Standard Products
EXHEAT Industrial Division offers fast track solutions to industry’s wide and varied requirements for electrical heating systems. All heaters manufactured by EXHEAT for use in Hazardous Areas are supplied fully certified to meet the latest requirements of the IECEx Scheme, CSA, GOST, CCOE, or the European ATEX Directive as appropriate.

When the standard range of products does not exactly meet our customer’s requirements, EXHEAT sales engineers and designers will design a custom built Hazardous or Safe Area electric heater. Close consultation with the customer and years of experience will ensure that our clients procure a heater that is optimal for their applications.

All EXHEAT heaters are manufactured and stocked in the UK, a selection of stock is also kept at our regional office in Singapore to facilitate faster delivery time.

EXHEAT Industrial Product Range

- Hazardous Area air warmers, enclosure heaters and industrial convector heaters
- Flameproof radiators, fan heaters, water boilers, immersion heaters and thermostats
- Vented and unvented storage water heaters and vat heaters
- Industrial, baptistery and portable immersion heaters
- Heating elements rod and core type, trace heating, thermostats, control panels
- Flameproof instrument housing and transmitters
Contents

AIR HEATERS - pages 4 - 12

LINE HEATERS - pages 13 - 15

IMMERSION HEATERS - pages 16 - 21

THERMOSTATS/TRANSMITTER ENCLOSURES - pages 22 & 23
FWD Flameproof Air Warmers

The FWD range of air warmers is designed for use in small work or storage areas which are located in Zone 1 and 2 or Zone 21 and 22 Hazardous Areas where the flammable atmosphere is a IIA, IIB or IIC Gas Group.

FEATURES

- Certified to meet the ATEX Directive 94/9/EC and IECEx
- Fabricated steel enclosure weatherproof to IP66/67
- Temperature classes T2, T3 and T4 available
- Suitable for floor or wall mounting
- 2 x 20mm (plugged) cable entries provided as standard
- Corrosion resistant powder coated finish
- Suitable for ambient temperatures from -60°C to +60°C (subject to conditions to be discussed with sales engineer)
- Individually replaceable heating elements

TYPICAL APPLICATIONS

- Aircraft hanger service bays
- Fuel servicing areas
- Chemical plants
- Offshore installations
- Battery stores
- Gas installations
- Containers
- Explosive Stores
- Paint/solvent stores

Rating 500W to 2kW
Certification ATEX certified (© II 2 G/D
IECEx & ATEX certified Ex’d’ IIC T2 to T4 Ex tD A21 IP66 T300°C to T135°C
EN/IEC60079-0, EN/IEC60079-1, EN/IEC61241-0 & EN/IEC61241-1
Enclosure Mild steel powder coated orange/grey, stainless steel option available to special order
Controls If required the heaters can be controlled from the EXHEAT range of remote mounted thermostats available for use in Hazardous Areas (see last page of brochure)
Mounting Pre-drilled support feet supplied as standard
Voltage 1 phase 230/254V or 110V

www.exheat.com
The FWD-T range comes with an easy to adjust external thermostat which is designed for heating small work or storage areas and similar applications, located in Zone 1 and 2 or Zone 21 and 22 Hazardous Areas where the flammable atmosphere is a IIA, IIB or IIC Gas Group.

**FEATURES**

- Certified to meet the ATEX Directive 94/9/EC and IECEx
- Weatherproof to IP66/67
- Temperature classes T2, T3 and T4 available
- Corrosion resistant powder coated finish
- Suitable for floor or wall mounting
- 2 x 25mm (plugged) cable entries provided as standard
- Rotatable terminal box
- Externally adjustable 0-40°C room temperature controlled thermostat
- Suitable for ambient temperatures from -60°C to +60°C (subject to conditions to be discussed with sales engineer)
- Individually replaceable heating elements

**TYPICAL APPLICATIONS**

- Aircraft hanger service bays
- Fuel servicing areas
- Chemical plants
- Offshore installations
- Battery stores
- Gas installations
- Containers
- Explosive Stores
- Paint/solvent stores

**SPECIFICATIONS**

- **Rating**: 500W to 2kW
- **Certification**: ATEX certified ² II 2 G/D, IECEx & ATEX certified Ex’d’ IIC T2 to T4 Ex tD A21 IP66 T300°C to T135°C
  - EN/IEC60079-0, EN/IEC60079-1, EN/IEC61241-0 & EN/IEC61241-1
- **Enclosure**: Aluminium powder coated orange/grey
- **Controls**: Externally adjustable 0-40°C room temperature controlled thermostat
- **Mounting**: Pre-drilled support feet supplied as standard
- **Voltage**: 1 phase 230/254V or 110V
The FAW range offers a versatile lightweight air warming solution for small work and storage areas located in Zone 1 and Zone 2 Hazardous Areas. The range is suitable for use with 1 phase or 3 phase power supplies up to 440 volts. The range can also be configured for use with DC power supplies.

**FEATURES**

Certified to meet the requirements of the ATEX Directive 94/9/EC, IECEx and GOST

Lightweight enclosure certified weatherproof to IP66

Suitable for 1 phase or 3 phase (3 or 4 wire) or DC power supplies

Temperature classes T2, T3, and T4 available

Suitable for floor or wall mounting

A 20mm cable entry is provided as standard, additional entries can be provided as required

Powder coated finish

Optional range of Flameproof room thermostats can also be provided

Suitable for ambient temperatures from -60°C to +60°C (subject to conditions to be discussed with sales engineer)

Individually replaceable heating elements

**TYPICAL APPLICATIONS**

- Aircraft hangers
- Fuel servicing areas
- Chemical plants
- Offshore installations
- Battery stores
- Gas installations
- Paint/solvent stores
- Safety showers

**Rating**

250W to 3kW

**Certification**

- ATEX certified — I II 2 G
- IECEx & ATEX certified Ex’e’ II T2 to T4
- IEC/EN60079-0 & IEC/EN60079-7
- GOST

**Enclosure**

- Lightweight stainless steel or coated mild steel

**Controls**

- If required the heaters can be controlled from the EXHEAT range of remote mounted thermostats available for use in Hazardous Areas (see last page of brochure)

**Mounting**

- Support feet are pre-drilled and suitable for floor mounting supplied as standard (wall mounting brackets available on request)

**Voltage**

- 1 phase: 230 to 254V or 110V
- 3 phase: 400 to 440V

www.exheat.com
The heavy duty natural convector type STW air warmer range is most suitable for medium sized spaces. The units can be supplied with an optional integral externally adjustable limit thermostat, a remote thermostat or frost protection as required.

**FEATURES**

- Heavy duty robust construction
- Suitable for floor or wall mounting
- Powder coated sheet steel construction
- Supplied with plugged cable entries
- Weatherproof protected to IP66 against water and dust
- Optional adjustable 0-40°C room temperature controlled thermostat

**TYPICAL APPLICATIONS**

- Workshops
- Crane cabs
- Dairies
- Ships
- Storage units
- Greenhouses
- Pump stations
- Equipment rooms
- Frost protection

**Rating**

1kW, 2kW and 3kW ratings available

**Construction**

Powder coated sheet metal construction

**Terminal Box**

Powder coated die cast aluminium, weatherproof to IP66

**Element**

Finned plated mild steel

**Supply**

Standard heaters are to suit 110V or 230V

**Mounting**

Support feet are pre-drilled and suitable for floor mounting or wall mounting. Heaters should not be covered and always mounted horizontally.
The FLR range of liquid filled electrically heated radiators has been specifically designed to provide heating in Zones 1 and 2 or Zone 21 and 22 Hazardous Areas where airborne dust particles are of particular concern. Our FLR-A range comes complete with an externally adjustable control thermostat.

**FEATURES**

Certified to meet the ATEX Directive 94/9/EC
Surface temperature limited to meet EN 563 safety requirements
Integral preset surface temperature control thermostat
Floor mounting
Long life Incoloy 825 sheathed rod-type element
Radiator filled with water/glycol mix
Suitable for ambient temperatures from -20°C to +40°C
Robust construction
Certified weatherproof to IP66
Decorative, white powder coat finish
Manual reset over-temperature cut-out fitted to ensure radiator surface temperature never exceeds 80°C
Optional externally adjustable control thermostat

**TYPICAL APPLICATIONS**

- Ammunition depots
- Explosive stores
- Chemical plant warehouses
- Firework factories
- Sugar refineries
- Laboratories

<table>
<thead>
<tr>
<th>Certification</th>
<th>ATEX certified Ex’d’ II 2 G/D Ex’d’ IIC T6 Ex tD A21 IP6X T85°C EN60079-0, EN60079-1, EN61241-0 &amp; EN61241-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enclosure</td>
<td>Cast aluminium finished in orange/grey</td>
</tr>
<tr>
<td>Radiator</td>
<td>Pressed steel with white powder coated finish</td>
</tr>
<tr>
<td>Element</td>
<td>Rod-type, comprising high quality 80/20 nickel chrome resistance wire, compacted in magnesium oxide insulating powder and encased in corrosion resistant Incoloy 825 metal sheath</td>
</tr>
<tr>
<td>Controls</td>
<td>Preset radiator surface temperature control thermostat and manual reset safety temperature limiter (optional externally adjustable control thermostat)</td>
</tr>
<tr>
<td>Mounting</td>
<td>Floor standing with welded-on feet and wall retention brackets</td>
</tr>
<tr>
<td>Rating</td>
<td>Standard heater ratings 1kW, 2kW and 3kW</td>
</tr>
<tr>
<td>Voltage</td>
<td>230V single phase</td>
</tr>
</tbody>
</table>

www.exheat.com
The heavy duty folded steel construction and the finned stainless steel elements give the FCR range an exceptional long life. The FCR range is certified for use in Hazardous Areas where the flammable atmosphere is a IIA, IIB or IIC Gas Group.

**FEATURES**

Certified to meet the ATEX Directive 94/9/EC and IECEx

Small footprint, occupying less floor space

Sloped top, preventing objects being placed on the grill

Floor or wall mounting

Integral terminal enclosure

Suitable for ambient temperatures from -60°C to +60°C

Stainless steel finned elements for long life

Grey gloss, powder coated, sheet steel construction

Optional built on room temperature control thermostat

**TYPICAL APPLICATIONS**

- Aircraft hangers
- Fuel servicing areas
- Chemical plants
- Offshore installations
- Battery stores
- Gas installations

**Certification**

- ATEX certifiedExII 2 G
- IECEx & ATEX certified Ex’e’ IIC T2 to T4
- IEC/EN60079-0 & IEC/EN60079-7

**Enclosure**

- Heavy duty folded steel

**Elements**

- Individually replaceable, finned heating elements, comprising high quality 80/20 nickel chrome resistance wire, compacted in magnesium oxide insulating powder and encased in an Incoloy sheath

**Controls**

- If required the heaters can be controlled from the EXHEAT range of remote mounted thermostats available for use in Hazardous Areas (see last page of brochure)

**Mounting**

- Wall or floor mounting via brackets/feet supplied

**Voltage**

- 1 phase: 110V or 230V
- 3 phase: 415V

**Rating**

- Up to 3kW
The FUH range offers a compact high capacity air heating solution that is suitable for large premises. The flexible design allows for the FUH to be supplied according to the capacity requirements and power supply of the client.

**FEATURES**

Certified to meet the ATEX Directive 94/9/EC  
Efficient liquid to air heat exchanger  
Over-temperature protection  
Adjustable angle outlet louvres  
Optional, integral room temperature control thermostat (to be used in conjunction with a suitable rated contactor)  
Suitable for ambient temperatures -40°C to +40°C

**TYPICAL APPLICATIONS**

- Oil refineries  
- Petrochemical plant  
- Offshore platforms  
- Ammunition stores  
- Sewage plants  
- Paint stores

**Certification**  
ATEX certified Ex’d’ II 2 G  
Ex’d’ IIC T3  
EN60079-0 & EN60079-1

**Casing**  
Grey powder coated steel

**Element**  
Rod-type heating elements comprising 80/20 nickel chrome resistance wire, compacted high purity magnesium oxide insulating powder and encased in Incoloy 825 metal sheath

**Controls**  
If required the heaters can be controlled from the EXHEAT range of remote mounted thermostats available for use in Hazardous Areas (see last page of brochure)

**Rating**  
9kW to 30kW

**Voltage**  
Heater and motor: 3 phase (4 wire STAR), 20kW model 3 phase (3 wire DELTA)  
Controls: up to 230V 1 phase.
FUH-C Flameproof Fan Heaters

The FUH-C Flameproof electric fan heater is an ideal solution for large spaces that have a temporary heating requirement. Like the FUH range, the FUH-C range is designed for use in Zone 1 and Zone 2 areas where the flammable atmosphere is a IIA, IIB or IIC Gas Group.

FEATURES

- Designed to meet the requirements of the ATEX Directive 94/9/EC and IECEx
- Wall or floor mounting
- Over-temperature protection
- Adjustable mounting for vertical flow direction
- Optional wall bracket which allows lateral flow direction

TYPICAL APPLICATIONS

- Oil refineries
- Petrochemical plant
- Offshore platforms
- Ammunition stores
- Sewage plants
- Paint stores

Certification

- ATEX certified Ex II 2 G
- IECEx & ATEX certified Ex’d e’ IIC T3

Casing

- Immersion heater – powder coated mild steel

Element

- Finned type heating elements comprising 80/20 nickel chrome resistance wire, compacted high purity magnesium oxide insulating powder and encased in Incoloy 800 metal sheath

Controls

- 3 phase controller providing isolation, safety contactor, control contactor & integral room thermostat can be supplied by EXHEAT

Rating

- 3kW 1 phase unit connects directly to suitable power supply
- 6kW 3 phase units require separate controls
- EXHEAT can supply optional control with an integral room thermostat

IP rating

- Heater: IP65
- Controller: IP65/66/67
HEF Hazardous Area Enclosure Heaters

The self-regulating properties of the HEF enclosure heaters eliminate the requirement for a thermostat. Coupled with the compact design, this makes the HEF ideal for anti condensation, frost protection and temperature control where the enclosure is located within Zone 1 and Zone 2 or Class I, Div 2 Hazardous Areas.

**FEATURES**

Certified to meet the requirements of the ATEX Directive 94/9/EC and IECEx

Compact, low profile, stainless steel case, requires minimal space

Self-regulating - can be used without a thermostat

Suitable for ambient temperatures from -60°C to +80°C

Mounting of the heater can be in any orientation

Design allows installation close to internal components and cables without fear of damage by overheating

**TYPICAL APPLICATIONS**

Control / monitoring panels

Instrumentation cabinets

Condensation prevention

Temperature fluctuations

Frost protection

**Certification**

ATEX certified II 2 G

IECEx & ATEX certified Ex'e' T4

EN/IEC60079-0 & EN/IEC60079-7

**Casing**

Perforated stainless steel

**Element**

Self-regulating

**Controls**

The HEF is self-regulating, automatically reducing its output as the ambient temperature rises. If overall enclosure temperature control is required it is recommended that the HEF heater is used in conjunction with one of the EXHEAT range of Ex’d’ thermostats (see last page of brochure)

**Mounting**

The heater may be mounted in any orientation, using appropriate securing bolts through the mounting feet

**Rating**

The HEF range is available in a nominal 30, 50, 100, 200 & 500W outputs, models available for 110V or 230V 1 phase supplies
The range of Flameproof mini line heaters consist of a screw plug or flanged type immersion heater mounted in a thermally insulated heating vessel. They are designed to efficiently transfer heat to a flowing medium (liquid, air or gas). All EXHEAT Flameproof heaters are fully ATEX certified and designed for use in Zone 1 and 2 Hazardous Areas, Gas Group IIA, IIB and IIC.

**FEATURES**

- Certified to meet the ATEX Directive 94/9/EC
- Weatherproof lightweight cast aluminium terminal enclosure – IP67
- Choice of built in process temperature sensors and externally adjustable option
- Mild steel or stainless steel vessel
- Suitable for ambient temperatures -40°C to +40°C
- Standard range of high quality Incoloy rod-type elements, designed for water or withdrawable ceramic core elements, designed for oil
- Maximum allowable working pressure 5bar.g (73psi.g)
- Designed for horizontal installation (vertical mounting version available on request)

**TYPICAL APPLICATIONS**

- Water heating - wash rooms, industrial washing equipment, hot water storage tanks
- Frost protection - pre-start systems for water cooled engines, fire extinguishing equipment, oil sump heating
- Heat transfer oils - moulds, dies & platens, closed loop systems for bitumen
- Fuel oil heating - pre-heating to pumping viscosity

**Certification**

ATEX certified II 2 G
Ex’d’ IIC T4-T6
EN60079-0 & EN60079-1

**Enclosure**

Cast aluminium alloy with a maximum of two cable entries, external and internal earths and screwed terminal cover

**Element**

High quality nickel chrome resistance wire compacted in magnesium oxide insulating powder and sheathed in corrosion resistant Incoloy, withdrawable ceramic core elements in mild steel or 316L stainless steel

**Pressure**

Maximum allowable working pressure 5bar.g (73psi.g)

**Design Code**

Sound Engineering Practice (SEP)

**Insulation**

Mineral wool

**Cladding**

Coated mild steel or stainless steel

**Rating**

Up to 12kW
The HEWL and HEOL range of line heaters is suitable for heating all process fluids which are non-corrosive to the materials of construction. They provide a clean and efficient heating method for bulk liquid flow applications.

**FEATURES**

- Thermal insulation and cladding
- Weatherproof terminal enclosure with protection to IP55
- Internal control thermostats and over-temperature thermostat
- Also available in Flameproof construction for Hazardous Areas
- Alternative materials of construction available
- Designed for horizontal installation (vertical mounting version available on request)

**TYPICAL APPLICATIONS**

- Industrial washing and rinsing processes
- Indirect heating of liquids
- Engine jacket pre-heating
- Temperature maintenance of storage tanks
- Under floor heating schemes
- Lube oil pre-heating
- Fuel oil
- Heat transfer oils
- Tempering of low grade residual oils for burners and engines

**Construction**

- Weatherproof protection to IP55
- Flameproof protection to IP65

**Element**

- Incoloy 825 sheathed rod-type or removable ceramic core type housed in mild steel or stainless steel

**Working Pressure**

- Up to 5bar.g (73psi.g)

**Design Code**

- Sound Engineering Practice (SEP)

**Vessel**

- Mild steel or stainless steel sheath

**Insulation**

- Mineral wool

**Cladding**

- Stucco aluminium

**Voltage**

- Standard supplies up to 690V

**Rating**

- Up to 120kW (subject to application)
The range of cast aluminium line heaters provide an effective heating solution for constant flow liquids or gases, eliminating the requirement for a costly pressure vessel. Particularly in high pressure applications or when exotic process materials are required the FP Cast range can provide significant commercial advantage. The design incorporates electric heating elements and an indirect process heating coil imbedded within marine grade cast aluminium. This provides excellent heat transfer properties combined with low surface temperatures. It should be noted that this design is not suitable for constantly varying flow applications where precise outlet temperature control is required.

### FEATURES

- Certified to meet the requirements of the ATEX Directive 94/9/EC and IECEx
- Thermally insulated aluminium or stainless steel cladding
- Flameproof IP65 rated terminal enclosure
- Maximum working pressure and temperature rating of 300bar.g at 100°C
- Internal control thermostats and over-temperature thermostats (PT 100 or thermocouple type K available)
- Wall or floor, vertical or horizontal mounting
- Multiple heating elements allow for step control or alternatively thyristor control can be employed
- Standard stainless steel process coil (other materials upon request)
- Various process connections including industry standard flange or compression joints

### Certification

- ATEX certified © II 2 G/D
- IECEx & ATEX certified Ex’d’ IIC T3 to T6 Ex tD A21 IP66 T200°C to T85°C
- IEC/EN60079-0, IEC/EN60079-1, IEC/EN61241-0 & IEC/EN61241-1

### Enclosure

- Painted mild steel or natural finished stainless steel

### Element

- Stainless steel sheathed with 80/20 nickel chrome resistance wire imbedded in high purity magnesium oxide

### Casting

- Marine grade aluminium, insulated and aluminium clad (stainless steel cladding available on request)

### Process Coil

- Supplied as standard with stainless steel 321 (other materials available on request)

### Design Code

- ASME VIII or PD5500 with PED certification for installation within the European Union

### CE Marked

- In accordance with relevant EC Directives

### Voltage

- Up to 690 VAC
FP Rod-Type Immersion Heaters

The FP range of Flameproof rod-type immersion heaters is a highly adaptable solution that can be customised to suit the process requirements of our clients. They are suitable for heating all types of process liquids and gases which are non-corrosive to the materials of construction.

**FEATURES**

- Certified to meet the requirements of the ATEX Directive 94/9/EC, IECEx, CSA and CCOE
- Mild steel or 316 stainless steel terminal enclosure with weatherproof protection to IP66
- Choice of built in process temperature sensors
- Suitable for ambient temperatures to -50°C to +60°C
- Mounting of the heater can be by a threaded boss or an industry standard flange
- Designed for horizontal installation (vertical mounting version available on request)
- Can be supplied with the terminal box mounted away from the fixing boss/flange for high process temperatures

**TYPICAL APPLICATIONS**

- Pre-heating oil/water
- Processing equipment
- Cleaning and rinsing tanks
- Heating medium
- Boiler equipment
- Frost protection
- Heat transfer systems
- Tank heating
- Safety showers

**Certification**

- ATEX certified ® II 2 G/D
- IECEx & ATEX certified Ex'd' IIC T1 to T6 Ex tD A21 IP66 T450 to 85°C
- CSA certified Class I, Div 1, Gas Groups A, B, C & D
- EN/IEC 60079-0, EN/IEC 60079-1, EN/IEC 61241-0 & EN/IEC 61241-1 CCOE

**Enclosure**

- Mild steel or 316 stainless steel, external and internal earths, screwed terminal cover, finished in epoxy paint (if required)

**Elements**

- A choice of rod-type elements comprising of 80/20 nickel chrome resistance wire, compacted in high purity magnesium oxide insulating powder and encased in either Incoloy, stainless steel and titanium sheath, secured by either brazing or welding depending upon the process application

**Controls**

- Heater over-temperature protection is fitted as standard (optional process temperature sensing devices can be incorporated in the form of thermostats, RTD’s or thermocouples)

**Mounting**

- Any threaded boss or flange in any material can be specified within the limits of the design parameters
- Heater terminal box can be either ‘direct-on’ or ‘stand-off’, depending on process temperature

**Rating**

- To suit process requirements

**Voltage**

- Any electrical supply up to 690V
FP-C Removable Core Immersion Heaters

The FP-C range of Flameproof removable single and multi core heaters offers a Hazardous Area heating solution for oil and similar applications where low heat density is required. The element can be withdrawn for inspection without system drain down. The standard heater consists of a single element or multi core fitted into a mounting flange. A robust Ex’d’ terminal enclosure protects the electrical connections. The watts density of the element core fitted depends upon the media to be heated and the kilowatt rating required.

FEATURES

Certified to meet the requirements of the ATEX Directive 94/9/EC, IECEx and CCOE

- Mild steel or 316 stainless steel terminal enclosure with weatherproof protection to IP66
- Choice of built in process temperature sensors
- Suitable for ambient temperatures to -50°C to +60°C
- Mounting of the heater can be by a threaded boss or an industry standard flange
- Designed for horizontal installation (vertical mounting version available on request)
- Can be supplied with the terminal box mounted away from the fixing boss/flange for high process temperatures

TYPICAL APPLICATIONS

- Pre-heating oil/water
- Processing equipment
- Cleaning and rinsing tanks
- Heat transfer systems
- Boiler equipment
- Frost protection

Certification

ATEX certified II 2 G/D
IECEx & ATEX certified Ex’d’ IIC T1 to T6 Ex tD A21 IP66 T450 to 85°C
EN/IEC60079-0, EN/IEC60079-1, EN/IEC61241-0 & EN/IEC61241-1
CCOE

Enclosure

Mild steel or 316 stainless steel, external and internal earths, screwed terminal cover, finished in epoxy paint (if required)

Elements

Removable core, comprising high quality 80/20 nickel chrome resistance wire, contained within ceramic formers housed in plain or extended surface tubes

Controls

Heater over-temperature protection is fitted as standard (optional process temperature sensing devices can be incorporated in the form of thermostats, RTD’s or thermocouples)

Mounting

Any threaded boss or flange in any material can be specified within the limits of the design parameters

Rating

To suit process requirement within the design parameters and ATEX approval

Voltage

Any electrical supply up to 690V
RFA Rod-Type Immersion Heaters

The RFA range of Flameproof rod-type immersion heaters is suitable for installation in process tanks, safety showers, engine sumps, pressure vessels and similar plants located in Zone 1 and Zone 2 Hazardous Areas, where the flammable atmosphere is a IIA, IIB or IIC Gas Group. They are suitable for heating all process liquids or gases which are non-corrosive to the materials of construction.

**FEATURES**

Certified to meet the ATEX Directive 94/9/EC

Lightweight cast aluminium alloy terminal enclosure with weatherproof protection to IP67

Choice of built in process temperature sensors

Suitable for ambient temperatures -40°C to +40°C

Mounting of the heater can be by a threaded boss or an industry standard flange

Designed for horizontal installation, vertical mounting available on request

**TYPICAL APPLICATIONS**

Pre-heating oil/water

Processing equipment

Cleaning and rinsing ranks

Heat transfer systems

Boiler equipment

Frost protection

Safety showers

**Certification**

ATEX certified ® II 2 G
Ex’d’ IIC T3 to T6
EN60079-0 & EN60079-1

**Enclosure**

Cast aluminium alloy with a maximum of two cable entries, external and internal earths and screwed terminal cover

Certified Ex’d’ IIC T4-T6 with the option of T3-T6 where the terminal enclosure is stood away from the processing equipment

**Elements**

A maximum of three rod-type elements comprising 80/20 nickel chrome resistance wire, compacted in high purity magnesium oxide insulating powder and encased in either Incoloy, stainless steel or titanium sheath, secured by either brazing or welding depending upon the process application

**Mounting**

Any threaded boss or flange in any material can be specified within the limits of the design parameters

Heaters can be either ‘direct-on’ or ‘standoff’ as required by the ‘T’ classification

**Controls**

Heater over-temperature protection is fitted as standard

**Rating**

Up to 18kW

**Voltage**

Any electrical supply up to 690V

www.exheat.com
The PIH range of portable immersion heaters are primarily designed for baptismal pools and are also suitable for heating large or small quantities of liquid, stored in open topped vessels and baths, where permanently installed immersion heaters are not practical or desirable.

**FEATURES**
- Robust stainless steel construction
- IP66 terminal enclosure
- Long life Incoloy 825 sheathed rod-type elements
- Wide, stable, self-supporting base
- Optional control thermostat
- Long unheated length for use with low liquid levels

**TYPICAL APPLICATIONS**
- Baptismal pools
- Sterilizing
- Drum heating
- Vat heating

<table>
<thead>
<tr>
<th>Enclosure</th>
<th>Self colour aluminium protected to IP66</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element</td>
<td>Rod-type with Incoloy 825 sheaths</td>
</tr>
<tr>
<td>Immersed parts</td>
<td>Stainless steel</td>
</tr>
<tr>
<td>Controls</td>
<td>Standard construction: none</td>
</tr>
<tr>
<td></td>
<td>Automatic construction: capillary type thermostat (optional)</td>
</tr>
<tr>
<td>Rating</td>
<td>Standard heater rating 3kW</td>
</tr>
<tr>
<td>Voltage</td>
<td>230V 1 phase</td>
</tr>
<tr>
<td>Installation</td>
<td>This equipment must be protected by an RCD and be fully earthed</td>
</tr>
<tr>
<td></td>
<td>The element must be fully submerged before being energised</td>
</tr>
</tbody>
</table>
HFY Flanged Industrial Immersion Heaters

The HFY range of flanged immersion heaters are suitable for all commercial and industrial hot water cylinders and process tank heating applications which are non-corrosive to the materials of construction. Each heater is supplied with an adjustable control thermostat, for automatic temperature control and Run Dry, manual reset, over-temperature protection thermostat.

FEATURES

Individually replaceable Incoloy 825 elements
Weatherproof terminal enclosure to IP54
‘Run Dry’ over-temperature protection
Brass or stainless steel mounting flange
Heavy duty stud terminals suitable for client cables
Designed for horizontal installation only

TYPICAL APPLICATIONS

Calorifier packages
Hot water storage tanks
Cleaning and rinsing equipment
Heat transfer systems
Boiler equipment

Rating                  Rating up to 54kW
Enclosure               Heavy gauge, corrosion protected, mild steel having a hinged access door and two undrilled removable gland plates for cable entry (finished in grey stove enamel)
Flange                  Brass or stainless steel having 8 bolt holes, 10mm diameter on 146mm PCD
Elements                Nickel chrome resistance wire compacted in high purity magnesium oxide insulating powder and sheathed in corrosion resistant Incoloy. Each element is secured to the flange by screwed compression fixings, making them individually replaceable
Controls                A capillary type control thermostat and a manual reset thermostat are fitted as standard
Working Pressure        The maximum allowable working pressure is 6bar.g (87psi.g)
Thermostat              Two stainless steel pockets are secured into the flange by screwed compression fittings, one of which is thermally linked to the uppermost element
Pockets                 Standard units are nominally designed for 415v, and are suitable for operation on 380v – 440v electrical supplies
Voltage                 Other voltages and alternative wiring configurations available on request.
The HB range of screwed or flanged immersion heaters is an inexpensive solution for all commercial and industrial hot water cylinders, process tank heating, cooling tower frost protection and other applications which are non-corrosive to the materials of construction. The HB range of heaters can be supplied with an adjustable control thermostat scaled to suit the specific application.

**ROD-TYPE**

Heat is transferred to the liquid by means of Incoloy 825 sheathed heating elements with automatic control being achieved using an integral adjustable thermostat.

Rating up to 18kW.

**FEATURES**

- Robust lightweight aluminium enclosure
- Fitted with control and limit thermostats
- Certified weatherproof to IP66
- Suitable for working pressures of up to 8bar.g (higher working pressures are available on request)
- All models fitted with Incoloy 825 elements and 2-off stainless steel thermostat pockets
- Terminal box can be rotated through 360 degrees to allow final cable entry position to be chosen
- Heavy duty brass fixing boss screwed 2", 2¼" or 2½" BSPP, alternatively supplied with square mounting flange
- Up to two cable entries (standard 1 off)
- Standard immersion heaters are designed for horizontal installation (heaters for vertical installation are available to order)

**REMOVABLE CORE TYPE**

This range is recommended for applications where the equipment cannot be easily drained.

Heat is transferred to the liquid by means of removable ceramic heating elements within a carrier tube to allow replacement without draining.

Automatic control can be achieved by fitting a thermostat into the integral pocket.

Sheath material available in stainless steel or mild steel.

Rating up to 6kW.

**TYPICAL APPLICATIONS**

- Hot water storage tanks
- Pre-heating oil and water
- Food processing equipment
- Cleaning and rinsing equipment
- Heat transfer, process and boiler equipment
- Frost protection
ATEX Certified Flameproof Thermostats

All Flameproof thermostats are ATEX certified Ex’d’ IIC T6, suitable for installation in Zone 1 or 2 Hazardous Areas. The AFT has external adjustment enabling quick and accurate variable control for liquid, gas and air applications. The RFT is suitable for use in process tanks and vessels containing liquids or gases. The HFT is designed for the temperature control of work or storage areas, in conjunction with a Hazardous Area air heater.

**AFT Air/Process Sensing Thermostat**

- ATEX certified Ex’d’ II 2 G/D
- IECEx & ATEX certified Ex’d’ IIC T6
- Ex tD A21 IP6X T85°C
- for Zone 1 or 2 (Gas) and Zone 21 or 22 (Dust)
- Externally adjustable option
- Wall mounted/ threaded boss or industry standard flange
- Suitable for ambient temperatures from -60°C to +60°C

**HFT Air Sensing Thermostat**

- ATEX certified Ex’d’ II 2 G
- IECEx & ATEX certified Ex’d’ IIC T6
- for Zone 1 or 2 (Gas)
- Wall mounted
- Stainless steel enclosure
- Suitable for ambient temperatures from -60°C to +60°C

**RFT Process Sensing Thermostat**

- ATEX certified Ex’d’ IIC T1-T6 Ex tD A21 IP6X T450°C – T85°C
- for Zone 1 or 2 (Gas) and Zone 21 or 22 (Dust)
- Mounting can be by a threaded boss or an industry standard flange
- Lightweight cast aluminium enclosure certified weatherproof to IP67
- Suitable for ambient temperatures from -40°C to +40°C

www.exheat.com
HIH Flameproof Transmitter Enclosures

The HIH range of instrument enclosures are designed to accommodate most makes of head mounted process transmitter or termination block. EXHEAT promotes the use of its preferred range of WIKA® temperature transmitters, however empty enclosures can be supplied or, on special request, other makes of transmitter such as Siemens®, Rosemount® or Yokogawa® can be installed.

FEATURES

- Stainless steel enclosure
- Optional viewing window for transmitter
- LCD displays
- Ingress protection IP66
- ATEX certified II 2 G/D
- ATEX & IECEx certified Ex’d’ IIC T6 / Ex tD A21 IP66 T85°C
- Compliant with EN/IEC60079-0, EN/IEC60079-1, EN/IEC61241-0 & EN/IEC61241-1
- M20 cable entries (2 standard, 4 maximum)

TYPICAL APPLICATIONS

- Temperature measurement and display for all applications
- Accommodates all major brands of head mounted process transmitter
- Hazardous Area process temperature measurement
- Thermowell assemblies available
- Machinery and plant construction, power engineering, heating, ventilation, and refrigeration

WIKA is a registered trademark of WIKA Alexander Wiegand GmbH
Siemens is a registered trademark of Siemens AG
Rosemount is a registered trademark of Rosemount Inc
Yokogawa is a registered trademark of Yokogawa Electric Corp