

IMMERSION HEATERS

RX RANGE



RX RANGE APPLICATION

The RX range of immersion heater is designed as a cost-effective means of heating water in light duty building service applications or large domestic properties. The heaters can be fitted to calorifiers, flow vessels, hot water cylinders, water heaters, water tanks, buffer vessels, etc.

The range is easily adapted to suit OEM equipment such as washing machines, wash sinks, sterilising sinks, etc, provided there is adequate protection for the terminal enclosure. For more arduous operating environments we recommend our WR range.

The metal sheathed rod elements are fixed to the threaded connection boss. If an element were to fail, the entire heater requires to be replaced. For heaters with replaceable elements please refer to our GE and RE ranges.

All models are fitted with a fully rotatable, moulded plastic enclosure rated to IP55. Thread sizes are available in 2" and 2 1/4" BSP.

STANDARD RANGE

The range is ideal as the main heat source in soft or normal water areas or for use as a backup or boost for heat pumps and conventional boilers.

kW loadings are available in single phase up to 6kW and three phase configurations up to 12kW. Boss sizes are available in 2" and 2 1/4" BSP. All 2 1/4" BSP and a selection of 2" BSP models are kept in stock.

The range is fitted with Nicalloy 800 elements which is suitable for use as the main heat source in soft or normal water conditions, but due to the high watts densities, are not suitable as the main heat source in hard water areas, other than as a back-up heater. Nicalloy 800 is equivalent to Aqualoy and Superloy.

To provide the main heat source in hard waters areas, please refer to our WR range, constructed from Nicalloy 825 elements with a maximum watts density of 9W/cm².

SPECIALIST APPLICATIONS

The RX range is very flexible and our Technical Department can provide specifications suitable for a wide range of applications or incorporation into OEM equipment such as commercial and industrial washing machines, wash sinks, sterilising sinks, etc. To obtain a quotation or further information, please contact our Technical Department.

MOUNTING

Heaters are suitable for horizontal screwed mounting, however vertical mounting heaters can be supplied. Please contact our Technical Department.

To avoid localised boiling or air locks, care should be taken to ensure the cold zone extends beyond any neck piece. Longer cold zones are available. Please contact our Technical Department

2" and 2 1/4" BSP thread sizes are available. For details on which size of thread is appropriate please refer to our Technical Data Section.

The heater is supplied with a WRAS approved fibre gasket. Alternative gasket materials are available.

TEMPERATURE CONTROL

Our general recommendation for heaters above 6kW is that temperature control devices should be mounted away from the heater to avoid interference. Further guidance is given in the Technical Section of our website.

Standard models are supplied with a factory fitted control thermostat with a range of 20°C to 70°C rated to 20 Amps incorporating a preset over-temperature cut-out set at 85°C. Alternative thermostat ranges are available. Please contact our Technical Department.

Single phase 6kW models are supplied with two factory fitted control thermostats which incorporate a preset over-temperature cut-out rated to 16 Amps.

Where the current consumed exceeds the thermostat rating, the heater must be wired through a contactor switch. A contactor switch must be fitted on all three phase supplies.

Control panels can be supplied incorporating all necessary controls. Please refer to our TC range.

OPERATING TEMPERATURE & PRESSURE

The RX range has a maximum design temperature of 90°C and maximum operating temperature of 70°C due to the thermostats fitted. 6kW, single phase models have a maximum operating temperature of 60°C. The maximum operating pressure of all models is 6 Bar.

VOLTAGE

Single phase heaters from our standard range are designed to operate at 230/240V and three phase heaters at 400/415V.

Non-standard models can be supplied designed to suit operating voltages from 110V to 480V AC or DC. Please contact our Technical Department.

CONSTRUCTION

Immersion heaters are manufactured generally to BS7798.

Elements are brazed into a brass threaded boss. Individual elements cannot be replaced. For elements that can be replaced please refer to our GE and RE ranges.

The terminal enclosure is fully rotatable, moulded plastic and rated to IP55 with one M25 conduit entry.

COMMON VARIATIONS

Please contact our Technical Department for further details.

- Various operating voltages in single or three phase star or delta.
- Alternative element sheath materials, e.g. Nicalloy 825.
- Lower watts density elements for prolonged element life.
- Longer cold zones.
- Alternative thermostat ranges including twin thermostat models with separate control and over-temperature cut-out thermostats.
- Vertical mounting heaters.
- Low water level indication thermostat.
- EPDM 'O' ring gaskets.
- Copper gaskets for improved sealing.

STANDARD LIST NUMBERS

LIST No 2 1/4" BSP	LIST No 2" BSP	kW LOAD @ 240/415V	No. OF PHASES	IMMERSED LENGTH mm(in)	WATTS DENSITY (W/cm ²)
RX101	RX201	1	1	280 (11")	8.7
RX102	RX202	2	1	280 (11")	9.2
RX103	RX203	3	1 or 3	280 (11")	8.7
RX104	-----	3	1 or 3	457 (18")	6.5
RX105	-----	3	1	685 (27")	9.6
RX106	RX206	4.5	1 or 3	380 (15")	9.0
RX107	RX207	6	1 or 3	380 (15")	12.0
RX108	RX208	6	1 or 3	482 (19")	9.2
RX109	-----	6	1 or 3	685 (27")	6.3
RX110	-----	7.5	3	610 (24")	8.9
RX111	RX211	9	3	406 (16")	16.8
RX112	RX212	9	3	533 (21")	12.4
RX113	RX213	9	3	685 (27")	9.6
RX114	-----	9	3	915 (36")	6.9
RX115	RX215	12	3	610 (24")	14.9
RX116	RX216	12	3	915 (36")	9.2

Three phase heaters, or heaters above 3kW, require to be wired through a contactor switch. The following heaters have two individual circuits and do not require to be wired through a contactor switch.

LIST No 2 1/4" BSP	LIST No 2" BSP	kW LOAD @ 240/415V	No. OF PHASES	IMMERSED LENGTH mm(in)	WATTS DENSITY (W/cm ²)
RX117	RX217	6	1	533 (21")	12.4
RX118	RX218	6	1	685 (27")	9.4
RX119	RX219	6	1	380 (15")	9.4

RX General Arrangement

