

# NEEDLE VALVES FOR 30,000 PSI (2070 BAR)

## 1/4" H/P TUBE, CONED AND THREADED

2-way Straight

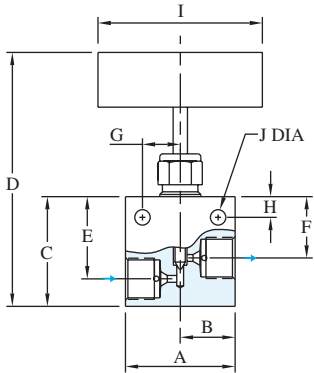


Figure 1

2-way Angle

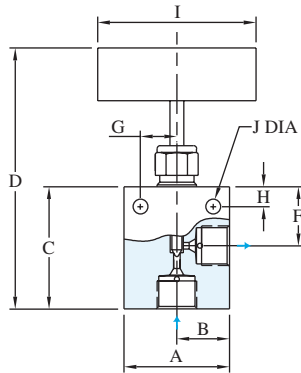


Figure 2

3-way Two on Pressure

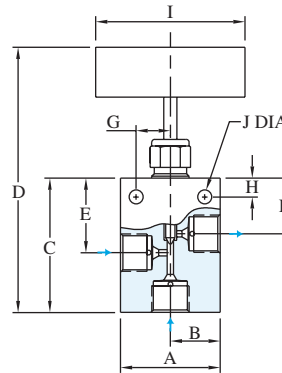


Figure 3

3-way One on Pressure

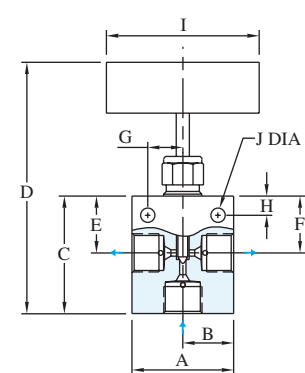


Figure 4

Catalog Number	Stem Style	Connection	A	B	C	D	E	F	G	H	I	J	K	L	Thk.	Fig
30UV41V	Vee	1/4" H/P	2.00"	1.00"	2.00"	4.75"	1.50"	1.12"	0.69"	0.38"	3.00"	0.28"	---	---	1.00"	1
30UV41R	Reg	Tube	(50.8)	(25.4)	(50.8)	(120.7)	(38.1)	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(25.4)	
30UV42V	Vee	1/4" H/P	2.00"	1.00"	2.00"	4.75"	---	1.12"	0.69"	0.38"	3.00"	0.28"	---	---	1.00"	2
30UV42R	Reg	Tube	(50.8)	(25.4)	(50.8)	(120.7)	---	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(25.4)	
30UV43V	Vee	1/4" H/P	2.00"	1.00"	2.12"	4.87"	1.50"	1.12"	0.69"	0.38"	3.00"	0.28"	---	---	1.00"	3
30UV43R	Reg	Tube	(50.8)	(25.4)	(53.8)	(123.7)	(38.1)	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(25.4)	
30UV44V	Vee	1/4" H/P	2.00"	1.00"	2.00"	4.75"	1.12"	1.12"	0.69"	0.38"	3.00"	0.28"	---	---	1.00"	4
30UV44R	Reg	Tube	(50.8)	(25.4)	(50.8)	(120.7)	(28.4)	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(25.4)	
30UV45V	Vee	1/4" H/P	2.00"	1.00"	3.06"	8.56"	1.53"	1.12"	0.69"	0.38"	3.00"	0.28"	---	---	1.00"	5
30UV45R	Reg	Tube	(50.8)	(25.4)	(77.7)	(217.4)	(38.9)	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(25.4)	
30UV46V	Vee	1/4" H/P	2.00"	1.00"	2.38"	5.13"	---	1.12"	0.69"	0.38"	3.00"	0.28"	0.75"	1.47"	1.00"	6
30UV46R	Reg	Tube	(50.8)	(25.4)	(60.5)	(130.3)	---	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	(19.1)	(37.3)	(25.4)	
30MV46V	Meter	1/4" H/P	2.00"	1.00"	2.38"	5.42"	---	1.12"	0.69"	0.38"	3.00"	0.28"	0.75"	1.47"	1.00"	7
		Tube	(50.8)	(25.4)	(60.5)	(137.7)	---	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	(19.1)	(37.3)	(25.4)	
30MMV46V	Micro-Meter	1/4" H/P	2.00"	1.00"	2.38"	6.10"	---	1.12"	0.69"	0.38"	3.00"	0.28"	0.75"	1.47"	1.00"	8
		Tube	(50.8)	(25.4)	(60.5)	(154.9)	---	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	(19.1)	(37.3)	(25.4)	

See page HP-1 for orifice and Cv

2-stem Manifold

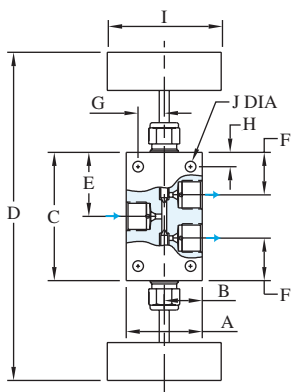


Figure 5

Replaceable Seat

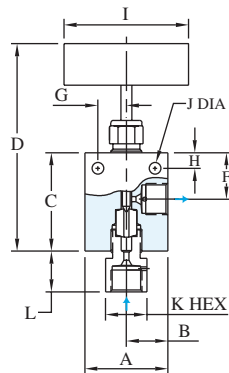


Figure 6

Metering

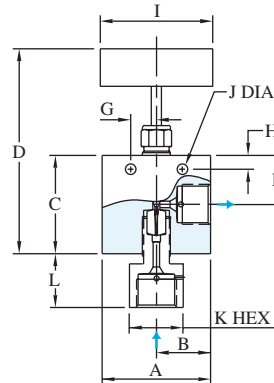


Figure 7

Micro-Metering

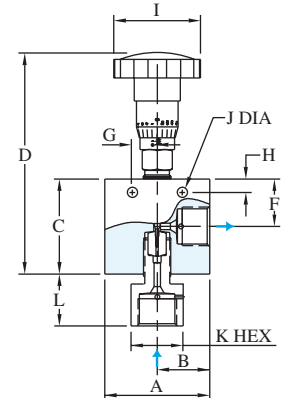


Figure 8

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

# NEEDLE VALVES FOR 30,000 PSI (2070 BAR)

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

2-way Straight

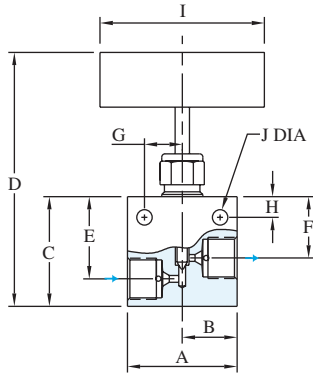


Figure 1

2-way Angle

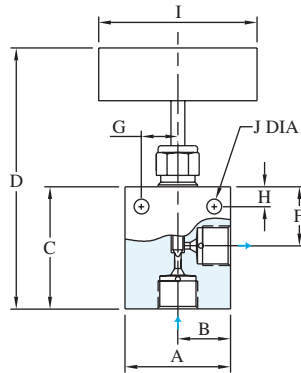


Figure 2

3-way Two on Pressure

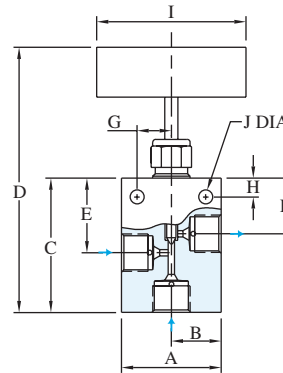


Figure 3

3-way One on Pressure

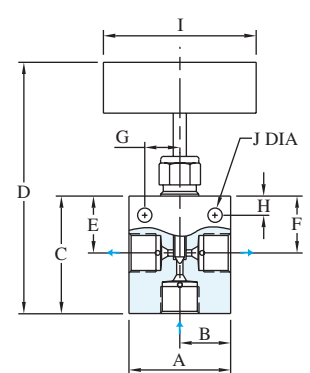


Figure 4

Catalog Number	Stem Style	Connection	A	B	C	D	E	F	G	H	I	J	K	L	Thk.	Fig
30UV61V	Vee	3/8" H/P	2.00"	1.00"	2.00"	4.75"	1.50"	1.12"	0.69"	0.38"	3.00"	0.28"	---	---	1.00"	1
30UV61R	Reg	Tube	(50.8)	(25.4)	(50.8)	(120.7)	(38.1)	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(25.4)	
30UV62V	Vee	3/8" H/P	2.00"	1.00"	2.12"	4.87"	---	1.12"	0.69"	0.38"	3.00"	0.28"	---	---	1.00"	2
30UV62R	Reg	Tube	(50.8)	(25.4)	(53.8)	(123.7)	---	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(25.4)	
30UV63V	Vee	3/8" H/P	2.00"	1.00"	2.50"	5.25"	1.50"	1.12"	0.69"	0.38"	3.00"	0.28"	---	---	1.00"	3
30UV63R	Reg	Tube	(50.8)	(25.4)	(63.5)	(133.4)	(38.1)	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(25.4)	
30UV64V	Vee	3/8" H/P	2.00"	1.00"	2.12"	4.87"	1.12"	1.12"	0.69"	0.38"	3.00"	0.28"	---	---	1.00"	4
30UV64R	Reg	Tube	(50.8)	(25.4)	(53.8)	(123.7)	(28.4)	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(25.4)	
30UV65V	Vee	3/8" H/P	2.00"	1.00"	3.25"	8.75"	1.62"	1.12"	0.69"	0.38"	3.00"	0.28"	---	---	1.00"	5
30UV65R	Reg	Tube	(50.8)	(25.4)	(82.6)	(222.3)	(41.1)	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(25.4)	
30UV66V	Vee	3/8" H/P	2.00"	1.00"	2.38"	5.13"	---	1.12"	0.69"	0.38"	3.00"	0.28"	1.00"	1.15"	1.00"	6
30UV66R	Reg	Tube	(50.8)	(25.4)	(60.5)	(130.3)	---	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	(25.4)	(29.2)	(25.4)	
30MV66V	Meter	3/8" H/P	2.00"	1.00"	2.38"	5.42"	---	1.12"	0.69"	0.38"	3.00"	0.28"	1.00"	1.15"	1.00"	7
30MV66R	Reg	Tube	(50.8)	(25.4)	(60.5)	(137.7)	---	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	(25.4)	(29.2)	(25.4)	
30MMV66V	Micro-Meter	3/8" H/P	2.00"	1.00"	2.38"	6.10"	---	1.12"	0.69"	0.38"	3.00"	0.28"	1.00"	1.15"	1.00"	8
30MMV66R	Reg	Tube	(50.8)	(25.4)	(60.5)	(154.9)	---	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	(25.4)	(29.2)	(25.4)	

See page HP-1 for orifice and Cv

2-stem Manifold

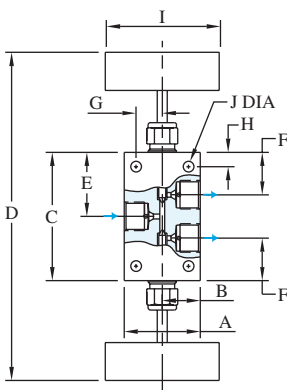


Figure 5

Replaceable Seat

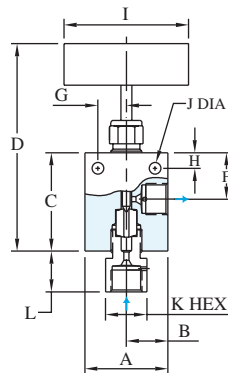


Figure 6

Metering

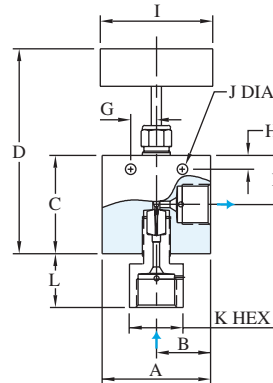


Figure 7

Micro-Metering

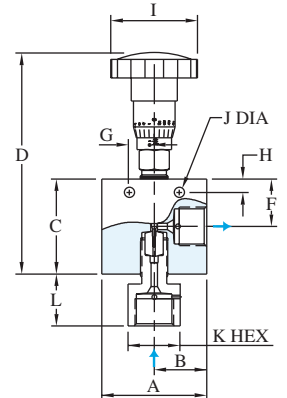


Figure 8

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Dimensions in parentheses are millimeters (mm)



# NEEDLE VALVES FOR 30,000 PSI (2070 BAR)

## 9/16" H/P TUBE, CONED AND THREADED

### 2-way Straight

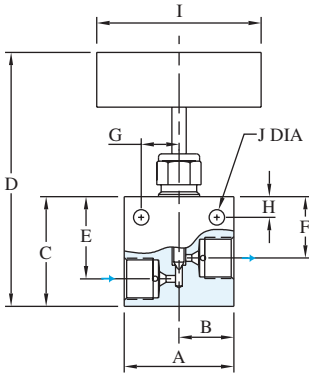


Figure 1

### 2-way Angle

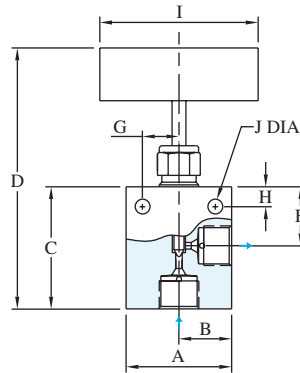


Figure 2

### 3-way Two on Pressure

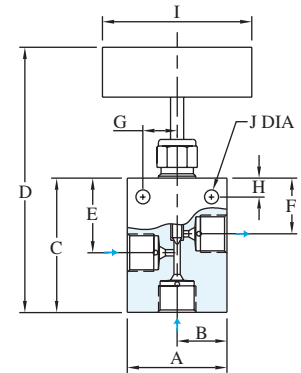


Figure 3

Catalog Number	Stem Style	Connection	A	B	C	D	E	F	G	H	I	J	K	L	Thk.	Fig
30UV91V	Vee	9/16" H/P	2.62"	1.31"	2.44"	5.19"	1.56"	1.12"	0.69"	0.38"	3.00"	0.28"	---	---	1.50"	1
30UV91R	Reg	Tube	(66.5)	(33.3)	(62.0)	(131.8)	(39.6)	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(38.1)	
30UV92V	Vee	9/16" H/P	2.62"	1.31"	2.44"	5.75"	---	1.12"	0.69"	0.38"	3.00"	0.28"	---	---	1.50"	2
30UV92R	Reg	Tube	(66.5)	(33.3)	(62.0)	(146.1)	---	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(38.1)	
30UV93V	Vee	9/16" H/P	2.62"	1.31"	2.88"	5.63"	1.56"	1.12"	0.69"	0.38"	3.00"	0.28"	---	---	1.50"	3
30UV93R	Reg	Tube	(66.5)	(33.3)	(73.2)	(143.0)	(39.6)	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(38.1)	
30UV94V	Vee	9/16" H/P	2.62"	1.31"	2.44"	5.19"	1.12"	1.12"	0.69"	0.38"	3.00"	0.28"	---	---	1.50"	4
30UV94R	Reg	Tube	(66.5)	(33.3)	(62.0)	(131.8)	(28.4)	(28.4)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(38.1)	
30UV95V	Vee	9/16" H/P	2.62"	1.31"	4.75"	10.25"	2.38"	1.62"	0.69"	0.50"	3.00"	0.28"	---	---	1.50"	5
30UV95R	Reg	Tube	(66.5)	(33.3)	(120.7)	(260.4)	(60.5)	(41.1)	(17.5)	(12.7)	(76.2)	(7.1)	---	---	(38.1)	
30UV96V	Vee	9/16" H/P	2.62"	1.31"	2.44"	5.19"	---	1.19"	0.69"	0.38"	3.00"	0.28"	1.38"	1.65"	1.50"	6
30UV96R	Reg	Tube	(66.5)	(33.3)	(62.0)	(131.8)	---	(30.2)	(17.5)	(9.7)	(76.2)	(7.1)	(35.1)	(41.9)	(38.1)	

See page HP-1 for orifice and Cv

### 3-way One on Pressure

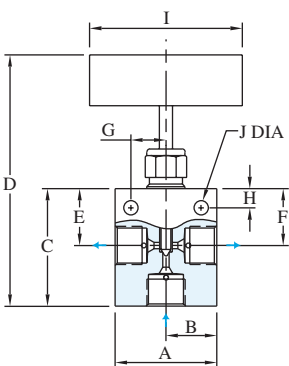


Figure 4

### 2-stem Manifold

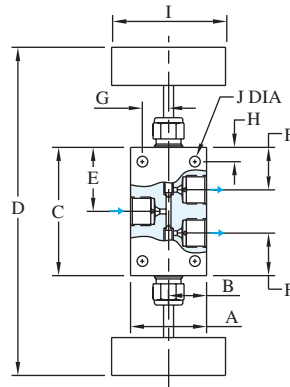


Figure 5

### Replaceable Seat

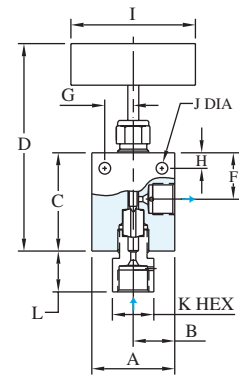


Figure 6

# NEEDLE VALVES FOR 30,000 PSI (2070 BAR)

1" H/P TUBE, CONED AND THREADED

2-way Straight

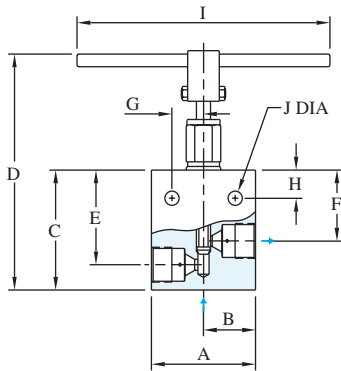


Figure 1

2-way Angle

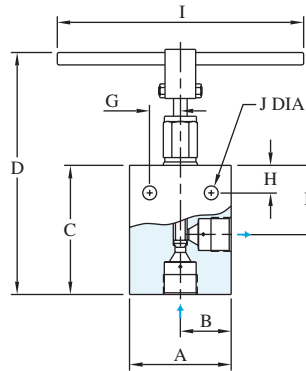


Figure 2

3-way Two on Pressure

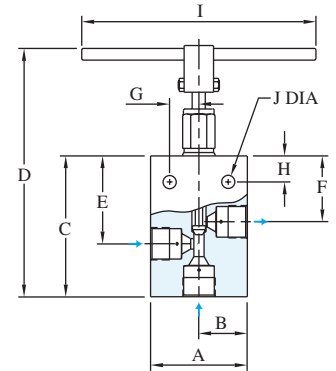


Figure 3

Catalog Number	Stem Style	Connection	A	B	C	D	E	F	G	H	I	J	K	L	Thk.	Fig
30V161V	Vee	1" H/P	4.12"	2.06"	4.75"	10.04"	3.75"	2.81"	1.25"	1.12"	10.00"	0.56"	---	---	1.75"	1
30V161R	Reg	Tube	(104.6)	(52.3)	(120.7)	(255.0)	(95.3)	(71.4)	(31.8)	(28.4)	(254.0)	(14.2)	---	---	(44.5)	
30V162V	Vee	1" H/P	4.12"	2.06"	5.25"	10.54"	---	2.81"	1.25"	1.12"	10.00"	0.56"	---	---	1.75"	2
30V162R	Reg	Tube	(104.6)	(52.3)	(133.4)	(267.7)	---	(71.4)	(31.8)	(28.4)	(254.0)	(14.2)	---	---	(44.5)	
30V163V	Vee	1" H/P	4.12"	2.06"	6.00"	11.25"	3.75"	2.81"	1.25"	1.12"	10.00"	0.56"	---	---	1.75"	3
30V163R	Reg	Tube	(104.6)	(52.3)	(152.4)	(285.8)	(95.3)	(71.4)	(31.8)	(28.4)	(254.0)	(14.2)	---	---	(44.5)	
30V164V	Vee	1" H/P	4.12"	2.06"	5.25"	10.54"	2.81"	2.81"	1.25"	1.12"	10.00"	0.56"	---	---	1.75"	4
30V164R	Reg	Tube	(104.6)	(52.3)	(133.4)	(267.7)	(71.4)	(71.4)	(31.8)	(28.4)	(254.0)	(14.2)	---	---	(44.5)	
30V165V	Vee	1" H/P	4.12"	2.06"	8.00"	18.58"	4.00"	2.81"	1.25"	1.12"	10.00"	0.56"	---	---	1.75"	5
30V165R	Reg	Tube	(104.6)	(52.3)	(203.2)	(471.9)	(101.6)	(71.4)	(31.8)	(28.4)	(254.0)	(14.2)	---	---	(44.5)	
30V166V	Vee	1" H/P	4.12"	2.06"	4.87"	10.16"	---	2.81"	1.25"	1.12"	10.00"	0.56"	1.75"	2.06"	1.75"	6
30V166R	Reg	Tube	(104.6)	(52.3)	(123.7)	(258.1)	---	(71.4)	(31.8)	(28.4)	(254.0)	(14.2)	(44.5)	(52.3)	(44.5)	

See page HP-1 for orifice and Cv

3-way One on Pressure

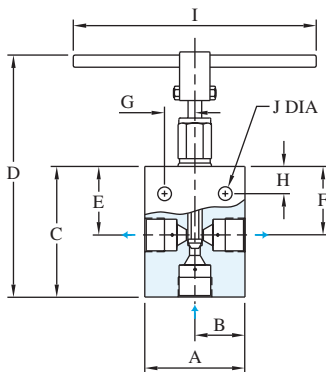


Figure 4

2-stem Manifold

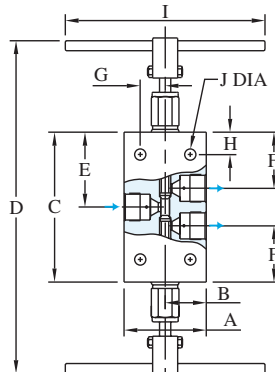


Figure 5

Replaceable Seat

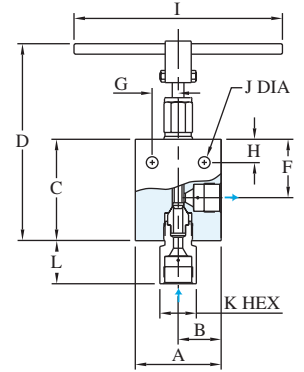


Figure 6



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



# NEEDLE VALVES FOR 40,000 PSI (2760 BAR)

## 9/16" H/P TUBE, CONED AND THREADED

### 2-way Straight

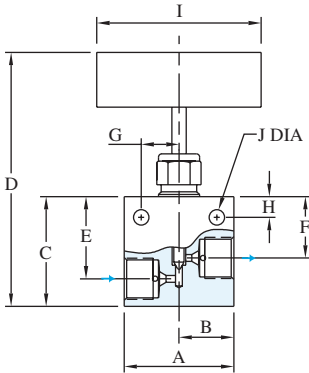


Figure 1

### 2-way Angle

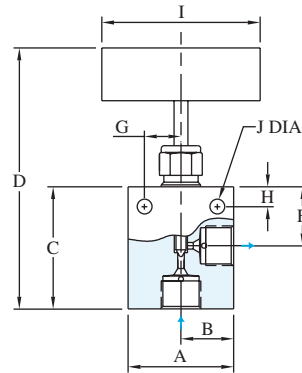


Figure 2

### 3-way Two on Pressure

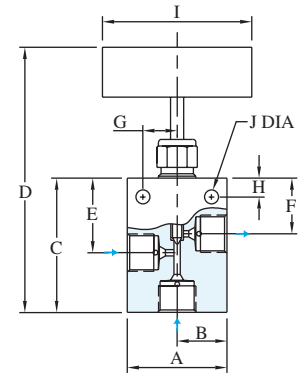


Figure 3

Catalog Number	Stem Style	Connection	A	B	C	D	E	F	G	H	I	J	K	L	Thk.	Fig
40UV91V	Vee	9/16" H/P	2.62"	1.31"	2.50"	5.25"	1.69"	1.31"	0.69"	0.38"	3.00"	0.28"	---	---	1.50"	1
40UV91R	Reg	Tube	(66.5)	(33.3)	(63.5)	(133.4)	(42.9)	(33.3)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(38.1)	
40UV92V	Vee	9/16" H/P	2.62"	1.31"	2.81"	5.56"	---	1.31"	0.69"	0.38"	3.00"	0.28"	---	---	1.50"	2
40UV92R	Reg	Tube	(66.5)	(33.3)	(71.4)	(141.2)	---	(33.3)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(38.1)	
40UV93V	Vee	9/16" H/P	2.62"	1.31"	3.03"	5.78"	1.75"	1.31"	0.69"	0.38"	3.00"	0.28"	---	---	1.50"	3
40UV93R	Reg	Tube	(66.5)	(33.3)	(77.0)	(146.8)	(44.5)	(33.3)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(38.1)	
40UV94V	Vee	9/16" H/P	2.62"	1.31"	2.81"	5.56"	1.31"	1.31"	0.69"	0.38"	3.00"	0.28"	---	---	1.50"	4
40UV94R	Reg	Tube	(66.5)	(33.3)	(71.4)	(141.2)	(33.3)	(33.3)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(38.1)	
40UV95V	Vee	9/16" H/P	2.62"	1.31"	4.12"	9.62"	2.06"	1.31"	0.69"	0.50"	3.00"	0.28"	---	---	1.50"	5
40UV95R	Reg	Tube	(66.5)	(33.3)	(104.6)	(244.3)	(52.3)	(33.3)	(17.5)	(12.7)	(76.2)	(7.1)	---	---	(38.1)	
40UV96V	Vee	9/16" H/P	2.62"	1.31"	2.62"	5.37"	---	1.31"	0.69"	0.38"	3.00"	0.28"	1.37"	1.39"	1.50"	6
40UV96R	Reg	Tube	(66.5)	(33.3)	(66.5)	(136.4)	---	(33.3)	(17.5)	(9.7)	(76.2)	(7.1)	(34.8)	(35.3)	(38.1)	

See page HP-1 for orifice and Cv

### 3-way One on Pressure

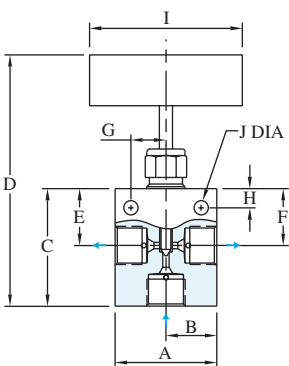


Figure 4

### 2-stem Manifold

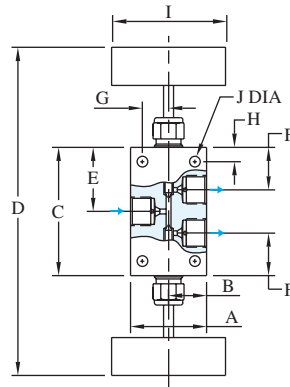


Figure 5

### Replaceable Seat

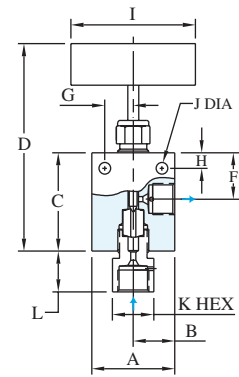


Figure 6

# NEEDLE VALVES FOR 60,000 PSI (4140 BAR)

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

2-way Straight

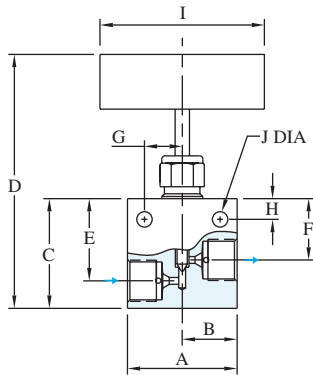


Figure 1

2-way Angle

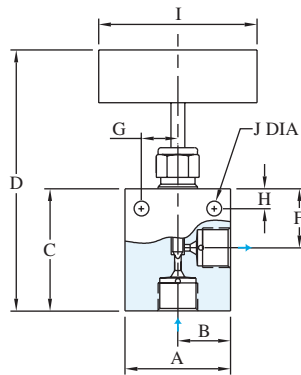


Figure 2

3-way Two on Pressure

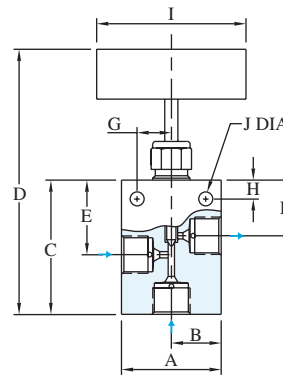


Figure 3

3-way One on Pressure

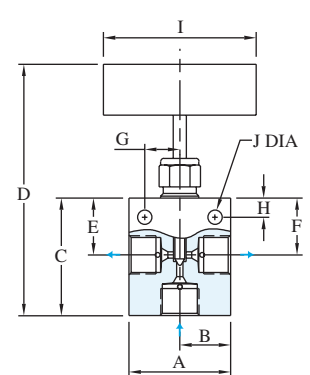


Figure 4

Catalog Number	Stem Style	Connection	A	B	C	D	E	F	G	H	I	J	K	L	Thk.	Fig
60UV41V 60UV41R	Vee Reg	1/4" H/P Tube	2.00" (50.8)	1.00" (25.4)	2.12" (53.8)	4.87" (123.7)	1.69" (42.9)	1.31" (33.3)	0.69" (17.5)	0.38" (9.7)	3.00" (76.2)	0.25" (6.4)	---	---	1.00" (25.4)	1
60UV42V 60UV42R	Vee Reg	1/4" H/P Tube	2.00" (50.8)	1.00" (25.4)	2.38" (60.5)	5.13" (130.3)	---	1.31" (33.3)	0.69" (17.5)	0.38" (9.7)	3.00" (76.2)	0.25" (6.4)	---	---	1.00" (25.4)	2
60UV43V 60UV43R	Vee Reg	1/4" H/P Tube	2.00" (50.8)	1.00" (25.4)	2.38" (60.5)	5.13" (130.3)	1.69" (42.9)	1.31" (33.3)	0.69" (17.5)	0.38" (9.7)	3.00" (76.2)	0.25" (6.4)	---	---	1.00" (25.4)	3
60UV44V 60UV44R	Vee Reg	1/4" H/P Tube	2.00" (50.8)	1.00" (25.4)	2.38" (60.5)	5.13" (130.3)	1.31" (33.3)	1.31" (33.3)	0.69" (17.5)	0.38" (9.7)	3.00" (76.2)	0.25" (6.4)	---	---	1.00" (25.4)	4
60UV45V 60UV45R	Vee Reg	1/4" H/P Tube	2.00" (50.8)	1.00" (25.4)	3.44" (87.4)	8.94" (227.1)	1.72" (43.7)	1.31" (33.3)	0.69" (17.5)	0.38" (9.7)	3.00" (76.2)	0.25" (6.4)	---	---	1.00" (25.4)	5
60UV46V 60UV46R	Vee Reg	1/4" H/P Tube	2.00" (50.8)	1.00" (25.4)	2.62" (66.5)	5.37" (136.4)	---	1.31" (33.3)	0.69" (17.5)	0.38" (9.7)	3.00" (76.2)	0.25" (6.4)	0.75" (19.1)	1.29" (32.8)	1.00" (25.4)	6
60MV46V	Meter	1/4" H/P Tube	2.00" (50.8)	1.00" (25.4)	2.62" (66.5)	6.95" (176.5)	---	1.31" (33.3)	0.69" (17.5)	0.38" (9.7)	3.00" (76.2)	0.25" (6.4)	0.75" (19.1)	1.29" (32.8)	1.00" (25.4)	7
60MMV46V	Micro-Meter	1/4" H/P Tube	2.00" (50.8)	1.00" (25.4)	2.62" (66.5)	7.63" (193.8)	---	1.31" (33.3)	0.69" (17.5)	0.38" (9.7)	3.00" (76.2)	0.25" (6.4)	0.75" (19.1)	1.29" (32.8)	1.00" (25.4)	8

See page HP-1 for orifice and Cv

2-stem Manifold

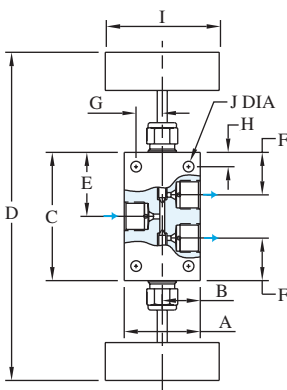


Figure 5

Replaceable Seat

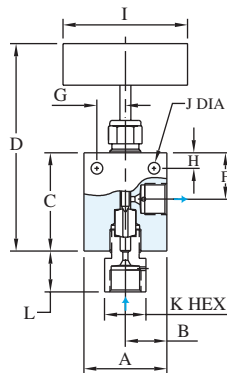


Figure 6

Metering

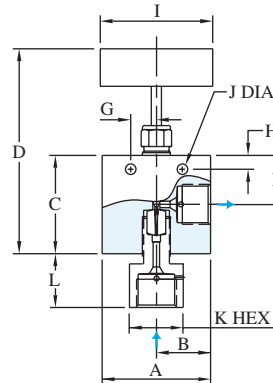


Figure 7

Micro-Metering

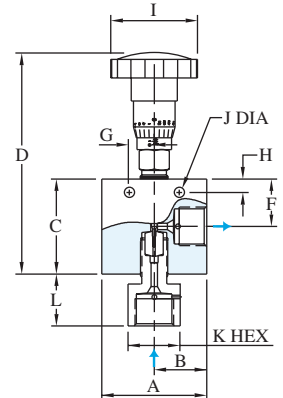


Figure 8

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



# NEEDLE VALVES FOR 60,000 PSI (4140 BAR)

## 3/8" H/P TUBE, CONED AND THREADED

2-way Straight

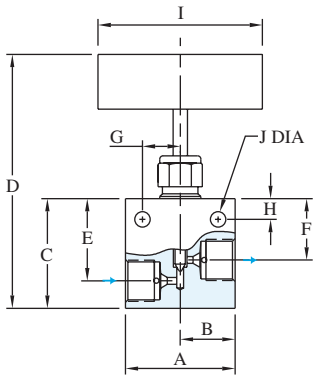


Figure 1

2-way Angle

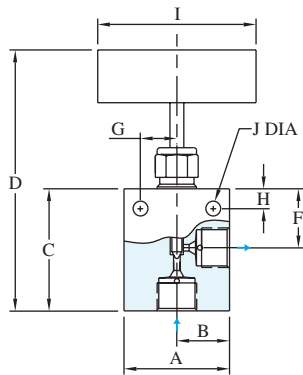


Figure 2

3-way Two on Pressure

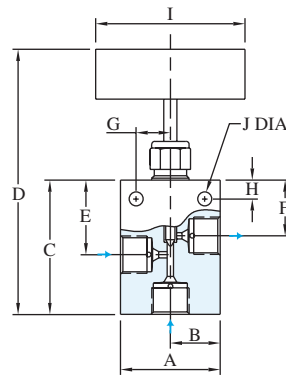


Figure 3

3-way One on Pressure

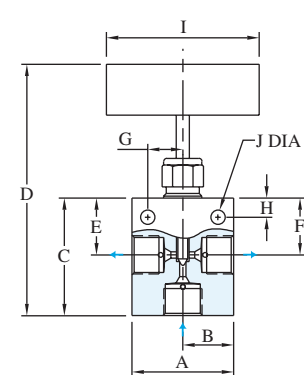


Figure 4

Catalog Number	Stem Style	Connection	A	B	C	D	E	F	G	H	I	J	K	L	Thk.	Fig
60UV61V	Vee	3/8" H/P	2.00"	1.00"	2.25"	5.00"	1.69"	1.31"	0.69"	0.38"	3.00"	0.25"	---	---	1.00"	1
60UV61R	Reg	Tube	(50.8)	(25.4)	(57.2)	(127.0)	(42.9)	(33.3)	(17.5)	(9.7)	(76.2)	(6.4)	---	---	(25.4)	
60UV62V	Vee	3/8" H/P	2.00"	1.00"	2.62"	5.37"	---	1.31"	0.69"	0.38"	3.00"	0.25"	---	---	1.00"	2
60UV62R	Reg	Tube	(50.8)	(25.4)	(66.5)	(136.4)	---	(33.3)	(17.5)	(9.7)	(76.2)	(6.4)	---	---	(25.4)	
60UV63V	Vee	3/8" H/P	2.00"	1.00"	2.75"	5.50"	1.69"	1.31"	0.69"	0.38"	3.00"	0.25"	---	---	1.00"	3
60UV63R	Reg	Tube	(50.8)	(25.4)	(69.9)	(139.7)	(42.9)	(33.3)	(17.5)	(9.7)	(76.2)	(6.4)	---	---	(25.4)	
60UV64V	Vee	3/8" H/P	2.00"	1.00"	2.62"	5.37"	1.31"	1.31"	0.69"	0.38"	3.00"	0.25"	---	---	1.00"	4
60UV64R	Reg	Tube	(50.8)	(25.4)	(66.5)	(136.4)	(33.3)	(33.3)	(17.5)	(9.7)	(76.2)	(6.4)	---	---	(25.4)	
60UV65V	Vee	3/8" H/P	2.00"	1.00"	3.75"	9.25"	1.88"	1.31"	0.69"	0.38"	3.00"	0.25"	---	---	1.00"	5
60UV65R	Reg	Tube	(50.8)	(25.4)	(95.3)	(235.0)	(47.8)	(33.3)	(17.5)	(9.7)	(76.2)	(6.4)	---	---	(25.4)	
60UV66V	Vee	3/8" H/P	2.00"	1.00"	2.62"	5.37"	---	1.31"	0.69"	0.38"	3.00"	0.25"	1.00"	1.21"	1.00"	6
60UV66R	Reg	Tube	(50.8)	(25.4)	(66.5)	(136.4)	---	(33.3)	(17.5)	(9.7)	(76.2)	(6.4)	(25.4)	(30.7)	(25.4)	
60MV66V	Meter	3/8" H/P	2.50"	1.25"	2.62"	6.95"	---	1.31"	0.69"	0.38"	3.00"	0.25"	1.00"	1.21"	1.00"	7
		Tube	(63.5)	(31.8)	(66.5)	(176.5)	---	(33.3)	(17.5)	(9.7)	(76.2)	(6.4)	(25.4)	(30.7)	(25.4)	
60MMV66V	Micro-Meter	3/8" H/P	2.00"	1.00"	2.62"	7.63"	---	1.31"	0.69"	0.38"	3.00"	0.25"	1.00"	1.21"	1.00"	8
		Tube	(50.8)	(25.4)	(66.5)	(193.8)	---	(33.3)	(17.5)	(9.7)	(76.2)	(6.4)	(25.4)	(30.7)	(25.4)	

See page HP-1 for orifice and Cv

2-stem Manifold

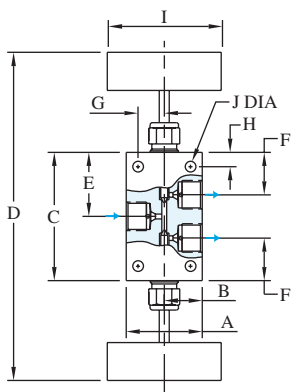


Figure 5

Replaceable Seat

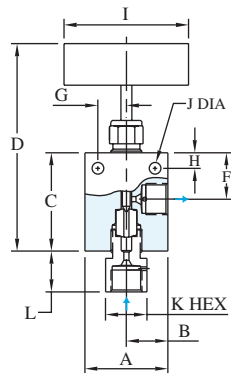


Figure 6

Metering

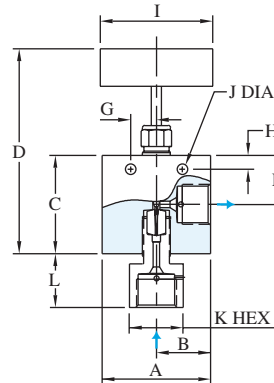


Figure 7

Micro-Metering

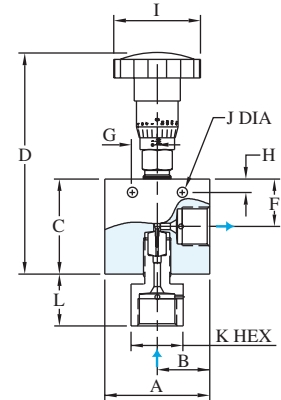


Figure 8

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

# NEEDLE VALVES FOR 60,000 PSI (4140 BAR)

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

2-way Straight

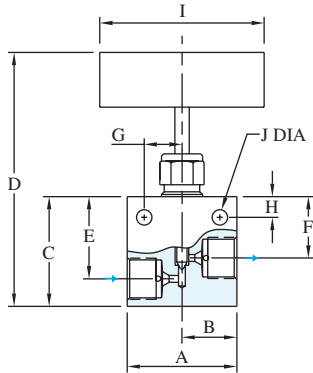


Figure 1

2-way Angle

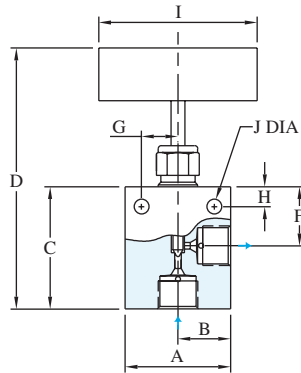


Figure 2

3-way Two on Pressure

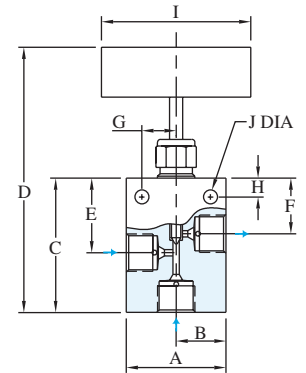


Figure 3

Catalog Number	Stem Style	Connection	A	B	C	D	E	F	G	H	I	J	K	L	Thk.	Fig
60UV91V	Vee	9/16" H/P	2.62"	1.31"	2.50"	5.25"	1.69"	1.31"	0.69"	0.38"	3.00"	0.28"	---	---	1.50"	1
60UV91R	Reg	Tube	(66.5)	(33.3)	(63.5)	(133.4)	(42.9)	(33.3)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(38.1)	
60UV92V	Vee	9/16" H/P	2.62"	1.31"	2.81"	5.56"	---	1.31"	0.69"	0.38"	3.00"	0.28"	---	---	1.50"	2
60UV92R	Reg	Tube	(66.5)	(33.3)	(71.4)	(141.2)	---	(33.3)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(38.1)	
60UV93V	Vee	9/16" H/P	2.62"	1.31"	3.03"	5.78"	1.75"	1.31"	0.69"	0.38"	3.00"	0.28"	---	---	1.50"	3
60UV93R	Reg	Tube	(66.5)	(33.3)	(77.0)	(146.8)	(44.5)	(33.3)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(38.1)	
60UV94V	Vee	9/16" H/P	2.62"	1.31"	2.81"	5.56"	1.31"	1.31"	0.69"	0.38"	3.00"	0.28"	---	---	1.50"	4
60UV94R	Reg	Tube	(66.5)	(33.3)	(71.4)	(141.2)	(33.3)	(33.3)	(17.5)	(9.7)	(76.2)	(7.1)	---	---	(38.1)	
60UV95V	Vee	9/16" H/P	2.62"	1.31"	4.12"	9.62"	2.06"	1.31"	0.69"	0.50"	3.00"	0.28"	---	---	1.50"	5
60UV95R	Reg	Tube	(66.5)	(33.3)	(104.6)	(244.3)	(52.3)	(33.3)	(17.5)	(12.7)	(76.2)	(7.1)	---	---	(38.1)	
60UV96V	Vee	9/16" H/P	2.62"	1.31"	2.62"	5.37"	---	1.31"	0.69"	0.38"	3.00"	0.28"	1.37"	1.39"	1.50"	6
60UV96R	Reg	Tube	(66.5)	(33.3)	(66.5)	(136.4)	---	(33.3)	(17.5)	(9.7)	(76.2)	(7.1)	(34.8)	(35.3)	(38.1)	

See page HP-1 for orifice and Cv

3-way One on Pressure

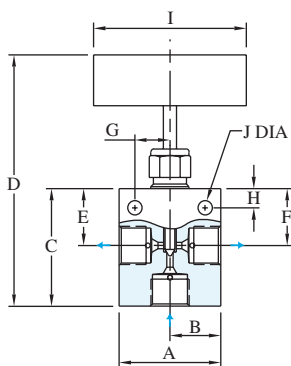


Figure 4

2-stem Manifold

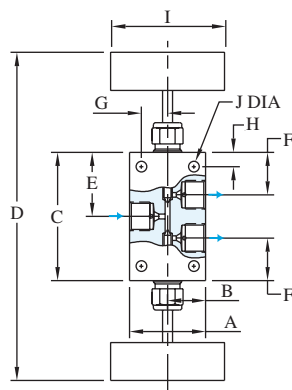


Figure 5

Replaceable Seat

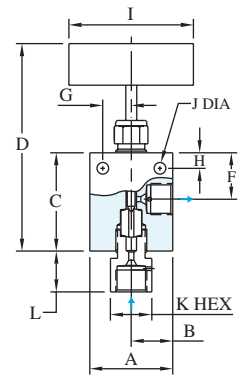


Figure 6



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

