



7th
EDITION
2016



**GATES
& VALVES
PRODUCTS**

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Kejriwal - A name synonymous with Ductile Iron / Cast Iron Pressure Pipes, Fittings & Valves in India. An endeavour which began in late fifties and has continued on its path of growth by sheer will to excel, and remain your first choice.

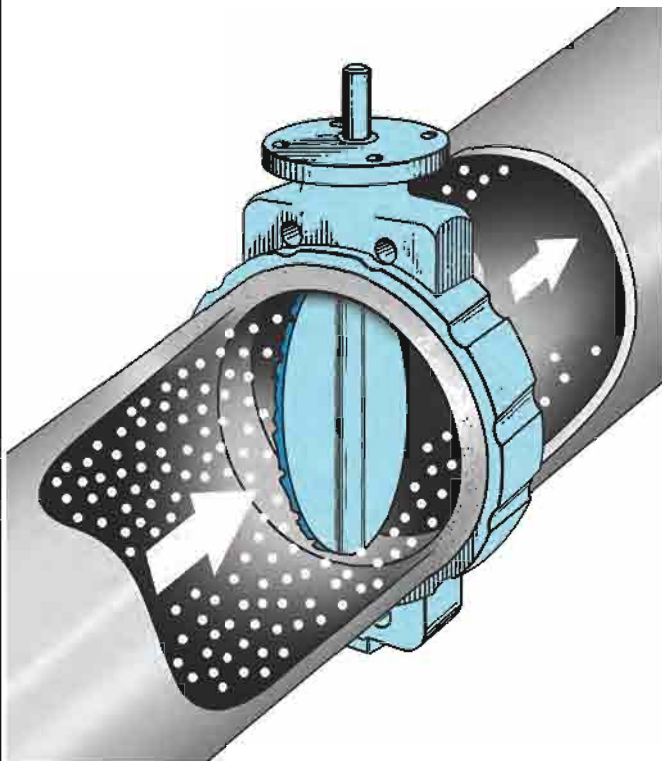
On this never ending journey towards excellence - every year the milestone is moved a bit further - being customer focused & ensuring their satisfaction is the driving force for us. We aim to achieve this through being innovative and competitive in the constant development of our product range, manufacturing process, embracing new technologies, services and through the undying efforts of all people representing Kejriwal.

Kejriwal's corporate office is in Kolkata, a throbbing city, supported by representations in all major cities spread all over India and in the Middle East.

Kejriwal offers the widest range of pipe fittings, its almost entire range being backed by recognition from Bureau of Indian Standards granting ISI mark license. Its quality system has been approved by British Standards Institution and in recognition it has conferred ISO 9001 accreditation to the organisation.

This brochure, being the 7th edition, list the details of our product range in Gates & Valves with dimensions and mass. We have tried to incorporate maximum details relevant to the current trends in the industry and the labour employed will be deemed to aptly rewarded if this brochure is found useful for your purpose.

We at Kejriwal are always eager to hear from you and suggestions from the reader will be most welcome.





Quality & Standards



ISI CERTIFICATE



NABL CERTIFICATE



Compliance Certificate





BIS Licenses

IS:9523  CML-5197373	DI PIPE FITTINGS
IS:8329  CML-5485379	DI WELDED/SCREWED FLANGED PIPES - CENTRIFUGALLY CAST
IS:14846  CML-5200538	DI / CI SLUICE VALVES
IS:5312  CML-5199983	DI / CI NON RETURN VALVES
IS:1538  CML-5120237	CI PIPE FITTINGS
IS:13382  CML-5159971	CI MECHANICAL JOINT FITTINGS
IS:7181  CML-5143754	CI DOUBLE FLANGED HORIZONTALLY CAST PIPES
IS:1537  CML-5158060	CI DOUBLE FLANGED VERTICALLY CAST PIPES
IS:8794  CML-5101677	CI DETACHABLE JOINTS FOR ASBESTOS CEMENT PRESSURE PIPES (D-JOINTS for AC PIPES)
IS:13095  CML-5741673	DI / CI BUTTERFLY VALVES
IS:14845  CML-5690682	DI / CI AIR RELEASE VALVE



Table : I
Approximate Weight of Water Content in
Cast Iron Pipes in Kg/metre.

Nominal Bore	Kg./mtr.	Nominal Bore	Kg./mtr.
80	5.0	450	161
100	8.2	500	199
125	12.7	600	285
150	18.2	700	388
200	32.2	750	445
250	50.6	800	505
300	72.7	900	645
350	98.7	1000	790
400	128.1	1200	1140

Table : II
Conversion Factors

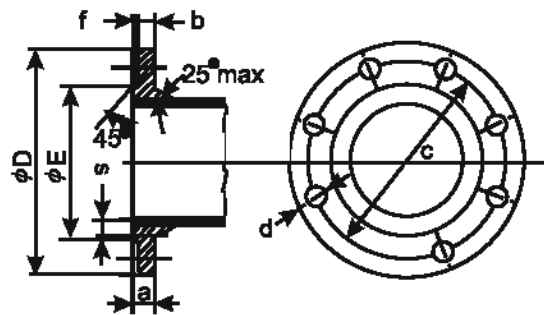
Length	
1 Inch	= 25.400 Millimetres (mm)
1 Foot	= 304.800 Millimetres (mm)
1 Yard	= 914.400 Millimetres (mm)
1 Mile	= 1.609 Kilometres (Km)
Weight	
1 Kilogram	= 2.2046 Pound
1 Pound	= 0.4536 Kilogram
Capacity	
1 Gallon (UK)	= 4.546 litres
1 Litre	= 0.219976 gallon (UK)
1 Gallon (US)	= 3.7853 litres
1 Litre	= 0.26418 gallon (US)
Others	
Pipe OD x π (3.14159)	= Circumference
1 liter	= 1000 cm ³ (approx.)

Table : III
Pressure Conversion Table

Kg/cm ²	Ibs/sq.Inch	Meter Head	Approx. Feet Head	Kg/cm ²	Ibs/sq.Inch	Meter Head	Approx. Feet Head	Kg/cm ²	Ibs/sq.Inch	Meter Head	Approx. Feet Head
1	14.22	10	32.81	13	184.90	130	426.62	25	355.58	250	820.62
2	28.45	20	65.62	14	199.13	140	459.45	26	369.80	260	853.24
3	42.67	30	98.43	15	213.35	150	492.24	27	384.02	270	886.05
4	56.87	40	131.24	16	227.57	160	525.07	28	398.24	280	918.86
5	71.12	50	164.05	17	241.80	170	557.90	29	412.47	290	951.69
6	85.34	60	196.86	18	256.02	180	590.71	30	426.69	300	984.28
7	99.56	70	229.67	19	270.24	190	623.52	31	440.91	310	1017.31
8	113.79	80	262.47	20	284.47	200	656.38	32	455.14	320	1050.15
9	128.01	90	295.38	21	298.69	210	689.17	33	469.36	330	1082.96
10	142.23	100	328.19	22	312.91	220	721.98	34	483.58	340	1115.77
11	156.46	110	361.00	23	327.14	230	754.81	35	497.80	350	1148.33
12	170.68	120	393.81	24	341.36	240	787.62				



'KEJRIWAL' Standard Flange Drilling for Flange Fittings (PN 10)



PN-10

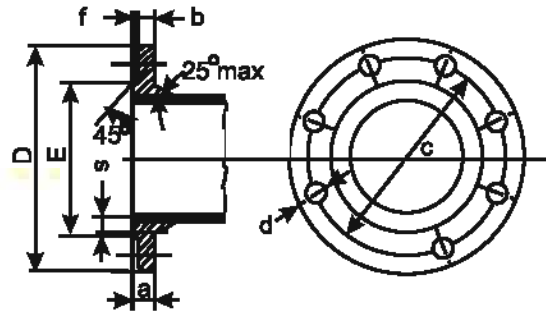
TABLE - 1

Nominal Diameter DN	Dimensions							Holes		Bolt Size Metric	Bolt Length mm	App. Flange/ Mass
	D	E	C	b	f	a	S	No.	Dia			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
80	200	132	160	16	3	19	15	4	19	M16	80	3
100	220	156	180	16	3	19	15	8	19	M16	80	3.3
125	250	184	210	16	3	19	15	8	19	M16	80	4
150	285	211	240	16	3	19	15	8	23	M20	80	5.1
200	340	266	295	17	3	20	15	8	23	M20	80	7.1
250	395	319	350	19	3	22	16	12	23	M20	90	10
300	445	370	400	20.5	4	24.5	17.5	12	23	M20	90	13
350	505	429	460	20.5	4	24.5	19.5	16	23	M20	90	14.7
400	565	480	515	20.5	4	24.5	19.5	16	28	M24	100	17.7
450	615	530	565	21	4	25.5	20	20	28	M24	100	20.2
500	670	582	620	22.5	4	26.5	21	20	28	M24	100	24.3
600	780	682	725	25	5	30	24	20	31	M27	110	34
700	895	794	840	27.5	5	32.5	24	24	31	M27	120	46
750	960	857	900	29	5	34	24	24	31	M27	120	55
800	1015	901	950	30	5	35	24.5	24	34	M30	130	62
900	1115	1001	1050	32.5	5	37.5	26.5	28	34	M30	130	73
1000	1230	1112	1160	35	5	40	28	28	37	M33	150	93
1100	1340	1231	1270	38	5	43	30	32	37	M33	150	113
1200	1455	1328	1380	40	5	45	31.5	32	40	M36	160	138
1400	1675	1530	1590	41	5	46	32	36	43	M39	180	175
1500	1785	1640	1700	42.5	5	46	32	36	43	M39	180	202
1600	1915	1750	1820	44	5	49	34.5	40	49	M45	190	242
1800	2115	1950	2020	47	5	52	36.5	44	49	M45	200	282
2000	2325	2150	2230	50	5	55	--	48	49	M45	200	337
2200	2550	2370	2440	53	6	59	--	52	56	M52	220	426

NOTE : Dimension 'S' is for guidance only.



'KEJRIWAL' Standard Flange Drilling for Flange Fittings (PN 16)



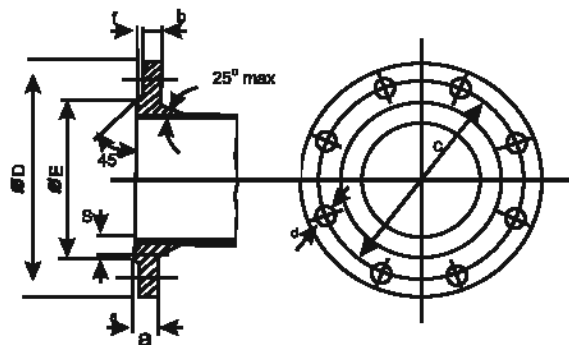
PN-16

TABLE - 2

Nominal Diameter	Dimensions							Holes		Bolt Size Metric	Bolt Length mm	App. Flange / Mass
								Nos.	Dia			
DN	D	E	C	b	f	a	S					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
80	200	132	160	16	3	19	15	8	19	M16	80	3.0
100	220	156	180	16	3	19	15	8	19	M16	80	3.3
125	250	184	210	16	3	19	15	8	19	M16	80	4
150	285	211	240	16	3	19	15	8	23	M20	80	5.1
200	340	266	295	17	3	20	16	12	23	M20	80	7.1
250	400	319	355	19	3	22	17.5	12	28	M24	90	11
300	455	370	410	20.5	4	24.5	19.5	12	28	M24	100	14
350	520	429	470	22.5	4	26.5	21	16	28	M24	100	17.4
400	580	480	525	24	4	28	22.5	16	31	M27	110	22.2
450	640	548	585	26	4	30	24	20	31	M27	110	28
500	715	609	650	27.5	4	31.5	25	20	34	M30	120	38
600	840	720	770	31	5	36	27	20	37	M33	130	60
700	910	794	840	34.5	5	39.5	27.5	24	37	M33	140	62
750	970	857	900	36	5	41	28	24	37	M33	140	70
800	1025	901	950	38	5	43	30	24	40	M36	150	80
900	1125	1001	1050	41	5	46	32.5	28	40	M36	160	92
1000	1255	1112	1170	45	5	50	35	28	43	M39	170	128
1100	1355	1218	1270	48.5	5	53.5	37.5	32	43	M39	180	148
1200	1485	1328	1390	52	5	57	40	32	49	M45	200	193
1400	1685	1530	1590	55	5	60	42	38	49	M45	200	232
1500	1820	1640	1710	57.5	5	62.5	44	36	56	M52	220	290
1800	1930	1750	1820	60	5	65	45.5	40	56	M52	220	331
1800	2130	1950	2020	65	5	70	49	44	56	M52	230	394
2000	2345	2150	2230	70	5	75	-	48	62	M56	250	475
2200	2555	2370	2440	75	6	81	-	52	62	M56	260	600

NOTE : Dimension 'S' is for guidance only.

'KEJRIWAL' Standard Flange Drilling for Flange Fittings (PN 25)



PN 25

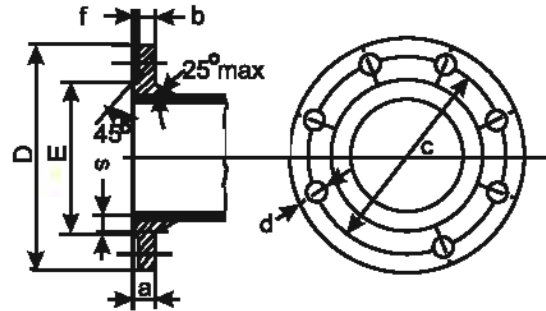
TABLE - 3

Nominal Diameter	Dimensions							Holes		Bolt Size Metric	Bolt Length mm	App. Flange / Mass
								Nos.	Dia			
DN	D	E	C	b	f	a	S	(9)	(10)	(11)	(12)	(13)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
80	200	132	160	16	3	19	15	8	19	M16	80	4
100	235	156	190	16	3	19	15	8	23	M20	80	5
125	270	184	220	16	3	19	15	8	28	M24	80	6
150	300	211	250	17	3	20	16	8	28	M24	90	7
200	360	274	310	19	3	22	17.5	12	28	M24	90	12
250	425	330	370	21.5	3	24.5	19.5	12	31	M27	100	17
300	485	389	430	23.5	4	27.5	22	16	31	M27	100	21
350	555	448	490	26	4	30	24	16	34	M30	110	30
400	620	503	550	28	4	32	25.5	16	37	M33	120	39
450	670	548	600	30.5	4	34.5	27.5	20	37	M33	130	45
500	730	609	660	32.5	4	36.5	29	20	37	M33	130	56
600	845	720	770	37	5	42	33.5	20	40	M36	150	80
700	960	820	875	41.5	5	36.5	33.5	24	43	M39	150	106
750	1020	883	940	45	5	50	34	24	43	M39	170	128
800	1085	928	990	46	5	51	35.5	24	49	M45	180	145
900	1185	1028	1090	50.5	5	55.5	39	28	49	M45	190	171
1000	1320	1140	1210	55	5	60	42	28	56	M52	210	233
1100	1420	1240	1310	60.5	5	65.5	45	32	56	M52	210	272
1200	1530	1350	1420	64	5	69	48.5	32	56	M52	220	322
1400	1755	1560	1640	69	5	74	52	36	62	M56	250	422
1500	1975	1780	1860	76	5	81	56.5	40	62	M56	260	745
1600	2195	1980	2070	83	5	88	61.5	44	70	M64	290	1148
1800	2425	2210	2300	90	5	95	66.5	48	70	M64	300	1452

NOTE : Dimension 'S' is for guidance only.



'KEJRIWAL' Standard Flange Drilling for Flange Fittings (PN 40)



PN-40

TABLE - 4

Nominal Diameter	Dimensions							Holes		Bolt Size Metric	Bolt Length mm	App. Flange / Mass
								Nos.	Dia			
DN	D	E	C	b	f	a	S	(9)	(10)	(11)	(12)	(13)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
80	200	132	160	16	3	19	15	8	19	M16	80	4
100	235	166	190	16	3	19	15	8	23	M20	80	5
125	270	184	220	20.5	3	23.5	16.5	8	28	M24	90	8
150	300	211	250	23	3	26	18	8	28	M24	100	10
200	375	284	320	27	3	30	21	12	31	M27	110	18
250	450	345	385	31.5	3	34.5	24	12	34	M30	130	28
300	515	409	450	35.5	4	39.5	27.5	16	34	M30	140	41
350	580	465	510	40	4	44	31	16	37	M33	150	55
400	660	535	585	44	4	48	33.5	16	40	M36	160	80
450	685	560	610	46	4	50	35	20	40	M36	170	85
500	755	615	670	48	4	52	36.5	20	43	M39	180	100
600	890	735	795	53	5	58	40.5	20	49	M45	200	150

NOTE : Dimension 'S' is for guidance only.

'KEJRIWAL' Ductile Iron / Cast Iron Fire Hydrant Stand Post Type



Ductile Iron / Cast Iron Fire Hydrants are used for fire fighting purposes to derive water from the main underground water pipe line. These are of two types :

- i) Stand Post type to IS - 908/1975
- ii) Underground Sluice Valve type to IS - 909/1975

STAND POST TYPE FIRE HYDRANT CONSISTS OF THE FOLLOWING

- i) For Single Outlet
 - a) One 80mm dia C. I. Sluice Valve with cap confirming to IS - 14846 PN 1.0
 - b) One C. I. Road Surface box confirming to IS - 3950/1979 / BS-750/BS-5834 (33 kg).
 - c) One 80mm dia C. I. Duckfoot Bend confirming to IS-1538/1993.
 - d) One 80mm dia x 250mm long standard C.I. flange riser to IS - 7181/1986.
(The length may be altered to suit specific requirements)
 - e) One C.I. Stand Post column single mouth fitted with a 63mm G.M. Male Coupling confirming to IS - 903/1975
- ii) For Double Outlet

All the components will be same as above, except for size which has to be changed from 80mm dia to 100mm dia and the Stand Post column shall be of double mouth fitted with two couplings.

A C.I. Flanged Socket tailpiece may also be supplied along with the above, with flanged end to be joined with the Spigot end pipe of the main water line.

HYDROSTATIC TEST

Each fire hydrant set shall be subjected to hydrostatic test, and shall prove perfectly water tight under a hydraulic test pressure of 20Kgf/cm²

PAINTING

Stand Post column shall be painted in fire red colour with the top of the post column above the outlet in yellow colour. All other parts shall be painted black.



'KEJRIWAL' Ductile Iron / Cast Iron Fire Hydrant Stand Post Type

FIRE HYDRANT

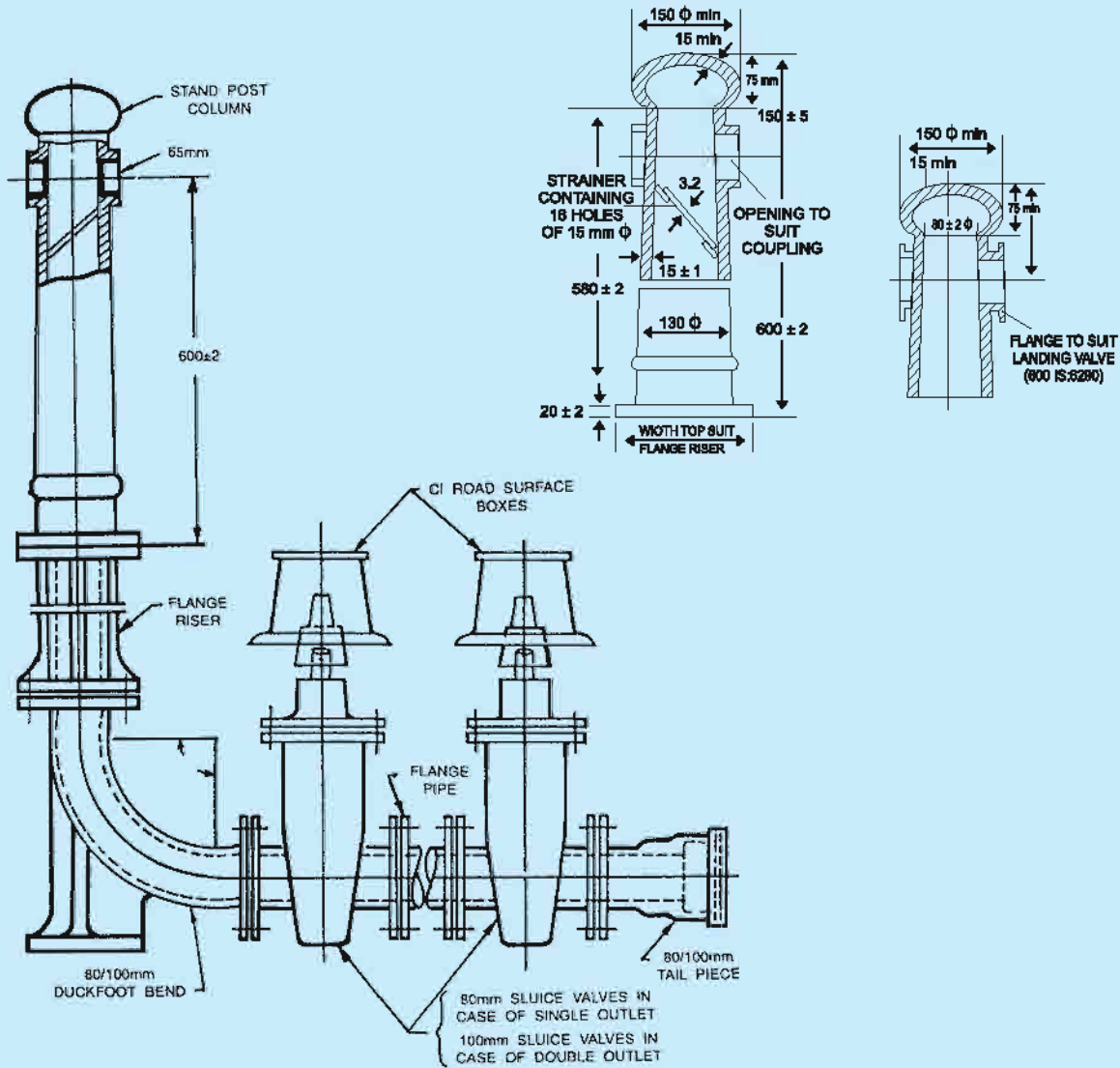


Fig. 1 : Fire Hydrant, Stand Post Type One/Two Outlets

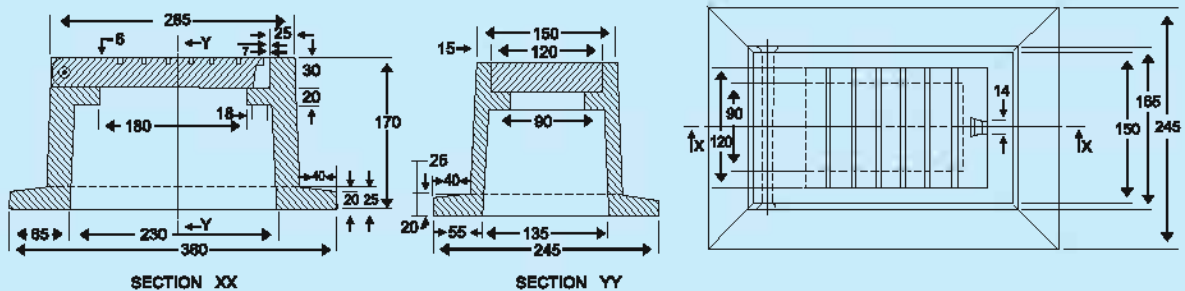


Fig. 2 : Rectangular surface box for Sluice Valves

'KEJRIWAL' Ductile Iron / Cast Iron Underground Fire Hydrant Sluice Valve Type

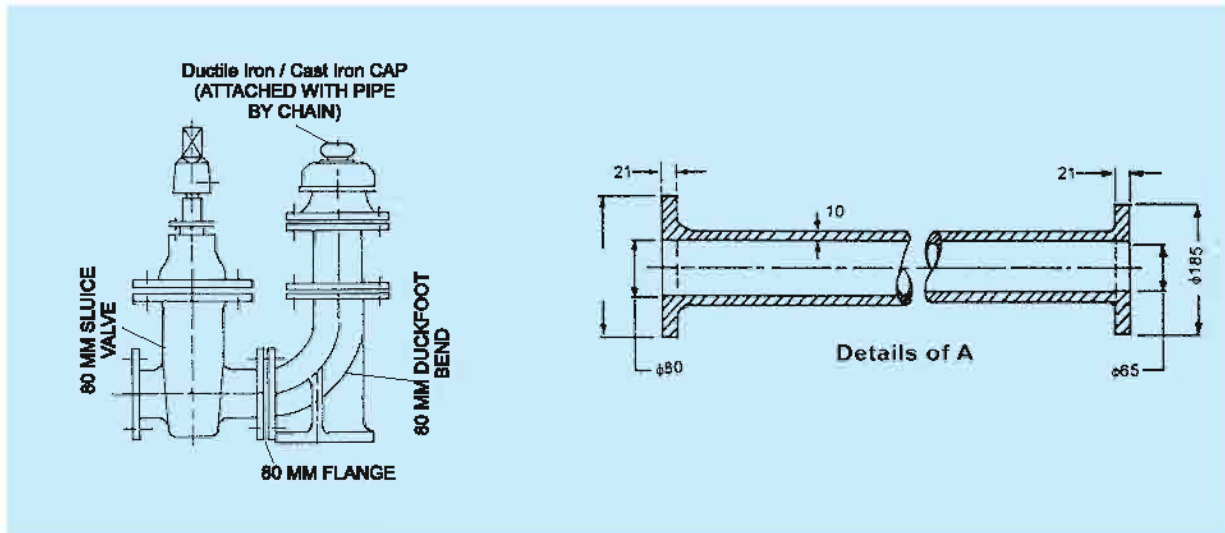


Fig. 1A

Underground Sluice Valve type Fire Hydrant are of two types as per figure 1A and 1B and consists of the following :

1. As per figure 1A

- One 80mm dia C.I. D/F Sluice Valve with cap conforming to IS-14846 PN-1.0.
- One road surface box of min 135 kg. weight.
- A dockfoot bend 80mm dia to IS - 1538/1993.
- A double flanged reducer 80 x 65mm as per IS - 1538/1993.
- An externally threaded outlet.
- An outlet cap placed on outlet by chain.

2. As per figure 1B

- An 80mm dia C. I. flanged Sluice Valve.
- An externally threaded outlet.
- An outlet cap placed on the outlet by chain.

HYDROSTATIC TEST

- With the valve open, each hydrant shall prove perfectly water tight without any porosity at 21 kgf/cm².
- With the valve closed each hydrant shall withstand 14kgf/cm² without showing any sign of leakage through the valve and its seat.

PAINTING

Complete fire hydrant set to be coated with fire red colour paint and Road surface box with yellow paint.



'KEJRIWAL' Ductile Iron / Cast Iron Underground Fire Hydrant Sluice Valve Type

FIRE HYDRANT

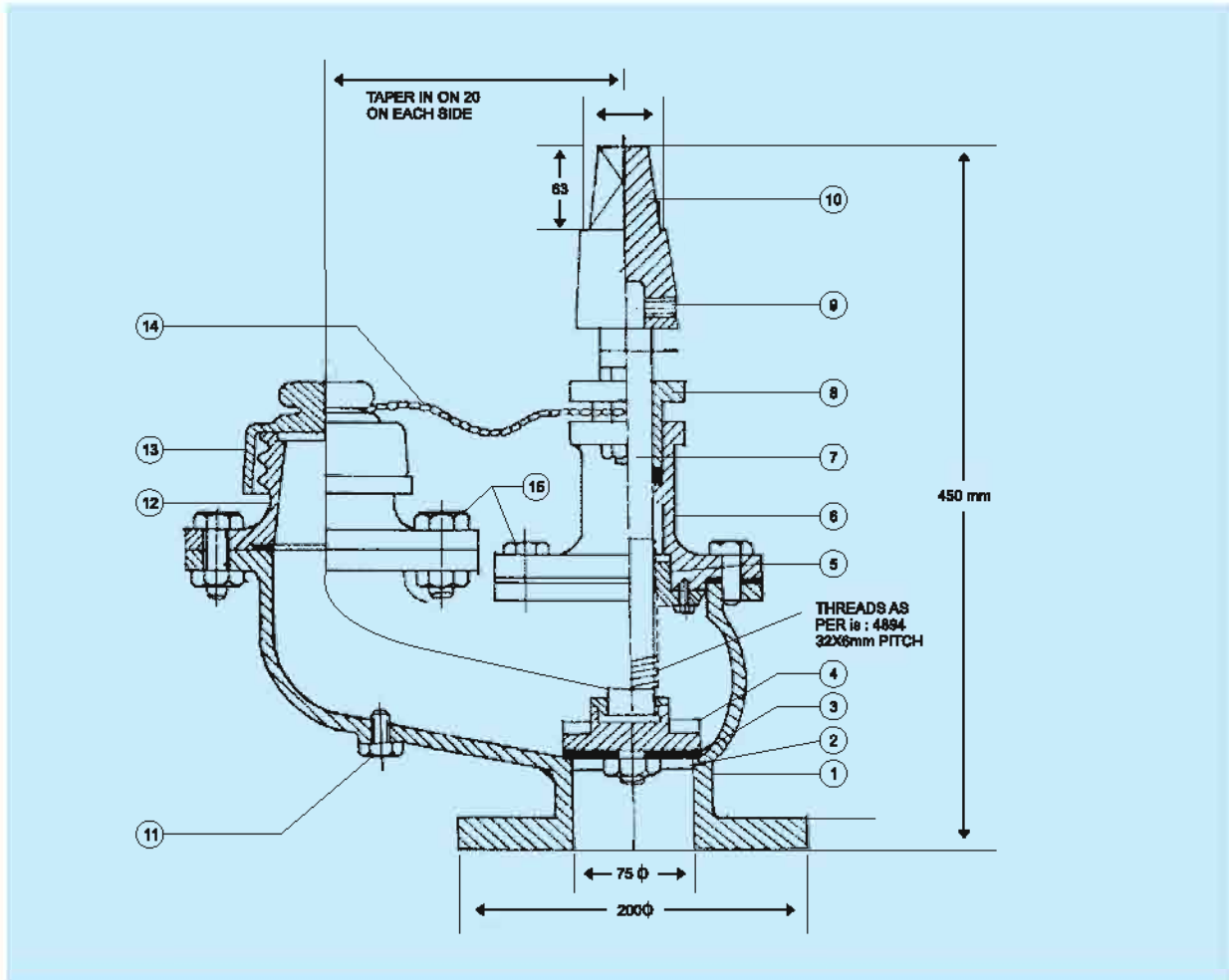


Fig. 1B

No.	Description	Material	Material Specification	No.	Description	Material	Material Specification
1.	Body	C.I.	IS: 210-1972 FG-200	9.	Grush Screw(12)	C.I.	IS: 6094-1981
2.	Valve Seat	G.M.	IS: 318-1981 LTB-2	10.	Spindle Cap	C.I.	IS: 210-1978 FG-200
3.	Washer	Rubber	IS: 937-1981	11.	Drain Bolt	M.S.	-
4.	Valve	G.M.	IS: 318-1981 LTB-2	12.	Outlet	G.M.	IS: 318-1981 LTB-2
5.	Spindle Nut	G.M.	IS: 318-1981 LTB-2	13.	Cap	C.I.	IS: 210-1978 FG-200
6.	Bonnet	C.I.	IS: 210-1978 FG-200	14.	Chain	G.I.	-
7.	Spindle	Brass	IS: 319-1989	15.	Nut and Bolt	M.S.	-
8.	Gland	C.I.	IS: 210-1978 FG-200				

'KEJRIWAL' Ductile Iron / Cast Iron Underground Fire Hydrant Sluice Valve Type



FIRE HYDRANT

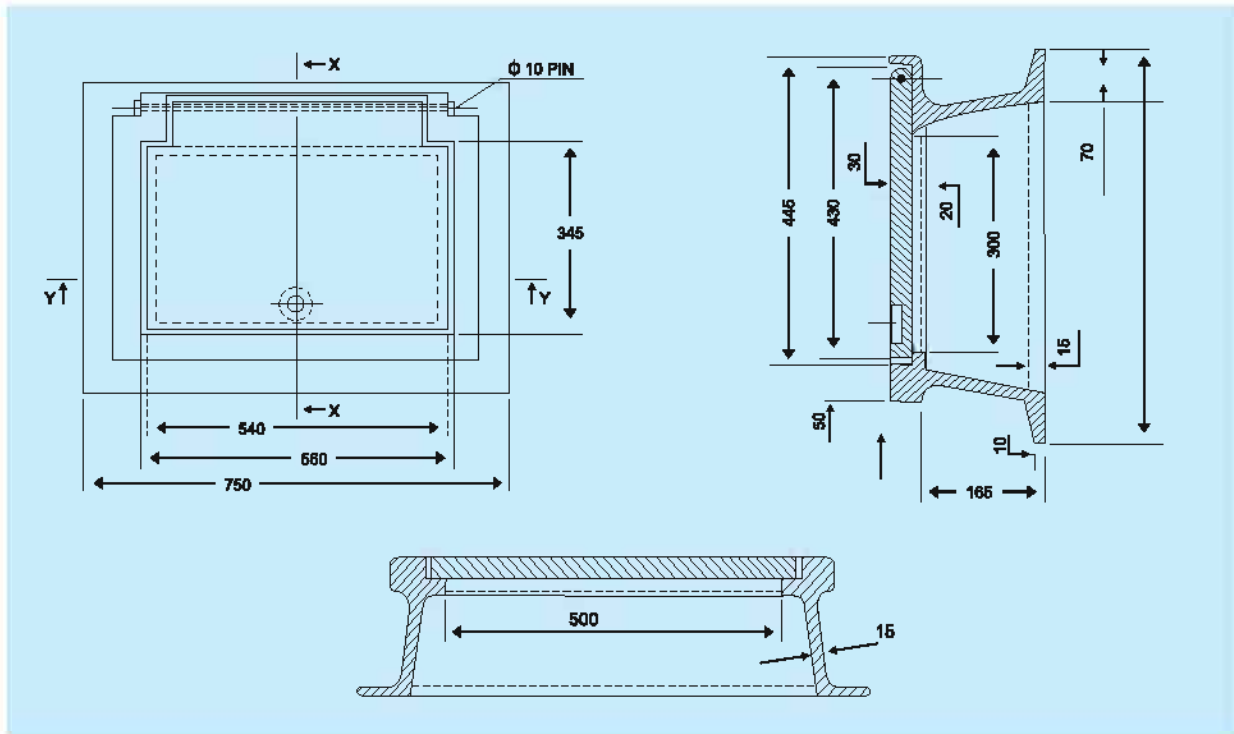


Fig. 2 : C. I. Road Surface Box - BS-5384/BS-750

NOTE :

The tolerance in dimensions shall be +2mm for upto and including 15mm, ±2mm or 16mm above and upto and including 50mm, and ± 5mm for 51mm and above.

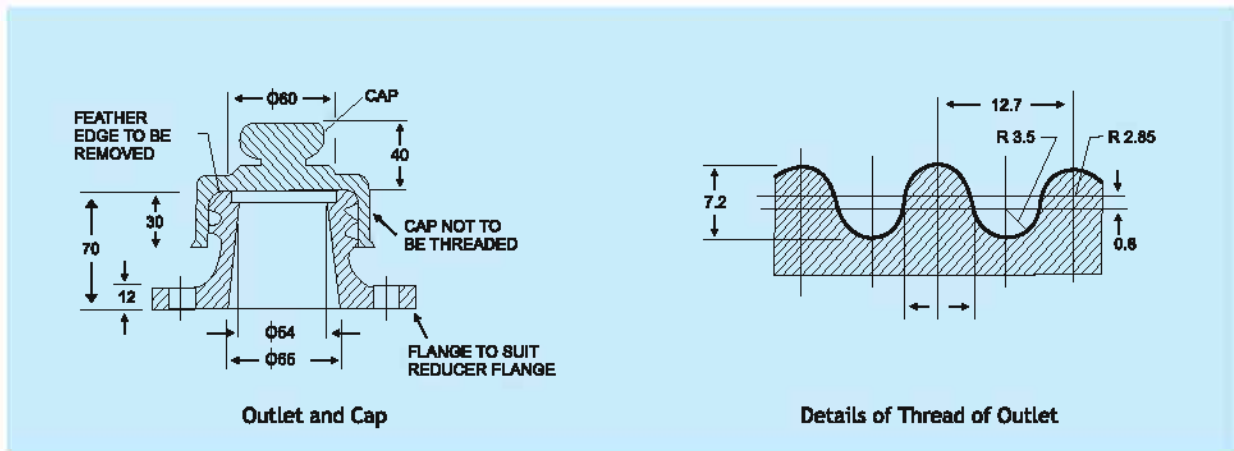


Fig. 3 : Screwed Outlet and Cap (Round Thread)

NOTES :

1. Crest diameter of thread $82.2^{+0.0}_{-0.4}$, Root diameter of thread 68.0 max.
2. Thickness of thread (t) $5.7^{+0.0}_{-0.4}$



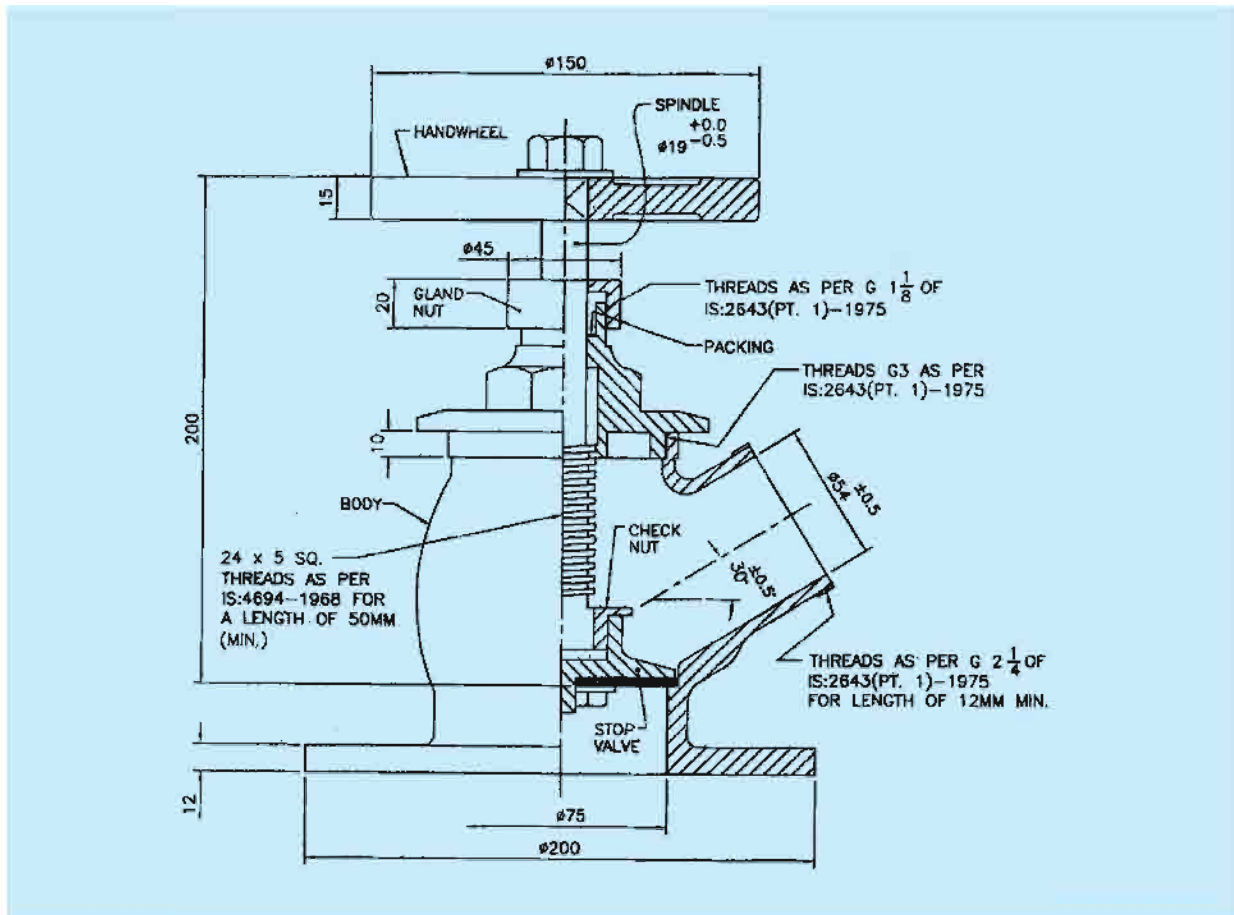


Fig. 4 : Landing Valve Single outlet (TYPE - A)

This standard lays down the requirements regarding materials, shape, dimensions and performance requirements of two types of Landing Valves.

The Landing Valve assembly shall consist of Valves (Fig. 4 & 5), instantaneous female outlets (Fig. 6) and blank cap (Fig.7).

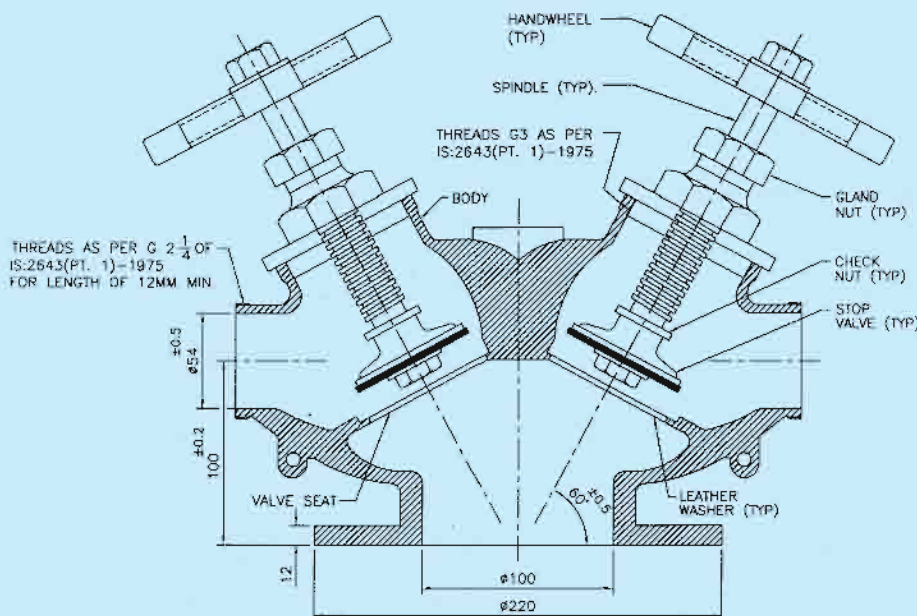
NOTES :

1. Outlet is fixed with instantaneous female coupling with blank cap.
2. Tolerance where not specified shall be $+0.5$ mm.
3. Pre-circle diameter of flange shall match with respective diameter of pipe i.e. 75mm and 100 mm respectively.



'KEJRIWAL' Landing Valves

LANDING



NOTES :

1. Both outlets are fixed with instantaneous female coupling with blank caps.
2. Dimensions of the components parts, that is, handwheel, spindle and other attachments are same as in Fig 1
3. Tolerance where not specified shall be $\pm 0.5\text{mm}$

Fig. 5 : Landing Valve Double Head Outlet (TYPE-B)

MATERIALS

The Valve body, bonnet, stop valve, check nut, instantaneous female outlet and blank cap shall be made either of leaded-tin-bronze conforming to Grade LTB-2 of IS 318 : 1981 or aluminium alloy conforming to IS designation 4225, 4450 and 4600 of IS 617 : 1975. All aluminium and zinc alloy shall be of die casting only.

Zinc Aluminium Alloy (Copper 0.5 to 1.5 percent, Aluminium 10.5 to 11.5 percent, Magnesium 0.015 to 0.03 percent and balance zinc) or Stainless Steel designation 04Cr17NiMo2 conforming to IS 6529 : 1972. All aluminium and zinc alloy shall be of die casting only.

The Valve spindle shall be of brass rod conforming to IS 320 : 1980 or IS 319 : 1989 for use with body of leaded-tin-bronze and of Stainless Steel conforming to IS 6603 : 1972 for use with body of aluminium or zinc alloy or Stainless Steel.

The handwheel shall be made of Mild Steel conforming to IS 1030 : 1989 or Ductile Iron / Cast Iron conforming to IS 210 : 1978.

Washers, gaskets shall be made of rubber conforming to IS 937 : 1981 or leather conforming to IS 937 : 1981 or leather conforming to IS 581 : 1976 . Gland packing shall be of asbestos thread conforming to IS 4687 : 1980.

The spring shall be of phosphor wire conforming to IS 7608 : 1987 for copper alloy landing valve and stainless Steel wire conforming to IS 6528 : 1972 for aluminium alloy, zinc alloy and stainless steel landing valves.

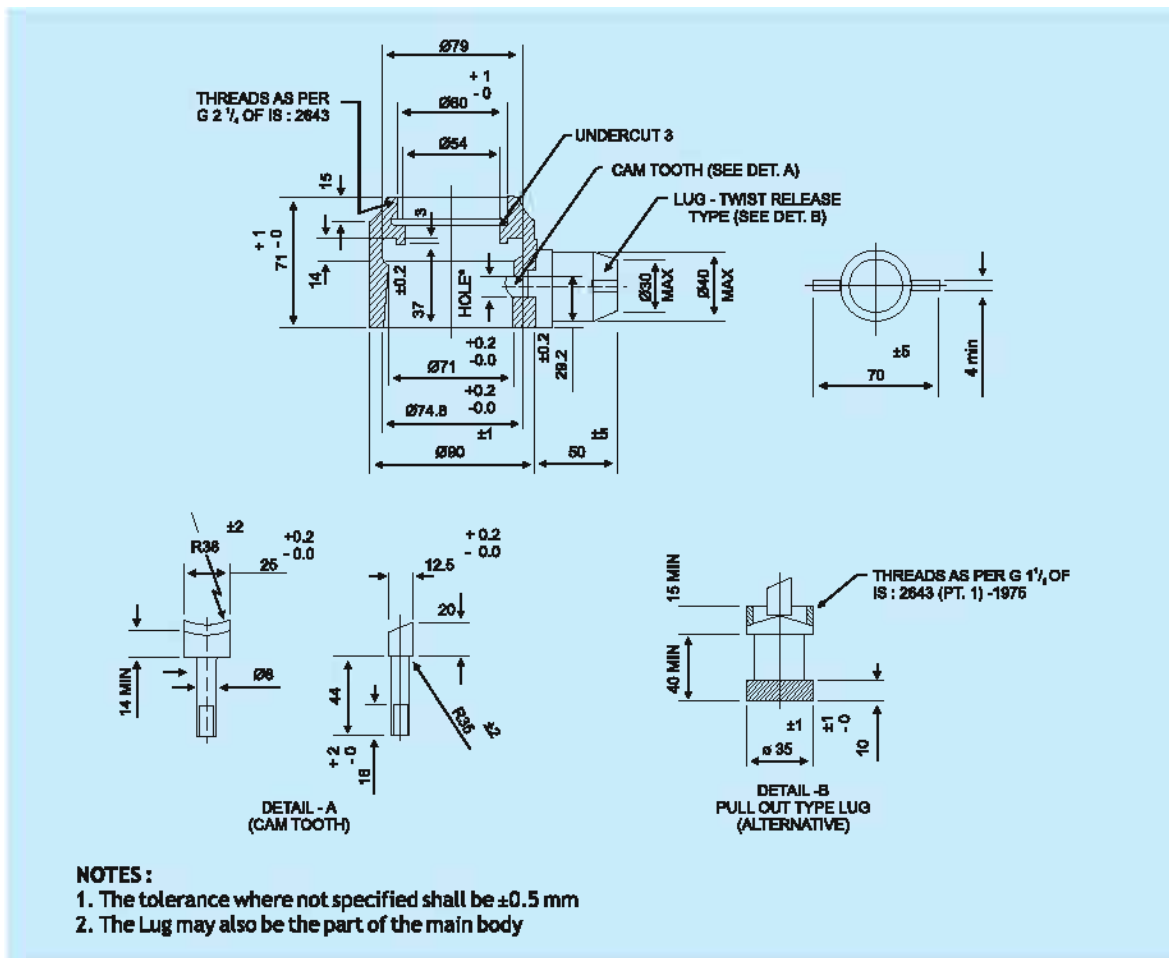


Fig. 6 : Instantaneous Female Outlet

TYPES & DIMENSIONS

The Landing Valves shall be of two types as under :

- Landing Valve Single Outlet (Fig. 4)
- Landing Valve Double head with Double Outlet (Fig. 5)

The shape and dimensions of each type are given in Fig. 4 to 7

Tooth shall be forged from forged brass materials conforming to grade FLB of IS 6912 : 1985.

The Valve top except the face of the flange and the instantaneous outlet shall be painted fire red of shade No. 536 of IS 5:1978. The outside of instantaneous outlet shall be highly polished. The handwheel shall be painted black. Paints shall conform to IS 2932 : 1974.

PERFORMANCE REQUIREMENTS

Water Tightness test for the Valve

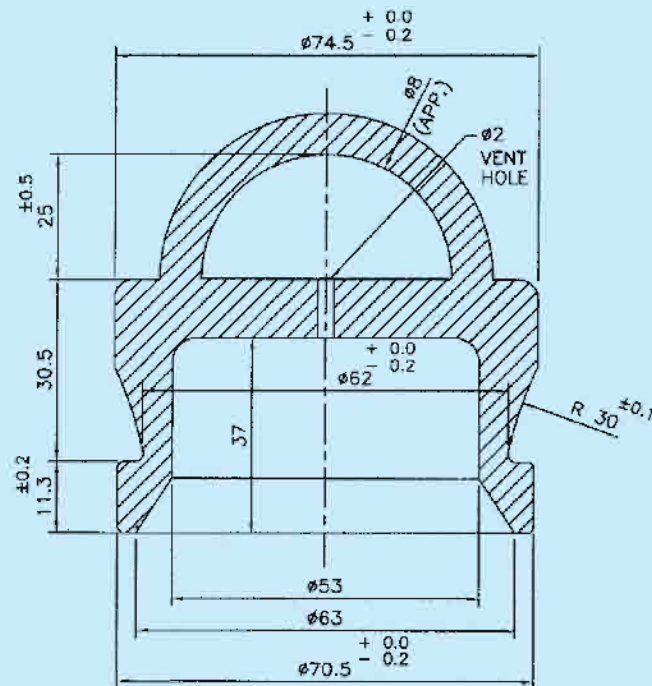
The stop valve shall be fully closed by screwing down the spindle. A hydrostatic pressure of 1.4 MN/m² (14 Kgf/cm²) shall then be applied to each valve on its inlet side. There shall be no leakage through the valve and its seat.

LANDING



'KEJRIWAL' Landing Valves

LANDING



NOTES :

1. The tolerance where not specified shall be ± 0.5 mm

Fig. 7 : Blank Cap

Hydrostatic Pressure Test

Each assembled unit shall be subjected to a hydrostatic pressure of 2.1 MN/mm^2 (21 Kg/cm^2) with the valve open and outlet closed for a period of two and half minutes for the purpose of locating porosity in the casting. When so tested it shall not fail or show any sign of leakage either through the valve body or through the gland of the spindle.

Note : During the hydrostatic pressure test, the initial drops of water should be allowed up to the period of proper rubber sealing with the male blank cap.

Flow Test

Water shall be discharged through the valve assembly and its flow shall be measured using a flow meter or V-notch. The flow shall be not less than 900 liters per minute at 0.7 MN/m^2 (7 Kg/cm^2) for Type A and 1800 liters per minute at 0.7 MN/m^2 (7 Kg/cm^2) for Type B provided the feed to the valves, for the purpose of this test, is not less than these figures. It shall be type test.

'KEJRIWAL' Ductile Iron / Cast Iron Double Flanged Sluice Valve (50mm - 1200mm)



Sluice Valves are designated by nominal pressure (PN) defined as the maximum permissible gauge working pressure (i.e. Mpa) as follows :

Nominal Pressure (PN) Mpa	Nominal Size mm
PN - 1.0	50 to 1200
PN - 1.6	50 to 600

All flanged are faced and drilled as per IS-1538/1993. However as special cases flanges may be drilled as per BS, DIN, ANSI and other International Standards upon request to suit specific requirements.

Valves generally come with Cap or Handwheel at the top for operation. However Valves with Spur gear, Bevel gear, Worm gear, Head stock arrangements, Chain wheel arrangements, Bye Pass arrangements may also be supplied against specific requirements.

Table 5: Materials for component parts of Sluice Valve

Sl.	Component	Preferred Material	Ref. No. IS No.	Grade of Designation	Alternative Material	Ref. No. IS No.	Grade or Designation
1.	Body, bonnet, dome, stool cover, wedge, stuffing box, gland, thrust plate and cap	Grey Cast Iron	210	FG 200	Spheroidal or Ductile Iron (SG)/ Cast Steel	1865 1030	450/10, 500/7 --
2.	Hand Wheel	Grey Cast Iron	210	FG 200	Mild Steel Cast Steel Ductile Iron	2062 1030 1865	F 410 WA 230-450W 450/10
3.	Stem	Stainless Steel	6603	12Cr13(AISI-410) 4Cr18Ni10 (AISI-304)	High Tensile Brass Stainless Steel	320 or 6912 6603	HT 2 FHTB 2 04Cr17Ni 12 MO2 (AISI-316)
4.	Wedge Nut Shoe Channel	Leaded Tin Bronze (G.M.)	318	LTB - 2	High Tensile Brass Phosphor Bronze	320 6912 28	HTB 2 FHTB 2
5.	Body Seat Ring, wedge facing ring and bushes	Leaded Tin Bronze (G.M) EDPM	318	LTB - 2	Alloy Steel Stainless Steel	3444 6603	Gr. 1/4/10 04Cr18Ni10 (AISI-304)
6.	Bolts	Carbon Steel	1363(Part1)	Class 4.6	Stainless Steel	6603	
7.	Nuts	Carbon Steel	1363(Part3)	Class 4.0	Stainless Steel	6603	
8.	Gasket	Rubber	638	Type B	Neoprene Rubber		
9.	Gland Packing	Jute & Hemp	5414		Rubber	638	Type B
10.	Gear	Spheroidal Graphite Iron	1865	Gr 500 / 7	Alloy Steel	1570	40Ni2Cr1MO28 Gr B
11.	Gear Housing	Grey Cast Iron	210	FG 200	Cast Steel S. G. Iron	1030 1865	230-450 W 450 / 10
12.	Pinion & Pinion Shaft	Wrought Carbon Steel	1570 (Part 3)	C55 Mn75	Alloy Steel Stainless Steel	1570 (Part 4) 6603	40Ni12Cr1MO28 04Cr18Ni10

SLUICE



'KEJRIWAL' Ductile Iron / Cast Iron Double Flanged Sluice Valve (50mm - 1200mm)

SLUICE

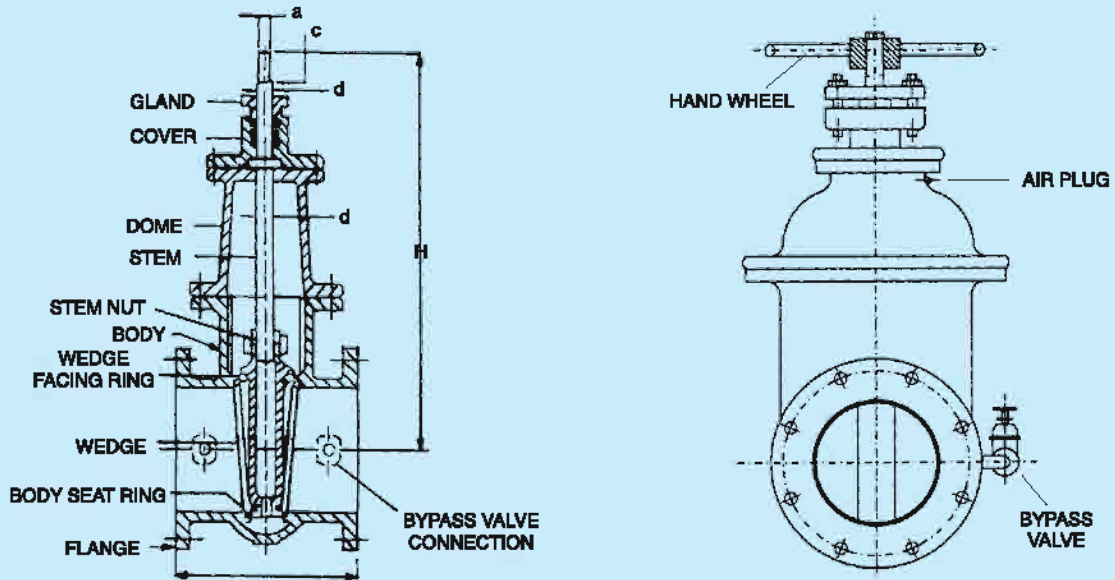


Fig. 8 : Sluice Valve for size 200mm ϕ and above

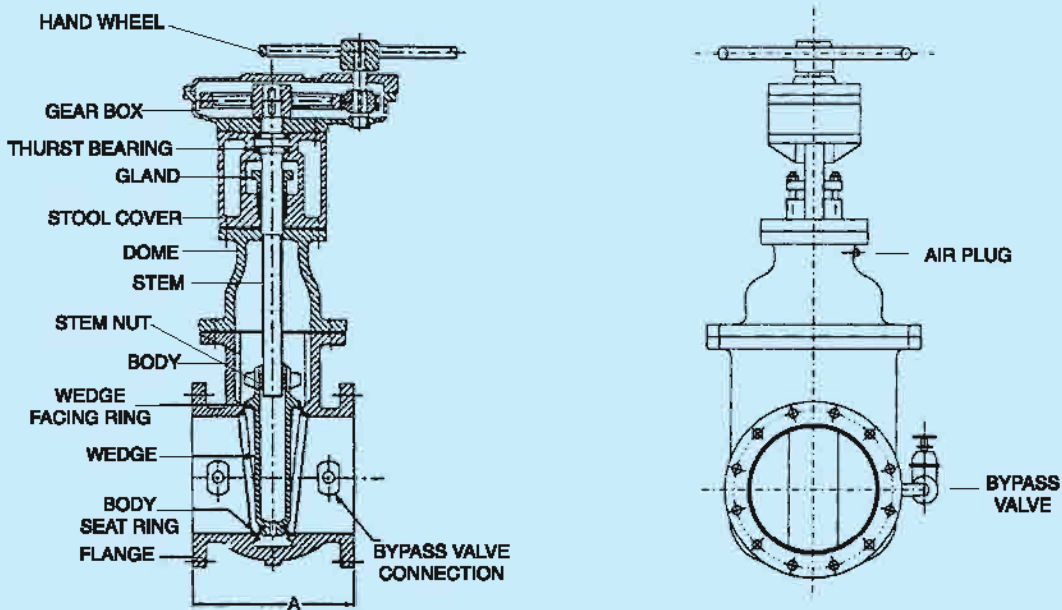


Fig. 9 : Sluice Valve with Ball Thrust Bearing and Spur Gear arrangement

'KEJRIWAL' Ductile Iron / Cast Iron Double Flanged Sluice Valve (50mm - 1200mm)

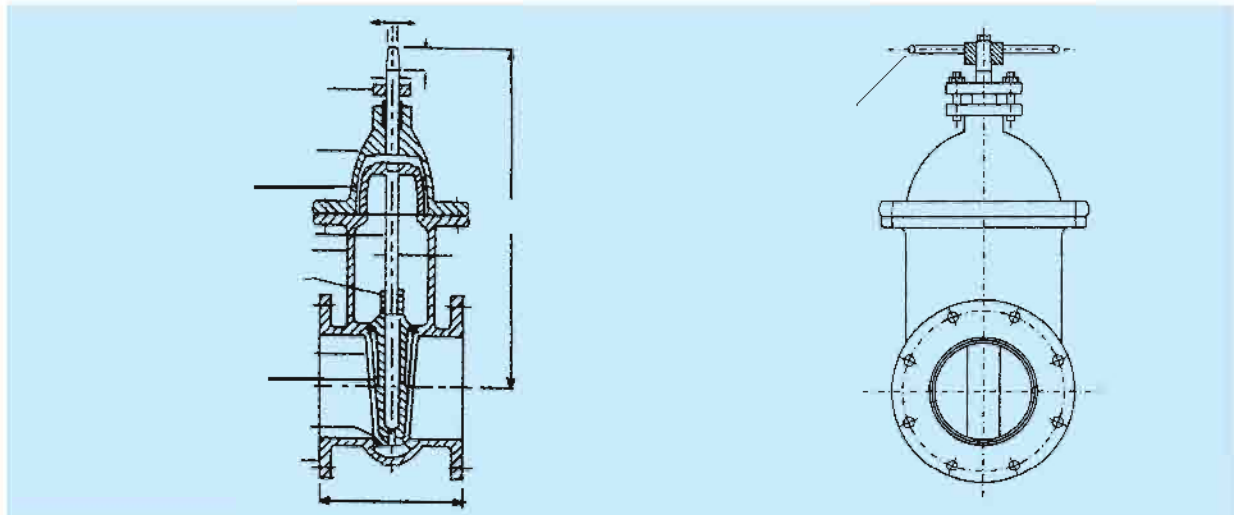


Fig. 10 : Sluice Valve for size 150mm ϕ and above with Thrust Plate

Table 6 : Test Duration for Sluice Valves

Valve Size mm	Test for Body/Seat	Test Duration min
50 to 1200	Body	5
	Seat	2

Table 7 : Test Pressure for Sluice Valves

PN Rating	Test for Body/Seat	Test pressure MPa (Gauge)
PN 1.0	Body	1.5
	Seat	1.0
PN 1.6	Body	2.4
	Seat	1.6

Table 8 : Size of By Pass

Nominal Size of Sluice Valve (mm)	Size of By Pass Arrangement (mm)
250	25
300	25
350	40
400	40
450	50
500	50
600	65
700	80
750	80
800	80
900	100
1000	100
1100	125
1200	125

SLUICE



'KEJRIWAL' Ductile Iron / Cast Iron Double Flanged Sluice Valve (50mm - 1200mm)

SLUICE

Table 9 : Dimensions of Sluice Valve for Nominal Pressure PN 1.0

SL. NO.	NOMINAL SIZE	BODY			STEM							STUFFING BOX				CAP					
		Length over Flanges	Width	Overall Height	Square	Length of Square	Dia of Stem	Length from Collar	Collar Thickness	Dia of Collar	Depth of Nut	Inside Dia	Packing Size	No. of Packing	Depth	Size of Hand Wheel	Size of Bottom Square	Length of Square			
		PD	ALT-I	ALT-II	B Max	H Max	a	C	d Min	L1	L2	I	G	K Min	E	F Min	D	X	Y		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
i.	50	178	250	215	160	365	15	30	22	225	180	8	50	30	42	10	4	45	225	35	60
ii.	65	190	270	230	215	380	15	30	22	225	180	8	50	30	42	10	4	45	225	35	60
iii.	80	203	280	230	220	425	15	30	22	240	190	8	50	30	42	10	4	45	225	35	60
iv.	100	229	300	255	250	470	18	36	27	240	190	8	55	35	47	10	4	45	320	35	60
v.	125	254	325	265	310	485	18	36	27	250	200	10	55	35	47	10	5	55	320	35	60
vi.	150	267	350	280	330	595	18	36	27	250	200	10	55	35	47	10	5	55	320	35	60
vii.	200	292	400	318	460	725	22	42	32	340	280	10	65	45	58	12	5	65	360	35	60
viii.	250	330	450	355	495	835	25	48	36	450	270	15	65	50	60	12	5	65	400	35	60
ix.	300	356	500	380	585	910	25	48	36	465	240	15	70	50	60	12	5	65	400	35	60
x.	350	381	550	-	650	1020	25	45	37												
xi.	400	406	600	-	750	1110	31	54	42												
xii.	450	432	650	-	830	1200	34	64	47												
xiii.	500	457	700	-	900	1300	34	64	47												
xiv.	600	508	800	-	1050	1500	34	64	47												
xv.	700	610	900	1130	1150	1670	44	78	62												
xvi.	750	610	950	1200	1200	1780	48	86	67												
xvii.	800	660	1000	1250	1300	1930	48	86	67												
xviii.	800	711	1100	1380	1400	2080	53	88	77												
xix.	1000	811	1200	1500	1500	2200	53	88	77												
xx.	1100	\$\$\$	\$\$\$	1650	1650	2450	63	99	87												
xxi.	1200	\$\$\$	\$\$\$	1800	1800	2580	63	99	87												

As per our Design

NOTES

- 1 - PD Preferred dimensions (short body).
- 2 - ALT I Alternate I dimensions (long body).
- 3 - ALT II Alternate II dimensions.
- 4 - \$ Dimensions given under Alternate II stand deleted with effect from 01 April 2005
- 5 - \$\$ As and when ISO stipulates, these dimensions will be notified:

Tolerances on Length L

- Up to and including 300 mm ± 2 mm
- Above 300 and including 600 mm ± 3 mm
- Above 600 and including 800 mm ± 4 mm
- Above 800 and including 1000 mm ± 5 mm
- Above 1000 mm ± 6 mm

Other Tolerances

- Tolerances on Square, a and X ± 0.5 mm
- Tolerances on Length of Square, C ± 1.0 mm
- Tolerances on Size of Hand Wheel, D ± 5.0 mm
- Tolerances on Length between Square ± 0.5 mm

'KEJRIWAL' Ductile Iron / Cast Iron Double Flanged Sluice Valve (50mm - 1200mm)



Table 10 : Dimensions of Sluice Valve for Nominal Pressure PN 1.6

SL. NO.	NOMINAL SIZE	BODY			STEM							STUFFING BOX				CAP											
		Length over Flanges	Width	Overall Height	Square	Length of Square	Dia of Stem	L1	L2	Collar Thickness	Dia Collar	Depth of Nut	Inside Dia	Packing Size	No. of Packing	Depth	Size of Hand Wheel	Size of Bottom Square	Length of Square								
(1)	(2)	PD	ALT-1	ALT-II	B Max	H Max	a	C	d Min	(10)	(11)	(12)	i	G	K Min	E	D	X	Y								
i.	50	178	250	215	160	365	15	30	22	225	180	8	50	30	42	10	4	45	280	35	60						
ii.	65	190	270	230	215	380	15	30	22	225	180	8	50	30	42	10	4	45	280	35	60						
iii.	80	203	280	230	220	425	15	30	22	240	190	8	50	30	42	10	4	45	280	35	60						
iv.	100	229	300	255	250	470	18	36	27	240	190	8	55	35	47	10	4	45	360	35	60						
v.	125	254	325	266	310	485	18	36	27	250	200	10	55	35	47	10	5	55	360	35	60						
vi.	150	267	350	280	330	595	18	36	27	250	200	10	55	35	47	10	5	55	360	35	60						
vii.	200	292	400	318	460	725	22	42	32	340	280	10	65	45	56	12	5	65	450	35	60						
viii.	250	330	450	355	495	835	25	48	36	450	280	10	65	50	60	12	5	65	640	35	60						
ix.	300	358	500	380	585	910	25	48	36	465	240	15	70	50	60	12	5	65	640	35	60						
x.	350	381	550	690	730	1030	30	55	42	As per our Design										66	12	6	77	640	48	75	
xi.	400	406	600	750	800	1110	35	60	47											55	75	14	6	90	730	48	75
xii.	450	432	650	820	850	1210	37	65	52											60	80	14	6	90	800	48	75
xiii.	500	457	700	880	930	1340	37	65	52											60	80	14	6	90	800	48	75
xiv.	600	508	800	1000	1050	1500	42	70	57	60	89	16	6	102	800	48	75										

NOTES :

- 1 - PD Preferred dimensions (short body).
- 2 - ALT I Alternate I dimensions (long body).
- 3 - ALT II Alternate II dimensions.
- 4 - \$ Dimensions given under Alternate II will stand deleted with effect from 01 April 2005

Tolerances on Length L

- Up to and including 300 mm ± 2 mm
- Above 300 and including 600 mm ± 3 mm

Other Tolerances

- Tolerances on Square, a and X ± 0.5 mm
- Tolerances on Length of Square, C ± 1.0 mm
- Tolerances on Size of Hand Wheel, D ± 5.0 mm
- Tolerances on Length between Square ± 0.5 mm

SLUICE



'KEJRIWAL' Ductile Iron / Cast Iron Resilient Seated Gate Valve

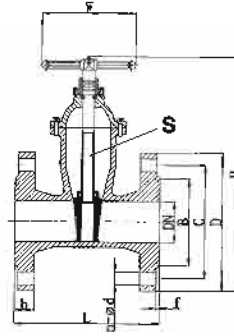


Fig : 11

Usage : Soft -sealing Gate Valve, shut off the medium flow using the force applied to the flexible disc. For the medium in cooperation, the operating pressure cannot exceed 16 Bar and the temperature cannot exceed 80°C. This valve is widely applied to pipelines for water and drainage and other industries, It can adjust and cut off the fluid.

Main Parts and Materials

Parts Name	Material
Valve Body, Bonnet	Ductile Iron
Disc	Ductile Iron encapsulated in EPDM Rubber
Stem	Stainless Steel AISI-410/420/304
Nut	Brass/G.M.

Dimensions

Type	Nominal DN (mm)	Measurement (mm) (face to face)	Spindle Diameter (S)	Height (mm) (H)
RESILIENT	50	178	19	207
	65	190	19	232
	80	203	19	260
	100	229	19	286
	125	254	19	355
SEATED	150	267	24	403
GATE	200	292	26	513
	250	330	30	590
VALVE	300	356	30	678
	350	381	30	762
	400	406	37	836
	450	432	37	957
	500	457	40	1036
	600	508	45	1188

NOTE : Due to lower thrust & torque required for operating Resilient Seated Sluice Valve, hence the stem diameter and handwheel diameter for these are less than metal seated valves.

'KEJRIWAL' Ductile Iron / Cast Iron Double Flanged Swing Check Type Reflux Valves, Single Door Pattern (50mm - 600mm) (Part I)



1. Reflux valves are generally used on rising mains as they permit water to flow in one direction only and check all the return flows. They are operated by pressure alone, having no external means of control.
2. Reflux Valves are designated by Nominal Pressure (PN) defined as maximum permissible guage working pressure.

Size of valves mm	Nominal Pressure Kgf/cm ²
50 to 125	16
150 to 300	10
350 to 600	6

Range	Tolerance on Length
200 to 350	± 12
400 to 600	± 13
700 to 800	± 14
900 to 1000	± 15
1100 to 1300	± 16

Table 11 : Dimensions of Reflux Valves

Size	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Length	203	216	241	292	330	356	495	622	698	787	914	978	978	1295
Hinge Pin Dia mm	10	10	10	12	12	16	20	22	25	25	32	32	38	38

Table 12 : Size of By-pass

Size	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Size of by-pass arrangements	10	10	10	10	15	15	25	25	40	40	40	50	50	65

NOTE : For materials of component parts see page 123

Table 13 : Test Duration

PN Rating	Test for	Test Pressure Kgf/cm ²	Test Duration Minutes
PN 1.6	Body	24	5
	Seat	16	2
PN 1.0	Body	15	5
	Seat	10	2
PN 0.6	Body	9	5
	Seat	6	2

NOTE : Valves with DASH POT arrangement may also be supplied.

REFLUX



'KEJRIWAL' Ductile Iron / Cast Iron Double Flanged Swing Check Type Reflex Valves

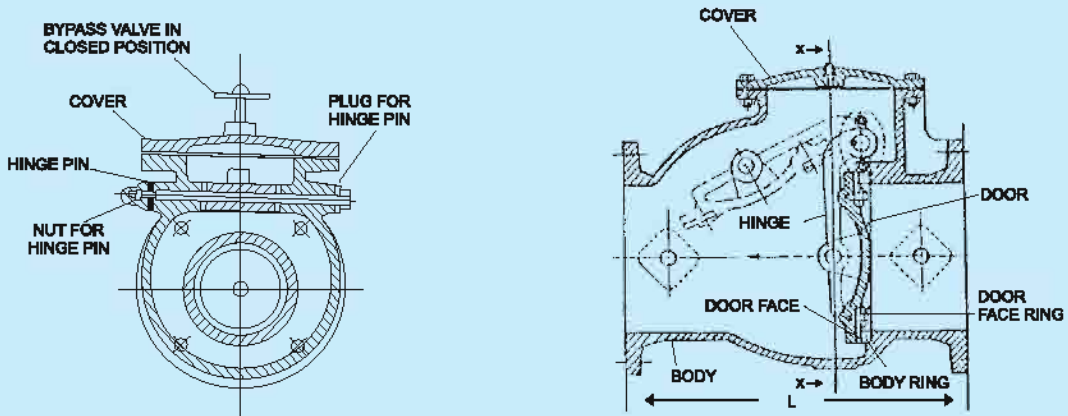


Fig. 12 : Reflux Valve with Vertical Seating and integral By-Pass Arrangement

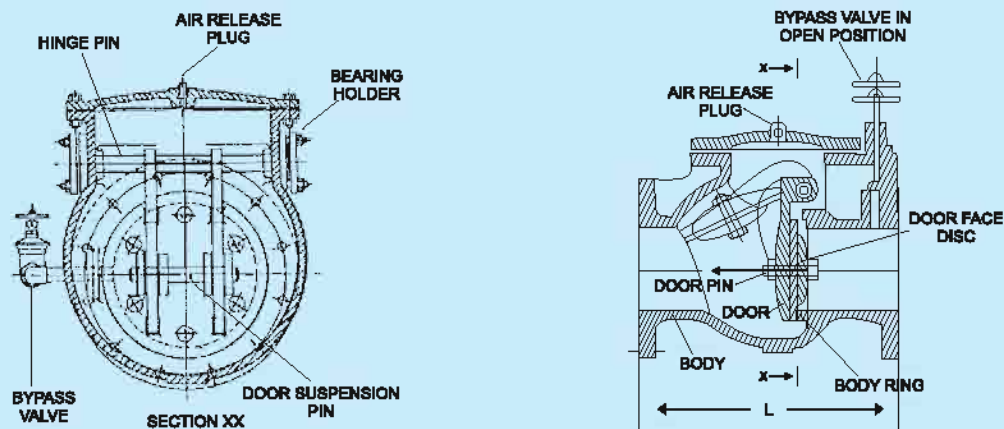


Fig. 13 : Reflux Valve with Vertical Seating and side By-Pass Arrangement

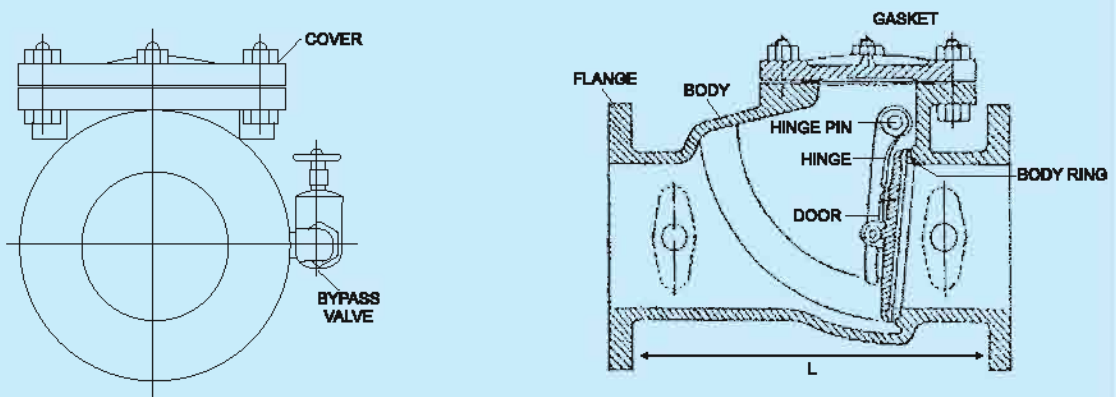


Fig. 14 : Reflux Valve with Inclined Seating and side By-Pass Arrangement

REFLUX

'KEJRIWAL' Ductile Iron / Cast Iron Double Flanged Swing Check Type Reflux Valves Multi Door Pattern (400mm - 1200mm) (Part II)



Reflux Valves are generally used in rising mains to check return flows. In large diameter pipes, the door, in single door pattern would close slowly and reflux flow would cause water hammer due to surge. Therefore multi-door pattern is resorted to in such cases, so as to reduce the time required for closure. The flow may be controlled by means of flaps swinging up and down with pressure on the seats. (Swing Check). The minimum number of doors in the diaphragm plate shall be two.

Reflux valves are designated by nominal pressure defined as the maximum permissible gauge working pressure in MPa as under.

PN-0.6 & PN-1.0

Table 15 : Materials for Different Component Parts of Reflux Valves

Sl. No.	Component	Basic Materials	Grade or Designation	Alternative Material	Grade or Designation
1.	Body with hinge and diaphragm	Grey Cast Iron	FG 200	a) S.G. Iron b) Cast Iron	400/12 Grade B
2.	Hinge Pin	High Tensile Brass	HT 2 FHTB 1	Stainless Steel Steel	04 Cr 17 Ni 12 Mo 2 or 04 Cr 18 Ni 10 12 Cr 13
3.	Bolts	Carbon Steel	Class 4.6	--	--
4.	Nuts, Nuts for Hinge Pins	Carbon Steel	Class 4	--	--
5.	Bearing Bushes	Leaded Tin Bronze	LTB 2	a) Austenitic Iron b) PTFE	ASGN : 20
6.	Face and Seat Rings	Leaded Tin Bronze	LTB 2	a) Austenic Stainless Steel b) Stainless Steel	04 Cr 17 Ni 12 Mo2 or 04 Cr 18 Ni 10 12 Cr 13
7.	Flange joining materials	Rubber	--	--	--

REFLUX



'KEJRIWAL' Ductile Iron / Cast Iron Double Flanged Swing Check Type Reflux Valves

The tolerances on the face-to-face dimensions shall be as follows :

Face-to-face Dimensions	Tolerances
400mm	± 2mm
Above 400mm up to and including 600mm	± 3mm
Above 600mm up to and including 800mm	± 4mm
Above 800mm up to and including 1000mm	± 5mm

By-Pass Connection - By-Passes are not standard items on valves to the design, but if required, they are made for connection between the inlet and outlet of the valve. By passes shall conform to PN-1 of IS : 14846* and the minimum size of the by-pass arrangement shall be as indicated below :

Size of Valve	Min. Size of By-Pass Arrangement
400 mm	50 mm
450 mm to 600 mm	80 mm
700 mm to 1200 mm	100 mm

* see page 27, Table -10

Mass of Valves - The minimum finished mass of the valves shall be as follows :

Nominal Size of Valve (mm)	Min Mass (kg)
500	1450
600	2040
700	2250
750	2450
800	2540
900	3480
1000	4000
1100	5100
1200	6000

Table 16 : Test Pressure & Test Duration of Valves

PN Rating	Test for kg/cm ²	Test Pressure Minutes	Test Duration
PN - 0.6	Body Test	9	2
	Seat Test	6	2
PN - 1	Body Test	15	2
	Seat Test	10	2

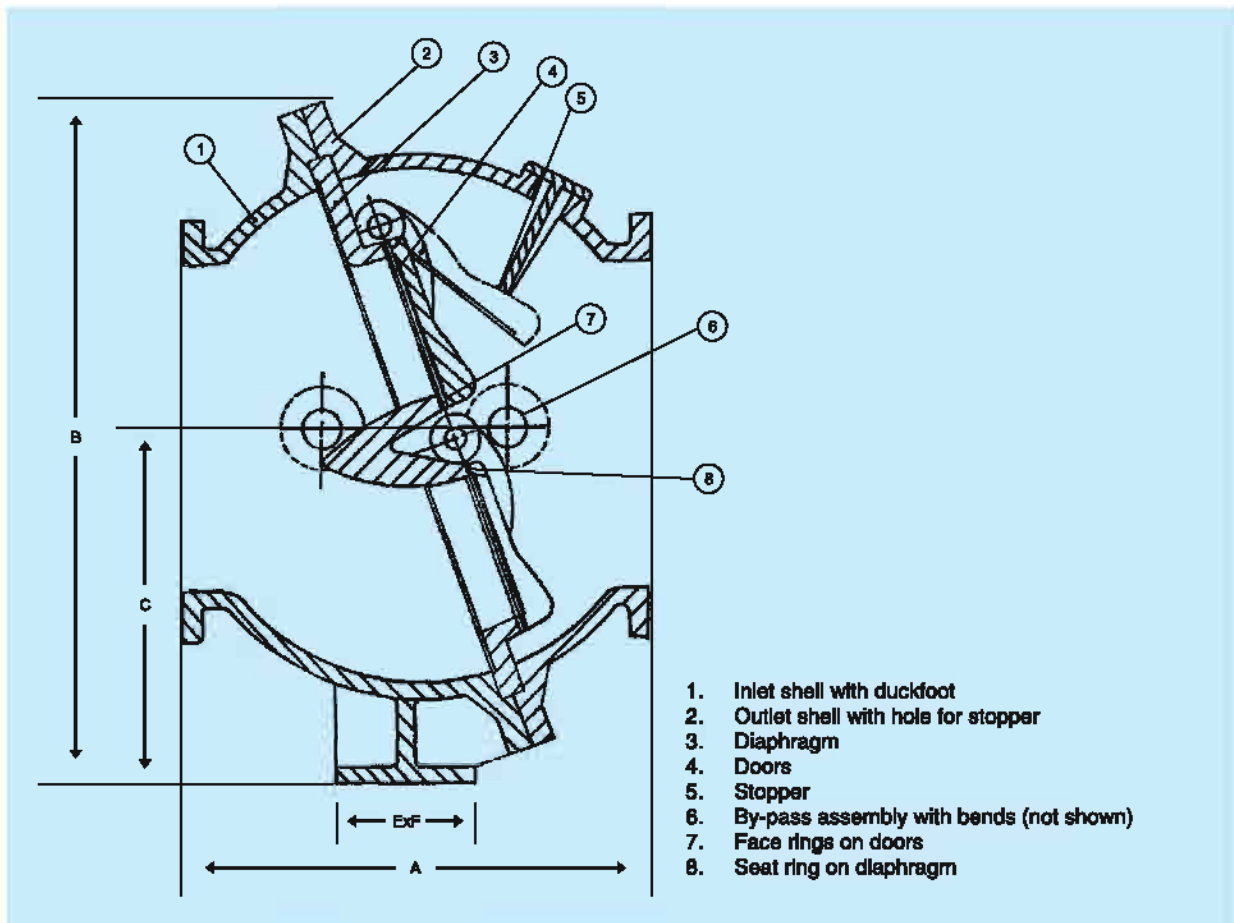


Fig. 15 : Typical Multidoor

Table 17 : Dimensions

DN	Length Over	Overall Height	Height of Centre	Size of Duck
500	815	1150	600	200 x 250
600	914	1333	685	254 x 254
700	1000	1446	750	300 x 375
750	1045	1446	750	300 x 375
800	1118	1634	850	300 x 375
900	1250	1570	815	300 x 375
1000	1250	1730	915	300 x 375
1100	1396	2069	1080	400 x 450
1200	1500	2250	1175	400 x 450





'KEJRIWAL' Dual Plate Check Valve

KEJRIWAL make dual plate check valve is high performance multi purpose check valve. It is stronger, lighter and smaller than conventional swing check valve. The valve provides two spring compressed on plates and housed on a vertical hinge pin. When the flow decreases, the plates closed rapidly by torsion spring action without requiring reverse flow. The dual plate check valve uses a special unique design spring for significant improvement in valve response. Each valve has its own two springs or no. of springs which provides independent closing action. This design overcomes the problems of either dual plates where both plates are closed by opposite legs of a single spring and where disparate forces acting on each plate cause the plates to close unevenly.

- | | |
|------------------------------------|--|
| PARENT / BASIC MATERIAL | : CAST IRON, S.G. DUCTILE IRON, CAST STEEL, STAINLESS STEEL, FABRICATED STEEL |
| MANUFACTURING STANDARD | : API 594, API 6D & API 598 (TESTING) |
| GENERAL FLUID APPLICATION | : CLEAR WATER, SEWAGE WATER, GAS, AIR, OIL, CHEMICAL |
| END FLANGE STANDARD | : IS:1538, IS:6392, BS : 4504, BS:10, ANSI B 16.1 ANSI B 16.5, AWWA C 207/ISO-7005/EN-1092 |
| TYPE OF DISC/FLAP | : DOUBLE DOOR SOLID FLAT FLAP WITH INTEGRAL HINGE |
| MANUFACTURING RANGE OF SIZE | : 50 MM TO 2000 MM |
| END CONNECTION | : WATER/PLAIN END OR FLANGE END |
| RATING | : PN-4, PN-6, PN-10 & PN-16. CL-150, 300, 600, 900 |

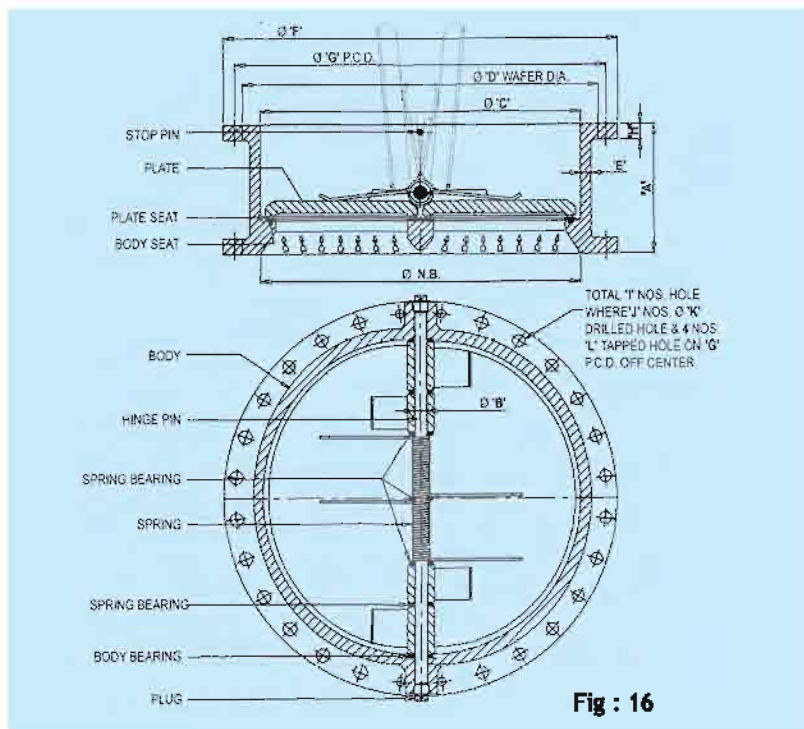


Fig : 16

CHARACTERISTIC FEATURES

- LEAK PROOF SEALING
- LOW PRESSURE DROP
- NON THROTTLING EFFECT
- TROUBLE FREE SERVICE
- INTER CHANGEABLE PARTS
- EASY INSTALLATION
- LONG LIFE SERVICE
- LOW MAINTENANCE
- GENTLE CLOSURE
- METAL TO RUBBER SEAT

ADDITIONAL ARRANGEMENTS

- METAL TO METAL SEAT
- LIFTING LUGS
- RIVETED METAL SEAT
- RESILIENT SEAT

Size (mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700
(A) face/face	54	54	57	64	70	98	127	146	181	184	191	203	213	222	264
Size (mm)	750	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	
(A) face/face	305	330	368	432	457	524	530	540	660	770	800	915	990	1070	

DUAL PLATE



'KEJRIWAL' Ductile Iron / Cast Iron Air Relief Valve Resilient Seated



This covers requirement of single air valve (small or large orifice) double air valves (small and large orifice with or without integral isolating valve) and kinetic air valves with or without separate isolating sluice valve for use on water mains.

	TYPE	Nominal Pressure	Nominal Sizes	End Connection
Single Air Valve	1.Small Orifice Type (S1) 2.Large Orifice Type (S2)	PN 1.0 and PN 1.6 PN 1.0 and PN 1.6	15, 25, 40 mm 25, 40, 50 mm	Flanged or Screwed
Double Air Valve	Standard type with In-built isolating valve (DS1), or without isolating valves (DS2)	PN 1.0 and PN 1.6	40, 50, 80, 100 150 and 200 mm	Flanged
Kinetic Air Valve	Kinetic Air Valve (DK)	PN 1.0 and PN 1.6	40 50 80 100 150 and 200 mm	Flanged

APPLICATION :

Single Air Valve (Small Orifice)

For automatically releasing air which may accumulate under pressure in a section of pipe line during normal working condition.

Single Air Valve (Large Orifice)

For automatically releasing/admitting air that may accumulate under pressure in a section of pipe line at the time of initial charging or draining of mains.

Double Air Valves

These valves are simply a combination of small and large orifice air valves with common connection to the main, small orifice function being similar to that of a single air valve. Large orifice serves for automatically exhausting air when a pipe is being filled with water, or automatically ventilating a pipe when it is being emptied of water.

Kinetic Air Valves

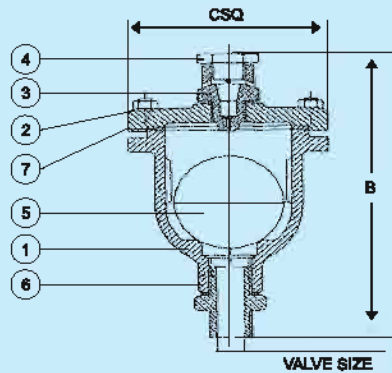
These valves are essentially the same as the conventional double air valves but with certain refinements and are suitable for high head pipe lines where high rates of air discharge and ventilation is required.

MATERIAL :

The material for different components of valves shall conform to the requirements given in Table 13.



'KEJRIWAL' Ductile Iron / Cast Iron Air Relief Valve Resilient Seated



Valve Size	B (mm)	C Sq. (mm)	Suitable for main Size
15	196	118	up to 100
25	255	158	up to 100
40	290	158	up to 100

LEGEND

- | | |
|-----------------------|------------------------|
| 1. Body | 2. High Pressure Cover |
| 3. H.P. Orifice Cover | 4. H.P. Orifice Plug |
| 5. H.P. Ball (Float) | 6. Ferrule |
| 7. Gasket | |

Fig. 17 : Cross-Sectional Arrangement for Single Air Valve (Small Orifice) S1

Table 18 : Materials for body and component parts

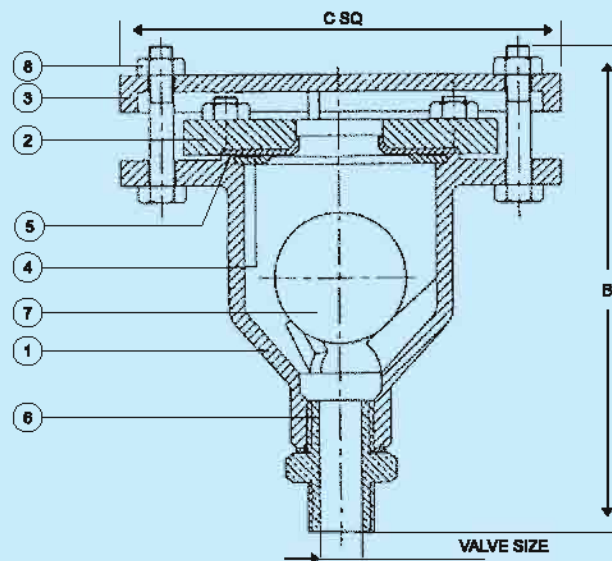
Sl. No.	Component/ Body	BASIC			ALTERNATIVE		
		Material	Ref. No IS No.	Grade or Designation	Material	Ref. No. IS No.	Grade or Designation
i.	Body, cover, valve disk, stuffing box, valve guide, cowl, gland, cap, joint support ring	Grey Cast Iron	210	FG 200	Ductile Iron	1865	450/10 500/7
ii.	Stem HTB 2	High tensile brass	320	HTB 1 or	Stainless Steel	6603	04 Cr 18 Ni 10 (AISI-304) 12 Cr. 13 (AISI-410)
iii.	Low pressure seat ring and face ring	Natural rubber	11855	—	EPDM Nitrile Rubber	—	—
iv.	High Pressure orifice	Leaded tin bronze	318	LTB 2	High Tensile Brass Stainless Steel	320 6603	HTB 2 04 Cr 18 Ni 10 (AISI-304)
v.	Stem Nut	Leaded tin bronze	318	LTB 2	High Tensile Brass	320	HTB 2
vi.	Body seat ring	Leaded tin bronze	318	LTB 2	Stainless Steel	3444	Grade 1
vii.	Bolts	Carbon Steel	1363	Class 4.6	Stainless Steel	6603	—
viii.	Nuts	Carbon Steel	1363	Class 4	Stainless Steel	6603	—
ix.	Gasket	Rubber	638	Type B	—	—	—
x.	Gland Packing	Jute/hemp	5414	Type III	—	—	—
xi.	Float (Low pressure orifice)	Timber core with valcanite coating	—	—	Stainless Steel	6603	04 Cr 18 Ni 10 (AISI-304)
xii.	Float (High pressure orifice)	Timber core with rubber coating	—	—	Stainless Steel	6603	04 Cr 18 Ni 10 (AISI-304)
xiii.	Float guide	Leaded tin bronze	318	LTB 2	High Tensile Brass	320	HTB 1

'KEJRIWAL' Ductile Iron / Cast Iron Air Relief Valve Resilient Seated



Table 19 : Body Thickness

Valve Size	Single Air Valve				Double Air Valve (DS 1&2)		Kinetic Air Valve (DK)	
	Small Office		Large Office		PN 1.0	PN 1.6	PN 1.0	PN 1.6
	PN 1.0	PN 1.6	PN 1.0	PN 1.6				
15	6	8	—	—	—	—	—	—
25	6	8	6	8	—	—	—	—
40	8	10	8	10	8	10	8	10
50	—	—	9	10	9	10	9	10
80	—	—	—	—	10	12	10	10
100	—	—	—	—	10	12	10	12
150	—	—	—	—	13	16	13	16
200	—	—	—	—	14.5	18	14.5	18



Valve Size	B (min)	C Sq. (min)	Suitable for main Size
25	202	164	up to 100
40	237	180	up to 100
50	287	180	125 to 200

LEGEND

1. Body
2. Low Pressure Cover
3. Cowl
4. Joint Support
5. L. P. Seat Ring
6. Ferrule
7. L. P. Ball (Float)
8. Bolts & Nuts

Fig. 18 : Cross-Sectional Arrangement for Single Air Valve (Large Office) S2

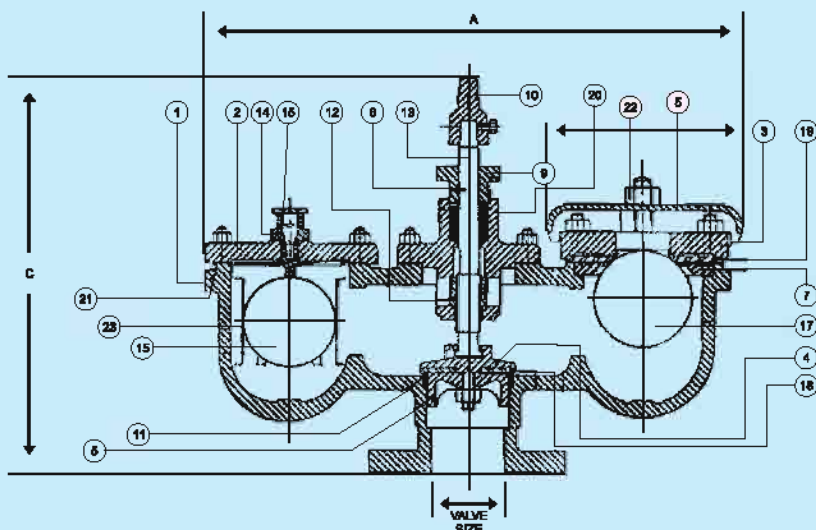
AIR RELIEF



'KEJRIWAL' Ductile Iron / Cast Iron Air Relief Valve Resilient Seated

Table 20 : Float Diameter

Valve Size	Single Air Valve		Double Air Valve		Kinetic Air Valve	
	Small Office	Large Office	Small Office	Large Office	Small Office	Large Office
15	75	40	—	—	—	—
25	100	75	—	—	—	—
40	100	75	100	75	90	55
50	100	75	100	75	100	75
80	—	—	100	100	115	100
100	—	—	125	125	125	125
150	—	—	125	200	150	200
200	—	—	140	250	150	250



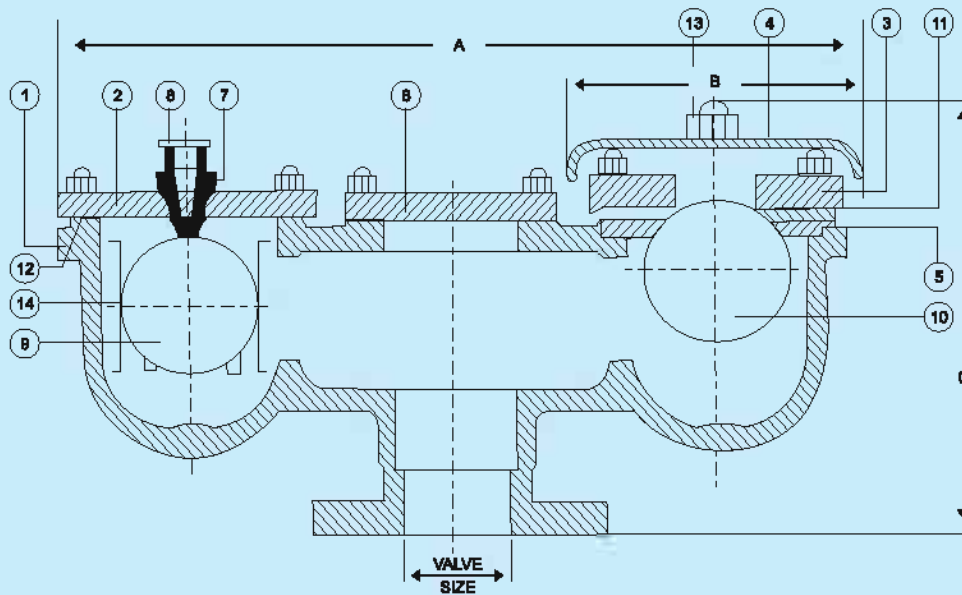
LEGEND

1. Body
2. High Pressure Cove
3. Low Pressure Cover
4. Valve
5. Valve Holder
6. Cowl
7. Joint Support Ring
8. Valve Cover
9. Gland
10. Cap
11. Seat Ring
12. Nut for Spindle
13. Spindle
14. H. P. Orifice Cover
15. H. P. Orifice plug
16. Ball for H.P. Chamber (Float)
17. Ball for L.P. Chamber (Float)
18. Valve Disc
19. L.P. Seat Ring
20. Packings
21. Gasket
22. Bolts & Nuts
23. Guide Bush

Valve Size	A (mm)	B (mm)	C (mm)	Suitable for main Size
40	442	210	371	up to 100
50	442	210	407	125 to 200
80	504	236	431	225 to 350
100	634	280	501	400 to 500
150	862	430	620	600 to 900
200	988	506	735	1000 to 1200

Fig. 19 : Cross-Sectional Arrangement for Standard Double Air Valve with in-built Isolating Valve (DS 1)

'KEJRIWAL' Ductile Iron / Cast Iron Air Relief Valve Resilient Seated



LEGEND

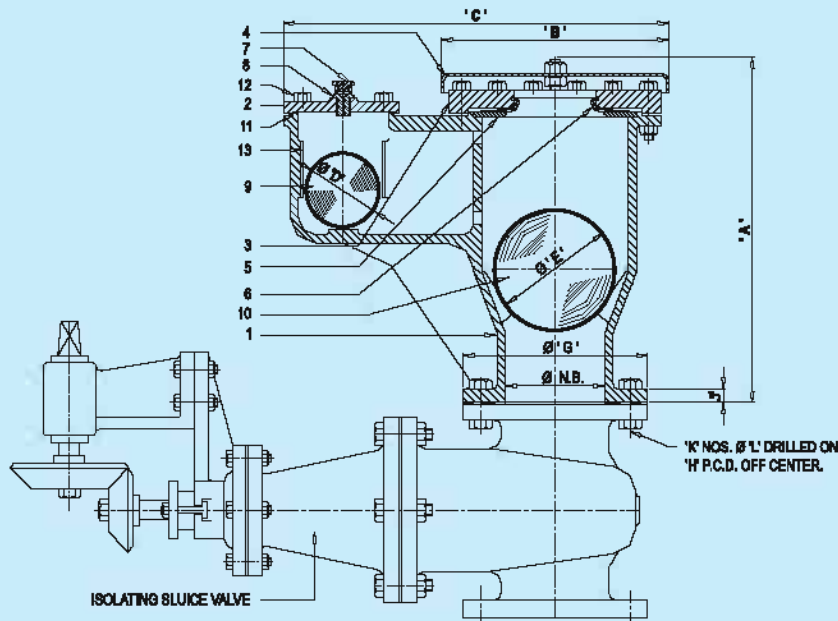
1. Body
2. High Pressure Cover
3. Low Pressure Cover
4. Cowl
5. Joint Support Ring
6. Cover
7. H. P. Orifice Cover
8. H. P. Orifice Plug
9. Ball for H.P. Chamber (Float)
10. Ball for L.P. Chamber (Float)
11. L.P. Seat Ring
12. Gasket
13. Bolts & Nuts
14. Gulde Bush

Valve Size	A (mm)	B (mm)	C (mm)	Suitable for main Size
40	442	210	224	up to 100
50	442	210	264	125 to 200
80	504	236	287	225 to 350
100	634	280	356	400 to 500
150	862	430	476	600 to 900
200	988	506	580	1000 to 1200

Fig. 20 : Cross-Sectional Arrangement for Standard Double Air Valve without Isolating Valve (DS 2)



'KEJRIWAL' Ductile Iron / Cast Iron Air Relief Valve Resilient Seated



Valve Size	A (mm)	B (mm)	C (mm)	Suitable for main Size
40	260	196	324	up to 100
50	280	211	352	125 to 200
80	305	236	373	225 to 350
100	360	280	424	400 to 500
150	487	450	674	600 to 900
200	700	506	739	1000 to 1200

LEGEND

1. Body
2. High Pressure Cover
3. Low Pressure Cover
4. Cowl
5. Joint Support Ring
6. L.P. Seat Ring
7. H. P. Orifice
8. H. P. Orifice plug
9. Ball for H.P. Chamber (Float)
10. Ball for L.P. Chamber (Float)
11. Gasket
12. Bolts & Nuts
13. Guide Bush

Fig. 21 : Cross-Sectional Arrangement for Kinetic Air Valve (DK)

Note : Sluice Valve with bevel gear is optional

Cluster Arrangement for SSE larger pipe lifeline with Double Air Valve & a common Isolating Metre Bevel Geared Sluice Valve

IS : 14845(DK)

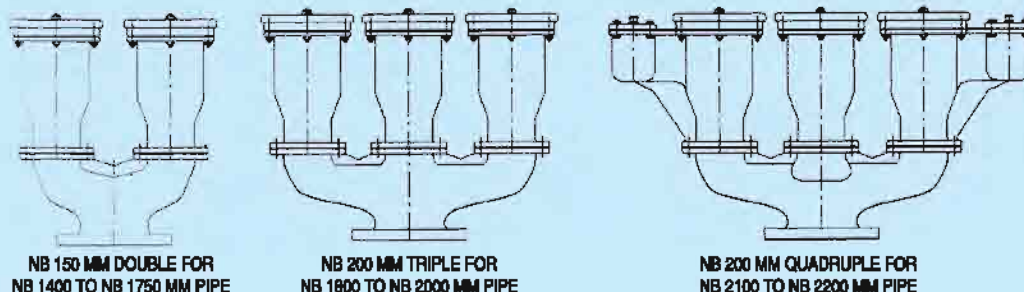
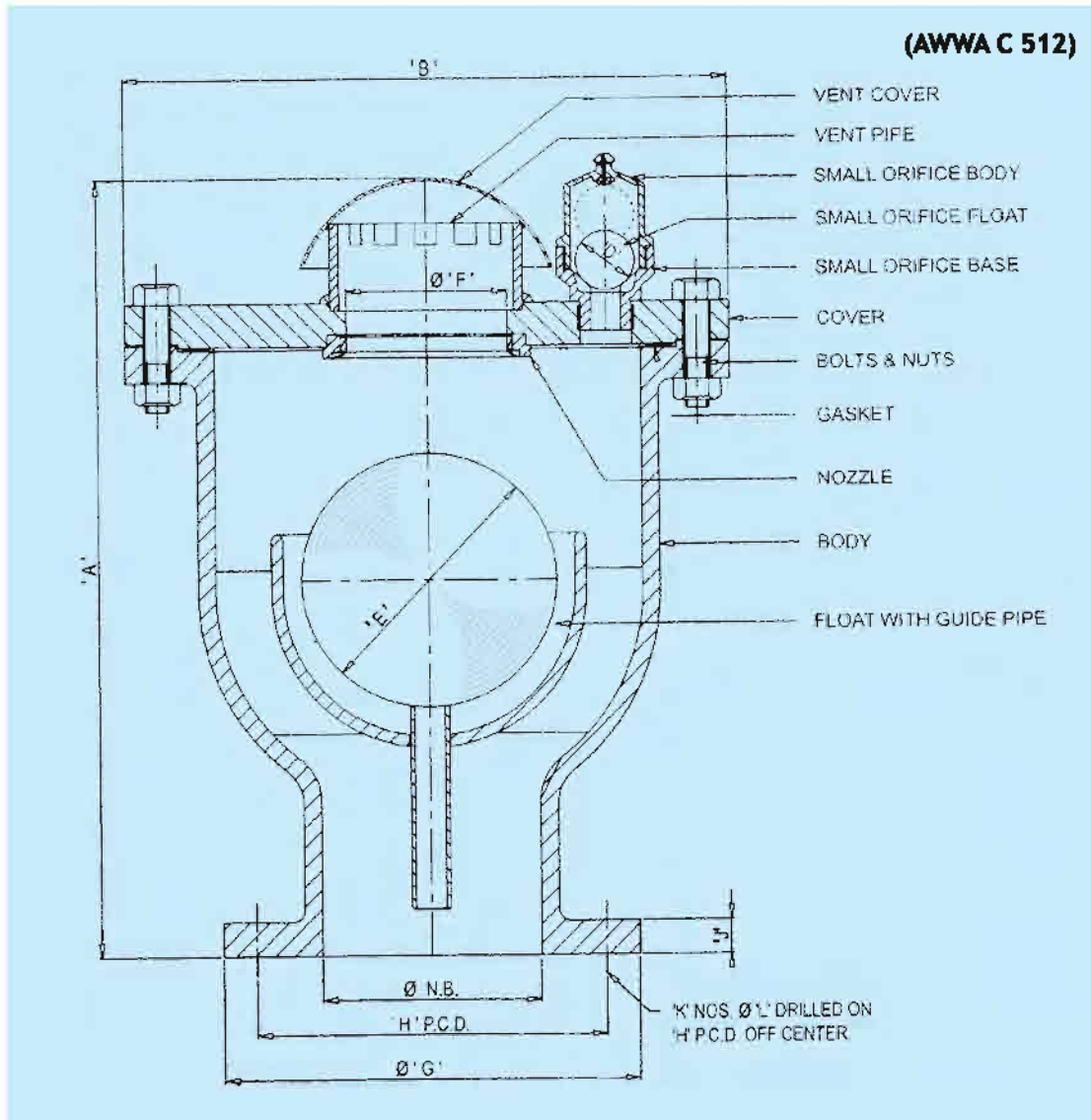


Fig. : 22

'KEJRIWAL' Tamper Proof Air Relief Valve



Size (mm)	Total Height (Approx.)	Total Width (Approx.)	Ball Dia (Float)		Large Orifice Dia	Suitable for Main Size
			HP Chamber	LP Chamber		
N.B.	A)	B	D	E	F	N.B.
50	—	—	—	—	—	Upto 200
80	—	—	—	—	—	225 to 350
100	400	360	40	90	55	400 to 500
150	450	460	50	150	90	600 to 900
200	460	480	50	200	110	1000 to 1200

Fig. : 23

AIR RELIEF



Kejriwal Castings Limited



'KEJRIWAL' Ductile Iron / Cast Iron Flanged Foot Valve with Strainer

A foot valve is generally placed at the lower end of the suction pipe of a centrifugal pump to prevent the suction pipe from emptying while the pump is at rest; consequently, when the pump is first started it does not have to exhaust the air from the suction pipe with the result that prompt starting of the pump is secured. Foot valve is particularly useful when the suction lift or vertical height of the pipe is considerable.

SWING TYPE

Swing type valves of sizes upto 150 mm shall have a single disc. Sizes exceeding 150 mm shall preferably have two discs of semi-circular type. Lift type valves are recommended upto size 100 mm only.

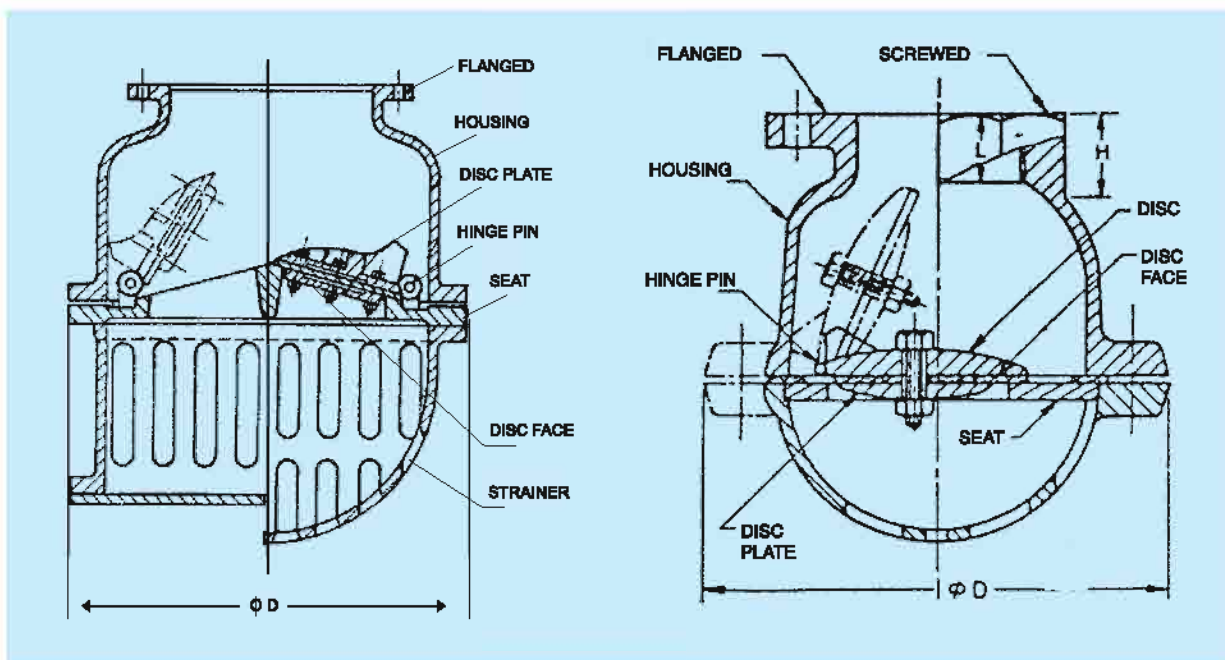


Fig. 24 : SWING TYPE
(Double Disc)

Fig. 25 : SWING TYPE Flanged / Screwed End
(with Single Disc)



'KEJRIWAL' Ductile Iron / Cast Iron Flanged Foot Valve with Strainer (Lift Type)

LIFT TYPE

Lift Type Valve are recommended upto size 100 mm only. Flange end Ductile Iron / Cast / Foot Valve with Ductile/Cast Iron/Galvanised Mild Steel Strainer and G.M. working Parts. Hydraulically tested to 16 Bar (PN-16)

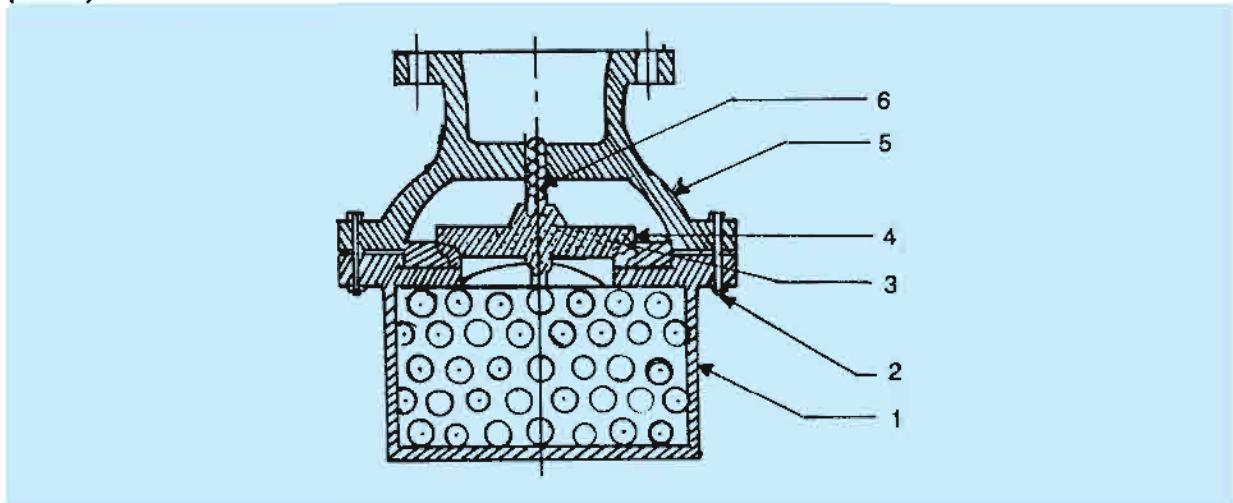


Fig. 26 : Lift Type (Rising) (Flanged End)

Table 21 : Dimensions of Strainer Holes

Nominal Size of Valve	Max. Dia of Hole (when Circular)	Max. Valve Small Dimensions of Hole (when non-circular)
25	10	10
32	10	10
40	12	12
50	12	12
65	12	12
80	12	12
100	20	16
125	20	16
150	20	16
200	22	20
250	22	20
300	25	22
350	25	22
400	28	22
450	28	22

Table 22 : Material for Component Parts

Sl. No.	Description	Materials
1.	Strainer	C.I. / S.S / MS (Galvanised)
2.	Bolt & Nut	Mild Steel
3.	Body Ring Face	G.M.
4.	Valve Ring Face	G.M /S.S/Rubber/Leather
5.	Body	C.I.
6.	Guide	Mild Steel

NOTES :

1. Ductile Iron / Cast Iron flanged foot valve is available in sizes from 25 mm to 450 mm dia with/without attached C. I. Strainer.
2. The valve is available with GM Stainless Steel, leather, Natural Rubber, Cotton Reinforced Synthetic Rubber Disc Faces.
3. Flanges are drilled to IS-1538, see Page 13, Table 8 of our catalogue for Ductile Iron / Cast Iron Pipes Fittings & Specials.
4. If nothing is specified with the purchase order normally Lift Type will be supplied upto 100 mm dia NB and Swing Type thereafter.

'KEJRIWAL' Ductile Iron / Cast Iron Double Flanged Globe Stop Valves



1. Globe stop Valves are available in 3 types / pattern
 - a. Straight Pattern Type
 - b. Angle Pattern Type
 - c. Oblique Pattern Type

Table 23 : Materials for component of Stop Valves and Stop and Check Valves

Sl. No.	COMPONENT	MATERIAL
i.	Body, Bonnet, Hand Wheel, Gland (one piece) and back seat integral	Ductile Iron / Cast Iron
ii.	Fastners, Bolts, Nut	Mild Steel
iii.	Stem	a) High Tensile Brass b) Stainless Steel
iv.	Body Sear Ring Disc Facing Ring	a) Leaded Tin Bronze b) Stainless Steel
v.	Solid disc with integral face	a) Leaded Tin Bronze b) Stainless Steel
vi.	Disc with separate face Rings	Jute and Hemp
vii.	Bonnet Gasket	Compresses Asbestos Fibre
viii.	Disc, Stem, back seat bushing, gland (two piece) yoke bush and back seat separate	a) Leaded Tin Bronze b) Stainless Steel
x.	Gland Bolting	Mild Steel

TESTING

Each Valve shall be subjected to hydrostatic test. There shall be no leakage during the test. The test pressure for body, seat and back seat test shall be as given below:

Body Tests	--	24 Kgf/cm ²
Seat Tests	--	6 Kgf/cm ²
Back Seat Test (If Specified)	--	24 Kgf/cm ²



'KEJRIWAL' Ductile Iron / Cast Iron Double Flanged Globe Stop Valves

GLOBE

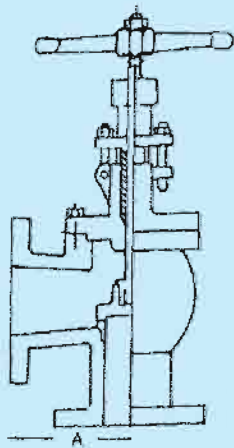


Fig. 27 : Right Angle Stop Valve

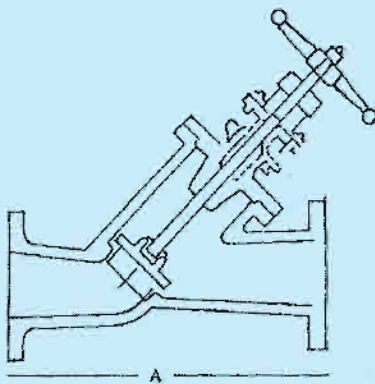


Fig. 28 : Oblique Type

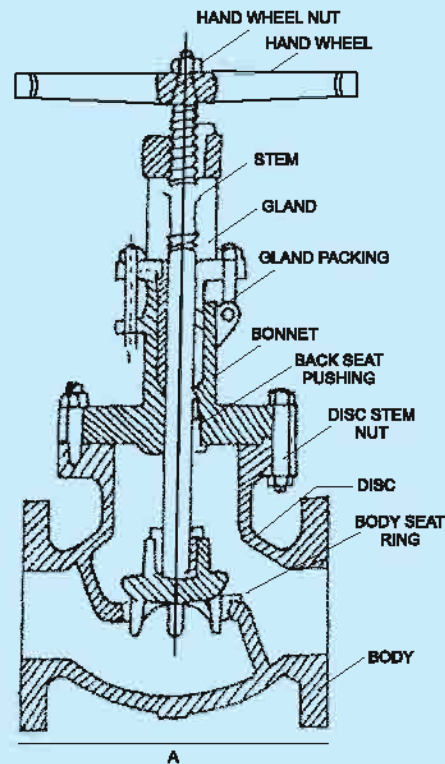


Fig. 29 : Straight Pattern

Table 24 : Dimensions of Screw Down Stop Valves & Angle Valves

Sl. No.	PARTICULARS	DIMENSIONS FOR NOMPINAL SIZE OF VALVES													
		15	20	25	32	40	50	65	80	100	125	150	200	250	300
1.	Face to face dimensions for straight pattern stop Valve A	135	150	160	180	200	280	290	310	350	400	480	600	730	850
ii.	Centre to face dimensions of angle pattern stop Valve A	90	95	100	105	115	125	145	155	175	200	225	275	325	375
iii.	Centre of waterway to top of handwheel (max.)	200	200	200	210	240	250	305	312	360	420	365	573	700	800
iv.	Dia of handwheel (min.)	100	100	120	120	140	140	160	180	200	250	320	400	400	400

NOTE : However Valves with face to face dimension confirming to G & K Catalogue are In common usage.

'KEJRIWAL' Ductile Iron / Cast Iron Double Flanged Pressure Relief Valves



Spring Loaded Pressure Relief Valves Are Of Two Types

- a. Right Angle Type
- b. Straight Through Type

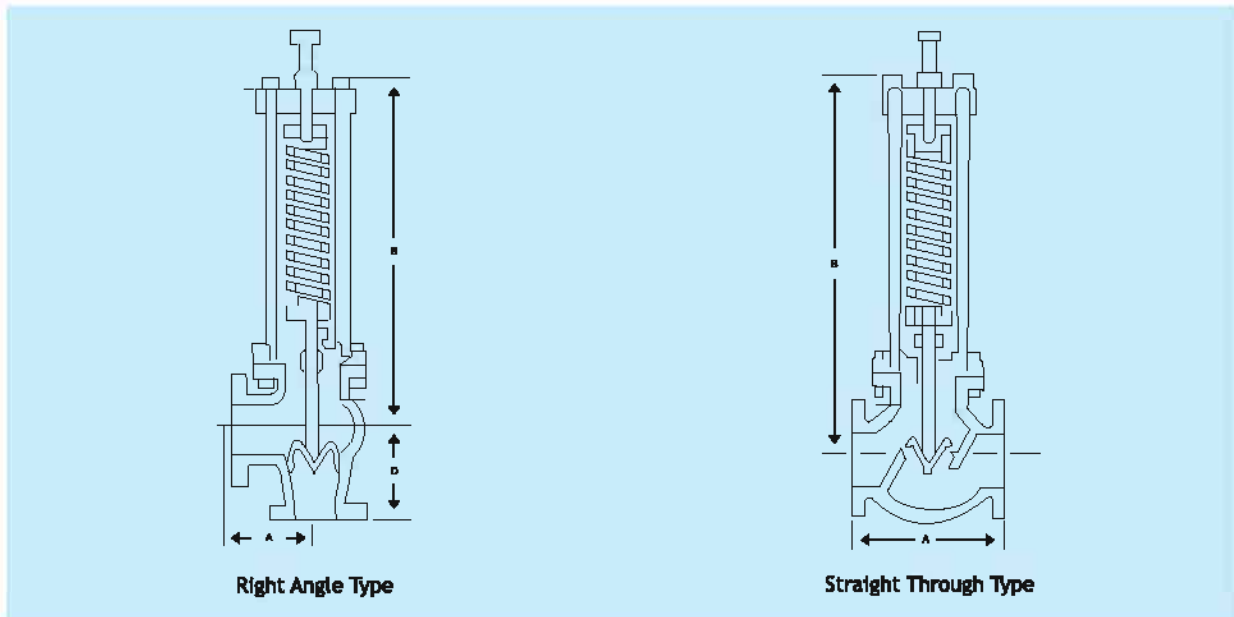


Fig. 30 : Spring Loaded Pressure Relief Valves

PRESSURE RELIEF

Table 25 : Dimensions of Pressure Relief Valves

All dimensions are in inches

Valve Size	Fig. H. 20					Fig. H. 20a				
	A	B	C	D	App Wt. (lb)	A	B	C	App Wt. (lb)	Suitable for Mains in dia
1½	4½	15¾	6¼	3¾	48	9	16½	6¼	18	3 - 6
2	4¾	15¾	7	4¼	63	9½	16¾	7	63	7 - 8
2½	5	19½	7½	5	85	10	20¾	7½	85	9 - 10
3	5½	19¾	8	5½	96	11	20¾	8	96	12 - 14
4	7	25¾	9¼	6¼	162	14	27½	9¼	162	15 - 16
5	8	26¾	11¼	7¼	265	16	29¾	11¼	265	18 - 21
6	9	28¾	12¼	8	330	18	30¾	12¼	330	22 - 27
8	10	42	14¼	10	610	20	44¼	14¼	610	28 - 33
9	11	44¼	15¼	11	840	22	46½	15¾	840	34 - 38
10	11½	48¾	16¼	12	1050	23	50½	16¾	1050	39 - 42
12	13	50	19½	14	1400	26	52¼	19½	1400	45 - 48

NOTE : The above dimensions may vary due to constant changes & upgradation of designs & patterns.



'KEJRIWAL' Ductile Iron / Cast Iron Double Flange Diaphragm Valves

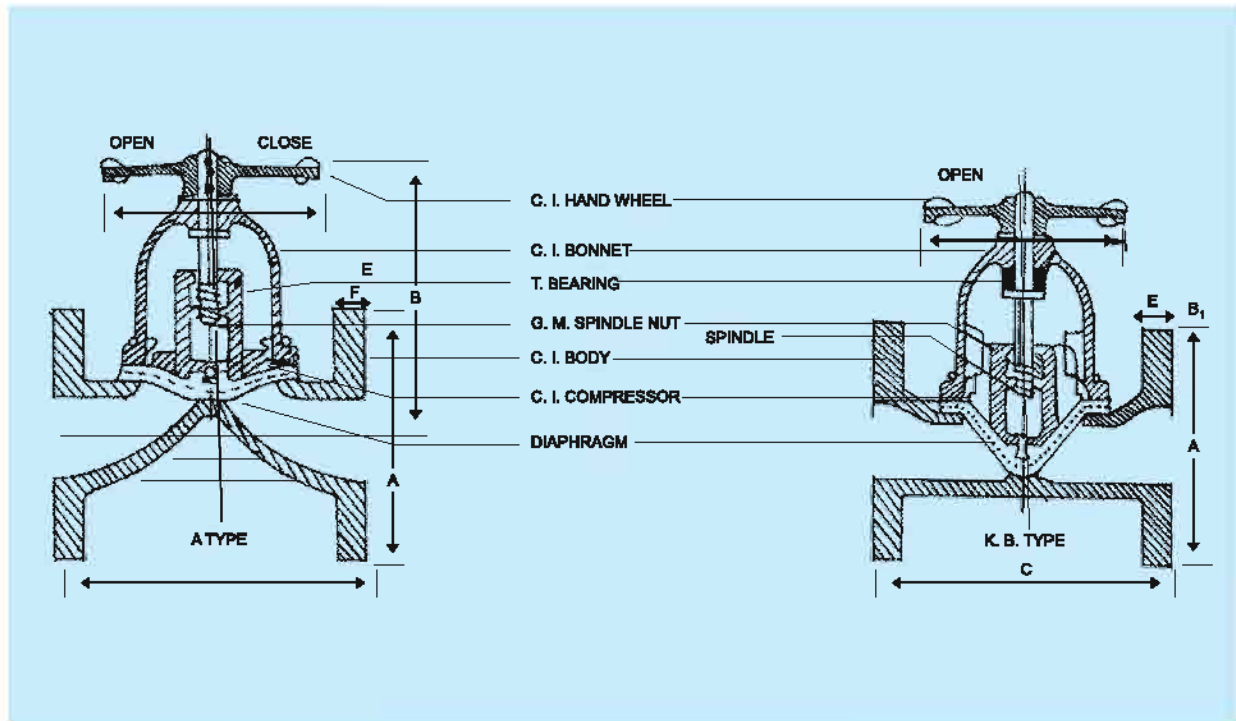


Fig. 31 : Diaphragm Valves

Table 26 : Dimensions of Diaphragm Valves

All dimensions are in inches

Size	1/2	3/4	1	1 1/2	1 1/2	2	2 1/2	3	4	5	6	8	10	12
A	2 1/4	2 3/4	3 1/4	3 3/4	4 1/4	5 1/4	7 1/2	7 5/8	9 1/2	12 1/4	12 1/4	19	23	27 1/2
B	2 15/16	3 5/8	4 1/2	4	5 15/16	7 1/8	8 7/16	9 5/8	11 7/16	13 1/16	14 15/16	20 1/4	23	26 3/4
B1	3 1/2	—	4 3/4	4 1/4	4 3/4	—	7 1/8	9 5/8	10 1/2	12	14 3/4	16 1/8	22	25
C	4	4 1/8	5	5 3/4	6 1/4	7 1/2	8 1/2	10	12	14	16	20 1/2	25	29 1/2
D	3	4	4 1/2	9 3/4	5 1/4	6	6 1/2	7 1/4	8 1/2	10	11	13 1/4	16	18
E	1/2	1/2	1/2	5/8	5/8	3/4	3/4	3/4	7/8	7/8	7/8	1	1	1 1/8
TESTED HD PSL	250	250	250	250	150	150	150	150	125	125	100	75	50lbs	50lbs

DIAPHRAGM



'KEJRIWAL' Ductile Iron / Cast Iron Butterfly Valves



Butterfly Valves are available in two types depending on end connections :

1. Double Flanged Type
2. Wafer Type

OPERATION

Depending upon mode of operation Valves may be supplied as follows :

1. Lever Operated
2. Worm Gear Operated

Part No.	Description	Materials
1.	Body	Cast Iron/Ductile Iron
2.	Disc	Cast Iron/Ductile Iron
3.	Shaft	Stainless Steel AISI-410/304
4.	Lever	C.I. / M.S./ D.I.
5.	Seating	Nitrile Rubber / EPDM
6.	'O' Ring Shaft Seal	Nitrile Rubber
7.	Gear Unit	Cast Iron
8.	Pin	Stainless Steel

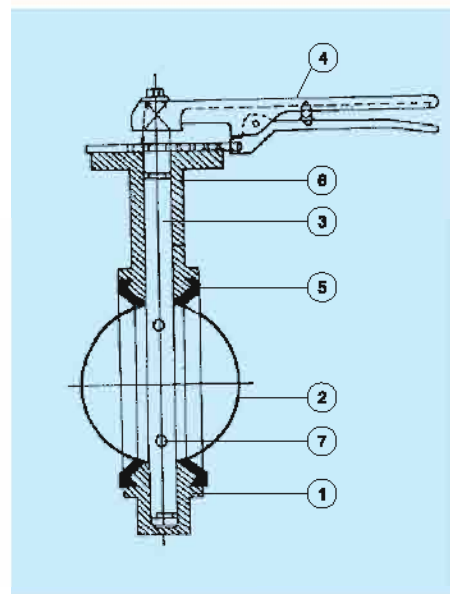


Fig. 32 : Wafer Type (50 - 200 mm)

Hyd. Pressure	Body	Seat
PN-1.0	15 Kg/cm ²	10 Kg/cm ²
PN-1.6	24 Kg/cm ²	16 Kg/cm ²
PN-2.5	40 Kg/cm ²	25 Kg/cm ²
PN-4.0	60 Kg/cm ²	40 Kg/cm ²

Part No.	Description	Materials
1.	Body	Cast Iron/Ductile Iron
2.	Disc	Cast Iron/Ductile Iron
3.	Shaft	Stainless Steel AISI-410
4.	Body Seat	Stainless Steel AISI-304
5.	Seal	Rubber EPDN/Nitrile
6.	Seal Retainer	Stainless Steel AISI-304
7.	Bush	G.M.
8.	Bush	G.M.
9.	Lock Washer	Stainless Steel
10.	End Cover	M.S. IS-226
11.	'U' Cup Seal	Rubber
12.	Seal Retainer	G.M.
13.	Cover	M.S.
14.	Gear Box Unit	C.I. / M.S./DI
15.	Hand Wheel	M.S./CI/DI

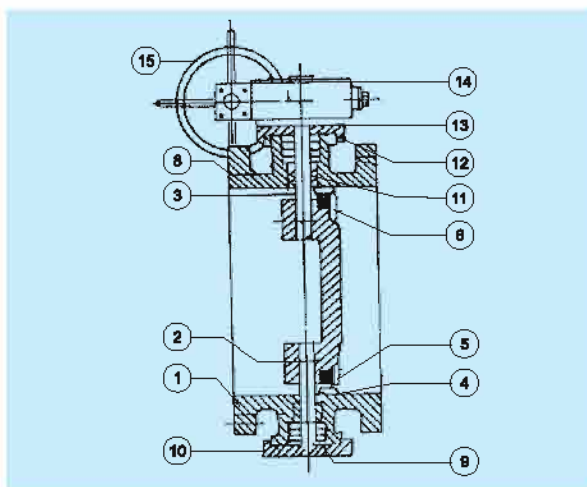


Fig. 33 : Double Flanged Type (50 - 1600 mm)

BUTTERFLY



'KEJRIWAL' Ductile Iron / Cast Iron Butterfly Valves

Table 27 : Face to Face Dimensions

Nominal Size DN	Double Flanged Short	Double Flanged Long	Wafer Short	Wafer Medium	Wafer Long	Wafer
	Face-to-Face dimensions for nominal pressure		Face-to-Face dimensions for nominal pressure			PN 4.0 Class 300
	PN 1.0/PN 1.6 PN 2.5 Class 125/150	PN 4.0 Class 300	PN 1.0/PN 1.6 PN 2.5 Class 125/150	PN 1.0 / PN 1.6 PN 2.5 Class 150	PN 1.0/PN 1.6/ PN 2.5 Class 125/150	
40	106	140	33	--	--	--
50	108	150	43	--	--	--
65	112	170	46	--	--	--
80	114	180	46	--	64	49
100	127	190	52	--	64	56
125	140	200	56	--	70	64
150	140	210	56	--	78	70
200	152	230	60	--	89	71
250	165	250	68	--	114	76
300	178	270	78	--	114	83
350	190	290	--	92	127	127
400	216	310	--	102	140	140
450	222	330	--	114	152	160
500	229	350	--	127	152	170
600	267	390	--	154	178	200
700	292	430	--	--	229	--
800	318	470	--	--	241	--
900	330	510	--	--	241	--
1000	410	550	--	--	300	--
1200	470	630	--	--	350	--
1400	530	710	--	--	390	--
1600	600	790	--	--	440	--
1800	670	870	--	--	490	--
2000	760	950	--	--	540	--

NOTES :

1. Wafer type Valves may not be available in all combinations of materials and face to face dimensions.
2. Flange dimensions are as per IS-1538/IS-9523/EN-1092/ISO-7005/BS-4504

DIAPHRAGM



'KEJRIWAL' Wall Thimble Mounted Sluice Gate

Single faced SLUICE GATE are extensively used in water supply, waste water applications, water treatment, intake wells, pumping stations, drainage works, irrigation canals, effluent treatment, sewage treatment system, flood control, thermal power station and water cooling systems for controlling the flow or shut off. There are of three types, one where the gate with spigot back frame is directly mounted on the wall, type two where mounting on the wall is through wall thimble and type three where mounting on R.C.C. channel through channel type frame.

CONSTRUCTION UNDER SPECIFICATION IS:3042

This specification is suitable for seating head pressure only. The gates are single machined metal faces SLUICE GATE (200 mm to 1200 mm). Gates are in three types in shape square, circular/round and rectangular, spindle of the gate are also two types one rising type other non-rising type, Mounting of the gate are spigot back wall mounted. Rating of the gate are Class 1(6 meter water column) and Class II (15 meter water column).

CONSTRUCTION UNDER SPECIFICATION IS:13349-1992 & AWWA C 501-1992

This specification is suitable for both seating & unseating head pressure. The gates are single machined metal faces and machined adjustable wedging devices. SLUICE GATE (300 mm to 2500 mm). Gates are in three types in opening shape square, circular/round & rectangular. They may be of the conventional-closure or flush-bottom-closure type. Spindle of the gate are two types one rising spindle other non-rising type. Rating of the gate are Class I (5 meter water column) and Class II (5 meter to 10 meter water column) & Class III (10 meter to 15 meter water column). The gates mounting on the wall is through thimble an accessory which is first embedded in the wall and its front flange being flush with the face of wall. The gate frame having machined back flanged is mounted on thimble flange, with a gasket in between the flanges, and fastened to it with the help of studs.

GUIDE LINE FOR SELECTION OF SLUICE GATES & FLAP GATES

Sl.No.	Application	Suitable water Head	Mounting	Specification
1	For isolation of flow in and out of a closed conduit	Seating/On-Seating head	Spigot back wall mounted	IS:3042
2	For isolation of flow in and out of a closed conduit	Seating/on-seating & Unseating/off-seating water head	Flange back face wall thimble mounted	IS:13349, AWWA C 501 / AWWA C 560, BS:7775
3	For isolation of flow in and out of an open channel	Seating/On-seating water head	Channel side wall mounted	AWWA C 513
4	For modulation of flow in and out of a closed conduit	Seating/on-seating & Unseating/off-seating water head	Flange back face wall thimble mounted	IS:13349, AWWA C 501 / AWWA C 560, BS:7775
5	For drainage outfall out of a closed conduit	Unseating/off-seating water head	Flange back face wall thimble mounted	

Above applications cover most general uses. For any other application and installation requirement needs a different type of gate as mentioned above. Please feel free to contact KEJRIWAL with your actual problem, application and specification.

SLUICE GATE



'KEJRIWAL' Wall Thimble Mounted Sluice Gate

Salient Features

OPTIONAL FEATURES

- | | | |
|--------------------------------------|---|---|
| Position Indicator | : | To observe the actual opening position of the shutter inside the frame. |
| Stem Muff Coupling | : | To couple/connect with two nos. one end stem/extension stem for rising spindle sluice gates. |
| Stem Adaptor | : | To couple/connect with two nos. one end non-rising stem/extension stem for sluice gates. |
| Adjustable Stem Guide Bracket | : | To avoid buckling under compression or from lateral thrust by debris or solids. It is acting as intermediate support. |
| Foot Plate Wall Bracket | : | To support headstock in case civil platform is not available for mounting of headstock. The bracket is grouted on the vertical face of the civil wall. |
| Offset Centre Piller | : | The bracket is provided to install stem nut and handwheel or headstock where the civil platform is not available. Bracket is grouted on the horizontal face of platform. |
| Universal Coupling | : | For joining two straight length of stem in different planes or centre-line and for transmission of torsion loads only. |
| Stop Nut | : | Stop nut with set screw on rising stem of manually operated sluice gates to prevent over travel and chances of damage to wedges block. |
| Thrust Ball Bearing | : | It is placed at the both end of stem collar or stem nut collar to reduce the rotating torque. |
| Stem Protector | : | The stem protector/pipe hood is provided on top of the floor stand, gear operator or electric actuator to protect the threaded portion of rising spindle sluice gate. |
| Handwheel Locking | : | Handwheel/Handlever locking arrangement is provided to prevent unauthorised operation. |
| Extension Stem | : | Extension stem is used where the distance between centre line of waterway to top of the operating platform is greater than gate size. One or more nos. extension spindle may be provided. Generally length of single piece extension spindle are not more than 4 meter. |
| Floor Stand/Headstock | : | To operate the gate from floor. |
| Anchor Bolt | : | L or Y Shape anchor bolts are used to fixing the gate frame, stem guide bracket or headstock. |
| Position Limit Switch | : | To receive signal on control panel. |
| Fixed Centre Stem Guide | : | It is provided where the distance between centre line of stem and the face of the wall is less than 175 min. These are directly erected on the face of the wall through anchor bolt. |

Materials of Construction for Spigot End, Thimble Mounted, Flange Back, Flat Back Frame Sluice Gate



Sl.No.	Component	Preferred Material	Alternative Material
1	Frame, Shutter/Door, Wall Thimble, Wedge bracket Headstock, Guide bracket Wedging Device, Flush	Grey Cast Iron, IS:210-1993, Grade-FG 200 220, 260 Cast Iron : BS EN:1561, Grade EN: GJL 200. Cast Iron, ASTM A 126, Grade Class B	Spheroidal Graphite Iron, IS:1865-2000, Grade-500/77 or 400/12, Cast Steel, IS:1030, Gr. 230-450W or ASTM A 216, Grade-WCB Fabricated Mild Steel, IS:2062, or Steel IS:2002
2.	Wages, Wage Facings, Sealing faces, Stem nut	Leaded Tin Bronze, IS:318-1981, Grade-LT B 1 or 2, Leaded Gunmetal BS:1400, Grade-LG 2. Naval Brass IS:291, Grade-1 or 2. Phosphor Bronze, ASTM N21, Gr. CA-C46200, C48200. Stainless Steel ASTS A 276/240, Gr.-304, 316, 410	Alloy Steel, IS:3444, Grade-I/Grade 4/ Grade-10, Stainless Steel - IS:6603, Grade-04 Cr18Ni10, Stainless Steel:AISI:304 or Stainless Steel, AISI:316, Stainless Steel, BS:970, Type 304, 410, 316
3.	Resilient rubber seal Flush bottom seal	Natural Rubber, IS:11855 EPDM Rubber, ASTM D 2000 Neoprene Rubber, ASTM D 2000	Nitrile Rubber/Dexine
4.	Rubber seal retainer strip	Mild Steel, IS:2062. Stainless Steel: ASTM A 276/240 Gr. 304, 316, 410	Spheroidal Graphite from IS:1865-2000, Grade 500/77 or 400/12. Stainless Steel BS:970, Type 304, 410,316
5	Stem/Spindle, Extension Stem Muff Coupling	Mild Steel, IS:2062, Grade A, Stainless Steel ASTM A 276/240, Gr. 304, 316,410 Stainless Steel, AISI:410, AISI:304, AISI:316	Stainless Steel, BS:970, Part I
6.	Fasteners & Studs Muff Couplings	Mild Steel, IS:2062, Grade A Carbon Steel, IS:1363, (Part 1 & 3), Class-4.6 & 4, Stainless Steel, AISI:410, AISI : 304, AISI:316	Stainless Steel BS:970, Part I, Type 304, 410,316
7	Anchor Bolts	Mild Steel, IS:2062, Grade - A Carbon Steel, IS:1363, (Part 1&3) Class 4.6 & 4 Stainless Steel, AISI:410, AISI:304, AISI:316.	Stainless Steel, BS:970, Part I, Type 304, 410,316
8	Yoke/Channel	Mild Steel, IS:2062, Grade-A Grey Cast Iron, IS:210-1993, Grade:FG 200, 220, 260. Stainless Steel, ASTM A 276/240, Gr. 304, 316, 410	Grey Cast Iron, IS:210-1993, Grade - Flake Graphite 150 or 300, Stainless, BS:970, Part I Type 304, 410, 316

SLUICE GATE



Erection Details of Thimble Mounted Flange Back Frame Rising Stem Sluice Gate fitted with Adjustable Centre Stem Guide Bracket

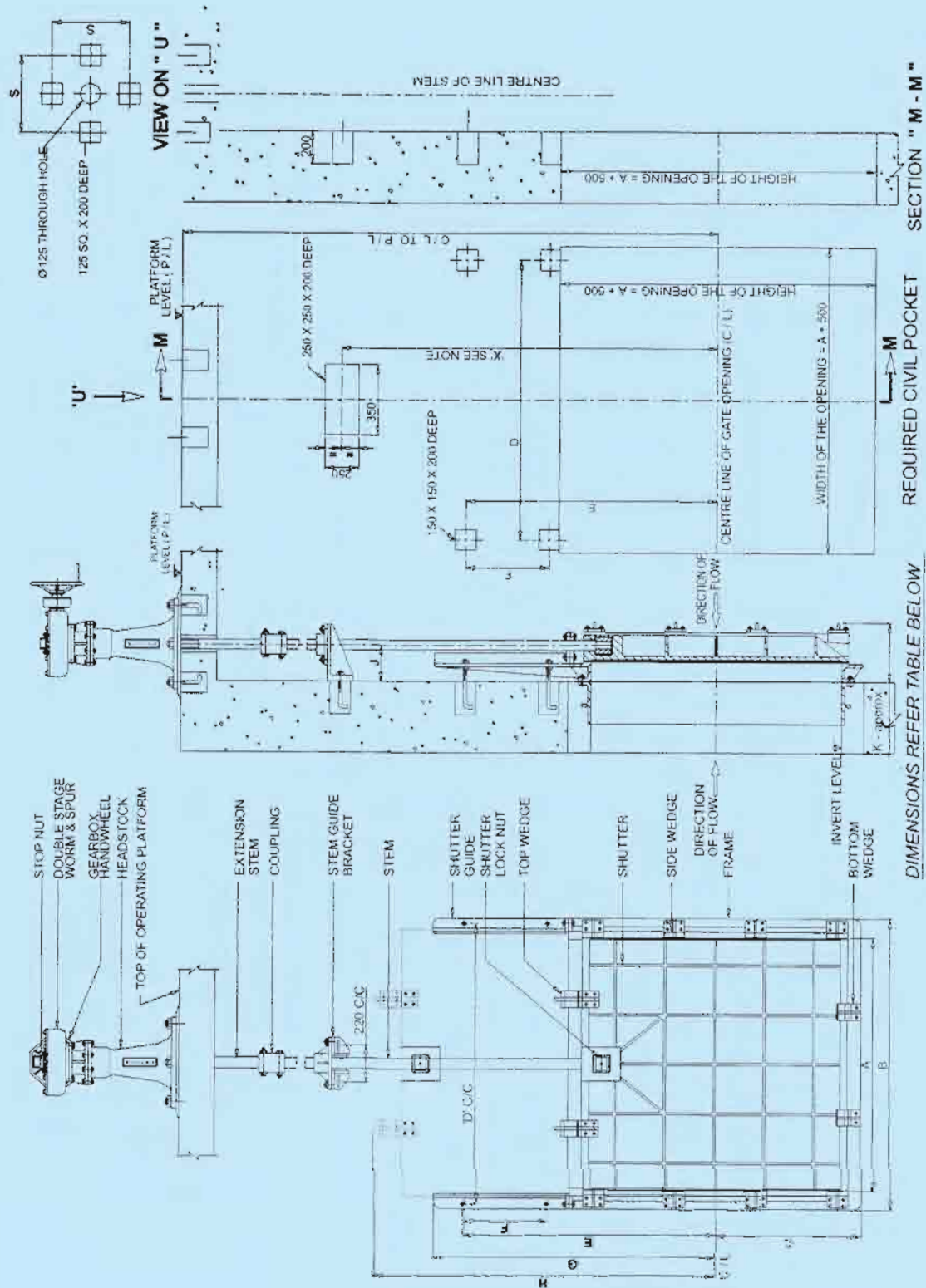
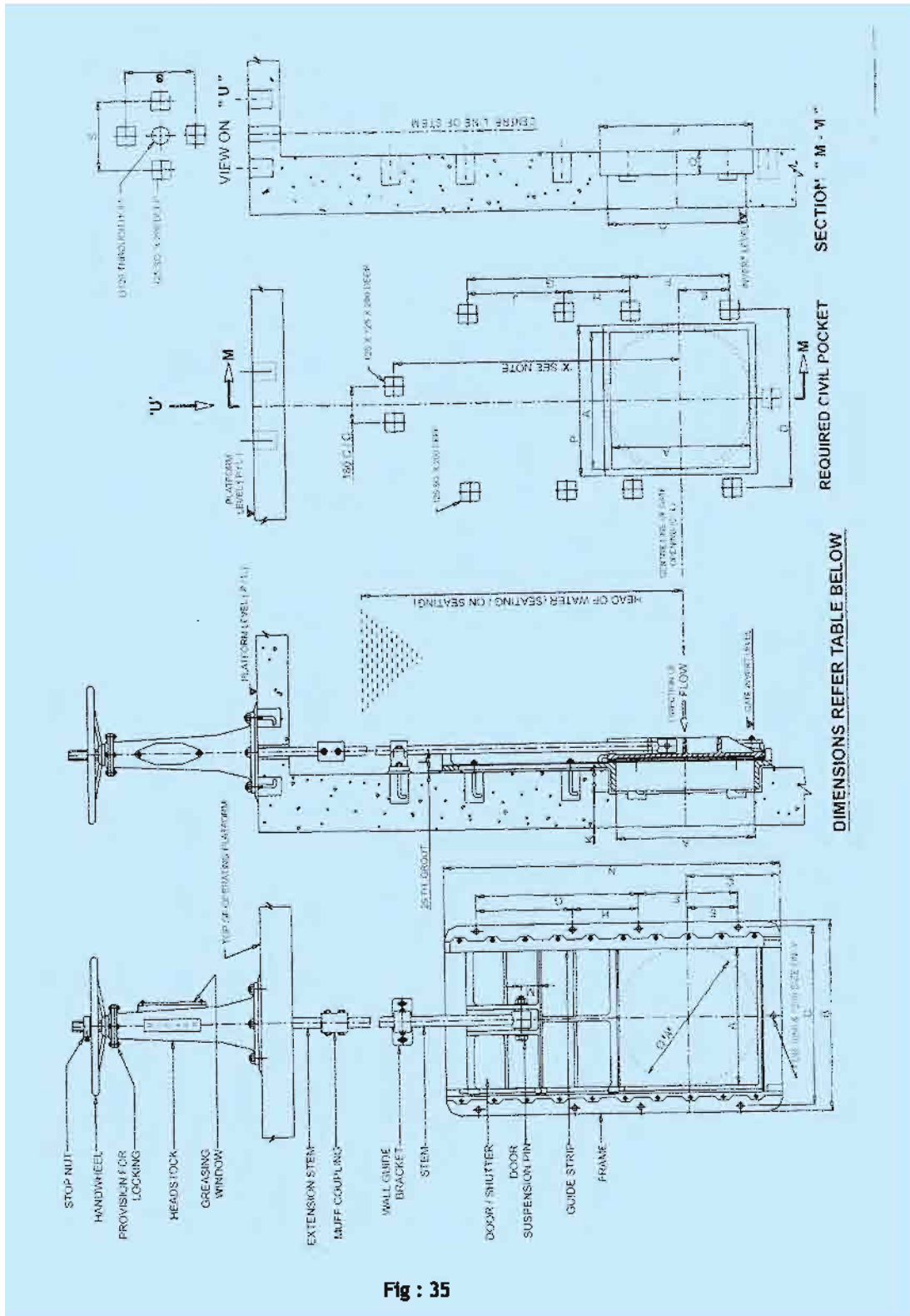


Fig : 34

SLUICE GATE

Erection Details of Spigot Back Frame Sluice Gate as per IS:3042-1965 (RISING STEM FITTED WITH FIXED CENTRE STEM GUIDE BRACKET)



SLUICE GATE





'KEJRIWAL' Cast Iron / Ductile Iron Swing Check Type Flap Gate Valve

CHARACTERISTICS FEATURES

- LEAK PROOF SEALING
- TROUBLE FREE SERVICE
- LONG LIFE SERVICE
- LOW MAINTAINENCE
- ROBUST CONSTRUCTION
- EASY INSTALLATION
- INTER CHANGEABLE PARTS
- EASY MAINTAINENCE

Kejriwal Cast Iron / Ductile Iron Flap Gate Valves or Flap Valves are used for:

1. Allowing gravity flow of Sewage water / Treated / Un-Treated water from internal Pipes to River / Canal / Water Body / Sea.
2. It prevents back flow of water from the River / Canal / Water Body / Sea into the pipeline or internal channels.

It is one way flow or Non-Return Reflux type of valve but fitted at the end of a pipeline / canal / drain channel.

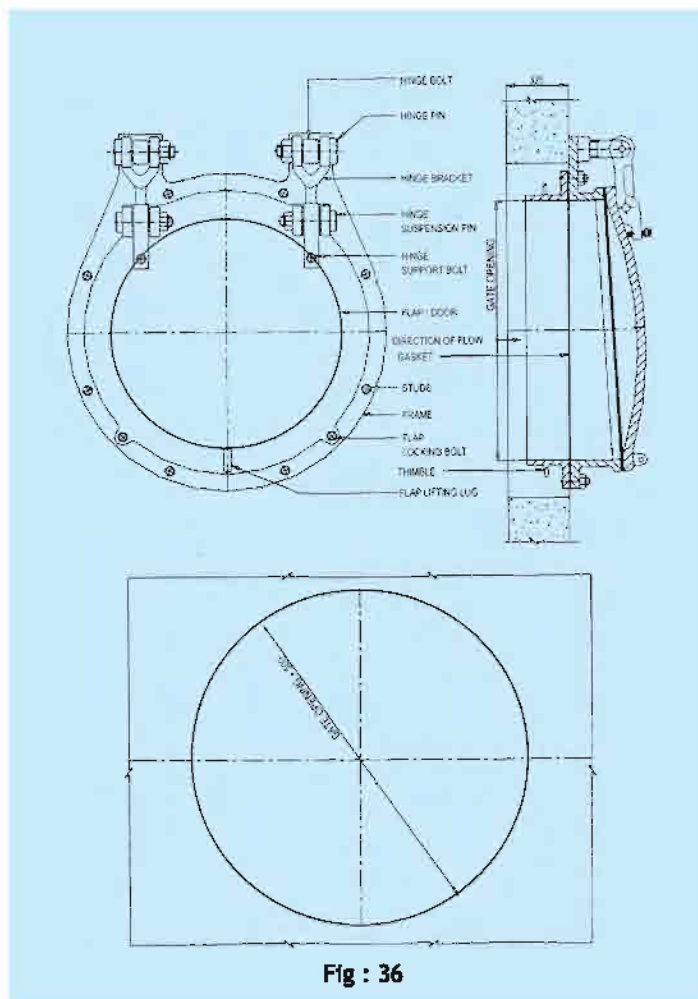


Fig : 36

Size (mm)	Ends	Working Parts of Flap Valve		
100 mm dia to 3000 mm dia	1. Flanged or 2. Thimble Mounted	<table border="0"> <tr> <td> 1. Metal a. GM-LTB b. Brass c. Stainless Steel 2. Resilient a. Natural Rubber b. EPDM c. SBR </td> <td style="text-align: center; vertical-align: middle;"> OR Combination of Both </td> </tr> </table>	1. Metal a. GM-LTB b. Brass c. Stainless Steel 2. Resilient a. Natural Rubber b. EPDM c. SBR	OR Combination of Both
1. Metal a. GM-LTB b. Brass c. Stainless Steel 2. Resilient a. Natural Rubber b. EPDM c. SBR	OR Combination of Both			

Above sketch and dimensions are in general guidance purpose only. For more details, G.A. drawings along with materials specifications can be furnished on request.

- Notes: 1. All dimensions are in millimeter
 2. A = Shape of gate opening is square or circular.
 In the sketch of FLAP GATE VALVE is shown circular opening





EXTERNAL COATINGS / INTERNAL LININGS

Kejriwal products are available with multi coating options namely :

Bituminous Paint & Zinc Primer/Zinc Metallisation

- **Liquid Epoxy Painting**
- **Fusion Bonded Epoxy Powder Coating**
- **Rilsan Coating**
- **Poly Urethane Coating**

Bituminous Paint & Zinc Primer Zinc Metallisation

As a normal course, all Valves are spray painted with a coat of zinc rich primer/zinc sprayed / metallised and black bituminous paint.

Liquid Epoxy Painting

Liquid Epoxy Spray Painting can be done on all Valves for superior finish and excellent corrosion resistance against sea water and others.

Fusion Bonded Epoxy Powder Coating (F.B.E.)

Electrostatic fusion bonded epoxy powder coating can be done on all Valves for Ultra Superior finish and excellent corrosion resistance against sea water and mild acid alkeline solutions.

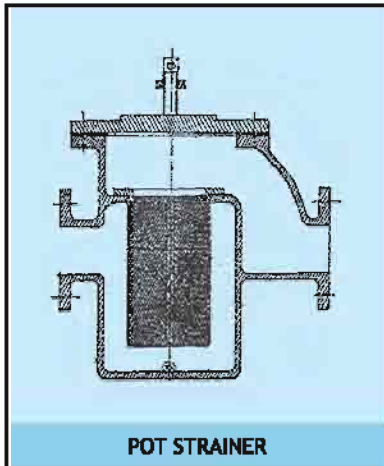
Rilsan Coating

We have capacity and arrangement for Rilsan coating to be done if required by clients on all Valves.

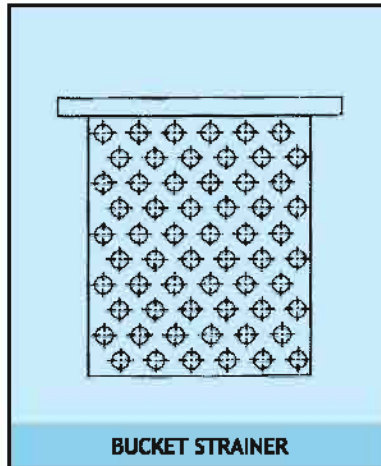
Poly Urathene Coating (P.U.)

Valves can be coated with Poly Urathene coating from 300 to 1000 microns as required.

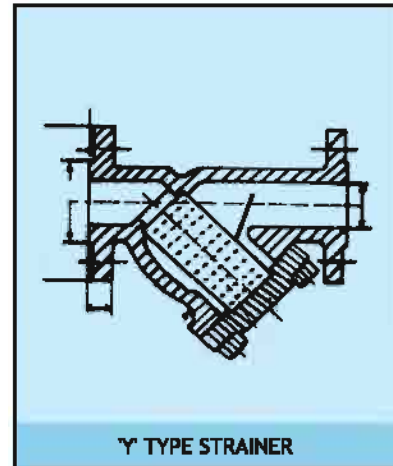




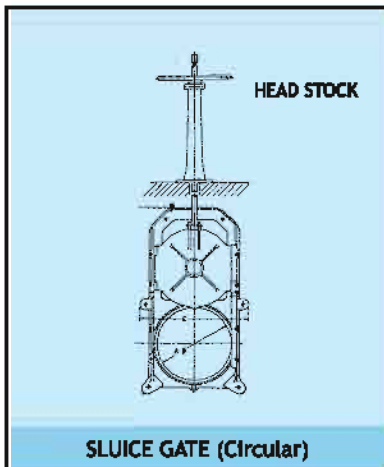
POT STRAINER



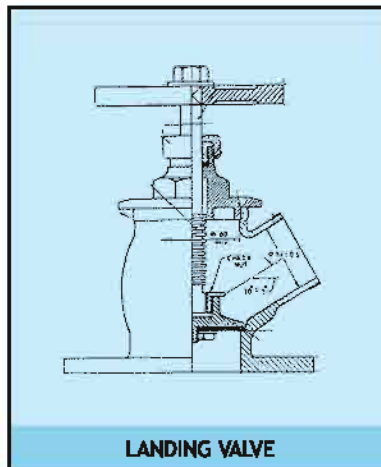
BUCKET STRAINER



Y TYPE STRAINER



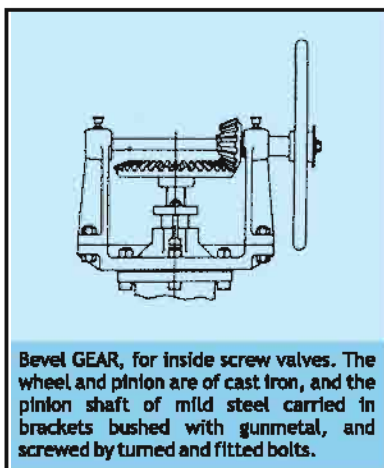
SLUICE GATE (Circular)



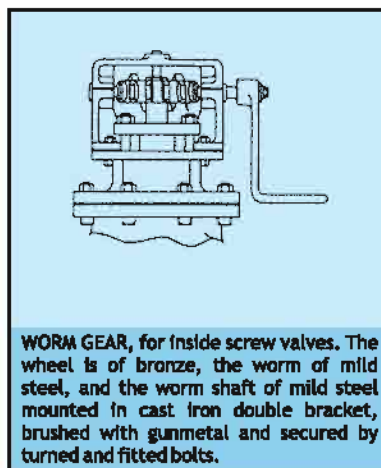
LANDING VALVE



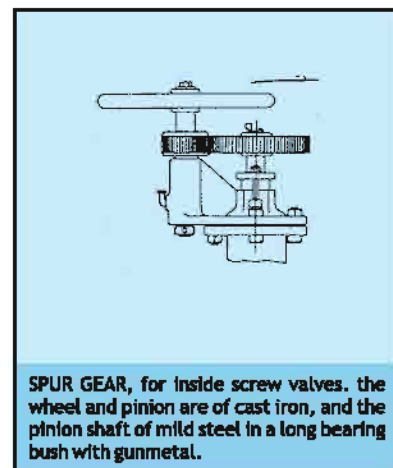
Cast iron sproket wheel for chain operation. The Chain guide, as shown, is recommended.



Bevel GEAR, for inside screw valves. The wheel and pinion are of cast iron, and the pinion shaft of mild steel carried in brackets bushed with gunmetal, and screwed by turned and fitted bolts.



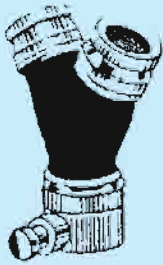
WORM GEAR, for inside screw valves. The wheel is of bronze, the worm of mild steel, and the worm shaft of mild steel mounted in cast iron double bracket, brushed with gunmetal and secured by turned and fitted bolts.



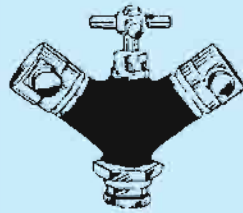
SPUR GEAR, for inside screw valves. the wheel and pinion are of cast iron, and the pinion shaft of mild steel in a long bearing bush with gunmetal.



Fire Fighting Equipments



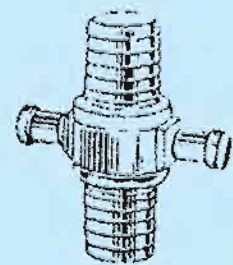
COLLECTING



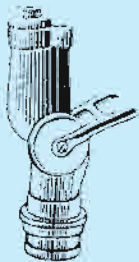
DIVING WITH CONTROL



DIVIDING



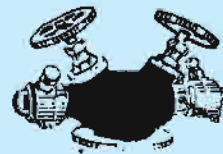
**INSTANTANEOUS PATTERN
COUPLING**



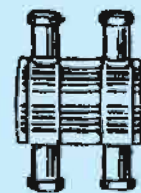
FOG NOZZLE



DOUBLE MALE



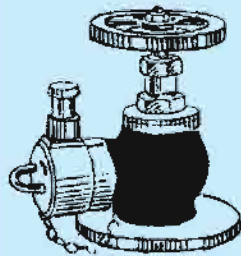
DOUBLE HEADED



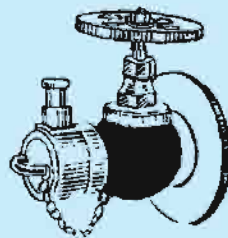
DOUBLE FEMALE



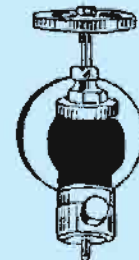
BLANK CAP MALE



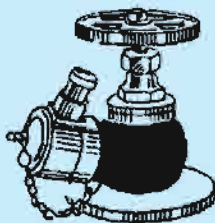
STRAIGHT WAY



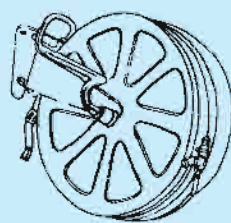
WHEEL VALVE PATTERN



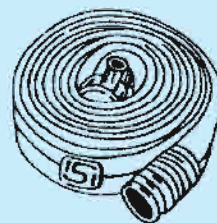
WALL DOWNWARD



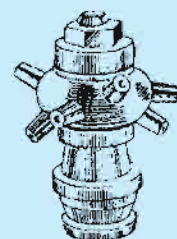
OBLIQUE TYPE



SWINGING HOSE REEL

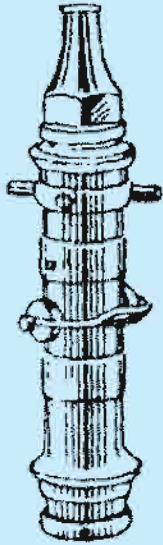


HOSE PIPE



REVOLVING

Fire Fighting Equipments



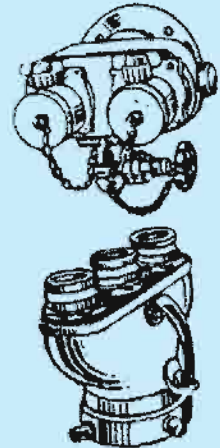
HAND OPERATED



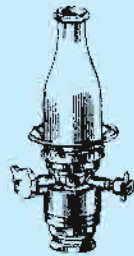
NAVY TYPE (DIFFUSER)



TRIPLE PURPOSE (DIFFUSER)



SUCTION COLLECTION HEADS



**SUPER JET
WATER MONITOR**



FIRE BUCKET



**LONG GUNMETAL
(BRANCH TYPE)**



**SHORT GUNMETAL
(BRANCH TYPE)**



HOSE BOX



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NUTS, BOLTS WASHERS RUBBER GASKETS, ADDITIONAL STEELS FLANGES MAY ALSO BE SUPPLIED AT EXTRA COST SUITABLE FOR OUR PIPES, FITTINGS, SPECIALS AND VALVES PRODUCT RANGE