

## GENERAL INFORMATION

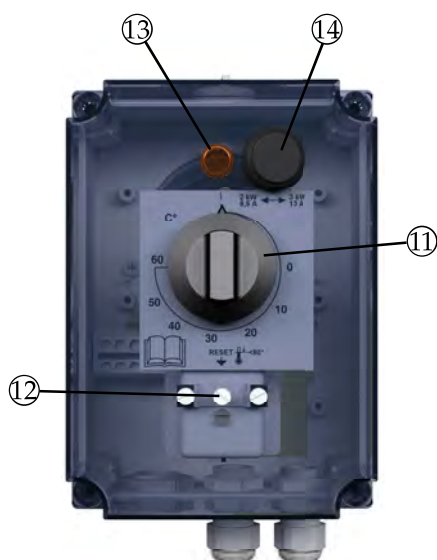
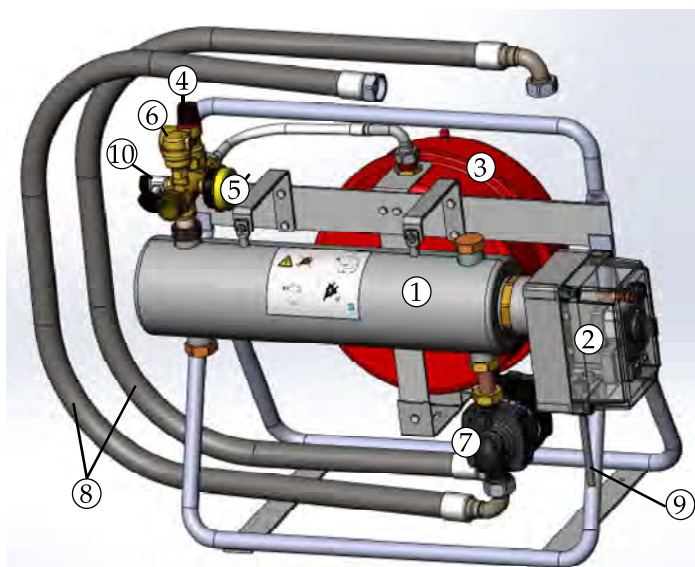
The **LK 440 EasyHeat** is a complete portable electrically-heated boiler. It is primarily meant to be used as a temporary heater, e.g. for drying concrete slabs installed with under floor heating and for heating buildings under construction installed with a under floor heating system.

The boiler has a total output capacity of 3 kW and it can be manually set between 2 or 3 kW.

The boiler is supplied complete with a circulation pump, an expansion tank and auxiliary devices including a safety valve and air-bleed valve.

Connection to the under floor heating manifold/heating system is simple, using steel-reinforced flexible hoses.

**LK 440 EasyHeat** is factory wired and complete with a 1-phase 230 V electric plug. Temperature regulation is controlled by the boiler's operating thermostat.



## TECHNICAL DATA

Art. No.	298588
Output	2 or 3 kW
Voltage	1-phase 230V, connection via 1-phase electric plug Boiler must be protected using 10 A fuse (8.5 A) for 2 kW and 16 A (13.5 A) for 3 kW
Electrical cartridge	3 kW/6-tube 230 V, stainless steel SS2353, connection 2"
Pump	Grundfos UPM3 Auto L 15/70 1 phase 230 V (factory fitted to control box)
Protection class	IP 44
Operating thermostat	Max 60 °C
Safety thermostat	80 °C
Expansion tank	12 litres
Safety valve	1,5 bar
Max. glycol solution	30%
Boiler volume	2,8 litres
PS max. pressure for boiler jacket	1,5 bar
Dimensions (L x W x H)	710 x 430 x 650 mm
Weight	30 kg

## LK 440 EASY HEAT COMPRISES OF:

1. Electrically-heated boiler
2. Control box
3. Expansion tank, 12 litres
4. Safety valve, 1.5 bar
5. Pressure gauge
6. Automatic air-bleed valve
7. Circulation pump, Grundfos UPM3 AUTO L
8. Steel-reinforced connection hose 1", length 1 m
9. Cable with 1-phase coupling connector, length 1 m
10. Filling valve
11. Operating thermostat, 0-60 °C
12. Trip switch, overheating protection
13. Power amplification indication
14. Switch 2/3 kW

## INSTALLATION

**LK 440 EasyHeat** should be placed indoors/under a roof and fully protected from rain.

The integrated safety package including automatic air-bleed valve, safety valve and connecting hoses, must be installed as shown in the product diagram (see above). Relevant building standards and hot water installation standards must be adhered to.

The safety valve's outlet's functioning must be ensured in the appropriate manner; refer to current hot water installation standards. No thermometer is included in the standard kit. However, a thermometer should be mounted on the pipe after the boiler.

The heating system must be arranged so that there is always a flow through the cassette. Check to see that one or more of the heating loops are always open.

## SWITCHING ON

Before switching on, check to see that the heating system is filled with water, air-bled and that the system's operating pressure is sufficient.

Check to see that the circulation pump is running by listening to and testing the various pump speed settings.

## THERMOSTAT OPERATION

Temperature regulation is via the boiler's operational thermostat (constant output temperature). The thermostat can be set up to a maximum of 60 °C.

Monitor the output temperature by means of a thermometer and compare it to the set temperature.

## CIRCULATION

For setting up the circulation pump, see separate instruction "Grundfos UPM3 Auto L 15/70". Note that the pump is advantageously set to work with constant pressure and that this must be set manually according to separate instructions.

## OVERHEATING PROTECTION

**LK 440 EasyHeat** is provided with built in overheating protection, which cuts off the power at approx. 70 °C. To reset the overheating protection function, press button (12). Resetting is possible after the boiler has cooled down to approx. 60 °C. In the event of a repeated overheating, determine the cause of the fault and fix it before restarting.

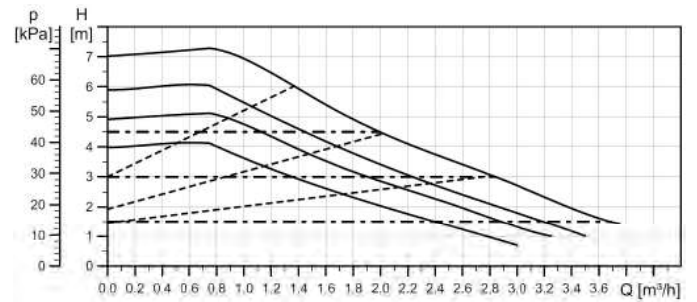
## TRIP SWITCH, CIRCULATION PUMP

The circulation pump is protected by a 10 A Trip Switch (13). In the event of the fuse tripping out, determine the cause of the fault and fix it before restarting.

## SAFETY VALVE

The safety valve must be tested at start-up and then at set intervals 2-3 times per year. CAUTION: Take care when testing as the out-flowing water/steam can cause scald injuries.

## PUMP GRAPH



## ELECTRIC CONNECTION DIAGRAM

