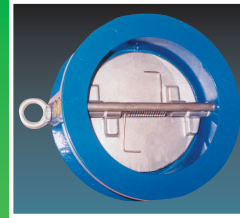




Butterfly Valves Duo-Check Valves Y-Strainers

www.ancvalve.com



ARTESIAN

ISO9001/CE/ certified manufacturer

Model No.



Replaceable Rubber Seated Butterfly Valve

SRS 710 / Wafer Type	6
711 / Lug Type	8
712 / U-section Type	10



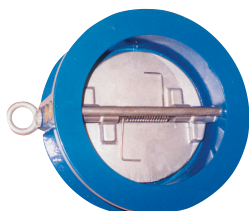
Vulcanized Rubber Seated Butterfly Valve

SRS 710V / Wafer Type	12
711V / Lug Type	13
712V / U-section Type	14



PTFE seated Butterfly Valve

SRS 740 / Wafer Type	25
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Duo-Check Valve

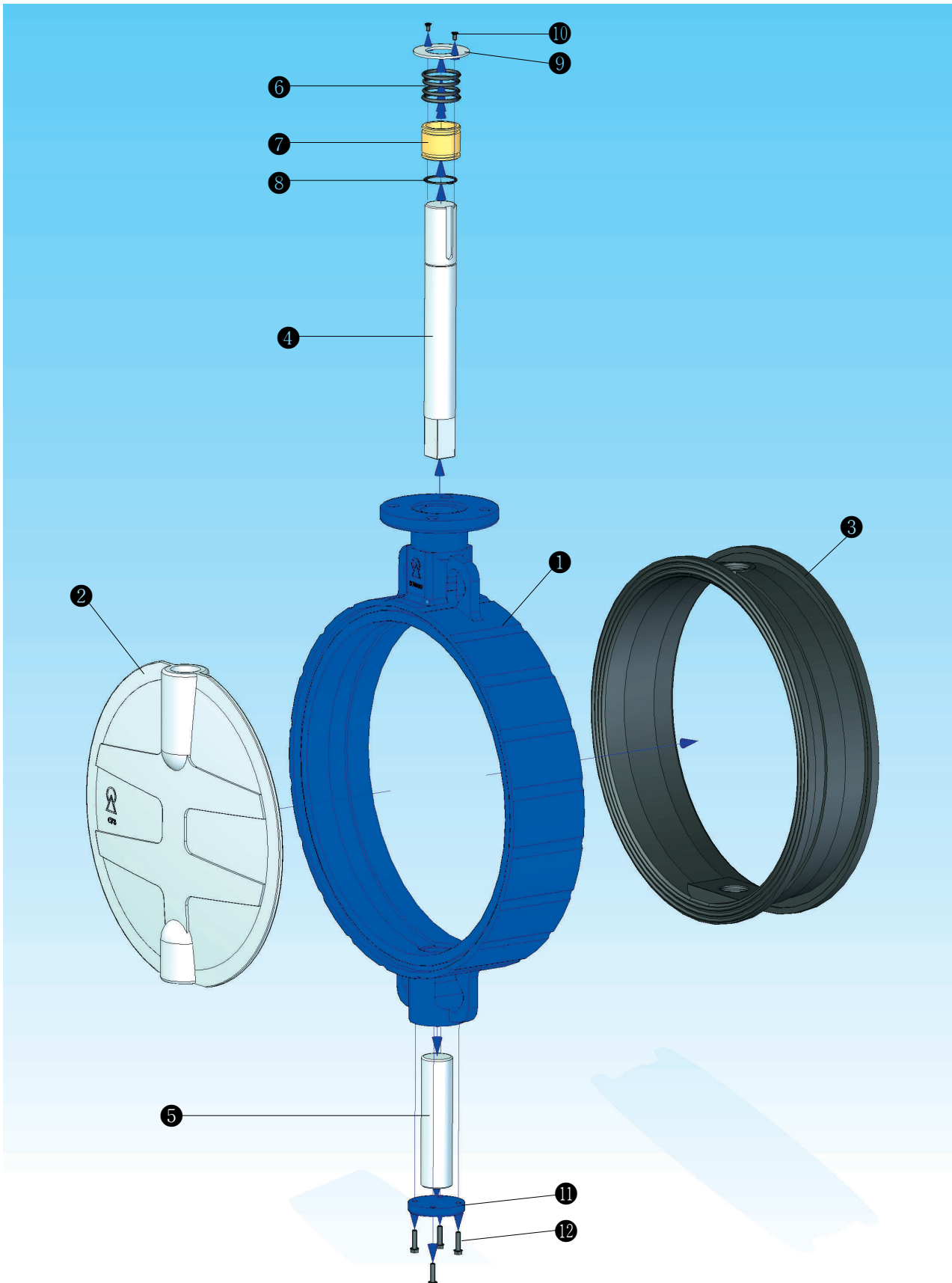
SRS 810 / Wafer Type	27
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Y-Strainer

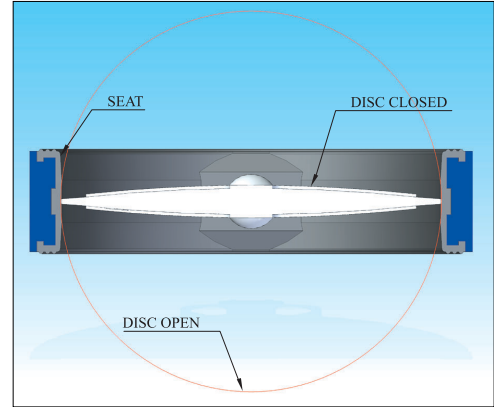
SRS 410 / Flange Type	31
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Parts List



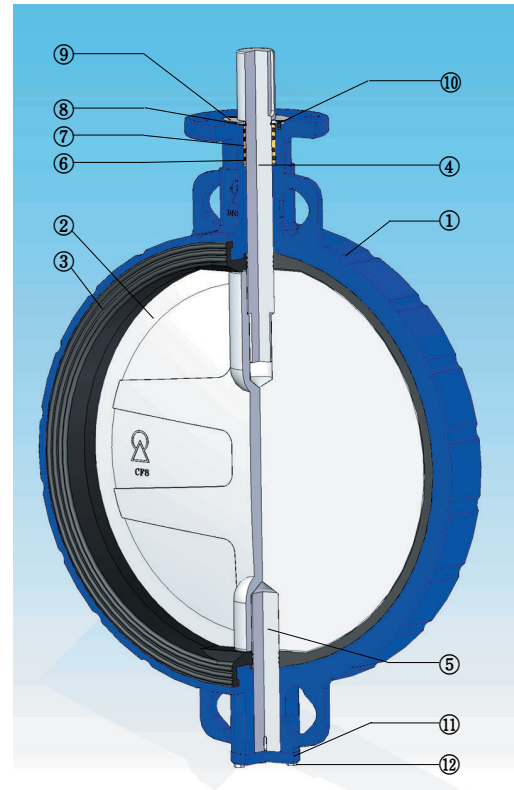
Design Features and Benefits for Use

- 100% bi-directional tight shut-off.
- Installation without restriction in direction of flow.
- Reduced weight and overall dimensions.
- Low pressure loss and reduced energy costs.
- High Kv / Cv values.
- Easy to clean and disinfect for potable water systems etc.
- Self cleaning (no residue will be trapped).
- Good resistance to corrosion.
- High reliability.
- Easy to handle, to install, and to dismantle.
- Less space in storage and installation.
- Fluid does not contact the body (no corrosion).
- No flange gaskets required.
- Insulation of noise and heat transfer.
- Easy replaceable seat without any special tools.*
- Wide range of materials for various conditions.
- Easy automation.
- Retrofitting of actuator is possible.
- Actuator position can be changed on site.
- Easy to operate.
- Economical actuator selection.
- Low shaft friction (operating torque) and wear.
- No lubrication required.
- Anti-blowout system



Material Specification

No.	Components	Materials
1	Body	Cast Iron / Ductile Iron / Carbon Steel
		Stainless Steel / Aluminium Bronze
2	Disc	Ductile Iron (+ Nickel Plated) / Carbon Steel (+ Nickel Plated)
		Stainless Steel / Aluminium Bronze
3	Seat	Rubber (NBR / EPDM / Viton / Silicone / Neoprene)
4	Upper Stem	Stainless Steel (SS410 / SS304 / SS316 / SS630 / Monel)
5	Lower Stem	Stainless Steel (SS410 / SS304 / SS316 / SS630 / Monel)
6	Packing	Rubber (NBR / EPDM / Viton / Silicone / Neoprene)
7	Packing Gland	Acetal upto DN300 , Brass or Bronze for DN350 & larger
8	Snap Ring	Carbon Steel
9	Top Retainer	Mild Steel / Stainless Steel
10	Top Retainer Bolts	Mild Steel / Stainless Steel
11	Bottom Plug (DN32 - DN300)	Mild Steel
	Bottom Cover (DN350 - DN1200)	Cast Iron / Ductile Iron / Steel Stainless Steel / Aluminium Bronze
12	Bottom Bolts (N/A for DN32 - DN300)	Mild Steel / Stainless Steel



*Note : For replaceable rubber seated butterfly valve only.

Specification and Application

Standard Compliance :

- Conform to EN 593 , MSS SP67 and API 609

Production Range :

- Sizes : DN32 ~ DN1200
- Working Pressure : Upto 16 bar for DN32 ~ DN600
Upto 10 bar for DN650 ~ DN1200
- Working Temperature : -20°C to +160°C

Connection :

- ANSI B16.1 CL. 125LB & B16.5 CL. 150LB
- AS 2129 Table D & E
- BS 10 Table D & E
- DIN 2501 PN6, PN10 & PN16
- EN 1092 PN6, PN10 & PN16
- ISO 2531 PN6, PN10 & PN16
- ISO 7005 PN6, PN10 & PN16
- KS B 1511 / JIS B 2210 5K & 10K
- MSS SP44 CL. 150LB
- SABS 1123 Table 1000/3 & Table 1600/3

Face to Face Dimensions :

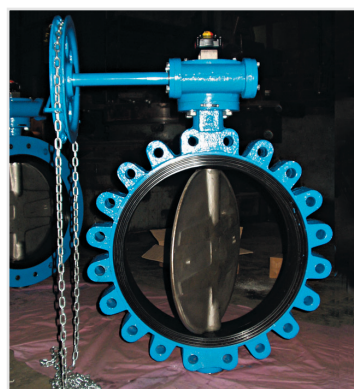
- Conform to ISO 5752 , EN 558 , MSS SP67 and API 609

Top Flange Dimensions :

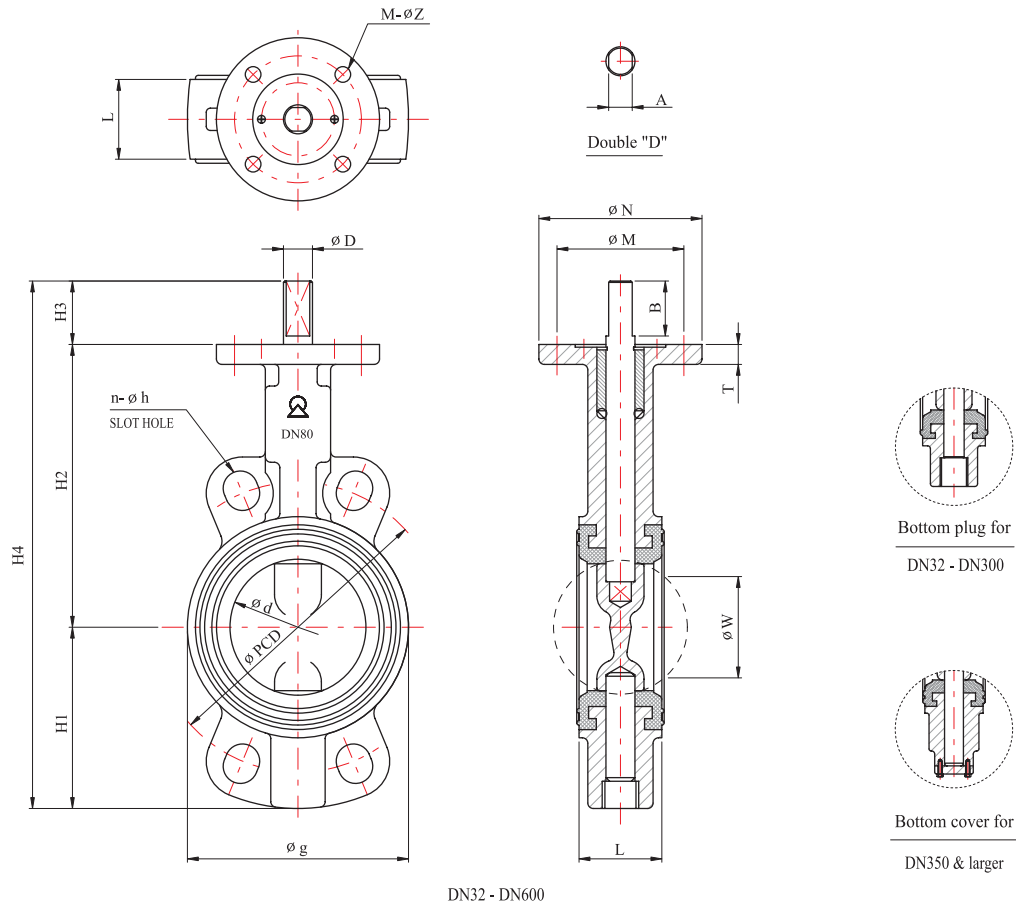
- Conform to ISO 5211

Applications

- | | |
|------------------------------------|-----------------------|
| • Ballast and bilge system | • Chemical processing |
| • Desalination plants | • Drilling rigs |
| • Drinking water | • Dry powder |
| • Food and beverage | • Gas plants |
| • HAVC | • Mining industry |
| • Paper industry | • Sand handling |
| • Seawater | • Sugar industry |
| • Thermo technical water treatment | • Waste water |
| • Water and so on. | |



SRS 710 / Wafer Type



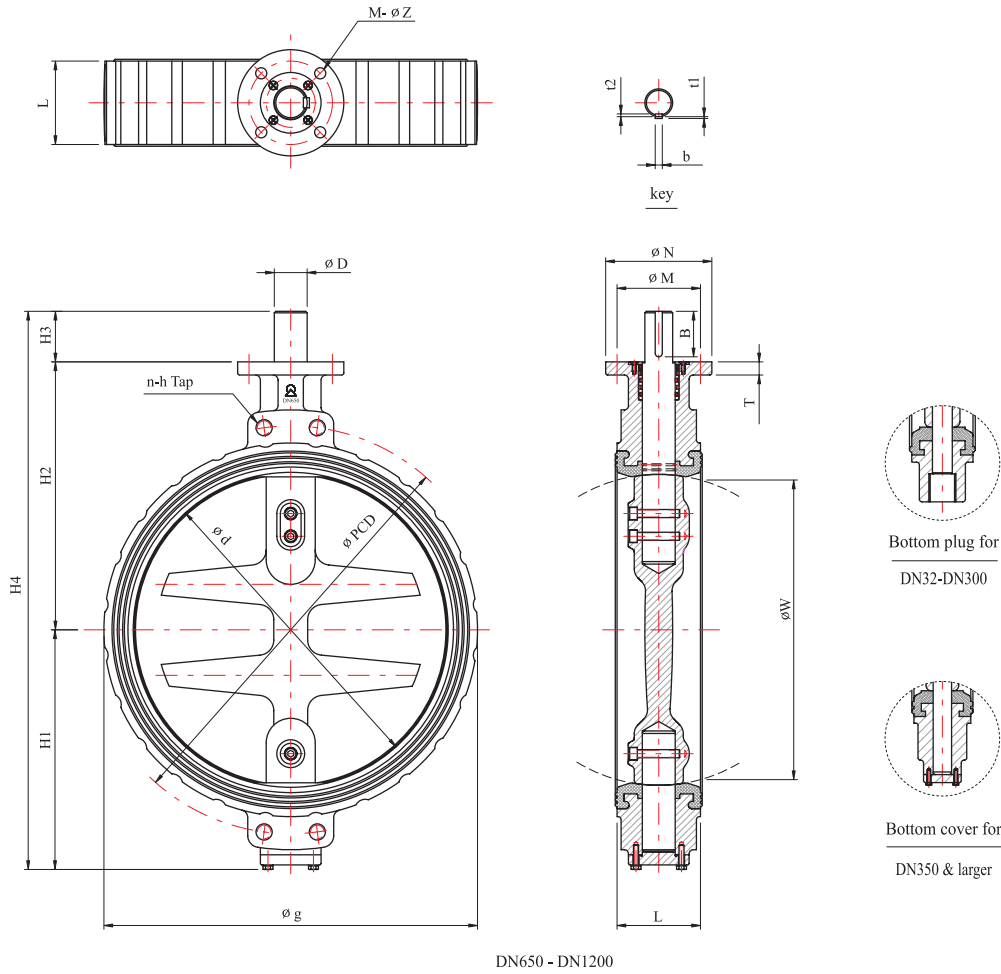
DN32 - DN600

Valve Dimensions

Unit : mm

Size		Stem										Top Flange											
mm	inch	ø d	ø g	H1	H2	H3	H4	L	T	ø W	Double "D"			key				Type	ø M	ø N	M-øZ		
											A	B	ø D	B	ø D	Type	t1					t2	b
32	1 1/4"	32.5	71	57	118	33	208	33	10	11	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-ø 7
40	1 1/2"	38.0	78	60	120	33	213	33	12	23	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-ø 7
																				F07	70	90	4-ø 10
50	2"	51.5	90	75	130	33	238	43	12	32	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-ø 7
																				F07	70	90	4-ø 10
65	2 1/2"	63.5	107	80	137	33	250	46	12	47	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-ø 7
																				F07	70	90	4-ø 10
80	3"	78.0	125	100	157	33	290	46	12	66	11.8	30	16	-	-	-	-	-	-	F07	70	90	4-ø 10
100	4"	101.5	146	110	171	33	314	52	12	89	11.8	30	16	-	-	-	-	-	-	F07	70	90	4-ø 10
125	5"	125.0	179	123	184	33	340	56	12	113	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-ø 10
150	6"	148.0	206	143	203	33	379	56	12	139	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-ø 10
200	8"	198.0	257	175	238	33	446	60	12	191	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-ø 10
250	10"	248.0	312	210	270	65	545	68	16	242	-	-	-	60	22	8x7	4.0	3.0	8.0	F10	102	125	4-ø 12
300	12"	298.0	362	245	310	65	620	78	16	291	-	-	-	60	28	8x7	4.0	3.0	8.0	F10	102	125	4-ø 12
350	14"	346.0	410	280	325	65	670	78	17	343	-	-	-	60	28	8x7	4.0	3.0	8.0	F10	102	125	4-ø 12
400	16"	395.0	468	315	375	75	765	102	20	386	-	-	-	70	38	12x8	5.0	3.0	12.0	F14	140	175	4-ø 18
450	18"	452.0	526	335	400	75	810	114	20	438	-	-	-	70	38	12x8	5.0	3.0	12.0	F14	140	175	4-ø 18
500	20"	489.5	577	385	435	100	920	127	23	476	-	-	-	90	45	14x9	5.5	3.5	14.0	F16	165	210	4-ø 22
550	22"	515.0	632	420	460	100	980	154	23	497	-	-	-	90	55	14x9	5.5	3.5	14.0	F16	165	210	4-ø 22
600	24"	579.0	677	450	500	100	1050	154	23	562	-	-	-	90	55	14x9	5.5	3.5	14.0	F16	165	210	4-ø 22
650	26"	615.0	739	475	530	100	1105	165	26	597	-	-	-	90	55	14x9	5.5	3.5	14.0	F16	165	210	4-ø 22
700	28"	664.0	789	510	555	125	1190	165	29	650	-	-	-	115	70	20x12	7.5	4.5	20.0	F25	254	300	8-ø 18
750	30"	714.0	845	540	595	125	1260	190	30	695	-	-	-	115	70	20x12	7.5	4.5	20.0	F25	254	300	8-ø 18
800	32"	759.0	896	570	635	125	1330	190	32	741	-	-	-	115	80	22X14	9.0	5.0	22.0	F25	254	300	8-ø 18
900	36"	858.0	1000	635	695	125	1455	203	33	841	-	-	-	115	80	22X14	9.0	5.0	22.0	F25	254	300	8-ø 18
1000	40"	952.0	1102	695	760	140	1595	216	35	936	-	-	-	130	100	28X16	10.0	6.0	28.0	F35	356	415	8-ø 32
1050	42"	1002.0	1155	720	780	140	1640	216	40	987	-	-	-	130	100	28X16	10.0	6.0	28.0	F35	356	415	8-ø 32
1100	44"	1042.0	1206	750	820	140	1710	235	40	1024	-	-	-	130	100	28X16	10.0	6.0	28.0	F35	356	415	8-ø 32
1200	48"	1124.0	1309	825	910	140	1875	254	43	1106	-	-	-	130	100	28X16	10.0	6.0	28.0	F35	356	415	8-ø 32

SRS 710 / Wafer Type



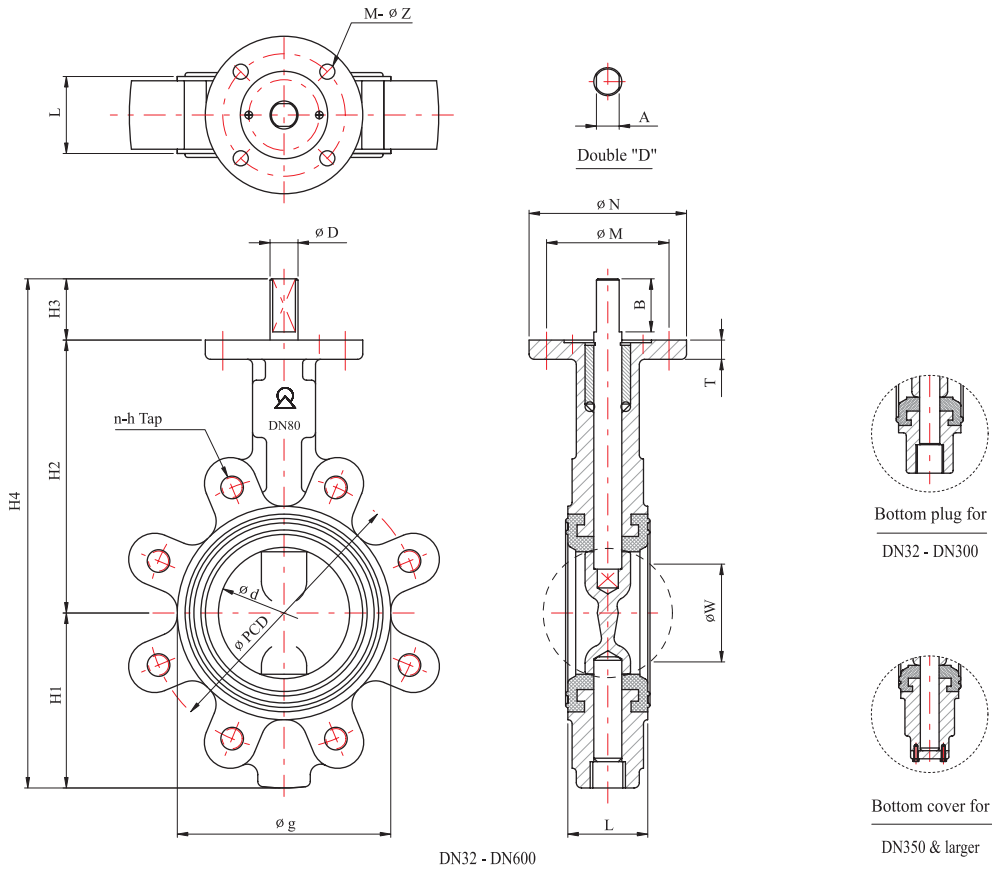
DN650 - DN1200

Flange Drilling Dimensions

Unit : mm

Size		JIS 5K			JIS 10K			AS 2129 "E"			ANSI 150LB			EN 1092 PN6			EN 1092 PN10			EN 1092 PN16		
mm	inch	φ PCD	n	h	φ PCD	n	h	φ PCD	n	h	φ PCD	n	h	φ PCD	n	h	φ PCD	n	h	φ PCD	n	h
32	1 1/4"	90	4	φ 15	100	4	φ 19	87	4	φ 14	89.0	4	φ 16	90	4	φ 14	100	4	φ 18	100	4	φ 18
40	1 1/2"	95	4	φ 15	105	4	φ 19	98	4	φ 14	98.5	4	φ 16	100	4	φ 14	110	4	φ 18	110	4	φ 18
50	2"	105	4	φ 15	120	4	φ 19	114	4	φ 18	120.5	4	φ 19	110	4	φ 14	125	4	φ 18	125	4	φ 18
65	2 1/2"	130	4	φ 15	140	4	φ 19	127	4	φ 18	139.5	4	φ 19	130	4	φ 14	145	4	φ 18	145	4	φ 18
80	3"	145	4	φ 19	150	8	φ 19	146	4	φ 18	152.5	4	φ 19	150	4	φ 18	160	8	φ 18	160	8	φ 18
100	4"	165	8	φ 19	175	8	φ 19	178	8	φ 18	190.5	8	φ 19	170	4	φ 18	180	8	φ 18	180	8	φ 18
125	5"	200	8	φ 19	210	8	φ 23	210	8	φ 18	216.0	8	φ 22	200	8	φ 18	210	8	φ 18	210	8	φ 18
150	6"	230	8	φ 19	240	8	φ 23	235	8	φ 22	241.5	8	φ 22	225	8	φ 18	240	8	φ 22	240	8	φ 22
200	8"	280	8	φ 23	290	12	φ 23	292	8	φ 22	298.5	8	φ 22	280	8	φ 18	295	8	φ 22	295	12	φ 22
250	10"	345	12	φ 23	355	12	φ 25	356	12	φ 22	362.0	12	φ 25	335	12	φ 18	350	12	φ 22	355	12	φ 26
300	12"	390	12	φ 23	400	16	φ 25	406	12	φ 26	432.0	12	φ 25	395	12	φ 22	400	12	φ 22	410	12	φ 26
350	14"	435	12	φ 25	445	16	φ 25	470	12	φ 26	476.0	12	φ 29	445	12	φ 22	460	16	φ 22	470	16	φ 26
400	16"	495	16	φ 25	510	16	φ 27	521	12	φ 26	539.5	16	φ 29	495	16	φ 22	515	16	φ 26	525	16	φ 30
450	18"	555	16	φ 25	565	20	φ 27	584	16	φ 26	578.0	16	φ 32	550	16	φ 22	565	20	φ 26	585	20	φ 30
500	20"	605	20	φ 25	620	20	φ 27	641	16	φ 26	635.0	20	φ 32	600	20	φ 22	620	20	φ 26	650	20	φ 33
550	22"	665	20	M24	680	20	M30	699	16	φ 30	692.0	20	1 1/4"	-	-	-	-	-	-	-	-	-
600	24"	715	20	φ 27	730	24	M30	756	16	φ 33	749.5	20	φ 35	705	20	φ 26	725	20	φ 30	770	20	φ 36
650	26"	770	24	M24	780	24	M30	-	-	-	806.5	24	1 1/4"	-	-	-	-	-	-	-	-	-
700	28"	820	24	M24	840	24	M30	845	20	φ 33	863.5	28	1 1/4"	810	24	M24	840	24	M27	840	24	M33
750	30"	880	24	M30	900	24	M30	927	20	φ 36	914.5	28	1 1/4"	-	-	-	-	-	-	-	-	-
800	32"	930	24	M30	950	28	M30	984	20	φ 36	978.0	28	1 1/2"	920	24	M27	950	24	M30	950	24	M36
900	36"	1030	24	M30	1050	28	M30	1092	24	M33	1086.0	32	1 1/2"	1020	24	M27	1050	28	M30	1050	28	M36
1000	40"	1130	28	M30	1160	28	M36	1175	24	M36	1200.0	36	1 1/2"	1120	28	M27	1160	28	M33	1170	28	M39
1050	42"	-	-	-	-	-	-	1251	28	M36	1257.5	36	1 1/2"	-	-	-	-	-	-	-	-	-
1100	44"	1240	28	M30	1270	28	M36	-	-	-	1314.5	40	1 1/2"	-	-	-	1270	32	M33	1270	32	M39
1200	48"	1350	32	M30	1380	32	M36	1410	32	M36	1422.5	44	1 1/2"	1340	32	M30	1380	32	M36	1390	32	M45

SRS 711 / Lug Type

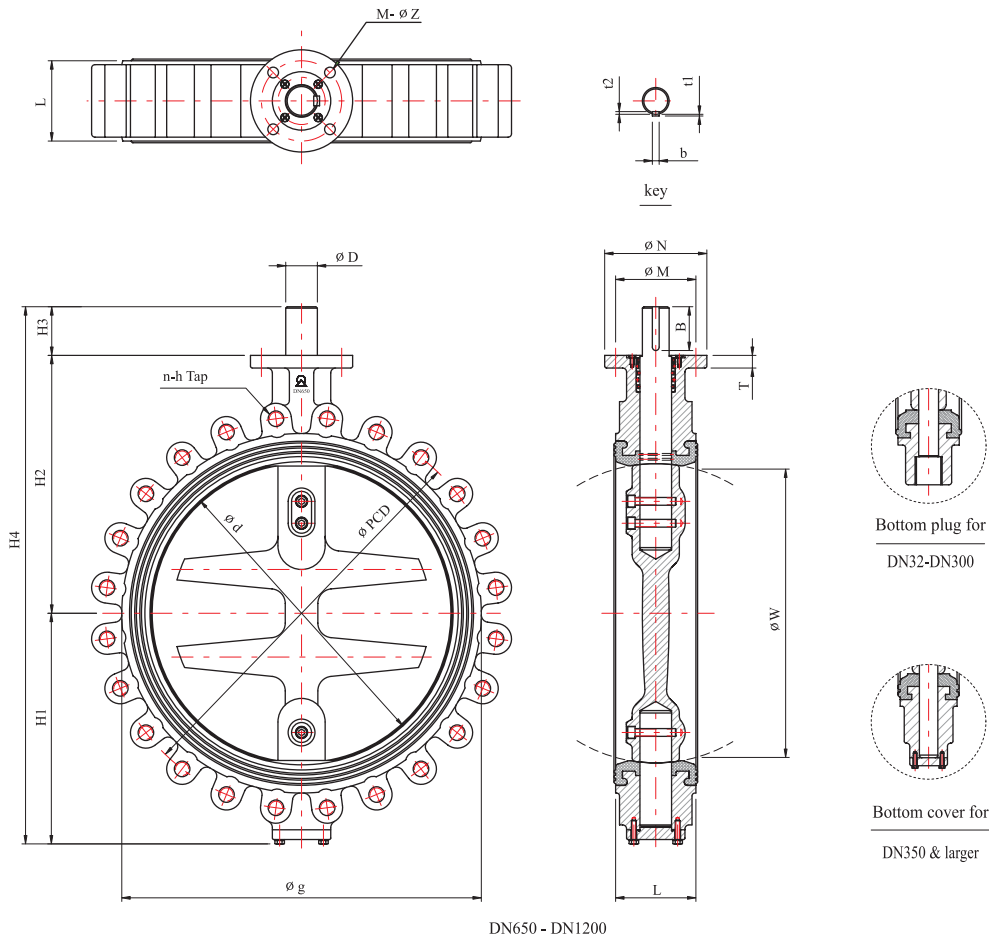


Valve Dimensions

Unit : mm

Size		ø d	ø g	H1	H2	H3	H4	L	T	ø W	Stem								Top Flange				
mm	inch										Double "D"			key					Type	ø M	ø N	M-ø Z	
											A	B	ø D	B	ø D	Type	t1	t2					b
32	1 1/4"	32.5	71	57	118	33	208	33	10	11	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-ø 7
40	1 1/2"	38.0	78	60	120	33	213	33	12	23	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-ø 7
																				F07	70	90	4-ø 10
50	2"	51.5	90	75	130	33	238	43	12	32	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-ø 7
																				F07	70	90	4-ø 10
65	2 1/2"	63.5	107	80	137	33	250	46	12	47	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-ø 7
																				F07	70	90	4-ø 10
80	3"	78.0	125	100	157	33	290	46	12	66	11.8	30	16	-	-	-	-	-	-	F07	70	90	4-ø 10
100	4"	101.5	146	110	171	33	314	52	12	89	11.8	30	16	-	-	-	-	-	-	F07	70	90	4-ø 10
125	5"	125.0	179	123	184	33	340	56	12	113	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-ø 10
150	6"	148.0	206	143	203	33	379	56	12	139	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-ø 10
200	8"	198.0	257	175	238	33	446	60	12	191	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-ø 10
250	10"	248.0	312	210	270	65	545	68	16	242	-	-	-	60	22	8x7	4.0	3.0	8.0	F10	102	125	4-ø 12
300	12"	298.0	262	245	310	65	620	78	16	291	-	-	-	60	28	8x7	4.0	3.0	8.0	F10	102	125	4-ø 12
350	14"	346.0	410	280	325	65	670	78	17	343	-	-	-	60	28	8x7	4.0	3.0	8.0	F10	102	125	4-ø 12
400	16"	395.0	468	315	375	75	765	102	20	386	-	-	-	70	38	12x8	5.0	3.0	12.0	F14	140	175	4-ø 18
450	18"	452.0	526	335	400	75	810	114	20	438	-	-	-	70	38	12x8	5.0	3.0	12.0	F14	140	175	4-ø 18
500	20"	489.5	577	385	435	100	920	127	23	476	-	-	-	90	45	14x9	5.5	3.5	14.0	F16	165	210	4-ø 22
550	22"	515.0	632	420	460	100	980	154	23	497	-	-	-	90	55	14x9	5.5	3.5	14.0	F16	165	210	4-ø 22
600	24"	579.0	677	450	500	100	1050	154	23	562	-	-	-	90	55	14x9	5.5	3.5	14.0	F16	165	210	4-ø 22
650	26"	615.0	739	475	530	100	1105	165	26	597	-	-	-	90	55	14x9	5.5	3.5	14.0	F16	165	210	4-ø 22
700	28"	664.0	789	510	555	125	1190	165	29	650	-	-	-	115	70	20x12	7.5	4.5	20.0	F25	254	300	8-ø 18
750	30"	714.0	845	540	595	125	1260	190	30	695	-	-	-	115	70	20x12	7.5	4.5	20.0	F25	254	300	8-ø 18
800	32"	759.0	896	570	635	125	1330	190	32	741	-	-	-	115	80	22X14	9.0	5.0	22.0	F25	254	300	8-ø 18
900	36"	858.0	1000	635	695	125	1455	203	33	841	-	-	-	115	80	22X14	9.0	5.0	22.0	F25	254	300	8-ø 18
1000	40"	952.0	1102	695	760	140	1595	216	35	936	-	-	-	130	100	28X16	10.0	6.0	28.0	F35	356	415	8-ø 32
1050	42"	1002.0	1155	720	780	140	1640	216	40	987	-	-	-	130	100	28X16	10.0	6.0	28.0	F35	356	415	8-ø 32
1100	44"	1042.0	1206	750	820	140	1710	235	40	1024	-	-	-	130	100	28X16	10.0	6.0	28.0	F35	356	415	8-ø 32
1200	48"	1124.0	1309	825	910	140	1875	254	43	1106	-	-	-	130	100	28X16	10.0	6.0	28.0	F35	356	415	8-ø 32

SRS 711 / Lug Type



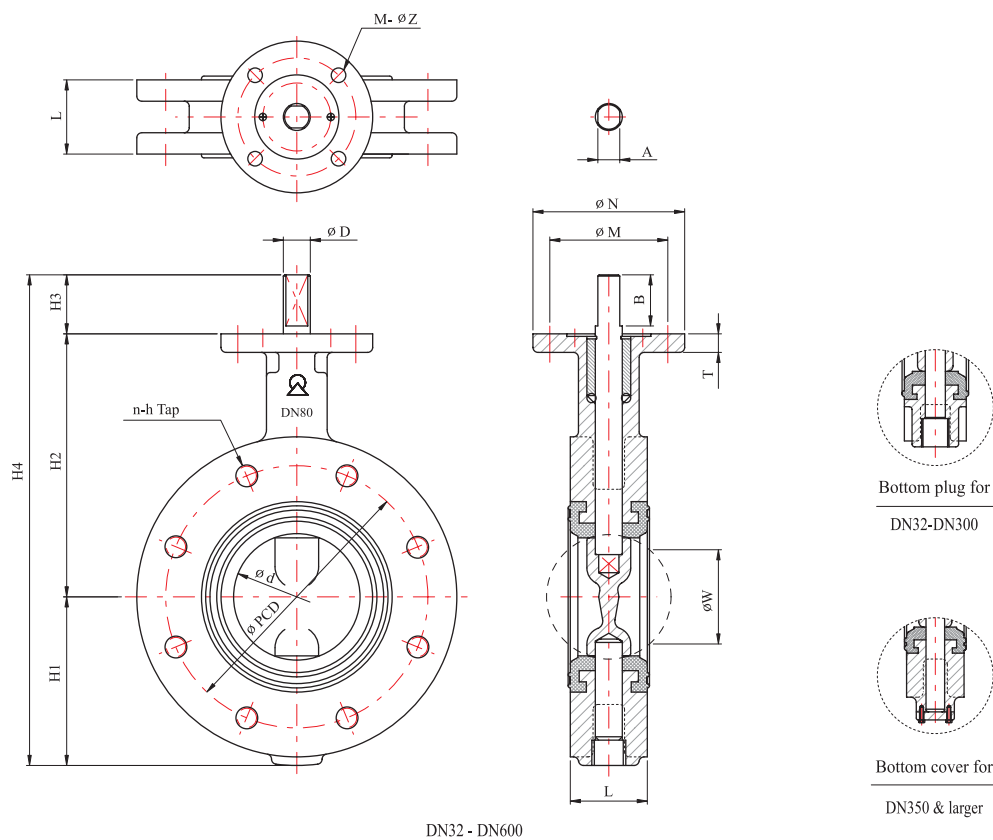
DN650 - DN1200

Flange Drilling Dimensions

Unit : mm

Size		JIS 5K			JIS 10K			AS 2129 "E"			ANSI 150LB			EN 1092 PN6			EN 1092 PN10			EN 1092 PN16		
mm	inch	ø PCD	n	h	ø PCD	n	h	ø PCD	n	h	ø PCD	n	h	ø PCD	n	h	ø PCD	n	h	ø PCD	n	h
32	1 1/4"	90	4	M12	100	4	M16	87	4	M12	89.0	4	1/2"	90	4	M12	100	4	M16	100	4	M16
40	1 1/2"	95	4	M12	105	4	M16	98	4	M12	98.5	4	1/2"	100	4	M12	110	4	M16	110	4	M16
50	2"	105	4	M12	120	4	M16	114	4	M16	120.5	4	5/8"	110	4	M12	125	4	M16	125	4	M16
65	2 1/2"	130	4	M12	140	4	M16	127	4	M16	139.5	4	5/8"	130	4	M12	145	4	M16	145	4	M16
80	3"	145	4	M16	150	8	M16	146	4	M16	152.5	4	5/8"	150	4	M16	160	8	M16	160	8	M16
100	4"	165	8	M16	175	8	M16	178	8	M16	190.5	8	5/8"	170	4	M16	180	8	M16	180	8	M16
125	5"	200	8	M16	210	8	M20	210	8	M16	216.0	8	3/4"	200	8	M16	210	8	M16	210	8	M16
150	6"	230	8	M16	240	8	M20	235	8	M20	241.5	8	3/4"	225	8	M16	240	8	M20	240	8	M20
200	8"	280	8	M20	290	12	M20	292	8	M20	298.5	8	3/4"	280	8	M16	295	8	M20	295	12	M20
250	10"	345	12	M20	355	12	M22	356	12	M20	362.0	12	7/8"	335	12	M16	350	12	M20	355	12	M24
300	12"	390	12	M20	400	16	M22	406	12	M24	432.0	12	7/8"	395	12	M20	400	12	M20	410	12	M24
350	14"	435	12	M22	445	16	M22	470	12	M24	476.0	12	1"	445	12	M20	460	16	M20	470	16	M24
400	16"	495	16	M22	510	16	M24	521	12	M24	539.5	16	1"	495	16	M20	515	16	M24	525	16	M27
450	18"	555	16	M22	565	20	M24	584	16	M24	578.0	16	1 1/8"	550	16	M20	565	20	M24	585	20	M27
500	20"	605	20	M22	620	20	M24	641	16	M24	635.0	20	1 1/8"	600	20	M20	620	20	M24	650	20	M30
550	22"	665	20	M24	680	20	M30	699	16	M27	692.0	20	1 1/4"	-	-	-	-	-	-	-	-	-
600	24"	715	20	M24	730	24	M30	756	16	M30	749.5	20	1 1/4"	705	20	M24	725	20	M27	770	20	M33
650	26"	770	24	M24	780	24	M30	-	-	-	806.5	24	1 1/4"	-	-	-	-	-	-	-	-	-
700	28"	820	24	M24	840	24	M30	845	20	M30	863.5	28	1 1/4"	810	24	M24	840	24	M27	840	24	M33
750	30"	880	24	M30	900	24	M30	927	20	M33	914.5	28	1 1/4"	-	-	-	-	-	-	-	-	-
800	32"	930	24	M30	950	28	M30	984	20	M33	978.0	28	1 1/2"	920	24	M27	950	24	M30	950	24	M36
900	36"	1030	24	M30	1050	28	M30	1092	24	M33	1086.0	32	1 1/2"	1020	24	M27	1050	28	M30	1050	28	M36
1000	40"	1130	28	M30	1160	28	M36	1175	24	M36	1200.0	36	1 1/2"	1120	28	M27	1160	28	M33	1170	28	M39
1050	42"	-	-	-	-	-	-	1251	28	M36	1257.5	36	1 1/2"	-	-	-	-	-	-	-	-	-
1100	44"	1240	28	M30	1270	28	M36	-	-	-	1314.5	40	1 1/2"	-	-	-	1270	32	M33	1270	32	M39
1200	48"	1350	32	M30	1380	32	M36	1410	32	M36	1422.5	44	1 1/2"	1340	32	M30	1380	32	M36	1390	32	M45

SRS 712/ U-Section Type



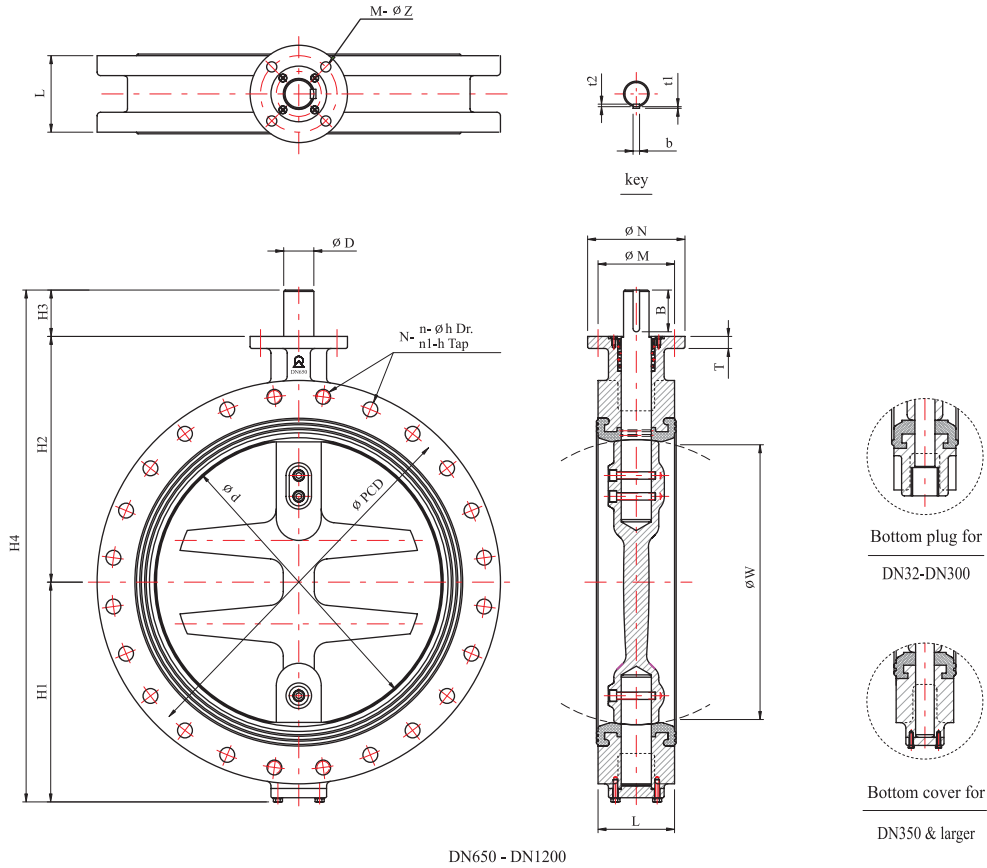
DN32 - DN600

Valve Dimensions

Unit : mm

Size		ϕd	H1	H2	H3	H4	L	T	ϕW	Stem								Top Flange				
mm	inch									Double "D"			key					Type	ϕM	ϕN	M- ϕZ	
										A	B	ϕD	B	ϕD	Type	t1	t2					b
32	1 1/4"	32.5	57	118	33	208	33	10	11	9.5	30	14	-	-	-	-	-	-	F05	50	65	4- $\phi 7$
40	1 1/2"	38.0	60	120	33	213	33	12	23	9.5	30	14	-	-	-	-	-	-	F05	50	65	4- $\phi 7$
																			F07	70	90	4- $\phi 10$
50	2"	51.5	75	130	33	238	43	12	32	9.5	30	14	-	-	-	-	-	-	F05	50	65	4- $\phi 7$
																			F07	70	90	4- $\phi 10$
65	2 1/2"	63.5	80	137	33	250	46	12	47	9.5	30	14	-	-	-	-	-	-	F05	50	65	4- $\phi 7$
																			F07	70	90	4- $\phi 10$
80	3"	78.0	100	157	33	290	46	12	66	11.8	30	16	-	-	-	-	-	-	F07	70	90	4- $\phi 10$
100	4"	101.5	110	171	33	314	52	12	89	11.8	30	16	-	-	-	-	-	-	F07	70	90	4- $\phi 10$
125	5"	125.0	123	184	33	340	56	12	113	14.5	30	19	-	-	-	-	-	-	F07	70	90	4- $\phi 10$
150	6"	148.0	143	203	33	379	56	12	139	14.5	30	19	-	-	-	-	-	-	F07	70	90	4- $\phi 10$
200	8"	198.0	175	238	33	446	60	12	191	14.5	30	19	-	-	-	-	-	-	F07	70	90	4- $\phi 10$
250	10"	248.0	210	270	65	545	68	16	242	-	-	-	60	22	8x7	4.0	3.0	8.0	F10	102	125	4- $\phi 12$
300	12"	298.0	245	310	65	620	78	16	291	-	-	-	60	28	8x7	4.0	3.0	8.0	F10	102	125	4- $\phi 12$
350	14"	346.0	280	325	65	670	78	17	343	-	-	-	60	28	8x7	4.0	3.0	8.0	F10	102	125	4- $\phi 12$
400	16"	395.0	315	375	75	765	102	20	386	-	-	-	70	38	12x8	5.0	3.0	12.0	F14	140	175	4- $\phi 18$
450	18"	452.0	335	400	75	810	114	20	438	-	-	-	70	38	12x8	5.0	3.0	12.0	F14	140	175	4- $\phi 18$
500	20"	489.5	385	435	100	920	127	23	476	-	-	-	90	45	14x9	5.5	3.5	14.0	F16	165	210	4- $\phi 22$
550	22"	515.0	420	460	100	980	154	23	497	-	-	-	90	55	14x9	5.5	3.5	14.0	F16	165	210	4- $\phi 22$
600	24"	579.0	450	500	100	1050	154	23	562	-	-	-	90	55	14x9	5.5	3.5	14.0	F16	165	210	4- $\phi 22$
650	26"	615.0	475	530	100	1105	165	26	597	-	-	-	90	55	14x9	5.5	3.5	14.0	F16	165	210	4- $\phi 22$
700	28"	664.0	510	555	125	1190	165	29	650	-	-	-	115	70	20x12	7.5	4.5	20.0	F25	254	300	8- $\phi 18$
750	30"	714.0	540	595	125	1260	190	30	695	-	-	-	115	70	20x12	7.5	4.5	20.0	F25	254	300	8- $\phi 18$
800	32"	759.0	570	635	125	1330	190	32	741	-	-	-	115	80	22X14	9.0	5.0	22.0	F25	254	300	8- $\phi 18$
900	36"	858.0	635	695	125	1455	203	33	841	-	-	-	115	80	22X14	9.0	5.0	22.0	F25	254	300	8- $\phi 18$
1000	40"	952.0	695	760	140	1595	216	35	936	-	-	-	130	100	28X16	10.0	6.0	28.0	F35	356	415	8- $\phi 32$
1050	42"	1002.0	720	780	140	1640	216	40	987	-	-	-	130	100	28X16	10.0	6.0	28.0	F35	356	415	8- $\phi 32$
1100	44"	1042.0	750	820	140	1710	235	40	1024	-	-	-	130	100	28X16	10.0	6.0	28.0	F35	356	415	8- $\phi 32$
1200	48"	1124.0	825	910	140	1875	254	43	1106	-	-	-	130	100	28X16	10.0	6.0	28.0	F35	356	415	8- $\phi 32$

SRS 712/ U-Section Type



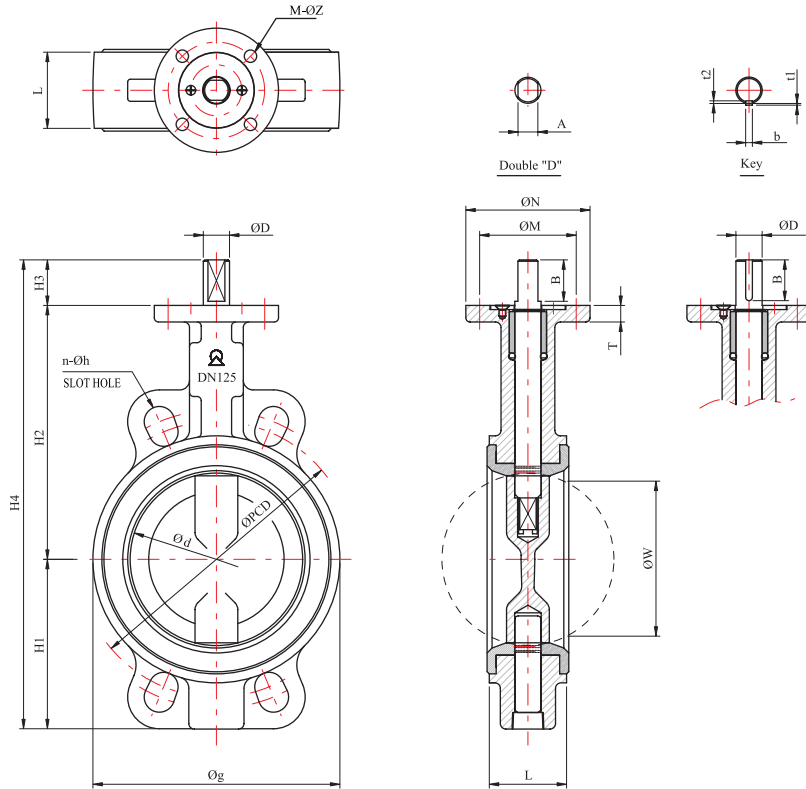
DN650 - DN1200

Flange Drilling Dimensions

Unit : mm

Size		JIS 5K			JIS 10K			AS 2129 "E"			ANSI 150LB			EN 1092 PN6			EN 1092 PN10			EN 1092 PN16									
mm	inch	ø PCD	n	ø h Dr.	h	ø PCD	n	ø h Dr.	h	ø PCD	n	ø h Dr.	h	ø PCD	n	ø h Dr.	h	ø PCD	n	ø h Dr.	h	ø PCD	n	ø h Dr.	h				
32	1 1/4"	90	4	-	M12	100	4	-	M16	87	4	-	M12	89.0	4	-	1/2"	90	4	-	M12	100	4	-	M16	100	4	-	M16
40	1 1/2"	95	4	-	M12	105	4	-	M16	98	4	-	M12	98.5	4	-	1/2"	100	4	-	M12	110	4	-	M16	110	4	-	M16
50	2"	105	4	-	M12	120	4	-	M16	114	4	-	M16	120.5	4	-	5/8"	110	4	-	M12	125	4	-	M16	125	4	-	M16
65	2 1/2"	130	4	-	M12	140	4	-	M16	127	4	-	M16	139.5	4	-	5/8"	130	4	-	M12	145	4	-	M16	145	4	-	M16
80	3"	145	4	-	M16	150	8	-	M16	146	4	-	M16	152.5	4	-	5/8"	150	4	-	M16	160	8	-	M16	160	8	-	M16
100	4"	165	8	-	M16	175	8	-	M16	178	8	-	M16	190.5	8	-	5/8"	170	4	-	M16	180	8	-	M16	180	8	-	M16
125	5"	200	8	-	M16	210	8	-	M20	210	8	-	M16	216.0	8	-	3/4"	200	8	-	M16	210	8	-	M16	210	8	-	M16
150	6"	230	8	-	M16	240	8	-	M20	235	8	-	M20	241.5	8	-	3/4"	225	8	-	M16	240	8	-	M20	240	8	-	M20
200	8"	280	8	-	M20	290	12	-	M20	292	8	-	M20	298.5	8	-	3/4"	280	8	-	M16	295	8	-	M20	295	12	-	M20
250	10"	345	12	-	M20	355	12	-	M22	356	12	-	M20	362.0	12	-	7/8"	335	12	-	M16	350	12	-	M20	355	12	-	M24
300	12"	390	12	-	M20	400	16	-	M22	406	12	-	M24	432.0	12	-	7/8"	395	12	-	M20	400	12	-	M20	410	12	-	M24
350	14"	435	12	-	M22	445	16	-	M22	470	12	-	M24	476.0	12	-	1"	445	12	-	M20	460	16	-	M20	470	16	-	M24
400	16"	495	16	-	M22	510	16	-	M24	521	12	-	M24	539.5	16	-	1"	495	16	-	M20	515	16	-	M24	525	16	-	M27
450	18"	555	16	-	M22	565	20	-	M24	584	16	-	M24	578.0	16	-	1 1/8"	550	16	-	M20	565	20	-	M24	585	20	-	M27
500	20"	605	20	25	M22	620	20	27	M24	641	16	26	M24	635.0	20	32	1 1/8"	600	20	22	M20	620	20	26	M24	650	20	33	M30
550	22"	665	20	27	M24	680	20	33	M30	699	16	30	M27	692.0	20	35	1 1/4"	-	-	-	-	-	-	-	-	-	-	-	-
600	24"	715	20	27	M24	730	24	33	M30	756	16	33	M30	749.5	20	35	1 1/4"	705	20	26	M24	725	20	30	M27	770	20	36	M33
650	26"	770	24	27	M24	780	24	33	M30	-	-	-	-	806.5	24	35	1 1/4"	-	-	-	-	-	-	-	-	-	-	-	
700	28"	820	24	27	M24	840	24	33	M30	845	20	33	M30	863.5	28	35	1 1/4"	810	24	26	M24	840	24	30	M27	840	24	36	M33
750	30"	880	24	33	M30	900	24	33	M30	927	20	36	M33	914.5	28	35	1 1/4"	-	-	-	-	-	-	-	-	-	-	-	-
800	32"	930	24	33	M30	950	28	33	M30	984	20	36	M33	978.0	28	41	1 1/2"	920	24	30	M27	950	24	33	M30	950	24	39	M36
900	36"	1030	24	33	M30	1050	28	33	M30	1092	24	36	M33	1086.0	32	41	1 1/2"	1020	24	30	M27	1050	28	33	M30	1050	28	39	M36
1000	40"	1130	28	33	M30	1160	28	39	M36	1175	24	39	M36	1200.0	36	41	1 1/2"	1120	28	30	M27	1160	28	36	M33	1170	28	42	M39
1050	42"	-	-	-	-	-	-	-	-	1251	28	39	M36	1257.5	36	41	1 1/2"	-	-	-	-	-	-	-	-	-	-	-	-
1100	44"	1240	28	33	M30	1270	28	39	M36	-	-	-	-	1314.5	40	41	1 1/2"	-	-	-	-	1270	32	36	M33	1270	32	42	M39
1200	48"	1350	32	33	M30	1380	32	39	M36	1410	32	39	M36	1422.5	44	41	1 1/2"	1340	32	33	M30	1380	32	39	M36	1390	32	48	M45

SRS 710V / Wafer Type



Valve Dimensions

Unit : mm

Size		Ø d	Ø g	H1	H2	H3	H4	L	T	Ø W	Stem								Top Flange				
mm	inch										Double "D"			key					Type	Ø M	Ø N	M- Ø Z	
											A	B	Ø D	B	Ø D	Type	t1	t2					b
32	1 1/4"	32.5	71	57	118	33	208	33	10	11	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-Ø 7
40	1 1/2"	38.0	78	60	120	33	213	33	12	23	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-Ø 7
																				F07	70	90	4-Ø 10
50	2"	51.5	90	75	130	33	238	43	12	32	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-Ø 7
																				F07	70	90	4-Ø 10
65	2 1/2"	63.5	107	80	137	33	250	46	12	47	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-Ø 7
																				F07	70	90	4-Ø 10
80	3"	78.0	125	100	157	33	290	46	12	66	11.8	30	16	-	-	-	-	-	-	F07	70	90	4-Ø 10
100	4"	101.5	146	110	171	33	314	52	12	89	11.8	30	16	-	-	-	-	-	-	F07	70	90	4-Ø 10
125	5"	125.0	179	123	184	33	340	56	12	113	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-Ø 10
150	6"	148.0	206	143	203	33	379	56	12	139	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-Ø 10
200	8"	198.0	257	175	238	33	446	60	12	191	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-Ø 10
250	10"	248.0	312	210	270	65	545	68	16	242	-	-	-	60	22	8x7	4.0	3.0	8.0	F10	102	125	4-Ø 12
300	12"	298.0	362	245	310	65	620	78	16	291	-	-	-	60	28	8x7	4.0	3.0	8.0	F10	102	125	4-Ø 12

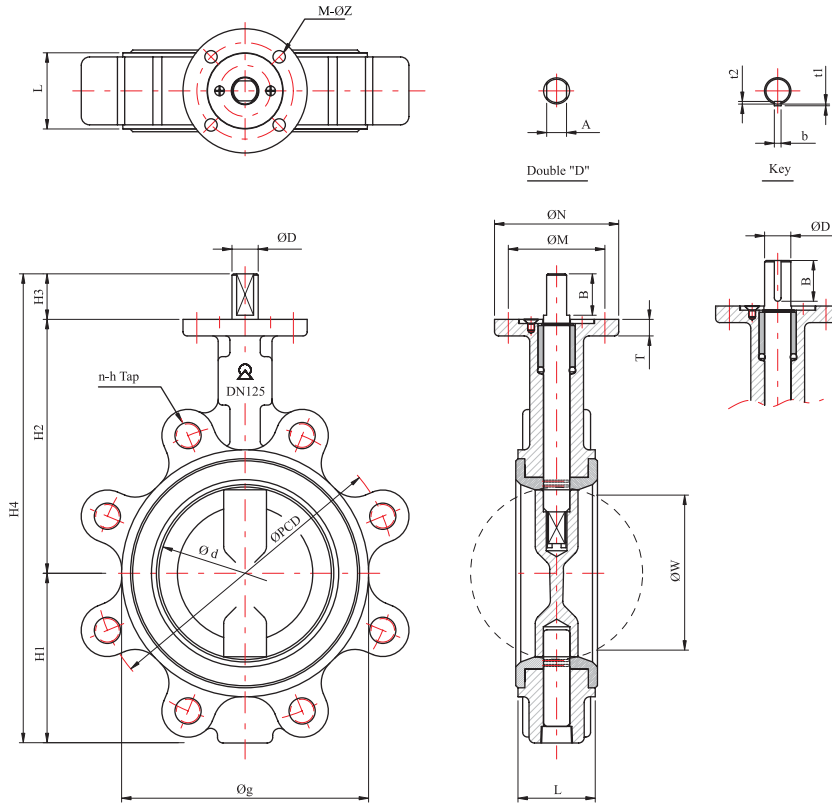
Flange Drilling Dimensions

Unit : mm

Size		JIS 5K			JIS 10K			AS 2129 "E"			ANSI 150LB			EN 1092 PN6			EN 1092 PN10			EN 1092 PN16		
mm	inch	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h
32	1 1/4"	90	4	Ø 15	100	4	Ø 19	87	4	Ø 14	89.0	4	Ø 16	90	4	Ø 14	100	4	Ø 18	100	4	Ø 18
40	1 1/2"	95	4	Ø 15	105	4	Ø 19	98	4	Ø 14	98.5	4	Ø 16	100	4	Ø 14	110	4	Ø 18	110	4	Ø 18
50	2"	105	4	Ø 15	120	4	Ø 19	114	4	Ø 18	120.5	4	Ø 19	110	4	Ø 14	125	4	Ø 18	125	4	Ø 18
65	2 1/2"	130	4	Ø 15	140	4	Ø 19	127	4	Ø 18	139.5	4	Ø 19	130	4	Ø 14	145	4	Ø 18	145	4	Ø 18
80	3"	145	4	Ø 19	150	8	Ø 19	146	4	Ø 18	152.5	4	Ø 19	150	4	Ø 18	160	8	Ø 18	160	8	Ø 18
100	4"	165	8	Ø 19	175	8	Ø 19	178	8	Ø 18	190.5	8	Ø 19	170	4	Ø 18	180	8	Ø 18	180	8	Ø 18
125	5"	200	8	Ø 19	210	8	Ø 23	210	8	Ø 18	216.0	8	Ø 22	200	8	Ø 18	210	8	Ø 18	210	8	Ø 18
150	6"	230	8	Ø 19	240	8	Ø 23	235	8	Ø 22	241.5	8	Ø 22	225	8	Ø 18	240	8	Ø 22	240	8	Ø 22
200	8"	280	8	Ø 23	290	12	Ø 23	292	8	Ø 22	298.5	8	Ø 22	280	8	Ø 18	295	8	Ø 22	295	12	Ø 22
250	10"	345	12	Ø 23	355	12	Ø 25	356	12	Ø 22	362.0	12	Ø 25	335	12	Ø 18	350	12	Ø 22	355	12	Ø 26
300	12"	390	12	Ø 23	400	16	Ø 25	406	12	Ø 26	432.0	12	Ø 25	395	12	Ø 22	400	12	Ø 22	410	12	Ø 26

*Note : For DN350 and larger sizes, please contact us.

SRS 711V / Lug Type



Valve Dimensions

Unit : mm

Size		Ø d	Ø g	H1	H2	H3	H4	L	T	Ø W	Stem								Top Flange				
mm	inch										Double "D"			key					Type	Ø M	Ø N	M-ØZ	
											A	B	Ø D	B	Ø D	Type	t1	t2					b
32	1 1/4"	32.5	71	57	118	33	208	33	10	11	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-Ø7
40	1 1/2"	38.0	78	60	120	33	213	33	12	23	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-Ø7
50	2"	51.5	90	75	130	33	238	43	12	32	9.5	30	14	-	-	-	-	-	-	F07	70	90	4-Ø10
																				F05	50	65	4-Ø7
65	2 1/2"	63.5	107	80	137	33	250	46	12	47	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-Ø7
																				F07	70	90	4-Ø10
80	3"	78.0	125	100	157	33	290	46	12	66	11.8	30	16	-	-	-	-	-	-	F07	70	90	4-Ø10
100	4"	101.5	146	110	171	33	314	52	12	89	11.8	30	16	-	-	-	-	-	-	F07	70	90	4-Ø10
125	5"	125.0	179	123	184	33	340	56	12	113	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-Ø10
150	6"	148.0	206	143	203	33	379	56	12	139	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-Ø10
200	8"	198.0	257	175	238	33	446	60	12	191	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-Ø10
250	10"	248.0	312	210	270	65	545	68	16	242	-	-	-	60	22	8x7	4.0	3.0	8.0	F10	102	125	4-Ø12
300	12"	298.0	362	245	310	65	620	78	16	291	-	-	-	60	28	8x7	4.0	3.0	8.0	F10	102	125	4-Ø12

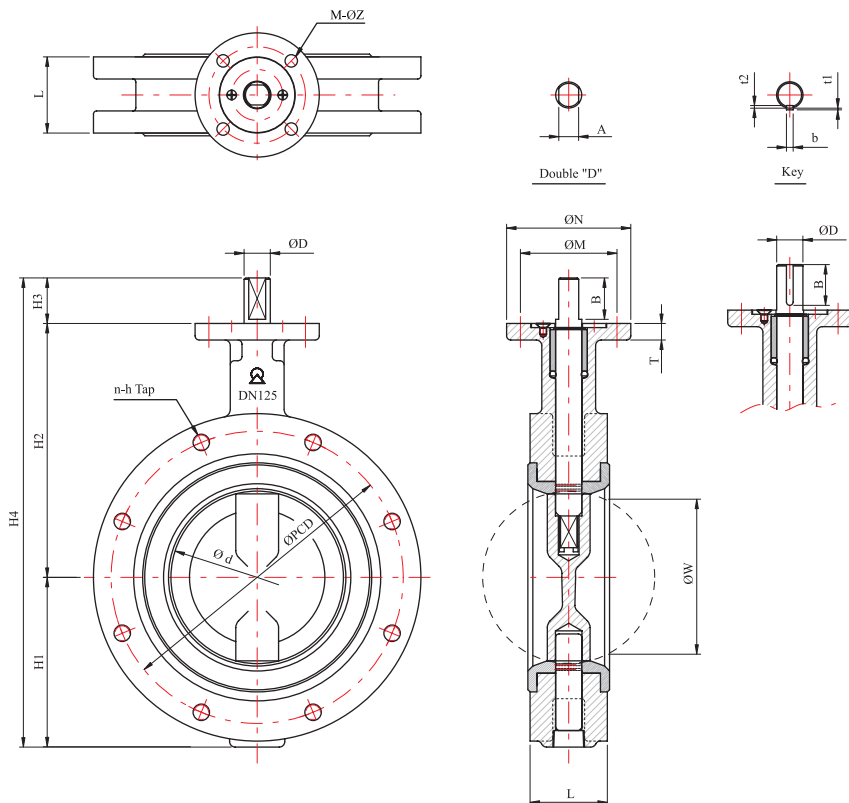
Flange Drilling Dimensions

Unit : mm

Size		JIS 5K			JIS 10K			AS 2129 "E"			ANSI 150LB			EN 1092 PN6			EN 1092 PN10			EN 1092 PN16		
mm	inch	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h
32	1 1/4"	90	4	M12	100	4	M16	87	4	M12	89.0	4	1/2"	90	4	M12	100	4	M16	100	4	M16
40	1 1/2"	95	4	M12	105	4	M16	98	4	M12	98.5	4	1/2"	100	4	M12	110	4	M16	110	4	M16
50	2"	105	4	M12	120	4	M16	114	4	M16	120.5	4	5/8"	110	4	M12	125	4	M16	125	4	M16
65	2 1/2"	130	4	M12	140	4	M16	127	4	M16	139.5	4	5/8"	130	4	M12	145	4	M16	145	4	M16
80	3"	145	4	M16	150	8	M16	146	4	M16	152.5	4	5/8"	150	4	M16	160	8	M16	160	8	M16
100	4"	165	8	M16	175	8	M16	178	8	M16	190.5	8	5/8"	170	4	M16	180	8	M16	180	8	M16
125	5"	200	8	M16	210	8	M20	210	8	M16	216.0	8	3/4"	200	8	M16	210	8	M16	210	8	M16
150	6"	230	8	M16	240	8	M20	235	8	M20	241.5	8	3/4"	225	8	M16	240	8	M20	240	8	M20
200	8"	280	8	M20	290	12	M20	292	8	M20	298.5	8	3/4"	280	8	M16	295	8	M20	295	12	M20
250	10"	345	12	M20	355	12	M22	356	12	M20	362.0	12	7/8"	335	12	M16	350	12	M20	355	12	M24
300	12"	390	12	M20	400	16	M22	406	12	M24	432.0	12	7/8"	395	12	M20	400	12	M20	410	12	M24

*Note : For DN350 and larger sizes, please contact us.

SRS 712V / U-Section Type



Valve Dimensions

Unit : mm

Size		Ø d	H1	H2	H3	H4	L	T	Ø W	Stem									Top Flange			
mm	inch									Double "D"			key						Type	Ø M	Ø N	M-ØZ
										A	B	Ø D	B	Ø D	Type	t1	t2	b				
32	1 1/4"	32.5	57	118	33	208	33	10	11	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-Ø 7
40	1 1/2"	38.0	60	120	33	213	33	12	23	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-Ø 7
																			F07	70	90	4-Ø 10
50	2"	51.5	75	130	33	238	43	12	32	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-Ø 7
																			F07	70	90	4-Ø 10
65	2 1/2"	63.5	80	137	33	250	46	12	47	9.5	30	14	-	-	-	-	-	-	F05	50	65	4-Ø 7
																			F07	70	90	4-Ø 10
80	3"	78.0	100	157	33	290	46	12	66	11.8	30	16	-	-	-	-	-	-	F07	70	90	4-Ø 10
100	4"	101.5	110	171	33	314	52	12	89	11.8	30	16	-	-	-	-	-	-	F07	70	90	4-Ø 10
125	5"	125.0	123	184	33	340	56	12	113	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-Ø 10
150	6"	148.0	143	203	33	379	56	12	139	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-Ø 10
200	8"	198.0	175	238	33	446	60	12	191	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-Ø 10
250	10"	248.0	210	270	65	545	68	16	242	-	-	-	60	22	8x7	4.0	3.0	8.0	F10	102	125	4-Ø 12
300	12"	298.0	245	310	65	620	78	16	291	-	-	-	60	28	8x7	4.0	3.0	8.0	F10	102	125	4-Ø 12

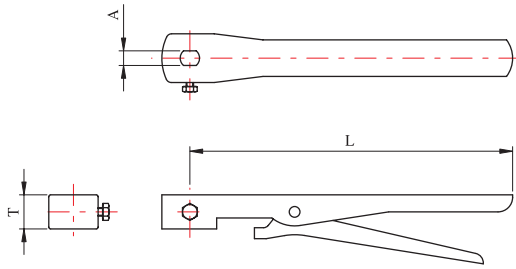
Flange Drilling Dimensions

Unit : mm

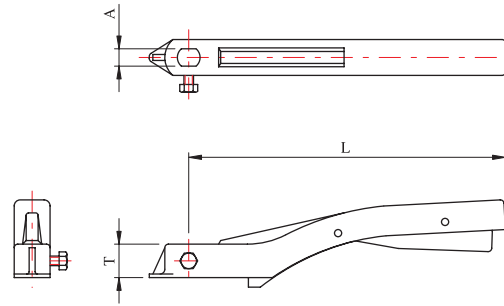
Size		JIS 5K			JIS 10K			AS 2129 "E"			ANSI 150LB			EN 1092 PN6			EN 1092 PN10			EN 1092 PN16		
mm	inch	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h
32	1 1/4"	90	4	M12	100	4	M16	87	4	M12	89.0	4	1/2"	90	4	M12	100	4	M16	100	4	M16
40	1 1/2"	95	4	M12	105	4	M16	98	4	M12	98.5	4	1/2"	100	4	M12	110	4	M16	110	4	M16
50	2"	105	4	M12	120	4	M16	114	4	M16	120.5	4	5/8"	110	4	M12	125	4	M16	125	4	M16
65	2 1/2"	130	4	M12	140	4	M16	127	4	M16	139.5	4	5/8"	130	4	M12	145	4	M16	145	4	M16
80	3"	145	4	M16	150	8	M16	146	4	M16	152.5	4	5/8"	150	4	M16	160	8	M16	160	8	M16
100	4"	165	8	M16	175	8	M16	178	8	M16	190.5	8	5/8"	170	4	M16	180	8	M16	180	8	M16
125	5"	200	8	M16	210	8	M20	210	8	M16	216.0	8	3/4"	200	8	M16	210	8	M16	210	8	M16
150	6"	230	8	M16	240	8	M20	235	8	M20	241.5	8	3/4"	225	8	M16	240	8	M20	240	8	M20
200	8"	280	8	M20	290	12	M20	292	8	M20	298.5	8	3/4"	280	8	M16	295	8	M20	295	12	M20
250	10"	345	12	M20	355	12	M22	356	12	M20	362.0	12	7/8"	335	12	M16	350	12	M20	355	12	M24
300	12"	390	12	M20	400	16	M22	406	12	M24	432.0	12	7/8"	395	12	M20	400	12	M20	410	12	M24

*Note : For DN350 and larger sizes, please contact us.

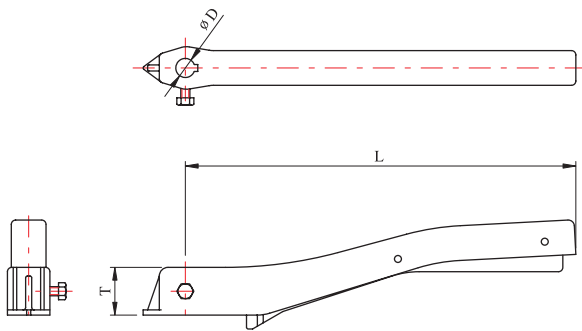
Lever Operator



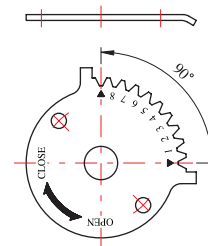
Steel Lever for DN32-DN200



Ductile Iron Lever for DN32-DN200



Ductile Iron Lever for DN250/300



Indicator (notch plate)

Dimensions

Unit : mm

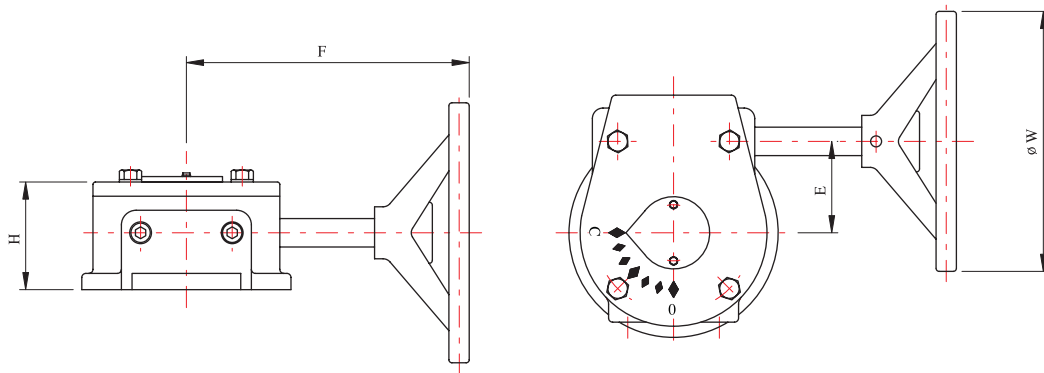
Valve Size		A	ø D	T	L	Weight Approx. (kg)	
mm	inch					Steel Lever	Ductile Iron Lever
32 ~ 65	1 1/4" ~ 2 1/2"	9.5	-	28	245	0.6	1.0
80 / 100	3" / 4"	11.8			265		1.2
125 / 150	5" / 6"	14.5			355	0.8	1.7
200	8"				-	-	-
250	10"	-	22	55	450	-	4.2
300	12"		28				

*Note : For DN200 and larger sizes, gear box operator is recommended.

Gear Operator

Gear box is a weather-pooof unit supplied with hand wheel.

It has a worm and quadrant operation with adjustable stoppers at both the fully open and fully closed positions and self-locking enabling the valve to be operated upto the maximum working pressure.



Dimensions

Unit : mm

Valve Size		E	F	H	ø W	Top Flange (ISO 5211)	Weight Approx. (kg)
mm	inch						
32 ~ 65	1 1/4" ~ 2 1/2"	45	165	74	150	F07	5.5
80 / 100	3" / 4"				180		
125 / 150	5" / 6"				220		
200	8"				260		
250 / 300	10" / 12"	63	250	85	315	F10	9.5
350	14"				405		10.0
400 / 450	16" / 18"	82	300	90	405	F14	19.0
500 ~ 650	20" / 26"	100	310	112		F16	32.0
700 / 750	28" / 30"	125	460	157	500	F25	61.0
800 / 900	32" / 36"	150	566	136			76.0
1000 ~ 1200	40" ~ 48"	200	610	224			700

*Note : Chain wheel is available

Material Specification

Componets	Materials
Housing	Cast Iron
Cover	Ductile Iron
Worm	Carbon Steel
Worm Wheel	Ductile Iron
Hand Wheel	Cast Iron Ductile Iron Steel
Indicator	Cast Iron Ductile Iron Mild Steel
Seal	Oiled-Paper NBR
Pin	Spring Steel
Adjust Bolts	Mild Steel
O-ring	NBR

Torques Required to Operate Valves

The factors affect the torque required to operate Butterfly Valves.

- Valve Diameter
- Shaft Diameter
- Bearing Friction Coefficient
- Type of Seat Material
- Shut off Pressure
- Velocity
- Shape of Disc
- System Head Characteristics
- Piping Arrangement

➔ Actuator torque can be calculated using the following formulas.

$$T_a = T_b + T_s + T_h = 1.2T_b \pm T_d$$

$$T_s = C_s D^2$$

$$T_b = 4.17D^3 dfP$$

$$T_d = C_t D^3 P$$

$$T_h = 3.06D^4$$

$$V = C_f \sqrt{P} = Q/0.785D^2$$

T_a : The required actuator torque(lb-ft)

T_s : Seating or unseating torque(lb-ft)

T_d : Dynamic torque(lb-ft)

T_h : Hydrostatic torque(lb-ft)

Q : Flow(cubic for per second)

V : Velocity(feet per second)

D : Diameter of valve(feet)

d : Diameter of Shaft(inch)

P : Pressure drop across valve(psi)

C_s : Coefficient of Seating or unseating torque

C_t : Coefficient of dynamic torque

C_f : Coefficient of flow

f : Bearing friction coefficient

1. The below torque is based on water with temperature range of +1 deg. C ~ +80 deg. C
2. The fluid does not include chemicals or contamination that may increase the friction between the seating surfaces.
3. At least one operation cycle per month.
4. Flow velocity in the pipe not more than 4m/s.
5. When other fluid conditions are expected, please contact us for detailed advice regarding operating torques and actuator sizing.
(Examples : Dry gas or air, slurries, powders, low temperatures, infrequent cycling, high flow velocities)
6. The operating speed of the actuator must be considered in order to avoid water hammer when the valve is closed in junction with liquid.

TORQUE TABLE

Size		6 bar		10 bar		16 bar	
mm	inch	kg.m	N.m	kg.m	N.m	kg.m	N.m
32	1 1/4"	1	10	2	11	2	13
40	1 1/2"	1	10	2	11	2	13
50	2"	2	18	3	21	3	23
65	2 1/2"	3	23	3	26	3	27
80	3"	3	30	4	32	4	35
100	4"	4	38	5	50	6	51
125	5"	6	57	7	65	8	79
150	6"	9	85	10	98	12	112
200	8"	17	158	18	169	25	239
250	10"	26	250	30	292	37	356
300	12"	36	347	52	501	54	525
350	14"	51	499	64	619	142	1389
400	16"	72	697	82	802	189	1851
450	18"	96	936	118	1150	231	2264
500	20"	124	1208	152	1485	285	2791
550	22"	177	1733	220	2153	446	4363
600	24"	259	2535	302	2955	526	5155
650	26"	192	1877	268	2624	347	3396
700	28"	231	2255	327	3201	436	4271
750	30"	279	2727	397	3890	520	5094
800	32"	338	3304	468	4580	615	6020
900	36"	466	4562	673	6595	882	8644
1000	40"	707	6921	1019	9982	1339	13120
1050	42"	777	7613	1111	10880	1473	14432
1100	44"	856	8389	1208	11834	1628	15950
1200	48"	1295	12689	1849	18111	2321	22741

*Note : 1) In case of less than 6 bar pressure, please consult with us.

2) For safety factor or actuator sizing, please contact actuator maker or consult with us.

Flow Coefficient

The size of butterfly valve used for control purpose should be calculated on the basis of the operating characteristics. In order to achieve optimum control, the flow coefficient (Cv, Kv) below need to be considered.

Flow coefficient (Cv, Kv)

Size		Disc Opening															
		20°		30°		40°		50°		60°		70°		80°		90°	
mm	inch	Kv	Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv	Cv
32	1 1/4"	3.7	4.3	5.6	6.5	8.7	10.1	14.2	16.5	22.7	26.3	36.5	42.4	56.3	65.3	67.5	78.3
40	1 1/2"	5.6	6.5	8.5	9.9	13.2	15.3	21.5	24.9	34.6	40.1	55.7	64.6	85.8	99.5	102.9	119.4
50	2"	9.3	10.8	14.1	16.4	22.0	25.5	35.9	41.6	58.0	67.3	93.5	108.4	144.2	167.3	172.4	200.0
65	2 1/2"	15.8	18.3	23.8	27.6	37.1	43.0	60.5	70.1	98.3	114.0	158.7	184.1	243.3	282.2	291.7	338.4
80	3"	23.9	27.8	36.1	41.8	56.4	65.4	91.9	106.6	148.2	171.9	240.1	278.5	369.0	428.0	441.5	512.1
100	4"	36.4	42.3	56.1	65.0	87.9	101.9	143.0	165.9	232.7	269.9	375.7	435.8	575.7	667.8	689.7	800.1
125	5"	58.9	68.3	87.9	101.9	137.4	159.4	224.3	260.2	361.7	419.6	586.9	680.8	900.9	1045.1	1077.6	1250.0
150	6"	84.1	97.6	127.1	147.4	198.1	229.8	323.4	375.1	523.4	607.1	843.9	979.0	1297.2	1504.7	1552.3	1800.7
200	8"	149.5	173.5	225.2	261.3	352.3	408.7	574.8	666.7	930.8	1079.8	1500.9	1741.1	2305.6	2674.5	2759.8	3201.4
250	10"	233.6	271.0	353.3	409.8	549.5	637.5	897.2	1040.7	1454.2	1686.9	2344.9	2720.0	3602.8	4179.3	4313.1	5003.2
300	12"	336.4	390.3	507.5	588.7	791.6	918.2	1292.5	1499.3	2094.4	2429.5	3377.6	3918.0	4382.2	5083.4	6210.3	7203.9
350	14"	458.9	532.3	691.6	802.2	1077.6	1250.0	1758.9	2040.3	2838.3	3292.4	4596.3	5331.7	7060.7	8190.5	8452.3	9804.7
400	16"	599.1	694.9	902.8	1047.3	1407.5	1632.7	2298.1	2665.8	3722.4	4318.0	6003.7	6964.3	9222.4	10698.0	11040.2	12806.6
450	18"	757.0	878.1	1142.1	1324.8	1781.3	2066.3	2907.5	3372.7	4711.2	5465.0	7598.1	8813.8	11672.9	13540.6	13972.9	16208.6
500	20"	935.5	1085.2	1410.3	1635.9	2199.1	2550.9	3589.7	4164.1	5815.9	6746.4	9381.3	10882.3	14410.3	16715.9	17250.5	20010.5
550	22"	1131.8	1312.9	1707.5	1980.7	2660.7	3086.5	4343.0	5037.9	7010.3	8131.9	11351.4	13167.6	17436.4	20226.3	20872.9	24212.6
600	24"	1346.7	1562.2	2031.8	2356.9	3167.3	3674.1	5169.2	5996.2	8374.8	9714.7	13508.4	15669.8	20750.5	24070.5	24840.2	28814.6
650	26"	1580.4	1833.2	2385.0	2766.7	3717.8	4312.6	6066.4	7037.0	9790.7	11357.2	15854.2	18390.9	24353.3	28249.8	29152.3	33816.7
700	28"	1832.7	2125.9	2765.4	3207.9	4311.2	5001.0	7035.5	8161.2	11355.1	13172.0	18386.0	21327.7	28244.9	32764.0	33810.3	39219.9
750	30"	2104.7	2441.4	3174.8	3682.7	4948.6	5740.4	8076.6	9368.9	13086.0	15179.7	21106.5	24483.6	32423.4	37611.1	38813.1	45023.2
800	32"	2394.4	2777.5	3705.6	4298.5	5630.8	6531.8	9189.7	10660.1	14830.8	17203.8	24015.0	27857.3	36889.7	42792.1	44160.7	51226.5
900	36"	3029.9	3514.7	4571.0	5302.4	7126.2	8266.4	9214.0	10688.3	18843.9	21859.0	30394.4	35257.5	46689.7	54160.1	55890.7	64833.2
1000	40"	3741.1	4339.7	5643.9	6547.0	8798.1	10205.8	14358.9	16656.3	23173.8	26881.6	37523.4	43527.1	57641.1	66863.7	69000.9	80041.1
1050	42"	4124.3	4784.2	6222.4	7218.0	9810.3	11379.9	15830.8	18363.8	25548.6	29636.4	41370.1	47989.3	63548.6	73716.4	76072.9	88244.6
1100	44"	4526.2	5250.4	6829.0	7921.6	10645.8	12349.1	17374.8	20154.7	28040.2	32526.6	45403.7	52668.3	69745.8	80905.1	83490.7	96849.2
1200	48"	5384.1	6245.6	8127.1	9427.4	12669.2	14696.2	20676.6	23984.9	33370.1	38709.3	54033.6	62679.0	83003.7	96284.3	99360.7	115258.5

Cv is in imperial units, the water flow rate in U.S. gallons per minute which passes through the valve giving a pressure drop of 1 psi at a temperature of 68° F.

In metric units the same coefficients is called Kv and correspond to the flow rate in m³/h passing through the valve giving a pressure drop of 1 bar at a temperature of 20 °C. The approximate corresponding formulas are :

$Q = C_v \cdot \sqrt{(\Delta P \cdot 62.4/D)}$

where:
 Q = valve flow rate in gpm (USGPM)
 ΔP = pound per square inch (psi) pressure drop through the valve
 62.4 = conversion factor for fluids computer in relation to water
 D = is pounds per cu.ft (pcf) fluid density

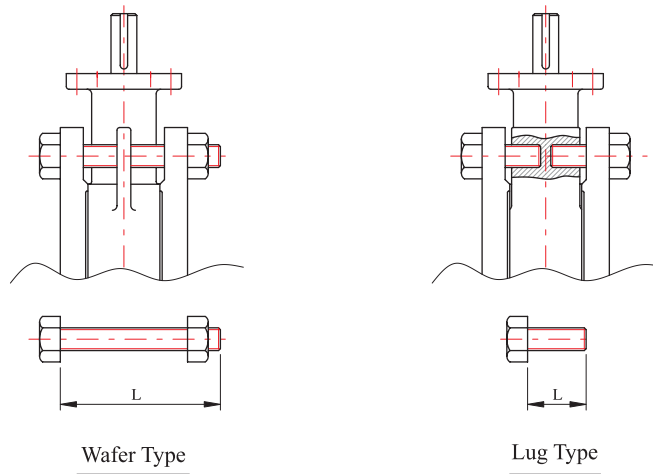
$Q = K_v \cdot \sqrt{(\Delta P \cdot 1000/D)}$

where:
 Q = valve flow rate in m³/h
 ΔP = pressure drop through the valve in bar
 1000 = conversion factor for fluids computed in relation to water
 D = kg/m³ fluid density

The relation between Cv and Kv, expressed in the above mentioned unit of measure is as follows ;

$C_v = 1.16 K_v$

Bolting Data



Wafer type (Stud bolts)

Unit : mm

Size		Valve face to face	JIS 5K			JIS 10K			ANSI 150LB			EN 1092 PN10			EN 1092 PN16		
mm	inch		flange thickness	bolt size X length (L)	Q' ty	flange thickness	bolt size X length (L)	Q' ty	flange thickness	bolt size X length (L)	Q' ty	flange thickness	bolt size X length (L)	Q' ty	flange thickness	bolt size X length (L)	Q' ty
32	1 1/4"	33	12	M12 x 75	4	16	M16 x 90	4	15.7	1/2" x 85	4	18	M16 x 90	4	18	M16 x 90	4
40	1 1/2"	33	12	M12 x 75	4	16	M16 x 90	4	17.5	1/2" x 85	4	18	M16 x 90	4	18	M16 x 90	4
50	2"	43	14	M12 x 90	4	16	M16 x 100	4	19.1	5/8" x 105	4	20	M16 x 105	4	20	M16 x 105	4
65	2 1/2"	46	14	M12 x 95	4	18	M16 x 105	4	22.4	5/8" x 115	4	20	M16 x 110	4	20	M16 x 110	4
80	3"	46	14	M16 x 100	4	18	M16 x 105	8	23.9	5/8" x 120	4	20	M16 x 110	8	20	M16 x 110	8
100	4"	52	16	M16 x 105	8	18	M16 x 110	8	23.9	5/8" x 125	8	22	M16 x 120	8	22	M16 x 120	8
125	5"	56	16	M16 x 115	8	20	M20 x 115	8	23.9	3/4" x 135	8	22	M16 x 125	8	22	M16 x 125	8
150	6"	56	18	M16 x 115	8	22	M20 x 130	8	25.4	3/4" x 135	8	24	M20 x 130	8	24	M20 x 130	8
200	8"	60	20	M20 x 125	8	22	M20 x 135	12	28.4	3/4" x 145	8	24	M20 x 135	8	26	M20 x 140	12
250	10"	68	22	M20 x 140	12	24	M22 x 145	12	30.2	7/8" x 160	12	26	M20 x 150	12	29	M24 x 155	12
300	12"	78	22	M20 x 150	12	24	M22 x 155	16	31.8	7/8" x 175	12	26	M20 x 160	12	32	M24 x 175	12
350	14"	78	24	M22 x 155	12	26	M22 x 160	16	35.0	1" x 185	12	28	M20 x 165	16	35	M24 x 180	16
400	16"	102	24	M22 x 180	16	28	M24 x 190	16	36.6	1" x 210	16	32	M24 x 200	16	38	M24 x 210	16
450	18"	114	24	M22 x 190	16	30	M24 x 210	20	39.6	1 1/8" x 235	16	36	M24 x 220	20	42	M24 x 230	20
500	20"	127	24	M22 x 205	20	30	M24 x 220	20	42.9	1 1/8" x 255	20	38	M24 x 235	20	46	M30 x 260	20
550	22"	154	26	M24 x 240	20	32	M30 x 255	20	46.0	1 1/4" x 285	20	-	-	-	-	-	-
600	24"	154	26	M24 x 240	20	32	M30 x 255	24	47.7	1 1/4" x 285	20	42	M27 x 275	20	52	M33 x 300	20

Lug type (Cap screws)

Unit : mm

Size		Valve face to face	JIS 5K			JIS 10K			ANSI 150LB			EN 1092 PN10			EN 1092 PN16		
mm	inch		flange thickness	bolt size X length (L)	Q' ty	flange thickness	bolt size X length (L)	Q' ty	flange thickness	bolt size X length (L)	Q' ty	flange thickness	bolt size X length (L)	Q' ty	flange thickness	bolt size X length (L)	Q' ty
32	1 1/4"	33	12	M12 x 25	8	16	M16 x 30	8	15.7	1/2" x 30	8	18	M16 x 30	8	18	M16 x 30	8
40	1 1/2"	33	14	M12 x 25	8	16	M16 x 30	8	17.5	1/2" x 30	8	18	M16 x 30	8	18	M16 x 30	8
50	2"	43	14	M12 x 30	8	16	M16 x 35	8	19.1	5/8" x 35	8	20	M16 x 40	8	20	M16 x 40	8
65	2 1/2"	46	14	M12 x 35	8	18	M16 x 35	8	22.3	5/8" x 40	8	20	M16 x 40	8	20	M16 x 40	8
80	3"	46	14	M16 x 35	8	18	M16 x 35	16	23.9	5/8" x 45	8	20	M16 x 40	16	20	M16 x 40	16
100	4"	52	16	M16 x 40	16	18	M16 x 40	16	23.9	5/8" x 45	16	22	M16 x 45	16	22	M16 x 45	16
125	5"	56	16	M16 x 40	16	20	M20 x 45	16	23.9	3/4" x 50	16	22	M16 x 45	16	22	M16 x 45	16
150	6"	56	18	M16 x 40	16	22	M20 x 45	16	25.4	3/4" x 50	16	24	M20 x 50	16	24	M20 x 50	16
200	8"	60	20	M20 x 45	16	22	M20 x 50	24	28.6	3/4" x 55	16	24	M20 x 50	16	26	M20 x 50	24
250	10"	68	22	M20 x 50	24	24	M22 x 55	24	30.2	7/8" x 60	24	26	M20 x 55	24	29	M24 x 60	24
300	12"	78	22	M20 x 55	24	24	M22 x 60	32	31.8	7/8" x 65	24	26	M20 x 60	24	32	M24 x 65	24
350	14"	78	24	M22 x 60	24	26	M22 x 60	32	35.0	1" x 70	24	28	M20 x 60	32	35	M24 x 70	32
400	16"	102	24	M22 x 70	32	28	M24 x 75	32	36.6	1" x 80	32	32	M24 x 75	32	38	M24 x 85	32
450	18"	114	24	M22 x 75	32	30	M24 x 80	40	39.7	1 1/8" x 90	32	36	M24 x 85	40	42	M24 x 90	40
500	20"	127	24	M22 x 80	40	30	M24 x 85	40	42.9	1 1/8" x 100	40	38	M24 x 95	40	46	M30 x 100	40
550	22"	154	26	M24 x 95	40	32	M30 x 100	40	46.0	1 1/4" x 115	40	-	-	-	-	-	-
600	24"	154	26	M24 x 95	40	32	M30 x 100	48	47.7	1 1/4" x 115	40	42	M27 x 110	40	52	M33 x 120	40

*Note : For DN650 and larger sizes, please contact us.

Elastomer General Chart

The following chart should be used as a general guide.

Application suggested derive from recommendation given by elastomer manufacturer.

The resistance can be affected by type of fluid, concentration, temperature, pressure, flow rate or evaporation of the medium.

The final choice is to be taken by the customer, based on characteristics and specific application.

Elastomer General Chart

Material	General Application	Service Temperature	Not recommended for
EPDM	Alcohol Alkali Brake Fluid Brine Ester Ketone Ozone Sewage Seawater Treated Water with Caustic soda Water / Drinking water Water-Steam	-15°C to +120°C (Allowable temperature in continuous use -5°C ~ +100°C)	Hydrocarbon Oil Fat Grease
EPDM-H	Alcohol Alkali Brake Fluid Brine Ester Ketone Ozone Sewage Seawater Treated Water with Caustic soda Water / Drinking water Water-Steam	-40°C to +130°C (Allowable temperature in continuous use -20°C ~ +130°C)	Hydrocarbon Oil Fat Grease
NBR (BUNA-N)	Air Gasoline Hydrocarbon Natural Gas Oil and Fat	-10°C to +90°C (Allowable temperature in continuous use 0°C ~ +80°C)	Solvent Benzene Xylol
SBR	Acid and Alkali	-10°C to +80°C	
VITON (FPM)	Acid, Oil Hydrocarbon	-10°C to +160°C	Steam, Ester Freon22, Alkali Solvent, Ketone
* SILICONE (Q)	Beverage Food	-20°C to +140°C	Steam Solvent Hydrocarbon
PTFE	Solvent Corrosive Products	-40°C to +200°C	Fluid Containing Powders Gaseous fluorine
NEOPRENE (CR)	Acid, Ozone, Oil Fat Grease Solvent	-18°C to +90°C	Kentone, Thinner Concentated Acid

*Note : Max. working pressure for silicone seat : 7 bar

Storage of Valves / Installation Instruction

Storage of valves

Store the valve in dry, dark and cool conditions, preferably indoors with the actual valve temperature higher than the dew point. If outdoor storage is unavoidable, support the valves off the ground and protect the valves with a watertight cover.

Do not remove the valve packaging or end port protection, until necessary for inspection or installation. Store the valve in the slightly open position to avoid deformation of the rubberlining.

Installation Instruction

General

- Before shipment the seat surface is lubricated with silicone grease. If it is considered not necessary for special usage, it can be removed with solvent. In case valves are for chlorine, oxygen hydrogen, valves should be cleaned and degreased perfectly.
- Valves can be installed in the pipeline in any position.
- Before installing valves, the pipeline must be cleaned from dirt and welding residues. Otherwise seat may be damaged.
- Pipes must be free of tension.
- Butterfly valves can be installed directly in between flanges without any gaskets.

Installation in line related to wafer butterfly valve (on the existing pipeline)

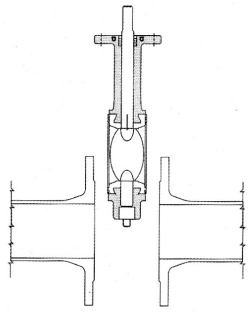
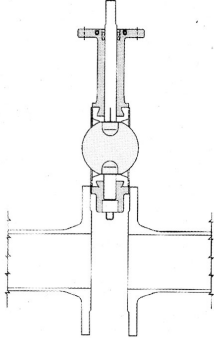
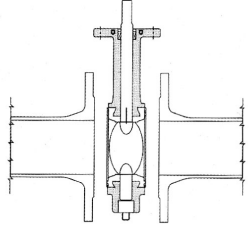
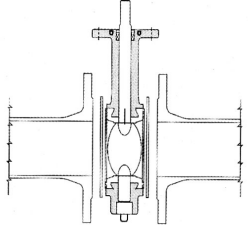
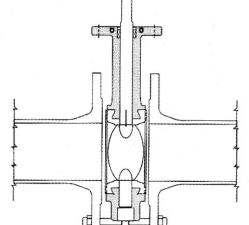
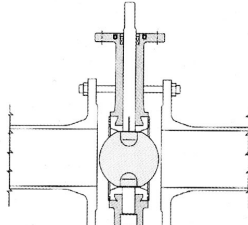
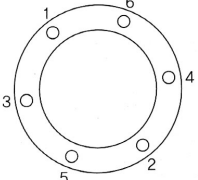
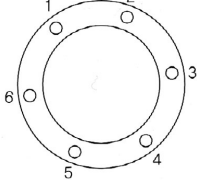
- Verify the distance between two flanges to be equal to face to face valve dimension.
- In order to facilitate installation of the valve, allow a sufficient room with adequate tools in between two flanges.
- Insert the lower part of flanges at least two flange-bolts.
- Close valve disc partially so that disc edge is at least 10mm within the body.
- Insert valve in between two flanges. Valve will be held by the two flange-bolts previously fitted in the lower part of flanges.
- Insert the flange-bolts through centering lugs of valve.
- Insert the remaining flange-bolts aligning the valve with the flanges and tightening flange-bolts manually.
- Maintain the valve aligned, remove gradually flange spreaders and tighten bolts partially.
- Control open and close operation of valve to be easy and smooth.
- Open the valve completely and cross tighten the bolts to adequate torque.

Installation of lug type butterfly valves has the same procedure with wafer type except using cap screws instead of bolts and nuts.

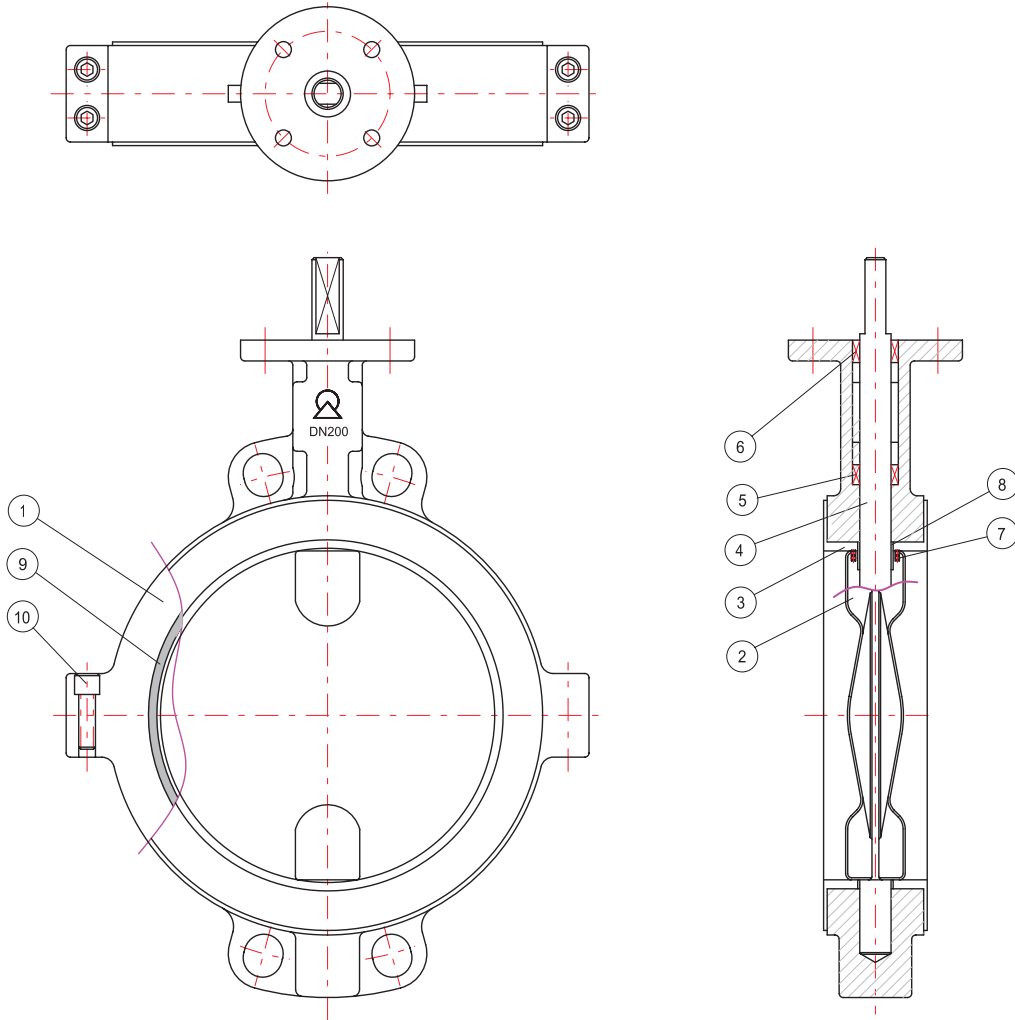
Installation in line related to wafer butterfly valve (in the new pipeline)

- Close valve disc partially so that disc edge is at least 10mm within the body.
- Align the two flanges with the valve body.
- Span the body with some flange-bolts and tighten the bolts partially. Finish tightening by uniform cross bolting.
- Use the flange-valve-flange unit for pipe centering.
- Tack-weld the flanges to the pipe.
- Remove the bolting and the valve from the flanges. Just perform tack-welding only when the valve is inserted as high heat temperature can damage valve seat.
- Weld flanges to the pipe and wait until completely cooled down.
- Install the valve by applying the same instruction procedure as the installation instruction on the existing pipeline.

Correct Installation

Correct Installation		Incorrect Installation
	<p>Spread flanges enough to allow the valve with disc in semi-closed position.</p> <p>It prevents the damage of disc and seat during installation and reduces initial torque.</p>	
	<p>Flange gaskets are not needed.</p>	
	<p>Insert bolts through the two bottom pipe flange holes to rest valve on during installation.</p>	
	<p>Tighten the flange bolts evenly to prevent the leakage between flanges and valve.</p>	

Design Features



Material Specification

No.	Components	Materials
1	Body	Cast Iron / Ductile Iron / Carbon Steel / Stainless Steel
2	Disc	Overmolded Disc in PTFE
3	Seat	PTFE
4	Stem	Stainless Steel (SS304 / SS316 / SS410 / SS630) / Monel
5	Packing	Grahite / Non-Asbestos
6	Bush (upper)	PTFE
7	O-ring	Viton
8	Bush (lower)	PTFE
9	Resilient back-up seat	Rubber
10	Body bolts	Stainless Steel / Steel

Specification and Application

Standard Compliance :

- Conform to EN 593, MSS SP67 and API 609

Production Range :

- Sizes : DN 40 ~ DN 600
- Working Pressure : Upto 10 bar for DN 40 ~ DN 300
Upto 6 bar for DN 350 ~ DN 600
- Working Temperature : -40°C to +200°C

Connection :

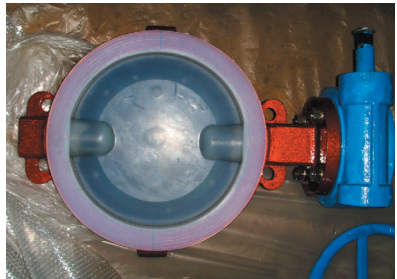
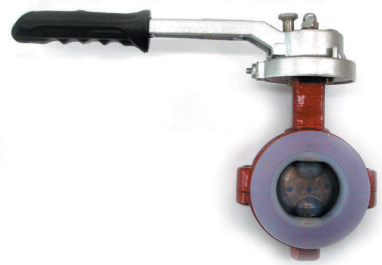
- ANSI B16.1 CL. 125LB & B16.5 CL. 150LB
- AS 2129 Table D & E
- BS 10 Table D & E
- DIN 2501 PN6 , PN10 & PN16
- EN 1092 PN6 , PN10 & PN16
- ISO 2531 PN6 , PN10 & PN16
- ISO 7005 PN6 , PN10 & PN16
- KS B 1511 / JIS B 2210 5K , 10K & 16K
- MSS SP44 CL. 150LB
- SABS 1123 Table 1000/3 & Table 1600/3

Face to Face Dimensions :

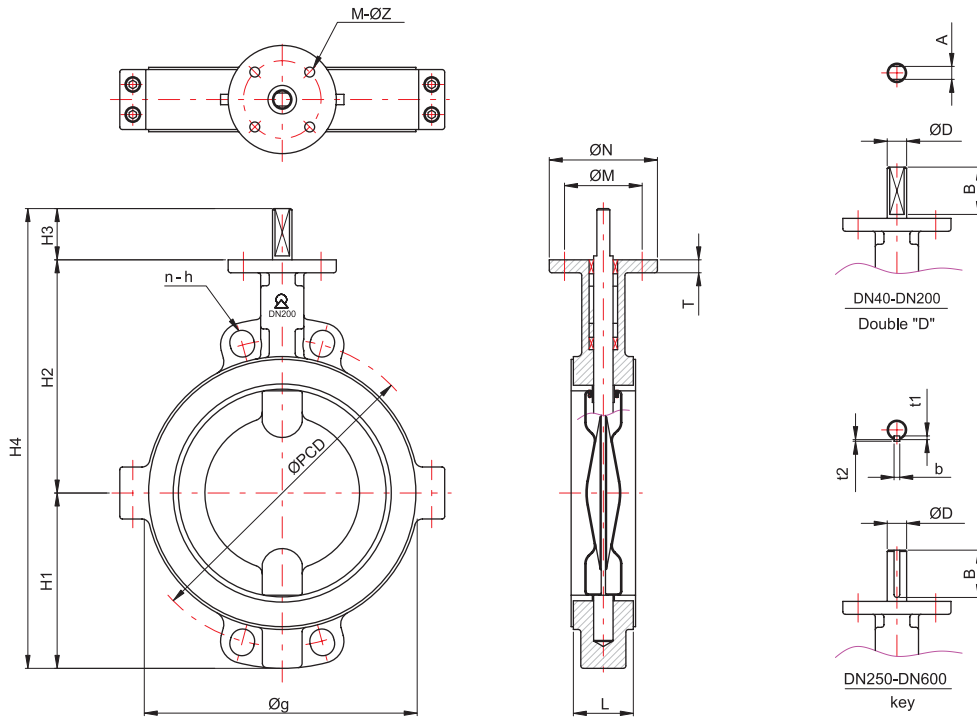
- Conform to ISO 5752 , EN 558 , MSS SP67 and API 609

Top Flange Dimensions :

- Conform to ISO 5211



SRS 740 / Wafer Type



Valve Dimensions

Unit : mm

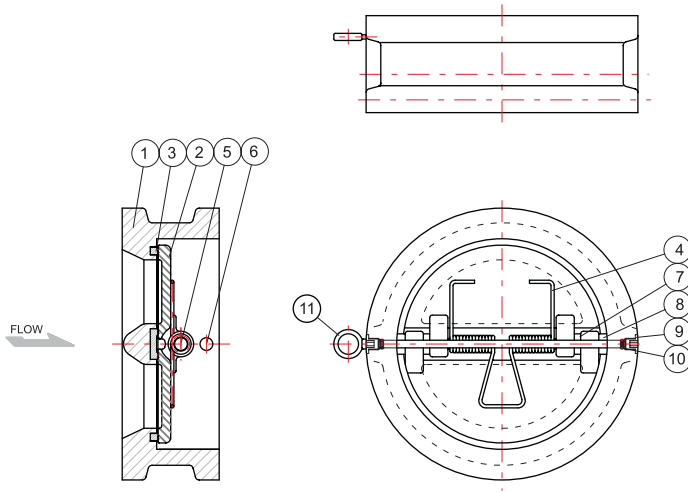
Size		Ø d	H1	H2	H3	H4	L	T	Stem								Top Flange				
mm	inch								Double "D"			key					Type	Ø M	Ø N	M- Ø Z	
									A	B	Ø D	B	Ø D	Type	t1	t2					b
40	1 1/2"	78	60	120	33	213	33	12	9.5	30	14	-	-	-	-	-	-	F07	70	90	4-Ø 10
50	2"	90	75	130	33	238	43	12	9.5	30	14	-	-	-	-	-	-	F07	70	90	4-Ø 10
65	2 1/2"	107	80	137	33	250	46	12	9.5	30	14	-	-	-	-	-	-	F07	70	90	4-Ø 10
80	3"	125	100	157	33	290	46	12	11.8	30	16	-	-	-	-	-	-	F07	70	90	4-Ø 10
100	4"	146	110	171	33	314	52	12	11.8	30	16	-	-	-	-	-	-	F07	70	90	4-Ø 10
125	5"	179	123	184	33	340	56	12	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-Ø 10
150	6"	206	143	203	33	379	56	12	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-Ø 10
200	8"	257	175	238	33	446	60	12	14.5	30	19	-	-	-	-	-	-	F07	70	90	4-Ø 10
250	10"	312	210	270	65	545	68	16	-	-	-	60	22	8x7	4.0	3.0	8.0	F10	102	125	4-Ø 12
300	12"	362	245	310	65	620	78	16	-	-	-	60	28	8x7	4.0	3.0	8.0	F10	102	125	4-Ø 12
350	14"	410	280	325	65	670	78	17	-	-	-	60	28	8x7	4.0	3.0	8.0	F10	102	125	4-Ø 12
400	16"	468	315	375	75	765	102	20	-	-	-	70	38	12x8	5.0	3.0	12.0	F14	140	175	4-Ø 18
450	18"	526	335	400	75	810	114	20	-	-	-	70	38	12x8	5.0	3.0	12.0	F14	140	175	4-Ø 18
500	20"	577	385	435	100	920	127	23	-	-	-	90	45	14x9	5.5	3.5	14.0	F16	165	210	4-Ø 22
550	22"	632	420	460	100	980	154	23	-	-	-	90	55	14x9	5.5	3.5	14.0	F16	165	210	4-Ø 22
600	24"	677	450	500	100	1050	154	23	-	-	-	90	55	14x9	5.5	3.5	14.0	F16	165	210	4-Ø 22

Flange Drilling Dimensions

Unit : mm

Size		JIS 5K			JIS 10K			AS2129 "E"			ANSI 150LB			EN1092 PN6			EN1092 PN10			EN1092 PN16		
mm	inch	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h	Ø PCD	n	h
40	1 1/2"	95	4	Ø 15	105	4	Ø 19	98	4	Ø 14	98.5	4	Ø 16	100	4	Ø 14	110	4	Ø 18	110	4	Ø 18
50	2"	105	4	Ø 15	120	4	Ø 19	114	4	Ø 18	120.5	4	Ø 19	110	4	Ø 14	125	4	Ø 18	125	4	Ø 18
65	2 1/2"	130	4	Ø 15	140	4	Ø 19	127	4	Ø 18	139.5	4	Ø 19	130	4	Ø 14	145	4	Ø 18	145	4	Ø 18
80	3"	145	4	Ø 19	150	8	Ø 19	146	4	Ø 18	152.5	4	Ø 19	150	4	Ø 18	160	8	Ø 18	160	8	Ø 18
100	4"	165	8	Ø 19	175	8	Ø 19	178	8	Ø 18	190.5	8	Ø 19	170	4	Ø 18	180	8	Ø 18	180	8	Ø 18
125	5"	200	8	Ø 19	210	8	Ø 23	210	8	Ø 18	216.0	8	Ø 22	200	8	Ø 18	210	8	Ø 18	210	8	Ø 18
150	6"	230	8	Ø 19	240	8	Ø 23	235	8	Ø 22	241.5	8	Ø 22	225	8	Ø 18	240	8	Ø 22	240	8	Ø 22
200	8"	280	8	Ø 23	290	12	Ø 23	292	8	Ø 22	298.5	8	Ø 22	280	8	Ø 18	295	8	Ø 22	295	12	Ø 22
250	10"	345	12	Ø 23	355	12	Ø 25	356	12	Ø 22	362.0	12	Ø 25	335	12	Ø 18	350	12	Ø 22	355	12	Ø 26
300	12"	390	12	Ø 23	400	16	Ø 25	406	12	Ø 26	432.0	12	Ø 25	395	12	Ø 22	400	12	Ø 22	410	12	Ø 26
350	14"	435	12	Ø 25	445	16	Ø 25	470	12	Ø 26	476.0	12	Ø 29	445	12	Ø 22	460	16	Ø 22	470	16	Ø 26
400	16"	495	16	Ø 25	510	16	Ø 27	521	12	Ø 26	539.5	16	Ø 29	495	16	Ø 22	515	16	Ø 26	525	16	Ø 30
450	18"	555	16	Ø 25	565	20	Ø 27	584	16	Ø 26	578.0	16	Ø 32	550	16	Ø 22	565	20	Ø 26	585	20	Ø 30
500	20"	605	20	Ø 25	620	20	Ø 27	641	16	Ø 26	635.0	20	Ø 32	600	20	Ø 22	620	20	Ø 26	650	20	Ø 33
550	22"	665	20	M24	680	20	M30	699	16	Ø 30	692.0	20	1 1/4"	-	-	-	-	-	-	-	-	-
600	24"	715	20	Ø 27	730	24	M30	756	16	Ø 33	749.5	20	Ø 35	705	20	Ø 26	725	20	Ø 30	770	20	Ø 36

Design Features and Specification



Material Specification

No.	Components	Materials
1	Body	Cast Iron / Ductile Iron / Carbon Steel Stainless Steel / Alu-Bronze
2	Disc	Ductile Iron / Carbon Steel / Bronze Stainless Steel / Alu-Bronze
3	Seat	Rubber (NBR / EPDM / Viton / Silicone / Neoprene)
4	Spring	Stainless Steel (SS304 / SS316)
5	Hinge Pin	Stainless Steel (SS304 / SS316)
6	Stop Pin	Stainless Steel (SS304 / SS316)
7	Disc Bearings	PTFE
8	Body Bearings	PTFE
9	Plugs	Steel
10	Pin stabiliser	Rubber
11	Eye Bolt	Steel (DN125 and larger)

General

Function

SRS 810 is a check valve to avoid unwanted back flow in a pipe.

Applications

Water supply systems (distribution, treatment etc.), irrigation, heating systems, ship building, industrial processes (liquids and gases).

Service Temperature ;

EPDM -15°C to +120°C (Allowable temperature in continuous use -5°C ~ +100°C)

NBR -10°C to +90°C (Allowable temperature in continuous use 0°C ~ +80°C)

Pipe connection

The Duo-check valve has been designed for installation in flanged piping systems (PN10, PN16, AS 2129 Table "E" etc.).

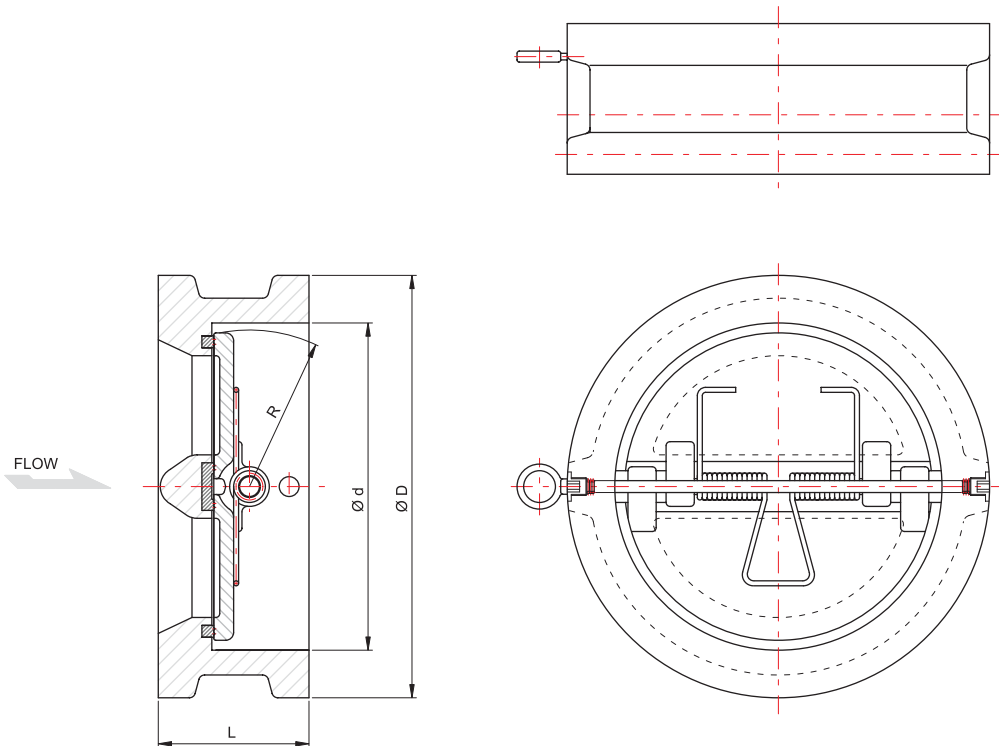
Suitable gaskets shall be used for sealing between valve and flanges.

Design

- The self acting pivoting check valve of the double disc.
- Maintenance free. The design is compact and space saving.
- The superior closing response prior to flow reveal.
- The corrosion resistant springs are designed to quickly close the valve at zero flow to prevent undesirable pressure surges.
In the closed position the valve is tight shut off.
- It opens automatically when the flow starts again.
- The elastomer seat is vulcanized and bonded to the body casting.
- It is out of the flow path thus ensuring extended seal life. Spherical profiling of the seat ensures positive shut-off even at low pressures and the area adjacent to the seat is also protected by the same elastomer material.
- Attention paid to the streamlining of the flow path is paramount if good flow characteristics are to be achieved.
- The saving of energy costs by selecting a check valve may be several times the initial cost of the valve.
- The use of these design features together with careful material selection makes a product with a high reliability and a low operating costs.



SRS 810 / Wafer Type



Valve Dimensions

AS 2129 Table "E"

Unit : mm

Size		ø d	ø D	L	R
mm	inch				
40	1 1/2"	55	84	43	26
50	2"	60	96	43	29
65	2 1/2"	73	109	46	35
80	3"	89	128	64	43
100	4"	114	160	64	56
125	5"	141	192	70	69
150	6"	168	213	76	83
200	8"	219	270	89	105
250	10"	273	334	114	135
300	12"	324	380	114	156
350	14"	375	444	127	173
400	16"	425	495	140	195

ANSI B16.5 CLASS 150LB

Unit : mm

Size		ø d	ø D	L	R
mm	inch				
40	1 1/2"	55	82	43	26
50	2"	60	101	43	29
65	2 1/2"	73	120	46	35
80	3"	89	133	64	43
100	4"	114	171	64	56
125	5"	141	194	70	69
150	6"	168	219	76	83
200	8"	219	276	89	105
250	10"	273	337	114	135
300	12"	324	407	114	156
350	14"	375	447	127	173
400	16"	425	510	140	195

EN 1092 PN10

Unit : mm

Size		ø d	ø D	L	R
mm	inch				
40	1 1/2"	55	92	43	26
50	2"	60	107	43	29
65	2 1/2"	73	127	46	35
80	3"	89	142	64	43
100	4"	114	160	64	56
125	5"	141	192	70	69
150	6"	168	213	76	83
200	8"	219	270	89	105
250	10"	273	328	114	135
300	12"	324	378	114	156
350	14"	375	438	127	173
400	16"	425	489	140	195

EN 1092 PN16

Unit : mm

Size		ø d	ø D	L	R
mm	inch				
40	1 1/2"	55	92	43	26
50	2"	60	107	43	29
65	2 1/2"	73	127	46	35
80	3"	89	142	64	43
100	4"	114	160	64	56
125	5"	141	192	70	69
150	6"	168	213	76	83
200	8"	219	270	89	105
250	10"	273	328	114	135
300	12"	324	384	114	156
350	14"	375	444	127	173
400	16"	425	495	140	195

Technical Data

Flow resistance

As a check valve is permanently open in normal service, the flow resistance is a very important feature of a check valve with regard to the energy loss per year which can mount up to many times the initial cost of the valve. We have reduced the pressure loss of our design to very low levels. This is indicated by high Cv/Kv values as stated in the following table.

Flow coefficient (Cv / Kv)

Unit : mm

Size		Cv	Kv
mm	inch		
40	1 1/2"	25.5	22
50	2"	51	44
65	2 1/2"	90	78
80	3"	128	110
100	4"	280	241
125	5"	500	431
150	6"	725	625
200	8"	1420	1224
250	10"	2590	2233
300	12"	3930	3388
350	14"	5100	4397
400	16"	7300	6293

Cv is in imperial units, the water flow rate in U.S. gallons per minute which passes through the valve giving a pressure drop of 1 psi at a temperature of 68°F.

In metric units the same coefficients is called Kv and correspond to the flow rate in m³/h passing through the valve giving a pressure drop of 1 bar at a temperature of 20°C.

The approximate corresponding formulas are :

$$Q = C_v \cdot \sqrt{(\Delta P \cdot 62.4/D)}$$

where :

- Q = valve flow rate in gpm (USGPM)
- ΔP = pound per square inch (psi) pressure drop through the valve
- 62.4 = conversion factor for fluids computed in relation to water
- D = is pounds per cu.ft (pcf) fluid density

$$Q = K_v \cdot \sqrt{(\Delta P \cdot 1000/D)}$$

where :

- Q = valve flow rate in m³/h
- ΔP = pressure drop through the valve in bar
- 1000 = conversion factor for fluids computed in relation to water
- D = kg/m³ fluid density

The relation between Cv and Kv, expressed in the above mentioned unit of measure is as follows ;

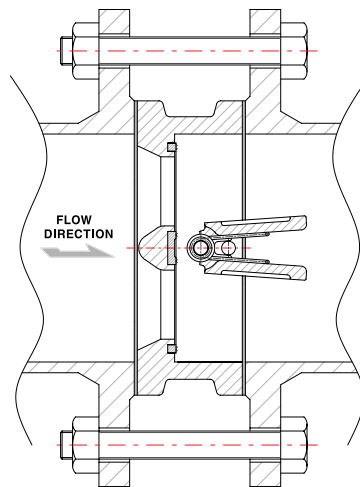
$$C_v = 1.16 K_v$$

Installation

The check valve is designed for steady flow conditions and can be installed in horizontal and vertical pipelines but the instructions shown must be adhered to.

* **Note** : The valve must not be installed in pipelines with pulsating flow or near to reciprocating pumps.

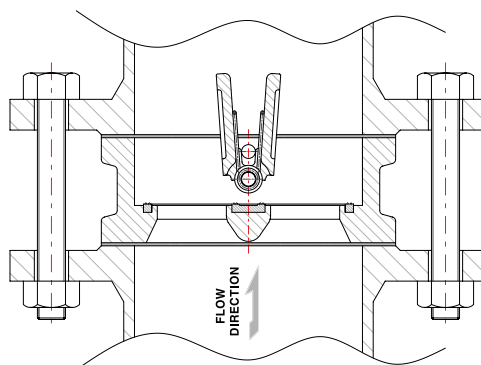
Installation in a horizontal pipeling



The disc shaft must be in the vertical position.

PLAN VIEW PREFERRED INSTALLATION

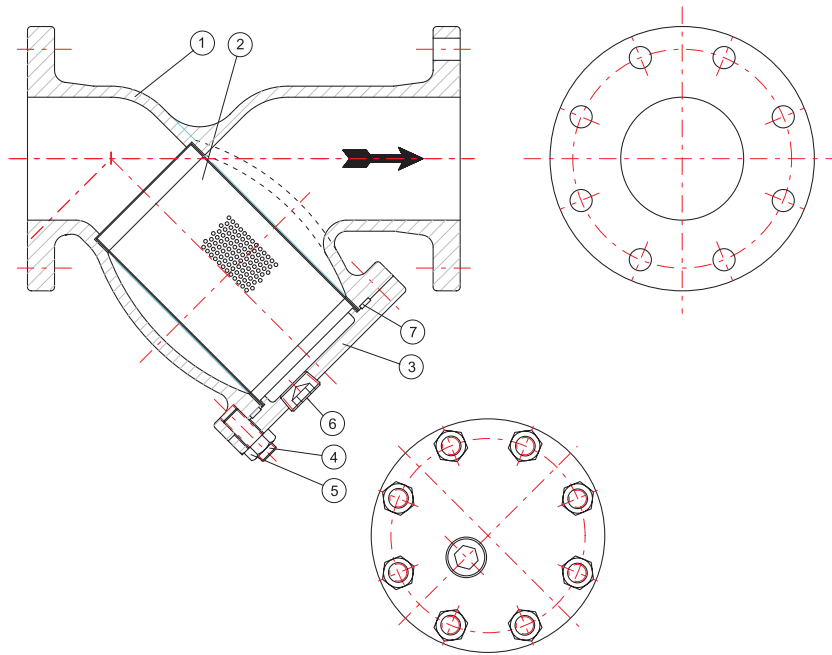
Installation in a vertical pipeling



As standard the valve must be installed with flow up.

* **Note** : Additional pressure drop can be expected due to the weight of the discs.

Design Features and Specification



Specification

Cast iron "Y" Type Strainer with Replaceable Stainless Steel Mesh.

Drilled & Tapped Blowdown Connection.

Flange to AS 2129 Table "E", ANSI B16.5 CLASS 150LB, EN 1092 PN10 / 16, and KS B 1511 / JIS B 2210 10K.

Pressure / Temperature Rating

Maximum working pressure of 1600 kPa (230PSI), 20°C

Maximum working temperature of 165°C, 700 kPa.

Hydrostatically tested at 2400 kPa.

Material Specification

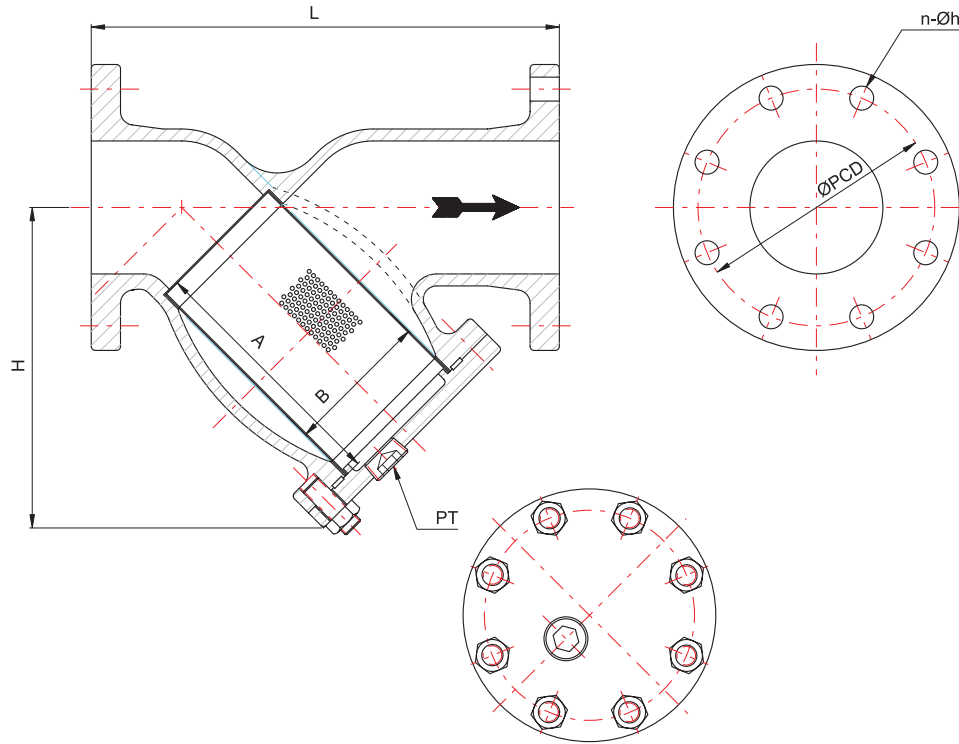
No.	Components	Materials
1	Body	Cast Iron
2	Screen	Stainless Steel (SS304 / SS316)
3	Cover	Cast Iron
4	Bolts	Steel
5	Nuts	Steel
6	Drain Plug	Galvanized Steel
7	Gasket	Rubber



Screen Specification

Stainless Steel perforated with 2 ~ 3mm holes. Available for purchase separately.

SRS 410 / Y - STRAINER



Valve Dimensions

Unit : mm

Size	mm	50	65	80	100	125	150	200	250	300	350
	inch	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"
A	162	177	183	192	232	258	328	398	452	643	
B	56	78	88	110	140	170	210	270	320	370	
H	172	203	222	241	292	321	416	483	559	735	
L	225	273	292	352	416	470	543	660	762	949	
PT	1/2"	1"	1"	1"	1 1/4"	1 1/2"	1 1/2"	2"	2"	2"	

EN 1092 PN10

Unit : mm

Size	mm	50	65	80	100	125	150	200	250	300	350
	inch	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"
ø PCD	125	145	160	180	210	240	295	350	400	460	
n	4	4	8	8	8	8	12	12	12	16	
ø h	18	18	18	18	18	22	22	22	22	22	

AS 2129 TABLE "E"

Unit : mm

Size	mm	50	65	80	100	125	150	200	250	300	350
	inch	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"
ø PCD	114	127	146	178	210	235	292	356	406	470	
n	4	4	4	8	8	8	8	12	12	12	
ø h	18	18	18	18	18	22	22	22	26	26	

EN 1092 PN16

Unit : mm

Size	mm	50	65	80	100	125	150	200	250	300	350
	inch	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"
ø PCD	125	145	160	180	210	240	295	355	410	470	
n	4	4	8	8	8	8	12	12	12	16	
ø h	18	18	18	18	18	22	22	26	26	26	

ANSI B16.5 CLASS 150LB

Unit : mm

Size	mm	50	65	80	100	125	150	200	250	300	350
	inch	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"
ø PCD	120.5	139.5	152.5	190.5	216.0	241.5	298.5	362.0	432.0	476.0	
n	4	4	4	8	8	8	8	12	12	12	
ø h	19	19	19	19	22	22	22	25	25	29	

JIS 10K

Unit : mm

Size	mm	50	65	80	100	125	150	200	250	300	350
	inch	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"
ø PCD	120	140	150	175	210	240	290	355	400	445	
n	4	4	8	8	8	8	12	12	16	16	
ø h	19	19	19	19	23	23	23	25	25	25	