General Installation and Operating Manual for Air Valves.

Table of Contents:

1 Introduction

This manual will provide you with the information to properly install and maintain the air valve and ensure a long service life. The Air Valves have rugged construction to provide many years of trouble-free operation.
Combination Air Valves intake air to protect the pipeline from the destructive effects caused by cavitation and vacuum (negative pressure), discharge air during pipe fill to increase fill efficiency and release air continuously in a pressurized pipeline to lower head losses and improve flow.
The material type is indicated clearly on the casting inscription of the valve body. The air valve size and pressure class are clearly indicated on the ID tag attached to the air valve body.

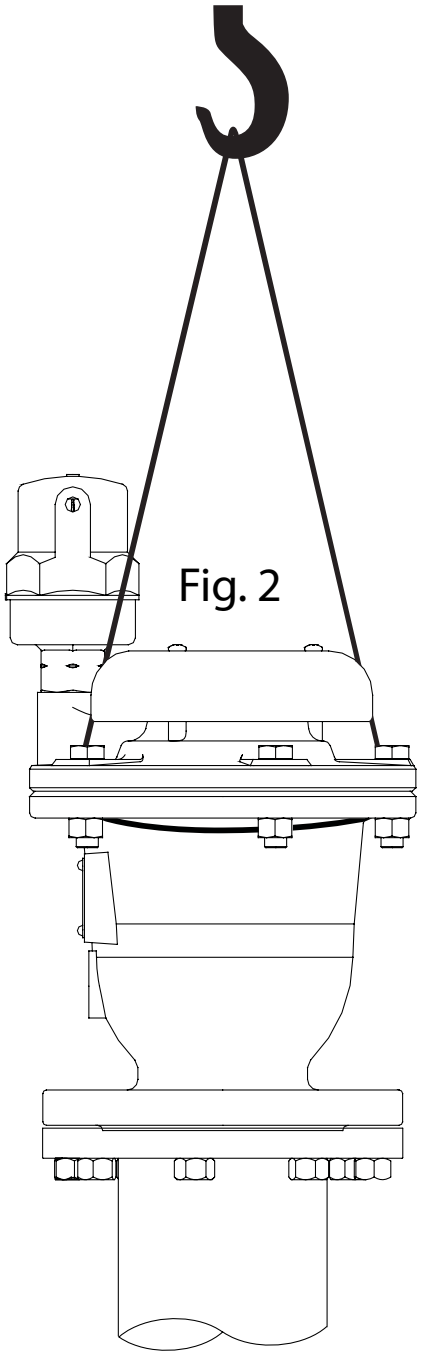
2 Receiving, Handling & Storage

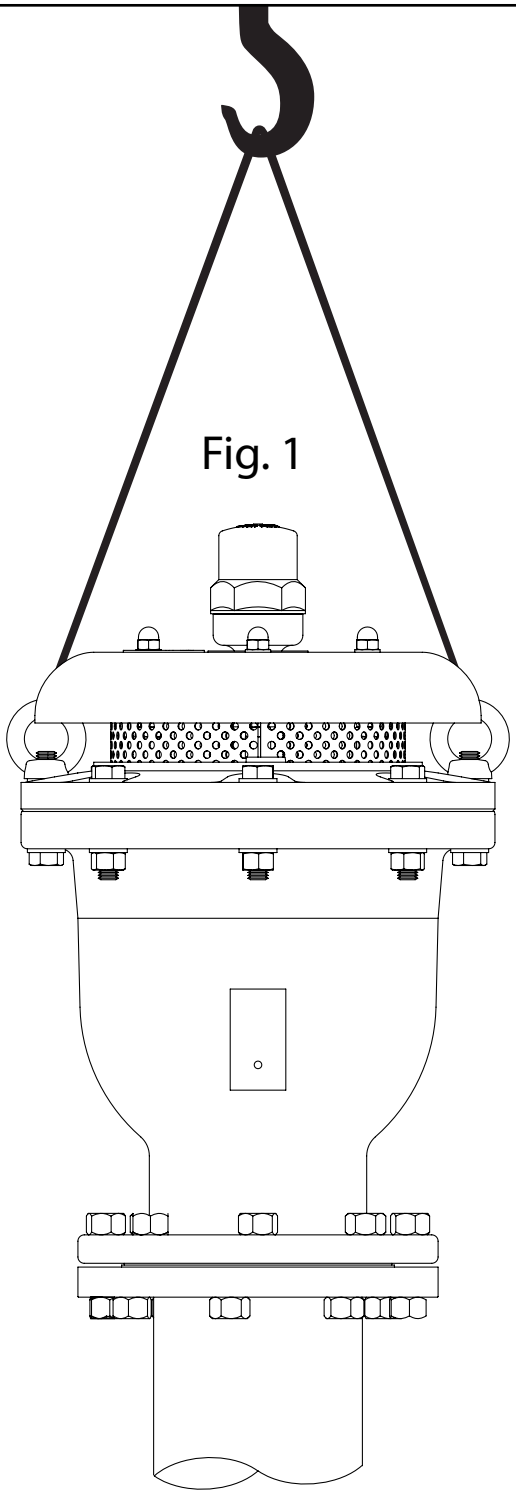
Inspect air valves upon receipt for damage in shipment. Carefully remove the air valve from the shipping package. Unload all air valves carefully to a sturdy level surface taking care not to drop them. Air valves should be lifted by using the eye bolts only and not by any other means (Fig.1). For small- sized air valves, they should be lifted by means of belts which are to be placed around the flange necks (Fig. 2).
When the valves are to be stored for some time before being fitted, storage should be in the original delivery crates or cases. Storage should be off the ground in a clean, dry indoor area.

Illustration No.1: Lifting Options

Fig.1 - Lifting Option for Air Valves 6" and larger

Fig.2 - Lifting Option for Air Valves up to 4"



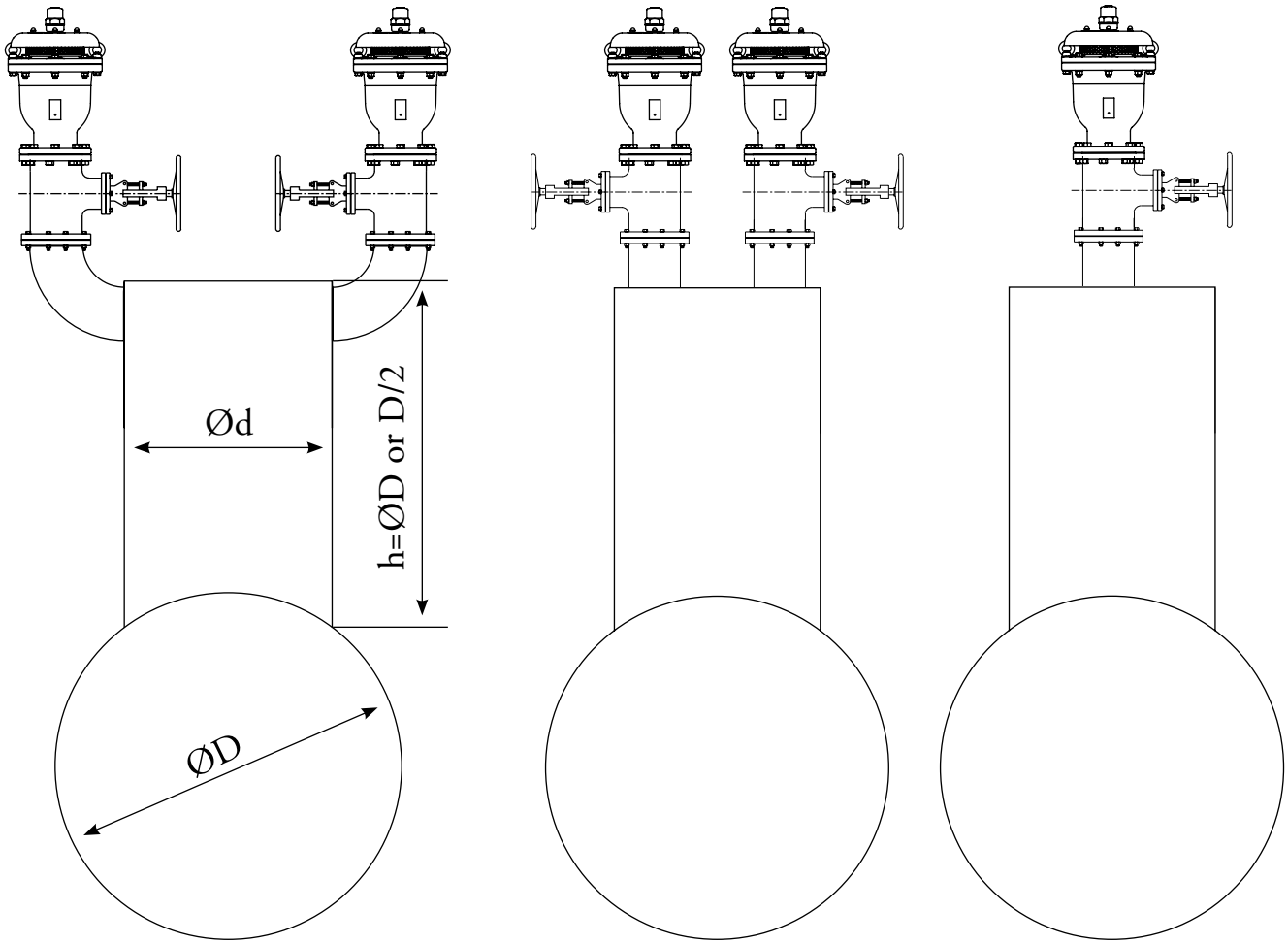


3 Air Valve Installation

1. Recommendation for Riser Dimensions

d=D	for	D ≤ 300 mm
d=0.6 D	for	300 mm < D ≤ 1500 mm
d ≥ 0.35 D	for	D > 1500 mm

h ≥ D or h=D/2 and h ≥ 150 mm



2. The air valve should be installed in a vertical position.

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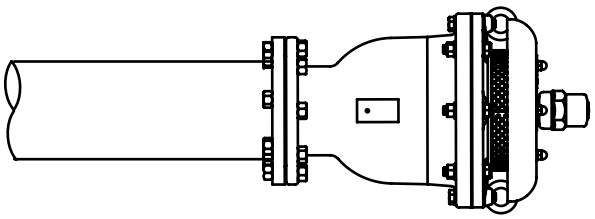

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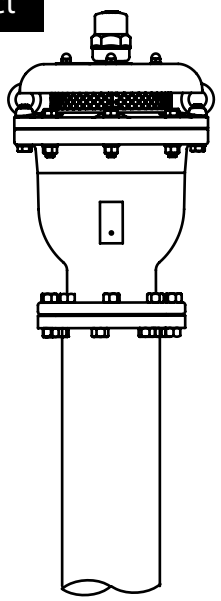

3. The standpipe should be attached to the crown of the pipe and not from the side of the pipe.

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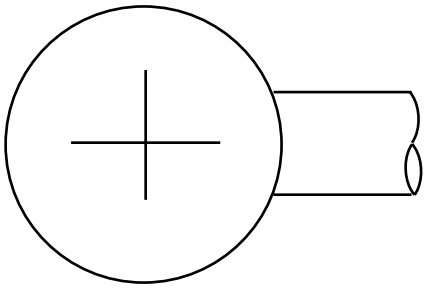

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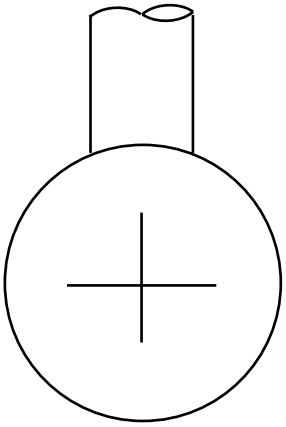

4. The standpipe should connect directly to the air valve and must be of an equal or greater diameter than the air valve.

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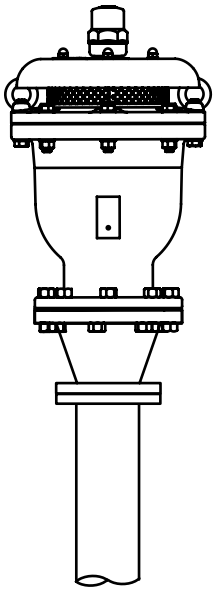

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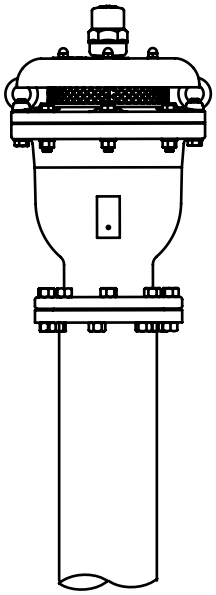

5. An isolation valve must be installed to allow for proper maintenance and should be positioned close to the main pipe.

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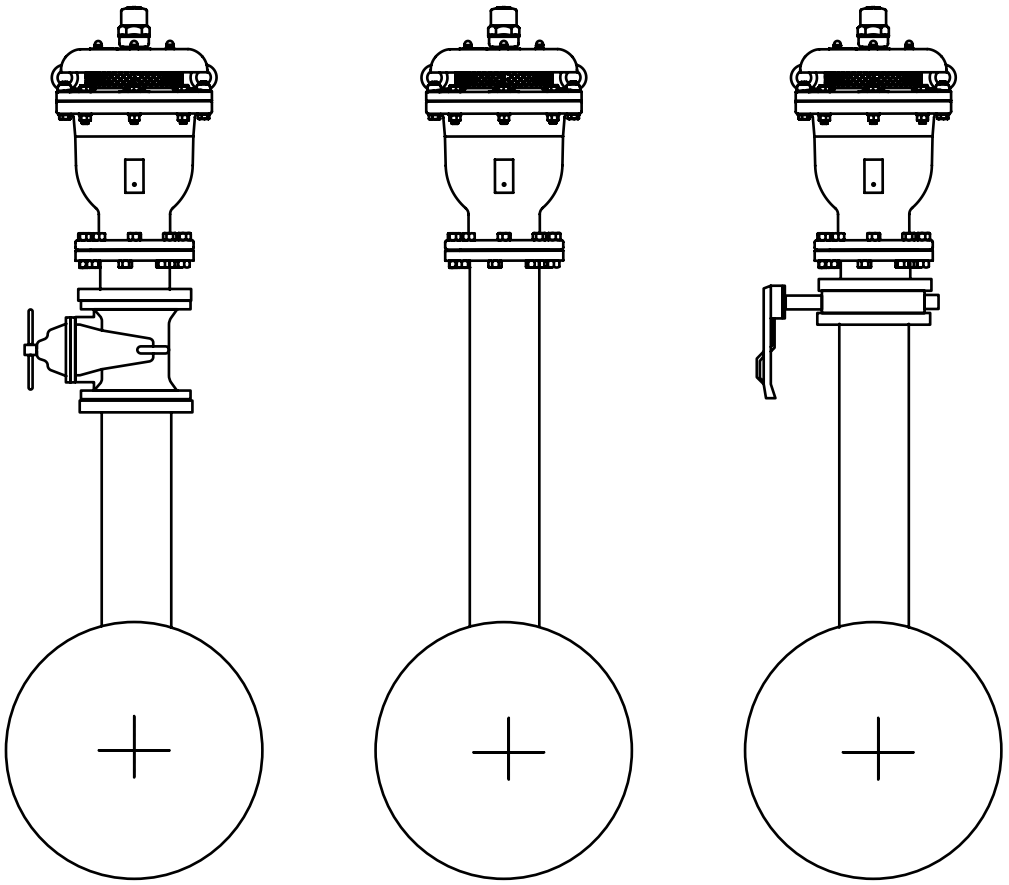

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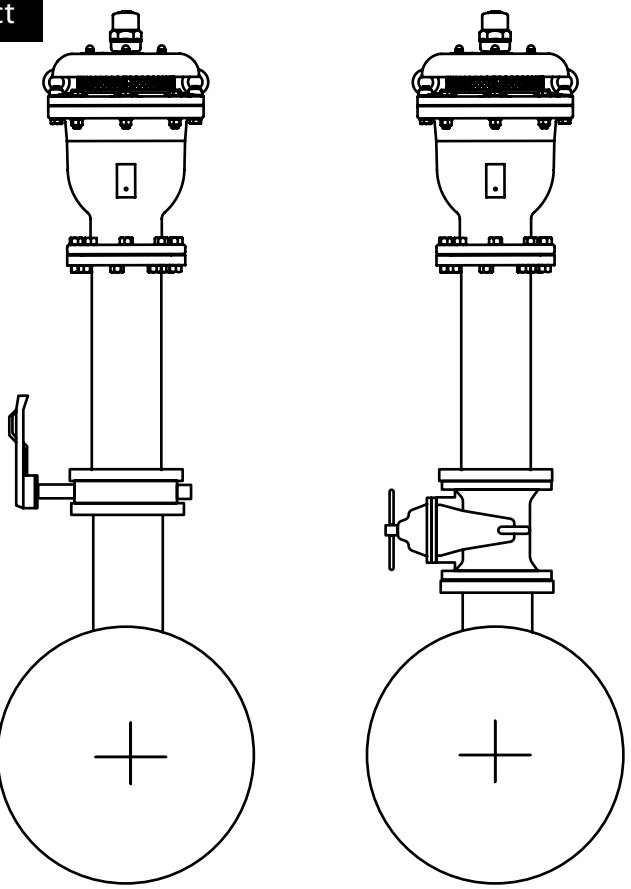

6. In case of installation in an underground chamber, a vent pipe must be installed with a diameter equal to or greater than the air valve. The vent outlet must have a mesh screen to prevent entry of animals or objects.

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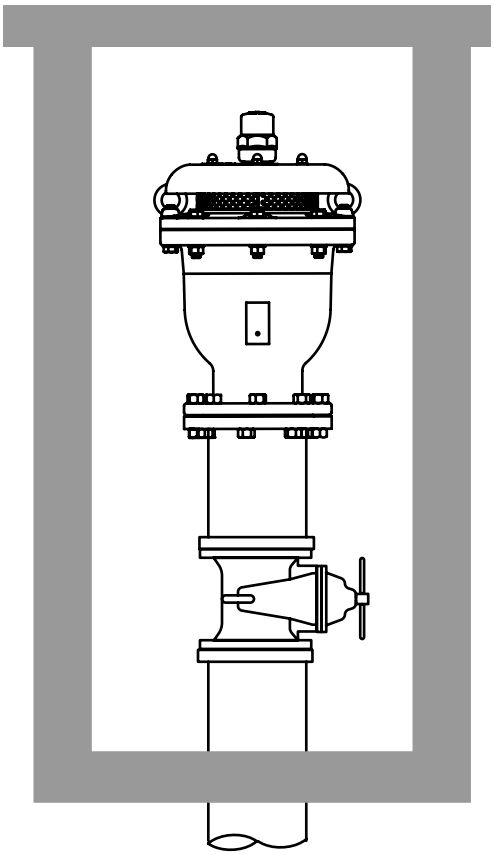

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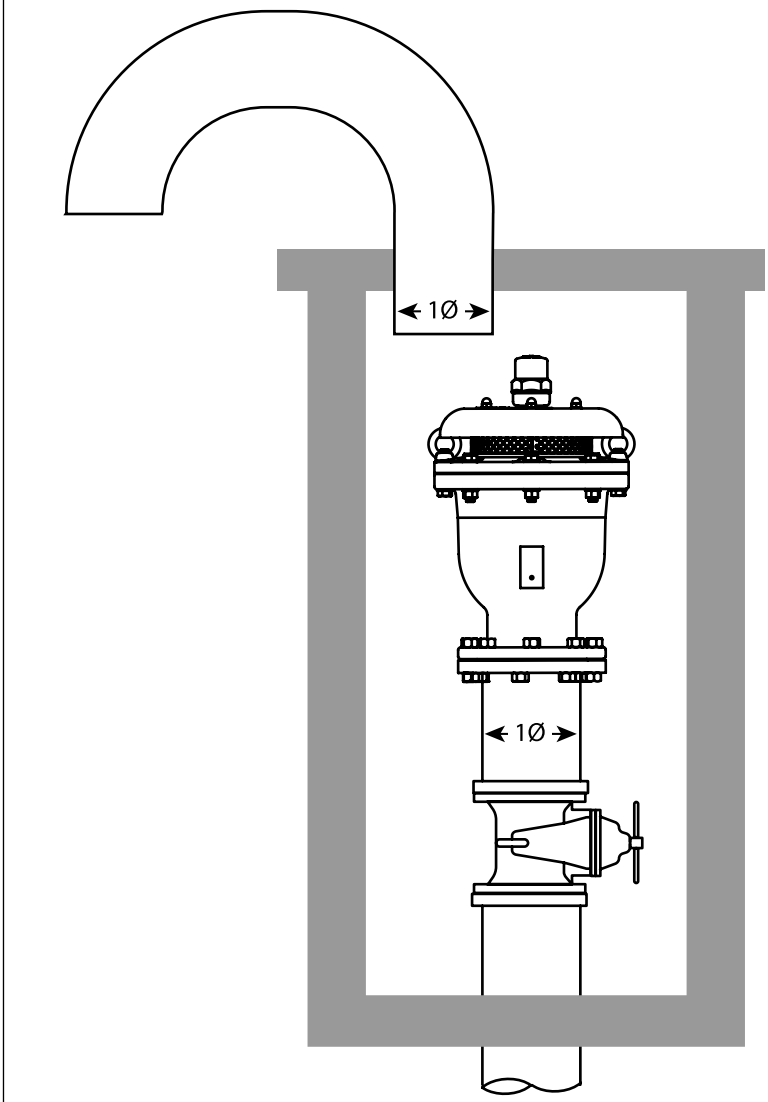
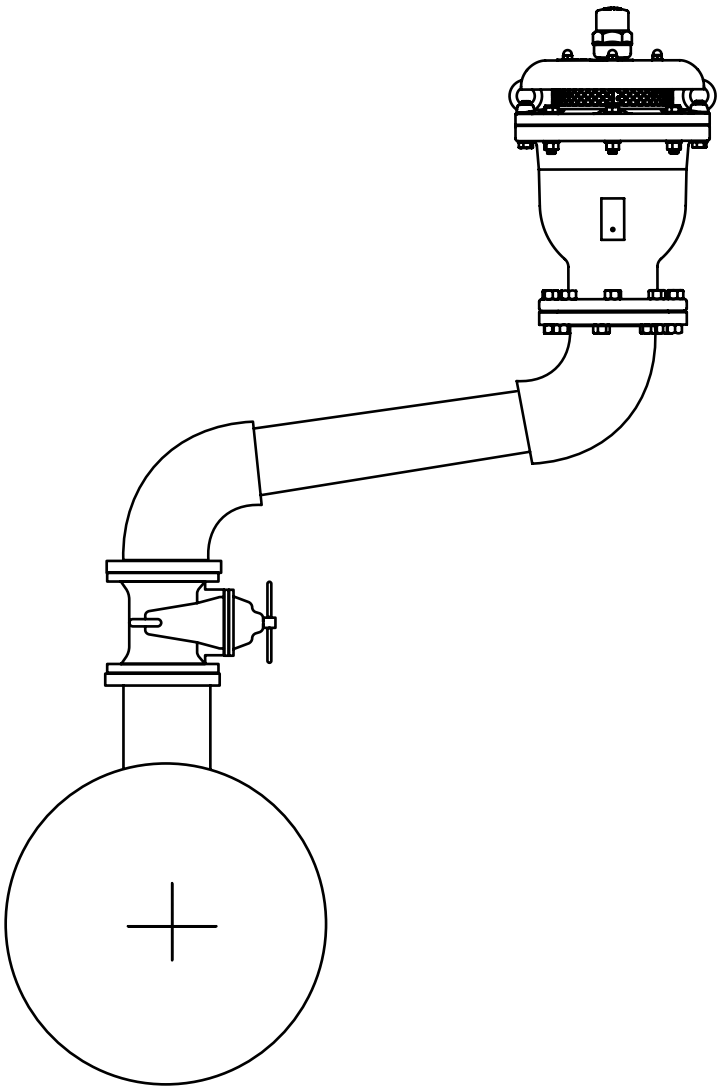


7. In installations, such as under a road, where the air valve must be displaced to the side, the connecting pipe after the isolation valve must be on a slight incline. The standpipe at this point can be connected vertically to the air valve.



8. If the event that a drain pipe needs to be attached to the air valve outlet, this pipe must be rigid and will have a diameter equal or greater than the outlet diameter of the air valve. AVOID USING COLLAPSIBLE FLEXIBLE HOSE.

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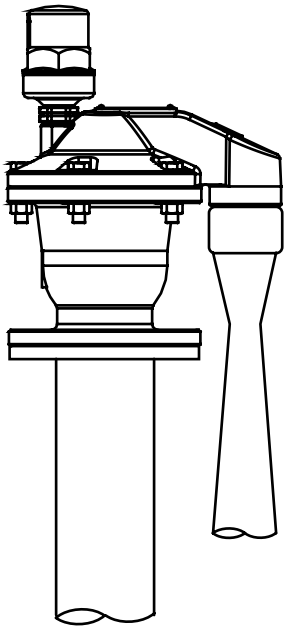

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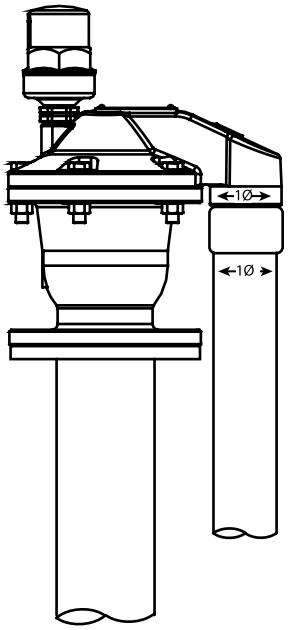

K-060 2”

Periodic Maintenance

1. Shut the isolating valve below the air valve.
2. 2.Unscrew the bolts (8) that connect the valve cover (2) to the body (1).
3. Wash the body (2) and the cover (1).and in clean water in order to remove coarse grime or accumulated scale. Check if the seal (4) , the seat (3) , or the float (5) are dirty, and clean them.
4. Reinstall in reverse order and fasten and tighten all bolts. Make sure to re-assemble the components correctly.
5. Open the isolating valve beneath the air valve.

PARTS LIST AND SPECIFICATION

No.	Part	Material	Coating / Colour	Coating procedure
1.	Elbow	Stainless Steel SAE 316	Epoxy Coated RAL 9003	DIN 30677 Part 2
2.	Plug	Nylon	BLACK	
3.	Nipple	ASTM A744 CF8M	Epoxy Coated RAL 9003	DIN 30677 Part 2
4.	Bolt, Nut & Washer	Stainless Steel SAE 316	CATAPHORETIC	Cathodic Electro Deposition (CDP) Black 8-15 µm Acc. MIL-DTL-0053084B
5.	Cover	Cast Duplex ASTM A890 GR. 5A	Epoxy Coated RAL 9003	DIN 30677 Part 2
6.	Orifice Seat	Cast Duplex ASTM A890 GR. 5A		
7.	Orifice Seal	E.P.D.M.		
8.	O-Ring	E.P.D.M.		
9.	Float	POLYCARBONATE		
10.	Body	Cast Duplex ASTM A890 GR. 5A	Epoxy Coated RAL 9003	DIN 30677 Part 2