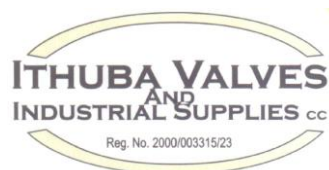
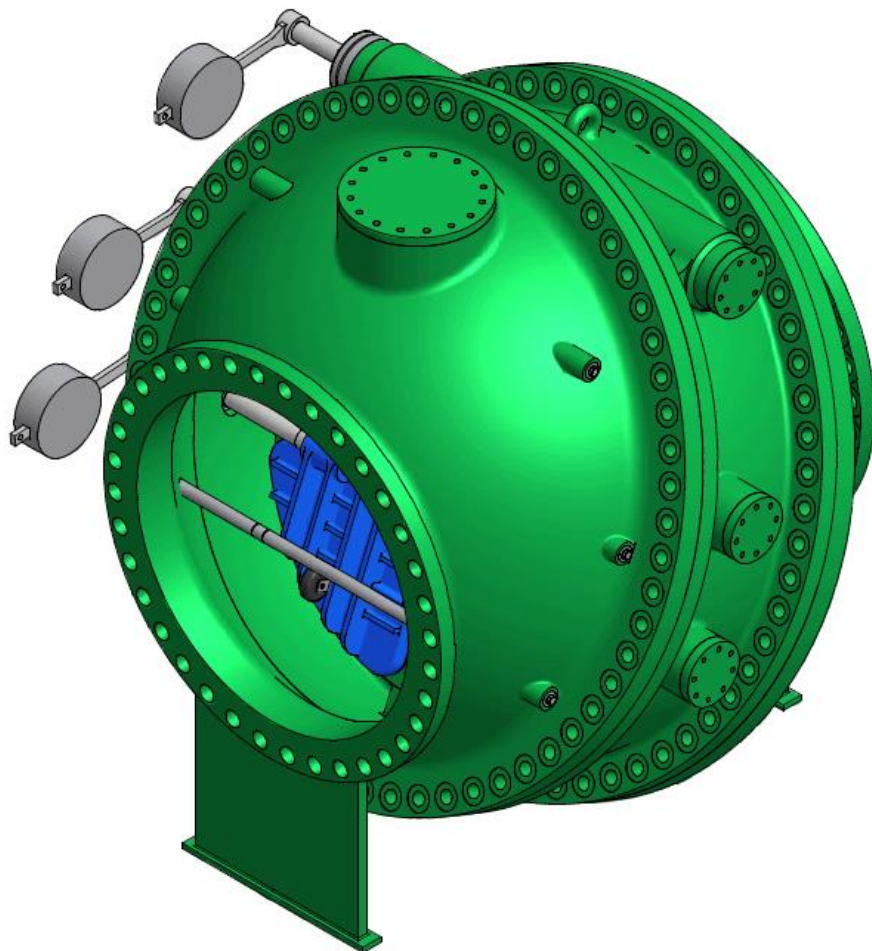


Swing Check Valves

Single & Multi Door Type: SABS 144, 192 & SANS 1551



THE PREFERRED VALVE PARTNER IN INDUSTRY

Single Door Reflux Valve

These valves are of self-contained, free swinging clack conventional style. Depending on operating conditions, valve can be supplied with or without lever & weight or by contractual requirement. The valves conform to BS 5153, SABS 144, 192 & SANS 1551. The valves come complete with quality welded seats of St/Steel 316 (Body) and NA Bronze-AB2 (Clack) for all ratings. The clack is keyed to the shaft, as opposed to pinning, for maintenance ease.

These valves are suitable for use in waste water, sewerage and clean water applications and are designed for horizontal installations.

The illustrations shown in this catalogue are subject to change without notice. The valves are rated as shown in this section.

Flanges

Valves have integral flanges that can be cast & drilled to suit customer or contractual specification requirements.

Coating

Internal and external coatings can be of Twin Pack Epoxy, Fusion Bonded Epoxy or approved equivalent.

Operation

Valves are of self-contained, free swinging clack format, clearing the waterway. The clack swings freely open and is keyed to the spindle. The valve swings open once pump starts and allows for full flow. The valves come complete with lever & weight, as per customer or contractual requirements.

Installation

All valves are built for horizontal pipe installation. However, valves can also operate equally well in vertical pipe flow-up installations.

Size Range: Sizes vary from DN50 - DN500

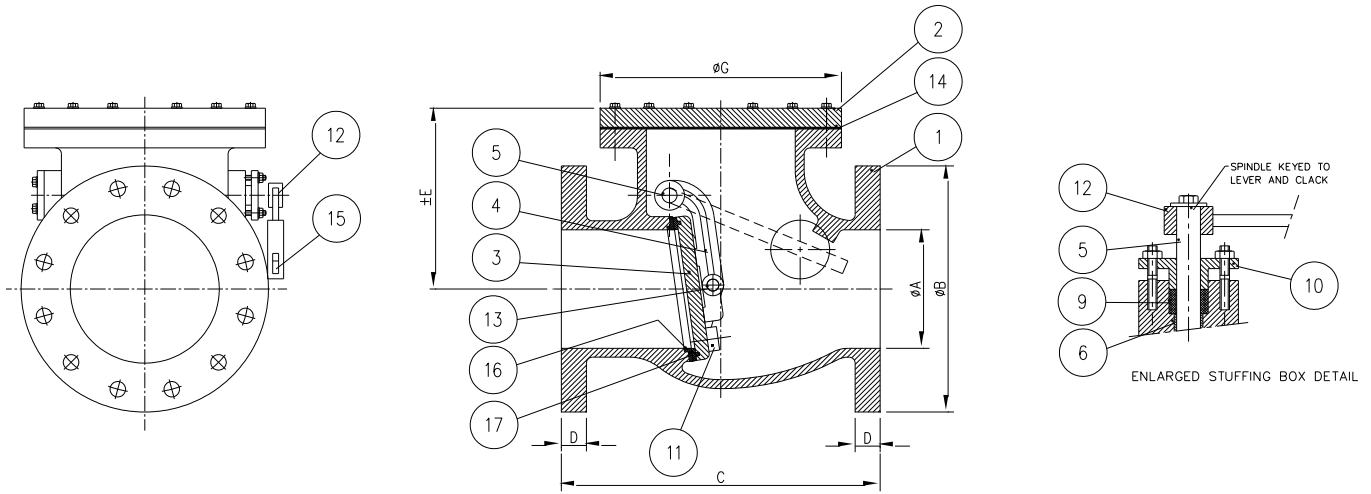
Rating: Valve are rated for PN10 - PN100

Valve Slamming

Swing check valves are subject to slamming on rapid reversal of flow. Valve doors may be balanced by using a lever & counter-weight attached to the hinge shaft. It is recommended that all sizes of high pressure check valves be fitted with lever & weight. This, when set properly, helps the valves to close on time before water wave reach the valve from downstream end, thus eliminating slamming.

By-passes

Valve sizes of DN200 and larger may be fitted with by-pass assemblies to drain the pipeline downstream of the main valve, or in the open position, to relieve surge pressures.



SIZE	UP TO PN40 RATING						UP TO PN100 RATING				
øA	øB	C	D	E	øG	Mass (kg)	øB	C	D	E	Mass (kg)
50	165	203	20	115	172	19	-	-	-	-	-
80	200	241	24	195	229	36	215	356	32	250	130
100	235	292	24	210	240	54	296	432	36	262	160
150	300	356	28	264	343	125	408	559	44	332	210
200	375	495	34	318	420	180	505	660	52	398	430
250	450	622	38	356	480	290	590	787	60	445	575
300	515	698	42	400	495	400	578	838	68	403	630
350	580	787	46	413	597	500	715	889	74	432	780
400	660	864	50	496	720	725	-	-	-	-	-
450	685	978	57	525	699	775	-	-	-	-	-
500	755	978	57	540	699	820	-	-	-	-	-

Materials Of Construction

For all valve ratings the material for primary components conforms to relevant specification and as listed below.

Item	Component	Specification	
		Low Pressure	High Pressure
1	Body	SG BS2789 420/12	CAST STEEL 3100-A2
3	Door	SG BS2789 420/12	CAST STEEL 3100-A2
2	Cover	Mild Steel BS 4360 300WA	
5	Shaft	Stainless Steel BS970 431S29	
16	Body Seat	Stainless Steel 316 (Weld Deposit)	
16	Door Seat	NA Bronze AB2 (Weld Deposit)	

Component Material List as indicated above

17	CLACK SEAL	N.A BROZE AB2 - WELD DEPOSIT
16	BODY SEAT	ST/STEEL 316
15	COUNTER WEIGHT	CAST IRON BS 1450/220
14	COVER GASKET	KLINGER
13	CLACK PIN	ST/STEEL 304
12	LEVER	MILD STEEL 300WA
11	STOPPER	NITRILE
10	GLAND	SG BS 2789 420/12/CAST STEEL 3100-A2
9	GLAND PACKING	JOHN CRANE
8	END COVER	MILD STEEL 300WA
7	END COVER O' RING	NITRILE RUBBER
6	BUSH	GM BS 1400 LG2
5	SPINDLE	ST/STEEL BS 970 431S29
4	CLACK ARM	SG BS 2789 420/12/CAST STEEL 3100-A2
3	CLACK	SG BS 2789 420/12/CAST STEEL 3100-A2
2	COVER	MILD STEEL 300WA
1	BODY	SG IRON BS 2789 420/12/CAST STEEL 3100-A2
ITEM	DESCRIPTION	MATERIAL & SPECIFICATION

All other components are as shown on the list or as per customer requirements

Headloss

The table below indicates headloss in kPa across pattern swing check valves mounted in a horizontal pipeline, with door shafts supported in low friction bearings and without counter-weights or damping devices affecting the movement of the doors. The headloss indicated below is at various fluid velocities through the valves of clean water at 20°C. The minimum headloss across the valves required to hold the doors in the open position averages 3.5kPa in all sizes.

Size	No Of Doors	Velocities			
		2 m/s	2.5 m/s	3 m/s	3.5 m/s
50	1	4.4	7.0	10.0	13.5
80	1	4.4	7.0	10.0	13.5
100	1	4.4	7.0	10.0	13.5
150	1	4.4	7.0	10.0	13.5
200	1	4.4	7.0	10.0	13.5
250	1	4.4	7.0	10.0	13.5
300	1	4.2	6.6	9.5	13.0
350	1	4.2	6.6	9.5	13.0
400	1	4.2	6.6	9.5	13.0
450	1	4.2	6.6	9.5	13.0
500	2	3.5	4.6	6.6	9.0
600	2	3.5	4.6	6.6	9.0
700	2	3.5	4.6	6.6	9.0
800	2	3.5	4.6	6.6	9.0
900	4	3.5	4.2	6.6	8.0
1000	4	3.5	4.2	6.6	8.0
1200	6	3.5	4.0	5.6	7.6
1400	6	3.5	4.0	5.6	7.6
1600	6	3.5	4.0	5.6	7.6

Multi-Door Reflux

The illustration shown below is of the 3-piece construction of sizes DN800 - DN1600. Sizes of DN500 & DN600 are of two-piece construction. The valves are supplied complete with lever & weight on each door or door-pair and position indicators. The valves can also be fitted with by-pass assemblies when required. The valves conform to BS5153.

Flanges: Valves have integral flanges that can be cast & drilled to suit customer or contractual specification requirements.

Coating: Internal and external coatings can be of Twin Pack Epoxy, Fusion Bonded Epoxy or approved equivalent.

Operation: The top & bottom doors swing independently open and, unlike the single clack type, are pinned to their respective spindles. The valve doors swing open once pump starts and allows for full flow. The valves come complete with lever & weight on each shaft.

Installation: All valves are built for horizontal pipe installation.

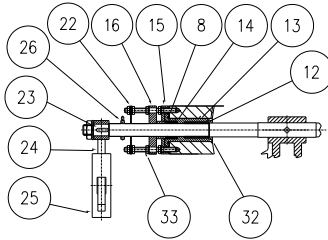
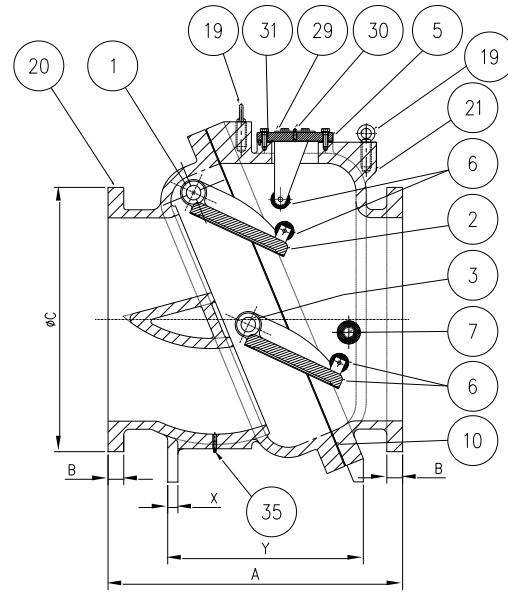
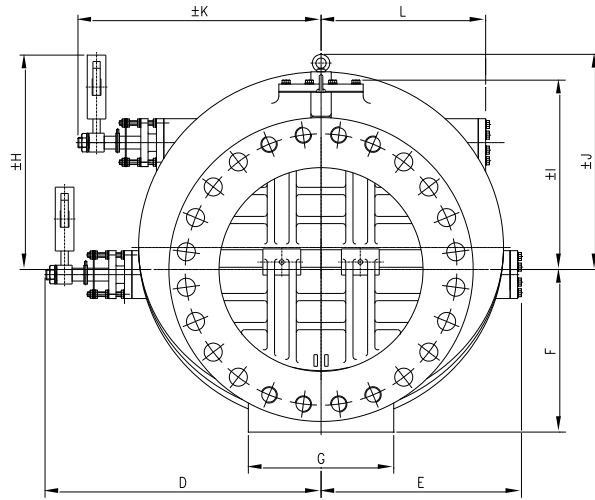
Size Range: Sizes vary from DN500 - DN1600

Rating: Valves are rated for PN6 to PN40 water working pressure.

Materials Of Construction

For all valve ratings the material for primary components conforms to relevant specification and as listed below.

Item	Component	Specification	
		Low Pressure	High Pressure
2 & 4	Doors	SG 420/12	CAST STEEL 3100-A2
20 & 21	Body	SG 420/12	CAST STEEL 3100-A2
15	Inspection-Cover	Mild Steel BS 4360 300WA	
1	Shaft	Stainless Steel BS970 431S29	
(20)	Body Seat	Stainless Steel 316 (Weld Deposit)	
(2)	Door Seat	N.A Bronze AB2 (Weld Deposit)	



Dimensions in Millimeters

SIZE							PN25 RATING			PN40 RATING			No Of Doors
	A	D	E	F	G	$\pm J$	B	C	MASS (kg)	B	C	MASS (kg)	
500	1000	885	630	500	500	720	44	730	2150	52	755	2205	2
600	1015	695	650	595	400	815	46	845	2500	60	890	2625	2
700	1330	1050	750	560	500	741	50	960	3240	64	995	3402	2
800	1330	1130	773	824	550	770	54	1085	4000	72	1140	4200	2
900	1700	935	756	900	700	770	58	1185	6456	-	-	6780	4
1000	1700	1616	964	1000	700	1035	62	1320	7600	-	-	7980	4
1200	2210	1800	1664	1100	900	1032	70	1530	14770	-	-	15510	6
1400	2150	1800	1465	1610	1000	1535	76	1755	17000	-	-	18700	6
1600	2400	1800	1465	1610	1000	1535	84	1975	25000	-	-	27000	6

Ithuba Valves & Industrial Supplies

Component Material as indicated on the schematics above

ITEM	DESCRIPTION	MATERIAL	ITEM	COMPONENT	DESCRIPTION	ITEM	COMPONENT	DESCRIPTION
1	UPPER DOOR SPINDLE	SG BS 2789 420-12/Cast Steel BS3100 - A2	14	GLAND PACKING	JOHN CRANE	27	SHAFT PIN	ST/STEEL BS970 431S29
2	UPPER DOOR	SG BS 2789 420 - 12/Cast Steel BS3100 - A2	15	ECC. STUFFING BOX COVER	MILD STEEL 300WA	28	SHAFT PIN GRUB SCREW	ST/STEEL 316
3	LOWER DOOR SPINDLE	ST/STEEL BS 970 431S29	16	GLAND	MILD STEEL 300WA	29	NAME PLATE	ST/STEEL 304
4	LOWER DOOR	SG BS 2789 420 - 12/Cast Steel BS3100 - A2	17	BODY SEAT (WELD DEPOSIT)	ST/STEEL 316	30	AIR RELEASE PLUG	STEEL -GALV.
5	INSPECTION COVER	MILD STEEL 300WA	18	DOOR SEAT (WELD DEPOSIT)	N.A. BRONZE AB2	31	INSPECTION COVER GASKET	KLINGER
6	RUBBER STOPPER	NITRILE RUBBER	19	EYE BOLT	EN5A	32	GACO U-SEAL	NITRILE RUBBER
7	LOWER STOPPER ROD	ST/STEEL BS 970 431S29	20	INLET BODY	SEE 2.1	33	GLAND BOLTING	STEEL Gr. 8.8
8	STUFFING BOX O' RING	NITRILE RUBBER	21	OUTLET BODY	SEE 2.1	34	ECC BUSH OVER BOLTING	STEEL Gr. 8.8
9	ECCENTRIC BUSH COVER	MILD STEEL 300WA	22	INDICATOR PLATE	ST/STEEL 304	35	DRAIN PLUG	STEEL
10	BODY O' RING	NITRILE RUBBER	23	KEY (LEVER- DOOR)	KEYSTEEL BS 4235			
11	ECCENTRIC BUSH	MILD STEEL 300WA	24	LEVER	MILD STEEL 300WA			
12	ECC. BUSH BEARING	PHOSPHOR BRONZE	25	COUNTER WEIGHT	SG BS 2789 420 - 12/Cast Steel			
13	ECC. STUFFING BOX	MILD STEEL 300WA	26	INDICATOR POINTER	ST/STEEL 304			