



PROFACTOR®
DER DEUTSCHE QUALITÄTSSTANDARD

EN

TECHNICAL DATA SHEET AND USER MANUAL



**PRODUCT
CODE**

**PF DV 571
PF DV 608**

**AUTOMATIC
AIR VENT VALVE**

1. PURPOSE AND SCOPE

The float air vent valve is designed for the automatic removal of air and other gases from pipelines and air collectors of internal systems — including heating, cold and hot water supply, heat supply for ventilation systems, air-conditioning units, and manifolds.

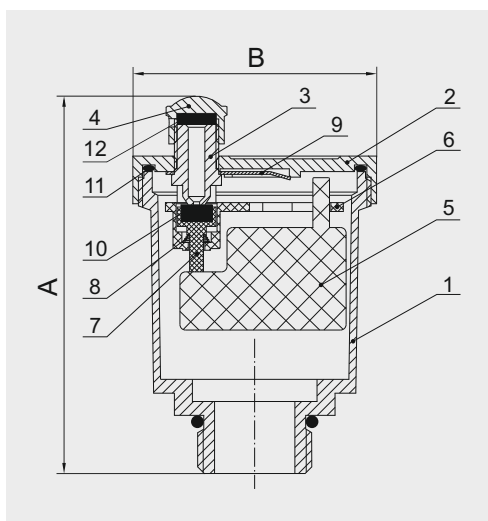
It protects closed pipeline systems from corrosion, cavitation, and the formation of air locks. The air vent valve can be used in pipelines carrying liquid media that are non-aggressive to the materials of the product (such as water or propylene and ethylene glycol solutions with concentrations up to 40%).

2. TECHNICAL SPECIFICATIONS

Product Code	PF DV	571	608
Connection size	DN	15	
	G	1/2"	
Maximum operating pressure	bar	10	
Minimum operating pressure	bar	0,05	
Operating medium temperature	°C	0°C to +110°C	
Maximum ambient temperature	°C	60°C	
A	mm	69	61
B	mm	46	58
Weight	g	140	170
Average service life	years	20	

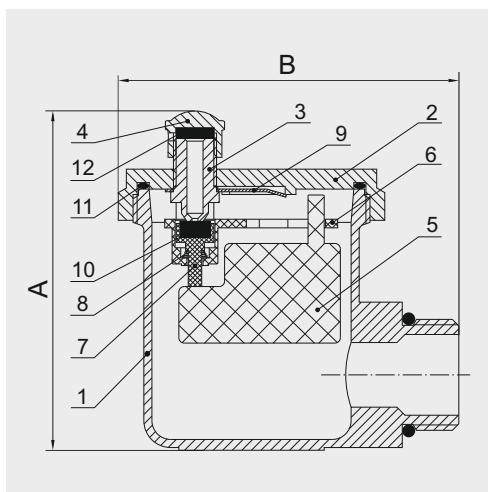
3. DESIGN

Air Vent Valve with Top Discharge PF DV 571



- 1 – Body
- 2 – Body cover
- 3 – Fitting
- 4 – Protective cap
- 5 – Float
- 6 – Lever
- 7 – Piston
- 8 – Spring
- 9 – Bridge
- 10 – Valve seal
- 11 – Body cover gasket
- 12 – Protective cap gasket

Angled Air Vent Valve with Top Discharge PF DV 608



- 1 – Body
- 2 – Body cover
- 3 – Fitting
- 4 – Protective cap
- 5 – Float
- 6 – Lever
- 7 – Piston
- 8 – Spring
- 9 – Bridge
- 10 – Valve seal
- 11 – Body cover gasket
- 12 – Protective cap gasket

The body (1), body cover (2), and air outlet fitting (3) are made of brass grade CW617N (according to DIN EN 12165-2011), with nickel-plated surfaces.

The straight air vent valve (model PF DV 571) has a connection port with external thread at the bottom of the body, while the angled version (model PF DV 608) has it on the lower part of the side wall.

All connection ports comply with ISO 228-1:2000, DIN EN 10226-2005. The top of the body is provided with a metric thread according to ISO 261:1998 for screwing on the cover.

The body cover has a threaded hole for the air outlet fitting (3). The fitting is screwed into the cover, pressing from below the bridge (9), which serves as a support for the lever-hinge mechanism of the exhaust valve. The joint is sealed with adhesive.

The lever (6), supported by the bridge, is pivotally connected to the float (5), which moves freely inside the body. The lever acts on the piston (7) through the spring (8). The lever and piston are made of rigid low-adhesion plastic (polyoxymethylene, POM), while the float is made of polypropylene (PP).

The spring and bridge are made of stainless steel AISI 304 in accordance with DIN EN 10088-2005. The piston is fitted with a seal (10) made of synthetic nitrile butadiene rubber (NBR).

When there is no air inside the air vent body, the float is in its uppermost position, and the spring presses the piston against the fitting opening, thereby closing the valve. This valve design allows the device to automatically release or admit air during filling, draining, and operation of the system.

The lever-hinge mechanism transmitting the force from the float to the exhaust valve significantly increases the closing force, ensuring tight sealing when the float is raised. The air outlet fitting is covered with a protective cap (4), which prevents the air passage from contamination with dust and dirt and also allows the valve to be shut off manually in emergency or maintenance situations. The cap is made of brass grade CW614N.

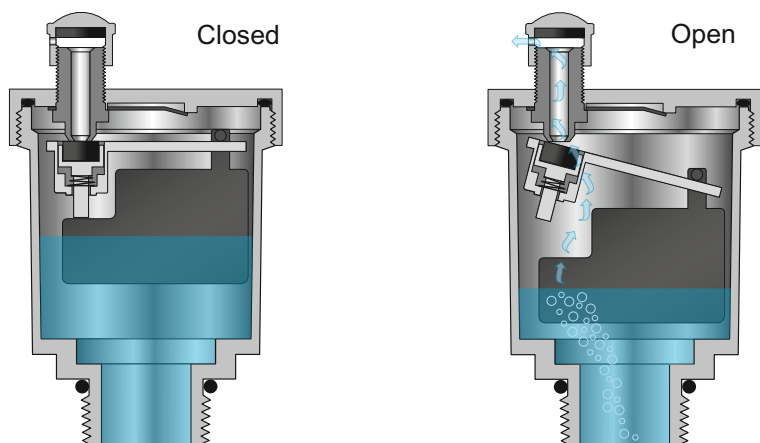
The tightness of the body/cover and fitting/cap connections is reinforced by gaskets (11 and 12) made of wear-resistant nitrile butadiene rubber (NBR).

4. OPERATING PRINCIPLE

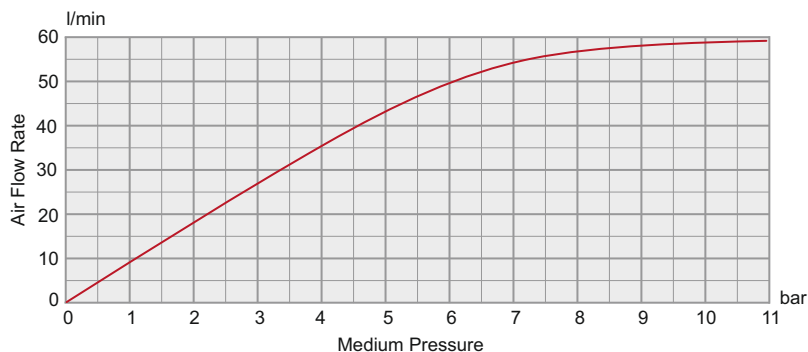
When no air is present, the body of the air vent valve is filled with liquid, and the float keeps the discharge valve closed (see diagram below).

As air accumulates in the float chamber, the water level decreases, and the float descends to the bottom of the body. Through the lever-hinge mechanism, the discharge valve opens, allowing the air to be released into the atmosphere.

After the air is expelled, water refills the float chamber, lifting the float, which in turn causes the discharge valve to close. These opening and closing cycles continue until all the air is vented from the adjacent section of the pipeline and no longer accumulates in the float chamber.



Air Flow Performance Chart:



5. INSTALLATION INSTRUCTIONS

The device is supplied to the customer fully assembled and ready for operation, requiring no additional adjustment.

Before installing the air vent, the pipeline must be cleaned of rust, dirt, scale, sand, and other foreign particles that could affect the performance of the device. Heating, heat supply, domestic cold and hot water systems, and boiler pipelines must be flushed with water after installation until the water runs clear and free of mechanical impurities.

The air vent valve must be installed vertically, with the protective cap facing upward, connected by a pipe cylindrical thread, in locations where air or gases may accumulate (the highest points of pipeline systems, air collectors, boilers, manifolds, or heating devices).

The air vent valve must not be subjected to external loads such as vibration or uneven tightening of fasteners. It is recommended to install a shut-off valve between the air vent valve and the pipeline.

Hydraulic testing of the system must not be performed with air vents installed or with open shut-off valves in front of them. No load should be applied to the protective cap. The air vent valve must be securely fixed to the pipeline, and leakage of the working medium through the threaded connection is not allowed.

After installation, a pressure (manometric) test of system tightness must be carried out to ensure protection against leaks and possible damage.

To put the air vent valve into operating mode, slightly unscrew (without removing) the protective cap of the outlet fitting.

6. OPERATION AND MAINTENANCE

The air vent valve must be operated without exceeding the pressure and temperature limits specified in the Technical Specifications table. Installation, removal, repair, or adjustment of the device must only be performed when there is no pressure in the system.

Allow the equipment to cool down to ambient temperature before servicing. The operating efficiency of the air vent valve should be checked regularly, at least once every 12 months.

During inspection, check the overall condition, the tightness of fastening connections, and the integrity of seals and gaskets. Maintenance of the device consists of removing accumulated dirt from the body and the air outlet fitting.

7. WARRANTY OBLIGATIONS

The warranty period is 24 months from the date of sale to the end user. During the entire warranty period, the manufacturer guarantees the proper operation of the product and its compliance with safety requirements, provided that the user follows the rules for storage, transportation, installation, operation, and maintenance. The warranty covers all defects arising from the manufacturer's fault.

The warranty does not cover defects resulting from:

- Violation of the rules for storage, transportation, installation, operation, or maintenance;
- Evidence of exposure to substances aggressive to the product materials;
- Presence of mechanical damage or destruction;
- Damage caused by fire, natural disasters, or other force majeure circumstances;
- Damage resulting from improper actions by the user;
- Evidence of unauthorized interference or modification of the product's design.

The product described in this technical passport is a technically complex device and must be installed by a qualified specialist with the appropriate skills and experience in handling such equipment.

Installation and commissioning must be carried out by an authorized and certified company.

Profactor Armaturen GmbH reserves the right to make design modifications that do not affect the technical characteristics or functional features of the product.



INTERNATIONAL WARRANTY CARD

NAME OF THE PRODUCT

PRODUCT CODE, SIZE

QUANTITY

SELLER NAME AND ADDRESS

DATE OF PURCHASE

SELLER STAMP

SELLER SIGNATURE

For the warranty term refer to the Warranty obligation clause in the technical manual

FOLD LINE

FOLD LINE

In case of any claims to the product quality the following documents should be submitted:

1. Application with customer and product details:

- Name of the customer, actual address and phone number
- Article of the product
- Reason for the claim and photo
- Plumbing system where installed (name, address, phone number)

2. Invoice copy and receipt

3. Warranty card

RETURN/EXCHANGE COMMENTS

DATE

SIGNATURE



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