FLANGED END BALL VALVE

FLOATER SERIES

Specification:

FLANGED END BALL VALVE - FLOATER 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:

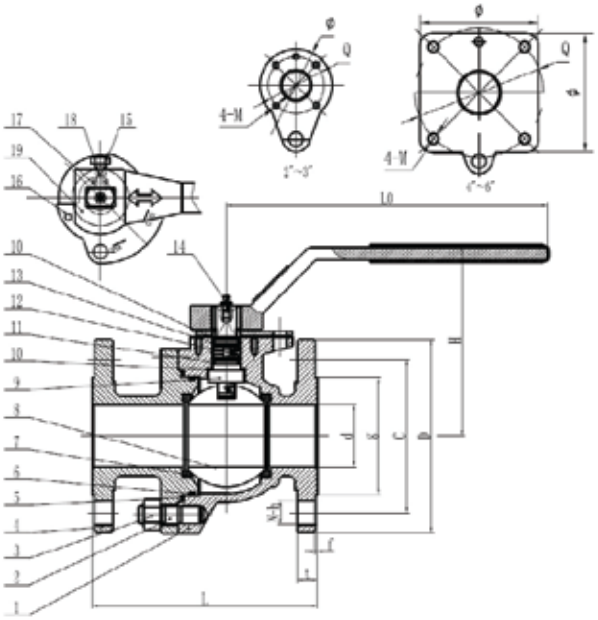
As per OSHA requirements, Chem Oil offers a simple cost effective temper proof locking mechanism that can be used in either the open position or closed position. Once the padlock is inserted, the lock plate cannot be removed from the valve even if the handle nut is removed.

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

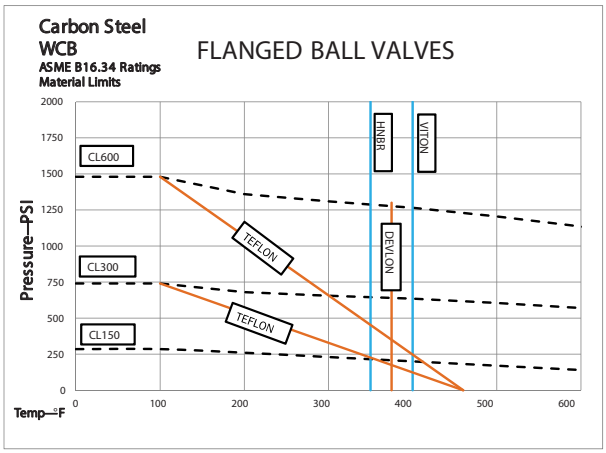
FLANGED END BALL VALVE

FLOATER SERIES

Class #150



Sr. No.	Description	Material
1	Body	ASTM A216 WCB
2	Stud	ASTM A193 B7
3	Nut	ASTM A194 2H
4	Adapter Cap	ASTM A216 WCB
5	Gasket Body	F304 + Graphite
6	O-ring Body	VITON
7	Seat	RPTFE
8	Ball	ASTM A276 410
9	Stem	ASTM A182 F6a
10	Stem gasket	PTFE
11	O-ring Stem	VITON
12	Antistatic ball	F304
13	Antistatic spring	F304
14	Grease Zerk	Carbon Steel
15	Handle Screw	A193 B7
16	Stop plate	A36+Zn
17	Elastic damping ring	AISI 1065
18	Stop plate	A193 B7
19	Handle	Ductile Iron



Dimensions and Sizes:

NPS	L	D	C	g	d	N-h	t	h	Ø	Q	4-M	LO
2”	7.01	5.98	4.75	3.62	1.93	4- Ø0.75	0.63	5.91	2.24	1.75	¼	12.00
3”	7.99	7.50	6.00	5.00	2.91	4- Ø0.75	0.75	6.87	3.70	2.75	5/16	14.00
4”	9.00	9.02	7.50	6.18	3.94	8- Ø0.75	0.94	9.11	3.70X3.70	4.00	3/8	21.70
6”	15.51	10.98	9.50	8.50	5.91	8- Ø0.88	1.02	12.14	6.37X6.37	6.50	0.71	31.50

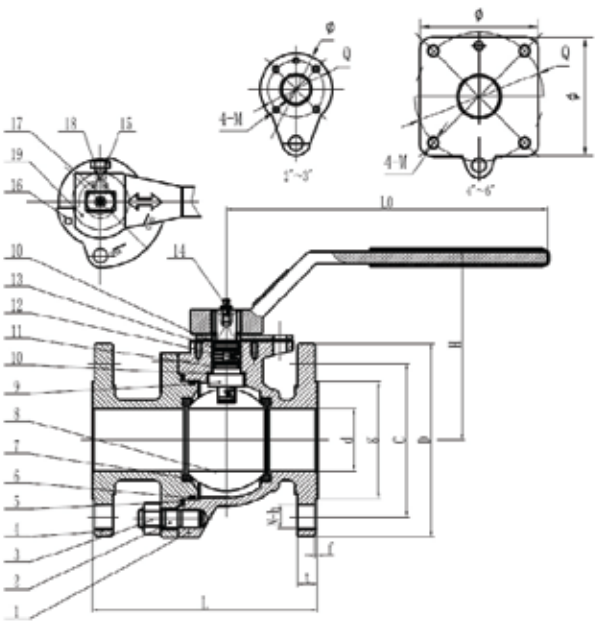
Torque Values:

	PTFE/RTFE ft.lbs (N.m)			
CWP	2x2	3X3	4X4	6X6
0 psi	30 (40.7)	50 (67.8)	70 (94.9)	130 (162.7)
275 psi	50 (67.8)	90 (122)	130 (176.3)	260 (352.5)

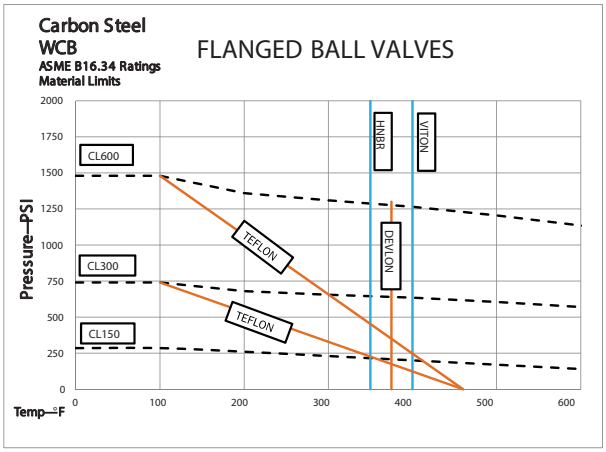
FLANGED END BALL VALVE

FLOATER SERIES

Class #300



Sr. No.	Description	Material
1	Body	ASTM A216 WCB
2	Stud	ASTM A193 B7
3	Nut	ASTM A194 2H
4	Adapter Cap	ASTM A216 WCB
5	Gasket Body	F304 + Graphite
6	O-ring Body	VITON
7	Seat	RPTFE
8	Ball	ASTM A276 410
9	Stem	ASTM A182 F6a
10	Stem gasket	PTFE
11	O-ring Stem	VITON
12	Antistatic ball	F304
13	Antistatic spring	F304
14	Grease Zerk	Carbon Steel
15	Handle Screw	A193 B7
16	Stop plate	A36+Zn
17	Elastic damping ring	AISI 1065
18	Stop plate	A193 B7
19	Handle	Ductile Iron



Dimensions and Sizes:

NPS	L	D	C	g	d	N-h	t	h	Ø	Q	4-M	LO
2”	8.50	6.50	5.00	3.62	1.93	8-Ø0.75	0.89	5.91	2.24	1.75	1/4	12.00
3”	11.14	8.27	6.63	5.00	2.91	8-Ø0.87	1.14	6.87	3.70	2.75	5/16	20.00
4”	12.01	10.00	7.87	6.18	3.94	8-Ø0.87	1.26	9.11	3.70X3.70	4.00	3/8	21.70
6”	15.87	12.52	10.63	8.50	5.91	12-Ø0.88	1.89	12.14	6.37X6.37	6.50	0.71	31.5

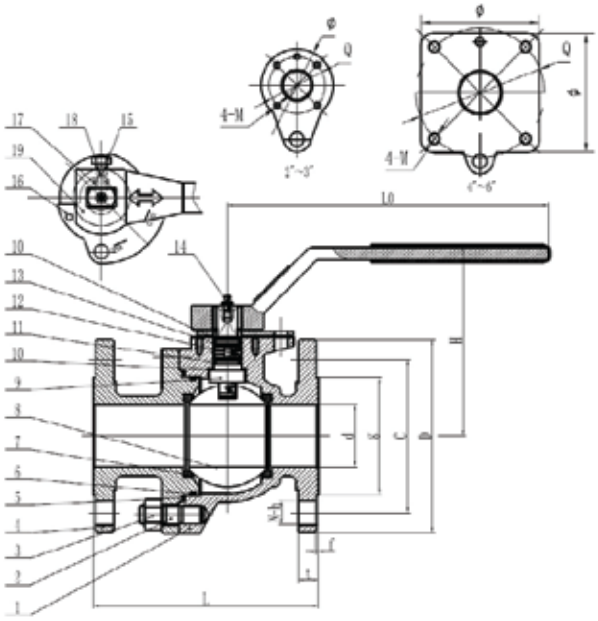
Torque Values:

	PTFE/RTFE ft.lbs (N.m)			
CWP	2x2	3X3	4X4	6X6
0 psi	30 (40.7)	50 (67.8)	70 (94.9)	130 (162.7)
720 psi	60 (81.3)	140 (189.8)	180 (244)	NA

FLANGED END BALL VALVE

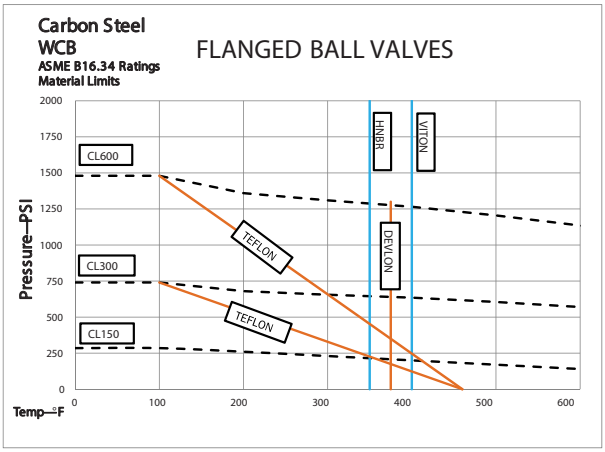
FLOATER SERIES

Class #600



Sr. No.	Description	Material
1	Body	ASTM A216 WCB
2	Stud	ASTM A193 B7
3	Nut	ASTM A194 2H
4	Adapter Cap	ASTM A216 WCB
5	Gasket Body	F304 + Graphite
6	O-ring Body	VITON
7	Seat	RPTFE
8	Ball	ASTM A276 410
9	Stem	ASTM A182 F6a
10	Stem gasket	PTFE
11	O-ring Stem	VITON
12	Antistatic ball	F304
13	Antistatic spring	F304
14	Grease Zerk	Carbon Steel
15	Handle Screw	A193 B7
16	Stop plate	A36+Zn
17	Elastic damping ring	AISI 1065
18	Stop plate	A193 B7
19	Handle	Ductile Iron

RPTFE: SEAT TEMP. RANGE -50 ºF TO 450 ºF



Dimensions and Sizes:

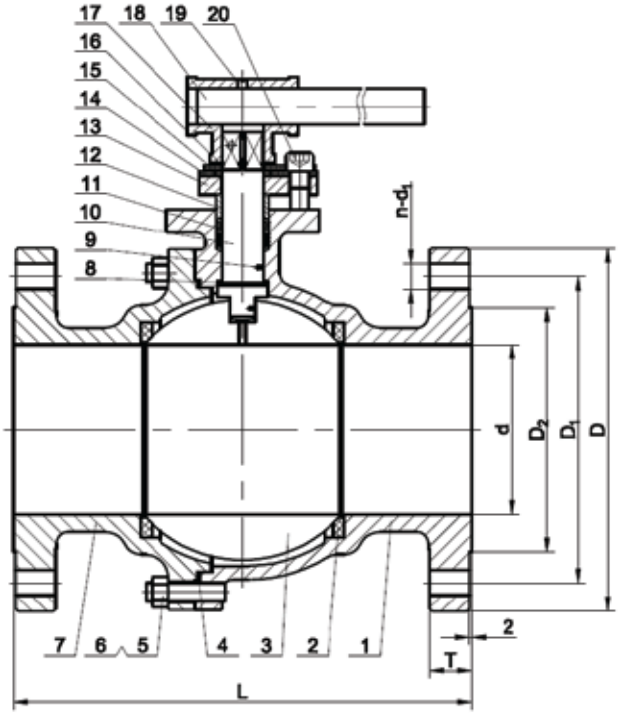
NPS	L	D	C	g	d	N-h	t	h	Ø	Q	4-M	LO
2”	11.50	6.50	5.00	3.62	1.93	8- Ø0.75	1.02	5.91	2.24	1.75	¼	12.00
3”	14.02	8.27	6.63	5.00	2.91	8- Ø0.87	1.26	6.80	3.70X3.70	4.00	3/8	20.00
4”	17.01	10.75	8.50	6.18	3.94	8- Ø1.02	1.50	7.93	3.85X3.85	4.24	3/8	31.50

Torque Values:

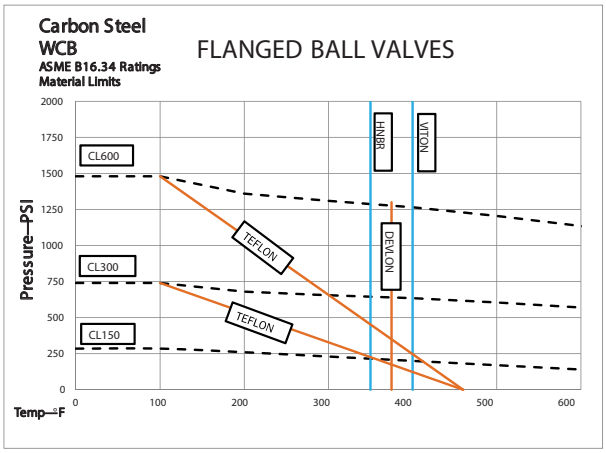
	Nylon ft. lbs (N.m)		
CWP	2X2	3X3	4X4
0 psi	40(54.2)	60(81.3)	80(108.5)
1440 psi	100(135.6)	180(244)	240(325.4)

FLANGED END BALL VALVE

Class #600 2”- 6” Valves



NO.	NAME	MATERIAL
20	SCREW	A193 B7
19	SCREW	A193 B7
18	HANDLE	Q235
17	THREE HEAD	A216 WCB
16	RING	SS301
15	SPACER	Q235
14	Latch	Q235
13	PACKING GLAND	A216 WCB
12	PACKING RING	A276 316
11	PACKING	GRAPHITE
10	STEM	A276 316
9	ANTI-STATIC	SS304
8	THRUST WASHER	RPTFE
7	CAP	A216 WCB
6	STUD	A193 B7
5	NUT	A194 2H
4	BODY GASKET	GRAPHITE+SS316
3	BALL	A182 F316
2	SEAT	RPTFE
1	BADY	A216 WCB



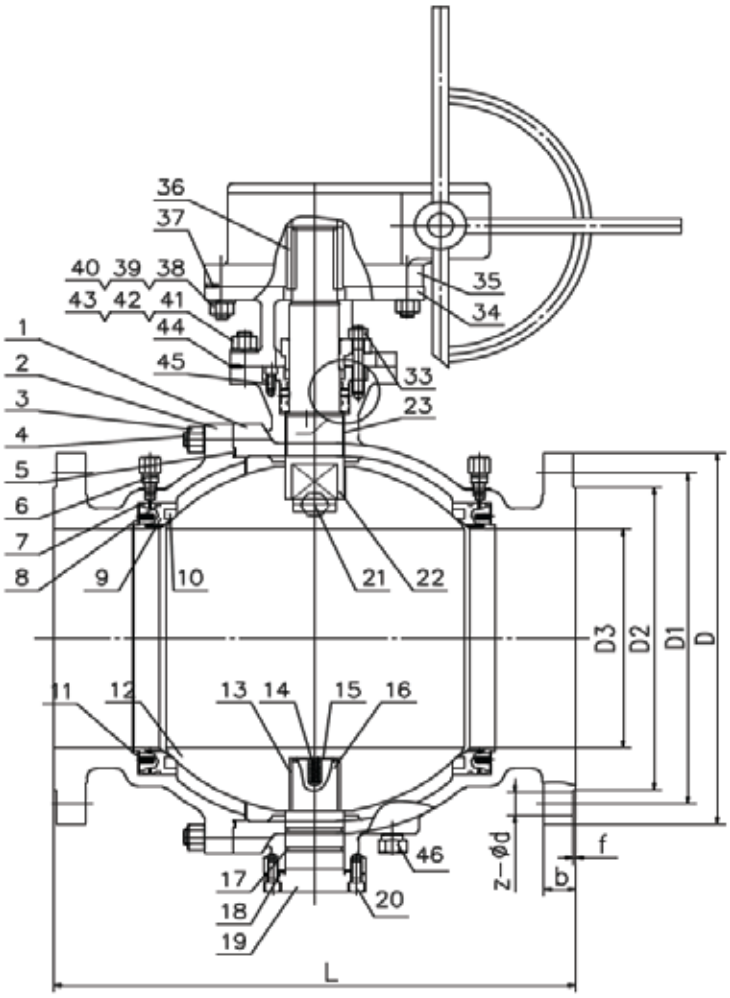
Dimensional Information for Class # 600 Valves:

Size	d	D2	D1	D	T	L	n-Ø
2"	2.0	3.6	5.0	6.5	1.0	11.5	8 - 3/4
3"	3.1	5.0	6.6	8.3	1.3	14.0	8 - 7/8
4"	3.9	6.2	8.5	10.8	1.5	17.0	8 - 1

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.
Please contact UVI/Chem Oil for technical details.

FLANGED END BALL VALVE

Class #150, 300 & 600 - 8” Trunnion 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:
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FLANGED END BALL VALVE

Additional Specification - Trunnion Ball Valves

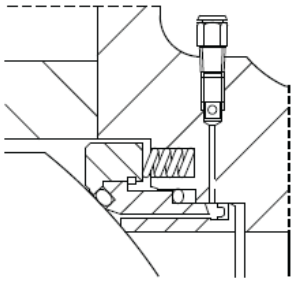
Standard Design Features:

• 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

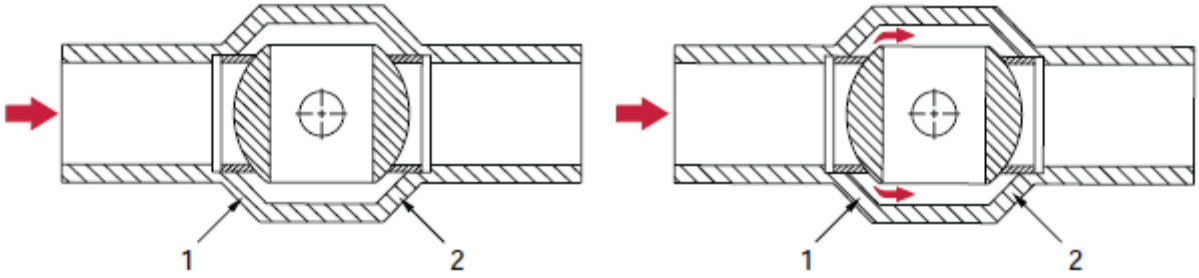
• Anti blow-out stem design.
- The stem features triple barrier seals to isolate the stem from line pressure and to seal from the atmosphere.

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

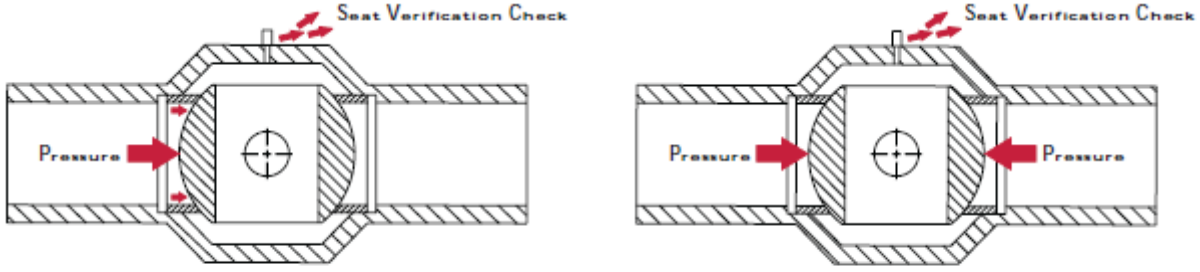
• Primary Metal to Metal and secondary soft RPTFE.



• 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.