.75	.15	3/4	7/16
5/16	5/16	21306N-E05	1/2-20	2.50	1.61	1.63	.21	3/4	1/2
5/16	3/8	21306N-E06	5/8-18	2.82	1.97	2.00	.24	3/4	5/8
13/32	1/2	21308N-E08	3/4-18	2.78	1.69	1.81	.33	7/8	3/4

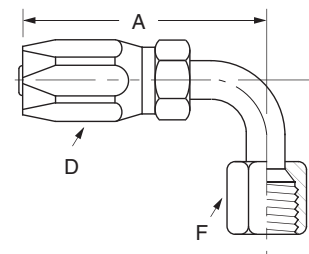
### JIC 37° Female Swivel 90° Tube Elbow

(Exceptions Noted for 45° Flare, Refer to Footnotes)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/16	1/4	21304N-664 <sup>a</sup>	7/16-20	2.16	.68	1.44	.13	9/16	9/16
1/4	5/16	21305N-665 <sup>a</sup>	1/2-20	2.46	.77	1.75	.17	5/8	5/8
5/16	3/8	21306N-666	9/16-18	2.61	.85	1.81	.24	3/4	11/16
13/32	1/2	21308N-668 <sup>a</sup>	3/4-16	2.91	1.09	1.94	.33	7/8	7/8

### SAE 45° Female Swivel 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
5/16	3/8	21306N-466	5/8-18	2.48	.85	1.63	.24	3/4	3/4

APPLICATION DATA  
 LOW & MEDIUM PRESSURE HOSE  
 HIGH PRESSURE HOSE  
 SPECIALTY HOSE  
 ACCESSORIES & ASSEMBLY INSTRUCTIONS  
 ADAPTERS & TUBE HOSE ENDS  
 HOSE ASSEMBLY EQUIPMENT  
 TECHNICAL DATA


## Field Attachable

## 247 'N' Series

Hose End 247  
'N' Series

## Ordering Information:

Order individually by catalog number.

 Refer to important safety information on page 4.

## Typical Application:

Medium pressure and high temperature hose lines for a variety of applications including truck, industrial, and small engine where temperature may be a problem.

**Compatible Hose:** H059; H069; H166; H169; H229; H366; H569.

**Pressure:** Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 16 for working pressure ratings for hose end configurations.

**Material:** AISI/SAE 12L14 carbon steel

**Plating:** Zinc; yellow dichromate finish

**Advantages:** Very popular in heavy-duty truck markets. Good selection of hose ends. Compatible with a wide variety of hose types allowing for a diverse number of applications. Non-mandrel assembly.

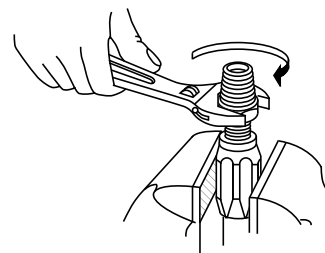
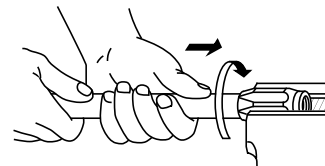
## Assembly Instructions:

1. Lubricate insert threads and I.D. of hose.
2. Screw hose into socket (left-hand thread) until hose bottoms. Back out 1/4 turn.
3. Screw insert into socket until insert touches socket.

## Note:

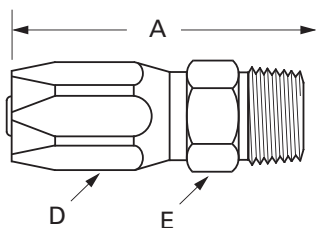
Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

**Label Set:** FS-600



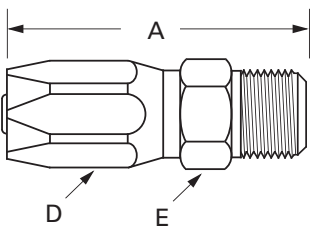
†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

## Male Pipe Rigid



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
3/16	1/8	24704N-102	1/8-27	1.71	1	.12	5/8	7/16
3/16	1/4	24704N-104	1/4-18	1.87	1.12	.12	5/8	9/16
1/4	1/4	24705N-104	1/4-18	1.96	1.25	.18	11/16	9/16
5/16	1/4	24706N-104	1/4-18	2.08	1.25	.25	13/16	9/16
5/16	3/8	24706N-106	3/8-18	2.11	1.25	.25	13/16	11/16
13/32	3/8	24708N-106	3/8-18	2.48	1.33	.36	15/16	11/16
13/32	1/2	24708N-108	1/2-14	2.73	1.58	.36	15/16	7/8
1/2	1/2	24710N-108	1/2-14	2.88	1.63	.45	1-1/8	7/8
1/2	3/4	24710N-112	3/4-14	2.94	1.69	.45	1-1/8	1-1/8
5/8	3/4	24712N-112	3/4-14	3.24	1.67	.55	1-1/4	1-1/4

## JIC 37° Male Rigid



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
3/16	1/4	24704N-504	7/16-20	1.85	1.10	.12	5/8	1/2
1/4	5/16	24705N-505	1/2-20	2.01	1.19	.18	11/16	9/16
5/16	3/8	24706N-506	9/16-18	2.13	1.25	.25	13/16	5/8
13/32	1/2	24708N-508	3/4-16	2.64	1.56	.36	15/16	13/16
1/2	5/8	24710N-510	7/8-14	2.92	1.69	.45	1-1/8	15/16
5/8	3/4	24712N-512	1-1/16-12	3.32	1.81	.55	1-1/4	1-1/8
7/8	1	24716N-516	1-5/16-12	2.97	1.81	.81	1-7/16	1-3/8

# Field Attachable

## 247 'N' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

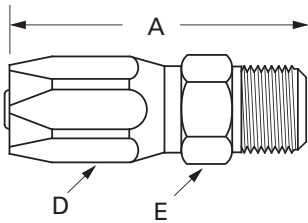
ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

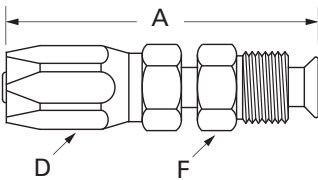
TECHNICAL DATA

### SAE 45° Flare Male Rigid



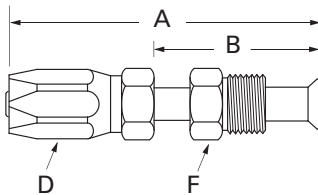
HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
3/16	1/4	24704N-304	7/16-20	1.84	1.13	.12	5/8	1/2
1/4	5/16	24705N-305	1/2-20	2.00	1.25	.18	11/16	9/16
5/16	3/8	24706N-306	5/8-18	2.18	1.28	.25	13/16	11/16
13/32	1/2	24708N-308	3/4-16	2.67	1.50	.36	15/16	13/16
1/2	5/8	24710N-310	7/8-14	3.00	1.72	.45	1-1/8	15/16
5/8	3/4	24712N-312	1-1/16-14	3.46	1.88	.55	1-1/4	1-1/8

### Inverted Male Swivel Straight



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/16	1/4	24704N-B04	7/16-24	2.54	1.81	.18	5/8	7/16
1/4	5/16	24705N-B05	1/2-20	2.75	2.00	.21	11/16	1/2
5/16	3/8	24706N-B06	5/8-18	2.91	2.00	.31	13/16	5/8
13/32	1/2	24708N-B08	3/4-18	3.63	2.50	.43	15/16	3/4

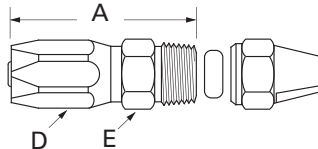
### Inverted Male Swivel - Extended



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
5/16	1/4	24706N-B24	7/16-24	7.62	6.00	6.75	.15	13/16	7/16
5/16	5/16	24706N-B25	1/2-20	7.62	6.00	6.75	.21	13/16	1/2
5/16	3/8	24706N-B26	5/8-18	7.62	6.00	6.75	.24	13/16	5/8

### Air Brake Connection (Hose to Copper/ Nylon Tubing)

(For 150 PSI Air Pressure Max.)



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
13/32	3/8	24708B-Y56	17/32-24	2.36	1.25	.361	15/16	7/8
1/2	1/2	24710B-Y58	11/16-20	2.66	1.38	.453	1-1/8	7/8
1/2	5/8	24710B-Y60	13/16-18	2.72	1.44	.453	1-1/8	7/8
5/8	3/4	24712B-Y62	1-18	3.14	1.56	.549	1-1/4	1

(Nut and Sleeve not included.)

#### Hose to Copper Tubing

#### Hose to Nylon Tubing

TUBE SIZE	CATALOG NUMBER SLEEVE	CATALOG NUMBER NUT	CATALOG NUMBER SLEEVE	CATALOG NUMBER NUT	CATALOG NUMBER INSERT
3/8	1360x6	1361x6	1460x6	1461x6	1484x6
1/2	1360x8	1361x8	1460x8	1461x8	1484x8
5/8	1360x10	1361x10	1460x10	1461x10	1484x10
3/4	1360x12	1361x12	1460x12	1461x12	1484x12

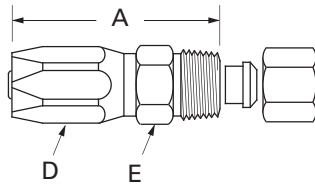
**Field Attachable****247 'N' Series**

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

**Flareless Tube Rigid  
Ermeto 7000 Series**

(With Nut and Sleeve)

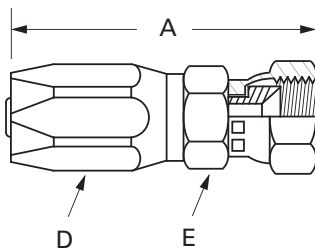


HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
5/16	1/4	24706N-754	7/16-20	2.02	1.13	.20	13/16	5/8
5/16	5/16	24706N-755	1/2-20	1.96	1.13	.23	13/16	5/8
5/16	3/8	24706N-756	9/16-18	1.98	1.13	.28	13/16	11/16
5/16	1/2	24706N-758	3/4-16	2.12	1.25	.28	13/16	13/16

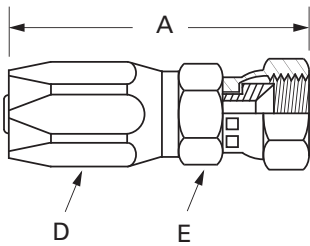
(For replacement Nuts and Sleeves, see pages 311-312.)

**JIC 37° Female Swivel**

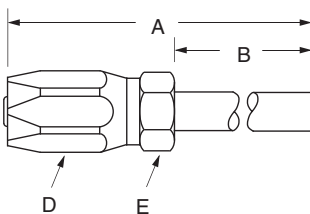
(Exceptions Noted)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
3/16	1/4	24704N-604 <sup>a</sup>	7/16-20	2.01	1.31	.13	5/8	9/16
1/4	5/16	24705N-605 <sup>a</sup>	1/2-20	2.19	1.50	.18	11/16	5/8
5/16	1/4	24706N-604 <sup>a</sup>	7/16-20	2.19	1.31	.17	13/16	9/16
5/16	5/16	24706N-605 <sup>a</sup>	1/2-20	2.38	1.50	.25	13/16	5/8
5/16	3/8	24706N-606	9/16-18	2.35	1.50	.25	13/16	11/16
5/16	1/2	24706N-608 <sup>a</sup>	3/4-16	2.45	1.56	.39	13/16	7/8
13/32	1/2	24708N-608 <sup>a</sup>	3/4-16	2.82	1.75	.36	15/16	7/8
1/2	1/2	24710N-608 <sup>a</sup>	3/4-16	3.04	1.75	.39	1-1/8	7/8
1/2	5/8	24710N-610 <sup>a</sup>	7/8-14	3.04	1.75	.45	1-1/8	1
5/8	3/4	24712N-612	1-1/16-12	3.46	1.94	.55	1-1/4	1-1/4
7/8	1	24716N-616	1-5/16-12	3.21	2.00	.81	1-7/16	1-1/2

**SAE 45° Flare  
Female Swivel**

HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
5/16	3/8	24706N-406	5/8-18	2.36	1.46	.25	13/16	3/4
13/32	3/8	24708N-406	5/8-18	2.65	1.56	.28	15/16	3/4
5/8	3/4	24712N-412	1-1/16-14	3.49	1.92	.55	1-1/4	1-1/4

**Straight Tube - Extended**

HOSE I.D.	TUBE SIZE	CATALOG NUMBER	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
3/16	1/4	24704N-T54	5.22	3.75	4.50	.12	5/8	1/2
1/4	5/16	24705N-T55	6.33	4.80	5.56	.18	11/16	1/2
5/16	3/8	24706N-T56	7.42	5.80	6.50	.25	13/16	1/2
13/32	1/2	24708N-T58	8.78	6.69	7.63	.36	15/16	3/4
1/2	5/8	24710N-T60	9.91	7.69	8.63	.45	1-1/8	7/8

**Hose to Copper Tubing****Hose to Nylon Tubing**

TUBE SIZE	CATALOG NUMBER SLEEVE	CATALOG NUMBER NUT	CATALOG NUMBER SLEEVE	CATALOG NUMBER NUT	CATALOG NUMBER INSERT
3/8	1360x6	1361x6	1460x6	1461x6	1484x6
1/2	1360x8	1361x8	1460x8	1461x8	1484x8
5/8	1360x10	1361x10	1460x10	1461x10	1484x10
3/4	1360x12	1361x12	1460x12	1461x12	1484x12

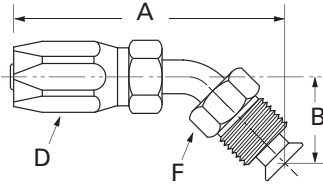
# Field Attachable

## 247 'N' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

‡Swivel nuts are universal – both SAE 37° and 45° connections.

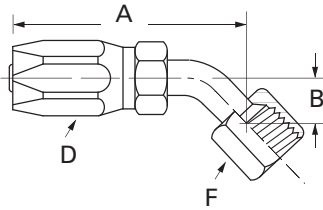
### Inverted Male Swivel 45° Tube Elbow



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
1/4	5/16	24705N-E45	1/2-20	3.42	1.14	2.63	.18	11/16	1/2

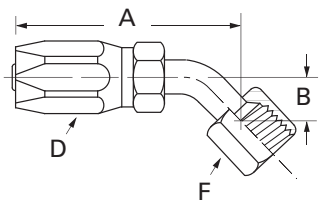
### JIC 37° Female Swivel 45° Tube Elbow

(Exceptions Noted for 45° Flare, Refer to Footnotes)



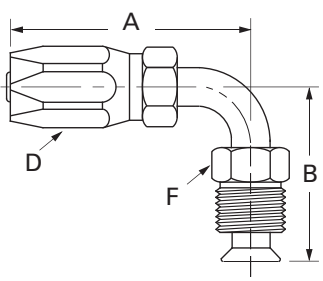
HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/16	1/4	24704N-684 <sup>a</sup>	7/16-20	2.45	.33	1.75	.12	5/8	9/16
1/4	5/16	24705N-685 <sup>a</sup>	1/2-20	2.60	.36	1.88	.18	11/16	5/8
5/16	3/8	24706N-686	9/16-18	2.78	.39	1.88	.25	13/16	11/16
13/32	1/2	24708N-688 <sup>a</sup>	3/4-16	3.46	.55	2.31	.33	15/16	7/8
1/2	5/8	24710N-690 <sup>a</sup>	7/8-14	3.86	.63	2.63	.45	1-1/8	1
5/8	3/4	24712N-692	1-1/16-12	4.39	.78	2.88	.55	1-1/4	1-1/4
7/8	1	24716N-696	1-5/16-12	5.21	1.10	3.94	.76	1-7/16	1-7/16

### SAE 45° Female Swivel 45° Tube Elbow



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
5/16	1/4	24706N-484	7/16-20	2.61	.33	1.75	.25	13/16	5/8
5/16	3/8	24706N-486	5/8-18	2.82	.39	1.94	.25	13/16	3/4
5/8	3/4	24712N-492	1-1/16-14	4.45	.78	2.94	.55	1-1/4	1-1/4

### Inverted Male Swivel 90° Tube Elbow



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/16	1/4	24704N-E04	7/16-24	2.26	1.36	1.56	.18	5/8	7/16
1/4	5/16	24705N-E05	1/2-20	2.59	1.61	1.88	.24	11/16	1/2
5/16	1/4	24706N-E04	7/16-24	2.41	1.36	1.50	.18	7/8	7/16
5/16	5/16	24706N-E05	1/2-20	2.74	1.61	1.88	.24	7/8	1/2
5/16	3/8	24706N-E06	5/8-18	3.03	1.97	2.13	.30	7/8	5/8

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA



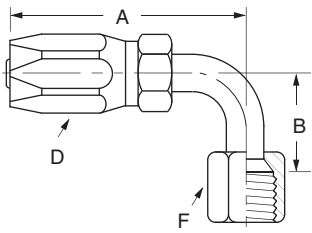
# Field Attachable

## 247 'N' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly  
<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

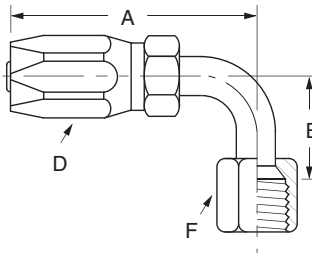
### JIC 37° Female Swivel 90° Tube Elbow

(Exceptions Noted)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/16	1/4	24704N-664 <sup>a</sup>	7/16-20	2.28	.68	1.50	.12	5/8	9/16
1/4	5/16	24705N-665 <sup>a</sup>	1/2-20	2.60	.77	1.88	.18	11/16	5/8
5/16	3/8	24706N-666	9/16-18	2.78	.85	2.88	.25	13/16	11/16
13/32	1/2	24708N-668 <sup>a</sup>	3/4-16	3.20	1.09	2.13	.36	15/16	7/8
1/2	1/2	24710N-668 <sup>a</sup>	3/4-16	3.45	1.09	2.13	.45	15/16	7/8
1/2	5/8	24710N-670 <sup>a</sup>	7/8-14	3.63	1.23	2.50	.45	1-1/8	1
5/8	3/4	24712N-672	1-1/16-12	4.29	1.82	2.81	.55	1-1/4	1-1/4
7/8	1	24716N-676	1-5/16-12	4.51	2.14	2.81	.81	1-7/16	1-1/2

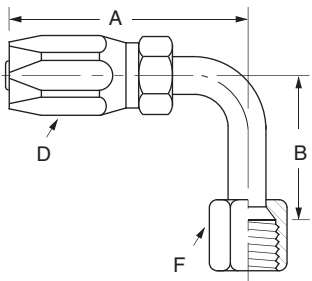
### SAE 45° Female Swivel 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
5/16	3/8	24706N-466	5/8-18	2.74	.85	1.88	.25	13/16	3/4
5/8	3/4	24712N-472	1-1/16-14	4.33	1.82	2.75	.55	1-1/4	1-1/4

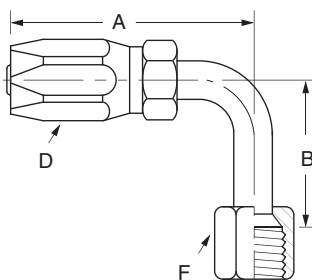
### JIC 37° Female Swivel Long Drop 90° Tube Elbow

(Exceptions Noted)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/16	1/4	24704N-644 <sup>a</sup>	7/16-20	2.35	1.80	1.69	.15	5/8	9/16
1/4	5/16	24705N-645 <sup>a</sup>	1/2-20	2.54	1.80	1.88	.21	11/16	5/8
5/16	3/8	24706N-646	9/16-18	2.83	2.18	2.00	.24	13/16	11/16
13/32	1/2	24708N-648 <sup>a</sup>	3/4-16	3.31	2.43	2.25	.33	15/16	7/8
1/2	5/8	24710N-650 <sup>a</sup>	7/8-14	3.56	2.57	2.31	.46	1-1/8	1
5/8	3/4	24712N-652	1-1/16-12	4.43	3.73	3.00	.58	1-1/4	1-1/4
7/8	1	24716N-656	1-5/16-12	4.39	4.33	3.19	.76	1-7/16	1-1/2

### SAE 45° Female Swivel Long Drop 90° Tube Elbow



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
5/16	1/4	24706N-444	7/16-20	2.54	1.80	1.63	.15	13/16	5/8
5/16	3/8	24706N-446	5/8-18	2.82	2.18	1.88	.24	13/16	3/4
5/8	3/4	24712N-452	1-1/16-14	4.39	3.73	2.81	.58	1-1/4	1-1/4

# Field Attachable

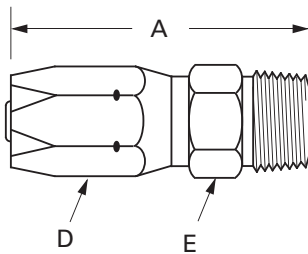
## 425 'N' Series

### Hose End 425 'N' Series

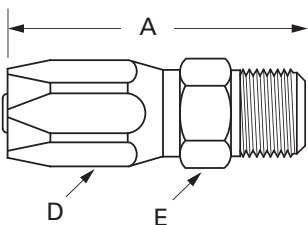
#### Insertion Depth

HOSE I.D.	SCREW HOSE INTO SOCKET
1/4	1"
3/8	1-5/32"
1/2	1-3/16"
3/4	1-5/16"
1	1-9/16"
1-1/4	1-7/8"
1-1/2	2"
2	1-15/16"

#### Male Pipe Rigid



#### JIC 37° Male Rigid



#### Ordering Information:

Order individually by catalog number. Order o-rings by catalog number; reference individual hose listing for details. For split flange kits, reference pages 330-333.

#### Typical Application:

High pressure hydraulic applications such as construction, farm implement and industrial equipment.

#### Compatible Hose: H425

**Pressure:** Determined by maximum working pressure for hose size. See page 16 for working pressure ratings for hose end configurations.

**Material:** AISI/SAE 12L14 carbon steel

**Plating:** Zinc; yellow dichromate finish

**Advantages:** Good selection of hose ends. Non-mandrel assembly. Wide variety of applications

because of its use with H425 hose.

#### Assembly Instructions:

Due to the high torque required to assemble larger sizes, it is recommended that 425 'N' Series hose ends be assembled with the T-300 assembly machine (page 425).

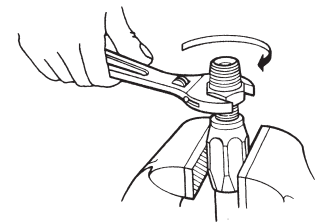
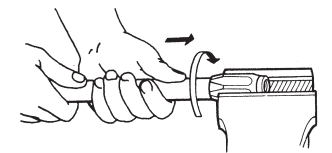
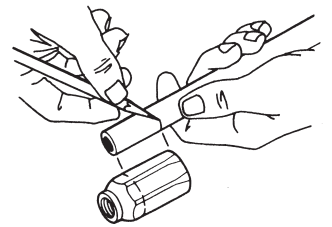
1. Lubricate insert threads and I.D. of hose.
2. Measure from end of hose and mark the socket depth. Use notch on socket or see insertion depth chart below.
3. Screw hose into socket (left-hand thread) to the depth marked on hose.
4. Screw insert into socket until insert touches socket.

**Label Set:** FS-700

**Note:**

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
1/4	1/8	42504N-102	1/8-27	2.18	1.19	.17	13/16	7/16
1/4	1/4	42504N-104	1/4-18	2.36	1.38	.17	13/16	9/16
3/8	1/4	42506N-104	1/4-18	2.50	1.31	.27	15/16	9/16
3/8	3/8	42506N-106	3/8-18	2.53	1.38	.27	15/16	11/16
1/2	3/8	42508N-106	3/8-18	2.58	1.38	.39	1-1/16	11/16
1/2	1/2	42508N-108	1/2-14	2.83	1.63	.39	1-1/16	7/8
1/2	3/4	42508N-112	3/4-14	2.86	1.69	.39	1-1/16	1-1/16
3/4	3/4	42512N-112	3/4-14	2.98	1.69	.61	1-3/8	1-1/16
1	1	42516N-116	1-11-1/2	3.59	2.00	.81	1-3/4	1-3/8
1-1/4	1-1/4	42520N-120	1-1/4-11-1/2	4.37	2.44	1.05	2-1/4	1-11/16
1-1/2	1-1/2	42524N-124	1-1/2-11-1/2	4.71	2.69	1.28	2-1/2	2
2	2	42532N-132	2-11-1/2	4.86	2.88	1.83	3	2-1/2

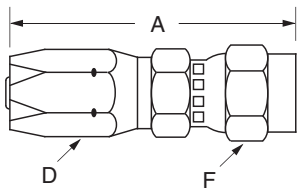
HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
1/4	1/4	42504N-504	7/16-20	2.35	1.38	.17	13/16	9/16
1/4	5/16	42504N-505	1/2-20	2.35	1.38	.17	13/16	9/16
1/4	3/8	42504N-506	9/16-18	2.39	1.38	.17	13/16	5/8
3/8	3/8	42506N-506	9/16-18	2.53	1.38	.27	15/16	5/8
3/8	1/2	42506N-508	3/4-16	2.69	1.50	.27	15/16	13/16
1/2	1/2	42508N-508	3/4-16	2.74	1.56	.39	1-1/16	13/16
1/2	5/8	42508N-510	7/8-14	2.87	1.69	.39	1-1/16	15/16
3/4	3/4	42512N-512	1-1/16-12	3.09	1.75	.61	1-3/8	1-1/8
1	1	42516N-516	1-5/16-12	3.56	1.94	.81	1-3/4	1-3/8

# Field Attachable

## 425 'N' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly  
<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

### Female Pipe Swivel

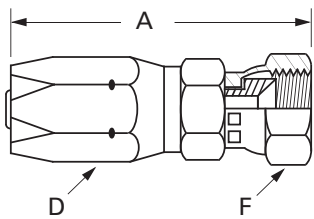


HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
1/2	1/2	42508N-258	1/2-14	3.89	2.75	.39	1-1/16	1-1/8
3/4	3/4	42512N-262	3/4-14	4.09	2.81	.61	1-3/8	1-3/8

**Note:**  
 Swivel for installation purposes only.  
 (Not for temperatures above 200°F.)

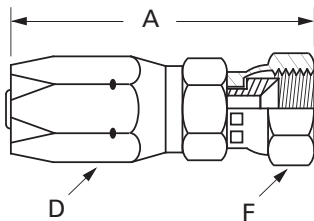
### JIC 37° Female Swivel

(Exceptions Noted)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
1/4	1/4	42504N-604 <sup>a</sup>	7/16-20	2.49	1.50	.17	13/16	9/16
1/4	5/16	42504N-605 <sup>a</sup>	1/2-20	2.59	1.56	.17	13/16	5/8
1/4	3/8	42504N-606	9/16-18	2.65	1.63	.17	13/16	11/16
3/8	3/8	42506N-606	9/16-18	2.79	1.63	.27	15/16	11/16
3/8	1/2	42506N-608 <sup>a</sup>	3/4-16	2.96	1.81	.27	15/16	7/8
1/2	1/2	42508N-608 <sup>a</sup>	3/4-16	3.01	1.81	.39	1-1/16	7/8
1/2	5/8	42508N-610 <sup>a</sup>	7/8-14	3.02	1.88	.39	1-1/16	1
3/4	5/8	42512N-610 <sup>a</sup>	7/8-14	3.14	1.88	.48	1-3/8	1
3/4	3/4	42512N-612	1-1/16-12	3.26	2.00	.61	1-3/8	1-1/4
3/4	7/8	42512N-614	1-3/16-12	3.38	2.06	.61	1-3/8	1-3/8
1	1	42516N-616	1-5/16-12	4.19	2.63	.81	1-3/4	1-1/2
1-1/4	1-1/4	42520N-620	1-5/8-12	4.76	2.75	1.08	2-1/4	2
1-1/2	1-1/2	42524N-624	1-7/8-12	5.04	3.00	1.28	2-1/2	2-1/4
2	2	42532N-632	2-1/2-12	5.80	3.88	1.73	3	3

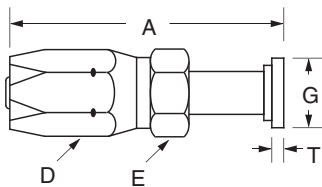
### SAE 45° Female Swivel



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/8	3/8	42506N-406	5/8-18	2.67	1.50	.27	15/16	3/4
3/4	3/4	42512N-412	1-1/16-14	3.27	2.00	.61	1-3/8	1-1/4

### Split Flange Straight

(SAE Code 61)

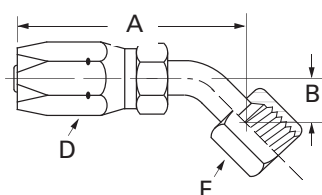


HOSE I.D.	NOM. FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E	G	T
3/4	3/4	42512N-G12	12x252	3.81	2.50	.58	1-3/8	1-15/16	1.50 (38mm)	.265
1	1	42516N-G16	16x252	4.02	2.50	.76	1-3/4	1-1/4	1.75 (44mm)	.315
1-1/4	1-1/4	42520N-G20	20x252	5.32	3.50	1.01	2-1/4	1-5/8	2.00 (51mm)	.315

(For Split Flange Kits, see pages 330-333.)

### JIC 37° Female Swivel 45° Tube Elbow

(Refer to Footnotes)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
1/4	1/4	42504N-684 <sup>a</sup>	7/16-20	2.86	.33	1.81	.15	13/16	9/16
3/8	3/8	42506N-686	9/16-18	3.15	.39	2.00	.25	15/16	11/16
1/2	1/2	42508N-688 <sup>a</sup>	3/4-16	3.46	.56	2.25	.36	1-1/16	7/8
1/2	5/8	42508N-690 <sup>a</sup>	7/8-14	3.92	.64	2.50	.36	1-1/16	1
3/4	3/4	42512N-692	1-1/16-12	4.17	.73	2.88	.55	1-3/8	1-1/4
1	1	42516N-696	1-5/16-12	5.42	1.10	3.75	.76	1-3/4	1-1/2

# Field Attachable

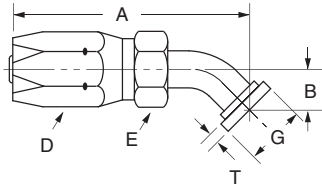
## 425 'N' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly

<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

### Split Flange 45° Tube Elbow

(SAE Code 61)

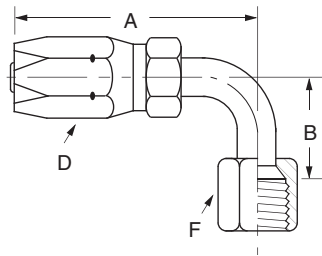


HOSE I.D.	NOM. FLANGE SIZE	CATALOG NUMBER	REPLACEMENT O-RING (NOT INCLUDED)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E	G	T
3/4	3/4	42512N-G42	12x252	4.47	1.00	3.13	.58	1-3/8	15/16	1.50 (38mm)	.265
1	1	42516N-G46	16x252	5.15	1.06	3.56	.76	1-3/4	1-1/4	1.75 (44mm)	.315
1-1/4	1-1/4	42520N-G50	20x252	5.32	1.15	3.44	1.01	2-1/4	1-5/8	2.00 (51mm)	.315

(For Split Flange Kits, see pages 330-333.)

### JIC 37° Female Swivel 90° Tube Elbow

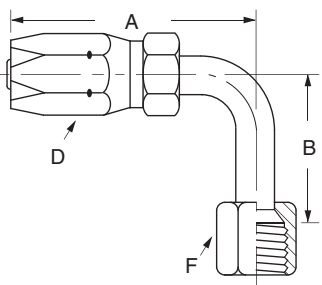
(Refer to Footnotes)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
1/4	1/4	42504N-664 <sup>a</sup>	7/16-20	2.71	.68	1.69	.15	13/16	9/16
3/8	3/8	42506N-666	9/16-18	3.12	.85	1.94	.24	15/16	11/16
1/2	1/2	42508N-668 <sup>a</sup>	3/4-16	3.33	1.09	2.13	.33	1-1/16	7/8
1/2	5/8	42508N-670 <sup>a</sup>	7/8-14	3.57	1.23	2.38	.39	1-1/16	1
3/4	3/4	42512N-672	1-1/16-12	4.26	1.85	2.94	.58	1-3/8	1-1/4
1	1	42516N-676	1-5/16-12	5.14	2.14	3.56	.81	1-3/4	1-1/2

### JIC 37° Female Swivel Long Drop 90° Tube Elbow

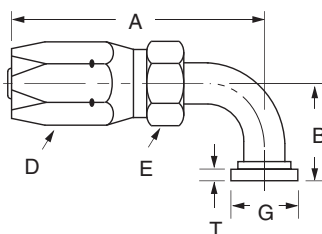
(Refer to Footnotes)



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
1/4	1/4	42504N-644 <sup>a</sup>	7/16-20	2.76	1.80	1.75	.15	13/16	9/16
3/8	3/8	42506N-646	9/16-18	3.17	2.18	2.00	.24	15/16	11/16
1/2	1/2	42508N-648 <sup>a</sup>	3/4-16	3.40	2.45	2.19	.33	1-1/16	7/8
3/4	3/4	42512N-652	1-1/16-12	4.08	3.75	2.75	.58	1-3/8	1-1/4

### Split Flange 90° Tube Elbow

(SAE Code 61)



HOSE I.D.	NOM. FLANGE SIZE	CATALOG NUMBER	REPLM'T O-RING (NOT INCL'D)	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E	G	T
3/4	3/4	42512N-G72	12x252	3.95	2.13	2.75	.58	1-3/8	15/16	1.50 (38mm)	.265
3/4	1	42512N-G76	16x252	4.06	2.13	2.75	.58	1-3/8	15/16	1.75 (44mm)	.315
1	1	42516N-G76	16x252	4.81	2.38	3.25	.88	1-3/4	1-1/4	1.75 (44mm)	.315
1-1/4	1-1/4	42520N-G80	20x252	5.47	2.62	3.56	1.03	2-1/4	1-5/8	2.00 (51mm)	.315
1-1/4	1-1/2	42520N-G84	24x252	5.49	2.75	3.63	1.05	2-1/4	1-7/8	2.37 (60mm)	.315

(For Split Flange Kits, see pages 330-333.)


APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

# Field Attachable

## 436 'N' Series

### Hose End 436 'N' Series

**Ordering Information:**  
Order individually by catalog number.

 Refer to important safety information on page 4.

**Typical Application:**  
Medium pressure hydraulic applications where compatibility may be a problem or where shock hazards exist.

**Compatible Hose:** H435; H436; H435 and H436 Twinline.

**Pressure:** Determined by maximum working pressure for hose size and hose end configuration whichever is lesser. See page 16 for working pressure ratings for hose end configurations.

**Material:** AISI/SAE 12L14 carbon steel

**Plating:** Zinc; yellow dichromate finish

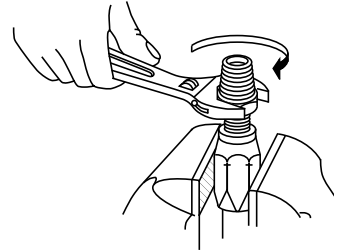
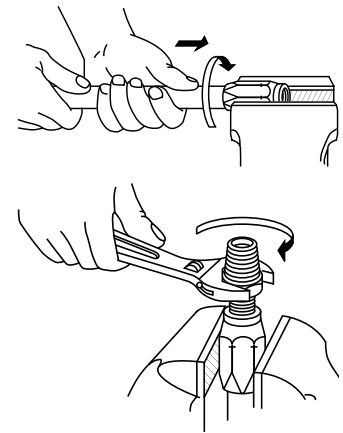
**Advantages:**  
Good selection of hose ends. Non-mandrel assembly.

**Assembly Instructions:**

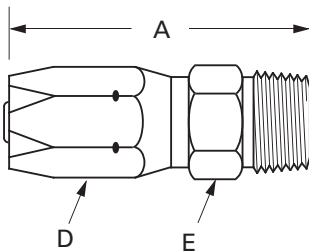
1. Lubricate insert threads and I.D. of hose.
2. Screw hose into socket (left-hand thread) until hose bottoms. Back out 1/4 turn.
3. Screw insert into socket until insert touches socket.

**Note:**

Refer to current price list for availability of cataloged items. Configurations and dimensions subject to change without notice.

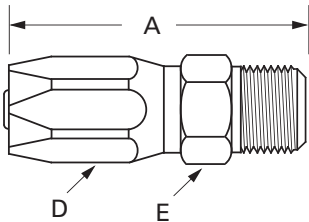


### Male Pipe Rigid



HOSE I.D.	PIPE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
1/4	1/4	43604N-104	1/4-18	1.96	1.13	.18	5/8	9/16
3/8	1/4	43606N-104	1/4-18	2.50	1.31	.27	7/8	9/16
3/8	3/8	43606N-106	3/8-18	2.53	1.38	.27	7/8	11/16
1/2	3/8	43608N-106	3/8-18	2.58	1.31	.39	1-1/16	11/16
1/2	1/2	43608N-108	1/2-14	2.83	1.56	.39	1-1/16	7/8
3/4	3/4	43612N-112	3/4-14	2.98	1.63	.61	1-3/8	1-1/16
1	1	43616N-116	1-11-1/2	3.59	1.94	.81	1-11/16	1-3/8

### JIC 37° Male Rigid



HOSE I.D.	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX E
1/4	1/4	43604N-504	7/16-20	1.99	1.19	.17	5/8	1/2
1/4	5/16	43604N-505	1/2-20	1.96	1.19	.18	5/8	9/16
3/8	3/8	43606N-506	9/16-18	2.53	1.38	.27	7/8	5/8
3/8	1/2	43606N-508	3/4-16	2.69	1.50	.27	7/8	13/16
1/2	1/2	43608N-508	3/4-16	2.74	1.50	.39	1-1/16	13/16
1/2	5/8	43608N-510	7/8-14	2.87	1.63	.39	1-1/16	15/16

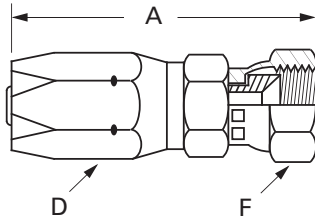
# Field Attachable

## 436 'N' Series

†To determine the correct length of hose, subtract the cut-off factor for each end fitting from the overall length of assembly  
<sup>a</sup>Swivel nuts are universal – both SAE 37° and 45° connections.

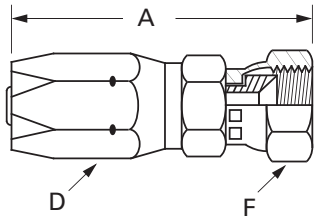
### SAE 37° Female Swivel

(Exceptions Noted)



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
1/4	1/4	43604N-604 <sup>a</sup>	7/16-20	2.13	1.31	.17	5/8	9/16
1/4	5/16	43604N-605 <sup>a</sup>	1/2-20	2.23	1.44	.18	5/8	5/8
1/4	3/8	43604N-606	9/16-18	2.24	1.44	.18	5/8	11/16
3/8	3/8	43606N-606	9/16-18	2.79	1.63	.27	7/8	11/16
3/8	1/2	43606N-608 <sup>a</sup>	3/4-16	2.96	1.81	.27	7/8	7/8
1/2	1/2	43608N-608 <sup>a</sup>	3/4-16	3.01	1.75	.39	1-1/16	7/8
1/2	5/8	43608N-610 <sup>a</sup>	7/8-14	3.02	1.75	.39	1-1/16	1
3/4	3/4	43612N-612	1-1/16-12	3.27	1.88	.61	1-3/8	1-1/4
1	1	43616N-616	1-5/16-12	3.83	2.19	.81	1-11/16	1-1/2

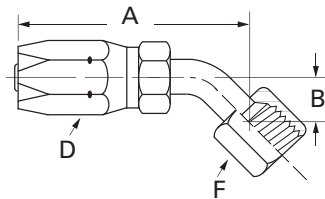
### SAE 45° Female Swivel



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
3/8	3/8	43606N-406	5/8-18	2.67	1.50	.27	7/8	3/4

### JIC 37° Female Swivel 45° Tube Elbow

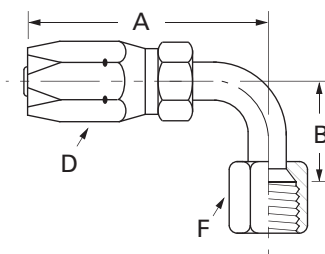
(Refer to Footnotes)



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
1/4	1/4	43604N-684 <sup>a</sup>	7/16-20	2.49	.33	1.69	.18	5/8	9/16

### JIC 37° Female Swivel 90° Tube Elbow

(Refer to Footnotes)



HOSE I.D	TUBE SIZE	CATALOG NUMBER	THREAD SIZE	A	B	HOSE CUT-OFF FACTOR†	HOLE DIA.	HEX D	HEX F
1/4	1/4	43604N-664 <sup>a</sup>	7/16-20	2.42	.68	1.63	.18	5/8	9/16
3/8	3/8	43606N-666	9/16-18	3.02	.85	1.88	.24	7/8	11/16
1/2	1/2	43608N-668 <sup>a</sup>	3/4-16	3.28	1.09	2.00	.33	1-1/16	7/8

APPLICATION DATA  
 LOW & MEDIUM PRESSURE HOSE  
 HIGH PRESSURE HOSE  
 SPECIALTY HOSE  
 ACCESSORIES & ASSEMBLY INSTRUCTIONS  
 ADAPTERS & TUBE HOSE ENDS  
 HOSE ASSEMBLY EQUIPMENT  
 TECHNICAL DATA

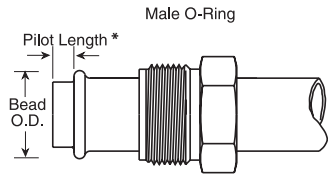
# E-Z Clip System

## End Connections & O-Rings

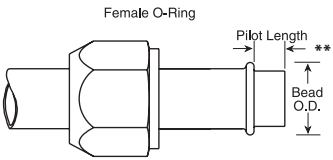
### How to Identify O-Ring Pilot Thread Sizes

This connection is common to air conditioning systems, both in vehicle and commercial applications. Both the male and female halves of the connections have a pilot, either long or

short. The seal takes place by compressing an O-ring adjacent to the bead of the tube. The threads hold the connection together mechanically.



		MALE THREAD O.D. (INCH)			FEMALE THREAD I.D. (INCH)		
INCH SIZE	DASH SIZE	NOMINAL THREAD	FRACTION	NOMINAL DECIMAL	THREAD	FRACTION	DECIMAL
3/8	06	5/8 - 18	5/8	.62	5/8 - 18	9/16	.57
1/2	08	3/4 - 18	3/4	.75	3/4 - 16	11/16	.69
5/8	10	7/8 - 18	7/8	.87	7/8 - 14	13/16	.81
3/4	12	1-1/16 -16	1-1/16	1.06	1-1/16 -16	1	.99



		LONG PILOT**		SHORT PILOT*	
INCH SIZE	NOMINAL BEAD TUBE SIZE	O.D. (INCH)	PILOT LENGTH	O.D. (INCH)	PILOT LENGTH
3/8	06	.52	.28	.52	.19
1/2	08	.64	.39	.64	.19
5/8	10	.77	.39	.77	.19
3/4	12	.91	.39	.91	.19

### Lubricant Compatibility Chart

LUBRICANT	HOSE STYLE GH134
Mineral Oil	Y
PAG	Y
Ester Oil	Y
Alkylbenzene	*

Y = Compatible N = Non-compatible  
\*Review application with Engineering Support.

### Refrigerant Compatibility Chart of Refrigerant Hoses

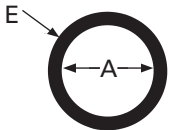
REFRIGERANT	HOSE STYLE GH134
R-12	Y
R-22	*
R-134a	Y
R-502	Y
MP39	Y
MP66	Y
R404a	Y

### Tubing Identification

SIZE	TUBING STYLE	WALL THICKNESS
-6	SAE J526	0.035
-0608	SAE J526	0.035
-8	SAE J526	0.035
-0810	SAE J526	0.035
-10	SAE J525	0.049
-1012	SAE J525	0.049
-12	SAE J525	0.049

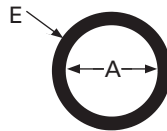
### O-rings for Bump Tube O-Ring Seal and O-Ring Pilot Hose Ends

(O-rings for o-ring pilot end must be purchased separately)



#### ZW747

**Material:** HNBR  
**Durometer:** 70  
**Temperature Range:**  
-40°F to +250°F  
-40°C to +121°C



#### FF90178

**Material:** HNBR  
**Durometer:** 70  
**Temperature Range:**  
-25°F to +300°F  
-31°C to +150°C

O-RING CATALOG NUMBER	O-RING PILOT DASH SIZE	A	E
ZW74706	-06	.301	.07
ZW74708	-08	.426	.07
ZW74710	-10	.551	.07
ZW74712	-12	.676	.07

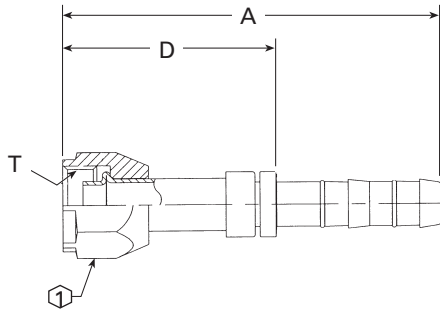
O-RING PART NUMBER	O-RING PILOT DASH SIZE	A	E
FF90178-11	-06	.301	.0625
FF90178-13	-08	.426	.0625
FF90178-15	-10	.551	.0625
FF90178-17	-12	.676	.0625



# E-Z Clip System™

## Hose Ends

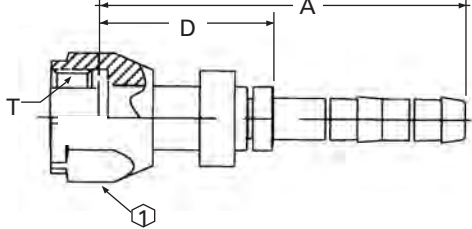
### FJ5984



#### Straight - Female O-ring (short pilot)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ5984-0606S	5/8-18	6	3.14	1.62	—	—	0.75
FJ5984-0608S	5/8-18	8	3.16	1.62	—	—	0.75
FJ5984-0808S	3/4-16	8	3.56	2.02	—	—	0.88
FJ5984-0810S	3/4-16	10	3.57	2.02	—	—	0.88
FJ5984-1008S	7/8-14	8	3.62	2.08	—	—	0.88
FJ5984-1010S	7/8-14	10	3.63	2.08	—	—	1.06
FJ5984-1012S	7/8-14	12	3.66	2.08	—	—	1.06
FJ5984-1210S	1-1/16-14	10	4.25	2.62	—	—	1.25
FJ5984-1212S	1-1/16-14	12	4.25	2.67	—	—	1.25

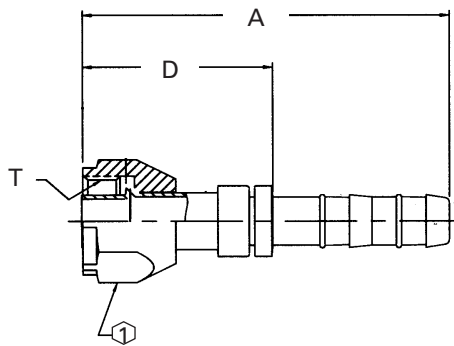
### FJ3632



#### Straight - Female O-ring (long pilot)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3632-0806S	3/4-16	6	2.91	1.36	—	—	0.875

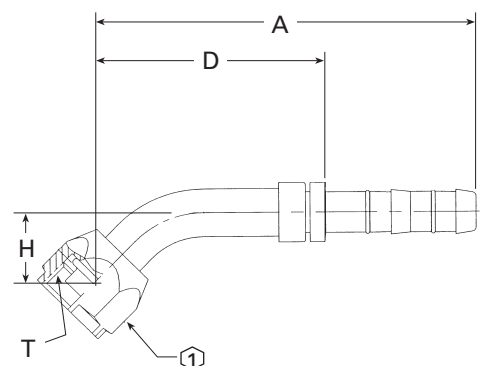
### FJ3408



#### Straight - Female O-ring, Metric Thread (long pilot)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3408-0808S	M20 x 1.5	8	3.20	1.66	—	—	0.94
FJ3408-0810S	M20 x 1.5	10	3.21	1.66	—	—	0.94
FJ3408-1212S	M27 x 2	12	4.25	2.67	—	—	1.25

### FJ3055



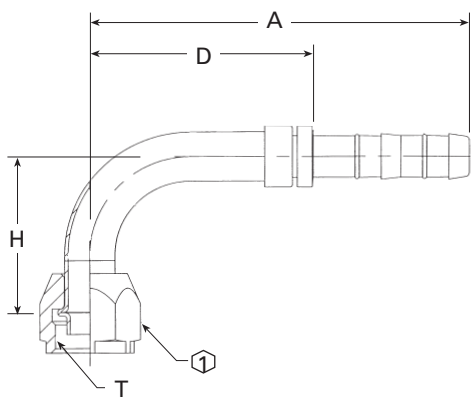
#### 45° Elbow Female O-ring (short pilot)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3055-01-0606S	5/8-18	6	3.60	2.08	—	0.67	0.75
FJ3055-02-0608S	5/8-18	8	3.62	2.08	—	0.67	0.75
FJ3055-03-0808S	3/4-16	8	3.94	2.40	—	0.73	0.88
FJ3055-04-0810S	3/4-16	10	3.95	2.40	—	0.73	0.88
FJ3055-05-1010S	7/8-14	10	4.37	2.81	—	1.19	1.06
FJ3055-06-1012S	7/8-14	12	4.46	2.88	—	1.25	1.06
FJ3055-07-1212S	1-1/16-14	12	5.33	3.75	—	1.47	1.25

# E-Z Clip System™

## Hose Ends

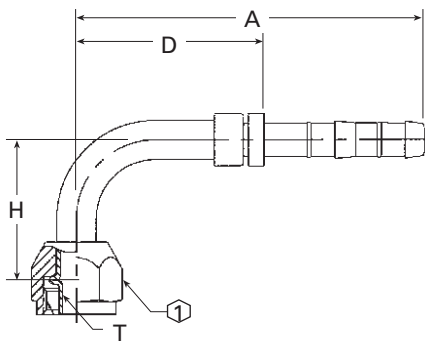
### FJ5985



#### 90° Elbow – Female O-ring (short pilot)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ5985-0606S	5/8-18	6	3.32	1.79	—	1.38	0.75
FJ5985-0608S	5/8-18	8	3.33	1.79	—	1.38	0.75
FJ5985-0806S	3/4-16	6	3.86	2.33	—	1.62	0.88
FJ5985-0808S	3/4-16	8	3.77	2.23	—	1.62	0.88
FJ5985-0810S	3/4-16	10	3.78	2.23	—	1.62	0.88
FJ5985-1010S	7/8-14	10	4.22	2.67	—	1.89	1.06
FJ5985-1012S	7/8-14	12	4.24	2.67	—	1.89	1.06
FJ5985-1210S	1-1/16-14	10	4.76	3.31	—	2.56	1.25
FJ5985-1212S	1-1/16-14	12	4.74	3.16	—	2.56	1.25

### FJ3288

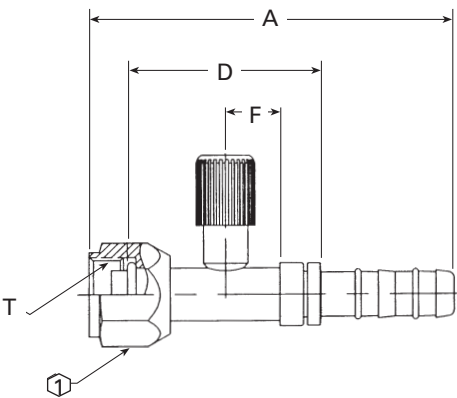


#### 90° Female O-ring (long pilot)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3288-01-0606S	5/8-18	6	3.32	1.79	—	1.38	0.75
FJ3288-02-0808S	3/4-16	8	3.77	2.23	—	1.62	0.88
FJ3288-03-0806S	3/4-16	6	3.75	2.33	—	1.62	0.88
FJ3288-04-0810S*	3/4-16	10	3.78	2.23	—	1.62	0.88
FJ3288-05-1016S*	7/8-14	16	4.40	2.72	—	1.89	1.06
FJ3288-06-1216S*	1-1/16-14	16	4.84	3.16	—	2.58	1.25

\*Non-stocked item.

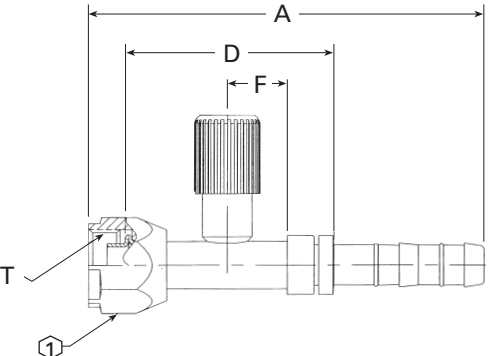
### FJ3054



#### Straight – Female O-ring (short pilot) with R134a Low Side Port

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3054-1010S	7/8-14	10	4.24	2.25	0.63	—	1.06
FJ3054-1012S	7/8-14	12	4.27	2.25	0.63	—	1.06
FJ3054-1212S	1-1/16-14	12	4.58	2.43	0.54	—	1.25

### FJ3053



#### Straight – Female O-ring (short pilot) with R134a High Side Port

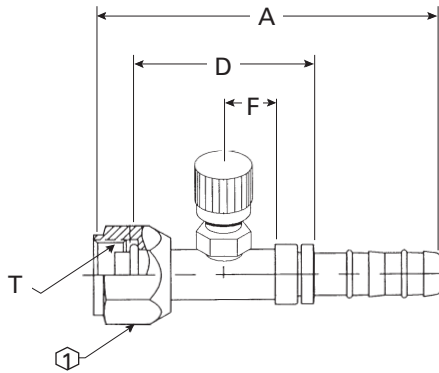
PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3053-0606S	5/8-18	6	3.91	2.10	0.63	—	0.75
FJ3053-0806S*	3/4-16	6	4.06	2.26	0.63	—	0.88
FJ3053-0808S	3/4-16	8	4.09	2.16	0.63	—	0.88
FJ3053-0810S	3/4-16	10	4.09	2.16	0.63	—	0.88

\*Non-stocked item.

# E-Z Clip System™

## Hose Ends

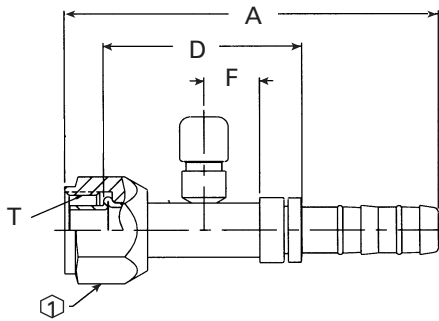
### FJ3162



#### Straight – Female O-ring (long pilot) with Switch Port (7/16-20 thd)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3162-0808S	3/4-16	8	4.09	2.16	0.79	—	0.88
FJ3162-1010S	7/8-14	10	4.25	2.25	0.79	—	1.06
FJ3162-1012S	7/8-14	12	4.27	2.25	0.79	—	1.06
FJ3162-1212S	1-1/16-14	12	4.86	2.71	0.79	—	1.25

### FJ3416

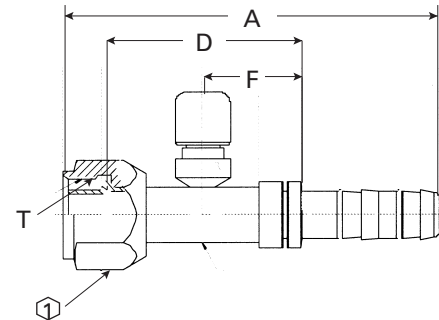


#### Straight – Female O-ring (long pilot) with Switch Port (M10 X 1.25)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3416-01-1010S	7/8-14	10	4.25	2.25	.63	—	1.06
FJ3416-02-0808S*	3/4-16	8	4.86	2.53	.79	—	1.06

\*Non-stocked item.

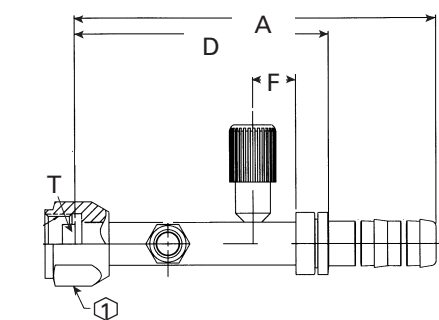
### FJ3461



#### Straight – Female O-ring (long pilot) with Switch Port (M12 X 1.25)

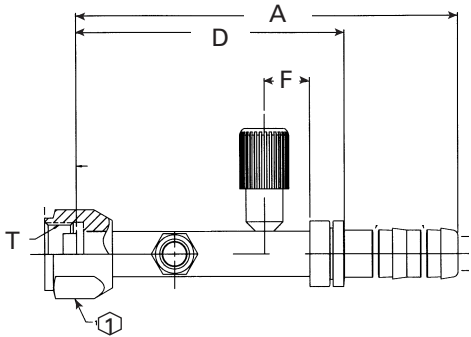
PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3461-01-1010S	7/8-14	10	4.25	2.25	.63	—	1.06
FJ3461-02-1012S	7/8-14	12	4.27	2.25	.63	—	1.06
FJ3461-03-1212S	1-1/16-14	12	4.86	2.71	.54	—	1.25

### FJ3363



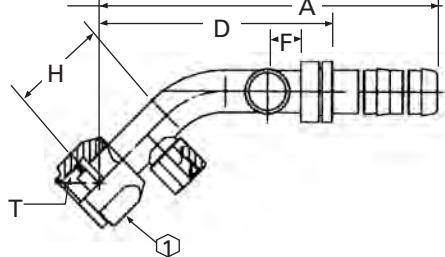
#### Straight – Female O-ring (short pilot), with R134a High side port and female switch connection, (1/8-27 thread)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3363-03-0808S	3/4-16	8	5.16	3.62	.63	—	.88
FJ3363-02-0810S	3/4-16	10	5.54	3.62	.63	—	.88

**E-Z Clip System™****Hose Ends****FJ3363**

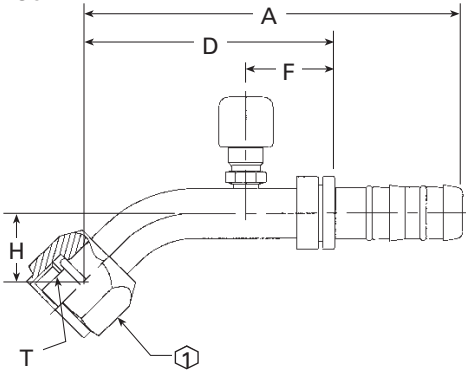
**Straight – Female O-ring (short pilot), with R134a Low side port and female switch connection, (1/8-27 thread)**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3363-01-1012S	7/8-14	12	5.30	3.72	.63	—	1.06

**FJ3365**

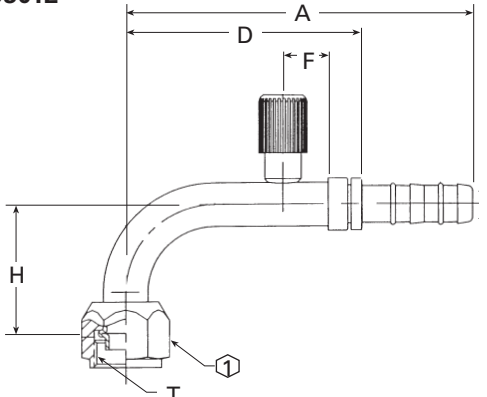
**45° - Female O-ring (Short Pilot) with R134a Low Side Port and switch conection**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3365-01-1012S	7/8-14	12	5.09	3.51	.50	1.43	1.125

**FJ3230**

**45° Female O-ring (long pilot) with Switch Port (7/16-20 thd)**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3230-01-0810S	3/4-16	10	4.61	2.58	0.63	0.80	0.88
FJ3230-02-1012S	7/8-14	12	4.73	2.67	0.63	0.89	1.06
FJ3230-03-0808S	3/4-16	8	4.43	2.40	0.63	0.73	0.88
FJ3230-04-1010S	7/8-14	10	5.00	2.97	0.63	1.19	1.06

**FJ3012**

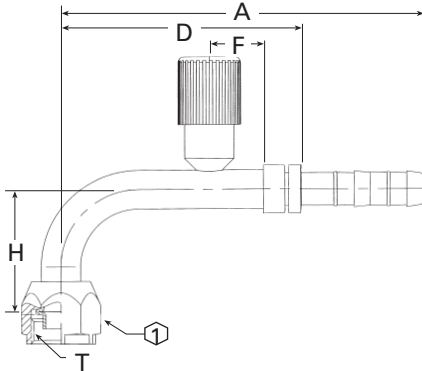
**90° Female O-ring (short pilot) with R134a Low Side Port**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3012-02-1010S	7/8-14	10	4.88	3.33	0.63	1.89	1.06
FJ3012-01-1012S	7/8-14	12	4.83	3.25	0.63	1.89	1.06
FJ3012-03-1212S	1-1/16-14	12	5.10	3.52	0.63	2.56	1.25

# E-Z Clip System™

## Hose Ends

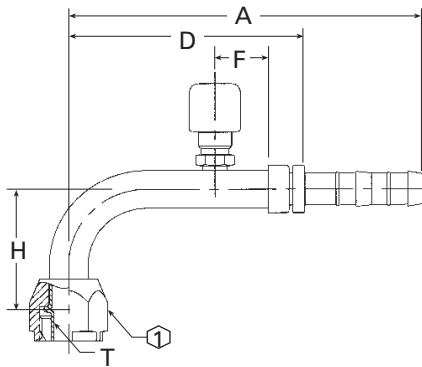
FJ3013



90° Female O-ring (short pilot) with R134a High Side Port

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3013-02-0606S	5/8-18	6	4.35	2.82	0.63	1.38	0.75
FJ3013-03-0808S	3/4-16	8	4.61	3.07	0.69	1.62	0.88
FJ3013-01-0810S	3/4-16	10	4.53	2.98	0.69	1.62	0.88

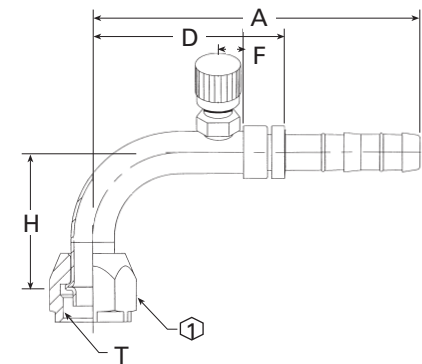
FJ3289



90° Female O-ring (long pilot) with Switch Port (7/16-20 thd)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3289-01-0808S	3/4-16	8	4.61	2.59	0.69	1.62	0.88
FJ3289-02-1010S	7/8-14	10	4.80	2.77	0.63	1.93	1.06
FJ3289-03-0606S	5/8-18	6	4.35	2.82	0.69	1.35	0.75
FJ3289-04-0810S	3/4-16	10	4.62	2.59	0.69	1.62	0.88
FJ3289-05-1012S	7/8-14	12	4.82	2.77	.63	1.93	1.06

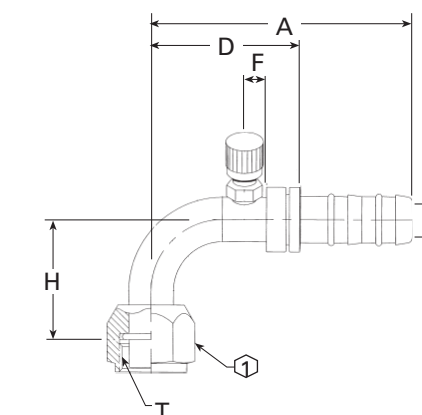
FJ3163



90° Elbow – Female O-ring (short pilot) with Switch Port (7/16-20 thd)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3163-01-1010S	7/8-14	10	4.80	3.25	0.79	1.89	1.06
FJ3163-02-1212S	1-1/16-14	12	5.08	3.50	0.79	2.56	1.25

FJ3047



90° Female O-ring (long pilot) with Charge Port (7/16-20Thd) – 45° Port Rotation

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3047-1012S	7/8-14	12	4.06	2.48	0.50	1.69	1.06

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

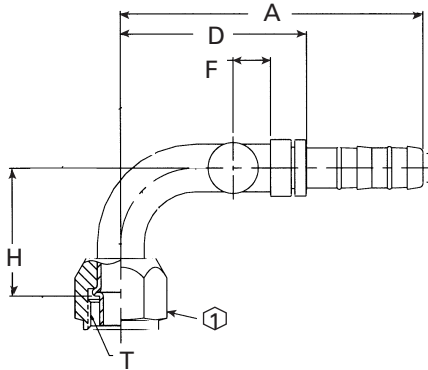
HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

**E-Z Clip System™**

## Hose Ends

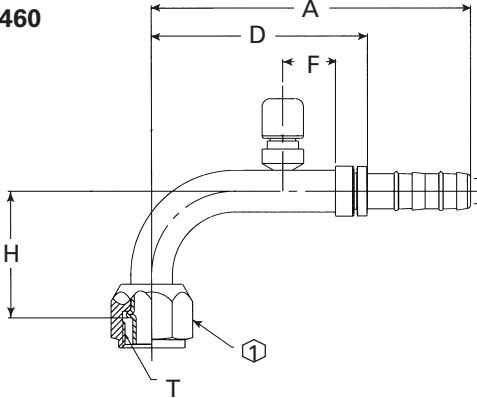
FJ3444



90° Female O-ring (long pilot) with Switch Port (7/16-20Thd) –  
90° Port Rotation

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3444-1010S	7/8-14	10	4.03	2.48	.50	1.69	1.06

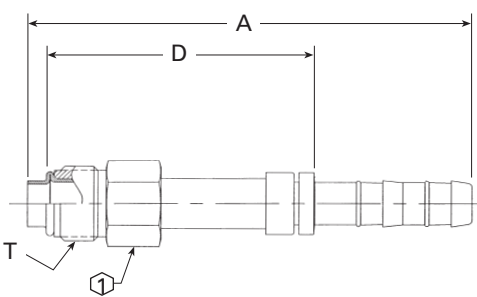
FJ3460



90° Female O-ring (long pilot) with Switchport (M12 X 1.25)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3460-01-1010S	7/8-14	10	4.80	3.25	0.79	1.89	1.06
FJ3460-02-1012S	7/8-14	12	4.83	3.25	0.79	1.89	1.06
FJ3460-03-1212S	1-1/16-14	12	5.08	3.50	.54	2.56	1.25

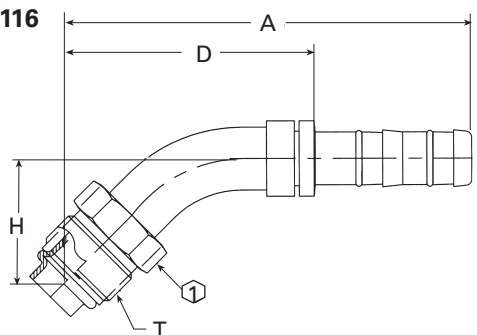
FJ3052



Straight Male O-ring (short pilot)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3052-0606S	5/8-18	6	3.41	1.70	—	—	0.62
FJ3052-0608S	5/8-18	8	3.43	1.70	—	—	0.62
FJ3052-0808S	3/4-18	8	4.37	2.64	—	—	0.75
FJ3052-1010S	7/8-18	10	3.66	1.92	—	—	0.88
FJ3052-1012S	7/8-18	12	3.68	1.92	—	—	0.88
FJ3052-1212S	1-1/16-16	12	3.68	1.92	—	—	1.06
FJ3052-1016S	7/8-18	16	4.33	2.47	—	—	0.88
FJ3052-1216S	1-1/16-16	16	4.28	2.42	—	—	0.88

FJ3116



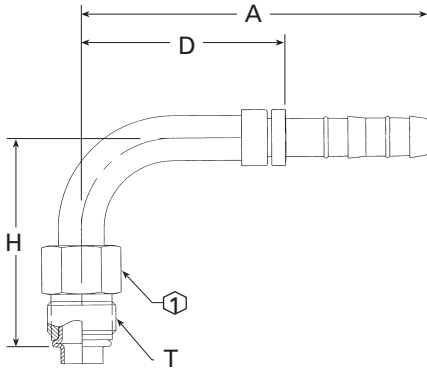
45° Male O-ring (short pilot)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3116-01-0606S	5/8-18	6	3.99	2.47	—	0.94	0.62
FJ3116-03-0808S	3/4-18	8	4.59	2.83	—	1.20	0.75
FJ3116-02-1010S	7/8-18	10	4.65	3.10	—	1.46	0.88
FJ3116-04-0608S	5/8-18	8	4.01	2.47	—	0.94	0.62

# E-Z Clip System™

## Hose Ends

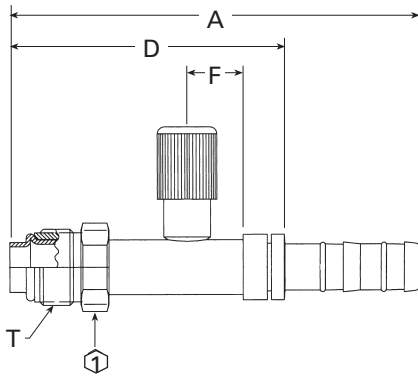
FJ3019



90° Male O-ring (short pilot)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3019-03-0606S	5/8-18	6	3.33	1.80	—	1.77	0.62
FJ3019-02-0608S	5/8-18	8	3.34	1.80	—	1.77	0.62
FJ3019-04-0808S	3/4-18	8	3.77	2.23	—	2.31	0.75
FJ3019-06-0810S	3/4-18	10	3.78	2.23	—	2.31	0.75
FJ3019-01-1012S	7/8-18	12	4.24	2.67	—	2.45	0.88
FJ3019-05-1212S	1-1/16-16	12	4.22	2.64	—	2.79	1.06
FJ3019-07-1010S	7/8-18	10	4.22	2.67	—	2.453	0.88

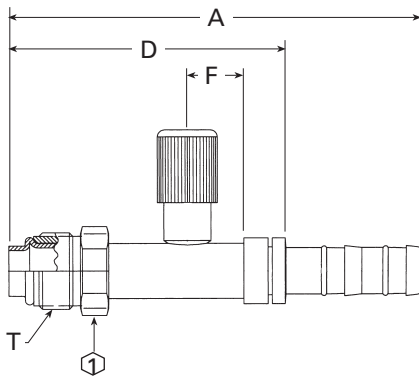
FJ3132



Straight Male O-ring (short pilot) with R134a Low Side Port

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3132-01-1010S	7/8-18	10	4.43	2.70	0.63	—	0.88
FJ3132-02-1012S	7/8-18	12	4.46	2.70	0.63	—	0.88

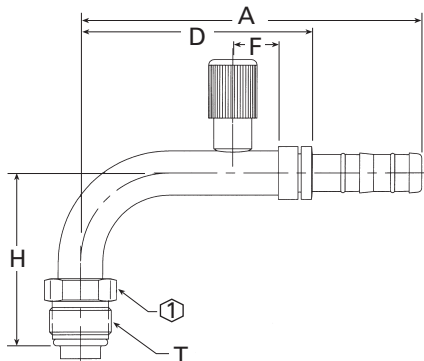
FJ3131



Straight Male O-ring (short pilot) with R134a High Side Port

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3131-01-0606S	5/8-18	6	4.18	2.47	0.63	—	0.62
FJ3131-02-0808S	3/4-18	8	4.58	2.85	0.63	—	0.75
FJ3131-03-1010S	7/8-18	10	4.34	2.61	0.63	—	0.88

FJ3134



90° Elbow Male O-ring (short pilot) with R134a High Side Port

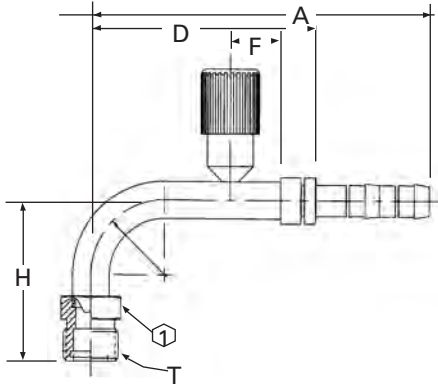
PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3134-01-0606S	5/8-18	6	4.34	2.82	0.63	1.75	0.62
FJ3134-02-0808S	3/4-18	8	4.61	3.07	0.63	2.31	0.75
FJ3134-03-1010S	7/8-18	10	4.81	3.25	0.63	2.34	0.88



**E-Z Clip System™**

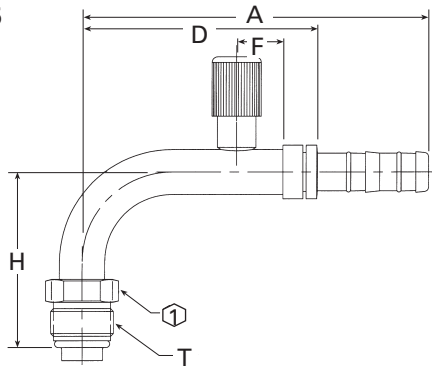
## Hose Ends

FJ3611

**90° Male MIO with R134a High Side Port**

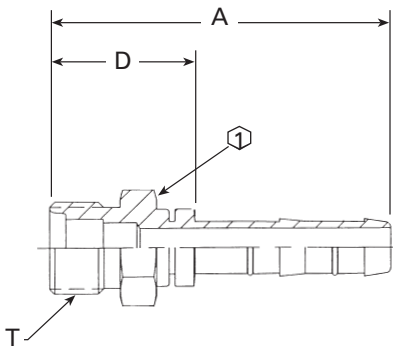
PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3611-01-0808S	3/4-16	8	4.61	3.07	.69	2.17	0.813

FJ3135

**90° Elbow Male O-ring (short pilot) with R134a Low Side Port**

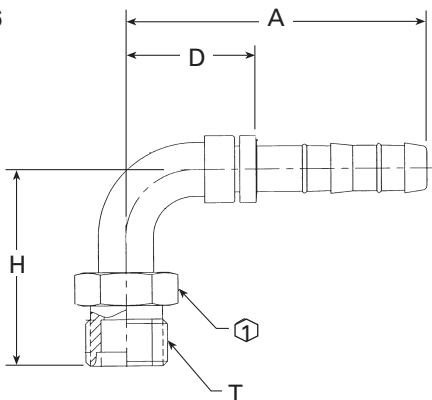
PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3135-01-1010S	7/8-18	10	4.81	3.25	0.63	2.34	0.88
FJ3135-02-1012S	7/8-18	12	4.81	3.25	0.63	2.34	0.88

FJ3026

**Male MIO (male insert O-ring) Straights**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3026-0606S	5/8-18	6	3.36	1.83	—	—	0.690
FJ3026-0808S	3/4-16	8	2.69	1.15	—	—	0.810
FJ3026-1010S	7/8-14	10	2.90	1.35	—	—	0.940
FJ3026-1012S	7/8-14	12	4.11	2.50	—	—	0.940
FJ3026-1212S	1-1/16-14	12	4.29	2.71	—	—	1.125

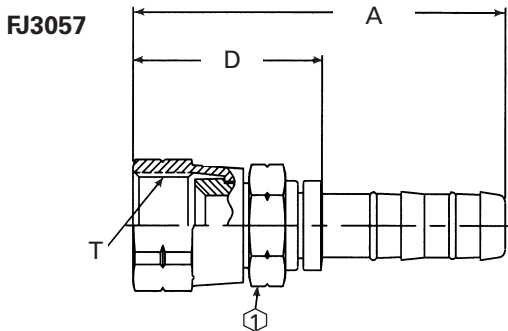
FJ3056

**90° Male MIO - (male insert O-ring)**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3056-01-0606S	5/8-18	6	2.50	0.98	—	1.44	0.69
FJ3056-02-0808S	3/4-16	8	2.74	1.20	—	1.82	0.81
FJ3056-03-1010S	7/8-14	10	3.09	1.54	—	2.13	0.94
FJ3056-04-0810S	3/4-16	10	2.75	1.20	—	1.82	0.81

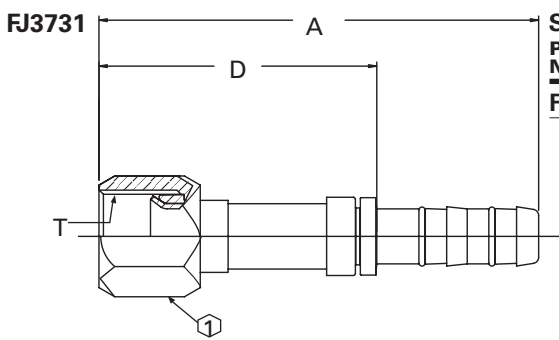
# E-Z Clip System™

## Hose Ends



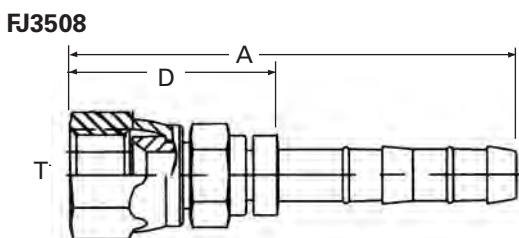
### Female SAE 45° Flares

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3057-01-0606S	5/8-18	6	2.88	1.35	—	—	0.56
FJ3057-02-0608S	5/8-18	8	3.14	1.62	—	—	0.75
FJ3057-03-0808S	3/4-16	8	2.96	1.42	—	—	0.69
FJ3057-04-0810S	3/4-16	10	3.56	2.02	—	—	0.88
FJ3057-05-1010S	7/8-14	10	3.63	2.08	—	—	1.00
FJ3057-06-1012S	7/8-14	12	3.66	2.08	—	—	1.00
FJ3057-07-1212S	1-1/16-14	12	3.20	1.62	—	—	1.25



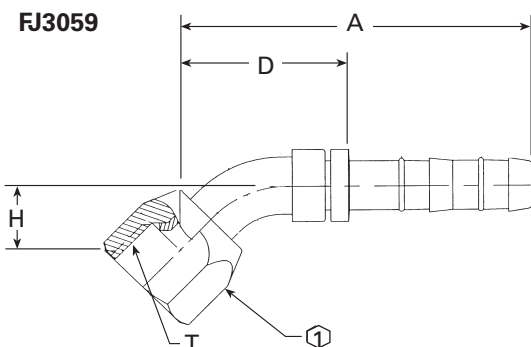
### Straight - Female 37° Flare

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3731-1010S	7/8-14	10	4.21	2.66	—	—	1



### Straight - Female 37° Flare - Braze Design - Special Order Only

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3508-0606S	9/16-18	6	2.85	1.32	—	—	0.563
FJ3508-0808S	3/4-16	8	2.96	1.42	—	—	0.688
FJ3508-1010S	7/8-14	10	3.15	1.59	—	—	0.875
FJ3508-1212S	1 1/16-12	12	3.2	1.62	—	—	1.25

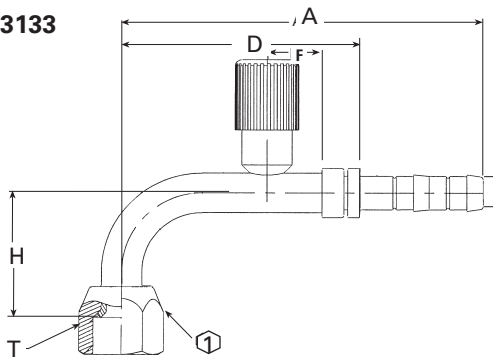


### 45° Female SAE 45° and Universal Flares

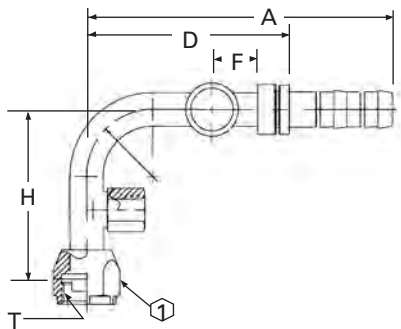
PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3059-01-0606S†	5/8-18	6	2.61	1.08	—	0.39	0.75
FJ3059-02-0608S†	5/8-18	8	2.62	1.08	—	0.39	0.75
FJ3059-03-0808S*	3/4-16	8	2.97	1.43	—	0.55	0.88
FJ3059-04-0810S*	3/4-16	10	2.98	1.43	—	0.55	0.88
FJ3059-05-1010S*	7/8-14	10	3.08	1.53	—	0.63	1.00
FJ3059-06-1012S*	7/8-14	12	3.11	1.53	—	0.63	1.00

†Double notch in nut for universal type identification

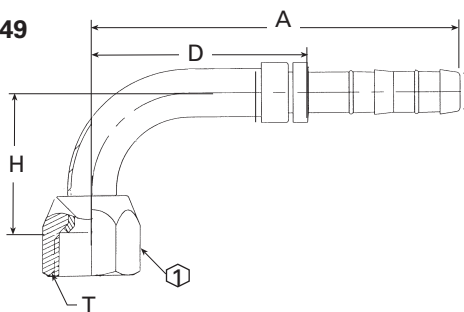
\*Universal Flare

**E-Z Clip System™****Hose Ends****FJ3133****90° Female SAE 45° With High Side Charge Port (R134a)**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3133-01-0606S	5/8-18	6	4.35	2.82	0.63	1.28	0.75
FJ3133-02-0808S	3/4-16	8	4.61	3.07	0.63	1.53	0.88
FJ3133-03-1010S	7/8-14	10	4.80	3.25	0.63	1.84	0.88

**FJ3366****SAE 90° with R134a C/Port and Switch Port**

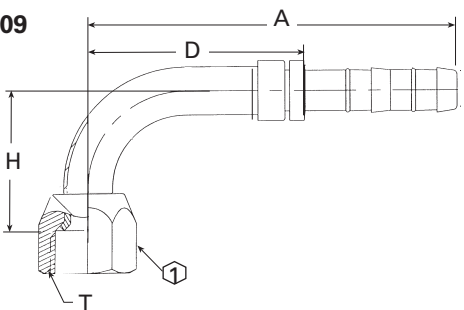
PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3366-01-0810S	3/4-16	10	4.62	3.07	.69	2.53	0.875
FJ3366-02-0808S	3/4-16	8	4.61	3.07	.69	2.53	0.875

**FJ3149****90° Female SAE 45° and Universal Flares**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3149-01-0606S†	5/8-18	6	2.51	0.98	—	0.85	0.75
FJ3149-02-0608S†	5/8-18	8	2.52	0.98	—	0.85	0.75
FJ3149-03-0808S*	3/4-16	8	2.74	1.20	—	1.09	0.88
FJ3149-04-1010S*	7/8-14	10	3.09	1.54	—	1.19	1.00
FJ3149-05-1012S*	7/8-14	12	3.09	1.54	—	1.19	1.00
FJ3149-06-1212S†	1-1/16-14	12	3.68	2.11	—	1.80	1.25

†Double notch in nut for universal type identification

\*Universal Flare

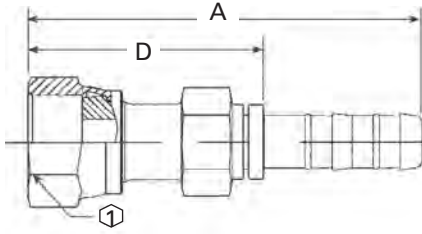
**FJ3509****90° Female JIC**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3509-0606S	9/16-18	6	2.50	.98	—	2.18	.69
FJ3509-0608S	9/16-18	8	2.52	.98	—	2.18	.69
FJ3509-1212S	1-1/16-12	12	3.36	1.78	—	3.73	1.25

# E-Z Clip System™

## Hose Ends

GA23911

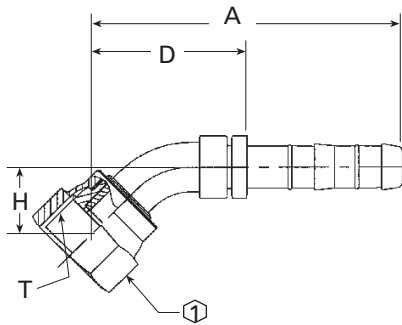


### Straight – ORS Female Swivel Metric Hex Nut<sup>Δ</sup>

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
GA23911-6-6*	1-1/16-16	6	2.95	1.43	—	—	22mm
GA23911-8-8*	1-3/16-16	8	3.17	1.62	—	—	24mm
GA23911-10-12*	1-14	12	3.32	1.74	—	—	30mm
GA23911-10-10*	1-14	10	3.33	1.78	—	—	30mm
GA23911-12-12*	1-3/16-12	12	3.38	1.80	—	—	36mm

<sup>Δ</sup>\*Metric Hex

FJ3161  
GA23912

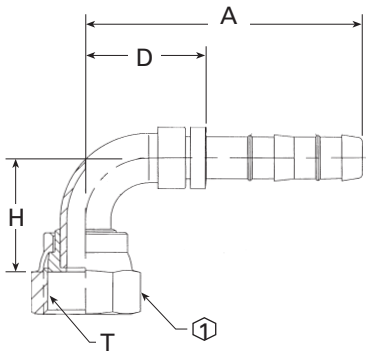


### 45° ORS Female Swivel

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3161-01-0606S	11/16-16	6	2.65	1.12	—	0.44	0.81
GA23912-8-8*	13/16-16	8	3.02	1.47	—	0.59	29mm
GA23912-10-10*	1-14	10	3.22	1.67	—	0.70	30mm
GA23912-10-8*	1-14	8	3.50	1.96	—	0.68	30mm
GA23912-12-12*	1-3/16-12	12	4.23	2.65	—	0.83	36mm

<sup>Δ</sup>\*Metric Hex

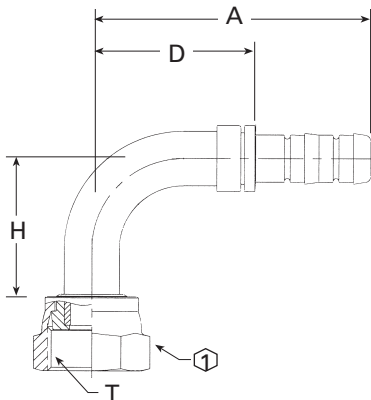
FJ5994



### 90° ORS Female Swivel

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ5994-01-0606S	1-1/16-16	6	2.50	0.98	—	0.91	0.81
FJ5994-02-0808S	13/16-16	8	2.74	1.20	—	1.15	0.94
FJ5994-04-1010S	1-14	10	3.09	1.53	—	1.27	1.12
FJ5994-03-1212S	1-3/16-12	12	3.36	1.78	—	1.90	1.38
FJ5994-05-0406S	9/16-18	6	2.44	0.92	—	0.82	0.69
FJ5994-05-1012S	1-14	12	3.11	1.53	—	1.78	1.13
FJ5994-07-0806S	13/16-16	6	2.66	1.10	—	1.15	0.94
FJ5994-08-1216S	1-3/16-12	16	3.46	1.78	—	1.90	1.38

FJ3319



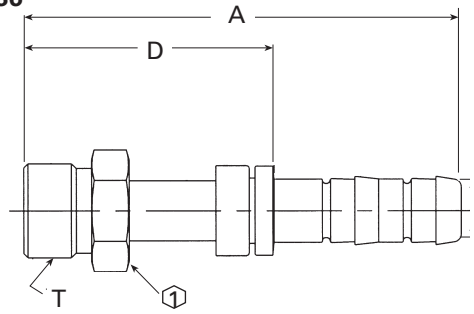
### 90° ORS Female Swivel (long drop)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3319-1212S	1-3/16-12	12	3.82	2.24	—	2.38	1.13

# E-Z Clip System™

## Hose Ends

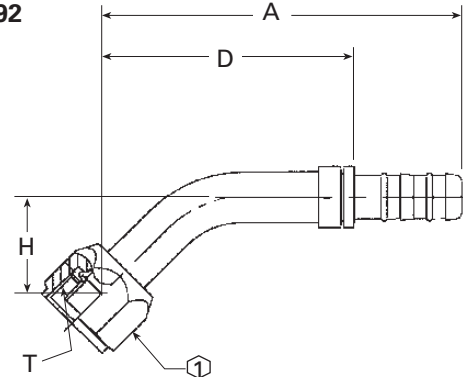
FJ3136



**Straight Male O-ring (rigid) Metric Thread**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3136-0810S	M20 x 1.5	10	3.62	2.07	0.69	—	0.88

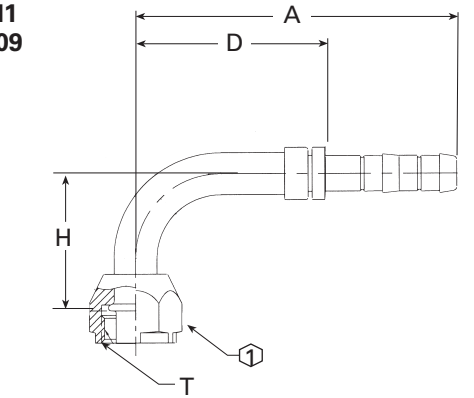
FJ3192



**45° Female O-ring (long pilot, metric thread)**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3192-02-1212S	M27x2	12	4.74	3.17	—	1.47	1.25

FJ3111  
FJ3409

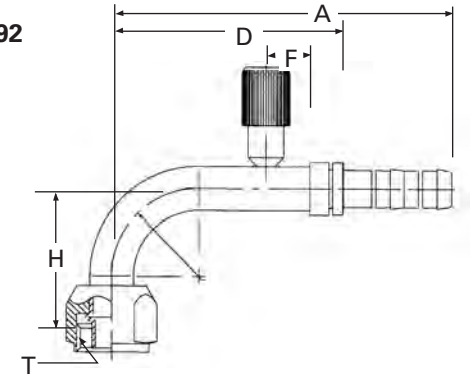


**90° Female O-ring (long pilot) Metric Thread**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3111-01-0808S	M20 x 1.5	8	3.77	2.23	—	1.62	0.94
FJ3111-02-0810S	M20 x 1.5	10	3.78	2.23	—	1.62	0.94
FJ3111-03-0806S*	M20 x 1.5	6	3.75	2.23	—	1.62	0.94
FJ3409-1212S	M27 x 2	12	4.74	3.16	—	2.56	1.25

\*Non-Stock item

FJ3892



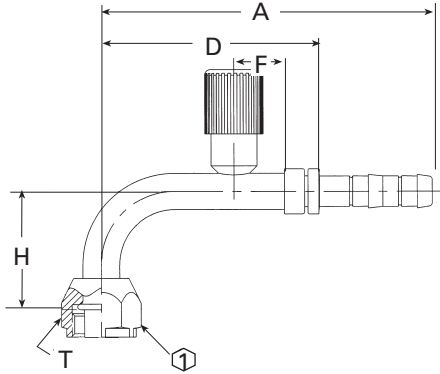
**90° - Female O-ring (long pilot) with R134a Low Side Port (Metric Thread)**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3892-01-1010S	M24 X 1.5	10	4.88	3.33	.63	1.89	1.125

# E-Z Clip System™

## Hose Ends

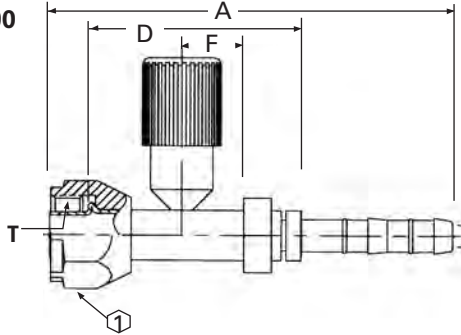
FJ3112



**90° Female O-ring (long pilot) Metric Thread with High Side Charge Port (R134a)**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3112-01-0808S	M20 x 1.5	8	4.52	2.98	0.69	1.62	0.94
FJ3112-02-0810S	M20 x 1.5	10	4.53	2.98	0.69	1.62	0.94
FJ3112-03-0806S	M20 x 1.5	8	4.50	2.98	0.69	1.62	0.94

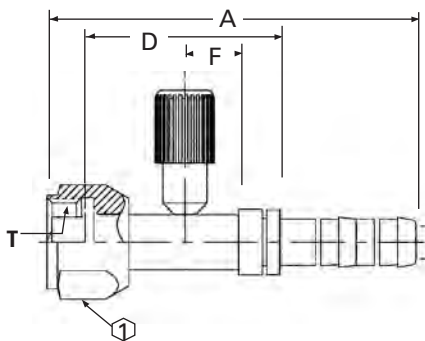
FJ3890



**Straight - Female O-ring (long pilot) with R134a High Side Port (Metric Thread)**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3890-01-0806S	M20 X 1.5	6	4.06	2.16	.63		0.94

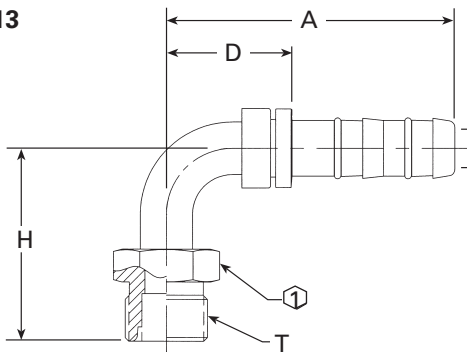
FJ3891



**Straight - Female O-ring (long pilot) with R134a Low Side Port (Metric Thread)**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3891-01-1010S	M24 X 1.5	10	4.24	2.25	.62		1.125

FJ3113



**90° Male O-ring (rigid) Metric Thread**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3113-0810S	M20 x 1.5	8	2.75	1.20	—	1.82	0.88

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

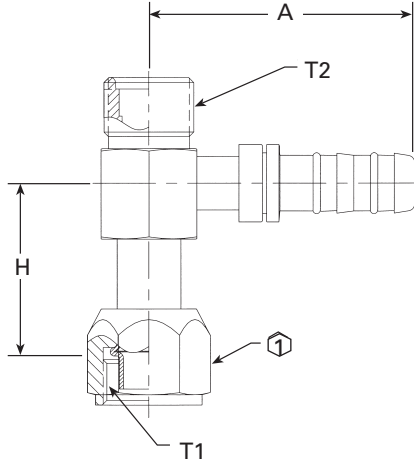
SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

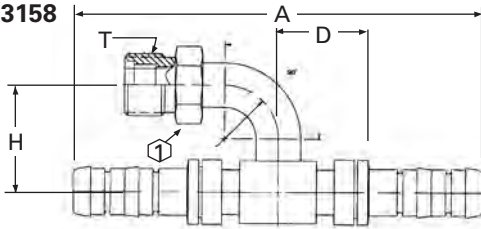
ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

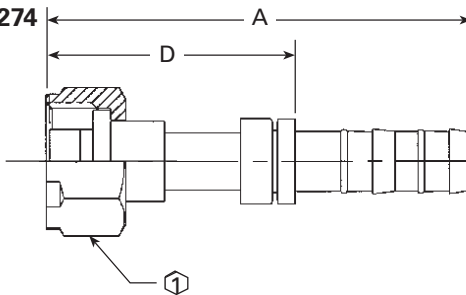
**E-Z Clip System™****Hose Ends****FJ3067  
FJ3495****GM Tie In – Metric Tee**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3067-1212S	M27 x 2	12	3.12	—	—	2.02	1.25
FJ3495-0808S	M20 x 1.5	8	2.71	—	—	1.68	0.94

**EJ3158****Tee Style Fitting with Male O-ring Connection**

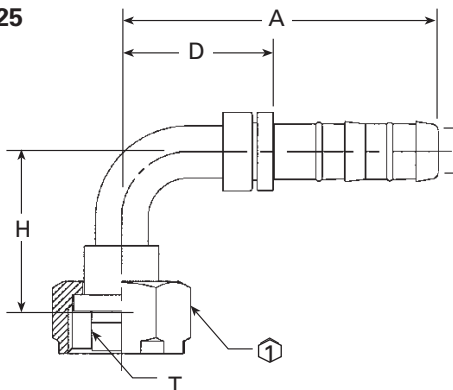
PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
EJ3158-101212S	7/8-14	12	5.67	1.26	—	1.49	0.94

\*Non-stocked item.

**FJ3274****Straight – Female RotaLok**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3274-1010S	1-14	10	3.69	2.14	—	—	1.13
FJ3274-1012S*	1-14	12	3.75	2.14	—	—	1.13

\*Non-stocked item.

**FJ3225****90° Female RotaLok**

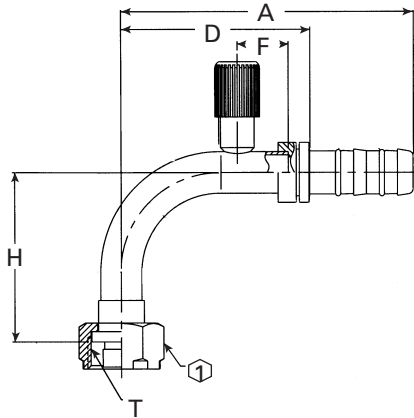
PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3225-1010S	1-14	10	2.98	1.43	—	1.52	1.13



# E-Z Clip System™

## Hose Ends

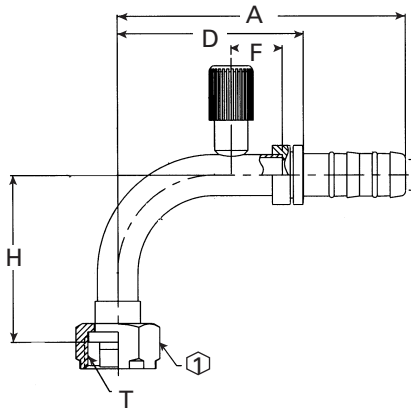
FJ3510



90° Female Rotalok with R134a Low Side Port

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3510-1012S	1-14	12	4.48	2.88	.79	2.58	1.13

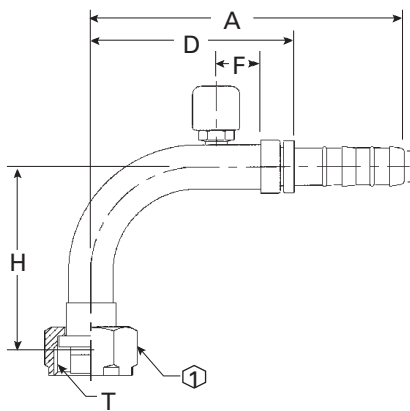
FJ3511



90° Female Rotalok with R134a High Side Port

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3511-1010S	1-14	10	4.43	2.88	.79	2.58	1.13

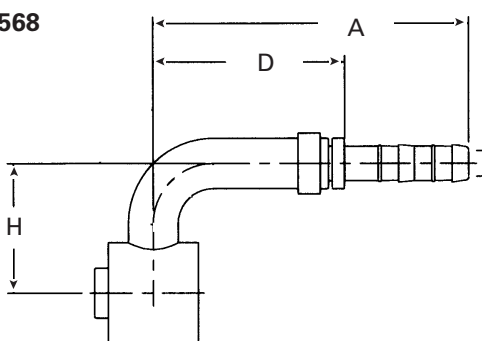
FJ3226



90° Female RotaLok with Switch Port (7/16-20 thread)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3226-1010S	1-14	10	4.43	2.88	0.63	2.56	1.13

FJ3568



90° GM Block Style

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3568-1008S	—	8	3.92	2.38	—	1.60	—
FJ3568-1010S	—	10	3.83	2.28	—	2.31	—
FJ3568-1012S	—	12	3.86	2.28	—	2.38	—

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

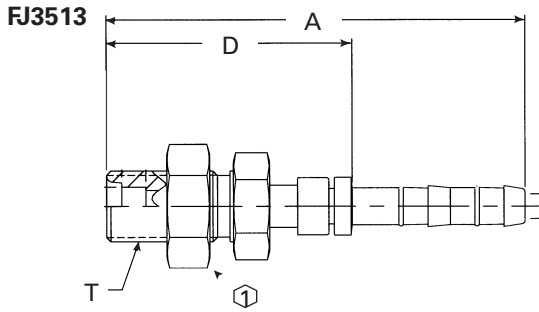
SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

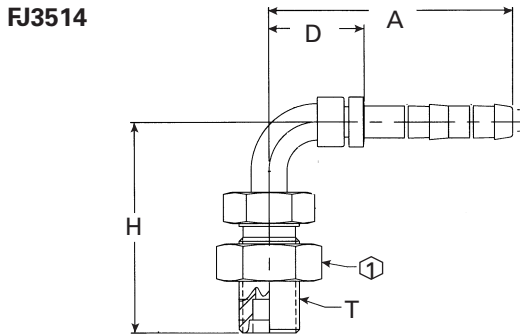
ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

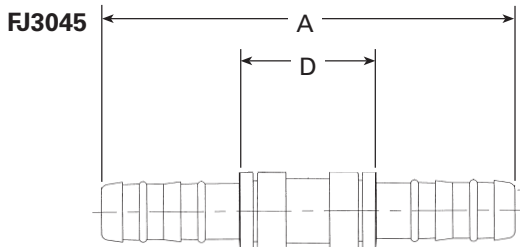
TECHNICAL DATA

**E-Z Clip System™****Hose Ends****Straight Bulkhead**

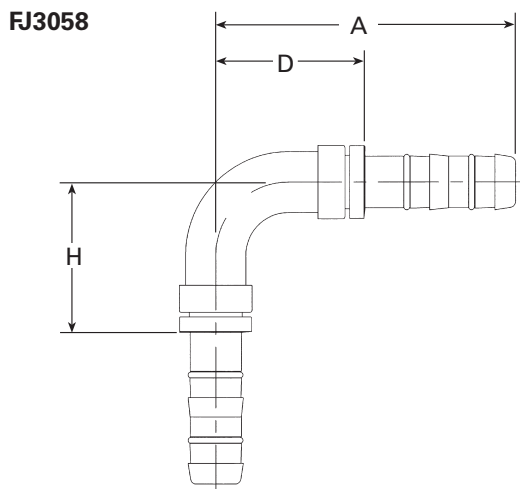
PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3513-0606S	5/8-18	6	3.69	2.16	—	—	.94
FJ3513-0808S	3/4-16	8	3.93	2.39	—	—	1.0
FJ3513-1010S	7/8-14	10	4.49	2.94	—	—	1.13
FJ3513-1212S	1 1/16-14	12	4.45	2.87	—	—	1.375

**90° Male Bulkhead**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3514-0606S	5/8-18	6	2.50	.98	—	2.15	.94
FJ3514-0808S	3/4-16	8	2.74	1.20	—	2.61	1.0
FJ3514-1010S	7/8-14	10	3.08	1.53	—	3.26	1.13
FJ3514-1012S	7/8-14	12	3.11	1.53	—	3.26	1.13
FJ3514-1212S	1-1/16-14	12	3.69	2.11	—	3.78	1.38

**Straight Splicer**

PART NUMBE	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3045-0606S	—	6	4.63	1.58	—	—	—
FJ3045-0808S	—	8	4.76	1.68	—	—	—
FJ3045-1010S	—	10	5.68	2.58	—	—	—
FJ3045-1212S	—	12	4.72	1.57	—	—	—
FJ3045-1008S	—	10, 8	5.78	2.69	—	—	—

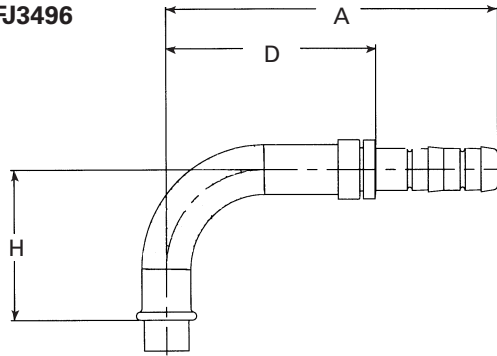
**90° Splicer**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3058-01-0606S	—	6	2.71	1.18	—	2.71	—
FJ3058-02-0808S	—	8	2.98	1.43	—	2.98	—
FJ3058-03-1010S	—	10	3.08	1.53	—	3.08	—
FJ3058-04-1212S	—	12	3.68	2.11	—	3.68	—

# E-Z Clip System™

## Hose Ends

FJ3496

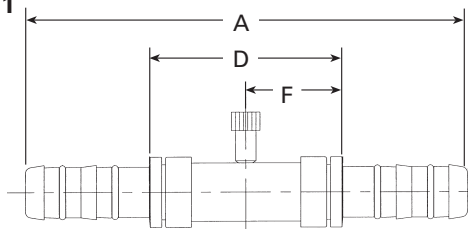


### 90° Pilot Connection (long pilot)

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3496-01-1010S	—	10	4.22	2.67	—	1.89	—

\* Consult applications engineer for additional sizes.

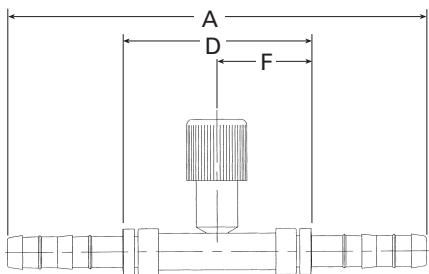
FJ3171



### Splicer with SwitchPort 7/16-20Thd

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3171-0606S	—	6	5.41	2.36	1.18	—	—
FJ3171-0808S	—	8	5.61	2.52	1.26	—	—
FJ3171-1010S	—	10	5.54	2.44	1.22	—	—
FJ3171-1212S	—	12	5.60	2.44	1.22	—	—

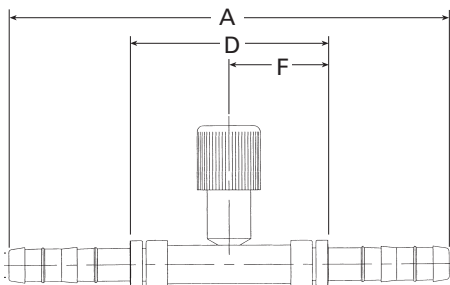
FJ5995



### Splicer with High Side R134a Port

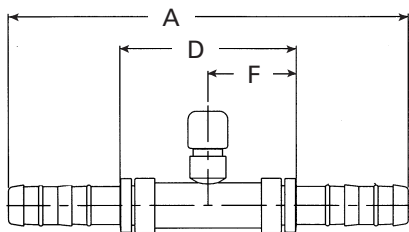
PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ5995-0606S	—	6	5.41	2.36	1.18	—	—
FJ5995-0808S	—	8	5.61	2.52	1.26	—	—
FJ5995-1010S	—	10	5.62	2.52	1.26	—	—
FJ5995-1212S	—	12	5.67	2.52	1.26	—	—

FJ5986

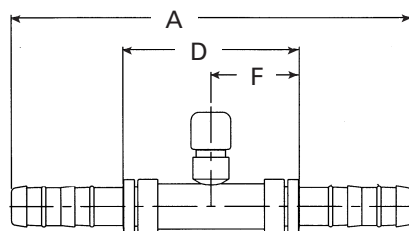


### Splicer with R134a Low Side Port

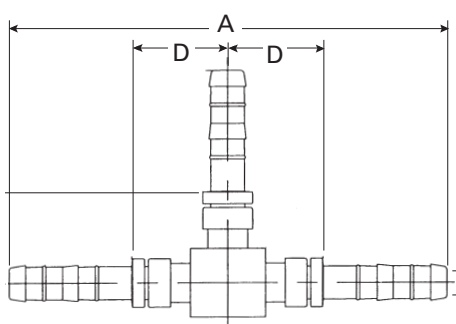
PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ5986-1010S	—	10	5.54	2.44	1.22	—	—
FJ5986-1212S	—	12	5.60	2.44	1.22	—	—
FJ5986-1616S	—	16	6.79	3.40	1.72	—	—

**E-Z Clip System™****Hose Ends****FJ3427****Splicer with High Side Switch Port (M10 X 1.25)**

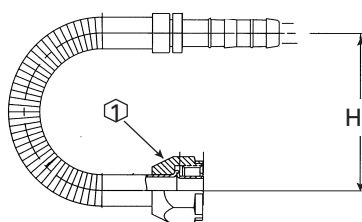
PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3427-0808S	—	8	5.61	2.52	1.26	—	—
FJ3427-1010S	—	10	5.54	2.44	1.22	—	—

**FJ3428****Splicer with Low Side Switch Port (M12 X 1.25)**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3428-1212S	—	12	5.59	2.44	1.22	—	—

**FJ3066****"T" Splicer – 3 Hose Connector**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3066-0808S	—	8	5.48	2.40	—	—	—
FJ3066-1010S	—	10	5.62	2.52	—	—	—
FJ3066-1212S	—	12	5.67	2.52	—	—	—
FJ3066-101212S	—	10x12x12	5.67	2.52	—	—	—
FJ3066-060808S	—	6 x 8 x 8	5.48	2.40	—	—	—

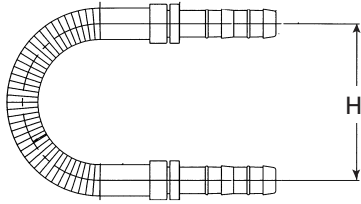
**FJ3623****180° Female O-ring Pilot**

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3623-0808S	M20 x 1.5	8	—	—	—	2.50	.94

# E-Z Clip System™

## Hose Ends

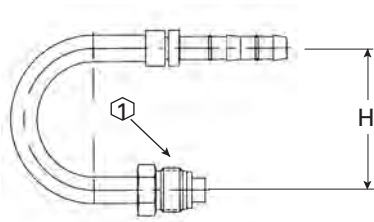
FJ3624



### 180° Splicer

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3624-0808S	—	8	—	—	—	2.50	—

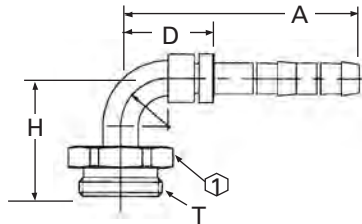
FJ3804



### 180° Male O-ring

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3804-0606S	5/8-18	6	—	—	—	2.00	.625

FJ3914



### 90° 5400 Coupling Thread

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3914-03-1210S	1 1/4-18	10	3.08	1.53	—	1.73	1.375
FJ3914-04-0806S	7/8-20	6	2.5	0.98	—	1.23	1.000

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

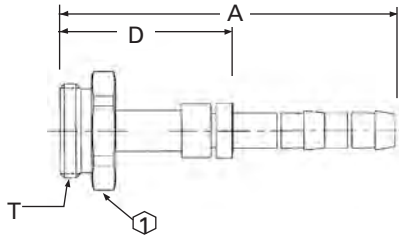
HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

# E-Z Clip System™

## Hose Ends

FJ3970



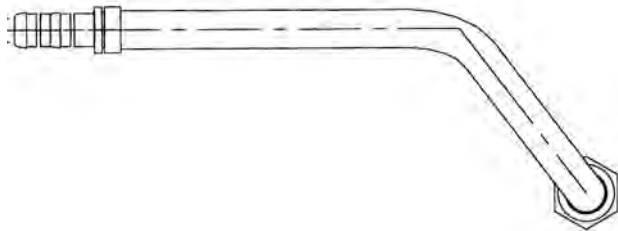
### Straight 5400 Coupling Thread

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3970-0606S	7/8-20	6	3.14	1.82	—	—	1.000

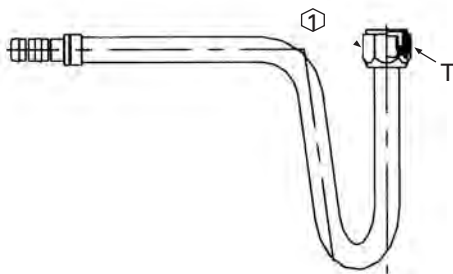
FJ3734

### Female O-ring (Long Pilot) Compound Tube

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3734-1212S	1 1/16-14	12	—	—	—	—	1.25



FJ3801



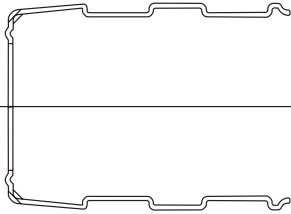
### Female O-ring (Long Pilot) Compound Tube

PART NUMBER	TH'D "T"	HOSE SIZE	A REF	D REF	F REF	H REF	① REF
FJ3801-1212S	1 1/16-14	12	—	—	—	—	1.25

# E-Z Clip System™

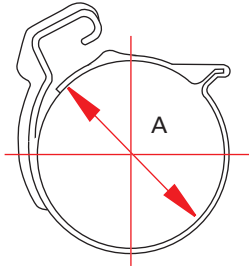
## Cages, Clips and Lifesavers

### Cages / Fitting to Hose Attachment



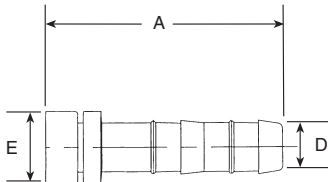
PART NUMBER	CAGE SIZE	HOSE DESCRIPTION
1F40105-04C	-04	Cages for size -04 hose
1F40105-06C	-06	Cages for size -06 hose
1F40105-08C	-08	Cages for size -08 hose
1F40105-10C	-10	Cages for size -10 hose
1F40105-12C	-12	Cages for size -12 hose
1F40105-16C	-16	Cages for size -16 hose

### Clips Hose / Cage Connection



PART NUMBER	A REF	DESCRIPTION
1F40104-04C	14 mm	Clips for size -04 hose
1F40104-06C	18 mm	Clips for size -06 hose
1F40104-08C	20.5 mm	Clips for size -08 hose
1F40104-10C	23 mm	Clips for size -10 hose
1F40104-12C	27.5 mm	Clips for size -12 hose
1F40104-16C	33 mm	Clips for size -16 hose

### Lifesaver Braze Nipple



PART NUMBER	TH'D "T"	HOSE SIZE	A REF
FF12262-0606S*	—	6	2.01
FF12262-0608S*	—	8	2.02
FF12262-0808S*	—	8	2.02
FF12262-0810S*	—	10	2.03
FF12262-1010S*	—	10	2.03
FF12262-1012S*	—	12	2.06
FF12262-1212S*	—	12	2.11

\*O-rings packaged separately in kit.



# E-Z Clip System

## Assembly Tools

### Pliers / Connecting Tool



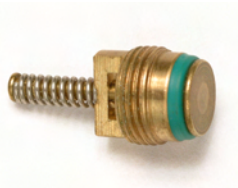
CATALOG NUMBER	DESCRIPTION
FT1357	Connecting Tool
FT1417	Size 16 Connecting Tool Only

### Hose Cutter



CATALOG NUMBER	DESCRIPTION
T-135	Plastic Tube and Hose Cutter
T-135B	Replacement Blade

### Core Tools



FF90192-02



FF90192-01

CATALOG NUMBER	DESCRIPTION
FF90192-02	High Side Core*
FF90192-01	Low Side Core*
FF90193-02	High Side Cap
FF90193-01	Low Side Cap
FF9872-04	Cap for 7/16-20 Thd. port

\*For Weatherhead high flow charge ports only.



FF90193-02, FF90193-01



FF9872-04

# E-Z Clip Components

## Ordering & Identifying



The E-Z Clip System is designed for assembly with Weatherhead GH134W Multi-Refrigerant hose. Its engineered connection exceeds SAE J2064 and has been vibration and impulse tested.

The benefits of E-Z Clip are virtually endless:

- No guess work
- No leaking crimps
- No power supply needed
- As easy to use as a pair of pliers
- Easy to use in confined areas

### Assembly Materials Checklist

- Pliers (FT1357)
- Guillotine blade (T-135) or equivalent cutting tool
- Refrigerant oil compatible with refrigeration or A/C system
- GH134W Multi-Refrigerant hose
- Nipple assembly\*
- Appropriately sized clips and cage

\*The two black o-rings on the nipple assembly are of a specific rubber compound and size. They should NOT be removed.



## E-Z Clip System Components Are Simple to Identify, Order and Use

### ORDERING INFORMATION

Hose	Nipple	Cage	Clips
GH134-6W	FJ__-__06S	1F40105-06C	1F40104-06C
GH134-8W	FJ__-__08S	1F40105-08C	1F40104-08C
GH134-10W	FJ__-__10S	1F40105-10C	1F40104-10C
GH134-12W	FJ__-__12S	1F40105-12C	1F40104-12C
GH134-16W*	FJ__-__16S	1F40105-16C	1F40104-16C

### IDENTIFICATION GUIDE

Hose	Cage	Clips	Nipple O-Ring*(HNBR)
GH134-6W	-6 and 150	150	1F40106-06
GH134-8W	-8 and 175	175	1F40106-08
GH134-10W	-10 and 200	200	1F40106-10
GH134-12W	-12 and 245	245	1F40106-12
GH134-16W	-16 and 285	285	1F40106-16C

\* The o-ring shown must be used on the hose nipple.  
NO substitution can be made, without potential of failure.

### For Example...



Hose



Cage



Cage Groove



Clips

\* See assembly instructions in document # W-HOAC-MS002-E

# E-Z Clip System

## Assembly Instructions

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

### Step 1. Cut the Hose

Cut the hose to proper length with an appropriate cutting tool. The Weatherhead hand-held hose cutter (T-135) has been specifically designed for cutting all non-wire reinforced hose, such as GH134W Multi-Refrigerant hose. Be sure the cut is made square to the hose length.



### Step 2. Slip on Two Clips

Install two proper-sized clips onto the cut end of the hose. Orientation of the clips does not affect the performance of the connection. However, for ease of assembly, both clips should have the same orientation.



#### NOTE:

Failure to slide the clips over the hose at this time will require the clips to be stretched over the hose or fitting later. This may permanently damage the clip.

### Step 3. Oil the Nipple

Lubricate the nipple with a generous amount of the refrigeration or A/C system's compressor lubricating oil. This **MUST** be done to lower the force of nipple insertion.



#### NOTE:

Be sure to wipe excess oil from the nipple and hose.

### Step 4. Insert the Nipple into the Hose

To ensure that the nipple is fully inserted, check the gap between the cut end of the hose and the shoulder on the nipple.

Care should be taken to avoid kinking or other damage to the hose during nipple insertion.



This step **MUST** be performed to ensure:

1. The clips will be located over the o-rings on the nipple.
2. The connection will be compatible with the connection's pressure rating.

### Step 5. Snap on the Cage

Snap the cage into the groove on the nipple. The arms should extend over the hose length. When the cage has been correctly installed in the cage groove, the cage will be able to rotate in the groove.

# E-Z Clip System

## Assembly Instructions (cont.)

### Step 6: Slide the Clips

Slide the clips over the cage arms and into the channels on each arm



### Step 7: Close the Clips

Use the FT1357 pliers to close the clips. The pliers should be positioned squarely on the clip connection points and should remain square during the closing of the clip.



For easiest assembly, the clasp should be closed between the cage arms.

The nose of the pliers should be firmly seated under the assembly bump and lock latch.



For easiest assembly, the clasp should be closed between the cage arms. If the pliers are not kept square during closing of the clip, the clasp may have an offset. Use the pliers to correct the clasp alignment.

### Notice

E-Z Clip components should not be reused.

### ⚠ CAUTION

Failure to follow these assembly instructions and/or the use of Weatherhead hose with Hose Ends supplied by other manufacturers may result in unreliable and unsafe hose assemblies, which may result in sudden or unintended escape of refrigerant gases. Personal injury and/or violations of EPA regulations may occur as a consequence.

Eaton recommends adherence to all guidelines, including EPA guidelines, concerning the service of refrigerant systems.



Correct



Incorrect



Incorrect

Correct

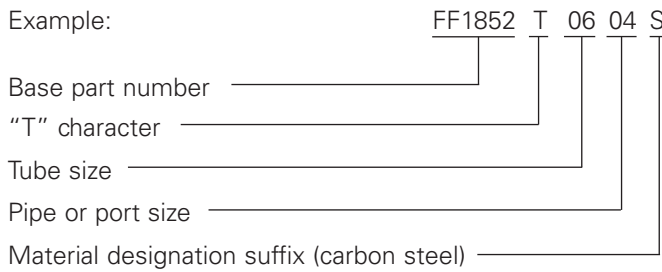


# Adapters New to Eaton Weatherhead

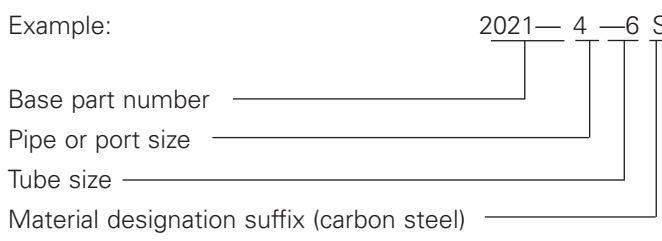
## How to Order

### New Eaton Adapter Part Numbers

Adapter part numbers consist of a base number followed by a size designation. If the part number contains a "T" character between the base number and size designator, the first size designator signifies the tube size.

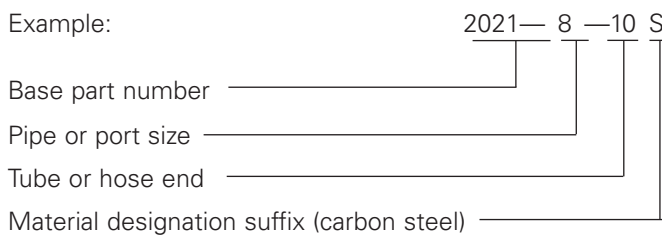


If the part number does not contain a "T" character between the base number and the size description, the first size designation signifies the port size.



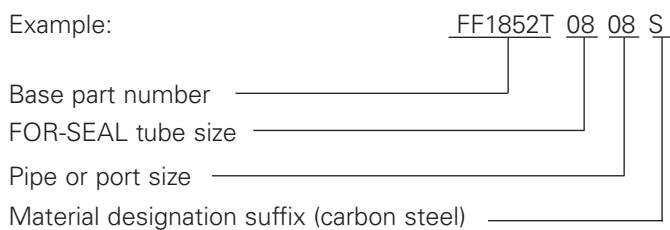
### How to Order New Eaton Adapters

Adapters are ordered using the complete part number as shown on the adapter pages.

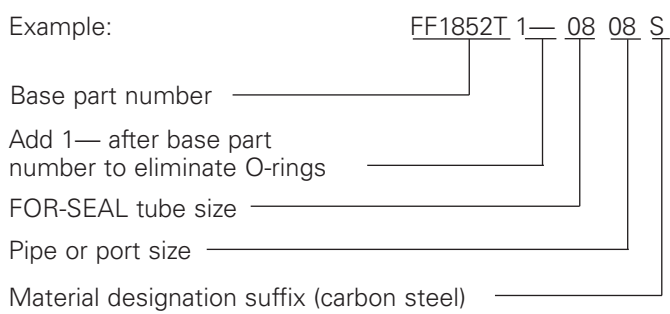


### How to order FOR-SEAL Adapters and Tube Fittings

#### FOR-SEAL tube fitting body with O-ring, locknut and washer, where applicable.



#### FOR-SEAL tube fitting body without O-rings



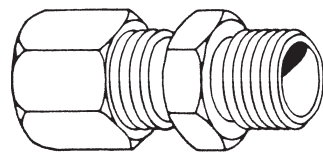
# Steel Adapters Introduction

## Materials

Eaton connectors are available in a variety of alloys on special order.

**Carbon Steel Adapters** – are precision machined from AISI 12L14 carbon steel. Shaped Adapters such as elbows and tees with a “C” prefix are made from hi-density forgings. Shaped Adapters with a “TF” prefix are brazed. Straight Adapters made from bar stock.

**Stainless Steel Adapters** – are made from type 316 stainless. Standard Ermeto flareless sleeves are made from 17-4PH precipitation hardened stainless.



## Finishes

**Weathercote™** – is an Eaton trademark for a protective coating that far exceeds the minimum requirements of the

SAE specifications for a corrosion resistant finish for use with petroleum-based, synthetic, and water-based hydraulic fluids. It is readily identified by its dark appearance. Weathercote is an amorphous phosphate coating covered with a soluble rust-proof film resulting in a coating of .0002" thick, yet providing full protection against electrolytic action, thread seizure or corrosive action of hydraulic fluids.

The lubricity of the rust-proof solvent film measurably reduces the amount of torque required to make leak-proof connections.

**Zinc Plated** – Eaton connectors are given a coating .0002" thick minimum.

**Stainless Steel** – Stainless Steel Adapters are supplied with natural surface finish except tube nuts which are coated with a bonded dry-film lubricant (black) to reduce assembly torque and prevent galling of threads. All Eaton Stainless Steel Adapters are

passivated to remove microscopic foreign particles from the surface of stainless steel as required. Process also leaves a film of corrosion protection.

## Hydraulic Fluids

Modern hydraulic systems in use today employ a wide variety of high quality hydraulic fluids. There are three principle types in general use today – each best suited for particular conditions. They are discussed here briefly to clarify the fitting finishes compatible with each type.

## Petroleum or Mineral Oil Based

**Hydraulic Fluids** – are good general purpose fluids available in a full range of viscosity specified as SAE 10, 20, 30, etc. These fluids are not fire resistant making them unsuitable for use where there is a potential source of ignition. Eaton Connectors can be used with these fluids.

**Straight Synthetic Hydraulic Fluids** – is a general term applied to such products as Pydraul, Lindol, Cellulubes 90, 150, 180, 220, etc. where fire hazards are high. Weathercote-finish Connectors are recommended for this type of fluid. O-Rings MUST be made of a “Butyl” compound, or they will “swell” when contacted by synthetic fluids.

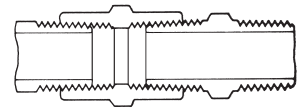
**Water-Based Hydraulic Fluids** – consist generally of a mixture of water and poly-glycols. They are non-flammable and serve the same purpose as the synthetic types. **Only Weathercote-finish Connectors are recommended for this type of fluid.** Zinc plate finishes will be dissolved by water-based fluids and damage to expensive components may result. These water-based fluids are usually less expensive than synthetic fluids and have little or no detrimental effects on Buna-N compounds used in O-Rings.

## O-Ring Compound and Application Chart

O-RING CATALOG NUMBER	BASE MATERIAL OF COMPOUND	PETROLEUM & MINERAL OIL-BASED HYDRAULIC FLUIDS	STRAIGHT SYNTHETIC HYDRAULIC FLUIDS	WATER-BASED HYDRAULIC FLUIDS (POLY-GLYCOLS)	LUBRICATING OILS		DUROMETER HARDNESS	TEMP RANGE °F	
					AIR	WATER			
_x252*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
2018x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
4629x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
7629x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
MB7629x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
M7629x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
ZW747x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	70	-40° to +250°

\*Standard O-Ring complies with SAE J-515 Type CH and ASTM specifications D2000. All standard Eaton connectors are supplied with this type O-Ring, unless otherwise specified. (Viton O-Rings are available as special order items only).

# Steel Adapters



## Ordering Information:

Each adapter is ordered individually by catalog number.

**Typical Application:** Grease, instrumentation and most hydraulic systems.

**Pressure:** See chart below.

## Vibration Rating:

Fair resistance.

## Material:

Carbon steel – AISI/SAE 12L14  
Stainless steel – Type 316

**Plating:** Zinc; yellow finish.

## Temperature:

-65°F to +400°F

**Advantages:** Dryseal pipe threads (NPTF), zinc plate, compact size, and broad selection of styles and sizes.

## Conformance:

Meets SAE specifications.

## Note:

See page 408 for hydraulic O-Ring assortment.

**Label Set:** FS-2000 (Adhesive)

PIPE SIZE	1/16	1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Thread Size	1/16-27	1/8-27	1/4-18	3/8-18	1/2-14	3/4-14	1-11 1/2	1 1/4-11 1/2	1 1/2-11 1/2	2-11 1/2

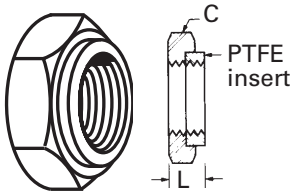
## Forged Hose Ends and Adaptors Pipe Hose Ends 3000 Series Pressure Rating Chart

CONNECTION TYPE	END SIZE								
	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Male Pipe (NPTF)	6000	5000	5000	4000	4000	4000	3000	2500	2500
Female Pipe (NPTF)	5000	5000	4000	3000	2500	2000	1500	1500	1000

## Brazed Hose Ends (TF) Pipe Hose Ends 3000 Series Pressure Rating Chart

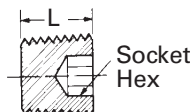
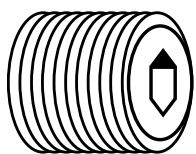
CONNECTION TYPE	END SIZE								
	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Male Pipe (NPTF)	6000	5000	5000	4000	4000	4000	3000	2500	2500
Female Pipe (NPTF)	5000	5000	4000	3000	2500	2000	1500	1500	1000

## Seal-Nut For Male Pipe Thread



PIPE THREAD	CATALOG NUMBER	HEX C	L
1/8	C3059x2	5/8	.15
1/4	C3059x4	3/4	.25
3/8	C3059x6	7/8	.25
1/2	C3059x8	1-1/8	.25
3/4	C3059x12	1-5/16	.25
1	C3059x16	1-5/8	.34

## Hex Socket Plug



MALE PIPE THREAD	CATALOG NUMBER	SOCKET HEX	L
1/16	C3169x1	5/32	.31
1/8	C3169x2	3/16	.30
1/4	C3169x4	1/4	.46



# Steel Adapters

• Available in Stainless Steel.

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

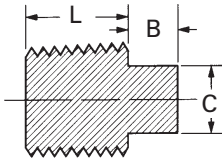
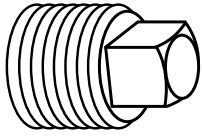
ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

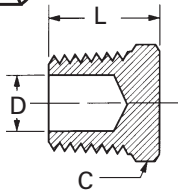
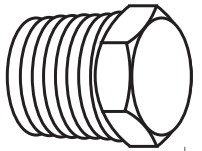
## Square Head Plug Thread



MALE PIPE THREAD	CATALOG NUMBER	B	C	L
1/8	C3179x2	.25	9/32	.34
1/4	C3179x4	.29	3/8	.51
3/8	C3179x6	.32	7/16	.51
1/2	C3179x8	.40	9/16	.68
3/4	C3179x12	.46	5/8	.69
1	C3179x16	.52	13/16	.85

## Hex Head Plug

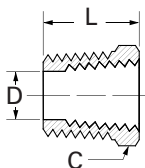
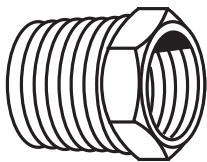
Stainless Steel No. 3171x



MALE PIPE THREAD	CATALOG NUMBER	HEX C	L	D OPT. DIA.
1/8	C3159x2•	7/16	.56	.156
1/4	C3159x4•	9/16	.68	.250
3/8	C3159x6•	11/16	.78	.375
1/2	C3159x8•	7/8	.98	.500
3/4	C3159x12	1-1/8	1.06	.690
1	C3159x16	1-3/8	1.25	.875
1-1/4	C3159x20	1-3/4	1.56	–
1-1/2	C3159x24	2	1.62	–
2	C3159x32	2-1/2	1.75	–

## Bushing

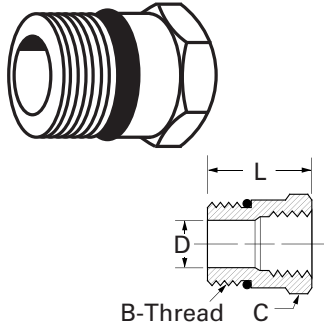
Stainless Steel No. 3121x  
(Ref. SAE No. 140140)



MALE PIPE THREAD	FEMALE PIPE THREAD	CATALOG NUMBER	HEX C	D	L
1/4	1/8	C3109x4x2•	5/8	.322	.85
3/8	1/8	C3109x6x2•	3/4	.332	.85
3/8	1/4	C3109x6x4•	3/4	.438	.85
1/2	1/8	C3109x8x2•	7/8	.332	1.10
1/2	1/4	C3109x8x4•	7/8	.438	1.10
1/2	3/8	C3109x8x6•	7/8	.562	1.10
3/4	1/4	C3109x12x4•	1-1/8	.438	1.17
3/4	3/8	C3109x12x6•	1-1/8	.562	1.17
3/4	1/2	C3109x12x8•	1-1/8	.703	1.17
1	3/8	C3109x16x6	1-3/8	.562	1.36
1	1/2	C3109x16x8•	1-3/8	.703	1.36
1	3/4	C3109x16x12•	1-3/8	.922	1.36
1-1/4	1/2	C3109x20x8	1-3/4	.703	1.47
1-1/4	3/4	C3109x20x12•	1-3/4	.922	1.47
1-1/4	1	C3109x20x16•	1-3/4	1.156	1.47
1-1/2	3/4	C3109x24x12	2	.906	1.58
1-1/2	1	C3109x24x16	2	1.141	1.58
1-1/2	1-1/4	C3109x24x20	2	1.500	1.57
2	1-1/4	C3109x32x20	2-1/2	1.484	1.75
2	1-1/2	C3109x32x24	2-1/2	1.719	1.75

# Steel Adapters

## Straight Thread O-Ring to Female Pipe Adapter

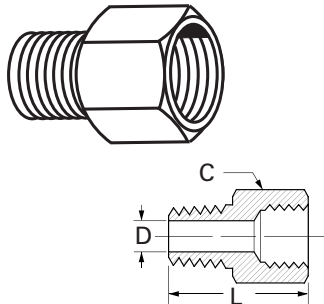


MALE PORT SIZE	FEMALE PIPE THREAD	CATALOG NUMBER	STRAIGHT THREAD B	HEX C	D	L
1/4	1/8	C3269x4x2	7/16-20	9/16	.172	.97
1/4	1/4	C3269x4x4	7/16-20	3/4	.172	1.16
5/16	1/8	C3269x5x2	1/2-20	5/8	.234	.94
3/8	1/4	C3269x6x4	9/16-18	3/4	.297	1.09
3/8	3/8	C3269x6x6	9/16-18	7/8	.281	1.30
3/8	1/2	C3269x6x8	9/16-18	1-1/8	.281	1.44
1/2	1/4	C3269x8x4	3/4-16	7/8	.421	1.06
1/2	3/8	C3269x8x6	3/4-16	7/8	.421	1.22
1/2	1/2	C3269x8x8	3/4-16	1-1/16	.421	1.50
5/8	1/4	C3269x10x4	7/8-14	1	.422	.81
5/8	3/8	C3269x10x6	7/8-14	1	.500	1.25
5/8	1/2	C3269x10x8	7/8-14	1-1/8	.500	1.50
5/8	3/4	C3269x10x12	7/8-14	1-3/8	.500	1.62
3/4	1/2	C3269x12x8	1-1/16-12	1-1/4	.688	1.34
3/4	3/4	C3269x12x12	1-1/16-12	1-3/8	.656	1.66
7/8	3/4	C3269x14x12	1-3/16-12	1-3/8	.718	1.63
1	1/2	C3269x16x8	1-5/16-12	1-1/2	.688	1.00
1	3/4	C3269x16x12	1-5/16-12	1-1/2	.876	1.50
1	1	C3269x16x16	1-5/16-12	1-5/8	.876	1.88
1-1/4	1	C3269x20x16	1-5/8-12	1-7/8	1.080	1.00
1-1/4	1-1/4	C3269x20x20	1-5/8-12	2	1.080	1.94
1-1/2	1-1/2	C3269x24x24	1-7/8-12	2-3/8	1.312	1.88
2	2	C3269x32x32	2-1/2-12	2-7/8	1.781	1.91

Replacement O-rings page 256.

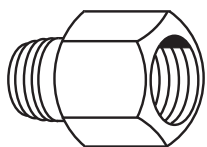
## Adapter

Stainless Steel No. 3221x  
(Ref. SAE 140139)

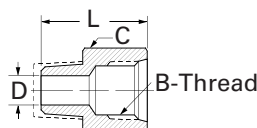


FEMALE PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER	HEX C	D	L
1/4	1/8	C3209x4x2*	3/4	.188	1.21
3/8	1/4	C3209x6x4*	7/8	.281	1.44
1/2	1/8	C3209x8x2*	1-1/8	.188	1.50
1/2	1/4	C3209x8x4*	1-1/8	.281	1.68
1/2	3/8	C3209x8x6*	1-1/8	.406	1.68
3/4	1/4	C3209x12x4*	1-3/8	.281	1.78
3/4	1/2	C3209x12x8*	1-3/8	.531	1.93
1	1/2	C3209x16x8*	1-5/8	.562	2.09
1	3/4	C3209x16x12*	1-5/8	.719	2.18
1-1/4	1	C3209x20x16	2	.938	2.46
1-1/2	1-1/4	C3209x24x20	2-3/8	1.25	2.50
2	1-1/2	C3209x32x24	2-7/8	1.500	2.63

## Female Straight Thread O-Ring to Male Pipe Adapter



FEM. PORT SIZE	MALE PIPE THREAD	CATALOG NUMBER	STRAIGHT THREAD B	HEX C	D	L
3/8	3/8	C3239x6x6	9/16-18	13/16	.406	1.38
3/8	1/2	C3239x6x8	9/16-18	7/8	.500	1.61
1/2	3/8	C3239x8x6	3/4-16	1	.406	1.46
1/2	1/2	C3239x8x8	3/4-16	1	.562	1.69
5/8	1/2	C3239x10x8	7/8-14	1-1/4	.531	1.81



APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

# Steel Adapters

• Available in Stainless Steel.

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

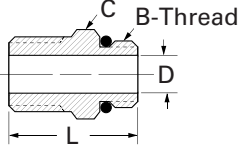
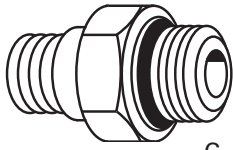
ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

## Male Straight Thread O-Ring to Male Pipe Adapter

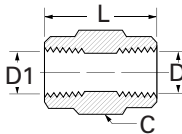
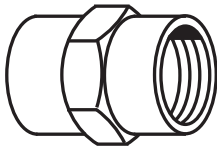


Replacement O-rings page 256.

MALE PORT SIZE	MALE PIPE THREAD	CATALOG NUMBER	STRAIGHT THREAD B	HEX C	D	L
1/4	1/8	C3249x4x2	7/16-20	9/16	.172	1.05
3/8	1/4	C3249x6x4	9/16-18	11/16	.281	1.30
1/2	3/8	C3249x8x6	3/4-16	7/8	.391	1.36
1/2	1/2	C3249x8x8	3/4-16	7/8	.391	1.55
5/8	1/2	C3249x10x8	7/8-14	1	.434	1.69
3/4	3/4	C3249x12x12	1-1/16-12	1-1/4	.609	1.73
1	1	C3249x16x16	1-5/16-12	1-1/2	.844	2.06
1-1/4	1-1/4	C3249x20x20	1-5/8-12	1-7/8	1.078	2.17
1-1/2	1-1/2	C3249x24x24	1-7/8-12	2-1/8	1.312	2.26
2	2	C3249x32x32	2-1/2-12	2-7/8	1.781	2.47

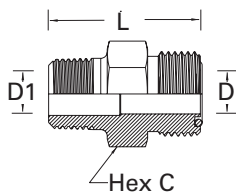
## Coupling

Stainless Steel No. 3321x  
(Ref. SAE No. 140138)



FEM. PIPE THREAD	FEM. PIPE THREAD	CATALOG NUMBER	HEX C	D	D1	L
1/8	1/8	C3309x2•	5/8	.332	.332	.75
1/4	1/8	C3309x4x2•	3/4	.437	.332	1.13
1/4	1/4	C3309x4•	3/4	.437	.437	1.13
3/8	1/4	C3309x6x4•	7/8	.562	.437	1.13
3/8	3/8	C3309x6•	7/8	.562	.562	1.13
1/2	1/4	C3309x8x4•	1-1/8	.687	.437	1.50
1/2	3/8	C3309x8x6•	1-1/8	.687	.562	1.50
1/2	1/2	C3309x8•	1-1/8	.687	.687	1.50
3/4	1/2	C3309x12x8	1-3/8	.906	.687	1.53
3/4	3/4	C3309x12•	1-3/8	.906	.906	1.53
1	3/4	C3309x16x12	1-5/8	1.125	.906	1.89
1	1	C3309x16•	1-5/8	1.125	1.125	1.89
1-1/4	1-1/4	C3309x20	2	1.468	1.468	1.93
1-1/2	1-1/2	C3309x24	2-3/8	1.703	1.703	1.93
2	2	C3309x32	2-7/8	2.188	2.188	1.96

## Male FOR-SEAL® to Male Pipe Adapter



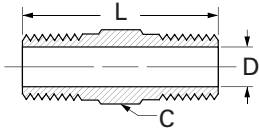
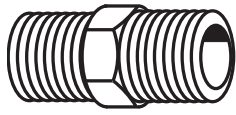
Replacement O-rings page 273.

TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	HEX C	D	D1	L
3/8	3/8	4205x6x6	3/4	.264	.406	1.30
1/2	3/8	4205x8	7/8	.378	.406	1.45
1/2	1/2	4205x8x8	7/8	.378	.484	1.64
5/8	1/2	4205x10	1-1/16	.484	.531	1.82
3/4	1/2	4205x12x8	1-1/4	.406	.484	1.87
3/4	3/4	4205x12	1-1/4	.609	.719	1.94
3/4	1	4205x12x16	1-3/8	.609	.938	1.87
1	1	4205x16	1-1/2	.811	.938	2.19
1-1/4	1-1/4	4205x20	1-3/4	1.024	1.250	2.30

# Steel Adapters

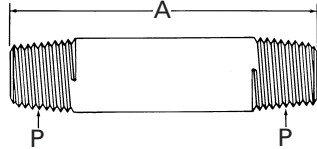
## Hex Nipple

Stainless Steel No. 3081x  
(Ref. SAE No. 140137)



MALE PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER	HEX C	D	L
1/16	1/16	C3069x1	5/16	.141	.940
1/8	1/16	C3069x2x1	7/16	.141	.970
1/8	1/8	C3069x2•	7/16	.188	1.06
1/4	1/8	C3069x4x2•	5/8	.188	1.26
1/4	1/4	C3069x4•	5/8	.281	1.45
3/8	1/8	C3069x6x2•	3/4	.188	1.26
3/8	1/4	C3069x6x4•	3/4	.281	1.45
3/8	3/8	C3069x6•	3/4	.406	1.45
1/2	1/4	C3069x8x4•	7/8	.281	1.70
1/2	3/8	C3069x8x6•	7/8	.406	1.70
1/2	1/2	C3069x8•	7/8	.531	1.89
3/4	1/2	C3069x12x8•	1-1/8	.531	1.96
3/4	3/4	C3069x12•	1-1/8	.719	1.96
1	3/4	C3069x16x12	1-3/8	.719	2.16
1	1	C3069x16•	1-3/8	.938	2.34
1-1/4	1-1/4	C3069x20	1-3/4	1.250	2.48
1-1/2	1-1/2	C3069x24	2	1.500	2.61
2	2	C3069x32	2-1/2	1.938	2.83

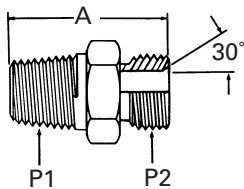
## Long Nipple



### Part No. 2084- (Dash Size)

DASH SIZE	THREAD P (NPTF)	A	
		mm	inches
2S - 3/4	1/8- 27	19,0	.75
2S - 2	1/8- 27	50,8	2.00
4S - 7/8	1/4- 18	22,3	.88
6S - 1	3/8- 18	25,4	1.00
6S - 2	3/8- 18	50,8	2.00
6S - 3	3/8- 18	76,2	3.00
8S - 1 1/8	1/2- 14	28,5	1.12
8S - 2 1/2	1/2- 14	63,5	2.50
12S - 1 3/8	3/4- 14	35,1	1.38
16S - 1 1/2	1 - 11 1/2	38,1	1.50

## NPSM Adapter

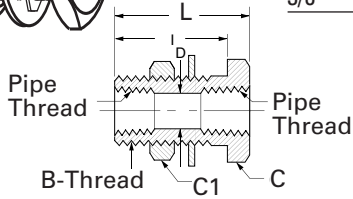
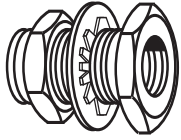


### Part No. 2015- (Dash Size)

DASH SIZE	THREAD P1 (NPTF)	THREAD P2 (NPSM)	A	
			mm	inches
8 - 8S	1/2- 14	1/2- 14	38,1	1.50

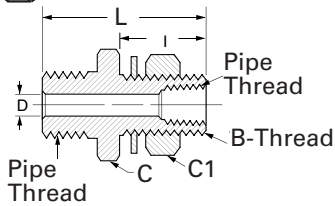
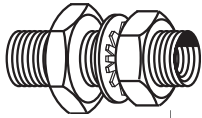
APPLICATION DATA  
 LOW & MEDIUM PRESSURE HOSE  
 HIGH PRESSURE HOSE  
 SPECIALTY HOSE  
 ACCESSORIES & ASSEMBLY INSTRUCTIONS  
 ADAPTERS & HOSE ENDS  
 HOSE ASSEMBLY EQUIPMENT  
 TECHNICAL DATA

## Bulkhead Coupling



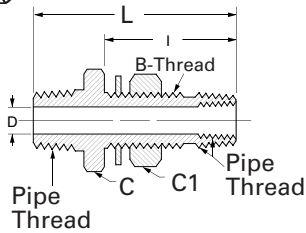
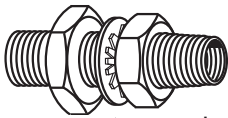
FEMALE PIPE THREAD	CATALOG NUMBER	THREAD SIZE B	HEX C	HEX C1	D	I	L
1/4	W05465	3/4-16	1	1-1/16	.422	1.25	1.50
1/4	W21204	3/4-16	1	1-1/16	.422	.69	.94
3/8	W17709	1-14	1-1/8	1-3/8	.563	1.06	1.31

## Bulkhead Coupling



MALE PIPE THREAD	FEMALE PIPE THREAD	CATALOG NUMBER	THREAD SIZE B	HEX C	HEX C1	D	I	L
1/2	1/4	W05498	3/4-16	1-1/4	1-1/16	.312	1.13	2.16
1/2	1/4	W05499	3/4-16	1-1/4	1-1/16	.312	1.53	2.53

## Bulkhead Coupling



MALE PIPE THREAD	FEMALE PIPE THREAD	CATALOG NUMBER	THREAD SIZE B	HEX C	HEX C1	D	I	L
1/2	1/4	W05730	1-14	1-1/4	1-3/8	.375	1.88	2.94
1/2	1/4	W23464	1-14	1-1/4	1-3/8	.375	2.88	3.94

# Steel Adapters

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

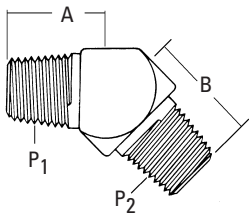
ADAPTERS &  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

## 45° Union Elbow

(Ref. SAE 140337)

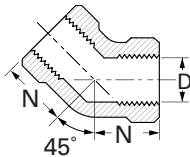
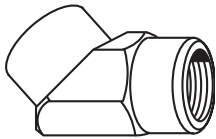
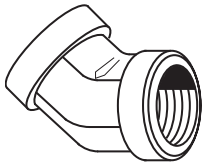


### Part No. 2247- (Dash Size)

DASH SIZE	THREAD P1 (NPTF)	THREAD P2 (NPTF)	A		B	
			mm	inches	mm	inches
4-4S	1/4 - 18	1/4 - 18	21,8	.86	21,8	.86
6-6S	3/8 - 18	3/8 - 18	24,1	.95	24,1	.95
8-8S	1/2 - 14	1/2 - 14	28,7	1.13	29,7	1.17
12-12S	3/4 - 14	3/4 - 14	29,7	1.17	30,5	1.20
16-16S	1 - 11 1/2	1 - 11 1/2	30,5	1.20	37,6	1.48

## 45° Female Elbow

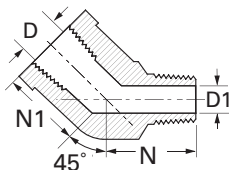
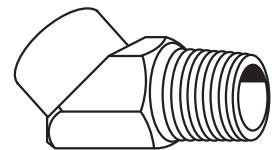
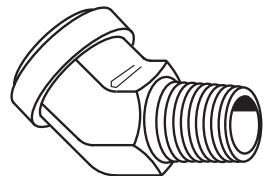
(Ref. SAE No. 140338)



FEM. PIPE THREAD	CATALOG NUMBER	D	N	ACROSS FLATS
1/4	C3559x4	.437	.69	3/4
3/8	C3559x6	.562	.750	7/8
1/2	C3559x8	.687	.940	1-1/16
3/4	C3559x12	.906	1.000	1-5/16
1	C3559x16	1.125	1.190	1-5/8
1/4	TF3559x4	.437	.620	3/4

## 45° Street Elbow

Stainless Steel No. 3371x  
(Ref. SAE No. 140339)



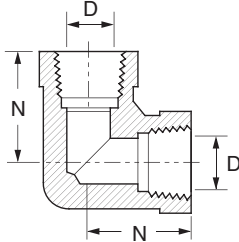
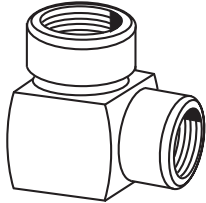
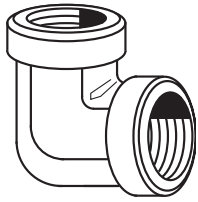
FEM. PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER	D	D1	N1	N	ACROSS FLATS
1/8	1/8	C3359x2•	.332	.188	.47	.72	9/16
1/4	1/4	C3359x4•	.437	.281	.62	1.05	3/4
3/8	3/8	C3359x6•	.562	.406	.72	1.10	7/8
1/2	1/2	C3359x8•	.687	.531	.91	1.34	1-1/16
3/4	3/4	C3359x12•	.906	.719	.97	1.38	1-5/16
1	1	C3359x16•	1.125	.938	1.12	1.72	1-5/8
1/8	1/8	TF3359x2	.332	.188	.47	.72	5/8
1/4	1/4	TF3359x4	.437	.281	.62	1.05	3/4
3/8	3/8	TF3359x6	.562	.406	.72	1.10	7/8
1/2	1/2	TF3359x8	.687	.531	.91	1.34	1-1/8
3/4	3/4	TF3359x12	.906	.719	.97	1.38	1-3/8
1	1	TF3359x16	1.125	.938	1.12	1.72	1-5/8
1-1/4	1-1/4	TF3359x20	1.468	1.250	1.63	1.80	2
1-1/2	1-1/2	TF3359x24	1.734	1.500	1.69	2.06	2-3/8
2	2	TF3359x32	2.188	1.938	2.30	2.15	2-1/2

# Steel Adapters

• Available in Stainless Steel.

## 90° Female Elbow

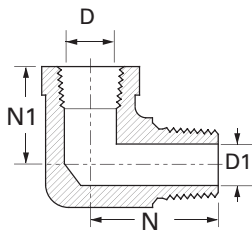
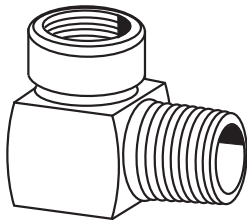
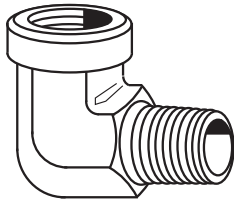
Stainless Steel No. 3521x  
(Ref. SAE No. 140238)



FEM. PIPE THREAD	FEM. PIPE THREAD	CATALOG NUMBER	D	N	ACROSS FLATS
1/8	1/8	C3509x2•	.332	.66	9/16
1/4	1/4	C3509x4•	.437	.88	3/4
3/8	3/8	C3509x6•	.562	1.02	7/8
1/2	1/2	C3509x8•	.687	1.23	1-1/16
3/4	3/4	C3509x12•	.906	1.36	1-5/16
1	1	C3509x16	1.125	1.62	1-5/8
1-1/4	1-1/4	C3509x20	1.468	1.70	1-7/8
2	2	C3509x32	2.188	2.39	2-3/16
1/8	1/8	TF3509x2	.332	.66	5/8
1/4	1/8	TF3509x4x2	.343	.88	3/4
1/4	1/4	TF3509x4	.437	.88	3/4
3/8	1/4	TF3509x6x4	.437	1.02	7/8
3/8	3/8	TF3509x6	.562	1.02	7/8
1/2	3/8	TF3509x8x6	.562	1.23	1-1/8
1/2	1/2	TF3509x8	.687	1.23	1-1/8
3/4	1/2	TF3509x12x8	.687	1.23	1-3/8
3/4	3/4	TF3509x12	.906	1.36	1-3/8
1	1	TF3509x16	1.125	1.62	1-5/8
1-1/4	1-1/4	TF3509x20	1.468	1.70	2
1-1/2	1-1/2	TF3509x24	1.734	2.08	2-3/8

## 90° Street Elbow

Stainless Steel No. 3421x  
(Ref. SAE No. 140239)

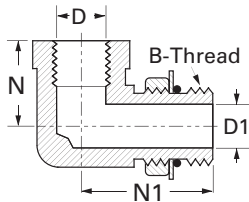
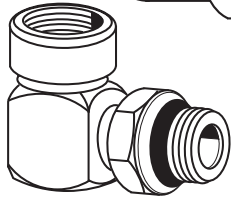
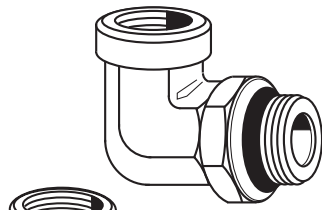


MALE PIPE THREAD	FEMALE PIPE THREAD	CATALOG NUMBER	D	D1	N	N1	ACROSS FLATS
1/8	1/8	C3409x2•	.332	.188	.78	.66	9/16
1/4	1/4	C3409x4•	.437	.281	1.09	.88	3/4
3/8	3/8	C3409x6•	.562	.406	1.22	1.02	7/8
1/2	1/2	C3409x8•	.687	.531	1.47	1.23	1-1/16
3/4	3/4	C3409x12•	.906	.719	1.59	1.36	1-5/16
1	1	C3409x16•	1.125	.938	1.97	1.62	1-5/8
1-1/4	1-1/4	C3409x20	1.468	1.250	2.38	1.70	1-7/8
2	2	C3409x32	2.188	1.930	3.00	2.39	2-13/16
1/8	1/8	TF3409x2	.332	.188	.78	.66	5/8
1/8	1/4	TF3409x2x4	.437	.188	.91	.88	3/4
1/4	1/8	TF3409x4x2	.332	.281	1.09	.67	5/8
1/4	1/4	TF3409x4	.437	.281	1.09	.88	3/4
1/4	3/8	TF3409x4x6	.562	.281	1.22	1.02	7/8
3/8	1/4	TF3409x6x4	.437	.406	1.22	.91	13/16
3/8	3/8	TF3409x6	.562	.406	1.22	1.02	7/8
3/8	1/2	TF3409x6x8	.687	.406	1.38	1.23	1-1/8
1/2	3/8	TF3409x8x6	.562	.531	1.47	1.05	15/16
1/2	1/2	TF3409x8	.687	.531	1.47	1.23	1-1/8
1/2	3/4	TF3409x8x12	.906	.531	1.59	1.23	1-3/8
3/4	1/2	TF3409x12x8	.687	.719	1.59	1.23	1-1/8
3/4	3/4	TF3409x12	.906	.719	1.59	1.36	1-3/8
1	1	TF3409x16	1.125	.938	1.97	1.62	1-5/8
1-1/4	1-1/4	TF3409x20	1.468	1.250	2.38	1.70	2
1-1/2	1-1/2	TF3409x24	1.734	1.500	2.64	2.08	2-3/8

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

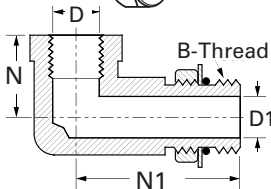
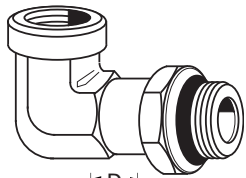


## Steel Adapters

90° Straight Thread  
O-Ring Male Elbow

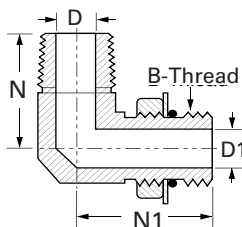
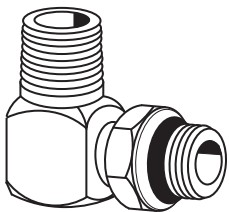
MALE PORT SIZE	FEM. PIPE THREAD	CATALOG NUMBER	STRAIGHT THREAD B	D	D1	N	N1	ACROSS FLATS
1/2	3/8	C3459x8	3/4-16	.562	.422	.63	1.47	7/8
5/8	1/2	C3459x10	7/8-14	.687	.500	.75	1.81	1-1/16
3/4	3/4	C3459x12	1-1/16-12	.906	.656	.81	2.00	1-5/16
1	1	C3459x16	1-5/16-12	1.125	.876	1.00	2.25	1-5/8
1/4	1/8	TF3459x4	7/16-20	.332	.172	.66	1.09	5/8
5/16	1/8	TF3459x5	1/2-20	.332	.234	.66	1.13	5/8
3/8	1/4	TF3459x6	9/16-18	.437	.297	.88	1.31	3/4
1/2	3/8	TF3459x8	3/4-16	.562	.391	1.02	1.49	7/8
5/8	1/2	TF3459x10	7/8-14	.687	.484	1.23	1.80	1-1/8
3/4	3/4	TF3459x12	1-1/16-12	.906	.609	1.36	2.06	1-3/8
7/8	3/4	TF3459x14	1-3/16-12	.906	.719	1.42	2.06	1-3/8
1	1	TF3459x16	1-5/16-12	1.125	.844	1.62	2.17	1-5/8
1-1/4	1-1/4	TF3459x20	1-5/8-12	1.468	1.078	1.70	2.38	2
1-1/2	1-1/2	TF3459x24	1-7/8-12	1.703	1.312	2.08	2.58	2-3/8
2	2	TF3459x32	2-1/2-12	2.180	1.781	2.39	3.02	2-7/8

Replacement O-rings page 256.

90° Straight Thread  
O-Ring Female Elbow Long

45° FEM. PORT SIZE	FEM. PIPE SIZE	CATALOG NUMBER	STRAIGHT THREAD B	D	D1	N	N1	ACROSS FLATS
1/2	3/8	C3469x8	3/4-16	.562	.422	.63	2.94	7/8
5/8	1/2	C3469x10	7/8-14	.687	.500	.75	3.56	1-1/16
3/4	3/4	C3469x12	1-1/16-12	.906	.656	.81	4.13	1-5/16
1	1	C3469x16	1-5/16-12	1.125	.876	1.00	4.63	1-5/8

Replacement O-rings page 256.

90° Straight Thread  
O-Ring Male Elbow  
To Male Pipe

MALE PORT SIZE	MALE PIPE THREAD	CATALOG NUMBER	STRAIGHT THREAD B	D	D1	N	N1	ACROSS FLATS
1/4	1/8	TF3569x4	7/16-20	.172	.188	.78	1.03	1/2
5/16	1/8	TF3569x5	1/2-20	.234	.188	.78	1.09	9/16
3/8	1/4	TF3569x6	9/16-18	.297	.281	1.09	1.25	5/8
1/2	3/8	TF3569x8	3/4-16	.391	.406	1.22	1.45	13/16
5/8	1/2	TF3569x10	7/8-14	.484	.531	1.47	1.70	15/16
3/4	3/4	TF3569x12	1-1/16-12	.609	.719	1.59	1.94	1-1/8
7/8	3/4	TF3569x14	1-3/16-12	.719	.719	1.69	2.00	1-1/4
1	1	TF3569x16	1-5/16-12	.844	.938	1.97	2.05	1-3/8
1-1/4	1-1/4	TF3569x20	1-5/8-12	1.078	1.250	2.38	2.25	1-3/4
1-1/2	1-1/2	TF3569x24	1-7/8-12	1.312	1.500	2.64	2.39	2
2	2	TF3569x32	2-1/2-12	1.781	1.938	3.00	2.89	2-5/8

Replacement O-rings page 256.

# Steel Adapters

• Available in Stainless Steel.

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASM'BL Y INSTRUCTIONS

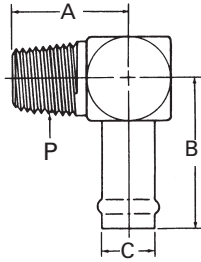
ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

## 90° Elbow Hose Connector

(Ref. SAE 430260)

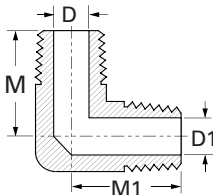
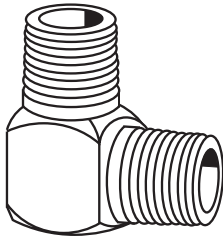
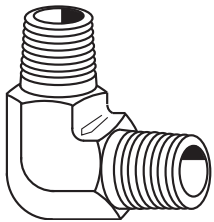


### Part No. FF1162- (Dash Size)

DASH SIZE	HOSE SIZE		THREAD P (NPTF)	A		B		C	
	mm	inches		mm	inches	mm	inches	mm	inches
1212S	19,0	.75	3/4 - 14	35,8	1.41	46,5	1.83	19,0	.75
1616S	25,4	1.00	1 - 11 1/2	43,4	1.71	49,3	1.94	25,4	1.00

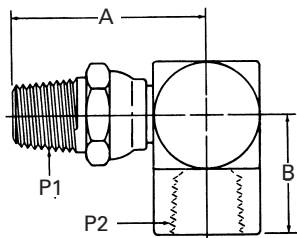
## 90° Male Elbow

Stainless Steel No. 3541x



MALE PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	M1	ACROSS FLATS
1/8	1/8	C3529x2•	.188	.188	.78	.78	7/16
1/4	1/4	C3529x4•	.281	.281	1.09	1.09	9/16
3/8	3/8	C3529x6•	.406	.406	1.22	1.22	3/4
1/2	1/2	C3529x8	.531	.531	1.47	1.47	7/8
3/4	3/4	C3529x12	.719	.719	1.59	1.59	1-1/16
1/8	1/8	TF3529x2	.188	.188	.78	.78	1/2
1/4	1/4	TF3529x4	.281	.281	1.09	1.09	5/8
3/8	1/4	TF3529x6x4	.406	.281	1.28	1.19	13/16
3/8	3/8	TF3529x6	.406	.406	1.21	1.21	13/16
1/2	3/8	TF3529x8x6	.531	.406	1.47	1.28	15/16
1/2	1/2	TF3529x8	.531	.531	1.47	1.47	15/16
3/4	1/2	TF3529x12x8	.719	.531	1.59	1.56	1-1/8
3/4	3/4	TF3529x12	.719	.719	1.59	1.59	1-1/8
1	3/4	TF3529x16x12	.938	.719	1.97	1.72	1-3/8
1	1	TF3529x16	.938	.938	1.97	1.97	1-3/8
1-1/4	1-1/4	TF3529x20	1.250	1.250	2.38	2.38	1-3/4
1-1/2	1-1/2	TF3529x24	1.938	1.938	2.64	2.64	2

## 90° Male Pipe Swivel to Female Pipe Rigid



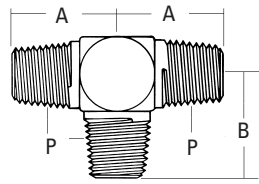
### Part No. 2252- (Dash Size)

DASH SIZE	THREAD P1 (NPTF)	THREAD P2 (NPTF)	A		B	
			mm	inches	mm	inches
4-4S	1/4 - 18	1/4 - 18	43,7	1.72	22,3	.88
6-6S	3/8 - 18	3/8 - 18	42,9	1.69	25,9	1.02
8-8S	1/2 - 14	1/2 - 14	54,3	2.14	31,2	1.23
12-12S	3/4 - 14	3/4 - 14	57,2	2.25	34,5	1.36

Not for use in applications over +212°F. Not intended to be a live swivel.

# Steel Adapters

## Union Tee



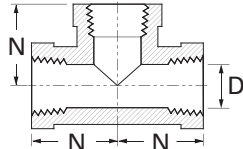
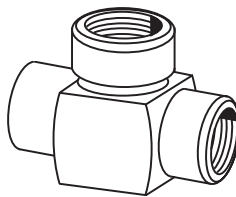
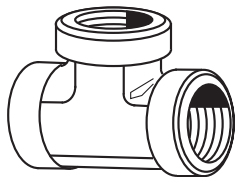
### Part No. 2257- (Dash Size)

DASH SIZE	THREAD P (NPTF)	A		B	
		mm	inches	mm	inches
4-4S	1/4 - 18	27,7	1.09	27,7	1.09
6-6S	3/8 - 18	31,0	1.22	31,0	1.22
8-8S	1/2 - 14	37,3	1.47	37,3	1.47
12-12S	3/4 - 14	40,4	1.59	40,4	1.59

## Tee

Stainless Steel No. 3721x  
(Ref. SAE No. 140438)

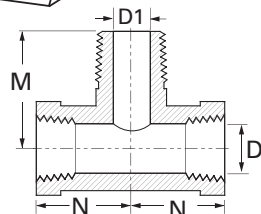
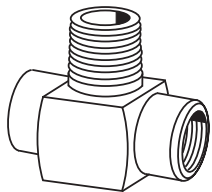
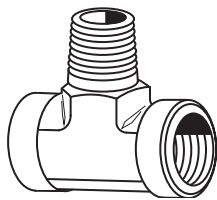
FEM. PIPE THREAD	CATALOG NUMBER	D	N	ACROSS FLATS
1/8	C3709x2•	.332	.66	9/16
1/4	C3709x4•	.437	.88	3/4
3/8	C3709x6•	.562	1.02	7/8
1/2	C3709x8•	.687	1.23	1-1/16
3/4	C3709x12•	.906	1.36	1-5/16
1	C3709x16•	1.125	1.62	1-5/8
1-1/4	C3709x20	1.468	1.70	1-7/8
1/8	TF3709x2	.343	.66	5/8
1/4	TF3709x4	.437	.88	3/4
3/8	TF3709x6	.562	1.02	7/8
1/2	TF3709x8	.687	1.23	1-1/8
3/4	TF3709x12	.906	1.36	1-3/8
1	TF3709x16	1.275	1.62	1-5/8
1-1/4	TF3709x20	1.468	1.70	2
1-1/2	TF3709x24	1.710	2.08	2-3/8
2	TF3709x32	2.180	2.39	2-7/8



## Male Branch Tee

Stainless Steel No. 3621x  
(Ref. SAE No. 140425)

MALE PIPE THREAD	FEM. PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/8	1/8	C3609x2	.332	.188	.78	.66	9/16
1/4	1/4	C3609x4•	.437	.281	1.09	.88	3/4
1	1	C3609x16	1.125	.938	1.97	1.62	1-5/8
1/8	1/8	TF3609x2	.343	.188	.78	.66	5/8
1/4	1/4	TF3609x4	.437	.281	1.09	.87	3/4
3/8	3/8	TF3609x6	.562	.406	1.22	1.02	7/8
1/2	1/2	TF3609x8	.687	.531	1.47	1.23	1-1/8
3/4	3/4	TF3609x12	.906	.719	1.59	1.36	1-3/8
1	1	TF3609x16	1.125	.938	1.97	1.62	1-5/8
1-1/4	1-1/4	TF3609x20	1.468	1.250	2.38	1.70	2
1-1/2	1-1/2	TF3609x24	1.700	1.500	2.64	2.08	2-3/8



APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

# Steel Adapters

• Available in Stainless Steel.

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASM'BL Y INSTRUCTIONS

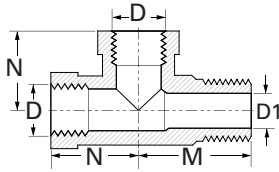
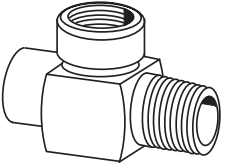
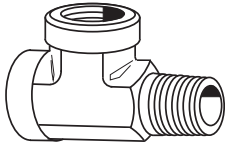
ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

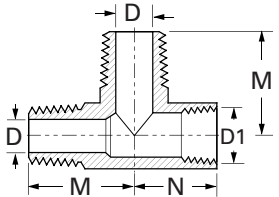
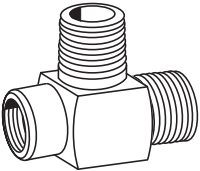
## Male Run Tee

Stainless Steel No. 3771x  
(Ref. SAE No. 140424)



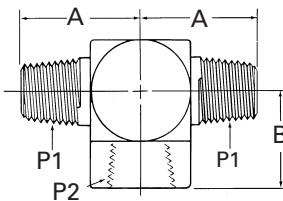
FEM. PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/8	1/8	C3759x2*	.332	.188	.78	.66	9/16
1/4	1/4	C3759x4*	.437	.281	1.09	.88	3/4
3/8	3/8	C3759x6*	.562	.406	1.22	1.02	7/8
1/2	1/2	C3759x8*	.687	.531	1.47	1.23	1-1/16
3/4	3/4	C3759x12	.906	.719	1.59	1.36	1-5/16
1	1	C3759x16	1.125	.938	1.97	1.62	1-5/8
1/8	1/8	TF3759x2	.343	.188	.78	.66	5/8
1/4	1/4	TF3759x4	.437	.281	1.09	.88	3/4
3/8	3/8	TF3759x6	.562	.406	1.22	1.02	7/8
1/2	1/2	TF3759x8	.687	.531	1.47	1.23	1-1/8
3/4	3/4	TF3759x12	.906	.719	1.59	1.36	1-3/8
1	1	TF3759x16	1.125	.938	1.97	1.62	1-5/8
1-1/4	1-1/4	TF3759x20	1.468	1.250	2.38	1.70	2
1-1/2	1-1/2	TF3759x24	1.710	1.500	2.64	2.08	2-3/8
2	2	TF3759x32	2.180	1.938	3.00	2.39	2-7/8

## Female Run Tee



FEM. PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/8	1/8	TF3805x2	.188	.343	.78	.66	5/8
1/4	1/4	TF3805x4	.281	.437	1.09	.88	3/4
3/8	3/8	TF3805x6	.406	.562	1.22	1.02	7/8
1/2	1/2	TF3805x8	.531	.687	1.47	1.23	1-1/8
3/4	3/4	TF3805x12	.719	.906	1.59	1.36	1-3/8
1	1	TF3805x16	.938	1.125	1.97	1.62	1-5/8
1-1/4	1-1/4	TF3805x20	1.250	1.468	2.38	1.70	2
1-1/2	1-1/2	TF3805x24	1.490	2.180	2.64	2.08	2-3/8

## Female Branch Tee

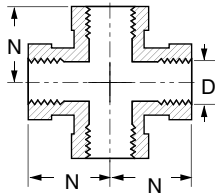
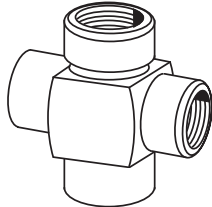
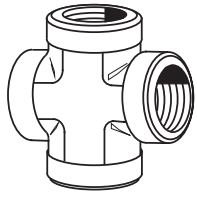


### Part No. 2256- (Dash Size)

DASH SIZE	THREAD P1 (NPTF)	THREAD P2 (NPTF)	A		B	
			mm	inches	mm	inches
4-4S	1/4 - 18	1/4 - 18	27,7	1.09	22,3	.88
6-6S	3/8 - 18	3/8 - 18	31,0	1.22	25,9	1.02
8-8S	1/2 - 14	1/2 - 14	37,3	1.47	31,2	1.23
12-12S	3/4 - 14	3/4 - 14	40,4	1.59	34,5	1.36

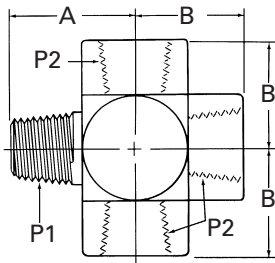
## Steel Adapters

## Cross



FEM. PIPE THREAD	CATALOG NUMBER	D	N	ACROSS FLATS
3/8	C3959x6	.562	1.02	7/8
1/2	C3959x8	.687	1.23	1-1/16
3/4	C3959x12	.906	1.36	1-5/16
1/8	TF3959x2	.343	.66	5/8
1/4	TF3959x4	.437	.88	3/4
3/8	TF3959x6	.562	1.02	7/8
1/2	TF3959x8	.687	1.23	1-1/8
3/4	TF3959x12	.906	1.36	1-3/8
1	TF3959x16	1.125	1.62	1-5/8
1-1/4	TF3959x20	1.468	1.70	2
1-1/2	TF3959x24	1.710	2.08	2-3/8
2	TF3959x32	2.180	2.39	2-7/8

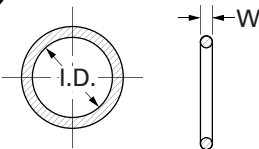
## Cross



## Part No. 208007- (Dash Size)

DASH SIZE	THREAD P1 (NPTF)	THREAD P2 (NPTF)	A		B	
			mm	inches	mm	inches
4-4S	1 <sup>1</sup> / <sub>4</sub> - 18	1 <sup>1</sup> / <sub>4</sub> - 18	29,5	1.16	22,3	.88
8-8S	1 <sup>1</sup> / <sub>2</sub> - 14	1 <sup>1</sup> / <sub>2</sub> - 14	41,4	1.63	31,2	1.23

## Straight Thread O-Ring



**Material:** Buna-N, 90 Durometer  
**Temperature Range:**  
 -40°F to +250°F  
 (-40°C to +121°C)

Standard O-Ring complies with SAE specification SAE J515 Type CH.  
 (See page 343 for O-Ring compound and application chart.)

TUBE O.D.	CATALOG NUMBER	W	I.D.
1/16	7629x1	.058	.185
1/8	7629x2	.064	.239
3/16	7629x3	.064	.301
1/4	7629x4	.072	.351
5/16	7629x5	.072	.414
3/8	7629x6	.078	.468
7/16	7629x7	.082	.530
1/2	7629x8	.087	.644
5/8	7629x10	.097	.755
3/4	7629x12	.116	.924
7/8	7629x14	.116	1.048
1	7629x16	.116	1.171
1-1/4	7629x20	.118	1.475
1-1/2	7629x24	.118	1.720
2	7629x32	.118	2.337

# Steel Connectors

## Swivel Adapters

### 9000 Pipe Connectors

**Typical Application:**  
Pressure hydraulic systems.  
**Pressure:** See chart.

**Material:** Carbon steel  
**Plating:** Zinc

**Sealing Method:** Metal to metal, 30° cone-NPSM thread on pipe swivel end. Sealing methods vary depending on swivel adapter type.

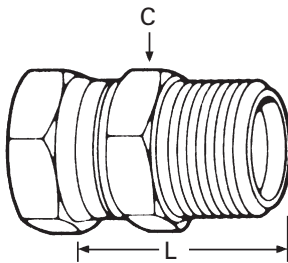
### Pipe Hose Ends 9000 Series Pressure Rating Chart

CONNECTION TYPE	END SIZE								
	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Male Pipe (NPTF)*	5000	5000	4000	3000	2500	2000	1500	1000	1000
Female Pipe (NPTF)*	5000	5000	4000	3000	2500	2000	1500	1500	1000

\*Pressure ratings shown are the pressure ratings for the fitting and are not necessarily the pressure ratings applicable in an assembly with hydraulic hose. The applicable pressure rating for an assembly with hydraulic hose is the lower value specified for the hose and the fitting unless otherwise agreed to by the supplier and user.

### Female Pipe Swivel to Male Pipe

(Ref. SAE No. 140130)



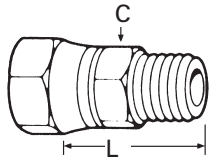
NPSM SWIVEL NUT	MALE PIPE THREAD	CATALOG NUMBER	HEX C	L
1/8-27	1/8-27	9205x2x2	9/16	.900
1/8-27	1/4-18	9205x2x4	11/16	1.187
1/4-18	1/8-27	9205x4x2	11/16	0.940
1/4-18	1/4-18	9205x4x4	11/16	1.200
1/4-18	3/8-18	9205x4x6	11/16	1.200
1/4-18	1/2-14	9205x4x8	7/8	1.500
3/8-18	1/4-18	9205x6x4	5/8	1.210
3/8-18	3/8-18	9205x6x6	3/4	1.240
3/8-18	1/2-14	9205x6x8	7/8	1.540
1/2-14	3/8-18	9205x8x6	7/8	1.330
1/2-14	1/2-14	9205x8x8	1	1.640
1/2-14	3/4-14	9205x8x12	1-1/4	1.620
3/4-14	1/2-14	9205x12x8	1	1.720
3/4-14	3/4-14	9205x12x12	1-1/4	1.680
3/4-14	1-11-1/2	9205x12x16	1-1/2	1.984
1-11-1/2	3/4-14	9205x16x12	1-1/2	1.800
1-11-1/2	1-11-1/2	9205x16x16	1-1/2	2.010
1-11-1/2	1-1/4-11-1/2	9205x16x20	1-11/16	2.080
1-1/4-11-1/2	1-11-1/2	9205x20x16	1-7/8	2.100
1-1/4-11-1/2	1-1/4-11-1/2	9205x20x20	1-7/8	2.140
1-1/4-11-1/2	1-1/2-11-1/2	9205x20x24	2-1/8	2.187
1-1/2-11-1/2	1-1/4-11-1/2	9205x24x20	2-1/8	2.093
1-1/2-11-1/2	1-1/2-11-1/2	9205x24x24	2-1/8	2.270
2-11-1/2	2-11-1/2	9205x32x32	2-5/8	2.420

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
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SPECIALTY HOSE  
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ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

# Steel Connectors

## Swivel Adapters

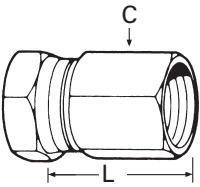
### Female 37° JIC Swivel to Male Pipe Adapter



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	HEX C	L
1/4	1/4	9100x4x4	9/16	1.130
5/16	1/4	9100x5x4	11/16	1.170
3/8	1/4	9100x6x4	11/16	1.290
3/8	3/8	9100x6x6	11/16	1.290
1/2	3/8	9100x8x6	7/8	1.430
1/2	1/2	9100x8x8	7/8	1.610
5/8	3/8	9100x10x6	1	1.400
5/8	1/2	9100x10x8	1	1.600
3/4	1/2	9100x12x8	1-1/8	1.650
3/4	3/4	9100x12x12	1-1/8	1.650
1	3/4	9100x16x12	1-3/8	1.750
1	1	9100x16x16	1-3/8	1.940
1-1/4	1 1/4	9100x20x20	1-7/8	2.090

### Female Pipe Swivel to Female Pipe Straight

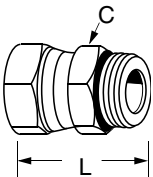
(Ref. SAE No. 140131)



NPSM SWIVEL NUT	FEM. PIPE THREAD	CATALOG NUMBER	HEX C	L
1/8-27	1/8-27	9255x2x2	9/16	.880
1/4-18	1/4-18	9255x4x4	11/16	1.170
1/4-18	3/8-18	9255x4x6	7/8	1.312
3/8-18	1/4-18	9255x6x4	11/16	1.250
3/8-18	3/8-18	9255x6x6	7/8	1.310
3/8-18	1/2-14	9255x6x8	1	1.453
1/2-14	3/8-18	9255x8x6	1	1.500
1/2-14	1/2-14	9255x8x8	1	1.500
3/4-14	3/4-14	9255x12x12	1-1/4	1.620
3/4-14	1-11-1/2	9255x12x16	1-1/2	1.906
1-11-1/2	1-11-1/2	9255x16x16	1-1/2	2.000
1-1/4-11-1/2	1-1/4-11-1/2	9255x20x20	1-7/8	2.000
1-1/2-11-1/2	1-1/2-11-1/2	9255x24x24	2-1/8	2.000
2-11-1/2	2-11-1/2	9255x32x32	2-5/8	2.120

### Male Straight Thread O-Ring to Female Pipe Swivel

(Ref. SAE No. 140157)



STRAIGHT THREAD	NPSM SWIVEL NUT	CATALOG NUMBER	HEX C	L
7/16-20	1/4-18	9315x4x4	9/16	.970
7/16-20	3/8-18	9315x4x6	5/8	1.060
1/2-20	1/4-18	9315x5x4	5/8	1.109
9/16-18	1/4-18	9315x6x4	11/16	1.171
9/16-18	3/8-18	9315x6x6	11/16	1.090
9/16-18	1/2-14	9315x6x8	13/16	1.210
3/4-16	1/4-18	9315x8x4	7/8	1.234
3/4-16	3/8-18	9315x8x6	7/8	1.200
3/4-16	1/2-14	9315x8x8	7/8	1.260
3/4-16	3/4-14	9315x8x12	1	1.406
3/4-14	3/8-18	9315x10x6	1	1.375
3/4-14	1/2-14	9315x10x8	1	1.400
3/4-14	3/4-14	9315x10x12	1	1.546
1-1/16-12	1/2-14	9315x12x8	1-1/4	1.453
1-1/16-12	3/4-14	9315x12x12	1-1/4	1.600
1-3/16-12	3/4-14	9315x14x12	1-3/8	1.703
1-5/16-12	3/4-14	9315x16x12	1-1/2	1.734
1-5/16-12	1-11-1/2	9315x16x16	1-1/2	1.710
1-5/8-12	1-11-1/2	9315x20x16	1-7/8	1.828
1-5/8-12	1-1/4-11-1/2	9315x20x20	1-7/8	1.890
1-7/8-12	1-1/2-11-1/2	9315x24x24	2-1/8	1.953
2-1/2-12	2-11-1/2	9315x32x32	2-3/4	2.156

Replacement o-rings page 256.

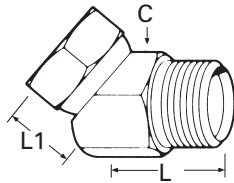


# Steel Connectors

## Swivel Adapters

### 45° Swivel Elbow Female Pipe Swivel to Male Pipe

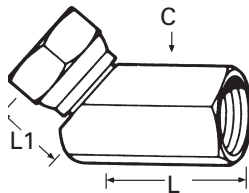
(Ref. SAE No. 140330)



NPSM SWIVEL NUT	MALE PIPE THREAD	CATALOG NUMBER	HEX C	L	L1
1/8-27	1/8-27	9355x2x2	9/16	.620	.500
1/4-18	1/8-27	9355x4x2	11/16	.660	.470
1/4-18	1/4-18	9355x4x4	11/16	1.020	.670
1/4-18	3/8-18	9355x4x6	7/8	1.060	.620
1/4-18	1/2-14	9355x4x8	1	1.380	.730
3/8-18	1/4-18	9355x6x4	7/8	1.000	.750
3/8-18	3/8-18	9355x6x6	7/8	1.060	.750
3/8-18	1/2-14	9355x6x8	1	1.060	.750
1/2-14	3/8-18	9355x8x6	1	1.310	.910
1/2-14	1/2-14	9355x8x8	1	1.310	.910
1/2-14	3/4-14	9355x8x12	1-1/4	1.31	.910
3/4-14	1/2-14	9355x12x8	1-1/4	1.500	1.000
3/4-14	3/4-14	9355x12x12	1-1/4	1.500	1.000
3/4-14	1-11-1/2	9355x12x16	1-1/2	1.500	1.030
1-11-1/2	3/4-14	9355x16x12	1-1/2	1.310	1.050
1-11-1/2	1-11-1/2	9355x16x16	1-1/2	1.500	1.060
1-11-1/2	1-1/4-11-1/2	9355x16x20	1-7/8	1.800	1.300
1-1/4-11-1/2	1-1/4-11-1/2	9355x20x20	1-7/8	1.750	1.250
1-1/2-11-1/2	1-1/2-11-1/2	9355x24x24	2-1/8	1.940	1.380
2-11-1/2	2-11-1/2	9355x32x32	2-5/8	2.000	.500

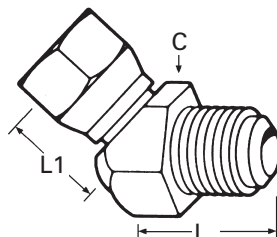
### 45° Swivel Elbow Female Pipe Swivel to Female Pipe

(Ref. SAE No. 140331)



NPSM SWIVEL NUT	FEM. PIPE THREAD	CATALOG NUMBER	HEX C	L	L1
1/8-27	1/8-27	9385x2x2	1/2	.620	.500
1/4-18	1/4-18	9385x4x4	11/16	1.020	.670
1/4-18	3/8-18	9385x4x6	7/8	1.062	.625
3/8-18	3/8-18	9385x6x6	7/8	1.060	.750
3/8-18	1/2-14	9385x6x8	1	1.310	.750
1/2-14	1/2-14	9385x8x8	1	1.310	1.270
3/4-14	3/4-14	9385x12x12	1-1/4	1.500	1.000
3/4-14	1-11-1/2	9385x12x16	1-1/2	1.500	1.031
1-11-1/2	1-11-1/2	9385x16x16	1-1/2	1.500	1.000
1-1/4-11-1/2	1-1/4-11-1/2	9385x20x20	1-7/8	1.790	1.250
1-1/2-11-1/2	1-1/2-11-1/2	9385x24x24	2-1/8	1.940	1.380
2-11-1/2	2-11-1/2	9385x32x32	2-5/8	2.000	1.500

### 45° Swivel Elbow Female 45° SAE to Male 45° SAE (Steel)



TUBE O.D.	CATALOG NUMBER	HEX C	L	L1
3/8	9154x6x6	3/4	1.400	.429
1/2	9154x8x8	1	1.760	.598
5/8	9154x10x10	1-1/4	1.920	.645

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

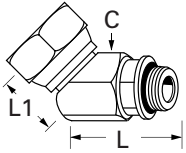
TECHNICAL DATA

# Steel Connectors

## Swivel Adapters

### 45° Swivel Elbow Male Straight Thread O-Ring to Female Pipe Swivel 45° Elbow

(Ref. SAE No. 140357)

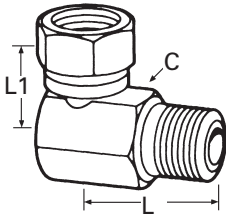


STRAIGHT THREAD	NPSM SWIVEL NUT	CATALOG NUMBER	HEX C	L	L1
7/16-20	1/4-18	9365x4x4	11/16	1.062	.656
7/16-20	3/8-18	9365x4x6	7/8	1.062	.656
9/16-18	3/8-18	9365x6x6	7/8	1.062	.703
9/16-18	1/2-14	9365x6x8	1	1.062	.812
3/4-16	3/8-16	9365x8x6	1	1.125	.875
3/4-16	1/2-14	9365x8x8	1	1.125	.812
7/8-14	1/2-14	9365x10x8	1	1.500	.781
1-1/16-12	3/4-14	9365x12x12	1-1/4	1.500	1.046
1-5/16-12	1-11-1/2	9365x16x16	1-1/2	1.625	1.062
1-5/8-12	1-1/4-11 1/2	9365x20x20	1-7/8	1.281	1.171
1-7/8-12	1-1/2-11 1/2	9365x24x24	2-1/8	1.609	1.343

Replacement o-rings page 256.

### 90° Elbow Female Pipe Swivel to Male Pipe

(Ref. SAE No. 140230)



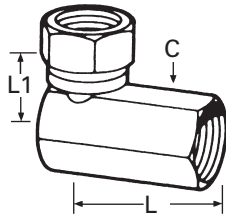
NPSM SWIVEL NUT	MALE PIPE THREAD	CATALOG NUMBER	HEX C	L	L1
1/8-27	1/8-27	9405x2x2	9/16	.720	.700
1/8-27	1/4-18	9405x2x4	11/16	1.190	.750
1/4-18	1/8-27	9405x4x2	11/16	1.060	.780
1/4-18	1/4-18	9405x4x4	11/16	.980	.750
1/4-18	3/8-18	9405x4x6	11/16	1.090	.810
1/4-18	1/2-14	9405x4x8	1	1.810	.940
3/8-18	1/4-18	9405x6x4	13/16	1.090	.900
3/8-18	3/8-18	9405x6x6	7/8	1.090	.900
3/8-18	1/2-14	9405x6x8	1	1.350	1.020
3/8-18	3/4-14	9405x6x12	1-1/4	2.000	1.120
1/2-14	3/8-18	9405x8x6	1	1.280	1.020
1/2-14	1/2-14	9405x8x8	1	1.350	1.020
1/2-14	3/4-14	9405x8x12	1-1/4	1.490	1.140
1/2-14	1-11-1/2	9405x8x16	1-1/2	2.380	1.250
3/4-14	3/4-14	9405x12x12	1-1/4	1.490	1.200
3/4-14	1-11-1/2	9405x12x16	1-1/2	2.380	1.380
1-11 1/2	3/4-14	9405x16x12	1-1/2	2.190	1.440
1-11-1/2	1-11-1/2	9405x16x16	1-1/2	2.380	1.440
1-11-1/2	1-1/4-11-1/2	9405x16x20	1-7/8	1.578	2.620
1-1/4-11-1/2	1-11-1/2	9405x20x16	1-7/8	2.530	1.660
1-1/4-11-1/2	1-1/4-11-1/2	9405x20x20	1-7/8	2.070	1.630
1-1/4-11-1/2	1-1/2-11-1/2	9405x20x24	2-1/8	2.810	1.780
1-1/2-11-1/2	1-1/2-11-1/2	9405x24x24	2-1/8	2.810	1.750
2-11-1/2	2-11-1/2	9405x32x32	2-5/8	3.120	2.310

# Steel Connectors

## Swivel Adapters

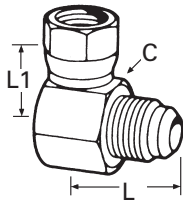
### 90° Elbow Female Pipe Swivel to Female Pipe

(Ref. SAE No. 140231)



NPSM SWIVEL NUT	FEM. PIPE THREAD	CATALOG NUMBER	HEX C	L	L1
1/8-27	1/8-27	9455x2x2	9/16	.640	.700
1/4-18	1/4-18	9455x4x4	11/16	.870	.750
1/4-18	3/8-18	9455x4x6	13/16	1.000	.810
1/4-18	1/2-14	9455x4x8	1	1.250	.940
3/8-18	1/4-18	9455x6x4	13/16	1.000	.900
3/8-18	3/8-18	9455x6x6	13/16	1.000	.900
3/8-18	1/2-14	9455x6x8	1	1.250	1.000
1/2-14	3/8-18	9455x8x6	1	1.220	1.020
1/2-14	1/2-14	9455x8x8	1	1.250	1.000
1/2-14	3/4-14	9455x8x12	1-1/4	1.440	1.120
3/4-14	1/2-14	9455x12x8	1-1/4	1.440	1.250
3/4-14	3/4-14	9455x12x12	1-1/4	1.490	1.200
3/4-14	1-11-1/2	9455x12x16	1-1/2	1.750	1.380
1-11-1/2	3/4-14	9455x16x12	1-1/2	1.750	1.380
1-11-1/2	1-11-1/2	9455x16x16	1-1/2	1.690	1.460
1-1/4-11-1/2	1-1/4-11-1/2	9455x20x20	1-7/8	1.850	1.630
1-1/2-11-1/2	1-1/2-11-1/2	9455x24x24	2-1/8	2.250	1.750
2-11-1/2	2-11 1/2	9455x32x32	2-5/8	2.500	2.310

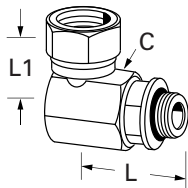
### 90° Elbow 45° SAE Female Swivel to SAE 45° Male (Steel)



TUBE O.D.	CATALOG NUMBER	HEX C	L	L1
3/8	9151x6x6	3/4	1.00	.69
1/2	9151x8x8	1	1.25	.99
5/8	9151x10x10	1-1/4	1.44	1.09

### 90° Elbow Male Straight Thread O-Ring to Female Pipe Swivel

(Ref. SAE No. 140257)



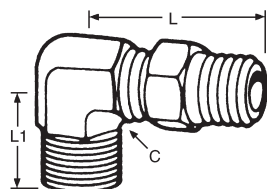
STRAIGHT THREAD	NPSM SWIVEL NUT	CATALOG NUMBER	HEX C	L	L1
7/16-20	1/4-18	9515x4x4	11/16	1.090	.781
7/16-20	3/8-18	9515x4x6	7/8	1.100	.900
9/16-18	1/4-18	9515x6x4	11/16	1.187	.781
9/16-18	3/8-18	9515x6x6	7/8	1.296	.937
9/16-18	1/2-14	9515x6x8	1	1.484	1.000
3/4-16	3/8-18	9515x8x6	1	1.515	1.000
3/4-16	1/2-14	9515x8x8	1	1.515	1.000
3/4-16	3/4-14	9515x8x12	1-1/4	1.656	1.250
7/8-14	3/8-18	9515x10x6	1	1.640	1.000
7/8-14	1/2-14	9515x10x8	1	1.640	1.025
7/8-14	3/4-14	9515x10x12	1-1/4	1.781	1.250
1-1/16-12	1/2-14	9515x12x8	1-1/4	1.921	1.125
1-1/16-12	3/4-14	9515x12x12	1-1/4	1.921	1.250
1-3/16-12	3/4-14	9515x14x12	1-1/4	1.921	1.250
1-5/16-12	3/4-14	9515x16x12	1-1/2	2.093	1.375
1-5/16-12	1-11-1/2	9515x16x16	1-1/2	2.093	1.390
1-5/8-12	3/4-14	9515x20x12	1-7/8	2.484	1.562
1-5/8-12	1-1/4-11-1/2	9515x20x20	1-7/8	2.484	1.656
1-7/8-12	1-1/2-11-1/2	9515x24x24	2-1/8	2.609	1.734
2-1/2-12	2-11-12	9515x32x32	2-5/8	3.250	2.312

Replacement o-rings page 256.

# Steel Connectors

## Swivel Adapters

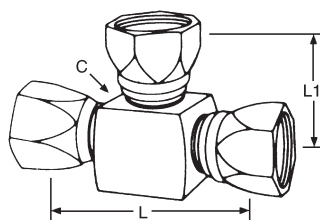
### 90° Elbow Male Pipe Swivel to Male Pipe Rigid



MALE PIPE SWIVEL	MALE PIPE RIGID	CATALOG NUMBER	HEX C	L	L1
1/4-18	1/4-18	9435x4x4	9/16	1.870	1.060
3/8-18	3/8-18	9435x6x6	3/4	1.950	1.220
1/2-14	1/2-14	9435x8x8	7/8	2.250	1.470

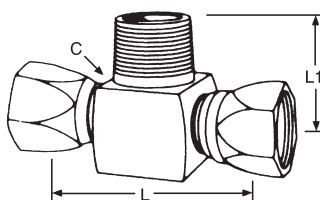
Not for use with liquids over 212°F.

### Female Pipe Swivel Tee



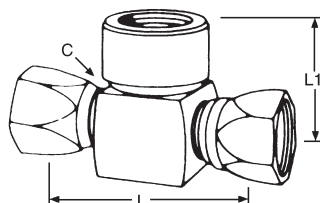
NPSM SWIVEL	CATALOG NUMBER	HEX C	L	L1
1/8-27	9705x2x2x2	1/2	1.406	.660
1/4-18	9705x4x4x4	11/16	1.720	.780
3/8-18	9705x6x6x6	7/8	1.720	.940
1/2-14	9705x8x8x8	1	2.200	1.000
3/4-14	9705x12x12x12	1-1/4	2.780	1.250
1-11-1/2	9705x16x16x16	1-1/2	3.060	1.390
1 1/4-11 1/2	9705x20x20x20	1-7/8	3.320	1.660

### Female Pipe Swivel to Male Pipe Branch Tee



SWIVEL THREAD	NPSM MALE PIPE	CATALOG NUMBER	HEX C	L	L1
1/8-27	1/8-27	9406x2x2x2	9/16	1.380	.940
1/4-18	1/4-18	9406x4x4x4	11/16	1.500	1.190
1/4-18	3/8-18	9406x4x4x6	7/8	1.744	1.500
1/4-18	1/2-14	9406x4x4x8	7/8	1.880	1.500
3/8-18	3/8-18	9406x6x6x6	1	1.874	1.750
3/8-18	1/2-14	9406x6x6x8	1	2.000	1.750
1/2-14	1/2-14	9406x8x8x8	1	2.000	1.810
1/2-14	3/4-14	9406x8x8x12	1-1/4	2.250	2.000
3/4-14	1-11-1/2	9406x12x12x16	1-1/2	2.756	2.375
1-11-1/2	3/4-14	9406x16x16x12	1-1/2	2.780	2.187
1-11-1/2	1-11-1/2	9406x16x16x16	1-1/2	2.880	2.380
1-1/4-11-1/2	1-1/4-11-1/2	9406x20x20x20	1-7/8	3.240	2.620
1-1/2-11-1/2	1-1/2-11-1/2	9406x24x24x24	2-1/8	3.500	2.810

### Female Pipe Swivel to Female Pipe Branch Tee



NPSM SWIVEL THREAD	FEMALE PIPE	CATALOG NUMBER	HEX C	L	L1
1/8-27	1/8-27	9456x2x2x2	1/2	1.312	.687
1/4-18	1/4-18	9456x4x4x4	11/16	1.625	.937
1/4-18	3/8-18	9456x4x4x6	7/8	1.744	1.062
3/8-18	3/8-18	9456x6x6x6	7/8	1.874	.937
3/8-18	1/2-14	9456x6x6x8	1	2.000	1.250
1/2-14	1/2-14	9456x8x8x8	1	2.000	1.250
1/2-14	3/4-14	9456x8x8x12	1-1/4	2.250	1.437
3/4-14	3/4-14	9456x12x12x12	1-1/4	2.500	1.437
3/4-14	1-11-1/2	9456x12x12x16	1-1/2	2.750	1.750
1-11-1/2	1-11-1/2	9456x16x16x16	1-1/2	2.780	1.750
1-1/4-11-1/2	1-1/4-11-1/2	9456x20x20x20	1-7/8	3.312	2.000

# FOR-SEAL

## Introduction

### Ordering Information:

Use catalog number.

### Typical Application:

High pressure, hydraulic, pneumatic and chemical processing.

**Pressure:**\* Working pressure to 6000 PSI (1-1/4" and 1-1/2"; maximum 4000 PSI).

**Sealing Method:** O-Ring.

### Vibration Rating:

Excellent resistance.

**Material:** Generally 12L14 steel

**Plating:** Eaton Carbon Steel Connectors are zinc-plated, except brazed parts which are oil dipped.

**Used With:** Steel tubing (tubing for brazing must be non-coated).

**Advantages:** Tubing is brazed for permanent leakproof connection.

### Conformance:

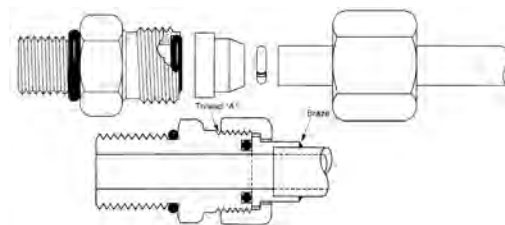
An exclusive item with Eaton, meets SAE J1453.

**Label Set:** FS-2400

### Note:

See page 408 for new hydraulic O-Ring assortment.

\* Pressure ratings shown are the pressure ratings for the fitting and are not necessarily the pressure rating applicable in an assembly with hydraulic hose. The applicable pressure rating for an assembly with hydraulic hose is the lower value specified for the hose and the fitting.



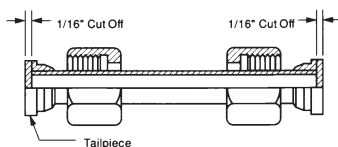
<b>Tube O.D.</b>	1/4	3/8	1/2	5/8	3/4
<b>Thread</b>	9/16-18	11/16-16	13/16-16	1-14	1 3/16-12

<b>Tube O.D.</b>	7/8	1	1-1/4	1-1/2
<b>Thread</b>	1 3/16-12	1 7/16-12	1 11/16-12	2-12

## Tube Preparation and Cleaning

Figure 1

1. Establish the length of tubing required allowing 1/16" cut-off factor for each connection.
2. Cut the tubing to proper length keeping ends reasonably square. A fine tooth hack saw or cut-off saw works well for this job. The use of a tubing cutter is not recommended due to possible collapse of the tube end, retarding the capillary action required for proper braze flow.



### Note:

Subtract 1/16" from tube length for each connection.



3. Clean the end of the tube with an alkaline cleaner to remove all traces of oil or grease. Deburr the end of the tube with a file and polish the outside of the tube down to bare metal with clean emery paper. Oil and grease residue must be removed first to avoid working the oily residue into the tube surface.
4. After polishing, wipe off any metal particles using a clean solvent if necessary. Avoid touching the tube end after final cleaning as this may leave greasy spots which will braze poorly. Clean the tailpiece with an alkaline cleaner.



# FOR-SEAL

## Fluxing and Brazing Cleanup

Flux may be cleaned up using hot water and wire brush, using care not to scratch the tailpiece sealing surface.

1. Assemble proper size braze ring into counterbore of tailpiece. The correct size braze ring will be slightly smaller than the inside diameter of the counterbore.



2. Clamp the tube securely in a vise, slide nut on tube, with threads pointing outward. Coat the tube end with flux and several inches of the tube outside diameter.



3. Coat the tailpiece liberally with flux including the counterbore and braze ring.



4. In a well ventilated area, apply heat uniformly to the tailpiece and the tube end. Watch the flux. The flux becomes completely clear when it is close to the proper brazing temperature. When ring melts, the tailpiece will settle down onto the end.



**Note:**  
General working knowledge of Acetylene torch brazing techniques is recommended.

5. Remove tube assembly from vise and check braze joint.



6. The braze alloy will flow down through the joint and should form a continuous fillet at the tube to tailpiece joint.



**Note:**  
Do not overheat. Excessive heat will only cause scaling and charred flux and make the parts more difficult to clean up.

## Torque Requirements

Tube O.D.	1/4	3/8	1/2	5/8	3/4	1	1-1/4	1-1/2
Torque Ft-Lb. For-Seal SW. Nut	10-12	18-20	32-35	46-50	65-70	92 100	125 140	150 165
Torque Ft-Lb O-Ring Boss Straight Thread O-Ring Locknut Torque	14-16	24-26	50-60	72-80	125 135	200 220	210 280	270 360

## Thread Chart

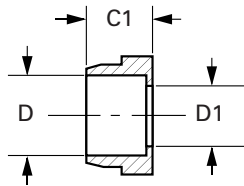
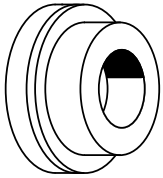
Rated pressures are for low surge, static type applications.

Tube O.D.	1/4	3/8	1/2	5/8	3/4	1	1-1/4	1-1/2
For-Seal Thread	9/16-18	11/16-16	13/16-16	1-14	1-3/16-12	1-7/16-12	1-11/16-12	2-12
Maximum PSI	6000	6000	6000	6000	6000	6000	4000	4000
Adjustable Hose Ends PSI	6000	6000	6000	6000	6000	5000	4000	3000

# FOR-SEAL

## Tailpiece Silver Braze

(Ref. SAE No. 520115)

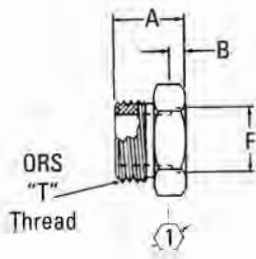


TUBE O.D.	CATALOG NUMBER	D	D1	C1
1/4	4165x4	.256	.172	.374
3/8	4165x6	.381	.264	.374
1/2	4165x8	.506	.378	.374
5/8	4165x10	.631	.484	.413
3/4	4165x12	.757	.609	.551
1	4165x16	1.007	.811	.610
1-1/4	4165x20	1.257	1.024	.610
1-1/2	4165x24	1.507	1.260	.610

Oil Dipped

## FOR-SEAL Braze Adapter

(Ref. SAE 520104)

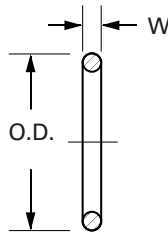
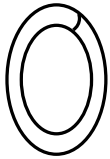


### Part No. FF1851T(Size)\*

DASH SIZE	TUBE O.D.		THREAD T1	A		B		F		①
	mm	inches		mm	inches	mm	inches	mm	inches	
1212S	19,0	.75	1 <sup>3</sup> / <sub>16</sub> - 12	30,7	1.21	9,6	.38	19,0	.75	1.25

\*Eaton counterbores are dimensioned for sizes or emerged tubing. If tubing is used as received, contact Eaton for appropriate part number.

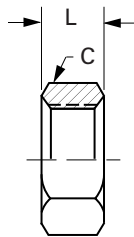
## FOR-SEAL Cadmium Free Braze Ring



TUBE O.D.	CATALOG NUMBER	WIRE DIA.	O.D.
1/4	4640x4	.046	.250
3/8	4640x6	.046	.375
1/2	4640x8	.046	.500
5/8	4640x10	.046	.625
3/4	4640x12	.062	.750
1	4640x16	.062	1.000
1-1/4	4640x20	.062	1.250
1-1/2	4640x24	.062	1.500

## Bulkhead Nut

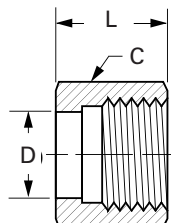
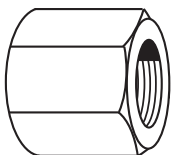
(Ref. SAE No. 520118)



TUBE O.D. A	CATALOG NUMBER	HEX C	L
1/4	4924x4	13/16	.27
3/8	4924x6	1	.31
1/2	4924x8	1-1/8	.35
5/8	4924x10	1-5/16	.41
3/4	4924x12	1-1/2	.41
1	4924x16	1-3/4	.41
1-1/4	4924x20	2	.41
1-1/2	4924x24	2-3/8	.41

## Nut

(Ref. SAE No. 520110)



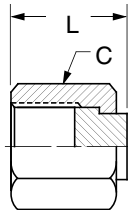
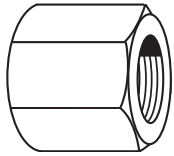
TUBE O.D.	CATALOG NUMBER	HEX C	D	L
1/4	4105x4	11/16	.412	.58
3/8	4105x6	13/16	.531	.67
1/2	4105x8	15/16	.652	.83
5/8	4105x10	1-1/8	.829	.93
3/4	4105x12	1-3/8	.950	1.02
1	4105x16	1-5/8	1.144	1.10
1-1/4	4105x20	1-7/8	1.415	1.10
1-1/2	4105x24	2-1/4	1.727	1.10

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA



**FOR-SEAL****Cap**

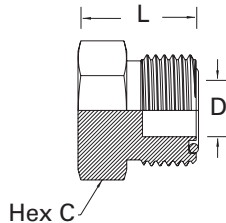
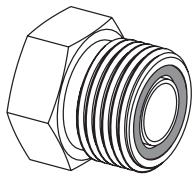
(Ref. SAE No. 520112)



TUBE O.D.	CATALOG NUMBER	HEX C	L
1/4	4129x4	11/16	.67
3/8	4129x6	13/16	.75
1/2	4129x8	15/16	.90
5/8	4129x10	1-1/8	1.00
3/4	4129x12	1-3/8	1.10
1	4129x16	1-5/8	1.17
1-1/4	4129x20	1-7/8	1.17
1-1/2	4129x24	2-1/4	1.17

**Plug**

(Ref. SAE No. 520109)

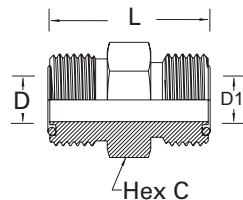
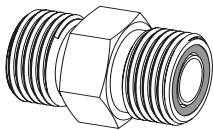


TUBE O.D.	CATALOG NUMBER	HEX C	D	L
1/4	4229x4	5/8	.172	.659
3/8	4229x6	3/4	.264	.751
1/2	4229x8	7/8	.378	.854
5/8	4229x10	1-1/16	.484	1.020
3/4	4229x12	1-1/4	.609	1.080
1	4229x16	1-1/2	.811	1.100
1-1/4	4229x20	1-3/4	1.024	1.100
1-1/2	4229x24	2-1/8	1.260	1.100

FOR-SEAL O-Ring included.

**Union**

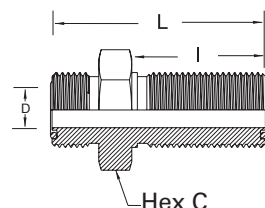
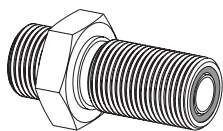
(Ref. SAE No. 520101)



TUBE O.D.	TUBE O.D.	CATALOG NUMBER	HEX C	D	D1	L
1/4	1/4	4305x4	5/8	.172	.172	1.08
3/8	1/4	4305x6x4	3/4	.264	.172	1.17
3/8	3/8	4305x6	3/4	.264	.264	1.22
1/2	3/8	4305x8x6	7/8	.378	.264	1.33
1/2	1/2	4305x8	7/8	.378	.378	1.39
5/8	1/2	4305x10x8	1-1/16	.484	.378	1.57
5/8	5/8	4305x10	1-1/16	.484	.484	1.68
3/4	1/2	4305x12x8	1-1/4	.609	.378	1.69
3/4	5/8	4305x12x10	1-1/4	.609	.484	1.80
3/4	3/4	4305x12	1-1/4	.609	.609	1.86
1	3/4	4305x16x12	1-1/2	.812	.609	1.92
1	1	4305x16	1-1/2	.811	.811	1.94
1-1/4	1-1/4	4305x20	1-3/4	1.024	1.024	2.02
1-1/2	1-1/2	4305x24	2-1/8	1.260	1.260	2.09

**Bulkhead Union**

(Ref. SAE No. 520601)



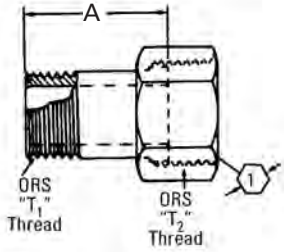
TUBE O.D.	CATALOG NUMBER	HEX C	D	I	L
3/8	4325x6	1	.264	1.34	2.09
1/2	4325x8	1-1/8	.378	1.44	2.30
3/4	4325x12	1-1/2	.609	1.64	2.72
1	4325x16	1-3/4	.812	1.66	2.76
1-1/4	4325x20	2	1.024	1.66	2.76
1-1/2	4325x24	2-3/8	1.260	1.66	2.76

For bulkhead nut, see page 265.

# FOR-SEAL

## FOR-SEAL Reducer Adapter

(Ref. SAE 520123)

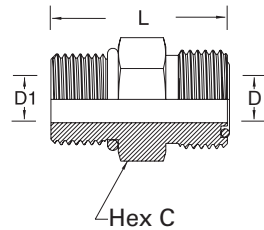
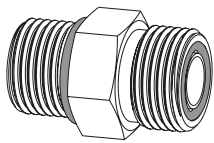


### Part No. FF2281T(Size)

DASH SIZE	TUBE O.D.		THREAD T1	THREAD T2	A		①
	mm	inches			mm	inches	
0406S	9,6	.38	9/16 - 18	11/16 - 16	19,5	.77	.81
0408S	12,7	.50	9/16 - 18	13/16 - 16	21,8	.86	.94
0608S	12,7	.50	11/16 - 16	13/16 - 16	22,3	.88	.94
0612S	19,0	.75	11/16 - 16	13/16 - 12	26,2	1.03	1.38
0812S	19,0	.75	13/16 - 16	13/16 - 12	27,9	1.10	1.38

## Straight Thread O-Ring Connector

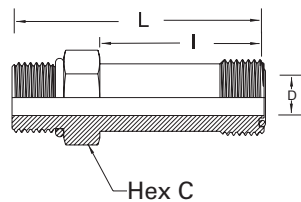
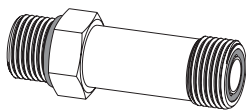
(Ref. SAE No. 520120)



MALE TUBE O.D.	MALE PORT SIZE	CATALOG NUMBER	HEX C	D	D1	L
1/4	1/4	4315x4	5/8	.172	.172	1.133
1/4	3/8	4315x4x6	11/16	.172	.172	1.202
3/8	1/4	4315x6x4	3/4	.264	.172	1.343
3/8	3/8	4315x6	3/4	.264	.264	1.252
3/8	1/2	4315x6x8	7/8	.378	.264	1.378
3/8	5/8	4315x6x10	1-1/16	.264	.484	1.530
1/2	3/8	4315x8x6	7/8	.378	.264	1.472
1/2	1/2	4315x8	7/8	.378	.378	1.441
1/2	5/8	4315x8x10	1	.378	.484	1.590
1/2	3/4	4315x8x12	1-1/4	.378	.609	1.748
5/8	5/8	4315x10	1-1/16	.484	.484	1.700
3/4	3/4	4315x12	1-1/4	.609	.609	1.918
3/4	1	4315x12x16	1-1/2	.609	.609	1.960
1	3/4	4315x16x12	1-1/2	.812	.609	2.138
1	1	4315x16	1-1/2	.811	.811	1.978
1	1-1/4	4315x16x20	1-7/8	.812	1.709	2.058
1-1/4	1	4315x20x16	1-3/4	1.024	.843	2.278
1-1/4	1-1/4	4315x20	1-7/8	1.024	1.024	2.058
1-1/2	1-1/2	4315x24	2-1/8	1.260	1.260	2.125

## Straight Thread O-Ring Extended

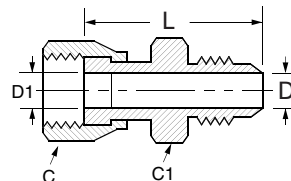
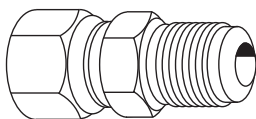
(Ref. SAE No. 520122)



MALE TUBE O.D.	MALE PORT SIZE	CATALOG NUMBER	HEX C	D	I	L
3/8	3/8	4316x6	3/4	.264	1.46	2.27
1/2	1/2	4316x8	7/8	.378	1.75	2.67
3/4	3/4	4316x12	1-1/4	.609	2.52	3.76
1	1	4316x16	1-1/2	.811	2.87	4.14
1-1/4	1-1/4	4316x20	1-7/8	1.024	3.41	4.76
1-1/2	1-1/2	4316x24	2-1/8	1.260	3.82	5.26

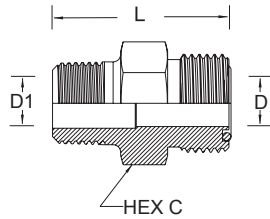
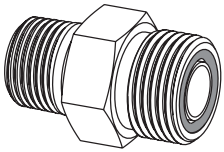
For replacement Straight Thread O-Ring, see page 273.

## Male 37° to Female FOR-SEAL

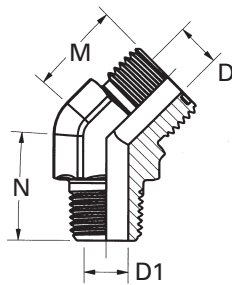


FEMALE TUBE O.D.	MALE TUBE SIZE	CATALOG NUMBER	HEX C	HEX C1	D	L
1/4	1/4	4213x4	11/16	5/8	.172	1.50
3/8	3/8	4213x6	13/16	3/4	.297	1.62
1/2	1/2	4213x8	15/16	7/8	.392	1.90
5/8	5/8	4213x10	1-1/8	1-1/16	.484	2.25
3/4	3/4	4213x12	1-3/8	1-1/4	.609	2.48
1	1	4213x16	1-5/8	1-1/2	.811	2.84

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

**FOR-SEAL****Male FOR-SEAL Male  
Pipe Adapter**

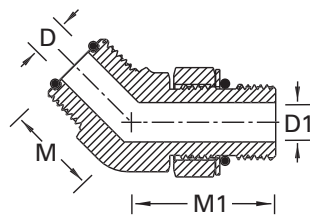
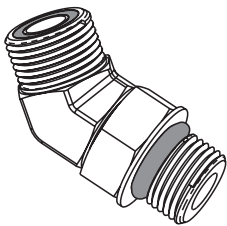
TUBE O.D.	MALE PIPE SIZE	CATALOG NUMBER	HEX C	D	D1	L
3/8	3/8	4205x6x6	3/4	.264	.406	1.30
1/2	3/8	4205x8	7/8	.378	.406	1.45
1/2	1/2	4205x8x8	7/8	.378	.484	1.64
5/8	1/2	4205x10	1-1/16	.484	.531	1.82
3/4	1/2	4205x12x8	1-1/4	.406	.484	1.87
3/4	3/4	4205x12	1-1/4	.609	.719	1.94
3/4	1	4205x12x16	1-3/8	.609	.938	1.87
1	1	4205x16	1-1/2	.811	.938	2.19
1-1/4	1-1/4	4205x20	1-3/4	1.024	1.250	2.30

**45° Male Elbow**

MALE TUBE O.D.	MALE TUBE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/8	4355x4	.172	.188	.63	.64	9/16
3/8	1/4	4355x6	.264	.281	.74	.86	3/4
1/2	3/8	4355x8	.378	.406	.80	.95	7/8
5/8	1/2	4355x10	.484	.531	.92	1.17	1-1/16
3/4	3/4	4355x12	.609	.719	1.02	1.20	1-5/16
1	1	4355x16	.812	.939	1.18	1.48	1-5/8
1-1/4	1-1/4	4355x20	1.026	1.252	1.26	1.67	1-5/8
1-1/2	1-1/2	4355x24	1.262	1.502	1.45	1.77	1-7/8

**Straight Thread O-Ring  
Connector 45° Elbow**

(Ref. SAE No. 520320)



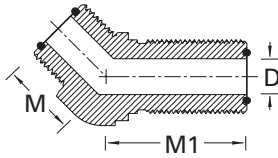
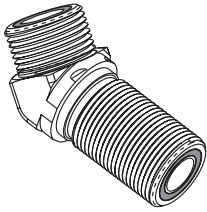
MALE TUBE O.D.	MALE PORT SIZE	CATALOG NUMBER	D	D1	M	M1	ACROSS FLATS
1/4	1/4	4365x4	.172	.172	.63	1.18	9/16
1/4	3/8	4365x4x6	.172	.264	.68	1.30	3/4
3/8	1/4	4365x6x4	.264	.172	.74	1.22	3/4
3/8	3/8	4365x6	.264	.264	.74	1.30	3/4
3/8	1/2	4365x6x8	.264	.390	.74	1.43	3/4
1/2	3/8	4365x8x6	.378	.264	.80	1.27	3/4
1/2	1/2	4365x8	.378	.390	.80	1.43	3/4
1/2	5/8	4365x8x10	.378	.484	.82	1.76	1-1/16
1/2	3/4	4365x8x12	.378	.609	.87	1.97	1-3/16
5/8	1/2	4365x10x8	.484	.390	.92	1.59	1-1/16
5/8	5/8	4365x10	.484	.484	.92	1.76	1-1/16
5/8	3/4	4365x10x12	.484	.609	.94	1.97	1-3/16
3/4	5/8	4365x12x10	.609	.484	1.02	1.81	1-3/16
3/4	3/4	4365x12	.609	.609	1.02	1.97	1-5/16
3/4	1	4365x12x16	.609	.811	1.16	2.06	1-5/16
1	3/4	4365x16x12	.811	.609	1.12	2.03	1-7/16
1	1	4365x16	.812	.811	1.18	2.06	1-1/2
1	1-1/4	4365x16x20	.811	1.081	1.26	2.11	1-5/8
1-1/4	1-1/4	4365x20	1.024	1.081	1.26	2.11	1-5/8
1-1/2	1-1/2	4365x24	1.260	1.312	1.45	2.11	1-7/8

For replacement straight thread O-Ring, see page 273.

# FOR-SEAL

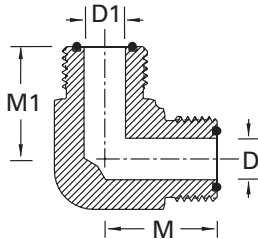
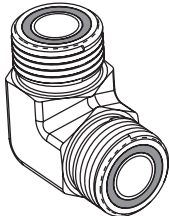
## 45° Bulkhead Elbow

(Ref. SAE No. 520201)



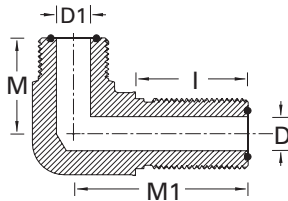
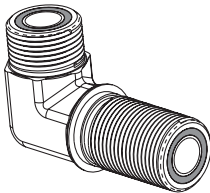
## Union 90° Elbow

(Ref. SAE No. 520201)

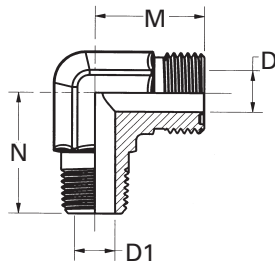


## Bulkhead Union 90° Elbow

(Ref. SAE No. 520701)



## 90° Male Elbow



MALE TUBE O.D.	CATALOG NUMBER	D	M	M1	ACROSS FLATS
1/4	4375x4	.172	.63	1.73	9/16
3/8	4375x6	.264	.74	1.91	3/4
1/2	4375x8	.378	.80	2.01	3/4
5/8	4375x10	.484	.92	2.23	1-1/16
3/4	4375x12	.609	1.02	2.39	1-3/16
1	4375x16	.811	1.18	2.57	1-7/16
1-1/4	4375x20	1.045	1.26	2.64	1-11/16
1-1/2	4375x24	1.312	1.45	2.64	1-7/8

For Bulkhead Nut, see page 265.

MALE TUBE O.D.	CATALOG NUMBER	D	M	ACROSS FLATS
1/4	4505x4	.172	.85	9/16
3/8	4505x6	.264	.98	3/4
1/2	4505x8	.378	1.10	3/4
5/8	4505x10	.484	1.31	1-1/16
3/4	4505x12	.609	1.47	1-3/16
1	4505x16	.811	1.64	1-7/16
1-1/4	4505x20	1.045	1.76	1-5/8
1-1/2	4505x24	1.312	1.92	1-7/8

MALE TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	M1	1	ACROSS FLATS
1/4	1/4	4525x4	.172	.172	.89	1.85	1.24	9/16
3/8	3/8	4525x6	.264	.264	1.02	2.05	1.34	3/4
1/2	1/2	4525x8	.378	.378	1.14	2.18	1.44	7/8
5/8	5/8	4525x10	.484	.484	1.36	2.36	1.44	1-1/16
3/4	3/4	4525x12	.609	.609	1.52	2.64	1.60	1-5/16
1	1	4525x16	.811	.811	1.67	2.80	1.64	1-5/8
1-1/4	1-1/4	4525x20	1.024	1.024	1.79	2.97	1.66	1-7/8
1-1/2	1-1/2	4525x24	1.260	1.260	1.95	3.13	1.66	1-7/8

For Bulkhead Nut, see page 265.

MALE TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/8	4405x4	.172	.188	.85	.78	9/16
3/8	1/4	4405x6	.264	.281	.80	1.09	3/4
1/2	3/8	4405x8	.378	.406	1.10	1.22	3/4
5/8	1/2	4405x10	.484	.531	1.31	1.47	1-1/16
3/4	3/4	4405x12	.609	.719	1.47	1.59	1-5/16
1	1	4405x16	.812	.939	1.64	1.97	1-5/8
1-1/4	1-1/4	4405x20	1.026	1.252	1.76	2.38	1-5/8
1-1/2	1-1/2	4405x24	1.262	1.502	1.92	2.64	1-7/8

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

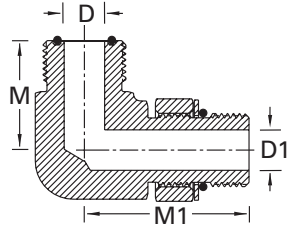
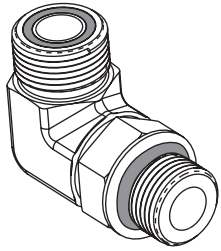
# FOR-SEAL

## 90° Swivel Elbow

(Ref. SAE No. 520221)

## Straight Thread O-Ring 90° Elbow

(Ref. SAE No. 520220)

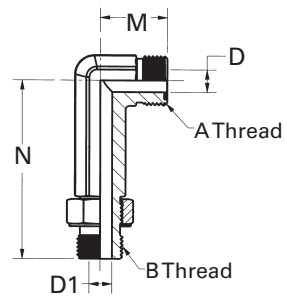


MALE TUBE O.D.	FEMALE PORT O.D.	CATALOG NUMBER	HEX C	D	D1	M	M1	ACROSS FLATS
1/4	1/4	4506x4	11/16	.172	.165	.85	1.04	9/16
3/8	3/8	4506x6	13/16	.264	.264	.98	1.19	3/4
1/2	3/8	4506x8x6	13/16	.378	.264	1.10	1.49	3/4
1/2	1/2	4506x8	15/16	.378	.358	1.10	1.46	3/4
5/8	5/8	4506x10	1-1/8	.484	.453	1.31	1.59	1-1/16
3/4	3/4	4506x12	1-3/8	.609	.547	1.47	1.79	1-5/16
1	1	4506x16	1-5/8	.811	.783	1.64	2.10	1-7/16
1-1/4	1-1/4	4506x20	1-7/8	1.045	1.024	1.76	2.29	1-5/8
1-1/2	1-1/4	4506x24x20	1-7/8	1.312	1.024	1.92	2.41	1-7/8
1-1/2	1-1/2	4506x24	2-1/4	1.312	1.260	1.92	2.41	1-7/8

MALE TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	M1	ACROSS FLATS
1/4	1/4	4515x4	.172	.172	.85	1.29	9/16
1/4	3/16	4515x4x3	.172	.120	.85	1.19	9/16
1/4	5/16	4515x4x5	.172	.234	.85	1.29	9/16
1/4	3/8	4515x4x6	.172	.264	.92	1.45	3/4
1/4	1/2	4515x4x8	.172	.390	.97	1.60	3/4
3/8	1/4	4515x6x4	.264	.172	.98	1.37	3/4
3/8	5/16	4515x6x5	.264	.234	.98	1.37	3/4
3/8	3/8	4515x6	.264	.264	.98	1.45	3/4
3/8	1/2	4515x6x8	.264	.390	1.04	1.60	3/4
3/8	5/8	4515x6x10	.264	.484	1.15	1.97	3/4
3/8	3/4	4515x6x12	.264	.609	1.25	2.17	1-3/16
1/2	5/8	4515x8x10	.378	.484	1.21	1.97	1-1/16
1/2	3/4	4515x8x12	.378	.484	1.32	2.17	1-1/16
1/2	3/8	4515x8x6	.378	.264	1.10	1.44	3/4
1/2	1/2	4515x8	.378	.390	1.10	1.60	3/4
5/8	5/8	4515x10	.484	.484	1.31	1.97	1-1/16
5/8	3/4	4515x10x12	.484	.609	1.41	2.17	1-3/16
5/8	1/2	4515x10x8	.484	.390	1.31	1.80	1-1/16
3/4	5/8	4515x12x10	.609	.484	1.47	2.01	1-5/16
3/4	3/4	4515x12	.609	.609	1.47	2.17	1-5/16
3/4	1	4515x12x16	.609	.811	1.62	2.35	1-5/16
3/4	1/2	4515x12x8	.609	.390	1.47	1.84	1-3/16
1	3/4	4515x16x12	.811	.609	1.64	2.32	1-5/8
1	7/8	4515x16x14	.811	.609	1.64	2.32	1-5/8
1	1	4515x16	.811	.811	1.64	2.35	1-5/8
1	1-1/4	4515x16x20	.811	1.081	1.76	2.45	1-5/8
1-1/4	1	4515x20x16	1.024	.811	1.76	2.42	1-5/8
1-1/4	1-1/4	4515x20	1.024	1.081	1.76	2.45	1-7/8
1-1/4	1-1/2	4515x20x24	1.024	1.312	1.92	2.59	1-7/8
1-1/2	1-1/4	4515x24x20	1.312	1.081	1.92	2.59	1-7/8
1-1/2	1-1/2	4515x24	1.312	1.312	1.92	2.59	1-7/8

For replacement straight thread O-Ring, see page 273.

## Straight Thread O-Ring 90° Elbow - Long

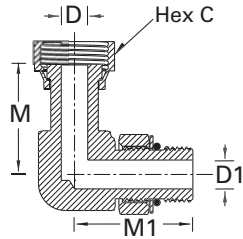
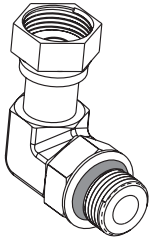


MALE TUBE O.D.	MALE PORT SIZE	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/4	4515x4L	.172	.180	.85	2.23	9/16
3/8	3/8	4515x6L	.264	.300	.98	2.61	3/4
1/2	1/2	4515x8L	.378	.398	1.10	2.95	3/4
5/8	5/8	4515x10L	.484	.498	1.31	3.51	1-1/16
3/4	3/4	4515x12L	.609	.616	1.47	3.97	1-3/16
1	1	4515x16L	.812	.852	1.64	4.51	1-7/16
1-1/4	1-1/4	4515x20L	1.026	1.090	1.76	4.98	1-5/8
1-1/2	1-1/2	4515x24L	1.262	1.326	1.92	5.48	1-7/8

# FOR-SEAL

## 90° Straight Thread Swivel

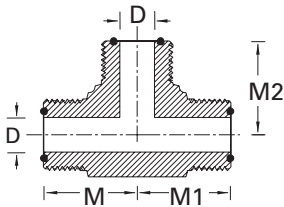
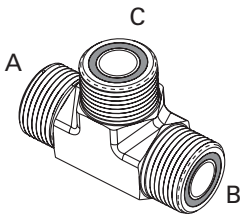
(Ref. SAE No. 520281)



FEM. TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	M1	HEX C	ACROSS FLATS
1/4	1/4	4535x4	.165	.180	1.04	1.29	11/16	9/16
3/8	3/8	4535x6	.264	.300	1.15	1.45	13/16	3/4
1/2	1/2	4535x8	.258	.398	1.49	1.60	15/16	7/8
5/8	5/8	4535x10	.453	.498	1.62	1.97	1-1/8	1-1/16
3/4	3/4	4535x12	.547	.616	1.82	2.17	1-3/8	1-3/8
1	1	4535x16	.783	.852	2.10	2.35	1-5/8	1-5/8
1-1/4	1-1/4	4535x20	1.026	1.090	2.29	2.45	1-7/8	1-5/8
1-1/2	1-1/2	4535x24	1.262	1.326	2.41	2.59	2-1/4	1-7/8

## Union Tee

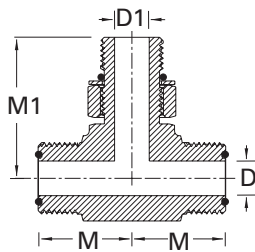
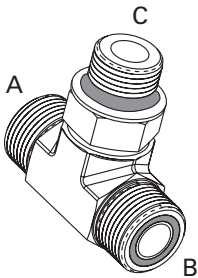
(Ref. SAE No. 520401)



MALE TUBE O.D. A	MALE TUBE O.D. B	MALE TUBE O.D. C	CATALOG NUMBER	D	D1	M	M1	M2	ACROSS FLATS
1/4	1/4	1/4	4705x4	.172	.172	.85	.85	.85	9/16
3/8	3/8	3/8	4705x6	.264	.264	.98	.98	.98	3/4
3/8	3/8	1/2	4705x6x6x8	.264	.378	1.04	1.04	1.10	3/4
1/2	3/8	1/2	4705x8x6x8	.264	.378	.98	.98	1.10	3/4
1/2	1/2	1/2	4705x8	.378	.378	1.10	1.10	1.10	3/4
5/8	5/8	5/8	4705x10	.484	.484	1.31	1.31	1.31	1-1/16
3/4	3/4	3/4	4705x12	.609	.609	1.47	1.47	1.47	1-3/16
1	1	1	4705x16	.811	.811	1.64	1.64	1.64	1-5/8
1-1/4	1-1/4	1-1/4	4705x20	1.024	1.024	1.76	1.76	1.76	1-5/8
1-1/4	1-1/4	1	4705x20x20x16	1.024	.811	1.76	1.76	1.76	1-5/8
1-1/2	1-1/2	1-1/2	4705x24	1.260	1.260	1.92	1.92	1.92	1-7/8

## Straight Thread Branch Tee

(Ref. SAE No. 520429)



TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	M1	ACROSS FLATS
1/4	1/4	4715x4	.172	.172	.85	1.29	9/16
1/4	3/16	4715x4x3	.172	.120	.85	1.19	9/16
3/8	3/8	4715x6	.264	.264	.98	1.45	3/4
3/8	1/2	4715x6x8	.264	.391	1.04	1.60	7/8
1/2	3/8	4715x8x6	.378	.264	1.10	1.44	3/4
1/2	1/2	4715x8	.378	.390	1.10	1.60	3/4
5/8	5/8	4715x10	.484	.484	1.31	1.97	1-1/16
3/4	3/4	4715x12	.609	.609	1.47	2.17	1-3/16
3/4	1	4715x12x16	.609	.812	1.62	2.35	1-5/8
1	1	4715x16	.811	.845	1.64	2.35	1-5/8
1-1/4	1	4715x20x16	1.046	.845	1.76	2.45	1-15/16
1-1/4	1-1/4	4715x20	1.046	1.081	1.76	2.45	1-7/8
1-1/2	1-1/2	4715x24	1.260	1.313	1.92	2.59	1-7/8

For replacement straight thread O-Ring, see page 273.

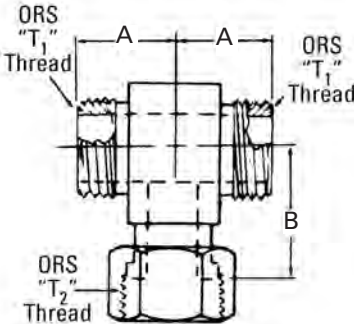
APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA



## FOR-SEAL

## Female Branch Tee

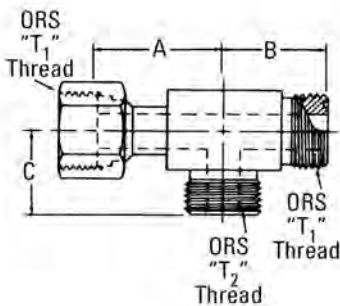
(Ref. SAE No. 520433)



CATALOG NUMBER	TUBE OD	THREAD T1	THREAD T2	A	B
4707x4	.25	9/16-18	9/16-18	.85	1.04
4707x6	.38	11/16-16	11/16-16	.98	1.15
4707x8	.50	13/16-16	13/16-16	1.10	1.49
4707x10	.63	1-14	1-14	1.31	1.62
4707x12	.75	1 3/16-12	1 3/16-12	1.47	1.82
4707x16	1.00	1 7/16-12	1 7/16-12	1.64	2.10
4707x20	1.25	1 11/16-12	1 11/16-12	1.76	2.29
4707x24	1.50	2-12	2-12	1.92	2.41

## Female Run Tee

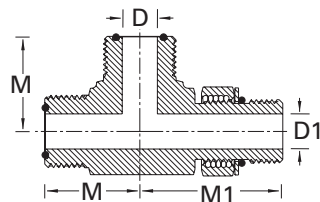
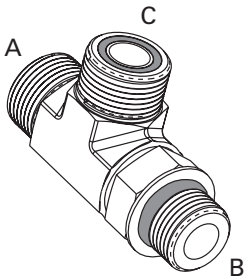
(Ref. SAE No. 520432)



CATALOG NUMBER	TUBE OD	THREAD T1	THREAD T2	A	B	C
4706x4	.25	9/16-18	9/16-18	1.04	.85	.85
4706x6	.38	11/16-16	11/16-16	1.15	.98	.98
4706x8	.50	13/16-16	13/16-16	1.49	1.10	1.10
4706x10	.63	1-14	1-14	1.62	1.31	1.31
4706x12	.75	1 3/16-12	1 3/16-12	1.82	1.47	1.47
4706x16	1.00	1 7/16-12	1 7/16-12	2.10	1.64	1.64
4706x20	1.25	1 11/16-12	1 11/16-12	2.29	1.76	1.76
4706x24	1.50	2-12	2-12	2.41	1.92	1.92

## Straight Thread Run Tee

(Ref. SAE No. 520428)



MALE TUBE O.D. A	MALE TUBE O.D. B	MALE TUBE O.D. C	CATALOG NUMBER	D	D1	M	M1	ACROSS FLATS
1/4	1/4	1/4	4716x4	.172	.172	.85	1.29	9/16
1/4	1/4	3/8	4716x4x6	.172	.264	1.39	1.45	3/4
3/8	3/8	3/8	4716x6	.264	.264	.98	1.45	3/4
1/2	1/2	1/2	4716x8	.378	.391	1.10	1.60	7/8
5/8	5/8	5/8	4716x10	.484	.484	1.31	1.97	1-1/16
3/4	3/4	3/4	4716x12	.609	.609	1.47	2.17	1-3/16
3/4	3/4	1	4716x12x16	.609	.812	1.62	2.32	1-7/16
3/4	1	3/4	4716x12x16x12	.609	.812	1.62	2.35	1-7/16
1	1	3/4	4716x16x12	.812	.609	1.64	2.35	1-7/16
1	1	1	4716x16	.812	.845	1.64	2.35	1-7/16
1-1/4	1-1/4	1-1/4	4716x20	1.046	1.081	1.76	2.45	1-7/8
1-1/2	1-1/2	1-1/2	4716x24	1.313	1.313	1.92	2.59	1-7/8

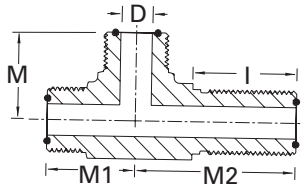
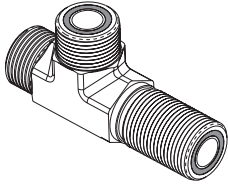
For replacement straight thread O-Ring, see page 273.



# FOR-SEAL

## Bulkhead Run Tee

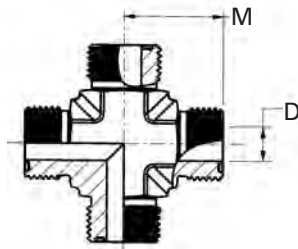
(Ref. SAE No. 520958)



TUBE O.D.	CATALOG NUMBER	D	I	M	M1	M2	ACROSS FLATS
1/4	4726x4	.172	1.24	.89	.89	1.85	9/16
3/8	4726x6	.264	1.34	1.02	1.02	2.05	3/4
1/2	4726x8	.378	1.44	1.14	1.14	2.18	3/4
5/8	4726x10	.484	1.60	1.36	1.36	2.48	1-1/16
3/4	4726x12	.609	1.64	1.52	1.52	2.65	1-3/16
1	4726x16	.812	1.66	1.67	1.67	2.80	1-7/16
1-1/4	4726x20	1.024	1.66	1.79	1.79	2.97	1-5/8
1-1/2	4726x24	1.260	1.66	1.95	1.95	3.13	1-7/8

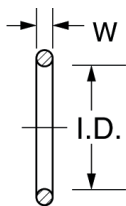
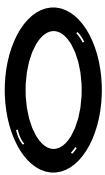
For Bulkhead Nut, see page 265.

## Male FOR-SEAL Cross



TUBE O.D.	CATALOG NUMBER	D	M	ACROSS FLATS
1/4	4955x4	.172	.89	9/16
3/8	4955x6	.264	1.02	3/4
1/2	4955x8	.378	1.14	7/8
5/8	4955x10	.484	1.36	1-1/16
3/4	4955x12	.609	1.52	1-5/16
1	4955x16	.812	1.67	1-5/8
1-1/4	4955x20	1.026	1.79	1-5/8
1-1/2	4955x24	1.262	1.95	1-7/8

## O-Ring, FOR-SEAL



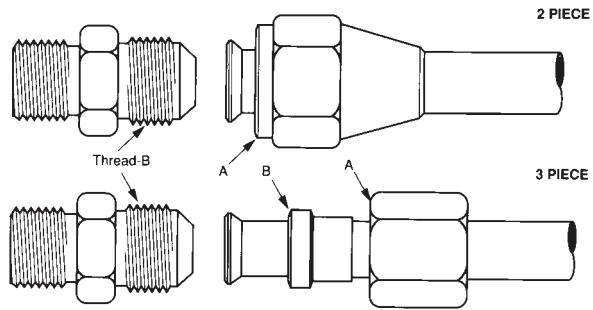
**Material:** Buna N, 90 Durometer

**Temperature:**  
-40°F to +250°F  
(-40°C to +121°C)

Standard O-Ring complies with SAE specification SAE J515 Type CH

TUBE O.D.	CATALOG NUMBER	W	I.D.
1/4	4629x4	.070 ± .005	.301 ± .005
3/8	4629x6	.070 ± .005	.364 ± .005
1/2	4629x8	.070 ± .005	.489 ± .005
5/8	4629x10	.070 ± .005	.614 ± .005
3/4	4629x12	.070 ± .005	.739 ± .005
1	4629x16	.070 ± .006	.926 ± .006
1-1/4	4629x20	.070 ± .006	1.176 ± .006
1-1/2	4629x24	.070 ± .010	1.489 ± .010

# JIC 37° Flare-Twin



Tube O.D.	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1	1-1/4	1-1/2	2
Thread Size-B	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18	3/4-16	7/8-14	1-1/16-12	1-3/16-12	1-5/16-12	1-5/8-12	1-7/8-12	2-1/2-12

## Forged Adapters 5000 Series Pressure Rating Chart

Connection Type	End Size												
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1-1/4"	1-1/2"	2"
SAE Fittings	6000	5000	5000	5000	5000	4000	4000	4000	4000	4000	3000	3000	3000
W/Adjustable Straight Thread O-Ring	5000	5000	4500	4000	4000	4000	3000	3000	2500	2500	2000	1500	1125
With Male Pipe	6000		5000		5000	4000		4000		4000	3000	2500	2500
With Female Pipe	5000		5000		4000	3000		2500		2000	1500	1500	1000

## Brazed Adapters (TF)/SAE 5000 Series Pressure Rating Chart

Connection Type	End Size												
	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1-1/4"	1-1/2"	2"
SAE Fittings	5000	5000	5000	5000	5000	4500	3500	3500	3000	3000	2500	2000	1500
W/Adjustable Straight Thread O-Ring	5000	5000	4500	4000	4000	4000	3000	3000	2500	2500	2000	1500	1125
With Male or Female Pipe	5000	5000	5000	5000	4000	3000	3000	2500	2500	2000	1150	1000	1000

## Typical Application

Hydraulic, instrumentation and chemical processing systems.

## Pressure

Refer to the pressure charts above. The maximum working pressure of an adapter is the lower working pressure of the end size. Ex: C3069x8x6, 8 = 4000 psi and 6 = 5000 psi.

Maximum working pressure is 4000 psi.

## Vibration

Good resistance. Vibration resistance decreases with increase in tube size.

Use two piece design when greater vibration resistance is required.

## Temperature Range

-65°F to +400°F (-53°C to +204°C) at maximum operating pressures.

## Material

Carbon Steel - AISI/SAE 12L14

Stainless Steel - Type 316

Plating - Zinc, yellow dichromate.

## Used With

Copper, brass, steel, aluminum and other tubing that can be flared. See page 29-33 for material compatibility.

## Advantages

Zinc Plate. Choice of two or three-piece design. Broad selection of styles and sizes. Interchangeable with all sources.

## Conformance

Meets specifications and standards of ASA, ASME and SAE.

## How to Order

To order a three-piece assembly, prefix the catalog number with a "3".

Example: To order a male connector C5205x4 with nut and sleeve assembled, order C35205x4. To order a two-piece assembly, order nut and body separately.

Example: Order male connector C5205x4 and two-piece style nut C5115x4. Bodies, nuts and sleeves can be ordered separately by catalog number. Stainless steel bodies, nuts and sleeves are ordered separately by catalog number.

To order Weathercote finish (black phosphate coating) use "W" prefix in place of "C": Example: W5205x4 (special order only).

To order with pipe sealants (Seal-AThread), add a "Z" suffix to the catalog number. Example: C5205x4Z (special order only).

## NOTE

Refer to current price list for availability of cataloged items. Quotations and delivery of non-stock items supplied on request. Configurations and dimensions subject to change without notice.

Additional information can be found in SAE J514.

Weatherhead fittings with a "C" prefix are made from a forged construction.

Example: C5405x4. Weatherhead fittings with a "TF" prefix are made from a brazed construction.

Example: TF5405x4.

**Label Set:** FS-200 (adhesive)

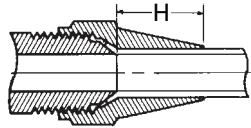
## Assembly Instructions

- Cut tubing to desired length. Make sure all burrs are removed and ends are cut square.
- Slide nut on tube. Threaded end of nut "A" must face toward fitting body. (See above.)
- Slide sleeve on tube (3-piece assembly only). Collar end "B" of sleeve must face toward fitting body. (See above.)
- Flare end of tubing with 37° flaring tool.
  - Check flare diameter. For dimensional data on 37° flares, see page 275.
  - Examine flare for excessive thinout.
  - On thin wall, welded or brazed tubing, use double flare to prevent pinch-off and cracked flares.
- Lubricate threads and assemble to fitting body. Nut should be turned hand tight.
- Tighten assembly until finger tight, then until a sharp torque rise is encountered. From that point, apply one-sixth turn with a wrench.

# JIC 37° Flare-Twin

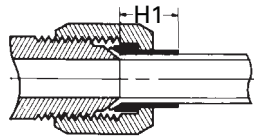
## Dimensional Data

### Dimensional Data Two-Piece Assemblies



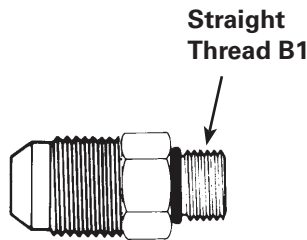
### Dimensional Data Three-Piece Assemblies

**Note:** H & H1 are dimensions of fittings assembled to hand tight condition.



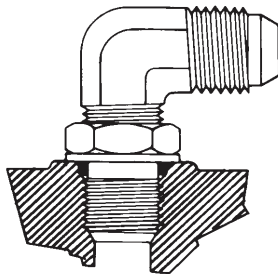
TUBE O.D.	H	H1
1/8	—	.31
3/16	—	.38
1/4	.59	.36
5/16	.66	.41
3/8	.69	.47
1/2	.81	.50
5/8	.94	.64
3/4	—	.61
7/8	—	.69
1	—	.75
1-1/4	—	.73
1-1/2	—	1.05
2	—	1.08

## Straight Thread O-Ring Thread Sizes



PORT SIZE	THREAD SIZE B1	PORT SIZE	THREAD SIZE B1
1/8	5/16-24	3/4	1-1/16-12
3/16	3/8-24	7/8	1-3/16-12
1/4	7/16-20	1	1-5/16-12
5/16	1/2-20	1-1/4	1-5/8-12
3/8	9/16-18	1-1/2	1-7/8-12
1/2	3/4-16	2	2-1/2-12
5/8	7/8-14		

## Straight Thread O-Ring Fitting



### Adjustable Fittings

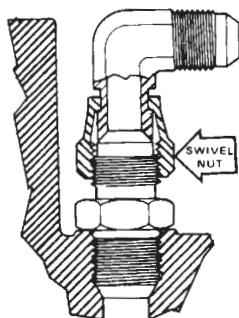
- Permit exact positioning of tees and elbows.
- Provide a leakproof joint.
- Eliminate distorted bosses from over tightening.

1. Lubricate O-ring by coating with a light oil or petrolatum and push back-up washer and O-ring to the extreme rear of the O-ring groove.
2. Turn the lock nut down until it just contacts the back-up washer.
3. Screw fitting by hand into straight thread boss until the back-up washer contacts the face of the boss.
4. Position the fitting by backing out (counter-clockwise) up to one full turn. Hold fitting in desired position and tighten lock nut with a wrench.
5. Assemble tube to fitting. Retighten lock nut.

**NOTE:** O-ring, lock nuts and back-up washers are preassembled on all straight thread fittings.

## Swivel Fitting

(Used with Connector)



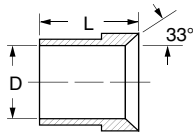
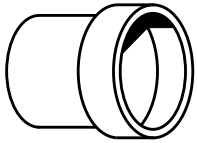
Weatherhead swivel end fittings can be used with a straight connector when space limitations will not permit full rotation of standard straight thread elbows and tees.

1. Screw connector into the O-ring boss and tighten.
2. Thread swivel nut onto connector.
3. Hold fitting in desired position and tighten swivel nut with a wrench

# JIC 37° Flare-Twin®

• Available in Stainless Steel.

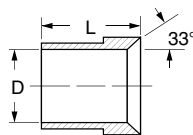
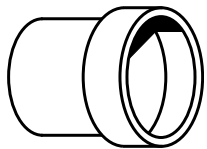
## Sleeve 3 Piece

Stainless Steel No. 5177x  
(Ref. SAE No. 070115)

TUBE O.D.	CATALOG NUMBER	D	L
1/8	C5165x2•	.130	.34
3/16	C5165x3•	.193	.34
1/4	C5165x4•	.255	.41
5/16	C5165x5•	.318	.44
3/8	C5165x6•	.380	.50
1/2	C5165x8•	.505	.56
5/8	C5165x10•	.631	.66
3/4	C5165x12•	.756	.68
7/8	C5165x14	.881	.76
1	C5165x16•	1.006	.78
1-1/4	C5165x20•	1.260	.91
1-1/2	C5165x24•	1.510	1.12
2	C5165x32•	2.014	1.19

## Sleeve 3 Piece Metric

(Ref. SAE No. 070115)

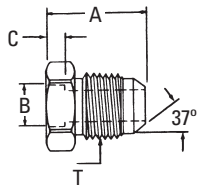


TUBE O.D.	TUBE O.D.	CATALOG NUMBER	D	L
(Inch Size)	(Metric Size)			
1/4	6MM	C5165x4x6MM	.241	.41
5/16	8MM	C5165x5x8MM	.320	.44
3/8	10MM	C5165x6x10MM	.399	.50
1/2	12MM	C5165x8x12MM	.478	.56
5/8	14MM	C5165x10x14MM	.556	.66
5/8	15MM	C5165x10x15MM	.596	.66
5/8	16MM	C5165x10x16MM	.636	.66
3/4	18MM	C5165x12x18MM	.717	.68
7/8	20MM	C5165x14x20MM	.793	.76
7/8	22MM	C5165x14x22MM	.866	.76
1	25MM	C5165x16x25MM	.990	.78
1-1/4	30MM	C5165x20x30MM	1.191	.91
1-1/4	32MM	C5165x20x32MM	1.270	.91
1-1/2	38MM	C5165x24x38MM	1.510	1.12

Adapts Standard SAE Flare-Twin® Hose Ends for use with metric tubing.

## JIC 37° Braze Adapter

### Part No. 73014- (Dash Size)



DASH SIZE	TUBE O.D.		THREAD T	A		B		C	
	mm	inches		mm	inches	mm	inches	mm	inches
4S	6,3	.25	7/16 - 20	18,8	.74	6,3	.25	4,0	.16
5S	7,9	.31	1/2 - 20	20,3	.80	7,9	.31	4,0	.16
6S	9,6	.38	9/16 - 18	20,6	.81	9,6	.38	4,0	.16
8S	12,7	.50	3/4 - 16	23,9	.94	12,7	.50	4,0	.16
10S	16,0	.63	7/8 - 14	27,2	1.07	15,7	.62	4,0	.16
12S	19,0	.75	1 1/16 - 12	31,5	1.24	19,0	.75	6,3	.25
16S	25,4	1.00	1 5/16 - 12	32,8	1.29	25,4	1.00	6,3	.25
20S	31,7	1.25	1 5/8 - 12	35,6	1.40	31,7	1.25	6,3	.25
20-16S	31,7	1.25	1 5/16 - 12	32,8	1.29	31,7	1.25	6,3	.25
32S	50,8	2.00	2 1/2 - 12	49,8	1.96	50,8	2.00	6,3	.25

# JIC 37° Flare-Twin®

• Available in Stainless Steel.

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

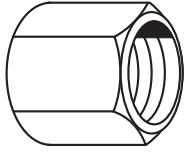
ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

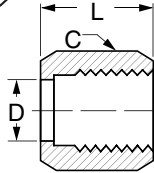
TECHNICAL DATA

## Nut 3 Piece

Stainless Steel No. 5117x  
(Ref. SAE No. 070115)

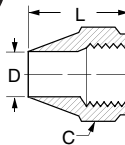
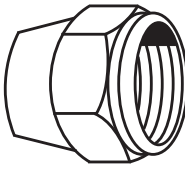


SAE style 'B'



TUBE O.D.	CATALOG NUMBER	HEX C	D	L
1/8	C5105x2•	3/8	.181	.55
3/16	C5105x3•	7/16	.243	.61
1/4	C5105x4•	9/16	.306	.62
5/16	C5105x5•	5/8	.375	.68
3/8	C5105x6•	11/16	.441	.73
1/2	C5105x8•	7/8	.571	.85
5/8	C5105x10•	1	.698	.98
3/4	C5105x12•	1-1/4	.835	1.03
7/8	C5105x14	1-3/8	.961	1.09
1	C5105x16•	1-1/2	1.089	1.13
1-1/4	C5105x20•	2	1.347	1.23
1-1/2	C5105x24•	2-1/4	1.617	1.42
2	C5105x32•	2-7/8	2.167	1.75

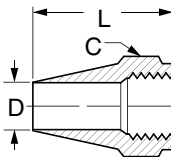
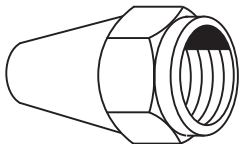
## 2 Piece Nut (Short)



TUBE O.D.	CATALOG NUMBER	HEX C	D	L
1/4	C5125x4	9/16	.255	.59
5/16	C5125x5	5/8	.318	.59
3/8	C5125x6	11/16	.380	.66
1/2	C5125x8	7/8	.505	.81
5/8	C5125x10	1	.631	.94
3/4	C5125x12	1-1/4	.756	1.14

## 2 Piece Nut

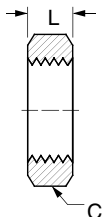
(Ref. SAE No. 070111 (style A))



TUBE O.D.	CATALOG NUMBER	HEX C	D	L
1/4	C5115x4	9/16	.255	1.00
5/16	C5115x5	5/8	.318	1.06
3/8	C5115x6	11/16	.380	1.09
1/2	C5115x8	7/8	.505	1.28
5/8	C5115x10	1	.631	1.48
3/4	C5115x12	1-1/4	.756	1.66
7/8	C5115x14	1-3/8	.881	1.81
1	C5115x16	1-1/2	1.006	1.94
1-1/4	C5115x20	2	1.260	2.19
1-1/2	C5115x24	2-1/4	1.510	2.31

## Bulkhead Nut

Stainless Steel No. 7936x  
(Ref. SAE No. 070118)

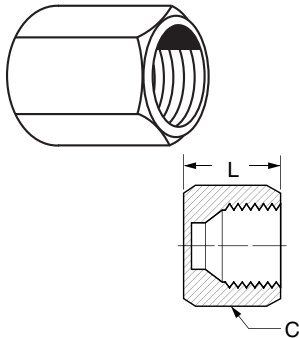


TUBE O.D.	CATALOG NUMBER	HEX C	L
1/8	C5924x2	9/16	.22
3/16	C5924x3	5/8	.22
1/4	C5924x4•	11/16	.25
5/16	C5924x5	3/4	.28
3/8	C5924x6•	13/16	.27
1/2	C5924x8•	1	.31
5/8	C5924x10	1-1/8	.36
3/4	C5924x12•	1-3/8	.41
7/8	C5924x14	1-1/2	.41
1	C5924x16•	1-5/8	.41
1-1/4	C5924x20	1-7/8	.41
1-1/2	C5924x24	2-1/8	.41
2	C5924x32	2-3/4	.41

# JIC 37° Flare-Twin®

## Cap

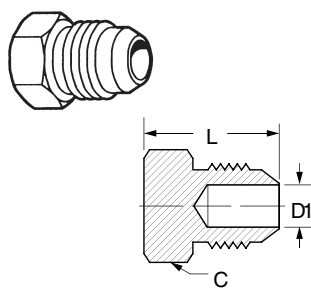
Stainless Steel No. 5141x  
(Ref. SAE No. 070112)



TUBE O.D.	CATALOG NUMBER	HEX C	L
1/8	C5129x2	3/8	.50
3/16	C5129x3	7/16	.56
1/4	C5129x4•	9/16	.59
5/16	C5129x5•	5/8	.61
3/8	C5129x6•	11/16	.62
1/2	C5129x8•	7/8	.75
5/8	C5129x10•	1	.84
3/4	C5129x12•	1-1/4	.91
1	C5129x16•	1-1/2	1.02
1-1/4	C5129x20•	2	1.06
1-1/2	C5129x24	2-1/4	1.19
2	C5129x32	2-7/8	1.44

## Plug

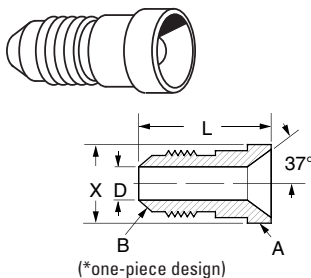
Stainless Steel No. 5241x  
(Ref. SAE No. 070109)



TUBE O.D.	CATALOG NUMBER	HEX C	L	D1 OPT.
1/4	C5229x4•	1/2	.80	.172
5/16	C5229x5•	9/16	.80	.234
3/8	C5229x6•	5/8	.84	.297
1/2	C5229x8•	13/16	.94	.391
5/8	C5229x10•	15/16	1.10	.484
3/4	C5229x12•	1-1/8	1.28	.609
7/8	C5229x14	1-1/4	1.31	.719
1	C5229x16•	1-3/8	1.33	.844
1-1/4	C5229x20	1-11/16	1.45	1.078
1-1/2	C5229x24	2	1.65	1.312
2	C5229x32	2-5/8	2.05	1.781

## Reducer

Stainless Steel No. 5027x  
(Ref. SAE No. 070123)  
Example assembly No.  
C35015x



FEMALE REDUCTION A	MALE REDUCTION B	CATALOG NUMBER	D	L	DIA. X	HEX C
3/8	1/4	C5015x6x4•	.172	.97	.502	–
1/2	1/4	C5015x8x4•	.172	1.00	.682	–
1/2	3/8	C5015x8x6•	.297	1.00	.682	–
5/8*	1/4	C5015x10x4•	.172	1.47	–	1
5/8*	3/8	C5015x10x6•	.297	1.41	–	1
5/8*	1/2	C5015x10x8•	.391	1.41	–	1
3/4	1/4	C5015x12x4•	.172	1.09	.972	–
3/4	3/8	C5015x12x6•	.297	1.09	.972	–
3/4	1/2	C5015x12x8•	.391	1.19	.972	–
3/4*	5/8	C5015x12x10	.484	1.58	–	1-1/4
7/8*	3/8	C5015x14x6	.297	1.59	–	1-3/8
7/8*	1/2	C5015x14x8	.391	1.69	–	1-3/8
7/8*	5/8	C5015x14x10	.484	1.73	–	1-3/8
7/8*	3/4	C5015x14x12	.609	1.80	–	1-3/8
1*	1/2	C5015x16x8	.391	1.72	–	1-1/2
1*	5/8	C5015x16x10	.484	1.79	–	1-1/2
1	3/4	C5015x16x12•	.609	1.47	1.222	–
1*	7/8	C5015x16x14	.719	1.87	–	1-1/2
1-1/4	3/4	C5015x20x12	.609	1.50	1.534	–
1-1/4*	1	C5015x20x16	.844	2.00	–	2
1-1/2*	1-1/4	C5015x24x20	1.078	2.15	–	2-1/4
2*	1-1/2	C5015x32x24	1.312	2.61	–	2-7/8

NOTE: Two-piece design does not include nut. Order nut C5105x to use reducer.

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

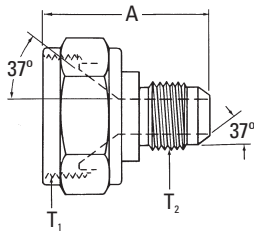
# JIC 37° Flare-Twin®

• Available in Stainless Steel.

APPLICATION  
DATA

## Reducer

(Ref. SAE 070123)



## Part No. 221501- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD T1	THREAD T2	A	
	mm	inches			mm	inches
10-6S	9,6	.38	7/8 - 14	9/16 - 18	41,1	1.62
16-6S	9,6	.38	1 5/16 - 12	9/16 - 18	46,7	1.84
16-8S	12,7	.50	1 5/16 - 12	3/4 - 16	49,3	1.94
16-10S	16,0	.63	1 5/16 - 12	7/8 - 14	51,8	2.04
16-12S	19,0	.75	1 5/16 - 12	1 1/16 - 12	54,6	2.15
20-16S	25,4	1.00	1 5/8 - 12	1 5/16 - 12	56,6	2.23

Includes swivel nut

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

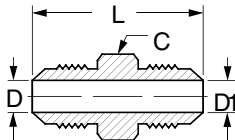
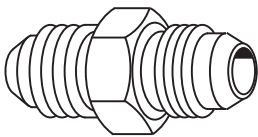
ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

## Small Hex Union

Stainless Steel No. 5317x  
(Ref. SAE No. 070101)  
Example assembly No.  
C35305x2



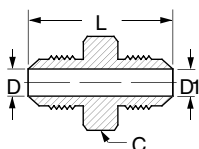
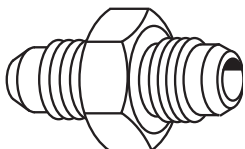
TUBE O.D.	TUBE O.D.	CATALOG NUMBER	HEX C	D	D1	L
1/8	1/8	C5305x2	7/16	.062	.062	1.17
3/16	3/16	C5305x3	7/16	.125	.125	1.23
1/4	1/4	C5305x4•	1/2	.172	.172	1.37
5/16	1/4	C5305x5x4	9/16	.234	.172	1.37
5/16	5/16	C5305x5•	9/16	.234	.234	1.37
3/8	1/4	C5305x6x4	5/8	.297	.172	1.40
3/8	5/16	C5305x6x5	5/8	.297	.234	1.40
3/8	3/8	C5305x6•	5/8	.297	.297	1.41
1/2	3/8	C5305x8x6	13/16	.391	.297	1.52
1/2	1/2	C5305x8•	13/16	.391	.391	1.62
5/8	1/2	C5305x10x8	15/16	.484	.391	1.78
5/8	5/8	C5305x10•	15/16	.484	.484	1.88
3/4	1/2	C5305x12x8	1-1/8	.609	.391	1.95
3/4	5/8	C5305x12x10	1-1/8	.609	.484	2.05
3/4	3/4	C5305x12•	1-1/8	.609	.609	2.16
7/8	7/8	C5305x14	1-1/4	.719	.719	2.21
1	3/4	C5305x16x12	1-3/8	.844	.609	2.20
1	1	C5305x16•	1-3/8	.844	.844	2.25
1-1/4	1-1/4	C5305x20	1-11/16	1.078	1.078	2.43
1-1/2	1-1/2	C5305x24	2	1.312	1.312	2.75
2	2	C5305x32	2-5/8	1.781	1.781	3.40



# JIC 37° Flare-Twin®

## Large Hex Union

Stainless Steel No. 5318x  
(Ref. SAE No. 070119)  
Example assembly No.  
C35306x2

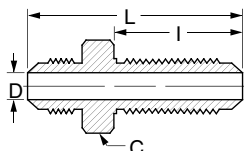
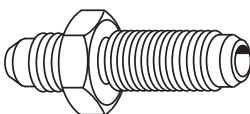


TUBE O.D.	CATALOG NUMBER	HEX C	D	D1	L
1/4	C5306x4•	11/16	.172	.172	1.37
5/16	C5306x5•	3/4	.234	.234	1.37
3/8	5318x6x4*	13/16	.297	.172	1.40
3/8	C5306x6•	13/16	.297	.297	1.41
1/2	5318x8x6*	1	.391	.297	1.52
1/2	C5306x8•	1	.391	.391	1.62
5/8	C5306x10•	1-1/8	.484	.484	1.88
3/4	C5306x12•	1-3/8	.609	.609	2.16
1	C5306x16•	1-5/8	.844	.844	2.25
1-1/4	C5306x20	1-7/8	1.078	1.078	2.43
1-1/2	C5306x24	2-1/8	1.312	1.312	2.75

\* Stainless Steel

## Bulkhead Union

Stainless Steel No. 5337x  
(Ref. SAE No. 070601)  
Example assembly No.  
C5325x4



TUBE O.D.	CATALOG NUMBER	HEX C	D	I	L
3/16	C5325x3	5/8	.125	1.14	1.90
1/4	C5325x4•	11/16	.172	1.23	2.07
5/16	C5325x5	3/4	.234	1.23	2.07
3/8	C5325x6•	13/16	.297	1.31	2.18
1/2	C5325x8•	1	.391	1.47	2.44
5/8	C5325x10•	1-1/8	.484	1.61	2.74
3/4	C5325x12•	1-3/8	.609	1.78	3.09
1	C5325x16	1-5/8	.844	1.78	3.14
1-1/4	C5325x20	1-7/8	1.078	1.83	3.31

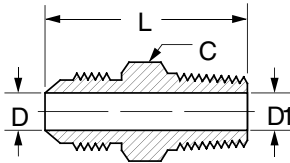
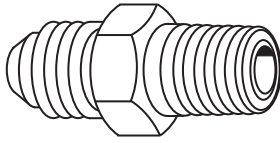
Bulkhead nut not included. Must be ordered separately. See page 277 for bulkhead nut.

# JIC 37° Flare-Twin

• Available in Stainless Steel.

## Male Connector

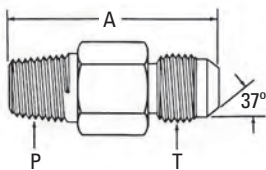
Stainless Steel No. 5217x  
(Ref. SAE No. 070102)  
Example assembly No.  
C35205x4



\*Optional counterbore for D1.

TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	HEX C	D	D1 OPT.	L
1/8	1/8	C5205x2*	7/16	.062	.188*	1.11
3/16	1/8	C5205x3	7/16	.125	.188*	1.14
1/4	1/8	C5205x4*	1/2	.172	.188*	1.22
1/4	1/4	C5205x4x4*	9/16	.172	.281*	1.42
1/4	3/8	C5205x4x6	3/4	.172	.406*	1.42
1/4	1/2	C5205x4x8	7/8	.172	.531*	1.68
5/16	1/8	C5205x5	9/16	.234	.188	1.22
5/16	1/4	C5205x5x4*	5/8	.234	.281*	1.42
5/16	3/8	C5205x5x6	13/16	.234	.406*	1.42
3/8	1/8	C5205x6x2*	5/8	.297	.188	1.24
3/8	1/4	C5205x6*	5/8	.297	.281	1.43
3/8	3/8	C5205x6x6*	3/4	.297	.297*	1.43
3/8	1/2	C5205x6x8*	7/8	.297	.531*	1.69
1/2	1/4	C5205x8x4*	13/16	.391	.281	1.53
1/2	3/8	C5205x8*	13/16	.391	.406*	1.53
1/2	1/2	C5205x8x8*	15/16	.391	.531*	1.79
1/2	3/4	C5205x8x12*	1-1/8	.391	.719*	1.85
5/8	3/8	C5205x10x6	15/16	.484	.406	1.70
5/8	1/2	C5205x10*	15/16	.484	.531*	1.89
5/8	3/4	C5205x10x12	1-1/8	.484	.484*	1.95
3/4	1/2	C5205x12x8*	1-1/8	.609	.531	2.06
3/4	3/4	C5205x12*	1-1/8	.609	.719*	2.06
3/4	1	C5205x12x16	1-3/8	.609	.938*	2.25
7/8	3/4	C5205x14	1-1/4	.718	.718*	2.09
1	3/4	C5205x16x12	1-3/8	.844	.719	2.25
1	1	C5205x16*	1-3/8	.844	.938*	2.30
1	1-1/4	C5205x16x20	1-11/16	.844	1.250*	2.40
1-1/4	1	C5205x20x16	1-11/16	1.078	.938	2.42
1-1/4	1-1/4	C5205x20	1-11/16	1.078	1.250*	2.45
1-1/2	1-1/4	C5205x24x20	2	1.312	1.250*	2.65
1-1/2	1-1/2	C5205x24	2	1.312	1.500*	2.68
2	2	C5205x32	2-5/8	1.781	1.938*	3.11

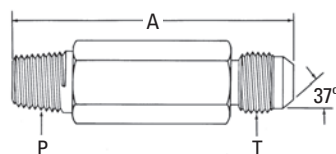
## Male Connector Long



### Part No. 202113- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD P	THREAD T (NPTF)	A	
	mm	inches			mm	inches
2-4S	6,3	.25	1/8 - 27	7/16 - 20	46,0	1.81
4-4S	6,3	.25	1/4 - 18	7/16 - 20	57,2	2.25
4-5S	7,9	.31	1/4 - 18	1/2 - 20	57,2	2.25
4-6S	9,6	.38	1/4 - 18	9/16 - 18	57,2	2.25
6-6S	9,6	.38	3/8 - 18	9/16 - 18	63,5	2.50
6-8S	12,7	.50	3/8 - 18	3/4 - 16	69,8	2.75
8-12S	19,0	.75	1/2 - 14	1 1/16 - 12	83,3	3.28
12-12S	19,0	.75	3/4 - 14	1 1/16 - 12	88,9	3.50
16-16S	25,4	1.00	1 - 11 1/2	1 5/16 - 12	101,6	4.00

## Male Connector Extra Long



### Part No. 202114- (Dash Size)

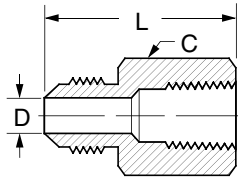
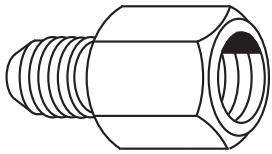
DASH SIZE	TUBE O.D.		THREAD P	THREAD T (NPTF)	A	
	mm	inches			mm	inches
2-4S	6,3	.25	1/8 - 27	7/16 - 20	65,0	2.56
4-4S	6,3	.25	1/4 - 18	7/16 - 20	82,5	3.25
4-6S	9,6	.38	1/4 - 18	9/16 - 18	82,5	3.25
6-8S	12,7	.50	3/8 - 18	3/4 - 16	101,6	4.00
12-12S	19,0	.75	3/4 - 14	1 1/16 - 12	127,0	5.00

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

# JIC 37° Flare-Twin®

## Female Connector

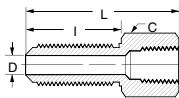
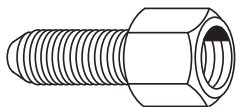
Stainless Steel No. 5267x  
(Ref. SAE No. 070103)  
Example assembly  
No. C35255x4



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER	HEX C	D	L
1/8	1/8	C5255x2	9/16	.062	1.12
3/16	1/8	C5255x3	9/16	.125	1.13
1/4	1/8	C5255x4•	9/16	.172	1.19
1/4	1/4	C5255x4x4•	3/4	.172	1.39
5/16	1/8	C5255x5	9/16	.234	1.17
5/16	1/4	C5255x5x4•	3/4	.234	1.39
3/8	1/4	C5255x6•	3/4	.297	1.40
3/8	3/8	C5255x6x6•	7/8	.297	1.46
1/2	3/8	C5255x8•	7/8	.391	1.56
1/2	1/2	C5255x8x8•	1-1/8	.391	1.79
5/8	3/8	C5255x10x6	7/8	.484	1.89
5/8	1/2	C5255x10•	1-1/8	.484	1.89
3/4	1/2	C5255x12x8•	1-1/8	.609	2.05
3/4	3/4	C5255x12•	1-3/8	.609	2.06
7/8	3/4	C5255x14	1-3/8	.875	2.06
1	1	C5255x16•	1-5/8	.844	2.35
1-1/4	1-1/4	C5255x20	2	1.078	2.49
1-1/2	1-1/2	C5255x24	2-3/8	1.312	2.62
2	2	C5255x32	2-7/8	1.781	2.97

## Female Bulkhead Connector

Example assembly  
No. C35275x4

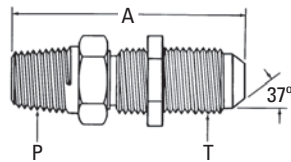


TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER	HEX C	D	I	L
1/4	1/8	C5275x4	11/16	.172	1.23	1.84
3/8	1/4	C5275x6	13/16	.297	1.31	2.06
1/2	3/8	C5275x8	1	.391	1.47	2.35
5/8	1/2	C5275x10	1-1/8	.484	1.61	2.66
3/4	3/4	C5275x12	1-3/8	.609	1.78	2.91
1	1	C5275x16	1-5/8	.844	1.78	3.09

Bulkhead nut not included. Must be ordered separately. See page 277 for bulkhead nut.

## Male Bulkhead Connector

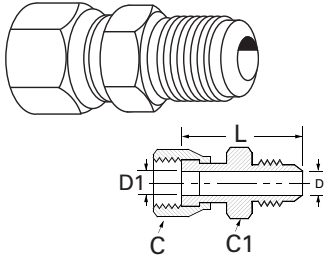
### Part No. 2240- (Dash Size)



DASH SIZE	TUBE O.D.		THREAD P (NPTF)	THREAD T	A	
	mm	inches			mm	inches
2-4S	6,3	.25	1/8 - 27	7/16 - 20	46,7	1.84
4-4S	6,3	.25	1/4 - 18	7/16 - 20	51,6	2.03
4-6S	9,6	.38	1/4 - 18	9/16 - 18	53,9	2.12
6-8S	12,7	.50	3/8 - 18	3/4 - 16	59,9	2.36
12-12S	19,0	.75	3/4 - 14	1 1/16 - 12	74,2	2.92
16-16S	25,4	1.00	1 - 11 1/2	5 5/16 - 12	79,0	3.11

# JIC 37° Flare-Twin®

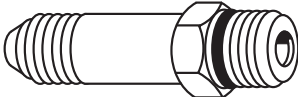
## Male JIC 37° SAE to Female FOR-SEAL®



FEMALE TUBE O.D.	MALE 37° TUBE SIZE	CATALOG NUMBER	HEX C1	HEX C	D	D1	L
1/4	1/4	4213x4	11/16	5/8	.172	.165	1.50
3/8	3/8	4213x6	13/16	3/4	.297	.264	1.62
1/2	1/2	4213x8	15/16	7/8	.397	.358	1.90
5/8	5/8	4213x10	1-1/8	1-1/16	.484	.453	2.25
3/4	3/4	4213x12	1-3/16	1-1/4	.609	.547	2.48
1	1	4213x16	1-5/8	1-1/2	.811	.783	2.84

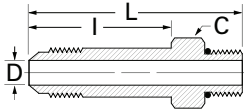
## Straight Thread O-Ring Extended Connector

(Ref. SAE No. 070122)  
Example assembly No.  
C35316x4



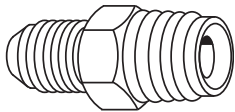
TUBE O.D.	PORT SIZE	CATALOG NUMBER	HEX C	D	I	L
1/4	1/4	C5316x4	9/16	.172	1.39	2.08
3/8	3/8	C5316x6	11/16	.297	1.56	2.31
1/2	3/8	C5316x8x6	7/8	.297	1.56	2.38
1/2	1/2	C5316x8	7/8	.391	1.88	2.70
5/8	5/8	C5316x10	1	.484	2.09	3.04
3/4	3/4	C5316x12	1-1/4	.609	2.50	3.61
1	1	C5316x16	1-1/2	.844	2.84	3.98
1-1/4	1-1/4	C5316x20	1-7/8	1.078	3.47	4.69

Replacement O-rings page 302.

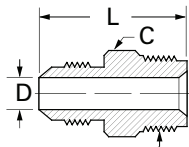


## Adapter

Example assembly No.  
C35880x4



TUBE O.D.	INVERTED THREAD	CATALOG NUMBER	HEX C	D	L
1/4	7/16-24	C5880x4	1/2	.172	1.08
5/16	1/2-20	C5880x5	9/16	.234	1.14
3/8	5/8-18	C5880x6	11/16	.297	1.22
1/2	3/4-18	C5880x8	13/16	.391	1.46



Inverted Thread

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

# JIC 37° Flare-Twin®

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

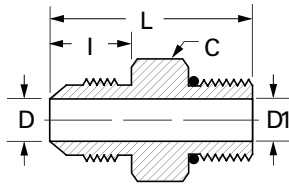
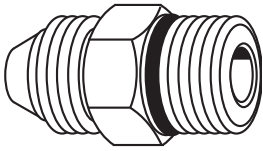
ADAPTERS &  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

## Straight Thread O-Ring Connector

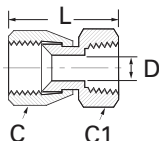
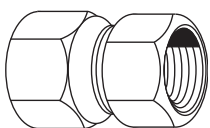
Stainless Steel No. 5327x  
(Ref. SAE No. 070120)  
Example assembly  
No. C35315x4



\*Optional counterbore for D1.  
Replacement O-rings page 302.

TUBE O.D.	PORT SIZE	CATALOG NUMBER	HEX C	D	D1 OPT.	I	L
1/8	1/8	C5315x2•	7/16	.062	.062*	.45	1.06
3/16	3/16	C5315x3	1/2	.125	.125*	.48	1.10
1/4	1/4	C5315x4•	9/16	.172	.172*	.55	1.23
1/4	5/16	C5315x4x5•	5/8	.172	.234*	.55	1.23
1/4	3/8	C5315x4x6	11/16	.172	.297*	.55	1.29
1/4	1/2	C5315x4x8	7/8	.172	.391*	.55	1.37
5/16	1/4	C5315x5x4	5/8	.234	.172	.55	1.23
5/16	5/16	C5315x5	5/8	.234	.234*	.55	1.23
5/16	3/8	C5315x5x6	11/16	.234	.297*	.55	1.29
3/8	1/4	C5315x6x4	11/16	.297	.172	.56	1.27
3/8	5/16	C5315x6x5	11/16	.297	.234	.56	1.27
3/8	3/8	C5315x6•	11/16	.297	.297*	.56	1.30
3/8	1/2	C5315x6x8•	7/8	.297	.391*	.56	1.38
3/8	5/8	C5315x6x10	1	.297	.484*	.56	1.50
1/2	3/8	C5315x8x6	13/16	.391	.297	.66	1.44
1/2	1/2	C5315x8•	7/8	.391	.391*	.66	1.48
1/2	5/8	C5315x8x10•	1	.391	.484*	.66	1.60
1/2	3/4	C5315x8x12•	1-1/4	.391	.609*	.66	1.76
5/8	1/2	C5315x10x8	1	.484	.391	.76	1.64
5/8	5/8	C5315x10•	1	.484	.484*	.76	1.70
5/8	3/4	C5315x10x12	1-1/4	.484	.609*	.76	1.86
5/8	1	C5315x10x16	1-1/2	.484	.844*	.76	1.89
3/4	1/2	C5315x12x8	1-1/4	.609	.391	.86	1.94
3/4	5/8	C5315x12x10	1-1/8	.609	.484	.86	1.88
3/4	3/4	C5315x12•	1-1/4	.609	.609*	.86	1.97
3/4	7/8	C5315x12x14	1-3/8	.609	.718*	.86	1.96
3/4	1	C5315x12x16	1-1/2	.609	.844*	.86	1.99
3/4	1-1/4	C5315x12x20	1-7/8	.609	1.078*	.86	2.08
7/8	7/8	C5315x14	1-3/8	.719	.719*	.89	1.99
1	5/8	C5315x16x10	1-1/2	.844	.484	.91	2.07
1	3/4	C5315x16x12	1-1/2	.844	.609	.91	2.04
1	1	C5315x16•	1-1/2	.844	.844*	.91	2.04
1	1-1/4	C5315x16x20	1-7/8	.844	1.078*	.91	2.12
1-1/4	1	C5315x20x16	1-7/8	1.078	.844	.96	2.33
1-1/4	1-1/4	C5315x20	1-7/8	1.078	1.078*	.96	2.17
1-1/4	1-1/2	C5315x20x24	2-1/8	1.078	1.312*	.96	2.24
1-1/2	1-1/4	C5315x24x20	2-1/8	1.312	1.078*	1.08	2.53
1-1/2	1-1/2	C5315x24	2-1/8	1.312	1.312*	1.08	2.37
1-1/2	2	C5315x24x32	2-3/4	1.312	1.781*	1.08	2.53
2	1-1/2	C5315x32x24	2-3/4	1.781	1.312*	1.33	2.81
2	2	C5315x32	2-3/4	1.781	1.781	1.33	2.78

## Female JIC 37° Swivel to Female Pipe



TUBE O.D.	FEMALE PIPE	CATALOG NUMBER	HEX C	HEX C1	L	D
1/4	1/4	C5256x4x4	9/16	3/4	1.32	.172
3/8	3/8	C5256x6x6	11/16	7/8	1.63	.297
1/2	1/2	C5256x8x8	7/8	1-1/8	1.81	.391
3/4	3/4	C5256x12	1-1/4	1-1/4	2.08	.609
1	1	C5256x16	1-1/2	1-1/2	2.62	.844

# JIC 37° Flare-Twin

• Available in Stainless Steel.

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

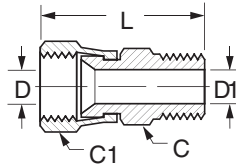
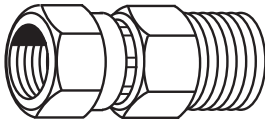
ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

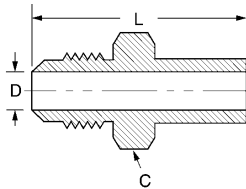
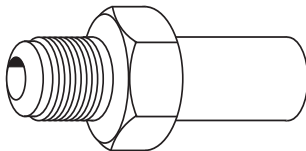
## Female JIC 37° Swivel to Male Pipe Adapter



\*Optional counterbore for D1.

TUBE O.D.	MALE PIPE SIZE	CATALOG NUMBER	HEX C	HEX C1	D	D1	L
1/4	1/4	9100x4x4	9/16	9/16	.172	.281*	1.50
5/16	1/4	9100x5x4	11/16	5/8	.234	.281*	1.57
3/8	1/4	9100x6x4	11/16	11/16	.297	.281	1.69
3/8	3/8	9100x6x6	11/16	11/16	.297	.406*	1.69
1/2	3/8	9100x8x6	7/8	7/8	.391	.406*	1.87
1/2	1/2	9100x8x8	7/8	7/8	.391	.531*	2.05
5/8	3/8	9100x10x6	1	1	.484	.406	1.91
5/8	1/2	9100x10x8	1	1	.484	.531*	2.11
3/4	1/2	9100x12x8	1-1/8	1-1/4	.609	.531	2.21
3/4	3/4	9100x12x12	1-1/8	1-1/4	.609	.719*	2.21
1	3/4	9100x16x12	1-3/8	1-1/2	.844	.719	2.36
1	1	9100x16x16	1-3/8	1-1/2	.844	.938*	2.55
1-1/4	1-1/4	9100x20x20	1-7/8	2	1.078	1.250*	2.73

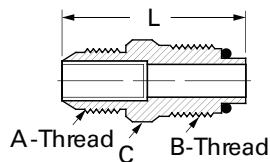
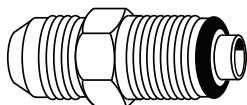
## Male JIC 37° to Male Metric Standpipe



For metric flareless nuts and sleeves see page 304.

TUBE O.D.	TUBE O.D. (MM)	CATALOG NUMBER	HEX C	L	D
1/4	6MM	MC5019x4x6	9/16	1.58	.16
1/4	8MM	MC5019x4x8	9/16	1.68	.17
3/8	10MM	MC5019x6x10	3/4	1.67	.28
1/2	12MM	MC5019x8x12	7/8	1.97	.32
1/2	14MM	MC5019x8x14	7/8	1.89	.39
5/8	15MM	MC5019x10x15	1	2.03	.43
5/8	16MM	MC5019x10x16	1	2.07	.47
3/4	16MM	MC5019x12x16	1-1/4	2.22	.47
3/4	18MM	MC5019x12x18	1-1/4	2.12	.55
3/4	20MM	MC5019x12x20	1-1/4	2.38	.61
1	22MM	MC5019x16x22	1-1/2	2.21	.67
1	25MM	MC5019x16x25	1-1/2	2.54	.79

## Male JIC 37° to O-Ring Port Adapter

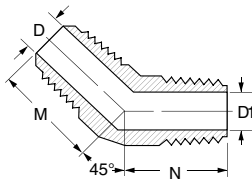
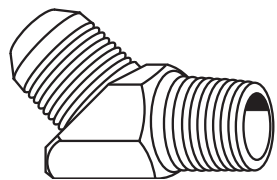
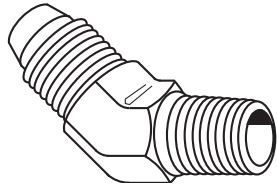


TUBE SIZE	PORT SIZE	CATALOG NUMBER	REPLACEMENT O-RING	THREAD A	THREAD B	HEX C	L
1/4	1/4	41157x4	7629x1	7/16-20	7/16-24	7/16	1.33
3/8	3/8	41157x6	7629x3	9/16-18	5/8-18	5/8	1.47
1/2	1/2	41157x8	7629x5	3/4-16	3/4-16	3/4	1.91
5/8	5/8	41157x10	7629x7	7/8-14	7/8-14	15/16	2.23
3/4	3/4	41157x12	7629x8	1-1/16-12	1-1/16-16	1-1/8	2.13

# JIC 37° Flare-Twin®

## 45° Male Elbow

Stainless Steel No. 5367x  
(Ref. SAE No. 070302)  
Example assembly No.  
C35355x4



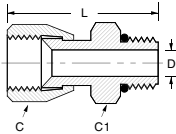
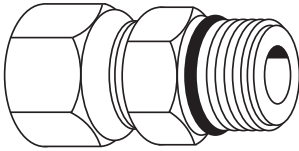
Tube O.D.	Male Pipe Thread	Catalog Number	D	D1	M	N	Across Flats
1/8	1/8	C5355x2	.062	.188	.66	.52	7/16
3/16	1/8	C5355x3	.125	.188	.66	.52	7/16
1/4	1/8	C5355x4•	.172	.188	.72	.64	7/16
1/4	1/4	C5355x4x4•	.172	.281	.83	.86	9/16
5/16	1/8	C5355x5	.234	.188	.77	.67	9/16
5/16	1/4	C5355x5x4	.234	.281	.83	.86	9/16
3/8	1/8	C5355x6x2	.297	.188	.83	.69	9/16
3/8	1/4	C5355x6•	.297	.281	.83	.86	9/16
3/8	3/8	C5355x6x6	.297	.406	.98	.95	3/4
3/8	1/2	C5355x6x8	.297	.531	1.06	1.17	7/8
1/2	1/4	C5355x8x4	.391	.281	.98	.95	3/4
1/2	3/8	C5355x8•	.391	.406	.98	.95	3/4
1/2	1/2	C5355x8x8•	.391	.531	.99	1.17	7/8
5/8	3/8	C5355x10x6	.484	.406	1.11	1.00	7/8
5/8	1/2	C5355x10	.484	.531	1.11	1.17	7/8
3/4	1/2	C5355x12x8	.609	.531	1.28	1.20	1-1/16
3/4	3/4	C5355x12•	.609	.719	1.28	1.20	1-1/16
1	3/4	C5355x16x12	.844	.719	1.47	1.27	1-5/16
1	1	C5355x16	.844	.938	1.47	1.48	1-5/16
1-1/2	1-1/2	C5355x24	1.312	1.500	1.78	1.77	1-7/8
1/8	1/8	TF5355x2	.062	.188	.66	.52	7/16
1/4	1/8	TF5355x4	.172	.188	.72	.64	1/2
1/4	1/4	TF5355x4x4	.172	.281	.81	.86	5/8
5/16	1/8	TF5355x5	.234	.188	.76	.64	9/16
5/16	1/4	TF5355x5x4	.234	.281	.83	.86	5/8
3/8	1/8	TF5355x6x2	.297	.188	.81	.66	5/8
3/8	1/4	TF5355x6	.297	.281	.82	.86	5/8
3/8	3/8	TF5355x6x6	.297	.406	.91	.95	13/16
3/8	1/2	TF5355x6x8	.297	.531	1.03	1.17	15/16
1/2	1/4	TF5355x8x4	.391	.281	.98	.94	13/16
1/2	3/8	TF5355x8	.391	.406	.98	.95	13/16
1/2	1/2	TF5355x8x8	.391	.531	1.12	1.17	15/16
5/8	3/8	TF5355x10x6	.484	.406	1.11	1.06	15/16
5/8	1/2	TF5355x10	.484	.531	1.11	1.17	15/16
5/8	3/4	TF5355x10x12	.484	.719	1.26	1.20	1-1/8
3/4	1/2	TF5355x12x8	.609	.531	1.28	1.17	1-1/8
3/4	3/4	TF5355x12	.609	.719	1.28	1.20	1-1/8
3/4	1	TF5355x12x16	.609	.938	1.42	1.48	1-3/8
1	3/4	TF5355x16x12	.844	.719	1.47	1.28	1-3/8
1	1	TF5355x16	.844	.938	1.47	1.48	1-3/8
1-1/4	1-1/4	TF5355x20	1.078	1.250	1.59	1.67	1-3/4
1-1/2	1-1/2	TF5355x24	1.312	1.500	1.78	1.77	2
2	2	TF5355x32	1.781	1.938	2.22	2.11	2-5/8

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA



# JIC 37° Flare-Twin

## 37° JIC Female Swivel to Male Straight Thread O-Ring

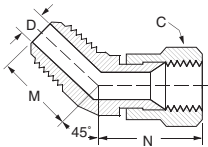
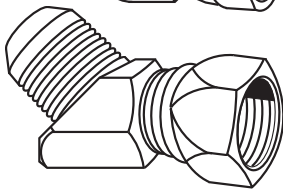
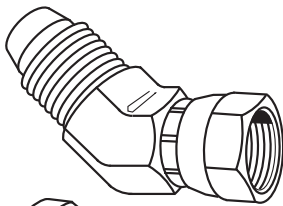


TUBE O.D.	PORT SIZE	CATALOG NUMBER	HEX C	HEX C1	L	D
1/4	1/4	C5216x4x4	9/16	9/16	1.32	.17
1/4	3/8	C5216x4x6	11/16	11/16	1.37	.17
3/8	3/8	C5216x6x6	11/16	11/16	1.51	.30
3/8	1/2	C5216x6x8	11/16	7/8	1.58	.30
1/2	3/8	C5216x8x6	7/8	3/4	1.62	.30
1/2	1/2	C5216x8x8	7/8	7/8	1.61	.39
5/8	5/8	C5216x10x10	1	1	1.96	.48
3/4	3/4	C5216x12x12	1-1/4	1-1/4	2.17	.61
1	1	C5216x16x16	1-1/2	1-1/2	2.30	.84
1-1/4	1-1/4	C5216x20x20	2	1-7/8	2.47	1.08
1-1/2	1-1/2	C5216x24x24	2-1/8	2-1/8	2.63	1.31
2	2	C5216x32x32	2-3/4	2-3/4	2.95	1.78

For replacement Straight Thread O-rings, see page 302.

## 45° Elbow - Swivel Nut

Stainless Steel No. 5368x  
(Ref. SAE No. 070321)  
Example assembly  
No. C35356x4

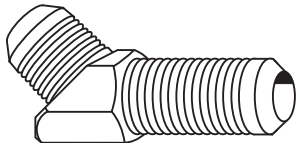


TUBE O.D.	CATALOG NUMBER	HEX C	D	M	N	ACROSS FLATS
1/4	C5356x4	9/16	.172	.72	.94	7/16
5/16	C5356x5	5/8	.234	.77	1.00	9/16
3/8	C5356x6•	11/16	.297	.83	1.12	9/16
1/2	C5356x8•	7/8	.391	.98	1.28	3/4
5/8	C5356x10	1	.484	1.11	1.44	7/8
3/4	C5356x12	1-1/4	.609	1.28	1.50	1-1/16
7/8	C5356x14	1-3/8	.718	1.39	1.62	1-5/16
1	C5356x16	1-1/2	.845	1.47	1.75	1-5/16
1-1/2	C5356x24	2-1/4	1.312	1.78	2.25	1-7/8
1/4	TF5356x4	9/16	.172	.72	.94	1/2
5/16	TF5356x5	5/8	.234	.77	1.00	9/16
3/8	TF5356x6	11/16	.297	.83	1.12	5/8
1/2	TF5356x8	7/8	.391	.98	1.28	13/16
5/8	TF5356x10	1	.484	1.11	1.44	15/16
3/4	TF5356x12	1-1/4	.609	1.28	1.50	1-1/8
1	TF5356x16	1-1/2	.845	1.47	1.75	1-3/8
1-1/4	TF5356x20	2	1.078	1.59	2.03	1-3/4
1-1/2	TF5356x24	2-1/4	1.312	1.78	2.25	2
2	TF5356x32	2-7/8	1.781	2.22	2.91	2-5/8

# JIC 37° Flare-Twin

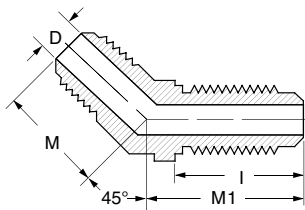
## 45° Bulkhead Union Elbow

(Ref. SAE No. 070801)

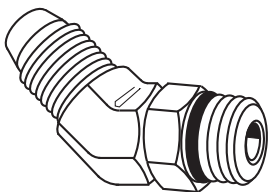


TUBE O.D.	CATALOG NUMBER	D	M	M1	ACROSS FLATS	I
1/4	TF5375x4	.172	.72	1.53	1/2	1.11
5/16	TF5375x5	.234	.76	1.53	9/16	1.11
3/8	TF5375x6	.297	.83	1.67	5/8	1.18
1/2	TF5375x8	.391	.98	1.94	13/16	1.38
5/8	TF5375x10	.484	1.11	2.17	15/16	1.52
3/4	TF5375x12	.609	1.28	2.44	1-1/8	1.69
1	TF5375x16	.844	1.47	2.56	1-3/8	1.69

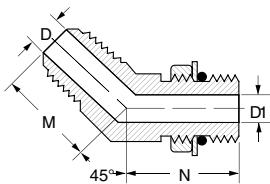
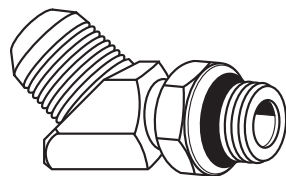
Bulkhead nut not included. Must be ordered separately. See page 277 for bulkhead nut.



## 45° Elbow - Straight Thread O-Ring

(Ref. SAE No. 070320)  
Example assembly No.  
C35365x4

TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/4	C5365x4	.172	.172	.72	1.05	7/16
5/16	5/16	C5365x5	.234	.234	.77	1.05	9/16
3/8	3/8	C5365x6	.297	.297	.83	1.14	9/16
1/2	1/2	C5365x8	.391	.391	.98	1.30	3/4
1/2	5/8	C5365x8x10	.391	.484	.99	1.52	7/8
5/8	5/8	C5365x10	.484	.484	1.11	1.52	7/8
3/4	5/8	C5365x12x10	.609	.484	1.28	1.57	1-1/16
3/4	3/4	C5365x12	.609	.609	1.28	1.73	1-1/16
1	1	C5365x16	.844	.844	1.47	1.86	1-5/16
1-1/4	1-1/4	C5365x20	1.078	1.078	1.59	1.91	1-5/8
1/4	1/4	TF5365x4	.172	.172	.72	1.05	1/2
5/16	5/16	TF5365x5	.234	.234	.77	1.05	9/16
3/8	3/8	TF5365x6	.297	.297	.83	1.14	5/8
3/8	1/2	TF5365x6x8	.297	.391	.87	1.30	13/16
1/2	3/8	TF5365x8x6	.391	.297	.98	1.17	13/16
1/2	1/2	TF5365x8	.391	.391	.98	1.30	13/16
1/2	5/8	TF5365x8x10	.391	.484	.99	1.52	15/16
5/8	1/2	TF5365x10x8	.484	.391	1.09	1.41	15/16
5/8	5/8	TF5365x10	.484	.484	1.09	1.52	15/16
5/8	3/4	TF5365x10x12	.484	.609	1.22	1.73	1-1/8
3/4	5/8	TF5365x12x10	.609	.484	1.30	1.58	1-1/8
3/4	3/4	TF5365x12	.609	.609	1.28	1.73	1-1/8
3/4	1	TF5365x12x16	.609	.844	1.45	1.86	1-3/8
7/8	7/8	TF5365x14	.718	.718	1.39	1.80	1-1/4
1	3/4	TF5365x16x12	.844	.609	1.47	1.86	1-3/8
1	1	TF5365x16	.844	.844	1.47	1.86	1-3/8
1-1/4	1-1/4	TF5365x20	1.078	1.250	1.59	1.91	1-3/4
1-1/2	1-1/2	TF5365x24	1.312	1.312	1.78	1.91	2
2	2	TF5365x32	1.781	1.938	2.22	1.86	2-5/8



Replacement O-rings page 302.

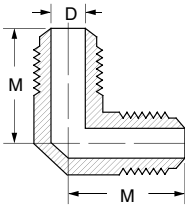
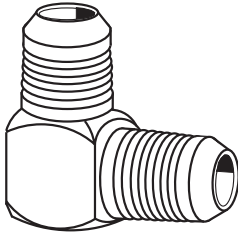
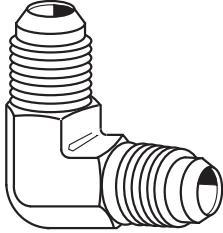
# JIC 37° Flare-Twin

• Available in Stainless Steel.

APPLICATION  
DATA

## 90° Union Elbow

Stainless Steel No. 5517x  
(Ref. SAE No. 070201)  
Example assembly  
No. C35505x4



LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

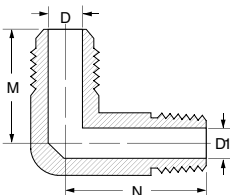
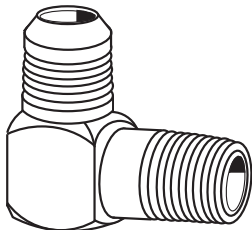
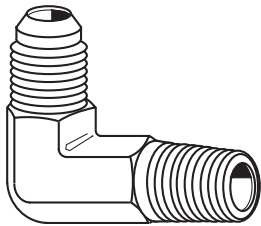
HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

TUBE O.D.	CATALOG NUMBER	D	M	ACROSS FLATS
1/4	C5505x4•	.172	.89	7/16
3/8	C5505x6•	.297	1.06	9/16
1/2	C5505x8•	.391	1.25	3/4
5/8	C5505x10•	.484	1.45	7/8
3/4	C5505x12•	.609	1.66	1-1/16
1	C5505x16•	.844	1.81	1-5/16
1/4	TF5505x4	.172	.89	1/2
5/16	TF5505x5	.234	.95	1/2
3/8	TF5505x6	.297	1.06	5/8
1/2	TF5505x8	.391	1.25	13/16
5/8	TF5505x10	.484	1.45	15/16
3/4	TF5505x12	.609	1.66	1-1/8
7/8	TF5505x14	.718	1.73	1-1/4
1	TF5505x16	.844	1.81	1-3/8
1-1/4	TF5505x20	1.078	2.06	1-3/4
1-1/2	TF5505x24	1.312	2.33	2
2	TF5505x32	1.781	3.06	2-5/8

## 90° Male Elbow Long

(Ref. SAE No. 071502)  
Example assembly  
No. C35425x4

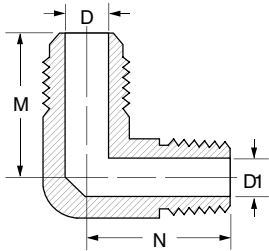
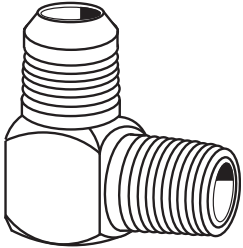
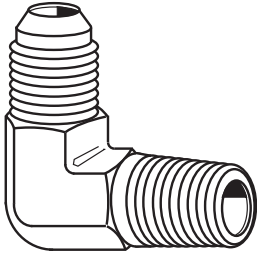


TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
3/8	1/4	C5425x6	.297	.281	1.06	1.58	9/16
3/4	3/4	C5425x12	.609	.719	1.66	2.44	1-1/16
1/4	1/8	TF5425x4	.172	.188	.89	1.17	1/2
1/4	1/4	TF5425x4x4	.172	.281	.95	1.58	5/8
5/16	1/4	TF5425x5x4	.234	.281	.95	1.55	9/16
3/8	1/4	TF5425x6	.297	.281	1.06	1.58	5/8
3/8	3/8	TF5425x6x6	.297	.406	1.16	1.83	13/16
1/2	3/8	TF5425x8	.391	.406	1.25	1.83	13/16
1/2	1/2	TF5425x8x8	.391	.531	1.31	2.17	15/16
1/2	3/4	TF5425x8x12	.391	.719	1.41	2.44	1-1/8
5/8	1/2	TF5425x10	.484	.531	1.45	2.17	15/16
3/4	3/4	TF5425x12	.609	.719	1.66	2.44	1-1/8
7/8	3/4	TF5425x14	.718	.719	1.73	2.66	1-1/4
1	1	TF5425x16	.844	.938	1.81	3.02	1-3/8
1-1/4	1-1/4	TF5425x20	1.078	1.250	2.06	3.69	1-3/4
1-1/2	1-1/2	TF5425x24	1.312	1.500	2.32	4.11	2

# JIC 37° Flare-Twin®

## 90° Male Elbow

Stainless Steel No. 5417x  
(Ref. SAE No. 070202)  
Example assembly  
No. C35405x4



• Available in Stainless Steel.

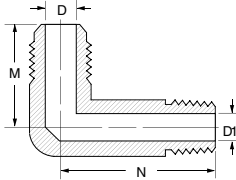
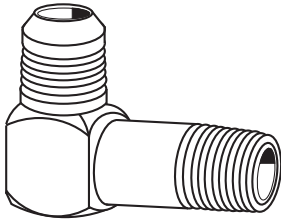
TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/8	1/8	C5405x2•	.062	.188	.77	.72	7/16
3/16	1/8	C5405x3	.125	.188	.83	.72	7/16
1/4	1/8	C5405x4•	.172	.188	.89	.78	7/16
1/4	1/4	C5405x4x4•	.172	.281	1.05	1.09	9/16
5/16	1/8	C5405x5	.234	.188	.95	.78	9/16
5/16	1/4	C5405x5x4•	.234	.281	1.05	1.09	9/16
3/8	1/8	C5405x6x2•	.297	.188	1.06	.90	9/16
3/8	1/4	C5405x6•	.297	.281	1.06	1.09	9/16
3/8	3/8	C5405x6x6•	.297	.406	1.14	1.22	3/4
3/8	1/2	C5405x6x8•	.297	.531	1.22	1.47	7/8
1/2	1/4	C5405x8x4•	.391	.281	1.25	1.22	3/4
1/2	3/8	C5405x8•	.391	.406	1.25	1.22	3/4
1/2	1/2	C5405x8x8•	.391	.531	1.33	1.47	7/8
1/2	3/4	C5405x8x12•	.391	.719	1.42	1.59	1-1/16
5/8	3/8	C5405x10x6	.484	.406	1.45	1.28	7/8
5/8	1/2	C5405x10•	.484	.531	1.45	1.47	7/8
5/8	3/4	C5405x10x12	.484	.719	1.54	1.59	1-1/16
3/4	1/2	C5405x12x8•	.609	.531	1.66	1.59	1-1/16
3/4	3/4	C5405x12	.609	.719	1.66	1.59	1-1/16
1	3/4	C5405x16x12	.844	.719	1.81	1.78	1-5/16
1	1	C5405x16•	.844	.938	1.81	1.97	1-5/16
1-1/4	1	C5405x20x16	1.078	.938	2.06	2.38	1-5/8
1-1/4	1-1/4	C5405x20	1.078	1.250	2.06	2.38	1-5/8
1-1/2	1-1/2	C5405x24	1.312	1.500	2.33	2.64	1-7/8
2	2	C5405x32	1.781	1.938	3.06	3.00	2-9/16
1/4	1/8	TF5405x4	.172	.188	.89	.78	1/2
1/4	1/4	TF5405x4x4	.172	.281	.95	1.09	5/8
1/4	3/8	TF5405x4x6	.172	.406	1.05	1.22	13/16
1/4	1/2	TF5405x4x8	.172	.531	1.11	1.47	15/16
5/16	1/8	TF5405x5	.234	.188	.95	.78	9/16
5/16	1/4	TF5405x5x4	.234	.281	.98	1.09	5/8
5/16	3/8	TF5405x5x6	.234	.406	1.08	1.22	13/16
3/8	1/8	TF5405x6x2	.297	.188	1.06	.81	5/8
3/8	1/4	TF5405x6	.297	.281	1.06	1.09	5/8
3/8	3/8	TF5405x6x6	.297	.406	1.16	1.22	13/16
3/8	1/2	TF5405x6x8	.297	.531	1.22	1.47	15/16
3/8	3/4	TF5405x6x12	.297	.719	1.31	1.59	1-1/8
1/2	1/4	TF5405x8x4	.391	.281	1.25	1.19	13/16
1/2	3/8	TF5405x8	.391	.406	1.25	1.22	13/16
1/2	1/2	TF5405x8x8	.391	.531	1.31	1.47	15/16
1/2	3/4	TF5405x8x12	.391	.719	1.41	1.59	1-1/8
5/8	3/8	TF5405x10x6	.484	.406	1.45	1.28	15/16
5/8	1/2	TF5405x10	.484	.531	1.45	1.47	15/16
5/8	3/4	TF5405x10x12	.484	.719	1.55	1.59	1-1/8
3/4	1/2	TF5405x12x8	.609	.531	1.66	1.56	1-1/8
3/4	3/4	TF5405x12	.609	.719	1.66	1.59	1-1/8
3/4	1	TF5405x12x16	.609	.938	1.78	1.97	1-3/8
7/8	3/4	TF5405x14	.718	.719	1.73	1.69	1-1/4
1	3/4	TF5405x16x12	.844	.719	1.81	1.72	1-3/8
1	1	TF5405x16	.844	.938	1.81	1.97	1-3/8
1	1-1/4	TF5405x16x20	.844	1.250	2.00	2.37	1-3/4
1-1/4	1	TF5405x20x16	1.078	.938	2.06	2.16	1-3/4
1-1/4	1-1/4	TF5405x20	1.078	1.250	2.06	2.37	1-3/4
1-1/4	1-1/2	TF5405x20x24	1.078	1.500	2.19	2.64	2
1-1/2	1-1/4	TF5405x24x20	1.312	1.250	2.33	2.50	2
1-1/2	1-1/2	TF5405x24	1.312	1.500	2.33	2.64	2
2	2	TF5405x32	1.781	1.938	3.06	3.00	2-5/8

# JIC 37° Flare-Twin®

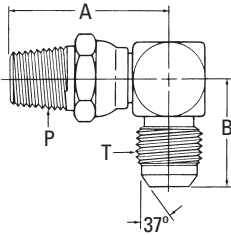
• Available in Stainless Steel.

## 90° Male Elbow Extra Long

(Ref. SAE No. 071602)

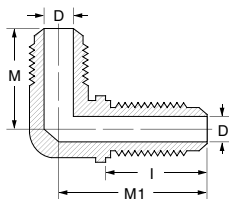
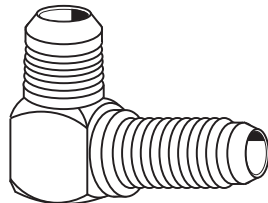
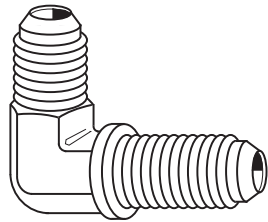


## 90° Swivel Male Elbow



## 90° Bulkhead Union Elbow

Stainless Steel No. 5537x  
(Ref. SAE No. 070701)  
Example assembly No.  
C35525x4



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/8	TF5435x4	.172	.188	.89	1.56	1/2
1/4	1/4	TF5435x4x4	.172	.281	.95	2.07	5/8
5/16	1/8	TF5435x5	.234	.188	.95	1.62	9/16
5/16	1/4	TF5435x5x4	.234	.281	.95	2.04	9/16
3/8	1/4	TF5435x6	.297	.281	1.06	2.08	5/8
3/8	3/8	TF5435x6x6	.297	.406	1.06	2.42	13/16
1/2	3/8	TF5435x8	.391	.406	1.25	2.42	13/16
1/2	1/2	TF5435x8x8	.391	.531	1.31	2.88	15/16
5/8	1/2	TF5435x10	.484	.531	1.45	2.88	15/16
3/4	3/4	TF5435x12	.609	.719	1.66	3.28	1-1/8
7/8	3/4	TF5435x14	.718	.719	1.73	3.62	1-1/4
1	1	TF5435x16	.844	.938	1.81	4.05	1-3/8
1-1/4	1-1/4	TF5435x20	1.078	1.250	2.06	5.00	1-3/4

## Part No. 2249- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD P (NPTF)	THREAD T	A		B	
	mm	inches			mm	inches	mm	inches
4-6S	9,6	.38	1/4 - 18	9/16 - 18	40,6	1.60	26,9	1.06
6-8S	12,7	.50	3/8 - 18	3/4 - 18	43,4	1.71	31,0	1.22
12-12S	19,0	.75	3/4 - 14	1 1/16 - 12	54,3	2.14	42,2	1.66

TUBE O.D.	CATALOG NUMBER	D	I	M	M1	ACROSS FLATS
1/4	C5525x4•	.172	1.11	.97	1.59	7/16
3/8	C5525x6•	.297	1.18	1.09	1.81	9/16
1/2	C5525x8	.391	1.38	1.36	2.11	3/4
3/4	C5525x12•	.609	1.69	1.78	2.67	1-1/16
1	C5525x16	.844	1.69	1.94	2.80	1-5/16
1-1/4	C5525x20	1.078	1.74	2.17	3.12	1-5/8
1/4	TF5525x4	.172	1.11	.97	1.59	1/2
5/16	TF5525x5	.234	1.11	1.03	1.62	9/16
3/8	TF5525x6	.297	1.18	1.09	1.81	5/8
1/2	TF5525x8	.391	1.38	1.36	2.11	13/16
5/8	TF5525x10	.484	1.52	1.56	2.39	15/16
3/4	TF5525x12	.609	1.69	1.78	2.67	1-1/8
1	TF5525x16	.844	1.69	1.94	2.80	1-3/8

Bulkhead nut not included. Must be ordered separately.

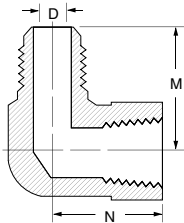
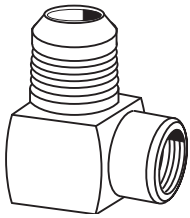
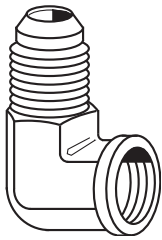
See page 277 for bulkhead nut.

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

# JIC 37° Flare-Twin®

## 90° Female Elbow

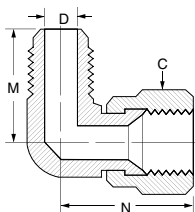
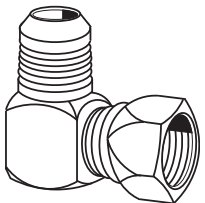
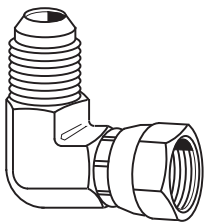
Stainless Steel No. 5467x  
(Ref. SAE No. 070203)  
Example assembly  
No. C35455x4



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER	D	M	N	ACROSS FLATS
1/4	1/8	C5455x4•	.172	1.08	.66	9/16
3/8	1/8	C5455x6x2	.297	1.06	.66	9/16
3/8	1/4	C5455x6•	.297	1.23	.88	3/4
3/8	3/8	C5455x6x6•	.297	1.31	1.02	7/8
1/2	1/4	C5455x8x4	.391	1.23	.88	3/4
1/2	3/8	C5455x8•	.391	1.42	1.02	7/8
1/2	1/2	C5455x8x8•	.391	1.52	1.23	1-1/16
5/8	1/2	C5455x10	.484	1.64	1.23	1-1/16
3/4	1/2	C5455x12x8	.609	1.66	1.23	1-1/16
3/4	3/4	C5455x12•	.609	1.89	1.36	1-5/16
7/8	3/4	C5455x14	.718	1.86	1.42	1-5/16
1	1	C5455x16•	.844	2.17	1.62	1-5/8
1/4	1/8	TF5455x4	.172	1.08	.66	5/8
1/4	1/4	TF5455x4x4	.172	1.14	.88	3/4
5/16	1/8	TF5455x5	.234	1.08	.66	5/8
5/16	1/4	TF5455x5x4	.234	1.30	1.02	7/8
3/8	1/4	TF5455x6	.297	1.23	.88	3/4
3/8	3/8	TF5455x6x6	.297	1.14	.88	3/4
1/2	3/8	TF5455x8	.391	1.42	1.02	7/8
1/2	1/2	TF5455x8x8	.391	1.55	1.23	1-1/8
5/8	1/2	TF5455x10	.484	1.64	1.23	1-1/8
3/4	3/4	TF5455x12	.609	1.89	1.36	1-3/8
7/8	3/4	TF5455x14	.718	1.86	1.42	1-3/8
1	1	TF5455x16	.814	2.17	1.62	1-5/8
1-1/4	1-1/4	TF5455x20	1.078	2.33	1.70	2
1-1/2	1-1/2	TF5455x24	1.312	2.89	2.08	2-3/8
2	2	TF5455x32	1.781	3.30	2.39	2-7/8

## 90° Elbow - Swivel Nut

Stainless Steel No. 5518x  
(Ref. SAE No. 070221)  
Example assembly  
No. C35506x4

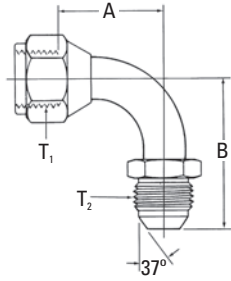


TUBE O.D.	CATALOG NUMBER	HEX C	D	M	N	ACROSS FLATS
1/4	C5506x4•	9/16	.172	.89	1.00	7/16
5/16	C5506x5	5/8	.234	.95	1.06	9/16
3/8	C5506x6•	11/16	.297	1.06	1.25	9/16
1/2	C5506x8•	7/8	.391	1.25	1.42	3/4
5/8	C5506x10	1	.484	1.43	1.62	7/8
3/4	C5506x12•	1-1/4	.609	1.66	1.75	1-1/16
1	C5506x16•	1-1/2	.844	1.81	2.00	1-5/16
1-1/4	C5506x20	2	1.078	2.06	2.31	1-5/8
1/4	TF5506x4	9/16	.172	.89	1.00	1/2
5/16	TF5506x5	5/8	.234	.95	1.06	9/16
3/8	TF5506x6	11/16	.297	1.06	1.25	5/8
1/2	TF5506x8	7/8	.391	1.25	1.38	13/16
5/8	TF5506x10	1	.484	1.45	1.62	15/16
3/4	TF5506x12	1-1/4	.609	1.66	1.75	1-1/8
7/8	TF5506x14	1-3/8	.718	1.73	1.78	1-1/4
1	TF5506x16	1-1/2	.844	1.81	2.00	1-3/8
1-1/4	TF5506x20	2	1.078	2.06	2.31	1-3/4
1-1/2	TF5506x24	2-1/4	1.312	2.33	2.59	2
2	TF5506x32	2-7/8	1.781	3.06	3.38	2-5/8

• Available in Stainless Steel.

# JIC 37° Flare-Twin

## 90° Sweep Elbow

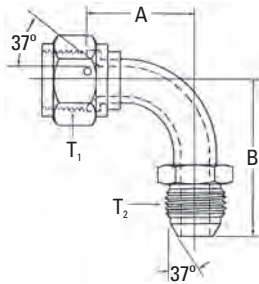


### Part No. 500454- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD T1	THREAD T2	A		B	
	mm	inches			mm	inches	mm	inches
4S	6,3	.25	7/16 - 20	7/16 - 20	17,3	.68	28,5	1.12
6S	9,6	.38	9/16 - 18	9/16 - 18	21,6	.85	33,3	1.31
8S	12,7	.50	3/4 - 16	3/4 - 16	27,7	1.09	42,2	1.66
10S	16,0	.63	7/8 - 14	7/8 - 14	31,2	1.23	46,2	1.82
12S	19,0	.75	1 1/16 - 12	1 1/16 - 12	46,2	1.82	63,2	2.49
16S	25,4	1.00	1 5/16 - 12	1 5/16 - 12	60,7	2.39	70,9	2.79
20S	31,7	1.25	1 5/8 - 12	1 5/8 - 12	69,8	2.75	79,7	3.14

(Suitable for pressures through 2-wire hose)

## 90° Sweep Elbow

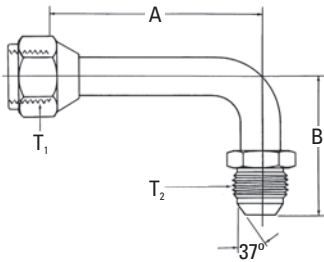


### Part No. FF5163- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD T1	THREAD T2	A		B	
	mm	inches			mm	inches	mm	inches
0808S	12,7	.50	3/4 - 16	3/4 - 16	47,5	1.87	54,9	2.16
1212S	19,0	.75	1 1/16 - 12	1 1/16 - 12	59,7	2.35	71,4	2.81
1616S	25,4	1.00	1 5/16 - 12	1 5/16 - 12	77,2	3.04	71,4	2.81
2020S	31,7	1.25	1 5/8 - 12	1 5/8 - 12	86,4	3.40	94,2	3.71
2424S	38,1	1.50	1 7/8 - 12	1 7/8 - 12	100,3	3.95	110,0	4.33

(Suitable for pressures through 4-wire hose)

## 90° Sweep Elbow Long

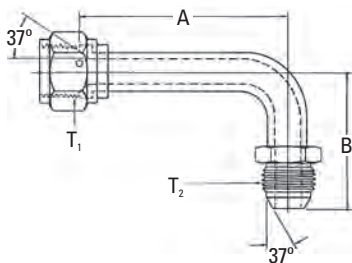


### Part No. 504095- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD T1	THREAD T2	A		B	
	mm	inches			mm	inches	mm	inches
4S	6,3	.25	7/16 - 20	7/16 - 20	45,7	1.80	28,5	1.12
6S	9,6	.38	9/16 - 18	9/16 - 18	55,4	2.18	33,3	1.31
8S	12,7	.50	3/4 - 16	3/4 - 16	61,7	2.43	45,2	1.78
10S	16,0	.63	7/8 - 14	7/8 - 14	65,3	2.57	52,6	2.07
12S	19,0	.75	1 1/16 - 12	1 1/16 - 12	94,7	3.73	63,2	2.49
16S	25,4	1.00	1 5/16 - 12	1 5/16 - 12	116,3	4.58	70,9	2.79
20S	31,7	1.25	1 5/8 - 12	1 5/8 - 12	140,5	5.53	79,7	3.14

(Suitable for pressures through 2-wire hose)

## 90° Sweep Elbow Long



### Part No. FF5164- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD T1	THREAD T2	A		B	
	mm	inches			mm	inches	mm	inches
0808S	12,7	.50	3/4 - 16	3/4 - 16	84,8	3.34	54,9	2.16
1212S	19,0	.75	1 1/16 - 12	1 1/16 - 12	112,0	4.41	71,4	2.81
1616S	25,4	1.00	1 5/16 - 12	1 5/16 - 12	133,1	5.24	71,4	2.81

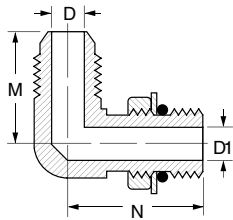
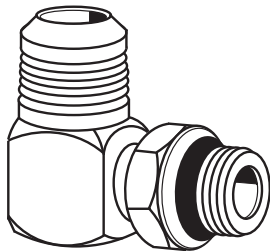
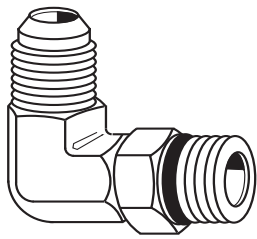
(Suitable for pressures through 4-wire hose)



# JIC 37° Flare-Twin

## 90° Elbow - Straight Thread O-Ring

Stainless Steel No. 5527x  
(Ref. SAE No. 070220)  
Example assembly  
No. C35515x4



Replacement O-rings page 302.

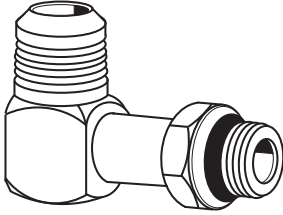
TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
3/16	3/16	C5515x3	.125	.125	.83	.94	7/16
1/4	1/4	C5515x4•	.172	.172	.89	1.03	7/16
5/16	5/16	C5515x5•	.234	.234	.95	1.13	9/16
3/8	3/8	C5515x6•	.297	.297	1.06	1.25	9/16
3/8	1/2	C5515x6x8	.297	.391	1.14	1.45	3/4
1/2	3/8	C5515x8x6	.391	.297	1.25	1.32	3/4
1/2	1/2	C5515x8•	.391	.391	1.25	1.45	3/4
1/2	5/8	C5515x8x10	.391	.484	1.33	1.70	7/8
5/8	5/8	C5515x10	.484	.484	1.45	1.70	7/8
3/4	5/8	C5515x12x10	.609	.484	1.66	1.78	1-1/16
3/4	3/4	C5515x12•	.609	.609	1.66	1.94	1-1/16
7/8	7/8	C5515x14	.718	.718	1.73	2.00	1-5/16
1	3/4	C5515x16x12	.844	.609	1.81	2.05	1-5/16
1	1	C5515x16	.844	.844	1.81	2.05	1-5/16
1-1/4	1-1/4	C5515x20	1.078	1.078	2.06	2.25	1-5/8
1-1/2	1-1/2	C5515x24	1.312	1.312	2.33	2.39	1-7/8
1/4	1/4	TF5515x4	.172	.172	.89	1.03	1/2
1/4	5/16	TF5515x4x5	.172	.234	.95	1.12	5/8
1/4	3/8	TF5515x4x6	.172	.297	.95	1.25	5/8
5/16	1/4	TF5515x5x4	.234	.172	.98	1.06	9/16
5/16	5/16	TF5515x5	.234	.234	.95	1.09	9/16
5/16	3/8	TF5515x5x6	.234	.297	.98	1.25	5/8
3/8	1/4	TF5515x6x4	.297	.172	1.06	1.09	5/8
3/8	5/16	TF5515x6x5	.297	.234	1.06	1.12	5/8
3/8	3/8	TF5515x6	.297	.297	1.06	1.25	5/8
3/8	1/2	TF5515x6x8	.297	.391	1.16	1.45	13/16
3/8	5/8	TF5515x6x10	.297	.484	1.22	1.70	15/16
1/2	3/8	TF5515x8x6	.391	.297	1.25	1.34	13/16
1/2	1/2	TF5515x8	.391	.391	1.25	1.45	13/16
1/2	5/8	TF5515x8x10	.391	.484	1.31	1.70	15/16
1/2	3/4	TF5515x8x12	.391	.609	1.41	1.94	1-1/8
5/8	1/2	TF5515x10x8	.484	.391	1.45	1.52	15/16
5/8	5/8	TF5515x10	.484	.484	1.45	1.70	15/16
5/8	3/4	TF5515x10x12	.484	.609	1.55	1.94	1-1/8
3/4	1/2	TF5515x12x8	.609	.391	1.66	1.61	1-1/8
3/4	5/8	TF5515x12x10	.609	.484	1.66	1.80	1-1/8
3/4	3/4	TF5515x12	.609	.609	1.66	1.94	1-1/8
3/4	7/8	TF5515x12x14	.609	.718	1.72	2.00	1-1/4
3/4	1	TF5515x12x16	.609	.844	1.78	2.05	1-3/8
7/8	7/8	TF5515x14	.718	.718	1.73	2.00	1-5/16
1	3/4	TF5515x16x12	.844	.609	1.81	2.06	1-3/8
1	7/8	TF5515x16x14	.844	.718	1.81	2.06	1-3/8
1	1	TF5515x16	.844	.844	1.81	2.05	1-3/8
1	1-1/4	TF5515x16x20	.844	1.078	2.00	2.25	1-3/4
1-1/4	1	TF5515x20x16	1.078	.844	2.06	2.23	1-3/4
1-1/4	1-1/4	TF5515x20	1.078	1.078	2.06	2.25	1-3/4
1-1/2	1-1/4	TF5515x24x20	1.312	1.078	2.33	2.37	2
1-1/2	1-1/2	TF5515x24	1.312	1.312	2.33	2.39	2
2	2	TF5515x32	1.781	1.781	3.06	2.89	2-5/8

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

# JIC 37° Flare-Twin

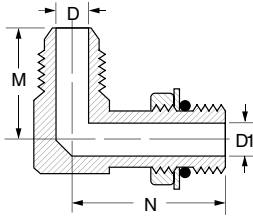
## 90° Elbow Long - Straight Thread O-Ring

(Ref. SAE No. 071520)



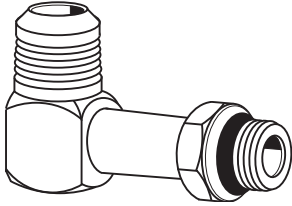
TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
3/8	3/8	TF5515x6L	.297	.297	1.06	1.66	5/8
1/2	1/2	TF5515x8L	.391	.391	1.25	1.81	13/16
5/8	5/8	TF5515x10L	.484	.484	1.45	2.16	15/16
3/4	3/4	TF5515x12L	.609	.609	1.66	2.47	1-1/8

Replacement O-rings page 302.



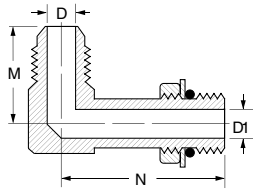
## 90° Elbow Extra Long - Straight Thread O-Ring

(Ref. SAE No. 071620)

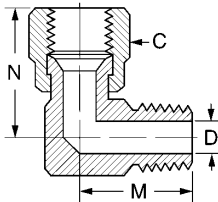
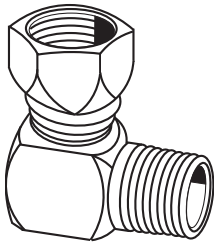


TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
3/8	3/8	TF5515x6LL	.297	.297	1.06	2.08	5/8
1/2	1/2	TF5515x8LL	.391	.391	1.25	2.50	13/16
5/8	5/8	TF5515x10LL	.484	.484	1.45	3.25	15/16
3/4	3/4	TF5515x12LL	.609	.609	1.66	3.34	1-1/8

Replacement O-rings page 302.

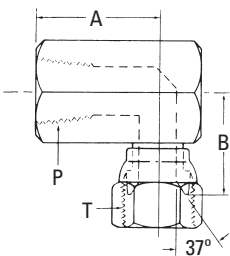


## 90° Male Pipe to 37° JIC Swivel



TUBE O.D.	MALE PIPE	CATALOG NUMBER	D	M	N	ACROSS FLATS	HEX C
1/4	1/8	TF5406x4	.188	.78	1.00	1/2	9/16
3/8	1/4	TF5406x6	.281	1.09	1.25	5/8	11/16
1/2	3/8	TF5406x8	.406	1.22	1.38	13/16	7/8
5/8	1/2	TF5406x10	.531	1.47	1.62	15/16	1
3/4	3/4	TF5406x12	.719	1.59	1.75	1-1/8	1-1/4
1	1	TF5406x16	.938	1.97	2.00	1-3/8	1-1/2
1-1/4	1-1/4	TF5406x20	1.250	2.38	2.31	1-3/4	2
1-1/2	1-1/2	TF5406x24	1.500	2.64	2.59	2	2-1/4
2	2	TF5406x32	1.938	3.00	3.38	2-5/8	2-7/8

## 90° Female Pipe to 37° JIC Swivel



### Part No. 2244- (Dash Size)

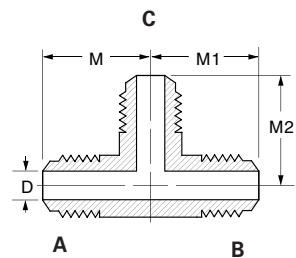
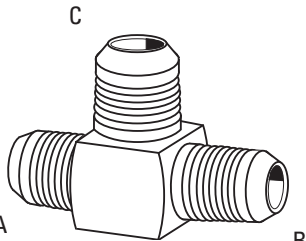
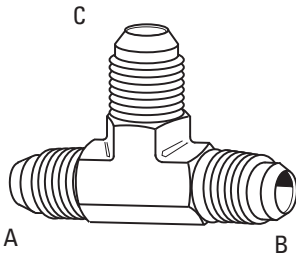
DASH SIZE	TUBE O.D.		THREAD P (NPTF)	THREAD T	A		B	
	mm	inches			mm	inches	mm	inches
8-8S	12,7	.50	1/2 - 14	3/4 - 16	31,2	1.23	27,4	1.08
8-10S	16,0	.63	1/2 - 14	7/8 - 14	31,2	1.23	28,5	1.12

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

# JIC 37° Flare-Twin

## Union Tee

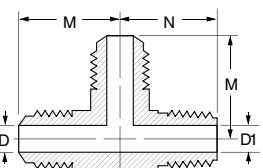
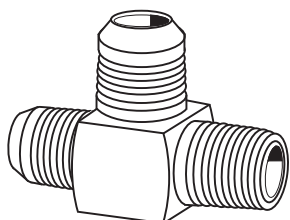
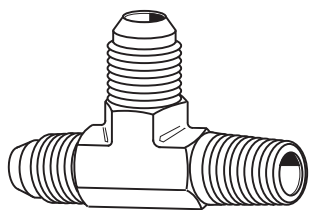
Stainless Steel No. 5717x  
(Ref. SAE No. 070401)  
Assembly No. C35705x4



TUBE O.D. A	TUBE O.D. B	TUBE O.D. C	CATALOG NUMBER	D	M	M1	M2	ACROSS FLATS
1/8	1/8	1/8	C5705x2	.062	.77	.77	.77	7/16
3/16	3/16	3/16	C5705x3	.125	.83	.83	.83	7/16
1/4	1/4	1/4	C5705x4•	.172	.89	.89	.89	7/16
5/16	5/16	5/16	C5705x5	.234	.95	.95	.95	9/16
3/8	3/8	3/8	C5705x6•	.297	1.06	1.06	1.06	9/16
1/2	1/2	1/2	C5705x8•	.391	1.25	1.25	1.25	3/4
5/8	5/8	5/8	C5705x10•	.484	1.45	1.45	1.45	7/8
3/4	3/4	3/4	C5705x12•	.609	1.66	1.66	1.66	1-1/16
7/8	7/8	7/8	C5705x14	.718	1.73	1.73	1.73	1-5/16
1	1	1	C5705x16	.844	1.81	1.81	1.81	1-5/16
1-1/4	1-1/4	1-1/4	C5705x20	1.078	2.06	2.06	2.06	1-5/8
1-1/2	1-1/2	1-1/2	C5705x24	1.312	2.33	2.33	2.33	1-7/8
1/4	1/4	1/4	TF5705x4	.172	.89	.89	.89	1/2
5/16	5/16	5/16	TF5705x5	.234	.95	.95	.95	1/2
3/8	3/8	3/8	TF5705x6	.297	1.06	1.06	1.06	5/8
1/2	1/2	1/2	TF5705x8	.391	1.25	1.25	1.25	13/16
5/8	1/2	1/2	TF5705x10x8x8	.484	1.45	1.31	1.31	15/16
5/8	5/8	5/8	TF5705x10	.484	1.45	1.45	1.45	15/16
5/8	5/8	1/2	TF5705x10x10x8	.484	1.45	1.45	1.31	15/16
3/4	3/4	3/4	TF5705x12	.609	1.66	1.66	1.66	1-1/8
7/8	7/8	7/8	TF5705x14	.718	1.73	1.73	1.73	1-1/4
1	1	1	TF5705x16	.844	1.81	1.81	1.81	1-3/8
1-1/4	1-1/4	1-1/4	TF5705x20	1.078	2.06	2.06	2.06	1-3/4
1-1/2	1-1/2	1-1/2	TF5705x24	1.312	2.33	2.33	2.33	1-7/8
2	2	2	TF5705x32	1.781	3.06	3.06	3.06	2-5/8

## Male Run Tee

Stainless Steel No. 5767x  
(Ref. SAE No. 070424)  
Example assembly  
No. C35755x4



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/8	C5755x4•	.172	.188	.89	.78	7/16
1/2	3/8	C5755x8•	.391	.406	1.25	1.22	3/4
5/8	1/2	C5755x10	.484	.531	1.45	1.47	7/8
3/4	3/4	C5755x12	.609	.719	1.66	1.59	1-1/16
1	1	C5755x16	.844	.938	1.81	1.97	1-5/16
1/4	1/8	TF5755x4	.172	.188	.89	.78	1/2
1/4	1/4	TF5755x4x4x4	.172	.281	.95	1.09	9/16
5/16	1/8	TF5755x5	.234	.188	.95	.78	1/2
3/8	1/4	TF5755x6	.297	.281	1.06	1.09	9/16
3/8	3/8	TF5755x6x6x6	.297	.406	1.16	1.22	9/16
1/2	3/8	TF5755x8	.391	.406	1.25	1.22	13/16
1/2	1/2	TF5755x8x8x8	.391	.531	1.31	1.47	7/8
5/8	1/2	TF5755x10	.484	.531	1.45	1.47	15/16
3/4	3/4	TF5755x12	.609	.719	1.66	1.59	1-1/8
7/8	3/4	TF5755x14	.718	.719	1.73	1.69	1-1/4
1	1	TF5755x16	.844	.938	1.81	1.97	1-3/8
1-1/4	1-1/4	TF5755x20	1.078	1.250	2.06	2.38	1-3/4
1-1/2	1-1/2	TF5755x24	1.312	1.500	2.33	2.64	2
2	2	TF5755x32	1.781	1.938	3.06	3.00	2-5/8

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

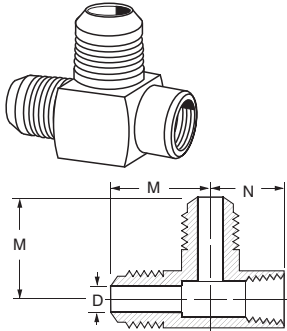
# JIC 37° Flare-Twin

• Available in Stainless Steel.

APPLICATION  
DATA

## Female Run Tee

(Ref. SAE No. 070426)

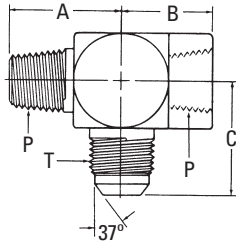


TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER	D	M	N	ACROSS FLATS
1/4	1/8	TF5805x4	.172	1.08	.66	5/8
3/8	1/4	TF5805x6	.297	1.23	.88	3/4
1/2	3/8	TF5805x8	.391	1.42	1.02	7/8
5/8	1/2	TF5805x10	.484	1.64	1.23	1-1/8
3/4	3/4	TF5805x12	.609	1.89	1.36	1-3/8
7/8	3/4	TF5805x14	.718	1.86	1.42	1-3/8
1	1	TF5805x16	.844	2.17	1.62	1-5/8

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

## Male Pipe/Female Pipe/37° Flare Tee

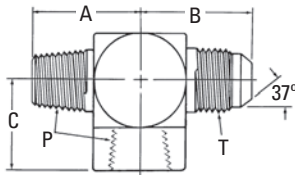


### Part No. 203301- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD P (NPTF)	THREAD T	A		B		C	
	mm	inches			mm	inches	mm	inches	mm	inches
2-4S	6,3	.25	1/8 - 27	7/16 - 20	19,8	.78	16,8	.66	27,4	1.08
4-6S	9,6	.38	1/4 - 18	9/16 - 18	27,7	1.09	22,3	.88	31,2	1.23
12-12S	19,0	.75	3/4 - 14	1 1/16 - 12	40,4	1.59	34,5	1.36	48,0	1.89
16-16S	25,4	1.00	1 - 11 1/2	1 5/16 - 12	50,0	1.97	41,1	1.62	55,1	2.17

SPECIALTY HOSE

## Male Pipe/ 37° Flare/Female Pipe



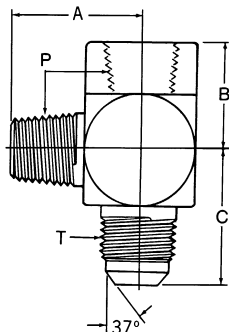
### Part No. 203103- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD P (NPTF)	THREAD T	A		B		C	
	mm	inches			mm	inches	mm	inches	mm	inches
2-4S	6,3	.25	1/8 - 27	7/16 - 20	19,8	.78	27,4	1.08	16,8	.66
4-6S	9,6	.38	1/4 - 18	9/16 - 18	27,7	1.09	31,2	1.23	22,3	.88
6-6S	9,6	.38	3/8 - 18	9/16 - 18	31,0	1.22	33,3	1.31	25,9	1.02
6-8S	12,7	.50	3/8 - 18	3/4 - 16	31,0	1.22	36,1	1.42	25,9	1.02
8-10S	16,0	.63	1/2 - 14	7/8 - 14	37,3	1.47	41,6	1.64	31,2	1.23
12-12S	19,0	.75	3/4 - 14	1 1/16 - 12	40,4	1.59	48,0	1.89	34,5	1.36

ACCESSORIES &  
ASM'BY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

## Male Pipe/Female Pipe 37° Flare Tee



### Part No. 203006- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD P	THREAD T	A		B		C	
	mm	inches			mm	inches	mm	inches	mm	inches
12-12S	19,0	.75	3/4 - 14	1 1/16 - 12	40,4	1.59	34,5	1.36	48,0	1.89

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

# JIC 37° Flare-Twin

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

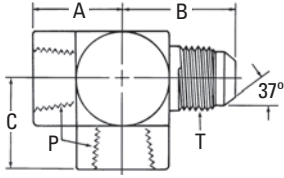
ADAPTERS &  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

## Male JIC Run Tee

(Ref. SAE 070427)

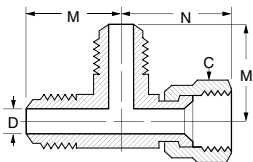
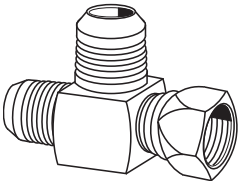
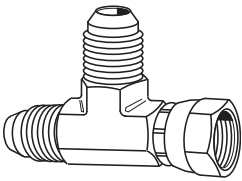


## Part No. 203104- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD P	THREAD T	A		B		C	
	mm	inches			mm	inches	mm	inches	mm	inches
4-6S	9,6	.38	1/4 - 18	9/16 - 18	22,3	.88	31,2	1.23	22,3	.88

## Swivel Nut Run Tee

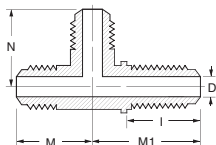
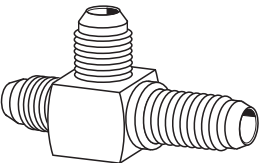
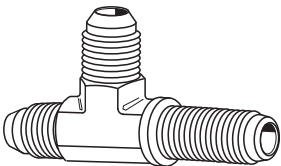
Stainless Steel No. 5718x  
(Ref. SAE No. 070432)  
Example assembly  
No. C35706x4



TUBE O.D.	CATALOG NUMBER	HEX C	D	M	N	ACROSS FLATS
1/4	C5706x4•	9/16	.172	.89	1.00	7/16
5/16	C5706x5	5/8	.234	.95	1.06	9/16
3/8	C5706x6•	11/16	.297	1.06	1.25	9/16
1/2	C5706x8•	7/8	.391	1.25	1.44	3/4
5/8	C5706x10	1	.484	1.45	1.62	7/8
3/4	C5706x12•	1-1/4	.609	1.66	1.75	1-1/16
1	C5706x16	1-1/2	.844	1.81	2.00	1-5/16
1-1/4	C5706x20	2	1.078	2.06	2.36	1-5/8
1/4	TF5706x4	9/16	.172	.89	1.00	1/2
5/16	TF5706x5	5/8	.234	.95	1.06	9/16
3/8	TF5706x6	11/16	.297	1.06	1.25	5/8
1/2	TF5706x8	7/8	.391	1.25	1.38	13/16
5/8	TF5706x10	1	.484	1.45	1.62	15/16
3/4	TF5706x12	1-1/4	.609	1.66	1.75	1-1/8
7/8	TF5706x14	1-3/8	.719	1.73	1.78	1-1/4
1	TF5706x16	1-1/2	.844	1.81	2.00	1-3/8
1-1/4	TF5706x20	2	1.078	2.06	2.31	1-3/4
1-1/2	TF5706x24	2-1/4	1.312	2.33	2.59	2
2	TF5706x32	2-7/8	1.781	3.06	3.38	2-5/8

## Bulkhead Run Tee

(Ref. SAE No. 070958)  
Example assembly  
No. C35726x6



Bulkhead nut not included. Must be ordered separately.  
See page 277 for bulkhead nut.

TUBE O.D.	CATALOG NUMBER	D	I	N	M	M1	ACROSS FLATS
3/8	C5726x6	.297	1.18	1.09	1.06	1.81	9/16
1/2	TF5726x8	.391	1.38	1.36	1.36	2.11	3/4

# JIC 37° Flare-Twin

• Available in Stainless Steel.

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

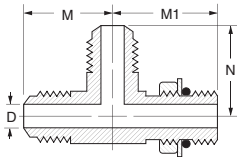
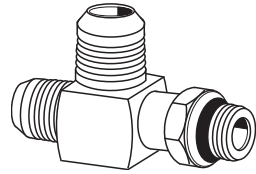
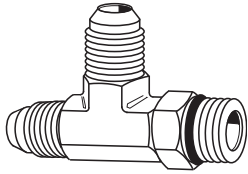
ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

## Straight Thread O-Ring Run Tee

(Ref. SAE No. 070428)  
Example assembly  
No. C35716x4

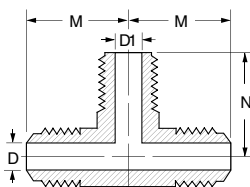
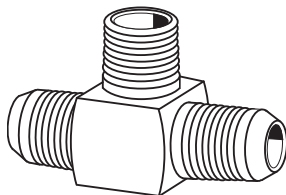
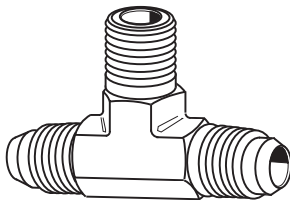


TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	M	M1	ACROSS FLATS	N
1/4	1/4	C5716x4	.172	.89	1.03	7/16	.89
5/16	5/16	C5716x5	.234	.95	1.09	9/16	.95
3/8	3/8	C5716x6	.297	1.06	1.25	9/16	1.06
1/2	1/2	C5716x8	.391	1.25	1.45	3/4	1.25
5/8	5/8	C5716x10	.484	1.45	1.70	7/8	1.45
3/4	3/4	C5716x12	.609	1.66	1.94	1-1/16	1.66
1	1	C5716x16	.844	1.81	2.05	1-5/16	1.81
1-1/4	1-1/4	C5716x20	1.078	2.06	2.25	1-5/8	2.06
1/4	1/4	TF5716x4	.172	.89	1.03	1/2	.89
5/16	5/16	TF5716x5	.234	.95	1.09	9/16	.95
3/8	3/8	TF5716x6	.297	1.06	1.25	5/8	1.06
1/2	1/2	TF5716x8	.391	1.25	1.45	13/16	1.25
5/8	5/8	TF5716x10	.484	1.45	1.70	15/16	1.45
3/4	3/4	TF5716x12	.609	1.66	1.94	1-1/8	1.66
7/8	7/8	TF5716x14	.718	1.73	2.00	1-1/4	1.73
1	1	TF5716x16	.844	1.81	2.05	1-3/8	1.81
1-1/4	1-1/4	TF5716x20	1.078	2.06	2.25	1-3/4	2.06
1-1/2	1-1/2	TF5716x24	1.312	2.33	2.39	2	2.33

Replacement O-rings page 302.

## Male Branch Tee

Stainless Steel No. 5617x  
(Ref. SAE No. 070425)  
Example assembly No.  
C35605x4

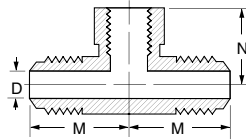
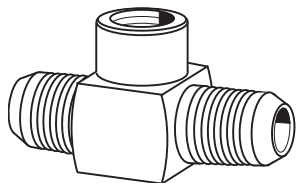
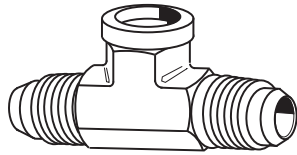


TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/8	C5605x4*	.172	.188	.89	.78	7/16
1/4	1/4	C5605x4x4x4	.172	.281	1.05	1.09	9/16
5/16	1/8	C5605x5	.234	.188	.95	.78	9/16
3/8	1/4	C5605x6*	.297	.281	1.06	1.09	9/16
1/2	3/8	C5605x8	.391	.406	1.25	1.22	3/4
5/8	1/2	C5605x10	.484	.531	1.45	1.47	7/8
3/4	3/4	C5605x12	.609	.719	1.66	1.59	1-1/16
1	1	C5605x16	.844	.938	1.81	1.97	1-5/16
1/4	1/8	TF5605x4	.172	.188	.89	.78	1/2
1/4	1/4	TF5605x4x4x4	.172	.281	.95	1.09	5/8
5/16	1/8	TF5605x5	.234	.188	.95	.78	9/16
3/8	1/4	TF5605x6	.297	.281	1.08	1.09	5/8
3/8	3/8	TF5605x6x6x6	.297	.406	1.16	1.22	13/16
1/2	3/8	TF5605x8	.391	.406	1.25	1.22	13/16
1/2	1/2	TF5605x8x8x8	.391	.531	1.31	1.47	15/16
5/8	1/2	TF5605x10	.484	.531	1.45	1.47	15/16
3/4	3/4	TF5605x12	.609	.719	1.66	1.59	1-1/8
7/8	3/4	TF5605x14	.718	.719	1.73	1.69	1-1/4
1	1	TF5605x16	.844	.938	1.81	1.97	1-3/8
1-1/4	1-1/4	TF5605x20	1.078	1.250	2.06	2.38	1-3/4
1-1/2	1-1/2	TF5605x24	1.312	1.500	2.33	2.64	2
2	2	TF5605x32	1.781	1.938	3.06	3.00	2-5/8

# JIC 37° Flare-Twin

## Female Branch Tee

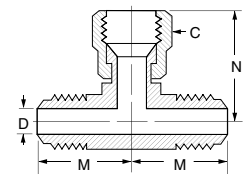
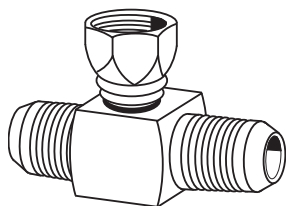
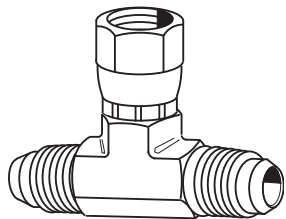
Stainless Steel No. 5667x  
(Ref. SAE No. 070427)  
Example assembly  
No. C35655x4



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER	D	M	N	ACROSS FLATS
1/4	1/8	C5655x4•	.172	1.08	.66	9/16
3/8	1/4	C5655x6•	.297	1.23	.88	3/4
1/2	3/8	C5655x8•	.391	1.42	1.02	7/8
5/8	1/2	C5655x10	.484	1.64	1.23	1-1/16
3/4	3/4	C5655x12	.609	1.89	1.36	1-5/16
1/4	1/8	TF5655x4	.172	1.08	.66	5/8
1/4	1/4	TF5655x4x4x4	.172	1.14	.88	3/4
5/16	1/8	TF5655x5	.234	1.08	.66	5/8
3/8	1/4	TF5655x6	.297	1.23	.88	3/4
3/8	3/8	TF5655x6x6x6	.297	1.30	1.02	7/8
1/2	3/8	TF5655x8	.391	1.42	1.02	7/8
1/2	1/2	TF5655x8x8x8	.391	1.55	1.23	1-1/8
5/8	1/2	TF5655x10	.484	1.64	1.23	1-1/8
3/4	3/4	TF5655x12	.609	1.89	1.36	1-3/8
7/8	3/4	TF5655x14	.718	1.86	1.42	1-3/8
1	1	TF5655x16	.844	2.17	1.62	1-5/8
1-1/4	1-1/4	TF5655x20	1.078	2.33	1.70	2
1-1/2	1-1/2	TF5655x24	1.312	2.89	2.08	2-3/8
2	2	TF5655x32	1.781	3.30	2.39	2-7/8

## Swivel Nut Branch Tee

Stainless Steel No. 5719x  
(Ref. SAE No. 070433)  
Example assembly  
No. C35707x4



TUBE O.D.	CATALOG NUMBER	HEX C	D	M	N	ACROSS FLATS
1/4	5719x4•	9/16	.172	.89	1.00	7/16
3/8	C5707x6•	11/16	.297	1.06	1.25	9/16
1/2	5719x8•	7/8	.391	1.25	1.43	3/4
3/4	C5707x12•	1-1/4	.609	1.66	1.75	1-1/16
1	C5707x16	1-1/2	.844	1.81	2.00	1-5/16
1/4	TF5707x4	9/16	.172	.89	1.00	7/16
5/16	TF5707x5	5/8	.234	.95	1.06	9/16
3/8	TF5707x6	11/16	.297	1.06	1.25	5/8
1/2	TF5707x8	7/8	.391	1.25	1.38	13/16
5/8	TF5707x10	1	.484	1.45	1.62	7/8
3/4	TF5707x12	1-1/4	.609	1.66	1.75	1-1/8
7/8	TF5707x14	1-3/8	.719	1.73	1.78	1-1/4
1	TF5707x16	1-1/2	.844	1.81	2.00	1-3/8
1-1/4	TF5707x20	2	1.078	2.06	2.31	2
1-1/2	TF5707x24	2-1/4	1.312	2.33	2.59	2
2	TF5707x32	2-7/8	1.781	3.06	3.38	2-5/8

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA



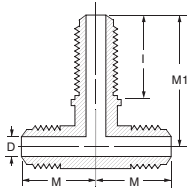
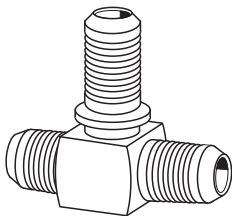
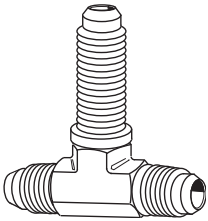
# JIC 37° Flare-Twin

• Available in Stainless Steel.

APPLICATION  
DATA

## Bulkhead Branch Tee

(Ref. SAE No. 070959)



TUBE O.D.	CATALOG NUMBER	I	D	M	M1	ACROSS FLATS
1/4	TF5725x4	1.11	.172	.97	1.59	1/2
3/8	TF5725x6	1.18	.297	1.06	1.81	5/8
1/2	TF5725x8	1.38	.391	1.36	2.11	13/16
5/8	TF5725x10	1.52	.484	1.56	2.39	15/16
3/4	TF5725x12	1.69	.609	1.78	2.67	1-1/8
1	TF5725x16	1.69	.844	1.94	2.80	1-3/8
1/4	5737x4•	1.11	.172	.97	1.59	7/16
3/8	5737x6•	1.18	.297	1.09	1.81	9/16

Bulkhead nut not included. Must be ordered separately.

See page 277 for bulkhead nut.

LOW & MEDIUM  
PRESSURE HOSE

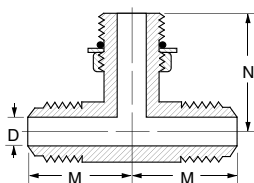
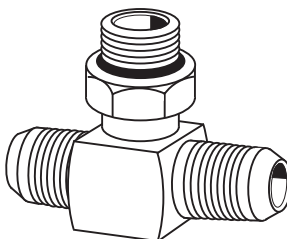
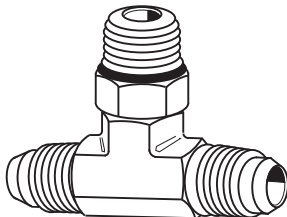
HIGH PRESSURE HOSE

SPECIALTY HOSE

## Straight Thread O-Ring Branch Tee

(Ref. SAE No. 070429)

Example assembly  
No. C35715x4



TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	M	N	ACROSS FLATS
1/4	1/4	C5715x4	.172	.89	1.03	7/16
3/8	3/8	C5715x6	.297	1.06	1.25	9/16
1/2	1/2	C5715x8	.391	1.25	1.45	3/4
5/8	5/8	C5715x10	.484	1.45	1.70	7/8
3/4	3/4	C5715x12	.609	1.66	1.94	1-1/16
1	1	C5715x16	.844	1.81	2.05	1-5/16
1/4	1/4	TF5715x4	.172	.89	1.03	7/16
5/16	5/16	TF5715x5	.234	.95	1.09	9/16
3/8	3/8	TF5715x6	.297	1.06	1.25	5/8
1/2	1/2	TF5715x8	.391	1.25	1.45	3/4
5/8	5/8	TF5715x10	.484	1.45	1.70	15/16
3/4	3/4	TF5715x12	.609	1.66	1.94	1-1/8
7/8	7/8	TF5715x14	.719	1.73	2.00	1-1/4
1	1	TF5715x16	.844	1.81	2.05	1-3/8
1-1/4	1-1/4	TF5715x20	1.078	2.06	2.25	1-3/4
1-1/2	1-1/2	TF5715x24	1.312	2.33	2.39	2

Replacement O-rings listed on page 302.

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

# JIC 37° Flare-Twin

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

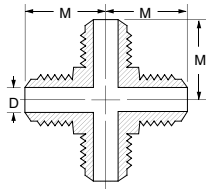
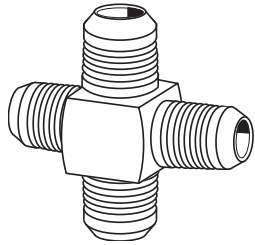
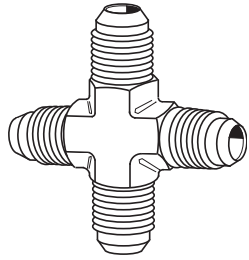
ADAPTERS &  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

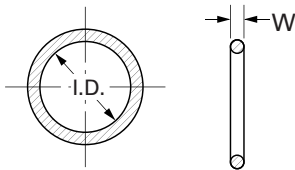
## Cross

(Ref. SAE No. 070501)



TUBE O.D.	CATALOG NUMBER	D	M	ACROSS FLATS
1/4	TF5955x4	.172	.89	1/2
5/16	TF5955x5	.234	.95	9/16
3/8	TF5955x6	.297	1.06	5/8
1/2	TF5955x8	.391	1.25	13/16
5/8	TF5955x10	.484	1.45	15/16
3/4	TF5955x12	.609	1.66	1-1/8
7/8	TF5955x14	.718	1.73	1-1/4
1	TF5955x16	.844	1.81	1-3/8
1-1/4	TF5955x20	1.078	2.06	1-3/4
1-1/2	TF5955x24	1.312	2.33	2
1/4	5967x4•	.172	.89	7/16
3/8	5967x6•	.297	1.06	9/16
1/2	5967x8•	.391	1.25	3/4

## Straight Thread O-Ring



TUBE O.D.	CATALOG NUMBER	W	I.D.
1/16	7629x1	.058	.185
1/8	7629x2	.064	.239
3/16	7629x3	.064	.301
1/4	7629x4	.072	.351
5/16	7629x5	.072	.414
3/8	7629x6	.078	.468
7/16	7629x7	.082	.530
1/2	7629x8	.087	.644
5/8	7629x10	.097	.755
3/4	7629x12	.116	.924
7/8	7629x14	.116	1.048
1	7629x16	.116	1.171
1-1/4	7629x20	.118	1.475
1-1/2	7629x24	.118	1.720
2	7629x32	.118	2.337

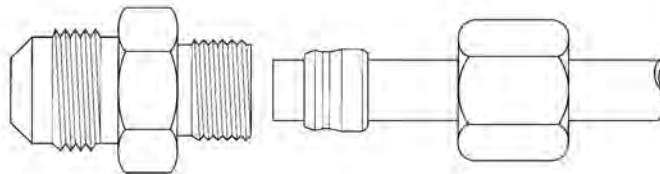
**Material:** Buna-N 90 Durometer

**Temperature Range:**

-40°F to +250°F  
(-40°C to +121°C)

Standard O-ring complies with SAE specification SAE J515 Type CH.

# Steel DIN Fittings



METRIC TUBE OD	6	8	10	12	14	15	16	18	20	22	25	28	30	38
Light	M12x1.5	M14x1.5	M16x1.5	M18x1.5	-	M22x1.5	-	M26x1.5	-	M30x2.0	-	M36x2.0	-	-
Heavy	M14x1.5	M16x1.5	M18x1.5	M20x1.5	M22x1.5	-	M24x1.5	-	M30x2.0	-	M36x2.0	-	M42x2.0	M52x2.0

**• Typical Application**

Used in applications to adapt connections made to DIN (Deutsche Industrie Norme) specifications to male 37° JIC Flare.

**• Sealing Method**

Three-Piece Flareless Bite Type or 60° or 24° Tube Seat, or 37° Flare.

**• Vibration Rating**

Three-Piece Flareless Bite Type or 60° or 24° Tube Seat. Fair Resistance.

**• Material**

Carbon Steel - SAE 12L14

**• Plating**

Bodies and Sleeves - Zinc Yellow Dichromate Finish  
Nuts - Phosphate Coating.

**• Advantages**

Provides an adapter to convert a metric hose assembly to JIC 37° allowing the use of standard hose and end fittings. Can also be used in the repair of metric tubing.

**• Presetting Instructions**

1. Preset with preset tool. All sleeves should be preset in tool prior to installation.
2. Cut the tubing squarely and lightly deburr the end of the tubing inside and out.
3. Lubricate the sleeve, nut and threads with a good grade of lubricant compatible with the system fluid.
4. Slide the nut and sleeve on the tubing. The thicker end of the sleeve should be towards the nut.
5. Insert the tube into the preset tool making sure it is bottomed on the tube stop. Tighten the nut by hand as much as possible.

6. On the tube sizes up to and including 18mm O.D., tighten the nut 1-1/2 turns past hand tight. For larger tube O.D.'s, tighten the nut 1-1/4 turns past hand tight.
7. To inspect preset, mark the nut location and remove nut.
8. To reinstall, tighten the nut 1/6 turn (one hex flat) past the previous nut location.

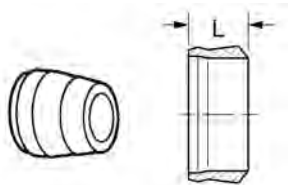
**• Ordering Information**

Order individually by catalog number. Preset tools found on page 431.

# Steel DIN Fittings

NOTE:  
Multiply millimeters (mm) by 0.03937 to  
obtain inches.

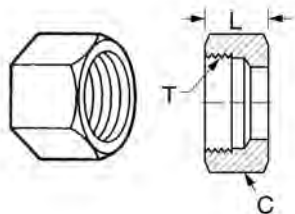
## Metric Flareless Sleeve



TUBE O.D. (MM)	CATALOG NUMBER	L (MM)
6	7165x6MM	8.5
8	7165x8MM	8.5
10	7165x10MM	9.5
12	7165x12MM	9.5
14	7165x14MM	10.0
15	7165x15MM	10.0
16	7165x16MM	10.0
18	7165x18MM	10.0
20	7165x20MM	11.5
22	7165x22MM	11.5
25	7165x25MM	11.5
28	7165x28MM	11.5
30	7165x30MM	13.5
38	7165x38MM	13.5

## Metric Flareless Nut Light Series

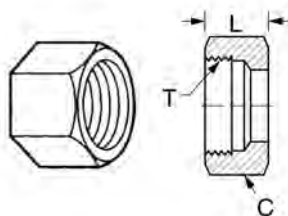
(DIN 3901/3902L)



TUBE O.D. (MM)	CATALOG NUMBER	T THD.	HEX C (MM)	L (MM)
6	ML7105x6	M12x1.5	14	a14.5
8	ML7105x8	M14x1.5	17	14.5
10	ML7105x10	M16x1.5	19	15.5
12	ML7105x12	M18x1.5	22	15.5
15	ML7105x15	M22x1.5	27	17.0
18	ML7105x18	M26x1.5	32	18.0
22	ML7105x22	M30x2.0	36	20.0
28	ML7105x28	M36x2.0	41	21.0

## Metric Flareless Nut Heavy Series

(DIN /3902S)3901



TUBE O.D. (MM)	CATALOG NUMBER	T THD.	HEX C (MM)	L (MM)
6	MH7105x6	M14x1.5	17	16.5
8	MH7105x8	M16x1.5	19	16.5
10	MH7105x10	M18x1.5	22	17.5
12	MH7105x12	M20x1.5	24	17.5
14	MH7105x14	M22x1.5	27	20.5
16	MH7105x16	M24x1.5	30	20.5
20	MH7105x20	M30x2.0	36	24.0
25	MH7105x25	M36x2.0	46	27.0
30	MH7105x30	M42x2.0	50	29.0
38	MH7105x38	M52x2.0	60	32.5

# Steel DIN Fittings

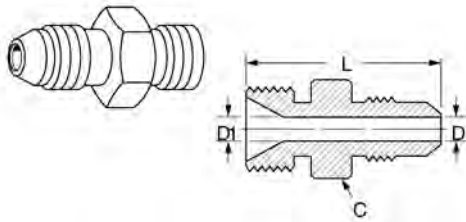
NOTE:  
Multiply millimeters (mm) by 0.03937 to obtain inches.

APPLICATION DATA

DIUM PRESSURE HOSE

## Male JIC 37° to 24° Metric Tube Seat (Light)

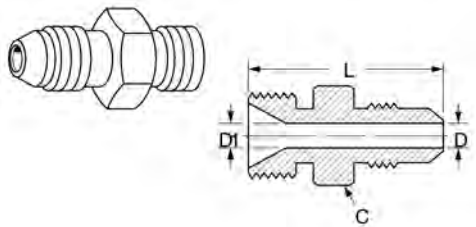
(DIN 3901/3902L)



TUBE O.D.	TUBE O.D. (MM)	CATALOG NUMBER	METRIC THD.	HEX C	D	D1	L
1/4	6	MC5206x4x6	M12x1.5	5/8	.171	.171	1.22
3/8	8	MC5206x6x8	M14x1.5	3/4	.297	.240	1.22
1/2	10	MC5206x8x10	M16x1.5	7/8	.391	.322	1.41
1/2	12	MC5206x8x12	M18x1.5	15/16	.391	.398	1.48
5/8	15	MC5206x10x15	M22x1.5	1-1/16	.484	.478	1.70
3/4	18	MC5206x12x18	M26x1.5	1-3/4	.609	.596	1.91

## Male JIC 37° to 24° Metric Tube Seat (Heavy)

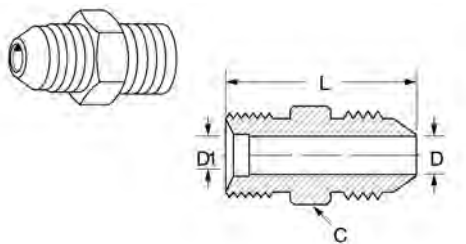
(DIN 3901/3902L)



TUBE O.D.	TUBE O.D. (MM)	CATALOG NUMBER	METRIC THD.	HEX C	D	D1	L
3/8	6	MC5208x6x6	M14x1.5	3/4	.297	.167	1.22
1/2	10	MC5208x8x10	M18x1.5	15/16	.391	.283	1.48
5/8	14	MC5208x10x14	M22x1.5	1-1/16	.484	.397	1.70
3/4	16	MC5208x12x16	M24x1.5	1-1/8	.609	.476	1.77

## Male JIC 37° to 60° Metric Tube Seat

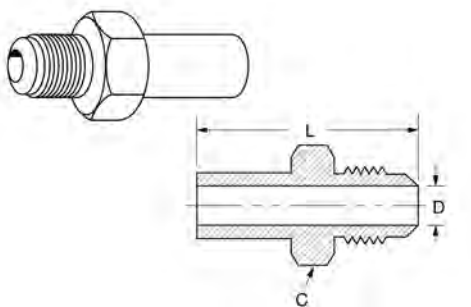
(DIN 7631)



TUBE O.D.	TUBE O.D. (MM)	CATALOG NUMBER	METRIC THD.	HEX C	D	D1	L
1/4	6	MC5207x4x6	M12x1.5	1/2	.171	.157	1.22
3/8	8	MC5207x6x8	M14x1.5	5/8	.297	.242	1.22
3/8	10	MC5207x6x10	M16x1.5	7/8	.297	.321	1.32
1/2	12	MC5207x8x12	M18x1.5	15/16	.391	.394	1.48
5/8	15	MC5207x10x15	M22x1.5	1-1/16	.472	.472	1.52
3/4	18	MC5207x12x18	M26x1.5	1-1/8	.609	.596	1.91

## Male JIC 37° to Male Metric Standpipe

(DIN 7631)



TUBE O.D.	TUBE O.D. (MM)	CATALOG NUMBER	HEX C	L	D
1/4	6MM	MC5019x4x6	9/16	1.58	.16
1/4	8MM	MC5019x4x8	9/16	1.68	.17
3/8	10MM	MC5019x6x10	3/4	1.67	.28
1/2	12MM	MC5019x8x12	7/8	1.97	.32
1/2	14MM	MC5019x8x14	7/8	1.89	.39
5/8	15MM	MC5019x10x15	1	2.03	.43
5/8	16MM	MC5019x10x16	1	2.07	.47
3/4	16MM	MC5019x12x16	1-1/4	2.22	.47
3/4	18MM	MC5019x12x18	1-1/4	2.12	.55
3/4	20MM	MC5019x12x20	1-1/4	2.38	.61
1	22MM	MC5019x16x22	1-1/2	2.21	.67
1	25MM	MC5019x16x25	1-1/2	2.54	.79

ASSEMBLY INSTRUCTIONS

HOSE ENDS

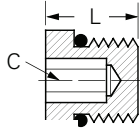
EQUIPMENT

TECHNICAL DATA

# Straight Thread O-Ring

## Straight Thread O-Ring Hex Socket Plug

(Ref. SAE No. 090109B)



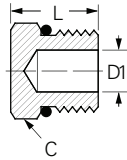
Replacement O-rings page 302.

NOTE: Parts furnished with zinc plate.

PORT SIZE	CATALOG NUMBER	HEX C	L
1/8	7238x2	1/8	.40
3/16	7238x3	1/8	.40
1/4	7238x4	3/16	.47
5/16	7238x5	3/16	.47
3/8	7238x6	1/4	.50
1/2	7238x8	5/16	.58
5/8	7238x10	3/8	.65
3/4	7238x12	9/16	.77
7/8	7238x14	9/16	.77
1	7238x16	5/8	.77
1-1/4	7238x20	3/4	.78

## Straight Thread O-Ring Hex Head Plug

(Ref. SAE No. 090109A)

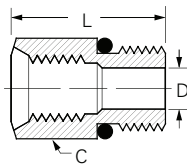
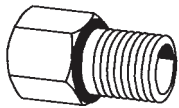


Replacement O-rings page 302.

NOTE: Parts furnished with zinc plate.

PORT SIZE	CATALOG NUMBER	HEX C	L	D1 OPT.
1/8	7237x2	7/16	.60	.093
3/16	7237x3	1/2	.60	.125
1/4	7237x4	9/16	.67	.203
5/16	7237x5	5/8	.67	.234
3/8	7237x6	11/16	.73	.297
1/2	7237x8	7/8	.80	.422
5/8	7237x10	1	.93	.500
3/4	7237x12	1-1/4	1.09	.656
7/8	7237x14	1-3/8	1.09	.718
1	7237x16	1-1/2	1.12	.875
1-1/4	7237x20	1-7/8	1.20	1.093
1-1/2	7237x24	2-1/8	1.27	1.344
2	7237x32	2-3/4	1.42	1.815

## Male Straight Thread/Female Straight Thread O-Ring Boss

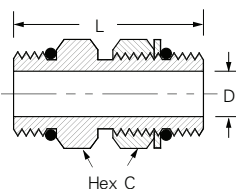
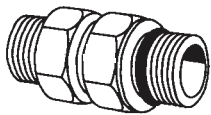


Replacement O-rings page 302.

NOTE: Parts furnished with zinc plate.

MALE PORT SIZE	FEMALE PORT SIZE	CATALOG NUMBER	HEX C	D	L
1/2	3/8	7033x8x6	7/8	.391	1.16
5/8	1/2	7033x10x8	1	.484	1.34
3/4	1/2	7033x12x8	1-1/4	.671	1.44
7/8	3/4	7033x14x12	1-3/8	.719	1.72
1	1/2	7033x16x8	1-1/2	.687	1.12
1	3/4	7033x16x12	1-1/2	.844	1.70
1-1/4	3/4	7033x20x12	1-7/8	.968	1.20
1-1/2	1-1/4	7033x24x20	2-1/8	1.312	1.75
2	1-1/2	7033x32x24	2-3/4	1.781	1.44

## Straight Thread O-Ring Union

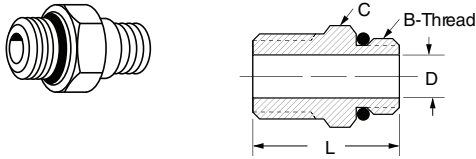


Replacement O-rings page 302.

PORT SIZE	CATALOG NUMBER	HEX C	D	L
1/4	C5314x4x4	9/16	.172	1.37
3/8	C5314x6x6	11/16	.297	1.50
1/2	C5314x8x8	7/8	.391	1.56
5/8	C5314x10x10	1	.484	1.80
3/4	C5314x12x12	1-1/4	.609	2.33
1	C5314x16x16	1-1/2	.844	2.28
1-1/4	C5314x20x20	1-7/8	1.078	2.13
1-1/2	C5314x24x24	2-1/8	1.312	2.13
2	C5314x32x32	2-3/4	1.781	2.13

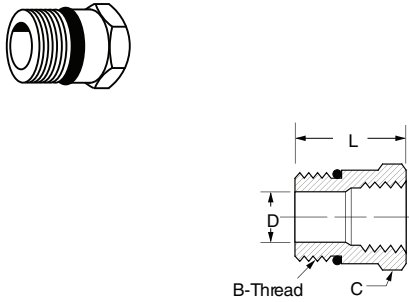
# Straight Thread O-Ring

## Male Straight Thread O-Ring to Male Pipe Adapter



Replacement O-rings page 302.

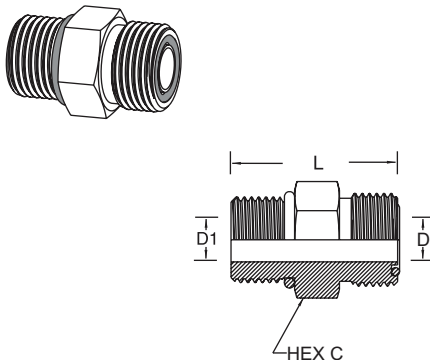
## Straight Thread O-Ring to Female Pipe Adapter



Replacement o-rings page 302.

## Straight Thread O-Ring Connector to FOR-SEAL®

(Ref. SAE No. 520120)



Replacement straight o-rings page 302.

PORT SIZE	MALE PIPE THD.	CATALOG NUMBER	STRAIGHT THD B	HEX C	D	L
1/4	1/8	C3249x4x2	7/16-20	9/16	.172	1.05
3/8	1/4	C3249x6x4	9/16-18	11/16	.281	1.30
1/2	3/8	C3249x8x6	3/4-16	7/8	.391	1.36
1/2	1/2	C3249x8x8	3/4-16	7/8	.391	1.55
5/8	1/2	C3249x10x8	7/8-14	1	.484	1.69
3/4	3/4	C3249x12x12	1-1/16-12	1-1/4	.609	1.73
1	1	C3249x16x16	1-5/16-12	1-1/2	.844	2.06
1-1/4	1-1/4	C3249x20x20	1-5/8-12	1-7/8	1.078	2.17
1-1/2	1-1/2	C3249x24x24	1-7/8-12	2-1/8	1.312	2.26
2	2	C3249x32x32	2-1/2-12	2-3/4	1.781	2.47

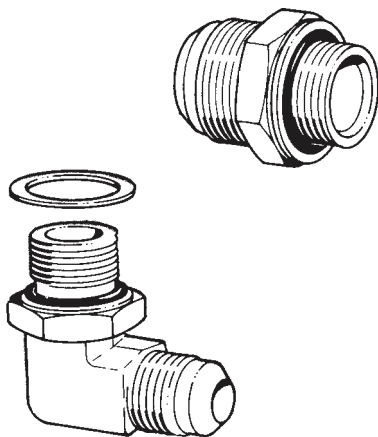
PORT SIZE	FEMALE PIPE THD.	CATALOG NUMBER	STRAIGHT THD B	HEX C	D	L
1/4	1/8	C3269x4x2	7/16-20	9/16	.172	.97
1/4	1/4	C3269x4x4	7/16-20	3/4	.172	1.16
5/16	1/8	C3269x5x2	1/2-20	5/8	.234	.94
3/8	1/4	C3269x6x4	9/16-18	3/4	.297	1.09
3/8	3/8	C3269x6x6	9/16-18	7/8	.281	1.30
3/8	1/2	C3269x6x8	9/16-18	1-1/8	.281	1.44
1/2	1/4	C3269x8x4	3/4-16	7/8	.421	1.06
1/2	3/8	C3269x8x6	3/4-16	7/8	.421	1.22
1/2	1/2	C3269x8x8	3/4-16	1-1/16	.421	1.50
5/8	1/4	C3269x10x4	7/8-14	1	.422	.81
5/8	3/8	C3269x10x6	7/8-14	1	.500	1.25
5/8	1/2	C3269x10x8	7/8-14	1-1/8	.500	1.50
5/8	3/4	C3269x10x12	7/8-14	1-3/8	.500	1.62
3/4	1/2	C3269x12x8	1-1/16-12	1-1/4	.688	1.34
3/4	3/4	C3269x12x12	1-1/16-12	1-3/8	.656	1.66
7/8	3/4	C3269x14x12	1-3/16-12	1-3/8	.718	1.63
1	1/2	C3269x16x8	1-5/16-12	1-1/2	.688	1.00
1	3/4	C3269x16x12	1-5/16-12	1-1/2	.876	1.50
1	1	C3269x16x16	1-5/16-12	1-5/8	.876	1.88
1-1/4	1	C3269x20x16	1-5/8-12	1-7/8	1.080	1.00
1-1/4	1-1/4	C3269x20x20	1-5/8-12	2	1.080	1.94
1-1/2	1-1/2	C3269x24x24	1-7/8-12	2-3/8	1.312	1.88
2	2	C3269x32x32	2-1/2-12	2-7/8	1.781	1.91

MALE TUBE O.D.	PORT SIZE	CATALOG NUMBER	HEX C	D	D1	L
1/4	1/4	4315x4	5/8	.172	.172	1.133
1/4	3/8	4315x4x6	11/16	.172	.172	1.202
3/8	1/4	4315x6x4	3/4	.264	.172	1.343
3/8	3/8	4315x6	3/4	.264	.264	1.252
3/8	1/2	4315x6x8	7/8	.378	.264	1.378
3/8	5/8	4315x6x10	1-1/16	.264	.484	1.530
1/2	3/8	4315x8x6	7/8	.378	.264	1.472
1/2	1/2	4315x8	7/8	.378	.378	1.441
1/2	5/8	4315x8x10	1	.378	.484	1.590
1/2	3/4	4315x8x12	1-1/4	.378	.609	1.748
5/8	5/8	4315x10	1-1/16	.484	.484	1.700
3/4	3/4	4315x12	1-1/4	.609	.609	1.918
3/4	1	4315x12x16	1-1/2	.609	.609	1.960
1	3/4	4315x16x12	1-1/2	.812	.609	2.138
1	1	4315x16	1-1/2	.811	.811	1.978
1	1-1/4	4315x16x20	1-7/8	.812	1.709	2.058
1-1/4	1	4315x20x16	1-3/4	1.024	.843	2.278
1-1/4	1-1/4	4315x20	1-7/8	1.024	1.024	2.058
1-1/2	1-1/2	4315x24	2-1/8	1.260	1.260	2.125

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HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

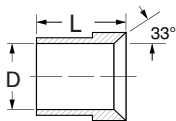


# DIN Connectors



## Sleeve 3 Piece Metric

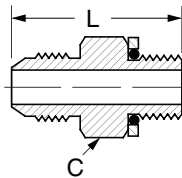
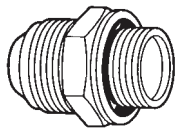
(Ref. SAE No. 070115)



Adapts standard JIC Flare-Twin® fittings for use with metric tubing

## Male JIC 37° to Male Metric Straight Thread Connector

(Port Per ISO 9974)



Replacement O-rings page 309.

### • Typical Application

Used in applications to adapt connections and tubing to male and female swivel 37° JIC flare.

### • Sealing Method

Tapered pipe thread, or o-ring, or 37° flare.

### • Vibration Rating

Fair resistance.

### • Material

Carbon Steel – SAE 12L14.

### • Plating

Zinc yellow dichromate finish.

### • Advantages

Provides an adapter to convert Metric ports to 37° JIC allowing the use of standard hose and end fittings. Also metric tubing that can be flared can be adapted to a standard 37° JIC connection by the use of sleeves.

### • Ordering Information

Order individually by catalog number.

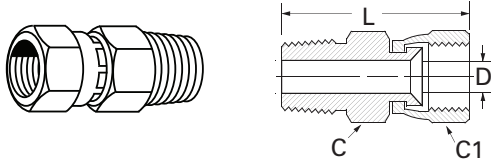
TUBE O.D. IN. SIZE	TUBE O.D. METRIC	CATALOG NUMBER	D	L
1/4	6MM	C5165x4x6MM	.241	.41
5/16	8MM	C5165x5x8MM	.320	.44
3/8	10MM	C5165x6x10MM	.399	.50
1/2	12MM	C5165x8x12MM	.478	.56
5/8	14MM	C5165x10x14MM	.556	.66
5/8	15MM	C5165x10x15MM	.596	.66
5/8	16MM	C5165x10x16MM	.636	.66
3/4	18MM	C5165x12x18MM	.717	.68
7/8	20MM	C5165x14x20MM	.793	.76
7/8	22MM	C5165x14x22MM	.866	.76
1	25MM	C5165x16x25MM	.990	.78
1-1/4	30MM	C5165x20x30MM	1.191	.91
1-1/4	32MM	C5165x20x32MM	1.270	.91
1-1/2	38MM	C5165x24x38MM	1.500	1.12

TUBE O.D.	MALE THD. METRIC	CATALOG NUMBER	L	HEX C
1/4	M10x1.0	MC5315x4x10	1.18	5/8
1/4	M12x1.5	MC5315x4x12	1.22	5/8
1/4	M14x1.5	MC5315x4x14	1.22	3/4
3/8	M14x1.5	MC5315x6x14	1.22	3/4
3/8	M16x1.5	MC5315x6x16	1.32	7/8
1/2	M18x1.5	MC5315x8x18	1.48	15/16
1/2	M22x1.5	MC5315x8x22	1.61	1-1/16
5/8	M20x1.5	MC5315x10x20	1.71	1
3/4	M22x1.5	MC5315x12x22	1.81	1-1/8
3/4	M27x2.0	MC5315x12x27	1.95	1-1/4
1	M33x2.0	MC5315x16x33	2.03	1-5/8
1-1/4	M42x2.0	MC5315x20x42	2.19	2

# Metric Connectors

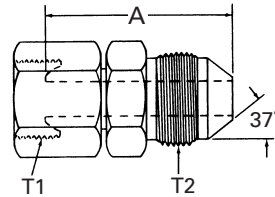
## Female JIC 37° Swivel to Male Metric Taper Pipe Thread

(Pipe Thread Per DIN 3852)



TUBE O.D.	TAPER PIPE THD. METRIC	CATALOG NUMBER	HEX C	HEX C1	D	L
1/4	M10 x 1.0	M9700x4x6	9/16	9/16	.172	1.25
5/16	M12 x 1.5	M9700x5x8	11/16	5/8	.234	1.54
3/8	M14 x 1.5	M9700x6x10	11/16	11/16	.297	1.60
1/2	M16 x 1.5	M9700x8x12	7/8	7/8	.391	1.78
5/8	M20 x 1.5	M9700x10x14	1	1	.484	1.91
3/4	M24 x 1.5	M9700x12x20	1-1/8	1-1/8	.609	2.04
1	M27 x 2.0	M9700x16x25	1-3/8	1-1/2	.845	2.30
1-1/4	M36 x 2.0	M9700x20x32	1-7/8	2	1.079	2.43

## Metric 24° (DIN 3901/3902 I. Rh)/ 37° Flare

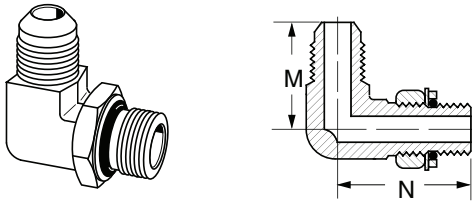


### Part No. 15.163- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD T1	THREAD T2	A	
	mm	inches			mm	inches
4-4T	6,3	.25	M12 x 1.5	7/16 - 20	34,5	1.36

## 90° Elbow - Male JIC 37° to Male Metric Straight Thread

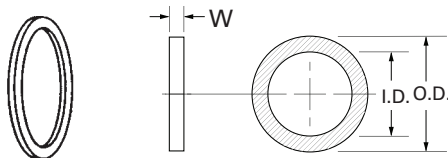
(For ISO 9974 Port)



Replacement retaining rings and O-rings see below.

TUBE O.D.	MALE THD. METRIC	CATALOG NUMBER	M	N
1/4	M10x1.0	MC5515x4x10	.89	1.03
1/4	M12x1.5	MC5515x4x12	.95	1.09
3/8	M14x1.5	MC5515x6x14	1.06	1.25
3/8	M16x1.5	MC5515x6x16	1.14	1.45
1/2	M18x1.5	MC5515x8x18	1.26	1.47
1/2	M22x1.5	MC5515x8x22	1.33	1.70
5/8	M18x1.5	MC5515x10x18	1.41	1.60
5/8	M20x1.5	MC5515x10x20	1.45	1.70
5/8	M22x1.5	MC5515x10x22	1.45	1.70
3/4	M22x1.5	MC5515x12x22	1.66	1.78
3/4	M27x2.0	MC5515x12x27	1.66	1.94
1	M33x2.0	MC5515x16x33	1.81	2.05

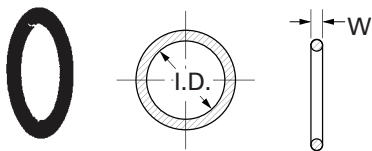
## Metric Retaining Ring



TUBE O.D. (MM)	CATALOG NUMBER	RING I.D. (MM)	RING O.D. (MM)	W (MM)
10	M7630x10	11.33	14.85	1.00
12	M7630x12	13.72	17.85	1.42
14	M7630x14	15.73	19.85	1.42
16	M7630x16	17.73	21.85	1.42
18	M7630x18	19.73	23.80	1.42
20	M7630x20	21.73	25.85	1.42
22	M7630x22	23.73	27.85	1.42
27	M7630x27	29.44	32.85	1.90
33	M7630x33	35.44	39.85	1.90
42	M7630x42	44.44	49.85	1.90

## Metric O-Ring

(For ISO 9974 Port)



TUBE O.D.	CATALOG NUMBER	W (MM)	I.D. (MM)
10	M7629x10	1.60	8.10
12	M7629x12	2.40	9.30
14	M7629x14	2.10	11.40
16	M7629x16	2.40	13.30
18	M7629x18	2.40	15.60
20	M7629x20	2.46	18.00
22	M7629x22	2.46	19.80
27	M7629x27	2.95	23.47
33	M7629x33	2.95	29.74
42	M7629x42	3.00	39.20

**Material:** Buna N 90 Durometer  
**Temperature Range:** -40°F to +250°F  
 (-40°C to +121°C)

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 TECHNICAL DATA

# BSP Connectors

**Typical Application:**  
Used in applications to adapt connections made to BSP (British Standard Pipe) specifications to male or female swivel SAE 37° flare.

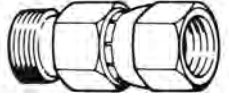
**Sealing Method:**  
Tapered (BSPT) or Parallel Pipe Thread (BSPP), O-Ring or JIC 37° flare.

**Vibration Rating:**  
Fair resistance.

**Material:**  
Carbon steel

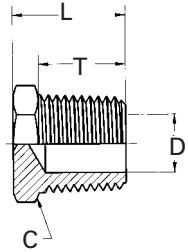
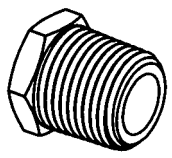
**Plating:** Zinc

**Advantages:** Provides an adapter to convert BSP ports to 37° allowing the use of standard connectors.



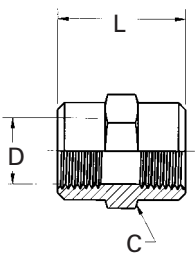
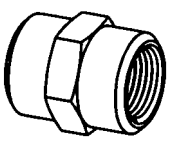
Pipe Size	1/8	1/4	3/8	1/2	5/8	3/4	1	1-1/4
Thread Size	1/8-28	1/4-19	3/8-19	1/2-14	5/8-14	3/4-14	1-11	1-1/4-11

## Hex Head Plug



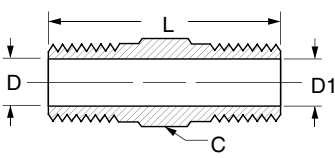
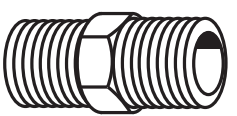
BSPT PIPE SIZE	CATALOG NUMBER	HEX C (MM)	L	T	D OPT. DIA.
1/8	MC3159x2	11	.58	.385	.16
1/4	MC3159x4	14	.76	.577	.25
3/8	MC3159x6	17	.80	.577	.38
1/2	MC3159x8	22	.98	.765	.50
3/4	MC3159x12	27	1.11	.796	.69
1	MC3159x16	36	1.27	.943	.88

## Coupling



BSPT PIPE SIZE	CATALOG NUMBER	HEX C (MM)	L	D OPT. DIA.
1/8	MC3309x2	17	.75	.337
1/4	MC3309x4	19	1.13	.450
3/8	MC3309x6	22	1.13	.588
1/2	MC3309x8	30	1.50	.733
3/4	MC3309x12	36	1.53	.949
1	MC3309x16	41	1.89	1.192

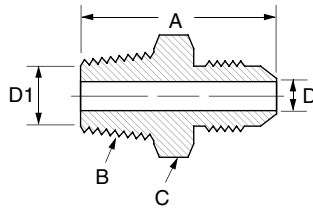
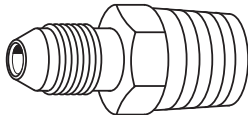
## Hex Nipple



BSPT PIPE SIZE A	BSPT PIPE SIZE A1	CATALOG NUMBER	HEX C (MM)	L	T	T1	D	D1
1/8	1/8	MC3069x2x2	11	1.06	.395	.395	.188	.188
1/4	1/4	MC3069x4x4	17	1.26	.575	.575	.281	.281
3/8	3/8	MC3069x6x6	19	1.45	.575	.575	.406	.406
1/2	1/2	MC3069x8x8	22	1.70	.765	.765	.531	.531
3/4	3/4	MC3069x12x12	30	1.99	.795	.795	.719	.719
1	1	MC3069x16x16	36	2.18	.955	.955	.939	.939
1-1/4	1-1/4	MC3069x20x20	46	2.51	1.045	1.045	1.252	1.252
1-1/2	1-1/2	MC3069x24x24	50	2.67	1.045	1.045	1.502	1.502
2	2	MC3069x32x32	65	2.98	1.205	1.205	1.940	1.940

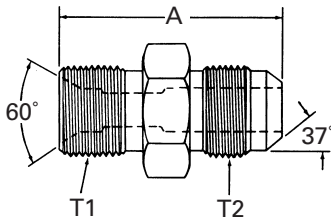
# BSP Connectors

## Male Connector



TUBE O.D.	BSPT PIPE SIZE	CATALOG NUMBER	BSPT THREAD B	A	HEX C	D	D1
1/4	1/8	MC5205x4x2	1/8-28	1.22	1/2	.172	.281
1/4	1/4	MC5205x4x4	1/4-19	1.42	9/16	.172	.188
1/4	3/8	MC5205x4x6	1/4-19	1.42	1/2	.172	.406
5/16	1/4	MC5205x5x4	1/4-19	1.22	9/16	.234	.281
5/16	3/8	MC5205x5x6	3/8-19	1.42	47/64	.234	.406
3/8	1/4	MC5205x6x4	1/4-19	1.21	5/8	.297	.406
3/8	3/8	MC5205x6x6	3/8-19	1.29	3/4	.297	.281
3/8	1/2	MC5205x6x8	1/2-14	1.69	55/64	.297	.531
3/8	3/4	MC5205x6x12	3/4-14	1.78	1-5/32	.297	.719
1/2	3/8	MC5205x8x6	3/8-19	1.41	13/16	.391	.531
1/2	1/2	MC5205x8x8	1/2-14	1.59	15/16	.391	.406
1/2	3/4	MC5205x8x12	3/4-14	1.88	1-5/32	.391	.719
5/8	1/2	MC5205x10x8	1/2-14	1.66	15/16	.484	.531
5/8	3/4	MC5205x10x12	3/4-14	1.99	1-1/8	.484	.719
5/8	1	MC5205x10x16	1-11	2.15	1-13/32	.484	.939
3/4	1/2	MC5205x12x8	1/2-14	2.06	1-5/32	.609	.531
3/4	1	MC5205x12x16	1-11	2.25	1-13/32	.609	.531
7/8	3/4	MC5205x14x12	3/4-14	2.12	1-5/32	.609	.939
7/8	1	MC5205x14x16	1-11	2.28	1-13/32	.719	.719
3/4	3/4	MC5205x12x12	3/4-14	1.93	1-1/8	.719	.942
1	3/4	MC5205x16x12	3/4-14	2.14	1-13/32	.845	.939
1	1	MC5205x16x16	1-11	2.13	1-3/8	.845	.719
1-1/4	1-1/4	MC5205x20x20	1-1/4-11	2.34	1-11/16	1.080	1.252
1-1/2	1-1/2	MC5205x24x24	1-1/2-11	2.71	1-15/16	1.314	1.502
2	2	MC5205x32x32	2-11	3.27	2-3/4	1.784	1.940

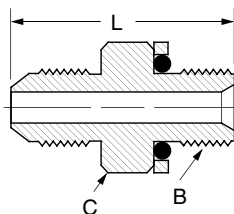
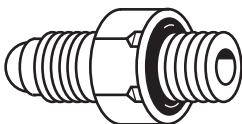
## Male Connector



### Part No. 2063- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD T1 (BSPP)	THREAD T2	A	
	mm	inches			mm	inches
2-4S	6,3	.25	1/8 - 28	7/16 - 20	35,1	1.38
4-4S	6,3	.25	1/4 - 19	7/16 - 20	35,1	1.38
4-6S	9,6	.38	1/4 - 19	9/16 - 18	35,1	1.38
6-6S	9,6	.38	3/8 - 19	9/16 - 18	36,3	1.43
8-10S	16,0	.63	1/2 - 14	7/8 - 14	43,9	1.73
12-12S	19,0	.75	3/4 - 14	1 1/16 - 12	50,5	1.99
16-16S	25,4	1.00	1 - 11	1 5/16 - 12	53,1	2.09

## Male British Standard Parallel Pipe to Male 37° SAE



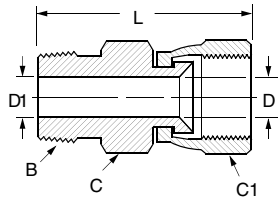
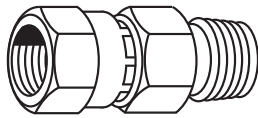
TUBE O.D.	BSPP PIPE SIZE	CATALOG NUMBER	BSPP THREAD B	L	HEX C
1/4	1/8	MB5315x4x2	1/8-28	1.10	5/8
1/4	1/4	MB5315x4x4	1/4-19	1.24	3/4
5/16	1/4	MB5315x5x4	1/4-19	1.24	3/4
3/8	1/4	MB5315x6x4	1/4-19	1.25	3/4
3/8	3/8	MB5315x6x6	3/8-19	1.31	7/8
1/2	3/8	MB5315x8x6	3/8-19	1.48	7/8
1/2	1/2	MB5315x8x8	1/2-14	1.67	1-1/8
5/8	3/4	MB5315x10x12	3/4-14	1.83	1-3/8
3/4	3/4	MB5315x12x12	3/4-14	1.93	1-3/8
1	1	MB5315x16x16	1-11	2.20	1-3/4
1-1/4	1-1/4	MB5315x20x20	1-1/4-11	2.32	2

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# BSP Connectors

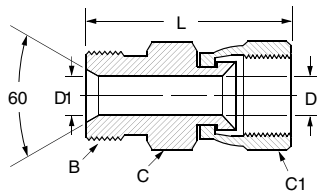
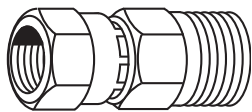
## Female 37° SAE Swivel to Male British Standard Tapered Pipe Thread



TUBE O.D.	BSPT PIPE	CATALOG NUMBER SIZE	BSPT PIPE	HEX SIZE	HEX C1	D	D1	L
1/4	1/4	M9800x4x4	1/4	9/16	9/16	.172	.281*	1.56
5/16	1/4	M9800x5x4	1/4	11/16	5/8	.234	.281*	1.63
3/8	1/4	M9800x6x4	1/4	11/16	11/16	.297	.281	1.69
1/2	1/4	M9800x8x4	1/4	7/8	7/8	.391	.281	1.87
1/2	3/8	M9800x8x6	3/8	7/8	7/8	.391	.406*	1.87
1/2	1/2	M9800x8x8	1/2	7/8	7/8	.391	.531*	2.06
5/8	1/2	M9800x10x8	1/2	1	1	.484	.531*	2.11
3/4	1/2	M9800x12x8	1/2	1-1/8	1-1/4	.609	.531	2.21
3/4	3/4	M9800x12x12	3/4	1-1/8	1-1/4	.609	.719*	2.24
1	3/4	M9800x16x12	3/4	1-3/8	1-1/2	.845	.719	2.39
1	1	M9800x16x16	1	1-3/8	1-1/2	.845	.938*	2.55
1-1/4	1-1/4	M9800x20x20	1-1/4	1-7/8	2	1.079	1.125*	2.73

\*Optional counterbore.

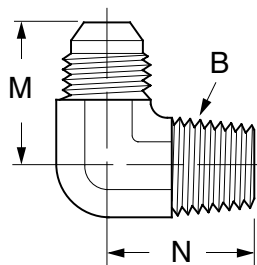
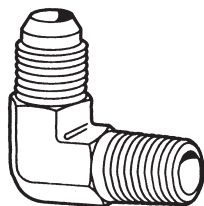
## Female 37° SAE Swivel to Male British Standard Parallel Pipe Thread



TUBE O.D.	BSPP PIPE	CATALOG NUMBER SIZE	BSPT PIPE	HEX SIZE	HEX C1	D	D1	L
1/4	1/4	M9600x4x4	1/4	9/16	9/16	.172	.198*	1.43
5/16	1/4	M9600x5x4	1/4	5/8	11/16	.234	.198	1.50
3/8	1/4	M9600x6x4	1/4	11/16	11/16	.297	.198	1.56
3/8	3/8	M9600x6x6	3/8	11/16	11/16	.297	.322*	1.66
1/2	3/8	M9600x8x6	3/8	7/8	7/8	.391	.322	1.77
1/2	1/2	M9600x8x8	1/2	7/8	7/8	.391	.448*	1.92
5/8	1/2	M9600x10x8	1/2	1	1	.484	.448	1.97
3/4	3/4	M9600x12x12	3/4	1-1/4	1-1/8	.609	.666*	2.25
1	1	M9600x16x16	1	1-1/2	1-3/8	.845	.885*	2.48
1-1/4	1-1/4	M9600x20x20	1-1/4	2	1-7/8	1.078	1.125*	2.64

\*Optional counterbore.

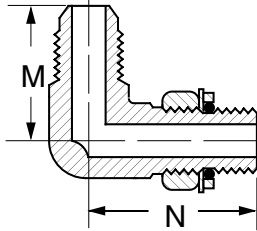
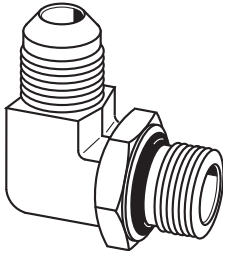
## Male British Standard Tapered Pipe to Male SAE 37° SAE 90° Elbow



TUBE O.D.	BSPT PIPE SIZE	CATALOG NUMBER	BSPT THREAD B	M	N	ACROSS FLATS
1/4	1/4	MC5405x4x4	1/4-19	1.05	1.09	7/16
5/16	1/4	MC5405x5x4	1/4-19	1.05	1.09	1/2
3/8	1/4	MC5405x6x4	1/4-19	1.06	1.09	9/16
3/8	3/8	MC5405x6x6	3/8-19	1.14	1.22	3/4
1/2	3/8	MC5405x8x6	3/8-19	1.25	1.22	3/4
1/2	1/2	MC5405x8x8	1/2-14	1.33	1.47	7/8
5/8	3/4	MC5405x10x12	3/4-14	1.54	1.59	1-1/16
3/4	3/4	MC5405x12x12	3/4-14	1.66	1.59	1-1/16
1	1	MC5405x16x16	1-11	1.81	1.97	1-5/16
1-1/4	1-1/4	MC5405x20x20	1-1/4-11	2.06	2.38	1-5/8

# BSP Connectors

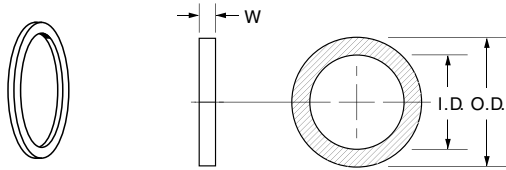
## Male British Standard Parallel Pipe to Male 37° SAE 90° Elbow



TUBE O.D.	BSPP PIPE SIZE	CATALOG NUMBER	BSPP THREAD	M	N	ACROSS FLATS
1/4	1/4	MB5515x4x4	1/4-19	1.05	1.25	9/16
5/16	1/4	MB5515x5x4	1/4-19	.95	1.25	9/16
3/8	1/4	MB5515x6x4	1/4-19	1.06	1.25	9/16
3/8	3/8	MB5515x6x6	3/8-19	1.14	1.45	3/4
1/2	3/8	MB5515x8x6	3/8-19	1.25	1.45	3/4
1/2	1/2	MB5515x8x8	1/2-14	1.33	1.70	7/8
5/8	3/4	MB5515x10x12	3/4-14	1.34	1.94	1-1/16
3/4	3/4	MB5515x12x12	3/4-14	1.66	1.94	1-1/16
1	1	MB5515x16x16	1-11	1.81	2.05	1-5/16
1-1/4	1-1/4	MB5515x20x20	1-14-11	2.06	2.25	1-5/8

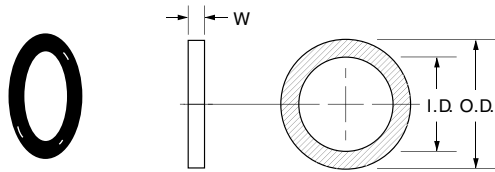
Replacement retaining rings and O-Rings see below.

## British Retaining Ring



TUBE O.D.	CATALOG NUMBER	RING	RING I.D.	W O.D.
1/8	MB7630x2	.45	.60	.044
1/4	MB7630x4	.63	.81	.067
3/8	MB7630x6	.77	.93	.067
1/2	MB7630x8	.91	1.12	.067
5/8	MB7630x10	1.00	1.24	.067
3/4	MB7630x12	1.12	1.37	.067
1	MB7630x16	1.44	1.74	.092
1-1/4	MB7630x20	1.76	2.18	.092
1-1/2	MB7630x24	2.02	2.43	.092

## British O-Ring



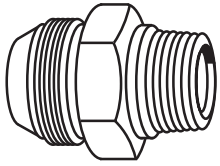
**Material:**  
Buna N 90 Durometer

**Temperature Range:**  
-40°F to +250°F  
(-40°C to +121°C)

TUBE O.D.	CATALOG NUMBER	W	I.D.
1/8	MB7629x2	.070	.239
1/4	MB7629x4	.103	.424
3/8	MB7629x6	.103	.549
1/2	MB7629x8	.103	.695
5/8	MB7629x10	.103	.818
3/4	MB7629x12	.103	.924
1	MB7629x16	.139	1.171
1-1/4	MB7629x20	.139	1.484

# Special Adapters

## AC8111 Connector (Steel)



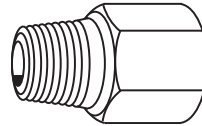
TUBE SIZE	MALE PIPE THREAD	CATALOG NUMBER
1 (1-5/16-14)	3/4	C9240

1 (1-5/16-14)	1	C9200
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**APPLICATION:** PTT Thread 30° tube to male pipe adapter for Diesel Engines

## Restriction Pipe Adapter (Brass)

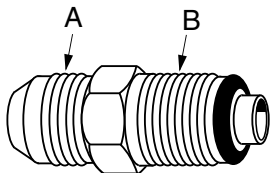
With .0625 Orifice



MALE PIPE SIZE	FEM. PIPE THREAD	CATALOG NUMBER
1/8	1/8	1512

## JIC 37° Flare to O-Ring Port (Steel)

Includes O-Ring

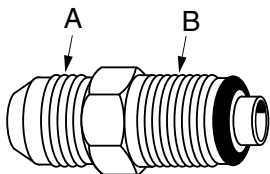


TUBE SIZE	THREAD A	THREAD B	CATALOG NUMBER
1/4	7/16-20	7/16-24	41157x4
3/8	9/16-18	5/8-18	41157x6
1/2	3/4-16	3/4-16	41157x8
5/8	7/8-14	7/8-14	41157x10
3/4	1-1/16-12	1-1/16-16	41157x12

Includes O-Ring.

## JIC 37° Flare to Metric O-Ring Port Adapter (Steel)

Includes O-Ring



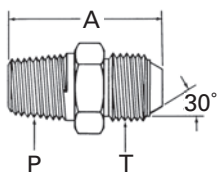
TUBE SIZE	THREAD A	THREAD B	CATALOG NUMBER
3/8	M14x1.5	9/16-18	M41157x6x14
3/8	M16x1.5	9/16-18	M41157x6x16
3/8	M18x1.5	9/16-18	M41157x6x18

Includes O-Ring.

**Application:** GM power steering with Saginaw steering and rack and pinion steering systems.

## Male Pipe to 30° Flare

### Part No. 2004- (Dash Size)



DASH SIZE	TUBE O.D.		THREAD P (NPTF)	THREAD T	A	
	mm	inches			mm	inches
16-16S	25,4	1.00	1 - 11 <sup>1</sup> / <sub>2</sub>	1 <sup>5</sup> / <sub>16</sub> - 14	51,6	2.03



# Steel Flareless Ermeto Connectors

## Typical Application:

Hydraulic, instrumentation and chemical processing. Highly recommended for high pressure and high vibration applications.

**Pressure:** See chart below.

**Sealing Method:**  
3-piece bite-type.

**Vibration Rating:**  
Excellent resistance

**Material:** Carbon steel–, Stainless steel– Bodies and nuts type 316, sleeves 17-4PH

**Used With:** Aluminum, hard or half-hard copper, steel, stainless steel, monel, titanium and heavy wall tubing that cannot be flared.

**Advantages:** No tube flaring. Used with extra heavy wall tubing. Broad selection of styles and sizes.

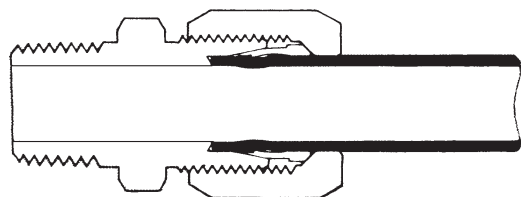
## Conformance:

Meets ASA, ASME, SAE, and MS specifications and standards.

## Ordering Information:

Connectors are ordered as complete assemblies. To order bodies only (less nut and sleeve), prefix catalog number with the letter "B." Example: B7205x4. Order nuts and sleeves separately by catalog number.

**Label Set:** FS-1600



<b>Tube O.D.</b>	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1	1-1/4	1-1/2	2
<b>Thread</b>	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18	3/4-16	7/8-14	1-1/16-12	1-3/16-12	1-5/16-12	1-5/8-12	1-7/8-12	2-1/2-12

## Ermeto Connectors 7000 Series Pressure Rating Chart

CONNECTION TYPE	END HOSE												
	1/8	3/16	1/4	5/16	3/8	1/2	3/4	5/8	7/8	1	1-1/4	1-1/2	2
<b>Ermeto Connectors</b>	5000	5000	5000	5000	5000	4000	4000	4000	4000	4000	3000	3000	3000
<b>W/Adjustable Straight Thread O-Ring</b>	5000	5000	4500	4000	4000	4000	3000	3000	2500	2500	2000	1500	1125
<b>With Male Pipe</b>	5000		5000		5000	4000		4000		4000	3000	2500	2500
<b>With Female Pipe</b>	5000		5000		4000	3000		2500		2000	1500	1500	1000

## Preset with Preset Tool:

(Preset Tools are listed on page 389.)

- Slide nut and then sleeve on tube. Shoulder of sleeve 'A' must be toward nut.
- Insert tube into presetting tool. Be sure that tube is bottomed on fitting tube stop at point 'B'. Lubricate threads, seat of fitting and shoulder of sleeve with good grade of lubricant.
- Turn nut slowly with wrench while turning tube with other hand. When the sleeve grips the tube, that is, when the tube can no longer be turned by hand – STOP – and note the position of the wrench. This is the "Ring Grip" point. Tighten nut an additional number of turns past the ring grip point as shown in Table 1, page 316.

**CAUTION:** All stainless steel sleeves should be preset in tool prior to installation.

## Preset in Fitting Body

- Follow same procedure as when presetting with preset tool. Once the fitting nut has been turned the proper number of turns past ring grip, the fitting assembly is complete and ready for use.

### Note:

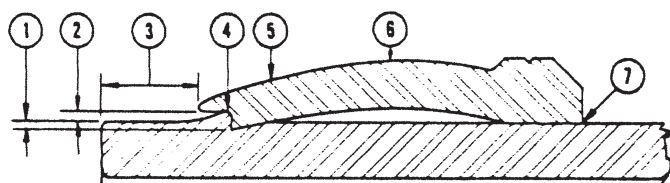
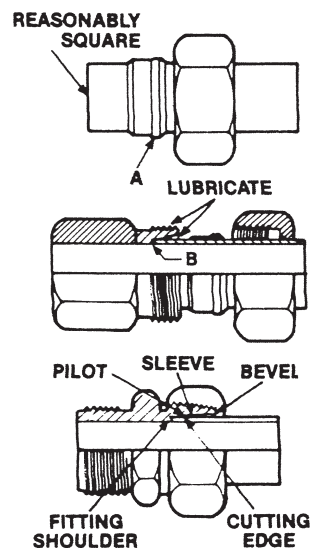
Only carbon steel sleeves can be preset directly into the fitting body. Due to possible thread galling, the use of presetting tools is required when stainless steel Connectors are to be assembled.

## WARNING

Follow the installation procedures below with care to ensure proper installation of Ermeto Connectors.

## Installation:

- After sleeve and nut have been preset on the tubing and checked as described, the assembly is ready for installation into the Ermeto connector seat.
- Lubricate threads, seat of fitting and shoulder of sleeve with a good grade of lubricant compatible with system fluid.
- Insert tube assembly into fitting and tighten nut until sharp rise in torque is felt.
- Starting at the position of sharp torque rise, tighten nut 1/4 turn to complete the assembly.

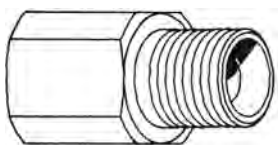


# Steel Flareless Ermeto Connectors

TABLE 1

Number of Additional Turns from "Ring Grip" for Hand Presetting Operation – Ermeto Sleeve

TUBE SIZE	**TUBE MATERIAL	.018	.022	.028	.035	.049	.065	.083	.095	.109	.120
2	C1010	1-1/6	1-1/6	1-1/6	1-1/6						
	MIL T 8504	1-1/6	1-1/6	1-1/6	1-1/6						
3	C1010 1-1/6	1-1/6	1-1/6	1							
	MIL T 8504	1-1/6	1-1/6	1-1/6	1						
4	C1010			1-1/6	1-1/6	1-1/6	1				
	MIL T 8504			1-1/6	1	1	5/6				
5	C1010			1-1/6	1-1/6	1-1/6	1				
	MIL T 8504			1-1/6	1-1/6	1	1				
6	C1010				1-1/6	1-1/6	1	1			
	MIL T 8504				1-1/6	1	5/6	5/6			
8	C1010				1-1/6	1-1/6	1	1	1		
	MIL T 8504				1-1/6	1	5/6	5/6	5/6		
10	C1010					1-1/6	1	5/6	5/6	5/6	5/6
	MIL T 8504					1-1/6	1	5/6	5/6	5/6	5/6
12	C1010				1	1	5/6	5/6	5/6	5/6	5/6
	MIL T 8504				1-1/6	1	5/6	5/6	5/6	5/6	5/6
16	C1010				1-1/6	1-1/6	5/6	5/6	5/6	5/6	5/6
	MIL T 8504				1-1/6	1-1/6	5/6	5/6	5/6	5/6	5/6
20	C1010				1-1/6	1	1	1	5/6	5/6	5/6
	MIL T 8504				1	1	1	1	5/6	5/6	5/6
24	C1010								1	1	1
	MIL T 8504								1	1	1
32	C1010								1	1	1
	MIL T 8504								1	1	1



Presetting tools provide a more accurate and positive leakproof method of coupling flareless Connectors. Presetting steel Ermeto sleeves on tubing prior to the fitting assembly will permit the maximum high performance obtainable with flareless Connectors. Due to possible thread galling the use of presetting tools is required when stainless steel Connectors are to be assembled. See page 431 for T-570-1 hydraulic preset machine.

### Ermeto Hand-Presetting Tools 7000 Series

CATALOG NUMBER	SEAT SIZE	TUBE O.D. (INCHES)	THREAD SIZE
T-7002	2	1/8	5/16-24
T-7003	3	3/16	3/8-24
T-7004	4	1/4	7/16-20
T-7005	5	5/16	1/2-20
T-7006	6	3/8	9/16-18
T-7008	8	1/2	3/4-16
T-7010	10	5/8	7/8-14
T-7012	12	3/4	1-1/16-12
T-7016	16	1	1-5/16-12
T-7020	20	1-1/4	1-5/8-12
T-7024	24	1-1/2	1-7/8-12
T-7032	32	2	2-1/2-12

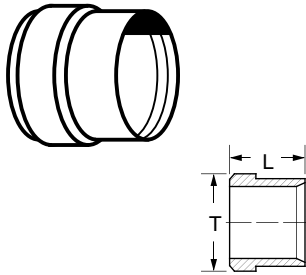
# Steel Connectors

• Available in Stainless Steel.

## Steel Flareless Ermeto Connectors

### Sleeve

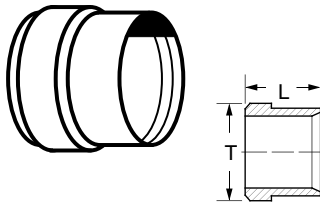
Stainless Steel No. 7176x  
(Ref. SAE No. 080115B)



TUBE O.D.	CATALOG NUMBER	L	DIA. T
1/8	7165x2•	.28	.20
3/16	7165x3•	.28	.31
1/4	7165x4•	.34	.36
5/16	7165x5•	.34	.42
3/8	7165x6•	.38	.48
1/2	7165x8•	.38	.63
5/8	7165x10•	.42	.75
3/4	7165x12•	.42	.88
7/8	7165x14•	.42	1.00
1	7165x16•	.42	1.13
1-1/4	7165x20•	.42	1.41
1-1/2	7165x24•	.42	1.66
2	7165x32•	.45	2.19

### Sleeve

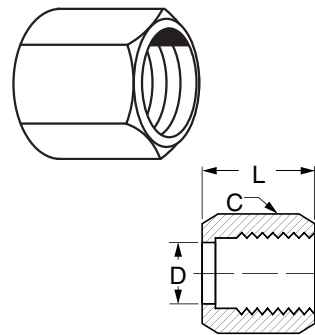
(For use with diesel nuts only)



TUBE O.D.	CATALOG NUMBER	L	DIA. T
1/4	8165x4	.34	.38
5/16	8165x5	.34	.44
3/8	8165x6	.38	.50

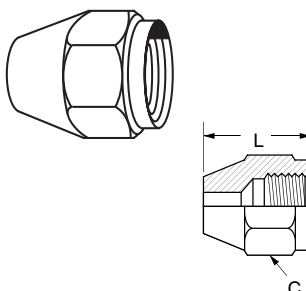
### Nut

Stainless Steel No. 7117x  
(Ref. SAE No. 080110)



TUBE O.D.	CATALOG NUMBER	HEX C	L	D DIA.
1/8	7105x2•	3/8	.53	.132
3/16	7105x3•	7/16	.61	.195
1/4	7105x4•	9/16	.70	.257
5/16	7105x5•	5/8	.72	.320
3/8	7105x6•	11/16	.75	.382
1/2	7105x8•	7/8	.84	.508
5/8	7105x10•	1	.92	.634
3/4	7105x12•	1-1/4	.97	.759
7/8	7105x14•	1-3/8	1.00	.884
1	7105x16•	1-1/2	1.05	1.009
1-1/4	7105x20•	2	1.05	1.263
1-1/2	7105x24•	2-1/4	1.03	1.513
2	7105x32•	2-7/8	1.12	2.017

### Diesel Nut



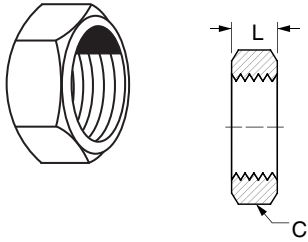
TUBE O.D.	THREAD SIZE	CATALOG NUMBER	HEX C	L
1/4	9/16-18	8112x4	3/4	.94
5/16	5/8-18	8112x5	13/16	1.00
3/8	3/4-16	8112x6	15/16	1.13

# Steel Connectors

## Steel Flareless Ermeto Connectors

### Bulkhead Nut

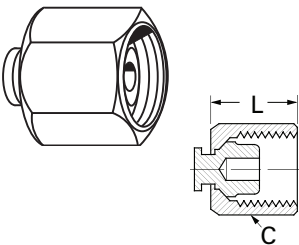
Stainless Steel No. 7936x  
(Ref. SAE No. 080118)



TUBE O.D.	CATALOG NUMBER	HEX C	L
1/4	7924x4•	11/16	.28
3/8	7924x6•	13/16	.27
1/2	7924x8•	1	.31
5/8	7924x10	1-1/8	.36
3/4	7924x12•	1-3/8	.41
7/8	7924x14	1-1/2	.41
1	7924x16•	1-5/8	.41
1-1/4	7924x20	1-7/8	.41

### Cap

Stainless Steel No. 7141x  
(Ref. SAE No. 080112)

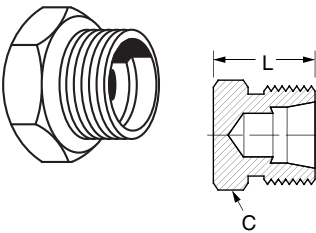


TUBE O.D.	CATALOG NUMBER	HEX C	L
1/4	7129x4•	9/16	.70
3/8	7129x6•	11/16	.75
1/2	7129x8•	7/8	.84
5/8	7129x10•	1	.92
3/4	7129x12•	1-1/4	.97
1	7129x16•	1-1/2	1.05
1-1/4	7129x20	2	1.05

•7141x2 also available

### Plug

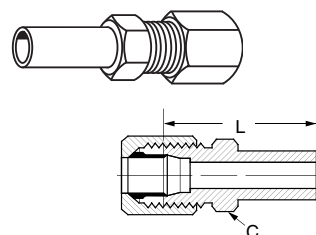
Stainless Steel No. 7241x  
(Ref. SAE No. 080109)



TUBE O.D.	CATALOG NUMBER	HEX C	L
1/8	7229x2	7/16	.63
1/4	7229x4•	1/2	.71
5/16	7229x5	9/16	.71
3/8	7229x6•	5/8	.75
1/2	7229x8•	13/16	.85
5/8	7229x10	15/16	.97
3/4	7229x12•	1-1/8	1.10
1	7229x16	1-3/8	1.10

### Reducer

Stainless Steel No. 7027x  
(Ref. SAE No. 080123)



BODY SIZE T	TUBE SIZE E	CATALOG NUMBER	HEX C	L
3/8	1/4	7015x6x4•	1/2	1.61
1/2	1/4	7015x8x4•	9/16	1.73
1/2	3/8	7015x8x6•	5/8	1.77
5/8	1/2	7015x10x8•	13/16	1.96
3/4	3/8	7015x12x6•	13/16	1.93
3/4	1/2	7015x12x8•	13/16	2.03
1	3/4	7015x16x12•	1-1/8	2.24
1-1/4	1	7015x20x16•	1-3/8	2.28

•7027x16x8 also available

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

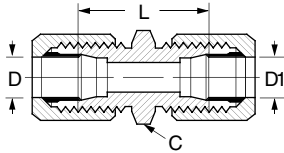
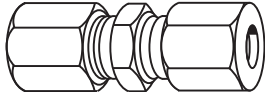
# Steel Connectors

• Available in Stainless Steel.

## Steel Flareless Ermeto Connectors

### Small Hex Union

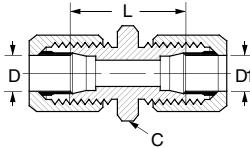
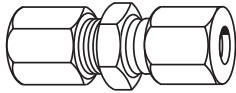
Stainless Steel No. 7317x  
(Ref. SAE No. 080101)



TUBE O.D.	TUBE O.D.	CATALOG NUMBER	HEX C	D	D1	L
1/8	1/8	7305x2•	7/16	.093	.093	1.02
3/16	3/16	7305x3•	7/16	.125	.125	1.11
1/4	1/4	7305x4•	1/2	.203	.203	1.18
5/16	5/16	7305x5•	9/16	.234	.234	1.18
3/8	1/4	7305x6x4•	5/8	.281	.203	1.22
3/8	3/8	7305x6•	5/8	.281	.281	1.24
1/2	3/8	7305x8x6	13/16	.422	.281	1.33
1/2	1/2	7305x8•	13/16	.422	.422	1.42
5/8	5/8	7305x10•	15/16	.500	.500	1.61
3/4	3/4	7305x12•	1-1/8	.656	.656	1.81
7/8	7/8	7305x14	1-1/4	.718	.718	1.81
1	1	7305x16•	1-3/8	.875	.875	1.81
1-1/4	1-1/4	7305x20	1-11/16	1.093	1.093	1.89
1-1/2	1-1/2	7305x24	2	1.344	1.344	1.96
2	2	7305x32	2-5/8	1.813	1.813	2.11

### Large Hex Union

Stainless Steel No. 7318x  
(Ref. SAE No. 080119)

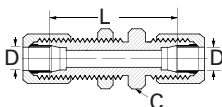
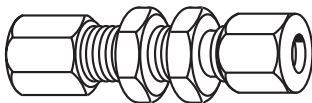


TUBE O.D.	TUBE O.D.	CATALOG NUMBER	HEX C	D	D1	L
1/4	1/4	7306x4•	11/16	.203	.203	1.18
3/8	3/8	7306x6•	13/16	.281	.281	1.24
1/2	3/8	7306x8x6•	1	.422	.281	1.33
1/2	1/2	7306x8•	1	.422	.422	1.42
3/4	3/4	7306x12•	1-3/8	.656	.656	1.81
1	1	7306x16	1-5/8	.875	.875	1.81

•7318x6x4 also available

### Bulkhead Union

Stainless Steel No. 7337x  
(Ref. SAE No. 080601)



TUBE O.D.	CATALOG NUMBER	HEX C	D	L
1/4	7325x4•	11/16	.203	1.89
3/8	7325x6•	13/16	.281	1.98
1/2	7325x8•	1	.422	2.22
3/4	7325x12•	1-3/8	.656	2.72
1	7325x16	1-5/8	.875	2.72

For bulkhead nuts see page 318.

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

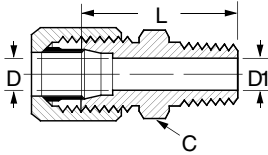
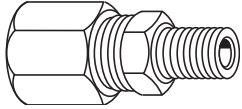
TECHNICAL DATA

# Steel Connectors

## Steel Flareless Ermeto Connectors

### Male Connector

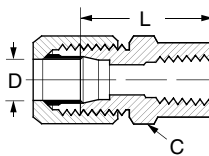
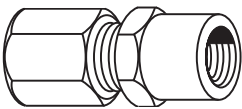
Stainless Steel No. 7217x  
(Ref. SAE No. 080102)



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	HEX C	D	D1 OPT.	L
1/8	1/8	7205x2•	7/16	.093	.188	1.04
1/8	1/4	7205x2x4•	9/16	.093	.281	1.25
3/16	1/8	7205x3•	7/16	.125	.188	1.09
1/4	1/8	7205x4•	1/2	.203	.188	1.12
1/4	1/4	7205x4x4•	9/16	.203	.281	1.32
1/4	3/8	7205x4x6•	3/4	.203	.406	1.33
1/4	1/2	7205x4x8•	7/8	.203	.531	1.58
5/16	1/8	7205x5•	9/16	.234	.188	1.12
5/16	1/4	7205x5x4•	9/16	.234	.281	1.32
3/8	1/8	7205x6x2•	5/8	.281	.188	1.15
3/8	1/4	7205x6•	5/8	.281	.281	1.34
3/8	3/8	7205x6x6•	3/4	.281	.406	1.35
3/8	1/2	7205x6x8•	7/8	.281	.531	1.60
1/2	1/4	7205x8x4•	13/16	.422	.281	1.44
1/2	3/8	7205x8•	13/16	.422	.406	1.44
1/2	1/2	7205x8x8•	7/8	.422	.531	1.69
1/2	3/4	7205x8x12•	1-1/8	.422	.719	1.76
5/8	3/8	7205x10x6•	15/16	.500	.406	1.56
5/8	1/2	7205x10•	15/16	.500	.531	1.75
3/4	1/2	7205x12x8•	1-1/8	.656	.531	1.88
3/4	3/4	7205x12•	1-1/8	.656	.719	1.88
7/8	3/4	7205x14•	1-1/4	.718	.719	1.88
1	3/4	7205x16x12•	1-3/8	.875	.719	1.88
1	1	7205x16•	1-3/8	.875	.938	2.07
1-1/4	1-1/4	7205x20	1-11/16	1.093	1.250	2.18
1-1/2	1-1/2	7205x24	2	1.344	1.500	2.28
2	2	7205x32	2-5/8	1.813	1.938	2.46

### Female Connector

Stainless Steel No. 7267x  
(Ref. SAE No. 080103)



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER	HEX C	D	L
1/8	1/8	7255x2•	9/16	.093	1.05
3/16	1/8	7255x3•	9/16	.125	1.08
1/4	1/8	7255x4•	9/16	.203	1.09
1/4	1/4	7255x4x4•	3/4	.203	1.20
5/16	1/8	7255x5•	9/16	.234	1.08
3/8	1/4	7255x6•	3/4	.281	1.31
3/8	3/8	7255x6x6•	7/8	.281	1.40
1/2	1/4	7255x8x4•	7/8	.422	1.38
1/2	3/8	7255x8•	7/8	.422	1.47
1/2	1/2	7255x8x8•	1-1/8	.422	1.63
5/8	1/2	7255x10	1-1/8	.500	1.76
3/4	3/4	7255x12•	1-3/8	.656	1.89
7/8	3/4	7255x14	1-3/8	.718	1.86
1	1	7255x16•	1-5/8	.875	2.13
1-1/4	1-1/4	7255x20	2	1.093	2.22

• 7267x6x8 also available

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

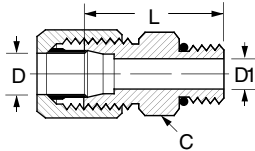
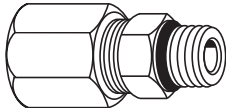
# Steel Connectors

• Available in Stainless Steel.

## Steel Flareless Ermeto Connectors

### Straight Thread O-Ring Connector

Stainless Steel No. 7327x  
(Ref. SAE No. 080120)

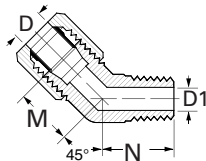
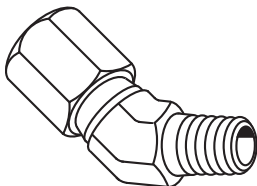


Replacement O-rings page 325.

TUBE O.D.	PORT SIZE	CATALOG NUMBER	HEX C	D	L	D1 OPT.
3/16	3/16	7315x3	1/2	.125	1.04	–
1/4	1/4	7315x4•	9/16	.203	1.13	–
1/4	5/16	7315x4x5•	5/8	.203	1.13	–
1/4	3/8	7315x4x6•	11/16	.203	1.19	.281
5/16	5/16	7315x5	5/8	.234	1.13	–
3/8	3/8	7315x6•	11/16	.281	1.21	–
3/8	1/2	7315x6x8	7/8	.281	1.29	.422
1/2	1/2	7315x8•	7/8	.422	1.38	–
1/2	5/8	7315x8x10	1	.422	1.51	.500
1/2	3/4	7315x8x12•	1-1/4	.422	1.67	.656
5/8	5/8	7315x10•	1	.500	1.57	–
3/4	3/4	7315x12•	1-1/4	.656	1.79	–
3/4	1	7315x12x16	1-1/2	.656	1.82	.876
7/8	7/8	7315x14	1-3/8	.718	1.79	–
1	3/4	7315x16x12	1-1/2	.875	1.82	.656
1	1	7315x16•	1-1/2	.875	1.82	–
1-1/4	1-1/4	7315x20	1-7/8	1.093	1.90	–
1-1/2	1-1/2	7315x24	2-1/8	1.344	1.97	–
2	2	7315x32	2-3/4	1.813	2.13	–

### 45° Male Elbow

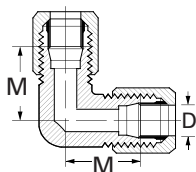
Stainless Steel No. 7367x  
(Ref. SAE No. 080302)



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/8	7355x4•	.203	.188	.70	.64	7/16
1/4	1/4	7355x4x4•	.203	.281	.83	.86	9/16
5/16	1/8	7355x5	.234	.188	.75	.64	9/16
3/8	1/4	7355x6•	.281	.281	.83	.86	9/16
1/2	3/8	7355x8•	.422	.406	.98	.95	3/4
5/8	1/2	7355x10	.500	.531	1.08	1.17	7/8
3/4	3/4	7355x12	.656	.719	1.27	1.20	1-1/16
1	1	7355x16	.875	.938	1.36	1.48	1-5/16

### 90° Union Elbow

Stainless Steel No. 7517x  
(Ref. SAE No. 080201)



TUBE O.D.	CATALOG NUMBER	D	M	ACROSS FLATS
1/4	7505x4•	.203	.89	7/16
5/16	7505x5	.234	.95	1/2
3/8	7505x6•	.281	1.05	9/16
1/2	7505x8•	.422	1.25	3/4
5/8	7505x10•	.500	1.42	7/8
3/4	7505x12•	.656	1.58	1-1/16
7/8	7505x14•	.718	1.66	1-5/16
1	7505x16•	.875	1.73	1-5/16
1-1/4	7505x20	1.093	1.89	1-5/8
1-1/2	7505x24	1.346	2.02	1-7/8

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & TUBE HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

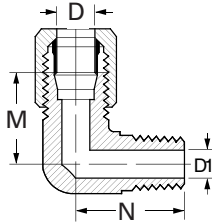
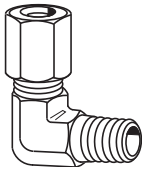


# Steel Connectors

## Steel Flareless Ermeto Connectors

### 90° Male Elbow

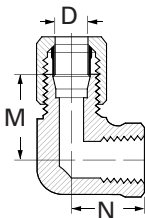
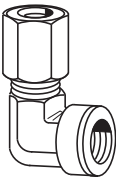
Stainless Steel No. 7417x  
(Ref. SAE No. 080202)



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/8	1/8	7405x2•	.093	.188	.77	.72	7/16
3/16	1/8	7405x3	.125	.188	.83	.72	7/16
1/4	1/8	7405x4•	.203	.188	.89	.78	7/16
1/4	1/4	7405x4x4•	.203	.281	1.03	1.09	9/16
5/16	1/8	7405x5•	.234	.188	.95	.81	1/2
5/16	1/4	7405x5x4•	.234	.281	1.03	1.09	9/16
3/8	1/8	7405x6x2•	.281	.188	1.05	.90	9/16
3/8	1/4	7405x6•	.281	.281	1.05	1.09	9/16
3/8	3/8	7405x6x6•	.281	.406	1.16	1.22	3/4
3/8	1/2	7405x6x8•	.281	.531	1.24	1.47	7/8
1/2	1/4	7405x8x4•	.422	.281	1.25	1.22	3/4
1/2	3/8	7405x8•	.422	.406	1.25	1.22	3/4
1/2	1/2	7405x8x8•	.422	.531	1.35	1.47	7/8
5/8	3/8	7405x10x6•	.500	.406	1.42	1.28	7/8
5/8	1/2	7405x10•	.500	.531	1.42	1.47	7/8
3/4	1/2	7405x12x8	.656	.531	1.58	1.59	1-1/16
3/4	3/4	7405x12•	.656	.719	1.58	1.59	1-1/16
7/8	3/4	7405x14	.718	.719	1.62	1.69	1-5/16
1	3/4	7405x16x12	.875	.719	1.73	1.78	1-5/16
1	1	7405x16•	.875	.938	1.73	1.97	1-5/16
1-1/4	1-1/4	7405x20	1.093	1.250	1.89	2.38	1-5/8
1-1/2	1-1/2	7405x24	1.344	1.500	2.02	2.64	1-7/8
2	2	7405x32	1.813	1.938	2.45	3.00	2-9/16

### 90° Female Elbow

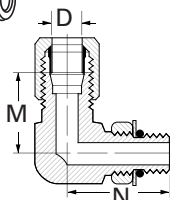
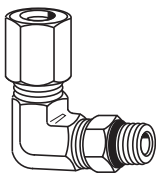
Stainless Steel No. 7467x  
(Ref. SAE No. 080203)



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER	D	M	N	ACROSS FLATS
1/4	1/8	7455x4•	.203	.89	.66	9/16
1/4	1/4	7455x4x4•	.203	1.03	.88	3/4
3/8	1/4	7455x6•	.281	1.05	.88	3/4
3/8	3/8	7455x6x6•	.281	1.14	1.02	7/8
1/2	3/8	7455x8•	.422	1.23	1.02	7/8
1/2	1/2	7455x8x8•	.422	1.35	1.23	1-1/16
5/8	1/2	7455x10•	.500	1.42	1.23	1-1/16
3/4	3/4	7455x12•	.656	1.58	1.36	1-5/16
7/8	3/4	7455x14	.718	1.66	1.42	1-5/16
1	1	7455x16	.875	1.73	1.62	1-5/8

### 90° Elbow - Straight Thread O-Ring

Stainless Steel No. 7527x  
(Ref. SAE No. 080220)



TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	M	N	ACROSS FLATS
1/4	1/4	7515x4•	.203	.89	1.03	7/16
5/16	5/16	7515x5	.234	.96	1.13	9/16
3/8	3/8	7515x6•	.281	1.05	1.25	9/16
1/2	1/2	7515x8•	.422	1.25	1.45	3/4
5/8	5/8	7515x10•	.500	1.42	1.70	7/8
3/4	3/4	7515x12•	.656	1.58	1.94	1-1/16
1	3/4	7515x16x12	.875	1.73	2.05	1-5/16
1	1	7515x16•	.875	1.73	2.05	1-5/16
1-1/4	1-1/4	7515x20	1.093	1.89	2.25	1-5/8

Replacement O-rings page 325.

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

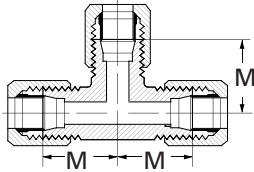
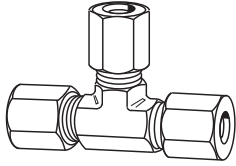
# Steel Connectors

• Available in Stainless Steel.

## Steel Flareless Ermeto Connectors

### Union Tee

Stainless Steel No. 7717x  
(Ref. SAE No. 080401)

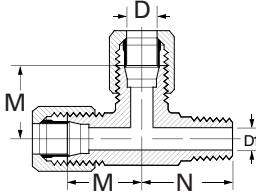
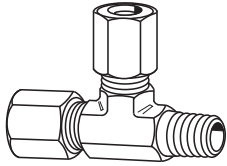


TUBE O.D.	CATALOG NUMBER	D	M	ACROSS FLATS
3/16	7705x3	.125	.83	7/16
1/4	7705x4•	.203	.89	7/16
5/16	7705x5•	.234	.95	9/16
3/8	7705x6•	.281	1.05	9/16
1/2	7705x8•	.422	1.25	3/4
5/8	7705x10•	.500	1.42	7/8
3/4	7705x12•	.656	1.58	1-1/16
7/8	7705x14	.718	1.62	1-5/16
1	7705x16•	.875	1.73	1-5/16

\*7717x

### Male Run Tee

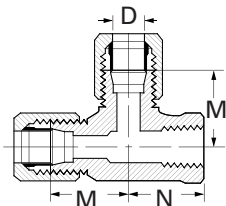
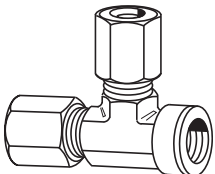
Stainless Steel No. 7767x  
(Ref. SAE No. 080424)



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/8	7755x4•	.203	.188	.89	.78	7/16
1/4	1/4	7755x4x4x4•	.203	.281	1.03	1.09	9/16
3/8	1/4	7755x6•	.281	.281	1.05	1.09	9/16
1/2	3/8	7755x8	.422	.422	1.25	1.22	3/4
1/2	1/2	7755x8x8x8•	.422	.531	1.35	1.47	7/8
5/8	1/2	7755x10	.500	.531	1.42	1.47	7/8
3/4	3/4	7755x12	.656	.719	1.58	1.59	1-1/16
1	1	7755x16	.875	.938	1.73	1.97	1-5/16

### Female Run Tee

(Ref. SAE No. 080426)



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER	D	M	N	ACROSS FLATS
1/4	1/8	7805x4	.203	.89	.66	9/16
1/4	1/4	7805x4x4x4	.203	1.03	.88	3/4
3/8	1/4	7805x6	.281	1.05	.88	3/4
1/2	3/8	7805x8	.422	1.23	1.02	7/8
5/8	1/2	7805x10	.500	1.42	1.23	1-1/16
3/4	3/4	7805x12	.656	1.58	1.36	1-5/16

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

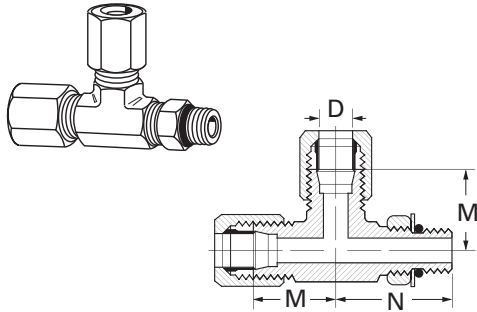
TECHNICAL DATA

# Steel Connectors

## Steel Flareless Ermeto Connectors

### Straight Thread O-Ring Run Tee

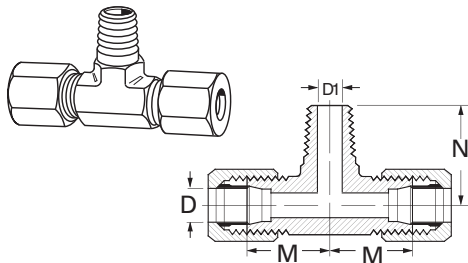
Stainless Steel No. 7716x  
(Ref. SAE No. 080428)



TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	M	N	ACROSS FLATS
1/4	1/4	7716x4•	.203	.89	1.03	7/16
3/8	3/8	7716x6•	.281	1.05	1.25	9/16
1/2	1/2	7716x8•	.422	1.25	1.45	3/4

### Male Branch Tee

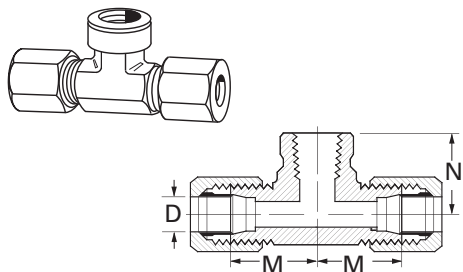
Stainless Steel No. 7605x  
(Ref. SAE No. 080425)



TUBE O.D.	MALE PIPE THD.	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/8	7605x4•	.203	.188	.89	.78	7/16
1/4	1/4	7605x4x4x4•	.203	.281	1.03	1.09	9/16
5/16	1/8	7605x5	.234	.188	.95	.81	9/16
3/8	1/4	7605x6•	.281	.281	1.05	1.09	9/16
1/2	3/8	7605x8•	.422	.406	1.25	1.22	3/4
1/2	1/2	7605x8x8x8•	.422	.531	1.35	1.47	7/8
5/8	1/2	7605x10	.500	.531	1.42	1.47	7/8
3/4	3/4	7605x12	.656	.719	1.58	1.59	1-1/16
1	1	7605x16	.875	.938	1.73	1.97	1-5/16

### Female Branch Tee

Stainless Steel No. 7655x  
(Ref. SAE No. 080427)



TUBE O.D.	FEMALE PIPE THD.	CATALOG NUMBER	D	M	N	ACROSS FLATS
1/4	1/8	7655x4•	.203	.89	.66	9/16
1/4	1/4	7655x4x4x4•	.203	1.03	.88	3/4
3/8	1/4	7655x6•	.281	1.05	.88	3/4
1/2	3/8	7655x8•	.422	1.23	1.02	7/8
5/8	1/2	7655x10	.500	1.42	1.23	1-1/16
3/4	3/4	7655x12	.656	1.58	1.36	1-5/16
7/8	3/4	7655x14	.718	1.62	1.42	1-5/16
1	1	7655x16	.875	1.73	1.62	1-5/8
1-1/4	1-1/4	7655x20	1.093	2.08	1.70	1-7/8

APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA

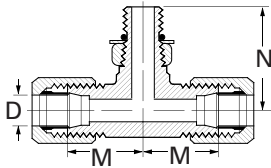
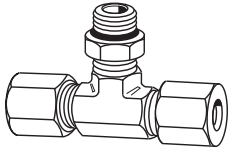
# Steel Connectors

• Available in Stainless Steel.

## Steel Flareless Ermeto Connectors

### Straight Thread O-Ring Branch Tee

Stainless Steel No. 7727x  
(Ref. SAE No. 080429)

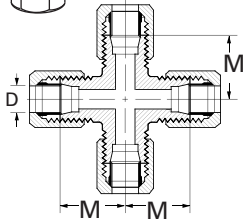
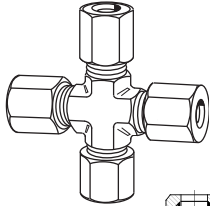


TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	M	N	ACROSS FLATS
1/4	1/4	7715x4*	.203	.89	1.03	7/16
3/8	3/8	7715x6*	.281	1.05	1.25	9/16
1/2	1/2	7715x8	.422	1.25	1.45	3/4

Replacement O-rings see below.

### Cross

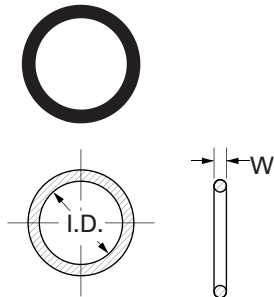
Stainless Steel No. 7967x  
(Ref. SAE No. 080501)



TUBE O.D.	CATALOG NUMBER	D	M	ACROSS FLATS
1/4	7955x4*	.203	.89	9/16
3/8	7955x6*	.281	1.05	9/16
1/2	7955x8	.422	1.25	3/4

\*Brazed construction.

### Straight Thread O-Ring



Material: Buna-N 90 Durometer

Temperature Range:

-40°F to +250°F  
(-40°C to +121°C)

Standard O-ring complies with  
SAE J515 Type CH.

TUBE O.D.	CATALOG NUMBER	W	I.D.
1/16	7629x1	.058 ± .003	.185 ± .005
1/8	7629x2	.064 ± .003	.239 ± .005
3/16	7629x3	.064 ± .003	.301 ± .005
1/4	7629x4	.072 ± .003	.351 ± .005
5/16	7629x5	.072 ± .003	.414 ± .005
3/8	7629x6	.078 ± .003	.468 ± .005
7/16	7629x7	.082 ± .003	.530 ± .005
1/2	7629x8	.087 ± .003	.644 ± .005
5/8	7629x10	.097 ± .003	.755 ± .005
3/4	7629x12	.116 ± .004	.924 ± .006
7/8	7629x14	.116 ± .004	1.048 ± .006
1	7629x16	.116 ± .004	1.171 ± .006
1-1/4	7629x20	.118 ± .004	1.475 ± .010
1-1/2	7629x24	.118 ± .004	1.720 ± .010
2	7629x32	.118 ± .004	2.337 ± .010

# Steel Connectors

## Ready-Lok Adapters

### Adapter Series:

Ready-Lok Adapters.

### Typical Application:

General purpose low, medium, and high pressure hydraulics. Generally found in mining operations.

**Pressure:** For use in hydraulic systems up to and including SAE 100R12 pressures.

**Material:** Carbon steel

**Plating:** Zinc

**Advantages:** Easy installation. Just lock components together with Ready-Lok staples. Threadless design simplifies field service and cuts maintenance costs.

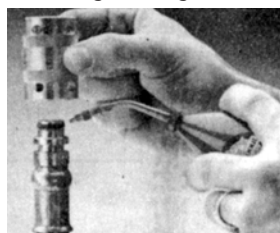
### Ordering Information:

Order individually by catalog number.

**Label Set:** FS-2200

### Assembly instructions

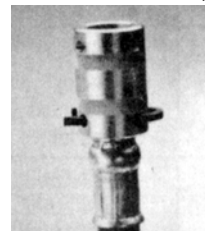
1. Lubricate the male Ready-Lok fitting (including O-Ring).



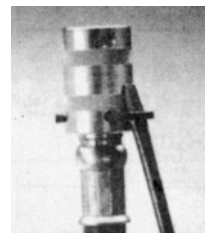
2. Assemble male fitting into fe-male adapter until it bottoms. O-Ring will engage in internal mating surface. Insert staple into adapter.



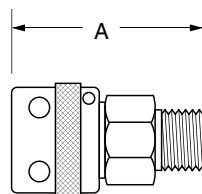
3. When the staple is inserted through the adapter and engages the shoulder of the hose end as shown, the Ready-Lok connection is complete.



4. To disassemble, remove the staple and disengage the hose assembly.

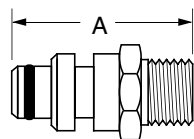


### Male Pipe To Female Ready-Lok Swivel-Straight



READY-LOK CONNECTOR SIZE	MALE PIPE THREAD	CATALOG NUMBER	A	HEX
1/4	1/4	2008x4S	2.13	3/4
3/8	3/8	2008x6S	2.19	15/16
1/2	1/2	2008x8S	2.51	1-1/8
3/4	3/4	2008x12S	2.49	1-5/16
1	1	2008x16S	3.12	1-11/16
1-1/4	1-1/4	2008x20S	3.17	2-1/8

### Male Pipe To Male Ready-Lok Straight



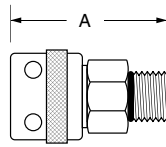
READY-LOK CONNECTOR SIZE	MALE PIPE THREAD	CATALOG NUMBER	A	HEX
1/4	1/4	2013x4S	1.91	5/8
3/8	3/8	2013x6S	1.91	13/16
1/2	1/2	2013x8S	2.16	1
3/4	3/4	2013x12S	2.23	1-3/16
1	1	2013x16S	2.72	1-9/16
1-1/4	1-1/4	2013x20S	2.81	1-7/8

# Steel Connectors

Note: Order staples separately.

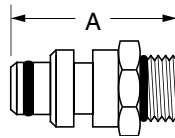
## Ready-Lok Adapters

### Male Straight Thread O-Ring To Female Ready-Lok Swivel Straight



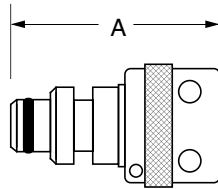
READY-LOK CONNECTOR SIZE	TUBE SIZE	CATALOG NUMBER	STRAIGHT THREAD SIZE	A	
				HEX	
3/8	3/8	2020x6S	9/16-18	2.02	15/16
1/2	1/2	2020x8S	3/4-16	2.20	1-1/8
3/4	3/4	2020x12S	1-1/16-12	2.33	1-5/16
1	1	2020x16S	1-5/16-12	2.78	1-11/16

### Male Straight Thread O-Ring To Male Ready-Lok Straight



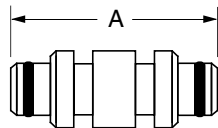
READY-LOK CONNECTOR SIZE	TUBE SIZE	CATALOG NUMBER	STRAIGHT THREAD SIZE	A
1	1	2012x16S	1-15/16-12	2.37

### Male Ready-Lok To Female Ready-Lok Swivel-Straight



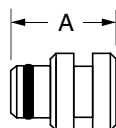
READY-LOK MALE CONNECTOR SIZE	READY-LOK FEMALE CONNECTOR SIZE	CATALOG NUMBER	A
1/2	3/8	2015x8x6S	2.16
3/4	1/2	2015x12x8S	2.25
1-1/4	3/4	2015x20x12S	2.43
1-1/4	1	2015x20x16S	2.79

### Male Ready-Lok To Male Ready-Lok Straight



READY-LOK CONNECTOR SIZE	CATALOG NUMBER	A
3/8	2016x6S	2.20
1/2	2016x8S	2.20
3/4	2016x12S	2.20
1	2016x16S	2.63
1-1/4	2016x20S	2.63

### Male Ready-Lok Plug



READY-LOK CONNECTOR SIZE	CATALOG NUMBER	A
3/8	2017x6S	1.33
3/4	2017x12S	1.33
1	2017x16S	1.61
1-1/4	2017x20S	1.61

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

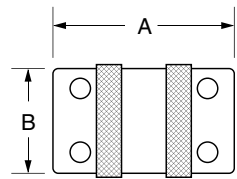
TECHNICAL DATA

# Steel Connectors

Note: Order staples separately.

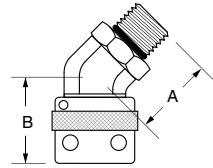
## Ready-Lok Adapters

### Ready-Lok Female Connector



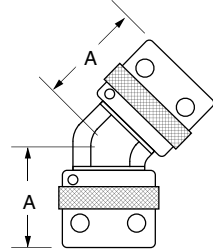
READY-LOK CONNECTOR SIZE	CATALOG NUMBER	A	B
1/4	2004x4S	2.17	1.000
3/8	2004x6S	2.17	1.250
1/2	2004x8S	2.17	1.438
1	2004x16S	2.50	2.125

### 45° Elbow Male Straight Thread O-Ring To Female Ready-Lok Swivel



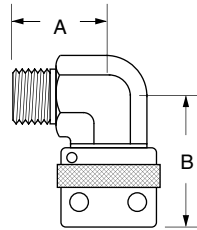
READY-LOK CONNECTOR SIZE	TUBE SIZE	CATALOG NUMBER	STRAIGHT THREAD SIZE	A	B
1	1	2010x16S	1-5/16-12	1.79	2.04

### 45° Elbow Female Ready-Lok Swivel Connector



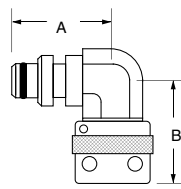
READY-LOK CONNECTOR SIZE	CATALOG NUMBER	A
1-1/4	2006x20S	2.01

### Male Pipe To Female Ready-Lok Swivel 90° Elbow



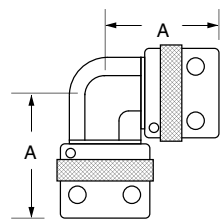
READY-LOK CONNECTOR SIZE	MALE PIPE THREAD	CATALOG NUMBER	A	B
3/8	3/8	2009x6S	1.21	1.69
1/2	1/2	2009x8S	1.49	1.83
1	1	2009x16S	2.01	2.50

### 90° Elbow Male Ready-Lok To Female Ready-Lok



READY-LOK CONNECTOR SIZE	CATALOG NUMBER	A	B
1/4	2014x4S	1.66	1.55
3/8	2014x6S	1.76	1.66
1/2	2014x8S	1.83	1.84
1-1/4	2014x20S	2.52	2.59

### 90° Elbow Female Ready-Lok Swivel Connector



READY-LOK CONNECTOR SIZE	CATALOG NUMBER	A
3/8	2005x6S	1.69
1/2	2005x8S	1.84
3/4	2005x12S	1.94
1	2005x16S	2.50
1-1/4	2005x20S	2.59



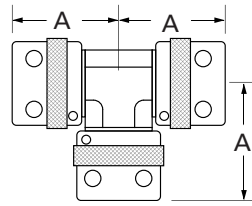
# Steel Connectors

## Ready-Lok Adapters

Note: Order staples separately.

APPLICATION  
DATA

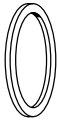
### Female Ready-Lok



READY-LOK CONNECTOR SIZE	CATALOG NUMBER	A
3/8	2007x6S	1.72

LOW & MEDIUM  
PRESSURE HOSE

### Ready-Lok Back-up Ring



Material: Nylon 6/6

READY-LOK CONNECTOR SIZE	CATALOG NUMBER
3/8	2019x6S
1/2	2019x8S
3/4	2019x12S
1	2019x16S
1-1/4	2019x20S

### Ready-Lok Staple



READY-LOK CONNECTOR SIZE	CATALOG NUMBER
3/8	2003x6
1/2	2003x8
1	2003x16
1-1/4	2003x20

HIGH PRESSURE HOSE

SPECIALTY HOSE

### Ready-Lok O-Ring



Material: Buna-N 90 Durometer

#### Temperature Range:

-40°F to +250°F  
(-40°C to + 121°C)

Standard O-Ring complies with SAE specifications SAE J515 Type CH (Intro to adapter section page 243)

READY-LOK CONNECTOR SIZE	CATALOG NUMBER
1/4	2018x4S
3/8	2018x6S
1/2	2018x8S
3/4	2018x12S
1	2018x16S
1-1/4	2018x20S

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE  
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HOSE ASSEMBLY  
EQUIPMENT

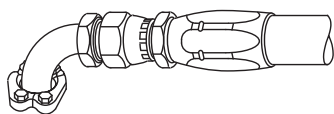
TECHNICAL DATA

# Steel Connectors

## Split Flange Adapters and Kits

### Adapter Used With Standard Female Swivel End

(SAE Code 61)



Weatherhead split flange adapter eliminates the need for special hose ends. Interconnect pumps and valves with SAE flange outlets using low cost standard hose assemblies to replace equipment hose outlets. **Material:** Low carbon steel.

**Plating:** Zinc

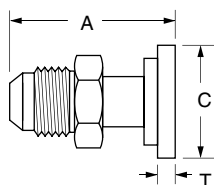
**Pressure:** Code 61 – 3000 PSI working pressure (32 sizes 2500 PSI W.P.).

**Label Set:** FS-300

**Note:**

See page 376 for hydraulic O-ring assortment

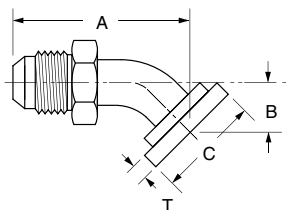
### Straight



TUBE SIZE	CODE 61 FLANGE SIZE	CATALOG NUMBER	A	DIA. C	T	THREAD SIZE
1/2	1/2	50008	2.66	1.188	.265	3/4-16
1/2	3/4	50008x12	2.72	1.500	.265	3/4-16
3/4	3/4	50012	2.62	1.500	.265	1-1/16-12
1	1	50016	2.74	1.750	.315	1-5/16-12
1	1-1/4	50016x20	2.74	2.000	.315	1-5/16-12
1-1/4	1	50020x16	2.80	1.750	.315	1-5/8-12
1-1/4	1-1/4	50020	3.27	2.000	.315	1-5/8-12
1-1/2	1-1/2	50024	3.42	2.375	.315	1-7/8-12
2	2	50032	4.24	2.812	.375	2-1/2-12

O-Ring not included.

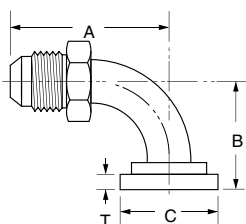
### 45° Elbow



TUBE SIZE	CODE 61 FLANGE SIZE	CATALOG NUMBER	A	B	DIA. C	T	THREAD SIZE
1/2	1/2	54508	2.91	.78	1.188	.265	3/4-16
1/2	3/4	54508x12	2.93	.84	1.500	.265	3/4-16
3/4	3/4	54512	3.28	1.03	1.500	.265	1-1/16-12
1	1	54516	3.61	1.06	1.750	.315	1-5/16-12
1	1-1/4	54516x20	3.61	1.06	2.000	.315	1-5/16-12
1-1/4	1	54520x16	3.67	1.06	1.750	.315	1-5/8-12
1-1/4	1-1/4	54520	3.86	1.15	2.000	.315	1-5/8-12
1-1/2	1-1/2	54524	4.61	1.41	2.375	.315	1-7/8-12
2	2	54532	6.04	2.00	2.812	.375	2-1/2-12

O-Ring not included.

### 90° Elbow



TUBE SIZE	CODE 61 FLANGE SIZE	CATALOG NUMBER	A	B	DIA. C	T	THREAD SIZE
1/2	1/2	59008	2.54	1.63	1.188	.265	3/4-16
1/2	3/4	59008x12	2.54	1.69	1.500	.265	3/4-16
3/4	3/4	59012	2.81	2.13	1.500	.265	1-1/16-12
1	1	59016	3.41	2.38	1.750	.315	1-5/16-12
1	1-1/4	59016x20	3.41	2.38	2.000	.315	1-5/16-12
1-1/4	1	59020x16	3.46	2.38	1.750	.315	1-5/8-12
1-1/4	1-1/4	59020	3.71	2.62	2.000	.315	1-5/8-12
1-1/2	1-1/2	59024	4.33	3.12	2.375	.315	1-7/8-12
2	2	59032	5.71	4.50	2.812	.375	2-1/2-12

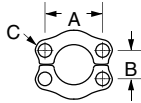
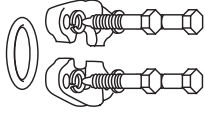
O-Ring not included.

# Steel Connectors

## Split Flange Adapters and Kits

### Split Flange Kits – SAE Standard

Pressure Series  
(Code 61) SAE J518



**O-Ring Material:**  
Buna-N 90 Durometer

**Temperature Range:**  
-40°F to +250°F  
(-40°C to + 121°C)

Standard O-Ring complies with SAE specification SAE J515 Type CH (See page 243 for O-Ring compound and application chart)

Included in kit.

NOMINAL FLANGE SIZE	CATALOG NUMBER COMPLETE KIT	Included in kit.				A	B	C	BOLT TORQUE RANGE LB.-IN.
		FLANGE HALVES 2 REQ'D.	O-RING	BOLTS	LOCK WASHER				
1/2	SFK-08	8x251	8x252	8x853	8x254	1.50	.69	11/32	175-225
3/4	SFK-12	12x251	12x252	12x853	12x254	1.88	.88	13/32	250-350
1	SFK-16	16x251	16x252	12x853	12x254	2.06	1.03	13/32	325-425
1-1/4	SFK-20	20x251	20x252	20x853	20x254	2.31	1.19	15/32	425-550
1-1/2	SFK-24	24x251	24x252	24x853	24x254	2.75	1.41	17/32	550-700
2	SFK-32	32x251	32x252	24x853	24x254	3.06	1.69	17/32	650-800

Flanges conform to SAE J518.

# Steel Connectors

## Split Flange Adapters and Kits

### Adapter Used With Standard Female Swivel End

(SAE Code 62)

Eaton split flange adapter eliminates the need for special hose ends. Interconnect pumps and valves with SAE flange outlets using low cost standard hose assemblies to replace original equipment hose assembly.

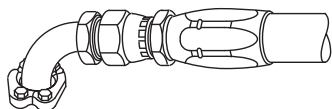
**Material:** Carbon steel.

**Plating:** Zinc, Yellow Dichromate finish.

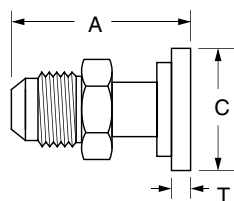
**Pressure:** Code 62 – 5000 PSI working pressure.

**Label Set:** FS-300

**Note:**  
See page 408 for hydraulic O-ring assortment.

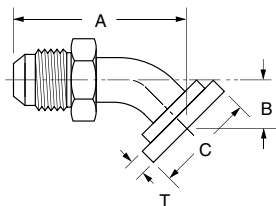


### Straight



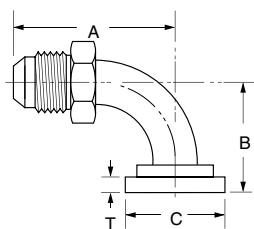
TUBE SIZE	CODE 62 FLANGE SIZE	CATALOG NUMBER	A	DIA. C	T	THREAD SIZE
1/2	1/2	60008	2.32	1.25	.305	3/4-16
3/4	3/4	60012	2.64	1.62	.345	1-1/16-12
1	1	60016	3.44	1.88	.375	1-5/16-12
1-1/4	1-1/4	60020	3.97	2.12	.405	1-5/8-12
1-1/2	1-1/2	60024	4.97	2.50	.495	1-7/8-12
2	2	60032	5.22	3.12	.495	2-1/2-12

### 45° Elbow



TUBE SIZE	CODE 62 FLANGE SIZE	CATALOG NUMBER	A	B	DIA. C	T	THREAD SIZE
1/2	1/2	64508	2.12	1.10	1.25	.305	3/4-16
3/4	3/4	64512	2.56	1.32	1.62	.345	1-1/16-12
1	1	64516	3.34	1.43	1.88	.375	1-5/16-12
1-1/4	1-1/4	64520	3.49	1.87	2.12	.405	1-5/8-12
1-1/2	1-1/2	64524	6.31	3.07	2.50	.495	1-7/8-12
2	2	64532	8.19	3.74	3.12	.495	2-1/2-12

### 90° Elbow



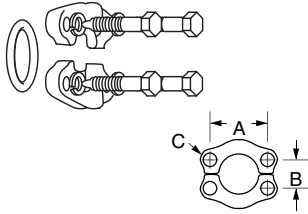
TUBE SIZE	CODE 62 FLANGE SIZE	CATALOG NUMBER	A	B	DIA. C	T	THREAD SIZE
1/2	1/2	69008	1.57	2.11	1.25	.305	3/4-16
3/4	3/4	69012	1.93	2.56	1.62	.345	1-1/16-12
1	1	69016	2.35	2.90	1.88	.375	1-5/16-12
1-1/4	1-1/4	69020	2.91	3.46	2.12	.405	1-5/8-12
1-1/2	1-1/2	69024	5.44	6.53	2.50	.495	1-7/8-12
2	2	69032	7.38	8.22	3.12	.495	2-1/2-12

# Steel Connectors

## Split Flange Adapters and Kits

### Split Flange Kits – SAE High Pressure Series

(Code 62) SAE J518



**O-Ring Material:**  
Buna-N 90 Durometer

**Temperature Range:**  
-40°F to +250°F  
(-40°C to + 121°C)

Standard O-Ring complies with SAE specifications SAE J515 Type CH (See page 243 for O-Ring compound and application chart)

**Note:**  
Code 62 split flange kits cannot be used with Thick Flange™ Hose Ends. Use existing split flanges.

Included in kit.

NOMINAL FLANGE SIZE	CATALOG NUMBER COMPLETE KIT	FLANGE HALVES 2 REQ'D.	Included in kit.			A	B	C	BOLT TORQUE RANGE LB.-IN.
			O-RING	BOLTS	LOCK WASHER				
1/2	SFK62-8	8x262	8x252	8x853	8x254	1.57	.72	5/16	175-225
3/4	SFK62-12	12x262	12x252	12x863	12x254	2.00	.94	13/32	300-400
1	SFK62-16	16x262	16x252	16x863	20x254	2.25	1.09	15/32	500-600
1-1/4	SFK62-20	20x262	20x252	20x863	24x254	2.63	1.25	17/32	750-900
1-1/2	SFK62-24	24x262	24x252	24x863	24x264	3.12	1.44	21/32	1400-1600
2	SFK62-32	32x262	32x252	32x863	32x264	3.81	1.75	25/32	2400-2600

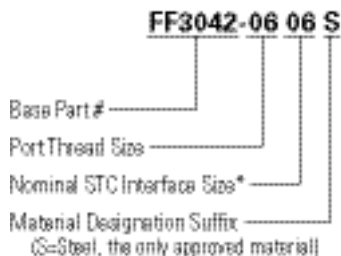
Flanges conform to SAE J518.

## How to Order STC Adapters

### STC Adapters:

First, state the base part number, then thread size, then the nominal STC interface size.

(For adapters add a "0" prefix to interface and port thread sizes 6 and 8.)



List o-ring material designation suffix; omit the "S" suffix if ordering alternate o-ring materials.

Buna-N (nitrile) is the standard o-ring in Female OTC Adapters; no suffix is needed for standard Buna-N.

EPR (Ethylene Propylene Rubber) = -212

Viton™ (Fluoroelastomer) = -213

Neoprene = -352

HNBR = -461

Example:

**FF3042-0606-213**

Viton is a registered trademark of E.I. DuPont.

## Seal Elastomer Data

SEAL ELASTOMER	APPLICATION SPECIFICATION	OPERATING TEMPERATURE RANGE
Buna-N/Nitrile	None	-40°F to +250°F (-40°C to +121°C)
EPR (Ethylene Propylene Rubber)	None	-65°F to +300°F (-55°C to +150°C)
Viton	MIL-R-25897	-15°F to +400°F (-25°C to +205°C)
Neoprene	None	-65°F to +300°F (-55°C to +150°C)
HNBR (Hydrogenated Nitrile Rubber)	None	-40°F to +300°F (-40°C to +150°C)

### Note:

Even though the seal temperature range can go below -40°F (-40°C) and/or above +300°F (+150°C), the temperature range of STC is -40°F to +300°F (-40°C to +150°C), due to the fact that the release sleeve is made out of HNBR.

## Performance Characteristics

### Leak-Free Connections in a Snap

#### Design Features

- Positive round-wire style latching mechanism
- Swivels for installation (in absence of pressure)
- Low profile; compact design
- Elastomeric o-ring seal – available in many materials
- Capable of direct porting into valve blocks or manifolds
- Dual purpose dust seal/release sleeve
- Simple stamped release tool for disconnecting

#### Benefits

- Fast reliable one-hand connections requiring no assembly tools
- Eliminates cross-threading, over or undertorquing, and hose twisting
- Installs easily in confined areas
- Zero leak performance per SAE J1176
- Direct porting eliminates adapters to maximize cost savings
- Resists external contamination
- Allows easy disconnection with release tool

### Operating Characteristics

INTERFACE SIZE	MAXIMUM OPERATING PRESSURE		MINIMUM BURST PRESSURE		VACUUM	
	PSI	Bar	PSI	Bar	in./Hg.	mm/Hg.
3/8"	5,000	345	20,000	1,380	29.5	750
1/2"	4,250	295	17,000	1,175	29.5	750
5/8"	4,000	275	16,000	1,100	29.5	750
3/4"	4,000	275	16,000	1,100	29.5	750
1"	4,000	275	16,000	1,100	29.5	750

### Technology Comparison

	THREADED FITTINGS	STC CONNECTORS
Assembly tools required	•	
Torque sensitive	•	
Limited reusability	•	
Virtually zero leakage		•
Fast, reliable connections		•
Ease of installation in confined areas – improved ergonomics		•
Ease of orienting hose ends		•
Compact design, install and remove in limited access areas		•



## What You Should Know About STC Connectors

1. The STC connection is not recommended for use in swivel applications. Rotation should be limited to assembly and disassembly when zero pressure is present.
2. The o-ring seal determines the temperature range and fluid compatibility of the STC connection except when exceeding the release sleeve operating temperature of 300°F.
3. Disconnection of the STC connection should be limited to situations where there is no pressure present.
4. Installation of the male STC connector must be made straight into the adapter and not at an angle. Misalignment during the connection results in a higher connect force.
5. If the release sleeve is damaged during the connection or disconnection of the STC connection, the male portion must be replaced – premature failure of the STC connection may result if the replacement is not made.
6. Do not use the rubber sleeve as leverage to push the male half into the female half of the STC connection.
7. Applications that involve vibration should be analyzed with the aid of Eaton prior to utilization.
8. After the STC connection is made, pull on the connection to make sure the male STC connector is properly inserted into the female STC connector.
9. The use of clamps is highly recommended for long hose assemblies that utilize STC connections; the clamp should be positioned close to the STC connection to prevent its rotation.
10. STC connection should not be used as a quick disconnect coupling.
11. Do not hold release sleeve during assembly.



*For your own safety, do not hold the release sleeve during assembly.*

**⚠ WARNING:**

*Do **NOT** disconnect STC connection when under pressure. Failure to observe the foregoing may result in property damage or personal injury.*

### STC Assembly Method and Verification

#### Assembly Method

Align the STC fitting on the hose assembly with the STC connector. Push the hose fitting into the mating connector until you feel a definite snap and a solid stop.



**Correct Method**

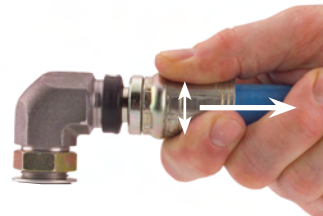


**Incorrect Method**

Do not hold sleeve during assembly

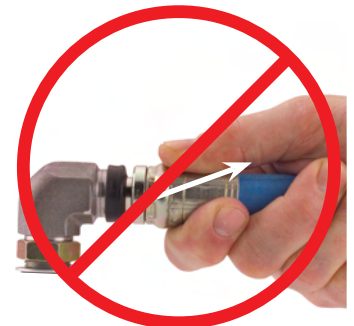
#### Assembly Verification

Verify that the STC connection has been made successfully by pulling on the connection to make sure that the male connector has been properly inserted into female connector. Be sure that the direction of pull is parallel to the axis of the STC connection.



**Correct Method**

Pulling parallel to the connections axis



**Incorrect Method**

Pulling at an angle to connections axis



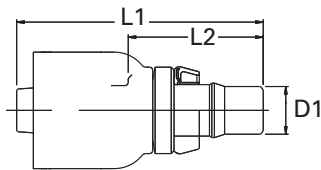
**Correct Method**

Pulling on the fitting such that the motion is parallel to the connections axis.

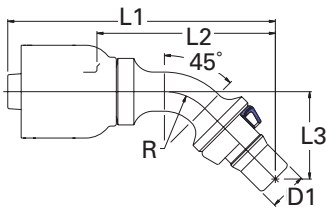


**Incorrect Method**

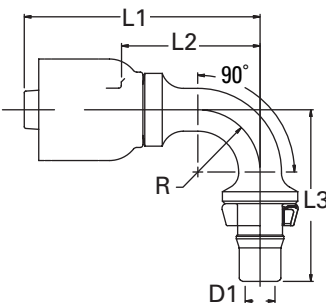
Subjecting the connection to a side-load by pulling on the hose.

**STC Crimp Hose Ends****Straight Male STC  
Hose End**

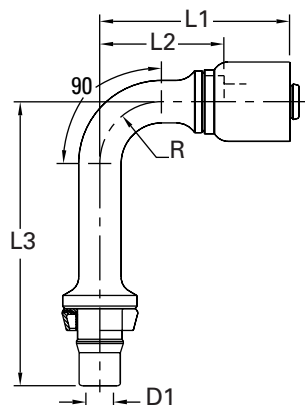
STRAIGHT PART NUMBER	D1		L1		L2	
	mm	in.	mm	in.	mm	in.
04Z-BC06	4,2	0.17	52,4	2.06	29,0	1.14
06Z-BC06	6,7	0.26	55,5	2.19	30,2	1.19
06Z-BC08	6,7	0.26	60,6	2.39	35,4	1.39
08Z-BC08	9,6	0.38	66,3	2.61	36,6	1.44
10Z-BC10*	12,8	0.50	69,0	2.72	39,6	1.56
12Z-BC12	15,5	0.61	74,6	2.94	44,4	1.75
16Z-BC16	20,7	0.82	83,7	3.30	49,3	1.94

**45° Male STC  
Hose End**

45° PART NUMBER	D1		L1		L2		L3		R	
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
04Z-BC46	4,2	0.17	69,8	2.75	46,4	1.83	22,2	0.86	14,0	0.55
06Z-BC46	6,7	0.26	72,9	2.87	47,6	1.87	22,2	0.87	14,0	0.55
08Z-BC48	8,8	0.35	89,9	3.54	60,2	2.37	29,6	1.17	19,0	0.75
10Z-BC50	11,5	0.45	97,8	3.85	68,4	2.69	33,6	1.32	22,0	0.87
12Z-BC52	13,9	0.55	110,2	4.34	80,0	3.15	40,7	1.60	31,0	1.22

**90° Male STC  
Hose End**

90° PART NUMBER	D1		L1		L2		L3		R	
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
06Z-BC66	6,7	0.26	59,3	2.33	34,0	1.34	39,6	1.56	14,0	0.55
06Z-BC68	6,7	0.26	66,4	2.61	41,1	1.62	53,0	2.09	19,0	0.75
08Z-BC68	8,8	0.35	72,0	2.83	42,3	1.67	53,0	2.09	19,0	0.75
10Z-BC70	11,5	0.45	77,9	3.07	48,5	1.91	60,4	2.36	22,0	0.87
12Z-BC72	13,9	0.55	88,7	3.49	58,5	2.30	75,7	2.98	31,0	1.22
16Z-BC76	19,9	0.78	107,3	4.22	72,9	2.87	90,0	3.54	38,0	1.50

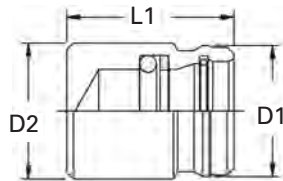
**Long Drop  
90° Male STC  
Hose End**

LONG DROP 90° PART NUMBER	D1		L1		L2		L3		R	
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
06Z-BC86	6,4	0.25	59,3	2.33	34,0	1.34	70,6	2.78	14,0	0.55
08Z-BC88	9,1	0.36	72,0	2.84	42,3	1.67	88,1	3.46	19,0	0.75
12Z-BC92	13,9	0.55	88,7	3.49	58,5	2.30	123,7	4.87	31,0	1.22

\* MTO Item

## Female STC Cap and Male STC Plug

### Female STC Cap

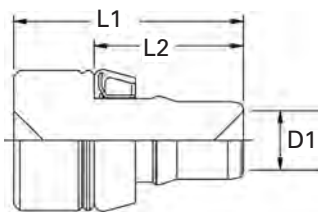


PART NUMBER	D1		L1		D2	
	mm	in.	mm	in.	mm	in.
FF90202-06S	17,0	0.67	18,0	0.71	21,1	0.83
FF90202-08S	20,3	0.80	21,0	0.83	26,8	1.06
FF90202-10S	24,4	0.96	25,0	0.99	33,0	1.30
FF90202-12S	31,3	1.24	32,0	1.26	36,7	1.45
FF90202-16S	39,0	1.54	50,9	2.00	41,0	1.61

**NOTE:**

Female STC cap can hold pressure equal to the operating pressure of the particular STC size.

### Male STC Plug



PART NUMBER	D1		L1		L2	
	mm	in.	mm	in.	mm	in.
FF90384-06S	6,8	0.27	31,2	1.23	19,2	0.76
FF90384-08S	9,7	0.38	37,5	1.48	24,4	0.96
FF90384-10S	11,5	0.45	42,4	1.68	27,2	1.08
FF90384-12S	15,6	0.62	46,8	1.85	31,6	1.25
FF90384-16S	20,6	0.81	51,9	2.05	36,0	1.42

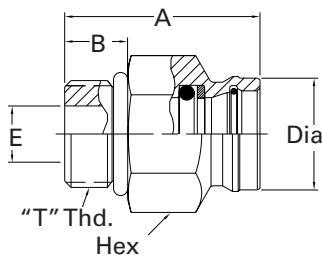
**NOTE:**

Male STC Plug can hold pressure equal to the operating pressure of the particular STC size.

**STC Adapters**  
**Male SAE O-Ring to Female STC**

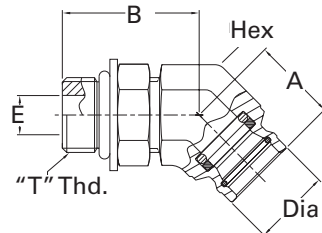
STC adapters come standard with nitrile O-rings. See page 334 for seal options.

**Straight FF3042**



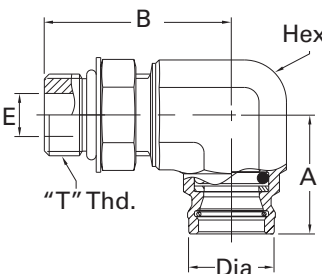
STRAIGHT PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3042-0406S	30,0	1.18	9,1	0.36	17,0	0.67	4,4	0.17	19,0	0.75	7/16-20 2A
FF3042-0606S	28,7	1.13	9,9	0.39	17,0	0.67	7,5	0.30	19,0	0.75	9/16-18 2A
FF3042-0608S	33,7	1.33	9,9	0.39	20,3	0.80	7,5	0.30	21,0	0.83	9/16-18 2A
FF3042-0806S	29,9	1.18	11,1	0.44	17,0	0.67	9,9	0.39	25,0	0.98	3/4-162A
FF3042-0808S	34,5	1.36	11,1	0.44	20,3	0.80	9,9	0.39	24,0	0.94	3/4-162A
FF3042-0810S	36,5	1.44	11,1	0.44	24,4	0.96	10,0	0.39	25,4	1.00	3/4-162A
FF3042-1008S	35,0	1.38	12,7	0.50	20,3	0.80	12,3	0.48	27,0	1.06	7/8-142A
FF3042-1010S	38,0	1.50	12,7	0.50	24,4	0.96	12,3	0.48	27,0	1.06	7/8-142A
FF3042-1012S	44,6	1.76	12,7	0.50	31,3	1.23	12,3	0.48	32,0	1.26	7/8-142A
FF3042-1210S	40,4	1.59	15,1	0.59	24,4	0.96	15,5	0.61	32,0	1.26	1 1/16-12 2A
FF3042-1212S	47,0	1.85	15,1	0.59	31,2	1.23	15,5	0.61	32,0	1.26	1 1/16-12 2A
FF3042-1616S	50,9	2.00	15,1	0.59	41,0	1.61	21,4	0.84	41,0	1.62	1 5/16-12 2A

**45° Adjustable  
FF3038**



45° PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3038-0406S	18,5	0.73	28,4	1.12	17,0	0.67	4,4	0.17	19,0	0.75	7/16-20 2A
FF3038-0606S	18,5	0.73	30,0	1.18	17,0	0.67	7,5	0.30	19,0	0.75	9/16-18 2A
FF3038-0808S	21,4	0.84	34,5	1.36	20,3	0.80	9,9	0.39	22,0	0.86	3/4-162A
FF3038-1010S	23,1	0.91	42,5	1.67	24,4	0.96	12,3	0.48	27,0	1.05	7/8-142A

**90° Adjustable  
FF3046**

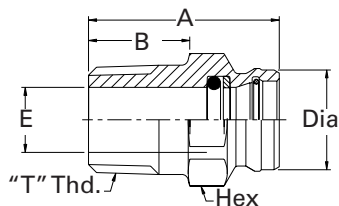


90° PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3046-0406S	27,7	1.09	32,8	1.29	17,0	0.67	4,4	0.17	19,0	0.75	7/16-20 2A
FF3046-0606S	27,7	1.09	35,6	1.40	17,0	0.67	7,5	0.30	19,0	0.75	9/16-18 2A
FF3046-0806S	27,5	1.08	43,2	1.70	17,0	0.67	9,9	0.39	22,0	0.86	3/4-162A
FF3046-0808S	27,5	1.08	43,2	1.70	20,3	0.80	9,9	0.39	22,0	0.86	3/4-162A
FF3046-1008S	30,9	1.22	50,0	1.97	20,3	0.80	12,3	0.48	22,0	0.86	7/8-142A
FF3046-1010S	31,8	1.25	48,2	1.90	24,4	0.96	12,3	0.48	27,0	1.05	7/8-142A
FF3046-1212S	38,1	1.50	55,5	2.18	31,2	1.23	15,5	0.61	32,0	1.25	1 1/16-12 2A
FF3046-1616S	46,4	1.83	63,5	2.50	41,0	1.61	21,5	0.85	41,0	1.62	1 5/16-12 A

## STC Adapters Male NPTF to Female STC

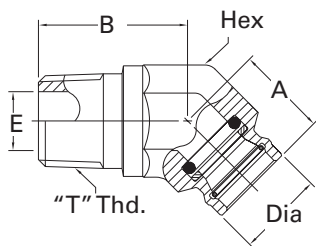
STC adapters come standard with nitrile O-rings. See page 334 for seal options.

### Straight FF3089



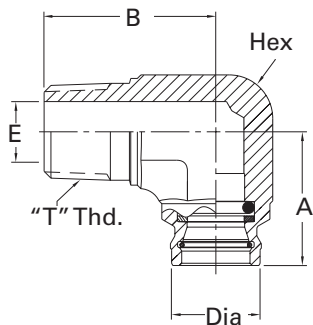
STRAIGHT PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3089-0406S	36,8	1.45	14,6	0.57	17,0	0.67	7,1	0.28	19,0	0.75	1/4-18
FF3089-0606S	36,8	1.45	14,6	0.57	17,0	0.67	10,3	0.41	19,0	0.75	3/8-18
FF3089-0608S	38,8	1.53	14,6	0.57	20,3	0.80	10,3	0.41	21,0	0.83	3/8-18
FF3089-0806S	41,6	1.64	19,4	0.76	17,0	0.67	9,7	0.38	22,2	0.88	1/2-14
FF3089-0808S	37,8	1.49	19,4	0.76	20,3	0.80	12,3	0.48	24,0	0.94	1/2-14
FF3089-0810S	43,9	1.73	19,4	0.76	24,4	0.96	13,5	0.53	25,4	1.00	1/2-14
FF3089-1210S	43,9	1.73	19,4	0.76	24,4	0.96	16,2	0.64	27,0	1.06	3/4-14
FF3089-1212S	44,6	1.76	19,4	0.76	31,3	1.23	18,3	0.72	32,0	1.26	3/4-14

### 45° FF3093



45° PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3093-0406S	18,8	0.74	26,7	1.05	17,0	0.67	7,1	0.28	19,0	0.75	1/4-18
FF3093-0606S	20,4	0.80	26,9	1.06	17,0	0.67	10,3	0.41	19,0	0.75	3/8-18
FF3093-0808S	25,6	1.01	34,0	1.34	20,3	0.80	13,5	0.53	22,0	0.86	1/2-14
FF3093-0810S	26,2	1.03	34,0	1.34	24,4	0.96	13,5	0.53	27,0	1.06	1/2-14
FF3093-1212S	32,0	1.28	35,0	1.38	31,2	1.23	18,3	0.72	32,0	1.26	3/4-14

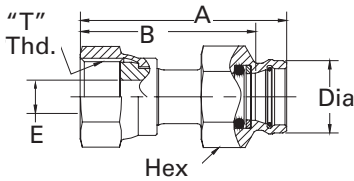
### 90° FF3056



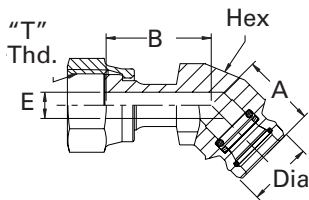
90° PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3056-0606S	27,7	1.09	27,5	1.08	17,0	0.67	10,3	0.41	19,0	0.75	3/8-18
FF3056-0608S	28,2	1.11	27,7	1.09	20,3	0.80	10,3	0.41	22,0	0.86	3/8-18
FF3056-0808S	29,8	1.17	38,4	1.51	20,3	0.80	13,5	0.53	22,0	0.86	1/2-14
FF3056-1212S	37,3	1.47	41,9	1.65	31,2	1.23	18,3	0.72	32,0	1.26	3/4-14

STC Adapters  
Female FOR-SEAL® to Female STC

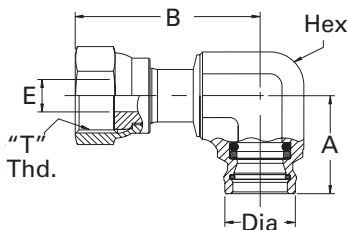
STC adapters come standard with nitrile O-rings. See page 334 for seal options.

**Straight FF3236**

STRAIGHT PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3236-0606S	50,8	2.00	18,2	0.72	19,0	0.75	6,7	0.26	19,0	0.75	11/16-16 2B
FF3236-0808S	45,5	1.79	22,1	0.87	20,3	0.80	9,1	0.36	24,0	0.95	1 3/16-16 2B

**45° FF3362**

45° PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3362-0606S	18,8	0.74	26,9	1.06	17,0	0.67	6,7	0.26	19,0	0.75	11/16-16 2B

**90° FF3246**

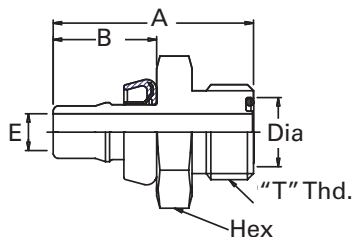
90° PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3246-0606S	27,7	1.09	40,6	1.60	16,5	0.65	6,7	0.26	19,0	0.75	11/16-16 2B
FF3246-0808S	27,5	1.08	51,9	2.04	19,8	0.78	9,1	0.36	22,0	0.86	13/16-16 2B



## STC Adapters Male FOR-SEAL® to Male STC

STC adapters come standard with nitrile O-rings. See page 334 for seal options.

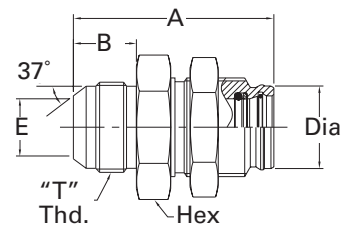
### Straight FF3318T



STRAIGHT PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3318T0606S	36,5	1.44	18,8	0.74	12,6	0.50	6,7	0.26	24,0	0.95	11/16-16

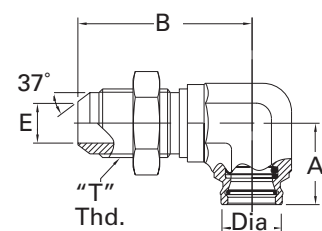
## STC Adapters SAE 37° Male Flare to Female STC, Bulkhead Adapters

### Straight FF3412



STRAIGHT PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3412-1612S	73,7	2.90	23,1	0.91	31,2	1.23	20,6	0.81	46,0	1.79	15/16-12 2A

### 90° Elbow FF3044

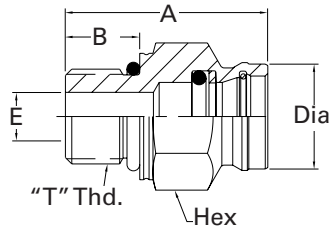


90° PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3044-1210S	31,8	1.25	67,8	2.67	24,4	0.96	15,5	0.61	27,0	1.06	11/16-16 2A
FF3044-1616S	46,4	1.83	64,5	2.54	41,0	1.61	21,4	0.84	41,0	1.61	15/16-12 2A

## STC Adapters Male ISO 6149 O-Ring Boss (S-Series) to Female STC

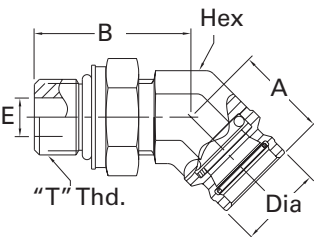
STC adapters come standard with nitrile O-rings. See page 334 for seal options.

### Straight FF3061



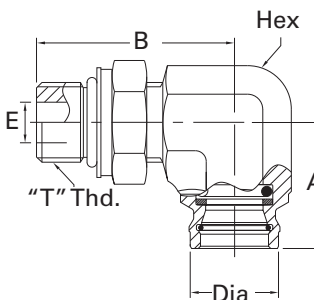
STRAIGHT PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3061-1006S	29,0	1.14	9,5	0.37	17,0	0.67	3,1	0.12	19,0	0.75	M10x1 6g
FF3061-1206S	30,5	1.20	11,0	0.43	17,0	0.67	4,1	0.16	19,0	0.75	M12x1.5 6g
FF3061-1406S	30,5	1.20	11,0	0.43	17,0	0.67	6,1	0.24	19,0	0.75	M14x1.5 6g
FF3061-1408S	34,8	1.37	11,0	0.43	20,3	0.80	6,1	0.24	21,0	0.82	M14x1.5 6g
FF3061-1606S	32,0	1.26	12,5	0.49	17,0	0.67	7,1	0.28	22,0	0.86	M16x1.5 6g
FF3061-1608S	36,3	1.43	12,5	0.49	20,3	0.80	7,1	0.28	22,0	0.86	M16x1.5 6g
FF3061-1610S	39,5	1.56	12,5	0.49	24,4	0.96	7,1	0.28	25,0	0.98	M16-1.5 6g
FF3061-1806S	33,5	1.32	14,0	0.55	17,0	0.67	9,1	0.36	24,0	0.94	M18-1.5 6g
FF3061-1808S	38,1	1.50	14,0	0.55	20,3	0.80	9,1	0.36	24,0	0.94	M18-1.5 6g
FF3061-1810S	39,4	1.55	14,0	0.55	24,4	0.96	9,1	0.36	25,0	0.98	M18-1.5 6g
FF3061-1812S	50,0	1.97	14,0	0.55	31,3	1.23	9,1	0.36	32,0	1.26	M18-1.5 6g
FF3061-2210S	40,4	1.59	15,0	0.59	24,4	0.96	12,1	0.48	27,0	1.06	M22-1.5 6g
FF3061-2212S	51,0	2.01	15,0	0.59	31,3	1.23	12,1	0.48	32,0	1.26	M22-1.5 6g

### 45° Adjustable FF3065



45° PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3065-1406S	18,8	0.74	31,4	1.24	17,0	0.67	6,1	0.24	19,0	0.75	M14-1.5 6g
FF3065-1606S	18,8	0.74	33,5	1.32	17,0	0.67	7,1	0.28	19,0	0.75	M16-1.5 6g
FF3065-1808S	21,6	0.85	37,0	1.46	20,3	0.80	9,1	0.36	22,0	0.87	M18-1.5 6g
FF3065-1810S	25,9	1.02	42,5	1.67	24,4	0.96	9,1	0.36	27,0	1.06	M18-1.5 6g
FF3065-2212S	31,2	1.23	44,0	1.73	31,2	1.23	12,1	0.48	32,0	1.25	M22-1.5 6g
FF3065-2712S	30,3	1.19	52,6	2.07	31,0	1.21	15,1	0.60	36,0	1.40	M27-2 6g

### 90° Adjustable FF3067

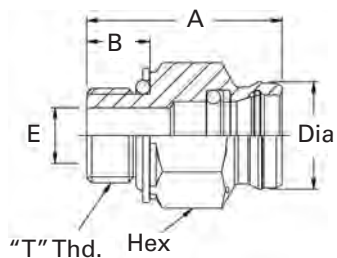


90° PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3067-1406S	24,9	0.98	35,5	1.40	17,0	0.67	6,1	0.24	19,0	0.75	M14-1.5 6g
FF3067-1606S	27,7	1.09	42,9	1.69	17,0	0.67	7,1	0.28	19,0	0.75	M16-1.5 6g
FF3067-1808S	28,2	1.11	44,3	1.74	20,3	0.80	9,1	0.36	22,0	0.87	M18-1.5 6g
FF3067-1810S	33,3	1.31	47,5	1.87	24,4	0.96	9,1	0.36	27,0	1.06	M18-1.5 6g
FF3067-2210S	33,3	1.31	49,0	1.93	24,4	0.96	12,1	0.48	27,0	1.06	M22-1.5 6g
FF3067-2212S	37,6	1.48	50,8	2.00	31,2	1.23	12,1	0.48	32,0	1.25	M22-1.5 6g
FF3067-2712S	37,6	1.48	55,5	2.18	31,2	1.23	15,1	0.60	32,0	1.26	M27-2 6g

**STC Adapters  
O-Ring Boss DIN 3852 Metric Male  
to Female STC**

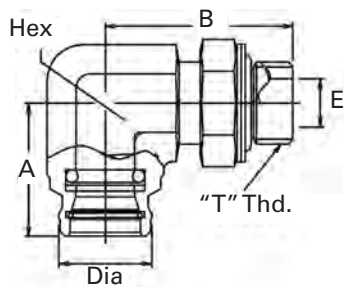
STC adapters come standard with nitrile O-rings. See page 334 for seal options.

**Straight FF3284**



STRAIGHT PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3284-1608S	37,5	1.48	12,0	0.47	20,3	0.80	8,5	0.34	22,1	0.88	M18-1.5 6g
FF3284-1808S	37,0	1.46	12,0	0.47	20,3	0.80	10,5	0.42	23,8	0.94	M18-1.5 6g
FF3284-2612S	48,4	1.91	15,4	0.61	31,3	1.24	15,0	0.60	36,0	1.42	M18-1.5 6g

**90° FF3286**



90° PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3286-1808S	28.8	(1.14)	40.8	(1.61)	20.3	(0.80)	10.5	(0.42)	22.0	(0.87)	M18-1.5 6g

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

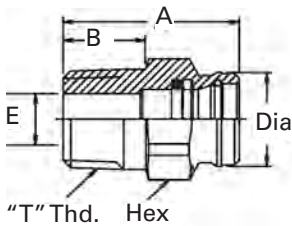
ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

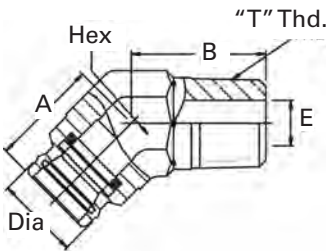
TECHNICAL DATA

**WeatherGRIP™****STC Adapters  
Male BSPT to Female STC**

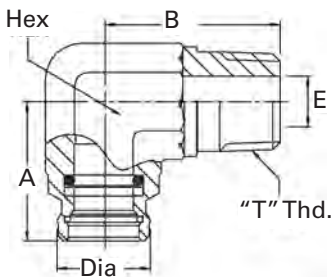
STC adapters come standard with nitrile O-rings. See page 334 for seal options.

**Straight FF3503****STRAIGHT  
PART NUMBER**

PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3503-0406S	37,1	1.47	13,0	0.51	17,0	0.67	5,0	0.20	19,0	0.75	R 1/4 - 19
FF3503-0606S	36,9	1.46	15,0	0.59	17,0	0.67	8,0	0.32	19,0	0.75	R 3/8 - 19
FF3503-0808S	38,3	1.51	18,0	0.71	20,3	0.80	11,0	0.43	24,0	0.95	R 1/2 - 14
FF3503-1212S	44,7	1.77	20,0	0.79	31,3	1.24	16,0	0.63	32,0	1.26	R 3/4 - 14

**45° FF3505****45°  
PART NUMBER**

PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3505-0406S	18,7	0.74	13,0	0.51	17,0	0.67	5,0	0.20	19,0	0.75	R 1/4 - 19
FF3505-0606S	20,5	0.81	24,4	0.96	17,0	0.67	8,0	0.32	19,0	0.75	R 3/8 - 18
FF3505-0808S	26,2	1.04	34,0	1.34	20,3	0.80	11,0	0.43	22,0	0.87	R 1/2 - 14
FF3505-1212S	32,6	1.29	36,0	1.42	31,3	1.24	16,0	0.63	32,0	1.26	R 3/4 - 14

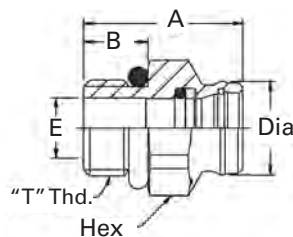
**90° FF3507****90°  
PART NUMBER**

PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3507-0406S	28,1	1.11	27,5	1.08	17,0	0.67	5,0	0.20	19,0	0.75	R 1/4 - 19
FF3507-0606S	28,1	1.11	27,5	1.08	17,0	0.67	5,0	0.20	19,0	0.75	R 3/8 - 19
FF3507-0808S	30,3	1.19	38,4	1.50	20,3	0.80	11,0	0.43	22,0	0.87	R 1/2 - 14
FF3507-1212S	37,3	1.47	41,9	1.65	31,3	1.24	16,0	0.63	32,0	1.26	R 3/4 - 14

## STC Adapters Male BSPP (Special JIS) to Female STC

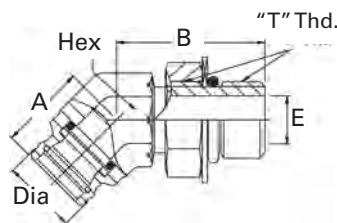
STC adapters come standard with nitrile O-rings. See page 334 for seal options.

### Straight FF3509



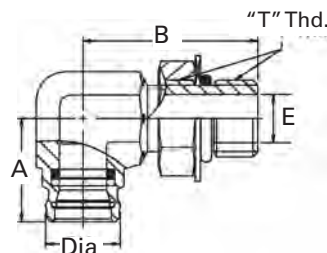
STRAIGHT PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3509-0406S	30,1	1.19	12,0	0.47	17,0	0.67	6,1	0.24	19,0	0.75	G1/4 - 19
FF3509-0606S	28,9	1.14	12,0	0.47	17,0	0.67	9,6	0.38	22,0	0.87	G3/8 - 19
FF3509-0808S	34,6	1.37	14,0	0.55	20,3	0.80	13,1	0.52	27,0	1.07	G1/2 - 14
FF3509-1212S	47,6	1.88	16,0	0.24	31,3	1.24	18,1	0.72	32,0	1.26	G3/4 - 14

### 45° FF3511



45° PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3511-0406S	16,8	0.66	32,4	1.28	17,0	0.67	6,1	0.24	19,0	0.75	G1/4 - 19
FF3511-0606S	16,8	0.66	35,0	1.38	17,0	0.67	9,6	0.38	19,0	0.75	G3/8 - 19
FF3511-0808S	23,6	0.93	40,2	1.59	20,3	0.80	13,1	0.52	22,0	0.87	G1/2 - 14
FF3511-1212S	29,9	1.18	46,7	1.85	31,3	1.24	18,1	0.72	32,0	1.26	G3/4 - 14

### 90° FF3513



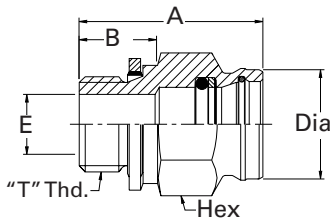
90° PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3513-0406S	28.1	1.11	37.8	1.49	17.0	0.67	6.1	0.24	19.0	0.75	G1/4 - 19
FF3513-0606S	28.1	1.11	39.5	1.56	17.0	0.67	9.6	0.38	19.0	0.75	G3/8 - 19
FF3513-0808S	28.0	1.11	47.5	1.88	20.3	0.80	13.1	0.52	22.0	0.87	G1/2 - 14
FF3513-1212S	38.0	1.50	56.4	2.23	31.3	1.24	18.1	0.72	32.0	1.26	G3/4 - 14

**WeatherGRIP™**

## STC Adapters

### Male BSPP to Female STC - Meets Standard 5005 DIN 3852 Form A

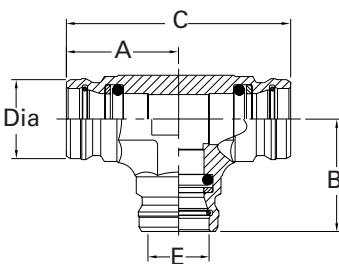
STC adapters come standard with nitrile O-rings. See page 334 for seal options.

**Straight FF3218**

STRAIGHT PART NUMBER	A		B		DIA		E		HEX		"T" THD
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
FF3218-0406S	31,8	1.25	14,2	0.56	17,0	0.67	6,1	0.24	19,0	0.75	G6 1/4-19A
FF3218-0606S	32,3	1.27	14,6	0.58	17,0	0.67	9,6	0.38	22,0	0.87	G6 3/8-19A
FF3218-0806S	37,0	1.46	17,2	0.68	17,0	0.67	9,1	0.36	27,0	1.06	G6 1/2-14A
FF3218-0608S	36,1	1.42	14,6	0.58	20,3	0.80	9,6	0.38	22,0	0.87	G6 3/8-19A
FF3218-0808S	38,6	1.52	17,2	0.68	20,3	0.80	12,3	0.48	27,0	1.06	G6 1/2-14A
FF3218-0810S	40,2	1.58	17,2	0.68	24,4	0.96	13,1	0.52	27,0	1.06	G6 1/2-14A
FF3218-1210S	42,2	1.66	19,2	0.75	24,4	0.96	15,5	0.61	32,0	1.26	G6 3/4-14A
FF3218-1212S	44,2	1.74	19,2	0.75	31,2	1.23	18,1	0.71	32,0	1.26	G6 3/4-14A

## STC Adapters

### Tee Adapter Female STC

**FF3178**

PART NUMBER	A		B		C		DIA		E	
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
FF3178-0808S	28,2	1.11	28,2	1.11	56,4	2.22	20,3	0.80	20,3	0.80

### Release Tools

- STC -06 = FF90213-06
- STC -08 = FF90213-08
- STC -10 = FF90213-10
- STC -12 = FF90213-12
- STC -16 = FF90213-01-16S



### STC Repair Kits (Female Halves)

#### Includes

- Instructions on repairing STC (Bulletin JA535)
- Back-up Ring
- Retaining Ring
- O-Ring

#### BUNA-N/NITRILE

Size	Part Number
-06	FF12228-06
-08	FF12228-08
-10	FF12228-10
-12	FF12228-12
-16	FF12228-16

#### VITON

Size	Part Number
-06	FF12230-06
-08	FF12230-08
-10	FF12230-10
-12	FF12230-12
-16	FF12230-16

#### HNBR

Size	Part Number
-06	FF12229-06
-08	FF12229-08
-10	FF12229-10
-12	FF12229-12
-16	FF12229-16

#### EPDM

Size	Part Number
-06	FF12231-06
-08	FF12231-08
-10	FF12231-10
-12	FF12231-12
-16	FF12231-16

### STC Video

Part number A-MEFI-ME001-E



### Female Ring Part Numbers

#### RETAINING RINGS

Size	Part Number
-06	FF90277-06C
-08	FF90277-08C
-10	FF90277-10C
-12	FF90277-12C
-16	FF90277-16C

#### NITRILE O-RINGS

Size	Part Number
-06	22550-12
-08	22550-112
-10	22550-114
-12	22550-117
-16	22550-215

### Z-Series Sales Kit

Part number PR014040-01



#### BACK-UP RINGS

Size	Part Number
-06	FF90241-12
-08	FF90241-112
-10	FF90241-114
-12	FF90241-117
-16	FF90241-215

#### HNBR O-RINGS

Size	Part Number
-06	FF90467-12
-08	FF90467-112
-10	FF90467-114
-12	FF90467-117
-16	FF90467-215

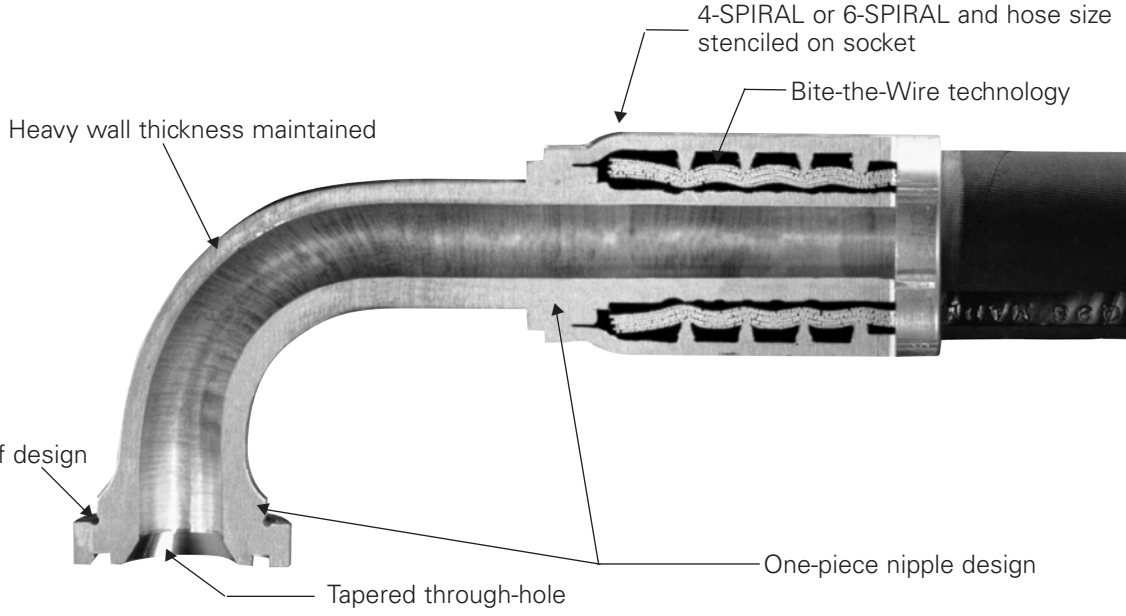
#### VITON O-RINGS

Size	Part Number
-06	22566-12
-08	22566-112
-10	22566-114
-12	22566-117
-16	22566-215



# WeatherTIGHT™ 4SP/6SP Series Hose Ends

For use with  
H464, H470, H485



FEATURES	BENEFITS
Bite the Wire technology	Skiving not required, saves time in assembly
One-piece nipple design	Stronger design, no braze joints
One-piece hose end	Easier to assemble
Stress-relief design	Maximizes durability
Heavy wall thickness	Heavy-duty construction for heavy-duty applications
Modern micro-alloy steel	Maximizes fatigue life
Tapered through-hole	Improves flow characteristics
Global design	Global availability
Stenciled socket	Hose insertion depth
Operating pressure to 6000 psi	Perfect for hydrostatic drives and other demanding applications
Available in -12, -16, -20, -24 & -32	Multiple configurations and jump sizes to fit a wide array of applications

### ⚠ WARNING

Failure to follow Eaton process and product instructions and limitations could lead to premature hose assembly failures, resulting in property damage, serious injury or death.

Eaton Hose End tolerances are engineered to match Weatherhead hose tolerances. The use of Eaton Hose Ends on hose supplied by other manufacturers and/or the use of Weatherhead hose with Hose Ends supplied by other manufacturers, may result in the production of unreliable and unsafe hose assemblies and is neither recommended nor authorized by Eaton.

Read and understand the operator's manual before attempting to operate any equipment.

Eaton hereby disclaims any obligation or liability (including incidental and consequential damages) arising from breach

of contract, warranty, or tort (under negligence or strict liability theories) should Weatherhead hose, Eaton Hose Ends or assembly equipment be used with the hose supplied by another manufacturer, or in the event that product instructions for each specified hose assembly are not followed.

### ⚠ WARNING

Eaton manufactures the terminal ends of our Hose Ends to the appropriate requirement established by SAE and other industry standards. It is possible to order a hose end with a terminal end that has a performance rating lower than the hose rating. Failure to consider the terminal end performance could lead to premature hose assembly failures, resulting in property damage, serious injury or death.

# WeatherTIGHT™ 4SP/6SP Series Hose Ends

## 4SP Hose Ends

For Use with Hose:

H464, H485 (-16 only),  
H470 (-12 & -16 only)\*

\*H470 with black cover only (2Q 2006)

Assembled with:

ET4000,  
T-440-1 (-12 & -16 only)

## 6SP Hose Ends

For Use with Hose:

H470 (-20, -24, -32 only)\*  
H485 (-20 & -24 only),

\*H470 with black cover only (2Q 2006)

Assembled with:

ET4000

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

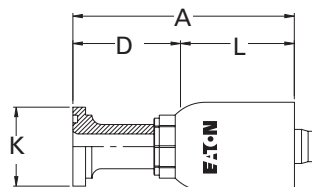
ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

### Straight Split Flange

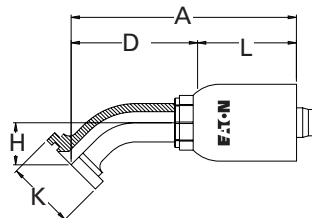
Code 61



FITTING PART NUMBER	FLANGE HEAD DIA. K		HOSE SIZE	A		D		INSERTION LENGTH L		H	
	inch	mm		inch	mm	inch	mm	inch	mm	inch	mm
<b>Straight split flange - Code 61 (SAE J518)</b>											
4SP12W-G12	1.50	38.1	-12	3.92	99.5	2.15	54.5	1.77	45.0		
4SP12W-G16	1.75	44.4	-12	3.78	96.1	2.01	51.1	1.77	45.0		
4SP16W-G16	1.75	44.4	-16	4.78	121.3	2.22	56.3	2.56	65.0		
4SP16W-G20	2.00	50.8	-16	4.94	125.5	2.38	60.5	2.56	65.0		
4SP20W-G20	2.00	50.8	-20	5.57	141.5	2.62	66.5	2.95	75.0		
4SP20W-G24	2.38	60.3	-20	6.45	163.8	3.50	88.8	2.95	75.0		
4SP24W-G24	2.38	60.3	-24	6.61	167.8	3.54	89.8	3.07	78.0		
4SP24W-G32	2.81	71.4	-24	6.73	170.9	3.66	92.9	3.07	78.0		
4SP32W-G32	2.81	71.4	-32	6.81	173.0	3.74	95.0	3.07	78.0		
6SP20W-G20	2.00	50.8	-20	5.57	141.5	2.62	66.5	2.95	75.0		
6SP24W-G24	2.38	60.3	-24	6.61	167.8	3.54	89.8	3.07	78.0		
6SP32W-G32	2.81	71.4	-32	6.81	173.0	3.74	95.0	3.07	78.0		

### 45° Elbow Split Flange

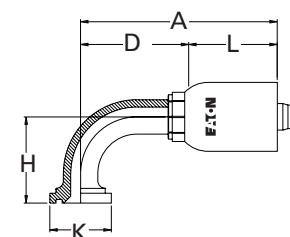
Code 61



<b>45° split flange - Code 61 (SAE J518)</b>											
4SP12W-G42	1.50	38.1	-12	4.93	125.3	3.16	80.3	1.77	45.0	1.06	27.0
4SP12W-G46	1.75	44.4	-12	5.37	136.5	3.60	91.5	1.77	45.0	1.26	32.0
4SP16W-G46	1.75	44.4	-16	6.37	161.7	3.81	96.7	2.56	65.0	1.26	32.0
4SP16W-G50	2.00	50.8	-16	6.99	177.4	4.43	112.4	2.56	65.0	1.54	39.0
4SP20W-G50	2.00	50.8	-20	7.61	193.4	4.66	118.4	2.95	75.0	1.54	39.0
4SP20W-G54	2.38	60.3	-20	8.12	206.3	5.17	131.3	2.95	75.0	1.77	45.0
4SP24W-G54	2.38	60.3	-24	8.28	210.3	5.21	132.3	3.07	78.0	1.77	45.0
4SP24W-G62	2.81	71.4	-24	9.73	247.2	6.66	169.2	3.07	78.0	2.26	57.5
4SP32W-G62	2.81	71.4	-32	9.81	249.3	6.74	171.3	3.07	78.0	2.26	57.5
6SP20W-G50	2.00	50.8	-20	7.61	193.4	4.66	118.4	2.95	75.0	1.54	39.0
6SP24W-G54	2.38	60.3	-24	8.28	210.3	5.21	132.3	3.07	78.0	1.77	45.0
6SP32W-G62	2.81	71.4	-32	9.81	249.3	6.74	171.3	3.07	78.0	2.26	57.5

### 90° Elbow Split Flange

Code 61

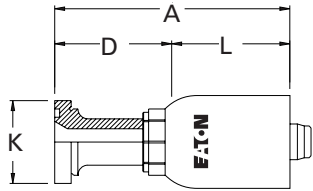


<b>90° split flange - Code 61 (SAE J518)</b>											
4SP12W-G72	1.50	38.1	-12	4.72	120.0	2.95	75.0	1.77	45.0	2.32	59.0
4SP12W-G76	1.75	44.4	-12	5.17	131.4	3.40	86.4	1.77	45.0	2.80	71.0
4SP16W-G76	1.75	44.4	-16	6.17	156.6	3.61	91.6	2.56	65.0	2.80	71.0
4SP16W-G80	2.00	50.8	-16	6.79	172.4	4.23	107.4	2.56	65.0	3.50	89.0
4SP20W-G80	2.00	50.8	-20	7.41	188.4	4.46	113.4	2.95	75.0	3.50	89.0
4SP20W-G84	2.38	60.3	-20	7.92	201.1	4.96	126.1	2.95	75.0	4.09	104.0
4SP24W-G84	2.38	60.3	-24	8.07	205.1	5.00	127.1	3.07	78.0	4.09	104.0
4SP24W-G92	2.81	71.4	-24	9.59	243.6	6.52	165.6	3.07	78.0	5.43	138.0
4SP32W-G92	2.81	71.4	-32	9.67	245.7	6.60	167.7	3.07	78.0	5.43	138.0
6SP20W-G80	2.00	50.8	-20	7.41	188.4	4.46	113.4	2.95	75.0	3.50	89.0
6SP24W-G84	2.38	60.3	-24	8.07	205.1	5.00	127.1	3.07	78.0	4.09	104.0
6SP32W-G92	2.81	71.4	-32	9.67	245.7	6.60	167.7	3.07	78.0	5.43	138.0

# WeatherTIGHT™ 4SP/6SP Series Hose Ends

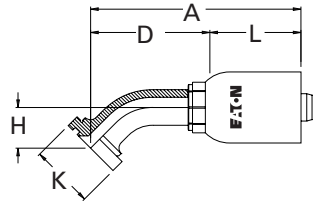
## Straight Split Flange

Code 62



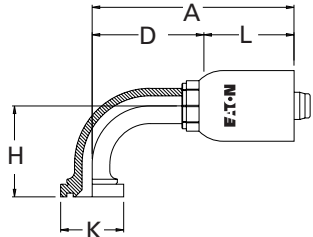
## 45° Elbow Split Flange

Code 62



## 90° Elbow Split Flange

Code 62



## 4SP Hose Ends

For Use with Hose:

H464, H485 (-16 only),

H470 (-12 &amp; -16 only)\*

\*H470 with black cover only (2Q 2006)

Assembled with:

ET4000,

T-440-1 (-12 &amp; -16 only)

## 6SP Hose Ends

For Use with Hose:

H470 (-20, -24, -32 only)\*

H485 (-20 &amp; -24 only),

\*H470 with black cover only (2Q 2006)

Assembled with:

ET4000

FITTING PART NUMBER	FLANGE HEAD DIA. K		HOSE SIZE	A		D		INSERTION LENGTH		H	
	inch	mm		inch	mm	inch	mm	inch	mm	inch	mm
<b>Straight split flange - Code 62 (SAE J518)</b>											
4SP12W-D12	1.62	41.3	-12	4.16	105.8	2.39	60.8	1.77	45.0		
4SP12W-D16	1.88	47.6	-12	4.33	110.0	2.56	65.0	1.77	45.0		
4SP16W-D16	1.88	47.6	-16	5.32	135.2	2.76	70.2	2.56	65.0		
4SP16W-D20	2.12	54.0	-16	5.22	132.6	2.66	67.6	2.56	65.0		
4SP20W-D20	2.12	54.0	-20	5.85	148.6	2.90	73.6	2.95	75.0		
4SP20W-D24	2.50	63.5	-20	7.31	185.6	4.35	110.6	2.95	75.0		
4SP24W-D24	2.50	63.5	-24	7.46	189.6	4.39	111.6	3.07	78.0		
4SP24W-D32	3.13	79.4	-24	7.90	200.6	4.83	122.6	3.07	78.0		
4SP32W-D32	3.13	79.4	-32	7.98	202.7	4.91	124.7	3.07	78.0		
<b>45° split flange - Code 62 (SAE J518)</b>											
4SP12W-D42	1.62	41.3	-12	4.93	125.3	3.16	80.3	1.77	45.0	1.06	27.0
4SP12W-D46	1.88	47.6	-12	5.37	136.5	3.60	91.5	1.77	45.0	1.26	32.0
4SP16W-D46	1.88	47.6	-16	6.37	161.7	3.81	96.7	2.56	65.0	1.26	32.0
4SP16W-D50	2.12	54.0	-16	6.99	177.4	4.43	112.4	2.56	65.0	1.54	39.0
4SP20W-D50	2.12	54.0	-20	7.61	193.4	4.66	118.4	2.95	75.0	1.54	39.0
4SP20W-D54	2.50	63.5	-20	8.12	206.3	5.17	131.3	2.95	75.0	1.77	45.0
4SP24W-D54	2.50	63.5	-24	8.28	210.3	5.21	132.3	3.07	78.0	1.77	45.0
4SP24W-D62	3.13	79.4	-24	9.73	247.2	6.66	169.2	3.07	78.0	2.26	57.5
4SP32W-D62	3.13	79.4	-32	9.81	249.3	6.74	171.3	3.07	78.0	2.26	57.5
<b>90° split flange - Code 62 (SAE J518)</b>											
4SP12W-D72	1.62	41.3	-12	4.72	120.0	2.95	75.0	1.77	45.0	2.32	59.0
4SP12W-D76	1.88	47.6	-12	5.17	131.4	3.40	86.4	1.77	45.0	2.80	71.0
4SP16W-D76	1.88	47.6	-16	6.17	156.6	3.61	91.6	2.56	65.0	2.80	71.0
4SP16W-D80	2.12	54.0	-16	6.79	172.4	4.23	107.4	2.56	65.0	3.50	89.0
4SP20W-D80	2.12	54.0	-20	7.41	188.4	4.46	113.4	2.95	75.0	3.50	89.0
4SP20W-D84	2.50	63.5	-20	7.92	201.1	4.96	126.1	2.95	75.0	4.09	104.0
4SP24W-D84	2.50	63.5	-24	8.07	205.1	5.00	127.1	3.07	78.0	4.09	104.0
4SP24W-D92	3.13	79.4	-24	9.59	243.6	6.52	165.6	3.07	78.0	5.43	138.0
4SP32W-D92	3.13	79.4	-32	9.67	245.7	6.60	167.7	3.07	78.0	5.43	138.0
<b>6SP Hose Ends</b>											
6SP20W-D20	2.12	54.0	-20	5.85	148.6	2.90	73.6	2.95	75.0		
6SP20W-D24	2.50	63.5	-20	7.31	185.6	4.35	110.6	2.95	75.0		
6SP24W-D24	2.50	63.5	-24	7.46	189.6	4.39	111.6	3.07	78.0		
6SP24W-D32	3.13	79.4	-24	7.90	200.6	4.83	122.6	3.07	78.0		
6SP32W-D32	3.13	79.4	-32	7.98	202.7	4.91	124.7	3.07	78.0		
6SP20W-D50	2.12	54.0	-20	7.61	193.4	4.66	118.4	2.95	75.0	1.54	39.0
6SP20W-D54	2.50	63.5	-20	8.12	206.3	5.17	131.3	2.95	75.0	1.77	45.0
6SP24W-D54	2.50	63.5	-24	8.28	210.3	5.21	132.3	3.07	78.0	1.77	45.0
6SP24W-D62	3.13	79.4	-24	9.73	247.2	6.66	169.2	3.07	78.0	2.26	57.5
6SP32W-D62	3.13	79.4	-32	9.81	249.3	6.74	171.3	3.07	78.0	2.26	57.5
6SP20W-D80	2.12	54.0	-20	7.41	188.4	4.46	113.4	2.95	75.0	3.50	89.0
6SP20W-D84	2.50	63.5	-20	7.92	201.1	4.96	126.1	2.95	75.0	4.09	104.0
6SP24W-D84	2.50	63.5	-24	8.07	205.1	5.00	127.1	3.07	78.0	4.09	104.0
6SP24W-D92	3.13	79.4	-24	9.59	243.6	6.52	165.6	3.07	78.0	5.43	138.0
6SP32W-D92	3.13	79.4	-32	9.67	245.7	6.60	167.7	3.07	78.0	5.43	138.0

# WeatherTIGHT™ 4SP/6SP Series Hose Ends

## 4SP Hose Ends

For Use with Hose:

H464, H485 (-16 only),  
H470 (-12 & -16 only)\*

\*H470 with black cover only (2Q 2006)

Assembled with:

ET4000,  
T-440-1 (-12 & -16 only)

## 6SP Hose Ends

For Use with Hose:

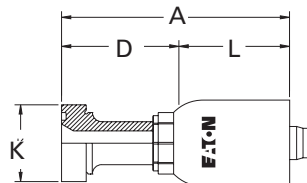
H470 (-20, -24, -32 only)\*  
H485 (-20 & -24 only),

\*H470 with black cover only (2Q 2006)

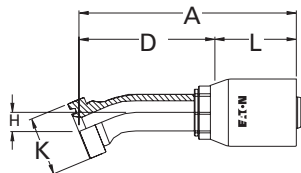
Assembled with:

ET4000

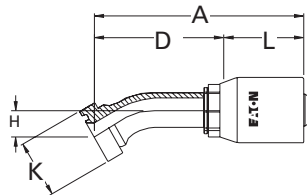
### Thick-Flange Straight



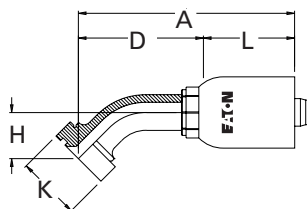
### Thick-Flange - 22.5° Elbow



### Thick-Flange - 30° Elbow



### Thick-Flange - 45° Elbow



FITTING PART NUMBER	FLANGE HEAD DIA. K		HOSE SIZE	A		D		INSERTION LENGTH L		H	
	inch	mm		inch	mm	inch	mm	inch	mm	inch	mm
<b>Thick-flange - Straight split flange</b>											
4SP12W-K12	1.62	41.3	-12	4.38	111.3	2.61	66.3	1.77	45.0		
4SP12W-K16	1.88	47.6	-12	4.51	114.7	2.74	69.7	1.77	45.0		
4SP16W-K16	1.88	47.6	-16	5.51	139.9	2.95	74.9	2.56	65.0		
4SP16W-K20	2.12	54.0	-16	5.37	136.5	2.81	71.5	2.56	65.0		
4SP20W-K20	2.12	54.0	-20	6.00	152.5	3.05	77.5	2.95	75.0		
6SP20W-K20	2.12	54.0	-20	6.00	152.5	3.05	77.5	2.95	75.0		
6SP20W-K24	2.50	63.5	-20	7.37	187.3	4.42	112.3	2.95	75.0		
6SP24W-K24	2.50	63.5	-24	7.53	191.3	4.46	113.3	3.07	78.0		
6SP24W-K32	3.13	79.4	-24	7.96	202.3	4.89	124.3	3.07	78.0		
6SP32W-K32	3.13	79.4	-32	8.05	204.4	4.98	126.4	3.07	78.0		

Compatible only with D-Ring FF90319. See page 354.

### Thick-flange - 22.5°

4SP12W-K02	1.62	41.3	-12	5.43	137.9	3.66	92.9	1.77	45.0	0.54	13.7
4SP16W-K03	1.88	47.6	-16	6.88	174.8	4.32	109.8	2.56	65.0	0.60	15.3
4SP16W-K04	2.12	54.0	-16	7.56	191.9	5.00	126.9	2.56	65.0	0.70	17.8
6SP20W-BD20	2.12	54.0	-20	8.19	207.9	5.23	132.9	2.95	75.0	0.70	17.8
6SP20W-BD24	2.50	63.5	-20	8.67	220.1	5.71	145.1	2.95	75.0	0.76	19.4
6SP24W-BD24	2.50	63.5	-24	8.82	224.1	5.75	146.1	3.07	78.0	0.76	19.4

Compatible only with D-Ring FF90319. See page 354.

### Thick-flange - 30°

4SP12W-K22	1.62	41.3	-12	5.34	135.7	3.57	90.7	1.77	45.0	0.75	19.1
4SP16W-K23	1.88	47.6	-16	6.79	172.4	4.23	107.4	2.56	65.0	0.85	21.6
4SP16W-K25	2.12	54.0	-16	7.45	189.1	4.89	124.1	2.56	65.0	1.00	25.3
6SP20W-BD50	2.12	54.0	-20	8.08	205.1	5.12	130.1	2.95	75.0	1.00	25.3
6SP20W-BD54	2.50	63.5	-20	8.55	217.1	5.59	142.1	2.95	75.0	1.09	27.7
6SP24W-BD54	2.50	63.5	-24	8.70	221.1	5.63	143.1	3.07	78.0	1.09	27.7
6SP24W-BD62	3.13	79.4	-24	10.26	260.5	7.19	182.5	3.07	78.0	1.37	34.8
6SP32W-BD62	3.13	79.4	-32	10.34	262.6	7.27	184.6	3.07	78.0	1.37	34.8

Compatible only with D-Ring FF90319. See page 354.

### Thick-flange - 45° split flange

4SP12W-K42	1.62	41.3	-12	5.08	129.2	3.31	84.2	1.77	45.0	1.22	30.9
4SP12W-K46	1.88	47.6	-12	5.50	139.8	3.73	94.8	1.77	45.0	1.39	35.3
4SP16W-K46	1.88	47.6	-16	6.50	165.0	3.94	100.0	2.56	65.0	1.39	35.3
4SP16W-K50	2.12	54.0	-16	7.10	180.2	4.54	115.2	2.56	65.0	1.65	41.8
4SP20W-K50	2.12	54.0	-20	7.72	196.2	4.77	121.2	2.95	75.0	1.65	41.8
6SP20W-K50	2.12	54.0	-20	7.72	196.2	4.77	121.2	2.95	75.0	1.65	41.8
6SP20W-K54	2.50	63.5	-20	8.17	207.5	5.22	132.5	2.95	75.0	1.82	46.2

Compatible only with D-Ring FF90319. See page 354.

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

# WeatherTIGHT™ 4SP/6SP Series Hose Ends

## 4SP Hose Ends

For Use with Hose:

H464, H485 (-16 only),

H470 (-12 & -16 only)\*

\*H470 with black cover only (2Q 2006)

Assembled with:

ET4000,

T-440-1 (-12 & -16 only)

## 6SP Hose Ends

For Use with Hose:

H470 (-20, -24, -32 only)\*

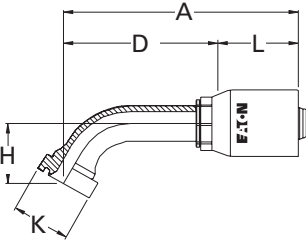
H485 (-20 & -24 only),

\*H470 with black cover only (2Q 2006)

Assembled with:

ET4000

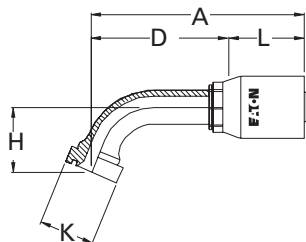
### Thick-Flange - 60° Elbow



FITTING PART NUMBER	FLANGE HEAD DIA. K		HOSE SIZE	A		D		INSERTION LENGTH L		H	
	inch	mm		inch	mm	inch	mm	inch	mm	inch	mm
<b>Thick-flange - 60°</b>											
4SP12W-K52	1.62	41.3	-12	5.83	148.1	4.06	103.1	1.77	45.0	1.66	42.3
4SP16W-K53	1.88	47.6	-16	7.45	189.3	4.89	124.3	2.56	65.0	1.92	48.7
4SP16W-K54	2.12	54.0	-16	8.36	212.4	5.80	147.4	2.56	65.0	2.33	59.3
6SP20W-BD80	2.12	54.0	-20	8.99	228.4	6.04	153.4	2.95	75.0	2.33	59.3
6SP20W-BD84	2.50	63.5	-20	9.70	246.4	6.75	171.4	2.95	75.0	2.62	66.6
6SP24W-BD84	2.50	63.5	-24	9.86	250.4	6.79	172.4	3.07	78.0	2.62	66.6
6SP24W-BD92	3.13	79.4	-24	11.94	303.2	8.87	225.2	3.07	78.0	3.44	87.3
6SP32W-BD92	3.13	79.4	-32	12.02	305.3	8.95	227.3	3.07	78.0	3.44	87.3

Compatible only with D-Ring FF90319. See below.

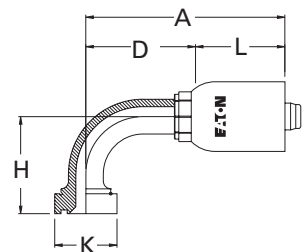
### Thick-Flange - 67.5° Elbow



<b>Thick flange - 67.5°</b>											
4SP12W-K62	1.62	41.3	-12	5.60	142.2	3.83	97.2	1.77	45.0	1.90	48.2
4SP16W-K63	1.88	47.6	-16	7.18	182.5	4.62	117.5	2.56	65.0	2.20	55.8
4SP16W-K64	2.12	54.0	-16	8.04	204.1	5.48	139.1	2.56	65.0	2.68	68.1
6SP20W-BD20	2.12	54.0	-20	8.67	220.1	5.71	145.1	2.95	75.0	2.68	68.1
6SP20W-BD24	2.50	63.5	-20	9.33	237.0	6.38	162.0	2.95	75.0	3.02	76.8

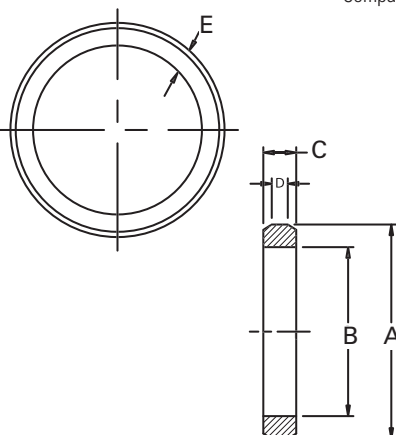
Compatible only with D-Ring FF90319. See below.

### Thick-Flange - 90° Elbow



<b>Thick Flange - 90° split flange</b>											
4SP12W-K72	1.62	41.3	-12	4.72	120.0	2.95	75.0	1.77	45.0	2.54	64.5
4SP12W-K76	1.88	47.6	-12	5.17	131.4	3.40	86.4	1.77	45.0	2.98	75.7
4SP16W-K76	1.88	47.6	-16	6.17	156.6	3.61	91.6	2.56	65.0	2.98	75.7
4SP16W-K80	2.12	54.0	-16	6.79	172.4	4.23	107.4	2.56	65.0	3.66	92.9
4SP20W-K80	2.12	54.0	-20	7.41	188.4	4.46	113.4	2.95	75.0	3.66	92.9
6SP20W-K80	2.12	54.0	-20	7.41	188.4	4.46	113.4	2.95	75.0	3.66	92.9
6SP20W-K84	2.50	63.5	-20	7.92	201.1	4.96	126.1	2.95	75.0	4.16	105.7
6SP24W-K84	2.50	63.5	-24	7.92	201.1	4.96	126.1	2.95	75.0	4.16	105.7
6SP24W-K92	3.13	79.4	-24	9.59	243.6	6.52	165.6	3.07	78.0	5.50	139.6
6SP32W-K92	3.13	79.4	-32	9.59	243.6	6.52	165.6	3.07	78.0	5.50	139.6

Compatible only with D-Ring FF90319. See below.



### Thick-Flange D-Ring\*

PART NUMBER	A REF		B REF		C REF		D REF		E REF	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
FF90319-12	1.27	32,3	1.00	25,4	.20	5,1	.10	2,5	.135	3,4
FF90319-16	1.52	36,6	1.25	31,8	.20	5,1	.10	2,5	.135	3,4
FF90319-20	1.77	45,0	1.50	38,1	.20	5,1	.10	2,5	.135	3,4
FF90319-24	2.03	51,6	1.76	44,7	.20	5,1	.10	2,5	.135	3,4
FF90319-32	2.78	70,6	2.52	64,0	.20	5,1	.10	2,5	.135	3,4

Temperature range: -40°F to +212°F.

Material: Nitrile (Buna-N)

\*To be used only with Thick-Flange hose ends.



# WeatherTIGHT™ 4SP/6SP Series Hose Ends

## 4SP Hose Ends

For Use with Hose:

H464, H485 (-16 only),  
H470 (-12 & -16 only)\*

\*H470 with black cover only (2Q 2006)

Assembled with:

ET4000,  
T-440-1 (-12 & -16 only)

## 6SP Hose Ends

For Use with Hose:

H470 (-20, -24, -32 only)\*  
H485 (-20 & -24 only),

\*H470 with black cover only (2Q 2006)

Assembled with:

ET4000

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

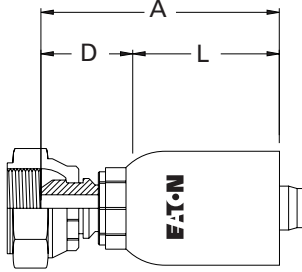
ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

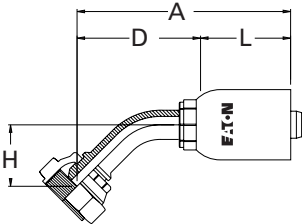
TECHNICAL DATA

FITTING PART NUMBER	THREAD	HOSE SIZE	A		D		INSERTION LENGTH L		H	
			inch	mm	inch	mm	inch	mm	inch	mm
<b>BSP/JIS Female Swivel</b>										
4SP12W-352	G 3/4	-12	3.27	83.0	1.50	38.0	1.77	45.0		
4SP12W-356	G 1	-12	3.22	81.7	1.44	36.7	1.77	45.0		
4SP16W-356	G 1	-16	4.21	106.9	1.65	41.9	2.56	65.0		
4SP16W-370	G 1 1/4	-16	4.13	104.9	1.57	39.9	2.56	65.0		
4SP20W-370	G 1 1/4	-20	4.76	120.9	1.81	45.9	2.95	75.0		
4SP24W-374	G 1 1/2	-24	6.04	153.5	2.97	75.5	3.07	78.0		
4SP32W-375	G 2	-32	6.28	159.5	3.21	81.5	3.07	78.0		
6SP24W-374	G 1 1/2	-24	6.04	153.5	2.97	75.5	3.07	78.0		
6SP32W-375	G 2	-32	6.28	159.5	3.21	81.5	3.07	78.0		

### BSPW Swivel - Straight



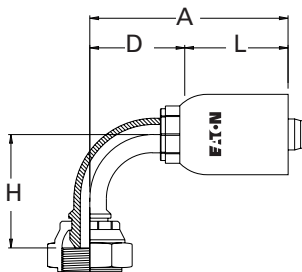
### BSPW Swivel - 45° Elbow



#### BSP/JIS Female Swivel, 45° elbow

4SP12W-52P	G 3/4	-12	4.76	121.0	2.99	76.0	1.77	45.0	1.02	26.0
4SP12W-56P	G 1	-12	5.13	130.4	3.36	85.4	1.77	45.0	1.18	30.0
4SP16W-56P	G 1	-16	6.13	155.6	3.57	90.6	2.56	65.0	1.18	30.0
4SP16W-60P	G 1 1/4	-16	6.57	166.9	4.01	101.9	2.56	65.0	1.34	34.0
4SP20W-60P	G 1 1/4	-20	7.19	182.6	4.25	107.9	2.95	75.0	1.34	34.0
4SP24W-64P	G 1 1/2	-24	8.20	208.2	5.13	130.2	3.07	78.0	1.69	43.0
4SP32W-65P	G 2	-32	9.78	248.5	6.71	170.5	3.07	78.0	2.23	56.6
6SP24W-64P	G 1 1/2	-24	8.20	208.2	5.13	130.2	3.07	78.0	1.69	43.0
6SP32W-65P	G 2	-32	9.78	248.5	6.71	170.5	3.07	78.0	2.23	56.6

### BSPW Swivel - 90° Elbow



#### BSP/JIS Female Swivel, 90° elbow

4SP12W-82P	G 3/4	-12	4.51	114.5	2.74	69.5	1.77	45.0	2.24	57.0
4SP12W-86P	G 1	-12	4.94	125.6	3.17	80.6	1.77	45.0	2.68	68.0
4SP16W-86P	G 1	-16	5.94	150.8	3.38	85.8	2.56	65.0	2.68	68.0
4SP16W-90P	G 1 1/4	-16	6.44	163.7	3.89	98.7	2.56	65.0	3.11	79.0
4SP20W-90P	G 1 1/4	-20	7.07	179.7	4.12	104.7	2.95	75.0	3.11	79.0
4SP24W-94P	G 1 1/2	-24	8.07	205.1	5.00	127.1	3.07	78.0	4.09	104.0
4SP32W-95P	G 2	-32	9.67	245.7	6.60	167.7	3.07	78.0	5.28	134.0
6SP24W-94P	G 1 1/2	-24	8.07	205.1	5.00	127.1	3.07	78.0	4.09	104.0
6SP32W-95P	G 2	-32	9.67	245.7	6.60	167.7	3.07	78.0	5.28	134.0

NOTE: The JIS parallel thread and BSPW connection are interchangeable.

# WeatherTIGHT™ 4SP/6SP Series Hose Ends

## 4SP Hose Ends

For Use with Hose:  
H464, H485 (-16 only),  
H470 (-12 & -16 only)\*  
\*H470 with black cover only (2Q 2006)

Assembled with:  
ET4000,  
T-440-1 (-12 & -16 only)

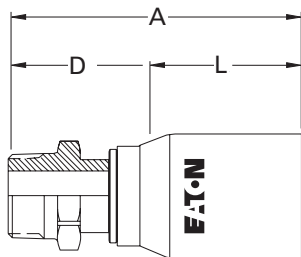
## 6SP Hose Ends

For Use with Hose:  
H470 (-20, -24, -32 only)\*  
H485 (-20 & -24 only),  
\*H470 with black cover only (2Q 2006)

Assembled with:  
ET4000

FITTING PART NUMBER	THREAD	HOSE SIZE	A		D	INSERTION LENGTH L		HEX		
			inch	mm	inch	mm	inch	mm	inch	
<b>Male Pipe Rigid</b>										
	NPTF									
4SP12W-112	3/4-14	-12	3.89	98.7	2.12	53.7	1.77	45	1 1/4	
4SP16W-116	1-11 1/2	-16	4.94	125.4	2.38	60.4	2.56	65	1 1/2	
4SP20W-120	1 1/4-11 1/2	-20	5.70	144.8	2.75	69.8	2.95	75	1 7/8	
4SP24W-124	1 1/2-11 1/2	-24	5.93	150.6	2.86	72.6	3.07	78	2	
4SP32W-132	2-11 1/2	-32	6.03	153.2	2.96	75.2	3.07	78	2 5/8	
6SP20W-120	1 1/4-11 1/2	-20	5.70	144.8	2.75	69.8	2.95	75	1 7/8	
6SP24W-124	1 1/2-11 1/2	-24	5.93	150.6	2.86	72.6	3.07	78	2	
6SP32W-132	2-11 1/2	-32	6.03	153.2	2.96	75.2	3.07	78	2 5/8	

### Male Pipe Rigid



APPLICATION DATA  
LOW & MEDIUM PRESSURE HOSE  
HIGH PRESSURE HOSE  
SPECIALTY HOSE  
ACCESSORIES & ASSEMBLY INSTRUCTIONS  
ADAPTERS & HOSE ENDS  
HOSE ASSEMBLY EQUIPMENT  
TECHNICAL DATA



# WeatherTIGHT™ 4SP/6SP Series Hose Ends

## 4SP Hose Ends

For Use with Hose:

H464, H485 (-16 only),  
H470 (-12 & -16 only)\*

\*H470 with black cover only (2Q 2006)

Assembled with:

ET4000,  
T-440-1 (-12 & -16 only)

## 6SP Hose Ends

For Use with Hose:

H470 (-20, -24, -32 only)\*  
H485 (-20 & -24 only),

\*H470 with black cover only (2Q 2006)

Assembled with:

ET4000

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

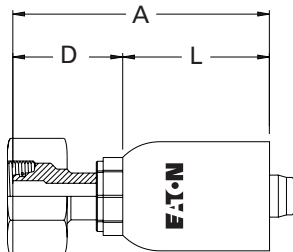
ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

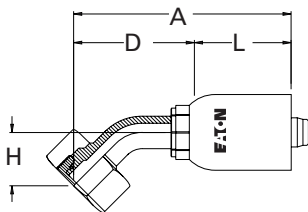
TECHNICAL DATA

FITTING PART NUMBER	THREAD SIZE	TUBE SIZE	HOSE SIZE	A		D		INSERTION LENGTH L		H	
				inch	mm	inch	mm	inch	mm	inch	mm
<b>DKO Female Swivel, Heavy Duty</b>											
4SP12W-75C	M36 x 2	25	-12	3.87	98.4	2.10	53.4	1.77	45.0		
4SP12W-80C	M42 x 2	30	-12	3.80	96.6	2.03	51.6	1.77	45.0		
4SP16W-80C	M42 x 2	30	-16	4.80	121.8	2.24	56.8	2.56	65.0		
4SP16W-88C	M52 x 2	38	-16	4.82	122.3	2.26	57.3	2.56	65.0		
4SP20W-88C	M52 x 2	38	-20	5.44	138.3	2.49	63.3	2.95	75.0		
6SP20W-88C	M52 x 2	38	-20	5.44	138.3	2.49	63.3	2.95	75.0		

### Female Swivel DIN 24° Seat s.Rh. DKO (heavy)

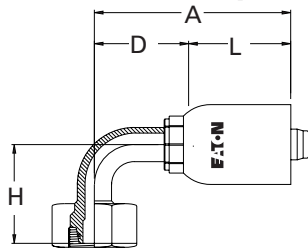


### Female Swivel DIN 24° Seat 45° Tube Elbow S.Rh. DKO (heavy)



<b>DKO Female Swivel, Heavy Duty, 45° Elbow</b>											
4SP12W-25E	M36 x 2	25	-12	5.13	130.3	3.36	85.3	1.77	45.0	1.26	32.0
4SP12W-30E	M42 x 2	30	-12	5.49	139.4	3.72	94.4	1.77	45.0	1.38	35.0
4SP16W-30E	M42 x 2	30	-16	6.48	164.6	3.92	99.6	2.56	65.0	1.38	35.0
4SP16W-38E	M52 X 2	38	-16	6.98	177.3	4.42	112.3	2.56	65.0	1.54	39.0
4SP20W-38E	M52 x 2	38	-20	7.61	193.3	4.66	118.3	2.95	75.0	1.54	39.0
6SP20W-38E	M52 x 2	38	-20	7.61	193.3	4.66	118.3	2.95	75.0	1.54	39.0

### Female Swivel DIN 24° Seat 90° Tube Elbow s.Rh. DKO (heavy)



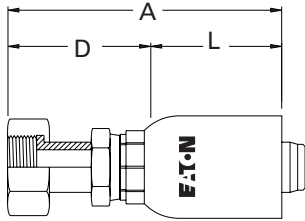
<b>DKO Female Swivel, Heavy Duty, 90° elbow</b>											
4SP12W-75E	M36 x 2	25	-12	4.72	120.0	2.95	75.0	1.77	45.0	2.56	65.0
4SP12W-80E	M42 X 2	30	-12	5.17	131.4	3.40	86.4	1.77	45.0	2.99	76.0
4SP16W-80E	M42 x 2	30	-16	6.17	156.8	3.61	91.8	2.56	65.0	2.99	76.0
4SP16W-88E	M52 X 2	38	-16	6.79	172.4	4.23	107.4	2.56	65.0	3.50	89.0
4SP20W-88E	M52 x 2	38	-20	7.41	188.4	4.46	113.4	2.95	75.0	3.50	89.0
6SP20W-88E	M52 x 2	38	-20	7.41	188.4	4.46	113.4	2.95	75.0	3.50	89.0

# WeatherTIGHT™

## 4SP/6SP Series

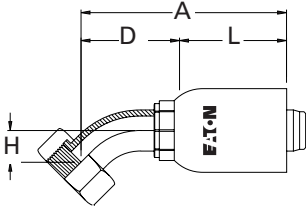
### Hose Ends

#### FOR-SEAL Swivel Straight



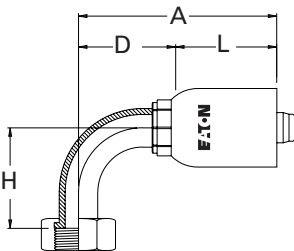
FITTING PART NUMBER	THREAD	HOSE SIZE	A		D		INSERTION LENGTH L		H	
			inch	mm	inch	mm	inch	mm	inch	mm
<b>Female FOR-SEAL Swivel, Straight</b>										
4SP12W-J72	1 3/16-12	-12	3.77	95.9	2.00	50.9	1.77	45.0		
4SP12W-J76	1 7/16-12	-12	3.33	84.6	1.56	39.6	1.77	45.0		
4SP16W-J76	1 7/16-12	-16	4.71	119.5	2.15	54.5	2.56	65.0		
4SP16W-J80	1 <sup>11</sup> / <sub>16</sub> -12	-16	4.19	106.4	1.63	41.4	2.56	65.0		
6SP16W-J80	1 <sup>11</sup> / <sub>16</sub> -12	-16	4.19	106.4	1.63	41.4	2.56	65.0		
4SP20W-J80	1 <sup>11</sup> / <sub>16</sub> -12	-20	5.38	136.7	2.43	61.7	2.95	75.0		
6SP20W-J80	1 <sup>11</sup> / <sub>16</sub> -12	-20	5.38	136.7	2.43	61.7	2.95	75.0		
4SP24W-J84	2-12	-24	5.00	126.9	1.93	48.9	3.07	78.0		
6SP24W-J84	2-12	-24	5.00	126.9	1.93	48.9	3.07	78.0		

#### FOR-SEAL Swivel 45° Elbow



<b>Female FOR-SEAL Swivel, 45° elbow</b>										
4SP12W-L72	1 3/16-12	-12	4.68	118.9	2.91	73.9	1.77	45.0	0.94	24.0
4SP12W-L76	1 7/16-12	-12	5.05	128.4	3.28	83.4	1.77	45.0	1.10	28.0
4SP16W-L76	1 7/16-12	-16	6.04	153.4	3.48	88.4	2.56	65.0	1.10	28.0
4SP16W-L80	1 <sup>11</sup> / <sub>16</sub> -12	-16	6.45	163.9	3.89	98.9	2.56	65.0	1.22	31.0
4SP20W-L80	1 <sup>11</sup> / <sub>16</sub> -12	-20	7.08	179.8	4.13	104.8	2.95	75.0	1.22	31.0
6SP20W-L80	1 <sup>11</sup> / <sub>16</sub> -12	-20	7.08	179.8	4.13	104.8	2.95	75.0	1.22	31.0

#### FOR-SEAL Swivel 90° Elbow



<b>Female FOR-SEAL Swivel, 90° elbow</b>										
4SP12W-J42	1 3/16-12	-12	4.51	114.5	2.74	69.5	1.77	45.0	2.28	58.0
4SP12W-J46	1 7/16-12	-12	4.94	125.6	3.17	80.6	1.77	45.0	2.80	71.0
4SP16W-J46	1 7/16-12	-16	5.93	150.6	3.37	85.6	2.56	65.0	2.80	71.0
4SP16W-J50	1 <sup>11</sup> / <sub>16</sub> -12	-16	6.45	163.7	3.89	98.7	2.56	65.0	3.07	78.0
4SP20W-J50	1 <sup>11</sup> / <sub>16</sub> -12	-20	7.07	179.6	4.12	104.6	2.95	75.0	3.07	78.0
6SP20W-J50	1 <sup>11</sup> / <sub>16</sub> -12	-20	7.07	179.6	4.12	104.6	2.95	75.0	3.07	78.0

#### 4SP Hose Ends

For Use with Hose:

H464, H485 (-16 only),  
H470 (-12 & -16 only)\*  
\*H470 with black cover only (2Q 2006)

Assembled with:

ET4000,  
T-440-1 (-12 & -16 only)

#### 6SP Hose Ends

For Use with Hose:

H470 (-20, -24, -32 only)\*  
H485 (-20 & -24 only),  
\*H470 with black cover only (2Q 2006)

Assembled with:

ET4000

# WeatherTIGHT™ 4SP/6SP Series Hose Ends

## 4SP Hose Ends

For Use with Hose:

H464, H485 (-16 only),  
H470 (-12 & -16 only)\*

\*H470 with black cover only (2Q 2006)

Assembled with:

ET4000,  
T-440-1 (-12 & -16 only)

## 6SP Hose Ends

For Use with Hose:

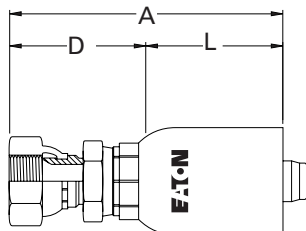
H470 (-20, -24, -32 only)\*  
H485 (-20 & -24 only),

\*H470 with black cover only (2Q 2006)

Assembled with:

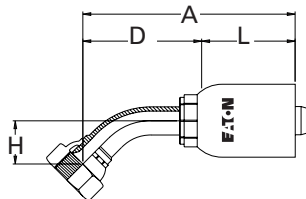
ET4000

### SAE 37° (JIC) Swivel Straight



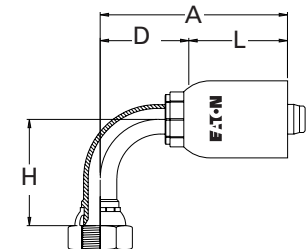
FITTING PART NUMBER	THREAD	HOSE SIZE	A		D		INSERTION LENGTH L		H	
			inch	mm	inch	mm	inch	mm	inch	mm
<b>SAE 37° (JIC) Swivel, straight</b>										
4SP12W-612	1 1/16-12	-12	4.10	104.2	2.33	59.2	1.77	45.0		
4SP12W-616	1 5/16-12	-12	4.20	106.6	2.43	61.6	1.77	45.0		
4SP16W-616	1 5/16-12	-16	5.19	131.8	2.63	66.8	2.56	65.0		
4SP16W-620	1 5/8-12	-16	5.26	133.7	2.70	68.7	2.56	65.0		
4SP20W-620	1 5/8-12	-20	5.89	149.7	2.94	74.7	2.95	75.0		
6SP20W-620	1 5/8-12	-20	5.89	149.7	2.94	74.7	2.95	75.0		
4SP20W-624	1 7/8-12	-20	6.59	167.5	3.64	92.5	2.95	75.0		
6SP20W-624	1 7/8-12	-20	6.59	167.5	3.64	92.5	2.95	75.0		
4SP24W-624	1 7/8-12	-24	6.75	171.5	3.68	93.5	3.07	78.0		
6SP24W-624	1 7/8-12	-24	6.75	171.5	3.68	93.5	3.07	78.0		
4SP32W-632	2 1/2-12	-32	7.32	186.0	4.25	108.0	3.07	78.0		
6SP32W-632	2 1/2-12	-32	7.32	186.0	4.25	108.0	3.07	78.0		

### SAE 37° (JIC) Swivel 45° Elbow



<b>SAE 37° (JIC) Swivel, 45° elbow</b>										
4SP12W-692	1 1/16-12	-12	4.80	121.9	3.03	76.9	1.77	45.0	1.06	27.0
4SP12W-696	1 5/16-12	-12	5.25	133.4	3.48	88.4	1.77	45.0	1.30	33.0
4SP16W-696	1 5/16-12	-16	6.25	158.6	3.69	93.6	2.56	65.0	1.30	33.0
4SP16W-697	1 5/8-12	-16	6.70	170.2	4.14	105.2	2.56	65.0	1.46	37.0
4SP20W-697	1 5/8-12	-20	7.33	186.2	4.38	111.2	2.95	75.0	1.46	37.0
6SP20W-697	1 5/8-12	-20	7.33	186.2	4.38	111.2	2.95	75.0	1.46	37.0
4SP24W-698	1 7/8-12	-24	8.20	208.2	5.13	130.2	3.07	78.0	1.69	43.0
6SP24W-698	1 7/8-12	-24	8.20	208.2	5.13	130.2	3.07	78.0	1.69	43.0

### SAE 37° (JIC) Swivel 90° Elbow



<b>SAE 37° (JIC) Swivel, 90° elbow</b>										
4SP12W-652	1 1/16-12	-12	4.51	114.5	2.74	69.5	1.77	45.0	2.28	58.0
4SP12W-656	1 5/16-12	-12	4.94	125.6	3.17	80.6	1.77	45.0	2.80	71.0
4SP16W-656	1 5/16-12	-16	5.94	150.8	3.38	85.8	2.56	65.0	2.80	71.0
4SP16W-657	1 5/8-12	-16	6.45	163.9	3.89	98.9	2.56	65.0	3.23	82.0
4SP20W-657	1 5/8-12	-20	7.08	179.9	4.13	104.9	2.95	75.0	3.23	82.0
6SP20W-677	1 5/8-12	-20	7.08	179.9	4.13	104.9	2.95	75.0	3.23	82.0
4SP24W-658	1 7/8-12	-24	8.07	205.1	5.00	127.1	3.07	78.0	4.09	104.0
6SP24W-678	1 7/8-12	-24	8.07	205.1	5.00	127.1	3.07	78.0	4.09	104.0

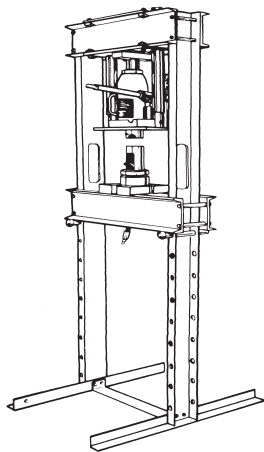
# Equipment

## Coll-O-Crimp T-400-17



Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

### Shop Press Tooling Packages



#### T-400-17 • Shop Press Tooling Package

The T-400-17 Shop Press Tooling Kit allows you to make factory-type hydraulic hose assemblies on your 25-ton shop press. With this minimum investment in equipment, and a nominal stock of packaged bulk hose and hose ends, you can begin to make Coll-O-Crimp hose assemblies in your own shop. This kit includes tooling to crimp 1/4" through 1" hose I.D. 'U' Series hose ends. Additional tooling is available to crimp 5/8" and 1-1/4" I.D. sizes.

#### Included in kit:

##### CATALOG NUMBER DESCRIPTION

T-400-2C	'U' Series Collet – 1/4"
T-400-3C	'U' Series Collet – 3/8"
T-400-4C	'U' Series Collet – 1/2"
T-400-5C	'U' Series Collet – 3/4"
T-400-6C	'U' Series Collet – 1"
T-400-8	Die Ring – 3/16" thru 1-1/4"
T-400-10	Spacer Ring – Black
T-400-11	Spacer Ring – Silver
T-400-17P	Pusher
W-EQCR-TD003-E	Shroud Decal
T-400-MSP	Instructions

### WARNING

These kits are intended for use on shop presses not exceeding a 25-ton rating. Usage of presses exceeding this rating may result in damage to the pusher, causing metal fragments to spray which may result in serious bodily injury.

Reference pages 259-395 for Coll-O-Crimp tooling, tooling packages and pumps.

#### T-400-20A • Shop Press 757 "E" Series Tooling Package

The T-400-20A Shop Press 757 'E' Series Tooling Kit allows you to make factory-type air conditioning hose assemblies on your 25-ton shop press. With this minimum investment in equipment, and a nominal stock of packaged bulk hose and hose ends, you can begin to make Coll-O-Crimp hose assemblies in your own shop. This kit includes tooling to crimp all of the 757 'E' Series hose ends.

#### Included in kit:

##### CATALOG NUMBER DESCRIPTION

T-400-114	757 'E' Series Collets
T-400-8	Die Ring Fits Collets 3/16" thru 1-1/4"
T-400-10	Spacer Ring – Black
T-400-17P	Pusher
W-EQCR-TD003-E	Shroud Decal
FS-3200	Label Set

# Equipment

## Air Conditioning Portable T-475

**!** Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 3.

APPLICATION DATA

### T-475-1 • Portable Air Conditioning Press



This hand operated, light-weight and easy to use air conditioning press is engineered and designed specifically for use with Weatherhead 757 'E' series hose end fittings. Perfect for bench mounting this portable press is made of heavy duty construction for use with an air impact wrench. Uses color coded

urethane encased dies and a removable die holder to accommodate complicated shapes. Uses four standard die sizes (#6, #8, #10, and #12) that produce an OE style triple bubble crimp. No electrical requirements necessary.

**Capacity:** Crimps 2-braid dimension nylon barrier or reduced diameter hose.

**Mounting:** Bench or Mount in Vise

**Weight:** 6 lbs.

Reference pages 360-398 for Coll-O-Crimp tooling, tooling packages and pumps.

Refer to safety information regarding Coll-O-Crimp crimping procedures on pages 362-367.

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

### T-475 • Portable Air Conditioning Package



**Package includes:**

**CATALOG NUMBER DESCRIPTION**

T-475-1	Portable A/C Press
T-475-105C	#6 Die Set - Brown
T-475-106C	#8 Die Set - Purple
T-475-107C	#10 Die Set - Almond
T-475-108C	#12 Die Set - White

Includes Bench Mount Flange, Die Set Lubricant and Steel Pipe Nipple Extension  
Also includes a Custom Carrying Case with Instructions

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

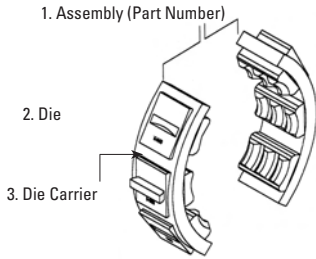
# Equipment

## T-475-1 Crimping Procedure



Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

### T-475-1 Crimp Die Sets



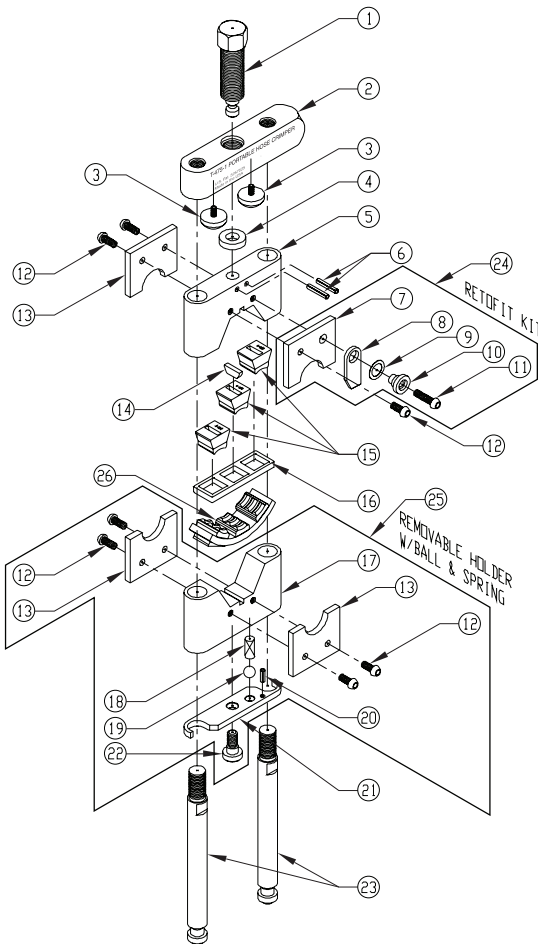
### T-475-1 Die Set Info

ITEM	DESC.	QTY	6	8	10	12
1	Assembly Part No.	1 set	T-475-105C	T-475-106C	T-475-106C	T-475-107C
2	Die Marking	-	556	640	742	897
3	Die Carrier Color	-	Brown	Purple	Almond	White

For use with H757 Hose and 757 'E' Series Hose Ends

### T-475-1 Crimper Parts List

When ordering T-475-1 spare parts, contact: [www.atcoproductsinc.com](http://www.atcoproductsinc.com) or Email: [info@atcomail.com](mailto:info@atcomail.com) or call: 1-972-225-8178.



### Parts List

ITEM	DESCRIPTION	QTY	PART NO.
1	Actuator Screw	1	75013
2	Actuator Bar	1	75001
3	Rubber Bumper	2	75012
4	Thrust Bushing	1	75011
5	Movable Die Holder	1	75005
6	3/16 x 1 Roll Pin	2	75010
7	Die Guide Block (Locator)*	1	75099
8	Locator Flag*	1	75086
9	Curved Disc Spring	1	75088
10	Locator Bushing	1	75087
11	1/4-20 x 1 Button Head Screw*	1	75113
12	1/4-20 x 5/8 Button Head Screw**(4)	7	75003
13	Die Guide Block**(2)	3	75002
17	Removable Die Holder**	1	75075
18	Spring-Compression**	1	75076
19	7/16 Dia. Ball**	1	75077
20	3/16 x 1/2 Roll Pin**	1	75009
21	Latch late	1	75074
22	Lock Screw**	1	75008
23	Strain Rod	2	75020
24	Retrofit it For Flag	1	75116
25	Removable Holder w/Ball & Spring	1	75081

### Items Not Shown

ITEM	DESCRIPTION	QTY	PART NO.
A	5/32 Short Arm Hex Key	1	71731
B	Grease	1	75015
C	3/8 x 4 Pipe Nipple	1	75016
D	3/8 Flooring Flange	1	90607
E	Carrying Case	1	75017
F	Crimper Only (No Dies)	1	3700-1

\* Included in item 24 (Not assembled)

\*\* Included in item 25 (Assembled)

### For use with H7575 Hose and 757 'E' Series Hose Ends.

ITEM	DESCRIPTION	QTY	6	8	10	12
-	Die Marking	-	556	640	742	897
26	Crimp Die No.	1 set	T-475-105C	T-475-106C	T-475-108C	T-475-108C
-	Color	-	Brown	Purple	Almond	White
16	Die Carrier	2	75134	75135	75136	75137
15	Die Segment	6	71741	75119	71743	71744

# Equipment

## T-475-1 Crimping Procedure

### Model T-475 Portable Air Conditioning Hose Crimping Kit



#### Features

- Engineered and designed specifically for use with 757 'E' Series black, zinc finished Hose End Fittings
- Portable, hand operation
- OE style triple bubble crimp
- Heavy duty construction for use with air impact wrench
- Color coded, urethane encased dies
- Easy changeover from size to size
- Crimps 2 braid dimension nylon barrier or reduced diameter hose
- Four standard die sizes – #6, #8, #10, #12
- Capable of crimping under-hood applications
- Light weight for easy handling (less than 6 lbs)
- Removable die holder accommodates complicated shapes
- Unit can be bench mounted
- Shipped in a custom carrying case with instructions
- No electrical requirements
- U.S. Patent No. 5257525
- Made in U.S.A.

### Operating Instructions for Model T-475-1 Air Conditioning Hose Crimper

#### General

The Model T-475-1 Crimper is a hand operated hose end crimping unit specifically designed for use with Weatherhead 757 'E' black, zinc finished Series hose ends. It is intended for use with Weatherhead H757 Air Conditioning hose.

The longer Weatherhead ferrule and triple bubble crimp of the T-475-1 insures a superior interface between the hose and the end fittings. In addition, the removable die holder allows for easy access in confined under-hood areas as well as for complicated end shapes.

#### CAUTION

To insure high quality crimped hoses, use only Weatherhead 757 'E' Series black, zinc finished hose and hose ends with this crimper. The crimp dies included will crimp Weatherhead 757 'E' Series black hose ends onto Weatherhead H757 Air Conditioning hose. The dies are housed in replaceable, flexible, color coded polyurethane carriers (see crimp die set parts list on previous page for part numbers) for easy identification of crimp sizes.

CATALOG NUMBER	HOSE NUMBER	COLOR	CRIMP DIAMETER
T-475-105C	H75706	Brown	.556
T-475-106C	H75708	Purple	.640
T-475-107C	H75710	Almond	.742
T-475-108C	H75712	White	.897

\*Refer to T-475-1 Crimper Parts List, page 362.



# Equipment

## T-475-1 Crimping Procedure

### Model T-475 Portable Air Conditioning Hose Crimping Kit

#### Description of terms

The crimper can be operated with a 1/2" drive air impact wrench, ratchet or breaker bar. It takes approximately 100 foot pounds of torque to fully close the jaws and achieve a satisfactory crimp. The crimper can be bench mounted using the flange and pipe nipple provided or it can be mounted in a bench vise to stabilize the unit. If the unit is used in a service vehicle with a mounted vice, it will be necessary to use a 12" minimum long extension to the pipe nipple to counteract the torque while closing the dies. This extension is not provided in the kit.

**Bench mount:** Bolt the flange to a bench top. Screw the pipe nipple and crimper to the flange plate.

**Impact wrench (1/2" DRIVE @ 100 PSIG MAX.):** Use a 1" impact socket to drive the movable die holder.

#### ⚠ CAUTION

Do not exceed 100 PSIG air pressure on the impact wrench as damage to the wrench and the crimper may result.

#### ⚠ CAUTION

Do not continue impacting after the dies are closed. This can cause damage to the crimper.

#### ⚠ CAUTION

Care should be taken when reversing the impact so that the die holder does not slam into the crimper body (actuator bar, Item 2). Bumpers are provided to minimize damage.

#### Ratchet or breaker bar:

Use a 1" socket to drive the movable die holder. It will take approximately 100 foot pounds of torque to achieve a full crimp.

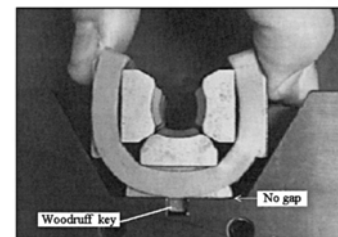
**Removable die holder:** The bottom of the crimper can be removed to accommodate special shapes or under-hood crimping. Push the latch plate (Item 21) open while holding the removable die holder. Pull the holder off the strain rods.

**Die change:** With the removable die holder removed, loosen two of the button head screws (Item 12) on one side of the die holder. The die will drop out of the holder. Apply grease (Item B) to the slide surfaces. Squeeze the outer segments of the die set together and insert the die into the holder making sure that the woodruff key (Item 14) in the center segment snaps fully into the groove in the holder (Refer to Fig. 1).

While holding the die securely in the slot, retighten the two button head screws. Check to make sure that the two outer segments on each half are free to move. If they do not move freely, remove and inspect for damaged guide block pad or dirt.

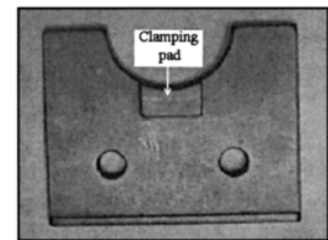
#### ⚠ CAUTION

Retention of the woodruff key in the slot while tightening the screws is most important. Failure to do so will result in an irregular crimp and damage to the guide blocks and Woodruff Key (Refer to Fig. 2).

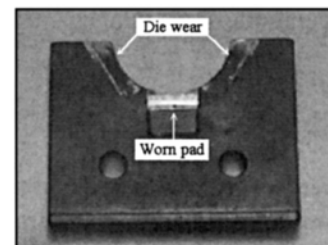


**Figure 1**

Die carrier properly inserted in holder.



Undamaged Pad



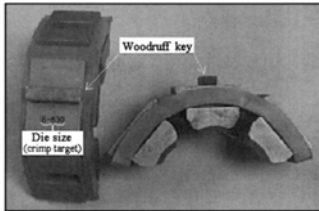
Damaged Pad

**Figure 2**

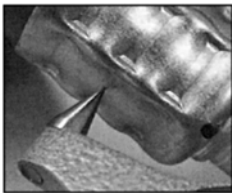
# Equipment

## T-475-1 Crimping Procedure

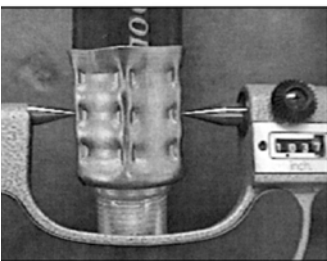
**!** Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.



**Figure 3**  
Dies with woodruff keys in place.



Position of tip of micrometer.



Measuring the crimp with a micrometer.  
**Figure 4**

### **!** CAUTION

It is not necessary to over-tighten the screws. Always use the short hex key wrench provided in order to avoid damage.

#### **Die Carrier:**

The die carriers will become worn and produce unacceptable crimps with time. To replace the color coded die carriers, simply push the die segment out of the back of the carrier. Reverse the process to assemble die segments in the new carrier.

#### **Woodruff Key:**

The woodruff key is bonded into the slot in the center die segment. It is used to align the dies in the die holders (Refer to Fig. 3).

### **!** CAUTION

If the woodruff key is not in the center segment of each half of the die set, an irregular crimp will be formed increasing the probability of leakage.

### **!** CAUTION

Never use dies without woodruff key engaged in the slot of the segment and holder.

To replace the woodruff key, use a screwdriver and hammer to remove the old key. Replace the key using a drop of adhesive such as Loctite® to hold the key securely.

#### **Locator Flag:**

There is a locator flag on the crimper. It is spring loaded and movable to locate the end of the ferrule for proper crimp location. Swivel the flag to a position so that when the fitting is inserted into the crimper, the ferrule will stop in the proper location for crimping.

#### **Crimp diameter measurement:**

The crimp diameter can be measured by using a set of point micrometers or calipers with a point accessory kit installed. Standard measuring instruments will not reach to the crimp impression because of the pinch of the crimp. When measuring the crimp diameter, take three measurements around the center crimp ring. Add the measurements, divide by three to get the average. The average should be the target crimp diameter (+.015/-.005). Example: The #6 size is .556 target crimp diameter. The crimp should measure between .571 and .551 (Refer to Fig 4).

#### **Hose Wall Thickness:**

The hose wall thicknesses for one braid dimension hoses are listed below. It is important to check the hose wall thickness to make sure that the crimp will be leak free.

HOSE SIZE	HOSE O.D.
#6 - 5/16 I.D.	9/16
#8 - 13/32 I.D.	11/16
#10 - 1/2 I.D.	3/4
#12 - 5/8 I.D.	15/16

### Operation

1. Mount the crimper as described previously unless it is necessary to mount it in the vice on the service vehicle.
2. Select the proper size dies. Check all segments to make sure that all of the segments have the same numbers on the back. Each segment will be marked identifying the hose size and crimp diameter. Example: 5/16 ID hose with a .556 diameter crimp will be marked "556" (Refer to Fig. 3).
3. Lubricate the slides of the crimper die holders (Items 5 and 17) and the screw thread (Item 1) with an appropriate grease (Item B).
4. Refer to die change outlined above for proper assembly of the dies into the crimper.
5. Position the locator flag (Item 8) so the ferrule of the fitting bumps it on the side when inserted into the crimper.

### **!** CAUTION

Do not locate from the bead on the fitting. This will result in the wrong crimp location.

6. Insert the hose into the fitting making sure that the hose appears in the small inspection hole on the side or end of the ferrule.

### **!** CAUTION

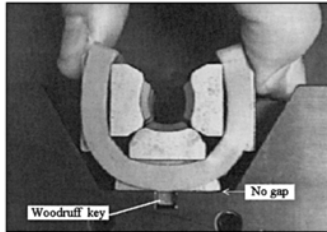
If the hose does not appear in the inspection hole, a poor crimp may result.

Loctite® is a registered trademark of Loctite Corporation.

# Equipment

## T-475-1 Crimping Procedure

**!** Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.



**Figure 5**  
Crimp head completely closed.

\*Refer to T-475-1 Crimper Parts List, page 362.

7. Place the assembly into the crimper and hold it against the locator flag. Only the ferrule should touch the screw. Operate the screw (Item 1) to close the dies to the full closed position. This will provide the proper compression to achieve a leak free crimp. When the crimp dies are bottomed out, there will be a slight gap between the two die holders (Items 5 & 17). This insures that the dies are fully closed before the holders bottom out (Refer to Fig. 5).
8. Reverse the screw (Item 1) to release the crimper from the hose assembly. Take care not to drive the die holder (Item 5) against the actuator bar (Item 2) as damage to the crimper may result. The bumpers (Item 3) are provided as a cushion to help prevent this from occurring.

9. If the crimp is performed under hood or the fitting is a complicated shape that requires disassembly of the crimper, open the latch plate (Item 21) and remove the die holder (Item 17).
10. Inspect the first crimp to make sure that the correct dies were used, the crimp location is correct, the crimp is uniform and there is no internal deformation of the fitting.

### Note:

Some hose materials trap air in the hose layers during manufacture. When leak testing a newly pressurized hose using soap bubbles or water submersion, the air in the hose will bleed out at the fitting and hose interface indicating a false leaking condition. Leave the hose pressurized for one hour and retest. The residual air should completely bleed out and no leak will be visible.

### Crimper Maintenance

1. Clean and lubricate all moving parts. Use an appropriate grease (Item B) as needed when lubricating.
2. Inspect the strain rods and latch plate for wear around the contact points.
3. Make sure the actuator screw turns freely. Lubricate as noted above.
4. Check for worn or torn die carriers. Replace when crimp appears to go out of round.
5. Inspect woodruff keys. Replace if they are damaged or missing to insure good crimps.

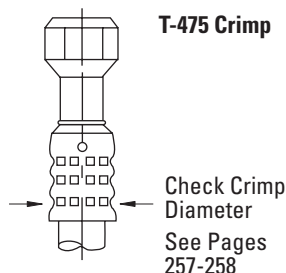
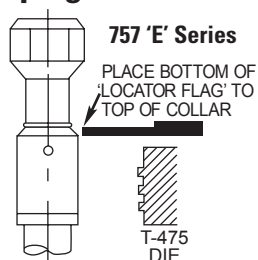
## Troubleshooting

PROBLEM	CAUSE	ACTION
1. Oblong or irregular crimp	<ul style="list-style-type: none"> <li>• Worn carriers</li> <li>• One die segment in the set is the wrong size</li> <li>• Woodruff key missing</li> <li>• Guide blocks installed backwards</li> </ul>	<ul style="list-style-type: none"> <li>• Replace carriers</li> <li>• Check all segments for correct size on back of die</li> <li>• Replace key</li> <li>• Turn guide blocks around so raised pad clamps on die</li> </ul>
2. Crimp diameter too large	<ul style="list-style-type: none"> <li>• Crimper not fully closed – refer to instructions</li> <li>• Incorrect size dies</li> </ul>	<ul style="list-style-type: none"> <li>• Recrimp until dies fully close</li> <li>• Replace with correct size</li> </ul>
3. Crimp diameter too small	<ul style="list-style-type: none"> <li>• Incorrect size dies</li> </ul>	<ul style="list-style-type: none"> <li>• Replace with correct size</li> </ul>
4. Crimp location too close to closed end of ferrule	<ul style="list-style-type: none"> <li>• Ferrule not inserted far enough into crimper</li> </ul>	<ul style="list-style-type: none"> <li>• Use locator flag to properly locate ferrule position</li> </ul>
5. Crimp location too close to hose	<ul style="list-style-type: none"> <li>• Ferrule inserted too far into crimper (past locator flag)</li> </ul>	<ul style="list-style-type: none"> <li>• Use locator flag to properly locate ferrule position</li> </ul>
6. Crimped fitting leaks when tested with soap bubbles	<ul style="list-style-type: none"> <li>• Air trapped in the hose during manufacture</li> <li>• Insufficient crimp</li> <li>• Hose wall thickness is under size (see chart)</li> <li>• Fitting is defective</li> </ul>	<ul style="list-style-type: none"> <li>• Recheck after system has been charged for one hour – air will bleed out of the hose</li> <li>• Check crimp diameter</li> <li>• Recrimp with .030 under size die</li> <li>• Replace fitting/recrimp</li> </ul>
7. Crimped fitting leaks when tested with electronic leak detector	<ul style="list-style-type: none"> <li>• Insufficient crimp</li> <li>• Hose wall thickness</li> </ul>	<ul style="list-style-type: none"> <li>• Check crimp diameter</li> <li>• Recrimp with .030</li> </ul>

# Equipment

## T-475-1 Crimping Procedure

### T-475-1 Crimping Procedure



### Nominal Crimp Diameter Measurement

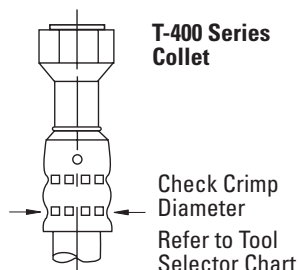
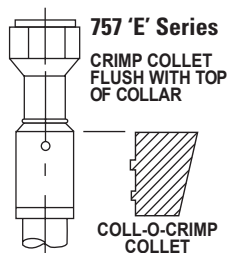
Measuring crimp diameters should be a part of the normal hose assembly procedure. To insure a proper crimp diameter reading, follow these steps.

1. Measure the diameter in the middle of crimped portion of the hose end.
2. Place the caliper in a position to allow a measurement across the pressed (flat) portion of the crimp.

### Note:

When using T-475 system, the bubble style crimp will have three annular rings compared to two when crimped with the T-400 series collets.

### Coll-O-Crimp Crimping Procedure



### Nominal Crimp Diameter Measurement

Measuring crimp diameters should be a part of the normal hose assembly procedure. To insure a proper crimp diameter reading, follow these steps.

1. Measure the diameter in the middle of crimped portion of the hose end.
2. Place the caliper in a position to allow a measurement across the pressed (flat) portion of the crimp.

### Note:

When using T-400 C-O-C system, the bubble style crimp will have two annular rings compared to three when crimped with the T-475 die set.

### 757 Hose Ends

Listed to the right are certain 757 style hose ends that require the use of designated Coll-O-Crimp systems. As noted, removal of the protective cap covering on the charge port may be necessary.

CATALOG NUMBER	HOSE END DESCRIPTION	T-460, T-400, T-407	T-420	T-410, T-440	T-462 T-465	T-480
75708E-Z99	-8, 90deg, w/Charge Port	YES/WC	YES/WC	YES/WC	YES/WC	YES/WC
75710E-Z01	-10, 90deg, w/Charge Port	YES/WC	NO	YES/WC	YES/WC	YES/WC
75712E-Z01	-12, 90deg, w/Charge Port	YES/WC	NO	YES/WC	YES/WC	YES/WC
75706E-Y36	Splicer, -6 to -6	YES	YES	YES	YES	YES
75708E-Y38	Splicer, -8 to -8	YES	YES	YES	YES	YES
75710E-Y40	Splicer, -10 to -10	NO	YES	YES	YES	YES
75712E-Y41	Splicer, -12 to -12	NO	YES	YES	NO	YES
75706E-Y38	Splicer, -6 to -8	YES	YES	YES	YES	YES
75708E-Y40	Splicer, -8 to -12	YES	YES	YES	YES	YES
75710E-Y41	Splicer, -10 to -12	NO	YES	YES	NO	YES
75706E-Y47	Splicer, -6 to -6 w/Charge Port	NO	YES	YES	NO	YES
75708E-Y48	Splicer, -8 to -8 w/Charge Port	NO	YES	YES	NO	YES
75710E-Y49	Splicer, -10 to -10 w/Charge Port	NO	YES	YES	NO	YES
75712E-Y50	Splicer, -12 to -12 w/Charge Port	NO	YES	YES	NO	NO

WOC indicates without protective cap.  
WC indicates with protective cap.

# Equipment

## Coll-O-Crimp Portable T-465

### Portable Coll-O-Crimp



The Portable Coll-O-Crimp is a completely PORTABLE hose assembly system. NO ELECTRICAL POWER SOURCE IS NEEDED. Hand pump powered, lightweight, vise or stand mounted, this crimper is ideal for your portable crimping needs.

**Capacity:** 3/16" I.D. 1 fiber braid through 1-3/8" I.D. 1 wire hose and 1-1/4" 2 wire hose

**Mounting:** Vise/Stand

**Size:** 12-1/2" high, 8-1/2" wide, 5-1/2" deep

**Weight:** 31 lbs.

The vise bracket, die ring, pusher, decal and instruction kit are components of the T-465 Portable Coll-O-Crimp Press.

**Pump Required** (sold separately): T-460-2

**T-465 • Portable Coll-O-Crimp Press ONLY**

### T-465-HP • Portable Coll-O-Crimp Package

Includes one each of the following:

**CATALOG****NUMBER DESCRIPTION**

T-465	Portable Coll-O-Crimp Press
T-460-2	Hand Pump (10,000 PSI)
T-450-3	Quick Disconnect Hose Assembly

For replacement pump see pages 395-397.

### T-465 HPU • Portable Coll-O-Crimp Package

Includes one each of the following:

**CATALOG****NUMBER DESCRIPTION**

T-465-HP	Portable Coll-O-Crimp Package
T-400-2C	'U' Series Collet – 1/4"
T-400-3C	'U' Series Collet – 3/8"
T-400-4C	'U' Series Collet – 1/2"
T-400-10	Black Spacer Ring
T-400-62	Yellow Spacer Ring

### T-465-HP80 • Portable Coll-O-Crimp Package

Includes one each of the following:

**CATALOG****NUMBER DESCRIPTION**

T-465-HP	See above for contents.
T-80	Coll-O-Cut Portable Saw

### T-465 HPU80 • Portable Coll-O-Crimp Package

Includes one each of the following:

**CATALOG****NUMBER DESCRIPTION**

T-465-HPU	See above for contents.
T-80	Coll-O-Cut Portable Saw



Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

**CAUTION**

Use T-460-2 10,000 PSI hand pump only.

**CAUTION**

The Coll-O-Crimp power source has the pressure relief valve set at 10,000 PSI. Damage to the press will result if higher pressures are used and warranty will be voided.

Reference pages 360-398 for Coll-O-Crimp tooling, tooling packages and pumps.

Refer to safety information regarding Coll-O-Crimp crimping procedures on page 370.



# Equipment

## Coll-O-Crimp Portable T-465

### T-450-C • Portable Coll-O-Crimp Stand



The T-450-C Stand is designed specifically for your Portable Coll-O-Crimp T-465 Press. This stand allows you to use your press on a work bench or other flat surface without the need of a vise. Simply bolt the press onto the stand with the supplied bolts, and you're ready to make Coll-O-Crimp Hose Assemblies.

Refer below for repair and replacement items.

### T-465-TB • Portable Coll-O-Crimp Tool Boxes



The T-465-TB tool boxes feature convenient press, pump and collet storage while offering easy mobility of your hose assembly equipment. Supplied as a set, the T-465-TB tool boxes are an excellent addition to the portable Coll-O-Crimp System.

Refer below for repair and replacement items.

**Includes one each:**

**CATALOG NUMBER DESCRIPTION**

T-460-10B Small Tool Box  
Stores the T-465 and spacer rings. 15" x 9" x 8".

T-460-10BB Large Tool Box  
Stores the T-460-2 and collets. 25" x 10" x 8".

### T-450/T-465 Portable Coll-O-Crimp Repair and Replacement Items

**CATALOG NUMBER DESCRIPTION**

T-450-D1 Spacer Ring Selector Decal for Nylon Hose (H009, H209, H243, H435 and H436)

T-450-P Pusher

T-450-Q Quick Disconnect Coupling


T-450K Pusher and Retainer Plate Repair Kit.

Includes: T-450B Pusher bolt (1)

T-450R Retainer plate (1)

T-450S Retainer plate screw (2)

W-EQCR-TE011-E Shroud Decal

 Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

# Equipment

## T-465-1 Crimping Procedure

### ⚠ WARNING

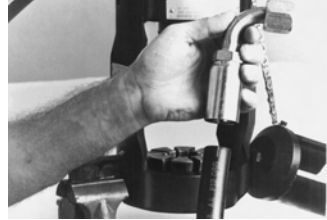
You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious bodily injury.



1. Clamp the crimper into a vise or mount to a work bench using the mounting bracket.

#### Note:

Lubricate the tapered cone seat with T-400-G grease or equivalent before any crimping is completed. Continued periodic lubrication is necessary.



2. Select proper Coll-O-Crimp hose and end fitting. Insert hose into end fitting, hose is bottomed in end fitting.

3. Remove pusher and insert proper size collet halves. Refer to crimp bulletin W-HOOV-TM001-E1.



4. Insert hose assembly from below between the collet halves. Align the hose end with the top of the collet in the proper location.



5. Refer to crimp bulletin W-HOOV-TM001-E1 for proper spacer ring. Place appropriate spacer ring, with the proper orientation, on top of collet. Hold uncrimped hose assembly in place throughout crimping operation.



6. Replace pusher by hanging it from ramplate with bolt on top. Slide it back for centering. Close valve on hand pump and start pumping to crimp.




7. When spacer ring contacts die ring, the crimp is complete. Open valve on hand pump. Allow the ram and pusher to retract.
8. Remove pusher and spacer ring. Remove crimped assembly from below through the collet halves. Visually inspect the crimped end.
9. To insure a proper crimp has been completed, measure the nominal crimp diameter and verify the proper crimp length and crimp location. Refer to crimp bulletin W-HOOV-TM001-E1.



# Equipment

## Coll-O-Crimp Portable T-464

 Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

### T-464 • Portable Coll-O-Crimp



For T-460 Tool Box see page 401.

Refer to pages 360-398 for Coll-O-Crimp tooling, tooling packages and pumps.

Refer to safety information regarding Coll-O-Crimp crimping procedures on page 372.

The T-460 is a completely portable hose assembly system. Lightweight, hand pump powered, and complete with a self-supporting base, this crimping press features layback positioning up to a 45° angle.

**Capacity:** 3/16" I.D. 1 fiber braid through 1-3/8" I.D. 1 wire hose and 1-1/4" 2 wire hose.

**Mounting:** Free standing base

**Size:** 15" high, 14" wide, 11-1/4" deep

**Weight:** 62 lbs.

### T-464 • Portable Coll-O-Crimp Package

Includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-460	Portable Coll-O-Crimp Press, Hand Pump & Hose Assembly Kit, W-EQCR-TM008-E Instructions
T-400-2C	'U' Series Collet – 1/4"
T-400-3C	'U' Series Collet – 3/8"
T-400-4C	'U' Series Collet – 1/2"
T-400-10	Black Spacer Ring
T-400-62	Yellow Spacer Ring

### Repair and Replacement Items

CATALOG NUMBER	DESCRIPTION	CATALOG NUMBER	DESCRIPTION
W-EQCR-TM008-E	Instructions	T-460-P	Pusher
T-460-SPR	Slide Pull Rod	T-460-SF	Slide Flange
T-460-16	Hose Assembly	T-460-SP	Slide Plate
T-460-2	Hand Pump	T-460-SPK	Slide Pull Knob
W-EQCR-TE009-E	Shroud Decal		

For replacement pump see pages 395-397.

### T-466 • Portable Coll-O-Crimp



For T-462 Tool Box see page 401.

Refer to pages 360-398 for Coll-O-Crimp tooling, tooling packages and pumps.

Refer to safety information regarding Coll-O-Crimp crimping procedures on page 372.

This portable Coll-O-Crimp features an air/hydraulic pump making it the ideal system if you have the availability of compressed air in your shop or in the field via a portable compressor.

**Capacity:** 3/16" I.D. 1 fiber braid through 1-3/8" I.D. 1 wire hose and 1-1/4" 2 wire hose.

**Mounting:** Free standing base

**Size:** 15" high, 14" wide, 11-1/4" deep

**Weight:** 62 lbs.

### T-466 • Portable Coll-O-Crimp Package

Includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-462	Portable Coll-O-Crimp Press, Air/Hydraulic Pump & Hose Assembly Kit, W-EQCR-TM008-E Instructions
T-400-2C	'U' Series Collet – 1/4"
T-400-3C	'U' Series Collet – 3/8"
T-400-4C	'U' Series Collet – 1/2"
T-400-10	Black Spacer Ring
T-400-62	Yellow Spacer Ring


### Repair and Replacement Items

CATALOG NUMBER	DESCRIPTION	CATALOG NUMBER	DESCRIPTION
W-EQCR-TM008-E	Instructions	T-460-SPK	Slide Pull Knob
T-460-P	Pusher	T-460-SPR	Slide Pull Rod
T-460-SF	Slide Flange	T-462-16	Hose Assembly
T-460-SP	Slide Plate	T-462-V	Regulator only
W-EQCR-TE010-E	Shroud Decal	T-462-2	Air/Hydraulic Pump
T-462-V	Air Regulator Kit		

For replacement pump see pages 395-397.

# Equipment

## T-460 Crimping Procedure

 Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

### WARNING

You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious bodily injury.



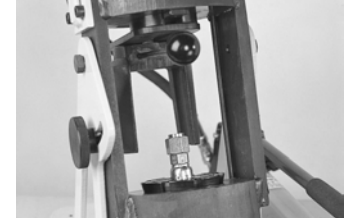
1. Select proper Coll-O-Crimp hose end fitting. Insert hose into end fitting.

**IMPORTANT:** Make sure hose is bottomed in end fitting.



2. Slide pusher to back of machine and insert proper size collet halves. Refer to crimp bulletin W-HOOV-TM001-E1.

**Note:**  
Lubricate tapered cone seat with T-400-G grease or equivalent before any crimping is completed. Continued periodic lubrication is necessary.



3. Insert hose assembly from below between the collet halves. Align the hose end with the top of the collet in the proper location.



4. Refer to crimp bulletin W-HOOV-TM001-E1 for proper spacer ring. Place appropriate spacer ring, with the proper orientation, on top of collet. Hold uncrimped hose assembly in place throughout crimping operation.



5. Pull the pusher positioning handle as far forward as it will go. The pusher will now be in the proper position for crimping. Close valve located on rear of hand pump and start pumping to crimp.



6. When spacer ring contacts die ring, the crimp is complete. Open control valve on hand pump. Allow the ram and pusher to retract.

7. Slide pusher clear and remove spacer ring. Remove crimped assembly from below through the collet halves. Visually inspect the crimped end.

8. To insure a proper crimp has been completed, measure the nominal crimp diameter and verify the proper crimp length and crimp location. Refer to crimp bulletin W-HOOV-TM001-E1.

# Equipment

## T-462 Crimping Procedure

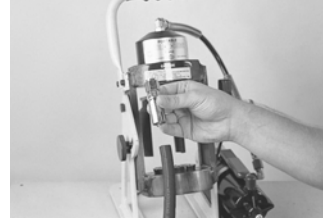
### WARNING

You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious bodily injury.



1. Select proper Coll-O-Crimp hose end fitting. Insert hose into end fitting.

**IMPORTANT:** Make sure hose is bottomed in end fitting.



2. Slide pusher to back of machine and insert proper size collet halves. Refer to crimp bulletin W-HOOV-TM001-E1.

**Note:**  
Lubricate tapered cone seat with T-400-G grease or equivalent before any crimping is completed. Continued periodic lubrication is necessary.



3. Insert hose assembly from below between the collet halves. Align the hose end with the top of the collet in the proper location.



4. Refer to crimp bulletin W-HOOV-TM001-E1 for the spacer ring selector chart. Place appropriate spacer ring, with the proper orientation, on top of collet. Hold uncrimped hose assembly in place throughout crimping operation.




5. Pull the pusher positioning handle as far forward as it will go. The pusher will now be in the proper position for crimping. Hold down on activation button and start crimping.




6. When spacer ring contacts die ring, the crimp is complete. Hold the red lever down to allow the pusher to retract.

7. Slide pusher clear and remove spacer ring. Remove crimped assembly from below through the collet halves. Visually inspect the crimped end.

8. To insure a proper crimp has been completed, measure the nominal crimp diameter and verify the proper crimp length and crimp location. Refer to crimp bulletin W-HOOV-TM001-E1.

 Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

 Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

## Equipment

### Coll-O-Crimp Portable T-480

#### T-480-HP • Portable Coll-O-Crimp Press & Hand Pump Package



Make factory-type hose assemblies anywhere-anytime! Versatile and portable, this package offers the ease of use you are looking for in a Coll-O-Crimp hose assembly system. The T-480 Coll-O-Crimp Press packages are offered in four options. Listed below are press/power unit packages.

For cabinets see pages 399-401 (not included).

**Capacity:** 3/16" I.D. 1 fiber braid through 1-1/4" I.D. 6 spiral hose

**Mounting:**  
Free Standing Base

**Size:** 22-1/2" high, 14" long, 10-1/2" wide

**Total Weight:** 112 lbs.

#### T-480-2 Pump Specifications:

**Dimensions:** 7-3/16" high, 21-1/64" long, 4-3/4" wide

**Pressure:** 0-10,000 psi

**Outlet Port Size:** 3/8" NPT

**Hydraulic Oil:** Enerpac

**Reservoir Capacity:**  
55 cu. in.

Includes **T-480-68** blue pusher extension ring to be used with **T-480** Portable Coll-O-Crimp and the **T-420** and **ET420** collets only.

For replacement pump see pages 395-397.

Refer to pages 360-398 for Coll-O-Crimp tooling, tooling packages and pumps.

Refer to safety information regarding Coll-O-Crimp crimping procedures on page 377.

#### T-480-AH • Portable Coll-O-Crimp Press & Air/Hydraulic Pump Package



**Capacity:** 3/16" I.D. 1 fiber braid through 1-1/4" I.D. 6 spiral hose

**Mounting:** Free Standing Base

**Size:** 22-1/2" high, 14" long, 10-1/2" wide

**Total Weight:** 124 lbs.

#### T-482-2 Pump Specifications:

**Dimensions:** 5" high, 14-5/8" long, 5-5/8" wide

**Pressure:** 0-10,000 psi

**Outlet Port Size:** 3/8" NPT

**Inlet Port:** 1/4" NPT

**Pump Inlet Air Pressure:**  
60-100 psi

**Hydraulic Oil:** Enerpac

**Reservoir Capacity:**  
36 cu. in.

Includes **T-480-68** blue pusher extension ring to be used with **T-480** Portable Coll-O-Crimp and the **T-420** and **ET420** collets only.

**Note:** It is recommended that a filter, regulator, lubricator, and air pressure gauge be installed upstream from the pump. Filter, regulator and lubricator units are not included.


For replacement pump see pages 395-397.

Refer to pages 360-398 for Coll-O-Crimp tooling, tooling packages and pumps.

Refer to safety information regarding Coll-O-Crimp crimping procedures on page 377.

# Equipment

## Coll-O-Crimp Portable T-480

 Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

APPLICATION  
DATA

### T-480-TA Portable Coll-O-Crimp Press & Turbo Air/Hydraulic Pump Package



Reference pages 360-398 for Coll-O-Crimp tooling, tooling packages and pumps.

Refer to safety information regarding Coll-O-Crimp crimping procedures on page 377.

**Capacity:** 3/16" I.D. 1 fiber braid through 1-1/4" I.D. 6 spiral hose  
**Mounting:** Free Standing Base  
**Size:** 22-1/2" high, 14" long, 10-1/2" wide  
**Total Weight:** 116 lbs.

**T-480-3 Pump Specifications:**  
**Dimensions:** 8-1/4" high, 12-3/8" long, 8" wide  
**Pressure:** 0-10,000 psi  
**Outlet Port Size:** 3/8" NPT  
**Inlet Port:** 1/4" NPT  
**Pump Inlet Air Pressure:** 40-150 psi  
**Hydraulic Oil:** Enerpac  
**Reservoir Capacity:** 150 cu. in.

Includes **T-480-68** blue pusher extension ring to be used with **T-480** Portable Coll-O-Crimp and the **T-420** and **ET420** collets only.  
**Note:** It is recommended that a filter, regulator, lubricator, and air pressure gauge be installed upstream from the pump. Filter, regulator and lubricator units are not included.  
For replacement pump see pages 395-397.

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

### T-480-EP Portable Coll-O-Crimp Press & 110v Electric Pump Package



Reference pages 360-398 for Coll-O-Crimp tooling, tooling packages and pumps.

Refer to safety information regarding Coll-O-Crimp crimping procedures on page 377.

**Capacity:** 3/16" I.D. 1 fiber braid through 1-1/4" I.D. 6 spiral hose  
**Mounting:** Free Standing Base  
**Size:** 22-1/2" high, 14" long, 10-1/2" wide  
**Total Weight:** 134 lbs.

**T-481-110 Pump Specifications:**  
**Electrical Power Source:** 15amp, 110v grounded 1Ph 50/60HZ  
**Dimensions:** 14-1/4" high, 9-5/8" long, 9-5/8" wide  
**Pressure:** 0-10,000 psi  
**Outlet Port Size:** 3/8" NPT  
**Hydraulic Oil:** Enerpac  
**Reservoir Capacity:** 115.5 cu. in.  
**Flow:** .5 to 1.0 gpm  
**Motor Rating:** 1/2 hp universal, 9 amps at 10,000 psi

Includes **T-480-68** blue pusher extension ring to be used with **T-480** Portable Coll-O-Crimp and the **T-420** and **ET420** collets only.  
For replacement pump see pages 395-397.

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

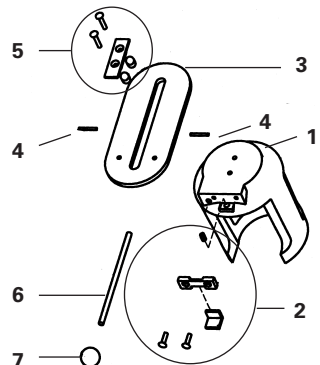
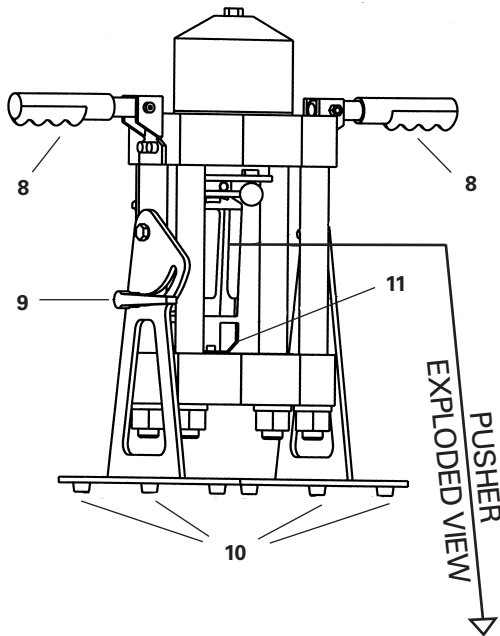


# Equipment

## Coll-O-Crimp Portable T-480

**!** Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

### T-480 • Portable Coll-O-Crimp Repair & Replacement Items



ITEM NUMBER	CATALOG NUMBER	DESCRIPTION
1	T-480-P	Pusher
2	T-480-PSK	Pusher Stop Repair Kit (Includes pusher clip, 2 machine screws, pusher stop & spring)
3	T-480-SP	Slider Plate
4	140-05485-01	Roll Pin
5	T-480-SFK	Slide Flange Kit (Includes slide flange, 2 bushings & 2 machine screws)
6	T-480-SPR	Slide Pull Rod
7	T-480-SPK	Slide Pull Knob
8	140-06601	Vinyl Grip
9	T-480-TBK	Tilt Bracket Knob
10	140-06894	Foot Pad
11	T-480-69	Tool Locator Bracket
#	T-480-16	10,000 PSI replacement hose assembly for 480-HP
#	T-480-17	10,000 PSI replacement hose assembly for T-480-TA and T-480-EP
#	T-480-18	10,000 PSI replacement hose assembly for 480-AH
#	140-06906	Hydraulic Quick Coupler used with the T-480-TA and T-480-EP System
#	T-480-3	Turbo Air/Hydraulic replacement pump for T-480-TA System
#	T-481-110	Electric replacement pump for T-480-EP System
#	T-480-2	Hand replacement pump for T-480-HP System
#	T-482-2	Air/Hydraulic replacement pump for T-480-AH System
#	W-EQCR-TE012-E	Shroud Decal
#	W-EQCR-TM013-E	Set-up & Operating Guide for T-480 System

# Item not illustrated in parts breakdown.

# Equipment

## Portable T-480 Crimping Procedure

### Note:

Lubricate the die ring with T-400-G grease or equivalent before any crimping is completed. Continued periodic lubrication is necessary.



**T-480-HP**  
Portable Coll-O-Crimp Press & Hand Pump



**T-480-AH**  
Portable Coll-O-Crimp Press & Air/Hydraulic Pump



**T-480-TA**  
Portable Coll-O-Crimp Press & Turbo Air/Hydraulic Pump



**T-480-EP**  
Portable Coll-O-Crimp Press & 110v Electric Pump



1. Attach air supply to pump.



1a. Connect hose assembly to pump and crimper.

1b. Attach air supply to pump.

1c. Vent pump by opening vent screw 1-2 turns.



1a. Connect hose assembly to pump and crimper. Check all connections to be sure they are tight and leak free.

1b. Open the pump vent plug by turning it 1-2 turns.

- 1a Turn vent/ fill cap to VENT position to vent pump reservoir.
- 1b. Close release valve on pump.



2. Release the pusher clip and slide pusher back.

3. Select the proper Weatherhead hose, end fittings and tooling. Refer to crimp bulletin W-HOOV-TM001-E1. Insert the hose into the end fitting.

**IMPORTANT:** Make sure hose is bottomed in end fitting.



4. Loosen knob and tilt press as necessary. Insert one end of hose assembly from below the base plate and between the collet halves. Align the hose end with the top of the collet in the proper location.



5. Holding uncrimped hose assembly in place, position the correct spacer ring on top of collet.

6. Slide pusher forward, making sure pusher clip has locked.



7. Turn pump switch, located on side of shroud, to "ON" position. Press ADVANCE on pendant switch and hold until the spacer ring contacts the base plate, indicating that the crimp is complete. Press RETRACT on the pendant switch and pusher will retract. Activate the pump and complete the crimp cycle until the spacer ring contacts the base ring. Remove the spacer ring from top of collet and then the crimped hose assembly from below.

**Note:** Visually inspect the crimped end. Measure the nominal crimp diameter and verify the proper crimp length and crimp location.

### WARNING

You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious bodily injury.

### For T-400 Tooling

#### Note:

The **T-480-68** blue extension ring is NOT used with T-400 tooling.

8. When crimping with Coll-O-Crimp I tooling the procedure is the same except;

- a. Insert the **T-420-25** adapter die ring into the base plate die cavity.
- b. Periodically lubricate the T-420-25 adapter die ring and base plate die cavity.

c. Use T-400 and ET400 collets and spacer rings.

d. Align the hose end with the top of the collet in the proper location.



# Equipment

## Portable T-480 Operating

### Insertion Depth

Push hose end on hose until hose is bottomed in end fitting. To insure that hose is bottomed in collar, mark the insertion depth on the hose before inserting it into the hose end.

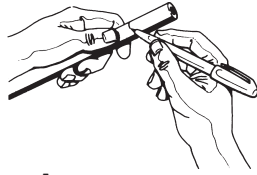


Figure A

HOSE I.D.	'U' SERIES RUBBER	'E' SERIES NYLON/	069 'E' SERIES TRUCK HOSE	757 'E' SERIES REFRIGERANT HOSE
3/16	—	7/8	1	—
1/4	1-1/2	7/8	1	—
5/16	—	15/16	1-3/32	1
3/8	1-7/16	15/16	—	—
13/32	—	—	1-3/32	1-1/8
1/2	1-7/16	1-1/16	1-3/32	1-3/32
5/8	1-15/16	—	1-5/16	1-3/32
3/4	2-1/8	1-1/4	—	—
7/8	—	—	1-5/16	—
1	2-3/16	1-11/32	—	—
1-1/8	—	—	1-3/8	—

### Coll-O-Crimp Spacer Ring

Typical spacer ring illustrating both sides of ring.

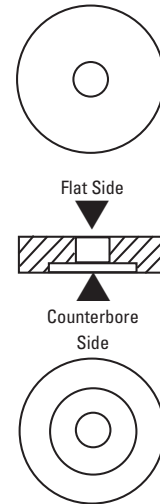


Figure B

### Nominal Crimp Diameter Measurement

Measuring crimp diameters should be a part of the normal hose assembly procedure. To insure a proper crimp diameter reading, follow these steps:

1. Measure the diameter in the middle of crimped portion of the hose end.
2. Place the caliper in a position to allow a measurement across the pressed (flat) portion of the crimp.
3. Refer to crimp bulletin W-HOOV-TM001-E1 for nominal crimp diameter.

#### Note:

In the larger sizes, calipers may be used; however, in the smaller sizes, and in the 'E' Series thermoplastic hose ends, a point micrometer will provide an accurate reading.

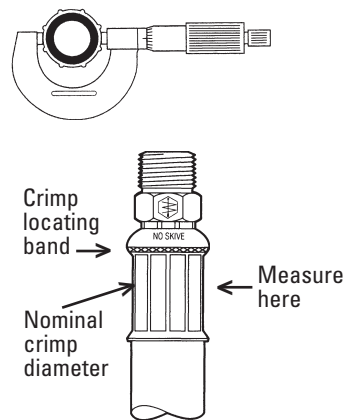


Figure C

### 757 'E' Series Hose End

757 'E' Series hose ends must be positioned with top of collar level with top of collet.

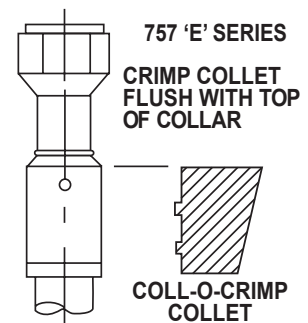


Figure D

# Equipment

## Coll-O-Crimp T-400

### Coll-O-Crimp T-400



Packages continued on next page.  
Refer to pages 360-398 for Coll-O-Crimp tooling, tooling packages and pumps.

**Note:**

25 ton (T-400-1 is C-O-C press only)



Refer to safety information regarding Coll-O-Crimp crimping procedures on page 381.



**CAUTION**

The Coll-O-Crimp power source has the pressure relief valve set at 4000 to 4200 PSI. Damage to the press will result if higher pressures are used and warranty may be voided.

The Coll-O-Crimp I is the time-proven 'Mini-Factory' that you can easily set up in your own shop. Fast, easy, compact and various power sources available make this crimper versatile for even the smallest of workshops.

**Capacity:** 3/16" I.D. 1 fiber braid through 1-3/8" I.D. 1 wire hose and 1-1/4" I.D. 2 wire hose.

**Mounting:** Bench; FH-135X or C40X Cabinet.

For cabinets see pages 399-401.

**Size:** 16-1/4" high, 8" wide, 21-3/4" deep

**Weight:** 113 lbs.

### T-400 • Coll-O-Crimp I Package

Includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-400-1	Coll-O-Crimp Press, T-400-BB Switch, and T-400-M Instructions
T-400-2C	'U' Series Collet – 1/4"
T-400-3C	'U' Series Collet – 3/8"
T-400-4C	'U' Series Collet – 1/2"
T-400-5C	'U' Series Collet – 3/4"
T-400-6C	'U' Series Collet – 1"
T-400-10	Spacer Ring – Black
T-400-11	Spacer Ring – Silver
T-400-62	Spacer Ring – Yellow
T-400-16**	36" T-421U Pump to Press Hose Assembly
T-400-8	Die Ring

Pump Required (sold separately): T-421U, T421U-110, T-402-2 or T-403-2 see pages 395-397.

\*\*Not supplied when ordering a T-402 or T-403 package.

### T-400 Coll-O-Crimp I Press/Pump Packages

The T-400 Coll-O-Crimp Press and tooling package can be supplied with a variety of power units for your particular needs. Listed below are press/power unit packages. For cabinets see pages 399-401.

### T-401 • C-O-C I & 220v Electric Pump Package

Includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-400	Press and tooling package
T-421U	Electric Pump (220v, 1 phase)

### T-401-110 • C-O-C I & 110v Electric Pump Package

Includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-400	Press and tooling package
T-421U-110	Electric Pump (110v, 1 phase)

### T-402 • C-O-C I & Air/Hydraulic Pump Package

Includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-400	Press and tooling package/Less T-400-16
T-402-2	Air/Hydraulic Pump
T-400-18	108" Hose assembly and fittings



Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

## Equipment

Coll-O-Crimp  
T-400

Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

Packages continued from previous page.



Refer to safety information regarding Coll-O-Crimp crimping procedures on page 381.

### T-400 Coll-O-Crimp I Press/Pump Packages Continued

The T-400 Coll-O-Crimp I Press and tooling package can be supplied with a variety of power units for your particular needs. Listed below are press/power unit packages. For cabinets see pages 399-401.

### T-403 • C-O-C I & Hand Pump Package

Includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-400	Press and tooling package/Less T-400-16
T-403-2	Hand Pump
T-400-19	60" hose assembly and fittings

### T-414 • C-O-C I & 12v Electric Pump Package

Includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-400	Press and tooling package
T-412	12 volt DC Electric Pump

**Note:** 25 ton (T-400-1 is C-O-C press only)

### T-400-9 • Crimp Locator

The T-400-9 allows you to make large volumes of hose assemblies by automatically aligning hose ends in proper crimp location.

### Installation Procedure

1. Remove the front Allen bolt using an Allen wrench or tool provided with kit.
2. Add the washer provided with the kit to existing washer as shown and torque the bolt down to 75 ft.-lbs.
3. Attach the locator post of the pre-assembled locator to the bottom of the middle plate and lock it in place with one of the knurled nuts.

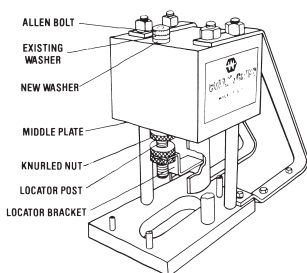
4. Align the dimples on the first assembly with top of collet to locate the crimp. Drop the locator bracket down to rest on top of the hose end. Lock the bracket in position with remaining two knurled nuts. The locator now can be used, instead of dimples, to locate crimp accurately and consistently on the remaining hose ends of the same size and type.

**Note:**

Remove locator assembly when crimping bent tube ends.

### T-400-1 Coll-O-Crimp I Repair and Replacement Items

CATALOG NUMBER	DESCRIPTION
T-400-B	Pusher Bolt
T-400-BB	Switch to interface T400-1 crimper to T421U pump or T-421U-110 pump
T-400-G	1.5 oz. Tube High Efficiency * Grease
T-400-K1	Seal Replacement Kit for T-400-1 Press
W-EQCR-TD002-E	Shroud Decal
T-400-M	Instructions for T-400-1
T-400-S	Replacement press shroud with Decals.
T-400-8	Die Ring
T-400-13	Replacement collet cage for T-400 'U' Series collets, 1/4" and 3/8" sizes only, and 229 "P" Series collets, all sizes, with a 'C' suffix (2 required for each collet).
T-400-14	Replacement collet cage for T-400 'U' Series collets with a 'C' suffix, 1/2" through 1" only, (2 required for each collet).
T-400-90	Replacement collet cage for T-400 'E', 069 'E', and 'E' Series collets with a 'C' suffix (2 required for each collet).
T-432-15	Pusher



**CAUTION**

The Coll-O-Crimp power source has the pressure relief valve set at 4000 to 4200 PSI. Damage to the press will result if higher pressures are used and warranty may be voided.

# Equipment

## Coll-O-Crimp T-400 Crimping Procedure

### WARNING

You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious bodily injury.

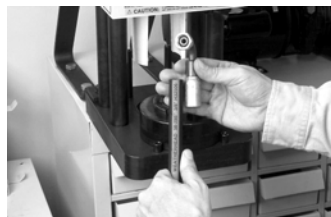
### Note:

Lubricate the die ring with T-400-G grease or equivalent before any crimping is completed. Continued periodic lubrication is necessary.



1. Place die ring **T-400-8** on base plate against front stops.

2. Insert properly-sized matched collet halves in the die ring. Refer to crimp bulletin W-HOOV-TM001-E1.



3. Place the correct Coll-O-Crimp hose end on hose.

**IMPORTANT:** Make sure hose is bottomed in end fitting.



4. Insert hose assembly from below between the collet halves. Align the hose end with the top of the collet in the proper location.



5. Place spacer ring with proper orientation on collet with uncrimped hose assembly held in place. Refer to crimp bulletin W-HOOV-TM001-E1.

6. Slide entire assembly back against rear locating stops.



7. Activate pump to crimp hose end to hose. When spacer ring contacts die ring, crimping is complete. Release the electric switch to retract pusher. Slide entire assembly forward and remove spacer ring.



8. Remove factory-quality crimped hose assembly and visually inspect the crimped end. Verify the proper crimp length and crimp location.

9. To insure a proper crimp has been completed, measure the nominal crimp diameter. Refer to crimp bulletin W-HOOV-TM001-E1 for procedure and crimp diameters.

# Equipment

## Coll-O-Crimp Super IT-420



The Coll-O-Crimp Super I is a versatile machine ideal for your shop, factory, construction, and mine locations. Big capacity combined with lever activated crimping gives you wide coverage and a quick and simple way to make factory-quality hose assemblies.

**Capacity:** 3/16" I.D. 1 fiber braid through 1-1/4" 6 spiral hose; for hoses other than

4 and 6 spiral, conversion tooling is required. See page 398 for details.

### Mounting:

Bench or C-40X cabinet.


See pages 296-299 for cabinet (not included).

**Size:** 22" high, 10" wide, 20-1/2" deep

**Weight:** 210 lbs.

### Pump Required (sold separately):

T-421U or T-421U-110

 Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

### T-420-1 • Coll-O-Crimp Super I Press ONLY Includes W-EQCR-TM004-E Instructions

### CAUTION

The Coll-O-Crimp power source has the pressure relief valve set at 4000 to 4200 PSI. Damage to the press will result if higher pressures are used and warranty will be voided.

### T-420-N • Coll-O-Crimp Super I Package

Includes one each of the following:

#### CATALOG NUMBER DESCRIPTION

T-420-1	Coll-O-Crimp Super I Press and T-420-M Instructions
T-421U	220v Electric Pump
T-400-2C	'U' Series Collet- 1/4"
T-400-3C	'U' Series Collet- 3/8"
T-400-4C	'U' Series Collet- 1/2"
T-400-5C	'U' Series Collet- 3/4"
T-400-6C	'U' Series Collet- 1"
T-400-10	Spacer Ring- Black
T-400-11	Spacer Ring- Silver
T-400-62	Spacer Ring Yellow
T-410-22	36" Pump to Press Hose Assembly
T-420-25	Adapter Ring for T-400 Series Collets
T-420-4CN	430 'U' Series Collet- 1/2"
T-420-5CN	430 'U' Series Collet- 3/4"
T-420-6CN	430 'U' Series Collet- 1"
T-420-7CN	430 'U' Series Collet- 1-1/4"

### T-420N-110 • Coll-O-Crimp Super I Package

Includes one each of the following:

#### CATALOG NUMBER DESCRIPTION

T-420-1	Coll-O-Crimp Super I Press and T-420-M Instructions
T-421U-110	110v Electric Pump
T-400-2C	'U' Series Collet- 1/4"
T-400-3C	'U' Series Collet- 3/8"
T-400-4C	'U' Series Collet- 1/2"
T-400-5C	'U' Series Collet- 3/4"
T-400-6C	'U' Series Collet- 1"
T-400-62	Spacer Ring- Yellow
T-400-10	Spacer Ring- Black
T-400-11	Spacer Ring- Silver
T-410-22	36" Pump to Press Hose Assembly
T-420-25	Adapter Ring for T-400 Series Collets
T-420-4CN	430 'U' Series Collet- 1/2"
T-420-5CN	430 'U' Series Collet- 3/4"
T-420-6CN	430 'U' Series Collet- 1"
T-420-7CN	430 'U' Series Collet- 1-1/4"

### Coll-O-Crimp Super I Repair and Replacement Items

CATALOG NUMBER	DESCRIPTION
T-420-1M	Micro-Switch for T-420-1 Press
T-420-28	Tool Locator Bracket
T-420-B	Pusher Bolt and Washers
W-EQCR-TE006-E	Shroud Decal
T-420-H	Handle
T-420-L	Light Bulb
T-420-LA	Light Assembly
T-420-LS	Light Switch
W-EQCR-TM004-E	Instructions for T-420-1
T-420-P	Pusher Set (2) with Wear Plates and Screws
T-420-S	Press Shroud with Decals
T-420-26	Insert - Base Plate

CATALOG NUMBER	DESCRIPTION
T-420-G	Linkage Assembly
T-420-2R	Rack
T-420-2K	Pinion Shaft Assembly (incl'd T-420-25 and T-420-2G)
T-420-2S	Replacement Pinion Gear Shaft
T-420-2G	Replacement Pinion Gear
T-400-G	1.5 oz. Tube High Efficiency PTFE Grease
T-421U-BC	Breather Cap for T-421U Pump
140-06745	Pusher Wear Plates includes (1) Left and (1) Rt
140-06748	Pusher Wear Plates Screws (1)

See pages 395-397 for replacement pumps. Refer to pages 360-398 for Coll-O-Crimp tooling, tooling packages and pumps. Refer to safety information regarding Coll-O-Crimp crimping procedures on pages 384-385.



# Equipment

## Coll-O-Crimp ET4000



The ET4000 is ideal for factory, high performance machine operations, construction and mine locations. This machine offers the capabilities of crimping all of the crimp style hose ends Weatherhead offers. With this coverage, this heavy-duty crimper can handle all of your crimping needs.

### CAUTION

The Coll-O-Crimp power source has the pressure relief valve set at 5000 PSI. Damage to the press will result if higher pressures are used and warranty may be voided.


**Capacity:** 3/16" I.D. 1 fiber braid through 2" 6 spiral hose; for hoses other than 4 and 6 spiral, conversion tooling is required. See page 396 for details.

**Mounting:** Bench

**Size:** 29" high, 12" wide, 21" deep

**Weight:** 550 lbs.

**Pump Required (sold separately):** T-441, see page 396.

 Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

Reference pages 360-398 for Coll-O-Crimp tooling, tooling packages and pumps.

**Note:**

Seal kits for T-410, T-440 and ET4000 are not sold separately. Crimpers must be sent in and torqued by Weatherhead.

Refer to safety information regarding Coll-O-Crimp crimping procedures on pages 384.

**Note:**

These packages include tooling to crimp H430 hose. For additional tooling order from pages 388-389.

**Note:**

**T-410-25 Adapter Die Ring Required for T-400 and ET400 series collets.**

**Note:**

**ET4000AR-002 Adapter Die Ring required for -20, -24 and -32 size 4SP and 6SP series collets.**

### ET4000-004 • Coll-O-Crimp Package

Includes one each of the following:

CATALOG NUMBER	DESCRIPTION
ET4000-002	ET4000 Press, Operating Instructions and 140-06741 Switch
T-441	220v 2-stage Electric Pump
T-410-22	36" Pump to Press Hose Assembly

### ET4000-006 • Coll-O-Crimp Package

Includes one each of the following:

CATALOG NUMBER	DESCRIPTION
ET4000-004	Press and Pump Package
T-410-4CN	430 'U' Series Collet – 1/2" I.D.
T-410-5CN	430 'U' Series Collet – 3/4" I.D.
T-410-6CN	430 'U' Series Collet – 1" I.D.
T-410-7CN	430 'U' Series Collet – 1-1/4" I.D.
T-410-8N	430 'U' Series Collet – 1-1/2" I.D.
T-410-9N	430 'U' Series Collet – 2" I.D.

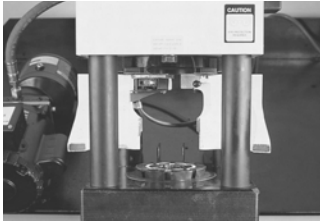
### Repair & Replacement Items:

CATALOG NUMBER	DESCRIPTION
T-410-26	Base Plate Insert for T-410-1 Machine
T-410-26R	Base Plate Insert for T-440-1 Machine
ET4000AR-001	Base Plate Insert for ET4000 Machine
T-410-28	Tool Locator Bracket Kit for the T-410-1 and T-440-1 Machine
ET4000TP-0001	Tool Locator Bracket Kit for the ET4000 Machine
T-410-P	Pusher Set for T-410-1, T-440-1 and ET4000 Machines (includes wear plates)
T-410-1M	Microswitch for T-410-1, T-440-1 and ET400 Machine
T-421-FP	4 Prong Female Electrical Outlet
T-400-G	1.5 oz. Tube PTFE Grease
T-410-BB	Pump Switch for T-410-1 Machine
140-06741	Pump Switch for the T-440-1 and ET4000 Machines
ET4000TP-002	Wear Plate Kit for T-410-1, T-440-1 and ET4000 Machines (Includes both halves plus screws)
W-EQCR-TE007-E	Shroud Decal for T-440-1 Machine
W-EQCR-TE014-E	Shroud Decal for ET4000 Machine
W-EQCR-TE010-E	Owner's Manual for T-440-1 Machine
W-EQCR-TE002-E	Owner's Manual for ET4000 Machine

## Equipment

### T-420 and ET4000 Crimping Procedure

#### T-420 (T-440 Used In Example)

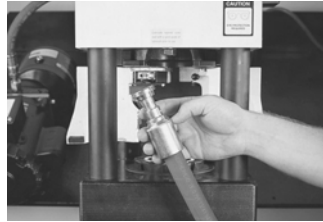


1. Open pusher halves. Select proper size collet for hose type being crimped. Insert collet as shown.

Refer to crimp bulletin W-HOOV-TM001-E1.

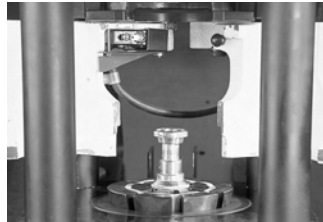
#### Note:

Lubricate the die ring with T-400-G grease or equivalent before any crimping is completed. Continued periodic lubrication is necessary.



2. Place proper size Coll-O-Crimp hose end on hose.

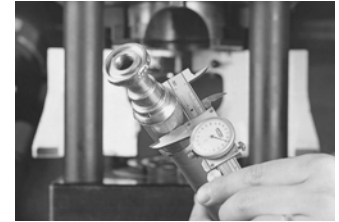
**IMPORTANT:** Make sure hose is bottomed in end fitting.



3. Insert hose assembly from below, between collet halves. Align the hose end with the top of the collet in the proper location.



4. Pull activating lever down. Pusher halves will close. Continue to pull activating lever down (pump will activate) until pusher contacts the base plate. The crimp is complete. Release activating lever. Pusher will automatically return, and pusher halves will open. Remove hose assembly and measure nominal crimp diameter (see step 6).



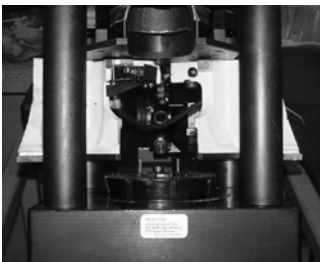
5. To insure a proper crimp has been completed, measure the nominal crimp diameter and verify the proper crimp length and location. Refer to crimp bulletin W-HOOV-TM001-E1 for procedure and crimp diameter.

#### ⚠ WARNING

You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious bodily injury.

⚠ Procedure when using ET420 or T-420 series collets. Spacer ring may be required, please refer to Crimp Bulletin # W-HOOV-TM001-E1 for tooling specifications.

#### ET4000



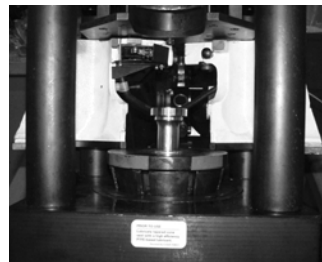
1. OPEN the pusher halves. Select the proper collet assembly for hose type being crimped as referenced in the Crimp Specifications Manual and insert the collet assembly into the base adapter ring.

#### Note:

Lubricate the inside of the base adapter ring and external surfaces of the collet assembly with a high-efficiency PTFE-based lubricant.



2. INSERT the hose assembly through the bottom of the base adapter ring and between the two collet assembly halves. Align the fitting with the top of the collet halves as referenced in the Crimp Specifications Manual.



3. PLACE the spacer ring (if applicable) in the appropriate position on top of the collet assembly (either flat-side up or flat-side down as referenced in the Crimp Specifications Manual).




4. CLOSE the pusher halves and begin crimping by activating the pump with turning on the switch. When the pusher halves or spacer ring (if applicable) contacts the base adapter ring, the crimp is complete.
5. RELEASE the switch and the pusher will automatically return. OPEN the pusher halves and remove the crimped hose assembly.
6. Visually inspect the crimp and verify the correct crimp diameter and length.



# Equipment

## T-420 Crimping Procedure

 Procedure when using T-400 and ET4000 series collets. Please refer to Crimp Bulletin # W-HOOV-TM001-E1 for tooling specifications.

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

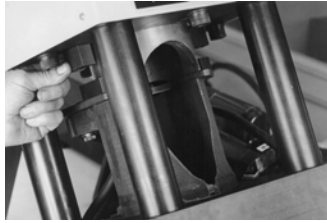
HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

### WARNING

You must hold the hose assembly in place from below throughout the crimping operation. Do not place fingers or hands at the crimping point during operation. Failure to follow this procedure could result in serious bodily injury.

### T-420 Used In Example



1. Hold switch "ON;" As ram starts down, rotate the ram return stops "OUT" from their "IN" position. Release switch. Ram will return to the full up position allowing enough clearance for insertion of required tooling.

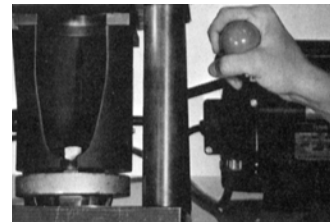
2. Open pusher halves and place adapter ring in the base plate cavity. Select proper size collet for hose type and size being crimped. Insert collet halves in adapter ring.

3. Place proper size Coll-O-Crimp hose end on hose.

**IMPORTANT:** Make sure hose is bottomed in end fitting.

### Note:

Lubricate the die ring with T-400-G grease or equivalent before any crimping is completed. Continued periodic lubrication is necessary.



4. Select proper spacer ring. Reference Spacer Ring Selector Chart located on front of press, or refer to crimp bulletin W-HOOV-TM001-E1. Insert hose assembly from below, between collet halves. Align the hose end with the top of the collet in the proper location.

6. Pull activating lever down. Pusher halves will close. Continue to pull activating lever down (pump will activate) until pusher contacts the base plate. The crimp is complete.

7b. Release activating lever. Pusher will automatically return and pusher halves will open. Remove factory-crimped hose assembly and inspect the crimp.

5. Place with proper orientation the spacer ring on top of collet.

8. To insure a proper crimp has been completed, measure the nominal crimp diameter. Refer to crimp bulletin W-HOOV-TM001-E1 for procedure and crimp diameters.

# Equipment

## ET1000 Portable Crimp Machine

### ET1000 • Portable Crimp Machine

#### CAUTION

Refer to safety information regarding hose, hose fittings and assembly equipment compatibility on page 4.

The completely PORTABLE ET1000 crimp machine boasts a broad crimp capability with an ease-of-use that is sure to please hose assemblers. With 3 power source options - air/hydraulic, hand, and electric - this portable machine can travel to the work-site. The machine comes equipped with a stand pre-drilled for mounting to a work-bench or table-top.

The ET1000 Portable Crimp Machine is a mid-size machine positioned between the other two popular portable crimp machines (the T-460 and T-480).



#### Capacity:

Coll-O-Crimp U Series hose ends and applicable hoses in sizes 1/4" through 1-1/4"

Coll-O-Crimp Z Series hose ends and applicable hoses in sizes 1/4" through 1-1/4"

Coll-O-Crimp 430U Series hose ends and applicable hoses in sizes 3/8" through 3/4"

#### Mounting:

Work bench or table top

#### Weight:

70 lbs. (less pump)

#### Tooling:

Standard Coll-O-Crimp collets and spacer rings. Uses the same tooling as the T-420 machine.

#### Pump Kits:

(pump kits contain hose assembly and fittings to attach pump to machine)

ET1000PK-001,  
Hand Pump

ET1000PK-002,  
Air/Hydraulic Pump

ET1000PK-003,  
110 Volt Electric Pump

#### Pump Only:

(does not include hose assembly or fittings)

T-480-2,  
Hand Pump

T-482-2,  
Air/Hydraulic Pump

T-481-110,  
110 Volt Electric Pump

#### ORDERING OPTIONS

ET1000-001	Basic machine (no pump)
ET1000-002	Machine with hand pump*
ET1000-003	Machine with air/hydraulic pump*
ET1000-004	Machine with 110 volt electric pump*

\* Includes hose assembly and fittings to attach pump to machine

**Note:** Collets and spacers not included in kits. Must be ordered separately. See pages 388-394 for part numbers.

**Note:** ET1000AR-001 adapter die ring required to Crimp T-400 and ET400 series collets. Not included in kits and must be ordered separately.

#### REPAIR AND REPLACEMENT ITEMS:

ET1000C-0001	Stand
ET1000C-0006	Pusher
ET1000AR-001	Adapter Ring
T-400-G	Lubrication

Additional repair and replacement items are available. Refer to the owner's manual or contact Eaton for information.

# Equipment

## ET1000 Crimping Procedures

### Note:

See Crimp Bulletin #W-HOOV-TM001-E1 for tooling specifications.

### Crimping Procedures



#### Step 1:

Slide the pusher to the back position.

Using the Collet/Spacer Ring Selector Chart, select the proper collet assembly and spacer ring.

#### Step 2A (for T-420 and ET420 Series Collets):

Lubricate the inside cone of the die ring and external surfaces of the collet assembly with a high-efficiency PTFE-based lubricant (T-400-G).

Insert the collet assembly into the base die ring.

#### Step 2B (for T-400 and ET400 Series Collets):

Lubricate the inside cone of the base die ring and the outside cone of the die ring adapter plate.

Place the die ring adapter plate into the base die ring.

Lubricate the external surfaces of collet assembly halves with a high-efficiency PTFE-based lubricant.

Insert the collet assembly into the die ring adapter plate.



#### Step 3:

Insert the hose assembly through the bottom of the base die ring and between the two collet assembly halves. Align the fitting with the top of the collet halves as referenced on the Collet/Spacer Ring Selector Chart.



#### Step 4:

Place the spacer ring in the appropriate position on top of the collet assembly (either flat-side up or flat-side down as referenced in the Collet/Spacer Ring Selector Chart).



#### Step 5:

Pull the pusher forward into the detent holding position with the pusher positioning handle.

#### Step 6:

Begin crimping by actuating the pump. **When the spacer ring bottoms out against the base die ring,** the crimping is complete.

#### Note:

Visually inspect the crimp and verify the correct crimp diameter and length.

# Equipment

## WeatherGRIP Tooling

### ET400TP-0001 Crimp Kit for T-400 Crimper

(For Braided Hose sizes -4 thru 16 one wire and two wire)

COLLET	SPACER RING P/N	SPACER RING COLOR
ET400DC-M150S	ET1000SR-M100A	Purple
ET400DC-M195S	T-400-62	Yellow
ET400DC-M230S	T-400-46R	Black/Tan
ET400DC-M245S	ET1000SR-M190D	Lt. Green
ET400DC-M295S	T-400-37	Green
ET400DC-M375S	T-400-10	Black
	ET400SR-002	Black/Green
	T-400-48R	Black/Orange
	ET400SR-003	Black/Purple
	T-400-49R	Black/Silver
	T-400-112	Tan

### ET420TP-0001 Crimp Kit for T-420 Crimper

(For Braided Hose sizes -4 thru 16 one wire; and -4 thru -20 two wire)

COLLET	SPACER RING P/N	SPACER RING COLOR
ET400DC-M150S	ET1000SR-M100A	Purple
ET400DC-M195S	T-400-62	Yellow
ET400DC-M230S	T-400-46R	Black/Tan
T-420-86C	ET1000SR-M190D	Lt. Green
ET420DC-M380S	T-400-37	Green
	T-400-10	Black
	T-400-112	Tan
	ET420SR-M495A	Gray
	ET420SR-M255A	Black/Silver
	T-420-29	Orange
	T-420-82R	Black/Blue

### ET440TP-0001 Crimp Kit for T-440 Crimper

(For Braided Hose sizes -4 thru 16 (no -10) for one wire and two wire)

COLLET	SPACER RING P/N	SPACER RING COLOR
ET400DC-M150S	ET4000SR-M100A	Purple
ET400DC-M195S	T-410-41	Yellow
ET400DC-M230S	T-440-78R	Black/Tan
T-440-86C	ET4000SR-M190D	Lt. Green
ET4000DC-M380S	T-410-39	Green
	T-410-10	Black
	T-410-42	Tan
	ET4000SR-M405A	Gray
	ET4000SR-M215A	Black/Silver
	T-410-93	Orange
	T-440-82R	Black/Blue

**Note:**

See page 393 for individual collet part numbers.



Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

### ET460TP-0001 Crimp Kit for T-460 Series Crimper

(For Braided Hose sizes -4 thru 8 one wire)

COLLET	SPACER RING P/N	SPACER RING COLOR
ET400DC-M150S	ET1000SR-M100A	Purple
ET400DC-M195S	T-400-62	Yellow
ET400DC-M230S	T-400-46R	Black/Tan
	ET1000SR-M190D	Lt. Green
	T-400-37	Green
	T-400-10	Black
	T-400-112	Tan

### ET1000TP-0001 Crimp Kit for ET1000 Crimper

(For Braided Hose sizes -4 thru 20 for one wire and two wire)

COLLET	SPACER RING P/N	SPACER RING COLOR
ET400DC-M150S	ET1000SR-M100A	Purple
ET400DC-M195S	T-400-62	Yellow
ET400DC-M230S	T-400-46R	Black/Tan
T-420-86C	ET1000SR-M190D	Lt. Green
ET420DC-M380S	T-400-37	Green
	T-400-10	Black
	T-400-112	Tan
<b>PUSHER EXTENTION</b>	ET420SR-M495A	Gray
ET1000C-0012	ET420SR-M255A	Black/Silver
	T-420-29	Orange
	T-420-82R	Black/Blue
	T-480-68	Blue

### ET480TP-0001 Crimp Kit for T-480 Crimper

(For Braided Hose sizes -4 thru 16 (no -10) for one wire and two wire)


COLLET	SPACER RING P/N	SPACER RING COLOR
ET400DC-M150S	ET1000SR-M100A	Purple
ET400DC-M195S	T-400-62	Yellow
ET400DC-M230S	T-400-46R	Black/Tan
T-420-86C	ET1000SR-M190D	Lt. Green
ET420DC-M380S	T-400-37	Green
	T-400-10	Black
	T-400-112	Tan
	ET420SR-M495A	Gray
	ET420SR-M255A	Black/Silver
	T-420-29	Orange
	T-420-82R	Black/Blue

# Equipment

## WeatherGRIP Tooling



**Note:**  
See Crimp Bulletin #W-HOOV-TM001-E1 for proper Collet selection for hose style and size desired.

 Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASM'BLY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

### 'Z' Series Collets

For use with: T-400, T-410, T-420, T-460, T-462, T-465, T-440, ET1000 and ET4000.

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
ET400DC-M150S	Collet – 1/4"
ET400DC-M195S	Collet – 3/8"
ET400DC-M230S	Collet – 1/2"

### 'Z' Series Collets

For use with: T-400

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
ET400DC-M245S*	Collet – 1/4"
ET400DC-M295S*	Collet – 3/8"
ET400DC-M375S*	Collet – 1/2"

\* Requires two ET400AR-001 base halves. Sold separately.

### 'Z' Series Collets

For use with: T-420, T-480 and ET1000.

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-420-85C	Collet – 5/8"
T-420-86C	Collet – 3/4"
ET420DC-M380S	Collet – 1"
ET420DC-M480S	Collet – 1-1/4"

### 'Z' Series Collets

For use with: T-410, T-440 and ET4000.

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-440-85C	Collet – 5/8"
T-440-86C	Collet – 3/4"
ET4000DC-M380S	Collet – 1"
ET4000DC-M480S	Collet – 1-1/4"

# Equipment

## Collet Kits



The Eaton tools listed are offered in kits for any given hose type, or collets and tools can be purchased individually by catalog number.

Refer to Crimp Bulletin # W-HOOV-TM001-E1 for proper spacer rings.



Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

**Note:**

See Crimp Bulletin #W-HOOV-TM001-E1 for proper Collet selection for hose style and size desired.

**Note:**

Collets may be ordered individually.

**T-400-30****'E' Series Collet Kit**

This kit can be used with the following C-O-C systems: T-400-1, T-420-1, T-440-1, ET4000, T-460, T-462, T-465 and T-480.

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-400-113C	Collet – 3/16" (H243 only)
T-400-31C	Collet – 1/4"
T-400-32C	Collet – 5/16"
T-400-33C	Collet – 3/8"

Spacer Rings not included in T-400-30 kit.

CATALOG NUMBER	DESCRIPTION
T-400-34C	Collet – 1/2"
T-400-35C	Collet – 3/4"
T-400-36C	Collet – 1"
FS-1200	Label Set/Layout Guide

**T-400-66****069 'E' Series Collet Kit**

This kit can be used with the following C-O-C systems: T-400-1, T-420-1, T-440-1, ET4000, T-460, T-462, T-465 and T-480.

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-400-54C	Collet – 3/16"
T-400-55C	Collet – 1/4"
T-400-56C	Collet – 5/16"
T-400-57C	Collet – 13/32"
T-400-58C	Collet – 1/2"

Spacer Rings not included in T-400-66 kit. See pg XXX for 1-13/16" collet.

CATALOG NUMBER	DESCRIPTION
T-400-59C	Collet – 5/8"
T-400-60C	Collet – 7/8"
T-400-61C	Collet – 1-1/8"
T-400-70	Collet – 1-3/8"
FS-1500	Label Set/Layout Guide

**T-400-67****'U' Series Collet Kit**

This kit can be used with the following C-O-C systems: ET1000, T-400-1, T-420-1, T-440-1, ET4000, T-460, T-462, T-465, T-480 and ET1000.

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-400-2C	Collet – 1/4"
T-400-3C	Collet – 3/8"
T-400-4C	Collet – 1/2"
T-400-64C	Collet – 5/8"

Spacer Rings not included in T-400-67 kit. \*Through size -12 only.

CATALOG NUMBER	DESCRIPTION
T-400-5C	Collet – 3/4"
T-400-6C	Collet – 1"
T-400-12	Collet – 1-1/4"
FS-1100	Label Set/Layout Guide

**T-400-137****229 'P' Series Collet Kit**

This kit can be used with the following C-O-C systems: T-400-1, T-420-1, T-440-1, ET4000, T-460, T-462, T-465 and T-480.

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-400-80C	Collet – 3/16"
T-400-82C	Collet – 13/32"

Spacer Rings not included in T-400-137 kit.

CATALOG NUMBER	DESCRIPTION
T-400-81C	Collet – 5/16"
T-400-83C	Collet – 1/2"

**T-400-104****338 'P' Series Collet Kit**

This kit can be used with the following C-O-C systems: T-400-1, T-420-1, T-440-1, ET4000, T-460, T-462, T-465 and T-480.

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-400-102C	Collet – 3/8"
T-400-103C	Collet – 1/2"

Spacer Rings not included in T-400-104 kit.

CATALOG NUMBER	DESCRIPTION
FS-2900	Label Set



# Equipment

## Collet Kits



**Note:**

See Crimp Bulletin # W-HOOV-TM001-E1 for proper Collet selection for hose style and size desired.

**Note:**

Collets may be ordered individually.



Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASM'BL Y INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

### T-400-114 757 'E' Series Collet Kit

This kit can be used with the following C-O-C systems: T-400-1, T-420-1, T-440-1, ET4000, T-460, T-462, T-465 and T-480.

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-400-105C	Collet – 5/16"
T-400-107C	Collet – 1/2"

CATALOG NUMBER	DESCRIPTION
T-400-106C	Collet – 13/32"
T-400-108C	Collet – 5/8"

Spacer Rings not included in T-400-114 kit.

### T-400-129 336 'E' Series Collet Kit

This kit can be used with the following C-O-C systems: T-400-1, T-420-1, T-440-1, ET4000, T-460, T-462 and T-480.

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-400-120C	Collet – 3/16"
T-400-122C	Collet – 3/8"
T-400-121C	Collet – 1/4"

CATALOG NUMBER	DESCRIPTION
T-400-123C	Collet – 1/2"
FS-3500	Label Set

\* For size 3/4" order T-420-15C. For 1" size order T-420-16C. For use with T-420-1 and T-480-1 only.

### T-410-70 470 'E' Series Collet Kit

This kit can be used with the following C-O-C systems: T-410-1, T-440-1, ET4000 ONLY.

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-470-8C	Collet – 1/2"
T-470-12C	Collet – 3/4"
T-470-16C	Collet – 1"
T-470-20	Collet – 1-1/4"

CATALOG NUMBER	DESCRIPTION
T-470-24	Collet – 1-1/2"
T-440-32*	Collet – 2"
FS-1800	Label Set/Layout Guide

\*.32 size requires T-440 or ET4000 system.

### T-410-80 430 'U' Series No Skive Collet Kit

This kit can be used with the following C-O-C systems: T-440-1 and ET4000 ONLY.

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-410-4CN	Collet – 1/2"
T-410-5CN	Collet – 3/4"
T-410-6CN	Collet – 1"
T-410-7CN	Collet – 1-1/4"

CATALOG NUMBER	DESCRIPTION
T-410-8N	Collet – 1-1/2"
T-410-9N	Collet – 2"
FS-3100	Label Set

### T-420-70 470 'E' Series Collet Kit

This kit can be used with the following C-O-C systems: T-420-1 and T-480.

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-420-8C	Collet – 1/2"
T-420-9C	Collet – 3/4"
T-420-10C	Collet – 1"

CATALOG NUMBER	DESCRIPTION
T-420-11	Collet – 1-1/4"
FS-1800	Label Set

### T-420-80 430 'U' Series No Skive Collet Kit

This kit can be used with the following C-O-C systems: T-420-1 and T-480

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-420-4CN	Collet – 1/2"
T-420-5CN	Collet – 3/4"
T-420-6CN	Collet – 1"

CATALOG NUMBER	DESCRIPTION
T-420-7CN	Collet – 1-1/4"
FS-3100	Label Set



# Equipment

## Collet Kits

**Note:**

See Crimp Bulletin # W-HOOV-TM001-E1 for proper Collet selection for hose style and size desired.

**Note:**

Collets may be ordered individually.



Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

### T-480-80 'U' and 430 'U' Series Collet Kit

This kit can be used with the following C-O-C systems: T-420-1, and T-480 ONLY.

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-400-2C	Collet – 1/4"
T-400-3C	Collet – 3/8"
T-400-4C	Collet – 1/2"
T-400-5C	Collet – 3/4"
T-400-6C	Collet – 1"
T-400-10	Spacer Ring - Black
T-400-11	Spacer Ring - Silver

CATALOG NUMBER	DESCRIPTION
T-400-62	Spacer Ring - Yellow
T-420-25	Adapter Ring for T-400 Series Collets
T-420-4CN	Collet – 1/2"
T-420-5CN	Collet – 3/4"
T-420-6CN	Collet – 1"
T-420-7CN	Collet – 1-1/4"

Refer to Crimp Bulletin # W-HOOV-TM001-E1 for proper spacer rings.

### 069 'E' Series Collet Size 32

For use with:  
T-440 and ET4000 ONLY

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-410-71C	Collet – 1-13/16"

### 265 'P' Series Collets

For use with: T-400, T-420, T-460, T-462, T-465, T-440, ET4000, T-480.

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
T-400-2C	Collet – 1/4" and 3/8"
T-400-3C	Collet – 1/2"

CATALOG NUMBER	DESCRIPTION
T-400-64C	Collet – 5/8"

### 4SP & 6SP Series Collets

For use with:  
T-440 and ET4000 ONLY

Kit includes one each of the following:

CATALOG NUMBER	DESCRIPTION
ET4000DC-4S12	Collet – 3/4"
ET4000DC-4S16	Collet – 1"
ET4000DC-4S20*	Collet – 1-1/4"
ET4000DC-4S24*	Collet – 1-1/2"
ET4000DC-4S32*	Collet – 2"

CATALOG NUMBER	DESCRIPTION
ET4000DC-6S20*	Collet – 1-1/4"
ET4000DC-6S24*	Collet – 1-1/2"
ET4000DC-6S32*	Collet – 2"

Qualified on ET4000 machine only.  
Requires ET4000AR-002 base adapter ring.

# Equipment

## Collet Kits



**Note:**

See Crimp Bulletin # W-HOOV-TM001-E1 for proper Collet selection for hose style and size desired.

**Note:**

Collets may be ordered individually.

**T-410-27 • Conversion Kit**

For use if you have collets used on our smaller T-400 Coll-O-Crimp I and you are upgrading to an ET4000.

**Example:**

If you desire to crimp hose other than 4 or 6 spiral hose, you will need the T-410-25 Adapter Die Ring which is included in the conversion kit. This ring allows the use of standard Coll-O-Crimp I tooling, in the Coll-O-Crimp II Plus and ET4000 Press.



Refer to safety information regarding Coll-O-Crimp hose fittings and assembly equipment compatibility on page 4.

If you have a Coll-O-Crimp II Plus or ET4000 press and would like to be able to crimp 'U' Series hose ends, order T-410-27 conversion kit and T-400-67 for all the collets. Collets and tools may also be purchased individually by catalog number.

Kit includes one each of the following:

**CATALOG NUMBER DESCRIPTION**

T-410-10	Spacer Ring Black
T-410-11	Spacer Ring Silver
T-410-25	Adapter Die Ring
T-410-41	Spacer Ring Yellow

### Adapter Die Rings

**CATALOG NUMBER DESCRIPTION**

T-400-8	Adapter Die Ring for T-400 Collets (T-400-1 Press)
T-410-25	Adapter Die Ring for T-400 Collets (ET4000, T-440-1 Presses)
T-420-25	Adapter Die Ring for T-400 Collets (T-420-1 Press and T-480 Packages)
ET1000-AR-001	Adapter Die Ring for T-400 Collets (ET1000 Press)

### Collet Cage Replacements

**CATALOG NUMBER DESCRIPTION**

T-400-13	Replacement collet cages for: T-400-2C, T-400-3C, T-400-80C, T-400-81C, T-400-82C, T-400-83C, T-400-100C, T-400-101C
T-400-14	Replacement collet cages for: T-400-4C, T-400-5C, T-400-6C, T-400-64C, T-400-105C, T-400-106C, T-400-107C, T-400-108C, T-400-109C, T-400-110C, T-400-111C, T-400-120C, T-400-121C, T-400-122C, T-400-123C
T-400-15	Replacement collet cages for: T-400-31C, T-400-32C, T-400-46C, T-400-47C, T-400-102C, T-400-103C, T-400-113C
T-400-90	Replacement collet cages for: T-400-33C, T-400-34C, T-400-35C, T-400-36C, T-400-48C, T-400-49C, T-400-54C, T-400-55C, T-400-56C, T-400-57C, T-400-58C, T-400-59C, T-400-60C, T-400-61C
T-420-14NS	Replacement collet cages for: T-410-4CN, T-410-5CN, T-410-6CN, T-410-7CN, T-410-72CN, T-410-73CN, T-420-4CN, T-420-5CN, T-420-6CN, T-420-7CN
T-420-14	Replacement collet cages for: T-410-4C, T-410-5C, T-410-6C, T-410-7C, T-410-8C, T-420-4C, T-420-5C, T-420-6C, T-420-7C, T-420-8C, T-420-9C, T-420-10C, T-420-30C, T-470-8C, T-470-12C, T-470-16C
ET4000CC-W1	
ET400	
ET420	
ET4000	

**Note:**

These items are half cages. Order 2 for complete cage.

### Die Ring Lubricant

**CATALOG NUMBER DESCRIPTION**

T-400-G	1.5 oz. Tube High Efficiency Grease
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APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS


ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

# Equipment

## Spacer Rings

 Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

**Note:**

See Crimp Bulletin # W-HOOV-TM001-E1 for proper Spacer Ring selection for hose style and size desired.

**Note:**

Spacer rings may ONLY be ordered individually, no sets available.

For use with  
T-400, T-460, T-462, T-465

\* T-400 machine only

CATALOG NUMBER	COLOR (5" DIA.)	CATALOG NUMBER	COLOR (5" DIA.)	CATALOG NUMBER	COLOR (5" DIA.)
T-400-10	Black	T-400-45R*	Black/Yellow	ET1000SR-M100A	Purple
T-400-11	Silver	T-400-46R	Black/Tan	ET1000SR-M190D	Lt. Green
T-400-112	Tan	T-400-47R	Black/Red	ET1000SR-M215A	Magenta
T-400-37	Green	T-400-48R*	Black/Orange	ET400SR-001*	Black/Red
T-400-38	Red	T-400-49R	Black/Silver	ET400SR-002*	Black/Green
		T-400-62	Yellow	ET400SR-003*	Black/Purple

For use with  
T-420

CATALOG NUMBER	COLOR (5" DIA.)	CATALOG NUMBER	COLOR (5" DIA.)	CATALOG NUMBER	COLOR (5" DIA.)
T-400-10	Black	T-400-47R	Black/Red	ET1000SR-M100A	Purple
T-400-11	Silver	T-400-62	Yellow	ET1000SR-M190D	Lt. Green
T-400-112	Tan	T-420-29	Orange	ET1000SR-M215A	Magenta
T-400-37	Green	T-420-80R	Black/White	ET420SR-M255A	Blk/Grey
T-400-38	Red	T-420-81R	Black/Orange	ET420SR-M495A	Brown
T-400-46R	Black/Tan	T-420-82R	Black/Blue	ET420SR-M660A	Pink

For use with  
T-480

CATALOG NUMBER	COLOR (5" DIA.)	CATALOG NUMBER	COLOR (5" DIA.)	CATALOG NUMBER	COLOR (5" DIA.)
T-400-10	Black	T-400-62	Yellow	ET1000SR-M100A	Purple
T-400-11	Silver	T-420-29	Orange	ET1000SR-M190D	Lt. Green
T-400-112	Tan	T-420-80R	Black/White	ET1000SR-M215A	Magenta
T-400-37	Green	T-420-81R	Black/Orange	ET420SR-M255A	Blk/Grey
T-400-38	Red	T-420-82R	Black/Blue	ET420SR-M495A	Brown
T-400-46R	Black/Tan	T-480-68	Blue	ET420SR-M660A	Pink
T-400-47R	Black/Red	ET1000C-0012	Blue		

For use with  
T-410, T-440, ET4000

CATALOG NUMBER	COLOR (6" DIA.)	CATALOG NUMBER	COLOR (6" DIA.)	CATALOG NUMBER	COLOR (5" DIA.)
T-410-10	Black	T-410-93	Orange	ET4000SR-M180A	Blk/Purple
T-410-11	Silver	T-440-78R	Black/Tan	ET4000SR-M050A	Blk/Green
T-410-12	White	T-440-79R	Black/Red	ET4000SR-M560A	Pink
T-410-39	Green	T-440-80R	Black/White	ET4000SR-M100A	Purple
T-410-40	Red	T-440-81R	Black/Orange	ET4000SR-M405A	Brown
T-410-46R	Yellow	T-440-82R	Black/Blue	ET4000SR-M345A	Blk/Brown
T-410-47R	Tan	ET4000SR-M215A	Blk/Magenta	ET4000SR-M190D	Lt. Green

For use with  
ET1000

CATALOG NUMBER	COLOR (5" DIA.)	CATALOG NUMBER	COLOR (5" DIA.)	CATALOG NUMBER	COLOR (5" DIA.)
T-400-10	Black	T-400-62	Yellow	ET1000SR-M100A	Purple
T-400-11	Silver	T-420-80R	Black/White	ET1000SR-M190D	Lt. Green
T-400-37	Green	T-420-81R	Black/Orange	ET1000SR-M215A	Magenta
T-400-46R	Black/Tan	T-420-82R	Black/Blue	ET420SR-M255A	Blk/Grey
T-400-47R	Black/Red	ET1000C-0012	Blue	ET420SR-M495A	Brown
				ET420SR-M660A	Pink

## Equipment

### Coll-O-Crimp Pumps

#### T-481-110 Electric Pump (110 volt)

For use with T-480-EP,  
ET10000



#### Pump Specifications:

**Dimensions:** 14-14" High x  
9-5/8" long x 9-5/8" wide

**Weight:** 32 lbs.

**Operation Pressure:**  
0-10,000 PSI

**Hydraulic Oil:**  
Use Enerpac Oil ONLY

#### T-482-2 Air/Hydraulic Pump

For use with T-480-AH,  
ET1000



#### Pump Specifications:

**Dimensions:** 5" High,  
14-5/8" long, 5-5/8" wide

**Weight:** 12 lbs.

**Operation Pressure:**  
0-10,000 PSI

**Hydraulic Oil:** Use Enerpac  
Oil ONLY

#### T-433 Two Stage Piston Pump (220v)

For use with T-407  
Production Press, T-400-1  
or T-420-1.



The Weatherhead T-433 two stage piston pump power unit is a high capacity pump especially suited for the T-407 Production crimper. It features a two stage piston pump providing high flow at low pressure for fast ram approach and low flow at high pressure for actual crimping. When used in conjunction with the T-433-2 connector cable, the T-433 can be used as an optional high capacity pump for the T-400-1 or T-420-1 Coll-O-Crimp presses.

#### Pump Specifications:

**Dimensions:**  
22" high, 12" long, 15" long

**Weight:** 127 lbs.

**Operation Pressure:**  
4,000 PSI

**Reservoir Capacity:**  
2 gallons

**Outlet Port Size:**  
3/8" Pipe Thread

**Motor:** 1-1/2" H.P.,  
220 volts 60hz single phase

**Hydraulic Oil:**  
Use Enerpac Oil ONLY

**Flow:** 2.78 GPM @ 800  
PSI, 0.52 GPM @ 4000 PSI

#### Replacement Parts:

**T-421-FP** 220v 4 wire Female  
electrical receptacle.  
See page 292.

**T-433-2** Interlock Cable

**T-433-1** Foot Switch Assembly

#### T-402-2 Air/Hydraulic Pump

For use with T-400-1.



#### Pump Specifications:

**Dimensions:**

5-1/4" high, 12-1/2" long,  
5" wide

**Weight:** 18 lbs.

**Operation Pressure:**  
4000-4200 PSI

**Reservoir Capacity:** 1 pint

**Hydraulic Oil:** Use Enerpac  
Oil ONLY

**Outlet Port Size:**

3/8" NPT

**Inlet (Air) Port Size:**

1/4" NPT

**Inlet Air Pressure**

**Required:** 60 to 120 PSI

#### Note:

It is recommended that a filter, regulator, lubricator and air pressure gauge be installed in the air line as close as possible to the pump. Filter, Regulator and Lubricator units not included.

Some models have air port on  
right side.

#### T-403-2 Hand Pump

For use with T-400-1.



#### Pump Specifications:

**Dimensions:** 7 high, 21"  
long, 4-3/4" wide

**Weight:** 9 lbs.

**Operation Pressure:**  
4000-4200 PSI

**Reservoir Capacity:** 1 qt.

**Outlet Port Size:** 3/8"

**NPT Hydraulic Oil:**  
Use Enerpac Oil ONLY

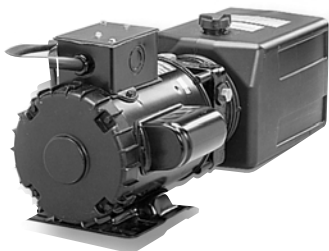
For repair and replacement items for the following pumps please contact an Enerpac Distributor at [www.enerpac.com](http://www.enerpac.com):  
T-402-2, T-403-2, T-481-110 & T-482-2.

# Equipment

## Coll-O-Crimp Pumps

### T-421U Electric Pump (220 Volt)

For use with T-400-1 and T-420-1.

**Note:**

It is recommended that the electric pump be used on a 15 amp. fused circuit. Pump wired for 220 volts, single phase.

**Pump Specifications:**

**Dimensions:** 7-1/2" high, 22" long, 10" wide

**Weight:** 75 lbs.

**Operation Pressure:** 4000-4200 PSI

**Reservoir Capacity:** 6 quarts

**Outlet Port Size:** 3/4"-16 Straight Thread

**Motor:** 1 H.P., 3450 R.P.M., 220 volts, 60 cycle, single phase

At 50 Hertz, RPM = 2,850  
At 60 Hertz, RPM = 3,450

**Hydraulic Oil\*:** ISO 32 hydraulic oil or (ATF) automatic transmission fluid

**Flow:** 2.5 GPM @ 750 PSI, 0.5 GPM @ 4000 PSI

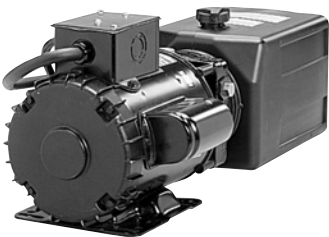
**Replacement Parts:**

CATALOG NUMBER	DESCRIPTION
140-06761	Relay for T-421U, T-441 and T-441 pumps only
T-421U-BC	Breather Cap
T-421-FP	220v 4 wire Female electrical receptacle

\*For low temperature applications automatic transmission fluid can be substituted.

### T-421U-110 Electric Pump (110 Volt)

For use with T-400-1 and T-420-1.



For dimensional data other than voltage information, refer to T-421U see above.

**Note:** It is recommended that the electric pump be used on an individual 30 amp. fused circuit.

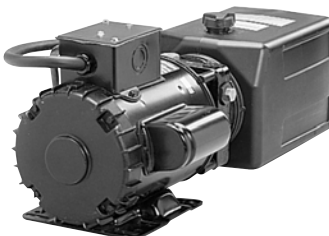
Pump wired for 110 volts, single phase.

**Replacement Parts:**

CATALOG NUMBER	DESCRIPTION
T-421U-BC	Breather Cap
T-421-FP	220v 4 wire Female electrical receptacle

### T-441 Electric Pump (220 Volt)

For use with T-440-1 only.



The Weatherhead T-441 power unit is designed for use with the latest Coll-O-Crimp II Plus press. It features a two-stage pump providing high flow at low pressure for fast ram approach and low flow at high pressure for actual crimping.

**Pump Specifications:**

**Dimensions:** 7-1/2" high, 22" long, 10" wide

**Weight:** 75 lbs.

**Operation Pressure:** 5,000 PSI

**Reservoir Capacity:** 6 quarts

**Outlet Port Size:** 3/4"-16 Straight Thread O-Ring

**Motor:** 1 H.P., 3450 R.P.M., 220 volts, 60 cycle, single phase

**Hydraulic Oil:** ISO 32 hydraulic oil automatic transmission fluid

**Flow:** 2.5 GPM @ 750 PSI, 0.5 GPM @ 5000 PSI

**Replacement Parts:**

T-421U-BC	Breather Cap
T-421-FP	220v 4 wire Female electrical receptacle. See page 292.
140-06761	Relay for T-421U or T-421U-110 pumps

**Note:**

T441 pump is to be used with T440-1 and ET4000 press only. When replacing the pump on a standard T-410 Coll-O-Crimp II Press (without the black switchbox on the side of the press) refer to the repair and replacement items on page 383.)



## Equipment

### Coll-O-Crimp Pumps

#### T-460-2 Hand Pump

For use with T-450-1, T-460 and T-465



#### Pump Specifications:

**Dimensions:** 5-5/8" High, 13-1/4" long, 3-3/4" wide

**Weight:** 4-1/2 lbs.

**Operation Pressure:** 0-10,000 PSI

**Reservoir Capacity:** 20 cu in.

**Relief Valve Setting:** 10,000 PSI

**Hydraulic Oil:** Use Enerpac Oil ONLY

#### Note:

For repair and replacement items for the following pumps please contact an Enerpac Distributor at

[www.enerpac.com](http://www.enerpac.com):

T-402-2, T-403-2, T-433, T-460-2, T-462-2, T-480-2, T-480-3, T-481-110 & T-482-2.

#### T-480-2 Two-Stage Hand Pump

For use with T-480-HP, ET1000



#### Pump Specifications:

**Dimensions:** 7-3/16" high x 21-1/64" long x 4-3/4" wide

**Weight:** 9 lbs.

**Operation Pressure:** 0-10,000 PSI

**Hydraulic Oil:** Use Enerpac Oil ONLY

#### T-462-2 Air/Hydraulic Pump

For use with T-462.



The Weatherhead T-462-2 power unit is a air/hydraulic pump designed for use with the T-462 portable system. Ideal if you have the availability of compressed air in your shop or in the field via a portable compressor.

#### Pump Specifications:

**Dimensions:** 4" high, 13" long

**Weight:** 8 lbs.

**Operation Pressure:** 0-10,000 PSI

**Reservoir Capacity:** 10 cu in.

**Relief Valve Setting:** 10,000 PSI

**Hydraulic Oil:** Use Enerpac Oil ONLY

Regulator to be set for 100-120 PSI inlet air.

#### T-480-3 Turbo Air/Hydraulic Pump

For use with T-480-TA.



#### Pump Specifications:

**Dimensions:** 8-1/4" High x 12-3/8" long x 8" wide

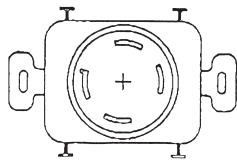
**Weight:** 16-1/2 lbs.

**Operation Pressure:** 0-10,000 PSI

**Hydraulic Oil:** Use Enerpac Oil ONLY

For repair and replacement items for the following pumps please contact an Enerpac Distributor at [www.enerpac.com](http://www.enerpac.com): T-402-2, T-403-2, T-460-2, T-462-2, T-480-2, T-480-3, T-481-110 & T-482-2.

#### T-421-FP 4 Prong Female Electrical Outlet



All Weatherhead 220v Coll-O-Crimp power pumps are equipped with a four prong electrical outlet as illustrated.



To obtain corresponding female wall receptacle order T-421-FP. For use with T-421U, T-441 & T-433 pumps.

#### Repair and Replacement Items for Discontinued T-401-1 Pump

CATALOG NUMBER	DESCRIPTION
T-401-1BC	Breather Cap for Fenner-Stone pumps
T-401-1S	Toggle Switch
T-401-SVF	Shuttle Valve for Fenner-Stone pump

## Equipment

### Conversion Tooling

#### T-400-NP60 Dayco to Weatherhead Conversion Kit



See pages 388-394 for  
collets and spacer rings.

The T-400-NP60 Conversion Kit is designed to allow the use of standard Weatherhead Coll-O-Crimp tooling, hose and hose ends in the Dayco NP60, (2) tie rod, crimp machine. Everything is included to convert the crimper to accept Weatherhead tooling. This kit gives the crimper capacity to crimp up to and including 1-1/4" I.D. 4 spiral wire hose assemblies.

#### T-400-NP60 Kit Includes:

PART DESCRIPTION	QTY
Base Plate Assembly	1
Dayco Pusher Spacer	1
3/8-16 x 1.75 Cap Screw	1
Adapter Ring for T-400 Collets	1
Instruction Kit	1

#### T-400-DE60 Dayco to Weatherhead Conversion Kit



See pages 388-394 for  
collets and spacer rings.

The T-400-DE60 Conversion Kit is designed to allow the use of standard Weatherhead Coll-O-Crimp tooling, hose and hose ends in the Dayco DE60, (4) tie rod, crimp machine. Everything is included to convert the crimper to accept Weatherhead tooling. This kit gives the crimper capacity to crimp up to and including 1-1/4" I.D. 4 spiral wire hose assemblies.

#### T-400-DE60 Kit Includes:

PART DESCRIPTION	QTY
Base Plate Assembly	1
Dayco Pusher Spacer	1
3/8-16 x 1.75 Cap Screw	1
Adapter Ring for T-400 Collets	1
Instruction Kit	1

#### T-400-GT Gates PC707 Conversion Kit



The T-400-GT Conversion Kit is designed to allow the use of standard Weatherhead Coll-O-Crimp tooling, hose, and hose ends in the Gates PC707 crimper. Everything is included to convert the crimper to accept Weatherhead tooling. This kit gives the crimper capacity to crimp up to and including 1-1/4" I.D. 2 wire hose factory-type hose assemblies. **This kit does not include the T-400-8 Die Ring which is required for crimping.** If you do not already have the die ring or collets, you can order the kit to the right.

#### T-400-GT kit includes:

Pusher, 10-24 x 1/4 Set Screws (2), Spacer (2), Instructions

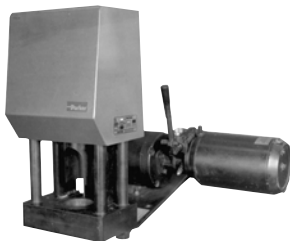
#### T-400-GTK • Gates PC707 Conversion Kit

Kit includes one each of the following:

#### CATALOG NUMBER DESCRIPTION

T-400-GT	Conversion Kit
T-400-2C	'U' Series Collet - 1/4"
T-400-3C	'U' Series Collet - 3/8"
T-400-4C	'U' Series Collet - 1/2"
T-400-5C	'U' Series Collet - 3/4"
T-400-6C	'U' Series Collet - 1"
T-400-8	Die Ring - 3/16" thru 1-1/4"
T-400-10	Spacer Ring - Black
T-400-11	Spacer Ring - Silver

#### T-400-PH Parker 80c Conversion Kit



The T-400-PH Conversion Kit is designed to allow the use of standard Weatherhead Coll-O-Crimp tooling, hose, and hose ends in the Parker 80c crimper. Everything is included to convert the crimper to accept Weatherhead tooling. This kit gives the crimper capacity to crimp up to and including 1-1/4" I.D. 2 wire hose factory-type hose assemblies. If you do not already have the collets and spacer rings, you can order the kit to the right.

#### T-400-PH Kit includes:

1/4-20 x 1 Cap Screw (4), Dowel Pin Spacer (2), 1/4" Lockwasher (4), Spacer Bracket (4), Adapter Die Ring, Instructions

#### T-400-PHK • Parker 80c Conversion Kit

Kit includes one each of the following:

#### CATALOG NUMBER DESCRIPTION

T-400-PH	Conversion Kit
T-400-2C	'U' Series Collet - 1/4"
T-400-3C	'U' Series Collet - 3/8"
T-400-4C	'U' Series Collet - 1/2"
T-400-5C	'U' Series Collet - 3/4"
T-400-6C	'U' Series Collet - 1"
T-400-10	Spacer Ring - Black
T-400-11	Spacer Ring - Silver



Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.



# Equipment

## Cabinets

### C-40X Stock Cabinet



Ideal for mounting the T-400-1 Coll-O-Crimp I Press and Pump or T-420-1 Coll-O-Crimp Super I. The sturdy C-40X Cabinet contains 40 heavy-duty plastic drawers that can be divided into one, two, three, or four compartments providing space for a large selection of Coll-O-Crimp hose ends and adapters.

**Drawers: PD-40**  
(one drawer)

**Dividers: PD-20**  
(24 per set)

**Size:** 46-1/2" high, 40" wide, 26" deep at base, 18" deep at top

**Weight:** 228 lbs.

### FH-135X Stock Cabinet



The sturdy FH-135X Cabinet contains 50 heavy-duty plastic drawers that can be divided into one, two, or three compartments allowing you ample space for a large selection of Coll-O-Crimp hose ends and adapters. Ideal for mounting the Coll-O-Crimp I Press and Pump.

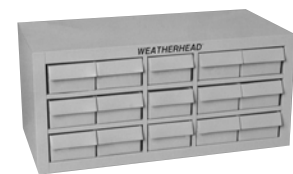
**Drawers: PD-95**  
(one drawer)

**Dividers: PD-15** (30 per set)

**Size:** 46-1/2" high, 33" wide, 14-1/2" deep

**Weight:** 115 lbs.

### FH-15X Stock Cabinet



Here is the ideal way to organize your inventory of hose ends and adapters. The rugged FH-15X Cabinet contains 15 plastic drawers for stocking hose ends and adapters.

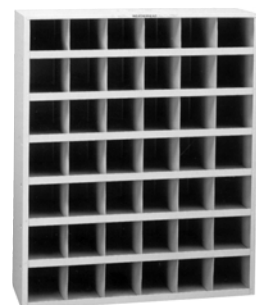
**Drawers: PD-95**  
(one drawer)

**Dividers: PD-15**  
(30 per set)

**Size:** 13-5/8" high, 14-3/8" deep, 30-1/4" wide

**Weight:** 45 lbs.

### FH-40X Stock Cabinet



Provides convenient storage areas for those large size fittings and hose ends. This durable 20 gage steel cabinet is made to handle abuse.

**Size:** 35" wide, 42" high, 12" deep

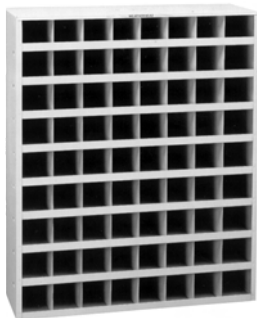
**Weight:** 200 lbs.

**Note:** Will not support Weatherhead Coll-O-Crimp equipment.

# Equipment

## Cabinets

### FH-72X Stock Cabinet



Large capacity all-welded cabinet provides 72 storage compartments. Fabricated from 20 gage steel, the FH-72X will provide years of continued service.

**Size:** 35" wide, 42" high, 12" deep

**Weight:** 200 lbs.

**Note:** Will not support Weatherhead Coll-O-Crimp equipment.

### C-5X Stock Cabinet



This mini-cabinet is designed to contain your oversized Weatherhead hose ends which may not currently have an organized home.

**Size:** 30" wide, 5-7/8" high, 9-5/16" deep

**Weight:** 10 lbs.

### TC-20 Collet Cabinet



The TC-20 Cabinet provides you easy access to all of your tooling needs. There is ample space for collets, spacer rings, and related Coll-O-Crimp tooling.

**Size:** 28-1/2" high, 26-1/2" wide, 12-3/4" deep

**Weight:** 37-1/2 lbs.

### HD-1X Hose Cabinet



The HD-1X Cabinet offers you the ideal solution for keeping 50 foot lengths of hose off your floor. Vertical slots in the cabinet keep your hoses organized and clean. Consider bolting an FH-15X Stocking Cabinet on top of the HD-1X to keep an inventory of hose ends readily available.

**Size:** 36" high, 24" deep, 31" wide

**Weight:** 83 lbs.

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS &  
HOSE ENDS

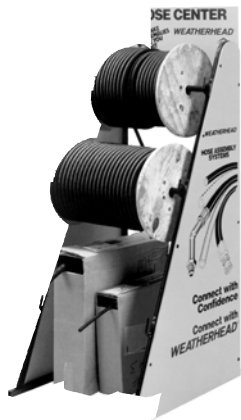
HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

# Equipment

## Cabinets and Bags

### HD-2X Hose Center Display



The HD-2X hose display is built with a heavy steel inner frame which supports the weight of the hose reels, while its tough wooden sides provide additional durability. It is designed to hold both Weatherhead bulk reels and boxed product. Handles are even provided to make loading the hose as safe and easy as possible.

**Measurements:** 22" wide x 30" deep x 57" tall

**Weight:** 54 lbs. (UPS Shipping)

**Max. Capabilities:** (3) Reels or (2) Reels & (4) Boxes (Hose not included)

### T-460-10BB Coll-O-Crimp Tool Box



The T-460-10BB Tool Box complements our T-460 and T-462 portable crimpers by offering you storage for your collets, spacer rings, and perhaps an assortment of hose ends.

**Measurements:** 25"x9"x8"

### T-460-TR Tool Rack



The T-460-TR wall mounted tool rack is rugged and built to last! The perfect shop accessory for Coll-O-Crimp machines, the T-460-TR stores up to 10 collets and 4 spacer rings- organized and within easy reach.

(The T-460-TR rack does not include tooling)

**Measurements:** 24 -1/2" Wide x 16" High x 7-1/2" Deep

**Weight:** 16 lbs.

### Plastic Bags



Weatherhead heavy duty plastic bags for Weatherhead fittings come in sizes 5"x6", 6"x10", and 8"x12". The bags include convenient spaces for labeling.

CATALOG NUMBER	DESCRIPTION	QTY
5x6 PB	Plastic Bag	100
6x10 PB	Plastic Bag	100
8x12 PB	Plastic Bag	100

# Equipment

## Label Sets

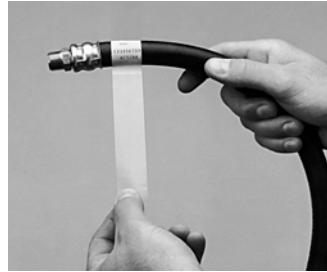
### Self Adhesive Label Sets



For C-40X, FH-15X and FH-135X Cabinets

LABEL NUMBER	DESCRIPTION
FS-100	Swivel Adapters
FS-200	JIC Steel Adapters
FS-300	Split Flange Adapters
FS-400	Field Attachable Hose Ends – 009 'B' Series
FS-500	Barb-Tite® 100 'B' and 105 'B' Series Hose Ends
FS-600	Field Attachable Hose Ends – 069 'D' & 247 'N' Series
FS-700	Field Attachable Hose Ends – 425 'N' Series
FS-800	Field Attachable Hose Ends – 338 'B' Series & Brass
	Air Brake Fittings for Copper Tubing
FS-1100	Coll-O-Crimp Hose Ends – 'U' Series
FS-1200	Coll-O-Crimp Hose Ends – 'E' Series
FS-1500	Coll-O-Crimp Hose Ends – 069 'E' Series
FS-1600	7000 Series Flareless Fitting
FS-1800	Coll-O-Crimp Hose Ends – 470 'E' Series and 570 'S' Series
FS-2000	Steel Pipe
FS-2200	Ready-Lok Hose Ends and Adapters
FS-2300	Drain Cocks, Valves and Select 338 'B' Series Hose Ends
FS-2400	FOR-SEAL Adapters Label Set
FS-2500	Metric Hose Ends ('U' Series) and Metric Flareless Nuts/Sleeves
FS-2800	Field Attachable Hose Ends – 213 'N' Series
FS-2900	Coll-O-Crimp Hose Ends – 338 'P' Series
FS-3100	Coll-O-Crimp Hose Ends – 430 'U' Series No-Skive
FS-3200	Coll-O-Crimp Hose Ends – 757 'E' Series
FS-3300	Quick Connect Air Brake 1800 Series
FS-3500	Coll-O-Crimp Hose Ends – 336 'E' Series
FF90645	WeatherGRIP Hose Ends - 'Z' Series
FF90646	E-Z Clip Label Set

### A-2103 Mylar Hose Labels



Eaton now offers Mylar labels for marking hose assemblies. They are self adhesive Mylar strips, 1" wide by 3-3/4" long, with a 1" x 1" white area on one end for printed information. They are supplied on a fan-folded computer form, 3 labels per row, 8 rows per page, 2500 labels to a carton. The format is suitable for use in typewriters and tractor feed or friction drive printers.

Whether for compliance with federal hose assembly labeling requirements, or for simply meeting customer demands for labeling hose assemblies, we strongly recommend labeling become part of your hose assembly "manufacturing" procedure. The National Highway Traffic Safety Administration places responsibility for labeling an air brake hose assembly in the hands of the "manu-

facturer" of the hose assembly. (Not the manufacturer of the hose or hose ends.) For a summary of air brake hose assembly labeling recommendations, see "Air Brake Hose Assembly Guidelines." For specific air brake hose assembly regulations, consult "Federal Motor Vehicle Safety Standard (FMVSS) 571.106," available from NHTSA, at the address listed below. For use other than air brake applications, customers may want additional information on the labels. Generally, the labels will accept 9-10 characters per row, on 4 or 5 rows. The information can be handwritten, typed or printed on the labels. The main concern is resistance to the elements. Procedure for applying the labels is simple:

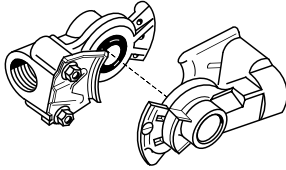
1. Print the appropriate information on the label.
2. Wrap the tag around the hose assembly; printed end first.
3. Cover the printed end with the clear mylar tail of the label.
4. The clear tail will protect the printed area from the elements.

Office Of Vehicle  
Safety Standards  
National Highway Traffic  
Safety Administration  
400 Seventh Street SW  
Washington, DC 20590  
Phone (202) 366-5317  
[www.nhtsa.dot.gov](http://www.nhtsa.dot.gov)

# Equipment

## Air Brakes

### Gladhand Couplings



- Die cast aluminum body
- Conforms to SAE J318
- Connects to 1/2" pipe
- Includes seal

CATALOG NUMBER	DESCRIPTION
W79850	SERVICE (Signal) (Blue clip; Connects only to service)
W79851	EMERGENCY (Supply line) (Red clip; Connects only to emergency)
W76150	UNIVERSAL (Connects to all three styles)

### Gladhand Seal

For use with W79850, W79851, W76150.



CATALOG NUMBER	DESCRIPTION
W14630	

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

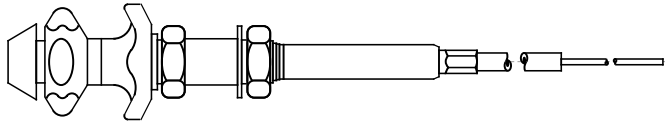
HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

# Equipment

## Cable Controls

### Vernier Controls



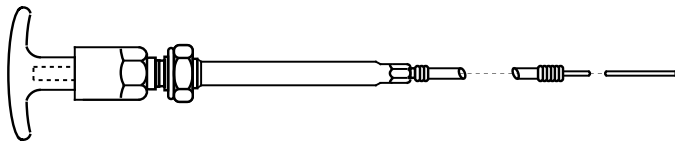
**Catalog Number: 8374**

Advanced styling. Meets or exceeds OEM specifications. Non-Corrosive aircraft aluminum body and stainless steel shaft assures 400 hour salt spray test without corrosion.

A direct replacement for most "Remote Throttle Controls"; Mack Truck

21QB-180 Series, Kenworth K068B Series, Peterbilt 05-1462 Series, Volvo-White 13401 Series, I.H. 34084 Series, Muncie COCL Series BPC VCG Series. Also replaces most Garage and Service Station Wreckers remote control throttles; Earnest Holmes, Dover, etc.

### Turn-To-Lock Controls (T-Locking)

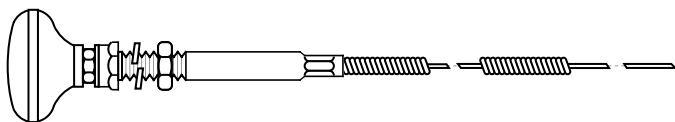


**Catalog Numbers: 8370, 8371**

Positive action control for small to mid-size engine throttles, governors, chokes, fuel shut-offs and more.

Aluminum body assures rust free performance. Patented Acetal Locking bushing guarantees never before possible settings with one third operator effort. Replaces Muncie COCL Series, and BPC R09 Series.

### Power Take Off Controls (Ball Knob)

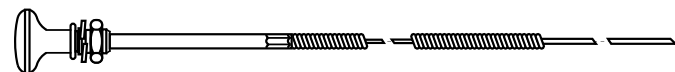


**Catalog Numbers: 8372, 8373**

Utility grade as exact replacement for most P.T.O. Controls.

Features 2" Round Knobs, Galvanized Steel, vinyl covered casing and steel inner wire. All P.T.O. Controls meet or exceed OEM specifications. Replaces BPC R-38DS, R04, R38 and R38D Series, Muncie COKB Series.

### Utility Light Load Controls (Dash)



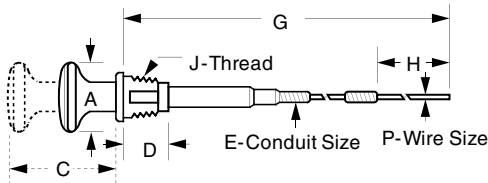
**Catalog Numbers: 8375, 8376, 8377, 8378**

Universal light load Choke, Fuel-Shutoff, Throttle, Hood, Trunk and more! Controls are designed for most engine applications. Stainless steel inner-wire resists corrosion and assures trouble free operation. Vinyl coated.

# Equipment

## Cable Controls

### Throttle Stop



CATALOG NUMBER	DESCRIPTION
1548	

### SPECIFICATION CHART ON WEATHERHEAD "PUSH-PULL" CONTROLS

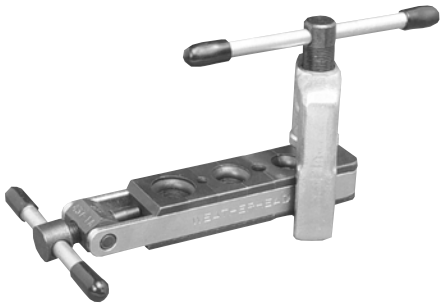
DESCRIPTION	DASH				T-HOOD	T-LOCKING	PTO CONTROL		VERNIER	DELUXE PTO CONTROL		
Catalog Number	8375	8376	8377	8378	8367	8370	8371	8372	8373	8374	106370	106470
Length of "G"	84"	84"	84"	60"	180"	126"	186"	81"	165"	120"	192"	300"
Length of Wire "H"	9-3/8"	9-3/8"	9-3/8"	7"	5"	6"	6"	3"	3"	4-1/2"	12"	12"
Knob Type	Round				T-Handle	T-Handle		Round		Round	Round	
Knob Size "A"	1.06"				2"			2"		2"	2"	2"
Knob Color	Black				Chrome	Chrome		Black		Black	Red	
Knob Material	Plastic				Cast Zinc	Nylon		Plastic		Plastic	Plastic	
Knob Lettering	Choke	Throttle	None	None	None	Lock		None		None	None	
Knob Travel "C"	2-1/2"				2-1/2"	3"		3-1/2"		3-3/8"	4-1/2"	
Thread Size "J"	3/8"-24				3/8"-24	7/16"-20		7/16"-20		3/4"-16	1/2"-20	
Thread Length "D"	1/2"				1/2"	3/4"		1-5/32"		2-1/2"	1-1/8"	
Conduit Size "E"	3/16"				3/16"	3/16"		1/4"		1/4"	3/8"	
Conduit Material & Style	Galvanized Steel				Steel	Galvanized Steel		Galvanized Steel		Galvanized Steel	High Carbon	
	Vinyl	Vinyl	Vinyl	Vinyl	Cover	Vinyl Covered		Vinyl Covered		Vinyl Covered	Polyethylene Lining & Cover	
Wire Size "P"	.054"				.054"	.054"		.088"		.0625"	.088"	



# Equipment

## Tube Flaring Tools

### T-1290 • Segmented Flaring Tool (37°)

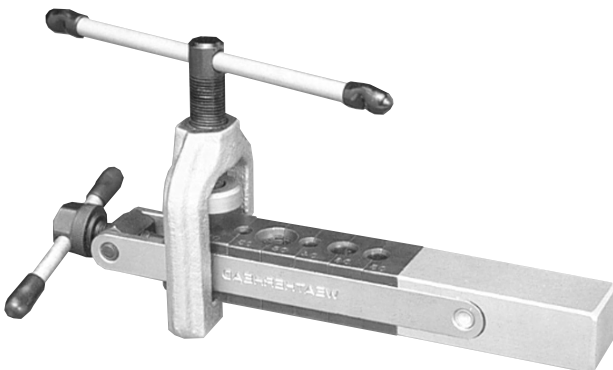


Hard chrome finished cone makes exceptionally smooth flares and minimizes amount of effort needed. Forged steel yoke for maximum strength. Sliding die blocks lock in place by lever clamp action.

**Flaring Capacity:** 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. Forms 37° SAE flares in soft copper, aluminum, brass and Bundyweld tubing.

**Weight:** 1 lb., 11 oz.

### T-1295 • Heavy-Duty Segmented Flaring Tool (37°)



Ideal for use where considerable number of 37° flares in stainless steel tubing must be made. Built to withstand continuous rugged service. Ball thrust mechanism reduces effort required. Hardened tool steel die features non-slip grip of tubing – even after repetitive flaring. Bar has vise extension.

**Flaring Capacity:** 1/8", 3/16", 1/4", 5/16", 3/8", and 1/2", O.D. tubing. Forms 37° SAE flares in annealed stainless steel (MIL-T-6845 or AMS-5566), cold drawn stainless steel, and annealed copper, brass, steel or aluminum.

**Weight:** 3 lbs.

# Equipment

## Assortments

### AB-8 & AB-9 Air Brake Air Chamber Hose



#### Assembly Assortment of 3/8" and 1/2" I.D. Lines

Each selection of fourteen ready-made air chamber hose assemblies facilitate replacement of hoses. Eliminates time and cost of making special assemblies. Wall rack keeps assemblies handy and ready to use.

#### AB-8 • 1/2" I.D. Air Brake Air Chamber Lines

LENGTH	QUANTITY	CATALOG NUMBER
18-1/2"	1	38353-01800
20-3/8"	1	38353-02037
24-1/8"	1	38353-02400
28-3/8"	1	38353-02837
30-1/8"	1	38353-03000
32"	1	38353-03200
34-3/8"	1	38353-03437
36-1/8"	1	38353-03600
41-1/8"	1	38353-04112
	1	AB-8X (rack only)

Replacement Labels: AB-8L

#### AB-9 • 3/8" I.D. Lines Air Brake Air Chamber Lines

LENGTH	QUANTITY	CATALOG NUMBER
18-1/2"	1	38166-01812
20-3/8"	2	38166-02137
24-1/8"	2	38166-02412
28-3/8"	2	38166-02837
30-1/8"	2	38166-03012
32"	1	38166-03200
34-3/8"	1	38166-03437
36-1/8"	2	38166-03612
41-1/8"	1	38166-04112
	1	AB-9X (rack only)

Replacement Labels: AB-9L

### CA-130 & CA-230 Clamp Assortments



You can now increase your all-stainless steel or part-stainless steel clamp sales with these all-purpose clamp assortments. These rugged assortments can be wall mounted or stand free using less than 2 sq. ft. of counter space. They load easily and organize your merchandise effectively.

#### CA-130 Part-Stainless Steel

CATALOG NUMBER	QUANTITY
6205-004	20
6205-006	10
6203-010	20
6203-016	20
6203-020	20
6203-024	10
6203-036	10
CA-10X (rack only)	1

#### CA-230 All-Stainless Steel

CATALOG NUMBER	QUANTITY
6206-004	20
6206-006	10
6204-010	20
6204-016	20
6204-020	20
6204-024	10
6204-036	10
CA-10X (rack only)	1

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

# Equipment Assortments

## RG-24 Hydraulic O-Ring Assortment



Weatherhead's RG-24 is your solution to storing a useful inventory of hydraulic o-rings. This kit contains o-rings for Weatherhead's straight thread and FOR-SEAL tube fitting applications as well as popular (code 61) split flange hydraulic applications. The RG-24 comes enclosed in a handy steel case with a

carrying handle. Consider an RG-24 for an over-the-counter sales merchandiser or keep one in your equipment shop or maintenance trailer to prepare for those critical "got-to-have-it" applications.

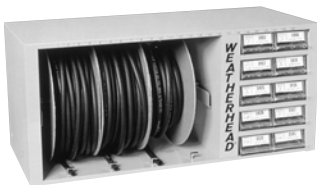
Twenty-four individual compartments keep your hydraulic o-ring inventory

separated by part number, and labelled illustrations on the inside of the assortment prevent the mix-up of o-rings. Compact, organized and reasonably priced, if you specialize in hydraulic applications which call for o-rings – we've got your number – RG-24.

### RG-24 • O-Ring Assortment Contents

PART NUMBER	SPLIT FLANGE QUANTITY	PART NUMBER	FOR-SEAL QUANTITY	PART NUMBER	STRAIGHT THR. QUANTITY
8x252	12	4629x4	12	7629x4	12
12x252	12	4629x6	12	7629x5	12
16x252	12	4629x8	12	7629x6	12
20x252	12	4629x10	12	7629x8	12
24x252	12	4629x12	12	7629x10	12
32x252	12	4629x16	12	7629x12	12
		4629x20	12	7629x16	12
		4629x24	12	7629x20	12
				7629x24	12
				7629x32	12

## FL-310 Fuel Hose and Fittings Assortment



FL-310 contains 250' of Weatherhead fuel line hose, a variety of brass hose end fittings, and gear-type clamps for easy, instant service on fuel and oil line assemblies.

A well-designed cabinet keeps 1/4", 5/16", 3/8", or 7/16" I.D. hose on reels free of kinks and tangles...

ready for instant use. Ten clear plastic drawers with color-coded illustrated labels are provided for storing hose end fittings and clamps. H057 hose is compatible with unleaded gasolines and low pressure fuel systems.

**Size:** 30" wide, 13-1/2" high, 13" deep

CATALOG NUMBER	QUANTITY	CATALOG NUMBER	QUANTITY
05704B-102	10	05706B-104	10
05704B-104	5	05706B-106	5
05704B-C02	5	05706B-1568	5
05705B-102	10	05706B-1570	5
05705B-104	10	05706B-C02	5
05705B-1560	5	05706B-C04	5
05705B-1561	5	6202	20
05705B-C02	5	CL-434	1
05705B-C04	5	FL-310X	1
05706B-102	10	H05704	100'
		H05705	100'
		H05706	50'

APPLICATION DATA  
 LOW & MEDIUM PRESSURE HOSE  
 HIGH PRESSURE HOSE  
 SPECIALTY HOSE  
 ACCESSORIES & ASSEMBLY INSTRUCTIONS  
 ADAPTERS & HOSE ENDS  
 HOSE ASSEMBLY EQUIPMENT  
 TECHNICAL DATA

# Equipment Assortments

## SR3100W Weatherhead Air Conditioning Assortment



Air Conditioning Assortment Kit; containing the most popular steel air conditioning hose ends for use with H757 air conditioning hose.

**Included in Kit:** (various sizes)

- Bumped Tube O-Ring Male Swivels
- Bumped Tube O-Ring Male Swivel 90° Tube Elbows
- Bumped Tube O-Ring Female Swivels
- Bumped Tube O-Ring Female Swivel 90° Tube Elbows
- O-Ring Assortment
- Stackable Sturdy Steel Case (18" x 12" x 3")

CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.
75706E-Z47	4	75706E-Z87	4	75708E-Z08	4	ZW74706	4
75708E-Z49	4	75708E-Z89	4	75710E-Z10	4	ZW74708	4
75710E-Z51	4	75710E-Z91	4	75712E-Z12	4	ZW74710	4
75712E-Z51	4	75712E-Z91	4	75706E-Z66	4	ZW74712	4
75712E-Z53	4	75712E-Z93	4	75708E-Z68	4		
		75706E-Z06	4	75710E-Z70	4		

## FF12139 E-Z Clip System™



The E-Z Clip System is designed for assembly with Weatherhead Multi-Refrigerant hose GH134. It's engineered connection exceeds SAE J2064 and has been vibration and impulse tested.

### Kit Contents Components

PART NUMBER	DESCRIPTION	QTY/PER KIT
1F40104-size	Clips	20 each size
1F40105-size	Cages	10 each size
FT1357	Assy. Tool	1
T-135	Hose Cutter	1
T-135B	Replacement Blade	1

### Note:

The E-Z Clip System has been designed to work exclusively with Weatherhead GH134W Hose.

## BL-456 Barb-Tite Fittings and Hose Assortment



Making up an air line – oil line – transmission or power steering return line? The BL-456 assortment puts Eaton Barb-Tite fittings and 1/4", 5/16", and 3/8" I.D. 350 PSI maximum operating pressure H101 hose at your fingertips for quick and easy assembly. Simply push ends on hose, and you have a hose assembly. No clamps required!

Measure the hose on top of the cabinet with the rule provided and then select the proper hose ends from the assortment in the two metal drawers. Within minutes the hose assembly is ready for installation.

### Size:

15" wide  
16-1/2" high  
13-3/16" deep  
16 Compartments in each drawer.

CATALOG NUMBER	QUANTITY	CATALOG NUMBER	QUANTITY	CATALOG NUMBER	QUANTITY	CATALOG NUMBER	QUANTITY
10004B-102	4	10004B-B04	4	10005B-C02	4	10006B-606	4
10004B-104	4	10004B-B05	4	10005B-C04	4	10006B-B06	4
10004B-304	4	10004B-Y04	4	10005B-Y05	4	10006B-Y06	4
10004B-305	4	10005B-102	4	10006B-102	4	H10104	25'
10004B-405	4	10005B-104	4	10006B-104	4	H10105	25'
10004B-604	4	10005B-405	4	10006B-106	4	H10106	25'
10004B-A04	4	10005B-B05	4	10006B-306	4	FS-500	1
10004B-A05	4	10005B-B06	4	10006B-406	4	BL-456X	1
10004B-B03	4						

# Equipment

## Assortments

### Fleet Hose and Fitting Assortment



These assortments are ideal for servicing that fleet account. The DOT-approved hose and fittings will enable the user to make

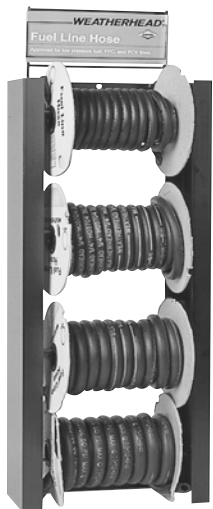
up chamber lines, connect to gladhand couplings, and provide routing for air brake lines. The general purpose H069 provides for fuel, oil,

water, power steering, and transmission lines. A self-contained assortment in a super cabinet, all set up for easy serviceability!

#### FA-100 • Fleet Hose and Fitting Assortment (with Cabinet) FA-100-CO • Fleet Hose and Fitting Assortment (Contents Only)

CATALOG NUMBER	QUANTITY	CATALOG NUMBER	QUANTITY	CATALOG NUMBER	QUANTITY
H06904	50'	24706N-106	5	24710N-608	5
H06906	50'	24706N-406	5	24710N-610	2
H06908	50'	24706N-604	5	33806-A	20
H06910	50'	24706N-605	5	33806-B	5
H16606	50'	24706N-606	5	33806B-Y06	5
H16608	50'	24706N-608	5	33806B-Y24	5
H33806	50'	24706N-756	5	33806B-Y26	2
24704N-102	5	24706N-B06	5	33806B-Y28	5
24704N-104	5	24708N-106	5	33806B-Y34	5
24704N-604	5	24708N-108	5	33806B-Y36	5
24704N-B04	5	24708N-406	5	33806B-Y38	5
24705N-104	5	24708N-608	5	FH-15X	1
24705N-605	5	24710B-Y58	2	HD-1X	1
24705N-B05	5	24710B-Y60	5		
24706N-104	5	24710N-108	5		

### HA-574 Fuel Hose Merchandiser



Now you can make those custom hose assemblies in minutes for instant service on fuel and oil line replacements. The attractive HA-574 includes H057 hose in all popular sizes for low

pressure fuel, EEC and PCV lines. Weatherhead H057 low pressure fuel line hose has Nitrile inner tube, fiber braid reinforcement, and Hypalon cover for long life compatibility with gasohol,

leaded and unleaded fuels. The HC-574X rack can be easily installed on pegboard, wall, or metal shelving with the included hardware.

CATALOG NUMBER	QUANTITY	DESCRIPTION
H05703	25'	Hose
H05704	25'	Hose
H05705	25'	Hose
H05706	25'	Hose
HC-574X	1	Rack + 4 Dowels

# Equipment

## Assortments

### MA-100 • Metric Adapter Assortment

(with Cabinet)



The MA-100 is an ideal assortment to begin a metric adapter inventory. Offered are a variety of male British Standard Tapered Pipe and British Standard Parallel fittings in straight and 90° elbow configurations, sizes ranging from 1/8" through 1-1/4". Two male DIN (German metric) fittings adapt SAE fittings and hose ends to metric size tubing, and a

third DIN fitting connects SAE fittings with metric female swivel adapters, sizes ranging from 6mm through 42mm. The C5165X metric sleeves adapt metric tubing used with standard JIC fittings. The MA-100 is supplied with cabinet for accurate and easy access to your metric fittings.

**Replacement Drawers:**  
**PD-49** (one drawer)

**Replacement Dividers:**  
**PD-75 Set** (25/set)

### MA-100 Contents

CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.
7165X6MM	5	M9700X5X8	2	MC5205X4X2	5	MC5315X10X20	2	ML7105X8	5
7165X8MM	2	M9700X6X10	2	MC5205X4X4	5	MC5315X12X22	2	ML7105X10	5
7165X10MM	5	M9700X8X12	2	MC5205X5X4	5	MC5315X12X27	2	ML7105X12	5
7165X12MM	5	M9700X10X14	2	MC5205X6X4	5	MC5315X16X33	2	ML7105X15	5
7165X14MM	5	M9700X12X20	2	MC5205X6X6	5	MC5315X20X42	1	ML7105X18	5
7165X15MM	5	M9700X16X25	2	MC5205X8X6	5	MC5405X4X4	5	ML7105X22	5
7165X16MM	5	M9700X20X32	1	MC5205X8X8	5	MC5405X5X4	5	ML7105X28	5
7165X18MM	5	M9800X4X4	2	MC5205X10X8	5	MC5405X6X4	5	C5165X4X6MM	5
7165X20MM	5	M9800X5X4	2	MC5205X10X12	5	MC5405X6X6	5	C5165X5X8MM	5
7165X22MM	5	M9800X6X4	2	MC5205X12X12	5	MC5405X8X6	5	C5165X6X10MM	5
7165X25MM	5	M9800X8X4	2	MC5205X16X16	2	MC5405X8X8	5	C5165X8X12MM	5
7165X28MM	5	M9800X8X6	2	MC5205X20X20	2	MC5405X10X12	5	C5165X10X14MM	5
7165X30MM	5	M9800X8X8	2	MC5206X4X6	2	MC5405X12X12	5	C5165X10X15MM	5
M7629X10	5	M9800X10X8	2	MC5206X6X8	2	MC5405X16X16	2	C5165X10X16MM	5
M7629X14	5	M9800X12X8	2	MC5206X8X10	2	MC5405X20X20	2	C5165X12X18MM	5
M7629X16	5	M9800X12X12	2	MC5206X8X12	2	MC5515X4X12	2	C5165X14X20MM	5
M7629X18	5	M9800X16X12	2	MC5206X10X15	2	MC5515X6X14	2	C5165X16X25MM	5
M7629X20	5	M9800X16X16	2	MC5206X12X18	2	MC5515X6X16	2	C5165X20X30MM	5
M7629X22	5	M9800X20X20	1	MC5207X4X6	2	MC5515X8X18	2	C5165X20X32MM	5
M7629X27	5	MB5315X4X2	5	MC5207X6X8	2	MC5515X10X20	2	C-5X	1
M7629X33	5	MB5315X4X4	5	MC5207X6X10	2	MC5515X12X22	2	C-63X	1
M7629X42	5	MB5315X5X4	5	MC5207X8X12	2	MC5515X12X27	2	CL-502	1
M9600X4X4	2	MB5315X6X4	5	MC5207X10X15	2	MC5515X16X33	1	TA-1002	1
M9600X5X4	2	MB5315X6X6	5	MC5207X12X18	2	MH7105X6	5		
M9600X6X4	2	MB5315X8X6	5	MC5208X6X6	2	MH7105X8	5		
M9600X6X6	2	MB5515X6X4	5	MC5208X8X10	2	MH7105X10	5		
M9600X8X6	2	MB5515X6X6	5	MC5208X10X14	2	MH7105X12	5		
M9600X8X8	2	MB5515X8X6	5	MC5208X12X16	2	MH7105X14	5		
M9600X10X8	2	MB5515X8X8	5	MC5315X4X10	2	MH7105X16	5		
M9600X12X12	2	MB5515X10X12	5	MC5315X4X12	2	MH7105X20	5		
M9600X16X16	2	MB5515X12X12	5	MC5315X6X14	2	MH7105X25	5		
M9600X20X20	1	MB5515X16X16	2	MC5315X6X16	2	MH7105X30	5		
M9700X4X6	2	MB5515X20X20	2	MC5315X8X18	2	ML7105X6	5		



# Equipment Assortments

## MA-200 • Metric Hose End Assortment

(with Cabinet)



The MA-200 Hose End Assortment offers an excellent introductory stock of metric hose ends. Coverage includes 'U' Series British Standard Tapered Pipe (BSPT) and British Standard Parallel Pipe (BSPP) in male straight, and female swivel in straight and 90°

tube elbow connections, swivels, and split flange ends for Komatsu and Link Belt applications and DIN standpipe hose ends in light and heavy series. One FH-15X stock cabinet is supplied for storage.

### MA-200 Contents

CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.
04U-14K	2	06U-76P	2	12U-162	2	16U-P66	2	MH7105X14	2
04U-154	5	08U-158	5	12U-30K	2	7165X8MM	5	MH7105X16	2
04U-354	5	08U-22K	2	12U-362	2	7165X10MM	4	MH7105X20	2
04U-38T	2	08U-358	5	12U-52T	2	7165X12MM	2	MH7105X25	2
04U-40T	2	08U-360	5	12U-55T	2	7165X14MM	2	MH7105X30	1
04U-P54	5	08U-45T	2	12U-G12	2	7165X15MM	2	ML7105X8	2
04U-74P	2	08U-46T	2	12U-G42	2	7165X16MM	2	ML7105X10	2
06U-156	5	08U-P56	2	12U-P62	2	7165X18MM	2	ML7105X12	2
06U-18K	2	08U-P58	2	12U-82P	2	7165X20MM	2	ML7105X15	2
06U-356	5	08U-78P	2	16U-166	2	7165X22MM	2	ML7105X18	2
06U-358	2	08U-80P	5	16U-33K	2	7165X25MM	2	ML7105X22	2
06U-40T	2	10U-24K	2	16U-366	2	7165X28MM	2	ML7105X28	2
06U-42T	2	10U-48T	2	16U-58T	2	7165X30MM	1	FH-15X	2
06U-44T	2	10U-50T	2	16U-60T	1	MH7105X8	2	FS-2500	1
06U-P56	2	10U-G09	2	16U-G16	2	MH7105X10	2		
06U-P58	2	10U-G69	2	16U-G46	2	MH7105X12	2		

## FA-15 Portable Coll-O-Crimp Assortment (with Cabinet)



This portable assortment includes everything you need to service your hydraulic hose needs on the job site. Three sizes of 2 wire hose plus a variety of hose ends and adapters combined with a crimping system that requires no electrical power source makes this assortment the ultimate for field repairs. A 15-drawer cabinet is included for storage. Also available are assortments with a cut-off saw or less the equipment.

**FA-15:** Includes contents listed below.

**FA-15-CO:** Includes contents listed below less equipment and cabinet.

**FA-15-NH:** Includes contents listed below less hose.

**FA-15-80:** Includes contents listed below plus T-80 Saw.

### FA-15 Contents

CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.
04U-102	5	06U-406	5	06U-J06	5	08U-612	5	9405X8X8	5
04U-104	10	06U-506	5	06U-J08	5	08U-668	5	FH-15X	1
04U-106	5	06U-508	5	06U-P08	5	08U-J08	5	H42504	50'
04U-604	10	06U-606	10	08U-106	5	08U-P08	5	H42506	50'
04U-605	5	06U-608	5	08U-108	10	08U-P10	5	H42508	50'
04U-606	5	06U-666	5	08U-112	5	9205X2X2	5	T-465-HPU	1
04U-B04	5	06U-668	5	08U-508	5	9205X4X4	5	FS-1100	1
04U-J04	5	06U-755	5	08U-510	5	9205X6X6	5	FS-100	1
06U-104	10	06U-756	5	08U-512	5	9205X8X8	5		
06U-106	10	06U-B06	5	08U-608	10	9405X4X4	5		
06U-108	5	06U-B66	5	08U-610	5	9405X6X6	5		



# Equipment Assortments

## FA-135 Coll-O-Crimp I Assortment

(with Cabinet)



This assortment includes everything you need to start servicing hydraulic hose applications in your own shop. Five sizes of 2 wire hose along with a variety of hose ends and adapters gives you the versatility you need. In addition there is hose for power steering applications and a cabinet for storage. Also available are assortments with a cut-off saw or less the equipment.

**FA-135:** Includes contents listed below.

**FA-135-CO:** Includes contents listed below less equipment and cabinet.

**FA-135-NH:** Includes contents listed below less hose.

**FA-135-10B:** Includes contents listed below plus T-10B Saw.

### FA-135 Contents

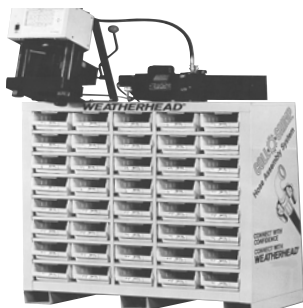
CATALOG NUMBER	QUANTITY	CATALOG NUMBER	QUANTITY	CATALOG NUMBER	QUANTITY
04U-102	5	06U-J08	5	12U-P12	5
04U-104	10	06U-P06	5	16U-116	5
04U-106	5	06U-P08	5	16U-516	2
04U-504	5	08U-058	5	16U-616	5
04U-505	5	08U-106	5	16U-676	1
04U-506	5	08U-108	10	16U-J16	1
04U-604	10	08U-112	5	41157X6	5
04U-605	5	08U-208	2	9205X2X2	5
04U-606	5	08U-508	5	9205X4X4	5
04U-664	5	08U-510	5	9205X6X6	5
04U-B04	5	08U-512	5	9205X6X8	5
04U-J04	5	08U-608	10	9205X8X6	5
06U-104	10	08U-610	5	9205X8X8	5
06U-106	10	08U-612	5	9405X4X4	5
06U-108	5	08U-668	5	9405X6X6	5
06U-206	5	08U-670	5	9405X8X8	5
06U-406	5	08U-758	5	9405X12X12	2
06U-446	5	08U-760	5	C5205X4X4	2
06U-506	5	08U-J08	5	C5205X6	4
06U-508	5	08U-P08	5	C5205X6X6	4
06U-606	10	08U-P10	5	C5205X8	4
06U-608	5	08U-R70	5	C5205X10	2
06U-610	5	12U-112	10	FH-135X	1
06U-666	5	12U-116	2	FS-1100	1
06U-668	5	12U-412	5	FS-100	1
06U-686	5	12U-512	5	FS-200	1
06U-755	5	12U-514	2	H32406	50'
06U-756	5	12U-516	2	H42504	50'
06U-B05	5	12U-610	5	H42506	50'
06U-B06	5	12U-612	10	H42508	50'
06U-B46	5	12U-614	5	H42512	50'
06U-B66	5	12U-616	2	H42516	50'
06U-J04	5	12U-672	2	T-401	1
06U-J06	5	12U-J12	5		

# Equipment

## Assortments

### CA-50 Coll-O-Crimp Super I Assortment

(with Cabinet)



The CA-50 assortment includes everything you need to service your larger hydraulic applications. Five sizes of 2 wire hose and four sizes of 4 wire hose combined with a variety of hose ends and adapters gives you the coverage you need. Included with this assortment is a 40-drawer cabinet for mounting your press and storage. Also available are assortments with a cut-off saw or less the equipment.

**CA-50:** Includes contents listed below.

**CA-50-CO:** Includes contents listed below less equipment and cabinet.

**CA-50-NH:** Includes contents listed below less hose.

**CA-50-60A:** Includes contents listed below plus T-60A Saw.

### CA-50 Contents

CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.
04U-102	5	08U-512	5	43012U-G12	1	C5205X4	4
04U-104	10	08U-608	10	43012U-G42	1	C5205X4X4	2
04U-106	5	08U-610	5	43012U-G72	1	C5205X6	4
04U-504	5	08U-612	5	43016U-116	2	C5205X6X6	4
04U-506	5	08U-668	5	43016U-616	2	C5205X8	4
04U-604	10	08U-670	5	43016U-G16	1	C5205X8X8	4
04U-605	5	08U-688	5	43016U-G46	1	C5205X10	2
04U-606	5	08U-758	5	43016U-G76	1	C5205X12	2
04U-664	5	08U-760	5	43020U-120	1	C5205X16	1
04U-B04	5	08U-J08	5	43020U-620	1	C5315X8	1
04U-J04	5	08U-P08	5	43020U-G20	1	C5405X6	2
06U-104	10	08U-P10	5	43020U-G50	1	C5405X6X6	2
06U-106	10	12U-112	10	43020U-G80	1	C5405X8	2
06U-108	5	12U-116	2	9205X2X2	5	C5405X8X8	2
06U-406	5	12U-412	5	9205X4X4	5	C5405X10	1
06U-506	5	12U-512	5	9205X6X6	5	C5515X8	1
06U-508	5	12U-610	5	9205X6X8	5	H24504	50'
06U-604	5	12U-612	10	9205X8X6	5	H24506	50'
06U-606	10	12U-614	5	9205X8X8	5	H24508	50'
06U-608	5	12U-616	2	9205X12X12	2	H24512	50'
06U-610	5	12U-672	2	9205X16X16	1	H24516	50'
06U-666	5	12U-692	2	9405X4X4	5	H43008	50'
06U-668	5	12U-J12	5	9405X6X6	5	H43012	50'
06U-755	5	16U-116	5	9405X8X8	5	H43016	50'
06U-756	5	16U-516	2	9405X12X12	2	H43020	50'
06U-B06	5	16U-616	5	9405X16X16	1	T-420-N	1
06U-B66	5	16U-676	1	C-40X	1	FS-1100	1
06U-J06	5	16U-J16	1	C5105X4	2	FS-100	1
06U-J08	5	43008U-108	2	C5105X6	2	FS-200	1
06U-P08	5	43008U-608	2	C5105X8	2	FS-3100	1
08U-106	5	43008U-G08	1	C5105X12	1		
08U-108	10	43008U-G41	1	C5165X4	10		
08U-112	5	43008U-G71	1	C5165X6	10		
08U-508	5	43012U-112	2	C5165X8	10		
08U-510	5	43012U-612	2	C5165X12	5		

# Equipment

## Assortments

### TA-1002 Thread Measuring Kit



Measuring tube and pipe fitting threads can be a most difficult task if not completely understood. Tools needed include a thread pitch gauge, calipers and seat angle gauges. To aid you, Eaton has a kit to fit your needs, the TA-1002 thread measuring kit.

#### This handy kit includes:

- Thread Pitch Gauge (Imperial and metric)
- Inside/Outside Caliper (inches and millimeters)
- 2 Seat Angle Gauges (37°/45° and a 12°/30°)
- How to Identify Fluid Ports and Connectors bulletin
- Carrying Case for Easy Convenient and Storage

**Weight:** .5 lb.

### TA-1004 Metric Thread Identification Kit



Contained in a durable steel carrying case, TA-1004 will help you with identification of metric, British pipe and JIS thread configurations. Identification pieces are configured for 20 metric and 8 British pipe sizes.

#### This handy kit includes:

- Steel Carrying Case
- Stainless Steel Caliper
- Metric and British Thread Pitch Gauges
- British Thread Measuring Templates (4 measuring 8 sizes) made of durable aircraft grade aluminum.
- Metric Thread Measuring Templates (10 measuring 20 sizes) made of durable aircraft grade aluminum.
- Kit Content Identification Chart

# Equipment Assortments

## SS-85 • Standard Brass Fittings Assortment



Instant service for service stations, car dealers, repair shops. Contains 85 of the fastest moving Weatherhead brass fittings.

Compact, lightweight plastic box stores easily in a drawer, shelf or service truck. Saves you time and money by having the right fitting when it is needed. Eliminates searching and make-shift repairs by giving you the right part when you need it most.

**Size:** 11" wide, 1-3/4" high, 6-3/4" deep. **WEIGHT:** 3-1/4 lbs.

CATALOG NUMBER	QTY.
105x3	5
105x4	5
105x5	10
202x4	5
202x5	5
3151x2	2
3220x4x2	5
3300x2	5
402x4	2
60x3	5
60x4	10

CATALOG NUMBER	QTY.
60x5	5
60x6	5
62x3	2
62x4	5
62x5	5
62x6	2
68x4	2
BF-40X	1)

## SS-86 • Compression Fittings Assortment



Assortment contains 80 of the fastest moving compression fittings.

**Size:** 11" wide, 1-3/4" high, 6-3/4" deep.

**Weight:** 3-1/2 lbs.

CATALOG NUMBER	QTY.
60x3	5
60x4	10
60x5	5
60x6	5
61x3	5
61x4	5
61x5	5
61x6	5
62x3	5

CATALOG NUMBER	QTY.
62x4	5
62x5	5
62x6	2
68x3	2
68x4	5
68x5	2
69x3	2
69x4	5
69x5	2
BF-40X	1

## SS-87 • Inverted Flare Assortment



Assortment contains 84 of the fastest moving inverted fittings.

**Size:** 11" wide, 1-3/4" high, 6-3/4" deep.

**Weight:** 3-1/2 lbs.

CATALOG NUMBER	QTY.
105x3	5
105x4	5
105x5	5
105x6	5
202x3	5
202x4	5
202x5	5
202x6	2
302x3	5

CATALOG NUMBER	QTY.
302x4	5
302x5	5
302x6	2
402x3	5
402x4	5
402x5	5
402x6	5
7896x3	5
7896x4	5
BF-40X	1

# Equipment

## Assortments

### SS-88 • Brass Pipe Assortment



Assortment contains 59 of the fastest moving brass pipe fittings.

**Size:** 11" wide, 1-3/4" high, 6-3/4" deep. **WEIGHT:** 3-1/2 lbs.

CATALOG NUMBER	QTY.
3152x2	5
3152x4	5
3152x6	2
3220x4x2	2
3220x6x4	2
3300x2	5
3300x4	2
3326x2	5
3326x4	5

CATALOG NUMBER	QTY.
3326x6	2
3350x2	5
3350x4	4
3350x6	2
3400x2	5
3400x4	2
3400x6	2
3500x2	2
3500x4	2
BF-40X	1

### BF-40 • Hydraulic Brake Fittings Assortment



The BF-40 assortment of fast moving hydraulic brake fittings is a must for any shop doing brake service work. Contains the adapters needed to convert large size ports in master cylinders to accept standard steel brake lines plus the brass tees used in the installation of electric towed trailer brakes.

Assortment is organized in a compact, handy plastic box for easy selection.

**Size:** 11" wide, 1-3/4" high, 6-3/4" deep.

**Weight:** 4 lbs. (approx.)

CATALOG NUMBER	QTY.
7818	2
7828	2
7829	2
7897	2
7898	2
7900	2
7901	2
7904	2
7905	2

CATALOG NUMBER	QTY.
7906	2
7908	2
7910	2
7911	2
7912	2
7913	2
7914	2
7917	2
7933	2
BF-40X	1

### BF-41 • Hydraulic Brake Line Adapter Assortment



The BF-41 assortment contains the adapters needed to convert the oversize master cylinder ports to accept the inverted flare nut used on standard replacement steel brake lines. The adapters eliminate the need to cut line, install oversize nut and double flare tubing as well as converting the port to standard size threads for the life of the car. Extra standard nuts and the unions needed to connect two steel brake lines when a non-standard length is required are also included in the assortment. The contents including the illustrations of parts are shown on the inside cover of the box.

**Size:** 11" wide, 1-3/4" high, 6-3/4" deep.

**Weight:** 4 lbs. (approx.)

CATALOG NUMBER	QTY.
105x3	10
105x4	10
105x5	10
105x6	5
105x6x7	2
302x3	5
302x4	5
302x5	5
302x6	2

CATALOG NUMBER	QTY.
7818	2
7828	2
7829	2
7896x3	5
7896x4	5
7897	2
7908	2
7917	2
BF-40X	1

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

# Equipment Assortments

## BF-42 • RV Brake Line Adapter Assortment



The BF-42 assortment contains the adapter tees required to install the control switch used to coordinate the electric trailer brakes with the hydraulic brakes on towing vehicle. The assortment also contains inverted brake line nuts and unions needed to make up non-standard steel brake line lengths.

**Size:** 11" wide, 1-3/4" high, 6-3/4" deep.

**Weight:** 4 lbs.

CATALOG NUMBER	QTY.
105x3	10
105x4	10
105x5	10
105x6	5
105x6x7	2
302x3	5
302x4	5
302x5	5
7898	1

CATALOG NUMBER	QTY.
7900	1
7901	1
7904	1
7905	1
7906	1
7914	1
7921	1
7933	1
BF-40X	1

## BF-43 • Metric Adapter and Tee Assortment



The BF-43 assortment contains metric thread connectors to adapt the three port sizes in late model GM cars to use a steel brake line with metric threads (M10x1.0) and standard flare (Weatherhead J series). Included as well are metric adapters to convert European Bubble flare type ports to accept standard 3/16" U.S. steel brake lines, and metric towed trailer brake tees used in controls of electric trailer brakes. The 3/16" unions are used for joining metric and U.S. steel brake lines to make up non-standard lengths.

**Size:** 11" wide, 1-3/4" high, 6-3/4" deep.

CATALOG NUMBER	QTY.
105x3	10
105x4	5
1442	5
1443	5
302x3	5
7921	1
7934A	5
7935	1
7936	1

CATALOG NUMBER	QTY.
7937	1
7940	5
7941	5
7970	2
7972	1
7974	1
7975	1
7896x3	5
7896x4	5
BF-40X	1



# Equipment

## Assortments

### DC-121 • Plastic Drain Cock Assortment



To address your plastic drain cock needs, Weatherhead now offers a full assortment of domestic and offshore drain cocks. This kit comes complete with a plastic box and a label with part number and application information.

CATALOG NUMBER	QTY.
110	2
111	2
112	2
113	2
114	2
115	2
116	2
117	2
135	2
145	2

### PC-48 • Push Connect Fittings Assortment



Weatherhead PUSH > CONNECT fittings are designed for quick assembly without the need for a wrench. Ideal for pneumatic applications where space is tight. Then fittings are also easily disconnected; simply depress the collet ring with two fingers and withdraw the tube. The PC-48 provides the 48 most popular PUSH > CONNECT fittings in a compact, handy plastic box to make your assortment organized and accessible.

CATALOG NUMBER	QTY.	CATALOG NUMBER	QTY.
1162x2	5	1168x6	5
1162x4	5	1168x6x6	5
1162x6	5	1168x6x8	2
1164x2.5	5	1168x8	5
1164x4	5	1168x8x8	2
1164x6	5	1169x2.5S	5
1164x8	2	1169x2S	5
1165x2.5	5	1169x2x4S	5
1165x4	5	1169x4S	5
1165x6	5	1169x4x4S	5
1165x8	2	1169x4x6S	5
1166x4	5	1169x6S	5
1166x4x4	5	1169x6x6S	5
1166x6	5	1169x8S	2
1166x6x6	2	1169x8x4S	2
1168x2	2	1171x4S	5
1168x2.5	5	1171x4x4S	5
1168x2.5A	5	1171x6S	5
1168x2.5x4	5	1172x4S	5
1168x2x4	5	1172x4x4S	5
1168x4	5	1174x2	5
1168x4A	5	1174x4	5
1168x4x4	5	CL-499	1
1168x4x6	5	FC-16X	1
1168x5	5		
1168x5x4	5		



# Equipment

## Assortments

### BA-84 • Steel Brake Line Assortment



The BA-84 attractive lobby merchandiser displays domestic as well as import car (British, European and Japanese) steel brake lines. The BA-84 puts brake lines where users can make fast and easy selection from a complete inventory protected by sturdy cardboard color-coded tubes.

The corrosion and vibration resistant double wall steel brake lines are easily formed into the configurations you need without kinking. Longer or non-standard lengths can be made up by joining two lines with a Weatherhead union of the proper thread size.

The BA-84 includes all sizes of the 3/16", 1/4" and 5/16" Weatherhead steel brake lines for domestic cars and trucks plus a sturdy steel rack. Order the SB series (Jaguar, M.G., Triumph), SC series (BMW, Mercedes, Peugeot, Porsche, Volkswagen), SJ series (Mazda, Nissan, Toyota) and Weatherhead import car steel brake lines and unions from listings in brake line section of this catalog. See page 128.

Increase your sales  
 — Organize your inventory  
 — Make selections easy  
 — Discover the results of putting this proven money maker to work for you  
 — Install a BA-84 NOW.

LENGTH	CATALOG NUMBER	QTY.
<b>3/16" LINES</b>		
6"	S306	4
8"	S308	4
12"	S312	4
20"	S320	4
30"	S330	4
40"	S340	4
51"	S351	4
60"	S360	4
72"	S372	4
<b>1/4" LINES</b>		
12"	S412	4
20"	S420	4
30"	S430	4
40"	S440	4
51"	S451	4
60"	S460	4
<b>5/16" LINES</b>		
12"	S512	4
20"	S520	4
30"	S530	4
40"	S540	4
51"	S551	4
60"	S560	4
Rack	BA-84X	1

# Equipment Assortments



## BA-24 • Steel Brake Line Assortment

The BA-24 assortment includes an assortment of 5/16" steel brake lines and a rack for wall or bin installation. The multi-walled corrosion resistant tubing can be easily formed for time saving installation. All lines have color-coded label attached for easy identification. Non-standard lengths can be made up by joining two standard lengths with a 302x5 union.

**Weight:** 6 lbs.

## BA-28 • Steel Brake Line Assortment

BA-28 contains 3/16" easy to form, anti-corrosive, multi-walled steel brake lines for Japanese vehicles. The SJ lines with 10-1.0mm threads (standard flare) can be joined to form longer lines by using the 7934A Japanese metric union. The handy wall rack is included.

## BA-38 • Steel Brake Line Assortment

BA-38 contains six different lengths made of 3/8" multi-walled, easily formed, anti-corrosive steel tubing with inverted flare nuts attached. All lines have color-coded label for easy identification. Non-standard length lines may be fabricated by joining two 3/8" steel lines with a 302x6 union.

**Weight:** 8 lbs.

## BA-48 • Steel Brake Line Assortment

BA-48 contains the most popular steel brake lines and an easy to install rack. The 3/16" and 1/4" steel brake lines are available in six different lengths. Each steel brake line has a standard inverted flare nut on one end and a long thread inverted flare nut on the other end for better sealing. Easy to form, multi-walled steel tubing resists corrosion and vibration.

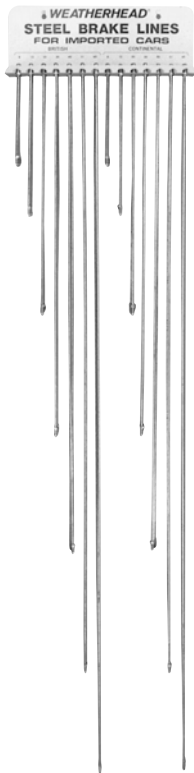
Non-standard length lines may be fabricated by joining two 3/16" lines with a 302x3 and two 1/4" lines with a 302x4.

**Weight:** 10-1/2 lbs.

## BA-56 • Steel Brake Line Assortment

BA-56 contains 3/16" easy to form, anti-corrosive, multi-walled steel brake lines for British and European cars. The SB lines with 3/8-24 threads (Bubble Flare) can be joined to form longer lines by using the 7940 metric union. SC lines with 10X1.0mm threads (Bubble Flare) can be joined with the 7941 metric union. The handy wall rack is included.

**Weight:** 10 lbs.



LENGTH	CATALOG NUMBER	QTY.
<b>British 3/8-24 Thread</b>		
8"	SB308	4
12"	SB312	4
20"	SB320	4
30"	SB330	4
40"	SB340	4
51"	SB351	4
60"	SB360	4

LENGTH	CATALOG NUMBER	QTY.
12"	S512	4
20"	S520	4
30"	S530	4
40"	S540	4
51"	S551	4
60"	S560	4
Rack	BA-24X	1

LENGTH	CATALOG NUMBER	QTY.
8"	SJ308	4
12"	SJ312	4
20"	SJ320	4
30"	SJ330	4
40"	SJ340	4
51"	SJ351	4
60"	SJ360	4
Rack	BA-28X	1

LENGTH	CATALOG NUMBER	QTY.
12"	S612	4
20"	S620	4
30"	S630	4
40"	S640	4
51"	S651	4
60"	S660	4
Rack	BA-38X	1

LENGTH	CATALOG NUMBER	QTY.
<b>3/16" LINES</b>		
12"	S312	4
20"	S320	4
30"	S330	4
40"	S340	4
51"	S351	4
60"	S360	4

LENGTH	CATALOG NUMBER	QTY.
<b>1/4" LINES</b>		
12"	S412	4
20"	S420	4
30"	S430	4
40"	S440	4
51"	S451	4
60"	S460	4
Rack	BA-48X	1

LENGTH	CATALOG NUMBER	QTY.
<b>European 10-1.0mm Thread</b>		
8"	SC308	4
12"	SC312	4
20"	SC320	4
30"	SC330	4
40"	SC340	4
51"	SC351	4
60"	SC360	4
Rack	BA-56X	1

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# Equipment

## Assortments

### AB-1400 • Air Brake Fittings Assortment



The AB-1400 contains DOT approved brass air brake fittings for servicing nylon brake and secondary air lines. Selecting the proper fittings from the 63 drawer cabinet included with assortment is easy. Clear, wide plastic drawers with color-coded labels make identification of shapes and sizes quick and simple. Order Weatherhead NT100 nylon air brake tubing to complete your nylon air brake line service center.

CATALOG NUMBER	QTY.
1460x4	10
1460x6	20
1460x8	10
1460x10	10
1460x12	10
1461x4	5
1461x6	10
1461x8	5
1461x10	5
1461x12	5
1462x4	5
1462x6	10
1462x8	5
1462x10	4
1462x12	2
1464x6	5
1464x8	5
1466x6	5
1466x6x6	5
1466x8	5
1468x4	5
1468x4x4	5
1468x6	10
1468x6x2	5
1468x8	5
1468x10	5
1468x12	4
1469x4	5

CATALOG NUMBER	QTY.
1469x4x4	5
1469x6	10
1469x6L	5
1469x6x2	5
1469x6x6	5
1469x8	5
1469x8x4	5
1469x10	5
1469x10x6	4
1469x12	4
1471x4	5
1471x6	5
1472x6	5
1472x8	5
1480x6	5
1480x6x6	5
1480x8	5
1480x10	4
1484x4	20
1484x6	20
1484x8	20
1484x10	10
1484x12	10
C-63X	1
CL-497	1

### AB-140 • 1400 Series Air Brake Fittings Assortment



This assortment of 1/4", 3/8", 1/2" air brake fittings designed for use with NT100 nylon air brake tubing provides the coverage needed for service work by fleets, repair shops and farm implement dealers. The DOT approved air brake fittings are easily selected from the cabinet with 16 plastic drawers and color-coded labels included in the assortment.

CATALOG NUMBER	QTY.
1460x4	20
1460x6	20
1460x8	20
1461x4	10
1461x6	10
1461x8	5
1462x4	5
1462x6	10
1462x8	4
1468x4	10
1468x6	10
1468x8	5
1469x4	5
1469x6	5

CATALOG NUMBER	QTY.
1469x8	5
1484x4	20
1484x6	20
1484x8	20
145	10
CL-16-3	1
FC-16X	1
W15310	5

# Equipment Assortments

## QC-18



Designed as a glove box sized emergency repair kit, the QC-18 assortment contains Q-CAB® tube unions in 5/32", 3/16", 1/4", 3/8" and 1/2" sizes, also included is a T-191 tubing cutter. The contents are contained in a convenient carrying case measuring 1-1/4"x3-3/4"x7".

### COMPONENT

PART NO.	QTY.
1862x2.5	2
1862x3	2
1862x4	2
1862x6	2
1862x8	2
T-191	1
QC-18X	1

## QC-180



The QC180 contains tube unions, male connectors, swivel male 45° elbow, male 90° elbows and repair kits in popular 1/4", 3/8" and 1/2" tube sizes designed for D.O.T. Truck and Trailer Air Brake System needs (see complete listing below). The Q-CAB® fittings are field proven with over millions of miles of leak free performance. Their design can save up to 75% of the assembly time over conventional compression fittings. These fittings are contained in a case measuring 1-3/4"x6-3/4"x1-3/4".

### COMPONENT

PART NO.	QTY.
1862x3	2
1869x6x6	2
1862x4	2
1869x8x8	1
1862x6	2
1880x4x4	2
1862x8	2
1880x6x6	2
1868x2.5	2
1880x8x8	1
1868x3	2
1800Kx4	2
1868x4x4	2
1800Kx6	2

### COMPONENT

PART NO.	QTY.
1868x6x6	2
1800Kx8	2
1868x8x8	2
1800TRK	1
1869x4x4	2
BF-40X	1

## QC-1800



This assortment contains a solid inventory of popular Weatherhead Q-CAB® fittings designed for D.O.T. Truck and Trailer Air Brake System needs (see complete listing below). The Q-CAB® fittings are field proven with over millions of of leak free performance. Their design can save up to 75% of the assembly time over conventional compression fittings.

### COMPONENT

PART NO.	QTY.
1800Kx2.5	4
1862x10	2
1868x12	2
1874x6x6	1
1800Kx3	4
1868x2.5x1	5
1869x4	5
1874x8x8	1
1800Kx4	4
1868x2.5	5
1869x4x4	5
1880x4x4	5
1800Kx6	4
1868x3	5
1869x6	5
1880x6x6	5
1800Kx8	4
1868x4	5
1869x8	5
1880x8x8	5
1800Kx10	2
1868x4x4	5
1869x8x8	5
1880x10	2

### COMPONENT

PART NO.	QTY.
1800Kx12	2
1868x6	5
1869x10	2
1880x12	2
1862x2.5	2
1868x6x6	5
1869x4S	5
1800T	1
1862x3	5
1868x8	5
1869x4x4S	5
CL-503	1
1862x4	5
1868x8x8	5
1869x6S	5
FC-16X	1
1862x6	5
1868x10x6	2
1869x8S	5
T-191	1
1862x8	5
1868x10	2
1874x4x4	1

# Equipment

## Assortments

### AB-45 • Air Brake Fittings Assortment



This assortment of drain-cocks, shutoffs and air brake fittings for use with 1/4", 3/8", 1/2" copper tubing is a must for jobbers and fleet service shops. Provides excellent coverage for air brake tube and hose service requirements. The large plastic drawers and the illustrated labels for the 15 drawer cabinet included in assortment make positive part selection simple and quick.

CATALOG NUMBER	QTY.
1360x6	20
1360x8	20
1360x10	10
1360x12	10
1361x6	20
1361x8	5
1361x10	5
1362x4	5
1362x6	10
1362x8	5
1362x10	5
1368x6	10
1368x6x2	5
1368x6x6	5
1368x8	5
1368x10	5
1369x4x4	5
1369x6	10
1369x8	5
1380x6	5
1390x6	5
1391x6	5
145	10

CATALOG NUMBER	QTY.
33806-A	20
33806-B	5
33806B-Y06	2
33806B-Y24	5
33806B-Y28	5
33806B-Y34	5
33806B-Y38	5
6707	1
6708	1
6709	1
6747	1
6748	1
6749	1
FH-15X	1
FS-800	1
W05465	5
W14630	10
W15310	5
W76150	5
W79850	3
W79851	3

### AB-28 • Air Brake Fittings Assortment



The 1/4", 3/8", 1/2" brass air brake fittings for use with copper tubing provide excellent coverage for fleets, independent repair shops and farm implement dealers doing service work.

With the AB-28 assortment you also receive a cabinet with clear plastic drawers plus illustrated, color-coded labels that assure fast, positive identification and selection of replacement fittings.

CATALOG NUMBER	QTY.
1360x4	20
1360x6	20
1360x8	20
1360x10	10
1360x12	10
1361x4	5
1361x6	20
1361x8	5
1361x10	5
1361x12	5
1362x6	5
1362x8	5
1362x10	5
1368x4	5
1368x6	10

CATALOG NUMBER	QTY.
1368x6x6	5
1368x8	5
1369x4	5
1369x6	10
145	10
33806-A	20
33806B-Y06	2
33806B-Y24	5
33806B-Y28	5
33806B-Y34	5
33806B-Y38	5
CL-16-2	1
FC-16X	1
W14630	10
W15310	5



# Equipment

## Assortments

### SA-1 • Secondary Air Systems Kit



Ideal for fleet repair shops, truck dealers, garages and truck stops. SA-1 contains an assortment of popular 1/8" and 1/4" brass fittings plus 200' of Weatherhead NT100 SAE J844 Nylon tubing. The 1/8" fittings are Weatherhead SELFALIGN® and 1/4" fittings are Weatherhead 1400 series air brake. The sturdy box keeps the tubing and fittings together for quick and easy servicing of the tubing used on shifters, PTO's, wipers, horns, remote air, instrumentation, etc. All of the parts are organized at your finger tips. The SA-1 is a must for all vehicle air system maintenance facilities.

**Size:** 15" wide, 3-1/2" high, 14-1/2" deep.

### SA-2 • Secondary Air Systems Kit




The SA-2 assortment enables you to supply fleets and dealers with fittings and tubing for 1/4" and 3/8" O.D. air brake applications. 1/8" O.D. tubing and fittings are also supplied for applications such as transmission shifter, air horn, gauge and flat adjustment. A cabinet is also supplied for easy storage on shelves and bench tops.

CATALOG NUMBER	QTY.
1460x4	10
1461x4	5
1462x4	2
1464x4	1
1468x4	2
1468x4x1	2
1468x4x4	2
1469x4	2
1469x4x4	2
1484x4	5
601x2	10

CATALOG NUMBER	QTY.
611x2	5
621x2	2
661x2	2
681x2	2
681x2x1	2
691x2	2
691x2x1	2
BF-40X	1
NT10002BK-100 100'	
NT10004BK-100 100'	

CATALOG NUMBER	QTY.
1460x4	10
1460x6	20
1461x4	5
1461x6	10
1462x4	5
1462x6	10
1464x4	2
1464x6	2
1466x6	5
1468x4	5
1468x4x4	5
1468x4x6	2
1472x4	5
1472x6	5
1472x6x6x6	5
1484x4	10
1484x6	10
1485x4	10
1485x6	10
1468x6	10

CATALOG NUMBER	QTY.
1468x6x2	5
1468x6x6	5
1468x6x8	5
1469x4	5
1469x4x4	5
1469x6	10
1469x6x6	5
601x2	10
611x2	10
621x2	5
661x2	5
681x2	5
681x2x1	2
691x2	5
691x2x1	2
BL-456-X	1
FS-SA-2	1
NT10002BK-100 100'	
NT10004BK-100 100'	
NT10006BK-100 100'	

 Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

# Equipment

## Field Attachable Assembly Equipment

### T-300 Field Attachable Hose End Assembly Machine



The Weatherhead T-300 Machine eliminates lost time and hard work when making replacement hose assemblies with bulk hose and field attachable hose ends. Simple, effortless operation provides uniform, safe assemblies time after time. This heavy-duty machine assembles straight, swivel, elbow and flange-type ends on all medium and high pressure wire braid hose from 3/16" through 2" I.D.

#### CATALOG NUMBER DESCRIPTION

T-300	Assembly Machine – complete with tripod stand, adjustable locator, chuck handle and foot switch
T-300X	Assembly Machine without tripod stand
T-301	Tripod Stand

**Motor:** Universal, reversible, 110-115 volts, 25-60 cycle, 1/2 H.P., 8 amps

**Weight:** 167 lbs.

### Mandrel Assembly Tools



These tools are required for assembling 069 'D' Series hose ends in sizes 4 through 12 to prevent cutting the hose inner tube. Size 16 through 32 mandrels are used as a holding device when assembling 069 'D' Series swivel ends. Mandrels can be ordered individually or in sets as shown.

#### TH-8 Mandrel Set:

Contains 1 each of the mandrels listed plus

**TH-8 BAG** pocket roll bag for convenient storage.

HOSE I.D.	CATALOG NUMBER	SWIVEL END APPLICATION
3/16"	T-JS4	SAE 37° & 45°
1/4"	T-JS5	SAE 37° & 45°
5/16"	T-J6	SAE 37°
5/16"	T-S6	SAE 45°
13/32"	T-JS8	SAE 37° & 45°
1/2"	T-JS10	SAE 37° & 45°
5/8"	T-J12	SAE 37°
5/8"	T-S12	SAE 45°

#### TH-14 Mandrel Set:

Contains 1 each of the mandrels listed plus

**TH-14 BAG** zipper bag for convenient storage.

HOSE I.D.	CATALOG NUMBER	SWIVEL END APPLICATION
7/8"	T-J16	SAE 37°
1-1/8"	T-J20	SAE 37°
1-3/8"	T-J24	SAE 37°
1-13/16"	T-J32	SAE 37°

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# Equipment

## Field Attachable Assembly Equipment

### T-101A Barb-Tite End Assembly Tool



Assembly of Barb-Tite push-on hose ends is made easy with this handy tool. Easy and fast operation assures dependable, leak proof assemblies. Simply clamp hose in jaws, place hose end on push rod and pull the handle. Engineered for a lifetime of rugged service.

**Weight:** 1 lb.

**Capacity:** 1/4" to 1/2" I.D. hose only.

### T-201 Barb-Tite End Assembly Tool



This bench-mounted tool is actually two tools in one. Not only does it assemble Barb-Tite hose ends, it is also a hose cutter. To cut your hose, simply retract the handle, place the hose in the cutter area and pull the handle. After cutting the hose to the desired length, place the hose under the cam handle locking it in place with the hose end aligned with the appropriate mark on the label. Place the barbed end of the fitting against the end of the hose and then pull the handle forward to complete the installation. The T-201 Assembly Tool is an easy-to-use tool that does everything you need to create a hose assembly.

#### Replacement Blade: T-201B

**Note:** This tool is designed to cut fiber-reinforced rubber hose only.

**Capacity:** 1/4" to 3/4" I.D. hose ONLY.



Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE


SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

 Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

## Equipment

### Hose Cutting Equipment

#### T-60A Portable Cutter



An excellent heavy-duty cutting machine. The T-60A is a portable power saw that can cut all hoses, including wire-reinforced. Includes three abrasive blades.

**Replacement Blade:**  
**T-1060A** 14" diameter

**Motor:**  
3-1/2 H.P., 110/115 volts

**Amps:** 15

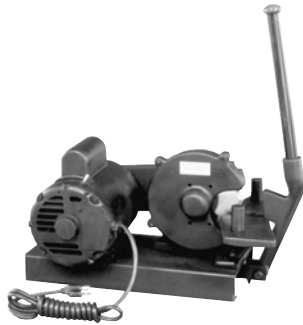
**Weight:** 45 lbs.

**RPM:** 3500

**Note:**

3 blades are mounted on shaft for shipping purposes. Remove prior to use.

#### T-10B Hose Cutting Machine



The T-10B hose cutting machine assures quick, clean, right angle cuts, eliminating ragged and frayed cut ends which make hose assembly difficult and are a possible cause of premature hose failure. A powerful 1 H.P. motor and belt-driven blade cut all low, medium and high pressure fabric and wire-braided hose from 3/16" through 1-1/4" I.D. 2 wire hose. Specifically designed for cutting hose, the T-10B is a natural companion to the T-400-1 Coll-O-Crimp and T-300 hose assembly machines.

**Ordering Options:**

T-10B= saw with smooth edge blade for cutting up to 1-1/4" 1-wire hose

T-10B-1= saw with scalloped edge blade for cutting up to 1-1/4" 2-wire hose.

**Replacement Blades:**

T-1047 (Smooth)

T-1047-1 (Scalloped)

**Replacement Belt for T-10B & T-10C:**

T-10-V1 Belt

**Motor:**

1 H.P., 3450 RPM, 115, 60 cycle, single phase

**Size:** 13" wide, 24" long, 17" high

**Weight:**

85 lbs.

**Amps Drawn:**

115 volts – 15

**Replacement Parts:**

**T-10-D** Hose/Dowel

**T-10-H** Handle

**T-10-P** Pusher

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY  
HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS &  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA

# Equipment

## Hose Cutting Equipment

**!** Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

### T-9-1 & T-9-3 Hose Cutting Machine



The T-9-1 and T-9-3 provide the capability for cutting multi-spiral and braided wire-reinforced hose through 2" I.D. This machine is a perfect companion for the ET4000 press. Includes scalloped blade.

**Note:** The T-9-1 and T-9-3 are shipped less a line cord and plug. An electrician is recommended for direct electrical hook-up.

#### T-9-1:

**Motor:** 3 H.P., 230 volts, 60 cycle, single phase

**Size:** 24" wide, 24" deep, 24" high

**Weight:** Approx. 255 lbs.

**Amps Drawn:** At 230 volts – 17

#### T-9-3:

**Motor:** 3 H.P., 230 volts, 60 cycle, 3 phase

**Size and Weight:** Same as T-9-1

**Amps Drawn:** At 230 volts – 8

#### Replacement Blade:

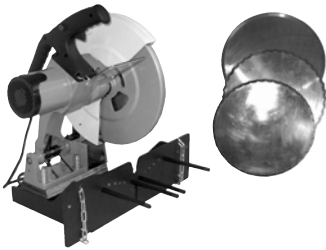
**T-75-14** Scalloped

**T-75-17** Carborundum

**T-75-11** Smooth

**Guard: T-9-G**

### T-70 Hose Cutting Machine



This cutting machine easily handles all one and two braided wire hose through 4" I.D., up to 2" I.D. 4-spiral and up to 1-1/2" I.D. 6 multi-spiral reinforced hose. That makes this machine ideal for cutting most hydraulic and pneumatic hoses as well as a variety of industrial fluid transfer hoses. The T-70 uses a 14" cutting blade for cutting all 1 & 2 wire braid and through 2" 4 spiral hose. The scalloped toothed blade is for cutting

industrial transfer hoses through 4" and the smooth beveled blade for cutting hose with a wire braid cover. T-70 includes a scalloped blade.

#### Replacement Blade:

**T-1070** Steel Scalloped

**T-1071** Steel Scalloped Toothed

**T-1072** Steel Smooth Beveled

**Motor:** 4.2 H.P., 110/115 volts, single phase

**Size:** 22" wide, 19" deep, 25" high


**Weight:** Approx. 65 lbs.

**Amps Drawn:** 115 volts – 20

### Hose Cutting and Skiving Wheels



CATALOG NUMBER	TYPE	BLADE DIA.	HOLE DIA.	MACHINE USED ON
<b>Cutting Wheels</b>				
T-1042	Carborundum	8"	5/8"	T-10A
T-1047	Steel Smooth	7"	5/8"	T-10B & T-10C
T-1047-1	Steel Scalloped	7"	5/8"	T-10B & T-10C
T-1060	Carborundum	12"	1"	T-60
T-1060A	Carborundum	14"	1"	T-60A
T-1070	Steel Scalloped	14"	1"	T-70
T-1071	Steel Scalloped Toothed	14"	1"	T-70
T-1072	Steel Smooth Beveled	14"	1"	T-70
T-75-11	Steel Smooth	10"	3/4"	T-9/T-75
T-75-14	Steel Scalloped	10"	3/4"	T-9/T-75
T-75-17	Carborundum	10"	3/4"	T-9/T-75
<b>Skiving Wheels</b>				
T-75-12	Wire	8"	1"	T-75
<b>Belts</b>				
T-76-B	Reinforced	1"		Old T-76/T-76-1

 Refer to safety information regarding Coll-O-Crimp hose, hose fittings and assembly equipment compatibility on page 4.

## Equipment

### Hose Cutting Equipment

#### T-1037 Knife



An inexpensive, reliable knife useful in splitting twin-line and multiple-line hoses quickly and easily.

**Replacement Blade:**  
**T-1037B**  
**Replacement Handle:**  
**T-1037H**

#### T-135 Plastic Tube and Hose Cutter



An economical alternative to quality tube and hose cutting. This versatile tool is lightweight and durable for long service life.

**Replacement Blade:**  
**T-135B**  
**Capacity:**  
Up to 1" hose I.D.  
**Note:**  
Not for use with wire-reinforced hose.

#### T-138 Hose and Tube Cutter



One hand operation for quick, clean cuts through plastic or nylon compound tubing and solid or fiber-reinforced hose up to 1-1/2" O.D.

- Any wireless hose or tubing.
- Power steering hose (H324)

- Air Conditioning hose (H757)
- Air brake hose (H338)
- Air system nylon tubing (NT100)
- Thermoplastic hose (H435, H436, H335, and H336)
- Low pressure plastic tubing (PT200, PT230, PT240)

**Replacement Blade:**  
**T-138B**  
**Note:**  
Not for use with wire-reinforced hose.

#### T-191 Plastic Tube and Hose Cutter



A tool designed to be small, only 2-7/8" long. The versatile T-191 offers quick and clean square cuts on 1/16" to 1/2" O.D. plastic tubing and non-wire reinforced hose. The T-191 can be either bench or wall mounted and offers the safety of closing automatically when not in use.

**Spare Parts: T-191B**  
Replacement Blade  
(one per package)

# Equipment

## Presetting Tools

### T-570-1 Ermeto-Quick Set™ Preset Machine



The Ermeto-Quick Set Machine is ideal for bulk assemblies. It has a positive-stop action, which guarantees uniform repeatability, and a hand pump operation which yields quick cycle time, reducing assembly time. The T-570 is an easy tool to use that will save you time and money.

#### T-570 Package includes:

PART NUMBER	DESCRIPTION
T-460-2	Hand Pump (10,000 PSI)
T-450-3	Quick Disconnect Hose Assembly
T-570-1	Ermeto Preset Machine
T-570-4	Preset Die
T-570-6	Preset Die
T-570-8	Preset Die
T-570-12	Preset Die
T-570-16	Preset Die
T-571-4	Tube Support
T-571-6	Tube Support
T-571-8	Tube Support
T-571-12	Tube Support
T-571-16	Tube Support

-20, -24, and -32 sizes also available.

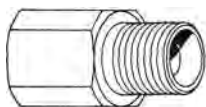
### Ermeto Hand Presetting Tools 7000 Series



Presetting tools provide a more accurate and positive leak-proof method of coupling flareless fittings. Presetting steel Ermeto sleeves on tubing prior to fitting assembly will permit the maximum high performance obtainable with flareless fittings. Due to possible thread galling, the use of presetting tools is required when assembling stainless steel fittings.

CATALOG NUMBER	TUBE O.D. (INCHES)	THREAD SIZE
T-7002	1/8	5/16-24
T-7003	3/16	3/8-24
T-7004	1/4	7/16-20
T-7005	5/16	1/2-20
T-7006	3/8	9/16-18
T-7008	1/2	3/4-16
T-7010	5/8	7/8-14
T-7012	3/4	1 1/16-12
T-7016	1	1 5/16-12
T-7020	1-1/4	1 5/8-12
T-7024	1-1/2	1 7/8-12
T-7032	2	2 1/2-12

### Metric Flareless Hand Presetting Tools



Presetting tools provide a more accurate and positive leak-proof method of coupling flareless fittings. Presetting the steel metric sleeves prior to fitting assembly will permit the maximum high performance obtainable with flareless fittings. These tools are available for both the Light (DIN 3901/3902L) and Heavy (DIN 3901/3902S) flareless series.

#### Light Series 3901/3902L

CATALOG NUMBER	TUBE O.D. (MM)	THREAD SIZE
TL-7008	8	M14x1.5
TL-7010	10	M16x1.5
TL-7012	12	M18x1.5
TL-7015	15	M22x1.5
TL-7018	18	M26x1.5
TL-7022	22	M30x2.0
TL-7028	28	M36x2.0

#### Heavy Series 3901/3902S

CATALOG NUMBER	TUBE O.D. (MM)	THREAD SIZE
TH-7008	8	M16x1.5
TH-7010	10	M18x1.5
TH-7012	12	M20x1.5
TH-7014	14	M22x1.5
TH-7016	16	M24x1.5
TH-7020	20	M30x2.0
TH-7025	25	M36x2.0
TH-7030	30	M42x2.0

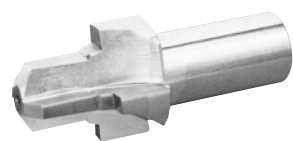
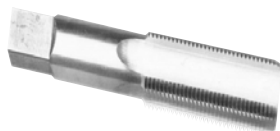
# Equipment

## Counterbore and Brazing Tools

### SAE Straight O-Ring Boss Tapping and Counterboring Tools

These Eaton precision counterborer and tap tools are available in the full range of sizes. They provide the correct SAE contour

and UNF-2B threads for proper containment of straight-thread o-ring fittings.



THREAD TAP CATALOG NO.	UNF-2B THREAD SIZE OF THREAD TAP	DRILL SIZE	FOR FITTING SIZE	FOR TUBE O.D.	COUNTER-BORER CATALOG NO.
T-5002	5/16-24	I	2	1/8	T-5102
T-5003	3/8-24	0	3	3/16	T-5103
T-5004	7/16-20	W	4	1/4	T-5104
T-5005	1/2-20	29/64	5	5/16	T-5105
T-5006	9/16-18	1/2	6	3/8	T-5106
T-5008	3/4-16	11/16	8	1/2	T-5108
T-5010	7/8-14	51/64	10	5/8	T-5110
T-5012	1 1/16-12	31/32	12	3/4	T-5112
T-5014	1 3/16-12	1 3/32	14	7/8	T-5114
T-5016	1 5/16-12	1 7/32	16	1	T-5116
T-5020	1 5/8-12	1 17/32	20	1 1/4	T-5120
T-5024	1 7/8-12	1 25/32	24	1 1/2	T-5124
*T-5032*	2 1/2-12	2 27/64	32	2	*T-5132*

\*Special order only.

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY  
HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS &  
HOSE ENDS

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EQUIPMENT

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# Equipment

## Hose Bore Cleaning Brushes

### Individual Brushes



HOSE I.D. (INCH)	CATALOG NUMBER	BRISTLE O.D. (INCH)	BRISTLE LENGTH (INCH)	OVERALL LENGTH (INCH)
3/16-3/8	T-1106	3/8	2	24
1/2-5/8	T-1110	1/2	3	24
3/4-1	T-1116	1	4	24
1-1/8-1-1/2	T-1124	1-1/2	4	24
2-3	T-1132	2	5	24

### T-1100 3-Piece Kit



Includes one of each of the following:

HOSE I.D. (INCH)	CATALOG NUMBER	BRISTLE O.D. (INCH)	BRISTLE LENGTH (INCH)	OVERALL LENGTH (INCH)
3/16-3/8	T-1106	3/8	2	24
1/2-5/8	T-1110	1/2	3	24
3/4-1	T-1116	1	4	24

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &  
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE  
HOSE ENDS

HOSE ASSEMBLY  
EQUIPMENT

TECHNICAL DATA



# Equipment

## Skiving Tools and Wrenches

### Hand Skiving Tool

(For H470 Hose)



Order hand skiving tool components by the individual catalog numbers listed below.

See page 23 for skiving instructions.

**T-410-36:** Handle

**T-410-37:** Replacement Cutting Blades

HOSE SIZE	SKIVING TOOL CUTTING HEAD H470
1/2" I.D.	T-410-50
3/4" I.D.	T-410-52
1" I.D.	T-410-53
1-1/4" I.D.	T-410-54
1-1/2" I.D.	T-410-55
2" I.D.	T-410-56

### Rapid Wrenches



The Rapid Wrench is a heavy-duty, high quality wrench that ratchets for quick installation and removal of tube fittings and hose ends. These wrenches have jaws that snap open and close completely around the fitting giving 6-point contact. Needing only 30° of rotation to ratchet, they allow easy access to tight locations. Available individually or in a set with pouch, these wrenches are a welcome addition to any tool box.

**T-139:** 7-Piece Set with Pouch – 1/2" through 7/8"

**T-139P:** Pouch for 7-Piece Set

**T-152:** 11-Piece Set with Pouch

**T-152P:** Pouch for 11-Piece Set

CATALOG NUMBER	WRENCH HEX SIZE
T-140	3/8"
T-141	7/16"
T-142	1/2"
T-143	9/16"
T-144	5/8"
T-145	11/16"
T-146	3/4"
T-147	13/16"
T-148	7/8"
T-151	15/16"
T-149	1"

# Equipment

## Power Steering Make-Up Information

### H32406 Passenger Car Power Steering Hose



The Coll-O-Crimp System may be used to supplement the original equipment-type power steering hose assembly inventory by using hose ends listed below and tubing (from the old hose assembly) to duplicate out-of-stock or slow moving hose assemblies.

**Reinforcement:**

2 Fiber Braids

**Cubical Expansion:**

8 to 17 cc ft. @ 1300 PSI

**Temp. Range:**

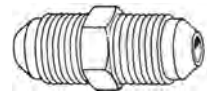
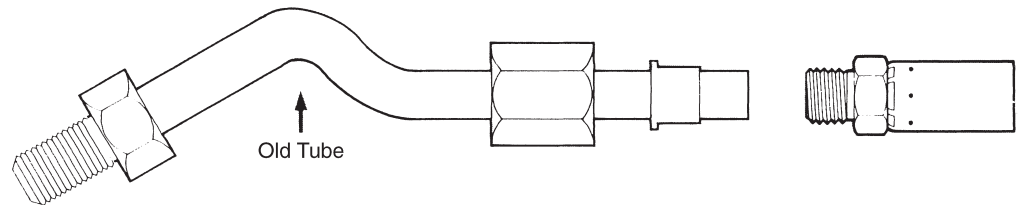
-40°F to +250°F

**SAE J188 Type 2**

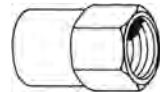
HOSE I.D.	HOSE O.D.	CATALOG NUMBER	RECOM. OPER. PRESS.	MIN. BURST PRESS.	BEND RADII
3/8	13/16	H32406	1500	6000	3-1/8

All dimensions in inches; pressure in PSI.

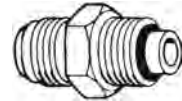
On many of the late model cars the formed tubing from the old line with its complicated bends can be utilized to make up a new assembly. Just use a tube cutter to cut the old tube as close to the hose as possible, then make up a hose assembly with a flareless tube end (i.e., 06U-756) and attach to the old tubing. Reference flareless tube assembly instructions on page 315-316.



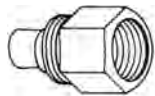
**42x6**  
SAE 45° Flare Union



**252x6, 252x7**  
Inverted Flare to Female Pipe



**1439, 1440, 41157x6**  
O-Ring Port to JIC 37° Flare  
**M41157x6x14, M41157x6x16, M41157x6x18**  
Metric O-Ring Port to JIC 37° Flare



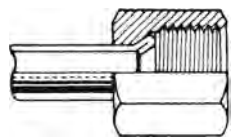
**1444, 1445, 1446, 1447**  
O-Ring Port to Female Inverted Flare



**1553, 1554, 1563**  
Inverted Flare to SAE 45° Flare

# Equipment

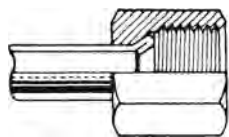
## Power Steering Make-Up Information



### Original End

1/4" SAE Swivel 7/16-20

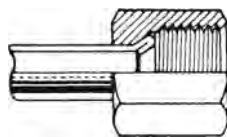
CONFIGURATION	USE CATALOG NO.
Straight	06U-604
45° Elbow	06U-684
90° Elbow (Short)	06U-664
90° Elbow (Long)	06U-644
Reuse old tube	06U-754



### Original End

5/16" SAE Swivel 1/2-20

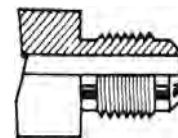
CONFIGURATION	USE CATALOG NO.
Reuse old tube	06U-755



### Original End

3/8" SAE Swivel 5/8-18

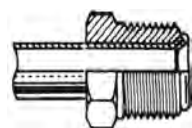
CONFIGURATION	USE CATALOG NO.
Straight	06U-406
45° Elbow	06U-486
90° Elbow	06U-446
Reuse old tube	06U-756



### Original End

3/8" SAE 45° Rigid 5/8-18

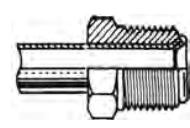
CONFIGURATION	USE CATALOG NO.
Straight	06U-406 with 42x6
45° Elbow	06U-486 with 42x6
90° Elbow	06U-446 with 42x6
Reuse old tube	06U-756



### Original End

1/4" Inv. Swivel 7/16-24

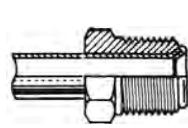
CONFIGURATION	USE CATALOG NO.
Straight	06U-B04
45° Elbow	06U-B44
90° Elbow	06U-B64
Reuse old tube	06U-754



### Original End

5/16" Inv. Swivel 1/2-20

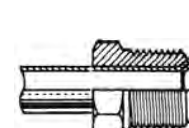
CONFIGURATION	USE CATALOG NO.
Straight	06U-B05 or 06U-406 with 1553
45° Elbow	06U-B45 or 06U-486 with 1553
90° Elbow	06U-B65 or 06U-446 with 1553
Reuse old tube	06U-755



### Original End

3/8" Inv. Swivel 5/8-18

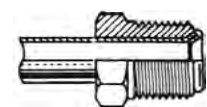
CONFIGURATION	USE CATALOG NO.
Straight	06U-B06 or 06U-406 with 1563
45° Elbow	06U-B46 or 06U-486 with 1563
90° Elbow	06U-B66 or 06U-446 with 1563
Reuse old tube	06U-756



### Original End

1/4" Inv. Swivel 7/16-24

CONFIGURATION	USE CATALOG NO.
Straight	06U-B04
45° Elbow	06U-B44
90° Elbow	06U-B64
Reuse old tube	06U-754



### Original End

7/16" Inv. Swivel with 3/89 Tube Opening 11/16-18

CONFIGURATION	USE CATALOG NO.
Straight	06U-B07 or 06U-406 with 1554
45° Elbow	06U-B47 or 06U-486 with 1554
90° Elbow	06U-B67 or 06U-446 with 1554
Reuse old tube	06U-756
New tubing/nut	105x6x7



### Original End

3/8" Inv. Seat 5/8-18

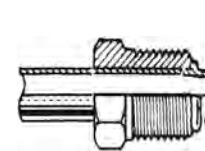
CONFIGURATION	USE CATALOG NO.
Straight	06U-104 with 252x6



### Original End

7/16" Inv. Seat 11/16-18

CONFIGURATION	USE CATALOG NO.
Straight	06U-104 with 252x7



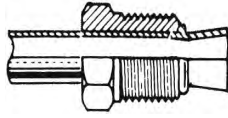
### Original End O-Ring Tube End

3/8" Tube - 5/8-18

CONFIGURATION	USE CATALOG NO.
Straight	06U-606 with 41157x6
45° Elbow	06U-686 with 41157x6
90° Elbow	06U-666 with 41157x6
Reuse old tube	06U-756

# Equipment

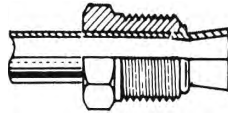
## Power Steering Make-Up Information



### Original End

O-Ring Tube End (Chrysler)  
5/16" Swivel 1/2-20

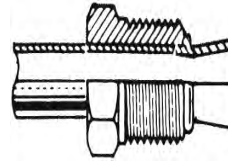
CONFIGURATION NO.	USE CATALOG
Reuse old tube	06U-755



### Original End

O-Ring Tube End (Ford) 1/4"  
Tube -9/16-18 (Special)

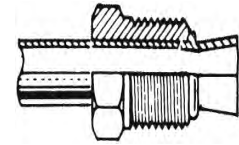
CONFIGURATION NO.	USE CATALOG
Straight	06U-604 with 1440
45° Elbow	06U-684 with 1440
90° Elbow	06U-664 with 1440
Reuse old tube	06U-755



### Original End

O-Ring Tube End 3/8" Tube  
- 5/8-18 (Special)

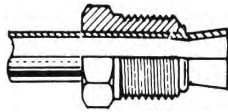
CONFIGURATION NO.	USE CATALOG
Straight	06U-606 with 1439
45° Elbow	06U-686 with 1439
90° Elbow	06U-666 with 1439
Reuse old tube	06U-756



### Original End

O-Ring Tube End (Ford)  
7/16" Tube -11/16-18  
(Special)

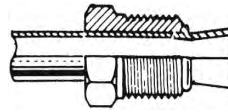
CONFIGURATION NO.	USE CATALOG
Straight	06U-B06 with 1444
45° Elbow	06U-B46 with 1444
90° Elbow	06U-B66 with 1444
Reuse old tube	06U-756



### Original End

O-Ring Tube End 3/8" Tube  
- M14x1.5

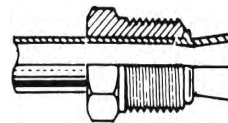
CONFIGURATION NO.	USE CATALOG
Straight	06U-B06 with 1445
45° Elbow	06U-B46 with 1445
90° Elbow	06U-B66 with 1445
Reuse old tube	06U-756



### Original End

O-Ring Tube End 3/8" Tube  
- M16x1.5

CONFIGURATION NO.	USE CATALOG
Straight	06U-B06 with 1446
45° Elbow	06U-B46 with 1446
90° Elbow	06U-B66 with 1446
Reuse old tube	06U-756



### Original End

O-Ring Tube End 3/8" Tube  
- M18x1.5

CONFIGURATION NO.	USE CATALOG
Straight	06U-B06 with 1447
45° Elbow	06U-B46 with 1447
90° Elbow	06U-B66 with 1447
Reuse old tube	06U-756

# Conversion

## Conversion Chart

APPLICATION DATA	INCHES			INCHES			INCHES			INCHES		
	FRCTN.	DEC.	MM	FRCTN.	DEC.	MM	FRCTN.	DEC.	MM	FRCTN.	DEC.	MM
LOW & MEDIUM PRESSURE HOSE	-	.0004	.0100	21/32	.6560	16.6690	1-3/4	1.7500	4.4500	3-1/16	3.0620	77.7880
	-	.0040	.1000	-	.6693	17.0000	-	1.7717	45.0000	-	3.0709	78.0000
	-	.0100	.2500	43/64	.6720	17.0660	1-25/32	1.7810	45.2440	3-3/32	3.0940	78.5810
	1/64	.0156	.3970	11/16	.6875	17.4630	-	1.8110	46.0000	-	3.1102	79.0000
	-	.0197	.5000	45/64	.7030	17.8590	1-13/16	1.8125	46.0380	3-1/8	3.1250	79.3750
	-	.0295	.7500	-	.7087	18.0000	1-27/32	1.8440	46.8310	-	3.1496	80.0000
	1/32	.0313	.7940	23/32	.7190	18.2560	-	1.8504	47.0000	3-5/32	3.1560	80.1690
	-	.0394	1.0000	-	.7283	18.5000	1-7/8	1.8750	47.6250	3-3/16	3.1875	80.9630
	3/64	.0469	1.1910	47/64	.7340	18.6530	-	1.8898	48.0000	-	3.1890	81.0000
	-	.0590	1.5000	-	.7480	19.0000	1-29/32	1.9062	48.4190	3-7/32	3.2190	81.7560
HIGH PRESSURE HOSE	1/16	.0620	1.5880	3/4	.7500	19.0500	-	1.9291	49.0000	-	3.2283	82.0000
	5/64	.0781	1.9840	49/64	.7656	19.4470	1-15/16	1.9375	49.2130	3-1/4	3.2500	82.5500
	-	.0787	2.0000	25/32	.7810	19.8440	-	1.9685	50.0000	-	3.2677	83.0000
	3/32	.0940	2.3810	-	.7874	20.0000	1-31/32	1.9690	50.0060	3-9/32	3.2810	83.3440
	-	.0984	2.5000	51/64	.7970	20.2410	2	2.0000	50.8000	-	3.3071	84.0000
	7/64	.1090	2.7780	13/16	.8125	20.6380	-	2.0079	51.0000	3-5/16	3.3120	84.1377
	-	.1181	3.0000	-	.8268	21.0000	2-1/32	2.0313	51.5940	3-11/32	3.3440	84.9314
	1/8	.1250	3.1750	53/64	.8280	21.0340	-	2.0472	52.0000	-	3.3464	85.0000
	-	.1378	3.5000	27/32	.8440	21.4310	2-1/16	2.0620	52.3880	3-3/8	3.3750	85.7250
	9/64	.1410	3.5720	55/64	.8590	21.8280	-	2.0866	53.0000	-	3.3858	86.0000
SPECIALTY HOSE	5/32	.1560	3.9690	-	.8662	22.0000	2-3/32	20.9400	53.1810	3-13/32	3.4060	86.5190
	-	.1575	4.0000	7/8	.8750	22.2250	2-1/8	2.1250	53.9750	-	3.4252	87.0000
	11/64	.1720	4.3660	57/64	.8906	22.6220	-	2.1260	54.0000	3-7/16	3.4380	87.3130
	-	.1770	4.5000	-	.9055	23.0000	2-5/32	2.1560	54.7690	-	3.4646	88.0000
	3/16	.1875	4.7630	29/32	.9062	23.0190	-	2.1650	55.0000	3-15/32	3.4690	88.1060
	-	.1969	5.0000	59/64	.9220	23.4160	2-3/16	2.1875	55.5630	3-1/2	3.5000	88.9000
	13/64	.2030	5.1590	15/16	.9375	23.8130	-	2.2047	56.0000	3-1/2	3.5039	89.0000
	-	.2165	5.5000	-	.9449	24.0000	2-7/32	2.2190	56.3560	3-17/32	3.5310	89.6940
	7/32	.2190	5.5560	61/64	.9530	24.2090	-	2.2440	57.0000	-	3.5433	90.0000
	15/64	.2340	5.9530	31/32	.9690	24.6060	2-1/4	2.2500	57.1500	3-9/16	3.5620	90.4877
ACCESSORIES & ASSEMBLY INSTRUCTIONS	-	.2362	6.0000	-	.9843	25.0000	2-9/32	2.2810	57.9440	-	3.5827	91.0000
	1/4	.2500	6.3500	63/64	.9844	25.0030	-	2.2835	58.0000	3-19/32	3.5940	91.2810
	-	.2559	6.5000	1	1.0000	25.4000	2-5/16	2.3120	58.7380	-	3.6220	92.0000
	17/64	.2656	6.7470	-	1.0236	26.0000	-	2.3228	59.0000	3-5/8	3.6250	92.0750
	-	.2756	7.0000	1-1/32	1.0312	26.1940	2-11/32	2.3440	59.5310	3-21/32	3.6560	92.8960
	9/32	.2810	7.1440	1-1/16	1.0620	26.9880	-	2.3622	60.0000	-	3.6614	93.0000
	-	.2953	7.5000	-	1.0630	27.0000	2-3/8	2.3750	60.3250	3-11/16	3.6875	93.6630
	19/64	.2970	7.5410	1-3/32	1.0940	27.7810	-	2.4016	61.0000	-	3.7008	94.0000
	5/16	.3120	7.9380	-	1.1024	28.0000	2-13/32	2.4060	61.1190	3-23/32	3.7190	94.4560
	-	.3150	8.0000	1-1/8	1.1250	28.5750	2-7/16	2.4380	61.9130	-	3.7401	95.0000
ADAPTERS & HOSE ENDS	21/64	.3280	8.3340	-	1.1417	29.0000	-	2.4409	62.0000	3-3/4	3.7500	92.2500
	-	.3350	8.5000	1-5/32	1.1560	29.3690	2-15/32	2.4690	62.7060	-	3.7795	96.0000
	11/32	.3440	8.7310	-	1.1811	30.0000	-	2.4803	63.0000	3-25/32	3.7810	96.0440
	-	.3543	9.0000	1-3/16	1.1875	31.1630	2-1/2	2.5000	63.5000	3-13/16	3.8125	96.8380
	23/64	.3590	9.1280	1-7/32	1.2190	30.9560	-	2.5197	64.0000	-	3.8189	97.0000
	-	.3740	9.5000	-	1.2205	31.0000	2-17/32	2.5310	64.2940	3-26/32	3.8440	97.6310
	3/8	.3750	9.5250	1-1/4	1.2500	31.7500	-	2.5590	65.0000	-	3.8583	98.0000
	25/64	.3910	9.9220	-	1.2598	32.0000	2-9/16	2.5620	65.0880	3-7/8	3.8750	98.4250
	-	.3937	10.0000	1-9/32	1.2810	32.5440	2-19/32	2.5940	65.8810	-	3.8976	99.0000
	13/32	.4060	10.3190	-	1.2992	33.0000	-	2.5984	66.0000	3-29/32	3.9062	99.2190
HOSE ASSEMBLY EQUIPMENT	-	.4130	10.5000	1-5/16	1.3120	33.3380	2-5/8	2.6250	66.6750	-	3.9370	100.0000
	27/64	.4220	10.7160	-	1.3386	34.0000	-	2.6380	67.0000	3-15/16	3.9375	100.0130
	-	.4331	11.0000	1-11/32	1.3440	34.1310	2-21/32	2.6560	67.4690	3-31/32	3.9690	100.8060
	7/16	.4380	11.1130	1-3/8	1.3750	34.9250	-	2.6772	68.0000	-	3.9764	101.0000
	29/64	.4530	11.5090	-	1.3779	35.0000	2-11/16	2.6875	68.2630	4	4.0000	101.6000
	15/32	.4690	11.9060	1-13/32	1.4060	35.7190	-	2.7165	69.0000	4-1/16	4.0620	103.1880
	-	.4724	12.0000	-	1.4173	36.0000	2-23/32	2.7190	69.0560	4-1/8	4.1250	104.7750
	31/64	.4840	12.3030	1-7/16	1.4380	36.5130	2-3/4	2.7500	69.8500	-	4.1338	105.0000
	-	.4920	12.5000	-	1.4567	37.0000	-	2.7559	70.0000	4-3/16	4.1875	106.3630
	1/2	.5000	12.7000	1-15/32	1.4690	37.3060	2-25/32	2.7810	70.6439	4-1/4	4.2500	107.9500
TECHNICAL DATA	-	.5118	13.0000	-	1.4961	38.0000	-	2.7953	71.0000	4-5/16	4.3120	109.5380
	33/64	.5156	13.0970	1-1/2	1.5000	38.1000	2-13/16	2.8125	71.4376	-	4.3307	110.0000
	17/32	.5310	13.4940	1-17/32	1.5310	38.8940	-	2.8346	72.0000	4-3/8	4.3750	111.1250
	35/64	.5470	13.8910	-	1.5354	39.0000	2-27/32	2.8440	72.2314	4-7/16	4.4380	112.7130
	-	.5512	14.0000	1-9/16	1.5620	39.6880	-	2.8740	73.0000	4-1/2	4.5000	114.3000
	9/16	.5630	14.2880	-	1.5748	40.0000	2-7/8	2.8750	73.0250	-	4.5275	115.0000
	-	.5710	14.5000	1-19/32	1.5940	40.4810	2-29/32	2.9062	73.8190	4-9/16	4.5620	115.8880
	37/64	.5790	14.6840	-	1.6142	41.0000	-	2.9134	74.0000	4-5/8	4.6250	117.4750
	-	.5906	15.0000	1-5/8	1.6250	41.2750	2-15/16	2.9375	74.6130	4-11/16	4.6875	119.0630
	19/32	.5940	15.0810	-	1.6535	42.0000	-	2.9527	75.0000	-	4.7244	120.0000



# Glossary

## Alpha/Numeric

### A

**abrasion:** external damage to a hose assembly caused by its being rubbed on a foreign object; a wearing away by friction.

**ABS:** Air-Brake Swivel absorption: regarding hose, the process of taking in fluid. Hose materials are often compared with regard to relative rates and total amounts of absorption as they pertain to specific fluids.

**acid resistant:** having the ability to withstand the action of identified acids within specified limits of concentration and temperature.

**adapter, adaptor: 1)** fittings of various sizes and materials used to change an end fitting from one type to another type or one size to another. (i.e., a male SAE to male pipe adapter is often attached to a female SAE to create a male end union fitting); **2)** the grooved portion of a cam & groove coupling.

**adhesion:** the strength of bond between cured rubber surfaces or between a cured rubber surface and a non-rubber surface.

**adhesive:** a material which, when applied, will cause two surfaces to adhere.

**ambient temperature:** the temperature of the atmosphere or medium surrounding an object under consideration.

**ambient/atmospheric conditions:** The surrounding conditions, such as temperature, pressure, and corrosion, to which a hose assembly is exposed.

**amplitude of vibrations and/or lateral movement:** the distance a hose assembly deflects laterally to one side from its normal position, when this deflection occurs on both sides of the normal hose centerline.

**anchor:** a restraint applied to eliminate motion and restrain forces.

**annular:** refers to the convolutions on a hose that are a series of complete circles or rings located at right angles to the longitudinal axis of the hose (sometimes referred to as "bellows").

**anodize, anodized:** an electrolytic process used to deposit protective or cosmetic coatings in a variety of colors on metal, primarily used with aluminum.

**ANSI:** American National Standards Institute.

**Application working pressure:** unique to customer's application. See pressure, working.

**application:** the service conditions that determine how a hose assembly will be used.

**armor:** a protective cover slid over and affixed to a hose assembly; used to prevent over bending or for the purpose of protecting hose from severe external environmental conditions such as hot materials, abrasion or traffic.

**assembly:** a general term referring to any hose coupled with end fittings of any style attached to one or both ends.

**ASTM:** American Society for Testing and Materials.

**attachment:** the method of securing an end fitting to a hose (e.g., banding, crimping, swaging, or screw-together 2 piece or 3 piece-style field attachable fittings).

**axial movement:** compression or elongation along the longitudinal axis.

### B

**backing:** a soft rubber layer between a hose tube and/or cover and carcass to provide adhesion.

**barb:** the portion of a fitting (coupling) that is inserted into the hose, usually comprised of two or more radial serrations or ridges designed to form a redundant seal between the hose and fitting.

**barbed and ferrule fitting:** a two-piece hose fitting comprised of a barbed insert (nipple), normally with peripheral ridges or backward-slanted barbs, for inserting into a hose and a ferrule, usually crimped or swaged.

**Barb-Tite:** a line of low pressure push-on brass hose end fittings that is a Trademark of Eaton Corporation.

**bend radius:** the radius of a bent section of hose measured to the innermost surface of the curved portion.

**bend radius, minimum:** the smallest radius at which a hose can be used. For Metal Hose: - the radius of a bend measured to the hose centerline, as recommended by the manufacturer.

**blister:** a raised area on the surface or a separation between layers usually creating a void or air-filled space in a vulcanized article.

**blow out force:** the force generated from the internal pressure attempting to push the fitting from the hose.

**body wire:** normally a round or flat wire helix embedded in the hose wall to increase strength or to resist collapse.

**bore: 1)** an internal cylindrical passageway, as of a tube, hose or pipe; **2)** the internal diameter of a tube, hose, or pipe.

**braid:** the woven portion of a hose used as reinforcement to increase pressure rating and add hoop strength. Various materials such as polyester, cotton or metal wire are used. A hose may have one or more braids, outside or between layers of hose material.

**braid wear:** motion between the braid and corrugated hose, which normally causes wear on the outside diameter of the corrugation and the inside diameter of the braid.

**braided ply:** a layer of braided reinforcement.

**braid-over-braid:** multiple plies of braid having no separating layers.

**brand:** a mark or symbol identifying or describing a product and/or manufacturer, that is embossed, inlaid or printed.

**brass:** a family of copper/zinc alloys.

# Glossary

## Alpha/Numeric

**brazing:** a process of joining metals using a non-ferrous filler metal having a melting point that is lower than the "parent metals" to be joined, typically over +800°F.

**bronze:** an alloy of copper, tin and zinc.

**BSPP/BSPT:** British Standard Pipe Parallel / British Standard Pipe Tapered. See Fitting/Coupling - Pipe Thread Fittings.

### C

**carcass:** the fabric, cord and/or metal reinforcing section of a hose as distinguished from the hose tube or cover.

**chalking:** the formation of a powdery surface condition due to disintegration of surface binder or elastomer by weathering or other destructive environments.

**checking:** the short, shallow cracks on the surface of a rubber product resulting from damaging action of environmental conditions.

**chemical compatibility:** the relative degree to which a material may contact another without corrosion, degradation or adverse change of properties.

**chemical resistance:** the ability of a particular polymer, rubber compound, or metal to exhibit minimal physical and/or chemical property changes when in contact with one or more chemicals for a specified length of time, at specified concentrations, pressure, and temperature.

**cold flexibility:** relative ease of bending while being exposed to specified low temperature.

**collar: 1)** the portion of a fitting that is compressed by crimping to seal the hose onto the fitting barbs and create a permanent attachment; also called a ferrule. (With field attachable fittings, the lock and seal are accomplished mechanically by the collar without crimping); **2)** a raised portion on the hose shank which functions as a connection for a ferrule or other locking device or functions as a hose stop.

**collet:** a tool or die-set used to crimp a hose end fitting onto a hose. A crimping die-set is typically six to eight "fingers" designed for infinite diameter settings within a range or preset to a specific diameter for a given hose type and size. Some may have a replaceable cage.

**Coll-O-Crimp:** a line of hydraulic and pneumatic hose, hose end fittings, and fabrication equipment that is a registered trademark of Eaton Corporation.

**combustible liquid:** a combustible liquid is one having a flash point at or above +100°F (37.8°C).

**compound:** the mixture of rubber or plastic and other materials, which are combined to give the desired properties when, used in the manufacture of a product.

**compression fitting:** see fitting/coupling - Compression

**conductive:** the ability to transfer electrical potential.

**configuration:** the combination of fittings on a particular assembly.

**convoluted:** description of hose or innercore having annular or helical ridges formed to enhance flexibility.

**core:** the inner portion of a hose, usually referring to the material in contact with the medium.

**corrosion:** the process of material degradation by chemical or electrochemical means.

**corrosion resistance:** ability of metal components to resist oxidation.

**corrugated hose:** hose with a carcass fluted, radially or helically, to enhance its flexibility or reduce its weight.

**coupling:** a frequently used alternative term for hose end fitting.

**cover:** the outer component usually intended to protect the carcass of a product.

**CPE:** chlorinated polyethylene, a rubber elastomer.

**cracking:** a sharp break or fissure in the surface, generally caused by strain and environmental conditions.

**crimp diameter:** the distance across opposite flats after crimping.

**crimp/crimping:** a hose end fitting attachment method utilizing a number of dies mounted in a radial configuration. The dies close perpendicular to the hose and fitting axis, compressing the collar, ferrule, or sleeve around the hose.

**cure:** the act of vulcanization. See vulcanization.

**cut off factor:** the hose length to be subtracted from the overall assembly length that allows for the hose coupling end connection extension beyond the end of the hose.

### D

**date code:** any combination of numbers, letters, symbols or other methods used by a manufacturer to identify the time of manufacture of a product.

**deburr:** to remove ragged edges from the inside diameter of a hose end.

**design factor:** a ratio used to establish the working pressure of the hose, based on the burst strength of the hose.

**displacement:** the amount of motion applied to a hose defined as inches for parallel offset and degrees for angular misalignment.

**DOT:** Department of Transportation.

**DIN:** Deutsche Industrie Norme.

**duplex assembly:** an assembly consisting of two hose assemblies-one inside the other, and connected at the ends; also known as "jacketed assemblies."

**durometer:** an instrument for measuring the hardness of rubber and plastic compounds.



# Glossary

## Alpha/Numeric

### E

**eccentricity:** the condition resulting from the inside and outside diameters not having a common center.

**effusion:** the escape, usually of gases, through a material. See permeation.

**elastic limit:** the limiting extent to which a body may be deformed and yet return to its original shape after removal of the deforming force.

**elastomer:** any one of a group of polymeric materials, usually designated thermoset, such as natural rubber, or thermoplastic, which will soften with application of heat.

**elongation:** the increase in length expressed numerically as a percentage of the initial length.

**EN:** European Normes

**ERMETO:** a steel fitting product trademarked by Eaton Corporation.

**endurance test:** a service or laboratory test, conducted to product failure, usually under normal use conditions.

**EPDM:** Ethylene Propylene Diene Monomer; an elastomer.

**extrude/extruded/extrusion:** forced through the shaping die of an extruder; extrusion may have a solid or hollow cross section.

### F

**fabric impression:** impression formed on the rubber surface during vulcanization by contact with fabric jacket or wrapper.

**fabricator:** the producer of hose assemblies.

**fatigue:** the weakening or deterioration of a material occurring when a repetitious or continuous application of stress causes strain, which could lead to failure.

**FDA:** United States Food and Drug Administration.

**fire sleeve:** slip-on or integrally extruded sleeve used to retard the effects of fire in certain applications; most often made with silicone and/or ceramic fiber.

**fitting/coupling:** a device attached to the end of the hose to facilitate connection.

**The following is only a partial list of types of fittings available-**

- **Banjo Fitting:** a through bolted designed featuring a hollow circle or "donut" attached to one end of the fitting barb so that the inner diameter is along the hose axis.

- **Compression Fitting:** a fitting style that seals on a mating tube by compressing an internal ferrule against the tube O.D..

- **Field Attachable Fitting:** a fitting designed to be attached to hose without crimping or swaging. This fitting is not always a Reusable type fitting.

- **Flange Style Fittings:** pipe flanges and flanged fitting standards are listed

under ANSI B16.5. Flanges are rated for pressure and listed as "American Class 150, 300, 400, 600, 900, 1,500 or 2,500". Pressure-Temperature ratings can be obtained by consulting the ANSI specification or ASME B16.5 (American Society of Mechanical Engineers). Designs vary by neck and face style, or other dimensional changes based on use. Various finishes or grooves may be applied to the face for sealing on a gasket or o-ring. Bolt holes and other dimensions are per the ANSI standard.

- **Inverted Flare Fitting:** a fitting consisting of a male or female nut, trapped on a tube by flaring the end of the tube material to either 37° or 45°.

- **JIC Fittings:** joint Industrial Council (no longer in existence). An engineering group that established an industry standard fitting design incorporating a 37° mating surface, male and female styles. These standards are now governed by SAE.

- **O-ring Fittings:** a fitting that seals by means of an elastomeric ring of a specified material.

#### Pipe Thread Fittings:

- **NPT:** National Pipe Taper. Pipe thread per ANSI B1.20.1

- **NPTF:** National Pipe Tapered for Fuels. (Same as above except dry-seal per ANSI B1.20.3)

- **NPSH:** National Pipe Straight Hose per ANSI B1.20.7

- **NPSM:** National Pipe Straight Mechanical. Straight thread per ANSI B1.20.1

- **NPSL:** National Pipe Straight Loosefit per ANSI B1.20.1

- **BSPP, BSPT:** British Standard Pipe Parallel, British Standard Pipe Taper. BS21-

- **Quick Connect Fitting:** a fitting designed to quickly connect and disconnect. These fittings come in many styles and types.

- **Split Flange Fitting:** a fitting consisting of a flange retainer and a flange of two halves. This design allows the flanges to be installed after the retainer has been attached to the hose, making the flange reusable. SAE Code 61 and 62.

- **Tube Fitting:** a hose fitting of which the mating end conforms to a tube diameter. The mate or male end of a compression fitting.

**flammable gases/liquid/media:** a flammable gas, including liquefied gas, is one having a closed cup flash point below +100°F (+37.8°C) and a vapor pressure greater than 25 psi. (174.2 KPa).

**flex cracking:** a surface cracking induced by repeated bending and straightening.

**flow rate:** a volume of media being conveyed in a given time period.

**fluid:** a gas or liquid medium.

# Glossary

## Alpha/Numeric

**fluorocarbon:** an organic compound containing fluorine directly bonded to carbon. The ability of the carbon atom to form a large variety of structural chains gives rise to many fluorocarbons and fluorocarbon derivatives.

**FOR-SEAL:** a product name for a hose end configuration using an o-ring sealing method, trademarked by Eaton Corporation.

### G

**GPM:** gallons per minute.

### H

**heat resistance:** the property or ability to resist the deteriorating effects of elevated temperatures.

**helix:** a shape formed by spiraling a wire or other reinforcement around the cylindrical body of a hose; typically used in suction hose.

**hose:** a flexible conduit consisting of a tube, reinforcement, and usually an outer cover.

**hydrostatic testing:** the use of liquid pressure to test a hose or hose assembly for leakage, twisting, and/or hose change-in-length.

**Hytrel:** a DuPont registered trademark.

### I

**I.D.:** the abbreviation for inside diameter.

**identification yarn:** a yarn of single or multiple colors, usually embedded in the hose wall, used to identify the manufacturer.

**impression:** a design formed during vulcanization in the surface of a hose by a method of transfer, such as fabric impression or molded impression.

**impulse:** an application of force in a manner to produce sudden strain or motion, such as hydraulic pressure applied in a hose.

**innertube:** the innermost layer of a hose; the hose material in contact with the medium.

**insert:** optional term for nipple. See nipple.

**interlocking clamp:** a clamp which engages the fitting in a manner which prevents the clamp from sliding off the fitting, typically a bolt or U-bolt style with interlocking fingers which engage an interlock ring on the fitting.

**interlocking ferrule:** a ferrule, which physically attaches to the fitting preventing the ferrule from sliding off the fitting.

**ISO:** International Organization for Standardization.

### J

**jacket:** a seamless tubular braided or woven ply generally on the outside of a hose.

**JIC:** see fitting/coupling-JIC.

### K

**kinking:** a temporary or permanent distortion of the hose induced by bending beyond the minimum bend radius.

### L

**layline:** the line of printed information that runs parallel on the side of a manufactured hose giving details such as part number, PSI rating, hose size and manufacturing data.

**layer:** a single thickness of rubber or fabric between adjacent parts.

**loop installation:** the assembly is installed in a loop or "U" shape, and is most often used when frequent and/or large amounts of motion are involved.

**LPG, LP Gas:** the abbreviation for liquefied petroleum gas.

### M

**MAWP:** see pressure, maximum allowable working.

**mandrel built:** a hose fabricated and/or vulcanized on a mandrel.

**manufacturer's identification:** a code symbol used on or in some hose to indicate the manufacturer.

**media, medium:** the substance(s) being conveyed through a system.

### N

**NAHAD:** the abbreviation for the National Association of Hose & Accessories Distributors.

**Neoprene®:** a registered trademark of DuPont.

**nipple:** the internal member or portion of a hose fitting.

**nitrile rubber (NB/Buna-N):** a family of acrylonitrile elastomers used extensively for industrial hose.

**nominal:** a size indicator for reference only.

**nomograph:** a chart used to compare hose size to flow rate to recommended velocity.

**non-conductive:** the inability to transfer an electrical charge.

**NPT/NPTF:** abbreviation for national pipe threads. See fitting/coupling - Pipe Thread Fittings.

**nylon:** a family of polyamide materials.

### O

**OAL:** see overall length

**O.D.:** the abbreviation for outside diameter.

**OE/OEM:** original equipment manufacturer.

**oil resistance:** the ability of the materials to withstand exposure to oil.

**oil swell:** the change in volume of a rubber article resulting from contact with oil.

**operating conditions:** the pressure, temperature, motion, and environment to which a hose assembly is subjected.

**o-ring fitting:** see fitting/coupling, O-Ring.

**overall length (OAL):** the total length of a hose assembly, which consists of the free hose length plus the length of the coupling(s).

**oxidation:** the reaction of oxygen on a material, usually evidenced by a change in the appearance or feel of the surface or by a change in physical properties.

# Glossary

## Alpha/Numeric

**ozone cracking:** the surface cracks, checks or crazing caused by exposure to an atmosphere containing ozone.

**ozone resistance:** the ability to withstand the deteriorating effects of ozone (generally cracking).

### P

**permanent fitting:** the type of fitting which, once installed, may not be removed for re-use.

**permeation:** the process of migration of a substance into and through another, usually the movement of a gas into and through a hose material; the rate of permeation is specific to the substance, temperature, pressure and the material being permeated.

**pin pricked:** perforations through the cover of a hose to vent permeating gases.

**pitch: 1)** the distance from one point on a helix to the corresponding point on the next turn of the helix, measured parallel to the axis; **2)** the distance between the two peaks of adjacent corrugation or convolution.

**plating:** a material, usually metal, applied to another metal by electroplating, for the purpose of reducing corrosion; typically a more noble metal such as zinc is applied to steel.

**ply:** an individual layer in hose construction.

**polymer:** a macromolecular material formed by the chemical combination of monomers, having either the same or different chemical compositions.

**pressure:** force ÷ unit area. For purposes of this document, refers to PSIG (pounds per square inch gauge).

**pressure drop:** the measure of pressure reduction or loss over a specific length of hose.

**pressure, burst:** the pressure at which rupture occurs.

**pressure, maximum allowable working:** the maximum pressure at which a hose or hose assembly is designed to be used.

**pressure, working:** the maximum pressure to which a hose will be subjected, including the momentary surges in pressure, which can occur during service. Abbreviated as WP.

**psi (PSI):** pounds per square inch.

**PTFE:** polytetrafluoroethylene, a high molecular weight fluoroplastic polymer with carbon atoms shielded by fluorine atoms having very strong inter atomic bonds, giving it chemical inertness.

**PVC:** polyvinyl chloride. A low cost thermoplastic material typically used in the manufacture of industrial hoses. The operating temperature range is -500°F to +1750°F (-295.5°C to +954.4°C).

### R

**reinforcement:** the strengthening members, consisting of either fabric, cord, and/or metal, of a hose. See ply.

**reusable fitting/coupling:** see fitting/coupling, Field Attachable Fittings.

**RhinoHide:** a product's name for an abrasion resistant covered hydraulic hose that is a registered trademark of Eaton Corporation.

**RMA:** The Rubber Manufacturers Association, Inc.

### S

**SAE:** Society of Automotive Engineers.

**shank:** that portion of a fitting, which is inserted into the bore of a hose.

**skive:** the removal of a short length of cover and/or tube to permit the attachment of a fitting directly over the hose reinforcement.

**sleeve:** a metal cylinder, which is not physically attached to the fitting, for the purpose of forcing the hose into the serrations of the fitting.

**smooth bore:** a term used to describe the type of inner-core in a hose.

**specification:** a document setting forth pertinent details of a product.

**spiral:** a method of applying reinforcement in which there is not interlacing between individual strands of the reinforcement.

**spring guard:** a helically wound component applied internally or externally to a hose assembly, used for strain relief, abrasion resistance, collapse resistance.

**standard:** a document, or an object for physical comparison, for defining product characteristics, products, or processes, prepared by a consensus of a properly constituted group of those substantially affected and having the qualifications to prepare the standard for use.

**static wire:** wire incorporated in a hose to conduct static electricity.

**stem:** see nipple.

**Sub-Zero:** a product's name for a low temperature resistant hose that is a registered trademark of Eaton Corporation.

**surge (spike):** a rapid and transient rise in pressure.

**swelling:** an increase in volume or linear dimension of a specimen immersed in liquid or exposed to a vapor.

### T

**Thick-Flange:** a product's name for a hose end fitting that is trademarked by Eaton Corporation.

**tube:** the innermost continuous all-rubber or plastic element of a hose.

**tube fitting:** see fitting/coupling-Tube.

**tubing:** a non-reinforced, homogeneous conduit, generally of circular cross-section.

## Glossary

## Alpha/Numeric

## V

**vacuum resistance:** the measure of a hoses ability to resist negative gauge pressure.

**vibration:** amplitude motion occurring at a given frequency.

**viscosity:** the resistance of a material to flow.

**vulcanization:** a process during which a rubber compound, through a change in its chemical structure, improves or extends elastic properties over a greater range of temperature.

## W

**weathering:** the surface deterioration of a hose cover during outdoor exposure, as shown by checking, cracking, crazing and chalking.

**wire reinforced:** a hose containing wires to give added strength, increased dimensional stability; crush resistance. See reinforcement.

**working temperature:** the temperature range of the application, may include the temperature of the fluid conveyed or the environmental conditions the assembly is exposed to in use.

**WP:** the abbreviation for working pressure.

The preceding Glossary of Terms, as utilized in the hose industry, includes some definitions from The Hose Handbook, published by the Rubber Manufacturers Association.

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# Product Warranty

APPLICATION  
DATA

LOW & MEDIUM  
PRESSURE HOSE

For one year after date of purchase, Eaton warrants its products to be free from defects in materials and workmanship when properly installed and maintained. Products covered include those items contained in this catalog.

If during the warranty period, a product is discovered to be defective Eaton will, at its option, replace the warranted product or grant the purchaser a credit for the product claimed to be defective. Eaton will have the sole discretion to determine whether the product was defective.

This warranty is null and void if the product has been used in the wrong application or has been damaged from an accident or willfully destroyed. In addition, this warranty will not apply to Weatherhead assembly equipment, Weatherhead end fittings or Weatherhead hose if the claimed defective product has been used in an assembly made from other than Weatherhead parts.

NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE BY EATON. THE FOREGOING STATES EATON'S ENTIRE AND EXCLUSIVE LIABILITY

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**CLAIM INFORMATION:**  
To make a warranty claim contact an Eaton Customer Service Representative at the address below.

Eaton  
14615 Lone Oak Road  
Eden Prairie, MN 55344  
USA

Tel: 952 937-9800  
Fax: 952 974-7722

<http://www.hydraulics.eaton.com/warranty>

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# Additional Product Literature



**Boston Hose Catalog**  
B-HYOV-MC001-E



**Everflex Catalog**  
E-HOEV-MC001-E2



**Brass Catalog**  
E-BRFI-MC001-E1



**Flexmaster Catalog**  
E-MEFL-MR001-E1



**Quick Disconnect**  
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E-MESW-MC001-E



**Master Interchange**  
W-HYOV-MI001-E



**Walterscheid Catalog**  
E-MEFI-MC001-M



**FLOCS Catalog**  
E-EQOT-MC001-E



**A/C and Refrigeration**  
W-HOAC-MC001-E1



**Crimp Specification Manual**  
W-HOOV-TM001-E1



**Hose Assembly Systems**  
M-HOAS-MR001-E

**Eaton**  
14615 Lone Oak Road  
Eden Prairie, MN 55344  
USA  
Tel: 952 937-9800  
Fax: 952 974-7722  
[www.hydraulics.eaton.com](http://www.hydraulics.eaton.com)

**Eaton**  
20 Rosamond Road  
Footscray  
Victoria 3011  
Australia  
Tel: (61) 3 9319 8222  
Fax: (61) 3 9318 5714

**Eaton**  
Dr.-Reckeweg-Str. 1  
D-76532 Baden-Baden  
Germany  
Tel: (49) 7221 682-0  
Fax: (49) 7221 682-788



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