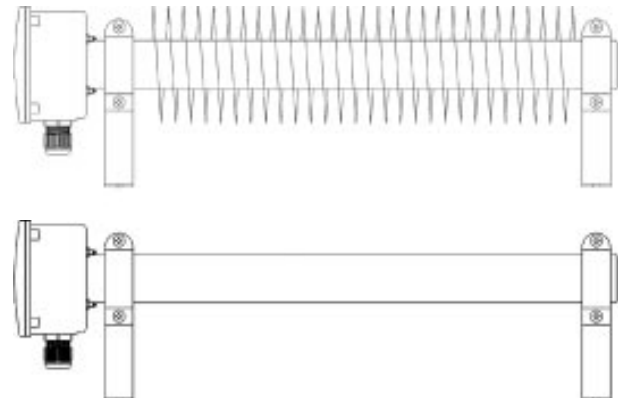


Installation and operating instructions

Page 1

RRH 500 to 6000
RRH TR 500 to 3000
RRH ST 1000 to 3000
RRH NO 400 to 1200
RH 150 to 1200



General note on safety

Please read these installation and operating instructions carefully and keep them in a safe place. The instructions contain important information for the safety and use of the heater. Kraemer & Kraus heaters are constructed in accordance with standard engineering practice and comply with the applicable safety regulations for electrical equipment. Installation, connection and repairs should only be conducted by trained personnel.

Application

Kraemer & Kraus heaters are space heaters for use exclusively in commercial and industrial spaces and areas. The heaters are designed for fixed on-site installation. They are not suitable for use in the domestic sector.

Installation

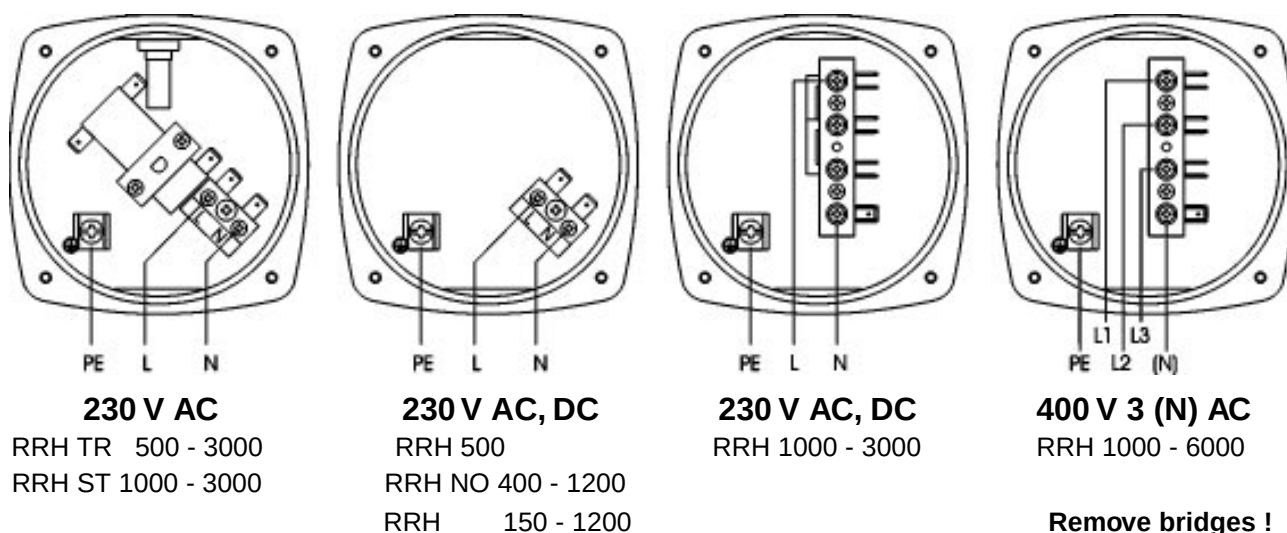
- To install, use only the enclosed fastening supports. Mount these supports as far as possible on the outer end of the piping.
- In rooms and areas which are closed to the public and where there is no fire load, the unit can be installed at a height within easy reach. The following minimum spacings must hereby be observed: 6 cm to walls and floors, 40 cm to the ceilings, window boards and other projecting structures, 50 cm to adjoining parts.
- In rooms and areas that are open to the public, the unit must be installed at a height outside easy reach. The following minimum spacings must hereby be observed: 180 cm to floors, 40 cm to the ceilings, window boards and other projecting structures, 50 cm to easily combustible materials and other adjoining parts.
- Do not install the heaters directly below the ceiling, since this can lead to heat build-up.
- Do not install the heaters directly below wall mounted socket outlets.
- Do not install the heater below loose hanging or combustible parts that could fall down and cover the unit. Cover can lead to fire hazard.
- Install the heaters only horizontally.
- Do not install or use the heaters in bath- or shower rooms.

Electrical connection

- Detach cover fastening screws and remove cover. In the case of heaters with thermostat, remove the cover complete with knob.
- Screw in safety union piece, insert connector, and tighten pressure screw.
 For pipe diameters 7 to 12 mm, do not change the multi-purpose joint gasket.
 For pipe diameters 11 to 17 mm, remove the inner punched ring of the multi-purpose joint gasket.
 Attention: To ensure high tightness IP 66/ IP 67, expansion protection, and proper strain relief only use the enclosed M 25x1,5 union piece.
- Connect according to the circuit diagram shown below. Do not forget to connect the protective conductor. Ensure that all terminal screws are well secured.
- In connecting the heater, an at least 3 mm contact gap - e.g. automatic circuit-breaker - must be allowed during installation.

Installation and operating instructions

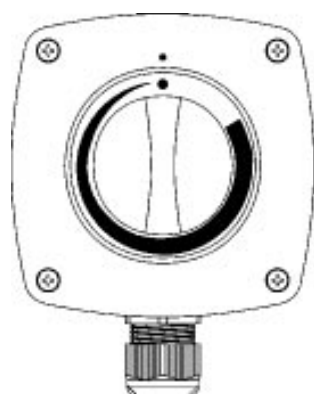
Page 2



Start-up

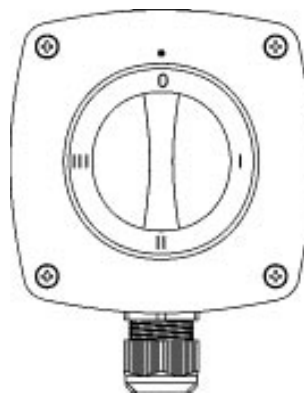
As soon as the mains voltage is switched on the heaters RRH, RRH NO und RH are in operation. Heaters RRH TR with built-in thermostat, heat according to the pre-set temperature. This temperature can be steplessly adjusted using the thermostat knob. The operating status of the heater is indicated by the signal light.

RRH TR with built-in thermostat



- = frostfree
- ◐ = +5° C to + 30° C

RRH ST with inbuilt switch



- Level 1 : 1/3 Power
- Level 2 : 2/3 Power
- Level 3 : full Power

Surface temperatures

The effective temperature rise on the ribbed top edge of the ribbed tube heaters during operation:
RRH, RRH TR approx. 200 K
RRH NO approx. 67 K

The effective temperature rise on the ribbed top edge of the tube heater during operation:
RH approx. 255 K

The surface temperature is made up of the effective temperature rise + room temperature.

Care must be taken to ensure that the heaters are not covered. If covered there is a fire hazard.