

International Standard Valve, Inc.

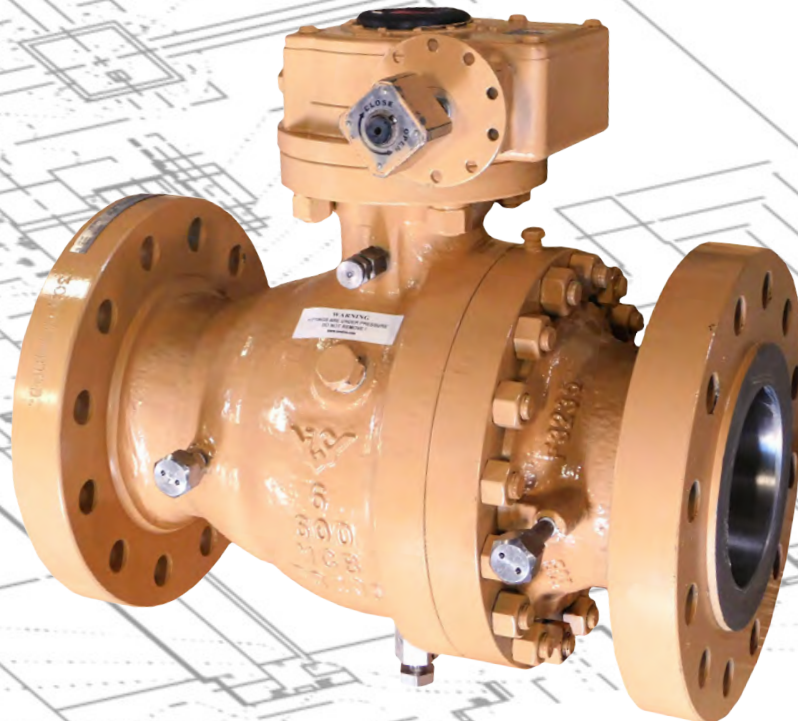
ISV



Series BT3B

Two Piece Trunnion Mounted

Ball Valve



**ASME
CLASS
150
300
600**

**BODY
MATERIAL
WCB
LCC**

**API 6D
FIRE SAFE
NACE
CE**



is a registered trademark of International Standard Valve, Inc.



About ISV

International Standard Valve, Inc. was founded in 2010. From our facility in Houston, Texas, **ISV** industrial valves are specifically designed and manufactured for oil, gas, petrochemical, mining, power generation and general industrial applications.



All ISV valves meet or exceed industry standards.

Our core competences reside in two key areas; code compliance and quality assurance.

- **Fully code compliant products:** ISV offers a variety of industrial valve products designed to be in full compliance with API and ASME piping codes and standards, providing customers a wide range of valve choices in meeting critical industry regulations of DOT and ASME B31 piping code requirements.
- **Multi-layered quality assurance:** ISV's quality assurance program includes unique levels of in-house inspections & pressure testing of our internationally produced valves at the **ISV** Houston facility. ISV maintains material certification database at the component level for extended product traceability.

The **ISV** product line includes valve sizes ranging from 1/4" to 56" and pressures through ASME Class 2500 and up to 10,000 psi working pressures.

ISV valves are produced domestically in our ISO 9001 and API 6D certified facility in Houston, Texas and internationally by our well established manufacturing partners in Taiwan and China.

Design, assembly and testing of 1/4" through 42" is conducted in Houston.

ISV utilizes advanced techniques in operational activities to efficiently achieve continual improvements in product reliability and service quality. Systems include ERP manufacturing software system, bar coded serialization, material certification data base and inspection record retention.



ISV Quality, Design and Production Standards

- All manufacturing is conducted under ISO 9001 certified Quality Management Systems.
- Engineering and design review is documented under *ISV Design Control File System*.
- Products are stringently manufactured in accordance with applicable industry standards and to specific *ISV Product Design Specifications*.
- Designs are compliant with ASME B16.34, API 608, API 600, API 6D and MSS-SP110.
- Pressure Testing is conducted to API 6D, API 598, MSS SP-110 as applicable.
- Fire test certifications to API 607 and API 6FA as applicable.
- All ISV valves certified to NACE meets the predefined material requirements of NACE MR-0175/ISO 15156 or NACE MR-0103.
- Material Test Reports per EN 10204-1991 3.1.B & EN 10204 3.1 available for each valve.

ISV Series BT

How to Order

EXAMPLE MODEL NUMBER: BT3B-F060-1210RF-DH-NFG

DESCRIPTION: CL 600, Full Port, Raised Face Flanged Ends, Trunnion mounted ball valve

DESIGN: 2 pc Bolted Body BODY: WCB TRIM: Carbon Steel +3MIL ENP SEAT DESIGN: SPE X SPE (DDB)

SEATS: Devlon inserts SEALS: HNBR ACTUATION: Gear op CERTIFIED: NACE, Fire safe tested

BT	3	B		-	F	060	-	12	10	RF	-	D	H	-	NF	G
1	2	3	4		5	6		7	8	9		10	11		12	13

1 Valve Type		2 Service/Design Style		3 Body Design		4 Seat Design		5 Bore	
Code	Type	Code	Design style	Code	Body style	Code	Seat Design	Code	Port
BT	Trunnion	3	O-Ring Stem Seal	B	2 pc Bolted Body	Blank	SPE x SPE (DDB)	R	Reduced
		4	Metal Seated	U	USA Production	1	DPE x DPE (DIB-1)	F	Full
		9	Severe Service			2	SPE x DPE (DIB-2)		

6 Pressure Rating (ASME)		7 Body Material		8 Trim Material		9 End Connections	
Code	Class	Code	Material	Code	Material	Code	Ends
015	150	12	A216 GR WCB	10	C.S. + ENP	RF	Flg-RF
030	300	24	A350 GR LCC	20	LT. C.S. + ENP (-50 Deg. F. Service)	RJ	Flg-RTJ
060	600	36	CF8M	36	316SS / CF8M	FF	Flg-FF
						WW	WE x WE
						WF	WE x RF
						WJ	WE x RTJ

10 Seat Insert		11 Body Seals		12 NACE/Fire Safe		13 Operator	
Code	Material	Code	Material	Code	Description	Code	Description
N	Nylon	V	FKM (Viton)	NF	NACE Compliant, Fire Safe	L	Locking Lever
D	Devlon V	H	HNBR	NW	NACE Compliant, Non Fire Safe Tested	B	Bare Stem
R	RPTFE	L	Low Temp	WF	Without NACE, Fire Safe	G	Locking Manual Gear
C	TFM 4215	G	Graphite	WW	Without NACE, Non Fire Safe Tested	H	Non Locking Lever
K	PCTFE	E	EPDM			C	Chain Wheel
P	PEEK					A	Actuated
1	Tung. Carbide						

NOTE: Materials of construction are NACE compliant unless otherwise specified by customer.

ISV Series No. BT3B

STANDARD FEATURES DESIGN

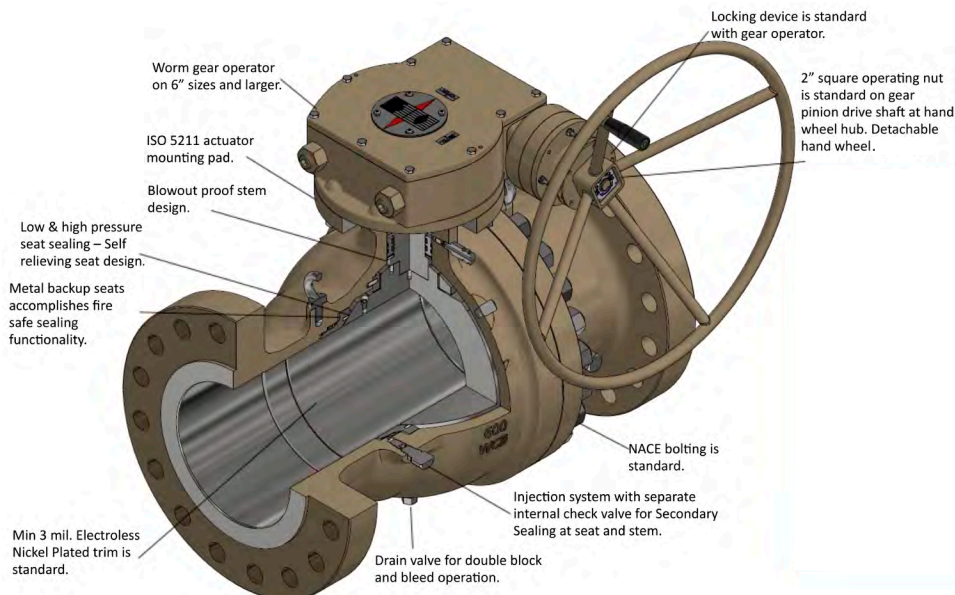
Product Certifications

API 6D

API 607

PED CE

2 PIECE CAST TRUNNION BALL VALVE



Two piece bolted body design.

Design meets API 6D, API 608 & ASME B16.34.

Manufactured, tested and monogrammed in accordance with API 6D and API Q1.

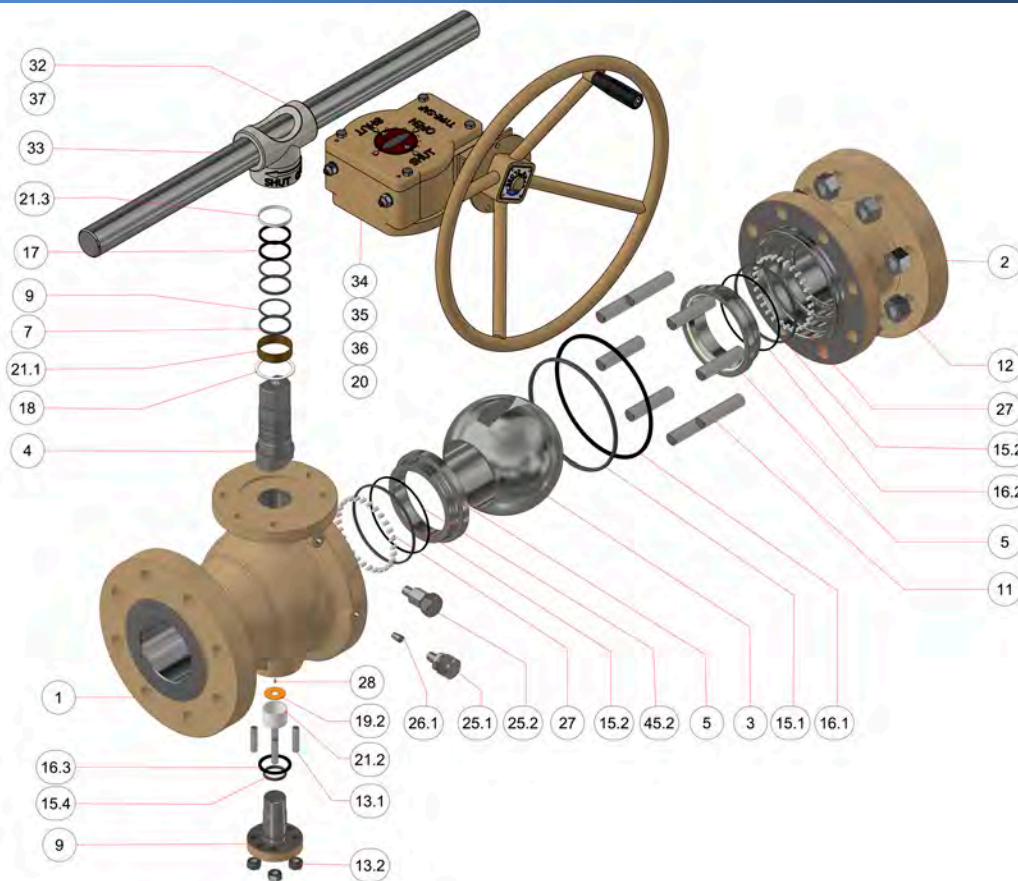
Each valve is uniquely serialized for enhanced traceability.

Rugged, polymeric seat insert material provides tight shut-off in a variety of services.

Fire safe tested to API 607 7th Edition.

Trunnion plate design on 6" and larger eliminates a potential leak path.

ISV Series No. BT3B Material List of Trunnion Ball Valve (2" - 4")



Material List of Trunnion Ball Valve (2" - 4")

No	Part Name	Materials	Materials	Materials	Materials
1	Body	A216 WCB	A216 WCB	A352 LCC	A352 LCC
2	End Cap	A216 WCB	A216 WCB	A352 LCC	A352 LCC
3	Ball	A105N + ENP	A182 F316	A350 LF2 CL1 +ENP	A182 F316
4	Stem	4140+ENP	A 182 XM-19	4140+ENP	A 182 XM-19
5	Seat Assembly				
	Seat Ring	A105N + ENP	A182 F316	A350 LF2 CL1 +ENP	A182 F316
	Seat Insert (1)	DEVLON	DEVLON	DEVLON	DEVLON
9	Trunnion	A105N + ENP	A182 F316	A350 LF2 CL1 +ENP	A350 LF2 CL1 +ENP
11	Stud's Body-End Cap	A193 B7M	A193 B7M	A320 L7M	A320 L7M
12	Nut's End Cap	A194 2HM	A194 2HM	A194 7M	A194 7M
13.1	Stud's Trunnion	A193 B7M	A193 B7M	A320 L7M	A320 L7M
13.2	Nut's Trunnion	A194 2HM	A194 2HM	A194 7M	A194 7M
15.1	Body-End cap O-Ring	HNBR-LT	HNBR-LT	HNBR-LT	HNBR-LT
15.2	Seat -O-Ring's	HNBR-LT	HNBR-LT	HNBR-LT	HNBR-LT
15.3	Stem-Body O-Ring's	HNBR-LT	HNBR-LT	HNBR-LT	HNBR-LT
15.4	Trunnion-body O-Ring's	HNBR-LT	HNBR-LT	HNBR-LT	HNBR-LT
16.1	Body Gasket (2)	SPW GRAPHITE+F304	SPW GRAPHITE+F304	SPW GRAPHITE+F304	SPW GRAPHITE+F304
16.2	Seat Gasket	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
16.3	Trunnion Gasket (2)	SPW GRAPHITE+F304	SPW GRAPHITE+F304	SPW GRAPHITE+F304	SPW GRAPHITE+F304
17	Stem Packing	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
18	Trust Washer	304+PTFE	304+PTFE	316+PTFE	316+PTFE
19.2	Lower Ball Spacer	R-PTFE	R-PTFE	R-PTFE	R-PTFE
20	Spring Washer (3)	C.S.	C.S.	C.S.	C.S.
21.1	Lower Stem Bearing	304+PTFE	304+PTFE	316+PTFE	316+PTFE
21.2	Ball Bearing	304+PTFE	304+PTFE	316+PTFE	316+PTFE
21.3	Upper Stem Bearing	R-PTFE	R-PTFE	R-PTFE	R-PTFE
24	Body Drain Valve	A182 F316	A182 F304	A182 F304	A182 F304
25.1	Seat Grease Injection valves	A182 F304	A182 F304	A182 F304	A182 F304
25.2	Stem Grease Injection valve	A182 F304	A182 F304	A182 F304	A182 F304
26.1	Check Valves	A182 F316	A182 F316	A182 F316	A182 F316
27	Seat Springs	INCONEL-X750	INCONEL-X750	INCONEL-X750	INCONEL-X750
28	Anti Static spring	INCONEL-X750	INCONEL-X750	INCONEL-X750	INCONEL-X750
32	Lever Adapter	A216 WCB	A216 WCB	A216 WCB	A216 WCB
33	Lever Pipe	C.S.+Zn	C.S.+Zn	C.S.+Zn	C.S.+Zn
34	Gearbox (3)	C.S.	C.S.	C.S.	C.S.
35	Gearbox Studs (3)	A193 B7M	A193 B7M	A320 L7M	A320 L7M
36	Gearbox Nuts (3)	A194 2HM	A194 2HM	A194 7M	A194 7M
37	Lever screw	A193 B7M	A193 B7M	A320 L7M	A320 L7M
45.3	Backup Ring Stem	HNBR-LT	HNBR-LT	HNBR-LT	HNBR-LT

• Note: The valve service temperature ratings are also dependant on the elastomers and polymers installed. Consult with the factory for material compound details.

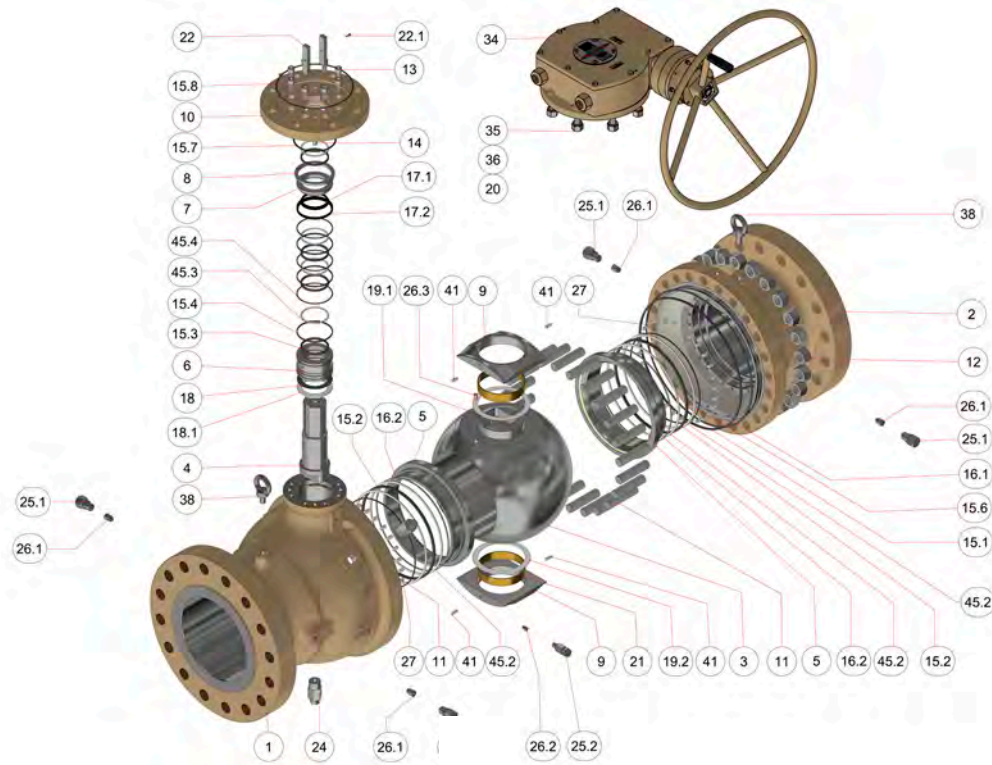
• Alternate materials are available on request.

1) DEVLON is a registered trademark of the James Walker company.

2) Spiral wound gaskets 304SS + Graphite.

3) Optional. Gear operator.

ISV Series No. BT3B Material List of Trunnion Ball Valve (6" - 16")



Material List of Trunnion Ball Valve (6" to 16" view)

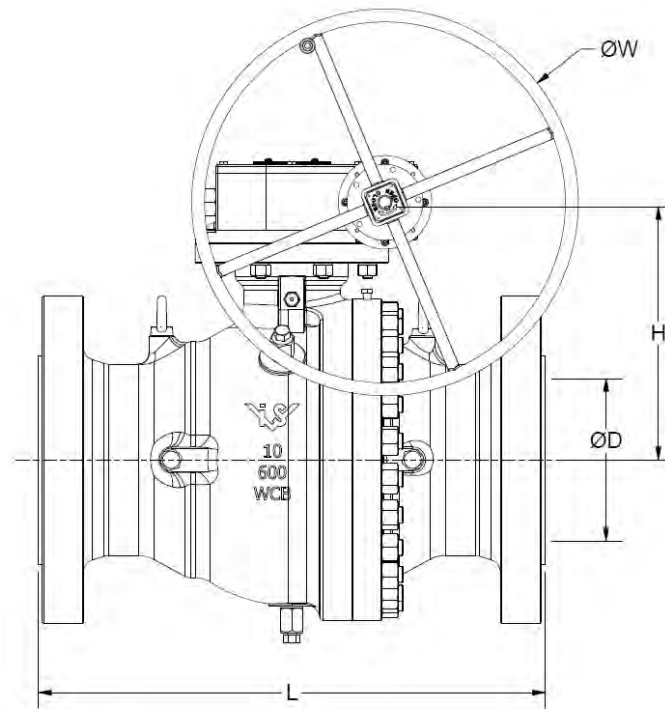
No	Part Name	Materials	Materials	Materials	Materials
1.	Body	A216 WCB	A216 WCB	A352 LCC	A352 LCC
2.	End Cap	A216 WCB	A216 WCB	A352 LCC	A352 LCC
3.	Ball	A105N + ENP	A182 F316	A350 LF2 CL1 + ENP	A182 F316
4.	Stem	4140+ENP	A 182 XM-19	4140+ENP	A 182 XM-19
5.	Seat Assembly				
	Seat Ring	A105N+ENP	A182 F316	A350 LF2 CL1 + ENP	A182 F316
	Seat Insert (1)	DEVLON	DEVLON	DEVLON	DEVLON
6.	Stem Retainer	A105N+ENP	A182 F316	A350 LF2 CL1 + ENP	A182 F316
7.	Stem Packing Ring	A105N+ENP	A182 F316	A350 LF2 CL1 + ENP	A182 F316
8.	Lock Ring	AISI 4140	A182 F316	AISI 4140	A182 F316
9.	Trunnion Plates	A105N+ENP	A105N+ENP	A350 LF2 CL1 + ENP	A350 LF2 CL1 + ENP
10.	Top Plate	A105N	A105N	A350 LF2 CL1	A350 LF2 CL1
11.	Stud's Body-End Cap	A193 B7M	A193 B7M	A320 L7M	A320 L7M
12.	Nut's End Cap	A194 2HM	A194 2HM	A194 7M	A194 7M
13.	HSCH Screws Top Plate- Body	A193 B7M	A193 B7M	A320 L7M	A320 L7M
14.	Locating pins Top plate	C.S.	C.S.	C.S.	C.S.
15.1	Body-End cap O-Ring	HNBR	HNBR	HNBR-LT	HNBR-LT
15.2	Seat -O-Ring's 3	HNBR	HNBR	HNBR-LT	HNBR-LT
15.3	Stem- Stem Retainer O-Ring's	HNBR	HNBR	HNBR-LT	HNBR-LT
15.4	Stem Retainer-Body O-Ring's	HNBR	HNBR	HNBR-LT	HNBR-LT
15.5	Stem - Top plate O-Ring	HNBR	HNBR	HNBR-LT	HNBR-LT
15.6	2nd Dary Seat O-ring's	HNBR	HNBR	HNBR-LT	HNBR-LT
15.7	Top plate-Body O-ring	HNBR	HNBR	HNBR-LT	HNBR-LT
15.8	Top plate O-Ring 3	HNBR	HNBR	HNBR-LT	HNBR-LT
16.1	Body Gasket (2)	SPW GRAPHITE+F304	SPW GRAPHITE+F304	SPW GRAPHITE+F304	SPW GRAPHITE+F304
16.2	Seat Gasket	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
17.1	Inner Stem packing	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
17.2	Outer Stem packing	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
18.	Trust washer	F304+PTFE	F316+PTFE	F304+PTFE	F316+PTFE
18.1	Support wahser	A182 F304	A182 F316	A182 F304	A182 F316
19.1	Upper Ball Spacer	R-PTFE	R-PTFE	R-PTFE	R-PTFE
19.2	Lower Ball Spacer	R-PTFE	R-PTFE	R-PTFE	R-PTFE
20.	Spring Washer	C.S.	C.S.	C.S.	C.S.
21.	Ball Bearings	304+PTFE	316+PTFE	304+PTFE	316+PTFE
22.	Key's	C.S	S.S.	C.S	S.S.
22.1	Key Screws's	C.S	S.S.	C.S	S.S.
23.	Plug	A105N+ZN	A105N+ZN	A350 LF2-CL1+ZN	A350 LF2-CL1+ZN
24.	Body Drain Valve	A182 F304	A182 F304	A182 F304	A182 F304
25.1	Seat Grease Injection valves	A182 F304	A182 F304	A182 F304	A182 F304
25.2	Stem Grease Injection valve	A182 F304	A182 F304	A182 F304	A182 F304
26.1	Check Valves	A182 F316	A182 F316	A182 F316	A182 F316
26.2	Check Valve	A182 F316	A182 F316	A182 F316	A182 F316
26.3	Ball Check Valve	A182 F316	A182 F316	A182 F316	A182 F316
27.	Seat Springs	INCONEL-X750	INCONEL-X750	INCONEL-X750	INCONEL-X750
28.	Anti static spring	INCONEL-X750	INCONEL-X750	INCONEL-X750	INCONEL-X750
34.	Gearbox	C.S	C.S.	C.S	C.S.
35.	Gearbox Studs	A193 B7M	A193 B7M	A320 L7M	A320 L7M
36.	Gearbox Nuts	A194 2HM	A194 2HM	A194 7M	A194 7M
38.	Lift eye's	C.S.+ZN	C.S.+ZN	C.S.+ZN	C.S.+ZN
41.	Trunnion Pins	C.S	C.S.	C.S.	C.S.
45.2	Backup Ring seat	HNBR	HNBR	HNBR-LT	HNBR-LT
45.3	Backup Ring Stem	HNBR	HNBR	HNBR-LT	HNBR-LT
45.4	Backup Ring Stem Retainer	HNBR	HNBR	HNBR-LT	HNBR-LT
45.5	Backup Ring Top Plate	HNBR	HNBR	HNBR-LT	HNBR-LT

• Note: The valve service temperature ratings are also dependant on the elastomers and polymers installed. Consult with the factory for material compound details.

• Alternate materials are available on request.

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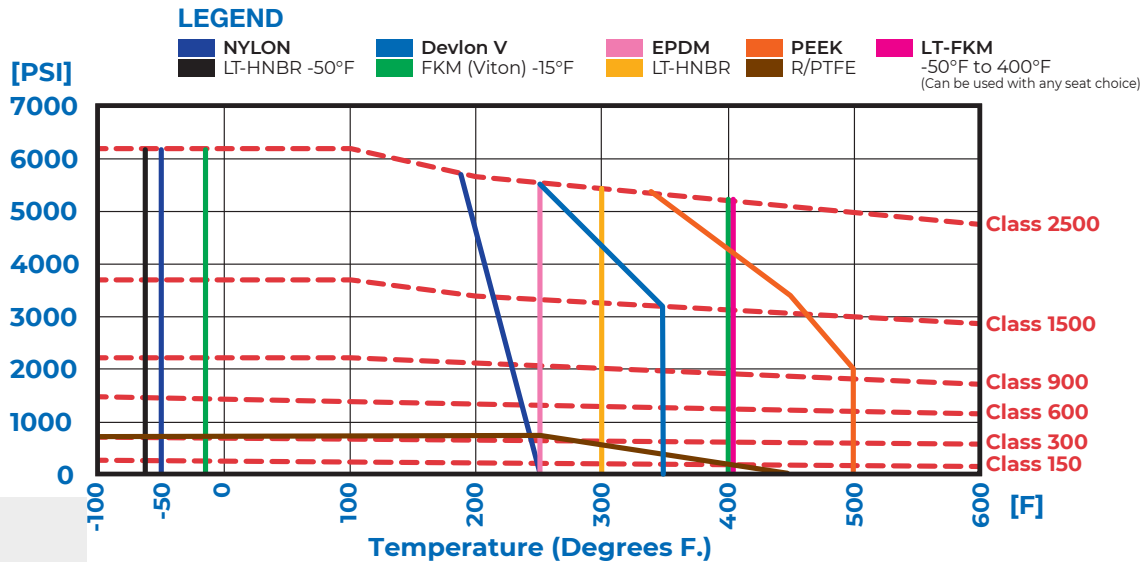
2) Spiral wound gaskets 304SS + Graphite.



Valve Size:		NPS	2.00"	3.00"	4.00"	6.00"	8.00"	10.00"	12.00"	14.00"	16.00"
Class 150	ØD	inch	2.00	3.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
	L (RF)	inch	7.00	8.00	9.00	15.50	18.00	21.00	24.00	27.00	30.00
	L (RTJ)	inch	7.50	8.50	9.50	16.00	18.50	21.50	24.50	27.50	30.50
	H	inch	6.00	7.00	8.00	10.40	12.70	14.66	17.50	18.50	20.00
	ØW	inch				18.00	18.00	24.00	24.00	24.00	24.00
Class 300	WT	lbs	33.00	84.00	143.00	214.00	353.00	529.00	860.00	1191.00	1522.00
	ØD	inch	2.00	3.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
	L (RF)	inch	8.50	11.10	12.00	15.88	19.75	22.40	25.50	30.00	33.00
	L (RTJ)	inch	9.13	11.75	12.64	16.50	20.40	23.00	26.14	30.63	33.60
	H	inch	6.00	7.00	8.00	10.40	12.70	14.66	17.50	18.50	20.00
Class 600	ØW	inch				18.00	18.00	24.00	24.00	24.00	24.00
	WT	lbs	40.00	104.00	176.00	260.00	441.00	805.00	1169.00	1533.00	1897.00
	ØD	inch	2.00	3.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
	L (RF)	inch	11.50	14.00	17.00	22.00	26.00	31.00	33.00	35.00	39.00
	L (RTJ)	inch	11.61	14.23	17.13	22.13	26.10	31.14	33.13	35.10	39.13
Class 900	H	inch	5.20	7.00	8.11	11.50	13.54	15.20	17.67	18.88	20.75
	ØW	inch				18.00	18.00	24.00	24.00	24.00	24.00
	WT	lbs	84.00	146.00	269.00	479.00	772.00	1565.00	2117.00	2669.00	3221.00



Pressure Temperature Limits*



*The Pressure/Temperature Limits of any valve are dependent upon the materials selected along with the seat/seal of choice.



Trunnion Mounted Ball Valve ▼ ISV Series BT

INTERNATIONAL STANDARD VALVE



ISV

INTERNATIONAL STANDARD VALVE, INC.

5510 CLARA RD ▼ HOUSTON, TEXAS
713-983-7600 ▼ SALES@ISVALVE.COM

WWW.ISVALVE.COM



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