AFRISOBasic

Manifold with low-loss header BLH 860 for two heating circuits for BPS pump groups

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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 860 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. Otherwise, there is a risk of burns from the hot medium.

APPLICATION

The manifold with low-loss header BLH 860 is used in heating and cooling systems. It is installed between the heating or cooling source and the system or BPS pump groups. It hydraulically separates the source circuit from the system circuits, ensuring smooth operation of the system when some receivers are switched off or the pump operating parameters are changed.

PREDICTABLE INCORRECT APPLICATION

Do not use the manifold with low-loss header BLH 860 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.

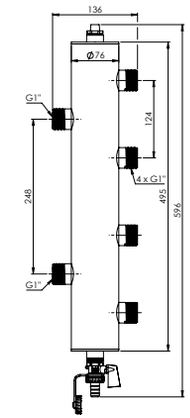
DESCRIPTION AND SCOPE OF DELIVERY

The manifold with low-loss header BLH 860 is made of a galvanised steel housing and is designed for connecting two heating/cooling circuits. On one side there is one pair of connections (source side) and on the other side there are two pairs of connections (system side).

The connections on the system side are spaced to allow direct connection of two BPS pump groups. The connections on the system side can also be used to connect two heat/cooling sources. In addition, the low-loss header is fitted with a manual air vent and a KFE drain valve. A wall bracket is included with the manifold with low-loss header (Fig. 1).

Fig. 1. Wall bracket for BLH 860 manifold

DIMENSIONS [mm]



MOUNTING

Before installing the BLH 860 manifold with low-loss header, flush the system thoroughly, paying particular attention to removing any solder residue, pipe cutting debris, etc. To protect the system against dirt and corrosion, we recommend installing an AFRISO ADS magnetic dirt separator and using AFRISO BCI corrosion inhibitor.

The BLH 860 can be installed vertically or horizontally. When installed vertically, the manifold must be mounted so that the manual air vent is at the top and the drain valve is at the bottom. If installed horizontally, air venting and draining of dirt from the manifold will not be effective. In this case, an additional vent (e.g. Art. No. 77 735 10) and a mesh filter should be installed at another location in the system.

The BLH 860 manifold should be hung on the wall using the wall bracket provided. The bracket should be fixed to the wall using proper mounting plugs, which are not included in the scope of delivery. When connecting two system circuits or BPS pump groups (Fig. 2), connect the heat/cooling source to a single pair of connections, and connect the system circuits to the side with two pairs of connections.When connecting two heat/cooling sources (Fig. 3), connect the two sources to the side with two pairs of connections and the output to the system pump circuit on the side with one pair of connections.

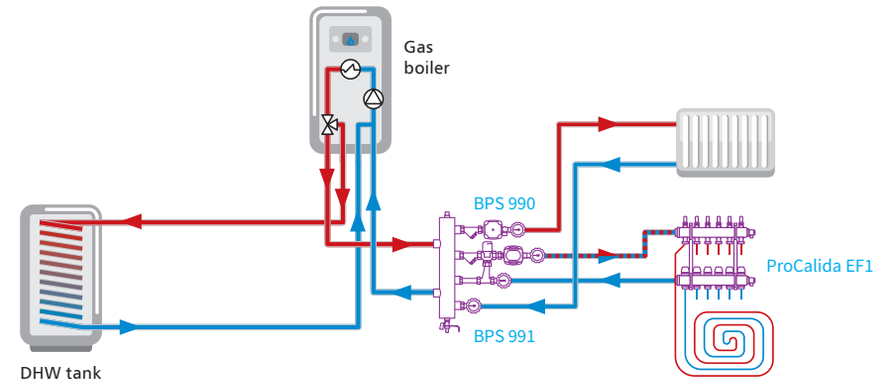


Fig. 2. Example diagram of connecting the BLH 860 manifold with BPS pump groups in a heating system with a gas boiler

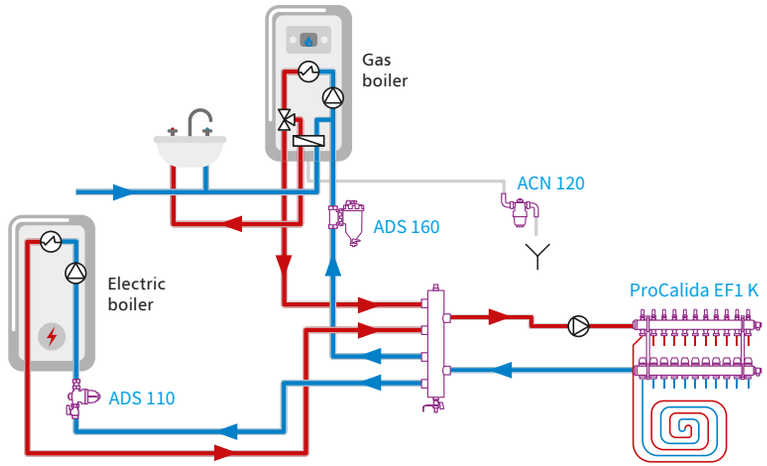
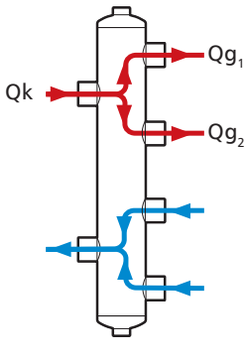


Fig. 3. Example diagram of connecting two heat sources to an underfloor heating manifold using the BLH 860 manifold

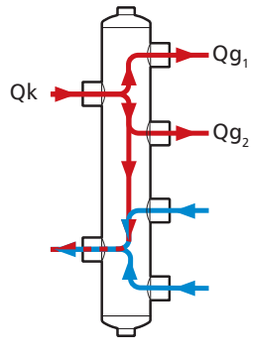
OPERATING PRINCIPLE IN AN EXAMPLE WITH TWO SYSTEM CIRCUITS



$Qk = Qg_1 + Qg_2$

Situation I – The total flow rate of the heating medium in the system pump circuits (Qg) is equal to the flow rate in the heat source pump circuit (Qk).

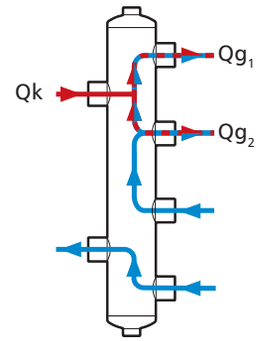
In this case, no mixing of the supply and return flows occurs in the low-loss header.



$Qk > Qg_1 + Qg_2$

Situation II – The total flow rate of the heating medium in the system pump circuits (Qg) is lower than the flow rate in the heat source pump circuit (Qk).

In this case, part of the hot medium from the boiler mixes with the cold return flow from the system inside the low-loss header, increasing the temperature of the medium returning to the heat source.



$Qk < Qg_1 + Qg_2$

Situation III – The total flow rate of the heating medium in the system pump circuits (Qg) is higher than the flow rate in the heat source pump circuit (Qk).

In this case, part of the cold return medium from the system mixes with the hot flow from the boiler inside the low-loss header, reducing the temperature of the medium supplied to the system.

TECHNICAL DATA

Parameter / part	Value / material
Connections to the installation	G1"
Accessory connections	G½" F
Flow	max 4,0 m³/h
Capacity	max 70 kW at ΔT = 15K
Operating pressure	max 6 bar
Set operating temperature	max 90°C
Operating temperature	max 90°C
Glycol concentration	max 50%
Housing	galvanised steel
Insulation	polypropylene (EPP)
Manual air vent	G½"
Drain valve KFE	nickel-plated, G½"

MAINTENANCE

Connections should be checked for tightness periodically. At regular intervals, it is recommended to use the KFE drain valve and the manual air vent to remove air and dirt from the system.

APPROVALS AND CERTIFICATES

Manifold with low-loss header BLH 860 for two heating circuits 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

Two-piece insulation for the BLH 860 manifold effectively reduces heat loss.