Bulletin JB27B
Supersedes
Bulletin JB27A

Aeroquip®

Quick Disconnect Couplings

Serving your industry with quality fluid conveying products

Construction

Forestry

Public Safety

Utility

Marine and Defense

Oil and Gas

Transportation

Steel

Machine Tool

Aeroquip®

PART NUMBER INDEX

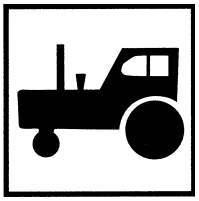
Part numbers listed below are base part numbers that exclude size designation, for complete part number refer to page and line referenced.

Part numbers listed below are base part numbers that exclude size designation, for complete part number refer to page and line referenced.

Industry Application Symbols

Industry symbols are provided for each coupling indicating where it is typically used. But remember, a coupling can be used in any industry, provided it meets the established application requirements.

Agriculture



FD14, FD42, FD48, 5400, 5600, FD70, FD71, FD72, FD76, FD90

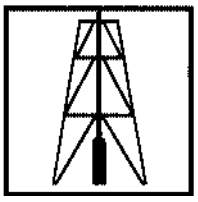
Chemical Processing

FD45, FD49, 5100 5400

Construction

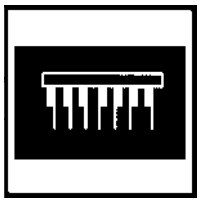
FD14, FD15, FD35, FD40, FD41, FD42, FD43, FD45 (steel), FD48, FD49, 5100, 5400, 5600, FD69, FD86, FD90

Oil and Gas



FD15, FD35, FD45 (stainless), FD45 (brass), 5100, 5600, FD86, FD90

Electronic Cooling

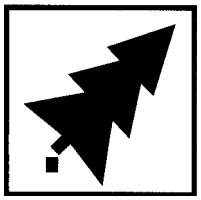


FD45 (stainless), FD45 (brass), 5100, 5400

Food & Beverage

FD15, FD45 (stainless)

Forestry



FD14, FD15, 5600, FD86

Maintenance & Repair Operations

FD14, FD40, FD41, FD43, FD45 (steel), FD45 (brass), FD49, 5100, 5600, FD69, FD90

Marine and Defense

FD14, FD15, FD35, FD45 (stainless) FD45 (brass), 5100, 5400, 5600, FD69, FD86, FD90

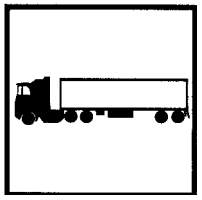
Pharmaceutical/Medical

FD15, FD45 (brass), FD45 (stainless), 5400

Industrial Plants

FD14, FD35, FD40, FD41, FD43, FD45 (steel), FD45 (brass), FD45 (stainless), FD48, FD49, 5100, 5600, FD69, FD86, FD90

Transportation

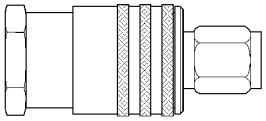


FD14, FD15, FD42, FD45 (steel), FD45 (brass), 5100, 5400, 5600, FD90

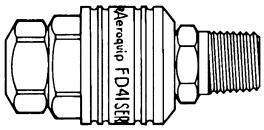
Utility

FD14, FD15, FD35, FD45 (steel), FD49, 5100, 5600, FD86, FD90

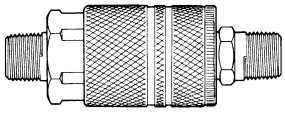
AIR COUPLINGS



FD40 Series – page 17
MIL-C-4109 Interchange—
Automatic Sleeve

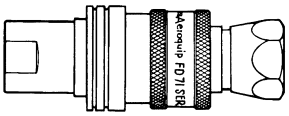


FD41 Series – page 19
ARO-210 Interchange

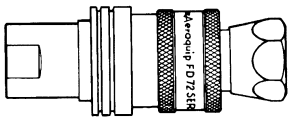


FD43 Series – page 21
MIL-C-4109 Interchange—
Manual Sleeve

HYDRAULIC—FARM

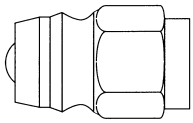


FD71 Series – page 64
Push to Connect
ISO Interchange

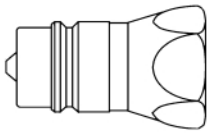


FD72 Series – page 66
Push to Connect
Connect Under Pressure—Male
ISO Interchange

Male Tips

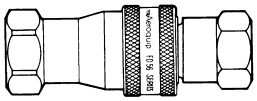


FD70 Series – page 68
Deere Interchange

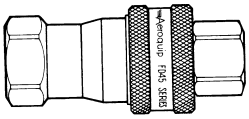


FD76 Series – page 68
ISO Standard

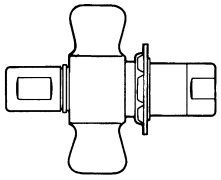
FLUID TRANSFER and HYDRAULIC



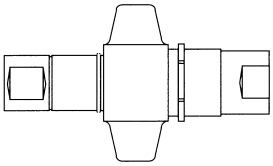
5600 Series – page 57
General Purpose Industrial Interchange
ISO 7241/1 Series A



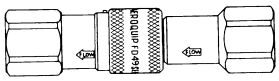
FD45 Series
Steel…page 35
Brass…page 38
Stainless Steel…page 41
Industrial Interchange
ISO 7241/1 Series B



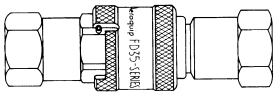
5100 Series – page 50
Thread Together—Low Spill



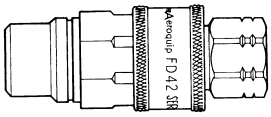
FD86 Series – page 69
5000 psi High Impulse—DryBreak



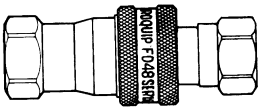
FD49 Series – page 47
Flush Face—No Spill
HTMA Interchange



FD35 Series – page 27
High Pressure—"Arc Latch™"

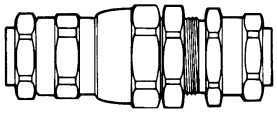


FD42 Series – page 30
Pioneer 4000-2 Interchange



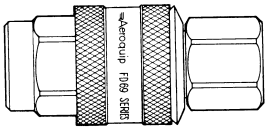
FD48 Series – page 45
Bruning SM-250 Interchange

FLUID TRANSFER and REFRIGERANT

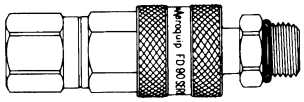


5400 Series – page 53
Low Spill—Low Air Inclusion

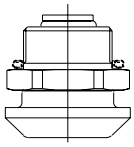
SPECIAL APPLICATION



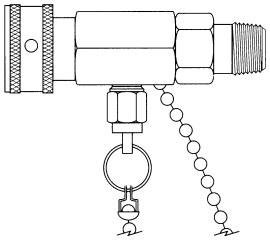
FD69 Series – page 62
Water Blast "Arc Latch™"



FD90 Series – page 72
Diagnostic SAE J1502 Interchange

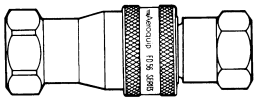


FD14 Series – page 23
Drain Coupling



FD15 Series – page 25
Oil Sampling Valve

DRYBREAK



FD56 and FD45 DryBreak – page 33
ISO 7241

How to Order

Aeroquip quick disconnect couplings can generally be ordered as a complete assembly or as separate halves. Couplings ordered by complete assembly part numbers will be supplied by halves. For special packaging, contact Aeroquip. (The FD14, FD40, FD41, FD43, FD86 and FD90 series are ordered by halves only.)

Standard coupling part numbers are described below:

5601-8-10 S

- Coupling series and body style
- Port or thread size*
- Nominal coupling size*
- Material (steel)

FD45-1002-06-06

- Coupling series
- Coupling half and material designation
- Port or thread size*
- Nominal coupling size*

*Size designations are represented in 16ths of an inch, i.e., 06 = $^{6}/_{16}$ or $^{3}/_{8}$ inch

Dimensions

Dimensions in this catalog are for reference only. Actual dimensions may vary from those shown.

Coupling Identification

Generally, the coupling series or complete part number will be stenciled on the coupling body.

Caution:

The user should observe carefully the precautions listed in this catalog. These include selection of seals and body materials for fluid compatibility and recommendations on the selection of quick disconnect couplings. In addition, care should be taken not to exceed the maximum operating pressures listed for each coupling size and type shown in the physical characteristics table for each coupling. Because of possible variations in machining tolerances, quality control, inspection and quality assurance, Aeroquip coupling halves should not be used with coupling halves supplied by other manufacturers except where such use is approved for a particular coupling as noted in this catalog.

For Technical Assistance Contact:

Eaton Aeroquip, Industrial Division,
3000 Strayer, Maumee, OH 43537

Phone: (419) 867-2600, FAX: (419) 867-2629

Construction

Electronic Cooling

Forestry

Safety Information for Aeroquip Coupling and Swivel Products

1.0 General Instructions

1.1 Scope. The scope of this safety bulletin is to warn against improper selection, use, installation, etc. of Aeroquip coupling/swivel products.

1.2 Distribution. A copy of this safety bulletin should be distributed to all individuals responsible for using and/or selecting Aeroquip coupling/swivel products.

1.3 Fail-Safe. Design all systems and equipment for fail-safe operation such that failure of any component does not result in personal injury and/or property damage.

1.4 User Responsibility. It is the sole responsibility of the user to select and determine that the Aeroquip product is compatible with the end use application. The user is responsible for reading and following this safety bulletin as well as any instructions or literature on the Aeroquip product being used. The user must provide necessary product warnings for Aeroquip couplings/swivel products, used with systems or equipment, to the operators of the systems or equipment.

1.5 Usage with other Manufacturers' Products. When using Aeroquip coupling/swivel products with other manufacturers' adapters, hoses, etc., do not exceed the lowest pressure rating of any of the components being used or rupture may result.

2.0 Selection of Aeroquip Couplings/Swivels.

2.1 Pressure. Ensure that the maximum operating pressure of the system or equipment does not exceed the rated operating pressure of the Aeroquip coupling/swivel product or rupture may result.

2.2 Fluid compatibility. Verify that all components (seals, metals, etc.) are compatible with the fluid being conveyed. Failure to do so may result in high speed fluid discharge and/or leakage of fluids which may be flammable, toxic, at extreme temperatures, or otherwise harmful.

2.3 Temperature. Ensure that the maximum operating temperature of the system or equipment does not exceed the rated operating temperature of the Aeroquip coupling/swivel product (including seals) or rupture may result.

2.4 Coupling/Swivel Size. Use properly sized couplings/swivels such that there is not a large pressure drop across them thus avoiding system damage due to excessive heat generation or failure of internal components.

2.5 Sleeve Lock. Use sleeve locks or threaded couplings where there is the possibility of accidental disconnection. Failure to utilize sleeve locks or threaded couplings in these applications may result in hose whip, expelled components, high speed fluid discharge, system damage, or leakage of fluids which may be flammable, toxic, at extreme temperatures, or otherwise harmful.

2.6 Connect or Disconnect Under Pressure. If connection and/or disconnection of couplings under pressure is a requirement, only use couplings designed for connection/disconnection under pressure. Failure to utilize this type of coupling in that application may result in hose whip, expelled components, high speed fluid discharge, and/or system damage. Be certain not to confuse the rated operating pressure with the rated connect/disconnect under pressure.

2.7 Environment. Ensure that Aeroquip couplings/swivels are compatible with the surrounding environment. The surrounding environment may be heat, salt water, moisture, chemicals, and the like. Failure to protect against an adverse environment may cause system damage, premature failure, and/or leakage of fluids which may be flammable, toxic, at extreme temperatures, or otherwise harmful.

2.8 External Loads. Avoid any external loads such as side loads, tensile loads, vibration, etc. Failure to do so may result in accidental disconnection, premature failure, system damage, and/or leakage of fluids which may be flammable, toxic, at extreme temperatures, or otherwise harmful.

2.9 Welding & Brazing. Extreme heating of plated products above +450°F (+232°C) such as welding, brazing, baking, etc., where the plating is burned off, may result in the release of deadly gases.

3.0 Installation of Aeroquip Coupling & Swivel Products.

3.1 Inspection of Product. Prior to installation, ensure that the Aeroquip product meets all of the requirements of the system and/or equipment it is to be used on. Ensure you have the correct part number, function test the coupling by connecting it with a mating half, and function test the swivel by rotating the sleeve. The function test should result in smooth, non-binding operation or premature failure may result.

3.2 Cleanliness. Use end caps and plugs to reduce the risk of system contamination or damage to critical sealing surfaces. Failure to do so may result in leakage of fluids which may be flammable, toxic, at extreme temperatures, or otherwise harmful. Caps and plugs are not a secondary seal unless explicitly noted.

3.3 Location. Place Aeroquip couplings and swivels in a safe location such as not to expose the user to personal injury (slippage, tripping, falling, etc.) during installation, connection, disconnection and maintenance.

4.0 Product Maintenance. A maintenance schedule should be put in place to ensure that Aeroquip couplings and swivels are functioning properly.

4.1 Inspection. Visually inspect to ensure that there is NO leakage, cracked components, corrosion build-up, contamination build-up, wear, etc. If any abnormality is encountered, the coupling or swivel should be replaced immediately.

Note: To obtain additional copies of this Safety Information Bulletin (60JB), contact Aeroquip at: Phone: 1-800-625-9100 Fax: 1-800-437-5318.

Quick Disconnect Couplings

Quick disconnect couplings are connecting devices which permit easy, immediate connection and separation of fluid lines. When installed in a fluid system, quick disconnect couplings save time by eliminating system bleeding, recharging and purging of air whenever an accessory is being replaced. Dependability is assured because the coupling valves automatically open and close and because the possibility of air, dirt, and moisture being trapped in the system is minimized.

Aeroquip quick disconnect couplings may be used in systems to help align components and the swivel feature helps prevent twisting of hose assemblies. However, they are not intended to be used as swivel joints in applications subjected to constant rotation. Aeroquip swivel joints should be used in these applications. See pages 225-239 of JA316G.

Selection of Quick Disconnect Couplings

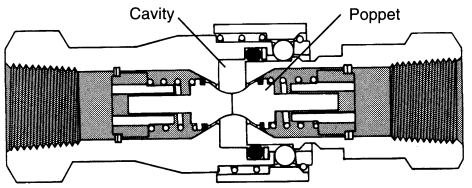
See selection chart on pages 13 and 14.

The following questions should be answered before selecting or specifying a quick disconnect coupling.

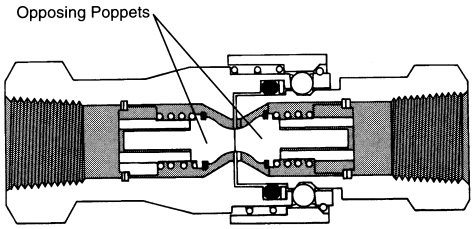
1. What are the functional requirements of the coupling?
2. To what pressures will the coupling be subjected?
3. What are the flow requirements of the coupling?
4. What is the maximum acceptable pressure drop at specified flow rate?
5. Is the coupling to be connected or disconnected under pressure? How much pressure? Which half?
6. What metals are compatible with the fluid in the system?
7. What seals are compatible with the system's fluid?
8. Are minimum air inclusion or fluid loss upon connection and disconnection critical to the proper operation of the system?
9. What threads and end configurations are necessary?
10. Is bulkhead flange or frame mounting necessary?
11. Should the coupling be interchangeable with other couplings presently in use?

I. Types of Valves

Double Poppet Valves – Most Common
FD14, FD35, FD42, FD45, FD48, 5600, FD71, FD72, FD76



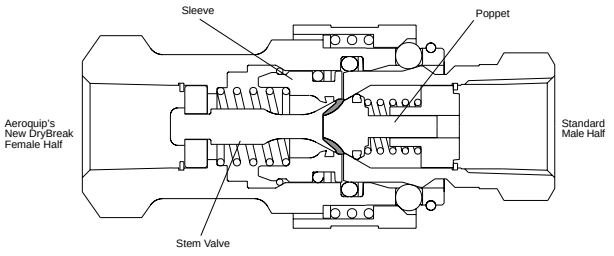
Partially Connected—No Flow



Fully Connected—Full Flow

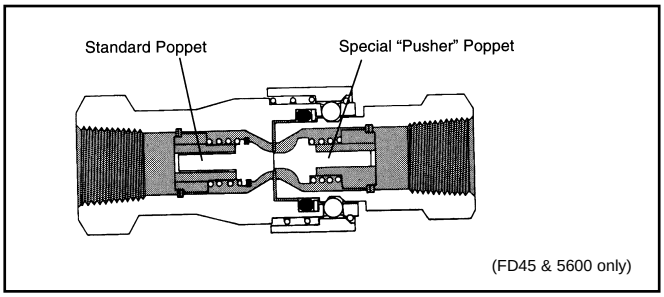
- Spring loaded poppet valves in each half immediately self-seal both halves upon disconnection.
- Cavity between halves allows some air inclusion when connecting and some fluid loss upon disconnection.
- Durable and economical.

Stem Valve and Sleeve – Poppet
FD45 DryBreak and FD56 DryBreak



- Patented valving for low air inclusion and fluid loss.
- Allows mating to any standard ISO 7241 poppet style male half.
- Spring loaded sleeve in the female half seals against stem valve and body.
- Poppet valve in opposing half self seals.
- No cavity between halves to cause spillage or air inclusion.

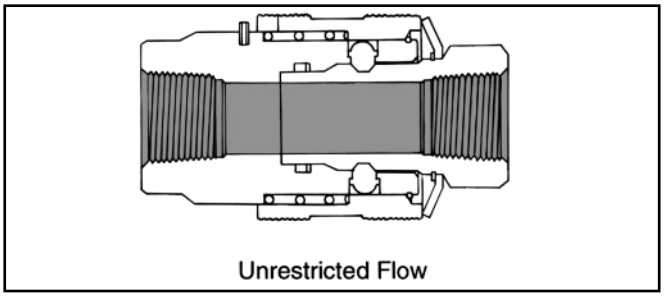
Valved – One Side
FD40, FD41, FD43, FD45, 5600



- Immediate self-sealing in valved half only.
- Either male or female half can be valved.
- Full flow in non-valved half upon disconnection.

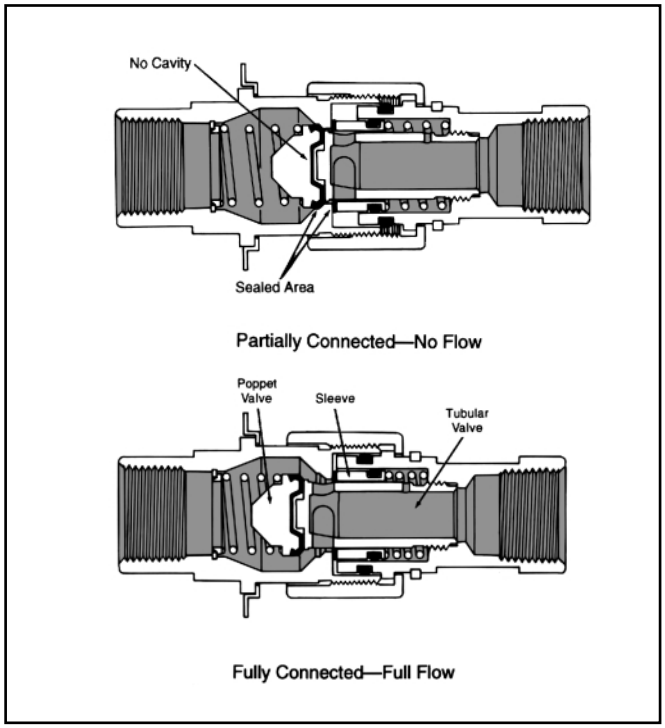
NOTE: A "Pusher" poppet is needed in non-valved half to open poppet in valved half except for FD40, FD41 and FD43.

No Valves
FD45, 5600, FD69



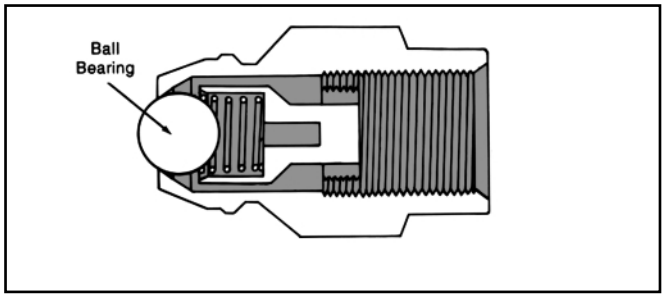
- Full flow when connected and disconnected.
- Minimum pressure drop.
- Maximum flow.

Tubular Valve and Sleeve – Poppet
FD49, 5100, 5400, FD86, FD90



- Precision valving for low air inclusion and fluid loss.
- Spring loaded sleeve provides access to tubular valve ports.
- Poppet valve in opposing half self seals.
- No cavity between halves to cause spillage or air inclusion.

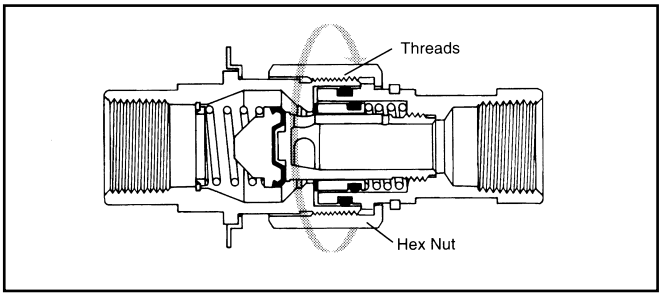
Ball Bearing Valve
FD70



- Spring loaded ball bearing.
- Durable and economical.
- Not recommended for vacuum.
- Metal-to-metal seal.

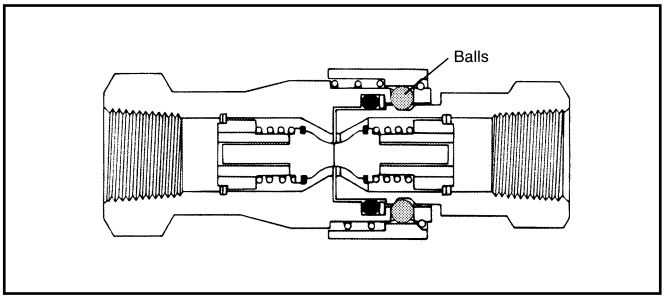
II. Types of Latches

Threaded Connections
5100, 5400, FD86



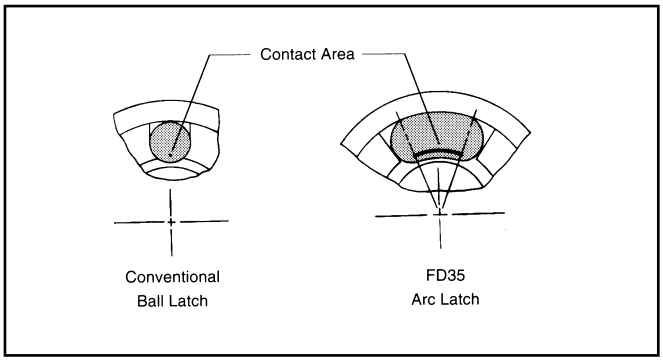
- Uses mechanical advantage of threads to connect or disconnect under pressure.
- Greater holding power under impulsing and vibration.
- Union nuts may be wing or hex type.

Ball Latch Connections
FD14, FD40, FD42, FD43, FD45, FD48, FD49, 5600 (FD56), FD71, FD72, FD90



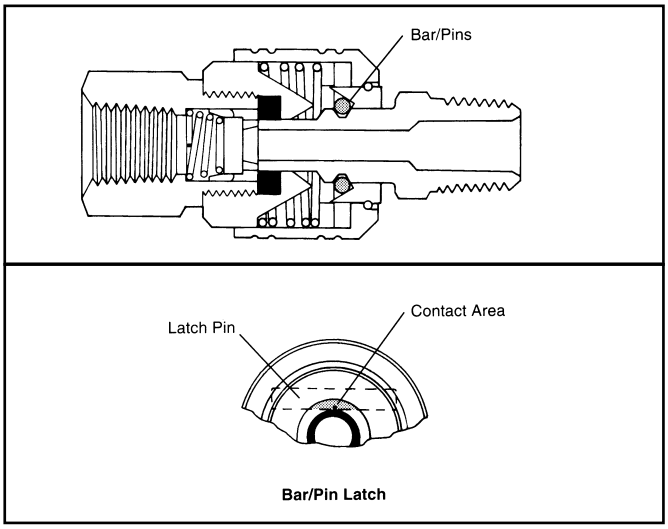
- Series of balls on female half, lock into recess on male half.
- Allows for 360° swiveling (not intended for constant swiveling).
- Quick and easy to connect and disconnect.
- Can be used as an emergency breakaway when female sleeve is frame mounted.
- Most popular and economical latching design.

"Arc Latch™" Connections
FD35, FD69



- Exclusive Aeroquip design.
- Series of arcs in female half, lock into recess on male half (same as ball latch).
- Greater surface contact area gives tremendous holding strength.
- For high pressure applications.

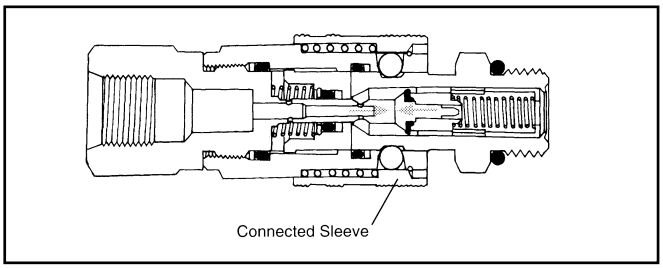
Bar/Pin Latch Connections
FD41



- Two bar/pins in female half lock into recess on male half.
- Allows for 360° swiveling (not intended for constant swiveling).
- Design allows for push to connect operation.
- Typically used for low pressure applications.

Latching Methods—(How To)
Push-to-Connect

FD14, FD40, FD41, FD49, FD90,
(FD71, FD72 when female half is frame mounted)



To Connect

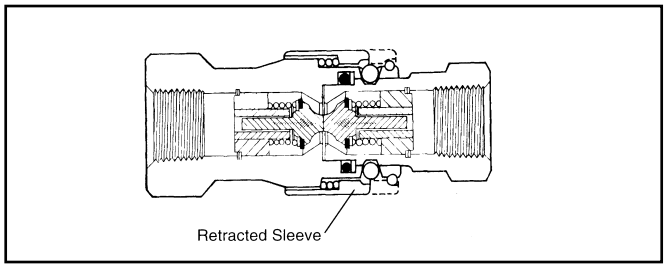
- Relieve system pressure.
- Insert and push male half into female half.
- Release sleeve on female half will connect automatically.
- Only one hand is required.
- FD71, FD72, only—to obtain push-to-connect female half must be frame mounted. (Ref. 5603 breakaway frame.) Female half end port must be connected to a 12" minimum length of flexible hose for full female body motion.

To Disconnect

- Relieve system pressure.
- Manually retract release sleeve on female half and remove male half.
- FD71, FD72 only—female half must be frame mounted and will automatically disconnect when male half is pulled out. This requires a slightly higher force to disconnect.

Retract (Sleeve) To-Connect

FD35, FD42, FD43, FD45, FD48, 5600 (FD56), FD69



To Connect

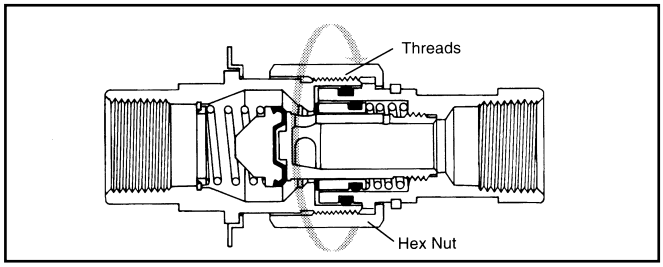
- Relieve system pressure.
- Pull back and hold release sleeve on female half.
- Insert male half.
- Let go of release sleeve on female half.

To Disconnect

- Relieve system pressure.
- Pull back and hold release sleeve on female half.
- Remove male half.
- Let go of release sleeve on female half.

Thread-to-Connect

5100, 5400, FD86



- Prevent male from rotating.
- Insert male into union nut on female body assembly.
- Rotate union nut clockwise.
  – With hand if wing nut type.
  – With wrench if hex nut type.
- Tighten as follows.

5100 Series

- Tighten until halves bottom out and connection indicator *groove* is no longer visible.

FD86 Series

- Tighten until halves bottom out and connection indicator *O-Ring* is no longer visible.

5400 Series

- Recommended torque values for S2 half to S5 half are listed below.

Dash Size	Torque – ft. lbs.
–4	10–12
–8	35–37
–12	45–47
–16	65–67

COUPLING SELECTION CHART

Below is a capability selection chart to aid you in locating the proper coupling to meet your requirements. This chart should be used in conjunction with the fluid compatibility charts on pages 15 and 16 and the appropriate product pages.

This information is intended as a guide only and final selection is further dependent on fluid and ambient temperature, concentration of agent, intermittent or continuous exposure, etc.

For further details on a specific coupling, see the appropriate catalog pages.

Where dash sizes appear in the chart below, the coupling is available only in those sizes.

The check marks (✓) in the chart below indicate product is normally available in either final assembly and/or component form. Contact Aeroquip for availability of products without a check mark.

Function	Nominal Coupling Size (inches)	Dash Size	FD14 Pg. 23	FD15 Pg. 25	FD35 Pg. 27	FD40 Pg. 17	FD41 Pg. 19	FD42 Pg. 30	FD43 Pg. 21	FD45				FD48 Pg. 45
										DryBreak Steel Pg. 33	Steel Pg. 35	Brass Pg. 38	SS Pg. 41	
	1/8	–2									4500	1000		
	1/4	–4		50/300		300	300	3000	300	4000	5000	1000	3000	3000
	3/8	–6	50		10000	300			300	4000	4000	1000	1500	
	1/2	–8				300			300					
	1/2	–8–10								4000	4000	1000	1500	
	3/4	–12								4000	4000	1000	1500	
	1	–16									4000	1000	1250	
	1 1/4	–20										1000		
	1 1/2	–24												
	2	–32												
Vacuum (in./Hg.)			28	28	28	28	28	28		28/15	28	28	28	28
Choice of Seals (other seal compounds available upon request)	Buna-N		✓	✓		✓	✓	✓		✓	✓	✓	✓	✓
	Neoprene								✓					
	EPR									✓	✓	✓	✓	
	Viton		✓		✓					✓	✓	✓	✓	
Valve Options	No-spill valving			N/A						✓				
	Double valve		✓	N/A	✓			✓		✓	✓	✓	✓	✓
	Valved male only			N/A							✓	✓	✓	
	Valved female only			N/A		✓	✓		✓		✓	✓	✓	
	Straight thru – no valves			N/A							✓	✓	✓	
Basic Material	Steel		✓	✓	✓	✓	✓	✓	✓	✓	✓			✓
	Brass											✓		
	Stainless Steel												✓	
	Aluminum													
	Polypropylene													
Latch Style	"Arc latch™"				✓									
	Ball latch		✓			✓		✓	✓	✓	✓	✓	✓	✓
	Bar Pin latch						✓							
	Threaded													
End Connections	Female pipe		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Male pipe		✓	✓		✓	✓		✓					
	Fem. st. thd. O-ring				✓			✓						
	Male st. thd. O-ring		✓	✓										
	SAE 37° (JIC) male													
	Metric male O-ring		✓											
	Braze													
	Hose barb								✓					
Mounting Method	Bulkhead							✓						
	Flange													
	Frame													
Connect Under Pressure						✓	✓		✓					
Caps/Plugs			✓		✓			✓		✓	✓	✓	✓	✓
Full Field Service					✓						✓	✓	✓	
Push to Connect (Automatic Sleeve)			✓			✓	✓							
Interchangeable with Other Brands					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Function	Nominal Coupling Size (inches)	Dash Size	FD49 Pg. 47	5100 Pg. 50	5400 Pg. 53	5600 DryBreak Pg. 33	5600 Standard Pg. 57	FD69 Pg. 62	FD71 Pg. 64	FD72 Pg. 66	FD86 Pg. 69	FD90 Pg. 72
Maximum Operating Pressure (psi connected)	1/8	–2										
	1/4	–4		3000*	3000*		5000					7000
	3/8	–6	3000	3000*		4000	4000					
	1/2	–8		3000*	1750*			10000				
	1/2	–8–10				4000	4000		3000	3000		
	3/4	–12		3000*	700*	4000	4000					
	1	–16		3000*	700*		4000				5000	
	1 1/4	–20		2750*							5000	
	1 1/2	–24		2500*								
	2	–32										
Vacuum (in./Hg.)			28	28	28	28/15	28	28	28	28	28	28
Choice of Seals (other seal compounds available upon request)	Buna-N		✓	✓		✓	✓	✓	✓	✓	✓	✓
	Neoprene				✓							
	EPR			✓		✓	✓	✓			✓	✓
	Viton			✓		✓	✓	✓			✓	✓
Valve Options	No spill valving		✓	✓	✓	✓					✓	✓
	Double valve		✓	✓	✓	✓	✓		✓	✓	✓	✓
	Valved male only						✓					
	Valved female only						✓					
	Straight thru – no valves						✓	✓				
Basic Material	Steel		✓		✓	✓	✓	✓	✓	✓	✓	✓
	Brass			✓								
	Stainless Steel							✓				
	Aluminum											
	Polypropylene											
Latch Style	"Arc latch™"							✓				
	Ball latch		✓			✓	✓		✓	✓		✓
	Bar Pin latch											
	Threaded			✓	✓						✓	
End Connections	Female pipe		✓	✓		✓	✓	✓	✓	✓	✓	✓
	Male pipe											✓
	Fem. st. thd. O-ring		✓			✓	✓				✓	✓
	Male st. thd. O-ring		✓									✓
	SAE 37° (JIC) male				✓							✓
	Metric male O-ring											✓
	Braze				✓							
	Hose barb											
Mounting Method	Bulkhead				✓				✓	✓		✓
	Flange			✓							✓	
	Frame					✓	✓		✓	✓		
Connect Under Pressure			500	500	✓		–8 –10			✓	750	500
Caps/Plugs			✓	✓	✓	✓	✓		✓	✓	✓	✓
Full Field Service				✓	✓		✓	✓			✓	
Push to Connect (Automatic Sleeve)			✓						✓	✓		✓
Interchangeable with Other Brands			✓	✓	✓	✓	✓		✓	✓		✓

**Not recommended for continuous hydraulic impulse applications at maximum operating pressure.*

FLUID COMPATIBILITY

This chart indicates the suitability of various elastomers and metals for use with fluids to be conveyed. It is intended for use with Aeroquip couplings and should not be used to determine compatibility for other products. It is intended as a guide only and is not a guarantee. Final selection of the proper seal or material of metal components is further dependent on many factors including pressure, fluid and ambient temperature, concentration, duration of exposure, etc.

HOW TO USE THE CHART

1. Both the elastomer and the metal must be considered when determining suitability of a combination for a coupling.
2. Locate the fluid to be conveyed and determine the suitability of the elastomeric and metal components according to the resistance ratings shown for each.
3. Dimensional and operation specifications for each coupling can be found on the catalog pages.
4. Information on seal options for couplings, and how to specify them, are shown in the respective sections of this catalog.
5. Be sure to check the table below for maximum operating temperature range of the elastomer for desired temperature.
6. For further details on the products shown in this catalog, and their applications, consult your Aeroquip Sales Representative or Aeroquip Corporation, Americas Industrial Division, Maumee, Ohio.
7. Coupling component materials may differ from body material. Refer to specific catalog pages.

RESISTANCE RATING KEY

E = Excellent – Fluid has little or no effect.

G = Good – Fluid has minor to moderate effect.

C = Conditional – Service conditions should be described to Aeroquip for determination of suitability for application.

U = UNSATISFACTORY

The differences between ratings "E" and "G" are relative. Both indicate satisfactory service. Where there is a choice, the materials rated "E" may be expected to give better or longer service than those rated "G".

SEAL ELASTOMER DATA

Seal Elastomer	Application Specification	Max. Operating Temperature Range
Buna-N	none	–40°F to +250°F (–40°C to +121°C)
Neoprene	none	–65°F to +300°F (–54°C to +149°C)
EPR (Ethylene Propylene Rubber)	none	–65°F to +300°F (–54°C to +149°C)
Viton	MIL-R-25897	–15°F to +400°F (–29°C to +204°C)

NOTE: This chart does not apply to bonded seals used in the 5100 and FD86 Series Couplings. Consult Aeroquip for special applications.

E = EXCELLENT G = GOOD C = CONDITIONAL U = UNSATISFACTORY	Buna-N	Neoprene	EPR/EPDM	Viton	Steel	Brass	Cres	Aluminum	Monel
FLUID	SEALS				METAL				
Acetaldehyde	E	E	E	U	E	U	E	E	E
Acetic Acid, 10%	U	C	C	U	G	E	E	E	E
Acetic Acid, Glacial	U	U	E	G	U	U	C	C	U
Acetone	U	U	C	U	U	E	C	C	C
Acetophenone	U	U	G	U	E	E	E	E	E
Acetyl Acetone	U	U	E	U	E	E	E	C	E
Acetyl Chloride	U	U	G	U	U	C	C	C	C
Acetylene	U	U	U	E	C	C	C	U	E
Air, Hot (Up to +160°F)	U	U	G	E	E	E	E	E	E
Air, Hot (161°F – 200°F)	E	E	E	E	E	E	E	E	E
Air, Hot (201°F – 300°F)	G	G	E	E	E	E	E	E	E
Air Wet	U	U	G	E	E	E	E	E	E
Aluminum Chloride	E	E	E	E	U	G	E	E	E
Aluminum Fluoride	E	E	E	E	U	U	U	U	C
Aluminum Nitrate	E	E	E	E	U	U	U	E	C
Aluminum Sulfate	E	E	E	E	U	U	C	C	C
Alums	E	E	E	E	U	C	E	C	C
Ammonia, Cold	E	E	E	E	U	C	E	C	C

E = EXCELLENT G = GOOD C = CONDITIONAL U = UNSATISFACTORY	Buna-N	Neoprene	EPR/EPDM	Viton	Steel	Brass	Cres	Aluminum	Monel
FLUID	SEALS				METAL				
Ammonia, Hot	U	G	G	U	E	U	E	E	E
Ammonia, Anhydrous	E	E	E	U	E	U	E	E	E
Ammonia, Aqueous	E	E	E	U	E	U	E	E	E
Ammonium Carbonate	U	E	E	U	C	U	C	C	C
Ammonium Chloride	E	E	E	U	C	U	C	C	C
Ammonium Hydroxide	C	C	E	C	U	U	C	C	U
Ammonium Nitrate	E	G	E	U	G	U	G	C	U
Ammonium Phosphate	E	E	E	–	U	C	G	U	G
Ammonium Sulfate/Sulfide	E	E	E	U	U	U	G	U	G
Amyl Acetate	U	U	G	E	U	E	E	E	E
Amyl Alcohol	G	G	E	G	U	G	E	U	G
Aniline, Aniline Oil	U	U	G	U	E	U	E	G	G
Aniline Dyes	U	G	G	G	U	C	G	C	G
Arsenic Acid	E	E	E	E	U	U	G	C	C
Asphalt	G	C	U	E	E	G	E	C	E
ASTM #1	E	E	C	E	E	E	E	E	E
ASTM #2	E	G	U	E	E	E	E	E	E
ASTM #3	E	G	U	E	E	E	E	E	E
Automatic Trans. Fluid	E	G	U	E	E	E	E	E	E
Barium Chloride	E	E	E	E	U	G	C	G	G
Barium Hydroxide	E	E	E	E	G	U	G	U	G
Barium Sulfide	E	E	E	E	C	U	G	U	G
Benzene, Benzol	U	U	U	E	G	E	E	G	E
Benzin	E	U	U	E	E	E	E	E	E
Benzoic Acid	U	U	U	E	U	G	G	E	G
Benzyl Alcohol	U	G	G	E	E	G	E	G	G
Black Sulfate Liquor	C	C	C	E	E	C	E	U	U
Blast Furnace Gas	U	U	U	E	E	C	E	U	U
Borax	G	G	E	E	E	E	E	G	–
Boric Acid	G	G	G	E	U	G	C	C	C
Bromine	U	U	U	E	E	C	U	C	C
Butane	E	E	U	E	U	E	E	E	E
Butyl Acetate	U	U	G	U	E	E	E	E	E
Butyl Alcohol	E	E	G	E	U	G	G	E	G
Butyl Cellosolve	U	E	G	U	E	E	E	E	E
Butylene	C	U	U	E	E	E	E	E	E
Butyl Stearate	G	U	U	E	G	G	G	E	G
Butyraldhyde	U	U	G	U	E	G	E	E	G
Calcium Acetate	G	G	E	U	E	G	G	C	G
Calcium Bisulfate	E	E	U	E	U	C	C	U	G
Calcium Chloride	E	E	E	E	U	G	G	C	G
Calcium Hydroxide	E	E	E	E	G	G	G	U	G
Calcium Hypochlorite	U	U	E	E	U	G	C	U	G
Calcium Nitrate	E	E	E	E	U	G	G	G	G
Cane Sugar Liquors	E	E	E	E	E	G	E	E	E
Carbitol	G	G	G	G	E	E	E	E	E
Carbolic Acid	U	U	G	E	U	E	E	–	–
Carbonic Acid	G	E	E	E	U	E	E	G	E
Carbon Dioxide	G	G	E	E	E	E	E	E	E
Carbon Disulfide	U	U	U	E	E	G	G	E	G
Carbon Monoxide	G	G	E	E	E	E	E	E	E
Carbon Tetrachloride	U	U	U	E	E	G	G	E	E
Castor Oil	E	E	G	E	U	E	E	E	E
Cellosolve Acetate	U	U	G	U	U	E	E	G	E
China Wood Oil (Tung Oil)	G	G	U	E	E	G	E	E	E
Chlorine	U	U	U	G	C	C	C	C	C
Chloracetic Acid	U	U	G	U	U	C	U	U	G
Chloroacetone	U	U	E	U	U	G	U	U	G
Chlorobenzene	U	U	U	G	G	G	G	G	G
Chloroform	U	U	U	E	G	G	G	G	G
Chlorophenol	U	U	U	E	C	G	G	U	G
Chlorosulfonic Acid	U	U	U	U	G	U	G	U	C
Chrome Plating Solution	U	U	G	E	C	U	U	U	U
Chromic Acid	U	U	C	E	C	U	U	C	U
Citric Acid	E	E	E	E	C	C	C	C	C
Coke Oven Gas	U	U	U	E	E	C	E	U	U
Copper Chloride	E	E	E	E	U	U	U	U	U
Copper Cyanide	E	E	E	E	U	U	G	U	G
Copper Sulfate	E	E	E	E	U	C	G	E	G
Cotton Seed Oil	E	G	C	E	E	E	E	E	E
Creosote (Coal Tar)	G	C	U	E	E	C	E	E	E
Crude Oil	E	G	U	E	G	E	G	E	U
Cyclohexanol	E	G	U	E	E	E	E	C	E
Cyclohexanone	U	G	U	E	E	E	E	C	E
Detergent/Water Solution	E	E	E	E	G	E	E	E	E
Diacetone Alcohol (Acetol)	U	U	E	U	E	E	E	E	E
Dibenzyl Ether	U	U	G	U	G	G	G	G	G
Diesel Oil	E	C	U	E	E	E	E	E	E
Diethylamine	G	G	U	U	E	G	E	–	E
Dowtherm A&E	U	G	U	E	G	U	E	E	E
Dowtherm 209	C	G	E	U	–	–	–	–	–
Ethyl Alcohol (Ethanol)	E	E	E	E	E	E	E	G	E
Ethyl Acetate	U	U	G	U	E	E	E	E	E
Ethyl Benzene	U	U	U	E	E	G	G	G	E
Ethyl Cellulose	G	G	U	U	E	G	G	G	G
Ethyl Chloride	U	U	U	E	E	E	E	G	G

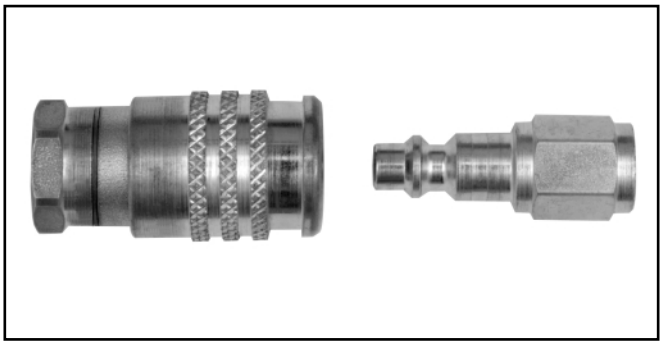
E = EXCELLENT
G = GOOD
C = CONDITIONAL
U = UNSATISFACTORY

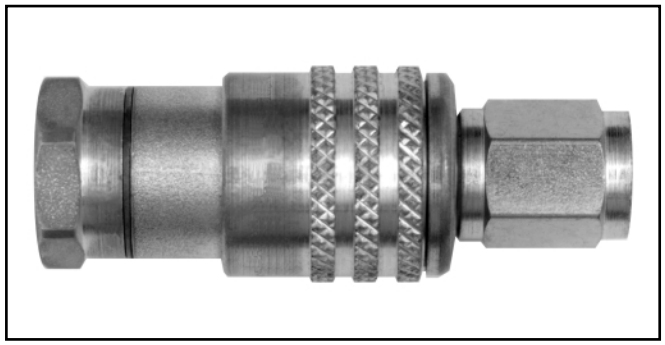
FLUID	Buna-N	Neoprene	EPR/EPDM	Viton	Steel	Brass	Cres	Aluminum	Monel
	SEALS				METAL				
Ethylene Dichloride	U	U	U	G	G	C	G	G	G
Ethylene Glycol	E	E	E	E	E	G	E	E	E
Ferric Chloride	E	G	E	E	U	U	U	U	U
Ferric Nitrate	E	E	E	E	U	U	G	U	U
Ferric Sulfate	G	G	G	E	U	U	E	U	U
Formaldehyde	C	C	G	G	E	E	E	G	G
Formic Acid	C	G	E	U	E	C	C	C	C
Fuel Oil	E	G	U	E	E	E	E	E	E
Furfural	C	C	G	U	E	G	G	G	G
Gallic Acid	G	G	G	E	U	–	G	C	G
Gasoline	E	C	U	E	E	E	E	E	E
Gasohol	G	G	U	E	E	E	E	G	E
Glycerine/Glycerol	E	E	E	E	E	G	E	E	E
Green Sulfate Liquor	G	G	E	E	U	U	E	U	U
Helium	E	E	E	E	E	E	E	E	E
Heptane	E	G	U	E	E	E	E	E	E
Hexaldehyde	U	G	G	U	E	G	E	E	G
Hexane	E	G	U	E	E	E	E	E	E
Hydraulic Oils									
Straight Petroleum	E	G	U	E	E	E	E	E	E
Water Petroleum Emulsion	E	G	U	E	C	E	E	G	E
Water Glycol	E	E	E	E	E	E	E	G	E
Straight Phosphate Ester	U	U	G	C	E	E	E	E	E
Phos. Ester/ Petroleum Blend	U	U	U	C	E	E	E	E	E
Ester Blend	E	U	U	E	E	E	E	E	E
Silicone Oils	E	E	E	E	E	E	E	E	E
Hydrobromic Acid	U	U	E	E	E	U	E	E	U
Hydrochloric Acid	U	U	G	E	U	U	U	U	U
Hydrocyanic Acid	C	C	E	E	E	E	G	E	G
Hydrofluoric Acid	U	U	C	U	U	U	U	U	C
Hydrofluorosilic Acid	G	G	E	E	U	U	E	U	U
Hydrogen	E	E	E	E	E	E	E	E	E
Hydrogen Peroxide	G	G	G	E	U	U	G	E	U
Hydrogen Sulfide, Dry	U	G	E	U	E	G	G	G	G
Isocyanate	U	U	G	E	G	–	G	–	–
Iso Octane	E	G	U	E	E	E	E	E	E
Isopropyl Acetate	U	U	G	U	E	–	E	E	E
Isopropyl Alcohol	G	G	E	E	E	E	E	G	E
Isopropyl Ether	G	U	U	U	G	G	G	–	–
JP-4, JP-5	E	U	U	E	E	E	E	E	E
Kerosene	E	U	U	E	E	E	E	E	E
Lacquer/Lacquer Solvents	U	U	U	U	U	E	E	E	E
Lime Sulfur									
Linseed Oil	E	G	U	E	E	E	E	E	E
LPG	E	G	U	E	E	E	E	E	E
Lubricating Oils									
Magnesium Chloride	E	E	E	E	E	C	C	G	G
Magnesium Hydroxide	G	G	E	E	E	G	E	G	G
Magnesium Sulfate	E	E	E	E	E	E	E	E	E
Maleic Acid	U	U	U	E	E	G	G	G	G
Maleic Anhydride	U	U	U	E	G	U	E	G	E
Malic Acid	G	G	U	G	U	–	E	G	E
Mercuric Chloride	E	E	E	E	U	U	U	U	U
Mercury	E	E	E	E	E	U	E	U	G
Methanol	G	G	E	U	G	G	E	G	E
Methyl Bromide	G	U	U	E	E	E	G	U	E
Methyl Chloride	U	U	U	E	E	E	E	U	G
Methyl Butyl Ketone	U	U	E	U	E	E	E	–	E
Methyl Ethyl Ketone	U	U	E	U	G	G	G	G	G
Methylene Chloride	U	U	U	G	G	G	G	G	G
Methyl Isobutyl Ketone	U	U	U	U	G	G	G	G	G
Methyl Isopropyl Ketone	U	U	U	U	G	G	G	G	G
Methyl Salicylate	U	U	C	U	E	G	G	E	G
MIL-L-2104	E	G	U	E	E	E	E	–	E
MIL-D-5606	E	G	U	E	E	E	E	E	E
MIL-H-6083	E	E	U	E	E	E	E	–	E
MIL-L-7808	G	U	U	E	G	G	E	–	–
MIL-L-23699	G	U	U	E	E	E	E	E	E
MIL-H-46170	E	G	U	E	E	E	E	–	E
MIL-H-83282	E	E	U	E	E	E	E	–	E
Mineral Oils	E	G	U	E	G	E	E	E	E
Naphtha	C	U	U	E	–	–	–	–	–
Naphthalene	U	U	U	E	E	G	E	G	G
Naphthenic Acid	C	U	U	E		G	E	G	G
Natural Gas	E	E	U	E	G	G	G	G	G
Nickel Acetate	C	C	E	G	G	C	E	G	E
Nickel Chloride	E	G	E	E	U	U	G	U	G
Nickel Sulfate	E	E	E	E	U	G	G	U	G
Nitric Acid, to 10%	U	U	U	E	U	U	E	U	U
Nitric Acid, over 10%	U	U	U	G	U	U	E	C	U
Nitrobenzene	U	U	U	G	E	G	E	E	E
Nitrogen	E	E	E	E	E	E	E	E	E
Octyl Alcohol	E	E	E	E	E	E	E	E	E

E = EXCELLENT
G = GOOD
C = CONDITIONAL
U = UNSATISFACTORY

FLUID	Buna-N	Neoprene	EPR/EPDM	Viton	Steel	Brass	Cres	Aluminum	Monel
	SEALS				METAL				
Oleic Acid	U	U	C	G	C	E	G	C	G
Oleum (Fuming Sulfuric Acid)	U	U	U	E	G	U	G	U	U
Oleum (Mineral Spirits)	E	G	U	E	E	E	E	E	E
Ortho-Dichlorobenzene	U	U	U	E	G	G	G	G	G
Oxalic Acid	G	G	E	E	U	C	C	C	C
Oxygen	–	–	–	–	G	G	G	G	G
Palmitic Acid	E	G	G	E	G	–	E	G	G
Para-Dichlorobenzene	U	U	U	E	G	G	G	G	G
Pentane	E	E	U	E	G	G	G	E	G
Perchloroethylene	U	U	U	E	C	G	G	G	E
Phenol (Carbolic Acid)	U	U	G	E	U	E	E	E	G
Phosphoric Acid	U	U	G	E	U	E	E	C	E
Phosphorous Trichloride	U	U	E	E	C	U	C	E	E
Potassium Acetate	G	G	E	U	C	G	C	U	G
Potassium Chloride	E	E	E	E	E	C	E	U	G
Potassium Cyanide	E	E	E	E	C	U	G	U	C
Potassium Dichromate	E	E	E	E	C	C	C	C	C
Potassium Hydroxide, to 10%	G	G	E	G	G	G	G	U	E
Potassium Hydroxide, over 10%	C	C	E	U	G	G	G	U	E
Potassium Nitrate	E	E	E	E	G	G	E	G	–
Potassium Sulfate	E	E	E	E	–	–	–	–	–
Propane	C	–	–	–	E	E	E	E	E
Propyl Acetate	U	U	G	U	E	–	E	E	E
Propyl Alcohol	E	E	E	E	E	E	E	E	E
Propylene	U	U	U	E	E	E	E	E	E
Refrigerant R-12	G	E	C	E	E	E	E	E	E
Refrigerant R-13	G	E	C	E	E	E	E	E	E
Refrigerant R-22	U	E	C	U	E	E	E	E	E
Refrigerant R-134a	C	E	C	U	E	E	E	E	E
Sewage	E	E	E	E	G	G	G	G	G
Soap (Water Solutions)	E	E	E	E	E	E	E	U	E
Sodium Acetate	G	G	E	U	E	E	G	E	E
Sodium Bicarbonate	E	E	E	E	G	G	E	G	E
Sodium Borate	E	E	E	E	E	E	E	G	–
Sodium Carbonate	E	E	E	E	E	G	E	U	E
Sodium Chloride	E	E	E	E	U	C	C	E	
Sodium Cyanide	E	E	E	E	E	–	C	U	U
Sodium Hydroxide, to 10%	U	G	E	E	C	G	C	U	C
Sodium Hydroxide, over 10%	U	U	G	E	C	C	C	U	C
Sodium Hypochlorite	C	C	E	C	U	U	U	U	C
Sodium Metaphosphate	E	E	E	E	E	G	E	U	G
Sodium Nitrate	G	G	E	–	E	C	E	E	E
Sodium Perborate	G	G	E	E	C	U	C	U	C
Sodium Peroxide	G	G	E	E	U	U	C	C	C
Sodium Phosphates	E	E	E	E	U	E	G	U	E
Sodium Silicate	E	E	E	E	E	E	E	E	E
Sodium Sulfate	E	E	E	E	G	G	U	G	G
Sodium Sulfide	E	E	E	E	C	U	C	U	G
Sodium Thiosulfate	G	E	E	E	U	U	C	G	G
Soy Bean Oil	E	G	U	E	E	E	E	E	E
Stannic Chloride	E	G	E	E	U	U	U	U	U
Steam (up to 300°F)	U	U	E	C	E	E	E	G	E
Stearic Acid	G	G	G	E	C	C	E	C	E
Stoddard Solvent	E	G	U	E	E	E	E	E	E
Styrene	U	U	U	G	E	E	E	E	E
Sulfur	U	E	E	E	E	U	G	E	E
Sulfur Chloride	U	U	U	E	G	–	G	G	U
Sulfur Dioxide	U	U	G	E	E	G	G	E	G
Sulfur Trioxide	U	U	G	E	G	C	G	G	G
Sulfuric Acid, over 10%	U	U	U	G	C	C	U	U	C
Sulfurous Acid	C	C	U	U	U	C	C	C	U
Tannic Acid	E	E	E	E	E	E	G	C	E
Tar (Bituminous)	G	U	G	E	E	G	E	E	E
Tartaric Acid	E	G	G	E	U	C	C	E	E
Tertiary Butyl Alcohol	G	G	G	E	G	G	U	G	E
Titanium Tetrachloride	C	U	U	E	E	U	G	U	G
Toluene (Toluol)	U	U	U	E	E	E	E	E	E
Trichlorethylene	U	U	U	E	E	G	E	E	E
Tricresyl Phosphate	U	U	E	G	E	–	C	–	G
Trianthanolamine	U	G	E	U	E	U	E	E	E
Tung Oil	G	G	U	E	E	G	G	E	E
Turpentine	G	U	U	E	G	G	G	G	G
Varnish	G	U	U	E	E	G	E	E	E
Vinyl Chloride	U	U	U	E	E	U	C	E	E
Water (to +150°F)	E	E	E	E	C	G	E	G	E
Water (+151°F to +200°F)	E	E	E	E	C	G	E	G	E
Water (+201°F to +250°F)	U	U	U	G	C	G	E	G	E
Xylene	U	U	U	E	E	E	E	E	E
Zinc Chloride	E	E	E	E	E	U	U	C	G
Zinc Sulfate	E	E	E	E	U	C	G	C	G

FD40 Series/MIL-C-4109 Industrial Interchange – Air

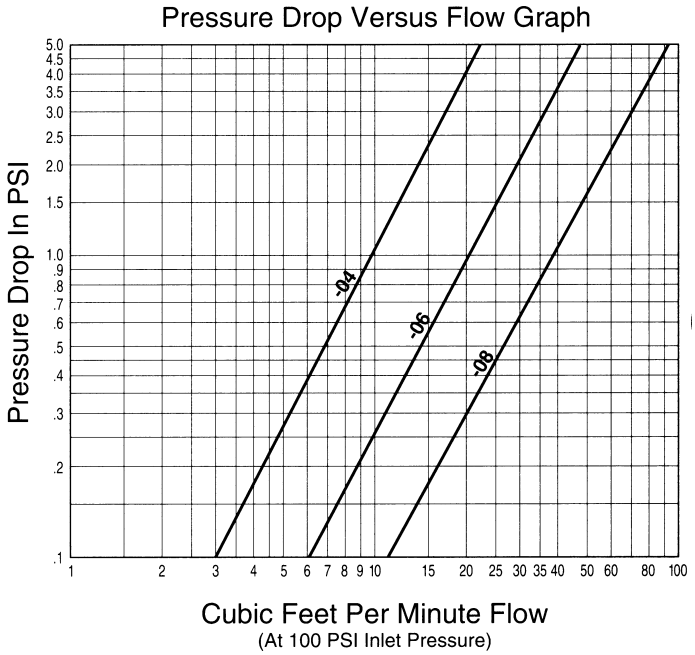




The FD40 Series offers a one-hand push-to-connect latch ideal for compressed air service. The female half features self-sealing poppet valves, preventing air loss while disconnected. Male half uses straight through design.

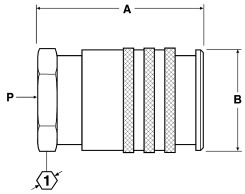
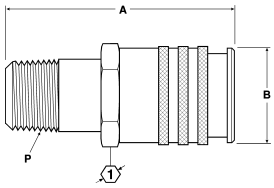
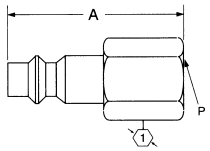
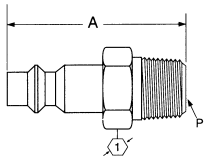
- Automatic sleeve for one-hand push-to-connect operation.
- Protective collar to prevent accidental snagging and disconnection.
- Meet dimensional requirements of MIL-C-4109 for industrial interchangeability.
- Swivels 360°, eliminating hose kinking.
- Ball latching mechanism.
- Standard seal material – Buna-N.
- Standard body material – Zinc plated steel.

Flow Data

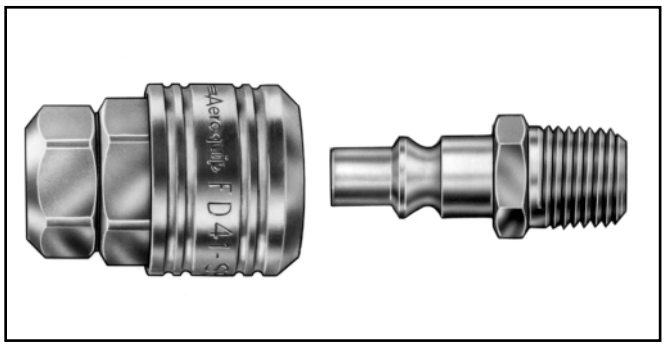


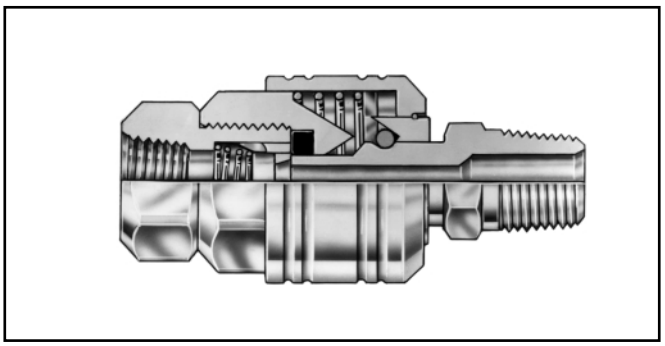
Physical Characteristics

Coupling Size	Maximum Operating Pressure (psi)	Mininum Burst Pressure (psi)		Vacuum (in./Hg.) Connected Only
		Female Half Only	Connected	
-04	300	3000	8000	28
-06	300	3000	8000	28
-08	300	2000	8000	28

FD40 Series	Coupling Size	Thread Size(P)	Dimensional Data A	B	⑴	Part Number Buna-N	Line Ref.
Female Half Female Pipe/Valved 	–04	1/4-18	1.88	1.00	.81	FD40–1000–04–04	2
	–04	3/8-18	2.56	1.00	.94	FD40–1000–06–04	3
	–06	1/4-18	2.63	1.16	.94	FD40–1000–04–06	4
	–06	3/8-18	2.13	1.16	.94	FD40–1000–06–06	5
	–08	1/2-14	2.38	1.28	1.06	FD40–1000–08–08	6
							7
							7
							8
Female Half Male Pipe/Valved 	–04	1/4-18	2.63	1.00	.81	FD40–1001–04–04	9
	–04	3/8-18	2.63	1.00	.81	FD40–1001–06–04	10
	–06	3/8-18	2.88	1.16	.94	FD40–1001–06–06	11
	–08	1/2-14	3.50	1.28	.88	FD40–1001–08–08	12
							13
							14
							15
							16
Male Half Female Pipe/Non-Valved 	–04	1/8-27	1.21		.56	FD40–1013–02–04	17
	–04	1/4-18	1.62		.62	FD40–1013–04–04	18
	–04	3/8-18	1.80		.88	FD40–1013–06–04	19
	–06	3/8-18	1.90		.88	FD40–1013–06–06	20
	–08	1/2-14	2.40		1.12	FD40–1013–08–08	21
							22
							23
							24
Male Half Male Pipe/Non-Valved 	–04	1/8-27	1.50		.50	FD40–1014–02–04	25
	–04	1/4-18	1.75		.56	FD40–1014–04–04	26
	–04	3/8-18	1.75		.69	FD40–1014–06–04	27
	–06	1/4-18	1.88		.62	FD40–1014–04–06	28
	–06	3/8-18	1.88		.69	FD40–1014–06–06	29
	–06	1/2-14	2.13		.88	FD40–1014–08–06	30
	–08	3/8-18	2.18		.69	FD40–1014–06–08	31
	–08	1/2-14	2.44		.88	FD40–1014–08–08	32

FD41 Series/ARO 210 Interchange – Air

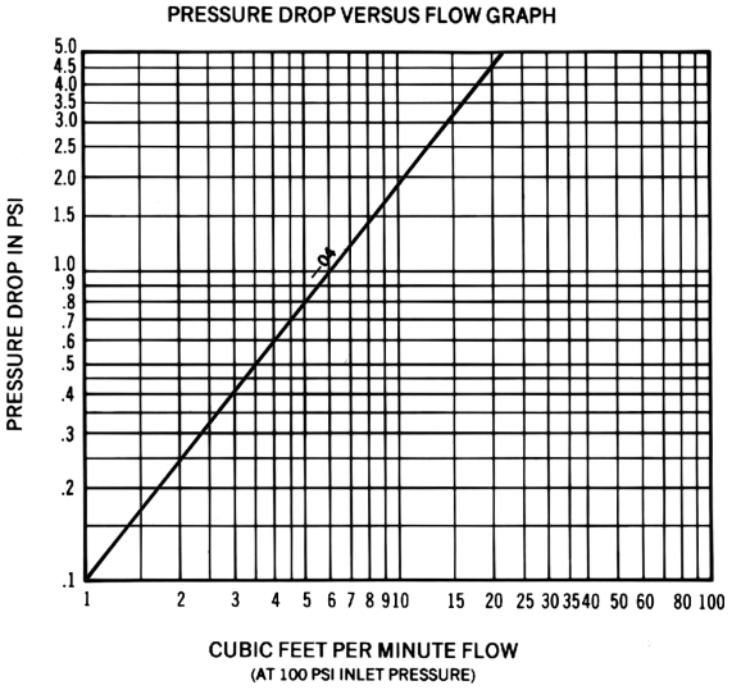




The FD41 interchanges with the ARO 210 Series for compressed air service, with a self-sealing female half and straight through male half.

- Designed to interchange with ARO 210 Series.
- Automatic sleeve for one hand push-to-connect operation.
- Swivels 360°, eliminating hose kinking.
- Designed to assure high flow with low pressure drop for peak tool performance.
- Standard seal material – Buna-N.
- Standard body material – Zinc plated steel.

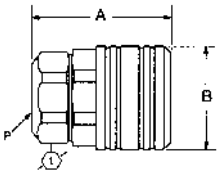
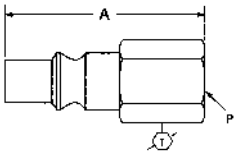
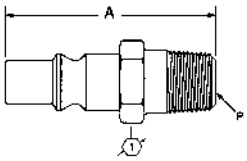
Flow Data



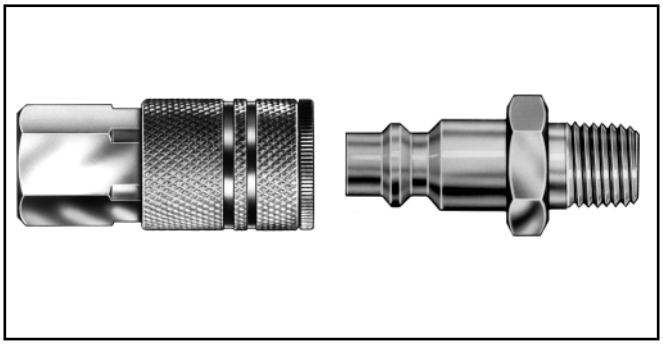
Physical Characteristics

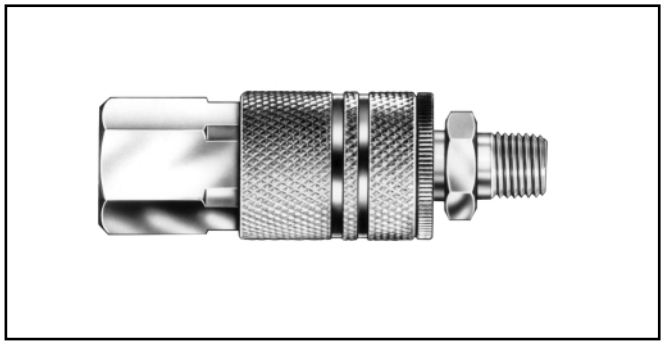
Coupling Size	Maximum Operating Pressure (psi)	Mininum Burst Pressure (psi)		Vacuum (in./Hg.) Connected Only
		Female Half Only	Connected	
–04	300	3000	8000	28

FD41 Series

Coupling Size	Thread Size (P)	Dimensional Data A	Dimensional Data B	Dimensional Data ⬡1	Part Number Buna-N	Line Ref.
Female Half Female Pipe/Valved 						
–04	1/8-27	2.15	1.12	.62	FD41–1000–02–04	1
–04	1/4-18	1.62	1.12	.81	FD41–1000–04–04	2
						3
						4
						5
						6
						7
						8
Male Half Female Pipe/Non-Valved 						
–04	1/4-18	1.51	–	.62	FD41–1013–04–04	9
						10
						11
						12
						13
						14
						15
						16
Male Half Male Pipe/Non-Valved 						
–04	1/4-18	1.61	–	.56	FD41–1014–04–04	17
						18
						19
						20
						21
						22
						23
						24

FD43 Series/Industrial Interchange—Air

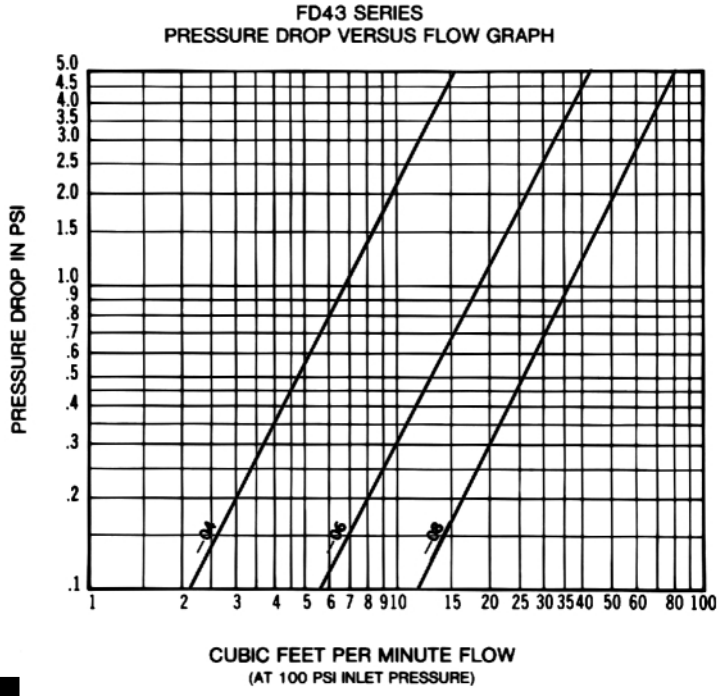




The FD43 Series is a manual retract-type ball latch industrial interchange coupling. Ideal for compressed air service, the FD43 uses FD40 male tips.

- Meets dimensional requirements of MIL-C-4109 specifications for industrial interchangeability.
- Protective collar to prevent accidental snagging and disconnection.
- Manual retract latch design allows quick and easy connection of hose lines.
- Swivels 360°, eliminating hose kinking.
- Standard seal material – Neoprene.
- Standard body material – Zinc plated steel.

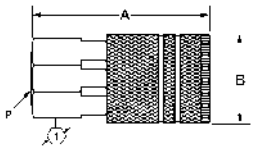
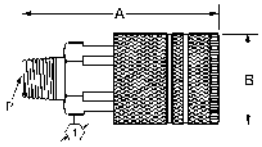
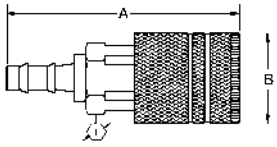
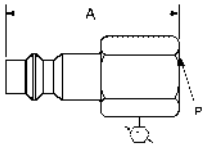
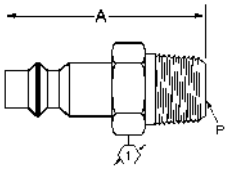
Flow Data



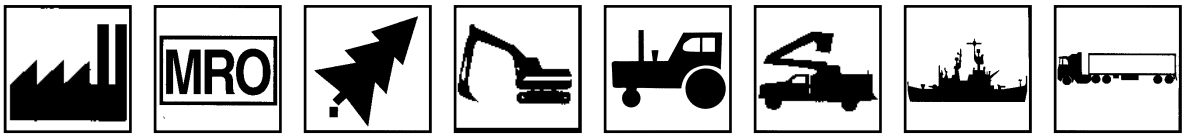
Physical Characteristics

Coupling Dash Size	Maximum Operating Pressure (psi)	Minimum Burst Pressure (psi)		Vacuum (in./Hg.) Connected Only
		Female Half Only	Connected	
–04	300	3000	8000	Not Rated
–06	300	3000	8000	Not Rated
–08	300	2000	8000	Not Rated

FD43 Series

Coupling Size	Thread Size(P)	Hose I.D.	Dimensional Data A	B	1	Part Number Neoprene	Line Ref.
Female Half Female Pipe/Valved 	–04	1/8-27		1.88	.88	.75	FD43–1001–02–04	1
	–04	1/4-18		2.09	.88	.75	FD43–1001–04–04	2
	–04	3/8-18		2.16	.88	.81	FD43–1001–06–04	3
	–06	1/4-18		2.38	1.06	.88	FD43–1001–04–06	4
	–06	3/8-18		2.38	1.06	.88	FD43–1001–06–06	5
	–06	1/2-14		2.53	1.06	1.00	FD43–1001–08–06	6
	–08	1/2-14		3.06	1.19	1.00	FD43–1001–08–08	7
Female Half Male Pipe/Valved 	–04	1/8-27		2.19	.88	.75	FD43–1011–02–04	8
	–04	1/4-18		2.28	.88	.75	FD43–1011–04–04	9
	–04	3/8-18		2.34	.88	.75	FD43–1011–06–04	10
	–06	1/4-18		2.41	1.06	.88	FD43–1011–04–06	11
	–06	3/8-18		2.44	1.06	.88	FD43–1011–06–06	12
	–06	1/2-14		2.56	1.06	.88	FD43–1011–08–06	13
	–08	1/2-14		3.09	1.19	1.00	FD43–1011–08–08	14
Female Half *SOCKETLESS*™ Hose Barb/Valved 	–04		1/4	2.78	.88	.75	FD43–1031–04–04	15
	–04		3/8	2.78	.88	.75	FD43–1031–06–04	16
								17
								18
								19
								20
								21
Male Half Female Pipe/Non-Valved 	–04	1/8-27		1.21		.56	FD40–1013–02–04	22
	–04	1/4-18		1.62		.62	FD40–1013–04–04	23
	–04	3/8-18		1.80		.88	FD40–1013–06–04	24
	–06	3/8-18		1.90		.88	FD40–1013–06–06	25
	–08	1/2-14		2.40		1.12	FD40–1013–08–08	26
								27
								28
Male Half Male Pipe/Non-Valved 	–04	1/8-27		1.50		.50	FD40–1014–02–04	29
	–04	1/4-18		1.75		.56	FD40–1014–04–04	30
	–04	3/8-18		1.75		.69	FD40–1014–06–04	31
	–06	1/4-18		1.88		.62	FD40–1014–04–06	32
	–06	3/8-18		1.88		.69	FD40–1014–06–06	33
	–06	1/2-14		2.13		.88	FD40–1014–08–06	34
	–08	3/8-18		2.18		.69	FD40–1014–06–08	35
	–08	1/2-14		2.44		.88	FD40–1014–08–08	36

FD14 Series/Drain Coupling

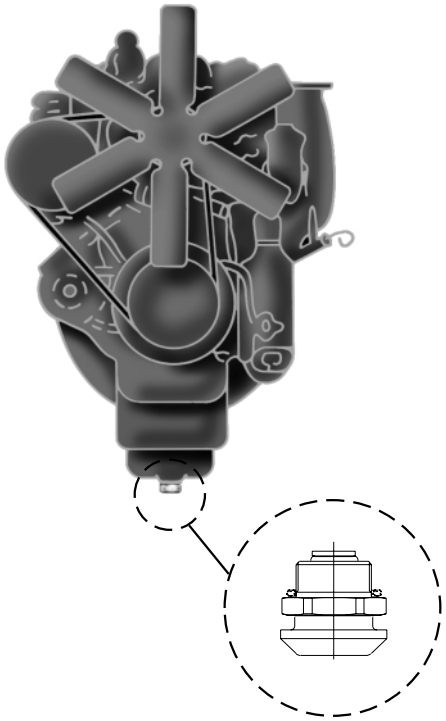


Male Half with
Rubber Molded Cap

Female Half

The FD14 Drain coupling is designed to serve as a drain port for use with systems such as the Aeroquip FLOCS (Fast Lube Oil Change System) as well as providing a purging port for use during prefill operations.

- Low-Profile, with multiple sealing mechanisms
  - O-ring – primary seal
  - Metal-to-metal – Secondary Seal
  - Rubber protective cap - Secondary Seal
- Push-To-Connect female half for easy one-hand operation
- Broad range of standard thread styles for Male Half
  - Utilizes a Copper-Crush gasket to seat against the port face.
- Standard male half seal material - Viton
- Standard female half seal material - Buna-N
- Standard body material - Zinc plated steel with zinc die-cast valve
- Rubber molded cap
  - Standard material - Buna-N



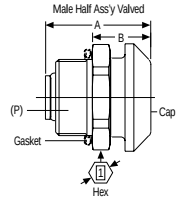
Physical Characteristics

Coupling Size	Maximum Operating Pressure (psi)	Minimum Burst Pressure (psi)	Vacuum (in./Hg.)	Rated Flow (gpm)
-06	50	200	28	3

Aeroquip FD14 Drain Coupling

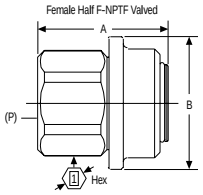
Providing direct access for fast oil changes.

The FLOCS Direct Access Conversion Kit uses the Aeroquip-developed FD14 Drain Coupling as an alternative to the standard remote hose kit. This coupling design permits easy, one-hand connection and disconnection of the evacuation unit's hose.

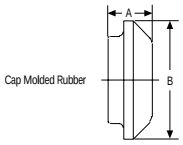


Coupling Size	Thread Size (P)	A	B	1	Ass'y Torque (Ft.-Lbs.)	Assembly (Includes Gasket & Cap)	Gasket (Copper-Crush)	Cap (Buna-N)
-06	1/2 - 20 UNF - 2A	1.33	.56	15/16	20-24*	FD14-1002-01-06	FD14-1206-01	FD14-1204-06
-06	M18 x 1.5 6g	1.33	.56	1 1/4	20-40*	FD14-1002-02-06	FD14-1206-04	FD14-1204-06
-06	M14 x 1.25 6g	1.33	.56	15/16	20-24*	FD14-1002-03-06	FD14-1206-02	FD14-1204-06
-06	1 1/4 - 18 UNEF - 2A	1.37	.56	1 1/2	30-60*	FD14-1002-05-06	FD14-1206-11	FD14-1204-06
-06	1 -18 UNS - 2A	1.37	.56	1 1/4	30-60*	FD14-1002-06-06	FD14-1206-07	FD14-1204-06
-06	7/8 - 18 UNS - 2A	1.37	.56	1 1/4	30-60*	FD14-1002-07-06	FD14-1206-06	FD14-1204-06
-06	5/8 - 18 UNF - 2A	1.33	.56	15/16	20-40*	FD14-1002-08-06	FD14-1206-03	FD14-1204-06
-06	3/4 - 16 UNF - 2A	1.37	.56	1 1/4	30-50*	FD14-1002-09-06	FD14-1206-04	FD14-1204-06
-06	7/8 - 14 UNF - 2A	1.37	.56	1 1/4	30-60*	FD14-1002-10-06	FD14-1206-06	FD14-1204-06
-06	M24 x 2 6g	1.37	.56	1 1/4	30-60*	FD14-1002-11-06	FD14-1206-07	FD14-1204-06
-06	9/16 - 18 UNF - 2A	1.33	.56	15/16	20-40*	FD14-1002-12-06	FD14-1206-02	FD14-1204-06
-06	1 1/8 - 12 UNF - 2A	1.37	.56	1 1/2	30-60*	FD14-1002-14-06	FD14-1206-09	FD14-1204-06
-06	M20 x 1.5 6g	1.37	.56	1 1/4	30-60*	FD14-1002-16-06	FD14-1206-05	FD14-1204-06
-06	M25 x 1.5 6g	1.37	.56	1 1/4	30-60*	FD14-1002-17-06	FD14-1206-07	FD14-1204-06
-06	M22 x 1.5 6g	1.37	.56	1 1/4	30-60*	FD14-1002-18-06	FD14-1206-06	FD14-1204-06
-06	M24 x 1.5 6g	1.37	.56	1 1/4	30-60*	FD14-1002-19-06	FD14-1206-07	FD14-1204-06
-06	1 1/16 - 12 UN - 2A	1.37	.56	1 1/2	30-60*	FD14-1002-20-06	FD14-1206-08	FD14-1204-06
-06	M30 x 1.5 6g	1.37	.56	1 1/2	30-60*	FD14-1002-21-06	FD14-1206-10	FD14-1204-06
-06	1/2 - 14 UNS - 2A	1.33	.56	15/16	20-24*	FD14-1002-22-06	FD14-1206-01	FD14-1204-06
-06	M12 x 1.5 6g	1.33	.56	15/16	20-24*	FD14-1002-23-06	FD14-1206-01	FD14-1204-06
-06	M14 x 1.5 6g	1.33	.56	15/16	20-24*	FD14-1002-24-06	FD14-1206-02	FD14-1204-06
-06	M12 x 1.75 6g	1.33	.56	15/16	20-24*	FD14-1002-25-06	FD14-1206-01	FD14-1204-06
-06	3/4 - 14 Dryseal NPTF	1.52	.56	1 1/4		FD14-1002-26-06	None Needed	FD14-1204-06

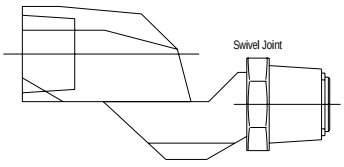
*⚠ CAUTION: Failure to meet minimum assembly torque could result in fluid leakage.



Coupling Size	Thread Size (P)	A	B	1	Assembly
-06	3/4 - 14 Dryseal NPTF	1.83	1.81	1 5/16	FD14-1001-12-06

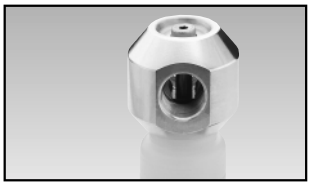


Coupling Size	A	B	Cap (Buna-N)
-06	0.519	1.400	FD14-1204-06

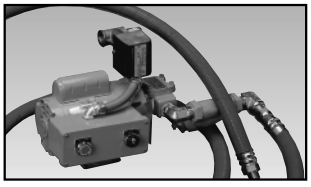


Coupling Size	Thread Size (P)	Assembly
-06	3/4 - 14 Dryseal NPTF	FD14-1004-12-12

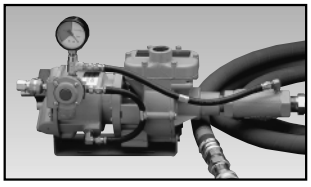
FLOCS System Components & Accessories



– FLOCS Oil Thief Sampling System

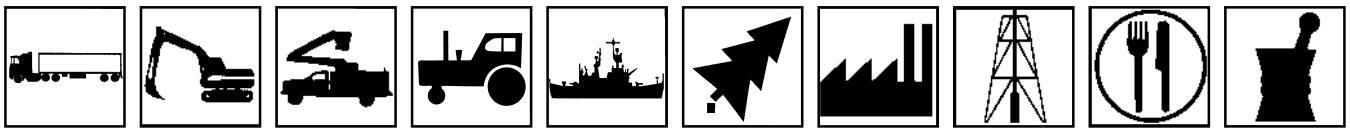


– FLOCS 15 Direct Access Oil Evacuation Unit (Electric)



– FLOCS 30A Air Powered Oil Evacuation Unit

FD15 Series/Oil Sampling Valve



0–50 psi

Part Number	Inlet Ports
FD15–1026–04	1/4" NPTF
FD15–1025–04	7/16-20 Male ORB

As required in MIL-V-81940/2-1 this valve's flow rate is between 100 and 1500 milliliters per minute at pressures from 0–50 psi. (MIL-V-81940/2-1 applies only to pressures from 50–300 psi.)

50–300 psi

Part Number	Inlet Ports
FD15–1000–02	1/8" NPTF
FD15–1000–04*	1/4" NPTF
FD15–1002–04	7/16-20 Male ORB

*The 1/4" NPTF version is qualified to MIL-V-81940/2-1 and its performance is representative of the other inlet port configurations listed above.
QPL-81940-9 6-5-89

FD15 Oil Sampling Valve: In-line sampling of system fluids is made without system shutdown, usually in less than one minute, and without fluid contamination.

Application: Engine oil, lubricating oil, transmission fluid and hydraulic fluids in mobile construction equipment, military vehicles, trucks and stationary equipment.

For best results, Aeroquip FD15 Oil Sampling Valves should be installed in dynamic fluid lines in low pressure and return lines. If only one sampling point can be chosen, it should be in the return line, upstream of any return line filter. This will insure a representative sample of all components in the fluid system for their present condition.

Operation: Remove metal dustcover on discharge port. Discharge approximately 200 ml of oil to flush valve by turning knurled knob 1/4 turn to the right. Dispose of this sample in the appropriate manner. Locate clean oil sample bottle under discharge port. (Sample bottles are usually supplied by the oil analysis lab.) Turn knurled knob 1/4 turn to the right until bottle is filled to the desired level. The knob can be backed off to throttle the rate of flow. When bottle is filled let go of the knurled knob, the valve will close automatically. Replace metal dustcover wrench tight.

Construction: Corrosion resistant plated steel with brass internal components and Buna-N seal.

Operating Temperature Range: –65°F to +275°F (–53°C to +135°C)

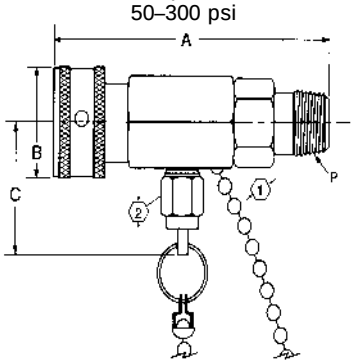
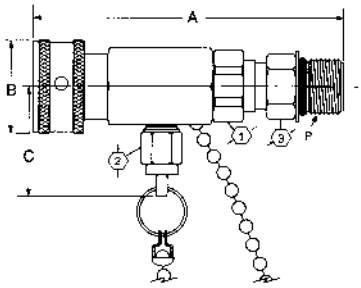
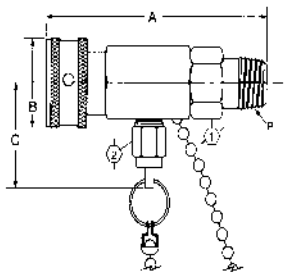
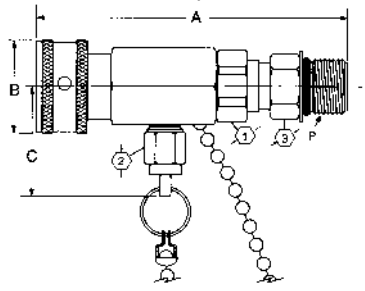
Minimum Burst Pressure: 1200 psi

Minimum Particle Restriction: 500 microns

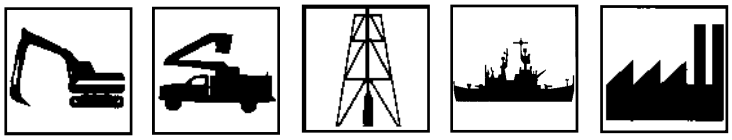
Maximum Torque to Operate: 10 in. lbs.

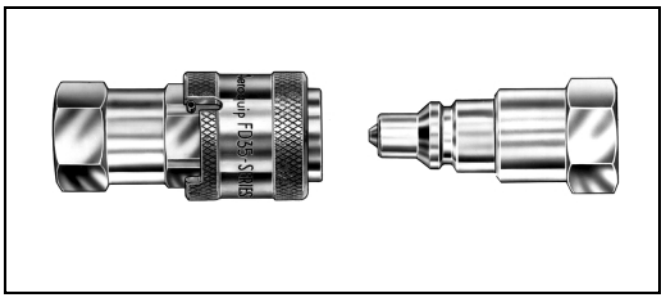
Note: This valve is not intended for aerospace applications.

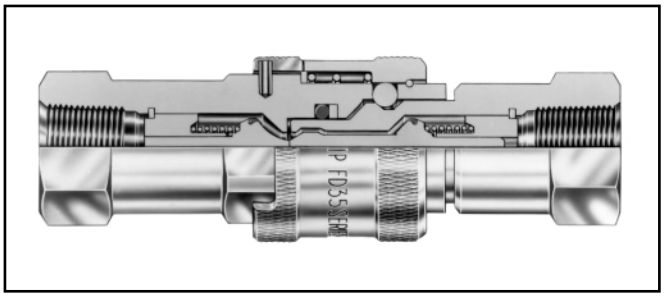
FD15 Series

	Coupling Size	Thread Size (P)	Dimensional Data A	B	C	①	②	③	Part Number Buna-N	Line Ref.
Male Pipe Thread 50–300 psi 	–	1/8-27	2.42	1.00	1.30	.69	.38	–	FD15–1000–02	1
	–	1/4-18	2.56	1.00	1.30	.69	.38	–	FD15–1000–04	2
										3
										4
										5
										6
										7
										8
Male SAE O-Ring Thread 50–300 psi 	–	7/16-20	2.79	1.00	1.30	.69	.38	.56	FD15–1002–04	9
										10
										11
										12
										13
										14
										15
										16
Male Pipe Thread 0–50 psi 	–	1/4-18	2.56	1.00	1.30	.69	.38	–	FD15–1026–04	17
										18
										19
										20
										21
										22
										23
										24
Male SAE O-Ring Thread 0–50 psi 	–	7/16-20	2.79	1.00	1.30	.69	.38	.56	FD15–1025–04	25
										26
										27
										28
										29
										30
										31
										32

FD35 Series/*Arc Latch™ for 10,000 psi High Pressure Applications*

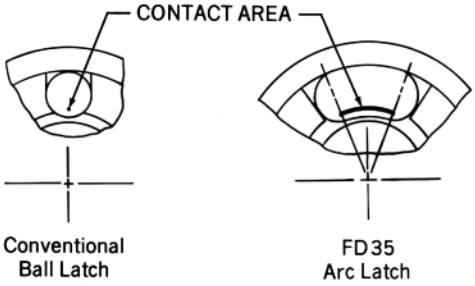




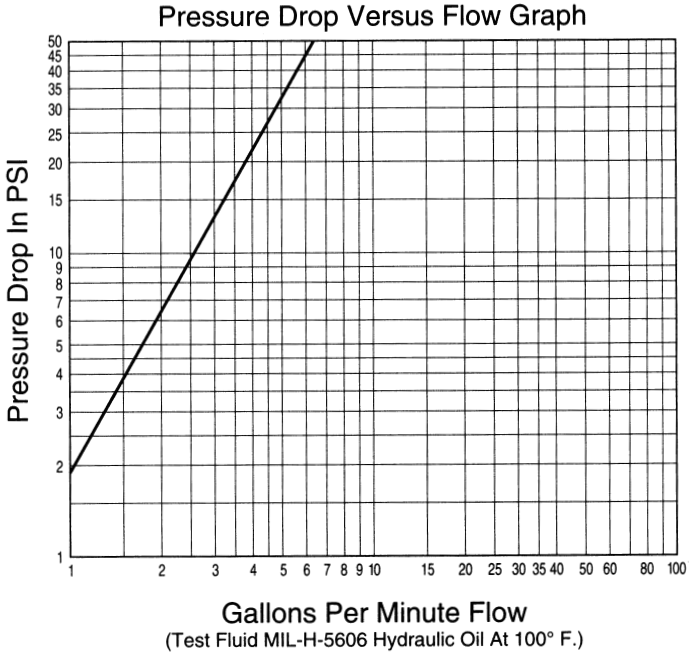


The FD35 Series Arc Latch™ design has a greater surface contact area for long surface life in rugged high pressure applications. The maximum operating pressure is 10,000 psi.

- Safety sleeve lock prevents accidental disconnection.
- Heavy duty back-up ring prevents O-ring extrusion.
- Heat treated and plated steel for greater wear and corrosion resistance.
- Self-sealing poppet valves provide excellent high and low pressure sealing.
- Standard seal material – Viton.
- Standard body material – Zinc plated steel.

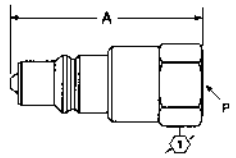
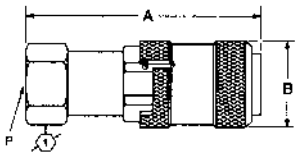
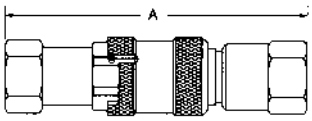
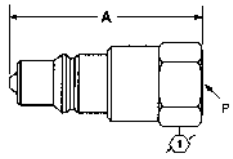
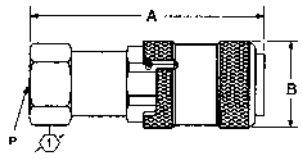


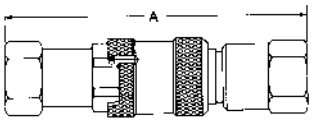
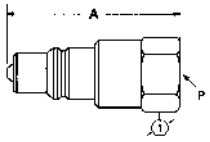
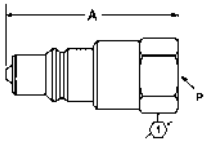
Flow Data



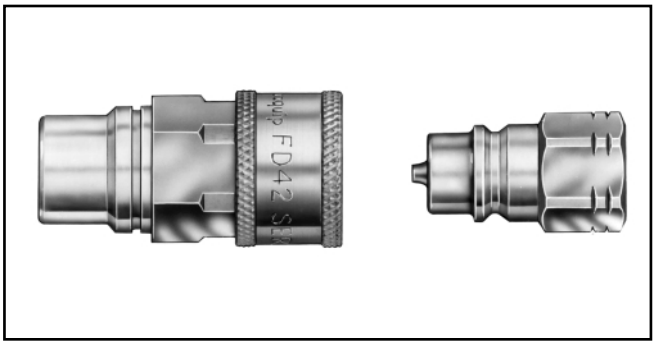
Physical Characteristics

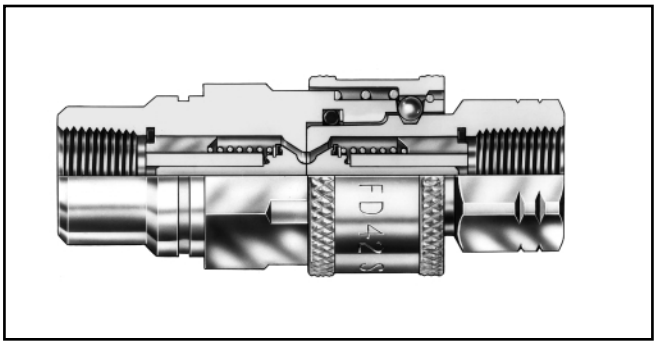
Coupling Size	Maximum Operating Pressure (psi)	Minimum Burst Pressure (psi)	Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc. max.)	Fluid Loss (cc. max.)
-06	10,000	40,000	28	2	0.50	0.50

FD35 Series	Coupling Size	Thread Size (P)	Dimensional Data A	B	①	Part Number Buna-N	Line Ref.
Male Half Female Pipe/Valved 	–06	3/8-18	2.05		0.94	FD35–1002–06–06	1
							2
							3
							4
							5
							6
							7
							8
Female Half Female Pipe/Valved 	–06	3/8-18	2.56	1.27	0.94	FD35–1001–06–06	9
							10
							11
							12
							13
							14
							15
							16
Complete Coupling Female Pipe/Valved 	–06	3/8-18	3.53			FD35–1000–06–06	17
							18
							19
							20
							21
							22
							23
							24
Male Half Female SAE O-Ring/Valved 	–06	9/16-18	2.05		0.94	FD35–1008–06–06	25
							26
							27
							28
							29
							30
							31
							32
Female Half Female SAE O-Ring/Valved 	–06	9/16-18	2.56	1.27	0.94	FD35–1007–06–06	33
							34
							35
							36
							37
							38
							39
							40

FD35 Series	Coupling Size	Thread Size(P)	Dimensional Data A	B	⑴	Part Number Viton	Line Ref.
Complete Coupling Female SAE O-Ring/Valved 	-06	9/16-18	3.53			FD35–1006–06–06	1
							2
							3
							4
							5
							6
							7
							8
Male Half Female Pipe/45 psi Bleed Valve  Incorporates a special relief valve set at 45 psi, preventing disconnected pressure build-up.	-06	3/8-18	2.05		0.94	FD35–1043–06–06	9
							10
							11
							12
							13
							14
							15
							16
Male Half Female SAE O-Ring/ 45 psi Bleed Valve  Incorporates a special relief valve set at 45 psi, preventing disconnected pressure build-up.	-06	9/16-18	2.12		0.94	FD35–1044–06–06	17
							18
							19
							20
							21
							22
							23
							24
Repair Kits							25
	-06	Male Valving				FF10173–06	26
	-06	Female Valving				FF10174–06	27
	-06	Female Locking Arc Latch				FF10175–06	28
Accessories							29
Dust Cover 	-06	Fits Male and Female Halves				FD35–1042–06	30
							31
							32
							33
							34
							35
							36
							37

FD42 Series/Pioneer 4000 Interchange



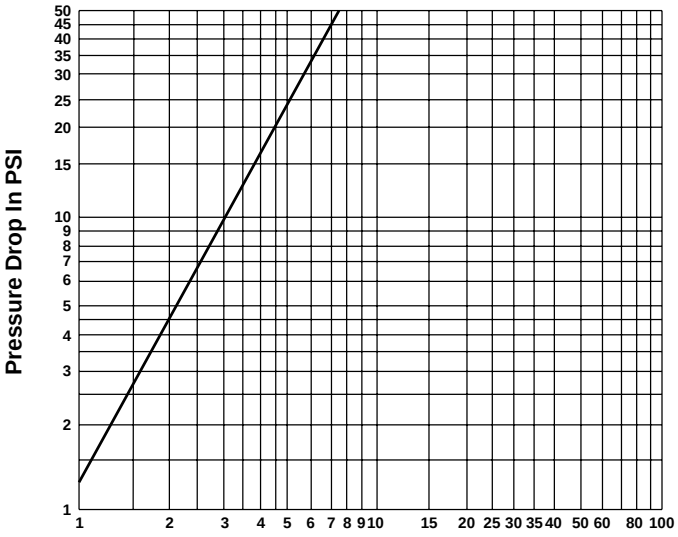


The FD42 Series coupling is designed as a Pioneer 4000 interchange to accommodate high surge flows typically found in snow plow applications. The maximum operating pressure is 3,000 psi.

- Teflon† back up ring in female half improves impulse life.
- Self-sealing poppet valve design provides excellent high and low pressure sealing.
- *PUSH-PULL*™ ball latch design allows quick and easy connection and disconnection of hose lines.
- Interchanges with Pioneer 4000-2 and Safeway S20-A.
- Retaining groove on female half for bulkhead mounting.
- Male half can be bulkhead mounted with optional adapter.
- Standard seal material – Buna-N.
- Standard body material – Zinc plated steel with zinc poppet guides.

Flow Data

Pressure Drop Versus Flow Graph



Gallons Per Minute Flow
(Test Fluid MIL-H-5606 Hydraulic Oil At 100˚F.)

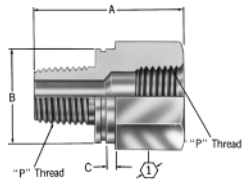
Physical Characteristics

Coupling Size	Maximum Operating Pressure (psi)	Mininum Burst Pressure (psi)	Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc. max.)	Fliud Loss (cc. max.)
-04	3000	12,000	28	3	.62	.80

† *Teflon is a registered trademark of Dupont.*

FD42 Series

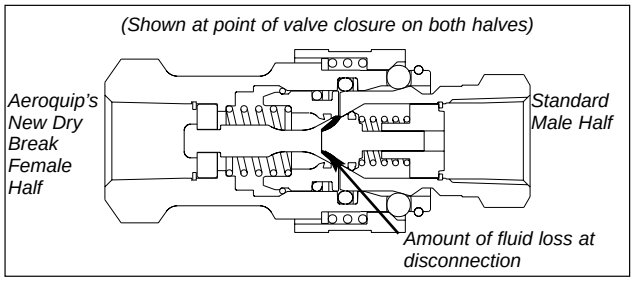
	Coupling Size	Thread Size (P)	Dimensional Data						Part Number	Line Ref.
			A	B	C	D	E	⑴	Buna-N	
Male Half Female Pipe/Valved	-04	1/4-18	1.34					.75	FD42–1002–04–04	1
										2
										3
										4
										5
										6
										7
										8
Female Half Female Pipe/Valved	-04	1/4-18	2.04		.87	.05	.10	.88	FD42–1001–04–04	9
										10
										11
										12
										13
										14
										15
										16
Complete Coupling Female Pipe/Valved	-04	1/4-18	2.68						FD42–1000–04–04	17
										18
										19
										20
										21
										22
										23
										24
Male Half Female SAE O-Ring/Valved	-04	9/16-18	1.63					.81	FD42–1010–06–04	25
										26
										27
										28
										29
										30
										31
										32
Female Half Female SAE O-Ring/Valved	-04	9/16-18	2.13	1.06	.87	.05	.10	.88	FD42–1008–06–04	33
										34
										35
										36
										37
										38
										39
										40
Complete Coupling Female SAE O-Ring/Valved	-04	9/16-18	2.97						FD42–1006–06–04	41
										42
										43
										44
										45
										46
										47

FD42 Accessories	Coupling Size	Thread Size (P)	Dimensional Data						Part Number	Line Ref.
			A	B	C	D	E	(1)	Buna-N	
Bulkhead Adapter 	-04	1/4-18	1.39	.87	.08			.88	FF1607–0404S	1
										2
										3
										4
										5
										6
										7
										8
Dust Cap/Plug (Fits Both Halves) 	-04								FD48–1042–04	9
										10
										11
										12
										13
										14
										15
										16

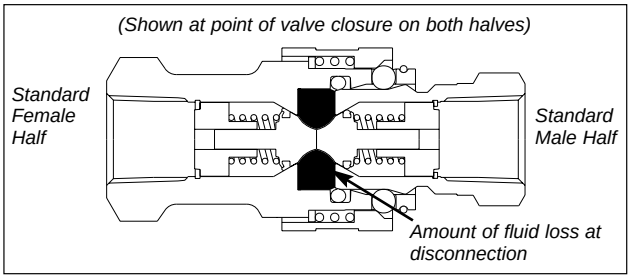
DryBreak
ISO INTERCHANGE

The Aeroquip DryBreak Difference

DryBreak/Industrial Interchange Coupling



Industry Standard Opposed Poppet Style



DryBreak Valves

DryBreak Valve for the 5600 Series

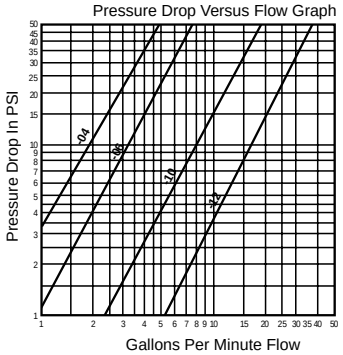
- **Mates with all standard poppet valved style ISO 7241/1 Series A male halves.**
- Economical Patented concave stem valve in the female coupling half that provides disconnecting fluid loss rates comparable with more expensive flush faced coupling styles.
- Standard Seal Materials – Buna-N, Viton, and EPR available on request.
- Standard body material – Zinc plated steel.

Physical Characteristics

Coupling Size	Maximum Operating Pressure (psi)	Minimum Burst Pressure (psi)	Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc. max.)	**Fluid Loss (cc. max)**
-06	4,000	12,000	28	6	.36	.05
-10	4,000	12,000	28	12	1.14	.08
-12	4,000	12,000	15	28	1.19	.23
-16	4,000	12,000				

FLOW DATA

Pressure Drop Versus Flow Graph



(Test Fluid MIL-H-5606 Hydraulic Oil At 100° F.)

DryBreak Valve for the FD45 Series

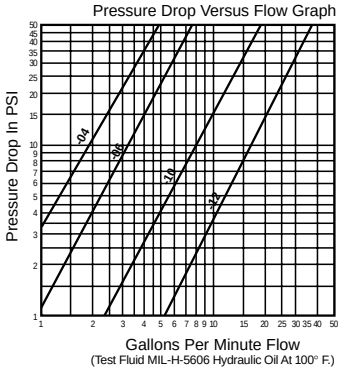
- **Mates with all standard poppet valved style ISO 7241/1 Series B male halves.**
- Economical Patented concave stem valve in the female coupling half that provides disconnecting fluid loss rates comparable with more expensive flush faced coupling styles.
- Standard Seal Materials – Buna-N, Viton, and EPR available on request.
- Standard body material – Zinc plated steel.

Physical Characteristics

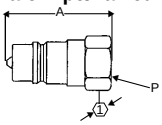
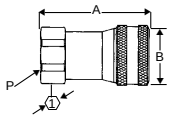
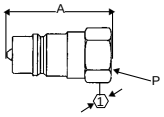
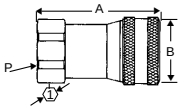
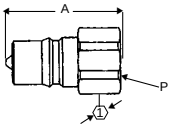
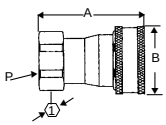
Coupling Size	Maximum Operating Pressure (psi)	Minimum Burst Pressure (psi)	Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc. max.)	**Fluid Loss (cc. max)**
-04	4,000	15,000	28	3	.25	.02
-06	4,000	12,000	28	6	.89	.05
-10	4,000	12,000	28	12	1.12	.08
-12	4,000	12,000	15	28	2.53	.23
-16	4,000	12,000				

FLOW DATA

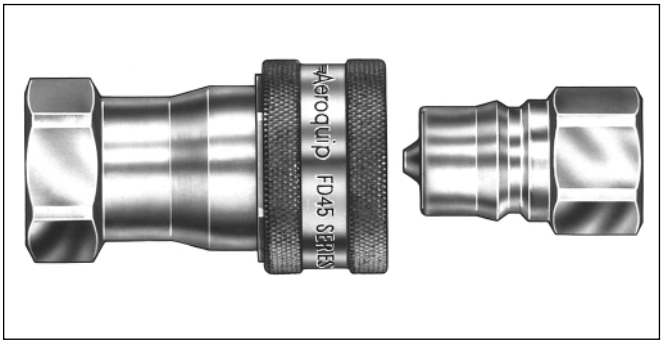
Pressure Drop Versus Flow Graph

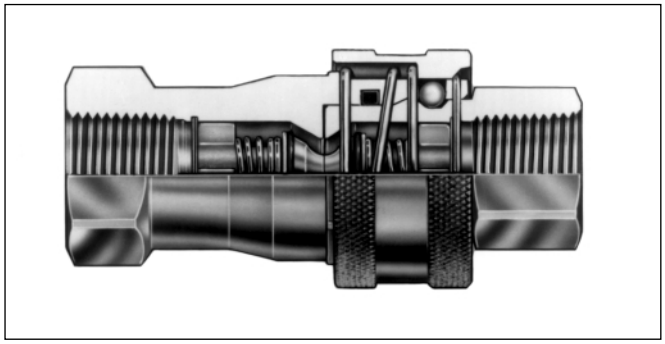


(Test Fluid MIL-H-5606 Hydraulic Oil At 100° F.)

	Coupling Size	Thread Size (P)	Dimensional Data			Buna-N
			A	B	⑴	
5600 SERIES						
Standard Male Half Female Pipe/Valved 	-06	3/8-18	1.40		.88	5602-6-6S
	-10	1/2-14	1.89		1.06	5602-8-10S
	-12	3/4-14	2.28		1.38	5602-12-12S
Female Half Female Pipe/ DryBreak Valving ISO-7241-A 	-06	3/8-18	2.23	1.23	1.00	FD56-4001-06-06
	-10	1/2-14	2.70	1.50	1.19	FD56-4001-08-10
	-12	3/4-14	3.29	1.81	1.50	FD56-4001-12-12
Standard Male Half Female SAE O-Ring/ Valved 	-06	9/16-18	1.50		.88	5610-6-6S
	-10	3/4-16	2.03		1.06	5610-8-10S
	-12	1 1/16-12	2.55		1.38	5610-12-12S
Female Half Female SAE O-Ring/ DryBreak Valving 	-06	9/16-18	2.23	1.23	1.00	FD56-4101-06-06
	-10	3/4-16	2.70	1.50	1.19	FD56-4101-08-10
	-12	1 1/16-12	3.33	1.81	1.50	FD56-4101-12-12
FD45 SERIES						
Standard Male Half Female Pipe/Valved 	-04	1/4-18	1.53		.75	FD45-1002-04-04
	-06	3/8-18	1.69		.88	FD45-1002-06-06
	-10	1/2-14	1.96		1.06	FD45-1002-08-10
	-12	3/4-14	2.41		1.31	FD45-1002-12-12
Female Half Female Pipe/ DryBreak Valving ISO-7241-B 	-04	1/4-18	2.35	1.10	.81	FD45-4001-04-04
	-06	3/8-18	2.65	1.36	1.06	FD45-4001-06-06
	-10	1/2-14	3.02	1.67	1.31	FD45-4001-08-10
	-12	3/4-14	3.44	2.04	1.62	FD45-4001-12-12

FD45 Series/Industrial Interchange Series B ... (Steel)

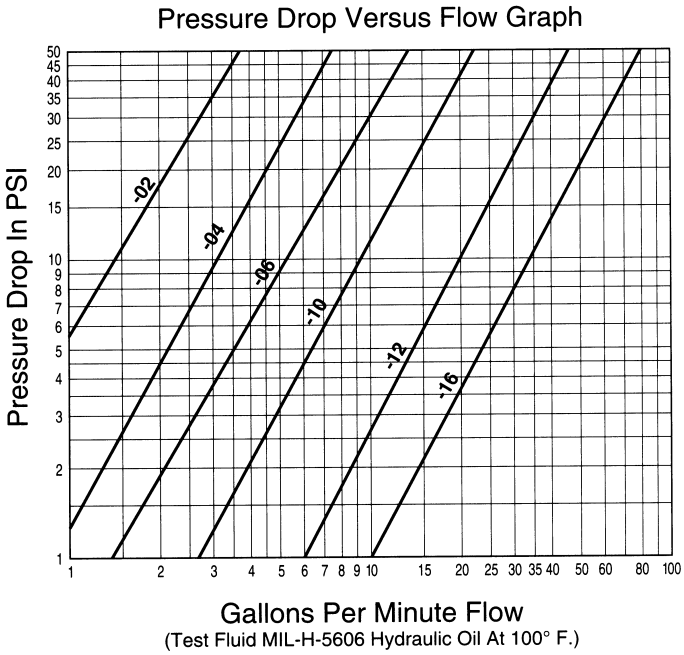




The FD45 Series steel is an industrial interchange popular in North America. Features rugged ball latch mechanism with automatic self-sealing poppet valves.

- Industrial interchange coupling conforming dimensionally to ISO standard 7241/1 Series B.
- *PUSH-PULL*™ ball latch design allows quick and easy connection and disconnection of hose lines.
- Self-sealing poppet valve design provides excellent high and low pressure sealing.
- Standard seal material – Buna-N, EPR and Viton.
- Standard body material – Zinc plated steel. (Brass poppet guide in –02 size.)

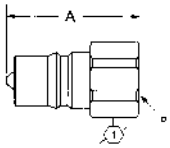
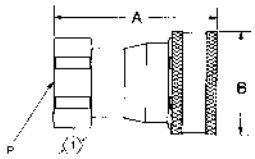
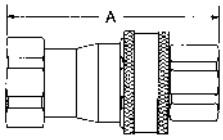
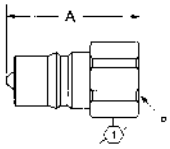
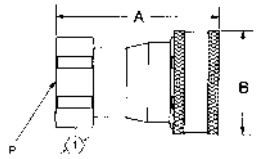
Flow Data



(Test Fluid MIL-H-5606 Hydraulic Oil At 100° F.)

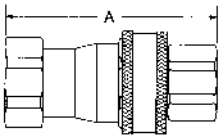
Physical Characteristics

Coupling Size	Maximum Operating Pressure (psi)	Minimum Burst Pressure (psi)	Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc. max.)	Fluid Loss (cc. max.)
-02	4,500	13,500	28	1	.50	.50
-04	5,000	15,000	28	3	.50	.50
-06	4,000	12,000	28	6	2.5	1.3
-10	4,000	12,000	28	12	4.0	2.8
-12	4,000	12,000	28	28	11.0	8.2
-16	4,000	12,000	28	50	18.0	16.0

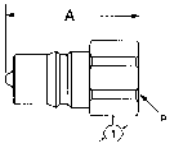
FD45 Steel	Coupling Size	Thread Size (P)	Dimensional Data A	B	①	Part Number Buna-N	Viton	EPR	Line Ref.
Male Half Female Pipe/Valved 	-02	1/8-27	1.28		.56	FD45–1002–02–02	FD45–1071–02–02	FD45–1064–02–02	1
	-04	1/4-18	1.50		.75	FD45–1002–04–04	FD45–1071–04–04	FD45–1064–04–04	2
	-06	3/8-18	1.66		.88	FD45–1002–06–06	FD45–1071–06–06	FD45–1064–06–06	3
	-10	1/2-14	1.93		1.06	FD45–1002–08–10	FD45–1071–08–10	FD45–1064–08–10	4
	-12	3/4-14	2.26		1.31	FD45–1002–12–12	FD45–1071–12–12	FD45–1064–12–12	5
	-16	1-11 1/2	2.72		1.62	FD45–1002–16–16	FD45–1071–16–16	FD45–1064–16–16	6
									7
									8
Female Half Female Pipe/Valved 	-02	1/8-27	1.81	.96	.75	FD45–1003–02–02	FD45–1070–02–02	FD45–1065–02–02	9
	-04	1/4-18	2.22	1.13	.81	FD45–1003–04–04	FD45–1070–04–04	FD45–1065–04–04	10
	-06	3/8-18	2.45	1.38	1.06	FD45–1003–06–06	FD45–1070–06–06	FD45–1065–06–06	11
	-10	1/2-14	2.86	1.69	1.31	FD45–1003–08–10	FD45–1070–08–10	FD45–1065–08–10	12
	-12	3/4-14	3.40	2.06	1.62	FD45–1003–12–12	FD45–1070–12–12	FD45–1065–12–12	13
	-16	1-11 1/2	4.02	2.44	2.00	FD45–1003–16–16	FD45–1070–16–16	FD45–1065–16–16	14
									15
									16
Complete Coupling Female Pipe/Valved 	-02	1/8-27	2.31			FD45–1000–02–02	FD45–1072–02–02	FD45–1063–02–02	17
	-04	1/4-18	2.74			FD45–1000–04–04	FD45–1072–04–04	FD45–1063–04–04	18
	-06	3/8-18	3.04			FD45–1000–06–06	FD45–1072–06–06	FD45–1063–06–06	19
	-10	1/2-14	3.54			FD45–1000–08–10	FD45–1072–08–10	FD45–1063–08–10	20
	-12	3/4-14	4.02			FD45–1000–12–12	FD45–1072–12–12	FD45–1063–12–12	21
	-16	1-11 1/2	4.88			FD45–1000–16–16	FD45–1072–16–16	FD45–1063–16–16	22
									23
									24
Male Half Female Pipe/Non-Valved  Will not operate with valved coupling halves. No valve actuator.	-02	1/8-27	1.20		.56	FD45–1061–02–02	FD45–1061–02–02	FD45–1061–02–02	25
	-04	1/4-18	1.37		.75	FD45–1061–04–04	FD45–1061–04–04	FD45–1061–04–04	26
	-06	3/8-18	1.50		.88	FD45–1061–06–06	FD45–1061–06–06	FD45–1061–06–06	27
	-10	1/2-14	1.76		1.06	FD45–1061–08–10	FD45–1061–08–10	FD45–1061–08–10	28
	-12	3/4-14	2.00		1.31	FD45–1061–12–12	FD45–1061–12–12	FD45–1061–12–12	29
	-16	1-11 1/2	2.43		1.62	FD45–1061–16–16	FD45–1061–16–16	FD45–1061–16–16	30
									31
									32
Female Half Female Pipe/Non-Valved  Will not operate with valved coupling halves. No valve actuator.	-02	1/8-27	1.81	.96	.75	FD45–1047–02–02	FD45–1172–02–02	FD45–1207–02–02	33
	-04	1/4-18	2.22	1.13	.81	FD45–1047–04–04	FD45–1172–04–04	FD45–1207–04–04	34
	-06	3/8-18	2.45	1.38	1.06	FD45–1047–06–06	FD45–1172–06–06	FD45–1207–06–06	35
	-10	1/2-14	2.86	1.69	1.31	FD45–1047–08–10	FD45–1172–08–10	FD45–1207–08–10	36
	-12	3/4-14	3.40	2.06	1.62	FD45–1047–12–12	FD45–1172–12–12	FD45–1207–12–12	37
	-16	1-11 1/2	4.02	2.44	2.00	FD45–1047–16–16	FD45–1172–16–16	FD45–1207–16–16	38
									39
									40
Repair Kit									41
Each kit will repair one male or female half.	-02					FF013–02†	FF014–02†	FF015–02†	42
	-04					FF013–04	FF014–04	FF015–04	43
	-06					FF013–06	FF014–06	FF015–06	44
	-10					FF013–10	FF014–10	FF015–10	45
	-12					FF013–12	FF014–12	FF015–12	46
	-16					FF013–16	FF014–16	FF015–16	47
									48
†The –02 coupling size valving is not repairable. This size repair kit contains an interface seal and back-up ring.									49

FD45 Steel

Complete Coupling
Female Pipe/Non-Valved

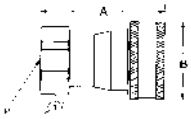


Male Half
Female Pipe/Pusher Style
Valving



Incorporates a pusher device to open mating valved coupling halves.

Female Half
Female Pipe/Pusher Style
Valving



Incorporates a pusher device to open mating valved coupling halves.

Coupling Size	Thread Size (P)	Dimensional Data A	B	(1)	Part Number Buna-N	Viton	EPR	Line Ref.
–02	1/8-27	2.31			FD45–1044–02–02	FD45–1173–02–02	FD45–1206–02–02	1
–04	1/4-18	2.74			FD45–1044–04–04	FD45–1173–04–04	FD45–1206–04–04	2
–06	3/8-18	3.04			FD45–1044–06–06	FD45–1173–06–06	FD45–1206–06–06	3
–10	1/2-14	3.54			FD45–1044–08–10	FD45–1173–08–10	FD45–1206–08–10	4
–12	3/4-14	4.02			FD45–1044–12–12	FD45–1173–12–12	FD45–1206–12–12	5
–16	1-11 1/2	4.88			FD45–1044–16–16	FD45–1173–16–16	FD45–1206–16–16	6
								7
								8
–02	1/8-27	1.28		.56	FD45–1046–02–02	FD45–1046–02–02	FD45–1046–02–02	9
–04	1/4-18	1.50		.75	FD45–1046–04–04	FD45–1046–04–04	FD45–1046–04–04	10
–06	3/8-18	1.66		.88	FD45–1046–06–06	FD45–1046–06–06	FD45–1046–06–06	11
–10	1/2-14	1.93		1.06	FD45–1046–08–10	FD45–1046–08–10	FD45–1046–08–10	12
–12	3/4-14	2.26		1.31	FD45–1046–12–12	FD45–1046–12–12	FD45–1046–12–12	13
–16	1-11 1/2	2.72		1.62	FD45–1046–16–16	FD45–1046–16–16	FD45–1046–16–16	14
								15
								16
–02	1/8-27	1.81	.96	.75	FD45–1045–02–02	FD45–1228–02–02	FD45–1229–02–02	17
–04	1/4-18	2.22	1.13	.81	FD45–1045–04–04	FD45–1228–04–04	FD45–1229–04–04	18
–06	3/8-18	2.45	1.38	1.06	FD45–1045–06–06	FD45–1228–06–06	FD45–1229–06–06	19
–10	1/2-14	2.86	1.69	1.31	FD45–1045–08–10	FD45–1228–08–10	FD45–1229–08–10	20
–12	3/4-14	3.40	2.06	1.62	FD45–1045–12–12	FD45–1228–12–12	FD45–1229–12–12	21
–16	1-11 1/2	4.02	2.44	2.00	FD45–1045–16–16	FD45–1228–16–16	FD45–1229–16–16	22
								23
								24

Repair Kit

Each kit will repair one male or female half.

†The –02 coupling size valving is not repairable. This size repair kit contains an interface seal and back-up ring.

								25
–02					FF013–02†	FF014–02†	FF015–02†	26
–04					FF013–04	FF014–04	FF015–04	27
–06					FF013–06	FF014–06	FF015–06	28
–10					FF013–10	FF014–10	FF015–10	29
–12					FF013–12	FF014–12	FF015–12	30
–16					FF013–16	FF014–16	FF015–16	31
								32

Accessories

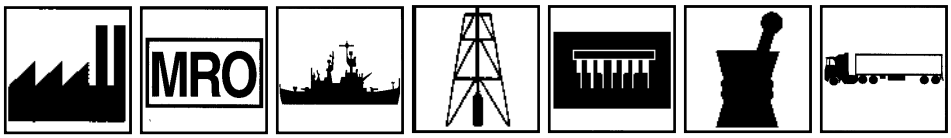
Dust Cap

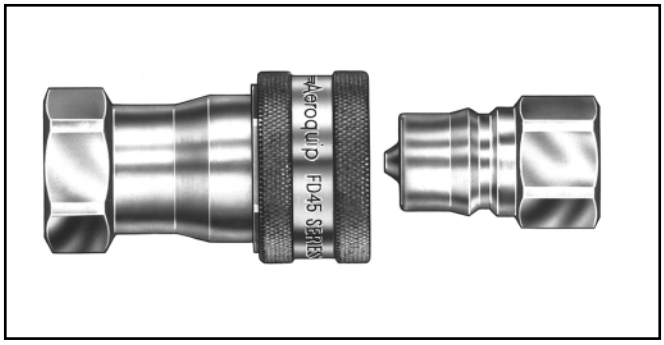
								33
–02						FD45–1040–02		34
–04						FD45–1040–04		35
–06						FD45–1040–06		36
–10						FD45–1040–10		37
–12						FD45–1040–12		38
–16						FD45–1040–16		39
								40

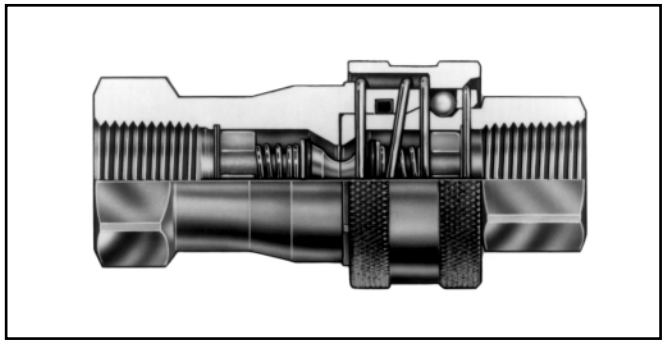
Dust Plug

–02						FD45–1041–02		41
–04						FD45–1041–04		42
–06						FD45–1041–06		43
–10						FD45–1041–10		44
–12						FD45–1041–12		45
–16						FD45–1041–16		46
								47

FD45 Series/Industrial Interchange Series B . . . (Brass)



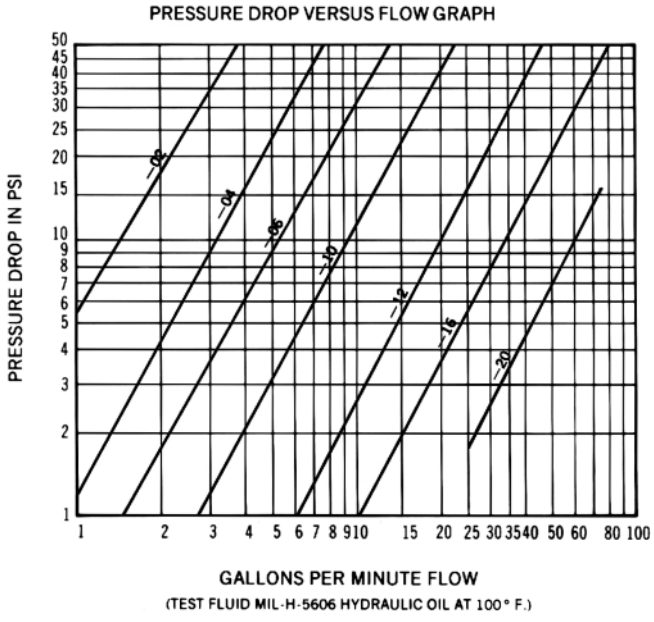




The FD45 Series brass industrial interchange coupling offers corrosion resistance where steel couplings are unacceptable. This general purpose coupling uses a *PUSH-PULL*™ latch mechanism.

- Dual interface O-Rings in the female half provide redundant sealing while connected.
- Brass construction with stainless steel springs for greater corrosion resistance and fluid compatibility.
- Industrial interchange coupling conforming dimensionally to ISO standard 7241/1 Series B.
- *PUSH-PULL*™ ball latch design allows quick and easy connection and disconnection of hose lines.
- Self-sealing poppet valves provide excellent high and low pressure sealing.
- Standard seal material – Buna-N, EPR and Viton.
- Standard body material – Brass with stainless steel springs and balls.

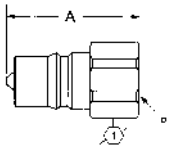
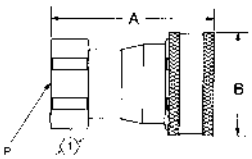
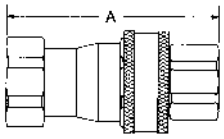
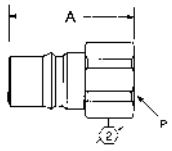
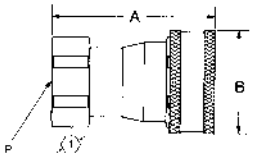
Flow Data



Physical Characteristics

Coupling Size	Maximum Operating Pressure (psi)	Minimum Burst Pressure		Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc. max.)	Fluid Loss (cc. max)
		Connected (psi)	Disconnected (psi)				
–02	1,000	11,000	12,000	28	1	.50	.50
–04	1,000	18,000	14,000	28	3	.50	.50
–06	1,000	12,000	9,000	28	6	2.5	1.3
–10	1,000	12,000	6,500	28	12	4.0	2.8
–12	1,000	10,000	10,000	28	28	11.0	8.2
–16	1,000	8,500	11,000	28	50	18.0	16.0
–20	1,000	6,000	6,000	28	75	30.0	45.0

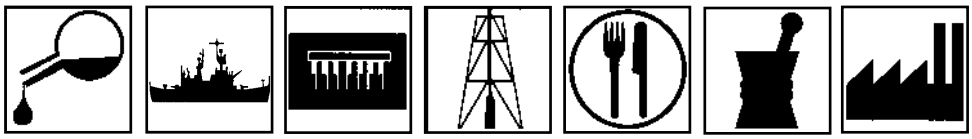
FD45 Brass

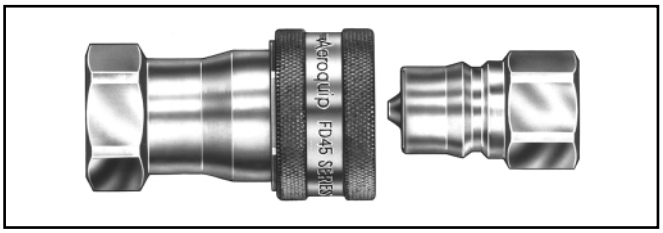
	Coupling Size	Thread Size (P)	Dimensional Data A	B	(1)	Part Number Buna-N	Viton	EPR	Line Ref.
Male Half Female Pipe/Valved 	–02	1/8-27	1.28		.56	FD45–1086–02–02	FD45–1092–02–02	FD45–1153–02–02	1
	–04	1/4-18	1.50		.69	FD45–1086–04–04	FD45–1092–04–04	FD45–1153–04–04	2
	–06	3/8-18	1.66		.88	FD45–1086–06–06	FD45–1092–06–06	FD45–1153–06–06	3
	–10	1/2-14	1.93		1.06	FD45–1086–08–10	FD45–1092–08–10	FD45–1153–08–10	4
	–12	3/4-14	2.26		1.31	FD45–1086–12–12	FD45–1092–12–12	FD45–1153–12–12	5
	–16	1-11 1/2	2.72		1.62	FD45–1086–16–16	FD45–1092–16–16	FD45–1153–16–16	6
	–20	1 1/4-11 1/2	4.25		2.38	FD45–1086–20–20	FD45–1092–20–20	FD45–1153–20–20	7
	Art is not representative of –20 size.								8
Female Half Female Pipe/Valved 	–02	1/8-27	1.81	.96	.75	FD45–1101–02–02	FD45–1091–02–02	FD45–1156–02–02	9
	–04	1/4-18	2.22	1.13	.81	FD45–1101–04–04	FD45–1091–04–04	FD45–1156–04–04	10
	–06	3/8-18	2.45	1.38	1.06	FD45–1101–06–06	FD45–1091–06–06	FD45–1156–06–06	11
	–10	1/2-14	2.86	1.69	1.31	FD45–1101–08–10	FD45–1091–08–10	FD45–1156–08–10	12
	–12	3/4-14	3.40	2.01	1.62	FD45–1101–12–12	FD45–1091–12–12	FD45–1156–12–12	13
	–16	1-11 1/2	4.02	2.38	1.94	FD45–1101–16–16	FD45–1091–16–16	FD45–1156–16–16	14
	–20	1 1/4-11 1/2	4.49	2.62	2.38	FD45–1101–20–20	FD45–1091–20–20	FD45–1156–20–20	15
	Art is not representative of –20 size.								16
Complete Coupling Female Pipe/Valved 	–02	1/8-27	2.31			FD45–1100–02–02	FD45–1090–02–02	FD45–1157–02–02	17
	–04	1/4-18	2.74			FD45–1100–04–04	FD45–1090–04–04	FD45–1157–04–04	18
	–06	3/8-18	3.04			FD45–1100–06–06	FD45–1090–06–06	FD45–1157–06–06	19
	–10	1/2-14	3.54			FD45–1100–08–10	FD45–1090–08–10	FD45–1157–08–10	20
	–12	3/4-14	4.02			FD45–1100–12–12	FD45–1090–12–12	FD45–1157–12–12	21
	–16	1-11 1/2	4.88			FD45–1100–16–16	FD45–1090–16–16	FD45–1157–16–16	22
	–20	1 1/4-11 1/2	6.80			FD45–1100–20–20	FD45–1090–20–20	FD45–1157–20–20	23
	Art is not representative of –20 size.								24
Male Half Female Pipe/Non-Valved  Will not operate with valved coupling halves. No valve actuator.	–02	1/8-27	1.20		.56	FD45–1175–02–02	FD45–1175–02–02	FD45–1175–02–02	25
	–04	1/4-18	1.37		.69	FD45–1175–04–04	FD45–1175–04–04	FD45–1175–04–04	26
	–06	3/8-18	1.50		.88	FD45–1175–06–06	FD45–1175–06–06	FD45–1175–06–06	27
	–10	1/2-14	1.76		1.06	FD45–1175–08–10	FD45–1175–08–10	FD45–1175–08–10	28
	–12	3/4-14	2.00		1.31	FD45–1175–12–12	FD45–1175–12–12	FD45–1175–12–12	29
	–16	1-11 1/2	2.43		1.62	FD45–1175–16–16	FD45–1175–16–16	FD45–1175–16–16	30
	–20	1 1/4-11 1/2	4.25		2.38	FD45–1175–20–20	FD45–1399–20–20	FD45–1400–20–20	31
	Art is not representative of –20 size.								32
Female Half Female Pipe/Non-Valved  Will not operate with valved coupling halves. No valve actuator.	–02	1/8-27	1.81	.96	.75	FD45–1176–02–02	FD45–1180–02–02	FD45–1178–02–02	33
	–04	1/4-18	2.22	1.13	.81	FD45–1176–04–04	FD45–1180–04–04	FD45–1178–04–04	34
	–06	3/8-18	2.45	1.38	1.06	FD45–1176–06–06	FD45–1180–06–06	FD45–1178–06–06	35
	–10	1/2-14	2.86	1.69	1.31	FD45–1176–08–10	FD45–1180–08–10	FD45–1178–08–10	36
	–12	3/4-14	3.40	2.01	1.62	FD45–1176–12–12	FD45–1180–12–12	FD45–1178–12–12	37
	–16	1-11 1/2	4.02	2.38	1.94	FD45–1176–16–16	FD45–1180–16–16	FD45–1178–16–16	38
	–20	1 1/4-11 1/2	4.49	2.62	2.38	FD45–1176–20–20	FD45–1180–20–20	FD45–1178–20–20	39
	Art is not representative of –20 size.								40
Repair Kit									41
Each kit will repair one male or female half.	–02					FF016–02†	FF017–02†	FF018–02†	42
	–04					FF016–04	FF017–04	FF018–04	43
	–06					FF016–06	FF017–06	FF018–06	44
	–10					FF016–10	FF017–10	FF018–10	45
	–12					FF016–12	FF017–12	FF018–12	46
	–16					FF016–16	FF017–16	FF018–16	47
†The –02 coupling size valving is not repairable. This size repair kit contains an interface seal and back-up ring.	–20					FF016–20	FF017–20	FF018-20	48

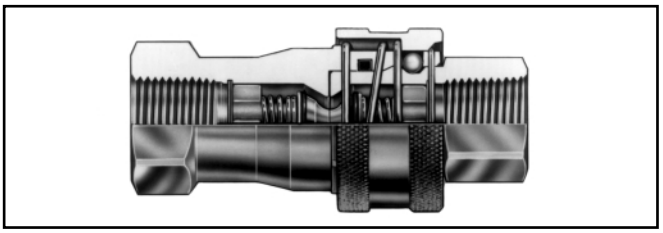
FD45 Brass

Coupling Size	Thread Size (P)	Dimensional Data A	B	①	Part Number Buna-N	Viton	EPR	Line Ref.
Complete Coupling Female Pipe/Non-Valved								
–02	1/8-27	2.31			FD45–1174–02–02	FD45–1179–02–02	FD45–1177–02–02	1
–04	1/4-18	2.74			FD45–1174–04–04	FD45–1179–04–04	FD45–1177–04–04	2
–06	3/8-18	3.04			FD45–1174–06–06	FD45–1179–06–06	FD45–1177–06–06	3
–10	1/2-14	3.54			FD45–1174–08–10	FD45–1179–08–10	FD45–1177–08–10	4
–12	3/4-14	4.02			FD45–1174–12–12	FD45–1179–12–12	FD45–1177–12–12	5
–16	1-11 1/2	4.88			FD45–1174–16–16	FD45–1179–16–16	FD45–1177–16–16	6
–20	1 1/4-11 1/2	6.80			FD45–1174–20–20	FD45–1179–20–20	FD45–1177–20–20	7
Art is not representative of –20 size.								8
Male Half Female Pipe/Pusher Style Valving								9
–04	1/4-18	1.50		.75	FD45–1201–04–04	FD45–1201–04–04	FD45–1201–04–04	10
–06	3/8-18	1.66		.88	FD45–1201–06–06	FD45–1201–06–06	FD45–1201–06–06	11
–10	1/2-14	1.93		1.06	FD45–1201–08–10	FD45–1201–08–10	FD45–1201–08–10	12
–12	3/4-14	2.26		1.31	FD45–1201–12–12	FD45–1201–12–12	FD45–1201–12–12	13
–16	1-11 1/2	2.72		1.62	FD45–1201–16–16	FD45–1201–16–16	FD45–1201–16–16	14
								15
Incorporates a pusher device to open mating valved coupling halves.								16
Female Half Female Pipe/Pusher Style Valving								17
–04	1/4-18	2.22	1.13	.88	FD45–1203–04–04	FD45–1199–04–04	FD45–1211–04–04	18
–06	3/8-18	2.45	1.38	1.06	FD45–1203–06–06	FD45–1199–06–06	FD45–1211–06–06	19
–10	1/2-14	2.86	1.69	1.31	FD45–1203–08–10	FD45–1199–08–10	FD45–1211–08–10	20
–12	3/4-14	3.40	2.01	1.62	FD45–1203–12–12	FD45–1199–12–12	FD45–1211–12–12	21
–16	1-11 1/2	4.02	2.38	1.94	FD45–1203–16–16	FD45–1199–16–16	FD45–1211–16–16	22
								23
Incorporates a pusher device to open mating valved coupling halves.								24
Repair Kit								25
Each kit will repair one male or female half.								
–02					FF016–02†	FF017–02†	FF018–02†	26
–04					FF016–04	FF017–04	FF018–04	27
–06					FF016–06	FF017–06	FF018–06	28
–10					FF016–10	FF017–10	FF018–10	29
–12					FF016–12	FF017–12	FF018–12	30
–16					FF016–16	FF017–16	FF018–16	31
–20					FF016–20	FF017–20	FF018–20	32
†The –02 coupling size valving is not repairable. This size repair kit contains an interface seal and back-up ring.								
Accessories								33
Dust Cap								
–02					FD45–1040–02			34
–04					FD45–1040–04			35
–06					FD45–1040–06			36
–10					FD45–1040–10			37
–12					FD45–1040–12			38
–16					FD45–1040–16			39
								40
Dust Plug								
–02					FD45–1041–02			41
–04					FD45–1041–04			42
–06					FD45–1041–06			43
–10					FD45–1041–10			44
–12					FD45–1041–12			45
–16					FD45–1041–16			46
								47

FD45 Series/Industrial Interchange Series B . . . (Stainless Steel)



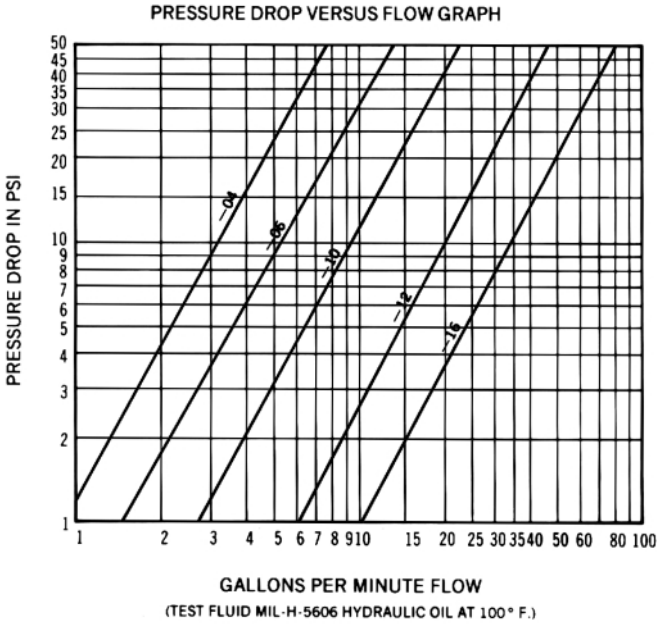




The FD45 stainless steel is a general purpose industrial interchange coupling available valved or non-valved. Offered in 303/304 grades of stainless steel for excellent corrosion resistance in rugged applications.

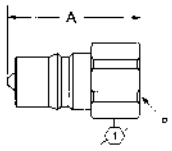
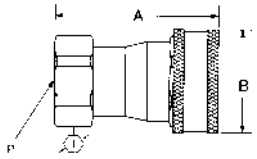
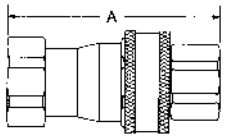
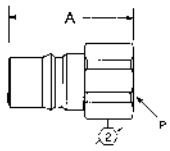
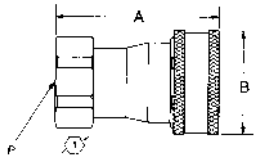
- Industrial interchange coupling conforming dimensionally to ISO standard 7241/1 Series B.
- Stainless steel construction for greater corrosion resistance and fluid compatibility.
- *PUSH-PULL*™ ball latch design allows quick and easy connection and disconnection of hose lines.
- Self-sealing poppet valves provide excellent high and low pressure sealing.
- Standard seal material – Buna-N, EPR and Viton.
- Standard body material – Stainless Steel.

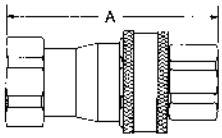
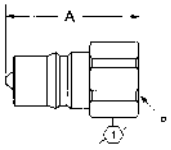
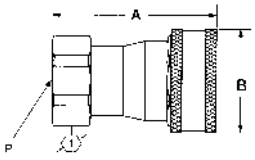
Flow Data

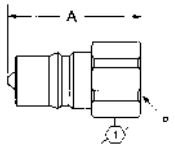
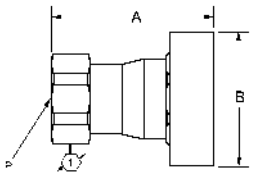


Physical Characteristics

Coupling Size	Maximum Operating Pressure		Minimum Burst Pressure (psi)	Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc. max.)	Fluid Loss (cc. max)
	Hydraulic (psi)	Static (psi)					
–04	3,000	3,000	12,000	28	3	.50	.50
–06	1,500	1,750	12,000	28	6	2.5	1.3
–10	1,500	1,750	12,000	28	12	4.0	2.8
–12	1,500	1,750	12,000	28	28	11.0	8.2
–16	1,250	1,500	12,000	28	50	18.0	16.0

FD45 Stainless Steel	Coupling Size	Thread Size (P)	Dimensional Data A	B	①	Part Number Buna-N	Viton	EPR	Line Ref.
Male Half Female Pipe/Valved 	–04	1/4-18	1.46		.69	FD45–1004–04–04	FD45–1078–04–04	FD45–1121–04–04	1
	–06	3/8-18	1.66		.88	FD45–1004–06–06	FD45–1078–06–06	FD45–1121–06–06	2
	–10	1/2-14	1.89		1.06	FD45–1004–08–10	FD45–1078–08–10	FD45–1121–08–10	3
	–12	3/4-14	2.26		1.31	FD45–1004–12–12	FD45–1078–12–12	FD45–1121–12–12	4
	–16	1-11 1/2	2.72		1.62	FD45–1004–16–16	FD45–1078–16–16	FD45–1121–16–16	5
									6
									7
									8
Female Half Female Pipe/Valved 	–04	1/4-18	2.22	1.13	.81	FD45–1005–04–04	FD45–1076–04–04	FD45–1122–04–04	9
	–06	3/8-18	2.45	1.38	1.06	FD45–1005–06–06	FD45–1076–06–06	FD45–1122–06–06	10
	–10	1/2-14	2.86	1.69	1.31	FD45–1005–08–10	FD45–1076–08–10	FD45–1122–08–10	11
	–12	3/4-14	3.40	2.01	1.62	FD45–1005–12–12	FD45–1076–12–12	FD45–1122–12–12	12
	–16	1-11 1/2	4.02	2.38	2.00	FD45–1005–16–16	FD45–1076–16–16	FD45–1122–16–16	13
									14
									15
									16
Complete Coupling Female Pipe/Valved 	–04	1/4-18	2.70			FD45–1001–04–04	FD45–1075–04–04	FD45–1120–04–04	17
	–06	3/8-18	3.04			FD45–1001–06–06	FD45–1075–06–06	FD45–1120–06–06	18
	–10	1/2-14	3.50			FD45–1001–08–10	FD45–1075–08–10	FD45–1120–08–10	19
	–12	3/4-14	4.02			FD45–1001–12–12	FD45–1075–12–12	FD45–1120–12–12	20
	–16	1-11 1/2	4.88			FD45–1001–16–16	FD45–1075–16–16	FD45–1120–16–16	21
									22
									23
									24
Male Half Female Pipe/Non-Valved  Will not operate with valved coupling halves. No valve actuator.	–04	1/4-18	1.33		.69	FD45–1062–04–04	FD45–1062–04–04	FD45–1062–04–04	25
	–06	3/8-18	1.50		.88	FD45–1062–06–06	FD45–1062–06–06	FD45–1062–06–06	26
	–10	1/2-14	1.72		1.06	FD45–1062–08–10	FD45–1062–08–10	FD45–1062–08–10	27
	–12	3/4-14	2.00		1.31	FD45–1062–12–12	FD45–1062–12–12	FD45–1062–12–12	28
	–16	1-11 1/2	2.43		1.62	FD45–1062–16–16	FD45–1062–16–16	FD45–1062–16–16	29
									30
									31
									32
Female Half Female Pipe/Non-Valved  Will not operate with valved coupling halves. No valve actuator.	–04	1/4-18	2.22	1.13	.81	FD45–1053–04–04	FD45–1195–04–04	FD45–1142–04–04	33
	–06	3/8-18	2.45	1.38	1.06	FD45–1053–06–06	FD45–1195–06–06	FD45–1142–06–06	34
	–10	1/2-14	2.86	1.69	1.31	FD45–1053–08–10	FD45–1195–08–10	FD45–1142–08–10	35
	–12	3/4-14	3.40	2.01	1.62	FD45–1053–12–12	FD45–1195–12–12	FD45–1142–12–12	36
	–16	1-11 1/2	4.02	2.38	2.00	FD45–1053–16–16	FD45–1195–16–16	FD45–1142–16–16	37
									38
									39
									40
									41
Repair Kit Each kit will repair one male or female half.	–04					FF054–04	FF055–04	FF056–04	42
	–06					FF054–06	FF055–06	FF056–06	43
	–10					FF054–10	FF055–10	FF056–10	44
	–12					FF054–12	FF055–12	FF056–12	45
	–16					FF054–16	FF055–16	FF056–16	46
									47
									48

FD45 Stainless Steel	Coupling Size	Thread Size(P)	Dimensional Data A	B	①	Part Number Buna-N	Viton	EPR	Line Ref.
Complete Coupling Female Pipe/Non-Valved 	–04	1/4-18	2.70			FD45–1052–04–04	FD45–1194–04–04	FD45–1143–04–04	1
	–06	3/8-18	3.04			FD45–1052–06–06	FD45–1194–06–06	FD45–1143–06–06	2
	–10	1/2-14	3.50			FD45–1052–08–10	FD45–1194–08–10	FD45–1143–08–10	3
	–12	3/4-14	4.02			FD45–1052–12–12	FD45–1194–12–12	FD45–1143–12–12	4
	–16	1-11 1/2	4.88			FD45–1052–16–16	FD45–1194–16–16	FD45–1143–16–16	5
									6
									7
									8
Male Half Female Pipe/Pusher Style Valving  Incorporates a pusher device to open mating coupling halves	–04	1/4-18	1.46		.69	FD45–1059–04–04	FD45–1059–04–04	FD45–1059–04–04	9
	–06	3/8-18	1.66		.88	FD45–1059–06–06	FD45–1059–06–06	FD45–1059–06–06	10
	–10	1/2-14	1.89		1.06	FD45–1059–08–10	FD45–1059–08–10	FD45–1059–08–10	11
	–12	3/4-14	2.26		1.31	FD45–1059–12–12	FD45–1059–12–12	FD45–1059–12–12	12
	–16	1-11 1/2	2.72		1.62	FD45–1059–16–16	FD45–1059–16–16	FD45–1059–16–16	13
									14
									15
									16
Female Half Female Pipe/Pusher Style Valving  Incorporates a pusher device to open mating coupling halves	–04	1/4-18	2.22	1.13	.81	FD45–1056–04–04	FD45–1197–04–04	FD45–1209–04–04	17
	–06	3/8-18	2.45	1.38	1.06	FD45–1056–06–06	FD45–1197–06–06	FD45–1209–06–06	18
	–10	1/2-14	2.86	1.69	1.31	FD45–1056–08–10	FD45–1197–08–10	FD45–1209–08–10	19
	–12	3/4-14	3.40	2.01	1.62	FD45–1056–12–12	FD45–1197–12–12	FD45–1209–12–12	20
	–16	1-11 1/2	4.02	2.38	2.00	FD45–1056–16–16	FD45–1197–16–16	FD45–1209–16–16	21
									22
									23
									24
Repair Kit									25
Each kit will repair one male or female half	–04					FF054–04	FF055–04	FF056–04	26
	–06					FF054–06	FF055–06	FF056–06	27
	–10					FF054–10	FF055–10	FF056–10	28
	–12					FF054–12	FF055–12	FF056–12	29
	–16					FF054–16	FF055–16	FF056–16	30
									31
									32
Accessories									33
Dust Cap 	–04					FD45–1040–04			34
	–06					FD45–1040–06			35
	–10					FD45–1040–10			36
	–12					FD45–1040–12			37
	–16					FD45–1040–16			38
Dust Plug 	–04					FD45–1041–04			39
	–06					FD45–1041–06			40
	–10					FD45–1041–10			41
	–12					FD45–1041–12			42
	–16					FD45–1041–16			43

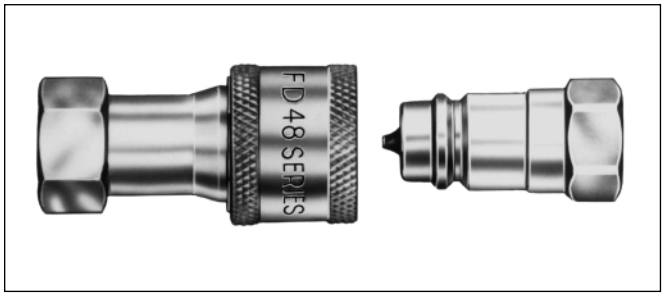
FD45 Stainless Steel	Coupling Size	Thread Size (P)	Dimensional Data A	B	①	Part Number Buna-N	Viton	EPR	Line Ref.
*Fryer Coupling/Male Half Female Pipe/Valved 	–10	1/2-14	1.92		1.06		FD45–1270–08–10		1
									2
									3
									4
									5
									6
									7
									8
*Fryer Coupling/Female Half Female Pipe/Valved Silicone Collar on Ball Release Sleeve 	–10	1/2-14	2.86	2.38	1.31		FD45–1267–08–10		9
									10
									11
									12
									13
									14
									15
									16

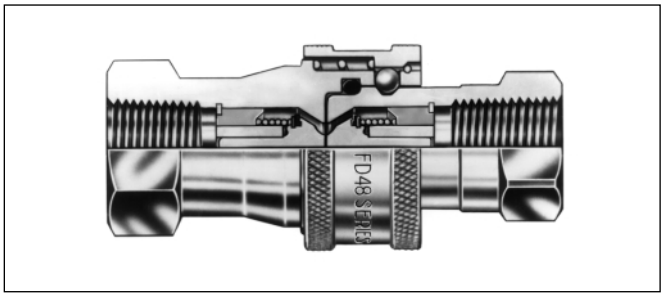
**Special internal Viton seal material approved for use by the National Sanitation Foundation. The fryer coupling uses a silicone collar aiding disconnection with hot fluid applications.*

Connecting and disconnecting lines between deep fat fryers and oil recycling units has been made cleaner, safer and quicker with Aeroquip's new FD45 "Fryer" coupling.

Aeroquip's FD45 "Fryer" coupling is made of stainless steel with Viton* seal material. It has a silicone rubber collar on the sleeve of the female half to provide insulation from high oil temperatures and an excellent gripping surface during connection and disconnection. The coupling has been approved for use by the National Sanitation Foundation.

FD48 Series/*Parker Bruning—SM Interchange*



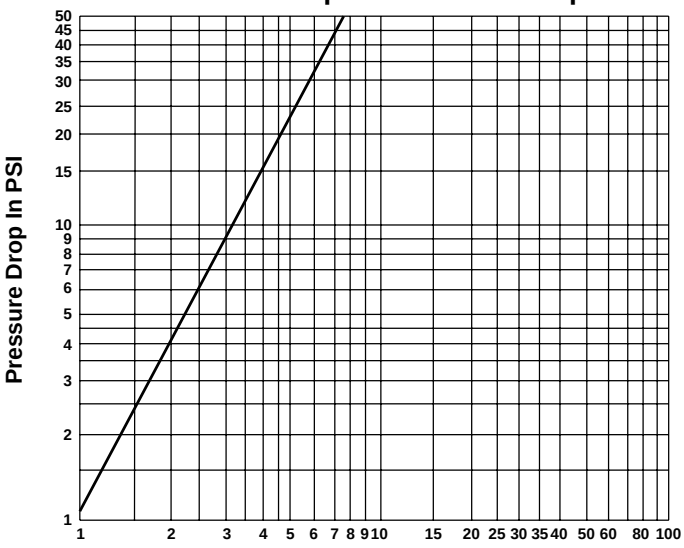


The FD48 Series coupling is designed to interchange with Parker Bruning SM-250 couplings.

- Self-sealing poppet valves provide excellent high and low pressure sealing.
- *PUSH-PULL*™ ball latch design allows quick and easy connection and disconnection of fluid lines.
- Heat-treated and plated steel for wear and corrosion resistance.
- 3,000 psi operating pressure.
- Standard seal material – Buna-N.
- Standard seal material – Zinc plated steel with zinc poppet guides.

Flow Data

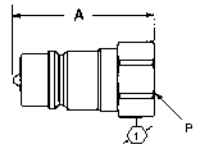
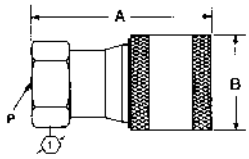
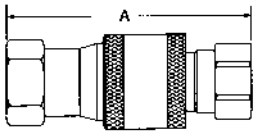
Pressure Drop Versus Flow Graph



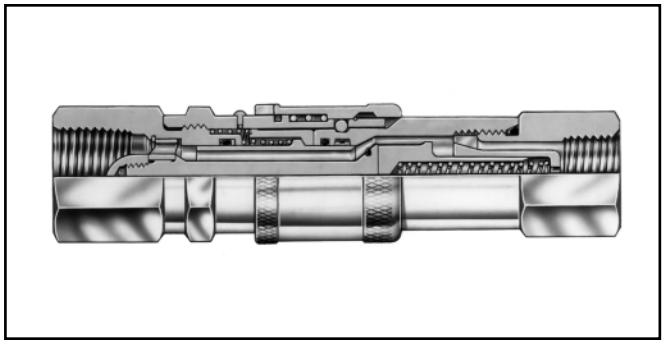
Gallons Per Minute Flow
(Test Fluid MIL-H-5606 Hydraulic Oil At 100˚F.)

Physical Characteristics

Coupling Size	Maximum Operating Pressure (psi)	Minimum Burst Pressure (psi)	Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc. max.)	Fluid Loss (cc. max.)
-04	3,000	12,000	28	3	0.50	1.10

FD48 Series	Coupling Size	Thread Size (P)	Dimensional Data A	Dimensional Data B	Dimensional Data ⑴	Part Number Buna-N	Line Ref.
Male Half Female Pipe/Valved 	–04	1/4-18	1.45		.75	FD48–1002–04–04	1
							2
							3
							4
							5
							6
							7
							8
Female Half Female Pipe/Valved 	–04	1/4-18	2.01	1.06	.81	FD48–1001–04–04	9
							10
							11
							12
							13
							14
							15
							16
Complete Coupling Female Pipe/Valved 	–04	1/4-18	2.69			FD48–1000–04–04	17
							18
							19
							20
							21
							22
							23
							24
Accessories							25
Dust Cap/Plug (Fits both male and female halves) 	–04					FD48–1042–04	26
							27
							28
							29
							30
							31
							32

FD49 Series/HTMA Flush Face, Hydraulic Tool



The FD49 Series meets NFPA standard T3.20.15, which was developed in conjuction with HTMA (Hydraulic Tool Manufacturer's Association).

- Twin-Guard™ sealing system prevents weepage and allows connection and disconnection against pressure up to 500 psi.
- Dual flush face valving for minimal fluid loss and air inclusion.
- Tubular valve and sleeve construction for high fluid flow with low pressure drop.
- Push-to-connect latching for one hand operation.
- Standard seal material – Teflon channel seal and Buna-N O-Ring backup.
- Standard body material – Zinc plated steel.

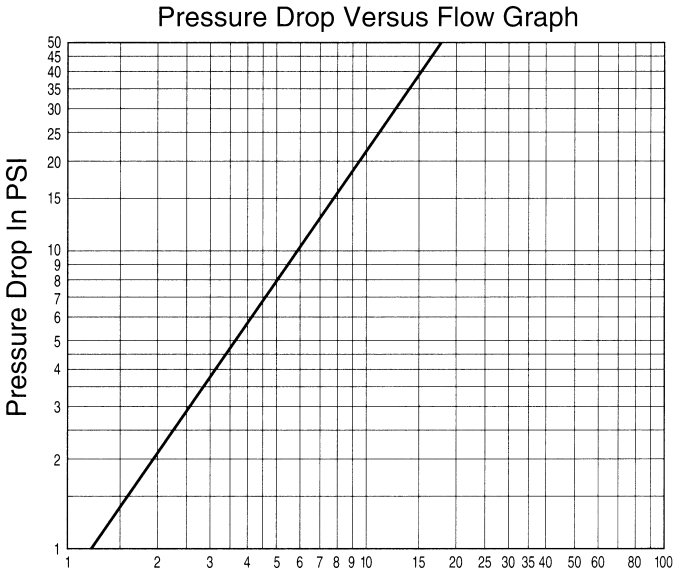
Our patented* Twin-Guard™ seal system consists of channel and Buna-N O-Ring seals. The channel seal prevents blowout during connection and disconnection under pressure to 500 psi. The Buna-N O-Ring seal is a secondary seal eliminating fluid weepage.

*Patent Number 5123446

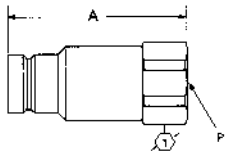
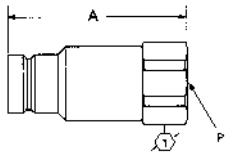
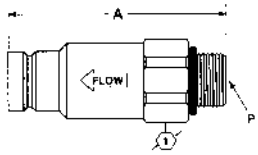
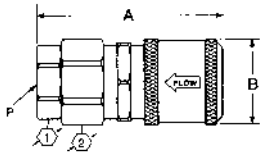
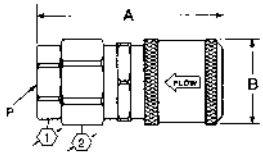
Physical Characteristics

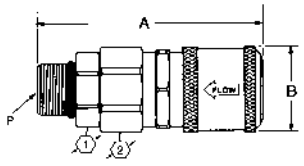
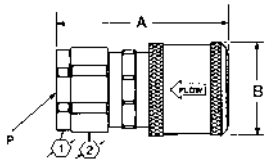
Coupling Size	Maximum Operating Pressure (psi)	Minimum Burst Pressure (psi)	Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc. max.)	Fluid Loss (cc. max.)
–06	3,000	9,000	28	10	.01	.02

Flow Data

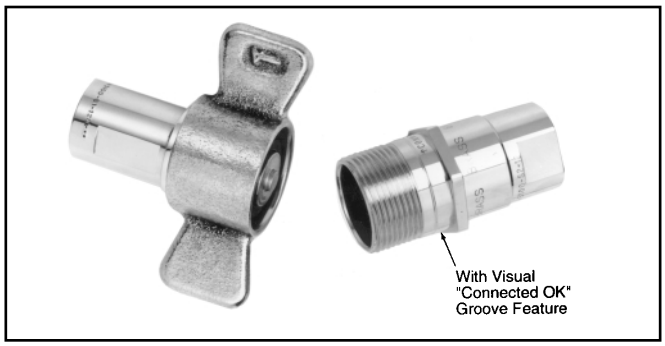


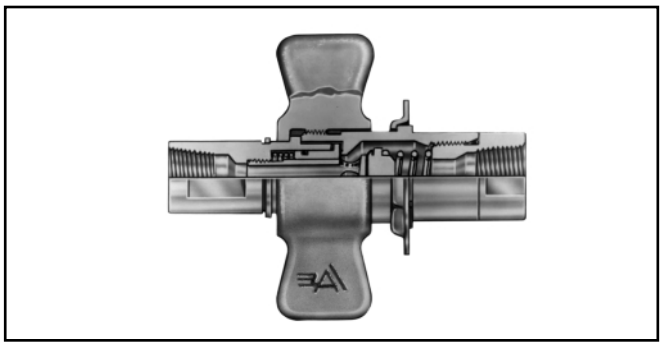
(Test Fluid MIL-H-5606 Hydraulic Oil At 100° F.)

FD49 Series	Coupling Size	Thread Size (P)	Dimensional Data				Part Number	Line Ref.
			A	B	①	②	Buna-N	
Male Half Female Pipe/Valved 	–06	3/8-18	2.62		1.00		FD49–1002–06–06	1
	–06	1/2-14	2.75		1.06		FD49–1002–08–06	2
								3
								4
								5
								6
								7
								8
Male Half Female SAE O-Ring/Valved 	–06	9/16-18	2.79		1.06		FD49–1004–06–06	9
	–06	3/4-16	2.75		1.00		FD49–1004–08–06	10
								11
								12
								13
								14
								15
								16
Male Half Male SAE O-Ring/Valved 	–06	9/16-18	2.99		1.00		FD49–1057–06–06	17
	–06	3/4-16	2.99		1.00		FD49–1057–08–06	18
								19
								20
								21
								22
								23
								24
Female Half Female Pipe/Valved 	–06	3/8-18	2.74	1.20	1.00	1.06	FD49–1001–06–06	25
	–06	1/2-14	2.85	1.20		1.06	FD49–1001–08–06	26
								27
								28
								29
								30
								31
								32
Female Half Female SAE O-Ring/Valved 	–06	3/4-16	2.82	1.20		1.06	FD49–1005–08–06	33
								34
								35
								36
								37
								38
								39
								40

FD49 Series	Coupling Size	Thread Size (P)	Dimensional Data				Part Number	Line Ref.
			A	B	1	2	Buna-N	
Female Half Male SAE O-Ring/Valved 	–06	9/16-18	3.22	1.20	1.00	1.06	FD49–1014–06–06	1
	–06	3/4-16	3.28	1.20	1.00	1.06	FD49–1014–08–06	2
								3
								4
								5
								6
								7
								8
Female Half/Heavy Duty Sleeve Female Pipe/Valved 	–06	3/8-18	2.74	1.40	1.00	1.06	FD49–1200–06–06	9
	–06	1/2-14	2.85	1.40		1.06	FD49–1200–08–06	10
								11
								12
								13
								14
								15
								16
Accessories								17
Dust Cover For Standard Coupling 								18
								19
	–06						FD49–1042–06	20
								21
								22
								23
								24
								25
								26
								27
Dust Cover For Heavy Duty Coupling 	–06						FD49–1088–06	28
								29
								30
								31
								32
								33
								34
								35

5100 Series/Low Spill—Connect Under Pressure

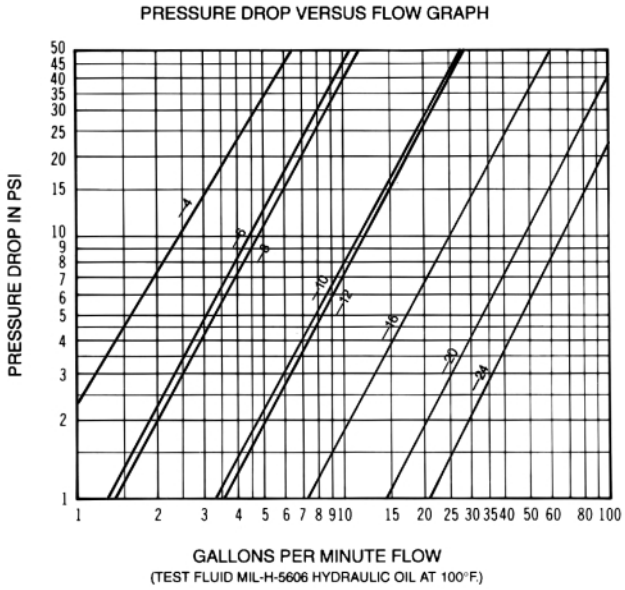




The 5100 Series brass coupling with steel tubular valve offers minimum air inclusion and fluid loss. Thread together latch provides connect under pressure capability and vibration resistance. It is not rated for continuous hydraulic impulse applications. (See FD86 on page 69.)

- Tubular valve construction for virtually no fluid loss during disconnection, reduces environmental and worker safety hazards.
- Low air inclusion during connection maintains system performance.
- Available with wing or hex nut configurations.
- Connect against pressure capability allows connecting of halves even when pressurized up to 500 psi.
- Steel flange available for accessible bulkhead mounting.
- Standard seal material – Buna-N, Viton and EPR available upon request.
- Standard body material – Brass with steel valving components, hex and wing nuts.

Flow Data

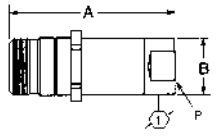
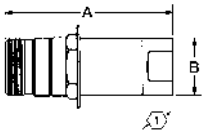
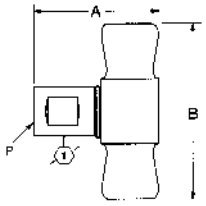
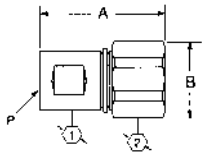
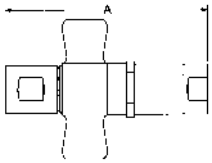


Physical Characteristics

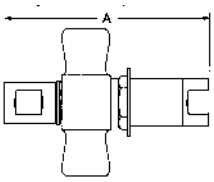
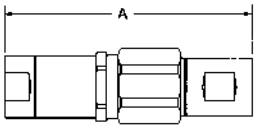
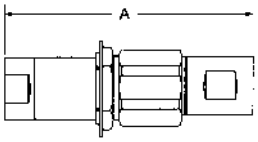
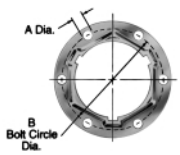
Coupling Dash Size	Coupling Interface Size	Maximum Operating Pressure* (psi connected)	Maximum Operating Pressure (psi disconnected)		Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc max.)	Fluid Loss (cc max.)
			Male Half S2 and S4	Female Half S5				
–4	–4	3000	3000	3000	28	4	.03	.01
–6	–8	3000	3000	3000	28	7	.05	.06
–8	–8	3000	3000	3000	28	7	.05	.10
–10	–12	3000	3000	3000	28	18	.14	.10
–12	–12	3000	3000	3000	28	18	.34	.26
–16	–16	3000	3000	3000	28	40	.50	.35
–20	–20	2750	2500	2750	28	75	.68	.70
–24	–24	2500	2500	2000	28	100	.60	.94

**Minimum burst pressure is equal to three times the maximum operating pressure. Not recommended for continuous hydraulic impulse applications at maximum operating pressures.*

For component part number breakdown and service instructions, request bulletin JB41.

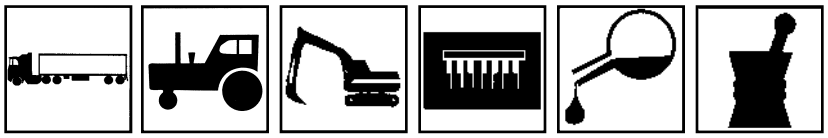
5100 Series	Coupling Size	Thread Size (P)	Dimensional Data				Part Number			Line Ref.
			A	B	①	②	Buna-N	Viton	EPR	
Male Half/Less Flange Female Pipe 	–4	1/8-27	1.88	.90	.69		5100–S2–4B	FD51–1264–04	FD51–1265–04	1
	–6	1/4-18	2.58	1.07	.94		5100–S2–6B	FD51–1264–06	FD51–1265–06	2
	–8	3/8-18	2.58	1.07	.94		5100–S2–8B	FD51–1264–08	FD51–1265–08	3
	–10	1/2-14	3.11	1.38	1.19		5100–S2–10B	FD51–1264–10	FD51–1265–10	4
	–12	3/4-14	3.11	1.38	1.19		5100–S2–12B	FD51–1264–12	FD51–1265–12	5
	–16	1-11 1/2	3.55	1.76	1.56		5100–S2–16B	FD51–1264–16	FD51–1265–16	6
	–20	1 1/4-11 1/2	3.71	2.10	1.88		5100–S2–20B	FD51–1264–20	FD51–1265–20	7
	–24	1 1/2-11 1/2	4.12	2.48	2.19		5100–S2–24B	FD51–1264–24	FD51–1265–24	8
Male Half/With Flange Female Pipe 	–4	1/8-27	1.88	.90	.94		5100–S4–4B			9
	–6	1/4-18	2.58	1.07	1.12		5100–S4–6B			10
	–8	3/8-18	2.58	1.07	1.12		5100–S4–8B			11
	–10	1/2-14	3.11	1.38	1.62		5100–S4–10B			12
	–12	3/4-14	3.11	1.38	1.62		5100–S4–12B			13
	–16	1-11 1/2	3.55	1.76	1.88		5100–S4–16B			14
	–20	1 1/4-11 1/2	3.71	2.10	2.12		5100–S4–20B			15
	–24	1 1/2-11 1/2	4.12	2.48	2.50		5100–S4–24B			16
Female Half/Wing Nut Female Pipe 	–4	1/8-27	1.97	3.03	.56		5100–S5–4B	FD51–1266–04	FD51–1268–04	17
	–6	1/4-18	2.37	3.44	.76		5100–S5–6B	FD51–1266–06	FD51–1268–06	18
	–8	3/8-18	2.37	3.44	.76		5100–S5–8B	FD51–1266–08	FD51–1268–08	19
	–10	1/2-14	3.09	4.06	1.16		5100–S5–10B	FD51–1266–10	FD51–1268–10	20
	–12	3/4-14	3.09	4.06	1.16		5100–S5–12B	FD51–1266–12	FD51–1268–12	21
	–16	1-11 1/2	3.67	4.38	1.44		5100–S5–16B	FD51–1266–16	FD51–1268–16	22
	–20	1 1/4-11 1/2	3.98	5.19	1.78		5100–S5–20B	FD51–1266–20	FD51–1268–20	23
	–24	1 1/2-11 1/2	4.02	5.31	2.00		5100–S5–24B	FD51–1266–24	FD51–1268–24	24
Female Half/Hex Nut Female Pipe 	–4	1/8-27	2.10	1.32	.56	1.19	5110–S5–4B	FD51–1267–04	FD51–1269–04	25
	–6	1/4-18	2.40	1.53	.76	1.38	5110–S5–6B	FD51–1267–06	FD51–1269–06	26
	–8	3/8-18	2.40	1.53	.76	1.38	5110–S5–8B	FD51–1267–08	FD51–1269–08	27
	–10	1/2-14	3.07	1.98	1.16	1.75	5110–S5–10B	FD51–1267–10	FD51–1269–10	28
	–12	3/4-14	3.07	1.98	1.16	1.75	5110–S5–12B	FD51–1267–12	FD51–1269–12	29
	–16	1-11 1/2	3.68	2.41	1.44	2.12	5110–S5–16B	FD51–1267–16	FD51–1269–16	30
	–20	1 1/4-11 1/2	4.00	2.81	1.78	2.50	5110–S5–20B	FD51–1267–20	FD51–1269–20	31
	–24	1 1/2-11 1/2	4.10	3.10	2.00	2.75	5110–S5–24B	FD51–1267–24	FD51–1269–24	32
Complete Coupling Less Flange/With Wing Nut/ Female Pipe 	–4	1/8-27	3.20				5101–4B	FD51–1270–04	FD51–1272–04	33
	–6	1/4-18	4.11				5101–6B	FD51–1270–06	FD51–1272–06	34
	–8	3/8-18	4.11				5101–8B	FD51–1270–08	FD51–1272–08	35
	–10	1/2-14	5.21				5101–10B	FD51–1270–10	FD51–1272–10	36
	–12	3/4-14	5.21				5101–12B	FD51–1270–12	FD51–1272–12	37
	–16	1-11 1/2	5.98				5101–16B	FD51–1270–16	FD51–1272–16	38
	–20	1 1/4-11 1/2	6.31				5101–20B	FD51–1270–20	FD51–1272–20	39
	–24	1 1/2-11 1/2	6.52				5101–24B	FD51–1270–24	FD51–1272–24	40
Repair Kit Each kit will repair male and female halves.	–4						FF098–04	FF095–04	FF097–04	41
	–6, –8						FF098–08	FF095–08	FF097–08	42
	–10, –12						FF098–12	FF095–12	FF097–12	43
	–16						FF098–16	FF095–16	FF097–16	44
	–20						FF098–20	FF095–20	FF097–20	45
	–24						FF098–24	FF095–24	FF097–24	46

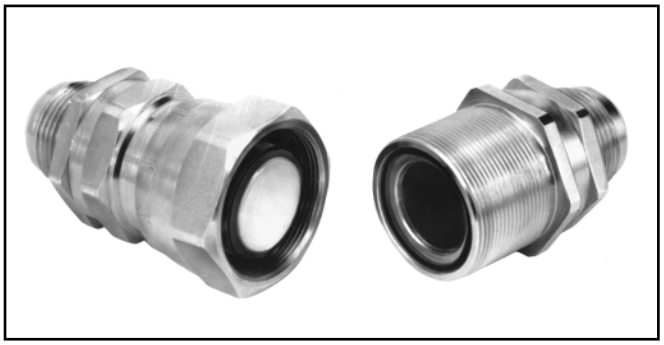
For component part number breakdown and service instructions, request bulletin JB41.

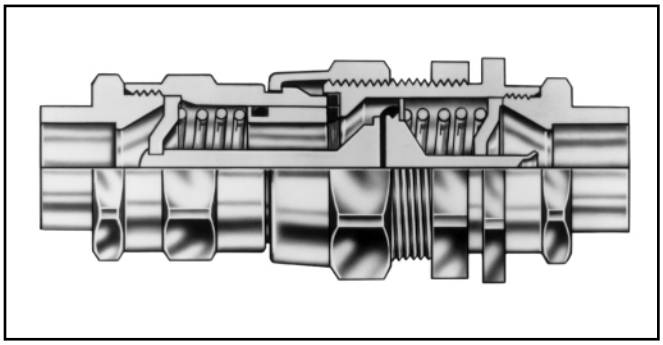
5100 Series	Coupling Size	Thread Size (P)	Dimensional Data A	B	①	②	Part Number Buna-N	Viton	EPR	Line Ref.
Complete Coupling With Flange/With Wing Nut/ Female Pipe 	–4	1/8-27	3.24				5100–4B			1
	–6	1/4-18	4.11				5100–6B			2
	–8	3/8-18	4.11				5100–8B			3
	–10	1/2-14	5.21				5100–10B			4
	–12	3/4-14	5.21				5100–12B			5
	–16	1-11 1/2	5.99				5100–16B			6
	–20	1 1/4-11 1/2	6.33				5100–20B			7
	–24	1 1/2-11 1/2	6.54				5100–24B			8
Complete Coupling Less Flange/With Hex Nut/ Female Pipe 	–4	1/8-27	3.20				5111–4B	FD51–1271–04	FD51–1273–04	9
	–6	1/4-18	4.11				5111–6B	FD51–1271–06	FD51–1273–06	10
	–8	3/8-18	4.11				5111–8B	FD51–1271–08	FD51–1273–08	11
	–10	1/2-14	5.21				5111–10B	FD51–1271–10	FD51–1273–10	12
	–12	3/4-14	5.21				5111–12B	FD51–1271–12	FD51–1273–12	13
	–16	1-11 1/2	5.98				5111–16B	FD51–1271–16	FD51–1273–16	14
	–20	1 1/4-11 1/2	6.31				5111–20B	FD51–1271–20	FD51–1273–20	15
	–24	1 1/2-11 1/2	6.52				5111–24B	FD51–1271–24	FD51–1273–24	16
Complete Coupling With Flange/With Hex Nut/ Female Pipe 	–4	1/8-27	3.20				5110–4B			17
	–6	1/4-18	4.11				5110–6B			18
	–8	3/8-18	4.11				5110–8B			19
	–10	1/2-14	5.21				5110–10B			20
	–12	3/4-14	5.21				5110–12B			21
	–16	1-11 1/2	5.98				5110–16B			22
	–20	1 1/4-11 1/2	6.31				5110–20B			23
	–24	1 1/2-11 1/2	6.52				5110–24B			24
Repair Kit Each kit will repair male and female halves.	–4						FF098–04	FF095–04	FF097–04	25
	–6, –8						FF098–08	FF095–08	FF097–08	26
	–10, –12						FF098–12	FF095–12	FF097–12	27
	–16						FF098–16	FF095–16	FF097–16	28
	–20						FF098–20	FF095–20	FF097–20	29
	–24						FF098–24	FF095–24	FF097–24	30
Accessories							**Dust Cap with Chain**	**Dust Plug with Chain**	**6 Bolt Flange**	31
Dust Cap with Chain** 	–4						5100–S7–5	5100–S9–5		32
	–6, –8						5100–S7–8	5100–S9–8		33
	–10, –12						5100–S7–12	5100–S9–12		34
	–16						5100–S7–16	5100–S9–16		35
	–20						5100–S7–20	5100–S9–20		36
	–24						5100–S7–24	5100–S9–24		37
										38
										39
Dust Plug with Chain** 										
6 Bolt Flange* 	–4		.201	1.44					150–22–5	40
	–6, –8		.201	1.69					150–22–8	41
	–10, –12		.201	2.12					150–22–12	42
	–16		.201	2.38					150–22–16	43
	–20		.201	2.62					150–22–20	44
	–24		.201	3.25					5100–22–24S	45

**6 Bolt Flange-holes equally spaced. (See "A" for bolt hole diameter, and "B" for bolt circle diameter).*
***To order caps and plugs without chain, order cap by part number 5100-32-(size) and plug by part number 5100-41-(size).*

5400 Series/Low Air Inclusion Refrigerant





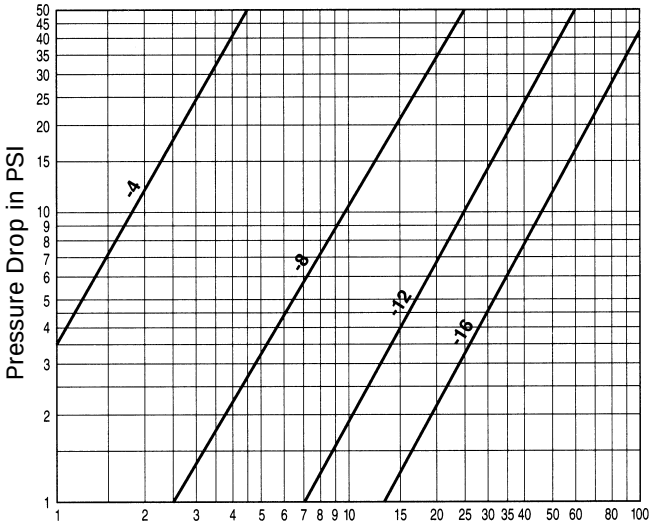


The 5400 Series is designed for air conditioning, refrigerant, gaseous and fluid transfer applications.

- Brazed or threaded end connections for versatility of installation on tubing or hose.
- Tubular valve construction for low fluid loss and air inclusion.
- Thread together design allows connection and disconnection against pressure.
- Lock washer and jam nut standard for optional bulkhead mounting.
- Standard seal material – Neoprene.
- Standard adapter material – Steel or Brass.
- Standard body material – Zinc plated steel.

Flow Data

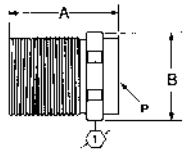
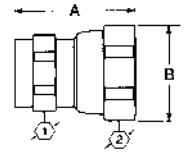
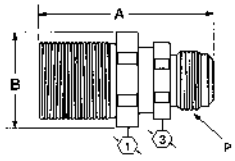
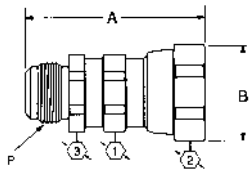
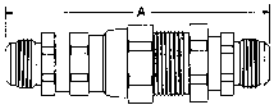
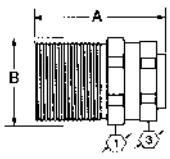
Pressure Drop Versus Flow Graphic



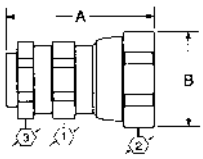
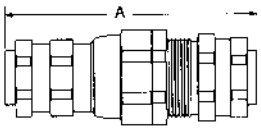
Gallons Per Minute Flow
(Test Fluid MIL-H-5606 Hydraulic Oil At 100° F)

Physical Characteristics

Coupling Dash Size	Maxium Operating Pressure (psi connected)	Minimum Burst Pressure (psi connected)	Maximum Operating Pressure (psi disconnected)		Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc max.)	Fluid Loss (cc max.)
			Male Half	Female Half				
–4	3000	9000	2500	500	28	2	.10	.05
–8	1750	5200	1750	400	28	14	.10	.10
–12	700	2100	800	400	28	35	.30	.10
–16	700	2100	700	300	28	75	.50	.20

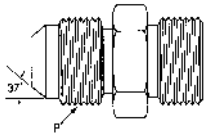
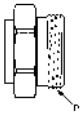
5400 Series	Coupling Size	Thread Size (P)	Tube O.D. Size	Dimensional Data A	B	①	②	③	Part Number Neoprene	Line Ref.
Male Half No Adapter 	–4			1.08	.83	.75			5400–S2–4	1
	–8			1.37	1.25	1.13			5400–S2–8	2
	–12			1.74	1.83	1.63			5400–S2–12	3
	–16			1.83	2.10	1.88			5400–S2–16	4
										5
										6
										7
										8
Female Half No adapter 	–4			1.13	.83	.63	.75		5400–S5–4	9
	–8			1.63	1.31	1.00	1.19		5400–S5–8	10
	–12			2.15	1.80	1.38	1.63		5400–S5–12	11
	–16			2.37	2.24	1.75	2.00		5400–S5–16	12
										13
										14
										15
										16
Male Half SAE 37° (JIC) 	–4	7/16-20		1.88	.83	.75		.63	5410–S17–4–4	17
	–4	9/16-18		1.89	.83	.75		.63	5410–S17–6–4	18
	–8	9/16-18		2.18	1.25	1.13		1.00	5410–S17–6–8	19
	–8	3/4-16		2.28	1.25	1.13		1.00	5410–S17–8–8	20
	–12	7/8-14		2.75	1.83	1.63		1.38	5410–S17–10–12	21
	–12	1 1/16-12		2.86	1.83	1.63		1.38	5410–S17–12–12	22
	–16	1 5/16-12		2.99	2.10	1.88		1.75	5410–S17–16–16	23
										24
Female Half SAE 37° (JIC) 	–4	7/16-20		1.93	.83	.63	.75	.63	5410–S14–4–4	25
	–4	9/16-18		1.94	.83	.63	.75	.63	5410–S14–6–4	26
	–8	9/16-18		2.43	1.31	1.00	1.19	1.00	5410–S14–6–8	27
	–8	3/4-16		2.53	1.31	1.00	1.19	1.00	5410–S14–8–8	28
	–12	7/8-14		3.16	1.80	1.38	1.63	1.38	5410–S14–10–12	29
	–12	1 1/16-12		3.27	1.80	1.38	1.63	1.38	5410–S14–12–12	30
	–16	1 5/16-12		3.53	2.24	1.75	2.00	1.75	5410–S14–16–16	31
										32
Complete Coupling SAE 37° (JIC) 	–4	7/16-20		3.54					5410–4–4	33
	–4	9/16-18		3.56					5410–6–4	34
	–8	9/16-18		4.23					5410–6–8	35
	–8	3/4-16		4.44					5410–8–8	36
	–12	7/8-14		5.33					5410–10–12	37
	–12	1 1/16-12		5.54					5410–12–12	38
	–16	1 5/16-12		5.89					5410–16–16	39
										40
Male Half Braze Tubing Adapter 	–4		1/4	1.52	.83	.75		.63	5401–S17–4–4	41
	–4		3/8	1.52	.83	.75		.63	5401–S17–6–4	42
	–8		3/8	1.75	1.31	1.13		1.00	5401–S17–6–8	43
	–8		1/2	1.75	1.31	1.13		1.00	5401–S17–8–8	44
	–12		5/8	2.47	1.80	1.63		1.38	5401–S17–10–12	45
	–12		3/4	2.47	1.80	1.63		1.38	5401–S17–12–12	46
	–16		1	2.80	2.24	1.88		1.75	5401–S17–16–16	47
										48

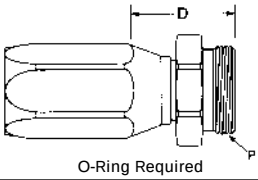
5400 Series

Coupling Size	Thread Size (P)	Tube O.D. Size	Dimensional Data A	B	1	2	3	Part Number Neoprene	Line Ref·
Female Half Braze Tubing Adapter 									
–4		1/4	1.57	.83	.63	.75	.63	5401–S14–4–4	1
–4		3/8	1.57	.83	.63	.75	.63	5401–S14–6–4	2
–8		3/8	2.00	1.31	1.00	1.19	1.00	5401–S14–6–8	3
–8		1/2	2.00	1.31	1.00	1.19	1.00	5401–S14–8–8	4
–12		5/8	2.88	1.80	1.38	1.63	1.38	5401–S14–10–12	5
–12		3/4	2.88	1.80	1.38	1.63	1.38	5401–S14–12–12	6
–16		1	3.34	2.24	1.75	2.00	1.75	5401–S14–16–16	7
									8
Complete Coupling Braze Tubing Adapter 									
–4		1/4	2.82					5401–4–4	9
–4		3/8	2.82					5401–6–4	10
–8		3/8	3.37					5401–6–8	11
–8		1/2	3.37					5401–8–8	12
–12		5/8	4.76					5401–10–12	13
–12		3/4	4.76					5401–12–12	14
–16		1	5.52					5401–16–16	15
									16

Accessories

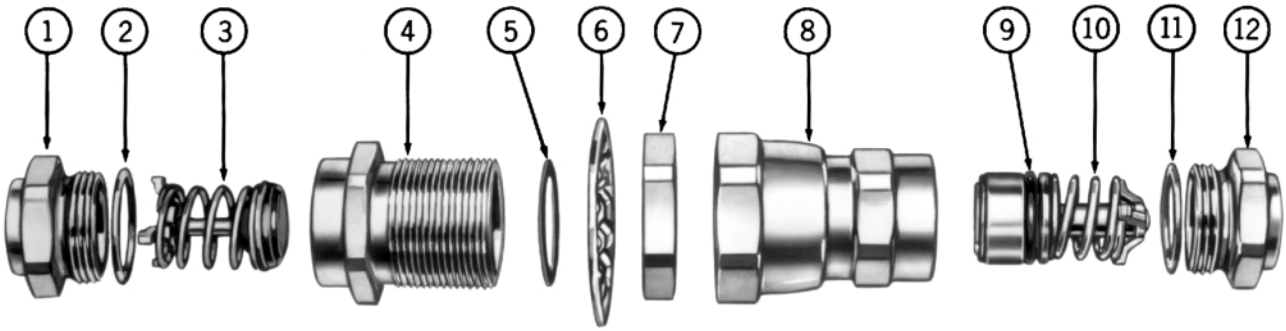
			Dust Cap with Gasket	Dust Plug with Gasket	
Dust Cap Dust Plug 					17
–4			5400–S6–4	5400–S8–4	18
–8			5400–S6–8	5400–S8–8	19
–12			5400–S6–12	5400–S8–12	20
–16			5400–S6–16	5400–S8–16	21
					22
					23
					24
					25

			O-Ring	Brass	Steel	
Adapter SAE 37° (JIC)  O-Ring Required						
						26
–4	7/16-20	1/4	22546–12	202220–4–4B	202220–4–4S	27
–4	9/16-18	3/8	22546–12	202220–6–4B	202220–6–4S	28
–8	9/16-18	3/8	22546–17	202220–6–8B	202220–6–8S	29
–8	3/4-16	1/2	22546–17	202220–8–8B	202220–8–8S	30
–12	7/8-14	5/8	22546–23	202220–10–12B	202220–10–12S	31
–12	1 1/16-12	3/4	22546–23	202220–12–12B	202220–12–12S	32
–16	1 3/16-12	1	22546–28	202220–16–16B	202220–16–16S	33
Adapter–Braze  O-Ring Required						
				Brass		34
–4	1/2-20	1/4	22546–12	202208–4–4B		35
–8	7/8-20	1/2	22546–17	202208–8–8B		36
–12	1 1/4-18	5/8	22546–23	202208–10–12B		37
–16	1 19/32-20	7/8	22546–28	202208–14–16B		38

			Hose Size	D			
Hose Fitting SAE 100R5†  O-Ring Required							
							39
–4	1/2-20	–4	.92	22546–12	487–4–4S		40
–4	1/2-20	–6	.96	22546–12	487–4–6S		41
–8	7/8-20	–6	.96	22546–17	487–8–6S		42
–8	7/8-20	–8	1.06	22546–17	487–8–8S		43
–12	1 1/4-18	–10	1.07	22546–23	487–12–10S		44
–16	1 19/32-20	–16	1.01	22546–28	487–16–16S		45

†*Additional dash styles available.*

Assembly Instructions/Component Part Numbers



Typical Male Coupling Half (S2)

Typical Female Coupling Half (S5)

Assembly Instructions

Steps:

1. After tubing or hose has been connected to adapters ① and ⑫, install O-Rings ②and ⑪† on adapters. Be sure O-Rings are not twisted.
2. Oil O-Rings ② and ⑪ liberally with system fluid to prevent them from scuffing and tearing when coupling body is threaded on adapter.
3. S2 Half—Lubricate poppet face with system fluid. Insert poppet valve assembly ③ into body ④. Tighten body ④ on adapter ①. After body and adapter make metal-to-metal contact, tighten by rotating body ④1/8" with respect to adapter ① or torque per table value.

   S5 Half—Oil O-Ring ⑨† liberally with system fluid. Insert valve and sleeve assembly ⑩ into body ⑧. Tighten body ⑧ on adapter ⑫. After body and adapter make metal-to-metal contact, tighten by rotating body ⑧1/8" with respect to adapter ⑫ or torque per table value.
4. Coupling Connection—Lubricate gasket seal ⑤ on 5400-S2 half with system fluid. Thread union nut ⑧ on 5400-S2 half. Tighten union nut to torque values shown in Table. Be sure S2 and S5 bodies do not rotate during connection.

Bulkhead Mounting––S2 Half

Install lock washer ⑥ on S2 half. Insert S2 half through bulkhead, and tighten jam nut ⑦ so that lock washer teeth are fully compressed.

NOTE: Lock washer ⑥ must be between hex of S2 half and bulkhead.

Maximum Bulkhead Thickness

Coupling Size	Lock Washer Installed	Lock Washer Not Used
–4	.206	.256
–8	.136	.203
–12	.232	.292
–16	.101	.161

Torque Values

Recommended torque values in ft. lbs., are listed below.

Dash Size	Adapter to Body		S2 Half to S5 Half
	Braze Type or Aluminum	Non-braze Type Steel or Brass	
–4	6–8	12–15	10–12
–8	15–20	35–45	35–37
–12	35–40	45–55	45–47
–16	50–60	55–65	65–67

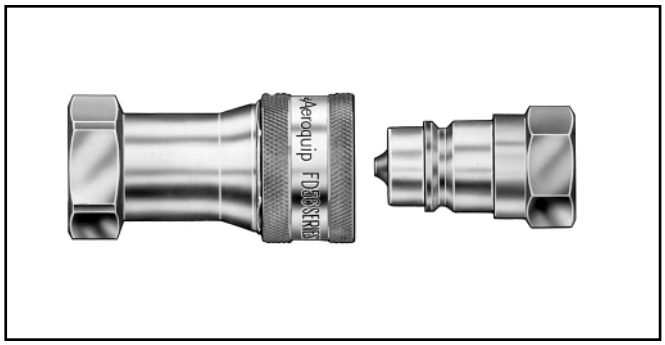
†***IMPORTANT****: Generous lubrication is required for all gaskets and O-Rings. Use refrigeration oil only when used in refrigerant system.*

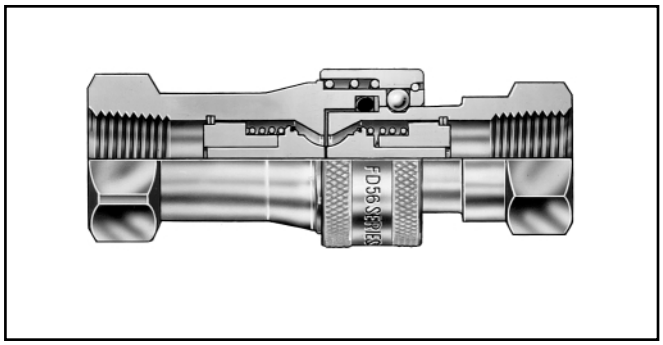
Component Part Numbers

Item No.	Dash Size→	–4	–8	–12	–16	Line Ref.
	O.D. Tube Size→	1/4"–3/8"	1/4"–5/8"	5/8"–7/8"	7/8"–1 3/8"	
	Typical Male Half					**1**
1	Tubing Adapter	202208–*–4	202208–*–8	202208–*–12	202208–*–16	**2**
2	O-Ring	22546–12	22546–17	22546–23	22546–28	**3**
3	Poppet Valve Assembly	5400–S20–4	5400–S20–8	5400–S20–12	5400–S20–16	**4**
4	Body	5400–17–4	5400–17–8	5400–17–12	5400–17–16	**5**
5	Gasket Seal	22008–4	22008–8	22008–12	22008–16	**6**
6	Lock Washer	5400–54–4S	5400–54–8S	5400–54–12S	5400–54–16S	**7**
7	Jam Nut	5400–53–4S	5400–53–8S	5400–53–12S	5400–53–16S	**8**
	Typical Female Half					**9**
8	Union Nut and Body Assembly	5400–S16–4	5400–S16–8	5400–S16–12	5400–S16–16	**10**
9	O-Ring	22546–10	22546–112	22546–116	22546–214	**11**
10	Valve and Sleeve Assembly	5400–S19–4	5400–S19–8	5400–S19–12	5400–S19–16	**12**
11	O-Ring	22546–12	22546–17	22546–23	22546–28	**13**
12	Tubing Adapter	202208–*–4	202208–*–8	202208–*–12	202208–*–16	**14**

**Specify O.D. Tubing size of adapter required in 16th of an inch. Example: –4 coupling with 3/8" O.D. tubing is 6/16 or –6. Part number is then 202208–6–4.*

5600 Series/Industrial Interchange (Series A)





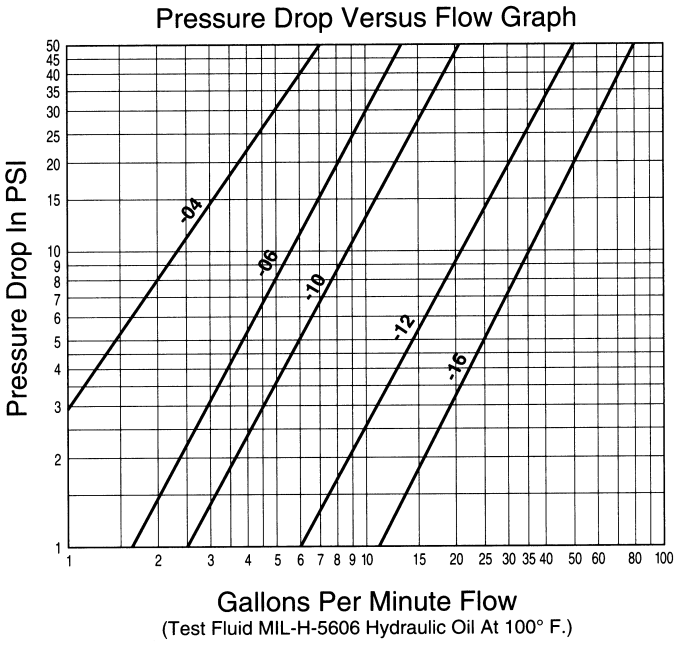
The 5600 Series general purpose coupling features a *PUSH-PULL*™ latch and poppet valving in a low profile design. It is a favorite in North America and abroad.

- *PUSH-PULL*™ ball latch design allows quick and easy connection and disconnection of fluid lines.
- Self-sealing poppet valve provides excellent high and low pressure sealing.
- Conforms dimensionally to ISO standard 7241/1 Series A.
- Streamlined valving provides minimum pressure drop.
- Standard seal materials – Buna-N, EPR and Viton.
- Standard body material – Zinc plated steel with Zinc poppet guides. (Brass poppet guide in –04 size.)

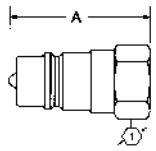
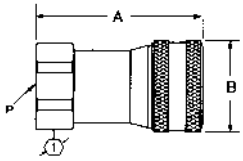
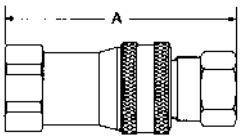
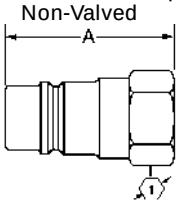
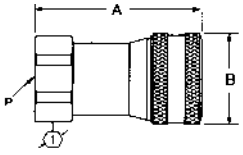
Physical Characteristics

Coupling Size	Maximum Operating Pressure (psi)	Minimum Burst Pressure (psi)	Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc. max.)	Fluid Loss (cc. max.)
–04	5,000	15,000	28	1	.50	.50
–06	4,000	12,000	28	6	1.5	1.3
–10	4,000	12,000	28	12	2.8	2.8
–12	4,000	12,000	28	28	10.0	8.2
–16	4,000	12,000	28	50	14.2	14.2

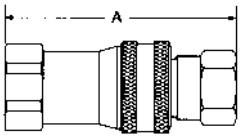
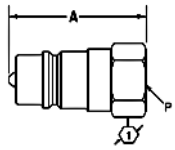
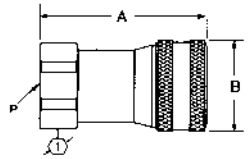
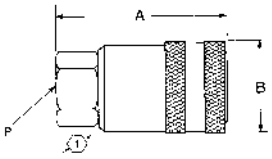
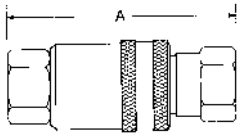
Flow Data

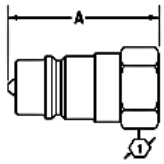
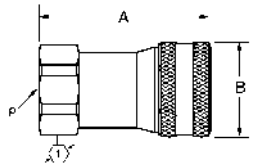
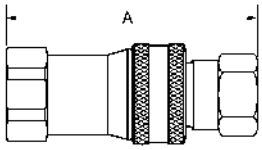
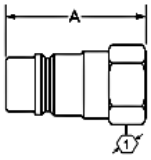
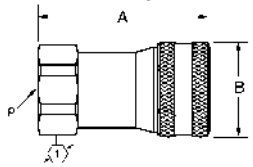


(Test Fluid MIL-H-5606 Hydraulic Oil At 100° F.)

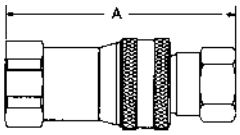
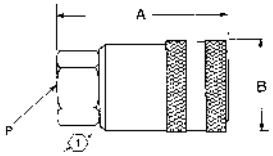
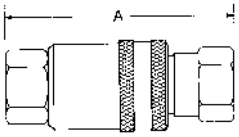
5600 Series	Coupling Size	Thread Size (P)	Dimensional Data			Part Number			Line Ref.
			A	B	⑴	Buna-N	Viton	EPR	
Male Half Female Pipe/Valved 	–04	1/8-27	1.17		.56	5602–2–4S	FD56–1062–02–04	5644–2–4S	1
	–04	1/4-18	1.24		.75	5602–4–4S	FD56–1062–04–04	5644–4–4S	2
	–06	3/8-18	1.40		.88	5602–6–6S	FD56–1062–06–06	5644–6–6S	3
	–10	1/2-14	1.89		1.06	5602–8–10S	FD56–1062–08–10	5644–8–10S	4
	–10	3/4-14	2.03		1.38	5602–12–10S	FD56–1062–12–10	5644–12–10S	5
	–12	3/4-14	2.28		1.38	5602–12–12S	FD56–1062–12–12	5644–12–12S	6
	–16	1-11 1/2	2.77		1.62	5602–16–16S	FD56–1062–16–16	5644–16–16S	7
									8
Female Half Female Pipe/Valved 	–04	1/8-27	1.81	1.08	.88	5601–2–4S	FD56–1064–02–04	5643–2–4S	9
	–04	1/4-18	1.81	1.08	.88	5601–4–4S	FD56–1064–04–04	5643–4–4S	10
	–06	3/8-18	2.15	1.23	1.00	5601–6–6S	FD56–1064–06–06	5643–6–6S	11
	–10	1/2-14	2.61	1.50	1.19	5601–8–10S	FD56–1064–08–10	5643–8–10S	12
	–10	3/4-14	2.61	1.50	1.31	5601–12–10S	FD56–1064–12–10	5643–12–10S	13
	–12	3/4-14	3.25	1.81	1.50	5601–12–12S	FD56–1064–12–12	5643–12–12S	14
	–16	1-11 1/2	3.82	2.10	1.69	5601–16–16S	FD56–1064–16–16	5643–16–16S	15
									16
Complete Coupling Female Pipe/Valved 	–04	1/8-27	2.42			5600–2–4S	FD56–1065–02–04	5642–2–4S	17
	–04	1/4-18	2.49			5600–4–4S	FD56–1065–04–04	5642–4–4S	18
	–06	3/8-18	2.80			5600–6–6S	FD56–1065–06–06	5642–6–6S	19
	–10	1/2-14	3.78			5600–8–10S	FD56–1065–08–10	5642–8–10S	20
	–10	3/4-14	4.06			5600–12–10S	FD56–1065–12–10	5642–12–10S	21
	–12	3/4-14	4.46			5600–12–12S	FD56–1065–12–12	5642–12–12S	22
	–16	1-11 1/2	5.54			5600–16–16S	FD56–1065–16–16	5642–16–16S	23
									24
Male Half/Female Pipe Non-Valved  Will not operate with valved coupling halves. No valve actuator.	–04	1/8-27	1.17		.56	FD56–1037–02–04	FD56–1037–02–04	FD56–1037–02–04	25
	–04	1/4-18	1.24		.75	FD56–1037–04–04	FD56–1037–04–04	FD56–1037–04–04	26
	–06	3/8-18	1.40		.88	FD56–1037–06–06	FD56–1037–06–06	FD56–1037–06–06	27
	–10	1/2-14	1.89		1.06	FD56–1037–08–10	FD56–1037–08–10	FD56–1037–08–10	28
	–10	3/4-14	2.03		1.38	FD56–1037–12–10	FD56–1037–12–10	FD56–1037–12–10	29
	–12	3/4-14	2.28		1.38	FD56–1037–12–12	FD56–1037–12–12	FD56–1037–12–12	30
	–16	1-11 1/2	2.77		1.62	FD56–1037–16–16	FD56–1037–16–16	FD56–1037–16–16	31
									32
Female Half/Female Pipe Non-Valved  Will not operate with valved coupling halves. No valve actuator.	–04	1/8-27	1.81	1.08	.88	FD56–1225–02–04	FD56–1207–02–04	FD56–1204–02–04	33
	–04	1/4-18	1.81	1.08	.88	FD56–1225–04–04	FD56–1207–04–04	FD56–1204–04–04	34
	–06	3/8-18	2.15	1.23	1.00	FD56–1225–06–06	FD56–1207–06–06	FD56–1204–06–06	35
	–10	1/2-14	2.61	1.50	1.19	FD56–1225–08–10	FD56–1207–08–10	FD56–1204–08–10	36
	–10	3/4-14	2.61	1.50	1.31	FD56–1225–12–10	FD56–1207–12–10	FD56–1204–12–10	37
	–12	3/4-14	3.25	1.81	1.50	FD56–1225–12–12	FD56–1207–12–12	FD56–1204–12–12	38
	–16	1-11 1/2	3.82	2.10	1.69	FD56–1225–16–16	FD56–1207–16–16	FD56–1204–16–16	39
									40
Repair Kit									41
Each kit will repair one male or female half.	–04					FF082–04†	FF092–04†	FF093–04†	42
	–06					FF082–06	FF092–06	FF093–06	43
	–10					FF082–10	FF092–10	FF093–10	44
	–12					FF082–12	FF092–12	FF093–12	45
	–16					FF082–16	FF092–16	FF093–16	46

†*This size repair kit contains an interface seal and back-up ring.*

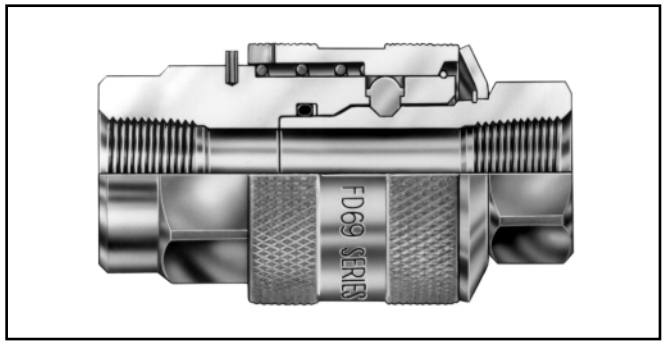
5600 Series	Coupling Size	Thread Size (P)	Dimensional Data A	B	①	Part Number Buna-N	Viton	EPR	Line Ref.
Complete Coupling/Non–Valved Female Pipe 	–04	1/8-27	2.42			FD56–1226–02–04	FD56–1208–02–04	FD56–1205–02–04	1
	–04	1/4-18	2.49			FD56–1226–04–04	FD56–1208–04–04	FD56–1205–04–04	2
	–06	3/8-18	2.80			FD56–1226–06–06	FD56–1208–06–06	FD56–1205–06–06	3
	–10	1/2-14	3.78			FD56–1226–08–10	FD56–1208–08–10	FD56–1205–08–10	4
	–10	3/4-14	4.06			FD56–1226–12–10	FD56–1208–12–10	FD56–1205–12–10	5
	–12	3/4-14	4.46			FD56–1226–12–12	FD56–1208–12–12	FD56–1205–12–12	6
	–16	1-11 1/2	5.54			FD56–1226–16–16	FD56–1208–16–16	FD56–1205–16–16	7
									8
Male Half/Female Pipe Pusher Style Valving  Incorporates a pusher device to open mating valved coupling halves.	–04	1/8-27	1.17		.56	FD56–1125–02–04	FD56–1125–02–04	FD56–1125–02–04	9
	–04	1/4-18	1.24		.75	FD56–1125–04–04	FD56–1125–04–04	FD56–1125–04–04	10
	–06	3/8-18	1.40		.88	FD56–1125–06–06	FD56–1125–06–06	FD56–1125–06–06	11
	–10	1/2-14	1.89		1.06	FD56–1125–08–10	FD56–1125–08–10	FD56–1125–08–10	12
	–10	3/4-14	2.03		1.38	FD56–1125–12–10	FD56–1125–12–10	FD56–1125–12–10	13
	–12	3/4-14	2.28		1.38	FD56–1125–12–12	FD56–1125–12–12	FD56–1125–12–12	14
	–16	1-11 1/2	2.77		1.62	FD56–1125–16–16	FD56–1125–16–16	FD56–1125–16–16	15
									16
Female Half/Female Pipe Pusher Style Valving  Incorporates a pusher device to open mating valved coupling halves.	–04	1/8-27	1.81	1.08	.88	FD56–1123–02–04	FD56–1201–02–04	FD56–1196–02–04	17
	–04	1/4-18	1.81	1.08	.88	FD56–1123–04–04	FD56–1201–04–04	FD56–1196–04–04	18
	–06	3/8-18	2.15	1.23	1.00	FD56–1123–06–06	FD56–1201–06–06	FD56–1196–06–06	19
	–10	1/2-14	2.61	1.50	1.19	FD56–1123–08–10	FD56–1201–08–10	FD56–1196–08–10	20
	–10	3/4-14	2.61	1.50	1.31	FD56–1123–12–10	FD56–1201–12–10	FD56–1196–12–10	21
	–12	3/4-14	3.25	1.81	1.50	FD56–1123–12–12	FD56–1201–12–12	FD56–1196–12–12	22
	–16	1-11 1/2	3.82	2.10	1.69	FD56–1123–16–16	FD56–1201–16–16	FD56–1196–16–16	23
									24
Female Half/Female Pipe Connect Under Pressure Style 	–10	1/2-14	2.88	1.52	1.06	5651–8–10S	FD56–1070–08–10	565007–8–10S	25
	–10	3/4-14	3.30	1.22	1.25	5651–12–10S	FD56–1070–12–10	565007–12–10S	26
									27
									28
									29
									30
									31
									32
Complete Coupling/Female Pipe Connect Under Pressure Style 	–10	1/2-14	3.89			5650–8–10S	FD56–1071–08–10	565006–8–10S	33
	–10	3/4-14	4.45			5650–12–10S	FD56–1071–12–10	565006–12–10S	34
									35
									36
									37
									38
									39
									40
Repair Kit									41
Each kit will repair one male or female half.	–04					FF082–04†	FF092–04†	FF093–04†	42
	–06					FF082–06	FF092–06	FF093–06	43
	–10					FF082–10	FF092–10	FF093–10	44
	–12					FF082–12	FF092–12	FF093–12	45
† This size repair kit contains an interface seal and back-up ring.	–16					FF082–16	FF092–16	FF093–16	46

5600 Series	Coupling Size	Thread Size (P)	Dimensional Data A	B	①	Part Number Buna-N	Viton	EPR	Line Ref.
Male Half Female SAE O-Ring/Valved 	–04	7/16-20	1.28		.62	5610–4–4S	FD56–1072–04–04	560078–4-4S	1
	–06	9/16-18	1.50		.88	5610–6–6S	FD56–1072–06–06	560078–6–6S	2
	–10	3/4-16	2.03		1.06	5610–8–10S	FD56–1072–08–10	560078–8–10S	3
	–10	7/8-14	2.08		1.12	5610–10–10S	FD56–1072–10–10	560078–10–10S	4
	–10	1 1/16-12	2.26		1.38	5610–12–10S	FD56–1072–12–10	560078–12–10S	5
	–12	1 1/16-12	2.55		1.38	5610–12–12S	FD56–1072–12–12	560078–12–12S	6
	–16	1 5/16-12	3.10		1.62	5610–16–16S	FD56–1072–16–16	560078–16–16S	7
									8
Female Half Female SAE O-Ring/Valved 	–04	7/16-20	1.81	1.08	.88	5608–4–4S	FD56–1074–04–04	FD56–1012–04–04	9
	–06	9/16-18	2.11	1.27	1.00	5608–6–6S	FD56–1074–06–06	FD56–1012–06–06	10
	–10	3/4-16	2.76	1.52	1.19	5608–8–10S	FD56–1074–08–10	FD56–1012–08–10	11
	–10	7/8-14	2.81	1.52	1.19	5608–10–10S	FD56–1074–10–10	FD56–1012–10–10	12
	–10	1 1/16-12	3.00	1.52	1.31	5608–12–10S	FD56–1074–12–10	FD56–1012–12–10	13
	–12	1 1/16-12	3.25	1.84	1.50	5608–12–12S	FD56–1074–12–12	FD56–1012–12–12	14
	–16	1 5/16-12	3.83	2.15	1.88	5608–16–16S	FD56–1074–16–16	FD56–1012–16–16	15
									16
Complete Coupling Female SAE O-Ring/Valved 	–04	7/16-20	2.53			5606–4–4S	FD56–1075–04–04	FD56–1009–04–04	17
	–06	9/16-18	2.84			5606–6–6S	FD56–1075–06–06	FD56–1009–06–06	18
	–10	3/4-16	3.78			5606–8–10S	FD56–1075–08–10	FD56–1009–08–10	19
	–10	7/8-14	3.88			5606–10–10S	FD56–1075–10–10	FD56–1009–10–10	20
	–10	1 1/16-12	4.24			5606–12–10S	FD56–1075–12–10	FD56–1009–12–10	21
	–12	1 1/16-12	4.46			5606–12–12S	FD56–1075–12–12	FD56–1009–12–12	22
	–16	1 5/16-12	5.54			5606–16–16S	FD56–1075–16–16	FD56–1009–16–16	23
									24
Male Half Female SAE O-Ring/Non-Valved  Will not operate with valved coupling halves. No valve actuator.	–04	7/16-20	1.21	.72	.62	FD56–1221–04–04	FD56–1221–04–04	FD56–1221–04–04	25
	–06	9/16-18	1.42	.73	.88	FD56–1221–06–06	FD56–1221–06–06	FD56–1221–06–06	26
	–10	3/4-16	1.89	1.02	1.06	FD56–1221–08–10	FD56–1221–08–10	FD56–1221–08–10	27
	–10	7/8-14	1.94	1.07	1.12	FD56–1221–10–10	FD56–1221–10–10	FD56–1221–10–10	28
	–10	1 1/16-12	2.12	1.24	1.38	FD56–1221–12–10	FD56–1221–12–10	FD56–1221–12–10	29
	–12	1 1/16-12	2.28	1.21	1.38	FD56–1221–12–12	FD56–1221–12–12	FD56–1221–12–12	30
	–16	1 5/16-12	2.77	1.45	1.62	FD56–1221–16–16	FD56–1221–16–16	FD56–1221–16–16	31
									32
Female Half Female SAE O-Ring/Non-Valved  Will not operate with valved coupling valves. No valve actuator.	–04	7/16-20	1.81	1.08	.88	5691–4–4S	FD56–1233–04–04	FD56–1209–04–04	33
	–06	9/16-18	2.11	1.27	1.06	5691–6–6S	FD56–1233–06–06	FD56–1209–06–06	34
	–10	3/4-16	2.76	1.52	1.25	5691–8–10S	FD56–1233–08–10	FD56–1209–08–10	35
	–10	7/8-14	2.81	1.52	1.25	5691–10–10S	FD56–1233–10–10	FD56–1209–10–10	36
	–10	1 1/16-12	3.00	1.52	1.38	5691–12–10S	FD56–1233–12–10	FD56–1209–12–10	37
	–12	1 1/16-12	3.25	1.84	1.50	5691–12–12S	FD56–1233–12–12	FD56–1209–12–12	38
	–16	1 5/16-12	4.09	2.15	1.88	5691–16–16S	FD56–1233–16–16	FD56–1209–16–16	39
									40
Repair Kit									41
Each kit will repair one male or female half.	–04					FF082–04†	FF092–04†	FF093–04†	42
	–06					FF082–06	FF092–06	FF093–06	43
	–10					FF082–10	FF092–10	FF093–10	44
	–12					FF082–12	FF092–12	FF093–12	45
† This size repair kit contains an interface seal and back-up ring.	–16					FF082–16	FF092–16	FF093–16	46

5600 Series

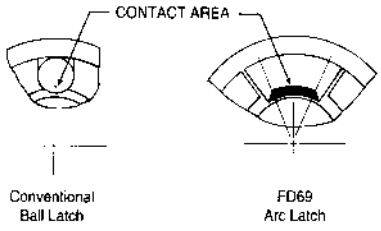
Coupling Size	Thread Size (P)	Dimensional Data A	B	(1)	Part Number Buna-N	Viton	EPR	Line Ref.
Complete Coupling Female SAE O-Ring/Non-Valved  Will not operate with valved coupling halves.								
–04	7/16-20	2.53			5690–4–4S	FD56–1234–04–04	FD56–1210–04–04	1
–06	9/16-18	2.84			5690–6–6S	FD56–1234–06–06	FD56–1210–06–06	2
–10	3/4-16	3.78			5690–8–10	FD56–1234–08–10	FD56–1210–08–10	3
–10	7/8-14	3.88			5690–10–10S	FD56–1234–10–10	FD56–1210–10–10	4
–10	1 1/16-12	4.24			5690–12–10S	FD56–1234–12–10	FD56–1210–12–10	5
–12	1 1/16-12	4.46			5690–12–12S	FD56–1234–12–12	FD56–1210–12–12	6
–16	1 5/16-12	5.54			5690–16–16S	FD56–1234–16–16	FD56–1210–16–16	7
								8
Female Half/Female SAE O-Ring Connect Under Pressure 								
–10	3/4-16	2.88	1.52	1.06	5668–8–10S	FD56–1081–8–10	565015–8–10S	9
–10	7/8-14	3.19	1.52	1.12	5668–10–10S	FD56–1081–10–10	565015–10–10S	10
–10	1 1/16-12	3.38	1.52	1.38	5668–12–10S	FD56–1081–12–10	565015–12–10S	11
								12
								13
								14
								15
								16
Complete Coupling/Female SAE O-Ring Connect Under Pressure 								
–10	3/4-16	3.88			5667–8–10S	FD56–1082–8–10	565014–8–10S	17
–10	7/8-14	4.25			5667–10–10S	FD56–1082–10–10	565014–10–10S	18
–10	1 1/16-12	4.62			5667–12–10S	FD56–1082–12–10	565014–12–10S	19
								20
								21
								22
								23
								24
Repair Kit								25
Each kit will repair one male or female half. †This size repair kit contains an interface seal and back-up ring.								
–04					FF082–04†	FF092–04†	FF093–04†	26
–06					FF082–06	FF092–06	FF093–06	27
–10					FF082–10	FF092–10	FF093–10	28
–12					FF082–12	FF092–12	FF093–12	29
–16					FF082–16	FF092–16	FF093–16	30
Accessories								31
Dust Cap 								
–04						5657–4		32
–06						5657–6		33
–10						5657–10		34
–12						5657–12		35
–16						5657–16		36
Dust Plug 								
–4						5659–4		37
–6						5659–6		38
–10						5659–10		39
–12						5659–12		40
–16						5659–16		41
Break Away Frame 								
–10						5603		42
								43
								44
								45
								46

FD69 Series/Arc Latch™—High Pressure Water Blast (10,000 psi)

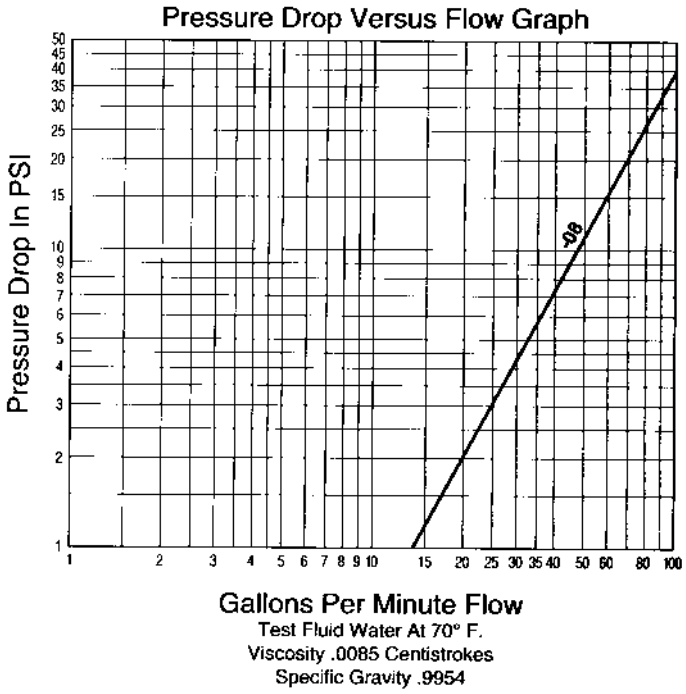


The FD69 Series "Arc Latch™" design has a greater surface contact area for long service life in rugged high-pressure and water blast applications. The maximum operating pressure is 10,000 psi with 40,000 psi minimum burst pressure.

- Safety sleeve lock guards against accidental disconnection.
- Smooth bore "straight through" design for high flow.
- Heavy duty back-up ring to prevent O-Ring extrusion.
- Available in plated steel and stainless steel for added corrosion resistance.
- Standard seal material – Buna-N.
- Standard body material – Zinc plated steel, Stainless steel.

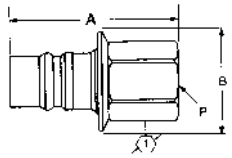
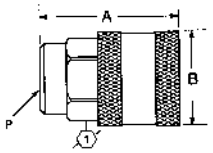
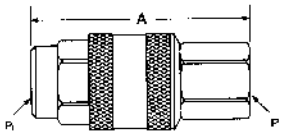


Flow Data

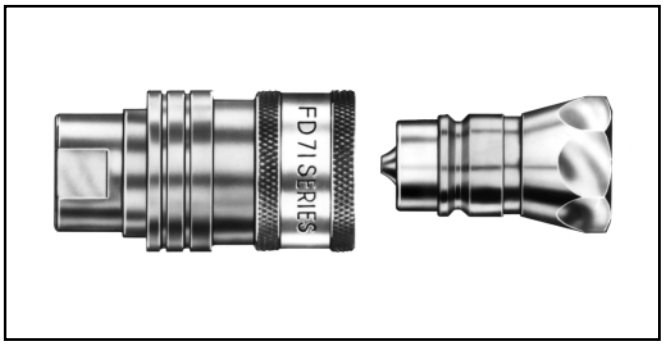


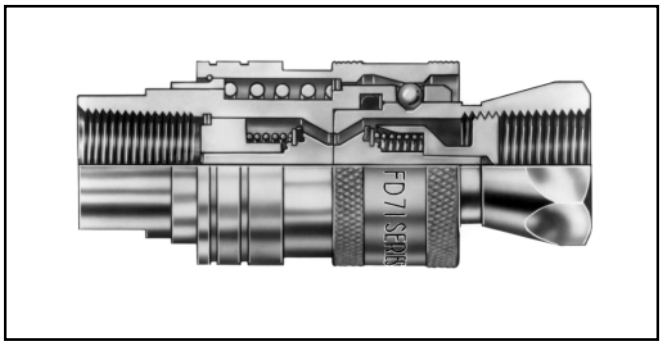
Physical Characteristics

Coupling Dash Size	Maximum Operating Pressure (psi)	Minimum Burst Pressure (psi)	Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc. max.)	Fluid Loss (cc. max
–08	10,000	40,000	28	45	–	–

FD69 Series	Coupling Size	Thread Size (P)	Thread Size (P_1)	Dimensional Data A	B	⑴	Part Number Buna-N	Viton	EPR	Line Ref.
Male Half/Female Pipe 		**Steel**								**1**
	–08	3/8-18		1.85	1.64	1.00	FD69–1002–06–08	FD69–1002–06–08	FD69–1002–06–08	**2**
	–08	1/2-14		2.34	1.64	1.12	FD69–1002–08–08	FD69–1002–08–08	FD69–1002–08–08	**3**
										4
		Stainless Steel								**5**
	–08	1/2-14		2.34	1.64	1.12	FD69–1012–08–08	FD69–1012–08–08	FD69–1012–08–08	**6**
										7
										8
Female Half/Female Pipe 		**Steel**								**9**
	–08	3/8-18		2.13	1.62	1.25	FD69–1001–06–08	FD69–1026–06–08	FD69–1028–06–08	**10**
	–08	1/2-14		2.13	1.62	1.25	FD69–1001–08–08	FD69–1026–08–08	FD69–1028–08–08	**11**
										12
		Stainless Steel								**13**
	–08	1/2-14		2.13	1.62	1.25	FD69–1011–08–08			**14**
										15
										16
Complete Coupling Female Pipe 		**Steel**								**17**
	–08	1/2-14	1/2-14	3.43			FD69–1000–080808	FD69–1027–080808	FD69–1029–080808	**18**
	–08	1/2-14	3/8-18	3.43			FD69–1000–080806	FD69–1027–080806	FD69–1029–080806	**19**
	–08	3/8-18	1/2-14	2.94			FD69–1000–060808	FD69–1027–060808	FD69–1029–060808	**20**
	–08	3/8-18	3/8-18	2.94			FD69–1000–060806	FD69–1027–060806	FD69–1029–060806	**21**
		Stainless Steel								**22**
	–08	1/2-14	1/2-14	3.43			FD69–1010–080808			**23**
										24
Repair Kit		**Female Interface Seal Kit**								**25**
	–08						FF10166			**26**

FD71 Series/Push-to-Connect Farm



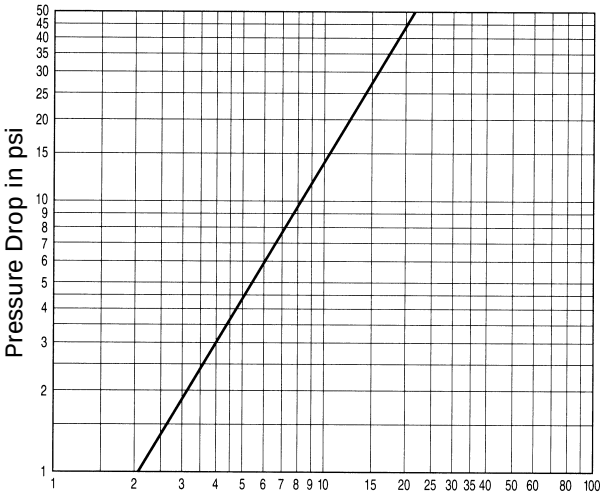


The FD71 Series coupling is designed to interchange with male tips made to ISO 5675 specifications. It features one hand push-to-connect latching. The maximum operating pressure is 3,000 psi.

- Self-sealing poppet valve construction provides reliable leak-free service.
- Push-to-connect for one-hand operation when sleeve is mounted.
- Retaining ring groove on female half for bulkhead and break-away frame mounting.
- Standard seal material – Buna-N.
- Standard body material – Zinc plated steel with Zinc poppet guide.

Flow Data

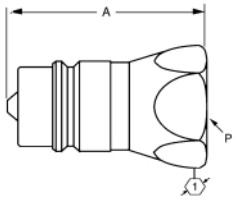
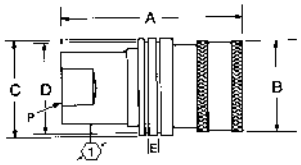
Pressure Drop versus Flow Graph



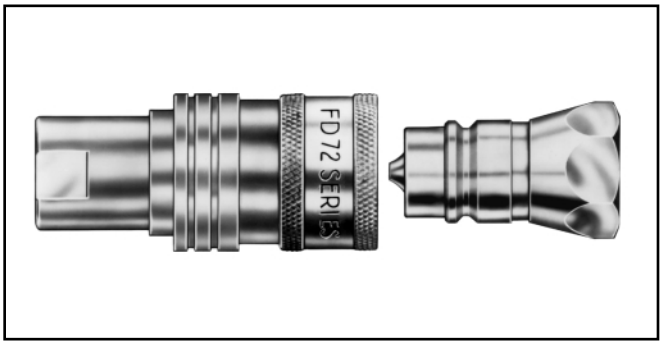
Gallons per Minute Flow
(Test Fluid MIL-H-5606 Hydraulic Oil at 100°F)

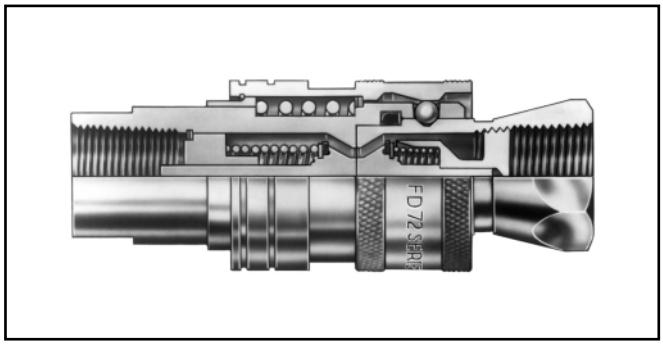
Physical Characteristics

Coupling Size	Maximum Operating Pressure (psi)	Minimum Burst Pressure (psi)	Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc. max.)	Fluid Loss (cc. max.)
–10	3,000	12,000	28	16	2.8	2.8

FD71 Series	Coupling Size	Thread Size (P)	Dimensional Data						Part Number	Line Ref.
			A	B	C	D	E	①	Buna-N	
Male Half Female Pipe/Valved 	–10	1/2-14	2.05					1.06	FD76–1002–08–10	1
										2
										3
										4
										5
										6
										7
										8
Female Half Female Pipe/Valved 	–10	1/2-14	2.74	1.52	1.50	1.41	.20	1.00	FD71–1001–08–10	9
										10
										11
										12
										13
										14
										15
										16
Accessories										17
Dust Cap 	–10								5657–10	18
										19
										20
										21
										22
										23
										24
Dust Plug 	–10								5659–10	25
										26
										27
										28
										29
										30
										31
										32
Break Away Frame 	–10								5603	33
										34
										35
										36
										37
										38
										39
										40

FD72 Series/Connect Under Pressure—Farm





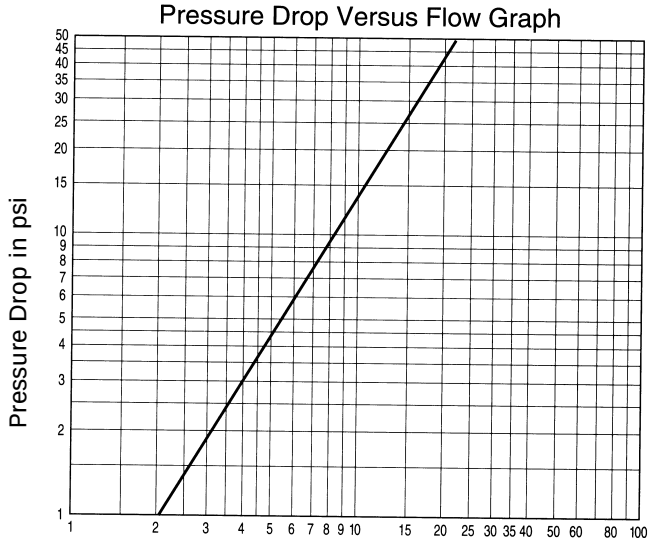
The FD72 Series coupling incorporates special valving allowing connection to a male half under pressure (FD76 Series male). The maximum operating pressure is 3,000 psi.

- Over travel, self-sealing poppet valve construction for connecting to a pressurized male tip. Requires that the tractor control valve be actuated to open the flow path and to equalize the pressure.
- Push-to-connect for one-hand operation when sleeve is mounted.
- Interchanges with ISO 5675 male tips.
- Retaining ring groove on female half for bulkhead and breakaway frame mounting.
- Standard seal material – Buna-N.
- Standard body material – Zinc plated steel with zinc poppet guide.

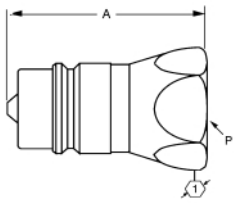
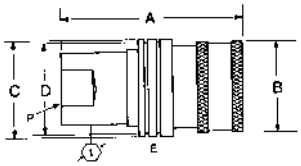
Physical Characteristics

Coupling Size	Maximum Operating Pressure (psi)	Minimum Burst Pressure (psi)	Vacuum (in. Hg.)	Rated Flow (gpm)	Air Inclusion (cc. max.)	Fluid Loss (cc. max.)
–10	3,000	12,000	28	16	2.8	2.8

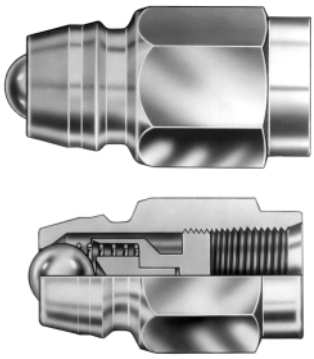
Flow Data



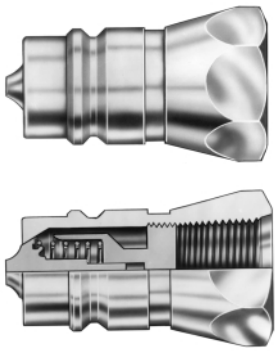
(Test Fluid MIL-H-5606 Hydraulic Oil at 100°F)

FD72 Series	Coupling Size	Thread Size (P)	Dimensional Data						Part Number	Line Ref.
			A	B	C	D	E	⑴	Buna-N	
Male Half Female Pipe/Valved 	–10	1/2-14	2.05					1.06	FD76–1002–08–10	1
										2
										3
										4
										5
										6
										7
										8
Female Half Female Pipe/Valved 	–10	1/2-14	3.17	1.52	1.50	1.41	.20	1.00	FD72–1001–08–10	9
										10
										11
										13
										14
										15
										16
										17
Accessories										18
Dust Cap 	–10								5657-10	19
										20
										21
										22
										23
										24
Dust Plug 	–10								5659-10	25
										26
										27
										28
										29
										30
										31
										32
Break Away Frame 	–10								5603	33
										34
										35
										36
										37
										38
										39
										40

FD70 & FD76 Series/Male Tip—Farm

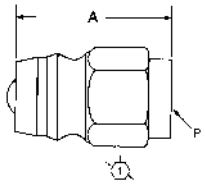
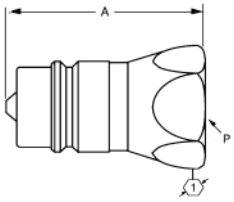
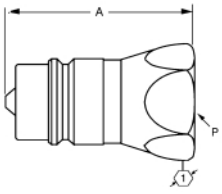


FD70 Deere

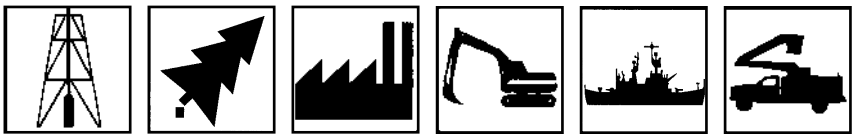


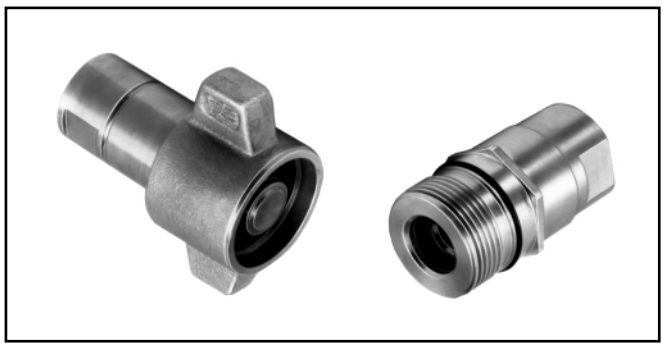
FD76 ISO

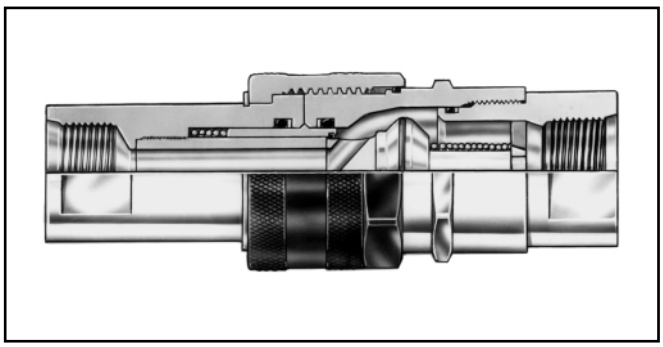
- Designed to connect with female couplings on most older style John Deere farm equipment.
- Interchanges with ISO 5675 used on most farm tractors found throughout North America and abroad.

FD70 & FD76 Series	Coupling Size	Thread Size (P)	Dimensional Data A	B	①	Part Number Buna-N	Line Ref.
Deere Male Half Female SAE O-Ring/Ball Valve 	–10	3/4-16	1.96		1.00	FD70–1010–08–10	1
							2
							3
							4
							5
							6
							7
							8
ISO Male Half Female Pipe/Poppet Valve 	–10	1/2-14	2.05		1.06	FD76–1002–08–10	9
							10
							11
							12
							13
							14
							15
							16
ISO Male Half Female SAE O-Ring/Poppet Valve 	–10	3/4-16	2.05		1.00	FD76–1010–08–10	17
							18
							19
							20
							21
							22
							23
							24

FD86 Series/5,000 PSI DryBreak—High Impulse





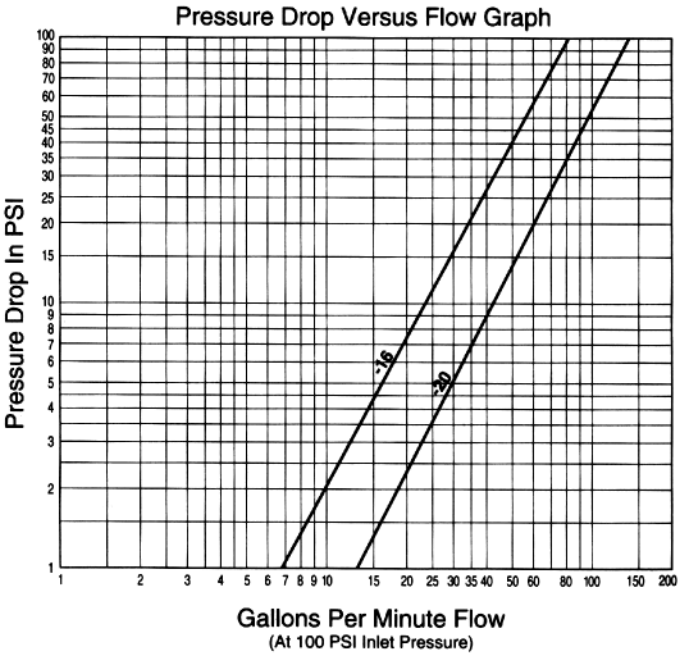


The FD86 Series is a thread together steel coupling offering dry break and high impulse technology and capabilities. The maximum operating pressure is 5,000 psi.

- Tubular valve and sleeve construction for low fluid loss and air inclusion.
- Thread together design using wing or hex nut allows connection and disconnection against pressures up to 750 psi.
- Teflon* back-up rings along with secondary metal-to-metal sealing contact provides high impulse capability up to 5,000 psi operating pressure.
- Acme threads prevent galling and provide ease of connection.
- Metal-to-metal sealing withstands +2,000°F for ten minutes with no fluid loss (requirement in California for oil field blow-out preventers).
- Steel flange available for bulkhead mounting.
- Standard seal material – Buna-N.
- Standard body material – Zinc plated steel.

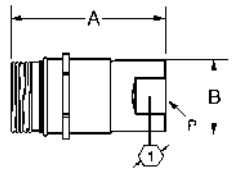
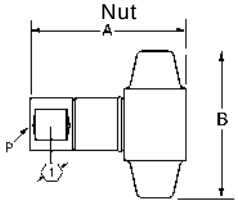
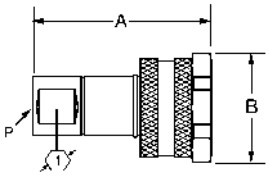
*Teflon is a registered trademark of Dupont.

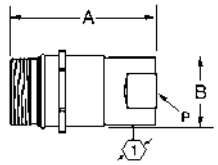
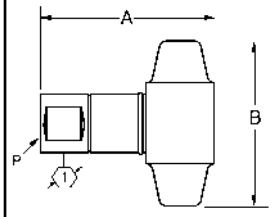
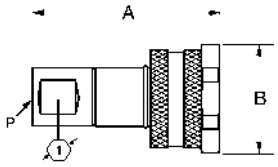
Flow Data

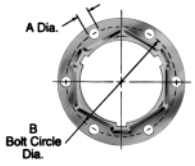


Physical Characteristics

Coupling Size	Maximum Operating Pressure (psi)	Minimum Burst Pressure (psi)	Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc. max.)	Fluid Loss (cc. max.)
–16	5,000	15,000	28	50	2.90	.72
–20	5,000	15,000	28	75	4.61	1.0

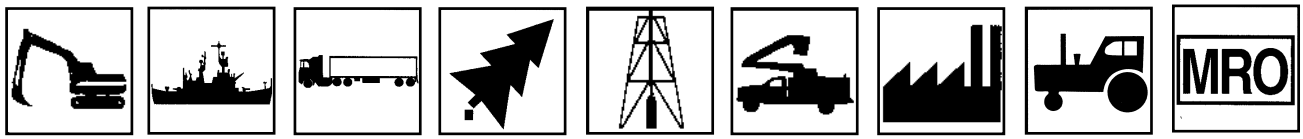
FD86 Series	Coupling Size	Thread Size (P)	Dimensional Data A	B	⑴	Part Number Buna-N	Viton	EPR	Line Ref.
Male Half Female SAE O-Ring 	–16	1 5/16-12	4.03	2.11	1.75	FD86–1008–16–16	FD86–1043–16–16	FD86–1053–16–16	1
	–20	1 5/8-12	4.16	2.48	2.25	FD86–1008–20–20	FD86–1043–20–20	FD86–1053–20–20	2
									3
									4
									5
									6
									7
									8
Female Half Female SAE O-Ring/With Wing Nut 	–16	1 5/16-12	4.62	4.50	1.62	FD86–1010–16–16	FD86–1044–16–16	FD86–1054–16–16	9
	–20	1 5/8-12	5.22	5.25	2.00	FD86–1010–20–20	FD86–1044–20–20	FD86–1054–20–20	10
									11
									12
									13
									14
									15
									16
Female Half Female SAE O-Ring/With Hex Nut 	–16	1 5/16-12	4.62	2.81	1.62	FD86–1006–16–16	FD86–1042–16–16	FD86–1052–16–16	17
	–20	1 5/8-12	5.22	3.40	2.00	FD86–1006–20–20	FD86–1042–20–20	FD86–1052–20–20	18
									19
									20
									21
									22
									23
									24

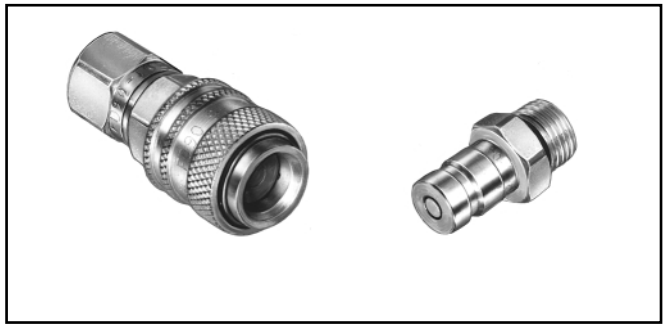
FD86 Series	Coupling Size	Thread Size(P)	Dimensional Data A	B	①	Part Number Buna-N	Viton	EPR	Line Ref.
Male Half Female NPTF 	–16	1-11½	4.40	2.11	1.75	FD86–1002–16–16	FD86–1040–16–16	FD86–1050–16–16	1
	–20	1¼-11½	4.43	2.48	2.25	FD86–1002–20–20	FD86–1040–20–20	FD86–1050–20–20	2
									3
									4
									5
									6
									7
									8
Female Half Female NPTF/With Wing Nut 	–16	1-11½	4.98	4.50	1.62	FD86–1001–16–16	FD86–1039–16–16	FD86–1049–16–16	9
	–20	1¼-11½	5.62	5.25	2.00	FD86–1001–20–20	FD86–1039–20–20	FD86–1049–20–20	10
									11
									12
									13
									14
									15
									16
Female Half Female NPTF/With Hex Nut 	–16	1-11½	4.98	2.81	1.62	FD86–1004–16–16	FD86–1041–16–16	FD86–1051–16–16	17
	–20	1¼-11½	5.62	3.40	2.00	FD86–1004–20–20	FD86–1041–20–20	FD86–1051–20–20	18
									19
									20
									21
									22
									23
									24
Repair Kit	Male Half								26
	–16					FF10596–16	FF10597–16	FF10598–16	27
	–20					FF10596–20	FF10597–20	FF10598–20	28
	Female Half								29
	–16					FF10593–16	FF10594–16	FF10595–16	30
	–20					FF10593–20	FF10594–20	FF10595–20	31

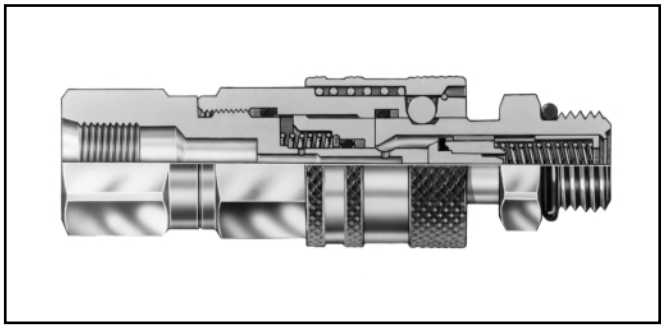
FD86 Series	Coupling Dash Size	Dimensional Size A	B	Part Number Dust Cap with Chain	Dust Plug with Chain	6 Bolt Flange Assembly	Line Ref.
Accessories							1
Dust Cap With Chain  Dust Plug With Chain 	–16			FD86–1018–16	FD86–1016–16		2
	–20			FD86–1018–20	FD86–1016–20		3
							4
							5
							6
							7
							8
							9
6 Bolt Flange Assembly* 	–16	.19	2.98			FD86–1035–16	10
	–20	.19	3.50			FD86–1035–20	11
							12
							13
							14
							15
							16

*6 Bolt Flange-holes equally spaced. (See "A" for bolt hole diameter, and "B" for bolt circle diameter.)

FD90 Series/SAE J1502 Interchange







The FD90 Series diagnostic coupling is designed to connect and disconnect pressure gauges to hydraulic systems, eliminating the need for permanent gauges. The maximum operating pressure is 7,000 psi.

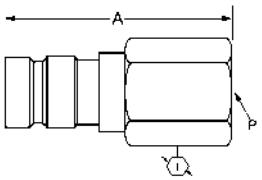
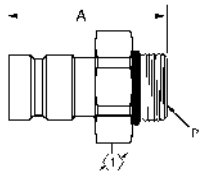
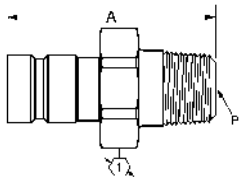
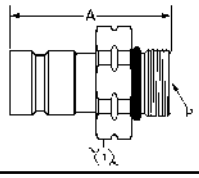
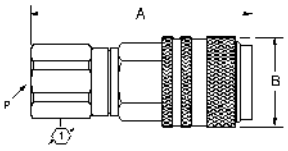
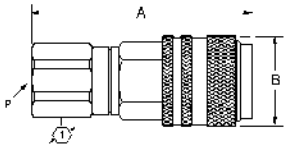
- Automatic sleeve for one hand push-to-connect operation.
- Flush face valving provides minimal fluid loss and low air inclusion.
- Self-sealing valve design allows connection and disconnection at 500 psi.
- Broad range of end configurations for system accessibility.
- Standard seal material – Buna-N.
- Standard seal material – Zinc plated steel.

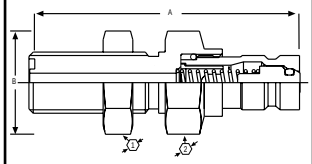
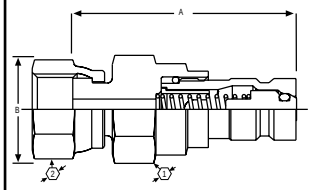
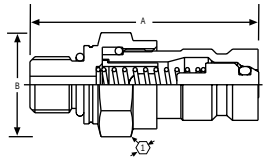
Diagnostic Kit* – FF10000-02

**Contact Aeroquip for additional information.*

Physical Characteristics

Coupling Size	Maximum Operating Pressure (psi)	Minimum Burst Pressure (psi)	Vacuum (in./Hg.)	Rated Flow (gpm)	Air Inclusion (cc. max.)	Fluid Loss (cc. max.)
-04	7,000	28,000	28	.50	0.02	0.10

FD90 Series	Coupling Size	Thread Size (P)	Dimensional Data A	B	(1)	Part Number Buna-N	Part Number with Dust Cap Buna-N	Line Ref.
Male Half Female Pipe/Valved 	–04	1/8-27	1.70		.62	FD90–1034–02–04	FD90–1035–02–04	1
	–04	1/4-18	1.90		.75	FD90–1034–04–04	FD90–1035–04–04	2
								3
								4
								5
								6
								7
								8
Male Half Male SAE O-Ring/Valved 	–04	3/8-24	1.52		.62	FD90–1044–03–04	FD90–1004–03–04	9
	–04	7/16-20	1.58		.62	FD90–1044–04–04	FD90–1004–04–04	10
	–04	1/2-20	1.32		.62	FD90–1044–05–04	FD90–1004–05–04	11
	–04	9/16-18	1.32		.69	FD90–1044–06–04	FD90–1004–06–04	12
								13
								14
								15
								16
Male Half Male Pipe/Valved 	–04	1/8-27	1.60		.62	FD90–1012–02–04	FD90–1045–02–04	17
	–04	1/4-18	1.49		.69	FD90–1012–04–04	FD90–1045–04–04	18
								19
								20
								21
								22
								23
								24
Male Half Metric Male O-Ring/Valved 	–04	M14x1.5	1.38		.75	FD90–1046–06–04	FD90–1047–06–04	25
								26
								27
								28
								29
								30
								31
Female Half Female Pipe/Valved 	–04	1/8-27	1.95	1.00	.75	FD90–1021–02–04	Dust Cap for Male Halves FD90–1040–04 	32
	–04	1/4-18	2.25	1.00	.75	FD90–1021–04–04		33
								34
								35
								36
								37
								38
								39
								40
Female Half Female SAE O-Ring/Valved 	–04	7/16-20	2.20	1.00	.75	FD90–1041–04–04		41
								42
								43
								44
								45
								46
								47
								48

FD90 Series	Coupling Size	Thread Size (P)	Dimensional Data A	B	1	2	Part Number Buna-N	Part Number with Dust Cap Buna-N	Line Ref.
Male Half Male ORS Bulkhead, Valved 	-04	9/16-18	2.46	.94	.81	.81	FD90-1206-04-04		1
									2
									3
									4
									5
									6
									7
									8
Male Half, Female ORS Swivel Valved 	-04	9/16-18	1.79	.87	.75	.69	FD90-1061-04-04		9
									10
									11
									12
									13
									14
									15
									16
Male Half Male Metric O-Ring ISO6149-2 Valved 	-04	M10x1	1.58	.72	.62		FD90-1090-10-04		17
									18
									19
									20
									21
									22
									23
									24

A Brief History of "Dry Break" Couplings

Quick Disconnect Couplings were first introduced with an opposed poppet-type valve. This economical valve type reduces spillage drastically, yet it remains measurable in whole cc's.*

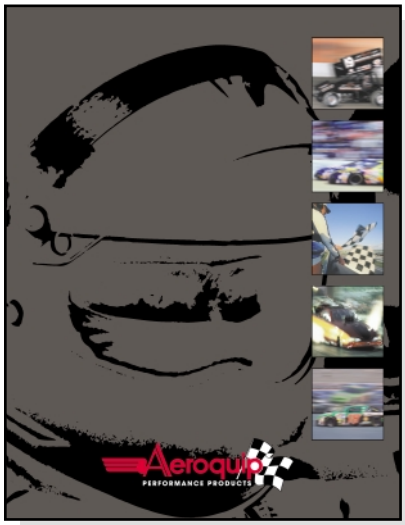
As the number of applications for couplings grew, so did the demand for reduced spillage. Aeroquip responded with the patented tubular valve design which became standard in critical industrial and aerospace applications. Typically, fluid loss is measured in fractions of cc's per disconnection.

State-of-the-art valving was introduced with flush-face style couplings that provide fluid loss rates that are nearly unmeasurable. These couplings also provide one-hand push-to-connect and connect under limited pressure features, but require complete changeover fom poppet-style couplings.

Aeroquip now introduces patented DryBreak female coupling halves that mate with any ISO poppet-style male coupling half. This upgrade ensures virtually no-spill performance without the necessity of changing out any of the male halves.

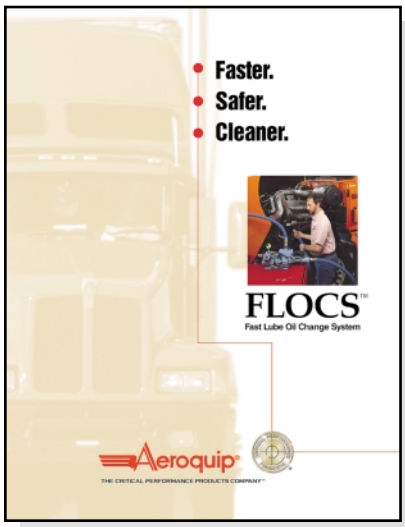
*cc = cubic centimeters (28.4 cc = 1 oz.)

Additional Aeroquip Products Available

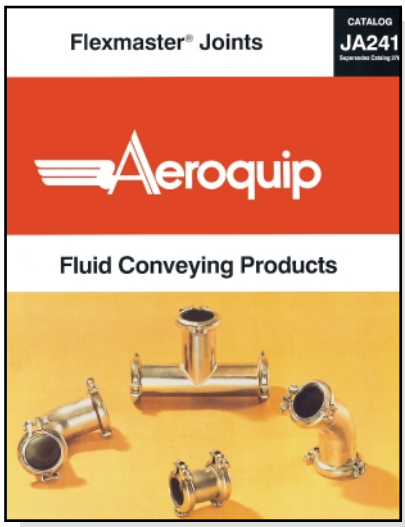


JC125

JA316



JB13



JA241

Aeroquip®

Eaton Aeroquip
Industrial Division
3000 Strayer Road
Maumee, Ohio 43537
419/867-2600, Fax: 419/867-2629
www.aeroquip.com

EATON

Specifications subject to change without notice