Meridian™

Bolted Three Piece Forged Steel

TRUNNION BALL VALVE

Meridian
VALVES · ACTUATION · PVF
a WOLSELEY company

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TECHNICAL EXPERTISE, QUALITY AND SERVICE
WHEN AND WHERE YOU NEED IT

Industrial Valves

Meridian† is a leader in valve supply in Canada and has achieved exclusive, master or preferred distributor status with manufacturers of recognized, high quality products. Meridian is ISO 9001:2008 certified and stocks an industry leading inventory of both commodity and specific application valves in a wide range of sizes, materials and pressure classes.

Specific Application Valves

Meridian also stocks valves designed with specific features and proper metallurgy to provide proven solutions for tough applications. Applications include: SAGD, steam, molten sulphur, acid gas/tail gas service, pulp mill liquor service, pump and compressor discharge, high temperature/abrasive applications, pipeline pigging, cryogenic applications, high pressure steam and hot water applications, autoclave operations and other difficult services.

Valve Actuation

Meridian provides rapid turn-around valve actuation solutions and will customize its industry leading valve product range to meet its customers' actuation needs. Actuation products include electric actuators, pneumatic and hydraulic actuators, and control accessories.

Valve Innovation

Meridian works in partnership with its customers and manufacturers to develop unique solutions to problems. A combination of experience, resources and broad technical knowledge gives Meridian an advantage reflected in our unique product offering and strong customer relationships. Examples include Meridian's back pressure valve, low-bleed wellhead pressure control package and Forum choke package.

Valve Services

In addition to product sales and distribution, Meridian provides valve servicing capabilities in the field (selected areas); Meridian's technicians offer various on-site and in-shop services that ensure lower operating costs, reduced down-time and increased valve life and reliability.

Pipe, Flanges and Fittings

Meridian sources PFF products from reputable, well established global sources. Our quality assurance criteria for qualifying vendors is rigorous and extensive, focused on the vendor's quality programs and compliance to industry standards, manufacturing standards and ability to provide a dependable source of supply.

Major Project Management

Meridian has established an experienced Project Management Team which has successfully completed both international and domestic projects. Special care is taken in sourcing products that meet the customer's requirements commercially, technically, legally, operationally (including expediting, reporting and documentation) while adhering to the project schedule.

FB-CCP ®

FB-CCP® process leverages "critical control point" data to provide a quality control mechanism. Key components of the FB-CCP® process include:

A. Database links FB-CCP input to specific valve serial number.
B. Visual review and/or inspection and sign-off at each stage in the process
C. Check-list/traveler for each valve in production that tracks its progress from raw material to finished product.

† Wolseley Industrial Products Group Inc. o/a Meridian

The data provided in this document is subject to change without notice.

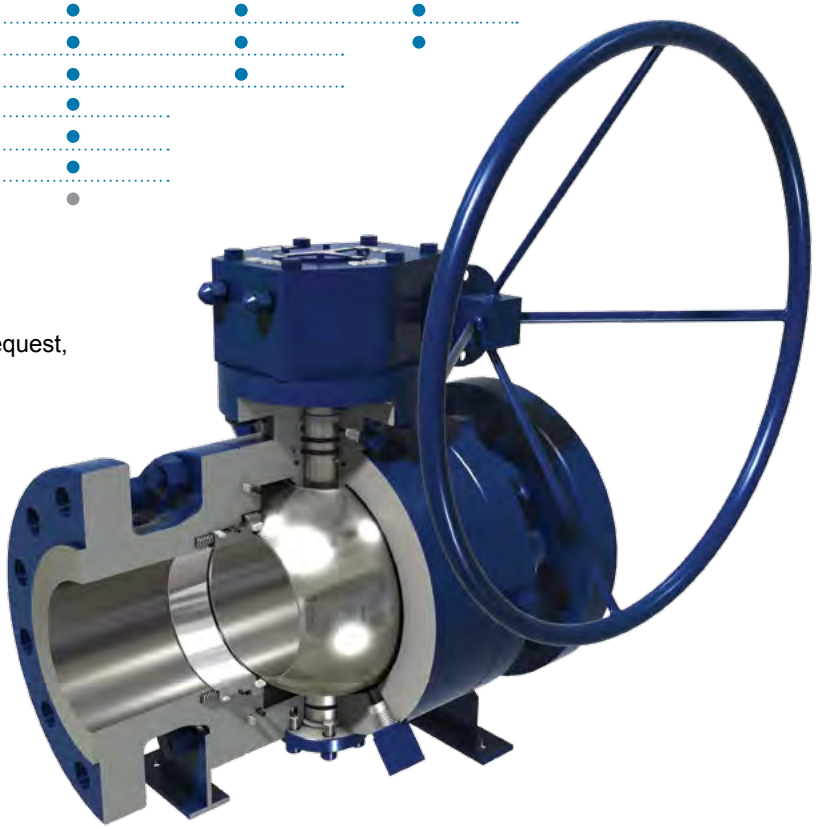
MANUFACTURING RANGE

(Available in full and regular port)

Size	ASME 150	ASME 300	ASME 600	ASME 900	ASME 1500	ASME 2500
2	●	●	●	●	●	●
3	●	●	●	●	●	●
4	●	●	●	●	●	●
6	●	●	●	●	●	●
8	●	●	●	●	●	●
10	●	●	●	●	●	●
12	●	●	●	●	●	●
14	●	●	●	●	●	
16	●	●	●	●	●	
18	●	●	●	●	●	
20	●	●	●	●	●	
24	●	●	●	●	●	
30	●	●	●	●		
36	●	●	●			
42	●	●	●			
48	●	●	●			
56	●	●	●			

"●" denotes Meridian™'s standard design.

"●" denotes larger sizes that are available on request, please contact Meridian for details.



MERIDIAN™ EXTENDED WARRANTY

INDUSTRY LEADING WARRANTY

Meridian stands behind the products it sells and provides an industry leading warranty of 48 months from date of shipment or 24 months from the date of start-up (whichever is sooner) for all Meridian™ brand API 6D check valves, flanged or buttweld trunnion ball valves, and floating ball valves.

KEY FEATURES & BENEFITS

GENERAL FEATURES

- 3 piece bolted body design for ease of field service and maintenance.
- Forged body, bonnet and ball material as a standard, ensures a high integrity material grain structure.
- Body joint integrity is ensured by dual independent seals supported by tight toleranced overlapping metal to metal joint construction capable of withstanding pipeline stress.
- Double block and bleed design
- Antistatic tested
- Fire safe design
- Manual body bleed valve for pressure relief
- Drain/flush plug on body
- All trunnion valves are equipped with a locking device. For gear operated valves, this feature is included on the gear operator
- All trunnion valves are equipped with ISO 5211 actuator mounting flanges
- Low emission compliant (ISO 15848)
- Standard document package ISO / EN 10104.3.1
- All o-rings are AED (anti-explosion decompression) design

STEM DESIGN FEATURES

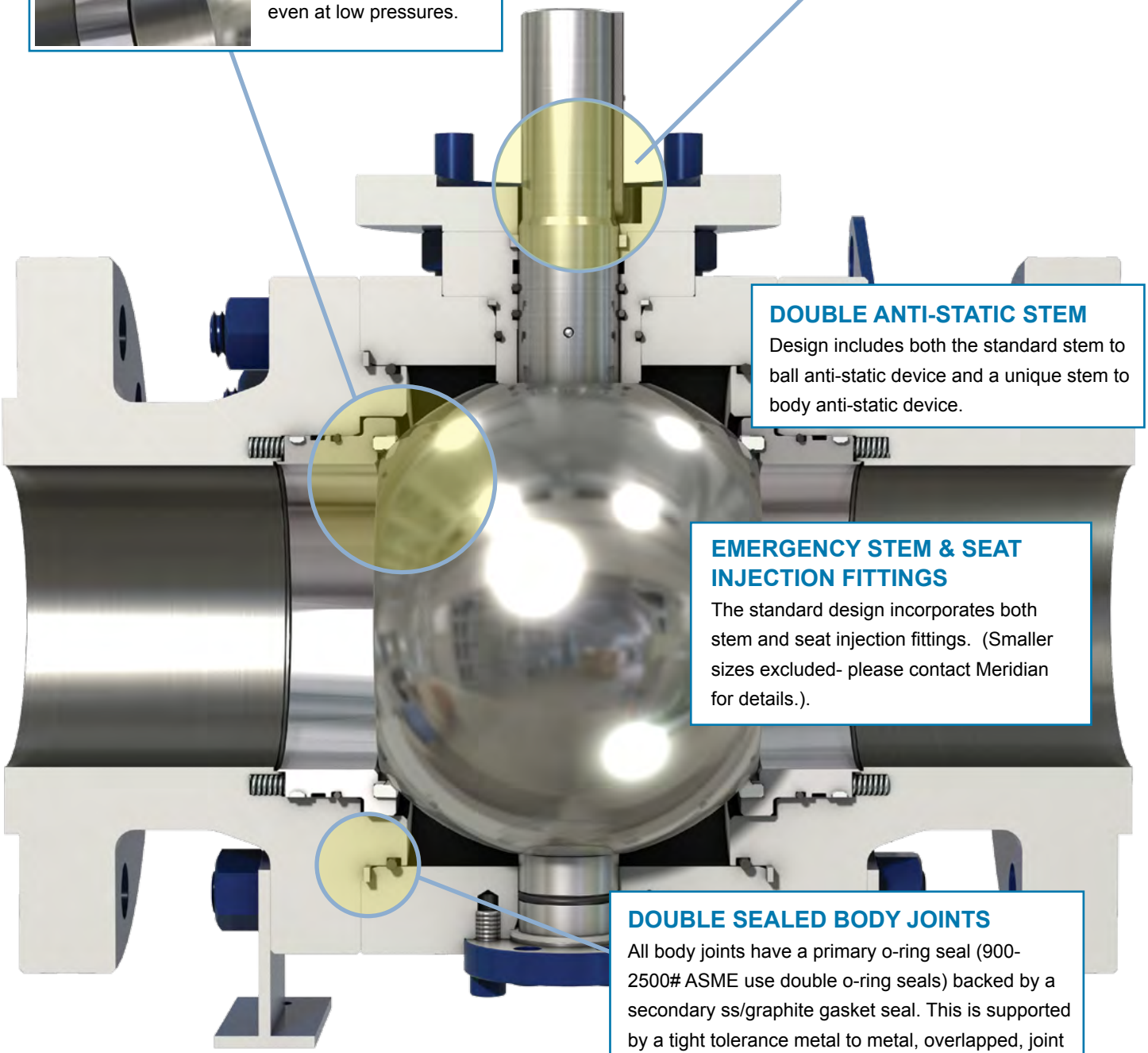
- Blow out proof stem
- Stems and trunnions are manufactured separately from the ball and supported by a bearing and thrust washer (RPTFE 150-600# ASME; PEEK 900-2500# ASME) to ensure low consistant torques.
- Multiple independent stem packing seal system ensures stem seal integrity.
- All valves include emergency secondary stem sealant injection system.

SEAT DESIGN FEATURES

- Valves have internal automatic self-relieving cavity (DPE designs are available on request)
- Special wide seat insert design facilitates the selection of a broader range of materials while providing an increased life in difficult service conditions.
- Seat ring sealing includes separate graphite seals for maximum assurance in fire conditions.
- Seat sealant injection: 2” – 4” (ASME 150-300#) and 2” x 1 ½” x 600# valves utilize body cavity sealant injection. All other sizes / ASME classes include seat sealant injection valves. 16” and larger sizes use 2 sealant injection valves per seat to insure uniform and complete sealant injection around the entire seat.
- A separate independent check valve is located beneath the seat sealant injection fitting.
- Valves are hydrotested utilizing the check valve only.
- Should an injection fitting be damaged, it may be replaced without the requirement of re-hydrotesting the valve.
- Double o-ring seat seals for ASME 900-2500# designs.

OPTIONAL FEATURES

- Double piston effect seats
- Combination seats/“safe relieving” (double piston effect on one side and a self-relieving seat on the other)
- Body may be coated for corrosion protection
- Available in top entry and welded body designs; cryogenic and high temperature designs also available. Please contact Meridian for details.



INTEGRAL VALVE STOPS

The valve stops are integral facilitating easy correct actuation stop setting when the valve is retrofitted in the field.

INDEPENDENT SEATS

Independent seats with preloaded coil springs ensure a bubble tight seal even at low pressures.

DOUBLE ANTI-STATIC STEM

Design includes both the standard stem to ball anti-static device and a unique stem to body anti-static device.

EMERGENCY STEM & SEAT INJECTION FITTINGS

The standard design incorporates both stem and seat injection fittings. (Smaller sizes excluded- please contact Meridian for details.).

DOUBLE SEALED BODY JOINTS

All body joints have a primary o-ring seal (900-2500# ASME use double o-ring seals) backed by a secondary ss/graphite gasket seal. This is supported by a tight tolerance metal to metal, overlapped, joint construction to ensure fire safe design.

The data provided in this document is subject to change without notice.

High Phosphorus 3 mil ENP Trim Upgrade

Meridian has improved the standard ball valve trim in our Floating and Trunnion Ball Valves by upgrading the normal Electroless Nickel-Phosphorus plating to a 3 mil High phosphorus EN Plating. The phosphorus content exceeds 10%.

Meridian's ENP vs. Standard ENP

Meridian's 3 mil High phosphorus versus the standard ENP provided by other manufacturers:

- High phosphorus EN plating is less porous which increases corrosion protection and provides enhanced wear resistance.
- High phosphorus EN plating has the highest deposit passivity rating meaning that it is less reactive with the process fluids. This is known as corrosion resistance. This allows high phosphorus platings to be used in pH conditions as low as 4. Standard ENP should only be used for pH above 5. This difference is very important in the energy industry where process conditions are often acidic.

- The corrosion performance of EN plating is proportional to the deposit thickness. Meridian's 3 mil plating thickness is an excellent barrier protecting the substrate material (commonly A105N or A350 LF2). A thinner 1 mil ENP should be limited to valves in sweet service and a relatively neutral pH process.

Meridian's ENP vs. Full 316 SS

Meridian's 3 mil High phosphorus EN Plating versus a full 316 Stainless Steel trim:

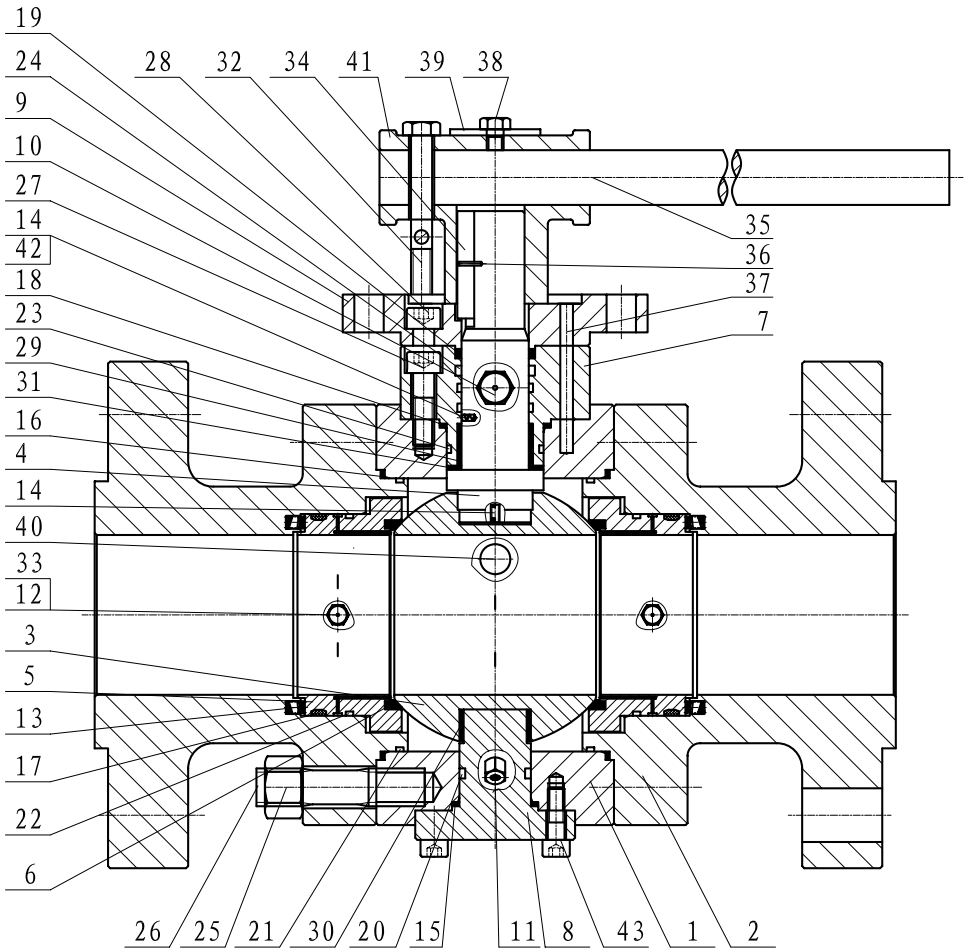
- Meridian's high phosphorus EN plating has a Vickers hardness of 480 – 500, 316 stainless steel is very soft and has no stated ASTM hardness level. This extreme hardness helps an EN plated ball resist scratches that quickly damage the seat material and compromise the valve seal.
- EN plating is allowed by NACE MR-0175 / ISO 15156 and is suitable for higher temperatures than 316 Stainless Steel. 316 Stainless Steel is limited to a maximum of 140°F (60°C) due to dangerous interactions with chlorides above these temperatures.
- Electroless Nickel plating leaves a surface coating of approximately 90% pure nickel. Nickel is a noble metal that provides the corrosion resistant performance required in difficult services. 316 Stainless Steel also relies on nickel for corrosion resistance but is limited to 10 – 14% nickel by weight.

The data provided in this document is subject to change without notice.

CROSS SECTIONAL DRAWING

External trunnion design, Full and Reg port, lever operated

Range: 2” - 4” ASME 150, 300 & 600
2” - 3” ASME 900 & 1500
2” ASME 2500

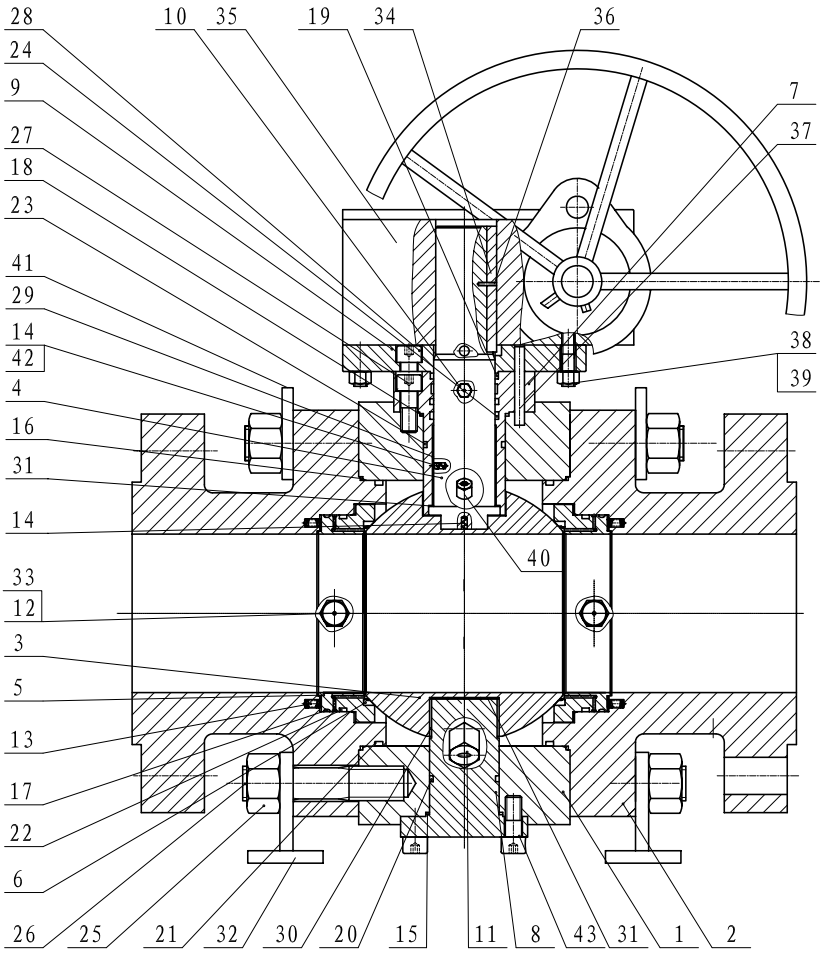


ITEM	DESCRIPTIONS	ITEM	DESCRIPTIONS	ITEM	DESCRIPTIONS
1	BODY	16	FIRE SAFE GASKET	30	BEARING
2	END CAP	17	FIRE SAFE GASKET	31	THRUST WASHER
3	BALL	18	FIRE SAFE GASKET	32	HEX HEAD BOLT
4	STEM	19	FIRE SAFE GASKET	33	CHECK VALVE
5	SEAT	20	TRUNNION SEAL O-RING	34	KEY
6	SEAT RING	21	BODY SEAL O-RING	35	LEVER
7	UPPER CAP	22	SEAT SEAL O-RING	36	PIN
8	TRUNNION	23	UPPER CAP SEAL O-RING	37	PIN
9	LIMIT STOP PLATE	24	STEM SEAL O-RING	38	HEX HEAD BOLT
10	SEALANT INJECTION VALVE	25	STUD	39	INDICATING PLATE
11	DRAIN VALVE	26	NUT	40	VENT VALVE
12	SEALANT INJECTION VALVE	27	ALLEN HEAD BOLT	41	LEVER HEAD
13	SEAT SPRING	28	ALLEN HEAD BOLT	42	ANTISTATIC BALL
14	ANTISTATIC SPRING	29	BEARING	43	ALLEN HEAD BOLT
15	FIRE SAFE GASKET				

NOTE: 2” to 4” ASME 150 & 300 DO NOT INCLUDE SEAT SEALANT INJECTION.
Drawings are representative, please contact Meridian for specific and current PDF drawings

CROSS SECTIONAL DRAWING

External trunnion design, Full and Reg port, gear operated
Range: 6” - 24” ASME 150, 300 & 600
4” - 18” ASME 900
4” - 14” ASME 1500
3” - 8” ASME 2500



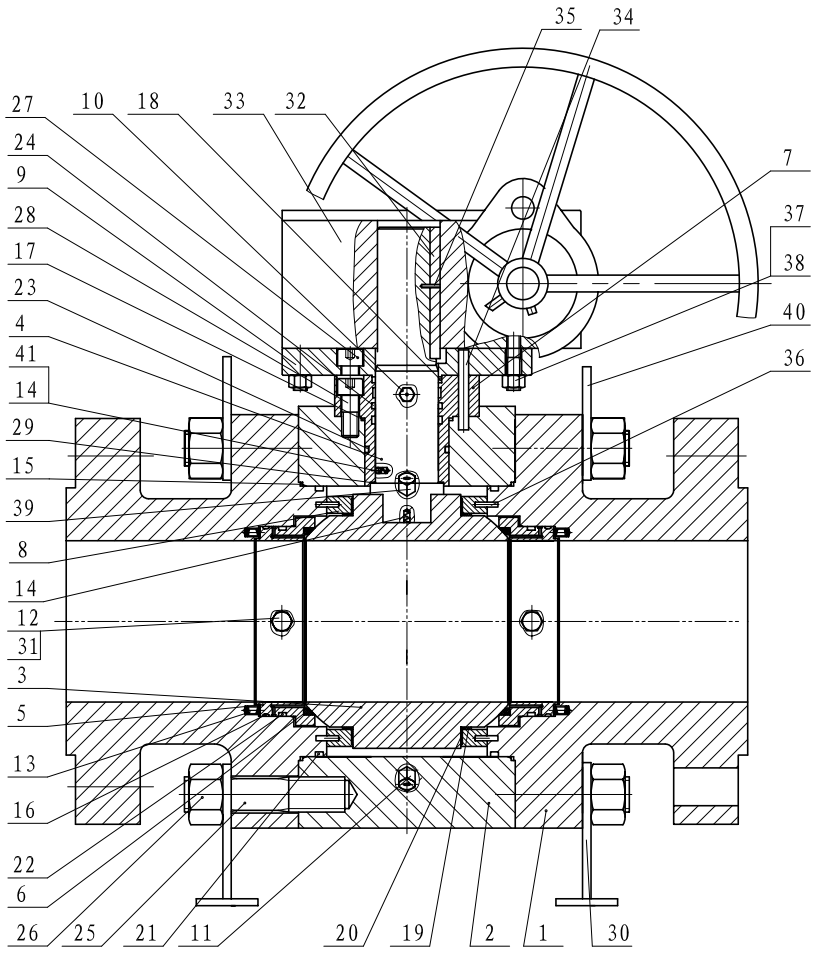
ITEM	DESCRIPTIONS	ITEM	DESCRIPTIONS	ITEM	DESCRIPTIONS
1	BODY	16	FIRE SAFE GASKET	30	BEARING
2	END CAP	17	FIRE SAFE GASKET	31	THRUST WASHER
3	BALL	18	FIRE SAFE GASKET	32	SUPPORT FEET
4	STEM	19	FIRE SAFE GASKET	33	CHECK VALVE
5	SEAT	20	TRUNNION SEAL O-RING	34	KEY
6	SEAT RING	21	BODY SEAL O-RING	35	GEAR OPERATOR
7	UPPER CAP	22	SEAT SEAL O-RING	36	PIN
8	TRUNNION	23	UPPER CAP SEAL O-RING	37	PIN
9	LIMIT STOP PLATE	24	STEM SEAL O-RING	38	STUD
10	SEALANT INJECTION VALVE	25	STUD	39	NUT
11	DRAIN VALVE	26	NUT	40	VENT VALVE
12	SEALANT INJECTION VALVE	27	ALLEN HEAD BOLT	41	LIFTING LUGS
13	SEAT SPRING	28	ALLEN HEAD BOLT	42	ANTISTATIC BALL
14	ANTISTATIC SPRING	29	BEARING	43	ALLEN HEAD BOLT
15	FIRE SAFE GASKET				

NOTE: Support legs and lifting lugs supplied on sizes 6” and larger.
Drawings are representative, please contact Meridian for specific and current PDF drawings

CROSS SECTIONAL DRAWING

Internal trunnion design, Full and Reg port, gear operated

Range: 30” & Larger ASME 150, 300 & 600
20” & Larger ASME 900
14” & Larger ASME 1500
10” & Larger ASME 2500



ITEM	DESCRIPTIONS	ITEM	DESCRIPTIONS	ITEM	DESCRIPTIONS
1	BODY	15	FIRE SAFE GASKET	29	THRUST WASHER
2	END CAP	16	FIRE SAFE GASKET	30	SUPPORT FEET
3	BALL	17	FIRE SAFE GASKET	31	CHECK VALVE
4	STEM	18	FIRE SAFE PACKING	32	KEY
5	SEAT	19	BEARING	33	GEAR OPERATOR
6	SEAT RING	20	BEARING	34	PIN
7	UPPER CAP	21	BODY SEAL O-RING	35	PIN
8	SUPPORT PLATE	22	SEAT SEAL O-RING	36	PIN
9	LIMIT STOP PLATE	23	UPPER CAP SEAL O-RING	37	STUD
10	SEALANT INJECTION VALVE	24	STEM SEAL O-RING	38	NUT
11	DRAIN VALVE	25	STUD	39	VENT VALVE
12	SEALANT INJECTION VALVE	26	NUT	40	LIFTING LUGS
13	SEAT SPRING	27	ALLEN HEAD BOLT	41	ANTISTATIC BALL
14	ANTISTATIC SPRING	28	ALLEN HEAD BOLT		

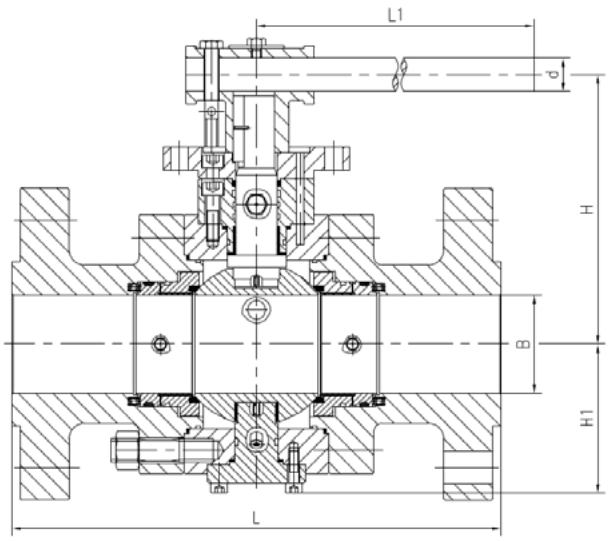
NOTE: Support legs and lifting lugs suppied on sizes 6” and larger.
Drawings are representative, please contact Meridian for specific and current PDF drawings

TRUNNION
2” to 6” LEVER OPERATED

Size in inches Dimensions in mm

ASME	SIZE	B-Port	L-RF	L-RTJ	H	H1	L1	d	WT (kg)
150	2x1-1/2	38	178	191	140	78	300	20	15
150	2	50	178	191	159	84	300	20	17
150	3x2	50	203	216	159	84	300	20	30
150	3	75	203	216	197	110	400	20	37
150	4x3	75	229	241	197	110	400	20	42
150	4	100.1	229	241	216	130	450	25	49
150	6x4	100.1	394	406	216	130	450	25	100
300	2x1-1/2	38	216	232	146	80	300	20	20
300	2	50	216	232	163	88	300	20	22
300	3x2	50	283	298	163	88	300	20	40
300	3	75	283	298	196	110	500	20	45
300	4x3	75	305	321	196	110	500	20	60
300	4	100.1	305	321	216	130	600	25	70
300	6x4	100.1	403	419	216	130	600	25	150
600	2x1-1/2	38	292	295	153	84	404	20	28
600	2	50	292	295	165	95	500	20	32
600	3x2	50	356	359	165	95	500	20	48
600	3	75	356	359	201	115	600	25	56
600	4x3	75	432	435	201	115	600	25	80
600	4	100.1	432	435	220	137	700	25	105
600	6x4	100.1	559	562	220	137	700	25	210
900	2x1-1/2	38	368	371	160	90	540	25	40
900	2	49	368	371	170	99	600	25	48
900	3x2	49	381	384	170	99	600	25	55
900	3	74	381	384	208	115	760	25	83
900	4x3	74	457	460	208	115	760	25	100
1500	2x1-1/2	38	368	371	166	96	500	25	45
1500	2	49	368	371	170	99	600	25	62
1500	3x2	49	470	473	170	99	600	25	110
1500	3	74	470	473	238	144	882	35	135
1500	4x3	74	546	549	238	144	882	35	150
2500	2	42	451	454	246	147	900	34	120
2500	3x2	42	578	584	246	147	900	34	182

NOTE: Please contact Meridian for specific and current drawings and data.



TRUNNION
6” to 48” GEAR OPERATED

Size in inches Dimensions in mm

ASME	SIZE	B-Port	L-RF	L-RTJ	H	H1	A	Dia A	WT (kg)
150	6	151	394	406	264	205	360	460	154
	8x6	151	457	470	264	205	360	460	240
150	8	202	457	470	305	245	360	600	270
	10x8	202	533	546	305	245	360	600	370
150	10	252	533	546	358	300	402	600	462
	12x10	252	610	—	358	300	402	600	535
150	12	303	610	622	386	341	402	600	646
	14x12	303	686	699	386	341	402	600	845
150	14	334	686	699	408	357	402	600	958
	16x14	334	762	775	408	357	402	600	1160
150	16	385	762	775	460	417	402	600	1248
	18x16	385	864	876	460	417	402	600	1350
150	18	436	864	876	468	532	543	700	1440
	20x18	436	914	927	468	532	543	700	1850
150	20	487	914	927	562	510	543	700	1960
	24x20	487	1067	1080	562	510	543	700	2540
150	24	589	1067	1080	652	617	642	700	2810
	30x24	589	1295	—	652	617	642	700	4550
150	30	735	1295	—	785	725	642	750	4850
	36x30	735	1524	—	785	725	642	750	
150	36	874	1524	—	—	—	—	—	8950
	42x36	874	1855	—	—	—	—	—	
150	42	1020	1855	—	—	—	—	—	14450
	48x42	1020	2134	—	—	—	—	—	
150	48	1166	2134	—	—	—	—	—	21750

TRUNNION
6” to 48” GEAR OPERATED

Size in inches Dimensions in mm

ASME	SIZE	B-Port	L-RF	L-RTJ	H	H1	A	Dia A	WT (kg)
300	6	151	403	419	264	205	229	460	175
	8x6	151	502	518	264	205	229	460	215
300	8	202	502	518	305	245	360	600	327
	10x8	202	568	584	305	245	360	600	382
300	10	252	568	584	360	300	402	600	408
	12x10	252	648	664	360	300	402	600	570
300	12	303	648	664	505	341	543	750	735
	14x12	303	762	778	505	341	543	750	980
300	14	334	762	778	458	385	543	750	1162
	16x14	334	838	854	458	385	543	750	1250
300	16	385	838	854	514	430	543	750	1492
	18x16	385	914	930	514	430	543	750	1620
300	18	436	914	930	539	488	543	750	1752
	20x18	436	991	1010	539	488	543	750	1910
300	20	487	991	1010	592	534	642	750	2695
	24x20	487	1143	1165	592	534	642	750	2860
300	24	589	1143	1165	670	600	642	750	3210
	30x24	589	1397	1422	670	600	642	750	4560
300	30	735	1397	1422	891	755	754	800	5590
	36x30	735	1727	1756	891	755	754	800	7854
300	36	874	1727	1756	—	—	—	—	10280
	42x36	874	2083	—	—	—	—	—	
300	42	1020	2083	—	—	—	—	—	16300
	48x42	1020	2170	—	—	—	—	—	
300	48	1166	2170	—	—	—	—	—	24300

NOTE: Please contact Meridian for specific and current drawings and data.

SIZES & DIMENSIONS

TRUNNION
6” to 48” GEAR OPERATED

Size in inches Dimensions in mm

ASME	SIZE	B-Port	L-RF	L-RTJ	H	H1	A	Dia A	WT (kg)
600	6	151	559	562	266	215	360	600	260
	8x6	151	660	664	266	215	360	600	382
600	8	202	660	664	337	278	402	600	465
	10x8	202	787	791	337	278	402	600	591
600	10	252	787	791	476	326	543	750	750
	12x10	252	838	841	476	326	543	750	856
600	12	303	838	841	440	354	543	750	1090
	14x12	303	889	892	440	354	543	750	1150
600	14	334	889	892	455	400	543	750	1335
	16x14	334	991	994	455	400	543	750	1560
600	16	385	991	994	513	420	543	750	1810
	18x16	385	1092	1095	513	420	543	750	2300
600	18	436	1092	1095	580	490	642	750	2500
	20x18	436	1194	1200	580	490	642	750	2750
600	20	487	1194	1200	590	515	642	750	3000
	24x20	487	1397	1407	590	515	642	750	4150
600	24	589	1397	1407	695	640	642	762	5000
	30x24	589	1651	1664	695	640	642	762	6100
600	30	735	1651	1664	—	—	—	—	7570
	36x30	735	2083	2099	—	—	—	—	9266
600	36	874	2083	2099	—	—	—	—	13530
	42x36	874	2437	2437	—	—	—	—	
600	42	1020	2437	2437	—	—	—	—	21590
	48x42	1020	2540	2540	—	—	—	—	
600	48	1166	2540	2540	—	—	—	—	31550

TRUNNION
4” TO 30” GEAR OPERATED

Size in inches Dimensions in mm

ASME	SIZE	B-Port	L-RF	L-RTJ	H	H1	A	Dia A	WT (kg)
900	4	100	457	460	223	—	229	460	125
	6x4	100	610	613	223	—	229	460	270
900	6	150	610	613	281	—	402	600	305
	8x6	150	737	740	281	—	402	600	480
900	8	201	737	740	327	259	402	600	560
	10x8	201	838	841	327	259	402	600	750
900	10	252	838	841	386	315	543	600	858
	12x10	252	965	968	386	315	543	600	1050
900	12	303	965	968	438	352	543	700	1343
	14x12	303	1029	1038	438	352	543	700	1520
900	14	322	1029	1038	465	390	543	750	1610
	16x14	322	1130	1140	465	390	543	750	1850
900	16	373	1130	1140	560	477	642	750	2525
	18x16	373	1219	1232	560	477	642	750	2690
900	18	423	1219	1232	615	546	642	750	2870
	20x18	423	1321	1334	615	546	642	750	2950
900	20	471	1321	1334	—	—	—	—	3480
	24x20	471	1549	1568	—	—	—	—	3600
900	24	570	1549	1568	—	—	—	—	7030
	30x24	570	1880	1902	—	—	—	—	10200
900	30	712	1880	1902	—	—	—	—	12440

NOTE: Please contact Meridian for specific and current drawings and data.

SIZES & DIMENSIONS

TRUNNION
4” TO 24” GEAR OPERATED

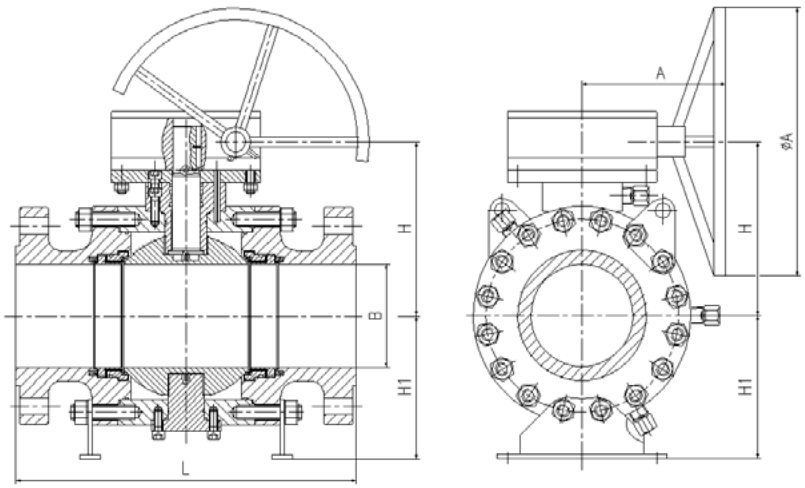
Size in inches Dimensions in mm

ASME	SIZE	B-Port	L-RF	L-RTJ	L-WE	H	H1	A	Dia A	WT (kg)
1500	4	100	546	549	546	258	—	360	600	190
	6x4	100	705	711	705	258	—	360	600	410
1500	6	144	705	711	705	342	—	402	750	461
	8x6	144	832	841	832	342	—	402	750	560
1500	8	192	832	841	832	492	352	543	750	640
	10x8	192	991	1000	991	492	352	543	750	930
1500	10	239	991	1000	991	553	380	604	750	1210
	12x10	239	1130	1146	1130	553	380	604	750	1356
1500	12	287	1130	1146	1130	483	405	543	750	1592
	14x12	287	1257	1276	1257	483	405	543	750	1830
1500	14	315	1257	1276	1257	—	—	—	—	2260
	16x14	315	1384	1406	1384	—	—	—	—	2560
1500	16	360	1384	1406	1384	—	—	—	—	3760
	18x16	360	1537	1559	1537	—	—	—	—	5554
1500	18	406	1537	1559	1537	—	—	—	—	6400
	20x18	406	1664	1686	1664	—	—	—	—	7521
1500	20	454	1664	1686	1664	—	—	—	—	8060
	24x20	454	1944	1972	—	—	—	—	—	10922
1500	24	546	1944	1972	—	—	—	—	—	14550

TRUNNION
3” TO 12” GEAR OPERATED

Size in inches Dimensions in mm

ASME	SIZE	B-Port	L-RF	L-RTJ	L-WE	H	H1	A	Dia A	WT (kg)
2500	3	62	578	584	578	242	—	360	600	215
	4x3	62	673	683	673	242	—	360	600	275
2500	4	87	673	683	673	277	—	402	600	389
	6x4	87	914	927	914	277	—	402	600	526
2500	6	131	914	927	914	345	—	402	600	1524
	8x6	131	1022	1038	1022	345	—	402	600	1623
2500	8	179	1022	1038	1022	516	395	642	750	1880
	10x8	179	1270	1292	1270	516	395	642	750	2421
2500	10	223	1270	1292	1270	577	463	642	750	3140
	12x10	223	1422	1444	1422	577	463	642	750	3536
2500	12	265	1422	1444	1422	—	—	—	—	4260



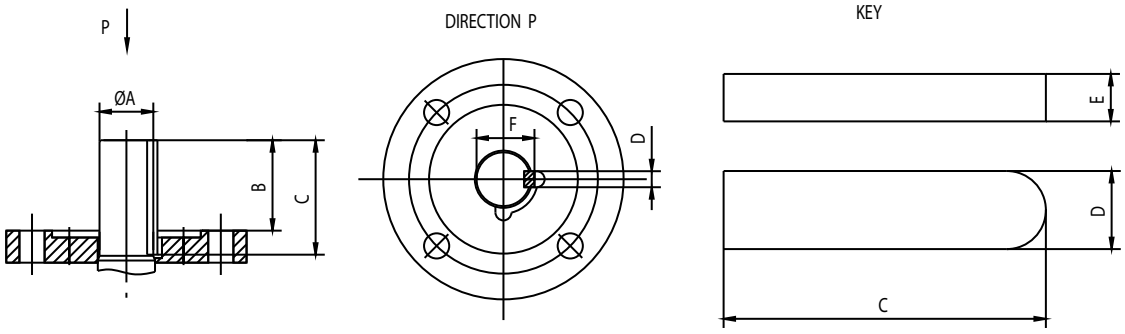
NOTE: Drawing applies to data on pages 10-12.

The data provided in this document is subject to change without notice.

TOP WORKS DIMENSIONS

FULL AND REDUCED PORT TRUNNION

Size in inches Dimensions in mm



ASME CLASS 150

NPS	A	B	C	D	E	F	ISO
2X1 1/2"	20	29.5	40	6	6	22.5	F10
2"	26	35	45	8	7	29	F10
3X2"	26	35	45	8	7	29	F10
3"	30	40	50	8	7	33	F12
4X3"	30	40	50	8	7	33	F12
4"	35	41	56	10	8	38	F12
6X4"	35	41	56	10	8	38	F12
6"	47	79	100	14	9	50.5	F16
8X6"	47	79	100	14	9	50.5	F16
8"	52	88	110	16	10	56	F16
10X8"	52	88	110	16	10	56	F16
10"	62	85	110	18	11	66	F25
12X10"	62	85	110	18	11	66	F25
12"	62	88	110	18	11	66	F25
14x12"	62	88	110	18	11	66	F25
14"	72	117	140	20	12	76.5	F25
16x14"	72	117	140	20	12	76.5	F25
16"	72	117	140	20	12	76.5	F25
18x16"	72	117	140	20	12	76.5	F25
18"	80	120	150	22	14	85	F25
20x18"	80	120	150	22	14	85	F25
20"	90	120	150	25	14	95	F25
24x20"	90	120	150	25	14	95	F25
24"	105	130	165	28	16	111	F30
30x28"	115	140	180	32	18	122	F30
30"	115	140	180	32	18	122	F30
36x30"	115	140	180	32	18	122	F30
36"	130	180	220	32	18	137	F35
42x36"	130	180	220	32	18	137	F35
42"	145	200	250	36	20	153	F40
48x42"	145	200	250	36	20	153	F40
48"	150	200	250	36	20	158	F40

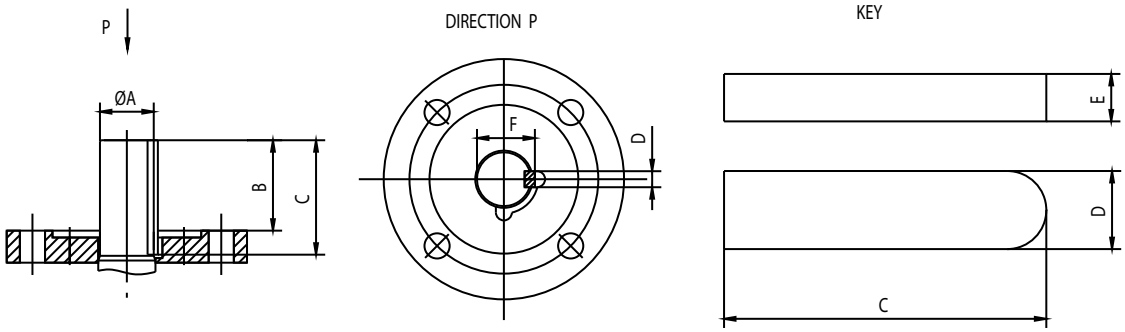
ASME CLASS 300

NPS	A	B	C	D	E	F	ISO
2X1 1/2"	20	29.5	40	6	6	22.5	F10
2"	26	35	45	8	7	29	F10
3X2"	26	35	45	8	7	29	F10
3"	30	40	50	8	7	33	F12
4X3"	30	40	50	8	7	33	F12
4"	35	41	56	10	8	38	F12
6X4"	35	41	56	10	8	38	F12
6"	47	79	100	14	9	50.5	F16
8X6"	47	79	100	14	9	50.5	F16
8"	52	88	110	16	10	56	F16
10X8"	52	88	110	16	10	56	F16
10"	62	85	110	18	11	66	F25
12X10"	62	85	110	18	11	66	F25
12"	62	88	110	18	11	66	F25
14x12"	62	88	110	18	11	66	F25
14"	72	117	140	20	12	76.5	F25
16x14"	72	117	140	20	12	76.5	F25
16"	72	117	140	20	12	76.5	F25
18x16"	72	117	140	20	12	76.5	F25
18"	80	120	150	22	14	85	F25
20x18"	80	120	150	22	14	85	F25
20"	90	120	150	25	14	95	F25
24x20"	90	120	150	25	14	95	F25
24"	105	130	165	28	16	111	F30
30x28"	115	140	180	32	18	122	F30
30"	130	180	220	32	18	137	F35
36x30"	130	180	220	32	18	137	F35
36"	150	200	250	36	20	158	F40
42x36"	150	200	250	36	20	158	F40
42"	175	250	310	45	25	185	F48
48x42"	175	250	310	45	25	185	F48
48"	190	250	310	45	25	200	F48

TOP WORKS DIMENSIONS

FULL AND REDUCED PORT TRUNNION

Size in inches Dimensions in mm



ASME CLASS 600

NPS	A	B	C	D	E	F	ISO
2X1 1/2"	20	29.5	40	6	6	22.5	F10
2"	26	35	45	8	7	29	F10
3X2"	26	35	45	8	7	29	F10
3"	30	40	50	8	7	33	F12
4X3"	30	40	50	8	7	33	F12
4"	35	41	56	10	8	38	F12
6X4"	35	41	56	10	8	38	F12
6"	47	79	100	14	9	50.5	F16
8X6"	47	79	100	14	9	50.5	F16
8"	52	88	110	16	10	56	F25
10X8"	52	88	110	16	10	56	F25
10"	62	85	110	18	11	66	F25
12X10"	62	85	110	18	11	66	F25
12"	72	117	140	20	12	76.5	F25
14x12"	72	117	140	20	12	76.5	F25
14"	85	117	140	22	14	90	F25
16x14"	85	117	140	22	14	90	F25
16"	92	133	160	25	14	97	F30
18x16"	92	133	160	25	14	97	F30
18"	95	130	165	25	14	100	F30
20x18"	95	130	165	25	14	100	F30
20"	110	130	165	28	16	116	F30
24x20"	110	130	165	28	16	116	F30
24"	125	180	220	32	18	132	F35
30x28"	150	200	250	36	20	158	F40
30"	150	200	250	36	20	158	F40
36x30"	150	200	250	36	20	158	F40
36"	165	250	310	40	22	174	F48
42x36"	165	250	310	40	22	174	F48
42"	205	310	380	50	28	216	F60
48x42"	205	310	380	50	28	216	F60
48"	220	310	380	50	28	231	F60

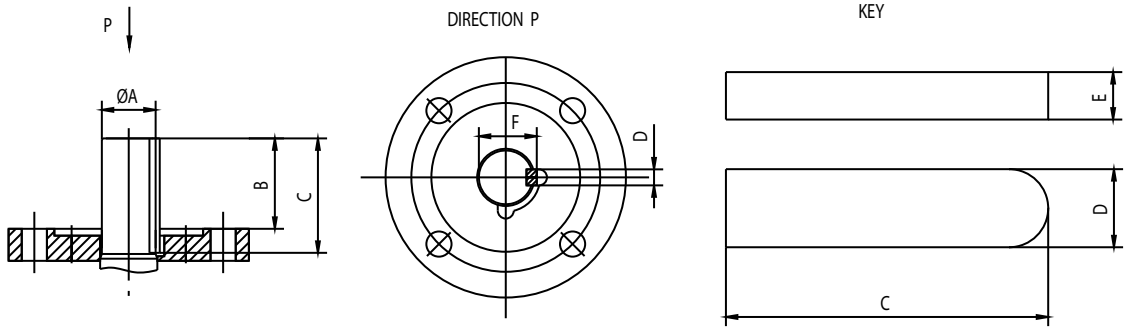
ASME CLASS 900

NPS	A	B	C	D	E	F	ISO
2X1 1/2"	26	36.5	50	8	7	29	F12
2"	26	36	50	8	7	29	F12
3X2"	26	36	50	8	7	29	F12
3"	30	40	55	8	7	33	F12
4X3"	30	40	55	8	7	33	F12
4"	35	62	80	10	8	38	F14
6X4"	35	62	80	10	8	38	F14
6"	47	76	100	14	9	50.5	F25
8X6"	47	76	100	14	9	50.5	F25
8"	72	76	100	20	12	76.5	F25
10x8"	72	76	100	20	12	76.5	F25
10"	72	76	100	20	12	76.5	F25
12x10"	72	76	100	20	12	76.5	F25
12"	90	120	151	25	14	95	F25
14x12"	90	120	151	25	14	95	F25
14"	105	130	165	28	16	111	F30
16x14"	105	130	165	28	16	111	F30
16"	115	180	219	32	18	122	F35
18x16"	115	180	219	32	18	122	F35
18"	125	180	219	32	18	132	F35
20x18"	125	180	219	32	18	132	F35
20"	130	200	246	32	18	137	F40
24x20"	130	200	246	32	18	137	F40
24"	150	200	248	36	20	158	F40
30x28"	165	200	248	40	22	174	F40
30"	190	250	310	45	25	200	F48

TOP WORKS DIMENSIONS

FULL AND REDUCED PORT TRUNNION

Size in inches Dimensions in mm



ASME CLASS 1500

NPS	A	B	C	D	E	F	ISO
2X1 1/2"	26	36.5	50	8	7	29	F12
2"	26	36	50	8	7	29	F12
3X2"	26	36	50	8	7	29	F12
3"	38	60	75	10	8	41	F16
4X3"	38	60	75	10	8	41	F16
4"	47	79	100	14	9	50.5	F16
6x4"	47	79	100	14	9	50.5	F16
6"	57	83	105	16	10	61	F25
8x6"	57	83	105	16	10	61	F25
8"	80	120	149	22	14	85	F25
10x8"	80	120	149	22	14	85	F25
10"	95	130	165	25	14	100	F30
12x10"	95	130	165	25	14	100	F30
12"	115	180	219	32	18	122	F35
14x12"	115	180	219	32	18	122	F35
16"	130	200	246	32	18	137	F40
18x16"	130	200	246	32	18	137	F40
18"	145	200	250	36	20	153	F40
20x18"	145	200	250	36	20	153	F40
20"	175	250	310	45	25	185	F48
24x20"	175	250	310	45	25	185	F48
24"	195	250	310	45	25	205	F48

ASME CLASS 2500

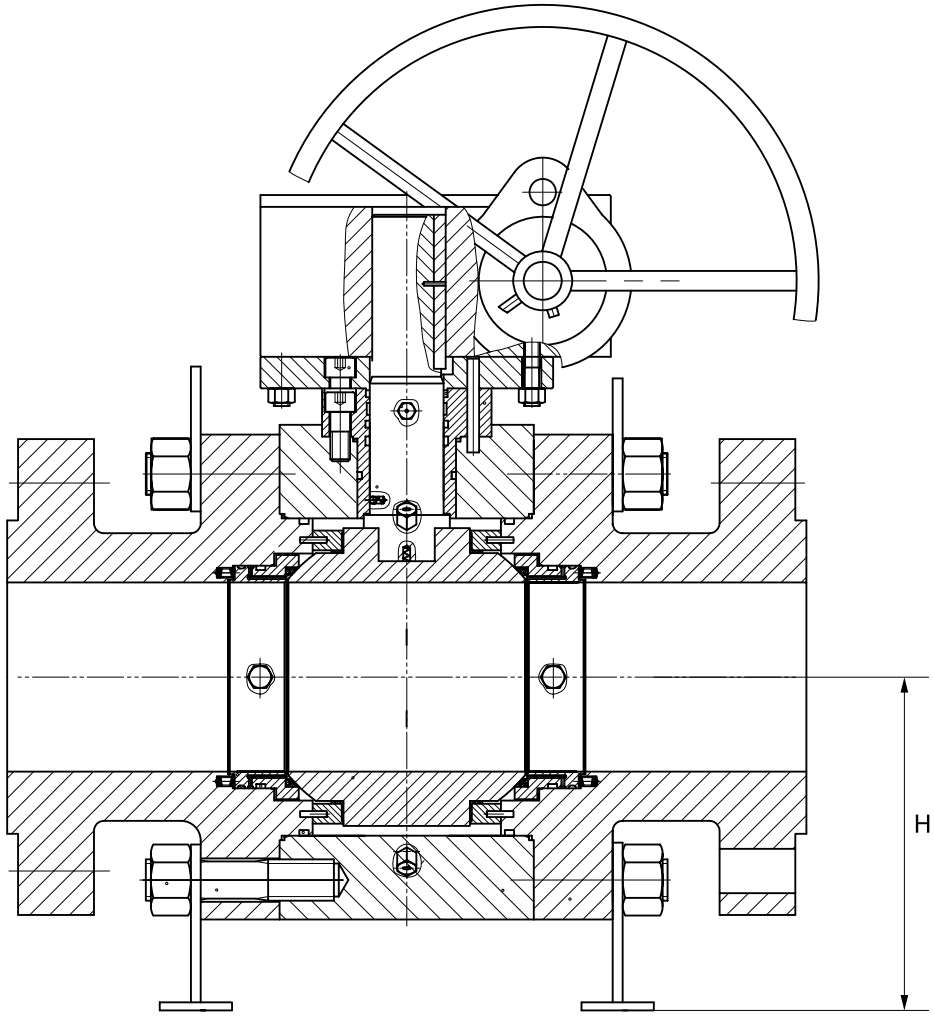
NPS	A	B	C	D	E	F	ISO
2X1 1/2"	32	40	55	10	8	35	F14
2"	35	43	60	10	8	38	F16
3X2"	35	43	60	10	8	38	F16
3"	42	68	90	12	8	45	F16
4X3"	42	68	90	12	8	45	F16
4"	52	79	100	16	10	56	F25
6x4"	52	79	100	16	10	56	F25
6"	75	84	110	20	12	79.5	F25
8x6"	75	84	110	20	12	79.5	F25
8"	90	130	161	25	14	95	F30
10x8"	90	130	161	25	14	95	F30
10"	110	180	215	28	16	116	F35
12x10"	110	180	215	28	16	116	F35
12"	135	200	255	36	20	143	F40

The data provided in this document is subject to change without notice.

LIFTING LUG AND SUPPORT FEET DATA

	150#			300#			600#			900#			1500#			2500#		
NPS	LIFTING LUG	SUPPORT FEET	H	LIFTING LUG	SUPPORT FEET	H	LIFTING LUG	SUPPORT FEET	H	LIFTING LUG	SUPPORT FEET	H	LIFTING LUG	SUPPORT FEET	H	LIFTING LUG	SUPPORT FEET	H
2X1 1/2"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3X2"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	YES	YES	185
4X3"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	YES	YES	185
4"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	YES	YES	200	YES	YES	209	YES	YES	240
6X4"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	YES	YES	200	YES	YES	209	YES	YES	260
6"	YES	YES	205	YES	YES	205	YES	YES	221	YES	YES	240	YES	YES	270			
8X6"	YES	YES	205	YES	YES	205	YES	YES	221	YES	YES	240	YES	YES	270			
8"	YES	YES	243	YES	YES	243	YES	YES	280	YES	YES	283						
10X8"	YES	YES	243	YES	YES	243	YES	YES	280	YES	YES	283						
10"	YES	YES	300	YES	YES	300	YES	YES	326	YES	YES	315						
12X10"	YES	YES	300	YES	YES	300	YES	YES	326	YES	YES	315						
12"	YES	YES	335	YES	YES	345	YES	YES	355									
16"	YES	YES	410	YES	YES	422	YES	YES	420									

NOTE: Valves larger than 16” come standard with support feet - please call for dimensions.



TORQUE DATA (BASED ON FULL-PORT)

Size (In)	Open (break) torque (inch pounds) at Max. P					
	150 #	300 #	600 #	900 #	1500 #	2500 #
2X1.5"	478	597	1195	1912	2867	3823
2"	597	956	1971	3106	3823	6571
3"	717	1195	3106	5102	7169	11828
4"	1553	2509	5496	8961	13142	23417
6"	4540	6930	11350	18519	38232	65711
8"	8124	16727	24492	45401	72880	108961
10"	13142	27479	35245	65711	143370	201614
12"	19116	32258	51972	107528	209081	407410
14"	25090	45401	77659	191160		
16"	38232	65711	111112	256871	358425	
18"	41816	65711	122223	308246	387003	
20"	55556	100956	152928	346478	747197	
24"	81601	156512	253825	537638	1224619	
30x28"	136440	260456	399047	696539		
30"	164039	349703	504185	1075275		
36"	289130	545523	778738			
42"	430707	913745	1485911			
48"	475152	1044928	1664287			

NOTE:
1. Torque values are in inch pounds. For torques in Newton meters, multiply inch pounds x 8.85.
2. Torque includes safety factor.
3. For clean wet applications in low temperature service below -20 Deg C (-4 Deg F) add 10% safety.
4. Add additional safety if service conditions dictate.
5. For reduced port valves select torque based on valve port size. For example: 4” x 3” x 300# ASME valve – use torque for 3” x 300# ASME valve.
6. Sizes not shown available upon request.
7. Class 150-300# ASME valves have RPTFE seat rings; class 600-1500# ASME valves have Devlon seat rings; and class 2500# ASME valves have PEEK seat rings.

CV Values

FULL BORE

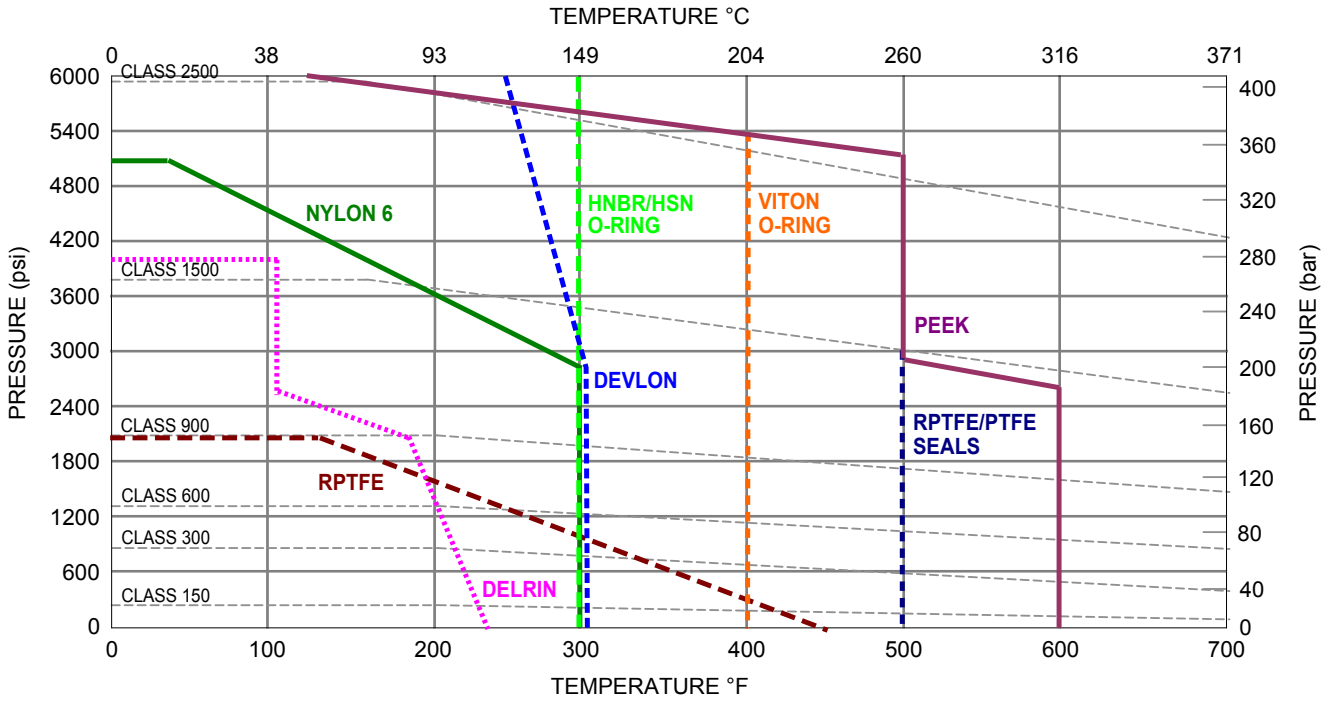
Size (In)	150 #	300 #	600 #	900 #	1500 #	2500 #
2	647	647	647	599	582	412
3	2086	2086	2086	1932	1879	1268
4	2694	2694	2694	2494	2426	1766
6	6062	6062	6062	5612	5030	4004
8	10885	10885	10885	10077	8943	7476
10	17109	17109	17109	15840	13857	11603
12	24734	24734	24734	22990	19982	16385
14	30055	30055	30055	25862	24071	
16	39934	39934	39934	34703	31440	
18	51214	51214	51214	44630	39988	
20	63896	63896	63896	53333	50002	
24	96465	96465	96465	81039	72321	
30	145588	145588	145588	129948		
36	211092	211092	211092			
42	280946	280946	280946			
48	383846	383846	383846			

REDUCED BORE

Size (In)	150 #	300 #	600 #	900 #	1500 #	2500 #
2*1 1/2	306	306	306	306	306	300
3*2	377	377	377	377	377	287
4*3	1043	1043	1043	1043	1043	681
6*4	1587	1587	1587	1587	1353	953
8*6	4364	4364	4364	4364	4065	3197
10*8	7495	7495	7495	7495	6986	6057
12*10	13470	13470	13470	13470	12171	10999
14*12	24702	24702	24702	28276	20780	
16*14	27737	27737	27737	25275	25551	
18*16	34740	34740	34740	32387	31002	
20*18	47739	47739	47739	45666	41158	
24*20	49304	49304	49304	46021	43687	
30*28	96762	96762	96762	94231		
36*30	119199	119199	119199			
42*36	180836	180836	180836			
48*42	267636	267636	267636			

NOTE: 1. Larger size data available on request.
2. Flow coefficient Cv is the volume (in US gallons) of water at 60°F that will flow per minute through a valve with a pressure drop of 1 psi across the valve.

REFERENCE PRESSURE/TEMPERATURE CHART



Consult ASME 16.34 for specific material pressure/temperature ratings.
Consult Meridian for specific information.

COMMON REFERENCE STANDARDS

API - AMERICAN PETROLEUM INSTITUTE

API 608	Metal ball valves - flanged, threaded and welding ends
API 598	Valve inspection and testing
API Q1	Specification for quality programs
API 6D	Specification for pipeline valves
API 607	Fire test for quarter turn valves with non-metallic seats

ASME - AMERICAN SOCIETY OF MECHANICAL ENGINEERS

B16.5	Pipe flanges and flanged fittings
B16.10	Face to Face and end to end dimensions of valves
B16.25	Butt welding ends
B16.34	Valves - flanged, threaded and welding ends
B16.47	Large diameter steel flanges

MSS - Manufactures Standardization Society

MSS SP - 25	Standard marking system for valves, flanges, fittings and unions
MSS SP - 44	Steel pipeline flanges
MSS SP - 54	Quality standard for steel castings for valves, radiographic examination method
MSS SP - 55	Quality standard for steel castings for valves, visual method

BS - BRITISH STANDARD

BS EN ISO 10204	Metallic products - inspection documents
BS EN 17292	Metal ball valves for petroleum, petrochemical and allied industries

CSA - CANADIAN STANDARDS ASSOCIATION

CSA B51	Boiler, pressure vessel and pressure piping code
CSA Z245.15	Steel valves
CSA Z662-11	Oil and gas pipeline systems

ISO - INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO 9001	Quality management systems
ISO TS 29001	Specification for quality programs
ISO 15156 (All)	Sulphide stress cracking resistant metallic materials for oil field equipment
ISO 14313	Pipeline transportation systems - pipeline valves
ISO 5208	Pressure testing of metallic valves
ISO 10497	Fire type testing of valves
ISO 5211	Attachment of part-turn actuators
ISO 15848	Industrial valves - measurement, test and qualification procedures for fugitive emissions

NACE - NACE INTERNATIONAL, THE CORROSION SOCIETY

MR0175	Sulphide stress cracking resistant metallic materials for oilfield equipment
MR0103	Sulphide stress cracking resistant metallic materials for petroleum refining

ESD's & Control Chokes
IN STOCK

RAPID TURN-AROUND ACTUATION

Meridian provides rapid turn-around valve actuation solutions and will customize its industry leading valve product range to meet its customers' actuation needs. Actuation products include electric actuators, pneumatic and hydraulic actuators, and control accessories.

Same day shipment of Meridian actuation packages!

Meridian™ Ledeen™ WG Wood Group ASCO SAMSON PMV VAC VRC rotork® TOPWORX FNW™ IC Indelac Controls, Inc.

CAPABILITIES

- Quarter-turn actuation
- Multi-turn/linear actuation
- Complete shop facilities
- Experienced Technicians
- Retrofit in service
- In-field services
- Total package responsibility
- All actuators are sized for full ASME differential pressure and Meridian ensures that the appropriate safety factor is added to ensure safe operation

IN STOCK

- Pneumatic, Hydraulic, and Electric
- Control accessories and mounting hardware
- ESD packages

PACKAGES

Meridian™ actuated packages including:

- Pneumatic actuated ball valves
- Self-contained hydraulic ESD system
- Electric actuated quarter and multi-turn valves
- Actuated control chokes
  - Meridian™ MAP 2000
  - Meridian™ MAP 2100
- Gas-over-oil packages

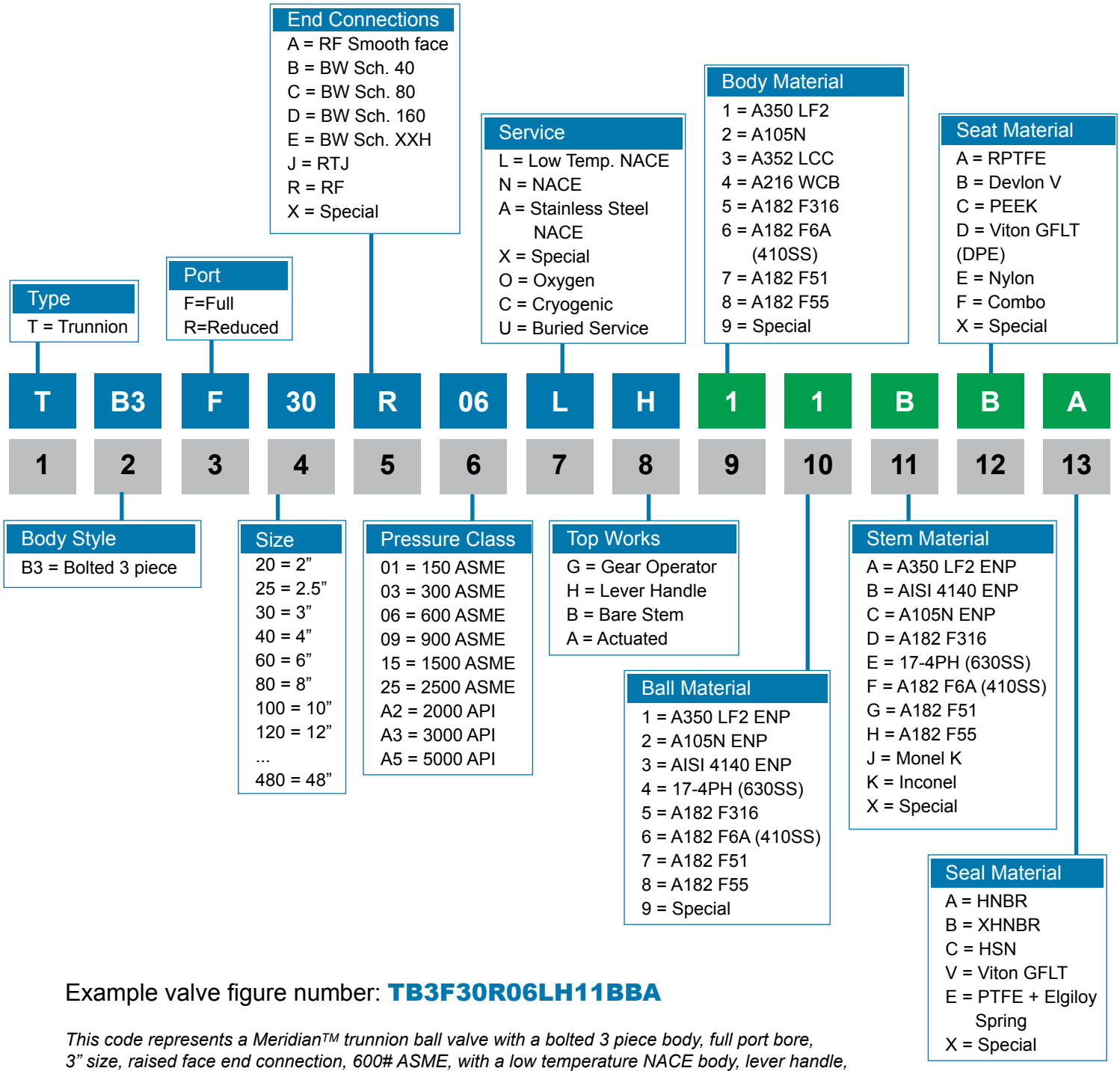
FNW™ actuated packages

- FNW™ ball valves
- FNW™ knife gates
- FNW™ butterfly valves

The data provided in this document is subject to change without notice.

HOW TO ORDER

ORDERING FIGURE NUMBER CHART



Example valve figure number: **TB3F30R06LH11BBA**

This code represents a Meridian™ trunnion ball valve with a bolted 3 piece body, full port bore, 3” size, raised face end connection, 600# ASME, with a low temperature NACE body, lever handle, A350 LF2 body, A350 LF2 ENP ball, AISI 4140 ENP stem, Devlon V seat ring, and HNBR seals.

Meridian
VALVES · ACTUATION · PVF
a WOLSELEY company

Head Office
3780 - 98 Street
Edmonton, AB
T6E 6B4
Phone: 1.800.661.6997
Fax: 1.800.263.8298

Edmonton
Ph: 780.468.7161
Fax: 780.469.2655

Calgary
Ph: 403.243.3001
Fax: 403.243.0492

Richmond
Ph: 604.278.4640
Fax: 604.278.7515

Fort St. John
Ph: 250.785.9643
Fax: 250.785.9651

Grande Prairie
Ph: 780.532.4208
Fax: 780.532.4264

Burlington
Ph: 905.331.2180
Fax: 905.331.3218

Sarnia
Ph: 519.336.0014
Fax: 519.336.6899

Sudbury
Ph: 705.682.9779
Fax: 705.682.9780

Montreal
Ph: 514.343.5400
Fax: 514.343.8625

- Hanna
  Ph: 403.854.4960
  Fax: 403.854.4967
- Olds
  Ph: 403.556.1990
  Fax: 403.556.2731
- Oyen
  Ph: 403.664.2100
  Fax: 403.664.3050
- Ponoka
  Ph: 403.783.4405
  Fax: 403.783.2855
- Rimbey
  Ph: 403.843.2661
  Fax: 403.843.3775

MAVERICK SUPPLY LTD.

Meridian/Maverick locations identified with "●".

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