

AFRISOBasic

AFRISO Sp. z o.o.
Szalsza, ul. Kościelna 7
42-677 Czekanów
www.afriso.pl

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

Boiler return protecting pump groups BTA / BRA

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!



Boiler return protection pump groups BTA and BRA may only be installed, commissioned, and dismantled by trained personnel.

The group circulation pump operates at 230 V AC mains voltage. This voltage can cause severe injury and death.

Do not allow the pump to come into contact with water or other liquids.

Disconnect the pump power supply during installation work.

Do not make any modifications to the pump.

The seals achieve full tightness only after wetting; therefore, leak testing should be performed using water only. Testing with compressed air may indicate leaks at screw connections that do not occur under actual operating conditions.

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

APPLICATION

BTA and BRA boiler return protection pump groups are used in heating systems with solid fuel boilers. They are installed on the return line from the system and mix the return and supply media in appropriate proportions to protect the boiler from low-temperature corrosion caused by the return of medium at too low a temperature.

Maintaining a return temperature at the constant level specified by the boiler manufacturer prevents moisture condensation on the water jacket and the buildup of tar and soot in the furnace. A sufficiently high return temperature extends boiler service life and improves efficiency.

Return temperature protection devices should be installed in every system with a heat buffer tank (storage tank) and are also recommended for all solid fuel boilers.

PREDICTABLE INCORRECT APPLICATION

Do not use the BTA and BRA boiler return protection pump groups in the following cases:

- with the following liquids and gases: a mix of water and glycol with a glycol concentration greater than 50%, water vapour, oil, petrol;
- for operation in explosive atmospheres. The occurrence of sparks in such environments may lead to deflagration, fire, or explosion;
- for safety-related purposes;
- on the supply of the central heating system.

DESCRIPTION

The groups consist of three shut-off valves with integrated thermometers, a circulation pump, and a mixing valve. The shut-off valve equipped with a blue thermometer also includes a non-return valve. The BTA group is fitted with an ATV temperature mixing valve, while the BRA group features an ARV Vario ProClick rotary mixing valve.

MOUNTING

BTA and BRA groups should be installed on the return pipe to the heat source, as shown in Fig. 1 or Fig. 2.

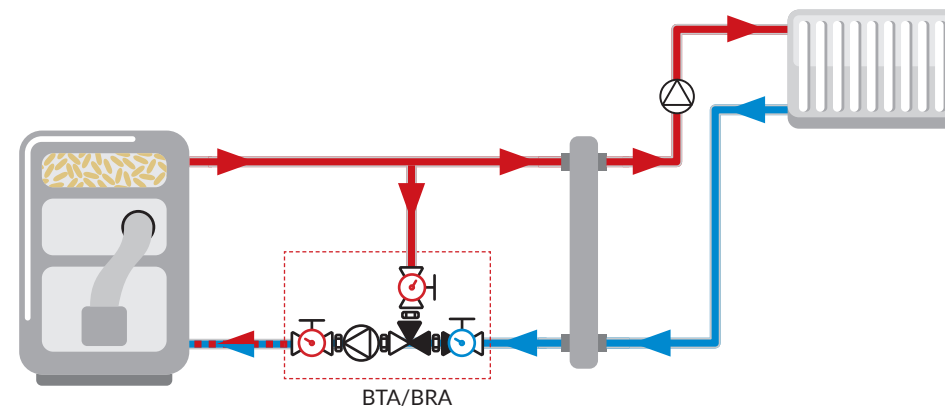


Fig. 1. BTA or BRA group used to increase the temperature of water returning to a solid fuel boiler in a heating system with a low-loss header

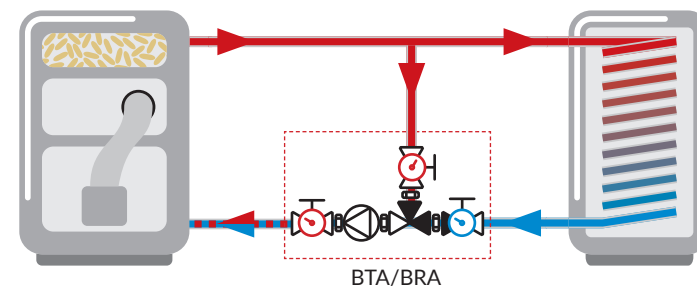


Fig. 2. BTA or BRA group used to increase the temperature of water returning to a solid fuel boiler in a system with a buffer tank



ARV Vario ProClick
or ATV mixing valve



Shut-off valve
with thermometer



Shut-off valve with thermometer
and integrated non-return valve



Circulation
pump

OPERATION OF THE BTA GROUP

The rated temperature of the ATV temperature valve in the BTA group is a fixed value and does not require adjustment during operation. The rated temperature of the temperature valve can be changed by replacing the thermostatic insert. To do this, purchase a ATV repair kit with an insert with the proper rated temperature. Versions with inserts rated at 45°C, 50°C, 55°C, 60°C and 72°C are available. For pump configuration, refer to the operating manual included in the pump package.

OPERATION OF THE BRA GROUP

The ARV Vario ProClick rotary mixing valve features a Kvs Vario function, which allows the Kvs value to be adjusted within the range of 3.5÷9 m³/h. Detailed instructions for selecting the appropriate Kvs value can be found in the valve operating manual included in the package.

The mixing valve in the BRA group must be equipped with an actuator connected to a controller (e.g. ARM ProClick AFRISO and BWC AFRISO) or a controller integrated with an actuator (e.g. ACT ProClick AFRISO). This will enable automatic maintenance of the set return temperature to the boiler.

Actuators and controllers must be ordered separately. For pump configuration, refer to the operating manual included in the pump package.

TECHNICAL DATA

Parameter	Value / material
Connections	G1" F
Operating pressure	max 6 bar
Operating temperature	max 90°C
Glycol concentration	max 50%
Thermometers	Ø50 mm, 0÷120°C
Shut-off valves	DN20, PN16
Shut-off valve with integrated non-return valve	DN20, PN10
Circulation pump	AFRISO APH 160 15-7/130 mm, 230 V AC, 45 W (with 1.6 m cable)
Rotary mixing valve (if present)	ARV 362 Vario ProClick, Kvs 3,5÷9 m³/h, PN10
Temperature mixing valve (if present)	ATV 225, Kvs 6 m³/h, 55°C, PN10
Material	brass, corrosion-resistant steel, iron, composite, plastic

MAINTENANCE

The BTA and BRA groups do not require maintenance. The internal components of the ATV temperature valve in the BTA group can be removed for cleaning of scale and other dirt.

Before performing maintenance on the valve, the system must be cooled down. Otherwise, there is a risk of burns from hot medium.

APPROVALS AND CERTIFICATES

Pump groups BTA and BRA are subject to the Pressure Directive 2014 /68/EU and are not CE marked in accordance with Article 4.3 (recognised engineering practice). The products have been marked with the B construction mark, in accordance with the regulations in force in Poland.

The circulation pump included with the products has a Declaration of conformity, which is available on the website: www.afriso.pl.

DECOMMISSIONING, DISPOSAL



1. Disconnect the power supply.
 2. Dismount the device.
 3. Dispose of the product according to local directives and guidelines.
- Electronic parts and batteries should not be disposed of with household waste. Return the product to the appropriate collecting point or to the manufacturer's or distributor's collecting 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.