AFRISOBasic

Standard pressure reducing valve BPR

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NOTE!

The product may only be used if you have fully read and understood these operating instructions. The manual is also available on the AFRISO websites in the Internet.

WARNING!

Pressure reducing valves may only be installed, commissioned, and dismantled by trained personnel.

Changes and modifications carried out by unauthorised persons may cause danger and are prohibited for safety reasons.

Risk of scalding by hot medium! Perform all installation and maintenance work after the system has cooled down.

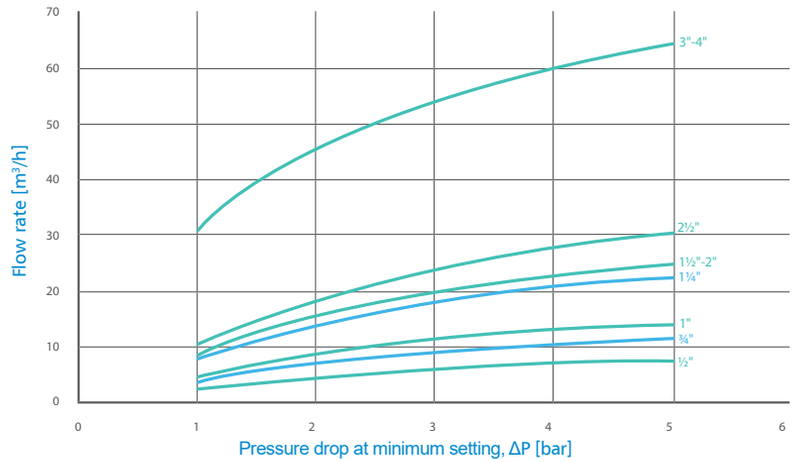
Before starting maintenance, the system must be drained of any medium and the minimum pressure at the outlet must be set. Failure to follow these instructions may result in personal injury or property damage.

APPLICATION

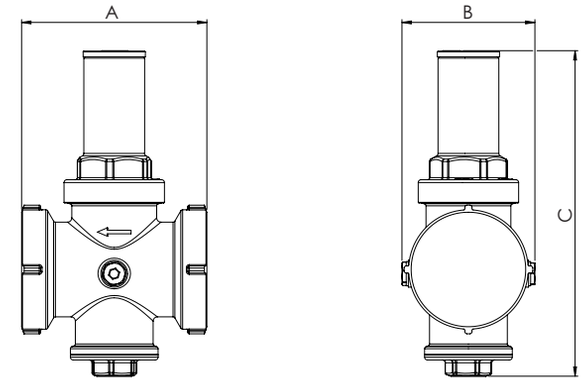
Used in domestic water systems or heating/cooling systems. Installed on the mains water connection after the water meter or at any other point where pressure reduction is needed. It reduces and stabilizes the water pressure to the value set on the pressure reducing valve.

CONSTRUCTION

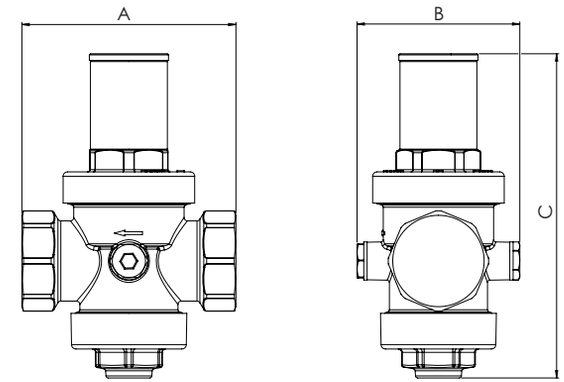
FLOW DIAGRAM (AT MINIMUM PRESSURE SETTING ON THE PRESSURE REDUCING VALVE)



DIMENSIONS [mm]



Model	BPR 401	BPR 402	BPR 403	BPR 404
Connections	G½" F	G¾" F	G1" F	G1¼" F
A	69	82	96	100
B	63	63	73	73
C	114	114	146	152



Model	BPR 405	BPR 406	BPR 407	BPR 408	BPR 409
Connections	G1½" F	G2" F	G2½" F	G3" F	G4" F
A	91	97	131	197	197
B	77	81	94	127	127
C	148	150	230	312	312

MOUNTING

The BPR water pressure reducing valve should be installed on the main water connection after the water meter or at any location where pressure reduction is required. The room where the BPR pressure reducing valve is installed must be protected from frost. Additionally, the installation site should allow easy access to the pressure reducing valve for adjustment and maintenance. Before installing the pressure reducing valve, thoroughly flush the system, ensuring all residues from soldering, pipe cutting, and other debris are removed.

It is recommended to install a filtration mesh (e.g., AWF AFRISO) before the pressure reducing valve to protect it and other system components from dirt. To facilitate maintenance, shut-off valves should be installed at the connections of the pressure reducing valve. The direction of water flow through the BPR pressure reducing valve must align with the arrow on the housing. When installing the valve at the inlet of water heaters or domestic hot water tanks, a proper diaphragm vessel must be used after the reducing valve.

Fig. 1. Direction of water flow through the BPR reducing valve

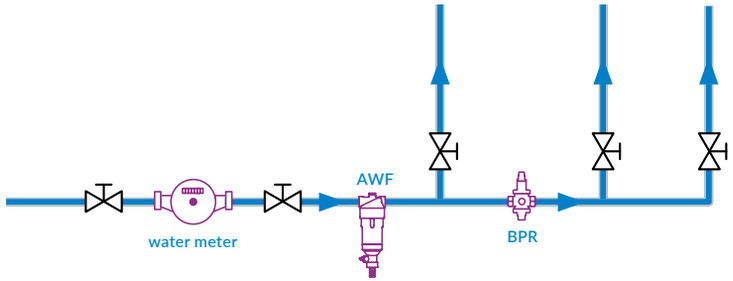
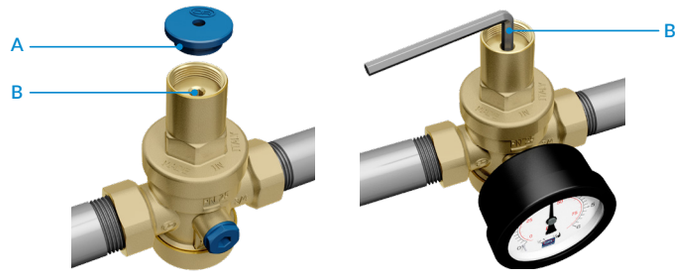


Fig. 2. Example application diagram of a BPR reducing valve in a system

An optional pressure gauge, not included in the pressure reducing valve's scope of delivery, displays the medium's pressure at the outlet. Installing it in the dedicated connection enables proper pressure adjustment and monitoring of the pressure reducing valve's operation.

All BPR pressure reducing valves are preset to an outlet pressure of 3 bar. To set a different outlet pressure, follow these steps:

1. Close the shut-off valve located behind the pressure reducing valve.
2. Remove the protective plug (A).
3. To **REDUCE** the outlet pressure, turn the adjusting screw (B) inside the head **counterclockwise** using a size 5 Allen key.
4. To **INCREASE** the pressure, turn the adjusting screw (B) **clockwise** using a size 5 Allen key.



The table below shows the corresponding allen key sizes depending on the pressure reducing valve model.

Model	BPR 401	BPR 402	BPR 403	BPR 404	BPR 405	BPR 406	BPR 407	BPR 408	BPR 409
Key size	5	5	8	8	8	8	10	14	14

After each adjustment of the adjusting screw, the outlet pressure must be equalized by opening the shut-off valve and closing it again after a few seconds. When reducing the pressure set on the pressure reducing valve, open any tapping point downstream of the valve to release the pressure in the system. After these steps, check whether the outlet pressure of the pressure reducing valve is as desired. If so, close the adjusting screw (B) with the protective plug (A). We also recommend noting the set pressure for future maintenance purposes.

After completing the work, open all shut-off valves.

MAINTENANCE

Periodically check that the outlet pressure from the pressure reducing valve corresponds to the value set during installation. To read the pressure correctly, install a pressure gauge in the dedicated connection on the the reducting valve housing. Then, close the shut-off valve located downstream of the reducing valve and check the pressure gauge reading. It is important to ensure that the shut-off valve is fully closed, as the pressure must be measured in the absence of flow.

If the outlet pressure from the pressure reducing valve is lower than the value set during installation, ensure that the valve is properly sealed at the connections. Any leakage will result in an incorrect outlet pressure reading. If the shut-off valve is fully closed, the desired pressure must be set again. If the outlet pressure from the pressure reducing valve is higher than the value set during installation, check the outlet pressure after closing the shut-off valve. If the pressure remains constant, set the desired pressure. If the pressure gradually increases above the set value, further maintenance or replacement of the pressure reducing valve is required.

If there is a significant drop in flow within the system, check all filters installed in the system for dirt.

TECHNICAL DATA

Parameter / part	Value / material
Operating pressure	max. 25 bar
Operating temperature	0 (excluding ice)÷130°C
Pressure adjustment range	1÷5.5 bar (factory setting 3 bar)
Connections (depending on version)	BPR 401: G½" F BPR 402: G¾" F BPR 403: G1" F BPR 404: G1¼" F BPR 405: G1½" F BPR 406: G2" F BPR 407: G2½" F BPR 408: G3" F BPR 409: G4" F
Kvs (at a factory setting of 3 bar)	BPR 401: 1.8 m^3/h BPR 402: 2.1 m^3/h BPR 403: 3.3 m^3/h BPR 404: 3.4 m^3/h BPR 405: 5.8 m^3/h BPR 406: 5.3 m^3/h BPR 407: 9.1 m^3/h BPR 408: 28.5 m^3/h BPR 409: 33.1 m^3/h
Pressure gauge connection	Rp¼"
Housing material	BPR 401÷406: CW617N brass BPR 407÷409: CC770S brass
Spring material	EN10270-1 galvanised steel
Sealing material	EPDM
Compatible media	water, a mixture of water and glycol with a max. concentration of 50%

APPROVALS AND CERTIFICATES

Reducing valves BPR are subject to the Pressure Directive 2014/68/EU and are not CE marked in accordance with Article 4.3 (recognised engineering practice). They are hygienically certified by the National Institute of Public Health NIH in Poland.

DECOMISSIONING, DISPOSAL

1. Dismount the product.
2. Dispose of the product according to local directives and guidelines.

The product is built from recyclable materials.

If you have any questions or problems with disposal, please contact the appropriate distributor or manufacturer's point.

WARRANTY

Product guarantee in accordance with the general conditions of sale and delivery.

CUSTOMER SATISFACTION

For AFRISO customer satisfaction is paramount. If you have any questions, suggestions or product problems, please contact us.