

Check Valves (Non Return Valve)

1. Swing Check Valve
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Swing Check Valves

Flosteer **Swing check valves** are ideally suitable for vertical and horizontal application. A range of Check Valves (Non-Return Valves) suitable for oil, gas, water, refining, power and chemical applications where the prevention of flow reversal is mandatory. Flosteer Check Valves are Bolted cover design up to 600# and above pressure seal design.

Stellited trims are provided for all above 600# as a manufacturing standard of "FLOSTEER" valves and in lower rating also on request.

FLOSTEER Swing Check valves are available under any Third party inspection including IBR (Indian Boiler Regulation). Swing Check valves can be supplied with Titling disc design, Counter weight or Dash pot arrangement.



Swing Check Valve

<u>Standards:</u>	
Design Standard	BS 1868/API 6D
Inspection & Testing Standard	BS 6755/API 6D
Face To Face	As Per ANSI B 16.10
End Connection	Flanged End To ANSI B 16.5/BS 10 Table Buttweld End To ANSI B 16.25
Size Range	1" To 24"
Pressure Rating	150# To 1500#

Material Specification:

Body / Cover / Hinge	ASTM A 216 GR. WCB ASTM A 217 GR. WC1/WC6/WC9/WC11 ASTM A 352 GR. LCB/LC3 ASTM A 351 GR. CF 8 /CF 8M/CF 3/CF 3M/CN 7M IS 210 GR. FG 200/220/250/260
Disc	AISI 410 (13% Cr.) /AISI 304/316/304L/316L/Alloy 20
Seat	AISI 410 (13% Cr.) /AISI 304/316/304L/316L/Alloy 20
Hinge Pin	AISI 410 (13% Cr.) /AISI 304/316/304L/316L/Alloy 20
Gasket	CAF/Grafoil/S.S. Spiral Wound With CAF/Grafoil/P.T.F.E.
Disc Lock Nut	A 194 GR. 2H/S.S. 304/316
Stud & Nut	ASTM A 193 GR. B7/ A 194 GR. 2H/S.S. 304/316

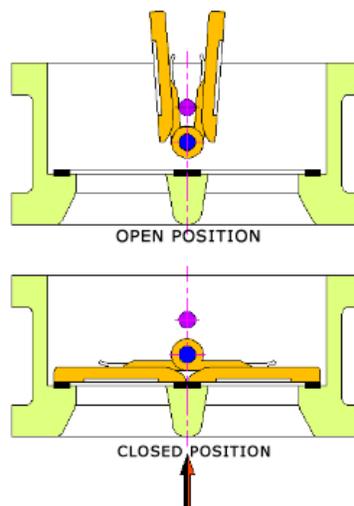
Dual Plate Check Valve (NRV)

Floster Dual Plate, Wafer Check Valve has One Piece cast heavy stronger Body configuration provides reduced weight and size compare to a swing check valve or lift check valve. This results savings in Initial cost, space and pipe support element installation.

The Dual Plate, Wafer Check Valve employs two-spring-loaded plates hinged on a central hinge pin. When the flow decreases, the plates close by the action of torsion spring before flow reversal takes place. All features put together make the Dual Plate Check Valve as the most efficient & versatile design. It is also referred to as SILENT CHECK VALVE

It is much easier to install between standard gaskets and line flanges, and therefore is more cost effective to install and to maintain.

Its design complies with API 594 and API 6D, testing with API 598.



Features:

- Light Weight, Versatile Design, and 80 to 90% lighter than conventional full body check valve.
- Reduces pipe supports, simplifies piping, easier, less costly installation.
- Spring Loaded double door design has low cracking pressure.
- Disc open 80% to ensure positive closing
- Materials and trims available for all services within temperature range.
- Rubber To Metal or Metal To Metal Seat available
- Neoprene, Buna-N, EPDM, Viton[®], Silicon etc.

Standard:

Design Standard	API 6D / API 594
Testing Standard	API 598
Pressure Class	150# to 300#
End Connection	Wafer Type, Flangeless Suitable To Mount Between ANSI B 16.5/BS 10 Table/DIN/JIS/IS Flange

Nomeclature:

Body	IS 210 GR. FG 200/220 ASTM A 216 GR. WCB ASTM A 217 GR. WC 1 / WC 6 /WC 9 / WC 11 ASTM A 352 GR. LCB / LC 3 ASTM A 351 GR. CF 8 / CF 8M / CF 3/CF 3M
Disc	ASTM A 216 GR. WCB ASTM A 217 GR. WC 1 / WC 6 /WC 9 / WC 11 ASTM A 352 GR. LCB / LC 3 ASTM A 351 GR. CF 8 / CF 8M / CF 3/CF 3M
Hinge/Stop Pin	AISI 410 / 304 / 316 / 304L / 316L
Seat (Moulded)	Neoprene / Nitrile / Buna-N/ NBR / EPDM /Silicon / Viton Spring : S.S. 304 / 316 / 304L / 316 L Lifting Hook : C.S. / S.S 304 / 316

Wafer Type Check Valve (Plate Type)

Floster Wafer Type Check Valve has short face-to-face dimensions and low weight allows a simple space saving installation between the companion flanges. The valves are suitable to mounting between weld neck or slip on type companion flanges of different standards.

They are specially developed for applications where a low-pressure loss is essential. Opening and closing of the valve will take place at an extremely low-pressure difference over the valve disc. The eccentric disc shaft combination with the disc seat guarantees a positive shut off returning media. Wafer check valves are becoming the preferred type of check valve for most applications, due to their compact design and relatively low cost.



Wafer Type Check Valve (Plate Type)

Features:

- Body Type: Single Plate, Short Type
- Suitable For Horizontal and Vertical Mounting
- Shorter overall length, mounting requires minimum space.
- Low Pressure Drop
- Easy to Install
- Less Weight
- Maintenance Free
- End Connection: Wafer Type, Flangeless
- Size Range: 1" To 42"
- Pressure Rating: 150#
- Seat Leakage: Zero Leakage, Tight Shut Off
- Temperature Range: -250 To + 2000 C
- Mounting Between: ANSI B 16.5 / BS 10 / DIN /IS/JIS Flanges
- Design Standard: API 6D
- Testing: API 598
- Face To Face: ANSI B 16.10

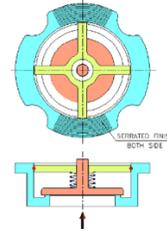
Disc Check Valve

Floster Disc Check Valves feature a wafer type, compact and rugged cast steel design and are suitable for any process liquid, air, gas, steam etc. Disc check valves are opened by the pressure of fluid and closed through compression spring as soon as flow stops thus preventing reverse flow.

Advantage of these check valve is they can be mount between pipe flanges in any direction. Body Seat available in Metal-to-Metal and Soft seat also.



Disc Check Valve



FEATURES:

- Compact & Rugged Design
- Less Weight
- Easy To Installation
- Maintenance Free
- Zero Leakage (In Soft Seat)

Standard:

Design Standard	DIN EN 558-2
Testing Standard	DIN 3230 / API 598
End Connection	Wafer Type, Flangeless Suitable To Mount Between ANSI B 16.5/BS 10 Table/DIN/JIS/IS Flange
Rating	150# to 300#
Size Range	15MM to 100MM

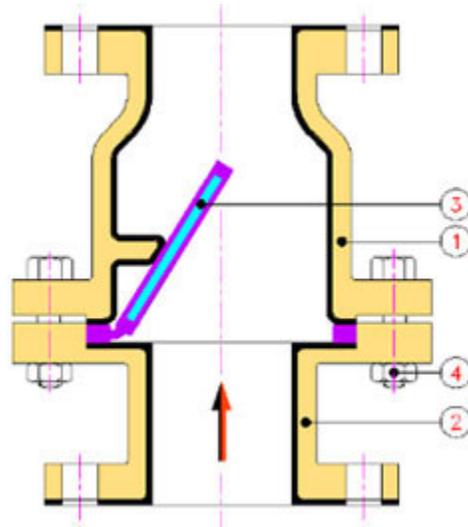
Nomenclature:

Body	ASTM A 216 GR. WCB ASTM A 351 GR. CF 8 /CF 8M / CF 3 / CF 3M Star Guide : ASTM A 216 GR. WCB ASTM A 351 GR. CF 8 /CF 8M / CF 3 / CF 3M
Seat	Metal To Metal – Integral Body –S.S. 304/316/304L/316L Soft Seat – P.T.F.E./Neoprene/EPDM/Nitrile/Buna-N/Silicon/Viton
Disc	ASTM A 351 GR. CF 8 /CF 8M / CF 3 / CF 3M Spring : S.S. 304 / 316 / 304L / 316L Circlip : S.S. 304 / 316 / 304L / 316L

Flap Type Check Valve

Rubber Lined & Unlined

Floster Flap Type Check Valves are available in Two Piece Body Construction with Rubber Lining or Without Lining. Floster Designed Flap Type Check Valves gives Zero Leakage due to Rubber Moulded Flap Disc.



Standard:

Design & Testing Std.	Mfg. Standard
Pressure Rating	PN 7
End Connection	Flanged End
Drilling	As Per ANSI B 16.5/BS 10 Table/DIN/JIS/IS Std.
Leakage Class	Class VI (Zero Leakage)

Nomenclature:

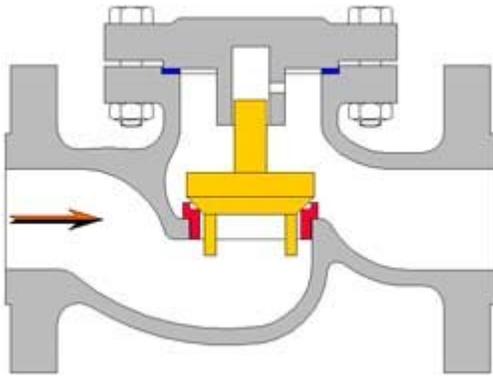
Body / End Piece	IS 210 GR. FG 200 / 200 S.G. Iron / Ductile Iron ASTM A 216 GR. WCB
Flap Disc	C.S./S.S. With Neoprene/EPDM/Nitrile/NBR/Silicon/Viton Rubber Lined
Fasteners	C.S. / ASTM A 193 GR. B7/ A 194 GR. 2H / S.S. 304 / 316
Rubber Lining	Neoprene/EPDM/Ebonite/Hypalon/Silicon/Viton Lining Thickness – 3.0mm Minimum Lining Test (Spark Test) – 15 KV DC

Forged Steel Lift Check Valve

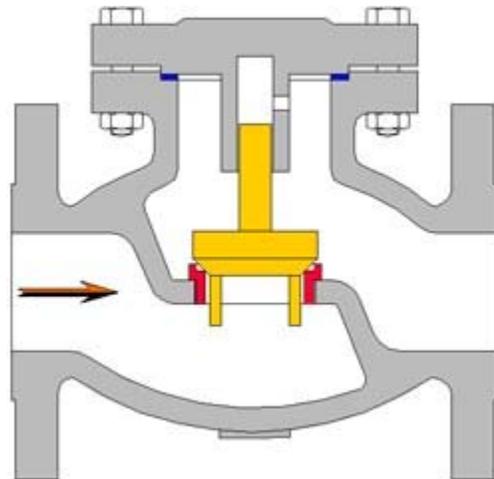


Forged Steel Check Valve

Cast Steel Lift Check Valve



ND Lift Check Valve



ASA Lift Check Valve

Floster Lift Type Check Valves are designed to reduce the flow resistance and pressure drop to the minimum possible extend. Lift check valves are suitable to mount in horizontal position only. Accurately machined, lapped and screwed in seat ring ensures tight shut of and long life. The valve disc is perfectly designed, accurately machined and guided for efficient automatic shut off at zero pressure. As an option seat can be welded deposited or integrated with body in case of stainless steel and other high alloy metals.

Floster Lift Check Valves are available from size range 1" t 12" in Flanged End / Butt Weld End Connection, generally in all material of construction and up to 600# pressure rating.