



ASME Classes 150 – 2500

API 6D

2 Piece & 3 Piece Design, O-Ring Seals



Trunnion Mounted Ball Valves

CHAODA INTRODUCTION

At Chaoda, pioneering design meets efficient manufacturing for top-tier trunnion ball valves.

INDUSTRIES WE SERVE



The Chaoda Group is excited to introduce our Trunnion Mounted Ball Valve range, which exemplifies our dedication to combining field-tested designs with cutting-edge manufacturing technology to deliver superior quality.

As a fully integrated manufacturer, we oversee every aspect of production from the initial design through to the foundry, machining, assembly, and rigorous testing phases. This complete control ensures that each Trunnion Mounted Ball Valve meets the high standards our clients expect, providing a reliable solution tailored to precise operational requirements without compromising on cost.

Established in 1984, the Chaoda Group has consistently pursued excellence in valve production, driven by a commitment to ongoing research, development, and enhancement of manufacturing processes. This approach positions us at the forefront of the industry, offering you a premier selection of Trunnion Mounted Ball Valves that truly set the standard in performance and value.

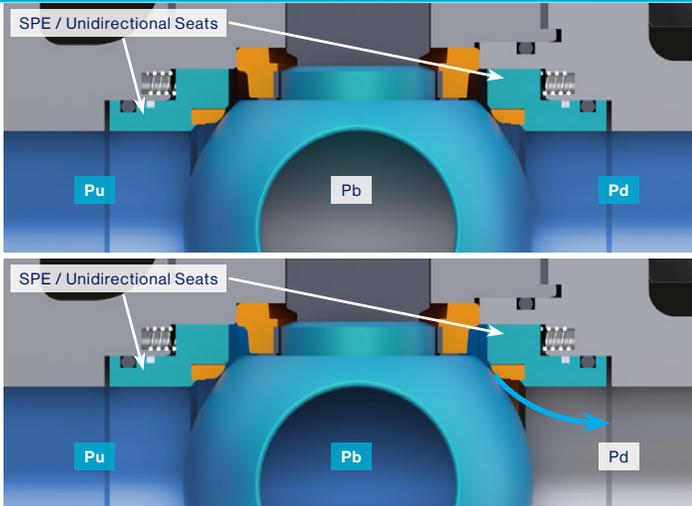
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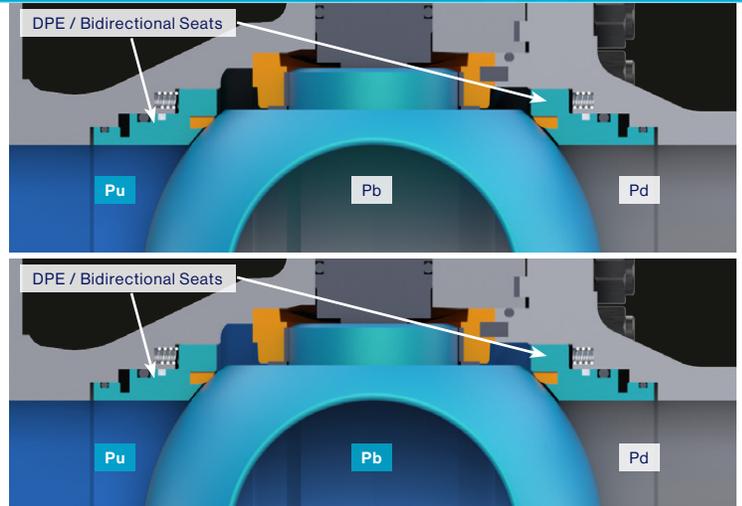
SEAT DESIGN DETAILS

Chaoda is capable of manufacturing trunnion ball valves with a variety of seat configurations to meet customer requirements.



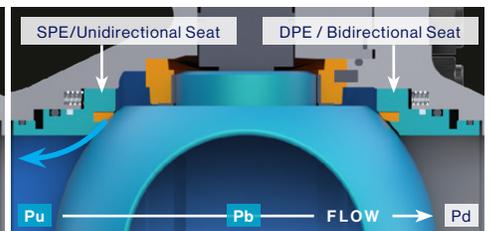
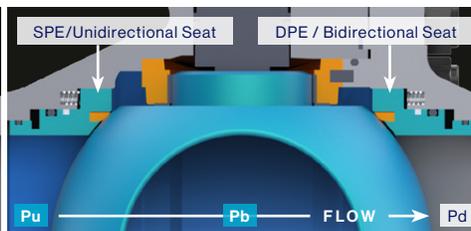
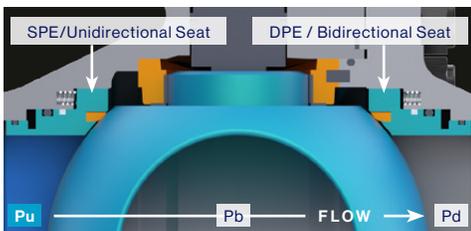
Double Block & Bleed (DBB)

Chaoda's standard seat configuration for our trunnion ball valves is Double Block & Bleed. This configuration uses 2 Single Piston Effect (Unidirectional) seats that seal the pressure source in 1 direction only. This configuration allows both seats to automatically self-relieve excess internal body cavity pressure that is created by thermal expansion of the media in the body cavity.



Double Isolation & Bleed 1 (DIB-1)

Chaoda also can manufacture trunnion ball valves with DIB-1 seat configuration. This seat configuration uses 2 Double Piston Effect (Bidirectional) seats that seal the pressure source in either direction. This seat configuration provides Double Positive Isolation against the pressure source regardless of valve installation – meaning that if the upstream seat fails, the downstream seat will still seal. This configuration does NOT automatically self-relieve excess internal body cavity pressure, and thus consideration should be given to providing for differential thermal relief (DTR) to the valve. Chaoda can install body cavity pressure relief and DTR systems to end user specification.



Double Isolation & Bleed Type 2 (DIB-2)

Lastly, Chaoda can manufacture trunnion ball valves with DIB-2 seat configuration. This seat configuration uses 1 Double Piston Effect (Bidirectional) seat and 1 Single Piston Effect (Unidirectional) seat. This seat configuration provides Double Positive Isolation against the pressure source in the Preferred Direction – meaning that if the upstream seat fails, the downstream seat will still seal. This configuration can automatically self-relieve excess internal body cavity pressure across the Single Piston Effect (SPE) seat. It does NOT automatically self-relieve excess internal body cavity pressure across the Double Piston Effect (DPE) seat. Chaoda can install body cavity pressure relief and DTR systems to end user specification if required.

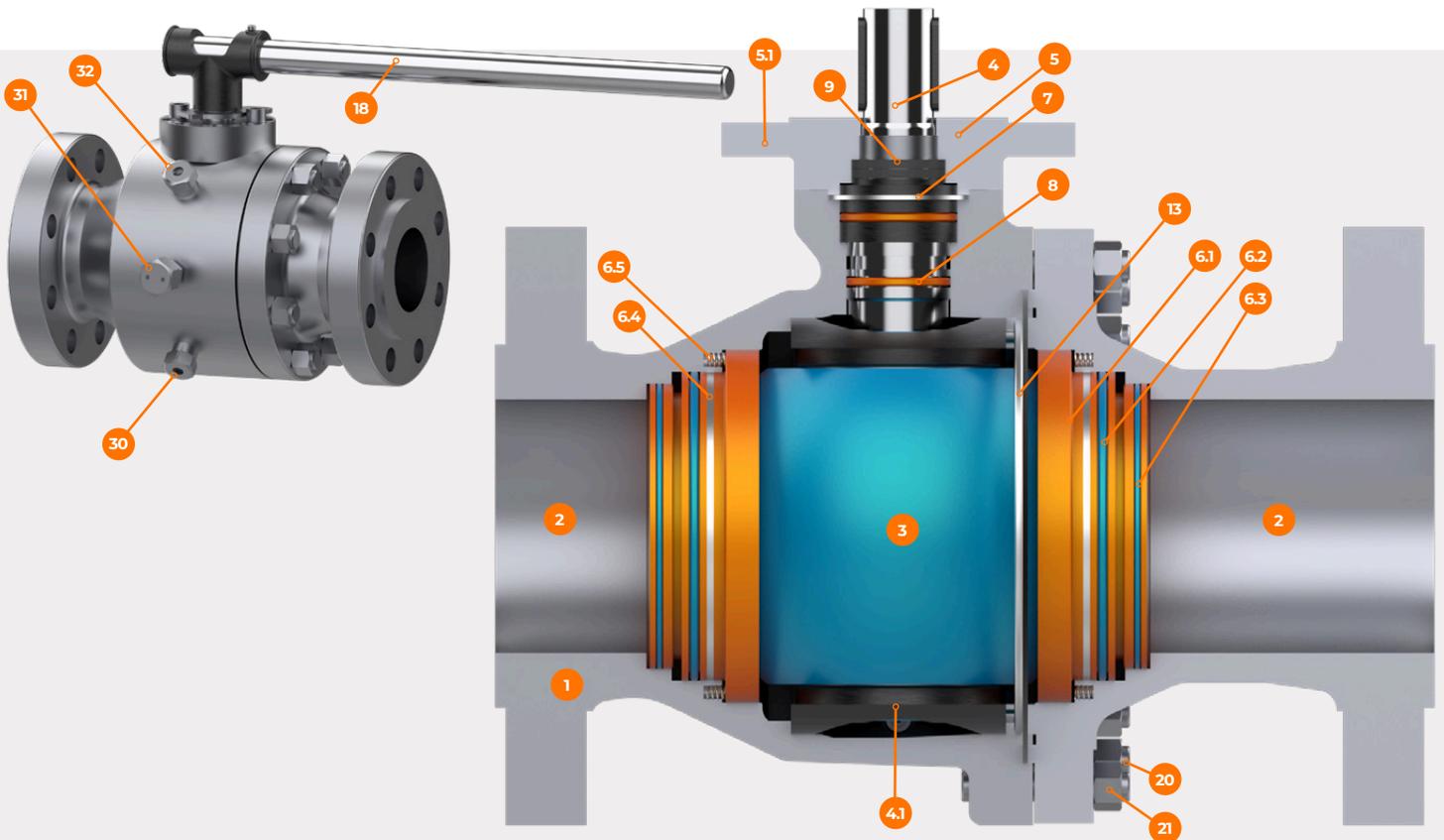
BT2D SERIES | API 6D

2 Piece Trunnion Mounted Ball Valve

BT2D SERIES 2-PC TMBV

ASME Class 150, 300, 600, 900, 1500, 2500

BASIC DESIGN	API 6D
TESTING	API 6D
END DIMENSION FLANGED	ASME B16.5 (NPS≤24) ASME B16.47 Series A or B (NPS>24)
BUTT WELD	ASME B16.25
FACE-TO-FACE:	API 6D
P/T RATINGS:	ASME B16.34



BT2D SERIES | API 6D

ASME Class 150, 300, 600, 900, 1500, 2500
Standard Parts and Materials

#	PART NAME	WCC BODY CS + 3MIL ENP TRIM	WCC BODY 316SS TRIM	A105 BODY CS + 3MIL ENP TRIM	LCC BODY LTCS + 3MIL ENP TRIM
1	Body	ASTMA216 WCC	ASTMA216 WCC	ASTMA105N	ASTMA352 LCC
2	Cap(s)	ASTMA216 WCC	ASTMA216 WCC	ASTMA105N	ASTMA352 LCC
3	Ball	ASTMA105N + 3mil ENP	ASTMA182 F316	ASTMA105N + 3mil ENP	ASTMA350 LF2 Cl.1 + 3mil ENP
4	Stem	UNS G41400 + 3mil ENP	Class 150-300: ASTM A182 F316 Class 600-900 NPS 2 - NPS 4: ASTM A182 F316 Class 600-900 NPS 6 & Larger: ASTM A182 FXM-19 Class 1500-2500: ASTM A182 FXM-19	UNS G41400 + 3mil ENP	UNS G41400 + 3mil ENP
4.1	Trunnion	External: ASTM A105N Internal: ASTM A216 WCC	External: ASTM A105N Internal: ASTM A216 WCC	External: ASTM A105N Internal: ASTM A216 WCC	External: ASTM A350 LF2 Cl.1 Internal: ASTM A352 LCC
5	Gland Flange (NPS 2-3)	ASTMA216 WCB	ASTMA216 WCB	ASTMA216 WCB	ASTMA216 WCB
5.1	Cover (NPS 4 & Larger)	ASTMA105N or ASTM A216 WCC	ASTMA105N or ASTM A216 WCC	ASTMA105N or ASTM A216 WCC	ASTMA350 LF2 Cl.1 or ASTM A352 LCC
5.2	Gland (NPS 6 & Larger)	ASTMA182 F6a	ASTMA182 F316	ASTMA182 F6a	NPS 6: ASTM A350 LF2 Cl.1 NPS 8 & Larger: ASTM A182 F304
6.1	Seat Retainer	ASTMA105N + 3mil ENP	ASTMA182 F316	ASTMA105N + 3mil ENP	ASTMA350 LF2 Cl.1 + 3mil ENP
6.2	Seat Insert	Class 150-300: G/PTFE Class 600-1500: Devlon V-API Class 2500: PEEK	Class 150-300: G/PTFE Class 600-1500: Devlon V-API Class 2500: PEEK	Class 150-300: G/PTFE Class 600-1500: Devlon V-API Class 2500: PEEK	Class 150-300: G/PTFE Class 600-1500: Devlon V-API Class 2500: PEEK
6.3	Seat Seals	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others
6.4	Seat Firesafe Seal	Graphite	Graphite	Graphite	Graphite
6.5	Seat Springs	Inconel X-750	Inconel X-750	Inconel X-750	Inconel X-750
7	Thrust Washer	Glass-Filled PTFE	Glass-Filled PTFE	Glass-Filled PTFE	Glass-Filled PTFE
8	Stem Seals	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others
9	Stem Firesafe Seals (Packing)	Graphite	Graphite	Graphite	Graphite
13	Body Seal	Spiralwound 304SS + Graphite	Spiralwound 316SS + Graphite	Spiralwound 304SS + Graphite	Spiralwound 304SS + Graphite
18	Lever	Steel	Steel	Steel	Steel
19	Gear	Commercial	Commercial	Commercial	Commercial
19	Locating Plate	Steel	Steel	Steel	Steel
20	Body Studs	ASTMA193 B7M	ASTMA193 B7M	ASTMA193 B7M	ASTMA320 L7M
21	Body Nuts	ASTMA194 2HM	ASTMA194 2HM	ASTMA194 2HM	ASTMA194 7M
30	Drain Valve	ASTMA105N Galvanized	ASTMA105N Galvanized	ASTMA105N Galvanized	ASTMA105N Galvanized
31	Seat Injection Fitting(s) + Check Valve	ASTMA105N Galvanized	ASTMA105N Galvanized	ASTMA105N Galvanized	ASTMA105N Galvanized
32	Stem Injection Fitting + Check Valve	ASTMA105N Galvanized	ASTMA105N Galvanized	ASTMA105N Galvanized	ASTMA105N Galvanized

#	PART NAME	LCC BODY 316SS TRIM	LF2 BODY LTCS + 3MIL ENP TRIM	CF8M BODY 316SS TRIM	CD3MN BODY F51 DUPLEX TRIM
1	Body	ASTMA352 LCC	ASTMA350 LF2 Cl.1	ASTMA351 CF8M	ASTMA995 CD3MN
2	Cap(s)	ASTMA352 LCC	ASTMA350 LF2 Cl.1	ASTMA351 CF8M	ASTMA995 CD3MN
3	Ball	ASTMA182 F316	ASTMA350 LF2 Cl.1 + 3mil ENP	ASTMA182 F316	ASTMA182 F51
4	Stem	Class 150-300: ASTM A182 F316 Class 600-900 NPS 2 - NPS 4: ASTM A182 F316 Class 600-900 NPS 6 & Larger: ASTM A182 FXM-19 Class 1500-2500: ASTM A182 FXM-19	UNS G41400 + 3mil ENP	Class 150-300: ASTM A182 F316 Class 600-900 NPS 2 - NPS 4: ASTM A182 F316 Class 600-900 NPS 6 & Larger: ASTM A182 FXM-19 Class 1500-2500: ASTM A182 FXM-19	ASTMA182 F51
4.1	Trunnion	External: ASTM A350 LF2 Cl.1 Internal: ASTM A352 LCC	External: ASTM A350 LF2 Cl.1 Internal: ASTM A352 LCC	External: ASTM A182 F316 Internal: ASTM A351 CF8M	External: ASTM A182 F51 Internal: ASTM A351 CD3MN
5	Gland Flange (NPS 2-3)	ASTMA216 WCB	ASTMA216 WCB	ASTMA182 F316	ASTMA182 F51
5.1	Cover (NPS 4 & Larger)	ASTMA350 LF2 Cl.1 or ASTM A352 LCC	ASTMA350 LF2 Cl.1 or ASTM A352 LCC	ASTMA351 CF8M	ASTMA995 CD3MN
5.2	Gland (NPS 6 & Larger)	ASTMA182 F316	NPS 6: ASTM A350 LF2 Cl.1 NPS 8 & Larger: ASTM A182 F304	ASTMA182 F316	ASTMA182 F51
6.1	Seat Retainer	ASTMA182 F316	ASTMA350 LF2 Cl.1 + 3mil ENP	ASTMA182 F316	ASTMA182 F51
6.2	Seat Insert	Class 150-300: G/PTFE Class 600-1500: Devlon V-API Class 2500: PEEK	Class 150-300: G/PTFE Class 600-1500: Devlon V-API Class 2500: PEEK	Class 150-300: G/PTFE Class 600-1500: Devlon V-API Class 2500: PEEK	Class 150-300: G/PTFE Class 600-1500: Devlon V-API Class 2500: PEEK
6.3	Seat Seals	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others
6.4	Seat Firesafe Seal	Graphite	Graphite	Graphite	Graphite
6.5	Seat Springs	Inconel X-750	Inconel X-750	Inconel X-750	Inconel X-750
7	Thrust Washer	Glass-Filled PTFE	Glass-Filled PTFE	Glass-Filled PTFE	Glass-Filled PTFE
8	Stem Seals	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others
9	Stem Firesafe Seals (Packing)	Graphite	Graphite	Graphite	Graphite
13	Body Seal	Spiralwound 316SS + Graphite	Spiralwound 316SS + Graphite	Spiralwound 316SS + Graphite	Spiralwound S31803 + Graphite
18	Lever	Steel	Steel	Steel	Steel
19	Gear	Commercial	Commercial	Commercial	Commercial
19	Locating Plate	Steel	Steel	Steel	Steel
20	Body Studs	ASTMA320 L7M	ASTMA320 L7M	Class 150-600: ASTM A193 Gr. B8MA CL.1A Class 900-2500: ASTM A193 Gr. B7M + PTFE	Class 150-600: ASTM A193 Gr. B8MA CL.1A Class 900-2500: ASTM A193 Gr. B7M + PTFE
21	Body Nuts	ASTMA194 7M	ASTMA194 7M	Class 150-600: ASTM A194 Gr. 8MA Class 900-2500: ASTM A194 Gr. 2HM + PTFE	Class 150-600: ASTM A194 Gr. 8MA Class 900-2500: ASTM A194 Gr. 2HM + PTFE
30	Drain Valve	ASTMA105N Galvanized	ASTMA105N Galvanized	ASTMA182 F316	ASTMA182 F51
31	Seat Injection Fitting(s) + Check Valve	ASTMA105N Galvanized	ASTMA105N Galvanized	ASTMA182 F316	ASTMA182 F51
32	Stem Injection Fitting + Check Valve	ASTMA105N Galvanized	ASTMA105N Galvanized	ASTMA182 F316	ASTMA182 F51

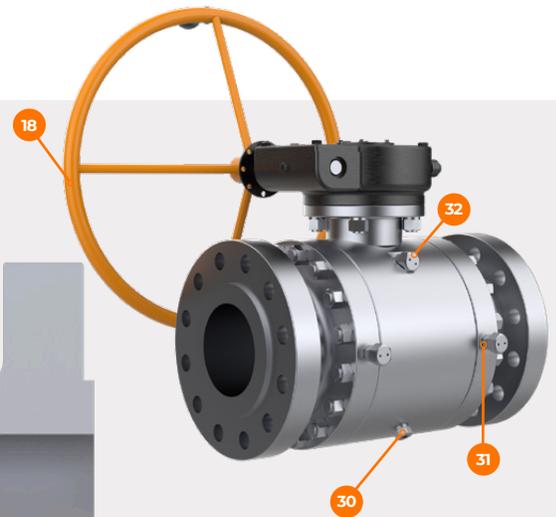
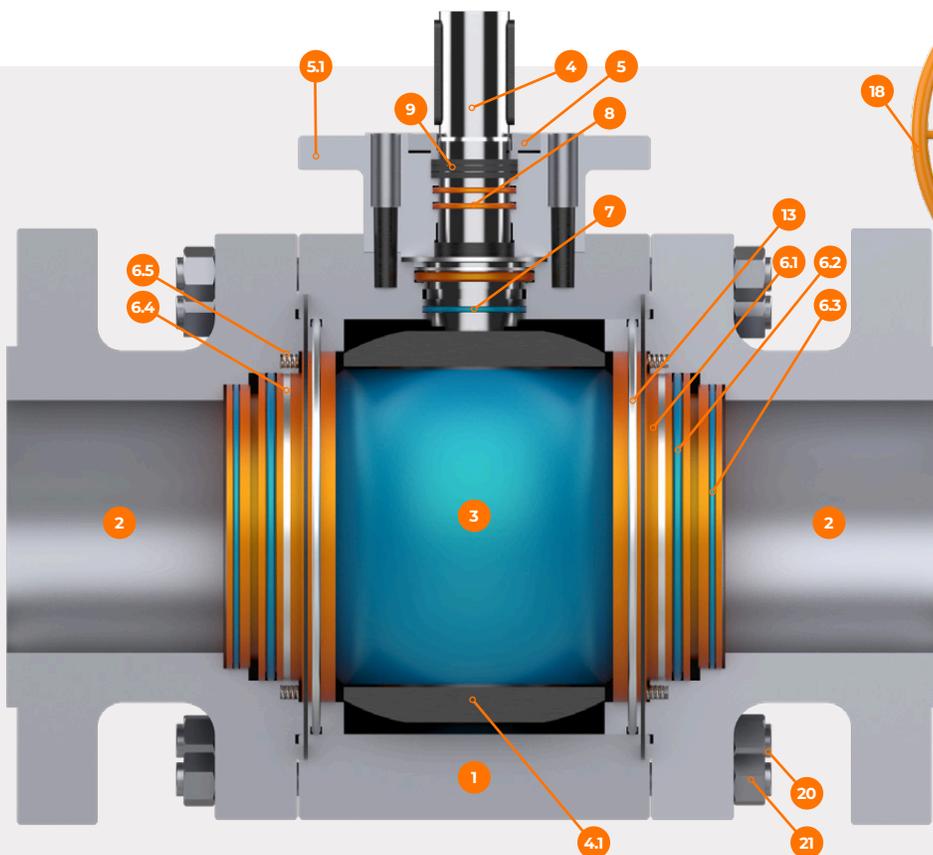
BT3D SERIES | API 6D

3 Piece Trunnion Mounted Ball Valve

BT3D SERIES 3-PC TMBV

ASME Class 150, 300, 600, 900, 1500, 2500

BASIC DESIGN	API 6D
TESTING	API 6D
END DIMENSION FLANGED	ASME B16.5 (NPS≤24) ASME B16.47 Series A or B (NPS>24)
BUTT WELD	ASME B16.25
FACE-TO-FACE:	API 6D
P/T RATINGS:	ASME B16.34



BT3D SERIES | API 6D

ASME Class 150, 300, 600, 900, 1500, 2500
Standard Parts and Materials

#	PART NAME	A105 BODY CS + 3MIL ENP TRIM	A105 BODY 316SS TRIM	LF2 BODY LTCS + 3MIL ENP TRIM
1	Body	ASTMA105N	ASTMA105N	ASTMA350 LF2 Cl.1
2	Cap(s)	ASTMA105N	ASTMA105N	ASTMA350 LF2 Cl.1
3	Ball	ASTMA105N + 3mil ENP	ASTMA182 F316	ASTMA350 LF2 Cl.1 + 3mil ENP
4	Stem	UNS G41400 + 3mil ENP	Class 150-300: ASTM A182 F316 Class 600-900 NPS 2 - NPS 4: ASTM A182 F316 Class 600-900 NPS 6 & Larger: ASTM A182 FXM-19 Class 1500-2500: ASTM A182 FXM-19	UNS G41400 + 3mil ENP
4.1	Trunnion	ASTMA216 WCB	External: ASTM A105N Internal: ASTM A216 WCC	External: ASTM A350 LF2 Cl.1 Internal: ASTM A352 LCC
5	Gland Flange (NPS 2-3)	ASTMA216 WCB	ASTMA216 WCB	ASTMA216 WCB
5.1	Cover (NPS 4 & Larger)	ASTMA105N or ASTM A216 WCC	ASTMA105N or ASTM A216 WCC	ASTMA350 LF2 Cl.1 or ASTM A352 LCC
5.2	Gland (NPS 6 & Larger)	ASTMA182 F6a	ASTMA182 F316	NPS 6: ASTM A350 LF2 Cl.1 NPS 8 & Larger: ASTM A182 F304
6.1	Seat Retainer	ASTMA105N + 3mil ENP	ASTMA182 F316	ASTMA350 LF2 Cl.1 + 3mil ENP
6.2	Seat Insert	Class 150-300: G/PTFE Class 600-1500: Devlon V-API Class 2500: PEEK	Class 150-300: G/PTFE Class 600-1500: Devlon V-API Class 2500: PEEK	Class 150-300: G/PTFE Class 600-1500: Devlon V-API Class 2500: PEEK
6.3	Seat Seals	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others
6.4	Seat Firesafe Seal	Graphite	Graphite	Graphite
6.5	Seat Springs	Inconel X-750	Inconel X-750	Inconel X-750
7	Thrust Washer	Glass-Filled PTFE	Glass-Filled PTFE	Glass-Filled PTFE
8	Stem Seals	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others
9	Stem Firesafe Seals (Packing)	Graphite	Graphite	Graphite
13	Body Seal	Spiralwound 304SS + Graphite	Spiralwound 316SS + Graphite	Spiralwound 304SS + Graphite
18	Lever	Steel	Steel	Steel
19	Gear	Commercial	Commercial	Commercial
19	Locating Plate	Steel	Steel	Steel
20	Body Studs	ASTMA193 B7M	ASTMA193 B7M	ASTMA320 L7M
21	Body Nuts	ASTMA194 2HM	ASTMA194 2HM	ASTMA194 7M
30	Drain Valve	ASTMA105N Galvanized	ASTMA105N Galvanized	ASTMA105N Galvanized
31	Seat Injection Fitting(s) + Check Valve	ASTMA105N Galvanized	ASTMA105N Galvanized	ASTMA105N Galvanized
32	Stem Injection Fitting + Check Valve	ASTMA105N Galvanized	ASTMA105N Galvanized	ASTMA105N Galvanized

#	PART NAME	LF2 BODY 316SS TRIM	F316 BODY 316SS TRIM	F51 BODY F51 DUPLEX TRIM
1	Body	ASTMA350 LF2 Cl.1	ASTMA182 F316	ASTMA182 F51
2	Cap(s)	ASTMA350 LF2 Cl.1	ASTMA182 F316	ASTMA182 F51
3	Ball	ASTMA350 LF2 Cl.1 + 3mil ENP	ASTMA182 F316	ASTMA182 F51
4	Stem	UNS G41400 + 3mil ENP	Class 150-300: ASTM A182 F316 Class 600-900 NPS 2 - NPS 4: ASTM A182 F316 Class 600-900 NPS 6 & Larger: ASTM A182 FXM-19 Class 1500-2500: ASTM A182 FXM-19	ASTMA182 F51
4.1	Trunnion	External: ASTM A350 LF2 Cl.1 Internal: ASTM A352 LCC	External: ASTM A182 F316 Internal: ASTM A351 CF8M	External: ASTM A182 F51 Internal: ASTM A351 CD3MN
5	Gland Flange (NPS 2-3)	ASTMA216 WCB	ASTMA182 F316	ASTMA182 F51
5.1	Cover (NPS 4 & Larger)	ASTMA350 LF2 Cl.1 or ASTM A352 LCC	ASTMA351 CF8M	ASTMA995 CD3MN
5.2	Gland (NPS 6 & Larger)	NPS 6: ASTM A350 LF2 Cl.1 NPS 8 & Larger: ASTM A182 F304	ASTMA182 F316	ASTMA182 F51
6.1	Seat Retainer	ASTMA350 LF2 Cl.1 + 3mil ENP	ASTMA182 F316	ASTMA182 F51
6.2	Seat Insert	Class 150-300: G/PTFE Class 600-1500: Devlon V-API Class 2500: PEEK	Class 150-300: G/PTFE Class 600-1500: Devlon V-API Class 2500: PEEK	Class 150-300: G/PTFE Class 600-1500: Devlon V-API Class 2500: PEEK
6.3	Seat Seals	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others
6.4	Seat Firesafe Seal	Graphite	Graphite	Graphite
6.5	Seat Springs	Inconel X-750	Inconel X-750	Inconel X-750
7	Thrust Washer	Glass-Filled PTFE	Glass-Filled PTFE	Glass-Filled PTFE
8	Stem Seals	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others	HNBR AED, FKM GLT AED, or Others
9	Stem Firesafe Seals (Packing)	Graphite	Graphite	Graphite
13	Body Seal	Spiralwound 304SS + Graphite	Spiralwound 316SS + Graphite	Spiralwound S31803 + Graphite
18	Lever	Steel	Steel	Steel
19	Gear	Commercial	Commercial	Commercial
19	Locating Plate	Steel	Steel	Steel
20	Body Studs	ASTMA320 L7M	Class 150-600: ASTM A193 Gr. B8MA CL.1A Class 900-2500: ASTM A193 Gr. B7M + PTFE	Class 150-600: ASTM A193 Gr. B8MA CL.1A Class 900-2500: ASTM A193 Gr. B7M + PTFE
21	Body Nuts	ASTMA194 7M	Class 150-600: ASTM A194 Gr. 8MA Class 900-2500: ASTM A194 Gr. 2HM + PTFE	Class 150-600: ASTM A194 Gr. 8MA Class 900-2500: ASTM A194 Gr. 2HM + PTFE
30	Drain Valve	ASTMA105N Galvanized	ASTMA182 F316	ASTMA182 F51
31	Seat Injection Fitting(s) + Check Valve	ASTMA105N Galvanized	ASTMA182 F316	ASTMA182 F51
32	Stem Injection Fitting + Check Valve	ASTMA105N Galvanized	ASTMA182 F316	ASTMA182 F51

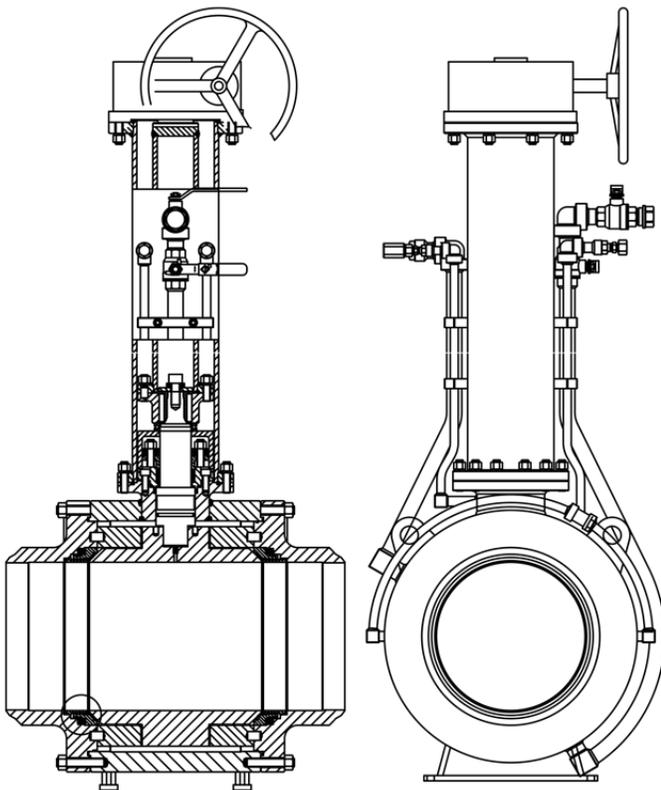
SPECIAL FEATURES & OPTIONS

Midstream Trunnion Ball Valves

FLEXIBILITY IN MIND

Choda's midstream trunnion ball valves are designed to meet diverse operational needs, offering a range of special features and customizable options to ensure optimal performance in various applications. Customers can enhance their valves with options like valve automation for seamless operation, stem extensions tailored to specific requirements (including high-head, pinion shaft, and 2" nut configurations), and specialized pressure testing that includes chart-recorded, extended duration, and high-pressure gas testing.

Additionally, ChodaUSA provides special coatings and non-destructive examinations according to customer specifications, ensuring that each valve meets the exact standards and durability required. To fully leverage these advanced features and customize their valves to the unique demands of their projects, customers are encouraged to reach out to ChodaUSA's expert team for guidance and support.



SPECIAL FEATURES & OPTIONS

- > Valve Automation
- > Stem Extensions
 - High-Head
 - Pinion Shaft
 - 2" Nut & More
- > Special Pressure Testing
 - Chart-Recorded
 - Extended Duration
 - High Pressure Gas Testing
- > Special Coatings to Customer Specification
- > Non-Destructive Examination to Customer Specification

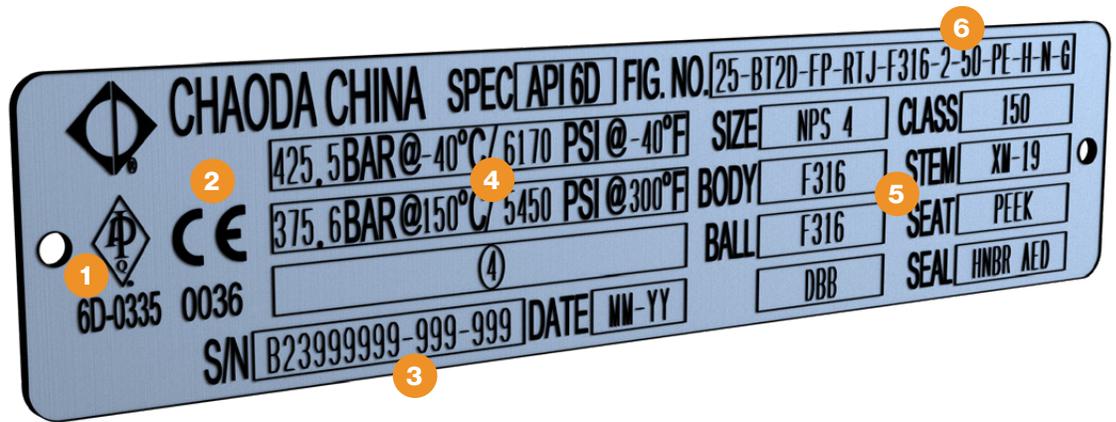
NAMEPLATES & CERTIFICATIONS

API 6D Valves

NAMEPLATE

Chaoada's nameplate conventions are prominently displayed on their valves, providing customers with all essential information, including API 6D monogram, pressure and temperature ranges, and materials for critical valve components. Each nameplate also includes a date of manufacture, figure number, and a serial number, ensuring traceability and easy access to vital data for maintenance and operational purposes.

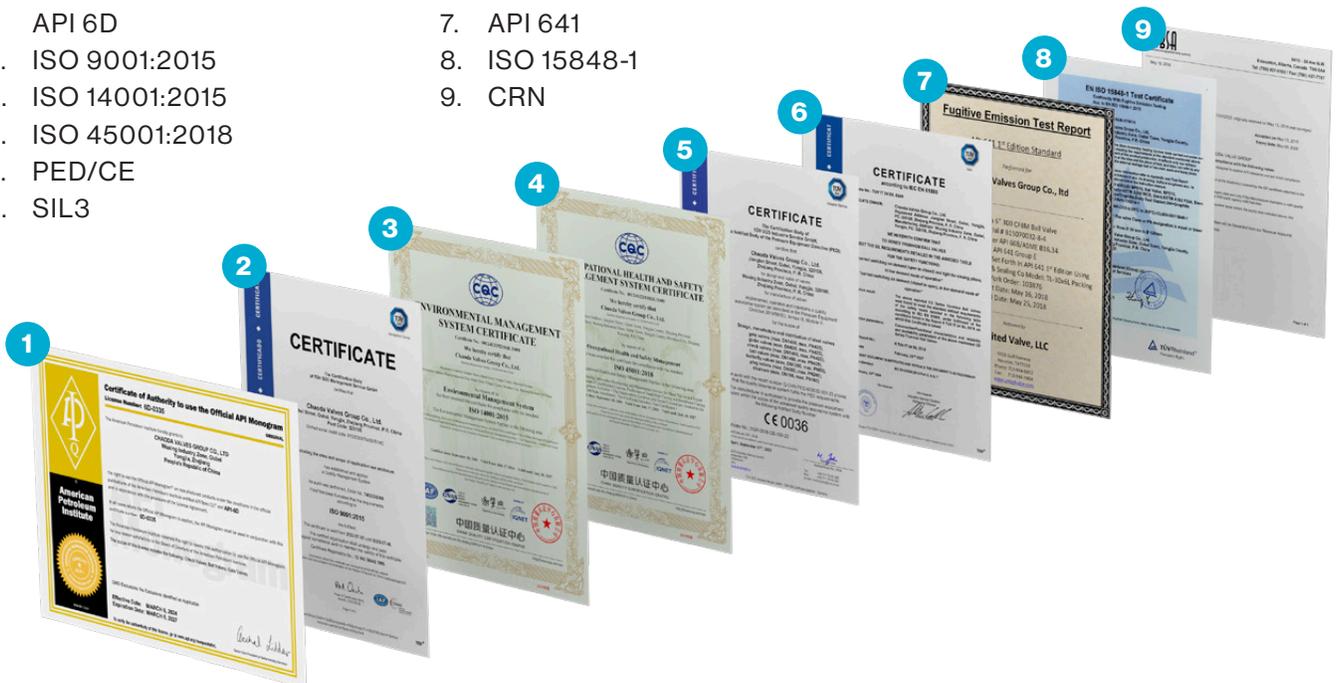
1. API Monogram
2. CE Mark
3. Serial Number
4. P/T Range
5. Part Materials
6. Figure Number



CERTIFICATIONS

Chaoada maintains a broad array of product and manufacturing certifications, which is crucial for ensuring compliance with industry standards, guaranteeing product quality and safety, and building trust with our clients and various international regulatory bodies.

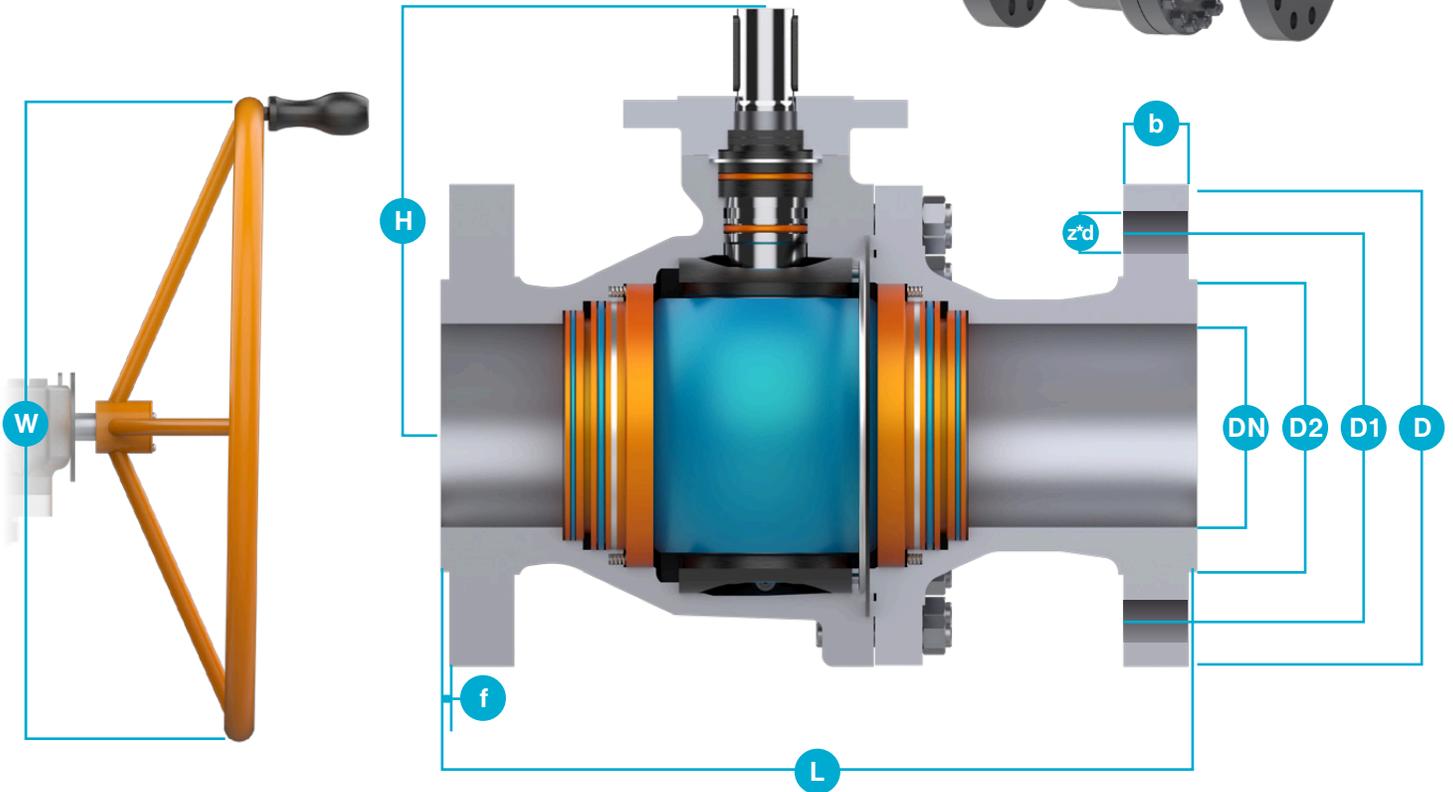
1. API 6D
2. ISO 9001:2015
3. ISO 14001:2015
4. ISO 45001:2018
5. PED/CE
6. SIL3
7. API 641
8. ISO 15848-1
9. CRN



API 6D BT2D BALL VALVE

ASME Class 150 | 300

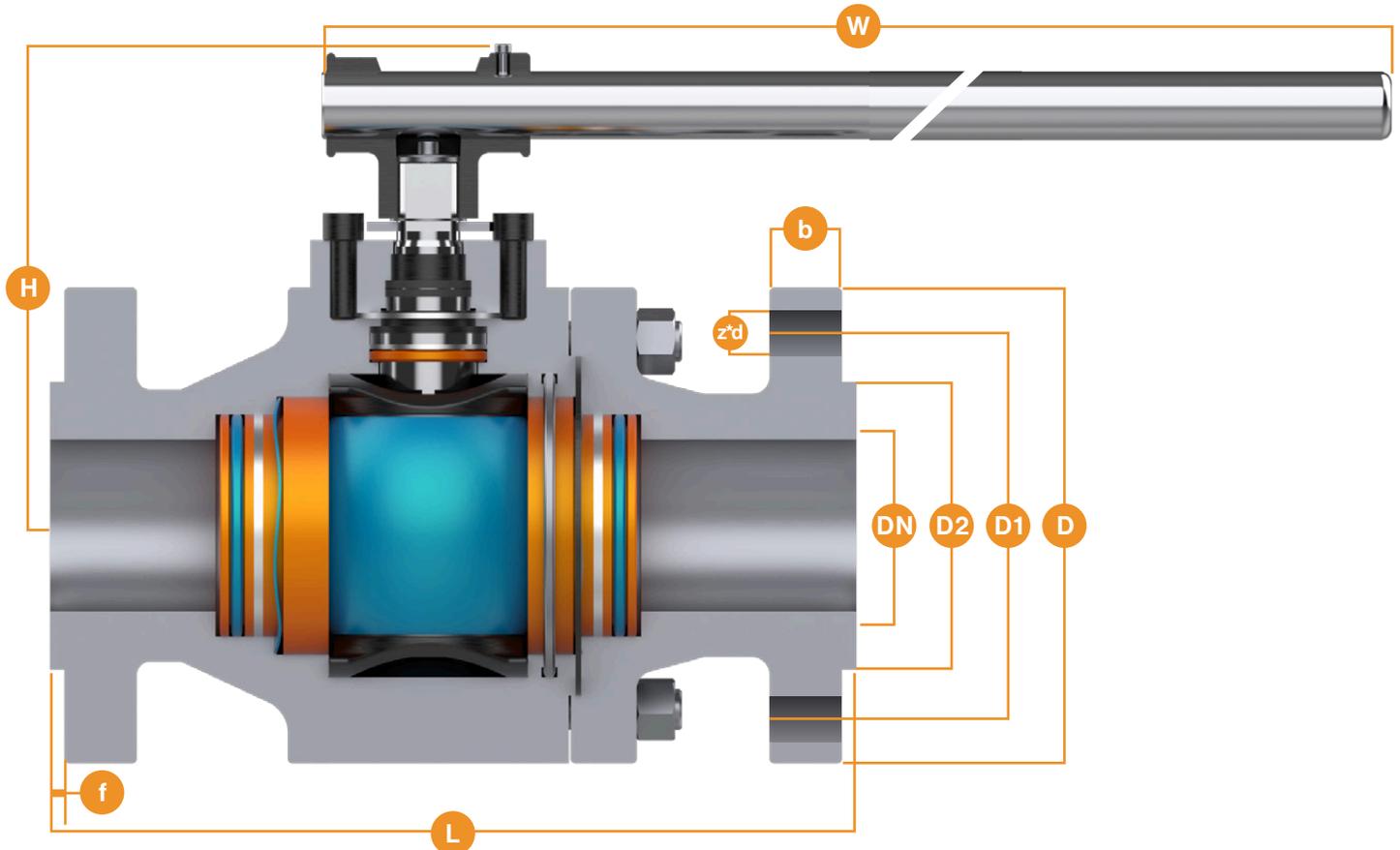
Dimensional Information



DIMENSIONS INCH (MM)											STD OPER	WT LB (KG)
SIZE	L	DN	D	D1	D2	b	f	z*d	W	H		
CL. 150												
2	7.01 (178)	1.97 (50)	5.98 (152)	4.75 (120.6)	3.62 (91.9)	0.56 (14.2)	0.06 (1.5)	4*0.75 (4*19)	9.84 (250)	7.48 (190)	L	42 (19)
3	7.99 (203)	2.91 (74)	7.48 (190)	6 (152.4)	5 (127)	0.69 (17.5)	0.06 (1.5)	4*0.75 (4*19)	14.96 (380)	9.37 (238)	L	57 (26)
4	9.02 (229)	3.94 (100)	9.02 (229)	7.5 (190.5)	6.19 (157.2)	0.88 (22.4)	0.06 (1.5)	8*0.75 (8*19)	11.81 (300)	8.46 (215)	G	132 (60)
6	15.51 (394)	5.91 (150)	10.98 (279)	9.5 (241.3)	8.5 (215.9)	0.94 (23.9)	0.06 (1.5)	8*0.87 (8*22)	14.17 (360)	10.55 (268)	G	223 (101)
8	17.99 (457)	7.91 (201)	13.5 (343)	11.75 (298.4)	10.62 (269.7)	1.06 (26.9)	0.06 (1.5)	8*0.87 (8*22)	18.11 (460)	12.36 (314)	G	366 (166)
10	20.98 (533)	9.92 (252)	15.98 (406)	14.25 (362)	12.75 (323.8)	1.12 (28.4)	0.06 (1.5)	12*0.98 (12*25)	23.62 (600)	14.17 (360)	G	624 (283)
12	24.02 (610)	11.93 (303)	19.02 (483)	17 (431.8)	15 (381)	1.19 (30.2)	0.06 (1.5)	12*0.98 (12*25)	23.62 (600)	15.83 (402)	G	1,021 (463)
16	30.00 (762)	15.16 (385)	23.5 (597)	23.25 (539.8)	18.5 (469.9)	1.38 (35.1)	0.06 (1.5)	16*1.14 (16*29)	23.62 (600)	19.8 (503)	G	2,851 (1,293)
CL. 300												
2	8.5 (216)	1.97 (50)	6.5 (165)	5 (127)	3.62 (91.9)	0.81 (20.6)	0.06 (1.5)	8*0.75 (8*19)	9.84 (250)	7.48 (190)	L	66 (30)
3	11.14 (283)	2.91 (74)	8.27 (210)	6.62 (168.1)	5 (127)	1.06 (26.9)	0.06 (1.5)	8*0.87 (8*22)	14.96 (380)	9.25 (235)	L	106 (48)
4	12.01 (305)	3.94 (100)	10 (254)	7.88 (200.2)	6.19 (157.2)	1.19 (30.2)	0.06 (1.5)	8*0.87 (8*22)	11.81 (300)	8.46 (215)	G	154 (70)
6	15.87 (403)	5.91 (150)	12.52 (318)	10.62 (269.7)	8.5 (215.9)	1.38 (35.1)	0.06 (1.5)	12*0.87 (12*22)	14.17 (360)	10.55 (268)	G	282 (128)
8	19.76 (502)	7.91 (201)	15 (381)	13 (330.2)	10.62 (269.7)	1.56 (39.6)	0.06 (1.5)	12*0.98 (12*25)	18.11 (460)	12.36 (314)	G	516 (234)
10	22.36 (568)	9.92 (252)	17.48 (444)	15.25 (387.4)	12.75 (323.8)	1.81 (46)	0.06 (1.5)	16*1.14 (16*29)	23.62 (600)	14.57 (370)	G	889 (403)
12	25.51 (648)	11.93 (303)	20.51 (521)	17.75 (450.8)	15 (381)	1.94 (49.3)	0.06 (1.5)	16*1.26 (16*32)	23.62 (600)	15.83 (402)	G	1,327 (602)

API 6D BT2D BALL VALVE

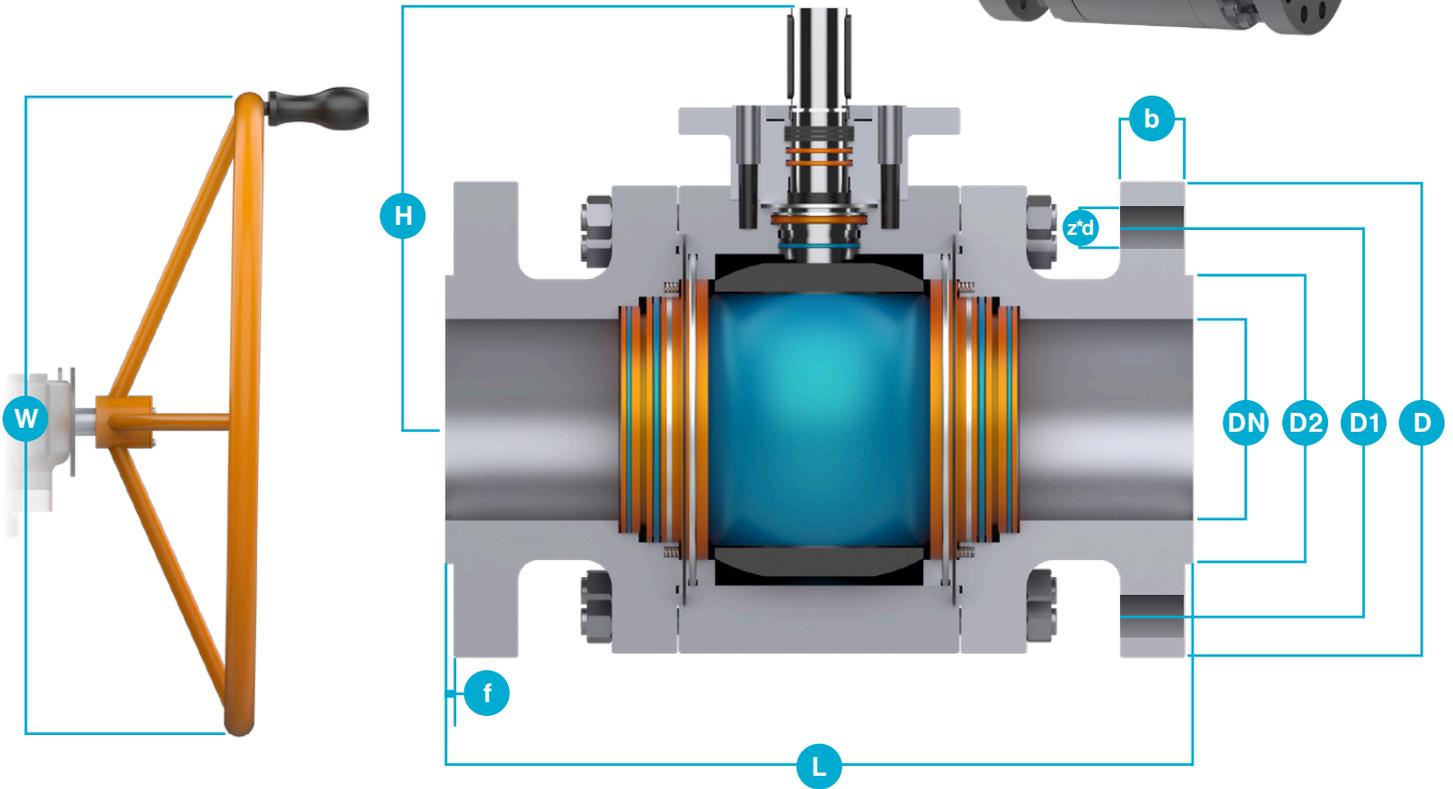
ASME Class 600 | 900 | 1500
Dimensional Information



DIMENSIONS INCH (MM)											STD OPER	WT LB (KG)
SIZE	L	DN	D	D1	D2	b	f	z*d	W	H		
CL. 600												
2	11.5 (292)	1.93 (49)	6.5 (165)	5 (127)	3.62 (91.9)	1 (25.4)	0.25 (6.4)	8*0.75 (8*19)	15.75 (400)	9.13 (232)	L	71 (32)
3	14.02 (356)	2.99 (76)	8.27 (210)	6.62 (168.1)	5 (127)	1.25 (31.8)	0.25 (6.4)	8*0.87 (8*22)	19.69 (500)	10.63 (270)	L	150 (68)
4	17.01 (432)	3.94 (100)	10.75 (273)	8.5 (215.9)	6.19 (157.2)	1.5 (38.1)	0.25 (6.4)	8*0.98 (8*25)	18.11 (460)	8.58 (218)	G	234 (106)
6	22.01 (559)	5.91 (150)	14.02 (356)	11.5 (292.1)	8.5 (215.9)	1.88 (47.8)	0.25 (6.4)	12*1.14 (12*29)	23.62 (600)	11.81 (300)	G	531 (241)
8	25.98 (660)	7.91 (201)	16.5 (419)	13.75 (349.2)	10.62 (269.7)	2.19 (55.6)	0.25 (6.4)	12*1.26 (12*32)	18.11 (460)	13.82 (351)	G	979 (444)
10	30.98 (787)	9.92 (252)	20 (508)	17 (431.8)	12.75 (323.8)	2.5 (63.5)	0.25 (6.4)	16*1.38 (16*35)	18.11 (460)	15.51 (394)	G	1,473 (668)
12	32.99 (838)	11.93 (303)	22.01 (559)	19.25 (489)	15 (381)	2.62 (66.5)	0.25 (6.4)	20*1.38 (20*35)	18.11 (460)	17.72 (450)	G	2,315 (1,050)
16	39.02 (991)	15.16 (385)	27.01 (686)	23.75 (603.2)	18.5 (469.9)	3 (76.2)	0.25 (6.4)	20*1.61 (20*41)	23.62 (600)	20.79 (528)	G	4,322 (1,960)
CL. 900												
2	15 (381)	2.95 (75)	9.49 (241)	7.5 (190.5)	5 (127)	1.5 (38.1)	0.25 (6.4)	8*0.98 (8*25)	23.62 (600)	9.21 (234)	G	207 (94)
3	17.99 (457)	3.94 (100)	11.5 (292)	9.25 (235)	6.19 (157.2)	1.75 (44.5)	0.25 (6.4)	8*1.26 (8*32)	23.62 (600)	10.28 (261)	G	311 (141)
CL. 1500												
2	14.49 (368)	1.93 (49)	8.5 (216)	6.5 (165.1)	3.62 (91.9)	1.5 (38.1)	0.25 (6.4)	8*0.98 (8*25)	14.17 (360)	7.56 (192)	G	148 (67)
CL. 2500												
2	17.87 (454)	1.65 (42)	9.25 (235)	6.75 (171.4)	5.24 (133)	2 (50.8)	— (—)	8*1.14 (8*29)	23.62 (600)	8.94 (227)	G	229 (104)
3	22.99 (584)	2.44 (62)	12.01 (305)	9 (228.6)	5 (127)	2.62 (66.5)	— (—)	8*1.38 (8*35)	23.62 (600)	9.96 (253)	G	445 (202)
4	26.89 (683)	3.43 (87)	14.02 (356)	10.75 (273)	7.99 (203)	3 (76.2)	— (—)	8*1.61 (8*41)	18.11 (460)	13.5 (343)	G	673 (305)

API 6D BT3D BALL VALVE

ASME Class 600 | 900 | 1500
Dimensional Information

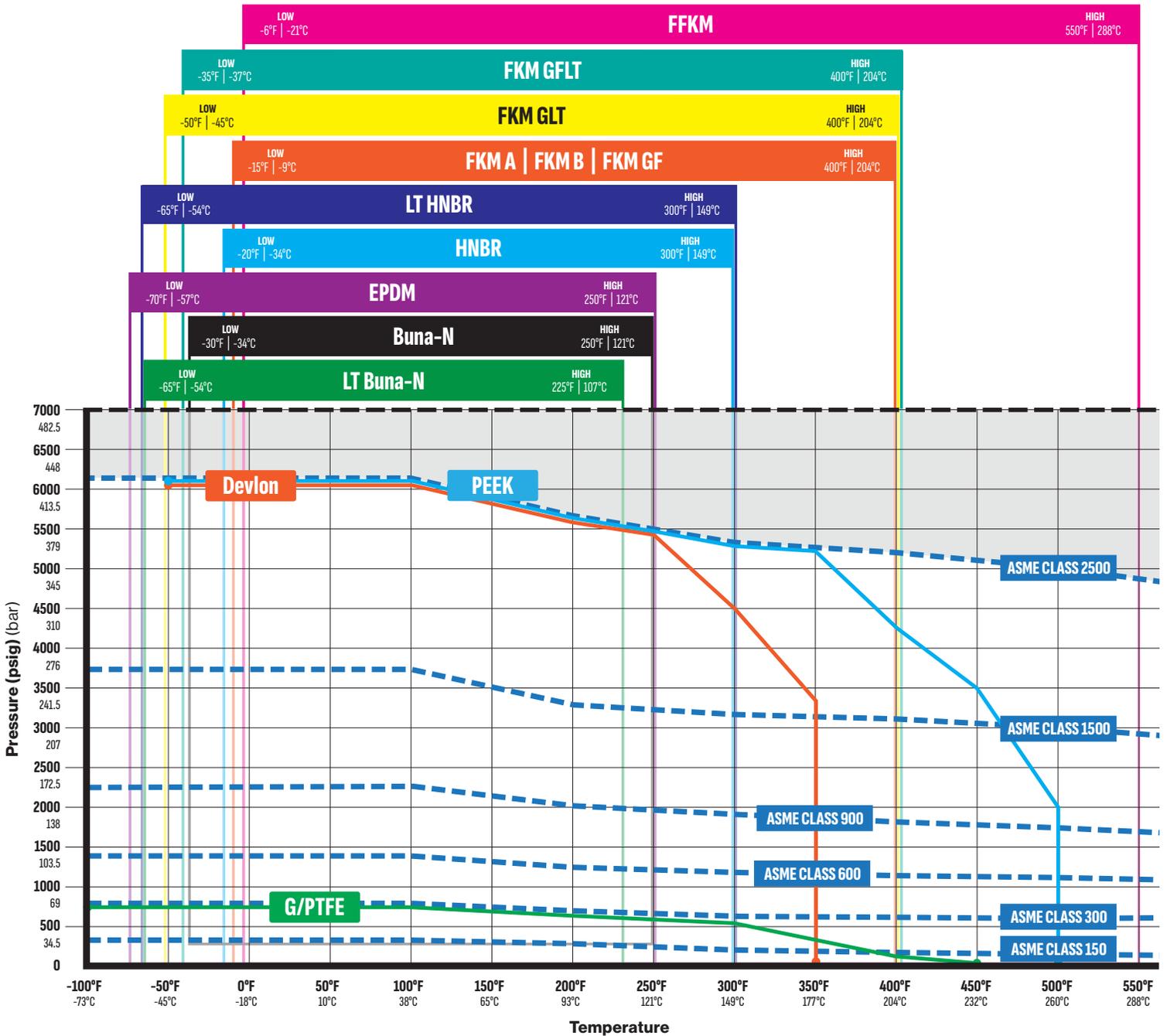


DIMENSIONS INCH (MM)											STD OPER	WT LB (KG)
SIZE	L	DN	D	D1	D2	b	f	z*d	W	H		
CL. 600												
6	22.01 (559)	5.94 (151)	14.02 (356)	11.5 (292.1)	8.5 (215.9)	1.88 (47.8)	0.25 (6.4)	12*1.14 (12*29)	23.62 (600)	14.57 (370)	G	531 (241)
8	25.98 (660)	7.91 (201)	16.5 (419)	13.75 (349.2)	10.62 (269.7)	2.19 (55.6)	0.25 (6.4)	12*1.26 (12*32)	18.11 (460)	13.27 (337)	G	979 (444)
10	30.98 (787)	9.92 (252)	20 (508)	17 (431.8)	12.75 (323.8)	2.5 (63.5)	0.25 (6.4)	16*1.38 (16*35)	18.11 (460)	15.79 (401)	G	1,473 (668)
12	32.99 (838)	11.93 (303)	22.01 (559)	19.25 (489)	15 (381)	2.62 (66.5)	0.25 (6.4)	20*1.38 (20*35)	23.62 (600)	17.64 (448)	G	2,315 (1,050)
CL. 900												
6	24.02 (610)	5.94 (151)	15 (381)	12.5 (317.5)	8.5 (215.9)	2.19 (55.6)	0.25 (6.4)	12*1.26 (12*32)	18.11 (460)	12.24 (311)	G	717 (325)
CL. 1500												
3	18.62 (473)	2.99 (76)	10.51 (267)	8 (203.2)	5 (127)	1.88 (47.8)	0.25 (6.4)	8*1.26 (8*32)	23.62 (600)	9.61 (244)	G	287 (130)
4	21.61 (549)	3.94 (100)	12.24 (311)	9.5 (241.3)	6.19 (157.2)	2.12 (53.8)	0.25 (6.4)	8*1.38 (8*35)	23.62 (600)	10.63 (270)	G	423 (192)

PRESSURE – TEMPERATURE RATINGS

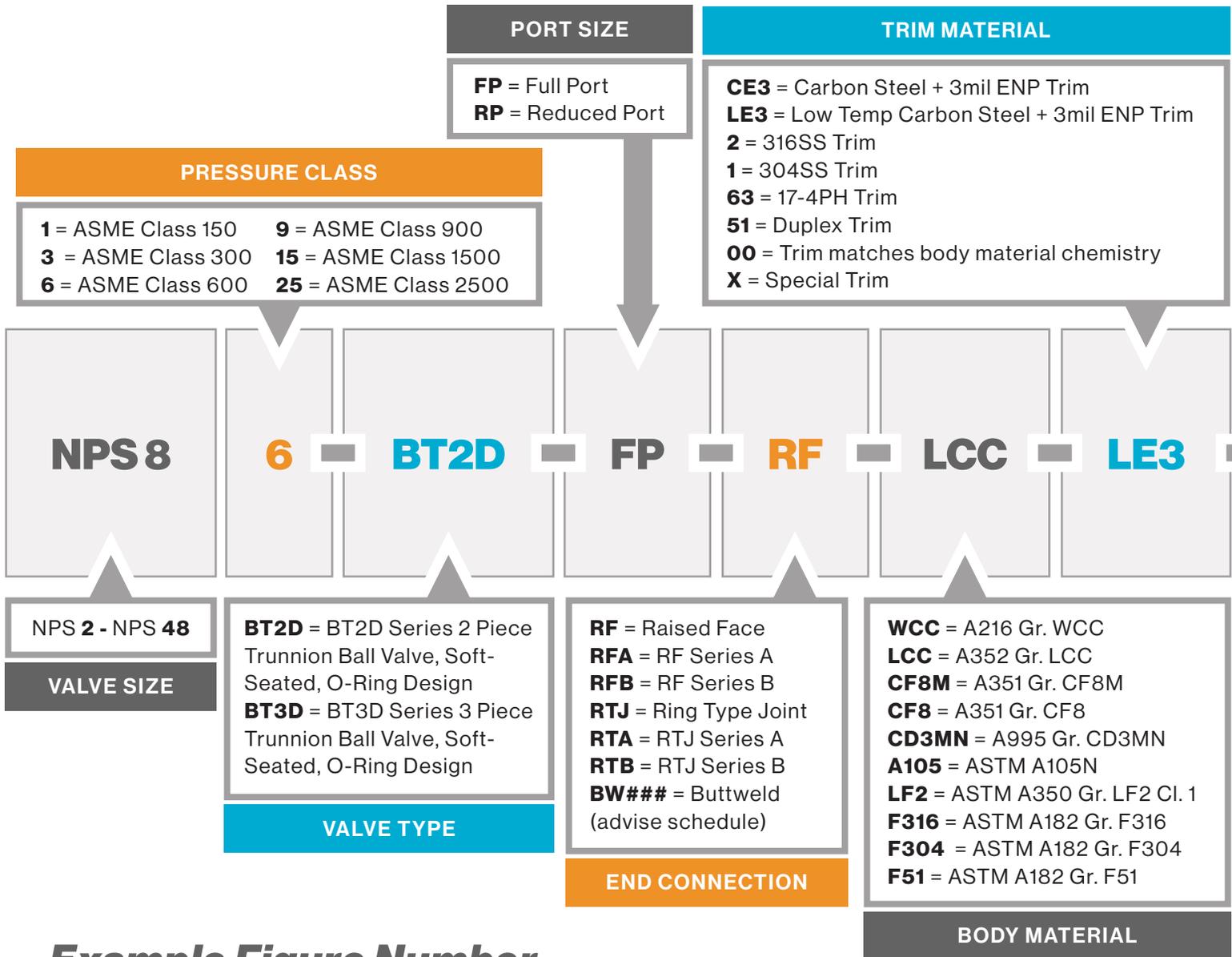
API 6D Valves

This chart shows the P/T values for our seat and seal materials.



VALVE FIGURE NUMBER SYSTEM

How-To-Order Guide



Example Figure Number

NPS 8 6-BT2D-FP-RF-LCC-LE3-41-DV-VT-N-G

Example: NPS 2 BT2D Series 2pc Trunnion, CL 600, Full Port, RF, LCC Body, LTCS + 3mil ENP Trim, 4140+ENP Stem, Devlon Seats, FKM GLT Seals, NACE, GO, Design: API6D, Test: API6D

This unique Valve Figure Number system is arranged to cover the basic valve design features. When ordering, please include this basic Figure Number and add any additional design requirements and features in a complete valve description. Valve designs, materials, trims and other features are not limited to those listed here.

STEM MATERIAL

41 = 4140+ENP Stem
40 = 410SS Stem
63 = 17-4PH Stem
31 = S31803 Duplex Stem
50 = XM-19 Stem
51 = F51 Duplex Stem
71 = Inconel 718 Stem
***** = Omit If Not Required

STEM SEAL

B = Buna-N Seals	VL = FKM GFLT Seals (Viton™ GFLT)
BL = Low Temp Buna-N Seals	VT = FKM GLT Seals (Viton™ GLT)
H = HNBR Seals	K = FFKM Seals (Kalrez®)
HL = Low Temp HNBR Seals	E = EPDM Seals
VA = FKM A Seals (Viton™ A)	VM = VMQ Seals
VB = FKM B Seals (Viton™ B)	A = AFLAS Seals
VG = FKM GF Seals (Viton™ GF)	X = Special Stem Seal

41

DV

VT

N

G

A

B

GP = Glass-Filled PTFE
N = Nylon
DV = Devlon® V-API
PE = PEEK

N = NACE MR0103 & MR0175 Compliant
N5 = NACE MR0175 Compliant
***** = Omit if Not Required

NACE

DIB1 = DIB-1 Configuration Seats
DIB2 = DIB-2 Configuration Seats

CONFIGURATION

SEATING MATERIAL

A

EXTENSIONS

L = Lever (Lockable) **BS** = Bare Stem
G = Gear **A** = Actuator

OPERATOR

B

QUALITY SPECIFICATION

QSL2 = API 6D Quality Specification Level 2
QSL3 = API 6D Quality Specification Level 3
QSL3G = API 6D Quality Specification Level 3G
QSL4 = API 6D Quality Specification Level 4
QSL4G = API 6D Quality Specification Level 4G

E#### = Operator Extension
 (advise extension length in mm as measured from handwheel C/L to valve C/L)
H#### = Buried Valve High Head Extension
 (advise extension length in mm as measured from handwheel C/L to valve C/L)
P#### = Pinion Shaft Extension
 (advise extension length in mm as measured from handwheel C/L to valve C/L)
S#### = 2" Square Operating Nut Extension
 (advise extension length in mm as measured from top of Square Op Nut to valve C/L)

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