

FLAP VALVES HDPE WA-PTK (A & F)

Flap Valve round, rectangular or square design Material HDPE with 316L Hinges etc.

PTK Flap Valves are non-return water control units that regulating flow in one direction. They open when supply water pressure is greater than pressure on the closed flap. The Flap opens under very low differential pressure conditions and allows full flow as the supply head increases.

DESCRIPTION:

The flap valve shall be provided with a hinged flap/door to close round - square or rectangular shaped openings. The single / on-seating tightening shall be effected by means of a special EPDM spherical/lip shaped rubber seal placed around the opening in the door.

After installation the flap valve shall be watertight on one side (on-seating) up to a

- Pressure of 1 meter water column for 50 years
- Pressure of 5 meter in the event of flood conditions for 72 hr
- Higher pressures are available

MATERIALS:

The door of the flap valve shall be of HDPE (high density poly-ethylene) with a minimum thickness of 30 mm, which will be reinforced with HDPE strengthening ribs with a minimum thickness of 30 mm. If necessary and depending upon dimension and pressure, the door will be provided with stainless steel AISI 316L strengthening profiles.

The HDPE door shall be provided with an easy replaceable EPDM spherical/lip shaped rubber profile. Only the door has to be removed for replacing the seal.

The flap door shall be position at an angle of 10 degrees for PTK-A & F models

The hinge construction for the flap valve will be of the “confined closed hinge” type. The confined closed hinge consists of two side segments and a cover plate. The cover plate protects the hinge against settling of dirt. The confined hinge increases strength and stability.

These hinge parts are connected both by means of HDPE welding and parker bolts with a length of at least 25 mm. The hinge axes shall be of stainless steel AISI 316L (solid) bar material with a minimal diameter of 12 mm. The horizontal movement of the axe is limited by 2 HDPE cover plates on each side of the hinge segment (which at the same time to ensure easy replacement of the axe). This design also ensures that the weight of the door is supported equally on each side of the hinge for increased stability.

SPECIFICATION FOR HDPE FLAP VALVE TYPE PTK

Between the moving HDPE parts AISI 316L washers will be applied.

The maximum opening angle of the door is - depending upon dimensions – between 63 – 76 degrees. Upon request the opening angle can be increased to 90 degrees. The limitation of the door movement is controlled by the specific shape of the valve rib(s) and the confined closed hinge, which ensures the door will be automatically closed.

The HDPE flap/door shall be provided with ballast to prevent the door from floating in the water and ensure complete closing of the door under the water line. The ballast applied on the door ensures that the specific weight of the door is being increased to 1100 kg / M3 ensuring full closing of the door below water level and yet maintains differential opening pressures of less than 10 mm water column when completely submerged.

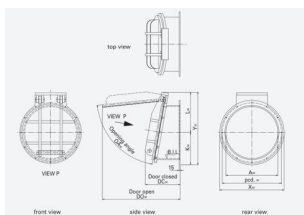
The valve seating shall be of HDPE with a minimum thickness of 30 mm, which is positioned at an angle 10° to the frame/tube material. The frame shall be of HDPE tube in case of circular openings and HDPE plate material in case of rectangular or square openings.

The model suitable for wall mounting (model A) shall have an anchor plate with a minimum thickness of 15 mm, welded onto the frame. The anchor plate for wall mounting shall follow the shape of the opening. The anchor holes for wall mounting will be positioned at a minimum distance of 50 mm from the opening.

The tightening between the wall and the anchor plate shall be of neoprene cell rubber tape to be stucked on the anchor plate according to installation instructions.

INSTALLATION:

The flap valve shall be mounted perpendicularly and free of tension. By preference mounting has to be effected with fixing anchors manufactured from stainless steel AISI 316.



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