



B | **BACKER**
HEATROD

**BRINGING WARMTH
TO YOUR WORLD**



ORMANDY

Electric

ELECTRIC HEATING & CONTROLS

MEMBER OF BACKER GROUP



Immersion heating is still the most efficient way to heat liquids quickly and safely. Often the key is selecting the most suitable heater for the application. Our large product portfolio gives us a vast range of solutions to call on.

Light Industrial and Commercial Range of Stock Immersion Heaters

R Series



R Series Immersion Heaters

The R Series range of stock immersion heaters is designed for commercial and light industrial water heating applications. The IP 55 terminal box can be rotated through 180 degrees to facilitate easy installation in all types of locations. Supplied as standard with control and high limit thermostats. The heaters are also available with low temperature thermostats, making them suitable for frost protection applications.

Key Features:



- IP55 Rotatable Terminal Cover
- 2" and 2 1/4" BSP Threaded Glands
- Incoloy® 825 Alloy Sheathed Elements
- Wide Range of Thermostats available
- Available from stock
- Control and High Limit Thermostats in all 2 1/4" BSP Heaters to comply with BS EN 60335-2-73
- Unique design offers both Single and Three Phase Installation

2" BSP	2 1/4" BSP	k kW	Voltage	Immersed Length
5R111	6R111	1	240/415	11"
5R216	6R216	2	240/415	16"
5R311	6R311	3	240/415	11"
	6R330	3	240/415	30"
	6R411	4	240/415	11"
	6R416	4	240/415	16"
5R616	6R616	6	240/415	16"
	6R630	6	240/415	30"
	6R636	6	240/415	36"
	6R724	7.5	240/415	24"
5R924	6R916	9	240/415	16"
	6R924	9	240/415	24"
	6R936	9	240/415	36"
5R1234	6R1224	12	415	24"
	6R1236	12	415	36"
	6R1826	18	415	26"
	6R1836	18	415	36"

C Series



C Series Immersion Heaters

The C Series range of stock immersion heaters is designed for arduous water heating conditions where a lower watts density is required. The standard range is constructed using Nickel plated copper sheath.

Key Features:



- IP55 Rotatable Terminal Cover
- 2" and 2 1/4" BSP Threaded Glands
- Nickel Plated Copper Sheath
- Low Watts Density (3.9w/cm²)
- Available from stock
- 40-80°C Control Thermostat
- Available in both Single and Three Phase
- Elements can be replaced without draining vessel
- Wide Range of Thermostats available
- Optional Voltages on request

2" BSP	2 1/4" BSP	kW	Voltage	Length
5C219	6C219	2	240	19"
5C327	6C327	3	240	27"
5C438	6C438	4.5	240/415	38"
5C650	6C650	6	240/415	60"



1RB

1RB Flange Mounted Immersion Heaters

The 1RB range of stock immersion heaters is designed for commercial and light industrial water heating applications. Fitted with a lockable IP 66 terminal box with removable gland plate. Supplied as standard with control and high limit thermostats.

- Key Features:**
- IP66 Lockable Terminal Cover
 - "DQ" Type Brass Mounting Flange
 - Incoloy® 825 Alloy Sheathed Elements
 - Available from stock
 - Control and High Limit Thermostats
 - Multi Stage options
 - Wide Range of Thermostats available

List No	Loading kW	Voltage	Immersed Length
1RB1216	12	415	16"
1RB1816	18	415	16"
1RB2416	24	415	16"
1RB2716	27	415	16"
1RB3027	30	415	27"
1RB3627	36	415	27"
1RB4527	45	415	27"
1RB5436	54	415	36"



HRF

HRF Flange Mounted Immersion Heaters

The HRF range of stock immersion heaters is designed for commercial and light industrial applications. Mounted on a 150mm BS EN 1092-1 PN6 Stainless Steel flange and fitted with an IP55 terminal box with removable gland plate. Supplied as standard with control and high limit thermostats.

- Key Features:**
- IP55 Terminal Cover
 - BS EN 1092-1 PN6 Stainless Steel Flange
 - Incoloy® 825 Alloy Sheathed Elements
 - Available from stock
 - Control and High Limit Thermostats
 - Multi Stage options
 - Wide Range of Thermostats available

List No	Loading kW	Voltage	Immersed Length
HRF1224	12	415	24"
HRF1824	18	415	24"
HRF2424	24	415	24"
HRF3024	30	415	24"
HRF3624	36	415	24"
HRF3636	36	415	36"
HRF4824	48	415	24"
HRF4836	48	415	36"
HRF5436	54	415	36"

X Series Immersion Heaters

The X Series range of stock immersion heaters is designed specifically for oil applications. Manufactured with extended surface carbon steel sheath.

- Key Features:**
- IP55 Rotatable Terminal Cover
 - 2" and 2 1/4" BSP Threaded Glands
 - Extended Surface Carbon Steel Sheath
 - Low Watts Density (1.5w/cm²)
 - Available from stock
 - Control and High Limit Thermostats
 - 3-55°C Control Thermostat
 - Available in both Single and Three Phase
 - Elements can be replaced without draining vessel
 - Wide Range of Thermostats available
 - Optional Voltages on request



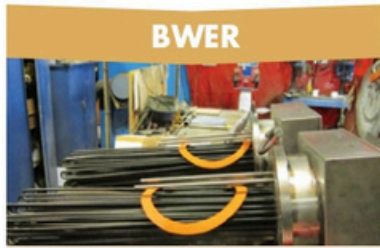
X Series

2" BSP	2 1/4" BSP	kW	Voltage	Length
5X115	6X115	1	240	15"
5X226	6X226	2	240	26"
5X336	6X336	3	240/415	36"
5X447	6X447	4	240/415	47"
5X557	6X557	5	240/415	57"



Heatrod Elements can draw on the rich history of design and manufacture to fulfil the need for much larger immersion heater batteries, for both liquid and gas heating applications.

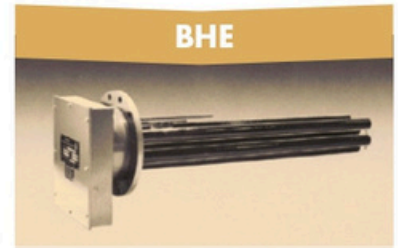
Industrial Immersion Heater Batteries



BWER



BWE



BHE

BWER Immersion Heater Batteries

The BWER range of immersion heater batteries is designed for industrial water heating applications. Usually manufactured to bespoke customer requirements. The elements are fixed using compression fittings into heavy duty flanges. A wide range of flange and terminal boxes are available.

- Key Features:**
- IP56 Terminal Cover in a Range of Materials
 - Incoloy® 825 Alloy Sheathed Elements
 - Brass, Carbon or Stainless Steel Flanges
 - Standard Range up to 180kw
 - Control and High Limit Thermostats
 - Operating Pressures up to 10 bar (standard)
 - Wide Range of Thermostats available
 - Variety of Voltage options

BWE Immersion Heater Batteries

The BWE range of immersion heater batteries is designed for industrial heating applications for water and other liquids. Usually manufactured to bespoke customer requirements. The design utilises copper, or stainless steel sheaths with removable ceramic elements, enabling element maintenance to be carried out without the need for system draining.

- Key Features:**
- IP56 Terminal Cover in a Range of Materials
 - Copper or Stainless Steel Sheaths
 - Brass, Carbon or Stainless Steel Flanges
 - Standard Range up to 180kw
 - Variety of Voltage options
 - Control and High Limit Thermostats
 - Elements can be replaced without draining vessel
 - Operating Pressures up to 10 bar (standard)
 - Wide Range of Thermostats available

BHE Immersion Heater Batteries

The BHE range of immersion heater batteries is designed for industrial heating applications for oil. Usually manufactured to bespoke customer requirements. The design utilises plain surface carbon, or stainless steel sheaths, together with extended surface carbon steel, all with removable ceramic elements, enabling element maintenance to be carried out without the need for system draining.

- Key Features:**
- IP56 Terminal Cover in a Range of Materials
 - Plain Surface Carbon or Stainless Steel Sheaths
 - Low Watts Density Extended Surface Carbon Steel Sheath for Light Oils
 - Wide Range of Thermostats available
 - Control and High Limit Thermostats
 - Elements can be replaced without draining vessel
 - Operating Pressures up to 10 bar (standard)
 - Standard Range up to 180kw
 - Variety of Voltage options



The majority of industrial immersion heaters can be installed in a heater vessel, either horizontal, or vertical, to make an in line electric heater. The applications for in-line electric heaters are varied, from a simple primary heating solution, to lubrication oil heating, thermal fluids and even process air heating. Heatrod Elements has a range of standard, made to order solutions.

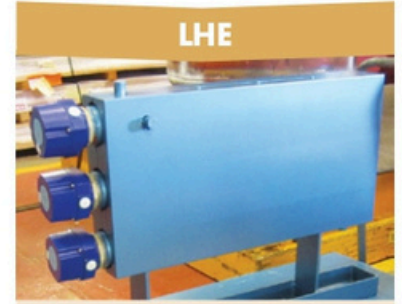
Industrial In-Line Heaters



LRW/LWER



LWE



LHE

LRW/LWER In-Line Heaters

The LRW and LWER range of in-line heaters are designed for industrial water heating applications. Usually manufactured to bespoke customer requirements. The elements are fixed using compression fittings into heavy duty flanges. A wide range of flange and shell materials are available.

Key Features:



- IP56 Terminal Cover in a Range of Materials
- Incoloy® 825 Alloy Sheathed Elements
- Brass, Carbon or Stainless Steel Flanges
- Vessels in Copper, Carbon or Stainless Steels
- Standard Range up to 180kw
- Control and High Limit Thermostats
- Operating Pressures up to 10 bar (standard)
- Wide Range of Thermostats available
- Variety of Voltage options
- Vertical options available

LWE In-Line Heaters

The LWE range of in-line heaters is designed for industrial heating applications for water and other liquids. Usually manufactured to bespoke customer requirements. The design utilises copper, carbon, or stainless steel sheaths and vessels.

Key Features:



- IP56 Terminal Cover in a Range of Materials
- Copper, Carbon or Stainless Steel Sheaths
- Brass, Carbon or Stainless Steel Flanges
- Standard Range up to 180kw
- Variety of Voltage options
- Control and High Limit Thermostats
- Elements can be replaced without draining vessel
- Operating Pressures up to 10 bar (standard)
- Wide Range of Thermostats available
- Vertical options available

LHE In-Line Heaters

The LHE range of in-line heaters is designed for industrial heating applications for oil. Usually manufactured to bespoke customer requirements. The design utilises plain, or extended surface carbon, steel sheaths, all with removable ceramic elements, enabling element maintenance without the need for system draining.

Key Features:



- IP56 Terminal Cover in a Range of Materials
- Plain or Extended Surface Carbon Steel Sheaths
- Low Watts Density Extended Surface Carbon Steel Sheath for Light Oils
- Wide Range of Thermostats available
- Custom Designs
- Control and High Limit Thermostats
- Elements can be replaced without draining vessel
- Operating Pressures up to 10 bar (standard)
- Standard Range up to 180kw
- Variety of Voltage options



ATEX Certified Hazardous Area Heaters

When environmental conditions become unsafe to use ordinary immersion heaters, Heatrod Elements can offer a wide range of explosion proof heating solutions.

Having manufactured our first hazardous area heater way back in 1953, under the Heatrae Industrial brand, Heatrod can provide a hazardous area version for the majority of our products, together with bespoke hazardous area air and gas heaters. The Ormandy Electric range is currently certified for zones IIB, but Heatrod can also provide IIC certified products from other group manufacturers.



The term 'explosive atmosphere' is defined as a mix of inflammable substances in the form of gases, vapour, mist or dust – which may lead to fire spreading to the un-burnt mix following ignition. Atmospheric conditions are normally defined as -20°C to +40°C, pressure 0.8 - 1.1 bar. We produce equipment for ATEX areas, with different temperature and pressure on the media and for all temperature classes.

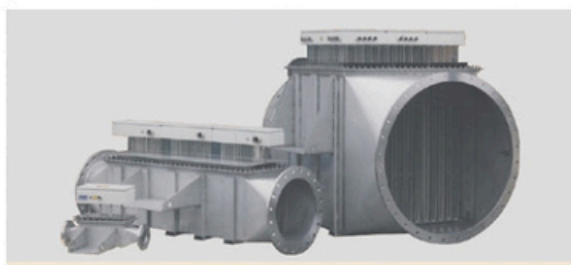
Key Features:



- IP67 Exd Atex certified terminal cover
- Incoloy® 825 Alloy Sheathed Elements
- Brass, Carbon or Stainless Steel Flanges
- Removable core options, with plain, or options for stainless steel and copper
- Standard Range up to 180kw
- Control and High Limit Thermostats
- Operating Pressures up to 10 bar (standard)
- Wide Range of Thermostats available
- Variety of Voltage options

Air Heaters

The Ormandy Electric range of air heaters includes historical designs, together with bespoke products manufactured for the MOD. These include free standing none luminous radiators for land based space heating and air duct heaters for Naval applications. Heatrod can also offer a range of air heating products, including in-line units, duct heaters and process solutions.



Process Heater for Air and Steam

Manufactured from a special type of stainless steel withstanding temperatures exceeding more than 500°C. The heater is divided into sections. Controlled by PLC regulator monitoring temperatures, flow volume and composition of hot elements.





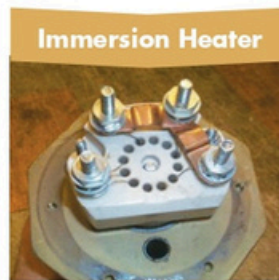
Ormandy Electric and before it Heatrae Industrial, are names that have long been synonymous with equipment supplied to the Ministry of Defence. Many of the vessels in service with many of the world's navies are fitted with our original equipment.



Heatrod Elements continue to offer a complete range of spare parts for equipment still in use today. We can also supply replacement water heaters, lube oil and air heaters for ship's systems.



Admiralty pattern water heater during manufacture.



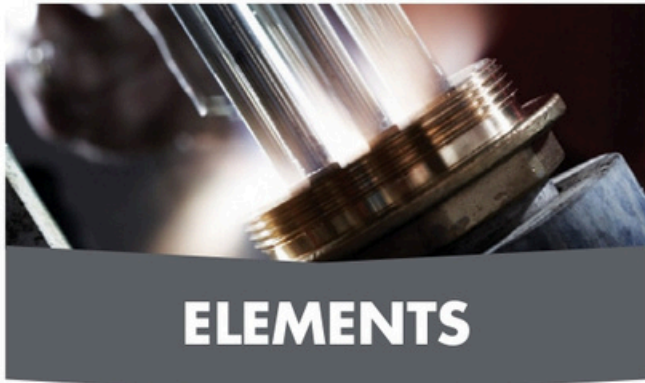
Admiralty pattern heaters.



In-line lubrication oil heater awaiting delivery.

Heatrod Elements are based in Manchester and have been manufacturing electric heating elements and associated equipment for over 50 years.

This level of experience has allowed the business to develop into industrial products and projects whilst still retaining a base manufacturing capability for heating elements. To guide you in our level of expertise we have produced brochures which introduce you to the three main aspects of our industrial business: **Elements, Industrial** and **Projects**.



In our Elements brochure you will find reference to all the different types of electric heating elements we produce both in our Manchester factory and in our group companies around the world.

This ranges from the traditional tubular heating elements which remains the most common and versatile form of electric heating available through to more specialist technologies such as flexible film elements.



Industrial heating processes often demand a level of practical engineering in their design and application in the field.

Our team of application engineers are trained to be able to consult with our customers in solving their process heating challenges and to be able to provide technically and commercially competitive solutions to our customers. Add to this our centre of competence in Sweden and our ability to manufacture and install locally and you have access to a full project delivery team ready to support you.



Industrial/
Projects



Energy/
Environment



Advanced
technology



Commercial
equipment



Home
appliance



Transportation



HVAC



Ormandy Electric (formerly Heatrae Industrial) is now part of Heatrod Elements. From our Manchester base we continue to offer sales and support the full range of Ormandy Electric products, together with product development associated with Heatrod. If you need more information or have any questions please call us on **0161 727 3713**.



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Heatrod is a company within the Backer Group, part of NIBE Group's Business Area NIBE ELEMENT