Operating and maintenance instructions for

# Air valve for sewage water and potable water
# Order No. 988-00

## 1. Intended use:

The Hawle air release valve (ARV) Order No. 988 can be used for installation in systems/ shafts for venting pressure lines in the operating range 0.2 - 16 bar.
Media: municipal sewage water (according to EN 1085:2007), potable water
Max. operating pressure PFA = 16 bar
During installation and with maintenance work, in addition to the assembly instructions, the applicable standards and regulations, accident prevention regulations and the regulations of the employers‘ liability insurance associations must be observed.
Caution: ARV‘s contain compressed air. Before any maintenance work, the ARV must therefore be taken out of operation and depressurised!

## 2. Product description:

The ARV with its large air release cross section and patented diaphragm technology is ideally suited for the ventilation high air volumes.

The body and the ventilation hood is made of stainless steel. All internal parts are made exclusively of high-quality stainless materials. The choice of materials ensures a high level of functionality over the entire service life.

The sealing seat does not come into contact with the media. The ARV operates continuously from 0.2 to 16 bar. The diaphragm and spring mechanism dampen pressure surges.

The integrated flushing connection is used for maintenance purposes. By connecting a flushing line, dirt can be flushed out of the ARV quickly and easily. With heavy soiling, the functional unit must be removed, cleaned and replaced.

The ARV is equipped with a ventilation hood as standard. As an option, the ARV can be equipped with a transition piece for connecting a sufficiently large air release pipeline (to be provided by the customer) instead of the vent hood.

## 3. Assembly:

The ARV must be mounted on a vertical outlet, directly on the pressure pipeline. A laterally displaced arrangement of ARV‘s is to be avoided. A shut-off valve must always be provided under the ARV to enable maintenance work to be carried out.

Further information on the installation and operation of ARV‘s can be found in the current DVGW data sheet W 334.

## 4. Commissioning and pressure testing:

ARV‘s are to be taken out of operation before a pressure test of the pipeline. The shut-off valve below the valve needs to be closed for this purpose.

After successful pressure testing is completed, open the shut-off valve slowly and subject the ARV to a functional and visual inspection under operating pressure.

Caution: To avoid pressure surges ≥ 3 bar, the maximum filling speed must be limited to 0.25 m/s in accordance with DVGW W 334. Before filling the pipeline, check whether the ventilation devices in the shaft can divert the required amount of air.

## 5. Maintenance and repair

According to DVGW W 392, ARVs must be maintained at least once a year and more frequently, especially in sewage pressure pipes with a high degree of contamination. We recommend carrying out the first maintenance after a period of about 4 to 8 weeks and defining future maintenance intervals based on evaluation of this initial maintenance.

Work on ARVs may only be carried out by suitably trained personnel. Regular inspections improve the operational reliability of ARVs.

Before conducting any maintenance work, ARVs need to be disconnected from the pipe network by closing the shut-off valve. The overpressure in the ARVs needs to be released by briefly opening the ball valve.

General safety precautions must always be complied with when entering service shafts. When working in service shafts, we recommend forced ventilation of the structure and only performing maintenance work when pumps are switched off.

After maintenance work is completed, perform a proper pressure test in accordance with the applicable rules and regulations.

5.1 Open the housing screws.

5.2 Lift the flange vertically upwards.

5.3 Pull the complete valve mechanism upwards out of the housing using the two handle straps and place it upright on a firm surface.

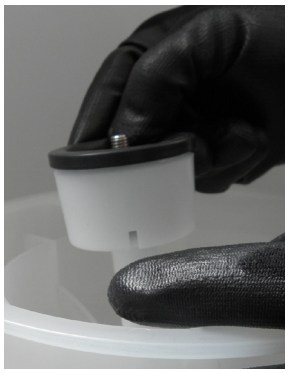
5.4 Unscrew the guide rod and press out the screw while simultaneously lifting the valve disc. Remove the valve disc.

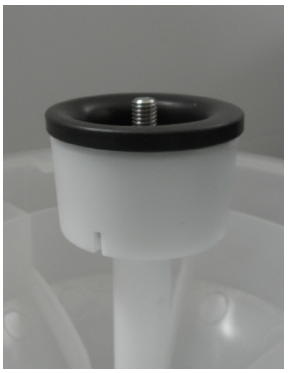
5.5 Clean and flush the slots of the basket on the valve disc.

5.6 Pull out the diaphragm by tightening the stainless steel screw and check for sedimentary deposition and mechanical damage. Remove sedimentary deposition by wiping with a damp cloth. If it is necessary to replace the diaphragm, separate the diaphragm from the retaining groove and replace it with a new diaphragm. Also check upper sealing ring for sedimentary deposition and mechanical damage. If necessary, clean or replace with a damp cloth.

**Assembly the diaphragm:**

5.7 Place the diaphragm over the cup and the screw.





5.8 Check that the diaphragm is correctly seated in the retaining groove.

5.9 Diaphragm mounting on the valve disc:
Guide the screw through the hole in the valve disc and tighten it from above using the guide rod. To avoid turning the screw, press the valve disk into the cup.

5.10 Further assembly is carried out in reverse order to dismantling.

5.11 Pressure testing.

Should you have questions or need further information, please contact:

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