HYDR-STAR Fluid Control Company Limited

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HYDR·STAR Pumps and Valves

HYDR-STAR FLUID CONTROL COMPANY LIMITED

HIGH PRESSURE VALVES, FITTINGS, TUBING & NIPPLES

HYDR·STAR
Pumps and Valves

Waterjet Cutting

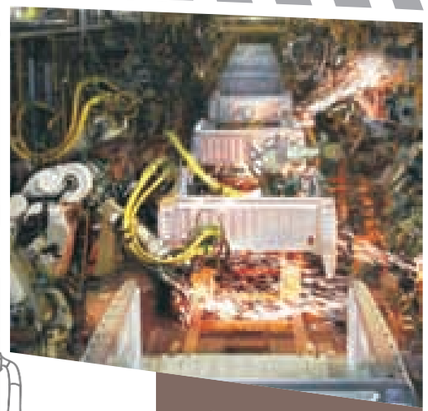
Aerospace

Chemical

Petro

Waterblasting

Process Controls


Automobile

HYDT-STAR's pumps and valves are widely used in various industries. We provide quality products and services with international standard for many well know and outstanding companies worldwide. Choose HYDR-STAR, we will provide you with comprehensive products and professional services.

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HYDR·STAR
Pumps and Valves

About HYDR-STAR

HYDR-STAR Fluid Control Company Limited specialize and focus on the R&D, design and manufacture of stainless steel instrumentation valves, high pressure valves, control valves, high pressure pumps and boosters with international standard.

The company occupies 54 acres and owns 20,000 square meters of modern workshop and office buildings; an engineering team with more than 15 years of professional fluid control technology; advanced testing and manufacturing equipment; complete quality control system; customer oriented, timely and professional sales team and superior services to provide high quality products and solutions for the global fluid control industry.

HYDR-STAR passed the ISO9001 quality management system certification and our products passes SIL and EAC certification. Our products are recognized by clients and customers in Middle East, European Union, Russia, China and other countries.

After years of hard work, HYDR-STAR has become an industry leader and has established list of regular customers from around the globe. Our products are being used in oil&gas, petrochemical, energy, mining, aerospace, military, automotive, firefighting and conventional hydraulic machinery Industries.

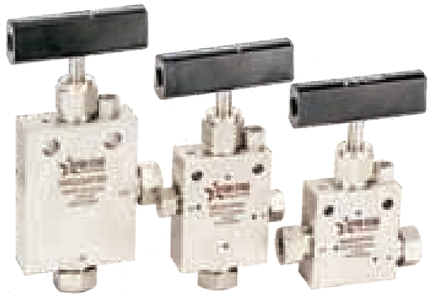
A corner of workshop

High Precision Lathe	Three Coordinate Measuring Machine
VMC	Warehouse

Needle Valves

Features

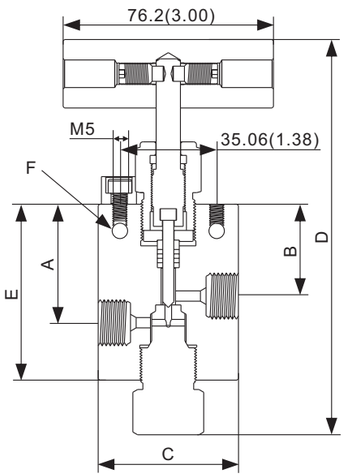
- ★ 316 cold-work stainless steel body for excellent corrosion resistant and high tensile. Other special materials available.
- ★ 3 patterns body types.(Straight,Angle,3 way/1 on pressure type)
- ★ Prevents galling due to the no-rotation stem.
- ★ Packing blow stem threads designed for reliable sealing.
- ★ Integral though-holes for bracket mounting. Panel mounting is also available.
- ★ Vee or Regulating stem for flow control and shut-off.
- ★ Replaceable seat valves available. Valves with replaceable seat can be quickly repaired without removing from the system. It is easy to repaired and low maintenance costs.
- ★ 4 pressure levels available.15000 psig (low pressure),20000 psig (medium pressure),30000 psig (high pressure) and 60000 psig (high pressure).
- ★ Working temperature ranges from -100°Fto 450°F(-73℃ to 232℃) for standard valves with glass filled PTFE packing. And other packing materials available, such as grafoil.
- ★ Gland locking device prevent loosening of the packing gland.



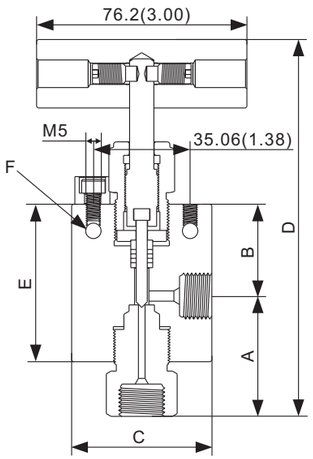
NR Series With Replaceable Seat

mm(in.)

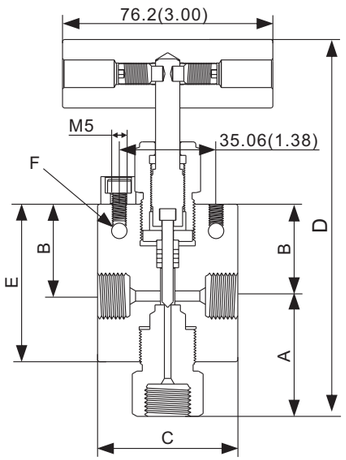
Straight Valves



Angle Valves



3 Way / 1 on Pressure



Technical Parameters				Ordering Code		
Work Pressure	Size	Ports	Orifice mm(in.)	Straight	Angel	3 Way/1on press.
Medium Pressure 20000 psig	1/4"	MF 4	3.18(0.13)	NR20MF4A	NR20MF4B	NR20MF4C
	3/8"	MF 6	5.56(0.22)	NR20MF6A	NR20MF6B	NR20MF6C
	9/16"	MF 9	7.94(0.31)	NR20MF9A	NR20MF9B	NR20MF9C
	3/4"	MF 12	11.13(0.44)	NR20MF12A	NR20MF12B	NR20MF12C
	1"	MF 16	14.27(0.56)	NR20MF16A	NR20MF16B	NR20MF16C
High Pressure 30000 psig	1/4"	HF 4	2.39(0.09)	NR30HF4A	NR30HF4B	NR30HF4C
	3/8"	HF 6	3.18(0.13)	NR30HF6A	NR30HF6B	NR30HF6C
	9/16"	HF 9	3.18(0.13)	NR30HF9A	NR30HF9B	NR30HF9C
High Pressure 60000 psig	1/4"	HF 4	1.57(0.06)	NR60HF4A	NR60HF4B	NR60HF4C
	3/8"	HF 6	1.57(0.06)	NR60HF6A	NR60HF6B	NR60HF6C
	9/16"	HF 9	1.98(0.08)	NR60HF9A	NR60HF9B	NR60HF9C

Dimension

Straight Valves

mm(in.)

Ordering Code	A	B	C	D	E	F	Thickness
NR20MF4A	41.15(1.62)	30.23(1.19)	50.80(2.00)	144.25(5.68)	70.40(2.77)	5.59 (0.22)	25.40(1.00)
NR20MF6A	41.15(1.62)	30.23(1.19)	50.80(2.00)	144.25(5.68)	70.50(2.78)	5.59 (0.22)	25.40(1.00)
NR20MF9A	60.45(2.38)	44.45(1.75)	63.50(2.50)	165.7(6.52)	92.2(3.63)	8.64 (0.34)	25.40(1.00)
NR20MF12A	76.20(3.00)	57.15(2.25)	76.20(3.00)	187.8(7.39)	114.3(4.50)	11.18 (0.44)	34.93(1.38)
NR20MF16A	95.25(3.75)	71.37(2.81)	104.65(4.12)	211.6(8.33)	138.1(5.44)	14.22 (0.56)	44.45(1.75)
NR30HF4A	38.10(1.50)	28.45(1.12)	50.80(2.00)	141.28(5.56)	67.80(2.67)	5.59 (0.22)	25.40(1.00)
NR30HF6A	38.10(1.50)	28.45(1.12)	50.80(2.00)	141.28(5.56)	67.80(2.67)	5.59 (0.22)	25.40 (1.00)
NR30HF9A	39.62(1.56)	28.45(1.12)	66.55(2.62)	144.25(5.68)	70.80(2.79)	7.11 (0.28)	38.10(1.50)
NR60HF4A	42.93(1.69)	33.27(1.31)	50.80(2.00)	144.25(5.68)	70.40(2.77)	5.59 (0.22)	25.40(1.00)
NR60HF6A	42.93(1.69)	33.27(1.31)	50.80(2.00)	144.25(5.68)	71.20(2.80)	5.59 (0.22)	25.40(1.00)
NR60HF9A	45.45(1.75)	33.27(1.31)	66.55(2.62)	144.25(5.68)	70.20(2.76)	7.11 (0.28)	38.10(1.50)

Angle Valves

mm(in.)

Ordering Code	A	B	C	D	E	F	Thickness
NR20MF4B	53.98(2.13)	30.23(1.19)	50.80(2.00)	143.88(5.66)	57.15(2.25)	5.59 (0.22)	25.40(1.00)
NR20MF6B	53.98(2.13)	30.23(1.19)	50.80(2.00)	143.88(5.66)	57.15(2.25)	5.59 (0.22)	25.40(1.00)
NR20MF9B	63.50(2.50)	44.45(1.75)	63.50(2.50)	167.62(6.60)	79.38(3.13)	8.64 (0.34)	25.40(1.00)
NR20MF12B	87.38(3.44)	57.15(2.25)	76.20(3.00)	204.20(8.04)	107.95(4.25)	11.18 (0.44)	34.93(1.38)
NR20MF16B	111.10(4.38)	71.37(2.81)	104.65(4.12)	239.10(9.41)	133.35(5.25)	14.22 (0.56)	44.45(1.75)
NR30HF4B	52.32(2.06)	28.45(1.12)	50.80(2.00)	140.47(5.53)	60.45(2.38)	5.59 (0.22)	25.40(1.00)
NR30HF6B	58.67(2.31)	28.45(1.12)	50.80(2.00)	146.79(5.78)	60.45(2.38)	5.59 (0.22)	25.40(1.00)
NR30HF9B	66.55(2.62)	30.23(1.19)	66.55(2.62)	156.45(6.16)	61.98(2.44)	7.11 (0.28)	38.10(1.50)
NR60HF4B	53.85(2.12)	33.27(1.31)	50.80(2.00)	146.79(5.78)	66.55(2.62)	5.59 (0.22)	25.40(1.00)
NR60HF6B	59.94(2.36)	33.27(1.31)	50.80(2.00)	152.88(6.02)	66.55(2.62)	5.59 (0.22)	25.40(1.00)
NR60HF9B	68.07(2.68)	33.27(1.31)	66.55(2.62)	161.01(6.34)	66.55(2.62)	7.11 (0.28)	38.10(1.50)

3 Way / 1 on Pressure

mm(in.)

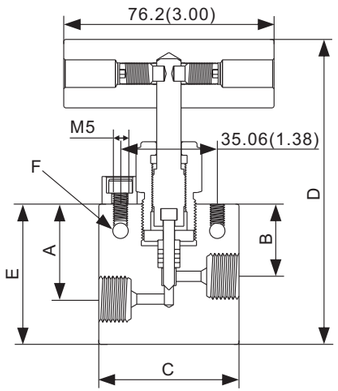
Ordering Code	A	B	C	D	E	F	Thickness
NR20MF4C	53.98(2.13)	30.23(1.19)	50.80(2.00)	143.88(5.66)	57.15(2.25)	5.59 (0.22)	25.40(1.00)
NR20MF6C	53.98(2.13)	30.23(1.19)	50.80(2.00)	143.88(5.66)	57.15(2.25)	5.59 (0.22)	25.40(1.00)
NR20MF9C	63.50(2.5)	44.45(1.75)	63.50(2.50)	167.62(6.60)	79.38(3.13)	8.64 (0.34)	25.40(1.00)
NR20MF12C	87.38(3.44)	57.15(2.25)	76.20(3.00)	204.20(8.04)	107.95(4.25)	11.18 (0.44)	34.93(1.38)
NR20MF16C	111.10(4.38)	71.37(2.81)	104.65(4.12)	239.10(9.41)	133.35(5.25)	14.22 (0.56)	44.45(1.75)
NR30HF4C	52.32(2.06)	28.45(1.12)	50.80(2.00)	140.47(5.53)	60.45(2.38)	5.59 (0.22)	25.40(1.00)
NR30HF6C	58.67(2.31)	28.45(1.12)	50.80(2.00)	146.79(5.78)	60.45(2.38)	5.59 (0.22)	25.40(1.00)
NR30HF9C	66.55(2.62)	28.45(1.12)	66.55(2.62)	156.45(6.16)	61.98(2.44)	7.11 (0.28)	38.10(1.50)
NR60HF4C	53.85(2.12)	33.27(1.31)	50.80(2.00)	146.79(5.78)	66.55(2.62)	5.59 (0.22)	25.40(1.00)
NR60HF6C	59.94(2.36)	33.27(1.31)	50.80(2.00)	152.88(6.02)	66.55(2.62)	5.59 (0.22)	25.40(1.00)
NR60HF9C	68.07(2.68)	33.27(1.31)	66.55(2.62)	161.01(6.34)	66.55(2.62)	7.11 (0.28)	38.10(1.50)

1. MF means female medium pressure connection . HF means female high pressure connection.
2. Ordering codes listed are for valves with vee stem tip. Valves with Regulating stem tip, add “-R” after the ordering codes.
3. Ordering codes listed are standard. Other sizes, materials and types are available upon request. For special requirements, please contact us.

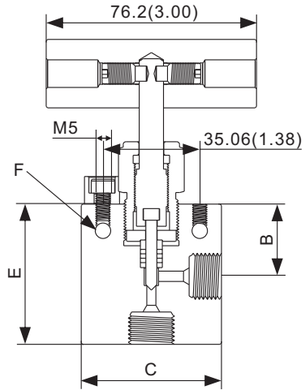
NV Series Without Replaceable Seat

mm(in.)

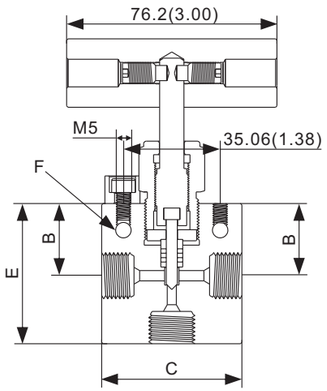
Straight Valves



Angle Valves



3 Way / 1 on Pressure



Technical Parameters				Ordering Code		
Work Pressure	Size	Ports	Orifice mm(in.)	Straight	Angel	3 Way/1on press.
Low Pressure 15000 psig	1/4"	FN 4	3.18(0.13)	NV15FN4A	NV15FN4B	NV15FN4C
	3/8"	FN 6	5.56(0.22)	NV15FN6A	NV15FN6B	NV15FN6C
	1/2"	FN 8	7.94(0.31)	NV15FN8A	NV15FN8B	NV15FN8C
Medium Pressure 20000 psig	1/4"	MF 4	3.18(0.13)	NV20MF4A	NV20MF4B	NV20MF4C
	3/8"	MF 6	5.56(0.22)	NV20MF6A	NV20MF6B	NV20MF6C
	9/16"	MF 9	7.94(0.31)	NV20MF9A	NV20MF9B	NV20MF9C
	3/4"	MF 12	11.13(0.44)	NV20MF12A	NV20MF12B	NV20MF12C
	1"	MF 16	14.27(0.56)	NV20MF16A	NV20MF16B	NV20MF16C
High Pressure 30000 psig	1/4"	HF 4	2.39(0.09)	NV30HF4A	NV30HF4B	NV30HF4C
	3/8"	HF 6	3.18(0.13)	NV30HF6A	NV30HF6B	NV30HF6C
	9/16"	HF 9	3.18(0.13)	NV30HF9A	NV30HF9B	NV30HF9C
High Pressure 60000 psig	1/4"	HF 4	1.57(0.06)	NV60HF4A	NV60HF4B	NV60HF4C
	3/8"	HF 6	1.57(0.06)	NV60HF6A	NV60HF6B	NV60HF6C
	9/16"	HF 9	1.98(0.08)	NV60HF9A	NV60HF9B	NV60HF9C

Dimension

Straight Valves

mm(in.)

Ordering Code	A	B	C	D	E	F	Thickness
NV15FN4A	41.15(1.62)	30.23(1.19)	50.80(2.00)	110.47(4.35)	50.80(2.00)	5.59(0.22)	25.40(1.00)
NV15FN6A	41.15(1.62)	30.23(1.19)	50.80(2.00)	110.47(4.35)	50.80(2.00)	5.59(0.22)	25.40(1.00)
NV15FN8A	60.45(2.38)	44.45(1.75)	76.20(3.00)	135.87(5.35)	76.20(3.00)	8.64(0.34)	38.10(1.50)
NV20MF4A	41.15(1.62)	30.23(1.19)	50.80(2.00)	110.47(4.35)	50.80(2.00)	5.59(0.22)	25.40(1.00)
NV20MF6A	41.15(1.62)	30.23(1.19)	50.80(2.00)	110.47(4.35)	50.80(2.00)	5.59(0.22)	25.40(1.00)
NV20MF9A	60.45(2.38)	44.45(1.75)	63.50(2.50)	132.82(5.23)	73.15(2.88)	8.64(0.34)	25.40(1.00)
NV20MF12A	76.20(3.00)	57.15(2.25)	76.20(3.00)	154.92(6.10)	95.25(3.75)	11.18(0.44)	34.93(1.38)
NV20MF16A	95.25(3.75)	71.37(2.81)	104.65(4.12)	177.27(6.98)	117.6(4.63)	14.22(0.56)	44.45(1.75)
NV30HF4A	38.10(1.50)	28.45(1.12)	50.80(2.00)	110.47(4.35)	50.80(2.00)	5.59(0.22)	25.40(1.00)
NV30HF6A	38.10(1.50)	28.45(1.12)	50.80(2.00)	110.47(4.35)	50.80(2.00)	5.59(0.22)	25.40(1.00)
NV30HF9A	39.62(1.56)	28.45(1.12)	66.55(2.62)	121.65(4.79)	61.98(2.44)	7.11(0.28)	38.10(1.50)
NV60HF4A	42.93(1.69)	33.27(1.31)	50.80(2.00)	113.52(4.47)	53.85(2.12)	5.59(0.22)	25.40(1.00)
NV60HF6A	42.93(1.69)	33.27(1.31)	50.80(2.00)	116.82(4.60)	57.15(2.25)	5.59(0.22)	25.40(1.00)
NV60HF9A	45.45(1.75)	33.27(1.31)	66.55(2.62)	123.17(4.85)	63.50(2.50)	7.11(0.28)	38.10(1.50)

Angle Valves

mm(in.)

Ordering Code	B	C	D	E	F	Thickness
NV15FN4B	30.23(1.19)	50.80(2.00)	121.65(4.79)	61.98(2.44)	5.59(0.22)	25.40(1.00)
NV15FN6B	30.48(1.20)	50.80(2.00)	124.69(4.91)	65.02(2.56)	5.59(0.22)	25.40(1.00)
NV15FN8B	42.88(1.69)	76.20(3.00)	148.57(5.85)	88.90(3.50)	8.64(0.34)	25.40(1.00)
NV20MF4B	30.23(1.19)	50.80(2.00)	121.57(4.79)	61.90(2.44)	5.59(0.22)	25.40(1.00)
NV20MF6B	30.23(1.19)	50.80(2.00)	121.57(4.79)	61.90(2.44)	5.59(0.22)	25.40(1.00)
NV20MF9B	44.45(1.75)	63.50(2.50)	145.52(5.73)	85.85(3.38)	8.64(0.34)	25.40(1.00)
NV20MF12B	57.15(2.25)	76.20(3.00)	167.62(6.60)	107.95(4.25)	11.18(0.44)	34.93(1.38)
NV20MF16B	71.37(2.81)	104.65(4.12)	189.72(7.47)	130.05(5.12)	14.22(0.56)	44.45(1.75)
NV30HF4B	28.45(1.12)	50.80(2.00)	110.47(4.35)	50.80(2.00)	5.59(0.22)	25.40(1.00)
NV30HF6B	28.45(1.12)	50.80(2.00)	113.52(4.47)	53.85(2.12)	5.59(0.22)	25.40(1.00)
NV30HF9B	28.45(1.12)	66.55(2.62)	121.65(4.79)	61.98(2.44)	7.11(0.28)	38.10(1.50)
NV60HF4B	33.27(1.31)	50.80(2.00)	120.12(4.73)	60.45(2.38)	5.59(0.22)	25.40(1.00)
NV60HF6B	33.27(1.31)	50.80(2.00)	126.22(4.97)	66.55(2.62)	5.59(0.22)	25.40(1.00)
NV60HF9B	33.27(1.31)	66.55(2.62)	131.04(5.16)	71.37(2.81)	7.11(0.28)	38.10(1.50)

3 Way / 1 on Pressure

mm(in.)

Ordering Code	B	C	D	E	F	Thickness
NV20MF4C	30.23(1.19)	50.8(2.00)	121.57(4.79)	61.90(2.44)	5.59(0.22)	25.40(1.00)
NV20MF6C	30.23(1.19)	50.80(2.00)	121.57(4.79)	61.90(2.44)	5.59(0.22)	25.40(1.00)
NV20MF9C	44.45(1.75)	63.50(2.50)	145.52(5.73)	85.85(3.38)	8.64(0.34)	25.40(1.00)
NV20MF12C	57.15(2.25)	76.20(3.00)	167.62(6.60)	107.95(4.25)	11.18(0.44)	34.93(1.38)
NV20MF16C	71.37(2.81)	104.65(4.12)	189.72(7.47)	130.05(5.12)	14.22(0.56)	44.45(1.75)
NV30HF4C	28.45(1.12)	50.80(2.00)	110.47(4.35)	50.80(2.00)	5.59(0.22)	25.40(1.00)
NV30HF6C	28.45(1.12)	50.80(2.00)	113.52(4.47)	53.85(2.12)	5.59(0.22)	25.40(1.00)
NV30HF9C	28.45(1.12)	66.55 (2.62)	121.65(4.79)	61.98(2.44)	7.11(0.28)	38.10(1.50)
NV60HF4C	33.27(1.31)	50.80(2.00)	120.12(4.73)	60.45(2.38)	5.59(0.22)	25.40(1.00)
NV60HF6C	33.27(1.31)	50.80(2.00)	126.22(4.97)	66.55(2.62)	5.59(0.22)	25.40(1.00)
NV60HF9C	33.27(1.31)	66.55(2.62)	131.04(5.16)	71.37(2.81)	7.11(0.28)	38.10(1.50)

1. MF means female medium pressure connection . HF means female high pressure connection.
2. Ordering codes listed are for valves with vee stem tip. Valves with Regulating stem tip, add “-R” after the ordering codes.
3. Ordering codes listed are standard. Other sizes, materials and types are available upon request. For special requirements, please contact us.

Actuator Operate Valves

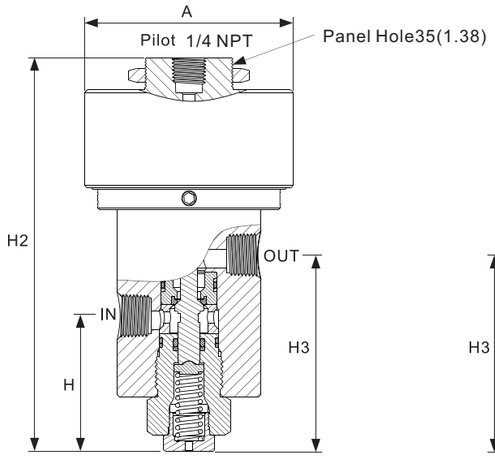
Features

- ★ 316 cold-work stainless steel valve body for excellent corrosion resistant and high tensile. Other special materials available.
- ★ 316 stainless steel actuator for IFV series valves and Aluminum alloy actuator for NV & NR series valves.
- ★ Panel Mounting for IFV series valves and Bracket installation for NV & NR series valves.
- ★ Integral though-holes for bracket mounting. Panel mounting is also available.
- ★ Normally Open Valves and Normally Closed Valves available.
- ★ The Valve can be quickly removed from the actuator. It is easy to repaired and low maintenance costs.
- ★ 6 pressure levels available .6000 psig, 10000 psig,15000 psig, 20000 psig, 30000 psig and 60000 psig.
- ★ Working temperature ranges from -40°F to 250°F(-40℃ to 120℃) for standard valves. And valves for other temperatures are available.
- ★ Pneumatic or hydraulic pilot for IFV series, air pilot for NV & NR series.

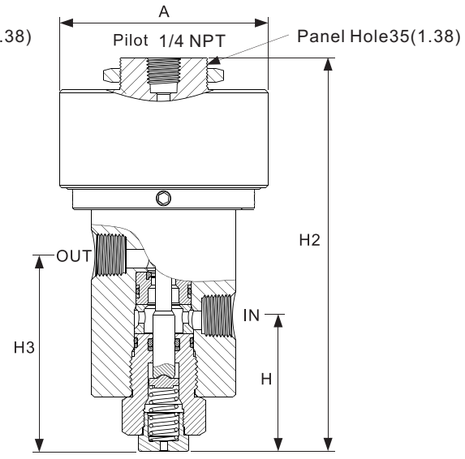
IFV series Valves

mm(in.)

Normally Closed Valves



Normally Open Valves



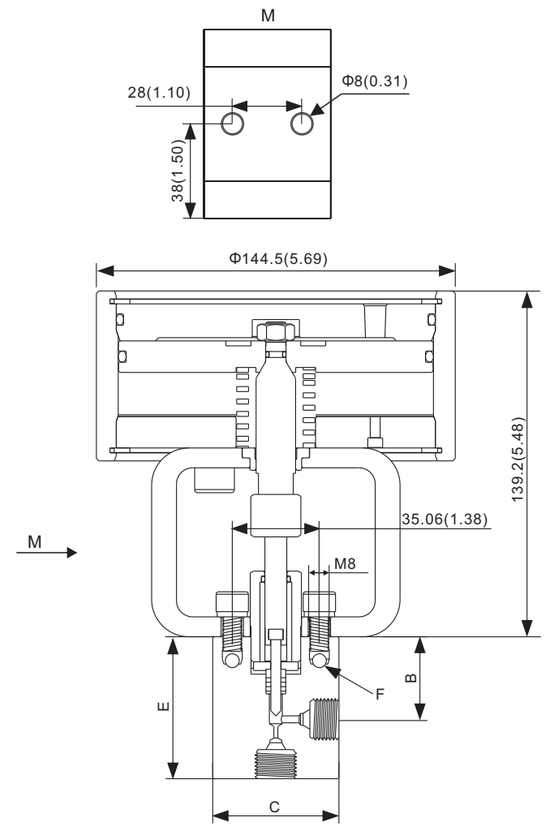
mm(in.)

Ordering Code	Work Press.	Pilot Press.	NO or NC	Valve Ports	A	H	H2	H3	Orifice
IFV-06SS6NO	6000Psig	MAX.100Psig	NO	3/8 NPT	82.5(3.25)	53.6(2.11)	155.8(6.13)	77.7(3.06)	9.5(0.38)
IFV-06SS6NC	6000Psig	MAX.100Psig	NC	3/8 NPT	82.5(3.25)	53.6(2.11)	155.8(6.13)	77.7(3.06)	9.5(0.38)
IFV-10SS6NO	10000Psig	MAX.100Psig	NO	3/8 NPT	82.5(3.25)	53.6(2.11)	155.8(6.13)	77.7(3.06)	7.9(0.31)
IFV-10SS6NC	10000Psig	MAX.100Psig	NC	3/8 NPT	82.5(3.25)	53.6(2.11)	155.8(6.13)	77.7(3.06)	7.9(0.31)
IFV-15SS6NO	15000Psig	MAX.100Psig	NO	3/8 NPT	82.5(3.25)	53.6(2.11)	155.8(6.13)	77.7(3.06)	6.4(0.25)
IFV-15SS6NC	15000Psig	MAX.100Psig	NC	3/8 NPT	82.5(3.25)	53.6(2.11)	155.8(6.13)	77.7(3.06)	6.4(0.25)

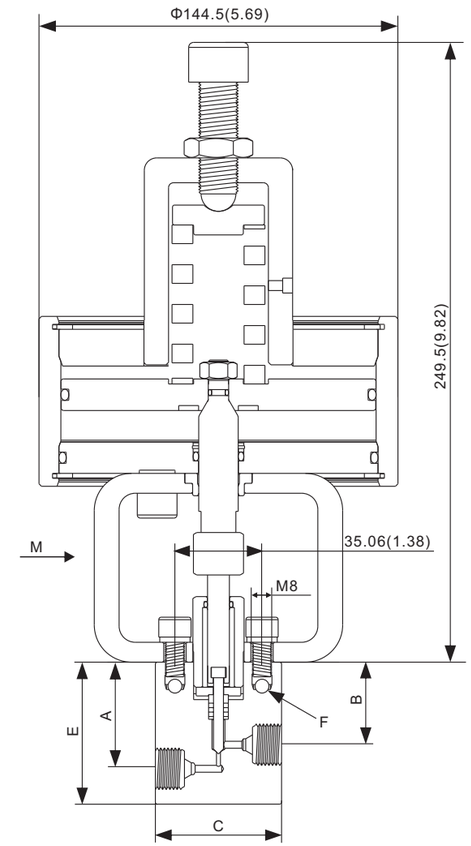
Single Drive Pneumatic Operate Valves

mm(in.)

With Single Piston Actuator NO Valve, Air To Close



With Single Piston Actuator NC Valve, Air To Open



NV Series Valves

Valve Technical Parameters			Ordering Code					
			Air to Open			Air to Close		
Work Press.	Size	Ports	Straight	Angel	3 way/1on press.	Straight	Angel	3 way/1on press.
15000 psig	1/4"	FN 4	NV15FN4A-1NC	NV15FN4B-1NC	NV15FN4C-1NC	NV15FN4A-1NO	NV15FN4B-1NO	NV15FN4C-1NO
	3/8"	FN 6	NV15FN6A-1NC	NV15FN6B-1NC	NV15FN6C-1NC	NV15FN6A-1NO	NV15FN6B-1NO	NV15FN6C-1NO
	1/2"	FN 8	NV15FN8A-1NC	NV15FN8B-1NC	NV15FN8C-1NC	NV15FN8A-1NO	NV15FN8B-1NO	NV15FN8C-1NO
20000 psig	1/4"	MF 4	NV20MF4A-1NC	NV20MF4B-1NC	NV20MF4C-1NC	NV20MF4A-1NO	NV20MF4B-1NO	NV20MF4C-1NO
	3/8"	MF 6	NV20MF6A-1NC	NV20MF6B-1NC	NV20MF6C-1NC	NV20MF6A-1NO	NV20MF6B-1NO	NV20MF6C-1NO
	9/16"	MF 9	NV20MF9A-1NC	NV20MF9B-1NC	NV20MF9C-1NC	NV20MF9A-1NO	NV20MF9B-1NO	NV20MF9C-1NO
30000 psig	1/4"	HF 4	NV30HF4A-1NC	NV30HF4B-1NC	NV30HF4C-1NC	NV30HF4A-1NO	NV30HF4B-1NO	NV30HF4C-1NO
	3/8"	HF 6	NV30HF6A-1NC	NV30HF6B-1NC	NV30HF6C-1NC	NV30HF6A-1NO	NV30HF6B-1NO	NV30HF6C-1NO
	9/16"	HF 9	NV30HF9A-1NC	NV30HF9B-1NC	NV30HF9C-1NC	NV30HF9A-1NO	NV30HF9B-1NO	NV30HF9C-1NO
60000 psig	1/4"	HF 4	NV60HF4A-1NC	NV60HF4B-1NC	NV60HF4C-1NC	NV60HF4A-1NO	NV60HF4B-1NO	NV60HF4C-1NO
	3/8"	HF 6	NV60HF6A-1NC	NV60HF6B-1NC	NV60HF6C-1NC	NV60HF6A-1NO	NV60HF6B-1NO	NV60HF6C-1NO
	9/16"	HF 9	NV60HF9A-1NC	NV60HF9B-1NC	NV60HF9C-1NC	NV60HF9A-1NO	NV60HF9B-1NO	NV60HF9C-1NO

1. Valve body dimensions see page 5 and page 6, actuator dimensions see page 8.
2. Ordering codes listed are standard. Other sizes, materials and types are available upon request. For special requirements, please contact us.

NR Series Valves

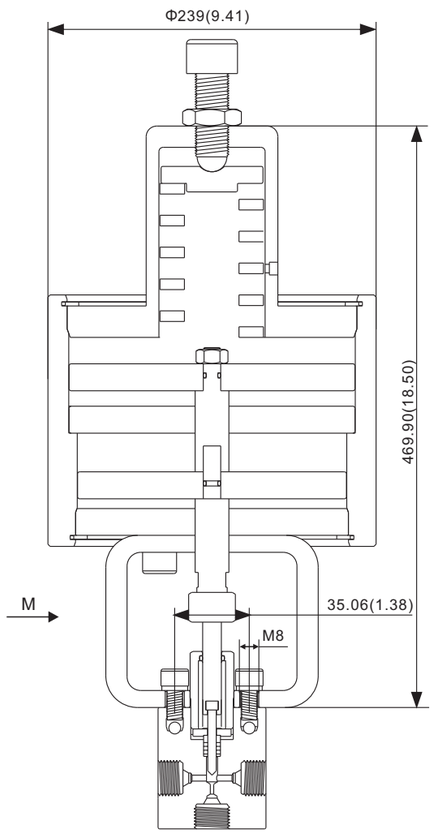
Valve Technical Parameters			Ordering Code					
			Air to Open			Air to Close		
Work Press.	Size	Ports	Straight	Angel	3 way/1on press.	Straight	Angel	3 way/1on press.
15000 psig	1/4"	FN 4	NR15FN4A-1NC	NR15FN4B-1NC	NR15FN4C-1NC	NR15FN4A-1NO	NR15FN4B-1NO	NR15FN4C-1NO
	3/8"	FN 6	NR15FN6A-1NC	NR15FN6B-1NC	NR15FN6C-1NC	NR15FN6A-1NO	NR15FN6B-1NO	NR15FN6C-1NO
	1/2"	FN 8	NR15FN8A-1NC	NR15FN8B-1NC	NR15FN8C-1NC	NR15FN8A-1NO	NR15FN8B-1NO	NR15FN8C-1NO
20000 psig	1/4"	MF 4	NR20MF4A-1NC	NR20MF4B-1NC	NR20MF4C-1NC	NR20MF4A-1NO	NR20MF4B-1NO	NR20MF4C-1NO
	3/8"	MF 6	NR20MF6A-1NC	NR20MF6B-1NC	NR20MF6C-1NC	NR20MF6A-1NO	NR20MF6B-1NO	NR20MF6C-1NO
	9/16"	MF 9	NR20MF9A-1NC	NR20MF9B-1NC	NR20MF9C-1NC	NR20MF9A-1NO	NR20MF9B-1NO	NR20MF9C-1NO
30000 psig	1/4"	HF 4	NR30HF4A-1NC	NR30HF4B-1NC	NR30HF4C-1NC	NR30HF4A-1NO	NR30HF4B-1NO	NR30HF4C-1NO
	3/8"	HF 6	NR30HF6A-1NC	NR30HF6B-1NC	NR30HF6C-1NC	NR30HF6A-1NO	NR30HF6B-1NO	NR30HF6C-1NO
	9/16"	HF 9	NR30HF9A-1NC	NR30HF9B-1NC	NR30HF9C-1NC	NR30HF9A-1NO	NR30HF9B-1NO	NR30HF9C-1NO
60000 psig	1/4"	HF 4	NR60HF4A-1NC	NR60HF4B-1NC	NR60HF4C-1NC	NR60HF4A-1NO	NR60HF4B-1NO	NR60HF4C-1NO
	3/8"	HF 6	NR60HF6A-1NC	NR60HF6B-1NC	NR60HF6C-1NC	NR60HF6A-1NO	NR60HF6B-1NO	NR60HF6C-1NO
	9/16"	HF 9	NR60HF9A-1NC	NR60HF9B-1NC	NR60HF9C-1NC	NR60HF9A-1NO	NR60HF9B-1NO	NR60HF9C-1NO

1. Valve body dimensions see page 3 and page 4, actuator dimensions see page 8.
2. Ordering codes listed are standard. Other sizes, materials and types are available upon request. For special requirements, please contact us.

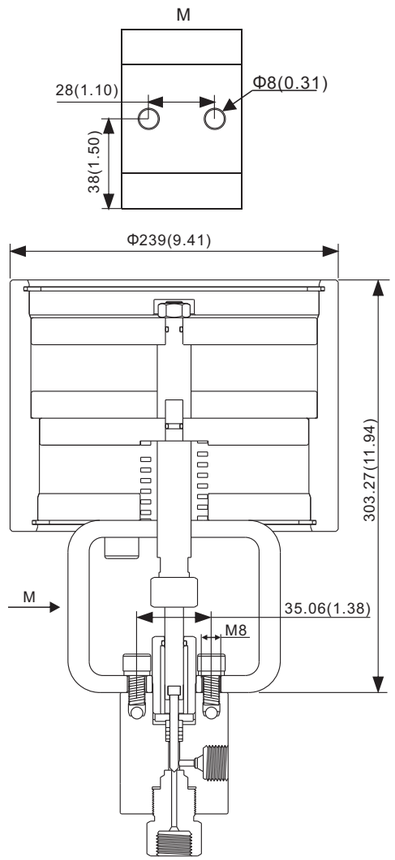
Double Drive Pneumatic Operate Valves

mm(in.)

With Double Piston Actuator NC Valve, Air To Open



With Double Piston Actuator NO Valve, Air To Close



NV Series Valves

Valve Technical Parameters			Ordering Code					
			Air to Open			Air to Close		
Work Press.	Size	Ports	Straight	Angel	3 way/1on press.	Straight	Angel	3 way/1on press.
15000 psig	1/4"	FN 4	NV15FN4A-2NC	NV15FN4B-2NC	NV15FN4C-2NC	NV15FN4A-2NO	NV15FN4B-2NO	NV15FN4C-2NO
	3/8"	FN 6	NV15FN6A-2NC	NV15FN6B-2NC	NV15FN6C-2NC	NV15FN6A-2NO	NV15FN6B-2NO	NV15FN6C-2NO
	1/2"	FN 8	NV15FN8A-2NC	NV15FN8B-2NC	NV15FN8C-2NC	NV15FN8A-2NO	NV15FN8B-2NO	NV15FN8C-2NO
20000 psig	1/4"	MF 4	NV20MF4A-2NC	NV20MF4B-2NC	NV20MF4C-2NC	NV20MF4A-2NO	NV20MF4B-2NO	NV20MF4C-2NO
	3/8"	MF 6	NV20MF6A-2NC	NV20MF6B-2NC	NV20MF6C-2NC	NV20MF6A-2NO	NV20MF6B-2NO	NV20MF6C-2NO
	9/16"	MF 9	NV20MF9A-2NC	NV20MF9B-2NC	NV20MF9C-2NC	NV20MF9A-2NO	NV20MF9B-2NO	NV20MF9C-2NO
30000 psig	1/4"	HF 4	NV30HF4A-2NC	NV30HF4B-2NC	NV30HF4C-2NC	NV30HF4A-2NO	NV30HF4B-2NO	NV30HF4C-2NO
	3/8"	HF 6	NV30HF6A-2NC	NV30HF6B-2NC	NV30HF6C-2NC	NV30HF6A-2NO	NV30HF6B-2NO	NV30HF6C-2NO
	9/16"	HF 9	NV30HF9A-2NC	NV30HF9B-2NC	NV30HF9C-2NC	NV30HF9A-2NO	NV30HF9B-2NO	NV30HF9C-2NO
60000 psig	1/4"	HF 4	NV60HF4A-2NC	NV60HF4B-2NC	NV60HF4C-2NC	NV60HF4A-2NO	NV60HF4B-2NO	NV60HF4C-2NO
	3/8"	HF 6	NV60HF6A-2NC	NV60HF6B-2NC	NV60HF6C-2NC	NV60HF6A-2NO	NV60HF6B-2NO	NV60HF6C-2NO
	9/16"	HF 9	NV60HF9A-2NC	NV60HF9B-2NC	NV60HF9C-2NC	NV60HF9A-2NO	NV60HF9B-2NO	NV60HF9C-2NO

NR Series Valves

Valve Technical Parameters			Ordering Code					
			Air to Open			Air to Close		
Work Press.	Size	Ports	Straight	Angel	3 way/1on press.	Straight	Angel	3 way/1on press.
15000 psig	1/4"	FN 4	NR15FN4A-2NC	NR15FN4B-2NC	NR15FN4C-2NC	NR15FN4A-2NO	NR15FN4B-2NO	NR15FN4C-2NO
	3/8"	FN 6	NR15FN6A-2NC	NR15FN6B-2NC	NR15FN6C-2NC	NR15FN6A-2NO	NR15FN6B-2NO	NR15FN6C-2NO
	1/2"	FN 8	NR15FN8A-2NC	NR15FN8B-2NC	NR15FN8C-2NC	NR15FN8A-2NO	NR15FN8B-2NO	NR15FN8C-2NO
20000 psig	1/4"	MF 4	NR20MF4A-2NC	NR20MF4B-2NC	NR20MF4C-2NC	NR20MF4A-2NO	NR20MF4B-2NO	NR20MF4C-2NO
	3/8"	MF 6	NR20MF6A-2NC	NR20MF6B-2NC	NR20MF6C-2NC	NR20MF6A-2NO	NR20MF6B-2NO	NR20MF6C-2NO
	9/16"	MF 9	NR20MF9A-2NC	NR20MF9B-2NC	NR20MF9C-2NC	NR20MF9A-2NO	NR20MF9B-2NO	NR20MF9C-2NO
30000 psig	1/4"	HF 4	NR30HF4A-2NC	NR30HF4B-2NC	NR30HF4C-2NC	NR30HF4A-2NO	NR30HF4B-2NO	NR30HF4C-2NO
	3/8"	HF 6	NR30HF6A-2NC	NR30HF6B-2NC	NR30HF6C-2NC	NR30HF6A-2NO	NR30HF6B-2NO	NR30HF6C-2NO
	9/16"	HF 9	NR30HF9A-2NC	NR30HF9B-2NC	NR30HF9C-2NC	NR30HF9A-2NO	NR30HF9B-2NO	NR30HF9C-2NO
60000 psig	1/4"	HF 4	NR60HF4A-2NC	NR60HF4B-2NC	NR60HF4C-2NC	NR60HF4A-2NO	NR60HF4B-2NO	NR60HF4C-2NO
	3/8"	HF 6	NR60HF6A-2NC	NR60HF6B-2NC	NR60HF6C-2NC	NR60HF6A-2NO	NR60HF6B-2NO	NR60HF6C-2NO
	9/16"	HF 9	NR60HF9A-2NC	NR60HF9B-2NC	NR60HF9C-2NC	NR60HF9A-2NO	NR60HF9B-2NO	NR60HF9C-2NO

1. Valve body dimensions see page 3, page 4, page 5 and page 6, actuator dimensions see page 9.
2. Ordering codes listed are standard. Other sizes, materials and types are available upon request. For special requirements, please contact us.

Pneumatic Valve Actuator Pilot Pressure

Valve Type				Pillot Pressure			
Work Pressure	Size	Ports	Orifice mm(in.)	Single piston air to open	Single piston air to close	Double piston air to open	Double piston air to close
Medium Pressure 20000 psig	1/4"	MF 4	3.18(0.13)	95 psi	95 psi	55.9 psi	55.9 psi
	3/8"	MF 6	5.56(0.22)	95 psi	100 psi	55.9 psi	58.8 psi
	9/16"	MF 9	7.94(0.31)	95 psi	100 psi	55.9 psi	58.8 psi
	3/4"	MF 12	11.13(0.44)	75 psi	100 psi	75 psi	58.8 psi
	1"	MF 16	14.27(0.56)	75 psi	100 psi	75 psi	58.8 psi
High Pressure 30000 psig	1/4"	HF 4	2.39(0.09)	75 psi	50 psi	44.1 psi	29.4 psi
	3/8"	HF 6	3.18(0.13)	95 psi	75 psi	55.9 psi	44.1 psi
	9/16"	HF 9	3.18(0.13)	95 psi	75 psi	55.9 psi	44.1 psi
High Pressure 60000 psig	1/4"	HF 4	1.57(0.06)	95 psi	75 psi	55.9 psi	44.1 psi
	3/8"	HF 6	1.57(0.06)	95 psi	75 psi	55.9 psi	44.1 psi
	9/16"	HF 9	1.98(0.08)	95 psi	90 psi	55.9 psi	52.9 psi

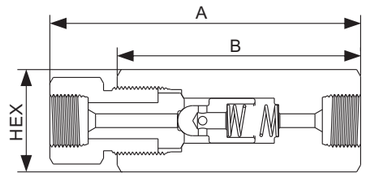
Check Valves

Features

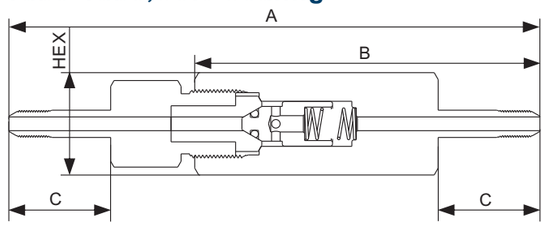
- ★ 316 cold-work stainless steel body for excellent corrosion resistant and high tensile. Other special materials available.
- ★ Reliable sealing guarantees that zero leakage.
- ★ When differential drops below cracking pressure, valve closes.
- ★ Low pressure drop.
- ★ Valves can be repaired easily, and low maintenance costs.
- ★ 3 pressure levels available.15000 psig (low pressure),20000 psig (medium pressure),and 60000 psig (high pressure).
- ★ Soft sealing and ball sealing valves available.
- ★ Working temperature ranges from -40°F to 250°F(-40°C to 120°C) for standard soft sealing valves with Buna N seals. -100°F to 450°F(-73°C to 232°C) for standard ball sealing valves. Temperature to -420°F(-250℃) available. Temperature to 1200°F(638℃) available.
- ★ Nominal cracking pressure is 15 psi. other cracking pressure available.

Drawing & Ordering Information

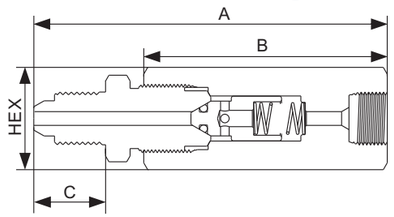
Female-Female,Ball Sealing



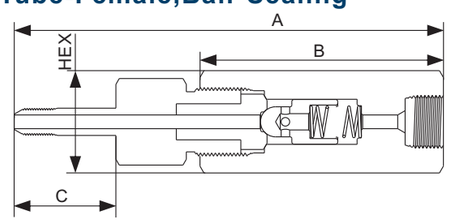
Tube-Tube,Soft Sealing



Male-Female,Soft Sealing



Tube-Female,Ball Sealing



Work Pressure	Size	Orifice mm(in.)	Connection, Inlet to Out let			
			Female-Female	Male-Female	Tube-Tube	Tube-Female
Low Pressure 15000psig	1/4"	3.20(0.13)	CV15FN4	CV15MN4FN4		
	3/8"	5.60(0.22)	CV15FN6	CV15MN6FN6		
	1/2"	7.90(0.31)	CV15FN8	CV15MN8FN8		
Medium Pressure 20000 psig	1/4"	3.20(0.13)	CV20MF4	CV20MM4MF4	CV20MT4	CV20MT4MF4
	3/8"	5.60(0.22)	CV20MF6	CV20MM6MF6	CV20MT6	CV20MT6MF6
	9/16"	7.90(0.31)	CV20MF9	CV20MM9MF9	CV20MT9	CV20MT9MF9
	3/4"	11.10(0.44)	CV20MF12	CV20MM12MF12	CV20MT12	CV20MT12MF12
	1"	14.30(0.56)	CV20MF16	CV20MM16MF16	CV20MT16	CV20MT16MF16
High Pressure 60000 psig	1/4"	2.40(0.09)	CV60HF4	CV60HM4HF4	CV60HT4	CV60HT4HF4
	3/8"	3.20(0.13)	CV60HF6	CV60HM6HF6	CV60HT6	CV60HT6HF6
	9/16"	3.20(0.13)	CV60HF9	CV60HM9HF9	CV60HT9	CV60HT9HF9

Ordering codes listed are for valves with soft sealing. For valves with ball sealing, add "-B" after the ordering codes.
Other sizes, materials and types are available upon request. For special requirements, please contact us.

Dimension

Female-Female

mm(in.)

Ordering Code	A	B	HEX
CV15FN4	80.77(3.18)	65.02(2.56)	20.64(0.81)
CV15FN6	90.42(3.56)	76.20(3.00)	25.40(1.00)
CV15FN8	106.17(4.18)	88.90(3.50)	34.93(1.38)
CV20MF4	74.68(2.94)	63.50(2.50)	20.64(0.81)
CV20MF6	79.25(3.12)	66.55(2.62)	25.40(1.00)
CV20MF9	106.17(4.18)	88.90(3.50)	34.93(1.38)
CV20MF12	139.70(5.50)	120.65(4.75)	44.45(1.75)
CV20MF16	168.40(6.63)	146.05(5.75)	53.85(2.12)
CV60HF4	85.85(3.38)	63.50(2.50)	31.75(1.25)
CV60HF6	95.25(3.75)	66.55(2.62)	31.75(1.25)
CV60HF9	117.35(4.62)	85.85(3.38)	38.10(1.50)

Male-Female

mm(in.)

Ordering Code	A	B	C	HEX
CV15MN4FN4	90.02(3.54)	65.02(2.56)	12.00(0.47)	20.64(0.81)
CV15MN6FN6	104.20(4.10)	76.20(3.00)	13.00(0.51)	25.40(1.00)
CV15MN8FN8	121.90(4.80)	88.90(3.50)	16.00(0.63)	34.93(1.38)
CV20MM4MF4	97.50(3.84)	63.50(2.50)	21.00(0.38)	20.64(0.81)
CV20MM6MF6	103.55(4.08)	66.55(2.62)	22.00(0.87)	25.40(1.00)
CV20MM9MF9	131.90(5.19)	88.90(3.50)	26.00(1.02)	34.93(1.38)
CV20MM12MF12	169.65(6.68)	120.65(4.75)	30.00(1.18)	44.45(1.75)
CV20MM16MF16	212.05(8.35)	146.05(5.75)	43.00(1.69)	53.85(2.12)
CV60HM4HF4	98.60(3.88)	63.50(2.50)	18.10(0.71)	31.75(1.25)
CV60HM6HF6	106.43(4.19)	66.55(2.62)	22.88(0.90)	31.75(1.25)
CV60HM9HF9	132.95(5.23)	85.85(3.38)	28.10(1.11)	38.10(1.50)

Tube-Tube

mm(in.)

Ordering Code	A	B	C	HEX
CV20MT4	126.58(4.98)	79.20(3.12)	34.70(1.35)	20.64(0.81)
CV20MT6	134.58(5.30)	81.60(3.21)	39.40(1.55)	25.40(1.00)
CV20MT9	186.20(7.33)	115.00(4.53)	52.50(2.07)	34.93(1.38)
CV20MT12	250.90(9.88)	250.90(9.88)	176.25(6.94)	44.45(1.75)
CV20MT16	312.80(12.31)	250.90(9.88)	218.25(8.59)	53.85(2.12)
CV60HT4	136.59(5.38)	85.60(3.37)	34.00(1.34)	31.75(1.25)
CV60HT6	153.14(6.03)	92.49(3.64)	43.65(1.72)	31.75(1.25)
CV60HT9	166.59(6.56)	125.70(4.95)	59.20(2.33)	38.10(1.50)

Tube-Female

mm(in.)

Ordering Code	A	B	C	HEX
CV20MT4MF4	104.58(4.12)	63.50(2.50)	34.70(1.35)	20.64(0.81)
CV20MT6MF6	111.98(4.41)	66.55(2.62)	39.40(1.55)	25.40(1.00)
CV20MT9MF9	152.70(6.01)	88.90(3.50)	52.50(2.07)	34.93(1.38)
CV20MT12MF12	195.30(7.69)	120.65(4.75)	55.60(2.19)	44.45(1.75)
CV20MT16MF16	240.60(9.47)	146.05(5.75)	72.20(2.84)	53.85(2.12)
CV60HT4HF4	113.69(4.48)	85.60(3.37)	34.00(1.34)	31.75(1.25)
CV60HT6HF6	125.35(4.94)	92.49(3.64)	43.65(1.72)	31.75(1.25)
CV60HT9HF9	166.59(6.56)	125.70(4.95)	59.20(2.33)	38.10(1.50)

MF means female medium pressure connection. HF means female high pressure connection. MM means male medium pressure connection. HM means male high pressure connection. MT means medium pressure tube end. HT means male high pressure tube end. FN means female NPT connection.

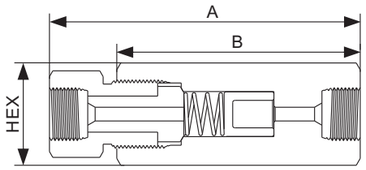
Line Filters

Features

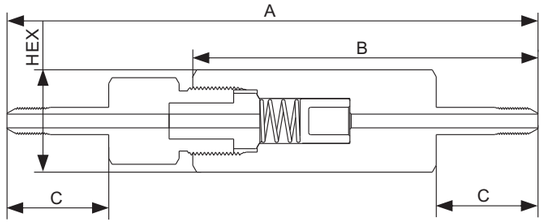
- ★ 316 cold-work stainless steel body for excellent corrosion resistant and high tensile. Other special materials available.
- ★ Low pressure drop.
- ★ 3 pressure levels available.15000 psig (low pressure), 20000 psig (medium pressure), and 60000 psig (high pressure).
- ★ Long element life due to cup type.
- ★ Micron size 65μ is standard. Size 5μ, 10μ and 35μ available.
- ★ Working temperature ranges from -100°F to 450°F(-73°C to 232°C) for standard filters. Temperature to -420°F(-250℃) available. Temperature to 1200°F(638℃) available.

Drawing & Ordering Information

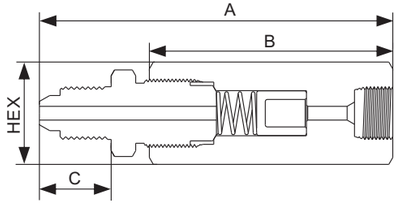
Female-Female



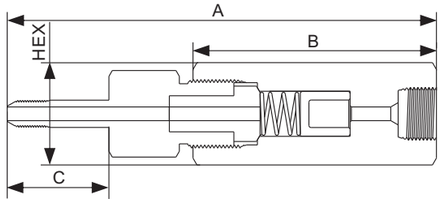
Tube-Tube



Male-Female



Tube-Female



Work Pressure	Size	Orifice mm(in.)	Connection, Inlet to Out let			
			Female-Female	Male-Female	Tube-Tube	Tube-Female
Low Pressure 15000psig	1/4"	3.20(0.13)	FL15FN4	FL15MN4FN4		
	3/8"	5.60(0.22)	FL15FN6	FL15MN6FN6		
	1/2"	7.90(0.31)	FL15FN8	FL15MN8FN8		
Medium Pressure 20000 psig	1/4"	3.20(0.13)	FL20MF4	FL20MM4MF4	FL20MT4	FL20MT4MF4
	3/8"	5.60(0.22)	FL20MF6	FL20MM6MF6	FL20MT6	FL20MT6MF6
	9/16"	7.90(0.31)	FL20MF9	FL20MM9MF9	FL20MT9	FL20MT9MF9
	3/4"	11.10(0.44)	FL20MF12	FL20MM12MF12	FL20MT12	FL20MT12MF12
	1"	14.30(0.56)	FL20MF16	FL20MM16MF16	FL20MT16	FL20MT16MF16
High Pressure 60000 psig	1/4"	2.40(0.09)	FL60HF4	FL60HM4HF4	FL60HT4	FL60HT4HF4
	3/8"	3.20(0.13)	FL60HF6	FL60HM6HF6	FL60HT6	FL60HT6HF6
	9/16"	3.20(0.13)	FL60HF9	FL60HM9HF9	FL60HT9	FL60HT9HF9

Dimension

Female-Female

mm(in.)

Ordering Code	A	B	HEX
FL15FN4	80.77(3.18)	65.02(2.56)	20.64(0.81)
FL15FN6	90.42(3.56)	76.20(3.00)	25.40(1.00)
FL15FN8	106.17(4.18)	88.90(3.50)	34.93(1.38)
FL20MF4	74.68(2.94)	63.50(2.50)	20.64(0.81)
FL20MF6	79.25(3.12)	66.55(2.62)	25.40(1.00)
FL20MF9	106.17(4.18)	88.90(3.50)	34.93(1.38)
FL20MF12	139.70(5.50)	120.65(4.75)	44.45(1.75)
FL20MF16	168.15(6.62)	146.05(5.75)	53.85(2.12)
FL60HF4	106.42(4.19)	85.85(3.38)	34.93(1.38)
FL60HF6	117.35(4.62)	91.94(3.62)	34.93(1.38)
FL60HF9	133.35(5.25)	103.12(4.06)	38.10(1.50)

Male-Female

mm(in.)

Ordering Code	A	B	C	HEX
FL15MN4FN4	90.02(3.54)	65.02(2.56)	12.00(0.47)	20.64(0.81)
FL15MN6FN6	104.20(4.10)	76.20(3.00)	13.00(0.51)	25.40(1.00)
FL15MN8FN8	121.90(4.80)	88.90(3.50)	16.00(0.63)	34.93(1.38)
FL15MM4MF4	97.50(3.84)	63.50(2.50)	21.00(0.38)	20.64(0.81)
FL15MM6MF6	103.55(4.08)	66.55(2.62)	22.00(0.87)	25.40(1.00)
FL20MM9MF9	131.90(5.19)	88.90(3.50)	26.00(1.02)	34.93(1.38)
FL20MM12MF12	169.65(6.68)	120.65(4.75)	30.00(1.18)	44.45(1.75)
FL20MM16MF16	212.05(8.35)	146.05(5.75)	43.00(1.69)	53.85(2.12)
FL60HM4HF4	98.60(3.88)	63.50(2.50)	18.10(0.71)	34.93(1.38)
FL60HM6HF6	106.43(4.19)	66.55(2.62)	22.88(0.90)	34.93(1.38)
FL60HM9HF9	132.95(5.23)	85.85(3.38)	28.10(1.11)	38.10(1.50)

Tube-Tube

mm(in.)

Ordering Code	A	B	C	HEX
FL20MT4	126.58(4.98)	79.20(3.12)	34.70(1.35)	20.64(0.81)
FL20MT6	134.58(5.30)	81.60(3.21)	39.40(1.55)	25.40(1.00)
FL20MT9	186.20(7.33)	115.00(4.53)	52.50(2.07)	34.93(1.38)
FL20MT12	250.90(9.88)	250.90(9.88)	176.25(6.94)	44.45(1.75)
FL20MT16	312.80(12.31)	250.90(9.88)	218.25(8.59)	53.85(2.12)
FL60HT4	136.59(5.38)	85.60(3.37)	34.00(1.34)	35.05(1.50)
FL60HT6	153.14(6.03)	92.49(3.64)	43.65(1.72)	31.75(1.25)
FL60HT9	166.59(6.56)	125.70(4.95)	59.20(2.33)	38.10(1.50)

Tube-Female

mm(in.)

Ordering Code	A	B	C	HEX
FL20MT4MF4	104.58(4.12)	63.50(2.50)	34.70(1.35)	20.64(0.81)
FL20MT6MF6	111.98(4.41)	66.55(2.62)	39.40(1.55)	25.40(1.00)
FL20MT9MF9	152.70(6.01)	88.90(3.50)	52.50(2.07)	34.93(1.38)
FL20MT12MF12	195.30(7.69)	120.65(4.75)	55.60(2.19)	44.45(1.75)
FL20MT16MF16	240.60(9.47)	146.05(5.75)	72.20(2.84)	53.85(2.12)
FL60HT4HF4	113.69(4.48)	85.60(3.37)	34.00(1.34)	34.93(1.38)
FL60HT6HF6	125.35(4.94)	92.49(3.64)	43.65(1.72)	34.93(1.38)
FL60HT9HF9	166.59(6.56)	125.70(4.95)	59.20(2.33)	38.10(1.50)

1 MF means female medium pressure connection. HF means female high pressure connection. MM means male medium pressure connection. HM means male high pressure connection. MT means medium pressure tube end. HT means male high pressure tube end. FN means female NPT.

2 Ordering codes listed are for micron size 65μ. For micron size 5μ add "-5" after the ordering codes. For micron size 10μ add "-10" after the ordering codes. For micron size 35μ add "-35" after the ordering codes. Other sizes, materials and types are available upon request. For special requirements, please contact us.

Ball Valves

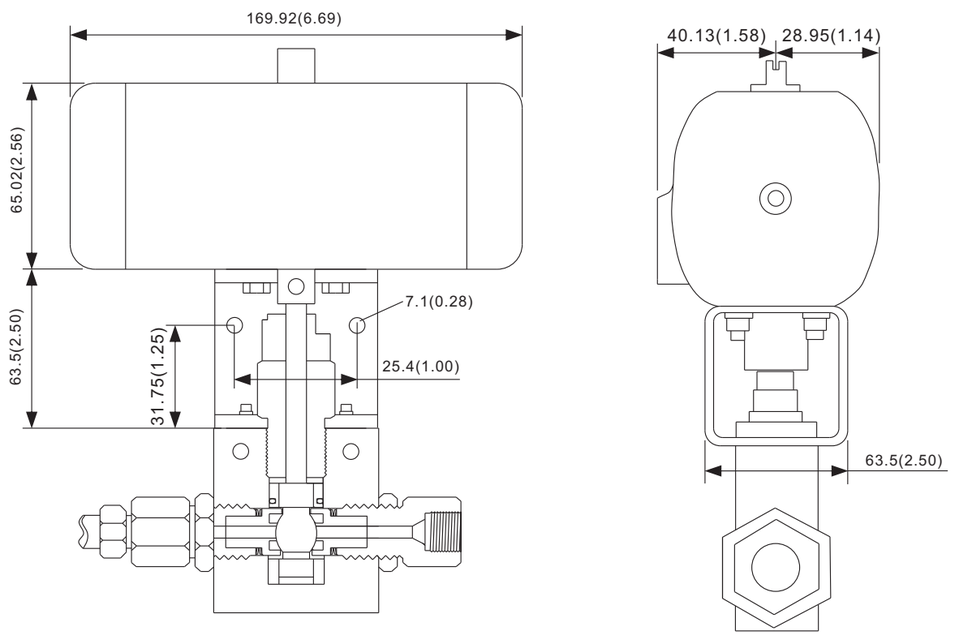
Features

- ★ 316 cold-work stainless steel body for excellent corrosion resistant and high tensile. Other special materials available.
- ★ One-piece, trunnion mounted stem design reduces effects of side loading.
- ★ Re-torqueable seat glands for longer seat life.
- ★ Integral though-holes for bracket mounting. Panel mounting is also available.
- ★ 2 patterns body types.(2 way Straight, and 3 way 180°)
- ★ 2 pressure levels available.15000 psig & 20000 psig .
- ★ Working temperature ranges from -40°F to 250°F(-40°C to 120°C) for standard valves with Buna N seals. Other seals available.
- ★ PEEK soft seat guarantees that zero leakage.
- ★ Pneumatic actuator options for 2 way valves.

Drawing & Ordering Information

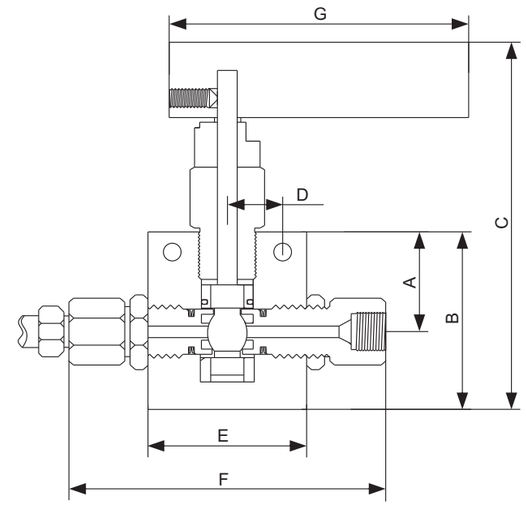
2 way, With Pneumatic Actuator

mm(in.)

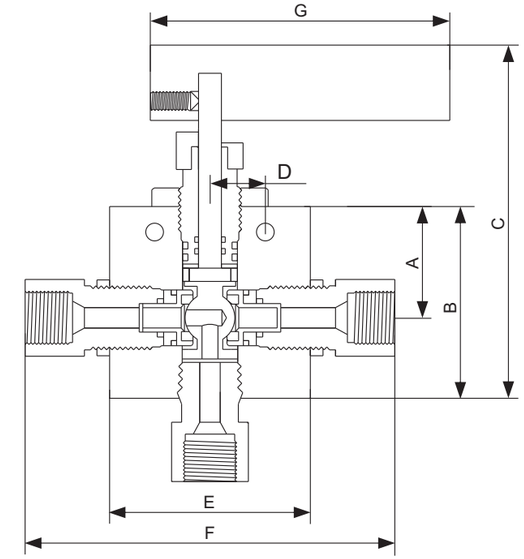


Actuator dimensions as show. Valve body dimensions see page 15 and page 16.

2 Way Straight Valve



3 Way 180° Valve



Technical Parameters				Ordering Code		
Work Pressure	Size	Ports	Orifice mm(in.)	2 Way Straight	3 Way 180°	2 Way, With Actuator
Low Pressure 15000 psig	1/4"	FN 4	6.35(0.25)	BV15FN4A	BV15FN4B	BV15FN4 ☐
	3/8"	FN 6	9.53(0.38)	BV15FN6A	BV15FN6B	BV15FN4 ☐
Medium Pressure 20000 psig	1/4"	MF 4	6.35(0.25)	BV20MF4A	BV20MF4B	BV20MF4 ☐
	3/8"	MF 6	9.53(0.38)	BV20MF6A	BV20MF6B	BV20MF6 ☐
	9/16"	MF 9	12.70(0.50)	BV20MF9A	BV20MF9B	BV20MF9 ☐

Actuator Type	Air To Close,Spring Return	Air To Open,Spring Return	Double Acting Actuator
Symbol ☐ Means	C	D	E

Dimension

2 Way Straight

mm(in.)

Ordering Code	A	B	C	D	E	F	G
BV15FN4A	28.58(1.13)	48.41(1.91)	109.99(4.33)	19.10(0.75)	50.80(2.00)	106.49(4.19)	99.02(3.90)
BV15FN6A	34.92(1.38)	63.50(2.50)	126.30(4.97)	25.40(1.00)	76.20(3.00)	140.41(5.53)	140.32(5.52)
BV20MF4A	28.58(1.13)	48.41(1.91)	109.99(4.33)	19.10(0.75)	50.80(2.00)	106.49(4.19)	99.02(3.90)
BV20MF6A	34.92(1.38)	63.50(2.50)	126.30(4.97)	25.40(1.00)	76.20(3.00)	140.41(5.53)	140.32(5.52)
BV20MF9A	44.70(1.76)	78.58(3.09)	151.64(5.97)	38.10(1.50)	104.78(4.13)	196.46(7.73)	260.3(10.25)

3 Way 180°

mm(in.)

Ordering Code	A	B	C	D	E	F	G
BV15FN4B	28.58(1.13)	57.15(2.25)	143.35(5.64)	19.05(0.75)	63.50(2.50)	119.94(4.72)	99.02(3.90)
BV15FN6B	34.93(1.38)	73.03(2.88)	166.37(6.55)	25.40(1.00)	76.20(3.00)	145.79(5.74)	140.32(5.52)
BV20MF4B	28.58(1.13)	57.15(2.25)	143.35(5.64)	19.05(0.75)	63.50(2.50)	119.94(4.72)	99.02(3.90)
BV20MF6B	34.93(1.38)	73.03(2.88)	166.37(6.55)	25.40(1.00)	76.20(3.00)	145.79(5.74)	140.32(5.52)
BV20MF9B	42.16(1.66)	84.94(3.34)	198.79(7.83)	38.10(1.50)	104.78(4.13)	197.36(7.77)	260.3(10.25)

1. MF means female medium pressure connection . FN means female NPT.
2. Ordering codes listed are standard. Other sizes,materials and types are available upon request. For special requirements, please contact us.

Relief Valves

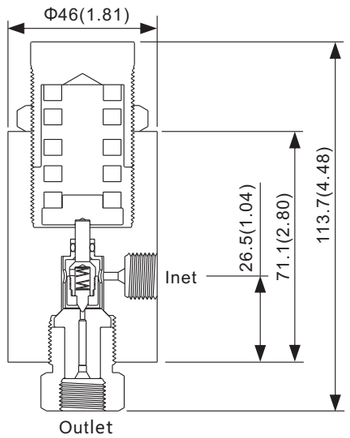
Features

- ★ 316 cold-work stainless steel body for excellent corrosion resistant and high tensile. Other special materials available.
- ★ Liquid or gas service.
- ★ Metal seat and soft seat valves available.Soft seat valves provide bubble tight shut-off of gas.
- ★ Working temperature ranges from -100°F to 400°F(-73°C to 204°C) for metal seat valves and soft seat valves.
- ★ Work pressure up to 60000psig for metal seat valves.Work pressure up to 20000psig for soft seat valves.
- ★ The cracking pressure will be setted in the factory if the customer needs and provides set pressure.
- ★ Lock wired secure cap to maintain set pressure.

Drawing & Ordering Information

Low flow valves

mm(in.)

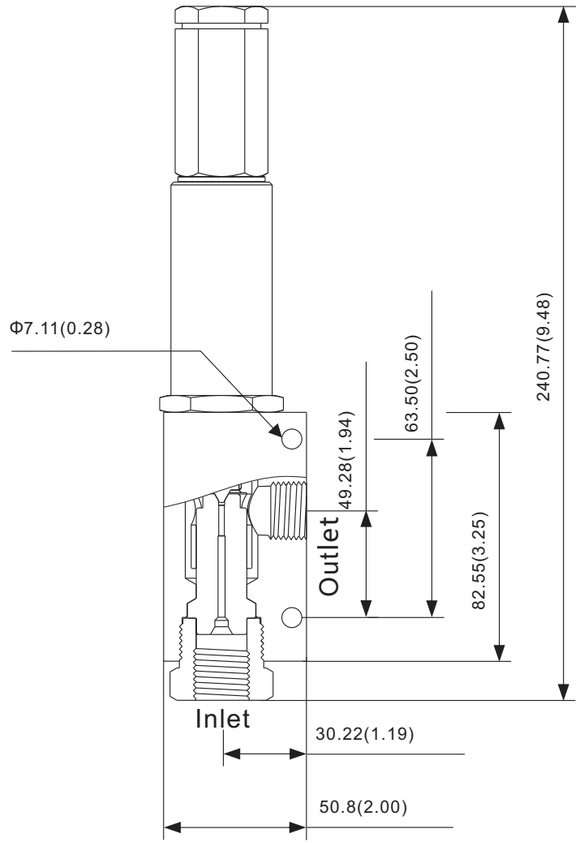


Set Pressure psi(bar)	Orifice mm(in.)	Seat	Ordering Code
5000-10000(345-689)	3.20(0.13)	Metal Seat	RL2HF4
10000-15000(689-1034)	2.50(0.10)		RL3HF4
15000-20000(1034-1379)	2.20(0.09)		RL4HF4
20000-30000(1379-2069)	1.80(0.07)		RL5HF4
30000-45000(2069-3102)	1.50(0.06)		RL6HF4
45000-60000(3102-4137)	1.30(0.05)		RL7HF4

Standard valves with 1/4 HF connector inlet and 3/8 female NPT outlet.

High flow valves

mm(in.)



Set Pressure psi(bar)	Orifice mm(in.)	Seat	Ordering Code
15000-20000(1034-1379)	4.00(0.16)	Metal Seat	RH2HF9
20000-30000(1379-2069)	3.20(0.13)		RH3HF9
30000-45000(2069-3102)	2.40(0.09)		RH4HF9
45000-60000(3102-4137)	2.00(0.08)		RH5HF9
5000-10000(345-689)	6.40(0.25)	Soft Seat	RH6HF9
10000-15000(689-1034)	4.80(0.19)		RH7HF9
15000-20000(1034-1379)	4.00(0.17)		RH8HF9

Standard valves with 9/16 HF connector inlet and 1/2 female NPT outlet.

1. HF means female high pressure connection .
2. Ordering codes listed are standard. Other sizes,materials and types are available upon request. For special requirements, please contact us.

Quick Connectors

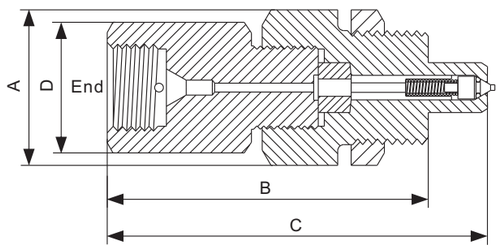
Features

- ★ 316 cold-work stainless steel body for excellent corrosion resistant and high tensile. Other special materials available.
- ★ Working temperature ranges from -40°Fto 250°F(-40°C to 120°C) for standard valves with Buna N seal.Other seal available.
- ★ Work pressure up to 60000psig.
- ★ Active nut connection ensures easy and secure connection.
- ★ Double-end closed, and full-flow(double-open) available. It depends on different the type of female and male body of the quick connector.
- ★ A quick connector should consists of a male body and a female body. The two bodies should be the same body size. And the single body can be ordered separately.

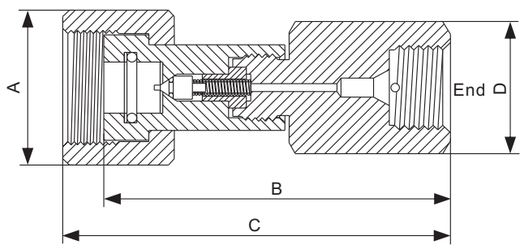
Drawing & Ordering Information

mm(in.)

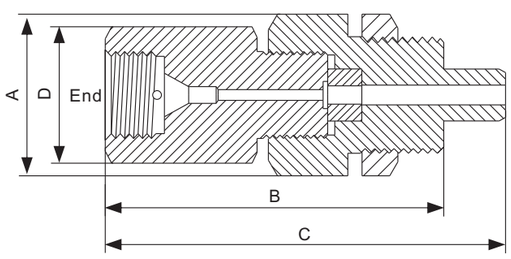
Male Body, Close Type



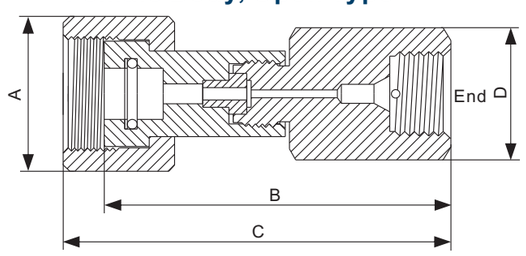
Female Body, Close Type



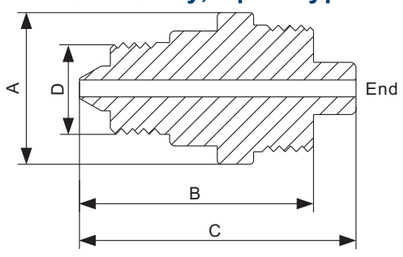
Male Body, Open Type



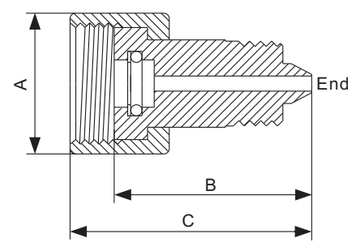
Female Body, Open Type



Male Body, Open Type



Female Body, Open Type



Size M4 Body,To 20000psig,Orifice 0.16in(3.2mm)

End Port	Male Body	Female Body
MF 4	QCB-AM4MF4	QCB-BM4MF4
MM 4	QCB-AM4MM4	QCB-BM4MM4

Size M6 Body,To 20000psig,Orifice 0.22in(5.6mm)

End Port	Male Body	Female Body
MF 6	QCB-AM6MF6	QCB-BM6MF6
MM 6	QCB-AM6MM6	QCB-BM6MM6

Size M9 Body,To 20000psig,Orifice 0.28in(7.1mm)

End Port	Male Body	Female Body
MF 9	QCB-AM9MF9	QCB-BM9MF9
MM 9	QCB-AM9MM9	QCB-BM9MM9

Size H4 Body,To 60000psig,Orifice 0.09in(2.4mm)

End Port	Male Body	Female Body
HF 4	QCB-AH4HF4	QCB-BH4HF4
HM 4	QCB-AH4HHM4	QCB-BH4HM4

Size H6 Body,To 60000psig,Orifice 0.19in(4.8mm)

End Port	Male Body	Female Body
HF 6	QCB-AH6HF6	QCB-BH6HF6
HM 6	QCB-AH6HM6	QCB-BH6HM6

Size H9 Body,To 60000psig,Orifice 0.25in(6.4mm)

End Port	Male Body	Female Body
HF 9	QCB-AH9HF9	QCB-BH9HF9
HM 9	QCB-AH9HM9	QCB-BH9HM9

Dimension

Medium pressure connectors, up to 20000psig

mm(in.)

Ordering Code	Pressure	Connections	A	B	C	D
QCB-AM4MF4	20000 psig	MF 4	37.00(1.46)	76.00(2.99)	91.00(3.58)	25.40(1.00)
QCB-BM4MF4	20000 psig	MF 4	37.00(1.46)	76.00(2.99)	91.00(3.58)	25.40(1.00)
QCB-AM4MM4	20000 psig	MM 4	18.41(0.72)	40.60(1.60)	45.76(1.80)	11.11(0.44)
QCB-BM4MM4	20000 psig	MM 4	18.41(0.72)	34.89(1.37)	44.24(1.74)	\
QCB-AM6MF6	20000 psig	MF 6	37.00(1.46)	76.00(2.99)	91.00(3.58)	25.40(1.00)
QCB-BM6MF6	20000 psig	MF 6	37.00(1.46)	76.00(2.99)	91.00(3.58)	25.40(1.00)
QCB-AM6MM6	20000 psig	MM 6	23.60(0.93)	47.39(1.87)	54.01(2.13)	14.29(0.56)
QCB-BM6MM6	20000 psig	MM 6	23.60(0.93)	40.07(1.58)	52.06(2.05)	\
QCB-AM9MF9	20000 psig	MF 9	37.00(1.46)	76.00(2.99)	91.00(3.58)	25.40(1.00)
QCB-BM9MF9	20000 psig	MF 9	37.00(1.46)	76.00(2.99)	91.00(3.58)	25.40(1.00)
QCB-AM9MM9	20000 psig	MM 9	32.55(1.28)	60.66(2.39)	69.62(2.75)	20.64(0.81)
QCB-BM9MM9	20000 psig	MM 9	32.55(1.28)	50.41(1.98)	67.19(2.65)	\

High pressure connectors, up to 60000psig

mm(in.)

Ordering Code	Pressure	Connections	A	B	C	D
QCB-AH4HF4	60000 psig	HF 4	37.00(1.46)	76.00(2.99)	91.00(3.58)	20.64(0.81)
QCB-BH4HF4	60000 psig	HF 4	37.00(1.46)	76.00(2.99)	91.00(3.58)	20.64(0.81)
QCB-AH4HM4	60000 psig	HM 4	23.60(0.93)	43.80(1.72)	50.40(1.98)	14.29(0.56)
QCB-BH4HM4	60000 psig	HM 4	23.60(0.93)	36.50(1.44)	48.50(1.91)	\
QCB-AH6HF6	60000 psig	HF 6	37.00(1.46)	76.00(2.99)	91.00(3.58)	25.40(1.00)
QCB-BH6HF6	60000 psig	HF 6	37.00(1.46)	76.00(2.99)	91.00(3.58)	25.40(1.00)
QCB-AH6HM6	60000 psig	HM 6	31.50(1.24)	56.20(2.21)	65.10(2.56)	19.05(0.75)
QCB-BH6HM6	60000 psig	HM 6	31.50(1.24)	47.40(1.87)	62.70(2.47)	\
QCB-AH6HF9	60000 psig	HF 9	37.00(1.46)	76.00(2.99)	91.00(3.58)	38.10(1.50)
QCB-BH6HF9	60000 psig	HF 9	37.00(1.46)	76.00(2.99)	91.00(3.58)	38.10(1.50)
QCB-AH9HM9	60000 psig	HM 9	50.00(1.97)	78.00(3.07)	92.00(3.62)	28.58(1.13)
QCB-BH9HM9	60000 psig	HM 9	50.00(1.97)	70.00(2.76)	85.00(3.35)	\

1. MF means female medium pressure connection . MM means male medium pressure connection.
   HF means female high pressure connection . HM means male high pressure connection .
2. Ordering codes listed are standard open type bodies. For closed type add “R” after the ordering codes. Other sizes,materials and types are available upon request. For special requirements, please contact us.

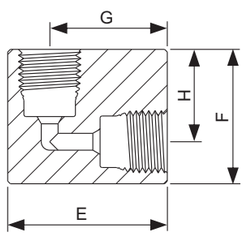
High Pressure Fittings

Features

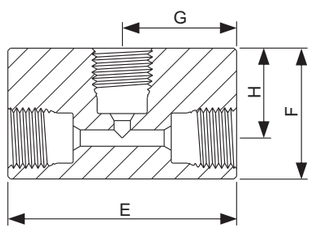
- ★ 316 stainless steel structure. Other special materials available, such as inconel 718, inconel 625, inconel 825.
- ★ Work pressure up to 60000psig.
- ★ Sour gas service available.

Drawing & Dimensions

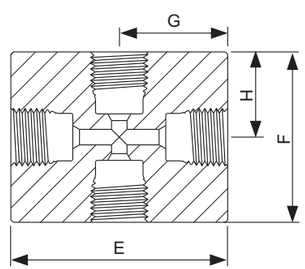
Elbow



Tee



Cross

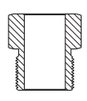


Medium Pressure Fittings, Up to 20000 psig

mm(in.)

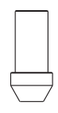
Ordering Code	Types	Size	Ports	E	F	G	H	Thickness
20L-MF4	Elbow	1/4"	MF 4	30.15(1.19)	25.40(1.00)	22.23(0.88)	17.50(0.69)	15.88(0.63)
20L-MF6	Elbow	3/8"	MF 6	34.93(1.38)	34.93(1.38)	25.40(1.00)	25.40(1.00)	19.05(0.75)
20L-MF9	Elbow	9/16"	MF 9	44.45(1.75)	44.45(1.75)	31.75(1.25)	31.80(1.25)	25.40(1.00)
20L-MF12	Elbow	3/4"	MF 12	57.15(2.25)	57.15(2.25)	38.10(1.50)	38.10(1.50)	34.93(1.38)
20L-MF16	Elbow	1"	MF 16	76.20(3.00)	76.20(3.00)	52.32(2.06)	52.30(2.06)	44.45(1.75)
20T-MF4	Tee	1/4"	MF 4	44.45(1.75)	25.40(1.00)	22.23(0.88)	17.50(0.69)	15.88(0.63)
20T-MF6	Tee	3/8"	MF 6	50.80(2.00)	34.93(1.38)	25.40(1.00)	25.40(1.00)	19.05(0.75)
20T-MF9	Tee	9/16"	MF 9	63.50(2.50)	44.45(1.75)	31.75(1.25)	31.80(1.25)	25.40(1.00)
20T-MF12	Tee	3/4"	MF 12	76.20(3.00)	57.15(2.25)	38.10(1.50)	38.10(1.50)	34.93(1.38)
20T-MF16	Tee	1"	MF 16	104.80(4.13)	76.20(3.00)	52.32(2.06)	52.30(2.06)	44.45(1.75)
20F-MF4	Cross	1/4"	MF 4	44.45(1.75)	34.93(1.38)	22.23(0.88)	17.50(0.69)	15.88(0.63)
20F-MF6	Cross	3/8"	MF 6	50.80(2.00)	50.80(2.00)	25.40(1.00)	25.40(1.00)	19.05(0.75)
20F-MF9	Cross	9/16"	MF 9	63.50(2.50)	63.50(2.50)	31.75(1.25)	31.80(1.25)	25.40(1.00)
20F-MF12	Cross	3/4"	MF 12	76.20(3.00)	76.20(3.00)	38.10(1.50)	38.10(1.50)	34.93(1.38)
20F-MF16	Cross	1"	MF 16	104.80(4.13)	104.80(4.13)	52.32(2.06)	52.30(2.06)	44.45(1.75)

Medium Pressure Connection Components



Name	Size	Code
Gland	1/4	20G-MF4
Gland	3/8	20G-MF6
Gland	9/16	20G-MF9
Gland	3/4	20G-MF12
Gland	1	20G-MF16

Name	Size	Code
Collar	1/4	20C-MF4
Collar	3/8	20C-MF6
Collar	9/16	20C-MF9
Collar	3/4	20C-MF12
Collar	1	20C-MF16



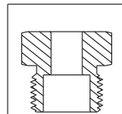
Name	Size	Code
Plug	1/4	20P-MF4
Plug	3/8	20P-MF6
Plug	9/16	20P-MF9
Plug	3/4	20P-MF12
Plug	1	20P-MF16

High Pressure Fitting, Up to 60000 psig

mm(in.)

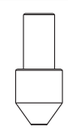
Ordering Code	Types	Size	Ports	E	F	G	H	Thickness
60L-HF4	Elbow	1/4"	HF 4	34.93(1.38)	38.10(1.50)	22.23(0.88)	25.40(1.00)	25.40(1.00)
60L-HF6	Elbow	3/8"	HF 6	44.45(1.75)	38.10(1.50)	31.75(1.25)	25.40(1.00)	25.40(1.00)
60L-HF9	Elbow	9/16"	HF 9	66.80(2.63)	47.75(1.88)	47.63(1.88)	28.60(1.13)	38.10(1.50)
60T-HF4	Tee	1/4"	HF 4	50.80(2.00)	34.93(1.38)	25.40(1.00)	22.20(0.88)	25.40(1.00)
60T-HF6	Tee	3/8"	HF 6	50.80(2.00)	39.67(1.56)	25.40(1.00)	28.60(1.13)	25.40(1.00)
60T-HF9	Tee	9/16"	HF 9	66.80(2.63)	53.98(2.13)	33.32(1.31)	34.90(1.38)	38.10(1.50)
60F-HF4	Cross	1/4"	HF 4	50.80(2.00)	38.10(1.50)	25.40(1.00)	19.10(0.75)	25.40(1.00)
60F-HF6	Cross	3/8"	HF 6	54.10(2.13)	50.80(2.00)	26.92(1.06)	25.40(1.00)	25.40(1.00)
60F-HF9	Cross	9/16"	HF 9	69.85(2.75)	66.68(2.63)	34.93(1.38)	33.20(1.31)	38.10(1.50)

High Pressure Connection Components



Name	Size	Code
Gland	1/8	60G-MF2
Gland	1/4	60G-MF4
Gland	3/8	60G-MF6
Gland	9/16	60G-MF9

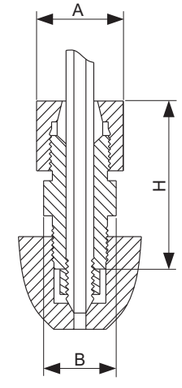
Name	Size	Code
Collar	1/8	60C-MF2
Collar	1/4	60C-MF4
Collar	3/8	60C-MF6
Collar	9/16	60C-MF9



Name	Size	Code
Plug	1/8	60P-MF2
Plug	1/4	60P-MF4
Plug	3/8	60P-MF6
Plug	9/16	60P-MF9

Anti-Vibration Gland Assemblies

The tubing systems that are subjected to extreme vibration or shock, such as mobile pressure systems or long tubing runs culminating at a compressor, will be prevented by using Anti-Vibration Gland Assemblies. These assemblies use the same reliable connection geometries as the standard HYDT-STAR fittings, with the added advantage of essentially unlimited vibrational fatigue life.



Medium Pressure, Up to 20000 psig

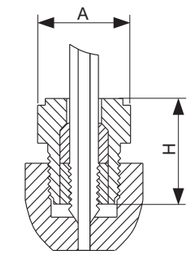
mm(in.)

Ordering Code	Connections	A	B	H
20AG-MF4	MF 4	15.88(0.63)	12.70(0.50)	36.54(1.44)
20AG-MF6	MF 6	19.05(0.75)	15.88(0.63)	41.28(1.63)
20AG-MF9	MF 9	25.40(1.00)	22.23(0.88)	47.63(1.88)
20AG-MF12	MF 12	31.75(1.25)	28.58(1.13)	53.98(2.13)
20AG-MF16	MF 16	38.10(1.50)	34.93(1.38)	63.50(2.50)

High Pressure, Up to 60000 psig

mm(in.)

Ordering Code	Connections	A	H
60AG-HF4	HF 4	15.88(0.63)	20.64(0.81)
60AG-HF6	HF 6	20.64(0.81)	28.58(1.13)
60AG-HF9	HF 9	46.04(1.81)	39.40(1.56)



1. MF means medium pressure female connection. HF means high pressure female connection.
2. Ordering codes listed are standard. For sour gas service, add "-SG" after the ordering codes. The working pressure of the fittings for sour gas service differs from the fittings listed in the table. please contact us for more information.
3. Ordering codes listed are standard. Other sizes, materials and types are available upon request. For special requirements, please contact us.

Adapters

Features

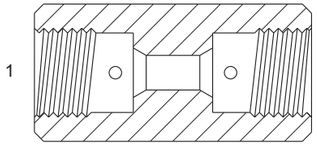
- ★ 316 stainless steel structure. Other special materials available, such as inconel 718, inconel 625, inconel 825.
- ★ Work pressure up to 60000psig.
- ★ Sour gas service available.

Drawing & Typical Ordering Code

Female to Female

mm(in.)

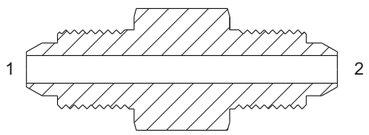
Ordering Code	Pressure	Tube Size	Connections	Length	Hex
20U-MF4	20000 psig	1/4" OD	MF 4	39.69(1.56)	15.88(0.63)
20U-MF6	20000 psig	3/8" OD	MF 6	44.45(1.75)	19.05(0.75)
20U-MF9	20000 psig	9/16" OD	MF 9	53.98(2.13)	25.40(1.00)
20U-MF12	20000 psig	3/4" OD	MF 12	63.50(2.50)	34.93(1.38)
20U-MF16	20000 psig	1" OD	MF 16	88.90(3.50)	44.45(1.75)
60U-HF4	60000 psig	1/4" OD	HF 4	28.58(1.13)	19.05(0.75)
60U-HF6	60000 psig	3/8" OD	HF 6	44.45(1.75)	25.40(1.00)
60U-HF9	60000 psig	9/16" OD	HF 9	50.80(2.00)	25.40(1.00)



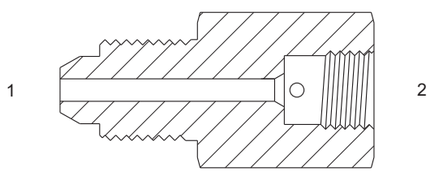
Male to Male

mm(in.)

Ordering Code	Pressure	Connections	Length	Hex
20U-MM4	20000 psig	MM 4	50.80(2.00)	15.88(0.63)
20U-MM6	20000 psig	MM 6	57.15(2.25)	19.05(0.75)
20U-MM9	20000 psig	MM 9	66.68(2.63)	22.23(0.88)
20U-MM12	20000 psig	MM 12	76.20(3.00)	28.58(1.13)
60U-HM4	60000 psig	HM 4	42.86(1.69)	15.88(0.63)
60U-HM6	60000 psig	HM 6	57.15(2.25)	19.05(0.75)
60U-HM9	60000 psig	HM 9	66.68(2.63)	28.58(1.13)



Male to Female



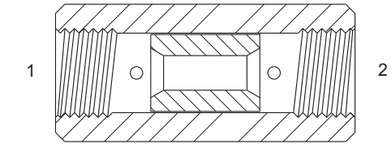
mm(in.)

Ordering Code	Pressure	Tube Size	First Connection	Second Connection	Length	Hex
20U-MM4MF4	20000 psig	1/4" OD	MM 4	HF 4	44.45(1.75)	19.05(0.75)
20U-MM6MF6	20000 psig	3/8" OD	MM 6	HF 6	50.80(2.00)	25.40(1.00)
20U-MM9MF9	20000 psig	9/16" OD	MM 9	HF 9	63.50(2.50)	34.93(1.38)
60U-HM4HF4	60000 psig	1/4" OD	HM 4	HF 4	44.45(1.75)	19.05(0.75)
60U-HM6HF6	60000 psig	3/8" OD	HM 6	HF 6	53.98(2.13)	28.58(1.13)

Slip Union Coupling

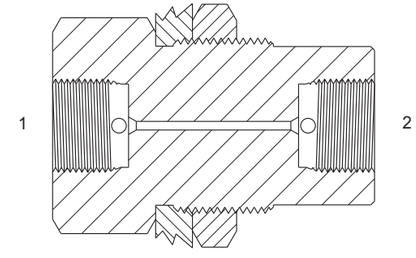
mm(in.)

Ordering Code	Pressure	Connections	Length	Hex
20SU-MF4	20000 psig	MF 4	39.69(1.56)	15.88(0.63)
20SU-MF6	20000 psig	MF 6	44.45(1.75)	19.05(0.75)
20SU-MF9	20000 psig	MF 9	53.98(2.13)	25.40(1.00)
20SU-MF12	20000 psig	MF 12	63.50(2.50)	34.93(1.38)
60SU-HF4	60000 psig	HF 4	44.45(1.75)	25.40(1.00)
60SU-HF6	60000 psig	HF 6	50.80(2.00)	25.40(1.00)
60SU-HF9	60000 psig	HF 9	60.33(2.38)	34.93(1.38)



There were two connections of a adapter. First take the male connection to be the first connection. Then if both connections are male or female connections, take the high pressure connection first, then is the medium pressure connection. Then if both connections are the high pressure connections or medium pressure connections, take the bigger one to be first. If the two ports are the same, the second port's code will be omitted in the ordering code.

Bulkhead Coupling



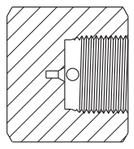
mm(in.)

Ordering Code	Pressure	Connections	Length	Hex	Panel Hole
20BC-MF4	20000 psig	MF 4	47.63(1.88)	25.40(1.00)	19.05(0.75)
20BC-MF6	20000 psig	MF 6	50.80(2.00)	25.40(1.00)	22.23(0.88)
20BC-MF9	20000 psig	MF 9	60.33(2.38)	34.93(1.38)	26.99(1.06)
20BC-MF12	20000 psig	MF 12	66.68(2.63)	47.63(1.88)	41.28(1.63)
60BC-HF4	60000 psig	HF 4	50.80(2.00)	25.40(1.00)	23.81(0.94)
60BC-HF6	60000 psig	HF 6	60.33(2.38)	34.93(1.38)	28.58(1.13)
60BC-HF9	60000 psig	HF 9	69.85(2.75)	47.63(1.88)	42.86(1.69)

Caps

mm(in.)

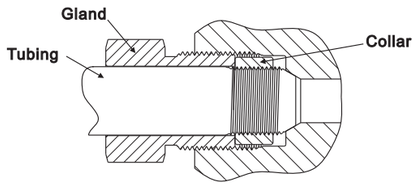
Ordering Code	Pressure	Connections	Length	Hex
20CP-MF4	20000 psig	MF 4	22.23(0.88)	15.88(0.63)
20CP-MF6	20000 psig	MF 6	34.93(1.38)	19.05(0.75)
20CP-MF9	20000 psig	MF 9	38.10(1.50)	25.40(1.00)
20CP-MF12	20000 psig	MF 12	63.50(2.50)	34.93(1.38)
60CP-HF4	60000 psig	HF 4	22.23(0.88)	19.05(0.75)
60CP-HF6	60000 psig	HF 6	31.75(1.25)	25.40(1.00)
60CP-HF9	60000 psig	HF 9	38.10(1.50)	34.93(1.38)



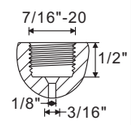
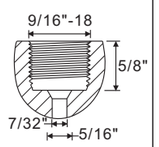
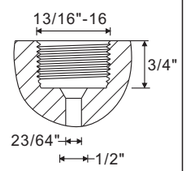
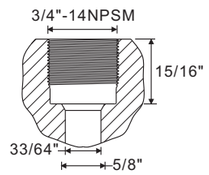
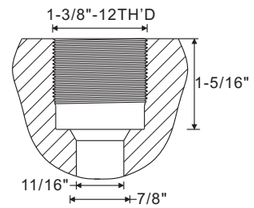
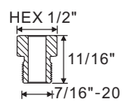
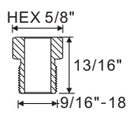
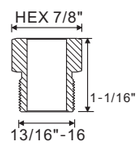
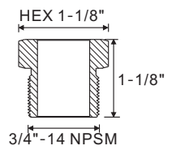
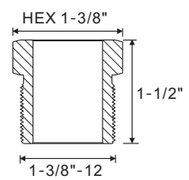
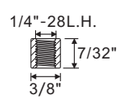
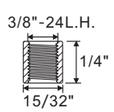
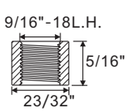
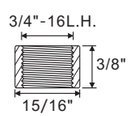
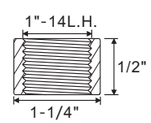
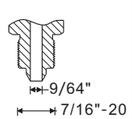
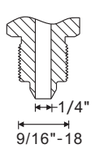
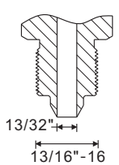
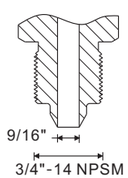
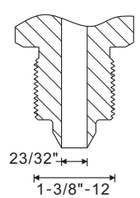
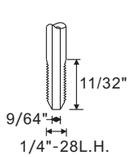
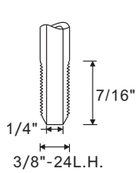
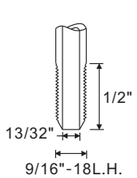
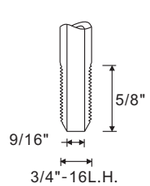
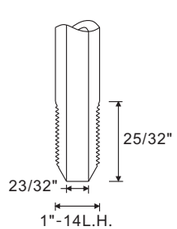
1. MF means medium pressure female connection. HF means high pressure female connection.
2. Ordering codes listed are standard. For sour gas service, add “-SG” after the ordering codes.
3. Ordering codes listed are standard. Other sizes, materials and types are available upon request. For special requirements, please contact us.

Connection Dimensions

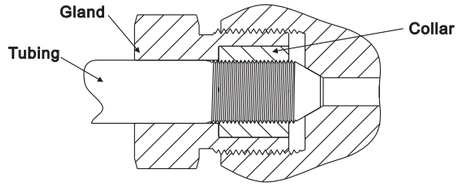
Medium Pressure Connections



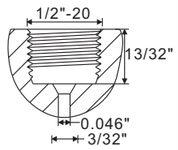
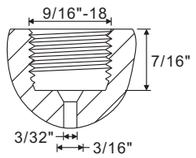
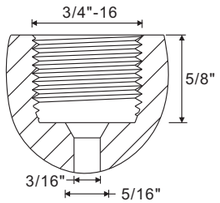
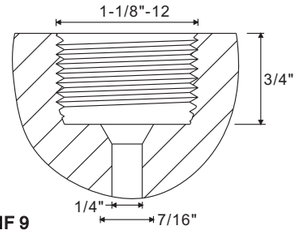
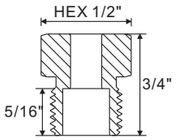
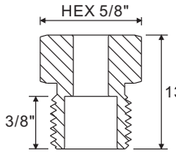
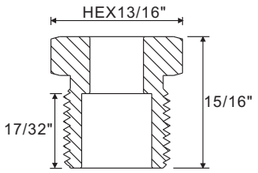
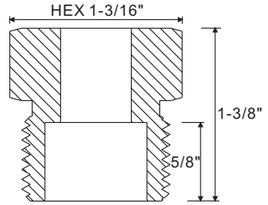
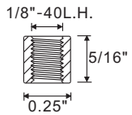
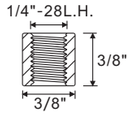
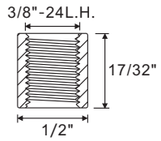
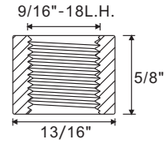
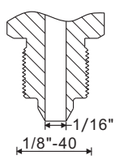
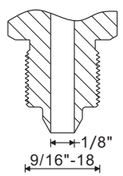
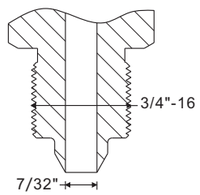
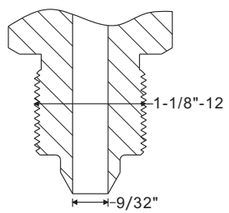
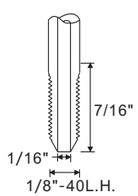
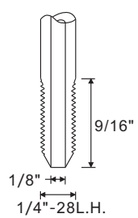
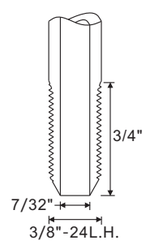
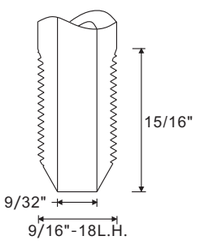
20000 psi

1/4"O.D.Tubing	3/8"O.D.Tubing	9/16"O.D.Tubing	3/4"O.D.Tubing	1"O.D.Tubing
 MF 4	 MF 6	 MF 9	 MF 12	 MF 16
 Gland	 Gland	 Gland	 Gland	 Gland
 Collar	 Collar	 Collar	 Collar	 Collar
 MM 4	 MM 6	 MM 9	 MM 12	 MM 16
 MT 4	 MT 6	 MT 9	 MT 12	 MT 16

High Pressure Connections



30000 & 60000 psi

1/8"O.D.Tubing	1/4"O.D.Tubing	3/8"O.D.Tubing	9/16"O.D.Tubing
 HF 2	 HF 4	 HF 6	 HF 9
 Gland	 Gland	 Gland	 Gland
 Collar	 Collar	 Collar	 Collar
 HM 2	 HM 4	 HM 6	 HM 9
 HT 2	 HT 4	 HT 6	 HT 9

Needle Valves For Sour Gas Service

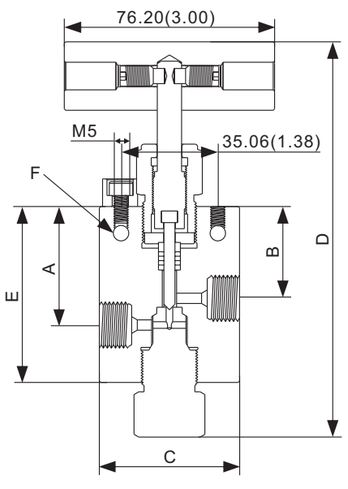
Features

- ★ Annealed 316 stainless steel construction. Other special materials available.
- ★ Prevents galling due to the no-rotation stem.
- ★ Packing blow stem threads designed for reliable sealing.
- ★ Integral though-holes for bracket mounting. Panel mounting is also available.
- ★ Vee or Regulating stem for flow control and shut-off.
- ★ Replaceable seat valves available.
- ★ Valves with replaceable seat can be quickly repaired without removing from the system. It is easy to repaired and low maintenance costs.
- ★ 2 pressure levels available.20000 psig and 30000 psig.
- ★ Working temperature ranges from-100°F to 450°F(-73℃ to 232℃) for standard valves with glass filled PTFE packing. And other packing materials available, such as grafoil.
- ★ Designed for sour oil and gas service. Meet or exceed requirements of NACE MR -0175.

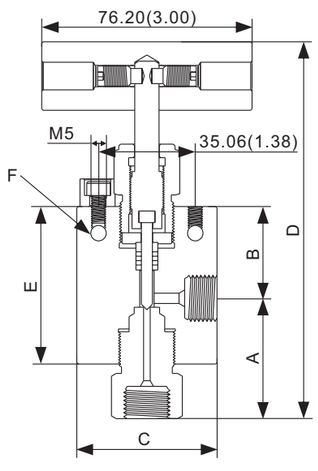
NR Series With Replaceable Seat

mm(in.)

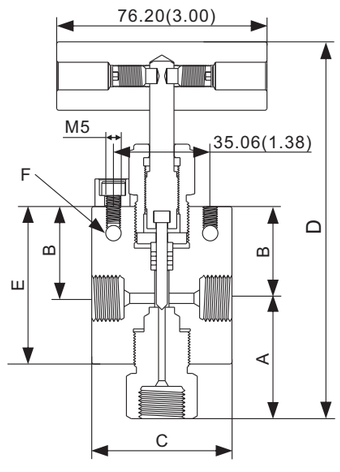
Straight Valves



Angle Valves



3 Way / 1 on Pressure



Technical Parameters				Ordering Code		
Work Pressure	Size	Ports	Orifice mm(in.)	Straight	Angel	3 Way/1on pressure
High Pressure 20000 psig	1/4"	HF 4	2.39(0.09)	NR30HF4A-SG	NR30HF4B-SG	NR30HF4C-SG
	3/8"	HF 6	3.18(0.13)	NR30HF6A-SG	NR30HF6B-SG	NR30HF6C-SG
	9/16"	HF 9	3.18(0.13)	NR30HF9A-SG	NR30HF9B-SG	NR30HF9C-SG
High Pressure 30000 psig	1/4"	HF 4	1.57(0.06)	NR60HF4A-SG	NR60HF4B-SG	NR60HF4C-SG
	3/8"	HF 6	1.57(0.06)	NR60HF6A-SG	NR60HF6B-SG	NR60HF6C-SG
	9/16"	HF 9	1.98(0.08)	NR60HF9A-SG	NR60HF9B-SG	NR60HF9C-SG

Dimension

Straight Valves

mm(in.)

Ordering Code	A	B	C	D	E	F	Thickness
NR30HF4A-SG	38.10(1.50)	28.45(1.12)	50.80(2.00)	141.28(5.56)	67.80(2.67)	5.59(0.22)	25.40(1.00)
NR30HF6A-SG	38.10(1.50)	28.45(1.12)	50.80(2.00)	141.28(5.56)	67.80(2.67)	5.59(0.22)	25.40(1.00)
NR30HF9A-SG	39.62(1.56)	28.45(1.12)	66.55(2.62)	144.25(5.68)	70.80(2.79)	7.11(0.28)	38.10(1.50)
NR60HF4A-SG	42.93(1.69)	33.27(1.31)	50.80(2.00)	144.25(5.68)	70.40(2.77)	5.59(0.22)	25.40(1.00)
NR60HF6A-SG	42.93(1.69)	33.27(1.31)	50.80(2.00)	144.25(5.68)	71.20(2.80)	5.59(0.22)	25.40(1.00)
NR60HF9A-SG	45.45(1.75)	33.27(1.31)	66.55(2.62)	144.25(5.68)	70.20 (2.76)	7.11(0.28)	38.10(1.50)

Angle Valves

mm(in.)

Ordering Code	A	B	C	D	E	F	Thickness
NR30HF4B-SG	52.32(2.06)	28.45(1.12)	50.80(2.00)	140.47(5.53)	60.45(2.38)	5.59(0.22)	25.40(1.00)
NR30HF6B-SG	58.67(2.31)	28.45(1.12)	50.80(2.00)	146.79(5.78)	60.45(2.38)	5.59(0.22)	25.40(1.00)
NR30HF9B-SG	66.55(2.62)	30.23(1.19)	66.55(2.62)	156.45(6.16)	61.98(2.44)	7.11(0.28)	38.10(1.50)
NR60HF4B-SG	53.85(2.12)	33.27(1.31)	50.80(2.00)	146.79(5.78)	66.55(2.62)	5.59(0.22)	25.40(1.00)
NR60HF6B-SG	59.94(2.36)	33.27(1.31)	50.80(2.00)	152.88(6.02)	66.55(2.62)	5.59(0.22)	25.40(1.00)
NR60HF9B-SG	68.07(2.68)	33.27(1.31)	66.55(2.62)	161.01(6.34)	66.55(2.62)	7.11(0.28)	38.10(1.50)

3 Way / 1 on Pressure

mm(in.)

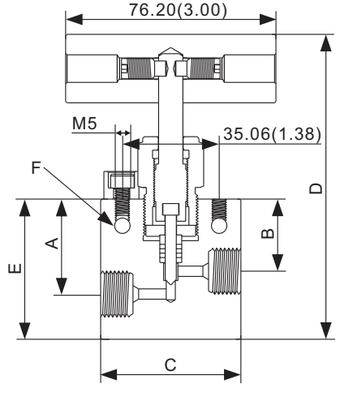
Ordering Code	A	B	C	D	E	F	Thickness
NR30HF4C-SG	52.32(2.06)	28.45(1.12)	50.80(2.00)	140.47(5.53)	60.45(2.38)	5.59(0.22)	25.40(1.00)
NR30HF6C-SG	58.67(2.31)	28.45(1.12)	50.80(2.00)	146.79(5.78)	60.45(2.38)	5.59(0.22)	25.40(1.00)
NR30HF9C-SG	66.55(2.62)	28.45(1.12)	66.55(2.62)	156.45(6.16)	61.98(2.44)	7.11(0.28)	38.10(1.50)
NR60HF4C-SG	53.85(2.12)	33.27(1.31)	50.80(2.00)	146.79(5.78)	66.55(2.62)	5.59(0.22)	25.40(1.00)
NR60HF6C-SG	59.94(2.36)	33.27(1.31)	50.80(2.00)	152.88(6.02)	66.55(2.62)	5.59(0.22)	25.40(1.00)
NR60HF9C-SG	68.07(2.68)	33.27(1.31)	66.55(2.62)	161.01(6.34)	66.55(2.62)	7.11(0.28)	38.10(1.50)

1. HF means female high pressure connector.
2. Ordering codes listed are for valves with vee stem tip. Valves with Regulating stem tip, please add "-R" after the ordering codes.
3. Ordering codes listed are standard. Other sizes,materials and types are available upon request. For special requirements, please contact us.

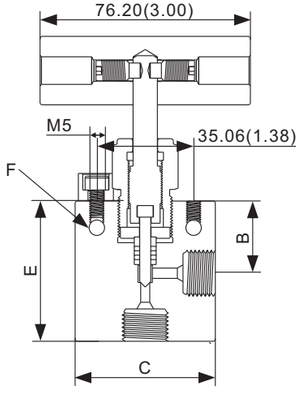
NV Series Without Replaceable Seat

mm(in.)

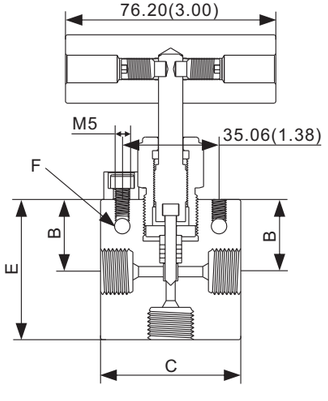
Straight Valves



Angle Valves



3 Way / 1 on Pressure



Technical Parameters				Ordering Code		
Work Pressure	Size	Ports	Orifice mm(in.)	Straight	Angel	3 Way/1on pressure
High Pressure 20000 psig	1/4"	HF 4	2.39(0.09)	NV30HF4A-SG	NV30HF4B-SG	NV30HF4C-SG
	3/8"	HF 6	3.18(0.13)	NV30HF6A-SG	NV30HF6B-SG	NV30HF6C-SG
	9/16"	HF 9	3.18(0.13)	NV30HF9A-SG	NV30HF9B-SG	NV30HF6C-SG
High Pressure 30000 psig	1/4"	HF 4	1.57(0.06)	NV60HF4A-SG	NV60HF4B-SG	NV60HF4C-SG
	3/8"	HF 6	1.57(0.06)	NV60HF6A-SG	NV60HF6B-SG	NV60HF6C-SG
	9/16"	HF 9	1.98(0.08)	NV60HF9A-SG	NV60HF9B-SG	NV60HF9C-SG

Dimension

Straight Valves

mm(in.)

Ordering Code	A	B	C	D	E	F	Thickness
NV30HF4A-SG	38.10(1.50)	28.45(1.12)	50.80(2.00)	110.47(4.35)	50.80(2.00)	5.59(0.22)	25.40(1.00)
NV30HF6A-SG	38.10(1.50)	28.45(1.12)	50.80(2.00)	110.47(4.35)	50.80(2.00)	5.59(0.22)	25.40(1.00)
NV30HF9A-SG	39.62(1.56)	28.45(1.12)	66.55(2.62)	121.65(4.79)	61.98(2.44)	7.11(0.28)	38.10(1.50)
NV60HF4A-SG	42.93(1.69)	33.27(1.31)	50.80(2.00)	113.52(4.47)	53.85(2.12)	5.59(0.22)	25.40(1.00)
NV60HF6A-SG	42.93(1.69)	33.27(1.31)	50.80(2.00)	116.82(4.60)	57.15(2.25)	5.59(0.22)	25.40(1.00)
NV60HF9A-SG	45.45(1.75)	33.27(1.31)	66.55(2.62)	123.17(4.85)	63.50(2.50)	7.11(0.28)	38.10(1.50)

Angle Valves

mm(in.)

Ordering Code	B	C	D	E	F	Thickness
NV30HF4B-SG	28.45(1.12)	50.80(2.00)	110.47(4.35)	50.80(2.00)	5.59(0.22)	25.40(1.00)
NV30HF6B-SG	28.45(1.12)	50.80(2.00)	113.52(4.47)	53.85(2.12)	5.59(0.22)	25.40(1.00)
NV30HF9B-SG	28.45(1.12)	66.55(2.62)	121.65(4.79)	61.98(2.44)	7.11(0.28)	38.10(1.50)
NV60HF4B-SG	33.27(1.31)	50.80(2.00)	120.12(4.73)	60.45(2.38)	5.59(0.22)	25.40(1.00)
NV60HF6B-SG	33.27(1.31)	50.80(2.00)	126.22(4.97)	66.55(2.62)	5.59(0.22)	25.40(1.00)
NV60HF9B-SG	33.27(1.31)	66.55(2.62)	131.04(5.16)	71.37(2.81)	7.11(0.28)	38.10(1.50)

3 Way / 1 on Pressure

mm(in.)

Ordering Code	B	C	D	E	F	Thickness
NV30HF4C-SG	28.45(1.12)	50.80(2.00)	110.47(4.35)	50.80(2.00)	5.59(0.22)	25.40(1.00)
NV30HF6C-SG	28.45(1.12)	50.80(2.00)	113.52(4.47)	53.85(2.12)	5.59(0.22)	25.40(1.00)
NV30HF6C-SG	28.45(1.12)	66.55(2.62)	121.65(4.79)	61.98(2.44)	7.11(0.28)	38.10(1.50)
NV60HF4C-SG	33.27(1.31)	50.80(2.00)	120.12(4.73)	60.45(2.38)	5.59(0.22)	25.40(1.00)
NV60HF6C-SG	33.27(1.31)	50.80(2.00)	126.22(4.97)	66.55(2.62)	5.59(0.22)	25.40(1.00)
NV60HF9C-SG	33.27(1.31)	66.55(2.62)	131.04(5.16)	71.37(2.81)	7.11(0.28)	38.10(1.50)

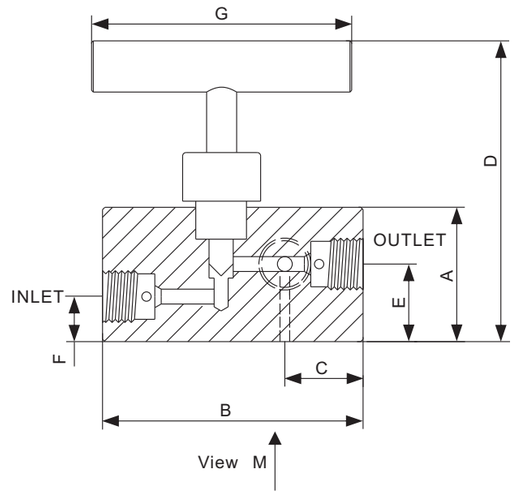
1. HF means female high pressure connector.
2. Ordering codes listed are for valves with vee stem tip. Valves with Regulating stem tip, please add “-R” after the ordering codes.
3. Ordering codes listed are standard. Other sizes, materials and types are available upon request. For special requirements, please contact us.

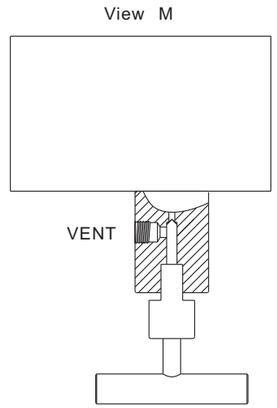
Block & Bleed Valves For Sour Gas Service

Features

- ★ Annealed 316 stainless steel construction. Other special materials available.
- ★ Prevents galling due to the no-rotation stem.
- ★ Packing blow stem threads designed for reliable sealing.
- ★ Working pressure up to 20000 psig.
- ★ Working temperature ranges from -100°F to 600°F(-73℃ to 315℃) for standard valves with glass filled PTFE packing. And other packing materials available, such as grafoil.
- ★ Designed for sour oil and gas service.Meet or exceed requirements of NACE MR-0175.
- ★ It is usually used as a gauge valve.

Drawing & Ordering Information





Ordering Code	Work Pressure	Inlet	Outlet	Orifice mm(in.)
BBV20MF6-SG	10000 psig	MF 6	MF 6	3.18(0.13)
BBV20MF9-SG	10000 psig	MF 9	MF 9	3.18(0.13)
BBV30HF9-SG	20000 psig	HF 9	HF 9	3.18(0.13)

Dimension

mm(in.)

Ordering Code	A	B	C	D	E	F	G
BBV10MF6-SG	50.80(2.00)	79.25(3.12)	28.58(1.13)	120.65(4.75)	23.83(0.94)	12.70(0.50)	76.20(3.00)
BBV10MF9-SG	50.80(2.00)	98.55(3.88)	33.27(1.31)	115.31(4.54)	23.83(0.94)	16.76(0.66)	76.20(3.00)
BBV20HF9-SG	50.80(2.00)	98.55(3.88)	33.27(1.31)	120.65(4.75)	23.83(0.94)	16.76(0.66)	76.20(3.00)

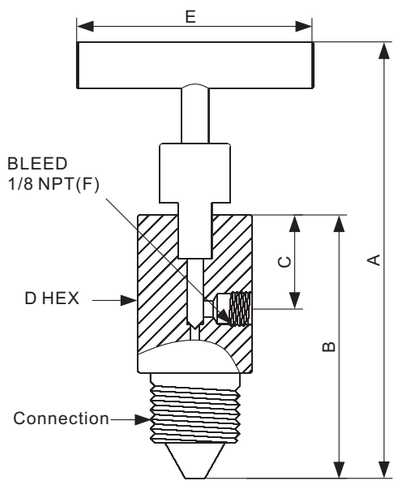
1. HF means high pressure female connector.
2. Ordering codes listed are standard. Other sizes, materials and types are available upon request. For special requirements, please contact us.

Bleed Valves For Sour Gas Service

Features

- ★ Annealed 316 stainless steel construction. Other special materials available.
- ★ Working pressure up to 20000 psig.
- ★ Working temperature ranges from -100°F to 600°F(-73°C to 315°C).
- ★ Designed for sour gas service. Meet requirements of NACE MR-0175.
- ★ Special bleed port is set to prevent splash fluid from damaging operators.

Drawing & Ordering Information



Ordering Code	Work Pressure	Connection	Orifice mm(in.)
BD10MM6-SG	10000 psig	MM 6	2.36(0.09)
BD10MM9-SG	10000 psig	MM 9	2.36(0.09)
BD20HM4-SG	20000 psig	HM 4	2.36(0.09)
BD20HM9-SG	20000 psig	HM 9	2.36(0.09)

Dimension

mm(in.)

Ordering Code	A	B	C	D	E
BD10MM6-SG	82.04(3.23)	61.47(2.42)	28.45(1.12)	35.05(1.38)	44.45(1.75)
BD10MM9-SG	93.47(3.68)	76.64(2.86)	28.70(1.13)	35.05(1.38)	44.45(1.75)
BD20HM4-SG	77.72(3.06)	56.90(2.24)	28.45(1.12)	35.05(1.38)	44.45(1.75)
BD20HM9-SG	87.38 (3.44)	66.29(2.61)	28.45(1.12)	35.05(1.38)	44.45(1.75)

1. HM means high pressure male connector.
2. Ordering codes listed are standard. Other sizes,materials and types are available upon request. For special requirements, please contact us.

High Pressure Tube

Features

- ★ Tube is sold in a 10 ft unit.
- ★ Using stainless steel 316 cold material for excellent corrosion resistant.
- ★ Working temperature ranges from -423°F (-252°C) to 1200°F (649°C).
- ★ Suitable for chemical, oil refining, research, oil and gas companies, this product is used for various pressures.

Ordering Information

Size	Tube Size	Working Pressure psi	Type Connection Used	Material	Catalog Orde Number
1/4"	1/4"O.D.×0.109"I.D	20000	1/4"MEDIUM PRESSUSRE (MF4)	316SS	TB20M4
3/8"	3/8"O.D.×0.203"I.D	20000	1/4"MEDIUM PRESSUSRE (MF6)	316SS	TB20M6
9/16"	9/16"O.D.×0.359"I.D	10000	9/16"MEDIUM PRESSUSRE (MF9)	316SS	TB10M9
9/16"	9/16"O.D.×0.312"I.D	20000	9/16"MEDIUM PRESSUSRE (MF9)	316SS	TB20M9
3/4"	3/4"O.D.×0.516"I.D	10000	3/4"MEDIUM PRESSUSRE (MF12)	316SS	TB10M12
3/4"	3/4"O.D.×0.438"I.D	20000	3/4"MEDIUM PRESSUSRE (MF12)	316SS	TB20M12
1"	1"O.D.×0.688"I.D	10000	1"MEDIUM PRESSUSRE (MF16)	316SS	TB10M16
1"	1"O.D.×0.562"I.D	20000	1"MEDIUM PRESSUSRE (MF16)	316SS	TB20M16
1/4"	1/4"O.D.×0.083"I.D	60000	1/4"HIGH PRESSURE (HF4)	316SS	TB60H4
3/8"	3/8"O.D.×1/8"I.D	60000	3/8"HIGH PRESSURE (HF6)	316SS	TB60H6
9/16"	9/16"O.D.×3/16"I.D	60000	9/16"HIGH PRESSURE (HF9)	316SS	TB60H9
9/16"	9/16"O.D.×1/4"I.D	40000	9/16"HIGH PRESSURE (HF9)	316SS	TB40H9