

# AFRISOBasic

AFRISO Sp. z o.o.  
Szańska, ul. Kościelna 7  
42-677 Czekanów  
[www.afriso.pl](http://www.afriso.pl)

Customer Service Team  
Tel. +48 (0) 32 330 33 55  
[info@afriso.pl](mailto:info@afriso.pl)

## Pressure reducing valve BPR with filtration mesh

### 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.

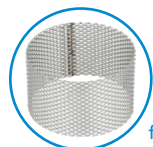
Before starting maintenance, the system must be drained of any medium and the minimum pressure at the outlet must be set. Failure to follow these instructions may result in personal injury or property damage.

### APPLICATION

Used in domestic water systems or heating/cooling systems. Installed on the mains water connection behind the water meter or at any other point where pressure reduction is required. It reduces and stabilises the water pressure to the value set on the pressure reducing valve. A filtration mesh inside the pressure reducing valve traps dirt.

### CONSTRUCTION

pressure setting knob with scale



filtration mesh



reducing valve housing

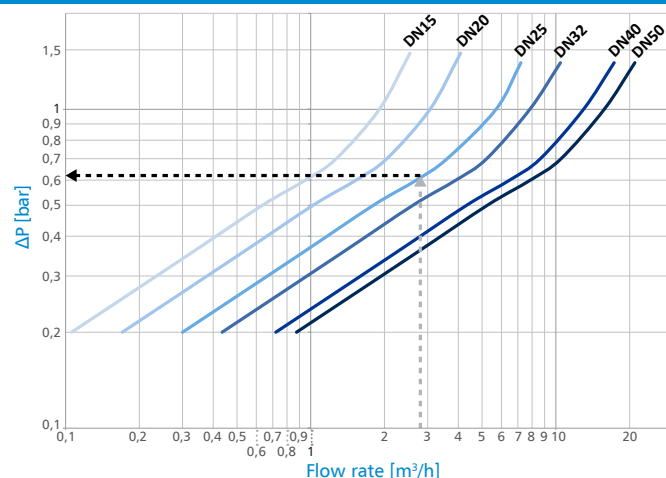
internal membrane cartridge



half-screws with flat gasket

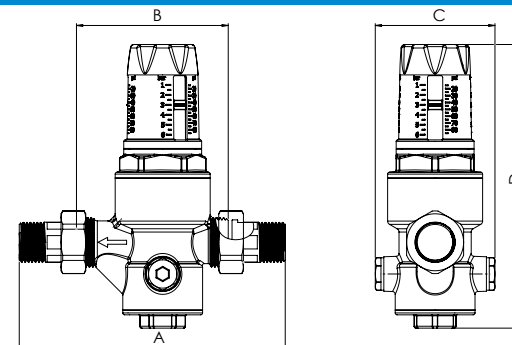
pressure gauge connection  $Rp\frac{1}{4}"$ ,  
e.g., Art. No. 63 539 (factory-sealed)

### FLOW DIAGRAM



Flow diagram based on an inlet water pressure of 8 bar. The pressure setting on the pressure reducing valve is 3 bar.

### DIMENSIONS [mm]



Model	BPR 421	BPR 422	BPR 423	BPR 424	BPR 425	BPR 426
Connections	R $\frac{1}{2}"$	R $\frac{3}{4}"$	R1"	R1 $\frac{1}{4}"$	R1 $\frac{1}{2}"$	R2"
A	140	160	180	200	225	255
B	80	90	100	105	130	140
C	63	63	80	80	99	99
D	149	149	181	189	239	246

### MOUNTING

The BPR water pressure reducing valve should be installed on the main water connection after the water meter or wherever pressure reduction is required. The room where the BPR pressure reducing valve is located should be protected from frost. In addition, the installation site should allow easy access to the pressure reducing valve for adjustment and maintenance. Before installing the pressure reducing valve, rinse the system thoroughly, paying particular attention to removing residues from soldering, pipe cutting, etc.

Although the pressure reducing valve is equipped with a built-in filtration mesh, it is recommended to install an additional filter (e.g., AWF AFRISO) before the device to further protect the entire system, including areas with unreduced pressure. Shut-off valves should be installed at the connections of the pressure reducing valve to facilitate maintenance. The direction of water flow through the BPR pressure reducing valve must align with the arrow on the housing. When installing at the inlet to water heaters or domestic hot water tanks, a proper diaphragm vessel must be used after the reducing valve.



Fig. 1. Arrow indicating the direction of water flow through the BPR pressure reducing valve

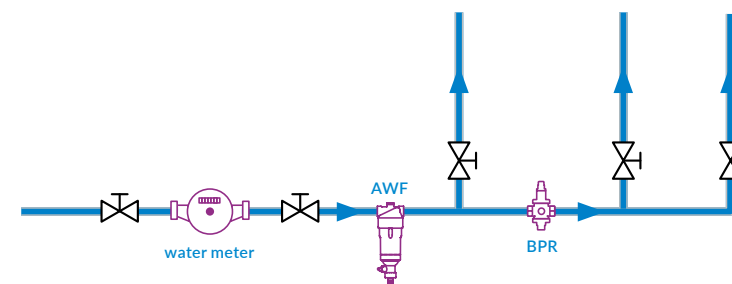


Fig. 2. Example application diagram of a BPR reducing valve in a system

An optional pressure gauge, not included in the scope of delivery of the pressure reducing valve, displays the pressure of the medium at the outlet. Installing it in the dedicated connection allows for setting the proper pressure in the system and monitoring the operation of the pressure reducing valve.

All BPR pressure reducing valves are preset to an outlet pressure of 3 bar. The current outlet pressure is indicated on a scale on the knob of the pressure reducing valve. To **increase** the pressure, turn the knob **clockwise** after the pressure reducing valve; to **reduce** the pressure, turn the knob **counterclockwise**.

## MAINTENANCE

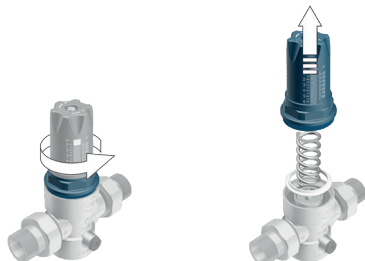
Periodically check that the outlet pressure from the pressure reducing valve matches the value set during installation. To read the pressure accurately, install a pressure gauge in the dedicated connection on the valve housing. Then, close the shut-off valve located downstream of the pressure reducing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

If the detected outlet pressure significantly differs from the pressure indicated on the knob scale, or if there is a noticeable drop in the flow available to users, check the internal cartridge, seals, and filtration mesh as follows:

1. Close the shut-off valve at the inlet of the pressure reducing valve and depressurize the system by opening the tapping point for a few seconds. Then, close the tapping point and the valve downstream of the pressure reducing valve.
2. Note the set pressure and then set a minimum pressure to reduce the spring tension.



3. Use the adjustable spanner to unscrew and remove the blue cover with the knob and scale to access the spring and internal cartridge.



4. Carefully remove the entire internal cartridge with the filtration mesh using pliers, ensuring that no components are damaged.



5. Carefully remove the filtration mesh from the internal cartridge. Rinse the mesh under running water to remove any dirt. If the mesh is damaged, it must be replaced.



6. Carefully inspect the entire internal cartridge. Ensure that all components are intact and that there is no dirt between the seal and the seal slot. If the seal is damaged or contaminated with dirt or sand, it is advisable to replace the entire internal cartridge. If it is not damaged, simply rinse it under running water.
7. Before reinserting the cartridge into the pressure reducing valve, place the filtration mesh in its position (see figure for point 5). Then lubricate the O-rings with a small amount of silicone that is approved for contact with domestic water. Reinsert the entire cartridge into the reducing valve housing in its original position. Place the white plastic ring on the membrane, the spring in the blue cover and screw the whole unit tight with the following torque:  $19 \pm 2$  Nm for  $\frac{1}{2}$ " and  $\frac{3}{4}$ " reducing valves,  $20 \pm 2$  Nm for 1" and  $1\frac{1}{4}$ " reducing valves,  $28 \pm 2$  Nm for  $1\frac{1}{2}$ " and 2" reducing valves.
8. After reassembling the pressure reducing valve, set the required pressure again using the knob. Before activating the valve, verify the set pressure as explained in the MOUNTING chapter to ensure the effectiveness of the maintenance. If the pressure on the pressure gauge does not match the set pressure on the scale and the cartridge has not been replaced, this indicates insufficient cleaning, and we recommend replacing the entire internal cartridge.

## TECHNICAL DATA

Parameter / part	Value / material
Operating pressure	max. 25 bar
Operating temperature	0 (excluding ice) ÷ 80°C
Pressure adjustment range	1 ÷ 6 bar (factory setting 3 bar)
Degree of filtration	500 µm
Connections (depending on version)	BPR 421: R $\frac{1}{2}$ " BPR 422: R $\frac{3}{4}$ " BPR 423: R1" BPR 424: R1 $\frac{1}{4}$ " BPR 425: R1 $\frac{1}{2}$ " BPR 426: R2"
Kvs (at a factory setting of 3 bar)	BPR 421: 2.3 m³/h BPR 422: 2.9 m³/h BPR 423: 5.4 m³/h BPR 424: 6.9 m³/h BPR 425: 10.5 m³/h BPR 426: 12.7 m³/h
Pressure gauge connection	Rp $\frac{1}{4}$ "
Housing material	CW625N brass + glass fibre reinforced polyamide
Spring material	EN10270-1 galvanised steel
Filtration mesh material	AISI 304 stainless 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.

## DECOMMISSIONING, 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.