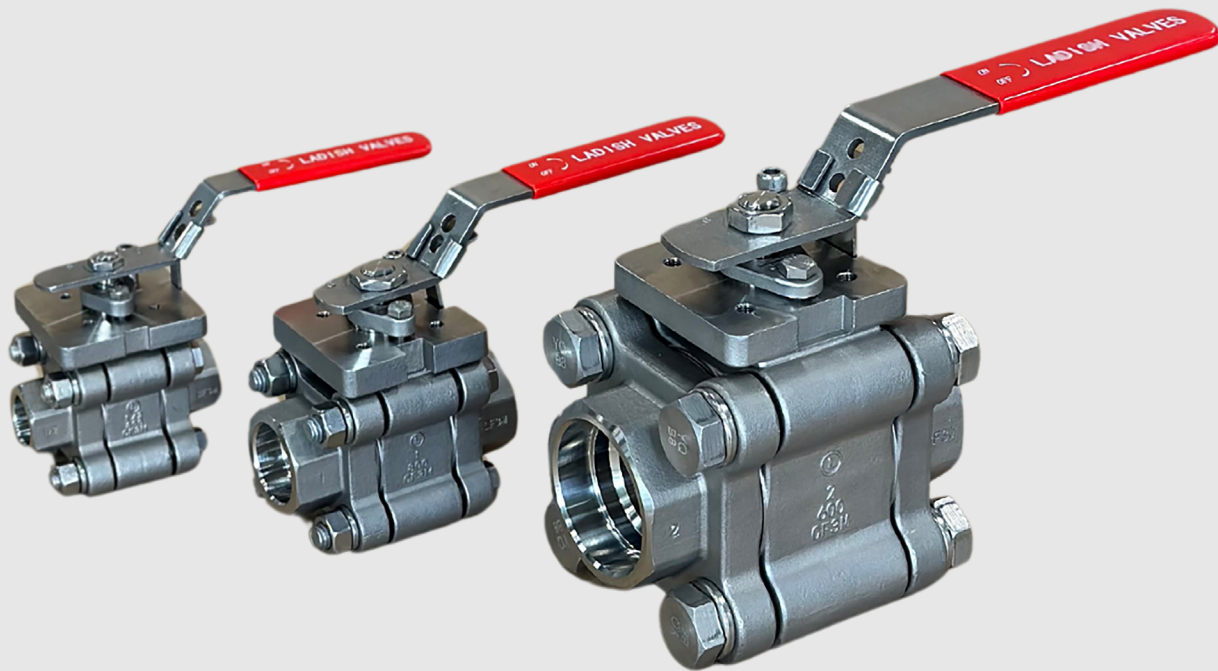


Catalog 471

API 608 / ASME B16.34 CAST 3PC BALL VALVES

Threaded & Socketweld Floating Ball Valves



**LADISH
VALVES**



CONTENTS

03

Overview & Options

05

Item Descriptions - Standard 3-PC

06 - 07

Dimensional Data:
CL600 - CL800

08 - 09

Item Descriptions & Dimensions - Ext. Handle

10 - 11

Item Descriptions & Dimensions - Cryogenic Extention

12 - 13

How to Order

14

Cv Value & Pressure-Temperature Data

15

Top Works - Standard Valve

16

Top Works - Ext. Handle

17

Top Works - Cryogenic

Cast Three-Piece Valves Overview

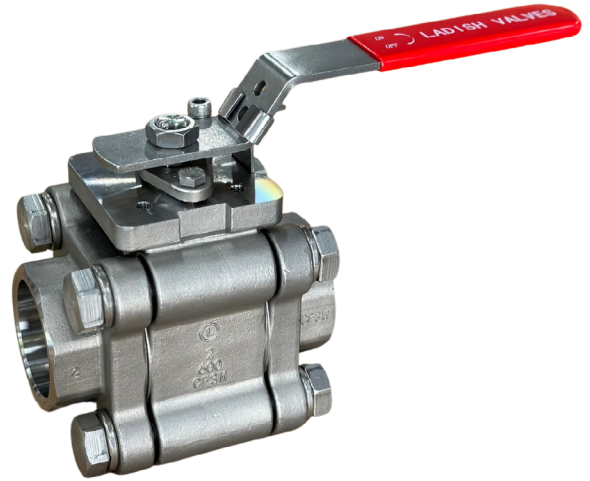
Full Port • Threaded or Sockweld Ends • CL600 & 800

Features & Benefits

- Built-in ISO 5211 Mounting Pad for Easy Automation
- API 641 / ISO 15848 Fugitive Emissions
- API 607 Compliance
- Bi-directional Seating
- Anti-static devices
- Blow-out proof stem
- Customized End Connections
- Self-Relieving Seats

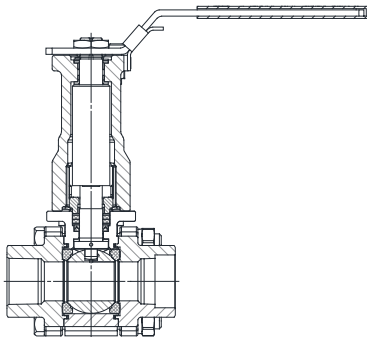
Applicable Standards

- Design Standard: B16.34 / API 608
- Inspection & Testing: API 598
- Socketweld/Threaded Ends: ASME B16.11/B1.20.1

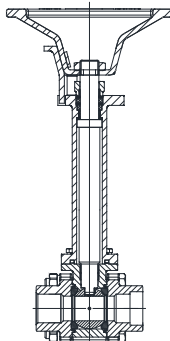


Valve Options

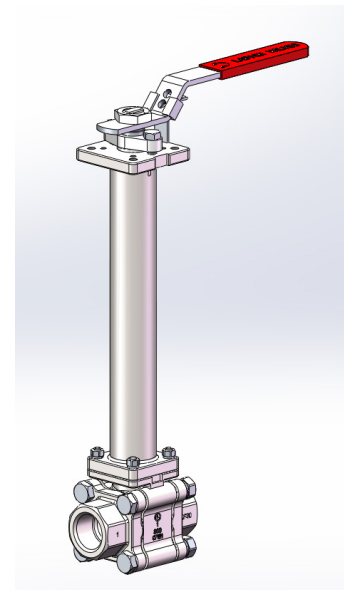
- Optional Extended Handle
- Optional Cryogenic Extension
- Oval & Lever Handles Available on all options



Extended Handle



Cryogenic Extension

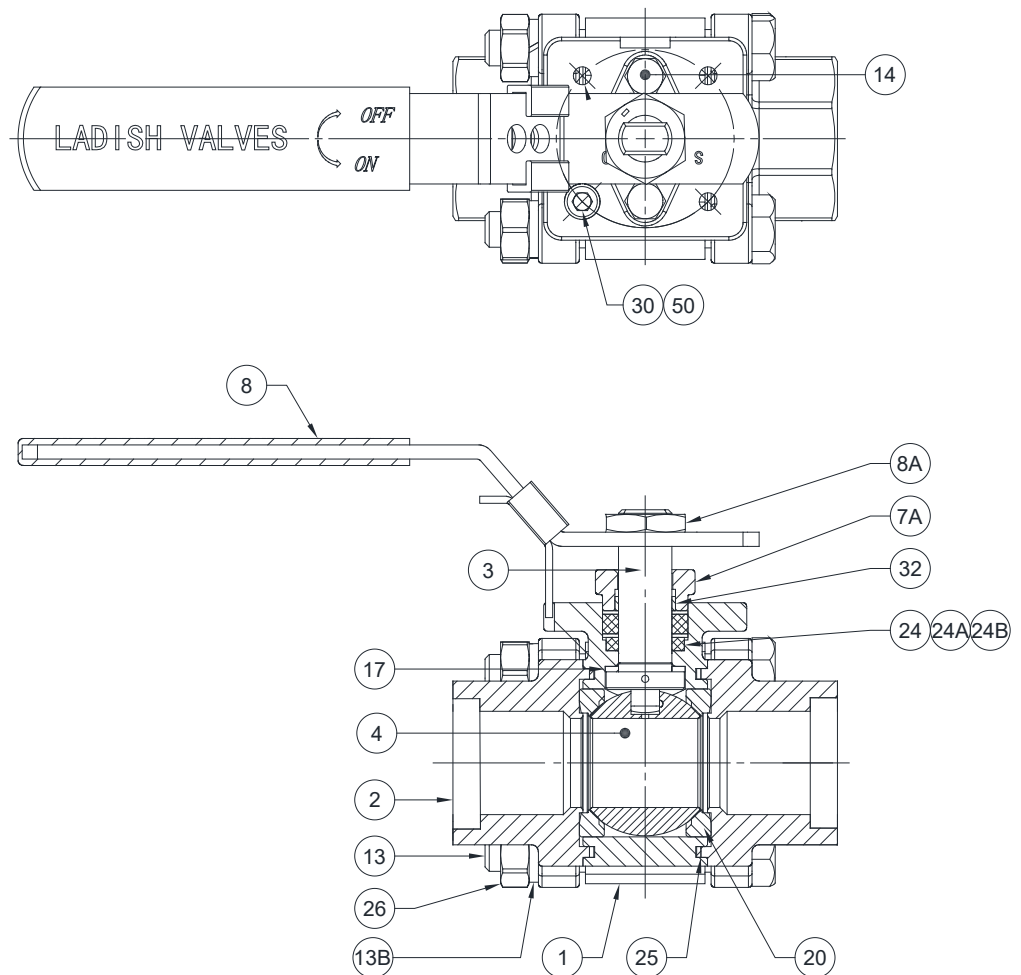






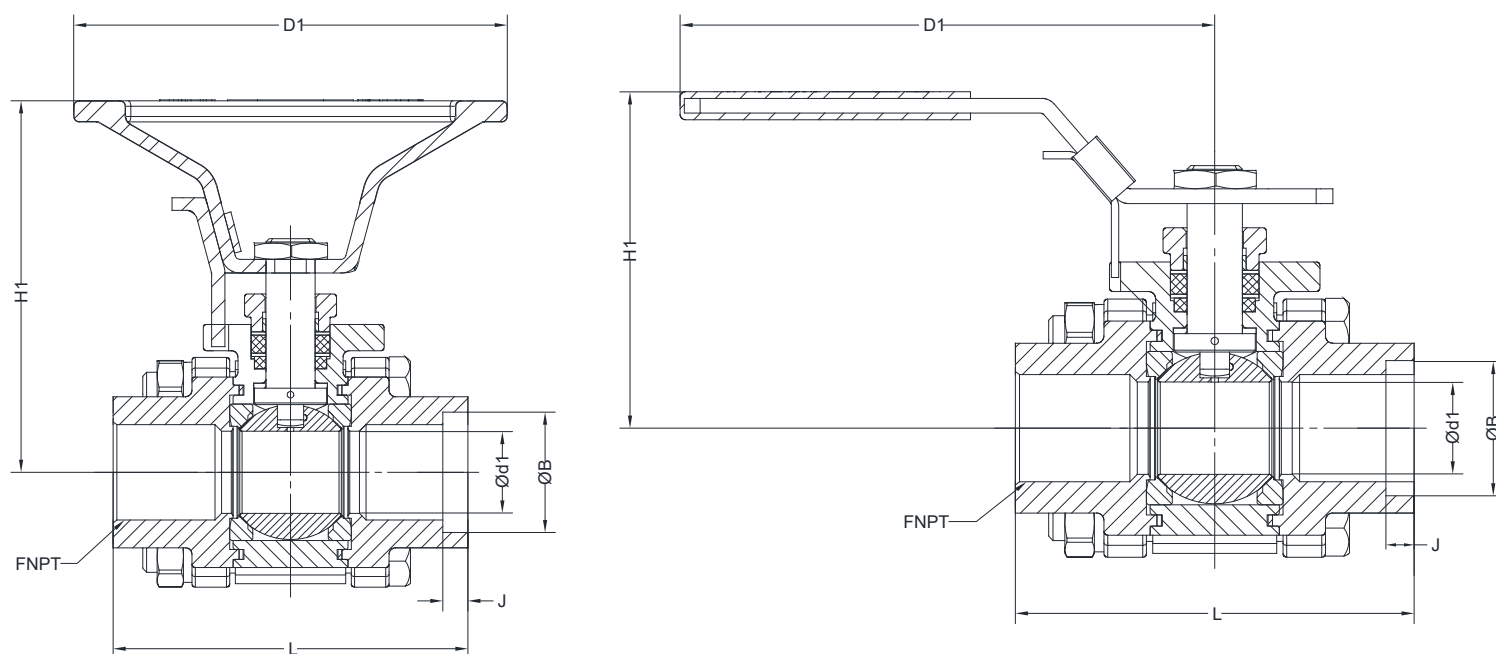
Standard 3PC - Item Description

Item No.	Description
1	BODY
2	CAP
3	STEM
4	BALL
7A	GLAND FLANGE
8	LEVER HANDLE
8A	HANDLE NUT
13	BODY BOLT
13B	LOCK WASHER
14	GLAND BOLT
17	THRUST BEARING
20	SEAT
24	PRIMARY PACKING
24A	SECONDARY PACKING
24B	PACKING SPACER
25	BODY GASKET
26	BODY NUT
30	STOP BOLT
32	STEM BEARING
50	STOP WRS



DIMENSIONAL DATA | CL800

Full Port • Threaded or Sockweld Ends: 1/2" - 1" • Meets requirements of CL150/300/600



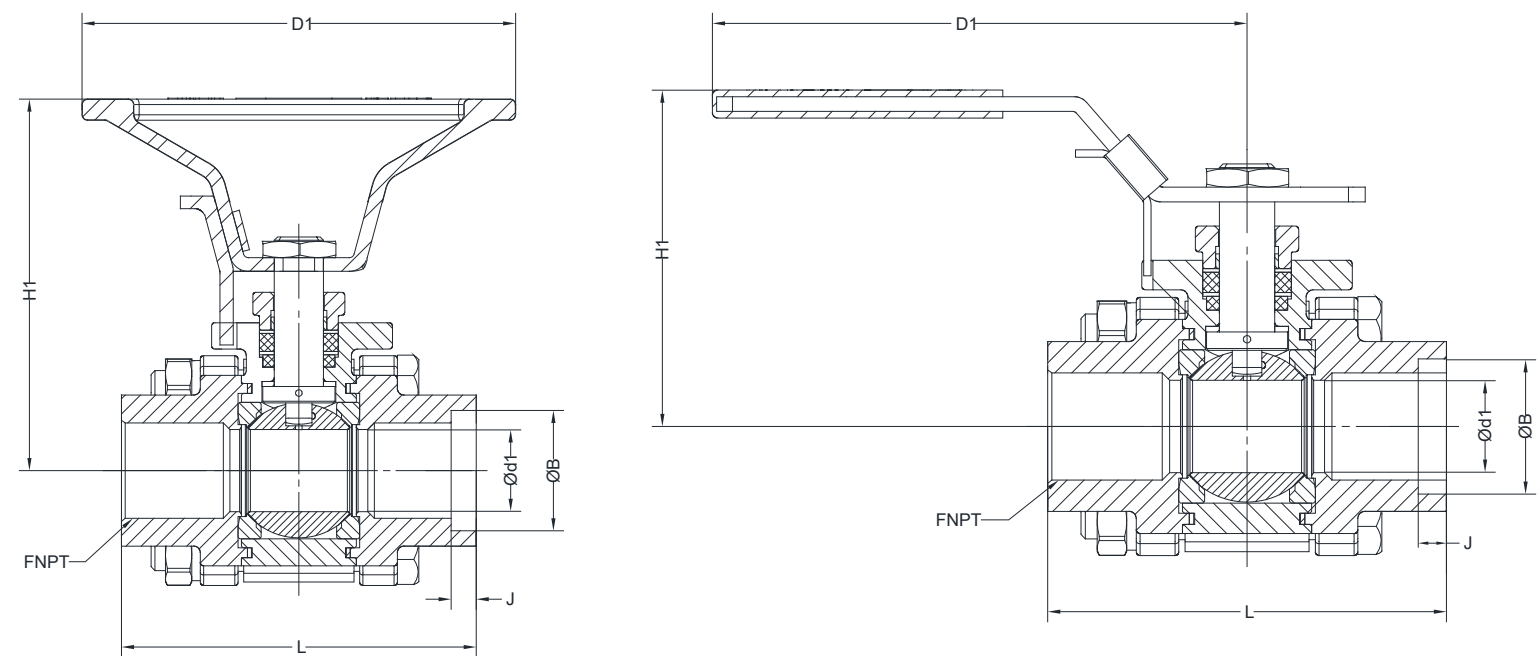
Valve Dimensions - CL800

Dimensional Data: ASME Class 800 Lever and Oval Handles
1/2" - 1", NPT x NPT, SWE x SWE, SWE x THD

Size	Ød1	L	D1		H1		SWE		THD
			Lever	Oval	Lever	Oval	"ØB Socket Bore"	"J Socket Depth"	FNPT
1/2"	0.59	3.44	6.30	5.91	3.69	4.44	0.865	0.38	1/2"-14
3/4"	0.79	3.70	6.30		3.88	4.63	1.075	0.50	3/4"-14
1"	0.98	4.25	7.28		3.93	4.84	1.340	0.50	1" - 11 1/2

DIMENSIONAL DATA | CL600

Full Port • Threaded or Sockweld Ends: 1 1/2" - 2" • Meets requirements of CL150/300



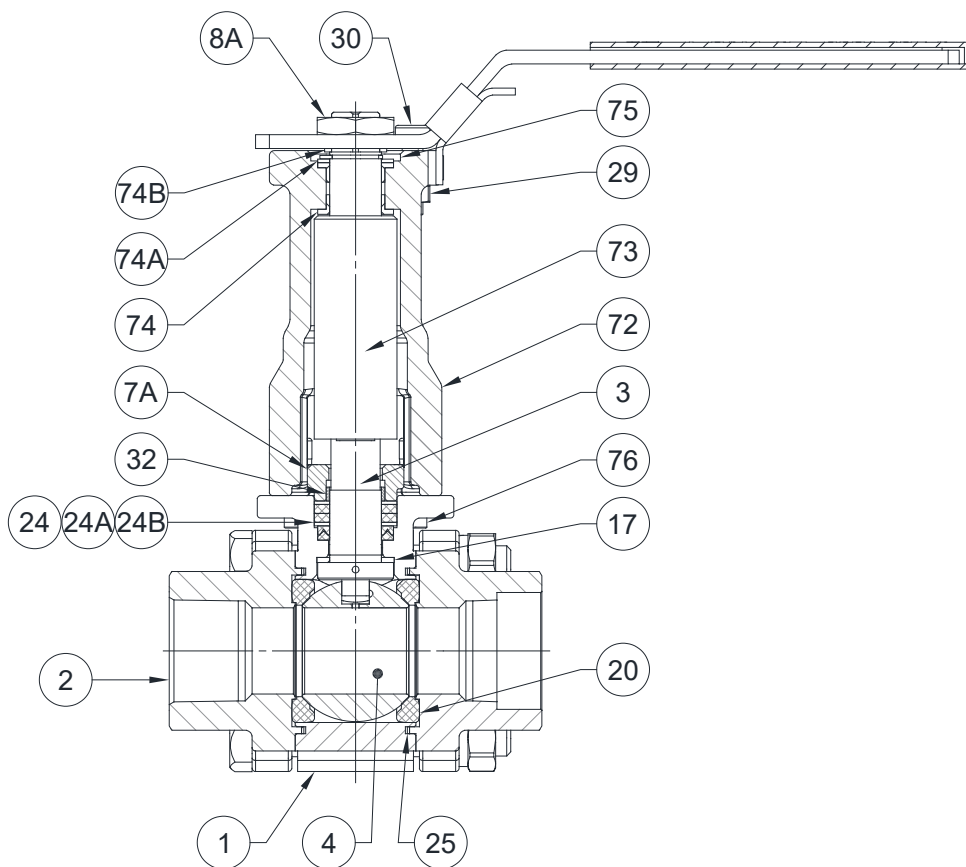
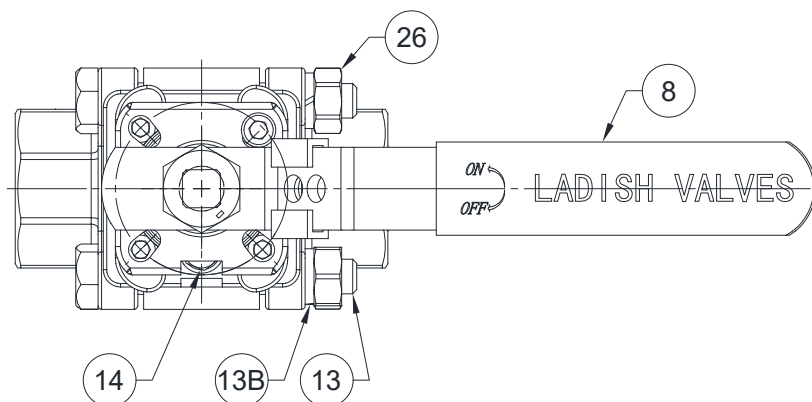
Valve Dimensions - CL600

Dimensional Data: ASME Class 600 Lever and Oval Handles: 1 1/2" - 2", NPT x NPT, SWE x SWE, SWE x THD									
Size	Φd1	L	D1		H1		SWE		THD
			Lever	Oval	Lever	Oval	"ΦB Socket Bore"	"J Socket Depth"	FNPT
1 1/2"	1.50	5.12	9.21	7.87	4.72	5.67	1.925	0.50	1 1/2" - 11 1/2
2"	1.97	6.18	9.21	13.78	5.20	6.95	2.416	0.62	2" - 11 1/2



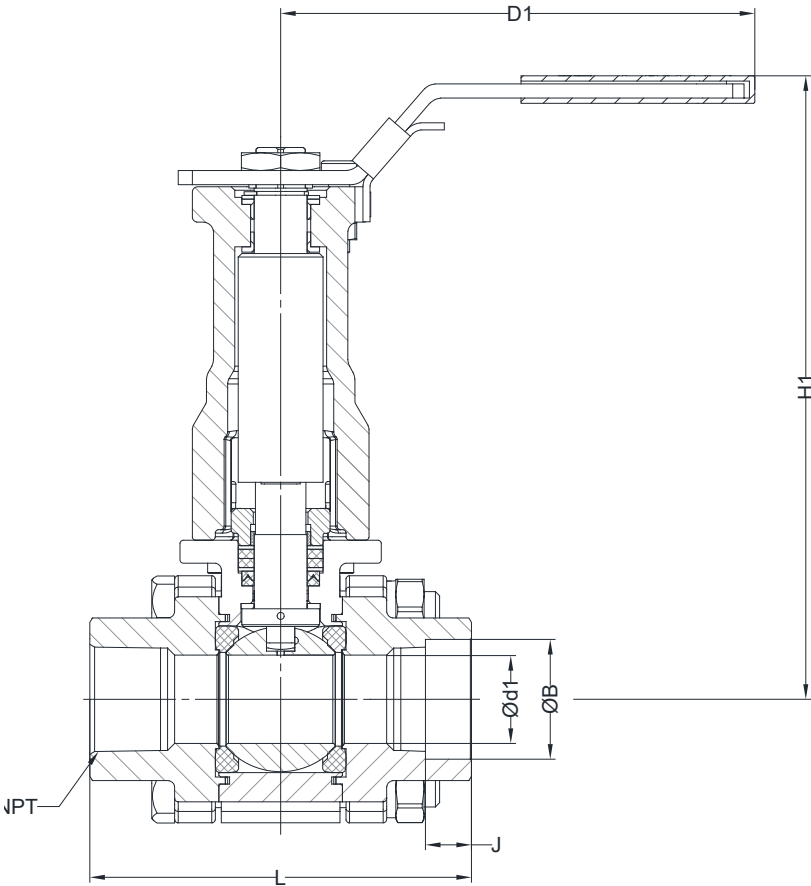
Ext. Handle 3PC - Item Description

Item No.	Description
1	BODY
2	CAP
3	STEM
4	BALL
7A	GLAND FLANGE
8	HANDLE
8A	HANDLE NUT
13	BODY BOLT
13B	LOCK WASHER
14	GLAND BOLT
17	THRUST BEARING
20	SEAT
24	PRIMARY PACKING
24A	SECONDARY PACKING
24B	PACKING SPACER
25	BODY GASKET
26	BODY NUT
29	STOP NUT
30	STOP BOLT
32	STEM BEARING
72	EXT.BRACKET
73	EXT.COUPLING
74	L-THRUST BRG
74A	BUSHING
74B	SQUARE WRS
75	SNAP RING
76	EXTENSION BOLT



EXT. HANDLE DIMENSIONAL DATA | CL600 & CL800

Full Port • Threaded or Sockweld Ends: 1/2" - 1" • Meets requirements of CL150/300/600



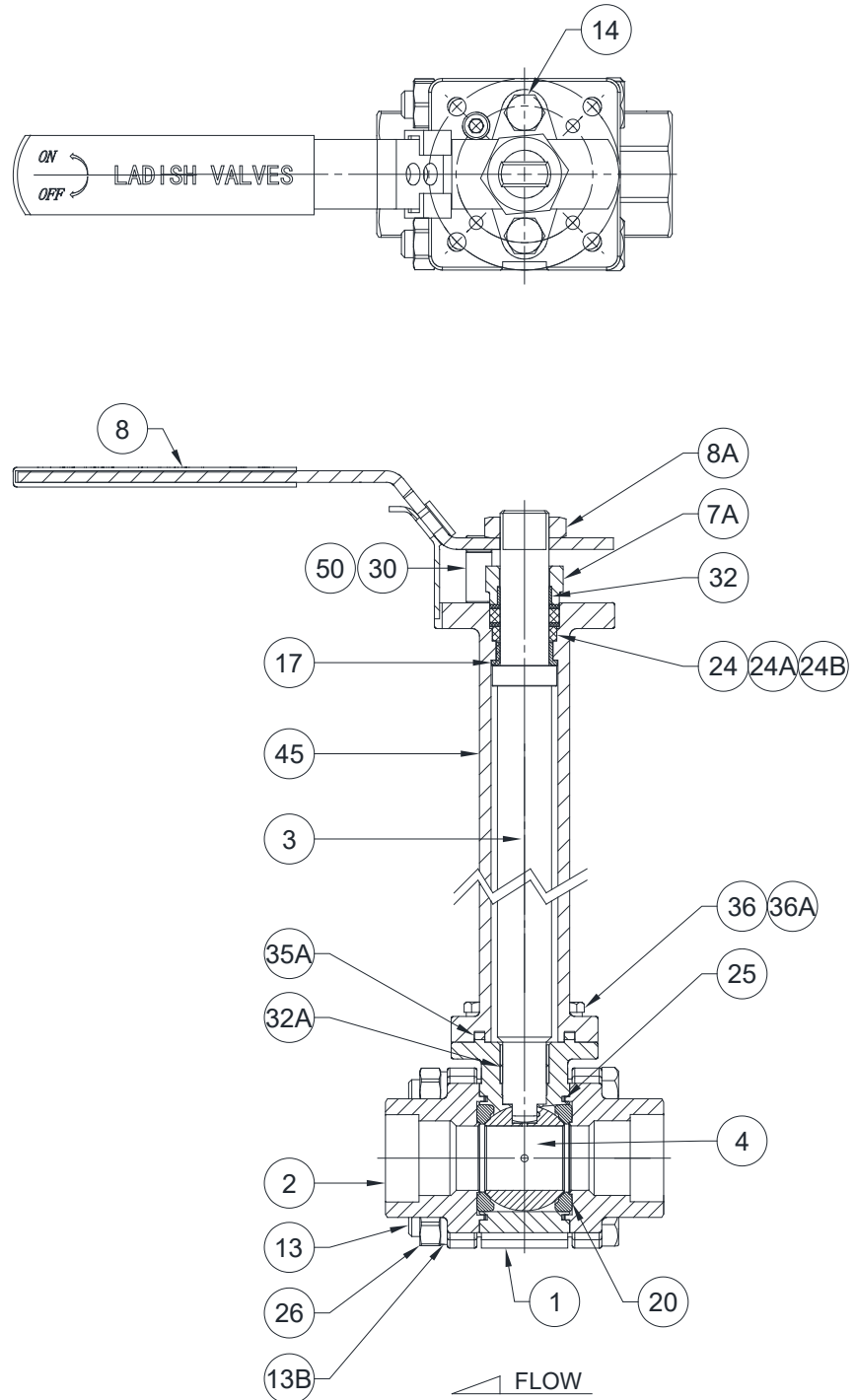
Dimensional Data: ASME Class 800 Extended Handle 1/2" - 1", NPT x NPT, SWE x SWE, SWE x THD							
Size	Ød1	L	D1	H1	SWE		THD
					"ØB Socket Bore"	"J Socket Depth"	FNPT
1/2"	0.59	3.44	6.30	7.06	0.865	0.38	1/2"-14
3/4"	0.79	3.70	6.30	7.28	1.075	0.50	3/4"-14
1"	0.98	4.25	7.28	7.31	1.340	0.50	1" - 11 1/2

Dimensional Data: ASME Class 600 Extended Handle 1 1/2" - 2", NPT x NPT, SWE x SWE, SWE x THD							
Size	Ød1	L	D1	H1	SWE		THD
					"ØB Socket Bore"	"J Socket Depth"	FNPT
1 1/2"	1.50	5.12	9.21	7.99	1.925	0.50	1 1/2" - 11 1/2
2"	1.97	6.18	9.21	8.45	2.416	0.62	2" - 11 1/2



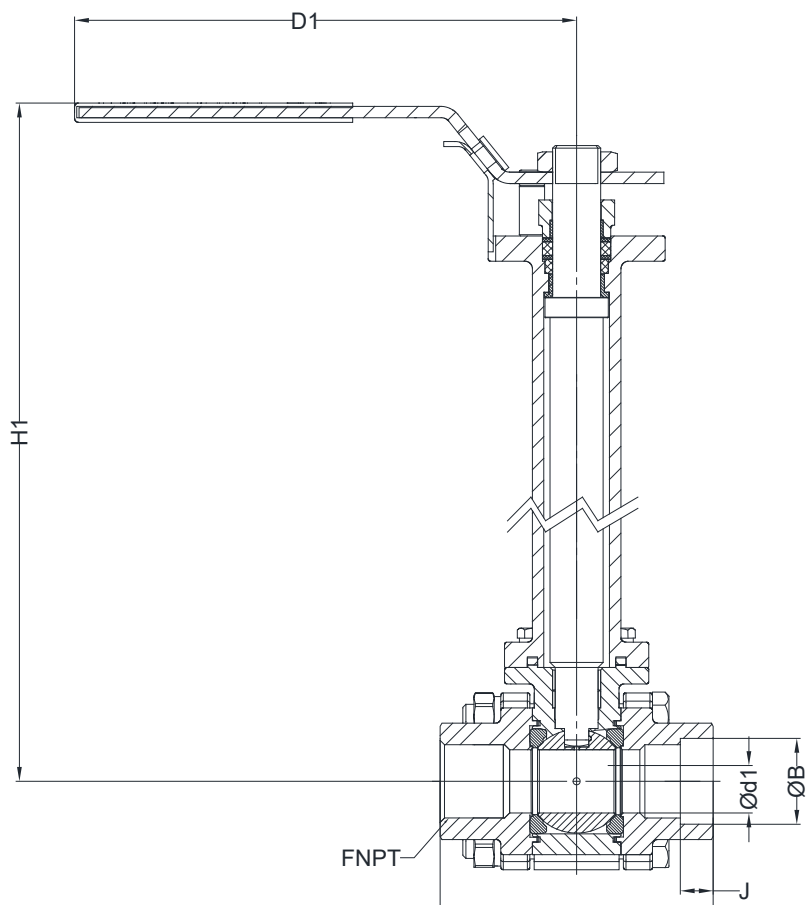
Cryogenic 3PC - Item Description

Item No.	Description
1	BODY
2	CAP
3	STEM
4	BALL
7A	GLAND FLANGE
8	HANDLE
8A	HANDLE NUT
13	BODY BOLT
13B	LOCK WASHER
14	GLAND BOLT
17	THRUST BEARING
20	SEAT
24	PRIMARY PACKING
24A	SECONDARY PACKING
24B	PACKING SPACER
25	BODY GASKET
26	BODY NUT
30	STOP BOLT
32	STEM BEARING
32A	BODY BEARING
35A	EXTENSION GASKET
36	EXTENSION BOLT
36A	EXTENSION BOLT WRS
45	EXTENSION
50	STOP WRS



CRYOGENIC - DIMENSIONAL DATA | CL600 & 800

Full Port • Threaded or Sockweld Ends: 1/2" - 1" • Meets requirements of CL150/300/600



Dimensional Data: ASME Class 800 1/2" - 1", NPT x NPT, SWE x SWE, SWE x THD							
Size	Φd1	L	D1	H1	SWE		THD
					"ΦB Socket Bore"	"J Socket Depth"	FNPT
1/2"	0.59	3.44	5.79	14.65	0.865	0.38	1/2"-14
3/4"	0.79	3.70	5.79	14.86	1.075	0.50	3/4"-14
1"	0.98	4.25	7.01	15.14	1.340	0.50	1" - 11 1/2

Dimensional Data: ASME Class 600 1 1/2" - 2", NPT x NPT, SWE x SWE, SWE x THD							
Size	Φd1	L	D1	H1	SWE		THD
					"ΦB Socket Bore"	"J Socket Depth"	FNPT
1 1/2"	1.50	5.12	16.93	17.24	1.925	0.50	1 1/2" - 11 1/2
2"	1.97	6.18	16.93	17.83	2.416	0.62	2" - 11 1/2

HOW TO ORDER

Ladish Cast 3PC Floating Ball Valves

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 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:

PC83-L693-DC01-A05X-0000 ½" Three-piece, Cast Full Port, CL800 Threaded Ends, Lever Operated, WCB Body, 316SS Trim, B8 CL1 Bolting, Dual PTFE/GRF, Fire Safe NACE design

VALVE STYLE	CONSTRUCT & VALVE TYPE	ANSI CLASS	END CONNECT	OPER.	BODY MAT.	BALL/STEM	PACKING & GASKET
P	C	B	3	L	06	3	G
P - PACKING	C - Floater, Cast 3pc, Full Port	6 - CL600 8 - CL800	3 - NPT 4 - SWE 7 - THD/SWE	A - Actuator B - Bare Stem L - Lever V - Oval Handle S - Spring Return Handle	06 - CF3M 69 - WCB 20 - CW12MW 55 - CD3MN 15 - CN7M 30 - M35-1	0 - SAME AS BODY 3 - 316SS A - ALLOY 20 H - HAST C276 D - 2205 M - MONEL 400 K - Monel Ball / K500 Stem	D - DUAL PTFE/GRF G - GRAPHOIL T - PTFE



SEAT MATERIAL	BOLTING & NUTS	MISC OPTION	SIZE	DESIGN FIRE-SAFE NACE	MODIFIER
C	01	A	05	C	0000
C - Carbon Filled TFMC K - PCTFE	01 - B8CL1/8 03 - B8MCL1/8M 05 - B7/2H 06 - B7M/2HM 07 - ALLOY 20 12 - HAST C 28 - B8MCL2/8MA	A - No Added Option B - Cleaned 2 - Cryogenic Extension length BS6364/MSS-SP-134 NON-Coldbox length w/ vented ball E - 4" Handle Extension V - Vented Ball OTHER OPTIONS AVAILABLE; CONTACT MANUFACTURING	05 - 1/2" 07 - 3/4" 10 - 1" 15 - 1-1/2" 20 - 2"	X - B16.34 - API 608 FIRE SAFE NACE Y - B16.34 - API 608 NON-FIRE SAFE NACE A - B16.34 - API 608 FIRE SAFE NON-NACE B - B16.34 - API 608 NON- FIRE SAFE NON-NACE	0000 - Internal use only - Foundry Code

CV VALUES | PRESSURE TEMPERATURE

Full Port • Threaded or Sockweld Ends

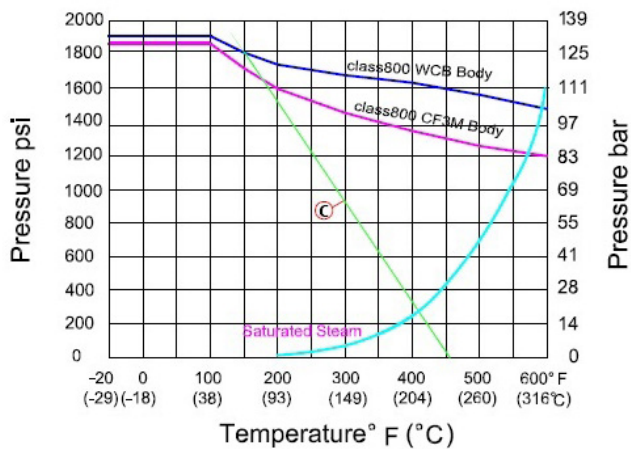
CV Value

CV Values					
Size	1/2"	3/4"	1"	1 1/2"	2"
CV	30	55	96	270	460

Pressure - Temperature Data

Floating Ball valves ,class800

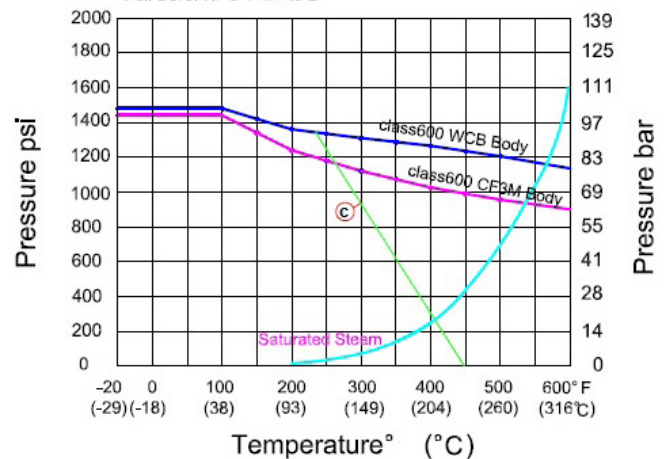
Full Bore: NPS 1/2 to 1



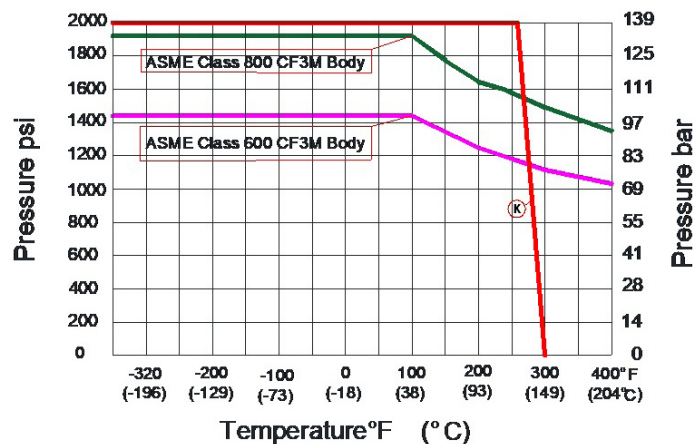
Seat Material: C Carbon Filled TFMC

Floating Ball valves ,class600

Full Bore: NPS 1-1/2 to 2



Seat Material: C Carbon Filled TFMC

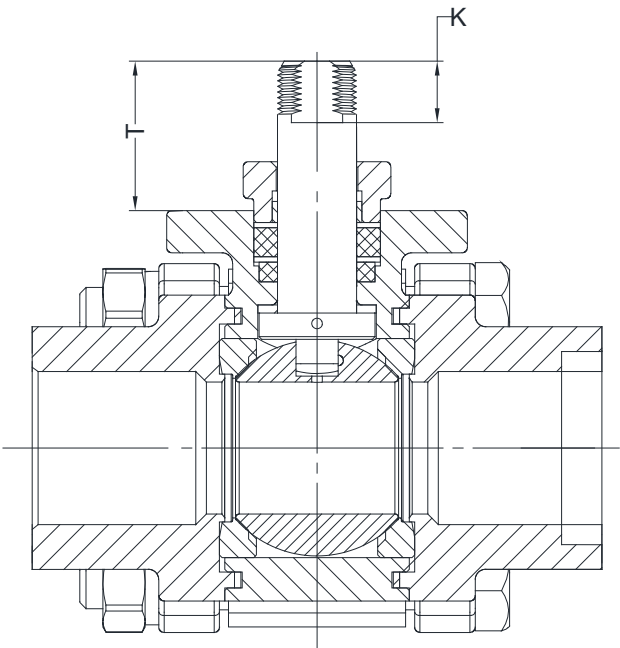
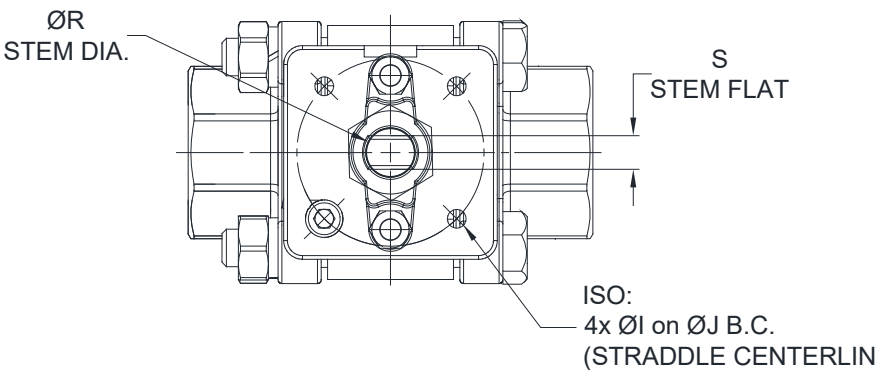


Seat Materials: K PCTFE: Cryogenic Ball Valve

TOP WORKS DATA - STANDARD VALVE

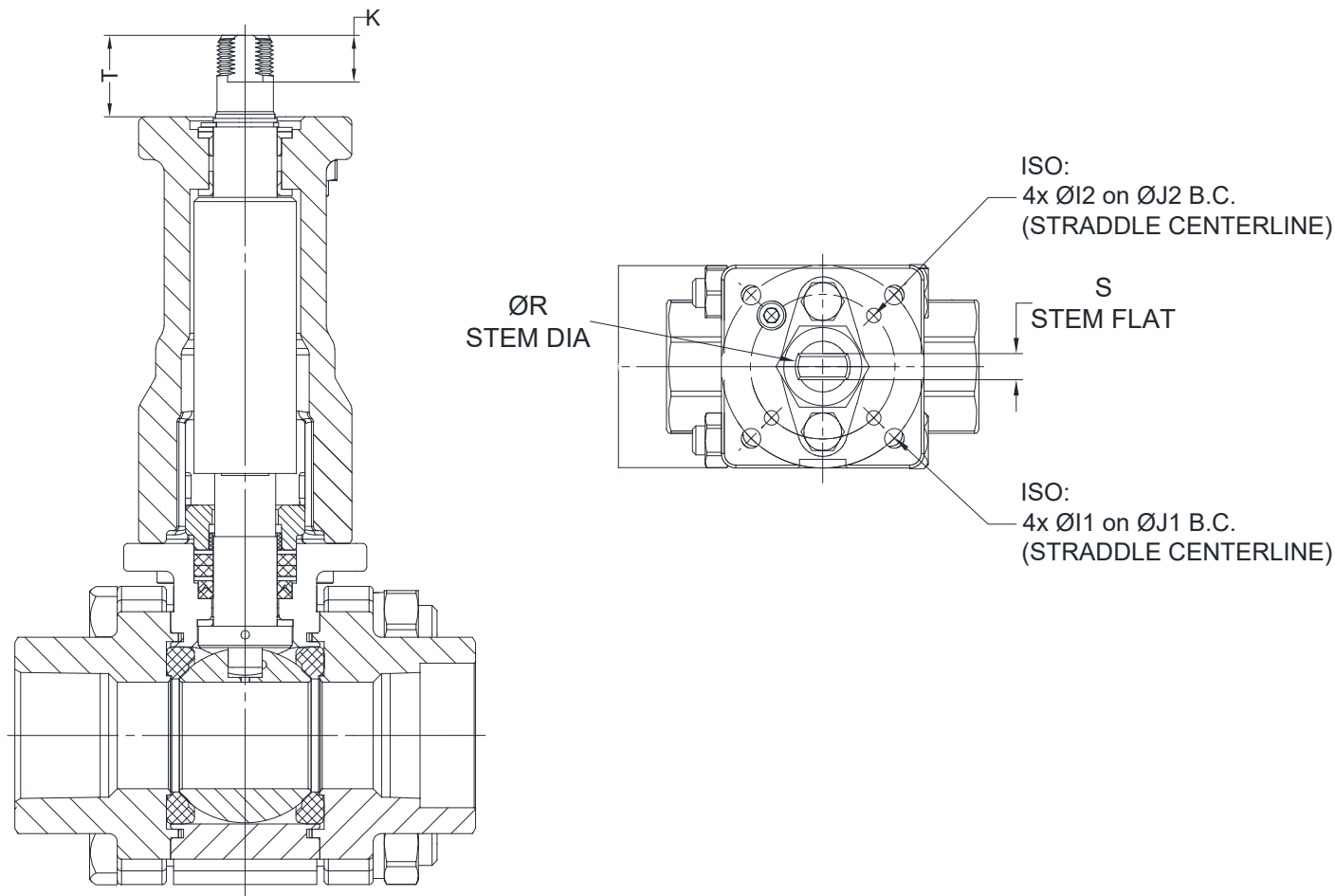
Full Port • Threaded or Sockweld Ends

TOPWORKS DATA - STANDARD							
Size	ISO-5211 MOUNTING FLANGE PATTERN			STEM DIM.			
	F-No	ΦI	ΦJ	ΦR	S	T	K
1/2"	F04	M5	1.654	0.378	0.248	0.94	0.31
3/4"	F04	M5	1.654	0.378	0.248	0.91	0.31
1"	F05	M6	1.969	0.563	0.354	1.00	0.39
1 1/2"	F07	M8	2.756	0.630	0.378	1.26	0.55
2"	F07	M8	2.756	0.630	0.378	1.33	0.60



TOP WORKS DATA - EXTENDED HANDLE

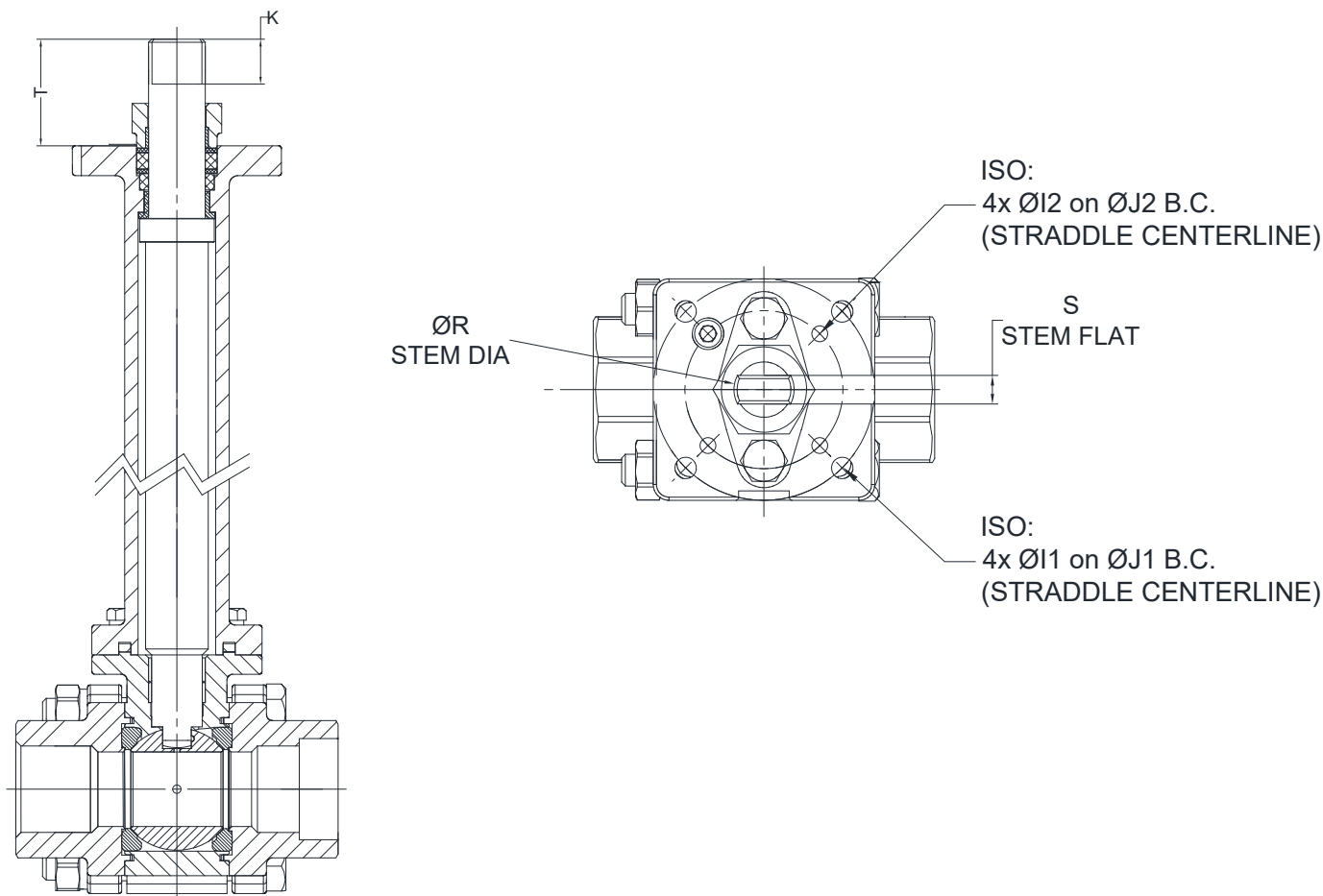
Full Port • Threaded or Sockweld Ends



TOPWORKS DATA - EXT. HANDLE										
SIZE	ISO-5211 MOUNTING FLANGE PATTERN						STEM DIAMETER			
	F-NO 1	ΦI	ΦJ	F-No 2	ΦI	ΦJ	R	S	T	K
1/2"	F03	0.236	1.417	F04	0.236	1.654	0.378	0.248	0.35	0.30
3/4"	F03	0.236	1.417	F04	0.236	1.654	0.378	0.248	0.35	0.30
1"	F04	0.236	1.654	F05	0.276	1.969	0.563	0.354	0.43	0.37
1 1/2"	F05	0.276	1.969	F07	0.354	2.756	0.63	0.378	0.55	0.51
2"	F05	0.276	1.969	F07	0.354	2.756	0.63	0.378	0.55	0.51

TOP WORKS DATA - CRYOGENIC

Full Port • Threaded or Sockweld Ends



TOPWORKS DATA - CRYOGENIC										
Size	ISO-5211 MOUNTING FLANGE PATTERN						STEM DIM.			
	F-No 1	ΦI1	ΦJ1	F-No 2	ΦI2	ΦJ2	ΦR	S	T	K
1/2"				F05	M6	1.969	0.563	0.327	1.10	0.39
3/4"				F05	M6	1.969	0.563	0.327	1.10	0.39
1"	F07	M8	2.756	F05	M6	1.969	0.748	0.354	1.38	0.53
1 1/2"	F10	M10	4.016	F07	M8	2.756	0.874	0.630	1.77	0.71
2"	F10	M10	4.016	F07	M8	2.756	0.874	0.630	1.77	0.71



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