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## Pump groups BPS

### 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!

BPS pump groups must only be installed, commissioned and dismantled by trained and qualified personnel. Work on electrical circuits must only be carried out by a licensed, qualified electrician.



The circulation pumps in the BPS pump groups operate on a 230 V AC mains supply. This voltage can cause serious injury or death.

Do not allow the pump's electronic components to come into contact with water or other liquids.

When carrying out installation work, the power supply to the pumps must be disconnected.

Do not make any modifications to the device.

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

### APPLICATION

Used in heating and cooling systems. Designed for installation on the BBM 870 manifold, the BLH 860 manifold with a low-loss header (2 circuits) or the BLH 890 manifold (3 circuits). They can also be installed as independent pump groups between the system and the heat/cooling source. They are used to connect, for example, a radiator system, a surface heating system and/or a DHW tank to the source.

### PREDICTABLE INCORRECT APPLICATION

BPS pump groups must not be used in the following cases:

- under conditions exceeding the maximum permissible pressure and temperature parameters of the medium,
- with the following liquids and gases: a mixture of water and glycol with a glycol concentration greater than 50%, steam, oil, petrol, water intended for human consumption, other media that have a destructive effect on valve components or interfere with its operation.

### DESCRIPTION AND SCOPE OF DELIVERY

BPS pump groups are ready-made hydraulic systems. Depending on the version selected, consumers can be connected to BPS pump groups directly (without a mixing valve, Fig. 2), using an ATM thermostatic mixing valve (20-43°C, Fig. 3) or an ARV Vario ProClick rotary mixing valve (Fig. 4).

BPS pump groups are fitted with an AFRISO APH 160 circulation pump and the necessary fittings - a mesh filter, a shut-off valve on the supply line (with a pocket for mounting a temperature probe, Fig. 1), a shut-off valve on the return line and a check valve.

### DESCRIPTION AND SCOPE OF DELIVERY

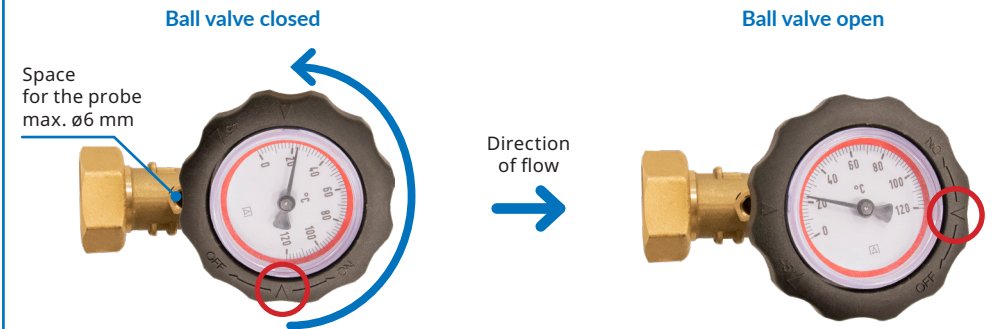


Fig. 1. Shut-off valve installed on the supply line



Art. No. 90 990 20



Fig. 2. Direct BPS pump group



Art. No. 90 991 20



Fig. 3. BPS pump group with a thermostatic mixing valve



Art. No. 90 996 20



Fig. 4. BPS pump group with a rotary mixing valve

#### Legend:



Mesh filter



ARV Vario ProClick rotary valve



T-piece with built-in non-return valve



ATM thermostatic valve



Shut-off valve with a thermometer and a built-in non-return valve



Shut-off valve with a thermometer on the return line



Shut-off valve with a thermometer on the supply line



Circulation pump

## EXAMPLE APPLICATION DIAGRAM

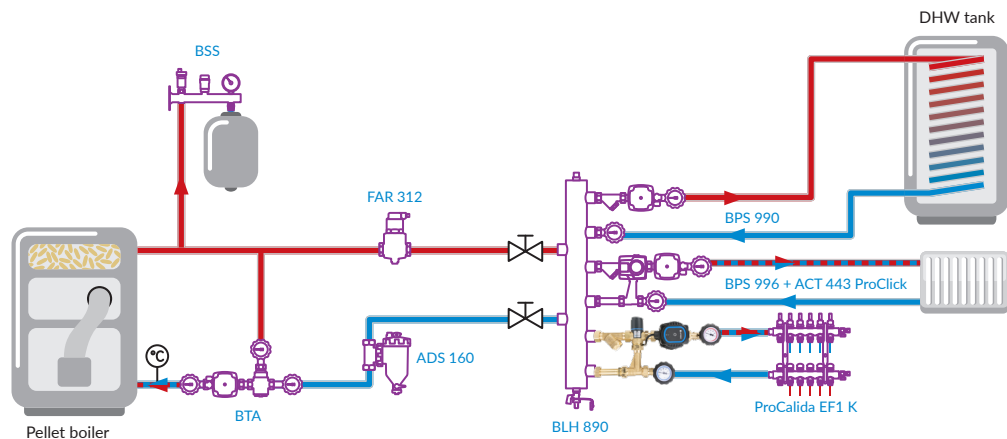


Fig. 5. Connection diagram for BPS pump groups to a manifold with a low-loss header BLH 890 (Art. No. 90 890 10)

## INSTALLATION

Before installing BPS pump groups, the system must be thoroughly flushed, paying particular attention to removing residues from soldering, pipe cutting, etc. For additional protection against dirt, we recommend installing a magnetic dirt separator.

BPS pump groups can be installed in either a vertical or horizontal position. During installation, pay attention to the direction of flow indicated on the circulation pump and the mesh filter. The sediment traps of the mesh filters should be facing downwards.

BPS pump groups should be bolted to the heat source using the G1" nuts and gaskets from the kit. The receiving installation should be connected using the G $\frac{3}{4}$ " female threads.

## MAINTENANCE

**NOTE!** Before carrying out maintenance work on BPS groups, the system must be allowed to cool down. Otherwise, there is a risk of scalding from the hot medium.

Periodically check the tightness of connections.

The mesh filter cartridge should be cleaned at least once a year. To do this, switch off the pump and close the shut-off valves before and after the pump. Then unscrew the filter cartridge and clean or replace it if necessary. Ensure that any medium leaking from the filters does not come into contact with the circulation pump. Screw the filter cartridge back into the housing, open the valves, vent the system and switch on the pump. Top up the system with medium if necessary.

## USE OF MIXING VALVES, CIRCULATION PUMPS AND OTHER COMPONENTS

Please refer to the enclosed operating instructions for (depending on the version selected): ATM mixing valves, ARV Vario ProClick valves and the APH circulation pump. The instructions are also available on the website: [www.afriso.pl](http://www.afriso.pl). If any of the components need to be replaced, proceed in the same way as when cleaning the angle filters (see MAINTENANCE).

**NOTE!** Components of BPS pump groups may only be replaced once the heating system has cooled down completely and the power supply to the pumps has been disconnected!

The ARV Vario ProClick rotary mixing valve features the Kvs Vario function, which allows the Kvs value to be adjusted within a range of 3.5-9 m<sup>3</sup>/h. The full procedure for selecting the proper Kvs value is described in the valve's operating instructions. The ARV Vario ProClick rotary mixing valve can operate automatically when equipped with an electric actuator (e.g. AFRISO ARM ProClick) or a controller (e.g. AFRISO ACT ProClick), which are not components of BPS pump groups.

## TECHNICAL DATA

Parameter	Value / description
Source-side connection	G1" nut
Installation-side connection	G $\frac{3}{4}$ " F
Medium pressure	max. 6 bar
Medium temperature	max. 90°C
Glycol concentration	max. 50%
Thermometers	Ø50 mm, 0-120°C
Mesh filter	DN20, PN10
Shut-off valves	DN20, PN16
Shut-off valve with built-in non-return valve (depending on the version selected)	DN20, PN10
T-piece with built-in non-return valve (depending on the version selected)	DN20, PN10
Materials	brass, copper
Circulation pump	AFRISO APH 160 15-7/130 mm, 230 V AC, 45 W (with a 1.6 m cable)
Thermostatic mixing valve (if fitted)	ATM 561, Kvs 2,5 m <sup>3</sup> /h, 20-43°C, PN10
Rotary mixing valve (if fitted)	ARV 362 Vario ProClick, Kvs 3,5-9 m <sup>3</sup> /h, PN10

## APPROVALS, CERTIFICATES AND DECLARATIONS OF CONFORMITY

This product is subject to the Pressure Equipment Directive 2014/68/EU and, in accordance with Article 4.3 (recognised engineering practice), does not bear the CE marking. The product has been marked with the Construction Product Mark B, in accordance with national regulations.

The circulation pumps supplied with the product are provided with a declaration of conformity, which is available on the website: [www.afriso.pl](http://www.afriso.pl).

## DECOMMISSIONING, DISPOSAL



1. Disconnect the power supply.
2. Dismount the device.
3. Dispose of the product in accordance with applicable regulations, standards and safety guidelines.

Electronic components and batteries must not be disposed of with household waste. This product contains a non-removable battery. Please return the product to a proper collection point or to the manufacturer's or distributor's collection 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.