

Series T51 Ball Valves

Three Way, Flanged, Bottom Entry Port Valves

Class 150 & 300 for diverting flow from a single source to two pipe lines

VALBOL bottom ported 3-way ball valves provide a variety of flow paths not commonly found in other 3-way designs. The basic design is suitable for diversion applications where positive shut-off is also required. It is equipped with a ball having a right angle port which, during its two step (180° rotation), connects either end port with the bottom port of the valve, plus has an intermediate shut-off position. Available in 1/2" – 10" sizes, these valves are designed for Class 150 & 300 service. It can also be ordered for 2-position operation, without stops at the intermediate position. Also available, is a special version which has a ball with two completely separate flow paths. Furnished for two position service (90° rotation), the 2TR provides either throughway flow through the end ports, or diversion flow between either of the end ports and the bottom port. The 3-position 3TR, permits diversion flow between the bottom port and either end port, and through way flow by rotating the ball through two 90° steps.



Features

Bi-directional Flow

Handles flow into the end ports or into the bottom port.

Effective Stem Sealing

The compression of low friction PTFE box rings eliminates stem leakage and allows for easy adjustment.

Economical

One 3-way valve does the work of two or three conventional valves.

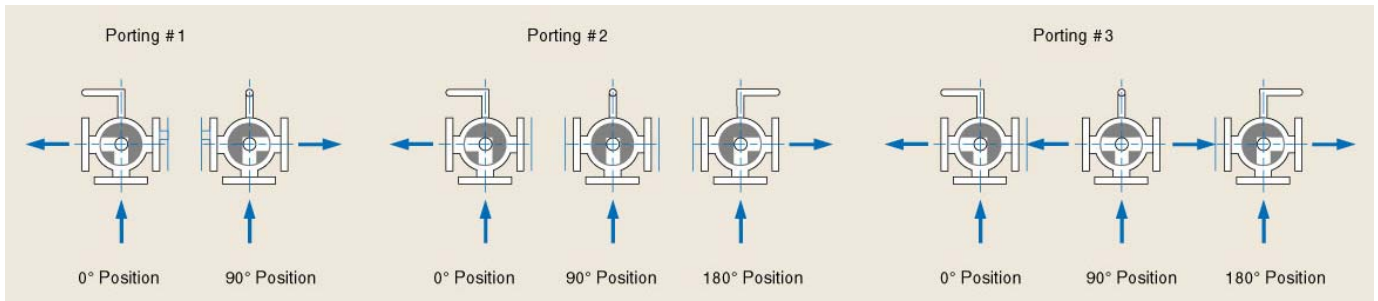
Easy Automation

2 position models can be equipped with VALBOL pneumatic or electric actuators for single source.

3 position models can be equipped with special 180° operators offering two 90° steps.

- Fast, easy quarter-turn low-torque operation.
- Flow into end ports and out side port for mixing, blending applications.
- 3-way ball design affords minimal velocity loss when changing flow paths.
- Flow into side port and out either end port for diversion, recalculation, or bypass.

Diverting Options



Specifications

Body - Carbon steel ASTM A216 Type WCB 316
 Stainless steel ASTM A351 Type CF8M
 End plug - Carbon steel ASTM A216 Type WCB 316
 Stainless steel ASTM A351 Type CF8M
 Ball - 316 Stainless steel
 Stem - 316 Stainless steel
 Body Seal - PTFE
 Stem Seal - PTFE
 Stem Bearing - Filled PTFE

Follower - Stainless steel
 Hex Jam Nut - Carbon steel
 Bonnet Stud - Stainless steel
 Indicator Stop Plate - Carbon steel
 Handle - Carbon steel
 Stop Nut - Stainless steel
 Identification Tag - Stainless steel
 Compression Ring - Stainless steel
 Spacer - Stainless steel
 O-Ring - Buna-Novato A

Sizes: 1.1/2", 2", 3", 4", 6."

Flanges: 150#.

Body: One-piece construction all sizes.

Seats: PTFE, Reinforced PTFE, C/fill.

Body Seal: PTFE, Graph oil.

Operation: 1.1/2" - 6" Valves are supplied with a handle operator.

Gear operators are sold separately.

Pneumatic and electric actuators are available.

Standards:

ANSI B16.10 Face to face dimensions.

ANSI B16.5 150# large dimensions.

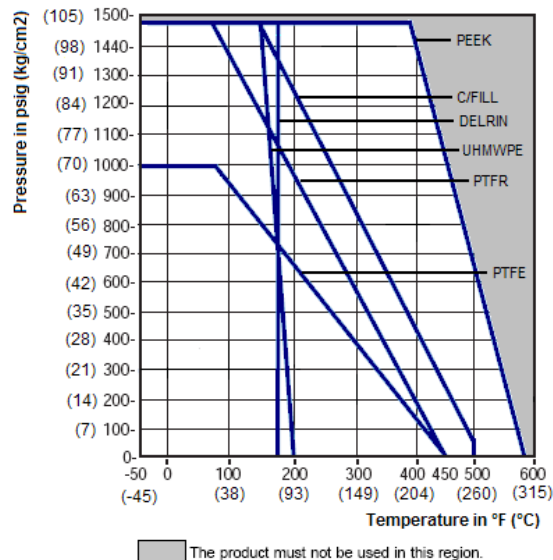
ANSI B16.34, ANSI B31.1, ANSI B31.3. MSS

SP-72. API 6D, pipeline valves.

NACE MR-01-75

API 607 tested

Pressure / Temperature Ratings



NOTE: Maximum working pressure temperature is limited by both flange rating seat and body seal capacity.

Automation

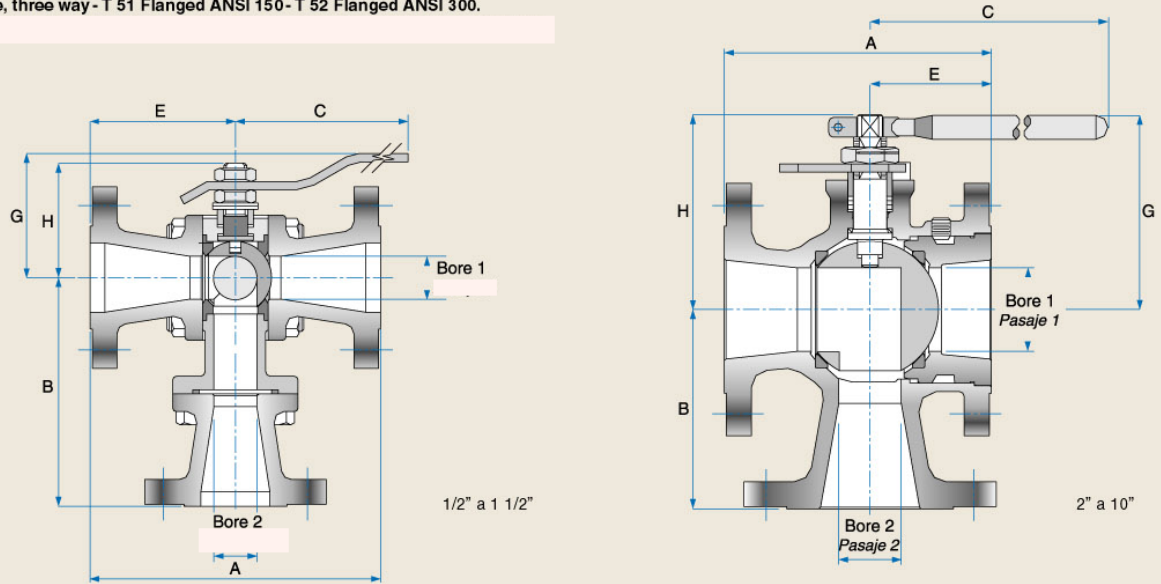
VALBOL offers a complete line of pneumatic and electric automation packages for Series 51, 52 & 53 valves. Both pneumatic and electric packages are offered for on/off or proportional control. Available options include

- Top mounted limit switches
- Proximity switches
- Single and double acting pneumatic actuators
- TYPE 4, 4x, 7 and 9 enclosures
- Remote position indication
- Positioners

Before an actuator can be sized for any given valve application the operating torque required for the valve must be determined. The operating torque of a ball valve is influenced by a number of factors, some are design and materials related, others are application and service conditions. Design related factors include the type and material of the valve seats, while application factors include system differential pressure, media and frequency of operation. For complete valve operating torque data refer to the torque curves given for each seat material, and provide the correction factor for media and the type of service such as on-off operation, cycle frequency, etc.

Dimensions

Ball valve, three way - T 51 Flanged ANSI 150 - T 52 Flanged ANSI 300.



Dimensions. Dimensiones.

Size Tamaño	Bore 1 Pasaje 1	Bore 2 Pasaje 2	Mod. 51 A	Mod. 51 B	Mod. 51 E	Mod. 52 A	Mod. 52 B	Mod. 52 E	H	G	C	Mod. 51 kg	Mod. 52 kg
1/2"	0.437	0.437	4.28	3.52	2.12	5.50	4.15	2.75	1.69	3.54	4.50	2.50	3.50
DN 15	11.1	11.1	107.9	89.6	53.9	139.7	105.5	69.8	42.8	90.0	114.3		
3/4"	0.562	0.562	4.62	3.71	2.31	6.00	4.40	3.00	1.69	3.54	4.50	3.20	4.80
DN 20	14.3	14.3	117.4	94.4	58.7	152.4	111.9	76.2	42.8	90.0	114.3		
1"	0.811	0.811	5.00	4.07	2.50	6.50	4.83	3.25	2.20	4.37	5.75	4.60	6.50
DN 25	20.6	20.6	127.0	103.6	63.5	165.2	122.7	82.6	55.8	111.0	146.0		
1 1/4"	1.25	1.25	5.50	4.59	2.75	7.00	5.34	3.50	2.88	4.60	7.00	8.40	12.50
DN 32	31.8	31.8	139.8	116.6	69.9	178.0	135.7	88.9	73.2	117.0	178.0		
1 1/2"	1.25	1.25	6.50	5.09	3.25	7.49	5.59	3.75	2.88	4.60	7.00	8.40	12.50
DN 40	31.8	31.8	165.2	129.4	82.6	190.3	142.0	95.2	73.2	117.0	178.0		
2"	1.50	1.50	7.00	5.00	2.68	8.50	5.51	2.68	3.06	4.80	7.00	12.00	16.50
DN 50	38.1	38.1	177.8	127.0	68.1	215.9	140.0	68.1	77.7	122.0	178.0		
2 1/2"	2.00	2.00	7.50	5.00	2.83	9.50	5.89	4.75	4.60	5.13	10.24	20.00	21.00
DN 65	50.8	50.8	190.5	127.0	72.0	241.3	149.7	120.6	116.8	128.2	260.0		
3"	2.50	2.00	8.00	6.00	3.63	11.12	6.50	3.62	5.70	5.90	18.31	23.60	32.00
DN 80	63.5	50.8	203.2	152.4	92.2	282.6	165.1	92.1	144.8	150.0	465.0		
4"	3.25	2.50	9.00	7.13	4.00	12.00	8.00	4.00	6.32	6.52	18.31	36.60	52.00
DN 100	82.5	63.5	228.6	181.1	101.6	304.8	203.2	101.6	160.5	165.5	465.0		
6"	4.38	3.00	10.50	9.75	4.25	-	-	-	8.90	9.22	21.30	62.50	-
DN 150	111.25	76.2	266.7	247.6	107.9	-	-	-	226.2	234.2	541.0		
8"	5.69	4.00	11.50	11.00	5.69	-	-	-	10.00	10.31	21.30	92.50	-
DN 200	144.5	101.6	292.1	279.4	144.6	-	-	-	254.0	262.0	541.0		
10"	7.36	6.00	13.00	12.00	7.13	-	-	-	13.00	12.18	-	-	-
DN 250	187.0	152.4	330.2	304.8	181.0	-	-	-	330.2	309.3	-	-	-

Ordering Instructions

1. Model	2. Size	3. Options	4. Body	5. Ball & Stem	6. Seat	7. Body Seals	8. Ends	9. Operator
51 52	05-DN15 (1/2") 07-DN20 (3/4") 10-DN25 (1") 12-DN32 (1.1/4") 15-DN40 (1.1/2") 20-DN50 (2") 25-DN65 (2.1/2") 30-DN80 (3") 40-DN100 (4") 60-DN150 (6") 80-DN200 (8") AO-DN250 (10")	0-Standard 1-More than one 2-Porting #2 3-Porting #3 A-Antistatic E-Steam Service G-Locking handle J-Extended Stem R-Spring return handle S-SS bolting & accs.	4 - C. Steel 6 - SS316	6 - SS316	P - C/Fill R - PTFE T - PTFE	A - Silicone B - Nitrile Buna E - EPR G - Graphoil N - Neoprene R - PTFE T - PTFE V - Viton	F-Flanges FF R-Flanges RF	A - Actuator M - Wrench N - Bare stem

Ordering Example

1	2	3	4	5	6	7	8	9
52	40	T	4	6	R	T	R	M



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