BV31 SERIES HIGH PRESSURE BALL VALVE



Straight Pattern (Manual)



Angle Pattern



3-Way Valve



Straight Pattern
(Pneumatic, with Limit Switch)



Straight Pattern
(Pneumatic, without Limit Switch)

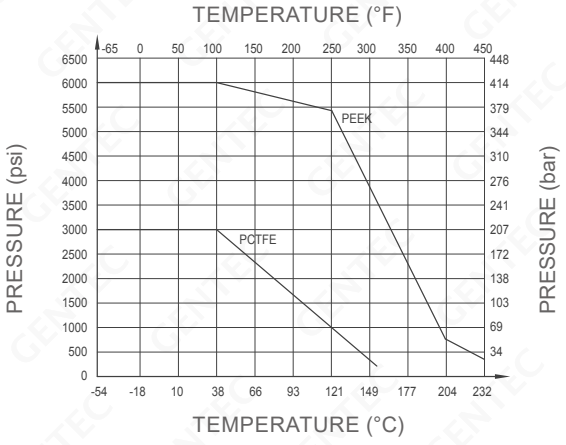
GENTEC® BV31 series High Pressure Ball Valve is made of high quality raw materials and can be used up to 6000 psi. It is mainly used in natural gas, petroleum and petrochemical, experimental analysis and other industries. Specially treated stems and special-material seals greatly increase valve sealing performance and service life.

Features

- Maximum operating pressure: 6000 psi (415bar)
- Operating temperature: -65.2°F ~ 449.6°F (-54°C ~ 232°C)
- Manual and pneumatic options are available
- End connections: GENLOK and NPT
- Valve Pattern: Straight, Angle and 3-Way
- Panel mounting available
- Low torque design
- Cleaned and degreased for oxygen service according to CGA G-4.1 and ASTM G93 Class C, respectively
- Every valve is factory tested for leakage with Nitrogen at 6000 psi

Note: For angle or 3-way ball valves, gas medium can only enter from the bottom.

Temperature Pressure Curve



Pneumatic Actuator According to ISO 5211 Standard

Category	Parameter Requirements
Air Source	Dry and clean air
Recommended gas source pressure	5.5 bar
Maximum air source pressure	8 bar
Lubrication	Each actuator has been added with sufficient lubricant to ensure normal operation
Installation	The actuator can be installed at any angle both indoors and outdoors

Pneumatic Actuator Working Condition

Please select the pneumatic actuator corresponding to the temperature range in the following table according to the operating conditions of the ball valve.

Pneumatic Actuator	Code	Temperature Range
High-temperature Type	HT	-4~248°F (-20~120°C)
Low-temperature Type	LT	-40~176°F (-40~80°C)

Limit Switch According to VDI/VDE 3845 Standard

- Housing: Die-cast aluminum alloy with powder coating for superior corrosion resistance
- Ingress Protection: IP68 dust tight and waterproof
- Top Cover: Waterproof transparent polycarbonate
- Status Indication: Red/green visual indicators for switch status
- Operating Temperature Range: -40 to 85°C (-40 to 185°F)
- Integrated standard port for solenoid valve connection
- Electrical Connection: 1/2" NPT
- Contact Configuration: 2SPDT
- Mounting: Compliant with NAMUR mounting standard
- Supplied with mounting bracket as standard equipment

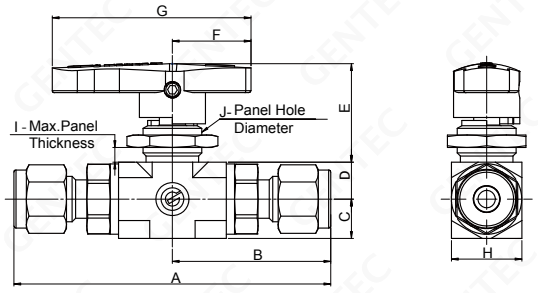
Minimum Operating Pressure

The maximum execution pressure is 8 bar (116 psi).
For the minimum execution pressure, please refer to the minimum execution pressure in the table below.

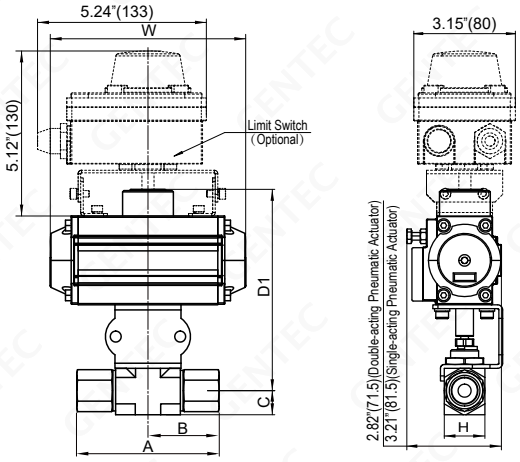
Valve Series	Orifice	Double-acting Pneumatic Actuator Model	Single-acting Pneumatic Actuator Model		Execution Mode	
					Single-acting	Double-acting
			Normally Close	Normally Open	Minimum Execution Pressure	
BV315	2.4 mm, 4.2 mm	PA050-00D	PA050-S06C	PA050-S06O	36 psi (2.5 bar)	36 psi (2.5 bar)
BV318	10.3 mm	PA050-00D	PA065-S11C	PA065-S11O	72 psi (5.0 bar)	36 psi (2.5 bar)

Dimensions

Straight Pattern



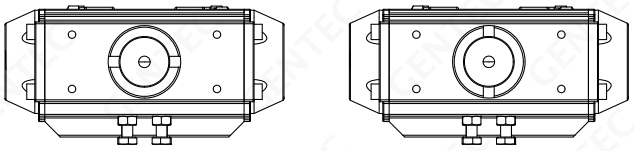
Manual

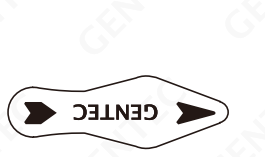


Pneumatic

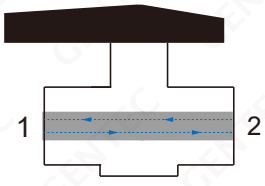
Flow Path Designator

Straight Pattern

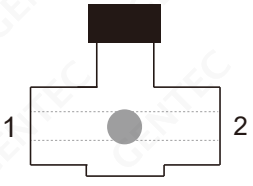








OPEN



CLOSE

Dimensions

Manual Model Number	Pneumatic Model Number	Orifice in.(mm)	Cv	Inlet / Outlet Connection	Dimensions in.(mm) A	B	C	D	D1	E	F	G	H	W	I	J
SS-BV315-TF2	SS-BV315-TF2-PD	0.09 (2.4)	0.2	1/8" GENLOK	2.31 (58.8)	1.16 (29.4)	0.37 (9.5)	0.35 (8.9)	5.6 (142)	0.94 (23.8)	0.75 (19)	1.89 (48)	0.67 (17)	6.06 (154)	0.25 (6.3)	0.56 (14.2)
	SS-BV315-TF2-PO															
	SS-BV315-TF2-PC															
SS-BV315-TF3M	SS-BV315-TF3M-PD			3mm GENLOK	2.38 (60.4)	1.19 (30.2)										
	SS-BV315-TF3M-PO															
	SS-BV315-TF3M-PC															
SS-BV315-FNT2	SS-BV315-FNT2-PD	0.17 (4.2)	0.9	1/8" Female NPT	2.25 (57.2)	1.13 (28.6)										
	SS-BV315-FNT2-PO															
	SS-BV315-FNT2-PC															
SS-BV315-NT2	SS-BV315-NT2-PD			1/8" Male NPT	2.33 (59.2)	1.17 (29.6)										
	SS-BV315-NT2-PO															
	SS-BV315-NT2-PC															
SS-BV315-TF4	SS-BV315-TF4-PD			1/4" GENLOK	3.01 (76.5)	1.51 (38.25)										
	SS-BV315-TF4-PO															
	SS-BV315-TF4-PC															
SS-BV315-TF6M	SS-BV315-TF6M-PD			6mm GENLOK	3.08 (78.3)	1.54 (39.15)										
	SS-BV315-TF6M-PO															
	SS-BV315-TF6M-PC															
SS-BV315-NT4	SS-BV315-NT4-PD			1/4" Male NPT	2.57 (65.4)	1.29 (32.7)										
	SS-BV315-NT4-PO															
	SS-BV315-NT4-PC															
SS-BV316-TF6	-	0.25 (6.4)	2.3	3/8" GENLOK	3.62 (92.0)	1.81 (46.0)	0.49 (12.5)	0.48 (12.2)	-	1.25 (31.8)	0.91 (23)	2.44 (62)	0.91 (23)	-	0.33 (8.3)	0.75 (19)
SS-BV316-TF8M	-			8mm GENLOK	3.59 (91.3)	1.80 (45.65)										
SS-BV316-TF10M	-			10mm GENLOK	3.65 (92.8)	1.83 (46.4)										
SS-BV316-NT6	-			3/8" Male NPT	3.08 (78.2)	1.54 (39.1)										
SS-BV316-NT4	-			1/4" Male NPT												
SS-BV316-FNT4	-			1/4" Female NPT	2.86 (72.6)	1.43 (36.3)										
SS-BV318-TF8	SS-BV318-TF8-PD	0.41 (10.3)	6.4	1/2" GENLOK	4.68 (118.8)	2.34 (59.4)	0.75 (19)	0.69 (17.6)	6.34 (161)	1.55 (39.3)	1.10 (28)	3.27 (83)	1.26 (32)	5.94 (151)	0.39 (9.8)	0.87 (22.1)
	SS-BV318-TF8-PO								7.09 (180)					6.61 (168)		
	SS-BV318-TF8-PC															
SS-BV318-TF12	SS-BV318-TF12-PD			3/4" GENLOK	4.66 (118.3)	2.33 (59.15)			6.34 (161)					5.94 (151)		
	SS-BV318-TF12-PO								7.09 (180)					6.61 (168)		
	SS-BV318-TF12-PC															
SS-BV318-TF12M	SS-BV318-TF12M-PD			12mm GENLOK					6.34 (161)					5.94 (151)		
	SS-BV318-TF12M-PO								7.09 (180)					6.61 (168)		
	SS-BV318-TF12M-PC															
SS-BV318-TF14M	SS-BV318-TF14M-PD			14mm GENLOK					6.34 (161)					5.94 (151)		
	SS-BV318-TF14M-PO								7.09 (180)					6.61 (168)		
	SS-BV318-TF14M-PC															
SS-BV318-TF16M	SS-BV318-TF16M-PD			16mm GENLOK					6.34 (161)					5.94 (151)		
	SS-BV318-TF16M-PO								7.09 (180)					6.61 (168)		
	SS-BV318-TF16M-PC															

Dimensions

Manual Model Number	Pneumatic Model Number	Orifice in.(mm)	Cv	Inlet / Outlet Connection	Dimensions in.(mm) A	B	C	D	D1	E	F	G	H	W	I	J
SS-BV318-TF18M	SS-BV318-TF18M-PD	0.41 (10.3)	6.4	18mm GENLOK	4.66 (118.3)	2.33 (59.15)	0.75 (19)	0.69 (17.6)	6.34 (161)	1.55 (39.3)	1.10 (28)	3.27 (83)	1.26 (32)	5.94 (151)	0.39 (9.8)	0.87 (22.1)
	SS-BV318-TF18M-PO								7.09 (180)					6.61 (168)		
	SS-BV318-TF18M-PC															
SS-BV318-TF22M	SS-BV318-TF22M-PD			22mm GENLOK	4.82 (122.4)	2.41 (61.2)			6.34 (161)					5.94 (151)		
	SS-BV318-TF22M-PO								7.09 (180)					6.61 (168)		
	SS-BV318-TF22M-PC															
SS-BV318-FNT12	SS-BV318-FNT12-PD	0.41 (10.3)	6.4	3/4" Female NPT	4.30 (109.2)	2.15 (54.6)	0.75 (19)	0.69 (17.6)	6.34 (161)	1.55 (39.3)	1.10 (28)	3.27 (83)	1.26 (32)	5.94 (151)	0.39 (9.8)	0.87 (22.1)
	SS-BV318-FNT12-PO								7.09 (180)					6.61 (168)		
	SS-BV318-FNT12-PC															
SS-BV318-FNT8	SS-BV318-FNT8-PD			1/2" Female NPT					6.34 (161)					5.94 (151)		
	SS-BV318-FNT8-PO								7.09 (180)					6.61 (168)		
	SS-BV318-FNT8-PC															
SS-BV318-FNT6	SS-BV318-FNT6-PD			3/8" Female NPT	3.90 (99.0)	1.95 (49.5)			6.34 (161)					5.94 (151)		
	SS-BV318-FNT6-PO								7.09 (180)					6.61 (168)		
	SS-BV318-FNT6-PC															
SS-BV318-NT8	SS-BV318-NT8-PD	0.41 (10.3)	6.4	1/2" Male NPT	4.44 (112.8)	2.22 (56.4)	0.75 (19)	0.69 (17.6)	6.34 (161)	1.55 (39.3	1.10 (28)	3.27 (83)	1.26 (32)	5.94 (151)	0.39 (9.8)	0.87 (22.1)
	SS-BV318-NT8-PO								7.09 (180)					6.61 (168)		
	SS-BV318-NT8-PC															
SS-BV318-NT12	SS-BV318-NT12-PD			3/4" Male NPT					6.34 (161)					5.94 (151)		
	SS-BV318-NT12-PO								7.09 (180)					6.61 (168)		
	SS-BV318-NT12-PC															

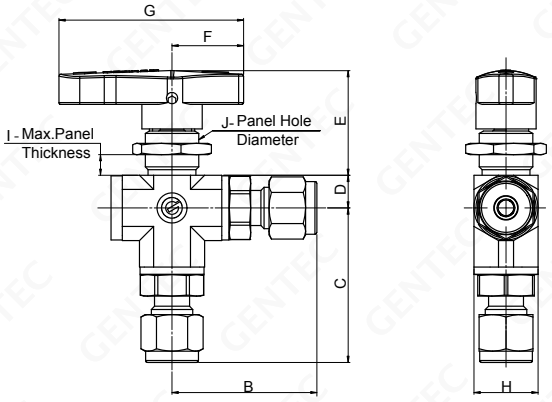
Ordering Information

Ex: SS	- BV31	6		- NT4	- K	- PD	- HT	B	- LS
Body	Serial Number	Orifice (mm)	Valve Pattern	Inlet / Outlet Connection	Sealing Gasket	Pneumatic Actuator Mode	Pneumatic Actuator Working Condition	Options	Limit Switch
SS: 316	BV31	5: 2.4, 4.2 8: 10.3	Blank: Straight	NT4: 1/4" Male NPT TF12: 3/4" GENLOK	K: PCTFE E: PEEK	Blank: Manual PD: 90° Double-acting Pneumatic Actuator (normally open) PC: 90° Single-acting Pneumatic Actuator (normally close) PO: 90° Single-acting Pneumatic Actuator (normally open)	HT: High-temperature Type LT: Low-temperature Type	Blank: Standard B: Metal Handle D: Special Cleaning	None: without Limit Switch LS: with Limit Switch

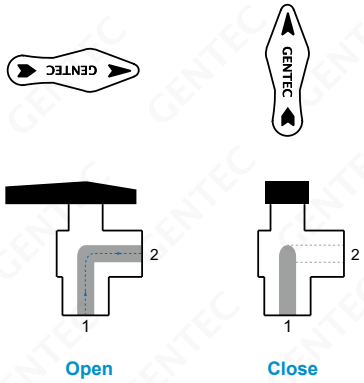
*: The pneumatic actuator is available in the BV315 and BV318 series.
*: For more connection options contact GENTEC.

Dimensions

Angle Pattern



Flow Path Designator



Model Number	Orifice in.(mm)	Cv	Inlet / Outlet Connection	Dimensions in.(mm) B	C	D	E	F	G	H	I	J
SS-BV315A-FNT2	0.17 (4.2)	0.9	1/8" Female NPT	1.13 (28.8)	1.23 (31.3)	0.34 (8.7)	1.10 (27.9)	0.75 (19.0)	1.93 (49.0)	0.67 (17.0)	0.25 (6.3)	0.56 (14.2)
SS-BV315A-NT2			1/8" Male NPT	1.17 (29.8)	1.27 (32.3)							
SS-BV315A-NT4			1/4" Male NPT	1.30 (32.9)	1.39 (35.4)							
SS-BV315A-TF4			1/4" GENLOK	1.48 (37.5)	1.61 (41.0)							
SS-BV315A-TF6M			6mm GENLOK									
SS-BV316A-TF6	0.25 (6.4)	2.3	3/8" GENLOK	1.83 (46.5)	2.01 (51.0)	0.60 (15.2)	1.28 (32.6)	0.91 (23.0)	2.44 (62.0)	0.91 (23.0)	0.33 (8.3)	0.75 (19.0)
SS-BV316A-TF8M			8mm GENLOK	1.75 (44.5)	1.93 (49.0)							
SS-BV316A-TF10M			10mm GENLOK	1.73 (44.0)	1.91 (48.5)							
SS-BV316A-FNT4			1/4" Female NPT	1.51 (38.4)	1.69 (42.9)							
SS-BV316A-NT4			1/4" Male NPT	1.62 (41.2)	1.80 (45.7)							
SS-BV316A-NT6			3/8" Male NPT									
SS-BV318A-TF8	0.41 (10.3)	6.4	1/2" GENLOK	2.28 (58.0)	2.59 (65.7)	0.89 (22.6)	1.53 (38.9)	1.10 (28.0)	3.27 (83.0)	1.26 (32.0)	0.39 (9.8)	0.87 (22.1)
SS-BV318A-TF12			3/4" GENLOK	2.38 (60.4)	2.68 (68.1)							
SS-BV318A-TF12M			12mm GENLOK									
SS-BV318A-TF14M			14mm GENLOK									
SS-BV318A-TF16M			16mm GENLOK									
SS-BV318A-TF18M			18mm GENLOK									
SS-BV318A-FNT6			3/8" Female NPT	2.00 (50.7)	2.30 (58.4)							
SS-BV318A-FNT8			1/2" Female NPT	2.20 (55.8)	2.50 (63.5)							
SS-BV318A-FNT12			3/4" Female NPT									
SS-BV318A-NT8			1/2" Male NPT	2.43 (61.8)	2.74 (69.5)							
SS-BV318A-NT12			3/4" Male NPT									

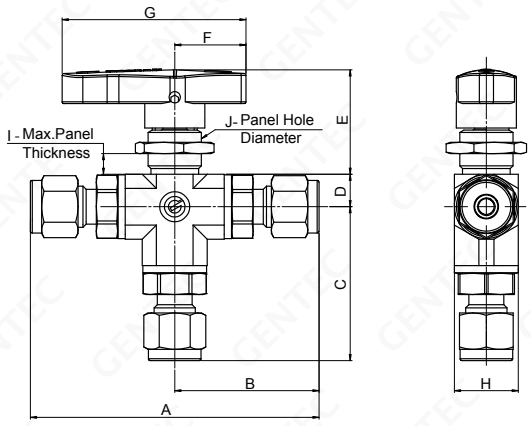
Ordering Information

Ex: SS	- BV31	6	A	- NT4	- K	B
Body	Serial Number	Orifice (mm)	Valve Pattern	Inlet / Outlet Connection	Sealing Gasket	Options
SS: 316	BV31	5: 2.4, 4.2 6: 6.4 8: 10.3	A: Angle	NT4: 1/4" Male NPT TF12: 3/4" GENLOK	K: PCTFE E: PEEK	Blank: Standard B: Metal Handle D: Special Cleaning

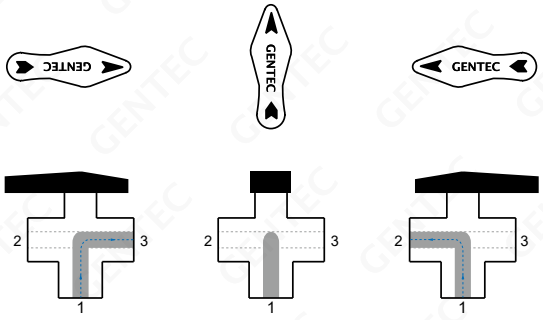
*: For more connection options contact GENTEC.

Dimensions (mm)

3-Way Valve



Flow Path Designator



1 and 3 are Connected | Close | 1 and 2 are Connected

Model Number	Orifice in.(mm)	Cv	Inlet / Outlet Connection	Dimensions in.(mm) A	B	C	D	E	F	G	H	I	J
SS-BV315T-FNT2	0.17 (4.2)	0.9	1/8" Female NPT	2.27 (57.6)	1.13 (28.8)	1.23 (31.3)	0.34 (8.7)	1.10 (27.9)	0.75 (19.0)	1.93 (49.0)	0.67 (17.0)	0.25 (6.3)	0.56 (14.2)
SS-BV315T-NT2			1/8" Male NPT	2.35 (59.6)	1.17 (29.8)	1.27 (32.3)							
SS-BV315T-NT4			1/4" Male NPT	2.59 (65.8)	1.30 (32.9)	1.39 (35.4)							
SS-BV315T-TF4			1/4" GENLOK	2.95 (75.0)	1.48 (37.5)	1.61 (41.0)							
SS-BV315T-TF6M			6mm GENLOK										
SS-BV316T-TF6	0.25 (6.4)	2.3	3/8" GENLOK	3.66 (93.0)	1.83 (46.5)	2.01 (51.0)	0.60 (15.2)	1.28 (32.6)	0.91 (23.0)	2.44 (62.0)	0.91 (23.0)	0.33 (8.3)	0.75 (19.0)
SS-BV316T-TF8M			8mm GENLOK	3.50 (89.0)	1.75 (44.5)	1.93 (49.0)							
SS-BV316T-TF10M			10mm GENLOK	3.46 (88.0)	1.73 (44.0)	1.91 (48.5)							
SS-BV316T-FNT4			1/4" Female NPT	3.02 (76.8)	1.51 (38.4)	1.69 (42.9)							
SS-BV316T-NT4			1/4" Male NPT	3.24 (82.4)	1.62 (41.2)	1.80 (45.7)							
SS-BV316T-NT6			3/8" Male NPT										
SS-BV318T-TF8	0.41 (10.3)	6.4	1/2" GENLOK	4.57 (116.0)	2.28 (58.0)	2.59 (65.7)	0.89 (22.6)	1.53 (38.9)	1.10 (28.0)	3.27 (83.0)	1.26 (32.0)	0.39 (9.8)	0.87 (22.1)
SS-BV318T-TF12			3/4" GENLOK	4.76 (120.8)	2.38 (60.4)	2.68 (68.1)							
SS-BV318T-TF12M			12mm GENLOK										
SS-BV318T-TF14M			14mm GENLOK										
SS-BV318T-TF16M			16mm GENLOK										
SS-BV318T-TF18M			18mm GENLOK										
SS-BV318T-FNT6			3/8" Female NPT	3.99 (101.4)	2.00 (50.7)	2.30 (58.4)							
SS-BV318T-FNT8			1/2" Female NPT	4.39 (111.6)	2.20 (55.8)	2.50 (63.5)							
SS-BV318T-FNT12			3/4" Female NPT										
SS-BV318T-NT8			1/2" Male NPT	4.87 (123.6)	2.43 (61.8)	2.74 (69.5)							
SS-BV318T-NT12			3/4" Male NPT										

Ordering Information

Ex: SS	- BV31	6	T	- NT4	- K	B
Body	Serial Number	Orifice (mm)	Valve Pattern	Inlet / Outlet Connection	Sealing Gasket	Options
SS: 316	BV31	5: 2.4, 4.2 6: 6.4 8: 10.3	T: 3-Way	NT4: 1/4" Male NPT TF12: 3/4" GENLOK	K: PCTFE E: PEEK	Blank: Standard B: Metal Handle D: Special Cleaning

*: For more connection options contact GENTEC.