

QUICK-START MANUAL

JK

floorheating

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Underfloor heating system start-up

Congratulations on purchasing your **JK underfloor heating system**. You can use this guide to start-up the heating system. In this quick-start guide you will find the most important functions and settings for your **JK underfloor heating system**.

You can start commissioning your underfloor heating system after the adhesive and screed have cured, which generally takes 4 to 6 weeks (**if in doubt please contact the supplier of your floor finish**).



Operating instructions and terms and conditions can be found on www.JK-gb.com/downloads

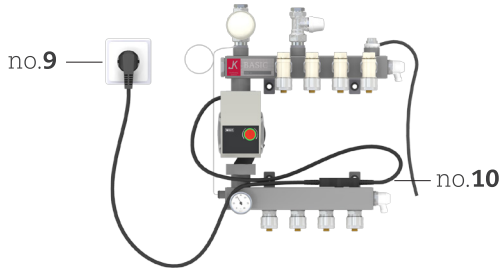
For your heating engineer:

How to connect the JK Basic/Ultra manifold to the heat source?

The manifold can be directly connected to a traditional hot water heat source such as a gas-boiler or electric-boiler. **The left-hand side** connection is the flow (3) and **the right-hand side** connection is the return (5). The JK Basic manifold (1-6 loops) features ½ [inch] connections, and the JK Ultra manifold (7-12 loops) features ¾ [inch] connections. To ensure that the heat-source is able to dissipate heat at all times, it is recommended to **install a bypass valve** in the flow/return.

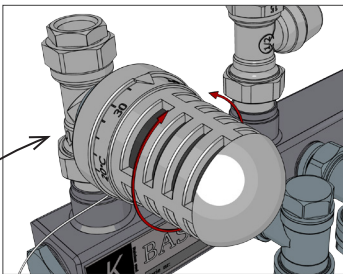
Step 1 System activation

Insert the underfloor heating pump (no. 9) plug into the power socket[230V]. The self-controlled pump can be set by means of the red button. The recommended setting is number 3 at the right side (constant pressure). The green LED around the red button indicates the correct functioning of the pump.

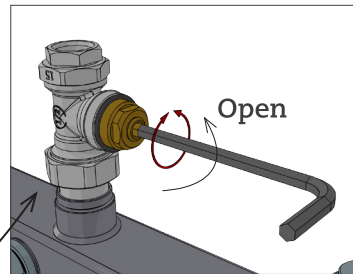


Step 2 JK Basic/Ultra manifold with energy-efficient circulation pump.

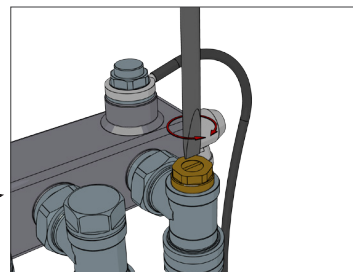
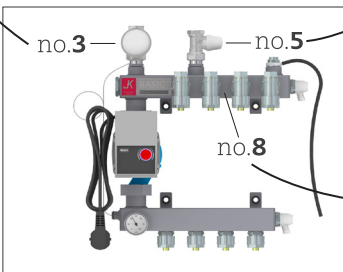
Open all return valves (5 and 8) by unscrewing the Allen screw behind the white cap (5) and the screws under the chrome cap (8) for all of the floor heating loops present. You can open these by unscrewing the cap and then (fully) unscrewing the screw under the cap until it stops. Or remove the bleu caps (in case adjustable valves are fitted) for all the loops present



1- Thermostat setting



2 - Open/Close return valve



3 - Open loop return valves



Underfloor heating system start-up

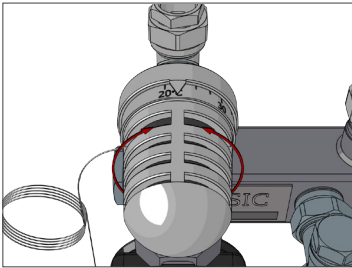
Step 3 Gradually increase temperature

Turn the thermostat (**no.3**) anti-clockwise to approx. **20°C** and increase every 2 days by approximately 5°C until 45°C is reached.

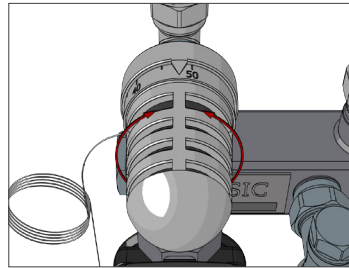
If you feel after some time that the temperature of the floor is too hot or too cold, you can set a different temperature (**maximum 50°C**).

Important: The white ring at the back of the thermostat knob is a lock, which can be unlocked by pushing backwards, and can be locked at the set temperature by pulling towards you.

Turn anti-clockwise to open.



Increase thermostat setting by 5°C



Maximum temperature 50°C

Depending on the floor finish you will feel the heat on the surface of the floor from about 30/35°C water temperature. The central heating system must be connected and the (main) room thermostat must be set to draw heat from a working central heating boiler.



Floor finish for underfloor heating

The choice of floor finish is important to ensure the performance of the underfloor heating system in your home. If you have chosen a floor covering (including underlay) that has a thermal resistance (R-value) higher than 0:10 m²K/W it will reduce the heat output from the underfloor heating system and it will not be possible to achieve the required room temperature. **This is entirely your own responsibility and therefore we recommend that you ask advice in advance from a floor covering/floor finish specialist.**



Adjusting the system

Because the underfloor heating manifold keeps the water temperature constant at the set temperature, it will occasionally require a considerable amount of hot water from the central heating boiler (for heating up the floor) and at other times it will require less hot water (when the floor is already at temperature).

Primary heating

In the event that the underfloor heating system is used as the primary heat source the entire heat demand will be provided by the underfloor heating system and you only need to adjust the setting on the underfloor heating manifold (floor temperature) and the room thermostat (room temperature). In both cases (used as primary heat source or additional heat source) the room thermostat setting will determine whether heating is required. If another external or internal heating source is present (such as an open fire or solar heating) this will heat the room to a greater or lesser extent, as a result of which the central heating boiler and therefore the underfloor heating system will (temporarily) generate no heat or a reduced amount of heat.

If the underfloor heating system has a high demand for hot water but this cannot be supplied by the central heating boiler (because many radiators are fully open for example) the floor will not come up to temperature or will not reach its full temperature. More hot water from the central heating boiler will flow to the underfloor heating system if you adjust the radiators in your home. The best way to adjust the radiators is to start opening them from the fully closed position. A half turn open often provides the desired heat output from the radiator.

You may find you do not need to adjust the other radiators if you start your adjustment with the radiator from which the supply and return pipe for the underfloor heating system manifold is branched off.

If the underfloor heating system is used as a primary heat source and other radiators in the house are closed a fault may develop on the central heating boiler because it is unable to dissipate sufficient heat (for systems without a bypass valve). In this case, radiator(s) should be opened (as required) to facilitate sufficient circulation in the central heating system. This fault can also occur if thermostatically-controlled valves are fitted to the radiators. In that case, a bypass valve must be installed.

Additional heating (in combination with radiators)

In the event that the underfloor heating system is used as an additional heat source in conjunction with radiators, the radiators need to be adjusted. Generally, the more space heated by radiators (in other words, the more radiators present and the more they are opened) the less influence the underfloor heating system will have on the temperature.

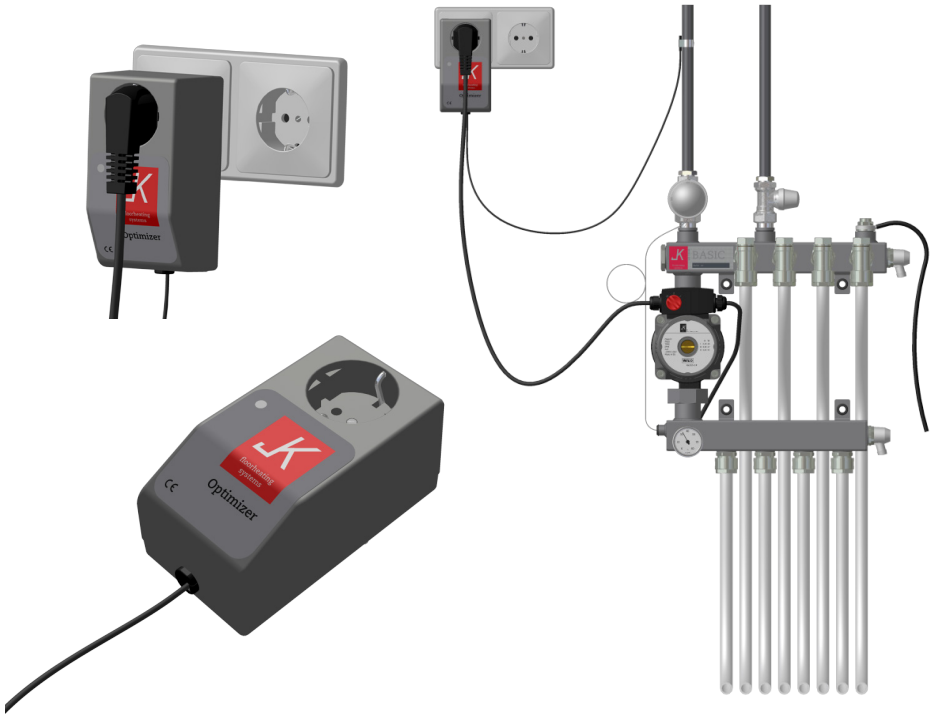
This is because an underfloor heating system reacts slower than traditional radiators. It is therefore possible that the room temperature set on the room thermostat is reached by the heat emitted from the radiators before the floor has had sufficient time to heat up. The easiest way to prevent this situation is to switch off the radiators in the room where the room thermostat is positioned and use the underfloor heating system as the primary source of heating. If the temperature set on the room thermostat is not reached, then you can open one or more radiators slightly (preferably the radiator(s) furthest away from the room thermostat).

Pump Switch



Comfort & Efficiency

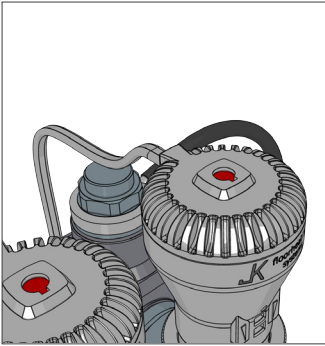
In most situations, the central heating boiler is controlled by the living room thermostat. When the set room temperature is reached the boiler stops producing hot water. If this happens in a situation without a pump switch, the underfloor heating manifold circulation pump will start to circulate relatively cold water (<math><35\text{ }^{\circ}\text{C}</math>) after a few minutes, as a result of which the floor in your living room will cool down faster than required. If a pump switch is fitted the pump will be switched off as soon as the central heating water temperature drops below $35\text{ }^{\circ}\text{C}</math> and the floor in your living room will remain at the desired temperature for longer.$



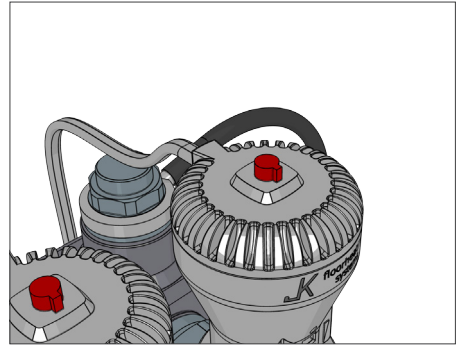
Shown JK Optimizer is an example of a pump switch and is not part of JK's Underfloor heating system

Actuators

The underfloor heating manifold can be fitted with actuators to enable it to control the temperature in each room. When a thermostat triggers a heat requirement on the thermostat system control unit (**not part of JK's underfloor heating system**) the red button on the actuator will illuminate. The gate valve activates the underfloor heating loop(s) and provides heat to the relevant room or area.



Actuator closed, no heat supply



Actuator open, heat supply



Troubleshooting Guide

Advice

- Because the underfloor heating is a slow-response system, JK recommends you set the room temperature as constant as possible and do not apply a nighttime reduction.
- Do not position the thermostat close to a heat source, in direct sunlight and/or where it is draughty.

Malfunction

Although an underfloor heating system is based on a simple principle, namely the circulation of hot water through pipes in the floor, failures can occur as a result of which the underfloor heating does not heat or does not reach the required temperature.

Air in system:

- Faults can occur due to air in the system. It is therefore very important that all **air** is removed. When the system is re-filled and vented it may also be necessary to vent the system again after a period of time

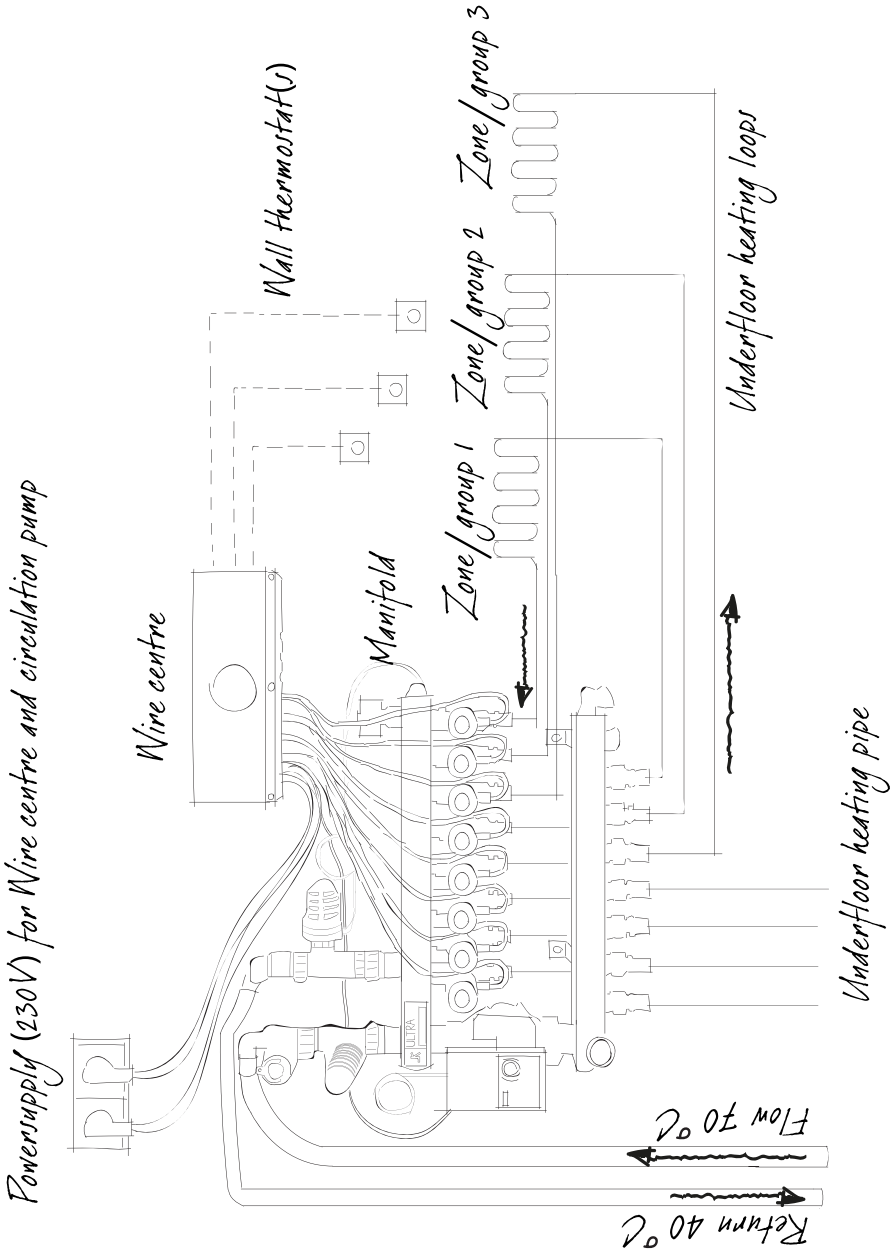
Adjusting system:

- Problems can also arise (depending on the system) with regard to **the volume of hot water** supplied to the manifold by the central heating boiler. If this volume is too small the temperature set on the supply thermostat (no. 3) will not be reached. After all, this temperature will only be reached in a situation whereby the central heating boiler is able to supply hot water. Faults as described above can be resolved by correct adjustment of the radiators (**see additional heating and adjusting the system**).
- There may also be a situation whereby the central heating boiler supplies too much hot water and at high pressure (if, for example, there is a small central heating circuit or central heating pump over-capacity). In that case, the supply thermostat (no. 3) can become disrupted, and the set supply water temperature will be exceeded. The result can be that the underfloor heating system circulation pump (no. 9) is switched off by the maximum switch (no. 10) (see step 1, page 1). This problem can be resolved by:
 - o a) turning on radiators
 - o b) reducing the capacity of the central heating boiler
 - o c) install a by-pass valve in the heating circuit so the boiler is able to dissipate heat at all times
 - o c) reducing the boiler temperature

Before proceeding with the solutions referred to under a, b, c or d always ensure that the temperature on the maximum thermostat (**no. 3**) is set at 55°C.



Wire Example



www.JK-gb.com

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Installation Date: - -

Manifold production number: