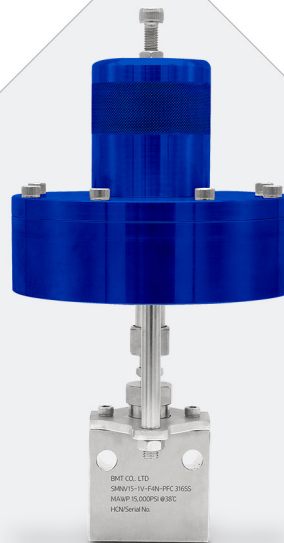


High Pressure Needle Valves

• SHNV30/40/60 Series



High Pressure Needle Valves

SHNV30/40/60 Series up to 60,000 psi (4,140 bar)

Features

- Pressures up to 60,000 psi (4,140 bar)
- Non-rotating stem tips.
- Available sizes : 1/4", 3/8", 9/16", 1".
- 316 stainless steel high tensile bodies.
- Choice of VEE or Regulating stem tip.
- Packing set consists of multiple Teflon packing with nylon back up.



Specifications

- Maximum Working Pressure rating: 60,000psig (4,140bar) @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	Connection	Orifice, In. (mm)	*Cv	Pressure / Temperature Rating @72 F°(22 C°)
1/4"	HP4	0.094 (2.39)	0.12	30,000 psi (2,070 bar)
3/8"	HP6	0.125 (3.18)	0.23	30,000 psi (2,070 bar)
9/16"	HP9	0.187 (4.74)	1.33	30,000 psi (2,070 bar)
1"	HP16	0.438 (11.12)	2.80	30,000 psi (2,070 bar)

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

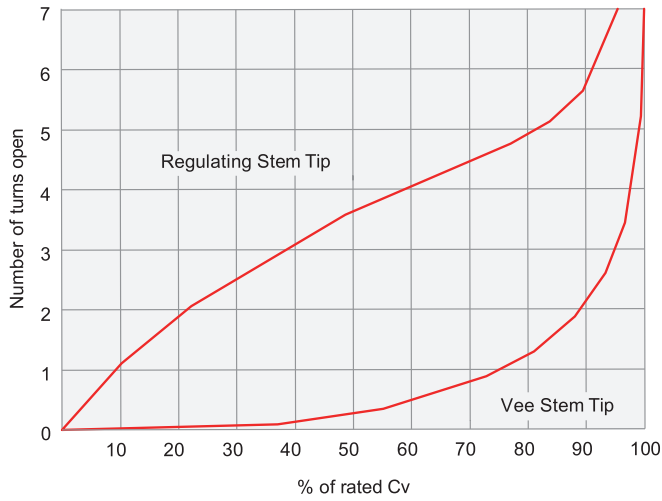
Valve Flow Coefficient

Tube O.D	Connection	Orifice, In. (mm)	*Cv	Pressure / Temperature Rating @72 F°(22 C°)
9/16"	HP9	0.109 (2.76)	0.28	40,000 psi (2,760 bar)
1/4"	HP4	0.062 (1.57)	0.08	60,000 psi (4,140 bar)
3/8"	HP6	0.062 (1.57)	0.09	60,000 psi (4,140 bar)
9/16"	HP9	0.078 (1.98)	0.14	60,000 psi (4,140 bar)

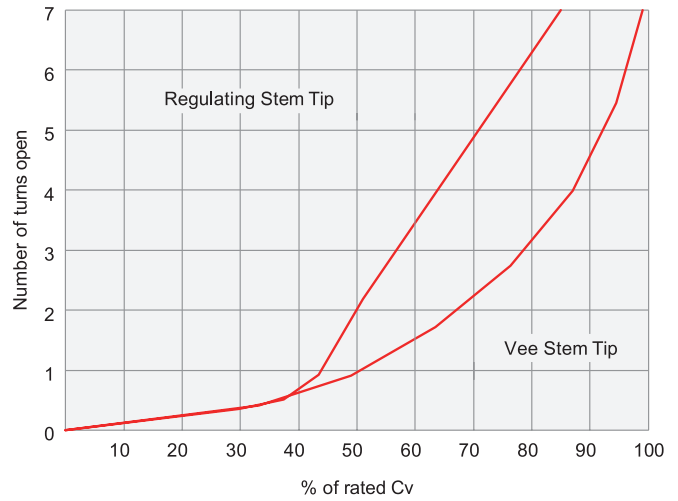
*Cv values listed are for 2-way straight pattern valves. For 2-way angle pattern valves, increase Cv value by 50%.

Technical Data

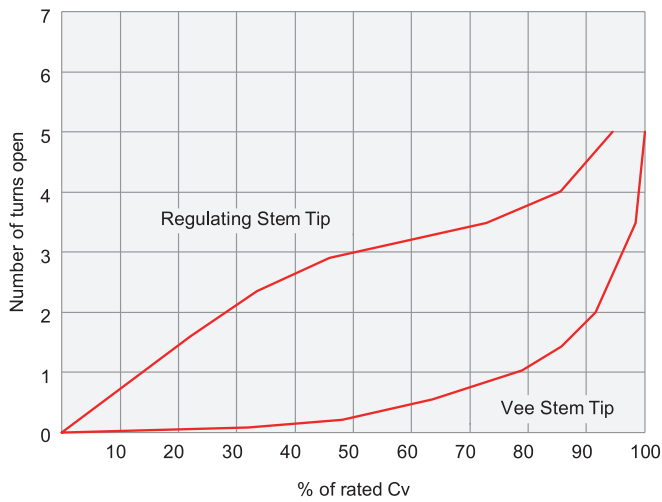
Coefficient Curves (Cv) 30,000psi - 1/4", 3/8", 9/16"



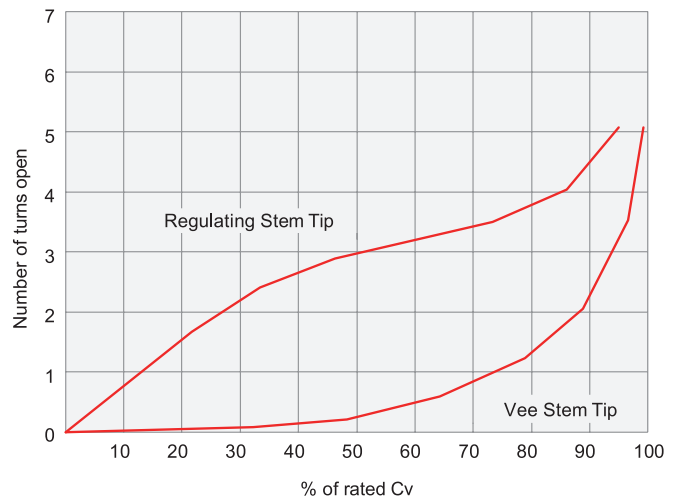
Coefficient Curves (Cv) 30,000psi - 1"



Coefficient Curves (Cv) 40,000psi - 9/16"



Coefficient Curves (Cv) 60,000psi - 1/4", 3/8", 9/16"



Ordering Information

Example :	SHNV30	-	1V	-	HP4	-	GR
	1		2 3		4		5

*316 Stainless Steel is Standard Body Material

1. Valve Series

- SHNV30 = 30,000 psi valve
- SHNV40 = 40,000 psi valve
- SHNV60 = 60,000 psi valve

4. Connection Size & Type

Size (inch)	1/4	3/8	9/16	1
High Pressure C&T	HP4	HP6	HP9	HP16

2. 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

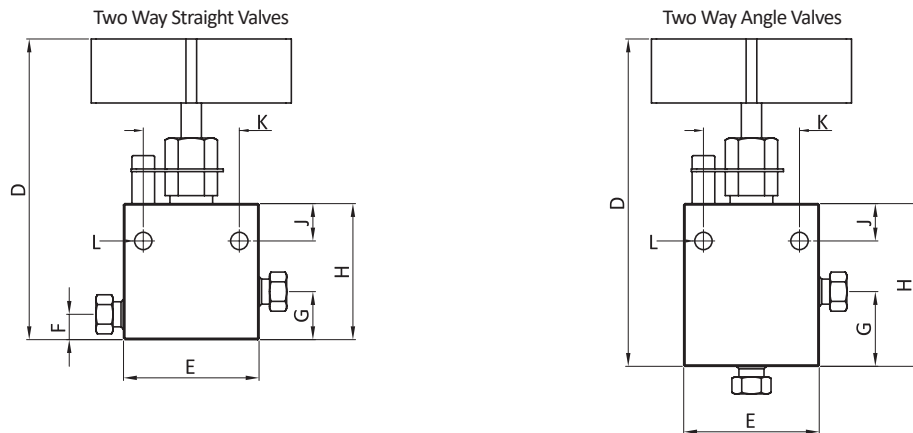
5. Packing Material

- (Blank) = PTFE (Standard)
- GR = Grafoil

3. Stem Type

- V = Vee stem
- R = Regulating stem

Table of Dimensions



Two Way Straight Valves

Part No.	Tube OD, in.(mm)	Orifice, in.(mm)	Dimensions, in. (mm)								Thickness, in.(mm)
			D	E	F	G	H	J	K	L	
SHNV30-1V-HP4	1/4 (6.35)	0.094 (2.39)	4.62 (117.35)	2.00 (50.80)	0.50 (12.70)	0.88 (22.35)	2.00 (50.80)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV30-1V-HP6	3/8 (9.53)	0.125 (3.18)	4.68 (118.87)	2.00 (50.80)	0.50 (12.70)	0.88 (22.35)	2.00 (50.80)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV30-1V-HP9	9/16 (14.29)	0.187 (4.74)	5.06 (128.52)	2.62 (66.55)	0.88 (22.35)	1.32 (33.52)	2.44 (61.98)	0.38 (9.65)	1.38 (35.05)	0.28 (7.11)	1.50 (38.10)
SHNV30-1V-HP16	1 (25.4)	0.438 (11.13)	8.42 (213.86)	4.13 (104.90)	0.94 (23.87)	1.69 (42.92)	4.44 (112.77)	1.12 (28.44)	2.50 (63.50)	0.56 (14.22)	1.75 (44.45)
SHNV40-1V-HP9	9/16 (14.29)	0.109 (2.76)	5.06 (128.52)	2.62 (66.55)	0.75 (19.05)	1.19 (30.22)	2.50 (63.50)	0.38 (9.65)	1.38 (35.05)	0.28 (7.11)	1.50 (38.10)
SHNV60-1V-HP4	1/4 (6.35)	0.062 (1.57)	4.75 (120.65)	2.00 (50.80)	0.43 (10.92)	0.81 (20.57)	2.12 (53.85)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV60-1V-HP6	3/8 (9.53)	0.062 (1.57)	4.87 (123.70)	2.00 (50.80)	0.56 (14.22)	0.94 (23.87)	2.25 (57.15)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV60-1V-HP9	9/16 (14.29)	0.078 (1.98)	5.13 (130.30)	2.62 (66.55)	0.75 (19.05)	1.19 (30.22)	2.50 (63.50)	0.38 (9.65)	1.38 (35.05)	0.28 (7.11)	1.50 (38.10)

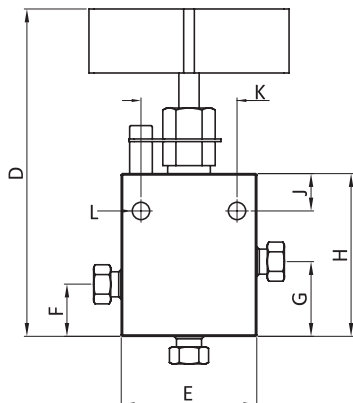
Two Way Angle Valves

Part No.	Tube OD, in.(mm)	Orifice, in.(mm)	Dimensions, in. (mm)							Thickness, in.(mm)
			D	E	G	H	J	K	L	
SHNV30-2V-HP4	1/4 (6.35)	0.094 (2.39)	4.62 (117.35)	2.00 (50.80)	0.88 (22.35)	2.00 (50.80)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV30-2V-HP6	3/8 (9.53)	0.125 (3.18)	4.74 (120.40)	2.00 (50.80)	1.00 (25.40)	2.12 (53.85)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV30-2V-HP9	9/16 (14.29)	0.187 (4.74)	5.06 (128.52)	2.62 (66.55)	1.32 (33.52)	2.44 (61.98)	0.38 (9.65)	1.38 (35.05)	0.28 (7.11)	1.50 (38.10)
SHNV30-2V-HP16	1 (25.4)	0.438 (11.13)	9.35 (237.49)	4.13 (104.90)	2.37 (60.20)	5.12 (130.04)	1.12 (28.44)	2.50 (63.50)	0.56 (14.22)	1.75 (44.45)
SHNV40-2V-HP9	9/16 (14.29)	0.109 (2.76)	5.37 (136.40)	2.62 (66.55)	1.50 (38.10)	2.81 (71.37)	0.38 (9.65)	1.38 (35.05)	0.28 (7.11)	1.50 (38.10)
SHNV60-2V-HP4	1/4 (6.35)	0.062 (1.57)	5.00 (127.00)	2.00 (50.80)	1.07 (27.17)	2.38 (60.45)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV60-2V-HP6	3/8 (9.53)	0.062 (1.57)	5.25 (133.35)	2.00 (50.80)	1.31 (33.27)	2.62 (66.55)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV60-2V-HP9	9/16 (14.29)	0.078 (1.98)	5.44 (138.18)	2.62 (66.55)	1.50 (38.10)	2.81 (71.37)	0.38 (9.65)	1.38 (35.05)	0.28 (7.11)	1.50 (38.10)

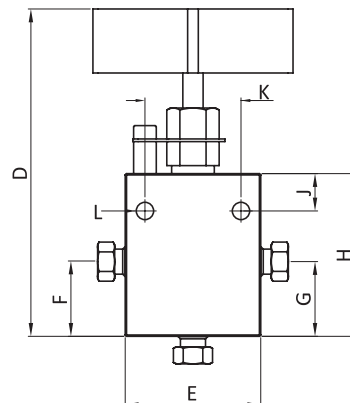
- Dimensions and Drawings are for reference only and are subject to change without prior notice.
- Unless otherwise specified, all dimensions are in millimeters.
- Sizes, pressure classes, and end connections not listed are available upon request.
- Dimensions shown with nuts finger-tight, where applicable.

Table of Dimensions

Three Way Valves / Two Pressure Connections



Three Way Valves / One Pressure Connection



Three Way Valves / Two Pressure Connections

Part No.	Tube OD, in.(mm)	Orifice, in.(mm)	Dimensions, in.(mm)								Thickness, in.(mm)
			D	E	F	G	H	J	K	L	
SHNV30-3V-HP4	1/4 (6.35)	0.094 (2.39)	4.74 (120.40)	2.00 (50.80)	0.62 (15.74)	1.00 (25.40)	2.12 (53.85)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV30-3V-HP6	3/8 (9.53)	0.125 (3.18)	5.12 (130.05)	2.00 (50.80)	1.00 (25.40)	1.38 (35.05)	2.50 (63.50)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV30-3V-HP9	9/16 (14.29)	0.187 (4.74)	5.49 (139.45)	2.62 (66.55)	1.32 (33.52)	1.76 (44.70)	2.88 (73.15)	0.38 (9.65)	1.38 (35.05)	0.28 (7.11)	1.50 (38.10)
SHNV30-3V-HP16	1 (25.4)	0.438 (11.13)	9.71 (246.63)	4.13 (104.90)	2.38 (60.45)	2.81 (71.37)	5.56 (141.22)	1.12 (28.44)	2.50 (63.50)	0.56 (14.22)	1.75 (44.45)
SHNV40-3V-HP9	9/16 (14.29)	0.109 (2.76)	6.06 (153.92)	2.62 (66.55)	1.43 (36.32)	1.88 (47.75)	3.31 (84.07)	0.38 (9.65)	1.38 (35.05)	0.28 (7.11)	1.50 (38.10)
SHNV60-3V-HP4	1/4 (6.35)	0.062 (1.57)	4.74 (120.40)	2.00 (50.80)	0.65 (17.52)	1.07 (27.17)	2.38 (60.45)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV60-3V-HP6	3/8 (9.53)	0.062 (1.57)	4.87 (123.70)	2.00 (50.80)	1.06 (26.92)	1.44 (36.57)	2.75 (69.85)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV60-3V-HP9	9/16 (14.29)	0.078 (1.98)	5.13 (130.30)	2.62 (66.55)	1.28 (32.51)	1.72 (43.68)	3.03 (76.96)	0.38 (9.65)	1.38 (35.05)	0.28 (7.11)	1.50 (38.10)

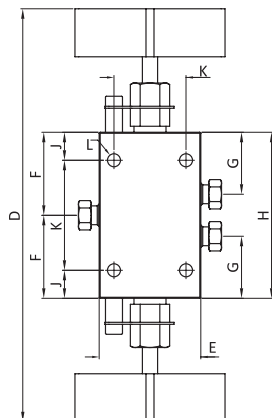
Three Way Valves / One Pressure Connection

Part No.	Tube OD, in.(mm)	Orifice, in.(mm)	Dimensions, in.(mm)								Thickness, in.(mm)
			D	E	F	G	H	J	K	L	
SHNV30-4V-HP4	1/4 (6.35)	0.094 (2.39)	4.62 (117.35)	2.00 (50.80)	0.88 (22.35)	0.88 (22.35)	2.00 (50.80)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV30-4V-HP6	3/8 (9.53)	0.125 (3.18)	4.74 (120.40)	2.00 (50.80)	1.00 (25.40)	1.00 (25.40)	2.12 (53.85)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV30-4V-HP9	9/16 (14.29)	0.187 (4.74)	5.12 (130.05)	2.62 (66.55)	1.32 (33.52)	1.32 (33.52)	2.44 (61.98)	0.38 (9.65)	1.38 (35.05)	0.28 (7.11)	1.50 (38.10)
SHNV30-4V-HP16	1 (25.4)	0.438 (11.13)	9.35 (237.49)	4.13 (104.90)	2.37 (60.20)	2.37 (60.20)	5.12 (130.04)	1.12 (28.44)	2.50 (63.50)	0.56 (14.22)	1.75 (44.45)
SHNV40-4V-HP9	9/16 (14.29)	0.109 (2.76)	5.37 (136.40)	2.62 (66.55)	1.50 (38.10)	1.50 (38.10)	2.81 (71.37)	0.38 (9.65)	1.38 (35.05)	0.28 (7.11)	1.50 (38.10)
SHNV60-4V-HP4	1/4 (6.35)	0.062 (1.57)	5.00 (127.00)	2.00 (50.80)	1.07 (27.17)	1.07 (27.17)	2.38 (60.45)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV60-4V-HP6	3/8 (9.53)	0.062 (1.57)	5.25 (133.35)	2.00 (50.80)	1.31 (33.27)	1.31 (33.27)	2.62 (66.55)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV60-4V-HP9	9/16 (14.29)	0.078 (1.98)	5.44 (138.18)	2.62 (66.55)	1.50 (38.10)	1.50 (38.10)	2.81 (71.37)	0.38 (9.65)	1.38 (35.05)	0.28 (7.11)	1.50 (38.10)

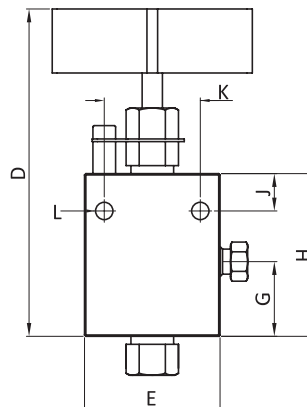
- Dimensions and Drawings are for reference only and are subject to change without prior notice.
 - Unless otherwise specified, all dimensions are in millimeters.
 - Sizes, pressure classes, and end connections not listed are available upon request.
 - Dimensions shown with nuts finger-tight, where applicable.

Table of Dimensions

Three Way / Two Stem Connection Valves



Replaceable Seat Valves



Three Way / Two Stem Connection Valves

Part No.	Tube OD, in.(mm)	Orifice, in.(mm)	Dimensions, in.(mm)								Thickness, in.(mm)
			D	E	F	G	H	J	K	L	
SHNV30-5V-HP4	1/4 (6.35)	0.094 (2.39)	5.68 (144.27)	2.00 (50.80)	1.53 (38.86)	1.12 (28.45)	3.06 (77.72)	0.38 (9.65)	2.30 (58.42)	0.22 (5.59)	1.00 (25.40)
SHNV30-5V-HP6	3/8 (9.53)	0.125 (3.18)	5.87 (149.10)	2.00 (50.80)	1.62 (41.27)	1.12 (28.45)	3.25 (82.55)	0.38 (9.65)	2.49 (63.24)	0.22 (5.59)	1.00 (25.40)
SHNV30-5V-HP9	9/16 (14.29)	0.187 (4.74)	6.37 (161.80)	2.62 (66.55)	1.87 (47.62)	1.12 (28.45)	3.75 (95.25)	0.38 (9.65)	2.99 (75.94)	0.28 (7.11)	1.50 (38.10)
SHNV30-5V-HP16	1 (25.4)	0.438 (11.13)	11.81 (299.97)	4.13 (104.90)	3.87 (98.42)	2.75 (69.85)	7.75 (196.85)	1.12 (28.44)	5.51 (139.95)	0.56 (14.22)	1.75 (44.45)
SHNV40-5V-HP9	9/16 (14.29)	0.109 (2.76)	9.12 (231.65)	2.62 (66.55)	2.06 (52.32)	1.31 (33.27)	4.12 (104.65)	0.38 (9.65)	3.36 (85.34)	0.28 (7.11)	1.50 (38.10)
SHNV60-5V-HP4	1/4 (6.35)	0.062 (1.57)	6.07 (154.18)	2.00 (50.80)	1.72 (43.68)	1.31 (33.27)	3.44 (87.38)	0.38 (9.65)	2.68 (68.07)	0.22 (5.59)	1.00 (25.40)
SHNV60-5V-HP6	3/8 (9.53)	0.062 (1.57)	6.37 (161.80)	2.00 (50.80)	1.87 (47.62)	1.31 (33.27)	3.75 (95.25)	0.38 (9.65)	2.99 (75.94)	0.22 (5.59)	1.00 (25.40)
SHNV60-5V-HP9	9/16 (14.29)	0.078 (1.98)	6.37 (161.80)	2.62 (66.55)	2.06 (52.32)	1.31 (33.27)	4.12 (104.65)	0.38 (9.65)	3.36 (85.34)	0.28 (7.11)	1.50 (38.10)

Replaceable Seat Valves

Part No.	Tube OD, in.(mm)	Orifice, in.(mm)	Dimensions, in.(mm)							Thickness, in.(mm)
			D	E	G	H	J	K	L	
SHNV30-6V-HP4	1/4 (6.35)	0.094 (2.39)	5.80 (147.32)	2.00 (50.80)	1.26 (32.00)	2.38 (60.45)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV30-6V-HP6	3/8 (9.53)	0.125 (3.18)	6.05 (153.67)	2.00 (50.80)	1.26 (32.00)	2.38 (60.45)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV30-6V-HP9	9/16 (14.29)	0.187 (4.74)	6.45 (163.83)	2.62 (66.55)	1.25 (31.75)	2.44 (61.98)	0.38 (9.65)	1.38 (35.05)	0.28 (7.11)	1.50 (38.10)
SHNV30-6V-HP16	1 (25.4)	0.438 (11.13)	10.56 (268.22)	4.13 (104.90)	2.31 (58.67)	5.12 (130.04)	1.12 (28.44)	2.50 (63.50)	0.56 (14.22)	1.75 (44.45)
SHNV40-6V-HP9	9/16 (14.29)	0.109 (2.76)	6.45 (163.83)	2.62 (66.55)	1.25 (31.75)	2.44 (61.98)	0.38 (9.65)	1.38 (35.05)	0.28 (7.11)	1.50 (38.10)
SHNV60-6V-HP4	1/4 (6.35)	0.062 (1.57)	6.28 (159.51)	2.00 (50.80)	1.31 (33.27)	2.62 (66.55)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV60-6V-HP6	3/8 (9.53)	0.062 (1.57)	6.52 (165.60)	2.00 (50.80)	1.31 (33.27)	2.62 (66.55)	0.38 (9.65)	1.38 (35.05)	0.22 (5.59)	1.00 (25.40)
SHNV60-6V-HP9	9/16 (14.29)	0.078 (1.98)	6.90 (175.26)	2.62 (66.55)	1.31 (33.27)	2.62 (66.55)	0.38 (9.65)	1.38 (35.05)	0.28 (7.11)	1.50 (38.10)

- Dimensions and Drawings are for reference only and are subject to change without prior notice.
- Unless otherwise specified, all dimensions are in millimeters.
- Sizes, pressure classes, and end connections not listed are available upon request.
- Dimensions shown with nuts finger-tight, where applicable.



BMT Co., Ltd.

| Head Quarter & 1st Factory

(50568) 경상남도 양산시 산막공단남11길 35 (북정동)

35, Sanmakgongdannam 11-gil, Yangsan-si, Gyeongsangnam-do, 50568, South Korea

TEL: +82 55 783 1000 FAX: +82 55 783 1111

E-mail: superlok@superlok.com

| 2nd Factory

(50568) 경상남도 양산시 산막공단남8길 29 (호계동)

29, Sanmakgongdannam 8-gil, Yangsan-si, Gyeongsangnam-do, 50568, South Korea

Fittings & Valves

INDUSTRIAL

Instrumentation Tube Fittings

i-Fitting®

Ball/Plug Valves

Double Block & Bleed Valves

Manifold/Gauge Valves

Globe/Needle Valves

Cryogenic Valves

Check/Relief/Excess Flow Valves

Medium/High Pressure Fittings & Valves

ULTRA HIGH PURITY

Weld & Metal Face Seal Fittings

Bend Fittings

Diaphragm Valves

Bellows Valves

Check Valves

Clean Ball Valves

Regulators

Electric & Energy

PRODUCT & SOLUTION

Metal Clad Switchgear (MCSG)

Compact Switchboard

Motor Control Center (MCC)

Smart Distribution Board

Energy Management System (EMS)

COMPONENTS (BMT PATENTED)

MCBS (Molded Case Busbar System)

MCPD (Molded Case Power Distributor)

Smart-eye (AC/DC Meter)