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### Ball valve with strainer filter and magnet BfV

**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!



Ball valve with strainer filter and magnet BFV 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.

The ball valve is equipped with a magnetic element. Persons with pacemakers are advised to maintain a safe distance from the device. Attention should also be paid to electronic equipment installed near the device. The magnetic element of the valve may cause interference.

Risk of scalding by hot medium – see the MAINTENANCE section.

## APPLICATION

The BFV ball valve with a strainer filter and magnet is installed in central heating and cooling systems. It is used to remove solid dirt that may cause damage to system components. It can be used in systems where the working medium is water or a mix of water and glycol with a concentration not exceeding 50%.

## PREDICTABLE INCORRECT APPLICATION

Do not use the BFV ball valve in the following cases and with the following media:

- a mix of water and glycol with a glycol concentration greater than 50%, vapour, oil, petrol, drinking water;
- for safety-related purposes.

## OPERATION

The medium returning from the system flows directly onto a built-in magnet when it enters the ball valve, which attracts metallic particles. The remaining non-metallic particles are effectively retained by the strainer filter. The purified medium is directed to the heat source.



Fig. 1. Operating principle of the BFV ball valve

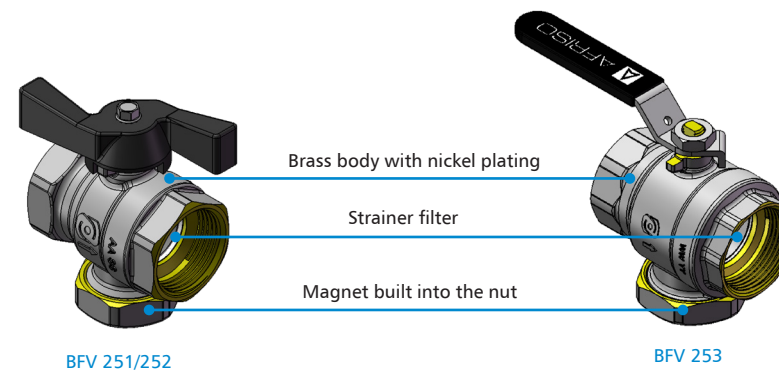


Fig. 2. Construction of the BFV ball valve

### DIMENSIONS [mm]

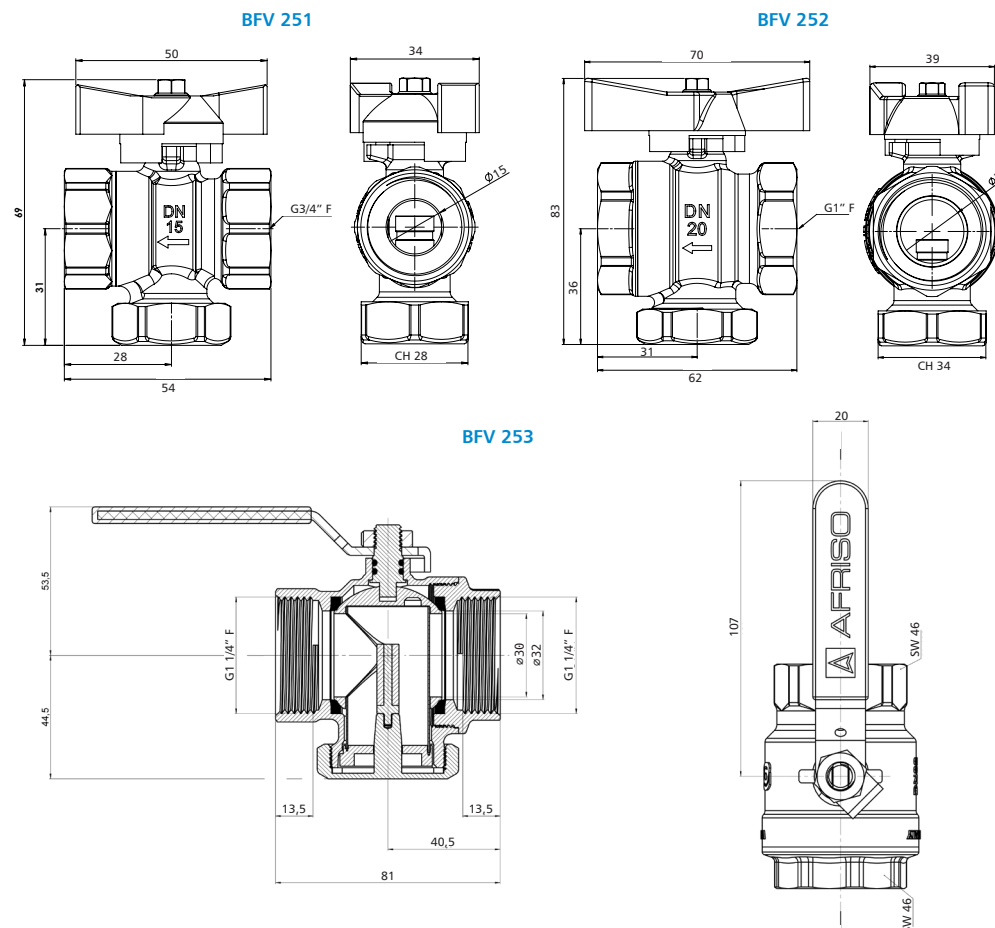


Fig. 3. Dimensions of ball valves

MOUNTING

In order to provide additional protection for the heat source and other system components against dirt and corrosion, we recommend using the AFRISO BCI corrosion inhibitor. The BFV ball valve with a strainer filter and magnet should be installed, for example, on the return pipe to the heat source in order to capture solid dirt that could damage the heat source as well as other sensitive system components.

The BFV ball valve must be installed on horizontal pipes. It should also be remembered that the valve cleaning nut must face downwards (Fig. 4). The arrow on the body indicates the direction of flow (Fig. 5).

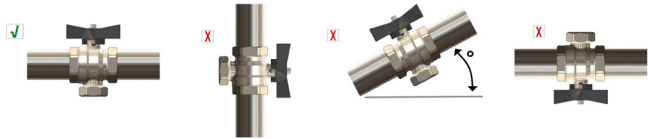


Fig. 4. Permissible installation position of the BFV ball valve

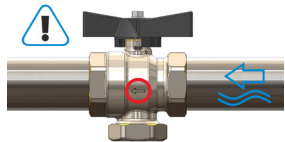


Fig. 5. Flow direction in the BFV ball valve

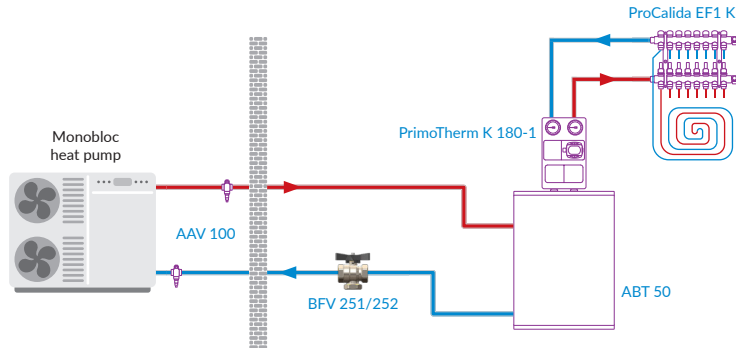


Fig. 6. Example installation diagram with BFV ball valve

MAINTENANCE

**CAUTION!** Maintenance work should only be carried out after the system has cooled down completely. Otherwise, there is a risk of burns from the hot medium.

The frequency of routine removal of dirt from the valve depends on the degree of contamination of the medium. However, we recommend that the valve be thoroughly cleaned and the connections checked for leaks at least once a year.

In order to perform routine cleaning of the strainer filter in the BFV ball valve, first close the valve by turning the handle 90 degrees and unscrew the bottom nut by hand or with an additional tool with a spacing of 28 or 34 mm (depending on the BFV valve model). Please note that a small amount of medium may leak out when unscrewing the nut. The nut contains a flat gasket and a built-in magnetic element. The strainer filter inside the valve should be removed easily by hand or with a tool to pry up the white plastic base of the strainer (Fig. 7).

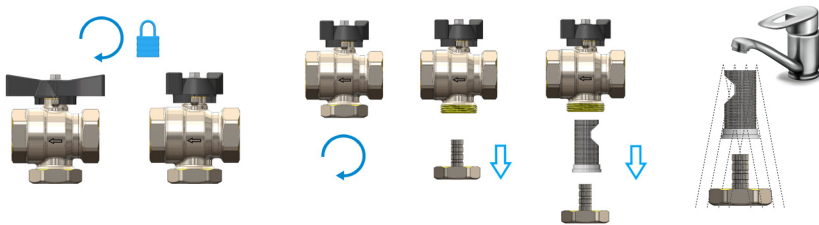


Fig. 7. BFV ball valve maintenance scheme

When assembling the separating elements, remember to position the strainer filter correctly. The strainer filter should be inserted as far as possible into the body so that the white plastic base is flush with the front surface of the thread under the nut in the body. The hole in the filter should be located concentrically to the connection on the installation side, in the opposite direction to the arrowhead, so that it does not block the flow into the valve, but only intercepts dirt (Fig. 8).

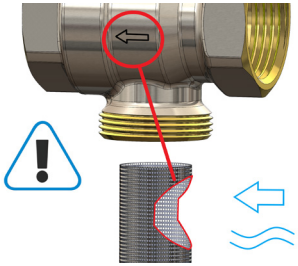


Fig. 8. Correct positioning of the strainer filter

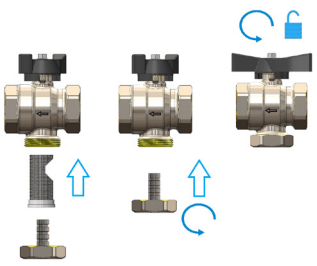


Fig. 9. Diagram of the BFV ball valve assembly

After cleaning the ball valve elements, reassemble the valve in the reverse order of disassembly. First, place the strainer filter in the body as described above, then screw in the nut with the magnetic insert, remembering to use the flat gasket, and unscrew the ball valve by turning the handle 90 degrees (Fig. 9).

TECHNICAL DATA

Parameter / part	Value / material
Operating parameters	max. 90°C at max. 1.5 bar max. 20°C at max. 30 bar
Glycol concentration in the system	max. 50%
Kvs	BFV 251: 2,8 m³/h BFV 252: 5,9 m³/h BFV 253: 13,0 m³/h
Connections	BFV 251: G¾" F BFV 252: G1" F BFV 253: G1¼" F
DN	BFV 251: DN15 BFV 252: DN20 BFV 253: DN32
Housing material	CW617N brass, nickel-plated
Strainer filter material	stainless steel, 30% glass fibre reinforced nylon
Filter mesh size	600 µm
Magnet power	12 000 GS

APPROVALS AND CERTIFICATES

Ball valve with strainer filter and magnet BFV is subject to the Pressure Directive 2014/68/EU and is not CE marked in accordance with Article 4.3 (recognised engineering practice).

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.