Hy-Lok

www.hy-lok.com

Catalog No. H - 116BV
Nov. 2008

116 & 118 Series

Ball Valves

Application

- Shipbuilding
- Natural gas plants
- Petroleum production & refining
- Mine and oil processing
- Chemical plants
- Power generation
- Plup and paper processing
- Food and other processing

Feature

- 2-Piece & 3-Piece Body
- Variety of Flanged Connections : ANSI, JIS, DIN, SAE & ISO
- Fire safe Design
- Locking Device
- Optional Pressure relief hole in Ball
- Anti-Blow out proof stem
- Cavity relieving Seat
- Optional ISO 5211 mounting pad
- Anti-Static device

Hy-Lok **HY-LOK CORPORATION**

Table of Contents

Top Quality

Customer Satisfacion

Global Operation

Certificates

Hy-Lok Ball Valves are designed and tested in accordance with API Q1, 6D and ASME B16.34 standards. The design for sour gas is based on NACE MR-01-75. Fire tests are performed in accordance with API 6FA BS6755, API 607 and BS 6755 standard. In addition to these basic standards and specifications, the Ball Valves meet the requirements of a range of other international specifications. Hy-Lok is able to apply any other standard specified by the customers.

	Certification
HSE (Health, Safety & Environment) Management System Certificates	ISO 14001
	OHSAS 18001
Quality Management System Certificates	ISO 9001
	ASME QSC
	API 6D / Q1
	CE MARK PED 97 / 23 / EC

How to Order

1	2	3	4	5	6	7	8	9	10	11	12	13			
B	2	F	A	J	1	2	8	D	- K	V	S	I	X	E	S	/ C	F	8	M
TYPE			END CONNECTION						MATERIAL				OPTION			BODY MATERIAL			

TYPE

1. TYPE

Code	Body Construction
B2	2 - Piece
B3	3 - Piece
B1	1 - Piece

2. BALL

Code	Ball Construction
F	Floating
T	Trunnion

END CONNECTION

3. END

Code	End Type
S	Socket Weld (ANSI / JIS)
B	Butt Weld (ANSI / JIS)
M	Male Thread
F	Female Thead
BE	Extended Pipe Butt Weld
PE	Extended Pipe Plain

Flange

Code	Type	Code	Contact Face
A	ANSI / ASME	R	Raised
J	JIS	F	Flat
D	DIN	J	Ring joint
P	API	O	with O-Ring
E	SAE (U / M)		Groove
I	ISO		

4. SIZE

Code	Size
8	1/2"
12	3/4"
16	1"
20	1 1/4"
24	1 1/2"
32	2"
40	2 1/2"
48	3"
64	4"
80	5"
96	6"
128	8"

5. PRESSURE RATING

Code	ASME	API	JIS	DIN	SAE	ISO	SCH.
A	150	400	5 kg/cm²	PN 10	3000	250	5S
B	300	1500	10 kg/cm²	PN 16	6000	400	10S
C	600	2000	16 kg/cm²	PN 25			20S
D	900	2220	20 kg/cm²	PN 40			40S
E	1500	3000	30 kg/cm²	PN 64			80S
F	2500	5000	40 kg/cm²	PN100			160S
G	4500	6000	63 kg/cm²	PN160			XXS
I	800	10000	210 kg/cm²	PN250			120S
K	400	15000	280 kg/cm²	PN320			
L		20000		PN420			

MATERIAL

6. SEAT

Code	Seat
P	PTFE
R	RTFE
C	PCTFE
K	PEEK
U	UHMWPE
N	NYLON
A	POM
M	METAL

7. SEAL

Code	Seal
V	Viton
W	Viton AED
X	Viton GLT
Y	Viton AED / GLT
N	NBR
H	HNBR
E	EPDM
K	KALEZ
A	AFLAS

8. GASKET

Code	Gasket
S	316 Sprial Gasket
G	Graphite

9. BOLT

Code	Seal / Gasket
W	A193 B7 / 2H
X	A193 B7M / 2H
B	A193 B8 / 8
C	A193 B8M / 8M
L	A193 L7 / 7
M	A193 L7M / 7M

13. BODY / TRIM

Code	Body	Trim
WCB	A352 WCB	SS316
LCB	A352 LCB	SS316
LCC	A352 LCC	SS316
CF8M	A351 CF8M	SS316
CF3M	A351 CF3M	SS316
MONE	Alloy 400	Monel
I625	Inconel 625	I625
F51	A182 F51	F51
F316	A182 F316	SS316

OPTION

10. BOLT COATING

Code	Bolt Coating
Z	Hot Dip Galvanize
P	Coated PTFE
X	Cadinimium+PTFE

11. ACTUATION

Code	Operator
B	Bare Stem
E	Electric Actuator
P	Pneumatinc Actuator
G	Manual Gear
M	Actuator Mount

12. OTHER

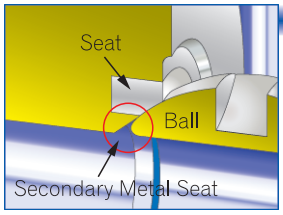
Code	Other
R	Reducing Bore
S	Sour Gas(NACE)

For Example

B2FAR16B-RG / WCB	2-Piece, Floating, ANSI Flange, 1" , Raised Force Class 300, RTFE, Graphite Packing, A352 WCB Body, 316 Trim, A193 B7 / 2H Bolt & Nut
B3TAJ32E-CG(R) / CF8M	3-Piece, Trunnion, ANSI Flange, 2" , RTJ Class 1500, PCTFE, Graphite Packing, A351 CF8M Body, 316 Trim, A193 B8M / 8M Bolt & Nut
B2FEF32B-AG / F316	2-Piece, Floating, SAE Flange, 2" , 6000 psig , POM , Viton O-Ring, Graphite Packing, A182 F316 Body, 316 Trim, A193 B8M / 8M Bolt & Nut

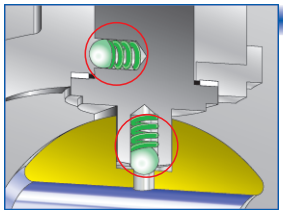
Features

The Hy-Lok Ball valves are designed, manufaturered and tested according to the most required international standards such as API, ANSI, ASME, DIN, BS, MSS etc...



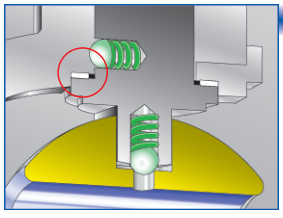
Firesafe Design

All Hy-Lok valves has a secondary metallic back up Firesafe seat, which ensures a metal to metal contact, in case the resilient seats would be disintegrated or burn-out by fire. To ensure the safety with fire, Hy-Lok ball valves have been Firesafe tested to BS 6755 part 2, API 607 & 6FA.



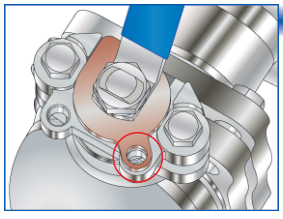
Anti-Static Device

All Hy-Lok valves have an Anti-Static Device to avoid build-up of static electricity between stem and ball, and stem and body.



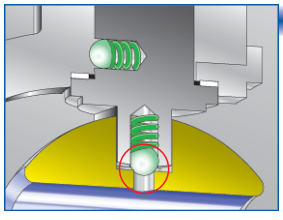
Anti - Blow - Out Proof Stem

The Anti-Blow-Out Proof Stem is mounted from the inside of the valve and cannot blow-out in case of overpressure in the line, as they are retained by body of valve and not by the gland.



Locking Device

In order to avoid any operational errors by unauthorized personal, Locking Device is provided as standards with full position.



Pressure Relief Hole in Ball (Optional)

In case of high increase of temperature and pressure at the cavity of body, this hole emits the exceeded volume of gas & fluid so that ball is free from direct damage.

Cavity Relieving Seat

The seats are designed in such a way that no overpressure can be built up in the cavity under temperature alternations.

ISO 5211 Mounting Pad (Option)

Hy-Lok ball valves provide ISO 5211 direct mounting pad which ensures direct mount of gear operator or actuator to valves. It will cut expenses of additional mounting bracket for connection.

Floating Ball Valve

Floating ball valves have been developed with incorporating many features according to latest API 6D standard approved. Complete split body design offers maximum protection against line pressure and thermal distortion with long life and trouble-free performance.

Applications :

Gas Industry
Chemical Industry
Power plants

Features :

Field repairable
Bi-Direction flow
Easy operation
Anti-Static & Blow out proof stems

End Connections :

ASME B16.10 RF, RTJ Flanged
JIS Flanged

Construction :

Free Floating Ball

Pressure Ratings :

ASME Class 150 to 2500
JIS 10K to 30K

Size Ranges :

1/2" thru 8"

Temperature Ranges :

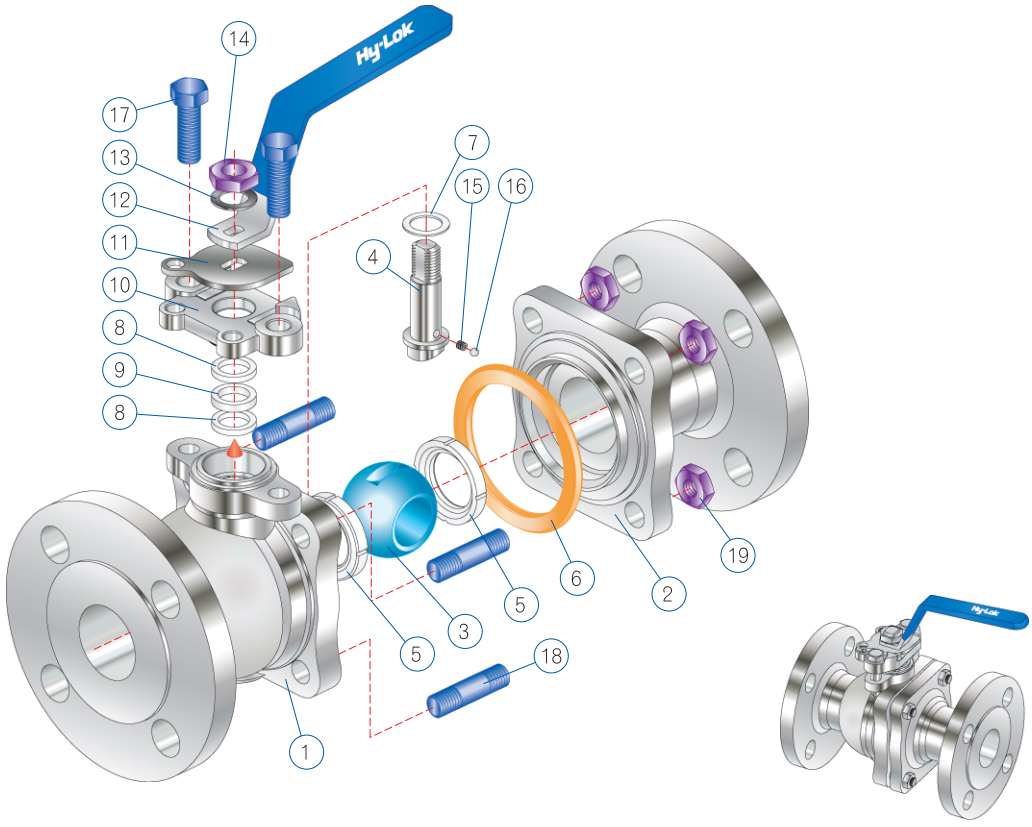
From -46°C to 180°C
Optional -196°C to 450°C

Standard Material :

A351 CF8M, CF8, A351 CF3M,
A216 WCB, A352 LCB, AL-Bronze,
A105, LF2, F316, Monel, etc.

Fire Safety :

API 607, API 6FA, BS 6755 Part-2

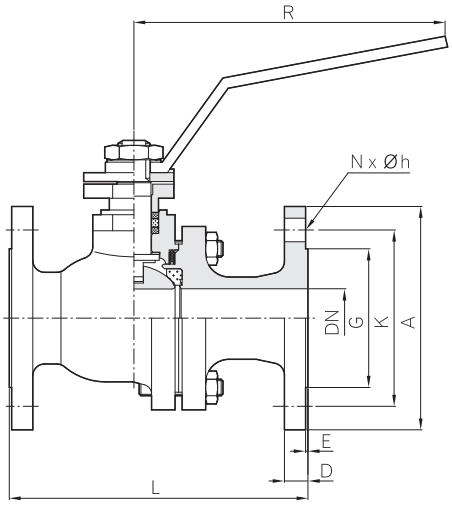


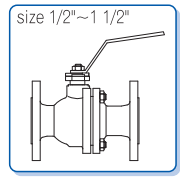
Materials of Construction

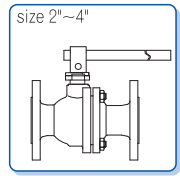
No.	Description	Material*	
1	Body	ASTM A351 CF8M ASTM A182 F316	ASTM A216 WCB ASTM A105
2	Body Cap		
3	Ball	ASTM A479 TP316	
4	Stem	ASTM A479 TP316	
5	Seat	PTFE / PCTFE	
6	Gasket	PTFE / GRAPHITE / 316SS SPIRAL - WOUND	
7	Stem Washer	PTFE	
8	Stem Packing	GRAPHITE	
9	Stem Graphite	GRAPHITE	
10	Gland	ASTM A351 CF8M	ASTM A216 WCB
11	Stopper	STAINLESS STEEL	
12	Handle	CARBON / STAINLESS STEEL	
13	Washer	STAINLESS STEEL	
14	Nut	STAINLESS STEEL	
15	Anti Static Spring	STAINLESS STEEL	
16	Anti Static Stem Ball	STAINLESS STEEL	
17	Hex Bolt	ASTM A193 B8M	
18	Stud Bolt	ASTM A193 B8M	ASTM A193 B7
19	Nut	ASTM A194 8M	ASTM A194 2H

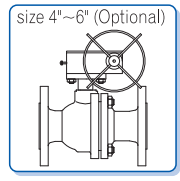
*Other materials can be applied upon request

Raised Face to Face









ASME CLASS 150 RF

(mm)

SIZE	DN	G	K	A	L	D	E	N	h	R	Weight(kg)
1/2"	15	34.9	60.3	88.9	108	9.7	1.6	4	15.9	160	2.8
3/4"	20	42.9	69.8	98.4	117	10.4	1.6	4	15.9	160	3.7
1"	25	50.8	79.3	107.9	127	11.2	1.6	4	15.9	180	5.3
1 1/4"	32	63.5	88.9	117.5	140	12.7	1.6	4	15.9	180	6.6
1 1/2"	38	73.0	98.4	127.0	165	14.2	1.6	4	15.9	200	8.3
2"	51	92.1	120.6	152.4	178	15.8	1.6	4	19.0	200	11.2
2 1/2"	65	104.8	139.7	177.8	190	17.5	1.6	4	19.0	320	18.4
3"	76	127.0	152.4	190.5	203	19.0	1.6	4	19.0	320	23.0
4"	102	157.2	190.5	228.6	229	23.8	1.6	8	19.0	420	39.3
5"	127	185.7	215.9	254.0	356	23.8	1.6	8	22.2	600	69.3
6"	152	215.9	241.3	279.4	394	25.4	1.6	8	22.2	600	90.0
8"	203	269.9	298.4	342.9	457	28.6	1.6	8	22.2	800	140.0

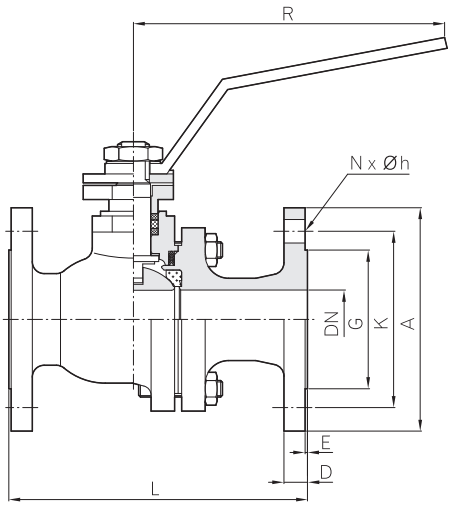
ASME CLASS 300 RF

(mm)

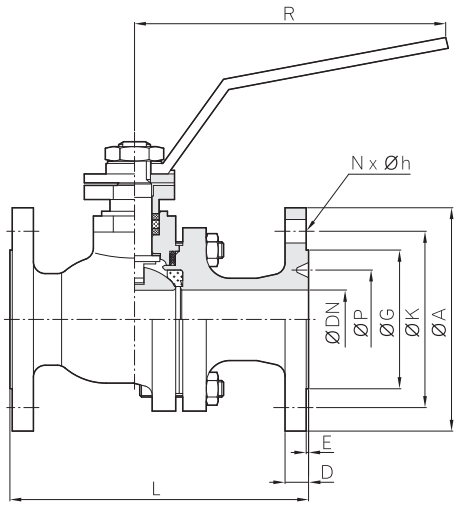
SIZE	DN	G	K	A	L	D	E	N	h	R	Weight(kg)
1/2"	15	34.9	66.7	95.2	140	14.3	1.6	4	15.9	160	3.0
3/4"	20	42.9	82.5	117.5	152	15.9	1.6	4	19.0	160	4.0
1"	25	50.8	88.9	123.8	165	17.5	1.6	4	19.0	180	6.6
1 1/4"	32	63.5	98.4	133.3	178	19.0	1.6	4	19.0	180	9.0
1 1/2"	38	73.0	114.3	155.6	190	20.6	1.6	4	22.2	200	12.9
2"	51	92.1	127.0	165.1	216	22.2	1.6	8	19.0	200	18.9
2 1/2"	64	104.8	149.2	190.5	241	25.4	1.6	8	22.2	320	28.0
3"	76	127.0	168.3	209.5	282	28.6	1.6	8	22.2	320	39.0
4"	102	157.2	200.0	254.0	305	31.8	1.6	8	22.2	420	60.0
5"	127	185.7	234.9	279.4	381	34.9	1.6	8	22.2	600	90.0
6"	152	215.9	269.9	317.5	403	36.5	1.6	12	22.2	600	130.0
8"	203	269.9	330.2	381.0	502	41.3	1.6	12	25.4	800	195.0

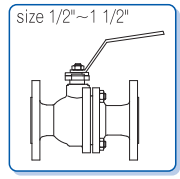
All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

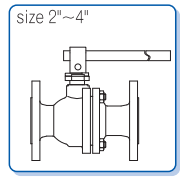
Raised Face to Face

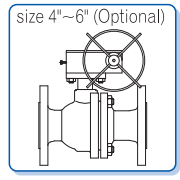


Ring Type Joint Face to Face









ASME CLASS 600 RF

(mm)

SIZE	DN	G	K	A	L	D	E	N	h	R	Weight(kg)
1/2"	15	34.9	66.7	95.2	165	14.3	6.4	4	15.9	245	4
3/4"	20	42.9	82.5	117.5	190	15.9	6.4	4	19.0	245	5
1"	25	50.8	88.9	123.8	216	17.5	6.4	4	19.0	245	8
1 1/4"	32	63.5	98.4	133.3	229	20.6	6.4	4	19.0	270	12
1 1/2"	38	73.0	114.3	155.6	241	22.2	6.4	4	22.2	270	15
2"	51	92.1	127.0	165.1	292	25.4	6.4	8	19.0	380	23
2 1/2"	64	104.8	149.2	190.5	330	28.6	6.4	8	22.2	380	33
3"	76	127.0	168.3	209.5	356	31.8	6.4	8	22.2	450	48
4"	102	157.2	215.9	273.0	432	38.1	6.4	8	25.4	600	80
5"	127	185.7	266.7	330.2	508	44.4	6.4	8	28.6	800	120
6"	152	215.9	292.1	355.6	559	47.6	6.4	12	28.6	800	156
8"	203	269.9	349.2	419.1	660	55.6	6.4	12	31.7	1000	224

ASME CLASS 600 RTJ

(mm)

SIZE	DN	P	G	K	A	L	D	E	N	h	R	Weight(kg)
1/2"	15	34.1	50.8	66.7	95.2	163.0	14.3	5.6	4	15.9	245	4
3/4"	20	42.9	63.5	82.5	117.5	190.0	15.9	6.4	4	19.0	245	5
1"	25	50.8	69.9	88.9	123.8	216.0	17.5	6.4	4	19.0	245	8
1 1/4"	32	60.3	79.3	98.4	133.3	229.0	20.6	6.4	4	19.0	270	12
1 1/2"	38	68.3	90.5	114.3	155.6	241.0	22.2	6.4	4	22.2	270	15
2"	51	82.6	108.0	127.0	165.1	295.0	25.4	7.9	8	19.0	380	23
2 1/2"	64	101.6	127.0	149.2	190.5	333.0	28.6	7.9	8	22.2	380	33
3"	76	123.8	146.1	168.3	209.5	359.0	31.8	7.9	8	22.2	450	48
4"	102	149.2	174.8	215.9	273.0	435.0	38.1	7.9	8	25.4	600	80
5"	127	181.0	209.6	266.7	330.2	511.0	44.4	7.9	8	28.6	800	120
6"	152	211.1	241.3	292.1	355.6	562.0	47.6	7.9	12	28.6	800	156
8"	203	269.9	301.8	349.2	419.1	663.0	55.6	7.9	12	31.7	1000	224

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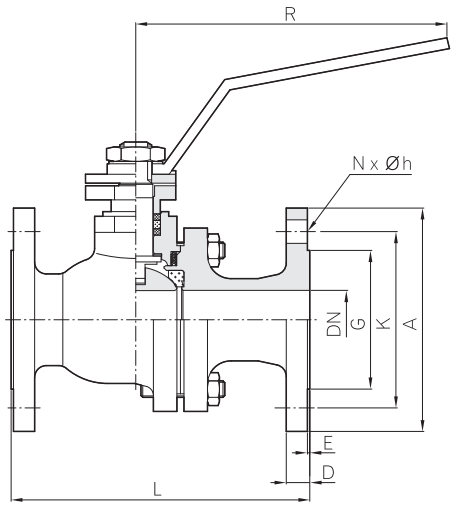
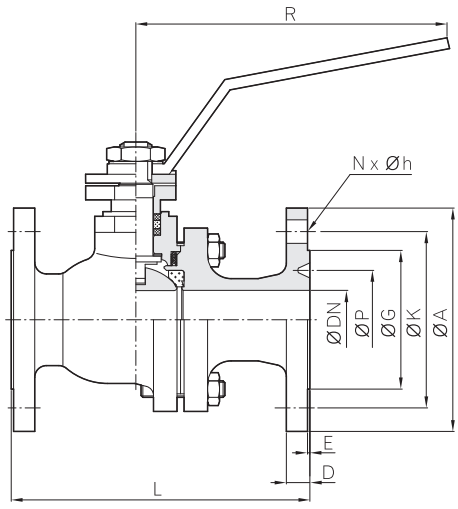
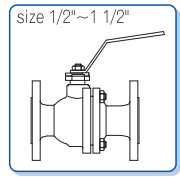
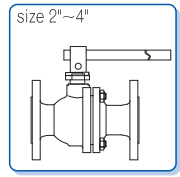
Raised Face to Face

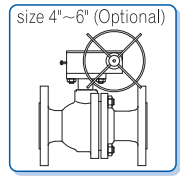


Ring Type Joint Face to Face









ASME CLASS 900 RF / RTJ

(mm)

SIZE	DN	P	G	K	A	L	D	E	N	h	R	Weight(kg)
1"	25	50.8	50.8 / 71.4	101.6	149.2	254	28.6	6.4	4	25.4	160	14.0
1 1/4"	32	60.3	63.5 / 81.0	111.1	158.7	279	28.6	6.4	4	25.4	160	13.5
1 1/2"	38	68.3	73.0 / 91.9	123.8	177.8	305	31.8	6.4	4	28.6	320	26.0
2"	48	95.3	92.1 / 124.0	165.1	215.9	368 / 371	38.1	6.4 / 7.9	8	25.4	320	38.0
2 1/2"	64	108.0	104.8 / 136.7	190.5	244.5	419 / 422	41.3	6.4 / 7.9	8	28.6	600	42.5
3"	76	123.8	123.0 / 155.5	190.5	241.3	381 / 384	38.1	6.4 / 7.9	8	25.4	600	50.0
4"	102	149.2	157.2 / 180.9	234.9	292.1	457 / 460	44.5	6.4 / 7.9	8	31.7	900	95.0

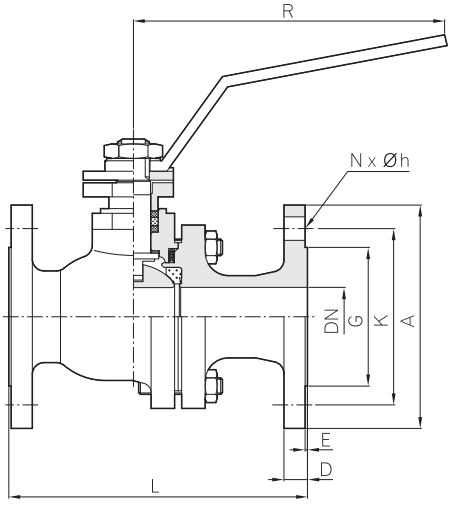
ASME CLASS 1500 RF / RTJ

(mm)

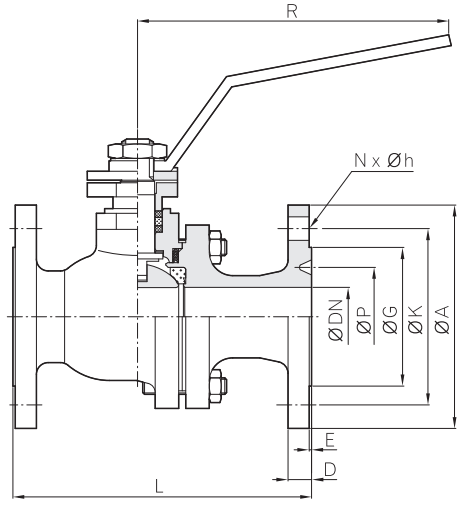
SIZE	DN	P	G	K	A	L	D	E	N	h	R	Weight(kg)
1"	25	50.8	50.8 / 71.4	101.6	149.2	254	28.6	6.4	4	25.4	160	14.0
1 1/4"	32	60.3	63.5 / 81.0	111.1	158.7	279	28.6	6.4	4	25.4	160	13.5
1 1/2"	38	68.3	73.0 / 91.9	123.8	177.8	305	31.8	6.4	4	28.6	320	26.0
2"	48	95.3	92.1 / 124.0	165.1	215.9	368 / 371	38.1	6.4 / 7.9	8	25.4	320	38.0
2 1/2"	64	108.0	104.8 / 136.7	190.5	244.5	419 / 422	41.3	6.4 / 7.9	8	28.6	600	42.5
3"	76	136.5	127.0 / 168.2	203.2	266.7	470 / 473	47.6	6.4 / 7.9	8	31.7	600	50.0
4"	102	161.9	157.2 / 193.6	241.3	311.1	546 / 549	54.0	6.4 / 7.9	8	34.9	900	95.0

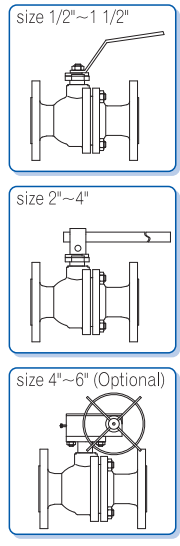
All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

Raised Face to Face



Ring Type Joint Face to Face





ASME CLASS 2500 RF

(mm)

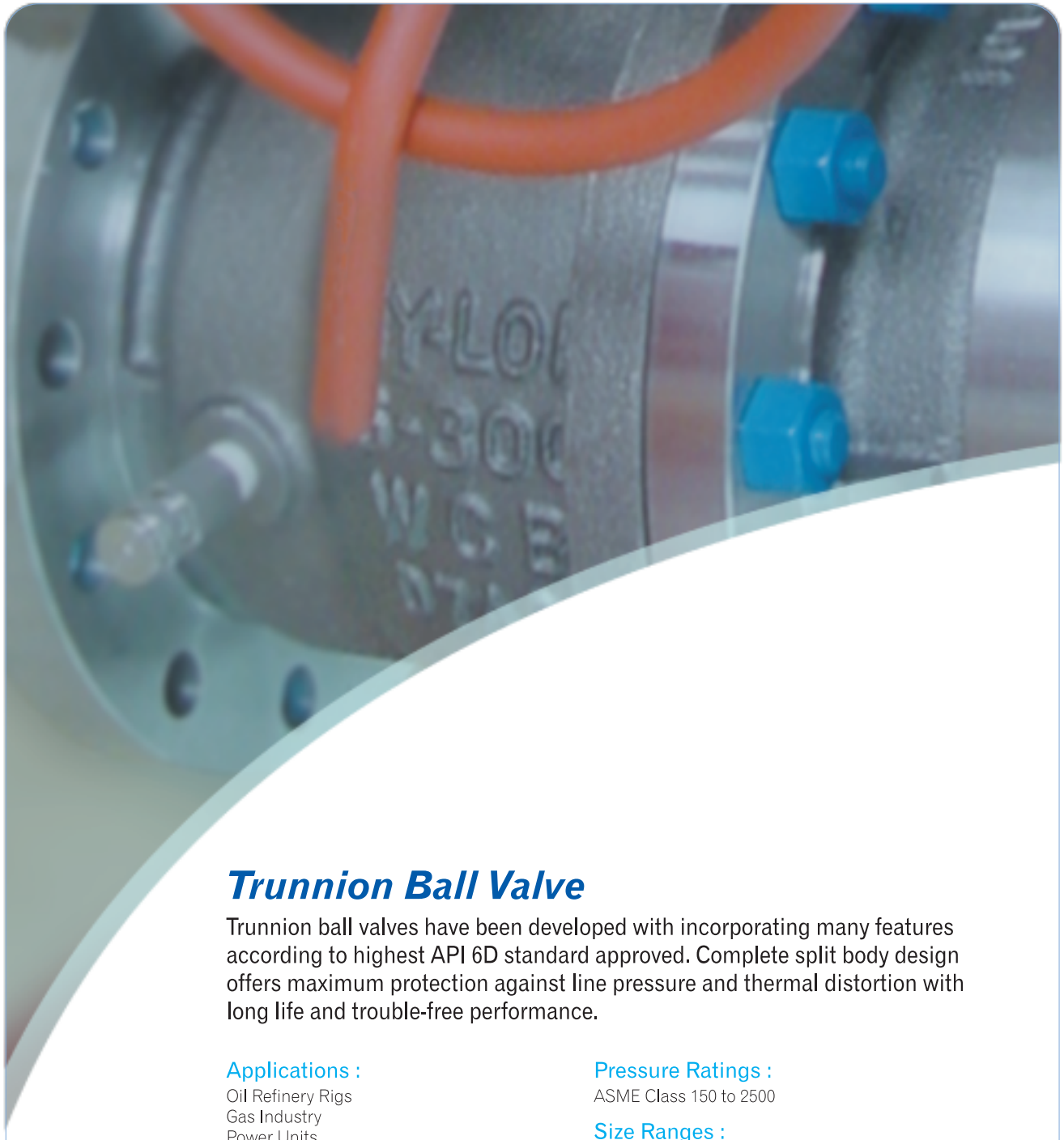
SIZE	DN	G	K	A	L	D	E	N	h	R	Weight(kg)
1"	25	50.8	108.0	158.8	308	34.9	6.4	4	25.4	160	15.8
1 1/4"	32	63.5	130.2	184.2	349	38.1	6.4	4	28.6	160	21.7
1 1/2"	38	73.0	146.1	203.2	384	44.4	6.4	4	31.7	320	29.5
2"	51	92.1	171.5	235.0	451	50.8	6.4	8	28.6	320	43.0
2 1/2"	64	104.8	196.5	266.7	508	57.1	6.4	8	31.7	600	47.8
3"	76	127.0	228.6	304.8	578	66.7	6.4	8	34.9	600	56.4
4"	102	157.2	273.1	355.6	673	76.2	6.4	8	41.3	900	105.0

ASME CLASS 2500 RTJ

(mm)

SIZE	DN	P	G	K	A	L	D	E	N	h	R	Weight(kg)
1"	25	60.3	82.5	108.0	158.8	308	38.1	6.4	4	25.4	160	15.8
1 1/4"	32	72.2	101.6	130.2	184.2	352	44.4	7.9	4	28.6	160	21.7
1 1/2"	38	82.6	114.3	146.1	203.2	387	50.8	7.9	4	31.7	320	29.5
2"	48	101.6	133.4	171.5	235.0	454	57.1	7.9	8	28.6	320	43.0
2 1/2"	64	111.1	149.4	196.5	266.7	514	66.7	9.5	8	31.7	600	47.8
3"	76	127.0	168.2	228.6	304.8	584	76.2	9.5	8	34.9	600	56.4
4"	102	157.2	203.2	273.1	355.6	683		11.1	8	41.3	900	105.0

All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.



Trunnion Ball Valve

Trunnion ball valves have been developed with incorporating many features according to highest API 6D standard approved. Complete split body design offers maximum protection against line pressure and thermal distortion with long life and trouble-free performance.

Applications :
Oil Refinery Rigs
Gas Industry
Power Units

Features :
Field repairable
Bi-Direction flow
Cavity relieving seats
Anti-Static & Blow out proof stems

End Connections :
ASME B16.10 RF, RTJ Flanged

Construction :
Trunnion Ball

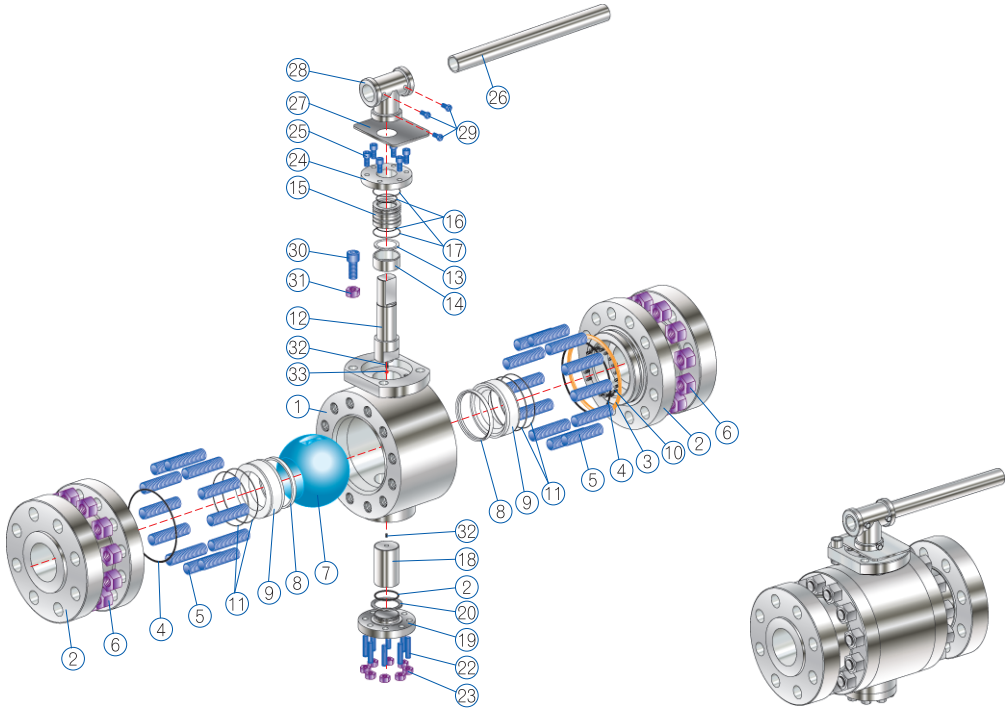
Pressure Ratings :
ASME Class 150 to 2500

Size Ranges :
2" thru 4"

Temperature Ranges :
From -46°C to 230°C
Optional -196°C to 450°C

Standard Material :
A351 CF8M, CF8, CF3M
A182 F316, F316L, A105, LF2, F51, F53, I625, etc..

Fire Safety :
API 607, API 6FA, BS 6755 Part-2

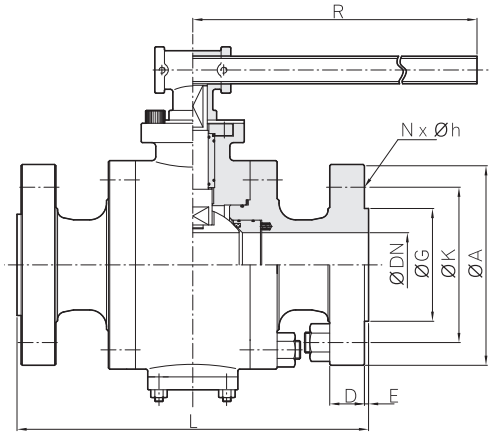


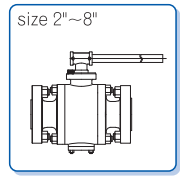
Materials of Construction

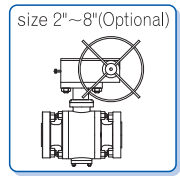
No.	Description	Material*	
1	Body	ASTM A351 CF8M ASTM A182 F316	ASTM A216 WCB ASTM A105
2	End Connection		
3	End Connection Gasket	PTFE / GRAPHITE / 316SS-SPIRAL WOUND	
4	End Connection O-Ring	NBR	
5	End Connection Bolt	ASTM A193 B8M	ASTM A193 B7
6	End Connection Nut	ASTM A194 8M	ASTM A194 2H
7	Ball	ASTM A479 TP316	
8	Seat	PTFE / PCTFE	
9	Seat Holder	STAINLESS STEEL	
10	Seat Spring	STAINLESS STEEL	
11	Seat O-Ring	NBR	
12	Stem	ASTM A479 TP316	
13	Thrust Seal	316SS + PTFE	
14	Dry Bearing	316SS + PTFE	
15	Stem Bush	STAINLESS STEEL	
16	Bush Inner O-Ring	NBR	
17	Bush Outer O-Ring	NBR	
18	Trunnion	STAINLESS STEEL	
19	Trunnion Cover	ASTM A351 CF8M	ASTM A216 WCB
20	Trunnion Gasket	PTFE/GRAPHITE/316SS-SPIRAL WOUND	
21	Trunnion O-Ring	NBR	
22	Trunnion Cover Bolt	ASTM A193 B8M	ASTM A193 B7
23	Trunnion Cover Nut	ASTM A194 8M	ASTM A194 2H
24	Gland Flange	ASTM A351 CF8M	ASTM A216 WCB
25	Gland Bolt	ASTM A193 B8M	ASTM A193 B7
26	Handle	STAINLESS STEEL	
27	Stopper	STAINLESS STEEL	
28	Lever Socket	STAINLESS STEEL	
29	Lever Set Bolt	STAINLESS STEEL	
30	Stopper Bolt	STAINLESS STEEL	
31	Stopper Nut	STAINLESS STEEL	
32	Anti Static Spring	STAINLESS STEEL	
33	Anti Static Ball	STAINLESS STEEL	

*Other materials can be applied upon request

Raised Face to Face







ASME CLASS 150 RF

(mm)

SIZE	DN	G	K	A	L	D	E	N	h	R	Weight(kg)
2"	48	92.1	120.6	152.4	178	19.0	1.6	4	19.0	220	10.5
2 1/2"	65	104.8	139.7	177.8	190	22.2	1.6	4	19.0	320	16.0
3"	76	127.0	152.4	190.5	203	23.8	1.6	4	19.0	320	23.0
4"	100	157.2	190.5	228.6	229	23.8	1.6	8	19.0	420	33.8
5"	125	185.7	215.9	254.0	356	23.8	1.6	8	22.2	420	58.0
6"	150	215.9	241.3	279.4	394	25.4	1.6	8	22.2	600	68.0
8"	203	269.9	298.4	342.9	457	28.6	1.6	8	22.2	800	105.0

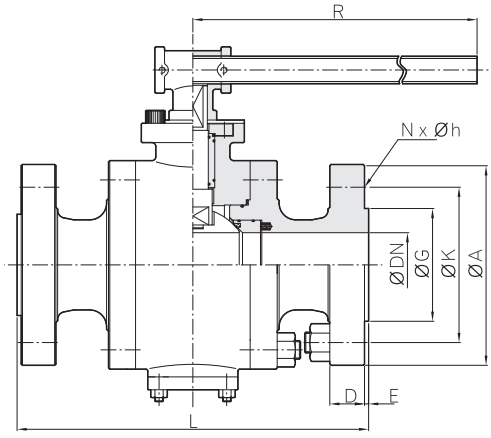
ASME CLASS 300 RF

(mm)

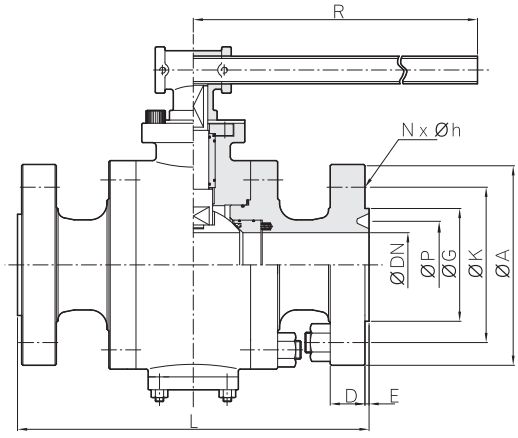
SIZE	DN	G	K	A	L	D	E	N	h	R	Weight(kg)
2"	48	92.1	127.0	165.1	216	22.2	1.6	8	19.0	220	14.0
2 1/2"	65	104.8	149.2	190.5	241	25.4	1.6	8	22.2	320	28.0
3"	76	127.0	168.3	209.5	282	28.6	1.6	8	22.2	320	33.0
4"	100	157.2	200.0	254.0	305	31.8	1.6	8	22.2	420	50.0
5"	125	185.7	234.9	279.4	381	34.9	1.6	8	22.2	420	70.0
6"	150	215.9	269.9	317.5	403	36.5	1.6	12	22.2	600	108.0
8"	203	269.9	330.2	381.0	502	41.3	1.6	12	25.4	800	180.0

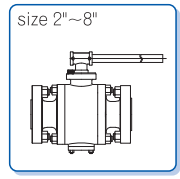
All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

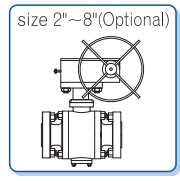
Raised Face to Face



Ring Type Joint Face to Face







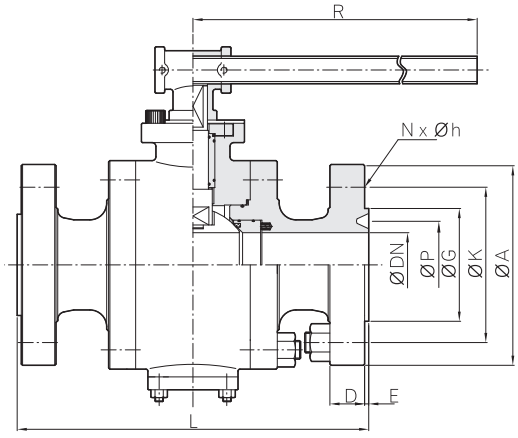
ASME CLASS 600 RF / RTJ

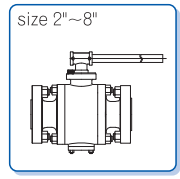
(mm)

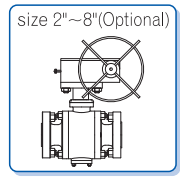
SIZE	DN	P	G	K	A	L	D	E	N	h	R	Weight(kg)
2"	48	82.6	92.1 / 108.0	127.0	165.1	292 / 295	25.4	6.4	8	19.0	220	27.0
2 1/2"	65	101.6	104.8 / 127.0	149.2	190.5	330 / 333	28.6	6.4	8	22.2	320	32.8
3"	76	123.8	127.0 / 146.1	168.3	209.5	356 / 359	31.8	6.4	8	22.2	320	53.0
4"	100	149.2	157.2 / 174.8	215.9	273.0	432 / 435	38.1	6.4	8	25.4	420	93.0
5"	127	181.0	185.7 / 209.6	266.7	330.2	508 / 501	44.4	6.4	8	28.6	800	120.0
6"	150	211.1	215.9 / 241.3	292.1	355.6	559 / 562	47.6	6.4	12	28.6	600	180.0
8"	203	269.9	269.9 / 301.8	349.2	419.1	660 / 663	55.6	6.4	12	31.7	800	224.0

All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

Ring Type Joint Face to Face







ASME CLASS 900 RTJ

(mm)

SIZE	DN	P	G	K	A	L	D	E	N	h	R	Weight(kg)
2"	50	95.3	92.1 / 124.0	165.1	215.9	368 / 371	38.1	6.4 / 7.9	8	25.4	280	38.0
2 1/2"	65	108.0	104.8 / 136.7	190.5	244.5	419 / 422	41.3	6.4 / 7.9	8	28.6	400	42.5
3"	76	123.8	127.0 / 155.5	190.5	241.3	381 / 384	38.1	6.4 / 7.9	8	25.4	400	50.0
4"	100	149.2	157.2 / 180.9	234.9	292.1	457 / 460	44.5	6.4 / 7.9	8	31.7	650	95.0

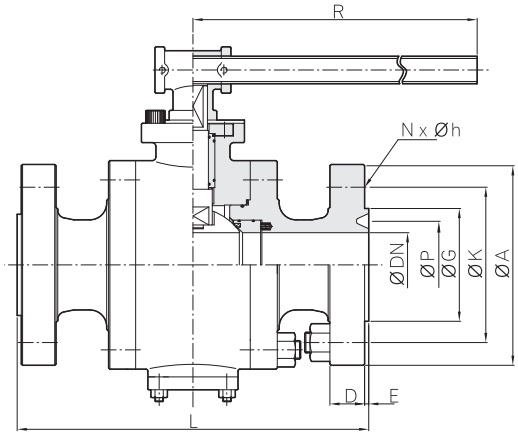
ASME CLASS 1500 RTJ

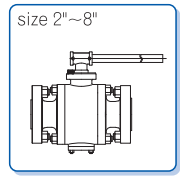
(mm)

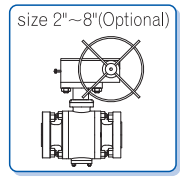
SIZE	DN	P	G	K	A	L	D	E	N	h	R	Weight(kg)
2"	50	95.3	92.1 / 124.0	165.1	215.9	368 / 371	38.1	6.4 / 7.9	8	25.4	400	38.0
2 1/2"	65	108.0	104.8 / 136.7	190.5	244.5	419 / 422	41.3	6.4 / 7.9	8	28.6	650	42.5
3"	76	136.5	127.0 / 168.2	203.2	266.7	470 / 473	47.6	6.4 / 7.9	8	31.7	650	50.0
4"	100	161.9	157.2 / 193.6	241.3	311.1	546 / 549	54.0	6.4 / 7.9	8	34.9	800	95.0

All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

Ring Type Joint Face to Face





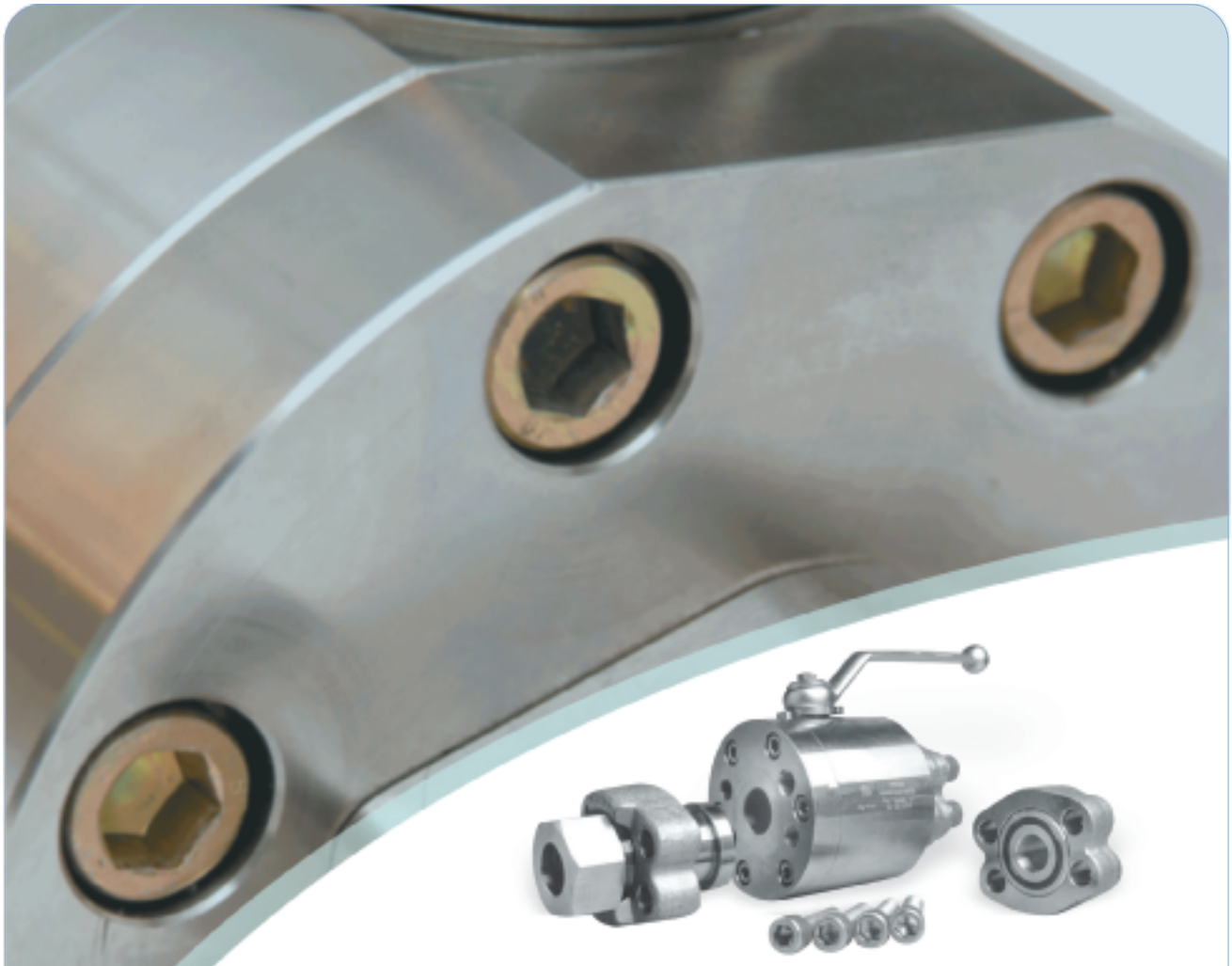


ASME CLASS 2500 RTJ

(mm)

SIZE	DN	P	G	K	A	L	D	E	N	h	R	Weight(kg)
2"	50	101.6	92.1 / 133.4	171.5	235.0	451 / 454	50.8	6.4 / 7.9	8	28.6	400	47
3"	76	127.0	127.0 / 168.2	228.6	304.8	578 / 584	66.7	6.4 / 9.5	8	34.9	500	130
4"	100	157.2	157.2 / 203.2	273.1	355.6	673 / 683	76.2	6.4 / 11.1	8	41.3	600	250

All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.



SAE J518 & ISO 6164 Ball Valve

SAE J518 & ISO6164 flanged ball valves are units which serve to shut off the flow of an operating medium in both directions

Applications :

Marine Hydraulics
Power Units
Oil & Gas Refinery Rigs

Features :

Compact design
2-Way wafer style
Easy operation
Blow out proof stems

End Connections :

SAE J518 Code 61/62 Flanged
ISO 6164 Flanged

Pressure Ratings :

SAE J518 Code 61 : 3000 psi to 5"
SAE J518 Code 62 : 6000 psi to 3"
ISO 6164 : PN 250, PN 400 to 6"

Size Ranges :

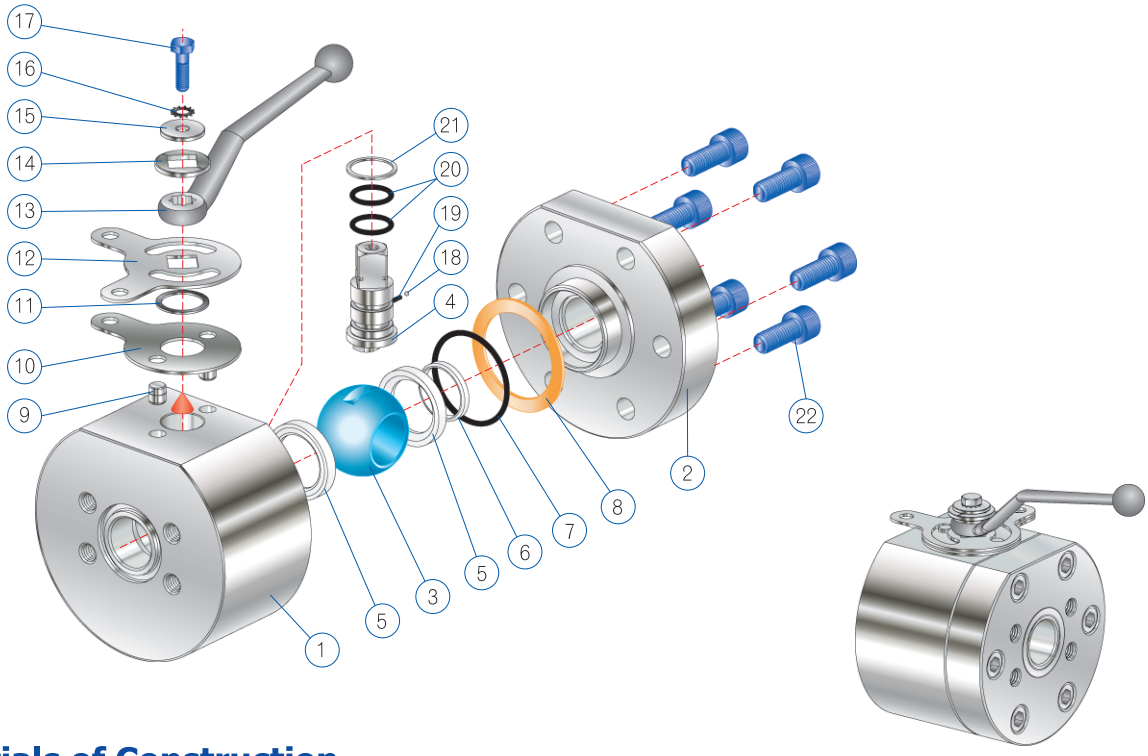
1/2" thru 6" Full Bore

Temperature Ranges :

From -46°C to 230°C

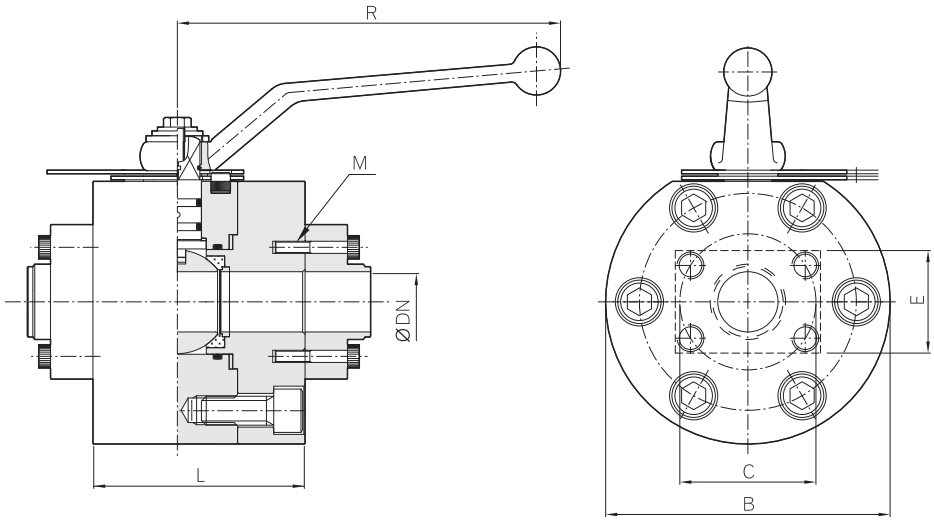
Standard Material :

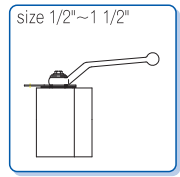
A182 F316, F316L, A105, LF2

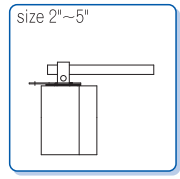


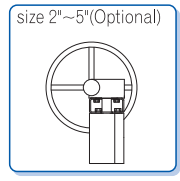
Materials of Construction

No.	Description	Material*	
1	Body	ASTM A182 F316	ASTM A105
2	End Connection		
3	Ball	ASTM A479 TP316	
4	Stem	ASTM A479 TP316	
5	Seat	POM	
6	Inner Ring	ASTM A479 TP316	
7	O - Ring	VITON	
8	End Packing	GRAPHITE	
9	Stop Pin	STAINLESS STEEL	
10	Lower Plate	STAINLESS STEEL	
11	Washer	POM	
12	Upper Plate	STAINLESS STEEL	
13	Handle	STAINLESS STEEL	
14	Washer	STAINLESS STEEL	
15	Upper Washer	STAINLESS STEEL	
16	Tooth Washer	STAINLESS STEEL	
17	Hex. Bolt	STAINLESS STEEL	
18	Anti Static Ball	STAINLESS STEEL	
19	Anti Static Spring	STAINLESS STEEL	
20	O - Ring	VITON	
21	Trust Bearing	POM	
22	Wrench Bolt	ASTM A193 B8M	ASTM A193 B7









SAE J518 CODE 61 #3000

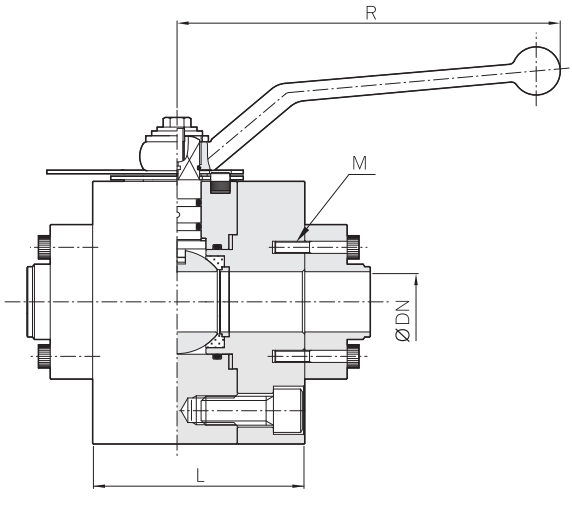
(mm)

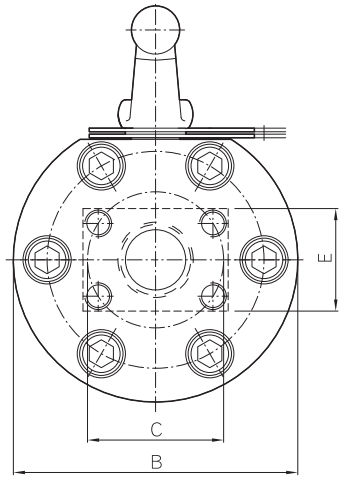
SIZE	DN	L	R	M		B	C	E	Weight(kg)
1/2"	13	75	115	5/16" - 18UNC x L35	M8 - 1.25P x L35	78	38.1	17.5	2.5
3/4"	20	80	160	3/8" - 16UNC x L35	M10 - 1.50P x L35	98	47.6	22.2	3.9
1"	25	88	160	3/8" - 16UNC x L40	M10 - 1.50P x L40	118	52.4	26.2	6.0
1 1/4"	32	100	160	7/16" - 14UNC x L40	M10 - 1.50P x L40	145	58.7	30.2	11.6
1 1/2"	38	110	320	1/2" - 13UNC x L40	M12 - 1.75P x L40	165	69.9	35.7	16.2
2"	50	116	320	1/2" - 13UNC x L45	M12 - 1.75P x L45	198	77.8	42.9	24.9
2 1/2"	63	150	600	1/2" - 13UNC x L50	M12 - 1.75P x L50	198	88.9	50.8	33.3
3"	76	180	600	5/8" - 11UNC x L60	M16 - 2.00P x L60	210	106.4	61.9	40.0
4"	100	170	900	5/8" - 11UNC x L55	M16 - 2.00P x L55	258	130.2	77.8	59.5
5"	125	210	900	5/8" - 11UNC x L65	M16 - 2.00P x L65	300	152.4	92.1	88.0

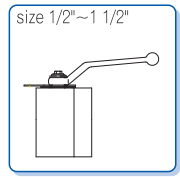
SAE J518 CODE 62 #6000

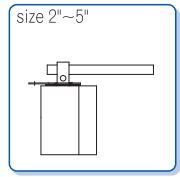
(mm)

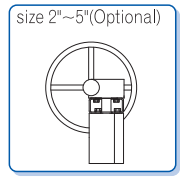
SIZE	DN	L	R	M		B	C	E	Weight(kg)
1/2"	13	75	115	5/16" - 18UNC x L35	M8 X 1.25P x L35	78	40.5	18.2	2.5
3/4"	20	80	160	3/8" - 16UNC x L40	M10 X 1.50P x L40	98	50.8	23.8	3.9
1"	25	88	160	7/16" - 14UNC x L40	M12 X 1.75P x L40	118	57.2	27.8	6.0
1 1/4"	32	100	160	1/2" - 13UNC x L45	M14 X 2.00P x L45	145	66.7	31.8	11.6
1 1/2"	38	120	320	5/8" - 11UNC x L55	M16 X 2.00P x L55	165	79.4	36.5	16.4
2"	50	130	320	3/4" - 10UNC x L65	M20 X 2.50P x L65	198	96.8	44.5	24.9
2 1/2"	63	150	600	1" - 8UNC x L60	M24 X 3.00P x L60	198	123.8	58.7	33.3
3"	76	180	600	1 1/8" - 8UNC x L85	M30 X 3.50P x L85	210	152.4	71.6	40.0











ISO 6164-1 250bar

(mm)

SIZE	DN	L	R	M		B	C	E	Weight(kg)
1/2"	14	75	115	3/8" - 16UNC x L35	M10 - 1.50P x L35	78	54	60	2.5
3/4"	19	80	160	7/16" - 14UNC x L35	M12 - 1.75P x L35	98	64	70	3.9
1"	24	88	160	7/16" - 14UNC x L40	M12 - 1.75P x L40	118	72	80	6.0
1 1/4"	32	100	160	5/8" - 11UNC x L40	M16 - 2.00P x L40	145	80	90	11.6
1 1/2"	32	110	320	5/8" - 11UNC x L45	M16 - 2.50P x L40	165	80	90	16.2
2"	38	116	320	5/8" - 11UNC x L45	M16 - 2.50P x L45	198	98	100	24.9
2 1/2"	50	150	600	3/4" - 10UNC x L65	M20 - 2.50P x L65	198	118	120	33.3
3"	63	180	600	1" - 8UNC x L75	M24 - 3.00P x L75	210	145	145	40.0
4"	76	170	900	1 1/8" - 8UNC x L90	M30 - 3.50P x L90	258	175	180	59.5
5"	100	210	900	1" - 8UNC x L100	M24 - 3.00P x L100	300	205	245	88.0
6"	132	260	1200	1 1/8" - 8UNC x L100	M30 - 3.50P x L100	360	245	300	182.0

ISO 6164-2 400bar

(mm)

SIZE	DN	L	R	M		B	C	E	Weight(kg)
1/2"	6	75	115	3/8" - 16UNC x L35	M10 - 1.50P x L35	78	54	60	2.5
3/4"	11	80	160	3/8" - 16UNC x L40	M10 - 1.50P x L40	98	54	60	3.9
1"	15	88	160	7/16" - 14UNC x L40	M12 - 1.75P x L40	118	64	70	6.0
1 1/4"	23	100	160	7/16" - 14UNC x L45	M12 - 1.75P x L45	145	72	80	11.6
1 1/2"	32	120	320	5/8" - 11UNC x L45	M16 - 2.50P x L40	165	80	90	16.4
2"	38	116	320	5/8" - 11UNC x L45	M16 - 2.50P x L45	198	98	100	24.9
2 1/2"	50	150	600	3/4" - 10UNC x L65	M20 - 2.50P x L65	198	118	120	33.3
3"	63	180	600	1" - 8UNC x L75	M24 - 3.00P x L75	210	145	145	40.0
4"	76	170	600	1 1/8" - 8UNC x L90	M30 - 3.50P x L90	258	175	180	59.5
5"	100	210	900	1" - 8UNC x L100	M24 - 3.00P x L100	300	205	245	88.0
6"	132	260	1200	1 1/8" - 8UNC x L100	M30 - 3.50P x L100	360	245	300	182.0

Floating Ball Valve Torque Value

(Unit : N·m)

Size (In.)	Class 150	Class 300	Class 600	Class 900	Class 1500	Class 2500
1/2"	8	10	18	20	35	48
3/4"	10	16	23	38	46	60
1"	20	25	40	70	120	153
1 1/2"	49	70	94	150	170	210
2"	60	82	130	210	310	414
2 1/2"	94	105	152	320	440	580
3"	105	145	201	450	600	710
4"	160	260	370			
5"	410	690				
6"	650	1100				
8"						

* To apply actuator selection, 25% of safety factor shell be recommended.

Floating Ball Valve Flow Coefficient (CV)

Size (In.)	Class 150	Class 300	Class 600	Class 900	Class 1500	Class 2500
1/2"	25	25	25	25	25	25
3/4"	50	50	50	50	50	50
1"	90	90	90	90	90	90
1 1/2"	230	230	230	230	230	230
2"	420	420	420	420	420	330
2 1/2"	610	610	610	610	610	520
3"	1150	1150	1150	1150	1150	810
4"	2600	2600	2600			
5"	3100	3100				
6"	4800	4800				
8"						

* Other materials can be applied upon request

Ball Valve Constition Table

CONSTRUCTION	2-Piece , 3-Piece Body	SEAT MATERIAL	NYLON
	Floating , trunnion Ball		POM
END CONNECTIONS	Socket / Butt Weld (ANSI/JIS)		NEOPRENE
	Extended Pipe Butt / Plain Weld		METAL
	Male / Female Thread	SEAL MATERIAL	VITON
	ANSI, JIS, DIN, SAE, ISO Flange		VITON AED / GLT
SIZE RANGES	1/2" ~ 8"		NBR
PRESSURE RATINGS	ASME CLASS 150 to 2500		HNBR
	JIS 10K to 30K		EPDM
	SAE 3000 to 6000		KALEZ
	ISO PN 250 to 400		AFLAS
TEMPERATURE RANGES	From -46°C to 230°C	GASKET MATERIAL	316 Sprial Gasket
	Optional -196°C to 450°C		ASBESTOS
BODY MATERIAL	STAINLESS STEEL - A351 CF8M , A351 CF3M		Graphite
	A182 F51 , A182 F316	BOLT MATERIAL	ASTM & JIS Grade Material with Coating
	CARBON STEEL - A352 WCB , A352 LCB , A352 LCC		(Hot Dip Galvanize, PTFE Coating etc.)
	ALLOY - ALLOY 400 , INCONEL 625	OTHER	Bare Stem
SEAT MATERIAL	PTFE		Electric Actuator
	RTFE		Pneumatic Actuator
	PCTFE		Manual Gear
	PEEK		Actuator Mount
	UHMWPE		

Payment Terms

The price of the goods shall be the Seller's quoted price or, where no price has been quoted, the price listed in the Seller's published price lists current at the date of acceptance of the order. All prices quoted are valid for 30 days only or until earlier acceptance by the Buyer, after which time they may be altered by the Seller without giving notice to the Buyer.

Ordering Information

Orders must be in writing and are subject to approval and confirmation upon receipt of Seller.
Cancellation of orders for standard items may not be made without written consent. Orders for material made special to customer's specifications may not be canceled without payment to Hy-Lok Corporation for all expenses involved, and then only by special permission.

Limited Warranty

Products are guaranteed against defects in material and workmanship for a period of one (1) year from the date of shipment. This warranty is limited to replacement or repairing and any material which upon our inspection on our premises we find to be thus defective. Transportation charges on material returned must be prepaid.

Limitation of Liability

Seller shall not be liable to the Buyer or to any other person, firm, or corporation for any incidental or consequential loss, damage, or injury arising out of any breach of warranty or any other act or default relating to Buyer's order or to products or services provided to Buyer, even if any such loss, damage, or injury is caused by Seller's negligence. The correction of defects as provided in the warranty statement above shall constitute Seller's full obligation with respect to all claims and Seller's liability shall in no event exceed the unit purchase price of the product in question.

Notice of Claims

Immediately upon receipt of the goods, Buyer shall inspect the same. Any claims for shortage must be made within ten (10) days after Buyer's receipt. All other claims, including, but not limited to, for alleged defective goods, must be made within fifteen (15) days after Buyer learn of the fact upon which such claim is based.

Return of Material

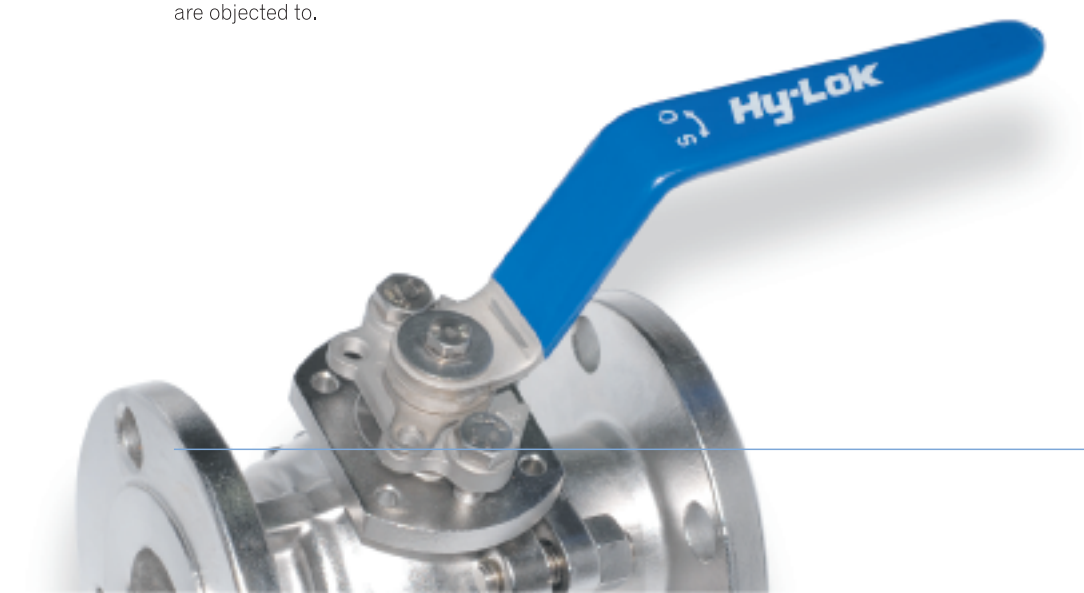
Materials may not be returned for credit without our written permission. Returned material must be accompanied by instructions as to disposition.

Warning

In order to ensure proper and continued performance of our products, regular inspection and maintenance is required to detect any corrosion or unusual wear of metallic and nonmetallic parts.

Notice

The terms and conditions set forth above are part of Hy-Lok Corporation's products. They may not be added to, modified, superseded, or otherwise altered, except by a written instrument signed by an Authorized representative of Hy-Lok Corporation. Please understand that by sending your purchase order or any other document for any product(s) offered for sale by Hy-Lok Corporation or accepting delivery for such product(s), you agree to the terms and conditions above. Any different or additional terms and conditions in your acceptance of this offer are objected to.



Sales & Service Network

Hy-Lok's service from worldwide network system assorted with high Technology and Know-How will be provided at themoment you choose "Hy-Lok". Hy-Lok has built international distribution network to achieve the goal of prompt delivery and provide the best service.

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Seoul Office / Daejeon Office / Gwangju Office / Suwon Office

Agents
Seoul, Busan, Ulsan, Masan, Changwon, Gwangju, Yeosu, Gwangyang, Daegu, Gumi, Pohang, Ulchin, Daejeon, Seosan

International Master Distributor

- USA / Hy-Lok USA Inc.
- CANADA / Hy-Lok Canada
- SINGAPORE / Hy-Lok Asia Valves & Fittings
- CHINA / Hy-Lok China Co., Ltd.
- SAUDI ARABIA / Al-ABDULKARIM Holding Co.
- NETHERLANDS / Hy-Lok Europe BV
- AUSTRALIA / Hy-Lok Australia P/L
- NIGERIA / Hy-Lok Nigeria

Regional Distributors

www.hy-lok.com