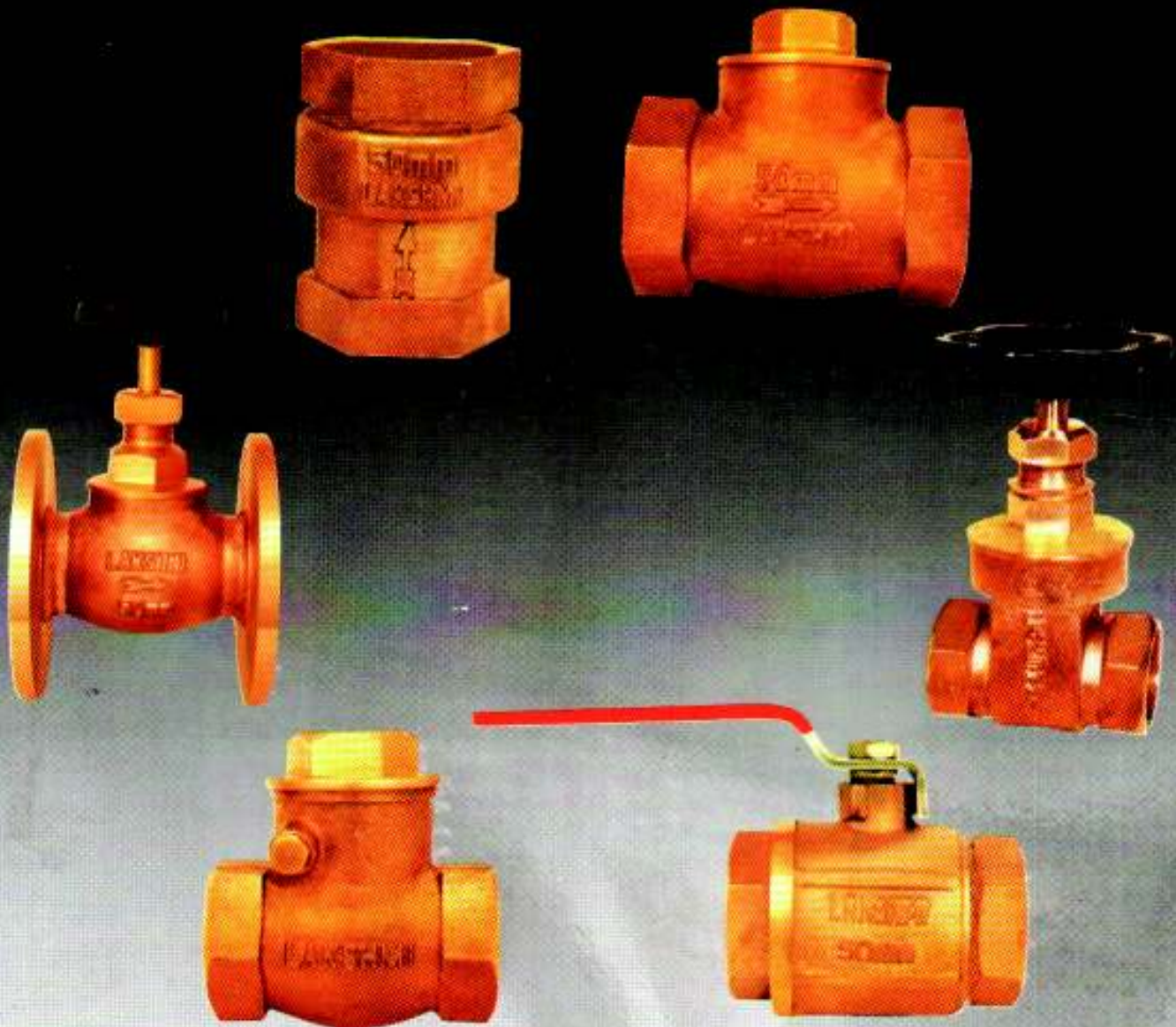


Lakshmi[®]



VALVES & COCKS



Lakshmi[®]

'**LAKSHMI**' Brand Valves & Cocks are backed with years of continuous development efforts and unrelenting focus on quality. So stringent are the quality control checks, which leads to better functional capability, reduced maintenance necessities and convenience of use. This has made '**LAKSHMI**' synonymous with high quality products, which has generated added confidence in its patrons and helped '**LAKSHMI**' to grow fast.

'**LAKSHMI**' **MEANS QUALITY** - The laboratories are equipped with the most update and sophisticated instruments, which are manned by qualified and experienced engineers and chemists. Furnaces and other testing equipments of latest technology are used to ensure that the raw materials of finest quality are used. The process controls are so rigidly enforced through out the production so as to ensure that the finished products are of highest quality.

Salient Features of 'LAKSHMI' Products

ISI MARKED : Gate, Globe and Check Valves are manufactured as per IS : 778/84 Standard and are duly ISI Marked.

RANGE : Screwed Ends Gate, Globe and Ball Valves are available in sizes from 8mm to 100 mm. Screwed Ends Check Valves are available in sizes from 15mm to 100 mm. Flanged Ends Valves are available in sizes from 15mm to 100 mm.

SEATING : All Gate and Globe Valves are provided with a back seating arrangement to facilitate 'On-Line' replacement of gland packing under pressure when the valve is fully open. Further the seat is properly guided in the body to avoid vibrations while opening or closing the valve under pressure. The Check valves are provided with metal disk with spherical seating surface. The Ball Valves are provided with molded PTFE seats which have a consistent grain structure and are manufactured to close dimensional tolerances. This results in longer seat life and perfect sealing over standard operations.

THREADING : All threading are done with standard dies/taps as per IS:554 BSP threads for high quality finishing and universal convenience.

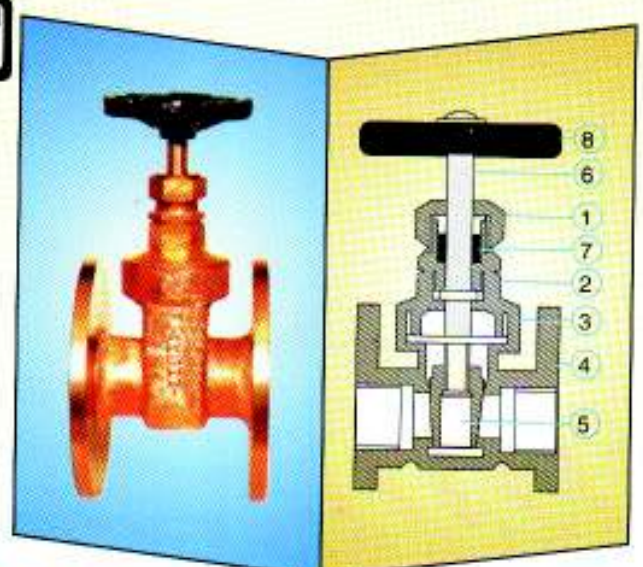
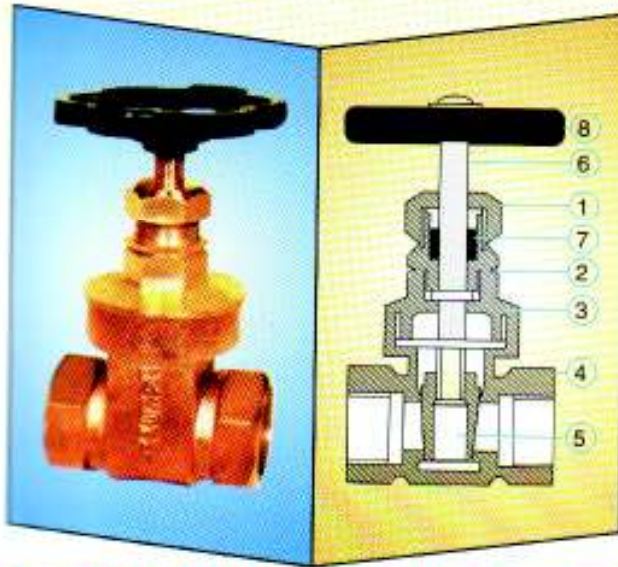
TESTING : Each and every valve is tested on automatic hydraulic pumps fitted with all modern testing facilities.



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BRONZE GATE VALVES

IS : 778/84



SCREWED END VALVES CL-I / CL-II

NOMINAL SIZE (mm)	GATE VALVE F/F ± 1.5 mm
15	60
20	60
25	70
32	80
40	90
50	100
65	105
80	125
100	160

FLANGED END VALVES CL-1

NOMINAL SIZE (mm)	FACE TO FACE ± 1.5 mm	DIAMETER OF FLANGE (mm)	THICKNESS OF FLANGE ± 1.5 mm	DIAMETER OF BOLT CIRCLE (mm)
15	72	95 ± 1	6	65
20	76	105 ± 1	6	75
25	90	115 ± 1	8	85
32	100	140 ± 1	8	100
40	110	150 ± 1	9	110
50	120	165 ± 1	11	125
65	140	185 ± 1	13	145
80	150	200 ± 1	13	160
100	190	220 ± 1.5	16	180

TEST PRESSURE (Temp. not exceeding 45°C)

VALVE	BODY HYDROSTATIC	SEAT HYDROSTATIC
CL-I	1.5 MPa	1.0 MPa
CL-II	2.4 MPa	1.6 MPa

MATERIAL CHART

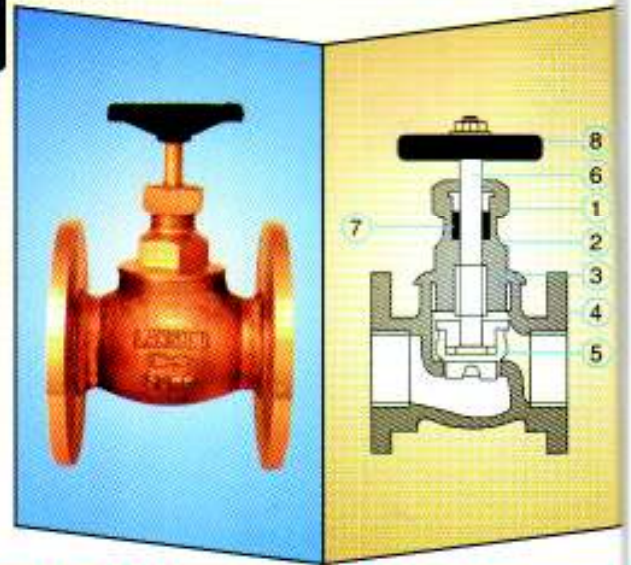
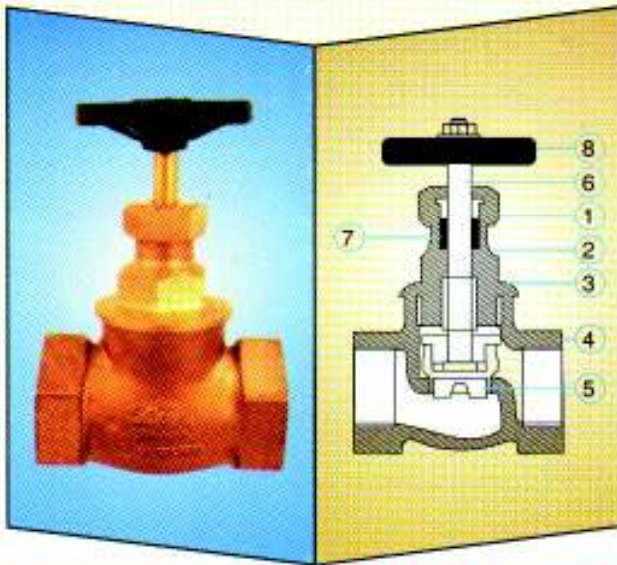
S.NO.	COMPONENT	MATERIAL	CONFORMING TO	S.NO.	COMPONENT	MATERIAL	CONFORMING TO
1.	Nut	Leaded Tin Bronze	LTB2 of IS:318	5.	Seat	Leaded Tin Bronze	LTB2 of IS:318
2.	Stuffing Box	Leaded Tin Bronze	LTB2 of IS:318	6.	Stem	Forged Brass	FLB of IS:6912
3.	Bonnet	Leaded Tin Bronze	LTB2 of IS:318	7.	Gland Packing	Asbestos	IS : 4687
4.	Body	Leaded Tin Bronze	LTB2 of IS:318	8.	Hand Wheel	Cast Iron	FG200 of IS:210



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BRONZE GLOBE VALVES

IS : 778/84



SCREWED END VALVES CL-I / CL-II

NOMINAL SIZE (mm)	GATE VALVE F/F ± 1.5 mm
15	60
20	70
25	80
32	95
40	110
50	125
65	160
80	180
100	216

FLANGED END VALVES CL-1

NOMINAL SIZE (mm)	PAGE TO FACE ± 1.5 mm	DIAMETER OF FLANGE (mm)	THICKNESS OF FLANGE ± 1.5 mm	DIAMETER OF BOLT CIRCLE (mm)
15	75	95 ± 1	6	65
20	85	105 ± 1	6	75
25	95	115 ± 1	8	85
32	100	140 ± 1	8	100
40	120	150 ± 1	9	110
50	145	165 ± 1	11	125
65	165	185 ± 1	13	145
80	185	200 ± 1	13	160
100	216	220 ± 1.5	16	180

TEST PRESSURE

(Temp. not exceeding 45°C)

VALVE	BODY HYDROSTATIC	SEAT HYDROSTATIC
CL-I	1.5 MPa	1.0 MPa
CL-II	2.4 MPa	1.6 MPa

MATERIAL CHART

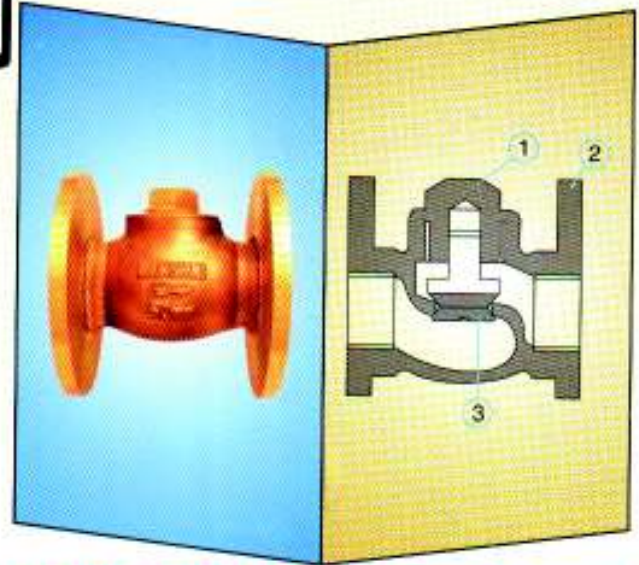
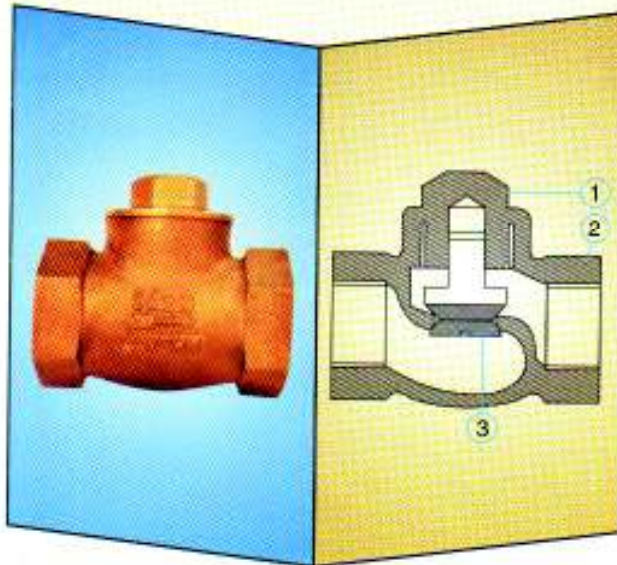
S.NO.	COMPONENT	MATERIAL	CONFORMING TO	S.NO.	COMPONENT	MATERIAL	CONFORMING TO
1.	Nut	Leaded Tin Bronze	LTB2 of IS:318	5.	Seat	Leaded Tin Bronze	LTB2 of IS:318
2.	Stuffing Box	Leaded Tin Bronze	LTB2 of IS:318	6.	Stem	Forged Brass	FLB of IS:6912
3.	Bonnet	Leaded Tin Bronze	LTB2 of IS:318	7.	Gland Packing	Asbestos	IS :4687
4.	Body	Leaded Tin Bronze	LTB2 of IS:318	8.	Hand Wheel	Cast Iron	FG200 of IS:210



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BRONZE HORIZONTAL CHECK VALVES

IS : 778/84



SCREWED END VALVES CL-I / CL-II

NOMINAL SIZE (mm)	GATE VALVE F/F ± 1.5 mm
15	60
20	70
25	80
32	95
40	110
50	125
65	160
80	180
100	216

FLANGED END VALVES CL-1

NOMINAL SIZE (mm)	FACE TO FACE ± 1.5 mm	DIAMETER OF FLANGE (mm)	THICKNESS OF FLANGE ± 0.3 mm	DIAMETER OF BOLT CIRCLE (mm)
15	75	95 ± 1	6	65
20	85	105 ± 1	6	75
25	95	115 ± 1	8	85
32	100	140 ± 1	8	100
40	120	150 ± 1	9	110
50	145	165 ± 1	11	125
65	165	185 ± 1	13	145
80	185	200 ± 1	13	160
100	216	220 ± 1.5	16	180

TEST PRESSURE

(Temp. not exceeding 45°C)

VALVE	BODY HYDROSTATIC	SEAT HYDROSTATIC
CL-I	1.5 MPa	0.25 MPa
CL-II	2.4 MPa	0.25 MPa

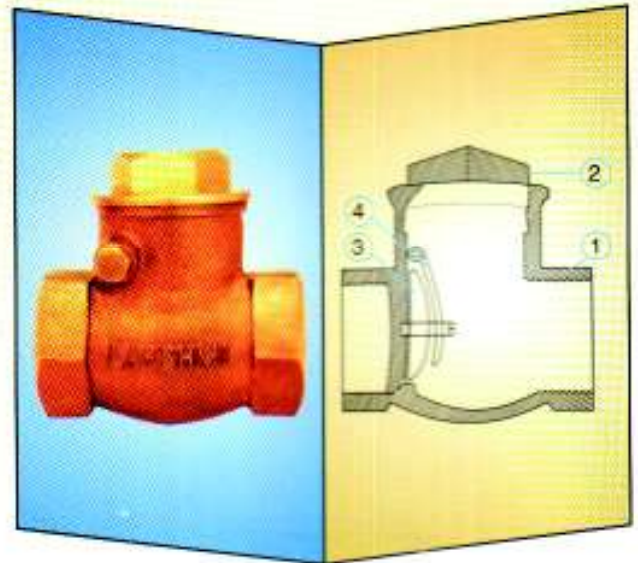
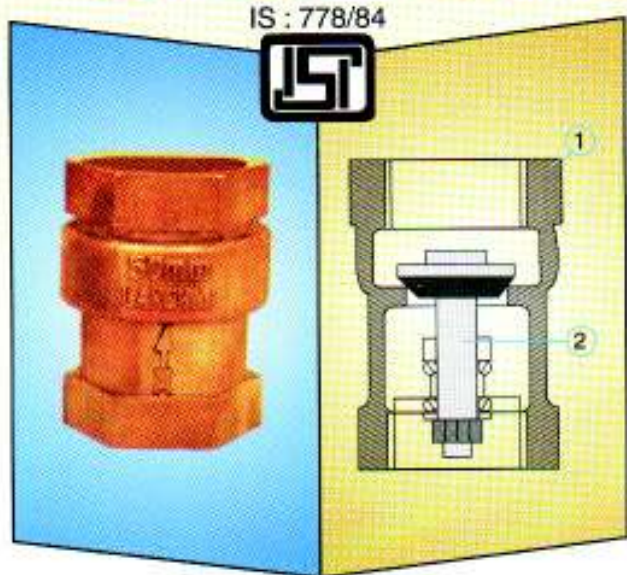
MATERIAL CHART

S.NO	COMPONENT	MATERIAL	CONFORMING TO
1.	Bonnet	Leaded Tin Bronze	LTB2 of IS:318
2.	Body	Leaded Tin Bronze	LTB2 of IS:318
3.	Seat	Leaded Tin Bronze	LTB2 of IS:318



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BRONZE VERTICAL/SWING CHECK VALVES



VERTICAL CHECK VALVES	
NOMINAL SIZE (mm)	FACE TO FACE ± 1.5 mm
15	65
20	70
25	75
32	85
40	95
50	110
65	130
80	145
100	190

SWING CHECK VALVES	
NOMINAL SIZE (mm)	FACE TO FACE ± 1.5 mm
15	60
20	70
25	80
32	92
40	105
50	122

MATERIAL CHART			
S.NO.	COMPONENT	MATERIAL	CONFORMING TO
1.	Body	Leaded Tin Bronze	LTB2 of IS:318
2.	Seat	Leaded Tin Bronze	LTB2 of IS:318

MATERIAL CHART			
S.NO.	COMPONENT	MATERIAL	CONFORMING TO
1.	Body	Leaded Tin Bronze	LTB2 of IS:318
2.	Bonnet	Leaded Tin Bronze	LTB2 of IS:318
3.	Seat	Leaded Tin Bronze	LTB2 of IS:318
4.	Lever	Leaded Tin Bronze	LTB2 of IS:318

TEST PRESSURE (Temp. not exceeding 45°C)		
VALVE	BODY HYDROSTATIC	SEAT HYDROSTATIC
CL-I	1.5 MPa	0.25 MPa

TEST PRESSURE (Temp. not exceeding 45°C)	
BODY HYDROSTATIC	SEAT HYDROSTATIC
1.5 MPa	0.25 MPa












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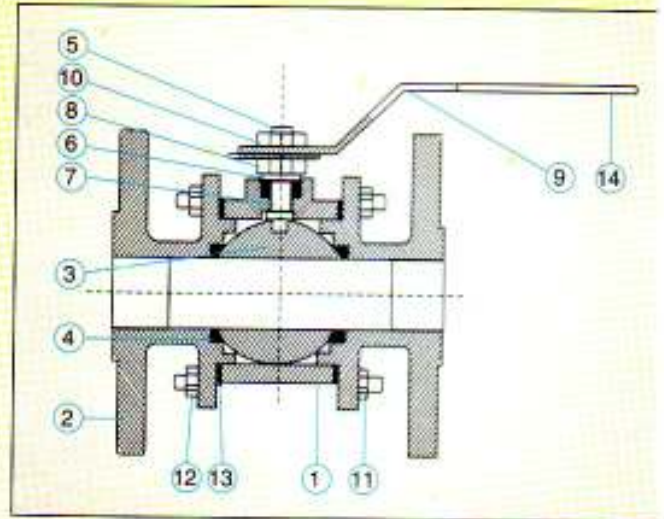
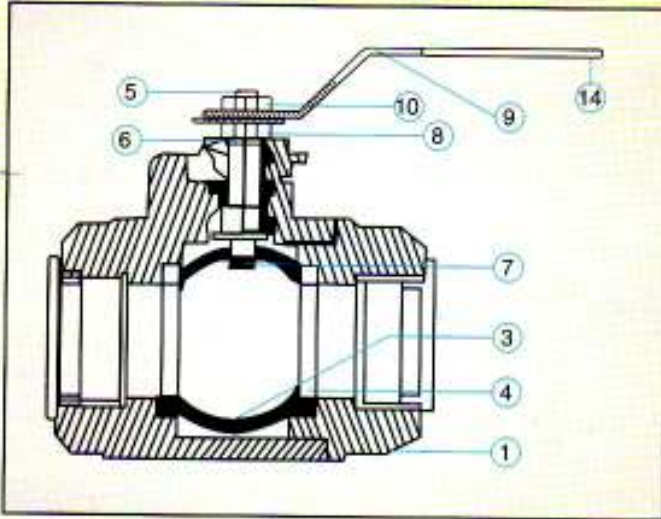
CAST IRON BALL VALVE



'LAKSHMI' Cast Iron Ball Valves are ISI Marked and are manufactured using the latest techniques and under going strict quality checks at all stages, these valves are full bore with Teflon Seat and Teflon gland packing and are Lever operated quarter turn.

Salient Features of 'LAKSHMI' Cast Iron Ball Valves :

-  **ISI MARKED** : The Valves are manufactured as per IS : 9890 Standard and are duly ISI Marked.
-  **BALL** : The Stainless Steel Ball polished to a mirror finish provide superior Seating.
-  **SEATING** : The moulded PTFE Seats have a consistent grain structure and are manufactured to close dimensional tolerances. This results in longer seat life and perfect sealing over extended operations.
-  **STEM** : The stainless steel Stem inserted from inside the body to make the valve blow out proof design.
-  **BORE** : The parallel bore ensures free flow with minimal flow resistance and along with the straight machined flow path in the port area, the pressure loss across the valve is minimized. The full bore further facilitates flow of high viscous fluids.
-  **DESIGN** : The special design of these valves enable gland packing replacement under pressure.
-  **RANGE** : Screwed end Ball Valves are single piece design and available in size from 1/4 (8mm) to 4" (100 mm). Flanged End Ball Valves are three piece design and available in size from DN 15 (1/2) to DN 100 (4").
-  **TESTING** : Each and every valve is hydraulically tested according to IS standard.
-  **Screwed End Ball Valves** are threaded as per IS : 554 BSP Threads. Flanged Valves are without holes but they can be supplied as per customer's requirements.



DIMENSIONS FOR SCREWED ENDS (ALL DIMENSIONS IN MM)			
NOMINAL SIZE	END TO END ±2	BORE DIA MINIMUM	SEALING FACE DIA MINIMUM
1/4	77	6	18
3/8	77	9.5	22
1/2	79	12.5	26
3/4	87	19	32
1	97	25	39
1-1/4	112	32	49
1-1/2	126	38	55
2	137	51	68
2-1/2	162	63.5	85
3	183	76	100
4	214	102	125

TEST PRESSURE					
VALVE	BODY HYDROSTATIC	SEAT HYDROSTATIC	AIR (1 bar: 1.02 Kg/cm ²)	MAX PERMISSIBLE TEMP	MAX. WORKING PRESSURE
SCREWED	21.1 Kg/cm ²	15.5 Kg/cm ²	7 bar	200°C	14.06 Kg/cm ²
FLANGED CL-125	21.1 Kg/cm ²	15.5 Kg/cm ²	7 bar	200°C	14.06 Kg/cm ²

DIMENSIONS FOR FLANGED ENDS CL-125 (ALL DIMENSIONS IN MM)				
NOMINAL SIZE	BORE DIA MINIMUM	FACE TO FACE ±2	FLANGE DIA (+1.5 / -1.0)	FLANGE THICKNESS MINIMUM
15	12.5	130	89.0	11.2
20	19.0	130	98.5	11.2
25	25.0	140	108.0	11.2
32	32.0	165	117.5	12.7
40	38.0	165	127.0	14.3
50	51.0	203	152.5	15.9
65	63.5	222	178.0	17.5
80	76.0	241	190.5	19.1
100	102.0	305	228.5	23.8

MATERIAL CHART			
S.NO	NAME OF PART	MATERIAL	GRADE
1.	Body	Cast Iron	IS : 210 FG 200
2.	Body Connector	Cast Iron	IS : 210 FG 200
3.	Ball	SS	AISI 304/AISI 410
4.	Seat	Teflon	PTFE
5.	Stem	SS	AISI 304/AISI 410
6.	Gland Packing	Teflon	PTFE
7.	Stem Seal	Teflon	PTFE
8.	Gland Nut	MS	IS : 1363
9.	Hand Lever	MS	IS : 226
10.	Lever Nut	MS	IS : 1363
11.	Body Stud	MS	IS : 1363
12.	Body Stud Nut	MS	IS : 1363
13.	Body Seal	Teflon	PTFE
14.	Hand Lever Sleeve	PVC	HDPE

NOTE : Owing to continuous efforts to improve quality & design, the details and dimensions in this technical sheet may be changed without notice.

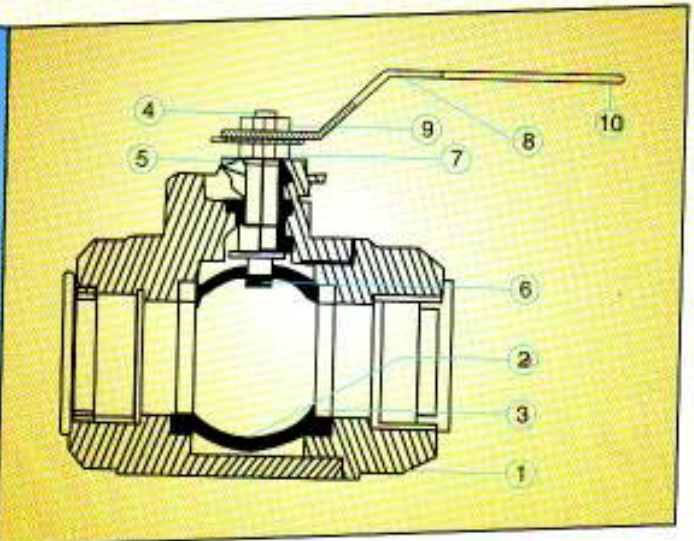
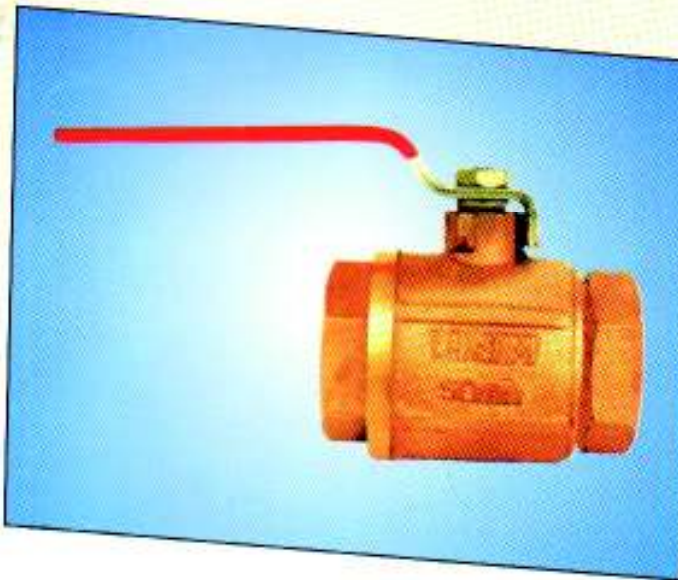
Authorised Dealer :

Manufactured by :
LAKSHMI METAL WORKS
INDIA



Lakshmi®

BRONZE BALL VALVE



DIMENSIONS FOR SCREWED ENDS (ALL DIMENSIONS IN MM)

NOMINAL SIZE	END TO END ± 2	BORE DIA MINIMUM
8	60	8
10	60	9
15	62	12.5
20	70	19
25	78	25
32	92	31
40	110	38
50	130	50
65	145	63.5
80	170	76
100	220	98

TEST PRESSURE

VALVE	BODY HYDROSTATIC	SEAT HYDROSTATIC	MAX. WORKING PRESSURE
SCREWED	21.1 Kg/cm ²	15.5 Kg/cm ²	14.06 Kg/cm ²

MATERIAL CHART

S.NO.	NAME OF PART	MATERIAL	GRADE
1.	Body	Leaded Tin Bronze	LTB-2
2.	Ball	SS	AISI 304/AISI 410
3.	Seat	Teflon	PTFE
4.	Stem	SS	AISI 304/AISI 410
5.	Gland Packing	Teflon	PTFE
6.	Stem Seal	Teflon	PTFE
7.	Gland Nut	MS	IS : 1363
8.	Hand Lever	MS	IS : 226
9.	Lever Nut	MS	IS : 1363
10.	Hand Lever Sleeve	PVC	HDPE