

Heat King

Supplementary Boost Heater Installation Instructions

- 10L Capacity
- 2.0kW element for rapid heat up
- Neon element-on indicator
- Glass lined vessel with magnesium anode
- Wall mounting or floor standing
- Manually re-settable thermal cut-out

| Qty | Description | Qty | Description |
|-----|---------------|-----|--------------------------|
| 1 | Boost Heater | 2 | 22mm Push fit connectors |
| 2 | Fibre washers | 1 | Wall brackets |
| 1 | Bypass Header | | |

When fitting the boost heater to an existing installation, drain down the system and isolate the mains electric to the Bwarm unit prior to starting the work.

AT NO POINT SHOULD THE BYPASS HEADER BE USED FOR CARRYING THE HEATER

Mounting

The boost heater must be mounted in the correct orientation, i.e. vertically with the flow and return connections at the top. It can be free standing on the floor or fixed to a wall using the bracket supplied. Either way, it **must** remain upright, with the pipe connections at the top

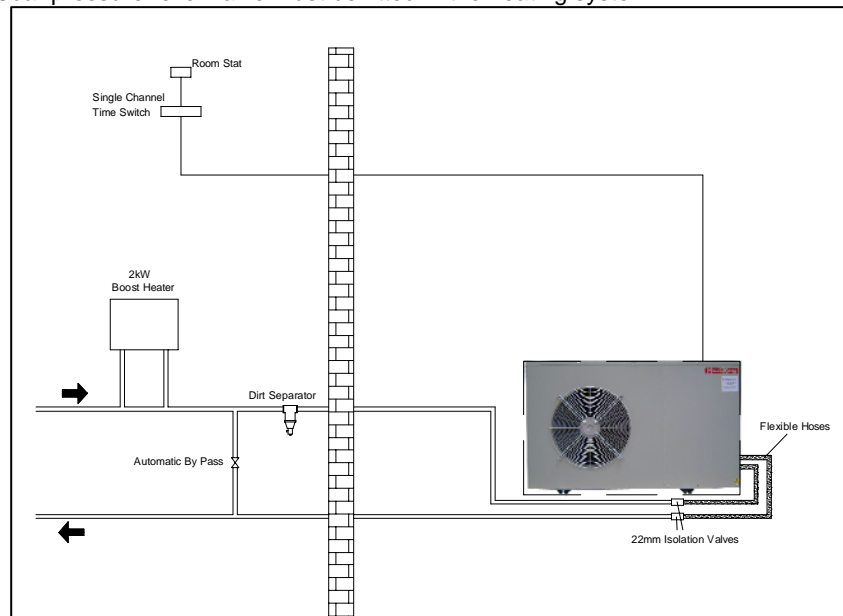
Pipework

1. The boost heater unit is to be fitted on the flow pipe from the Bwarm unit.
2. Ensure the water flow through the boost heater is in the correct direction. The connections on the boost heater are colour coded (blue = cold "from the Bwarm unit", red = hot "to the Heating circuit"). See the diagram below.
3. The boost heater must be connected using the bypass header, which is supplied loose with the boost heater.
4. **The fibre washers must be fitted to the header before connecting to the boost heater.** (see photo)
5. Wherever possible the pipe work running to and from the boost heater must be at least $\text{Ø}22\text{mm}$ to reduce the increase in resistance incurred by fitting the boiler.



Note

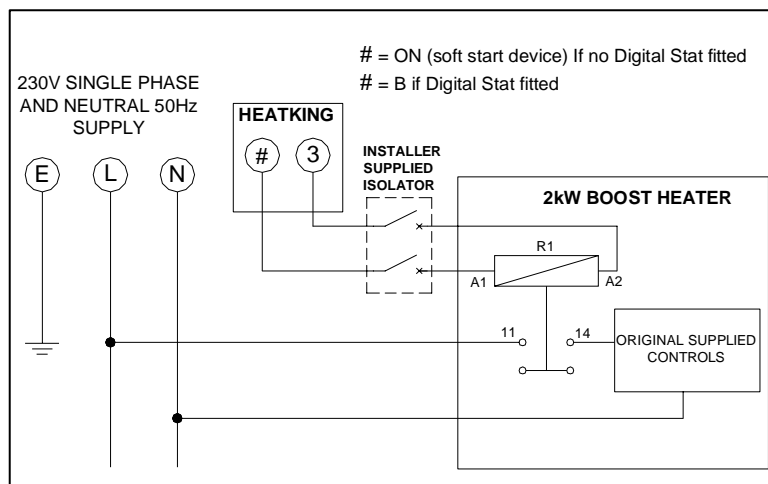
A 3bar pressure relief valve must be fitted in the heating system.



Electric connections

1. Installation should comply with current IEE and local regulations.
2. Remove HeatKing top cover by removing the screws to gain access to the electrics.
3. Connect a wire from terminal 'ON' on the soft start device (B if digital stat kit is fitted) on the Bwarm unit to the isolator. (Installer supplied)
4. Connect a wire from terminal 3 (Neutral) on the Bwarm unit to the isolator (installer supplied).
(A 2 core double insulated cable should be used for the above connections)
5. Connect the 2 core cable supplied with the boost heater to the isolator (Brown live) and (Blue Neutral).
6. Mains connection should be to a 13A spur (3 core 1mm cable).
If either of the cable lengths are insufficient, it is recommended that the entire cable is replaced and that no joints are made to the original.
7. Ensure the boiler unit is earthed.
8. Ensure the switch on the side of the boiler is turned on.

Important: Do not switch on the heater unless you are certain that it is completely full of water. Failure to do so will void the warranty.



Operation

The two reasons why the boost heater may be specified are as follows:-

1. To add thermal mass to the system to aid the Bwarm unit with defrosting. If there is only a small quantity of water in the system, the Bwarm unit may take longer to defrost just after a cold start. The addition of the boost heater will alleviate this issue.
2. To act as a boost heater to the Bwarm unit, giving an extra 2kW duty to the system when the Bwarm unit is operating below it's design condition. **The boost heater also gives higher flow temperatures to assist the heat transfer effectiveness of the radiators. (Additional benefit due to the enhancements)**

In both instances it is recommended that this heater be used in conjunction with the kit 70400423 "Heater digital stat kit" This only allows the boost heater to operate below an external ambient set point. This ensures the heater only runs when necessary, saving energy and improving the systems overall seasonal COP.

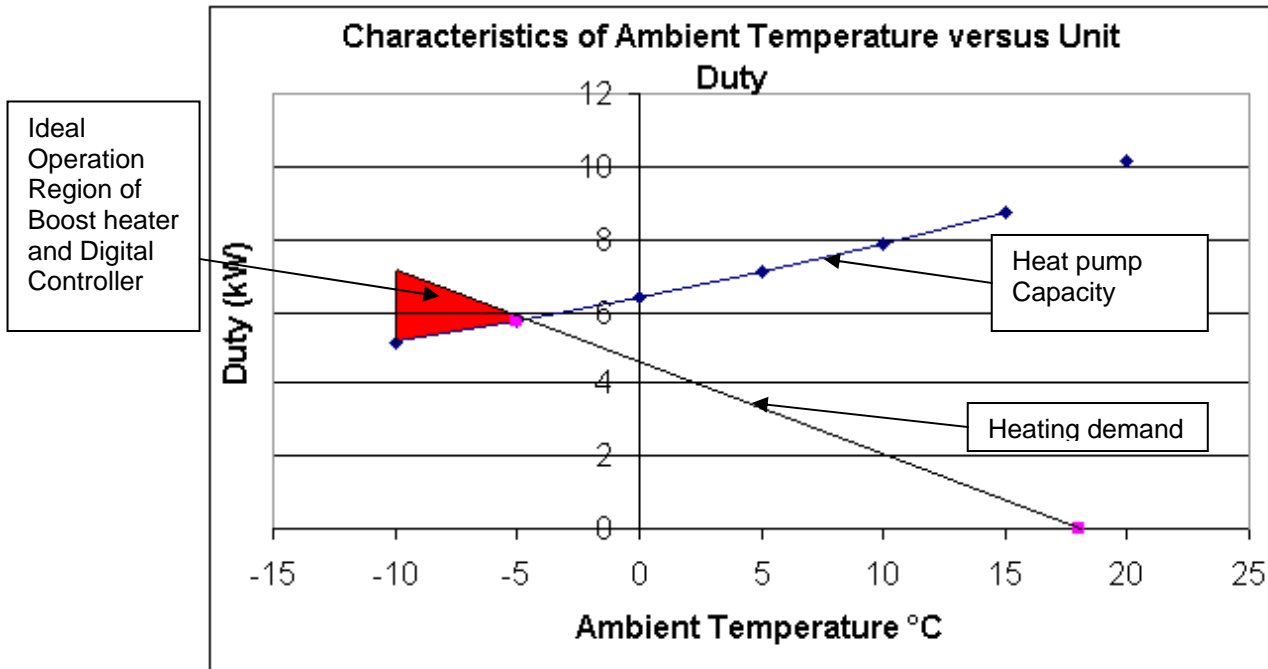
Settings for the thermostats are to be as follows:-

| Specification | Boost heater thermostat | Digital thermostat |
|---------------|-------------------------|--|
| Defrost aid | Factory set 35°C | 2°C |
| Boost Heater | Change to maximum | System design temperature. See graphical example below |



If the unit is being used as a defrost aid, it is recommended that the stat on the heater is set to 35°C. This will boost the system heating capacity on start up, ensuring that there is always sufficient thermal mass in the system for the heat pump to complete a good defrost. If a "Heater digital stat kit" is fitted, it is recommended that this be set at 2°C. It is at this temperature, which the most severe defrost conditions can occur.

If the unit is being supplied as a boost heater, it is recommended that the stat on the heater be turned up to maximum. If a "Heater digital stat kit" is fitted, it is recommended that this be set at the temperature the heat pump system was designed at. See the graphical example below for details.



Switch on the mains supply. The external neon lamp indicates when the heater element is on.

A manual re-settable safety cutout switches off the heater if the element overheats. To access the cutout, remove the electrical access panel. The cutout is identified by a small red button and is located inside the centre of a white disc. To re-set the cutout, press the red button.

Maintenance

The heater element should be checked annually for signs of corrosion and replaced when necessary.