

**BV31 SERIES HIGH PRESSURE BALL VALVE**


Straight Pattern (Manual)



Straight Pattern (Pneumatic)

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.



Angle Pattern



3-Way Valve

**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**

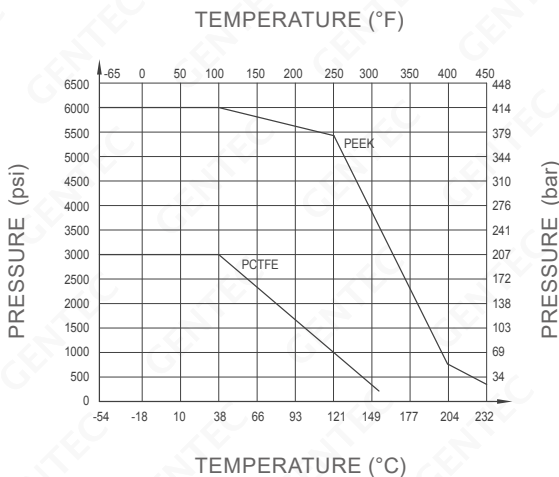
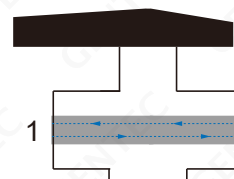
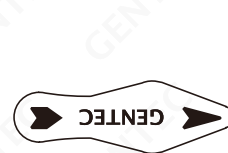
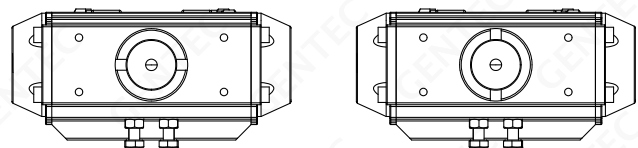
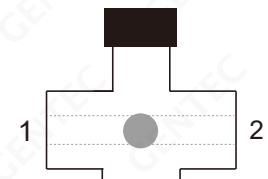
Please select the pneumatic actuator corresponding to the temperature range in the following table according to the operating conditions of the ball valve.

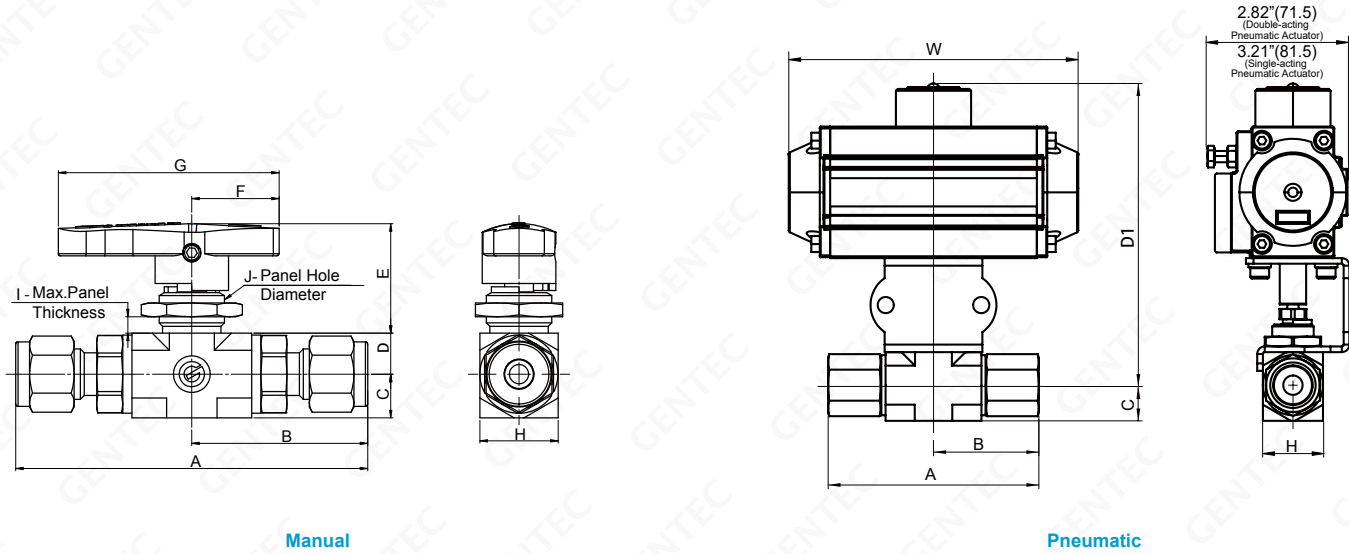
Pneumatic Actuator	Code	Temperature Range
High-temperature Type	<b>HT</b>	-4~248°F (-20~120°C)
Low-temperature Type	<b>LT</b>	-40~176°F (-40~80°C)

**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	
			Normally Close	Normally Open	Single-acting Minimum Execution Pressure	Double-acting Minimum Execution Pressure
<b>BV318</b>	10.3 mm	PA050-00D	PA065-S11C	PA065-S11O	72 psi (5.0 bar)	36 psi (2.5 bar)

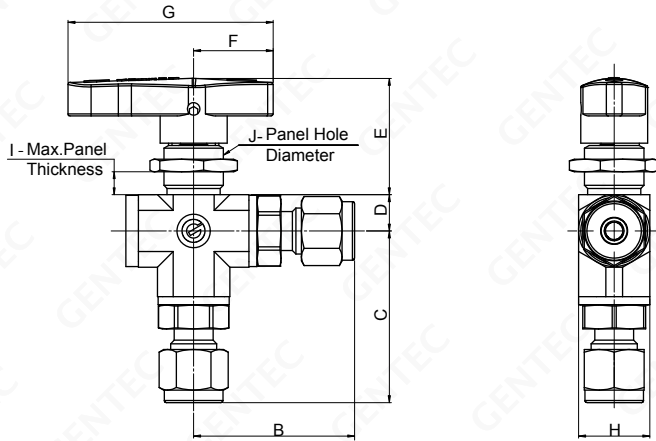
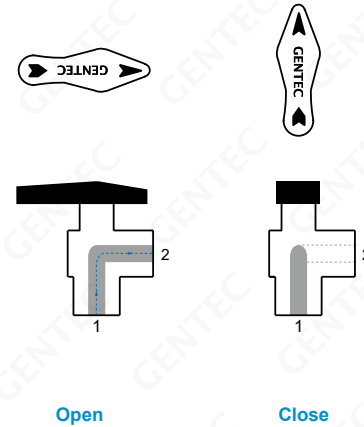
**Temperature Pressure Curve**

**Flow Path Designator**
**Straight Pattern**

**OPEN**

**CLOSE**

**Dimensions**
**Straight Pattern**


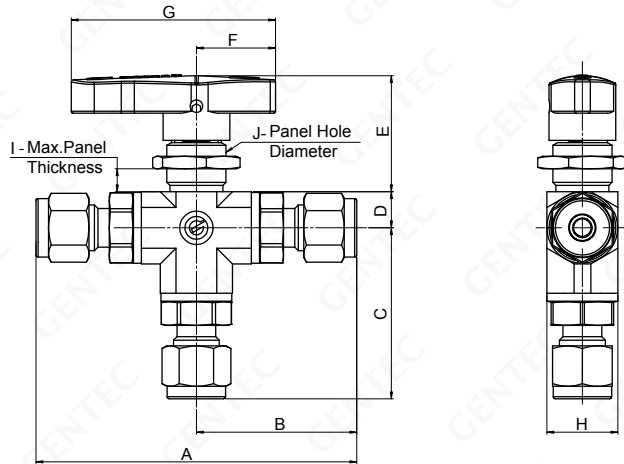
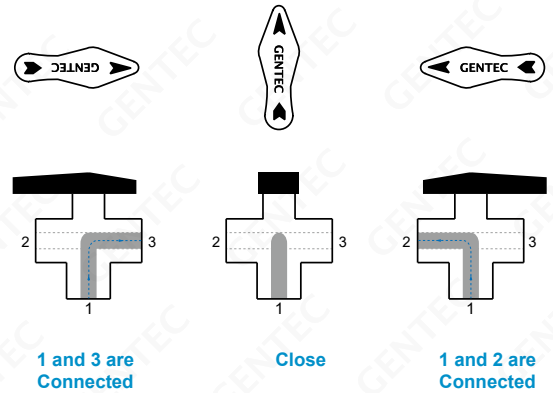
Manual Model Number	Orifice in.(mm)	Cv	Inlet / Outlet Connection	Dimensions in.(mm)											
				A	B	C	D	E	F	G	H	I	J		
SS-BV315-TF2	0.09 (2.4)	0.2	1/8" GENLOK	2.31 (58.8)	1.16 (29.4)										
SS-BV315-TF3M			3mm GENLOK	2.38 (60.4)	1.19 (30.2)										
SS-BV315-FNT2	0.17 (4.2)	0.9	1/8" Female NPT	2.25 (57.2)	1.13 (28.6)										
SS-BV315-NT2			1/8" Male NPT	2.33 (59.2)	1.17 (29.6)	0.37 (9.5)	0.35 (8.9)	0.94 (23.8)	0.75 (19)	1.89 (48)	0.67 (17)	0.25 (6.3)	0.56 (14.2)		
SS-BV315-TF4			1/4" GENLOK	3.01 (76.5)	1.51 (38.25)										
SS-BV315-TF6M			6mm GENLOK	3.08 (78.3)	1.54 (39.15)										
SS-BV315-NT4			1/4" Male NPT	2.57 (65.4)	1.29 (32.7)										
SS-BV316-TF6			0.25 (6.4)	2.3	3/8" GENLOK	3.62 (92.0)	1.81 (46.0)								
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)	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-NT6	3/8" Male NPT	3.08 (78.2)			1.54 (39.1)										
SS-BV316-NT4	1/4" Male NPT	2.86 (72.6)			1.43 (36.3)										
SS-BV316-FNT4	1/4" Female NPT														

**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-TF8	SS-BV318-TF8-PD	0.41 (10.3)	6.4	1/2" GENLOK	4.68 (118.8)	2.34 (59.4)				6.34 (161)						5.94 (151)		
	7.09 (180)									6.61 (168)								
	6.34 (161)									5.94 (151)								
7.09 (180)	6.61 (168)																	
6.34 (161)	5.94 (151)																	
7.09 (180)	6.61 (168)																	
SS-BV318-TF12	SS-BV318-TF12-PD			0.41 (10.3)	6.4	3/4" GENLOK	4.68 (118.8)	2.34 (59.4)				6.34 (161)						5.94 (151)
	7.09 (180)											6.61 (168)						
	6.34 (161)											5.94 (151)						
7.09 (180)	6.61 (168)																	
6.34 (161)	5.94 (151)																	
7.09 (180)	6.61 (168)																	
SS-BV318-TF12M	SS-BV318-TF12M-PD			0.41 (10.3)	6.4	12mm GENLOK	4.68 (118.8)	2.34 (59.4)				6.34 (161)						5.94 (151)
	7.09 (180)											6.61 (168)						
	6.34 (161)											5.94 (151)						
7.09 (180)	6.61 (168)																	
6.34 (161)	5.94 (151)																	
7.09 (180)	6.61 (168)																	
SS-BV318-TF14M	SS-BV318-TF14M-PD			0.41 (10.3)	6.4	14mm 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)
	7.09 (180)											6.61 (168)						
	6.34 (161)											5.94 (151)						
7.09 (180)	6.61 (168)																	
6.34 (161)	5.94 (151)																	
7.09 (180)	6.61 (168)																	
SS-BV318-TF16M	SS-BV318-TF16M-PD	0.41 (10.3)	6.4	16mm 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)		
	7.09 (180)									6.61 (168)								
	6.34 (161)									5.94 (151)								
7.09 (180)	6.61 (168)																	
6.34 (161)	5.94 (151)																	
7.09 (180)	6.61 (168)																	
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)		
	7.09 (180)									6.61 (168)								
	6.34 (161)									5.94 (151)								
7.09 (180)	6.61 (168)																	
6.34 (161)	5.94 (151)																	
7.09 (180)	6.61 (168)																	
SS-BV318-TF22M	SS-BV318-TF22M-PD	0.41 (10.3)	6.4	22mm GENLOK	4.82 (122.4)	2.41 (61.2)				6.34 (161)						5.94 (151)		
	7.09 (180)									6.61 (168)								
	6.34 (161)									5.94 (151)								
7.09 (180)	6.61 (168)																	
6.34 (161)	5.94 (151)																	
7.09 (180)	6.61 (168)																	
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)				6.34 (161)						5.94 (151)		
	7.09 (180)									6.61 (168)								
	6.34 (161)									5.94 (151)								
7.09 (180)	6.61 (168)																	
6.34 (161)	5.94 (151)																	
7.09 (180)	6.61 (168)																	
SS-BV318-FNT8	SS-BV318-FNT8-PD			0.41 (10.3)	6.4	1/2" 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)
	7.09 (180)											6.61 (168)						
	6.34 (161)											5.94 (151)						
7.09 (180)	6.61 (168)																	
6.34 (161)	5.94 (151)																	
7.09 (180)	6.61 (168)																	
SS-BV318-FNT6	SS-BV318-FNT6-PD			0.41 (10.3)	6.4	3/8" Female NPT	3.90 (99.0)	1.95 (49.5)				6.34 (161)						5.94 (151)
	7.09 (180)											6.61 (168)						
	6.34 (161)											5.94 (151)						
7.09 (180)	6.61 (168)																	
6.34 (161)	5.94 (151)																	
7.09 (180)	6.61 (168)																	
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)
	7.09 (180)											6.61 (168)						
	6.34 (161)											5.94 (151)						
7.09 (180)	6.61 (168)																	
6.34 (161)	5.94 (151)																	
7.09 (180)	6.61 (168)																	
SS-BV318-NT12	SS-BV318-NT12-PD	0.41 (10.3)	6.4	3/4" 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)		
	7.09 (180)									6.61 (168)								
	6.34 (161)									5.94 (151)								
7.09 (180)	6.61 (168)																	
6.34 (161)	5.94 (151)																	
7.09 (180)	6.61 (168)																	

**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											

**Dimensions (mm)**
**3-Way Valve**

**Flow Path Designator**


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										
SS-BV318T-TF12M			12mm GENLOK										
SS-BV318T-TF14M			14mm GENLOK	4.76 (120.8)	2.38 (60.4)	2.68 (68.1)							
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				- NT4	- K	- PD	- HT	B
Body	Serial Number	Orifice	Valve Pattern	Inlet / Outlet Connection	Sealing Gasket	Pneumatic Actuator Mode	Pneumatic Actuator Working Condition	Options
SS: 316	BV31	5: 2.4, 4.2 mm 6: 6.4 mm 8: 10.3 mm	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
			A: Angle T: 3-Way	NT4: 1/4" Male NPT TF12: 3/4" GENLOK .....	K: PCTFE E: PEEK		Blank: Standard B: Metal Handle D: Special Cleaning	

\*: The pneumatic actuator is only available in the BV318 series.

\*: For more connection options contact GENTEC.