

Installation and operation instructions for “S.O.S. emergency heater” EPM 13 M

Important notes:

- Working on electrical connection has to be performed by a licensed electrician taking into account all applicable safety codes.
- Before opening the wiring box or changing the pump, the unit has to be switched off and disconnected from the mains electrical supply.
- For safety reasons, locate the unit in fireproof and dry areas only.
- The unit must be installed with the circulator motor pointing downwards!
- It's not permitted to run the unit without water. Before switching on the unit, it's absolutely necessary, that the system and the unit are properly filled. Ignoring this can bring beyond repair both the pump and the TCO (Thermal Cut Out)
- The unit has a minimum flow rate of 100 l/h. In some cases it might be reasonable to install a bypass (radiator or floor heating systems with thermostatic valves, which all could be closed!)
- If the unit is not in use it has to be fully drained of water to avoid frost damage.

Starting Operation:

1. Connect the heating circuit according to good professional practice with the unit (red ball valve to flow, blue one to return)
2. Prime the system and the unit properly (it's necessary to close the two ball valves while priming the system. Open them to prime the unit itself).
3. Put the plug into the socket (CEE 32 for use with 400 Volt = 13000 Watt (44200 BTU/hr) or adapter plug for 230 V = 3000 Watt (10200 BTU/hr)
4. Put the units' selector switch on "PUMP". It is possible that there could be some noise in the system due to residual air. If this noise does not stop after a few minutes or if no liquid is circulated by the pump, the pump should be switched on and off several times (about 10 seconds off, 20 seconds on) to enhance the air venting. If this method does not succeed after about 10 minutes, the filling of the system has to be repeated since apparently there is still a large amount of air in the system. In no case should the pump run longer than a few minutes in a system inadequately vented since the bearing can be damaged.
5. After a successful start of the pump, please set the wished flow temperature by using the flow temperature knob.
6. Put the unit's selector switch on heating mode to activate the needed heating power.

LED's:

Function	"ON" LED (green)	"TCO" LED (green)	"HEAT" LED (yellow)
Unit is switched off	off	off	off
Unit is switched on, no heat requirement	on	on	off
Unit is switched on, heating mode	on	on	on
Excess temperature cut out	on	off	off

Switching off the unit:

To get rid of any residual energy of the heating elements, it's recommended first to switch off the heating elements (turn the units' selector switch to "PUMP") for about 2 minutes, before switching off the unit completely (turn the unit's selector switch to "OFF").

Troubleshooting:

TCO: (Thermal Cut Out)

For any TCO failures, be aware, that you must locate and rectify the fault prior to re-energising the unit.

To reset the TCO, the water temperature may not be higher, than 80°C. If so, please remove the TCO's protection cap and push the TCO knob hard by using a screwdriver or any other suitable tool until you hear a "click".

When the safety temperature limiter will become too hot (as can be the case when e.g. there's too much air left in the unit) it may not be possible to do the reset, as the high temperatures may have destroyed the TCO's element. This damage is recognizable when the TCO knob cannot be engaged any more. If this is the case, the TCO has to be replaced. This can only be done by Laing GmbH.

Pump:

In case it is necessary to open or replace the circulator pump, the unit has to be separated from the mains electrical supply first and all water drained from the unit.

The pump has to be taken off by unscrewing the two fastening Allen screws. When the pump is removed it should not be tilted too much since the rotor might fall out and could be damaged. After the pump has been removed the rotor can be drawn off upwards and can be tested for dirt e.g. scaling. Remove the dirt, but do not use emery paper to clean the pump.

If the pump does still not work, it has to be changed (type A5-400).

All air has to be vented prior to re-starting the unit.

