

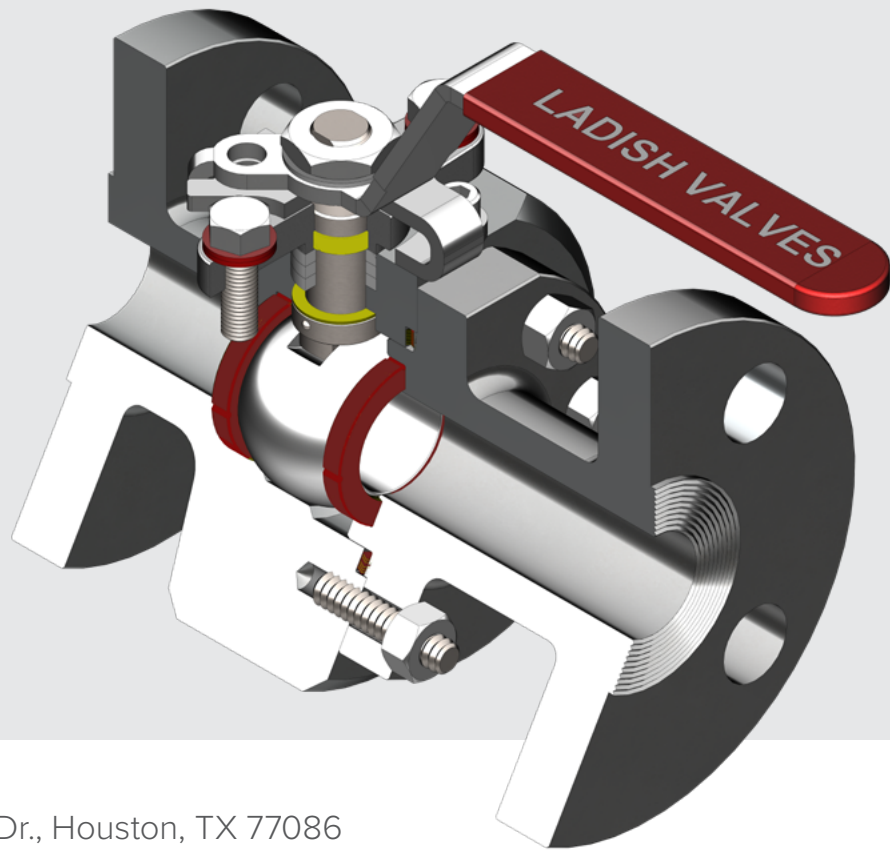


LADISH VALVES

CONTROLLED QUALITY • CORROSION RESISTANT

CATALOG 451

Bar Stock Floating Ball Valve



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🌐 [/ladish-valve-company-llc](https://www.ladish-valve-company-llc.com)

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LADISH MALT

LADISH MALT CO.
MILWAUKEE, WIS.

THERE IS
NO SUBSTITUTE
FOR FINE

Malt

EXTRA

1. HEAT CODE PROTECTION—Heat code protection is a feature of the Ladish Malt Co. which makes available certified malted barley for use in the production of specific grades of malt. The heat code is a feature of the malt which is a guarantee of its quality.
2. FUEL FLANGE THERMIST—The fuel flange thermist is a feature of the Ladish Malt Co. which makes available certified malted barley for use in the production of specific grades of malt. The fuel flange thermist is a feature of the malt which is a guarantee of its quality.

LADISH

QUALITY

FLOUR

LADISH

CORROSION RESISTANT

VALVES

VALVES
LOVE
ONE
EVE
STELLON
TANUM
LUNUM





TO MARK PROGRESS

LADISH VALVES

A Heritage Brand

Herman W. Ladish was born in Milwaukee, Wisconsin in 1880 and began his career in the bustling malting industry at the age of 16. Herman quickly established himself in the business, climbing the corporate ladder and assuming the role of superintendent at The American Malting Company. Ladish folklore has it that Herman's interest in metalworking was born from a problematic crankshaft that consistently halted production. Herman's search for an alternative manufacturing method led him to metal forging, and the birth of a metal working conglomerate of forgings, flanges, fittings and industrial valves was born.

Today, Ladish Valves is proud to have a history dating back to 1961 in Cynthiana, Kentucky. After experiencing a crippling flood of the Ohio River and several changes in ownership, Ladish Valves moved its headquarters to Houston in 2007.

With a foundation of more than 60 years of industrial valve production, Ladish Valves continues to be the industry benchmark for stainless steel and high nickel alloy industrial valves. The Ladish Valves trademark symbolizes a reputation that is emblematic of the highest quality standards, unmatched design and metalworking craftsmanship. Our history is important to us and we pay homage to it daily.

The Ladish Valves product line is specifically designed and manufactured to meet the stringent demands of the most corrosive service environments and high temperature applications. Our product is produced under rigorous metallurgical and manufacturing controls that assure a consistent, high degree of performance and dependability. The quality of the material we receive is critical to the quality of our product. With domestic source foundries and strictly monitored international vendors, Ladish Valves is relentless about the quality of materials sourced from its vendor community.

WHAT IT MEANS TO MARK PROGRESS

Ladish Valves is a responsive company that prides itself in being "local" with an exhaustive commitment to our customers and our product.

This means that no matter where you are, our team in Houston will provide a customized, clear response in a timely manner.

We pride ourselves in serving our customers and taking on the challenges of unconventional projects.

LADISH COMPLETE LINE OF PRODUCTS

Manufactured to the Ultimate in Quality Standards

GATE • GLOBE • CHECK
BALL • PRESSURE SEAL
BELLOW SEAL • CRYOGENIC

CAST • FORGED
BAR STOCK

THREADED ENDS
SOCKET ENDS
FLANGED ENDS
BUTTWELD ENDS
FLAT FACE ENDS

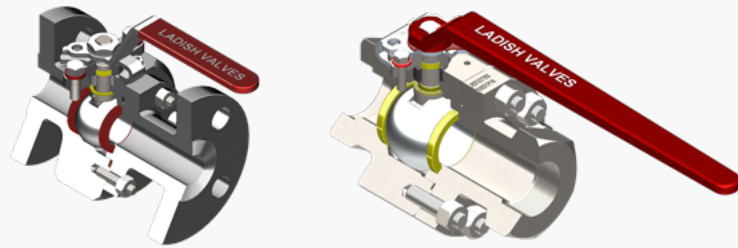
RISING HANDWHEEL
NON-RISING HANDWHEEL

SOLID WEDGE DISC
FLEX WEDGE DISC
SPLIT WEDGE DISC
PLUG DISC
TEFLON DISC

½"–36"
CL150 — CL2500

CARBON STEEL
STAINLESS STEEL
ALLOY 20 • DUPLEX
HIGH NICKEL ALLOY
TITANIUM • ZIRCONIUM

CATALOG 451 BAR STOCK FLOATING BALL VALVE



BAR STOCK, TWO-PIECE
FULL/STANDARD BORE
PACKING STEM DESIGN

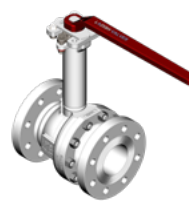
ALSO AVAILABLE



FORGED STEEL
CATALOG 221



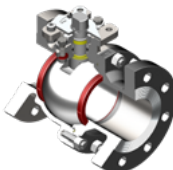
CAST STEEL
CATALOG 821



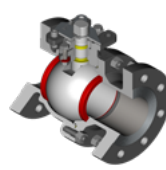
CRYOGENIC
CATALOG 321



HIGH PRESSURE
CATALOG 231



FLANGED FLOATING
BALL VALVES
CATALOG 421



PF SERIES
BALL VALVES
CATALOG 401



METAL & GRAPHITE
SEATED BALL VALVES
CATALOG 411

LADISH SERVICES WHY WE'RE DIFFERENT

One-stop Manufacturing, Controlled Quality.

Ladish Valves is a premier manufacturer of multi-turn and quarter-turn valves. Our valves are widely used in the chemical and petrochemical markets, spanning from upstream extraction through midstream transportation and downstream processing. Ladish has a long history of supplying products to these markets, in addition to the power and pulp & paper industries.

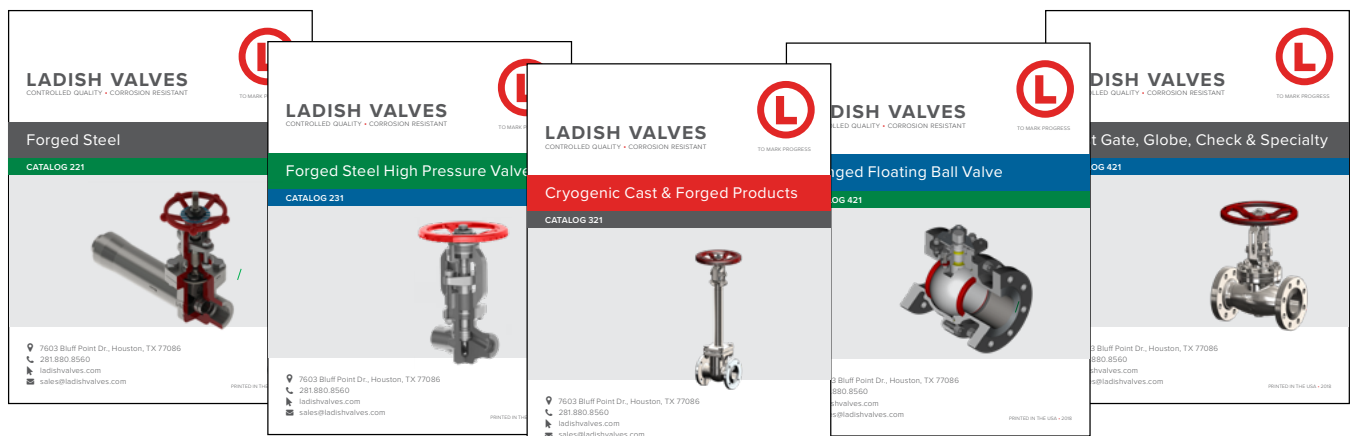
Ladish has a full complement of value-added services to address the many challenges that often delay projects. Our team specializes in quick turnaround deliveries—even on challenging orders—with the confidence of controlled quality through in-house design and manufacturing.

We're a Step Above the Competition. Here's Why.

Ladish is local. Our manufacturing facility is located in Houston, giving us the flexibility to design, machine, assemble, test, verify and expedite our customers' orders—setting us apart from everyone else. Our other differentiators include:

- One of the largest (stocked) stainless and exotic alloy inventories in the U.S.
- In-house machining: Cryo extensions, end connections, modifications, etc.
- Same-day deliveries available
- Custom valve solutions using Ladish engineering & design teams
- Fully compliant clean room (oxygen, chlorine, hydrogen peroxide and others)
- Extensive in-house NDE capabilities

Ladish Product Line Catalogs



CATALOG 221

CATALOG 231

CATALOG 321

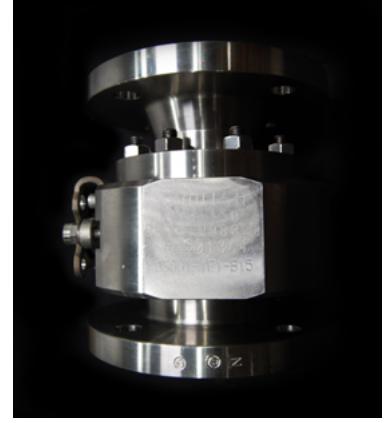
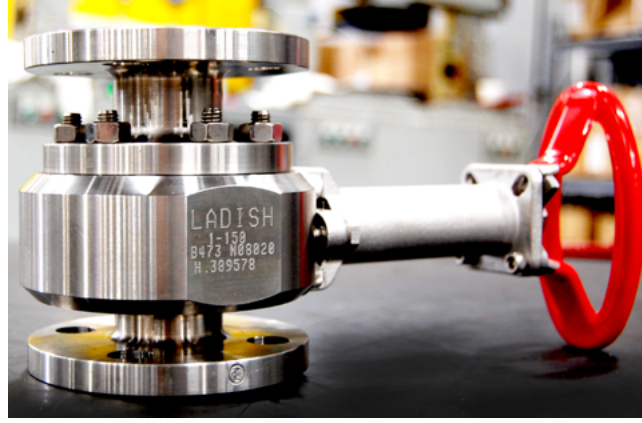
CATALOG 421

CATALOG 821

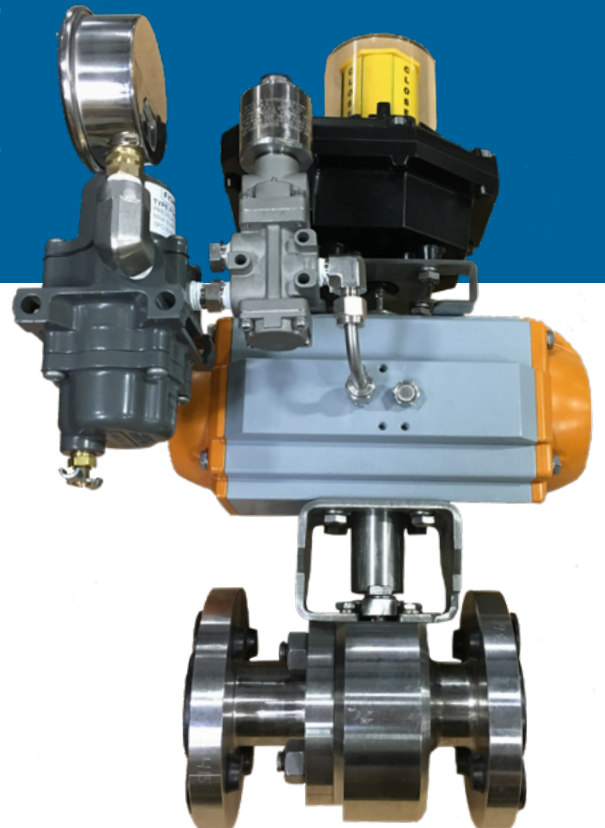
BAR STOCK FLOATING BALL VALVE

Oil & Gas, Petrochemical & Chemical Markets

Catalog 451 highlights the Ladish product offering for bar stock floating ball valves. With in-house engineering and a fully integrated machine shop right here in Houston, TX, Ladish can manufacture valves with short lead times to satisfy customer requirements.



Ladish has an extensive inventory of nickel alloy bar ready to machine for quick deliveries or for customers that require forged bar stock valves. Ladish has a long history of designing and manufacturing bar stock ball valves in special materials such as titanium, zirconium, hastelloy, alloy 20, nickel and inconel.



LADISH VALVES



Solution: Ladish

MISSION

Customer requires specialty valve with expedited delivery.

PROBLEM

Standard supplier cannot deliver valve required by the customer.

SOLUTION

Ladish has the design capabilities and machining and testing capacity to help get your customer the valve they need in the time required. We interact with our customers & end users to understand the application & to deliver quality valves with an on-time delivery.

LADISH STANDARD PRODUCT OFFERING FOR BAR STOCK FLOATING BALL VALVES

Don't see the design you are looking for?

Call us and let us develop a solution that helps meet the needs of your customer!

Product Range: Bar Stock Flanged Floating Ball Valves

CLASS	MODEL	SEAL	BODY	BORE	ENDS	½"	¾"	1"	1 ½"	2"	3"	4"	6"
150	P2	PACKING	2 PIECE BAR-STOCK	FULL	RF								
300	P1/P2	PACKING	2 PIECE BAR-STOCK	FULL AND STANDARD	RF								
600	P1/P2	PACKING	2 PIECE BAR-STOCK	FULL AND STANDARD	RF								

Product Range: Bar Stock Threaded Floating Ball Valves

CLASS	MODEL	SEAL	BODY	BORE	ENDS	½"	¾"	1"	1 ½"	2"
150	P2	PACKING	2 PIECE BAR-STOCK	FULL	THD/SWE/BWE					
300	P1/P2	PACKING	2 PIECE BAR-STOCK	FULL AND STANDARD	THD/SWE/BWE					
600	P1/P2	PACKING	2 PIECE BAR-STOCK	FULL AND STANDARD	THD/SWE/BWE					
1500 WOG	P1/P2	PACKING	2 PIECE BAR-STOCK	FULL AND STANDARD	THD/SWE/BWE					
2000 WOG	P1/P2	PACKING	2 PIECE BAR-STOCK	FULL AND STANDARD	THD/SWE/BWE					
4000 WOG	P1/P2	PACKING	3 PIECE BAR-STOCK	FULL AND STANDARD	THD/SWE/BWE					

= Long Pattern = Short Pattern = Long/Short Pattern

Ladish Bar Stock Floating Ball Valve

EXAMPLE:

[illegible]

01	A479 304	15	B473 N08020	36	B425 N08825	H0	A105
05	A479 316	20	B574 N10276	52	A479 S32550	J1	A182 F11 CL2
06	A479 316L	30	B164 N04400	55	A479 S31803	J2	A182 F22 CL3
11	A182 F317L	33	B166 N06600	56	A479 S32750	J5	A182 F5
12	A479 347	34	B446 N06625	57	A479 S32760	J9	A182 F9

CONTROLLED QUALITY • CORROSION RESISTANT



SEAT	BOLTING & NUTS	MISC. OPTION	SIZE	DESIGN FIRE-SAFE NACE
R	02	A	30	N
C - Carbon Filled TFMC D - Delrin® E - TFMC-HT (HIGH TEMP) F - VIRGIN TFM M - HF Chrome Carbide (Ball / Seat) N - Nylon Devlon® P - PEEK® V - Vespel® R - Glass Filled PTFE T - Virgin PTFE K - Kel-F(PCTFE) G - Carbon Graphite U - HF HARD CHROME (BALL/ SEAT) W - HF TUNGSTEN CARBIDE (BALL/SEAT) X - HF CHROME CARBIDE (BALL/SEAT) Y - HF CHROME OXIDE (BALL/ SEAT) Z - HF NICKEL CHROME (BALL/ SEAT)	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 – N/A B – Cleaned C – Cryogenic (Vented Ball) D – Cryogenic (Non-Vented Ball) E – Extended Handle H - Fugitive Emission Extended Bonnet Lantern Ring (Chlorine Clean) V – Unidirectional (Vented Ball) W – Chain Wheel Operated	05 – ½" 07 – ¾" 10 – 1" 15 – 1½" 20 – 2" 30 – 3" 40 – 4" 60 – 6"	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

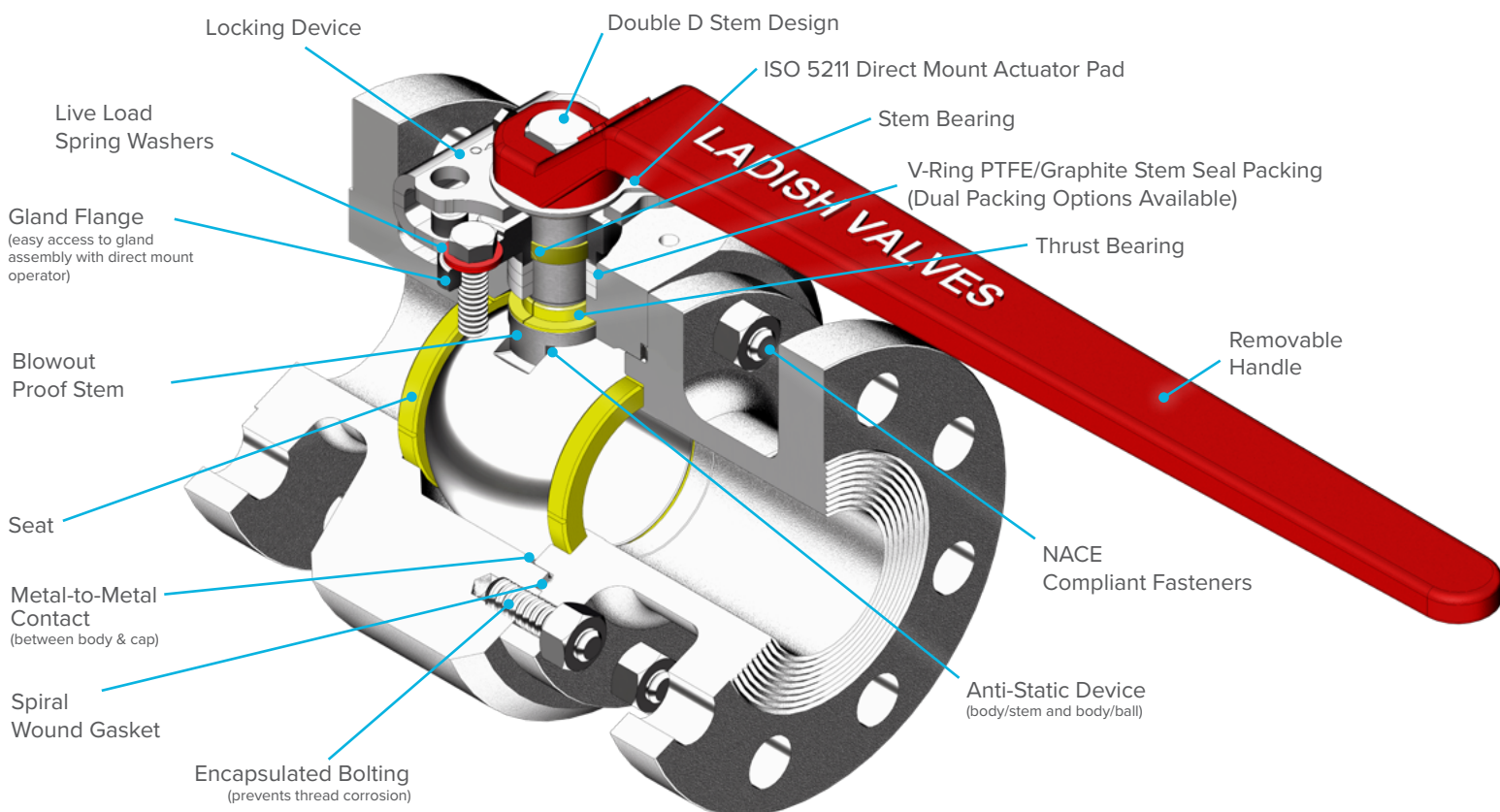
STANDARD FEATURES

Model P2 Full Bore & Model P1 Standard Bore, Two-Piece, Stem Packing API 608

Material of Construction: Bar-Stock

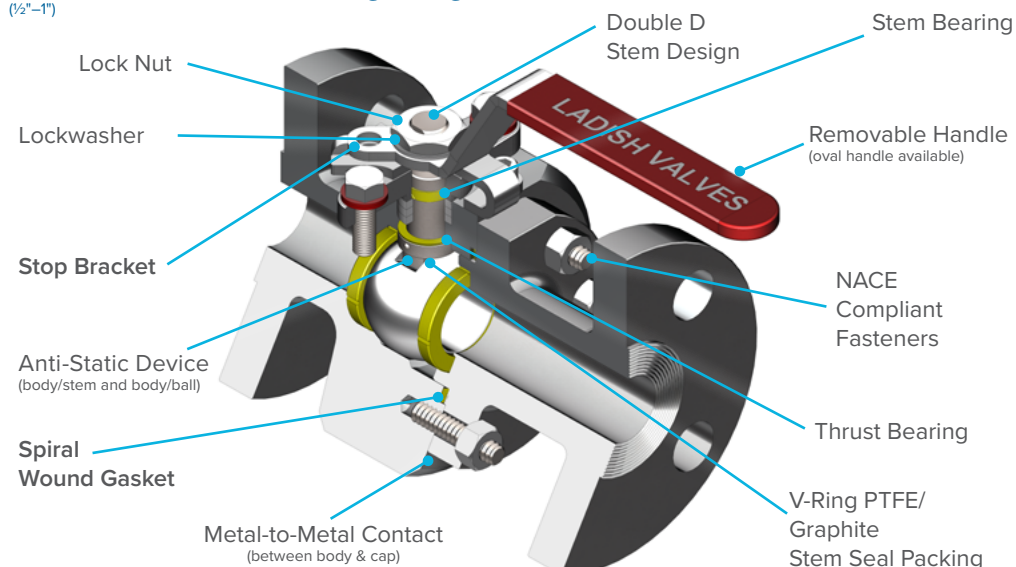
Model P1 & P2 Stem Packing Design

(1½"–4")



Model P1 & P2 Stem Packing Design

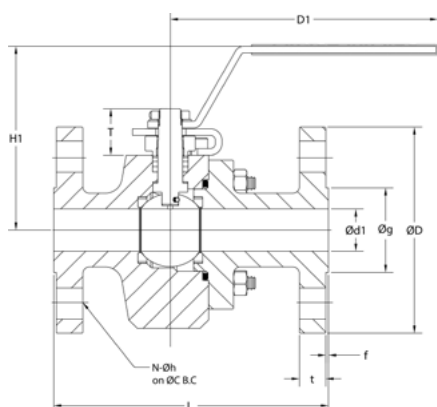
(½"–1")



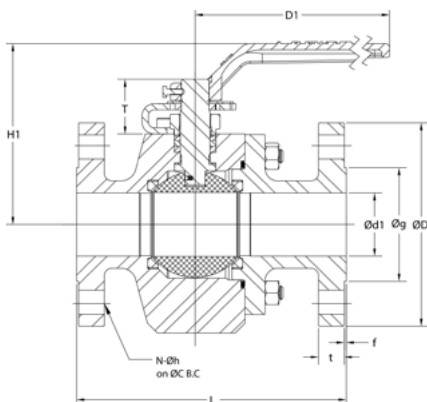
DIMENSIONAL DATA

Model P2 Full Bore, Two-Piece, Stem Packing API 608

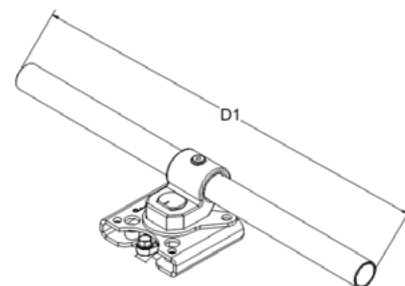
Material of Construction: Bar-Stock



1/2"–1" Model P2 Full Bore, Two Piece
Pressure Classes 150, 300 & 600



1 1/2"–4" Model P2 Full Bore, Two Piece
Pressure Classes 150, 300 & 600



6" Handle configuration for 6" and
above. Model P2, Full Bore, Two Piece
Pressure Classes 150, 300

150	Model P2, Class 150, 1/2"–6"											Weight LBS
	Ød1	L	D1	H1	ØD	ØC	Øg	t	f	N	Øh	
1/2"	0.50	4.25	4.97	3.42	3.54	2.38	1.38	0.31	0.06	4	0.63	6
3/4"	0.75	4.61	4.97	3.56	3.90	2.75	1.69	0.34	0.06	4	0.63	9
1"	1.00	5.00	6.32	4.39	4.25	3.12	2.00	0.38	0.06	4	0.63	13
1 1/2"	1.50	6.50	10.00	5.23	5.00	3.88	2.88	0.56	0.06	4	0.63	30
2"	2.00	7.01	16.54	6.13	6.06	4.75	3.62	0.62	0.06	4	0.75	40
3"	3.00	8.00	19.69	7.66	7.50	6.00	5.00	0.69	0.06	4	0.75	78
4"	4.00	9.02	19.69	8.76	9.00	7.50	6.19	0.88	0.06	8	0.75	133
6"	6	15.5	29.53	12.122	11	9.5	8.5	1	0.06	8	0.88	370

300	Model P2, Class 300, 1/2"–6"											Weight LBS
	Ød1	L	D1	H1	ØD	ØC	Øg	t	f	N	Øh	
1/2"	0.50	5.51	4.97	3.45	3.78	2.63	1.38	0.50	0.06	4	0.63	10
3/4"	0.75	5.98	4.97	3.56	4.65	3.25	1.69	0.56	0.06	4	0.75	16
1"	1.00	6.50	6.32	4.39	4.88	3.50	2.00	0.63	0.06	4	0.75	21
1 1/2"	1.50	7.48	10.00	5.01	6.12	4.50	2.88	0.81	0.06	4	0.88	38
2"	2.00	8.50	16.54	5.82	6.50	5.00	3.62	0.87	0.06	8	0.75	58
3"	3.00	11.13	19.69	7.66	8.25	6.62	5.00	1.06	0.06	8	0.88	112
4"	4.00	12.01	19.69	8.76	10.00	7.88	6.19	1.19	0.06	8	0.88	196
6"	6	15.88	29.53	12.123	12/5	10.62	8.5	1.38	0.06	12	0.88	425

600	Model P2, Class 600, 1/2"–4"											Weight LBS
	Ød1	L	D1	H1	ØD	ØC	Øg	t	f	N	Øh	
1/2"	0.50	6.50	4.97	3.42	3.78	2.63	1.38	0.62	0.25	4	0.63	11
3/4"	0.75	7.48	4.97	3.67	4.65	3.25	1.69	0.68	0.25	4	0.75	16
1"	1.00	8.50	6.32	4.39	4.88	3.50	2.00	0.69	0.25	4	0.75	25
1 1/2"	1.50	9.49	10.00	5.22	6.12	4.50	2.88	0.94	0.25	4	0.88	47
2"	2.00	11.49	16.54	5.82	6.50	5.00	3.62	1.06	0.25	8	0.75	65
3"	3.00	14.00	19.69	6.84	8.25	6.62	5.00	1.25	0.25	8	0.88	143
4"	4.00	17.01	59.06	11.16	10.75	8.50	6.19	1.50	0.25	8	1.00	282

*NOTE: Dimensions for P1 Standard Bore available upon request

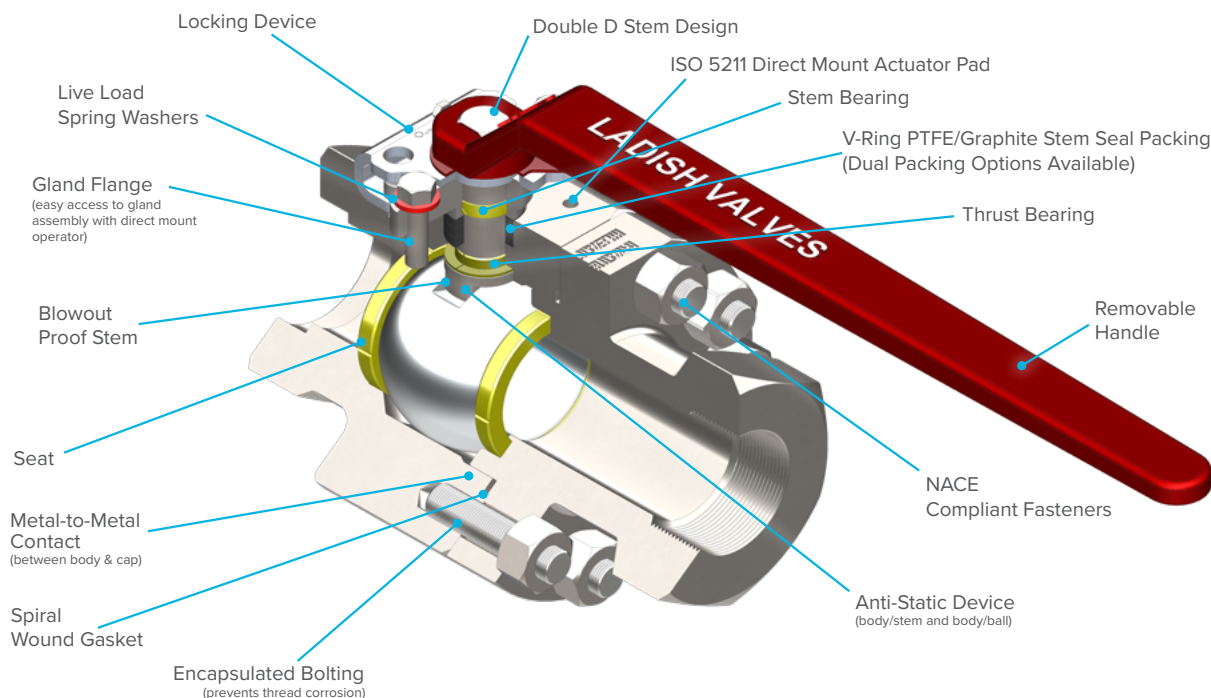
STANDARD FEATURES

Model P2 Full Bore & Model P1 Standard Bore, Two-Piece, Stem Packing API 608

Material of Construction: Bar-Stock

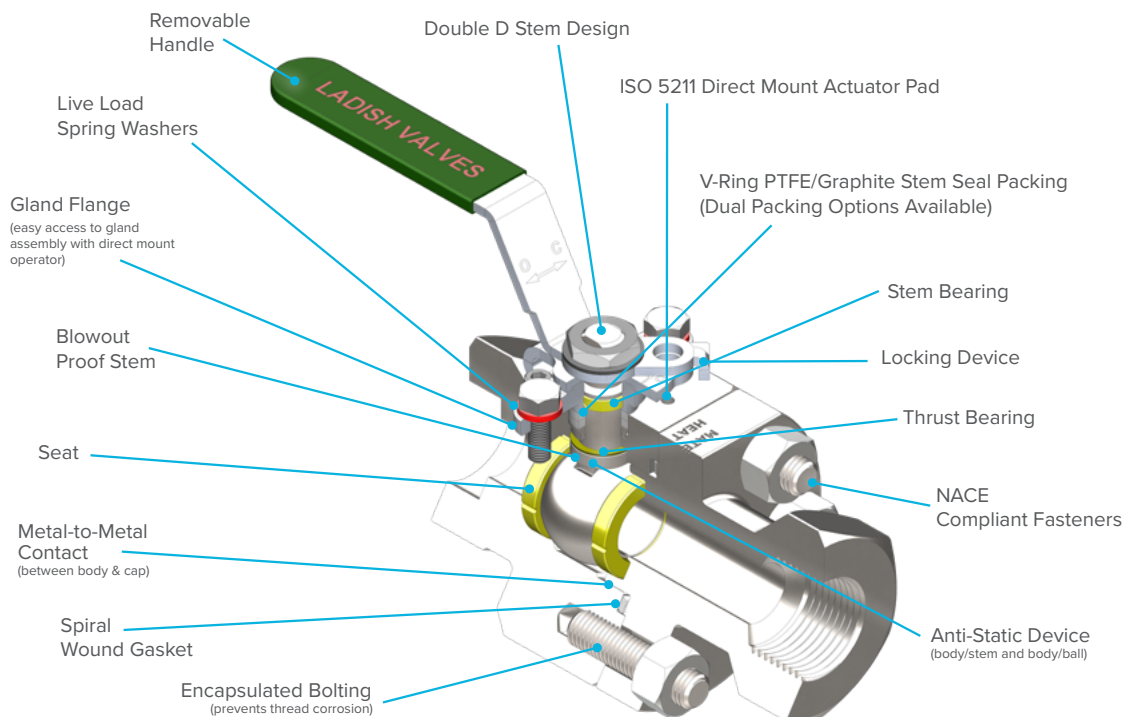
Model P1 & P2 Stem Packing Design

(1½"–4")



Model P1 & P2 Stem Packing Design

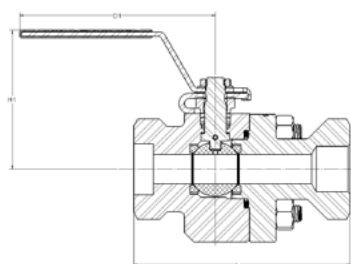
(½"–1")



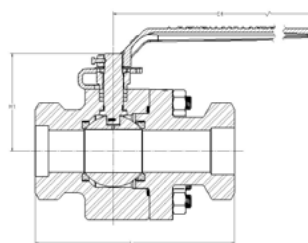
DIMENSIONAL DATA

Model P2 Full Bore, Two-Piece, Stem Packing API 608

Material of Construction: Bar-Stock



1/2"–1" Model P2
Full Bore, Two-Piece
Pressure Classes 150,
300 & 600



1 1/2"–2" Model P2
Full Bore, Two-Piece
Pressure Classes 150,
300 & 600

150	Model P2, Class 150			Weight LBS
	L	D1	H1	
1/2"	4.75	4.91	3.42	7
3/4"	5.50	4.97	3.53	8
1"	6.25	6.26	4.39	14
1 1/2"	8.25	10.00	5.01	34
2"	9.50	16.45	5.82	48

300	Model P2, Class 300			Weight LBS
	L	D1	H1	
1/2"	4.75	4.91	3.42	7
3/4"	5.50	4.97	3.53	8
1"	6.25	6.26	4.39	14
1 1/2"	8.25	10.00	5.01	34
2"	9.50	16.45	5.82	48

600	Model P2, Class 600 - 1000 WOG - 1500 WOG			Weight LBS
	L	D1	H1	
1/2"	4.75	4.91	3.42	7
3/4"	5.50	4.97	3.53	8
1"	6.25	6.26	4.39	14
1 1/2"	8.25	10.00	5.01	34
2"	9.50	16.45	5.82	48

2000 WOG	Model P2, 2000 WOG			Weight LBS
	L	D1	H1	
1/2"	5.50	7.50	3.54	6.93
3/4"	5.50	7.50	3.78	10.40
1"	6.25	9.00	4.39	15.40
1 1/2"	8.25	10.00	5.01	34.57
2"	9.50	16.45	5.81	55.80

4000 WOG	Model P2, 4000 WOG			Weight LBS
	L	D1	H1	
1/2"	6.50	7.50	4.27	16.10
3/4"	6.75	9.00	4.73	21.48
1"	10.00	5.00	9.00	44.00
1 1/2"	10.50	16.53	5.69	57.50
2"	12.50	19.68	7.58	113.30

*NOTE: Dimensions for P1 Standard Bore available upon request

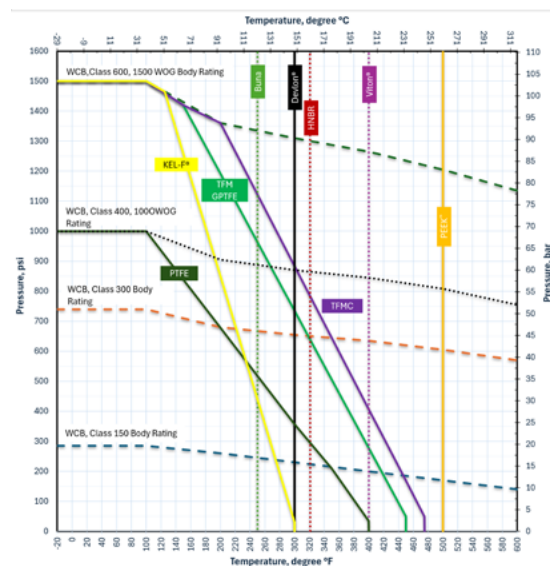
PRESSURE & TEMPERATURE RATINGS

The pressure temperature ratings for the Ladish Valves ball valve product line are determined by a combination of the body, seal and seating material. The charts below serve as representative of our most common seat materials. For ratings on other materials, please contact a Ladish team member.

Class 150/300/600/1000WOG/1500WOG

1/2" – 1 1/2", Full port, Valve Series: P2

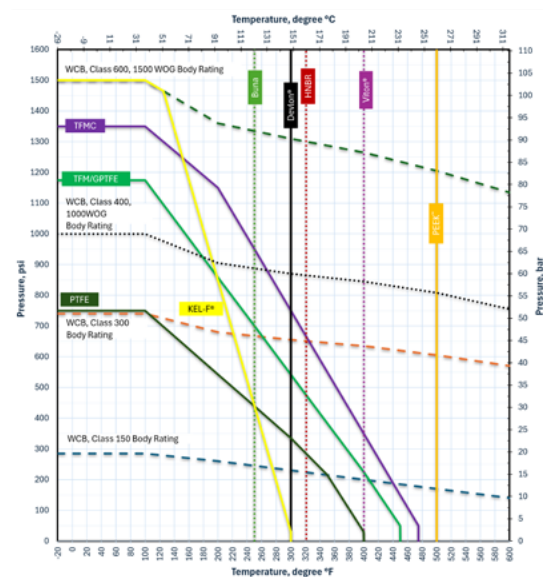
3/4" – 2", Reduced port, Valve Series: P1



Class 150/300/600/1000WOG/1500WOG

2", Full port, Valve Series: P2

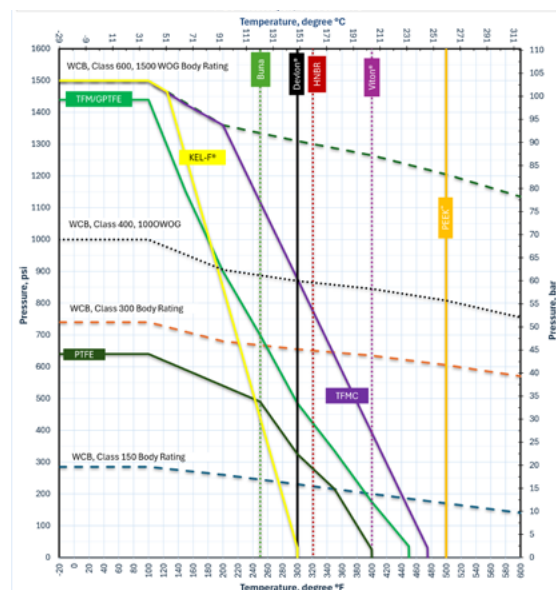
3", Reduced port, Valve Series: P1



Class 150/300/600/1000WOG/1500WOG

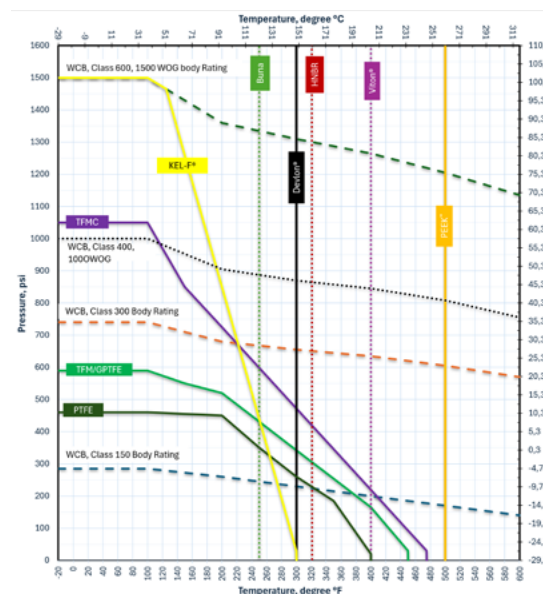
2 1/2", 3", and 4" Full port, Valve Series: P2

4" & 6" Reduced port, Valve Series: P1



Class 150/300/1000WOG

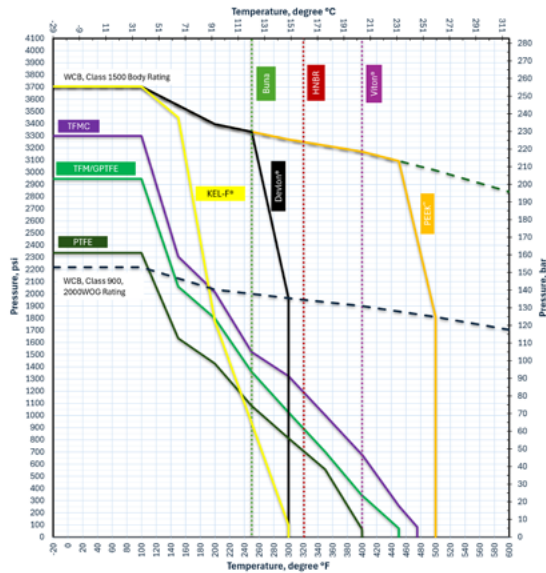
6", Full port, Valve Series: P2



Class 800/900, 2000WOG and Class 1500/4000WOG

½", Full port, Valve Series: P2

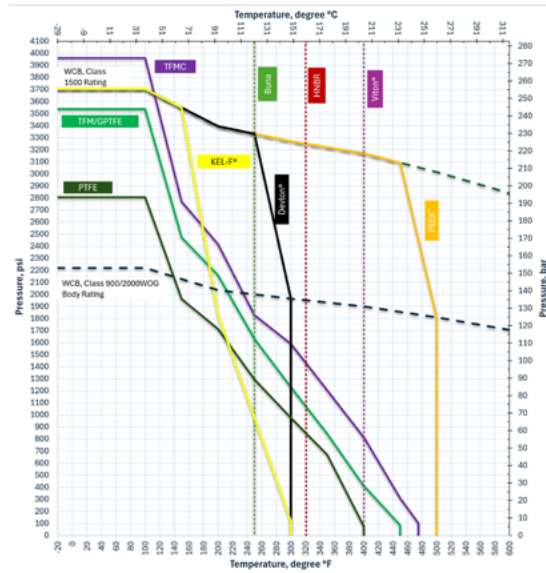
½" & ¾", Reduced port, Valve Series: P1



Class 800/900, 2000WOG and Class 1500/4000WOG

¾" & 1", Full port, Valve Series: P2

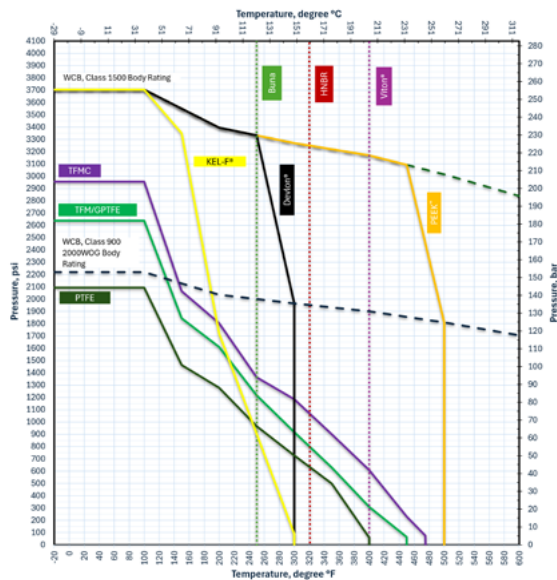
1" & 1½", Reduced port, Valve Series: P1



Class 800/900, 2000WOG and Class 1500/4000WOG

2", Full port, Valve Series: P2

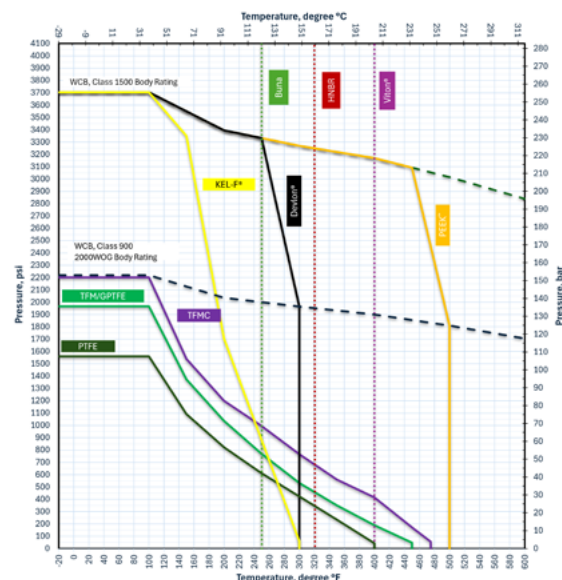
3", Reduced port, Valve Series: P1



Class 800/900, 2000WOG and Class 1500/4000WOG

1½", Full port, Valve Series: P2

2", Reduced port, Valve Series: P1



Notes:

- The body ratings shown are for A216 WCB. For other shell materials, refer to the latest edition of ASME B16.34
- The body pressure rating of the valve at service temperatures below -20°F (-29°C) shall not exceed the ASME B16.34 pressure rating at -20°F (-29°C)
- The seat and seal pressure ratings of the valve at service temperatures below -20°F (-29°C) shall not exceed the above pressure rating at -20°F (-29°C).

TFM -328°F	PTFE -328°F	KEL-F -418°F	PEEK® -148°F	HNBR -13°F
TFMC -328°F	GPTE -328°F	Devlon® -50°F	BUNA -30°F	VITON® -15°F

For -320°F (-196°C) service, recommend to use KEL-F® for seats

- Note: Valve series is the first two digits or letters of valve figure number.

IN-HOUSE ENGINEERING CAPABILITIES

All Ladish Flanged Floating Ball Valves are designed by Ladish engineers located in Houston. In addition to ball valve designs, Ladish builds and performs all required testing per API specifications. This includes seat capacity ratings, lifecycle testing and all fire testing as required by API 607.

ADVANCED ENGINEERING TOOLS

- 3D Solid Modeling
- Finite Analysis (FEA)
- Flow Simulation Analysis

RAPID PROTOTYPING OF NEW DESIGNS

- Compare design alternatives to meet customer demands and requirements

ACTIVE IN API AND MSS

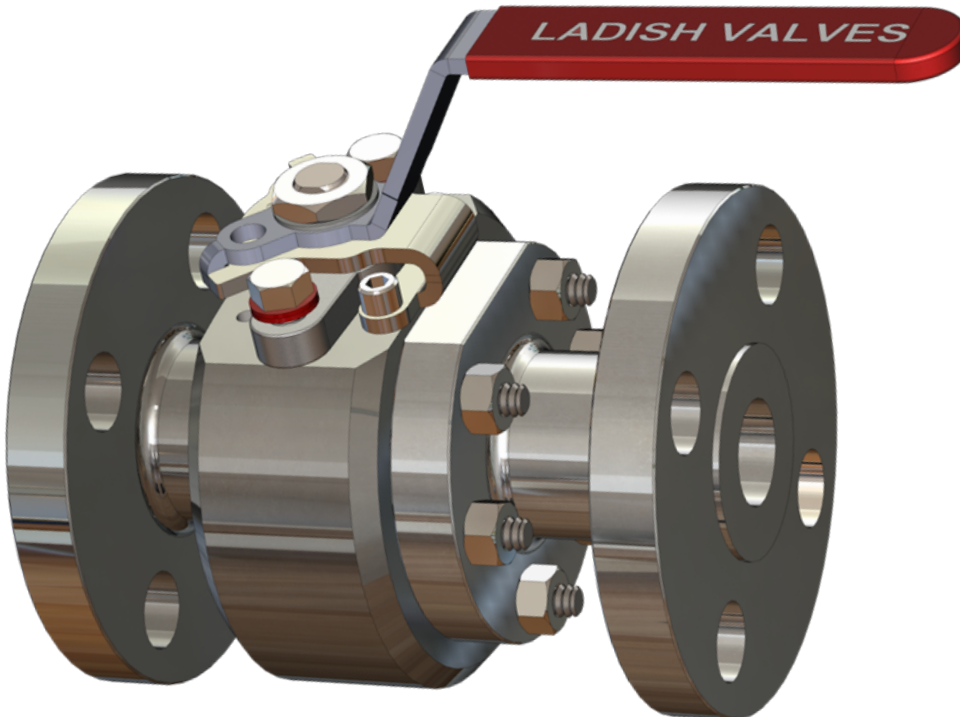
- Provides Ladish up-to-date access to the latest standard changes

CONTINUOUS INTERACTION WITH FOUNDRY VENDORS

- Communication enables quick execution of new pattern/tool changes
- Ensures the quality of the Ladish product from our foundry vendors
- Casting simulation software provides product verification and casting quality

SPECIALTY BALL VALVES

- Ladish ball valve design also offered in metal and graphite seats





LADISH VALVES

CONTROLLED QUALITY • CORROSION RESISTANT

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