

 **LEADER LVL**[®]
LEADER VALVES LTD.



Manufacturing Widest Range of Valves & Fittings for All Applications



GUN METAL/BRONZE



LVL Leading Products 3

 **LEADER VALVES LTD.**

www.leadervalves.com



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Company Profile

LEADER VALVES LIMITED is a leading, totally integrated valves manufacturing unit with its own Ferrous & Non Ferrous Foundries and Forging unit in India.

The company was set up more than six decades ago when India was on the threshold of industrial revolution and there were no good valve manufacturers in the country. It has over the years built up an excellent track record by following the policy of customer satisfaction.

We are an ISO-9001:2008 company since Jan. 1996 certified by LRQA, India. The company is licensed to use API Spec 6D (Certificate No. 6D-0346), and API 600 (Certificate No. 600-0018) monograms.

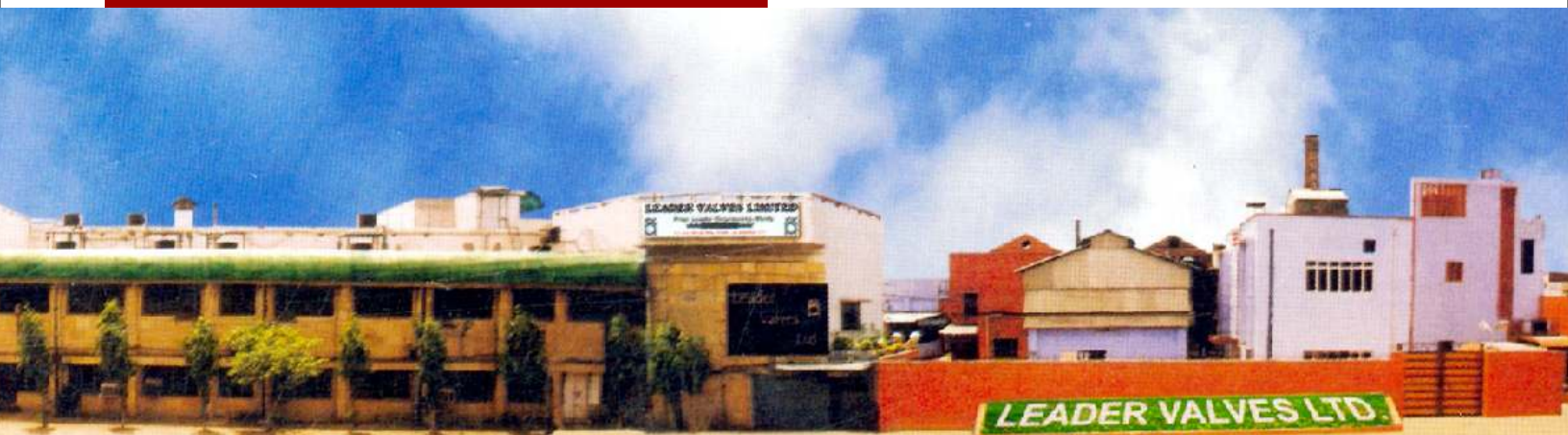
Structural Integrity Division of National Aerospace Laboratory Bangalore has tested and certified our valves for "Seismic Qualification" of bi-directional valves.



Leader Ferrous & Non Ferrous foundries are certified as "Well Known FOUNDRY" Under Indian Boiler Regulation 4C (2) of Central Boiler Board, Govt. of India Besides being PED certified by M/s. LRQA & AD 2000-Merkblatt WO certified by TUV.

The company is managed by an Efficient Board of Directors & well qualified professionals.

Leader High Pressure Fittings (I) Ltd. and Leader Exports are other two Associate Units of Leader Valves Ltd. manufacturing high pressure valves and fittings. We are also doing job work for some of the worlds leading valves manufacturing companies.



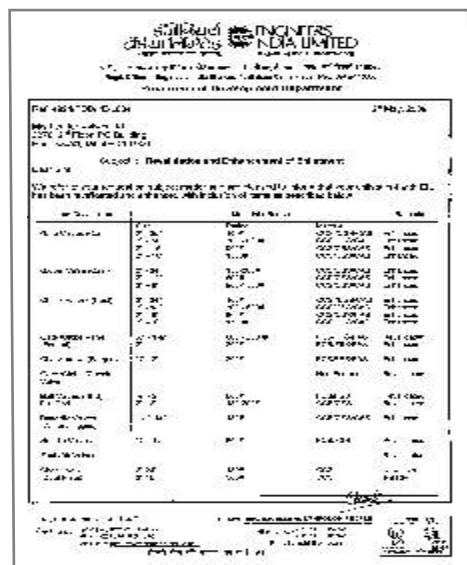


QUALITY POLICY

We at Leader Valves Ltd and leader Export want to achieve Customer Satisfaction.

- 1) By meeting the customer stated & implied requirements.
- 2) By meeting the applicable statutory & regulatory requirement.
- 3) Through Continual Improvement in
 - a) Quality Management System.
 - b) Manufacturing Process.
- 4) By adding new designs & improving existing designs for marketing the products which are Competitive , Safe and Harmless to the environment.







General Description



GUN METAL VALVE

For fluidic piping systems, valves are the controlling element. Valves are used to isolate equipment and piping systems, regulate flow, prevent backflow, and regulate and relieve pressure. The most suitable valve must be carefully selected for the piping system. The minimum design or selection parameters for the valve most suitable for an application are the following: size, material of construction, pressure and temperature ratings, and end connections. In

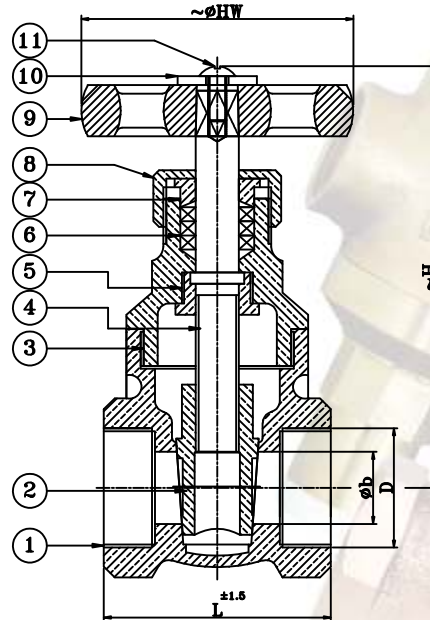
addition, if the valve is to be used for control purposes, additional parameters must be defined. These parameters include: method of operation, maximum flow capacity requirement, pressure drop during normal flowing conditions, pressure drop at shutoff, and maximum and minimum inlet pressure at the valve. These parameters are met by selecting body styles, material of construction, seats, packing, end connections, operations and supports.



FORGED BRASS GATE VALVES - IS 13144

SPECIFICATIONS

SCREWED IN BONNET, INSIDE SCREW,
NON-RISING STEM, INTEGRAL SEAT,
SOLID WEDGE, SCREWED FEMALE
PARALLEL THREADS TO IS 554.
OTHER FORMS OF THREADS CAN BE
PROVIDED ON REQUEST.



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	FORGED BRASS	IS 69 12 GR. FLB
2	WEDGE	FORGED BRASS	IS 69 12 GR. FLB
3	BONNET	FORGED BRASS	IS 69 12 GR. FLB
4	STEM	FORGED BRASS ROD	IS 6912 GR. FHTB1
5	STEM NUT	FORGED BRASS	IS 6921 GR. FHTB1/IS 6912 GR. FLB
6	GLAND PACKING	HEMP & JUTE / ASBESTOS	IS 5414 / IS 4687
7	GLAND	FORGED BRASS	IS 6921 GR. FHTB1/IS 6912 GR. FLB
8	GLAND NUT	FORGED BRASS	IS 6921 GR. FHTB1/IS 6912 GR. FLB
9	HANDWHEEL	C.I/ STEEL (PVC COATED)	IS 210 FG200/ANY GRADE
10	WASHER	STEEL	ANY GRADE
11	SET SCREW	STEEL	ANY GRADE

DIMENSIONAL DATA

SIZE (mm)	15	20	25
L	52	56	65
Øb	12.7	19	25
H	76	82	100
HW	48	60	60
D	1/2"	3/4"	1"
APROX WT. ^	0.285	0.405	0.625
ITEM CODE	IS 026	IS 026	IS 026

TEST PRESSURES

MAX. WORKING PRESSURE	SHELL TEST (HYDROSTATIC)	SEAT & BACK SEAT (HYDROSTATIC)	STANDARD NO.
2 MPa	3 Mpa (435 Psig)	2.2 Mpa (319 Psig)	IS 13114

NOTE: The above data is subject to change without notice due to our continuing product improvement program.

(^WEIGHT GIVEN IN KGS)



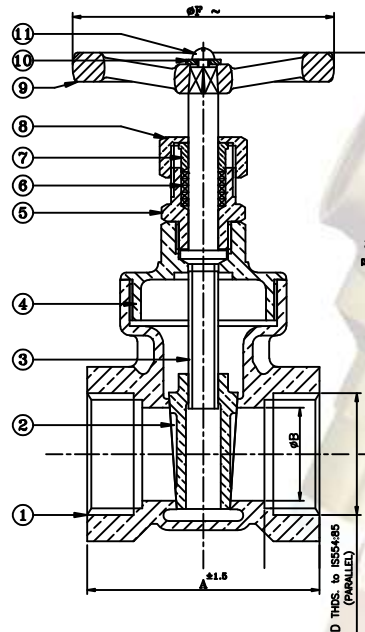
IS 778 Cu-ALLOY GATE VALVES- IS 778

SPECIFICATIONS

SCREWED IN BONNET, INSIDE SCREW, NON-RISING STEM, INTEGRAL SEAT, SOLID WEDGE, SCREWED FEMALE PARALLEL THREADS TO IS 554, OTHER FORMS OF THREADS CAN BE PROVIDED ON REQUEST.

PRESSURE TEMPERATURE RATING :

Class 1- 1.0 Mpa upto 45°C
Class 2 - 1.6 Mpa up to 45°C



NOTE : 8MM AND 10MM SIZES ARE NOT INCLUDED IN CLASS-2

STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTIO	MATERIAL	SPECIFICATIONS
1	BODY	LEADED TIN BRONZE	IS 318:81 Gr. LTB2
2	WEDGE	LEADED TIN BRONZE	IS 318:81 Gr. LTB2
3	STEM	HIGH TENSILE BRASS	IS 6912:85 Gr. FHTB1
4	BONNET	LEADED TIN BRONZE	IS 318-81 Gr. LTB2
5	STUFFING BOX	LEADED TIN BRONZE/BRASS ROD	IS 318:81 Gr. LTB2
6	GLAND PACKING	ASBESTOS HEMP & JUTE	IS 5414:69
7	GLAND	LEADED TIN BRONZE/BRASS ROD	IS 318:81 Gr.LTB2/IS 6912:85 Gr. FLB
8	GLAND NUT	LEADED TIN BRONZE/BRASS ROD	IS 318:81 Gr.LTB2/IS 6912:85 Gr. FLB
9	HAND WHEEL	C.I.	IS 210-93 Hr. FG200
10	WASHER	CARBON STEEL	IS 2062:92 Gr. A
11	SET SCREW	CARBON STEEL	SPECIAL GRADE

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50	65	80	100	
A	50	50	60	60	70	80	90	100	105	125	160	
ØB	10	10	15	20	25	32	40	50	65	80	100	
D	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	
~E	90	90	105	115	125	140	160	176	210	245	295	
~ØF	48	48	60	60	70	80	92	103	130	153	165	
ITEM CODE NOS.	Aprox. Wt. ^ (CL-1)	0.310	0.310	0.420	0.635	0.790	1.350	1.795	2.710	4.205	6.136	10.416
	CLASS 1	IS 001	IS 001	IS 001	IS 001	IS 001	IS 001	IS 001	IS 001	IS 001	IS 001	IS 001
	Aprox. Wt. ^ (CL-2)	----	----	0.470	0.675	0.940	1.555	2.185	3.216	4.500	7.750	13.445
	CLASS 2	IS 007	IS 007	IS 007	IS 007	IS 007	IS 007	IS 007	IS 007	IS 007	IS 007	IS 007

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT & BACK SEAT (HYDROSTATIC)	STANDARD NO.
CLASS 1	1.5 Mpa (217.5 psig)	1.0 Mpa (145 psig)	IS 6157
CLASS 2	2.4 Mpa (348 psig)	1.6 MPA (232 psig)	

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^WEIGHT GIVEN IN KGS)



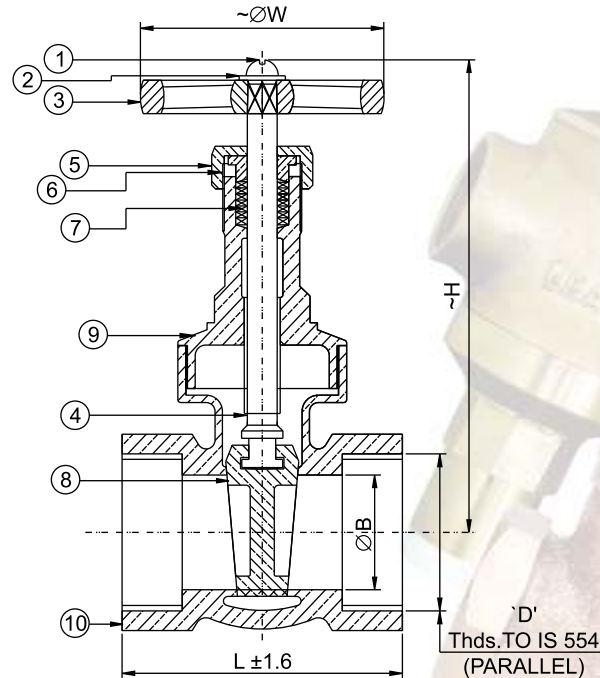
IS 778
Cu-ALLOY
GATE VALVES
IS: 778

SPECIFICATIONS

SCREWED IN BONNET,
INTEGRAL SEAT, RISING
STEM, INSIDE SCREW,
SCREWED FEMALE ENDS TO
IS: 554 (Parallel)

PRESSURE TEMPERATURE RATING :

Class 1 - 1.0 Mpa upto 45°C
Class 2 - 1.6 Mpa up to 45°C



NOTE : 8MM AND 10MM SIZES ARE NOT INCLUDED IN CLASS-2

STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	SCREW	M.S.	-----
2	WASHER	M.S.	-----
3	HAND WHEEL	C.I.	IS 210 GR FG 200/MS SHEET
4	STEM	HIGH TENSILE BRASS	IS 6912 FHTB1
5	GLAND NUT	LEADED TIN BRONZE/ BRASS ROD	IS 318 Gr. LTB2/IS 6912 Gr. FLB
6	GLAND	LEADED TIN BRONZE/BRASS ROD	IS 318 Gr.LTB2/IS 6912 Gr. FLB
7	PACKING	HEMP & JUTE	IS 5414
8	WEDGE	LEADED TIN BRONZE	IS 318 Gr.LTB2
9	BONNET	LEADED TIN BRONZE	IS 318 Gr.LTB2
10	BODY	LEADED TIN BRONZE	IS 318 Gr.LTB2

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50	65	80	100	
L	50	50	60	60	70	80	90	100	105	125	160	
~H	94	95	110	130	150	170	200	230	285	330	432	
ØW	52	52	60	60	70	90	92	103	130	150	165	
ØB	10	10	15	20	25	32	40	50	65	80	100	
D	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	
ITEM CODE	CLASS -1	IS002	IS002	IS002	IS002	IS002	IS002	IS002	IS002	IS002	IS002	IS002
Aprox. Wt. (CL-1)	0.350	0.350	0.505	0.710	1.000	1.330	1.970	2.990	4.655	6.662	11.170	
ITEM CODE	CLASS -2	IS008	IS008	IS008	IS008	IS008	IS008	IS008	IS008	IS008	IS008	IS008
Aprox. Wt. (CL-2)	---	---	0.550	0.720	1.025	1.390	1.970	3.140	4.655	7.050	11.730	

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT & BACK SEAT (HYDROSTATIC)	STANDARD NO.
CLASS 1	1.5 Mpa (217.5 psig)	1.0 Mpa (145 psig)	IS 6157
CLASS 2	2.4 Mpa (348 psig)	1.6 MPA (232 psig)	

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲WEIGHT GIVEN IN KGS)



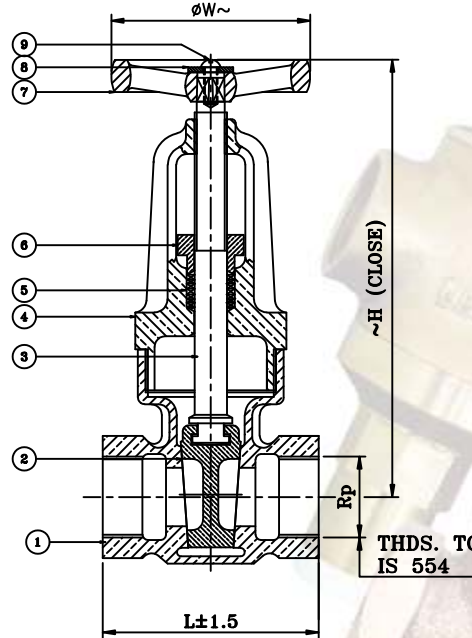
Cu-ALLOY
GATE VALVES
IS: 778

SPECIFICATIONS

SCREWED IN BONNET, O/S & YOKE TYPE, INTEGRAL SEAT, RISING STEM, SCREWED FEMALE ENDS TO IS: 554 (Parallel)

PRESSURE TEMPERATURE RATING :

Class 1 - 1.0 Mpa upto 45°C
Class 2 - 1.6 Mpa up to 45°C



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	LEADED TIN BRONZE	IS 318 Gr. LTB2
2	WEDGE	LEADED TIN BRONZE	IS 318 Gr.LTB2
3	STEM (RISING)	EXTRUDED BRASS ROD/FORGED BRASS	IS 6912 FHTB1
4	BONNET	LEADED TIN BRONZE	IS 318 Gr. LTB2
5	PACKING	HEMP & JUTE	IS 5414
6	GLAND	LEADED TIN BRONZE/FORGED BRASS	IS 318 Gr. LTB2/IS 319
7	HAND WHEEL	C.I./M.S.SHEET	IS 210 Gr. FG200
8	WASHER	CARBON STEEL	IS 2062 Gr.A
9	SCREW	CARBON STEEL	---

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50	65	80	100
L	50	50	60	60	70	80	90	100	105	125	160
~H	100	100	120	120	145	170	200	225	300	340	380
ØW	52	52	62	62	70	78	92	103	130	153	165
Rp	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1 1/2"	2"	2 1/2"	3"	4"
ITEM CODE	CLASS -1	IS003	IS003	IS003	IS003	IS003	IS003	IS003	IS003	IS003	IS003
Aprox. Wt. ▲(CL-1)	-----	-----	0.665	0.870	1.325	1.725	2.612	3.360	4.470	9.800	12.000
ITEM CODE	CLASS -2	IS009	IS009	IS009	IS009	IS009	IS009	IS009	IS009	IS009	IS009
Aprox. Wt. ▲(CL-2)	-----	-----	0.680	0.895	1.360	1.925	2.905	4.070	5.500	10.300	15.548

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT & BACK SEAT (HYDROSTATIC)	STANDARD NO.
CLASS 1	1.5 Mpa (217.5 psig)	1.0 Mpa (145 psig)	IS 6157
CLASS 2	2.4 Mpa (348 psig)	1.6 MPA (232 psig)	

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲WEIGHT GIVEN IN KGS)



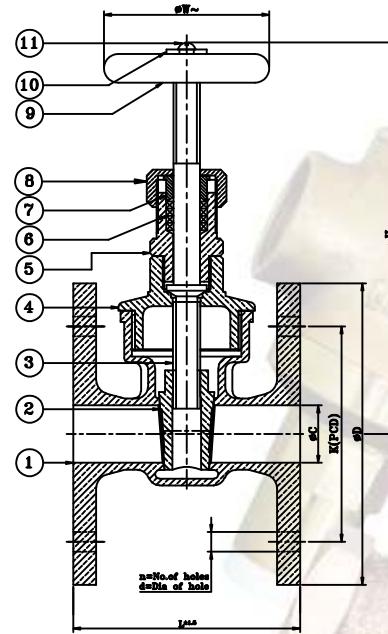
Cu-ALLOY
GATE VALVES- IS 778

SPECIFICATIONS

SCREWED IN BONNET, INSIDE SCREW
NON-RISING STEM, INTEGRAL SEAT,
SOLID WEDGE, FLANGED ENDS AS
PER IS 778

PRESSURE TEMPERATURE RATING :

Class 1- 1.0 Mpa upto 45°C
Class 2 - 1.6 Mpa up to 45°C



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	LEADED TIN BRONZE	IS 318:81 Gr.LTB2
2	WEDGE	LEADED TIN BRONZE	IS 318:81 Gr.LTB2
3	STEM	HIGH TENSILE BRASS	IS 6912:85 Gr. FHTB1
4	BONNET	LEADED TIN BRONZE	IS 318:81 Gr.LTB2
5	STUFFING BOX	LEADED TIN BRONZE	IS 318:81 Gr.LTB2
6	PACKING	HEMP & JUTE ASBESTOS	IS 5414, IS 4687
7	GLAND	LEADED TIN BRONZE	IS 318 : 81 Gr.LTB2
8	GLAND NUT	LEADED TIN BRONZE	IS 318 : 81 Gr.LTB2
9	HAND WHEEL	C.I.	IS 210:93 Gr.FG200
10	WASHER	M.S.	----
11	SET SCREW	M.S.	----

DIMENSIONAL DATA

SIZE(mm)		15	20	25	32	40	50	65	80	100
L		72	76	90	100	110	120	140	150	190
ØC		15	20	25	32	40	50	65	80	100
H		102	118	125	145	160	185	205	242	295
~ØW		60	60	70	90	92	103	130	150	165
K		65	75	85	100	110	125	145	160	180
N		4	4	4	4	4	4	4	8	8
d		14	14	14	18	18	18	18	18	18
ITEM CODE NOS.	Aprox. Wt. ^ (CL-1)	1.245	1.555	2.360	3.290	4.255	6.215	9.125	12.630	18.080
	CLASS 1	IS 004	IS 004	IS 004	IS 004	IS 004	IS 004	IS 004	IS 004	IS 004
	Aprox. Wt. ^ (CL-2)	1.921	2.200	3.200	5.057	5.200	6.550	10.300	13.760	21.200
	CLASS 2	IS 010	IS 010	IS 010	IS 010	IS 010	IS 010	IS 010	IS 010	IS 010

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT & BACK SEAT (HYDROSTATIC)	STANDARD NO.
CLASS 1	1.5 Mpa (217.5 psig)	1.0 Mpa (145 psig)	IS 6157
CLASS 2	2.4 Mpa (348 psig)	1.6 MPA (232 psig)	

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^ WEIGHT GIVEN IN KGS)



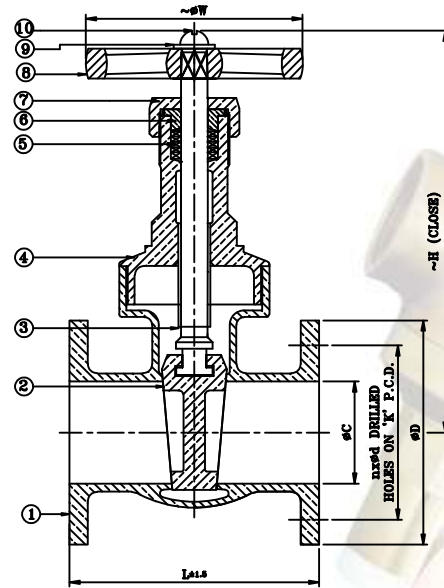
IS 778
Cu-ALLOY
GATE VALVES
IS: 778

SPECIFICATIONS

SCREWED IN BONNET, INTEGRAL SEAT,
RISING STEM, FLANGED ENDS AS PER IS
778-84 TO IS: 554 (Parallel)

PRESSURE TEMPERATURE RATING :

Class 1- 1.0 Mpa upto 45°C
Class 2 - 1.6 Mpa up to 45°C



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	LEADED TIN BRONZE	IS 318 Gr.LTB2
2	WEDGE	LEADED TIN BRONZE	IS 318 Gr.LTB2
3	STEM	HIGH TENSILE BRASS	IS 6912 Gr.FHTB1
4	BONNET	LEADED TIN BRONZE	IS 318 Gr.LTB2
5	PACKING	HEMP & JUTE/ASBESTOS	IS 5414/IS 4687
6	GLAND	LEADED TIN BRONZE/BRASS ROD	IS 318 Gr.LTB2/IS 6912 Gr. FLB
7	GLAND NUT	LEADED TIN BRONZE/ BRASS ROD	IS 318 Gr. LTB2/IS 6912 Gr. FLB
8	HAND WHEEL	C.I./STEEL (PVC COATED)	IS 210 Gr. FG200/ANY GRADE
9	WASHER	CARBON STEEL	-----
10	SCREW	CARBON STEEL	-----

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100	
L	72	76	90	100	110	120	140	150	190	
CØ	15	20	25	32	40	50	65	80	100	
H	110	130	150	170	200	230	285	330	432	
WØ	60	60	70	90	92	103	130	150	165	
D	95	105	115	140	150	165	185	200	220	
K (P.C.D.)	65	75	85	100	110	125	145	160	180	
n	4	4	4	4	4	4	4	8	8	
d	14	14	14	18	18	18	18	18	18	
ITEM CODE	CLASS -1	IS005	IS005	IS005	IS005	IS005	IS005	IS005	IS005	IS005
Aprox. Wt. Δ (CL-1)		1.225	1.635	2.585	3.400	4.390	6.415	9.690	13.705	19.235
ITEM CODE	CLASS -2	IS011	IS011	IS011	IS011	IS011	IS011	IS011	IS011	IS011
Aprox. Wt. Δ (CL-2)		2.016	2.214	3.309	5.182	5.760	7.270	11.063	14.950	23.900

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT & BACK SEAT (HYDROSTATIC)	STANDARD NO.
CLASS 1	1.5 Mpa (217.5 psig)	1.0 Mpa (145 psig)	IS 6157
CLASS 2	2.4 Mpa (348 psig)	1.6 MPA (232 psig)	

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (Δ WEIGHT GIVEN IN KGS)



Cu-ALLOY GATE VALVES IS: 778

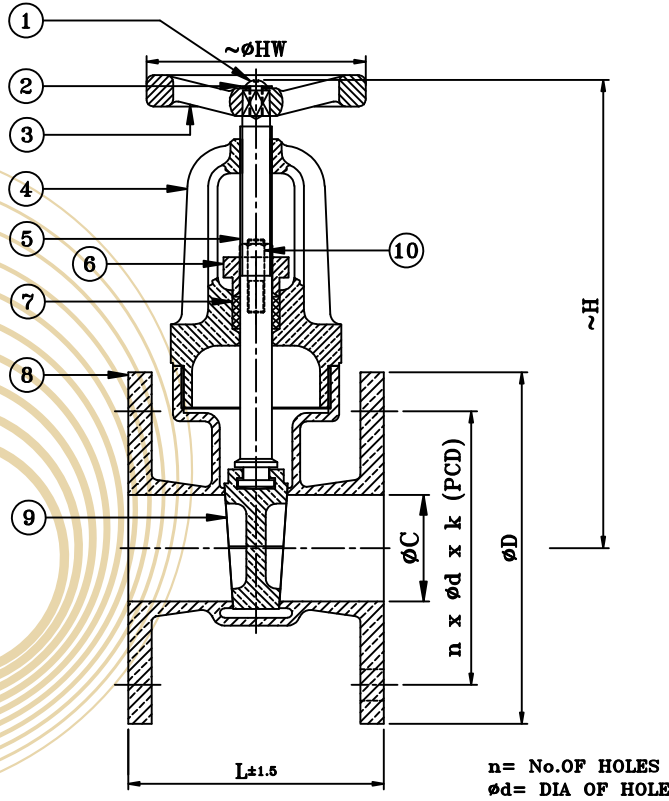
SPECIFICATIONS

SCREWED IN BONNET, OS & YOKE TYPE, RISING STEM, INTEGRAL SEATS FLANGES AS PER IS 778-84

PRESSURE TEMPERATURE RATING :

Class 1 - 1.0 Mpa upto 45°C

Class 2 - 1.6 Mpa up to 45°C



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	SCREW	CARBON STEEL	-----
2	WASHER	CARBON STEEL	-----
3	HAND WHEEL	CAST IRON\M.S. SHEET	IS 210:93 Gr. FG200
4	BONNET	LEADED TIN BRONZE	IS 318:81 Gr. LTB2
5	STEM	EXTRUDED BRASS ROD/FORGED BRASS	IS 6912:85 FHTB1
6	GLAND	LEADED TIN BRONZE	IS 318:81 Gr. LTB2
7	PACKING	HEMP & JUTE/ASBESTOS	IS 5414:69/IS 4687:80
8	BODY	LEADED TIN BRONZE	IS 318:/81 Gr. LTB2
9	WEDGE	LEADED TIN BRONZE	IS 318:/81 Gr. LTB2
10	STUDS & NUTS	CARBON STEEL	IS 1363 Gr. 4.6/IS 1363 Gr.4



Cu-ALLOY GATE VALVES

DIMENSIONAL DATA									
SIZE (mm)	15	20	25	32	40	50	65	80	100
L	72	76	90	100	110	120	140	150	190
H	115	120	145	165	200	215	300	340	380
ØHW	52	62	70	78	92	103	130	153	165
C	15	20	25	32	40	50	65	80	100
D	95	105	115	140	150	165	185	200	220
b	6	6	8	8	9	11	13	13	16
K	65	75	85	100	110	125	145	160	180
n	4	4	4	4	4	4	4	8	8
d	14	14	14	18	18	18	18	18	18
ITEM CODE	CLASS -1	IS006	IS006	IS006	IS006	IS006	IS006	IS006	IS006
	Aprox. Wt. ▲(CL-1)	1.435	1.940	2.760	3.960	5.112	7.170	11.200	13.210
ITEM CODE	CLASS -2	IS0012	IS0012	IS0012	IS0012	IS0012	IS0012	IS0012	IS0012
	Aprox. Wt. ▲(CL-2)	2.111	2.434	3.624	5.472	6.282	7.770	13.750	26.13

TEST PRESSURES			
NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT & BACK SEAT (HYDROSTATIC)	STANDARD NO.
CLASS 1	1.5 Mpa (217.5 psig)	1.0 Mpa (145 psig)	IS 6157
CLASS 2	2.4 Mpa (348 psig)	1.6 MPA (232 psig)	

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲WEIGHT GIVEN IN KGS)



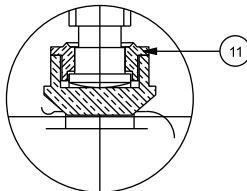
Cu-ALLOY
GLOBE VALVES IS: 778

SPECIFICATIONS

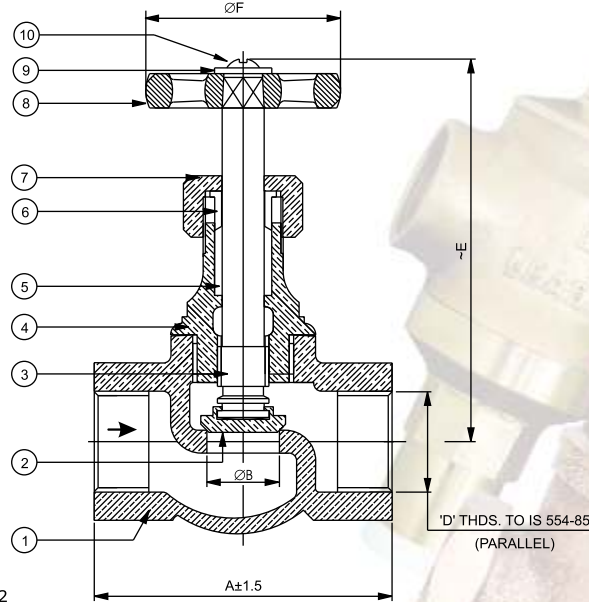
SCREWED IN BONNET, RISING STEM,
SCREWED FEMALE ENDS TO IS: 554
(PARALLEL)

PRESSURE TEMPERATURE RATING :

Class 1 - 1.0 Mpa upto 45°C
Class 2 - 1.6 Mpa up to 45°C



DESIGN FOR DISC ABOVE 25MM.



NOTE : 8MM AND 10MM SIZES ARE NOT INCLUDED IN CLASS-2

STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	LEADED TIN BRONZE	IS 318:/81 Gr. LTB2
2	DISC	LEADED TIN BRONZE	IS 318:/81 Gr. LTB2
3	STEM	EXTRUDED BRASS ROD	IS 6912:85 FHTB1
4	BONNET	LEADED TIN BRONZE	IS 318:81 Gr. LTB2
5	GLAND PACKING	HEMP & JUTE/ASBESTOS	IS 5414:69/IS 4687:80
6	GLAND	LEADED TIN BRONZE/FORGED BRASS	IS 318:81 Gr. LTB2/IS 6912:85 FLB
7	GLAND NUT	LEADED TIN BRONZE/FORGED BRASS	IS 318:81 Gr.LTB2/IS 6912:85 FLB
8	HAND WHEEL	C.I./M.S. SHEET	IS 210:93 Gr. FG200
9	WASHER	CARBON STEEL	IS 2062:92 Gr.A
10	SET SCREW	CARBON STEEL	IS 2062:92 Gr.A
11	STEM NUT	LEADED TIN BRONZE/FORGED BRASS	IS 318:81 Gr.LTB2/IS 6912:85 FLB

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50	65	80	100
A	47	50	60	70	80	95	110	125	160	180	216
$\varnothing B$	8	10	15	20	25	32	40	50	65	80	100
D	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
E	70	70	83	89	98	105	122	128	156	174	206
$\varnothing F$	48	48	60	60	70	90	92	103	130	150	165
ITEM CODE CLASS -1	IS0013	IS0013	IS0013	IS0013	IS0013	IS0013	IS0013	IS0013	IS0013	IS0013	IS0013
Aprox. Wt. Δ (CL-1)	0.265	0.265	0.385	0.555	0.795	1.325	1.700	2.635	4.870	6.815	13.250
ITEM CODE CLASS -2	IS0017	IS0017	IS0017	IS0017	IS0017	IS0017	IS0017	IS0017	IS0017	IS0017	IS0017
Aprox. Wt. Δ (CL-2)	----	----	0.420	0.595	0.995	1.425	2.100	3.010	5.060	7.200	15.980

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT & BACK SEAT (HYDROSTATIC)	STANDARD NO.
CLASS 1	1.5 Mpa (217.5 psig)	1.0 Mpa (145 psig)	IS 6157
CLASS 2	2.4 Mpa (348 psig)	1.6 MPA (232 psig)	

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (Δ WEIGHT GIVEN IN KGS)



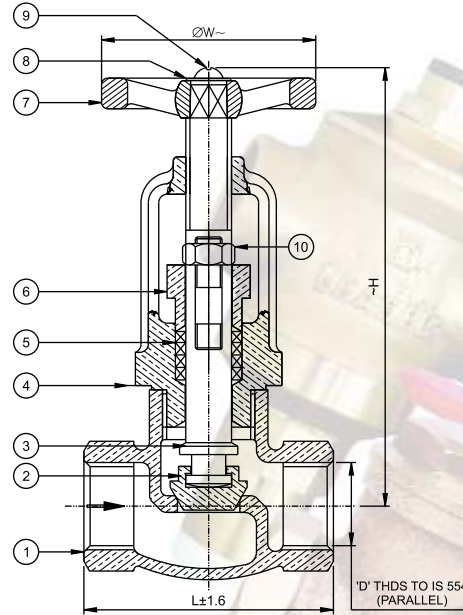
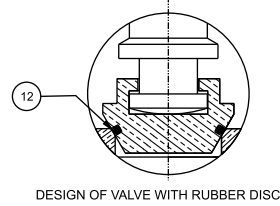
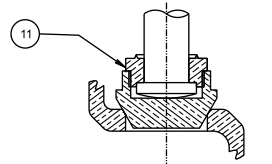
Cu-ALLOY
GLOBE VALVES
IS: 778

SPECIFICATIONS

SCREWED IN BONNET, OS & YOKE TYPE, RISING STEM, INTEGRAL SEAT, SCREWED FEMALE ENDS TO IS:554(PARALLEL)

PRESSURE TEMPERATURE RATING :

Class 1- 1.0 Mpa upto 45°C
Class 2 - 1.6 Mpa up to 45°C



NOTE : 8mm and 10mm Sizes are not included in Class-1

STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	LEADED TIN BRONZE	IS 318 Gr.LTB2
2	DISC	LEADED TIN BRONZE	IS 318 Gr.LTB2
3	STEM	H.T. BRASS	IS 6912 Gr. FHTB1
4	BONNET	LEADED TIN BRONZE	IS 318 Gr.LTB 2
5	PACKING	HEMP & JUTE/ASBESTOS	I.S. 5414/ IS 4687
6	GLAND	LEADED TIN BRONZE	IS 318 Gr.LTB2
7	HAND WHEEL	C.I./M.S. SHEET	IS 210 Gr. FG200/IS 2062
8	WASHER	CARBON STEEL	ANY GRADE
9	SCREW	CARBON STEEL	ANY GRADE
10	STUDS & NUTS	CARBON STEEL	IS 1363 Gr. 4.6/IS 1363 Gr.4
11	CHECK NUT	LEADED TIN BRONZE	IS 318 Gr. LTB2
12	O-RING	SYNTHETIC RUBBER	IS 5192

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50	
L	47	50	60	70	80	95	110	125	
~H	100	100	106	110	115	125	140	145	
ØW	52	52	60	60	70	80	92	110	
D	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	
ITEM CODE	CLASS -1	IS0014	IS0014	IS0014	IS0014	IS0014	IS0014	IS0014	IS0014
Aprox. Wt. (CL-1)	----	----	0.500	0.710	1.105	1.540	2.085	2.950	
ITEM CODE	CLASS -2	IS0018	IS0018	IS0018	IS0018	IS0018	IS0018	IS0018	IS0018
Aprox. Wt. (CL-2)	----	----	0.620	0.820	1.225	1.980	2.515	3.455	

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT & BACK SEAT (HYDROSTATIC)	STANDARD NO.
CLASS 1	1.5 Mpa (217.5 psig)	1.0 Mpa (145 psig)	IS 6157
CLASS 2	2.4 Mpa (348 psig)	1.6 MPA (232 psig)	

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲WEIGHT GIVEN IN KGS)



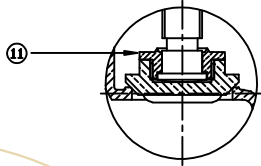
IS 778 Cu-ALLOY GLOBE VALVES IS: 778

SPECIFICATIONS

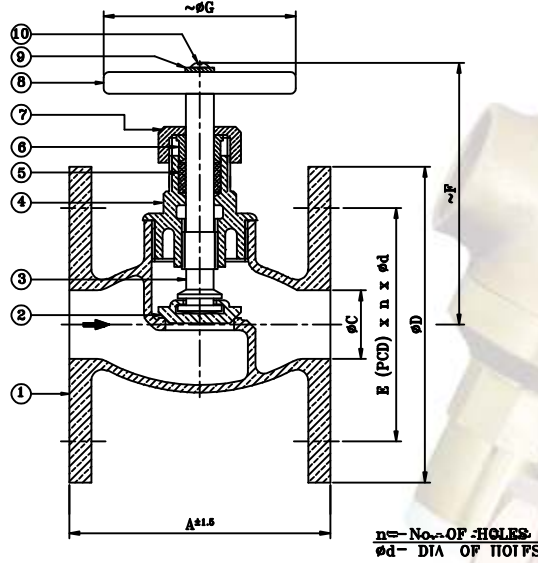
SCREWED IN BONNET, RISING
STEM, INTEGRAL SEAT, FLANGED
END AS PER IS 778, CLASS 1,2 FF

PRESSURE TEMPERATURE RATING :

Class 1- 1.0 Mpa upto 45°C
Class 2 - 1.6 Mpa up to 45°C



DESIGN FOR DISC
ABOVE 25mm SIZE



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	LEADED TIN BRONZE	IS 318-81 Gr.LTB2
2	DISC	LEADED TIN BRONZE	IS 318-81 Gr.LTB2
3	STEM	EXTRUDED BRASS ROD/FORGED BRASS	IS 6912 Gr. FHTB1
4	BONNET	LEADED TIN BRONZE	IS 318 Gr.LTB 2
5	PACKING	HEMP & JUTE/ASBESTOS	IS 5414/IS 4687
6	GLAND	LEADED TIN BRONZE/FORGED BRASS	IS 318 Gr.LTB2/IS 6912 Gr. FLB
7	GLAND NUT	LEADED TIN BRONZE/ FORGED BRASS	IS 318 Gr. LTB2/IS 6912 Gr. FLB
8	HAND WHEEL	C.I./M.S. (SHEET)	IS 210 Gr. FG200
9	WASHER	M.S.	IS 2062
10	SET SCREW	M.S.	IS 2062
11	CHECK NUT	LEADED TIN BRONZE/ FORGED BRASS	IS 318 Gr. LTB2/IS 6912 Gr. FLB

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100	
A	75	85	95	110	120	145	165	185	216	
C	15	20	25	32	40	50	65	80	100	
ØD	95	105	115	140	150	165	185	200	220	
E	65	75	85	100	110	125	145	160	180	
F	83	94	101	109	122	128	156	174	206	
~ØG	60	60	70	90	92	103	130	150	165	
n	4	4	4	4	4	4	4	8	8	
d	14	14	14	18	18	18	18	18	18	
ITEM CODE	CLASS -1	IS0015	IS0015	IS0015	IS0015	IS0015	IS0015	IS0015	IS0015	IS0015
	Aprox. Wt. (CL-1)	1.275	1.700	2.385	3.575	4.357	6.225	9.625	11.050	19.300
ITEM CODE	CLASS -2	IS0019	IS0019	IS0019	IS0019	IS0019	IS0019	IS0019	IS0019	IS0019
	Aprox. Wt. (CL-2)	1.750	2.350	2.850	3.700	4.546	6.665	10.550	12.550	20.000

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT & BACK SEAT (HYDROSTATIC)	STANDARD NO.
CLASS 1	1.5 Mpa (217.5 psig)	1.0 Mpa (145 psig)	IS 6157
CLASS 2	2.4 Mpa (348 psig)	1.6 MPA (232 psig)	

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲WEIGHT GIVEN IN KGS)



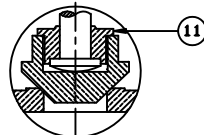
Cu-ALLOY GLOBE VALVES IS: 778

SPECIFICATIONS

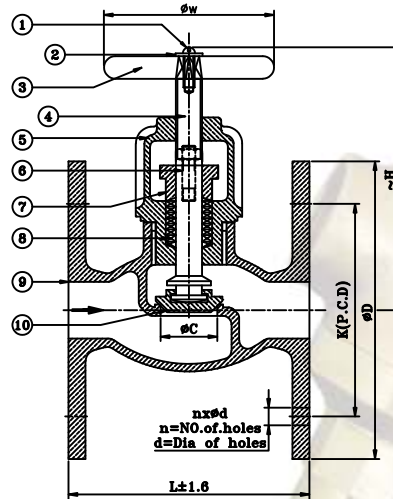
SCREWED IN BONNET, OS & YOKE TYPE, RISING STEM, INTEGRAL SEATS, FLANGED ENDS AS PER IS 778

PRESSURE TEMPERATURE RATING :

Class 1 - 1.0 Mpa upto 45°C
Class 2 - 1.6 Mpa up to 45°C



DESIGN FOR 32mm SIZE AND ABOVE.



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	SET SCREW	CARBON STEEL	-----
2	WASHER	CARBON STEEL	-----
3	HAND WHEEL	C.I./M.S. SHEET	IS 210:93 Gr. FG200/IS 2062
4	STEM	H.T. BRASS	IS 6912 Gr.FHTB1
5	BONNET	LEADED TIN BRONZE	IS 318 Gr. LTB2
6	STUD AND NUT	CARBON STEEL	I.S. 1363 Gr. 4.6/I.S. 1363 Gr.4
7	GLAND	LEADED TIN BRONZE	IS 318 Gr. LTB2
8	GLAND PACKING	HEMP & JUTE/ASBESTOS	IS 5414/IS 4687
9	BODY	LEADED TIN BRONZE	IS 318 Gr. LTB2
10	DISC	LEADED TIN BRONZE	IS 318 GR.LTB2
11	CHECK NUT	LEADED TIN BRONZE	IS 318 Gr.LTB2

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50
L±1.6	75	85	95	110	120	145
∅D	95	105	115	125	140	145
~H	105	110	115	125	140	145
∅W	60	60	70	80	92	110
∅C	15	20	25	32	40	50
K	65	75	85	100	110	125
n	4	4	4	4	4	4
∅d	14	14	14	18	18	18
ITEM CODE CLASS -1	IS0016	IS0016	IS0016	IS0016	IS0016	IS0016
Aprox. Wt. ^ (CL-1)	1.370	1.460	1.645	3.820	4.925	6.560
ITEM CODE CLASS -2	IS0020	IS0020	IS0020	IS0020	IS0020	IS0020
Aprox. Wt. ^ (CL-2)	1.400	1.560	2.785	3.925	5.135	7.060

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT & BACK SEAT (HYDROSTATIC)	STANDARD NO.
CLASS 1	1.5 Mpa (217.5 psig)	1.0 Mpa (145 psig)	IS 6157
CLASS 2	2.4 Mpa (348 psig)	1.6 MPA (232 psig)	

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^WEIGHT GIVEN IN KGS)



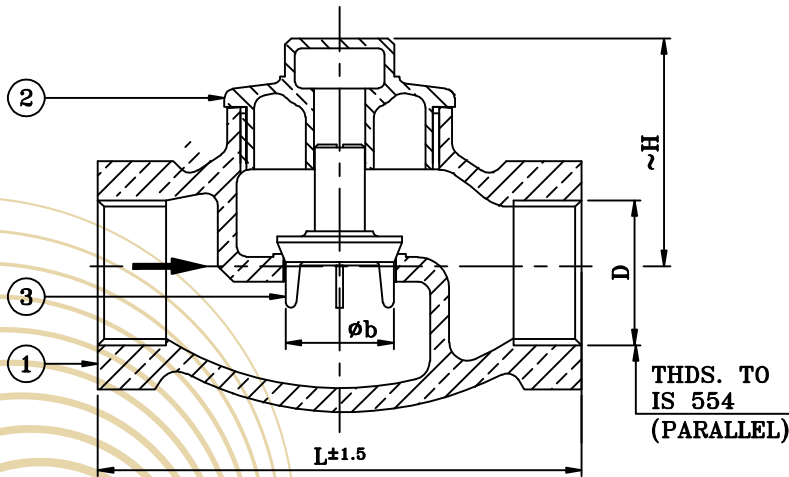
Cu-ALLOY HORIZONTAL LIFT CHECK VALVES IS: 778

SPECIFICATIONS

SCREWED IN COVER, INTEGRAL SEAT, SCREWED FEMALE THREADS TO IS : 554 (PARALLEL)

PRESSURE TEMPERATURE RATING :

Class 1- 1.0 Mpa upto 45°C
Class 2 - 1.6 Mpa up to 45°C



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	LEADED TIN BRONZE	IS 318 LTB2
2.	COVER	LEADED TIN BRONZE	IS 318 LTB2
3.	DISC	LEADED TIN BRONZE	IS 318 LTB2

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50	65	80	100	
L	40	40	60	70	80	95	110	125	160	180	216	
L1	-	-	24	31	35	43	48	58	70	81	112	
øb	9.5	9.5	15	20	25	32	40	50	65	80	100	
H	23	23	36	44	51	54	63	70	88	94	118	
H1	-	-	25	30	40	45	50	65	90	55	110	
ITEM CODE	CLASS-1	IS 021	IS 021	IS 021	IS 021	IS 021	IS 021	IS 021	IS 021	IS 021	IS 021	IS 021
Aprox. Wt. ▲	----	----	0.320	0.750	0.790	1.155	1.495	2.395	4.300	6.385	11.890	
ITEM CODE	CLASS-2	IS 023	IS 023	IS 023	IS 023	IS 023	IS 023	IS 023	IS 023	IS 023	IS 023	
Aprox. Wt. ▲	----	----	0.380	0.790	0.965	1.260	1.910	2.815	4.565	6.720	12.490	

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT & BACK SEAT (HYDROSTATIC)	STANDARD NO.
CLASS 1	1.5 Mpa (217.5 psig)	1.0 Mpa (145 psig)	IS 6157
CLASS 2	2.4 Mpa (348 psig)	1.6 MPA (232 psig)	

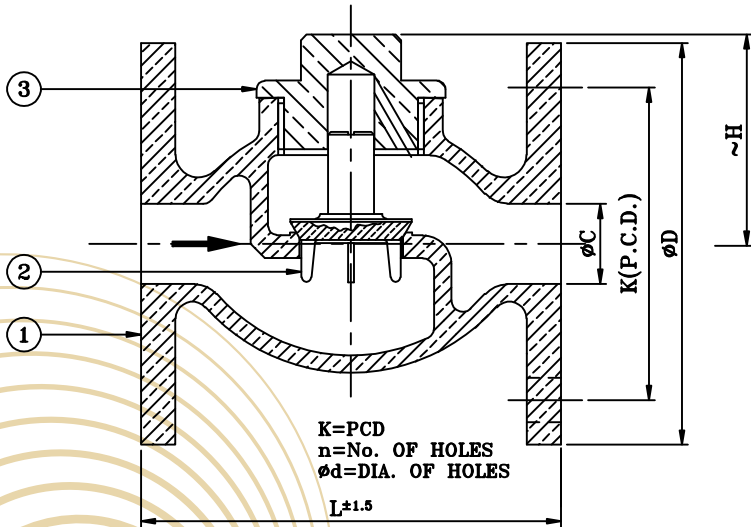
NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲WEIGHT GIVEN IN KGS)



IS 778 Cu-ALLOY HORIZONTAL LIFT CHECK VALVES IS: 778

SPECIFICATIONS

SCREWED IN COVER, INTEGRAL SEAT,
FLANGES AS PER IS 778



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	LEADED TIN BRONZE	IS 318 LTB2
2.	COVER	LEADED TIN BRONZE	IS 318 LTB2
3.	DISC	LEADED TIN BRONZE	IS 318 LTB2

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100	
H	36	44	51	54	63	70	88	94	118	
L	75	85	95	110	120	145	165	185	216	
C	15	20	25	32	40	50	65	80	100	
D	95	105	115	140	150	165	185	200	220	
K	65	75	85	100	110	125	145	160	180	
n	4	4	4	4	4	4	4	8	8	
d	14	14	14	18	18	18	18	18	18	
ITEM CODE CLASS -1	IS0022	IS0022	IS0022	IS0022	IS0022	IS0022	IS0022	IS0022	IS0022	IS0022
Aprox. Wt. Δ (CL-1)	1.110	1.560	3.140	3.400	4.290	5.100	7.510	12.390	18.450	
ITEM CODE CLASS -2	IS0024	IS0024	IS0024	IS0024	IS0024	IS0024	IS0024	IS0024	IS0024	IS0024
Aprox. Wt. Δ (CL-2)	1.165	1.640	3.300	3.575	4.370	6.150	9.700	13.000	19.100	

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT (HYDROSTATIC)	STANDARD NO.
CLASS 1	1.5 Mpa (217.5 psig)	1.0 Mpa (145 psig)	IS 6157
CLASS 2	2.4 Mpa (348 psig)	1.6 MPA (232 psig)	

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (Δ WEIGHT GIVEN IN KGS)



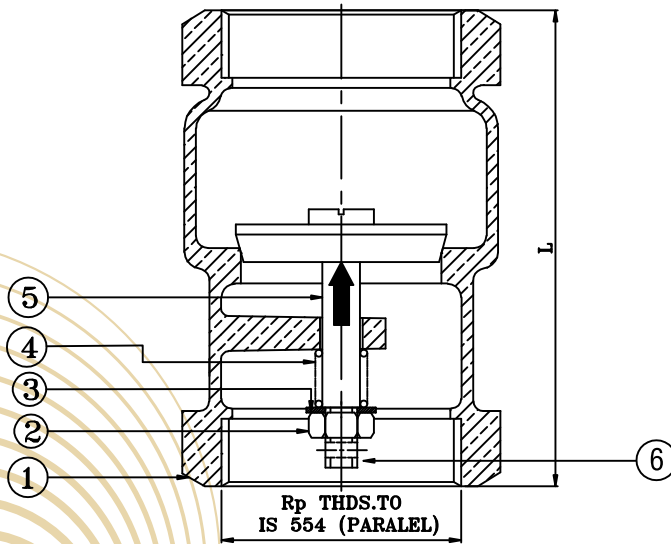
LEADER Cu-ALLOY VERTICAL LIFT CHECK VALVE-IS 778

SPECIFICATIONS

INTEGRAL SEAT, SCREWED FEMALE PARALLEL THREADS TO IS: 554(PARALLEL) OTHER FORMS OF THREADS CAN BE PROVIDED ON REQUEST.

PRESSURE TEMPERATURE RATING :

Class 1- 1.0 Mpa upto 45°C



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	G.M.	IS 318 LTB2
2.	NUT	EXTRUDED BRASS	IS 319 (HALF HARD)
3.	WASHER	G.M.	IS 319 (HALF HARD)
4.	SPRING	Ph. BRONZE	IS 7608
5.	DISC	G.M.	IS 318 LTB2
6.	SPLIT PIN	G.M.	IS 318 LTB2

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100
L	65	70	75	85	95	110	130	145	190
Øb	15	20	25	32	40	50	65	80	100
Rp	½"	¾"	1"	1 ¼"	1 ½"	2"	2 ½"	3"	4"
Aprox. Wt. ^	0.200	0.260	0.420	0.690	0.860	1.500	2.425	3.430	6.330
ITEM CODE	CLASS 1	IS 025	IS 025	IS 025	IS 025	IS 025	IS 025	IS 025	IS 025

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT (HYDROSTATIC)	STANDARD NO.
CLASS 1	1.5 Mpa (217.5 psig)	1.0 Mpa (145 psig)	IS 6157

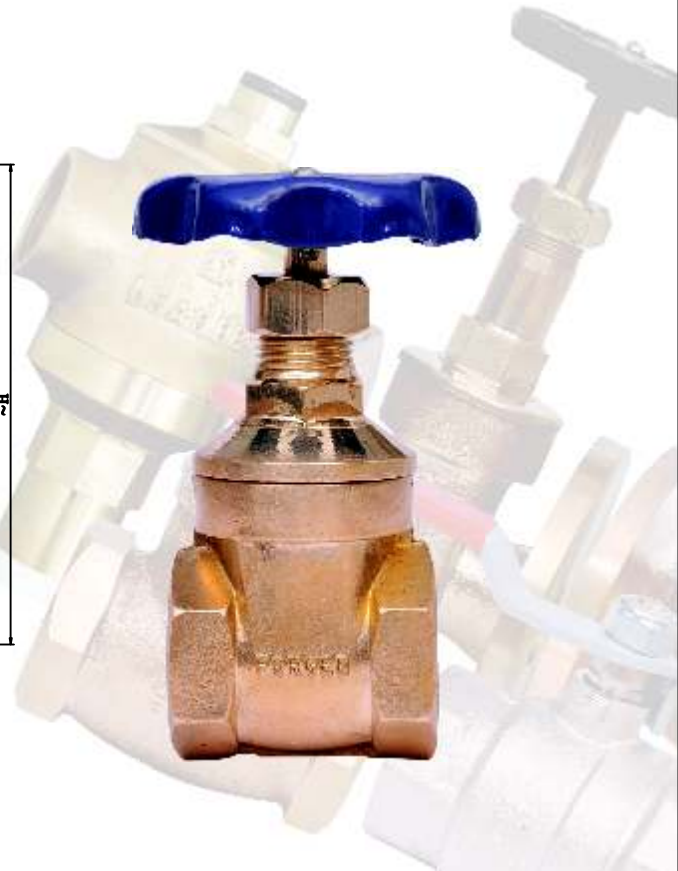
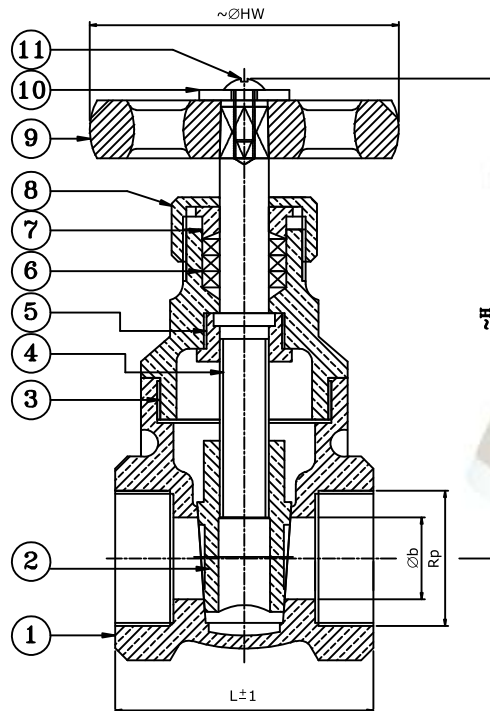
NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^WEIGHT GIVEN IN KGS)



BRASS GATE VALVES-BS 5154

SPECIFICATIONS

SCREWED IN BONNET,
INSIDE SCREW, NON-
RISING STEM, INTGRAL
SEAT, SOLID WEDGE,
SCREWED FEMALE BSP,
PARALLEL THREADS TO
BS 21.
Other Forms of Threads Can
Be Provided on Request.



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	BRASS	IS 6912 GR FLB
2	WEDGE	BRASS	IS 6912 GR FLB
3	BONNET	BRASS	IS 6912 GR FLB
4	STEM	BRASS	IS 6912 GR FLB
5	STUFFING BOX	BRASS	IS 6912 GR FLB
6	GLAND PACKING	TO SUIT SERVICE CONDITIONS	
7	GLAND	BRASS	IS 6912 GR FLB
8	GLAND NUT	BRASS	IS 6912 GR FLB
9	HAND WHEEL	C.I. / STEEL	GR. 220 OF BS 1452 / ANY GR.
10	WASHER	CARBON STEEL	GRADE
11	SET SCREW	CARBON STEEL	GRADE

DIMENSIONAL DATA

SIZE (mm)	15	20	25
L	40	45	53
∅b	12.7	19.0	25.0
H	76	82	100
HW	48	48	62
Aprox. Wt ▲	0.270	0.360	0.560
ITEM CODE MOS.	GM001	GM001	GM001

TEST PRESSURES

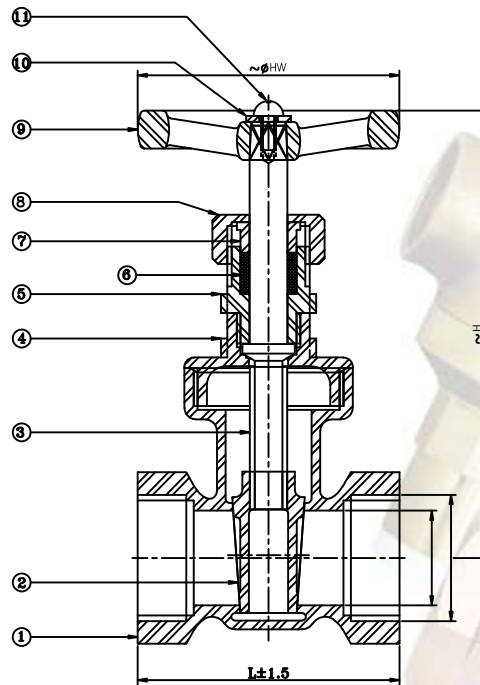
NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 20	30 bar	22 bar	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲WEIGHT GIVEN IN KGS)



Bronze BASIC GATE VALVE

SPECIFICATIONS : GM
BASIC GATE VALVE, PN 16,
SCREWED BONNET, NON
RISING STEM, SCREWED
ENDS



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M.	BSEN 1982 Gr. CC491K
2	WEDGE	G.M.	BSEN 1982 Gr. CC491K
3	STEM	BRASS ROD	BS 2874/2874 CZ122
4	GASKET	RUBBER	
5	BONNET	GM/BRASS	BS 1400 LG2/BS2874 CZ122
6	STEM BUSH	BRASS	BS 2874/2874 CZ122
7	PACKING	RUBBER	
8	GLAND NUT	BRASS	DIN EN 12165 CW 617 N
9	HAND WHEEL	M.S	IS GRADE
10	WASHER	C.S.	ANY GRADE
11	SETS SCREW	C.S.	ANY GRADE
12	GRAND FLOWER	BRASS	BS 2874/2874 Cz122

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	
L	43	45	54	60	64	78	
b	13	19	25	32	38.1	50	
~H	74	89	97	113	124	152	
ØHW	60	60	60	60	90	90	
Rp	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	
ITEM CODE	PN 16	GM 002B	GM 002B	GM 002B	GM 002B	GM 002B	GM 002B
Aprox. Wt. ▲	0.220	0.335	0.450	0.730	1.080	1.750	

TEST PRESSURES

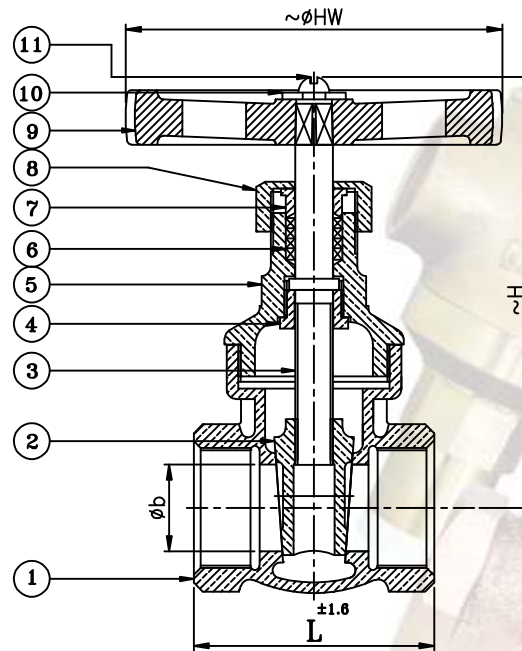
NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 16	24 bar	17.6 bar	EN 12266 PART- 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲ WEIGHT GIVEN IN KGS)



G.M. / BRONZE LEADER GATE VALVE

SPECIFICATIONS : SCREWED IN BONNET INSIDE SCREW, NON RISING STEM, INTEGRAL SEAT, SOLID WEDGE, SCREWED FEMALE BSP PARALLEL THREADS TO BS 21.



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M.	BS 1982 GR. CC 491 K
2	WEDGE (SOLID)	G.M.	BS 1982 GR. CC 491 K
3	STEM	HT BRASS	DIN EN 12165 CW 721 R
4	STEM BUSH	BRASS	DIN EN 12165 CW 617 N
5	BONNET	G.M.	BS 1982 GR. CC 491 K
6	PACKING	TO SUIT SERVICE CONDITIONS	
7	GLAND	BRASS	DIN EN 12165 CW 617 N
8	GLAND NUT	BRASS	DIN EN 12165 CW 617 N
9	HAND WHEEL	CI TO BSEN 1561 GR. EN GJL 200 / MS SHEET	
10	WASHER	CARBON STEEL	ANY GRADE
11	SETS SCREW	CARBON STEEL	ANY GRADE

DIMENSIONAL DATA

SIZE(mm)	8	10	15	20	25	32	40	50	65	80	100
L	43	43	48	53	58	68	72	83	94	105	127
ϕb	10	10	13	19.1	25	32	38	50	63.5	76.2	100
$\sim H$	74	74	82	93	111	125	138	172	210	245	297
ϕHW	48	48	60	60	60	70	90	92	140	140	168
Aprox. Wt.	-	-	0.310	0.460	0.621	1.110	1.350	2.300	3.500	5.150	9.630
ITEM CODE	GM 002	GM 002	GM 002	GM 002	GM 002	GM 002	GM 002	GM 002	GM 002	GM 002	GM 002

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 16	24 bar	17.6 bar	EN 12266 PART- 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program.

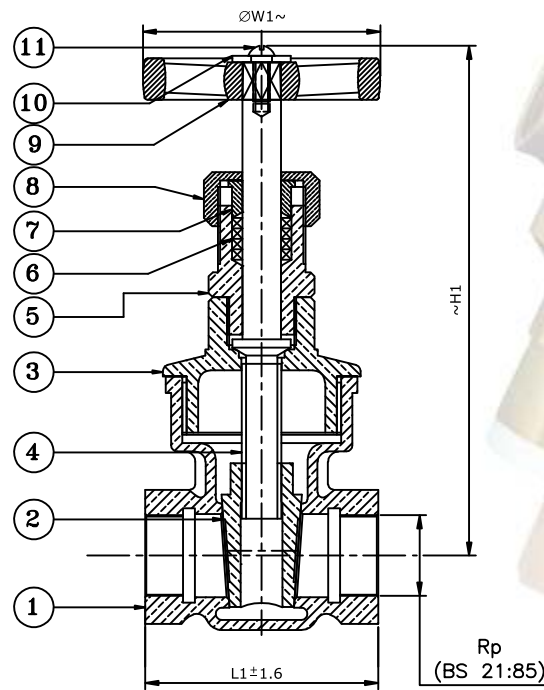
(▲ WEIGHT GIVEN IN KGS)



G.M. / BRONZE GATE VALVES-BS 5154

SPECIFICATIONS

SCREWED IN BONNET,
INSIDE SCREW, NON-
RISING STEM, INTGRAL
SEAT, SOLID WEDGE,
SCREWED FEMALE BSP,
PARALLEL THREADS TO
BS 21.
Other Forms of Threads Can
Be Provided on Request.



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M.	GM TO EN 1982 GR CC 491K
2	WEDGE	G.M.	GM TO EN 1982 GR CC 491K
3	BONNET	G.M. /BRASS	GM TO EN 1982 GR CC 491K
4	STEM	BRASS/ROD	GM TO EN 1982 GR CC 491K
5	STUFFING BOX	G.M. /BRASS ROD	GM TO EN 1982 GR CC 491K
6	GLAND PACKING	TO SUIT SERVICE CONDITIONS	
7	GLAND	G.M. /BRASS ROD	GM TO EN 1982 GR CC 491K
8	GLAND NUT	BRASS ROD	GM TO EN 1982 GR CC 491K
9	HAND WHEEL	C.I. / STEEL	GR. 220 OF BS 1452 / ANY GR.
10	WASHER	CARBON STEEL	GRADE
11	SET SCREW	CARBON STEEL	GRADE

DIMENSIONAL DATA

SIZE(mm)	15	20	25	32	40	50	65	80	100	125	150
L1	56	62	56	76	86	92	114	121	148	203	210
$\varnothing b1$	15	20	25	32	40	50	63.5	76.2	100	125	150
H1	100	112	125	140	159	176	210	250	285	426	532
HW1	60	60	70	90	90	111	136	145	197	216	254
Aprox. Wt ^	0.498	0.710	0.910	1.260	1.760	2.590	4.500	7.830	20.450	34.430	45.560
ITEM CODE	GM003	GM003	GM003	GM003	GM003	GM003	GM003	GM003	GM003	GM003	Gm003

TEST PRESSURES

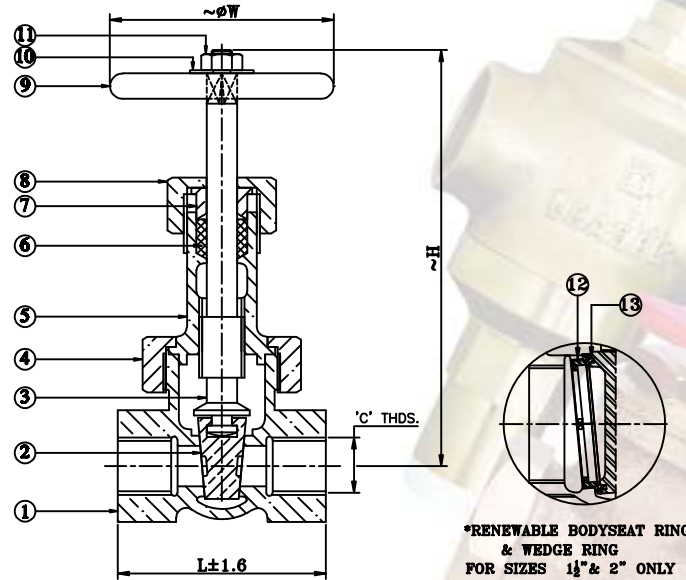
NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 20	30 bar	22 bar	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^WEIGHT GIVEN IN KGS)



G.M. / BRONZE UNION BONNET GATE VALVE

SPECIFICATIONS : UNION BONNET,
INSIDE SCREW, RISING STEM,
INTEGRAL SEAT, SOLID WEDGE,
SCREWED FEMALE, NPT THREADS
TO ASME B1.20.1



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M.	ASTM B 62
2	WEDGE (SOLID)	G.M.	ASTM B 62
3	STEM	HT BRASS	EN 121M65 CW721
4	UNION NUT	G.M.	ASTM B 62
5	BONNET	G.M.	ASTM B 62
6	PACKING	TO SUIT SERVICE CONDITIONS	
7	GLAND	G.M. / BRASS ROD	ASTM B 62 / EN 12165 CW 617N
8	GLAND NUT	G.M. / BRASS ROD	ASTM B 62 / EN 12165 CW 617N
9	HAND WHEEL	CI TO BSEN 1561 GR. EN GJL 200 / MS SHEET	
10	WASHER	CARBON STEEL	ANY GRADE
11	NUT	CARBON STEEL	ANY GRADE
12	BODY SEAT RING	G.M.	ASTM B 62
13	WEDGE RING	G.M.	ASTM B 62

DIMENSIONAL DATA

SIZE(mm)	8	10	15	20	25	32	40	50
L	50	50	65	65	75	85	105	120
C	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
H	105	110	140	165	185	235	250	285
∅W	48	48	67	67	80	80	103	108
Aprox. Wt.	0.510	0.510	0.730	1.070	1.650	3.200	4.750	6.840
ITEM CODE	GM 006	GM 006	GM 006	GM 006	GM 006	GM 006	GM 006	GM 006

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
CLASS 150	450 Psig	330 Psig	EN 12266 PART 1

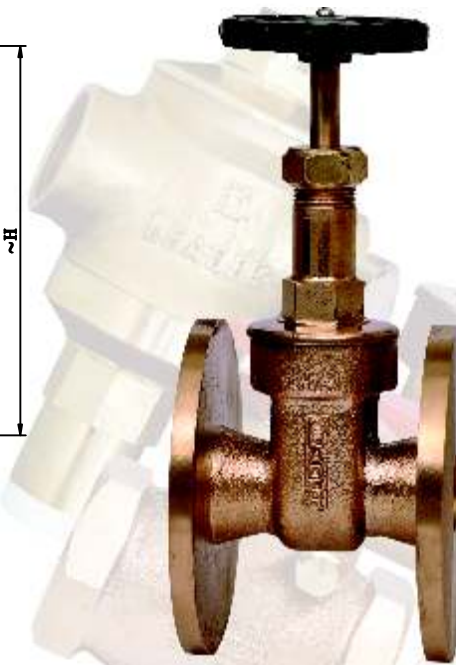
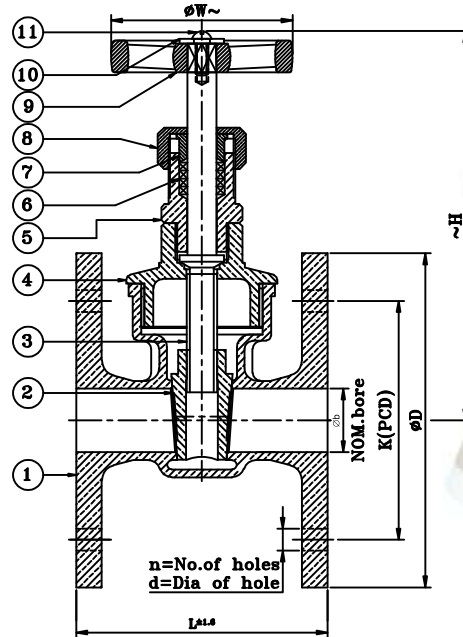
NOTE: The above data is subject to change without notice due to our continuing product improvement program. (± WEIGHT GIVEN IN KGS)



G.M. / BRONZE GATE VALVES

SPECIFICATIONS

SCREWED IN BONNET, INSIDE SCREW, NON-RISING STEM, INTEGRAL SEAT, SOLID WEDGE, FLEDGED ENDS AS PER BS 4504 PN 25/ BS 10 TABLE F.



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M	EN 1982 Gr. CC491K
2	WEDGE	G.M	EN 1982 Gr. CC491K
3	STEM	BRASS ROD	DIN EN 12165:98 CW721R
4	BONNET	G.M / BRASS	EN 1982 Gr. CC491K/ DIN EN 12165:98 CW617N
5	STUFFING BOX	G.M. / BRASS	EN 1982 Gr. CC491K/DIN EN 12165:98 CW617N
6	GLAND PACKING	TO SUIT SERVICE CONDITIONS	
7	GLAND	BRASS	DIN EN 12165:98 CW617N
8	GLAND NUT	G.M. / BRASS	EN 1982 Gr. CC491K/DIN EN 12165:98 CW617N
9	HAND WHEEL	C.I./ STEEL	EN 1561 Gr. GJL200/ ANY GRADE
10	WASHER	CARBON STEEL	ANY GRADE
11	SET SCREW	CARBON STEEL	ANY GRADE

DIMENSIONAL DATA

SIZE(mm)	15	20	25	32	40	50	65	80	100	125	150	
L	67	79	88	91	109	117	142	153	181	232	274	
Øb	15	20	25	32	40	50	63.5	76.2	100	125	150	
H	105	120	125	140	159	182	210	250	305	415	489	
ØW	60	60	60	70	90	92	103	130	168	216	254	
ITEM CODE NOS.	PN 20	GM 004	GM 004	GM 004	GM 004	GM 004	GM 004	GM 004	GM 004	GM 004	GM 004	GM 004
Aprox. Wt. (PN 20)	1.410	1.710	2.675	3.660	5.125	6.100	8.950	14.380	19.100	50.480	68.600	
ITEM CODE NOS.	CLASS 150	GM 005	GM 005	GM 005	GM 005	GM 005	GM 005	GM 005	GM 005	GM 005	GM 005	GM 005
Aprox. Wt. (CL-150)	1.480	1.800	2.805	3.840	5.380	6.410	9.400	15.100	20.500	53.000	72.000	

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATIONS	END DETAILS	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 20	FLANGED ENDS AS PER BS 4504 PN 20	30 Bar	22 bar	EN 12266 PART-1
CLASS 150	FLANGED ENDS AS PER BS 10 TABLE F	450 Psig	330 Psig	

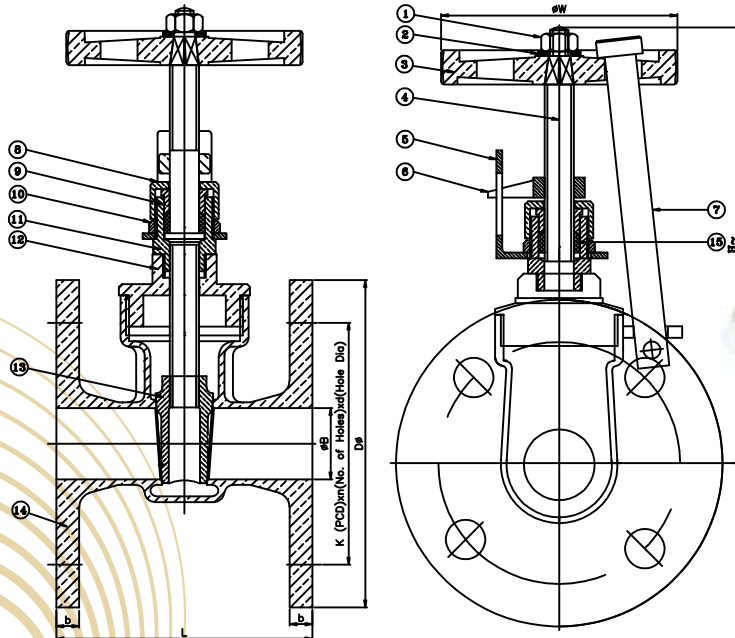
NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲ WEIGHT GIVEN IN KGS)



Copper Alloy Gate Valve

SPECIFICATION

Screwed in Bonnet, Inside Screw, Non-Rising Stem with Open Shut Indicator, Locking Arrangement, Flange Ends as per IS 778 CL-1



STANDARD MATERIAL COMBINATION

P. NO.	NAME OF PARTS	Material	Specification in mm
1.	NUT	SS/BRASS	TYPE 304
2.	WASHER	SS/BRASS	TYPE 304
3.	HANDWHEEL	C.I.	IS 210-93 FG 200
4.	STEM	H.T.BRASS	IS 6912-85 FHTB1
5.	INDICATOR PLANT	LEAD TIN BRONZE	IS 318 - 81 - LTB2
6.	INDICATOR	LEAD TIN BRONZE	IS 318 - 81 - LTB2
7.	LOCKING ROD	CARBON STEEL/SS	GALVANISED/ASTMA 182:08 Gr. F304
8.	GLAND NUT	LEAD TIN BRONZE	IS 318 - 81 LTB2
9.	GLAND	LEAD TIN BRONZE	IS 318 - 81 LTB2
10.	NUT	LEAD TIN BRONZE	IS 318 - 81 LTB2
11.	STUFFING BOX	LEAD TIN BRONZE	IS 318 - 81 LTB2
12.	BONNET	LEAD TIN BRONZE	IS 318 - 81 LTB2
13.	WEDGE	LEAD TIN BRONZE	IS 318 - 81 LTB2
14.	BODY	LEAD TIN BRONZE	IS 318 - 81 LTB2
15.	GLAND PACKING	TEFLON	

NOTE: The above data is subject to change without notice due to our continuing product improvement program.

(▲ WEIGHT GIVEN IN KGS)



Copper Alloy Gate Valve

DIMENSIONAL DATA

SIZE	15mm	20mm	25mm	40mm	50mm	65mm	80mm	100mm
L	72	76	90	110	120	140	150	190
B	6	6	8	9	11	13	13	16
C	15	20	25	40	50	65	80	100
K	65	75	85	110	125	145	160	180
D \varnothing	95	105	115	150	165	185	200	220
n	4	4	4	4	4	4	8	8
d	14	14	14	18	18	18	18	18
H	110	119	153	170	212	255	295	345
$\varnothing W$	60	60	83	90	120	130	145	194
Aprox. Wt. Δ	1.690	2.550	2.950	5.210	7.150	9.460	13.690	20.180
ITEM CODE	GM079	GM079	GM079	GM079	GM079	GM079	GM079	GM079

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 16	300 Psig	220 Psig	EN 12266 PART-1

NOTE: The above data is subject to change without notice due to our continuing product improvement program.

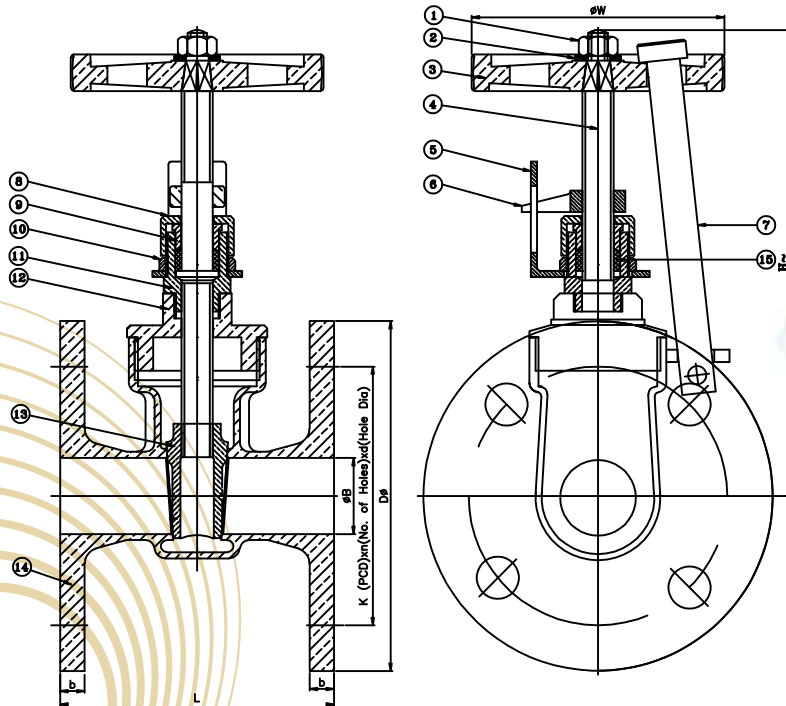
(Δ WEIGHT GIVEN IN KGS)



Copper Alloy Gate Valve

SPECIFICATION

Screwed in Bonnet, Inside Screw, Non-Rising Stem with Open Shut Indicator, Locking Arrangement, Flange Ends as per IS 778 CL-1



STANDARD MATERIAL COMBINATION

P. NO.	NAME OF PARTS	Material	Specification in mm
1.	NUT	SS/BRASS	TYPE 304
2.	WASHER	SS/BRASS	TYPE 304
3.	HANDWHEEL	C.I.	IS 210-93 FG 200
4.	STEM	H.T.BRASS	IS 6912-85 FHTB1
5.	INDICATOR PLANT	LEAD TIN BRONZE	IS 318 - 81 - LTB2
6.	INDICATOR	LEAD TIN BRONZE	IS 318 - 81 - LTB2
7.	LOCKING ROD	CARBON STEEL/SS	GALVANISED/ASTMA 182:08 Gr. F304
8.	GLAND NUT	LEAD TIN BRONZE	IS 318 - 81 LTB2
9.	GLAND	LEAD TIN BRONZE	IS 318 - 81 LTB2
10.	NUT	LEAD TIN BRONZE	IS 318 - 81 LTB2
11.	STUFFING BOX	LEAD TIN BRONZE	IS 318 - 81 LTB2
12.	BONNET	LEAD TIN BRONZE	IS 318 - 81 LTB2
13.	WEDGE	LEAD TIN BRONZE	IS 318 - 81 LTB2
14.	BODY	LEAD TIN BRONZE	IS 318 - 81 LTB2
15.	GLAND PACKING	TEFLON	

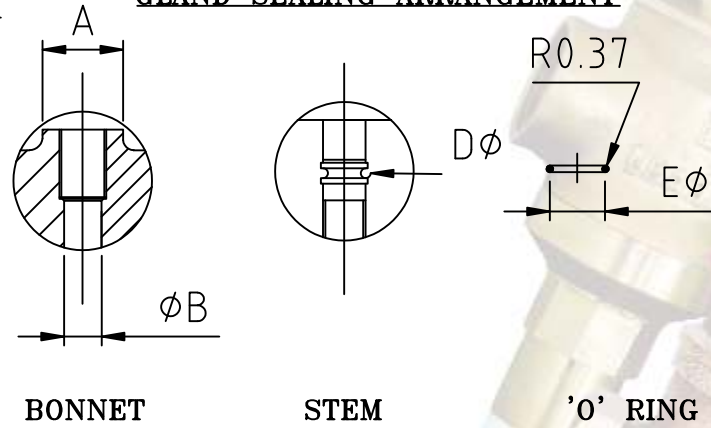
NOTE: The above data is subject to change without notice due to our continuing product improvement program.

(▲WEIGHT GIVEN IN KGS)



Copper Alloy Gate Valve

GLAND SEALING ARRANGEMENT



DIMENSIONAL DATA

SIZE (mm)	15	20	25	40	50
L	72	76	90	110	120
B	6	6	8	9	11
C	15	20	25	40	50
K	65	75	85	110	125
D	95	105	115	150	165
n	4	4	4	4	4
d	14	14	14	18	18
H	110	119	153	170	212
W	60	60	83	90	120
Aprox. Wt. κ	1.245	1.949	2.289	4.040	5.590
ITEM CODE	GM186	GM186	GM186	GM186	GM186

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 10	1.5 Mpa	1.0 Mpa	EN 12266 PART-1

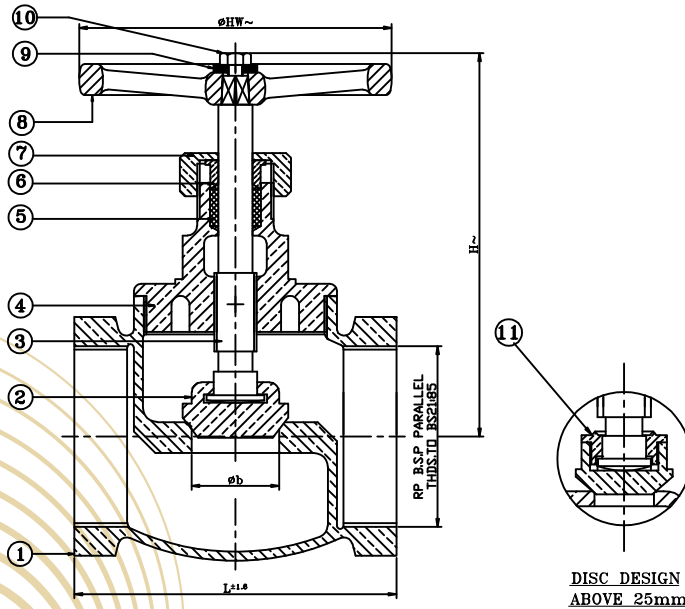
NOTE: The above data is subject to change without notice due to our continuing product improvement program.

(^WEIGHT GIVEN IN KGS)



G.M. / BRONZE GLOBE VALVES

SPECIFICATIONS : SCREWED IN BONNET INSIDE SCREW, RISING STEM, INTEGRAL SEAT, RENEWABLE DISC. PARALLEL THREADS.
Other Forms of Threads Can Be Provided on Request.



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M	EN 1982 Gr. CC491K
2	DISC	G.M	EN 1982 Gr. CC491K
3	STEM	BRASS ROD	DIN EN 12165:98 CW721R
4	BONNET	G.M. / BRASS	EN 1982 Gr. CC491K/ DIN EN 12165:98 CW617N
5	GLAND PACKING	TO SUIT SERVICE CONDITIONS	
6	GLAND	BRASS	DIN EN 12165:98 CW617N
7	GLAND NUT	G.M. / BRASS	EN 1982 Gr. CC491K/DIN EN 12165:98 CW617N
8	HAND WHEEL	C.I./ STEEL	EN 1561 Gr. GJL200/ ANY GRADE
9	WASHER	CARBON STEEL	ANY GRADE
10	SET SCREW	CARBON STEEL	ANY GRADE
11	STEM NUT	G.M / BRASS	EN 1982 Gr. CC491K/DIN EN 12165:98 CW617N

DIMENSIONAL DATA

SIZE(mm)	8	10	15	20	25	32	40	50	65	80	100	125	150
L	40	40	45	55	67	80	89	110	134	159	191	235	267
Øb	9.5	9.5	11.0	16.0	22.5	29.0	35.0	45.0	63.5	76.2	96	122	148
~H	55	55	61	73	84	108	112	120	150	165	235	245	280
HW	48	48	63	63	70	80	90	110	130	130	171	220	254
Approx. Wt. ^	0.130	0.130	0.185	0.350	0.510	0.665	1.210	1.900	3.860	5.450	12.280	23.950	32.400
ITEM CODE NOS.	PN 16	GM 008	GM 008	GM 008	GM 008	GM 008	GM 008	GM 008	GM 008	GM 008	GM 008	GM 008	GM 008

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 16	24 bar	17.6 bar	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^WEIGHT GIVEN IN KGS)



G.M. / BRONZE UNION BONNET GLOBE VALVES - BS 5154

SPECIFICATIONS

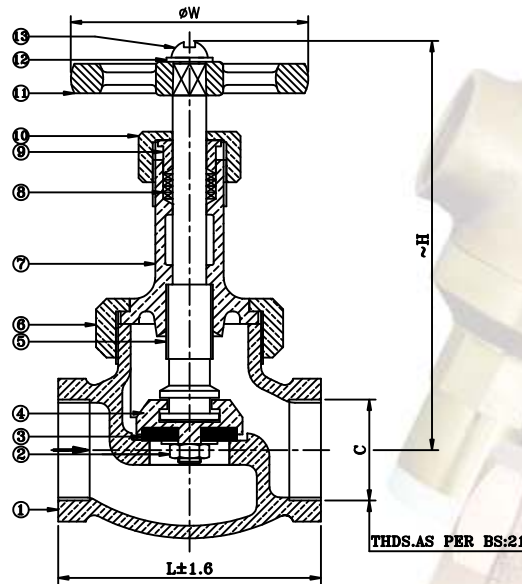
UNION BONNET, INSIDE SCREW,
RISING STEM, INTEGRAL SEAT,
RENEWABLE RUBBER DISC,
SCREWED FEMALE BSP PARALLEL
THREADS TO BS 21.

Other Forms of Threads Can Be Provided
on Request.

MAXIMUM PRESSURE

20 bar PN 20:

MAXIMUM TEMPERATURE 100°C



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	G.M.	EN 1982 Gr. CC491K
2.	DISC RETAINING NUT	G.M.	EN 1982 Gr. CC491K
3.	RESILIENT SEAT (RENEWABLE)	RUBBER	TO SUIT SERVICE CONDITIONS
4.	DISC HOLDER	G.M	EN 1982 Gr. CC491K
5.	STEM	BRASS/ 13% Cr. STEEL	DIN EN 12165:98 CW721R/ ASTM A182 F6a or its equivalent
6.	UNION NUT	G.M.	EN 1982 Gr. CC491K
7.	BONNET	G.M	EN 1982 Gr. CC491K
8.	GLAND PACKING	TO SUIT SERVICE CONDITIONS	
9.	GLAND	G.M./BRASS	EN 1982 Gr.CC491K/DIN EN 12165:98 CW721R
10.	GLAND NUT	G.M	EN 1982 Gr. CC491K
11.	HAND WHEEL	C.I./STEEL	EN 1561 Gr.GJL200/ ANY GRADE
12.	WASHER	CARBON STEEL	ANY GRADE
13.	HAND WHEEL NUT	CARBON STEEL	ANY GRADE

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50	65	80	100
L	60	60	70	85	100	108	125	148	168	203	248
C	9.5	11	15	20	25	32	38	50	63.5	76.2	100
~H	90	90	108	115	128	180	207	243	245	261	331
ØW	60	60	60	60	70	80	90	110	140	157	184
Aprox. Wt. ^	0.430	0.445	0.660	0.704	1.525	2.116	4.020	6.000	7.810	11.470	21.595
ITEM CODE NOS.	GM 014	GM 014	GM 014	GM 014	GM 014	GM 014	GM 014	GM 014	GM 014	GM 014	GM 014

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST	SEAT TEST		STANDARD NO.
		HYDROSTATIC	PNEUMATIC	
PN 20	30 bar	22 bar	6.9 bar	EN 12266 PART-1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^WEIGHT GIVEN IN KGS)

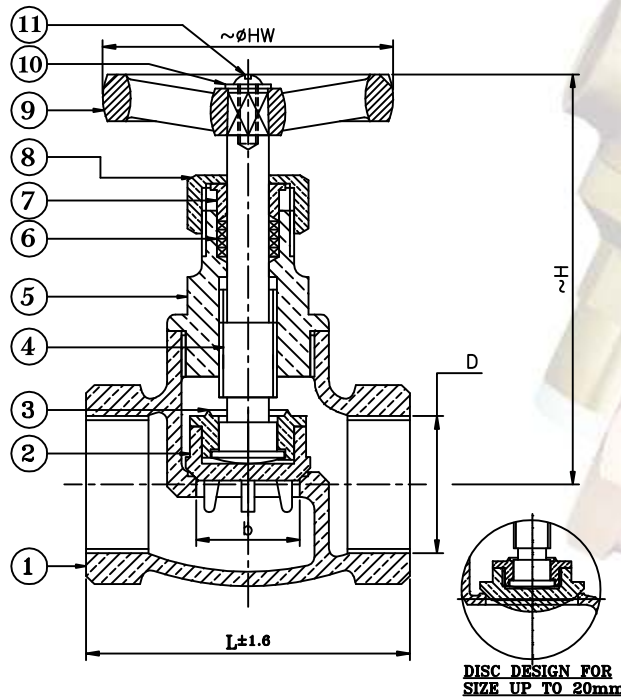


G.M. / BRONZE LEADER GLOBE VALVES BS-5154

SPECIFICATIONS

SCREWED IN BONNET,
INSIDE SCREW, RISING
STEM, INTEGRAL SEAT,
RENEWABLE DISC,
SCREWED FEMALE BSP
PARALLEL THREADS TO
BS 21.

Other Forms of Threads Can
Be Provided on Request.



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M.	EN 1982 Gr. CC491K
2	DISC	G.M.	EN 1982 Gr. CC491K
3	STEM NUT	G.M./BRASS	EN 1982 Gr. CC491K/DIN EN 12165:98 CW617N
4	STEM	BRASS ROD	DIN EN 12165:98 CW721R
5	BONNET	G.M./BRASS	EN 1982 Gr. CC491K/DIN EN 12165:98 CW617N
6	GLAND PACKING	TO SUIT SERVICE CONDITIONS	
7	GLAND	BRASS	DIN EN 12165:98 CW617N
8	GLAND NUT	G.M./BRASS	EN 1982 Gr. CC491K/DIN EN 12165:98 CW617N
9	HAND WHEEL	C.I./ STEEL	EN 1561 Gr. GJL200
10	WASHER	CARBON STEEL	ANY GRADE
11	SET SCREW	CARBON STEEL	ANY GRADE

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50	65	80	100
L	40	45	57	68	78	95	103	125	157	178	206
∅b	9.5	11	12.7	20	25	32	40	50	65	80	100
H	55	61	68	75	100	109	135	140	162	220	235
HW	48	48	60	60	80	90	90	130	135	165	195
Aprox. Wt. ▲	0.150	0.232	0.305	0.500	0.883	1.450	1.880	2.945	6.740	9.350	14.500
ITEM CODE NOS.	GM017	GM017	GM017	GM017	GM017	GM017	GM017	GM017	GM017	GM017	GM017

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 25	37.5 bar	27.5 bar	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲ WEIGHT GIVEN IN KGS)



G.M. / BRONZE UNION BONNET GLOBE VALVES - BS 5154

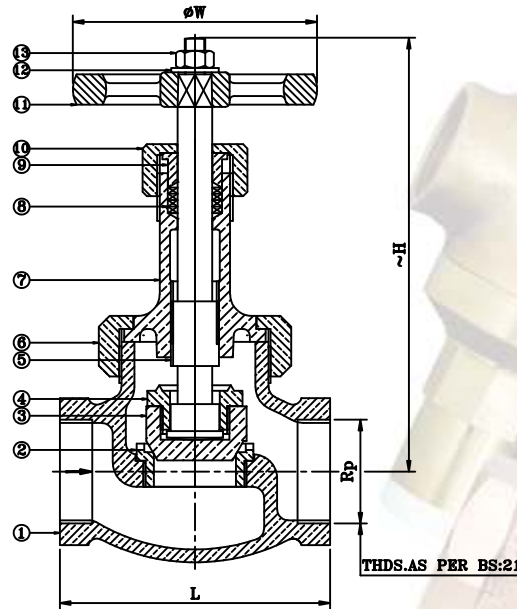
SPECIFICATIONS

UNION BONNET, INSIDE SCREW, RISING
STEM RENEWABLE SEAT & DISC,
SCREWED FEMALE BSP PARALLEL
THREADS TO BS21.

Other Forms of Threads Can
Be Provided on Request.

PRESSURE-TEMPERATURE RATINGS

PN 25 : 25 Bar FROM -
10°C TO 100°C
10.5 Bar at 260°C



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M.	EN 1982 Gr. CC491K
2	BODY SEAT RING	13% Cr. STEEL	ASTM A182 F6a or its equivalent
3	DISC	13% Cr. STEEL	ASTM A182 F6a or its equivalent
4	STEM NUT	G.M.	EN 1982 Gr. CC491K
5	STEM	13% Cr. STEEL	ASTM A 182 F6a / ASTM A276-410 or their equivalent
6	UNION NUT	G.M.	EN 1982 Gr. CC491K
7	BONNET	G.M	EN 1982 Gr. CC491K
8	GLAND PACKING	TO SUIT SERVICE CONDITIONS	
9	GLAND	13% Cr. STEEL	ASTM A 182 F6a / ASTM A276-410 or their equivalent
10	GLAND NUT	G.M.	EN 1982 Gr. CC491K
11	HAND WHEEL	C.I. / STEEL	EN 1561 Gr. GJL200 / ANY GRADE
12	WASHER	CARBON STEEL	ANY GRADE
13	NUT	CARBON STEEL	ANY GRADE

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100
L	70	85	100	108	125	148	168	203	248
H	108	115	128	180	205	243	245	261	331
ØW	60	60	70	80	90	110	140	157	184
Aprox. Wt. ▲	0.690	1.000	1.500	2.800	3.770	5.850	8.500	12.500	22.420
ITEM CODE NOS.	GM 020	GM 020	GM 020	GM 020	GM 020	GM 020	GM 020	GM 020	GM 020

TEST PRESSURES

NOMI NAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 25	37.5 bar	27.5 bar	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲ WEIGHT GIVEN IN KGS)



G.M. / BRONZE UNION BONNET GLOBE VALVES - BS 5154

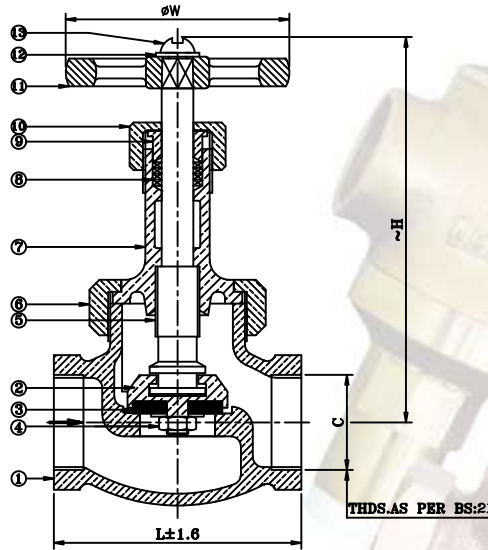
SPECIFICATIONS

UNION BONNET, INSIDE SCREW, RISING
STEM, INTEGRAL SEAT & RENEWABLE PTFE
DISC, SCREWED FEMALE BSP PARALLEL
THREADS TO BS21.

Other Forms of Threads Can Be
Provided on Request.

PRESSURE-TEMPERATURE RATINGS

PN 25 : 25 Bar FROM -
10°C TO 100°C
10.5 Bar at 186°C



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M.	EN 1982 Gr CC491K
2.	DISC	TEFLON	
3.	RESILIENT SEAT	RUBBER	TO SUIT SERVICE CONDITION
4.	DISC RETAINING NUT	BRASS	DIN EN 12165:98 CW617N
5.	STEM	BRASS	DIN EN 12165:98 CW617N
6.	UNION NUT	G.M	EN 1982 Gr. CC491K
7.	BONNET	G.M.	EN 1982 Gr. CC491K
8.	GLAND PACKING	TO SUIT SERVICE CONDITION	
9.	GLAND	BRASS	DIN EN 12165:98 CW617N
10.	GLAND NUT	G.M.	EN 1982 Gr. CC491K
11.	HAND WHEEL	C.I. / STEEL	EN 1561 Gr. GJL200/ANY GRADE
12.	WASHER	CARBON STEEL	ANY GRADE
13.	HAND WHEEL NUT	CARBON STEEL	ANY GRADE

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50	65	80	100
L	60	60	70	85	100	108	125	148	168	203	248
WØ	60	60	60	60	70	80	90	110	140	157	184
C	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
H	90	90	108	115	128	180	205	243	245	261	331
Aprox. Wt. ▲	0.420	0.436	0.710	1.020	1.565	2.115	4.020	6.000	7.200	10.970	13.800
ITEM CODE NOS.	PN-25	GM 023	GM 023	GM 023	GM 023	GM 023	GM 023	GM 023	GM 023	GM 023	GM 023

TEST PRESSURES

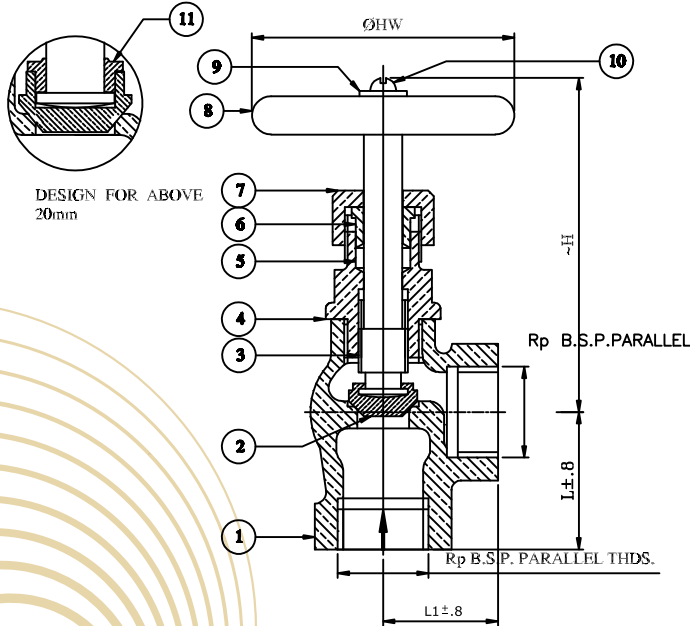
NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 25	37.5 bar	27.5 bar	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲ WEIGHT GIVEN IN KGS)



G.M. / BRONZE GLOBE VALVES

SPECIFICATIONS :SCREWED IN BONNET, INSIDE SCREW, RISING STEM INTEGRAL SEAT, RENEWABLE DISC, RIGHT ANGLE, SCREWED FEMALE BSP PARALLEL THREADS.



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M	EN 1982 Gr. CC491K
2	DISC	G.M	EN 1982 Gr. CC491K
3	STEM	BRASS ROD	DIN EN 12165:98 CW721R
4	BONNET	G.M. / BRASS	EN 1982 Gr. CC491K/ DIN EN 12165:98 CW617N
5	GLAND PACKING	TO SUIT SERVICE CONDITIONS	
6	GLAND	BRASS	DIN EN 12165:98 CW617N
7	GLAND NUT	G.M. / BRASS	EN 1982 Gr. CC491K/DIN EN 12165:98 CW617N
8	HAND WHEEL	C.I./ STEEL	EN 1561 Gr. GJL200/ ANY GRADE
9	WASHER	CARBON STEEL	ANY GRADE
10	SET SCREW	CARBON STEEL	ANY GRADE
11	STEM NUT	G.M / BRASS	EN 1982 Gr. CC491K/DIN EN 12165:98 CW617N

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50	65	80	100	125	150
L1	19	21	24	31	35	43	48	58	70	81	112	-	-
Rp	9.5	9.5	11.0	16.0	22.5	29.0	35.0	45.0	63.5	76.2	96	122	148
~H	60	60	80	85	90	95	110	130	175	180	-	-	-
HW	48	48	63	63	70	80	90	110	130	130	171	220	254
Approx. Wt. ^	0.140	0.180	0.250	0.385	0.650	1.070	1.450	2.370	3.838	5.554	---	---	---
ITEM CODE NOS.	PN 16	GM 011	GM 011	GM 011	GM 011	GM 011	GM 011	GM 011	GM 011	GM 011	GM 011	GM 011	GM 011

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 16	24 bar	17.6 bar	EN 12266 PART 1

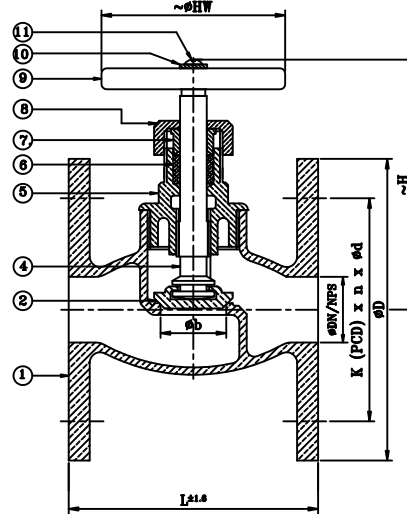
NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^ WEIGHT GIVEN IN KGS)



G.M. / BRONZE GLOBE VALVES

SPECIFICATIONS

SCREWED IN BONNET,
INSIDE SCREW, RISING
STEM, INTEGRAL SEAT,
RENEWABLE DISC,
FLANGED AS PER BS 4504
PN 16/BS 10 TABLE E.



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M	BSEN 1982:99 Gr. CC491K
2	DISC	G.M	BSEN 1982:99 Gr. CC491K
3	STEM NUT	G.M / BRASS	DIN EN 12165: CW 617N
4	STEM	BRASS ROD	EN 12165 CW 721R
5	BONNET	G.M. / BRASS	DIN EN 12165 CW 617N
6	GLAND PACKING	TO SUIT SERVICE CONDITIONS	
7	GLAND	BRASS	DIN EN 12165 CW 617N
8	GLAND NUT	G.M. / BRASS	DIN EN 12165 CW 617N
9	HAND WHEEL	C.I./ STEEL (PVC COATED)	BSEN 1561 Gr. 200/ANY GRADE
10	WASHER	CARBON STEEL	ANY GRADE
11	SET SCREW	CARBON STEEL	ANY GRADE

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100	125	150	
L	52	64	83	83	83	108	142	175	207	249	281	
Øb	11	16	22.5	29	35	45	63.5	76.2	96	122	148	
H	78	78	84	102	105	120	150	165	235	245	280	
K	65	75	85	100	110	125	145	160	180	210	240	
HW	60	60	62	70	90	110	130	130	171	220	254	
ØD	95	105	115	140	150	165	185	200	220	250	285	
ITEM CODE NOS.	Aprox. Wt. [▲]	1.230	1.380	2.180	3.130	3.440	5.490	10.100	11.100	18.900	27.800	41.700
	PN 16	GM 009	GM 009	GM 009	GM 009	GM 009	GM 009	GM 009	GM 009	GM 009	GM 009	GM 009
	Aprox. Wt. [▲]	1.290	1.450	2.290	3.290	3.610	5.760	10.600	11.650	19.880	29.200	43.768
	CLASS 100	GM 010	GM 010	GM 010	GM 010	GM 010	GM 010	GM 010	GM 010	GM 010	GM 010	GM 010

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	END DETAILS	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 16	FLANGED ENDS AS PER BS 4504	24 bar	17.6 bar	EN 12266 PART-1
CLASS 100	FLANGED ENDS AS PER BS 10 TABLE E	300 Psig	220 Psig	

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲ WEIGHT GIVEN IN KGS)



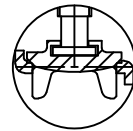
G.M. / BRONZE GLOBE VALVE BS 5154

SPECIFICATIONS

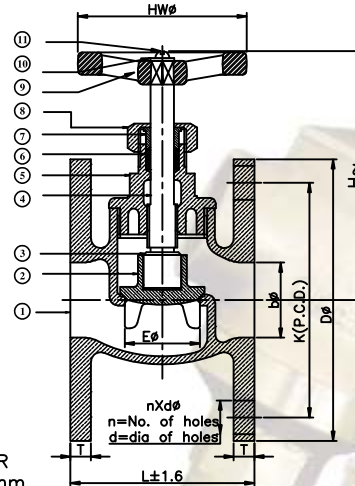
SCREWED IN BONNET, RISING STEM,
INSIDE SCREW, FLANGED END AS PER BS 4504
PN 25/BS: 10 TABLE F (UNDRILLED)
Other Forms of Threads Can Be Provided on Request.

PRESSURE TEMPERATURE RATING

10.5 Bar at 186° C



DISC DESIGN FOR
SIZE UP TO 20mm.



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	G.M.	BSEN 1982 Gr.CC491K
2.	DISC	G.M.	BSEN 1982 Gr. CC491K
3.	STEM NUT	G.M./BRASS	BSEN 1982 Gr. CC491K DIN EN 12165 Gr.CW617N
4.	STEM	HT BRASS	DIN EN 12165 CW721R
5.	BONNET	G.M.	BSEN 1982 Gr. CC491K
6.	GLAND PACKING	TO SUIT SERVICE CONDITIONS	
7.	GLAND	BRASS./G.M	DIN EN12165 Gr.CW617N BSEN 1982 Gr.CC491K
8.	GLAND NUT	BRASS./G.M	DIN EN12165 Gr.CW617N BSEN 1982 Gr.CC491K
9.	HANDWHEEL	M.S/C.S.	SHEET/BSEN 1561 Gr.200
10.	WASHER	CARBON STEEL	-----
11.	SET SCREW	CARBON STEEL	-----

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100
L	55	64	75	82	98	110	156	162	196
Øb	12.7	20	25	32	40	50	65	80	100
~H	68	75	100	109	135	140	162	220	235
ØHW	60	60	70	80	111	111	135	165	195
ØE	12.7	20	25	32	40	50.1	63.5	80	100
ØD	95	105	115	140	150	165	185	200	235
k	65	75	85	100	110	125	145	160	190
n	4	4	4	4	4	4	8	8	8
Ød	14	14	14	18	18	18	18	18	22
Aprox. Wt. ^	1.360	1.750	3.040	3.410	4.860	6.900	10.640	14.611	19.390
ITEM CODE NOS.	GM 018	GM 018	GM 018	GM 018	GM 018	GM 018	GM 018	GM 018	GM 018
Aprox. Wt. ^	1.430	1.840	3.192	3.600	5.150	7.250	11.175	15.340	20.360
ITEM CODE NOS.	GM 019	GM 019	GM 019	GM 019	GM 019	GM 019	GM 019	GM 019	GM 019

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	END DETAILS	STANDARD NO.
PN 25	37.5 bar/27.5 bar	FLANGED AS PER BS 4504	FLANGED END AS PER BS 10 TABLE E	EN 12266 PART 1
CLASS 150	450 Psig	330 Psig		

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^ WEIGHT GIVEN IN KGS)



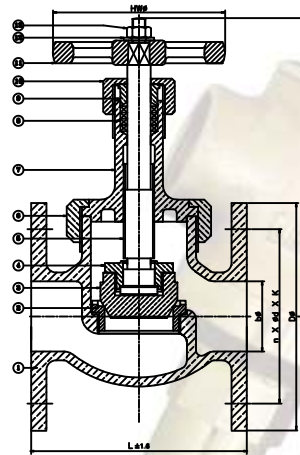
G.M. / BRONZE UNION BONNET GLOBE VALVES

SPECIFICATIONS

UNION BONNET, INSIDE SCREW, RISING
STEM RENEWABLE SEAT & DISC,
FLANGED ENDS AS PER BS 4504 PN 25/
BS 10 TABLE F.

PRESSURE-TEMPERATURE RATINGS

PN 25 : 25 Bar FROM -
10°C TO 100°C
10.5 Bar at 260°C



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M.	EN 1982 Gr. CC491K
2	BODY SEAT RING	13% Cr. STEEL	ASTM A182 F6a or its equivalent
3	DISC	13% Cr. STEEL	ASTM A182 F6a or its equivalent
4	STEM NUT	G.M.	EN 1982 Gr. CC491K
5	STEM	13% Cr. STEEL	ASTM A 182 F6a / ASTM A276-410 or their equivalent
6	UNION NUT	G.M.	EN 1982 Gr. CC491K
7	BONNET	G.M	EN 1982 Gr. CC491K
8	GLAND PACKING	TO SUIT SERVICE CONDITIONS	
9	GLAND	13% Cr. STEEL	ASTM A 182 F6a / ASTM A276-410 or their equivalent
10	GLAND NUT	G.M.	EN 1982 Gr. CC491K
11	HAND WHEEL	C.I. / STEEL	EN 1561 Gr. GJL200 / ANY GRADE
12	WASHER	CARBON STEEL	ANY GRADE
13	HAND WHEEL NUT	CARBON STEEL	ANY GRADE

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100
L	80	95	115	118	138	157	188	213	240
B	13.0	19.0	25.0	32.0	38.0	51.0	63.5	76.0	102.0
D	95	105	115	140	150	165	185	200	235
k	65	75	85	100	110	125	145	160	190
n	4	4	4	4	4	4	8	8	8
d	14	14	14	18	18	18	18	18	22
PN 25/A	GM 021	GM 021	GM 021	GM 021	GM 021	GM 021	GM 021	GM 021	GM 021
Aprox. Wt. ▲	(PN 25/A)	1.960	2.430	3.950	4.700	6.900	9.980	14.760	20.950
CLASS 150/A	GM 022	GM 022	GM 022	GM 022	GM 022	GM 022	GM 022	GM 022	GM 022
Aprox. Wt. ▲	(CL-150/A)	2.060	2.550	4.155	4.930	7.200	10.470	15.500	22.000

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	END DETAILS	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 25	FLANGED ENDS AS PER BS 4504 PN 25	37.5 bar	27.5 bar	EN 12266 PART-1
CLASS 150	FLANGED ENDS AS PER BS 10 TABLE F	450 psig	300 psig	

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲WEIGHT GIVEN IN KGS)

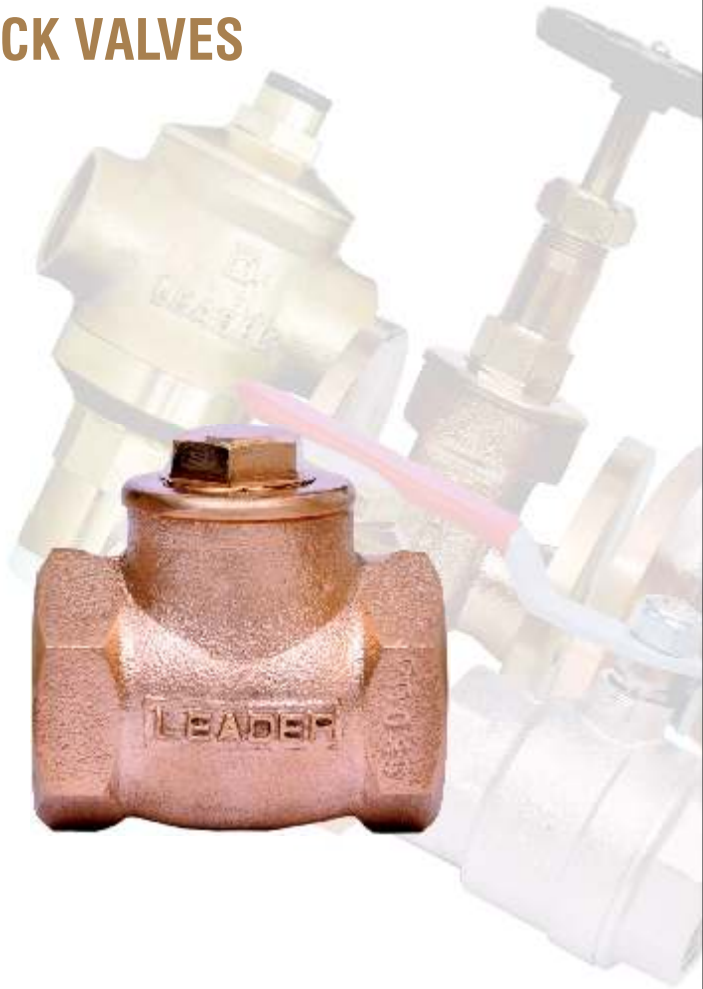
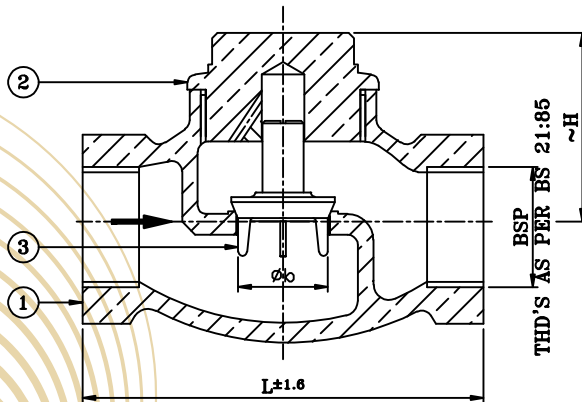


G.M. / BRONZE HORIZONTAL LIFT CHECK VALVES

SPECIFICATIONS

SCREWED IN COVER, INTEGRAL SEAT, RESILIENT SEATED,
SCREWED FEMALE BSP PARALLEL
THREADS TO BS 21.

Other Forms of Threads Can Be Provided on Request.



STANDARD MATERIAL COMBINATION

PART NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	G.M.	BSEN 1982 Gr. CC491K
2.	COVER	G.M.	BSEN 1982 Gr. CC491K
3.	DISC	G.M.	BSEN 1982 Gr. CC491K

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50	65	80	100	125	150
L	40	40	45	55	67	80	89	110	134	159	190	235	267
Øb	9.5	9.5	11	16	22.5	29	35	45	63.5	76.2	96	122	148
H	23	23	25	30	40	50	55	60	75	85	110	130	145
Aprox. Wt. ^	--	0.100	0.160	0.340	0.480	0.890	1.180	1.760	3.425	5.130	11.400	17.250	30.300
ITEM CODE	GM 030	GM 030	GM 030	GM 030	GM 030	GM 030	GM 030	GM 030	GM 030	GM 030	GM 030	GM 030	GM 030

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 16	24 bar	17.6 bar	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^ WEIGHT GIVEN IN KGS)



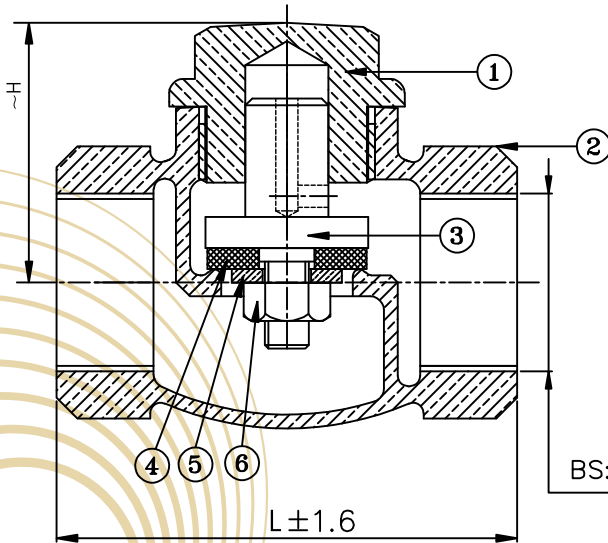
G.M. / BRONZE HORIZONTAL LIFT CHECK VALVES - BS 5154

SPECIFICATIONS

SCREWED IN COVER, INTEGRAL SEAT, RESILIENT DISC
SCREWED FEMALE BSP PARALLEL THREADS TO BS 21
Other Forms of Threads Can Be Provided on Request.

PRESSURE-TEMPERATURE RATINGS

20 bar FROM - 10°C TO 100°C



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	COVER	G.M	EN 1982 Gr. CC491K
2	BODY	G.M.	EN 1982 Gr. CC491K
3	PISTON	G.M.	BS 1982 Gr. CC491K
4	DISC	G.M.	EN 1982 Gr. CC491K
5	WASHER	BRASS ROD	DIN EN 12165:98 Gr. CW617N
6	NUT	BRASS	DIN EN 12165:98 Gr. CW721R

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100
L	55.5	66.5	78	91.5	100	123	156.5	178	206
H	35	40	51	61	70	80	90	110	115
Aprox. Wt. [▲]	0.290	0.480	1.080	1.300	1.750	3.300	6.100	----	----
ITEM CODE	GM 036	GM 036	GM 036	GM 036	GM 036	GM 036	GM 036	GM 036	GM 036

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST		STANDARD NO.
		HYDROSTATIC	PNEUMATIC	
PN 20	30 bar	22 bar	6.9 bar	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲ WEIGHT GIVEN IN KGS)

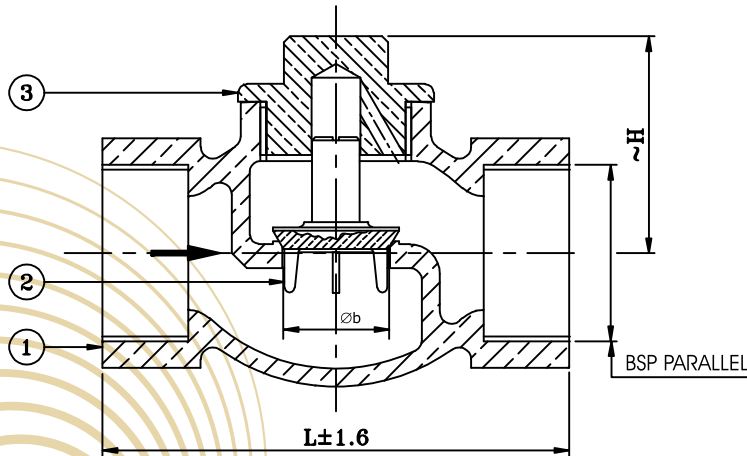


G.M. / BRONZE HORIZONTAL LIFT CHECK VALVES - BS 5154

SPECIFICATIONS

SCREWED IN COVER, INTEGRAL SEAT, SCREWED FEMALE BSP PARALLEL THREADS TO BS21.

Other Forms of Threads Can Be Provided on Request.



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	G.M.	EN 1982 Gr. CC491K
2.	DISC	G.M.	EN 1982 Gr. CC491K
3.	COVER	G.M.	EN 1982 Gr. CC491K

DIMENSIONAL DATA

SIZE (mm)	6	8	10	15	25	32	40	50	65	80	100
L	40	45	57	68	78	95	103	125	157	178	206
H	23	26	32	36.5	50	53	63.5	71.5	76	110	115
øb	1/4"	3/8"	1/2"	3/4"	1"	1-1/2"	1-1/2"	2"	2-1/2"	3"	4"
Aprox. Wt. ^	----	----	0.365	0.550	0.750	1.260	1.690	2.815	4.565	6.210	12.600
ITEM CODE	GM 039	GM 039	GM 039	GM 0039	GM 039	GM 039	GM 039	GM 039	GM 039	GM 039	GM 039

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 25	37.5 bar	27.5 bar	EN 12266 PART 1

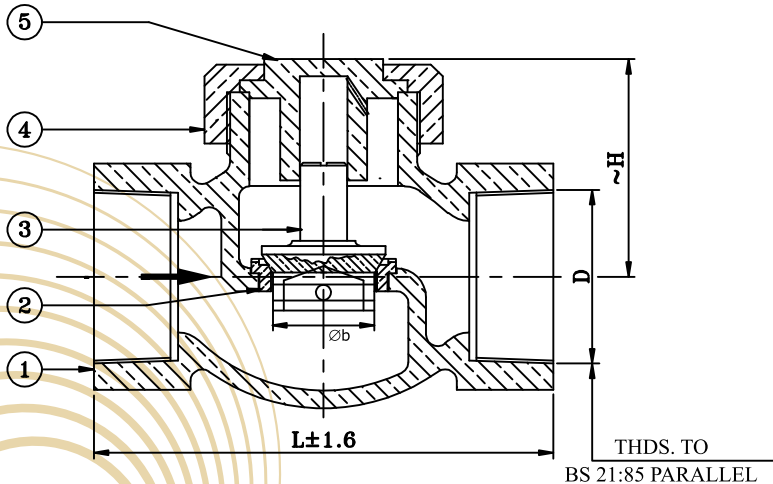
NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^ WEIGHT GIVEN IN KGS)



G.M. / BRONZE UNION COVER HORIZONTAL LIFT CHECK VALVES - BS 5154

SPECIFICATIONS

UNION COVER, RENEWABLE SEAT & DISC, SCREWED FEMALE BSP PARALLEL THREADS TO BS 21.
Other Forms of Threads Can Be Provided on Request.



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	G.M.	EN 1982 Gr. CC491K
2.	BODY SEAT RING	13% Cr. STEEL	ASTM A276 : 06 TYPE 410
3.	DISC	13% Cr. STEEL	ASTM A276 : 06 TYPE 410
4.	UNION	G.M.	EN 1982 Gr. CC491K
5.	COVER	G.M.	EN 1982 Gr. CC491K

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100
L	70	85	100	108	122	148.5	166	203	247.3
H	42	50	55	61	72	87	96.3	105	55
D	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
b	15	20	25	30.2	36.5	47.6	60.3	74.6	96.8
Aprox. Wt. [▲]	0.570	0.960	1.470	2.300	3.150	5.300	7.400	10.200	14.100
ITEM CODE NOS.	GM 042	GM 042	GM 042	GM 042	GM 042	GM 042	GM 042	GM 042	GM 042

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 25	37.5 bar	27.5 bar	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲ WEIGHT GIVEN IN KGS)



Cu-ALLOY SWING CHECK VALVES - BS 5154

SPECIFICATIONS

SCREWED IN COVER, INTEGRAL SEAT, SCREWED FEMALE
BSP PARALLEL THREADS TO BS 21.

Other Forms of Threads Can Be Provided on Request.

PRESSURE-TEMPERATURE RATINGS

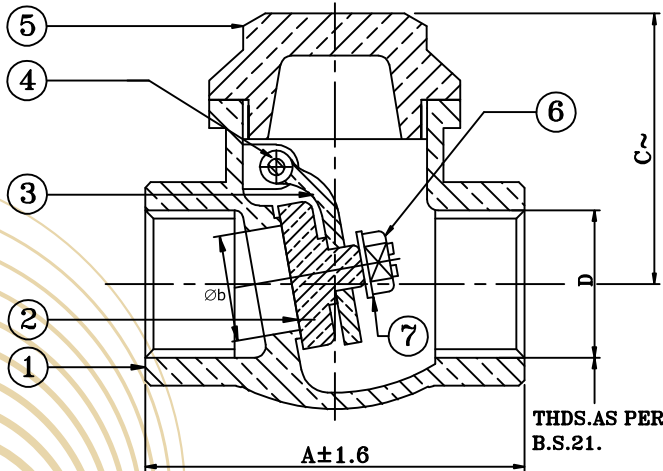
METAL TO METAL SEAT

20 bar AT-10°C to 100°C

9 bar AT-180°C

RESILIENT SEAT (RESTRICTED TO MAX. TEMP. OF 100°C)

20 bar FROM - 10°C TO 100°C



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M.	EN 1982 Gr. CC491K
2	DISC	G.M.	EN 1982 Gr. CC491K
3	HINGE	G.M.	EN 1982 Gr. CC491K
4	HINGE PIN	BRASS	DIN EN 12165:98 CW617N
5	COVER	G.M.	EN 1982 Gr. CC491K
6	HINGE NUT	BRASS	DIN EN 12165:98 CW617N
7	WASHER	HT BRASS / G.M.	DIN EN 1265 CW 721R

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100
A	57	68.5	81	93.5	108	130	154	189	222.5
D	½	¾	1	1 ¼	1 ½	2	2 ½	3	4
-C	40	50	52	65	70	78	100	106	130
b	12.7	22	24	29.9	29.5	46	63	70.5	102
Aprox. Wt. ⚡	0.400	0.630	0.800	1.150	1.850	2.685	4.795	7.600	13.440
ITEM CODE NOS.	GM 045	GM 045	GM 045	GM 045	GM 045	GM 045	GM 045	GM 045	GM 045

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 25	37.5 bar	17.6 bar	EN 12266 PART 1

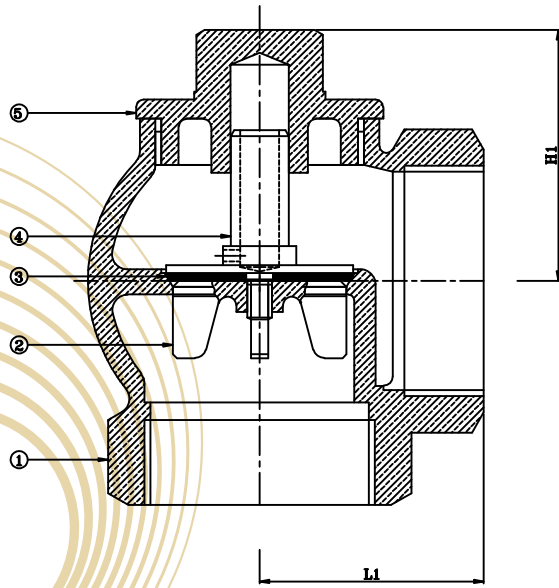
NOTE: The above data is subject to change without notice due to our continuing product improvement program. (⚡WEIGHT GIVEN IN KGS)



G.M. / BRONZE HORIZONTAL LIFT CHECK VALVES (Angle Type)

SPECIFICATIONS

SCREWED IN COVER, INTEGRAL SEAT, RESILIENT SEATED,
SCREWED FEMALE BSP
PARALLEL THREADS TO BS 21.
Other Forms of Threads Can Be Provided on Request.



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	G.M.	BSEN 1982 Gr. CC491K
2.	DISC	G.M.	BSEN 1982 Gr. CC491K
3.	WASHER	Brass	---
4.	STEM	G.M.	BSEN 1982 Gr. CC491K
5.	COVER	G.M.	BSEN 1982 Gr. CC491K

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50	65	80	100
L1	-	-	24	31	35	43	48	58	70	81	112
Øb	9.5	9.5	11	16	22.5	29	35	45	63.5	76.2	96
H1	-	-	25	30	40	45	50	65	90	55	110
Aprox. Wt. [▲]	--	--	0.205	0.340	0.570	0.995	1.290	2.090	---	---	---
ITEM CODE	GM033	GM033	GM033	GM 033	GM 033	GM 033	GM 033	GM 033	GM 033	GM033	GM033

TEST PRESSURES

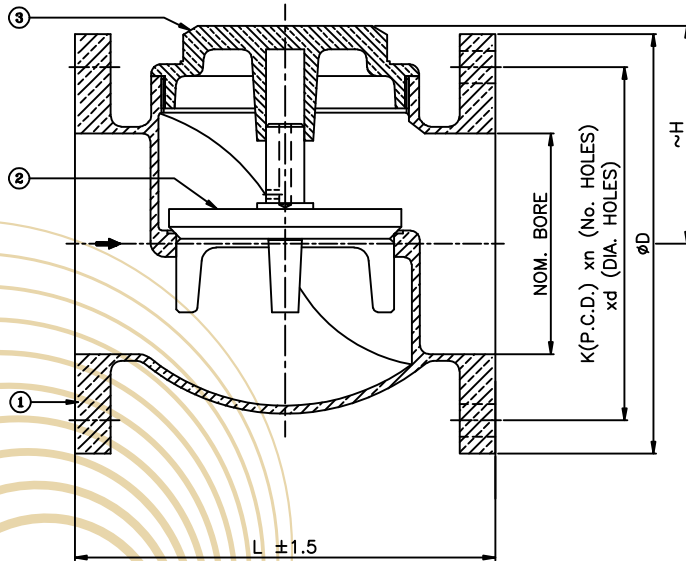
NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 16	24 bar	17.6 bar	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲ WEIGHT GIVEN IN KGS)



G.M. / BRONZE HORIZONTAL LIFT CHECK VALVE

SPECIFICATIONS : SCREWED IN COVER, INTEGRAL SEAT, FLANGES AS PER BS: 4504 PN 16 FF



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M.	BSEN 1982 GR. CC 492 K
2	DISC	G.M.	BSEN 1982 GR. CC 492 K
3	COVER	G.M.	BSEN 1982 GR. CC 492 K

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100	125	150
H	25	30	40	50	55	60	75	85	110	130	145
L	52	64	83	83	83	108	142	175	207	249	281
D	95	105	115	140	150	165	185	200	220	250	285
k	65	75	85	100	110	125	145	160	180	210	240
n	4	4	4	4	4	4	4	8	8	8	8
d	14	14	14	18	18	18	18	18	18	18	22
Aprox. Wt. ⚡	0.920	1.655	1.890	2.300	3.000	4.460	7.240	8.550	18.900	-	-
ITEM CODE	GM 031	GM 031	GM 031	GM 031	GM 031	GM 031	GM 031	GM 031	GM 031	GM 031	GM 031

TEST PRESSURES

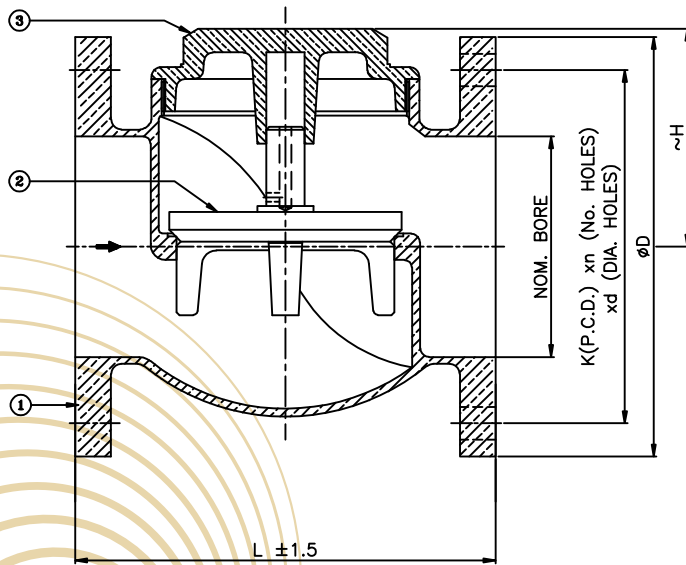
NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 16	24 bar	17.6 bar	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (⚡WEIGHT GIVEN IN KGS)



G.M. / BRONZE HORIZONTAL LIFT CHECK VALVE

SPECIFICATIONS : SCREWED IN COVER, INTEGRAL SEAT, FLANGES AS PER BS: 10 Table 'E' FF



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M.	BSEN 1982 GR. CC 492 K
2	DISC	G.M.	BSEN 1982 GR. CC 492 K
3	COVER	G.M.	BSEN 1982 GR. CC 492 K

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100
H	25	30	40	50	55	60	75	85	110
L	52	64	83	83	83	108	142	175	207
ØD	95.3	101.6	114.3	120.7	133.4	152.4	165.1	182.4	215.9
k	66.7	73	82.6	87.3	98.3	114.3	127	146.1	177.8
n	4	4	4	4	4	4	4	8	8
d	14.3	14.3	14.3	14.3	14.3	17.5	17.5	17.5	17.5
Aprox.Wt. ^	0.970	1.740	1.985	2.420	3.165	4.695	7.620	9.000	19.890
ITEM CODE	GM 032	GM 032	GM 032	GM 032	GM 032	GM 032	GM 032	GM 032	GM 032

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
CLASS 100	330 Psig	220 Psig	EN 12266 PART 1

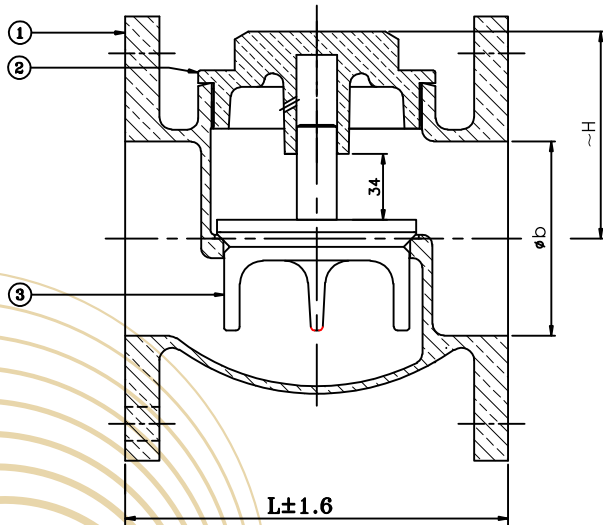
NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^ WEIGHT GIVEN IN KGS)



G.M. / BRONZE HORIZONTAL LIFT CHECK VALVES

SPECIFICATIONS

SCREWED IN COVER, INTEGRAL SEAT, SEAT RENEWABLE DISC,
FLANGED ENDS AS PER BS 4504 PN 25/BS 10 TABLE F



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	G.M.	EN 1982 Gr. CC491K
2.	COVER	G.M.	EN 1982 Gr. CC491K
3.	DISC	G.M.	EN 1982 Gr. CC491K

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100	
L	55	64	75	82	98	110	156	162	196	
øb	12.7	20	25	32	40	50	65	80	100	
H	35	40	51	61	70	80	90	110	115	
ITEM CODE NOS.	CLASS-150	GM 040	GM 040	GM 040	GM 040	GM 040	GM 040	GM 040	GM 040	GM 040
Aprox. Wt. [▲]		1.520	1.980	2.500	3.420	5.200	6.800	11.560	12.710	19.800
ITEM CODE NOS.	PN 25	GM 041	GM 041	GM 041	GM 041	GM 041	GM 041	GM 041	GM 041	GM 041
Aprox. Wt. [▲]		1.440	1.880	2.380	3.250	4.860	6.510	11.000	12.100	18.85

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	END DETAILS	SHELL TEST	SEAT TEST		STANDARD
		HYDROSTATIC	HYDROSTATIC		
PN 25	FLANGED ENDS AS PER BS 4504 PN 25	37.5 bar	27.5 bar	6.9 bar	EN 6755 PART-1
CLASS 150	FLANGED ENDS AS PER BS 10 TABLE F	450 psig	330 psig		

NOTE: The above data is subject to change without notice due to our continuing product improvement program.

([▲]WEIGHT GIVEN IN KGS)



G.M. / BRONZE SWING CHECK VALVES

SPECIFICATIONS

SCREWED IN COVER, INTEGRAL SEAT FLANGED ENDS AS PER BS 4504 PN25/BS 10 TABLE F.

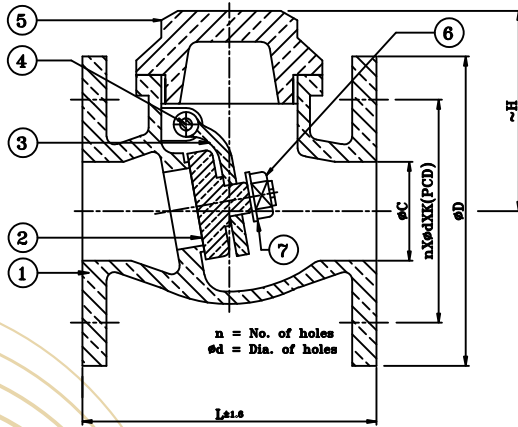
PRESSURE TEMPERATURE RATINGS

METAL TO METAL SEAT

PN 20 Class-150
20 Bar at - 10°C to 100°C 280 psig from - 10°C to 100°C
9 Bar at - 180°C 150 psig at 186°C

RESILIENT SEAT (Restricted to maximum Temp. of 100°C)

PN 20 Class-150
20 Bar from - 10°C to 100°C 280 psig from - 10°C to 100°C



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M. / BRONZE	BSEN 1982 Gr. CC491K / ASTM B62.93
2	DISC	G.M. / BRONZE	BSEN 1982 Gr. CC491K / ASTM B62.93
3	HINGE	G.M. / BRONZE	BSEN 1982 Gr. CC491K / ASTM B62.93
4	HINGE PIN	BRASS ROD	BS2872 : 89 or 2874:86 CZ114
5	COVER	G.M. / BRONZE	BSEN 1982 Gr. CC491K / ASTM B62.93
6	DISC NUT	BRASS ROD	BS2872: 89 or 2874: 86 CZ114
7	WASHER	BRASS/G.M.	BS2872: 89 or 2874: 86 CZ114

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100
L	83	89	102	112	124	144	169	178	217
H	50	62	67	75	85	85	110	120	165
øC	13	19	25.5	32	38	51	63.5	76	101.5
k	65	75	85	100	110	125	145	160	190
n	4	4	4	4	4	4	8	8	8
ød	14	14	14	18	18	18	18	18	22
ITEM CODE NOS. PN 20	GM 046	GM 046	GM 046	GM 046	GM 046	GM 046	GM 046	GM 046	GM 046
Aprox.Wt. (PN-20)	1.330	1.850	3.115	3.330	4.230	6.190	11.430	12.510	21.710
ITEM CODE NOS. CLASS 150	GM 047	GM 047	GM 047	GM 047	GM 047	GM 047	GM 047	GM 047	GM 047
Aprox.Wt. (CL-150)	1.400	1.945	3.270	3.500	4.440	6.500	12.000	13.200	22.800

TEST PRESSURES

Nominal Pressure According To PN or Class Designation	END DETAILS	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD
PN 20	FLANGED ENDS AS PER BS 4504 PN 25	30 bar	22 bar	EN 12266 PART-1
CLASS 150	FLANGED ENDS AS PER BS 10 TABLE F	450 Psi g	330 Psi g	

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲ WEIGHT GIVEN IN KGS)



G.M. / BRONZE VERTICAL CHECK VALVES - BS 5154

SPECIFICATIONS

RESILIENT SEAT SCREWED FEMALE BSP PARALLEL
THREADS TO BS 21.

Other Forms of Threads Can Be Provided on Request.

PRESSURE TEMPERATURE RATINGS

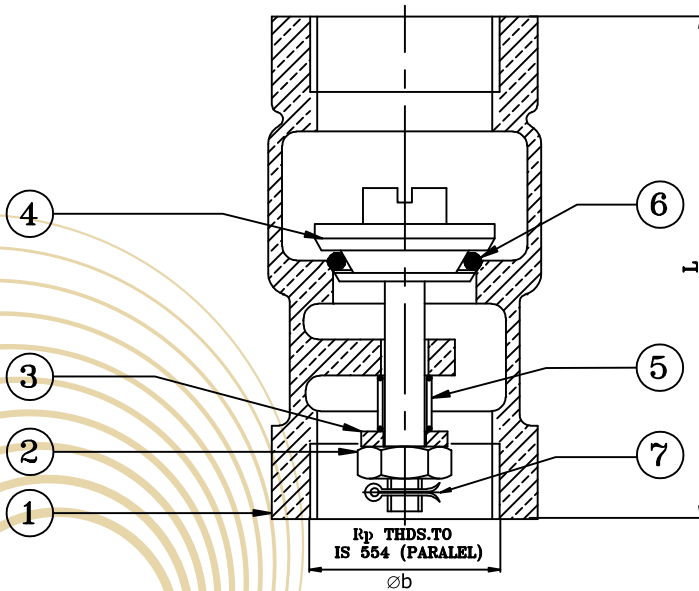
METAL TO METAL SEAT

PN 16 - 16 Bar at - 10°C to 100°C

7 Bar at - 180°C

RESILIENT SEAT (Restricted to maximum Temp. of 100°C)

PN 16 - 16 Bar from - 10°C to 100°C



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	G.M.	BS 1982 CC491K
2.	NUT	BRASS	DIN EN 1265 721R
3.	WASHER	BRASS	
4.	DISC	G.M.	BS1982 CC491K
5.	SPRING	Phos. BRONZE / SS304	ASTM B159 or Equivalent
6.	O-RING	SYNTHETIC RUBBER	
7.	SPLIT PIN	SS 304 / PH BRONZE / BRASS	

DIMENSIONAL DATA

SIZE (mm)	8	10	15	25	25	32	40	50	65	80	100	125	150
L	50	50	65	70	75	85	95	110	130	145	190	214	262
øb	8	10	13.5	18	25	32	40	50	65	77	100	121	150
Aprox. Wt. ^	0.175	0.220	0.220	0.300	0.420	0.640	0.890	1.400	2.326	3.330	6.685	13.650	20.200
ITEM CODE NOS.	GM 048	GM 048	GM 048	GM 048	GM 048	GM 048	GM 048	GM 048	GM 048	GM 048	GM 048	GM 048	GM 048

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 16	24 bar	17.6 bar	EN 12266 PART 1

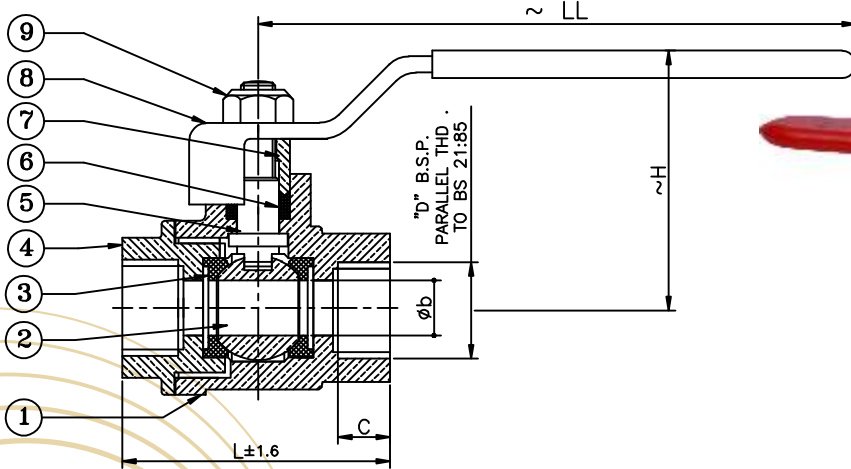
NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^ WEIGHT GIVEN IN KGS)



BRASS BALL VALVES

SPECIFICATIONS :

FULL BORE BALL VALVE , TWO PIECE DESIGN, LEVER OPERATED, SCREWED FEMALE BSP PARALLEL THREADS TO BS21.
Other Forms of Threads Can Be Provided on Request.



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	NICKLE-PLATED FORGED BRASS	DIN EN 12165:98 CW 617N
2	BALL	BRASS CHROME PLATED	DIN EN 12164:98 CW 614N
3	SEAT	PTFE	-----
4	END CONNECTOR	BRASS	DIN EN 12165:98 CW 617N
5	STEM	BRASS CHROME PLATED	DIN EN 12164:98 CW 614N
6	STEM PACKING	PTFE	-----
7	GLAND	BRASS	DIN EN 12164:98 CW 341N
8	LEVER	CARBON STEEL SHEET	PVC INSULATED WITH DACROMET PLATED
9	NUT	CARBON STEEL	-----

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80
Φ b	14	18	23	32	38	50	65	80
L	46	52	63.5	81	80.5	101	134	158
-H	46	51	56	79	75	94	123	138
-LL	86	86	103	140	150	165	222	260
D	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
C	8	9.5	10.4	16	12.7	16	24	28
Item Code	GM200	GM200	GM200	GM200	GM200	GM200	GM200	Gm200
Class	PN - 25	PN-25	PN - 25	PN - 25	PN - 25	PN - 25	PN - 25	PN - 25

TEST PRESSURES

CLASS	SHELL TEST (HYDROSTATIC) BAR	SEAT		STANDARD NO.
		(HYDROSTATIC) BAR	(PNEUMATIC) BAR	
PN 25	30	22	6.9	EN 12266 PART-1

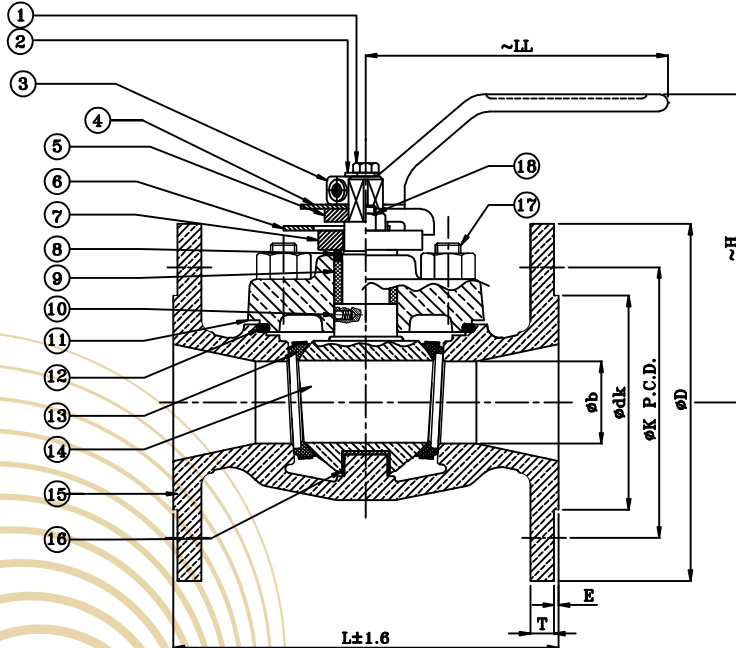
NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲WEIGHT GIVEN IN KGS)



G.M. Venturi Port Ball Valve

SPECIFICATION

One Piece Design, Venturi Part Lever Operated, Flanges as per ASME 16.24 CL-300 RF



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	G.M.	EN 1982 GR CC 491K
2.	WASHER	N.A.B.	NES 833 PART II
3.	HANDLE	C.C.S./C.S.S. (WITH PVC GRIP) S.S.	ASTM A216 Cr. WCB/ASTM A351 CF8M BS 970 SS 316 (FABRICATED)
4.	UPPER LOCK PLATE	BRASS SHEET	IS 410
5.	STOPPER	BRASS SHEET	IS 410
6.	LOWER LOCKING PLATE	BRASS SHEET	IS 410
7.	GLAND FLANGE	G.M.	BS 1400 LG 4C
8.	GLAND FOLLOWER	PH. BRONZE	
9.	GLAND PACKING	GRAPHITE	
10.	ANTISTATIC DEVICE	S.S.	AISI 304
11.	BONNET	G.M.	BS 1400 LG 4C
12.	GASKET	VITON B	
13.	SEAT	PTFE REINORCED WITH 90/10 CU.NI.	
14.	BALL	N.A.B.	NES 747 PART II/833 PART II
15.	BODY	G.M.	BS 1400 LG 4C
16.	BUSHING	REINFORCED PTFE	
17.	STUDS & NUTS	N.A.B.	NES 862
18.	GLAND STUD & NUTS	N.A.B.	NES 862



G.M. Venturi Port Ball Valve

DIMENSIONAL DATA

SIZE	20mm	25mm	32mm	40mm	50mm	65mm	80mm	100mm	15mm
L	110	127	140	165	178	190	203	229	110
H	92	113	123	125	143	150	151	195	92
LL	120	131	139	139	140	203	203	250	120
∅b	6.3	9.5	12.7	19	25	30	35	46	6
∅d	14.5	20.6	26	31.7	38	50.8	60.3	78	14.5
T	6	8	8	9	11	13	13	16	6
E	2	2	3	3	3	3	3	3	2
K	75	85	100	110	125	145	160	180	65
n	4	4	4	4	4	4	4	4	4
d	14	14	18	18	18	18	18	18	14
Aprox. Wt. [^]	3.2	4.5	6.5	8	11	17	21	33.1	2.
ITEM CODE	GM103	GM103	GM103	GM103	GM103	GM103	GM103	GM103	GM103

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT (HYDROSTATIC)	STANDARD NO.
PN 40	60 BAR (HYD)	40 BAR (HYD)	EN 12266 PART-1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. ([^] WEIGHT GIVEN IN KGS)



LEADER PRESSURE REDUCING VALVES

Specification : SPRING LOADED, PISTON TYPE WITH RUBBER DISC SCREWED FEMALE ENDS
MAXIMUM WORKING TEMPERATURE : 70°C



- ❑ PISTON ACTUATED
- ❑ LIGHT WEIGHT
- ❑ COMPACT
- ❑ SELF OPERATING
- ❑ SIMPLE TO SET
- ❑ CAN BE MOUNTED IN ANY POSITION
- ❑ WIDEST SPRING ADJUSTMENT.

LEADER water application Pressure Reducing valve will maintain a satisfactory reduced pressure under most operating condition and it has a wide application in the process work. Where regulation is required.

OPERATION

Fluid enters the valve through the inlet, establishes an equilibrium between the piston & the seat portion & then escapes through the outlet. The escaped fluid at outlet enters the piston chamber.

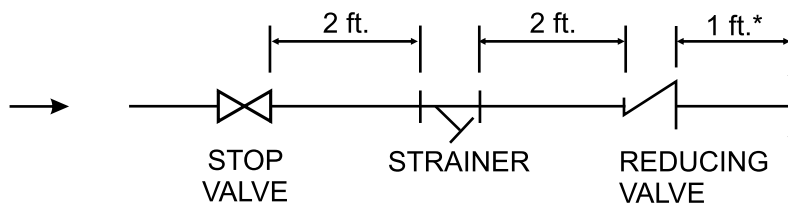
When the reduced pressure attains force more than the spring force, it starts compressing the spring downward. It gives pressure reduction at the outlet by closing the disc from the higher inlet pressure.

Turn the adjusting screw clockwise to increase, and anticlockwise to decrease the outlet pressure.

DATE REQUIRED WHILE ORDERING

Inlet Pressure, Outlet Pressure, Media, Temperature of the media, End Connection & other facts surrounding the installation which are pertinent thereto.

The installation should be done as per sketch shown below.



*No bend upto 1ft. after PRV.

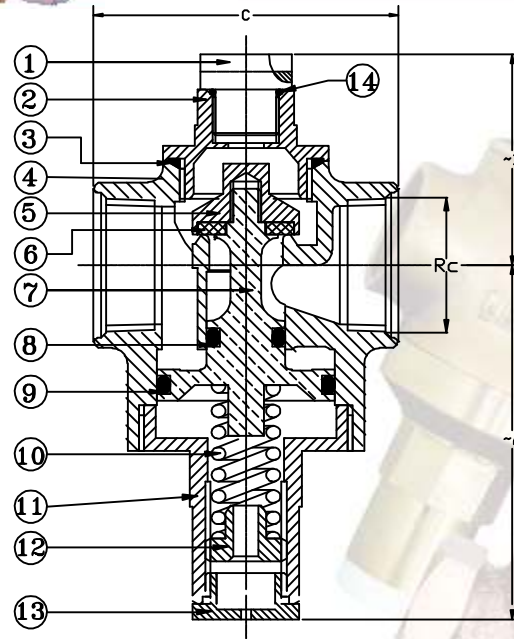
It is preferable to keep the outlet size of pipe atleast 1.5 times of the inlet size for better operation.

NOTE: The above data is subject to change without notice due to our continuing product improvement program.



LEADER PRESSURE REDUCING VALVES

SPECIFICATION :
 SPRING LOADED, PISTON TYPE
 WITH RUBBER DISC SCREWED
 FEMALE ENDS
 MAXIMUM WORKING
 TEMPERATURE : 70°C



STANDARD MATERIAL COMBINATION

P.No.	Description	Material	Specification/Standard
1	TOP COVER PLUG	BRASS	BS2872:89 or 2874:56 Gr. CZ122
2	TOP COVER	G.M./ FORGED BRASS	En1982 GR CC 491K/BS2872:89 Gr. CZ132
3	BODY SEAL	EPDM	SHORE HARDNESS 60±P4
4	BODY	G.M	En1982 GR CC 491K
5	DISC HOLDER	BRASS ROD	BS2872:89 or 2874:86 Gr. CZ122
6	DISC	NEOPREN RUBBER	BS2752:90Gr.C70
7	STEM	G.M. / FORGED BRASS	BS2872:89Gr.CZ122
8	‘O’RING	EPDM	SHORE HARDNESS 60±P4
9	‘O’RING (PISTON)	EPDM	SHORE HARDNESS 60±P4
10	SPRING	SILICON STEEL	ZINC PLATED
11	BOTTOM COVER	G.M./ FORGED BRASS	En1982 GR CC 491K/BS2872:89 Gr. CZ132
12	ADJUSTING SCREW	H.T. BRASS	BS2872:89Gr.CZ122
13	BOTTOM COVER PLUG	PVC	-----
14	‘O’RING (TOP COVER)	EPDM	SHORE HARDNESS 60±P4

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50
C±1	60	60	86	91	91	91
B	39	41.5	60.5	64.5	64.5	64.5
A	68	68.5	92.4	98	98	101
Rc	½"	¾"	1"	1 ¼"	1 ½"	2"
Aprox. Wt. ^	0.775	0.790	1.240	1.600	1.650	1.930
Item Code	GM 123	GM 123	GM 123	GM 123	GM 123	GM 123

TEST PRESSURES

BODY TEST (HYDROSTATIC)	MAX. INLET PRESSURE	OUTLET PRESSURE RANGE	STANDARD NO.
10 BAR	10 bar	0.5-6 bar	BS 6755:86 PART-1

NOTE: The above data is subject to change without notice due to our continuing product improvement program.

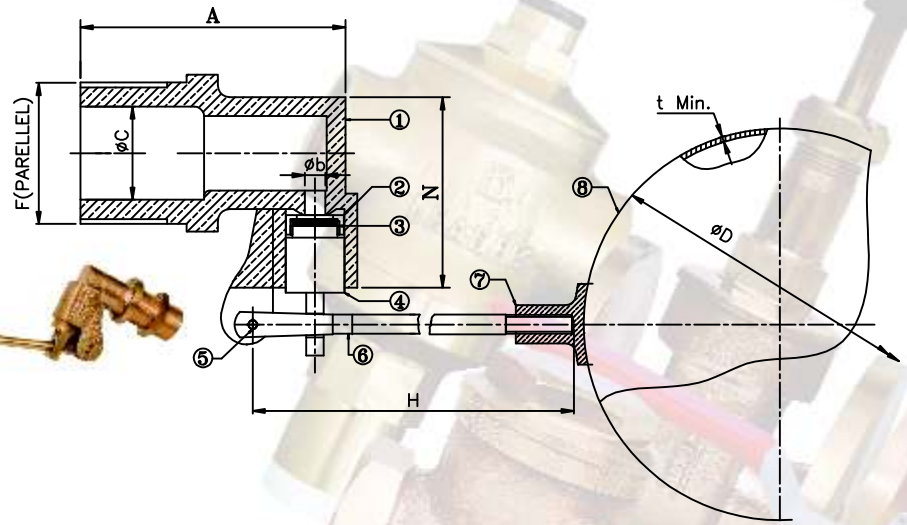
(^ WEIGHT GIVEN IN KGS)



LEADER G.M. / BRONZE FLOAT VALVES

SPECIFICATIONS

Rough Body with Plastic Ball, SCREWED
MALE BSP PARALLEL THREADS TO BS 21.
Other Forms of Threads Can Be Provided on
Request.



WORKING PRESSURE / TEMPERATURE

6 Bar upto 45°C

CLASS RATING : PN 6

STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	GUN METAL	EN 1982 Gr. CC491K
2.	WASHER	NITRILE RUBBER	BS: 2751 BA70
3.	PISTON CAP	GUN METAL	EN 1982 Gr. CC491K
4.	PISTON	GUN METAL	EN 1982 Gr. CC491K
5.	SPLIT PIN	PH. BRONZE	BS 2873 PB 102
6.	LEVER	BRASS ROD	DIN EN 12165:98 CW721R
7.	BALL CAP	GUN METAL	EN 1982 Gr. CC491K
8.	BALL	HDPE / COPPER	POLYETHYLENE *

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	80
A	78	80	81	96	114	135	185
ØC	12.5	19	25.4	32	38	47.5	74
F	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	3"
H	222	330	406	571	571	736	800
N	40	45	60	76	80	97	139
Øb	5.5	6.5	7.5	7.5	9.5	10.5	16
Approx. Wt.	0.290	0.520	0.890	1.400	1.750	3.570	----
ITEM CODE NOS.	GM 066	GM 066	GM 066	GM 066	GM 066	GM 066	GM 066

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT (HYDROSTATIC)	STANDARD NO.
PN 6	9 BAR (HYD)	6.6 BAR (HYD)	EN 12266 PART-1

NOTE: The above data is subject to change without notice due to our continuing product improvement program.

(▲ WEIGHT GIVEN IN KGS)

*Copper Ball can be provided on request.



G.M. / Bronze FOOT VALVES

SPECIFICATIONS

INTEGRAL SEAT, BRASS STRAINER,
INLET END HAVING SCREWED FEMALE
BSP PARALLEL THREADS TO BS 21.
Other Forms of Threads Can Be Provided
on Request.

PRESSURE

TEMPERATURE RATING

Metal to Metal Seat

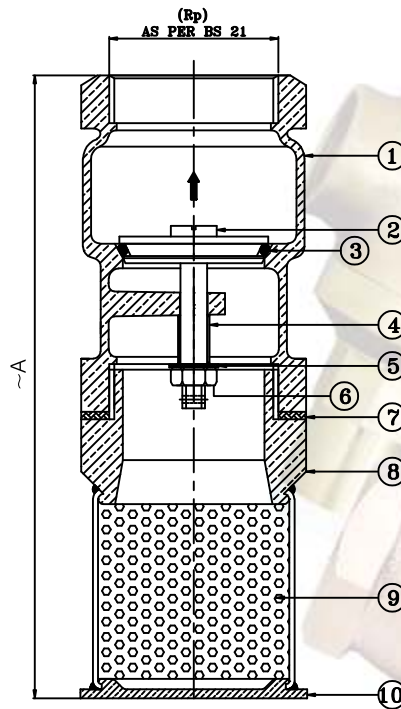
16 Bar at -10° C to 100° C

7 Bar at -180° C

RESILIENT SEAT

(Restricted to maximum
temperature of 100° C)

16 Bar from - 10°C to 100° C



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	G.M.	BS 1982 CC491K
2.	DISC	G.M.	BS 1982 CC491K
3.	'O'RING	SYNTHETIC RUBBER	IS 5192
4.	SPRING	PH. BRONZE	IS 7608
5.	WASHER	BRASS	
6.	NUT	EXTRUDED BRASS	IS 319 (HALF HARD)
7.	GASKET	C.A.F.	BS 1832 - 91
8.	NIPPLE	G.M.	BS 1982 CC491K
9.	SCREEN	BRASS	1mm HOLE DIA
10.	BOTTOM COVER	G.M.	BS 1982 CC491K

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100	125	150
A	110	130	140	180	185	205	215	245	290	340	420
RP	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	38	45
Aprox. Wt. ^	0.290	0.500	0.700	1.165	1.380	2.050	3.680	4.955	7.500	15.000	22.000
ITEM CODE NOS.	GM 065	GM 065	GM 065	GM 065	GM 065	GM 065	GM 065	GM 065	GM 065	GM 065	GM 065

TEST PRESSURES

PRESSURE RATING	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN-6	9 bar	6.6 bar	EN 12266 PART- 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^ WEIGHT GIVEN IN KGS)



G.M. / BRONZE MAIN COCK

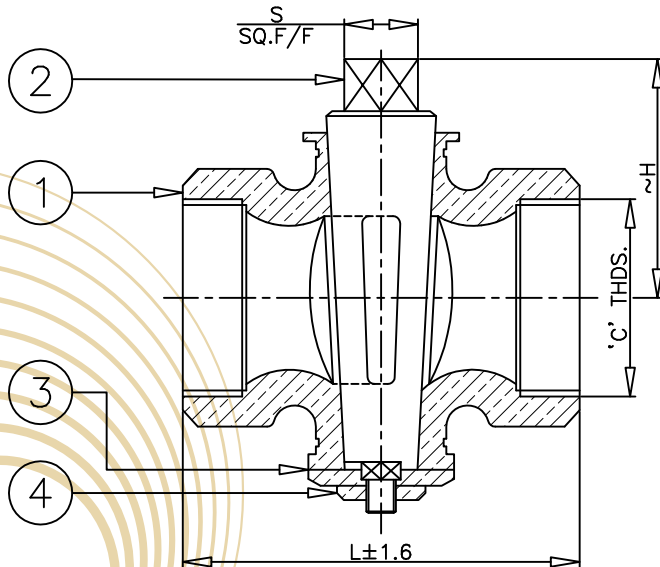
SPECIFICATIONS

TAPER PLUG COCKS, NON-LUBRICATED TYPE, SCREWED FEMALE BSP PARALLEL THREADS TO BS 21.

Other Forms of Threads Can Be Provided on Request.

PRESSURE TEMPERATURE RATINGS

6 Bar at - 100°C



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	G.M.	EN 1982 Gr. CC491K
2.	PLUG	G.M.	EN 1982 Gr. CC491K
3.	WASHER	G.M.	EN 1982 Gr. CC491K
4.	NUT	CARBON STEEL	BS 916 : 53

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50	65	80	100
L	48	54	58.7	69.9	82.6	96.8	111.1	133.4	160	187	231
H	37.6	42.6	50.8	55.6	68.3	81	93.7	110.3	122	136	156
C	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
S	9.5	9.5	11	13.5	16	17.5	21.5	24	32	35	46
Approx. Wt.	0.200	0.260	0.425	0.690	1.020	1.676	2.710	3.855	-	-	-
ITEM CODE	GM 049	GM 049	GM 049	GM 049	GM 049	GM 049	GM 049	GM 049	GM 049	GM 049	GM 049

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	STANDARD NO.	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)
PN 6	EN 12266 PART 1	9 bar	6.6 bar

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲ WEIGHT GIVEN IN KGS)



G.M. / Bronze GLAND COCKS

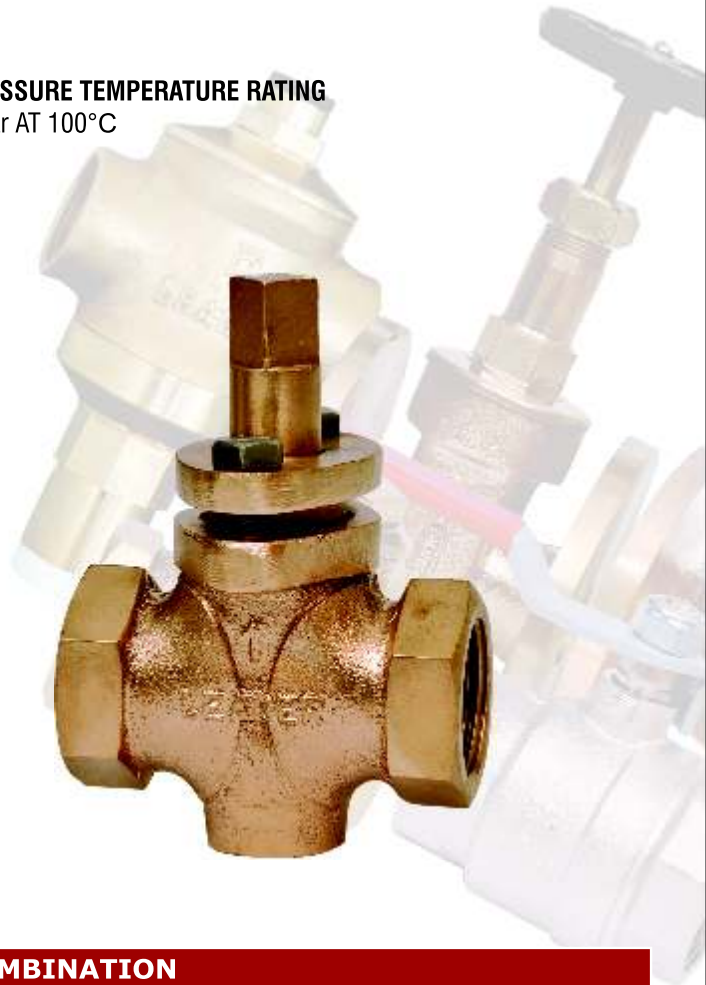
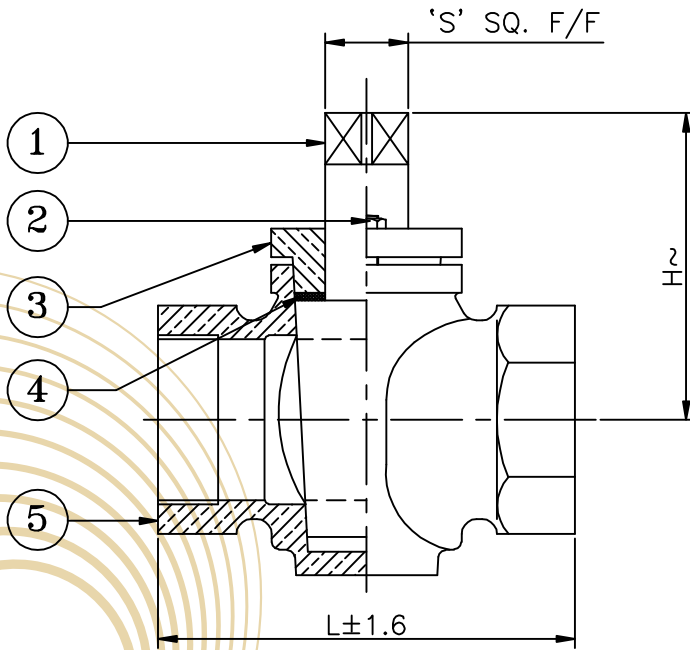
SPECIFICATIONS

TAPER PLUG COCK, NON LUBRICATED TYPE, SCREWED FEMALE BSP
PARALLEL THREADS TO BS 21.

Other Forms of Threads Can Be Provided on Request.

PRESSURE TEMPERATURE RATING

6 bar AT 100°C



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	PLUG	G.M.	EN 1982 Gr. CC491K
2.	GLAND BOLTS	C.S.	BS 916 : 53
3.	GLAND	G.M.	BSEN 1982 Gr. CC491K
4.	GLAND PACKING	ASBESTOS	
5.	BODY	G.M.	BSEN 1982 Gr. CC491K

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50	65	80	100
L	48	57	59	70	83	96	111	132	158	184	233
S	9.5	11	11	12.7	13.5	16	19	22	32	35	46
H	56	56	56	70	84	92	106	118	155	184	244
Aprox. Wt. ^	0.280	0.460	0.505	0.785	1.180	2.270	3.320	5.075	8.300	10.625	23.500
ITEM CODE NOS.	GM 052	GM 052	GM 052	GM 0052	GM 052	GM 052	GM 052	GM 052	GM 052	GM 052	GM 052

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 6	9 bar (HYD)	6.6 bar (HYD)	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program.

(^ WEIGHT GIVEN IN KGS)



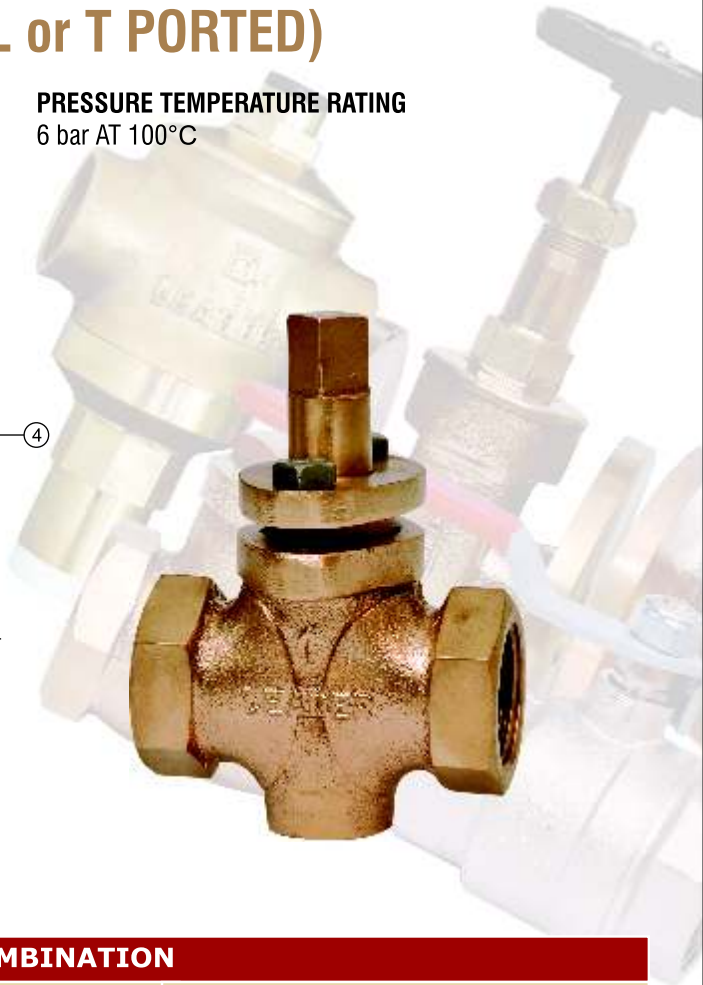
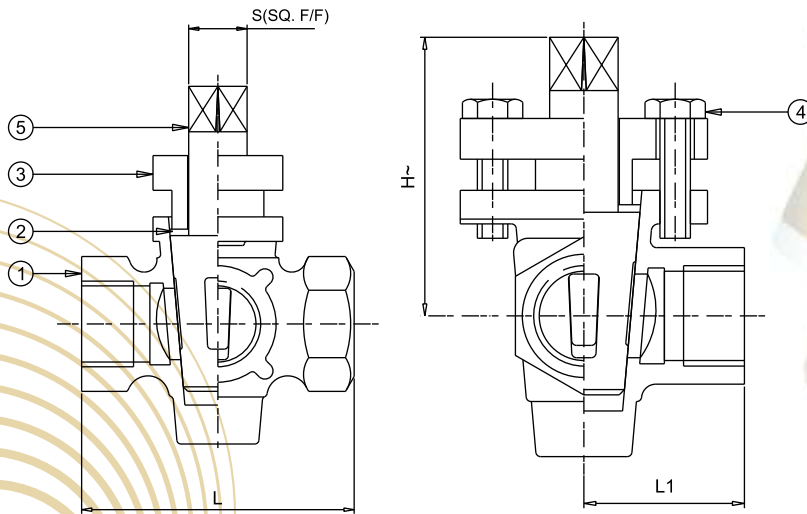
G.M. / BRONZE 3-WAY GLAND COCK (L or T PORTED)

SPECIFICATIONS

TAPER PLUG COCK, NON LUBRICATED TYPE, SCREWED FEMALE BSP
PARALLEL THREADS TO BS 21.
Other Forms of Threads Can Be Provided on Request.

PRESSURE TEMPERATURE RATING

6 bar AT 100°C



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	G.M.	BSEN 1982 Gr. CC491K
2.	PACKING	ASBESTOS	-
3.	GLAND FLANCE	G.M.	BSEN 1982 Gr. CC491K
4.	GLAND BOLTS	CARBON STEEL	BSEN 916
5.	PLUG	G.M.	BSEN 1982 Gr. CC491K

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50
L	67	67	67	77	91	130	146	174
L1	33.5	33.5	33.5	38.5	45.5	65	73	87
S	9.5	11	11	13	13.5	16	19	22
H	56	56	58	73	100	100	110	132
Aprox. Wt. Δ	0.220	0.480	0.625	1.120	1.260	2.270	3.320	5.075
ITEM CODE NOS.	GM 055	GM 055	GM 055	GM 055	GM 055	GM 055	GM 055	GM 055

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 6	9 bar (HYD)	6.6 bar (HYD)	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program.

(Δ WEIGHT GIVEN IN KGS)



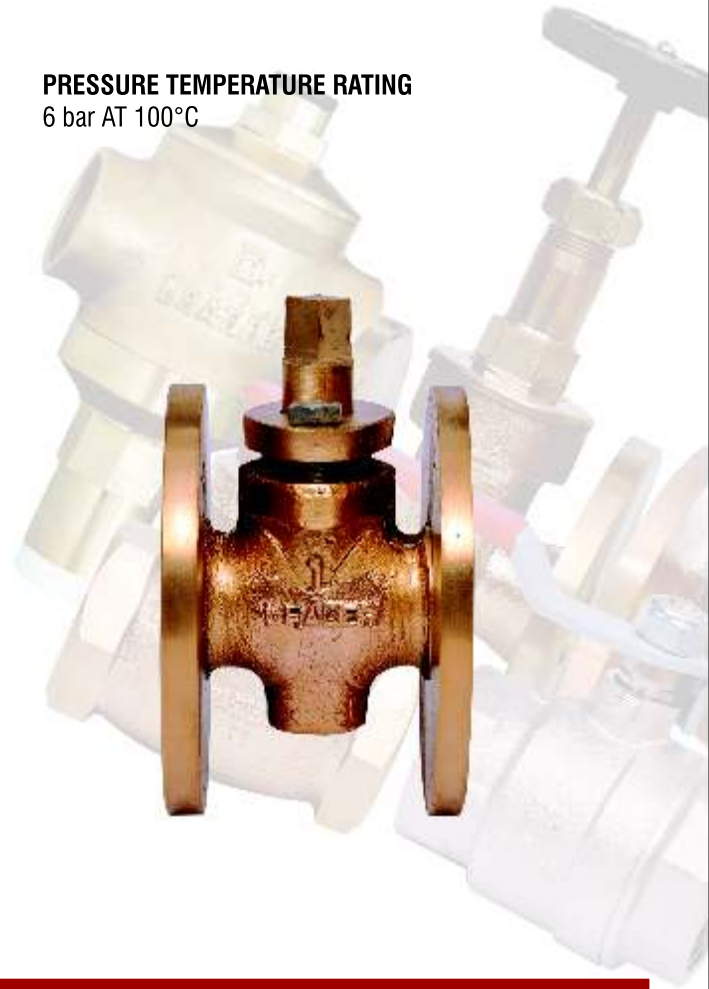
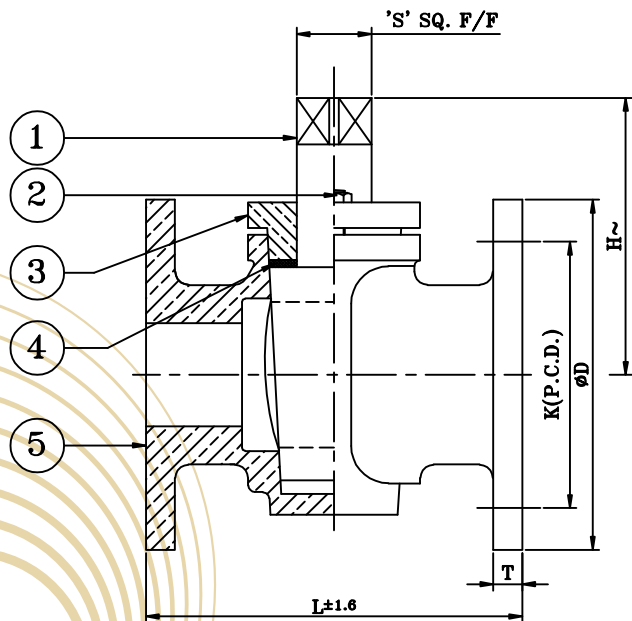
G.M. / BRONZE GLAND COCK

SPECIFICATIONS :

TAPER PLUG COCK, NON LUBRICATED TYPE, FLANGE AS PER BS 4504, SCREWED TO BSP END

PRESSURE TEMPERATURE RATING

6 bar AT 100°C



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	PLUG	G.M	BSEN 1982 : 99 Gr. CC 491K
2	BODY	G.M.	BSEN 1982 : 99 Gr. CC 491K
3	NUT	BRASS	BS 2872 : 89 or 2874 : 86 CZ114
4	WASHER	G.M.	BSEN 1982 : 99 Gr. CC 491K
5	SPRING WASHER	SPRING STEEL	---

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100	125	150
H	56	70	84	92	106	118	155	184	244	215	244
L	53	60	79	84	102	116	167	189	230	265	300
Rp	11	13	13.5	16	19	22	32	35	46	51	54
ØD	80	90	100	120	130	140	160	190	210	240	265
Aprox.Wt. ^	0.505	0.705	1.180	2.250	2.800	4.100	8.160	10.625	23.500	---	---
ITEM CODE	GM 053	GM 053	GM 053	GM 053	GM 053	GM 053	GM 053	GM 053	GM 053	GM 053	GM 053

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SEAT TEST (HYDROSTATIC)	SHELL TEST (HYDROSTATIC)	STANDARD NO.
PN 6	9 bar	6.6 bar	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^ WEIGHT GIVEN IN KGS)



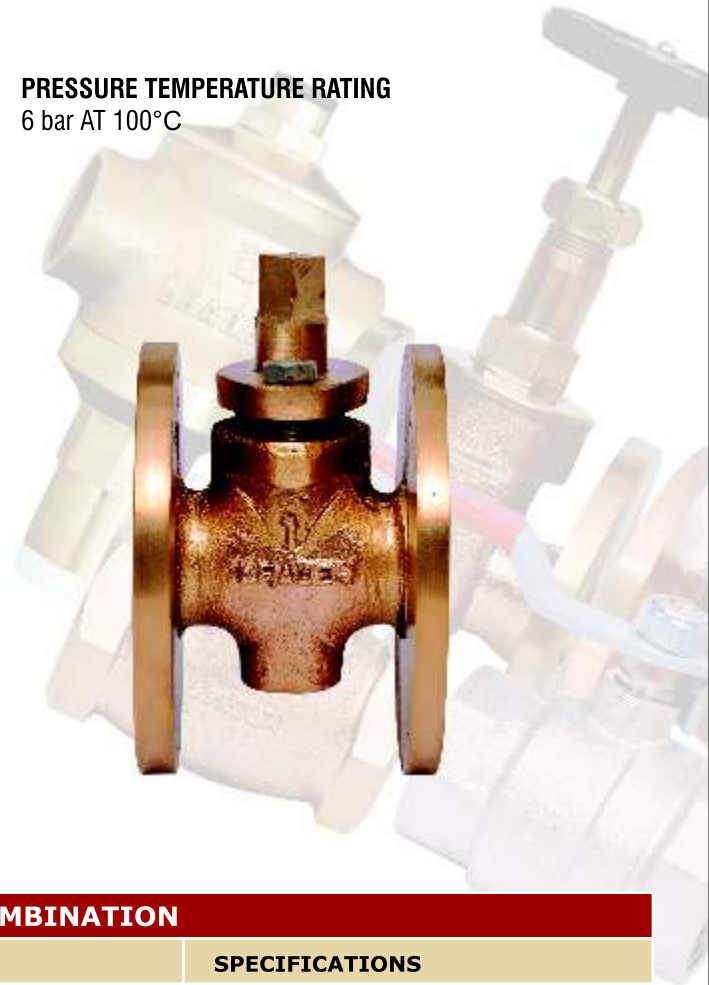
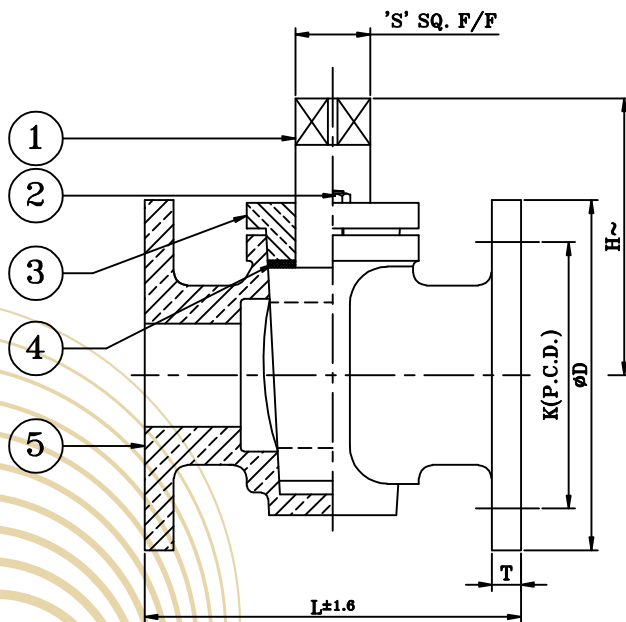
G.M. / BRONZE GLAND COCK

SPECIFICATIONS

TAPER PLUG COCK, NON LUBRICATED TYPE,
FLANGED ENDS BS 10 TABLE E.

PRESSURE TEMPERATURE RATING

6 bar AT 100°C



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIAL	SPECIFICATIONS
1	PLUG	G.M.	BSEN 1982:99 Gr. CC491K
2.	GLAND BOLTS	C.S.	BS 916 : 53
3.	GLAND	G.M.	BSEN 1982:99 Gr. CC491K
4.	GLAND PACKING	ASBESTOS	
5.	BODY	G.M.	BSEN 1982:99 Gr. CC491K

DIMENSIONAL DATA

SIZE (mm)	15	20	25	32	40	50	65	80	100
L	53	60	79	84	102	116	167	189	233
S	11	12.7	13.5	16	19	22	32	35	46
H	56	70	84	92	106	118	155	184	244
d	80	90	100	120	130	140	160	190	210
t	6	6	8	8	9	11	13	13	16
k	66.7	73	82.6	87.6	98.3	114.3	127	146.1	177.8
n	4	4	4	4	4	4	4	8	8
d	14.3	14.3	14.3	14.3	14.3	17.5	17.5	17.5	17.5
Aprox. Wt. ^	1.265	1.635	2.600	3.570	5.990	7.200	11.226	17.400	36.640
ITEM CODE NOS.	CLASS 100	GM 054	GM 054	GM 054	GM 054	GM 054	GM 054	GM 054	GM 054

TEST PRESSURES

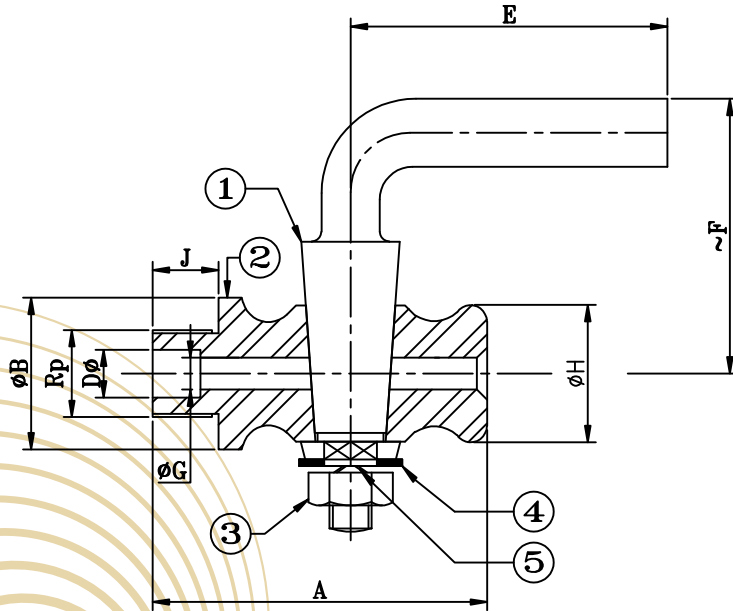
Nominal Pressure According To PN or Class Designation	END DETAILS	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
CLASS 100	FLANGED ENDS AS PER BS 10 TABLE .E	150 psig	100 psig	EN 12266 PART-1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (^ WEIGHT GIVEN IN KGS)



G.M. / BRONZE PET COCK

SPECIFICATIONS : ROUND BARREL, STRAIGHT NOSE, POLISH BODY, METALLIC HANDLE, INLET END HAVING BSP PARALLEL MALE THREADS.



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	PLUG	G.M.	BSEN 1982 99 GR. CC 491K
2	BODY	G.M.	BSEN 1982 99 GR. CC 491K
3	NUT	BRASS	BS 2872 89 OR 2874 86 CZ 114
4	WASHER	G.M	BSEN 1982 99 GR. CC 491K
5	SPRING WASHER	SPRING STEEL	BSEN 970 91 ENL4

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25
A	47	54	68	78	90
ØB	21.5	24	28	35.5	43
ØJ	6.3	9.5	12	18.5	25
L	47	50	58	63.5	83
H	30	40	47	51	64
ITEM CODE	GM 061	GM 061	GM 061	GM 061	GM 061
Approx. Wt.	0.150	0.210	0.300	0.380	0.560

TEST PRESSURES

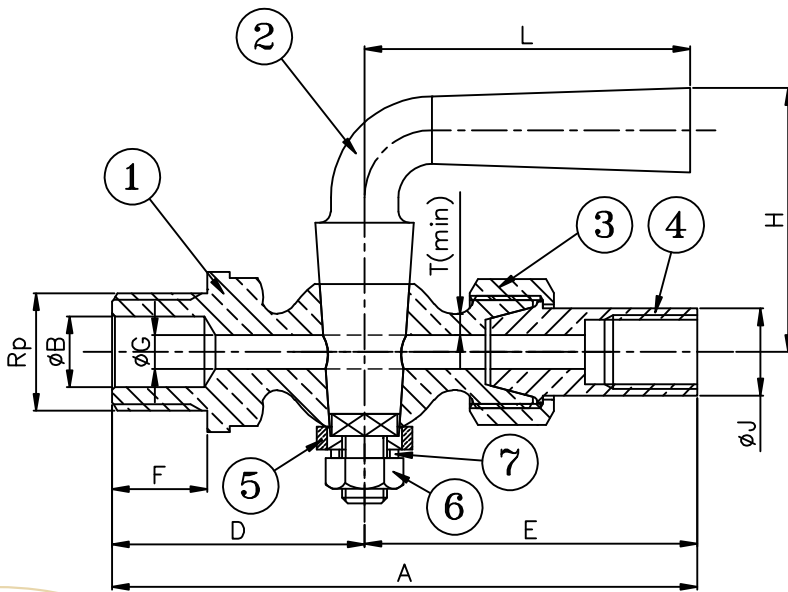
NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT (HYDROSTATIC)	STANDARD NO.
PN 6	9 BAR (HYD)	6.6 BAR (HYD)	EN 12266 PART-1

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲ WEIGHT GIVEN IN KGS)



G.M. / BRONZE DRAIN COCK

SPECIFICATIONS : ROUND BARREL, STRAIGHT NOSE, WITH UNION NUT & TAIL PIPE, POLISH BODY, METALLIC HANDLE, INLET END HAVING BSP PARALLEL MALE THREADS.



STANDARD MATERIAL COMBINATION

P.NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1	BODY	G.M.	BSEN 1982 99 GR. CZ 491K
2	PLUG	G.M.	BSEN 1982 99 GR. CZ 491K
3	UNION NUT	G.M.	BSEN 1982 99 GR. CZ 491K
4	NIPPLE	G.M.	BSEN 1982 99 GR. CZ 491K
5	WASHER	G.M.	BSEN 1982 99 GR. CZ 491K
6	NUT	BRASS	BSEN 1982 99 GR. CZ 491K
7	SPRING WASHER	SPRING STEEL	BSEN 2872 : 89 or 2874 : 86 CZ114

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25
A	72	82	105	118	138
ØD	6.3	9.5	12	19	25
ØB	30	34	45	53	60
E	45	48	60	65	78
F	10	11	16	19	21.5
ITEM CODE	GM 062	GM 062	GM 062	GM 062	GM 062
Approx. Wt.	0.175	0.230	0.400	0.650	0.825

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO PN OR CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 6	9 bar	6.6 bar	EN 12266 PART 1

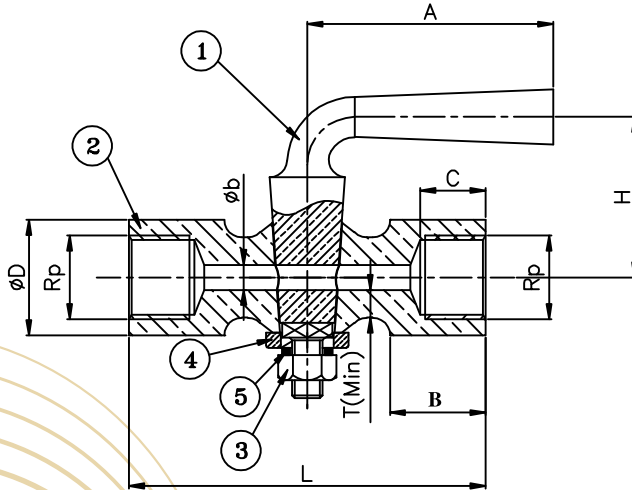
NOTE: The above data is subject to change without notice due to our continuing product improvement program. (▲WEIGHT GIVEN IN KGS)



LEADER BRASS PRESSURE GAUGE COCKS

SPECIFICATIONS

ROUND BAREL, POLISHED BODY, METALLIC HANDLE, SCREWED FEMALE PARALLEL THREADS TO BS 21:85.
Other Forms of Threads Can Be Provided on Request.



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	PLUG	G.M.	BSEN 1982:99 Gr. CC491K
2.	BODY	G.M.	BSEN 1982:99 Gr. CC491K
3.	NUT	BRASS	DIN EN 12165 CW 721R
4.	WASHER	BRASS	BSEN 1982:99 Gr. CC491K
5.	SPRING WASHER	SPRING STEEL	SPRING STEEL

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25
L	63	71	76	90	100
A	47	49	57	82	86
B	16	19	19	23	26.5
C	13	13	15	19	22
∅D	20	23	27	33	40.5
H	30	32	47	48	60
∅b	5	5	6.5	8	9.5
Rp	1/4	3/8	1/2	3/4	1
T	2.2	2.2	2.3	2.4	5
ITEM CODE	GM 063	GM 063	GM 063	GM 063	GM 063
Aprox. Wt.	0.150	0.270	0.400	---	---

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 6	9 bar (HYD)	6.6 bar (HYD)	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program.

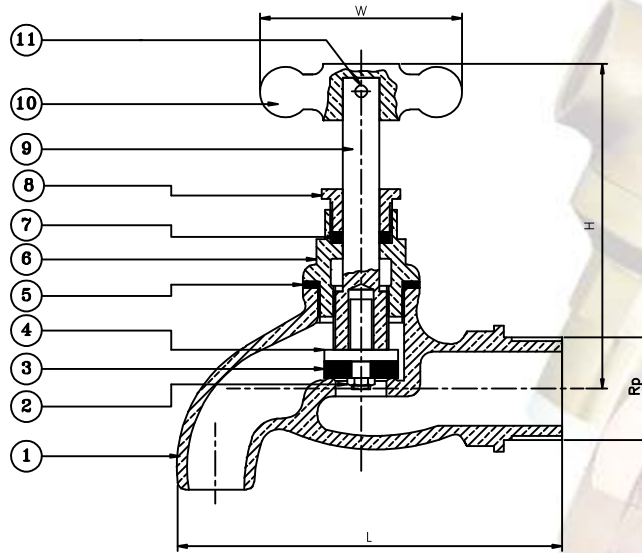
(▲WEIGHT GIVEN IN KGS)



BRASS BIB COCK

SPECIFICATION

Crutch Head Polished Body. Inlet End Heaving
BSP Parallel Male Threads



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	BRASS/G.M.	BS 1400:85 GR. DCB3/BS 1400:85 LG2
2.	NUT	BRASS ROD	BS 2872:89 OR BS 2874:86 CZ114
3.	DISC	VULCANISED SYNTHETIC OR NATURAL RUBBER	BS 3457:73
4.	DISC HOLDER	BRASS ROD	BS 2872:89 OR BS 2874:86 CZ114
5.	GASKET	SYNTHETIC RUBBER	BS 2751:90 BA70
6.	BONNET	BRASS/G.M.	BS 1400:85 GR. DCB3/ BS 1400:85 LG2
7.	GLAND PACKING	ASBESTOS	556 SF-990007
8.	GLAND	BRASS ROD	BS 2872:89 OR BS 2874:86 Cz114
9.	STEM	BRASS ROD	BS 2872:89 OR BS 2874:86 CZ114
10.	HEAD	BRASS/G.M.	BS 1400:85GR. DCB3/BS 1400:85 Lg2
11.	PIN FOR HEAD	BRASS ROD	BS 2872:89 OR BS 2874:86 Cz114

DIMENSIONAL DATA

SIZE	15mm	20mm
L	85	99
H	81	84
Rp	15	20
W	48	52
Aprox. Wt. Δ	0.310	0.450
ITEM CODE	GM059 D	GM059 F

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT (HYDROSTATIC)	STANDARD NO.
PN 10	16 BAR (HYD)	11 BAR (HYD)	EN 12266 PART-1

NOTE: The above data is subject to change without notice due to our continuing product improvement program.

(Δ WEIGHT GIVEN IN KGS)



G.M. / BRONZE FERRULE COCK

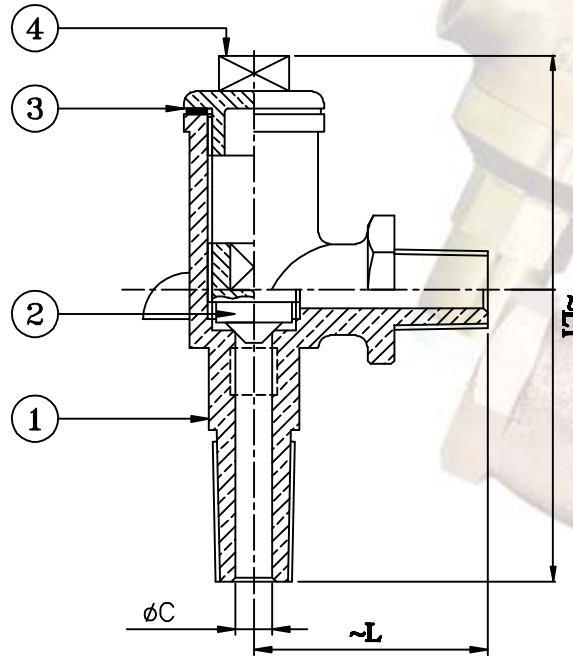
SPECIFICATION

FERRULE COCK, JCSWR TYPE,
SCREWED MALE BSP TAPER
THREADS (BS21) AT INLET &
SCREWED MALE BSP PARALLEL
THREADS (BS21)
AT OUTLET .

Other Forms of Threads Can Be Provided on
Request.

Pressure Temperature Rating

16 Bar at -10°C to 100°C
9 Bar at 180°C



STANDARD MATERIAL COMBINATION

P. NO.	DESCRIPTION	MATERIALS	SPECIFICATIONS
1.	BODY	G.M.	EN 1982 Gr. CC491K
2.	PLUG	G.M.	EN 1982 Gr. CC491K
3.	GASKET	C.A.F.	BS 1832
4.	COVER	G.M. BRASS	EN 1982 Gr. CC491K/DIN EN 12165 CW617N

DIMENSIONAL DATA

SIZE (mm)	8	10	15	20	25	32	40	50
L	40	40	40	50	55	70	83	90
L1	50	50	60	65	75	90	105	115
H	40	40	53	55	68	102	115	127
øb	6.3	9.5	12.7	19	25	30	35	46
Aprox. Wt. [▲]	0.220	0.340	0.350	0.550	0.950	1.620	2.216	3.950
ITEM CODE NOS.	GM058	GM058	GM058	GM058	GM058	GM058	GM058	GM058

TEST PRESSURES

NOMINAL PRESSURE ACCORDING TO CLASS DESIGNATION	SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
PN 16	24 bar (HYD)	17.6 bar (HYD)	EN 12266 PART 1

NOTE: The above data is subject to change without notice due to our continuing product improvement program.

([▲] WEIGHT GIVEN IN KGS)



A - Excellent B - Good C - Poor
D - Not Recommended
Blank Space - Insufficient Information

				Aluminum	Bronze	Cast Iron	Tungsten Carb.	Carbon Steel	304SS-17-4PhSS	316 SS	440CSS	Buna-N	EPR	Viton	Teflon	Ryton	Carbon	Peek	Hastelloy C-276	Chemraz
		A	A						A	A	A	A	A	A	A	A	A	A	A	A
Acetaldehyde	CH ₃ CHO	0.783	0.22	B	D	C	A	C	A	A	A	C	A	D	A	A	A	A	A	D
Acetates	(CH ₃ COO-)			A	A	B	A	B	A	A	A	D	A	D	A	A	A	A	A	A
Acetic Acid (50%)	CH ₃ COOH	1.057	1.22	C	D	D	C	D	A	A	D	B	B	D	A	A	A	A	A	A
Acetic Acid (Glacial)	CH ₃ COOH	1.049		A	B	D	C	D	A	A	B	B	B	D	A	A	A	A	A	A
Acetic Anhydride	(CH ₃ CO) ₂ O	1.083	0.90	B	C	D	A	D	B	B	C	D	B	D	A	A	A	D	A	A
Acetone	CH ₃ COCH ₃	0.797	0.31	B	A	A	A	A	B	B	B	D	A	D	A	A	A	A	A	A
Acrylic Emulsions				B	B	C	A	C	A	A	A	A		A	A	A	A	A	A	A
Acrylonitrile	H ₂ CCHCN	0.800		B	A	C	A	A	A	A	A	D	D	C	A	A	A	A	A	A
Alcohol-Allyl	CH ₂ CHCH ₂ OH	0.852	1.36	B	B	B	A	B	B	B	B	A			A	A	A	A	A	A
Alcohol-Amyl	CH ₃ (CH ₂) ₃ CH ₂ OH	0.817	4.65	A	B	B	A	B	A	A	B	B	A	B	A	A	A	A	B	A
Alcohol-Butyl	CH ₃ (CH ₂) ₂ CH ₂ OH (Butanol)	0.810	2.94	A	B	B	A	B	A	A	B	A	B	A	A	A	A	A	A	A
Alcohol-Diacetone	CH ₃ COCH ₂ C(CH ₃) ₂ OH	0.940	3.20	A	B	B	A	B	A	A	B	D	A	D	A	A	A	A	A	A
Alcohol-Ethyl	C ₂ H ₅ OH	0.804	1.20	B	B	B	A	B	A	A	B	A	A	C	A	A	A	A	A	A
Alcohol-Furfuryl	C ₄ H ₃ OCH ₂ OH	1.128		B	B	B	A	B	B	B	B	D	B	C	A	A	A	A	A	A
Alcohol-Isopropyl	(CH ₃) ₂ CHOH	0.786		B	B	B	A	B	B	B	B	B	A	A	A	A	A	A	A	A
Alcohol-Methyl	CH ₃ OH	0.792	0.59	D	B	B	A	B	A	A	B	A	A	D	A	A	A	A	A	A
Aliphatic Solvents				A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	A
Alkyd Resin				B	B	C	A	C	A	A	A	A	D	A	A	A	A	A	A	A
																				Viscosity Prime Factor
Alkyl Benzene	C ₂ H ₅ -C ₆ H ₆			B	B	A	A	A	A	A	A	D	D	A	A	A	A	A	A	A
Allyl Chloride	CH ₂ CHCH ₂ CL	0.938		D	B	B	B	B	B	B	B	A			A	A	A	A	A	A
AluminumAmmonium Sulfate (Alum.)	AlNH ₄ (SO ₄) ₂	1.645		D	D	D	D	D	B	A	D	A	A	A	A	A	A	A	A	A
Aluminum Chloride (10%)	AlCl ₃ ·6H ₂ O	1.07		D	D	D	D	D	B	A	D	A	A	A	A	A	A	A	B	A
AluminumSodium Sulfate (Aq.)	Al ₂ (SO ₄) ₃ ·Na ₂ SO ₄ ·24H ₂ O	1.67		D	D	D	D	D	B	A	D	A	A	A	A	A	A	A	A	A
Amines	(NH ₃)			C	D	B	A	B	A	A	A	B	B	D	A	A	A	A	A	A
Ammonia (Anh.)	NH ₃	0.77	0.25	B	D	B	B	A	A	A	A	B	A	D	A	A	A	A	A	A
Ammonia Solutions	NH ₄		@ -33°F	B	D	B	B	A	A	A	A	B	A	D	A	A	A	A	A	A
Ammonium Carbonate	NH ₄ HCO ₃			B	D	B	B	B	B	B	B	A	A	A	A	A	A	A	A	A
Ammonium Chloride (0-24%)	NH ₄ Cl	1.04-1.06		C	D	B	B	B	A	A	B	A	A	A		A	A	A	A	A
AmmoniumHydroxide (28%)	NH ₄ OH	0.900		C	D	B	B	B	B	B	B	C	A	D	A	A	A	A	A	A
AmmoniumHydroxide (34%)	NH ₄ OH	0.882		C	D	B	B	B	B	B	B	D	A	D	A	A	A	A	A	A
Ammonium Nitrate (8-42%)	NH ₄ NO ₃	1.03		B	D	D	B	D	A	A	A	A	A	B	A	A	A	A	A	A
Ammonium Phosphate	(NH ₄) ₃ HPO ₄	1.61		B	D	D	B	D	A	A	A	A	A		A	A	A	A	A	A
Ammonium Sulfate	(NH ₄) ₂ SO ₄	1.28		C	B	C	B	C	A	A	B	A	A	D	A	A	A	A	A	A
Amyl Acetate	CH ₃ CO ₂ C ₅ H ₁₁	0.879	0.89	B	B	C	A	C	A	A	A	D	A	D		A	A	A	A	A
Aniline	C ₆ H ₅ NH ₂	1.023	4.40	C	C	C	A	C	A	A	B	D	B	C	A	A	A	A	A	A
Anionic Detergents				A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A
Antimony Trichloride	SbCl ₃	3.14		D	D	D	D	D	D	D	D				A			A	A	A
Asphalt @ 450°F	Bitumens		2,000 SSU	C	A	A	B	A	A	A	A	D	D	C	A		A	A	A	A
																				Ventilated Ext.
Barium Carbonate	BaCO ₃	3.85		B	B	B	B	B	B	B	B	A	A	A	A	A	A	A	A	A
Barium Chloride (26%)	BaCl ₂ ·2H ₂ O	1.27		D	B	C	C	C	C	C	B	A	A	A	A	A	A	A	A	A
Barium Hydroxide	Ba(OH) ₂	1.656		D	B	B	B	B	B	A	B	A	A	A	A	A	A	A	A	A
Barium Sulfate	BaSO ₄	4.25		D	C	C	B	C	B	B	B	A	A	A	A	A	A	A	A	A

Note 1: Avoid dissimilar metals.



A - Excellent B Good C - Poor
D - Not Recommended
Blank Space - Insufficient Information

Chemicals	Formula	Sp. Gr. (60°F)	Typical Viscosity (60°F) (CPS)	Aluminum	Bronze	Cast Iron	Tungsten Carb.	Carbon Steel	304SS-17-4PHSS	316 SS	440CSS	Buna-N	EPR	Viton	Teflon	Ryton	Carbon	Peek	Hastelloy C-276	Chemraz	Remarks
Barium Sulfide	BaS	4.25		D	C	C	B	C	B	B	B	A	A	A	A	A	A	A	A	A	
Beef Tallow				D	D	B	A	B	A	A	A	A	B	A	A	A	A	A	A	A	Steam Clean
Beer				A	B	C	A	C	A	A	A	A	A	A	A	A	A	A	A	A	SS Meter Preferred
Beet Sugar Liquors	Sucrose			A	A	B	A	B	A	A		A	A	A	A	A	A	A	A	A	
Benzaldehyde				A	A	A	A	A	A	A	A			A	A	A			A	A	
Benzene	C ₆ H ₆	0.879	0.652	B	B	B	A	B	B	B	B	D	D	A	A	A	A	A	A	A	
Benzoic Acid	C ₆ H ₅ COOH	1.265		B	B	D	B	D	B	B	B	D	D	A	A	A	A	A	A	A	
Benzyl Alcohol	C ₆ H ₅ CH ₂ OH	1.040		B	B	A	A	A	B	B	B	D	B	A	A	A	A	A	A	A	
Boric Acid	H ₃ BO ₃	1.434		B	B	D	B	D	A	A	B	A	A	A	A	A	A	A	A	A	
Butadiene	C ₄ H ₆	0.621		A	C	B	A	B	A	A	A			A	A	A	A	A	A	A	Note 2
Butane	C ₄ H ₁₀	0.599		A	A	B	A	B	A	A	A	A	D	A	A	A	A	A	A	A	Note 2
Butyl Acetate	CH ₃ COOC ₄ H ₉	0.875	0.732	B	B	A	A	B	B	B	B	D	B	D	A	A	A	A	A	A	
Butylene	C ₄ H ₈	0.595		A	A	A	A	A	A	A	A	B	D	A	A	A	A	A	A	A	Note 2
Butylene Glycol	HOCH ₂ CH ₂ CH(OH)CH ₃	1.00		A	A	A	A	A	A	A	A	A		A	A	A	A	A	A	A	
Butylethyl Ketone	C ₈ H ₁₆ O	0.819		A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Butyraldehyde	CH ₃ (CH ₂) ₃ CHO	0.804	0.43	A	A	A	A	A	A	A	A	D	B	D	A	A	A	A	A	A	B
Butyrcellosolve	CH ₂ OHCH ₂ OC ₄ H ₉	0.901	6.40	A	A	A	A	A	A	A	A	D	B	D	A		A	A	A	A	
Butyric Acid	C ₄ H ₈ O ₂	0.958	1.61	B	C	D	B	D	B	B	C	D	B	B	A		A	A	A	A	
Buttermilk				A	D	D	B	D	A	A	A	A	A	A	A	A	A	A	A	A	
Bunker Oils				A	B	B	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Calcium Chloride (38%)	CaCl ₂ ·6H ₂ O	1.33		D	B	D	B	D	B	B	C	A	A	A	A	A	A	A	A	A	Note 1
Calcium Hydroxide	Ca(OH) ₂	2.34		D	C	C	B	C	B	B	B	A	A	A	A	A	A	A	A	A	
Calcium Hypochlorite (Aq.)	Ca(OCl) ₂			C	D	D	C	D	C	C	C	B	A	A	A	D	A	D	C	A	Hastelloy C
Calcium Nitrate (Aq.)	Ca(NO ₃) ₂ ·4H ₂ O	1.82		D	B	B	B	B	A	A	A	A	A	A	A	A	A	A	A	A	Note 1
Calcium Sulfate (10%)	CaSO ₄	2.45	14 CPS	B	B	B	B	B	A	A	A	B	A	A	A	A	A	A	A	B	Note 1
Camphene	C ₁₀ H ₁₆	0.833		B	B	B	B	B	B	B	B	A	D	A	A	A	A	A	A	A	
Carbolic Acid (20%)	Phenol	1.07	65 SSU	A	A	D	B	D	A	A	B	D	B	A	A		A		A	A	Note 3
Capric Acid	CH ₃ (CH ₂) ₈ COOH	0.885 @ 40°C		B	B	B	C	B	C	A	B	B	C	A	A		A	A	A	A	
Caproic Acid	CH ₃ (CH ₂) ₄ COOH	0.927 @ 20°C	3.10	A	C	D	B	D	A	A	B	B	C	A	A		A	A	A	A	Fatty Acid
Caprylic Acid	CH ₃ (CH ₂) ₆ COOH	0.915 @ 20°C		A	C	D	B	D	A	A	B	B	C	A	A		A	A	A	A	Fatty Acid
Carbitol	C ₈ H ₁₆ O ₂	0.953	6.40	A	A	A	A	A	A	A	A	B	B	B	A	A	A	A	A	A	
Carbitol Acetate	CH ₃ COOC ₂ H ₄ OC ₂ H ₄ OC ₂ H ₅	1.01	2.70	A	A	A	A	A	A	A	A	D	B	D	A		A	A	A	A	
Carbon Dioxide	CO ₂	1.10 @ -37°C		A	A	A	A	A	A	A	A	A	B	B	A		A	A	A	A	Note 2
Carbonic Acid	H ₂ CO ₃	2.44		A	D	C	A	A	A	A	A	B	A	A	A		A	A	A	A	Exists Only in Solid
Carbon Tetrachloride (Dry)	CCl ₄	1.59	1.03	C	C	C	A	C	A	A	C	B	D	A	A	A	A	A	A	A	
Carbon Disulphide	CS ₂	1.26	0.36	A	C	B	B	B	A	A	B	A	D	A	A	A	A	A	A	A	Note 1
Castor Oil		0.969	98.0	A	A	A	A	A	A	A	A	B	A	A	A	A	A	A	A	A	
Cellosolve	HOC ₂ H ₄ OC ₄ H ₉	0.901	6.40	A	A	A	A	A	A	A	A	D	B	D	A		A	A	A	A	
Cellosolve Acetate	CH ₃ COOC ₂ H ₄ OC ₂ H ₅	0.978	1.32	A	A	A	A	A	A	A	A	D	B	D	A	A	A	A	A	A	
Cerotic Acid	CH ₃ (CH ₂) ₂₄ COOH	0.819 @ 100°C		A	C	D	C	D	A	A	B	B	C	A	A		A	A	A	A	
Cetane	Hexadecane	0.773		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Chlorinated Solvents				A	A	A	A	A	A	A	A	D	D	A	A		A	A	A	A	No Water Present
Chlorine (Dry)	Cl ₂	1.46		D	D	B	D	C	B	B	B	D	D	A	A	D	A	D	A	A	No Moisture Present

Note 1: Avoid dissimilar metals.

Note 2: For rotary meters recommend LPG trim.

Note 3: C or D rating given due to possible contamination of metered product by metal. Material compatibility may be satisfactory.



A - Excellent B - Good C - Poor
D - Not Recommended
Blank Space - Insufficient Information

Chemicals	Formula	Sp. Gr. (60°F)	Typical Viscosity (60°F) (CPS)	Material Compatibility																Remarks	
				Aluminum	Bronze	Cast Iron	Tungsten Carb.	Carbon Steel	304SS-17-4PHSS	316 SS	440CSS	Buna-N	EPR	Viton	Teflon	Ryton	Carbon	Peek	Hastelloy C-276		Chemraz
Chloroacetic Acid	CH ₂ ClCOOH	1.370 @ 70°C		D	D	D	D	D	D	D	D	D	B	D	A	D	A	A	A	A	Hastelloy
Chlorobenzene	C ₆ H ₅ Cl	1.105 @ 25°C	0.79	B	B	B	A	B	B	B	B	D	D	A	A	B	A	A	A	A	
Chloroform (Dry)	CHCl ₃	1.485 @ 20°C	0.58	D	B	B	A	B	A	A	A	D	D	A	A	A	A	A	A	A	Note 1
Chlorosulfonic Acid	ClSO ₂ OH	1.76 @ 20°C		B	B	B	D	B	B	B	D	D	D	D	A	D	A	A	A	A	
Chlorothene	CH ₂ Cl ₂	1.319 @ 25°C		A	A	A	A	A	A	A	A	D		A	A	B	A	A	A	A	
Chromic Acid	H ₂ CrO ₄	2.67		D	D	D	D	D	C	C	D	B	D	A	A	D	A	D	D	D	Lead, All y 20
Citric Acid	C ₃ H ₄ OH(COOH) ₃	1.54		C	D	D	C	D	A	A	D	A	A	A	A	A	A	A	A	A	
Coca Cola							A		A	A	A				A	A	A	A	A	A	
Coconut Oil		0.925	27.0	B	B	C	A	C	A	A	B	A	A	A	A	A	A	A	A	A	Note 3
Codliver Oil		0.918	160 SSL	A	A	D	A	D	A	A	B	A	A	A	A	A	A	A	A	A	Note 3
Copper Nitrate 5-50%	Cu(NO ₃) ₂ ·3H ₂ O	2.174		D	D	D	D	D	A	A	B			A	A	A	A	A	A	A	
Copper Sulfate	CuSO ₄ ·5H ₂ O	2.284		C	D	D	C	D	B	B	B	A	A	A	A	A	A	A	A	A	
Cottonseed Oil		0.915-0.921	70.4	B	B	C	A	C	B	B	B	A	C	A	A	A	A	A	A	A	No Cd. Plat-ing Note 3
Corn Oil	(Fatty Acid)	0.914-0.921	26.0*	B	B	C	A	C	A	B	B	A	C	A	A	A	A	A	A	A	*Vis. @ 130°F Note 3
Cresylic Acid (50%)	(Cresol)	1.034		C	C	D	C	C	B	B	A	D	D	A	A		A		A	A	
Crude Oil (Sweet)	0.2-0.5% Sulfur			A	B	B	A	A	A	A	A	B	D	A	A	A	A	A	A	A	
Crude Oil (Sour)	0.5-2.5% Sulfur			A	D	B	B	B	A	A	B	B	D	A	A	A	A	A	A	A	Note 1
Cryogenics	Liquid O ₂ , N ₂ , CO ₂			A	D	D	A	D	A	A	B	D	D	D	A	D	D		A	D	
Cumene	C ₆ H ₅ CH(CH ₃) ₂	0.862	0.73	B	B	A	B	B	B	B	B	D	D	A	A	D	A	A	A	A	
Cupric Chloride	CuCl ₂ ·2H ₂ O	2.39		D	D	D	D	D	D	D	D	A	A	A	A	A	A	A	A	A	
Cuprous Chloride	CuCl	3.35		D	D	D	D	D	D	D	D	A	A	A	A	A	A	A	A	A	
Cutting Oil-Water Emulsions				A	A	B	A	B	A	A	A	A	D	A	A	A	A	A	A	A	
Cyclo Hexane	C ₆ H ₁₂	0.779	1.02	A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Cyclo Hexanone	C ₆ H ₁₀ O	0.943		B	B	B	A	D	B	B	B	D	B	D	A	A	A	A	A	A	
D.D.T.	(ClC ₆ H ₄) ₂ CHCCL ₃			D	D	A	A	A	A	A	A	B	D	A	A	A	A	A	A	A	
Decyl Alcohol	C ₁₀ H ₂₁ OH	0.829		A	A	A	A	A	A	A	A			A	A	A	A	A	A	A	
Denatured Alcohol	(Denatured Ethyl Alcohol)			A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Diammonium Phosphate	Ammonium Phosphate	1.61		B	D	D	D	D	A	A	B	A	A		A	A	A	A	A	A	
Dioctylphthalate	(C ₈ H ₁₇ COO) ₂ C ₆ H ₄	0.965		B	A	B	A	B	B	A	B	D	B	B	A	A	A	A	A	A	
Dibutyl Phthalate	C ₆ H ₄ (COOC ₄ H ₉) ₂	1.048 @ 20°C	20.0	B	B	B	A	B	B	A	B	D	B	B	A	A	A	A	A	A	
Dichloroethyl Ether	C ₂ H ₄ ClOCC ₂ H ₄ Cl	1.222	2.95	A	A	A	A	A	A	A	A	D	C	C	A		A	A	A	A	
Dichloro Propane	CH ₃ CHClCH ₂ Cl	1.158	0.88	B	B	A	A	A	A	A	A	B	D	A	A	A	A	A	A	A	
Diethanol Amine	(HOCH ₂ CH ₂) ₂ NH	1.092		A	D	A	A	A	A	A	A	B	B	D	A		A	A	A	A	Note 1
Diethyl Aniline	(C ₂ H ₅) ₂ C ₆ H ₃ NH ₂	0.959		B	D	A	A	A	B	B	B	D	A	D	A		A	A	A	A	Note 1
Diethyl Ketone	C ₂ H ₅ COC ₂ H ₅	0.816		A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Diethylene Glycol	C ₄ H ₈			A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	Hygroscopic Liquid
Diethylene Triamine	(NH ₂ C ₂ H ₄) ₂ NH	0.954	7.0	A	D	A	A	A	A	A	A	B	B	D	A	A	A	A	A	A	Note 1
Diethyl Sulfate	(C ₂ H ₅) ₂ SO ₄	1.180	1.79	A	A	A	B	A	A	A	A			A	A		A	A	A	A	Anhydrous
Di-octyl Adipate	D.O.A.	0.926	13.7	D	D	A	A	A	A	A	A	D	B	B	A	A	A	A	A	A	
Dipentene	C ₁₀ H ₁₆	0.847 @ 15°C		A	A	A	A	A	A	A	A	D	D	A	A	A	A	A	A	A	

Note 1: Avoid dissimilar metals.

Note 3: C or D rating given due to possible contamination of metered product by metal. Material compatibility may be satisfactory.



A - Excellent B - Good C - Poor
D - Not Recommended
Blank Space - Insufficient Information

Chemicals	Formula	Sp. Gr. (60°F)	Typical Viscosity (60°F) (CPS)	Aluminum	Bronze	Cast Iron	Tungsten Carb.	Carbon Steel	304SS-17-4PHSS	316 SS	440CSS	Buna-N	EPR	Viton	Teflon	Ryton	Carbon	Peek	Hastelloy C-276	Chemraz	Remarks
Diisobutyl Ketone	C ₄ H ₉ COC ₄ H ₉	0.808		A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Dimethylamine	(CH ₃) ₂ NH	0.686		A	D	A	A	A	A	A	A	B	B	D	A	B	A	A	A	A	Note 1
Dimethyl Formamide	HCON(CH ₃) ₂	0.953		D	D	A	A	A	A	A	A	D	B	B	A	A	A	A	A	A	B
Dioxane	C ₄ H ₈ O ₂	1.035 @ 20°C	1.31	B	A	A	A	A	A	A	A	D	B	D	A	A	A	A	A	A	
Dipropylene Glycol	(C ₃ H ₈ OH) ₂ O	1.025	107.0	A	A	A	A	A	B	B	B	A	A	A	A	A	A	A	A	A	
Dodecyl Benzene	Detergent			A	A	A	A	A	A	A	A	D	D	A	A	A	A	A	A	A	
Dowtherms	Diphenyl Oxides	1.060		A	A	B	A	B	A	A	A	D	D	A	A		A	A	A	A	
Ethane	C ₂ H ₆	0.446		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	Note 2
Ether Dimethyl	CH ₃ OCH ₃	0.661	0.23	B	B	B	B	A	A	A	A	D	C	C	A	A	A	A	A	A	
Ethers	(C ₂ H ₅) ₂ O	0.736	0.23	B	B	B	A	B	A	A	A	D	C	C	A	A	A	A	A	A	
Ethanol Amine	HOCH ₂ CH ₂ NH ₂	1.017		A	D	B	A	B	A	B	B	B	B	D	A	A	A	A	A	A	Note 1
Ethyl Acetate	CH ₃ COOC ₂ H ₅	0.883	0.45	A	C	C	A	B	B	B	B	D	B	D	A	A	A	A	A	A	
Ethyl Acrylate	CH ₂ CHCOOC ₂ H ₅	0.92		A	A	A	A	A	A	A	A	D	B	D	A	A	A	A	A	A	
Ethyl Amine	CH ₃ CH ₂ NH ₂	0.689		A	D	B	A	B	A	B	B	B	B	D	A	A	A	A	A	A	Note 1
Ethyl Aniline	C ₂ H ₅ NHC ₆ H ₅	0.963	2.04	B	D	A	A	A	B	B	B	D	A	D	A	A	A	A	A	A	
Ethyl Benzene	C ₆ H ₅ C ₂ H ₅	0.867	0.64	A	B	B	A	A	B	B	B	D	A	A	A	A	A	A	A	A	Note 2
Ethyl Chloride (Dry)	C ₂ H ₅ Cl	0.921		B	B	B	B	B	A	A	A	A	A	A	A	A	A	A	A	D	Note 2
Ethyl Chloride (Wet)	C ₂ H ₅ Cl	0.921		D	C	D	C	D	C	C	D	A	A	A	A	A	A	A	A	D	Note 2
Ethyl Ether	(C ₂ H ₅) ₂ O	0.714	0.23	B	B	B	B	A	A	A	A	D	C	C	A	A	A	A	A	A	
Ethyl Hexanol	CH ₃ CH ₂ CH ₂ COH(C ₂ H ₅) ₂	0.83		B	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Ethyl Lactate	CH ₃ CHOHCOOC ₂ H ₅	0.1020		B	B	B	B	B	B	B	B	A		A	A	A	A	A	A	A	
Ethyl Mercaptan	C ₂ H ₅ SH	0.839		B	D	A	B	D	B	B	B	D	D	A	A	A	A	A	A	A	Note 1
Ethyl Propyl Myristate	CH ₃ (CH ₂) ₁₂ COOC ₂ H ₅			A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Ethyl Propyl Palmitate	C ₂ Hg(CH ₂) ₁₄ COOC ₂ H ₅	0.83		A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Ethylene Chlorohydrin	ClCH ₂ CH ₂ OH	1.204	3.4	D	B	B	B	B	B	B	B	D	B	A	A	A	A	A	A	A	
Ethylene Cyanohydrin	HOCH ₂ CH ₂ CN	1.04		B	B	B	B	D	B	B		A	D	A	A	A	A	A	A	A	
Ethylene Diamine	(CH ₂) ₂ (NH ₂) ₂	0.899	1.54	C	D	B	A	B	A	A	B	A	A	D	A	A	A	A	D	A	Note 1
Ethylene Dichloride	CH ₂ ClCH ₂ Cl	1.25	0.83	D	B	D	B	D	A	A	B	C	C	A	A	A	A	A	D	A	Anhydrous
Ethylene Glycol	(CH ₂ OH) ₂	1.15	2.18	A	B	B	A	B	B	B	B	A	A	A	A	A	A	A	A	A	
Ethylene Glycol Acetate	CH ₂₀₀ CH ₂						A		A		D	A	D	A	A	A	A	A	A	A	
Ethyl Oxide	Ether	0.714	0.23	B	B	B	A	B	A	A	A	D	C	C	A	A	A	A	A	A	Dry Liquid
Ethylene	H ₂ CCH ₂	0.610 @ 0°C		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Ethyl Teritary Butyl Ether (ETBE)	C ₂ H ₅ OC ₄ H ₉			A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Fatty Acids				A	D	D	B	D	B	A	B	B	C	A	A	A	A	A	A	A	
Ferric Chloride	FeCl ₃	2.8		D	D	D	D	D	D	D	D	D	D	A	A	A	D	A	C	A	Hastelloy C
Ferric Sulphate	Fe ₂ (SO ₄) ₃ ·9H ₂ O	2.0-2.1		D	D	D	D	D	B	A	B	A	A	A	A	A	A	A	A	A	
Ferrous Chloride	FeCl ₂ ·4H ₂ O	1.93		D	D	D	D	D	D	D	D	A	A	A	A	A	D	A	B	A	
Ferrous Sulphate	FeSO ₄ ·7H ₂ O	1.89		D	B	D	D	D	B	A	A	A	A	A	A	A	A	A	A	A	
Fish Oil							A		A	A	A		A	A	A	A	A	A	A	A	
Flexol Plasticizer	DoP			A	A	A	A	A	B	B	B	D	B	B	A		A	A	A	A	
Formaldehyde (37%)	HCHO	1.075		B	A	C	C	C	A	A	B	C	B	D	A	A	A	B	A	A	Note 3
Formic Acid	HCOOH	1.22 @ 20°C		B	C	D	C	D	B	A	C	A	A		A	A	A		A	A	All Concentration
Fruit Juices	Fructose			B	B	D	A	D	A	A	A	A		A	A	A	A	A	A	A	No SO ₂ Present
Furfural (25%)	C ₄ H ₃ OCHO	1.15	1.49	B	B	B	B	B	B	B	B	D	B	D	A	A	A	A	A	A	
Fertilizer Solutions	NH ₄ NO ₃ Phosphate KC ₁ NH ₄	0.811		D	D	A	A	A	A	A	A	A		A	A	A	A	A	A	A	Note 1
Freon-11, 12	CCl ₃ F			B	B	B	A	B	A	A	A	B	D	B	A	A	A	D	A	B	

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Chemicals	Formula	Sp. Gr. (60°F)	Typical (60°F) Viscosity (CPS)	Aluminum	Bronze	Cast Iron	Tungsten Carb.	Carbon Steel	304SS-17-4PHSS	316 SS	440CSS	Buna-N	EPR	Viton	Teflon	Ryton	Carbon	Peek	Hastelloy C-276	Chemraz	Remarks
Fuel Oils #1-#3		0.82-0.95		A	A	A	A	A	A		A	A	D	A	A	A	A	A	A	A	34-45 SSU
Fuel Oils #4-#6		0.82-0.95		A	A	A	A	A	A		A	A	D	A	A	A	A	A	A	A	50-3,000SSU
Gallic Acid	C ₆ H ₂ (OH) ₃ CO ₂ H	1.69		B	C	D	B	D	B	B	B	B	B	A	A	A	A	A	A	A	
Gasoline	C ₆ H ₁₄ -C ₁₀ H ₂	0.66-0.69		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Glass Water	Sodium Silicate			D	D	B	B	B	B	B	B	A	A	A	A	A	A	A	A	A	Note 1
Galuber's Salts	Sodium Sulfate	1.46		A	B	B	B	B	B	A	B	D	B	A	A	A	A	A	A	A	Note 1
Gluconic Acid	CH ₂ OH(CHON) ₄ COOH			B	B	B	B	A	B	B	B	A		A	A		A	A	A	A	
Glycerol (Glycerine)	C ₃ H ₅ (OH) ₃	1.260		A	A	B	A	B	A	A	A	A	A	A	A	A	A	A	A	A	2,950 SSU @ 68.6°F
Glyoxal	OHCHO	1.26		B	B	B	A	B	A	A	A	A	A	A	A	A	A	A	A	A	
Gypsum	CaSO ₄ ·2H ₂ O	2.31		B	B	B	B	B	A	A	A	A	A	A	A		A	A	A	A	
Glucose	Corn Syrup			A	A	B	A	B	A	A	A	A	A	A	A	A	A	A	A	A	67,500 SSU @ 100°F
Glycols	Ethanediol	1.11		B	B	D	A	B	A	A	B	A	A	A	A	A	A	A	A	A	90-240 SSU @ 70°F
Hempseed Oil		0.925													A		A	A	A	A	
Heptane	C ₇ H ₁₆	0.683	0.409	A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	Note 2
Hexadecane	(Cetane) C ₁₆ H ₃₄	0.773	3.3	A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Hexane	C ₆ H ₁₄	0.659	0.326	A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	Note 2
Hexyl Alcohol	C ₆ H ₁₃ OH	0.818		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Hexylene Glycol	C ₆ H ₁₂ (OH) ₂	0.921		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Hydraulic Oil	Petroleum Based		60.0	A	B	B	A	A	A	A	D	A	A	A	A		A	A	A	A	
Hydroiodic Acid	HI	1.70		D	D	D	D	D	B	B	B		A	A		A		A		A	
Hydrobromic Acid (48%)	HBr	1.488		D	D	D	D	D	D	D	D	D	A	A	A	A	A	D	B	A	
Hydrochloric Acid-All Concentration Rubber, Glass-	HCl	1.19		D	D	D	D	D	D	D	D	D	C	A	A	D	D	D	A	A	Hastelloy A- Lined Vessels
Hydrocyanic Acid	HCN	0.697		A	D	B	D	A	B	B	B	B	A	A	A	A	A	D		A	
Hydrofluoric Acid	HF			D	D	D	D	D	D	D	D	D		B	D	A	A	D	B	A	Rubber, Lead Linings
Hydrogen Peroxide (30%)	H ₂ O ₂			D	D	D	D	D	A	A	B	B	A	A	A	A	A	A	A	A	Low Pressure and Temp.
Hydrogen Peroxide (70%)	H ₂ O ₂	1.46		D	D	D	D	D	A	A	A	D	C	A	A	A	A	A	A	A	SS Must be Passivated
Hydrogen Sulfide (N. Aq.)	H ₂ S	1.185		A	D	B	D	D	A	A	B	A	A	D	A	A	A	A	A	A	
Hydrogen Sulfide (Aq.)	H ₂ S	1.185		A	D	B	D	D	A	A	B	D	A	D	A	A	A	A	A	A	
Iron Potassium Sulfate	FeK(SO ₄) ₂ ·12H ₂ O	1.80		A	B	D	B	D	B	B	B	A	A	A		A	A	A	A	A	
Iso-Butane	(CH ₃) ₂ CHCH ₃	0.564		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	Note 2
Iso-Butanol	(CH ₃) ₂ CHCH ₂ OH	0.806	4.0	A	B	B	A	B	A	A	A	A	B	A	A	A	A	A	A	A	
Iso-Butylamine	(CH ₃) ₂ CHCH ₂ NH ₂	0.731	0.55	A	D	B	A	B	A	A		C	D	D	A	A	A	A	A	A	
Isobutyl Acetate	C ₄ H ₉ OOCC ₃ H ₇	0.868	0.7	A	B	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Iso-Decanol	C ₁₀ H ₂₁ OH	0.839		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Iso-Hexanol	C ₆ H ₁₃ OH	0.818		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Iso-Octane	C ₈ H ₁₈	0.691		A	A	B	A	A	A	A	A	A	D	A	A	A	A	A	A	A	Note 2
Iso-Pentane	(CH ₃) ₂ CHCH ₂ CH ₃	0.619	0.22	A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Iso-Propanol	C ₃ H ₇ OH	0.786	2.10	A	A	B	A	B	A	A	B	B	A	A	A	A	A	A	A	A	
Iso-Propyl Acetate	CH ₃ COOCH(CH ₃) ₂	0.869	0.49	A	C	C	A	B	B	B	B	D	B	D	A	A	A	A	A	A	
Iso-Propyl Ether	(CH ₃) ₂ CHOCH(CH ₃) ₂	0.723	0.32	A	A	B	A	A	A	A	A	B	D	D	A	A	A	A	A	A	
Iso-Propyl Amine	C ₃ H ₇ NH ₂	0.688		A	D	B	A	B	A	B	B		A		A	A	A	A	A	A	
Iso-Phorone	C ₉ H ₁₄ O	0.922	2.62	A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	

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Chemicals	Formula	Sp. Gr. (60°F)	Typical Viscosity (60°F) (CPS)	Aluminum	Bronze	Cast Iron	Tungsten Carb.	Carbon Steel	304SS-17-4PhSS	316 SS	440CSS	Buna-N	EPR	Viton	Teflon	Ryton	Carbon	Peek	Hastelloy C-276	Chemraz	Remarks
Iso-Valeric Acid	C ₅ H ₉ OOH	0.931											A	A	A	A	A	A	A	A	
Inks—Printers		1.00–1.38	500.0	B	C	D	A	D	B	A	B				A	A	A	A	A	A	
Jet Fuel	JP-4, JP-5, JP-6			A	B	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	Gasoline-Kerosene Blend
Kerosene		0.802	30 SSU	A	A	B	A	B	A	A	A	A	D	A	A	A	A	A	A	A	
Ketone, Butylethyl	C ₄ H ₉ COC ₂ H ₅	0.819		A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Ketone, Diethyl	(C ₂ H ₅) ₂ CO	0.816		A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Ketone, Di-Iso-Propyl	C ₄ H ₈ CO			A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Ketone, Methyl Ethyl	CH ₃ COC ₂ H ₅	0.825	.40	A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Ketone (MIBK)	C ₄ H ₉ COCH ₃	0.804	0.59	A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Lactic Acid	CH ₃ CHOHCOOH	1.2 @ 20°C		A	D	D	C	D	A	A	C	A	A	A	A	A	A	A	A	B	A
Lacquer		0.900		A	A	D	A	D	A	A	A	A		A	A	A	A	A	A	A	
Lard Oil	Grease Oil	1.470		A	A	C	A	C	A	A	A	A	B	A	A	A	A	A	A	A	287 SSU @ 100°F - Note
Latex Sol (70%)	Ph 1.7		900.0						A	A	A	A		A	A	A	A	A	A	A	
Lauric Acid	CH ₃ (CH ₂) ₁₀ COOH	0.833		A	C	D	C	A	A	A	A	A		A	A	A	A	A	A	A	
Lecithin	1.0	5,000 SSU		A	A	C		C	A	A	A			A	A	A	A	A	A	A	
Ligroin	Petroleum Ether			A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Linoleic Acid	C ₁₀ H ₁₇ (CH ₂) ₇ COOH	0.905		A	B	B	C	B	A	A	B	B	D	B	A	A	A	A	A	A	
Linolenic Acid	(C ₁₀ H ₁₅ CH ₂) ₇ COOH	0.916		A	B	B	C	B	A	A	B	B	D	B	A	A	A	A	A	A	
Linseed Oil	Flaxseed Oil	0.931	33.0	A	B*	B*	A	B*	A	A	B	A		A	A	A	A	A	A	A	Corrosive if Free Acid Present
Liquefied Pet. Gas	L.P.G.			A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	Note 2
Liquid Feed	Morea	1.2	22.0					A	A	A	A		A	A	A	A		A	A	A	
Magnesium Hydroxide	Mg(OH) ₂	2.36		D	B	B	B	B	A	A	A	B	A	A	A	A	A	A	A	A	Note 1
Magnesium Chloride (10%)	MgCl ₂ ·6H ₂ O	1.56		D	D	B	B	B	A	A	C	A	A	A	A	A	A	A	B	A	
Magnesium Nitrate	Mg(NO ₃) ₂ ·6H ₂ O	1.46		B	C	B	B	B	A	A	A	A	A	A	A	A	A	A	A	A	Note 1
Magnesium Sulfate	Mg(SO ₄)·7H ₂ O	1.678		B	D	B	B	B	A	A	D	A	A	A	A	A	A	A	A	A	Note 1
Maize Oil									A	A	A	A		A	A	A	A	A	A	A	
Maleic Acid	(CHCOOH) ₂	1.59		B	B	B	C	B	A	A	B	D	D	A	A	A	A	A	A	A	
Malonic Acid	CH ₂ (COOH) ₂	1.63						C	A	A				A	A	A	A	A	A	A	
Menhaden Oil (10%)	Moss Bunker Oil	0.927–0.933	28.0				A	A	A					A	A	A	A	A	A	A	Viscosity @ 100°F
Mercuric Chloride	HgCl ₂	5.32		D	D	D	D	D	D	D	D	A	A	A	A		A	A	A	A	Titanium
Mesityl Oxide (Ketone)	(CH ₃) ₂ C ₃ HOCH ₃	0.863	0.60	B	B	B	A	A	B	B	B	D	B	D	A		A	A	A	A	
Methyl Acetate	CH ₃ COOCH ₃	0.924	0.38	A	C	C	B	B	B	B	B	D	B	D	A	A	A	A	A	A	Alloy 20
Methyl Acrylate	C ₃ H ₅ OOCH ₃	0.957		A	B	B	A	A	A	A	A	D	B	D	A	A	A	A	A	A	
Methyl Amine	CH ₃ NH ₂		0.23	B	D	B	B	B	B	B	B		A		A	A	A	A	A	A	Note 1
Methyl Amyl Acetate	C ₈ H ₁₆ O ₂	0.859		A	C	C	B	B	B	B	B		A	D	A	A	A	A	A	A	
Methyl Amyl Alcohol	C ₆ H ₁₃ OH	0.807		A	B	B	A	B	A	A	A	A		A	A	A	A	A	A	A	
Methyl Aniline	C ₆ H ₅ NH(CH ₃)	0.991	2.02	B	D	A	B	A	B	B	B	D	A	D	A	A	A	A	A	A	Note 1
Methyl Cellosolve	CH ₃ OC ₂ H ₄ CH ₂ OH			A	A	B	A	B	A	A	A	C	B	D		A	A	A	A	A	
Methyl Cyclohexane	C ₇ H ₁₄	0.769		A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	A	
Methyl Cyclo Hexanol	CH ₃ C ₆ H ₁₀ OH			A	B	B	A	B	A	A	A	A	D	A	A	A	A	A	A	A	
Methyl Glycol Acetate				A	C	C	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Methyl Methacrylate	CH ₂ C(CH ₃)COOCH ₃	0.940		A	A	A	A	A	A	A	A	D	D	D	A	A	A	A	A	A	
Methyl Pyrrolidone	CH ₃ NC ₃ H ₆ CO			D	D	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Methyl Salicylate	C ₆ H ₄ OHCOOCH ₃	1.180					A		A	A	A	D	B	C	A	A	A	A	A	A	

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Methyl Tertiary Butyl Ether (MTBE)	CH ₃ OC ₄ H ₉	0.74	.35	A	A	A	A	A	A	A	A	D	D	A	A	A	A	A	A	A	
Methylene Chloride	CH ₂ Cl ₂	1.33	0.42	D	B	B	B	B	B	B	B	D	D	B	A		A	A	A	A	Note 1
Methylene Dichloride				C	B	B	B	B	B	B	B	D	D	B	A	A	A	A	A	A	Note 1
Methylene Glycol	CH ₂ (OH) ₂			B	B	B	A	B	A	A	A	A	D	A	A	A	A	A	A	A	
Milk	Lactic Acid	1.028–1.035	1.16				A		A	A	A	A	A	A	A		A	A	A	A	
Mineral Spirits	Naphtha			A	B	B	A	B	B	B		A	D	A	A	A	A	A	A	A	Note 2
Molasses (Crude)	Mother Liquor	1.40–1.46	151.5	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	Viscosity @ 130°F
Molasses (Edible)	Blackstrap	1.46–1.49	1320.0	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	Viscosity @ 130°F
Monochlorobenzene	C ₆ H ₅ CL	1.105		B	B	B	A	B	B	B	B	D	D	A	A	A	A	A	A	A	
Monoethanolamine				D	D	A	A	A	A	A	A	D	B	D	A	A	A	A	A	A	
Muriatic Acid	Hydrochloric			D	D	D	D	D	D	D	D	D	C	A	A	A	A	D	A	A	
Myristic Acid	CH ₃ (CH ₂) ₁₂ COOH	0.873		A	A	A	C	A	A	A	A			A		A	A	A	A	A	
Methane	CH ₄	0.554		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	Note 2
Naphtha (Aliphatic)		0.665		A	B	B	A	A	B	B	B	A	D	A	A	A	A	A	A	A	Note 2
Naphtha (Aromatic)		0.885–0.970		A	B	B	A	A	B	B	B	B	D	A	A	A	A	A	A	A	Note 2
Naphtha (V.M. and P.)				A	B	B	A	A	B	B	B	B	D	A	A	A	A	A	A	A	Note 2
Neatsfood Oil		0.916					A		A	A	A	A	B	A	A	A	A	A	A	A	230 SSU @ 100°F
Nickel Ammonium Sulfate (10%)	NiSO ₄ ·(NH ₄) ₂ ·6H ₂ O	1.92		D	D	D	D	D			D	A	A	A	A		A	A	A	A	Monel
Nickel Chloride (37%)	ClCl ₂ ·6H ₂ O	1.35		D	D	D	D	D	D	B	D	A	A	A	A		A	A	A	A	
Nickel Sulfate (25%)	NiSO ₄ ·6H ₂ O	1.20		D	B	D	D	D	A	A	A	A	A	A	A		A	A	A	A	
Nitro Benzene	C ₆ H ₅ NO ₂	1.198		B	B	B	A	A	B	B	B	D	D	B	A	A	A	C	B	A	
Nitro Ethane	C ₂ H ₅ NO ₂	1.052		A	A	A	A	A	A	A	A	D	B		A	A	A	C	B	A	
Nitro Propane	C ₃ H ₇ NO ₂	1.003		A	A	A	A	A	A	A	A	D	B	D	A	A	A	C	B	A	
Nonenes	C ₉ H ₁₈	0.743		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Nitric Acid (10%)	HNO ₃	1.074		B	D	D	D	D	A	A	B	D	D	A	A	A	A	A	B	A	
Nitric Acid (30%)	HNO ₃	1.186		D	D	D	D	D	A	A	B	D	D	A	A	D	A	D	A	A	
Nitric Acid (50%)	HNO ₃	1.318	0.76	D	D	D	D	D	A	A	B	D	D	D	B	A	D	A	D	A	
Nitric Acid (70%)	HNO ₃	1.421		D	D	D	D	D	A	A	B	D	D	B	A	D	A	D	B	A	
Nitric Acid (100%)	HNO ₃	1.502		A	D	D	D	D	A	A	D	D	D	B	A	D	A	D	B	D	
Nitrocumene	C ₆ H ₄ CH(CH ₃) ₂ NO ₂			C	D	B	B	B	B	B	B	B	C	D	A	A	A	A	A	A	
Nitro Fluorobenzene	C ₆ H ₄ NO ₂ FL		2.0	C	D	B	B	B	B	B	B	B	C	D	A	A	A	C	B		
N. Octane	C ₈ H ₁₈	0.702	0.54	A	A	A	A	A	A	A	A	B	D	A	A	A	A	A	A	A	
Oleic Acid (40%)	CH ₃ (CH ₂) ₁₄ C ₂ H ₂	0.890		D	D	D	C	D	A	A	B	C	D	B	A		A		A	A	Note 3
Oxalic Acid (50%)	(COOH) ₂	1.653		D	D	B	C	B	A	A	B	B	A	A	A		A	C	A	A	
Olive Oil	Sweet Oil	0.910	84.0	A	B	B	A	B	A	A	A	A	B	A	A	A	A	A	A	A	200 SSU @ 100°F
Oil-Lube			113.0	A	B	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Oils-Mineral				A	B	B	A	B	A	A	A	A	D	A	A	A	A	A	A	A	
Oils-Petroleum				A	B	B	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Oils-Water Emu.				A	A	B	A	B	A	A	A	A	D	A	A	A	A	A	A	A	
Ortho-Dichloro-Benzene	C ₆ H ₄ CL ₂	1.305		B	B	B	B	B	B	B	B	D	D	A	A	A	A	A	B	A	
Palmitic Acid	CH ₃ (CH ₂) ₁₄ COOH	0.841		B	B	C	C	C	B	B	B	A	D	A	A		A	A	A	A	
Palm Oil		0.924 @ 100°	44.0	A	B	C	A	C	B	B	B	A	C	A	A	A	A	A	A	A	
Paradyne				A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	

Note 1: Avoid dissimilar metals.

Note 2: For rotary meters recommend LPG trim.

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A - Excellent B - Good C - Poor
 D - Not Recommended
 Blank Space - Insufficient Information

Chemicals	Formula	Sp. Gr. (60°F)	Typical Viscosity (60°F) (CPS)	Aluminum	Bronze	Cast Iron	Tungsten Carb. Carbon Steel	304SS-17-4PhSS	316 SS	440CSS	Buna-N	EPR	Viton	Teflon	Ryton	Carbon	Peek	Hastelloy C-276	Chemraz	Remarks
Paraffin		0.83–0.93		A	A	B	A	B	A	A	A	B	A	A	A	A	A	A	A	
Para-tert-Amyl Phenol	(CH ₃) ₂ C ₂ H ₅ CC ₆ H ₄ OH	0.955		A	A	B	A	B	A	A	D	A	A	A	A	A	B	B	A	
Para-tert-Butyl Phenol	(CH ₃) ₃ CC ₆ H ₄ OH	1.03		D	D	A	A	A	A	A	A		A	A	A	A		B	A	
Paratex	Water Softner			D	D	A	A	A	A	A	A		A	A	A	A	A	A	A	
Parathion	C ₁₀ H ₁₄ NO ₅ PS						A	A	A	A	A		A	A	A	A	A	A	A	
Peanut Oil		0.920 @ 100°	38.0	A	B	C	A	C	B	B	B	A	C	A	A	A	A	A	A	
Pear Oil	Amyl Acetate	0.879	0.89	A	B	C	A	C	B	B	B	D	A	D	A	A	A	A	A	Note 3
Pentane	C ₅ H ₁₂	0.626		A	B	B	A	B	B	B	B	A	D	A	A	A	A	A	A	
Perchloroethylene	C ₂ Cl ₄	1.65	0.84	B	C	B	A	A	A	A	A	B	D	A	A	A	A	A	A	
Perilla Oil		0.932		A	B	B	A	B	A	A	B	A	A	A	A		A	A	A	
Petroleum Ether	Ligroin	0.665		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	
Petroleum Spirits	Naphtha			A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	
Phenolic Resins				A	C	C	A	C	A	A	A	A	B	A	A	A	A	A	A	
Phenol (20%)	C ₆ H ₅ OH	1.07	12.7	A	A	B	A	B	A	A	B	D	A	A	A	A	D	A	A	Use SS to Prevent Product Discoloration
Phosphoric Acid (10%)	H ₃ PO ₄	1.053		D	D	D	D	D	B	B	B	D	D	A	A	A	A	A	A	
Phosphoric Acid (25%)	H ₃ PO ₄	1.152		D	D	D	D	D	B	B	D	D	D	A	A	A	A	A	A	Most Concentrations Use Hastelloy, Alloy 20
Phosphoric Acid (75%)	H ₃ PO ₄	1.579		D	D	D	D	D	D	B	D	D	D	A	A	A	A	A	A	
Phthalic Acid	C ₆ H ₄ (CO ₂ H) ₂	1.58		B	B	C	C	D	B	B	B	C	C	A	A		A	A	A	
Phthalic Anhydride	C ₆ H ₄ (CO) ₂ O	1.527		B	B	C	B	D	B	B	B	C	C	A	A	A	A	A	A	
Picric Acid	C ₆ H ₃ (NO ₂) ₃ OH	1.76		C	D		C		A	A		A	A	A	A	A	A	A	A	
Polyethylene Glycol	H(OC ₂ H ₄)NOH			A	B	B	A	B	B	B	B	A	A	A	A	A	A	A	A	
Polyester Resin				D	D	A	A	A	A	A	A	A	D	A	A	A	A	A	A	
Polypropylene Glycol	CH ₃ CHOH (CH ₂ OCHCH ₂) _n -CH ₂ OH			A	B	B	A	B	B	B	B	A	A	A	A	A	A	A	A	
Polyvinyl Acetate	(H ₂ C ₂ HOOC ₂ H ₃) _n	1.19		A	A	A	A	B	A	A	A		A		A		A	A	A	
Polyvinyl Acetate Emulsion	PVac+H ₂ O			A	A	A	A	B	A	A	A		A		A		A	A	A	
Polyvinyl Alcohol	(CH ₂ CHOH) _x	1.98	2000.0	A	B	A	A	A	A	A	A		A		A		A	A	A	
Polymerized Gasoline				A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	
Potassium Chloride	KCl	1.98		D	B	C	C	C	A	A	B	A	A	A	A	A	D	A	A	Note 1
Potassium Aluminum Sulfate	AlK(SO ₄) ₂ ·12H ₂ O	1.75		B	B	C	C	C	A	A	B	A	A	A	A	A	A	A	A	Note 1
Potassium Cyanide (25%)	KCN	1.52		D	D	D	D	B	A	A	B	A	A	A	A		A		A	Note 1
Potassium Hydroxide (25%)	KOH	2.044		D	D	B	B	B	B	B	B	B	A	D	A	A	A	A	A	Note 1
Potassium Hydroxide	KOH			D	D	D	B	D	A	A	A	B	A	D	A	A	A	A	A	Note 1
Potassium Sulfate	K ₂ SO ₄	2.66		B	B	C	B	B	B	B	B	A	A	A	A	A	A	A	A	Note 1
Potassium Sulfide	K ₂ S	1.80		B	D	D	B	D	B	B	B	A	A	A	A	A	A	A	A	Note 1
Potash (Aq.)	K ₂ CO ₃	2.33		C		A	B	A	A	A	B	A	A	A	A	A	A	A	A	Note 1
Propane	C ₃ H ₈	0.531		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	Note 2
Propionic Acid (20%)	CH ₃ CH ₂ CO ₂ H	0.994		B	B	D	C	D	B	B	D		A		A	A	A	A	A	
Propylene	C ₃ H ₆	0.513		A	A	A	A	A	A	A	A	D	D	A	A	A	A	A	A	Note 2
Propylene Diamine	C ₃ H ₈ (NH ₂) ₂	0.873	1.70	B	B	B	A	B	A	A		D	D	D	A	A	A	A	A	
Propylene Glycol	C ₃ H ₈ (OH) ₂	1.038	58.0	A	B	B	A	B	B	B	B	A	A	A	A	A	A	A	A	
Propylene Oxide	C ₃ H ₆ O	0.830		B	B	B	A	B	A	A	B	D	B	D	A	A	A	A	A	
Prussic Acid	HCN	0.697		A	D	B	C	A	B	B	B	B	A	A	A		A		A	
Pyridine	N(CH) ₄ CH	0.978		A	B	B	B	B	A	A	B	D	B	D	A	B	A	A	A	

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Chemicals	Formula	Sp. Gr. (60°F)	Typical Viscosity (60°F) (CPS)	Aluminum	Bronze	Cast Iron	Tungsten Carb.	Carbon Steel	304SS-17-4PhSS	316 SS	440CSS	Buna-N	EPR	Viton	Teflon	Ryton	Carbon	Peek	Hastelloy C-276	Chemraz	Remarks
Pyrogallic Acid	C ₆ H ₃ (OH) ₃	1.463		B	B	D	C	D	B	B	B	B	B	A	A		A	A	A	A	
Pyrrrolidine	C ₄ H ₉ N	0.866		B	B	B	A	B	A	A	B	D	A	D	A		A	A	A		
Rayon (Spun Viscose)				B	B	B	A	B	A	A	B		A		A		A	A	A	A	40,000 SSU @ 80°F
Raffinate		0.712		A	A	A	A	A	A	A	A	A		A	A		A	A	A	A	
Resins and Rosins				B	B	C	A	C	B	B	B	A		A	A	A	A	A	A	A	Note 3
Ricinoleic Acid	C ₁₈ H ₃₂ O(OH) ₂	0.940		B	A	A	C	A	A	A	A			A		A	A	A	A	A	Not Over 21°F
Rotograde-Ink				D	D	A	A	A	A	A	A	D	D	A	A	A	A	A	A	A	
Rubber Solvent				A	A	A	A	A	A	A	A			A	A		A	A	A	A	100,000 SSU
Salicylic Acid	C ₆ H ₄ (OH)(COOH)	1.48	2.71	C	C	D	C	D	A	A	B	B	A	A	A	A	A	A	A	A	
Shellacol				A	A	B	A	A	A	A	A			A	A	A	A	A	A	A	
Shortening							A	A	A	A	A			A	A	A	A	A	A	A	Note 3
Sodium Aluminate	Na ₂ Al ₂ O ₄			C	B	C	B	C	B	A	B	A	A	A	A	A	A	A	A	A	
Soap Solutions (0-20%)	Stearates			C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Sodium Bicarbonate (50%)	NaHCO ₃	1.019-1.108		D	B	B	B	B	A	A	B	A	A	A	A	A	A	A	A	A	Note 1
Sodium Carbonate (0-20%)		1.146		D	D	B	B	B	A	A	A	A	A	A	A	A	A	A	A	A	
Sodium Chloride (30%)	NaCl	1.012-1.164		D	B	B	B	B	A	A	A	A	A	A	A	A	A	A	A	A	Pitting may Occur
Sodium Chromate	NaCrO ₄	1.261		B	B	B	B	B	B	B	B	A	A	A	A	A	D	A	A	A	
Sodium Cyanide	NaCn			D	D	B	D	D	A	A	B	A	A		A	A	A		A	A	Note 1
Sodium Hydroxide (20%)	NaOH	1.219		D	A	A	A	A	A	A	A	B	A	B	A	A	A	A	A	A	Note 1
Sodium Hydroxide (30%)	Caustic	1.262		D	A	A	A	A	A	A	A	B	A	B	A	A	A	A	A	A	Note 1
Sodium Hydroxide (50%)	Soda	1.525		D	D	B	C	B	B	B	B	B	A	B	A	A	A	A	A	A	Note 1
Sodium Hydroxide (70%)	Soda	1.788		D	D	D	C	D	B	B	B	B	A	B	A	A	A	A	A	A	Note 1
Sodium Hypochlorite (5%)	NaOCl			D	D	D	C	D	D	D	D	B	B	A	A	A	A	A	A	A	Hastelloy C
Sodium Meta Phosphate	NaPO ₃			D	B	B	B	D	B	B	B	A	A	A	A		A	A	A	A	Note 1
Sodium Metasilicate	Na ₂ SiO ₃	2.61		D	D	B	C	B	A	A	A	A	A	A	A	A	A	A	A	A	No Brass
Soidum Monochloro Acetic Acid	NaCH ₃ COOCL	1.328		D	D	D	D	D	A	A	A	D	D	A	A	A	A	A	A	A	
Sodium Nitrate	NaNO ₃	1.36		A	B	B	C	B	A	A	B	B	A		A	A	A	A	A	A	Note 1
Sodium Perborate (10%)	NaBO ₂			D	B	B	B	B	B	B	B	B	A	A	A	A	A	A	A	A	
Sodium Peroxide (10%)	Na ₂ O ₂	2.80		C	D	C	B	B	A	A	B	B	A	A	A	A	A	A	A	A	Note 1
Sodium Phosphate (5%)	Na ₂ HPO ₄	1.52		D	B	B	B	B	B	B	B	A	A	A	A	A	A	A	A	A	Note 1
Sodium Silicate	Na ₂ O-SiO ₂	1.56		D	D	B	B	B	B	B	B	A	A	A	A	A	A	A	A	A	Note 1
Sodium Sulfate (0-50%)	Na ₂ SO ₄	1.047		A	B	B	B	B	B	A	A	A	A	A	A	A	A	A	A	A	Note 1
Sodium Sulfide	Na ₂ S-5H ₂ O	1.02-1.36		D	D	C	B	C	B	B	B	A	A	A	A	A	A	A	A	A	Note 1
Sodium Thiosulfate (25%)	Na ₂ S ₂ O ₃	1.232		A	B	D	B	D	B	B	B	B	A	A	A	A	A	A	A	A	Pitting may Occur
Sodium Xylene Sulfonate	(CH ₃) ₂ C ₆ H ₃ SO ₃ Na-H ₂ O			A	B	A	A	A	A	A	A	D	D	A	A	A	A	A	A	A	
Solvesso-100-150 Aromatic Solvents		0.889	1.17	A	A	A	A	A	A	A	A	C	D	A	A	A	A	A	A	A	
Soybean Oil		0.924	40.6	B	B	D	A	D	A	A	A	A	D	A	A	A	A	A	A	A	No Cad. Plat-ing - Note 3
Stoddard's Solvent		0.780		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Soups							A	A	A					A	A	A	A	A	A	A	
Sperm Oil		0.878	42.0				A	A	A					A	A	A	A	A	A	A	110 SSU & 100°F
Stannic Chloride	SnCl ₄	1.21		D	D	D	D	D	D	D	D	A	A	A	A	A	A	A	A	A	
Stannous Chloride	SnCl ₂	2.71		D	D	D	D	D	D	D	D	A	A	A	A	A	A	A	A	A	
Starch	(C ₆ H ₁₀ O ₅) _n	1.5		B	B	A	A	A	A	A	A		B	A	A	A	A	A	A	A	Visc. 100-100,000 SSU

Note 1: Avoid dissimilar metals.

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Chemicals	Formula	Sp. Gr. (60°F)	Typical (60°F) Viscosity (CPS)	m	Aluminu	Bronze	Cast Iron	Carb.	Tungste	Carbon	304SS-1	316 SS	440CSS	Buna-N	EPR	Viton	Teflon	Ryton	Carbon	Peek	y C-276	Hastello	Chemraz	Remarks
					Aluminu	Bronze	Cast Iron	Carb.	Tungste	Carbon	304SS-1	316 SS	440CSS	Buna-N	EPR	Viton	Teflon	Ryton	Carbon	Peek	y C-276	Hastello	Chemraz	
Steam Condensate					A	A	A	A	A	A	A	A	D	A	C	A	A	A	A	A	A	A	A	
Stearic Acid	CH ₃ (CH ₂) ₁₆ CO ₂ H	0.839			B	C	C	C	C	A	A	B	B	B		A	A	A	A	A	A	A	A	
Styrene	C ₆ H ₅ CHCH ₂	0.904			A	B	A	A	A	A	A	A	D	D	B	A	A	A	A	A	A	A	A	
Sugar Solutions	Glucose		2.8 x 10 ⁶		A	A	D	A	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Sulfate Liquors					D	D	B	A	B	B	A	B	B	A	A	A	A	A	A	A	A	A	A	
Sulfonic Acid	C ₆ H ₅ HSO ₃				D	B	D	C	D	B	B	B				A		A	A	B	A			
Sulfur	S	2.06	10.94		A	D	A	B	A	A	A	B	D	D	C	A		A	A	A	A		A	All Iron Up to 350°F
Sulfur Dioxide	SO ₂		@ 120°C		B	B	B	B	B	B	D	D	B	A	A	A	A	A	A	A	A			
Sulfuric Acid (0-7%)	H ₂ SO ₄	1.074			D	D	D	C	D	D	B	D	D	D	A	A	A	A	A	A	A	A	A	Hastelloy B, C, D
Sulfuric Acid (30%)	H ₂ SO ₄	1.228			D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A	A	A	Rubber or Glass-Lined Equip. Needed
Sulfuric Acid (50%)	H ₂ SO ₄	1.407			D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	D	A	A	A	
Sulfuric Acid (85%)	H ₂ SO ₄	1.790			D	D	B	D	B	B	A	D	D	D	A	A	D	D	D	D	A	A	A	
Sulfuric Acid (93%)	H ₂ SO ₄	1.835	23.0		D	D	B	D	B	B	A	C	D	D	A	A	D	D	D	D	A	A	A	
Sulfurized Oil					B	D	B	B	B	B	B	B	D	D	D	A	A	A	A	A	A	A	A	
Tall Oil	Liquid Rosin				D	B	B	A	B	B	B	B	B	D	A	A	A	A	A	A	A	A	A	
Tallow—Oil					B			A	A	A	A	A	A		A	A	A	A	A	A	A	A	A	
Tar Oil	Creosote	1.04-1.10	12.0		B	A	B	A	B	A	A	A	A	D	A	A	A	A	A	A	A	A	A	
Tannic Acid (10%)	C ₁₄ H ₁₀ O ₉	1.04			C	B	C	C	C	A	A	B	A	A	A	A	A	A	A	A	A	A	A	
Tergitol Nonionic NPX	Phenyl Ether	1.063	373 cks				D	A	D	A	A	A				A	A	A	A	A	A	A	A	
Teritary Amyl Methyl Ether	C ₅ H ₁₁ OC ₄ H ₉				A	A	A	A	A	A	A	A	A	D	D	A	A	A	A	A	A	A	A	
Tetrahydrofuran	C ₄ H ₈ O	0.880			A	A	A	A	A	A	A	A	D	A	D	A	A	A	A		A	A	A	
Tetra Methyl Benzene	(CH ₃) ₄ C ₆ H ₂	0.896			A	A	A	A	A	A	A	A	A		A	A	A	A	A	A	A	A	A	
Tetrapropylene	C ₁₂ H ₂₄	0.770			A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	A	A	
Textile Spirits		0.689			A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	A	A	
Titanium Sulfate (10%)	(TiSO ₄) ₂ ·9H ₂ O	1.47			D	B	D	B	D	B	B	D							A				B	Hygroscopic
Toluene	C ₆ H ₅ CH ₃	0.866	0.59		A	A	A	A	A	A	A	A	D	D	A	A	A	A	A	A	A	A	A	
Toluene Diisocyanate	CH ₃ C ₆ H ₃ (NCO) ₂	1.22	38-750 SSU		D	D	A	A	A	A	A	A	D	A	B	A	A	A	A	A	A	A	A	
Tomato Paste					B	C	C	A	C	A	A	A	D	A	D	A	A	A	A	A	A	A	A	
Tri-Chloro-Acetic Acid	CCl ₃ COOH	1.62			D	D	D	D	D	D	D	D	B	B	C	A	A	A		A	A	A	A	Glass Linings Needed
Trichloro Ethane (Dry)	C ₂ H ₃ Cl ₃	1.44	1.20		A	A	A	A	A	A	A	A	D	D	A	A	C	A	A	A	A	A	A	No Water
Trichloroethylene	C ₂ HCl ₃	1.45	0.55		A	B	B	A	B	B	B	B	D	D	A	A	C	A	A	A	A	A	A	
Triclene D	Trichloroethylene	1.45	0.55		A	B	B	A	B	B	B	B	D	D	A	A	C	A	A	A	A	A	A	
Tri-Decyl Alcohol	C ₁₂ H ₂₅ CH ₂ OH	0.845			A	A	A	A	A	A	A	A	D	D	A	A	A	A	A	A	A	A	A	
Triethanol Amine	(HOCH ₂ CH ₂) ₃ N	1.12	500 SSU		A	D	A	A	A	A	A	A	B	B	D	A	A	A	A	A	A	A	A	Note 1
Triethylene Glycol	HO(C ₂ H ₄ O) ₃ H	1.12	0.47		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Trimethylamine	(CH ₃) ₃ N	0.662			A	D	A	A	A	A	A	A	B	A	D	A	A	A	A	A	A	A	A	Note 1
Triethylene Tetraamine	Na ₃ PO ₄ ·10H ₂ O	2.53			D	D	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Tri-Sodium Phosphate	Na ₃ PO ₄ ·10H ₂ O	2.53			D	D	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Triton X-100	Surfactant		34.0		A	A	A	A	A	A	A	B	A		A	A	A	A	A	A	A	A	A	
Tuna Fish Oil					B	D	B	A	B	A	A	A	A		A	A	A	A	A	A	A	A	A	
Tung Oil	Wood Oil	0.936			B	B	B	A	B	A	A	A	A	D	A	A	A	A	A	A	A	A	A	
Turpentine	C ₁₀ H ₁₆	0.87	1.48		A	B	B	A	B	A	A	A	A	D	A	A	A	A	A	A	A	A	A	
Urea	CO(NH ₂) ₂	1.335			B	D	C	A	C	B	B	B	A	B		A	A	A	A	B	A			
Urea Formaldehyde					D	D	A	A	A	A	A	A	A		A	A	A	A	A	A	A	A	A	

Note 1: Avoid dissimilar metals.



A - Excellent B - Good C - Poor
D - Not Recommended
Blank Space - Insufficient Information

Chemicals	Formula	Sp. Gr. (60°F)	Typical Viscosity (60°F) (CPS)	Aluminum	Bronze	Cast Iron	Tungsten Carb.	Carbon Steel	304SS-17-4PHSS	316 SS	440CSS	Buna-N	EPR	Viton	Teflon	Ryton	Carbon	Peek	Hastelloy C-276	Chemraz	Remarks	
Uran-Poly-N	Fertilizer			D	D	A	A	A	A	A	A	A		A	A	A	A	A	A	A	A	Note 1
Varnish	Spar	0.900	281.0	A	A	C	A	C	A	A	A	B	D	A	A	A	A	A	A	A	A	
Vegetable Oil				A	B	B	A	B	A	A	B	A	A	A	A	A	A	A	A	A	A	No Cad. Plating
Vinyl Acetate	CH ₃ COOCHCH ₂	0.933		D	D	A	B	A	A	A	A		A	D	A	A	A	A	A	A	A	
Vinyl Chloride	CH ₂ CHCl	0.912		D	D	A	B	A	A	A	A			A	A	D	A	A	A	A	A	
Vinegar	4% Acetic Acid	1.04		C	B	D	C	D	A	A	D	B	A	A	A	A	A	A	A	A	A	
Water (Distilled)	H ₂ O	1.00		A	A	D	B	D	A	A	A	A	A	D	A	A	A	A	A	A	A	
Water-Sea	H ₂ O	1.025		B	B	D	B	D	A	A	C	A	A	D	A	A	A	A	A	A	A	Note 1
Water-Fresh	H ₂ O	1.00		A	A	C	B	C	A	A	A	A	A	D	A	A	A	A	A	A	A	Note 1
Whiskey and Wine				D	A	D	A	D	A	A	A	A	A	A	A	A	A	A	A	A	A	SS Preferred
Xylene	C ₆ H ₄ (CH ₃) ₂	0.868	0.620	A	A	A	A	A	A	A	A	D	D	A	A	A	A	A	A	A	A	
Zeolites	Hydrated Silicates			D	D	A	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	Note 1
Zinc Sulfate	ZnSO ₄	1.966		D	C	B	B	B	A	A	C	A	A	A	A	A	A	A	A	A	A	
Zinc Chloride	ZnCl ₂	2.91		D	D	C	D	D	D	D	D	A	A	A	A	A	A	A	A	A	A	

Note 1: Avoid dissimilar metals.



A large area of the page is filled with horizontal dotted lines, providing a template for writing or drawing.

Do you
know this?

70% our planet's surface is
made up of water!!

97% of earth's water is saltwater
in seas & oceans and

3% is freshwater!

2% is frozen in the
polar ice caps

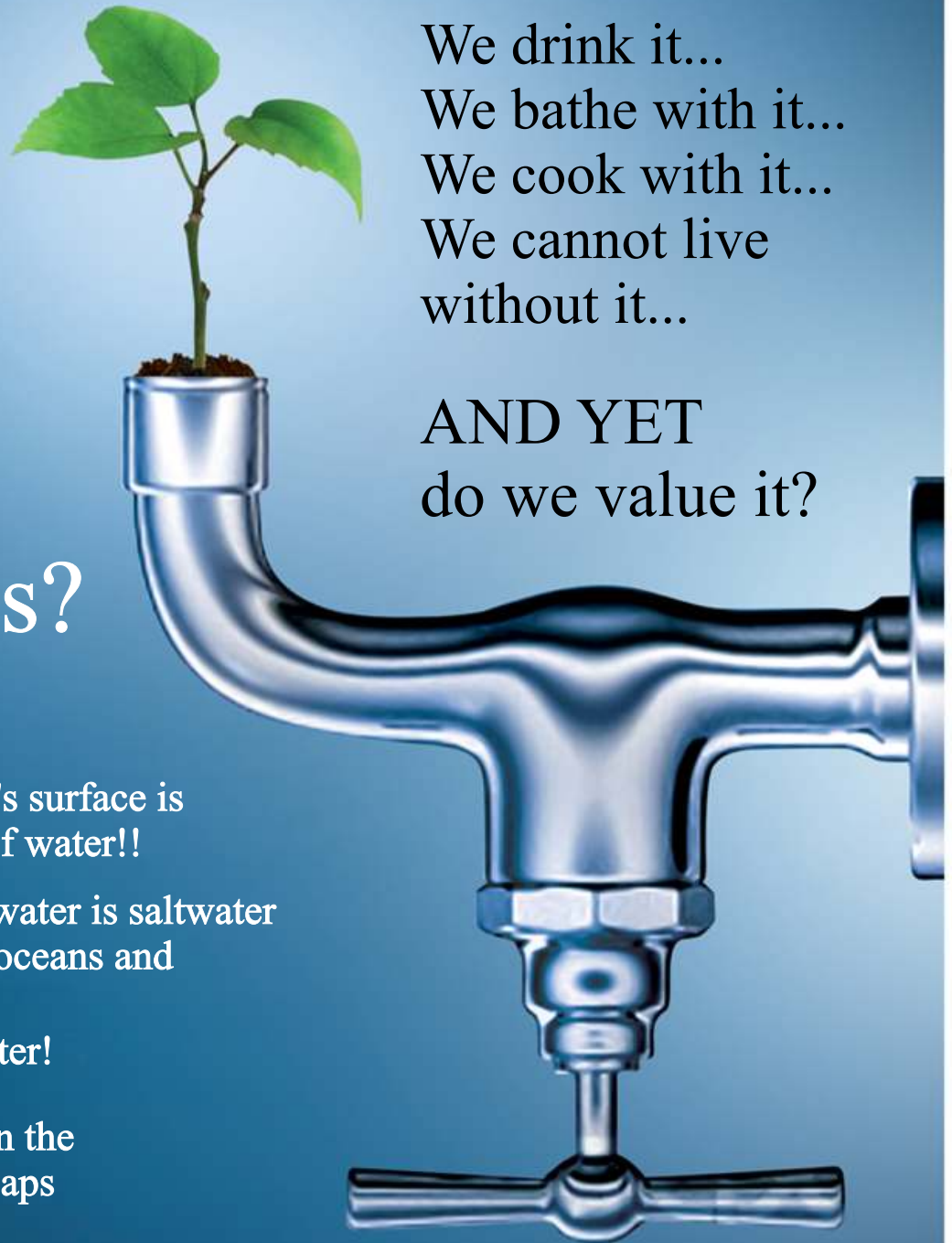
&

Only 1%

is available for drinking!

We drink it...
We bathe with it...
We cook with it...
We cannot live
without it...

AND YET
do we value it?



Save Water, Save Life

