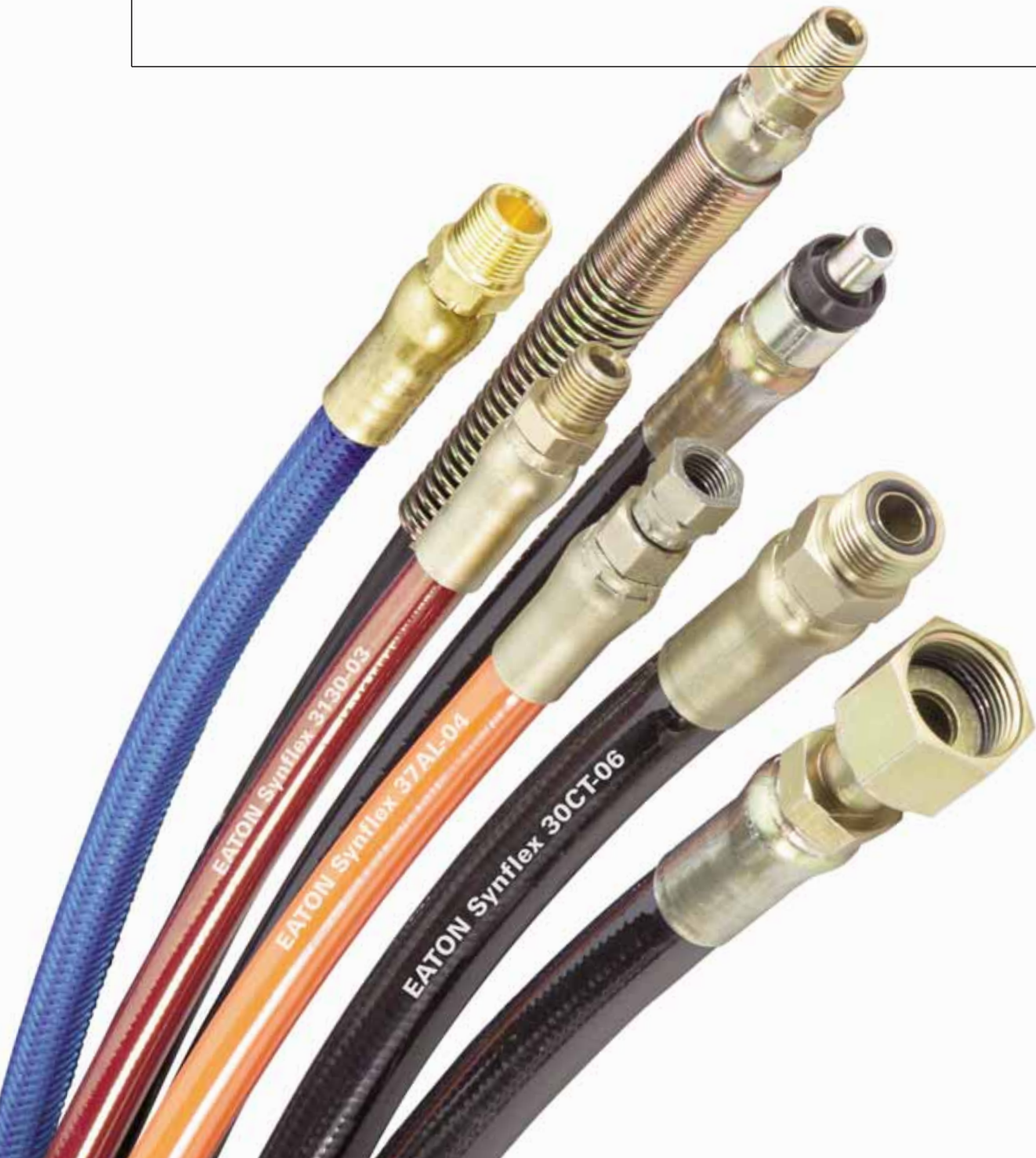




Synflex® Hose and Fittings

Master Catalog



LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

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Introduction

For decades, Synflex thermoplastic hose and tubing has been replacing rubber hose or metal tubing designs. Synflex hose and tubing offers customers a number of benefits, including flexibility, durability, abrasion resistance, lighter weight materials, superior chemical resistance, variety of colors, high pressure capability and extended product performance.

Synflex Hose, Tubing, Fittings and Accessories are available through distributors and direct sales offices throughout North America, Europe and Asia. Many locations also supply custom hose assemblies for specific applications and general industrial purposes.

This catalog contains the most popular lines of Synflex hose and tubing products. If these do not fit your particular needs, or you require a custom design, please contact us. As a customer-focused organization, satisfying customer needs with new products and innovative solutions is our goal.

Hose Selection Chart

Applications/Product

PRODUCT	Agriculture and Horticulture	Air Tools	Barber/Dental/Salon Chairs	Carpet Cleaners	Carwash	Chemical Transfer	Cooling/Misting/Dust Suppression	Foam Systems	Food Processing	Forestry-Delimer	Gas Transfer	General Construction	Handicap/Wheel Chair Lift	Hospital Surgical Beds/Tables
1. Hydraulic Hose														
3R30	✓	✓	✓		✓	✓	✓				✓		✓	✓
25CT						✓					✓			
3130	✓		✓		✓	✓		✓	✓	✓	✓	✓	✓	✓
3580	✓									✓		✓		
3750	✓									✓		✓	✓	
3740										✓				
37AL										✓				
31N0		✓												
3360	✓										✓	✓		
30CT	✓									✓	✓	✓		
3R80	✓					✓			✓	✓	✓	✓		
3800						✓					✓			
3E80										✓				
3840										✓				
3V10														
3VE0										✓				
2. Pneumatic Hose and Tubing														
4212						✓					✓			
4225						✓					✓			
4242						✓					✓			
3. Gas Transfer Hose														
34BA											✓			
35NG											✓			
4. Air and Water Transfer Hose														
3630	✓	✓		✓	✓						✓			
34PW									✓					
34WH									✓					
5. Specialty Hose and Tubing														
3440						✓		✓			✓			
34CU						✓		✓			✓			
31GW	✓											✓		
32GW	✓											✓		
34GW	✓											✓		
4233	✓													
4262											✓			

LOW/MEDIUM PRESSURE

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Applications/Product

PRODUCT	General Hydraulic	Lubrication Systems	Machine Tools/ Robotics	Marine	Material Handling/ Forklifts	Nuclear	Paint Spray Systems	Pneumatic Systems	Pressure Washers	Recreational Vehicles (RVs)	Rental Construction Equipment	Rescue	Tree Trimmers	Utility, Municipalities	Water Jetter, Drain/Sewer	
1. Hydraulic Hose																
3R30	✓									✓					✓	
25CT	✓				✓											
3130	✓	✓	✓	✓	✓				✓	✓	✓		✓		✓	
3580	✓	✓	✓	✓	✓				✓		✓		✓	✓		
3750	✓	✓	✓	✓						✓	✓		✓			
3740	✓					✓					✓		✓	✓		
37AL	✓					✓					✓		✓	✓		
31NO	✓			✓												
3360	✓	✓	✓		✓											
30CT	✓	✓	✓		✓						✓					
3R80	✓										✓	✓				
3800	✓								✓	✓	✓				✓	
3E80	✓											✓		✓		
3840	✓											✓		✓		
3V10	✓											✓		✓		
3VE0	✓											✓		✓		
2. Pneumatic Hose and Tubing																
4212	✓							✓								
43225	✓							✓								
4242	✓							✓								
3. Gas Transfer Hose																
34BA				✓												
35NG																
4. Air and Water Transfer Hose																
3630											✓		✓	✓		
34PW						✓										
34WH						✓				✓						
5. Specialty Hose and Tubing																
3440																
34CU																
31GW		✓														
32GW		✓														
34GW		✓														
4233							✓									
4262								✓								

Hydraulic Pressure Hose Selection Chart

HOSE SERIES	SAE J517 SPECIFICATION	DASH SIZE RANGE ⁽²⁾	RECOMMENDED PRESSURE RANGE PSI	TEMPERATURE RANGE F°	TEMPERATURE RANGE C°	KEY FEATURES AND APPLICATIONS
Low Pressure Hose						
3630	–	-3 to -16	250-300	-10 to 150	-23 to 66	Pneumatic Tools, Industrial Water Supply
3R30	100R3 ¹	-3 to -8	1,000-1,750	-40 to 212	-40 to 100	Low Pressure Hydraulic Equipment
Medium Pressure Hose						
3130	100R7	-2 to -16 ³	1,000-3,000	-40 to 212	-40 to 100	General Hydraulics/Pneumatics, Best Value 100R7 Hose
3580	100R1, R7 ¹	-4 to -12	2,250-3,500	-40 to 225	-40 to 107	Wire Reinforced, Cut Resistant, Rugged, Heavy Design
3740	100R7	-3 to -16	1,000-3,000	-40 to 212	-40 to 100	General Hydraulics/Pneumatics, Non-Conductive
3750	100R7	-3 to -12	1,250-3,000	-40 to 212	-40 to 100	General Hydraulics, Material Handling
37AL	100R7/ANSI	-3 to -8	3,000	-65 to 212	-54 to 100	General Hydraulics, Aerial Lift Equipment, Complies with ANSI A 92.2 non-conductive
Constant Pressure Hose						
30CT	100R18	-3 to -10	3,000	-65 to 200	-54 to 94	General Hydraulics, Material Handling, Freezer Applications
3360	100R18	-12 to -16	3,000	-40 to 212	-40 to 100	General Hydraulics, Material Handling, Freezer Applications
31N0	–	-4 to -8	1,500	-40 to 212	-40 to 100	Low Volumetric Expansion - Pilot Lines
25CT	100R7 ¹	-8	2,500	-65 to 200	-54 to 94	General Hydraulics, Material Handling
High Pressure Hose						
3R80	100R8	-3 to -16	2,000-5,000	-40 to 212	-40 to 100	Long Life in Impulse Cycling and Flexing, Reusable Fittings
3E80	100R8	-3 to -16	2,000-5,000	-40 to 212	-40 to 100	Non-Conductive Specification, Reusable Fittings, Aerial Equipment
3800	100R8	-2 to -8	3,500-6,000	-40 to 212	-40 to 100	Hose Performance With 100R7 Dimensions – Fitting Versatility
3840	100R8	-3 to -8	3,500-5,000	-40 to 212	-40 to 100	Non-Conductive Specification, Aerial Equipment – Fitting Versatility
Very High Pressure Hose						
3V10	–	-3 to -6	8,000-10,000	-40 to 150	-40 to 66	High Pressure Performance, Hydraulic Jacks
3VE0	–	-3 to -6	8,000-10,000	-40 to 150	-40 to 66	Non-Conductive Specification, High Pressure Performance, Safety Near High Voltage Sources

(1) Meets or Exceeds Specifications in Performance

(2) Dash Size = Hose I.D. in 16ths of One Inch. Ex. -3 = 3/16 inch I.D.

(3) SAE 100R7 Does Not Apply to -2 Size

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HOSE SERIES	HOSE COVER	REINFORCEMENT MATERIAL	CORE TUBE	BONDED LAYERS	TWIN-LINE OR MULTI-LINE
Low Pressure Hose					
3R30	Polyurethane	Synthetic Fiber	Nylon	•	•
3630	PVC	Synthetic Fiber	PVC	•	•
Medium Pressure Hose					
3130	Polyurethane	Synthetic Fiber	Nylon	•	•
3580	Polyurethane	Steel Wire	Polyester	•	•
3740	Polyurethane	Synthetic Fiber	Nylon	•	•
3750	Polyurethane	Synthetic Fiber	Polyester	•	•
37AL	Polyurethane	Synthetic Fiber	Polyester	•	•
Constant Pressure Hose					
30CT	Polyester	Synthetic Fiber	Polyester	•	•
3360	Polyester	Synthetic Fiber	Nylon	•	•
31N0	Polyurethane	Synthetic Fiber	Nylon	•	•
25CT	Polyester	Synthetic Fiber	Polyester	•	•
High Pressure Hose					
3R80	Polyurethane	Synthetic Fiber	Nylon	• ⁴	•
3E80	Polyurethane	Synthetic Fiber	Nylon	• ⁴	•
3800	Polyurethane	Aramid	Nylon	•	•
3840	Polyurethane	Aramid	Nylon	•	•
Very High Pressure Hose					
3V10	Polyurethane	Aramid	Nylon	•	•
3VE0	Polyurethane	Aramid	Nylon	•	•

(4) Not All Sizes Are Bonded

Low Pressure Hose

3R30 Low Pressure Hose

Meets SAE 100R3 Performance Specifications



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m	Part No. 4540	Steel Series*
3R30-03	3/16	4.8	.384	9.8	1	25	1,750	120	7,000	480	3.6	5.4	3W3	903
3R30-04	1/4	6.4	.487	12.4	1-1/4	32	1,500	103	6,000	414	5.3	7.9	3W4	903
3R30-06	3/8	9.5	.637	16.2	2	51	1,250	86	5,000	344	8.1	12.1	3W6	903
3R30-08	1/2	12.7	.818	20.8	3	76	1,000	69	4,000	276	14.1	21.0	308	903

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- Low volumetric expansion
- Rugged design

Applications

- Low pressure hydraulics (hospital beds)
- Hand tools: air power tools (impact tools, nail guns, stapler guns and tire inflation)
- Lubrication systems
- High pressure pneumatic systems
- Pressure wash hose
- Cooling mist systems

Construction

- Black perforated polyurethane cover
- Spiraled synthetic fiber reinforcement (-03 thru -06, -08 is braided)
- Nylon-lined core tube

Temperature Range

- -40°F to 212°F (-40°C to 100°C) or to 150°F (66°C), with water-based or fire-resistant fluids

Medium Pressure Hose

3130 Medium Pressure Hose

Meets SAE 100R7 Specifications



#	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT LB KG		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m	Part No. 4540	Steel
3130-02**	1/8	3.2	.335	8.5	1/2	13	2,500	172	10,000	689	2.6	3.7	302	903
3130-03	3/16	4.8	.427	10.8	3/4	19	3,000	207	12,000	827	4.5	6.8	303	903
3130-04	1/4	6.4	.510	13.0	1-1/4	32	3,000	207	12,000	827	6.1	8.5	304	903
3130-05	5/16	7.9	.594	15.1	1-3/4	44	2,500	172	10,000	689	7.5	10.3	305	903
3130-06	3/8	9.5	.669	17.0	2	51	2,250	155	9,000	620	8.4	14.1	306	903
3130-08	1/2	12.7	.816	20.7	3	76	2,000	138	8,000	552	11.4	21.0	308	903
3130-12	3/4	19.1	1.067	27.1	5	127	1,250	86	5,000	345	17.6	28.7	312	903
3130-16	1	25.4	1.340	34.0	8	203	1,000	69	4,000	276	31.1	39.3	316	903*

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

** SAE 100R7 does not apply to 1/8" size. The nylon core tube is a single wall and not bonded to the reinforcement.

Features

- Long continuous lengths
- Low elongation
- Best value 100R7 hose

Applications

- General hydraulics
- Material handling
- Forklift
- High pressure gas transfer
- Chemical transfer

Construction

- Black perforated polyurethane Cover
- Spiraled or braided synthetic fiber reinforcement
- Nylon-lined core tube

Temperature Range

- -40°F to 212°F (-40°C to 100°C) or to 150°F (66°C), with water-based or fire-resistant fluids

3750 Medium Pressure Hose

Meets SAE 100R7 Specifications



#	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT LB KG		SWAGE DIE	PERMANENT FITTING SERIES*	REUSABLE FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m	Part No. 4540	Steel	Steel
3750-03	3/16	4.8	.425	10.8	3/4	19	3,000	207	12,000	828	4.8	7.1	303	903	902
3750-04	1/4	6.4	.485	12.3	1-1/4	32	2,750	190	11,000	759	6.0	8.9	3W4	903	902
3750-05	5/16	7.9	.580	14.7	1-3/4	44	2,500	172	10,000	689	7.5	11.2	305	903	902
3750-06	3/8	9.5	.635	16.2	2	51	2,250	155	9,000	621	9.5	14.1	306	903	902
3750-08	1/2	12.7	.815	20.7	3	76	2,000	138	8,000	552	14.3	21.3	308	903	902
3750-12	3/4	19.1	1.070	27.2	5	127	1,250	86	5,000	345	20.4	30.4	312	903	902

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- Designed for permanent or reusable fittings
- Smaller O.D. than most 100R7 hose
- Flexible through temperature range

Applications

- Hydraulic tools
- Lubrication systems
- Mobile hydraulics
- Agriculture equipment

Construction

- Black polyurethane cover
- Braided synthetic Fiber reinforcement
- Polyester core tube

Temperature Range

- -40°F to 212°F (-40°C to 100°C) or to 140°F (60°C), with water-based or fire-resistant fluids

Medium Pressure Hose

37AL Non-Conductive Medium Pressure Hose

Complies With ANSI A92.2 for Vehicle Mounted Aerial Devices
Meets SAE 100R7 Non-Conductive Requirements



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT LB KG		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m	Part No. 4540	Steel
37AL-03	3/16	4.8	.425	10.8	3/4	19	3,000	207	12,000	827	4.8	7.1	303	903
37AL-04	1/4	6.4	.485	12.3	1-1/4	32	3,000	207	11,000	759	6.0	8.9	3W4	903
37AL-05	5/16	7.9	.580	14.7	1-3/4	44	3,000	207	10,000	689	7.5	11.2	305	903
37AL-06	3/8	9.5	.635	16.1	2	51	3,000	207	9,000	620	9.5	14.1	306	903
37AL-08	1/2	12.7	.815	20.7	3	76	3,000	207	9,000	620	14.3	21.3	308	903

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- SAE J517 non-conductive hose construction
- Less than 50 micro-amperes leakage when subjected to 75,000 volts/ft for 5 minutes
- Flexible in low temperatures
- Abrasion resistant cover
- UV resistant cover
- **Can use both permanently attached and reusable fittings**
- Long continuous lengths

Applications

- Electric utility truck Hydraulic systems
- Mobile equipment (picker, utility vehicles)

Construction

- Orange non-perforated non-stick polyurethane cover
- Braided synthetic fiber reinforcement
- Polyester core tube

Temperature Range

- -65°F to 212°F (-54°C to 100°C) or to 140°F (60°C), with water-based or fire-resistant fluids

3740 Non-Conductive Medium Pressure Hose

1,000–3,000 psi (69–207 bar) Working Pressures
Meets SAE 100R7 Specification



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT LB KG		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m	Part No. 4540	Steel
3740-03	3/16	4.8	.427	10.8	3/4	19	3,000	207	12,000	828	5.6	8.3	303	903
3740-04	1/4	6.4	.508	12.9	1-1/4	31	2,750	190	11,000	759	7.2	10.7	304	903
3740-05	5/16	7.9	.594	15.1	1-3/4	44	2,500	172	10,000	689	8.7	12.	305	903
3740-06	3/8	9.5	.664	16.9	2	51	2,250	155	9,000	621	10.3	15.3	306	903
3740-08	1/2	12.7	.817	20.8	3	76	2,000	138	8,000	552	14.1	1.0	308	903
3740-12	3/4	19.0	1.070	27.2	5	127	1,250	86	5,000	345	19.3	28.7	312	903
3740-16	1	25.4	1.342	34.1	8	203	1,000	69	4,000	276	26.4	39.3	316	903

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- SAE J517 non-conductive hose construction. Less than 50 micro-amperes leakage when subjected to 75,000 volts/ft for 5 minutes
- Very flexible through temperature range

Applications

- General hydraulic systems that may contact high voltage sources
- Aerial equipment
- Mobile hydraulics
- Rescue apparatus and tools

Construction

- Non-conductive marking and color code
- Orange polyurethane non-perforated cover
- Braided synthetic fiber reinforcement
- Nylon-lined core tube

Temperature Range

- -40°F to 212°F (-40°C to 100°C) or to 140° F(60° C), with water-based or fire-resistant fluids

Medium Pressure Hose

3580 Medium Pressure Hose

Meets or exceeds SAE 100 R1 & R7 Performance Specifications

Steel Wire Reinforcement



#	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m	Part No. 4540	Steel
3580-04	1/4	6.4	.485	12.3	1-3/4	44	3,500	241	14,000	965	10.3	15.3	3W4	903
3580-06	3/8	9.5	.645	16.4	2-1/4	57	3,250	224	13,000	896	18.1	26.9	306	903
3580-08	1/2	12.7	.765	19.4	3-1/4	83	3,000	207	12,000	828	20.7	30.8	308	903
3580-12	3/4	19.1	1.065	27.1	6	152	2,250	155	9,000	620	33.6	50.0	312	903

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- Single permanent fitting series fits all sizes
- SAE 100R7 dimensions
- Cut resistant – heavy duty design
- Crush resistant

Applications

- Lubrication systems
- Mobile general hydraulics
- Agriculture equipment

Construction

- Black polyurethane non-perforated cover
- Braided bronze coated steel wire reinforcement
- Polyester core tube

Temperature Range

- -40°F to 225° F (-40°C to 107°C) or to 140°F (60°C), with water-based or fire-resistant fluids

Constant Pressure Hose

30CT Constant Pressure Hose

Meets or Exceeds SAE 100R18 Specifications



#	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m	Part No. 4540	Steel
30CT-03	3/16	4.8	.420	10.7	1	25.4	3,000	207	12,000	828	5.3	7.9	303	903
30CT-04	1/4	6.4	.478	12.1	1-1/4	31.8	3,000	207	12,000	828	6.0	8.9	3W4	903
30CT-05	5/16	7.9	.610	15.5	1-1/2	38.1	3,000	207	12,000	828	9.9	14.7	305	903
30CT-06	3/8	9.5	.660	16.8	2	50.8	3,000	207	12,000	828	12.2	18.2	306	903
30CT-08	1/2	12.7	.850	21.5	3-1/2	88.9	3,000	207	12,000	828	16.6	24.6	A08	903
30CT-10	5/8	16.0	1.062	27.0	4	101.6	3,000	207	12,000	828	27.8	41.2	N10	90N

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- Highly flexible, even in cold temperatures
- Small O.D.
- Lightweight, yet rugged construction

Applications

- Forklift
- Construction
- General hydraulics
- Chemical and gas transfer
- Agricultural equipment
- Material handling
- Freezer applications
- Machines tools and robotics
- Lubrication equipment
- Portable hydraulic tools

Construction

- Black non-stick perforated polymeric cover
- Braided synthetic fiber reinforcement
- Polymeric core tube

Temperature Range

- -65°F to 200°F (-54°C to 94°C) or -65°F to 150°F (-54°C to 66°C), with water-based or fire-resistant fluids

3360 Constant Pressure Hose

Meets or Exceeds SAE 100R18 Specifications



#	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m	Part No. 4540	Steel
3360-12	3/4	19.1	1.238	31.4	5	127	3,000	207	12,000	827	35.4	52.7	N12	90N
3360-16	1	25.4	1.483	37.7	8	203	3,000	207	12,000	827	42.0	62.5	B1600-001	90N

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- Designed for severe flexing at low temperatures
- 3,000 psi rating – all hose sizes

Applications

- General hydraulic
- Cold environment applications

Construction

- Black polyurethane cover
- Braided synthetic fiber reinforcement
- Nylon-lined core tube

Temperature Range

- -40°F to 212°F (-40°C to 100°C) or to 150°F (66°C), with water-based or fire-resistant fluids.

Constant Pressure Hose

31N0 Constant Pressure Hose



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m	Part No. 4540	Steel
31N0-04	1/4	6.4	.418	10.6	1-9/16	40	1,500	103	6,000	414	4.4	6.5	104	903
31N0-05	5/16	8.1	.530	13.5	2	51	1,500	103	6,000	414	6.4	9.5	105	903
31N0-06	3/8	9.5	.570	14.5	2-3/8	60	1,500	103	6,000	414	7.0	10.4	V04	903
31N0-08	1/2	12.7	.710	18.0	3-3/16	80	1,500	103	6,000	414	10.6	15.8	108	903

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- 1,500 PSI rating – all sizes
- Very low volumetric expansion

Applications

- Hydraulic pilot lines
- Hydraulic tools
- Marine steering

Construction

- Black non-stick perforated polyurethane cover
- Braided synthetic fiber reinforcement
- Nylon core tube

Temperature Range

- -40°F to 212° F (-40°C to 100°C) or to 150°F (66°C), with water-based or fire-resistant fluids

25CT Constant Pressure Hose

Meets or Exceeds SAE 100R7 Specification



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m	Part No. 4540	Steel
25CT-08	1-1/2	38.1	.830	21.1	3	76.2	2,500	172	10,000	689	14.3	21.3	308	903

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- Highly flexible, even in cold temperatures
- Small O.D.
- Lightweight, yet rugged construction

Applications

- Forklift
- Construction
- General hydraulics
- Chemical and gas transfer
- Agricultural equipment
- Material handling
- Freezer applications
- Machine tools and robotics
- Lubrication equipment
- Portable hydraulic tools

Construction

- Black non-stick perforated polymeric cover
- Braided synthetic fiber reinforcement
- Polymeric core tube

Temperature Range

- -65°F to 200°F (-54°C to 94°C), with water-based or fire-resistant fluids

High Pressure Hose

3R80 High Pressure Hose
Meets SAE 100R8 Specifications



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*	REUSABLE FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m	Part No. 4540	Steel	Steel
3R80-03	3/16	4.8	.515	13.1	1-1/2	38	5,000	345	20,000	1,379	7.7	11.5	H03	90H	90J
3R80-04	1/4	6.4	.625	15.9	2	51	5,000	345	20,000	1,379	11.8	17.6	H04	90H	90J
3R80-06	3/8	9.5	.765	19.4	2-1/2	64	4,000	276	16,000	1,103	14.8	22.0	H06	90H	90J
3R80-08	1/2	12.7	.892	22.7	4	102	3,500	241	14,000	965	19.0	28.3	H08	90H	90J
3R80-12	3/4	19.1	1.138	28.9	6-1/2	165	2,250	155	9,000	620	25.6	38.1	H12	90H	90J
3R80-16	1	25.4	1.468	37.3	10	254	2,000	138	8,000	552	38.5	57.3	H16	90H	90J

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- Long life in impulse cycling and flexing
- Designed for permanent or reusable fittings

Applications

- General hydraulic systems
- Hydraulic tools
- Mobile equipment
- High pressure pneumatic systems
- High pressure chemical transfer

Construction

- Black perforated polyurethane cover
- Braided synthetic fiber reinforcement
- Nylon core tube

Temperature Range

- -40°F to 212° F (-40°C to 100°C) or to 150°F (66°C), with water-based or fire-resistant fluids

3800 High Pressure Hose
Meets SAE 100R8 Specification



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m	Part No. 4540	Steel
3800-02	1/8	3.2	.335	8.5	13/16	20	6,000	552	24,000	1,655	3.2	4.8	302	98E
3800-03	3/16	4.8	.432	11.0	1-1/2	38	5,000	460	20,000	1,379	5.6	8.3	303	903
3800-04	1/4	6.4	.532	13.5	2	51	5,000	460	20,000	1,379	7.9	11.8	304	903
3800-06	3/8	9.5	.667	16.9	2-1/2	64	4,000	368	16,000	1,103	10.6	15.8	306	903
3800-08	1/2	12.7	.837	21.3	4	102	3,500	322	14,000	965	14.6	21.7	308	903

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- 100R8 hose performance with 100R7 hose dimensions – for fitting versatility
- Low volumetric expansion

Applications

- General hydraulics
- High pressure gas and chemical transfer
- Machine tools
- Mobile equipment
- Agricultural equipment
- Marine steering

Construction

- Black perforated polyurethane cover
- Braided high tensile aramid fiber reinforcement
- Nylon core tube

Temperature Range

- -40°F to 212° F (-40°C to 100°C) or to 150°F (66°C), with water-based or fire-resistant fluids

High Pressure Hose

3E80 Non-Conductive High Pressure Hose

Meets SAE 100R8 Specification



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*	REUSABLE FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100 ft	100 m			
3E80-03	3/16	4.8	.515	13.1	1-1/2	38	5,000	345	20,000	1,379	7.7	11.5	H03	90H	90J
3E80-04	1/4	6.4	.625	15.9	2	51	5,000	345	20,000	1,379	11.8	17.6	H04	90H	90J
3E80-06	3/8	9.5	.765	19.4	2-1/2	64	4,000	276	16,000	1,103	14.8	22	H06	90H	90J
3E80-08	1/2	12.7	.892	22.7	4	102	3,500	241	14,000	965	19.0	28.3	H08	90H	90J
3E80-12	3/4	19.1	1.138	28.9	6-1/2	165	2,250	155	9,000	620	25.6	38.1	H12	90H	90J
3E80-16	1	25.4	1.468	37.3	10	254	2,000	138	8,000	552	38.5	57.3	H16	90H	90J

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- SAE J517 non-conductive hose construction. Less than 50 micro-amperes leakage when subjected to 75,000 volts/ft for 5 minutes
- Long life for impulse cycling and flexing
- UV resistant cover
- Designed for permanent and reusable fittings

Applications

- General hydraulic systems that may contact high voltage sources
- Aerial equipment
- Mobile machinery
- Rescue tools

Construction

- Non-conductive marking and color code
- Orange polyurethane non-perforated cover
- Braided synthetic fiber reinforcement
- Nylon core tube

Temperature Range

- -40°F to 212°F (-40°C to 100°C) or to 150°F (66°C), with water-based or fire-resistant fluids

3840 Non-Conductive High Pressure Hose

Meets SAE 100R8 Specification



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100 ft	100 m		
3840-03	3/16	4.8	.432	11.0	1-1/2	38	5,000	345	20,000	1,379	5.6	8.3	303	903
3840-04	1/4	6.4	.532	13.5	2	51	5,000	345	20,000	1,379	7.9	11.8	304	903
3840-06	3/8	9.5	.667	16.9	2-1/2	64	4,000	276	6,000	1,103	10.6	15.8	306	903
3840-08	1/2	12.7	.837	21.3	4	102	3,500	241	14,000	965	14.6	21.7	308	903

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- SAE J517 non-conductive hose construction. Less than 50 micro-amperes leakage when subjected to 246,000 volts/m for 5 minutes
- 100R8 hose performance with 100R7 hose dimensions for fitting versatility
- Low volumetric expansion
- UV resistant cover

Applications

- General hydraulic systems that may contact high voltage sources
- Aerial equipment
- Mobile machinery
- Rescue tools

Construction

- Non-conductive marking and color code
- Orange polyurethane non-perforated cover
- Braided high tensile aramid fiber reinforcement
- Nylon core tube

Temperature Range

- -40°F to 212°F (-40°C to 100°C) or to 150°F (66°C), with water-based or fire-resistant fluids

Very High Pressure Hose

3V10 Very High Pressure Hose



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m		
3V10-03	3/16	4.8	.520	13.2	1-1/2	38	10,000	919	40,000	2,758	8.1	12.1	Synflex 3V10 hose is available only as completed assemblies through the factory or Eaton Synflex authorized assemblers.	
3V10-04	1/4	6.4	.595	15.1	2-1/2	64	10,000	919	40,000	2,758	10.6	15.8		
3V10-06	3/8	9.5	.780	19.8	3	76	8,000	735	32,000	2,205	16.4	24.4		

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- Compact size
- Low elongation
- Designed for permanent high pressure fittings with hose guards
- Lightweight

Applications

- High pressure hydraulic tools
- Rescue equipment and tools
- High pressure test equipment

Construction

- Black perforated polyurethane cover
- Spiraled high tensile aramid fiber reinforcement
- Nylon-lined core tube

Temperature Range

- -40°F to 150° F (-40°C to 66°C)

3V10 Hose Assembly

Construction

- 3V10 Hose
- 390V Permanent Steel Fitting
- 45J0 Hose Guard
- Warning Tag



LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

LOW/MEDIUM PRESSURE
 CONSTANT PRESSURE HOSE
 HIGH PRESSURE
 TWIN LINE HOSE
 AIR WATER & TUBING
 SPECIALTY HOSE
 HOSE FITTINGS
 HOSE ASSEMBLY EQUIPMENT
 ACCESSORIES
 TECHNICAL DATA

Very High Pressure Hose

3VE0 Non-Conductive Very High Pressure Hose



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m		
3VE0-03	3/16	4.8	.520	13.2	1-1/2	38	10,000	919	40,000	2,758	8.1	12.1	Synflex 3VE0 Hose is available only as completed assemblies through the factory or Eaton Synflex authorized assemblers.	
3VE0-04	1/4	6.4	.595	15.1	2-1/2	64	10,000	919	40,000	2,758	10.6	15.8		
3VE0-06	3/8	9.5	.780	19.8	3	76	8,000	735	32,000	2,205	16.4	24.4		

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- SAE J517 non-conductive hose construction. Less than 50 micro-amperes leakage when subjected to 75,000 volts/ft for 5 minutes
- Compact size
- Low elongation
- UV resistant cover
- Designed for permanent high pressure fittings with hose guards

Applications

- General hydraulic systems that may contact high voltage sources
- Rescue equipment and tools
- Mobile machinery
- Aerial equipment

Construction

- Non-conductive marking and color code
- Orange polyurethane non-perforated cover
- Spiraled high tensile aramid fiber reinforcement
- Nylon-lined core tube

Temperature Range

- -40°F to 150°F (-40°C to 66°C)

3VE0 Hose Assembly

Construction

- 3VE0 Hose
- 390V Permanent Steel Fitting
- 45J0 Hose Guard
- Warning Tag



Twin Line Hose

3770 Twin-Line and Multi-Line Hose Multiple Pressure Hose in one design



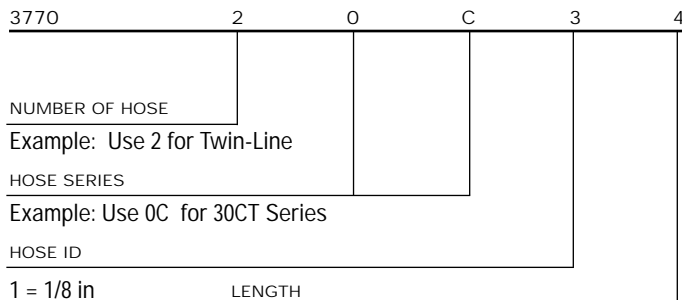
Twin-Line and Multi-Line Hose Separating Tool and instructions are located on pages 74-75.

Typical Standard Designs

PART NUMBER	NUMBER OF HOSE	NOMINAL I.D. IN	NOMINAL I.D. MM	SYNFLLEX HOSE SERIES
3770-20C33	2	1/4	6.4	30CT
3770-20C43	2	5/16	7.9	30CT
3770-20C53	2	3/8	9.5	30CT

* See hydraulic pressure hose selection chart for Hose Series vs. Twin-Line or Multi-Line availability – pages 5-6.

Same Size Hose Part Number Derivation



	LENGTH
1 = 1/8 in	0 = Bulk
2 = 3/16 in	2 = 100 ft
3 = 1/4 in	3 = 250 ft random
4 = 5/16 in	4 = 500 ft
5 = 3/8 in	6 = 250 ft continuous
6 = 1/2 in	9 = Manufactured to order
7 = 3/4 in	
8 = 1 in	

Features

- Eliminates abrasion caused by relative movement of adjacent hose
- Flat profile is flexible and compact
- Broad temperature and pressure ranges using standard hose series
- Special separation tool to prevent hose damage: Part No. 4574-01000

Applications

- General hydraulics and pneumatic systems
- Mobile machinery
- Hose retractors and sheave routings

Construction

- Most synflex hose can be permanently joined to form Twin-Line or Multi-Line designs
- Hose form flat assembly

Twin Line Hose

3770 Non-Conductive Twin-Line and Multi-Line Hose

Multiple Pressure Hose in One Design



Twin-Line and Multi-Line Hose Separating Tool and instructions are located on pages 74-75.

Typical Standard Designs

PART NUMBER	NUMBER OF HOSE	NOMINAL I.D. IN	I.D. MM	SYN FLEX HOSE SERIES
3770-27A33	2	1/4	6.4	37AL
3770-27A53	2	3/8	9.5	37AL
3770-27A63	2	1/2	12.7	37AL

* See hydraulic pressure hose selection chart for Hose Series vs. Twin-Line or Multi-Line availability – pages 5-6.

Same Size Hose Part Number Derivation

3770	2	7	A	3	3
NUMBER OF HOSE		HOSE SERIES		HOSE ID	
Example: Use 2 for Twin-Line		Example: Use 7 for 37AL Services			
1 = 1/8 in		LENGTH			
2 = 3/16 in		0 = Bulk			
3 = 1/4 in		2 = 100 ft			
4 = 5/16 in		3 = 250 ft random			
5 = 3/8 in		4 = 500 ft			
6 = 1/2 in		6 = 250 ft continuous			
7 = 3/4 in		9 = Manufactured to order			
8 = 1 in					

Features

- SAE J517 non-conductive hose construction. Less than 50 micro-amperes leakage when subjected to 75,000 volts/ft for 5 minutes
- Eliminates abrasion caused by relative movement of adjacent hose
- Flat profile is flexible and compact
- Broad temperature and pressure ranges
- Special separation tool to prevent damage: Part No. 4574-0100

Applications

- General hydraulics systems that may contact high voltage sources
- Aerial equipment
- Mobile machinery
- Hose retractors and sheave routings
- Rescue tools

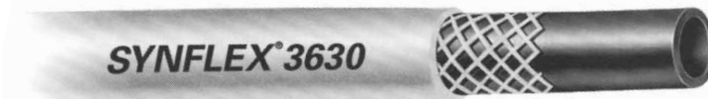
Construction

- Non-conductive marking and color code
- Orange polyurethane non-perforated cover
- Most Synflex non-conductive hose can be permanently joined to form Twin-Line or Multi-Line Design
- Hose form flat assembly

LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

Air and Water Hose

3630 General Purpose Air and Water Hose



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAX WORKING PRESSURE @70°F (21°C)		MAX WORKING PRESSURE @150°F (66°C)		WEIGHT	
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft LB	100m KG
3630-03	3/16	4.8	.397	10.1	7/16	11	300	20	250	17	4.5	6.7
3630-04	1/4	6.4	.488	12.4	5/8	16	300	20	250	17	6.3	9.4
3630-05	5/16	7.9	.548	13.9	3/4	19	300	20	250	17	7.9	11.8
3630-06	3/8	9.5	.637	16.2	7/8	22	300	20	250	17	9.7	14.4
3630-08	1/2	12.7	.792	20.1	1-1/4	32	300	20	250	17	13.6	20.2
3630-12	3/4	19.1	1.095	27.8	2-1/2	64	300	20	250	17	22.9	34.1
3630-16	1	25.4	1.391	35.3	3-1/2	89	250	17	250	17	31.4	46.7

HOSE I.D.	PERMANENT STEEL	Swage Die
in	Fitting Series*	
3/16	903	4540-303
1/4	903	4540-304
5/16	903	4540-305
3/8	903	4540-306
1/2	903	4540-308
3/4	903	4540-312
1	90H-16	4540-B16

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

BRASS FITTINGS	Brass Ferrules	Swage Die	Crimp Die
Fitting Series**			
390C	3981-30220	4540-00001	4548-03750
390C	3981-30320	4540-00002	4548-05000
-	-	-	-
390C	3981-19120	4540-00003	4548-06000
390C	3981-30420	-	4548-07500
390C	3981-30520	-	***
-	-	-	-

** For brass fitting availability, see hose fitting selection chart on page 27.

*** Crimp specification for -12, 3/4" I.D. hose: use a power crimper with a flat crimp die that will have a minimum gap between dies when crimped to 1.005 + .010.

Features

- Standard bold colors: gray, red, blue, yellow or black
- Excellent abrasion and impact resistance
- Lightweight
- 4:1 Burst to working pressure safety factor
- Long life over rubber hose

Applications

- Air power tools (impact tools, nail guns, stapler guns, tire inflation)
- Pneumatic motion control
- Industrial water supply line

Construction

- Perforated PVC cover
- Spiralled synthetic fiber reinforcement
- PVC core tube

Temperature Range

- -10°F to 150°F (-23°C to 66°C) or to 130°F (54°C), with 390C brass fittings

LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

Water Hose

34PW Pure Water Hose



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100 ft	100 m	Part No. 4540	Stainless
34PW-04	1/4	6.4	.520	13.2	1-1/4	32	2,750	190	11,000	758	6.4	9.6	304	90A
34PW-06	3/8	9.5	.655	16.6	2	51	2,250	155	9,000	620	9.0	13.4	306	90A
34PW-08	1/2	12.7	.812	20.6	3	76	2,000	138	8,000	552	16.2	24.4	308	90A
34PW-12	3/4	19.0	1.140	29.0	5	127	1,500	103	6,000	414	24.8	36.9	H12	90L
34PW-16	1	25.4	1.455	37.0	8	203	1,500	103	6,000	414	37.3	55.6	B1600-001	90L

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.
Note: Always use accepted cleaning practices to clean finished hose assembly before use.

Features

- Made with NSF, FDA approved materials
- Core tube is free of plasticizers
- Prevents moisture transmission, extraction of contaminants
- Approved by U.S. Navy for pure water applications (MIL-STD-767A Ships)
- Long lengths available

Applications

- Pure water transfer
- Deionized water
- Distilled water
- Potable water
- Food products

Construction

- Non-perforated blue polyurethane cover
- Synthetic fiber reinforcement
- Polyolefin core tube

Temperature Range

- -10°F to 150°F (-23°C to 66°C)

34WH Hot Water Hose

NSF61 and NSF51 Rated



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAX WORKING PRESSURE @73°F (23°C)		MAX WORKING PRESSURE @200°F (93°C)		WEIGHT	
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m
34WH-03	3/16	4.8	.385	9.8	1	25.4	150	10.3	65	4.5	3.5	1.59
34WH-04	1/4	6.4	.448	11.4	1	25.4	180	12.4	75	5.2	4.4	2.00
34WH-05	5/16	7.9	.575	14.6	1	25.4	190	13.1	100	6.9	7.3	3.30
34WH-06	3/8	9.5	.637	16.2	1-1/4	31.8	200	13.8	105	7.2	8.5	3.90
34WH-08	1/2	12.7	.765	19.4	1-1/2	38.1	160	11.0	70	4.8	10.1	4.60

Note: Custom sizes available up to 1".

Features

- Standard colors: grey, red, blue
- NSF 51 and 61 rated
- Flexible and lightweight

Applications

- Dispensing or conveying drinking water
- Hot water/detergent dispensing
- Cleaning equipment used in restaurants, hospitals and hotels
- Washdown equipment: food processing, beverage, pharmaceutical and chemical/petrochem/refining

Construction

- Smooth seamless thermoplastic elastomer core tube
- Synthetic fiber spiraled reinforcement
- Smooth seamless thermoplastic elastomer sheath

Temperature Range

- -15° F to 200° F (-26°C to 93°C)

Tubing

4212/4225 N2
Nylon Tubing



# PART NUMBER	NOMINAL O.D.		NOMINAL WALL THICKNESS		NOMINAL I.D.		MINIMUM BEND RADIUS		MINIMUM BURST PRESSURE @75°F (23.9°C)		WEIGHT		
	in	mm	in	mm	in	mm	in	mm	psi	bar	100ft LB	100m KG	
4212-216	4225-216	1/8	3.2	.016	.41	.093	2.4	1/2	12.7	1,000	69	0.25	0.37
4212-223	4225-223	1/8	3.2	.023	.58	.079	2.1	3/8	9.5	1,340	92	0.33	0.49
4212-231	4225-231	1/8	3.2	.031	.79	.063	1.6	1/4	6.4	2,000	138	0.41	0.61
4212-233	4225-233	1/8	3.2	.033	.84	.059	1.5	1/4	6.4	2,000	138	0.43	0.64
4212-325	4225-325	3/16	4.8	.025	.63	.137	3.5	5/8	16.0	1,000	69	0.57	0.85
4212-346	4224-346	3/16	4.8	.046	1.20	.095	2.4	7/16	11.0	2,000	138	0.92	1.37
4212-430	4225-430	1/4	6.4	.030	.76	.190	4.8	1	25.4	930	64	0.93	1.38
4212-435	4225-435	1/4	6.4	.035	.89	.180	4.6	7/8	22.0	1,000	69	1.06	1.58
4212-440	4225-440	1/4	6.4	.040	1.00	.170	4.3	13/16	10.3	1,135	78	1.19	1.79
4212-462	4225-462	1/4	6.4	.062	1.60	.126	3.2	1/2	12.7	2,000	138	1.65	2.46
4212-530	4225-530	5/16	7.9	.030	.76	.252	6.4	1-1/2	38.1	660	46	1.20	1.79
4212-540	4225-540	5/16	7.9	.040	1.00	.232	5.9	1-1/8	28.0	1,000	69	1.54	2.29
4212-577	4225-577	5/16	7.9	.077	2.00	.158	4.0	1/2	12.7	2,000	138	2.56	3.81
4212-650	4225-650	3/8	9.5	.050	1.30	.275	7.0	1-1/8	28.0	1,000	69	2.30	3.42
4212-693	4225-693	3/8	9.5	.093	2.40	.189	4.8	3/4	19.0	2,000	138	3.71	5.52
4212-8124	4225-8124	1/2	12.7	.124	3.10	.252	6.4	1	25.4	2,000	138	6.59	9.81
4212-862	4225-862	1/2	12.7	.062	1.60	.376	9.5	1-1/4	32.0	1,000	69	3.84	5.71

Features

- Premium quality flexible tubing
- High dimensional stability
- Low moisture absorption
- Chemicals resistant
- UV, ozone resistant
- 250 feet coil lengths - standard
- Lightweight

Applications

- Low-pressure hydraulic
- Chemical transfer service
- Pneumatic systems

Construction

- Extruded from highest Quality heat and light stabilized nylon 11 resin

Temperature Range

- -40°F to 200°F (-40°C to 93°C)

LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

LOW/MEDIUM PRESSURE
 CONSTANT PRESSURE HOSE
 HIGH PRESSURE
 TWIN LINE HOSE
 AIR, WATER & TUBING
 SPECIALTY HOSE
 HOSE FITTINGS
 HOSE ASSEMBLY EQUIPMENT
 ACCESSORIES
 TECHNICAL DATA

Tubing

4242 Unplasticized Nylon Tubing



# PART NUMBER	NOMINAL O.D.		NOMINAL WALL THICKNESS		NOMINAL I.D.		MINIMUM BURST PRESSURE @75°F (23.9°C)		WEIGHT	
	in	mm	in	mm	in	mm	psi	bar	100ft LBS	100m KG
4242-020	1/8	3.2	.016	0.4	.093	2.4	1,000	69	0.25	0.37
4242-022	1/8	3.2	.023	0.6	.079	2.0	2,500	172	0.33	0.49
4242-025	5/32	4.0	.032	0.8	.092	2.3	2,000	138	0.57	0.85
4242-030	3/16	4.7	.044	1.1	.099	2.5	2,000	138	0.88	1.31
4242-040	1/4	6.4	.040	1.0	.170	4.3	2,000	138	1.19	1.77
4242-045	1/4	6.4	.050	1.3	.150	3.8	2,750	190	1.42	2.11
4242-050	5/16	7.9	.059	1.5	.191	4.9	1,500	103	2.09	3.11
4242-051	5/16	7.9	.062	1.6	.188	4.8	2,750	190	2.19	3.26
4242-052	5/16	7.9	.040	1.0	.232	5.9	1,000	69	1.54	2.29
4242-060	3/8	9.5	.062	1.6	.251	6.4	1,000	69	2.75	4.09
4242-062	3/8	9.5	.079	2.0	.220	5.6	2,000	138	3.36	5.00
4242-070	7/16	11.1	.062	1.6	.313	8.0	1,000	69	3.29	4.90
4242-080	1/2	12.7	.062	1.6	.376	9.6	1,000	69	4.20	6.25

Features

- Low moisture absorption
- Low volumetric expansion
- Excellent resistance to ultraviolet light and ozone

Applications

- Low pressure hydraulic
- Pneumatic systems
- Lubrication systems

Construction

- Unplasticized heat and light-stabilized nylon
- Non-conductive compounds also available

Temperature Range

- -40°F to 200°F (-40°C to 93°C)

Tubing

4233 Horticultural Spray Tubing



# PART NUMBER	NOMINAL I.D.		NOMINAL O.D.		WALL THICKNESS		MINIMUM BURST PRESSURE @75°F (23.9°C)		WEIGHT	
	in	mm	in	mm	in	mm	psi	bar	100ft LBS	100m KG
4233-0450	1/4	6.4	.350	8.9	.050	1.3	800	55	3.17	4.7
4233-0550	5/16	8.1	.420	10.7	.050	1.3	800	55	4.05	6.0
4233-0662	3/8	9.5	.500	12.7	.062	1.6	800	55	4.75	7.1
4233-0768	7/16	11.1	.574	14.6	.068	1.7	800	55	5.25	7.8
4233-0875	1/2	13.0	.650	16.5	.075	1.9	250	17	6.5	9.6

Features

- Core tube resists hydrocarbon deposit build-up
- Offers excellent kink resistance, good resistance to vacuum collapse

Features (continued)

- Lightweight for easier handling
- Provides higher temperature resistance and excellent flexibility
- Contains three flexible layers for maximum flexibility

Applications

- Weed spray control
- Horticultural spray

Construction

- Bonded co-extruded nylon-urethane-nylon construction

4262 Exhaust Gas Analyzer Tubing



# PART NUMBER	NOMINAL I.D.		NOMINAL O.D.		WALL THICKNESS		MINIMUM BEND RADIUS		WEIGHT	
	in	mm	in	mm	in	mm	in	mm	100ft LB	100m KG
4262-3010	3/16	4.8	.367	9.6	.090	2.3	.75	19.1	3.3	4.9
4262-4010	1/4	6.6	.430	11.3	.085	2.2	.75	19.1	4.6	6.8
4262-4020	1/4	6.4	.445	11.7	.098	2.4	.75	19.1	5.0	7.4
4262-5030	5/16	7.9	.512	13.4	.100	2.5	.87	22.1	6.1	9.0

Features

- Smooth core tube resists hydrocarbon deposit buildup
- Special polymer cover provides excellent temperature resistance
- Very flexible, flame retardant
- Bonded co-extruded construction for kink resistance
- Resistant to vacuum collapse

Applications

- Emissions analysis
- Low pressure pneumatics
- Low pressure chemical transfer
- Vacuum applications

Construction

- Proprietary black polymer exterior
- Nylon lined

Temperature Range

- -40°F to 230°F (-40°C to 110°C)

LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

Specialty Hose

3440 Moisture-Lok Hose



#	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100 ft	100 m		
3440-04	1/4	6.4	.520	13.2	1-1/4	32	2,750	190	11,000	758	6.4	9.5	Part No. 4540	Steel
3440-06	3/8	9.5	.655	16.6	2	51	2,250	155	9,000	620	9.0	13.3	306	903
3440-08	1/2	12.7	.812	20.6	3	76	2,000	138	8,000	552	12.2	18.1	308	903
3440-12	3/4	19.0	1.140	29.0	5	127	1,500	103	6,000	414	24.6	36.8	H12	90H
3440-16	1	25.4	1.455	37.0	8	203	1,500	103	6,000	414	37.3	55.4	B1600-001	90H

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- High moisture barrier core tube
- No plasticizers in the core tube
- UV resistant cover
- Custom colors available

Applications

- Conveying urethane foam components
- Moisture sensitive chemicals

Construction

- Perforated polyurethane cover
- Synthetic fiber reinforcement
- Polyolefin core tube

Temperature Range

- -10°F to 150°F (-23°C to 66°C)

34CU High Pressure Transfer Hose

Kynar® Core Tube



#	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100ft	100m		
34CU-04	1/4	6.4	.51	13.0	1-1/2	38	4,000	276	12,000	828	7.5	24.6	304	903
34CU-06	3/8	9.5	.71	18.0	3	76	4,000	276	12,000	828	13.7	44.9	J06N	90H

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- Higher pressures than 3440 Moisture Lok series
- High moisture barrier core tube
- High chemical compatibility core tube
- UV resistant cover
- Custom colors available

Applications

- Two part urethane conveyance
- Chemical transfer under pressure
- Low cost alternative to Teflon® hose

Construction

- PVDF fluoropolymer-lined core tube (Kynar®)
- Polyester reinforcement
- Black perforated polyurethane cover

Temperature Range

- -40°F to 212°F (-40°C to 100°C)

Specialty Hose

31GW/32GW/34GW Grease Lubrication Hose



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE**		MINIMUM BURST PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*	REUSABLE FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100 ft	100 m			
31GW-03	3/16	4.8	.427	10.8	3/4	19	6,000	414	12,000	827	4.36	6.5	J03	903	-
32GW-DN4	5/32	4.15	.430	10.9	13/16	20	5,800	400	13,060	900	5.73	8.5	-	-	7950/7951
32GW-DN4-JK1	5/32	4.15	.330	8.4	13/16	20	5,800	400	13,060	900	2.83	4.2	-	-	7950/7951
32GW-DN4-JK2	5/32	4.15	.330	8.4	13/16	20	5,800	400	13,060	900	2.89	4.3	-	-	7950/7951
32GW-DN4-JK3	5/32	4.15	.340	8.7	13/16	20	5,800	400	13,060	900	3.03	4.5	-	-	7950/7951
34GW-DN4	5/32	4.15	.340	8.7	13/16	20	3,480	240	8,700	600	3.03	4.5	-	-	7950/7951

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

**Working pressure based on performance per MHI IJ100 specification

Features

- Complete line designed for different pressure needs
- Replace rigid nylon and/or steel pipes
- Chemically resistant to hydrocarbons (oil and grease)
- Very flexible
- Compact
- 31GW conforms to IJ100 Jacking Hose Standard

Applications

- Hand-held grease guns
- Central lubricating systems

Construction

- Black polyurethane cover (except 32GW-DN4-JK1: nylon cover)
- Braided synthetic fiber reinforcement bonded to the core tube
- Nylon core tube

Temperature Range

- 31GW
-10°F to 150°F
(-23°C to 66°C)
- 32GW, 34GW
-4°F to 104°F
(-20°C to 40°C)

34BA Breathing Air Hose



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		WEIGHT		SWAGE DIE	PERMANENT FITTING SERIES*
	in	mm	in	mm	in	mm	psi	bar	100 ft	100 m		
34BA-06	3/8	9.5	.697	17.7	1-1/2	38	250	17	13.7	20.7	H06	90L

*For stainless steel and Monel fitting availability, see hose fitting selection chart on page 27.

Features

- Bright safety yellow cover
- Lightweight kink-resistant design
- Clean, non-contaminating thermoplastic core tube
- Abrasion resistant cover

Applications

- Self-contained rescue air tanks
- Breathing air lines for asbestos removal environment
- Sand blasting area breathing apparatus

Construction

- Yellow perforated PVC cover
- Synthetic fiber reinforcement
- Polyester-lined core tube

Temperature Range

- -15°F to 150°F
(-26°C to 66°C)

LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

Specialty Hose

35NG Compressed Natural Gas (CNG) Hose



# PART NUMBER	NOMINAL I.D.		MAXIMUM O.D.		MINIMUM BEND RADIUS		MAXIMUM WORKING PRESSURE		MINIMUM BURST PRESSURE		WEIGHT	
	in	mm	in	mm	in	mm	psi	bar	psi	bar	100 ft LB	100 m KG
35NG-04	1/4	6.4	.630	16.0	2	51	5,000	345	20,000	1,379	11.6	17.3
35NG-06	3/8	9.7	.766	19.5	4	102	5,000	345	20,000	1,379	15.2	22.6
35NG-08	1/2	12.8	.885	22.5	5-1/2	140	5,000	345	20,000	1,379	21.2	31.5
35NG-12	3/4	19.1	1.155	28.3	8	203	5,000	345	20,000	1,379	37.6	56.1

NOTE: Synflex 35NG Hose is available only as completed assemblies through the factory or Eaton Synflex authorized assemblers.

Features

- Dissipates static electricity
- Low volumetric expansion
- UV resistant cover
- Abrasion-resistant cover
- Twin-line designs available with vent hose
- Designed for electrically conductive couplings
- AGA approved and listed
- ANSI/IAS NGV 4.2 and CSA 12.52 compliant for dispensing systems
- Conforms to appropriate sections of NFPA 52

Applications

- CNG refueling dispensers
- CNG transfer lines

Construction

- Black perforated polyurethane cover
- Braided synthetic fiber reinforcement
- Nylon-lined electrically conductive core tube

Temperature Range

- -40°F to 150°F (-40°C to 66°C)

Hose Fitting Selection Chart

FITTING SERIES	PERMANENT FITTING	REUSABLE FITTING	HOSE SERIES AND DASH SIZE RANGE*
Zinc Plated Steel			
903	•		3630 (-03 to -12), 3R30, 3130, 37AL, 3750, 3800, 3840, 31GW, 3440 (-04 to -08), 31B0, 37B0, 30CT (-04 to -06)
90H	•		3630 (-16), 3R80, 3E80, 3440 (-12 to -16), 30CT (-08)
90N	•		3350, 3360
90V	•		3V10, 3VE0
7903	•		3630 (-03 to -12), 3R30, 3000, 3130, 3580, 37AL, 3750, 3800, 3840, 31GW, 3440 (-4 to -8), 31B0, 37B0, 30CT (-04 to -06)
790H	•		3630 (-16), 3R80, 3E80, 3440 (-12 to -16), 30CT (-08)
901		•	3000
902		•	37AL, 3750
90J		•	3R80, 3E80
7950, 7951		•	32GW, 34GW
Stainless Steel			
90A	•		3630 (-3 to -12), 3R30, 3000, 3130, 3580, 37AL, 3750, 31N0, 3800, 3840, 34PW (-4 to -8), 31B0, 37B0, 30CT (-03 to -06)
90L	•		3630 (-16), 3R80 (-3 to -16), 3E80 (-3 to -16), 3440, 34PW (-12 to -16), 34BA (-6), 30CT (-08)
908		•	3000
90K		•	3R80, 3E80
90V	•		3V10, 3VE0
902		•	37AL, 3750
Monel			
90P	•		3630 (-3 to -12), 3R30, 3000, 3130, 3580, 31B0, 37B0, 37AL, 3750, 31N0, 3800, 3840, 30CT (-04 to -06)
90S	•		3630 (-16), 3R80, 3E80
90V	•		3V10, 3VE0
Brass			
90C	•		3630 (-3 to -12)
906	•		Made to Order for Many Hose Series
4401		•	4202

* Dash Size = Hose I.D. in 16th of One Inch. Example: -3 = 3/16 Inch I.D. , Where Hose Series Only is Listed, All Cataloged Dash Sizes Attach to Fitting Series.

LOW/MEDIUM PRESSURE

CONSTANT PRESSURE HOSE

HIGH PRESSURE

TWIN LINE HOSE

AIR, WATER & TUBING

SPECIALTY HOSE

HOSE FITTINGS

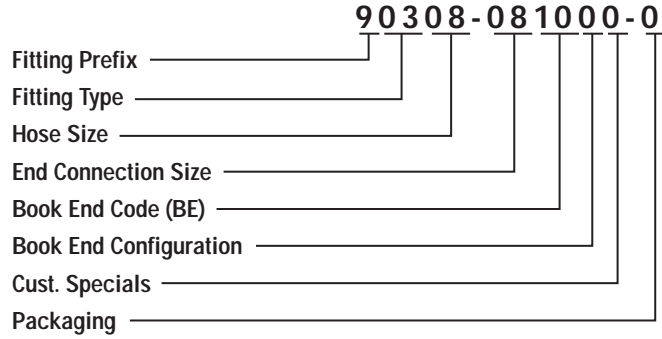
HOSE ASSEMBLY EQUIPMENT

ACCESSORIES

TECHNICAL DATA

Hose Fitting End Connection Style Code Numbering System

A fitting part number is composed of several different elements, all combined to make the final number. The following is a diagram of a fitting part number and the elements that go into creating that number:



The Fitting prefix plus the Fitting Type becomes the Fitting Series. This is followed by the hose size. Then a dash separates the hose size from the end connection size. The bookend code (may use first two digits of old bookend code) is followed by a configuration code, which defines the orientation of the fitting. A digit for customer specials follows that. Another dash separates the packaging code from the number.

The following sections detail each of these part number components.

Fitting Prefix

The fitting prefix is the easiest part of the fitting part number to determine. It is always 9. If a part number begins with "9" you know it is a fitting number.

Fitting Type

See **Chart 1** in fitting type section for a list of available Fitting types.

Hose Size

These are the fourth and fifth digits in the fitting part number. The hose size code is the diameter of the hose in sixteenths of an inch. In this example, the code 08 indicates a 1/2" hose diameter, since 8/16" is equal to 1/2 inch. All existing fitting series have fractional hose sizes.

If metric hose sizes become available the two digit diameter code would represent the diameter of the hose in millimeters. 16 = 16mm.

Fitting Type

There are many different fitting types. They are represented by the second and third digit in the fitting part number. **Chart 1** on page 28 shows the part number character code that corresponds to the fitting type.

Customer Specials Suffix

Alpha-numeric consecutive suffix. 0 denotes a standard part. M denotes marking with old part number for military purposes.

Packaging

Alpha or numeric code to denote shipping or pack quantity.

Book End Configuration

In order to determine the book end orientation the book end configuration code is assigned. It is the tenth digit in the fitting part number. The configuration code is new to the part numbering system. It reduces the number of end connection codes needed. **Chart 2** below shows the book end configuration code.

Code	Configuration
0	Straight
2	22.5° Bend
3	30° Bend
4	45° Bend
5	135° Bend
6	60° Bend
7	67.5° Bend
9	90° Bent tube (No short or long reference)
A	Angle to be specified on print (special)
B	90° Block
E	Long Neck (Machined Bar or Tube)
H	Bulkhead
L	90° Bend, long drop
M	Multiple bends
S	90° Bend, short drop

Book End Connection

The end connection code defines the style of the book end on the fitting. Along with the configuration code it may replace some previous end connection codes.

Chart 3 on pages 30-31 lists the end connection codes. It also shows the book end configuration code, and the resultant code. The former code is shown for reference.

Examples:

To find the last six digits using the connection type code, end connection configuration code, and the end connector size, simply arrange the codes in the correct order.

Example One:

End connector size -06	06
JIC 37° Female Swivel, code 54	54
Configuration 90° Block B	B
Customer Special, 0 standard	0
Final 6-digit code	0654B0

Example Two:

End connector size 3/8" = 6/16" =06	06
Male Pipe Rigid, code 10	10
Configuration, straight 0	0
Customer Special, 0 standard	0
Final 6-digit code	061000

Hose Fitting End Connection Style Code Numbers

Chart reference is located on page 28.

Chart 1 - Fitting Type

Code	Description	Code	Description
01	Reusable, plated steel, medium pressure	0H	Permanently attached, plated steel, high pressure
02	Reusable, plated steel, medium pressure, for 37NC nonconductive hose	0J	Reusable, plated steel, high pressure
03	Permanently attached, plated steel, medium pressure	0K	Reusable, 303/304 stainless steel, high pressure, 0J style
04	Reusable, brass, medium pressure	0L	Permanently attached, 316 stainless steel, high pressure, OH style
05	Permanently attached, brass, high pressure, for breathing gas hose	0M	Permanently attached, plated steel, medium pressure, 3500 hose
06	Permanently attached, brass, medium pressure, purchased	0N	Permanently attached, plated steel, 3350 & 3360 hose
07	Reusable, 303/304 stainless steel insert, steel shell, 01 style	0P	Permanently attached, all Monel, medium pressure, 03 style
08	Reusable, 303/304 stainless steel, medium pressure, 01 style	0R	Permanently attached, 303/304 stainless, medium pressure 03 style
09	Reusable, brass, 34MS-05 hose	0S	Permanently attached, all Monel, 3R80; OH style
10	Barbed brass, low pressure	0T	Permanently attached, Brass, low pressure, trepanned, 3600 hose
11	Barbed brass, low pressure	0V	Permanently attached, plated steel, very high pressure hose
12	P/A, plated steel, medium pressure, 1000 series hose	0W	Permanently attached, plated steel, tube o-ring, refrigerant hose
13	P/A, brass, medium pressure, trepanned, swaged	2V	Permanently attached 316 stainless steel, high pressure, 3390 hose
14	P/A, plated steel, for 35NG-12 hose	7H	Permanently attached, plated steel, high pressure - metric, BSP, JIS, (non-domestic ends)
20	P/A splice coupling, for sewer hose	7N	P/A plated steel, 3350/3360 hose - metric, BSP, JIS, (non-domestic ends)
22	Reusable splice coupling, for sewer hose	8E	P/A, 316 plated steel, Monel or mild steel, 38LV hose
23	P/A, 316 stainless steel, high pressure	A3	Permanently attached, plated steel, medium pressure
24	P/A, 316 stainless steel, 3LVE hose	A4	Permanently attached, Monel, 33CP hose, 904 style
25	P/A, 316 stainless, very high pressure hose for 3410	A5	Permanently attached, Monel, 3410 hose, very high pressure, 925 style
26	P/A, 316 stainless, medium pressure hose for 3700, 3130, 3000	A6	Permanently attached, Monel, 3700, 3131, 3000 medium pressure, 926 style
27	P/A, 316 stainless steel for 3000 medium pressure, no bell swage design	B3	Permanently attached, Monel, 3LVE, 38LV hose, 924 style
28	P/A, 316 stainless, very high pressure hose, for 3V10	B4	Permanently attached, Monel, 100R8, high pressure, 923 style
53	P/A, plated steel, medium pressure, crimped	C2	Reusable, C05 stainless, medium pressure, 37NC nonconductive hose, 902 style
54	P/A, plated steel, Monel, or stainless, 33CP hose	C4	Permanently attached, stainless steel, 33CP hose, 904 style
55	P/A, plated steel, medium pressure eyeletless crimped, 3420 & 3421 hose	C6	Permanently attached, brass, medium pressure crimp only
56	P/A, 316 plated steel, Monel, or mild steel, 38HW hose	E2	Reusable, C02 stainless, medium pressure, 37NC nonconductive hose, 902 style
73	P/A, plated steel, medium pressure - metric, BSP, JIS, (non-domestic ends)	G3	Permanently attached, plated steel, medium pressure
0A	Permanently attached, 316 stainless, 03 style	AE	Permanently attached, Monel, very high pressure, 902 style
0B	Permanently attached, zinc phosphated, 03 style	AV	Permanently attached, very high pressure, 902 style
0C	Permanently attached, with ferrule, all brass, 3600 & 3630 hose	CE	Permanently attached, stainless steel, 3LVE hose, 90E style
0D	Permanently attached, Chrome plated brass, low press. Breathing gas hose 3270	CN	Permanently attached, stainless steel, 3350/3360 hose, 90N style
0E	Permanently attached, plated steel, monel or stainless steel, 3LVE hose	CV	Permanently attached, stainless steel, very high pressure, 90V style
0F	Permanently attached, plated steel, aluminum shell, syntac	DE	Permanently attached, stainless steel, 38LV hose, 98E style
0G	Permanently attached, plated steel, medium pressure		

LOW/MEDIUM PRESSURE

CONSTANT PRESSURE HOSE

HIGH PRESSURE

TWIN LINE HOSE

AIR, WATER & TUBING

SPECIALTY HOSE

HOSE FITTINGS

HOSE ASSEMBLY EQUIPMENT

ACCESSORIES

TECHNICAL DATA

Hose Fitting End Connection Style Code Numbers

Chart reference is located
on page 28.

Chart 3 - End Connection Codes

Book End Code (BE)	Book End Configuration (BEC)	BE & Configuration	Former Code	Description
10	0	100	100	Male Pipe Rigid
14	0	140	140	Male Pipe Swivel
14	B	14B	270	Male Pipe Swivel, 90° Block
20	0	200	200	Female NPT Rigid
24	0	240	240	30° Female Inverted Flare (NPSM)
40	0	400	400	O-Ring Face Seal, (SAE Proposal), Straight
40	4	404	440	O-Ring Face Seal, 45°, Bent Tube
40	S	40S	470	O-Ring Face Seal, 90°, (Short) Bent Tube
40	L	40L	670	O-Ring Face Seal, 90°, (Long) Bent Tube
50	0	500	500	JIC 37° Male Rigid
54	0	540	540	JIC 37° Female Swivel (some SAE 45° Female swivels), Dual Seat
55	0	550	540	JIC 37° Female Swivel, Single Seat
55	4	544	600	JIC 37° Female Swivel, 45° Bent Tube
55	E	54E	T40	JIC 37° Female Swivel, Straight Tube
55	2	542	740	JIC 37° Female Swivel, 22-1/2° Bent Tube
55	5	545	770	JIC 37° Female Swivel, 135° Bent Tube
55	7	547	800	JIC 37° Female Swivel, 67-1/2° Bent Tube
55	L	54L	840	JIC 37° Female Swivel, 90° (Long) Bent Tube
55	S	54S	640	JIC 37° Female Swivel, 90° (Short) Bent Tube
55	3	543	870	JIC 37° Female Swivel, 30° Bent Tube
55	6	546	900	JIC 37° Female Swivel, 60° Bent Tube
57	0	570	570	JIC 37° Male Swivel
94	0	940	940	SAE 45° Male Rigid
A0	0	A00	A00	SAE 45° Female Swivel
A0	4	A40	A40	SAE 45° Female Swivel 45°, Bent Tube
A0	9	A09	B40	SAE 45° Female Swivel, 90°, Bent Tube
A0	E	A0E	B70	SAE 45° Female Swivel, Straight tube
A0	L	A0L	C00	SAE 45° Female Swivel, 90° (Long) Bent Tube
AL	0	AL0	-	Alger quick disconnect
B0	0	B00	B	BSP Female Swivel, 60° Male Cone
B0	4	B04	B-300	BSP Female Swivel, 60° Male Cone, 45° Bent Tube
B0	9	B09	B-100	BSP Female Swivel, 60° Male Cone, 90° Bent Tube
B0	B	B0B	B-600	BSP Female Swivel, 60° Male Cone, 90° Block
BM	0	BM0	BM00	DIN 7642 Metric Banjo
C4	0	C40	Q40	SAE 45° Inverted Flare Male Swivel
C4	4	C44	C40	SAE 45° Inverted Flare Male Swivel, 45° Bent Tube
C4	9	C49	C70	SAE 45° Inverted Flare Male Swivel, 90° Bent Tube
CG	0	CG0	-	CGA connection
CP	0	CP0	-	CPV for female swivel
D0	0	D00	D00	Male O-ring Straight Thread, Rigid
D4	0	D40	D40	Male O-ring Swivel, Straight Thread, Swivel
D4	B	D4B	E70	Male O-ring Swivel, Straight Thread, 90° Block
F7	0	F70	F70	Oxygen, Style B, Female Swivel
FC	0	FC0	-	Autoclave female, medium pressure
GF	0	GF0	GHF	Garden Hose, Female Swivel
GM	0	GM0	GHM	Garden Hose, Male Rigid
GS	0	GS0	GHS	Garden Hose Fitting Set

Hose Fitting End Connection Style Code Numbers

Chart reference is located
on page 28.

Chart 3 - End Connection Codes (continued)

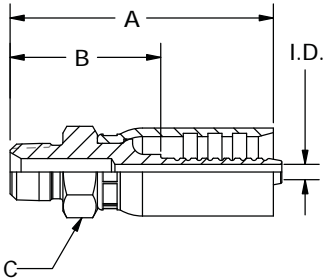
Book End Code (BE)	Book End Configuration (BEC)	BE & Configuration	Former Code	Description
G0	0	G00	G00	Tube O-ring, Female Swivel, Straight Tube
G0	4	G04	G40	Tube O-ring, Female Swivel, 45° Bent Tube
G0	9	G09	G70	Tube O-ring, Female Swivel, 90° Bent Tube
H0	0	H00	H00	Flange Seal, 34F1 & 34F2 Hose
H4	0	H40	H40	Triple 30° Flare Cone
J0	0	J00	J00	Tube Shank End or Straight Tube, Fractional size
JL	0	JL0	J-XX0	Female Swivel, O-ring, metric thread, light duty (DK0)
JL	4	JL4	J-XX3	Female Swivel, O-ring, metric thread, light duty, 45° tube
JL	9	JL9	J-XX1	Female Swivel, O-ring, metric thread, light duty, 90° tube
JS	0	JS0	J-XX0	Female Swivel, O-ring, metric thread, heavy duty (DK0)
JS	4	JS4	J-XX3	Female Swivel, O-ring, metric thread, heavy duty, 45° tube
JS	9	JS9	J-XX1	Female Swivel, O-ring, metric thread, heavy duty, 90° tube
K4	0	K40	K40	SAE Male Flareless, Rigid
L0	0	L00	L00	Globe Seal -DIN 3902
L1	0	L10	L00	SAE Flareless Female Swivel
L4	0	L40	L40	Flange Head, Straight Tube
L4	2	L42	M00	Flange Head, 22-1/2° Bent Tube
L4	3	L43	N70	Flange Head, 30° Bent Tube
L4	4	L44	M40	Flange Head, 45° Bent Tube
L4	6	L46	P00	Flange Head, 60° Bent Tube
L4	9	L49	N40	Flange Head, 90° Bent Tube
MA	0	MA0	MFS-400	Male O-ring face seal, SAE J1453, style A (straight groove)
MB	0	MB0	MFS-XXX	Male O-ring face seal, SAE J1453, style B (dovetail groove)
N0	0	N00	N00	Metric Standpipe N Series
N0	4	N04	N-300	Metric Standpipe, N Series, 45° Bent Tube
N0	9	N09	N-100	Metric Standpipe, N Series, 90° Bent Tube
R0	0	R00	R00	SAE 45° Inverted Flare Female Rigid
R1	0	R10	Q	BSP Male Rigid, 60° female seat
SL	0	SL0	S	Male Rigid, metric, low pressure (DK0 male)
S0	0	S00	-	SAE J512 Tube Connection
SS	0	SS0	S	Male Rigid, metric, high pressure (DK0 male)
S7	0	S70	S70	Female Swivel Nut, Spool with O-ring-Air Breathing Apparatus
T4	0	T40	T40	JIC 37° Female Swivel, Straight tube
T7	0	T70	T70	JIC 37° Female Swivel, Spool with O-ring, Orifice
V0	0	V00	V00	BSP Female Swivel, 60° Female Cone
V4	0	V40	V40	BSP Female Swivel, 60° Male Cone
VC	0	VCO	-	VCO for female swivel
W0	0	W00	W00	Splice Connector, Field Attachable, Consists of two couplings joined with an adapter
W4	0	W40	W40	Splice Connector, In-house Attachable
W7	0	W70	W70	Splice Connector, Field Attachable (left and right hand thread)
Z0	0	Z00	Z00	Fillet weld Socket Joint

LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
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TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
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Permanent Attached Hose Fittings

NOTE: Fittings may be ordered individually by adding a "-0" following the part number.

Male Pipe Rigid



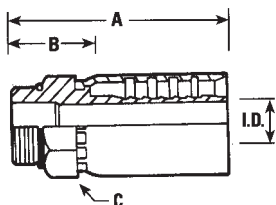
HOSE I.D.	PIPE SIZE	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	FORMER PART #
1/8	1/8	90302-021000	MP023	.074	1.296	3/4	1/2	3903-02102
1/8	1/4	90302-041000	MP026	.074	1.481	15/16	5/8	3903-02104
3/16	1/8	90303-021000	MP001	.109	1.870	1-1/16	9/16	3903-03102
3/16	1/4	90303-041000	MP004	.109	2.057	1-1/4	11/16	3903-03104
3/16	3/8	90303-061000	MP005	.109	2.151	1-3/8	3/4	3903-03106
1/4	1/8	90304-021000	MP002	.156	2.120	1	5/8	3903-04102
1/4	1/4	90304-041000	MP004	.156	2.307	1-3/16	11/16	3903-04104
1/4	3/8	90304-061000	MP005	.156	2.401	1-5/16	3/4	3903-04106
1/4	1/2	90304-081000	MP009	.156	2.651	1-9/16	15/16	3903-04108
5/16	1/4	90305-041000	MP004	.219	2.307	1-3/16	11/16	3903-05104
5/16	3/8	90305-061000	MP005	.219	2.401	1-1/4	3/4	3903-05106
3/8	1/4	90306-041000	MP005	.281	2.589	1-5/16	3/4	3903-06104
3/8	3/8	90306-061000	MP005	.281	2.589	1-5/16	3/4	3903-06106
3/8	1/2	90306-081000	MP009	.281	2.839	1-7/16	15/16	3903-06108
1/2	1/4	90308-041000	MP008	.391	2.776	1-5/16	7/8	3903-08104
1/2	3/8	90308-061000	MP008	.391	2.776	1-5/16	7/8	3903-08106
1/2	1/2	90308-081000	MP009	.391	3.026	1-1/2	15/16	3903-08108
1/2	3/4	90308-121000	MP011	.391	3.026	1-1/2	1-1/8	3903-08112
3/4	1/2	90312-081000	MP011	.500	3.213	1-5/8	1-1/8	3903-12108
3/4	3/4	90312-121000	MP011	.625	3.213	1-5/8	1-1/8	3903-12112
1	1	90316-161000	MP013	.812	3.964	1-7/8	1-3/8	3903-16116
3/16	1/8	90H03-021000	MP001	.109	1.870	1-1/16	9/16	390H-03102
3/16	1/4	90H03-041000	MP004	.109	2.057	1-1/4	11/16	390H-03104
3/16	3/8	90H03-061000	MP005	.109	2.151	1-3/8	3/4	390H-03106
1/4	1/8	90H04-021000	MP002	.156	2.120	1-1/16	5/8	390H-04102
1/4	1/4	90H04-041000	MP004	.156	2.307	1-1/4	11/16	390H-04104
1/4	3/8	90H04-061000	MP005	.156	2.401	1-5/16	3/4	390H-04106
1/4	1/2	90H04-081000	MP009	.156	2.651	1-9/16	15/16	390H-04108
5/16	1/4	90H05-041000	MP004	.219	2.307	1-3/16	11/16	390H-05104
3/8	1/4	90H06-041000	MP005	.281	2.589	1-5/16	3/4	390H-06104
3/8	3/8	90H06-061000	MP005	.281	2.589	1-5/16	3/4	390H-06106
3/8	1/2	90H06-081000	MP009	.281	2.839	1-9/16	15/16	390H-06108
1/2	3/8	90H08-061000	MP008	.391	2.776	1-1/4	7/8	390H-08106
1/2	1/2	90H08-081000	MP009	.391	3.026	1-1/2	15/16	390H-08108
1/2	3/4	90H08-121000	MP011	.391	3.026	1-1/2	1-1/8	390H-08112
5/8	1/2	90H10-081000	MP011	.469	3.213	1-5/8	1-1/8	390H-10108
3/4	1/2	90H12-081000	MP011	.500	3.213	1-5/8	1-1/8	390H-12108
3/4	3/4	90H12-121000	MP011	.625	3.213	1-5/8	1-1/8	390H-12112
1	1	90H16-161000	MP013	.812	3.964	1-7/8	1-3/8	390H-16116
3/4	3/4	90N12-121000	MP011	.625	3.298	1-5/8	1-1/8	390N-12112
1	1	90N16-161000	MP013	.813	3.966	1-7/8	1-3/8	390H-16116

A line of stainless steel fittings is available. Contact your Customer Service Representative for price and delivery.

Permanent Attached Hose Fittings

Male O-Ring Straight Thread

Do not swage with O-Ring installed

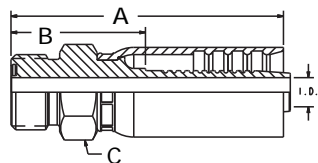


HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	FORMER PART #
1/8	-2	5/16-24	90302-02D000	MP021	.078	1.385	3/4	7/16	3903-02D02
3/16	-4	7/16-20	90303-04D000	MP001	.109	1.885	1-1/16	9/16	3903-03D04
1/4	-4	7/16-20	90304-04D000	MP002	.156	2.105	1-1/32	5/8	3903-04D04
1/4	-5	1/2-20	90304-05D000	MP002	.156	2.105	1-1/32	5/8	3903-04D05
1/4	-6	9/16-18	90304-06D000	MP004	.156	2.136	1-1/16	11/16	3903-04D06
5/16	-4	7/16-20	90305-04D000	MP004	.219	2.105	7/8	11/16	3903-05D04
5/16	-5	1/2-20	90305-05D000	MP004	.219	2.105	7/8	11/16	3903-05D05
5/16	-6	9/16-18	90305-06D000	MP004	.219	2.136	1	11/16	3903-05D06
3/8	-6	9/16-18	90306-06D000	MP005	.281	2.418	1-5/32	3/4	3903-06D06
3/8	-8	3/4-16	90306-08D000	MP008	.281	2.465	1-3/16	7/8	3903-06D08
3/8	-10	7/8-14	90306-10D000	MP020	.281	2.589	1-5/16	1	3903-06D10
1/2	-8	3/4-16	90308-08D000	MP009	.391	2.714	1-3/32	15/16	3903-08D08
1/2	-10	7/8-14	90308-10D000	MP018	.391	2.776	1-9/32	1-1/16	3903-08D10
3/4	-12	1-1/16-12	90312-12D000	MP014	.625	3.057	1-3/8	1-1/4	3903-12D12
1	-16	1-5/16-12	90316-16D000	MP019	.812	3.620	1-9/16	1-1/2	3903-16D16

3/16	-4	7/16-20	90H03-04D000	MP001	.109	1.860	1-1/16	9/16	390H-03D04
3/16	-6	9/16-18	90H03-06D000	MP004	.109	1.948	1-1/16	11/16	390H-06D06
1/4	-4	7/16-20	90304-04D000	MP002	.156	2.105	1-1/32	5/8	3903-04D04
1/4	-5	1/2-20	90H04-05D000	MP002	.156	2.110	1-1/32	5/8	390H-04D05
1/4	-6	9/16-18	90H04-06D000	MP004	.156	2.141	1-1/16	11/16	390H-04D06
3/8	-6	9/16-18	90H06-06D000	MP005	.281	2.423	1	3/4	390H-06D06
3/8	-8	3/4-16	90H06-08D000	MP008	.281	2.470	1-1/32	7/8	390H-06D08
3/8	-10	7/8-14	90H06-10D000	MP020	.281	2.656	1-1/8	1	390H-06D10
1/2	-8	3/4-16	90H08-08D000	MP009	.391	2.782	1-1/32	15/16	390H-08D08
1/2	-10	7/8-14	90H08-10D000	MP018	.391	2.844	1-5/32	1-1/16	390H-08D10
1/2	-12	1-1/16-12	90H08-12D000	MP014	.391	2.933	1-1/4	1-1/4	390H-08D12
3/4	-12	1-1/16-12	90H12-12D000	MP014	.625	3.062	1-1/4	1-1/4	390H-12D12
1	-16	1-5/16-12	90H16-16D000	MP019	.812	3.625	1-5/16	1-1/2	390H-16D16

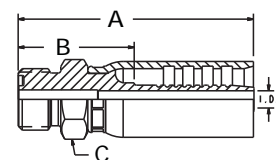
Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified. Otherwise Specified

ORFS Male with Dove Tail Groove SAE J1453 Style B



HOSE SIZE	THREAD SIZE	FITTING PART #	LENGTH A	CUT-OFF B	HEX SIZE	FORMER PART #
1/4	9/16-18	90304-04MB00	2.131	1-1/16	5/8	3903-04MFS-001
5/16	11/16-16	90305-06MB00	2.280	1-1/8	3/4	3903-05MFS-001
3/8	11/16-16	90306-06MB00	2.468	1-3/16	3/4	3903-06MFS-001
3/8	13/16-16	90306-08MB00	2.593	1-5/16	7/8	3903-06MFS-002
1/2	13/16-16	90308-08MB00	2.780	1-1/4	7/8	3903-08MFS-001
1/2	1-14	90308-10MB00	2.918	1-7/16	1-1/16	3903-08MFS-002

ORFS Male with Straight Groove SAE J1453 Style A



HOSE SIZE	THREAD SIZE	FITTING PART #	LENGTH A	CUT-OFF B	HEX SIZE	FORMER PART #
1/4	9/16-18	90304-04MA00	2.131	1-1/16	5/8	3903-04MFS-404
5/16	11/16-16	90305-06MA00	2.280	1-1/8	3/4	3903-05MFS-406
3/8	11/16-16	90306-06MA00	2.468	1-3/16	3/4	3903-06MFS-406
1/2	13/16-16	90308-08MA00	2.780	1-1/4	7/8	3903-08MFS-408

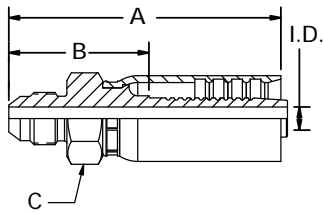
A line of stainless steel fittings is available. Contact your Customer Service Representative for price and delivery.

LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

Permanent Attached Hose Fittings

NOTE: Fittings may be ordered individually by adding a "-0" following the part number.

JIC 37° Male Rigid

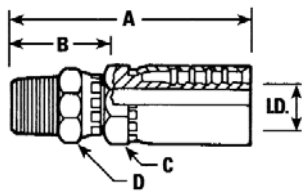


HOSE I.D.	PIPE SIZE	THREAD	FITTING PART #	PUSHER 4599	LENGTH A	CUT OFF B	HEX C	FORMER PART #
3/16	-3	3/8-24	90303-035000	MP001	1.974	1-3/16	9/16	3903-03503
3/16	-4	7/16-20	90303-045000	MP001	2.045	1-1/4	9/16	3903-03504
1/4	-4	7/16-20	90304-045000	MP002	2.295	1-1/4	5/8	3903-04504
1/4	-5	1/2-20	90304-055000	MP002	2.295	1-1/4	5/8	3903-04505
1/4	-6	9/16-18	90304-065000	MP005	2.395	1-5/16	3/4	3903-04506
5/16	-5	1/2-20	90305-055000	MP002	2.295	1-3/16	5/8	3903-05505
5/16	-6	9/16-18	90305-065000	MP004	2.301	1-3/16	11/16	3903-05506
3/8	-5	1/2-20	90306-055000	MP005	2.577	1-5/16	3/4	3903-06505
3/8	-6	9/16-18	90306-065000	MP005	2.583	1-5/16	3/4	3903-06506
3/8	-8	3/4-16	90306-085000	MP007	2.684	1-7/16	13/16	3903-06508
1/2	-8	3/4-16	90308-085000	MP008	2.871	1-3/8	7/8	3903-08508
1/2	-10	7/8-14	90308-105000	MP009	3.043	1-9/16	15/16	3903-08510
1/2	-12	1-1/16-12	90308-125000	MP011	3.140	1-5/8	1-1/8	3903-08512
3/4	-12	1-1/16-12	90312-125000	MP011	3.327	1-5/8	1-1/8	3903-12512
3/4	-14	1-3/16-12	90312-145000	MP014	3.353	1-11/16	1-1/4	3903-12514
3/4	-16	1-5/16-12	90312-165000	MP013	3.374	1-11/16	1-3/8	3903-12516
1	-16	1-5/16-12	90316-165000	MP013	3.937	1-7/8	1-3/8	3903-16516

3/16	-4	7/16-20	90H03-045000	MP001	2.045	1-1/4	9/16	390H-03504
1/4	-4	7/16-20	90H04-045000	MP002	2.295	1-1/4	5/8	390H-04504
1/4	-5	1/2-20	90H04-055000	MP002	2.295	1-1/4	5/8	390H-04505
1/4	-6	9/16-18	90H04-065000	MP005	2.395	1-5/16	3/4	390H-04506
3/8	-6	9/16-18	90H06-065000	MP005	2.583	1-5/16	3/4	390H-06506
3/8	-8	3/4-16	90H06-085000	MP007	2.684	1-7/16	13/16	390H-06508
1/2	-8	3/4-16	90H08-085000	MP008	2.871	1-3/8	7/8	390H-08508
1/2	-10	7/8-14	90H08-105000	MP009	3.034	1-9/16	15/16	390H-08510
1/2	-12	1-1/16-12	90H08-125000	MP011	3.140	1-5/8	1-1/8	390H-08512
3/4	-12	1-1/16-12	90H12-125000	MP011	3.327	1-5/8	1-1/8	390H-12512
3/4	-14	1-3/16-12	90H12-145000	MP014	3.353	1-11/16	1-1/4	390H-12514

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

Male Pipe Swivel



HOSE I.D.	PIPE SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	FORMER PART #
1/8	-2	1/8-27	90302-021400	MP027	.078	1.896	1-5/16	1/2	1/2	3903-02142
1/8	-2	1/4-18	90302-041400	MP003	.078	2.063	1-1/2	5/8	11/16	3903-02144
3/16	-2	1/8-27	90303-021400	MP027	.109	2.475	1-11/16	1/2	1/2	3903-03142
3/16	-4	1/4-18	90303-041400	MP003	.109	2.637	1-13/16	5/8	11/16	3903-03144
1/4	-4	1/4-18	90304-041400	MP003	.156	2.877	1-13/16	5/8	11/16	3903-04144
5/16	-4	1/4-18	90305-041400	MP003	.219	2.877	1-3/4	5/8	11/16	3903-05144
3/8	-6	3/8-18	90306-061400	MP006	.281	3.171	1-15/16	3/4	3/4	3903-06146
3/8	-8	1/2-14	90306-081400	FP025	.281	3.359	2-1/8	3/4	7/8	3903-06148
1/2	-8	1/2-14	90308-081400	MP010	.391	3.609	2-1/8	7/8	15/16	3903-08148
3/4	-12	3/4-14	90312-121400	MP012	.594	3.858	2-3/16	1-1/8	1-1/8	3903-12152
1	-16	1-11-1/2	90316-161400	MP016	.812	4.665	2-5/8	1-3/8	1-1/2	3903-16156

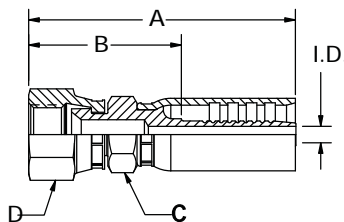
A line of stainless steel fittings is available. Contact your Customer Service Representative for price and delivery.

3/16	-4	1/4-18	90H03-041400	MP003	.109	2.637	1-13/16	5/8	11/16	390H-03144
1/4	-4	1/4-18	90H04-041400	MP003	.156	2.877	1-13/16	5/8	11/16	390H-04144
3/8	-6	3/8-18	90H06-061400	MP006	.281	3.171	1-15/16	3/4	3/4	390H-06146
3/8	-8	1/2-14	90H06-081400	FP025	.281	3.359	2-1/8	3/4	7/8	390H-06148
1/2	-8	1/2-14	90H08-081400	MP010	.391	3.609	2-1/8	7/8	15/16	390H-08148
3/4	-12	3/4-14	90H12-121400	MP012	.594	3.858	2-3/16	1-1/8	1-1/8	390H-12152
1	-16	1-11-1/2	90H16-161400	MP016	.812	4.665	2-5/8	1-3/8	1-1/2	390H-16156

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

Permanent Attached Hose Fittings

JIC 37° Swivel



Some Female swivels have double seats which make them compatible with either JIC 37° or SAE 45° male connectors.

Torque Values (in - lbs) for Steel Female Swivel Fittings

Size	Min.	Max.
4	50	150
5	70	200
6	90	300
8	150	500
10	220	700
12	300	1,000
16	450	1,400

The maximum torques listed are based upon strength rather than sealing properties. Use of any torque within the min-max range will prevent damage or leakage.

A line of stainless steel fittings is available. Contact your Customer Service Representative for price and delivery.

HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	FORMER PART #
1/8	-3	3/8-24	90302-035500	FP017	.078	1.613	1-1/16	1/2	9/16	3903-02543
1/8	-4	7/16-20	90302-045400	FP010	.078	1.703	1-1/16	1/2	5/8	3903-02544
1/8	-5	1/2-20	90302-055400	FP029	.078	1.675	1-1/16	1/2	3/4	3903-02545
3/16	-3	3/8-24	90303-035400	FP017	.109	2.151	1-5/16	9/16	9/16	3903-03543
3/16	-4	7/16-20	90303-045400	FP011	.109	2.151	1-3/8	9/16	5/8	3903-03544
3/16	-5	1/2-20	90303-055400	FP001	.109	2.151	1-3/8	9/16	3/4	3903-03545
1/4	-4	7/16-20	90304-045400	FP012	.156	2.526	1-7/16	5/8	5/8	3903-04544
1/4	-5	1/2-20	90304-055400	FP013	.156	2.526	1-7/16	5/8	3/4	3903-04545
1/4	-5	1/2-20	90304-055400	FP012	.156	2.526	1-7/16	5/8	5/8	3903-04545
1/4	-6	9/16-18	90304-065500	FP013	.156	2.536	1-7/16	5/8	3/4	3903-04546
5/16	-4	7/16-20	90305-045400	FP012	.219	2.526	1-7/16	5/8	5/8	3903-05544
5/16	-5	1/2-20	90305-055400	FP013	.219	2.526	1-3/8	5/8	3/4	3903-05545
5/16	-6	9/16-18	90305-065500	FP013	.219	2.536	1-7/16	5/8	3/4	3903-05546
3/8	-4	7/16-20	90306-045400	MP007	.281	2.683	1-7/16	13/16	5/8	3903-06544
3/8	-5	1/2-20	90306-055400	FP013	.234	2.683	1-7/16	3/4	3/4	3903-06545
3/8	-6	9/16-18	90306-065500	FP015	.281	2.818	1-9/16	3/4	3/4	3903-06546
3/8	-8	3/4-16	90306-085400	FP005	.281	2.808	1-9/16	3/4	15/16	3903-06548
3/8	-10	7/8-14	90306-105400	FP006	.281	2.964	1-11/16	7/8	1-1/16	3903-06550
1/2	-8	3/4-16	90308-085400	FP016	.391	3.151	1-5/8	7/8	15/16	3903-08548
1/2	-10	7/8-14	90308-105400	FP006	.391	3.151	1-5/8	7/8	1-1/16	3903-08550
1/2	-12	1-1/16-12	90308-125500	FP008	.391	3.245	1-3/4	1-1/8	1-1/4	3903-08552
3/4	-10	7/8-14	90312-105400	FP021	.484	3.432	1-5/8	1-1/8	1-1/16	3903-12550
3/4	-12	1-1/16-12	90312-125500	FP008	.625	3.432	1-3/4	1-1/8	1-1/4	3903-12552
3/4	-14	1-3/16-12	90312-145500	FP009	.625	3.494	1-11/16	1-3/8	1-1/2	3903-12554
3/4	-16	1-5/16-12	90312-165500	FP009	.625	3.494	1-11/16	1-3/8	1-1/2	3903-12556
1	-16	1-5/16-12	90316-165500	FP009	.812	4.057	1-11/16	1-3/8	1-1/2	3903-16556
3/16	-4	7/16-20	90H03-045400	FP011	.109	2.151	1-3/8	9/16	5/8	390H-03544
3/16	-5	1/2-20	90H03-055400	FP001	.109	2.151	1-3/8	9/16	3/4	390H-03545
1/4	-4	7/16-20	90H04-045400	FP012	.156	2.526	1-7/16	5/8	5/8	390H-04544
1/4	-5	1/2-20	90H04-055400	FP013	.156	2.526	1-7/16	5/8	3/4	390H-04545
1/4	-6	9/16-18	90H04-065500	FP013	.156	2.536	1-7/16	5/8	3/4	390H-04546
5/16	-6	9/16-18	90H05-065500	FP013	.219	2.536	1-7/16	5/8	3/4	390H-05546
3/8	-4	7/16-20	90H06-045400	MP007	.281	2.683	1-7/16	13/16	5/8	390H-06544
3/8	-5	1/2-20	90H06-055400	FP013	.234	2.683	1-7/16	3/4	3/4	390H-06545
3/8	-6	9/16-18	90H06-065500	FP015	.281	2.818	1-9/16	3/4	3/4	390H-06546
3/8	-8	3/4-16	90H06-085400	FP005	.281	2.808	1-9/16	3/4	15/16	390H-06548
3/8	-10	7/8-14	90H06-105400	FP006	.281	2.964	1-11/16	7/8	1-1/16	390H-06550
1/2	-8	3/4-16	90H08-085400	FP016	.391	3.151	1-5/8	7/8	15/16	390H-08548
1/2	-10	7/8-14	90H08-105400	FP006	.391	3.151	1-5/8	7/8	1-1/16	390H-08550
1/2	-12	1-1/16-12	90H08-125500	FP008	.391	3.245	1-3/4	1-1/8	1-1/4	390H-08552
5/8	-10	7/8-14	90H10-105400	FP021	.469	3.432	1-7/8	1-1/8	1-1/16	390H-10550
5/8	-12	1-1/16-12	90H10-125500	FP008	.469	3.432	1-7/8	1-1/8	1-1/4	390H-10552
3/4	-10	7/8-14	90H12-105400	FP021	.625	3.432	1-3/4	1-1/8	1-1/16	390H-12550
3/4	-12	1-1/16-12	90H12-125500	FP008	.625	3.432	1-3/4	1-1/8	1-1/4	390H-12552
3/4	-14	1-3/16-12	90H12-145500	FP009	.625	3.494	1-13/16	1-3/8	1-1/2	390H-12554
3/4	-16	1-5/16-12	90H12-165500	FP009	.625	3.494	1-13/16	1-3/8	1-1/2	390H-12556
1	-16	1-5/16-12	90H16-165500	FP009	.812	4.057	1-15/16	1-3/8	1-1/2	390H-16556
5/8	-10	7/8-14	90N10-105400	FP008	.469	3.470	1-7/8	1-1/8	1-1/16	390N-10550
5/8	-12	1-1/16-12	90N10-125500	FP021	.469	3.470	1-7/8	1-1/8	1-1/4	390N-10552
3/4	-10	7/8-14	90N10-125500	FP021	.484	3.472	1-3/4	1-1/8	1-1/16	390N-12550
3/4	-12	1-1/16-12	90N12-125500	FP008	.625	3.470	1-3/4	1-1/8	1-1/4	390N-12552
1	-16	1-5/16-12	90N16-165500	FP009	.812	4.057	1-7/8	1-3/8	1-1/2	390N-16556

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

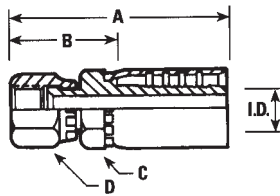
LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

Permanent Attached Hose Fittings

NOTE: Fittings may be ordered individually by adding a "-0" following the part number.

SAE 45° Female Swivel

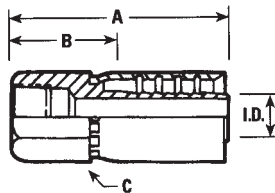
Some Female swivels have double seats which make them compatible with either JIC 37° or SAE 45° male connectors.



HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	FORMER PART #
3/16	-4	7/16-20	90304-045400	FP011	.109	2.151	1-3/8	9/16	5/8	3903-03544
3/16	-5	1/2-20	90305-055400	FP011	.109	2.151	1-3/8	9/16	3/4	3903-03545
1/4	-4	7/16-20	90304-045400	FP012	.156	2.526	1-7/16	5/8	5/8	3903-04544
1/4	-5	1/2-20	90305-055400	FP013	.156	2.526	1-7/16	5/8	3/4	3903-04545
1/4	-6	5/8-18	90306-06A000	FP003	.156	2.526	1-7/16	5/8	13/16	3903-04A06
5/16	-5	1/2-20	90305-055400	FP013	.219	2.526	1-3/8	5/8	3/4	3903-05545
5/16	-6	5/8-18	90306-05A000	FP003	.219	2.526	1-3/8	5/8	13/16	3903-05A06
3/8	-6	5/8-18	90306-06A000	FP014	.281	2.808	1-9/16	3/4	13/16	3903-06A06
3/8	-8	3/4-16	90308-085400	FP005	.281	2.808	1-9/16	3/4	15/16	3903-06548
1/2	-8	3/4-16	90308-085400	FP016	.391	3.151	1-5/8	7/8	15/16	3903-08548
1/2	-10	7/8-14	90308-105400	FP006	.391	3.151	1-5/8	7/8	1-1/16	3903-08550
3/4	-12	1-1/16-14	90312-12A000	FP008	.625	3.432	1-3/4	1-1/8	1-1/4	3903-12A12
1	-16	1-3/8-12	90316-16A000	FP023	.812	4.247	2-3/16	1-1/2	1-5/8	3903-16A16

3/16	-4	7/16-20	90H03-045400	FP011	.109	2.151	1-3/8	9/16	5/8	390H-03544
3/16	-5	1/2-20	90H03-055400	FP001	.109	2.151	1-3/8	9/16	3/4	390H-03545
1/4	-4	7/16-20	90H04-045400	FP012	.156	2.526	1-7/16	5/8	5/8	390H-04544
1/4	-5	1/2-20	90H04-055400	FP013	.156	2.526	1-7/16	5/8	3/4	390H-04545
1/4	-6	5/8-18	90H04-06A000	FP003	.156	2.526	1-7/16	5/8	13/16	390H-04A06
3/8	-6	5/8-18	90H06-06A000	FP014	.281	2.808	1-9/16	3/4	13/16	390H-06A06
3/8	-8	3/4-16	90H06-085400	FP005	.281	2.808	1-9/16	3/4	15/16	390H-06548
1/2	-8	3/4-16	90H08-085400	FP016	.391	3.151	1-5/8	7/8	15/16	390H-08548
1/2	-10	7/8-14	90H08-105400	FP006	.391	3.151	1-5/8	7/8	1-1/16	390H-08550
3/4	-12	1-1/16-14	90H12-12A000	FP008	.625	3.432	1-3/4	1-1/8	1-1/4	390H-12A12
1	-16	1-3/8-12	90H16-16A000	FP023	.812	4.247	2-3/16	1-1/2	1-5/8	390H-16A16

Female NPT Rigid



HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	FORMER PART #
1/8	1/8	1/8-27	90302-022000	FP012	.078	1.671	1-1/8	9/16	3903-02202
3/16	1/8	1/8-27	90303-022000	FP026	.109	1.870	1-1/16	9/16	3903-03202
1/4	1/4	1/4-18	90304-042000	FP002	.156	2.339	1-1/4	3/4	3903-04204
1/4	3/8	3/8-18	90304-062000	FP004	.156	2.433	1-5/16	7/8	3903-04206
3/8	1/4	1/4-18	90306-042000	FP002	.281	2.527	1-1/4	3/4	3903-06204
3/8	3/8	3/8-18	90306-062000	FP004	.281	2.621	1-3/8	7/8	3903-06206
3/8	1/2	1/2-14	90306-082000	FP006	.281	2.933	1-11/16	1-1/16	3903-06208
1/2	1/2	1/2-14	90308-082000	FP007	.391	2.964	1-1/2	1-1/16	3903-08208

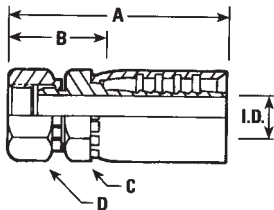
3/16	1/8	1/8-27	90H03-022000	FP026	.109	1.870	7/8	9/16	390H-03202
3/16	1/4	1/4-18	90H03-042000	FP002	.109	2.089	2-5/16	3/4	390H-03204
1/4	1/4	1/4-18	90H04-042000	FP002	.156	2.339	1-1/4	3/4	390H-04204
1/4	3/8	3/8-18	90H04-062000	FP004	.156	2.433	1-5/16	7/8	390H-04206
3/8	3/8	3/8-18	90H06-062000	FP004	.281	2.621	1-3/8	7/8	390H-06206
3/8	1/2	1/2-14	90H06-082000	FP006	.281	2.933	1-11/16	1-1/16	390H-06208
1/2	1/2	1/2-14	90H08-082000	FP007	.391	2.964	1-1/2	1-1/16	390H-08208

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

A line of stainless steel fittings is available. Contact your Customer Service Representative for price and delivery.

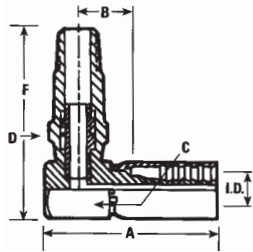
Permanent Attached Hose Fittings

30° Inverted Flare NPSM



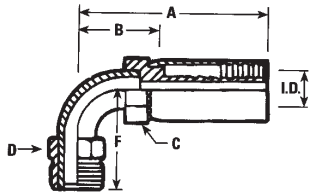
HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	FORMER PART #
1/8	-4	1/4-18	90302-042400	FP024	.078	1.651	1-1/16	1/2	11/16	3903-02244
3/16	-4	1/4-18	90303-042400	FP002	.109	2.134	1-5/16	5/8	3/4	3903-03244
1/4	-4	1/4-18	90304-042400	FP002	.156	2.384	1-5/16	5/8	3/4	3903-04244
1/4	-6	3/8-18	90304-062400	FP004	.156	2.464	1-3/8	3/4	7/8	3903-04246
5/16	-4	1/4-18	90305-042400	FP013	.219	2.540	1-7/16	3/4	3/4	3903-05244
3/8	-4	1/4-18	90306-042400	FP013	.218	2.666	1-7/16	3/4	3/4	3903-06244
3/8	-6	3/8-18	90306-062400	FP004	.281	2.652	1-3/16	3/4	7/8	3903-06246
1/2	-8	1/2-14	90308-082400	FP018	.391	2.989	1-1/2	1	1	3903-08248
3/4	-12	3/4-14	90312-122400	FP008	.625	3.432	1-3/4	1-1/8	1-1/4	3903-12252
1	-16	1-11-1/2	90316-162400	FP009	.812	4.060	1-7/8	1-3/8	1-1/2	3903-16256
3/16	-4	1/4-18	90H03-042400	FP002	.109	2.134	1-5/16	5/8	3/4	390H-03244
1/4	-4	1/4-18	90H04-042400	FP002	.156	2.384	1-5/16	5/8	3/4	390H-04244
3/8	-4	1/4-18	90H06-042400	FP013	.218	2.666	1-7/16	3/4	3/4	390H-06244
3/8	-6	3/8-18	90H06-062400	FP004	.281	2.652	1-3/16	7/8	7/8	390H-06246
1/2	-8	1/2-14	90H08-082400	FP018	.391	2.989	1-1/2	1	1	390H-08248
3/4	-12	3/4-14	90H12-122400	FP008	.625	3.432	1-3/4	1-1/8	1-1/4	390H-12252
1	-16	1-11-1/2	90H16-162400	FP009	.812	4.060	1-7/8	1-3/8	1-1/2	390H-16256

Male Pipe Swivel 90° Elbow



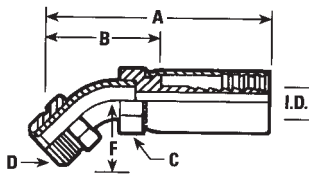
HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	DROP F	FORMER PART #
1/4	-4	1/4-18	90304-0414B0	SP008	.156	2.307	13/16	5/8	5/8	1.95	3903-04274
3/8	-6	3/8-18	90306-0614B0	SP011	.281	2.558	7/8	13/16	3/4	2.04	3903-06276
1/2	-8	1/2-14	90308-0814B0	SP009	.391	2.962	15/16	1	15/16	2.45	3903-08278
3/8	-6	3/8-18	90H06-0614B0	SP011	.281	2.558	7/8	13/16	3/4	2.04	390H-06276
1/2	-8	1/2-14	90H08-0814B0	SP009	.391	2.962	15/16	1	15/16	2.45	390H-08278

90° Bent Tube with SAE 45° Inverted Flare Swivel



HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	DROP F	FORMER PART #
3/8	-6	5/8-18	90306-06C490	TP206	.281	2.610	1-3/8	3/4	5/8	1.660	3903-06C76

45° Bent Tube With 45° Inverted Flare Swivel



HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	DROP F	FORMER PART #
3/8	-6	5/8-18	90306-06C440	TP206	.281	3.284	2	3/4	5/8	0.965	3903-06C46

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

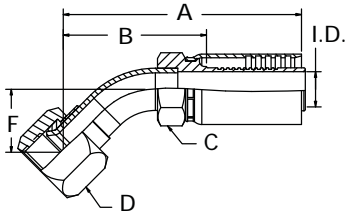
A line of stainless steel fittings is available. Contact your Customer Service Representative for price and delivery.

LOW/MEDIUM PRESSURE
 CONSTANT PRESSURE HOSE
 HIGH PRESSURE
 TWIN LINE HOSE
 AIR, WATER & TUBING
 SPECIALTY HOSE
 HOSE FITTINGS
 HOSE ASSEMBLY EQUIPMENT
 ACCESSORIES
 TECHNICAL DATA

Permanent Attached Hose Fittings

NOTE: Fittings may be ordered individually by adding a "-0" following the part number.

45° Bent Tube Female Swivel, JIC 37°

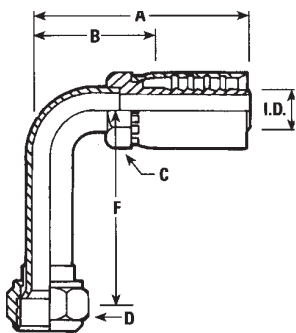


HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	DROP F	FORMER PART #
3/16	-4	7/16-20	90303-045540	TP204	.109	2.298	1-1/2	9/16	9/16	.467	3903-03604
1/4	-4	7/16-20	90304-045540	TP204	.156	2.548	1-1/2	5/8	9/16	.467	3903-04604
1/4	-5	1/2-20	90304-055540	TP205	.156	2.640	1-9/16	5/8	5/8	.526	3903-04605
1/4	-6	9/16-18	90304-065540	TP206	.156	2.728	1-5/8	5/8	11/16	.588	3903-04606
5/16	-6	9/16-18	90305-065540	TP206	.219	2.728	1-5/8	5/8	11/16	.588	3903-05606
3/8	-6	9/16-18	90306-065540	TP206	.281	2.916	1-11/16	3/4	11/16	.588	3903-06606
3/8	-8	3/4-16	90306-085540	TP208	.281	3.097	1-7/8	3/4	7/8	.713	3903-06608
1/2	-8	3/4-16	90308-085540	TP308	.391	3.278	1-13/16	7/8	7/8	.713	3903-08608
1/2	-10	7/8-14	90308-105540	TP310	.391	3.455	1-15/16	7/8	1	.839	3903-08610
3/4	-12	1-1/16-12	90312-125540	TP312	.625	4.261	2-9/16	1-1/8	1-1/4	1.118	3903-12612
1	-16	1-5/15-12	90316-165540	TP316	.812	4.951	2-7/8	1-3/8	1-1/2	1.146	3903-16616

3/16	-4	7/16-20	90H03-045540	TP204	.109	2.298	1-1/2	9/16	9/16	.467	390H-03604
1/4	-4	7/16-20	90H04-045540	TP204	.156	2.548	1-1/2	5/8	9/16	.467	390H-04604
1/4	-5	1/2-20	90H04-055540	TP205	.156	2.640	1-9/16	5/8	5/8	.526	390H-04605
3/8	-6	9/16-18	90H06-065540	TP206	.281	2.916	1-11/16	3/4	11/16	.588	390H-06606
3/8	-8	3/4-16	90H06-085540	TP208	.281	3.097	1-7/8	3/4	7/8	.713	390H-06608
1/2	-8	3/4-16	90H08-085540	TP308	.391	3.278	1-13/16	7/8	7/8	.713	390H-08608
1/2	-10	7/8-14	90H08-105540	TP310	.391	3.455	1-15/16	7/8	1	.839	390H-08610
3/4	-12	1-1/16-12	90H12-125540	TP312	.625	4.261	2-9/16	1-1/8	1-1/4	1.118	390H-12612
1	-16	1-5/16-12	90H16-165540	TP316	.812	4.951	2-7/8	1-3/8	1-1/2	1.146	390H-16616

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.
 *Requires a 3/16" Shim

90° Long Bent Tube Female Swivel, Jic 37°



HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	DROP F	FORMER PART #
1/8	-3	3/8-24	90303-0355L0	TP204	.078	1.483	15/16	1/2	7/16	1.625	3903-02843
3/16	-4	7/16-20	90304-0455L0	TP204	.109	2.058	1-1/4	9/16	9/16	1.800	3903-03844
1/4	-4	7/16-20	90304-0455L0	TP204	.156	2.308	1-1/4	5/8	9/16	1.800	3903-04844
1/4	-5	1/2-20	90304-0555L0	TP205	.156	2.370	1-5/16	5/8	5/8	1.770	3903-04845
1/4	-6	9/16-18	90304-0655L0	TP206	.156	2.456	1-3/8	5/8	11/16	2.180	3903-04846
5/16	-6	9/16-18	90305-0655L0	TP206	.219	2.432	1-5/16	5/8	11/16	2.180	3903-05846
3/8	-6	9/16-18	90306-0655L0	TP206	.281	2.620	1-3/8	3/4	11/16	2.180	3903-06846
3/8	-8	3/4-16	90306-0855L0	TP208	.281	2.751	1-1/2	3/4	7/8	2.430	3903-06848
1/2	-8	3/4-16	90308-0855L0	TP308	.391	2.932	1-7/16	7/8	7/8	2.430	3903-08848
1/2	-10	7/8-14	90308-1055L0	TP310	.391	3.057	1-9/16	7/8	1	2.570	3903-08850
3/4	-12	1-1/16-12	90312-1255L0	TP312	.625	3.870	2-3/16	1-1/8	1-1/4	3.730	3903-12852
3/4	-12	1-3/16-12	90312-1455L0	TP314	.625	4.122	2-7/16	1-1/4	1-3/8	4.330	3903-12854
1	-16	1-5/16-12	90316-1655L0	TP316	.812	4.685	2-5/8	1-3/8	1-1/2	4.330	3903-16856

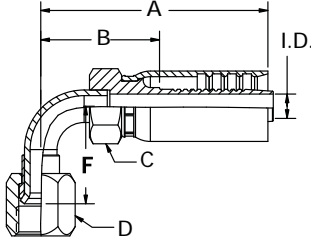
3/16	-4	7/16-20	90H03-0455L0	TP204	.109	2.058	1-1/4	9/16	9/16	1.800	390H-03844
1/4	-4	7/16-20	90H04-0455L0	TP204	.156	2.308	1-1/4	5/8	9/16	1.800	390H-04844
1/4	-5	1/2-20	90H04-0555L0	TP205	.156	2.370	1-5/16	5/8	5/8	1.770	390H-04845
1/4	-6	9/16-18	90H04-0655L0	TP206	.156	2.456	1-3/8	5/8	11/16	2.180	390H-04846
3/8	-6	9/16-18	90H06-0655L0	TP206	.281	2.620	1-3/8	3/4	11/16	2.180	390H-06846
3/8	-8	3/4-16	90H06-0855L0	TP208	.281	2.751	1-1/2	3/4	7/8	2.430	390H-06848
1/2	-8	3/4-16	90H08-0855L0	TP308	.391	2.932	1-7/16	7/8	7/8	2.430	390H-08848
1/2	-10	7/8-14	90H08-1055L0	TP310	.391	3.057	1-9/16	7/8	1	2.570	390H-08850
5/8	-10	7/8-14	90H10-1055L0	TP312	.469	3.369	1-13/16	1-1/8	1	2.570	390H-10850
3/4	-12	1-1/16-12	90H12-1255L0	TP312	.625	3.870	2-3/16	1-1/8	1-1/4	3.730	390H-12852
3/4	-14	1-3/16-12	90H12-1455L0	TP314	.625	4.122	2-7/16	1-1/4	1-3/8	4.330	390H-12854
1	-16	1-5/16-12	90H16-1655L0	TP316	.812	4.685	2-5/8	1-3/8	1-1/2	4.330	390H-16856

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

A line of stainless steel fittings is available. Contact your Customer Service Representative for price and delivery.

Permanent Attached Hose Fittings

90° Short Bent Tube Female Swivel, JIC 37°



Torque Values (in - lbs) for Bent Tube Fittings with Female Swivels

Size	Min.	Max.
4	37	112
5	52	150
6	67	225
8	112	375
10	165	525
12	225	750
16	337	1,050

The maximum torques listed are based upon strength rather than sealing properties. Use of any torque within the min-max range will prevent damage or leakage.

A line of stainless steel fittings is available. Contact your Customer Service Representative for price and delivery.

HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	DROP F	FORMER PART #
1/8	-3	3/8-24	90302-0355S0	TP204	.078	1.483	15/16	1/2	7/16	0.750	3903-02643
1/8	-4	7/16-20	90302-0455S0	SP038	.078	1.671	1-1/8	1/2	9/16	0.875	3903-02644
3/16	-4	7/16-20	90303-0455S0	TP204	.109	2.058	1-1/4	9/16	9/16	0.875	3903-03644
1/4	-4	7/16-20	90304-0455S0	TP204	.156	2.308	1-1/4	5/8	9/16	0.875	3903-04644
1/4	-5	1/2-20	90304-0555S0	TP205	.156	2.370	1-5/16	5/8	5/8	1.000	3903-04645
1/4	-6	9/16-18	90304-0655S0	TP206	.156	2.432	1-3/8	5/8	11/16	1.125	3903-04646
5/16	-5	1/2-20	90305-0555S0	TP205	.219	2.370	1-1/4	5/8	5/8	1.000	3903-05645
5/16	-6	9/16-18	90305-0655S0	TP206	.219	2.430	1-5/16	5/8	11/16	1.125	3903-05646
3/8	-4	7/16-20	90306-0455S0	TP204	.156	2.501	1-1/4	3/4	9/16	0.875	3903-06644
3/8	-6	9/16-18	90306-0655S0	TP206	.281	2.620	1-3/8	3/4	11/16	1.125	3903-06646
3/8	-8	3/4-16	90306-0855S0	TP208	.281	2.751	1-1/2	3/4	7/8	1.375	3903-06648
3/8	-10	7/8-14	90306-1055S0	TP310	.281	2.870	1-5/8	7/8	1	1.625	3903-06650
1/2	-8	3/4-16	90308-0855S0	TP308	.391	2.932	1-7/16	7/8	7/8	1.375	3903-08648
1/2	-10	7/8-14	90308-1055S0	TP310	.391	3.057	1-9/16	7/8	1	1.625	3903-08650
3/4	-10	7/8-14	90312-1055S0	TP312	.500	3.328	1-5/8	1-1/8	1	1.625	3903-12650
3/4	-12	1-1/16-12	90312-1255S0	TP312	.625	3.870	2-3/16	1-1/8	1-1/4	2.312	3903-12652
3/4	-12	1-3/16-12	90312-1455S0	TP314	.625	4.115	2-7/16	1-1/4	1-3/8	2.500	3903-12654
3/4	-16	1-5/16-12	90312-1655S0	TP314	.625	4.117	2-7/16	1-1/4	1-1/2	2.500	3903-12656
1	-12	1-1/16-12	90316-1255S0	TP316	.578	4.438	2-3/8	1-3/8	1-1/4	2.312	3903-16652
1	-16	1-5/16-12	90316-1655S0	TP316	.812	4.683	2-5/8	1-3/8	1-1/2	2.500	3903-16656
3/16	-4	7/16-20	90H03-0455S0	TP204	.109	2.058	1-1/4	9/16	9/16	0.875	390H-03644
1/4	-4	7/16-20	90H04-0455S0	TP204	.156	2.308	1-1/4	5/8	9/16	0.875	390H-04644
1/4	-5	1/2-20	90H04-0555S0	TP205	.156	2.370	1-5/16	5/8	5/8	1.000	390H-04645
1/4	-6	9/16-18	90H04-0655S0	TP206	.156	2.432	1-3/8	5/8	11-1/16	1.125	390H-04646
5/16	-6	9/16-18	90H05-0655S0	TP206	.219	2.433	1-5/16	5/8	11/16	1.125	390H-05646
3/8	-4	7/16-20	90H06-0455S0	TP204	.156	2.501	1-1/4	3/4	9/16	0.875	390H-06644
3/8	-6	9/16-18	90H06-0655S0	TP206	.281	2.620	1-3/8	3/4	11/16	1.125	390H-06646
3/8	-8	3/4-16	90H06-0855S0	TP208	.281	2.751	1-1/2	3/4	7/8	1.375	390H-06648
3/8	-10	7/8-14	90H06-1055S0	TP310	.281	2.870	1-5/8	7/8	1	1.625	390H-06650
1/2	-8	3/4-16	90H08-0855S0	TP308	.391	2.932	1-7/16	7/8	7/8	1.375	390H-08648
1/2	-10	7/8-14	90H08-1055S0	TP310	.391	3.057	1-9/16	7/8	1	1.625	390H-08650
5/8	-12	1-1/16-12	90H10-1255S0	TP312	.469	3.870	2-5/16	1-1/8	1-1/4	2.312	390H-10652
3/4	-10	7/8-14	90H12-1055S0	TP312	.625	3.328	1-5/8	1-1/8	1	1.625	390H-12650
3/4	-12	1-1/16-12	90H12-1255S0	TP312	.625	3.870	2-3/16	1-1/8	1-1/4	2.312	390H-12652
3/4	-14	1-3/16-12	90H12-1455S0	TP314	.625	4.115	2-7/16	1-1/4	1-3/8	2.500	390H-12654
3/4	-16	1-5/16-12	90H12-1655S0	TP316	.625	4.117	2-7/16	1-1/4	1-1/2	2.500	390H-12656
16	-12	1-1/16-12	90H16-1255S0	TP316	.578	4.438	2-3/8	1-3/8	1-1/4	2.312	390H-16652
1	-16	1-5/16-12	90H16-1655S0	TP316	.812	4.683	2-5/8	1-3/8	1-1/2	2.500	390H-16656

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

*Requires a 3/16" Shim

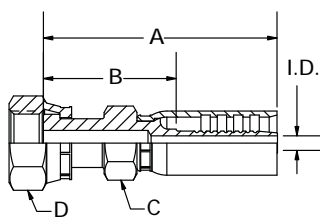
LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

LOW/MEDIUM PRESSURE
 CONSTANT PRESSURE HOSE
 HIGH PRESSURE
 TWIN LINE HOSE
 AIR WATER & TUBING
 SPECIALTY HOSE
 HOSE FITTINGS
 HOSE ASSEMBLY EQUIPMENT
 ACCESSORIES
 TECHNICAL DATA

Permanent Attached Hose Fittings

NOTE: Fittings may be ordered individually by adding a "-0" following the part number.

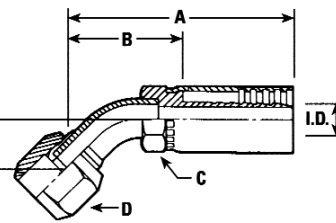
Straight with Female Swivel, O-Ring Face Seal



HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	FORMER PART #
1/8	-4	9/16-18	90302-044000	MP045	.078	1.780	1.219	5/8	11/16	3903-02404
1/4	-4	9/16-18	90304-044000	MP045	.156	2.600	1.520	5/8	11/16	3903-04404
1/2	-6	11/16-16	90304-064000	SP031	.156	2.502	1.422	5/8	7/8	3903-04406
5/16	-4	9/16-18	90305-044000	MP045	.219	2.600	1.475	5/8	11/16	3903-05404
5/16	-6	11/16-16	90305-064000	MP037	.375	2.670	1.545	5/8	13/16	3903-05406
3/8	-6	11/16-16	90306-064000	SP031	.272	2.690	1.440	3/4	7/8	3903-06406
3/8	-8	13/16-16	90306-084000	MP046	.272	3.038	1.788	3/4	15/16	3903-06408
1/2	-8	13/16-16	90308-084000	FP040	.382	3.060	1.565	15/16	1-1/16	3903-08408
1/2	-10	1-14	90308-104000	TP310	.391	3.325	1.830	7/8	1-1/8	3903-08410
3/4	-12	1-3/16-12	90312-124000	MP039	.610	3.642	1.955	1-1/8	1-3/8	3903-12412
1	-16	1-7/16-12	90316-164000	MP042	.811	4.360	2.170	1-3/8	1-5/8	3903-16416

1/4	-4	9/16-18	90H04-044000	MP045	.156	2.600	1.520	5/8	11/16	390H-04404
3/8	-6	11/16-16	90H06-064000	SP031	.272	2.690	1.440	3/4	7/8	390H-06406
1/2	-8	13/16-16	90H08-084000	FP040	.382	3.060	1.565	7/8	1-1/16	390H-08408
1/2	-10	1-14	90H08-104000	TP310	.382	3.325	1.830	7/8	1-1/8	390H-08410
5/8	-10	1-14	90H10-104000	TP312	.469	3.632	2.060	1-1/8	1-1/8	390H-10410
5/8	-12	1-3/16-12	90H10-124000	MP039	.469	3.642	2.070	1-1/8	1-3/8	390H-10412
3/4	-12	1-3/16-12	90H12-124000	MP039	.610	3.642	1.995	1-1/8	1-3/8	390H-12412
1	-16	1-7/16-12	90H16-164000	MP042	.811	4.360	2.170	1-3/8	1-5/8	390H-16416

Female Swivel, 45° Elbow O-Ring Face Seal

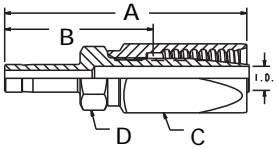


HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	DROP F	FORMER PART #
1/8	-4	9/16-18	90302-044040	TP204*	.078	1.916	1-5/16	1/2	11/16	.409	3903-02444
1/4	-4	9/16-18	90304-044040	TP204	.156	2.553	1-1/2	5/8	11/16	.409	3903-04444
5/16	-4	9/16-18	90305-044040	TP204	.219	2.553	1-7/16	5/8	11/16	.409	3903-05444
5/16	-6	11/16-16	90305-064040	TP206	.219	2.575	1-7/16	5/8	13/16	.429	3903-05446
3/8	-6	11/16-16	90306-064040	TP206	.281	2.763	1-1/2	3/4	13/16	.429	3903-06446
1/2	-8	13/16-16	90308-084040	TP308	.391	3.322	1-13/16	7/8	15/16	.590	3903-08448
3/4	-12	1-3/16-12	90302-124040	TP312	.625	4.031	2-3/8	1-1/8	1-3/8	.831	3903-12452

1/4	-4	9/16-18	90H04-044040	TP204	.156	2.553	1-1/2	5/8	11/16	.409	390H-04444
3/8	-6	11/16-16	90H06-064040	TP206	.281	2.763	1-1/2	3/4	13/16	.429	390H-06446
1/2	-8	13/16-16	90H08-084040	TP308	.391	3.322	1-13/16	7/8	15/16	.590	390H-08448
5/8	-12	1-3/16-12	90H10-124040	TP312	.470	4.031	2-7/16	1-1/8	1-3/8	.831	390H-10452
3/4	-12	1-3/16-12	90H12-124040	TP312	.625	3.916	2-3/8	1-1/8	1-3/8	.831	390H-12452

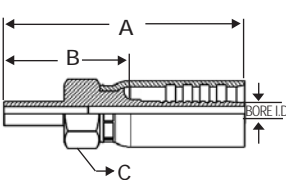
Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.
 *Requires a 3/16" Shim

Fractional Stand Pipe with Hoke Groove



HOSE I.D.	TUBE O.D.	FITTING PART #	LENGTH A	CUT OFF B	NIPPLE HEX C	HEX SIZE D	FORMER PART #
1/4	.250	90404-04JK00	2.193	1-3/8	5/8	1/2	3904-04J04-KOH
3/8	.375	90406-06JK00	2.730	1-3/4	13/16	5/8	3904-06J06-KOH
1/2	.500	90408-08JK00	3.295	2	1	13/16	3904-08J08-KOH

Stand Pipe J Series



HOSE I.D.	TUBE O.D.	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	FORMER PART #
1/4	.250	90304-04J000	TP204	.156	2.495	1-7/16	5/8	3903-04J04
3/8	.375	90306-06J000	TP206	.281	2.752	1-1/2	3/4	3903-06J06
1/2	.500	90308-08J000	TP308	.391	3.195	1-11/16	7/8	3903-08J08

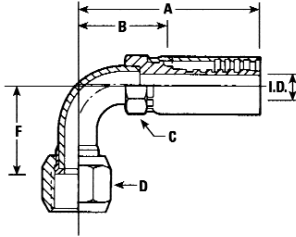
1/4	.250	90H04-04J000	TP204	.156	2.495	1-7/16	5/8	390H-04J04
3/8	.375	90H06-06J000	TP206	.281	2.752	1-1/2	3/4	390H-06J06
1/2	.500	90H08-08J000	TP308	.391	3.195	1-11/16	7/8	390H-08J08

A line of stainless steel fittings is available. Contact your Customer Service Representative for price and delivery.

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

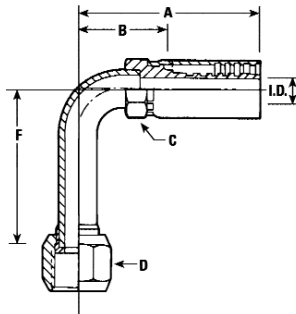
Permanent Attached Hose Fittings

Female Swivel, 90° Elbow O-Ring Face Seal (Short Drop)



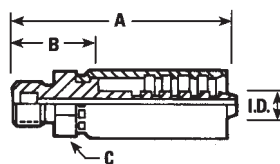
HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	DROP F	FORMER PART #
1/8	-4	9/16-18	90302-0440S0	TP204	.078	1.676	1-1/8	1/2	11/16	.779	3903-02474
1/4	-4	9/16-18	90304-0440S0	TP204	.156	2.313	1-1/4	5/8	11/16	.779	3903-04474
5/16	-4	9/16-18	90305-0440S0	TP204	.219	2.313	1-3/16	5/8	11/16	.779	3903-05474
5/16	-6	11/16-16	90305-0640S0	TP206	.281	2.493	1-15/16	3/4	13/16	.902	3903-05476
3/8	-6	11/16-16	90306-0640S0	TP206	.281	2.681	1-7/16	3/4	13/16	.902	3903-06476
1/2	-8	13/16-16	90308-0840S0	TP308	.391	2.980	1-1/2	7/8	15/16	1.150	3903-08478
3/4	-12	1-3/16-12	90312-1240S0	TP312	.625	3.709	2	1-1/8	1-3/8	1.882	3903-12482
1/4	-4	9/16-18	90H04-0440S0	TP204	.156	2.313	1-1/4	5/8	11/16	.779	390H-04474
3/8	-6	11/16-16	90H06-0640S0	TP206	.281	2.681	1-7/16	3/4	13/16	.902	390H-06476
1/2	-8	13/16-16	90H08-0840S0	TP308	.391	2.980	1-1/2	7/8	15/16	1.150	390H-08478
3/4	-12	1-3/16-12	90H12-1240S0	TP312	.625	3.709	2	1-1/8	1-3/8	1.882	390H-12482
3/4	-12	1-3/16-12	90N12-1240S0	TP312	.625	3.747	2	1-1/8	1-3/8	1.882	390N-12482

Female Swivel, 90° Elbow O-Ring Face Seal (Long Drop)



HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	DROP F	FORMER PART #
1/4	-4	9/16-18	90304-0440L0	TP204	.156	2.313	1-1/2	5/8	11/16	1.779	3903-04674
5/16	-4	9/16-18	90305-0440L0	TP204	.219	2.313	1-3/16	5/8	11/16	1.779	3903-05674
5/16	-6	11/16-16	90305-0640L0	TP206	.281	2.493	1-3/8	3/4	13/16	2.130	3903-05676
3/8	-6	11/16-16	90306-0640L0	TP206	.281	2.681	1-7/16	3/4	13/16	2.130	3903-06676
1/2	-8	13/16-16	90308-0840L0	TP308	.391	3.098	1-5/8	7/8	15/16	2.512	3903-08678
3/4	-12	1-3/16-12	90312-1240L0	TP312	.625	3.709	2	1-1/8	1-3/8	3.779	3903-12682
1/4	-4	9/16-18	90H04-0440L0	TP204	.156	2.313	1-1/2	5/8	11/16	1.779	390H-04674
3/8	-6	11/16-16	90H06-0640L0	TP206	.281	2.681	1-7/16	3/4	13/16	2.130	390H-06676
1/2	-8	13/16-16	90H08-0840L0	TP308	.391	3.098	1-5/8	7/8	15/16	2.512	390H-08678
3/4	-12	1-3/16-12	90H12-1240L0	TP312	.625	3.709	2	1-1/8	1-3/8	3.779	390H-12682
3/4	-12	1-3/16-12	90N12-1240L0	TP312	.625	3.747	2	1-1/8	1-3/8	3.779	390N-12682

SAE Flareless Male End



HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	FORMER PART #
1/4	-4	7/16-20	90304-04K400	MP002	.156	2.198	1-1/8	5/8	3903-04K44
3/8	-6	9/16-18	90304-06K400	MP005	.282	2.495	1-1/4	3/4	3903-06K46
1/2	-8	3/4-16	90304-08K400	MP008	.391	2.776	1-1/4	7/8	3903-06K48

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

A line of stainless steel fittings is available. Contact your Customer Service Representative for price and delivery.

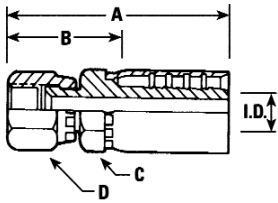
LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

LOW/MEDIUM PRESSURE
 CONSTANT PRESSURE HOSE
 HIGH PRESSURE
 TWIN LINE HOSE
 AIR WATER & TUBING
 SPECIALTY HOSE
 HOSE FITTINGS
 HOSE ASSEMBLY EQUIPMENT
 ACCESSORIES
 TECHNICAL DATA

Permanent Attached Hose Fittings

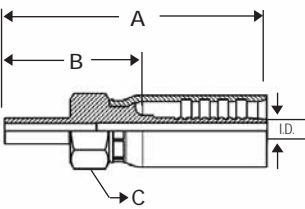
NOTE: Fittings may be ordered individually by adding a "-0" following the part number.

JIC 37° Female Swivel, AISI 316 Series Stainless Steel



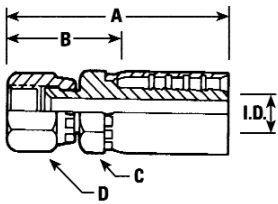
HOSE I.D.	DASH SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	FORMER PART #
3/16	-4	7/16-20	90A03-045400	FP011	.109	2.151	1-5/16	9/16	5/8	390A-03544
1/4	-4	7/16-20	90A04-045400	FP012	.156	2.526	1-7/16	5/8	5/8	390A-04544
3/8	-6	9/16-18	90A06-065500	FP015	.281	2.818	1-9/16	3/4	3/4	390A-06546
1/2	-8	3/4-16	90A08-085400	FP016	.391	3.151	1-5/8	7/8	15/16	390A-08548
1/2	-10	7/8-14	90A08-105400	FP006	.391	3.151	1-5/8	7/8	1-1/16	390A-08550
3/4	-12	1-1/16-12	90A12-125500	FP008	.625	3.432	1-3/4	1-1/8	1-1/4	390A-12552
1	-16	1-5/16-12	90A16-165500	FP009	.813	4.057	2	1-3/8	1-1/2	390A-16556

Stand Pipe, Straight, Stainless Steel



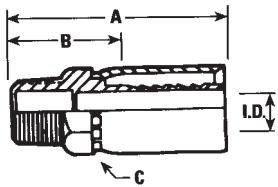
HOSE I.D.	PIPE SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	FORMER PART #
1/4	1/4	-	90A04-04J000	TP204	.156	2.495	1-7/16	5/8		390A-04J04
3/8	3/8	-	90A06-06J000	TP206	.281	2.752	1-1/2	3/4		390A-06J06
1/2	1/2	-	90A08-08J000	TP208	.391	3.195	1-11/16	7/8		390A-08J08
1/4	0.250	-	90L04-04J000	TP204	.156	2.495	1-7/16	5/8		390L-04J04
3/8	0.375	-	90L06-06J000	TP206	.281	2.752	1-1/2	3/4		390L-06J06
1/2	0.500	-	90L08-08J000	TP308	.391	3.195	1-11/16	7/8		390L-08J08

JIC 37° Female Swivel Brass



HOSE I.D.	PIPE SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	FORMER PART #
3/16	-4	7/16-20	90603-045400	FP011	.125	1.556	7/8	9/16	5/8	3906-03544
1/4	-4	7/16-20	90604-045400	FP022	.156	2.219	1-1/8	11/16	11/16	3906-04544
1/4	-6	9/16-18	90604-065500	FP003	.156	2.344	1-1/2	11/16	13/16	3906-04546
3/8	-6	9/16-18	90606-065500	FP014	.281	2.813	1-3/8	3/4	13/16	3906-06546

Male Pipe Rigid Brass



HOSE I.D.	PIPE SIZE	THREAD	FITTING PART #	PUSHER 4599	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	FORMER PART #
1/4	1/4	-	90604-041000	MP004	.156	2.048	1-1/8	11/16		3906-04104
3/8	1/4	-	90606-041000	MP005	.281	2.589	1-5/16	3/4		3906-06104
3/8	3/8	-	90606-061000	MP005	.281	2.589	1-5/16	3/4		3906-06106

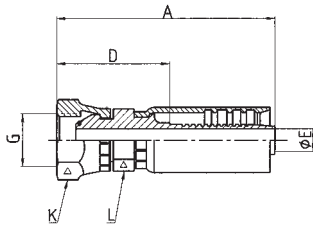
Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

A line of stainless steel fittings is available. Contact your Customer Service Representative for price and delivery.

Metric, BSP and JIS Hose Fittings

Code B

Female Swivel, With O-Ring, BSP Thread



HOSE D.N.	HOSE I.D.	THREAD G	FITTING PART #	A mm	D mm	ØE mm	L mm	K mm	PUSHER 4599
3	1/8	1/8-28	7903-02P02	40.9	26.6	2.08	14	14	4599-FP501
4	3/16	1/4-19	7903-03B04	54.8	35.8	2.77	14	19	4599FP002
6	1/4	1/4-19	7903-04B04	58.8	32.8	3.96	14	19	4599-FP002
8	5/16	1/4-19	7903-05B04	61.1	33.1	5.56	17	9	4599-FP002
10	3/8	1/4-19	7903-06B04	66.0	34.0	7.14	17	19	4599-FP002
4	1/4	3/8-19	7903-04B06	60.7	34.7	3.96	17	22	4599-FP503
8	5/16	3/8-19	7903-05B06	63.0	35.0	5.56	17	22	4599-FP503
10	3/8	3/8-19	7903-06B06	67.8	35.8	7.14	17	22	4599-FP503
10	3/8	1/2-14	7903-06B08	72.5	40.5	7.14	18	27	4599-FP505
13	1/2	3/8-19	7903-08B06	74.9	36.9	9.93	22	22	4599-FP503-001
13	1/2	1/2-14	7903-08B08	77.4	39.4	9.93	22	27	4599-FP505
13	1/2	5/8-14	7903-08B10	82.1	44.1	9.93	22	30	4599-FP506
13	1/2	3/4-14	7903-08B12	82.1	44.1	9.93	26	32	4599-FP506
20	3/4	3/4-14	7903-12B12	86.9	43.9	15.88	28	32	4599-FP506
25	1	1-11	7903-16B16	101.7	44.7	20.65	36	41	4599-FP508
4	3/16	1/4-19	7903-03B04	54.8	35.8	2.77	14	19	4599FP002
6	1/4	1/4-19	790H-04B04	58.8	32.8	3.96	14	19	4599-FP002
10	3/8	1/4-9	790H-06B04	66.0	34.0	7.14	17	19	4599-FP002
4	1/4	3/8-19	790H-04B06	60.7	34.7	3.96	17	22	4599-FP503
10	3/8	3/8-19	790H-06B06	67.8	35.8	7.14	17	22	4599-FP503
10	3/8	1/2-14	790H-06B08	72.5	40.5	7.14	18	27	4599-FP505
13	1/2	3/8-19	790H-08B06	74.9	36.9	9.93	22	22	4599-FP503-001
13	1/2	1/2-14	790H-08B08	77.4	39.4	9.93	22	27	4599-FP505
13	1/2	5/8-14	790H-08B10	82.1	44.1	9.93	22	30	4599-FP506
13	1/2	3/4-14	790H-08B12	82.1	44.1	9.93	26	32	4599-FP506
20	3/4	3/4-14	790H-12B12	86.9	43.9	15.88	28	32	4599-FP506
25	1	1-11	790H-16B16	101.7	44.7	20.65	36	41	4599-FP5008

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

LOW/MEDIUM
PRESSURE

CONSTANT
PRESSURE HOSE

HIGH
PRESSURE

TWIN LINE
HOSE

AIR, WATER
& TUBING

SPECIALTY
HOSE

HOSE
FITTINGS

HOSE ASSEMBLY
EQUIPMENT

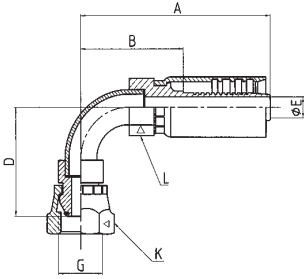
ACCESSORIES

TECHNICAL
DATA

Metric, BSP and JIS Hose Fittings

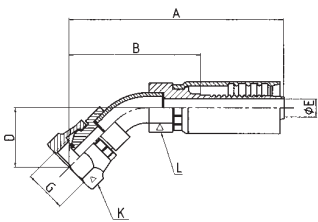
NOTE: Fittings may be ordered individually by adding a "-0" following the part number.

Code B-100 Female Swivel With O-Ring, 90° Elbow - BSP Thread



HOSE D.N.	HOSE I.D.	THREAD G	FITTING PART #	A mm	B mm	D mm	ØE mm	L mm	K mm	PUSHER 4599
4	3/16	1/4-19	7903-03B04-100	57.0	38.0	37.0	2.77	14	19	4599-TP205
6	1/4	1/4-19	7903-04B04-100	61.0	35.0	37.0	3.96	17	19	4599-TP205
8	5/16	3/8-19	7903-05B06-100	67.0	39.0	38.0	5.56	17	22	4599-TP210
10	3/8	3/8-19	7903-06B06-100	72.0	40.0	38.0	7.14	17	22	4599-TP210
13	1/2	1/2-14	7903-08B08-100	80.0	42.0	42.5	9.93	22	27	4599-TP308
13	1/2	5/8-14	7903-08B10-100	80.0	42.0	44.0	9.93	22	30	4599-TP308
20	3/4	3/4-14	7903-12B12-100	98.0	55.0	59.0	15.88	30	32	4599-TP312
25	1	1-11	7903-16B16-100	116.5	59.5	66.5	20.65	40	41	4599-TP316
4	3/16	1/4-19	790H-03B04-100	57.0	38.0	37.0	2.77	14	19	4599-TP205
6	1/4	1/4-19	790H-04B04-100	61.0	35.0	37.0	3.96	17	19	4599-TP205
10	3/8	3/8-19	790H-06B06-100	72.0	40.0	38.0	7.14	17	22	4599-TP210
13	1/2	1/2-14	790H-08B08-100	80.0	42.0	42.5	9.93	22	27	4599-TP308
13	1/2	5/8-14	790H-08B10-100	80.0	42.0	44.0	9.93	22	30	4599-TP308
20	3/4	3/4-14	790H-12B12-100	98.0	55.0	59.0	15.88	30	32	4599-TP312
25	1	1-11	790H-16B16-100	116.5	59.5	66.5	20.65	40	41	4599-TP316

Code B-300 With O-Ring, 45° Elbow

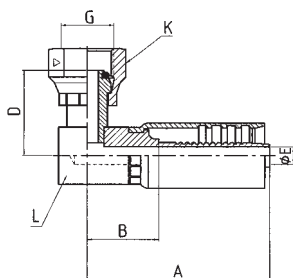


HOSE D.N.	HOSE I.D.	THREAD G	FITTING PART #	A mm	B mm	D mm	ØE mm	L mm	K mm	PUSHER 4599
4	3/16	1/4-19	7903-03B04-300	69.2	50.2	20.4	2.77	14	19	4599-TP205
6	1/4	1/4-19	7903-04B04-300	72.3	46.3	20.4	3.96	17	19	4599-TP205
8	5/16	3/8-19	7903-05B06-300	77.6	49.6	20.0	5.56	17	22	4599-TP210
10	3/8	3/8-19	7903-06B06-300	82.4	50.4	20.0	7.14	17	22	4599-TP210
13	1/2	1/2-14	7903-08B08-300	91.8	53.8	22.6	9.93	22	27	4599-TP308
13	1/2	5/8-14	7903-08B10-300	92.8	54.8	23.6	9.93	22	30	4599-TP308
20	3/4	3/4-14	7903-12B12-300	111.0	68.0	29.8	15.88	30	32	4599-TP312
25	1	1-11	7903-16B16-300	127.3	70.3	32.0	20.65	40	41	4599-TP316
4	3/16	1/4-19	790H-03B04-300	69.2	50.2	20.4	2.77	14	19	4599-TP205
6	1/4	1/4-19	790H-04B04-300	72.3	46.3	20.4	3.96	17	19	4599-TP205
10	3/8	3/8-19	790H-06B06-300	82.4	50.4	20.0	7.14	17	22	4599-TP210
13	1/2	1/2-14	790H-08B08-300	91.8	53.8	22.6	9.93	22	27	4599-TP308
13	1/2	5/8-14	790H-08B10-300	92.8	54.8	23.6	9.93	22	30	4599-TP308
20	3/4	3/4-14	790H-12B12-300	111.0	68.0	29.8	15.88	30	32	4599-TP312
25	1	1-11	790H-16B16-300	127.3	70.3	32.0	20.65	40	41	4599-TP316

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

Metric, BSP and JIS Hose Fittings

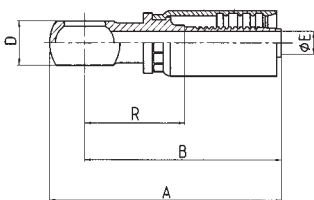
Code B-600 Female Swivel With O-Ring, Block Elbow 90°



HOSE D.N.	HOSE I.D.	THREAD G	FITTING PART #	A mm	B mm	D mm	ØE mm	L mm	K mm	PUSHER 4599
3	1/8	1/8-28	*7903-02P02-600	26.0	12.0	19.3	2.08	12	14	4599-PC604
*without O-Ring										
4	3/16	1/4-19	7903-03B04-600	44.3	25.3	23.0	2.77	14	18	4599-PC601
6	1/4	1/4-19	7903-04B04-600	48.2	22.4	23.0	3.96	14	18	4599-PC601
6	1/4	3/8-19	7903-04B06-600	48.4	22.4	24.7	3.96	14	21	4599-PC601
8	5/16	3/8-19	7903-05B06-600	52.7	24.7	27.0	5.56	18	21	4599-PC602
10	3/8	3/8-19	7903-06B06-600	57.5	25.5	27.0	7.14	18	21	4599-PC602
13	1/2	1/2-14	7903-08B08-600	64.8	26.8	28.5	9.93	22	25	4599-PC603
4	3/16	1/4-19	790H-03B04-600	44.3	25.3	23.0	2.77	14	18	4599-PC601
6	1/4	1/4-19	790H-04B04-600	48.4	22.4	23.0	3.96	14	18	4599-PC601
6	1/4	3/8-19	790H-04B06-600	48.4	22.4	24.7	3.96	14	21	4599-PC601
10	3/8	3/8-19	790H-06B06-600	57.5	25.5	27.0	7.14	18	21	4599-PC602
13	1/2	1/2-14	790H-08B08-600	64.8	26.8	28.5	9.98	22	25	4599-PC603

* Also available in 90306-06B0B0

Code BM Metric Banjo Din 7642



HOSE D.N.	HOSE I.D.	THREAD	FITTING PART #	A mm	B mm	D mm	ØE mm	R mm	PUSHER 4599
4	3/16	10	7903-03BM10	60.8	52.3	10	2.77	32	4599-BP005
4	3/16	12	7903-03BM12	64.3	54.3	12	2.77	34	4599-BP004
6	1/4	10	7903-04BM10	64.8	56.3	10	3.96	29	4599-BP005
6	1/4	12	7903-04BM12	68.3	58.3	12	3.96	31	4599-BP004
6	1/4	14	7903-04BM14	72.3	60.3	14	3.96	33	4599-BP001
6	1/4	16	7903-04BM16	76.3	62.3	16	3.96	35	4599-BP002
8	5/16	12	7903-05BM12	70.6	60.6	12	5.56	32	4599-BP004
8	5/16	14	7903-05BM14	74.6	62.6	14	5.56	34	4599-BP001
8	5/16	16	7903-05NM16	78.6	64.6	16	5.56	36	4599-BP002
8	5/16	18	7903-05BM18	82.6	66.6	20	5.56	38	4599-BP003
10	3/8	14	7903-06BM14	79.4	67.4	14	7.14	36	4599-BP001
10	3/8	16	7903-06BM16	83.4	69.4	16	7.14	38	4599-BP002
10	3/8	18	7903-06BM18	87.4	71.4	20	7.14	40	4599-BP003

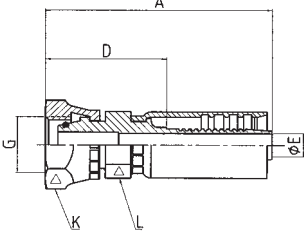
Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

Metric, BSP and JIS Hose Fittings

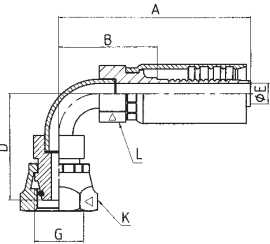
NOTE: Fittings may be ordered individually by adding a "-0" following the part number.

Code J-XXO Female Swivel O-Ring, Metric Thread



HOSE D.N.	HOSE I.D.	THREAD G	FITTING PART #	A mm	D mm	ØE mm	L mm	K mm	R mm	PUSHER 4599
4	3/16	M12x1.5	7903-03J12-060	55.2	36.2	2.77	14	17	6	4599-FP502
6	1/4	M14x1.5	7903-04J14-080	59.2	33.2	3.96	14	17	8	4599-FP502
6	1/4	M16x1.5	7903-04J16-100	60.0	34.7	3.96	17	19	10	4599-FP503
8	5/16	M14x1.5	7903-05J14-080	61.5	33.5	5.56	17	17	8	4599-FP502
8	5/16	M16x1.5	7903-05J16-100	63.0	35.0	5.56	17	19	10	4599-FP503
8	5/16	M18x1.5	7903-05J18-120	63.0	35.0	5.56	17	22	12	4599-FP503
10	3/8	M16x1.5	7903-06J16-100	67.8	35.8	7.14	17	19	10	4599-FP503
10	3/8	M18x1.5	7903-06J18-120	67.8	35.8	7.14	17	22	12	4599-FP503
10	3/8	M22x1.5	7903-06J22-150	72.5	40.5	7.14	22	27	15	4599-FP505
13	1/2	M22x1.5	7903-08J22-150	77.4	39.4	9.93	22	27	15	4599-FP505
13	1/2	M26x1.5	7903-08J26-180	80.5	42.5	9.93	27	32	18	4599-FP507
20	3/4	M26x1.5	7903-12J26-180	85.3	42.3	15.88	30	32	18	4599-FP507
20	3/4	M30x2.0	7903-12J30-220	88.7	45.7	15.88	30	36	22	4599-FP507
8	5/16	M20x1.5	7903-05J20-120	64.7	36.7	5.56	18	24	12	4599-FP504
4	3/16	M16x1.5	790H-03J16-080	56.7	37.7	2.77	14	19	8	4599-FP503
6	1/4	M16x1.5	790H-04J16-080	60.7	34.7	3.96	14	19	8	4599-FP503
6	1/4	M18x1.5	790H-04J18-100	60.7	34.7	3.96	17	22	10	4599-FP503
10	3/8	M20x1.5	790H-06J20-120	69.5	37.5	7.14	18	24	12	4599-FP504
10	3/8	M22x1.5	790H-06J22-140	72.5	40.5	7.14	21	27	14	4599-FP505
13	1/2	M24x1.5	790H-08J24-160	82.0	44.0	9.93	22	30	16	4599-FP506
13	1/2	M30x2.0	790H-08J30-200	83.9	45.9	9.93	30	36	20	4599-FP507
20	3/4	M30x2.0	790H-12J30-200	88.7	45.7	15.88	30	36	20	4599-FP507
20	3/4	M36x2.0	790H-12J36-250	90.0	47.0	15.88	36	41	25	4599-FP508
25	1	M42x2.0	790H-16J42-300	101.6	44.6	20.65	38	50	30	4599-FP508

Code J-XX1 Female Swivel O-Ring-Elbow 90°- Metric Thread

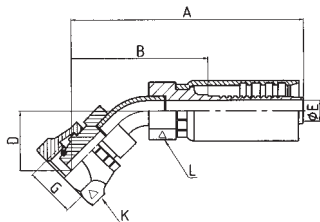


HOSE D.N.	HOSE I.D.	THREAD G	FITTING PART #	A mm	B mm	D mm	ØE mm	L mm	K mm	R mm	PUSHER 4599
4	3/16	M12x1.5	7903-03J12-061	56.0	37.0	35.0	2.77	14	17	6	4599-TP205
6	1/4	M14x1.5	7903-04J14-081	59.0	33.0	35.0	3.96	17	17	8	4599-TP205
6	1/4	M16x1.5	7903-04J16-101	60.5	34.5	39.0	3.96	17	19	10	4599-TP206
8	5/16	M14x1.5	7903-05J14-081	61.5	33.5	35.0	5.56	17	17	8	4599-TP205
8	5/16	M16x1.5	7903-05J16-101	63.0	35.0	39.0	5.56	17	19	10	4599-TP206
10	3/8	M18x1.5	7903-06J18-121	73.0	41.0	41.5	7.14	17	22	12	4599-TP210
13	1/2	M22x1.5	7903-08J22-151	80.0	42.0	45.0	9.93	22	27	15	4599-TP308
13	1/2	M26x1.5	7903-08J26-181	91.0	53.0	57.5	9.93	28	32	18	4599-TP312
20	3/4	M26x1.5	7903-12J26-181	97.8	54.8	59.5	15.88	30	32	18	4599-TP312
20	3/4	M30x2.0	7903-12J30-221	97.8	54.8	61.0	15.88	30	36	22	4599-TP312
8	5/16	M20x1.5	7903-05J20-121	63.0	35.0	37	5.56	17	24	12	4599-TP206
4	3/16	M16x1.5	790H-03J16-081	55.0	36.0	34.0	2.77	14	19	8	4599-TP205
6	1/4	M18x1.5	790H-04J18-101	59.0	33.0	35.5	3.96	17	22	10	4599-TP205
10	3/8	M20x1.5	790H-06J20-121	68.0	36.0	37.0	7.14	17	24	12	4599-FP206
10	3/8	M22x1.5	790H-06J22-141	72.0	40.0	42.0	7.14	17	27	14	4599-FP210
13	1/2	M24x1.5	790H-08J24-161	80.0	42.0	46.5	9.93	22	30	16	4599-TP308
20	3/4	M30x2.0	790H-12J30-201	98.0	55.0	62.3	15.88	30	36	20	4599-TP312
20	3/4	M36x2.0	790H-12J36-251	98.0	55.0	62.7	15.88	30	41	25	4599-TP312

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

Metric, BSP and JIS Hose Fittings

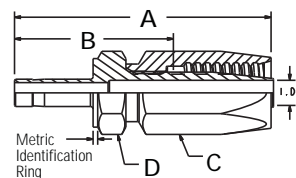
Code J-XX3 Female Swivel O-Ring-Elbow 45°- Metric Thread DKO 24° Male Cone



HOSE D.N.	HOSE I.D.	THREAD G	FITTING PART #	A mm	B mm	D mm	ØE mm	L mm	K mm	R mm	PUSHER 4599
4	3/16	M12x1.5	7903-03J12-063	67.0	48.0	19.2	2.77	14	17	6	4599-TP205
6	1/4	M14x1.5	7903-04J14-083	72.0	46.0	20.0	3.96	17	17	8	4599-TP205
6	1/4	M16x1.5	7903-04J16-103	72.5	46.5	20.3	3.96	17	19	10	4599-TP206
8	5/16	M16x1.5	7903-05J16-103	75.0	47.0	20.3	5.56	17	19	10	4599-TP206
10	3/8	M18x1.5	7903-06J18-123	84.3	52.3	21.9	7.14	17	22	12	4599-TP210
13	1/2	M22x1.5	7903-08J22-153	90.5	52.5	23.0	9.93	22	27	15	4599-TP308
13	1/2	M26x1.5	7903-08J26-183	104.0	66.0	29.0	9.93	28	32	18	4599-TP312
20	3/4	M26x1.5	7903-12J26-183	111.0	68.0	29.5	15.88	30	32	18	4599-TP312
20	3/4	M30x2.0	7903-12J30-223	111.0	68.0	30.7	15.88	30	36	22	4599-TP312
8	5/16	M20x1.5	7903-05J20-123	75.0	47.0	20.0	5.56	17	24	12	4599-TP206
4	3/16	M16x1.5	790H-03J16-083	67.0	48.0	19.0	2.77	14	19	8	4599-TP205
6	1/4	M18x1.5	790H-04J18-103	72.0	46.0	20.0	3.96	17	22	10	4599-TP205
10	3/8	M20x1.5	790H-06J20-123	80.0	48.0	20.0	7.14	17	24	12	4599-TP206
10	3/8	M22x1.5	790H-06J22-143	84.0	52.0	22.1	7.14	17	27	14	4599-TP210
13	1/2	M24x1.5	790H-08J24-163	92.0	54.0	24.0	9.93	22	30	16	4599-TP308
20	3/4	M30x2.0	790H-12J30-203	112.0	69.0	31.6	15.88	30	36	20	4599-TP312
20	3/4	M36x2.0	790H-12J36-253	112.0	69.0	31.9	15.88	30	41	25	4599-TP312

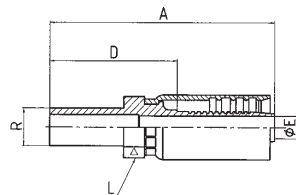
Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

Metric Stand Pipe with Hoke Groove



HOSE I.D.	PIPE SIZE	FITTING PART #	LENGTH A	CUT OFF B	NIPPLE HEX C	HEX SIZE D	FORMER PART #
1/4	-6	90404-06NK00	2.227	1.379	5/8	5/8	3904-04N06-KOH
1/2	-12	90408-12NK00	3.334	2.022	1	13/16	3904-08N12-KOH

Code N Metric Stand Pipe



HOSE D.N.	HOSE I.D.	FITTING PART #	A mm	D mm	ØE mm	L mm	R mm	PUSHER 4599
3	1/8	7903-02N04	43.8	29.8	2.08	13	4	4599-MP001
3	1/8	7903-02N06	43.8	29.8	2.08	13	6	4599-MP001
3	1/8	7903-02N08	45.8	31.8	2.08	13	8	4599-MP001
4	3/16	7903-03N05	58.3	39.3	2.77	14	5	4599-MP501
4	3/16	7903-03N06	58.3	39.3	2.77	14	6	4599-MP501
4	3/16	7903-03N06-001	68.3	49.3	2.77	14	6	4599-MP523
4	3/16	7903-03N08	60.3	41.3	2.77	14	8	4599-MP501
6	1/4	7903-04N06	62.4	36.4	3.96	14	6	4599-MP501
6	1/4	7903-04N08	64.4	38.4	3.96	14	8	4599-MP501
6	1/4	7903-04N10	66.4	40.4	3.96	14	10	4599-MP501
6	1/4	7903-04N12	69.4	43.4	3.96	17	12	4599-MP502
6	1/4	7903-04N13	69.4	43.4	3.96	17	13	4599-MP502
8	5/16	7903-05N08	68.6	40.6	5.56	17	8	4599-MP502
8	5/16	7903-05N10	70.6	42.6	5.56	17	10	4599-MP502
8	5/16	7903-05N10-001	80.6	52.6	5.56	17	10	4599-MP503-002
8	5/16	7903-05N12	71.6	43.6	5.56	17	12	4599-MP502
8	5/16	7903-05N12-001	78.6	50.6	5.56	19	12	4599-MP503-002
10	3/8	7903-06N10	75.5	43.5	7.14	17	10	4599-MP502
10	3/8	7903-06N12	76.5	44.5	7.14	17	12	4599-MP502
10	3/8	7903-06N14	79.5	47.5	7.14	19	14	4599-MP503
10	3/8	7903-06N16	82.5	50.5	7.14	22	16	4599-MP504
13	1/2	7903-08N14	85.3	47.3	9.93	22	14	4599-MP504

(continued on page 48)

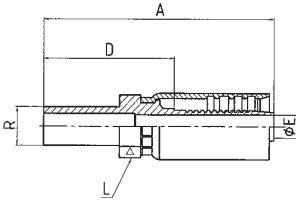
LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

Metric, BSP and JIS Hose Fittings

NOTE: Fittings may be ordered individually
by adding a "-0" following the part number.

Code N Metric Stand Pipe

(continued from page 47)



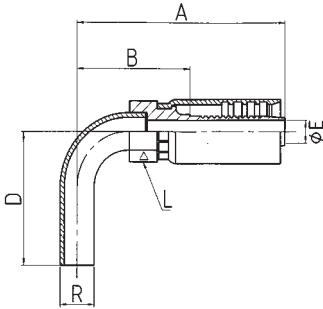
(continued from page 47)

HOSE D.N.	HOSE I.D.	FITTING PART #	A mm	D mm	ØE mm	L mm	R mm	PUSHER 4599
13	1/2	7903-08N15	85.3	47.3	9.93	22	15	4599-MP504
13	1/2	7903-08N16	87.3	49.3	9.93	22	16	4599-MP504
13	1/2	7903-08N18	88.3	50.3	9.93	22	18	4599-MP504
13	1/2	7903-08N20	89.3	51.3	9.93	24	20	4599-MP505
20	3/4	7903-12N20	94.6	51.6	15.88	30	20	4599-MP508
20	3/4	7903-12N22	96.6	53.6	15.88	30	22	4599-MP508
20	3/4	7903-12N25	98.6	55.6	15.88	30	25	4599-MP508
20	3/4	7903-12N28	99.6	56.6	15.88	32	28	4599-MP509
25	1	7903-16N25	110.3	53.3	20.65	36	25	4599-MP510
25	1	7903-16N28	111.3	54.3	20.65	36	28	4599-MP510
25	1	7903-16N30	112.3	55.3	20.65	40	30	4599-MP511
25	1	7903-16N35	113.3	56.3	20.65	40	35	4599-MP511
4	3/16	790H-03N05	58.3	39.3	2.77	14	5	4599-MP501
4	3/16	790H-03N06	58.3	39.3	2.77	14	6	4599-MP501
4	3/16	790H-03N06-001	68.3	49.3	2.77	14	6	4599-MP523
4	3/16	790H-03N08	60.3	41.3	2.77	14	8	4599-MP501
6	1/4	790H-04N06	62.4	36.4	3.96	14	6	4599-MP501
6	1/4	790H-04N08	64.4	38.4	3.96	14	8	4599-MP501
6	1/4	790H-04N10	66.4	40.4	3.96	14	10	4599-MP501
6	1/4	790H-04N12	69.4	43.4	3.96	17	12	4599-MP502
6	1/4	790H-04N13	69.4	43.4	3.96	17	13	4599-MP502
10	3/8	790H-06N10	75.5	43.5	7.14	17	10	4599-MP502
10	3/8	790H-06N12	76.5	44.5	7.14	17	12	4599-MP502
10	3/8	790H-06N14	79.5	47.5	7.14	19	14	4599-MP503
10	3/8	790H-06N16	82.5	50.5	7.14	22	16	4599-MP504
13	1/2	790H-08N14	85.3	47.3	9.93	22	14	4599-MP504
13	1/2	790H-08N15	85.3	47.3	9.93	22	15	4599-MP504
13	1/2	790H-08N16	87.3	49.3	9.93	22	16	4599-MP504
13	1/2	790H-08N18	88.3	50.3	9.93	22	18	4599-MP504
13	1/2	790H-08N20	89.3	51.3	9.93	24	20	4599-MP505
20	3/4	790H-12N20	94.6	51.6	15.88	30	20	4599-MP508
20	3/4	790H-12N22	96.6	53.6	15.88	30	22	4599-MP508
20	3/4	790H-12N25	98.6	55.6	15.88	30	25	4599-MP508
20	3/4	790H-12N28	99.6	56.6	15.88	32	28	4599-MP509
25	1	790H-16N25	110.3	53.3	20.65	36	25	4599-MP510
25	1	790H-16N28	111.3	54.3	20.65	36	28	4599-MP510
25	1	790H-16N30	112.3	55.3	20.65	40	30	4599-MP511
25	1	790H-16N35	113.3	56.3	20.65	40	35	4599-MP511

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

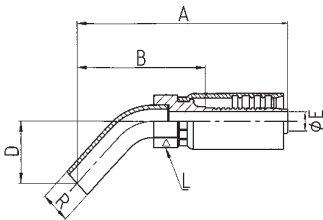
Metric, BSP and JIS Hose Fittings

Code N 100
Metric Stand Pipe
90° Elbow



HOSE D.N.	HOSE I.D.	FITTING PART #	A mm	B mm	D mm	ØE mm	L mm	R mm	PUSHER 4599
3	1/8	7903-02N06-100	38.0	24.0	32	2.08	13	6	4599-TP204
4	3/16	7903-03N06-100	53.0	34.0	32	2.77	14	6	4599-TP204
4	3/16	7903-03N08-100	55.8	36.8	34	2.77	14	8	4599-TP205
6	1/4	7903-04N06-100	57.0	31.0	32	3.96	17	6	4599-TP204
6	1/4	7903-04N08-100	59.0	33.0	34	3.96	17	8	4599-TP205
6	1/4	7903-04N10-100	61.0	35.0	38	3.96	17	10	4599-TP206
8	5/16	7903-05N08-100	61.2	33.2	34	5.56	17	8	4599-TP205
8	5/16	7903-05N10-100	63.2	35.2	38	5.56	17	10	4599-TP206
8	5/16	7903-05N12-100	67.2	39.2	43	5.56	17	12	4599-TP210
10	3/8	7903-06N10-100	68.0	36.0	38	7.14	17	10	4599-TP206
10	3/8	7903-06N12-100	72.0	40.0	43	7.14	17	12	4599-TP210
13	1/2	7903-08N15-100	82.0	44.0	48	9.93	22	15	4599-TP310
13	1/2	7903-08N16-100	84.0	46.0	54	9.93	22	16	4599-TP310
13	1/2	7903-08N18-100	91.0	53.0	54	9.93	28	18	4599-TP312
4	3/16	790H-03N06-100	53.0	34.0	32	2.77	14	6	4599-TP204
4	3/16	790H-03N08-100	55.8	36.8	34	2.77	14	8	4599-TP205
6	1/4	790H-04N06-100	57.0	31.0	32	3.96	17	6	4599-TP204
6	1/4	790H-04N08-100	59.0	33.0	34	3.96	17	8	4599-TP205
6	1/4	790H-04N10-100	61.0	35.0	38	3.96	17	10	4599-TP206
10	3/8	790H-06N10-100	68.0	36.0	38	7.14	17	10	4599-TP206
10	3/8	790H-06N12-100	72.0	40.0	43	7.14	17	12	4599-TP210
13	1/2	790H-08N15-100	82.0	44.0	48	9.93	22	15	4599-TP310
13	1/2	790H-08N16-100	84.0	46.0	54	9.93	22	16	4599-TP310
13	1/2	790H-08N18-100	91.0	53.0	54	9.93	28	18	4599-TP312

Code N-300 Metric
Stand Pipe,
45° Elbow



HOSE D.N.	HOSE I.D.	FITTING PART #	A mm	B mm	D mm	ØE mm	L mm	R mm	PUSHER 4599
4	3/16	7903-03N06-300	65.4	46.4	18.4	2.77	14	6	4599-TP204
4	3/16	7903-03N08-300	66.8	47.8	19.0	2.77	14	8	4599-TP205
6	1/4	7903-04N06-300	70.0	44.0	18.5	3.96	17	6	4599-TP204
6	1/4	7903-04N08-300	71.0	45.0	19.0	3.96	17	8	4599-TP205
6	1/4	7903-04N10-300	74.0	48.0	21.1	3.96	17	10	4599-TP206
8	5/16	7903-05N10-300	76.0	48.0	21.1	5.56	17	10	4599-TP206
8	5/16	7903-05N12-300	79.6	51.6	23.0	5.56	17	12	4599-TP210
10	3/8	7903-06N12-300	84.5	52.5	23.0	7.14	17	12	4599-TP210
13	1/2	7903-08N15-300	93.0	55.0	24.4	9.93	22	15	4599-TP310
13	1/2	7903-08N16-300	97.0	59.0	27.8	9.93	22	16	4599-TP310
13	1/2	7903-08N18-300	102.0	64.0	27.0	9.93	28	18	4599-TP312
4	3/16	790H-03N06-300	65.4	46.4	18.4	2.77	14	6	4599-TP204
4	3/16	790H-03N08-300	66.8	47.8	19.0	2.77	14	8	4599-TP205
6	1/4	790H-04N06-300	70.0	44.0	18.5	3.96	17	6	4599-TP204
6	1/4	790H-04N08-300	71.0	45.0	19.0	3.96	17	8	4599-TP205
6	1/4	790H-04N10-300	74.0	48.0	21.1	3.96	17	10	4599-TP206
10	3/8	790H-06N12-300	84.5	52.5	23.0	7.14	17	12	4599-TP210
13	1/2	790H-08N15-300	93.0	55.0	24.4	9.93	22	15	4599-TP310
13	1/2	790H-08N16-300	97.0	59.0	27.8	9.93	22	16	4599-TP310
13	1/2	790H-08N18-300	102.0	64.0	27.0	9.93	28	18	4599-TP312

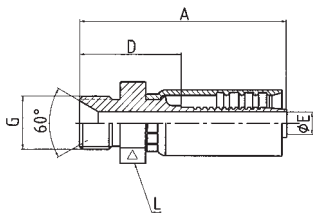
Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

Metric, BSP and JIS Hose Fittings

NOTE: Fittings may be ordered individually by adding a "-0" following the part number.

Code QBSP Male Rigid

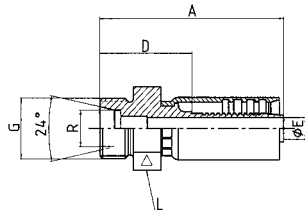


HOSE D.N.	HOSE I.D.	THREAD G	FITTING PART #	A mm	B mm	D mm	ØE mm	PUSHER 4599
3	1/8	1/8-28	7903-02Q02	33.3	19.3	2.08	13	4599-MP001
4	3/16	1/8-28	7903-03Q02	48.3	29.3	2.77	14	4599-MP501
4	3/16	1/4-19	7903-03Q04	51.5	32.5	2.77	17	4599-MP502
6	1/4	1/8-28	7903-04Q02	52.4	26.4	3.96	14	4599-MP501
6	1/4	1/4-19	7903-04Q04	55.6	29.6	3.96	17	4599-MP502
8	5/16	1/4-19	7903-05Q04	57.8	29.8	5.56	17	4599-MP502
8	5/16	3/8-19	7903-05Q06	60.3	32.3	5.56	22	4599-MP504
10	3/8	3/8-19	7903-06Q06	65.2	33.2	7.14	21	4599-MP504
10	3/8	1/2-14	7903-06Q08	70.3	38.3	7.14	26	4599-MP506
13	1/2	1/2-14	7903-08Q08	75.2	37.2	9.93	27	4599-MP506
13	1/2	5/8-14	7903-08Q10	75.8	37.8	9.93	30	4599-MP508
13	1/2	3/4-14	7903-08Q12	78.8	40.8	9.93	32	4599-MP509
20	3/4	3/4-14	7903-12Q12	83.7	40.7	15.88	32	4599-MP509
25	1	1-11	7903-16Q16	96.8	39.8	20.65	40	4599-MP511
4	3/16	1/8-28	790H-03Q02	48.3	29.3	2.77	14	4599-MP501
4	3/16	1/4-19	790H-03Q04	51.5	32.5	2.77	17	4599-MP502
6	1/4	1/8-28	790H-04Q02	52.4	26.4	3.96	14	4599-MP501
6	1/4	1/4-19	790H-04Q04	55.6	29.6	3.96	17	4599-MP502
10	3/8	3/8-19	790H-06Q06	65.2	33.2	7.14	21	4599-MP504
10	3/8	1/2-14	790H-06Q08	70.3	38.3	7.14	26	4599-MP506
13	1/2	1/2-14	790H-08Q08	75.2	37.2	9.93	27	4599-MP506
13	1/2	5/8-14	790H-08Q10	75.8	37.8	9.93	30	4599-MP508
13	1/2	3/4-14	790H-08Q12	78.8	40.8	9.93	32	4599-MP509
20	3/4	3/4-14	790H-12Q12	83.7	40.7	15.88	32	4599-MP509
25	1	1-11	790H-16Q16	96.8	39.8	20.65	40	4599-MP511

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

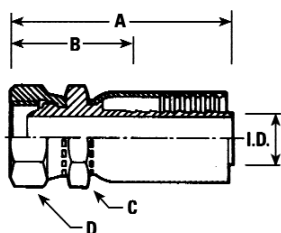
Metric, BSP and JIS Hose Fittings

Code S
Metric Male Rigid
(DIN 3901-3902)



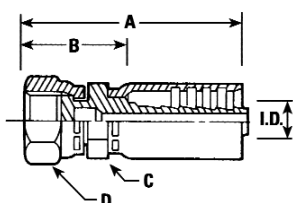
HOSE D.N.	HOSE I.D.	THREAD G	FITTING PART #	A mm	D mm	ØE mm	L mm	R mm	PUSHER 4599
4	3/16	M12x1.5	7903-03SL06	50.3	31.3	2.77	17	6	4599-MP502
6	1/4	M14x1.5	7903-04SL08	54.4	28.4	3.96	19	8	4599-MP503
6	1/4	M16x1.5	7903-04SL10	55.4	29.4	3.96	20	10	4599-MP503
8	5/16	M16x1.5	7903-05SL10	57.6	29.6	5.56	20	10	4599-MP503
8	5/16	M18x1.5	7903-05SL12	58.6	30.6	5.56	22	12	4599-MP504
8	5/16	M22x1.5	7903-05SL15	61.6	33.6	5.56	26	15	4599-MP506
10	3/8	M16x1.5	7903-06SL10	62.5	30.5	7.14	20	10	4599-MP503
10	3/8	M18x1.5	7903-06SL12	63.5	31.5	7.14	22	12	4599-MP504
10	3/8	M22x1.5	7903-06SL15	66.5	34.5	7.14	26	15	4599-MP506
13	1/2	M22x1.5	7903-08SL15	71.3	33.3	9.93	26	15	4599-MP506
13	1/2	M26x1.5	7903-08SL18	71.8	33.8	9.93	32	18	4599-MP509
20	3/4	M30x2.0	7903-12SL22	78.6	35.6	15.88	36	22	4599-MP510
25	1	M36x2.0	7903-16SL28	90.3	33.3	20.65	40	28	4599-MP511
8	5/16	M18x1.5	7903-05SS10	59.6	31.6	5.56	22	10	4599-MP504
8	5/16	M20x1.5	7903-05SS12	61.6	33.6	5.56	24	12	4599-MP505
4	3/16	M16x1.5	790H-03SS08	52.3	33.3	2.77	20	8	4599-MP503
6	1/4	M16x1.5	790H-04SS08	56.4	30.4	3.96	20	8	4599-MP503
6	1/4	M18x1.5	790H-04SS10	57.4	31.4	3.96	22	10	4599-MP504
6	1/4	M20x1.5	790H-04SS12	59.4	33.4	3.96	22	12	4599-MP505
10	3/8	M20x1.5	790H-06SS12	66.5	34.5	7.14	24	12	4599-MP505
10	3/8	M22x1.5	790H-06SS14	68.5	36.5	7.14	26	14	4599-MP506
10	3/8	M24x1.5	790H-06SS16	68.5	36.5	7.14	28	16	4599-MP507
13	1/2	M24x1.5	790H-08SS16	73.3	35.3	9.93	28	16	4599-MP507
13	1/2	M30x2.0	790H-08SS20	75.8	37.8	9.93	36	20	4599-MP510
20	3/4	M36x2.0	790H-12SS25	82.6	39.6	15.88	40	25	4599-MP511
25	1	M42x2.0	790H-16SS30	99.3	42.3	20.65	46	30	4599-MP512

JIS Female Swivel
60° Male Cone (PF)



HOSE I.D.	THREAD	FITTING PART #	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	PUSHER 4599
3/16	1/4-19	7903-03V44	.109	2.16	1.38	19	19	FP413
1/4	1/4-19	7903-04V44	.156	2.48	1.40	19	19	FP414
5/16	3/8-19	7903-05V46	.219	2.35	1.22	22	22	FP416
3/8	3/8-19	7903-06V46	.281	2.87	1.56	22	22	FP416
1/2	1/2-14	7903-08V48	.391	3.23	1.67	27	27	FP418
3/16	1/4-19	790H-03V44	.109	2.16	1.38	17	19	FP413
1/4	1/4-19	790H-04V44	.156	2.48	1.40	19	19	FP414
3/8	3/8-19	790H-06V46	.281	2.87	1.56	22	22	FP416
1/2	1/2-14	790H-08V48	.391	3.23	1.67	27	27	FP418

JIS Female Swivel 60°
Female Cone (PF)



HOSE I.D.	THREAD (PF)	FITTING PART #	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	PUSHER 4599
1/4	1/4-19	7903-04V04	.156	2.48	1-3/8	19	19	FP414
3/8	3/8-19	7903-06V06	.281	2.87	1-9/16	22	22	FP416
1/2	1/2-14	7903-08V08	.391	3.23	1-11/16	22	27	FP418
3/4	3/4-14	7903-12V12	.625	3.39	1-3/4	36	36	FP422
1/4	1/4-19	790H-04V04	.156	2.48	1-3/8	19	19	FP414
3/8	3/8-19	790H-06V06	.281	2.87	1-9/16	22	22	FP416
1/2	1/2-14	790H-08V08	.391	3.23	1-11/16	22	27	FP418
3/4	3/4-14	790H-12V12	.625	3.39	1-3/4	29	35	FP422

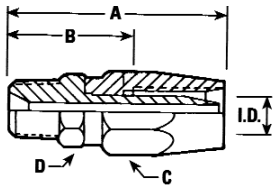
Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

Reusable Hose Fittings

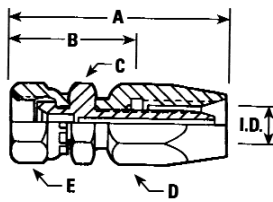
NOTE: Fittings may be ordered individually by adding a "-0" following the part number.

Male Pipe



HOSE I.D.	PIPE THREAD	FITTING PART #	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	FORMER PART #
3/16	1/8	90103-021000	.144	1.797	7/8	9/16	7/16	3901-03102
3/16	1/4	90103-041000	.144	1.985	1-1/16	9/16	9/16	3901-03104
1/4	1/4	90104-041000	.218	2.219	1-1/8	5/8	9/16	3901-04104
5/16	1/4	90105-041000	.266	2.406	1-3/16	3/4	9/16	3901-05104
5/16	3/8	90105-061000	.266	2.406	1-3/16	3/4	11/16	3901-05106
3/8	3/8	90106-061000	.323	2.515	1-1/4	13/16	11/16	3901-06106
1/2	3/8	90108-081000	.402	2.896	1-3/8	1	7/8	3901-08106
1/2	1/2	90108-081000	.438	3.078	1-9/16	1	7/8	3901-08108
3/4	3/4	90112-121000	.688	3.203	1-5/8	1-3/8	1-1/8	3901-12112
1	1	90116-161000	.875	3.501	1-3/4	1-5/8	1-3/8	3901-16116
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1/2	3/8	90J08-081000	.402	2.896	1-3/8	1-1/8	7/8	390J-08106
1/2	1/2	90J08-081000	.438	3.078	1-9/16	1-1/8	7/8	390J-08108
3/4	3/4	90J12-121000	.688	3.203	1-5/8	1-3/8	1-1/8	390J-12112
1	1	90316-161000	.875	3.501	1-3/4	1-5/8	1-3/8	390J-16116

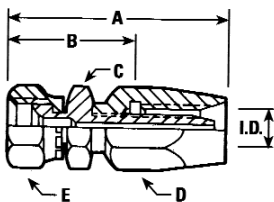
JIC 37° Swivel



HOSE I.D.	DASH SIZE	PIPE THREAD	FITTING PART #	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	HEX E	FORMER PART #
3/16	-4	7/16-20	90103-045400	.144	2.017	1-1/8	9/16	9/16	9/16	3901-03544
1/4	-4	7/16-20	90104-045400	.172	2.251	1-1/4	9/16	5/8	5/8	3901-04544
1/4	-5	1/2-20	90104-055400	.218	2.312	1-5/16	5/8	5/8	3/4	3901-04545
1/4	-6	9/16-18	90104-065500	.218	2.406	1-5/16	11/16	5/8	3/4	3901-04546
5/16	-6	9/16-18	90105-065500	.266	2.587	1-5/16	11/16	3/4	11/16	3901-05546
3/8	-6	9/16-18	90106-065500	.297	2.696	1-7/16	11/16	13/16	11/16	3901-06546
3/8	-8	3/4-16	90106-085400	.323	2.878	1-5/8	7/8	13/16	7/8	3901-06548
1/2	-8	3/4-16	90108-085400	.375	3.253	1-3/4	7/8	1	7/8	3901-08548
1/2	-10	7/8-14	90108-105400	.438	3.291	1-3/4	1	1	1	3901-08550
3/4	-12	1-1/16-12	90112-125500	.688	3.422	1-15/16	1-1/4	1-3/8	1-1/4	3901-12552
1	-16	1-5/16-12	90116-165500	.844	3.550	1-15/16	1-1/2	1-5/8	1-1/2	3901-16556
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3/16	-4	7/16-20	90J03-045400	.125	2.704	1-1/4	9/16	9/16	5/8	390J-03544
1/2	-8	3/4-16	90J08-085400	.391	3.253	1-3/4	7/8	7/8	1-1/8	390J-08548
1/2	-10	7/8-14	90J08-105400	.438	3.291	1-3/4	1	1-1/8	1	390J-08550
3/4	-12	1-1/16-12	90J12-125500	.688	3.422	1-15/16	1-1/4	1-3/8	1-1/4	390J-12552
1	-16	1-5/16-12	90J16-165500	.844	3.550	1-15/16	1-1/2	1-5/8	1-1/2	390J-16556

JIC 37° and SAE 45° fittings are interchangeable on all sizes except -3, -6, -12 and -16 tube sizes.

45° SAE Swivel

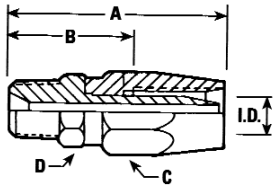


HOSE I.D.	DASH SIZE	PIPE THREAD	FITTING PART #	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	HEX E	FORMER PART #
1/8	-5	1/2-20	90102-05A000	.109	1.847	1-1/16	5/8	11/16	1/2	3901-02A05
3/16	-4	7/16-20	90103-045400	.144	2.017	1-1/8	9/16	9/16	9/16	3901-03544
1/4	-4	7/16-20	90104-045400	.172	2.251	1-1/4	9/16	5/8	5/8	3901-04544
1/4	-5	1/2-20	90104-055400	.218	2.312	1-5/16	5/8	5/8	3/4	3901-04545
5/16	-6	5/8-18	90105-06A000	.266	2.637	1-3/8	3/4	3/4	3/4	3901-05A06
3/8	-6	5/8-18	90106-06A000	.297	2.746	1-1/2	3/4	3/4	13/16	3901-06A06
3/8	-8	3/4-16	90106-085400	.323	2.878	1-5/8	7/8	13/16	7/8	3901-06548
1/2	-8	3/4-16	90108-085400	.391	3.253	1-3/4	7/8	1	7/8	3901-08548
1/2	-10	7/8-14	90108-105400	.438	3.291	1-3/4	1	1	1	3901-08550

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

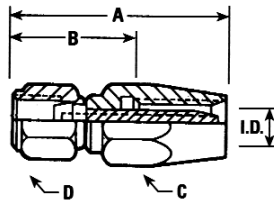
Reusable Hose Fittings

Male Pipe AISI 303 Series Stainless Steel



HOSE I.D.	DASH SIZE	PIPE THREAD	FITTING PART #	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	FORMER PART #
3/16	-	1/8	90803-021000	.144	1.797	7/8	9/16	7/16	3908-03102
3/16	-	1/4	90803-041000	.144	1.989	1-1/16	9/16	9/16	3908-03104
1/4	-	1/4	90804-041000	.218	2.219	1-1/8	5/8	9/16	3908-04104
5/16	-	1/4	90805-051000	.266	2.406	1-3/16	3/4	9/16	3908-05105
3/8	-	3/8	90806-061000	.323	2.515	1-1/4	13/16	11/16	3908-06106
1/2	-	1/2	90808-181000	.438	3.078	1-9/16	1	7/8	3908-08108
3/4	-	3/4	90812-121000	.688	3.203	1-5/8	1-3/8	1-1-8	3908-12112
1	-	1	90816-161000	.875	3.501	1-3/4	1-1/2	1-3/8	3908-16116

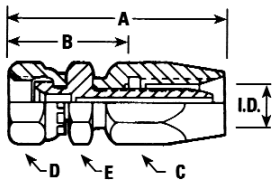
JIC 37° Swivel AISI 303 Series Stainless Steel



HOSE I.D.	DASH SIZE	PIPE THREAD	FITTING PART #	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	FORMER PART #
3/16	-4	7/16-20	90803-045400	.144	1.844	15/16	9/16	9/16	3908-03544
1/4	-4	7/16-20	90804-045400	.172	2.560	1-1/2	5/8	9/16	3908-04544
1/4	-5	1/2-20	90804-055400	.218	2.139	1-1/16	5/8	5/8	3908-04545
5/16	-6	9/16-18	90805-065500	.266	2.375	1-1/8	3/4	11/16	3908-05546
3/8	-6	9/16-18	90806-065500	.297	2.696	1-7/16	1-3/16	11/16	3908-06546
3/8	-8	3/4-16	90806-085400	.323	2.608	1-5/16	13/16	7/8	3908-06548
1/5	-8	3/4-16	90808-085400	.383	3.838	2-5/16	1	7/8	3908-08548
1/2	-10	7/8-14	90808-105400	.438	3.038	1-1/2	1	1	3908-08550
3/4	-12	1-1/16-12	90812-125500	.609	4.093	2-1/2	1-3/8	1-1/4	3908-12552
1	-16	1-5/16-12	90816-165500	.875	4.287	2-9/16	1-1/2	1-1/2	3908-16556

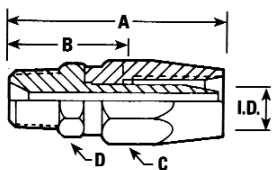
3/16	-4	7/16-20	90K03-045400	.186	2.450	1	5/8	9/16	390K-03544
1/2	-8	3/4-16	90K08-085400	.437	3.838	2-5/16	1-1/8	7/8	390K-08548
1/2	-10	7/8-14	90K08-105400	.438	3.038	1/2	1-1/8	1	390K-08550
3/4	-12	1-1/16-12	90K12-125500	.688	4.250	2-11/16	1-3/8	1-1/4	390K-12552

JIC 37° Female Swivel



HOSE I.D.	THREAD	FITTING PART #	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	HEX E	FORMER PART #
3/16	7/16-20	90203-045400	.144	2.017	1-1/8	9/16	9/16	9/16	3902-03544
1/4	7/16-20	90204-045400	.170	2.246	1-3/8	5/8	5/8	11/16	3902-04544
1/4	1/2-20	90204-055400	.170	2.376	1-3/8	5/8	3/4	5/8	3902-04545
1/4	9/16-18	90204-065500	.170	2.340	1-3/8	5/8	3/4	11/16	3902-04546
5/16	1/2-20	90205-055400	.230	2.616	1-1/2	3/4	3/4	5/8	3902-05545
5/16	9/16-18	90205-065500	.230	2.585	1-1/2	3/4	3/4	5/8	3902-05546
3/8	9/16-18	90206-065500	.265	2.780	1-1/2	7/8	3/4	11/16	3902-06546
3/8	3/4-16	90206-085400	.265	2.854	1-1/2	7/8	15/16	7/8	3902-06548
1/2	9/16-18	90208-065500	.390	3.211	1-3/4	1-1/16	3/4	7/8	3902-08546
1/2	3/4-16	90208-085400	.390	3.242	1-3/4	1-1/16	15/16	7/8	3902-08548
3/4	1-1/16-12	90212-125500	.600	3.625	1-3/4	1-3/8	1-1/4	1-1/8	3902-12552

Male Pipe Rigid



HOSE I.D.	THREAD	FITTING PART #	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	FORMER PART #
3/16	1/4-18	90203-041000	.144	2.376	1-1/4	9/16	9/16	3902-03104
1/4	1/4-18	90204-041000	.170	2.150	1-1/4	5/8	9/16	3902-04104
5/16	1/4-18	90205-041000	.230	2.400	1-1/4	3/4	9/16	3902-05104
3/8	3/8-18	90206-061000	.265	2.595	1-3/4	7/8	11/16	3902-06106
1/2	1/2-14	90208-081000	.390	3.216	1-3/4	1-1/16	7/8	3902-08108
3/4	3/4-14	90212-121000	.600	3.406	1-3/4	1-3/8	1-1/8	3902-12112

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.

LOW/MEDIUM PRESSURE

CONSTANT PRESSURE HOSE

HIGH PRESSURE

TWIN LINE HOSE

AIR, WATER & TUBING

SPECIALTY HOSE

HOSE FITTINGS

HOSE ASSEMBLY EQUIPMENT

ACCESSORIES

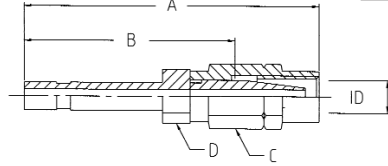
TECHNICAL DATA

Reusable Hose Fittings

NOTE: Fittings may be ordered individually by adding a "-0" following the part number.

Metric Standard Pipe (Grease Hose Series)

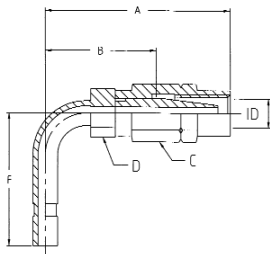
HOSE I.D.	TUBE O.D. mm	INSERT PART #	SHELL PART #	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D
5/32	6	7950-M4N06	7951-M4000	0.126	2.126	1-3/8	10	12



Metric Standard Pipe 90° Elbow (Grease Hose Series)

HOSE I.D.	TUBE O.D. mm	INSERT PART #	SHELL PART #	BORE I.D.	LENGTH A	CUT OFF B	HEX C	HEX D	DROP F
5/32	6	7950-M4N06-10L	7951-M4000	0.126	1.772	1-1/16	10	12	1.811

Fittings are manufactured from plated steel. Dimensions are in inches unless otherwise specified.



390C Brass Hose Fittings

390C Series Brass Fittings are ordered by selecting components from the parts shown to the right and on the next page.

Fittings are intended for use with hose clamps or brass ferrules.

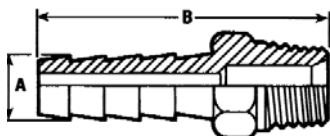
Dimensions are in inches unless otherwise specified.

*Contact Customer Support for 390C Series Swaging Pusher recommendations.

Construction

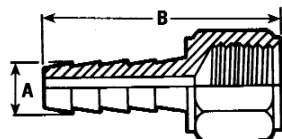
- Machined from 360 alloy brass
- Pipe Thread manufactured to dryseal specifications
- 3/16" ID Hose Barb Stems contain three barbs; 1/4" ID and larger contain four barbs.

NPT Male/Hose Barb



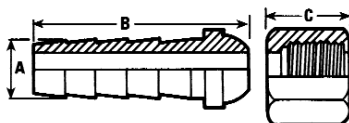
SIZE	NPT THREAD	FITTING PART #	LENGTH B	HEX
3/16	1/8-27	3980-77320	1.36	7/16
3/16	1/4-18	3980-77420	1.54	9/16
1/4	1/8-27	3980-71720	1.58	1/2
1/4	1/4-18	3980-71820	1.76	9/16
1/4	3/8-18	3980-71920	1.76	11/16
3/8	1/4-18	3980-72020	1.76	9/16
3/8	3/8-18	3980-72120	1.76	11/16
3/8	1/2-24	3980-72220	1.97	7/8
1/2	3/8-18	3980-77520	1.76	11/16
1/2	1/2-14	3980-77620	1.97	7/8
1/2	3/4-14	3980-77920	1.97	1-1/16
3/4	1/2-14	3980-77720	2.19	7/8
3/4	3/4-14	3980-77820	2.19	1-1/16

NPT Female/Hose Barb



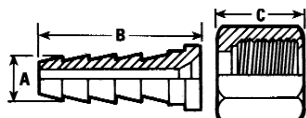
SIZE	NPT THREAD	FITTING PART #	LENGTH B	HEX
3/16	1/4-18	3980-82320	1.44	5/8
1/4	1/4-18	3980-71520	1.66	5/8
3/8	1/4-18	3980-84420	1.66	5/8
3/8	3/8-18	3980-71620	1.66	3/4
1/2	3/8-18	3980-84520	1.66	3/4
1/2	1/2-14	3980-82420	1.66	15/16
3/4	3/4-14	3980-82520	2.19	1-3/16

NPS Female Swivel/Hose Barb Ball Seat Type



SIZE A	NPS THREAD	FITTING PART #	STEM LENGTH B	NUT LENGTH C	HEX
3/16	1/4-18	3983-24412	1.17	.53	5/8
1/4	1/4-18	3983-24413	1.39	.53	5/8
3/8	3/8-18	3983-24605	1.45	.63	3/4
1/2	1/2-14	3983-24802	1.54	.69	15/16
3/4	3/4-14	3983-25202	1.69	.75	1-1/8

Female Swivel/Hose Barb 37° JIC/ 45° SAE



SIZE A	TUBE O.D.	THREAD	FITTING PART #	STEM LENGTH B	NUT LENGTH C	HEX
3/16	1/4	7/16-20	3983-54416	1.02	.60	9/16
1/4	1/4	7/16-20	3983-54417	1.24	.60	9/16
1/2	1/2	3/4-16	3983-54806	1.34	.84	7/8
3/8	3/8	5/8-18	3983-A0606	1.27	.68	3/4
1/4	3/8	9/16-18	3983-54614	1.31	.69	11/16
3/8	3/8	9/16-18	3983-54615	1.31	.69	11/16

LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

390C Brass Hose Fittings

NOTE: Fittings may be ordering individually by adding a "-0" following the part number.

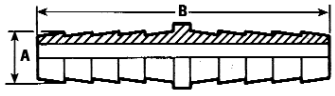
390C Series Brass Fittings are ordered by selecting components from the parts shown to the right and on the previous page.

Fittings are intended for use with hose clamps or brass ferrules.

Dimensions are in inches unless otherwise specified.

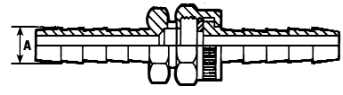
*Contact Customer Support for 390C Series Swaging Pusher recommendations.

Hose Splicer



SIZE A	FITTING PART #	LENGTH B
1/4	3980-82920	2.03
3/8	3980-83020	2.06
1/2	3980-83120	2.06
3/4	3680-83220	2.50

Garden Hose Fitting Set

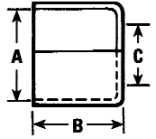


HOSE I.D. A (BOTH FITTINGS)	THREAD	FITTING PART #
1/2	3/4-11-1/2	3983-GHS01
3/4	3/4-11-1/2	3983-GHS02

Construction

- Machined from 360 alloy brass
- Pipe Thread manufactured to dryseal specifications
- 3/16" ID Hose Barb Stems contain three barbs; 1/4" ID and larger contain four barbs.

Brass Ferrule



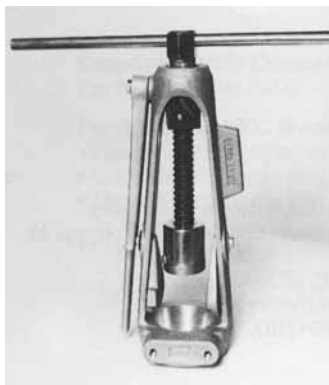
SIZE	FITTING PART #	FERRULE I.D. A	FERRULE LENGTH B	HOSE SIZE C
3/16	3981-30220	.400	.47	.27
1/4	3981-30320	.500	1.00	.34
3/8	3981-19120	.656	1.00	.44
1/2	3981-30420	.812	1.00	.63
3/4	3981-30520	1.150	.88	.88

Hose Fitting Swaging Machines and Tools

Designed to Attach Synflex Permanent Fittings to Synflex Hose

- Synflex swaging equipment produces smooth, uniform fitting surfaces, without raised edges or ridges common in other fitting methods.
- Complete range of fitting swaging pushers and dies, up to -16 size are ordered separately.

SST



SST

Part No.: 4530-01002

- Portable hand operated machine for field assembly
- Frame can be attached to bench vise or directly to a table with separate mounting bracket
- Weight: 8 lbs (3.6kg)

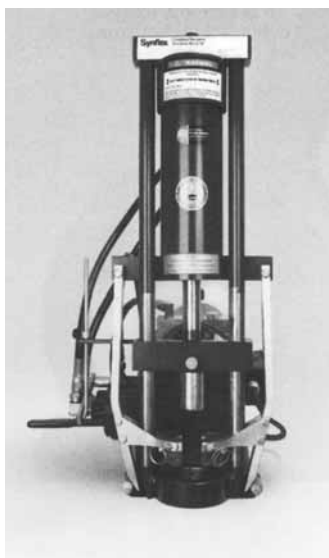
Carrying Case



Carrying Case for Portable Hand Swager SST

Part No.: 45JO-05600

Mark IX



Mark IX

- Fully automatic; opens dies to release completed fitting assembly
- Fast actuation; capable of 5-second cycle time
- Three power supply options for a broad range of production needs
- Weight: 131 lbs (59.4kg). (option 1&2)

Option 1

1HP, 60Hz, 115/208/230V Single Phase Motor; Medium Duty; Part No.: 4530-009S0

Option 2

1HP, 60 Hz, 230/460 V Three Phase Motor; Medium Duty; Part No.: 4530-009S1

Option 3

- For Heavy Duty, continuous high speed production assembly, the Mark IX (a) can be equipped with a high capacity power unit (b)
- (a) Mark IX swaging machine without standard power supply. Part No.: 4530-009S4
- (b) Commercial duty hydraulic power unit with 5HP three phase 230/460 volt motor, 5 gallon reservoir; 4.1 GPM displacement. Part No.: 453C-00020

LOW/MEDIUM PRESSURE

CONSTANT PRESSURE HOSE

HIGH PRESSURE

TWIN LINE HOSE

AIR, WATER & TUBING

SPECIALTY HOSE

HOSE FITTINGS

HOSE ASSEMBLY EQUIPMENT

ACCESSORIES

TECHNICAL DATA

Pushers, Dies

Pushers



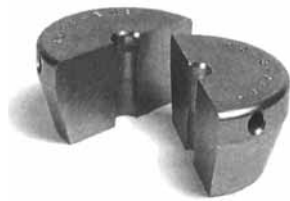
Pushers

- Pusher selection is based on fitting end design chosen from assembly. Pusher part numbers are listed in the Fitting Tables on pages 32-51.

Example:

- To attach a 3/8 inch I.D. hose to a JIC 37° Female Swivel fitting with a -6 thread size Part No. 90306-065400, page 42, use pusher Part No. 4599-FP015

Dies



Dies

- Swaging dies are applied in paired sets. Die selection is based on hose series and size. Die part numbers are listed in hose selection chart.

Example:

- To attach fitting Part No. 90306-065400 to a series 3130 3/8 inch I.D. hose, die Part No. 4540-306 is selected from the table in page 8.

Die Pusher Storage Rack



Die Pusher Storage Rack

- Rack holds 12 pushers and 8 dies. Welded 16 gauge steel frame can be wall mounted or used on bench top. Rack is 19 inches wide; 22-1/2 inches high; extends 3 inches from mounting surface.

Part No.: 45J0-03401

Hose Fitting Ferrule Crimper

ET1000

Portable, Light Duty, Positive Stop Crimp Machine

Eaton is proud to add the ET1000 crimp machine to its line of portable crimpers. While being our most economical crimp machine to-date, the new ET1000 machine boasts a broad crimp capability with an ease-of-use that is sure to please hose assemblers.



Specifications

Dimensions-22 inches high, 16 inches wide, 14 inches in depth

Weight 70 lbs. (without pump)

ET1000 Crimp Machine Part Numbers

For tooling and crimping information, refer to the Collet/Spacer Ring Selector Chart, A-EOCR-MG001-E.

All part numbers include the basic crimp machine.

ET1000-001 = No pump, no tooling (basic machine only)

ET1000-002 = Hand-pump, no tooling

ET1000-003 = Air/hydraulic pump, no tooling

ET1000-004 = 110 volt 1/2HP electric pump, no tooling

ET1000-005 = 12 V DC pump, no tooling

ET1000 Crimp Machine Package Part Numbers

These machine packaged part numbers offer a variety of pumps with the same tooling package including all collets and spacer rings to crimp:

1-wire and 2-wire braided MatchMate Plus Hose (sizes 1/4 through 1 1/4") using TTC fittings

GH493, 4-wire spiral MatchMate Plus Hose (sizes 3/8 through 1") using TTC12 fittings

ET1000-006 = No pump, but includes complete MatchMate Plus Collet and Spacer Ring Tooling package described above

ET1000-007 = Air/hydraulic pump, and complete MatchMate Plus Collet and Spacer Ring Tooling package described above

ET1000-008 = 110 Volt electric pump, and complete MatchMate Plus Collet and Spacer Ring Tooling package described above

ET1000-009 = 2-Stage hand pump, and complete MatchMate Plus Collet and Spacer Ring Tooling package described above

ET1000-010 = 12 Volt DC pump, and complete MatchMate Plus Collet and Spacer Ring Tooling package described above

Fitting Ferrule Crimper

Part No.: 4549-01000



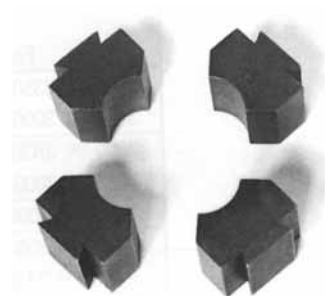
For Attaching 390C Brass Fitting to Synflex 3630

- Hand operated crimping tool with removable handle
- Easy to bench mount – weighs 27 lbs.(12kg)
- Use with die set series 4548, sold separately by hose size.
- Comes with complete instructions

Dies for Fitting Ferrule Crimper

HOSE I. D.	PART #
3/16"	4548-03750
1/4"	4548-05000
3/8"	4548-06000
1/2"	4548-07500
3/4"	*

* Crimp Specification For –12, 3/4 I. D. Hose: Use a power crimper with a flat crimp die that will have a minimum gap between dies when crimped to 1.095 ±.010



Die set contains (4) mating segments

LOW/MEDIUM PRESSURE

CONSTANT PRESSURE HOSE

HIGH PRESSURE

TWIN LINE HOSE

AIR, WATER & TUBING

SPECIALTY HOSE

HOSE FITTINGS

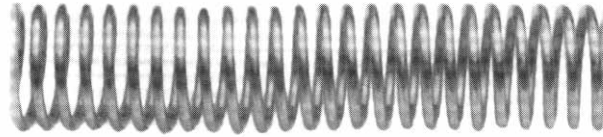
HOSE ASSEMBLY EQUIPMENT

ACCESSORIES

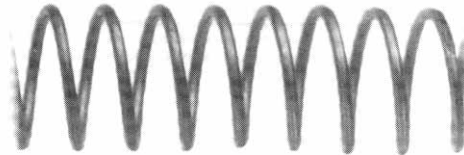
TECHNICAL DATA

Overall Spring Guards

Type 2



Type 3

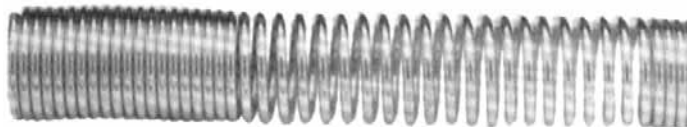


- For assembly abrasion protection and support
- Protects hose from kinking
- Order in multiples of 25-ft (7.6m) lengths

HOSE PART #	STANDARD LENGTH FT	TYPE 2 PART #	TYPE 3 PART #
3800-03, 3R30-03, 3130-03, 3000-03, 37AL-03	25	4521-50000	-
3800-04, 3R30-04, 3440-04, 3130-04, 3V10-03, 3000-04, 37AL-04, 30CT-04	25	4521-51000	4521-02000
3000-05	25	4521-84000	4521-03000
3800-06, 3440-06, 34PW-06, 3130-06, 3130-05, 37AL-05, 37AL-06, 30CT-05, 30CT-06	25	4521-53000	4521-04000
3800-08, 3R30-08, 3440-08, 34PW-08, 3130-08, 3000-08, 37AL-08, 30CT-08	25	4521-54000	4521-05000
3000-12	25	4521-55000	-
3000-16	10	4521-56000	-
34PW-10, 3440-10, 3130-12	25	4521-88000	-
3R80-03	25	4521-83000	-
3V10-04, 3130-05	25	4521-84000	-
3R80-06	25	4521-58000	-
3R80-08	25	4521-59000	4521-10000
3R80-12	25	4521-60000	-
3R80-16	10	4521-61000	-
3R80-04, 3000-06	25	4521-57000	-

Hose Accessories

Hose and Spring Guards



- For fitting-to-hose interface protection
- Made from high-grade spring steel wire.
- Hose guards provide protection against kinking at fittings.
- Spring-type guards hand screw to the fitting shell to form a single unit assembly.

HOSE PART #	PART #
3R30-04, 3800-04, 3130-04, 3000-04, 37AL-04, 30CT-04	4521-91005
3130-05, 3000-05, 37AL-05, 30CT-05	4521-90005
3R30-06, 3R80-04	4521-92005
3R30-03, 3800-03, 3130-03, 3000-03, 37AL-03	4521-AG004
3800-06, 3130-06, 3000-06, 37AL-06	4521-94005
30CT-06, 3R80-06	4521-AA005

Plastic Protective Coil Sleeve



- For fitting-to-hose interface protection
- A convenient and economical way to protect hose and tubing lines.
- Can be installed after hose assembly is made.
- Lightweight
- Order in multiples of 20-ft (6m) lengths.

HOSE PART #	PART #
3130-02	4554-04000
3R30-03, 3800-03, 3130-03, 3630-03, 3000-03, 37AL-03	4554-06000
3R30-04, 3130-04, 3630-03, 3000-04, 37AL-04, 30CT-04	4554-07000
3R30-06, 3800-04, 3440-04, 34PW-04, 3130-05, 3R80-03, 3000-05, 37AL-05, 30CT-05	4554-08000
3440-06, 34PW-06, 3130-06, 3R80-04, 3000-06, 37AL-06, 30CT-06	4554-10000
3R30-08, 3800-06, 3130-08, 3R80-06, 3000-08, 37AL-08, 30CT-08	4554-12000
3800-08, 3440-08, 34PW-08, 3R80-08	4554-14000
3130-12, 3R80-12, 3440-10, 34PW-10, 3630-12, 3000-12	4554-16000
3440-12, 34PW-12, 3000-16	4554-19000
3R80-16, 3440-16, 34PW-16	4554-22000

LOW/MEDIUM PRESSURE

CONSTANT PRESSURE HOSE

HIGH PRESSURE

TWIN LINE HOSE

AIR, WATER & TUBING

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HIGH PRESSURE

TWIN LINE HOSE

AIR WATER & TUBING

SPECIALTY HOSE

HOSE FITTINGS

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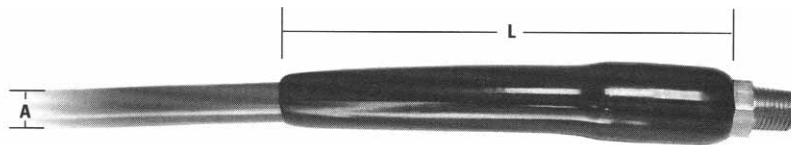
Vinyl Hose Guards



- For assembly abrasion protection and support
- Use when a non-metallic guard is required. Guard assembly may require the use of lubricant on the hose
- Available in 50-ft (15.2m) lengths
- **Note:** 4513-05 100-ft (30m) lengths

HOSE PART #	PART #	GUARD I.D.	GUARD O.D.
3R30-03, 34GW-03, 3130-03, 3800-03, 3000-03, 37AL-03	4513-03000	7/16	9/16
3R30-04, 3440-04, 34PW-04, 3130-04, 3R80-03, 3000-04, 37AL-04, 30CT-04	4513-04000	9/16	13/16
3R30-06, 3440-06, 34PW-06, 3130-06, 3R80-04, 3160-06, 3000-06, 37AL-06, 30CT-06	4513-05000	11/16	1-1/16
3R80-06, 3000-08	4513-06000	15/16	1-13/14
3R80-08, 3800-08	4513-10000	15/16	1-5/16
3130-12, 3R80-12	4513-11000	1-3/16	1-11/16

Molded Black PVC Hose Guards



- For assembly abrasion protection and support
- Protects against abrasion and physical abuse when a stiffer, non-metallic guard is preferred
- For hand-held use, keeps hose from kinking at fitting

HOSE PART #	PART #	GUARD I.D. A	LENGTH L
30CT-04, 3R30-04, 3000-04, 3630-04, 3130-04, 3580-04, 31NO-05, 3R80-03, 3800-04, 37AL-04	45J0-04801	.55	6.0
30CT-06, 3R30-06, 3000-06, 3630-06, 3130-06, 3580-06, 31NO-06, 3R80-04, 3800-06, 37AL-06	45J0-04802	.69	7.0

Hand-Held Hose Cutter

Part No. 4523-04006

- A handy tool for cutting Synflex hose 1/8 inch to 1/2 inch in diameter. Blades are replaceable. Vinyl cushioned grips.



Replacement Blade

Part No. 4523-04005

Swage Lubricant

Part No. 4545-01001

- A lubricant especially for use in assembly of Synflex reusable and permanently attached stainless steel fittings.



Twin-Line Hose Separation Tool

Part No. 4574-01000

- Designed for separating Twin-Line hose



Replacement Blades

(set of 10)

Part No. 4574-02000

Dies

Part No. 4574-03000-XXX

Multi-Line Hose Separation Tool

Part No. 4573-00000

- Designed for Separation of 3, 4 and 5 line hose.



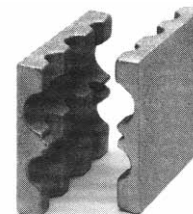
Replacement Blades

Part No. 4573-01000

Vise Blocks

Part No. 4504-00000

- For 3/16 inch through 1/2 inch I.D. hose

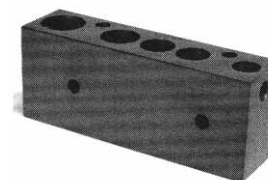


Part No. 4504-01000

- For 3/4 inch and 1 inch I.D. hose. Use in making assemblies.

Insertion Depth Marker

Part No. 45J0-04603



LOW/MEDIUM
PRESSURE

CONSTANT
PRESSURE HOSE

HIGH
PRESSURE

TWIN LINE
HOSE

AIR, WATER
& TUBING

SPECIALTY
HOSE

HOSE
FITTINGS

HOSE ASSEMBLY
EQUIPMENT

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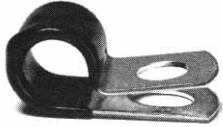
TECHNICAL
DATA

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 AIR, WATER & TUBING
 SPECIALTY HOSE
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Clamps

Plastic – covered clamps to secure hose



HOSE PART #	PART #	BOLT HOSE SIZE (in)
3130-02	45J0-00201	13/32
3130-03, 3630-03, 3800-03, 3000-03, 37AL-03	45J0-00202	13/32
3130-04, 3630-04, 3800-04, 3000-04, 37AL-04, 30CT-04	45J0-00204	13/32
3R80-03, 3130-05, 3000-05, 37AL-05, 30CT-05,	45J0-00203	13/32
3R80-04	45J0-00205	13/32
3130-06, 3630-06, 3800-06, 3000-06, 37AL-06, 30CT-06	45J0-00206	13/32
3R80-06, 3130-08, 3630-08, 3800-08, 3000-08, 37AL-08, 30CT-08	45J0-00207	13/32
3R80-08	45J0-00208	13/32
3130-12, 3000-12	45J0-00209	13/32
3R80-12, 3630-12	45J0-00210	17/32
3000-16	45J0-00211	17/32
3R80-16	45J0-00212	17/32

Hose Size vs. Flow Capacity

How to Select the Correct Hose Size

The hose I.D. may be determined if the fluid flow rate and velocity are known by using the nomograph.

Nomograph data is based on the formula:

$$\text{Area} = \frac{\text{Flow Rate} \times 0.3208}{\text{Velocity}}$$

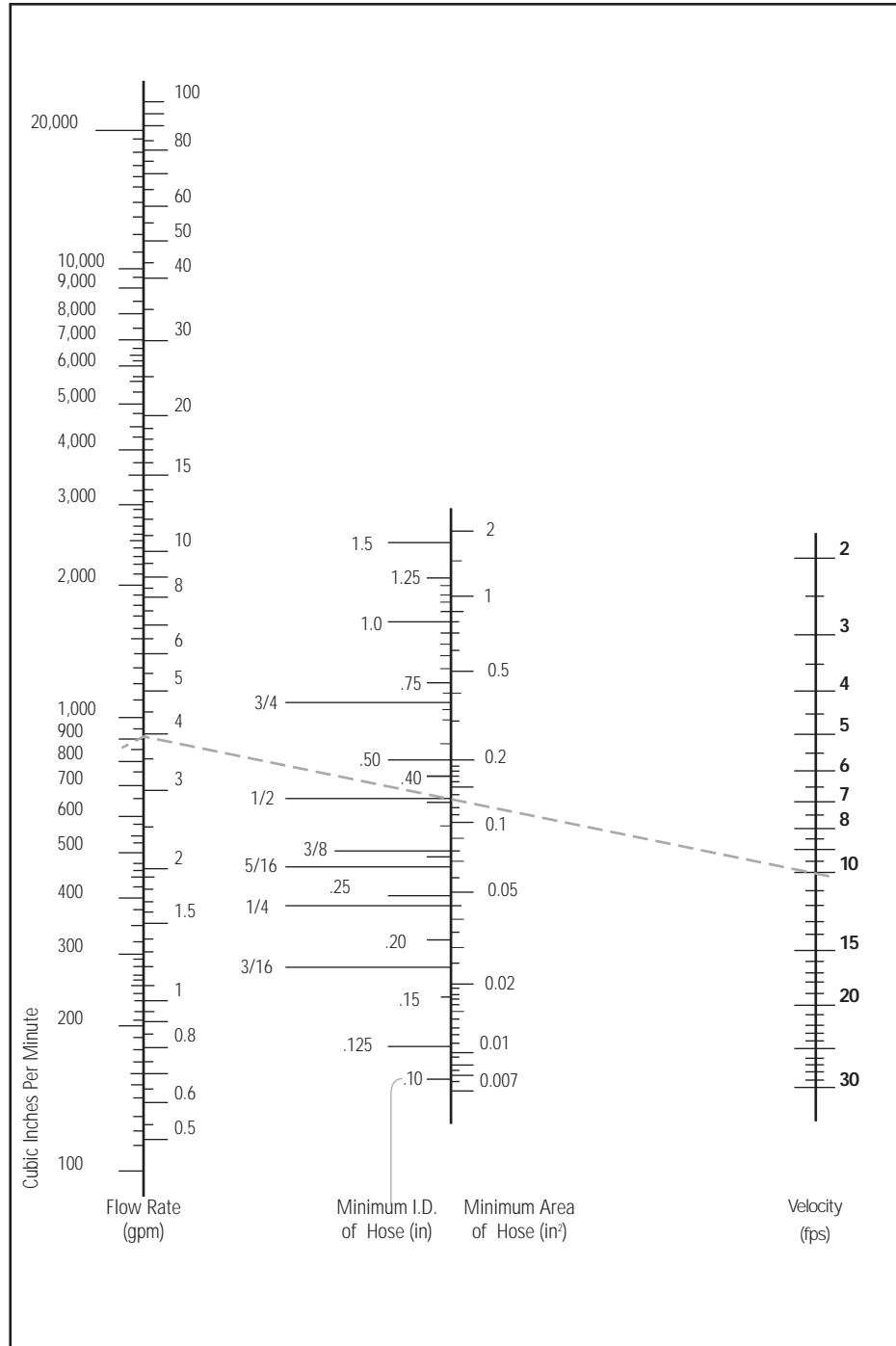
How to Use the Nomograph

- 1 Find the two known values.
- 2 Lay a straightedge to connect the known values.
- 3 The intersection point on the third vertical line identifies the point for that factor.

Example

A pump has a flow rate of 4 gpm. The necessary velocity is 10 fps. What hose size is required?

With a straightedge placed on 4 gpm and 10 fps, the answer is 1/2 inch hose I.D.



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Selection, Installation and Maintenance of Synflex Hose and Assemblies

Proper hose selection, installation and maintenance practices should be followed to ensure that hose and hose assemblies have long life and operate safely. Failure to consider these practices could result in unplanned down-time, damage or injury. The general industry practices assembled below are provided as a guide for hose selection, installation and maintenance. Careful consideration for applying these practices is recommended.

Pressure

Determine the maximum operating system pressure and select a hose that will have a maximum working pressure equal to or in excess of the operation system's maximum pressure. It is very important to take into account surge pressures that may be higher than normal operating pressures.

Temperature

Determine the maximum and minimum operating temperatures and select a hose that is designed for use within this temperature range. Consider transient thermal conditions resulting from startup, heat buildup from idling, etc. Special protection from hot equipment may be required.

Chemical and Environmental Resistance

Determine the type and concentration of the fluids and chemicals that will come in contact with the hose core tube I. D. and hose cover. Apply the Hose and Tubing Selection Guide or product construction description to identify the types of polymers used to form the core tube and cover. With this information, locate the compatibility rating of the combination of chemicals and/or fluids with the polymer type described in the Chemical Resistance data on pages 68-69. Contact Eaton Synflex Customer Support to request data for chemicals and conditions not listed.

Size

Select the proper I.D. based on system requirements such as fluid flow rate or velocity. The Hose Selection Nomograph on page 65 can help determine the hose I.D.

Electrical Conductivity

Each hose application should be evaluated for the importance of selecting a hose designed to prevent flow of electrical current (e.g. aerial hydraulics) or a hose designed to sufficiently conduct static electricity to safe ground connections. The conducting hose design requires special conducting fittings which should be selected along with the hose.

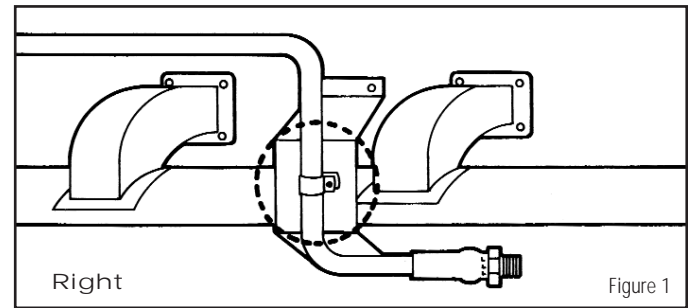
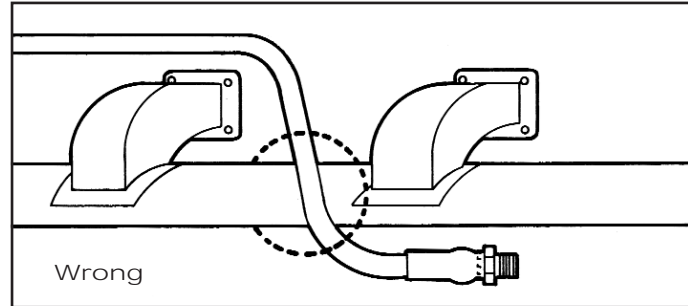


Figure 1

Component Inspection

Prior to installation, inspect hose for I. D. obstruction or damage such as blisters, looseness or cracks in the hose cover and evidence of having been kinked. Check fittings for thread damage or bent fitting components.

Routing

Many problems can be avoided by installing hose and hose assemblies away from hot equipment such as exhaust manifolds. Insulating heat shields may be necessary in some cases (Figure 1).

Selection, Installation and Maintenance of Synflex Hose and Assemblies

Minimum Bend Radius

Tight bends that exceed the hose minimum bend radius should be avoided. Spring guards or stress relief sleeves may be required to protect against exceeding prescribed minimum bend radii (Figure 2).

Torsional Flexing

When equipment parts exhibit relative motion, hose connections should be located so hoses bend instead of twist.

Fitting Connections

Follow the fitting installation instructions provided in this catalog or enclosed with assembly equipment and described in product standards. Attach only the fittings specified for each hose design and do not mix components that are produced by different manufacturers. Proper fitting end selection is very important to eliminate twists and kinks in installed assemblies when connecting fittings to port connections. Swivel fittings are designed to allow for the hex rotation during tightening and bent tube or elbow fittings can eliminate kinks (Figure 3).

Torque Wrench Application

Use torque values where specified when tightening fitting connections to prevent leakage and damage.

Final Check Out

After components are assembled, purge entrapped air and pressurize system to maximum operating pressure. Inspect for leaks and proper function. Perform electrical conductivity tests on designs serving as static electricity discharge paths.

It is important that designers and users consider hose and hose assemblies as having a finite life. Therefore maintenance and replacement is usually necessary at specific intervals.

Maintenance Interval

Frequency of maintenance inspection should be determined by the system designer and user based on the severity of the application, precious service life experience and risk potential.

Maintenance Program

Recommended maintenance should include the following steps as minimum practice:

Leakage - Turn off

equipment and bleed down pressures prior to inspection to minimize risk to personnel. Inspect the full length of the hose and fitting connections for leaks.

Damage

Inspect hose for cuts, abrasion, cracks, blisters, kinked or crushed areas, heat degradation or cover looseness at the port or hose connection. Inspect hose guards for damage using the steps applied to the hose and fittings.

Electrical Continuity

In applications requiring the hose assembly to conduct static electricity to a ground connection, test hose assemblies using a megohmmeter in accordance with recommended procedures described on the permanently attached tag.

Replacement

Hose and/or assembly replacement should be considered at specific intervals under normal conditions. If leakage, loss of conductivity (when required), fitting separation and/or signs of damage are detected, the hose assembly should be replaced immediately.

Hose Routing

Under pressure, a hose may change in length. Always provide some slack in the hose to allow for this shortening or elongation (However, excessive slack in hose lines may cause poor appearance) (Figure 4).

Figure 2

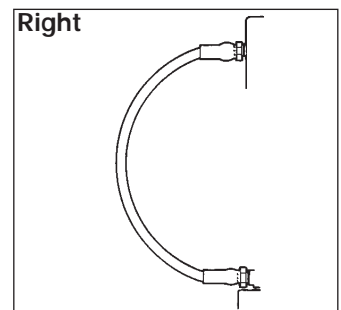
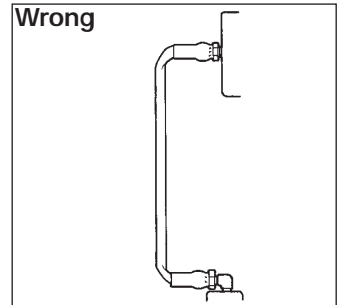


Figure 3

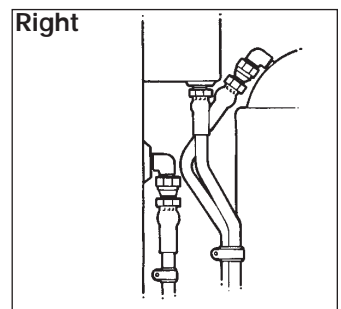
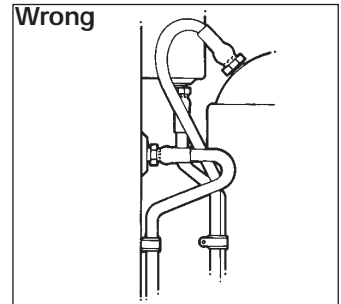
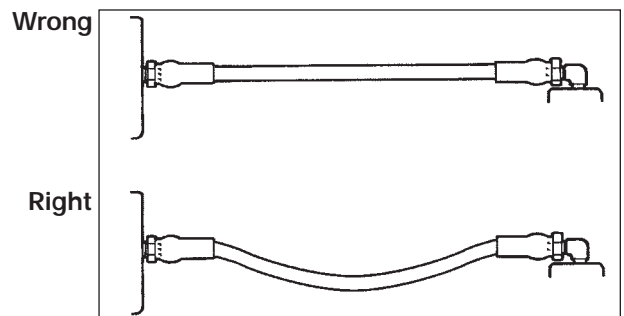


Figure 4



Chemical Resistance Data

This chart is intended to serve as a guide and does not guarantee suitability of hose material with the chemicals listed.

Final selection of materials is dependent on many factors including variations in temperature, pressure and duration of exposure.

HOSE MATERIAL KEY

N = Nylon	H = Polyester
P = Polyolefin	U = Polyurethane
V = PVC - Polyvinyl Chloride	

RESISTANCE RATING KEY

G = Good	P = Poor
L = Limited	NT = Not Tested

	N	H	P	U	V		N	H	P	U	V		N	H	P	U	V
Acetaldehyde	G	G	L	G	P	Carbon Bisulfide	G	L	P	L	P	†Ethylene Glycol	G	G	G	L	G
Acetic Acid	L	L	G	L	G	Carbon Disulfide	G	L	P	L	P	Ethylene Oxide	G	L	L	L	NT
Acetic Anhydride	L	L	G	L	P	Carbon Monoxide	G	G	G	G	G	Fatty Acid	G	G	P	G	G
Acetone	G	L	L	P	P	Carbon Tetrachloride	G	P	P	L	G	Ferric Chloride	L	NT	G	NT	G
Acetyl Bromide	P	P	P	P	P	Carbonic Acid	G	L	G	L	G	Ferric Sulphate	G	G	G	G	G
Acetyl Chloride	P	P	P	P	P	Castor Oil	G	L	G	L	G	Fluoboric Acid	NT	P	G	P	GL
Acetylene	G	G	G	G	NT	Caustic Potash (>20%)	L	L	G	L	L	Fluorine	P	P	P	P	L
Air	G	G	G	G	G	Caustic Potash (<20%)	G	L	G	L	G	Fluorosilicic	NT	NT	G	P	GL
*Alcohols	G	L	G	L	G	Caustic Soda (>20%)	L	L	G	L	L	Formaldehyde	G	L	G	L	G
Aluminum Chloride	P	NT	G	NT	G	Caustic Soda (<20%)	G	L	G	L	G	Formic Acid	P	P	GL	P	GL
Aluminum Sulphate	G	NT	G	NT	G	Cellusolves Union Carbide	G	P	P	P	P	Freon	G	L	L	L	L
Alums	P	NT	G	NT	G	Cellulubes Celanese (Hydraulic Fluid, Phosphate Ester Base)	G	P	P	P	P	*Fruit Juices	G	G	G	G	G
Ammonia Gas	P	P	P	P	P	Chloroacetic Acid	P	P	L	P	P	100 Octane	G	G	L	G	L
Ammonium Chloride	G	G	G	G	G	Chloroform	G	P	P	P	P	Fuel Oil	G	G	LP	G	L
Ammonium Hydroxide	P	P	P	P	P	Chlordane	G	G	G	G	L	Furfuryl Alcohol	G	G	G	G	G
Ammonium Nitrate	G	L	G	G	G	Chlorinated Solvents	G	P	L	P	P	Galic Acid (<20%)	G	L	G	L	G
Ammonium Phosphate	G	L	G	G	G	Chlorine (Dry)	P	P	P	P	L	** Gas (Natural)	G	G	G	G	G
Ammonium Sulphate	G	L	G	G	G	Chlorine (Water) (<20%)	L	P	G	L	G	Gas Oil	G	GL	P	G	L
Amyl Acetate	G	L	P	L	P	Chromic Acid	P	P	GL	P	L	Gasoline	G	G	LP	G	L
Amyl Alcohol	G	G	G	G	G	Chromium Salts	G	G	G	G	G	Gasoline (Aromatic)	G	G	LP	G	L
Anethole	G	NT	NT	NT	NT	*Cider	G	G	G	G	G	Gasoline (Non-Aromatic)	G	G	LP	G	G
Aniline	L	P	P	P	L	Citric Acid	G	L	G	L	G	Gelatin	G	G	G	G	G
Animal Oils	G	G	P	G	G	Coal Gas	G	G	G	G	G	Glucose	G	G	G	G	G
Antimony Salts	G	G	G	G	G	Copper Chloride	L	G	G	G	G	Glue (Depends on type)	G	G	G	G	G
Apoclor Monsanto (Chlorinated Hydrocarbon Hydraulic Fluid)	G	L	L	L	L	Copper Sulphate	G	G	G	G	G	†Glycerine	G	G	G	G	G
Aromatic Hydrocarbons	G	L	P	L	P	*Corn Oil	G	G	G	G	G	†Glycol	G	G	G	L	G
Arsenic Salts	G	G	G	G	G	Cottonseed Oil	G	G	G	G	G	Greases	G	G	L	G	G
Asphalt	G	G	G	G	G	Creosote	P	P	L	P	L	Heavy Water (D2O)	G	G	NT	NT	NT
Auto Transmission Fluid	G	G	G	G	G	Cresols	P	P	L	P	L	Heptane	G	G	P	G	L
Barium Chloride	G	G	G	G	G	Cresylic Acid	P	P	L	P	L	Hexane	G	G	P	G	L
Barium Salts	G	G	G	G	G	Crude Petroleum Oil	G	L	P	G	G	†Houghto Safe Houghton 600 Series (Hyd. Fluid Water Glycol Base)	G	L	G	G	G
Basic Copper Arsenate	G	G	G	G	G	Cupric Sulphate	L	L	G	L	G	†Houghto Safe Houghton 1000 Series (Phosphate Ester Base)	G	L	P	L	P
Benzaldehyde	G	G	L	G	P	Cyclohexane	G	G	NT	G	NT	Hydraulic Fluid Petroleum Base	G	G	P	G	P
Benzene	G	L	P	L	P	Cyclohexanone	G	G	P	G	P	†Hydraulic Fluid Water Glycol Base	G	G	G	G	G
Benzoic Acid	G	P	G	P	G	Decalin	G	NT	NT	NT	NT	Hydraulic Fluid	G	L	P	L	P
Benzol (Benzene)	G	L	P	L	P	Diacetone Alcohol	G	L	G	L	P	Phosphate Ester	G	L	P	L	P
Benzyl Alcohol	L	L	L	L	L	Diammonium Phosphate	G	L	G	P	G	Hydraulic Oil	G	G	P	G	NT
Borax	G	G	G	G	L	Dibutyl Phthalate	G	L	L	L	NT	Hydrochloric Acid (10%)	G	P	G	L	G
Bordeaux Mixture	G	G	G	G	G	Diesel Fuel	G	G	L	G	L	Hydrocyanic Acid	P	NT	G	NT	G
Boric Acids	G	G	G	G	G	Diethanolamine (20% conc.)	G	L	NT	L	NT	Hydrofluoric Acid	P	P	L	P	L
Boric Copper Sulphate	G	G	G	G	G	Diethyl Ether	G	L	G	L	L	Hydrogen Gas	G	G	G	G	G
Bromine	P	P	P	P	L	Diethyl Phosphate	G	L	P	L	P	Hydrogen Peroxide (dil.)	G	G	G	G	G
Butanol	G	G	G	G	G	Diethylphthalate	G	L	P	L	P	Hydrogen Peroxide (conc.)	P	P	G	P	L
* Butter	G	G	G	G	G	Enamels	G	G	G	G	G	Hydrogen Sulphide	L	L	G	NT	G
Butyl Acetate	G	L	P	L	P	Essential Oils	G	G	L	G	G	†Hydrolube Union Carbide—(Hydraulic Fluid Water Glycol Base)	G	L	G	G	G
Calcium Arsenate	G	G	G	G	G	* Ethanol	G	L	L	L	L						
Calcium Bisulphide	G	G	G	G	L	Ether	G	L	G	L	L						
Calcium Chloride	G	G	G	G	G	Ethyl Acetate	G	L	G	L	P						
Calcium Hydroxide (<20%)	G	L	G	L	G	* Ethyl Alcohol	G	L	G	L	L						
Calcium Hypochlorite	G	L	G	L	G	Ethyl Chloride	G	P	P	P	P						
Calcium Salts	G	G	G	G	G	Ethylene Chlorhydrin	P	P	NT	P	P						
Carbolic Acid	P	P	G	P	P	Ethylene Dichloride	G	P	L	P	P						

Chemical Resistance Data (continued)

	N	H	P	U	V		N	H	P	U	V		N	H	P	U	V	
†Irus Shell 902 Hydraulic Fluid (Water-Oil Emulsion)	G	G	L	G	G	Oleic Acid	G	G	P	G	L	Sodium Sulphate	G	G	G	G	G	
Isocyanates	G	G	G	G	NT	OS 45 Monsanto Hydraulic Fluid (Silicate Ester Base)	G	L	P	L	NT	Sodium Sulphide	G	G	G	G	G	
Isopropyl Acetate	G	L	L	L	P	Oxalic Acid (-30%)	G	L	G	L	G	Sodium Thiosulphate	G	G	G	G	G	
Kerosene	G	G	LP	G	L	Oxygen	Refer to Factory					Solutions/Emulsions 2-4D						
Ketones	G	L	G	L	P	Ozone	G	G	P	G	G	Quinoline	G	NT	NT	NT	G	
Lacquer Solvents	G	L	G	L	P	Paint (Oil Base)	G	G	L	G	L	Stannous Chloride	L	G	G	G	G	
Lactic Acid	G	NT	L	NT	G	Paint Solvents (Oil Base)	G	L	L	L	L	Steam	P	P	P	P	P	
Lard	G	G	G	G	G	Palmitic Acid	G	G	G	G	G	Stearic Acid	G	G	G	G	G	
Lead Arsenate	G	G	G	G	G	Pentane	G	G	P	G	L	Stearin	G	G	NT	G	NT	
Lead Sulphate	G	G	G	G	G	Perchloric Acid	P	P	G	P	L	Stoddard Solvent	G	P	L	P	L	
Lead Tetramethyl	G	G	NT	G	NT	Perchloroethylene	G	P	P	P	L	Styrene	G	L	NT	L	NT	
Lime	G	G	G	G	G	Petroleum Oils (Sour)	G	L	L	G	G	Sulphur	G	G	G	G	G	
Linseed Cake	G	G	P	G	G	Petroleum Oils (Refined)	G	G	L	G	G	Sulphur Dioxide	P	P	G	P	L	
Linseed Oil	G	G	P	G	G	Phenolates	L	L	L	G	L	Sulphur Trioxide	L	P	G	P	G	
Lubricating Oils, Petroleum Base	G	G	L	G	G	Phenols	P	P	G	P	L	Sulphuric Acid (dil.)	L	LP	L	LP	G	
†Lubricating Oils, Diester Base	G	L	P	L	NT	Phosphoric Acid	G	P	G	P	G	Sulphuric Acid (conc.)	P	P	L	P	P	
Magnesium Chloride	G	G	G	G	G	Picric Acid	L	P	G	P	G	Sulphurous Acid	P	LP	L	LP	L	
Magnesium Hydroxide (<20%)	G	L	G	L	G	Potash (Potassium Hydroxide)	L	P	G	P	L	Tannic Acid	G	L	G	L	G	
Magnesium Sulphate	G	G	G	G	G	Potassium Chloride	G	G	G	G	G	Tar Oil	G	G	G	G	G	
Maleic Acid	G	L	G	L	G	Potassium Hydroxide (50% conc.)	L	P	G	P	L	Tartaric Acid	G	G	G	G	G	
Mercuric Chloride	G	G	G	G	L	Potassium Nitrate	G	G	G	G	G	Toluene	G	L	P	L	P	
Mercury	G	G	G	G	G	Potassium Permanganate						Tributyl Phosphate	G	L	P	L	P	
**Methane	G	G	NT	G	P	(5% conc.)	P	P	P	P	G	Tricesylphosphate	G	L	P	L	P	
Methanol	G	L	G	L	P	Potassium Sulphate	G	G	G	G	G	Trichloroacetic Acid	P	P	GL	P	L	
Methyl Acetate	G	L	G	L	P	Propane	G	G	G	G	G	Trichloroethylene	G	P	P	P	L	
Methyl Bromide	L	P	P	P	P	†Pydraul (Stauffer) F-9, 150, 600, 625	G	L	P	L	P	†Trisodium Phosphate Solution	G	L	NT	L	G	
Methyl Chloride	G	P	P	P	P	Pyrethrum	G	G	G	G	G	Turpentine	G	G	P	G	G	
Methyl Sulphate	G	G	NT	G	NT	Pyridine	L	L	G	G	P	†Ucon Union Carbide (Hydraulic Fluid Water Glycol Base)	G	L	G	G	G	
Methylethylketone (MEK)	G	L	G	L	P	†Sea Water	G	G	G	G	G	Urea	G	L	G	L	G	
Methylisobutylketone (MIBK)	G	L	G	L	P	†Skydrol Monsanto 500, 7000	G	P	P	P	P	Uric Acid	G	P	G	P	G	
*Milk	G	G	G	G	G	†Soap Solution (conc.)	G	G	L	G	G	Varnish	G	G	L	G	P	
Mineral Oil	G	G	LP	G	G	* † Soda Water	G	G	G	G	G	Vinegar	G	L	G	L	G	
Molasses	G	G	G	G	G	Sodium Bicarbonate	G	G	G	G	G	† Water (150°F)	G	G	G	G	G	
Mustard	G	G	NT	G	NT	Sodium Bisulfite	G	G	G	G	G	White & Bagley No. 2190 Cutting						
Naphtha	G	L	P	L	P	Sodium Borate	G	G	G	G	G	Oil	G	NT	NT	NT	NT	
Naphthalene	G	L	P	L	P	Sodium Carbonate	G	G	G	G	G	*Wine	G	G	G	G	G	
Nickel Chloride	P	P	G	NT	P	Sodium Chloride	G	G	G	G	G	Wool Oil	G	G	G	G	G	
Nicotine	G	G	G	G	G	Sodium Cyanide	G	G	G	G	G	Xylol	G	L	P	L	P	
Nitric Acid (<20%)	L	L	G	L	G	Sodium Hydroxide (<20%)	G	L	G	L	G	Xylene	G	L	P	L	P	
Nitric Acid (>20%)	L	P	L	P	G	Sodium Hypochlorite	L	L	G	L	G	Zinc Chloride	G	G	G	G	G	
Nitrobenzene	G	P	P	P	P	Sodium Nitrate	G	G	G	G	G	Zinc Hydrate	P	L	G	L	G	
* Nitrous Oxide	G	G	LP	G	G	†Sodium Phosphate Solution	G	G	G	G	G	Zinc Sulphate	P	L	G	L	G	
Oil	G	G	L	G	L	Sodium Silicate	G	G	G	G	G							
* Oil of Turpentine	G	G	L	G	G													

LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

Hose Material Reference Chart

- * Does not imply NSF or FDA compliance
- † Recommended operating temperature not to exceed 150° F (66°C)
- ** Does not imply AGA or UL compliance
- ‡ Recommended operating temperature not to exceed 100° F(37.8°C)

SERIES	CORE	COVER	SERIES	CORE	COVER	SERIES	CORE	COVER
25CT	Polyester	Polyurethane	31NO	Nylon	Polyurethane	31GW	Nylon	Polyurethane
3630	PVC	PVC	3440	Polyolefin	Polyurethane	32GW	Nylon	Polyurethane ⁽²⁾
3R30	Nylon-Lined	Polyurethane	3R80	Nylon	Polyurethane	34GW	Nylon	Polyurethane
3130	Nylon-Lined ⁽¹⁾	Polyurethane	3E80	Nylon	Polyurethane	34PW	Polyolefin	Polyurethane
3360	Nylon	Polyester	3800	Nylon	Polyurethane	34WH	TPV	TPV
3580	Polyester	Polyurethane	3840	Nylon	Polyurethane	31B0	Nylon	Polyurethane
3740	Nylon	Polyurethane	3V10	Nylon-Lined	Polyurethane	37B0	Polyurethane	Polyester
3750	Polyester	Polyurethane	3VE0	Nylon-Lined	Polyurethane	30CT	Polyester	Polyester
37AL	Polyester	Polyurethane	34BA	Polyester-Lined	PVC	34CU	PVDF	Polyurethane

(1) -2 size is a nylon, single-wall design
(2) Except 32GW-DN4-JK1: Nylon Cover

How to Assemble Permanent Hose Fittings

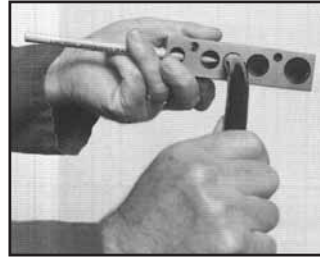
Instructions for using the Synflex Mark IX Swaging Machines

Permanent Fitting Chart Insertion Depth Table

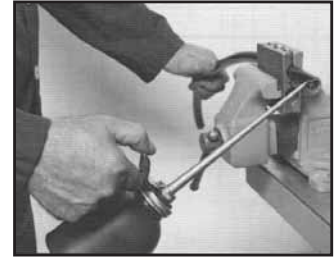
FITTING SERIES		
INSERTION DEPTH (in)		
	903, 90H, 90L, 905, 7903, 790H, 90A, 90N	906
Hose I.D. (in)		
1/8	9/16	-
3/16	25/32	-
1/4	1-1/16	7/8
5/16	1-1/8	-
3/8	1-1/4	1-1/4
1/2	1-1/2	1-1/2
5/8	1-9/16	-
3/4	1-11/16	-
1	2-1/16	-



1. Cut hose squarely with Hand-Held Hose Cutter 4523-04006 or Bench-Mounted Hose Cutter 4523-04007.

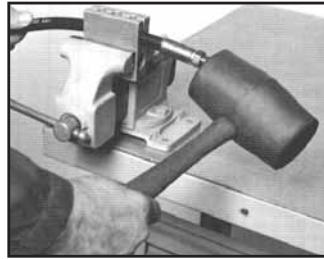


2. Mark hose for proper insertion depth into fitting. Use insertion depth chart or use Insertion Depth marker 45J0-04603.

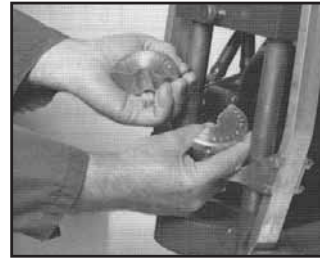


3. Oil inside hose diameter with SAE 20 oil.

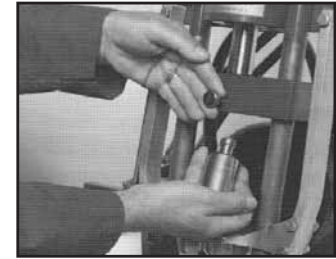
Consult Eaton Performance Plastics for oxygen system special assembly recommendations.



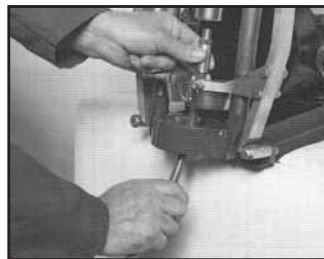
4. Insert hose into fitting to depth mark. (Use Vise Block 4504-00000 or 4504-01000 and rubber mallet to ease assembly.)



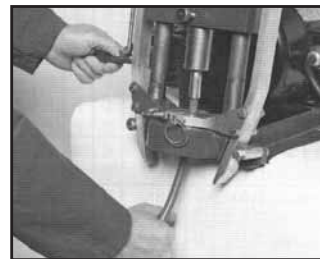
5. Insert the specified die and pusher into the swaging machine.



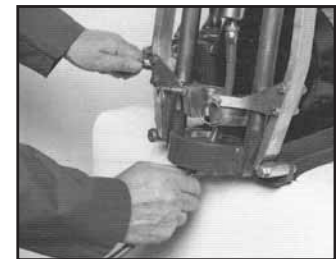
Lubricate die swaging surface with SAE 90 gear oil. For stainless steel fittings use Swage Lubricant 4545-01001.



6. Insert hose end into the pusher.



7. Pull control lever and guide fitting into the die until the pusher bottom is against the top of the die surface.



8. Push control lever to retract pusher and open die halves. Remove swaged hose assembly.

How to Assemble Permanent Hose Fittings

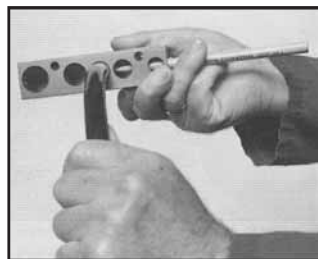
Instructions for using the Synflex SST Swaging Tool

Permanent Fitting Chart Insertion Depth Table

Hose I.D. (in)	FITTING SERIES	
	INSERTION DEPTH (in)	
	3903, 390A, 390P, 390H, 390L, 390S, 7903, 790H, 390N	3906
1/8	9/16	-
3/16	25/32	-
1/4	1-1/16	7/8
5/16	1-1/8	-
3/8	1-1/4	1-1/4
1/2	1-1/2	-
5/8	1-9/16	-
3/4	1-11/16	-
1	2-3/16	-



1. Cut hose squarely with Hand-Held Hose Cutter 4523-04006 or Bench-Mounted Hose Cutter 4523-00000.

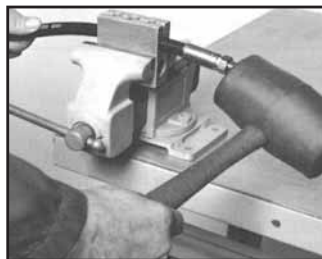


2. Mark hose for proper insertion depth into fitting. See page 14 for insertion depth table or use Insertion Depth marker 45J0-04603.



3. Lubricate inside hose diameter with SAE 20 oil or similar lightweight lubricant.

Consult Eaton Performance Plastics for oxygen system special assembly recommendations.



4. Insert hose into fitting to depth mark. (Use Vise Block 4504-00000 or 4504-01000 and rubber mallet to ease assembly.)



5. Insert the specified pusher with the pusher retainer in the raised position. Finger-tighten retaining screw to hold pusher firmly in place. Pusher must be allowed to rotate freely.



6. Place one die half into the base plate. **Lightly oil the inner surface of both die halves with SAE 90 gear oil. For stainless steel fittings use Swage Lubricant 4545-01001.**



7. Insert the assembled hose and fitting through the base plate and firmly into the pusher cavity. Place the other die half in base and lock into place by swinging clamps down firmly against top of dies. Rotate ball screw until fitting reaches the die.



8. With handle provided or 1-1/8 socket and ratchet, rotate screw CW until pusher bottom contacts top of die. Maintain pressure on ball screw and release die clamps. Slowly release pressure and rotate ball screw CCW until it is clear of the die. Remove swaged assembly.

LOW/MEDIUM
PRESSURE

CONSTANT
PRESSURE HOSE

HIGH
PRESSURE

TWIN LINE
HOSE

AIR, WATER
& TUBING

SPECIALTY
HOSE

HOSE
FITTINGS

HOSE ASSEMBLY
EQUIPMENT

ACCESSORIES

TECHNICAL
DATA

How to Assemble Reusable Hose Fittings

Use Synflex 3000, 3R80, 3E80, 37AL series only.

* Consult Eaton Training for oxygen system assembly recommendations.

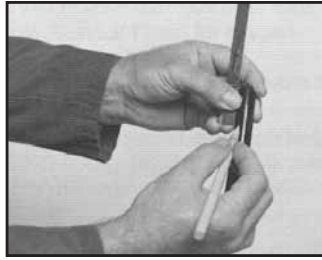


1. Cut hose squarely with Hand-Held Hose Cutter 4523-04006 or Bench-Mounted hose Cutter 4523-00000.

2. Use the table (to the right) to establish the length of hose that is inserted into the fitting socket.

Reusable Fitting Chart Insertion Depth Table

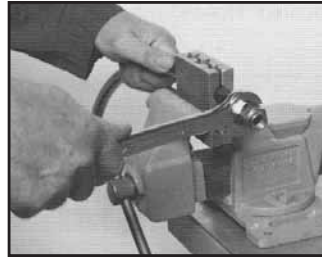
Hose I.D. (in)	FITTING SERIES	
	INSERTION DEPTH (in)	
	3901, 390J, 390K, 3908,	3902
1/8	21/32	-
3/16	27/32	27/32
1/4	1	7/8
5/16	1-3/32	1-1/8
3/8	1-3/16	1-1/4
1/2	1-5/16	1-1/2
3/4	1-1/4	1-11/16
1	1-11/16	-



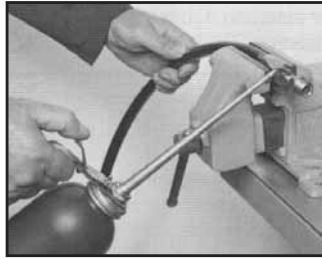
3. Use a rule for measurement and mark the hose with a colored pencil.
 4. Insert hose into Vise Blocks (4504-0000 or 4504-01000) and tighten to hold hose firmly in place.



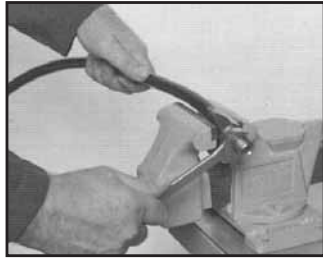
5. Lightly lubricate the outer surface of the hose to make it easier to push the fitting over the hose. For mild steel fittings and standard hose, use SAE 20 motor oil. For stainless steel fittings use Swage Lubricant 4545-01001*.



6. Push fitting socket over the lubricated hose and screw socket on by hand counterclockwise until the socket end is even with the depth mark. The end of the hose should be 3/32 inch to 1/16 inch from the inner shoulder of the fitting socket. It should NOT be bottomed against the shoulder. Do not over-tighten.



7. Remove hose and fitting assembly with Vise Blocks.
 8. Place fitting socket in the vise and lubricate the mating fitting threads.



9. Screw the fitting insert clockwise into the socket with a wrench until the bottom of the insert hex contacts the socket shoulder. Do not over-tighten.

ET1000 Crimping Procedure



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 flatside 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.

LOW/MEDIUM
PRESSURE

CONSTANT
PRESSURE HOSE

HIGH
PRESSURE

TWIN LINE
HOSE

AIR, WATER
& TUBING

SPECIALTY
HOSE

HOSE
FITTINGS

HOSE ASSEMBLY
EQUIPMENT

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LOW/MEDIUM PRESSURE
CONSTANT PRESSURE HOSE
HIGH PRESSURE
TWIN LINE HOSE
AIR, WATER & TUBING
SPECIALTY HOSE
HOSE FITTINGS
HOSE ASSEMBLY EQUIPMENT
ACCESSORIES
TECHNICAL DATA

How to Separate Twin Line & Multi-Line Hose

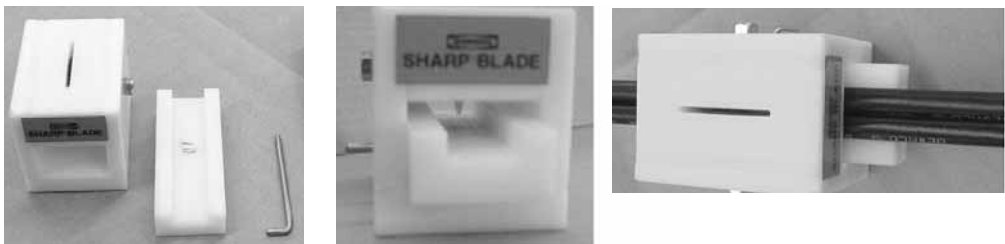
Synflex De-Twiner Die Reference Chart (4574-03000-xxx)

Hose Product	Die* No.	Hose Product	Die* No.	Hose Product	Die* No.
3R30-03	27	30CT-04	3	3VE0-03	5
3R30-04	3	30CT-05	22	3VE0-04	16
3R30-06	10	30CT-06	11	3VE0-06	17
3R30-08	13	30CT-08	14		
				3840-03	18
3130-02	1	3360-03	2	3840-04	19
3130-03	2	3360-04	4	3840-06	20
3130-04	4	3360-05	23	3840-08	21
3130-05	8	3360-06	24		
3130-06	11	3360-08	25	35NG-03	4
3130-08	13			35NG-04	26
				35NG-06	12
3160-03	2	3R80-04	9	35NG-08	15
3160-04	4	3R80-06	12		
3160-05	8	3R80-08	15	3V20-04	16
3160-06	11	3E80-04	9	3V20-06	17
3160-08	13	3E80-06	12		
		3E80-08	15	3251-08	6
37AL-03	2				
37AL-04	3	3V10-03	5		
37AL-05	7	3V10-04	16	31DW-04	5
37AL-06	10	3V10-06	17		
37AL-08	13				

*Die number stamped on end.

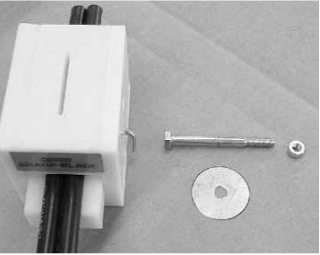
Instructions for using the Twin-Line Hose Separation Tool

CAUTION: Tool Contains a Sharp Blade. Do Not Put Your Hands or Objects Inside the Tool.



1. The De-Twiner tool 4574-01000 is designed to split twinned hose without any damage to the hose. Selecting the proper die is critical to operating this tool safely. The proper die can be selected from the attached chart. Customer service can assist in proper die selection. The hose should fit snugly in the die without any extra slop.
2. To insert the die into the tool, first remove the retainer pin. This pin should also fit snugly to prevent the die from moving. **DO NOT REACH INTO THE TOOL OR PUSH ANYTHING THROUGH THE TOOL TO REMOVE THE DIE!** The die extends out one side of the tool to allow ease of removal. Set the tool on its side with the long end of the die pointing up. Remove the die. Insert the new die from the same side and reset the pin.
3. Insert the assembled tool with die into a proper holding fixture (vise or other) and set stop at appropriate distance. The tool is cutting 2" before the exit end of the tool.
4. Apply a water soluble lubricant to the end of the first piece of product to be cut and slide it through the tool to the appropriate stop. Apply a few drops of lubricant to the end of each hose to be cut just before cutting. This will ease the cutting force and prolong blade life.

Blade Replacement

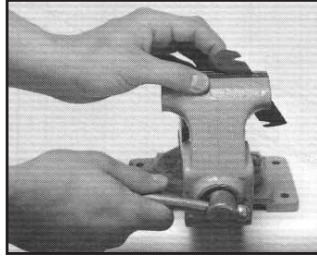


1. Replacement blades are available from Eaton Performance Plastics.
2. Use proper protective gear (cut resistant gloves) when replacing the blade. This blade is very sharp.
3. Remove blade retainer nut and slide out blade retainer bolt. Tip tool over and the blade should fall out from the top. **DO NOT TRY TO REMOVE IT FROM THE SLOT, THE MATERIAL SLIDES THROUGH.**
4. Insert new blade, bolt and nut. Tighten the locking nut only to the point that the bolt rotates as the product is cut. If it is too tight the blade and bolt will wear out prematurely.
5. The blade will last for thousands of cuts if properly installed and the operating procedures are followed correctly.

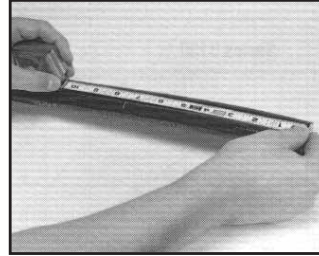


How to Separate Twin Line & Multi-Line Hose

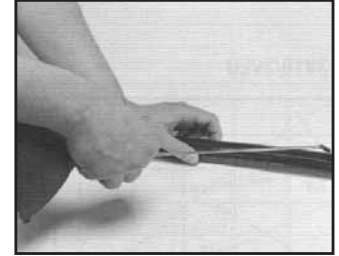
Instructions for using the Twin-Line Hose Separation Tool



1. Remove the hose separation knife (Part Number 4573-00000) from the handle and place in a vise at a 45° angle to the top of the vise. Fasten securely in the vise jaws.



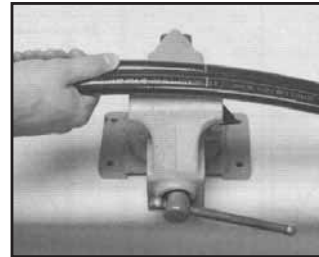
2. Measure and mark the distance to be separated.



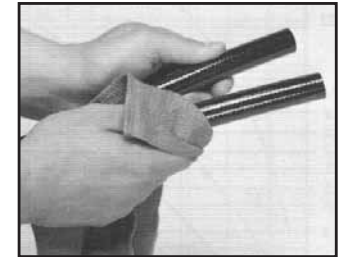
3. Lightly lubricate the hoses on both sides at the connecting web with a soap solution or lubricating oil. This step reduces friction between the knife blade and hose cover surfaces, plus keeps the knife centered during the cutting step.



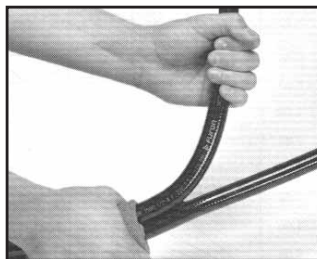
4. Push the hose into the "V" notch on the knife blade using a rocking motion to start the hoses into the blade.



5. Hold the hoses together and aligned with the blade while first pushing then pulling them to the mark, taking care not to cut the hose covers.



6. Remove the lubricant from the hoses and proceed with normal hose assembly.



7. Examine the hose cover material where the hoses were attached to ensure they have not been cut, or the reinforcement fiber exposed. If the hose covers shows signs of damage, the hose assembly should not be placed in service.

LOW/MEDIUM
PRESSURE

CONSTANT
PRESSURE HOSE

HIGH
PRESSURE

TWIN LINE
HOSE

AIR, WATER
& TUBING

SPECIALTY
HOSE

HOSE
FITTINGS

HOSE ASSEMBLY
EQUIPMENT

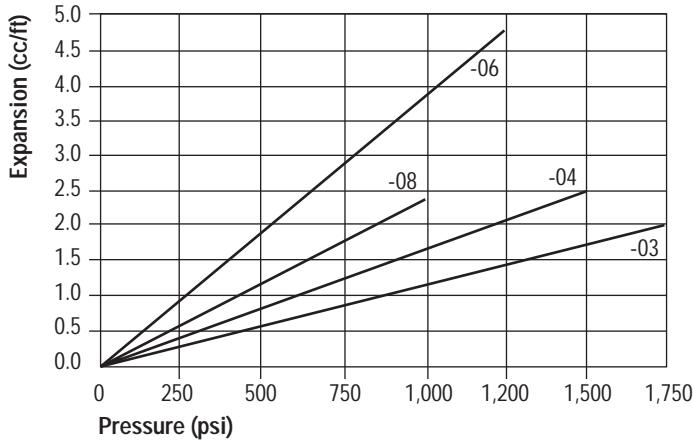
ACCESSORIES

TECHNICAL
DATA

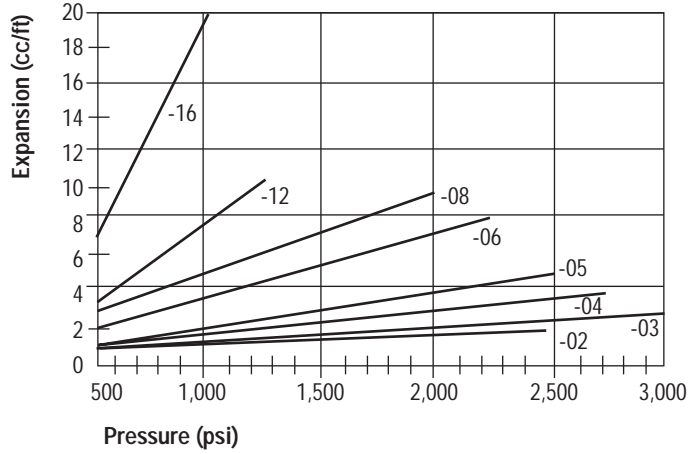
Volumetric Expansion Data

The following charts are based on a limited testing of each hose size according to SAE J343.

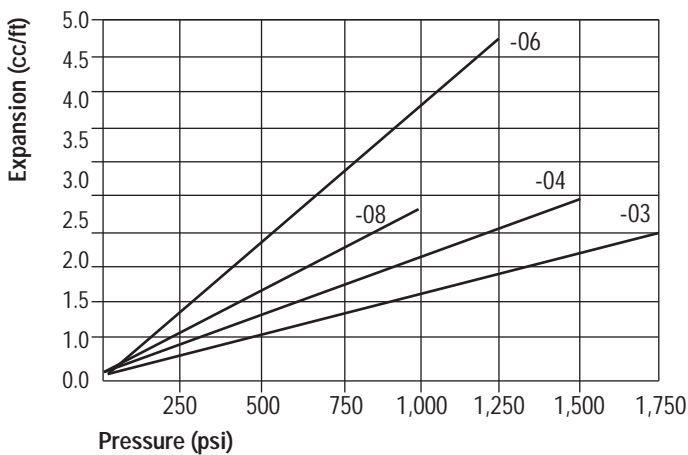
Series 3R30



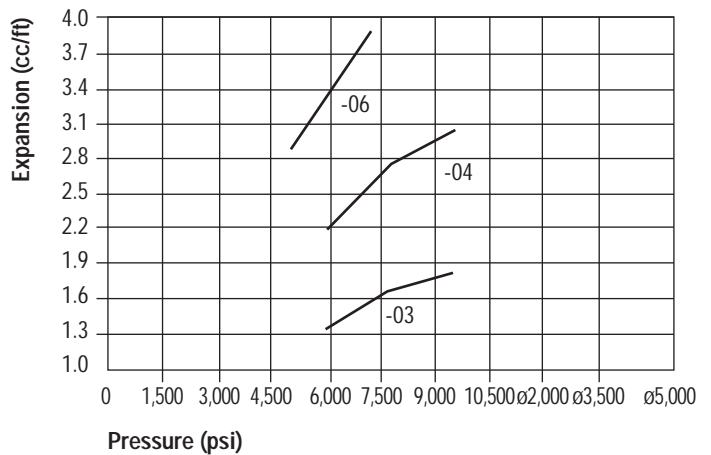
Series 3130



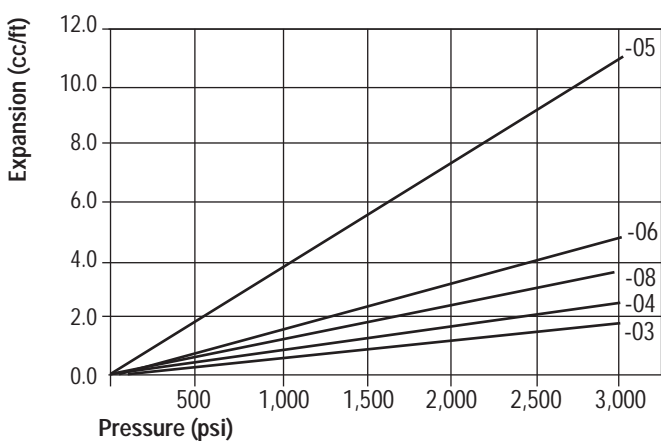
Series 3580



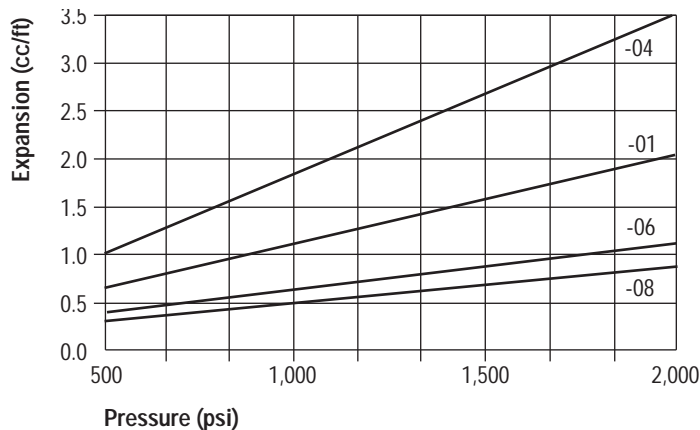
Series 3V10/3VEO



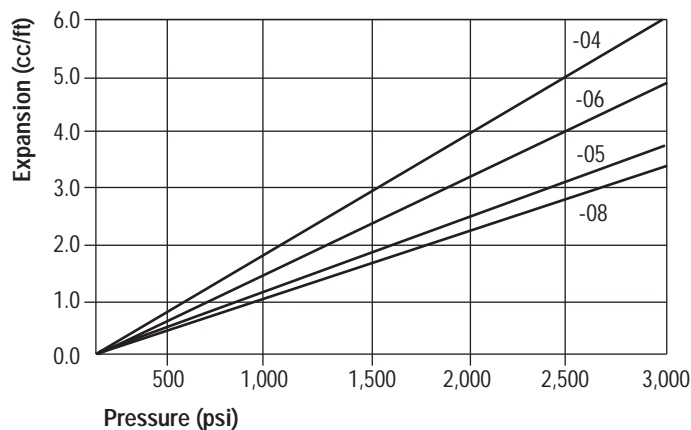
Series 37AL/3750



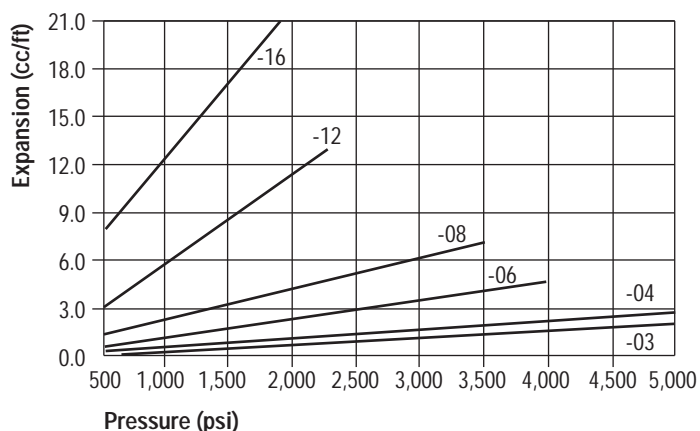
Series 31NO



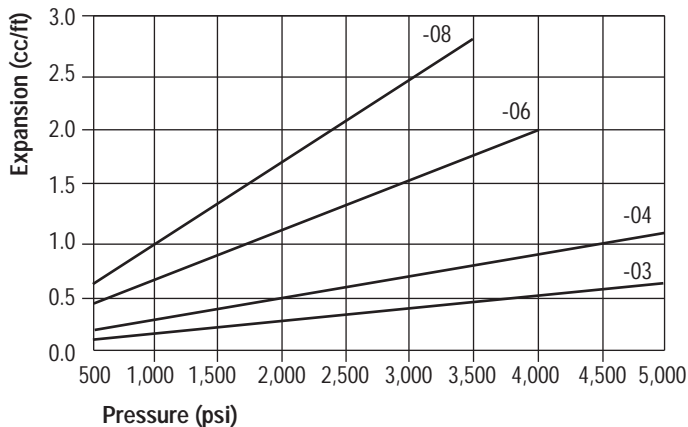
Series 30CT



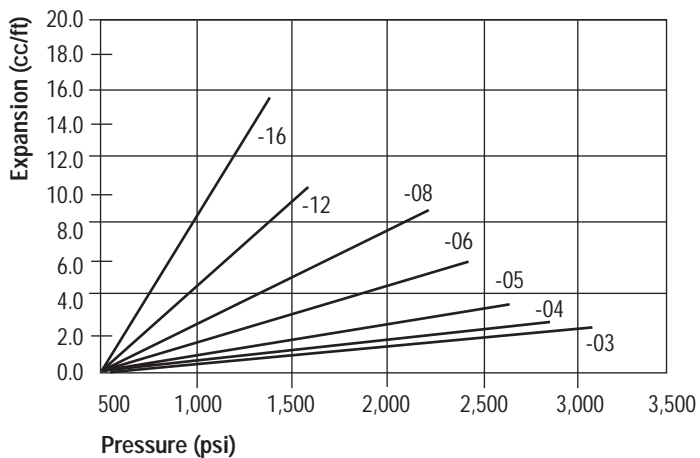
Series 3R80/3E80



Series 3800/3840



Series 3740



Conversion Tables

How to Use Conversion Tables

- Locate known unit symbol in left vertical column - **FROM**
- Locate the desired unit in top horizontal row - **TO**
- The factor at the intersection of the **FROM** row and **TO** column is multiplied by the known unit quantity to calculate the desired unit quantity

Example:

- Convert 3,000 PSI (psi) of a hydraulic pressure to kPa.
- Locate lb/in² row and kPa column in the Pressure Conversion Table; the factor is 6.895
- Calculation:
6.895 x 3,000 PSI = 20,685 kPa.

Pressure Conversions

FROM	TO								
	MMHG	IN HG	IN H ₂ O	FT H ₂ O	ATM	PSI	KG/CM ²	KPA	BAR
mmHg	1	0.03937	0.5353	0.044610	0.00132	0.01934	0.00136	0.1333	0.0013
inHg	25.40	1	13.6	1.133	0.03342	0.4912	0.03453	3.387	0.0339
inH ₂ O	1.868	0.07355	1	0.08333	0.00246	0.03612	0.00254	0.249	0.0025
ftH ₂ O	22.42	0.8826	12	1	0.02950	0.4334	0.03048	2.988	0.0299
atm	760	29.92	406.8	33.9	1	14.7	1.033	101.3	1.013
PSI	51.71	2.036	27.69	2.307	0.06805	1	0.07031	6.895	0.0689
Kg/cm ²	735.6	28.96	393.7	32.81	0.9678	14.22	1	98.05	0.981
kPa	7.5	0.2953	4.016	0.3347	0.00987	0.1451	0.0102	1	0.01

Flow Rate Conversions

FROM	TO					
	L/SEC	GAT/MIN	FT ³ /SEC	FT ³ /MIN	BBL/HR	BBL/DAY
l/sec	1	15.85	0.3532	2.119	22.66	543.8
gal/min	0.06309	1	0.00223	0.1337	1.429	34.3
ft ³ /sec	28.32	448.8	1	60	641.1	1.54x10 ⁴
ft ³ /min	0.4719	7.481	0.01667	1	10.69	256.5
bbl/hr	0.04415	0.6997	0.00156	0.09359	1	24
bbl/day	0.00184	0.02917	6.50x10 ⁵	0.0039	0.04167	1

Length Conversions

FROM	TO					
	FEET	INCHES	KILOMETERS	METERS	MM	MILES
feet	1	12	0.000305	0.3048	304.8	0.0001894
inches	0.08333	1	0.0000254	0.0254	25.4	0.00001578
kilometers	3281	39372	1	1000	1000000	0.6214
meters	3.281	39.37	0.001	1	1000	0.000621
millimeters	0.003281	0.03937	0.000001	0.001	1	-
miles	5280	6360	1.609	1609	-	1

Weight Conversions

FROM	TO			
	G	KG	OZ	LB
g	1	0.001	0.03527	0.0022
kg	1000	1	35.27	2.205
oz	28.35	0.02835	1	0.0625
lb	453.6	0.4536	16	1

Conversion Tables

Temperature Conversions

$$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times .555$$

$$^{\circ}\text{F} = (^{\circ}\text{C} \times 1.8) + 32$$

Look up the value in the middle column. If in degrees Centigrade, read the Fahrenheit equivalent in right-hand column; if in Fahrenheit degrees, read the Centigrade equivalent in left-hand column.

C	F/C	F	C	F/C	F	C	F/C	F
-73.0	-100	-148.0	5.0	41	105.8	33.3	92	197.6
-68.0	-90	-130.0	5.6	42	107.6	33.9	93	199.4
-62.0	-80	-112.0	6.1	43	109.4	34.4	94	201.2
-57.0	-70	-94.0	6.7	44	111.2	34.0	95	203.0
-51.0	-60	-76.0	7.2	45	113.0	35.6	96	204.8
-46.0	-50	-58.0	7.8	46	114.8	36.1	97	206.6
-40.0	-40	-40.0	8.3	47	116.6	36.7	98	208.4
-34.0	-30	-22.0	8.9	48	118.4	37.2	99	210.2
-29.0	-20	-4.0	9.4	49	120.2	37.8	100	212.0
-23.0	-10	14.0	10.0	50	122.0	43.0	110	230.0
-17.8	0	32.0	10.6	51	123.8	49.0	120	248.0
-17.2	1	33.8	11.1	52	125.6	54.0	130	266.0
-16.7	2	35.6	11.7	53	127.4	60.0	140	284.0
-16.1	3	37.4	12.2	54	129.2	66.0	150	302.0
-15.6	4	39.2	12.8	55	131.0	71.0	160	320.0
-15.0	5	41.0	13.3	56	132.8	77.0	170	338.0
-14.4	6	42.8	13.9	57	134.6	82.0	180	356.0
-13.9	7	44.6	14.4	58	136.4	88.0	190	374.0
-13.3	8	46.4	15.0	59	138.2	93.0	200	392.0
-12.8	9	48.2	15.6	60	140.0	99.0	210	410.0
-12.2	10	50.0	16.1	61	141.8	100.0	212	413.6
-11.7	11	51.8	16.7	62	143.6	104.0	220	428.0
-11.1	12	53.6	17.2	63	145.4	110.0	230	446.0
-10.6	13	55.4	17.8	64	147.2	116.0	240	464.0
-10.1	14	57.2	18.3	65	149.0	121.0	250	482.0
-9.4	15	59.0	18.9	66	150.8	127.0	260	500.0
-8.9	16	60.8	19.4	67	152.6	132.0	270	518.0
-8.3	17	62.6	20.0	68	154.4	138.0	280	536.0
-7.8	18	64.4	20.6	69	156.2	143.0	290	554.0
-7.2	19	66.2	21.1	70	158.0	149.0	300	572.0
-6.7	20	68.0	21.7	71	159.8	154.0	310	590.0
-6.1	21	69.8	22.2	72	161.6	160.0	320	608.0
-5.6	22	71.6	22.8	73	163.4	166.0	330	626.0
-5.0	23	73.4	23.3	74	165.2	170.0	338	640.0
-4.4	24	75.2	23.9	75	167.0	171.0	340	644.0
-3.9	25	77.0	24.4	76	168.8	177.0	350	662.0
-3.3	26	78.8	25.0	77	170.6	182.0	360	680.0
-2.8	27	80.6	25.6	78	172.4	186.0	366	691.0
-2.2	28	82.4	26.1	79	174.2	188.0	370	698.0
-1.7	29	84.2	26.7	80	176.0	193.0	380	716.0
-1.1	30	86.0	27.2	81	177.8	198.0	388	730.0
-0.6	31	87.8	27.8	82	179.6	199.0	390	734.0
0.0	32	89.6	28.3	83	181.4	204.0	400	752.0
0.6	33	91.4	29.8	84	183.2	208.0	406	763.0
1.1	34	93.2	29.4	85	185.0	210.0	410	770.0
1.7	35	95.0	30.0	86	186.8	216.0	420	788.0
2.2	36	96.8	30.6	87	188.6	221.0	430	806.0
2.8	37	98.6	31.1	88	190.4	227.0	440	824.0
3.3	38	100.4	31.7	89	192.2	232.0	450	842.0
3.9	39	102.2	32.2	90	194.0	238.0	460	860.0
4.4	40	104.0	32.8	91	195.8	243.0	470	878.0

LOW/MEDIUM PRESSURE

CONSTANT PRESSURE HOSE

HIGH PRESSURE

TWIN LINE HOSE

AIR, WATER & TUBING

SPECIALTY HOSE

HOSE FITTINGS

HOSE ASSEMBLY EQUIPMENT

ACCESSORIES

TECHNICAL DATA

Conversion Tables

Thread Chart

DASH NUMBER	O. D. TUBE SIZE	AN	JIC	SAE	NPTF (MALE)
- 2	1/8	5/16-34	5/16-24	5/16-24	1/8-27
- 3	3/16	3/8-24	3/8-24	3/8-24	
- 4	1/4	7/16-20	7/16-20	7/16-20	1/4-18
- 5	5/16	1/2-20	1/2-20	1/2-20	
- 6	3/8	9/16-18	9/16-18	5/8-18	3/8-18
- 8	1/2	3/4-16	3/4-16	3/4-16	1/2-14
- 10	5/8	7/8-14	7/8-14	7/8-14	
- 12	3/4	1 1/16-12	1 1/16-12	1 1/16-14	3/4-14
- 16	1	1 5/16-12	1 5/16-2	1 3/8-12	1-11-1/2

DECIMAL EQUIVALENTS OF INCH FRACTIONS

1/64	0.15625	17/64	0.265625	33/64	0.51563	49/64	0.765625
1/32	0.3125	9/32	0.28125	17/32	0.53125	25/32	0.78125
3/64	0.046875	19/64	0.296875	35/64	0.54688	51/64	0.796875
1/16	0.625	5/16	0.3125	9/16	0.5625	13/16	0.8125
5/6	40.78125	21/64	0.328125	37/64	0.57813	53/64	0.828125
3/32	0.9375	11/32	0.34375	19/32	0.59375	27/32	0.84375
7/64	0.109375	23/64	0.359375	39/64	0.60938	55/64	0.859375
1/8	0.125	3/8	0.375	5/8	0.625	7/8	0.875
9/64	0.140625	25/64	0.390625	41/64	0.64063	57/64	0.890625
5/32	0.15625	13/32	0.40625	21/32	0.66625	29/32	0.90625
11/64	0.171875	27/64	0.421875	43/64	0.67188	59/64	0.921875
3/16	0.1875	7/16	0.4375	11/16	0.6875	15/16	0.9375
13/64	0.203125	29/64	0.453125	45/64	0.70313	61/64	0.953125
7/32	0.21875	15/32	0.46875	23/32	0.71875	31/32	0.96875
15/64	0.234375	31/64	0.484375	47/64	0.73438	63/64	0.984375
1/4	0.25	1/2	0.5	3/4	0.75	1	1.00000

CONVERSION TABLE - INCHES TO MILLIMETERS

in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
1/64	0.3969	13/64	5.1594	25/64	9.9219	37/64	14.68	49/64	19.4469	61/64	24.2094	1 9/32	32.544	12 1/32	42.0688
1/32	0.7937	7/32	5.5562	13/32	10.3187	19/32	15.08	25/32	19.8437	31/32	24.6062	1 5/16	33.338	1 11/16	42.8626
3/64	1.1906	15/64	5.9531	27/64	10.7156	39/64	15.48	51/64	20.2406	63/64	25.0031	1 11/32	34.131	1 23/32	43.6563
1/16	1.5875	1/4	6.3500	7/16	11.1125	5/8	15.88	13/16	20.6375	1	25.4001	1 3/8	34.925	1 3/4	44.4501
5/64	1.9844	17/64	6.7469	29/64	11.5094	41/64	16.27	53/64	21.0344	1 1/32	26.1938	1 13/32	35.719	1 25/32	45.2438
3/32	2.3812	9/32	7.1437	15/32	11.9062	21/32	16.67	27/32	21.4312	1 1/16	26.9876	1 7/16	36.513	1 13/16	46.0376
7/64	2.7781	19/64	7.5406	31/64	12.3031	43/64	17.07	55/64	21.8281	1 3/32	27.7813	1 15/32	37.306	1 27/32	46.8313
1/8	3.1750	5/16	7.9375	1/2	12.7000	11/16	17.46	7/8	22.2250	1 1/8	28.5751	1 1/2	38.100	1 7/8	47.6251
9/64	3.5719	21/64	8.3344	33/64	13.0969	45/64	17.86	57/64	22.6219	1 5/32	29.3688	1 17/32	38.894	1 29/32	48.4188
5/32	3.9687	11/32	8.7312	17/32	13.4937	23/32	18.26	29/32	23.0187	1 3/16	30.1626	1 9/16	39.688	1 15/16	49.2126
11/64	4.3656	23/64	9.1281	35/64	13.8906	47/64	18.65	59/64	23.4156	1 7/32	30.9563	1 19/32	40.481	1 31/32	50.0063
3/16	4.7625	3/8	9.5250	9/16	14.2875	3/4	19.05	15/16	23.8125	1 1/4	31.7501	1 5/8	41.275	2	50.800

CONVERSION TABLE - MILLIMETERS TO INCHES

in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
1	0.0394	8	0.3150	15	0.5905	22	0.866	29	1.1417	36	1.4173	43	1.6929	50	1.9685
2	0.0787	9	0.3543	16	0.6299	23	0.906	30	1.1811	37	1.4567	44	1.7323	51	2.0079
3	0.1181	10	0.3937	17	0.6693	24	0.945	31	1.2205	38	1.4961	45	1.7716		
4	0.1575	11	0.4331	18	0.7087	25	0.984	32	1.2598	39	1.5354	46	1.8810		
5	0.1968	12	0.4724	19	0.748	26	1.0236	33	1.2992	40	1.5748	47	1.8504		
6	0.2362	13	0.5118	20	0.787	27	1.0630	34	1.3386	41	1.6142	48	1.8898		
7	0.2756	14	0.5512	21	0.827	28	1.1024	35	1.3779	42	1.6535	49	1.9291		

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