Operating Thermostat :
The operating thermostat supplied is a 20 amp device and can only be used for single phase applications on models up to 4kw . When used on models with a rating over 4kw, a contactor must always be used.

The temperature range of the thermostat supplied is 5 - 80 Deg C. For applications requiring higher rated thermostats, please contact Heatrod Elements Ltd for advice.

Thermostats have extremely low ratings when used on DC applications and a contactor must always been used.

Maintenance:
If the heater will NOT HEAT, first check the thermostat for incorrect setting or failure in the "open position". Thereafter check the contactor (If used), contactor coil fuse and mains supply fuses, wiring to the heater and elements for continuity and insulation resistance. Elements are NOT replaceable and are brazed into the brass mounting head. If found to be faulty (open circuit) then the complete heater must be replaced.

If the heater is OVER HEATING, check thermostat for incorrect setting or failure in the "closed position". Thereafter check the contactor (fused) is operating correctly. During normal operation the surface of the elements will, due to certain water conditions, be subject to a build-up of scale. It is advisable that at regular intervals, determined by experience, that the heater is removed from the vessel and carefully cleaned to remove the scale build up, in extreme cases heavy scaling can cause increased element running temperatures and lead to an early element failure.

Manufactured in the UK.

PLEASE RETAIN THIS LEAFLET FOR FUTURE REFERENCE

IT IS THE INSTALLERS RESPONSIBILITY TO CHECK ALL CONNECTIONS, INCLUDING FACTORY MADE CONNECTIONS.

Warranty Information

All products carry a standard 12 month parts only warranty. Products that are deemed faulty can be returned for replacement or credit at any time within this warranty period. **PLEASE SEE OUR WEBSITE FOR FURTHER DETAILS.**

For Technical Help or Assistance - Refer to FAQ's website

www.heatrod.com **or** www.heatrodshop.com

Tel: 0161 727 3713 Fax: 0161 727 3733 Email: technicalsupport@heatrod.com

Environmental Information

Please note this product can be recycled at the end of its life cycle.
If required this product can be returned to Heatrod Elements Limited for disposal.

hot water association CHARTER MEMBER

CE

Heatrod Elements Ltd. Unit 10 Top Deck, Smethurst lane, Farnworth, Bolton BL4 0AN

Heatrod Elements
NIBE Part of the Nibe Element Group

ThermTec

hot water association CHARTER MEMBER
For further information on the HWA Charter Membership, please refer to the HWA website hotwater.org.uk

Fitting Instructions for Immersion Heater Types :
Heaters Having Part No. Prefix HRxxxx, HRIxxxx, xx1T, xx2T, xx3T, xx1Z, xx2Z, xx3Z

Check that the heater rating label shows the voltage that conforms to your mains supply.

This appliance must be installed by a qualified person in compliance with the current or local Building, Plumbing and Wiring Regulations appropriate to this style of heating product.

In order to assist with installation and to avoid damage to the terminal cover we recommend that the cover assembly is removed.

Using a T20 Torx driver or suitable blade screwdriver, remove the red terminal cover. Once removed, the thermostat and it's support bracket can be removed by undoing the fixing screw and withdrawing the thermostat from it's pocket, this will assist with the removal of the lower cover, which can be removed by loosing the two screws at the base of the cover and rotating it until the cover become free from the brass head. Care must be taken not to damage the joint washer between the cover and brass head during this operation.

The immersion heater can now be fitted to the tank flange using a suitable spanner or wrench after first ensuring the rubber 'O' ring seal is correctly positioned in it's groove on the underside of the octagon brass flange. After fixing the heater to the container/tank, fill the system with water and check for joint leaks.

Note: The heater has been factory pressure tested for a Maximum working pressure of 2.5 Bar (36 PSI).

The heater can now be connected to the electrical mains supply.

Important Note: These heaters are designed to Operate only when totally immersed in water and must not be switched on when the heating elements are exposed to air. Do not switch on to test the heater after electrical connections are made unless the unit is completely immersed in water, as permanent damage may be caused.

IMPORTANT: THESE APPLIANCES MUST BE EARTHED AND INSTALLED BY A QUALIFIED PERSON.

After replacing the lower cover and rotating it and fixing in the most suitable position to suit the mains electrical cable, feed the cable into the electrical enclosure by means of the glands provided and make the electrical connections to suit your particular requirements. The heater can either be connected single or three phase dependent on the model. Some models also have the option to be converted from three phase to single phase by means of the connection bar supplied with these models.

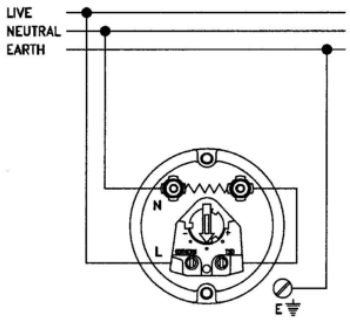
The following schematic wiring diagrams given an indication of the common connection types and the 'HR' models linked to these.

Heatrod Elements Ltd. Unit 10 Top Deck, Smethurst lane, Farnworth, Bolton BL4 0AN

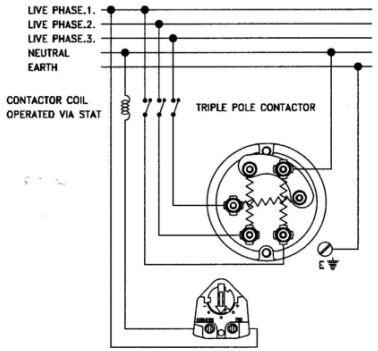
Document Ref. MS-019 Issue 4

Important Note: Ensure ALL electrical connection cables are of the correct size to suit the total loading of the heater being installed and that all connections are tight.

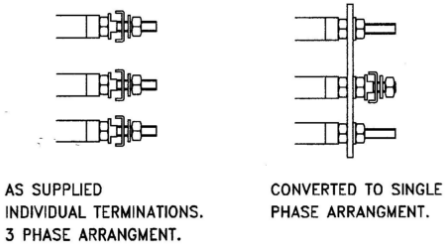
Single Element /Single Phase connection. Models: HR311S, HR411S, HR316S, HR416S, and models under 4kW of the following range (xx1T, xx2T, xx3T, xx1Z. xx2Z, xx3Z)



Three Element /Three Phase connection. Models: HR311, HR616, HR624, HR636, HR916, HR924 HR936, HR936L, HR1236L, xx3T, xx3Z



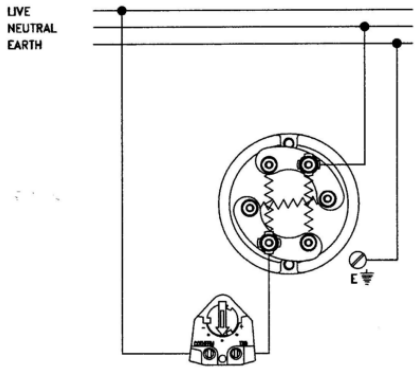
The following models can be converted to a single phase connection arrangement using the supplier busbar. The diagram below explains the conversion required. Models: HR311, HR616, HR624, HR636, HR916, HR924, HR936, HR936L.



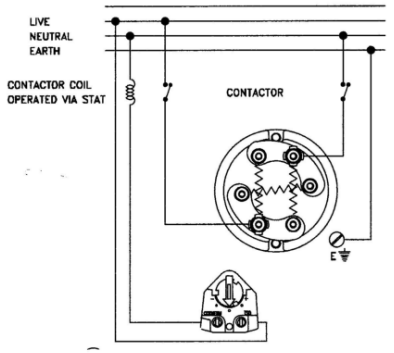
Basic conversion operation as follows:

1. Remove copper clamps, nuts and washers from all three terminals down to the bottom nut above the insulating ceramic. (Keep these items safe for re-use.)
2. 2. Fit supplied busbar onto the element connection pins.
3. On all three element connections and on top of the busbar, fit one shakeproof washer followed by one brass nut. Tighten all three nuts to ensure a good electrical connection. Take care NOT to over tighten. (Hold lower nut if possible to assist with this to prevent rotation of the lower nut).
4. On the central element connection (Phase connection point) re-fit two copper clamps followed by one shakeproof washer and one nut. The assembly is now complete and ready for wiring.

Three Element /Single Phase connection. Model : HR311 Only.



Three Element /Single Phase connection.
Models: HR616, HR624, HR636, HR916, HR924, HR936, HR936L, xx3T, xx3Z



After the main wiring has been completed the thermostat assembly can be replaced into it's pocket and the support bracket fixed using the screw provided. Final wiring of the thermostat circuit can now be completed. Adjust the thermostat to the desired setting and replace the red terminal cover. Switch on the power circuit and check operation.