

**TRUNION MOUNTED, TOP AND SIDE ENTRY
Butt-Weld (Series LBW) and Flanged Type (Series LBF)**



Specification

Description : GVC LNG Cryogenic ball valves suitable for bi-directional flow and bubble tight shut-off at full rated pressure with extended bonnet according to BS 6364, Direct Mount ISO table, adjustable gland packing, one-piece blow-out proof stem, trunnion mounted ball. Available with butt-weld ends (Top entry model) and Flanged ends (Side entry model).

Numbering System : Series LBW : Cryogenic BUTT-WELD type Ball Valve
Series LBF : Cryogenic FLANGED type Ball Valve



BUTT-WELD
Top Entry
(Series-LBW)



FLANGED
Side Entry
(Series-LBF)

Maintenance access : Butt-weld type ; Top entry design, in-line inspection & maintenance access.
Flanged type ; Side entry design, inspection & maintenance access by removal of up- or downstream piping.

Standards : Design and testing in accordance with BS 6364 Valves for Cryogenic Service, Fire Safe approved in accordance with API 607. Valve design and flow analysed using Finite Element Method.

Testing * : All cryogenic valves are tested in the fully equipped cryogenic in-house testing facilities.

Materials : Stainless Steel 316, 316L, others on request.

Production Range : Size : DN 50 - DN 1500 (2" - 60")
Working Pressure : Up to 250 Bar (3625 PSI)
Working Temperature : -196°C to + 815°C

Pressure Classes : ANSI/ASME 150 LBS, 300 LBS, 600 LBS, 900 LBS and 1500 LBS. Others on request.

Certification * : CE/PED, ABS Design Assessment, ABS and LRS type approvals, marine class society certified foundries and materials, Fire Safe certified API 607, BS 6364 cryogenic testing.

Operation : With ISO 5210 top flange for direct mounting of an actuator.

Options : A lantern ring in the gland packing is optionally available

Typical Applications : Liquefied Gas Carriers (Propane, Butane, Acetylene, Ethylene etc.), LNG Carriers, LNG Receiving Terminals, LNG re-gasification units, LNG liquefaction units, LNG peak shaving plants, other Cryogenic Services (Liquefied Oxygen Plants [-160°C]), on board of FSRU's, FLNG's, VLGC's etc.

Seat Configuration : Please contact us for further details.

* See Catalogue "GVC Product Group L, Triple Eccentric Metal Seated Cryogenic LNG Butterfly Valves" for further details on our cryogenic testing, or consult us for further information.

Series



**BUTT-WELD
Series LBW**

Size Range : DN 50 - DN 1500 (2" - 60")

Pressure Classes : ANSI/ASME 150 LBS, 300 LBS, 600 LBS, 900 LBS and 1500 LBS

- Butt-weld end connections
- Top Entry design, in-line inspection and maintenance
- Extended Cryogenic Bonnet (BS 6364)
- One piece blow-out proof stem
- Trunnion mounted ball
- Direct mount ISO table, no additional brackets required
- Adjustable gland packing, can be adjusted without removal of the actuator



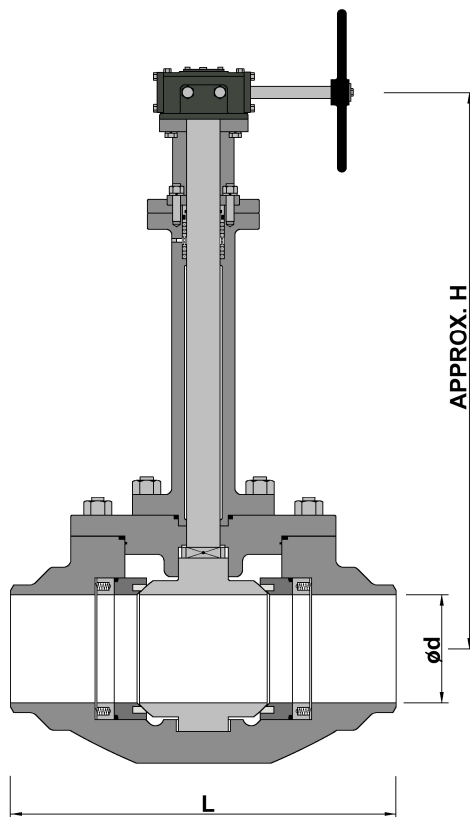
**FLANGED
Series LBF**

Size Range : DN 50 - DN 1500 (2" - 60")

Pressure Classes : ANSI/ASME 150 LBS, 300 LBS, 600 LBS, 900 LBS and 1500 LBS

- Flanged end connections
- Side Entry design
- Extended Cryogenic Bonnet (BS 6364)
- One piece blow-out proof stem
- Trunnion mounted ball
- Direct mount ISO table, no additional brackets required
- Adjustable gland packing, can be adjusted without removal of the actuator

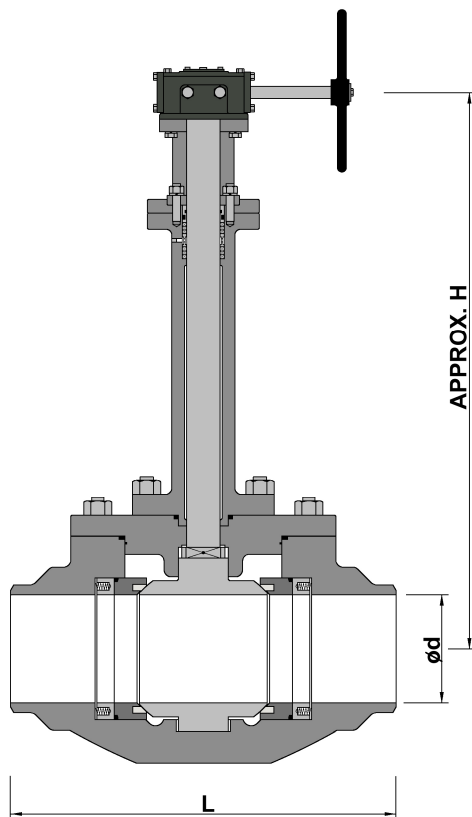
Series LBW Cryogenic Ball Valve Class 150# Butt-Weld Type DN 50 (2") - 1500 (60")



Dimensions DN 50 (2") - 1500 (60") **ANSI 150** [mm]

SIZE		ød	L	REFERENCE ONLY	WEIGHT APPROX. (Kg)
Inch	DN			H	
2"	50	50	292	750	34
3"	80	76	356	850	70
4"	100	100	432	850	112
6"	150	152	559	870	232
8"	200	203	660	900	424
10"	250	254	787	950	605
12"	300	305	838	1000	825
14"	350	337	889	1150	1025
16"	400	387	991	1150	1394
18"	450	438	1092	1250	1912
20"	500	489	1194	1300	2477
24"	600	591	1397	1400	3894
26"	650	635	1448	1450	4508
28"	700	686	1549	1460	5684
30"	750	737	1651	1500	6863
32"	800	781	1778	1520	8372
36"	900	876	2083	1610	10905
40"	1000	978	2310	1700	14596
42"	1050	1028	2430	1890	16676
48"	1200	1168	2720	1990	26213
56"	1400	1362	3170	2330	34077
60"	1500	1460	3350	2400	44300

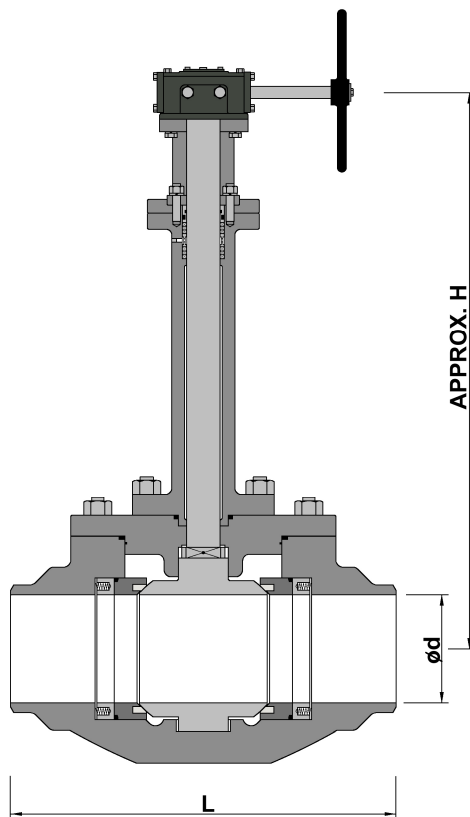
Series LBW Cryogenic Ball Valve Class 300# Butt-Weld Type DN 50 (2") - 1500 (60")



Dimensions DN 50 (2") - 1500 (60") **ANSI 300** [mm]

SIZE		ød	L	REFERENCE ONLY	WEIGHT APPROX. (Kg)
Inch	DN			H	
2"	50	50	292	750	43
3"	80	76	356	850	77
4"	100	100	432	850	127
6"	150	152	559	870	267
8"	200	203	660	900	480
10"	250	254	787	950	666
12"	300	305	838	1000	898
14"	350	337	889	1150	1102
16"	400	387	991	1150	1533
18"	450	438	1092	1250	2103
20"	500	489	1194	1300	2714
24"	600	591	1397	1400	4347
26"	650	635	1448	1450	5135
28"	700	686	1549	1460	6285
30"	750	737	1651	1500	7601
32"	800	781	1778	1520	9400
36"	900	876	2083	1610	12265
40"	1000	978	2310	1700	16398
42"	1050	1028	2430	1890	19161
48"	1200	1168	2720	1990	29279
56"	1400	1362	3170	2330	38062
60"	1500	1460	3350	2400	49480

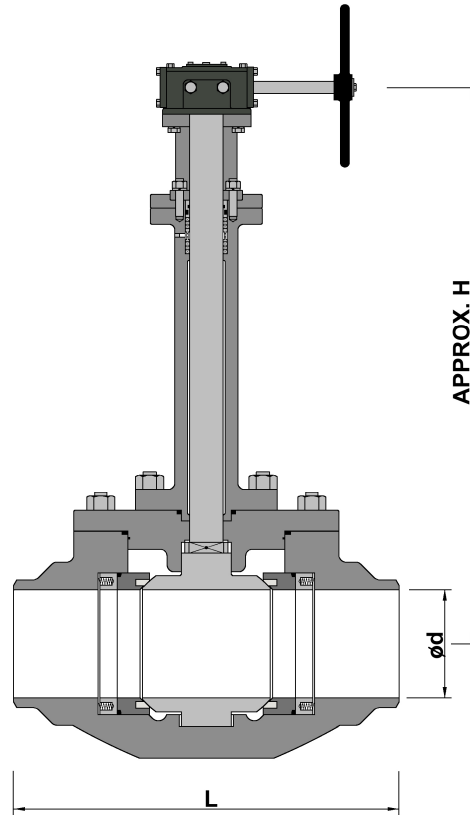
Series LBW Cryogenic Ball Valve Class 600# Butt-Weld Type DN 50 (2") - 1500 (60")



Dimensions DN 50 (2") - 1500 (60") **ANSI 600** [mm]

SIZE		ød	L	REFERENCE ONLY	WEIGHT APPROX. (Kg)
Inch	DN			H	
2"	50	50	292	760	56
3"	80	76	356	860	100
4"	100	100	432	860	164
6"	150	152	559	880	347
8"	200	203	660	910	623
10"	250	254	787	960	865
12"	300	305	838	1010	1167
14"	350	337	889	1160	1433
16"	400	387	991	1160	1993
18"	450	438	1092	1260	2734
20"	500	489	1194	1310	3528
24"	600	591	1397	1410	5651
26"	650	635	1448	1460	6675
28"	700	686	1549	1470	8171
30"	750	737	1651	1510	9881
32"	800	781	1778	1530	12219
36"	900	876	2083	1620	15945
40"	1000	978	2310	1710	21317
42"	1050	1028	2430	1900	24909
48"	1200	1168	2720	2000	38062
56"	1400	1362	3170	2340	49481
60"	1500	1460	3350	2410	64324

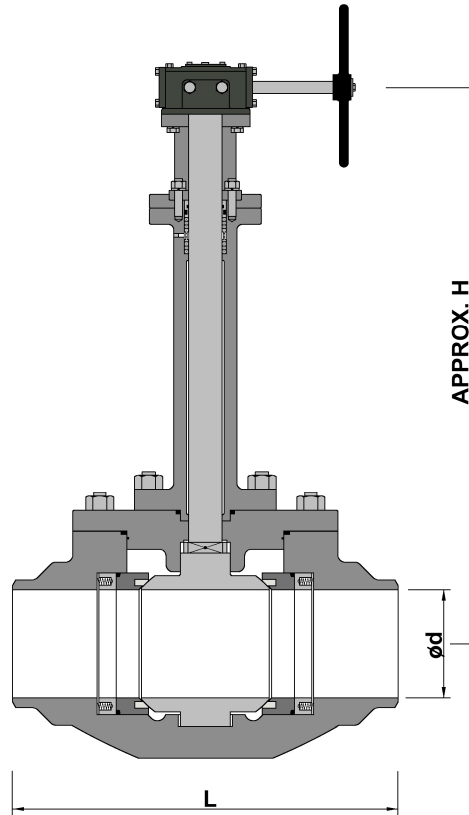
Series LBW Cryogenic Ball Valve Class 900# Butt-Weld Type DN 50 (2") - 1500 (60")



Dimensions DN 50 (2") - 1500 (60") **ANSI 900** [mm]

SIZE		ød	L	REFERENCE ONLY	WEIGHT APPROX. (Kg)
Inch	DN			H	
2"	50	50	368	770	73
3"	80	76	381	870	130
4"	100	100	457	870	214
6"	150	152	610	890	452
8"	200	203	737	920	811
10"	250	254	838	970	1125
12"	300	305	965	1020	1517
14"	350	324	1029	1170	1863
16"	400	375	1130	1170	2591
18"	450	425	1219	1270	3554
20"	500	473	1321	1320	4586
24"	600	572	1549	1420	7347
26"	650	619	1620	1470	8678
28"	700	667	1730	1480	10622
30"	750	714	1880	1520	12846
32"	800	762	2070	1540	15885
36"	900	857	2290	1630	20728
40"	1000	958	2440	1720	27712
42"	1050	1008	2560	1910	32382
48"	1200	1151	2920	2010	49481
56"	1400	1337	3300	2350	64325
60"	1500	1438	3450	2420	83622

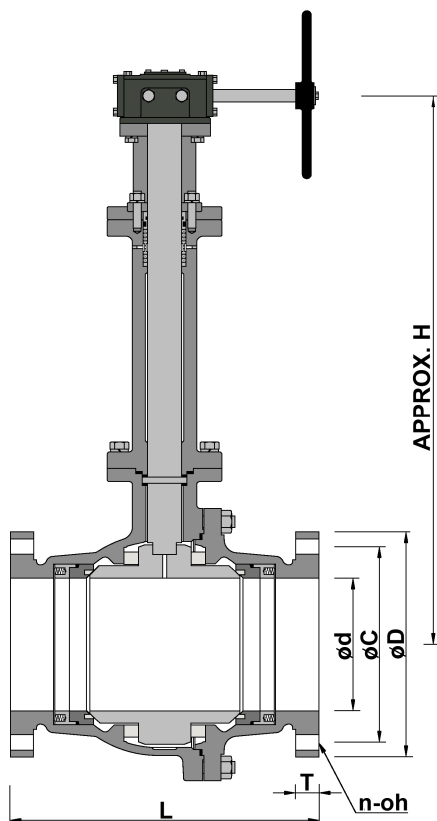
Series LBW Cryogenic Ball Valve Class 1500# Butt-Weld Type DN 50 (2") - 1000 (40")



Dimensions DN 50 (2") - 1000 (40") **ANSI 1500** [mm]

SIZE		ød	L	REFERENCE ONLY	WEIGHT APPROX. (Kg)
Inch	DN			H	
2"	50	50	368	780	94
3"	80	76	470	880	169
4"	100	100	546	880	278
6"	150	146	705	900	587
8"	200	194	832	930	1054
10"	250	241	991	980	1462
12"	300	289	1130	1030	1972
14"	350	317	1257	1180	2422
16"	400	362	1384	1180	3369
18"	450	408	1530	1280	4621
20"	500	456	1660	1330	5962
24"	600	548	1940	1430	9551
26"	650	596	2050	1480	11281
28"	700	643	2150	1490	13809
30"	750	688	2250	1530	16699
32"	800	732	2340	1550	20651
36"	900	821	2550	1630	26946
40"	1000	912	2800	1730	36026

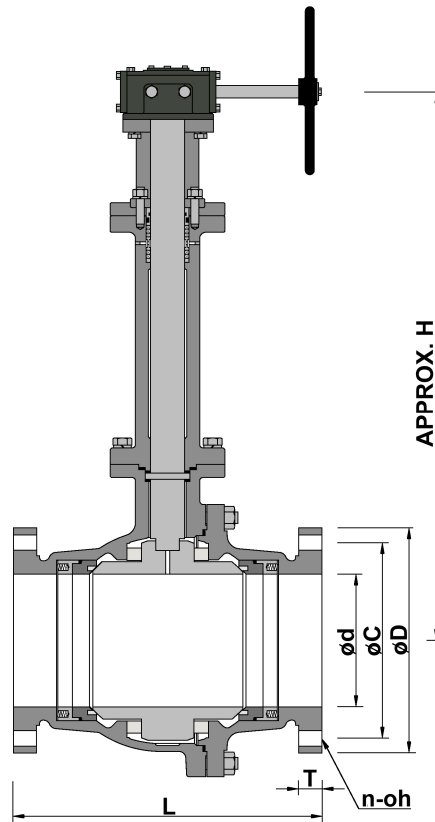
Series LBF Cryogenic Ball Valve Class 150# Flanged Type DN 50 (2") - 1500 (60")



Dimensions DN 50 (2") - 1500 (60") **ANSI 150** [mm]

SIZE		ød	L	FLANGE				REF. ONLY	WEIGHT APPROX. (Kg)
Inch	DN			øD	øC	n-øh	T	H	
2"	50	50	178	150	120.7	4-19	16.3	750	32
3"	80	76	203	190	152.4	4-19	19.5	850	50
4"	100	100	229	230	190.5	8-22	24.3	850	74
6"	150	152	394	280	241.3	8-22	25.9	870	158
8"	200	203	457	345	298.5	8-22	29.0	900	259
10"	250	254	533	405	362.0	12-25	30.6	950	383
12"	300	305	610	485	431.8	12-25	32.2	1000	526
14"	350	337	686	535	476.3	12-29	35.4	1150	724
16"	400	387	762	595	539.8	16-29	37.0	1150	1032
18"	450	438	864	635	577.9	16-32	40.1	1250	1337
20"	500	489	914	700	635.0	20-32	43.3	1300	1794
24"	600	591	1067	815	749.3	20-35	48.1	1400	2779
26"	650	635	1140	870	806.4	24-35	66.7	1450	3197
28"	700	686	1240	925	863.6	28-35	69.9	1460	3883
30"	750	737	1290	985	914.4	28-35	73.1	1500	4698
32"	800	781	1370	1060	977.9	28-41	79.4	1520	5215
36"	900	876	1520	1170	1085.8	32-41	88.9	1610	8248
40"	1000	978	1700	1290	1200.2	36-41	88.9	1700	12379
42"	1050	1028	1860	1345	1257.3	36-41	95.3	1890	14365
48"	1200	1168	2080	1510	1422.4	44-41	106.4	1990	22045
56"	1400	1362	2250	1745	1651.0	48-48	122.3	2330	28658
60"	1500	1460	2400	1855	1759.0	52-48	130.2	2400	37256

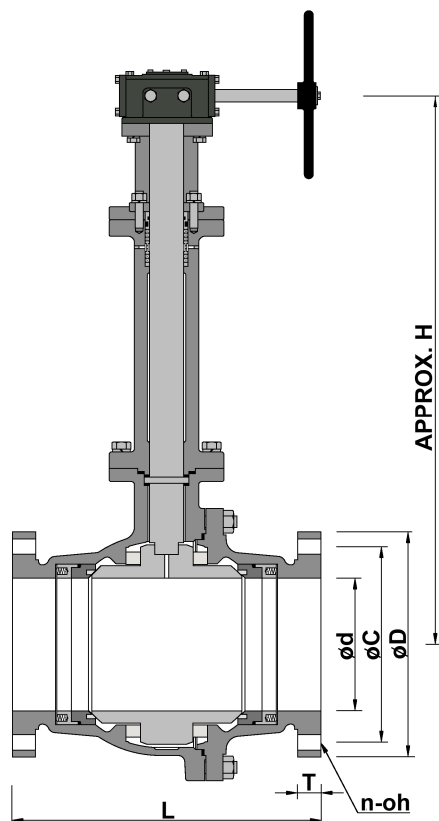
Series LBF Cryogenic Ball Valve Class 300# Flanged Type DN 50 (2") - 1500 (60")



Dimensions DN 50 (2") - 1500 (60") **ANSI 300** [mm]

SIZE		ød	L	FLANGE				REF. ONLY	WEIGHT APPROX. (Kg)
Inch	DN			øD	øC	n-øh	T	H	
2"	50	50	216	165	127.0	8-19	22.7	750	36
3"	80	76	283	210	168.3	8-22	29.0	850	60
4"	100	100	305	255	200.0	8-22	32.2	850	80
6"	150	152	457	320	269.9	8-22	37.0	870	179
8"	200	203	502	380	330.2	12-22	41.7	900	293
10"	250	254	568	445	387.4	16-29	48.1	950	438
12"	300	305	648	520	450.8	16-32	51.2	1000	643
14"	350	337	762	585	514.4	20-32	54.4	1150	863
16"	400	387	838	650	571.5	20-35	57.6	1150	1288
18"	450	438	914	710	628.6	24-35	60.8	1250	1651
20"	500	489	991	775	685.8	24-35	63.9	1300	2135
24"	600	591	1143	915	812.8	24-41	70.3	1400	3266
26"	650	635	1245	970	876.3	28-45	77.8	1450	3964
28"	700	686	1346	1035	939.8	28-45	84.2	1460	4736
30"	750	737	1397	1090	997.0	28-48	90.5	1500	5574
32"	800	781	1524	1150	1054.1	28-51	96.9	1520	6175
36"	900	876	1727	1270	1168.4	32-54	103.2	1610	11360
40"	1000	978	1910	1240	1155.7	32-45	112.8	1700	13168
42"	1050	1028	1970	1290	1206.5	32-45	117.5	1890	15408
48"	1200	1168	2160	1465	1371.6	32-51	131.8	1990	23980
56"	1400	1362	2450	1710	1600.2	28-61	152.4	2330	31172
60"	1500	1460	2590	1810	1701.8	32-61	162.0	2400	40525

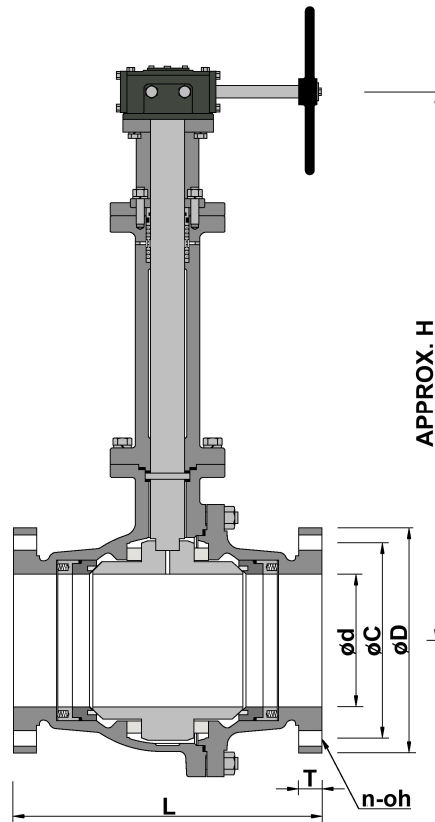
Series LBF Cryogenic Ball Valve Class 600# Flanged Type DN 50 (2") - 1500 (60")



Dimensions DN 50 (2") - 1500 (60") **ANSI 600** [mm]

SIZE		ød	L	FLANGE				REF. ONLY	WEIGHT APPROX. (Kg)
Inch	DN			øD	øC	n-øh	T	H	
2"	50	50	292	165	127.0	8-19	25.4	760	47
3"	80	76	356	210	168.3	8-22	31.8	860	78
4"	100	100	432	275	215.9	8-25	38.1	860	105
6"	150	152	559	355	292.1	12-29	47.7	880	232
8"	200	203	660	420	349.2	12-32	55.6	910	381
10"	250	254	787	510	431.8	16-35	63.5	960	569
12"	300	305	838	560	489.0	20-35	66.7	1010	836
14"	350	337	889	605	527.0	20-38	69.9	1160	1122
16"	400	387	991	685	603.2	20-41	76.2	1160	1674
18"	450	438	1092	745	654.0	20-45	82.6	1260	2147
20"	500	489	1194	815	723.9	24-45	88.9	1310	2775
24"	600	591	1397	940	838.2	24-51	101.6	1410	4246
26"	650	635	1448	1015	914.4	28-51	108.0	1460	5153
28"	700	686	1549	1075	965.2	28-54	111.2	1470	6157
30"	750	737	1651	1130	1022.4	28-54	114.3	1510	7246
32"	800	781	1778	1195	1079.5	28-60	117.5	1530	8028
36"	900	876	2083	1315	1193.8	28-67	123.9	1620	14769
40"	1000	978	2310	1320	1212.8	32-60	158.8	1710	17118
42"	1050	1028	2430	1405	1282.7	28-67	168.3	1900	20030
48"	1200	1168	2720	1595	1460.5	32-73	189.0	2000	31173
56"	1400	1362	3170	1855	1695.4	32-86	217.5	2340	40524
60"	1500	1460	3350	1995	1822.4	28-92	233.4	2410	52683

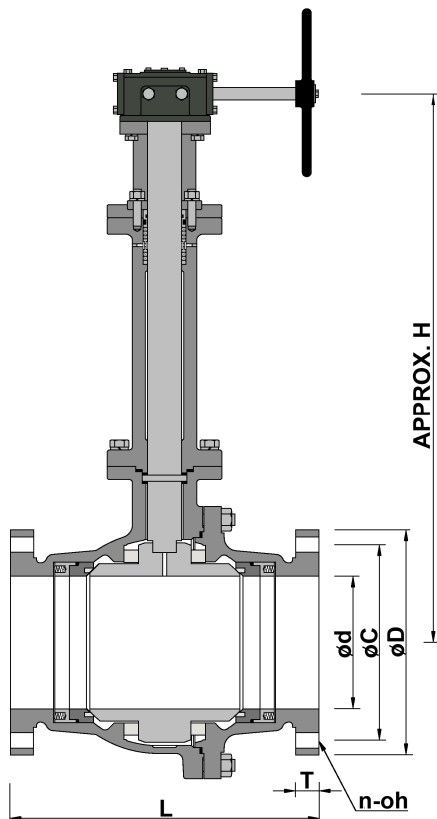
Series LBF Cryogenic Ball Valve Class 900# Flanged Type DN 50 (2") - 1500 (60")



Dimensions DN 50 (2") - 1500 (60") **ANSI 900** [mm]

SIZE		ød	L	FLANGE				REF. ONLY	WEIGHT APPROX. (Kg)
Inch	DN			øD	øC	n-øh	T	H	
2"	50	50	368	215	165.1	8-25	52.1	770	61
3"	80	76	381	240	190.5	8-25	52.1	870	101
4"	100	100	457	290	235.0	8-32	58.5	870	136
6"	150	152	610	380	317.5	12-32	69.6	890	302
8"	200	203	737	470	393.7	12-38	77.5	920	495
10"	250	254	838	545	469.9	16-38	83.9	970	740
12"	300	305	965	610	533.4	20-38	93.4	1020	1087
14"	350	324	1029	640	558.8	20-41	99.8	1170	1458
16"	400	375	1130	705	616.0	20-45	102.9	1170	2176
18"	450	425	1219	785	685.8	20-51	115.6	1270	2791
20"	500	473	1321	855	749.3	20-54	122.0	1320	3608
24"	600	572	1549	1040	901.7	20-67	153.7	1420	5520
26"	650	619	1620	1085	952.5	20-73	153.7	1470	6698
28"	700	667	1730	1170	1022.4	20-79	156.9	1480	8005
30"	750	714	1880	1230	1085.8	20-79	163.3	1520	9420
32"	800	762	2070	1315	1155.7	20-86	172.8	1540	10436
36"	900	857	2290	1460	1289.0	20-92	185.5	1630	19199
40"	1000	958	2440	1510	1339.8	24-92	210.9	1720	22253
42"	1050	1008	2560	1560	1390.6	24-92	220.4	1910	26040
48"	1200	1151	2920	1785	1587.5	24-105	247.4	2010	40526
56"	1400	1337	3300	2100	1862.2	28-105	268.1	2350	52681
60"	1500	1438	3450	2300	2080.6	28-105	278.6	2420	68488

Series LBF Cryogenic Ball Valve Class 1500# Flanged Type DN 50 (2") - 1000 (40")



Dimensions DN 50 (2") - 1000 (40") ANSI 1500 [mm]

SIZE		ød	L	FLANGE				REF. ONLY	WEIGHT APPROX. (Kg)
Inch	DN			øD	øC	n-øh	T	H	
2"	50	50	368	215	165.1	8-25	52.1	780	79
3"	80	76	470	265	203.2	8-32	61.7	880	132
4"	100	100	546	310	241.3	8-35	68.0	880	177
6"	150	146	705	395	317.5	12-38	96.6	900	393
8"	200	194	832	485	393.7	12-45	106.1	930	643
10"	250	241	991	585	482.6	12-51	122.0	980	962
12"	300	589	1130	675	571.5	16-54	137.9	1030	1413
14"	350	317	1257	750	635.0	16-60	147.4	1180	1896
16"	400	362	1384	825	704.8	16-67	160.1	1180	2829
18"	450	408	1530	915	774.7	16-73	176.0	1280	3628
20"	500	456	1660	985	831.8	16-79	191.8	1330	4690
24"	600	548	1940	1170	990.6	16-92	217.2	1430	7176
26"	650	596	2050	1430	1105.2	16-92	234.6	1480	8708
28"	700	643	2150	1540	1190.6	20-92	252.3	1490	10406
30"	750	688	2250	1650	1275.1	20-105	270.2	1530	12246
32"	800	732	2340	1760	1360.5	20-105	288.5	1550	13567
36"	900	821	2550	1980	1530.2	24-105	324.1	1640	24959
40"	1000	912	2800	2200	1700.8	28-105	360.5	1730	28929

Product Group C
Concentric Rubber Lined Butterfly Valves



Product Group O
*Double Eccentric Replaceable Seat Ring
Type Butterfly Valves (Cargo Oil)*



Product Group H, F and M
High Performance Butterfly Valves



Product Group T
Triple Eccentric Metal Seated Butterfly Valves



Product Group E
Disc Seated Butterfly Valves



Product Group L
*Cryogenic Butterfly Valves (LPG, LNG)
Ball, Gate, Globe and Check Valves*



Product Group D
Damper Butterfly Valves

