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Insulated low-loss header BLH 822

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!



Low-loss header BLH 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.

APPLICATION

Low-loss headers are used to divide heating systems compliant with PN-EN 12828 into a primary heat source circuit and a secondary circuit (or circuits) of the receiving installation. Dividing the system in this way ensures the correct hydraulic conditions for the operation of circulation pumps by balancing the flows. This guarantees smooth operation of the system and heat source when some heat receivers are switched off and increases the service life of the circulation pumps.

Thanks to its design and properties, the low-loss header also helps to vent and separate dirt, which can be removed using a drain valve. Another function of the header is to increase the temperature of the water returning to the heat source.

PREDICTABLE INCORRECT APPLICATION

BLH 822 low-loss headers must not be used in the following cases:

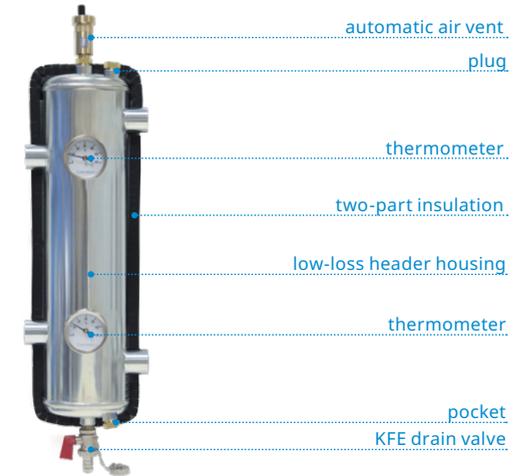
- under conditions exceeding the maximum permissible pressure and temperature parameters of the medium,
- with the following liquids and gases: a mixture of water and glycol with a glycol concentration greater than 50%, steam, oil, petrol, water intended for human consumption, other media that have a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

DESCRIPTION AND SCOPE OF DELIVERY

The low-loss header BLH 822 consists of a galvanised steel housing with an internal separation mesh, two-piece insulation, an immersion pocket for placing a temperature probe, a G $\frac{1}{2}$ " plug, an automatic air vent with a stop valve, a KFE drain valve and two thermometers.

The low-loss header BLH 822 up to 200 kW should be connected to the heating system using G2" internal threads. The automatic air vent, drain valve, thermometer pockets, immersion pocket and plug should be screwed into the G $\frac{1}{2}$ " internal threads. If no additional equipment is used, the holes should be plugged with a G $\frac{1}{2}$ " plug.

CONSTRUCTION



MOUNTING

Before installing the low-loss header, flush the system thoroughly, paying particular attention to removing any residues from soldering, pipe cutting, etc. We also recommend using a magnetic dirt separator in the system (e.g. Art.No. 77 160 00).

Install the low-loss header vertically, directly on the system pipes in accordance with the application diagram (Fig. 1), using G2" internal threads. In justified cases, e.g. when the pipes are made of plastic, additional clamps should be used on the pipes at the low-loss header connections.

Connect the narrower spigots to the heat/cooling source pump circuit. Connect the wider spigots to the pump circuit of the installation. Then screw the stop valve of the air vent into the upper G $\frac{1}{2}$ " connection. Screw the temperature probe pocket into the second G $\frac{1}{2}$ " connection using a proper seal (e.g. Teflon). Screw the KFE drain valve into the lower G $\frac{1}{2}$ " connection and screw the G $\frac{1}{2}$ " plug into the second additional connection. Place the thermometer pockets in the remaining two G $\frac{1}{2}$ " connections using a proper seal (e.g. Teflon).

After initial filling of the system, screw the automatic air vent into the stop valve by hand. If no additional equipment is used, the holes should be sealed with plugs.

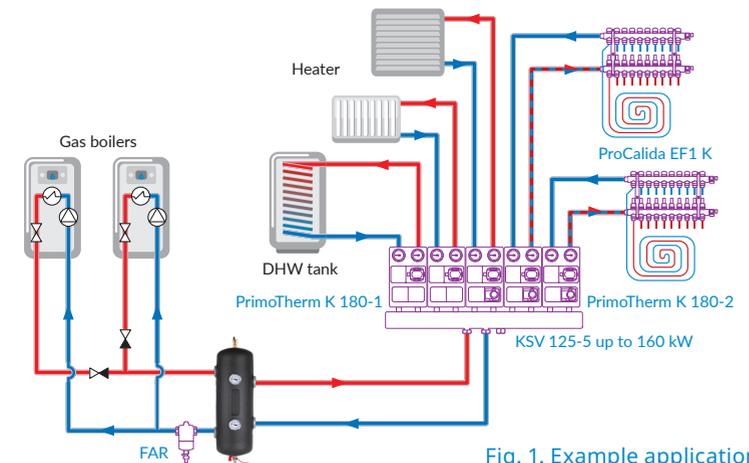
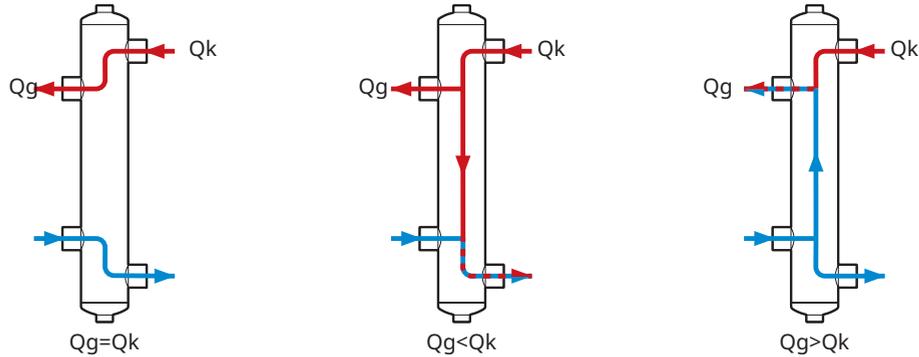


Fig. 1. Example application diagram

OPERATING PRINCIPLE



Situation I – the flow of the heating medium in the pump circuit of the heating system (Q_g) is equal to the flow of the medium in the pump circuit of the heat source (Q_k). There is no mixing of the supply and return medium streams from the system in the low-loss header.

Situation II – the flow of heating medium in the pump circuit of the heating system (Q_g) is lower than the flow of medium in the pump circuit of the heat source (Q_k). Part of the hot medium from the heat source mixes in the low-loss header with the cold flow from the system return, raising the temperature of the medium returning to the heat source.

Situation III – the flow of the heating medium in the pump circuit of the heating system (Q_g) is greater than the flow of the medium in the pump circuit of the heat source (Q_k). Part of the cold medium from the system return mixes in the low-loss header with the hot stream from the boiler, lowering the temperature of the medium supplying the system.

TECHNICAL DATA

Parameter / part	Value / material
Connections to the installation	G2" F
Accessory connections	G½" F
Flow	max 11.9 m ³ /h
Capacity	max 200 kW at $\Delta T = 15K$
Set nominal pressure	PN6
Set operating temperature	max 90°C
Nominal pressure of the low-loss header (without additional equipment)	PN16
Operating temperature of the low-loss header (without additional equipment and insulation)	max 110°C
Glycol concentration	max 50%
Zinc coating thickness	min 8 μm
Insulation	polyethylene (XLPE)
Automatic air vent	G¾" with stop valve R½"
KFE drain valve	G½"
BiTh bimetallic thermometers	ø63 mm, 0-120°C, G½", cl. 2,0
Immersion pocket, plug	G½"

MAINTENANCE

Periodically check the tightness of connections and the condition of the automatic air vent for dirt. At regular intervals, we recommend using the KFE drain valve to remove dirt separated from the medium from the system.

APPROVALS AND CERTIFICATES

The insulated low-loss header BLH 822 is subject to the Pressure Directive 2014 /68/EU and is not CE marked in accordance with Article 4.3 (recognised engineering practice). The product is marked with the B construction mark, in accordance with the regulations in force 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.

ACCESSORIES

The stand is designed for the low-loss header BLH 822. It is made of galvanised sheet metal. It is fitted with three adjustable bases for proper levelling.



Art.No. 90 800 05