

NEEDLE VALVES FOR 20,000 PSI (1380 BAR)

1/4" M/P TUBE, CONED AND THREADED

2-way Straight

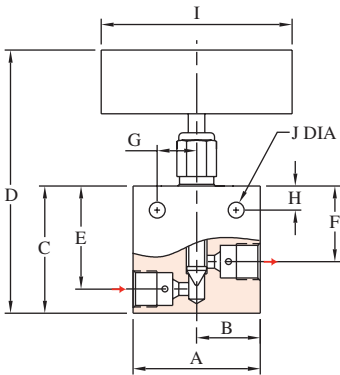


Figure 1

2-way Angle

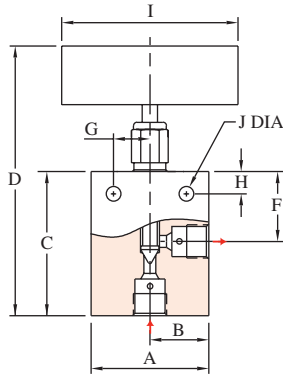


Figure 2

3-way Two on Pressure

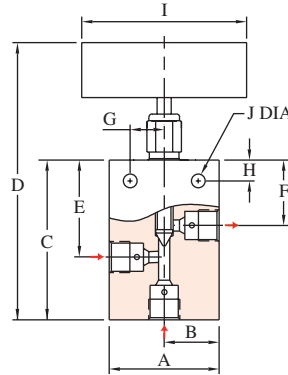


Figure 3

3-way One on Pressure

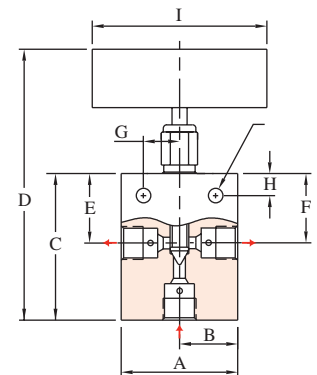


Figure 4

Catalog Number	Stem Style	Connection	A	B	C	D	E	F	G	H	I	J	K	L	Thk.	Fig
20UV41V	Vee	1/4" M/P	2.00"	1.00"	2.00"	4.50"	1.62"	1.19"	0.62"	0.38"	3.00"	0.25"	---	---	0.75"	1
20UV41R	Reg	Tube	(50.8)	(25.4)	(50.8)	(114.3)	(41.1)	(30.2)	(15.7)	(9.7)	(76.2)	(6.4)	---	---	(19.1)	
20UV42V	Vee	1/4" M/P	2.00"	1.00"	2.44"	4.94"	---	1.19"	0.62"	0.38"	3.00"	0.25"	---	---	0.75"	2
20UV42R	Reg	Tube	(50.8)	(25.4)	(62.0)	(125.5)	---	(30.2)	(15.7)	(9.7)	(76.2)	(6.4)	---	---	(19.1)	
20UV43V	Vee	1/4" M/P	2.00"	1.00"	2.62"	5.12"	1.62"	1.19"	0.62"	0.38"	3.00"	0.25"	---	---	0.75"	3
20UV43R	Reg	Tube	(50.8)	(25.4)	(66.5)	(130.0)	(41.1)	(30.2)	(15.7)	(9.7)	(76.2)	(6.4)	---	---	(19.1)	
20UV44V	Vee	1/4" M/P	2.00"	1.00"	2.44"	4.94"	1.19"	1.19"	0.62"	0.38"	3.00"	0.25"	---	---	0.75"	4
20UV44R	Reg	Tube	(50.8)	(25.4)	(62.0)	(125.5)	(30.2)	(30.2)	(15.7)	(9.7)	(76.2)	(6.4)	---	---	(19.1)	
20UV45V	Vee	1/4" M/P	2.00"	1.00"	3.38"	8.38"	1.68"	1.19"	0.62"	0.38"	3.00"	0.25"	---	---	0.75"	5
20UV45R	Reg	Tube	(50.8)	(25.4)	(85.9)	(212.9)	(42.7)	(30.2)	(15.7)	(9.7)	(76.2)	(6.4)	---	---	(19.1)	
20UV46V	Vee	1/4" M/P	2.00"	1.00"	2.25"	4.75"	---	1.19"	0.62"	0.38"	3.00"	0.25"	0.75"	1.06"	0.75"	6
20UV46R	Reg	Tube	(50.8)	(25.4)	(57.2)	(120.7)	---	(30.2)	(15.7)	(9.7)	(76.2)	(6.4)	(19.1)	(26.9)	(19.1)	
20MV46V	Meter	1/4" M/P	2.00"	1.00"	2.62"	6.72"	---	1.31"	0.69"	0.38"	3.00"	0.25"	0.75"	1.06"	1.00"	7
	Tube		(50.8)	(25.4)	(66.5)	(170.7)	---	(33.3)	(17.5)	(9.7)	(76.2)	(6.4)	(19.1)	(26.9)	(25.4)	
20MMV46V	Micro-Meter	1/4" M/P	2.00"	1.00"	2.62"	7.36"	---	1.31"	0.69"	0.38"	2.35"	0.25"	0.75"	1.06"	1.00"	8
	Tube		(50.8)	(25.4)	(66.5)	(186.9)	---	(33.3)	(17.5)	(9.7)	(59.7)	(6.4)	(19.1)	(26.9)	(25.4)	

See page MP-1 for orifice and Cv

2-stem Manifold

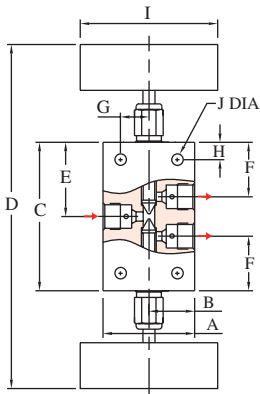


Figure 5

Replaceable Seat

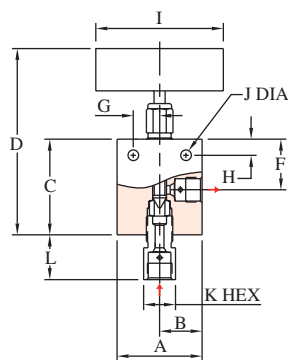


Figure 6

Metering

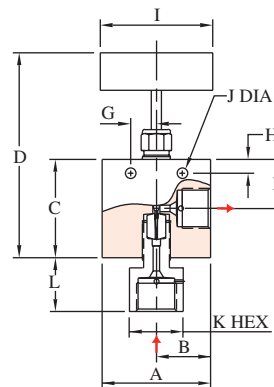


Figure 7

Micro-Metering

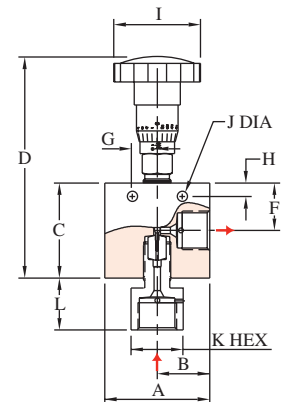


Figure 8

All dimensions are for reference only and are subject to change.
Dimensions in parentheses are millimeters (mm)

NEEDLE VALVES FOR 20,000 PSI (1380 BAR)

3/8" M/P TUBE, CONED AND THREADED

2-way Straight

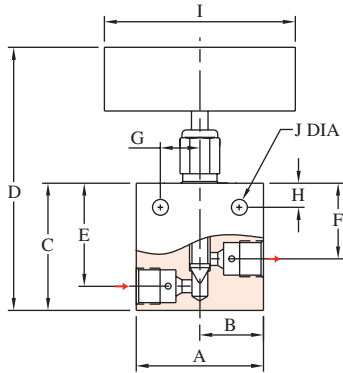


Figure 1

2-way Angle

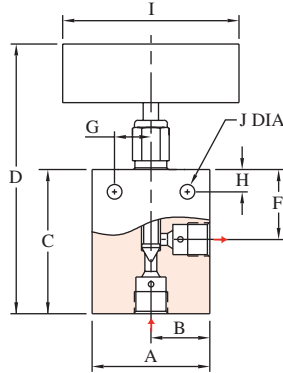


Figure 2

3-way Two on Pressure

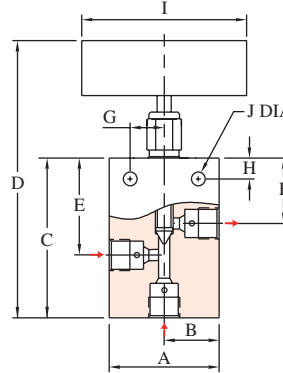


Figure 3

3-way One on Pressure

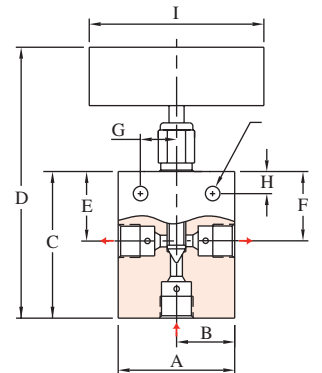


Figure 4

Catalog Number	Stem Style	Connection	A	B	C	D	E	F	G	H	I	J	K	L	Thk.	Fig
20UV61V	Vee	3/8" M/P	2.00"	1.00"	2.00"	4.50"	1.62"	1.19"	0.62"	0.38"	3.00"	0.25"	---	---	0.75"	1
20UV61R	Reg	Tube	(50.8)	(25.4)	(50.8)	(114.3)	(41.1)	(30.2)	(15.7)	(9.7)	(76.2)	(6.4)	---	---	(19.1)	
20UV62V	Vee	3/8" M/P	2.00"	1.00"	2.44"	4.94"	---	1.19"	0.62"	0.38"	3.00"	0.25"	---	---	0.75"	2
20UV62R	Reg	Tube	(50.8)	(25.4)	(62.0)	(125.5)	---	(30.2)	(15.7)	(9.7)	(76.2)	(6.4)	---	---	(19.1)	
20UV63V	Vee	3/8" M/P	2.00"	1.00"	2.62"	5.12"	1.62"	1.19"	0.62"	0.38"	3.00"	0.25"	---	---	0.75"	3
20UV63R	Reg	Tube	(50.8)	(25.4)	(66.5)	(130.0)	(41.1)	(30.2)	(15.7)	(9.7)	(76.2)	(6.4)	---	---	(19.1)	
20UV64V	Vee	3/8" M/P	2.00"	1.00"	2.44"	4.94"	1.19"	1.19"	0.62"	0.38"	3.00"	0.25"	---	---	0.75"	4
20UV64R	Reg	Tube	(50.8)	(25.4)	(62.0)	(125.5)	(30.2)	(30.2)	(15.7)	(9.7)	(76.2)	(6.4)	---	---	(19.1)	
20UV65V	Vee	3/8" M/P	2.00"	1.00"	3.38"	8.38"	1.68"	1.19"	0.62"	0.38"	3.00"	0.25"	---	---	0.75"	5
20UV65R	Reg	Tube	(50.8)	(25.4)	(85.9)	(212.9)	(42.7)	(30.2)	(15.7)	(9.7)	(76.2)	(6.4)	---	---	(19.1)	
20UV66V	Vee	3/8" M/P	2.00"	1.00"	2.25"	4.75"	---	1.19"	0.62"	0.38"	3.00"	0.25"	0.75"	1.06"	0.75"	6
20UV66R	Reg	Tube	(50.8)	(25.4)	(57.2)	(120.7)	---	(30.2)	(15.7)	(9.7)	(76.2)	(6.4)	(19.1)	(26.9)	(19.1)	
20MV66V	Meter	3/8" M/P	2.00"	1.00"	2.62"	6.72"	---	1.31"	0.69"	0.38"	3.00"	0.25"	0.75"	1.06"	1.00"	7
		Tube	(50.8)	(25.4)	(66.5)	(170.7)	---	(33.3)	(17.5)	(9.7)	(76.2)	(6.4)	(19.1)	(26.9)	(25.4)	
20MMV66V	Micro-Meter	3/8" M/P	2.50"	1.25"	2.62"	7.36"	---	1.31"	0.69"	0.38"	2.35"	0.25"	0.75"	1.06"	1.00"	8
		Tube	(63.5)	(31.8)	(66.5)	(186.9)	---	(33.3)	(17.5)	(9.7)	(59.7)	(6.4)	(19.1)	(26.9)	(25.4)	

See page MP-1 for orifice and Cv

2-stem Manifold

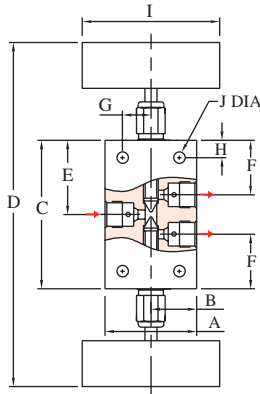


Figure 5

Replaceable Seat

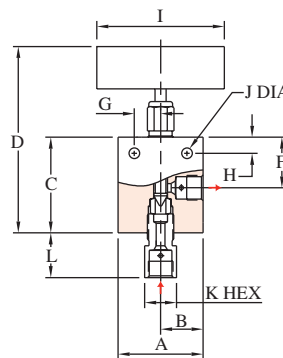


Figure 6

Metering

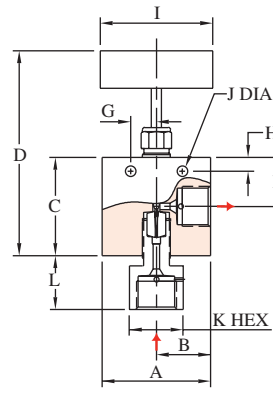


Figure 7

Micro-Metering

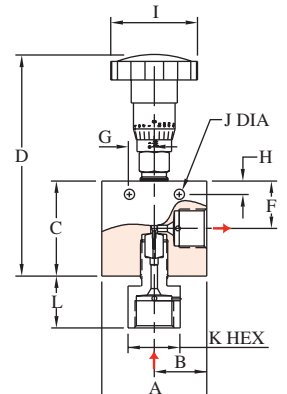


Figure 8

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Dimensions in parentheses are millimeters (mm)



NEEDLE VALVES FOR 20,000 PSI (1380 BAR)

9/16" M/P TUBE, CONED AND THREADED

2-way Straight

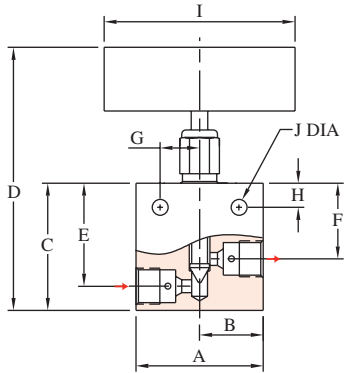


Figure 1

2-way Angle

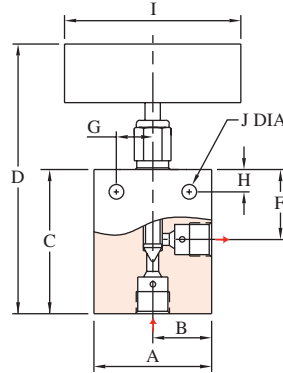


Figure 2

3-way Two on Pressure

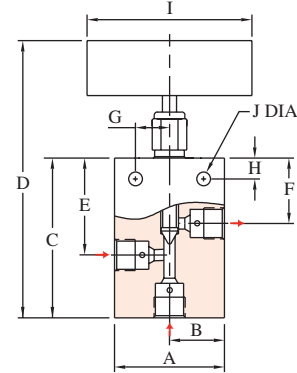


Figure 3

Catalog Number	Stem Style	Connection	A	B	C	D	E	F	G	H	I	J	K	L	Thk.	Fig
20UV91V	Vee	9/16" M/P	2.50"	1.25"	2.88"	6.32"	2.38"	1.75"	0.69"	0.50"	4.00"	0.34"	---	---	1.00"	1
20UV91R	Reg	Tube	(63.5)	(31.8)	(73.2)	(160.5)	(60.5)	(44.5)	(17.5)	(12.7)	(101.6)	(8.6)	---	---	(25.4)	
20UV92V	Vee	9/16" M/P	2.50"	1.25"	3.38"	6.82"	---	1.75"	0.69"	0.50"	4.00"	0.34"	---	---	1.00"	2
20UV92R	Reg	Tube	(63.5)	(31.8)	(85.9)	(173.2)	---	(44.5)	(17.5)	(12.7)	(101.6)	(8.6)	---	---	(25.4)	
20UV93V	Vee	9/16" M/P	2.50"	1.25"	3.62"	7.06"	2.38"	1.75"	0.69"	0.50"	4.00"	0.34"	---	---	1.00"	3
20UV93R	Reg	Tube	(63.5)	(31.8)	(91.9)	(179.3)	(60.5)	(44.5)	(17.5)	(12.7)	(101.6)	(8.6)	---	---	(25.4)	
20UV94V	Vee	9/16" M/P	2.50"	1.25"	3.38"	6.82"	1.75"	1.75"	0.69"	0.50"	4.00"	0.34"	---	---	1.00"	4
20UV94R	Reg	Tube	(63.5)	(31.8)	(85.9)	(173.2)	(44.5)	(44.5)	(17.5)	(12.7)	(101.6)	(8.6)	---	---	(25.4)	
20UV95V	Vee	9/16" M/P	2.50"	1.25"	5.12"	12.00"	2.56"	1.75"	0.69"	0.50"	4.00"	0.34"	---	---	1.00"	5
20UV95R	Reg	Tube	(63.5)	(31.8)	(130.0)	(304.8)	(65.0)	(44.5)	(17.5)	(12.7)	(101.6)	(8.6)	---	---	(25.4)	
20UV96V	Vee	9/16" M/P	2.50"	1.25"	3.25"	6.69"	---	1.75"	0.69"	0.50"	4.00"	0.34"	0.75"	1.37"	1.00"	6
20UV96R	Reg	Tube	(63.5)	(31.8)	(82.6)	(169.9)	---	(44.5)	(17.5)	(12.7)	(101.6)	(8.6)	(19.1)	(34.8)	(25.4)	

See page MP-1 for orifice and Cv

3-way One on Pressure

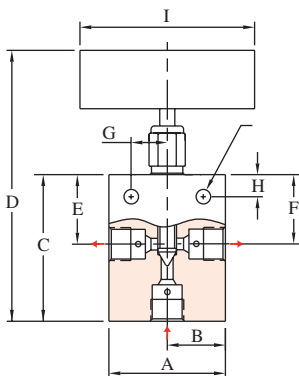


Figure 4

2-stem Manifold

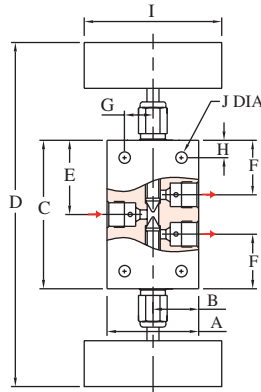


Figure 5

Replaceable Seat

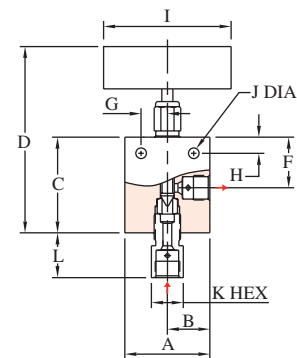


Figure 6

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Dimensions in parentheses are millimeters (mm)

NEEDLE VALVES FOR 20,000 PSI (1380 BAR)

3/4" M/P TUBE, CONED AND THREADED

2-way Straight

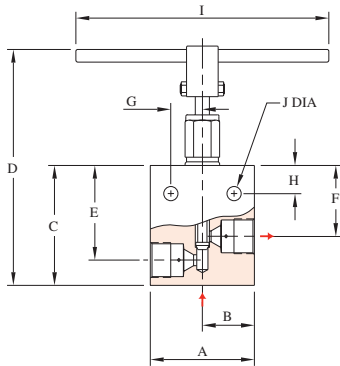


Figure 1

2-way Angle

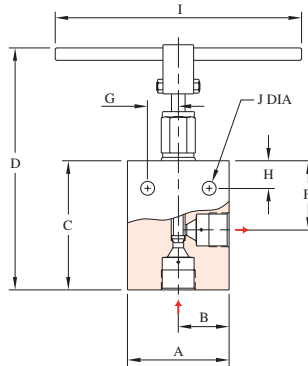


Figure 2

3-way Two on Pressure

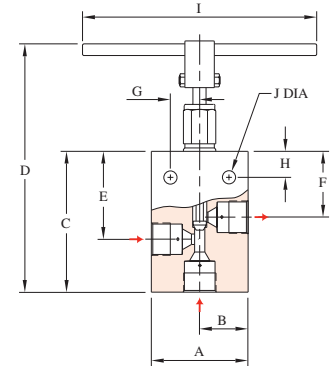


Figure 3

Catalog Number	Stem Style	Connection	A	B	C	D	E	F	G	H	I	J	K	L	Thk.	Fig
20V121V	Vee	3/4" M/P	3.00"	1.50"	3.75"	8.75"	3.00"	2.25"	0.88"	0.62"	8.00"	0.43"	---	---	1.38"	1
20V121R	Reg	Tube	(76.2)	(38.1)	(95.3)	(222.3)	(76.2)	(57.2)	(22.4)	(15.7)	(203.2)	(10.9)	---	---	(35.1)	
20V122V	Vee	3/4" M/P	3.00"	1.50"	4.50"	9.50"	---	2.25"	0.88"	0.62"	8.00"	0.43"	---	---	1.38"	2
20V122R	Reg	Tube	(76.2)	(38.1)	(114.3)	(241.3)	---	(57.2)	(22.4)	(15.7)	(203.2)	(10.9)	---	---	(35.1)	
20V123V	Vee	3/4" M/P	3.00"	1.50"	5.00"	10.00"	3.00"	2.25"	0.88"	0.62"	8.00"	0.43"	---	---	1.38"	3
20V123R	Reg	Tube	(76.2)	(38.1)	(127.0)	(254.0)	(76.2)	(57.2)	(22.4)	(15.7)	(203.2)	(10.9)	---	---	(35.1)	
20V124V	Vee	3/4" M/P	3.00"	1.50"	4.50"	9.50"	2.25"	2.25"	0.88"	0.62"	8.00"	0.43"	---	---	1.38"	4
20V124R	Reg	Tube	(76.2)	(38.1)	(114.3)	(241.3)	(57.2)	(57.2)	(22.4)	(15.7)	(203.2)	(10.9)	---	---	(35.1)	
20V125V	Vee	3/4" M/P	3.00"	1.50"	7.00"	17.00"	3.50"	2.25"	0.88"	0.62"	8.00"	0.43"	---	---	1.38"	5
20V125R	Reg	Tube	(76.2)	(38.1)	(177.8)	(431.8)	(88.9)	(57.2)	(22.4)	(15.7)	(203.2)	(10.9)	---	---	(35.1)	
20V126V	Vee	3/4" M/P	3.00"	1.50"	3.75"	8.75"	---	2.25"	0.88"	0.62"	8.00"	0.43"	1.38"	1.65"	1.38"	6
20V126R	Reg	Tube	(76.2)	(38.1)	(95.3)	(222.3)	---	(57.2)	(22.4)	(15.7)	(203.2)	(10.9)	(35.1)	(41.9)	(35.1)	

See page MP-1 for orifice and Cv

3-way One on Pressure

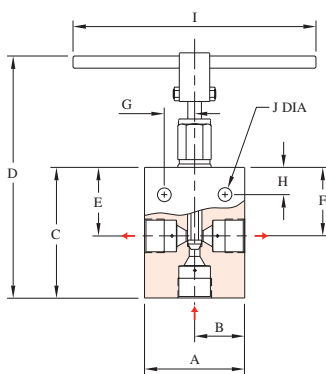


Figure 4

2-stem Manifold

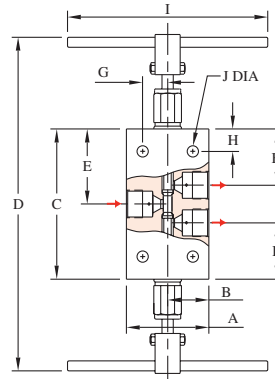


Figure 5

Replaceable Seat

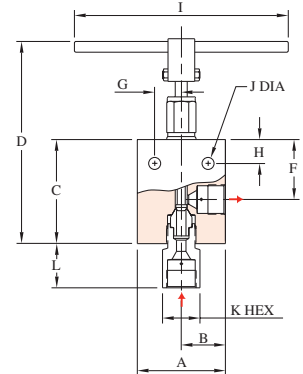


Figure 6



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Dimensions in parentheses are millimeters (mm)



NEEDLE VALVES FOR 20,000 PSI (1380 BAR)

1" M/P TUBE, CONED AND THREADED

2-way Straight

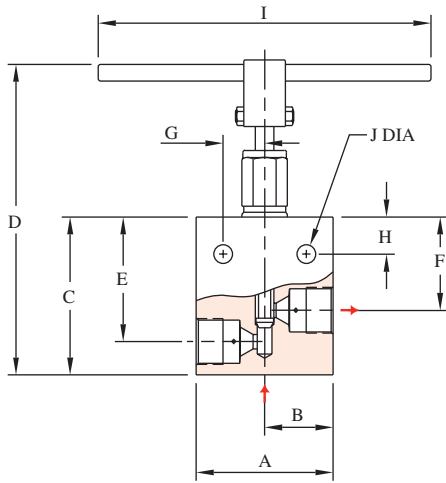


Figure 1

2-way Angle

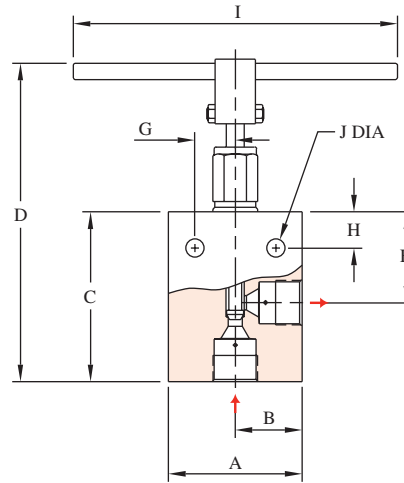


Figure 2

Catalog Number	Stem Style	Connection	A	B	C	D	E	F	G	H	I	J	Thk.	Fig
20V161V	Vee	1" M/P	4.12"	2.06"	4.75"	10.19"	3.75"	2.81"	1.25"	1.12"	10.00"	0.56"	1.75"	1
20V161R	Reg	Tube	(104.6)	(52.3)	(120.7)	(258.8)	(95.3)	(71.4)	(31.8)	(28.4)	(254.0)	(14.2)	(44.5)	
20V162V	Vee	1" M/P	4.12"	2.06"	5.50"	10.94"	---	2.81"	1.25"	1.12"	10.00"	0.56"	1.75"	2
20V162R	Reg	Tube	(104.6)	(52.3)	(139.7)	(277.9)	---	(71.4)	(31.8)	(28.4)	(254.0)	(14.2)	(44.5)	
20V163V	Vee	1" M/P	4.12"	2.06"	6.00"	11.44"	3.75"	2.81"	1.25"	1.12"	10.00"	0.56"	1.75"	3
20V163R	Reg	Tube	(104.6)	(52.3)	(152.4)	(290.6)	(95.3)	(71.4)	(31.8)	(28.4)	(254.0)	(14.2)	(44.5)	
20V164V	Vee	1" M/P	4.12"	2.06"	5.50"	10.94"	2.81"	2.81"	1.25"	1.12"	10.00"	0.56"	1.75"	4
20V164R	Reg	Tube	(104.6)	(52.3)	(139.7)	(277.9)	(71.4)	(71.4)	(31.8)	(28.4)	(254.0)	(14.2)	(44.5)	

See page MP-1 for orifice and Cv

3-way Two on Pressure

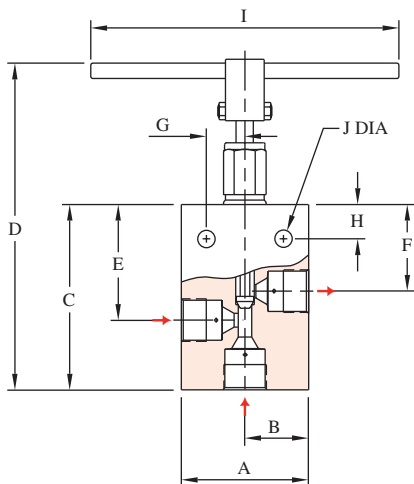


Figure 3

3-way One on Pressure

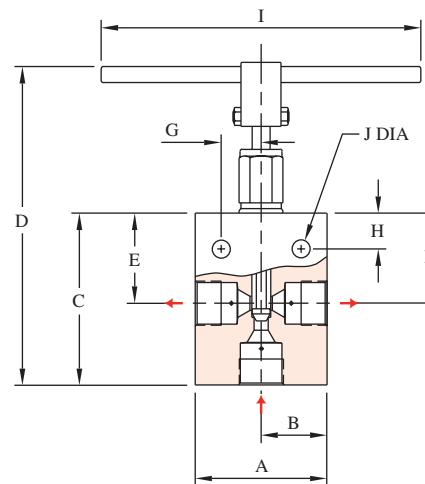


Figure 4

All dimensions are for reference only and are subject to change.
Dimensions in parentheses are millimeters (mm)

NEEDLE VALVES FOR 20,000 PSI (1380 BAR)

1" M/P TUBE, CONED AND THREADED

2-stem Manifold

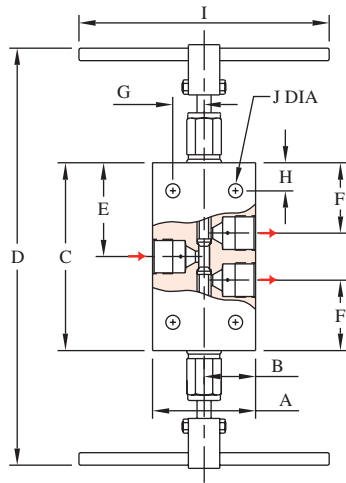


Figure 5

Replaceable Seat

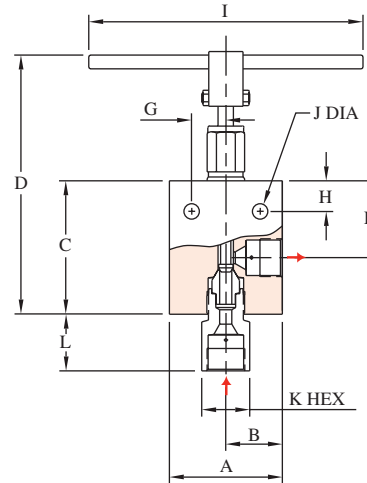


Figure 6

Catalog Number	Stem Style	Connection	A	B	C	D	E	F	G	H	I	J	K	L	Thk.	Fig
20V165V	Vee	1" M/P	4.12"	2.06"	8.00"	18.88"	4.00"	2.81"	1.25"	1.12"	10.00"	0.56"	---	---	1.75"	5
20V165R	Reg	Tube	(104.6)	(52.3)	(203.2)	(479.6)	(101.6)	(71.4)	(31.8)	(28.4)	(254.0)	(14.2)	---	---	(44.5)	
20V166V	Vee	1" M/P	4.12"	2.06"	4.88"	10.62"	---	2.81"	1.56"	1.12"	10.00"	0.56"	1.75"	2.08"	1.75"	6
20V166R	Reg	Tube	(104.6)	(52.3)	(124.0)	(269.7)	---	(71.4)	(39.6)	(28.4)	(254.0)	(14.2)	(44.5)	(52.8)	(44.5)	

See page MP-1 for orifice and Cv

All dimensions are for reference only and are subject to change.
Dimensions in parentheses are millimeters (mm)

