



**PATENTED\* DESIGNS**

**normex**

Ball Type Non Return Valves ( Patented )  
& Ball Type Foot Valves ( Patented )  
A break through in technology

- Frictionless • Dropless • Non Clog • Maintenance free
- **ENERGY SAVING** •

**normex Ball Type Non Return Valves (Patented \*)**

normex non return valves are ideally designed to prevent undesired backward flow of • Muddy, sandy & clear water • Sewage • Waste water • Viscous liquid • Paper Stock • Slurry

**Principal**

The heart of this valve is a reinforced rubber ball. The unique design of the valve allows free movement of the ball. The ball moves to open position when the pump starts and allows free flow of liquid without any interference (Fig. A.). As the pump stops the ball seats firmly against the metal seat due to its own weight and back pressure of the liquid ( Fig. B. ). This results in DROPLESS sealing.



Comparison	normex non-return valves	Conventional non-return valves
1 <b>Head Loss (Pressure drop)</b>	Low, due to light, free flowing rubber ball, without causing any interference, resulting in lower power consumption. (Frictionless)	High, Due to interference of the heavy hinge/ disc mechanism, with the flow resulting in high power consumption.
2 <b>Perfect Sealing</b>	The sealing face is deposit free due to rounded seat. The spherical ball & rounded seat form a line contact ensuring perfect sealing. ( Dropless )	Deposits on the sealing face due to its flatness may not ensure perfect sealing.
3 <b>Solid Handling Capacity</b>	Clear passage, equal to the nominal valve diameter, gives larger solid handling capacity.	The above interference leaves a clear passage less than the nominal valve diameter, hence smaller solid handling capacity.
4 <b>Self Cleaning</b>	Any deposits formed on the ball and in the valve passage are removed due to the rolling of the ball in operation.	No such Possibility
5 <b>Non-Clogging Nature</b>	No Moving parts other than the free rolling ball, hence no jamming / clogging.	Moving parts may jam due to deposits.
6 <b>Applications</b>	Unlimited , Ideal for slurries, sewage, viscous, erosive and corrosive liquids.	Limited, Troublesome for slurries, swage and viscous liquids.
7 <b>Maintenance</b>	Abrasion resistance of rubber ensures longer life. If required, ball can be replaced without removal of valve from the pipeline. Hence much shorter down time.	Parts may wear out due to abrasion. Breakage in hinge-pin, rubber seals are frequent. Valve has to be removed from the pipe line for maintenance / cleaning. Hence longer down time.

- Dimensionally compatible with IS 5312 ( Face to Face ) • Can be installed vertically or Horizontally • Operates silently • Operates at temp 80° C continuously ( for 100° C application please contact us.)
- Materials : ■ Body & cover - Cast Iron ■ Ball - Nitrile rubber coated ■ Seat - Leaded tin Bronze ■ Other materials on request.
- Sizes : 25mm to 350mm • Pressure ratings (in CI) : PN 16/ PN 10/ PN 6 • Temperature : up to 80°c (max. 100°c)

**normex wafer check valves**

**Salient Features**

- Sturdy but simple design. • 100% leak proof. • Short length- less space required. • Light weight. • Low opening & closing pressures.
- Wide range of materials, temperature & pressure ratings. • Efficient flow characteristics. • Can be mounted horizontally & vertically.
- Highly economical. • Epoxy coating over the entire surface.



**Part List/Materials of construction**

Part	Standard Material	Optional Material
1) Body	CI/MS	CS,SS
2) Disc	MS	SS
3) 'O' ring	Nitrile	EPDM, Neoprene, Viton

- Sizes : 25mm to 600mm
- Pressure ratings : (in CI) - PN 16/ PN10
- Temperature : up to 180°c

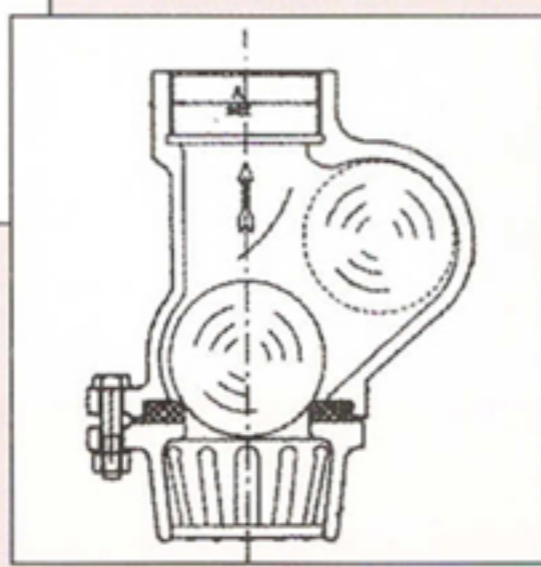
*Absolutely leak proof foot valves.  
Frequent priming not required*

**normex Ball foot Valves - Threaded / Flanged ( Patented \*)**



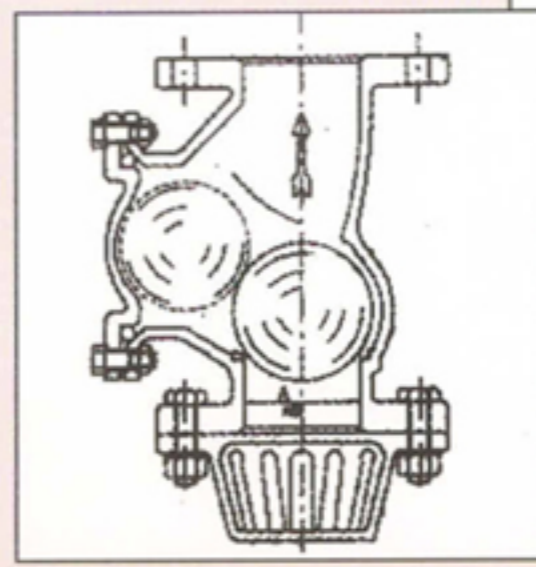
Threaded Foot Valve

This is a unique design foot valve which works excellently in muddy/clear water, sewage waste water, viscous liquid, paper stock, slurries etc. The commonly used flap type foot valve gives permanent problems like priming of the pump, clogging, breaking of the flap, etc. The ball type foot valve is specially designed to eliminate all those troubles. The problematic hinged flap is replaced by a free ball. A thick nitrile seal gives perfect sealing. This foot valve has also got all the advantages of the ball NRV like low head loss, self cleaning, non clogging etc.



This valve must be installed vertically.

- Working Pressure : 6 kg/cm<sup>2</sup>, Higher pressure ratings on request.
- Sizes : Threaded - 25-100mm  
Flanged - 25-350mm
- Threaded foot valves are convertible to threaded non return valves.



Flanged Foot Valve

**normex Hydrodynamic Guided Closing - HGC (Patented\*)**

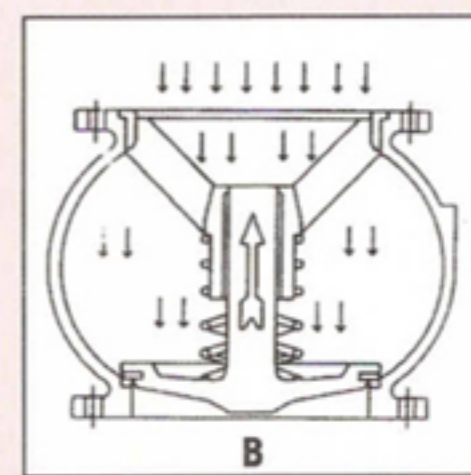
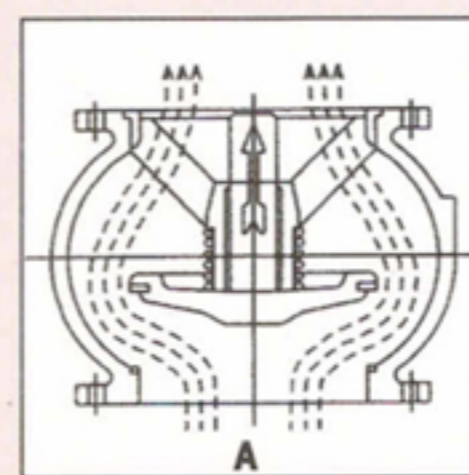


normex H.G.C. model non return valve is High Hydraulic Efficient rigid construction valve designed to give perfect sealing. Ideal to use for Clear water, Air, Gases, Chemicals having high pressure and high temperature. In addition this valve has got an in-built advantage of preventing the undesired Water hammer. This valve is the best alternative for the traditional swing check valve.

of the disc while closing. This and the concentric machining results in perfect sealing. In addition, as the valve is closed before the back flow starts the serious problem of water hammer is eliminated.

normex brings this latest technology for the first time in India.

- Materials : ■ Body & Guide - CI ■ Seal- Nitrile ■ Plunger - CS
- Seat- Leaded Tin Bronze
- Sizes : 40mm to 400mm
- Pressure ratings (in CI const.) : PN 16/ PN 10/ PN 6



**Principal :**

When the pump starts, the disc moves upward and the specially designed profile of the disk and body gives passage to the liquid / air without causing any change in its velocity. This gives the aero / hydrodynamic effect, which results in minimum pressure drop (fig. A). When the pump stops, the disc moves backward quickly (fig. B). Because of long axial guide there is no displacement

**normex Butterfly Valves**



**Applications**

- Water treatment plants
- Water distribution systems
- Power stations
- Chemical Industries
- Steel mills
- Sugar Factories / Breweries
- Sewage Plants
- Process Industries
- Seawater & Brine pumping
- Food Processing Industries
- Mining Industries
- Petrochemical Industries

**Parts List & Materials**

Description	STD mode Of Construction	Options
Body	Cast Iron, GG-25/ IS-210 FG -260/ BS-1452 Gr. 260	SG Iron, GGG 40 Cast Steel (WCB) Stainless Steel CF8 /CF8M
Disc	SG Iron, GGG-40/ IS-1865 SG400/12/ BS- 2789 Gr. 420/12	Cast Steel (WCB) Stainless Steel CF8/CF8M Aluminium Bronze IS 305 Gr.2
Seat	Black Nitrile	EPDM, Neoprene, Viton, Silicon, Hypalon or as per customer's Requirements.

**Technical Data**

Pressure Rating	PN 10 & PN 16
Pressure Testing	a) Body : 1.5 x PN b) Seat : 1.1 x PN
Temperature	(-) 40° C to 200° C
Fact to Face Dimension	ISO - 5752 / IS - 13095 / BS - 5155
To Suit Flanges Drilled As Per	IS, INSI, BS DIN Standards
Operation	Bidirectional
Painting	Epoxy coated
Sizes	40mm to 600mm

**Quality Features**

- Excellent flow control in quarter turn operation. ■ Compact space saving design. ■ Bidirectional 100 % tight shut off. ■ Low weight, low maintenance, long service life. ■ Easy automation / retrofit possible. ■ Stream lined valve disc for lower pressure drop. ■ Both shafts mounted in bearing supports for easy operating torques. ■ Replaceable / Bonded seat options. ■ Suitable for mounting between all standard flanges. ■ Gasket packing not required to install between flanges.

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AUTHORISED DEALER

\*Patented in India