

## Flap Valves HDPE material - Pump pressure lines

### Flap Valve WA-PWK - Pump Lines

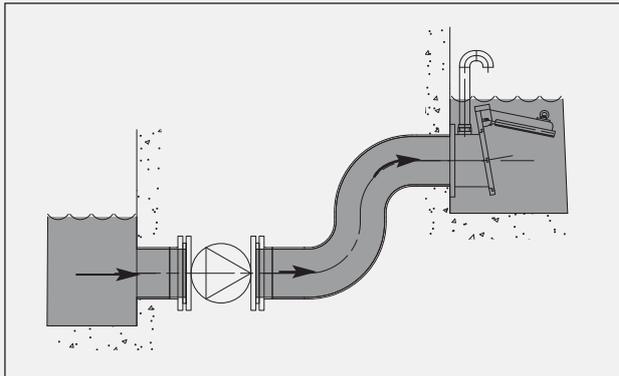
#### FLAP VALVES HDPE material Pressure Pipe Lines

When the flap valve is situated at the end of a pressure pipeline / pumping station, a flap valve system for pressure pipe applications is used.

Using a standard valve in this type of pumping situation will result in serious damage to the seal and hinges.

#### AIR VENT FUNCTION

When the flap valve operates in combination with a pump, the function of the air vent is not obvious during operation.



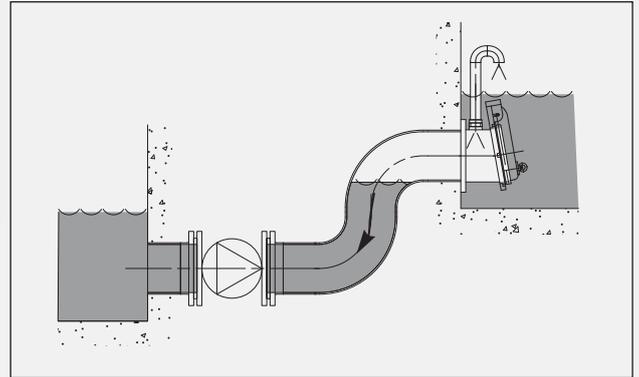
*Pump in operation*

It only becomes clear when the pump stops: then the air vent operates.

As the pump stops, the flow reverses and the flap valve must prevent this. In the very short time span between the pump stopping and the flap valve closing, the flow returning into the pipe can result in very high pressures. This is the result of a vacuum inside the pipe.

The vacuum will result in serious damage to the seal, hinge points and seating.

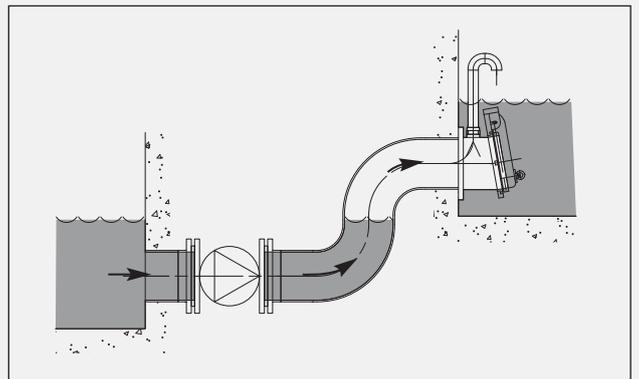
The aerator prevents vacuum formation by allowing air to enter via the air vent and thus preventing damage to the flap valve.



*Pump stops*

In this way the valve closes slowly and in a controlled manner.

When the pump starts up it compresses the air remaining in the pipe. The compressed air can leave the pipe through the air vent.



*Pump starts to operate*

The size of the aerator is approx. 10% to 15% of the flap valve passage.

Small flap valves up to and including 400 mm diameter are equipped with a threaded opening measured in inches. With bigger diameters the air vent will be equipped with a flange.

The customer must extend the aerator until it is above maximum water level.

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