

Medium Pressure Valves

SHNV20 Series - 20,000 psi (1380 bar)

Features

- Pressures to 20,000 psi (1,380 bar)
- Non-rotating stem tips.
- Available sizes are 1/4", 3/8", 9/16", 3/4" and 1".
- Type 316 stainless steel high tensile bodies.
- Choice of VEE or Regulating stem tip.
- PTFE(Teflon) encapsulated packing provides dependable stem and body sealing.

Specifications

- Maximum Working Pressure rating: 20,000psig (1,380bar) @72 F°(22 C°)
- Temperature rating: 0 to 450 F°(-17.8 to 232 C°) with Teflon packing and up to 1200 F°(648 C°) with optional grafoil packing.



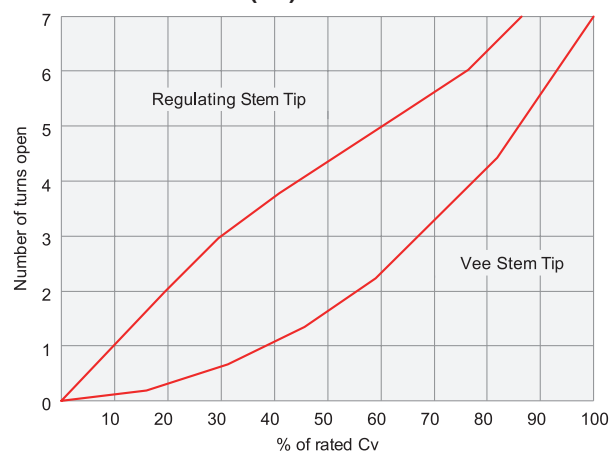
Technical Data

Valve Flow Coefficient

Tube O.D In.	Connection	Orifice In. (mm)	*Cv	Pressure / Temperature Rating psi (bar) @72 F°(22 C°)
1/4"	MP4	0.125" (3.18)	0.31	20,000 psi (1,380 bar)
3/8"	MP6	0.219" (5.56)	0.75	20,000 psi (1,380 bar)
9/16"	MP9	0.312" (7.92)	1.75	20,000 psi (1,380 bar)
3/4"	MP12	0.438" (11.13)	2.80	20,000 psi (1,380 bar)
1"	MP16	0.562" (14.27)	5.20	20,000 psi (1,380 bar)

*Cv values listed are for 2-way straight pattern valves.
For 2-way angle pattern valves, increase Cv value by 50%.

Coefficient Curves (Cv)



Ordering Information

Example : **SHNV 20 - 1V - MP9 - GR - SS**

1
2
3
4
5

1. Body Pattern

- 1 : 2-way straight
- 2 : 2-way angle
- 3 : 3-way, two pressure connections
- 4 : 3-way, one pressure connection
- 5 : 3-way, two stem connection valve
- 6 : Replaceable seat valve

2. Stem Type

- V : Vee stem
- R : Regulating stem

3. Connection Size & Type

Size (inch)	1/4	3/8	1/2	3/4	1
Medium Pressure	MP4	MP6	MP9	MP12	MP16

4. Packing Material

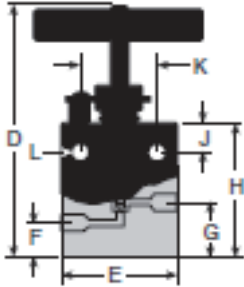
- Nil : PTFE (Standard)
- GR : Grafoil

5. Body Material

- SS : Stainless Steel

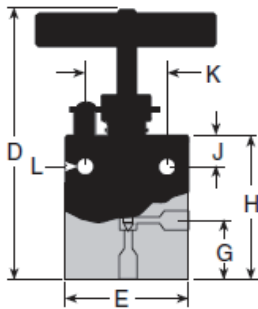
Specifications

Two Way Straight Valves



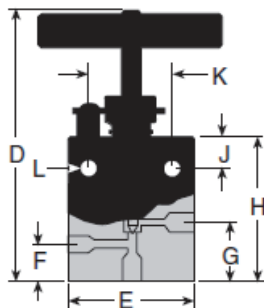
Part Number	Tube O.D	Orifice	Dimensions, inch(mm)								Thick-ness
			D	E	F	G	H	J	K	L	
SHNV20-1V-MP4	1/4 (6.35)	0.125 (3.18)	4.69 (119.13)	2.00 (50.80)	0.38 (9.65)	0.81 (20.57)	2.00 (50.80)	0.38 (9.65)	1.24 (31.50)	0.22 (5.59)	0.75 (19.05)
SHNV20-1V-MP6	3/8 (9.53)	0.219 (5.56)	4.69 (119.13)	2.00 (50.80)	0.38 (9.65)	0.81 (20.57)	2.00 (50.80)	0.38 (9.65)	1.24 (31.50)	0.22 (5.59)	0.75 (19.05)
SHNV20-1V-MP9	9/16 (14.29)	0.312 (7.92)	5.93 (150.86)	2.50 (63.50)	0.50 (12.70)	1.13 (28.70)	2.88 (73.15)	0.50 (12.70)	1.38 (35.05)	0.34 (8.64)	1.00 (25.40)
SHNV20-1V-MP12	3/4 (19.05)	0.438 (11.13)	7.00 (177.80)	3.00 (76.20)	0.75 (19.05)	1.50 (38.10)	3.75 (95.25)	0.63 (16.00)	1.76 (44.70)	0.44 (11.18)	1.38 (35.05)
SHNV20-1V-MP16	1 (25.4)	0.562 (14.27)	9.00 (228.60)	4.12 (104.65)	0.88 (22.35)	1.82 (46.22)	4.63 (117.60)	1.13 (28.70)	2.50 (63.50)	0.56 (14.22)	1.75 (44.45)

Two Way Angle Valves



Part Number	Tube O.D	Orifice	Dimensions, inch(mm)							Thick-ness
			D	E	G	H	J	K	L	
SHNV20-2V-MP4	1/4 (6.35)	0.125 (3.18)	4.81 (122.25)	2.00 (50.80)	1.25 (31.75)	2.44 (61.90)	0.38 (9.65)	1.24 (31.50)	0.22 (5.59)	0.75 (19.05)
SHNV20-2V-MP6	3/8 (9.53)	0.219 (5.56)	4.81 (122.25)	2.00 (50.80)	1.25 (31.75)	2.44 (61.90)	0.38 (9.65)	1.24 (31.50)	0.22 (5.59)	0.75 (19.05)
SHNV20-2V-MP9	9/16 (14.29)	0.312 (7.92)	6.43 (163.56)	2.50 (63.50)	1.63 (41.40)	3.38 (85.85)	0.50 (12.70)	1.38 (35.05)	0.34 (8.64)	1.00 (25.40)
SHNV20-2V-MP12	3/4 (19.05)	0.438 (11.13)	7.50 (190.50)	3.00 (76.20)	2.00 (50.80)	4.25 (107.95)	0.63 (16.00)	1.76 (44.70)	0.44 (11.18)	1.38 (35.05)
SHNV20-2V-MP16	1 (25.4)	0.562 (14.27)	9.00 (228.60)	4.12 (104.65)	2.31 (58.67)	5.12 (130.05)	1.13 (28.70)	2.50 (63.50)	0.56 (14.22)	1.75 (44.45)

Three Way Valves / Two Pressure Connections

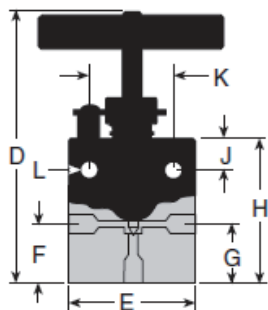


Part Number	Tube O.D	Orifice	Dimensions, inch(mm)								Thick-ness
			D	E	F	G	H	J	K	L	
SHNV20-3V-MP4	1/4 (6.35)	0.125 (3.18)	5.00 (127.00)	2.00 (50.80)	1.00 (25.40)	1.44 (36.57)	2.63 (66.68)	0.38 (9.65)	1.24 (31.50)	0.22 (5.59)	0.75 (19.05)
SHNV20-3V-MP6	3/8 (9.53)	0.219 (5.56)	5.00 (127.00)	2.00 (50.80)	1.00 (25.40)	1.44 (36.57)	2.63 (66.68)	0.38 (9.65)	1.24 (31.50)	0.22 (5.59)	0.75 (19.05)
SHNV20-3V-MP9	9/16 (14.29)	0.312 (7.92)	6.51 (165.59)	2.50 (63.50)	1.25 (31.75)	1.88 (47.75)	3.63 (92.08)	0.50 (12.70)	1.38 (35.05)	0.34 (8.64)	1.00 (25.40)
SHNV20-3V-MP12	3/4 (19.05)	0.438 (11.13)	7.88 (200.03)	3.00 (76.20)	1.63 (41.28)	2.38 (60.45)	4.63 (117.60)	0.63 (16.00)	1.76 (44.70)	0.44 (11.18)	1.38 (35.05)
SHNV20-3V-MP16	1 (25.4)	0.562 (14.27)	9.75 (247.89)	4.12 (104.65)	2.13 (54.10)	3.07 (77.97)	5.88 (149.35)	1.13 (28.70)	2.50 (63.50)	0.56 (14.22)	1.75 (44.45)

• All dimensions in millimeters unless specified as "inch". Dimension are for reference only, subject to change.

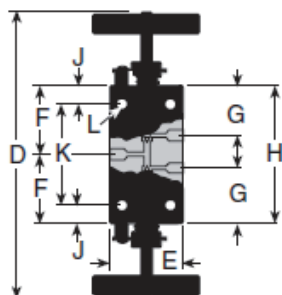
Specifications

Three Way Valves / One Pressure Connection



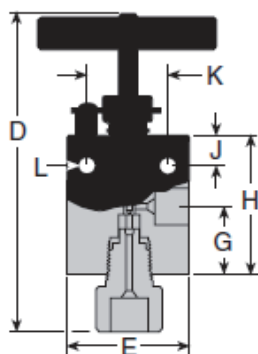
Part Number	Tube O.D	Orifice	Dimensions, inch(mm)								Thick-ness
			D	E	F	G	H	J	K	L	
SHNV20-4V-MP4	1/4 (6.35)	0.125 (3.18)	4.81 (122.25)	2.00 (50.80)	1.25 (31.75)	1.25 (31.75)	2.44 (61.90)	0.38 (9.65)	1.24 (31.50)	0.22 (5.59)	0.75 (19.05)
SHNV20-4V-MP6	3/8 (9.53)	0.219 (5.56)	4.81 (122.25)	2.00 (50.80)	1.25 (31.75)	1.25 (31.75)	2.44 (61.90)	0.38 (9.65)	1.24 (31.50)	0.22 (5.59)	0.75 (19.05)
SHNV20-4V-MP9	9/16 (14.29)	0.312 (7.92)	6.43 (163.56)	2.50 (63.50)	1.63 (41.40)	1.63 (41.40)	3.38 (85.85)	0.50 (12.70)	1.38 (35.05)	0.34 (8.64)	1.00 (25.40)
SHNV20-4V-MP12	3/4 (19.05)	0.438 (11.13)	7.50 (190.50)	3.00 (76.20)	2.00 (50.80)	2.00 (50.80)	4.25 (107.95)	0.63 (16.00)	1.76 (44.70)	0.44 (11.18)	1.38 (35.05)
SHNV20-4V-MP16	1 (25.4)	0.562 (14.27)	9.00 (228.84)	4.12 (104.65)	2.31 (58.67)	2.31 (58.67)	5.12 (130.05)	1.13 (28.70)	2.50 (63.50)	0.56 (14.22)	1.75 (44.45)

Three Way / Two Stem Connection Valves



Part Number	Tube O.D	Orifice	Dimensions, inch(mm)								Thick-ness
			D	E	F	G	H	J	K	L	
SHNV20-5V-MP4	1/4 (6.35)	0.125 (3.18)	8.13 (206.38)	2.00 (50.80)	1.69 (42.85)	1.00 (25.40)	3.38 (85.73)	0.38 (9.65)	2.62 (66.55)	0.22 (5.59)	0.75 (19.05)
SHNV20-5V-MP6	3/8 (9.53)	0.219 (5.56)	8.13 (206.38)	2.00 (50.80)	1.69 (42.85)	1.00 (25.40)	3.38 (85.73)	0.38 (9.65)	2.62 (66.55)	0.22 (5.59)	0.75 (19.05)
SHNV20-5V-MP9	9/16 (14.29)	0.312 (7.92)	11.31 (287.56)	2.50 (63.50)	2.56 (65.07)	1.63 (41.40)	5.13 (130.18)	0.50 (12.70)	4.13 (104.80)	0.34 (8.64)	1.00 (25.40)
SHNV20-5V-MP12	3/4 (19.05)	0.438 (11.13)	13.00 (330.20)	3.00 (76.20)	3.25 (82.55)	2.00 (50.80)	6.50 (165.10)	0.63 (16.00)	5.24 (133.10)	0.44 (11.18)	1.38 (35.05)
SHNV20-5V-MP16	1 (25.4)	0.562 (14.27)	15.44 (392.42)	4.12 (104.65)	3.75 (95.25)	1.88 (47.75)	7.50 (190.50)	1.13 (28.70)	5.24 (133.10)	0.56 (14.22)	1.75 (44.45)

Replaceable Seat Valves



Part Number	Tube O.D	Orifice	Dimensions, inch(mm)							Thick-ness
			D	E	G	H	J	K	L	
SHNV20-6V-MP4	1/4 (6.35)	0.125 (3.18)	5.75 (146.05)	2.00 (50.80)	1.06 (26.92)	2.25 (57.15)	0.38 (9.65)	1.24 (31.50)	0.22 (5.59)	0.75 (19.05)
SHNV20-6V-MP6	3/8 (9.53)	0.219 (5.56)	5.75 (146.05)	2.00 (50.80)	1.06 (26.92)	2.25 (57.15)	0.38 (9.65)	1.24 (31.50)	0.22 (5.59)	0.75 (19.05)
SHNV20-6V-MP9	9/16 (14.29)	0.312 (7.92)	7.34 (186.68)	2.50 (63.50)	1.38 (35.05)	3.13 (79.38)	0.50 (12.70)	1.38 (35.05)	0.34 (8.64)	1.00 (25.40)
SHNV20-6V-MP12	3/4 (19.05)	0.438 (11.13)	9.00 (228.60)	3.00 (76.20)	2.00 (50.80)	4.25 (107.95)	0.63 (16.00)	1.76 (44.70)	0.44 (11.18)	1.38 (35.05)
SHNV20-6V-MP16	1 (25.4)	0.562 (14.27)	11.00 (279.64)	4.12 (104.65)	2.56 (65.02)	5.25 (133.35)	1.13 (28.70)	2.50 (63.50)	0.56 (14.22)	1.75 (44.45)

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