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KLS 50 boiler charging station – Installation instructions

1. General

1.1 General notes

Before commencing work, the fitter must read, understand and pay attention to these installation and operating instructions. The KLS 50 boiler charging station may only be fitted, adjusted and maintained by trained professionals. Personnel undergoing training may only work on the product under the supervision of an experienced professional. Only if the above conditions are satisfied can the manufacturer accept any liability in accordance with its legal obligations. All information contained in these installation and operating instructions must be observed when using the KLS 50 boiler charging station. Use for any other purpose does not constitute correct and proper use. The manufacturer shall not be liable for any damages arising from misuse of the KLS 50 boiler charging station. Conversions or modifications are not permitted for safety reasons. The KLS 50 boiler charging station may only be maintained / repaired by a professional company approved by the manufacturer. Technical modifications reserved!

1.2 Safety notes

The following technology regulations must be particularly observed along country-specific guidelines:

DIN 1988 Codes of Practice for Drinking Water Installations

DIN 4708 Central water-based heating systems

DIN EN 12828 Heating systems in buildings - design of water-based heating systems

DIN 4753 Water heaters and water heating installations for drinking water and service water

DIN EN 12976 Thermal solar systems and components

VDE 0100 Erection of power installations

VDE 0185 Lightning protection systems


VDE 0190 Main potential equalisation of electrical installations

VDI 2035 Prevention of damage in water heating installations

DIN EN 14336 Heating systems in buildings - Installation and commissioning of water based heating systems

SYMBOLS AND ABBREVIATIONS

This document uses symbols and abbreviations to facilitate understanding. These are described below:

 Notification of danger or
Important information about a function

 High voltage

→ Reference to further documentation

1.3 Scope of delivery

- KLS 50 boiler charging station
- Insulation jacket made from EPP
- Wall bracket for the KLS 50
- Securing material
- Installation instructions

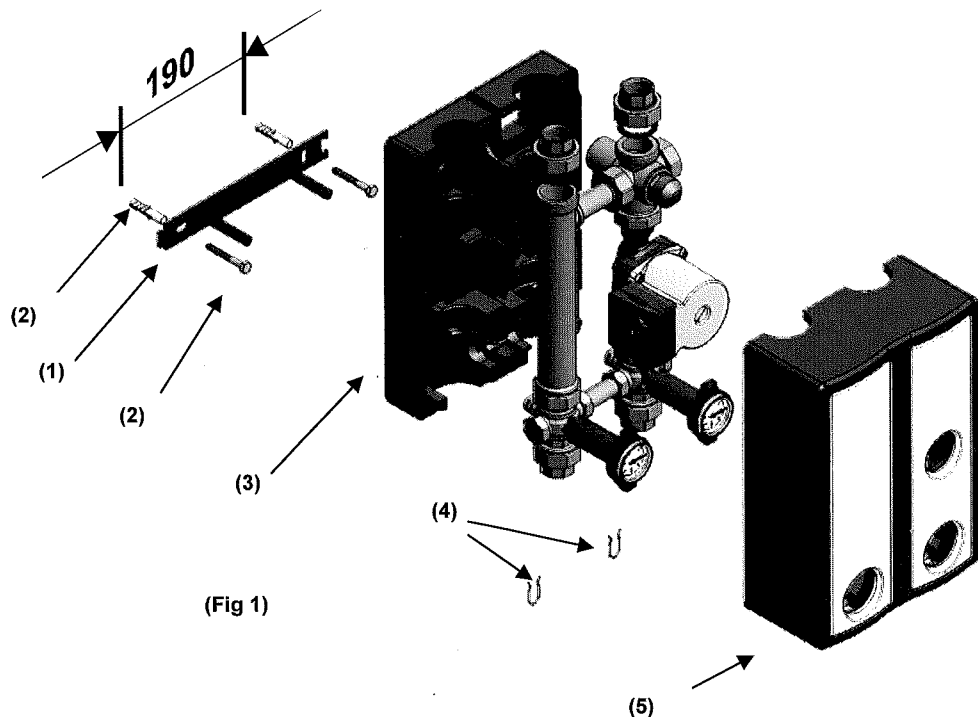
2. Application

The station enables the boiler's operating temperature to be reached quickly in order to avoid falling short of the dew point. This means that the boiler will deliver a longer service life while at the same time reducing harmful emissions. The integrated thermal switch enables the boiler circuit to operate in bypass mode during start-up. The dynamic bypass is fully open at low temperatures. Once the nominal return temperature is reached, the thermostat opens the flow to the buffer charger / heating circuit supply. As this happens, the bypass gradually closes and provides the full pumping capacity for the power transfer. As the boiler temperature falls, this process is reversed and the bypass ensures that the return temperature increases until the nominal temperature falls below its set value.

3. Installation and connection

3.1 Wall installation (Fig 1)

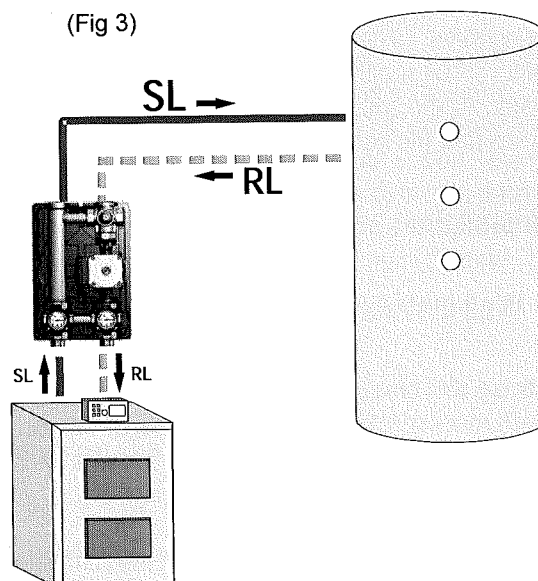
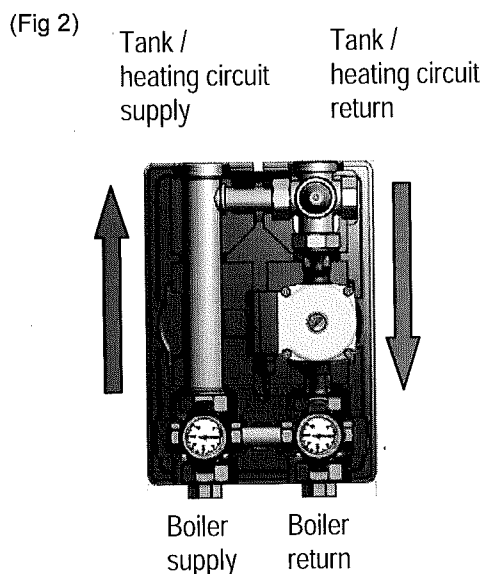
- Secure wall bracket (1) to the place provided using the dowels and screws (2) suitable for the base.
- Push rear insulating jacket (3) onto the wall bracket.
- Place the KLS 50 boiler charging station with the ball valves onto the wall bracket and fix in place with the retaining springs (4).
- Guide the connection to the system.
- After filling and checking for leaks on the complete system, put the front side of the heat insulation (5) in place.
- To remove the boiler charging station from the wall bracket: use a screwdriver or similar tool to pull the retaining springs downwards and off.
- Careful: the KLS 50 boiler charging station is now loose! Ensure that it does not fall forwards out of the wall bracket!



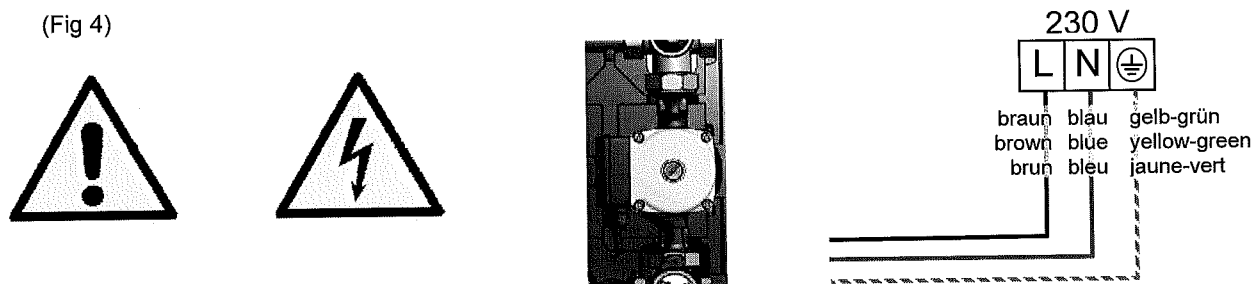
KLS 50 boiler charging station – Installation instructions

3.2 Hydraulic connection (Fig 2/3)

The KLS 50 boiler charging station is connected by pipe directly to the solid fuel boiler and tank / heating circuit. Ensure that the supply and return are connected correctly.



3.3 Electrical connection (Fig 4)

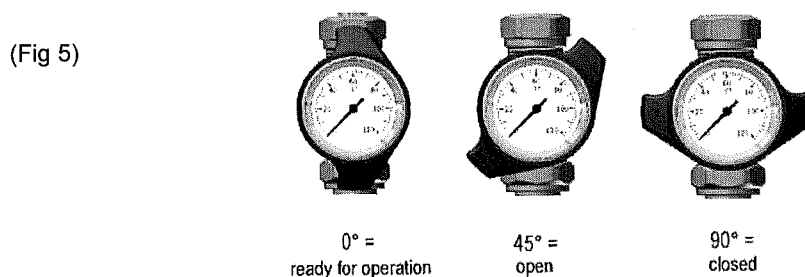


All installation and wiring work involving electrical and electronic components must only be carried out when the power supply is disconnected. The connection and commissioning of components must only be carried out by trained personnel. The applicable national and local safety regulations must also be observed.

➔ For further information refer to the enclosed installation and operating instructions for the pump.

4. Gravity brake (Fig 5)

To fill, bleed and rinse the system, the gravity brake must be open. It is opened by turning the ball valve to the 45° position. To operate the system, the ball valve must be completely open



5. Technical specifications

5.1 Tightening torques of connections with flat gasket

Torques when tightening screw fittings using Reinz AFM35 gaskets, plate thickness 2 mm:

3/4" screw 35 Nm

1" screw 55 Nm

1 1/4" screw 90 Nm

1 1/2" screw 130 Nm

As a result of the gasket settling, the screw connections may need to be retightened during installation.

5.2 Technical data

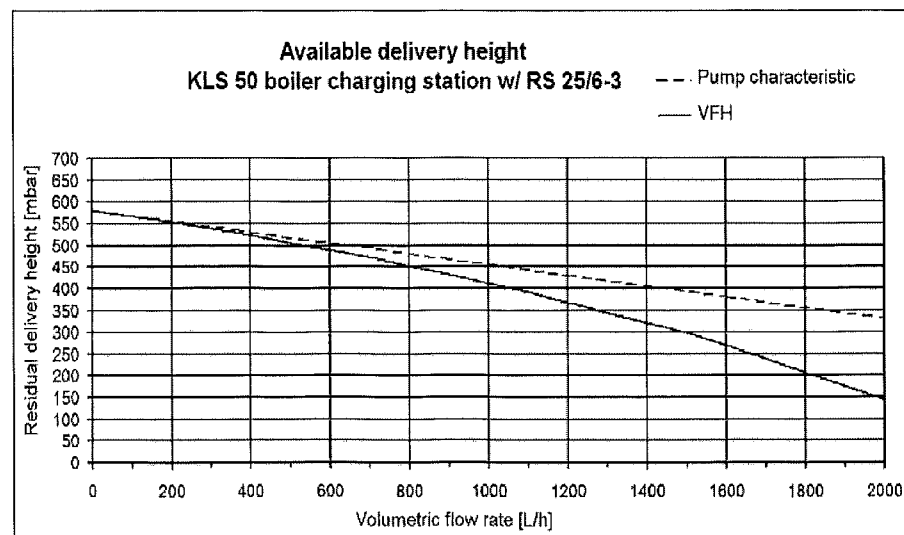
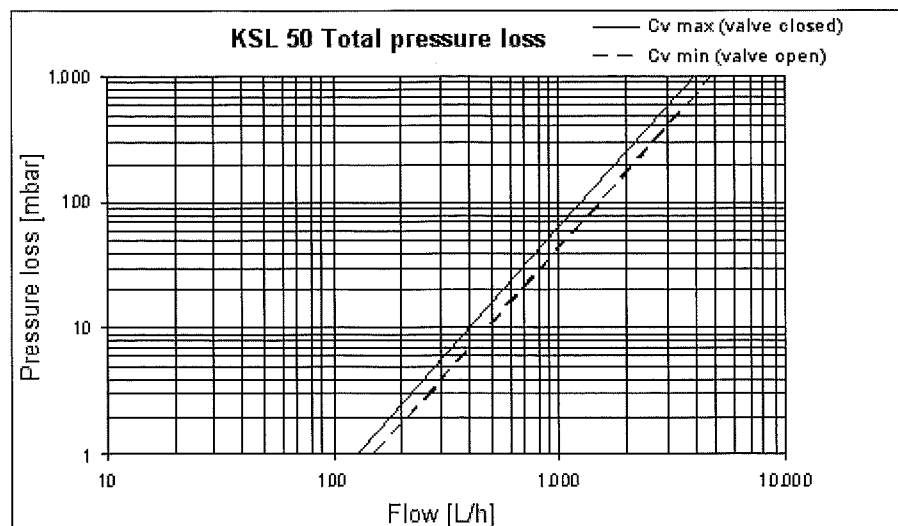
Pre-set thermostat: 58 °C +/- 2 °C

Maximum permissible operating temperature: +90 °C

Minimum permissible operating temperature: -20 °C *

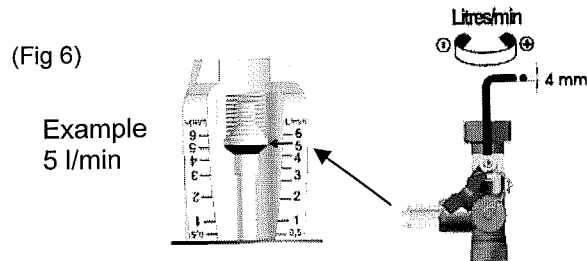
Maximum permissible operating overpressure: 10 bar

* At medium temperatures lower than 20 °C, the possible formation of condensation must be watched for. Suitable cooling brines must also be used if the medium temperature falls below the freezing point of water.



5.3 *WattFlow* balancing valve (optional)

Depending on the type / scope of delivery of the KLS 50, a balancing valve may be integrated into the station. Flow setting (Fig 6): the flow volume is set on the balancing valve using a SW 4 Allen wrench. The set volume can be read off directly on the scale. The valve stroke is distributed over several spindle revolutions in order to achieve as high a degree of setting precision as possible. The set values are based on the relevant system calculations.



5.4 Materials

- Fittings: forged brass Ms58
- Pipes: precision steel pipe; Cu pipe; Ms pipe
- Spring: stainless steel
- O-rings: EDPM elastomere
- Flat gaskets: AFM34 or EPDM elastomere
- Valve seats: PTFE (polytetrafluorethylene)
- Ball valve grip: fibreglass-reinforced, heat-resistant plastic

5.5 Construction dimensions (Fig 6)

