Fluid Control Components

Index

fluid control

CRANE

CRANE Instrumentation & Sampling, HOKE®
PO Box 4866 • Spartanburg, SC 29305-4866
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For Your Safety

It is solely the responsibility of the system designer and user to select products suitable for their specific application requirements and to ensure proper installation, operation, and maintenance of these products. When selecting products, the total system design must be considered to ensure safe, trouble-free performance. Material compatibility, product ratings and application details should be considered in the selection. Improper selection or use of products described herein can cause personal injury or property damage.

Contact your authorized HOKE® sales and service representative for information about additional sizes and special alloys.

SAFETY WARNING:

HOKE® products are designed for installation only by professional suitably qualified licensed system installers experienced in the applications and environments for which the products are intended. These products are intended for integration into a system. Where these products are to be used with flammable or hazardous media, precautions must be taken by the system designer and installer to ensure the safety of persons and property. Flammable or hazardous media pose risks associated with fire or explosion, as well as burning, poisoning or other injury or death to persons and/or destruction of property. The system designer and installer must provide for the capture and control of such substances from any vents in the product(s). The system installer must not permit any leakage or uncontrolled escape of hazardous or flammable substances. The system operator must be trained to follow appropriate precautions and must inspect and maintain the system and its components including the product(s) and at regular intervals in accordance with timescales recommended by the supplier to prevent unacceptable wear or failure.

CVH Series

Check Valves

The CVH Series Check Valves are engineered for a competitive price with no compromise of quality and performance to meet the growing requirements of instrumentation valves. The function of this valve series is to maintain system integrity by preventing back flow of a wide variety of fluids over a broad range of pressures.

Features & Specifications

- Rapid response
- Resilient o-ring seat provides cushioned, noise-free closing and zero leakage
- Floating o-ring design: o-ring is continually cleaned so contaminants do not prevent sealing
- Various materials of construction can be used with any liquid or gas service
- Various end connections can be assembled in any system or application
- Spring-loaded poppet can be mounted in any orientation
- Full flow with minimal restriction for maximum Cv rates
- Virtually maintenance free for maximum dependability
- Pressures up to 6000 psig (414 bar)
- Cracking pressure range is 0.5 to 20 psig (0 to 1 bar) ±10%
- Flow up to 7.4 Cv maximum
- Greater than 100,000 life cycles
- Special High Tolerance NPT Thread

Technical Data

Body Material*	316 stainless steel, MONEL® R-405, HASTELLOY® C-276
Operating Pressure Range	0 to 6000 psig (414 bar)
Temperature Range**	-65° F to +550° F (-54° C to +288° C)
Cv factors	0.32 to 7.4
Cracking Pressure Range	0.5 to 20 psig (0.035 to 1.379 bar) ± 10%
Leakage	External: zero Internal: Soft seat = zero
Connection sizes	⅛″ to 1″; 6mm to 25mm
Life Cycles	In excess of 100,000 cycles

** Consult factory for other materials*

*** Limited to +400° F (204° C) for ¾″ / 12 mm sizes and higher*

fluid control

CVH Series

Specifications

Operating Temperatures

Seal Material	Temperature (°F)	Temperature (°C)
Viton®	-20° to +400°	-29° to +204°
Fluorosilicone	-80° to +350°	-62° to +177°
Kalrez®*	-40° to +550°	-40° to +288°
Buna N	-65° to +275°	-54° to 135°

** Limited to +400° F (204° C) for ¾″/ 12 mm sizes and higher*

Flow Rates

Fitting Size	⅛″	¼″/4mm	⅜″/6mm	½″/8mm	10mm	¾″/12mm	1″/16mm
fitting code*	–02	–04	–06	–08	–10	–12	–16
Cv FACTORS	0.32	0.79	1.71	3.08	3.87	7.38	7.38

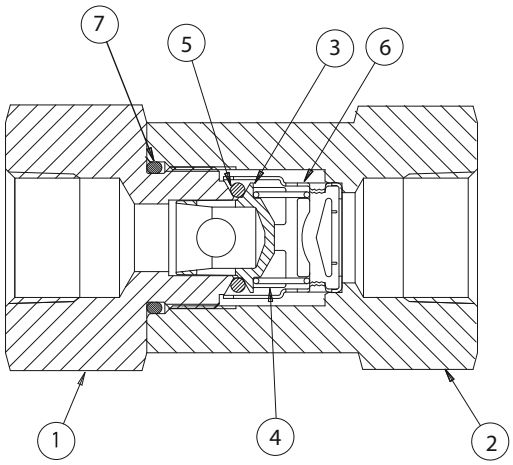
** See ordering matrix on page 9*

Materials of Constructions

	Part	Standard Materials (Others on Request)
1	Body* (inlet)	316 stainless steel
2	Body* (outlet)	316 stainless steel
3	Poppet*	316 stainless steel
4	Spring*	302 stainless steel
5	O-ring*	Viton®
6	Spring guide	316 stainless steel
7	O-ring*†	Viton®

** wetted component*

† Applies to ¾″ / 12mm sizes and higher

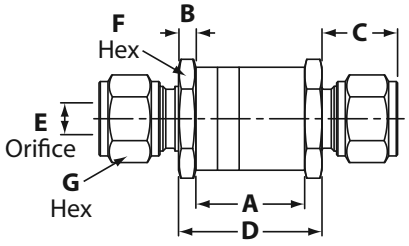


Dimensions

GYROLOK® Tube Fitting, Fractional

Fitting Code*	Fitting Size	A	B	C	D	E	F	G
–02	⅛″	0.93	0.20	0.67	1.33	0.19	1.06	0.44
–04	¼″/4mm	0.93	0.20	0.77	1.33	0.19	1.06	0.56
–06	⅜″/6mm	1.33	0.20	0.83	1.73	0.39	1.44	0.69
–08	½″/8mm	1.33	0.20	0.92	1.73	0.42	1.44	0.88
–12	¾″/12mm	2.05	0.50	0.97	3.05	0.66	2.25	1.25
–16	1″/16mm	2.05	0.50	1.08	3.05	0.66	2.25	1.5

** See ordering matrix on page 9*



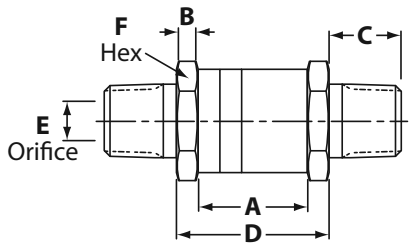
GYROLOK® Tube Fitting, Metric

Fitting Code*	Fitting Size	A	B	C	D	E	F	G
–04	¼″/4mm	23.62	5.08	17.9	33.78	2.44	26.99	12.70
–06	⅜"/6mm	23.62	5.08	19.5	33.78	3.96	26.99	14.22
–08	½″/8mm	23.62	5.08	19.1	33.78	5.94	26.99	15.88
–10	10mm	33.78	5.08	19.8	43.94	8.03	36.51	19.05
–12	¾″/12mm	33.78	5.08	23.4	43.94	10.01	36.51	22.23
–14	14mm	33.78	5.08	21.0	43.94	12.01	36.52	25.40
–16	1″/16mm	52.07	12.70	23.4	77.47	12.70	57.15	25.40
–18	18mm	52.07	12.70	24.6	77.47	15.88	57.15	28.58
–22	22mm	52.07	12.70	24.6	77.47	16.66	57.15	31.75
–25	25mm	52.07	12.70	27.4	77.47	16.66	57.15	38.10

** See ordering matrix on page 9*

CVH Series

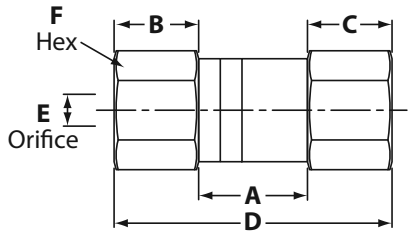
Dimensions



Male NPT, (Fractional)

Fitting Code*	Fitting Size	A	B	C	D	E	F
–02	⅛″	0.93	0.20	0.38	1.33	0.19	1.06
–04	¼″/4mm	0.93	0.20	0.56	1.33	0.19	1.06
–06	⅜″/6mm	1.33	0.20	0.56	1.73	0.39	1.44
–08	½″/8mm	1.33	0.20	0.75	1.73	0.42	1.44
–12	¾″/12mm	2.05	0.50	0.75	3.05	0.66	2.25
–16	1″/16mm	2.05	0.50	0.94	3.05	0.66	2.25

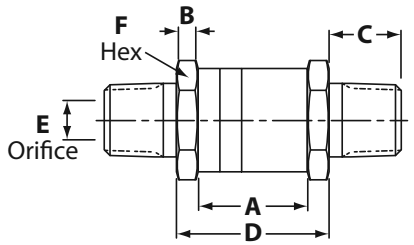
* *See ordering matrix on page 9*



Female NPT, (Fractional)

Fitting Code*	Fitting Size	A	B Inlet	C Outlet	D	E	F
–02	⅛″	0.93	0.62	0.65	2.20	0.19	1.06
–04	¼″/4mm	0.93	0.62	0.88	2.43	0.19	1.06
–06	⅜″/6mm	1.33	0.78	0.78	2.89	0.39	1.44
–08	½″/8mm	1.33	0.93	0.98	3.24	0.42	1.44
–12	¾″/12mm	2.05	1.08	0.95	4.08	0.66	2.25
–16	1″/16mm	2.05	1.37	1.16	4.58	0.66	2.25

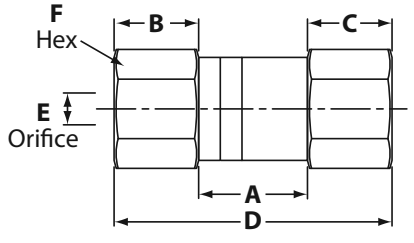
* *See ordering matrix on page 9*



Male British Tapered Pipe, (Fractional)

Fitting code*	Fitting Size	A	B Inlet	C Outlet	D	E	F
–02	⅛″	0.93	0.20	0.38	1.33	0.19	1.06
–04	¼″/4mm	0.93	0.20	0.56	1.33	0.19	1.06
–06	⅜″/6mm	1.33	0.20	0.56	1.73	0.39	1.44
–08	½″/8mm	1.33	0.20	0.75	1.73	0.42	1.44
–12	¾″/12mm	2.05	0.50	0.75	3.05	0.66	2.25
–16	1″/16mm	2.05	0.50	0.94	3.05	0.66	2.25

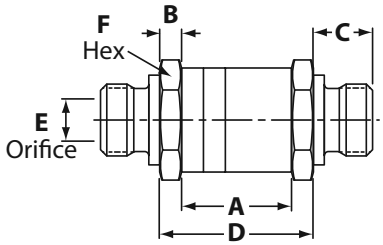
* *See ordering matrix on page 9*



Female British Tapered Pipe, (Fractional)

Fitting Code*	Fitting Size	A	B Inlet	C Outlet	D	E	F
–02	⅛″	0.93	0.63	0.64	2.20	0.19	1.06
–04	¼″/4mm	0.93	0.88	0.89	2.70	0.19	1.06
–06	⅜″/6mm	1.33	0.98	0.97	3.28	0.39	1.44
–08	½″/8mm	1.33	1.25	1.24	3.82	0.42	1.44
–12	¾″/12mm	2.05	1.58	1.22	4.85	0.66	2.25
–16	1″/16mm	2.05	1.80	1.46	5.31	0.66	2.25

* *See ordering matrix on page 9*



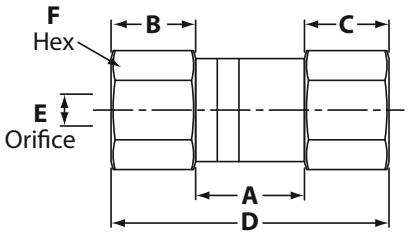
Male British Parallel Pipe, (Fractional)

Fitting Code*	Fitting Size	A	B	C	D	E	F
–02	⅛″	0.93	0.20	0.38	1.33	0.19	1.06
–04	¼″/4mm	0.93	0.20	0.56	1.33	0.19	1.06
–06	⅜″/6mm	1.33	0.20	0.56	1.73	0.39	1.44
–08	½″/8mm	1.33	0.20	0.75	1.73	0.42	1.44
–12	¾″/12mm	2.05	0.50	0.75	3.05	0.66	2.25
–16	1″/16mm	2.05	0.50	0.94	3.05	0.66	2.25

* *See ordering matrix on page 9*

CVH Series

Dimensions



Female British Parallel Pipe, (Fractional)

Fitting Code*	Fitting Size	A	B Inlet	C Outlet	D	E	F
–02	⅛″	0.93	0.66	1.05	2.64	0.19	1.06
–04	¼″/4mm	0.93	0.89	1.06	2.88	0.19	1.06
–06	⅜″/6mm	1.33	1.04	0.96	3.33	0.39	1.44
–08	½″/8mm	1.33	1.17	1.20	3.70	0.42	1.44
–12	¾″/12mm	2.05	1.51	1.17	4.73	0.66	2.25
–16	1″/16mm	2.05	1.61	1.37	5.03	0.66	2.25

* *See ordering matrix below*

How to Order

Standard items in bold

CVH G 4 Y 3 1 S – IS

FITTING TYPE
- F Female NPT
- G GYROLOK® tube fitting, fractional
- J Male British parallel pipe
- K Female British parallel pipe
- M Male NPT
- Q Male British tapered pipe
- T Female British tapered pipe
- Z GYROLOK® tube fitting, metric

FITTING SIZE

	Fractional	Metric
2	⅛″	N/A
4	¼″	4mm
6	⅜″	6mm
8	½″	8mm
10	N/A	10mm
12	¾″	12mm
14	N/A	14mm
16	1″	16mm
18	N/A	18mm
22	N/A	22mm
25	N/A	25mm

BODY MATERIAL
- **Y 316 stainless steel (standard)**
- H HASTELLOY® C–276
- M MONEL® R-405
- TI Titanium
- D50 2507 Super Duplex SST
- 6MO 254 SMO SST
- DX3 2205 Duplex SST
- 625 Inconel 625
- 825 Inconel 825

ADDITIONAL OPTIONS
- **IS Inconel spring ("Y" Body Only, "IS" is std on all others)**
- NK Norsok Complaint
- SLF Sulfinert Coating
- 22 Buna-N Oring (90 Duro)
- 93 HNBR Oring (90 Duro)
- 82 Kalrez® 6375 Oring

CLEANING OPTIONS
- **S Standard**
- O Oxygen cleaning

SEAL MATERIALS
- 1 Viton®
- 2 Buna-N (not for oxygen service)
- 3 Fluorosilicone
- 4 Kalrez® 4079

CRACK PRESSURE
- 1 0.5 psig (0.034 bar)
- 2 1.0 psig (0.07 bar)
- 3 3.0 psig (0.21 bar)
- 4 10 psig (0.70 bar)
- 5 20 psig (1.38 bar)
- 6 0.33 psig (0.023 bar)
- 7 5.0 psig (0.345 bar)
- 8 2.0 psig (0.14 bar)

Please consult HOKE® or your local distributor for information on special connections, o-rings, operating pressures and temperature ranges.

XVH Series

Excess Flow Valves

XVH Series Excess Flow Valves act as flow switches that automatically close when a flow spike occurs, preventing uncontrolled release of system fluid. The XVH Series is available in automatic and manual reset versions, depending on system requirements. Automatic reset XVH Series have an "anti-clog" wire which increases reliability by preventing a build up of system fluid in the bleed port. The XVH Series are high pressure (0 to 6000 psig [414 bar]), high performance, quick acting, zero leakage, low maintenance excess flow valves that will help provide a reliable and safe working environment.

- Lower cost
- Versatile
- Reliable
- Safety
- Flexible

Features

Automatic reset
- The bleed vent allows the valve to automatically reset

Manual reset
- Zero leakage: the valve must be manually reset

2–piece design
- Allows for simple spring and seal maintenance

O-ring or metal seat
- Can be used with any liquid or gas service

Various body materials
- Can be used with any liquid or gas service

Various end connections
- Can be assembled in any system or application

Spring-loaded poppet
- Can be mounted in any orientation

Anti-clog wire
- Prevents clogging of bleed port
- Special High Tolerance NPT Thread

Technical Data

Body Material*	316 stainless steel, MONEL®, HASTELLOY® C-276, 254 SMO
Temperature Range	–320° to +900° F (–196° to +482° C)
Operating Pressure	Zero to 6000 psig (414 bar)
Leakage Rate	• External: zero leak • Internal soft seat: zero leak
Flow/Trip Point Ranges	Low, standard/low, medium, and high

** Consult factory for other materials*

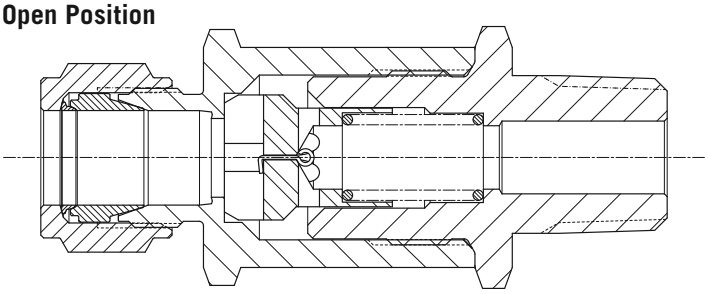
fluid control

XVH Series

Function

Excess Flow Valves are designed to limit flow of fluid to a predetermined rate. When flow reaches a predetermined rate the poppet will close, limiting or stopping flow. When pressure is equalized across the valve, the poppet will reset to the open position.

Open Position

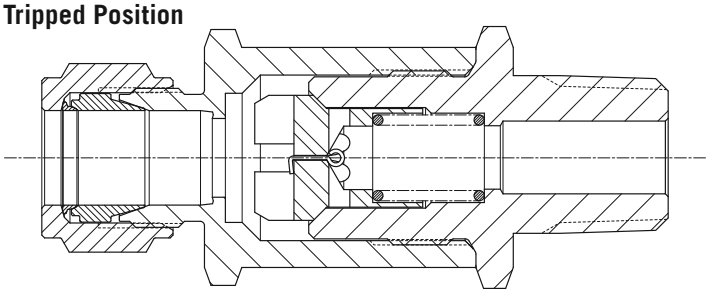


The spring holds the poppet in the open position during normal flow. When flow increases to the predetermined rate or trip point, the poppet will close.

Manual Reset

The poppet will remain in the tripped position with zero leakage and zero flow until pressure is manually equalized across the poppet. When the pressure becomes equal, the spring will then reset the poppet to the open position, allowing normal flow.

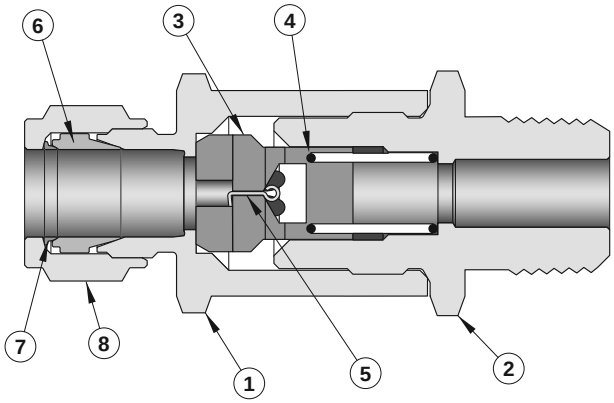
Tripped Position



Automatic Reset

The poppet will remain in the tripped position until system pressure becomes equal across the poppet. The bleed orifice in the poppet will allow the pressure to slowly equalize across the valve if the downstream line is closed or repaired. When the pressure becomes equal, the spring will then reset the poppet to the open position, allowing normal flow.

Materials of Construction



	Part	Standard Material (others available on request)
1	Body* (outlet)	316 stainless steel
2	End adapter* (inlet)	316 stainless steel
3	Poppet*	316 stainless steel
4	Spring*	302 stainless steel or INCONEL®**
5	Anti-clog wire*	302 stainless steel
6	Front ferrule*	316 stainless steel
7	Rear ferrule	316 stainless steel
8	Nut	316 stainless steel

** Wetted component*

*** INCONEL® springs installed with 254 SMO, **(–65)** Kalrez®, and **(–00)** seals, HASTELLOY C®.*

Operating Temperatures

Soft Seal, Manual Reset Valve

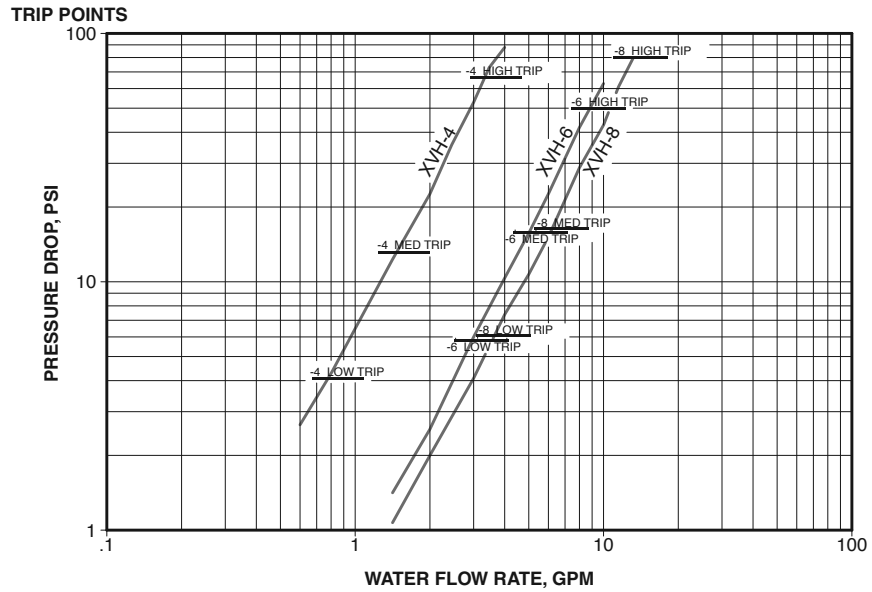
O-ring Code	O-ring Material	Temperature °F	Temperature °C
–32	Viton®	–20° to +400°	–29° to +204°
–62	Ethylene propylene	–65° to +300°	–54° to +149°
–64	Fluorosilicone	–80° to +350°	–62° to +177°
–65	Kalrez®	–40° to +550°	–40° to +288°

XVH Series

Water Flow Rates: Standard

Using the graph below, look up your desired normal flow rate (including normal surges) on the X axis. Read vertically on the graph to the Cv line and then left on the graph from the Cv line to the pressure drop. Then select a valve and trip range higher than normal expected flow. For example: With a normal flow rate of 1 GPM, a ¼″ valve **(XVH-4)** will have a pressure drop of approximately 6.5 psi. Selecting a ¼″ valve with a medium trip option, the valve will close when the flow reaches 1.5 GPM and a pressure drop of approximately 15 psi.

Water Flow – Standard Inlet/Outlet Sizes = ¼″, 6mm, 8mm

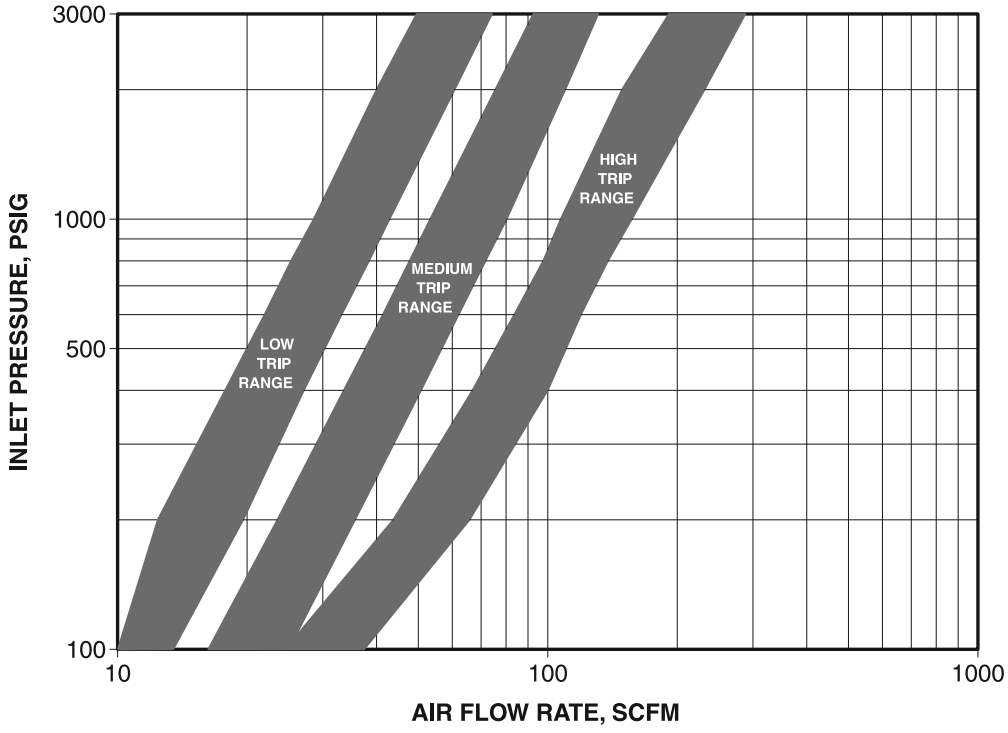


Note:
***XVH-4** is inlet/outlet size of ¼"*
***XVH-6** is inlet/outlet size of 6mm*
***XVH-8** is inlet/outlet size of 8mm*

Air Flow Rates – Standard

Using the graphs below, find the intersection of your normal flow rate (including normal surges) and the inlet pressure of the excess flow valve. From there, move to the right on the graph and select a valve with a trip range greater than your normal flow. For example: reading the chart below, if normal flow is 20 scfm and the inlet pressure is 200 psig, you would select a ¼″ valve with a medium trip range.

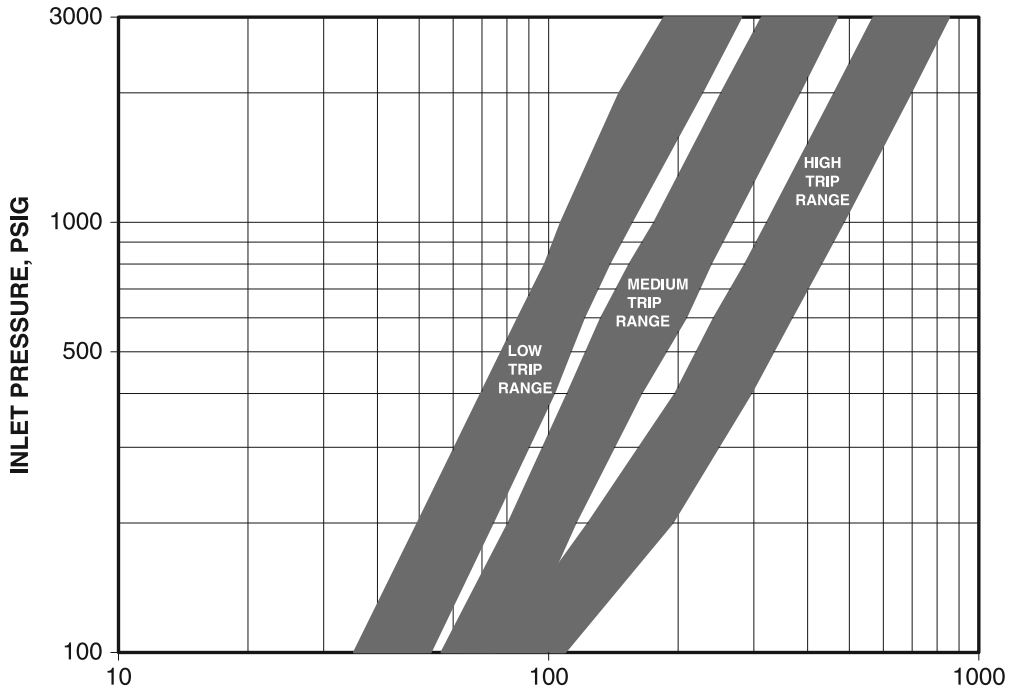
Air Flow – Standard Inlet/Outlet Sizes = ¼″, 6mm, 8mm



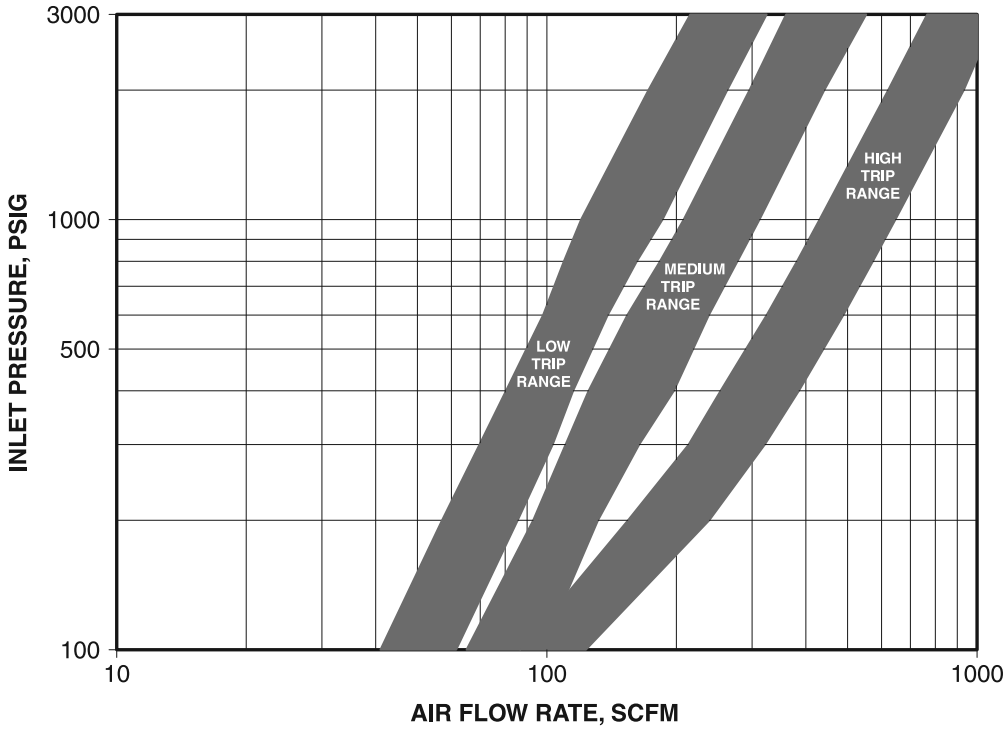
XVH Series

Air Flow –Standard Inlet/Outlet Sizes = ⅜″, 10mm

Inlet/Outlet sizes: ⅜″, 10mm



Air Flow –Standard Inlet/Outlet Sizes = ½″, 12mm



XVH Series

How to Order

Standard items in bold

XVH Y 08 M 08 G 00 100

BODY MATERIAL
- **Y 316 stainless steel (standard)**
- M MONEL®
- H HASTELLOY® C-276
- O 254 SMO

INLET SIZE
- **04 ¼˝ (standard)**
- **06 6mm, ⅜˝ (standard)**
- **08 8mm, ½˝ (standard)**
- 10 10mm
- 12 12mm

INLET STYLE
- **G GYROLOK® tube fitting (standard)**
- A GYROLOK® tube adapter (standard)
- Z GYROLOK® tube fitting, metric
- W GYROLOK® tube adapter, metric
- S Male SAE
- R Female SAE
- L Male British parallel pipe
- **M Male NPT (standard)**
- **F Female NPT (standard)**
- Q Male British tapered pipe
- P Female British tapered pipe

OUTLET SIZE
- **04 ¼˝ (standard)**
- **06 6mm, ⅜˝ (standard)**
- **08 8mm, ½˝ (standard)**
- 10 10mm
- 12 12mm

TRIP POINT

Standard Flow
- 100 Low
- 200 Medium
- 300 High (standard)

Low Flow
- 010 Low
- 020 Medium
- 030 High

O-RING MATERIAL

Automatic Reset
- 00 No o-ring (metal-to-metal seat)

Manual Reset
- 32 Viton®
- 62 Ethylene propylene
- 65 Kalrez®

OUTLET STYLE
- **G GYROLOK® tube fitting (standard)**
- A GYROLOK® tube adapter (standard)
- Z GYROLOK® tube fitting, metric
- W GYROLOK® tube adapter, metric
- S Male SAE
- R Female SAE
- L Male British parallel pipe
- **M Male NPT (standard)**
- **F Female NPT (standard)**
- Q Male British tapered pipe
- P Female British tapered pipe

Note: Inlet and outlet fittings can be the same or mixed styles.

6100 & 6200 Series

Ball and Poppet Check Valves

Features

- O-ring seat provides leak-tight shutoff
- Internal design guides flow around or inside spring, not through coils, when valve is open
- All models are tested in production to assure a leak-tight body joint and seat
- Ball and poppet designs are available as standard
- Ball type provides effective leak-tight closure with minimum flow resistance
- Poppet models provide large flows with a minimum of chatter and fluctuation
- Valves are available with various cracking pressures, from ⅓ to 25 psig (0 to 2 bar).
- 2-piece body permits interchangeability of end connections
- Special High Tolerance NPT Thread

Applications

- Prevents reversed flow to protect solenoids, regulators, and pumps
- Locks pressure in hydraulic cylinders
- Low pressure inline relief valve
- Vent valve to purge a system

Technical Data

Body Material*	316 stainless steel, brass, MONEL®
Maximum Operating Pressure	Brass: 3000 psig @ 70° F (206.84 bar @ 21° C) Stainless steel, MONEL®: 6000 psig @ 70° F (414 bar @ 21° C)
Standard cracking pressure	2 psig
Operating Temperature Range	Buna N: -40° F to +200° F (-40° C to +93° C) Viton®: -20° F to +350° F (-29° C to +177° C)
Orifice Sizes	0.187″ (4.75mm), 0.422″ (10.7mm)
Cv Factors	0.3, 2.4

** Consult factory for other materials*

fluid control

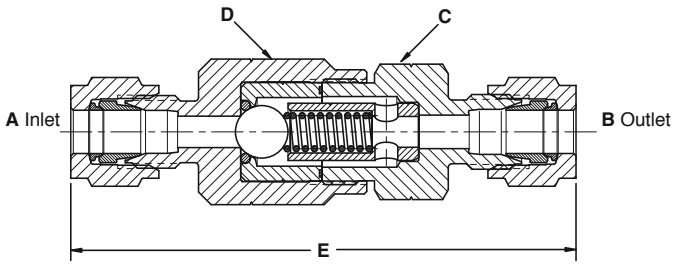
6100 & 6200 Series

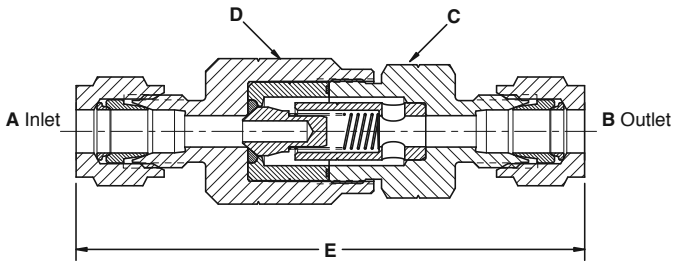
Materials of Construction

Part	Ball Type			Poppet Type
	Brass	316 Stainless Steel	MONEL®	316 Stainless Steel
Body	Brass	316 stainless steel	MONEL®	316 stainless steel
Ball/Poppet	302 stainless steel	316 stainless steel	MONEL®	316 stainless steel
Spring	302 stainless steel	316 stainless steel	MONEL®	316 stainless steel
O-ring seat	Buna N	Viton®	Viton®	Viton®/Buna N*
Gasket (body)	Mylar®	PTFE	PTFE	PTFE/Buna N*

** For poppet check valves with ⅜″ and ½″ NPT female connections.*

Dimensions





6100 Series Ball Check Valves

A & B Connections		C Hex	D Hex	E
⅛″ NPT female	inch	11⁄16	¾	2⅜
	mm	17	19	60
⅛″ NPT male	inch	11⁄16	¾	2⅜
	mm	17	19	60
¼″ NPT female	inch	¾	¾	2½
	mm	19	19	64
¼″ NPT male	inch	11⁄16	¾	2⅜
	mm	17	19	60
¼″ NPT male × ¼″ GYROLOK®	inch	11⁄16	¾	2¾
	mm	17	19	70
6mm GYROLOK®	inch	11⁄16	¾	3
	mm	17	19	76
¼″ GYROLOK®	inch	11⁄16	¾	3
	mm	17	19	76
⅜″ GYROLOK®	inch	1	¾	3⅛
	mm	25	19	79

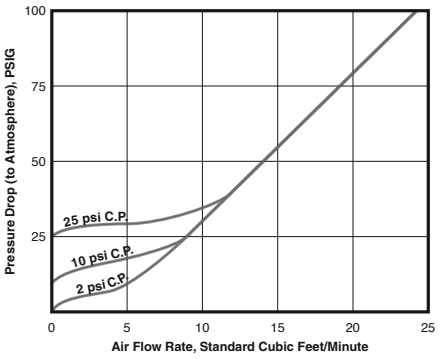
6200 Series Poppet Check Valves

A & B Connections		C Hex	D Hex	E
¼″ NPT female	inch	¾	¾	2½
	mm	19	19	64
¼″ NPT male	inch	11⁄16	¾	2⅜
	mm	17	19	60
¼″ GYROLOK®	inch	11⁄16	¾	3
	mm	17	19	76
⅜″ GYROLOK®	inch	1	¾	3⅛
	mm	25	19	79
½″ NPT female	inch	1¼	1¼	4⅛
	mm	32	32	105

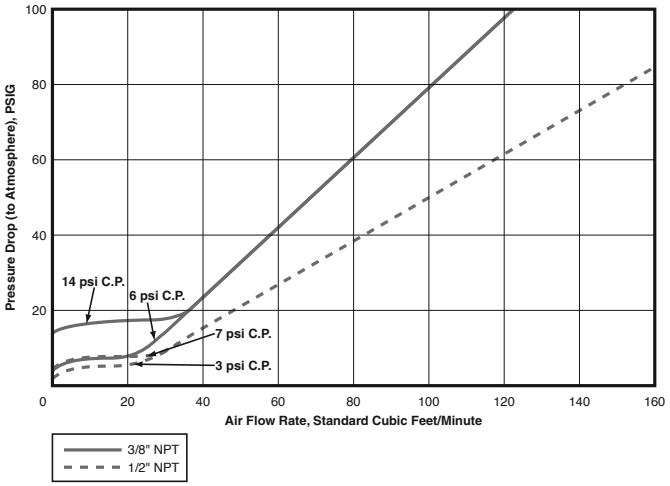
Flow Diagrams

Air

For all models except ⅜″ and ½″ NPT female

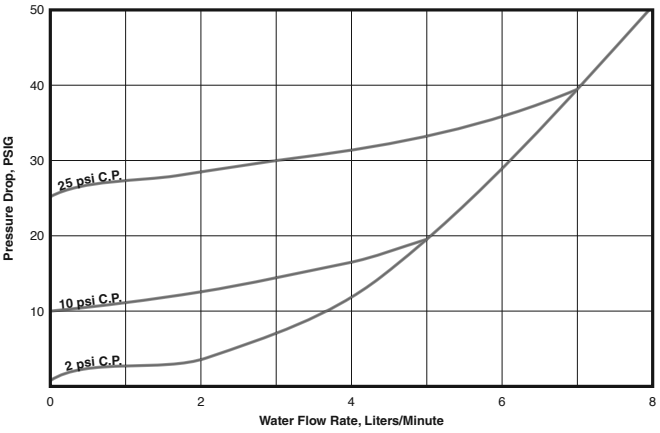


⅜″ and ½″ NPT female models

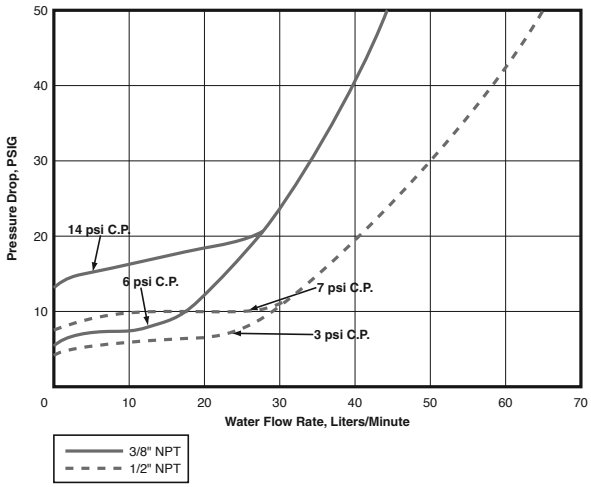


Water

For all models except ⅜″ and ½″ NPT female



⅜″ and ½″ NPT female models



How to Order: Standard Valves (factory preset at cracking pressure of 2 psig)

6100 Series Ball Check Valves

A & B Connections	Part Number Brass	MONEL®	316 St. Steel	Orifice
⅛″ NPT female	**6113F2B**	—	**6133F2Y**	0.187
⅛″ NPT male	**6113M2B**	—	**6133M2Y**	0.187
¼″ NPT female	**6113F4B**	—	**6133F4Y**	0.187
¼″ NPT male	**6113M4B**	—	**6133M4Y**	0.187
¼″ GYROLOK®	**6113G4B**	**6133G4M**	**6133G4Y**	0.187
⅜″ GYROLOK®	**6113G6B**	**6133G6M**	**6133G6Y**	0.187
¼″ NPT male × ¼″ GYROLOK®	**6113H4B**	—	—	0.187
GYROLOK®	—	—	**6133G6YMM**	0.187

6200 Series Poppet Check Valves

A & B Connections	Part Number 316 St. Steel	Orifice
¼″ NPT female	**6233F4Y**	0.187
¼″ NPT male	**6233M4Y**	0.187
¼″ GYROLOK®	**6233G4Y**	0.187
⅜″ GYROLOK®	**6233G6Y**	0.187
½″ NPT female	**6253F8Y**	0.422
GYROLOK®	**6253G8Y**	0.422

Other Differential Cracking Pressures

Cracking Pressure	Digit
⅓ psig	–1
10 psig	–5
25 psig	–6

All check valves except ⅜″ and ½″ female NPT models can be furnished with other than the standard 2 psig cracking pressure. To order, change the fourth digit ("–3") of the desired valve part number.

Example: **6115G4B** is a 6100 Series brass ball check valve with ¼″ GYROLOK® ends and a 10 psig cracking pressure

691F Series

High Flow Poppet Check Valves

Features & Benefits

- Prevents back flow
- Protects valuable equipment
- 316 stainless steel components
- GYROLOK® compression ends provide leak-free, reusable connections
- Recommended for severe service, including CNG applications:
  - High Cv flow rates
  - Blowout-proof o-ring design
  - Withstands high opening shocks without damage
- Special High Tolerance NPT Thread

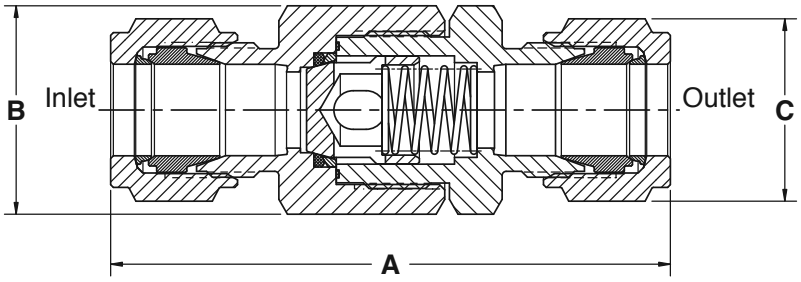
Technical Data

Body Material	316 stainless steel
Operating Pressure	5000 psig @ 70° F (345 bar @ 21° C)
Operating Temperature Range	-65° F to +275° F (-54° C to +135° C)
Differential Cracking Pressures	⅓ psig to 50 psig (0 to 3.45 bar)
Cv Factors	0.620 to 6.0

fluid control

691F Series

Dimensions



Materials of Construction

Part	Material
Body	316 stainless steel
Poppet	316 stainless steel
Seat ring	316 stainless steel
Body gasket	PTFE
Seat o-ring	Buna N

Fractional

Part Number	Cv	A	B Body Hex	C GYROLOK® Hex	Wrench
691FxG4Y	0.620	2.72 (69.1mm)	1.000 (25.4mm)	0.562	9/16″
691FxG6Y	1.0	2.83 (71.9mm)	1.000 (25.4mm)	0.688	11/16″
691FxG8Y	2.1	3.10 (78.7mm)	1.000 (25.4mm)	0.875	⅞″
691FxG12Y	6.0	3.75 (95.3mm)	1.625 (41.3mm)	1.125	1⅛″
691FxG16Y	6.0	3.96 (100.6mm)	1.625 (41.3mm)	1.500	1½″

Metric

Part Number	Cv	A	B Body Hex	C GYROLOK® Hex	Wrench
691FxG10YMM	1.2	2.84 (72.1mm)	1.000 (25.4mm)	19.1mm	¾″
691FxG12YMM	1.8	3.13 (79.5mm)	1.000 (25.4mm)	22.2mm	⅞″
691FxG18YMM	5.3	3.67 (93.2mm)	1.625 (41.3mm)	28.6mm	1⅛″
691FxG22YMM	6.0	3.80 (96.5mm)	1.625 (41.3mm)	31.8mm	1¼″
691FxG25YMM	6.0	4.02 (102.1mm)	1.625 (41.3mm)	38.1mm	1½″

How to Order

691 F 5 G 8 Y MM

FIXED CRACKING PRESSURE

CRACKING PRESSURE

1 ⅓ psig
2 1 psig
4 5 psig
5 10 psig
6 25 psig
7 50 psig
8 75 psig
9 100 psig

DENOTES METRIC FITTING

BODY MATERIAL

Y 316 stainless steel

END CONNECTION SIZE

	Fractional	Metric
4	¼″	N/A
6	⅜″	N/A
8	½″	N/A
10	N/A	10mm
12	¾″	12mm
16	1″	N/A
18	N/A	18mm
22	N/A	22mm
25	N/A	25mm

END CONNECTION

G GYROLOK®

GYROLOK® is a registered trademark of HOKE®.

R6000 Series

Right Angle Relief Valve

Available in low, medium, high and extra high pressure models, R6000 right angle relief valves provide users with high accuracy and consistency of cracking and reseat pressures. Furthermore, narrow pressure ranges (cracking pressures) for each model can be factory pre-set according to customer specifications. PED certification and CE marking are standard for all models. All R6000 relief valves are offered with multiple end connections to ensure application versatility.

Features & Benefits

Low Pressure (5 – 550 psig)*

Zero friction poppets

- Increases accuracy of cracking pressure and reseat pressure.
- Improves consistency of cracking pressure and reseat pressure.

Encapsulated Seat Seal

- Maintains small contact surface area.
- Protects seat from erosion due to flow.

Raised seal lip on poppet minimizes contact with seat, eliminating friction and preventing overstressing of the O-ring

6 pressure spring ranges improve accuracy

Caps and bonnets are pre-drilled for lockwire

Multiple end connections available

- Special High Tolerance NPT Thread

High Pressure (150–6000 psig)

3 models available:

- Medium (150–2500 psig)—6 spring ranges improve accuracy
- High (150–5000 psig)—7 spring ranges improve accuracy
- Extra High (5000–6000 psig)—one spring

Delta stem seal design prevents friction which increases accuracy of cracking pressure and reseat pressure.

Balanced poppet design allows cracking pressure to stay the same regardless of backup pressure.

Orifice sizes: 0.082˝, 0.094˝, 0.188˝

Multiple end connections available.

Optional manual override handle

For European Pressure Equipment Directive (PED 97/23/EC) applications, due to the R6000 valve's small poppet seat design, it is imperative that the R6000 valve be used in clean gas service ONLY (free from dust particles, contamination, and etc. (gas group 1 &2)).

** Back pressure affects cracking pressure on low pressure version*

Typical Applications

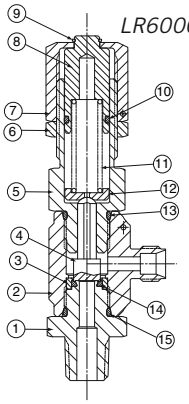
- Beverage dispensing equipment
- Gas pilot plants
- Petrochemical test labs
- Offshore oil platform heating lines
- Pharmaceutical sterilization and packaging systems

fluid control

R6000 Series

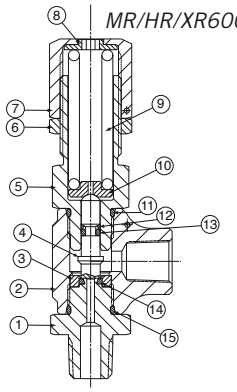
Materials of Construction

	LR
1	End
2	Body
3	Shroud ring
4	Poppet
5	Bonnet
6	Jam nut
7	Cap
8	Spring holder
9	Retaining ring
10	O-ring
11	Spring
12	Spring equalizer
13	O-ring
14	Seat o-ring
15	O-ring



LR6000 Series

	MR/HR/XR
1	End
2	Body
3	Shroud ring
4	Poppet
5	Bonnet
6	Jam nut
7	Cap
8	Spring holder
9	Spring
10	Spring equalizer
11	O-ring
12	Delta ring
13	O-ring
14	Seat o-ring
15	O-ring



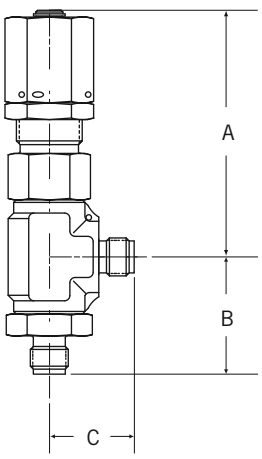
MR/HR/XR6000 Series

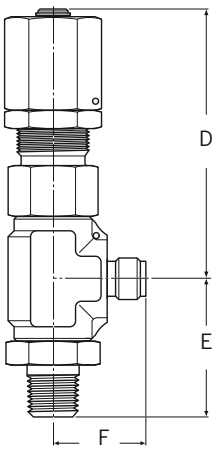
	Specifications
BODY CONSTRUCTION	316 stainless steel
SPRING MATERIAL	17-7PH CRES
SEAL MATERIAL	Viton® • Buna N • EPR • Kalrez® • Silicone (not available for the XR Series)
CONNECTION SIZES	¼″
ORIFICE SIZE	**LR6000, MR6000:** 0.188″ **HR6000:** 0.094" **XR6000:** 0.082"

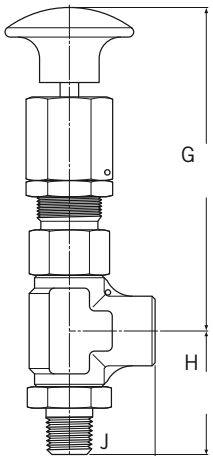
Dimensions

	¼″ GYROLOK® x ¼″ GYROLOK®			¼″ Male NPT x ¼″ GYROLOK®			¼" Male NPT x ¼" Female NPT		
Model No.	A	B	C	D	E	F	G*	H	J
LR	3.10″ max	1.34″	0.97″	3.10″ max	1.44″	0.97″	n/a	1.44″	1.00″
	(7.87cm)	(3.40cm)	(2.39cm)	(7.87cm)	(3.66cm)	(2.39cm)		(3.66cm)	(2.54cm)
MR	2.94″ max.	1.34″	0.97″	2.94″ max.	1.44″	0.97″	2.94″ max.	1.44″	1.00″
	(7.47cm)	(3.40cm)	(2.39cm)	(7.47cm)	(3.66cm)	(2.39cm)	(7.47cm)	(3.66cm)	(2.54cm)
HR	2.94″ max.	1.34″	0.97″	2.94″ max.	1.44″	0.97″	2.94″ max.	1.44″	1.00″
	(7.47cm)	(3.40cm)	(2.39cm)	(7.47cm)	(3.66cm)	(2.39cm)	(7.47cm)	(3.66cm)	(2.54cm)
XR	2.94″ max.	1.34″	0.97″	2.94″ max.	1.44″	0.97″	n/a	1.44″	1.00″
	(7.47cm)	(3.40cm)	(2.39cm)	(7.47cm)	(3.66cm)	(2.39cm)		(3.66cm)	(2.54cm)

** Manual override not available for LR and XR Series*







R6000 Series

Operating Pressures

Pressures	LR6000	MR6000	HR6000	XR6000
Cracking Pressure	5–550 psig (0–38 bar)	150–2500 psig (10–172 bar)	150–5000 psig (10–345 bar)	5000–6000 psig (345–414 bar)
Maximum Operating Pressure	5–700 psig (0–48 bar)	150–6000 psig (10–414 bar)	150–7000 psig (10–482 bar)	5000–7000 psig (345–482 bar)
Proof	1050 psig (72 bar)	9000 psig (620 bar)	9000 psig (620 bar)	9000 psig (620 bar)
Burst	Over 2800 psig (193 bar)	Over 24,000 psig (1655 bar)	Over 24,000 psig (1655 bar)	Over 24,000 psig (1655 bar)
Reseat Pressure	85% min. of CP > 10 psig 70% of CP < 10 psig	85% min. of CP	85% min. of CP	85% min. of CP

C_V Ratings

Cracking Pressure	C_v LR6000 0.188″		C_v MR6000 0.188″		C_v HR6000 0.094″		C_v XR6000 0.082″	
PSIG	Air	Water	Air	Water	Air	Water	Air	Water
5	0.63	0.47	—	—	—	—	—	—
25	0.63	0.47	—	—	—	—	—	—
26	0.64	0.43	—	—	—	—	—	—
80	0.64	0.43	—	—	—	—	—	—
81	0.4	0.31	—	—	—	—	—	—
150	0.4	0.31	—	—	—	—	—	—
151	0.42	0.26	0.79	0.59	0.25	0.16	—	—
250	0.42	0.26	0.79	0.59	0.25	0.16	—	—
251	0.3	0.19	0.79	0.59	0.25	0.16	—	—
350	0.3	0.19	0.79	0.59	0.25	0.16	—	—
351	0.35	0.18	0.61	0.59	0.27	0.16	—	—
550	0.35	0.18	0.61	0.59	0.27	0.16	—	—
650	—	—	0.61	0.59	0.27	0.16	—	—
651	—	—	0.38	0.29	0.27	0.16	—	—
700	—	—	0.38	0.29	0.27	0.16	—	—
701	—	—	0.38	0.29	0.2	0.16	—	—
1001	—	—	0.37	0.20	0.2	0.14	—	—
1300	—	—	0.37	0.20	0.2	0.14	—	—
1301	—	—	0.37	0.20	0.21	0.14	—	—
1500	—	—	0.37	0.20	0.21	0.13	—	—
1501	—	—	0.28	0.14	0.21	0.13	—	—
2000	—	—	0.28	0.14	0.21	0.13	—	—
2001	—	—	0.24	0.10	0.19	0.13	—	—
2500	—	—	0.24	0.10	0.19	0.13	—	—
3000	—	—	—	—	0.19	0.13	—	—
3001	—	—	—	—	0.15	0.07	—	—
4000	—	—	—	—	0.15	0.07	—	—
5000	—	—	—	—	—	—	0.15	0.009
6000	—	—	—	—	—	—	0.12	0.006

Pressure/Temperature Ratings

Low Pressure

Valve No.	Seal Material	Temperature °F (°C)	Pressure Range psig (bar)
LR6032	Viton®	-20° to +400° (-29° to +204°)	Up to 25 (Up to 1.4) 26–350 (1.8–24.1) 351–550 (24.2–37.9)
LR6077	Buna-N	-65° to +275° (-54° to +135°)	Up to 25 (Up to 1.4) 26–350 (1.8–24.1) 351–550 (24.2–37.9)
LR6062	Ethylene Propylene	-65° to +300° (-54° to +149°)	Up to 25 (Up to 1.4) 26–350 (1.8–24.1) 351–550 (24.2–37.9)
LR6065	Kalrez®	-40° to +550° (-40° to +288°)	Up to 25 (Up to 1.4) 26–350 (1.8–24.1) 351–550 (24.2–37.9)
LR6024	Silicone	-70° to +450° (-57° to +232°)	Up to 25 (Up to 1.4) 26–350 (1.8–24.1) 351–550 (24.2–37.9)

Medium Pressure

Valve No.	Seal Material	Temperature °F (°C)	Pressure Range psig (bar)
MR6032	Viton®	-20° to +400° (-29° to +204°)	150–350 (10.3–24.1) 351–2500 (24.2–172.4)
MR6077	Buna-N	-65° to +275° (-54° to +135°)	150–350 (10.3–24.1) 351–2500 (24.2–172.4)
MR6062	Ethylene Propylene	-65° to +300° (-54° to +149°)	150–350 (10.3–24.1) 351–2500 (24.2–172.4)
MR6065	Kalrez®	-40° to +550° (-40° to +288°)	150–350 (10.3–24.1) 351–2500 (24.2–172.4)
MR6024	Silicone	-70° to +450° (-57° to +232°)	150–350 (10.3–24.1)

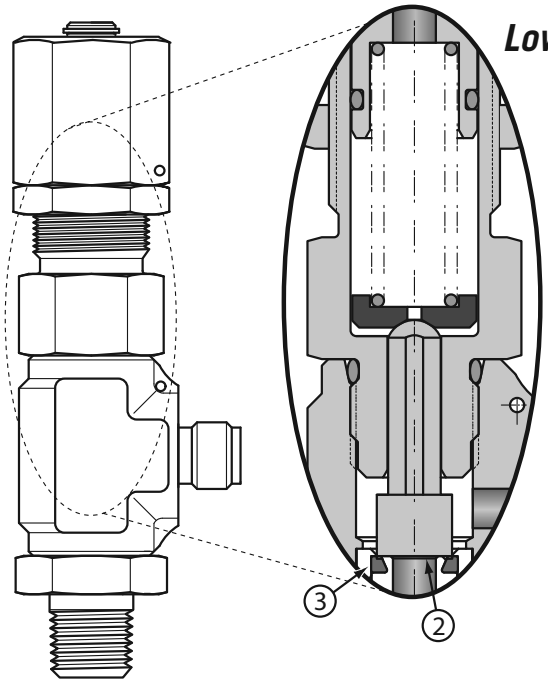
High Pressure

Valve No.	Seal Material	Temperature °F (°C)	Pressure Range psig (bar)
HR6032	Viton®	-20° to +400° (-29° to +204°)	150–300 (10.3 to 20.7) 301–5000 (20.8 to 344.8)
HR6077	Buna-N	-65° to +275° (-54° to +135°)	150–300 (10.3 to 20.7) 301–5000 (20.8 to 344.8)
HR6062	Ethylene Propylene	-65° to +300° (-54° to +149°)	150–300 (10.3 to 20.7) 301–5000 (20.8 to 344.8)
HR6065	Kalrez®	-40° to +550° (-40° to +288°)	150–300 (10.3 to 20.7) 301–5000 (20.8 to 344.8)
HR6024	Silicone	-70° to +450° (-57° to +232°)	150–300 (10.3 to 20.7)

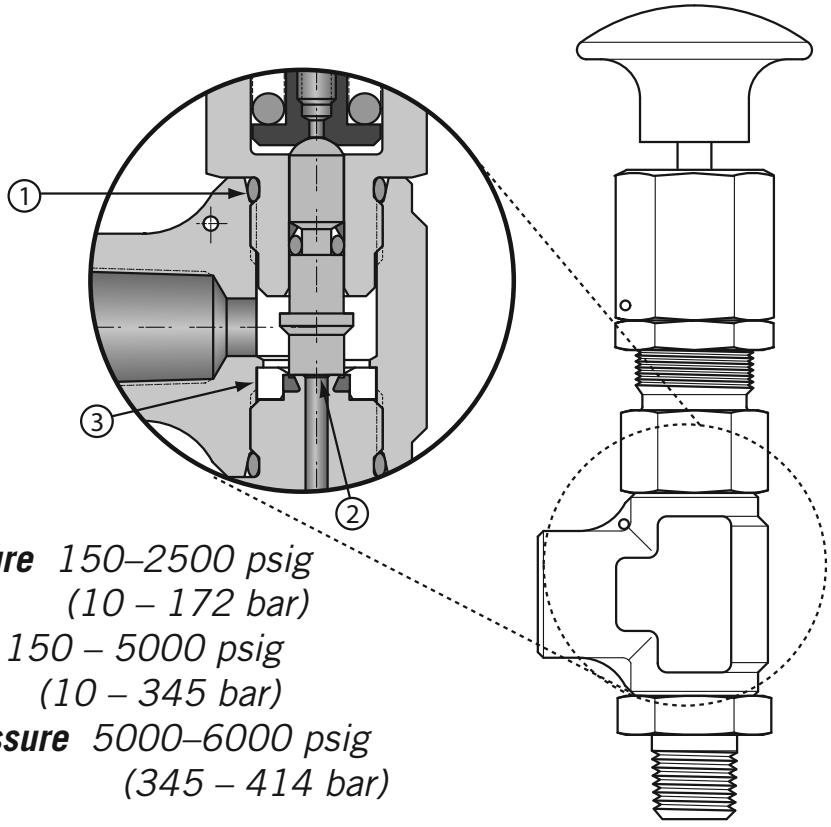
Extra High Pressure

Valve No.	Seal Material	Temperature °F (°C)	Pressure Range psig (bar)
XR6032	Viton®	-20° to +400° (-29° to +204°)	5000–6000 (344.8–414)
XR6077	Buna-N	-65° to +275° (-54° to +135°)	5000–6000 (344.8–414)
XR6062	Ethylene Propylene	-65° to +300° (-54° to +149°)	5000–6000 (344.8–414)
XR6065	Kalrez®	-40° to +550° (-40° to +288°)	5000–6000 (344.8–414)

R6000 Series



Low Pressure *5–550 psig (0-38 bar)*



Medium Pressure *150–2500 psig (10 – 172 bar)*

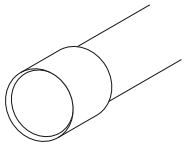
High Pressure *150 – 5000 psig (10 – 345 bar)*

Extra High Pressure *5000–6000 psig (345 – 414 bar)*

Features

① **O-ring & Delta backup ring**

② **Raised seal lip**



③ **Fully encapsulated seat seal**

R6000 Series

Crack Pressure Range

Select appropriate spring code

LR6000	Low Pressure
Spring Code	Range in PSIG (BAR)
A	5–25 (0–2)
B	26–80 (2–6)
C	81–150 (6–10)
D	151–250 (10–17)
E	251–350 (17–24)
F	351–550 (24–38)

MR6000	Medium Pressure
Spring Code	Range in PSIG (BAR)
B	150–350 (10–24)
C	351–650 (24–45)
D	651–1000 (45–69)
E	1001–1500 (69–103)
F	1501–2000 (104–138)
G	2001–2500 (138–172)

HR6000	High Pressure
Spring Code	Range in PSIG (BAR)
A	150–300 (10–21)
B	301–700 (21–48)
C	701–1300 (48–90)
D	1301–2000 (90–138)
E	2001–3000 (138–207)
F	3001–4000 (207–276)
G	4001–5000 (276–345)

XR6000	Extra High Pressure
Spring Code	Range in PSIG (BAR)
A	5000–6000 (345–414)

How to Order

LR60 24 – 2MP – A H M – * * * *

MANUAL OVERRIDE
(optional, not available for LR or XR series)
MR series only available up to 350 psig (24 bar).
HR series only available up to 700 psig (48 bar) .

BASIC MODEL NUMBER

- **LR60** Low pressure *5–550 psig (0-38 bar)*
- **MR60** Medium pressure *150–2500 psig (10-172 bar)*
- **HR60** High pressure *150–5000 psig (10-276 bar)*
- **XR60** Extra high pressure *5000–6000 psig (345-414 bar)*

SEAL MATERIAL

- **24** Silicone*
- **32** Viton®
- **62** Ethylene propylene
- **65** Kalrez®
- **77** Buna-N

SPRING CODE
See Crack Pressure table above

PORT SIZE

	Inlet	Outlet
2MP	¼″ male NPT	¼″ female NPT
2M4G	¼″ male NPT	¼″ GYROLOK®
4G	¼″ GYROLOK®	¼″ GYROLOK®
2RT	¼″ BSPT male	¼″ BSPT female
6Z	6mm GYROLOK®	6mm GYROLOK®
8Z	8mm GYROLOK®	8mm GYROLOK®
12Z	12mm GYROLOK®	12mm GYROLOK®

R6000 valves are CE 0035 / PED approved

* Silicone seals are not available for XR series.
* Silicone seals for MR series only available up to 350 psig (spring code B)
* Silicone seals for HR series only available up to 300 psig (spring code A)

*****Customer can request a specific cracking pressure when ordering. To specify, add the cracking pressure as -PSIG (not BAR) after the M for Manual Override (if no override, add value after "H"). Otherwise, the factory sets the valve at the nominal midpoint of the cracking pressure range selected. Valves with specific cracking pressure include standard factory installed lockwire.*

R6000 Service Kits

LR Kit includes: end seat-to-body O-ring, bonnet-to-body O-ring, and bonnet seal O-ring.

MR/HR/XR Kit includes: end seat-to-body O-ring, bonnet-to-body O-ring, seat O-ring, and Delta seal. Replacement of Delta seal requires use of installation tool and resizing tool. Consult factory for details.

To Order, add **K** to front of valve part number (example: **KLR6024-2MP-AH**).

www.hoke.com
www.dupontelastomers.com

6600 Series

Bleed Valves

HOKE® 6600 Series bleed valves allow for quick, easy manual bleed-off of system pressure. These valves come in a variety of configurations, including straight, elbow, union, and tee.

Features

- Compact installation
- 316 stainless steel construction
- Straight, union, elbow or tee flow configurations
- Integral tube ends
- Special High Tolerance NPT Thread

Benefits

- Safe
- Reliable
- GYROLOK® fitting connections eliminate pipe thread leak paths

Typical Applications

- Air, hydraulic systems, or natural gas
- Venting or purging of liquids and gases
- For use on instrument manifolds

Technical Data

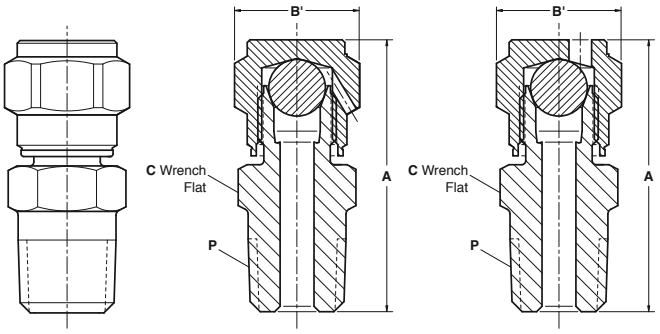
Body Material	316 stainless steel
Maximum Operating Pressure	6000 psig @ 70° F (414 bar @ 21° C)
Operating Temperature Range	-40° F to +600° F (-40° C to +316° C)
End Connections	¼″, ⅜″, ½″ GYROLOK®
Average Operating Torque @ Maximum Operating Pressure	40 in-lbs

Operating Instructions

- Valve is operated by turning the bleed port nut with a wrench. Use appropriate back-up wrench to hold body, while turning bleed nut.
- As the bleed nut is turned, pressure forces the ball off the seat. Pressure is vented through a hole drilled in the nut, angled back toward the body of the valve. Make sure flow is directed away from user.
- Those using the valves should wear protective clothing, especially goggles.
- No attempt should be made to repair or dismantle the valve.

6600 Series

Dimensions



6610 Series *6610001*

6610 Series: Straight Valve

Part Number	P Thread NPT	A Open	B' Hex	C Wrench Flat
6610M2Y	⅛″	1⅜ (35mm)	⅝″	½″
6610M4Y	¼″	1 17/32 (39mm)	⅝″	9/16″
6610M6Y	⅜″	1 19/32 (40mm)	⅝″	11/16″
6610M8Y	½″	1 13/16 (46mm)	⅝″	⅞″
6610001	¼″	1 17/32 (39mm)	⅝″	9/16″

6631 Series Directed Bleed Valves

HOKE®'s 6631 Bleed Valve allows the user to direct the bled fluid as desired. The valve can be ordered with a 1½″ (38mm) press fit handle by adding an "H" suffix to the valve part number (e.g., **6631H4YH**). To operate, simply turn the 7/16″ nut with a wrench or the optional loose fit stainless steel bar handle, part number **59-878**. Please consult your local distributor for details.

Caution: If the vented fluids are not going to be contained, the vent tube must be positioned at installation so that it is directed away from the operating personnel.

Technical Data

Body Material	316 stainless steel
Maximum Operating Pressure	5000 psig @ 70° F (345 bar @ 21° C)
Operating Temperature Range	-20° F to +425° F (-29° C to +218° C)
Orifice	0.125 (3.2mm)

Benefits

Safety

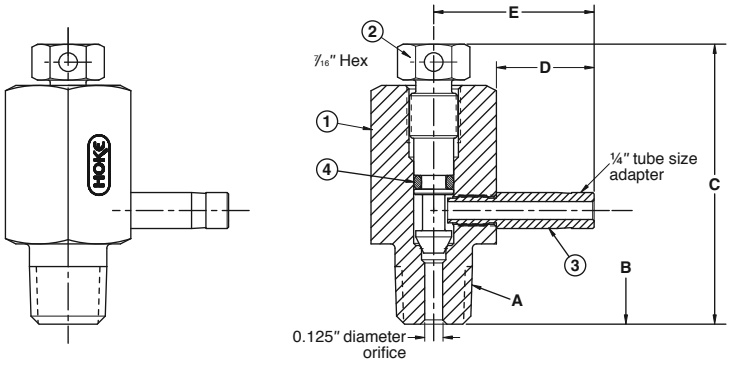
- O-ring packaging prevents leakage through stem threads

Reliability

- All valves are tested for bubble-tight leakage

Typical Applications

- Venting or purging of liquids and gases
- For use on gauge valves



Dimension Chart

Part Number	A Inlet	B	C	D	E
6631H4Y	¼″	¾″ (19mm)	2″ (51mm)	1 1/16″ (17mm)	1 3/16″ (30.5mm)
6631H84Y	½″	29/32″ (23mm)	2⅛″ (54mm)	1 1/16″ (17mm)	1 3/16″ (30.5mm)

Materials of Construction

	Part	Material
1	Body	316 stainless steel
2	Stem	316 stainless steel
3	Vent tube	316 stainless steel
4	O-ring	Fluoroelastomer

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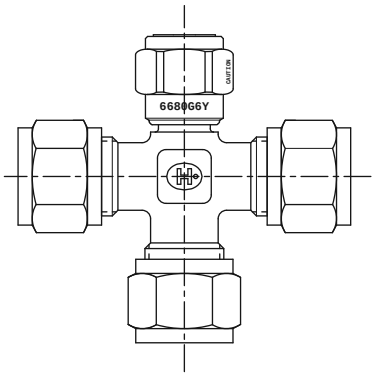
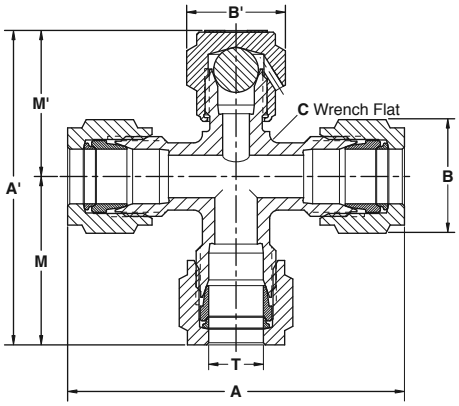
Dimensions for reference only and are subject to change without notice.

6600 Series

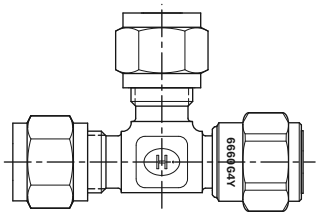
Dimensions

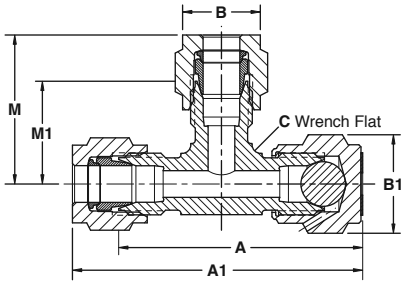




6680 Series: Tee Valve

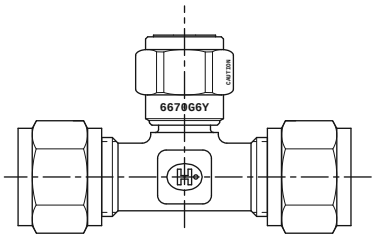
Part Number	T Tube O.D.	A	A'	B Hex	B' Hex	C Wrench Flat	M	M'
6680G4Y	¼″	2⅝₄″ (54mm)	2⅝₄″ (53mm)	⅜″	⅝″	7⁄16″	1 1⁄16″ (27mm)	1 1⁄64″ (27mm)
6680G6Y	⅜″	2 23⁄64″ (60mm)	2 13⁄64″ (52mm)	11⁄16″	⅝″	½″	2 3⁄16″ (56mm)	1 1⁄64″ (27mm)
6680G8Y	½″	2 57⁄64″ (73mm)	2 13⁄64″ (68mm)	⅞″	⅝″	11⁄16″	1 29⁄64″ (37mm)	1 7⁄32″ (31mm)

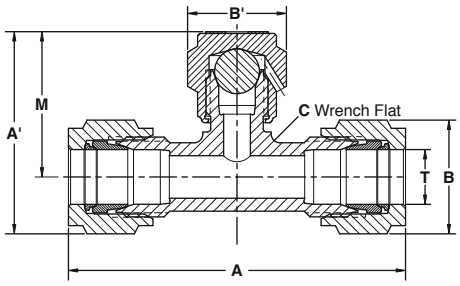




6660 Series: Elbow Valve

Part Number	T Tube O.D.	A	A'	B Hex	B' Hex	C Wrench Flat	M	M'
6660G4Y	¼″	1 25⁄32″ (45mm)	2 1⁄64″ (52mm)	9⁄16″	⅝″	7⁄16″	1 3⁄64″ (27mm)	23⁄32″ (18mm)



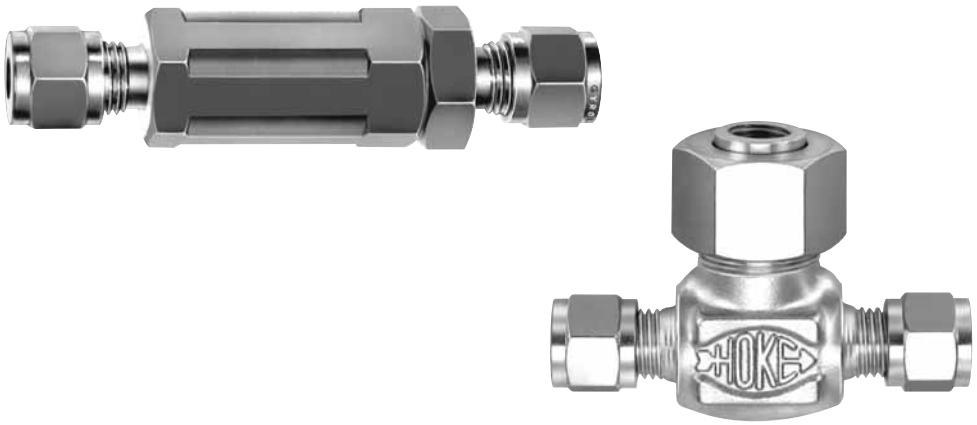


6670 Series: Union Valve

Part Number	T Tube O.D.	A	A'	B Hex	B' Hex	C Wrench Flat	M
6670G4Y	¼″	23⁄32″ (53mm)	1 23⁄64″ (35mm)	9⁄16″	⅝″	7⁄16″	1 5⁄64″ (27mm)
6670G6Y	⅜″	2 21⁄64″ (59mm)	1 1⁄16″ (37mm)	11⁄16″	⅝″	½″	1 3⁄32″ (28mm)
6670G8Y	½″	2 57⁄64″ (73mm)	1 21⁄32″ (42mm)	⅞″	⅝″	11⁄16″	1 7⁄32″ (31mm)

6300 Series

Micron Filters



Features

- Choice of in-line, removable, or bypass filter models
- NPT female and GYROLOK® tube fitting connections
- Variety of micron filtering ranges from 2 to 55µ
- Filter elements are available in 316 stainless steel
- Filter elements are easily replaced
- Bypass models permit purging and sampling of process fluid
- Bodies available in brass and 316 stainless steel
- Special High Tolerance NPT Thread

Applications

- Trap foreign particles
- Protect sensitive equipment
- System purging
- Pressure damper

Technical Data

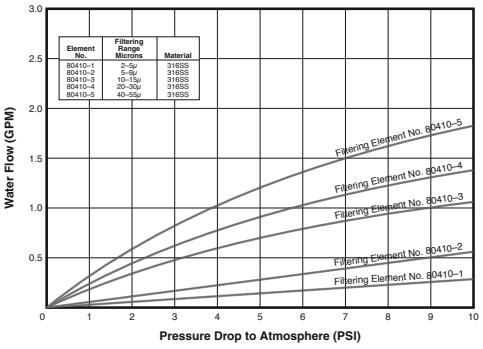
Body Material	316 stainless steel, brass
Maximum Operating Pressure	Brass: 3000 psig @ 70° F (211 kg/cm² @ 21° C) Stainless steel: 5000 psig @ 70° F (352 kg/cm² @ 21° C)
Operating Temperature Range	-60° F to +450° F (-51° C to +232° C)
Micron Range	2 to 55µ
Cv Factor Range	0.006 to 0.42

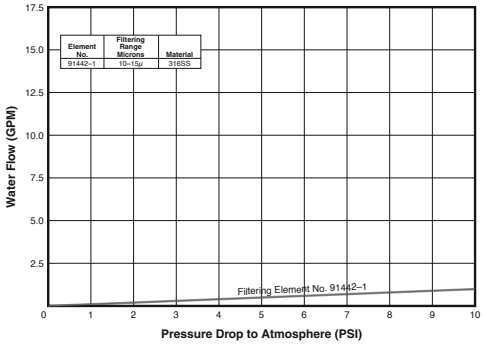
fluid control

6300 Series

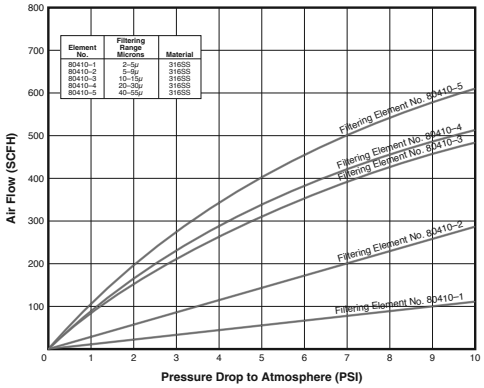
Diagrams & Flow Curves

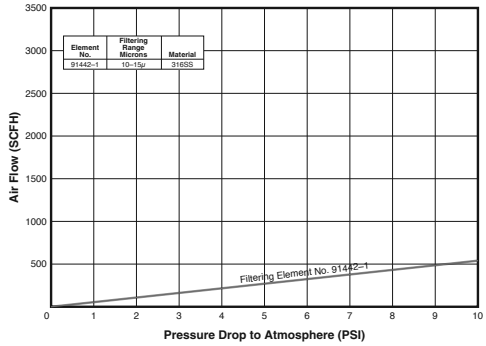
Water





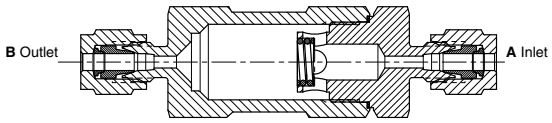
Air





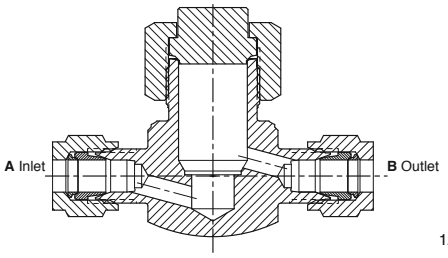
How to Order

Select and specify filter by part number, according to desired connections and materials of construction. Be sure to add the identifying digit of the desired filter element to the filter part number from the chart below. To order a 316 stainless steel in-line type, ⅛″ NPT female filter with an element range of 5 to 9µ, add "–2" (e.g., **6312F2Y**). To order a filter without a filter element, insert the number "–0" in the model number desired (e.g., **6310F2Y**).



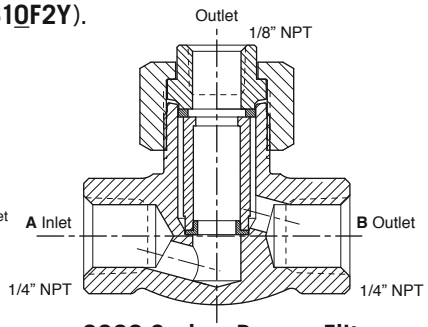
6310 Series: In-line Filters

A & B Connections	Brass	316 Stainless Steel
⅛″ NPT female	**631xF2B**	**631xF2Y**
¼″ NPT female	**631xF4B**	**631xF4Y**
⅛″ GYROLOK®	—	**631xG2Y**
¼″ GYROLOK®	**631xG4B**	**631xG4Y**



6320 Series: Removable Filters

A & B Connections	Brass	316 Stainless Steel
⅛″ GYROLOK®	**632xG2B**	**632xG2Y**
¼″ NPT female	**632xF4B**	**632xF4Y**
¼″ GYROLOK®	**632xG4B**	**632xG4Y**
6mm GYROLOK®	—	**632xG6YMM**



6330 Series: Bypass Filters

A & B Connections	316 Stainless Steel
¼″ NPT female	**633xF4Y**
⅛″ GYROLOK®	**633xG2Y**
¼″ GYROLOK®	**633xG4Y**

316 Stainless Steel Elements

Micron Range	For ⅛″ & ¼″ Size Housings	For ⅜″ & ½″ Size Housings	Identifying Digit	Cv Factor
2 to 5µ	**80410–1** **80409–1***	—	**–1**	0.006
5 to 9µ	**80410–2** **80409–2***	—	**–2**	0.055
10 to 15µ	**80410–3** **80409–3***	**91442–1**	**–3**	0.33
20 to 30µ	**80410–4** **80409–4***	—	**–4**	0.39
40 to 55µ	**80410–5** **80409–5***	—	**–5**	0.42
0.5µ	**80410–6**	—	**–6**	
100µ	**80410–7**	—	**–7**	

* *For use with 6330 Series Bypass-type housing*

1500 Series

Forged Body Toggle Valves

Featuring a simple, reliable design concept, this low-maintenance valve is well suited for a wide variety of applications. The toggle handle provides easy on-off operation and visual indication of flow.

Benefits

Safety

- Handle gives visual indication of stem position

Instant control

- Toggle handle provides instant on-off control

Vacuum service

- Elastomeric seals provide leak-tight sealing under positive pressure and vacuum conditions

Reliability

- All valves are tested for bubble-tight leakage at both seat and packing

Installation variety

- Choose from a broad selection of male NPT, female NPT and GYROLOK® tube fitting connections

Handle options

- Color-coded handles are available for identifying system fluids

Panel mounting

- Panel mounting is standard on all models

Typical Applications

- Chromatographs and mass spectrometers
- Manometer shutoff valves
- Air lines
- Instrument panels

Technical Data

Body Material*	316 stainless steel, brass
Maximum Operating Pressure @70° F (21° C)	0.125 orifice: 200 psig (14 bar) 0.219 orifice: 100 psig (7 bar)
Operating Temperature Range	-20° F to +300° F (-29° C to +149° C)
Orifice Sizes	0.125 to 0.219 (3.2 to 5.6mm)
Cv Factors	0.23 to 0.60
End Connection	⅛″ to ¼″ GYROLOK®, ⅛″ to ⅜″ NPT

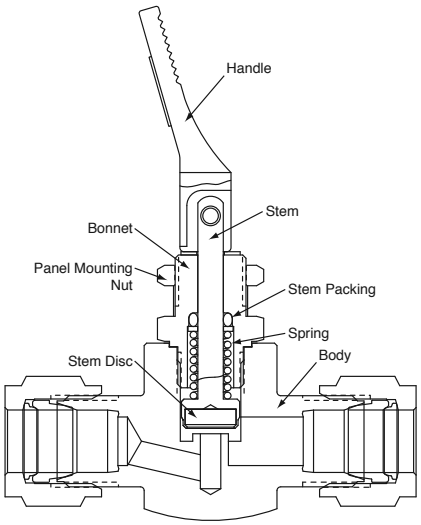
** Consult factory for other materials*

fluid control

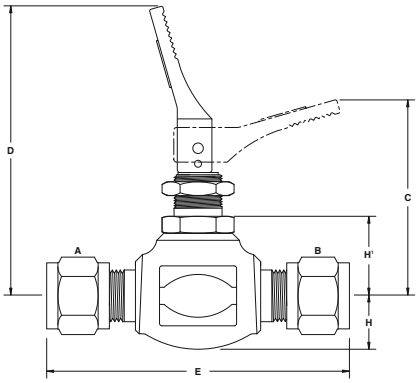
1500 Series

Materials of Construction

Part	Brass Valves	316 Stainless Steel Valves
Body	Brass	316 stainless steel
Stem	Brass	316 stainless steel
Stem packing	Viton® o-ring	Viton® o-ring
Stem disc	Viton®	Viton®
Spring	18-8 stainless steel	18-8 stainless steel
Bonnet	Brass	316 stainless steel
Handle, molded	Nylon, black	Nylon, black
Panel mounting nut	Nickel-plated brass	Nickel-plated brass



Dimensions

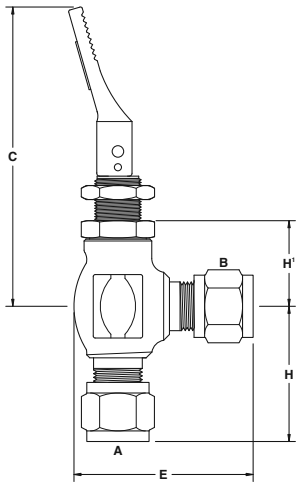


1500 Series Globe Pattern

1500 Series: Globe Pattern

Inlet A and Outlet B		C (Closed)	D (Open)	E	H	H¹
⅛″ GYROLOK®	inch	1 47/64	2 41/64	2 3/8	25/64	3/4
	mm	44	67	60	10	19
⅛″ male NPT	inch	1 47/64	2 41/64	1 3/4	25/64	3/4
	mm	44	67	44	10	19
⅛″ female NPT	inch	1 47/64	2 41/64	1 3/4	25/64	3/4
	mm	44	67	44	10	19
¼″ GYROLOK®	inch	1 47/64	2 41/64	2 3/8	25/64	3/4
	mm	44	67	60	10	19
¼″ male NPT	inch	1 47/64	2 41/64	1 3/4	25/64	3/4
	mm	44	67	44	10	19
¼″ female NPT	inch	1 57/64	2 51/64	1 7/8	31/64	15/16
	mm	48	71	48	12	24
⅜″ male NPT	inch	1 57/64	2 51/64	1 7/8	31/64	15/16
	mm	48	71	48	12	24

Dimensions for reference only, subject to change.



1500 Series Angle Pattern

1500 Series: Angle Pattern

Inlet A and Outlet B		C (Closed)	D (Open)	E	H	H¹
⅛″ GYROLOK®	inch	1 43/64	2 37/64	1 7/16	17/64	11/16
	mm	42	66	36	28	17
⅛″ male NPT	inch	1 23/32	2 5/8	1 17/64	7/8	3/4
	mm	44	67	32	22	19
⅛″ female NPT	inch	1 23/32	2 5/8	1 17/64	7/8	3/4
	mm	44	67	32	22	19
¼″ GYROLOK®	inch	1 23/32	2 5/8	1 19/32	1 13/64	3/4
	mm	44	67	40	31	19
¼″ male NPT	inch	1 23/32	2 5/8	1 17/64	7/8	3/4
	mm	44	67	32	22	19

Dimensions for reference only, subject to change.

Panel Mounting

Panel hole: for ¼″ female and ⅜″ male models (0.219 orifice) = 33/64″ (13.1mm) diameter
all other models (0.125 orifice) = 29/64″ (11.5mm) diameter

Panel thickness = 3/16″ (4.7mm) maximum

How to Order: Standard Valves

1500 Series: Globe Pattern

End Connections	Order by Part Number: Brass	Order by Part Number: 316 Stainless Steel	Orifice	Cv
⅛″ GYROLOK®	**1513G2B**	**1513G2Y**	0.125	0.23
⅛″ male NPT	**1513M2B**	**1513M2Y**	0.125	0.23
⅛″ female NPT	**1513F2B**	**1513F2Y**	0.125	0.23
¼″ GYROLOK®	**1513G4B**	**1513G4Y**	0.125	0.23
¼″ male NPT	**1513M4B**	**1513M4Y**	0.125	0.23
¼″ female NPT	**1533F4B**	—	0.219	0.60
⅜″ male NPT	**1533M6B**	—	0.219	0.60

1513G4B

1523F2B

1500 Series: Angle Pattern

End Connections	Order by Part Number: Brass	Orifice	Cv
⅛″ GYROLOK®	**1523G2B**	0.125	0.31
⅛″ male NPT	**1523M2B**	0.125	0.31
⅛″ female NPT	**1523F2B**	0.125	0.31
¼″ GYROLOK®	**1523G4B**	0.125	0.31
¼″ male NPT	**1523M4B**	0.125	0.31

Handle Options

Option	Description		Part Number
Handle positioning kit	Secures handle against rotation; permits placement of handle in any position on a panel face.		**1500K5**
Flip-shut pin	Pin prevents handle from being left in the open position.		**59–544**
Colored handles	Standard handle is black	Red handle	**95626–031**
		Yellow handle	**95626–032**
		Blue handle	**95626–033**

*Handle Positioning Kit **#1500K5***

*Handle with Flip-shut Pin **#59–544***

Spare Parts

Spare parts and repair kits are available for all toggle valves. Please contact your distributor for specific information.

Cleaning and Testing

When ordering, please specify if oxygen cleaning or helium leak testing is required.

Additional Sizes

Additional sizes and options are available on special request. Please consult your local HOKE® distributor.

6800 Series

Gauge Valves

Features

- Corrosion-resistant bar stock 316 stainless steel bodies
- Packing below stem threads prevents contamination and wash away of thread lubricants to assure long valve life
- Hardened 17-4 PH 2-piece , non-rotating stem point minimizes seat galling and provides an excellent metal-to-metal seat for positive shutoff
- Low profile bonnet assembly and large diameter stem reduces damage to bonnet and stem assembly
- Roll pin locks bonnet in the valve body to prevent accidental removal
- Choice of 5⅜″ long body for standard process use or 7⅜″ body for insulated piping applications
- Three outlets meet individual gauge requirements
- Polyethylene cap protects stem and bonnet from external damage
- Rugged large handle provides easy grip and control
- All models are stamped with maximum operating pressures on valve body
- High temperature packing is available on special order
- Special High Tolerance NPT Thread

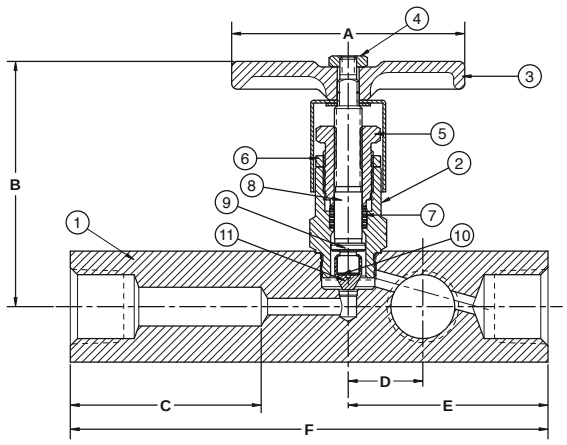
Technical Data

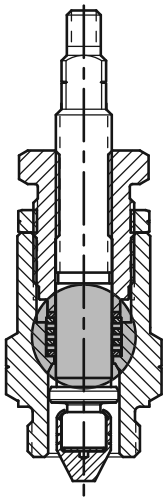
Body Material	316 stainless steel
Maximum Operating Pressure	• 6000 psig @ -65° to +200° F (414 bar @ -54° C to +93° C) • 3000 psig @ +450° F (207 bar @ +232° C)
Operating Temperature Range	-65° F to +450° F (-54° C to +232° C)
Orifice Sizes	**6801L8Y**: 0.156″ (3.96mm) All others: 0.187″ (4.75mm)

fluid control

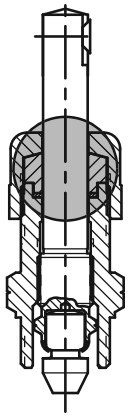
6800 Series

Materials of Construction





Dyna-Pak® Packing



TFE Packing
(6801L8Y only)

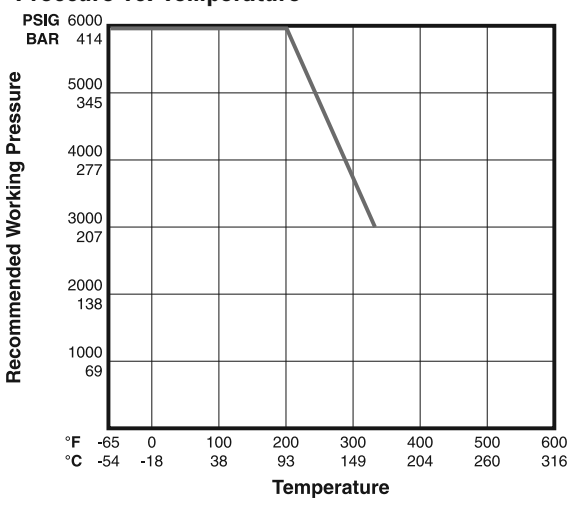
	Part	316 Stainless Steel Models
1	Body	316 stainless steel
2	Housing	316 stainless steel
3	Handle	303 stainless steel
4	Hex nut	18-8 stainless steel
5	Packing nut	XM-28 stainless steel
6	Lock nut	316 stainless steel
7	Packing*	Dyna-Pak®
8	Stem	316 stainless steel
9	Washer	316 stainless steel
10	Disc	17-7 PH stainless steel
11	Stem point	17-4 PH stainless steel

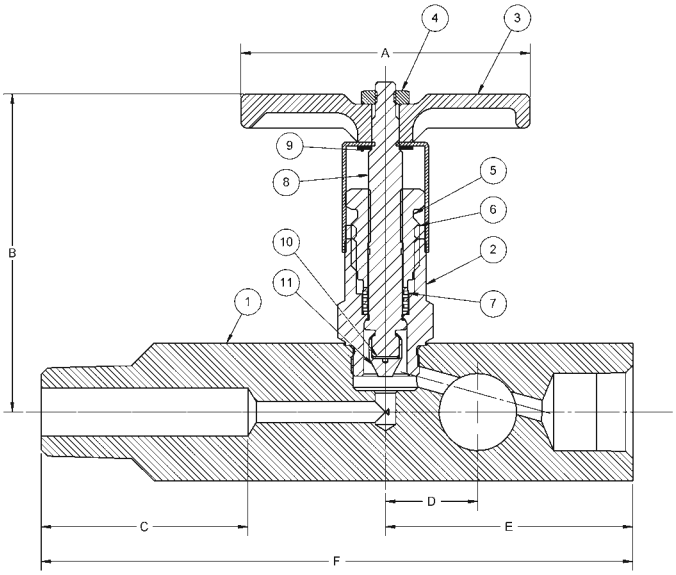
* *Model **6801L8Y** uses a single-piece molded PTFE packing system.*

Dimensions

Model Number		A	B	C	D	E	F
6801L8Y	inch	1¼	2 17/32	1	9/16	1¾	3¼
	mm	32	64	25	14	44	83
6802L8Y	inch	2⅝	3	2 5/32	27/32	2¼	5⅜
	mm	67	75	55	21	57	136
6803L128Y	inch	2⅝	3	2 5/32	27/32	2¼	5⅜
	mm	67	75	55	21	57	136
6805L128Y	inch	2⅝	3	4 5/32	27/32	2¼	7⅜
	mm	67	75	106	21	57	188

Pressure vs. Temperature





How to Order: Standard Valves

Connections		Order by Part Number	Body Length	
Inlet	Outlet	316 Stainless Steel	Inch	mm
½″ NPT male	½″ NPT female	**6801L8Y***	3¼	83
½″ NPT male	½″ NPT female (3x)	**6802L8Y**	5⅜	136
½″ NPT female	½″ NPT female (3x)	**6802F8Y**	5⅜	136
¾″ NPT male	½″ NPT female (3x)	**6803L128Y**	5⅜	136
¾″ NPT male	½″ NPT female (3x)	**6805L128Y**	7⅜	188

* *Furnished with bleed plug drilled in body*
*Model **6801L8Y** uses a single-piece molded PTFE packing system*

Dyna-Pak® is a registered trademark of HOKE®.

Notes

Notes

The Small Bore Instrumentation Specialists

We specialize in small bore instrumentation products up to 2" that deliver benchmark performance quality & safety; provide the broadest array of superior alloy offerings in the market; decades of proven success in a wide range of industries; a roster of "who's who" customers & projects globally; original "Best Solution" engineering & designs; and are focused on continuous improvement in all aspects of our business.

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