

Premier Manufacturer of High Pressure Valves, Fittings, Tubing, and Accessories



PHP 2018 Product Catalog alt.indd 1 6/25/18 11:46 AM



Precision High Pressure is the premier manufacturer of high pressure valves, fittings, tubing, and accessories with pressures up to 100,000 PSI.

PHP specializes in the
oil and gas and waterjet
markets with typical
applications including Hydrogen, Subsea

& Surface, Chemical Injection

Systems, Process Control Systems, Control Panels, Hydraulic Power Units (HPUs), Hydrostatic Test Systems, Water Blasting and Waterjet Cutting.

With over 60 years of cumulative experience in design and manufacturing of various high tech products, the PHP team looks forward to continuing our tradition of delivering high quality products and dependable services to our customers across the globe.





### **TABLE OF CONTENTS**

Pipe Needle Valves 4
Pipe Check Valves 7
Pipe Filters 8
Pipe Fittings
Medium and High Pressure Needle Valves 13
Medium and High Pressure Check Valves 17
Medium and High Pressure Filters 18
Medium and High Pressure Fittings 20
Air Actuators25
Ball Valves 27
Medium and High Pressure Tubing 32
Block and Bleed 33
Manifolds 34
Adaptors 35

## PIPE NEEDLE VALVES

### **Standard Type**

### **Specifications**

- MAWP up to 15,000 PSI (1034 bar).
- Temperature Ratings: 0°F to 400°F (-18°C to 204°C).
- Female NPT connections are standard.
- Vee type stem is standard.

### Features & Benefits

- Standard valve fully opens in 4 ½ turns.
- Standard <sup>3</sup>/<sub>4</sub>" and 1" valve fully opens in as little as 3 turns, compared to 9 turns for industry standard valves.
- Two-piece, heavy-duty, non-rotating stem for a robust and reliable assembly.
- Bi-directional flow capability. Simplifies system designs.
- Packing gland consists of a preload locking internal thread form that is resistant to vibration. Eliminates the need for an external locking device.
- Double-sided weep holes for easier leakage verification.



- Valve is fully open in as little as  $1^{3}/_{4}$  turns.
- Stem is lifted off of the seat a minimum of 2X faster than conventional valves, which reduces throttling and therefore increases seat life.
- Less than half the number of turns to fully open compared to competitor's valves.

### **Options**

- Solid Stainless Steel or Aluminum Handle.
- Replaceable Seat design for use in harsh environments.
- Air Actuators for Remote Valve Actuator.
- Grafoil Packing for temperature up to 800°F.
- Extended Stuffing Box for temperatures up to 1200°F.
- Extended Stuffing Box for temperatures down to -423°F.
- Can be manufactured to meet NACE MR-01-75.
- Wide range of construction materials available.

### Standard Materials

- Body 316 cold worked stainless steel.
- Packing Glass filled Teflon.
- Stem 17-4 PH.

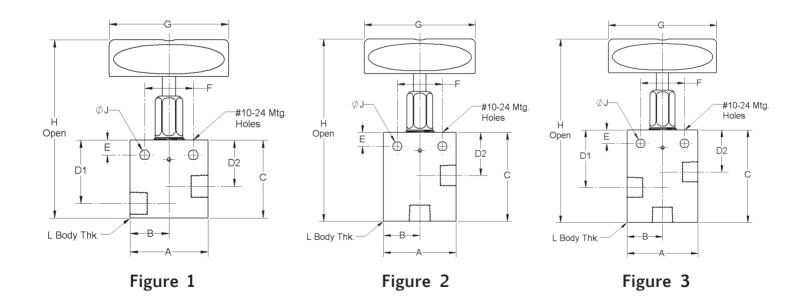


### **PIPE NEEDLE VALVES**

End	Connection	Pressure		Orifice					Di	mensio	ns, in. (m	m)	00.	10.		<i></i>	Valve			
Connection Size in.	Туре	Rating	Part Number	in. (mm)	А	В	С	D1	D2	D3	Ε	F	G	н	j	L	Dimensions			
2-WAY ST	RAIGHT																			
1/4			15NV4N1V	0.25	2.00 (50.8)	1.00	2.00 (50.8)	1,63 (41.28)	1.19 (30.2)	(m)	0.38 (9.7)	1.24 (31.5)	3.00 (76.2)	4.84 (123.0)	0.25	1.00 (25.4)				
3/8		15,000 PSI	15NV6N1V	0.312 (7.9)	2.50 (63.5)	1.25	2.88 (73.2)	2.38 (60.4)	1.75 (44.5)	23	0.50	1.38 (35.0)	4.00 (102.0)	5.46 (139.0)	0.34 (8.7)	1.00 (25.4)	8			
1/2	Female NPT		15NV8N1V	0.312 (7.9)	2.50 (63.5)	1.25 (31.8)	3,00 (76.2)	2.38 (60.4)	1.75 (44.5)	2	0.50	1.38 (35.0)	4.00 (102.0)	5.58 (142.0)	0.34 (8.7)	1.25 (31.6)	See Figure 1			
3/4	5	10.000.00	10NV12N1V	0.438	3.00 (76.2)	1.50 (38.1)	3.75 (95.3)	3.00 (76.2)	2.25 (57.2)	:22	0.62	1.75 (44.5)	8.07 (204.0)	7.07 (179.6)	0.44	1.38 (35.1)				
1		10,000 PSI -	10NV16N1V	0.562 (14.3)	4.12 (104.5)	2.06 (52.3)	4.75 (120.7)	3.75 (95.3)	2.82 (71.6)	350	1.12 (28.4)	2.50 (63.5)	10.29 (261.4)	8.96 (227.6)	0.56 (14.2)	1.75 (44.5)	ii S			
-WAY AI	NGLE																			
1/4		15,000 PSI	15NV4N2V	0.25	2.00 (50.8)	1.00	2.44 (62.0)	(18)	1.19 (30.2)	33	0.38	1.24	3.00 (76.2)	5.28 (134.1)	0.25	1.00 (25.4)				
3/8			15NV6N2V	0.312 (7.9)	2.50 (63.5)	1.25	3.38 (85.9)	1000	1.75 (44.5)	200	0.50 (12.7)	1.38 (35.0)	4.00 (102.0)	5.96 (152.0)	0.34 (8.7)	1.00 (25.4)				
1/2	Female NPT	1	15NV8N2V	0.312 (7.9)	2.50 (63.5)	1.25 (31.8)	3.38 (85.9)	(A)	1.75 (44.5)		0.50	1.38 (35.0)	4.00 (102.0)	5.96 (152.0)	0.34 (8.7)	1.25 (31.6)	See Figure 2			
3/4	ĺ	10 000 051	10NV12N2V	0.438	3.00 (76.2)	1.50 (38.1)	4.25 (108.0)		2.25 (57.2)		0.62 (15.7)	1.75 (44.5)	8.07 (204.0)	7.57 (182.3(	0.44 (11.2)	1.38 (35.1)				
1	3	8	10,000 PSI	10,000 PSI -	10,000 PSI	10NV16N2V	0.562 (14.3)	4.12 (104.6)	2.06 (52.3)	5.13 (130.3)		2.82 (71.6)	3	1.12 (28.4)	2.50 (63.5)	10.29 (261.4)	8.96 (227.6)	0.56 (14.2)	1.75 (44.5)	
-WAY/2	ON PRESSI	URE				/	70			0	100			1.0	0		No.			
1/4		a Production	15NV4N3V	0.25	2.00 (50.8)	1.00	2.62 (66.5)	1.63 (41.3)	1.19 (30.2)		0.38	1.24 (31.5)	3.00 (76.2)	5,46 (139.0)	0.25	1.00 (25.4)				
3/8	Female NPT	15,000 PSI	15NV6N3V	0.312 (7.9)	2.50 (63.5)	1.25	3.62 (85.9)	2.38 (60.4)	1.75 (44.5)	398	0.50 (12.7)	1.38 (35.0)	4.00 (102.0)	6.20 (157.5)	0.34 (8.7)	1.00 (25.4)	See Figure 3			
1/2			15NV8N3V	0.312 (7.9)	2.50 (63.5)	1.25	3.62 (85.9)	2.38 (60.4)	1.75 (44.5)	( <b>3</b> )	0.50	1.38	4.00	6.20 (157.5)	0.34 (8.7)	1.25	# 15			

Dimensions, in inches (millimeters), are for reference only and are subject to change.

### \*For quick open version insert "Q" after "NV" in part number. Example: 15NVQ8N1V



### **PIPE NEEDLE VALVES**

End	Connection	Pressure		Orifice					Di	mensior	ns, in. (m	im)					Valve	
Connection Size in.	Туре	Rating	Part Number	in. (mm)	A	В	c	D1	D2	D3	E	F	G	H	J	î	Dimensions	
3-WAY/1	ON PRESSI	JRE																
1/4			15NV4N4V	0.25 (6.4)	2.00 (50.8)	1.00 (25.4)	2.44 (62.0)	1.19 (30.2)	ş	\$	0.38	1.24 (31.5)	3.00 (76.2)	5.28 (134.1)	0.25	1.00 (25.4)		
3/8	Female NPT	15,000 PSI	15NV6N4V	0.312 (7.9)	2.50 (63.5)	1.25 (31.8)	3.38 (85.9)	1.75 (44.5)	29	25	0.50 (12.7)	1.38 (35.0)	4.00 (102.0)	5.96 (152.0)	0.34 (8.7)	1.00 (25.4)	See Figure 4	
1/2			15NV8N4V	0.312 (7.9)	2.50 (63.5)	1.25 (31.8)	3.38 (85.9)	1.75 (44.5)	50	56	0.50	1.38 (35.0)	4.00 (102.0)	5.96 (152.0)	0.34 (8.7)	1.25 (31.6)	el nilwwesenilli	
3-WAY/2-	STEM MAI	NIFOLD																
1/4			S	15NV4N5V	0.25	2.00 (50.8)	1.00 (25.4)	3.38 (85.9)	1.69	1.19 (30.2)	1.19 (30.2)	0.38	1.24 (31.5)	3.00 (76.2)	9.06 (230.1)	0.25	1.00 (25.4)	(
3/8	Female NPT		15NV6N5V	0.312 (7.9)	2.50 (63.5)	1.25 (31.8)	5.12 (130.0)	2.56 (65.0)	1.75 (44.5)	1.75 (44.5)	0.50 (12.7)	1.38 (35.0)	4.00 (102.0)	10.28 (261.1)	0.34 (8.7)	1.00 (25.4)	See Figure 5	
1/2			15NV8N5V	0.312 (7.9)	2.50 (63.5)	1.25	5.12 (130.0)	2.56 (65.0)	1.75	1.75	0.50	1.38	4.00	10.28 (261.1)	0.34	1.25	6 5	
2-WAY AI	NGLE/REPL	ACEABLE	SEAT		100	to the	hii ya		Mil 130	tot de		100	MA A			tuti.		
1/4			15NV4N6V	0.25	2.00 (50.8)	1.00 (25.4)	3.30 (83.8)	E	1.19 (30.2)	×	0.38	1.24	3.00 (76.2)	6.19 (157.2)	0.25	1.00 (25.4)		
3/8	Female NPT	15,000 PSI	15NV6N6V	0.312 (7.9)	2.50 (63.5)	1.25 (31.8)	4.51 (114.6)	12	1.75 (44.5)	÷.	0.50 (12.7)	1.38 (35.0)	4.00 (102.0)	7.09 (180.1)	0.34 (8.7)	1.00 (25.4)	See Figure 6	
1/2			15NV8N6V	0.312 (7.9)	2.50 (63.5)	1.25 (31.8)	4.62 (117.3)	18	1.75 (44.5)	55	0.50 (12.7)	1.38	4.00 (102.0)	7.20 (182.9)	0.34 (8.7)	1.50 (38.1)	or countries and	

Dimensions, in inches (millimeters), are for reference only and are subject to change.

### \*For quick open version insert "Q" after "NV" in part number. Example: 15NVQ8N1V

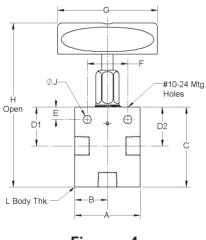
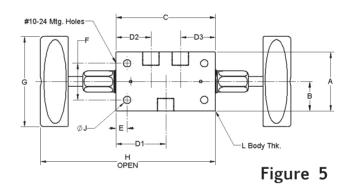
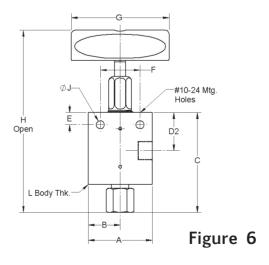


Figure 4





6

PHP 2018 Product Catalog alt.indd 6 6/25/18 11:46 AM

## PIPE CHECK VALVES

### **Specifications**

- MAWP up to 15,000 PSI (1034 bar).
- Temperature Ratings Metal Seat: 0°F to 400°F (-18°C to 204°C). Soft Seat: 0°F to 400°F (-18°C to 204°C).
- Nominal Cracking Pressure: 15 PSI (1 bar).
- Female NPT end connections are standard.

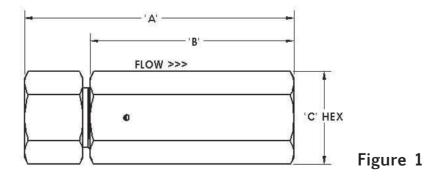
### **Features**

- Prevents reverse flow which may cause damage to a pressure system.
- Metal Seat offers metal-to-metal seat for rapid cycling or severe environments.
- Soft Seat offers PEEK seat with metal back-up for fast shutoff and reliable seal.
- Can be manufactured to meet NACE MR-01-75.



- 316 cold worked stainless steel is standard.
- PEEK 450G is standard material of soft seat poppet seal.

End	Connection	Pressure	Part Number	Part Number	Orifice	Dime	ension in. (	mm)	Valve	
Connection Size in.	Туре	Rating	Metal Seat	Soft Seat	in. (mm)	A	В	С	Dimensions	
1/4		3	15CV4NFM	15CV4NFS	0.188	3.20 (81.3)	2.50 (63.5)	1.00 (25.4)	6	
3/8		15,000 PSI	15CV6NFM	15CV6NFS	0.219 (5.56)	3.56 (90.4)	2.66 (66.0)	1.13		
1/2	Female NPT	(5)	15CV8NFM	15CV8NFS	0.359 (9.12)	4.63 (117.6)	3,50 (88.9)	1.38 (35.1)	See Figure 1	
3/4	8	10.000 PSI	10CV12NFM	10CV12NFS	0.516 (13.11)	5.63 (143.00)	4.38 (111.25)	1.75 (44.45)		
1		10,000 PSI	10CV16NFM	10CV16NFS	0.688 (17.48)	7.00 (177.8)	5.25 (133.35)	2.13 (54.10)		





### **Specifications**

- MAWP up to 15,000 PSI (1034 bar).
- Female NPT end connections are standard.

### Line Filters

- Line Filters are used to remove contaminating particles from fluid. Each line filer is provided with two filter elements. The upstream element to filter out larger particles, and the downstream element to filter smaller particles.
- Filter elements are available in nominal ratings of 0.5, 2, 5, 10, 20, 40 and 100 Micron.

### Cup Filters

- Cup Filters offer maximum filtration surface area for removal of contaminating particles from the fluid system. They may be used in systems which require high flow rates with minimum pressure drop.
- Filter elements are available in nominal ratings of 5, 10, 20, 40 and 100 Micron.

### **Materials**

- 316 cold worked stainless steel is standard.
- Filter discs are made from 300 series stainless steel.

End	Connection	Droceuro		Dime	nsion, in.	(mm)	Eitting
Connection Size in.	Туре	Pressure Rating	Part Number	Α	АВ		Fitting Dimensions
LINE FILTER	ł .			W:	0.9	CA .	
1/4			15LF4NF-*/*	2.13 (54.1)	1.50 (38.1)	1.00 (25.4)	1
3/8		15,000 PSI	15LF6NF-*/*	2.50 (63.5)	1.63 (41.4)	1.13 (28.7)	
1/2	Female NPT		15LF8NF-*/*	3.25 (82.55)	2.06 (52.32)	1.38 (35.1)	See Figure 1
3/4		10 000 BSI	10LF12NF-*/*	4.06 (103.12	2.88 (73.15)	1.75 (44.45)	
1	10,000 P	10,000 PSI	10LF16NF-*/*	5.00 (127)	3.30 (83.82)	2.13 (54.10)	5

<sup>\*</sup>Insert desired upstream/downstream micron filter Example: 15LF8NF-20/5 is a 1/2" FNPT Cup Filter with 20 micron upstream filter and 5 micron downstream filter.

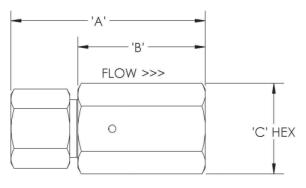


Figure 1

PHP 2018 Product Catalog alt.indd 8 6/25/18 11:46 AM

### **PIPE FILTERS**

End	Connection	Pressure		Dime	Dimension, in. (mm)					
Connection Size in.	Туре	Rating	Part Number	Α	В	С	Fitting Dimensions			
<b>CUP FILTER</b>			25	0.12	00	7%	43			
- 1a			15CEANE #	3.20	2.50	1.00				
1/4	1 1		15CF4NF-*	(81.3)	(63.5)	(25.4)				
3/8	1	15,000 PSI	15CF6NF-*	3.56	2.66	1.13				
3/0	<u>.</u>	15,000   31	TOCLOINE.	(90.4)	(66.0)	(28.7)				
1/2	Female		15CF8NF-*	4.63	3.50	1.38	See			
1/2	NPT		13CFOINF-	(117.6)	(88.9)	(35.1)	Figure 2			
3/4			10CF12NF-*	5.63	4.38	1.75				
3/4	]	10,000 PSI	TOCFTZINF-	(143.00	(111.25	(44.45)				
1	† l	10,000 F31	10CF16NF-*	7.00	5.25	2.13				
<del>(1</del> €3)	]		TOCLION-	(177.8)	(133.35	(54.10)				

\*Insert desired micron filter

Example: 15CF8NF-5 is a 1/2" FNPT Cup Filter with 5 micron filter

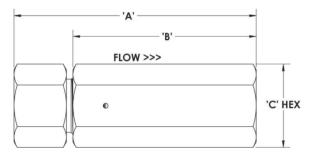


Figure 2



## PIPE FITTINGS

### **Specifications**

- NPT Fittings with MAWP up to 15,000 PSI (1034 bar).
- Female and Male NPT connections are standard.

### **Features**

 Can be manufactured to meet NACE MR-01-75.

### **Materials**

- 316 stainless steel is standard.
- Other materials available by request.



End	1980 (0.000 (0.000)			Din	ension, in. (n	nm)		
Connection Size in.	Pressure Rating	Part Number	А	В	с	D	Block Thickness	Fitting Dimensions
FEMALE E	LBOW		11	A 1				
1/8		15L2NF	1.13 (28.7)	1.00 (25.4)	0.75 (19.1)	0.62 (15.7)	0.62 (15.7)	
1/4	15 000 DCI	15L4NF	1.50 (38.1)	1.25 (31.8)	1.00 (25.4)	0.81 (20.6)	0.75 (19.1)	
3/8	15,000 PSI	15L6NF	1.50 (38.1)	1.50 (38.1)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	See
1/2		15L8NF	1.75 (44.4)	1.75 (44.4)	1.25 (31.8)	1.25 (31.8)	1.25 (31.8)	Figure 1
3/4	10.000.001	10L12NF	2.62 (66.5)	2.12 (53.8)	1.31 (33.3)	1.38 (35.1)	1.50 (38.1)	
1	10,000 PSI	10L16NF	3.00 (76.2)	2.56 (65.0)	1.69 (68.3)	1.69 (68.3)	1.75 (44.4)	
FEMALE T	EE			0.				
1/8		15T2NF	1.50 (38.1)	1.00 (25.4)	0.75 (19.1)	0.62 (15.7)	0.62 (15.7)	
1/4	15 000 001	15T4NF	2.00 (50.8)	1.25 (31.8)	1.00 (25.4)	0.81 (20.6)	0.75 (19.1)	
3/8	15,000 PSI	15T6NF	2.00 (50.8)	1.50 (38.1)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	See
1/2		15T8NF	2.50 (63.5)	1.75 (44.4)	1.25 (31.8)	1.25 (31.8)	1.25 (31.8)	Figure 2
3/4	10 000 DCI	10T12NF	2.62 (66.5)	2.12 (53.8)	1.31 (33.3)	1.38 (35.1)	1.50 (38.1)	
1	10,000 PSI	10T16NF	3.38 (85.9)	2.56 (65.0)	1.69 (68.3)	1.69 (68.3)	1.75 (44.4)	
FEMALE C	ROSS	): -	91	0				
1/8		15X2NF	1.50 (38.1)	1.50 (38.1)	0.75 (19.1)	0.75 (19.1)	0.62 (15.7)	
1/4	15 000 551	15X4NF	2.00 (50.8)	2.00 (50.8)	1.00 (25.4)	1.00 (25.4)	0.75 (19.1)	
3/8	15,000 PSI	15X6NF	2.00 (50.8)	2.00 (50.8)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	See
1/2		15X8NF	2.50 (63.5)	2.50 (63.5)	1.25 (31.8)	1.25 (31.8)	1.25 (31.8)	Figure 3
3/4	10 000 001	10X12NF	2.70 (68.6)	2.70 (68.6)	1.31 (33.3)	1.31 (33.3)	1.50 (38.1)	
1	10,000 PSI	10X16NF	4.12 (104.6)	4.12 (104.6)	2.06 (52.3)	2.06 (52.3)	1.75 (44.4)	

Dimensions, in inches (millimeters), are for reference only and are subject to change.

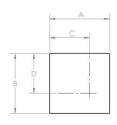


Figure 1

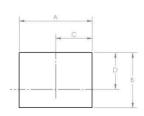


Figure 2



Figure 3

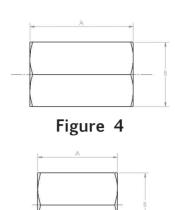
10

### PRECISION HIGH PRESSSURE

PHP 2018 Product Catalog alt.indd 10 6/25/18 11:46 AM

### **PIPE FITTINGS**

End Connection	Pressure	Part	Dimension	n, in. (mm)	Fitting
Size in.	Rating	Number	Α	В	Dimensions
COUPLING	ret e	v	7		
1/4		15CU4NF	1.25 (31.8)	0.75 (19.1)	
3/8	15,000 PSI	15CU6NF	1.38 (35.1)	1.00 (25.4)	
1/2	80	15CU8NF	1.50 (38.1)	1.38 (35.1)	See Figure 4
3/4	10 000 PCI	10CU12NF	1.75 (44.4)	1.38 (35.1)	rigure 4
1	10,000 PSI	10CU16NF	2.18 (55.4)	1.75 (44.4)	
CAP					
1/8		15CA2NF	0.75 (19.1)	0.62 (15.7)	
1/4		15CA4NF	1.00 (25.4)	0.75 (19.1)	
3/8	15,000 PSI	15CA6NF	1.00 (25.4)	1.00 (25.4)	See
1/2		15CA8NF	1.25 (31.8)	1.38 (35.1)	Figure 5
3/4	10 000 001	10CA12NF	1.50 (38.1)	1.38 (35.1)	1
1	10,000 PSI	10CA16NF	1.68 (42.7)	1.75 (44.4)	
PLUG					
1/8		15PL2NM	1.00 (25.4)	0.50 (12.7)	
1/4		15PL4NM	1.13 (28.7)	0.62 (15.7)	1
3/8	15,000 PSI	15PL6NM	1.13 (28.7)	0.75 (19.1)	See
1/2		15PL8NM	1.50 (38.1)	1.00 (25.4)	Figure 6
3/4		10PL12NM	1.50 (38.1)	1.38 (35.1)	
1	10,000 PSI	10PL16NM	1.88 (47.6)	1.38 (35.1)	





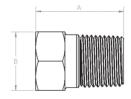
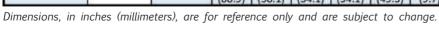


Figure 6

Dimensions, in	inches (milli	meters), are fo	r reference (	only and	are subject	to change.

End Connection	Pressure	Part	Part Dimension, in. (mm)										
Size in.	Rating	Number	Α	В	C	D	E	F	Dimensions				
BULKHEAD													
1/4		15BU4NF	2.00 (50.8)	0.62 (15.7)	1.00 (25.4)	1.00 (25.4)	0.94 (23.9)	0.38 (9.7)					
3/8	15,000 PSI	15BU6NF	2.62 (66.5)	0.79 (20.1)	1.38 (35.1)	1.38 (35.1)	1.25 (31.6)	0.38 (9.7)					
1/2		15BU8NF	2.62 (66.5)	0.91 (23.1)	1.88 (47.8)	1.88 (47.8)	1.37 (34.8)	0.38 (9.7)	See Figure 7				
3/4	10 000 001	10BU12NF	2.62 (66.5)	0.91 (23.1)	1.88 (47.8)	1.88	1.69 (42.9)	0.38 (9.7)	A Williams				
1	10,000 PSI	108U16NF	3.50 (88.9)	1.50 (38.1)	2.13 (54.1)	2.13 (54.1)	1.94 (49.3)	0.38 (9.7)					



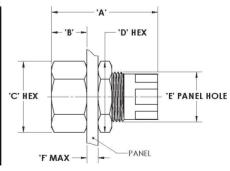
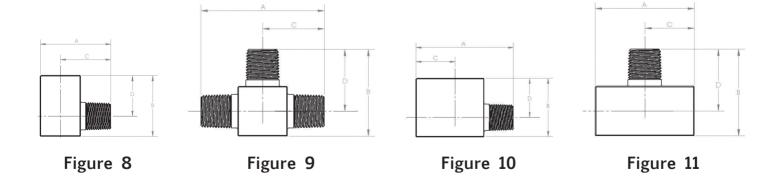


Figure 7

### **PIPE FITTINGS**

End	Burnesser		ar.	Din	nension, in. (n	nm)	e.	Planton
Connection Size in.	Pressure Rating	Part Number	A	В	С	D	Block Thickness	Fitting Dimensions
STREET EL	BOW							
1/8		15L2NM2NF	1.12 (28.5)	1.00 (25.4)	0.81 (20.6)	0.75 (19.1)	0.62 (15.7)	
1/4	45 000 001	15L4NM4NF	1.50 (38.1)	1.50 (38.1)	1.13 (28.7)	1.00 (25.4)	1.00 (25.4)	
3/8	15,000 PSI	15L6NM6NF	1.75 (44.4)	1.50 (38.1)	1.25 (31.8)	1.00 (25.4)	1.00 (25.4)	See
1/2		15L8NM8NF	2.25 (57.2)	2.00 (50.8)	1.63 (41.4)	1.20 (30.5)	1.25 (31.8)	Figure 8
3/4	10 000 001	10L12NM12NF	2.50 (63.5)	2.62 (66.5)	1.75 (44.4)	1.31 (33.3)	1.50 (38.1)	3800
1	10,000 PSI	10L16NM16NF	3.00 (76.2)	2.88 (73.2)	2.12 (53.8)	1.68 (42.7)	1.75 (44.4)	
MALE TEE								
1/8		15T2NM	1.50 (38.1)	1.13 (28.7)	0.75 (19.1)	0.81 (20.6)	0.62 (15.7)	
1/4	45 000 001	15T4NM	2.25 (57.2)	1.50 (38.1)	1.13 (28.7)	1.13 (28.7)	0.75 (19.1)	
3/8	15,000 PSI	15T6NM	2.50 (63.5)	1.75 (44.4)	1.25 (31.8)	1.25 (31.8)	1.00 (25.4)	See
1/2		15T8NM	3.00 (76.2)	2.00 (50.8)	1.50 (38.1)	1.50 (38.1)	1.00 (25.4)	Figure 9
3/4	10 000 001	10T12NM	3.50 (88.9	2.62 (66.5)	1.75 (44.4)	1.75 (44.4)	1.50 (38.1)	2 900
1	10,000 PSI	10T16NM	4.25 (108.0)	3.00 (76.2)	2.12 (53.8)	2.12 (53.8	1.75 (44.4)	
MALE RUI	N TEE							
1/8		15T2NF2NM2NF	1.50 (38.1)	1.13 (28.7)	0.62 (15.7)	0.75 (19.1)	0.62 (15.7)	
1/4	45 000 001	15T4NF4NM4NF	2.00 (50.8	1.38 (35.1)	0.81 (20.6)	1.00 (25.4)	0.75 (19.1)	
3/8	15,000 PSI	15T6NF6NM6NF	2.50 (63.5)	1.50 (38.1)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	See
1/2		15T8NF8NM8NF	2.75 (69.9)	1.75 (44.4)	1.25 (31.8)	1.25 (31.8)	1.38 (35.1)	Figure 10
3/4		10T12NF12NM12NF	3.12 (79.2)	2.62 (66.5)	1.31 (33.3)	1.31 (33.3)	1.50 (38.1)	
1	10,000 PSI	10T16NF16NM16NF	4.25 (108.0)	3.00 (76.2)	2.12 (53.8)	2.12 (53.8	1.75 (44.4)	
MALE BRA	ANCH TEE							
1/8		15T2NF2NF2NM	1.50 (38.1)	1.13 (28.7)	0.75 (19.1)	0.81 (20.6)	0.62 (15.7)	8
1/4		15T4NF4NF4NM	2.00 (50.8	1.50 (38.1)	1.00 (25.4)	1.13 (28.7)	0.75 (19.1)	
3/8	15,000 PSI	15T46NF6NF6NM	2.00 (50.8	1.75 (44.4)	1.00 (25.4)	1.25 (31.8)	1.00 (25.4)	See
1/2		15T8NF8NF8NM	2.50 (63.5)	2.25 (57.2)	1.25 (31.8)	1.63 (41.4)	1.25 (31.8)	Figure 11
3/4	40 000 001	10T12NF12NF12NM	2.62 (66.5)	2.50 (63.5)	1.31 (33.3)	1.75 (44.4)	1.50 (38.1)	
1	10,000 PSI	10T16NF16NF16NM	3.37 (85.6)	3.00 (76.2)	1.69 (42.9)	2.13 (54.1)	1.75 (44.4)	

Dimensions, in inches (millimeters), are for reference only and are subject to change.



12

### **Standard Type**

### **Specifications**

- MAWP up to 100,000 PSI (6894 bar).
- Temperature Ratings: 0°F to 400°F (-18°C to 204°C).
- Female Cone and Thread connections are standard.
- Vee type stem is standard.

### Features & Benefits

- Standard valve fully opens in 4 ½ turns.
- Standard <sup>3</sup>/<sub>4</sub>" and 1" valve fully opens in as little as 3 turns, compared to 9 turns for industry standard valves.
- Two-piece, heavy-duty, non-rotating stem for a robust and reliable assembly.
- Bi-directional flow capability. Simplifies system designs.
- Packing gland consists of a preload locking internal thread form that is resistant to vibration. Eliminates the need for an external locking device.
- Double-sided weep holes for easier leakage verification.



- Valve is fully open in as little as  $1^{3}/_{4}$  turns.
- Stem is lifted off of the seat a minimum of 2X faster than conventional valves, which reduces throttling and therefore increases seat life.
- Less than half the number of turns to fully open compared to competitor's valves.

### **Options**

- Solid Stainless Steel or Aluminum Handle.
- Replaceable Seat design for use in harsh environments.
- Air Actuators for Remote Valve Actuator.
- Grafoil Packing for temperature up to 800°F.
- Extended Stuffing Box for temperatures up to 1200°F.
- Extended Stuffing Box for temperatures down to -423°F.
- Can be manufactured to meet NACE MR-01-75.
- Wide range of construction materials available.

### Standard Materials

- Body 316 cold worked stainless steel.
- Packing Glass filled Teflon.
- Stem 17-4 PH.



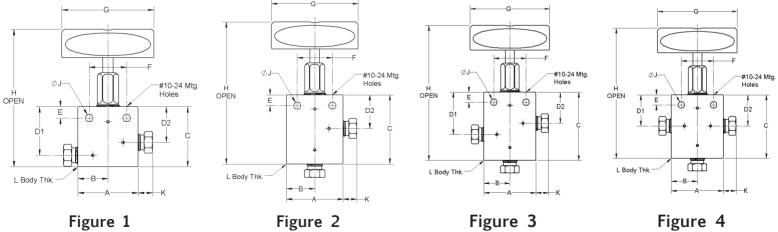
End	Connection	Pressure	200	Orifice						Dimer	isions, in	. (mm)						Valve						
onnection Size in.	Туре	Rating	Part Number	in. (mm)	A	В	c	D1	D2	D3	E	F	G	н	j	K	U	Dimensio						
-WAY ST	RAIGHT						10.00			120,50				1355		- 22								
E)		1		0.125	2.00	1.00	2.00	1.63	1.19		0.38	1.24	3.00	4.84	0.25	0.38	1.00							
1/4			20NV4M1V	(3.2)	(50.8)	(25.4)	(50.8)	(41.3)	(30.2)		(9.7)	(31.5)	(76.2)	[123.0)	(6.4)	(9.7)	(25.4)							
2/0		8	2010/51/41/	0.20	2.00	1.00	2.00	1.63	1.19		0.38	1.24	3.00	4.84	0.25	0.48	1.00	1						
3/8	Medium		20NV6M1V	(5.1)	(50.8)	(25.4)	(50.8)	(41.3)	(30.2)		(9.7)	(31.5)	(76.2)	(123.0)	(6.4)	(12.2)	(25.4)							
9/16	Pressure	20,000 PSI	20NV9M1V	0.312	2.50	1.25	2.88	2.38	1.75		0.50	1.38	4.00	5.46	0.34	0.68	1.00							
	Cone &	2042-1-200-201	2011/2/1121	(7.9)	(63.5)	(31.8)	(73.2)	(60.5)	(44.5)		(12.7)	(35.0)	(102.0)	(138.7)	(8.7)	(17.3)	(25.4)							
3/4	Thread		20NV12M1V	0.438	3.00	1.50	3.75	3.00	2.25		0.62	1.75	8.07	7.07	0.44	0.59	1.38							
41000			A SHOW THE SHORT	0.562	4.12	(38.1)	(95.3)	(76.2)	(57.2)		1.12	(44.5)	10.29	(179.6) 8.96	0.56	0.74	1.75							
1			20NV16M1V	(14.27)	(104.6)	(52.3)	(120.7)	(95.3)	(71.6)		(28.4)	(63.5)	(261.4)	(227.6)	(14.2)	(18.8)	(44.5)							
				1244677	120 1101	100.07	[farant)	(55.5)	11,2,07		1460.17	100.07	(402.7)	[227.07]	(a ria)	1 (20.0)	(1110)							
1/4	AVAMO		30NV4H1V	0.093	2.00	1.00	2.00	1.50	1.12		0.38	1.38	3.00	4.74	0.28	0.59	1.00	See						
1/4	High	,	30N V4H1V	(2.4)	(50.8)	(25.4)	(50.8)	(38.1)	(28.5)		(9.7)	(35.0)	(76.2)	(120.4)	(7.1)	(15.0)	(25.4)	Figure						
3/8	Pressure	30,000 PSI	30NV6H1V	0.125	2.00	1.00	2.00	1.50	1.12		0.38	1.38	3.00	4.74	0.28	0.72	1.00							
200	Cone &	2320,030,100.5		(3.2)	(50.8)	(25.4)	(50.8)	(38.1)	(28.5)		(9.7)	(35.0)	(76.2)	(120.4)	(7.1)	(18.3)	(25.4)	ļ						
9/16	Thread		30NV9H1V	0.125	2.62	1.31	2,44	1.56	1.12		0.38	1.38	3.00	5.18	0.28	1.00	1.50							
		l:		(3.2)	(66.5)	(33.3)	(62.0)	(39.6)	(28.5)		(9.7)	(35.0)	(76.2)	(131.6)	(7.1)	(25.4)	(38.1)	ł						
14114		ľ		0.062	2.00	1.00	2.12	1.69	1.31		0.38	1.38	3.00	4.89	0.28	0.59	1.00	ĺ						
1/4	High		60NV4H1V	(1.6)	(50.8)	(25.4)	(53.8)	(42.9)	(33.3)		(9.7)	(35.0)	(76.2)	(124.2)	(7.1)	(15.0)	(25.4)							
3/8	Pressure	60,000 PSI	60NV6H1V	0.062	2.00	1.00	2.25	1.69	1.31		0.38	1.38	3.00	5.02	0.28	0.72	1.00	1						
94.94	Cone & Thread	CONTROLLE	(1.6)	(50.8)	(25.4)	(57.2)	(42.9)	(33.3)		(9.7)	(35.0)	(76.2)	(127.5)	(7.1)	(18.3)	(25.4)	l							
9/16		Thread	60NV9H1V	0.012	2.62	1.31	2.50	1.75	1.31		0.38	1.38	3.00	5.27	0.28	1.00	1.50							
MAYAY AR	ICIE	5 3	Ç.					Jesos Covernos	(0.03)	(66.5)	(33.3)	(63.5)	(44.5)	(33.3)		(9.7)	(35.0)	(76.2)	(133.9)	(7.1)	(25.4)	(38.1)		
-WAY AI	VGLE	_	2-0.07200-7000	0.125	2.00	1.00	2.44		1.19		0.38	1.24	3.00	5.28	0.25	0.38	1.00							
1/4			20NV4M2V	(3.2)	(50.8)	(25.4)	(62.0)		(30.2)		(9.7)	(31.5)	(76.2)	(134.1)	(6.4)	(9.7)	(25.4)							
505			-			COLUMN TO SERVE	0.20	2.00	1.00	2.44		1.19		0.38	1.24	3.00	5.28	0.25	0.48	1.00				
3/8	Medium		20NV6M2V	(5.1)	(50.8)	(25.4)	(62.0)		(30.2)		(9.7)	(31.5)	(76.2)	(134.1)	(6.4)	(12.2)	(25.4)							
9/16	Pressure	20,000 PSI	20NV9M2V	0.312	2.50	1.25	3.38		1.75		0.50	1.38	4.00	5.96	0.34	0.68	1.00	1						
3/10	Cone &	20,000 F31	20144314124	(7.9)	(63.5)	(31.8)	(85.9)		(44.5)		(12.7)	(35.0)	(102.0)	(151.4)	(8.7)	(17.3)	(25.4)							
3/4	Thread		20NV12M2V	0.438	3.00	1.50	4.25		2.25		0.62	1.75	8.07	7.56	0.44	0.59	1.38							
0.0				0.562	(76.2)	2.06	(108.0)		(57.2)		1.12	2.50	10.29	(192.0)	0.56	0.74	(35.1)							
1			20NV16M2V	(14.27)	(104.6)	(52.3)	5.13		(71.6)		(28.4)	(63.5)	(261.4)	9.45	(14.2)	(18.8)	1.75 (44.5)							
-		//		Janes /	(120-1:0)	132.31	1,130,37		(1,2,0)		Lizard	(65.5)	(202.4)	1240.07	(*****)	[ (20.0)	144491							
472	, I			20001411014	0.093	2.00	1.00	2,00		1.12		0.38	1.38	3.00	4.74	0.28	0.59	1.00	See					
1/4	High		30NV4H2V	(2.4)	(50.8)	(25.4)	(50.8)		(28.5)		(9.7)	(35.0)	(76.2)	(120.4)	(7.1)	(15.0)	(25.4)	Figure						
3/8	Pressure	30,000 PSI	30,000 PSI	30,000 PSI	30 000 PSI	30 000 PSI	30 000 PSI	30 000 PSI	30NV6H2V	0.125	2.00	1.00	2.12		1.12		0.38	1.38	3,00	4.86	0.28	0.72	1.00	
200	Cone &	30,000 PSI	30,000 PSI	30,000 PSI	300000000000000000000000000000000000000	(3.2)	(50.8)	(25.4)	(53.8)		(28.5)		(9.7)	(35.0)	(76.2)	(123.4)	(7.1)	(18.3)	(25.4)					
9/16	Thread High	30NV9H2V	0.125	2.62	1.31	2.44		1.12		0.38	1.38	3.00	5.18	0.28	1.00	1.50								
Stre		S7.V(1) 22	(3.2)	(66.5)	(33.3)	(62.0)		(28.5)		(9.7)	(35.0)	(76.2)	(131.6)	(7.1)	(25.4)	(38.1)								
8/40		T <sub>N</sub>	Lo	T <sub>2</sub>		F 12			"Aggraphic essen"	0.062	2.00	1.00	2.38	1	1.31		0.38	1.38	3.00	5.15	0.28	0.59	1.00	
1/4		STATE OF STA	13	9	2	60NV4H2V	(1.6)	(50.8)	(25.4)	(60.5)		(33.3)		(9.7)	(35.0)	(76.2)	(130.8)	(7.1)	(15.0)	(25.4)				
2/0	Pressure		60NV6H2V	0.062	2.00	1.00	2.62		1.31		0.38	1.38	3.00	5.39	0.28	0.72	1.00	1						
3/8	Cone &	60,000 PSI	SUNVONZV	(1.6)	(50.8)	(25.4)	(66.5)		(33.3)		(9.7)	(35.0)	(76.2)	(136.9)	(7.1)	(18.3)	(25.4)							
9/16	Thread		60NV9H2V	0.012	2.62	1.31	2.81		1.31		0.38	1.38	3.00	5.58	0.28	1,00	1.50							
		6	6	38	2	nread	e &	hread	NAMES OF STREET	(0.03)	(66.5)	(33.3)	(71.4)		(33.3)		(9.7)	(35.0)	(76.2)	(141.7)	(7.1)	(25.4)	(38.1)	

Dimensions, in inches (millimeters), are for reference only and are subject to change.

PHP 2018 Product Catalog alt.indd 14 6/25/18 11:46 AM

End	Connection	Pressure	Part Number	Orifice	Dimensions, in. (mm)										Valve														
Connection Size in.	Туре	Rating	Part Number	in. (mm)	A	В	с	D1	D2	D3	E	F	G	н	ĵ	к	L	Dimension											
-WAY/2	ON PRESSI	JRE																											
1/4	AND PROPERTY.		20NV4M3V	0.125	2.00	1.00	2.62	1.63	1.19		0.38	1.24	3.00	5.46	0.25	0.38	1.00	-											
14/14	Medium		20140-41013-4	(3.2)	(50.8)	(25.4)	(66.5)	(41.3)	(30.2)		(9.7)	(31.5)	(76.2)	(138.7)	(6.4)	(9.7)	(25.4)												
3/8	Pressure	20,000 PSI	20NV6M3V	0.20	2.00	1.00	2.62	1.63	1.19		0.38	1.24	3.00	5.46	0.25	0.48	1.00	1											
36.0	Cone &	20,000 131	EUNITONIO T	(5.1)	(50.8)	(25.4)	(66.5)	(41.3)	(30.2)		(9.7)	(31.5)	(76.2)	(138.7)	(6.4)	(12.2)	(25.4)												
9/16	Thread		20NV9M3V	0.312	2.50	1.25	3.63	1.75	1.75		0.50	1.38	4.00	6.21	0.34	0.68	1.00												
12000			(Marie Service)	(7.9)	(63.5)	(31.8)	(92.2)	(44.5)	(44.5)		(12.7)	(35.0)	(102.0)	(157.7)	(8.7)	(17.3)	(25.4)	ei.											
0000				0.093	2.00	1.00	2.12	1.50	1.12	ř –	0.38	1.38	3.00	4.86	0.28	0.59	1.00	į.											
1/4	High		30NV4H3V	(2.4)	(50.8)	(25.4)	(53.8)	(38.1)	(28.5)		(9.7)	(35.0)	(76.2)	(123.4)	(7.1)	(15.0)	(25.4)												
20000	Pressure	ACCOMPANY OF THE PARTY OF THE P	Commence of	0.125	2.00	1.00	2.50	1.50	1.12		0.38	1.38	3.00	5.24	0.28	0.72	1.00	See											
3/8	Cone &	30,000 PSI	30NV6H3V	(3.2)	(50.8)	(25.4)	(63.5)	(38.1)	(28.5)		(9.7)	(35.0)	(76.2)	(133.1)	(7.1)	(18.3)	(25.4)	Figure 3											
OACH COLOR	Thread			0.125	2.62	1.31	2.88	1.56	1.12		0.38	1.38	3.00	5.62	0.28	1.00	1.50	1100143											
9/16	UMASS NES		30NV9H3V	(3.2)	(66.5)	(33.3)	(73.2)	(39.6)	(28.5)		(9.7)	(35.0)	(76.2)	(142.7)	(7.1)	(25.4)	(38.1)												
				Asset	100:57	Tonial	1,0,0,0	(05.0)	(2005)	1	1 100.1	(33.0)	1 (1.0.2)	1143444	(++4)	I (marrie)	1 100:27												
20			r	0.062	2.00	1.00	2.38	1.69	1.31		0.38	1.38	3.00	5.15	0.28	0.59	1.00	2											
1/4	High		60NV4H3V	(1.6)	(50.8)	[25.4]	(60.5)	(42.9)	(33.3)		(9.7)	(35.0)	(76.2)	(130.8)	(7.1)	(15.0)	(25.4)												
553	Pressure	deposition of	220002000	0.062	2.00	1.00	2.75	1.69	1.31		0.38	1.38	3.00	5.52	0.28	0.72	1.00	ä											
3/8	Cone &	60,000 PSI	60NV6H3V	(1.6)	(50.8)	(25.4)	(69.9)	(42.9)	(33.3)		(9.7)	(35.0)	(76.2)	(140.2)	(7.1)	(18.3)	(25.4)												
9/16 T	Thread		Separation of the second	0.012	2.62	1.31	3.03	1.75	1.31		0.38	1.38	3.00	5.82	0.28	1.00	1.50	4											
9/16	Tineau	9/16		60NV9H3V	(0.03)	(66.5)	(33.3)	(77.0)	(44.5)	(33.3)		(9.7)	(35.0)	(76.2)	(147.8)	(7.1)	(25.4)	(38.1)											
-WAY/1	ON PRESSI	JRE																											
1082	- Ann-Library	CHACA	Session resolutions	0.125	2.00	1.00	2,44	1.19	1.19		0.38	1.24	3.00	5.28	0.25	0.38	1.00												
1/4	Medium		20NV4M4V	(3.2)	(50.8)	(25.4)	(62.0)	(30.2)	(30.2)		(9.7)	(31.5)	(76.2)	(134.1)	(6.4)	(9.7)	(25.4)												
074800	Pressure 20,000 PSI	Pressure	Pressure	Pressure	Pressure	ssure	Pressure	ire	Pressure	ure	Medium Pressure	sure	ressure	"varantonamento"	0.20	2.00	1.00	2.44	1.19	1.19		0.38	1.24	3.00	5.28	0.25	0.48	1.00	2
3/8					\$150 PER 100 P	0.0000000000000000000000000000000000000	20,000 PSI	20NV6M4V	(5.1)	(50.8)	(25.4)	(62.0)	(30.2)	(30.2)		(9.7)	(31.5)	(76.2)	(134.1)	(6.4)	(12.2)	(25.4)							
CONCENTRATION	Thread		December 2017	0.312	2.50	1.25	3.38	1.75	1.75		0.50	1.38	4.00	5.96	0.34	0.68	1.00												
9/16	WW457955		20NV9M4V	(7.9)	(63.5)	(31.8)	(85.9)	(44.5)	(44.5)		(12.7)	(35.0)	(102.0)	(151.4)	(8.7)	(17.3)	(25.4)												
		•				Marie Com	- Character	tellin otto	Andrews Assessment		Adam ada	to a service		***************************************			to the second	i i											
400			20001411411	0.093	2.00	1.00	2.00	1.12	1.12		0.38	1.38	3.00	4.74	0.28	0.59	1.00												
1/4	High		30NV4H4V	(2.4)	(50.8)	(25.4)	(50.8)	(28.5)	(28.5)		(9.7)	(35.0)	(76.2)	(120.4)	(7.1)	(15.0)	(25.4)												
3/8	Pressure	30,000 PSI	30NV6H4V	0.125	2.00	1.00	2.12	1.12	1.12		0.38	1.38	3.00	4.86	0.28	0.72	1.00	See											
3/0	Cone &	30,000 P31	SUNVONAV	(3.2)	(50.8)	(25.4)	(53.8)	(28.5)	(28.5)	2	(9.7)	(35.0)	(76.2)	(123.4)	(7.1)	(18.3)	(25.4)	Figure 4											
9/16	Thread		30NV9H4V	0.125	2.62	1.31	2.44	1.12	1.12		0.38	1.38	3.00	5.18	0.28	1.00	1.00												
3/10			3011131141	(3.2)	(66.5)	(33.3)	(62.0)	(28.5)	(28.5)		(9.7)	(35.0)	(76.2)	(131.6)	(7.1)	(25.4)	(25.4)												
			,										-																
1/4	707-51		60NV4H4V	0.062	2.00	1.00	2.38	1.31	1.31		0.38	1.38	3.00	5.15	0.28	0.59	1.00												
	High			(1.6)	(50.8)	[25.4]	(60.5)	(33.3)	(33.3)		(9.7)	(35.0)	(76.2)	(130.8)	(7.1)	(15.0)	(25.4)												
3/8	Pressure	60,000 PSI	60NV6H4V	0.062	2.00	1.00	2.62	1.31	1.31		0.38	1.38	3.00	5.39	0.28	0.72	1.00												
10.00 E	Cone &	ne & 60,000 PSI 6	Securitary.	(1.6)	(50.8)	{25.4}	(66.5)	(33.3)	(33.3)		(9.7)	(35.0)	(76.2)	(136.9)	(7.1)	(18.3)	(25.4)	0											
9/16	Thread		60NV9H4V	0.012	2.52	1.31	2,81	1.31	1.31		0.38	1,50	3.00	5.58	0.28	1.00	1.50												
1-53/05/0			NEW SHIELDS OF THE	(0.03)	(66.5)	(33.3)	(71.4)	(33.3)	(33.3)		(9.7)	(38.1)	(76.2)	(141.7)	(7.1)	(25.4)	(38.1)												

Dimensions, in inches (millimeters), are for reference only and are subject to change.



PHP 2018 Product Catalog alt.indd 15 6/25/18 11:46 AM

15

End	Connection	Pressure		Orifice						Dimer	sions, in	. (mm)						Valve					
onnection Size in.	Type	Rating	Part Number	in. (mm)	A	В	С	D1	DZ	D3	E	F	G	н	10	к	SEE	Dimension					
-WAY/2	STEM MA	NIFOLD																					
1/4			20NV4M5V	0.125	2.00	1.00	3.38	1.69	1.19	1.19	0.38	1.24	3.00	9.06	0.25	0.38	1.00						
7/3	Medium		20144410134	(3.2)	(50.8)	(25.4)	(85.9)	(42.9)	(30.2)	(30.2)	(9.7)	(31.5)	(76.2)	(230.1)	(6.4)	(9.7)	(25.4)						
3/8	Pressure	20,000 PSI	20NV6M5V	0.20	2.00	1.00	3.38	2.56	1.75	1.75	0.38	1.24	3.00	9.06	0.25	0.48	1.00						
. 19.50	Cone &			(5.1)	(50.8)	(25.4)	(85.9)	(65.0)	(44.5)	(44.5)	(9.7)	(31.5)	(76.2)	(230.1)	(6.4)	(12.2)	(25.4)						
9/16	Thread		20NV9M5V	0.312	2.50	1.25	5.12	2.56	1.75	1.75	0.50	1.38	4.00	10.28	0.34	0.68	1.00						
>07/A/84	-		, married seasoner .	(7.9)	(63.5)	(31.8)	(130.0)	(65.0)	(44.5)	(44.5)	(12.7)	(35.0)	(102.0)	(261.1)	(8.7)	(17.3)	(25.4)						
100		ř –	Secretary many	0.093	2.00	1.00	3.06	1.53	1.12	1.12	0.38	1.38	3.00	8.54	0.28	0.59	1.00						
1/4			30NV4H5V	(2.4)	(50.8)	(25.4)	(77.7)	(38.9)	(28.4)	(28.4)	(9.7)	(35.0)	(76.2)	(216.9)	(7.1)	(15.0)	(25.4)						
	High																						
3/8	Pressure	30,000 PSI	30NV6H5V	0.125	2.00	1.00	3.25	1.62	1.12	1.12	0.38	1.38	3.00	8.73	0.28	0.72	1.00	See					
1/4	Cone &	161		(3.2)	(50.8)	(25.4)	[82.6]	(41.2)	(28.4)	(28.4)	(9.7)	(35.0)	(76.2)	(221.7)	(7.1)	(18.3)	(25.4)	Figure :					
plac	Thread		2000/01/51	0.125	2.62	1.31	3.75	1.88	1.12	1.12	0.38	1.38	3.00	9.23	0.28	1.00	1.50						
9/16			30NV9H5V	(3.2)	(66.5)	(33.3)	(95.3)	(47.8)	(28.4)	(28.4)	(9.7)	(35.0)	(76.2)	(234.4)	(7.1)	(25.4)	(38.1)						
	45		70 50	G.					100	AT	NT			W -C		UC T							
1/4			60NV4H5V	0.062	2.00	1.00	3,44	1.72	1.31	1.31	0.38	1.38	3.00	8.98	0.28	0,59	1.00						
46.00	High		- OUTTHISY	(1.6)	(50.8)	(25.4)	(87.4)	(43.7)	(33.3)	(33.3)	(9.7)	(35.0)	(76.2)	(228.1)	(7.1)	(15.0)	(25.4)						
orcester.	Pressure	re & 60,000 PSI	HERE PER PER PER PER PER PER PER PER PER	0.062	2.00	1.00	3.75	1.88	1.31	1.31	0.38	1.38	3.00	9.29	0.28	0.72	1.00						
3/8	Thread		60NV6H5V	(1.6)	(50.8)	(25.4)	(95.3)	(47.8)	(33.3)	(33.3)	(9.7)	(35.0)	(76.2)	(236.0)	(7.1)	(18.3)	(25.4)						
La description.			20000000		0.012	2.62	1.25	4.12	2.05	+ 21	2.24	0.20	1.20	2.00	0.00	0.20	7.00	1.50					
9/16			60NV9H5V	(0.03)	(66.5)	(33.3)	(104.7)	(82.3)	(33.3)	(33.3)	(9.7)	(35.0)	(76.2)	9.66 (245.4)	(7.1)	(25.4)	1.50 (38.1)						
MAY A	NGLE/REPL	ACEADIE	EAT	(0.03)	(00,3)	(33.3)	[(204.7)	106.31	(33.3)	(33,3)	(3+1)	(33.0)	110.21	(643.4)	(7.4)	(83.4)	(30.1)	2					
-WAT A	NGLE/REPL	ACEABLE :	EAI	0.455		1.66									0.00		4.00						
1/4	Afadlum	Medium	edium	Medium	Medium	Medium	20NV4M6V	(3.2)	(50.8)	(25.4)	3.30 (83.8)	5.2	(30.2)	1,0	(9.7)	(31.5)	3.00	6.04 (153.4)	(6.4)	(9.7)	1.00		
	Pressure			0.20	2.00	1.00	3.30		1.19		0.38	1.24	3.00	5.04	0.25	0.48	1.00						
3/8	Cone &	20,000 PSI	20NV6M6V	(5.1)	(50.8)	(25.4)	(83.8)	12	(30.2)	34	(9.7)	(31.5)	(76.2)	(153.4)	(6.4)	(12.2)	(25.4)						
0/38999	Thread		WE DOWN BONG ST	0.312	2.50	1.25	4.63		1.75		0.50	1.38	4.00	7.21	0.34	0.68	1.00						
9/16	0.000		20NV9M6V	(7.9)	(63.5)	(31.8)	(117.6)	. 19	(44.5)	98	(12.7)	(35.0)	(102.0)	(183.1)	(8.7)	(17.3)	(25.4)						
	47		45 V2	1000	10				CF 1			ASSESSED.			400.4	0 1	1000.17						
676	T	10,000		30NV4H6V	0.093	2.00	1.00	3.12	2-	1.12		0.38	1.38	3.00	5.83	0.28	0.59	1.00					
1/4	High	High	High		30NV4H6V	(2.4)	(50.8)	(25.4)	(79.2)		(28.5)		(9.7)	(35.0)	(76.2)	(148.1)	(7.1)	(15.0)	(25.4)				
3/8	Pressure	30,000 PSI	30NV6H6V	0.125	2.00	1.00	3.39		1.12		0.38	1.38	3.00	6.09	0.28	0,72	1.00	See					
3/0	Cone &	30,000 1 31	3014401104	(3.2)	(50.8)	(25.4)	(86.1)		(154.7)	(7.1)	(18.3)	(25.4)	Figure										
9/16	Thread	Thread	Thread	aread 30	Thread	Thread	30NV9H6V	0.125	2.62	1.31	3.82	- 54	1.19	92	0.38	1.38	3.00	6.52	0.28	1.00	1.50		
10				(3.2)	(66.5)	(33.3)	(97.0)		(30.2)		(9.7)	(35.0)	(76.2)	(165.6)	(7.1)	(25.4)	(38.1)						
	E-			0.000	2.55	4.65	1.10		1 1 44		0.75	1.70	1 5 44		0.20	0.70	1.00						
	444.40		60NV4H6V	0.062	2.00	1.00	3.45	12	1.31	92	0.38	1.38	3.00	6.19	0.28	0.59	1.00						
1/4	High		0.9370	High	ligh	High	0.3370	- CANADA TO THE STATE OF THE ST	0.062	(50.8)	1.00	(87.6)		(33.3)		(9.7)	(35.0)	3.00	(157.2) 6.49	(7.1)	0.72	1.00	
1/4	10.083203		Pressure 60,000 PSI 6				1.00	3.73		1.31		0.38	1.38	3.00	0.49	0.28	0.72	1.00					
1/4 3/8	Pressure	60,000 PSI	60NV6H6V	100 May 2003	ALC: UNKNOWN	1200/m	(95.25)		(33.31	1.6	19.71	735 O	176.21	(164.81	(7.51	(19.21	125 41						
X2840	10.083203	60,000 PSI	60NV6H6V	(1.6)	(50.8)	(25.4)	(95.25) 4.00		(33.3)	1.0	(9.7)	(35.0)	(76.2)	(164.8) 6.74	(7.1)	(18.3)	(25.4) 1.50						

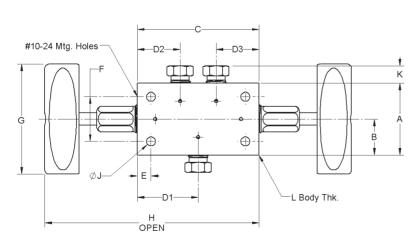


Figure 5

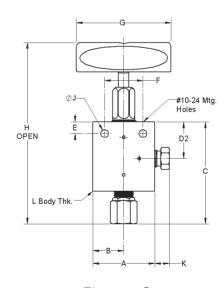


Figure 6

# MEDIUM AND HIGH PRESSURE CHECK VALVE

### **Specifications**

- MAWP up to 100,000 PSI (6895 bar).
- Temperature Ratings Metal Seat: -420°F to 1200°F (-251°C to 648°C)

Soft Seat: -65°F to 250°F (-54°C to 121°C). Nominal Cracking Pressure: 15 PSI (1 bar).

- Female Cone and Thread connections
- are standard.

### **Features**

- Prevents reverse flow which may cause damage to a pressure system.
- Metal Seat offers metal-to-metal seat for rapid cycling or severe environments.
- Soft Seat offers PEEK seat with metal back-up for fast shutoff and reliable seal.
- Can be manufactured to meet NACE MR-01-75.

### **Materials**

- 316 cold worked stainless steel is standard.
- PEEK 450G is standard material of soft seat poppet seal.

End	Connection	Pressure	Part Number	Part Number	Orifice	Dimer	nsion in.	(mm)	Valve	
Connection Size in.	Туре	Rating	Metal Seat	Soft Seat	in. (mm)	A	В	С	Dimensions	
MEDIUM I	PRESSURE									
1/4			20CV4MFM	20CV4MFS	0.125	3.07 (78.0)	2.50 (63.5)	1.00 (25.4)		
3/8	Medium		20CV6MFM	20CV6MFS	0.219 (5.56)	3.48 (88.4)	2.66 (66.0)	1.13 (28.7)		
9/16	Pressure Cone &	20,000 PSI	20,000 PSI	20CV9MFM	20CV9MFS	0.359 (9.12)	4.76 (120.9)	3.50 (88.9)	1.38	See Figure 1
3/4	Thread		20CV12MFM	20CV12MFS	0.516 (13.11)	5.63 (143.00)	4.38 (111.25	1.75 (44.45)	NAAVIII S	
1			20CV16MFM	20CV16MFS	0.688	7.00	5.25 (133.35	2.13 (54.10)		
HIGH PRES	SSURE		v2 (1)							
1/4			60CV4HFM	60CV4HFS	0.094 (2.39)	3.26 (82.8)	2.50 (63.5)	1.25		
3/8	High Pressure Cone &	ne & 60,000 PSI	60CV6HFM	60CV6HFS	0.125 (3.18)	3.75 (95.25)	2.75 (69.9)	1.25 (31.8)	See Figure 2	
9/16	Thread		60CV9HFM	60CV9HFS	0.188 (4.78)	4.63 (117.6)	3.38 (85.9)	1.50 (38.1)		

Dimensions, in inches (millimeters), are for reference only and are subject to change.

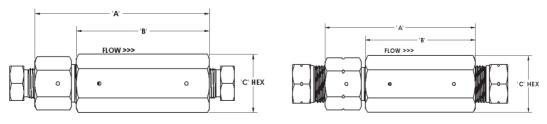


Figure 1

Figure 2

17

## **IEDIUM AND HIGH PRESSURE FILTERS**

### **Specifications**

- MAWP up to 60,000 PSI (4136 bar).
- Female Cone and Thread connections are standard.

### Line Filters

- Line Filters are used to remove contaminating particles from fluid. Each line filer is provided with two filter elements. The upstream element to filter out larger particles, and the downstream element to filter smaller particles.
- Filter elements are available in nominal ratings of 0.5, 2, 5, 10, 20, 40 and 100 Micron.

### Cup Filters

- Cup Filters offer maximum filtration surface area for removal of contaminating particles from the fluid system. They may be used in systems which require high flow rates with minimum pressure drop.
- Filter elements are available in nominal ratings of 5, 10, 20, 40 and 100 Micron.

### **Materials**

- 316 cold worked stainless steel is standard.
- Filter discs are made from 300 series stainless steel.

End	Connection	Pressure		Dime	(mm)	Fitting	
Connection Size in.	Туре	Rating	Part Number	A	В	С	Dimensions
LINE FILTE	R						
1/4			20LF4MF-*/*	2.13 (54.1)	1.50 (38.1)	1.00 (25.4)	
3/8	Medium		20LF6MF-*/*	2.50 (63.5)	1.63 (41.4)	1.13 (28.7)	
9/16	Pressure Cone &	20,000 PSI	20LF9MF-*/*	3.25 (82.55)	2.06 (52.3)	1.38 (35.1)	See Figure 1
3/4	Thread		20LF12MF-*/*	4.06 (103.1)	2.88 (73.15)	1.75 (44.45)	669
1		,	20LF16MF-*/*	5.00 (127.0)	3.30 (83.82)	2.13 (54.10)	
	2					OA 31	0
1/4	High		60LF4HF-*/*	3.00 (76.2)	2.13 (54.1)	1.25 (31.8)	
3/8	Pressure Cone &	60,000 PSI	60LF6HF-*/*	3.00 (76.2)	2.13 (54.1)	1.25 (31.8)	See Figure 2
9/16	Thread		60LF9HF-*/*	3.88 (98.6)	2.63 (66.8)	1.50 (38.1)	(RC)

\*Insert desired micron filter

Example: 20LF9MF-5/20 is a 9/16" MP Line Filter with 5 micron upstream filter and 20 micron downstream filter.

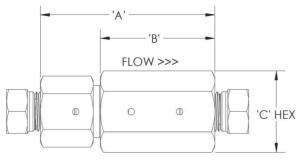


Figure 1

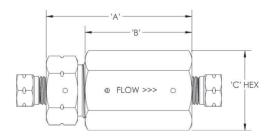


Figure 2

### **MEDIUM AND HIGH PRESSURE FILTERS**

End	Connection	Pressure		Dime	ension, in.	(mm)	Fitting
Connection Size in.	Туре	Rating	Part Number	A	В	С	Dimensions
CUP FILTER	}						
1/4			20CF4MF-*	3.07 (78.0)	2.50 (63.5)	1.00 (25.4)	
3/8	Medium	Î	20CF6MF-*	3.48 (88.4)	2.66 (66.0)	1.13 (28.7)	
9/16	Pressure Cone &	20,000 PSI	20CF9MF-*	4.76 (120.9)	3.50 (88.9)	1.38 (35.1)	See Figure 3
3/4	Thread		20CF12MF-*	5.63 (143.00)	4.38 (111.25)	1.75 (44.45)	800
1		ş	20CF16MF-*	7.00 (177.8)	5.25 (133.35)	2.13 (54.10)	
1/4	High		60CF4HF-*	3.26 (82.8)	2.50 (63.5)	1.25 (31.8)	
3/8	Pressure Cone &	60,000 PSI	60CF6HF-*	3.75 (95.25)	2.75 (69.9)	1.25	See Figure 4
9/16	Thread	27 27 2	60CF9HF-*	4.63 (117.6)	3.38 (85.9)	1.50	(476)

\*Insert desired micron filter Example: 20CF9MF-5 is a 9/16" MP Cup Filter with 5 micron filter

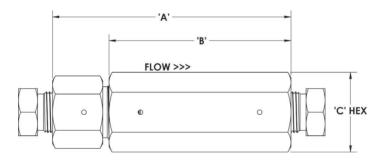


Figure 3

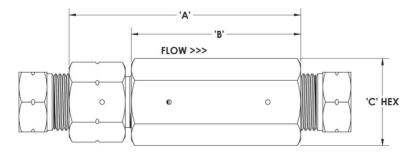


Figure 4

### Specifications

 Cone & Threaded Fittings with MAWP up to 100,000 PSI (6895 bar).

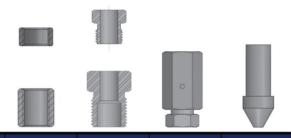
### **Features**

- Safety weep holes standard on all connections.
- Supplied with collars and glands when applicable.
- Can be manufactured to meet NACE MR-01-75.

### **Materials**

- 316 cold worked stainless steel is standard.
- Other materials available by request.
- Contact us for additional 100,000 psi fitting information.





Connection Size in.	Connection Type	Pressure Rating	Collar	Gland	Сар	Plug
CONNECTI	ON COMPO	NENTS				
1/4			20CL4M	20GL4M	20CA4M	20PL4M
3/8	Medium		20CL6M	20GL6M	20CA6M	20PL6M
9/16	Pressure Cone &	20,000 PSI	20CL9M	20GL9M	20CA9M	20PL9M
3/4	Thread	:	20CL12M	20GL12M	20CA12M	20PL12M
1			20CL6M 20CL9M	20GL16M	20CA16M	20PL16M
1/4	High		60CL4H	60GL4H	60CA4H	60PL4H
3/8	Pressure Cone &	60,000 PSI	60CL6H	60GL6H	60CA6H	60PL6H
9/16	Thread		60CL9H	60GL9H	60CA9H	60PL9H

20

PHP 2018 Product Catalog alt.indd 20 6/25/18 11:46 AM

End		Pressure				Fitting							
Connection Size in.	Connection Type	Pressure Rating	Part Number	А	В	С	D	E	F	Block Thickness	Fitting Dimension:		
ELBOW											#G		
1/4			20L4MF	1.50 (38.1)	1.13 (28.7)	0.75 (19.1)	0.75 (19.1)	0.35 (8.9)	0.50 (12.7)	0.62 (15.7)			
3/8	Medium		20L6MF	2.00 (50.8)	1.38 (35.1)	1.00 (25.4)	1.00 (25.4)	0,47 (11.9)	0.62 (15.7)	0.75 (19.1)			
9/16	Pressure Cone &	20,000 PSI	20L9MF	2.50 (63.5)	1.75 (44.5)	1.25 (31.8)	1.25 (31.8)	0.66 (16.8)	0.88 (22.4)	1.00 (25.4)			
3/4	Thread		20L12MF	3.00 (76.2)	2.25 (57.2)	1.50 (38.1)	1.50 (38.1)	0.55 (14.0)	1.18 (30.0)	1.38 (35.1)	See		
11			20L16MF	4.12 (104.6)	3.00 (76.2)	2.06 (52.3)	2.06 (52.3)	0.69 (17.5)	1.38 (35.1)	1.75 (44.5)	Figure 1		
1/4	High		60L4HF	1.50 (38.1)	1.00 (25.4)	0.88	0.62 (15.7)	0.50 (12.7)	0.62 (15.7)	0.75 (19.1)			
3/8	Pressure Cone &	60,000 PSI	60,000 PSI	60L6HF	2.00 (50.8)	1.50 (38.1)	1.25 (31.8)	1.00 (25.4)	0.60 (15.2)	0.81 (20.6)	1.00 (25.4)		
9/16	Thread			60L9HF	2.62 (66.5)	1.88 (47.8)	1.88 (47.8)	1.13 (28.7)	0.81 (20.6)	1.18	1.50 (38.1)		
TEE													
1/4		n	20T4MF	1.50 (38.1)	1.13 (28.7)	0,75 (19.1)	0.75 (19.1)	0.35 (8.9)	0.50 (12.7)	0.62 (15.7)			
3/8	Medium					20T6MF	2.00 (50.8)	1.38 (35.1)	1.00 (25.4)	1.00 (25.4)	0.47 (11.9)	0.62 (15.7)	0.75 (19.1)
9/16	Pressure Cone &	20,000 PSI	20T9MF	2.50 (63.5)	1.75 (44.5)	1.25 (31.8)	1.25 (31.8)	0.66 (16.8)	0.88 (22.4)	1.00 (25.4)			
3/4	Thread				20T12MF	3.00 (76.2)	2.25 (57.2)	1.50 (38.1)	1.50 (38.1)	0.55 (14.0)	1.18 (30.0)	1.38 (35.1)	See
1		i.	20T16MF	4.12 (104.6)	3.00 (76.2)	2.06 (52.3)	2.06 (52.3)	0.69 (17.5)	1.38 (35.1)	1.75 (44.5)	Figure 2		
1/4	High	Pressure Cone & 60,000 PSI 60	60T4HF	2.00 (50.8)	1.25	1.00 (25.4)	0.88	0.50	0.62	1.00 (25.4)			
3/8	Pressure		60T6HF	2.00 (50.8)	1.56 (39.6)	1.00 (25.4)	1.06 (26.9)	0.60 (15.2)	0.81 (20.6)	1.00 (25.4)			
9/16	Thread		60T9HF	2.62 (66.5)	2.12 (53.8)	1.31 (33.3)	1.38 (35.1)	0.81 (20.6)	1.18 (30.0)	1.50 (38.1)			

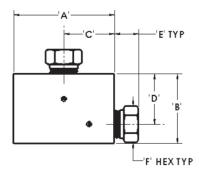


Figure 1

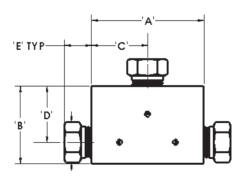
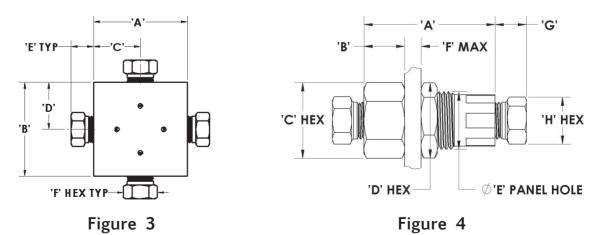


Figure 2

End Connection	Connection	Pressure				Din	nension,	in. (mm	,		Fitting	
Size in.	Туре	Rating	Part Number	Α	В	С	D	E	F	G	Dimension	
CROSS												
1/4			20X4MF	1.50	1.50	0.75	0.75	0.35	0.50	0.62 (15.7)		
1/4			20/41/11	(38.1)	(38.1)	(19.1)	(19.1)	(8.9)	(12.7)	0.02 (15.7)		
3/8	3554 35		20X6MF	2.00	2.00	1.00	1.00	0.47	0.62	0.75 (19.1)		
345	Medium		- Contoni	(50.8)	(50.8)	(25.4)	(25.4)	(11.9)	(15.7)	01/0 (4014)	ļ	
9/16	Pressure	20,000 PSI	20X9MF	2.50	2.50	1.25	1.25	0.66	0.88	1.00 (25.4)		
17540000	Cone &	ANNA COLORS	i cessocientis	(63.5)	(63.5)	(31.8)	(31.8)	(16.8)	(22.4)	73419 YOU # 540 SHI # S		
3/4	Thread		20X12MF	3.00	3.00	1.50	1.50	0.55	1.18	1.38 (35.1)		
DRAW III		(	* E	(76.2)	(76.2)	(38.1)	(38.1)	(14.0)	(30.0)	C ar a	See	
1			20X16MF	4.12	4.12	2.06	2.06	0.69	1.38	1.75 (44.5)	Figure 3	
	0	0		(104.6)	(104.6)	(52.3)	(52.3)	(17.5)	(35.1)	0	-	
1/4	2.07522		60X4HF	2.00	1.25	1.00	0.62	0.50	0.62	1.00 (25.4)		
34/39.1	High		OUX-HII	(50.8)	(38.1)	(25.4)	(15.7)	(12.7)	(15.7)	1.00 (25.4)		
3/8	Pressure Cone &	60,000 PSI	60X6HF	2.00	2.12	1.00	1.06	0.60	0.81	1.00 (25.4)		
3/0			ослоти	(50.8)	(53.8)	(25.4)	(26.9)	(15.2)	(20.6)	1.00 (23.4)	ļ	
9/16	Thread		60X9HF	2.62	2.75	1.31	1.38	0.81	1.18	1.50 (38.1)		
GEARTS .			CONSTI	(66.5)	(69.9)	(33.3)	(35.1)	(20.6)	(30.0)	2150 (5012)		
ULKHEAD												
1/4		ľ		20BU4MF	2.00	0.53	1.00	1.00	0.88	0.38	0.38 (9.7)	
1/4			208041011	(50.8)	(13.5)	(25.4)	(25.4)	(22.4)	(9.7)	0.30 (9.7)		
3/8			20BU6MF	2.00	0.62	0.94	0.94	0.94	0.38	0.44 (11.2)		
3/6	Medium		ZUBUBIVIF	(50.8)	(15.7)	(23.9)	(23.9)	(23.9)	(9.7)	0.44 (11.2)	Į.	
9/16	Pressure	20,000 PSI	20BU9MF	2.62	0.78	1.25	1.25	1.25	0.38	0.53 (13.5)		
3/10	Cone &	20,000131	200031411	(66.5)	(19.8)	(31.8)	(31.8)	(31.8)	(9.7)	0.33 (13.3)		
3/4	Thread		20BU12MF	2.62	0.91	1.69	1.69	1.69	0.38	0.62 (15.7)		
SIT.			2000121011	(66.5)	(23.1)	(42.9)	(42.9)	(42.9)	(9.7)	0.02 (13.7)	See	
1			20BU16MF	3.50	1.50	2.00	2.00	2.00	0.38	0.72 (18.3)	Figure 4	
::::::::::::::::::::::::::::::::::::::		,	2000101111	(88.9)	(38.1)	(50.8	(50.8	(50.8	(9.7)	0.72 (10.5)	I iguie 4	
- 8-	High Pressure Cone &	į.		2.00	0.50	1.00	1.00	0.94	0.38	9. S	1	
1/4			60BU4HF	(50.8)	(12.7)	(25.4)	(25.4)	(23.9)	(9.7)	0.50 (12.7)	Ž.	
2/0		50 000 551	CODUCUE	2.38	0.78	1.38	1.38	1.12	0.38	0.50 (40.5)	1	
3/8		60,000 PSI 60BU6HF	60BU6HF	(60.4)	(19.8)	(35.1)	(35.1)	(28.4)	(9.7)	0.53 (13.5)		
0/15	Thread		CORLIGIUS	2.75	1.00	1.88	1.88	1.69	0.38	0.04 (20.5)	1	
9/16			60BU9HF	(69.9)	(25.4)	(47.8)	(47.8)	(42.9)	(9.7)	0.81 (20.6)		



End Connection	Connection	Pressure	227 - 242 I T 147 C	Dimen	ion, in.	Fitting
Size in.	Туре	Rating	Part Number	Α	В	Dimensions
COUPLING						
1/4			20CU4MF	1.50 (38.1)	0.63 (16.0)	
3/8	Medium		20CU6MF	1.75 (44.5)	0.75 (19.1)	
9/16	Pressure Cone &	20,000 PSI	20CU9MF	2.12 (53.9)	1.00 (25.4)	
3/4	Thread		20CU12MF	2.50 (63.5)	1.38 (35.1)	See
ĭ			20CU16MF	3.50 (88.9)	1.75 (44.5)	Figure 5
1/4	High		60CU4HF	1.38 (35.1)	0.75	
3/8	Pressure Cone &	60,000 PSI	60CU6HF	1.75 (44.5)	1.00 (25.4)	
9/16	Thread		60CU9HF	2.19 (55.6)	1.38 (35.1)	

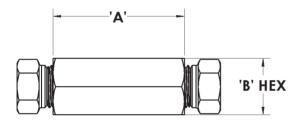


Figure 5

End Connection	Connection	Pressure	2 00 0		Dimension, in. (mm)					
Size in.	Туре	Rating	Part Number	Α	В	С	Dimensions			
ANTI-VIBRATI	ON ASSEMI	BLIES		-						
1/4			20AV4M	1.14 (29.0	0.62 (15.7)	0.62 (15.7)				
3/8	Medium		20AV6M	1.42 (36.1)	0.75 (19.1)	0.75 (19.1)	2000			
9/16	Pressure Cone &	20,000 PSI	20AV9M	1.74 (44.2)	0.94 (23.9)	0.94 (23.9)	See Figure 6			
3/4	Thread		20AV12M	1.97 (50.0)	1.38 (35.1)	1.38 (35.1)	rigare o			
1			20AV16M	2.34 (59.4)	1.50 (38.1)	1.50 (38.1)				
1/4	High	I 60,000 PSI I	60AV4H	0.81 (20.6)	0.62 (15.7)	- E				
3/8	Pressure Cone &		60AV6H	1.12 (28.4)	0.81 (20.6)	51	See Figure 7			
9/16	Thread		60AV9H	1.50 (38.1)	1.18 (30.0)	8	i iguic /			

Dimensions, in inches (millimeters), are for reference only and are subject to change.

- $\cdot$  For Moly-Coated parts add -MC to end of part number
- · Collars are not included in assembly and must be ordered separately

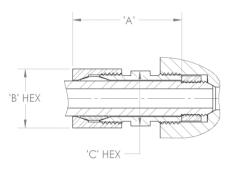


Figure 6

**End Connection** 

3/8

9/16

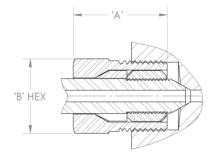


Figure 7



Connection

Pressure

60,000 PSI

60N6H-\*

60N9H-\*

Size in.	Type	Rating	rait Number
TUBE NIPPLES	S		W
1/4			20N4M-*
3/8	Medium		20N6M-*
9/16	Pressure Cone &	20,000 PSI	20N9M-*
3/4	Thread		20N12M-*
1			20N16M-*
1/4	High	Î	60N4H-*

 $<sup>^{\</sup>ast}$  Insert desired tube nipple length in inches <code>Example: 60N9H-6.00</code> is equal to 9/16" HP Tube Nipple, 6" Length

Pressure

Cone &

Thread

## AIR ACTUATORS

### **Air Actuators for Remote Valve Operation**

### **Types**

- Normally Closed Air is required to open the valve.
- Normally Open Air is required to close the valve.
- Double Action Open or close the valve using air pressure.

### **Features**

- Direct mount technology for reduced size and increased reliability.
- Aluminum housing for reduced weight.
- 360° user adjustable air supply inlet position
- Actuator to valve direct mount technology for simplified installation.

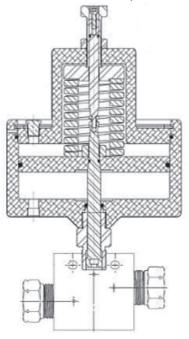
### **Options**

- Electric Actuator.
- Electronic switch for remote open/close position indication.
- Stainless steel housing.
- Replaceable Seat available for improved valve life.

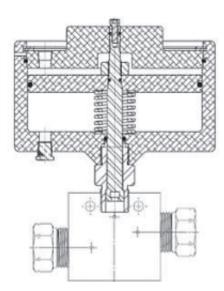
### Ordering Information

- Normally Closed (Air-to-Open): -NC5.
- Normally Open (Air-to-Close): -NO5.
- Double Acting: -DA5.

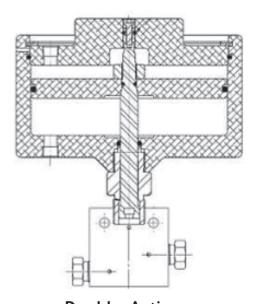
Example: 30NV6H1V becomes 30NV6H1V-NO5



Normally Closed (Air-to-Open)



Normally Open (Air-to-Close)



**Double Acting** 



### **AIR ACTUATORS**

Needle Val	ve	Norma	ally Closed Air-to	o-Open	Norm	ally Open Air-to	-Close	Double Acting			
Model Num	nber	NC5	NC6	NC8	NO5	NO6	NO8	DA5	DA6	DA8	
			MAWP psi (bar)			MAWP psi (bar)			MAWP psi (bar)		
15NV4N	MAWP psi (bar)	15,000 (1034)			15,000 (1034)			15,000 (1034)			
	actuator pressure	80 (5.5)			80 (5.5)			70 (5.0)			
15NV6N	MAWP psi (bar)	14,000 (970)	15,000 (1034)		15,000 (1034)			15,000 (1034)			
	actuator pressure	100 (7.0)	85 (6.2)		100 (7.0)			100 (7.0)			
15NV8N	MAWP psi (bar)	14,000 (970)	15,000 (1034)		15,000 (1034)			15,000 (1034)			
	actuator pressure	110 (7.6)	85 (6.2)		110 (7.6)			110 (7.6)			
20NV4M	MAWP psi (bar)	20,000 (1380)	100 (7.0)		20,000 (1380)			20,000 (1380)			
	actuator pressure	100 (7.0)			90 (6.2)			80 (5.5)			
20NV6M	MAWP psi (bar)	20,000 (1380)			20,000 (1380)			20,000 (1380)			
	actuator pressure	100 (7.0)			90 (6.2)			80 (5.5)			
20NV9M	MAWP psi (bar)	14,000 (970)	20,000 (1380)		18,000 (1240)	20,000 (1380)		20,000 (1380)			
	actuator pressure	110 (7.6)	100 (7.0)		110 (7.6)	80 (5.5)		100 (7.0)			
20NV12M	MAWP psi (bar)			17,000 (1172)			20,000 (1380)			20,000 (1380)	
	actuator pressure			90 (6.2)			100 (7.0)			80 (5.5)	
20NV16M	MAWP psi (bar)			10,000 (690)			13,000 (896)			16000 (1103)	
	actuator pressure			100 (7.0)			100 (7.0)			100 (7.0)	
30NV4H	MAWP psi (bar)	30,000 (2068)			30,000 (2068)			30,000 (2068)			
	actuator pressure	90 (6.2)			80 (5.5)			70 (5.0)			
30NV6H	MAWP psi (bar)	30,000 (2068)			30,000 (2068)			30,000 (2068)			
	actuator pressure	90 (6.2)			80 (5.5)			70 (5.5)			
30NV9H	MAWP psi (bar)	30,000 (2068)			30,000 (2068)			30,000 (2068)			
	actuator pressure	90 (6.2)			80 (5.5)			70 (5.5)			
60NV4H	MAWP psi (bar)	60,000 (4137)			60,000 (4137)			60,000 (4137)			
	actuator pressure	110 (7.6)			110 (7.6)			90 (6.2)			
60NV6H	MAWP psi (bar)	60,000 (4137)			60,000 (4137)			60,000 (4137)			
	actuator pressure	110 (7.6)			110 (7.6)			90 (6.2)			
60NV9H	MAWP psi (bar)	60,000 (4137)			60,000 (4137)			60,000 (4137)			
	actuator pressure	110 (7.6)			110 (7.6)			90 (6.2)			

PHP 2018 Product Catalog alt.indd 26 6/25/18 11:47 AM

### **Specifications**

- MAWP up to 20,000 PSI (1379 bar).
- Temperature Ratings: -15°F to 400° F (-26°C to 204°C).
- Port Sizes:  $\frac{3}{16}$ ",  $\frac{1}{4}$ ",  $\frac{3}{8}$ " or  $\frac{1}{2}$ ".
- Flow Pattern: 2-Way, 3-Way Switching, 3-Way Diverting.

### **Connection Types**

- NPT.
- MP and HP Cone & Threaded.

### Features & Benefits

- Bi-directional trunnion style for optimal performance.
- Two standard mounting options.

### **Standard Materials**

- Body/Side Adapter/Trunnion 316 cold worked stainless steel.
- Packing O-ring with PVX backup ring.
- ■Seats PVX.
- Seals Viton.
- Bearings PVX.

### **2-WAY TRUNNION**

End Connection Size in.	End Connetion Type	Pressure Rating	Orifice in. (mm)	Part Number
-------------------------------	-----------------------	--------------------	---------------------	----------------

### 1/4" ORIFICE

1/4	==			15BV4T4NF
3/8	Female NPT	15,000 PSI		15BV4T6NF
1/2				15BV4T8NF
1/4				20BV4T4MF
3/8	Medium Pressure Cone & Thread		0.250 (6.35)	20BV4T6MF
9/16	Cone & Thread	20 000 001	(0.55)	20BV4T9MF
1/4	W. 2	20,000 PSI		20BV4T4HF
3/8	High Pressure Cone and Thread			20BV4T6HF
9/16	Cone and Inread			20BV4T9HF

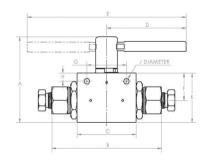


Figure 1

	Dimensions, in. (mm)												
Α	В	С	D	Ε	F	G	н	j	K	Thickness	Dimensions		
3.83	4.35	2.00	3.98		1.13	1.50	0.44	0.28	2.00	1.00	See		
(97.3)	(110.5)	(50.8)	(101.1)	5.	(28.7	(38.1)	(11.2)	(7.1)	(50.8)	(25.4)	Figure 1		

Dimensions, in inches (millimeters), are for reference only and are subject to change.

PHP

End Connection Size in.	End Connetion Type	Pressure Rating	Orifice in. (mm)	Part Number
3/8" ORIFI	CE			
1/4				15BV6T4NF
3/8	Female NPT	15,000 PSI		15BV6T6NF
1/2			0.375	15BV6T8NF
3/8	A A a dissana Dana a a suna		(9.53)	20BV6T6MF
9/16	Medium Pressure  Cone & Thread	20,000 PSI		20BV6T9MF
3/4	Conc & Thread			20BV6T12MF

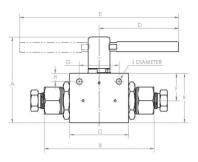


Figure 1

Valve Dimensions

See

Figure 1

	Dimensions, in. (mm)												
Α	В	С	D	Е	F	G	н	J	K	Thickness	Dimensions		
4.34	5.54	3.00	4.02		1.38	2.00	0.41	0.28	2.50	1.38	See		
(110.2)	(140.7)	(76.2)	(102.1)	*	(35.1)	(50.8)	(10.4)	(7.1)	(63.5)	(35.1)	Figure 1		

Dimensions, in inches (millimeters), are for reference only and are subject to change.

End Connect Size	ction		nnetion ype		essure ating	Orifice in. (mn		Part Iumber		E			
1/2" (	/2" ORIFICE									G H			
1/2	2			15,0	000 PSI		158	BV8T8NF			. 8		
3/4	4	Female NPT		10.0	300 DCI	0.500	10E	10BV8T12NF			\		
1	1		10,0	10,000 PSI		1 10F	V8T16N	F	C	-			
3/	4	Medium	Pressur	e 15 (	000 PSI	(12.7)		15BV8T12MF		Figure			
1	8	Cone 8	& Thread	15,0	JUU F31		15B	V8T16M	F	rigui	ет		
				Din	nensions	s, in. (mn	n)				V		
Α	В	С	D	Е	F	G	Н	j	K	Thickness	Dim		
5.57	7.69	4.13	5.13	10.26	1.76	3	0.50	0.28	3.09	1.75	18		
(141.5)	(195.3)	(104.9)	(130.3)	(260.6)	(44.7)	(76.2)	(12.7)	(7.1)	(78.5)	(44.5)	Fig		

### **3-WAY TRUNNION**

End Connection	End Connection Type	Pressure Rating	Orifice	Part N	lumber
Size in.	туре	Kating	()	90° Diverting	180° Switching

### 3/16" ORIFICE

1/4				15BV3D4NF	15BV3S4NF
3/8	Female NPT	15,000 PSI		15BV3D6NF	15BV3S6NF
1/2			(5)(0)(5)(5)	15BV3D8NF	15BV3S8NF
1/4				20BV3D4MF	20BV3S4MF
3/8	Medium Pressure Cone & Thread	20,000 PSI	0.188 (4.78)	20BV3D6MF	20BV3S6MF
9/16	Cone & Thread		(4.70)	20BV3D9MF	20BV3S9MF
1/4				20BV3D4HF	20BV3S4HF
3/8	High Pressure Cone and Thread			20BV3D6HF	20BV3S6HF
9/16	Colle and Thread			20BV3D9HF	20BV3S9HF

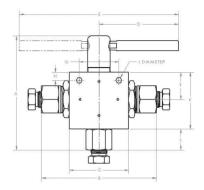


Figure 2

Dimensions, in. (mm)											Valve	
Α	В	С	D	E	F	G	Н	J	К	L	Block Thickness	Dimensions
5.78 (146.8)	5.80 (147.3)	3.00 (76.2)	4.02 (102.1)		1.38 (35.1)	2.00 (50.8)	0.41 (10.4)	0.28 (7.1)	2.88 (73.2)	1.06 (26.9)	1.38 (35.1)	See Figure 2

Dimensions, in inches (millimeters), are for reference only and are subject to change.

End Connection	End Connection Type	Pressure Rating	Orifice in. (mm)	Part N	lumber
Size in.	Турс	Natilig	111. (111111)	90° Diverting	180° Switching

### 3/8" ORIFICE

1/4				15BV6D4NF	15BV6S4NF
3/8	Female NPT			15BV6D6NF	15BV6S6NF
1/2		15 000 DCI	0.375	15BV6D8NF	15BV6S8NF
3/8	NA adicus Duanacci	15,000 PSI	(9.53)	15BV6D6MF	15BV6S6MF
9/16	Medium Pressure Cone & Thread			15BV6D9MF	15BV6S9MF
3/4	Cone & Thread			15BV6D12MF	15BV6S12MF

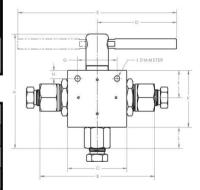


Figure 2

Dimensions, in. (mm)											Valve	
											Block	Dimensions
Α	В	С	D	Е	F	G	Н	J	K	L	Thickness	Diffictions
5.78	5.80	3.00	4.02		1.38	2.00	0.41	0.28	2.88	1.06	1.38	See
(146.8)	(147.3)	(76.2)	(102.1)	-	(35.1)	(50.8)	(10.4)	(7.1)	(73.2)	(26.9)	(35.1)	Figure 2

End Connection	End Connection	Pressure Rating	Orifice in. (mm)	Part N	lumber
Size in.	Туре	Naulig	()	90° Diverting	180° Switching

### 1/2" ORIFICE

1/2				15BV8D8NF	15BV8S8NF
3/4	Female NPT	10,000 PSI	0.500 (12.7)	10BV8D12NF	10BV8S12NF
1				10BV8D16NF	10BV8S16NF
3/4	Medium Pressure			10BV8D12MF	10BV8S12MF
1	Cone & Thread			10BV8D16MF	10BV8S16MF

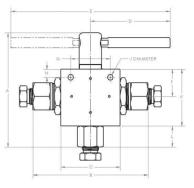


Figure 2

	Dimensions, in. (mm)									Valve		
А	В	C	D	E	F	G	H	J	К	E	Block Thickness	Dimensions
7.83	7.77	4.13	5.12	10.25	1.66	3.00	0.50	0.28	3.34	1.70	1.75	See
(198.9)	(197.4)	(104.9)	(130.0)	(260.35)	(42.2)	(76.2)	(12.7)	(7.1)	(84.8)	(43.2)	(44.5)	Figure 2

Dimensions, in inches (millimeters), are for reference only and are subject to change.



30

PHP 2018 Product Catalog alt.indd 30 6/25/18 11:47 AM

## **ADJUSTABLE RELIEF VALVES**

Precision High Pressure adjustable relief valves are designed to protect against over pressure of gas and liquids.

These proportional relief valves are designed to open gradually as the pressure increases. They do not have a capacity rating at given pressure increases, and therefore these relief valves are not certified to ASME code requirements.

### **Specifications**

- Set Pressure from 1,000 PSI to 20,000 PSI (69 to 1379 bar).
- Temperature Ratings: -40°F to 300°F (-40°C to 150°C).
- Inlet Connection ¹/₄" FNPT (10RV) and ¹/₄" HPF (20RV) are standard. Other connections sizes and types are available by request.
- Outlet Connection ½" Female NPT.

### **Features**

- Field Adjustable.
- Suitable for Gas or Liquid.

### **Materials**

- Body 316SS stainless steel.
- Seat Gland/Outlet 316 stainless steel.
- Stem 17-4PH.
- Seal Materials PTFE packing/EPDM.
- Soft Seat Nylon.

Set Pressure	Orifice	Inlet	Outlet	Outlet Part onnection Number		Dimension, in. (mm)						Valve
Range	Size, in.		Connection		А	В	С	D	E	F	G	Dimensions
1,000 to 10,000 PSI		1/4" FNPT	<i>''</i>	10RV4NF	5,22	1.56	1.06	1.50	0.56	1/4"	1.38	7266
1,000 (0.10,000 ) 31	0.070		1/4" FNPT		(132.6)	(39.6)	(26.9)	(38.1)	(14.2)	FNPT	(35.1)	See

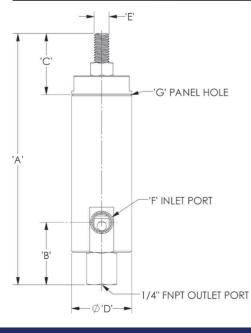


Figure 1



### **Specifications**

- Size ranges from  $\frac{1}{4}$ " OD to  $\frac{1}{2}$ " OD.
- MAWP up to 100,000 PSI (6895 bar).

### **Features**

- Stocked in USA for short delivery times.
- Tubing is also available for direct shipment from our European Mill.
   Contact us for more information.
- Tubing can be cut and shipped in shorter lengths when requested.

### **Materials**

- 316SS/316L is standard material.
- 304L also available.
- Other materials available by request.

Pressure Rating	Connection Type	Tube Material	Part Number	in. (mm)	Tube ID in. (mm)	in. (mm)	Tolerance/Outside Diameter in. (mm)
15,000 PSI	Medium Pressure	316SS/316L	15TU16M	1 (25.4)	0.688 (17.5)	0.156 (3.9)	0.995/0.990 (25.27/25.14)
15,000 F31	Cone & Thread	31033/3100	15TU24M	1-1/2 (38.1)	0.937 (23.8)	0.281 (7.12)	1.495/1.490 (37.98/37.85)
			20TU4M	1/4 (6.4)	0.109 (2.8)	0.070 (1.78)	0.248/0.243 (6.30/6.17)
	Modium		20TU6M	3/8 (9.5)	0.203 (5.2)	0.086 (2.2)	0.370/0.365 (9.40/9.27)
20,000 PSI	Medium Pressure Cone & Thead	316SS/316L	20TU9M	9/16 (14.2)	0.312 (7.9)	0.125 (3.2)	0.557/0.552 (14.15/14.02)
			20TU12M	3/4 (19.1)	0.438 (11.1)	0.156 (3.9)	0.745/0.740 (18.92/18.80)
-			20TU16M	1 (25.4)	0.562 (14.3)	0.219 (5.6)	0.995/0.990 (25.27/25.14)
			60TU4H	1/4 (6.4)	0.083 (2.1)	0.083 (2.1)	0.248/0.243 (6.30/6.17)
60,000 PSI	High Pressure Cone & Thread	316SS/316L	60TU6H	3/8 (9.5)	0.125 (3.2)	0.125 (3.2)	0.370/0.365 (9.40/9.27)
	The state of the s		60ТU9Н	9/16 (14.29)	0.188 (4.8)	0.187 (4.6)	0.557/0.552 (14.15/14.02)
	High Pressure	24 22 4 1 2 2	100ТU4Н	1/4 (6.4)	0.083 (2.1)	0.083 (2.1)	0.248/0.243 (6.30/6.17)
100,000 PSI	Cone & Thread	316SS/316L	100ТU6Н	3/8 (9.5)	0.125 (3.2)	0.125 (3.2)	0.370/0.365 (9.40/9.27)

Dimensions, in inches (millimeters), are for reference only and are subject to change.

PHP 2018 Product Catalog alt.indd 32 6/25/18 11:47 AM

### **Specifications**

- MAWP up to 20,000 PSI (1379 bar).
- Temperature Ratings: 0°F to 400°
- F  $(-18^{\circ}\text{C to } 204^{\circ}\text{C})$ .

### **Connection Types**

- NPT
- MP and HP Cone & Threaded.

### Features & Benefits

 PHP Standard Needle and Ball Valve Internals.

### Configurations

- ■Single Block and Bleed: Needle x Needle
- ■Double Block and Bleed: Ball x Needle x Ball.
- ■Double Block and Bleed: Needle x Needle x Needle.

### **Materials**

- Body 316 stainless steel.
- Packing O-ring with PEEK backup ring.
- Seats PEEK.
- Stem 17-4 PH.
- Other materials available by request.

Contact us for ordering information



### **MANIFOLDS**

Precision High Pressure manufactures custom designed manifolds to meet the unique needs of each individual customer. Manifolds reduce installation time, minimize potential leak ports, and reduce space requirements.

### **Specifications**

- MAWP up to 60,000 PSI (4136 bar).
- Available in a wide range of connection sizes and types including NPT and Cone & Thread.
- Lengths up to 45" are available.
- Available in a wide variety of materials.

### Features & Benefits

- Basic block for fluid distribution.
- Manifolds with needle valve assemblies for flow control.
- Both standard and quick open needle valves assemblies available.
- Replaceable seats available for ease of repair, minimizing long term costs.

Consult factory representative for additional details and availability.



PHP 2018 Product Catalog alt.indd 34 6/25/18 11:47 AM

### **Specifications**

- MAWP up to 60,000 PSI (4140 bar).
- Connection size ranges from  $\frac{1}{8}$ " to  $\frac{1}{2}$ ".

### **Features**

- Supplied complete with collars and glands when applicable.
- Material Traceability.
- Can be manufactured to NACE MR-01-75.

### **Materials**

- 316 cold worked stainless steel is standard.
- Other materials available by request.

### **Available Connection Types**

MM Medium Pressure Male.

HM High Pressure Male.

MF Medium Pressure Female.

HF High Pressure Female.

NF NPT Female.

NM NPT Male.

RM Type M Hose.

JM JIC Male.



35

Other connections types may be available by request.

### MALE X MALE

### JIC Male

			212			
		1/4"	3/8"	1/2"	3/4"	1"
ω [	1/4"	20AD4JM	20AD4JM6JM	20AD4JM8JM	15AD4JM12JM	15AD4JM16JM
Aale	3/8"		20AD6JM	20AD6JM8JM	15AD6JM12JM	15AD6JM16JM
5	1/2"			20AD8JM	15AD8JM12JM	15AD8JM12JM
7	3/4"				15AD12JM	15AD12JM16JM
- [	1"					15AD16JM

### **NPT Male**

		1/4"	3/8"	1/2"	3/4"	1"
ا س	1/4"	15AD4JM4NM	15AD4JM6NM	15AD4JM8NM	10AD4JM12NM	10AD4JM16NM
la l	3/8"	15AD6JM4NM	15AD6JM6NM	15AD6JM8NM	10AD6JM12NM	10AD6JM16NM
5	1/2"	15AD8JM4NM	15AD8JM6NM	15AD8JM8NM	10AD8JM12NM	10AD8JM16NM
7	3/4"	15AD12JM4NM	15AD12JM6NM	15AD12JM8M	10AD12JM12NM	10AD12JM16NM
П	1"	15AD16JM4NM	15AD16JM6NM	15AD16JM8NM	10AD16JM10NM	10AD16JM16NM

### **Medium Pressure Male**

		1/4"	3/8"	1/2"	3/4"	1"
Γ	1/4"	20AD4JM4MM	15AD4JM6MM	15AD4JM8MM	10AD4JM12MM	10AD4JM16MM
Γ	3/8"	15AD6JM4MM	15AD6JM6MM	15AD6JM8MM	10AD6JM12MM	10AD6JM16MM
Г	1/2"	15AD8JM4MM	15AD8JM6MM	15AD8JM8MM	10AD8JM12MM	10AD8JM16MM
	3/4"	15AD12JM4MM	15AD12JM6MM	15AD12JM8M	10AD12JM12MM	10AD12JM16MM
Γ	1"	15AD16JM4MM	15AD16JM6MM	15AD16JM8MM	10AD16JM10MM	10AD16JM16MM

PHP 2018 Product Catalog alt.indd 35 6/25/18 11:47 AM

### MALE X MALE

### **High Pressure Male**

		1/4"	3/8"	9/16"
Г	1/4"	20AD4JM4HM	20AD4JM6HM	20AD4JM9HM
	3/8"	20AD6JM4HM	20AD6JM6HM	20AD6JM9HM
	1/2"	20AD8JM4HM	20AD8JM6HM	20AD8JM9HM
1	3/4"	15AD12JM4HM	15AD12JM6HM	15AD12JM9HM
Г	1"	15AD16JM4HM	15AD16JM6HM	15AD16JM9HM

### **NPT Male**

		1/4"	3/8"	1/2"	3/4"	1"
2	1/4"	15AD4NM	15AD4NM6NM	15AD4NM8NM	10AD4NM12NM	10AD4NM16NM
Male	3/8"		15AD6NM	15AD6NM8NM	10AD6NM12NM	10AD6NM16NM
	1/2"			15AD8NM	10AD8NM12NM	10AD8NM16NM
2	3/4"				10AD12NM	10AD12NM16NM
Г	1"					10AD16NM

### Type M Hose

			A STATE OF THE PROPERTY OF THE		
		9/16"-18	3/4"-16	1"-12	1-5/16"-12
e e	1/4"	15AD4NM9RM	15AD4NM12RM	15AD4NM16RM	
Male	3/8"	15AD6NM9RM	15AD6NM12RM	15AD6NM16RM	
F F	1/2"	15AD8NM9RM	15AD8NM12RM	15AD8NM16RM	15AD8NM21RM
z	3/4"	10AD12NM9RM	10AD12NM12RM	10AD12NM16RM	10AD12NM21RM
	1"	10AD16NM9RM	10AD16NM12RM	10AD16NM16RM	10AD16NM21RM

### **Meduim Pressure Male**

		1/4"	3/8"	9/16"	3/4"	1"
2	1/4"	15AD4NM4MM	15AD4NM6MM	15AD4NM9MM	10AD4NM12MM	10AD4NM16MM
Niaid	3/8"	15AD6NM4MM	15AD6NM6MM	15AD6NM9MM	10AD6NM12MM	10AD6NM16MM
-	1/2"	15AD8NM4MM	15AD8NM6MM	15AD8NM9MM	10AD8NM12MM	10AD8NM16MM
1	3/4"	10AD12NM4MM	10AD12NM6MM	10AD12NM9MM	10AD12NM12MM	10AD12NM16MM
Т	1"	10AD16NM4MM	10AD16NM6MM	10AD16NM9MM	10AD16NM12MM	10AD16NM16MM

### **High Pressure Male**

		1/4"	3/8"	1/2"
ı [	1/4"	15AD4NM4HM	15AD4NM6HM	15AD4NM9HM
	3/8"	15AD6NM4HM	15AD6NM6HM	15AD6NM9HM
TAN	1/2"	15AD8NM4HM	15AD8NM6HM	15AD8NM9HM
	3/4"	10AD12NM4HM	10AD12NM6HM	10AD12NM9HM
	1"	10AD16NM4HM	10AD16NM6HM	10AD16NM9HM

### Type M Hose

	9/16"-18	3/4"-16	1"-12	1-5/16"-12
9/16"-18	40AD9RM	30AD9RM12RM	26AD9RM16RM	
3/4"-16		30AD12RM	26AD12RM16RM	
1"-12			26AD16RM	20AD16RM21RM
1-5/16"-12				20AD21RM

PHP 2018 Product Catalog alt.indd 36

6/25/18 11:47 AM

### MALE X MALE

Type M Hose

Medium Pressure Male

		AT A CONTRACTOR STATE PROPERTY.		
	9/16"-18	3/4"-16	1"-12	1-5/16"-12
1/4"	20AD4MM9RM	20AD4MM12RM	20AD4MM16RM	20AD4MM21RM
3/8"	20AD6MM9RM	20AD6MM12RM	20AD6MM16RM	20AD6MM21RM
9/16"	20AD9MM9RM	20AD9MM12RM	20AD9MM16RM	20AD9MM21RM
3/4"	20AD12MM9RM	20AD12MM12RM	20AD12MM16RM	20AD12MM21RM
1"	20AD16MM9RM	20AD16MM12RM	20AD16MM16RM	20AD16MM21RM

**High Pressure Male** 

	1/4"	3/8"	9/16"
9/16"-18	40AD9RM4HM	40AD9RM6HM	40AD9RM9HM
3/4"-16	30AD12RM4HM	30AD12RM6HM	30AD12RM9HM
1"-12		26AD16RM6HM	26AD16RM9HM
1-5/16"-12			20AD21RM9HM

### **Medium Pressure Male**

Medium Pressure Male

	1/4"	3/8"	9/16"	3/4"	1"
1/4"	20AD4MM	20AD4MM6MM	20AD4MM9MM	20AD4MM12MM	20AD4MM16MM
3/8"		20AD6MM	20AD6MM9MM	20AD6MM12MM	20AD6MM16MM
9/16"			20AD9MM	20AD9MM12MM	20AD9MM16MM
3/4"				20AD12MM	20AD12MM16MM
1"					20AD16MM

**High Pressure Male** 

Medium

	1/4"	3/8"	9/16"
1/4"	20AD4MM4HM	20AD4MM6HM	20AD4MM9HM
3/8"	20AD6MM4HM	20AD6MM6HM	20AD6MM9HM
9/16"	20AD9MM4HM	20AD9MM6HM	20AD9MM9HM
3/4"	20AD12MM4HM	20AD12MM6HM	20AD12MM9HM
1"	20AD16MM4HM	20AD16MM6HM	20AD16MM9HM

### **High Pressure Male**

High Pressure Male

		1/4"	3/8"	9/16"
! [	1/4"	60AD4HM	60AD4HM6HM	60AD4HM9HM
Ē	3/8"		60AD6HM	60AD6HM9HM
	9/16"		Ĭ.	60AD9HM

### **FEMALE X FEMALE**

### **NPT Female**

NPT Female

<u> </u>		1/4"	3/8"	1/2"	3/4"	1"
nai	1/4"		15AD4NF6NF	15AD4NF8NF	10AD4NF12NF	10AD4NF16NF
<u>a</u>	3/8"			15AD6NF8NF	10AD6NF12NF	10AD6NF16NF
<u> </u>	1/2"			- 110-011 - 30-01	10AD8NF12NF	10AD8NF16NF
	3/4"					10AD12NF16NF

### **Medium Pressure Female**

1	a	Į
ī	ī	
ì	ì	
i	ä	į
L	ì	
ŀ		
C	1	
2	2	

	1/4"	3/8"	9/16"	3/4"	1"
1/4"	15AD4NF4MF	15AD4NF6MF	15AD4NF9MF	15AD4NF12MF	15AD4NF16MF
3/8"	15AD6NF4MF	15AD6NF6MF	15AD6NF9MF	15AD6NF12MF	15AD6NF16MF
1/2"	15AD8NF4MF	15AD8NF6MF	15AD8NF9MF	15AD8NF12MF	15AD8NF16MF
3/4"	10AD12NF4MF	10AD12NF6MF	10AD12NF9MF	10AD12NF12MF	10AD12NF16MF
1"	10AD16NF4MF	10AD16NF6MF	10AD16NF9MF	10AD16NF12MF	10AD16NF16MF

PHP 2018 Product Catalog alt.indd 37 6/25/18 11:47 AM

### **FEMALE X FEMALE**

**High Pressure Female** 

	2.120	- 4-11	Car Excess
	1/4"	3/8"	9/16"
1/4"	15AD4NF4HF	15AD4NF6HF	15AD4NF9HF
3/8"	15AD6NF4HF	15AD6NF6HF	15AD6NF9HF
1/2"	15AD8NF4HF	15AD8NF6HF	15AD8NF9HF
3/4"	10AD12NF4HF	10AD12NF6HF	10AD12NF9HF
1"	10AD16NF4HF	10AD16NF6HF	10AD16NF9HF

### **Medium Pressure Female**

Medium Pressure Female

	1/4"	3/8"	9/16"	3/4"	1"
1/4"		20AD4MF6MF	20AD4MF9MF	20AD4MF12MF	20AD4MF16MF
3/8"			20AD6MF9MF	20AD6MF12MF	20AD6MF16MF
9/16"				20AD9MF12MF	20AD9MF16MF
3/4"					20AD12MF16MF

### **High Pressure Female**

Medium

	1/4"	3/8"	9/16"
1/4"	20AD4MF4HF	20AD4MF6HF	20AD4MF9HF
3/8"	20AD6MF4HF	20AD6MF6HF	20AD6MF9HF
9/16"	20AD9MF4HF	20AD9MF6HF	20AD9MF9HF
3/4"	20AD12MF4HF	20AD12MF6HF	20AD12MF9HF
1"	20AD16MF4HF	20AD16MF6HF	20AD16MF9HF

### **High Pressure Female**

High Pressure Female

	1/4"	3/8"	9/16"
1/4"		60AD4HF6HF	60AD4HF9HF
3/8"			60AD6HF9HF

### **MALE X FEMALE**

### **NPT Female**

į	ø	١
3	æ	l
1	⋝	ı
i		ì
ì	۵.	ĺ
į	2	l

		1/4"	3/8"	1/2"	3/4"	1"
	1/4"	15AD4NM4NF	15AD4NM6NF	15AD4NM8NF	15AD4NM12NF	15AD4NM16NF
	3/8"	15AD6NM4NF	15AD6NM6NF	15AD6NM8NF	15AD6NM12NF	15AD6NM16NF
	1/2"	15AD8NM4NF	15AD8NM6NF	15AD8NM8NF	15AD8NM12NF	15AD8NM16NF
	3/4"	10AD12NM4NF	10AD12NM6NF	10AD12NM8NF	10AD12NM12NF	10AD12NM16NF
Γ	1"	10AD16NM4NF	10AD16NM6NF	10AD16NM8NF	10AD16NM12NF	10AD16NM16NF

### **Medium Pressure Male**

NPT Male

	1/4"	3/8"	9/16"	3/4"	1"
1/4"	15AD4NM4MF	15AD4NM6MF	15AD4NM8MF	15AD4NM12MF	15AD4NM16MF
3/8"	15AD6NM4MF	15AD6NM6MF	15AD6NM8MF	15AD6NM12MF	15AD6NM16MF
1/2"	15AD8NM4MF	15AD8NM6MF	15AD8NM8MF	15AD8NM12MF	15AD8NM16MF
3/4"	10AD12NM4MF	10AD12NM6MF	10AD12NM8MF	10AD12NM12MF	10AD12NM16MF
1"	10AD16NM4MF	10AD16NM6MF	10AD16NM8MF	10AD16NM12MF	10AD16NM16MF

### **MALE X FEMALE**

**High Pressure Female** 

		1/4"	3/8"	9/16"
u [	1/4"	15AD4NM4HF	15AD4NM6HF	15AD4NM8HF
Male	3/8"	15AD6NM4HF	15AD6NM6HF	15AD6NM8HF
	1/2"	15AD8NM4HF	15AD8NM6HF	15AD8NM8HF
MPT	3/4"	10AD12NM4HF	10AD12NM6HF	10AD12NM8HF
	1"	10AD16NM4HF	10AD16NM6HF	10AD16NM8HF

### **NPT Female**

Medium Pressure Male

	1/4"	3/8"	1/2"	3/4"	1"
1/4"	15AD4MM4NF	15AD4MM6NF	15AD4MM8NF	15AD4MM12NF	15AD4MM16NF
3/8"	15AD6MM4NF	15AD6MM6NF	15AD6MM8NF	15AD6MM12NF	15AD6MM16NF
9/16"	15AD9MM4NF	15AD9MM6NF	15AD9MM8NF	15AD9MM12NF	15AD9MM16NF
3/4"	10AD12MM4NF	10AD12MM6NF	10AD12MM8NF	10AD12MM12NF	10AD12MM16NF
1"	10AD16MM4NF	10AD16MM6NF	10AD16MM8NF	10AD16MM12NF	10AD16MM16NF

### **NPT Female**

High Pressure Male

		1/4"	3/8"	1/2"	3/4"	1"
	1/4"	15AD4HM4NF	15AD4HM6NF	15AD4HM8NF	15AD4HM12NF	15AD4HM16NF
	3/8"	15AD6HM4NF	15AD6HM6NF	15AD6HM8NF	15AD6HM12NF	15AD6HM16NF
Г	9/16"	15AD9HM4NF	15AD9HM6NF	15AD9HM8NF	15AD9HM12NF	15AD9HM16NF

### **Medium Pressure Female**

Medium Pressure Male

	1/4"	3/8"	9/16"	3/4"	1"
1/4"	20AD4MM4MF	20AD4MM6MF	20AD4MM9MF	20AD4MM12MF	20AD4MM16MF
3/8"	20AD6MM4MF	20AD6MM6MF	20AD6MM9MF	20AD6MM12MF	20AD6MM16MF
9/16"	20AD9MM4MF	20AD9MM6MF	20AD9MM9MF	20AD9MM12MF	20AD9MM16MF
3/4"	20AD12MM4MF	20AD12MM6MF	20AD12MM9MF	20AD12MM12MF	20AD12MM16MF
1"	20AD16MM4MF	20AD16MM6MF	20AD16MM9MF	20AD16MM12MF	20AD16MM16MF

### **High Pressure Female**

Medium Pressure Male

	1/4"	3/8"	9/16"
1/4"	20AD4MM4HF	20AD4MM6HF	20AD4MM9HF
3/8"	20AD6MM4HF	20AD6MM6HF	20AD6MM9HF
9/16"	20AD9MM4HF	20AD9MM6HF	20AD9MM9HF
3/4"	20AD12MM4HF	20AD12MM6HF	20AD12MM9HF
1"	20AD16MM4HF	20AD16MM6HF	20AD16MM9HF

### **Medium Pressure Female**

High Pressure Male

		1/4"	3/8"	9/16"	3/4"	1"
ale	1/4"	20AD4HM4MF	20AD4HM6MF	20AD4HM9MF	20AD4HM12MF	20AD4HM16MF
٤ [	3/8"	20AD6HM4MF	20AD6HM6MF	20AD6HM9MF	20AD6HM12MF	20AD6HM16MF
	9/16"	20AD9HM4MF	20AD9HM6MF	20AD9HM9MF	20AD9HM12MF	20AD9HM16MF

### **High Pressure Female**

High Pressure Male

		ressure remaie	
	1/4"	3/8"	9/16"
1/4"	60AD4HM4HF	60AD4HM6HF	60AD4HM9HF
3/8"	60AD6HM4HF	60AD6HM6HF	60AD6HM9HF
9/16"	60AD9HM4HF	60AD9HM6HF	60AD9HM9HF

PHP 2018 Product Catalog alt.indd 39 6/25/18 11:47 AM



sales@qcp-llc.com 504-392-9464