FLANGED END BALL VALVE

TRUNNION SERIES

SIZE:
4” & 6”

SIZE:
8”

Specification:

FLANGED END BALL VALVE - TRUNNION SERIES

Chem Oil’s two-piece ball valve has been designed to handle extreme service applications with unsurpassed reliability. Valve body machined from solid wrought material providing maximum strength and virtually no porosity. Chem Oil’s ball valve integrates the proven sealing technology and the design capability to tackle the most demanding applications.

Features	Benefits
• Total encapsulated body seals.....	Elimination of cold flow; high performance over wide temperature and pressure range
• Actuation Flange.....	Ease of automation
• Variety of seating materials.....	Wide range of process media and service conditions
• Live loaded stem.....	Pressure and temperature recovery, stem seal integrity with a low operating torque
• API wall thickness.....	Extra corrosion allowance for long life
• Forged body and end.....	High integrity
• Fully traceable materials.....	Certification of all pressure retaining parts available for stringent specification requirements

Design Specification:

- ASME B16.5: Pipe flanges and flanged fitting
- ASME B16.10: Face-to-face dimensions of ferrous valves
- ASME B16.34: Steel valves (performance and design)
- API 598: Tested & Checked
- API 6D (Pipeline valves) & API 607 (Fire Safe)
- MSS-SP 72: Ball valve for general service
- NACE compliant

Locking Plate:

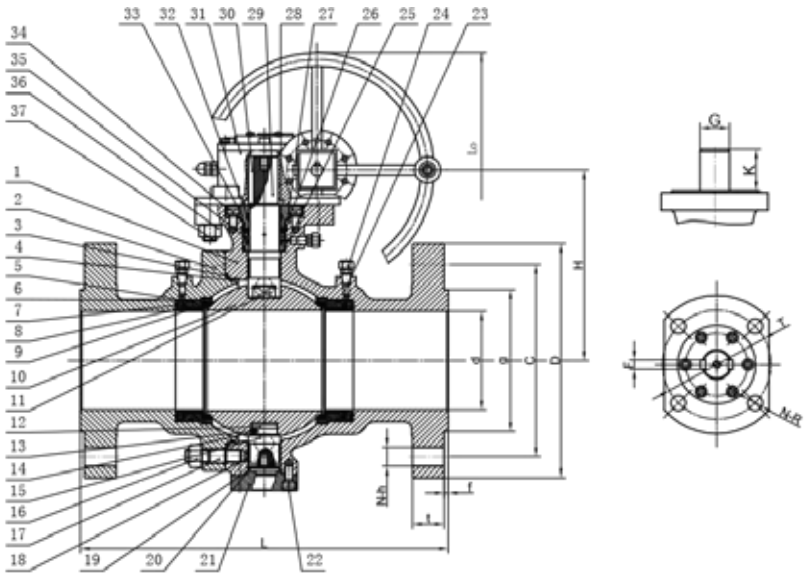
As per OSHA requirements, Chem Oil offers a simple cost effective temper proof locking mechanism that can be used in either the open position or closed position. Once the padlock is inserted, the lock plate cannot be removed from the valve even if the handle nut is removed.

* Due to the continuous development of our products, design or construction may change without prior notice.

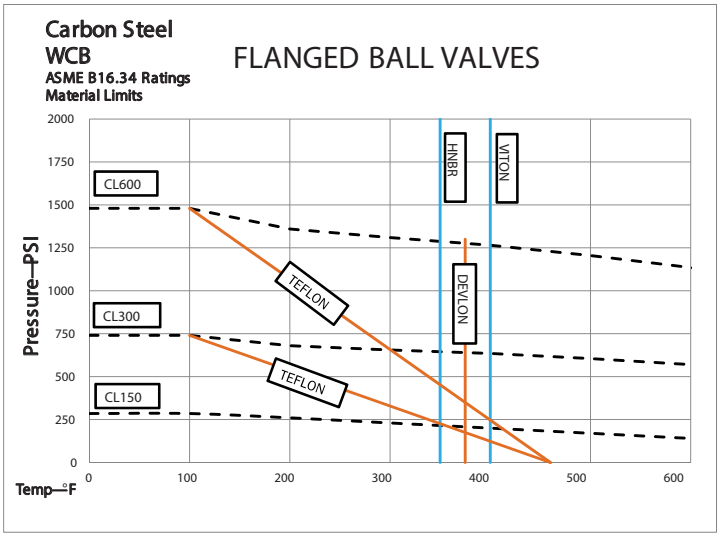
FLANGED END BALL VALVE

TRUNNION SERIES

4” & 6” Valves



NO.	PART	QTY	MATERIAL
37	Nut	4	A194 2H
36	Stud	4	A193 B7
35	Sealing Rings	1	ASTM A105
34	Screw	6	A193 B7
33	Upper Cover	1	ASTM A105
32	O-ring.Stem	2	VITON
31	Gear Operator	1	Cast Iron Case
30	Stem Key	1	AISI1075
29	Stem	1	A182 F316
28	Gland Plate Fire Seal	1	Graphite
27	Gasket.Body	1	304+Graphite
26	Gland Plate Circlip	1	ASTM A105
25	Gland Plate O-Ring	2	VITON
24	Seat Injection Fitting	3	AISI 1018
23	Internal Check Valve	2	ASTM A182
22	Cap Screw.Trunnion	6	A193 B7
21	Trunnion Plate	1	A105
20	Gasket Trunnion	1	304+Graphite
19	O-ring.Trunnion	1	VITON
18	Trunnion Bearing	2	F304+PTFE
17	Stud	12	A193 B7
16	Nut	12	A194 2H
15	Body Vent/ Drain Fitting	1	AISI 1018
14	Antistatic steel ball	2	A276 F304
13	Antistatic spring	2	A276 F304
12	Trunnion	1	A182 F6a
11	Bleed Valve	1	AISI 1018
10	Ball	1	A182 F316
9	Seat Assembly	2	RPTFE
8	Seat Ring	2	ASTM A105
7	Spring	32	17-7PH
6	Seat Fire Seal	2	Graphite
5	O-ring.Seat	2	VITON
4	O-ring.Body	1	VITON
3	Gasket.Body	1	304+Graphite
2	Adapter Cap	1	A216 WCB
1	Body	1	A216 WCB



Features and Specifications:

Flange Standard: ASME B16.5
Face To Face: ASME B16.10
CWP: 1440 Psi
Fire Safe Design
Design: API 6D
Hydro-Pressure tested for Shell Strength at 2175 Psi
Hydro-Pressure tested for Seal Strength at 1600 Psi

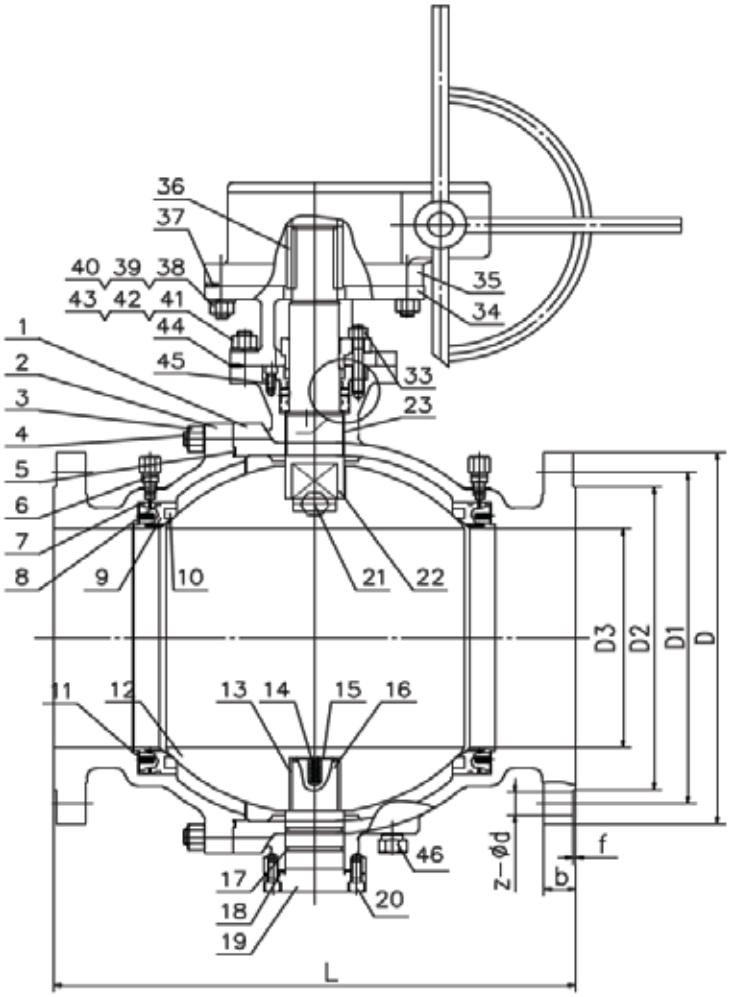
Sizing Availability:

NPS	L	D	C	g	d	N-h	t	f	H	N-R	T	G	F	K	Lo	Torque
4"	17	10.75	8.50	6.18	3.94	8-1.02	1.50	0.25	9.24	4-0.71	5.51	1.50	0.47	2.14	14.17	422 ft-lbf
6"	22	14	11.50	8.50	5.91	12-1.14	1.88	0.25	12	4-0.91	6.50	1.77	0.55	2.70	14.99	673 ft-lbf

FLANGED END BALL VALVE

TRUNNION SERIES

8” Valves



ITEM	PART NAME	MATERIAL
1	BODY	A216-WCB
2	BONNET	A216-WCB
3	NUT	ASTM A194-2H
4	BOLT	ASTM A193-B7
5	GASKET	304+ GRAPHITE
6	SEALANT INJECTION VALVE	AISI 1025
7	O-RING	VITON
8	O-RING	VITON
9	SEAT RING	ASTM A182 F316
10	SEAT INSERT	RPTFE
11	SPRING	INCONEL X- 750
12	BALL	ASTM A182 F316
13	RADIAL BEARING	304 + PTFE
14	SPRING	INCONEL X- 750
15	GASKET	304 + PTFE
16	LOWER STEM	17- 4PH
17	O-RING	VITON
18	GASKET	304 + PTFE
19	BOTTOM COVER	ASTM A105
20	SCREW	ASTM A193-B7
21	VENT VALVE	AISI 1025
22	UPPER STEM	17 – 4PH
23	RADIAL BEARING	304 + PTFE
24	GAKET	304 + PTFE
25	O-RING	VITON
26	O-RING	VITON
27	BACKUP RING	ASTM A182 F304
28	GLAND	ASTM A105
29	GASKET	304 + PTFE
30	PACKING	GRAPHITE
31	PACKING FLANGE	A216 - WCB
32	NUT	ASTM A194 - 2H
33	BOLT	ASTM A194 - B7
34	YOKE	A216 - WCB
35	GEAR BOX	*
36	KEY	ANSI 1045
37	SCREW	ASTM A913 – B7
38	NUT	ASTM A194 – 2H
39	SPRING GASKET	65Mn
40	BOLT	ASTM A193 – B7
41	NUT	ASTM A194 – 2H
42	SPRING GASKET	65Mn
43	BOLT	ASTM A193 – B7
44	SCREW	ASTM A193 – B7
45	SCREW	ASTM A913 – B7
46	DRAIN PLUG	AISI 1025

Sizing Availability:

CLASS	NPS	L	D	D1	D2	D3	b	f
150	8"	18.0	13.6	11.8	10.6	7.9	1.1	0.1
300	8"	19.8	15.0	13.0	10.6	7.9	1.6	0.1
600	8"	26.0	16.5	13.7	10.6	7.9	2.5	0.3

NOTE:
All valves are hydrostatically pressure tested in accordance with ISO 14313/API 6D under the supervision of UVI/Chem Oil’s Quality Department. A complete range of equipment and instrumentation is available to perform both standard and special test requirements.

FLANGED END BALL VALVE

TRUNNION SERIES

Additional Specification - Trunnion Ball Valves

Standard Design Features:

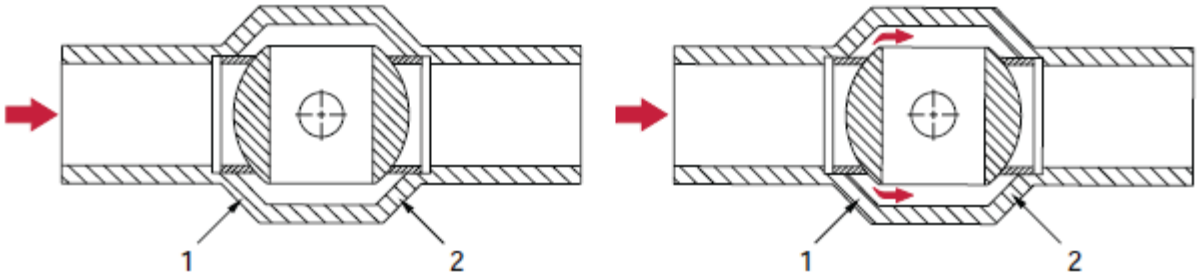
• Body construction: 2 piece bolted body design as per API 6D, API 608 & ASME B 16.34
- Face to face dimension: ASME B16.10 & API 6D.
- Flanged ends: ASME B16.5

• Anti blow-out stem design.
- The stem features triple barrier seals to isolate the stem from line pressure and to seal from the atmosphere.

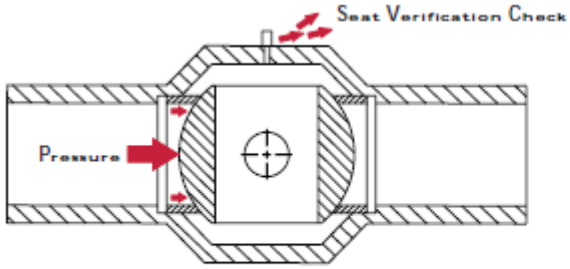
• Low Friction metal-backed self lubricating PTFE sleeve bearings and thrust washers to reduce torque and extend service life.

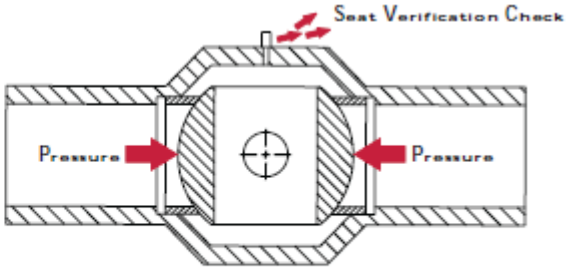
• Primary Metal to Metal and secondary soft RPTFE.

• Double barrier sealing in both directions.
- The upstream seat (1) becomes damaged and leaks, pressures entering the body cavity act on the downstream seat (2) sealing the downstream seat tightly against the ball.



• Block and Bleed: cavity relief valve for over-pressure due to liquid thermal expansion.





• Stem and seat sealant injection system.
- When the sealing materials (seat sealing or stem o-ring) are damaged or decomposed by fire or other accidental causes, leakage from the seat and stem can be prevented by injection of sealant into these fittings.

NACE MR0175/ISO 15156 Compliance – Materials of construction shall be in compliance with the pre-qualified material requirements specified by NACE MR0175/ISO 15156. According to NACE MR0175/ISO 15156, it is the manufacturer's responsibility for meeting metallurgical requirements and the customer/user responsibility to ensure that a material will be satisfactory in the intended environment. When given the application requirements (environment) by the customer/user, Chem Oil can make technical recommendations in accordance with NACE MR0175/ISO 15156, but that in no way certifies or warrants the product or materials for the application.