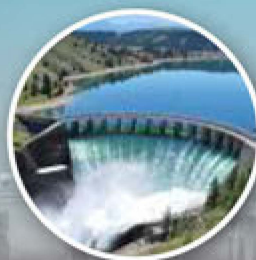




Manufacturing Widest Range of
Valves & Fittings for All Applications



CAST IRON



LVL Leading Products 4

 **LEADER VALVES LTD.**

www.leadervalves.com



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Company Profile

LEADER VALVES LIMITED is a leading valve manufacturing company of India. We are a totally integrated valves manufacturing unit with our own Ferrous & Non Ferrous Foundries, Forging units, state of art Machining and Testing facilities.

The company was set- up seven 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-9001:2015 company since Jan 1996 certified by LRQA, India. The company is also licensed to use API Spec 6D (Certificate no 6D-0346), and API 600 (Certificate No. 600-0018) monograms. Our Ferrous & Non-Ferrous foundries are PED certified by M/s. LRQA India & AD 2000-Merkblatt WO certified by TUV India. The Foundries are also adjudged as "Well Known FOUNDRY" under Indian Boiler Regulation 4C(2) of Central Boiler Board, Govt. of India. We also have IRS works approval certificate for Ferrous and Non Ferrous Foundry for casting of marine valves in accordance with the relevant requirements of Part 2, Chapter 4 & Chapter 8 of



"Rules & Regulations for the Construction & Classification of Steel Ships". Our valves are certified by "FCRI" for functional and structural integrity for Seismic applications.

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

We are registered with all major clients in India and abroad. We are also recipient of "**National award for Indigenisation**" for the year 1996—1997 by the Ministry of Defence India for our contribution in indigenous ship building activities of Indian Navy.





QUALITY POLICY

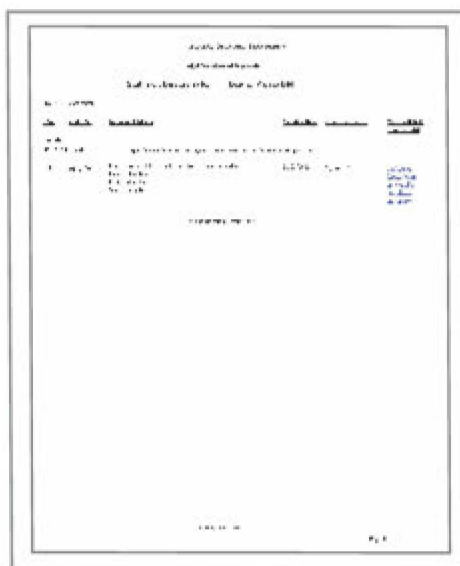
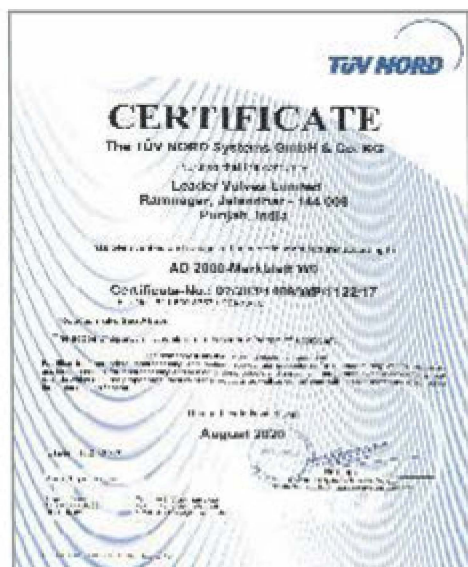
We at Leader Valves Ltd and Leader Exports are committed to enhance Customer Satisfaction by providing quality products ensuring safe and timely deliveries, considering the internal & external issues & timely reviews.

We are also committed to continually improve the effectiveness of our Quality Management System by ensuring improved product design which is emission free, upgradation of competence of personnel at all levels and reduction of rejections.

We aim to increase our sales.

We are committed to ensure compliance to applicable Statutory and Regulatory requirements.



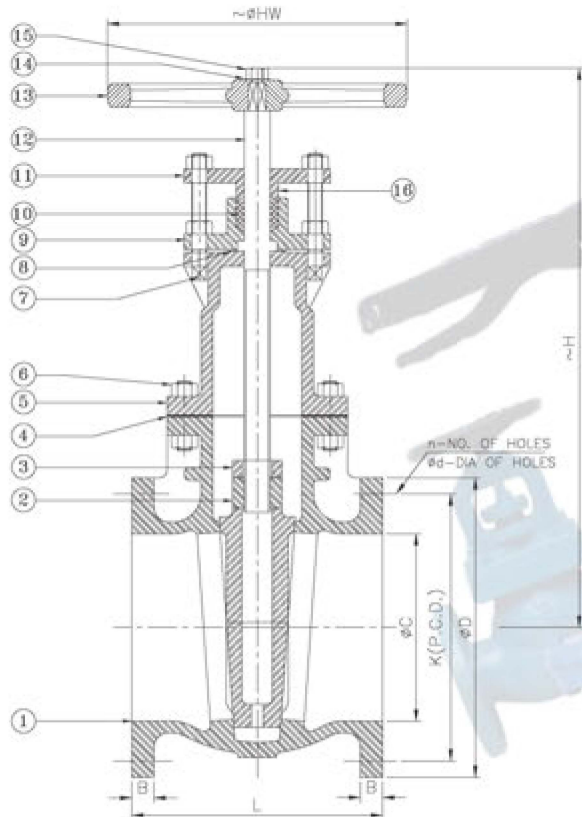




ALL IRON SLUICE VALVES CL-125

SPECIFICATIONS:

Inside Screw
Non-Rising Stem
Flanges as per
ASME B 16.1 CL-125 (FF)

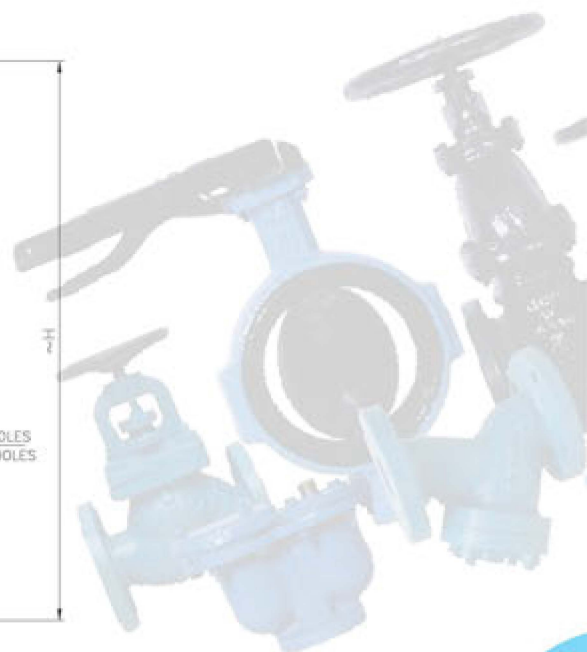
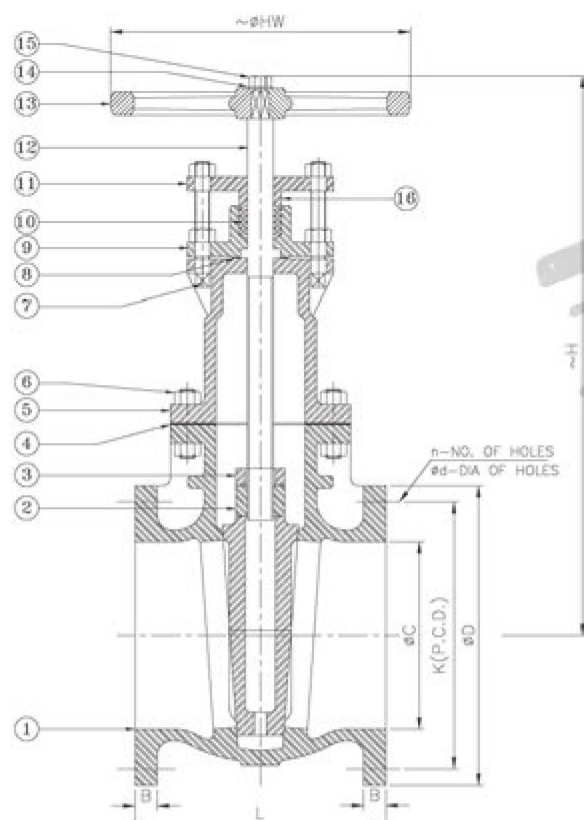


STANDARD MATERIAL COMBINATION

P.No	NAME OF PARTS	NO. OFF	MATERIAL	SPECIFICATION/STANDARD
1	BODY	1	C.I.	B.S.E.N. 1561 Gr.ENGJL200
2	STEM NUT	1	C.I.	B.S.E.N. 1561 Gr.ENGJL200
3	WEDGE	1	C.I.	B.S.E.N. 1561 Gr.ENGJL200
4	GASKET	1	C.N.A.F.	B.S. 1832
5	BONNET	1	C.I.	B.S.E.N. 1561 Gr.ENGJL200
6	BOLTS & NUTS	TO SUIT	CARBON STEEL	B.S. 4190
7	T-HEAD BOLTS & NUTS	2 & 4	CARBON STEEL	B.S. 4190
8	GASKET	1	C.N.A.F.	B.S. 1832
9	STUFFING BOX.	1	C.I.	B.S.E.N. 1561 Gr. ENGJL200
10	PACKING	1	TO SUIT SERVICE CONDITIONS	
11	GLAND FLANGE	1	C.I.	IS 2062 Gr.A
12	STEM	1	CARBON STEEL	IS 2062 Gr. B
13	HANDWHEEL	1	C.I.	B.S.E.N. 1561 Gr. ENGJL200
14	WASHER	1	CARBON STEEL	ANY GRADE
15	BOLT FOR HANDWHEEL	1	CARBON STEEL	B.S. 4190
16	GLAND FOLLOWER	1	CARBON STEEL	IS2062 Gr. B

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



ITEM	SIZES	ITEM CODE	END DETAILS
ALL IRON SLUICE VALVE -CLASS 125	40mm TO 300mm	CI-004	FLANGED ENDS TO ANSIB 16.1 CLASS 125

DIMENSION DATA										
VALVES SIZE (MM)	40	50	65	80	100	125	150	200	250	300
L±1.6	140	143	159	172	194	203	213	248	340	369
~H	215	238	270	320	370	420	480	635	760	406
~H/W	127	140	140	178	203	229	229	254	406	416
T	6.3	6.3	6.3	7.9	7.9	9.5	9.5	12.7	15.8	15.6
C	38.1	50.8	63.5	76.2	101.6	127	152.4	203	254	305
D	127	152	178	191	229	254	279	343	406	483
B	14.3	15.9	17.5	19	23.8	23.8	25.4	28.6	30.2	31.8
K	98.5	121	140	152	191	216	241	299	362	432
n	4	4	4	4	8	8	8	8	12	12
d	15.9	19	19	19	19	22.2	22.2	22.2	25.4	25.4

ITEM	SIZES	TEST PRESSURES		
		SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	TESTING STD.
ALL IRON SLUICE VALVE -CLASS 125	40mm to 300mm	20.7 bar	15.18 bar	Manufacturer

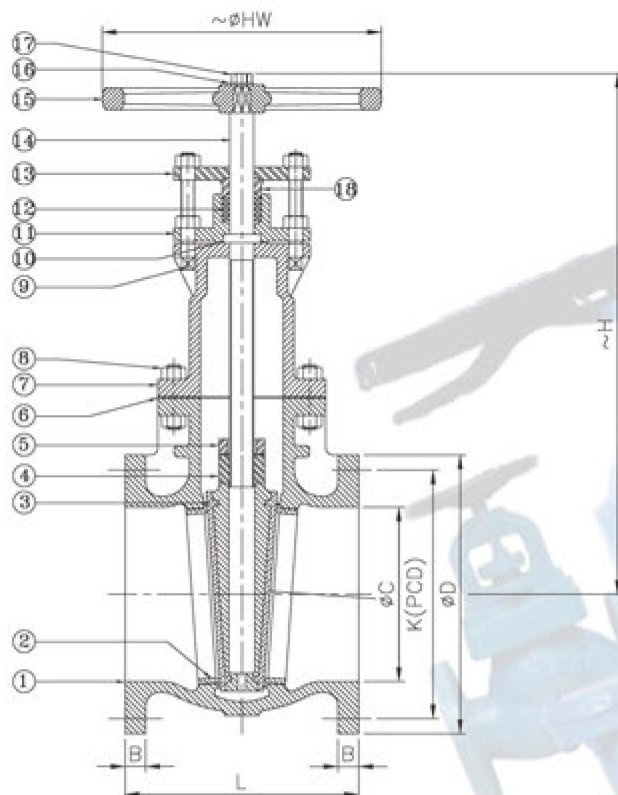
NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



CAST IRON SLUICE VALVES

SPECIFICATIONS:

Inside Screw Non-Rising
Stem G.M. Trim
Flanges as per ASME
B 16.1 CL-125 (FF)

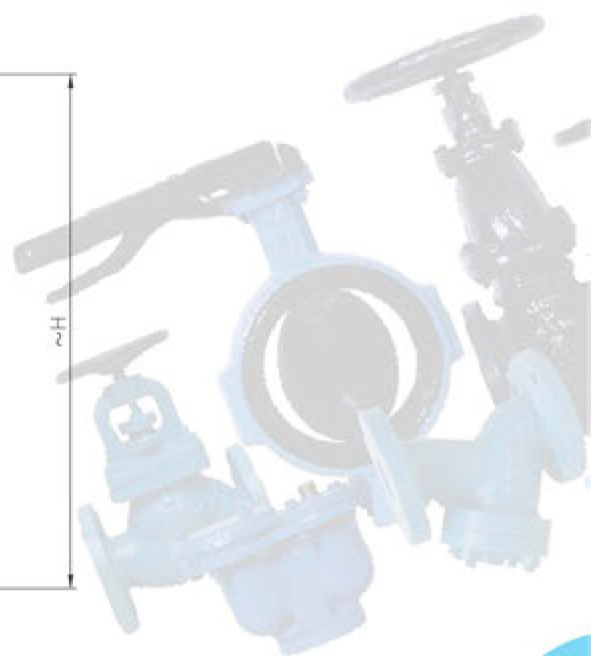
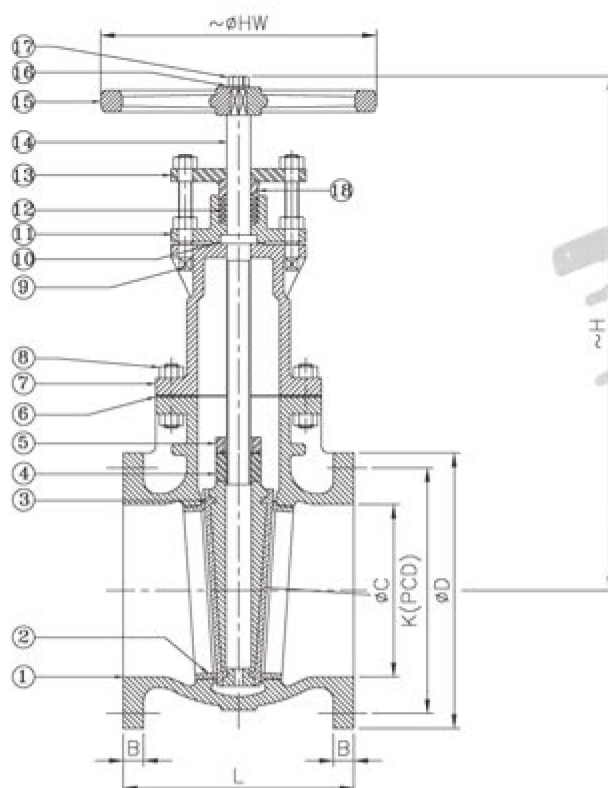


STANDARD MATERIAL COMBINATION

P.No	NAME OF PARTS	NO. OFF	MATERIAL	SPECIFICATION/STANDARD
1	BODY	1	C.I.	BSEN 1561 Gr.ENGJL 200
2	BODY SEAT RING	2	G.M.	BSEN 1982 Gr.CC491K
3	WEDGE RING	2	G.M.	BSEN 1982 Gr.CC491K
4	STEM NUT	1	G.M.	BSEN 1982 Gr.CC491K
5	WEDGE	1	C.I.	BSEN 1561 Gr.ENGJL 200
6	GASKET	1	C.N.A.F.	B.S. 1832
7	BONNET	1	C.I.	BSEN 1561 Gr.ENGJL 200
8	BOLTS & NUTS	TO SUIT	CARBON STEEL	ANY GRADE
9	T-HEAD BOLTS & NUTS	1	CARBON STEEL	ANY GRADE
10	GASKET	1	C.N.A.F.	B.S. 1832
11	STUFFING BOX.	1	C.I.	BSEN 1561 Gr.ENGJL 200
12	PACKING		TO SUIT SERVICE CONDITIONS	
13	GLAND FLANGE	1	C.S	IS 2062 Gr.A
14	STEM	1	H.T. BRASS	BSEN 12165 CW721R
15	HANDWHEEL	1	C.I.	BSEN 1561 Gr.ENGJL 200
16	WASHER	1	CARBON STEEL	IS 2062 Gr.A
17	BOLT FOR HANDWHEEL	1	CARBON STEEL	ANY GRADE
18	GLAND FOLLOWER	1	G.M.	BSEN 1982 Gr.CC491K

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON SLUICE VALVE -CLASS 125	40mm TO 300mm	CI-006	FLANGED ENDS TO ANSI B 16.1 CLASS 125

DIMENSION DATA

VALVES SIZE (MM)	40 MM	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM	250 MM	300 MM
L	140	143	159	172	194	203	213	248	340	369
~H	215	238	270	320	370	420	480	635	760	865
~øHW	127	140	140	178	203	229	229	254	406	406
C	38.1	50.8	63.5	76.2	101.6	127	152.4	203	254	305
D	127	152	178	191	229	254	279	343	406	483
B	14.3	15.9	17.5	19	23.8	23.8	25.4	28.6	30.2	31.8
K	98	121	140	152	191	216	241	299	362	432
n	4	4	4	4	8	8	8	8	12	12
d	15.9	19	19	19	19	22.2	22.2	22.2	25.4	25.4

ITEM	SIZES	TEST PRESSURES		
		SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	TESTING STD.
CAST IRON SLUICE VALVE -CLASS 125	40mm to 300mm	20.7 bar	15.18 bar	Manufacturer

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



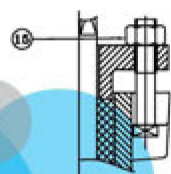
CAST IRON SLUICE (GATE) VALVES PN-1.0/ PN-1.6

SPECIFICATIONS:

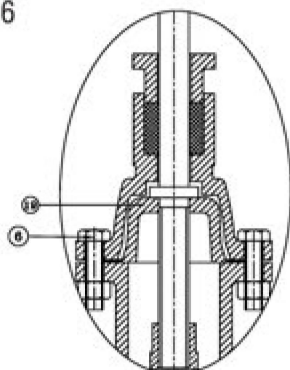
Bolted Bonnet with Bronze Trim,
Non-Rising stem (Short Body Pattern)
Flanged Ends as per IS 1538 (FF)

Product STD:

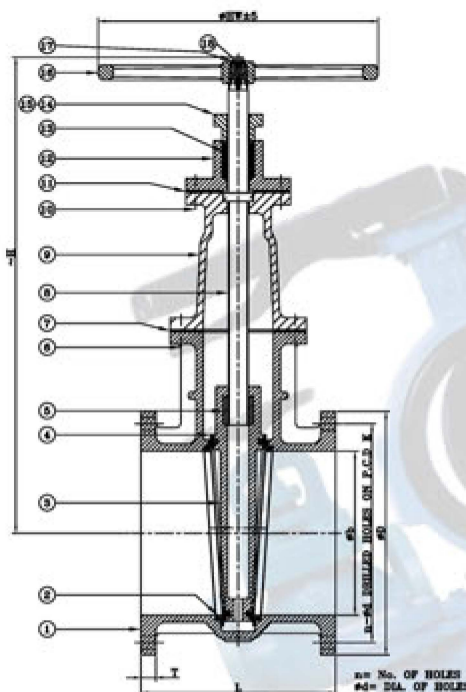
IS 14846. PN-1.0/ PN-1.6



STUFFING BOX SIDE VIEW



BONNET DESIGN UP TO 6"

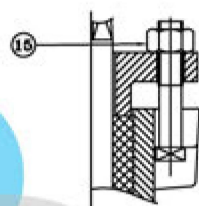


STANDARD MATERIAL COMBINATION

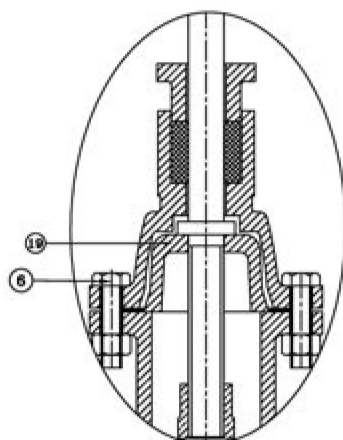
SR.	NAME OF PART	NO.	MATERIAL	SPECIFICATION
1	BODY	01	C.I.	IS 210 Gr. FG200
2	BODY RING	02	G.M.	IS 318 Gr. LTB2
3	WEDGE	01	C.I.	IS 210 Gr. FG200
4	WEDGE RING	02	G.M.	IS 318 Gr. LTB2
5	WEDGE NUT	01	G.M.	IS 318 Gr. LTB2
6	BOLTS & NUTS	TO SUIT	CARBON STEEL	IS 1363 CLASS 4 & 4.6
7	GASKET	01	RUBBER	IS 638 TYPE B
8	STEM	01	S.S./BRASS	IS 6603/ IS 6912 Gr. FHTB1
9	BONNET	01	C.I.	IS 210 Gr. FG200
10	BOLTS & NUTS	TO SUIT	CARBON STEEL	IS 1363 CLASS 4 & 4.6
11	GASKET	01	RUBBER	IS 638 TYPE B
12	STUFFING BOX	01	C.I.	IS 210 Gr. FG200
13	PACKING	--	HEMP & JUTE	IS 5414
14	GLAND	01	C.I.	IS 210 Gr. FG200
15	T-BOLTS & NUTS	2 EACH	CARBON STEEL	IS 1363 CLASS 4 & 4.6
16	HANDWHEEL	01	C.I.	IS 210 Gr. FG200
17	WASHER	01	CARBON STEEL	--
18	SCREW FOR HANDWHEEL	01	CARBON STEEL	--
19	THRUST PLATE	01	C.I.	IS 210 Gr. FG200

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

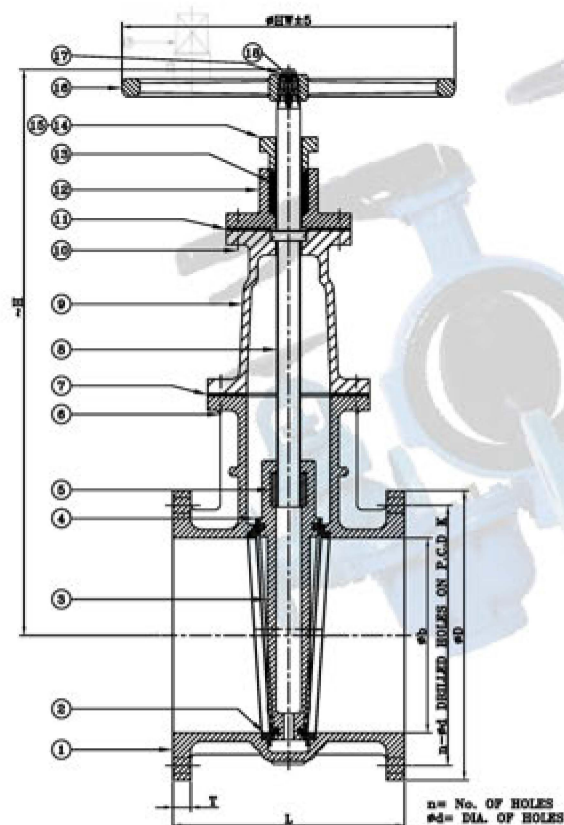
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



STUFFING BOX SIDE VIEW



BONNET DESIGN UPTO 6"



n= No. OF HOLES
ød= DIA. OF HOLES

ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON SLUICE (GATE) VALVE - PN-1.0/1.6	50mm TO 600mm	CI-008/CI-043	FLANGED ENDS TO IS 1538

DIMENSIONS DATA

NB	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM	250 MM	300 MM	350 MM	400 MM	450 MM	500 MM	600 MM
L	178	190	203	229	254	267	292	330	356	381	406	432	457	508
~H	365	380	425	470	485	595	725	835	910	1020	1110	1200	1300	1500
~øHW	225	225	225	320	320	320	360	400	400	-	-	-	-	-
øD	165	185	200	220	250	285	340	395	445	505	565	615	670	780
T	16	16	21	22	22.5	23	24.5	26	27.5	29	30	31.5	33	36
K	125	145	160	180	210	240	295	350	400	460	515	565	620	725
n	4	4	4	8	8	8	8	12	12	16	16	20	20	20
ød	19	19	19	19	19	23	23	23	23	23	28	28	28	31

ITEM	RATING	SIZES	TEST PRESSURES		
			SHELL TEST (HYDROSTATIC)	SEAT TEST (HYDROSTATIC)	STANDARD NO.
CAST IRON SLUICE (GATE) VALVE - PN-1.0/1.6	PN-1.0	50mm to 600mm	1.5 MPa (HYD.)	1.0 MPa (HYD.)	IS 14846
	PN-1.6	50mm to 600mm	2.4 MPa (HYD.)	1.6 MPa (HYD.)	

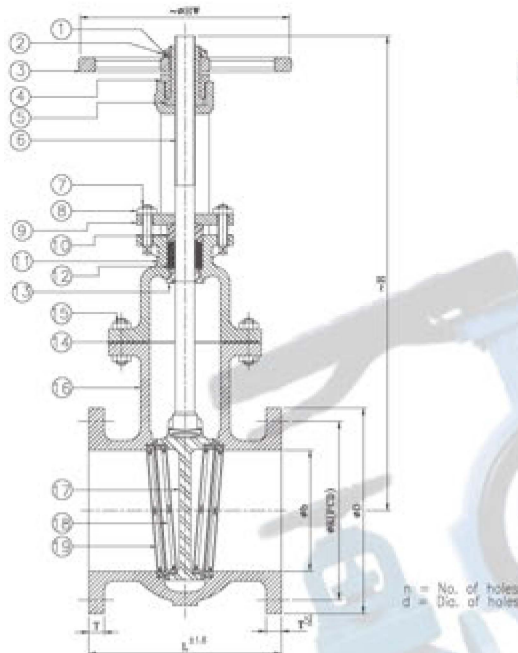
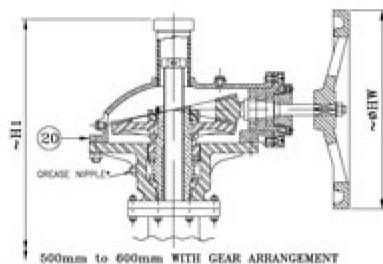
NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



CAST IRON GATE VALVES G.M./SS TRIM PN 1.6/PN 1.0

SPECIFICATIONS:

O/S & YOKE TYPE, RISING STEM,
FACE TO FACE AS PER IS 14846
FLANGES AS PER IS 1538 (F.F)
PN-1.0/ PN-1.6

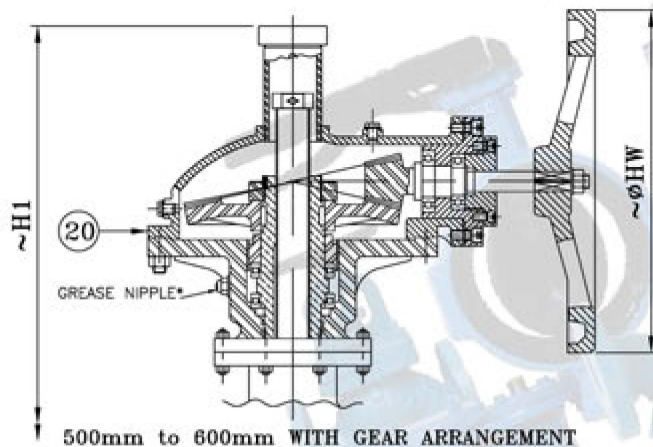
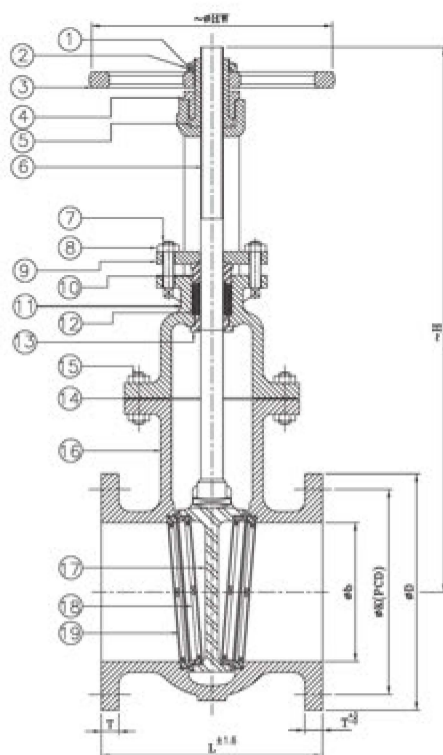


STANDARD MATERIAL COMBINATION

P.NO.	Name of Parts	No. Off	Material	Specification/Standard
1	KEY	1	CARBON STEEL	-----
2	HANDWHEEL RETAINING NUT	1	CARBON STEEL	IS 2062 Gr. A
3	HAND WHEEL	1	C.I.	IS 210 Gr. FG 200
4	YOKE SLEEVE RETAINING NUT	1	LEADED TIN BRONZE	IS 318 Gr.LTB2
5	YOKE SLEEVE	1	LEADED TIN BRONZE	IS 318 Gr.LTB2
6	STEM	1	S.S.	ASTM A276 TYPE 410
7	GLAND T-HEAD BOLTS	TO SUIT	CARBON STEEL	IS 1363
8	GLAND NUTS	1	CARBON STEEL	IS 1363
9	GLAND FLANGE	1	C.I.	IS 210 Gr. FG 200
10	GLAND FOLLOWER	1	LEADED TIN BRONZE	IS 318 Gr. LTB2
11	BONNET	1	C.I.	IS 210 Gr. FG 200
12	GLAND PACKING	--	TO SUIT SERVICE CONDITIONS	
13	BACK SEAT BUSHING	1	LEADED TIN BRONZE	IS 318 Gr. LTB2
14	GASKET	1	C.N.A.F.	IS 2712 Gr.C
15	BOLTS & NUTS	TO SUIT	CARBON STEEL	IS 1363
16	BODY	1	C.I.	IS 210 Gr. FG 200
17	WEDGE	1	C.I.	IS 210 Gr. FG 200
18	WEDGE RING	2	LEADED TIN BRONZE/SS	IS 318 Gr. LTB2/13% Cr. Steel
19	BODY SEAT RING	2	LEADED TIN BRONZE/SS	IS 318 Gr. LTB2/13% Cr. Steel
20	GEAR BOX ASSY.	1	--	--

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



n = No. of holes
d = Dia. of holes

ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON GATE VALVE G.M./SS TRIM PN-1.0/1.6	50mm TO 600mm	CI-010/CI-058	FLANGED ENDS TO IS 1538

DIMENSION DATA

VALVE SIZE	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM	250 MM	300 MM	350 MM	400 MM	450 MM	500 MM	550 MM	600 MM
L	178	190	203	229	254	267	292	330	356	381	406	432	457	508	508
T	16	16	21	22	22.5	23	24.5	26	27.5	30	32	32	34	46	36
øb	50	65	80	100	125	150	200	250	300	339	387	440	493	550	593
K	125	145	160	180	210	240	295	350	400	460	515	565	620	692	725
D	165	185	200	220	250	285	340	395	445	505	565	615	670	749	780
~H (close)	338	419	466	499	571	649	802	919	1145	1175	1450	1614	-	-	-
~H1 with Gear	--	--	--	--	--	--	--	--	--	--	--	--	2513	2762	2767
~øHW	PN 1.0	225	225	225	320	320	320	360	400	400	560	450	750	450	450
	PN 1.6	280	280	280	360	360	360	450	640	640	-	-	-	-	-
n	4	4	4	8	8	8	8	12	12	16	16	20	20	20	20
ød	19	19	19	19	19	23	23	23	23	23	28	28	28	35	31

ITEM	RATING	SIZES	TEST PRESSURES		
			BODY PRESSURE	BACK SEAT & SEAT	TESTING STANDARD
C.I. GATE VALVE, G.M. TRIM PN 1.0/PN 1.6	PN-1.0	50mm to 600mm	1.5 Mpa (Hyd.)	1.0 Mpa (Hyd.)	Manufacturer
	PN-1.6	50mm to 300mm	2.4 Mpa (Hyd.)	1.6 Mpa (Hyd.)	

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)

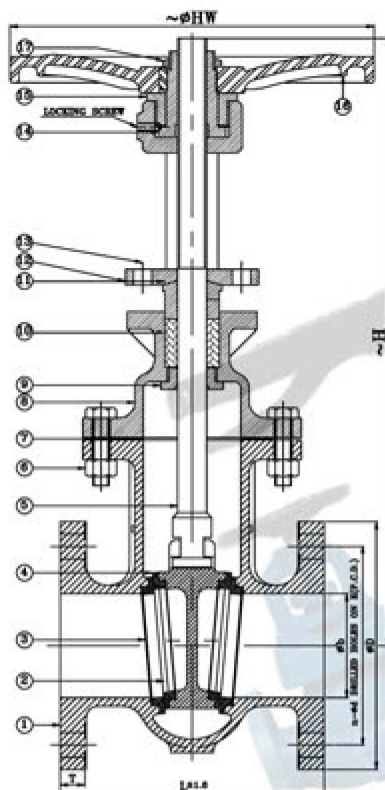
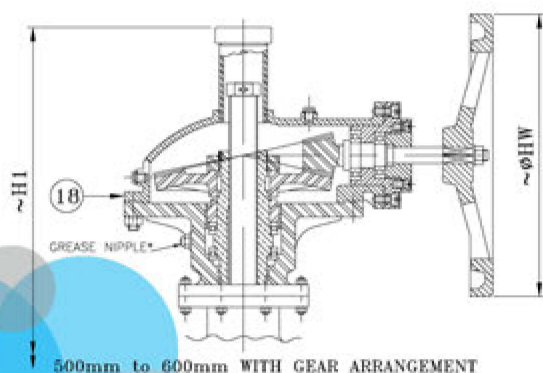


CAST IRON GATE VALVES CL-125

SPECIFICATIONS:

O/S & YOKE TYPE, RISING STEM,
WITH BRONZE/SS TRIM,
FLANGES AS PER
ASME B 16.1 CL-125 (FF)

PRODUCT STANDARD: BSEN 1171

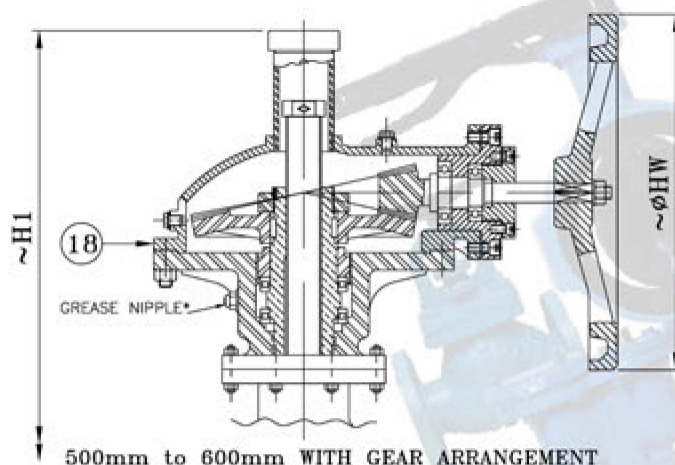
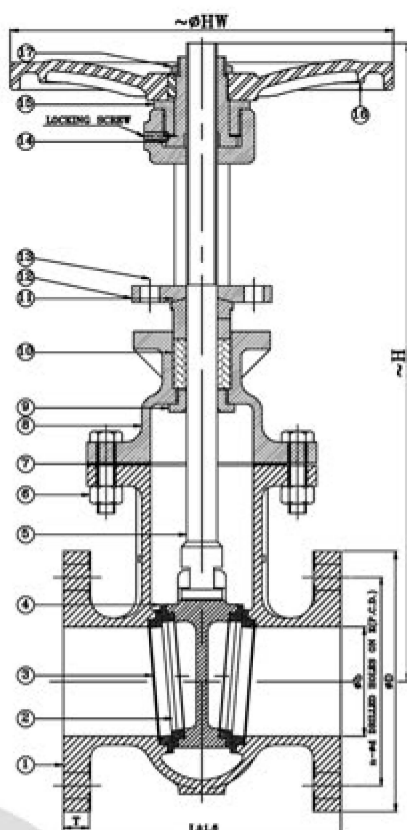


STANDARD MATERIAL COMBINATION

P.NO.	Name of Parts	No. Off	Material	Specification/Standard
1	BODY	1	C.I.	BSEN 1561 Gr. GJL 200
2	WEDGE	1	C.I.	BSEN 1561 Gr. GJL 200
3	BODY SEAT RING	2	LEADED TIN BRONZE/SS	IS 318 Gr.LTB2/13% Cr. Steel
4	WEDGE RING	2	LEADED TIN BRONZE/SS	IS 318 Gr.LTB2/13% Cr. Steel
5	STEM	1	S.S.	ASTM A276 TYPE 410
6	BOLTS & NUTS	TO SUIT	CARBON STEEL	BS 916
7	GASKET	1	C.N.A.F.	-----
8	BONNET	1	C.I.	BSEN 1561 Gr. GJL 200
9	BACK SEAT BUSH	1	S.S.	ASTM A276 TYPE 410
10	PACKING	--	TO SUIT SERVICE CONDITIONS	
11	GLAND FOLLOWER	1	LEADED TIN BRONZE	IS 318 Gr.LTB2
12	GLAND FLANGE	1	C.I.	BSEN 1561 Gr. GJL 200
13	T-BOLTS & NUTS	TO SUIT	CARBON STEEL	BS 916
14	YOKE SLEEVE	1	LEADED TIN BRONZE	IS 318 Gr.LTB2
15	RETAINING NUT	1	CARBON STEEL	IS 2062 Gr. B
16	HANDWHEEL	1	C.I.	BSEN 1561 Gr. GJL 200
17	NUT FOR HANDWHEEL	1	CARBON STEEL	IS 2062 Gr. B
18	GEAR BOX ASSY.	1	--	--

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON GATE VALVE CLASS-125	40mm TO 350mm	CI-011	FLANGE AS PER ASME B16.1
	400mm TO 600mm	CI-012	

DIMENSION DATA

VALVE SIZE	40 MM	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM	250 MM	300 MM	350 MM	400 MM	450 MM	500 MM	550 MM	600 MM
L	165	178	190	203	229	254	267	292	330	356	381	406	432	457	508	508
T	14.3	15.9	17.5	19	23.8	23.8	25.4	28.6	30.2	31.8	34.9	36.5	39.7	42.9	46	47.6
øb	40	50	65	80	100	125	150	200	250	300	350	400	450	500	550	600
K	98	121	140	152	191	216	241	299	362	432	476	540	578	635	692	749
D	127	152	178	191	229	254	280	345	406	485	533	597	635	699	749	813
~H	320	338	419	466	499	571	649	802.5	919	1060	1765	1950	2235	2370	2762	2810
~øHW	210	200	200	230	254	254	290	290	400	400	550	711	711	765	--	765
n	4	4	4	4	8	8	8	8	12	12	12	16	16	20	20	20
ød	19.1	19.1	19.1	19.1	19.1	22.2	22.2	22.2	25.4	25.4	28.6	28.6	31.8	31.8	35	34.9

ITEM	SIZES	TEST PRESSURES		
		BODY	SEAT	TESTING STANDARD
CAST IRON GATE VALVE-CLASS 125	40mm to 350mm	20.7 Bar (Hyd.)	15.18 Bar (Hyd.)	BSEN 1171
	400mm to 600mm	15.45 Bar (Hyd.)	11.33 Bar (Hyd.)	

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



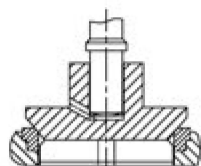
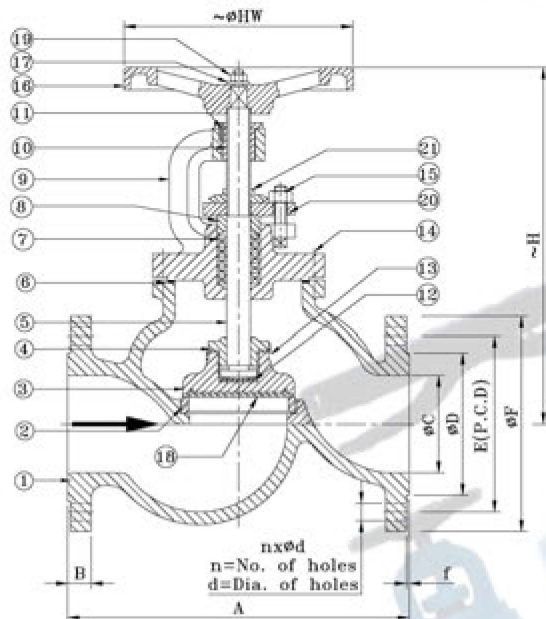
CAST IRON GLOBE STOP VALVES

PN 16

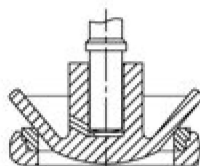
SPECIFICATIONS:

OS & YOKE TYPE,
 RISING STEM, S.S TRIM,
 STRAIGHT PATTERN FLANGED
 ENDS AS PER DIN 2533, PN-16 (FF)

PRODUCT STANDARD: BSEN 13789



FOR SDNR TYPE VALVE



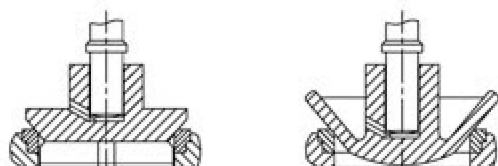
FOR SDSL TYPE VALVE

STANDARD MATERIAL COMBINATION

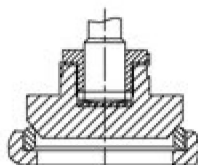
1	BODY	1	C.I.	BS EN1561 Gr. 200
2	BODY SEAT RING	1	S.S.	ASTM A182 Gr. F6a
3	DISC (SDSL)	1	C.I.	BS EN1561 Gr. 200
4	STEM NUT	1	C.I.	ASTM A182 Gr. F6a
5	STEM	1	S.S.	ASTM A276 TYPE 410
6	GASKET	1	C.N.A.F.	
7	GLAND PACKING	--	FLEXIBLE GRAPHITE	
8	GLAND FOLLOWER	1	S.S.	ASTM A276 TYPE 410
9	BONNET	1	C.I.	BS EN1561 Gr. 200
10	YOKE BUSH	1	G.M.	BS EN1982 Gr. CC491K
11	LOCK SCREW	1	S.S.	TYPE 410
12	THRUST PLATE	1	HARDENED STEEL	
13	LOCKING WASHER	1	S.S	TYPE 304
14	STUDS & NUTS	TO SUIT	CARBON STEEL	BS 916
15	T-HEAD BOLTS & NUTS	2 EACH	CARBON STEEL	BS 916
16	HAND WHEEL	1	C.I.	BS EN1561 Gr. 200
17	WASHER	1	CARBON STEEL	IS 2062 Gr.A
18	DISC RING	1	S.S.	ASTM A182 Gr. F6a
19	NUT FOR HANDWHEEL	1	CARBON STEEL	BS 916
20	GLAND FLANGE	1	C.I.	BS EN1561 Gr. 200
21	INDICATOR	1	G.M.	BS EN1982 Gr. CC491K

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

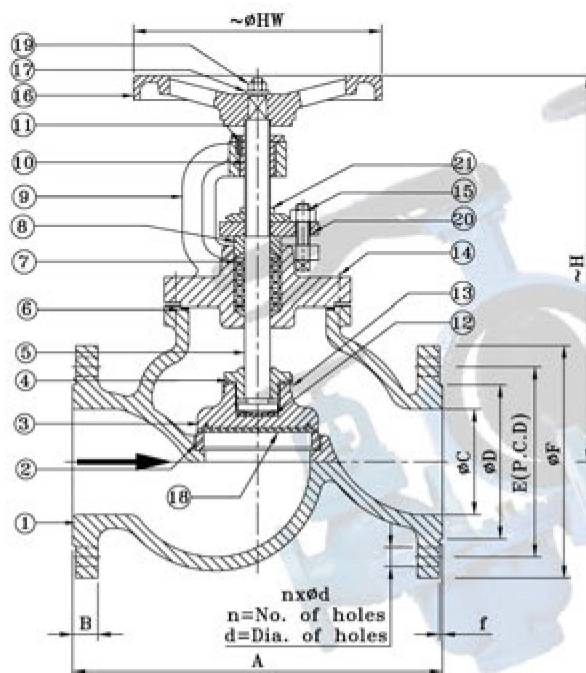
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



FOR SDNR TYPE VALVE



FOR SDSL TYPE VALVE



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON GLOBE STOP VALVE PN-16	15mm TO 350mm	CI-014	FLANGED ENDS TO DIN 2533

DIMENSION DATA

VALVE SIZE	15 MM	20 MM	25 MM	32 MM	40 MM	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM	250 MM	300 MM	350 MM
A	130	150	160	180	200	230	290	310	350	400	480	495	730	850	980
B	14	16	16	18	18	20	20	22	24	26	26	30	32	32	36
C	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
ø D	45	58	68	78	88	102	122	138	158	188	212	268	320	378	438
E	65	75	85	100	110	125	145	160	180	210	240	295	355	410	470
ø F	95	105	115	140	150	165	185	200	220	250	285	340	405	460	520
ø HW	120	120	120	120	140	140	180	180	235	260	320	400	400	400	450
~ H	165	165	170	200	230	255	305	320	350	405	460	529	640	710	770
n	4	4	4	4	4	4	4	8	8	8	8	12	12	12	16
ø d	14	14	14	18	18	18	18	18	18	18	22	22	26	26	26
f	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4

ITEM	SIZES	TEST PRESSURES		
		BAR (HYDROSTATIC)		
		BODY	SEAT	TESTING STANDARD
C.I. GLOBE STOP VALVE PN-16	15mm to 350mm	24	16	Manufacturer

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)

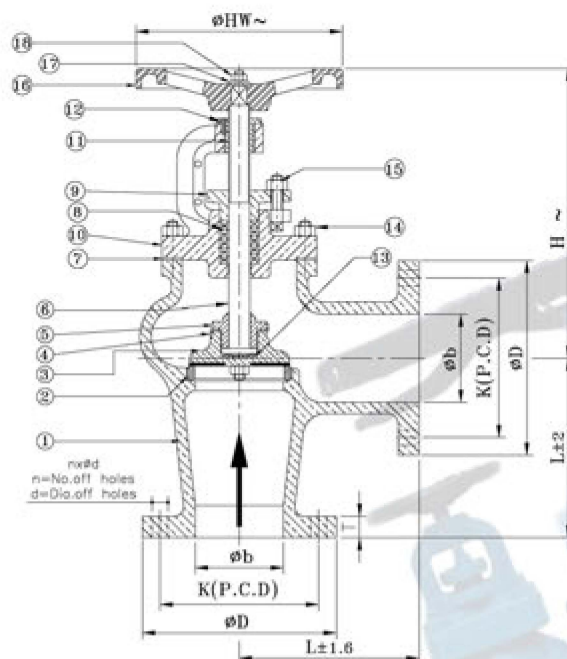


CAST IRON GLOBE VALVES RIGHT ANGLE PATTERN PN-16

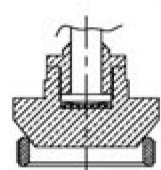
SPECIFICATIONS:

BOLTED BONNET, O/S YOKE TYPE,
 RISING STEM, S.S. TRIM
 FLANGED ENDS. AS PER DIN 2533
 PN-16 (R.F)
 DIN: 2532 PN-10 (R.F) FOR
 SIZE 200mm & 250mm

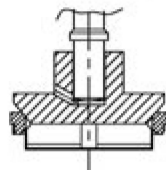
PRODUCT STANDARD: BS-5152



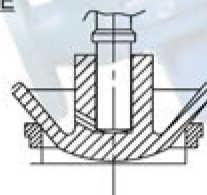
FOR SDNR TYPE VALVE



DISC DESIGN FOR
 SIZE 15MM TO 80MM



DISC DESIGN FOR
 SIZE 100MM AND ABOVE



FOR SDNL TYPE VALVE
 PLUG TYPE DISC DESIGN

DISC DESIGN FOR
 SDNR TYPE VALVE

STANDARD MATERIAL COMBINATION

1	BODY	1	C.I.	IS 210 Gr.FG 200
2	BODY SEAT RING	1	F.S.S	A 182 Gr. F6a
3	DISC	1	13% Cr. Steel	CA 15/ F6a
4	LOCKING WASHER	1	S.S.	TYPE 410
5	DISC NUT	1	S.S.	TYPE 410
6	STEM	1	S.S.	TYPE 410
7	GASKET	1	C.N.A.F.	-
8	PACKING	--	FLEXIBLE GRAPHITE	
9	GLAND FLANGE	1	C.I.	IS 210 Gr.FG 200
10	BONNET	1	C.I.	IS 210 Gr.FG 200
11	YOKE BUSH	1	G.M.	LTB2
12	LOCKING SCREW	1	S.S.	ASTM A276 TYPE 316
13	THRUST PLATE	1	S.S.	TYPE 410
14	STUDS & NUTS	TO SUIT	CARBON STEEL	IS 1363
15	T-HEAD BOLTS & NUTS	2 Each	CARBON STEEL	IS 1363
16	HAND WHEEL	1	C.I.	IS 210 Gr.FG 200
17	WASHER	1	S.S.	TYPE 410
18	NUT FOR HANDWHEEL	1	CARBON STEEL	BS 916

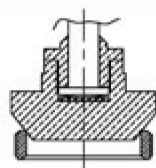
NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)

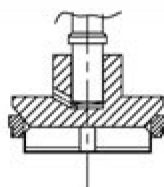


FOR SDNR TYPE VALVE

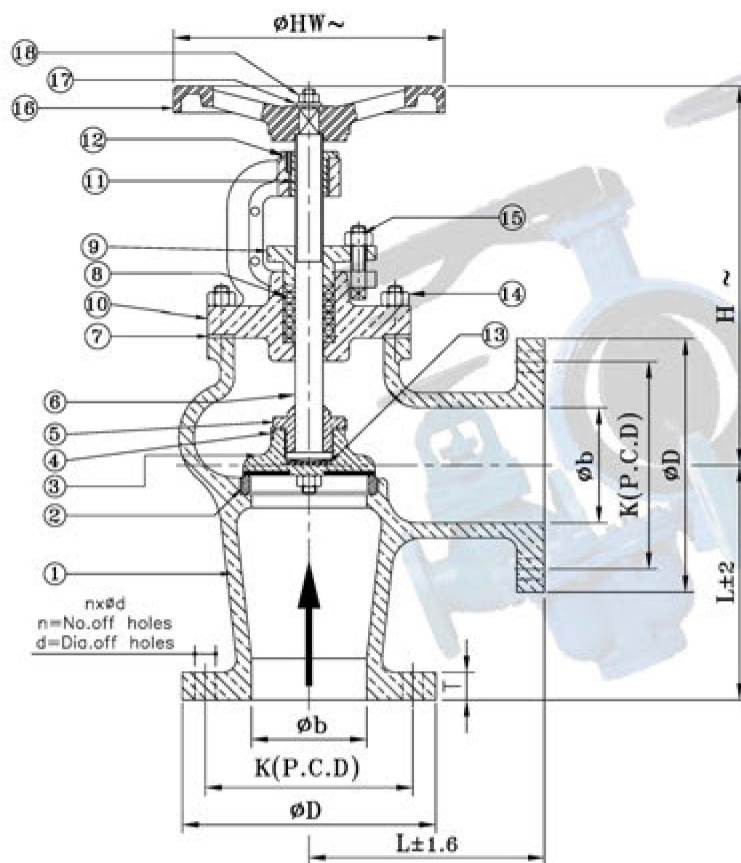
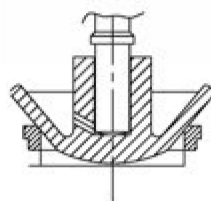
DISC DESIGN FOR
SIZE 15MM TO 80MM



DISC DESIGN FOR
SIZE 100MM AND ABOVE



FOR SDNL TYPE VALVE
PLUG TYPE DISC DESIGN



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON GLOBE RIGHT ANGLE PATTERN PN-10/PN-16	15mm TO 150mm	CI-016	FLANGED ENDS AS PER DIN 2533
	200mm TO 250mm	CI-016A	FLANGED ENDS AS PER DIN 2532

DIMENSION DATA

VALVES SIZE (MM)	15 MM	20 MM	25 MM	32 MM	40 MM	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM	250 MM
L	80	95	100	105	115	125	145	155	175	200	225	275	325
ϕb	15	20	25	32	40	50	65	80	100	125	150	200	250
$\sim H$	145	145	145	175	190	225	250	280	330	365	412	418	575
$\sim \phi HW$	120	120	120	120	140	140	180	180	235	260	320	400	400
ϕD	95	105	115	140	150	165	185	200	220	250	285	340	395
T	14	16	16	18	18	20	20	22	24	26	26	26	26
K	65	75	85	100	110	125	145	160	180	210	240	295	350
n	4	4	4	4	4	4	4	8	8	8	8	8	12
ϕd	14	14	14	18	18	18	18	18	18	18	23	23	23

ITEM	RATING	SIZES	TEST PRESSURES		TESTING STANDARD
			BAR (HYDROSTATIC)		
			BODY	SEAT	
C.I. GLOBE VALVE RIGHT ANGLE PATTERN PN-10/PN-16	PN-16	15mm to 150mm	24	16	Manufacturer
	PN-10	200mm to 250mm	15	11	

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)

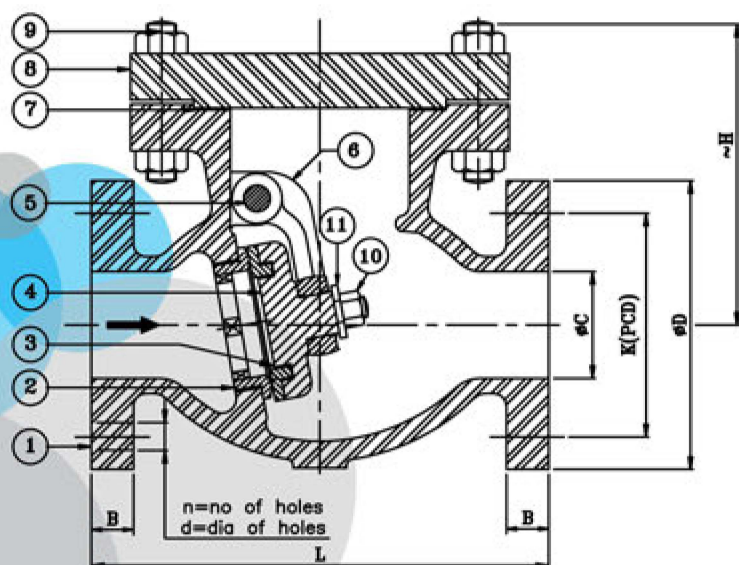


CAST IRON SWING CHECK VALVE CL-125

SPECIFICATIONS:

BOLTED COVER, BRONZE/SS TRIM,
 FLANGE ENDS AS PER B 16.1,
 CL-125 (F.F)

PRODUCT STANDARD: DIN EN-12334

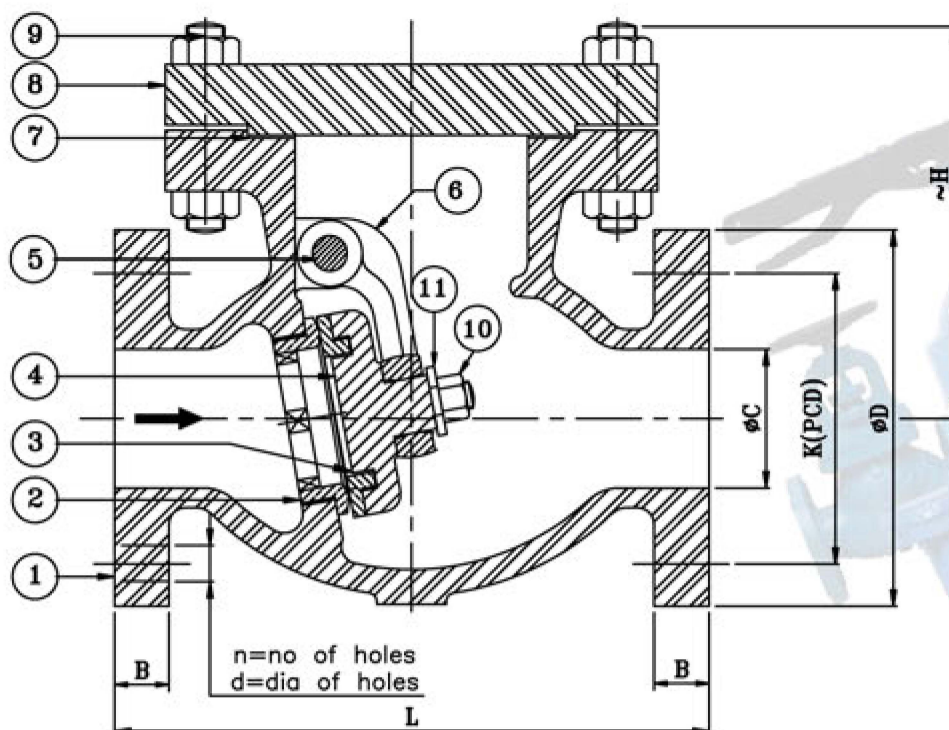


STANDARD MATERIAL COMBINATION

P.No.	Name of Parts	No.Off	Material	Specification/Standard
1	BODY	1	C.I.	IS 210 Gr. FG 200
2	BODY SEAT RING	1	G.M./SS	BS EN1982 CC491K/13% Cr. STEEL
3	DISC FACING RING	1	G.M./SS	BS EN1982 CC491K/13% Cr. STEEL
4	DISC	1	C.I.	IS 210 Gr. FG 200
5	HINGE	1	C.C.S./C.I.	ASTM A216 Gr. WCB/FG 200
6	HINGE PIN	1	HT BRASS/SS	BS 2872 Gr. CZ114/13% Cr. STEEL
7	GASKET	1	CNAF	BS 1832
8	COVER	1	C.I.	IS 210 Gr. FG 200
9	STUDS & NUTS	TO SUIT	CARBON STEEL	BS 916
10	NUT	1	HT BRASS	BS 2872 Gr. CZ114
11	WASHER	1	BRASS/G.M.	BS 2872/BS EN1982 CC491K

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON SWING CHECK VALVE CLASS-125	40mm TO 600mm	CI-017-18	FLANGED ENDS TO ASME B16.1, CL-125

DIMENSION DATA															
VALVES SIZE (MM)	40 MM	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM	250 MM	300 MM	350 MM	400 MM	450 MM	500 MM	600 MM
L ± 1.6	165 ± 1.6	203 ± 1.6	216 ± 1.6	241 ± 1.6	292 ± 1.6	330 ± 1.6	356 ± 1.6	495 ± 1.6	622 ± 1.6	698 ± 3.2	787 ± 3.2	914 ± 3.2	965 ± 3.2	1067 ± 3.2	1219 ± 3.2
~H	110	115	135	135	190	192	200	265	335	365	415	470	495	600	680
ØC	38	51	63.5	76	101.5	127	152	203	254	305	355.5	406.5	457	508	609
D	127	152	178	191	229	254	279	343	406	483	533	597	635	698.5	812.8
B	14.3	15.9	17.5	19	23.8	23.8	25.4	28.6	30.2	31.8	34.9	36.5	39.7	43	47.8
K	98	121	140	152	191	216	241	299	362	432	476	540	578	635	749.3
n	4	4	4	4	8	8	8	8	12	12	12	16	16	20	20
d	15.9	19	19	19	19	22.2	22.2	22.2	25.4	25.4	28.6	28.6	31.8	31.8	35

ITEM	SIZES	TEST PRESSURES		TESTING STANDARD
		BAR HYDROSTATIC)		
		BODY	SEAT	
C.I. SWING CHECK VALVE CLASS 125	40mm to 500mm	24.1	13.8	BS - 12266
	600mm	18.3	10.3	

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)

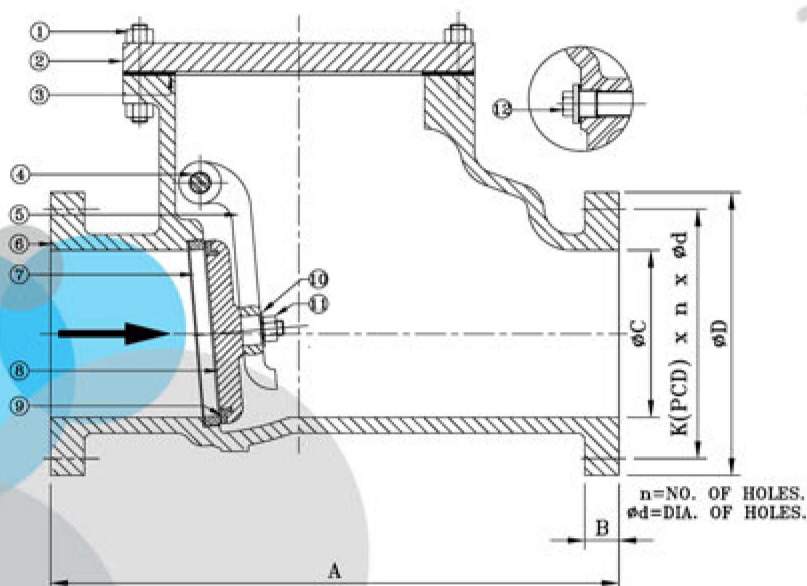


CAST IRON REFLUX VALVES PN-1.6

SPECIFICATIONS:

BOLTED COVER, BRONZE TRIM
 FLANGED ENDS AS PER IS 1538(FF)

PRODUCT STANDARD: IS 5312

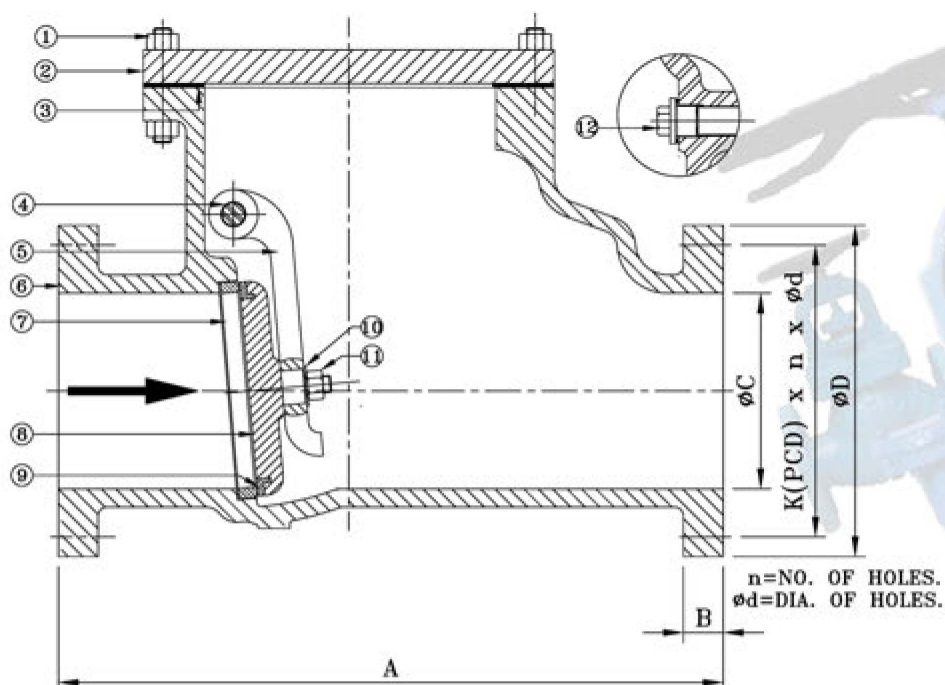


STANDARD MATERIAL COMBINATION

SR. NO.	NAME OF PARTS	NO. OFF	MATERIAL	SPECIFICATION/STANDARD
1.	STUDS & NUTS	TO SUIT	CARBON STEEL	IS 1363
2.	COVER	1	C.I.	IS 210 Gr. FG200
3.	GASKET	1	CNAF/RUBBER	IS 638 TYPE B
4.	HINGE PIN	1	H.T. BRASS	IS 6912 FHTB 1
5.	HINGE	1	C.I.	IS 210 Gr. FG200
6.	BODY	1	C.I.	IS 210 Gr. FG200
7.	SEAT RING	1	LEADED IN BRONZE	IS 318 LTB 2
8.	DISC	1	C.I.	IS 210 Gr. FG200
9.	DISC RING	1	LEADED IN BRONZE	IS 318 LTB 2
10.	WASHER	1	LEADED IN BRONZE/ BRASS	IS 318 LTB 2
11.	NUT	1	H.T. BRASS	IS 6912 FHTB1
12.	SIDE PLUG	TO SUIT	LEADED IN BRONZE	IS 318 LTB 2

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON REFLUX VALVE PN-1.6	50mm TO 500mm	CI-021	FLANGES AS PER IS 1538

DIMENSION DATA

VALVES SIZE (MM)	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM	250 MM	300 MM	350 MM	400 MM	450 MM	500 MM	600 MM
A	200 ±2	216 ±2	241 ±2	292 ±2	330 ±2	356 ±3	495 ±3	622 ±3	698 ±4	787 ±4	900 ±5	978 ±5	978 ±6	1295 ±6
B	16	16	21	22	22.5	23	24.5	26	27.5	29	30	31.5	33	36
C	50	65	80	100	125	150	200	250	300	350	400	450	500	600
øD	165	185	200	220	250	285	340	395	445	505	565	615	670	780
K	125	145	160	180	210	240	295	350	400	460	515	565	620	725
n	4	4	4	8	8	8	8	12	12	16	16	20	20	20
ød	19	19	19	19	19	23	23	23	23	23	28	28	28	31

ITEM	SIZES	TEST PRESSURES		TESTING STANDARD
		BAR (HYDROSTATIC)		
		BODY	SEAT	
C.I. REFLUX VALVE PN-1.6	50mm to 500mm	2.4 MPa	1.6 MPa	IS 5312

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)

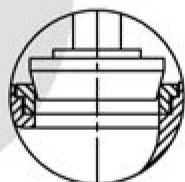
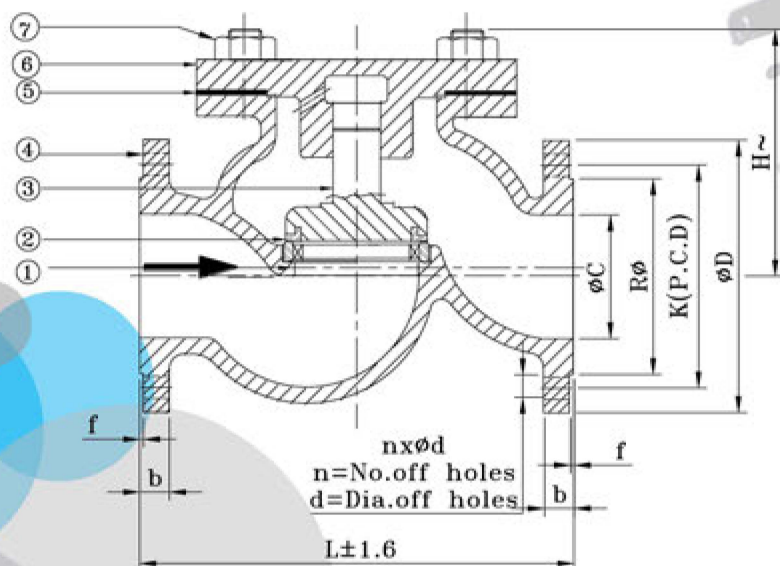


CAST IRON HORIZONTAL LIFT CHECK VALVE PN-16

SPECIFICATIONS:

BOLTED COVER, S.S. TRIM, FLANGED ENDS
AS PER DIN: EN 2533 PN-16 R.F

PRODUCT STANDARD: DIN EN: 12334



PLUG TYPE DISC DESIGN

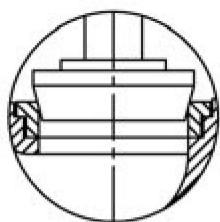


STANDARD MATERIAL COMBINATION

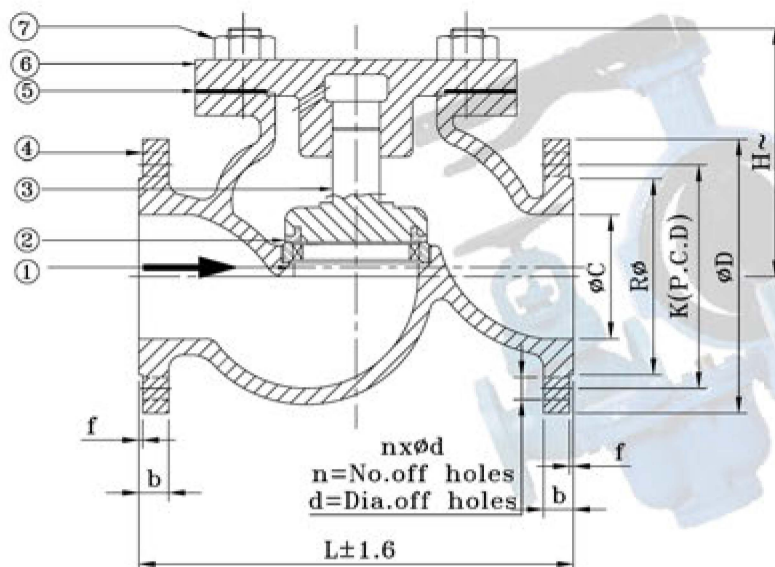
P.NO	NAME OF PARTS	NO. OFF	MATERIAL	SPECIFICATION/STANDARD
1	BODY SEAT RING	1	F.S.S.	ASTMA 182 Gr. F6a
2	DISC RING	1	F.S.S.	ASTMA 182 Gr. F6a
3	DISC	1	C.I.	IS 210 Gr. FG 200
4	BODY	1	C.I.	IS 210 Gr. FG 200
5	GASKET	1	CNAF	-
6	COVER	1	C.I.	IS 210 Gr. FG 200
7	STUD & NUT FOR BODY & COVER	TO SUIT	CARBON STEEL	-

NOTE: 1. The above data is subject to change without notice due to our continual product improvement program.

2. Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



PLUG TYPE DISC DESIGN



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON HORIZONTAL LIFT CHECK VALVE PN - 16	15mm TO 300mm	CI-019	FLANGED ENDS AS PER DIN EN-2533

DIMENSION DATA

VALVE SIZE	15 MM	20 MM	25 MM	32 MM	40 MM	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM	250 MM	300 MM
$L \pm 1.6$	130	150	160	180	200	230	290	310	350	400	480	600	730	850 ± 3.2
$\sim H$	85	85	90	100	115	130	160	170	190	210	282	310	325	380
ϕC	15	20	25	32	40	50	65	80	100	125	150	200	250	300
ϕD	95	105	115	140	150	165	185	200	220	250	285	340	395	445
b	14	16	16	18	18	20	20	22	24	26	26	26	28	28
ϕR	45	58	68	78	88	102	122	138	158	188	212	268	320	370
f	2	2	2	2	3	3	3	3	3	3	3	3	3	4
K	65	75	85	100	110	125	145	160	180	210	240	295	350	400
n	4	4	4	4	4	4	4	8	8	8	8	8	12	12
ϕd	14	14	14	18	18	18	18	18	18	18	23	23	23	23

ITEM	SIZES	TEST PRESSURES		TESTING STANDARD
		BAR (HYDROSTATIC)		
		BODY	SEAT	
C.I. HORIZONTAL LIFT CHECK VALVE PN-16	15mm to 300mm	24 BAR	16 BAR	12266

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



CAST IRON DUAL PLATE CHECK VALVE

Technical characters and selection of dual Plate Check Valves

The concept of the dual plate check valves means a lot of advantages compared with the other conventional check valves.

The most important are:

- Notable reduction of the valves weight
- Reduced water-hammer effect due to action of the spring force
- Low stress (fatigue) of the plates because during closure the plates do not produce force on the shaft.

The mechanism of the dual plate check valves is very simple and reliable for functionality. Since the valve is build with 2 half plates, the weight of these plates does not react on the fluid nor creates friction on the hinge pin because the plates are placed in vertical position. The spring force is creating an anti water hammer effect by helping to close the plates before the flow return.

One of the most important reasons of a check valves is to avoid the negative effects that are created by the reverse flow on the pumps and other elements of the installations.

During a short space of time, after the stopping the impulsive energy, the water column keeps on flowing until the kinetic energy of the fluid disperse due to the internal

friction and gravity, causing the reverse of the flow.

A conventional check valve (swing check valve) possesses a long inertia that allows creating a high velocity of the flow reverse.

The weight of the plate in this type of valve is very elevated. The weight combined with the high reverse flow will create a very high and strong over pressure (water hammer) at moment of closure.

The dual plate check valves have the following advantages on the above mentioned effects. Half plates with reduced weight and short inertia for closing have a reduced slamming (shocking) of the plates on the seat.

One or more springs assure the closing of the plates before the flow reverses. Theorically if the reverse flow is avoided, the effect of over pressure during return will disappear.

The water-hammer is reduced approximate 20% compared with swing check (considering a standard torque spring). The water-hammer can be reduced by adjusting to higher torque springs (quicker closure). However always considering that the pressure drop created by the springs does not have negative influence on the installation.

Difference between Dual Plate Check Valve & Swing Check Valve

DUAL PLATE CHECK VALVE	SWING CHECK VALVE
• Light Weight thus easier handling and self supporting. • More compact & structurally sound design. • Only Check Valve which can be installed for flow upside down due to spring assisted closure. • Low Pressure Drop and reduced Energy Loss Irrespective of Pressure Ratings. • Streamlined flow way. • Efficient and positive sealing under most flow and pressure conditions. Valve closes before flow reversal at zero velocity. • Inherently Non-Slamming. No external devices / attachments required. • Water Hammer almost non-existent. • Long life and trouble-free operation.	• Bulky & voluminous thus cumbersome handling & heavier supporting system. • Large & difficult to analyze from stress concentration points in critical applications due to intricate body shape. • Suitable primarily for horizontal applications. • Not possible. • Significant Pressure Loss and Energy Loss, which is still higher at higher Pressure ratings. • Swing restricted flow path. • Always require reverse flow for closure and back pressure for effective sealing. • External attachment required to counteract slamming. • Water hammer tendency persists. • Seat & Hinge Pin require regular maintenance due to impact loads and wear by rubbing.

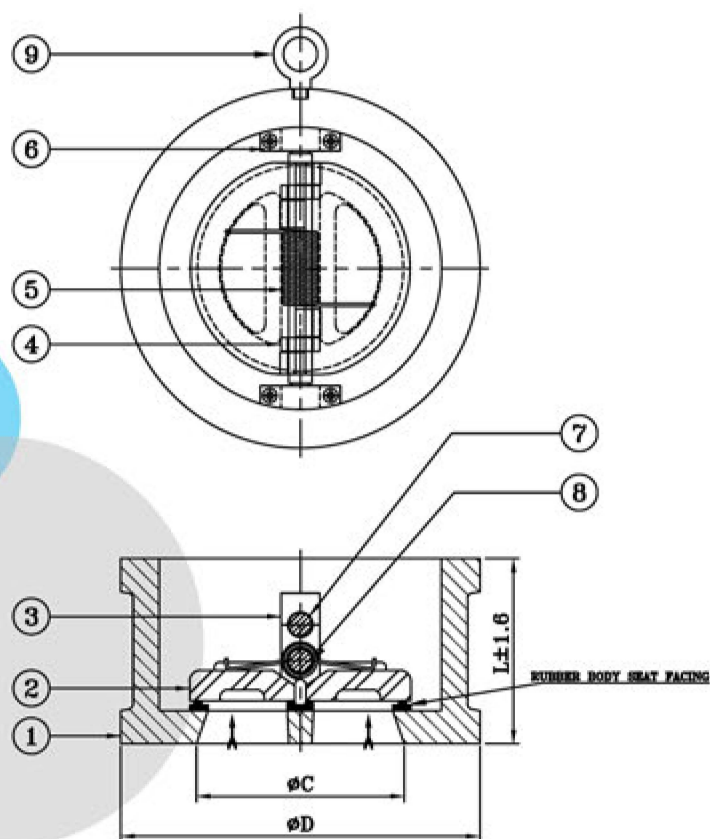


CAST IRON DUAL PLATE CHECK VALVE (WAFER TYPE) RETAINERLESS DESIGN CL-125/ PN-16

SPECIFICATIONS:

DUAL DISC, SPRING LOADED, SUITABLE FOR CLAMPING BETWEEN FLANGES AS PER ANSI B-16.1 CLASS-125 (FF)

PRODUCT STANDARD: API 594

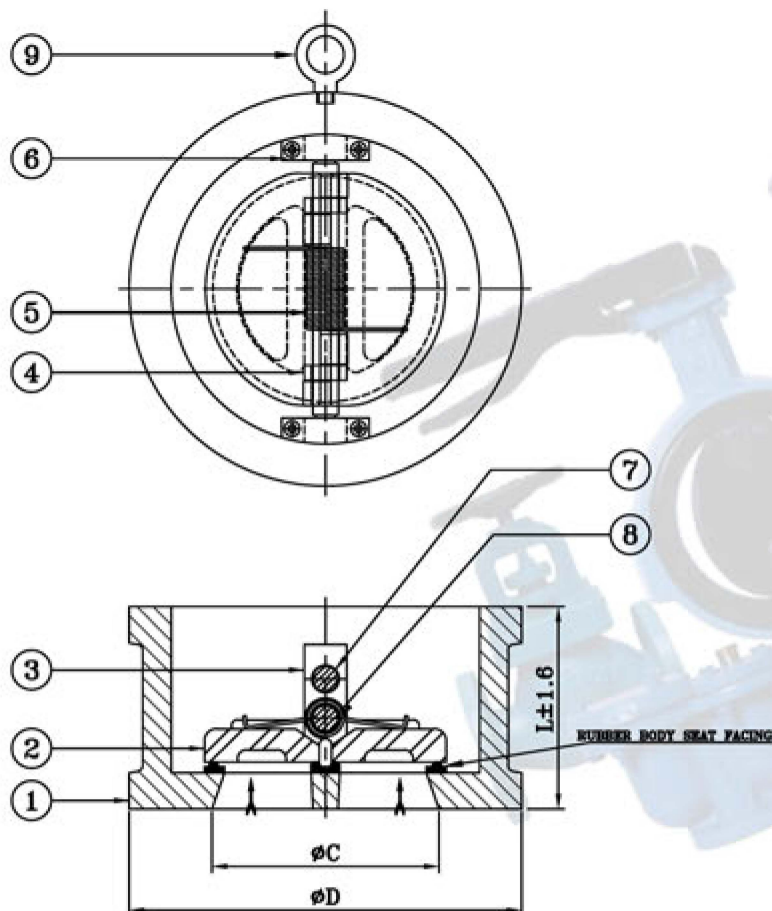


STANDARD MATERIAL COMBINATION

P.No.	Name of Part	No. Off	Material	Specification
1	BODY	1	C.I.	BSEN 1561 GJL-200
2	DISC	2	C.A.S.	ASTM A217 Gr. CA15
3	DISC HOLDING PLATE	2	C.S.S.	ASTM A216 Gr. WCB
4	BUSH	2	S.S.	ASTM A276 TYPE 304
5	SPRING	1	S.S. 316	
6	L-KEY SCREW/BOLT	4	S.S. 316	
7	STOPPER PIN	1	S.S.	ASTM A276 TYPE 410
8	DISC HOLDER PIN	1	S.S.	ASTM A276 TYPE 410
9	LIFTING HOOK	1	C.S.	IS 2062

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON DUAL PLATE WAFER TYPE CHECK VALVE CL-125/PN-16	40mm TO 900mm	CI-085	INSERTION BETWEEN FLANGES AS PER ANSI B16.1 CL-125

DIMENSION DATA

VALVE SIZE	40 MM	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM	250 MM	300 MM
± 1.6 L	60	60	67	73	73	83	98	127	146	181
øC	50	50	65	75	100	125	150	200	250	300
øD	80	101	119	130	170	192	214	273	334	403.5

VALVE SIZE	350 MM	400 MM	450 MM	500 MM	600 MM	650 MM	700 MM	750 MM	800 MM	900 MM
± 1.6 L	184	191	203	213	222	305	305	305	305	368
øC	350	400	450	500	600	650	700	750	777	900
øD	446	510	545	602	713	750	800	870	875	975

ITEM	SIZES	TEST PRESSURES		TESTING STANDARD
		BODY	SEAT	
Cast iron Dual Plate Wafer Type Check valve CL-125/PN-16	40mm to 900mm	CL-125	20.7 BAR (HYD.)	API 598
		PN-16	24 BAR (HYD.)	

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



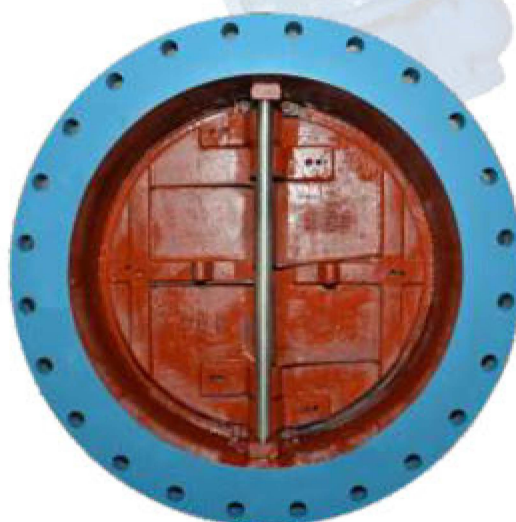
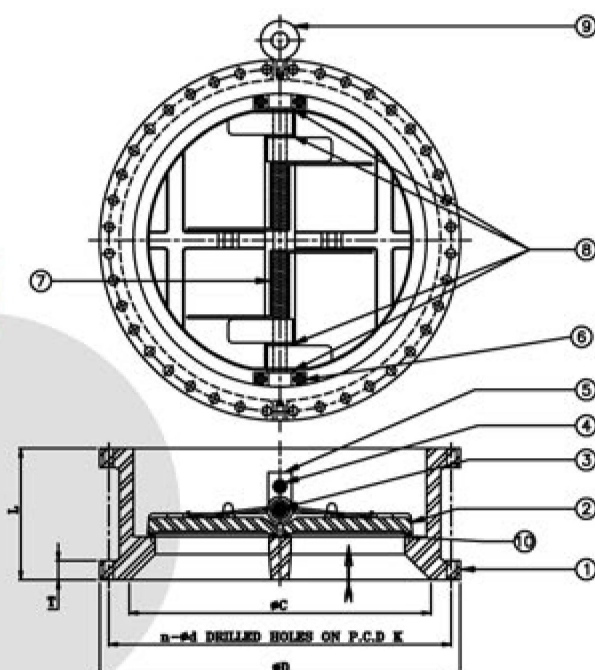
DUAL PLATE CHECK VALVES FLANGED ENDS, RETAINERLESS DESIGN CL-125/PN-16

SPECIFICATION:

DUAL DISC, SPRING LOADED,
FLANGED ENDS AS PER ANSI
B16.1 CL-125 (FF)

PRODUCT STANDARD: API - 594

VALVE DESIGN UPTO 80MM SHELL BE LUG TYPE DESIGN

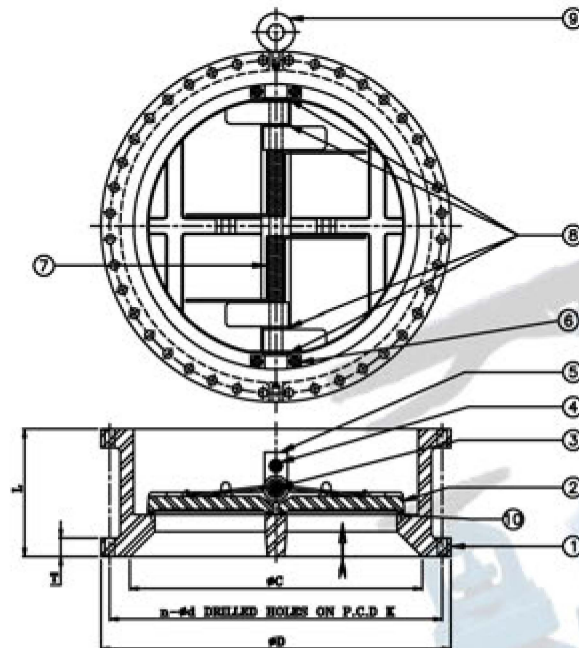


STANDARD MATERIAL COMBINATION

SR. NO.	NAME OF PARTS	NO. OFF	MATERIAL	SPECIFICATION/STANDARD
1.	BODY	1	C.I.	BSEN 1561 Gr. FG260
2.	DISC	2	D.I./SS	ASTM A 395/13% Cr. STEEL
3.	DISC HOLDER PIN	1	S.S.	ASTM A276 TYPE 410
4.	STOPPER PIN	1	S.S.	ASTM A276 TYPE 410
5.	DISC HOLDING PLATE	2	C.C.S.	ASTM A216 Gr. WCB
6.	L-KEY SCREW	4		AISI 304
7.	SPRING	TO SUIT		TYPE 316
8.	BUSH	TO SUIT	S.S.	ASTM A276 TYPE 304
9.	EYE BOLT	--	CARBON STEEL	ANY GRADE
10.	SEAT	1		RUBBER

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON DUAL PLATE CHECK VALVE CL-125/PN-16	40mm TO 900mm	CI-086	FLANGE ENDS AS PER ANSI B16.1 CLASS 125 (FF)

DIMENSION DATA

VALVE SIZE	40 MM	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM	250 MM	300 MM
L	54 ±2	54 ±2	60 ±2	67 ±2	67 ±2	83 ±2	95 ±2	127 ±2	140 ±2	181 ±2
øC	40	50	65	80	100	125	150	200	250	300
øD	125	150	180	190	230	255	280	345	405	485
n	4	4	4	4	8	8	8	8	12	12
ød	15.8	19.1	19.1	19.1	19.1	22.2	22.2	22.2	25.4	25.4
K	98	121	140	152	191	216	241	299	362	432

VALVE SIZE	350 MM	400 MM	450 MM	500 MM	600 MM	650 MM	700 MM	750 MM	800 MM	900 MM
L	184 ±3	191 ±3	203 ±3	213 ±3	222 ±3	305 ±3	305 ±3	305 ±3	305 ±3	368 ±3
øC	350	400	450	500	600	650	700	750	777	900
øD	535	595	635	700	815	785	835	885	940	1057
n	12	16	16	20	20	36	40	44	48	44
ød	28.6	28.6	31.8	31.8	35	22.2	22.2	22.2	22.2	25.4
K	476	540	578	635	749	744.5	795.3	846.1	900.1	1009.7

ITEM	SIZES	TEST PRESSURES		TESTING STANDARD
CAST IRON DUAL PLATE CHECK VALVE CL-125/PN-16	40mm to 900mm	CL-125	20.7 BAR (HYD.)	15.18 BAR (HYD.)
		PN-16	24 BAR (HYD.)	17.6 BAR (HYD.)

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

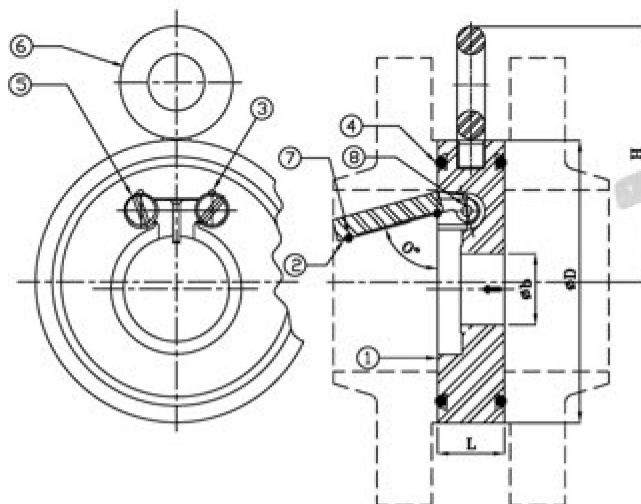
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



CAST IRON WAFER TYPE CHECK VALVES PN-16

SPECIFICATIONS:

SINGLE DISC, RENEWABLE
RESILIENT SEAT,
SUITABLE FOR INSERTION
BETWEEN FLANGES
AS PER BS-10 TABLE 'E'



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON WAFER TYPE CHECK VALVE PN-16	40mm TO 300mm	CI-0038	Insertion between flange as per B.S 10 Table 'E'

STANDARD MATERIAL COMBINATION

SR. NO.	NAME OF PARTS	NO. OFF	MATERIAL	SPECIFICATION/STANDARD
1.	BODY	1	C.I.	BSE N1561 Gr. 200
2.	FLAP	1	C.I. / S.S.	BSE N1561 Gr. 200 / S.S.304 / CF8
3.	LOCKING PIN	1	H.T. BRASS	DIN EN 12165 CW721R
4.	'O' RING	2	EPDM	-----
5.	LOCKING PLUG	2	G.M.	BSEN 1982 CC491K
6.	EYE BOLT	1	CARBON STEEL	-----
7.	'O' RING	1	EPDM	-----
8.	HINGE PIN	1	BRASS	DIN EN 12165 CW721R

DIMENSION DATA

NOMINAL SIZE	40 MM	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM	250 MM	300 MM
L	19	19	19	24	27	32	32	42	47	52
~H	40	81	87	97	111	129	140	175	208	232
øb	20	30	37	48	71	94.5	114	150	194	228
øD	82.2	95	107	126	158	190	210.5	266	331.5	379
0°	-	50	60	68	60	64	63	67	65	71

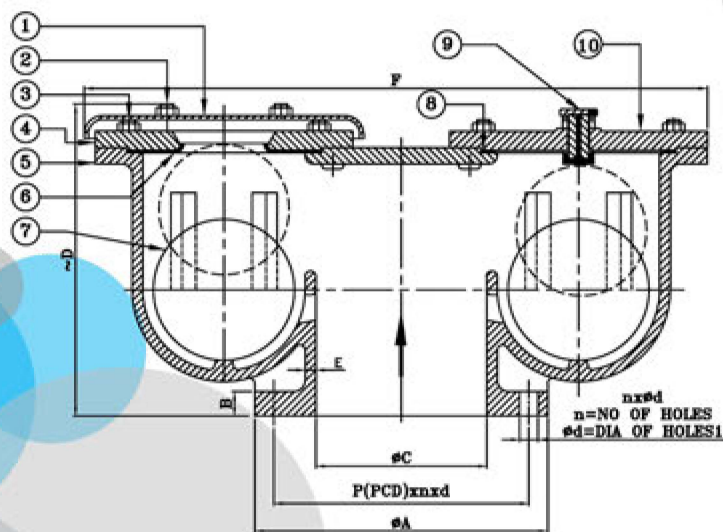
ITEM	SIZES	TEST PRESSURES		TESTING STANDARD
		BODY	SEAT	
Cast Iron Wafer Type Check Valve PN-16	40mm to 300mm	24 Bar (HYD)	17.6 Bar (HYD)	Manufacturer

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



CAST IRON AIR RELEASE VALVES WITH DOUBLE BALL PN-10 / PN-16

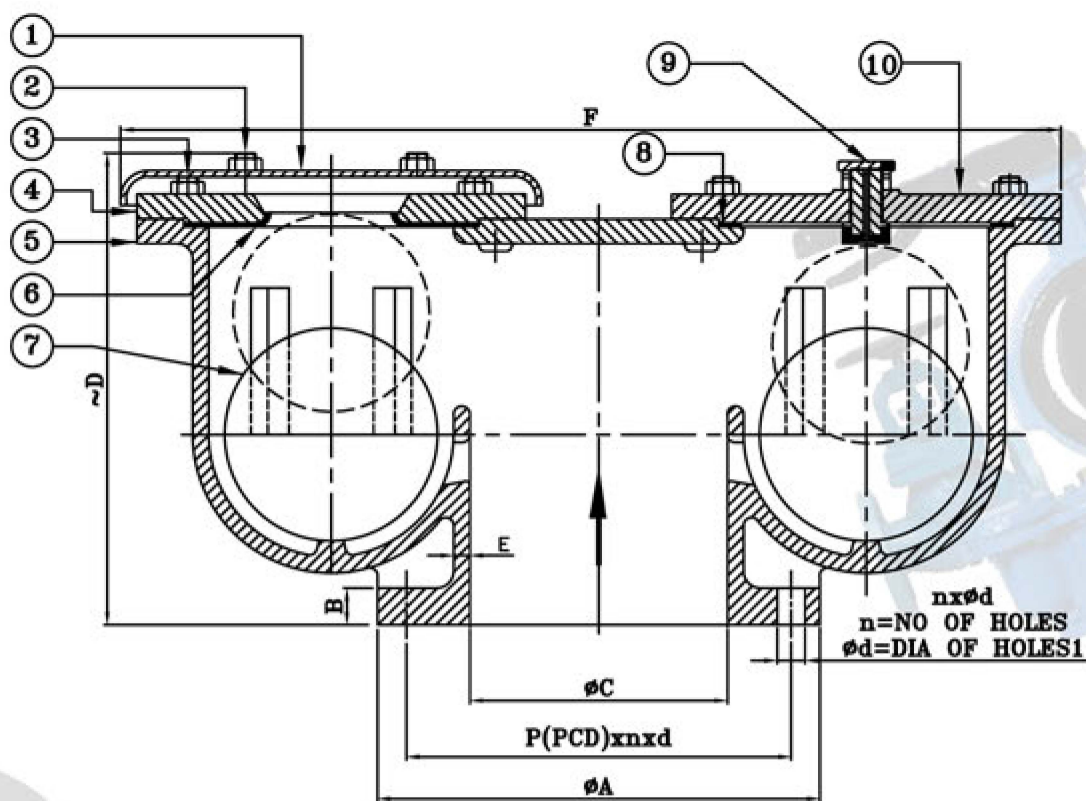
SPECIFICATIONS:
DOUBLE BALL TYPE,
FLANGES AS PER BS 4504 (F.F)



STANDARD MATERIAL COMBINATION

P.No.	Name of Part	No. Off	Material	Specification
1	COVER PLATE	1	STEEL	
2	BOLTS AND NUTS	TO SUIT	CARBON STEEL	BS 916
3	STUDS AND NUTS	TO SUIT	CARBON STEEL	BS 916
4	COVER	1	C.I.	BSEN 1561 Gr.200
5	BODY	1	C.I.	BSEN 1561 Gr.200
6	SEAT RING	1	SYNTHETIC RUBBER	IS 638 TYPE B
7	BALL	2	EPDM. COATED WOODEN BALL	
8	PACKING RING	--	SYNTHETIC RUBBER	IS 638 TYPE B
9	NIPPLE (RUBBER COATED)	1	G.M./SS	BSEN 1982 CC491K ASTMA 182 Gr. F6a
10	COVER	1	C.I.	BSEN 1561 Gr.200

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON AIR RELEASE VALVE WITH DOUBLE BALL PN-10 / PN-16	25mm TO 200mm	CI-026	FLANGE ENDS AS PER B.S. 4504 (FF)

DIMENSION DATA								
VALVE SIZE	25	40	50	65	80	100	150	200
A	115	150	165	185	200	220	285	340
B	16	18	20	20	22	24	26	26
C	25	38	50	65	76	100	150	200
~D	217	245	245	265	292	320	370	370
E	8	8	9.5	9.5	11	11	12.7	12.7
F	293	356	356	435	435	524	680	737
P	85	110	125	145	160	180	240	295
n	4	4	4	4	8	8	8	8
d	14	19	19	19	19	19	23	23

ITEM	SIZES	TEST PRESSURES		TESTING STANDARD
		BODY	SEAT	
CAST IRON AIR RELEASE VALVE WITH DOUBLE VALVE PN-10/ PN-16	25mm to 200mm	PN-10	15 BAR (Hyd.)	Manufacturer
		PN-16	24 BAR (Hyd.)	

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



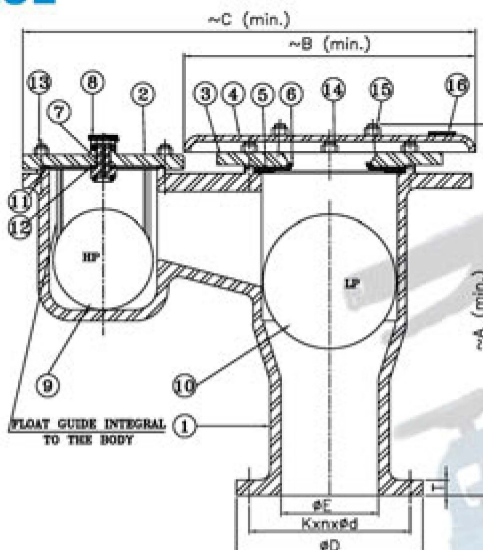
CAST IRON KINETIC AIR RELEASE VALVE PN-1.0/1.6

SPECIFICATIONS:

DOUBLE BALL TYPE

FLANGED AS PER IS 1538 (FF)

PRODUCT STANDARD: IS 14845

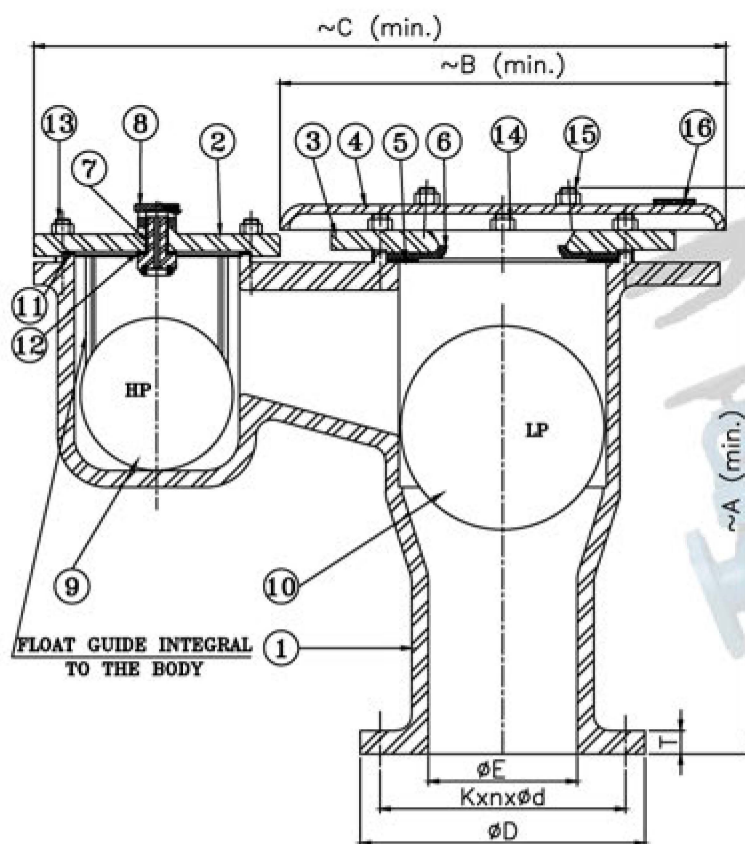


STANDARD MATERIAL COMBINATION

P.NO.	NAME OF PARTS	NO. OFF	MATERIAL	SPECIFICATION/STANDARD
1	BODY	1	C.I.	IS 210 Gr. FG 260
2	H.P. COVER	1	C.I.	FG 260
3	LOW PR. COVER	1	C.I.	FG 260
4	COWL	1	CARBON STEEL	IS 2062
5	JOINT SUPPORTING RING	1	CARBON STEEL	IS 2062
6	L.P. SEAT RING	1	NATURAL RUBBER SHORE HARDNESS	
7	H.P. ORIFICE	1	S.S	ASTM A 182 Gr. F6a
8	H.P. ORIFICE PLUG	1		
9	BALL FOR H.P. CHAMBER	1	EBONITE COATED WOODEN BALL SHORE HARDNESS 80±5°	
10	BALL FOR L.P. CHAMBER	1	EBONITE COATED WOODEN BALL SHORE HARDNESS 100±5°	
11	GASKET	1	E.P.D.M.	
12	GASKET	1	E.P.D.M.	
13	STUDS & NUTS FOR H.P. COVER	TO SUIT	H.T. STEEL & ALLOY STEEL	ASTM A193 Gr. B7 & ASTM A194 Gr. 2H
14	STUDS & NUTS FOR L.P. COVER	TO SUIT	H.T. STEEL & ALLOY STEEL	ASTM A193 Gr. B7 & ASTM A194 Gr. 2H
15	STUDS & NUTS FOR COWL	TO SUIT	H.T. STEEL & ALLOY STEEL	ASTM A193 Gr. B7 & ASTM A194 Gr. 2H
16	NAME PLATE	1	S.S.	TYPE 316

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON KINETIC AIR RELEASE VALVE PN-1.0/1.6	50mm TO 200mm	CI-094	FLANGED AS PER IS: 1538

DIMENSION DATA

VALVE SIZE	50MM	80MM	100MM	150MM	200MM
~A	280	305	360	487	700
~C	211	236	280	450	506
~B	352	373	424	674	739
øE	50	80	100	150	200
D	165	200	220	285	340
T	16	21	22	23	24.5
K	125	160	180	240	295
n	4	4	8	8	8
ød	19	19	19	23	23

ITEM	RATING	SIZES	TEST PRESSURES		
			BODY	SEAT	TESTING STANDARD
CAST IRON KINETIC AIR RELEASE VALVE PN-1.0/1.6	PN-1.0	50mm to 200mm	15 Bar (Hyd.)	11 Bar (Hyd.)	14845
	PN-1.6	50mm to 200mm	24 Bar (Hyd.)	17.6 Bar (Hyd.)	

NOTE: 1. The above data is subject to change without notice due to our continual product improvement program.
2. Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



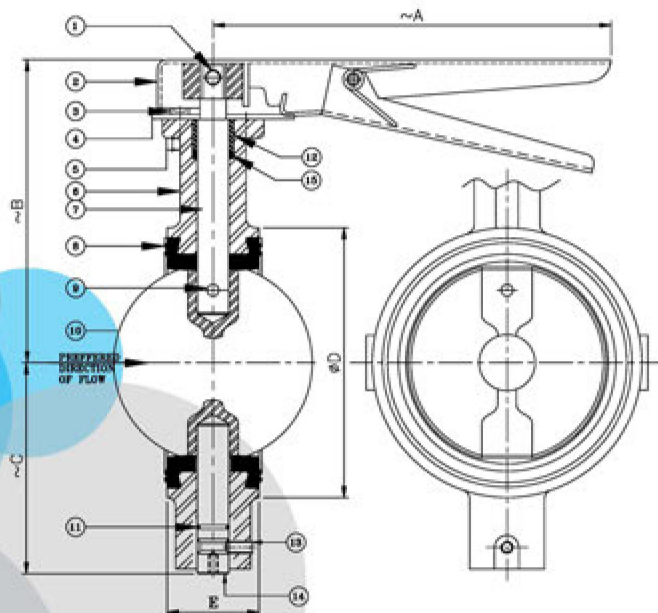
IS :13095

CAST IRON BUTTERFLY VALVE PN-10/ PN-16 (WAFER TYPE)

SPECIFICATIONS:

WAFER TYPE, WITHOUT LUGS,
 MOULDED LINER, SUITABLE
 FOR CLAMPING BETWEEN
 FLANGES AS PER ANSI B 16.1 CL-125

PRODUCT STANDARD: IS: 13095

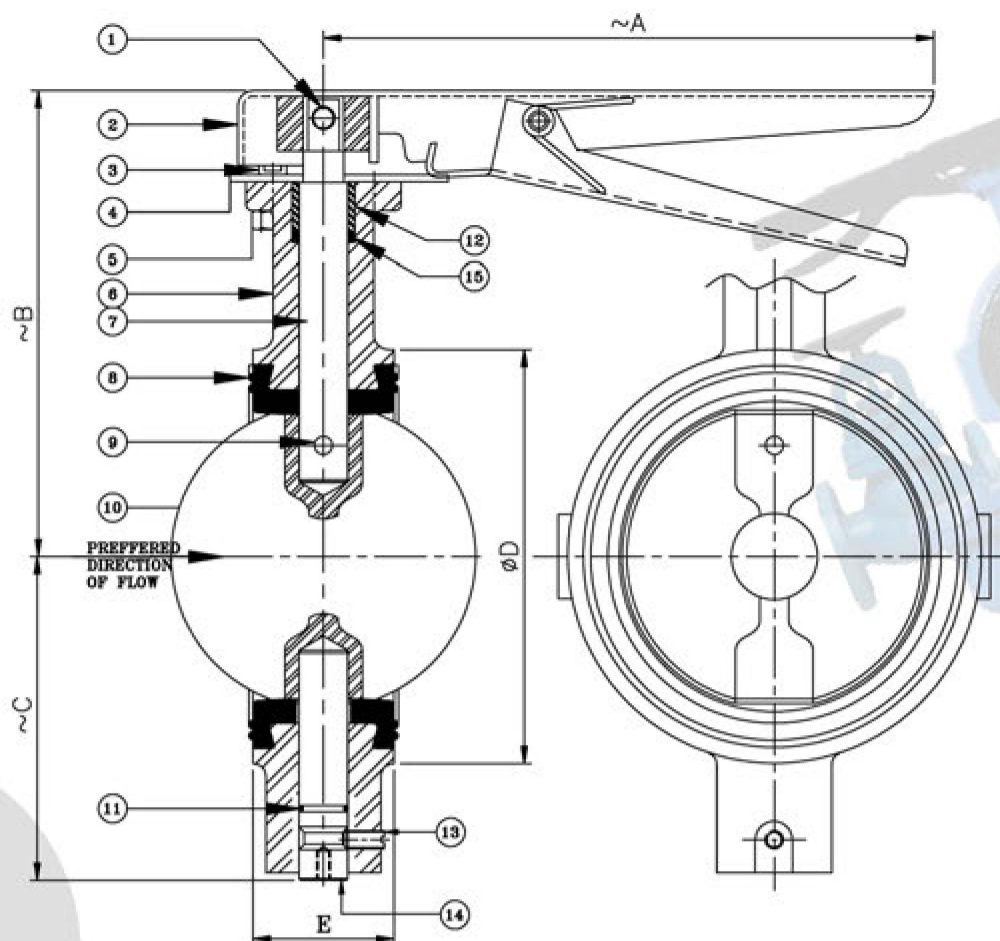


STANDARD MATERIAL COMBINATION

P.N.	NAME OF PART		NO. OFF	MATERIAL	SPECIFICATION
1	GRUB SCREW		1	M.S.	--
2	HANDLE	UP TO 5"	1	M.S. SHEET	IS 2062 FABRICATED (POWDER COATED)
		6" TO 12"		M.I./C.S.	IS 2062
3	L-KEY BOLT		2	CARBON STEEL	--
4	INDEXING PLATE		1	M.S.	IS 2062
5	NUT		2	CARBON STEEL	--
6	BODY		1	C.I.	IS 210 FG 200
7	UPEER STEM		1	S.S.	IS 6603 X12 Cr. 12
8	MOULDED LINER		1	BUNA-N/EPDM	SHORE HARDNESS 70°± 4
9	TAPER PIN		1	HARDENED STEEL	--
10	DISC		1	S.G. IRON/SS	IS 1865 SG 400/ 15/ASTM A351 Gr. CF8/CF8M
11	'O' RING		1	BUNA-N/EPDM	SHORE HARDNESS 60°± 4
12	BUSHING		1		PTFE
13	LOWER STEM		1	S.S.	IS 6603 X12 Cr. 12
14	GRUB SCREW		1	M.S.	--
15	PACKING		1	BUNA-N/EPDM	SHORE HARDNESS 60°± 4

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON BUTTERFLY VALVE-PN-10/16	40mm TO 300mm	CI-091/CI-091A/CI-091B	Insertion between Flanges as per ASME B16.1, CL-125

DIMENSION DATA

VALVE SIZE	40MM	50MM	65MM	80MM	100MM	125MM	150MM	200MM	250MM	300MM
~A	212	212	212	212	212	212	260	356	406	406
~B	118	130	146	151	162	191	210	236	290	320
~C	64	70	81	81	116	142	147	171	211	248
øD	81	95	111	120	144	175	200	255	325	374
E	33	43	46	46	52	56	56	60	68	78

ITEM	SIZES	TEST PRESSURES		TESTING STANDARD
		BODY	SEAT	
CAST IRON BUTTERFLY VALVE PN-10 WAFER TYPE WITHOUT LUGS	40mm to 300mm	15 BAR	11 BAR	IS: 13095
CAST IRON BUTTERFLY VALVE PN-16 WAFER TYPE WITHOUT LUGS	40mm to 300mm	24 BAR	17.6 BAR	IS: 13095

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



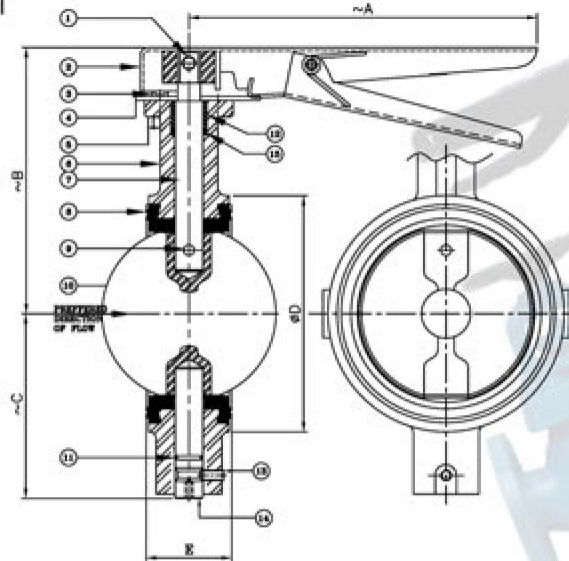
CAST IRON BUTTERFLY VALVE (WAFFER TYPE) PN-16/ PN-20/ PN-25

SPECIFICATIONS:

WAFFER TYPE, WITHOUT LUGS, MOULDED LINER, SUITABLE FOR CLAMPING BETWEEN FLANGES AS PER ANSI B 16.1

PRODUCT STANDARD:

BS: 5155

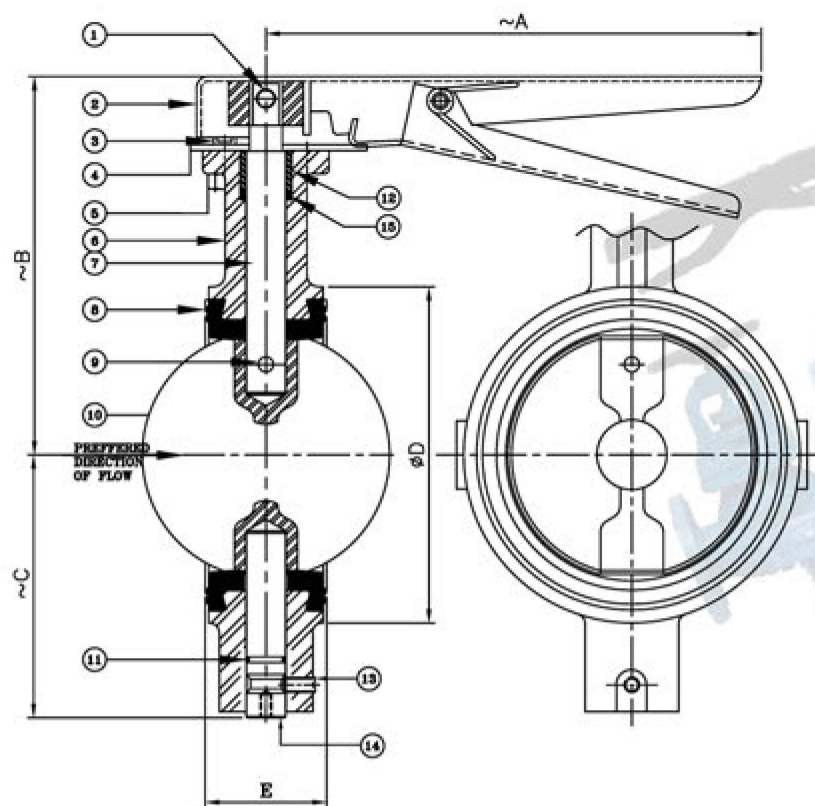


STANDARD MATERIAL COMBINATION

P.NO.	NAME OF PARTS		NO. OFF	MATERIAL	SPECIFICATION/STANDARD
1	GRUB SCREW		1	M.S.	-----
2	LEVER	UP TO 6"	1	M.S. SHEET	IS 2062 FABRICATED (POWDER COATED)
		8" TO 12"		M.I./C.C.S.	ASTM A338/ ASTM A216 Gr. WCB.
3	L-KEY BOLT/BOLT		2	CARBON STEEL	ZINC PLATED
4	INDEXING PLATE (CHROME PLATED)		1	M.S.	IS 2062
5	NUT		2	CARBON STEEL	ZINC PLATED
6	BODY		1	C.I.	EN 1561 Gr. 200
7	UPPER STEM		1	S.S	ASTM A 276 TYPE 410 or its eq.
8	MOULDED LINER		1	BUNA-N/EPDM	SHORE HARDNESS 70°±4
9	TAPER PIN		1	HARDENED STEEL	-----
10	DISC		1	D.I./SS	ASTM A395/ASTM A351 Gr.CF8/CF8M
11	O' RING		1	BUNA-N/EPDM	SHORE HARDNESS 60°±4
12	BUSHING		1	PTFE	
13	LOWER STEM		1	S.S	ASTM A 276 TYPE 410 or its eq.
14	GRUB SCREW		1	M.S.	-----
15	PACKING		1	BUNA-N/EPDM	SHORE HARDNESS 60°±4

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON BUTTERFLY VALVE-PN-16	40mm TO 300mm	CI-061/CI-061A/CI-061B	Insertion between Flanges as per ANSI B16.1 CL-125
CAST IRON BUTTERFLY VALVE-PN-20	40mm TO 300mm	CI-095/CI-095A/CI-095B	Insertion between Flanges as per ASME B16.5 CL-150
CAST IRON BUTTERFLY VALVE-PN- 25	40mm TO 300mm	CI-96	Insertion between Flanges as per BSEN 1092 PN-25

DIMENSION DATA

VALVE SIZE	40MM	50MM	65MM	80MM	100MM	125MM	150MM	200MM	250MM	300MM
~A	212	212	212	212	212	212	260	356	406	406
~B	118	130	146	151	162	191	210	236	290	320
~C	64	70	81	81	116	142	147	171	211	248
D	81	95	111	120	144	175	200	255	325	374
E	33	43	46	46	52	56	56	60	68	78

ITEM	SIZES	TEST PRESSURES		TESTING STANDARD
		BODY	SEAT	
CAST IRON BUTTERFLY VALVE PN-16 WAFER TYPE WITHOUT LUGS	40mm to 300mm	24 BAR (HYD)	17.6 BAR (HYD)	BSEN: 12266
CAST IRON BUTTERFLY VALVE PN-20 WAFER TYPE WITHOUT LUGS	40mm to 300mm	30 BAR (HYD)	22 BAR (HYD)	BSEN: 12266
CAST IRON BUTTERFLY VALVE PN-25 WAFER TYPE WITHOUT LUGS	40mm to 300mm	37.5 BAR (HYD)	27.5 BAR (HYD)	BSEN: 12266

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)

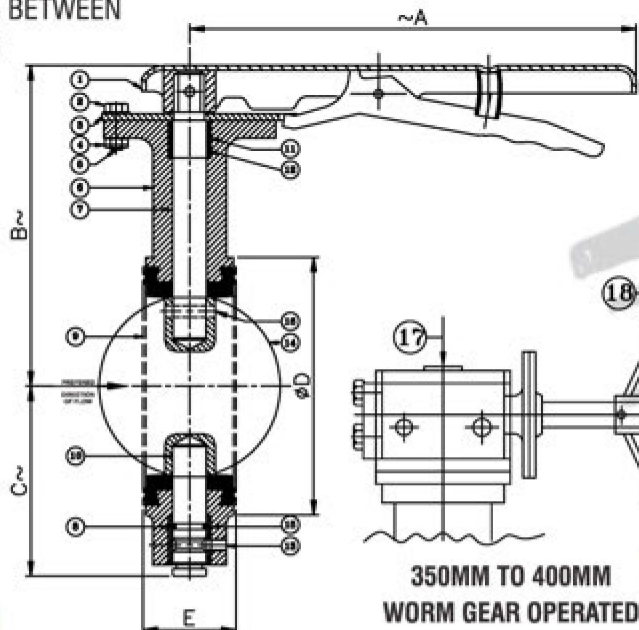


CAST IRON BUTTERFLY VALVE (WAFFER TYPE) CL-125

SPECIFICATIONS:

WAFFER TYPE WITHOUT LUGS MOULDED LINER SUITABLE
FOR CLAMPING BETWEEN
FLANGES ENDS
AS PER ASME
B16.1 CL-125

**PRODUCT
STANDARD:**
BS: 5155



350MM TO 400MM
WORM GEAR OPERATED

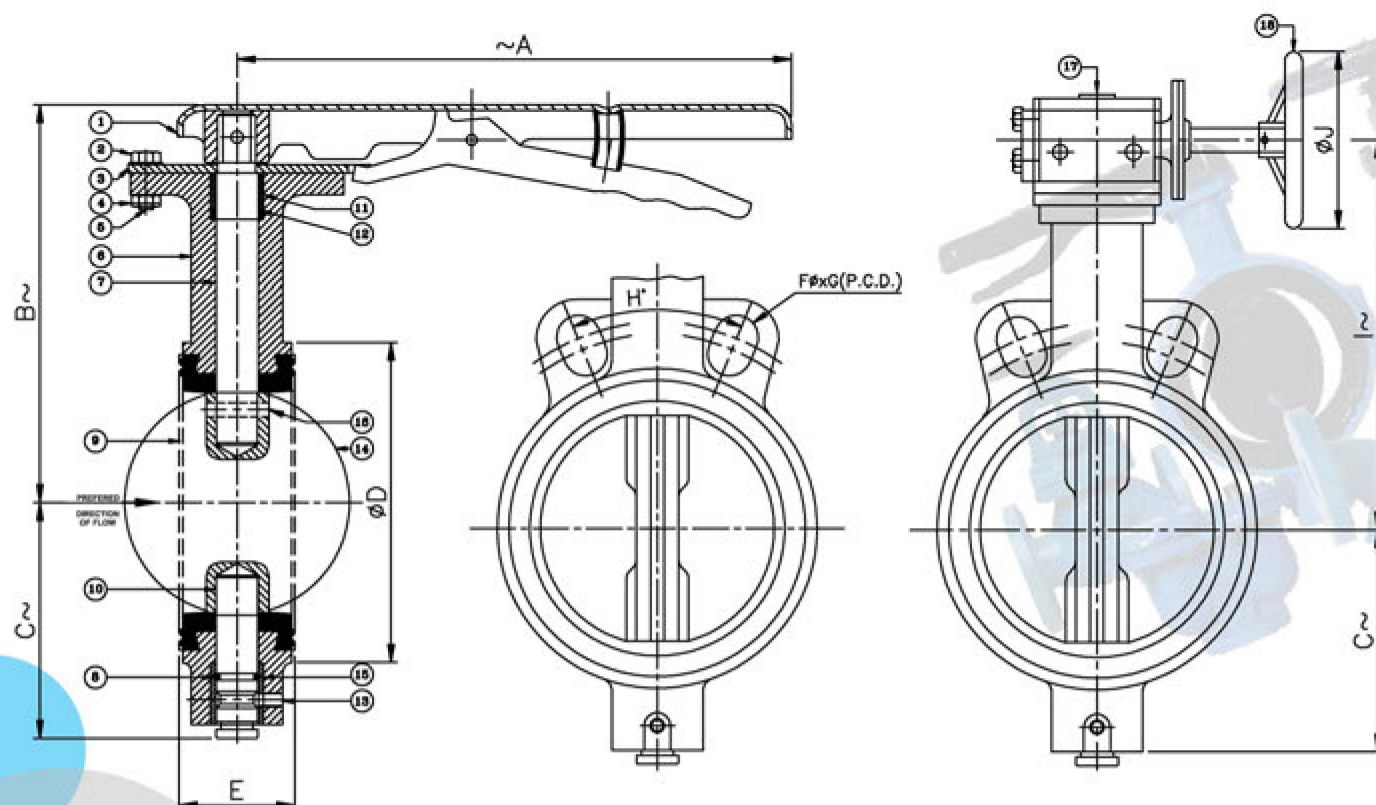


STANDARD MATERIAL COMBINATION

P. NO.	NAME OF PARTS		NO. OFF	MATERIAL	SPECIFICATIONS/STANDARD
1	LEVER	1½" TO 6"	1	M.S. SHEET	IS 2062 Gr. B
		8" TO 12"		M.I (OR) C.S (OR) NODULAR IRON	ASTMA 338/ ASTMA 216 Gr.WCB or B.S. 2789 Gr. 500/7
2	SPRING WASHER		2	CARBON STEEL	--
3	COVER PLATE		1	M.S. SHEET	IS 2062 Gr. B
4	NUTS		2	CARBON STEEL/ ALLOY STEEL	BS 4190/ ASTM A194 Gr. 2H
5	BOLTS		2	CARBON STEEL/ H.T. STEEL	BS 4190/ ASTM A193 Gr. B7
6	BODY		1	C.I./D.I.	BSEN 1561 Gr. 200/ B.S.2789 Gr. 500/7
7	UPPER STEM		1	S.S.	ASTM A 276 TYPE 410 or its eq.
8	O' RING		1	BUNA-N/EPDM	SHORE HARDNESS 60°±4
9	LINER		1	EPDM	SHORE HARDNESS 70°±4
10	LOWER STEM		1	S.S.	ASTM A 276 TYPE 410 or its eq.
11	BUSHING		1	HEAVY DUTY CORROSION RESISTANT TO ABSORB SIDE THRUST	
12	WASHER		1	BUNA-N/EPDM	SHORE HARDNESS 60°±4
13	GRUB SCREW		1	M.S.	--
14	DISC		1	C.I./S.S./ AL. BRONZE/ S.G. IRON	BSEN 1561 Gr.200/ ASTMA 351 Gr. CF8/ BSEN 1982/ BS 2789 Gr. 500/7
15	BUSH		1	PH. BRONZE/ PTFE	
16	TAPER PIN		1	STEEL	HARDENED
17	GEAR BOX		1	C.I.	BSEN 1561 Gr.200
18	HANDWHEEL		1	CI / MS / MI	BSEN 1561 Gr.200/ IS 2062 Gr.B/ IS 2108 Gr.BM 290

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON BUTTERFLY VALVE CL-125	40mm TO 400mm	CI-027, 028	Insertion between Flanges as per ASME B16.1

DIMENSION DATA												
VALVE SIZE	40MM	50MM	65MM	80MM	100MM	125MM	150MM	200MM	250MM	300MM	350MM	400MM
A	260	260	260	260	260	260	260	356	406	406	-	-
B	120	133	150	153	210	200	237	235	290	330	-	-
C	64	75	96	100	120	140	147	178	214	260	281	315
D	82	90	105	120	144	175	200	255	325	374	406	456
E	33	43	46	46	52	56	56	60	68	78	92	102
FØ	15.8	19	19	19	19	22.3	22.3	22.3	25.4	25.4	28.6	28.6
G (PCD)	98.5	120.6	139.7	152.4	190.5	215.9	241.3	298.4	361.9	431.8	476.2	539.8
I	-	-	-	-	-	-	240	240	290	330	340	412
JØ	-	-	-	-	-	-	200	200	250	250	300	300
H°	90°	90°	90°	90°	45°	45°	45°	45°	30°	30°	30°	22.5°

ITEM	SIZES	TEST PRESSURES		
		BODY	SEAT	TESTING STANDARD
CAST IRON BUTTERFLY VALVE CL-125	40mm to 400mm	20.7 Bar g (Hyd.)	15.18 Bar g (Hyd.)	BSEN 12266

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



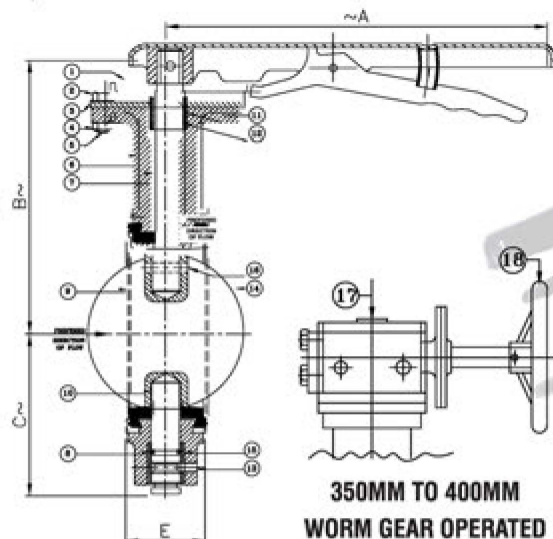
CAST IRON BUTTERFLY VALVE (LUG TYPE) CL-125

SPECIFICATIONS:

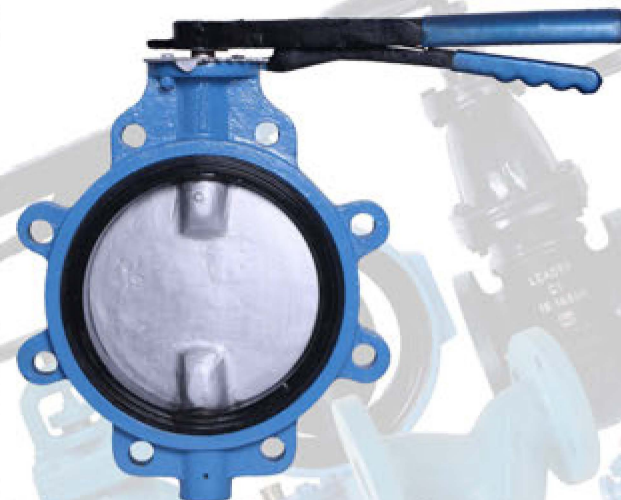
WAFFER TYPE, WITH LUGS,
 MOULDED LINER,
 SUITABLE FOR
 CLAMPING
 BETWEEN FLANGES
 AS PER
 ANSI B 16.1, CL-125

PRODUCT STANDARD:

BS: 5155



350MM TO 400MM
 WORM GEAR OPERATED

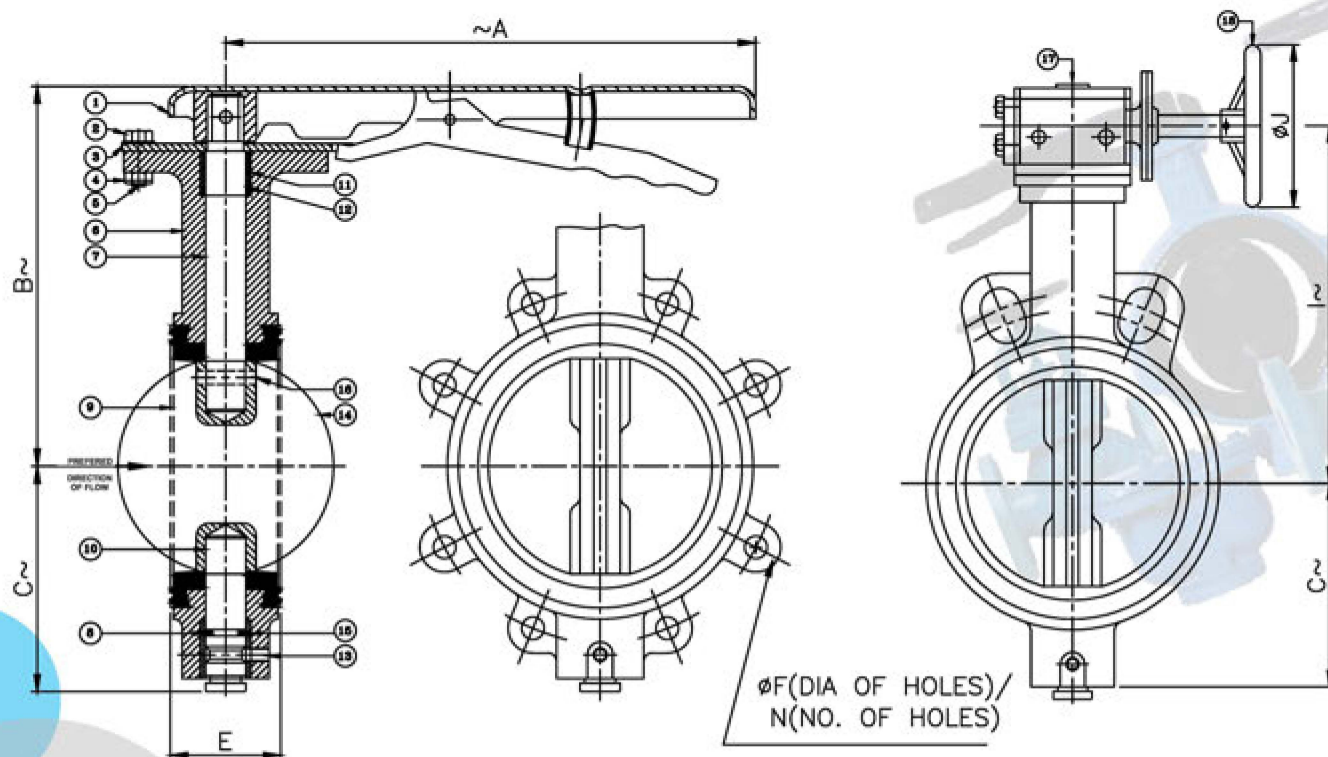


STANDARD MATERIAL COMBINATION

P.No.	NAME OF PARTS		NO. OFF	MATERIAL	SPECIFICATION/STANDARD
1	LEVER	1-1/2" TO 6"	1	M.S. SHEET	IS 2062 Gr. B
		8" TO 12"		MI (OR) C.S (OR) NODULAR IRON	ASTMA 338/ASTMA 216 Gr.WCB or B.S. 2789 Gr. 500/7
2	SPRING WASHER		2	CARBON STEEL	-
3	COVER PLATE		1	M.S. SHEET	IS 2062 Gr. B
4	NUTS		2	CARBON STEEL/ALLOY STEEL	BS 4190/ASTM A194 Gr.2H
5	BOLTS		2	CARBON STEEL/H.T. STEEL	BS 4190/ASTM A193 Gr.B7
6	BODY		1	C.I.	BSEN 1561 Gr. 200
7	UPPER STEM		1	S.S.	ASTM A 276 TYPE 410 or its eq.
8	O' RING		1	BUNA-N/EPDM	SHORE HARDNESS 60+-4
9	LINER		1	EPDM	SHORE HARDNESS 70+-4
10	LOWER STEM		1	S.S.	ASTM A 276 TYPE 410 or its eq.
11	BUSHING		1	HEAVY DUTY CORROSION RESISTANT TO ABSORB SIDE THRUST	
12	WASHER		1	BUNA-N/EPDM	SHORE HARDNESS 60+-4
13	GRUB SCREW		1	M.S.	-
14	DISC		1	C.I/ C.S.S AL.BRONZE/ S.G.IRON	BSEN 1561 Gr.200/ ASTM 351 Gr. CF8/ BSEN 1982/ BS 2789 Gr.500/7
15	BUSH		1	PH.BRONZE/PTFE	
16	TAPER PIN		1	STEEL	HARDENED
17	GEAR BOX		1	C.1/M.S.	BSEN 1561 Gr.200/ IS 2062 Gr.
18	HANDWHEEL		1	C.I/M.S./M.1	BSEN 1561 Gr.200/ IS 2062 Gr. B/ IS 2108 Gr. BM 290

NOTE: 1.The above data is subject to change without notice due to our continuing product improvement program.

2.Valves Can be supplied in other MOC's on request Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON BUTTERFLY VALVE-CL 125	40mm TO 400mm	CI-029/CI-030	Insertion between Flanges as per ASME B16.1

DIMENSION DATA												
VALVE SIZE	40MM	50MM	65MM	80MM	100MM	125MM	150MM	200MM	250MM	300MM	350MM	400MM
~A	260	260	260	260	260	260	260	356	406	406	-	-
~B	120	133	150	153	210	200	237	235	290	330	-	-
~C	64	75	96	100	120	140	147	178	214	260	281	315
E	33 ±1	43 ±1	46 ±1	46 ±1	52 ±1	56 ±1	56 ±1	60 ±2	68 ±2	78 ±2	92 ±2	102 ±2
F ϕ	15.8	19	19	19	19	22.3	22.3	22.3	25.4	25.4	28.6	28.6
G(PCD)	98.5	120.6	139.7	152.4	190.5	215.9	241.3	298.4	361.9	431.8	476.2	539.8
~I	-	-	-	-	-	-	240	240	290	330	340	412
J ϕ	-	-	-	-	-	-	200	200	250	250	300	500
N	4	4	4	4	8	8	8	8	12	12	12	12

ITEM	SIZES	TEST PRESSURES		TESTING STANDARD
		BODY	SEAT	
CAST IRON BUTTERFLY VALVE CL-125 WAFFER TYPE WITH LUGS	40mm to 400mm	20.7 Bar g (HYD)	15.18 Bar g (HYD)	BSEN 12266

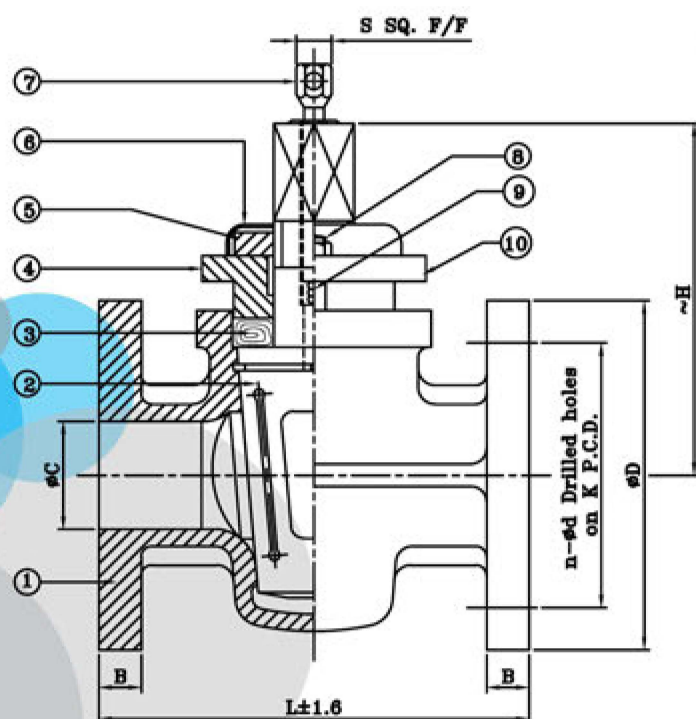
NOTE: 1. The above data is subject to change without notice due to our continual product improvement program.
2. Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



CAST IRON LUBRICATED TAPER PLUG COCK PN-16

SPECIFICATIONS:

REGULAR PATTERN, TOP ENTRY,
PRESSURISED LUBRICANT, WITHOUT
WRENCH FLANGES AS PER
B.S. 4504. PN 16



(Figure for size: 15mm to 50mm)

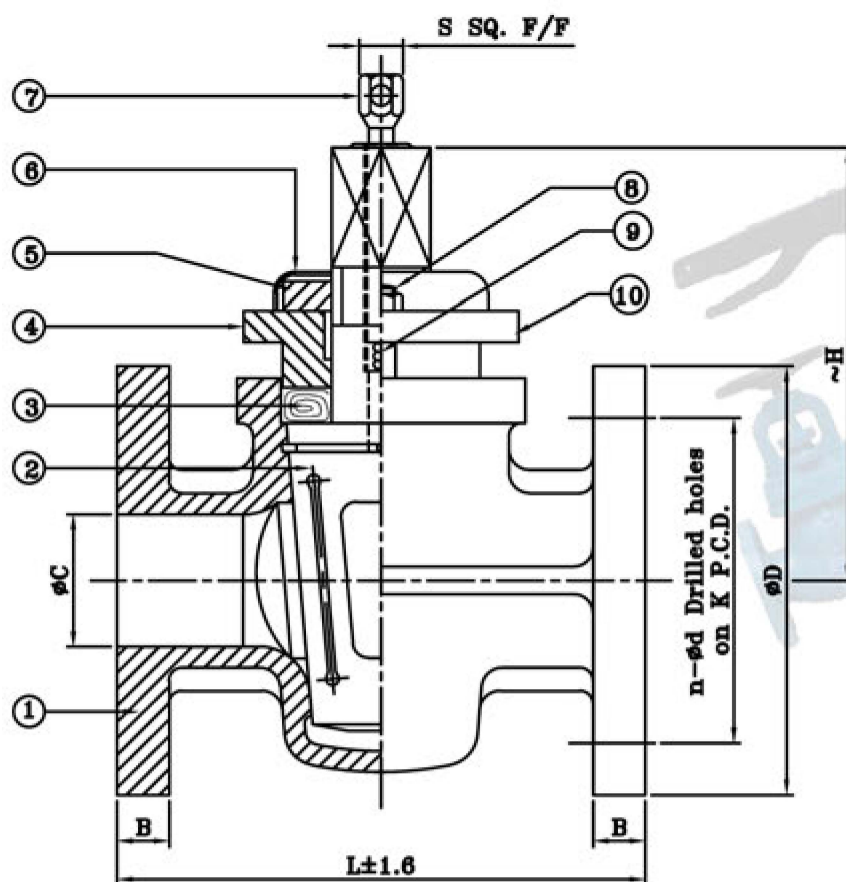


STANDARD MATERIAL COMBINATION

P.N.	NAME OF PART	NO. OFF	MATERIAL	SPECIFICATION
1	BODY	1	C.I.	BSEN 1561 Gr.200
2	PLUG	1	C.I.	BSEN 1561 Gr.200
3	GLAND PACKING	-	GRAPHOIL	
4	GLAND	1	C.S.	IS 2062 Gr. A
5	QUARTER STOP	1	CARBON STEEL	--
6	DUST COVER	1	RUST PROOF STEEL	
7	LUBRICANT SCREW	1	CARBON STEEL	--
8	GLAND STUDS & NUTS	TO SUIT	CARBON STEEL	BS 916
9	BALL CHECK VALVE	1	CARBON STEEL	--
10	STUFFING BOX	1	C.I.	BSEN 1561 Gr.200
11	STUDS & NUTS	TO SUIT	CARBON STEEL	BS 916
12	LUBRICANT	1	TO SUIT SERVICE CONDITIONS	

NOTE: 1. The above data is subject to change without notice due to our continual product improvement program.

2. Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



(Figure for size: 15mm to 50mm)

ITEM	SIZE	ITEM CODE	END DETAILS
CAST IRON LUBRICATED TAPER PLUG PN-16	15mm TO 50mm	CI-025	FLANGE ENDS AS PER B.S. 4504

DIMENSION DATA						
VALVES SIZE (MM)	15MM	20MM	25MM	32MM	40MM	50MM
L	121	121	140	152	165	203
~H	83	83	95	129	129	160
S	14.2	14.2	19	27	27	38.1
C	12.7	19	25	32	38	51
D	95	105	115	140	150	165
B	14	16	16	18	18	20
K	65	75	85	100	110	125
n	4	4	4	4	4	4
d	14	14	14	19	19	19

ITEM	SIZES	TEST PRESSURES		TESTING STANDARD
		BODY	SEAT	
C.I. LUBRICATED TAPER PLUG COCK PN-16	15mm to 50mm	24 BAR (Hyd.)	17.6 BAR (Hyd.)	Manufacturer

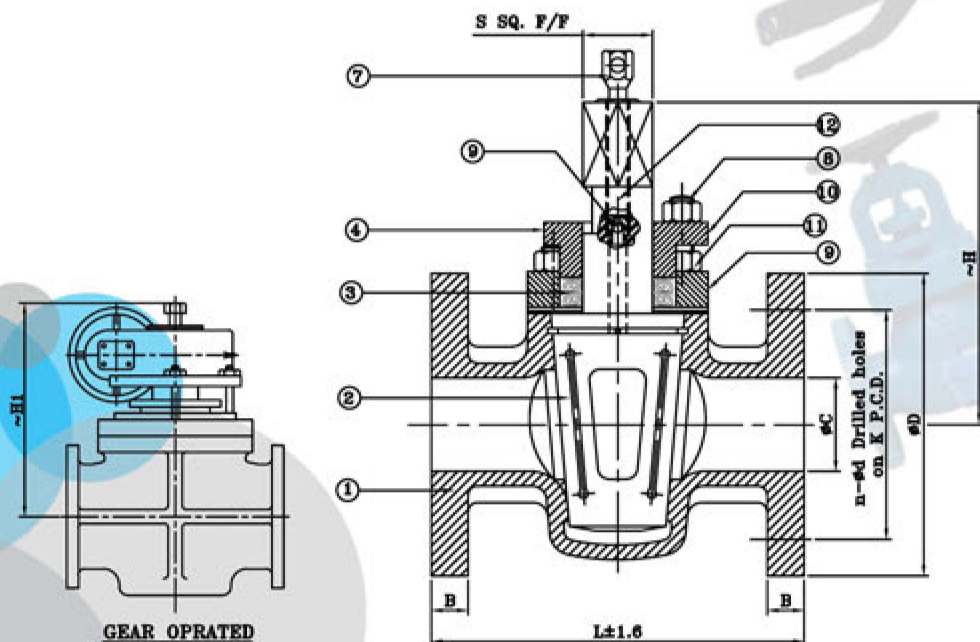
NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



CAST IRON LUBRICATED TAPER PLUG COCK PN-16

SPECIFICATIONS:

REGULAR PATTERN, TOP ENTRY,
PRESSURISED LUBRICANT, WITHOUT
WRENCH FLANGES AS PER
B.S. 4504. PN 16



(Figure for size: 65mm to 200mm)

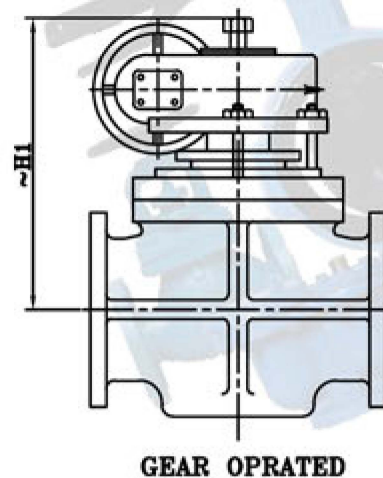
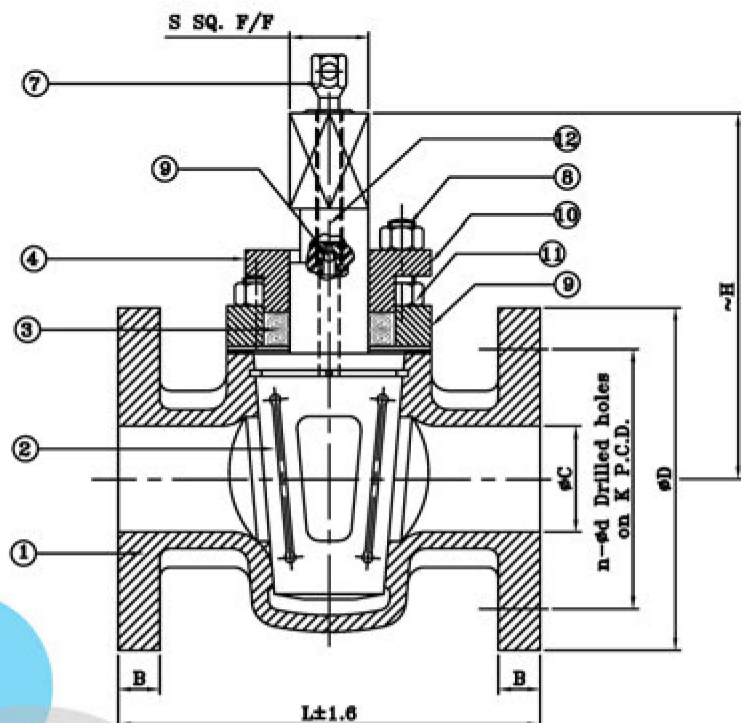


STANDARD MATERIAL COMBINATION

P.N.	NAME OF PART	NO. OFF	MATERIAL	SPECIFICATION
1	BODY	1	C.I.	BSEN 1561 Gr.200
2	PLUG	1	C.I.	BSEN 1561 Gr.200
3	GLAND PACKING	-	GRAPHOIL	
4	GLAND	1	C.S.	IS 2062 Gr. A
5	QUARTER STOP	1	CARBON STEEL	--
6	DUST COVER	1	RUST PROOF STEEL	
7	LUBRICANT SCREW	1	CARBON STEEL	--
8	GLAND STUDS & NUTS	TO SUIT	CARBON STEEL	BS 916
9	BALL CHECK VALVE	1	CARBON STEEL	--
10	STUFFING BOX	1	C.I.	BSEN 1561 Gr.200
11	STUDS & NUTS	TO SUIT	CARBON STEEL	BS 916
12	LUBRICANT	1	TO SUIT SERVICE CONDITIONS	

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



GEAR OPERATED

(Figure for size: 65mm to 200mm)

ITEM	SIZE	ITEM CODE	END DETAILS
CAST IRON LUBRICATED TAPER PLUG PN-16	65mm TO 200mm	CI-025	FLANGE ENDS AS PER B.S. 4504

DIMENSION DATA

VALVES SIZE (MM)	65MM	80MM	100MM	125MM	150MM	200MM
L	222	241	305	356	394	457
~H	197	227	254	297	325	398
H1	--	--	--	470	490	570
S	38.1	41.3	47.6	50.8	50.8	58.7
C	63.5	76	101.5	127	152	203
D	185	200	220	250	285	340
B	20	22	24	26	26	30
K	145	160	180	210	240	295
n	4	8	8	8	8	12
d	19	19	19	19	23	23

ITEM	SIZES	TEST PRESSURES		TESTING STANDARD
		BODY	SEAT	
C.I. LUBRICATED TAPER PLUG COCK PN-16	65mm to 200mm	24 BAR (Hyd.)	17.6 BAR (Hyd.)	Manufacturer

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



CAST IRON FLOAT VALVE (EQUILIBRIUM) CL-125

SPECIFICATIONS:

RUBBER SEATED, DOUBLE
BEAT TYPE, G.M. WORKING
PARTS, FLANGES AS
PER ANSI B:16.1, CL-125 (FF)

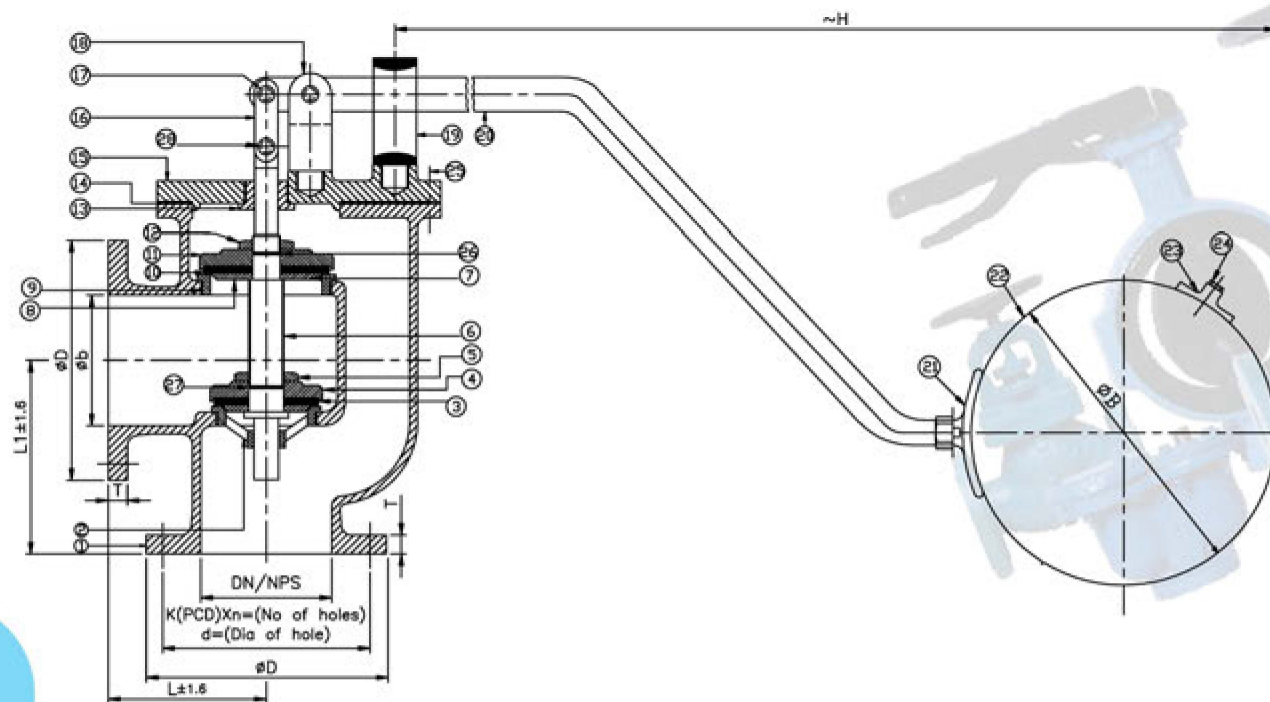


STANDARD MATERIAL COMBINATION

P.N.	NAME OF PART	No. Off	MATERIAL	SPECIFICATION
1	BODY	1	C.I.	IS 210 FG200
2	LOWER SEAT RING	1	G.M.	BSEN EN 1982 GrCC491K
3	LOWER RUBBER DISC	1	RUBBER	BS 3457 CL 6
4	LOWER DISC HOLDER	1	C.I.	IS 210 FG200
5	LOWER DISC NUT	1	G.M.	BSEN EN 1982 GrCC491K
6	STEM	2	BRASS ROD	B.S.2872 or BS 2874 CZ114
7	ADJUSTING NUT	1	G.M.	BSEN EN 1982 GrCC491K
8	UPPER DISC RETAINER	1	G.M.	BSEN EN 1982 GrCC491K
9	UPPER SEAT RING	1	G.M.	BSEN EN 1982 GrCC491K
10	UPPER RUBBER DISC	1	RUBBER	BS 3457 CL 6
11	UPPER DISC HOLDER	1	C.I.	IS 210 FG200
12	UPPER DISC NUT	1	G.M.	BSEN EN 1982 GrCC491K
13	BACK SEAT BUSH	1	G.M.	BSEN EN 1982 GrCC491K
14	GASKET	1	C.N.A.F.	BS 1832
15	COVER	1	C.I.	IS 210 FG200
16	THRUST LINK	1	G.M.	BSEN EN 1982 GrCC491K
17	THRUST PIN	2	BRASS ROD	B.S.2872 or BS 2874 CZ114
18	FULCRUM FORK	1	C.I.	IS 210 FG200
19	LEVER GUIDE	1	C.I.	IS 210 FG200
20	LEVER	1	CARBON STEEL	IS 2062 Gr.B
21	BALL CAP	1	G.M.	BSEN EN 1982 GrCC491K
22	BALL	1	COPPER	
23	ADJUSTING NUT	1	G.M.	BSEN 1982 GrCC491K
24	PLUG	1	G.M.	BSEN 1982 GrCC491K
25	BOLTS	4 each	CARBON STEEL	IS 2062
26	O-RINGS	1	EPDM	SHORE HARDNESS 65+-4
27	O-RINGS	1	EPDM	SHORE HARDNESS 65+-4
28	CONNECTING PIN	1	BRASS ROD	B.S.2872 OR BS 2874 CZ114

NOTE: 1. The above data is subject to change without notice due to our continual product improvement program.

2. Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON EQUILIBRIUM FLOAT VALVE-CL 125	40mm TO 250mm	CI-052	FLANGE AS PER ASME B16.1, CL-125

DIMENSION DATA									
VALVE SIZE	40MM	50MM	65MM	80MM	100MM	125MM	150MM	200MM	250MM
L	100	108	114	133	140	152	184	235	270
L1	95	108	114	133	190.5	200	225	260	286.6
~H	795	976	989	989	1420	1243	1268	1393	2350
D	127	152.5	178	190.5	229	254	279.5	343	406.4
T	14.2	15.8	17.5	19.1	24	24	25.4	28.5	30.2
K	98.5	120.7	139.7	152.4	190.5	215.9	241.3	298.5	361.9
n	4	4	4	4	8	8	8	8	12
d	15.7	19.1	19.1	19.1	19.1	22.3	22.3	22.3	25.4
B	300	300	300	355	457	457	457	457	680
THREAD	1/2"B.S.W.	1/2"B.S.W.	1/2"B.S.W.	1/2"B.S.W.	3/4"B.S.W.	3/4"B.S.W.	3/4"B.S.P.	1"B.S.P.	1-1/2"B.S.W.

ITEM	SIZES	TEST PRESSURES		TESTING STANDARD
		BODY	SEAT	
CAST IRON EQUILIBRIUM FLOAT VALVE CL-125	40mm to 250mm	20.7 BAR (HYD.)	13.5 BAR (HYD.)	MANUFACTURER

NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.
2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)

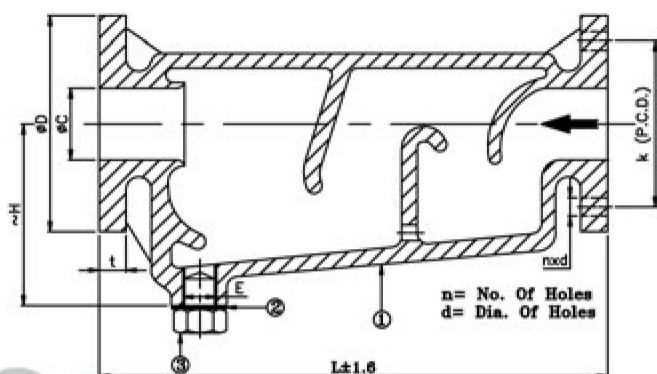


CAST IRON MOISTURE SEPARATOR PN-10

SPECIFICATIONS:

BAFFLE TYPE, FLANGED ENDS

FLANGES AS PER BS 4504 PN-10



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON MOISTURE SEPARATOR PN-10	25mm TO 100mm	CI-036	FLANGE AS PER BS 4504, PN 10

STANDARD MATERIAL COMBINATION

	NAME OF PART	No. Off	MATERIAL	SPECIFICATION
1	BODY	1	C.I.	IS 210 FG260
2	GAGSKET	1	C.N.A.F.	BS 1832
3	PLUG	1	G.M.	BSEN 1982 CC49 1K

DIMENSION DATA

NOMINAL SIZE	25MM	40MM	50MM	65MM	80MM	100MM
L	275	370	466	485	485	692
~H	78	113	146	172	175	238
C	25	38	50	65	76	100
E	1/2" B.S.P.	1/2" B.S.P.	1/2" B.S.P.	1/2" B.S.P.	1" B.S.P.	1" B.S.P.
D	115	150	165	185	200	220
T	16	18	20	20	22	24
K	85	110	125	145	160	180
N	4	4	4	4	8	8
d	14	19	19	19	19	19

ITEM	SIZES	TEST PRESSURES	TESTING STANDARD
		BODY	
CAST IRON MOISTURE SEPARATOR PN-10	25mm to 100mm	22 Bar (HYD)	Manufacturer

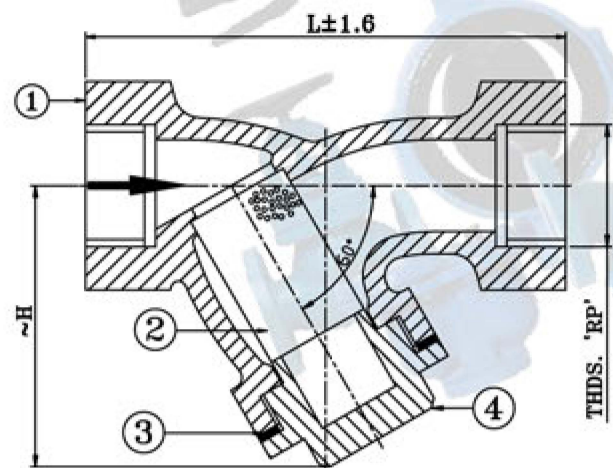
NOTE: 1. The above data is subject to change without notice due to our continual product improvement program.

2. Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)

CAST IRON 'Y' TYPE STRAINER SCREWED FEMALE ENDS

SPECIFICATIONS:

SS (TYPE 304) SCREEN HAVING
1MM DIA PERFORATIONS



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON 'Y' TYPE STRAINER	15mm TO 50mm	CI-0092	SCREWED FEMALE ENDS

STANDARD MATERIAL COMBINATION

SR. NO.	NAME OF PARTS	NO. OFF	MATERIAL	SPECIFICATION/STANDARD
1.	BODY	1	C.I.	BSEN 1561 Gr. GJL200
2.	SCREEN	1	S.S.	TYPE 304 1MMØ PERFORATION
3.	GASKET	1	CNAF	-
4.	COVER	1	C.I.	BSEN 1561 Gr. GJL200

DIMENSION DATA

NOMINAL SIZE	15MM	20MM	25MM	32MM	40MM	50MM
~L±1.6	100	125	145	145	180	200
~H	69	70	76	106.5	122	162
"Rp"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"

ITEM	SIZES	TEST PRESSURES	TESTING STANDARD
		BODY	
CAST IRON 'Y' TYPE STRAINER	15mm to 50mm	26 Bar (Hyd)	Manufacturer

NOTE: 1. The above data is subject to change without notice due to our continual product improvement program.
2. Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)

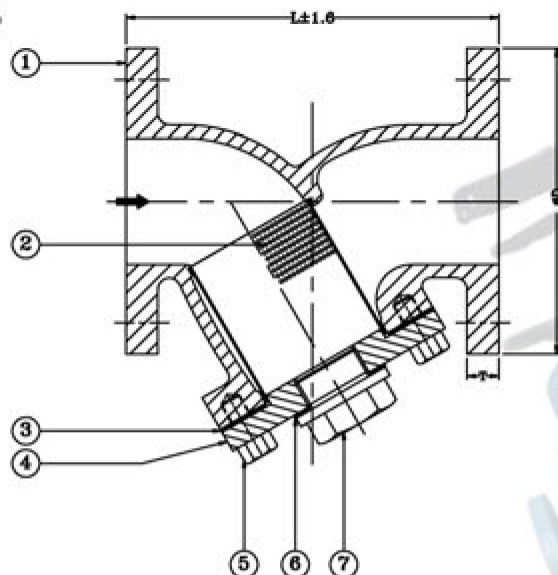


TECHNICAL & DIMENSIONAL DATA

CAST IRON 'Y' TYPE STRAINER FLANGE ENDS

SPECIFICATIONS:

SS (TYPE 304) SCREEN HAVING
1MM DIA PERFORATIONS,
FLANGES AS PER BS: 10
TABLE 'E' (FF)



ITEM	SIZES	ITEM CODE	END DETAILS
CAST IRON 'Y' TYPE STRAINER FLANGED ENDS	40mm TO 300mm	CI-0093	FLANGED ENDS AS PER BS 10 TABLE 'E' (FF)

STANDARD MATERIAL COMBINATION

SR. NO.	NAME OF PARTS	NO. OFF	MATERIAL	SPECIFICATION/STANDARD
1.	BODY	1	C.I.	BSEN 1561 Gr. GJL200
2.	SCREEN	1	S.S.	TYPE 304
3.	GASKET	1	C.N.A.F.	IS 2712 Gr. C
4.	COVER	1	C.I.	BSEN 1561 Gr. GJL200
5.	BOLTS	TO SUIT	CARBON STEEL	BS 4190
6.	GASKET	1	C.N.A.F.	--
7.	DRAIN PLUG	1	C.I.	BSEN 1561 Gr. GJL200

DIMENSION DATA

NOMINAL SIZE	40MM	50MM	65MM	80MM	100MM	125MM	150MM	200MM	250MM	300MM
FACE TO FACE (L)	190	190	200	263	294	360	378	430	510	593
FLANGE THICKNESS (T)	15.8	19.1	19.1	19.1	22.2	22.2	22.2	25.4	25.4	28.6
FLANGE DIAMETER (øD)	133.5	152.4	165.1	184.1	216	254	279.4	336.5	406.4	457.2

ITEM	SIZES	TEST PRESSURES	TESTING STANDARD
		BODY	
CAST IRON 'Y' TYPE STRAINER FLANGED ENDS	40mm to 300mm	18 kg/cm ² (Hyd.)	Manufacturer

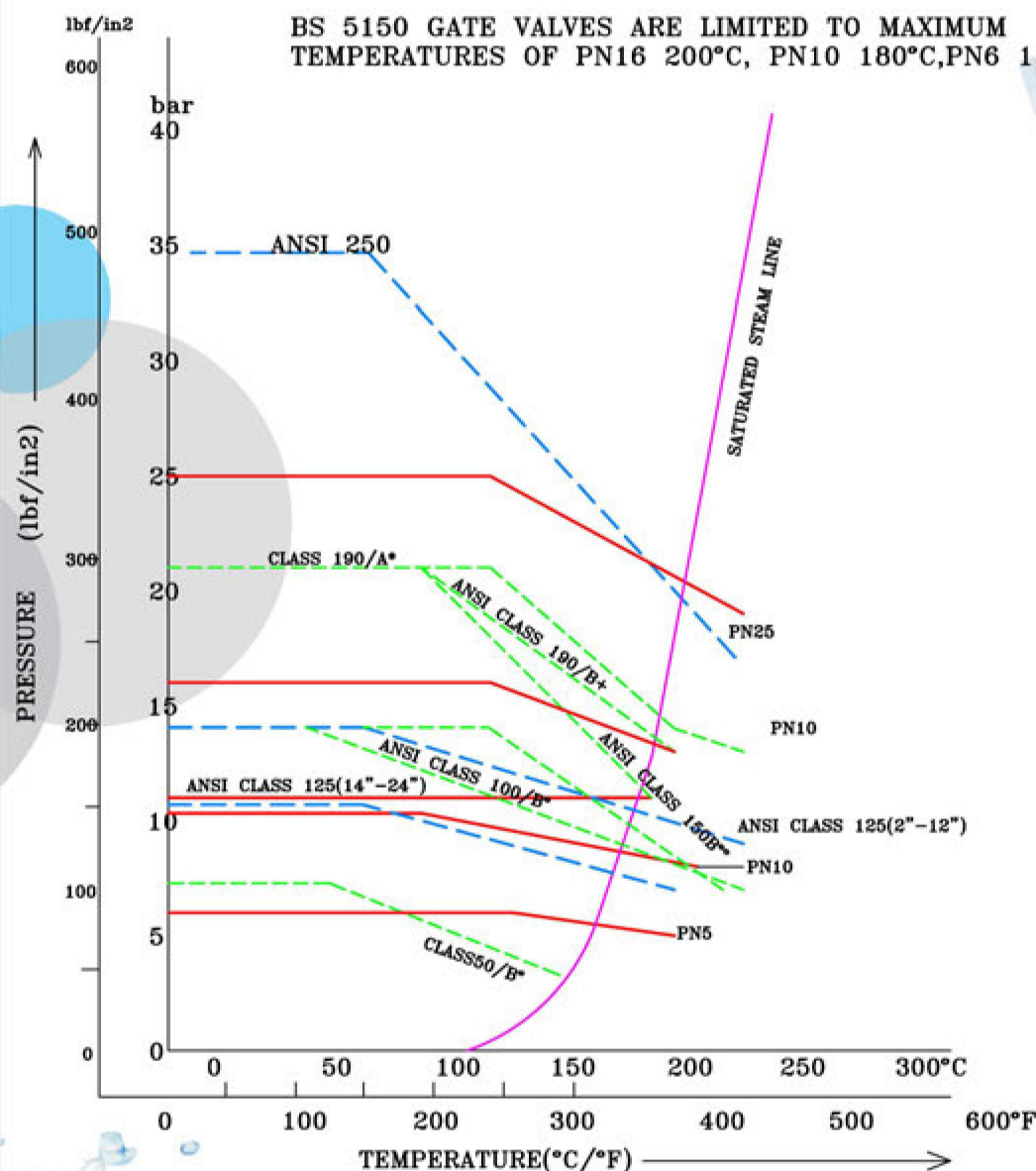
NOTE: 1.The above data is subject to change without notice due to our continual product improvement program.

2.Valves Can be supplied in other MOC's on request, Cast Iron (IS 210 Gr. FG 260) Ductile Iron (ASTMA 395 Gr. 60-40-18 / 65-45-15 / GGG 40.30) & D2 (ASTMA 439 Gr. D2/ D2A/ D2B/ D2C)

PRESSURE TEMPERATURE RATINGS FOR C.I VALVES

- BS 5120, BS5152 AND BS 5153 CAST IRON, GATE, GLOBE AND CHECK VALVES
- - - BS 3464, BS3961 AND BS 4090 CAST IRON, GATE, GLOBE AND CHECK VALVES
- - - MSS SP-70, SP-71 AND SP-85 CAST IRON, GATE, GLOBE AND CHECK VALVES
- /A SERIES A RATINGS.
- /B SERIES B RATINGS.
- * BS 3961 AND BS 4090 (SIZE 12 AND BELOW).
- + BS 3464 (SIZES 12 AND BELOW).
- * BS 3464 AND 3961.

BS 5150 GATE VALVES ARE LIMITED TO MAXIMUM TEMPERATURES OF PN16 200°C, PN10 180°C, PN6 150°C.





TECHNICAL & DIMENSIONAL DATA

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						
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	Note 1
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	Note 1
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	Note 1
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	Viscosity Prime Factor
Alkyl Benzene	C ₂ H ₅ -C ₆ H ₅			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	Note 1
Ammonia (Anh.)	NH ₃	0.77	0.25	B	D	B	B	A	A	A	A	B	A	D	A	A	A	A	A	Note 1
Ammonia Solutions	NH ₄		@ -33°F	B	D	B	B	A	A	A	A	B	A	D	A	A	A	A	A	Note 1
Ammonium Carbonate	NH ₄ HCO ₃			B	D	B	B	B	B	B	B	A	A	A	A	A	A	A	A	Note 1
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	A
AmmoniumHydroxide (28%)	NH ₄ OH	0.900		C	D	B	B	B	B	B	B	C	A	D	A	A	A	A	A	Note 1
AmmoniumHydroxide (34%)	NH ₄ OH	0.882		C	D	B	B	B	B	B	B	D	A	D	A	A	A	A	A	Note 1
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	Note 1
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	Note 1
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	Note 1
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	A
Asphalt @ 450°F	Bitumens		2,000 SSU	C	A	A	B	A	A	A	A	D	D	C	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	Note 1
Barium Hydroxide	Ba(OH) ₂	1.656		D	B	B	B	B	B	A	B	A	A	A	A	A	A	A	A	Note 1
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.

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 (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
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 ₆ H ₁₄ COC ₂ H ₅	0.819		A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Butyraldehyde	CH ₃ (CH ₂)CHO	0.804	0.43	A	A	A	A	A	A	A	A	D	B	D	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 OOH	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	B	A	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 ₄ H ₉ OC ₂ H ₄ OC ₂ H ₄ OH	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 ₂ H ₅	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	
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.

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TECHNICAL & DIMENSIONAL DATA

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

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
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	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		
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		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		
Chlorothene	CH ₃ CCl ₃	1.319 @ 25°C		A	A	A	A	A	A	A	A	D		A	A	B	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	A	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		
Coca Cola							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		Note 3
Codliver Oil		0.918	160 SSU	A	A	D	A	D	A	A	B	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		
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		
Cottonseed Oil		0.915-0.921	70.4	B	B	C	A	C	B	B	B	A	C	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		*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		
Crude Oil (Sour)	0.5-2.5% Sulfur			A	D	B	B	B	A	A	B	B	D	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		
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		
Cuprous Chloride	CuCl	3.35		D	D	D	D	D	D	D	D	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		
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		
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		
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		
Decyl Alcohol	C ₁₀ H ₂₁ OH	0.829		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		
Diammonium Phosphate	Ammonium Phosphate	1.61		B	D	D	D	D	A	A	B	A	A		A	A	A	A	A		
Diethylphthalate	(C ₂ H ₅) ₂ COO(C ₆ H ₄)	0.965		B	A	B	A	B	B	A	B	D	B	B	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		
Dichloroethyl Ether	C ₂ H ₄ ClOC ₂ H ₄ Cl	1.222	2.95	A	A	A	A	A	A	A	A	D	C	C	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		
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		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		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		
Diethylene Glycol	C ₄ H ₈			A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		Hygrosco-pic 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		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		
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		

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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
Diisobutyl Ketone	$C_8H_{16}COC_4H_9$	0.808		A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Dimethylamine	$(CH_3)_2NH$	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	B	
Dioxane	$C_4H_8O_2$	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	$(C_3H_7OH)_2O$	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_2H_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_3OCH_3	0.661	0.23	B	B	B	B	A	A	A	A	D	C	C	A	A	A	A	A	A	
Ethers	$(C_2H_5)_2O$	0.736	0.23	B	B	B	A	B	A	A	A	D	C	C	A	A	A	A	A	A	
Ethanol Amine	$HOCH_2CH_2NH_2$	1.017		A	D	B	A	B	A	B	B	B	B	D	A	A	A	A	A	A	Note 1
Ethyl Acetate	$CH_3COOC_2H_5$	0.883	0.45	A	C	C	A	B	B	B	B	D	B	D	A	A	A	A	A	A	
Ethyl Acrylate	$CH_3CHCOOC_2H_5$	0.92		A	A	A	A	A	A	A	A	D	B	D	A	A	A	A	A	A	
Ethyl Amine	$CH_3CH_2NH_2$	0.689		A	D	B	A	B	A	B	B	B	B	D	A	A	A	A	A	A	Note 1
Ethyl Aniline	$C_2H_5NHC_6H_5$	0.963	2.04	B	D	A	A	A	B	B	B	D	A	D	A	A	A	A	A	A	
Ethyl Benzene	$C_6H_5C_2H_5$	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_2H_5Cl	0.921		B	B	B	B	B	A	A	A	A	A	A	A	A	A	A	D	A	Note 2
Ethyl Chloride (Wet)	C_2H_5Cl	0.921		D	C	D	C	D	C	C	D	A	A	A	A	A	A	A	D	A	Note 2
Ethyl Ether	$(C_2H_5)_2O$	0.714	0.23	B	B	B	B	A	A	A	A	D	C	C	A	A	A	A	A	A	
Ethyl Hexanol	$CH_3CH_2CH_2COH(C_2H_5)_2$	0.83		B	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Ethyl Lactate	$CH_3CHOHCOOC_2H_5$	0.1020		B	B	B	B	B	B	B	B	A		A	A	A	A	A	A	A	
Ethyl Mercaptan	C_2H_5SH	0.839		B	D	A	B	D	B	B	B	D	D	A	A	A	A	A	A	A	Note 1
Ethyl Propyl Myristate	$CH_3(CH_2)_{12}COOC_2H_5$			A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Ethyl Propyl Palmitate	$C_2Hg(CH_2)_{14}COOC_2H_5$	0.83		A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	
Ethylene Chlorohydrin	$ClCH_2CH_2OH$	1.204	3.4	D	B	B	B	B	B	B	B	D	B	A	A	A	A	A	A	A	
Ethylene Cyanohydrin	$HOCH_2CH_2CN$	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_2ClCH_2Cl	1.25	0.83	D	B	D	B	D	A	A	B	C	C	A	A	A	A	A	D	A	Anhydrous
Ethylene Glycol	$(CH_2OH)_2$	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_2OOCCH_3						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_2CCH_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)	$C_2H_5OC_4H_9$			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	$Fe_2(SO_4)_3 \cdot 9H_2O$	2.0-2.1		D	D	D	D	D	B	A	B	A	A	A	A	A	A	A	A	A	
Ferrous Chloride	$FeCl_2 \cdot 4H_2O$	1.93		D	D	D	D	D	D	D	D	A	A	A	A	A	D	A	B	A	
Ferrous Sulphate	$FeSO_4 \cdot 7H_2O$	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 Con- centration
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_4H_3OCHO	1.15	1.49	B	B	B	B	B	B	B	B	D	B	D	A	A	A	A	A	A	
Fertilizer Solutions	NH_4NO_3 Phosphate KC_2NH_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_3F			B	B	B	A	B	A	A	A	B	D	B	A	A	A	D	A	B	

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TECHNICAL & DIMENSIONAL DATA

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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	$C_6H_2(OH)_3CO_2H$	1.69		B	C	D	B	D	B	B	B	B	B	A	A	A	A	A	A	A	
Gasoline	$C_6H_{14}-C_{10}H_2$	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	$CH_2OH(CHON)_4COOH$			B	B	B	B	A	B	B	B	A		A	A		A	A	A	A	
Glycerol (Glycerine)	$C_3H_5(OH)_3$	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	OHCCCHO	1.26		B	B	B	A	B	A	A	A	A	A	A	A	A	A	A	A	A	
Gypsum	$CaSO_4 \cdot 2H_2O$	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	Ethanedilol	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_7H_{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_6H_{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	$C_6H_{13}OH$	0.818		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Hexylene Glycol	$C_6H_{12}(OH)_2$	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	A	D	A	A	A	A		A	A	A	
Hydroidic 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_2O_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_2O_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_2S	1.185		A	D	B	D	D	A	A	B	A	A	D	A	A	A	A	A	A	
Hydrogen Sulfide (Aq.)	H_2S	1.185		A	D	B	D	D	A	A	B	D	A	D	A	A	A	A	A	A	
Iron Potassium Sulfate	$FeK(SO_4)_2 \cdot 12H_2O$	1.80		A	B	D	B	D	B	B	B	A	A	A	A		A	A	A	A	
Iso-Butane	$(CH_3)_2CHCH_3$	0.564		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	Note 2
Iso-Butanol	$(CH_3)_2CHCH_2OH$	0.806	4.0	A	B	B	A	B	A	A	A	B	A	A	A	A	A	A	A	A	
Iso-Butylamine	$(CH_3)_2CHCH_2NH_2$	0.731	0.55	A	D	B	A	B	A	A		C	D	D	A	A	A	A	A	A	
Isobutyl Acetate	$C_4H_{10}O_2$	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	$C_6H_{13}OH$	0.818		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Iso-Octane	C_8H_{18}	0.691		A	A	B	A	A	A	A	A	A	D	A	A	A	A	A	A	A	Note 2
Iso-Pentane	$(CH_3)_2CHCH_2CH_3$	0.619	0.22	A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	
Iso-Propanol	C_3H_7OH	0.786	2.10	A	A	B	A	B	A	B	B	A	A	A	A	A	A	A	A	A	
Iso-Propyl Acetate	$CH_3COOCH(CH_3)_2$	0.869	0.49	A	C	C	A	B	B	B	B	D	B	D	A	A	A	A	A	A	
Iso-Propyl Ether	$(CH_3)_2CHOCH(CH_3)_2$	0.723	0.32	A	A	B	A	A	A	A	A	B	D	D	A	A	A	A	A	A	
Iso-Propyl Amine	$C_3H_7NH_2$	0.688		A	D	B	A	B	A	B	B		A		A	A	A	A	A	A	
Iso-Phorone	$C_8H_{14}O$	0.922	2.62	A	A	A	A	A	A	A	A	D	A	D	A	A	A	A	A	A	

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 (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
Iso-Valeric Acid	C ₅ H ₉ OOH	0.931											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 ₉ 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	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 ₁₈ H ₃₂ (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 ₁₈ H ₃₀ CH ₂) ₇ COOH	0.916		A	B	B	C	B	A	A	B	B	D	B	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	B	A	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
Malze 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	Titanium
Mesityl Oxide (Ketone)	(CH ₃) ₂ C ₆ 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 ₅ H ₉ 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 ₈ H ₁₈ OH	0.807		A	B	B	A	B	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 OCH ₂ 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 ₅ 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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TECHNICAL & DIMENSIONAL DATA

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

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
Methyl Teritary Butyl Ether (MTBE)	CH ₃ OC ₄ H ₉	0.74	.35	A	A	A	A	A	A	A	A	A	D	D	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	
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
Neatsfoot 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%)	NI SO 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	B	A	D	A	D	A	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		
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	

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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
Paraffin		0.83-0.93		A	A	B	A	B	A	A	A	A	B	A	A	A	A	A	A	A	
Para-tert-Amyl Phenol	$(CH_3)_2C_2H_5CC_6H_4OH$	0.955		A	A	B	A	B	A	A	A	D	A	A	A	A	A	B	B	A	
Para-tert-Butyl Phenol	$(CH_3)_3CC_6H_4OH$	1.03		D	D	A	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	A	
Parathion	$C_{10}H_{14}NO_5PS$						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	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	A	Note 3
Pentane	C_5H_{12}	0.626		A	B	B	A	B	B	B	B	A	D	A	A	A	A	A	A	A	
Perchloroethylene	C_2Cl_4	1.65	0.84	B	C	B	A	A	A	A	A	B	D	A	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	A	
Petroleum Ether	Ligroin	0.665		A	A	A	A	A	A	A	A	A	D	A	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	A	
Phenolic Resins				A	C	C	A	C	A	A	A	A	B	A	A	A	A	A	A	A	
Phenol (20%)	C_6H_5OH	1.07	12.7	A	A	B	A	B	A	A	B	D	A	A	A	A	A	D	A	A	Use SS to Prevent Product Discoloration
Phosphoric Acid (10%)	H_3PO_4	1.053		D	D	D	D	D	B	B	B	D	D	A	A	A	A	A	A	A	
Phosphoric Acid (25%)	H_3PO_4	1.152		D	D	D	D	D	B	B	D	D	D	A	A	A	A	A	A	A	Most Concentrations Use Hastelloy, Alloy 20
Phosphoric Acid (75%)	H_3PO_4	1.579		D	D	D	D	D	D	B	D	D	D	A	A	A	A	A	A	A	
Phthalic Acid	$C_6H_4(COOH)_2$	1.58		B	B	C	C	D	B	B	B	C	C	A	A		A	A	A	A	
Phthalic Anhydride	$C_6H_4(CO)_2O$	1.527		B	B	C	B	D	B	B	B	C	C	A	A	A	A	A	A	A	
Picric Acid	$C_6H_3(NO_3)_3OH$	1.76		C	D		C		A	A		A	A	A	A	A	A	A	A	A	
Polyethylene Glycol	$H(OC_2H_4)_nOH$			A	B	B	A	B	B	B	B	A	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	A	
Polypropylene Glycol	$CH_3CHOH(CH_2OCHCH_2CH_3)_nCH_2OH$			A	B	B	A	B	B	B	B	A	A	A	A	A	A	A	A	A	
Polyvinyl Acetate	$(H_2C_2HOOC_2H_3)_n$	1.19		A	A	A	A	B	A	A	A		A		A		A	A	A	A	
Polyvinyl Acetate Emulsion	$PVAc+H_2O$			A	A	A	A	B	A	A	A		A		A	A	A	A	A	A	
Polyvinyl Alcohol	$(CH_2CHOH)_x$	1.98	2000.0	A	B	A	A	A	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	A	
Potassium Chloride	KCl	1.98		D	B	C	C	C	A	A	B	A	A	A	A	A	D	A	A	A	Note 1
Potassium Aluminum Sulfate	$AlK(SO_4)_2 \cdot 12H_2O$	1.75		B	B	C	C	C	A	A	B	A	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	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	A	Note 1
Potassium Hydroxide	KOH			D	D	D	B	D	A	A	A	B	A	D	A	A	A	A	A	A	Note 1
Potassium Sulfate	K_2SO_4	2.66		B	B	C	B	B	B	B	B	A	A	A	A	A	A	A	A	A	Note 1
Potassium Sulfide	K_2S	1.80		B	D	D	B	D	B	B	B	A	A	A	A	A	A	A	A	A	Note 1
Potash (Aq.)	K_2CO_3	2.33		C		A	B	A	A	A	B	A	A	A	A	A	A	A	A	A	Note 1
Propane	C_3H_8	0.531		A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	Note 2
Propionic Acid (20%)	$CH_3CH_2CO_2H$	0.994		B	B	D	C	D	B	B	D		A		A	A	A	A	A	A	
Propylene	C_3H_6	0.513		A	A	A	A	A	A	A	A	D	D	A	A	A	A	A	A	A	Note 2
Propylene Diamine	$C_2H_6(NH_2)_2$	0.873	1.70	B	B	B	A	B	A	A		D	D	D	A	A	A	A	A	A	
Propylene Glycol	$C_3H_8(OH)_2$	1.038	58.0	A	B	B	A	B	B	B	B	A	A	A	A	A	A	A	A	A	
Propylene Oxide	C_3H_6O	0.830		B	B	B	A	B	A	A	B	D	B	D	A	A	A	A	A	A	
Prussic Acid	HCN	0.697		A	D	B	C	A	B	B	B	B	A	A	A		A		A	A	
Pyridine	$N(CH_3)_4CH$	0.978		A	B	B	B	B	A	A	B	D	B	D	A	B	A	A	A	A	

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.



TECHNICAL & DIMENSIONAL DATA

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

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
Pyrogalllic Acid	C ₃ H ₃ (OH) ₃	1.463		B	B	D	C	D	B	B	B	B	B	A	A		A	A	A	A	
Pyrrolidine	C ₄ H ₉ N	0.866		B	B	B	A	B	A	A	B	D	A	D	A		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	
Shellac				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
Sodium 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. Plating - 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	
Sperm Oil		0.878	42.0				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.

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

A - Excellent B - Good C - Poor D - Not Recommended Blank Space - Insufficient Information			Typical (60°F)		E		Aluminu		Bronze		Cast Iron		Steel		Carbon		304SS-1		316 SS		440CSS		Buna-N		EPR		Viton		Teflon		Ryton		Carbon		Peek		y C-276		Hastello		Chemraz		Remarks		
Chemicals	Formula	Sp. Gr. (60°F)	Viscosity (CPS)																																										
Steam Condensate								A	A	A	A	A	A	A	A	A	A	D	A	C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	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	C	A	A	B	B	B		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	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	A	D	D	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	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	A	A	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	B	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	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	A	B	A													
Sulfur	S	2.06	10.94					A	D	A	B	A	A	A	A	B	D	D	C	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	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	D	B	D	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	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	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	D	D	A	A	A	D	D	D	A	A																		
Sulfuric Acid (93%)	H ₂ SO ₄	1.835	23.0					D	D	B	D	B	B	A	C	D	D	D	A	A	A	D	D	D	A	A																			
Sulfurized Oil								B	D	B	B	B	B	B	B	B	D	D	D	D	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A			
Tall Oil	Liquid Rosin							D	B	B	A	B	B	B	B	B	B	D	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	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	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	A	D	A	A	A	A	A	A	A	A	A	A	A	A	A	A	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	C	A	A	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	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	A	A	A	A	A	A	A	A	A	A	A	A	A				
Teritary Amyl Methyl Ether	C ₆ H ₁₁ OC ₄ H ₉							A	A	A	A	A	A	A	A	A	A	D	D	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A				
Tetrahydrofuran	C ₄ H ₈ O	0.880						A	A	A	A	A	A	A	A	A	D	A	D	A	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	A	A	A															
Tetrapropylene	C ₁₂ H ₂₄	0.770						A	A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	A	A	A	A	A	A														
Textile Spirits		0.689						A	A	A	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	A	A	A	A	A	A	A	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																												B Hygroscopic		
Toluene	C ₆ H ₅ CH ₃	0.866	0.59					A	A	A	A	A	A	A	A	A	A	D	D	A	A	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	A	D	A	B	A	A	A	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	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																						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	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	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	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	A	A	A	A															
Triethanol Amine	(HOCH ₂ CH ₂) ₃ N	1.12	500 SSJ					A	D	A	A	A	A	A	A	B	B	D	A	A	A	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	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	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	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	A	A	A																
Triton X-100	Surfactant		34.0					A	A	A	A	A	A	B	A					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	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	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	A	A	A																
Urea	CO(NH ₂) ₂	1.335						B	D	C	A	C	B	B	B	A	B			A	A	A	A	A	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	A																

Note 1: Avoid dissimilar metals.

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TECHNICAL & DIMENSIONAL DATA

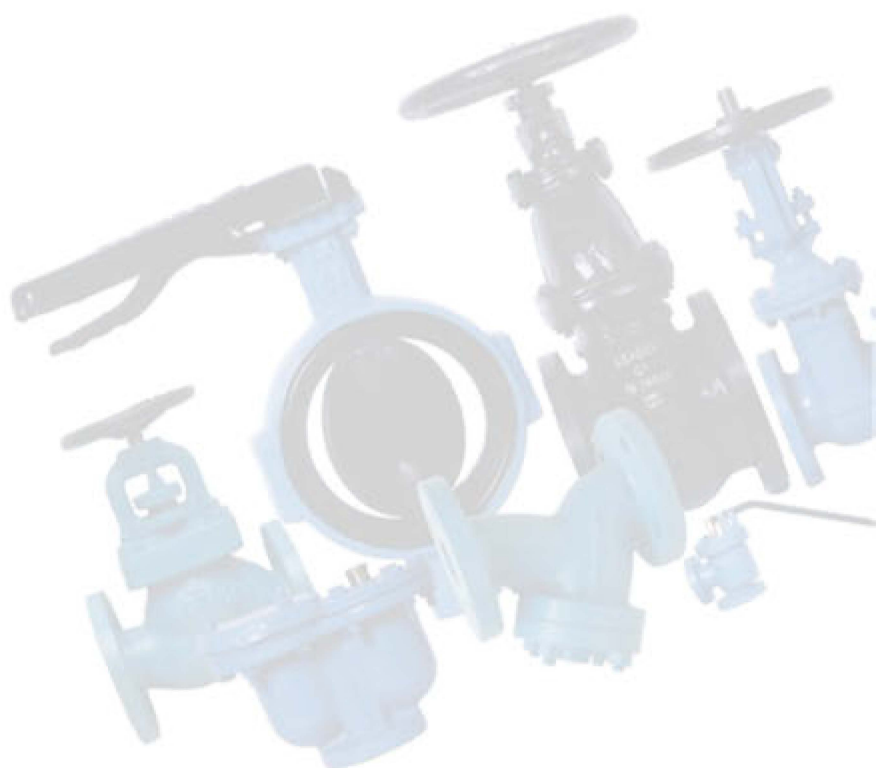
A - Excellent B - Good C - Poor
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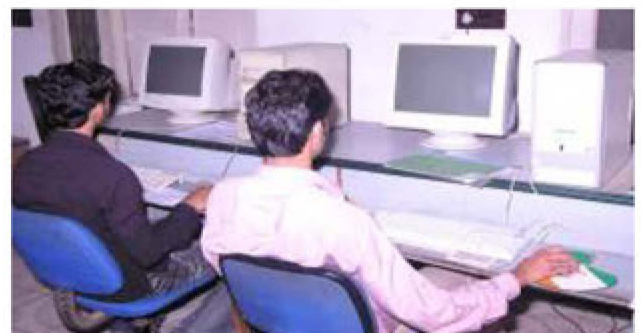
Chemicals	Formula	Sp. Gr. (60°F)	Typical (60°F) Viscosity (CPS)	Aluminum	Bronze	Cast Iron	Tungsten Carb.	Carbon Steel	304SS-17-4PhSS	316 SS	440CSS	Buna-N	EPR	Viton	Teflon	Ryton	Carbon	Peek	Hastelloy C-276	Chemraz	Remarks
Uran-Poly-N	Fertilizer			D	D	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	Note 1
Varnish	Spar	0.900	281.0	A	A	C	A	C	A	A	A	B	D	A	A	A	A	A	A	A	
Vegetable Oil				A	B	B	A	B	A	A	B	A	A	A	A	A	A	A	A	A	No Cad. Plating
Vinyl Acetate	$\text{CH}_3\text{COOCHCH}_2$	0.933		D	D	A	B	A	A	A	A		A	D	A	A	A	A	A	A	
Vinyl Chloride	CH_2CHCl	0.912		D	D	A	B	A	A	A	A			A	A	D	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	
Water (Distilled)	H_2O	1.00		A	A	D	B	D	A	A	A	A	A	D	A	A	A	A	A	A	
Water-Sea	H_2O	1.025		B	B	D	B	D	A	A	C	A	A	D	A	A	A	A	A	A	Note 1
Water-Fresh	H_2O	1.00		A	A	C	B	C	A	A	A	A	A	D	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	SS Preferred
Xylene	$\text{C}_6\text{H}_4(\text{CH}_3)_2$	0.868	0.620	A	A	A	A	A	A	A	A	D	D	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	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	
Zinc Chloride	ZnCl_2	2.91		D	D	C	D	D	D	D	D	A	A	A	A	A	A	A	A	A	

Note 1: Avoid dissimilar metals.

Note 2: For rotary meters recommend LPG trim.

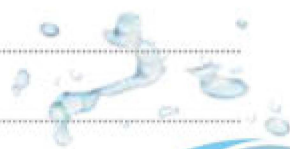
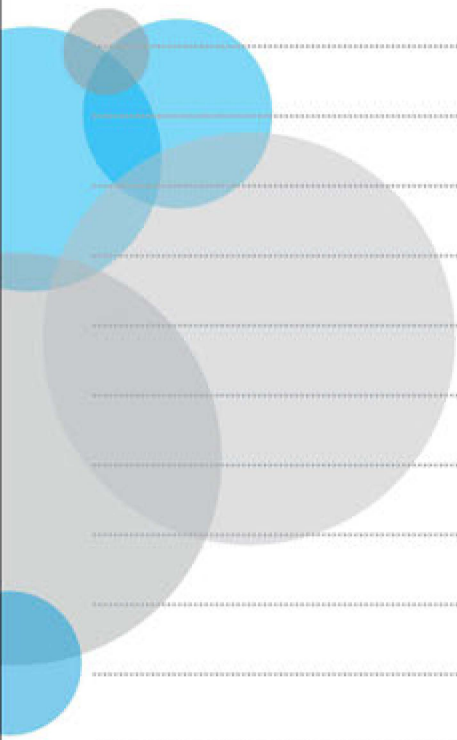
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Dealers:-



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