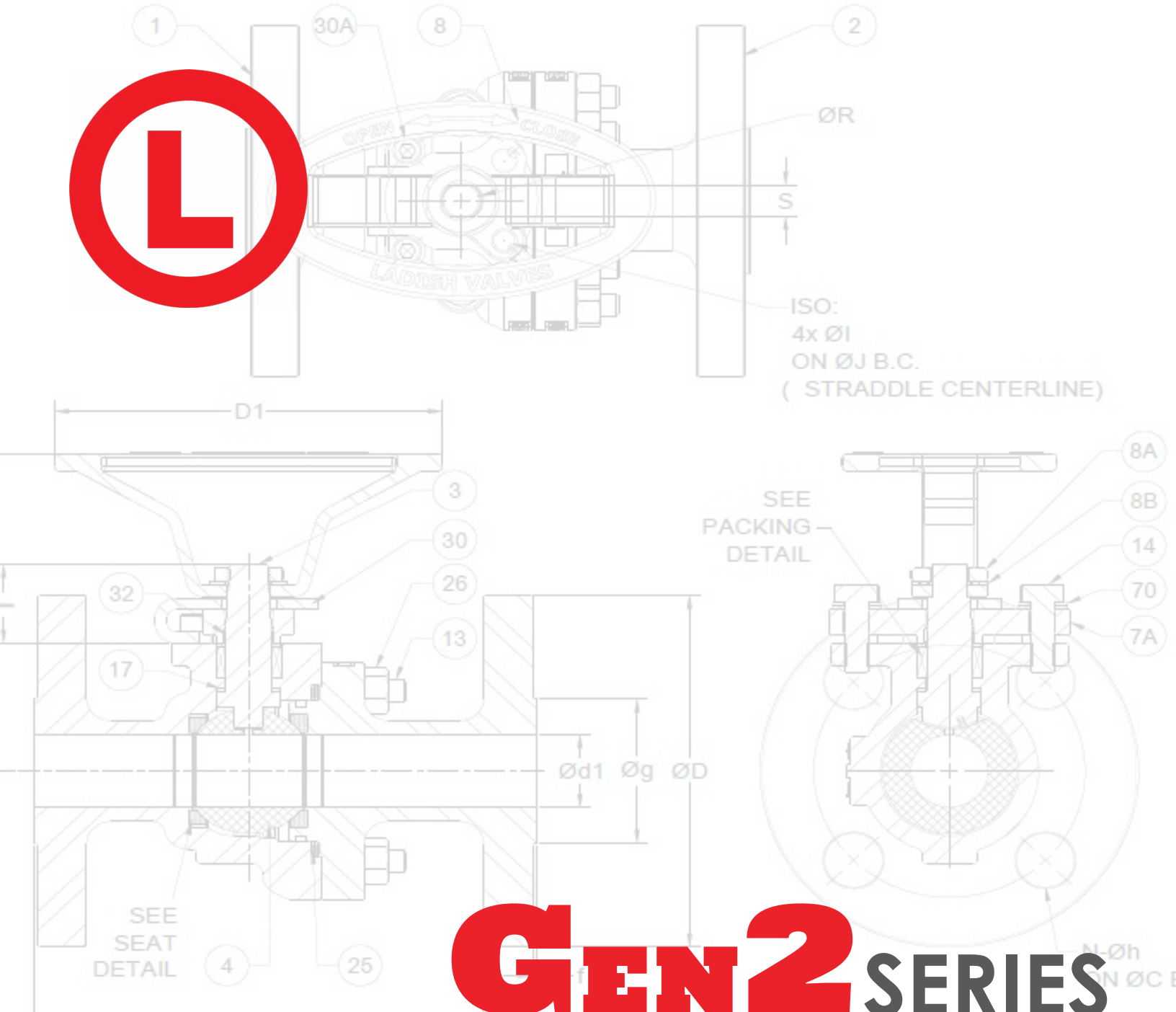




GEN2 SERIES

CRITICAL SERVICE SERVICE
HIGH PERFORMANCE BALL VALVES

7603 Bluff Point Dr., Houston, TX 77086

281.880.8560

ladishvalves.com

sales@ladishvalves.com



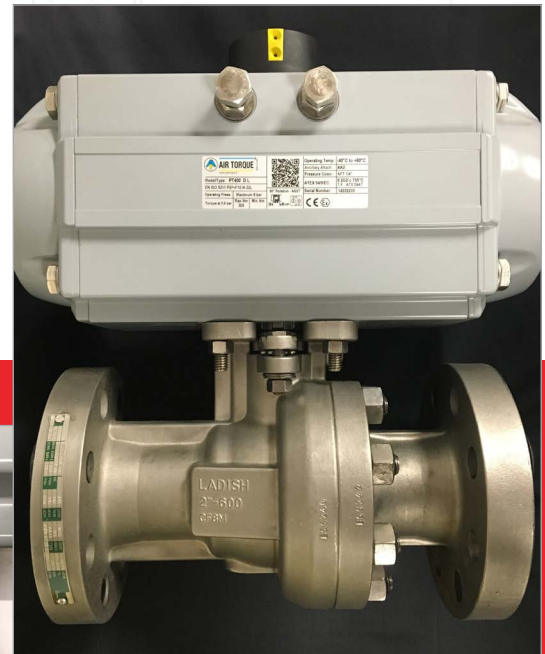
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LADISH VALVES

Ladish is a U.S. (Houston) based manufacturer of Ball, Gate, Globe and Check valves for Critical and Severe Service. Our specialty is low emission, carbon steel, stainless steel and high alloy valves for toxic/corrosive service. Our Low-E Ball valves are supplied with dual low emissions packing sets and seals that meet requirements of ISO-15848-1, API 641 and TA Luft (per VD12440), as well as being compliant with API 608 (Ball Valve Standard) and API 607 (Fire Safe). The valves are designed to ANSI/ASME B16.34 standards and meet ASME B16.10 Face-to-Face requirements, as well as all having integral ISO mounting pads for actuators or gearboxes when needed. ALL Ladish Ball Valves are manufactured and tested in our shops in Houston Texas under our ISO 9001:2008 Certification.

G2 APPLICATIONS

- Chlorine
- Anhydrous HCL
- Nitric Acid
- Phosgene
- Isocyanates
- ASME B31.3 Chapter VIII
Category M Fluid Service



GEN2 VALVE DESIGN FEATURES

ENGINEERED FOR PERFORMANCE & RELIABILITY IN THE MOST HAZARDOUS INDUSTRIAL PROCESSES

- Fully API 608 Compliant
- Fully Welded Extended Bonnets when required (NOT Bolted)
- Live Loaded Adjustable Packing
- Self-relieving seats
- All Wetted parts suitable for Chlorine Service when required
- Dual Gland Packing. Either with Primary PTFE and secondary Graphoil for fire safety, or dual PTFE. (Graphoil required for fire safe)
- Tested to API 598
- Fully Cleaned & Tagged for Chlorine Service to meet the requirements of Chlorine Institute Pamphlet 6 when required
- Sealed and Packaged to prevent moisture intrusion prior to shipping
- Valve Seating: Standard is our molecularly enhanced PTFE (TFM), with reinforced TFM, Carbon Graphite and Metal Seating available

Ladish produces all valves in conformance with API Q1 Quality System. The Houston manufacturing facility maintains an ISO 9001 certified quality system and an internal database for traceability on all valves.



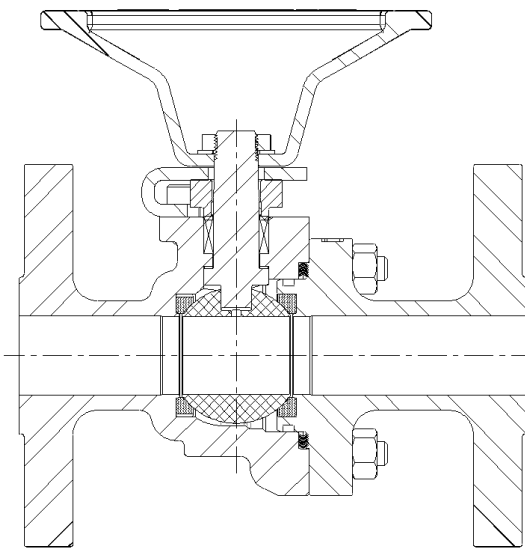
Oxidizer / Acid Service Valves



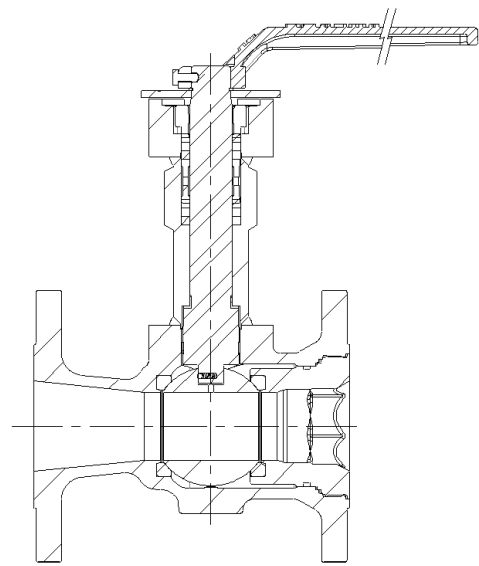
BONNET TYPES

Ladish offers both low-profile bonnets with Dual (PTFE / Graphite) Low Emission packing sets as well as Extended Bonnet. In the extended bonnet style, Ladish supplies these valves with internal Lantern Rings and “leak-off / bleed” ports on the bonnet as required.

LOW PROFILE BONNET



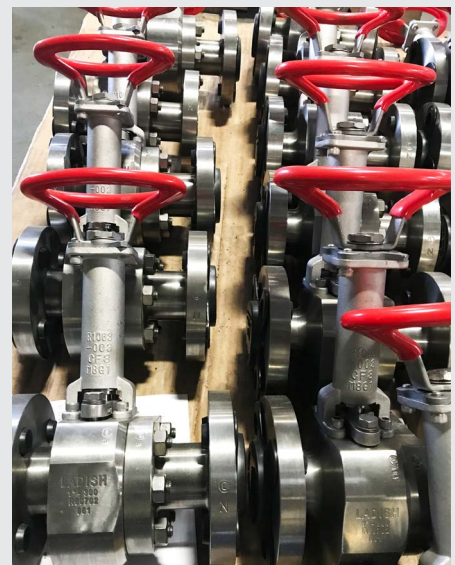
EXTENDED BONNET



OPTIONAL BOLT-ON STEM EXTENSION

An additional option on the Low Profile bonnets is a bolt-on stem extension should this be required for valves with insulation. All valves feature Live Loaded Dual (PTFE/ Graphite) Packing.

**SELF-RELIEVING SEATS STANDARD
VENTED BALL OPTIONAL**



CHLORINE SERVICE BALL VALVES

Ladish Chlorine and Oxidizing Service Ball Valves are of a “Floating” type with two basic body configurations. The first is a Split-Body type in both Full and Reduced Port configurations (Class 150, 300 and 600), with the second being a one-piece “Unibody” style (Class 150 and 300 Standard Port only).

The part numbers denoting these models are:

- P8: Full Port, Split Body (.5” – 16” Class 150 and 300, .5” – 6” Class 600)
- P7: Standard Port, Split Body (2” – 8” Class 150, 300 and 600)
- P9: Standard Port, Unibody Style (.75” – 12”, Class 150 and 300)

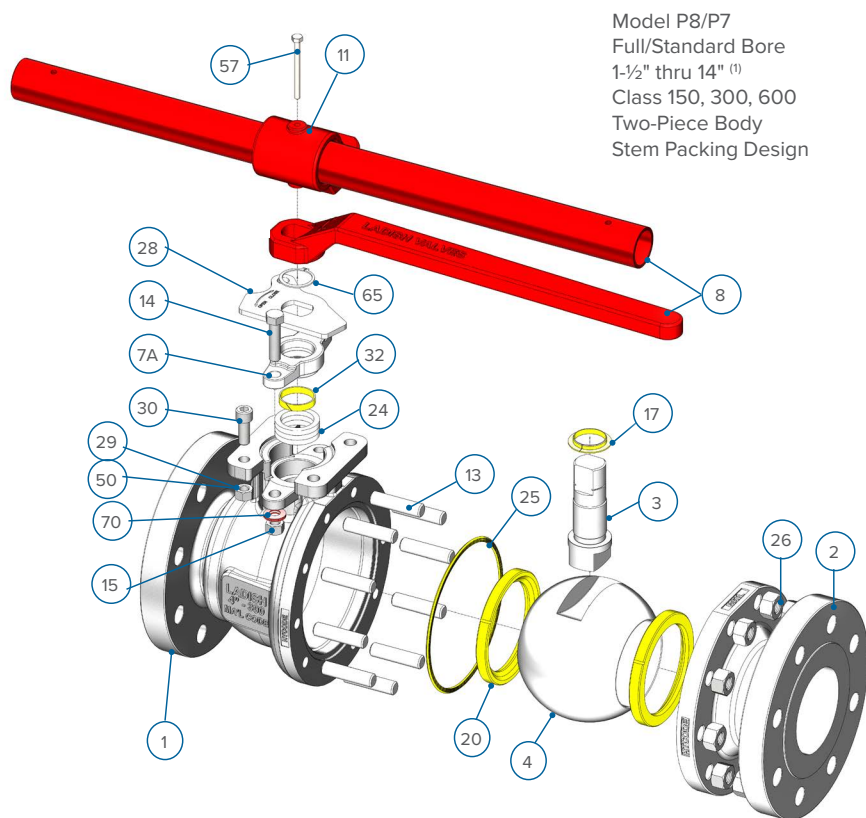
PRODUCT RANGE: G2 SERIES HIGH PERFORMANCE BALL VALVES

	P8			P7			P9	
	DUAL SEAL 2-PC BODY FULL PORT			DUAL SEAL 2-PC BODY STD. PORT			DUAL SEAL UNI-BODY STD. PORT	
	150	300	600	150	300	600	150	300
1/2"	✓	✓	✓	-	-	-	-	-
3/4"	✓	✓	✓	-	-	-	✓	✓
1"	✓	✓	✓	-	-	-	✓	✓
1 1/2"	✓	✓	✓	-	-	-	✓	✓
2"	✓	✓	✓	✓	✓	✓	✓	✓
3"	✓	✓	✓	✓	✓	✓	✓	✓
4"	✓	✓	✓	✓	✓	✓	✓	✓
6"	✓	✓	✓	✓	✓	✓	✓	✓
8"	✓	✓	-	✓	✓	✓	✓	✓
10"	✓	✓	-	-	-	-	✓	✓
12"	✓	✓	-	-	-	-	✓	✓
14"	✓	✓	-	-	-	-	-	-
16"	✓	✓	-	-	-	-	-	-



PARTS & MATERIALS P8/P7 DESIGN

FULL/STANDARD PORT, SPLIT BODY



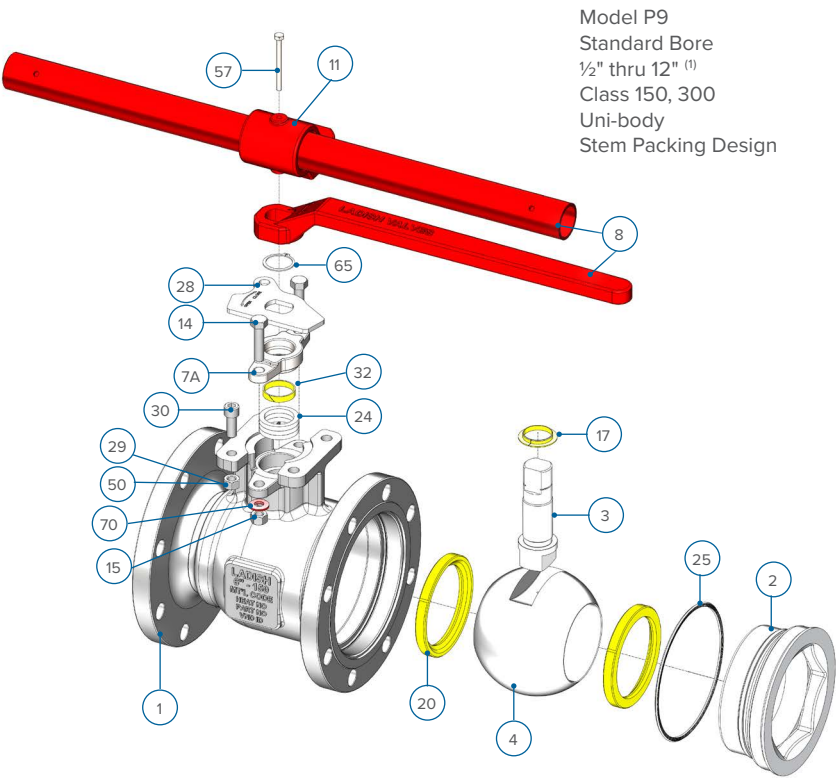
Item No.	Description	Material
1	Body	LCC LCB
2	Cap	LCC LCB
3	Stem	C-276
4	Ball	CW12-MW
7A	Gland Flange	WCB LCB
8	Handle	ASTM A47
8A	Stem Nut Locknut	STAINLESS STEEL
8B	Stem Nut Lockwasher	STAINLESS STEEL
11	Handle Adapter	ASTM A197
13	Body Stud	HASTELLOY C276
14	Gland Flange Bolt	HASTELLOY C276
15	Gland Flange Nut	HASTELLOY C276
17	Thrust Bearing	PTFE
20	Seat	TFM
24	Packing	GRAPHOIL/TFE
25	Gasket	SPW GRAPHOIL/TFE
26	Body Nut	HASTELLOY C276
28	Stop Plate	STAINLESS STEEL
28A	Stop Bracket	STAINLESS STEEL
29	Stop Nut	ASTM A194 GR8
30	Stop Bolt	ASTM A194 GR8
30A	Bracket Bolt	STAINLESS STEEL
32	Stem Bearing	GRAPHOIL/TFE
40	Name Plate (not shown)	STAINLESS STEEL
50	Stop Lock Washer	STAINLESS STEEL
57	Adapter Bolt	STEEL + ZINC
65	Snap Ring (stop plate)	STAINLESS STEEL
70	Spring Washer	INCONEL X-750

SPECIFICATIONS

G2 SERIES VALUE	STANDARD FEATURES
APPLICATION	RELIABLE ISOLATION & CONTROL OF EXTREMELY CORROSIVE LIQUIDS & GAS
STANDARDS	B16.5, B16.10, B16.34, API 598, API 608, API 607, CHLORINE INSTITUTE PAMPHLET #6
SIZE	1/2" - 16"
BODY MATERIAL	ASTM A352 LCB/LCC
TRIM	C276 BALL & STEM
TEMPERATURE RATING	Elastomers (-75 to 450°F) / Metal & Graphite (to 800°F)
PRESSURE RATING	PER ASME B16.34
PROCESS SEALING	BUBBLE TIGHT PER API 598, SELF RELIEVING SEATS, GAS TESTED
STEM SEALING	DUAL PACKING WITH LANTERN RING OPTION
CONNECTION TYPE	ASME 150#, 300#, 600# RAISED FACE FLANGE
EXTENDED CORROSION PROTECTION	PHOSPHATE/ZINC TREATMENT STANDARD; EPOXY PAINT AVAILABLE UPON REQUEST
FLOW DIRECTION	BI-DIRECTIONAL, UNI-DIRECTIONAL (VENTED BALL)

PARTS & MATERIALS P9 DESIGN

SHORT PATTERN, UNIBODY



Item No.	Description	Material	
1	Body	LCC	LCB
2	Cap	LCC	LCB
3	Stem	HASTELLOY C276	
4	Ball	CW-12MW	
7A	Gland Flange	LCC/ LCB	
8	Handle	ASTM A47	
11	Handle Adapter	ASTM A197	
14	Gland Flange Bolt	HASTELLOY C276	
15	Gland Flange Nut	HASTELLOY C276	
17	Thrust Bearing	TFM	
20	Seat	TFM	
24	Packing	GRAPHOIL/TFE	
25	Gasket	SPW GRAPHOIL/TFE	
28	Stop Plate	STAINLESS STEEL	
29	Stop Nut	ASTM A194 GR8	
30	Stop Bolt	ASTM A193 B8 CL1	
32	Stem Bearing	GRAPHOIL/TFE	
40	Name Plate (not shown)	STAINLESS STEEL	
50	Stop Lock Washer	STAINLESS STEEL	
57	Adapter Bolt	STEEL + ZINC	
65	Snap Ring (stop plate)	STAINLESS STEEL	
70	Spring Washer	INCONEL X-750	

- NOTES:**
1. Standard materials for chlorine service shown. Other materials readily available. See "How-to-Order" on pages 8-9 for listing of available options.
 2. Handle adapter used for class 150 & 300, 6" and above.



HOW TO ORDER

The Ladish Valves figure number is comprised of 20 alpha numeric digits defining the required product in detail. If you need assistance, give our knowledgeable sales staff a call at 281.880.8560 with the leading 4 digits and we can guide you through the rest. Our aim is to provide you with precisely what you need.

EXAMPLE:

P935-L72H-TF12-G10Q-BNP0 6", LCC/LCB, CF8M Ball Valve with C-276 Trim, Dual Packing, Fire Safe

VALVE STYLE	CONSTRUCT & VALVE TYPE	ANSI CLASS	END CONNECT	OPER.	BODY/CAP MATERIAL	TRIM	PACKING & GASKET
P	9	3	5	L	72	H	T
P - Packing	8 - Cast Two Piece Full Bore 7 - Cast Two Piece Standard Bore 9 - Cast Unibody Standard Bore 1 - Bar Stock Two-Piece Standard Bore 2 - Bar Stock Two-Piece Full Bore	1 - 150 3 - 300 6 - 600	5 - RF F - FF J - RTJ	A - Actuator B - Bare Stem G - Gear L - Lever V - Oval Handle	72 - Low Temp Carbon Steel 20 - Hast. C 30 - Monel 60 - Titanium 	0 - Same as Body 3 - 316SS A - Alloy 20 C - Inc 600 M - Monel H - Hast C OTHER MATERIALS AVAILABLE UPON REQUEST	D - Dual PTFE Graphoil G - Graphoil T - PTFE V - PTFE Vacuum Service W - Viton® B OTHER MATERIALS AVAILABLE UPON REQUEST

CAST MATERIALS OF CONSTRUCTION

71 A216 WCB/WCC	16 A351 CK3MCUN	26 A494 N7M	55 A995 CD3MN-GR4A
72 A352 LCC/LCB	17 A351 CN3MN	30 A494 M35-1	56 A995 CE3MN-GR5A
05 A351 CF8M	20 A494 CW12MW	33 A494 CY40	57 A995 CD3MWCUN-GR6A
10 A351 CG8M	21 A494 CW6M	34 A494 CW6MC	60 B367 GRC2
11 A351 CG3M	22 A494 CW2M	35 A351 CT15C	61 B367 GRC3
12 A351 CF8C	23 A494 CX2MW	36 A494 CU5MCuC	62 B367 GRC7
15 A351 CN7M	24 A494 CX2M	37 A494 CZ100	63 B752 GR702C
	25 A494 N12MV	52 A995 CD4M-CUN-GR1B	



SEAT MATERIAL	BOLTING & NUTS	MISC. OPTION	SIZE	DESIGN FIRE-SAFE NACE	OPTION CODES
F	12	G	10	Q	BNP0
C - Carbon Filled TFMC F - TFM G - Carbon Graphite K - Kel-F(PCTFE) N - Nylon Devlon® P - PEEK® R - Glass Filled TFM T - Virgin PTFE V - Vespel® X - HF Chrome Carbide Y - HF Chrome Oxide Z - HF Nickel Chrome	01 - B8CL1/8 02 - B8CL2/8 03 - B8MCL1/8M 04 - B8MCL2/8M 05 - B7/2H 06 - B7M/2HM 07 - ALLOY 20 08 - MONEL 400 09 - GR660 10 - L7/7 11 - INC 800 12 - HAST C 13 - B6/6 14 - B16/16 15 - K500 16 - A320 B8CL2/8 17 - B8CL2/8A 18 - B16/7 20 - L7M/7M	A - No Added Option B - Cleaned C - Cryogenic Bonnet, Vented Ball, Unidirectional D - Cryogenic Bonnet, Bi-Directional E - Extended Stem M - Acid Shield N - Cavity Filler V - Unidirectional (Vented Ball - Standard Bonnet)	05 - 1/2" 07 - 3/4" 10 - 1" 15 - 1-1/2" 20 - 2" 30 - 3" 40 - 4" 60 - 6" 80 - 8" 81 - 10" 82 - 12"	M - API 608 Fire Safe NACE N - API 608 Fire Safe Non-NACE P - API 608 Non-Fire Safe NACE Q - API 608 Non-Fire Safe Non-NACE	BWP0 - FE BONNET, LATTERN RING WITH MONITORING PORT BNP0 : FE BONNET, LATTERN RING WITHOUT MONITORING PORT BWPV - FE BONNET, LATTERN RING MONITORING PORT, VENTED BALL V000 : ONE DIRECTIONAL N000 : CAVITY FILLED S000 : SQUARE STEM

NOTES

NOTES

LADISH VALVES

CONTROLLED QUALITY • CORROSION RESISTANT



TO MARK PROGRESS

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