

Operating and Maintenance Instructions for HaVent® Automatic Air Valve Set for Potable Water (valve with shaft for underground installation) Model 992



1. Intended use

The H-TEC automatic air valve set is used for aerating and de-aerating of pressure pipe line systems for potable water up to a max. operating pressure of 250PSI / 17.2 Bar.

The air valve set is used instead of complex and expensive air valve shafts, thus avoiding the dangers usually associated with the access of such shafts.

Please note, this product must be maintained at least once per year, and even more frequently depending on the local conditions. Observe also the applicable standards and general regulations for the prevention of accidents.

2. Product description

Due to the automatic shut-off function the air valve set can be easily installed and dismantled under pressure for maintenance purpose. The protective pipe need not be dismantled, nor is it necessary to close gate valves or other shut-off elements! Splash water is discharged via the drain-off fitting (push-fit fitting $\frac{1}{2}$ ") and the PE pipe or the drainage element supplied together with the air valve set.

Pipeline connections:

- flange 3"
- thread 2" FNPT

Accessories:

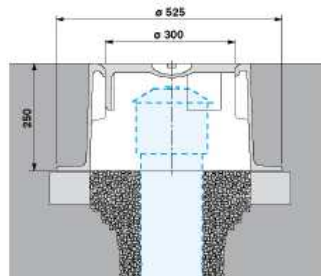
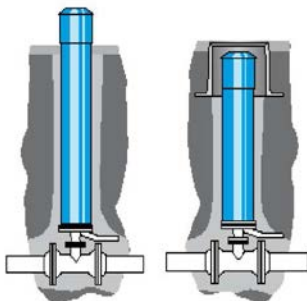
- flood protection, Model 992FP
- surface box for automatic air valve set, Model 211
- drainage element for automatic air valve set, Model 992
- flushing and water tapping set, Model 9922

3. Installation

Automatic Air valves are installed at geodesic and hydraulic high points of the pipeline. The upper side outlet must have a direct connection with the atmosphere. If water is allowed to accumulate and / or any back pressure built up in these parts of the pipeline the function of the air valve may not be ensured any more. The negative consequence is a leakage of the air valve.

To prevent the rainwater from running in, the standpipe must be surrounded by a gravel backfilling from the pipeline to the bonnet. If the automatic air valve set shall be installed in areas of high ground water levels please contact your supplier for additional technical measures, like the H-TEC Flood Protection, model 992FP.

The automatic air valve set can be shortened on site by **3,9 inch / 100 mm** at the points provided for this purpose (operating pipe 3) - see below drawing.



4. Service and maintenance

Dismantling of valve:

Open the surface box. Screw out the hexagon screw (16). Take off the black cap (14). Loosen the screw (13) until the spindle holder (12) can be taken out of the standpipe (see Fig. A). Simultaneously the sealing tappet (1.5) closes. Now the automatic air valve can be pulled upward and out by means of the operating pipe (3).

Loosen the upper part of the valve body by means of a face wrench (6mm) (see Fig. B). Then open of the valve body. Take out the internal functional unit (float and sealing mechanism). Remove any foreign bodies that may have been flushed in such as drilling chips. Carefully clean the valve body elements, the sealing areas, and the fine-venting rips from possible deposits that may have accumulated, depending on the composition of the water (e.g. precipitation of iron or manganese). Check the sealing elements for possible wear.

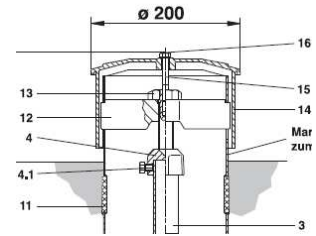
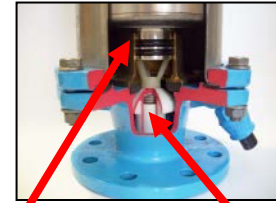


Fig. A



Fig. B



1.4

1.5



Fig. C

After cleaning all components (acc. to Fig. C) are re-installed in reverse order.

Installation of valve:

Insert the automatic air valve from above into the standpipe and into the sealing flange (1.4). Insert the spindle holder (12) into the standpipe and on top of the operating pipe (3). Tighten the screw (13). Simultaneously the valve is filled, producing a clearly audible noise, and vented. Put on the black cap (14). Tighten the hexagon screw (16). Close the surface box.

During installation, pressure testing and function testing make sure that any water emerging from the valve runs off via the drain-off fitting.

Otherwise germ-infested water may get into the potable water pipeline during aerating!

5. Start-up and pressure testing:

The automatic air valve set, model 992, is designed for a maximum operating range of 250 PSI / 17.2 Bar, i.e. a testing pressure up to 348 PSI / 24 Bar is permissible (leakage testing of body). The valve function has been tested by the manufacturer at 250 PSI / 17.2 Bar.

During pressure testing of the pipeline air valves must be put out of service, otherwise venting may be caused during pressure testing, leading to a pressure drop. Please don't forget to put the valve back to service after the pressure test and to perform a leakage test at operating pressure (visual inspection)!

Shut-down is effected as described under item 3 „Dismantling of valve“. Start-up is effected in reverse order.