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Safety group BSS for heating systems with connection to an expansion vessel

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!



The product 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 from hot medium! All installation and maintenance work must be carried out only after the system has cooled down.

APPLICATION

The BSS boiler safety group is used to protect closed heating systems. The group is fitted with a connection to an expansion vessel with a capacity of up to 25 litres, a safety valve to protect against pressure increases in the system, a pressure gauge to monitor pressure, and an automatic air vent to remove air from the system.

PREDICTABLE INCORRECT APPLICATION

- Do not use the BSS boiler safety groups in the following cases:
- when operating conditions exceed the maximum allowable pressure or temperature of the medium,
 - with the following liquids and gases: with the following liquids and gases: a mix of water and glycol with a glycol concentration of more than 50%, water vapour, oil, petrol, water intended for human consumption, other media that damage the valve components or interfere with its operation.

DESCRIPTION

The BSS safety group is a compact and ready-to-install safety unit. The safety group has a mounting bracket for attaching it to the wall with plugs and screws. The BSS safety group is designed for expansion vessels with a capacity of up to 25 l and a diameter of no more than 410 mm. A G $\frac{3}{4}$ " F connection at the end of the group beam is used to connect the vessel.

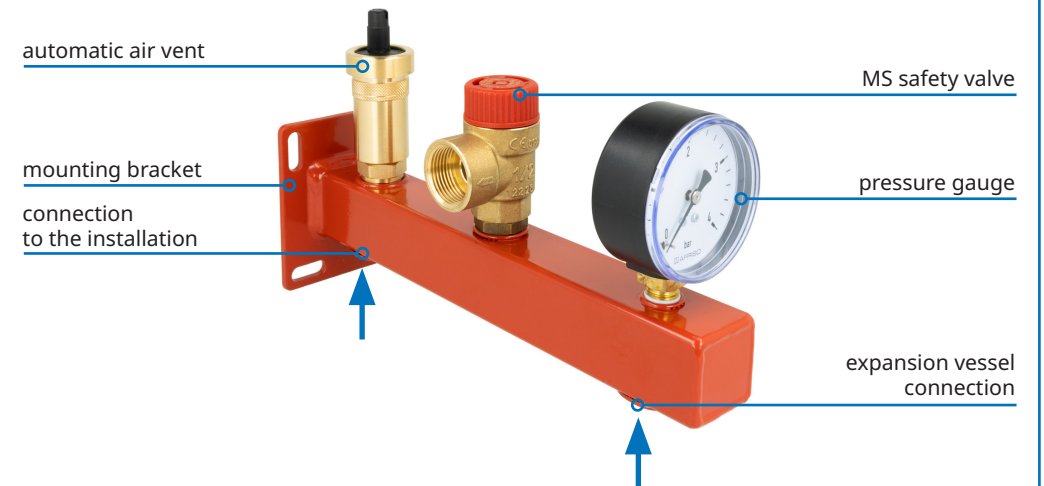
OPERATION

When the pressure in the heating system does not exceed the opening pressure, the safety valve, which is a component of the BSS safety group, remains closed. An increase in pressure above the valve's activation value causes the diaphragm to move and expose the outlet, which allows excess medium to be removed from the system and the pressure to be reduced to a safe value. The valve opening pressure is pre-set at the factory.

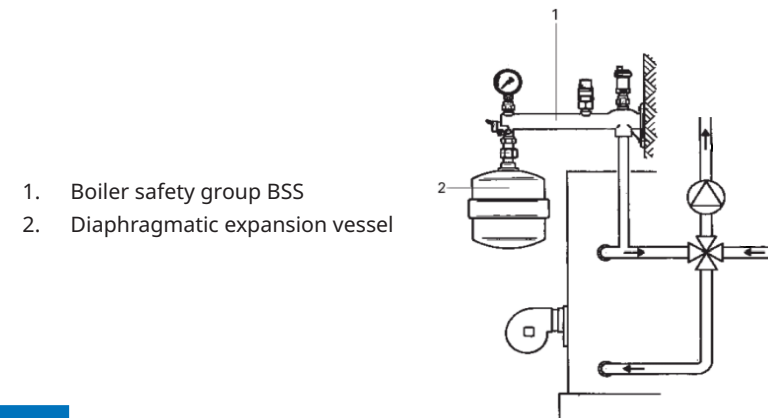
The knob on top of the safety valve allows the outlet to be opened manually at a pressure lower than the activation pressure in order to check that the valve is working properly.

An automatic air vent removes air accumulating in the safety group housing, and a pressure gauge indicates the current pressure in the heating system.

CONSTRUCTION



APPLICATION DIAGRAM



MOUNTING



During installation, activation and maintenance of the safety group, all possible measures should be taken to prevent scalding from hot water.

The safety group must be positioned in such a way as to allow its later dismantling and maintenance.



There must be no shut-off or non-return valves between the boiler and the safety group. The safety group should be located as close to the boiler as possible.

The safety group should be attached to the wall using a mounting bracket. The bracket should be screwed in place using screws proper for the type of wall and set in proper wall plugs. The location of the wall plugs is best determined by tracing the mounting holes of the bracket on the wall surface with a pencil.

The holes in the bracket are designed to allow easy and precise vertical (riser) positioning of the BSS safety group.



Connect an extraction pipe to the safety valve outlet (internal thread Rp $\frac{3}{4}$ ") and lead it to a drain grate or cooling well.

Before installing the BSS safety group, flush the system thoroughly. Dirt such as hemp or metal filings can cause the safety group components to malfunction.

We recommend using a quick-release connection with a brass nipple (e.g. quick-release connection for expansion vessel with ASK inspection valve, item no. 77 924) to connect the expansion vessel. In the BSS version fitted with a quick-release connection, the expansion vessel must be screwed into the lower part of the quick-release connection included in the set. Then, the vessel with the lower part of the quick-release connection screwed on must be screwed into the upper part located at the end of the BSS safety group beam.

USAGE

The system should be filled with treated water or a properly prepared mixture of water and glycol. Filters should be used in the system; it is also recommended to install sludge traps or magnetic sludge traps.

The plastic nut on top of the PrimoVent automatic air vent with Aquastop should be tightened during proper operation. The MS safety valve (see its operating instructions) and the automatic air vent, which are part of the BSS safety group, require regular inspection and maintenance.

In the event of a leak caused by contamination of the venting mechanism seal, unscrew the air vent from the safety group, unscrew its housing, clean the internal components and the housing, and then reinstall it.

After reinstalling the air vent, check it for leaks.

TECHNICAL DATA

Parameter / part	Value / description		
Art. No.	90 610 00, 90 611 00	90 610 20, 90 611 20	90 610 10, 90 611 10
Dimensions	256 x 156 x 75 mm		
Power of the secured installation according to UDT	73.6 kW	60.2 kW	42.6 kW
Expansion vessel connection	G3/4" F / quick-release connection G3/4" F		
Connection to the installation	G3/4" F		
Pressure gauge range	0-4 bar		
Safety valve opening pressure	3 bar	2.5 bar	1.5 bar
Operating temperature	max. 90°C		
Operating pressure	max. 6 bar		
Permissible glycol concentration	max. 50%		
Properties of the paint coating	min. 60 µm		

Outflow coefficients for vapours, gases and liquids according to the AFRISO MS safety valve data sheets

APPROVALS AND CERTIFICATES

The AFRISO MS diaphragm safety valve installed in the BSS safety group has been tested by TÜV Rheinland and has a CE declaration confirming compliance with the PED 2014/68/EU pressure directive and the proper Type Examination Certificate issued by the Technical Inspection Authority.

BSS safety groups for central heating systems with a connection to an expansion vessel have been marked with the B construction mark, in accordance with Polish national regulations.

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.