

\$5.00 U.S.

PRESSURE CONNECTIONS CORP.

Your Quality Connection

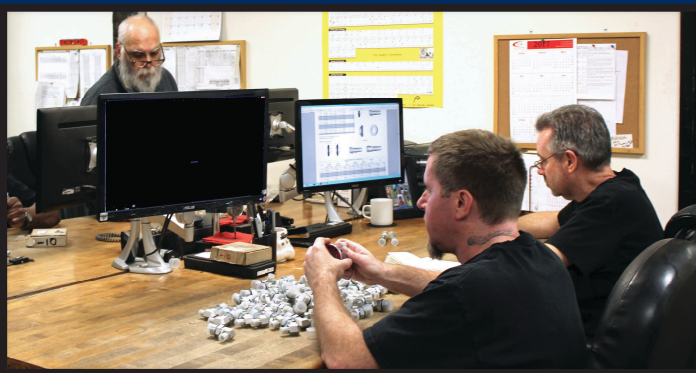
**valves
& flow controls**





Our trained Quality Assurance Personnel follow a rigid inspection program to ensure that our fittings meet or surpass the strictest requirements of SAE.

Quality Assurance Lab



We design our products to the strictest requirements of SAE, and improve our designs as we solve problems or reflect the latest changes in SAE design. We can also design custom fittings to fit your needs.

Engineering



Optical Comparator



Pressure Test Stand



Our Glastonbury Southern Gage trained personnel use only certified instrumentation and equipment in the quality process giving you leak free performance.

Precision Instruments



All equipment is calibrated at regularly scheduled intervals. Records and instrument serial numbers are kept on file to guarantee the accuracy of every inspection.



ISO 9001:2000
Audit

"The Corrective Preventive Action program you've setup at Pressure Connections is top notch. It is one of the best I've seen."

ISO Auditor
W.J. Davis
Quality Assurance Systems Inc.

Coordinate Measuring Machine (CMM)



Only a CMM can verify that an OFS groove is manufactured to exact SAE J1453 specifications. We use a state-of-the-art CMM to measure the latest OFS "dovetail" and standard OFS groove designs.

"How can an OFS fitting leak?"

The Answer: Grooves that are too small or too large don't apply the correct pressure on the O-ring to seal properly.



Quality Symbol

Quality Assurance Points



Coordinate Measuring Machine - *CMM*

Male O-Ring Face Seal Groove Diameters: The CMM is the only way to identify and discard out of spec OFS grooves that will not give the correct *Fill & Squeeze* (1) for the O-ring to seal properly.

Internal Flares like Female JIC and Female JIC Swivel: The CMM enables us to identify and discard parts that have incorrect sealing angles.

Female O-Ring Boss Counter Bore Angles: The CMM identifies and discards the angles that will not give the proper *Fill & Squeeze* (1) of the O-ring for a proper seal.

Optical Comparator

The **QUADRA-CHEK 2000** is used to identify and discard out of spec JIC nose diameters and 37° angles.

Male JIC Nose Diameters: We discard small diameters that will distort the sealing surface and prevent a proper seal.

Male JIC 37° Angles: We reject the sealing angles that won't seal properly.

Fixed Pitch *Glastonbury Southern Gage* Thread Gauges



Third-Party Calibration on a regular, computer-scheduled basis.

Long-Form Certifications for each newly purchased gauge & recalibration.

No-Go Gauges: No-Go gauges enable us to identify parts that have insufficient thread material. Insufficient threaded parts cannot reliably handle the PSI ratings set forth by SAE.

Go Gauges: Go gauges enable us to inspect and eliminate parts that would be difficult to install properly.

L1 / L2 Gauges: These gauges allow us to examine and discard male pipe threads that can bottom out and cause a spiral leak path.

6-Step Gauges: The 6-Step gauge facilitates inspecting and discarding parts that have flat threads that will not seal.

Calipers: Calipers assist in inspecting & discarding incorrect male O-ring diameters that can allow an improper *Fill & Squeeze* (1) or percentage of rubber in the hole.

Pressure Test Stand • Rockwell Hardness Tester • Profilometer

Profilometer - Electronically Measures Surface Finish or Smoothness

Male and Female JIC Flare, Female OFS Flat-Face, Female O-Ring Boss, and 30° chamfers.

Rockwell Hardness Tester

Tests the hardness of the steel to ensure tensile strength, which is needed to keep the connection tight.

Pressure Test Stand

Verifies burst pressure ratings.

To **Guarantee the Accuracy** of each inspection, all gauges and equipment are regularly calibrated to the strictest of ISO 9001:2008 specifications.

Our **Quality Assurance Lab** gauges and tests the parts both before and after they are plated. This ensures uniformity in the plating process. Finally, our shipping department carefully packages your order, to avoid thread damage in transit.

Should a problem arise, we will put in place a **Preventive Action** to resolve the problem. Our Quality Manager will solve it quickly, even if that means flying out to you or your customer. We won't just tell you to ship the parts back and try another batch.

Your Quality Connection



PRESSURE CONNECTIONS CORP.

Your Quality Connection

Pressure Connections has been in business since 1981 and is a certified ISO 9001:2008 Registered firm. We are dedicated to long-term customer relationships through **Our Business Philosophy, Our Vision, and Our Mission.**



Mission

To ship every order every day with **quality parts** and **quality packaging**; right parts, on time, every time.



Vision

To provide our customers with the highest **value** from excellent **service**, superior **quality**, and a competitive **price**.

We Support Urban Ministry

You support responsible urban ministries with every purchase from Pressure Connections, including Urban Concern, and Youth for Christ - City Life Center. Check them out on the web at www.urbanconcern.org and www.coyfc.org.



Quality Assurance Department

We will provide a Certificate of Conformance upon request. We are confident that our Quality Assurance program and personnel will be able to satisfy any quality concerns you or your customers may have.

Furthermore, we have established a Performance Team to handle written customer evaluations of our overall performance. This team is ready to respond to customer quality and service issues.

Certified ISO 9000



We are a certified ISO 9001:2008 Registered firm. Our Quality Assurance program is able to provide high quality fittings and service according to ISO 9000 principles. All of the documentation needed to satisfy your quality system requirements is on hand. At your request we will provide a Corrective Action Report and Evaluation. We also have Initial Sample Inspection, In-Process, and Final Inspection Reports.



We strive to provide you with the best value. Our Business Philosophy and personal convictions drive our commitment to excellence. We guarantee that you will be completely satisfied with the quality of our product(s). With an industry low PPM, our products are leak-free guaranteed and our excellent service makes us easy to do business with.

1-Year Warranty

PCC warrants to the customer that the equipment and parts (excluding wear parts) will be free from defects in material and workmanship under normal use and service for a period of three hundred sixty-five (365) days after delivery to customer, or **2,000 hours** of normal use. Any warranty claims not submitted in writing by customer to PCC within the applicable warranty period and within thirty (30) days of discovery of defect will be deemed waived. The obligation of PCC shall be limited to the repair or replacement ex works facility designated by PCC (excluding shipping costs, to be paid by customer), of the equipment or such parts which PCC determines were defective in material or workmanship under normal storage, use and service. This warranty applies only to new equipment and parts and expressly excludes wear parts. This warranty shall not apply to items manufactured by others attached to or incorporated in the equipment and/or parts, or to which the equipment and/or parts are attached or incorporated, and customer's recourse for defects in such equipment and/or parts of others shall be exclusively against the manufacturer of the equipment and/or parts under the terms of the PCC's warranty. This limited warranty does not apply to failures or defects of the equipment components, and/or parts (including wear parts) due to ordinary wear and tear, neglect (including but not limited to improper maintenance and storage), accident, improper installation or operation, or modification not authorized in writing by PCC (including but not limited to use of unauthorized parts or attachments). Any alteration or modification of the equipment or parts, or attaching of any parts or equipment not manufactured by PCC or not intended to be attached to the equipment or parts, or maintenance, use or operation of the equipment or parts contrary to PCC's or the manufacturer's instructions, shall at PCC's election void this warranty. This limited warranty shall extend only to the customer and is not assignable. The exclusive remedy of customer under this warranty or otherwise in connection with the equipment and for parts, shall be repair or replacement of the equipment and/or parts in accordance with this paragraph, PCC's sole and absolute discretion

Frequently Asked Questions

Need to Return Parts?

Just call and ask for a ***Returned Goods Authorization (RGA)*** form. We ask that the parts be securely packaged as they'll need to be in original condition upon our inspection.

A credit will be issued toward your next order minus a 20% processing and restocking fee. We cannot fulfill return requests for damaged items, special orders, unusually high demand orders, Price On Request (POR) orders, items purchased over one year, or items not originally purchased from us. Also, we are not able to accept returns larger than 5% of your total sales.

Need Parts Urgently?

We ship all orders received by **4:30 pm E.S.T.** the same day.

All orders ship F.O.B. (Freight on Board) Columbus, OH & Houston, TX

No Time to Compare Prices?

We'll compare our prices with your other source for you. Before placing your next order with someone else, fax it to us. We'll compare prices, check stock, and fax it back ASAP to show you the difference.

Need A Special Fitting?

We are competitive on special steel adapters. **Our Engineering Department** can design fittings to meet your needs. Special Order and Made to Order (MTO) runs have a 10% over-run or under-run variance, which is standard in manufacturing. The invoice will be adjusted accordingly.

Have A Shipment Problem?

Call, Fax, or Email us and we'll ship your replacement parts the very same day. If you need to return parts, we'll issue an RGA to make sure you receive a credit for the parts and reimburse you for the return shipping costs. We ask that all claims be made within 5 (FIVE) days of the receipt of the material.

Need to Cancel an Order?

All we ask is that you put it in writing. Special orders, unusually high demand orders, volume priced orders, Made to Order (MTO) and Price on Request (POR) orders are considered non-cancelable, but don't worry, we'll notify you in writing before we accept an order for a non-cancelable part.

Ordering Process

Use Your Own Part Numbers

To assist our customers we show the following in our Catalogs and Website.

- Pictures / Drawings
- Reference Numbers
- Crossover Charts

If you need assistance we're here to help so please call us for any inquiries regarding your order.

Descriptions, pictures, and crossover numbers are for reference only. We'll be glad to provide detailed information upon request. Pressure Connections cannot be held responsible for typographical or pictorial errors.

Pressure Connections Reserves the Right to Update Information Without Notice.

Images of Parts are Shown in Callout Order.

Simplified Ordering Process

Save time by ordering from us

- Large Inventory
- Use Your Own Part Numbers
- Same Day Shipping
- Trained and Certified Team
- Live Person Answering the Phone
- 24-Hour Fax and Email

(Business Hours: 8:00 am - 6:00 pm EST, M-F)

Discounted Terms

Our terms are 1/2% 10 / Net 30 Days. Invoices are dated the day your parts are shipped. Remember, discounts apply to 'product only' for non-C.O.D. shipments.

We're Easy to do Business With!

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Ball Valves

Brass • Steel • Stainless Steel • Mini Ball Valves

A **Ball Valve** uses a pivoting ball that turns a quarter-turn rotation (90°) to control the flow of fluid. This pivoting ball has an orifice that allows flow as the ball pivots inside of a straight-through housing. Each ball is directly connected to a handle and provides an easy visual confirmation of the valve's flow status.

The handle position is a good indication of flow. When the handle is *parallel* with the valve body the valve is fully open, but when the handle is pivoted 90° to be *perpendicular* to the valve body the valve is closed.

The Ball Valve design is reliable, durable, and performs well after many system cycles. This durable design, the quick open/close capability, and the variable adjustment make it an excellent choice for shut-off and control applications. Pressure Connections does not recommend using a Ball Valve as a flow control device, however.

Mini Ball Valves operate just like their big sibling ball valves with a quarter-turn pivoting ball, which is enclosed inside of a miniature housing to control the flow. They just do it without taking up as much space.

Standard vs. Full Port

Standard Port Ball Valves, also known as Reduced Port Ball Valves, have a compact ball compared to a full port ball valve, and therefore a smaller orifice that is one pipe size smaller than the threads on the ball valve itself.

Full Port Ball Valves have an oversized ball with a larger orifice than a standard ball valve. This orifice is the same size as the pipeline that is threaded to the ball valve, resulting in better flow with a lower friction loss.



Features

- Handle Position Indicates Valve Status
- Reliable / Durable Ball Design
- Quarter-Turn 90° Rotation
- Quick Open/Close Design
- Low Profile Handle
- Positive Shut-Off

Options

Locking Handles, T-Handles, Seal Compounds, High Pressure, High Temperature, etc.



BV-30102F

Features:

- Suitable for Water, Oil, and Gas
- Saturated Steam 150 PSI
- Each Valve Individually Tested
- 1/4 Turn Open/Close Operation
- Low Operating Torque
- Full Port - Minimal Pressure Drop
- Bi-Flow Capability
- Forged Brass Body
- Chromium Plated Brass Ball
- Bottom Loaded, Blow-Out Proof Stem
- Adjustable Stem Packing Gland
- Virgin PTFE Stem Packing Seal, Thrust Washer, and Seats
- Insulated Steel Handle
- Locking and Tee Handles Available
- NPT Pipe Threads



MP x FP - Full Port - Brass

Part No.	Male Pipe	Female Pipe	WOG	Body Length	Handle Height	Handle Length	Drill Dia.	Assembly
BV-30102F-04	1/4 - 18	1/4 - 18	600 PSI	2.02	1.69	2.76	0.32	0.46
BV-30102F-06	3/8 - 18	3/8 - 18	600 PSI	2.09	1.73	3.54	0.39	0.46
BV-30102F-08	1/2 - 14	1/2 - 14	600 PSI	2.34	1.94	3.54	0.58	0.52
BV-30102F-12	3/4 - 14	3/4 - 14	600 PSI	2.62	2.11	3.78	0.75	0.56
BV-30102F-16	1 - 11 1/2	1 - 11 1/2	600 PSI	3.00	2.58	4.53	0.95	0.63
BV-30102F-20	1 1/4 - 11 1/2	1 1/4 - 11 1/2	600 PSI	3.56	2.95	4.53	1.26	0.71
BV-30102F-24	1 1/2 - 11 1/2	1 1/2 - 11 1/2	600 PSI	3.97	3.35	5.51	1.58	0.72
BV-30102F-32	2 - 11 1/2	2 - 11 1/2	600 PSI	4.50	3.68	5.51	1.97	0.75

Applications

Our **BV-30102F Ball Valve** is suitable for water, oil, gas, and steam and each valve is individually leak tested for reliability and superior performance. It is a durable design with a forged brass body and an insulated steel handle that opens and closes the valve with a 90° quarter turn operation. This valve has a blow-out proof stem and a full port, chromium plated brass ball that provides maximum flow with minimal pressure drop and can flow in both directions.

Full Port Ball Valves have an oversized ball with a larger orifice than a standard ball valve. This orifice is the same size as the pipeline that is threaded to the ball valve, resulting in better flow with a lower friction loss.

Approvals

- Gas Approvals: UL842, UL258, UL125, FM, CSA AGA 3.88 5 PSIG
- Thread Ends to ANSI B1.20.1

Temperature

-20° to +248° F (-40° to +120° C)

Notice

- NOT Lead-Free Compliant
- Made in China

Other Ball Valves

Steel.....13-16
Stainless.....17-19
Mini.....20-23

BV-30202F

Features:

- Suitable for Water, Oil, and Gas
- 1/4 Turn Open/Close Operation
- Bi-Flow Capability
- Forged Brass Body
- Chromium Plated Brass Ball
- Standard (Reduced) Port
- Teflon® O-Rings, Stem Spacers, and Ball Seats
- Steel Insulated Handle

FP x FP - Standard Port - Brass



Part No.	Female Pipe	Female Pipe	WOG	Body Length	Handle Height	Handle Length	Drill Dia.
BV-30202F-04	1/4 - 18	1/4 - 18	600 PSI				
BV-30202F-06	3/8 - 18	3/8 - 18	600 PSI	1.71	0.86	1.85	0.39
BV-30202F-08	1/2 - 14	1/2 - 14	600 PSI	2.09	1.04	2.05	0.55
BV-30202F-12	3/4 - 14	3/4 - 14	600 PSI	2.36	1.18	2.05	0.75
BV-30202F-16	1 - 11 1/2	1 - 11 1/2	600 PSI	2.87	1.44	2.28	0.94
BV-30202F-20	1 1/4 - 11 1/2	1 1/4 - 11 1/2	600 PSI	3.41	1.70	2.99	1.22
BV-30202F-24	1 1/2 - 11 1/2	1 1/2 - 11 1/2	600 PSI	4.00	2.00	3.15	1.50
BV-30202F-32	2 - 11 1/2	2 - 11 1/2	600 PSI	4.25	2.13	3.54	1.93
BV-30202F-40	2 1/2 - 8	2 1/2 - 8	400 PSI	5.51	2.76	4.82	2.52
BV-30202F-48	3 - 8	3 - 8	400 PSI	6.38	3.19	5.24	3.11
BV-30202F-64	4 - 8	4 - 8	400 PSI	7.44	3.72	6.14	3.90

Applications:

Our **BV-30202F Ball Valve** is suitable for water, oil, and gas. It is a durable forged brass body design with an insulated steel handle that opens and closes the valve with a 90° quarter turn operation. This valve has a Full port, chromium plated brass ball that provides maximum flow with minimal pressure drop in both directions. It also features Teflon® O-Rings, Stem Spacer, and Ball Seats.

Full Port Ball Valves have an oversized ball with a larger orifice than a standard ball valve. This orifice is the same size as the pipeline that is threaded to the ball valve, resulting in better flow with a lower friction loss.

Notice:

- NOT Lead-Free Compliant

Other Ball Valves

Steel.....	13-16
Stainless.....	17-19
Mini.....	20-23

Teflon® is a DuPont Registered Trademark.

BV-30202F-T

Features:

- Suitable for Water, Oil, and Gas
- Saturated Steam: 150 PSI
- Each Valve Individually Tested
- 1/4 Turn Open/Close Operation
- Full Port - Minimal Pressure Drop
- Forged Brass Body
- Chromium Plated Brass Ball
- Bottom Loaded, Blow-Out Proof Stem
- Virgin PTFE Stem Packing Seal, Thrust Washer, and Seats
- Adjustable Stem Packing Gland
- Tee Handle - Low Operating Torque
- Deep NPT Pipe Threads

FP x FP - Full Port - T-Handle - Brass



Part No.	Female Pipe	Female Pipe	WOG	Body Length	Handle Height	Handle Length	Drill Dia.	Assembly
BV-30202F-T-04	1/4 - 18	1/4 - 18	600 PSI	1.68	1.49	1.83	0.32	0.46
BV-30202F-T-06	3/8 - 18	3/8 - 18	600 PSI	1.76	1.49	1.83	0.39	0.46
BV-30202F-T-08	1/2 - 14	1/2 - 14	600 PSI	2.05	1.76	2.39	0.58	0.52
BV-30202F-T-12	3/4 - 14	3/4 - 14	600 PSI	2.36	1.92	2.39	0.75	0.56

Applications:

Our **BV-30202F-T Ball Valve** is suitable for water, oil, gas, and steam and each valve is individually leak tested for reliability and superior performance. It is a durable design with a forged brass body and a tee handle that easily opens and closes the valve with a 90° quarter turn operation. This valve has a blow-out proof stem and a full port, chromium plated brass ball that provides maximum flow with minimal pressure drop.

Full Port Ball Valves have an oversized ball with a larger orifice than a standard ball valve. This orifice is the same size as the pipeline that is threaded to the ball valve, resulting in better flow with a lower friction loss.

Approvals:

- Gas Approvals: UL842, UL258, UL125, FM, CSA 5 PSIG (1/2" – 3/4" Sizes Only)
- Thread Ends to ANSI B1.20.1

Temperature:

-22° to +302° F (-30° to +150° C)

Notice:

- NOT Lead-Free Compliant
- Made in China

Other Ball Valves

Steel.....13-16
Stainless.....17-19
Mini.....20-23

BV-30202F-LH

Features:

- Suitable for Water, Oil, and Gas
- Saturated Steam 150 PSI
- Each Valve Individually Tested
- 1/4 Turn Open/Close Operation
- Low Operating Torque
- Full Port - Minimal Pressure Drop
- Forged Brass Body
- Chromium Plated Brass Ball
- Bottom Loaded, Blow-Out Proof Stem
- Virgin PTFE Stem Packing Seal, Thrust Washer, and Seats
- Adjustable Stem Packing Gland
- Insulated Steel Locking Handle
- Deep NPTF Pipe Threads

FP x FP - Full Port - Locking Handle - Brass



Part No.	Female Pipe	Female Pipe	WOG	Body Length	Handle Height	Handle Length	Drill Dia.	Assembly
BV-30202F-LH-04	1/4 - 18	1/4 - 18	600 PSI	1.73	1.84	3.15	0.49	0.71
BV-30202F-LH-06	3/8 - 18	3/8 - 18	600 PSI	1.81	1.88	3.86	0.49	0.79
BV-30202F-LH-08	1/2 - 14	1/2 - 14	600 PSI	2.23	2.09	3.86	0.61	0.98
BV-30202F-LH-12	3/4 - 14	3/4 - 14	600 PSI	2.48	2.24	4.06	0.62	1.20
BV-30202F-LH-16	1 - 11 1/2	1 - 11 1/2	600 PSI	2.95	2.67	4.73	0.73	1.50
BV-30202F-LH-20	1 1/4 - 11 1/2	1 1/4 - 11 1/2	600 PSI	3.42	3.05	4.73	0.77	1.81
BV-30202F-LH-24	1 1/2 - 11 1/2	1 1/2 - 11 1/2	600 PSI	3.78	3.51	5.71	0.78	2.09
BV-30202F-LH-32	2 - 11 1/2	2 - 11 1/2	600 PSI	4.18	3.84	5.71	0.75	2.60

Applications

Our **BV-30202F-LH Ball Valve** is suitable for water, oil, gas, and steam and each valve is individually leak tested for reliability and superior performance. It is a durable design with a forged brass body and an insulated steel locking handle that opens and closes with a 90° quarter turn operation. This valve has a blow-out proof stem and a full port, chromium plated brass ball that provides maximum flow with minimal pressure drop.

Full Port Ball Valves have an oversized ball with a larger orifice than a standard ball valve. This orifice is the same size as the pipeline that is threaded to the ball valve, resulting in better flow with a lower friction loss.

Approvals

- Gas Approvals: UL842, UL258, UL125, FM, CSA 5 PSIG (1/2" – 2" Sizes Only)
- Thread Ends to ANSI B1.20.1

Temperature

-22° to +302° F (-30° to +150° C)

Notice

- NOT Lead-Free Compliant
- Made in China

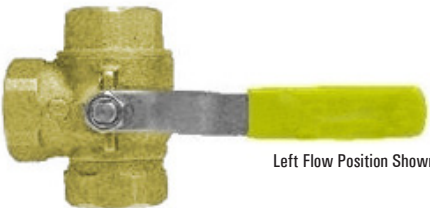
Other Ball Valves

Steel.....13-16
Stainless.....17-19
Mini.....20-23

BV-3020202F-3W

Features:

- 1/4 Turn Handle Operation
- **3-Way Handle Position:**
(Left, Left/Right, Right Flow)
- Suitable for Water, Oil, and Gas
- Full Port - Minimal Pressure Drop
- Forged Brass Body
- Blow-Out Proof Stem
- PTFE Seal and Seats
- Double O-Ring Stem Packing
- Insulated Steel Handle
- Side Outlet
- Bottom Outlet Available



FP x FP x FP - Full Port - 3-Way - Brass

Part No.	Female Pipe	Female Pipe	WOG	Body Length	Handle Height	Handle Length	Drill Dia.	Assembly
BV-3020202F-3W-04	1/4 - 18	1/4 - 18	600 PSI	1.89	1.73	3.35	0.39	0.47
BV-3020202F-3W-06	3/8 - 18	3/8 - 18	600 PSI	1.89	1.73	3.35	0.39	0.47
BV-3020202F-3W-08	1/2 - 14	1/2 - 14	600 PSI	2.11	1.80	3.35	0.50	0.51
BV-3020202F-3W-12	3/4 - 14	3/4 - 14	600 PSI	2.56	2.16	4.41	0.74	0.55

Applications

Our **BV-3020202F-3W Ball Valve** is a 3-way valve that is suitable for water, oil, and gas. This valve has a blow-out proof stem and a full port ball that provides maximum flow with minimal pressure drop. It is a durable design with a forged brass body and an insulated steel handle that redirects the flow path with a 90° quarter turn operation.

Full Port Ball Valves have an oversized ball with a larger orifice than a standard ball valve. This orifice is the same size as the pipeline that is threaded to the ball valve, resulting in better flow with a lower friction loss.

Temperature

-0° to +230° F (-18° to +110° C)

Notice

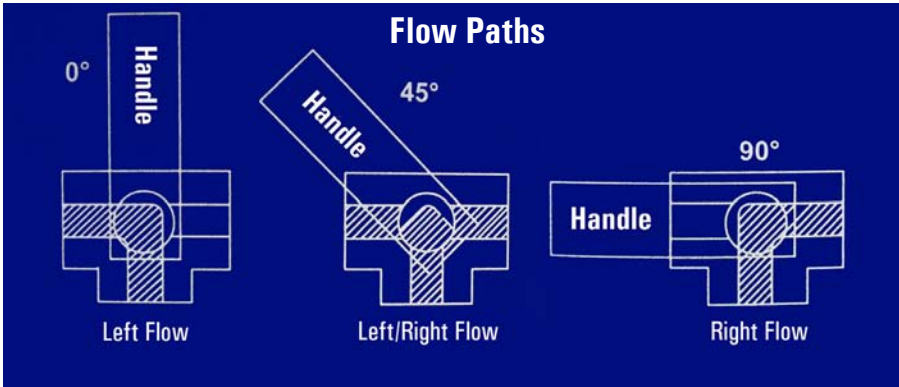
- NOT Lead-Free Compliant

Other Ball Valves

Steel.....13-16

Stainless.....17-19

Mini.....20-23



BV-50202F • BV-50202R

Features:

- **High Pressure** Hydraulic
- 1/4 Turn Open/Close Operation
- Steel Lever Ball Handle
- Rugged Steel Body
- Full Port - Minimal Pressure Drop
- Standard (Reduced) Port (1-1/4 – 1-1/2)
- Blow-Out Proof Stem
- Chrome Plated Steel Ball
- Buna-N Seals
- NPT Pipe Threads
- Mounting Holes
- **Temperature**
–0° to +215° F (–18° to +102° C)

FP x FP - Full and Standard Ports - Steel



Full Port Part No.	Female Pipe	Female Pipe	WOG	Body Length	Handle Length	Mt. Hole Dia.	Mt. Hole Spacing
BV-50202F-04	1/4 - 18	1/4 - 18	7,250 PSI	2.71	4.51	0.18	1.03
BV-50202F-06	3/8 - 18	3/8 - 18	7,250 PSI	2.84	4.51	0.26	1.24
BV-50202F-08	1/2 - 14	1/2 - 14	7,250 PSI	3.27	4.51	0.26	1.46
BV-50202F-12	3/4 - 14	3/4 - 14	5,800 PSI	3.74	6.38	0.26	1.76
BV-50202F-16	1 - 11 1/2	1 - 11 1/2	5,000 PSI	4.45	6.38	0.26	2.17
BV-50202F-20	1 1/4 - 11 1/2	1 1/4 - 11 1/2	5,000 PSI	4.72	9.00	-	-
BV-50202F-24	1 1/2 - 11 1/2	1 1/2 - 11 1/2	5,000 PSI	5.13	9.00	-	-
BV-50202F-32	2 - 11 1/2	2 - 11 1/2	5,000 PSI	5.52	9.00	-	-

Standard Port Part No.	Female Pipe	Female Pipe	WOG	Body Length	Handle Length	Mt. Hole Dia.	Mt. Hole Spacing
BV-50202R-20	1 1/4 - 11 1/2	1 1/4 - 11 1/2	5,000 PSI	4.72	9.00	0.26	2.18
BV-50202R-24	1 1/2 - 11 1/2	1 1/2 - 11 1/2	5,000 PSI	5.13	9.00	0.26	2.18

Applications

Our **BV-50202F** and **BV-50202R Ball Valves** are high pressure hydraulic valves with Female NPT Pipe Threads. These valves are designed to be durable with a rugged steel body and a steel lever ball handle that opens and closes the valve with a 90° quarter turn operation. These valves also feature a blow-out proof stem, Buna-N seals, and mounting holes to secure it in place.

Full Port Ball Valves have an oversized ball with a larger orifice than a standard ball valve. This orifice is the same size as the pipeline that is threaded to the ball valve, resulting in better flow with a lower friction loss.

Standard Port Ball Valves, also known as Reduced Port Ball Valves, have a compact ball compared to a full port ball valve, and therefore a smaller orifice that is one pipe size smaller than the threads on the ball valve itself.

Notice

- Stainless Steel Ball Valves are on Pages 17-19

BV-5020202F • BV-5020202R

Features:

- **High Pressure Hydraulic**
- **L-Flow Path:** (Left or Right Flow)
- 1/4 Turn Open/Close Operation
- Rugged Steel Body
- Full Port - Minimal Pressure Drop
- Standard (Reduced) Port (1-1/4 – 1-1/2)
- Blow-Out Proof Stem
- Chrome Plated Steel Ball
- Buna-N Seals
- NPT Pipe Threads
- Steel Lever Ball Handle
- Mounting Holes
- **Temperature**
–0° to +215° F (–18° to +102° C)

FP x FP x FP - Full and Standard Ports - 3-Way - Steel



Full Port Part No.	Female Pipe	Female Pipe	WOG	Body Length	Handle Length	Mt. Hole Dia.	Mt. Hole Spacing
BV-5020202F-04	1/4 - 18	1/4 - 18	5,880 PSI	2.72	4.51	0.18	1.02
BV-5020202F-06	3/8 - 18	3/8 - 18	5,880 PSI	2.84	4.51	0.26	1.23
BV-5020202F-08	1/2 - 14	1/2 - 14	5,145 PSI	2.28	4.51	0.26	1.46
BV-5020202F-12	3/4 - 14	3/4 - 14	5,145 PSI	3.74	6.38	0.26	1.77
BV-5020202F-16	1 - 11 1/2	1 - 11 1/2	5,145 PSI	4.45	6.38	0.26	2.17
BV-5020202F-20	1 1/4 - 11 1/2	1 1/4 - 11 1/2	4,500 PSI	4.73	9.00	-	-
BV-5020202F-24	1 1/2 - 11 1/2	1 1/2 - 11 1/2	4,500 PSI	5.14	9.00	-	-
BV-5020202F-32	2 - 11 1/2	2 - 11 1/2	4,500 PSI	5.51	9.00	-	-

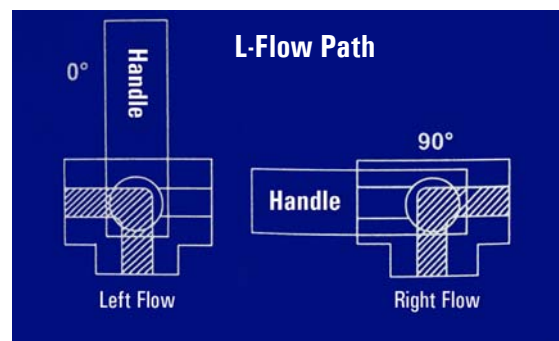
Standard Port Part No.	Female Pipe	Female Pipe	WOG	Body Length	Handle Length	Mt. Hole Dia.	Mt. Hole Spacing
BV-5020202R-20	1 1/4 - 11 1/2	1 1/4 - 11 1/2	4,500 PSI	4.72	6.38	0.26	2.17
BV-5020202R-24	1 1/2 - 11 1/2	1 1/2 - 11 1/2	4,500 PSI	4.84	6.38	0.26	2.17

Applications

Our **BV-5020202F** and **BV-5020202R** Ball Valves are 3-way high pressure hydraulic valves with Female NPT Pipe Threads. These valves are designed to be durable with a rugged steel body, a steel lever ball handle, a blow-out proof stem, and mounting holes to secure it in place. This 3-Way ball valve design features an **L-Flow Path** chrome plated steel ball that directs the fluid to the left outlet or the right outlet depending on the handle position.

Full Port Ball Valves have an oversized ball with a larger orifice than a standard ball valve. This orifice is the same size as the pipeline that is threaded to the ball valve, resulting in better flow with a lower friction loss.

Standard Port Ball Valves, also known as Reduced Port Ball Valves, have a compact ball compared to a full port ball valve, and therefore a smaller orifice that is one pipe size smaller than the threads on the ball valve itself.



BV-51010F • BV-51010R

Features:

- **High Pressure** Hydraulic
- 1/4 Turn Open/Close Operation
- Steel Lever Ball Handle
- Rugged Steel Body
- Full Port - Minimal Pressure Drop
- Standard (Reduced) Port (1-1/4 – 1-1/2)
- Blow-Out Proof Stem
- Chrome Plated Steel Ball
- Buna-N Seals
- O-Ring Boss Threads
- Mounting Holes
- **Temperature**
–0° to +215° F (–18° to +102° C)



FB x FB - Full and Standard Ports - Steel

Full Port Part No.	Female ORB	Female ORB	WOG	Body Length	Handle Length	Mt. Hole Dia.	Mt. Hole Spacing
BV-51010F-04	7/16 - 20	7/16 - 20	7,250 PSI	2.71	4.51	0.18	1.03
BV-51010F-06	9/16 - 18	9/16 - 18	7,250 PSI	2.84	4.51	0.26	1.24
BV-51010F-08	3/4 - 16	3/4 - 16	7,250 PSI	3.27	4.51	0.26	1.46
BV-51010F-12	1 1/16 - 12	1 1/16 - 12	5,800 PSI	3.74	6.38	0.26	1.75
BV-51010F-16	1 5/16 - 12	1 5/16 - 12	5,000 PSI	4.45	6.38	0.26	2.17
BV-51010F-20	1 5/8 - 12	1 5/8 - 12	5,000 PSI	4.72	9.00	-	-
BV-51010F-24	1 7/8 - 12	1 7/8 - 12	5,000 PSI	5.13	9.00	-	-
BV-51010F-32	2 1/2 - 12	2 1/2 - 12	5,000 PSI	5.52	9.00	-	-

Standard Port Part No.	Female ORB	Female ORB	WOG	Body Length	Handle Length	Mt. Hole Dia.	Mt. Hole Spacing
BV-51010R-20	1 5/8 - 12	1 5/8 - 12	5,000 PSI	4.73	6.38	0.26	2.17
BV-51010R-24	1 7/8 - 12	1 7/8 - 12	5,000 PSI	4.85	6.38	0.26	2.17

Applications

Our **BV-51010F** and **BV-51010R Ball Valves** are high pressure hydraulic valves with Female O-Ring Boss Threads. These valves are designed to be durable with a rugged steel body and a steel lever ball handle that opens and closes the valve with a 90° quarter turn operation. These valves also feature a blow-out proof stem, Buna-N seals, and mounting holes to secure it in place.

Full Port Ball Valves with O-Ring Boss Threads have the same oversized ball as their pipe threaded counterpart, resulting in better flow with a lower friction loss.

Standard Port Ball Valves, also known as Reduced Port Ball Valves, with O-Ring Boss Threads have the same compact ball and therefore a smaller orifice just like their pipe threaded counterpart.

BV-5101010F • BV-5101010R

Features:

- **High Pressure** Hydraulic
- **L-Flow Path:** (Left or Right Flow)
- 1/4 Turn Open/Close Operation
- Rugged Steel Body
- Full Port - Minimal Pressure Drop
- Standard (Reduced) Port (1-1/4 – 1-1/2)
- Blow-Out Proof Stem
- Chrome Plated Steel Ball
- Buna-N Seals
- O-Ring Boss Threads
- Steel Lever Ball Handle
- Mounting Holes
- **Temperature**
-0° to +215° F (-18° to +102° C)

FB x FB x FB - Full and Standard Ports - 3-Way - Steel



Full Port Part No.	Female ORB	Female ORB	WOG	Body Length	Handle Length	Mt. Hole Dia.	Mt. Hole Spacing
BV-5101010F-04	7/16 - 20	7/16 - 20	5,880 PSI	2.72	4.51	0.18	1.02
BV-5101010F-06	9/16 - 18	9/16 - 18	5,880 PSI	2.84	4.51	0.26	1.23
BV-5101010F-08	3/4 - 16	3/4 - 16	5,145 PSI	2.28	4.51	0.26	1.46
BV-5101010F-12	1 1/16 - 12	1 1/16 - 12	5,145 PSI	3.74	6.38	0.26	1.77
BV-5101010F-16	1 5/16 - 12	1 5/16 - 12	5,145 PSI	4.45	6.38	0.26	2.17
BV-5101010F-20	1 5/8 - 12	1 5/8 - 12	4,500 PSI	4.73	9.00	-	-
BV-5101010F-24	1 7/8 - 12	1 7/8 - 12	4,500 PSI	5.14	9.00	-	-
BV-5101010F-32	2 1/2 - 12	2 1/2 - 12	4,500 PSI	5.51	9.00	-	-

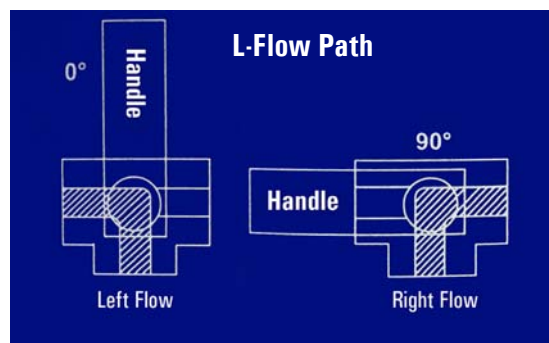
Standard Port Part No.	Female ORB	Female ORB	WOG	Body Length	Handle Length	Mt. Hole Dia.	Mt. Hole Spacing
BV-5101010R-20	1 5/8 - 12	1 5/8 - 12	4,500 PSI	4.72	6.38	0.26	2.17
BV-5101010R-24	1 7/8 - 12	1 7/8 - 12	4,500 PSI	4.84	6.38	0.26	2.17

Applications

Our **BV-5101010F** and **BV-5101010R Ball Valves** are 3-way high pressure hydraulic valves with Female O-Ring Boss Threads. These valves are designed to be durable with a rugged steel body, a steel lever ball handle, a blow-out proof stem, and mounting holes to secure it in place. This 3-Way ball valve design features an **L-Flow Path** chrome plated steel ball that directs the fluid to the left outlet or the right outlet depending on the handle position.

Full Port Ball Valves with O-Ring Boss Threads have the same oversized ball as their pipe threaded counterpart, resulting in better flow with a lower friction loss.

Standard Port Ball Valves, also known as Reduced Port Ball Valves, with O-Ring Boss Threads have the same compact ball and therefore a smaller orifice just like their pipe threaded counterpart.



BV-60102R-LH

Features:

- Suitable for Water, Oil, and Gas
- Saturated Steam 150 PSI
- Each Valve Individually Tested
- 1/4 Turn Open/Close Operation
- Standard (Reduced) Port
- CF8M (316 Equiv.) Stainless Body & Ball
- 316 Stainless Stem and Packing Gland
- RPTFE Packings
- Hostaflo[®] TFM 1600 Body Seal, Stem Seal, and Seats
- Insulated Stainless Locking Handle
- NPT Pipe Threads
- 304 Stainless Steel Handle, Nut, and Lock Washer
- 29 in-Hg Vacuum Rating
- Lead-Free 0.25% Wetted Surfaces

MP x FP - Standard Port - Stainless 316



Part No.	Male Pipe	Female Pipe	WOG	Body Length	Handle Height	Handle Length	Drill Dia.
BV-60102R-LH-06	3/8 - 18	3/8 - 18	2,000 PSI	2.44	1.75	4.06	0.38
BV-60102R-LH-08	1/2 - 14	1/2 - 14	2,000 PSI	2.89	1.94	4.06	0.49
BV-60102R-LH-12	3/4 - 14	3/4 - 14	2,000 PSI	3.26	2.21	4.06	0.59
BV-60102R-LH-16	1 - 11 1/2	1 - 11 1/2	2,000 PSI	3.62	2.49	4.29	0.79

Applications

Our **BV-60102R-LH Ball Valve** is suitable for water, oil, gas, and steam. It is a durable 316 stainless steel body design with an insulated locking handle that opens and closes the valve with a 90° quarter turn operation. This valve has a Standard port, CF8M (316 equivalent) stainless steel ball, a 316 stainless steel stem, and a 316 stainless steel packing gland for superior corrosion resistance.

Standard Port Ball Valves, also known as Reduced Port Ball Valves, have a compact ball compared to a full port ball valve, and therefore a smaller orifice that is one pipe size smaller than the threads on the ball valve itself.

Approvals

- API 598, MSS SP-110, NACE Certified
- Thread Ends to ANSI B1.20.1

Temperature

-20° to +450° F (-28° to +232° C)

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BV-60202R-LH

Features:

- Suitable for Water, Oil, and Gas
- Saturated Steam 100 PSI
- 1/4 Turn Open/Close Operation
- Standard (Reduced) Port
- 316 Stainless Body, Ball, and Stem
- Blow-Out Proof Stem
- R-PTFE Joint Gasket, Thrust Washer, and Seats
- Insulated Locking Handle
- NPT Pipe Threads

FP x FP - Standard Port - Stainless 316



Part No.	Female Pipe	Female Pipe	WOG	Body Length	Handle Height	Handle Length	Drill Dia.
BV-60202R-LH-04	1/4 - 18	1/4 - 18	800 PSI	1.57	1.32	2.76	0.20
BV-60202R-LH-06	3/8 - 18	3/8 - 18	800 PSI	1.77	1.38	2.76	0.28
BV-60202R-LH-08	1/2 - 14	1/2 - 14	800 PSI	2.17	1.54	3.15	0.35
BV-60202R-LH-12	3/4 - 14	3/4 - 14	800 PSI	2.36	1.93	3.74	0.45
BV-60202R-LH-16	1 - 11 1/2	1 - 11 1/2	800 PSI	2.76	2.13	4.13	0.59
BV-60202R-LH-20	1 1/4 - 11 1/2	1 1/4 - 11 1/2	800 PSI	3.15	2.58	4.72	0.77
BV-60202R-LH-24	1 1/2 - 11 1/2	1 1/2 - 11 1/2	800 PSI	3.39	2.83	5.51	0.98
BV-60202R-LH-32	2 - 11 1/2	2 - 11 1/2	800 PSI	3.98	3.19	5.91	1.26

Applications

Our **BV-60202R-LH Ball Valve** is suitable for water, oil, gas, and steam. It is a durable 316 stainless steel body design with an insulated locking handle that opens and closes the valve with a 90° quarter turn operation. This valve has a Standard port, 316 stainless steel ball, and a 316 stainless steel stem for superior corrosion resistance.

Standard Port Ball Valves, also known as Reduced Port Ball Valves, have a compact ball compared to a full port ball valve, and therefore a smaller orifice that is one pipe size smaller than the threads on the ball valve itself.

Temperature

-20° to +450° F (-28° to +232° C)

BV-60202F-LH

Features:

- Suitable for Water, Oil, and Gas
- Saturated Steam 150 PSI
- Each Valve Individually Tested
- 1/4 Turn Open/Close Operation
- Full Port - Minimal Pressure Drop
- CF8M (316 equiv.) Stainless Body & Ball
- 316 Stainless Steel Stem and Packing Gland
- RPTFE Packings
- Hostafion® TFM 1600 Body Seal, Stem Seal, and Seats
- Insulated Stainless Locking Handle
- NPT Pipe Threads
- 304 Stainless Steel Handle, Nut, and Lock Washer
- 29 in-Hg Vacuum Rating
- Lead-Free 0.25% Wetted Surfaces



FP x FP - Full Port - Stainless 316

Part No.	Female Pipe	Female Pipe	WOG	Body Length	Handle Height	Handle Length	Drill Dia.
BV-60202F-LH-04	1/4 - 18	1/4 - 18	1,000 PSI	2.20	2.20	4.21	0.43
BV-60202F-LH-06	3/8 - 18	3/8 - 18	1,000 PSI	2.20	2.20	4.21	0.43
BV-60202F-LH-08	1/2 - 14	1/2 - 14	1,000 PSI	2.60	2.30	4.21	0.56
BV-60202F-LH-12	3/4 - 14	3/4 - 14	1,000 PSI	2.99	2.79	5.73	0.81
BV-60202F-LH-16	1 - 11 1/2	1 - 11 1/2	1,000 PSI	3.54	2.96	5.73	1.00
BV-60202F-LH-20	1 1/4 - 11 1/2	1 1/4 - 11 1/2	1,000 PSI	3.94	3.56	7.45	1.25
BV-60202F-LH-24	1 1/2 - 11 1/2	1 1/2 - 11 1/2	1,000 PSI	4.41	3.84	7.45	1.50
BV-60202F-LH-32	2 - 11 1/2	2 - 11 1/2	1,000 PSI	5.00	4.24	8.08	1.97

Applications

Our **BV-60202F-LH Ball Valve** is suitable for water, oil, gas, and steam. It is a durable CF8M (316 equivalent) stainless steel body design with an insulated stainless steel locking handle that opens and closes the valve with a 90° quarter turn operation. This valve has a Full port, CF8M stainless steel ball, a 316 stainless steel stem, and a 316 stainless steel packing gland for superior corrosion resistance.

Full Port Ball Valves have an oversized ball with a larger orifice than a standard ball valve. This orifice is the same size as the pipeline that is threaded to the ball valve, resulting in better flow with a lower friction loss.

Approvals

- Conforms to API 598
- MSS SP-110, SP-61, SP-82
- NACE Certified
- Thread Ends to ANSI B1.20.1
- **UL Listed:**
 - MHKZ - Manual Valves
 - YQNZ - Compressed Gas Shut-Off Valves
 - YRBX - Flammable Liquid Shut-Off Valves
 - YRPV - Gas Shut-Off Valves
 - YSOT - LP Gas Shut-Off Valves

Temperature

-20° to +450° F (-28° to +232° C)

Hostafion® is a Hoechst Celanese Registered Trademark.

Nickel Plated Brass

Features:

- Suitable for Air, Water, Oil, and Gas
- Good for Vacuum Service
- 1/4 Turn Open/Close Operation
- Chrome Plated Brass Body
- Chrome Plated Brass Ball
- Nickel Plated Brass Stem
- Composite Handle
- NPTF Thread Ends
- Teflon® Ball Retainer Seal
- Buna-N Stem Seals
- NOT Lead-Free Compliant
- Temperature
–0° to +175° F (–18° to +80° C)

MBV-30102N

MP x FP - Nickel Plated Brass



Part No.	Male Pipe	Female Pipe	Pressure	Body Length	Handle Height	Handle Length	Drill Dia.	Assembly	Body Hex
MBV-30102N-02	1/8 - 27	1/8 - 27	290 PSI	1.48	0.83	0.75	0.22	0.34	0.55
MBV-30102N-04	1/4 - 18	1/4 - 18	290 PSI	1.81	0.83	0.75	0.22	0.51	0.55
MBV-30102N-06	3/8 - 18	3/8 - 18	290 PSI	1.91	0.87	0.75	0.32	0.51	0.71
MBV-30102N-08	1/2 - 14	1/2 - 14	290 PSI	2.44	1.20	1.02	0.39	0.67	0.87

MBV-30202N

FP x FP - Nickel Plated Brass



Part No.	Female Pipe	Female Pipe	Pressure	Body Length	Handle Height	Handle Length	Drill Dia.	Body Hex
MBV-30202N-02	1/8 - 27	1/8 - 27	290 PSI	1.48	0.83	0.75	0.22	0.55
MBV-30202N-04	1/4 - 18	1/4 - 18	290 PSI	1.81	0.83	0.75	0.22	0.55
MBV-30202N-06	3/8 - 18	3/8 - 18	290 PSI	1.91	0.87	0.75	0.32	0.71
MBV-30202N-08	1/2 - 14	1/2 - 14	290 PSI	2.44	1.20	1.02	0.39	0.87

MBV-3020290N

FP x FP 90° - Nickel Plated Brass



Part No.	Female Pipe	Female Pipe	Pressure	Body Length	Body Height	Handle Height	Handle Length	Drill Dia.	Body Hex	Stem Hex
MBV-3020290N-02	1/8 - 27	1/8 - 27	290 PSI	1.48	0.65	1.32	0.75	0.22	0.67	0.67
MBV-3020290N-04	1/4 - 18	1/4 - 18	290 PSI	1.48	0.65	1.32	0.75	0.22	0.67	0.67
MBV-3020290N-06	3/8 - 18	3/8 - 18	290 PSI	1.54	0.87	1.38	0.75	0.28	0.83	0.67

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MBV-3020202N-CC

FP x FP x FP - Closed Center



Part No.	Female Pipe	Female Pipe	Pressure	Body Length	Body Height	Handle Height	Handle Length	Drill Dia.	Body Hex	Stem Hex
MBV-3020202N-CC-02	1/8 - 27	1/8 - 27	290 PSI	1.48	0.65	1.32	0.75	0.22	0.67	0.67
MBV-3020202N-CC-04	1/4 - 18	1/4 - 18	290 PSI	1.48	0.65	1.32	0.75	0.22	0.67	0.67
MBV-3020202N-CC-06	3/8 - 18	3/8 - 18	290 PSI	1.91	0.87	1.38	0.75	0.28	0.83	0.67

MBV-3020202N-OC

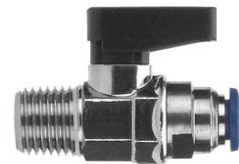
FP x FP x FP - Open Center



Part No.	Female Pipe	Female Pipe	Pressure	Body Length	Body Height	Handle Height	Handle Length	Drill Dia.	Body Hex	Stem Hex
MBV-3020202N-OC-02	1/8 - 27	1/8 - 27	290 PSI	1.48	0.65	1.32	0.75	0.22	0.67	0.67
MBV-3020202N-OC-04	1/4 - 18	1/4 - 18	290 PSI	1.48	0.65	1.32	0.75	0.22	0.67	0.67
MBV-3020202N-OC-06	3/8 - 18	3/8 - 18	290 PSI	1.91	0.87	1.38	0.75	0.28	0.83	0.67

MBV-30116N

MP x PTC - Nickel Plated Brass



Part No.	Male Pipe	Push-To-Connect	Pressure	Body Length	Handle Height	Handle Length	Assembly	Body Hex
MBV-30116N-02-25	1/8 - 27	5/32" Tube	290 PSI	1.37	0.82	0.74	0.33	0.55
MBV-30116N-02-04	1/8 - 27	1/4" Tube	290 PSI	1.57	0.82	0.74	0.33	0.55
MBV-30116N-04	1/4 - 18	1/4" Tube	290 PSI	1.50	0.82	0.74	0.49	0.55
MBV-30116N-06	3/8 - 18	3/8" Tube	290 PSI	1.76	0.86	0.74	0.51	0.70

MBV-31616N

PTC x PTC - Nickel Plated Brass



Part No.	Push-To-Connect	Push-To-Connect	Pressure	Body Length	Handle Height	Handle Length	Body Hex
MBV-31616N-02	1/8" Tube	1/8" Tube	290 PSI	1.67	0.83	0.75	0.55-0.59
MBV-31616N-04	1/4" Tube	1/4" Tube	290 PSI	1.83	0.83	0.75	0.55-0.59
MBV-31616N-06	3/8" Tube	3/8" Tube	290 PSI	2.38	0.87	0.75	0.71-0.75

MBV-32132N

Male BSP x Female BSP - Nickel Plated Brass



Part No.	Male BSPT	Female BSPP	Pressure	Body Length	Handle Height	Handle Length	Drill Dia.	Assembly	Body Hex
MBV-32132N-02	1/8 - 28	1/8 - 28	290 PSI	1.42	0.83	0.75	0.22	0.30	0.55
MBV-32132N-04	1/4 - 19	1/4 - 19	290 PSI	1.69	0.83	0.75	0.22	0.43	0.55
MBV-32132N-06	3/8 - 19	3/8 - 19	290 PSI	1.81	0.87	0.75	0.32	0.45	0.71
MBV-32132N-08	1/2 - 14	1/2 - 14	290 PSI	2.24	1.20	1.02	0.39	0.59	0.87

MBV-33232N

Female BSP x Female BSP - Nickel Plated Brass



Part No.	Female BSPP	Female BSPP	Pressure	Body Length	Handle Height	Handle Length	Drill Dia.	Body Hex
MBV-33232N-02	1/8 - 28	1/8 - 28	290 PSI	1.42	0.83	0.75	0.22	0.55
MBV-33232N-04	1/4 - 19	1/4 - 19	290 PSI	1.69	0.83	0.75	0.22	0.55
MBV-33232N-06	3/8 - 19	3/8 - 19	290 PSI	1.85	0.87	0.75	0.32	0.71
MBV-33232N-08	1/2 - 14	1/2 - 14	290 PSI	2.23	1.20	1.02	0.39	0.87

MBV-301M16N

BSPT x Metric PTC - Nickel Plated Brass



Part No.	Male BSPT	Push-To-Connect	Pressure	Body Length	Handle Height	Handle Length	Body Hex
MBV-301M16N-02-04	1/8 - 28	4mm Tube	290 PSI	1.38	0.83	0.75	0.55-0.59
MBV-301M16N-02-06	1/8 - 28	6mm Tube	290 PSI	1.57	0.83	0.75	0.55-0.59
MBV-301M16N-02-08	1/4 - 19	6mm Tube	290 PSI	1.63	0.83	0.75	0.55-0.59
MBV-301M16N-04-06	1/8 - 28	8mm Tube	290 PSI	1.52	0.83	0.75	0.55-0.59
MBV-301M16N-04-08	1/4 - 19	8mm Tube	290 PSI	1.79	0.87	0.75	0.55-0.59

MBV-3M16M16N

Metric PTC x PTC - Nickel Plated Brass



Part No.	Push-To-Connect	Push-To-Connect	Pressure	Body Length	Handle Height	Handle Length	Body Hex
MBV-3M16M16N-04	4mm Tube	4mm Tube	290 PSI	1.73	0.83	0.75	0.55-0.59
MBV-3M16M16N-06	6mm Tube	6mm Tube	290 PSI	1.89	0.83	0.75	0.55-0.59
MBV-3M16M16N-08	8mm Tube	8mm Tube	290 PSI	1.89	0.83	0.75	0.55-0.59

1,000 PSI Working Pressure

Features:

- Suitable for Air, Water, Oil, Gas, Propane, and Diesel
- 1/4 Turn Open/Close Operation
- Brass Body
- Nickel Plated Brass Ball
- Non-Adjustable Blow-Out Proof Stem
- Never Needs Tightening
- Highly Inert Teflon® Seats
- Viton® O-Ring Stem Seal
- Metal Handle
- 1,000 PSI Working Pressure

MBV-30101-1000

MP x MP - 1000 PSI - Brass



Part No.	Male Pipe	Male Pipe	Pressure
MBV-30101-1000-02	1/8 - 27	1/8 - 27	1,000 PSI
MBV-30101-1000-04	1/4 - 18	1/4 - 18	1,000 PSI

MBV-30102-1000

MP x FP - 1000 PSI - Brass



Part No.	Male Pipe	Female Pipe	Pressure
MBV-30102-1000-02	1/8 - 27	1/8 - 27	1,000 PSI
MBV-30102-1000-04	1/4 - 18	1/4 - 18	1,000 PSI

Applications

Our **1,000 PSI Mini Ball Valves** are ideal for tight, confined areas, or when routing aesthetics are desired. This miniature ball valve design features a corrosion resistant brass body and a metal handle that opens and closes the valve with a 90° quarter-turn operation. Applications include instrumentation, gas sampling systems, high pressure gauges, test stands, hydraulic and pneumatic service lines. Plus, it is also good for propane, gas, and diesel.

Approvals

- Approvals ASTM B-16 Corrosion Resistant Brass

Temperature

-40° to +300° F (-40° to +149° C)

Notice

- NOT Good for Steam
- NOT Lead-Free Compliant

Teflon® and Viton® are DuPont Registered Trademarks.

Check Valves

Brass • Nickel Plated Brass • Steel

Check Valves, also known as Crack Valves, Non-Return Valves, or One-Way Valves, are a type of directional control used in hydraulic systems to *automatically* stop the flow of fluid in one direction while allowing free flow of fluid in the opposite direction.

An important attribute of a Check Valve is the cracking pressure, which is the minimum upstream pressure at which the valve will operate, or crack open. Therefore, a specific cracking pressure is usually specified.

Features/Benefits

Our Check Valves are available with different cracking pressures for a variety of applications.

- Brass: 400 PSI (27 Bar)
- Nickel Plated Brass: 150 PSI (10 Bar)
- Steel: High Pressure Hydraulic
- Prefilling (to Avoid Cavitation)
- Stopping Flow In a Designated Direction
- Pre-Tensioning (by Creating a Certain Backpressure)
- Bypassing (e.g. Throttling Points or Return-Line Filters)
- Protect Hydraulic Components Against Pressure Spikes

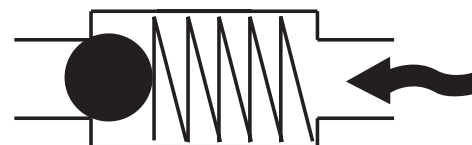


1-Way Flow Only

Flow is Allowed in One Direction



When flow is in opposite direction the valve is checked, or closed, and stops the flow



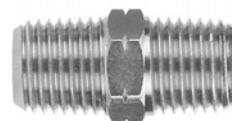
Nickel Plated Brass

Features:

- 3 PSI Cracking Pressure
- Nickel Plated Brass Body
- Nickel Plated Brass Piston
- Buna / Viton® Piston Seal
- Steel Spring
- One-Way Flow
- NOT Lead-Free Compliant
- Pressure Range: 3 – 120 PSI
- Temperature
–0° to +160° F (–18° to +71° C)

CV-30101N-3

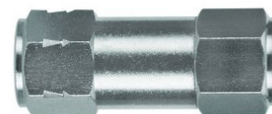
MP x MP - 3 PSI Crack - Nickel Plated Brass



Part No.	Male Pipe	Male Pipe	Pressure	Length	Assembly	Hex
CV-30101N-04-3	1/4 - 18	1/4 - 18	150 PSI	1.22	0.51	0.55
CV-30101N-06-3	3/8 - 18	3/8 - 18	150 PSI	1.22	0.51	0.75

CV-30202N-3

FP x FP - 3 PSI Crack - Nickel Plated Brass



Part No.	Female Pipe	Female Pipe	Pressure	Length	Hex
CV-30202N-02-3	1/8 - 27	1/8 - 27	150 PSI	1.44	0.51
CV-30202N-04-3	1/4 - 18	1/4 - 18	150 PSI	1.85	0.67

CV-31616N-3

PTC x PTC - 3 PSI Crack - Nickel Plated Brass



Part No.	Push-To-Connect	Push-To-Connect	Pressure	Length	Diameter
CV-31616N-04-3	1/4" Tube	1/4" Tube	150 PSI	2.05	0.51
CV-31616N-06-3	3/8" Tube	3/8" Tube	150 PSI	2.24	0.67

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Brass - 400 PSI

Features:

- 1/2 (0.5) PSI Cracking Pressure
- Suitable for Water, Oil, Air, and Inert Gases
- Saturated Steam 125 PSI
- Do NOT Use Near Reciprocating Pumps or Vibration
- Straight-Through, Streamlined Design for Minimal Pressure Drop
- Arrow Indicates One-Way Flow
- Brass Body
- Reinforced PTFE Spring Loaded Check
- Tight Shut-Off with Liquids
- No Radial Alignment Necessary
- NOT Lead-Free Compliant
- **Temperature**
-20° to +353° F (-29° to +178° C)

CV-30102-0.5

MP x FP - 1/2 PSI Crack - Brass



Part No.	Male Pipe	Female Pipe	Pressure	Length	O.D. Dia.
CV-30102-04-0.5	1/4 - 18	1/4 - 18	400 PSI	2.06	1.12
CV-30102-06-0.5	3/8 - 18	3/8 - 18	400 PSI	2.12	1.12
CV-30102-08-0.5	1/2 - 14	1/2 - 14	400 PSI	2.31	1.12
CV-30102-12-0.5	3/4 - 14	3/4 - 14	400 PSI	2.87	1.50
CV-30102-16-0.5	1 - 11 1/2	1 - 11 1/2	400 PSI	3.50	1.75
CV-30102-20-0.5	1 1/4 - 11 1/2	1 1/4 - 11 1/2	400 PSI	4.18	2.12
CV-30102-24-0.5	1 1/2 - 11 1/2	1 1/2 - 11 1/2	400 PSI	4.94	2.50
CV-30102-32-0.5	2 - 11 1/2	2 - 11 1/2	400 PSI	6.00	3.00

CV-30202-0.5

FP x FP - 1/2 PSI Crack - Brass



Part No.	Female Pipe	Female Pipe	Pressure	Length	O.D. Dia.
CV-30202-04-0.5	1/4 - 18	1/4 - 18	400 PSI	2.06	1.12
CV-30202-06-0.5	3/8 - 18	3/8 - 18	400 PSI	2.12	1.12
CV-30202-08-0.5	1/2 - 14	1/2 - 14	400 PSI	2.31	1.12
CV-30202-12-0.5	3/4 - 14	3/4 - 14	400 PSI	2.87	1.50
CV-30202-16-0.5	1 - 11 1/2	1 - 11 1/2	400 PSI	3.50	1.75
CV-30202-20-0.5	1 1/4 - 11 1/2	1 1/4 - 11 1/2	400 PSI	4.18	2.12
CV-30202-24-0.5	1 1/2 - 11 1/2	1 1/2 - 11 1/2	400 PSI	4.94	2.50
CV-30202-32-0.5	2 - 11 1/2	2 - 11 1/2	400 PSI	6.00	3.00
CV-30202-40-0.5	2 1/2 - 8	2 1/2 - 8	400 PSI	7.00	3.87
CV-30202-48-0.5	3 - 8	3 - 8	400 PSI	8.12	5.31

Steel - High Pressure

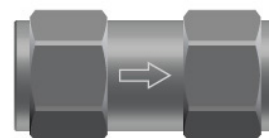
Features:

- 5, 14, and 65 PSI Cracking Pressures
- For Hydraulic Applications
- Arrow Indicates One-Way Flow
- Corrosion Resistant Plated Steel
- Spring Loaded Check
- Hardened Wear Parts
- NPT Pipe Threads
- Other Crack Pressures Available
- Temperature
-4° to +248° F (-20° to +120° C)

CV-50202-5

FP x FP - 5 PSI Crack - Steel

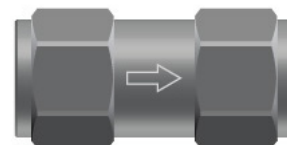
Part No.	Female Pipe	Female Pipe	Pressure	Length	Hex
CV-50202-02-5	1/8 - 27	1/8 - 27	5,800 PSI	1.73	0.55
CV-50202-04-5	1/4 - 18	1/4 - 18	7,250 PSI	1.97	0.75
CV-50202-06-5	3/8 - 18	3/8 - 18	5,075 PSI	2.36	0.94
CV-50202-08-5	1/2 - 14	1/2 - 14	5,075 PSI	2.76	1.06
CV-50202-12-5	3/4 - 14	3/4 - 14	3,625 PSI	3.39	1.34
CV-50202-16-5	1 - 11 1/2	1 - 11 1/2	3,625 PSI	3.39	1.61
CV-50202-20-5	1 1/4 - 11 1/2	1 1/4 - 11 1/2	3,625 PSI	5.12	1.97
CV-50202-24-5	1 1/2 - 11 1/2	1 1/2 - 11 1/2	3,625 PSI	5.51	2.56
CV-50202-32-5	2 - 11 1/2	2 - 11 1/2	2,175 PSI	6.30	2.95



CV-50202-14

FP x FP - 14 PSI Crack - Steel

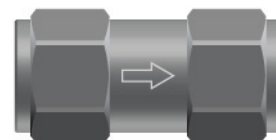
Part No.	Female Pipe	Female Pipe	Pressure	Length	Hex
CV-50202-04-14	1/4 - 18	1/4 - 18	5,075 PSI	2.36	0.75
CV-50202-08-14	1/2 - 14	1/2 - 14	4,350 PSI	3.03	1.18
CV-50202-12-14	3/4 - 14	3/4 - 14	4,350 PSI	3.54	1.42
CV-50202-16-14	1 - 11 1/2	1 - 11 1/2	4,350 PSI	4.17	1.77
CV-50202-20-14	1 1/4 - 11 1/2	1 1/4 - 11 1/2	3,625 PSI	4.92	2.17
CV-50202-24-14	1 1/2 - 11 1/2	1 1/2 - 11 1/2	3,625 PSI	5.51	2.56



CV-50202-65

FP x FP - 65 PSI Crack - Steel

Part No.	Female Pipe	Female Pipe	Pressure	Length	Hex
CV-50202-02-65	1/8 - 27	1/8 - 27	5,800 PSI	1.73	0.55
CV-50202-04-65	1/4 - 18	1/4 - 18	5,075 PSI	2.36	0.75
CV-50202-06-65	3/8 - 18	3/8 - 18	5,075 PSI	2.76	0.94
CV-50202-08-65	1/2 - 14	1/2 - 14	4,350 PSI	3.03	1.18
CV-50202-12-65	3/4 - 14	3/4 - 14	4,350 PSI	3.54	1.42
CV-50202-16-65	1 - 11 1/2	1 - 11 1/2	4,350 PSI	4.17	1.77
CV-50202-20-65	1 1/4 - 11 1/2	1 1/4 - 11 1/2	3,625 PSI	4.92	2.17
CV-50202-24-65	1 1/2 - 11 1/2	1 1/2 - 11 1/2	3,625 PSI	5.51	2.56
CV-50202-32-65	2 - 11 1/2	2 - 11 1/2	2,175 PSI	6.30	2.95



Steel - High Pressure

Features:

- 5 and 65 PSI Cracking Pressures
- For Hydraulic Applications
- Arrow Indicates One-Way Flow
- Black Phosphate Plated Steel
- Spring Loaded Check
- Closing Spring C72 Material
- Metal-To-Metal Seat – Avoids High Flow Seal Extrusion
- Hardened Sealing Piston
- Alternate Use Pressure Sequence Valve
- O-Ring Boss Threads
- Other Crack Pressures Available
- **Temperature**
–4° to +248° F (–20° to +120° C)

CV-51010-5

FB x FB - 5 PSI Crack - Steel

Part No.	Female ORB	Female ORB	Pressure	Length	Hex
CV-51010-04-5	7/16 - 20	7/16 - 20	5,075 PSI	2.36	0.75
CV-51010-06-5	9/16 - 18	9/16 - 18	5,075 PSI	2.76	0.94
CV-51010-08-5	3/4 - 16	3/4 - 16	4,350 PSI	3.03	1.18
CV-51010-12-5	1 1/16 - 12	1 1/16 - 12	4,350 PSI	3.54	1.42
CV-51010-16-5	1 5/16 - 12	1 5/16 - 12	4,350 PSI	4.17	1.77
CV-51010-20-5	1 5/8 - 12	1 5/8 - 12	3,625 PSI	4.92	2.17
CV-51010-24-5	1 7/8 - 12	1 7/8 - 12	3,625 PSI	5.51	2.56
CV-51010-32-5	2 1/2 - 12	2 1/2 - 12	2,175 PSI	6.30	2.95



CV-51010-65

FB x FB - 65 PSI Crack - Steel

Part No.	Female ORB	Female ORB	Pressure	Length	Hex
CV-51010-04-65	7/16 - 20	7/16 - 20	5,075 PSI	2.36	0.75
CV-51010-06-65	9/16 - 18	9/16 - 18	5,075 PSI	2.76	0.94
CV-51010-08-65	3/4 - 16	3/4 - 16	4,350 PSI	3.03	1.18
CV-51010-12-65	1 1/16 - 12	1 1/16 - 12	4,350 PSI	3.54	1.42
CV-51010-16-65	1 5/16 - 12	1 5/16 - 12	4,350 PSI	4.17	1.77
CV-51010-20-65	1 5/8 - 12	1 5/8 - 12	3,625 PSI	4.92	2.17
CV-51010-24-65	1 7/8 - 12	1 7/8 - 12	3,625 PSI	5.51	2.56
CV-51010-32-65	2 1/2 - 12	2 1/2 - 12	2,175 PSI	6.30	2.95



Steel - High Pressure

Features:

- 5 PSI Cracking Pressure
- For Hydraulic Applications
- High Grade Carbon Steel
- Steel w/ Mate500® Cr (III) Plating
- Arrow Indicates One-Way Flow
- BSP Threads
- Spring Loaded Check
- Hardened Wear Parts
- Buna-N Seals
- **Approvals:** Meets ISO 7241-2
- **Temperature**
–13° to +257° F (–25° to +125° C)

CV-53232-5

FBSP x FBSP - 5 PSI Crack - Steel

Part No.	Female BSP	Female BSP	Pressure	Length	Hex
CV-53232-04-5	1/4 - 19	1/4 - 19	7,250 PSI	1.97	0.75
CV-53232-06-5	3/8 - 19	3/8 - 19	5,075 PSI	2.36	0.94
CV-53232-08-5	1/2 - 14	1/2 - 14	5,075 PSI	2.76	1.06
CV-53232-12-5	3/4 - 14	3/4 - 14	3,625 PSI	3.39	1.34
CV-53232-16-5	1 - 11	1 - 11	3,625 PSI	3.94	1.61
CV-53232-20-5	1 1/4 - 11	1 1/4 - 11	3,625 PSI	5.12	1.97
CV-53232-24-5	1 1/2 - 11	1 1/2 - 11	2,900 PSI	5.71	2.36
CV-53232-32-5	2 - 11	2 - 11	2,500 PSI	6.30	2.95



Drain Cocks

Features:

- Brass Construction (Machined or Forged)
- External or Internal Seats
- Low Pressure Air, Water, and Fluids
- 150 PSI Max. (Unless Otherwise Stated)
- Hand-Tightening Metal-To-Metal Seal
- For Automotive and Industrial Applications
- NOT intended for natural gas, LPG, nuclear, or aircraft applications
- **Temperature** (Unless Otherwise Stated)
-65° to +250° F (-54° to +121° C)

DC-600

Air Tank Valve w/ Cable - Brass



Part No.	Male Pipe	Pressure
DC-600-04	1/4 - 18	150 PSI

- Self Return Shut-Off
- Steel Cable Attached

DC-601

MP - Trunk Air Tank Valve - Brass

30 PSI Maximum

Temperature: +32° to +125° F (+0° to +51° C)



Part No.	Male Pipe	Pressure
DC-601-02	1/8 - 27	30 PSI
DC-601-04	1/4 - 18	30 PSI
DC-601-06	3/8 - 18	30 PSI
DC-601-08	1/2 - 14	30 PSI

DC-601T

MP - Truck Drain Valve - T-Handle - Brass

30 PSI Maximum

Temperature: +32° to +125° F (+0° to +51° C)



Part No.	Male Pipe	Pressure
DC-601-02T	1/8 - 27	150 PSI
DC-601-04T	1/4 - 18	150 PSI

DC-602

MP - Internal Seat - Brass



Part No.	Male Pipe	Pressure
DC-602-02	1/8 - 27	150 PSI
DC-602-04	1/4 - 18	150 PSI
DC-602-06	3/8 - 18	150 PSI

DC-602L

MP - Internal Seat - Long Shank



Part No.	Male Pipe	Pressure
DC-602L-02	1/8 - 27	150 PSI
DC-602L-06-HS	3/8 - 18	150 PSI

DC-603

MP - Internal Seat - Brass



Part No.	Male Pipe	Pressure
DC-603-02	1/8 - 27	150 PSI
DC-603-02B	1/8 - 27	150 PSI
DC-603-04	1/4 - 18	150 PSI
DC-603-06	3/8 - 18	150 PSI

DC-604

MP - External Seat - Brass



Part No.	Male Pipe	Pressure
DC-604-02	1/8 - 27	150 PSI
DC-604-04	1/4 - 18	150 PSI
DC-604-06	3/8 - 18	150 PSI
DC-604-08	1/2 - 14	150 PSI

DC-606

BIBB x MP - External Seat - Brass



Part No.	Male Pipe	Pressure
DC-606-04	1/4 - 18	150 PSI

DC-607

BIBB x MP 90° - External Seat - Brass



Part No.	BIBB	Male Pipe	Pressure
DC-607-02-02	1/8" Bibb	1/8 - 27	150 PSI
DC-607-04-02	1/4" Bibb	1/8 - 27	150 PSI
DC-607-04-04	1/4" Bibb	1/4 - 18	150 PSI
DC-607-06-04	3/8" Bibb	1/4 - 18	150 PSI

Features:

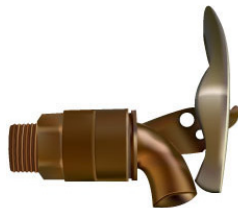
fau•cet
fôsit/ (Noun)

1. a device by which a flow of liquid or gas from a pipe or container can be controlled; a tap.

Drum Faucets

DF-BF

MP - Barrel Faucet - Die Cast



Part No.	Male Pipe	Size
DF-BF-12	3/4 - 14	3/4"

- Die Cast Body
- Nylon Seat
- Steel Spring
- Self Closing
- Notice: NOT for Potable Water
- Good for All Petroleum Products Except Trichlorethylene

DF-POLY

MP - Drum Faucet - Polyethylene



Part No.	Male Pipe	Size
DF-POLY-12	3/4 - 14	3/4"
DF-POLY-32	2 - 11 1/2	2"

- Gold Polyethylene Body
- No Wrenches or Tools Needed for Installation
- 3/4" Does Not Require a Gasket
- 2" Comes With a Gasket
- **Temperature:** Maximum + 140° F (+ 60° C)

Brass Flow Control Valves

(Pages 34-39)

Flow Control Valves vs. Needle Valves

Flow Control Valves and Needle Valves are both used to control the flow of water or air in a hydraulic or pneumatic circuit. The main difference is that the needle valve controls the flow in *both* directions (BI-Flow), while the Flow Control Valve only ensures control in one direction (Flow In or Flow Out). Both valves have finely threaded tapered stems, which allow control by the gradual adjustment of the flow passing through the valve.

Our **Nickel Plated Brass Flow Control Valves** are among the highest quality in the industry. They offer the same advantages as our Nickel Plated Brass Push-To-Connect fittings and are available with either a screwdriver adjustment screw, or a built-in knob with a locknut to lock in the setting once adjusted.

The **Sure-Fit Thread (SFX)** is a male swivel thread that allows one thread to be eight different threads.* The **Sure-Fit Thread** utilizes a Buna-N Seal to ensure leak-free performance, and the "swivel" thread eliminates any orientation problems.

* NPT, NPTF, BSPT, BSPP, ISO 7, ISO 228, G-Thread, and J-Thread

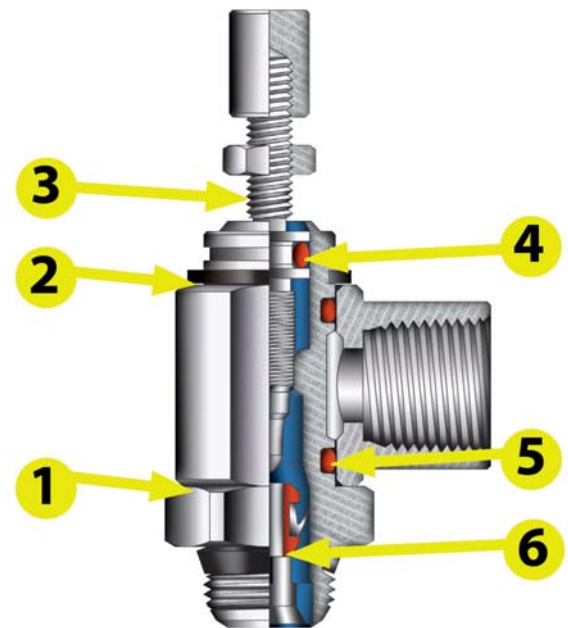
Features/Benefits

- Good for Compressed Air and Water
- 250 PSI (17 Bar)
- 2-Way Bi-Directional (BI-Flow)
- 1-Way Only (Flow IN / OUT)
- Screwdriver or Knobbed (Lockable) Adjustment
- Nickel Plated Brass Body
- Nickel Plated Brass Adjusting Mechanism
- Stainless Steel Shaft Clip
- Buna-N Lip Seal and O-Rings
- Vacuum Rated
- **Sure-Fit Thread Convenience**
- NOT Lead-Free Compliant
- **Temperature:** -0° to +160° F (-18° to +71° C)

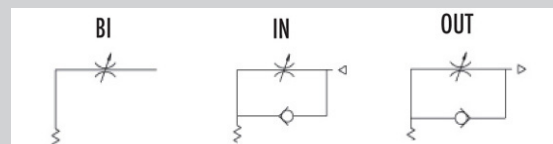
Metric Millimeter Nickel Plated Brass Flow Control Valves are readily available.



Valve Components



- | | |
|------------------------|-------------|
| 1. Body | 4. O-Ring |
| 2. Shaft Clip | 5. O-Ring |
| 3. Adjusting Mechanism | 6. Lip Seal |



Polymer Flow Control Valves

(Pages 40-45)

Flow Control Valves vs. Needle Valves

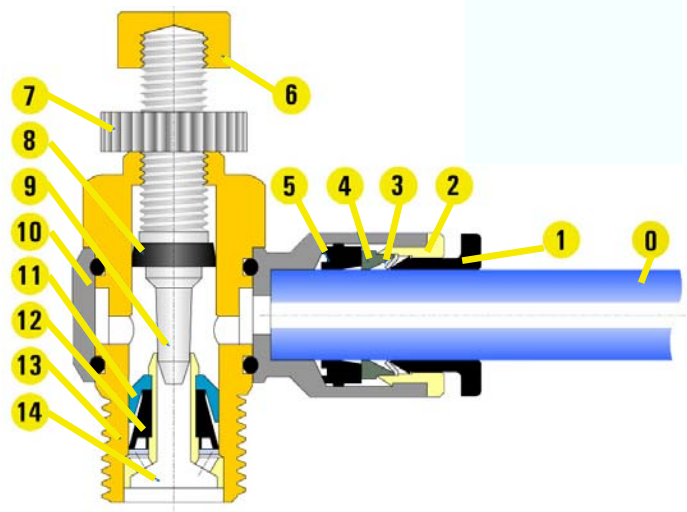
Flow Control Valves and Needle Valves are both used to control the flow of water or air in a hydraulic or pneumatic circuit. The main difference is that the needle valve controls the flow in *both* directions (BI-Flow), while the Flow Control Valve only ensures control in one direction (Flow In or Flow Out). Both valves have finely threaded tapered stems, which allow control by the gradual adjustment of the flow passing through the valve.

Our composite **Polymer Flow Control Valves** are lightweight, offer quick installation, and are reusable for multiple connections and disconnections. They offer the same advantages as our composite Polymer Push-To-Connect fittings and are available with either a screwdriver adjustment screw, or a built-in knob with a locknut to lock in the setting once adjusted.

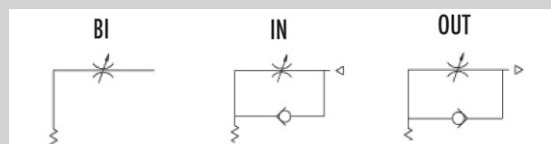
In addition, the male pipe swivels (MPX) come with a pre-applied Teflon® sealant and the "swivel" thread eliminates any orientation problems.



Valve Components



- | | |
|--------------------------|----------------------|
| 0. Tube | 8. Lip Seal |
| 1. Release Collar | 9. Needle |
| 2. Metal Liner | 10. Polymer Body |
| 3. Stainless Steel Teeth | 11. Stop |
| 4. Tube Stop | 12. Lip Seal |
| 5. Lip Seal | 13. MP Swivel Thread |
| 6. Adjusting Knob | 14. Nozzle |
| 7. Locknut | |



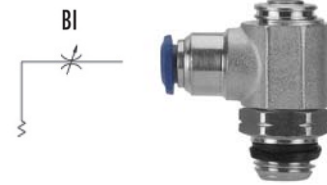
Features/Benefits

- Good for Compressed Air and Water
- 150 PSI (10 Bar)
- 2-Way Bi-Directional (BI-Flow)
- 1-Way Only (Flow IN / OUT)
- Screwdriver or Knobbed (Lockable) Adjustment
- Composite Polymer Body
- Nickel Plated Brass Threads
- Teflon® Sealant on Male Pipe Swivels
- Buna-N Lip Seal and O-Rings
- **Temperature:** +32° to +140° F (–0° to +60° C)

Metric Millimeter Polymer Flow Control Valves are readily available
Teflon® is a DuPont Registered Trademark.

FCV-1169SN-BI

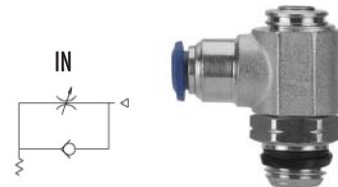
PTC x SFX (MPX) 90° - BI-Flow - Nickel Plated Brass



Part No.	Push-To-Connect	SFX (MPX)	Pressure	Length	Height	Assembly	MPX Hex
FCV-1169SN-BI-02-00	1/8" Tube	10-32 unf	250 PSI	0.75	0.95	0.16	0.32
FCV-1169SN-BI-02-02	1/8" Tube	1/8 - 27	250 PSI	0.83	1.18	0.22	0.55
FCV-1169SN-BI-25-00	5/32" Tube	10-32 unf	250 PSI	0.75	0.95	0.16	0.32
FCV-1169SN-BI-25-02	5/32" Tube	1/8 - 27	250 PSI	0.83	1.18	0.22	0.55
FCV-1169SN-BI-04-02	1/4" Tube	1/8 - 27	250 PSI	0.87	1.18	0.22	0.55
FCV-1169SN-BI-04-04	1/4" Tube	1/4 - 18	250 PSI	0.98	1.42	0.28	0.67
FCV-1169SN-BI-06-04	3/8" Tube	1/4 - 18	250 PSI	1.18	1.61	0.30	0.79
FCV-1169SN-BI-06-06	3/8" Tube	3/8 - 18	250 PSI	1.18	1.61	0.30	0.79
FCV-1169SN-BI-08-06	1/2" Tube	3/8 - 18	250 PSI	1.28	1.61	0.30	0.79
FCV-1169SN-BI-08-08	1/2" Tube	1/2 - 14	250 PSI	1.38	1.85	0.35	0.95

FCV-1169SN-IN

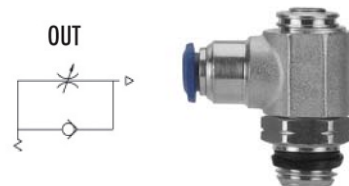
PTC x SFX (MPX) 90° - Flow IN - Nickel Plated Brass



Part No.	Push-To-Connect	SFX (MPX)	Pressure	Length	Height	Assembly	MPX Hex
FCV-1169SN-IN-02-00	1/8" Tube	10-32 unf	250 PSI	0.75	0.95	0.16	0.32
FCV-1169SN-IN-02-02	1/8" Tube	1/8 - 27	250 PSI	0.83	1.18	0.22	0.55
FCV-1169SN-IN-25-00	5/32" Tube	10-32 unf	250 PSI	0.75	0.95	0.16	0.32
FCV-1169SN-IN-25-02	5/32" Tube	1/8 - 27	250 PSI	0.83	1.18	0.22	0.55
FCV-1169SN-IN-04-02	1/4" Tube	1/8 - 27	250 PSI	0.87	1.18	0.22	0.55
FCV-1169SN-IN-04-04	1/4" Tube	1/4 - 18	250 PSI	0.98	1.42	0.28	0.67
FCV-1169SN-IN-06-04	3/8" Tube	1/4 - 18	250 PSI	1.18	1.61	0.30	0.79
FCV-1169SN-IN-06-06	3/8" Tube	3/8 - 18	250 PSI	1.18	1.61	0.30	0.79
FCV-1169SN-IN-08-06	1/2" Tube	3/8 - 18	250 PSI	1.28	1.61	0.30	0.79
FCV-1169SN-IN-08-08	1/2" Tube	1/2 - 14	250 PSI	1.38	1.85	0.35	0.95

FCV-1169SN-OUT

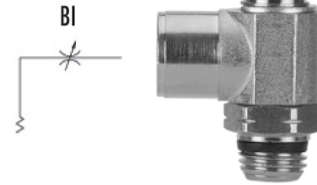
PTC x SFX (MPX) 90° - Flow OUT - Nickel Plated Brass



Part No.	Push-To-Connect	SFX (MPX)	Pressure	Length	Height	Assembly	MPX Hex
FCV-1169SN-OUT-02-00	1/8" Tube	10-32 unf	250 PSI	0.75	0.95	0.16	0.32
FCV-1169SN-OUT-02-02	1/8" Tube	1/8 - 27	250 PSI	0.83	1.18	0.22	0.55
FCV-1169SN-OUT-25-00	5/32" Tube	10-32 unf	250 PSI	0.75	0.95	0.16	0.32
FCV-1169SN-OUT-25-02	5/32" Tube	1/8 - 27	250 PSI	0.83	1.18	0.22	0.55
FCV-1169SN-OUT-04-02	1/4" Tube	1/8 - 27	250 PSI	0.87	1.18	0.22	0.55
FCV-1169SN-OUT-04-04	1/4" Tube	1/4 - 18	250 PSI	0.98	1.42	0.28	0.67
FCV-1169SN-OUT-06-04	3/8" Tube	1/4 - 18	250 PSI	1.18	1.61	0.30	0.79
FCV-1169SN-OUT-06-06	3/8" Tube	3/8 - 18	250 PSI	1.18	1.61	0.30	0.79
FCV-1169SN-OUT-08-06	1/2" Tube	3/8 - 18	250 PSI	1.28	1.61	0.30	0.79
FCV-1169SN-OUT-08-08	1/2" Tube	1/2 - 14	250 PSI	1.38	1.85	0.35	0.95

FCV-3400SN-BI

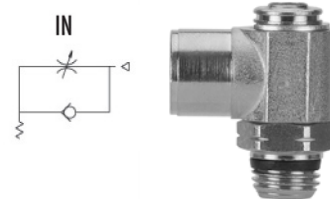
FP x SFX (MPX) 90° - BI-Flow - Nickel Plated Brass



Part No.	Female Pipe	SFX (MPX)	Pressure	Length	Height	Assembly	MPX Hex
FCV-3400SN-BI-00-00	10-32 unf	10-32 unf	250 PSI	0.40	0.95	0.16	0.32
FCV-3400SN-BI-02-02	1/8 - 27	1/8 - 27	250 PSI	0.65	1.18	0.22	0.55
FCV-3400SN-BI-04-04	1/4 - 18	1/4 - 18	250 PSI	0.87	1.42	0.28	0.67
FCV-3400SN-BI-06-06	3/8 - 18	3/8 - 18	250 PSI	1.04	1.61	0.30	0.79

FCV-3400SN-IN

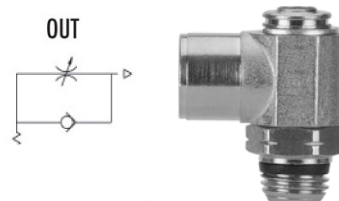
FP x SFX (MPX) 90° - Flow IN - Nickel Plated Brass



Part No.	Female Pipe	SFX (MPX)	Pressure	Length	Height	Assembly	MPX Hex
FCV-3400SN-IN-00-00	10-32 unf	10-32 unf	250 PSI	0.39	0.95	0.16	0.32
FCV-3400SN-IN-02-02	1/8 - 27	1/8 - 27	250 PSI	0.65	1.18	0.22	0.55
FCV-3400SN-IN-04-04	1/4 - 18	1/4 - 18	250 PSI	0.87	1.42	0.28	0.67
FCV-3400SN-IN-06-06	3/8 - 18	3/8 - 18	250 PSI	1.04	1.61	0.30	0.79

FCV-3400SN-OUT

FP x SFX (MPX) 90° - Flow OUT - Nickel Plated Brass



Part No.	Female Pipe	SFX (MPX)	Pressure	Length	Height	Assembly	MPX Hex
FCV-3400SN-OUT-00-00	10-32 unf	10-32 unf	250 PSI	0.39	0.94	0.16	0.32
FCV-3400SN-OUT-02-02	1/8 - 27	1/8 - 27	250 PSI	0.65	1.18	0.22	0.55
FCV-3400SN-OUT-04-04	1/4 - 18	1/4 - 18	250 PSI	0.87	1.42	0.28	0.67
FCV-3400SN-OUT-06-06	3/8 - 18	3/8 - 18	250 PSI	1.04	1.61	0.30	0.79

Flow Control Valve Overview Pages 32-33

FCV-KNOB-1162N

PTC x PTC - BI-Flow - Nickel Plated Brass



Part No.	Push-To-Connect	Push-To-Connect	Pressure	Length	Height	Mt. Hole Dia.	Mt. Hole Spacing	Locknut Hex
FCV-KNOB-1162N-04-04	1/4" Tube	1/4" Tube	250 PSI	1.89	1.58-1.83	0.12	0.68	0.51
FCV-KNOB-1162N-06-06	3/8" Tube	3/8" Tube	250 PSI	2.27	1.93-2.16	0.16	0.79	0.71

FCV-KNOB-1168SN

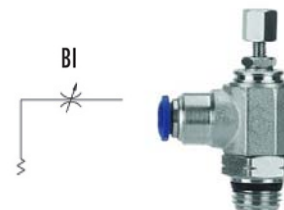
PTC x SFX (MPX) - BI-Flow - Nickel Plated Brass



Part No.	Push-To-Connect	SFX (MPX)	Pressure	Length	Height	Assembly	Mt. Hole Dia.	Mt. Hole Spacing	MPX Hex	Locknut Hex
FCV-KNOB-1168SN-04-04	1/4" Tube	1/4 - 18	250 PSI	1.10	1.59-1.83	0.28	0.12	0.68	0.51	0.51
FCV-KNOB-1168SN-04-06	1/4" Tube	3/8 - 18	250 PSI	2.51	1.93-2.16	0.28	0.16	0.79	0.63	0.71
FCV-KNOB-1168SN-06-06	3/8" Tube	3/8 - 18	250 PSI	2.43	1.93-2.16	0.30	0.16	0.79	0.67	0.71

FCV-KNOB-1169SN-BI

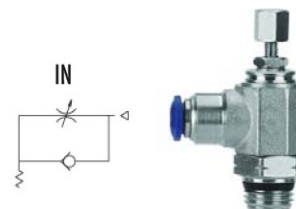
PTC x SFX (MPX) 90° - BI-Flow - Nickel Plated Brass



Part No.	Push-To-Connect	SFX (MPX)	Pressure	Length	Height	Assembly	MPX Hex
FCV-KNOB-1169SN-BI-02-00	1/8" Tube	10-32 unf	250 PSI	0.75	1.29-1.48	0.16	0.32
FCV-KNOB-1169SN-BI-02-02	1/8" Tube	1/8 - 27	250 PSI	0.83	1.61-1.83	0.22	0.55
FCV-KNOB-1169SN-BI-25-00	5/32" Tube	10-32 unf	250 PSI	0.75	1.30-1.47	0.16	0.32
FCV-KNOB-1169SN-BI-25-02	5/32" Tube	1/8 - 27	250 PSI	0.83	1.61-1.83	0.22	0.55
FCV-KNOB-1169SN-BI-04-02	1/4" Tube	1/8 - 27	250 PSI	0.87	1.61-1.83	0.22	0.55
FCV-KNOB-1169SN-BI-04-04	1/4" Tube	1/4 - 18	250 PSI	0.98	1.85-2.09	0.28	0.67
FCV-KNOB-1169SN-BI-06-04	3/8" Tube	1/4 - 18	250 PSI	1.18	2.21-2.48	0.30	0.79
FCV-KNOB-1169SN-BI-06-06	3/8" Tube	3/8 - 18	250 PSI	1.18	2.21-2.48	0.30	0.79
FCV-KNOB-1169SN-BI-08-06	1/2" Tube	3/8 - 18	250 PSI	1.28	2.21-2.48	0.30	0.79
FCV-KNOB-1169SN-BI-08-08	1/2" Tube	1/2 - 14	250 PSI	1.38	2.40-2.72	0.35	0.95

FCV-KNOB-1169SN-IN

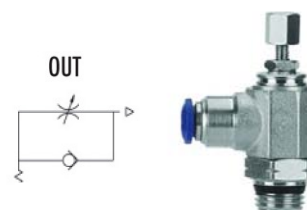
PTC x SFX (MPX) 90° - Flow IN - Nickel Plated Brass



Part No.	Push-To-Connect	SFX (MPX)	Pressure	Length	Height	Assembly	MPX Hex
FCV-KNOB-1169SN-IN-02-00	1/8" Tube	10-32 unf	250 PSI	0.75	1.30-1.48	0.16	0.32
FCV-KNOB-1169SN-IN-02-02	1/8" Tube	1/8 - 27	250 PSI	0.83	1.61-1.83	0.22	0.55
FCV-KNOB-1169SN-IN-25-00	5/32" Tube	10-32 unf	250 PSI	0.75	1.30-1.47	0.16	0.32
FCV-KNOB-1169SN-IN-25-02	5/32" Tube	1/8 - 27	250 PSI	0.83	1.61-1.83	0.22	0.55
FCV-KNOB-1169SN-IN-04-02	1/4" Tube	1/8 - 27	250 PSI	0.87	1.61-1.83	0.22	0.55
FCV-KNOB-1169SN-IN-04-04	1/4" Tube	1/4 - 18	250 PSI	0.98	1.85-2.09	0.28	0.67
FCV-KNOB-1169SN-IN-06-04	3/8" Tube	1/4 - 18	250 PSI	1.18	2.21-2.48	0.30	0.79
FCV-KNOB-1169SN-IN-06-06	3/8" Tube	3/8 - 18	250 PSI	1.18	2.21-2.48	0.30	0.79
FCV-KNOB-1169SN-IN-08-06	1/2" Tube	3/8 - 18	250 PSI	1.28	2.21-2.48	0.30	0.79
FCV-KNOB-1169SN-IN-08-08	1/2" Tube	1/2 - 14	250 PSI	1.38	2.40-2.72	0.35	0.95

FCV-KNOB-1169SN-OUT

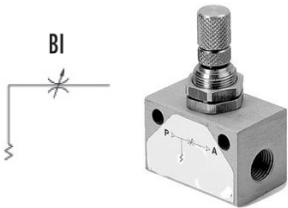
PTC x SFX (MPX) 90° - Flow OUT - Nickel Plated Brass



Part No.	Push-To-Connect	SFX (MPX)	Pressure	Length	Height	Assembly	MPX Hex
FCV-KNOB-1169SN-OUT-02-00	1/8" Tube	10-32 unf	250 PSI	0.75	1.30-1.48	0.16	0.32
FCV-KNOB-1169SN-OUT-02-02	1/8" Tube	1/8 - 27	250 PSI	0.83	1.61-1.83	0.22	0.55
FCV-KNOB-1169SN-OUT-25-00	5/32" Tube	10-32 unf	250 PSI	0.75	1.30-1.47	0.16	0.32
FCV-KNOB-1169SN-OUT-25-02	5/32" Tube	1/8 - 27	250 PSI	0.83	1.61-1.83	0.22	0.55
FCV-KNOB-1169SN-OUT-04-02	1/4" Tube	1/8 - 27	250 PSI	0.87	1.61-1.83	0.22	0.55
FCV-KNOB-1169SN-OUT-04-04	1/4" Tube	1/4 - 18	250 PSI	0.98	1.85-2.09	0.28	0.67
FCV-KNOB-1169SN-OUT-06-04	3/8" Tube	1/4 - 18	250 PSI	1.18	2.21-2.48	0.30	0.79
FCV-KNOB-1169SN-OUT-06-06	1/2" Tube	3/8 - 18	250 PSI	1.18	2.21-2.48	0.30	0.79
FCV-KNOB-1169SN-OUT-08-06	1/2" Tube	3/8 - 18	250 PSI	1.28	2.21-2.48	0.30	0.79
FCV-KNOB-1169SN-OUT-08-08	1/2" Tube	1/2 - 14	250 PSI	1.38	2.40-2.72	0.35	0.95

FCV-KNOB-3300N-BI

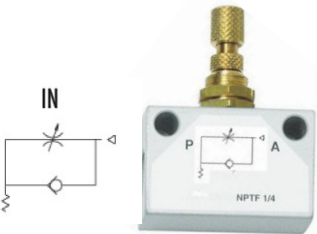
FP x FP - BI-Flow - Nickel Plated Brass



Part No.	Female Pipe	Female Pipe	Pressure	Length	Height	Mt. Hole Dia.	Mt. Hole Spacing	Width	Locknut Hex
FCV-KNOB-3300N-BI-02-02	1/8 - 27	1/8 - 27	250 PSI	1.38	1.89-2.28	0.18	0.98	0.71	0.59
FCV-KNOB-3300N-BI-04-04	1/4 - 18	1/4 - 18	250 PSI	1.81	2.20-2.60	0.26	1.38	0.79	0.59
FCV-KNOB-3300N-BI-06-06	3/8 - 18	3/8 - 18	250 PSI	1.97	2.44-2.83	0.26	1.38	0.98	0.87
FCV-KNOB-3300N-BI-08-08	1/2 - 14	1/2 - 14	250 PSI	2.36	2.83-3.31	0.26	1.73	0.98	0.87

FCV-KNOB-3300N-IN

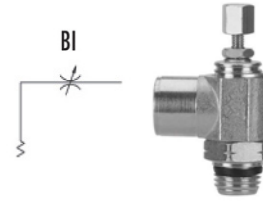
FP x FP - Flow IN - Nickel Plated Brass



Part No.	Female Pipe	Female Pipe	Pressure	Length	Height	Mt. Hole Dia.	Mt. Hole Spacing	Width	Locknut Hex
FCV-KNOB-3300N-IN-02-02	1/8 - 27	1/8 - 27	250 PSI	1.38	1.89-2.28	0.18	0.98	0.71	0.59
FCV-KNOB-3300N-IN-04-04	1/4 - 18	1/4 - 18	250 PSI	1.81	2.20-2.60	0.26	1.38	0.79	0.59
FCV-KNOB-3300N-IN-06-06	3/8 - 18	3/8 - 18	250 PSI	1.97	2.44-2.83	0.26	1.38	0.98	0.87
FCV-KNOB-3300N-IN-08-08	1/2 - 14	1/2 - 14	250 PSI	2.36	2.83-3.31	0.26	1.73	0.98	0.87

FCV-KNOB-3400SN-BI

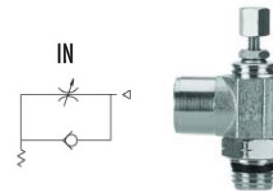
FP x SFX (MPX) 90° - BI-Flow - Nickel Plated Brass



Part No.	Female Pipe	SFX (MPX)	Pressure	Length	Height	Assembly	MPX Hex
FCV-KNOB-3400SN-BI-02-02	1/8 - 27	1/8 - 27	250 PSI	0.65	1.61–1.83	0.22	0.55
FCV-KNOB-3400SN-BI-04-04	1/4 - 18	1/4 - 18	250 PSI	0.87	1.85–2.09	0.28	0.67
FCV-KNOB-3400SN-BI-06-06	3/8 - 18	3/8 - 18	250 PSI	1.04	2.21–2.48	0.30	0.79

FCV-KNOB-3400SN-IN

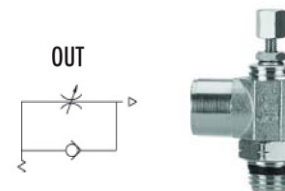
FP x SFX (MPX) 90° - Flow IN - Nickel Plated Brass



Part No.	Female Pipe	SFX (MPX)	Pressure	Length	Height	Assembly	MPX Hex
FCV-KNOB-3400SN-IN-02-02	1/8 - 27	1/8 - 27	250 PSI	0.65	1.61–1.83	0.22	0.55
FCV-KNOB-3400SN-IN-04-04	1/4 - 18	1/4 - 18	250 PSI	0.87	1.85–2.09	0.28	0.67
FCV-KNOB-3400SN-IN-06-06	3/8 - 18	3/8 - 18	250 PSI	1.04	2.21–2.48	0.30	0.79

FCV-KNOB-3400SN-OUT

FP x SFX (MPX) 90° - Flow OUT - Nickel Plated Brass



Part No.	Female Pipe	SFX (MPX)	Pressure	Length	Height	Assembly	MPX Hex
FCV-KNOB-3400SN-OUT-02-02	1/8 - 27	1/8 - 27	250 PSI	0.65	1.61–1.83	0.22	0.55
FCV-KNOB-3400SN-OUT-04-04	1/4 - 18	1/4 - 18	250 PSI	0.87	1.85–2.09	0.28	0.67
FCV-KNOB-3400SN-OUT-06-06	3/8 - 18	3/8 - 18	250 PSI	1.04	2.21–2.48	0.30	0.79

FCV-1169SP-BI

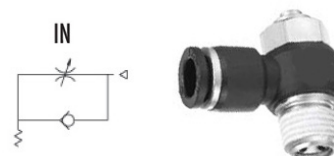
PTC x MPX 90° - BI-Flow - Polymer



Part No.	Push-To-Connect	Male Pipe Swivel	Pressure	Length	Height	Assembly	Hex
FCV-1169SP-BI-02-00	1/8" Tube	10-32 unf	150 PSI	0.78	0.36	0.16	0.31
FCV-1169SP-BI-02-02	1/8" Tube	1/8 - 27	150 PSI	0.86	0.47	0.32	0.50
FCV-1169SP-BI-25-00	5/32" Tube	10-32 unf	150 PSI	0.78	0.36	0.16	0.31
FCV-1169SP-BI-25-02	5/32" Tube	1/8 - 27	150 PSI	0.86	0.47	0.32	0.50
FCV-1169SP-BI-03-00	3/16" Tube	10-32 unf	150 PSI	0.89	0.36	0.16	0.31
FCV-1169SP-BI-03-02	3/16" Tube	1/8 - 27	150 PSI	0.91	0.47	0.32	0.50
FCV-1169SP-BI-03-04	3/16" Tube	1/4 - 18	150 PSI	1.00	0.47	0.43	0.56
FCV-1169SP-BI-03-06	3/16" Tube	3/8 - 18	150 PSI	1.07	0.61	0.48	0.75
FCV-1169SP-BI-04-00	1/4" Tube	10-32 unf	150 PSI	0.89	0.36	0.16	1.00
FCV-1169SP-BI-04-02	1/4" Tube	1/8 - 27	150 PSI	0.91	0.47	0.32	0.50
FCV-1169SP-BI-04-04	1/4" Tube	1/4 - 18	150 PSI	1.00	0.47	0.43	0.56
FCV-1169SP-BI-04-06	1/4" Tube	3/8 - 18	150 PSI	1.07	0.61	0.47	0.75
FCV-1169SP-BI-05-02	5/16" Tube	1/8 - 27	150 PSI	0.97	0.47	0.32	0.50
FCV-1169SP-BI-05-04	5/16" Tube	1/4 - 18	150 PSI	1.06	0.47	0.43	0.56
FCV-1169SP-BI-05-06	5/16" Tube	3/8 - 18	150 PSI	1.13	0.61	0.47	0.75
FCV-1169SP-BI-05-08	5/16" Tube	1/2 - 14	150 PSI	1.20	0.69	0.59	1.00
FCV-1169SP-BI-06-04	3/8" Tube	1/4 - 18	150 PSI	1.22	0.47	0.43	0.56
FCV-1169SP-BI-06-06	3/8" Tube	3/8 - 18	150 PSI	1.22	0.61	0.47	0.75
FCV-1169SP-BI-06-08	3/8" Tube	1/2 - 14	150 PSI	1.34	0.69	0.59	1.00
FCV-1169SP-BI-08-06	1/2" Tube	3/8 - 18	150 PSI	1.31	0.61	0.47	0.75
FCV-1169SP-BI-08-08	1/2" Tube	1/2 - 14	150 PSI	1.39	0.69	0.59	1.00

FCV-1169SP-IN

PTC x MPX 90° - Flow IN - Polymer

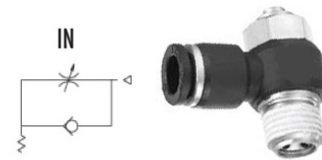


Part No.	Push-To-Connect	Male Pipe Swivel	Pressure	Length	Height	Assembly	Hex
FCV-1169SP-IN-02-00	1/8" Tube	10-32 unf	150 PSI	0.78	0.36	0.16	0.56
FCV-1169SP-IN-02-02	1/8" Tube	1/8 - 27	150 PSI	0.86	0.47	0.32	0.50
FCV-1169SP-IN-25-00	5/32" Tube	10-32 unf	150 PSI	0.78	0.36	0.16	0.56
FCV-1169SP-IN-25-02	5/32" Tube	1/8 - 27	150 PSI	0.86	0.47	0.32	0.50
FCV-1169SP-IN-03-00	3/16" Tube	10-32 unf	150 PSI	0.89	0.36	0.16	0.56
FCV-1169SP-IN-03-02	3/16" Tube	1/8 - 27	150 PSI	0.91	0.47	0.32	0.50
FCV-1169SP-IN-03-04	3/16" Tube	1/4 - 18	150 PSI	1.00	0.47	0.43	0.56
FCV-1169SP-IN-03-06	3/16" Tube	3/8 - 18	150 PSI	1.07	0.61	0.47	0.75
FCV-1169SP-IN-04-00	1/4" Tube	10-32 unf	150 PSI	0.89	0.36	0.16	1.00
FCV-1169SP-IN-04-02	1/4" Tube	1/8 - 27	150 PSI	0.91	0.47	0.32	0.50
FCV-1169SP-IN-04-04	1/4" Tube	1/4 - 18	150 PSI	1.00	0.47	0.43	0.56

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FCV-1169SP-IN

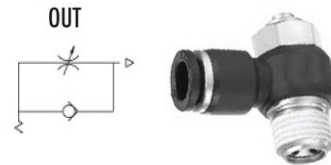
PTC x MPX 90° - Flow IN - Polymer



Part No.	Push-To-Connect	Male Pipe Swivel	Pressure	Length	Height	Assembly	Hex
FCV-1169SP-IN-04-06	1/4" Tube	3/8 - 18	150 PSI	1.07	0.61	0.47	0.75
FCV-1169SP-IN-05-02	5/16" Tube	1/8 - 27	150 PSI	0.97	0.47	0.32	0.50
FCV-1169SP-IN-05-04	5/16" Tube	1/4 - 18	150 PSI	1.06	0.47	0.43	0.56
FCV-1169SP-IN-05-06	5/16" Tube	3/8 - 18	150 PSI	1.13	0.61	0.47	0.75
FCV-1169SP-IN-05-08	5/16" Tube	1/2 - 14	150 PSI	1.20	0.69	0.59	1.00
FCV-1169SP-IN-06-04	3/8" Tube	1/4 - 18	150 PSI	1.22	0.47	0.43	0.56
FCV-1169SP-IN-06-06	3/8" Tube	3/8 - 18	150 PSI	1.22	0.61	0.47	0.75
FCV-1169SP-IN-06-08	3/8" Tube	1/2 - 14	150 PSI	1.34	0.69	0.59	1.00
FCV-1169SP-IN-08-06	1/2" Tube	3/8 - 18	150 PSI	1.31	0.61	0.47	0.75
FCV-1169SP-IN-08-08	1/2" Tube	1/2 - 14	150 PSI	1.39	0.69	0.59	1.00

FCV-1169SP-OUT

PTC x MPX 90° - Flow OUT - Polymer



Part No.	Push-To-Connect	Male Pipe Swivel	Pressure	Length	Height	Assembly	Hex
FCV-1169SP-OUT-02-00	1/8" Tube	10-32 unf	150 PSI	0.78	0.36	0.16	0.56
FCV-1169SP-OUT-02-02	1/8" Tube	1/8 - 27	150 PSI	0.86	0.47	0.32	0.50
FCV-1169SP-OUT-25-00	5/32" Tube	10-32 unf	150 PSI	0.78	0.36	0.16	0.56
FCV-1169SP-OUT-25-02	5/32" Tube	1/8 - 27	150 PSI	0.86	0.47	0.32	0.50
FCV-1169SP-OUT-03-00	3/16" Tube	10-32 unf	150 PSI	0.89	0.36	0.16	0.56
FCV-1169SP-OUT-03-02	3/16" Tube	1/8 - 27	150 PSI	0.91	0.47	0.32	0.50
FCV-1169SP-OUT-03-04	3/16" Tube	1/4 - 18	150 PSI	1.00	0.47	0.43	0.56
FCV-1169SP-OUT-03-06	3/16" Tube	3/8 - 18	150 PSI	1.07	0.61	0.47	0.75
FCV-1169SP-OUT-04-00	1/4" Tube	10-32 unf	150 PSI	0.89	0.36	0.16	1.00
FCV-1169SP-OUT-04-02	1/4" Tube	1/8 - 27	150 PSI	0.91	0.47	0.32	0.50
FCV-1169SP-OUT-04-04	1/4" Tube	1/4 - 18	150 PSI	1.00	0.47	0.43	0.56
FCV-1169SP-OUT-04-06	1/4" Tube	3/8 - 18	150 PSI	1.07	0.61	0.47	0.75
FCV-1169SP-OUT-05-02	5/16" Tube	1/8 - 27	150 PSI	0.97	0.47	0.32	0.50
FCV-1169SP-OUT-05-04	5/16" Tube	1/4 - 18	150 PSI	1.06	0.47	0.43	0.56
FCV-1169SP-OUT-05-06	5/16" Tube	3/8 - 18	150 PSI	1.13	0.61	0.47	0.75
FCV-1169SP-OUT-05-08	5/16" Tube	1/2 - 14	150 PSI	1.20	0.69	0.59	1.00
FCV-1169SP-OUT-06-04	3/8" Tube	1/4 - 18	150 PSI	1.22	0.47	0.43	0.56
FCV-1169SP-OUT-06-06	3/8" Tube	3/8 - 18	150 PSI	1.22	0.61	0.47	0.75
FCV-1169SP-OUT-06-08	3/8" Tube	1/2 - 14	150 PSI	1.34	0.69	0.59	1.00
FCV-1169SP-OUT-08-06	1/2" Tube	3/8 - 18	150 PSI	1.31	0.61	0.47	0.75
FCV-1169SP-OUT-08-08	1/2" Tube	1/2 - 14	150 PSI	1.39	0.69	0.59	1.00

FCV-KNOB-1162P

PTC x PTC - Polymer



Part No.	Push-To-Connect	Push-To-Connect	Pressure	Length	Height
FCV-KNOB-1162P-02-02	1/8" Tube	1/8" Tube	150 PSI	1.89	0.41
FCV-KNOB-1162P-25-25	5/32" Tube	5/32" Tube	150 PSI	1.89	0.42
FCV-KNOB-1162P-03-03	3/16" Tube	3/16" Tube	150 PSI	1.91	0.44
FCV-KNOB-1162P-04-04	1/4" Tube	1/4" Tube	150 PSI	1.93	0.44
FCV-KNOB-1162P-05-05	5/16" Tube	5/16" Tube	150 PSI	2.17	0.47
FCV-KNOB-1162P-06-06	3/8" Tube	3/8" Tube	150 PSI	2.48	0.48
FCV-KNOB-1162P-08-08	1/2" Tube	1/2" Tube	150 PSI	2.91	0.62

FCV-KNOB-1168SP

PTC x MPX - Polymer



Part No.	Push-To-Connect	Male Pipe Swivel	Pressure	Length	Height	Assembly	MPX Hex
FCV-KNOB-1168SP-02-02	1/8" Tube	1/8 - 27	150 PSI	2.19	0.41	0.32	0.44
FCV-KNOB-1168SP-25-02	5/32" Tube	1/8 - 27	150 PSI	2.19	0.41	0.32	0.44
FCV-KNOB-1168SP-03-02	3/16" Tube	1/8 - 27	150 PSI	2.25	0.44	0.32	0.50
FCV-KNOB-1168SP-04-02	1/4" Tube	1/8 - 27	150 PSI	2.25	0.44	0.32	0.50
FCV-KNOB-1168SP-04-04	1/4" Tube	1/4 - 18	150 PSI	2.34	0.44	0.43	0.56
FCV-KNOB-1168SP-05-02	5/16" Tube	1/8 - 27	150 PSI	2.45	0.47	0.32	0.56
FCV-KNOB-1168SP-05-04	5/16" Tube	1/4 - 18	150 PSI	2.57	0.47	0.43	0.56
FCV-KNOB-1168SP-05-06	5/16" Tube	3/8 - 18	150 PSI	2.63	0.47	0.47	0.69
FCV-KNOB-1168SP-06-02	3/8" Tube	1/8 - 27	150 PSI	2.75	0.48	0.32	0.69
FCV-KNOB-1168SP-06-04	3/8" Tube	1/4 - 18	150 PSI	2.87	0.48	0.43	0.69
FCV-KNOB-1168SP-06-06	3/8" Tube	3/8 - 18	150 PSI	2.91	0.48	0.47	0.69
FCV-KNOB-1168SP-06-08	3/8" Tube	1/2 - 14	150 PSI	3.06	0.48	0.59	0.88
FCV-KNOB-1168SP-08-02	1/2" Tube	1/8 - 27	150 PSI	3.24	0.61	0.43	0.75
FCV-KNOB-1168SP-08-04	1/2" Tube	1/4 - 18	150 PSI	3.36	0.61	0.43	0.75
FCV-KNOB-1168SP-08-06	1/2" Tube	3/8 - 18	150 PSI	3.40	0.61	0.47	0.75
FCV-KNOB-1168SP-08-08	1/2" Tube	1/2 - 14	150 PSI	3.54	0.61	0.59	0.88

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FCV-KNOB-1168RSP*

REVERSE - PTC x MPX INLET - Polymer



INLET							
Part No.	Push-To-Connect	Male Pipe Swivel	Pressure	Length	Height	Assembly	MPX Hex
FCV-KNOB-1168RSP-02-02	1/8" Tube	1/8 - 27	150 PSI	2.19	0.41	0.32	0.44
FCV-KNOB-1168RSP-25-02	5/32" Tube	1/8 - 27	150 PSI	2.19	0.41	0.32	0.44
FCV-KNOB-1168RSP-03-02	3/16" Tube	1/8 - 27	150 PSI	2.25	0.44	0.32	0.50
FCV-KNOB-1168RSP-04-02	1/4" Tube	1/8 - 27	150 PSI	2.25	0.44	0.32	0.50
FCV-KNOB-1168RSP-04-04	1/4" Tube	1/4 - 18	150 PSI	2.34	0.44	0.43	0.56
FCV-KNOB-1168RSP-05-02	5/16" Tube	1/8 - 27	150 PSI	2.45	0.47	0.32	0.56
FCV-KNOB-1168RSP-05-04	5/16" Tube	1/4 - 18	150 PSI	2.57	0.47	0.43	0.56
FCV-KNOB-1168RSP-05-06	5/16" Tube	3/8 - 18	150 PSI	2.63	0.47	0.47	0.69
FCV-KNOB-1168RSP-06-02	3/8" Tube	1/8 - 27	150 PSI	2.75	0.48	0.32	0.69
FCV-KNOB-1168RSP-06-04	3/8" Tube	1/4 - 18	150 PSI	2.87	0.48	0.43	0.69
FCV-KNOB-1168RSP-06-06	3/8" Tube	3/8 - 18	150 PSI	2.91	0.48	0.47	0.69
FCV-KNOB-1168RSP-06-08	3/8" Tube	1/2 - 14	150 PSI	3.06	0.48	0.59	0.88
FCV-KNOB-1168RSP-08-02	1/2" Tube	1/8 - 27	150 PSI	3.24	0.61	0.43	0.75
FCV-KNOB-1168RSP-08-04	1/2" Tube	1/4 - 18	150 PSI	3.36	0.61	0.43	0.75
FCV-KNOB-1168RSP-08-06	1/2" Tube	3/8 - 18	150 PSI	3.40	0.61	0.47	0.75
FCV-KNOB-1168RSP-08-08	1/2" Tube	1/2 - 14	150 PSI	3.54	0.61	0.59	0.88

* REVERSE Flow: The Male Pipe Swivel is the INLET.

FCV-KNOB-3325SP

MPX x MPX - Polymer



Part No.	Male Pipe Swivel	Male Pipe Swivel	Pressure	Length	Height	Assembly	MPX Hex
FCV-KNOB-3325SP-02-02	1/8 - 27	1/8 - 27	150 PSI	2.56	0.41	0.32	0.50
FCV-KNOB-3325SP-04-04	1/4 - 18	1/4 - 18	150 PSI	2.98	0.47	0.43	0.56
FCV-KNOB-3325SP-06-06	3/8 - 18	3/8 - 18	150 PSI	3.33	0.48	0.47	0.69
FCV-KNOB-3325SP-08-08	1/2 - 14	1/2 - 14	150 PSI	4.12	0.61	0.59	0.88

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FCV-KNOB-1169SP-BI

PTC x MPX 90° - BI-Flow - Polymer



Part No.	Push-To-Connect	Male Pipe Swivel	Pressure	Length	Height	Assembly	Hex
FCV-KNOB-1169SP-BI-02-00	1/8" Tube	10-32 unf	150 PSI	0.78	0.36	0.16	0.56
FCV-KNOB-1169SP-BI-02-02	1/8" Tube	1/8 - 27	150 PSI	0.86	0.47	0.32	0.50
FCV-KNOB-1169SP-BI-25-00	5/32" Tube	10-32 unf	150 PSI	0.78	0.36	0.16	0.56
FCV-KNOB-1169SP-BI-25-02	5/32" Tube	1/8 - 27	150 PSI	0.86	0.47	0.32	0.50
FCV-KNOB-1169SP-BI-03-00	3/16" Tube	10-32 unf	150 PSI	0.89	0.36	0.16	0.56
FCV-KNOB-1169SP-BI-03-02	3/16" Tube	1/8 - 27	150 PSI	0.91	0.47	0.32	0.50
FCV-KNOB-1169SP-BI-03-04	3/16" Tube	1/4 - 18	150 PSI	1.00	0.47	0.43	0.56
FCV-KNOB-1169SP-BI-03-06	3/16" Tube	3/8 - 18	150 PSI	1.07	0.61	0.47	0.75
FCV-KNOB-1169SP-BI-04-00	1/4" Tube	10-32 unf	150 PSI	0.89	0.36	0.16	0.56
FCV-KNOB-1169SP-BI-04-02	1/4" Tube	1/8 - 27	150 PSI	0.91	0.47	0.32	0.50
FCV-KNOB-1169SP-BI-04-04	1/4" Tube	1/4 - 18	150 PSI	1.00	0.47	0.43	0.56
FCV-KNOB-1169SP-BI-04-06	1/4" Tube	3/8 - 18	150 PSI	1.07	0.61	0.47	0.75
FCV-KNOB-1169SP-BI-05-02	5/16" Tube	1/8 - 27	150 PSI	0.97	0.47	0.32	0.50
FCV-KNOB-1169SP-BI-05-04	5/16" Tube	1/4 - 18	150 PSI	1.06	0.47	0.43	0.56
FCV-KNOB-1169SP-BI-05-06	5/16" Tube	3/8 - 18	150 PSI	1.13	0.61	0.47	0.75
FCV-KNOB-1169SP-BI-05-08	5/16" Tube	1/2 - 14	150 PSI	1.20	0.69	0.59	1.00
FCV-KNOB-1169SP-BI-06-04	3/8" Tube	1/4 - 18	150 PSI	1.22	0.47	0.43	0.56
FCV-KNOB-1169SP-BI-06-06	3/8" Tube	3/8 - 18	150 PSI	1.22	0.61	0.47	0.75
FCV-KNOB-1169SP-BI-06-08	3/8" Tube	1/2 - 14	150 PSI	1.34	0.69	0.59	1.00
FCV-KNOB-1169SP-BI-08-06	1/2" Tube	3/8 - 18	150 PSI	1.31	0.61	0.47	0.75
FCV-KNOB-1169SP-BI-08-08	1/2" Tube	1/2 - 14	150 PSI	1.39	0.69	0.59	1.00

FCV-KNOB-1169SP-IN

PTC x MPX 90° - Flow IN - Polymer



Part No.	Push-To-Connect	Male Pipe Swivel	Pressure	Length	Height	Assembly	Hex
FCV-KNOB-1169SP-IN-02-00	1/8" Tube	10-32 unf	150 PSI	0.78	0.36	0.16	0.56
FCV-KNOB-1169SP-IN-02-02	1/8" Tube	1/8 - 27	150 PSI	0.86	0.47	0.32	0.50
FCV-KNOB-1169SP-IN-25-00	5/32" Tube	10-32 unf	150 PSI	0.78	0.36	0.16	0.56
FCV-KNOB-1169SP-IN-25-02	5/32" Tube	1/8 - 27	150 PSI	0.86	0.47	0.32	0.50
FCV-KNOB-1169SP-IN-03-00	3/16" Tube	10-32 unf	150 PSI	0.89	0.36	0.16	0.56
FCV-KNOB-1169SP-IN-03-02	3/16" Tube	1/8 - 27	150 PSI	0.91	0.47	0.32	0.50
FCV-KNOB-1169SP-IN-03-04	3/16" Tube	1/4 - 18	150 PSI	1.00	0.47	0.43	0.56
FCV-KNOB-1169SP-IN-03-06	3/16" Tube	3/8 - 18	150 PSI	1.07	0.61	0.47	0.75
FCV-KNOB-1169SP-IN-04-00	1/4" Tube	10-32 unf	150 PSI	0.89	0.36	0.16	1.00
FCV-KNOB-1169SP-IN-04-02	1/4" Tube	1/8 - 27	150 PSI	0.91	0.47	0.32	0.50
FCV-KNOB-1169SP-IN-04-04	1/4" Tube	1/4 - 18	150 PSI	1.00	0.47	0.43	0.56

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FCV-KNOB-1169SP-IN

PTC x MPX 90° - Flow IN - Polymer



Part No.	Push-To-Connect	Male Pipe Swivel	Pressure	Length	Height	Assembly	Hex
FCV-KNOB-1169SP-IN-04-06	1/4" Tube	3/8 - 18	150 PSI	1.07	0.61	0.47	0.75
FCV-KNOB-1169SP-IN-05-02	5/16" Tube	1/8 - 27	150 PSI	0.97	0.47	0.32	0.50
FCV-KNOB-1169SP-IN-05-04	5/16" Tube	1/4 - 18	150 PSI	1.06	0.47	0.43	0.56
FCV-KNOB-1169SP-IN-05-06	5/16" Tube	3/8 - 18	150 PSI	1.13	0.61	0.47	0.75
FCV-KNOB-1169SP-IN-05-08	5/16" Tube	1/2 - 14	150 PSI	1.20	0.69	0.59	1.00
FCV-KNOB-1169SP-IN-06-04	3/8" Tube	1/4 - 18	150 PSI	1.22	0.47	0.43	0.56
FCV-KNOB-1169SP-IN-06-06	3/8" Tube	3/8 - 18	150 PSI	1.22	0.61	0.47	0.75
FCV-KNOB-1169SP-IN-06-08	3/8" Tube	1/2 - 14	150 PSI	1.34	0.69	0.59	1.00
FCV-KNOB-1169SP-IN-08-06	1/2" Tube	3/8 - 18	150 PSI	1.31	0.61	0.47	0.75
FCV-KNOB-1169SP-IN-08-08	1/2" Tube	1/2 - 14	150 PSI	1.39	0.69	0.59	1.00

FCV-KNOB-1169SP-OUT

PTC x MPX 90° - Flow OUT - Polymer



Part No.	Push-To-Connect	Male Pipe Swivel	Pressure	Length	Height	Assembly	Hex
FCV-KNOB-1169SP-OUT-02-00	1/8" Tube	10-32 unf	150 PSI	0.78	0.36	0.16	0.56
FCV-KNOB-1169SP-OUT-02-02	1/8" Tube	1/8 - 27	150 PSI	0.86	0.47	0.32	0.50
FCV-KNOB-1169SP-OUT-25-00	5/32" Tube	10-32 unf	150 PSI	0.78	0.36	0.16	0.56
FCV-KNOB-1169SP-OUT-25-02	5/32" Tube	1/8 - 27	150 PSI	0.86	0.47	0.32	0.50
FCV-KNOB-1169SP-OUT-03-00	3/16" Tube	10-32 unf	150 PSI	0.89	0.36	0.16	0.56
FCV-KNOB-1169SP-OUT-03-02	3/16" Tube	1/8 - 27	150 PSI	0.91	0.47	0.32	0.50
FCV-KNOB-1169SP-OUT-03-04	3/16" Tube	1/4 - 18	150 PSI	1.00	0.47	0.43	0.56
FCV-KNOB-1169SP-OUT-03-06	3/16" Tube	3/8 - 18	150 PSI	1.07	0.61	0.47	0.75
FCV-KNOB-1169SP-OUT-04-00	1/4" Tube	10-32 unf	150 PSI	0.89	0.36	0.16	1.00
FCV-KNOB-1169SP-OUT-04-02	1/4" Tube	1/8 - 27	150 PSI	0.91	0.47	0.32	0.50
FCV-KNOB-1169SP-OUT-04-04	1/4" Tube	1/4 - 18	150 PSI	1.00	0.47	0.43	0.56
FCV-KNOB-1169SP-OUT-04-06	1/4" Tube	3/8 - 18	150 PSI	1.07	0.61	0.47	0.75
FCV-KNOB-1169SP-OUT-05-02	5/16" Tube	1/8 - 27	150 PSI	0.97	0.47	0.32	0.50
FCV-KNOB-1169SP-OUT-05-04	5/16" Tube	1/4 - 18	150 PSI	1.06	0.47	0.43	0.56
FCV-KNOB-1169SP-OUT-05-06	5/16" Tube	3/8 - 18	150 PSI	1.13	0.61	0.47	0.75
FCV-KNOB-1169SP-OUT-05-08	5/16" Tube	1/2 - 14	150 PSI	1.20	0.69	0.59	1.00
FCV-KNOB-1169SP-OUT-06-04	3/8" Tube	1/4 - 18	150 PSI	1.22	0.47	0.43	0.56
FCV-KNOB-1169SP-OUT-06-06	3/8" Tube	3/8 - 18	150 PSI	1.22	0.61	0.47	0.75
FCV-KNOB-1169SP-OUT-06-08	3/8" Tube	1/2 - 14	150 PSI	1.34	0.69	0.59	1.00
FCV-KNOB-1169SP-OUT-08-06	1/2" Tube	3/8 - 18	150 PSI	1.31	0.61	0.47	0.75
FCV-KNOB-1169SP-OUT-08-08	1/2" Tube	1/2 - 14	150 PSI	1.39	0.69	0.59	1.00

Gate Valves / Ground Plug Valves

Gate Valve

Features:

- Good for Cold Water, Oil, and Gas
- NON-Rising Stem
- Solid Wedge Gate
- Cast Brass Body
- Cast Iron Hand Wheel
- Buna-N Gland Packing
- Good for Diesel Fuel
- Female Pipe Threads
- Thread Ends to ANSI B1.20.1
- NOT Lead-Free Compliant
- **Temperature**
–0° to +150° F (–18° to +65° C)

GV-30202

FP x FP - Brass

Part No.	Female Pipe	Female Pipe	WOG	Length	Height	Handle Dia.
GV-30202-04	1/4 - 18	1/4 - 18	200 PSI	1.65	2.75	2.09
GV-30202-06	3/8 - 18	3/8 - 18	200 PSI	1.62	2.76	2.13
GV-30202-08	1/2 - 14	1/2 - 14	200 PSI	1.69	2.84	2.13
GV-30202-12	3/4 - 14	3/4 - 14	200 PSI	1.85	3.31	2.13
GV-30202-16	1 - 11 1/2	1 - 11 1/2	200 PSI	2.17	3.94	2.52
GV-30202-20	1 1/4 - 11 1/2	1 1/4 - 11 1/2	200 PSI	2.40	4.57	2.75
GV-30202-24	1 1/2 - 11 1/2	1 1/2 - 11 1/2	200 PSI	2.52	4.84	3.07
GV-30202-32	2 - 11 1/2	2 - 11 1/2	200 PSI	2.83	5.90	3.54
GV-30202-40	2 1/2 - 8	2 1/2 - 8	200 PSI	3.51	7.33	4.14
GV-30202-48	3 - 8	3 - 8	200 PSI	3.98	8.75	5.12
GV-30202-64	4 - 8	4 - 8	200 PSI	4.57	10.17	6.78



Ground Plug Valves

Features:

- Good for Air, Water, Gas, and Fluids
- For Automotive and Industrial Applications
- Brass Body and Handle
- Use With Copper, Aluminum, Steel, and Plastic Tubing
- Universal Lubricant Suitable for Most Common Fluids
- NOT for Gasoline, Natural Gas, LPG, Nuclear, or Aircraft Applications
- 360° Handle Rotation

GPV-42

MS x MS - Brass



GPV-44

MS x MS x MS - Brass



Part No.	Male SAE	Male SAE	Pressure
GPV-42-04-04	7/16 - 20	7/16 - 20	30 PSI
GPV-42-05-05	1/2 - 20	1/2 - 20	30 PSI
GPV-42-06-06	5/8 - 18	5/8 - 18	30 PSI
GPV-42-08-08 *	3/4 - 16	3/4 - 16	30 PSI
GPV-42-10-10 *	7/8 - 14	7/8 - 14	30 PSI

Part No.	Male SAE	Male SAE	Pressure
GPV-44-04-04-04	7/16 - 20	7/16 - 20	30 PSI
GPV-44-05-05-05	1/2 - 20	1/2 - 20	30 PSI
GPV-44-06-06-06	5/8 - 18	5/8 - 18	30 PSI

* Approved for AGA, LPG and Natural Gas Applications.

GPV-46

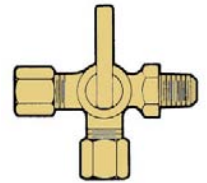
MS x FP - Brass



Part No.	Male SAE	Female Pipe	Pressure
GPV-46-06-08	5/8 - 18	1/2 - 14	30 PSI

GPV-71

CP x MP x CP - Brass



Part No.	Compression	Male Pipe	Pressure
GPV-71-04-02-04	7/16 - 24	1/8 - 27	30 PSI
GPV-71-05-02-05	1/2 - 24	1/8 - 27	30 PSI
GPV-71-05-04-05	1/2 - 24	1/4 - 18	30 PSI

GPV-48

MS x MP - Brass



Part No.	Male SAE	Male SAE	Pressure
GPV-48-04-02	7/16 - 20	1/8 - 27	30 PSI
GPV-48-04-04	7/16 - 20	1/4 - 18	30 PSI
GPV-48-05-02	1/2 - 20	1/8 - 27	30 PSI
GPV-48-05-04	1/2 - 20	1/4 - 18	30 PSI
GPV-48-06-04	5/8 - 18	1/4 - 18	30 PSI
GPV-48-08-06	3/4 - 16	3/8 - 18	30 PSI

GPV-3200

FP x MP - Brass



Part No.	Female Pipe	Male Pipe	Pressure
GPV-3200-02-02	1/8 - 27	1/8 - 27	30 PSI
GPV-3200-04-04	1/4 - 18	1/4 - 18	30 PSI
GPV-3200-06-06	3/8 - 18	3/8 - 18	30 PSI
GPV-3200-08-08	1/2 - 14	1/2 - 14	30 PSI

GPV-62

CP x CP - Brass



Part No.	Compression	Compression	Pressure
GPV-62-04-04	7/16 - 24	7/16 - 24	30 PSI
GPV-62-06-06	9/16 - 24	9/16 - 24	30 PSI

GPV-3300

FP x FP - Brass



Part No.	Female Pipe	Female Pipe	Pressure
GPV-3300-02-02	1/8 - 27	1/8 - 27	30 PSI
GPV-3300-04-04	1/4 - 18	1/4 - 18	30 PSI
GPV-3300-06-06 *	3/8 - 18	3/8 - 18	30 PSI
GPV-3300-08-08	1/2 - 14	1/2 - 14	80 PSI

* Approved for AGA, LPG and Natural Gas Applications.

GPV-68

CP x MP - Brass



Part No.	Compression	Male Pipe	Pressure
GPV-68-04-02	7/16 - 24	1/8 - 27	30 PSI
GPV-68-04-04	7/16 - 24	1/4 - 18	30 PSI
GPV-68-06-04 *	9/16 - 24	1/4 - 18	30 PSI

* Approved for AGA, LPG and Natural Gas Applications.

GPV-3325

MP x MP - Brass



Part No.	Male Pipe	Male Pipe	Pressure
GPV-3325-02-02	1/8 - 27	1/8 - 27	30 PSI
GPV-3325-04-04	1/4 - 18	1/4 - 18	30 PSI
GPV-3325-06-06	3/8 - 18	3/8 - 18	30 PSI
GPV-3325-08-08	1/2 - 14	1/2 - 14	80 PSI

Inline Filter

Features:

- Nickel Plated Brass Body
- Buna / Viton® Seal
- 1-Way Flow is Indicated by the Word "IN"
- NOT Lead-Free Compliant
- Temperature
-0° to +160° F (-18° to +71° C)

IF-1162N

PTC x PTC - Nickel Plated Brass



Part No.	Push-To-Connect	Push-To-Connect	Pressure	Length	Large Hex	Small Hex
IF-1162N-04-04	1/4" Tube	1/4" Tube	150 PSI	2.58	0.75	0.51
IF-1162N-06-06	3/8" Tube	3/8" Tube	150 PSI	2.83	0.75	0.67

Quick Exhaust Valve

Features:

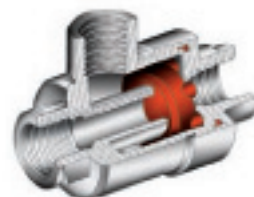
- Nickel Plated Brass Body
- Buna / Polyurethane Piston
- Nylon Cap Seal
- Female NPTF Pipe Threads
- NOT Lead-Free Compliant
- Temperature
-0° to +160° F (-18° to +71° C)

QEV-3700N

FP x FP x FP - Nickel Plated Brass

Part No.	Push-To-Connect	Push-To-Connect	Pressure	Length	Height	Hex
QEV-3700N-02-02-02	1/8 - 27	1/8 - 27	150 PSI	1.65	0.77	0.59
QEV-3700N-04-04-04	1/4 - 18	1/4 - 18	150 PSI	2.13	0.98	0.75
QEV-3700N-06-06-06	3/8 - 18	3/8 - 18	150 PSI	2.38	1.04	0.87
QEV-3700N-08-08-08	1/2 - 14	1/2 - 14	150 PSI	2.83	1.26	1.02
QEV-3700N-12-12-12	3/4 - 14	3/4 - 14	150 PSI	3.66	1.46	1.26
QEV-3700N-16-16-16	1 - 11 1/2	1 - 11 1/2	150 PSI	4.29	1.89	1.81

WARNING: This valve exhausts into the atmosphere - Do NOT use toxic, corrosive, or flammable media.



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Needle Valves

Features:

- Good For Hydraulic-Pneumatic Instrumentation Systems
- For Automotive and Industrial Applications
- Brass Body and Steel Handle
- Use With Copper, Aluminum, Steel, and Plastic Tubing
- Metal-To-Metal Seat
- Fine Thread Adjusts Easy and Holds Flow Setting
- NOT for Natural Gas, LPG, Nuclear, or Aircraft Applications
- **Temperature**
-40° to +250° F (-40° to +121° C)

NV-42

MS x MS - Brass



Part No.	Male SAE	Male SAE	Pressure
NV-42-04-04	7/16 - 20	7/16 - 20	150 PSI
NV-42-06-06	5/8 - 18	5/8 - 18	150 PSI

NV-62

CP x CP - Brass



Part No.	Compression	Compression	Pressure
NV-62-03-03	3/8 - 24	3/8 - 24	150 PSI
NV-62-04-04	7/16 - 24	7/16 - 24	150 PSI
NV-62-05-05	1/2 - 24	1/2 - 24	150 PSI
NV-62-06-06	9/16 - 24	9/16 - 24	150 PSI

NV-48

MS x MP - Brass



Part No.	Male SAE	Male Pipe	Pressure
NV-48-04-02	7/16 - 20	1/8 - 27	150 PSI
NV-48-04-04	7/16 - 20	1/4 - 18	150 PSI
NV-48-05-02	1/2 - 20	1/8 - 27	150 PSI
NV-48-05-04	1/2 - 20	1/4 - 18	150 PSI
NV-48-06-04	5/8 - 18	1/4 - 18	150 PSI

NV-68

CP x MP - Brass



Part No.	Compression	Male Pipe	Pressure
NV-68-03-02	3/8 - 24	1/8 - 27	150 PSI
NV-68-04-02	7/16 - 24	1/8 - 27	150 PSI
NV-68-04-04	7/16 - 24	1/4 - 18	150 PSI
NV-68-05-02	1/2 - 24	1/8 - 27	150 PSI
NV-68-06-04	9/16 - 24	1/4 - 18	150 PSI

NV-49

MS x MP 90° - Brass



Part No.	Male SAE	Male Pipe	Pressure
NV-49-04-02	7/16 - 20	1/8 - 27	150 PSI
NV-49-05-02	1/2 - 20	1/8 - 27	150 PSI
NV-49-05-04	1/2 - 20	1/4 - 18	150 PSI
NV-49-06-04	5/8 - 18	1/4 - 18	150 PSI

NV-69

CP x MP 90° - Brass



Part No.	Compression	Male Pipe	Pressure
NV-69-03-02	3/8 - 24	1/8 - 27	150 PSI
NV-69-04-02	7/16 - 24	1/8 - 27	150 PSI
NV-69-04-04	7/16 - 24	1/4 - 18	150 PSI
NV-69-05-02	1/2 - 24	1/8 - 27	150 PSI
NV-69-05-04	1/2 - 24	1/4 - 18	150 PSI
NV-69-06-02	9/16 - 24	1/8 - 27	150 PSI
NV-69-06-04	9/16 - 24	1/4 - 18	150 PSI

Needle Valves

NV-3200

FP x MP - Brass



Part No.	Female Pipe	Male Pipe	Pressure
NV-3200-02-02	1/8 - 27	1/8 - 27	150 PSI
NV-3200-04-04	1/4 - 18	1/4 - 18	150 PSI

NV-3300

FP x FP - Brass



Part No.	Female Pipe	Female Pipe	Pressure
NV-3300-02-02	1/8 - 27	1/8 - 27	150 PSI
NV-3300-04-04	1/4 - 18	1/4 - 18	150 PSI

NV-3325

MP x MP - Brass



Part No.	Male Pipe	Male Pipe	Pressure
NV-3325-02-02	1/8 - 27	1/8 - 27	150 PSI
NV-3325-04-04	1/4 - 18	1/4 - 18	150 PSI

NV-62-LF

CP x CP - LEAD-FREE Brass



Part No.	Compression	Compression	Pressure
NV-62-04-04-LF	7/16 - 24	7/16 - 24	150 PSI
NV-62-06-06-LF	9/16 - 24	9/16 - 24	150 PSI

NV-69-LF

CP x MP 90° - LEAD-FREE Brass



Part No.	Compression	Male Pipe	Pressure
NV-69-04-02-LF	7/16 - 24	1/8 - 27	150 PSI

Regulating Valves

Features:

- Good for Compressed Air
- Polymer Body
- Convenient Mounting Holes
- Nickel Plated Brass Threads
- Pre-Applied Teflon® NPT Thread
- Temperature
-32° to +140° F (-35° to +60° C)

RV-1162P

PTC x PTC - Polymer



Part No.	Push-To-Connect	Push-To-Connect	Pressure	Length	Height
RV-1162P-04-04	1/8" Tube	1/8" Tube	150 PSI	2.01	1.59
RV-1162P-05-04	5/16" Tube	1/4" Tube	150 PSI	2.02	1.59
RV-1162P-05-05	5/16" Tube	5/16" Tube	150 PSI	2.03	1.59
RV-1162P-06-06	3/8" Tube	3/8" Tube	150 PSI	2.45	1.75
RV-1162P-08-06	1/2" Tube	3/8" Tube	150 PSI	2.48	1.75
RV-1162P-08-08	1/2" Tube	1/2" Tube	150 PSI	2.50	1.75

RV-1168SP

PTC x MPX - Polymer



Part No.	Push-To-Connect	Male Pipe Swivel	Pressure	Length	Height	Assembly	MPX Hex
RV-1168SP-04-02	1/8" Tube	1/8 - 27	150 PSI	2.30	1.59	0.30	0.56
RV-1168SP-04-04	1/4" Tube	1/4 - 18	150 PSI	2.42	1.59	0.35	0.56
RV-1168SP-04-06	1/4" Tube	3/8 - 18	150 PSI	2.44	1.59	0.43	0.69
RV-1168SP-05-02	5/16" Tube	1/8 - 27	150 PSI	2.32	1.59	0.30	0.56
RV-1168SP-05-04	5/16" Tube	1/4 - 18	150 PSI	2.36	1.59	0.35	0.56
RV-1168SP-05-06	5/16" Tube	3/8 - 18	150 PSI	2.45	1.59	0.43	0.69
RV-1168SP-06-04	3/8" Tube	1/4 - 18	150 PSI	2.86	1.75	0.35	0.69
RV-1168SP-06-06	3/8" Tube	3/8 - 18	150 PSI	2.92	1.75	0.43	0.69
RV-1168SP-08-06	1/2" Tube	3/8 - 18	150 PSI	2.95	1.75	0.43	0.88
RV-1168SP-08-08	1/2" Tube	1/2 - 14	150 PSI	3.08	1.75	0.47	0.88

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RV-1168RSP*

REVERSE PTC x MPX INLET - Polymer



Part No.	INLET		Pressure	Length	Height	Assembly	MPX Hex
	Push-To-Connect	Male Pipe Swivel					
RV-1168RSP-04-02	1/4" Tube	1/8 - 27	150 PSI	2.30	1.59	0.30	0.56
RV-1168RSP-04-04	1/4" Tube	1/4 - 18	150 PSI	2.42	1.59	0.35	0.56
RV-1168RSP-04-06	1/4" Tube	3/8 - 18	150 PSI	2.44	1.59	0.43	0.69
RV-1168RSP-05-02	5/16" Tube	1/8 - 27	150 PSI	2.32	1.59	0.30	0.56
RV-1168RSP-05-04	5/16" Tube	1/4 - 18	150 PSI	2.36	1.59	0.35	0.56
RV-1168RSP-05-06	5/16" Tube	3/8 - 18	150 PSI	2.45	1.59	0.43	0.69
RV-1168RSP-06-04	3/8" Tube	1/4 - 18	150 PSI	2.86	1.75	0.35	0.70
RV-1168RSP-06-06	3/8" Tube	3/8 - 18	150 PSI	2.92	1.75	0.43	0.69
RV-1168RSP-08-06	1/2" Tube	3/8 - 18	150 PSI	2.95	1.75	0.43	0.88
RV-1168RSP-08-08	1/2" Tube	1/2 - 14	150 PSI	3.08	1.75	0.47	0.88

* REVERSE Flow: The Male Pipe Swivel is the INLET.

RV-9000SP

BSPX x BSPX - Polymer



Part No.	Male BSPT Swivel	Male BSPT Swivel	Pressure	Length	Height	Assembly	MPX Hex
RV-9000SP-02-02	1/8 - 28	1/8 - 28	150 PSI	2.56	1.59	0.30	14 mm
RV-9000SP-04-02	1/4 - 19	1/8 - 28	150 PSI	2.68	1.59	0.35	14 mm
RV-9000SP-04-04	1/4 - 19	1/4 - 19	150 PSI	2.68	1.59	0.35	14 mm
RV-9000SP-06-04	3/8 - 19	1/4 - 19	150 PSI	3.21	1.75	0.43	17 mm
RV-9000SP-06-06	3/8 - 19	3/8 - 19	150 PSI	3.31	1.75	0.43	17 mm
RV-9000SP-08-06	1/2 - 14	3/8 - 19	150 PSI	3.39	1.75	0.51	21 mm
RV-9000SP-08-08	1/2 - 14	1/2 - 14	150 PSI	3.46	1.75	0.51	21 mm

RV-3325SP

MPX x MPX - Polymer



Part No.	Male Pipe Swivel	Male Pipe Swivel	Pressure	Length	Height	Assembly	MPX Hex
RV-3325SP-02-02	1/8 - 27	1/8 - 27	150 PSI	2.60	1.59	0.32	0.56
RV-3325SP-04-02	1/4 - 18	1/8 - 27	150 PSI	2.72	1.59	0.43	0.56
RV-3325SP-04-04	1/4 - 18	1/4 - 18	150 PSI	2.83	1.59	0.43	0.56
RV-3325SP-06-04	3/8 - 18	1/4 - 18	150 PSI	3.27	1.75	0.47	0.69
RV-3325SP-06-06	3/8 - 18	3/8 - 18	150 PSI	3.39	1.75	0.47	0.69
RV-3325SP-08-06	1/2 - 14	3/8 - 18	150 PSI	3.52	1.75	0.59	0.88
RV-3325SP-08-08	1/2 - 14	1/2 - 14	150 PSI	3.66	1.75	0.59	0.88

Solid Bottom Valves

Features:

- Good for Water, Fuel Oil, Gas, Air, and LP Gas
- Brass Body
- Steel "Pointer" Lever Handle
- Solid Bottom, Spring Loaded Top
- Neoprene O-Ring Seal Prevents Leakage To/From the Atmosphere
- Packed with NON-Drying Synthetic Grease
- Quick 90° On/Off Operation With a 360° Rotation
- Use With Copper, Aluminum, Steel, and Plastic Tubing

SBV-3200

FP x MP - Brass



Part No.	Female Pipe	Male Pipe	Pressure
SBV-3200-02-02	1/8 - 27	1/8 - 27	30 PSI
SBV-3200-04-04	1/4 - 18	1/4 - 18	30 PSI

SBV-3700

FP x FP x FP - 3-Way - Brass



Part No.	Female Pipe	Female Pipe	Pressure
SBV-3700-04-04-04	1/4 - 18	1/4 - 18	30 PSI
SBV-3700-06-06-06	3/8 - 18	3/8 - 18	30 PSI

- Handle Clicks at Each 90° Increment
- Greaseless Non-Lubricated Design
- Relubrication NOT Required
- Panel Mount Holes
- NOT for LP Gas
- Temperature
-40° to +180° F (-40° to +82° C)

SBV-3300

FP x FP - Brass



Part No.	Female Pipe	Female Pipe	Pressure
SBV-3300-04-04	1/4 - 18	1/4 - 18	30 PSI

Swing Check Valve

Swing Check Valve

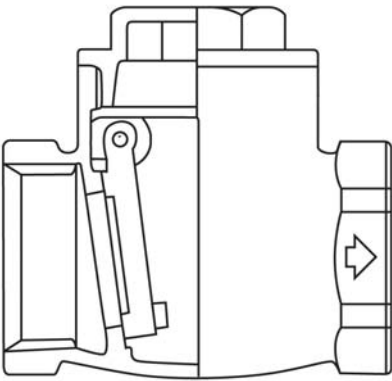
Features:

- Good for Water, Oil, and Gas Systems
- Residential and Commercial Applications
- Class 125
- Arrow Indicates 1-Way Flow
- Cast Brass Body and Cap
- Forged Brass Disc
- Brass Hinge Pin and Screw
- Female Pipe Threads
- Thread Ends to ANSI B1.20.1

SCV-3300H

FP x FP - Horizontal Type - Brass

Part No.	Female Pipe	Female Pipe	WOG	Length	Height
SCV-3300H-08-08	1/2 - 14	1/2 - 14	200 PSI	2.13	1.54
SCV-3300H-12-12	3/4 - 14	3/4 - 14	200 PSI	2.33	1.62
SCV-3300H-16-16	1 - 11 1/2	1 - 11 1/2	200 PSI	2.72	1.77
SCV-3300H-20-20	1 1/4 - 11 1/2	1 1/4 - 11 1/2	200 PSI	3.11	2.01
SCV-3300H-24-24	1 1/2 - 11 1/2	1 1/2 - 11 1/2	200 PSI	3.51	2.25
SCV-3300H-32-32	2 - 11 1/2	2 - 11 1/2	200 PSI	4.30	2.68
SCV-3300H-40-40	2 1/2 - 8	2 1/2 - 8	200 PSI	5.32	3.35
SCV-3300H-48-48	3 - 8	3 - 8	200 PSI	6.30	3.86
SCV-3300H-64-64	4 - 8	4 - 8	200 PSI	7.49	4.53



Slide Valve

Features:

- Chrome Plated Brass Body
- Aluminum Sleeve
- Buna-N Seal
- Steel Snap Ring
- Female NPTF Pipe Threads
- NOT Lead-Free Compliant
- Arrow Indicates 1-Way Flow
- **Temperature**
–0° to +160° F (–18° to +71° C)

SV-3300N

FP x FP - Nickel Plated Brass

Part No.	Female Pipe	Female Pipe	Pressure	Length	Sleeve Dia.	Hex
SV-3300N-02-02	1/8 - 27	1/8 - 27	150 PSI	1.89	0.98	0.55
SV-3300N-04-04	1/4 - 18	1/4 - 18	150 PSI	2.28	1.18	0.67
SV-3300N-06-06	3/8 - 18	3/8 - 18	150 PSI	2.76	1.38	0.87
SV-3300N-08-08	1/2 - 14	1/2 - 14	150 PSI	3.15	1.58	1.02

ON: Pressure flows from the inlet through a series of radial holes in the body to the air circuit.

OFF: Moving the sleeve to the closed position directs air from the circuit and exhausts it into the atmosphere.

WARNING: This valve exhausts into the atmosphere - Do NOT use toxic, corrosive, or flammable media.



Truck Valves

Features:

- Designed for the Trucking Industry
- For Fuel and Coolant Lines
- Forged Brass Body
- Steel "Wheel Type" Handle
- Buna-N O-Ring Seal
- NOT for Natural Gas, LPG, Nuclear, or Aircraft Applications

TV-49

MS x MP 90° - Brass



Part No.	Male SAE	Male Pipe	Pressure
TV-49-06-06	5/8 - 18	3/8 - 18	200 PSI
TV-49-06-08	5/8 - 18	1/2 - 14	200 PSI
TV-49-08-06	3/4 - 16	3/8 - 18	200 PSI
TV-49-08-08	3/4 - 16	1/2 - 14	200 PSI
TV-49-10-08	7/8 - 14	1/2 - 14	200 PSI

TV-3400

FP x MP 90° - Brass



Part No.	Female Pipe	Male Pipe	Pressure
TV-3400-06-06	3/8 - 18	3/8 - 18	200 PSI
TV-3400-06-08	3/8 - 18	1/2 - 14	200 PSI
TV-3400-08-08	1/2 - 14	1/2 - 14	200 PSI

TV-49R*

REVERSE - MS x MP 90° - Brass



Part No.	Male SAE	Male Pipe	Pressure
TV-49R-08-08	3/4 - 16	1/2 - 14	200 PSI
TV-49R-10-08	7/8 - 14	1/2 - 14	200 PSI

* REVERSE Threads: Threads are in reverse order.

TV-16890

Beaded Barb x MP 90° - Brass



Part No.	Hose Barb	Male Pipe	Pressure
TV-16890-06-06	3/8" Barb	3/8 - 18	200 PSI
TV-16890-10-06	5/8" Barb	3/8 - 18	200 PSI
TV-16890-10-08	5/8" Barb	1/2 - 14	200 PSI
TV-16890-12-06	3/4" Barb	3/8 - 18	200 PSI
TV-16890-12-08	3/4" Barb	1/2 - 14	200 PSI

PRESSURE CONNECTIONS CORP. TERMS OF SALE

The following Terms of Sale ("Terms and Conditions") are a part of the sales contract ("Contract") between Pressure Connections Corp. (PCC) and Customer for the sale of Equipment and/or Parts and the provision of any ancillary services (collectively "Equipment" and/or "Parts") described on the face side of this form. The Contract between with Customer consists solely of the form of Quotation received from PCC, if any, PCC's Invoice, these Terms and Conditions, and any other documents expressly incorporated into the Quotation; **The acceptance by Customer of delivery of the Equipment and/or Parts (whether or not Customer signs the acknowledgment on the face hereof) will be Customer's agreement to the Contract and these Terms and Conditions, to the exclusion of any prior, additional or different terms or conditions.**

1. Prices and Terms of Payment

- (a) Unless otherwise stated in this Contract, PCC's price quotations are subject to Customer acceptance within thirty (30) days, and may be withdrawn or canceled by PCC at any time after such date or before receipt of written notice of acceptance. Orders will be billed at prices in effect at time of shipment unless otherwise so stated in the Contract.
- (b) This Contract is subject to final approval (including credit approval) and acceptance by PCC's home office and is not binding on PCC until signed by an authorized officer of PCC and such written acceptance is delivered to Customer.
- (c) Prices do not include (and Customer shall pay when due) federal, state or local sales, use, excise, or other taxes, tariffs, or duties.
- (d) Customer shall make all payments, without any setoff or deduction, on the term of 1/2% 10, Net 30 Days, interest on any delinquent balance at a rate of the lesser of 1 1/2% for every 30 day period of delinquency or the maximum rate permitted by law. Customer shall pay all attorneys' fees, court costs, and all other costs incurred by PCC in collecting past due accounts, including interest on such amounts at the rate provided above.
- (e) In the event Purchaser cancels the order, all amounts previously paid by Purchaser shall be retained by Seller as liquidated damages.

2. Delivery

- (f) Shipping dates are estimates only. PCC will use commercially reasonable efforts to ship by the date specified, but shall not be liable to Customer for any delay in delivering the Equipment and/or Parts (including any resulting incidental or consequential damages). Shipping dates shall in any event be extended for delays, such as but not limited to acts of God, fires, strikes, transportation delays, delays of PCC's vendors, or any other cause beyond PCC's reasonable control. If shipment or delivery of Equipment and/or Parts is delayed by or at the request of Customer, payment will become due in full thirty (30) days from the date such Equipment and/or Parts is ready for shipment. In such event, Customer shall pay on demand storage charges and other incidental expenses incurred by PCC as a result of the delay in addition to any interest on late payment. Shipment from stock is subject to availability.
- (g) Unless otherwise stated in the Contract, the Equipment and/or Parts will be delivered to Customer Ex Works PCC's designated point of shipment, and Customer shall make all arrangements (and shall pay all costs) for transportation, handling and installation of the Equipment and/or Parts after delivery.
- (h) Instructions for any special shipping, packing, or handling services must be given by Customer in writing at the time of placing the order. Customer will pay all costs for such services.

3. Cancellation

Customer may cancel the Contract prior to delivery only upon written approval by PCC and upon payment by Customer to PCC of the following charges:

- (a) For Equipment and/or Parts to be fabricated by PCC or its subcontractors, specialty, custom, or made to order Equipment and/or Parts, Customer shall pay to PCC on demand all direct and indirect costs (including without limitation engineering, product development, and allocable overhead and administrative costs) incurred by PCC or such subcontractor in performing under the Contract, as determined by PCC, prior to written notice of cancellation, plus profit in an amount equal to twenty percent (20%) of all such direct and indirect costs; provided that the liability of Customer shall not exceed the purchase price for the Equipment and/or Parts provided in this Contract.
- (b) For stock item, PCC's loss of profit as reasonably determined by PCC.
- (c) Any deposits or progress payments made by Customer on Equipment and/or Parts will be retained by PCC and applied to such cancellation charges. Customer acknowledges that any cancellation charges payable by Customer hereunder are not a penalty but are a reasonable approximation of the economic loss to PCC resulting from cancellation.

4. Proprietary Information

All specifications, drawings, designs, manufacturing data and all other data furnished by or belonging to PCC, or pertaining to Equipment and Parts, and all terms of sale ("Information") are trade secrets and proprietary information of PCC. Customer will not use or disclose (and will take steps to prevent its employees and contractors from using or disclosing) the Information except as specifically authorized by PCC.

5. Security Interest and Insurance

As security for payment of all amounts due PCC under this Contract, Customer hereby grants to PCC a security interest in the Equipment and/or Parts and all proceeds or products thereof and replacements or substitutions therefor, and PCC shall have all rights of a secured party under the Uniform Commercial Code in effect from time to time in the State of Ohio or any other applicable jurisdiction or any successor law or laws of like effect. Customer shall sign, and/or hereby authorizes PCC to prepare and file all financing statements and other documents which PCC may deem necessary or desirable to perfect such security interest in any public office. Until full and irrevocable payment for the Equipment and/or Parts, Customer shall maintain replacement value insurance covering the Equipment and/or Parts against loss of damage from any cause with PCC named as insured or co-insured to the extent of the unpaid purchase price.

6. Governmental Requirements; Industry Standards

PCC does not represent or warrant that the equipment and/or parts comply or will comply with any particular federal, state, or local statutes, regulations, or requirements of any type, including but not limited to occupation safety (e.g., OSHA or MSHA) requirements, environmental requirements, any electrical codes, or any voluntary industry standards. Since applications of the equipment and/or parts vary, customer shall be solely responsible for compliance with all such federal, state, and local statutes, regulations, or requirements of any type, and with any voluntary industry standards, and customer will indemnify and hold PCC harmless from any claims by third parties (including employees of customer) related to such compliance or to operation or use of the equipment and/or parts, including court costs and attorneys' fees.

7. Limited Warranty / Exclusive Remedy

PCC warrants to the customer that the equipment and parts (excluding wear parts) will be free from defects in material and workmanship under normal use and service for a period of three hundred sixty-five (365) days after delivery to customer, or 2,000 hours of normal use. Any warranty claims not submitted in writing by customer to PCC within the applicable warranty period and within thirty (30) days of discovery of defect will be deemed waived. The obligation of PCC shall be limited to the repair or replacement ex works facility designated by PCC (excluding shipping costs, to be paid by customer), of the equipment or such parts which PCC determines were defective in material or workmanship

under normal storage, use and service. This warranty applies only to new equipment and parts and expressly excludes wear parts. This warranty shall not apply to items manufactured by others attached to or incorporated in the equipment and/or parts, or to which the equipment and/or parts are attached or incorporated, and customer's recourse for defects in such equipment and/or parts of others shall be exclusively against the manufacturer of the equipment and/or parts under the terms of the PCC's warranty. This limited warranty does not apply to failures or defects of the equipment components, and/or parts (including wear parts) due to ordinary wear and tear, neglect (including but not limited to improper maintenance and storage), accident, improper installation or operation, or modification not authorized in writing by PCC (including but not limited to use of unauthorized parts or attachments). Any alteration or modification of the equipment or parts, or attaching of any parts or equipment not manufactured by PCC or not intended to be attached to the equipment or parts, or maintenance, use or operation of the equipment or parts contrary to PCC's or the manufacturer's instructions, shall at PCC's election void this warranty. This limited warranty shall extend only to the customer and is not assignable. The exclusive remedy of customer under this warranty or otherwise in connection with the equipment and for parts, shall be repair or replacement of the equipment and/or parts in accordance with this paragraph, PCC's sole and absolute discretion.

8. Limitation of Liability

PCC's liability (and the exclusive remedy of customer) under this warranty for any alleged defect or failure of the equipment and/or parts (including results of operation of the equipment and/or parts, and whether resulting from defects, failures, or errors in design, materials or workmanship, or otherwise) is limited as provided in 7 above. PCC shall not be liable to customer for any direct, indirect, or consequential damages in connection with the equipment and/or parts or otherwise in connection with this contract, including but not limited to damages resulting from delays; loss of use of property; results of use of the equipment and/or parts; losses of income, profit or production; or increased costs of operation, or damages to other property arising in connection with the equipment and/or parts.

9. Exclusion of Expressed / Implied Warranties

Except as provided in paragraph 7 above, PCC disclaims any and all express and implied warranties in any way relating to the equipment and/or parts, including without limitation any implied warranties of merchantability or fitness for a particular purpose.

10. Dispute Resolution / Arbitration Procedure

(a) Except as provided herein, all disputes relating to this Contract or to the Equipment and/or Parts in any way ("Dispute") shall be resolved by arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("AAA"), and judgment upon the award rendered in the arbitration may be entered in any court having jurisdiction. The parties also agree that the AAA Optional Rules for Emergency Measures of Protection shall apply to the proceedings. The arbitration shall be conducted and the award made in Franklin County, Ohio before a single arbitrator. The arbitrator shall be selected from a list of approved arbitrators maintained by the Association of Equipment Manufacturers ("AEM") or its successor. If the AAA is unable to furnish a list of potential arbitrators satisfying such requirements, PCC shall supply Customer a list of at least five (5) such persons from which the arbitrator shall be selected by Customer. Any award shall be final and binding on the parties. The arbitrator shall include in the award the costs and attorneys' fees incurred by the prevailing party in the arbitration.

(b) Notwithstanding the above, the arbitration provisions in Paragraph 10(a) above shall not apply, at PCC's sole option, including in circumstances in which Customer has already served a demand for arbitration upon PCC, to any one or more claims or actions against Customer by PCC in connection with (i) collection of any amounts due PCC by Customer for the Equipment and/or Parts or otherwise under this Contract, including but not limited to interest on such amounts and attorneys' fees as provided above, (ii) enforcement by PCC of any security interest in the Equipment and/or Parts and/or the proceeds thereof under this Contract or otherwise under applicable law, or (iii) exercise by PCC of any and all remedies available to it in law or in equity in connection with actions described in (i) and (ii) above, including without limitation foreclosure and replevin. Any actions described in this Paragraph 10(b) are referred to as "Excluded Actions." PCC may at PCC's option maintain any such Excluded Actions in any state or federal court in the State of Ohio described in Paragraph 12 or in any other court having jurisdiction over Customer, and the parties hereto irrevocably consent to the jurisdiction of such courts in connection with Excluded Actions and agree that any such courts are a proper venue for any such Excluded Actions.

11. Entire Agreement

The Contract is the entire agreement of the parties relating to the Equipment and/or Parts and supersedes all prior discussions, correspondence or agreements (whether written or oral). The contract may not be amended nor any terms added, deleted, or changed except in writing signed by the parties and expressly stated to be an amendment. The Contract shall inure to the benefit of and be binding on the parties and their respective successors and assigns. Any execution by PCC of a document submitted by Customer in connection with Equipment and/or Parts shall not constitute acceptance by PCC of any such additional or conflicting terms, or any modification of this Contract, but only acknowledgment of receipt of such document.

12. Governing Law; Jurisdiction

This Contract shall be interpreted in accordance with and its performance shall be governed by the laws of the State of Ohio without regard to conflict of laws principles. The parties hereby agree that the state courts located in the State of Ohio or the United States District Court for the Southern District of Ohio, Eastern Division, shall have exclusive jurisdiction over any action or suit between the parties (including any action to compel arbitration or to enforce an arbitration award) in connection with this Contract or the Equipment and/or Parts, and the parties hereto irrevocably consent to the jurisdiction of such courts in connection with such action or suit, and agree that any such courts are a proper venue for any such action or suit. Notwithstanding the above, any Excluded Actions may be maintained by PCC in any state or federal court having jurisdiction over Customer or such Excluded Actions.

PRESSURE CONNECTIONS CORP.

610 Claycraft Rd. Columbus, OH 43230

Phone (614) 863-6930 • Fax (614) 864-1327

www.PressureConnections.com

ISO 9000 Requirements

What Does ISO 9000 Certified Mean?

"The Quality Assurance standard (ISO 9001:2008) lays down the requirements that a quality system should meet, but *does not dictate how they should be achieved.*" -Institute of Quality Assurance (IQA)

In other words, **achievement** will vary from one company to another. Pressure Connections has laid down the strictest requirements for us to meet and achieve the highest quality for our customers. **This supports our Business Philosophy, Vision, and Mission.**

(Ref. www.pressureconnections.com - See About Us)

ISO 9001:2008 Audit:

"Pressure Connections is a really exceptional example of ISO 9001 at work. In regards to quality management, you guys have that one thousand and ten percent."

James Mitchell
ISO Auditor, Quality Assurance
Systems Inc

What does ISO 9000 Require?

	Pressure Connections Standard	ISO 9000 Standard
1. How Many Trained Quality Assurance Personnel are required?	7 Full Time	1 Part Time
2. How many dollars in Thread Gauges are required?	\$300,000	\$0
3. Is a Coordinate Measuring Machine (CMM) required?	Yes	No
4. Is a Comparator required?	Yes	No
5. Is a Rockwell Hardness Tester required?	Yes	No
6. Is a Profilometer (Surface Finish Tester) required?	Yes	No
7. Is a Pressure Test Stand required?	Yes	No
8. Do O-Rings need to be installed with O-Ring Mandrels?	Yes	No

Quality Assurance Department

We will provide a Certificate of Conformance upon request. We are confident that our Quality Assurance program and personnel will be able to satisfy any quality concerns you or your customers may have. Furthermore, we have established a Performance Team to handle written customer evaluations of our overall performance. This team is ready to respond to customer quality and service issues.

Every employee strives to provide you with the best all-around value. Our Conduct Code and personal convictions drive our commitment to excellence. We guarantee that you will be completely satisfied with the quality of our product or we'll issue a Return Goods Authorization form for a full refund. Our goal is to make it easy to do business with us.

At Pressure Connections, ISO 9000 is more than just a certificate. It is a quality system applied to our daily practices enabling us to continually improve our processes.

We are an **ISO 9000 (9001:2008)** registered firm. We will provide you with the documentation needed to satisfy your quality system requirements. At your request, we will provide a Corrective Action Report and Evaluation (C.A.R.E). We also have Initial Sample Inspection, In-Process and Final Inspection Reports.



Product Lines

Hose & Fittings



Steel Adapters



Brass Fittings



OD Couplings



316 Stainless



Live Swivels



**Push-To-Connects
& DOT Fittings**



Metric & BSP



Valves



Pneumatics



GagePorts & Test Points



Custom Kits



PRESSURE CONNECTIONS CORP.

Pressure Connections Reserves the Right to Update Information Without Notice

Our Business Philosophy

Theory R. Management has five basic principles: **Doing What is Right, Treating People with Respect, Practicing Reconciliation, Building Relationships, & Taking Responsibility.**

These principles are guidelines for behavior & actions. They are the boundaries that we do not want to cross.



We are a certified ISO 9001:2008 Registered firm. Our Quality Assurance program provides high quality fittings, hoses, assemblies, and service according to ISO 9000 principles. All of the documentation needed to satisfy your quality system requirements is on hand. At your request we will provide a Corrective Action Report and Evaluation. We also have Initial Sample Inspection, In-Process, and Final Inspection Reports.



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