

Plastic air valve for Sewage AVUSE - Series L4 15



Plastic air valve for Sewage AVUSE



1 - Overview

1.1. Functions:

AVUSE-1 - single function

Single orifice air valve allowing efficient and automatic release of air pockets present in the network, especially at high points of the sewage pipelines.

AVUSE-3 - three functions

Double orifice air valve to secure sewage networks, providing three functions: high flow rate air discharge and air inlet, and continuous evacuation of air under normal working conditions.

1.2. Applications:

- Waste water.
- Rain water.
- Industrial waste water (please consult us).

1.3. Specifications:

High quality materials combining mechanical and chemical resistance:

- Body, bonnet and flange in polymeric material: easy handling thanks to the lightness of the product.
- Guiding stem and seal holder in stainless steel.
- Mechanical parts and sealing system protected from the fluid by a large air gap, to prevent from any fouling up, for long lasting performances.
- Easy maintenance thanks to quick removal of the clamps.
- Drainage cock included.
- Compact, reduced space requirements.
- Minimum pressure: 1mWC.
- Connection by flange DN50 or multi-drilling DN 60/65/80, ISO PN 10/16.
- Maximal working pressure 3 bar.
- Optional funnelled outlet (double socket elbow).
- Temperature limits: +1°C to +70°C.

1.4. Operation :

AVUSE-1

In absence of air, the force of the water on the float, assisted by the internal pressure, closes the small orifice. If an air pocket fills the body of the AVUSE-1, the weight of the float, multiplied by the lever arm, exceeds the effect of the internal pressure, and the float drops and opens the orifice, allowing air evacuation. When the water returns, the assembly closes.

AVUSE-3

While the pipes are being filled, the air is discharged at a high flow rate through the valve's main orifice. Water flowing into the body causes the float and the mechanism to rise, which then closes the main air intake/discharge orifice and the small orifice.

Under normal operating conditions, the small orifice (degassing seal), connected to the float, behaves like a single air relief valve and ensures the evacuation of the air pockets under pressure.

During the pipe drainage operation, the internal pressure of the pipeline drops below the external atmospheric pressure. The float frees the valve's main orifice, allowing air to enter at a high flow rate.

2. Recommended location:

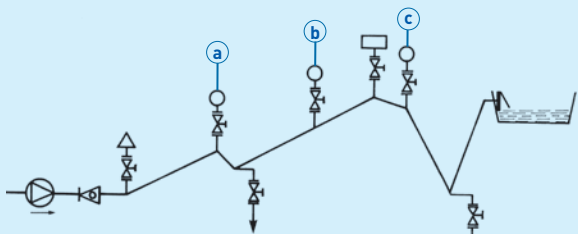
- At each main point to avoid the phenomenon of hydraulic high point and immobilization of air pockets.
- At regular intervals along the sewage pipeline, nearly all 400m, to avoid entrapping of air pockets while filling up.
- Before or after every isolating valve, depending on the slope of the pipeline, to avoid negative pressurizing of the pipe after closing the isolating valves.

3. Installation:

Vertical mounting on a tee with an isolating valve in between. If this mounting is not feasible, swerved mounting may be possible (please consult us). Please refer to the installation and maintenance manual WXA13001.



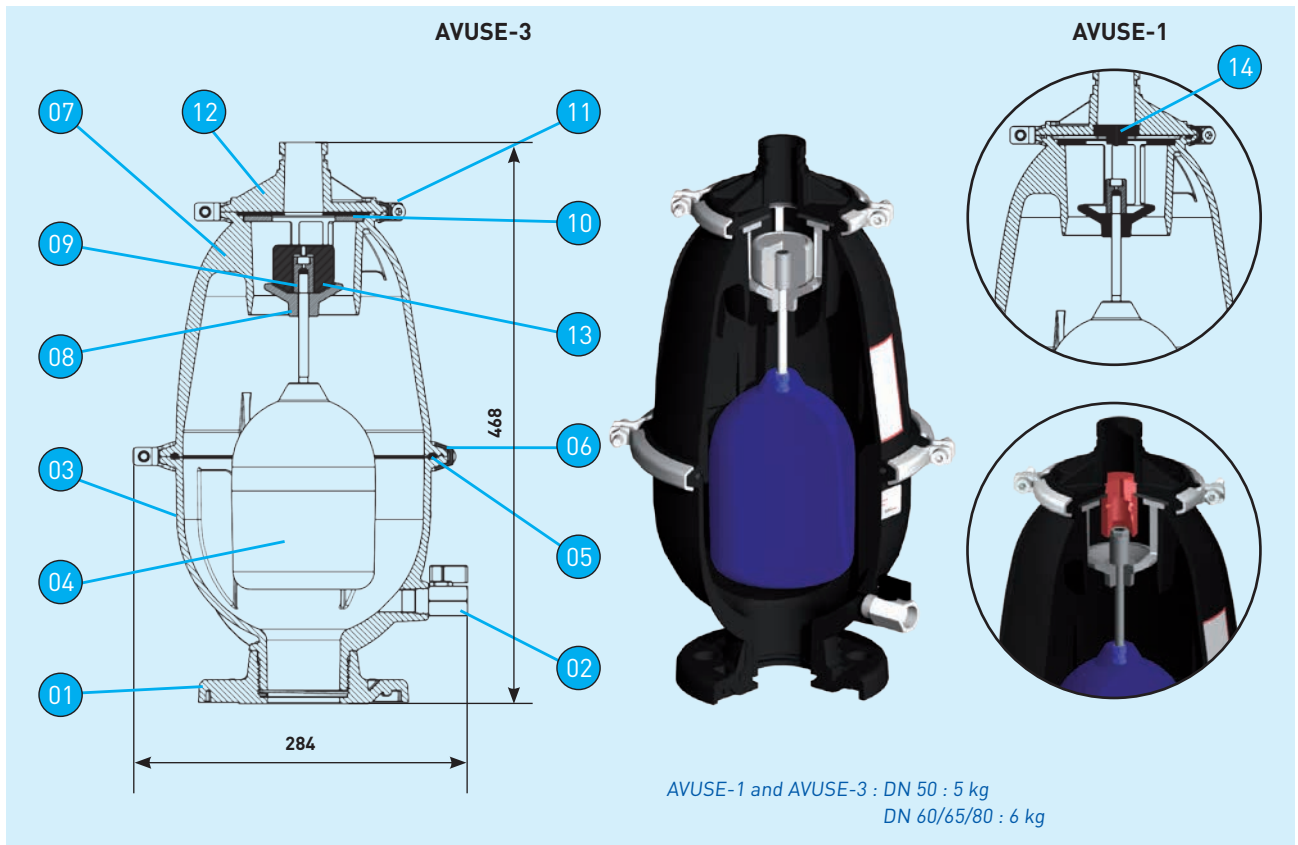
Installation



- | | |
|-------------------------|---|
| Pump | AVUSE-1 (single function) |
| Ball check valve | AVUSE-3 (three functions) |
| Soft sealing gate valve | Clapuse (safety air inlet valve for sewage water) |
| Flap valve | |

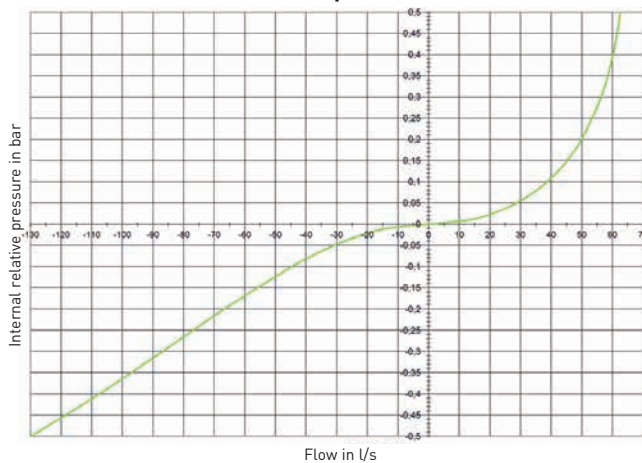
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4. Technical data

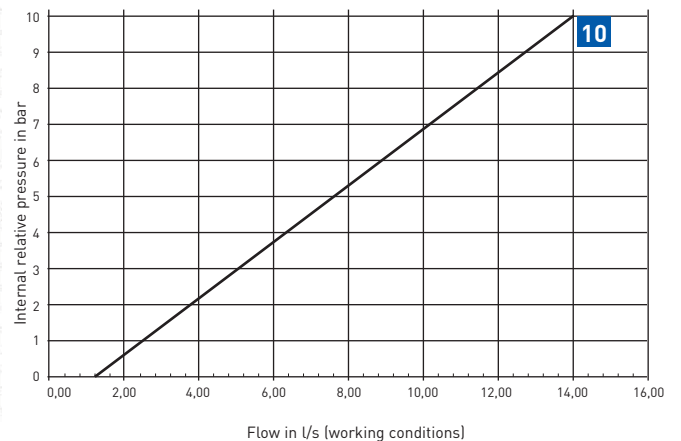


Item	Description	Qty	Materials	Standards
01	Flange	1	Reinforced composite	
02	Drainage cock	1	-	
03	Lower body	1	Reinforced composite	
04	Float	1	Polycarbonate	
05	O-Ring	1	NBR	ISO 1629
06	Large clamps	1	AISI 304 / X5CrNi18-10	ISO 15510 : 2010
07	Upper body	1	Reinforced composite	
08	Basket	1	PEHD	
09	Seal holder + degassing seal and guiding stem	1	AISI 316 and NBR	ISO 15510 : 2010 et ISO 1629
10	Seal	1	NBR 70Sh	ISO 1629
11	Small clamps	1	AISI 304 / X5CrNi18-10	ISO 15510 : 2010
12	Cover	1	Reinforced composite	
13	DISC (AVUSE-3)	1	PEHD	
14	DEGASSING CAP (AVUSE-1)	1	PEHD	

Inlet/outlet air flow rate performances (AVUSE-3)



Discharge capacity under pressure (AVUSE-1)



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