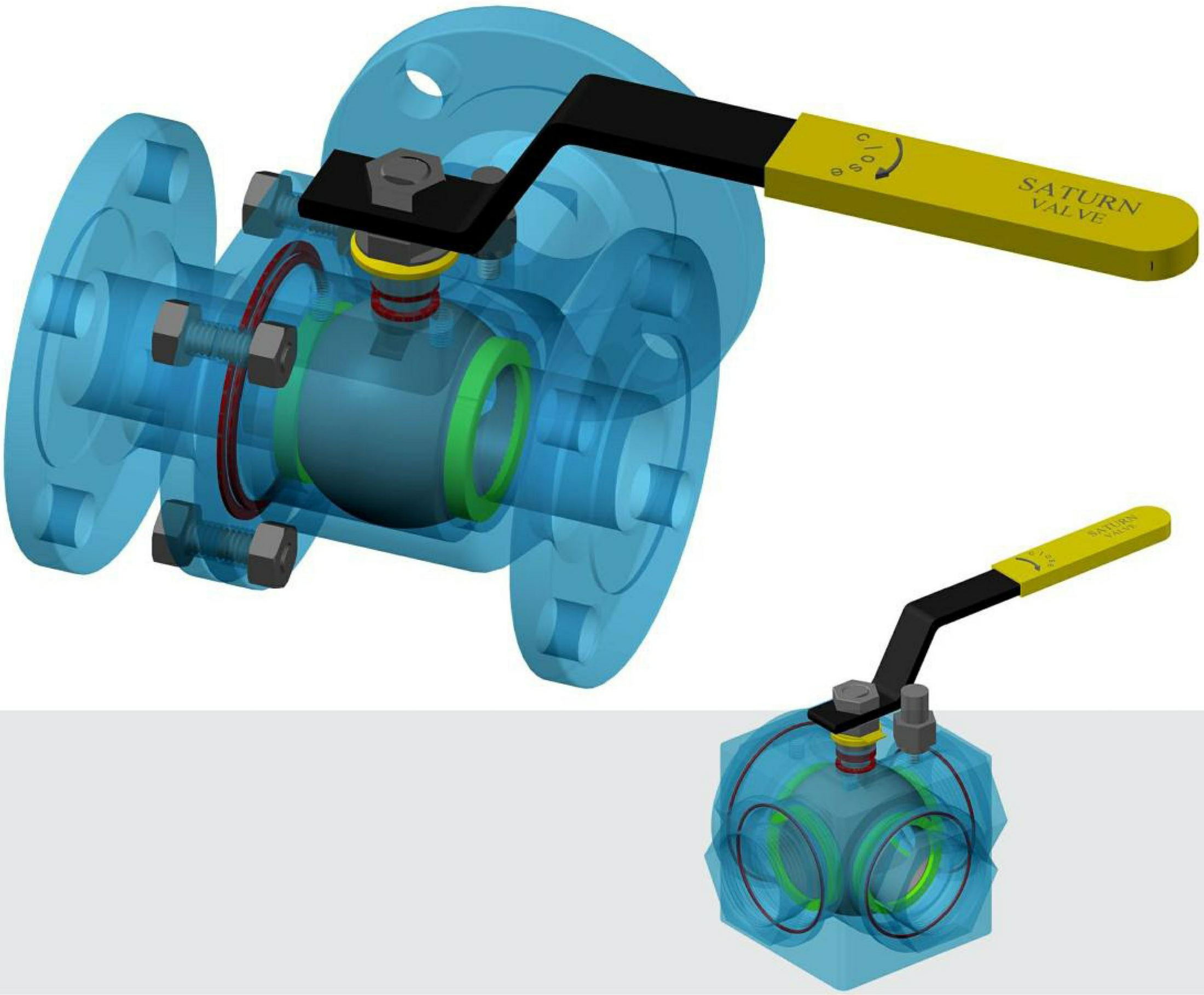
ENGINEERING RE-DEFINED

SATURN®
VALVES



THREE WAY BALL VALVE

Mevada Engineering Works Pvt. Ltd.

ISO 9001
BUREAU VERITAS
Certification

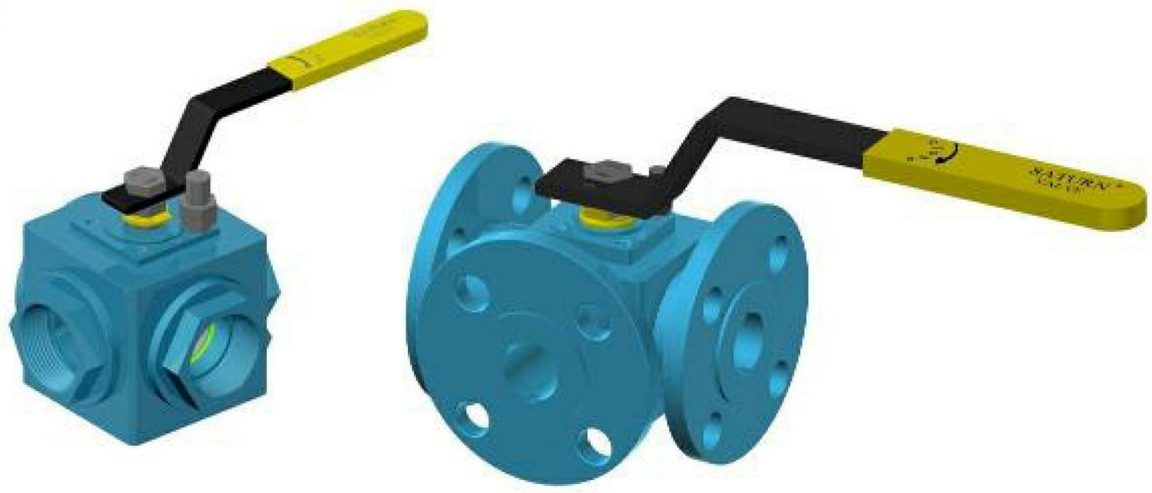
6D-0847

50 Years
OF SERVICE

Three Way Four Seated Threaded & Flanged Ball Valve

Mevada Engineering Works Pvt. Ltd. (MEWPL) Offers Three Way Four Seated T Port multi directional ball valve for applications where media is accepted through common inlet/ outlet port & direct it through either of the two inlet/outlet ports.

SIZE	TYPE	ENDS	CLASS	MODEL NO.
15-50mm 1" to 2"	L PORT	THREADED(BSP-II)	800	BL-L-1-F-P-A4
		THREADED(NPT)		BL-L-1-F-N-A4
	T PORT	THREADED(BSP-II)	800	BL-T-1-F-P-A4
		THREADED(NPT)		BL-T-1-F-N-A4
	L PORT T PORT	FLANGED	150	BL-L-1-F-F-A1 BL-T-1-F-F-A1

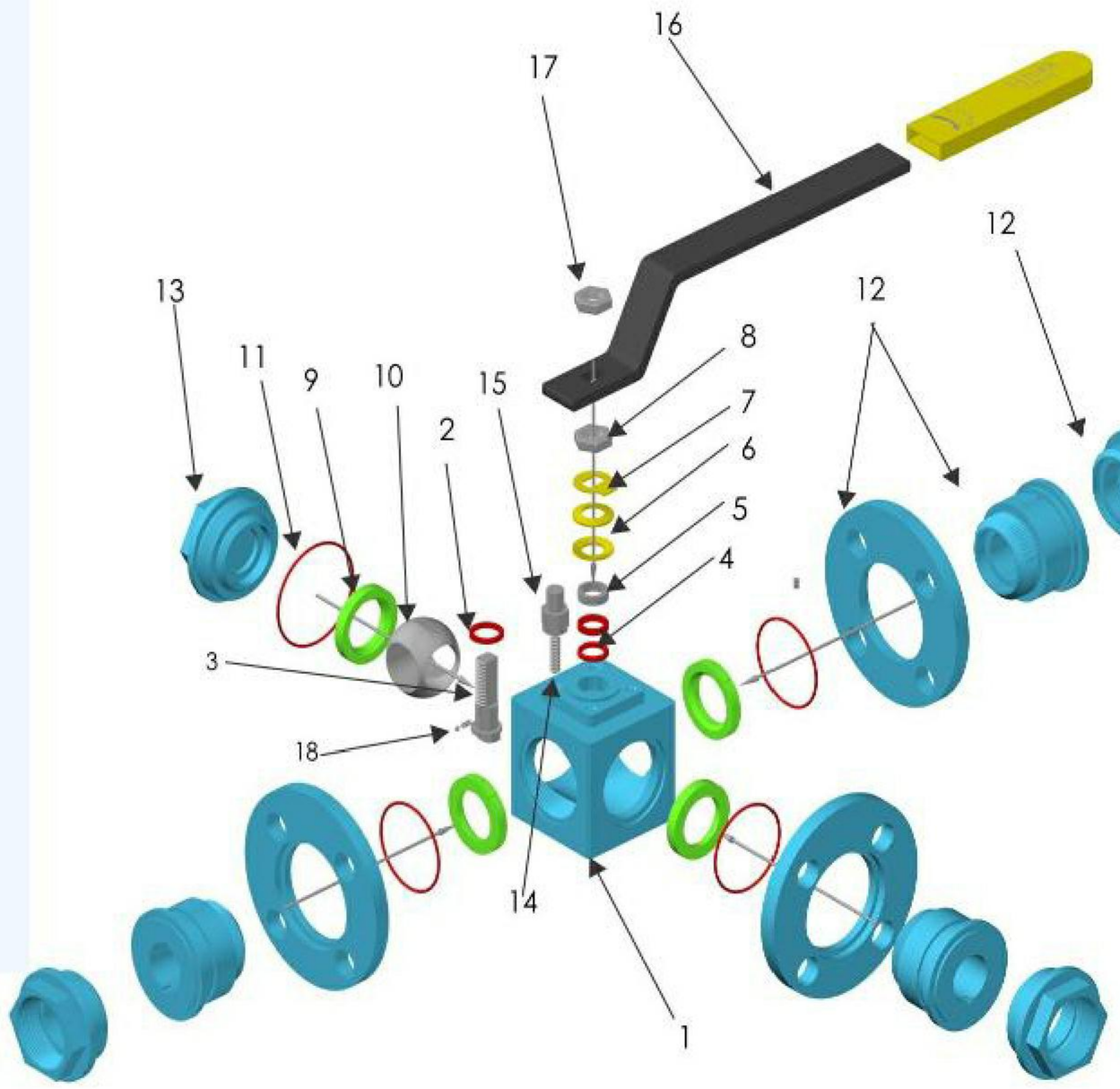


STANDARD COMPLIANCE
- DESIGN : ASME B 16.34, BS EN ISO 17292
- PRESSURE TESTING : API 598 / BS EN ISO 12266-1
- END TO END : MEWPL STD. FOR THREADED ENDS
  : ANSI B 16.10 FOR FLANGE ENDS
- End Conn. : Screwed BSP 'll'- IS 554
  NPT- ASME B 1.20.1
  : FLANGED ASME B16.5 / BS 10 / DIN 1092-1
- MOUNTING PAD : ISO 5211 / DIN 3337
- MATERIAL CERTIFICATION : DIN 50.049-3.1B
- QUALITY SYSTEMS / CERTIFICATIONS : ISO 9001

DESIGN FEATURES
- Choice of L or T port for Diverting/Mixing application
- Centralized Ball via 4 Seats
- Loose rotating flanges for easy installation in flanged valves
- Full bore, assures no pressure drop across the valve
- Blowout proof Stem
- Renewable Seat & Seals
- 'O' style body seals
- Anti-static Device
- Live loaded Stem seals
- Mounting pad to DIN 3337/ISO 5211

Options
- Bottom Common Inlet for avoiding intraport mixing of fluids for critical services
- Extended handle for pipe insulation
- Extended stem to suit insulation and inline gland leak monitoring & seal replacement
- Padlock capabilities maximum safety

Service Applications
Chemical I Dry/Liquid Chlorine
Food Processing I Hydraulic
Oxygen I Steam I Thermal Fluids
Vacuum Water I Oil I Gas



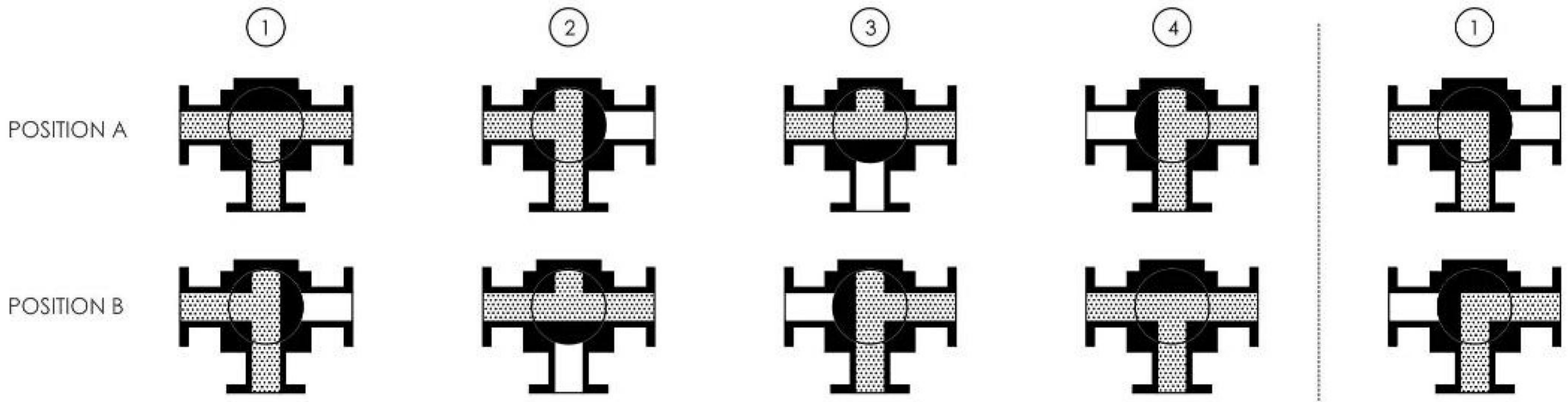
SR NO	DESCRIPTION	MATERIAL				
1	BODY	CARBON STEEL A 216 GR. WCB	SS304 A 351 GR. CF8	SS304 L A 351 GR. CF3	SS316 A 351 GR. CF8M	SS316 L A 351 GR. CF3M
2	THRUST WASHER	PTFE/GFT/CFT/TFM 1600				
3	STEM	AISI 304/316	AISI 304	AISI 304L	AISI 316	AISI 316L
4	GLAND SEAL RING	PTFE / GFT/CFT				
5	GLAND SPACER	AISI 316			AISI 316/316L	
6	BELLEVILLE WASHER	SPRING STEEL ZINC PLATED/STAINLESS STEEL				
7	LOCK WASHER	SPRING STEEL ZINC PLATED/STAINLESS STEEL				
8	GLAND NUT	SS304	SS316			
9	BALL SEAT	PTFE/GFT/CFT/TFM 1600				
10	BALL	SS304/SS316	SS304	SS304 L	SS316	SS316L
11	BODY JOINT 'O' RING	PTFE				
12	ADAPTOR & LOOSE FLANGE	CARBON STEEL A 216 GR. WCB	SS304 A 351 GR. CF8	SS304 L A 351 GR. CF3	SS316 A 351 GR. CF8M	SS316 L A 351 GR. CF3M
13	BLIND ADAPTOR	CARBON STEEL A 216 GR. WCB	SS304 A 351 GR. CF8	SS304 L A 351 GR. CF3	SS316 A 351 GR. CF8M	SS316 L A 351 GR. CF3M
14	GRUB SCREW	HIGH TENSIILE	ALLOY STEEL			
15	STOPPER	C.S ZINC PLATED	AISI 304			
16	LEVER WITH PVC SLEEVE	CARBON STEEL POWDER COATED/STAINLESS STEEL				
17	LEVER NUT	C.S ZINC PLATED	AISI 304			
18	ANTISTATIC DEVICE	SS316 L				

Design and dimensions are subject to change without prior notice

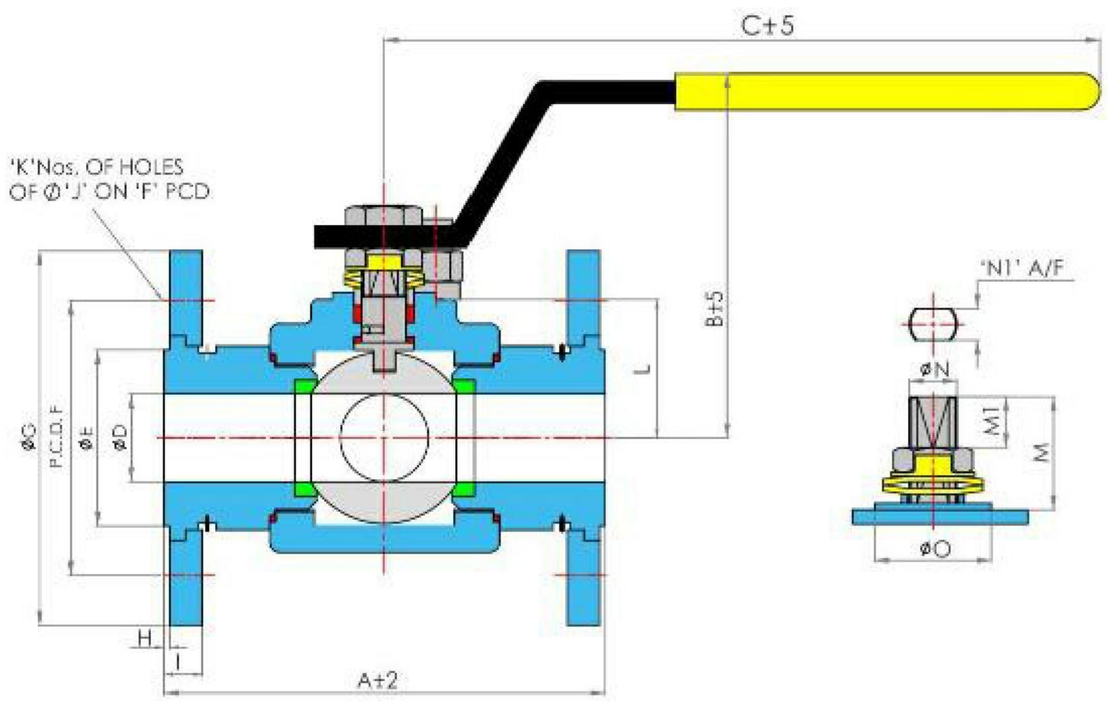
FLOW PATTERN

T PORT 90° OPERATION (MIXING & DIVERTING)

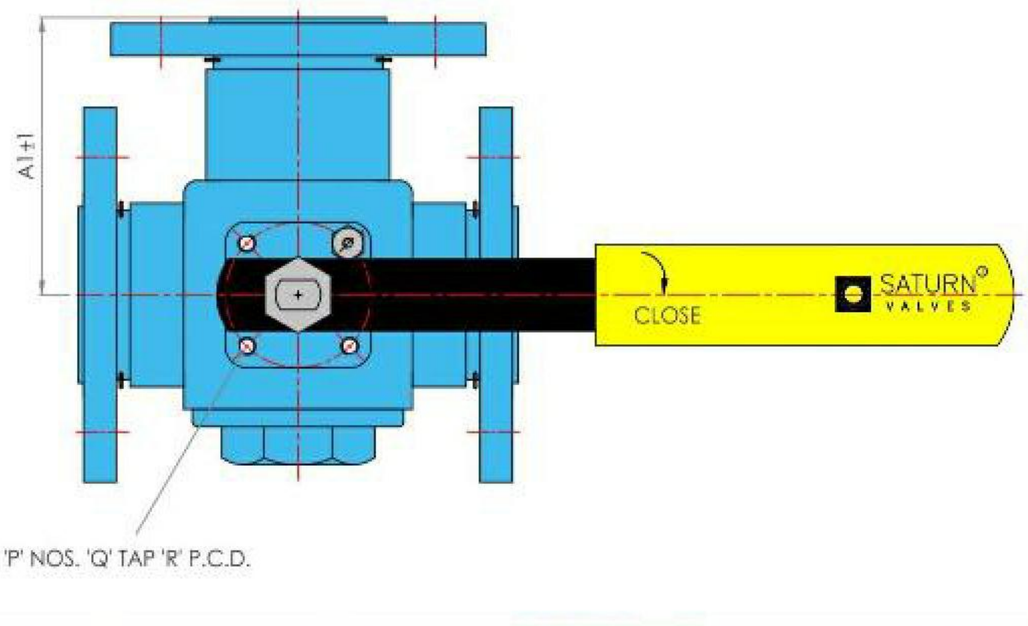
L PORT 90° OPERATION (DIVERTING)



DIMENSIONS for Three Way Four Seated Threaded & Flanged Ball Valve

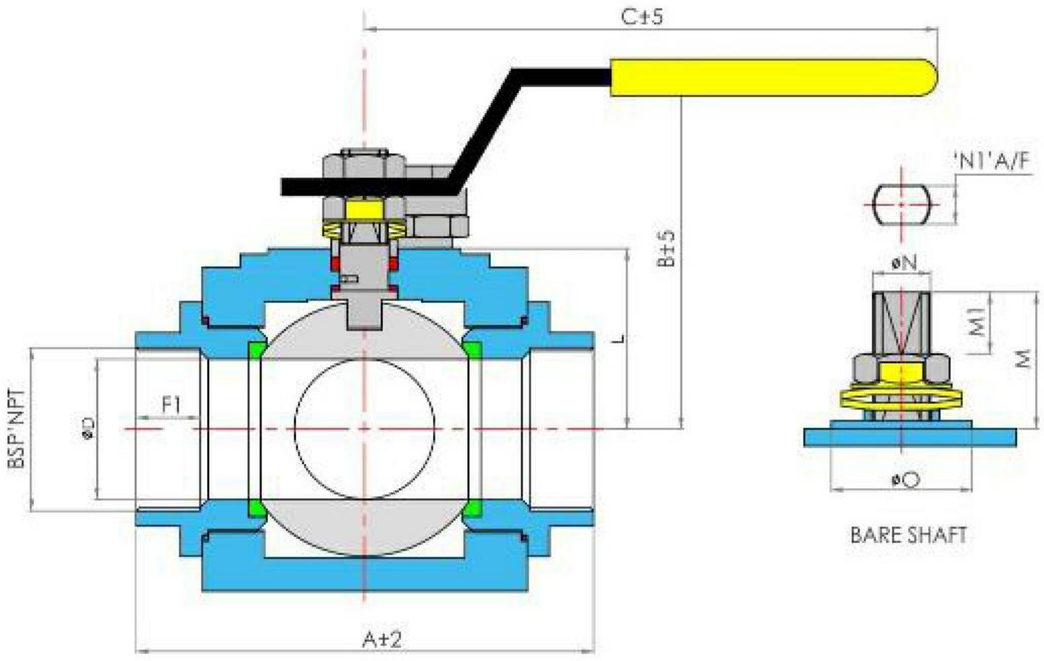


25mm To 50mm TWO PIECE FULL 'L' PORT TWO SEATED THREE WAY BALL VALVE.FLANGE END #150.

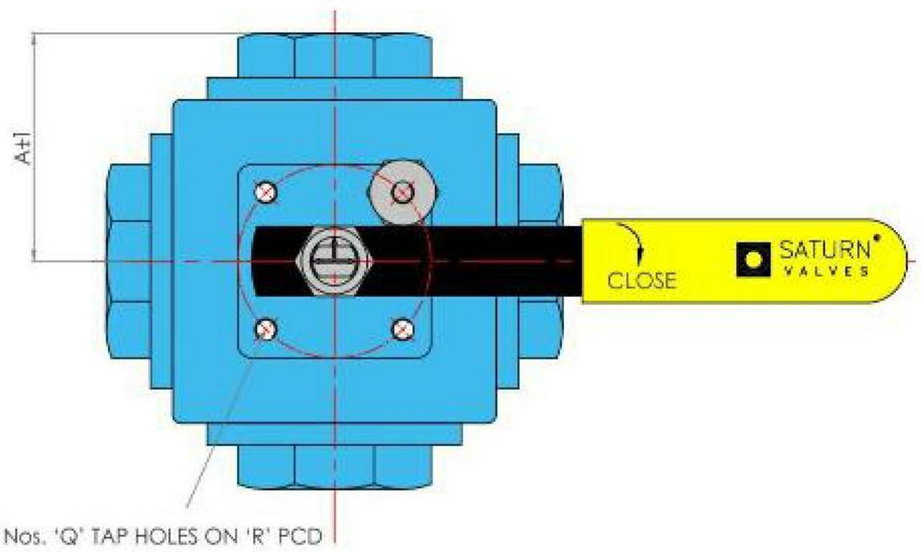


VALVE SIZE	A	A1	B	C	FLANGE DIMENSIONS ØD	ØE	F P.C.D	ØG	H	I	J	K	L	M	M1	ISO PAD DETAILS ØN	ØO	N1 A/F	P	Q	R P.C.D	ISO PAD
15	108	70	84	156	12.7	34.9	60.3	90	2	10	15.88	4	24.4	25.5	10.5	11.1	25	6.3	4	M5	36	F03
20	117	76	93	156	19	42.9	70	100	2	10.9	15.88	4	29.1	24.5	10.5	11.1	30	6.3	4	M5	42	F04
25	127	80	103	156	25.4	50.8	79.4	110	2	11.6	15.88	4	39.2	24.5	10.5	12.7	30	7.9	4	M5	42	F04
32	140	80	116	178	31.7	63.5	88.9	115	2	13.2	15.88	4	46	34	15.5	14.3	35	9.5	4	M6	50	F05
40	165	92	118	225	38.1	73	98.4	125	2	14.7	15.88	4	58	33.5	15	14.3	35	9.5	4	M6	50	F05
50	178	107	130	245	50.8	92.1	120.7	150	2	16.3	19.05	4	64	38	17	17	55	11.1	4	M8	70	F07

ALL DIMENSIONS ARE IN MM



15 mm To 50mm FOUR SEATED THREE WAY 4 SEATED T/L PORT BALL VALVE SCREWED END # 800.



VALVE SIZE	BSP/ NPT	F1	A	A1	B	C	ØD	ISO PAD DETAILS L	M	M1	ØN	ØO	N1 A/F	P	Q	R P.C.D	ISO PAD
15	1/2"	14	75	37.5	84	156	12.7	24.4	25.5	10.5	11.1	25	6.3	4	M5	36	F03
20	3/4"	14	90	45	93	156	19	29.1	24.5	10.5	11.1	30	6.3	4	M5	42	F04
25	1"	18	100	50	103	178	25.4	39.2	24.5	10.5	12.7	30	7.9	4	M5	42	F04
40	1.1/2"	19	134	67	118	225	38.1	58	33.5	15	14.3	35	9.5	4	M6	50	F05
50	2"	19	165	82.5	130	245	50.8	64	38	17	17	55	11.1	4	M8	70	F07

ALL DIMENSIONS ARE IN MM

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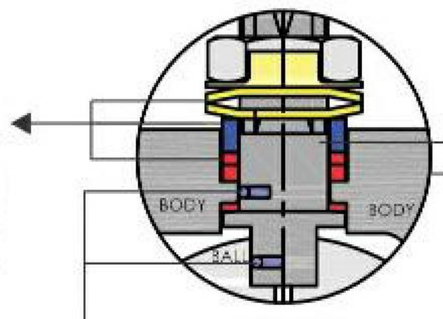
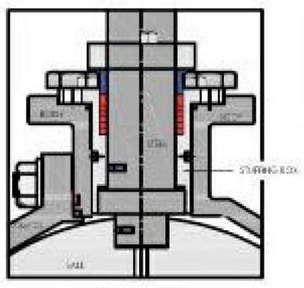
GENERAL DESIGN FEATURES

Auto Packing Compensation

Live loading is designed to provide gland load retention, compensating for expected in-service consolidation of the packing. A set of Belleville-Spring Washers are used on gland spacer to help exert a continuous compressive force on the gland spacer and therefore reduce fugitive emissions from the stem packing.



1/2" TO 4"



6" TO 10"

Blow-out Proof Stem

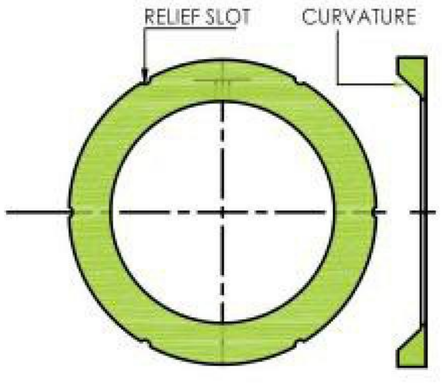
Stem lower end is integral T shaped designed to be blow-out proof. It is internally inserted and functions as the backseat for assured stem sealing at all pressures.

Anti-Static Device

When static are generated due to high velocity of fluid and concentrated on the ball, the spring-loaded pins installed on stem are provided to ensure electrical continuity throughout the ball, stem & body.
In addition to this the inter components like graphite body seal & gland seal have good electric conductivity which discharges the static.
Note : For sizes up to 2" one antistatic device is provided

Packing

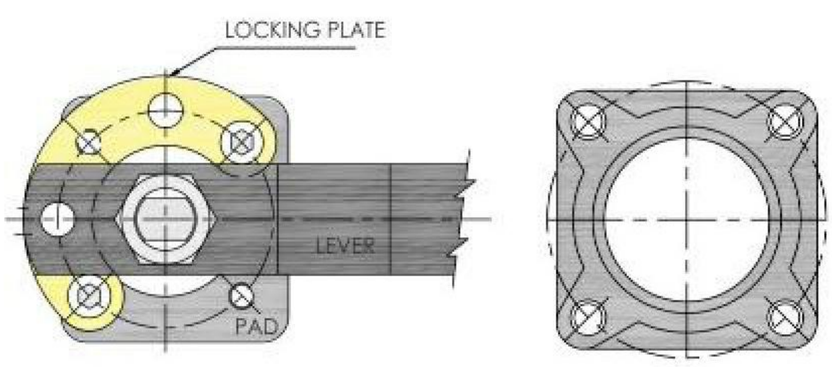
The packing set is a combination of parallel and vertical layer sealing elements, which are made of elastomer and graphite rings having less stress relaxation and low creep. With this special structure it allows for a low-friction on rotary stem, providing the stabilized seal performance for long cycle life.
For medium and low temperature service, the standard V shape PTFE packing rings are installed for low emission control.



Seat Design

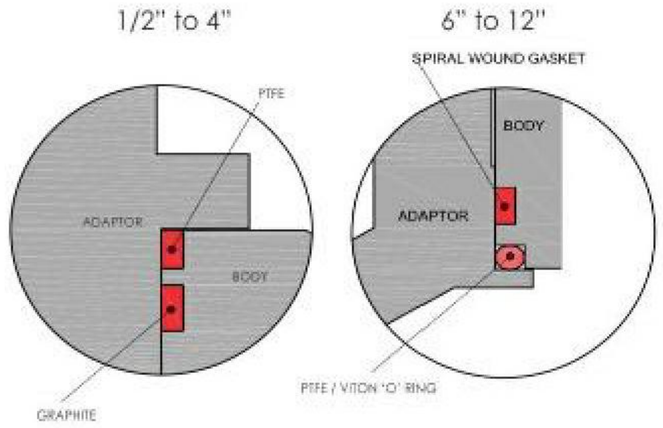
The special design seat feature relief slots or seat O.D. Clearance to relive pressure past the upstream seat. This design reduces friction, minimize seat wear and lowering operating torque. The curvature design feature minimize contact between the ball & seat when the valve is in open position, thus it prevent cold flow, lowers torque and reduced wear.

The pressure relief slots design also features automatic pressure relief from upstream in continuos pressure. During closing of the valve, the maximum surge pressure occurs, during which the downstream seat can be forced to intrude into the ball port and valve can become inoperative. The pressure relief slots prevent this potential failure. When pressure causes the upstream seat to move against the ball and ball moves to the downstream seat to effect and maintain a seal, the pressure simply leaks into the ball port through the relief slots.



ISO 5211 MOUNTING PAD

Ball Valves are Equipped with an Integral mounting pad as per ISO 5211 that facilitates easy mounting of hardware viz. pneumatic Actuator, Gear box, Limit Switch, Locking arrangement, etc.



Double Body Seals(for Two Seated Valves)

Double body sealing ensures positive body joint sealing against pipeline stresses. The inner body seal of elastomer prevents the contact of the fluid with the outer body seal of graphite having pure carbon.
For 6" & above step is provided with 'O" ring as inner body seal against pipeline stresses & joint expansions.

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SATURN® VALVES

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