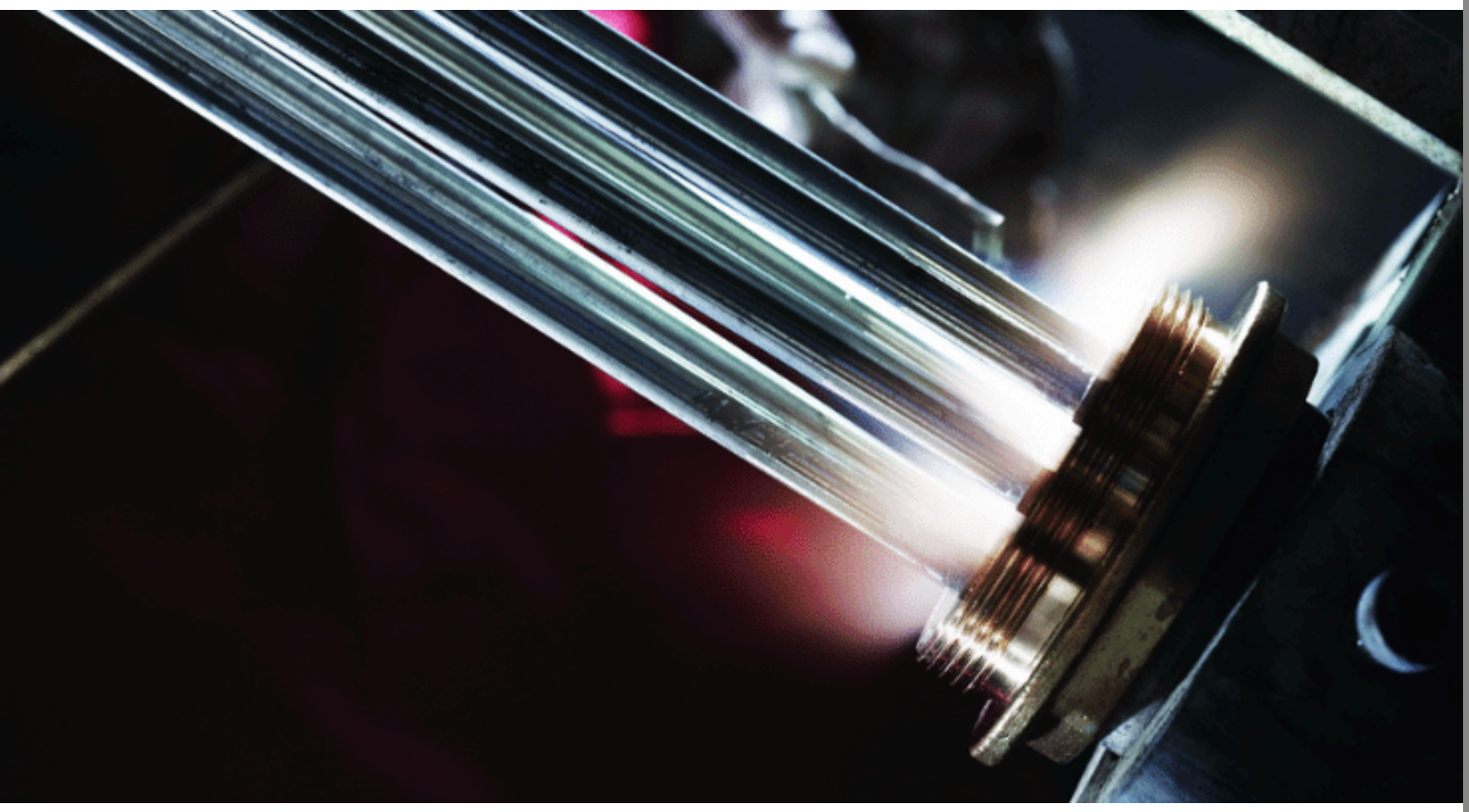
BACKER HEATROD

APRIL 2025

ATEX / Flameproof Heaters for Liquid & Gas

Data Sheet



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About Heatrod

Greater Manchester based Backer Heatrod is the UK's leading manufacturer of heating elements and associated process heating equipment required for your industrial heating applications.

History

Heatrod was formed in the early 1960's as a specialist producer of metal sheathed, mineral insulated heating elements. Initially concentrating on water heaters Heatrod soon became a specialist in a wide variety of additional element applications such as air, oil, defrost, vending, catering and many other applications which have been supplied since the late 1960's.

In late 2006 Heatrod was acquired by the NIBE Element Group (The world's largest element manufacturer) and now represents NIBE in the U.K. as one of the 65 Group companies that are based all over the world.

Our extensive restructure and investment programme is designed to ensure Backer Heatrod is the choice for heating and measuring requirements within the U.K. We are the only U.K. based manufacturer of heating elements offering a complete package focused totally on minimum lead time, maximum flexibility and complete design service, from individual raw material components to finished solution.

During more recent years Backer Heatrod has made further acquisitions to consolidate our position in the Industrial Electric Heating market. With the extensive additions in plant and machinery, skilled staff and market leading brands Heatrod can now offer a formidable range of solutions to the UK and export markets. Also as part of the Swedish Backer group of companies Heatrod has access to an even wider range of base heating technologies and local support throughout the world.

Backer Heatrod

After 87 years, Bolton based Heatrod has reclaimed ownership of the original Backer name, bringing it in line with the many companies around the world that sit within the wider NIBE Element Group. The company has now been re-branded as Backer Heatrod, following the acquisition of Christian Backer's original Rotherham based business, where the production of patented electrical element design that is still used throughout the world was established in 1938.

Heatrod completed the purchase of the original Backer Electric business in December 2023 and following an extended period of planning, can now announce its re-brand. The purchase allows the Swedish owned company to once again use the Backer name in the UK, where the manufacture of heating elements originally began.

ATEX/Flameproof Immersion Heaters

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

Having manufactured our first range of hazardous area heaters back in 1953, Heatrod can provide a hazardous area version for the majority of our products, together with bespoke hazardous area air and gas heaters. Fully ATEX certified to class IIB and ranging from standard screw-in immersions up to fully engineered process heaters. We can also provide IIC certified products from other group manufacturers.

Fields of Application:

- Flameproof immersion
- Flameproof in-line flow heater
- Flameproof gas heater
- Flameproof air heater

Benefits:

- IP67 Exd ATEX certified terminal cover
- Sheathed elements in a variety of materials
- Brass, carbon or stainless steel flanges
- Removable core options, with plain, or options for stainless steel & copper tubes
- Available up to 1.4mW
- Control & high limit thermostats
- Wide range of thermostats available
- Variety of voltage options

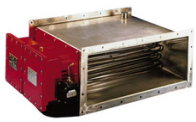
Heatrod are currently certified to manufacture heaters up to 1.4mW and 690V 3 Phase and suitable for ambient temperatures between -40°C and 45°C. Working with our sister companies, we can provide solutions for class IIB and IIC hazardous areas.

Hazardous Area Immersion Heater

A full range of immersion heaters and thermostats are available for screw-in or small flanged installation. With both rod and removable core elements, Ranging from 1-18kW and suitable for heating air, gas or liquid.

Hazardous Area In-Line Heaters

A range of process heaters suitable for a variety of applications, including; air, gas and liquid. Vessels are avaialble in copper, carbon and stainless steel.



Hazardous Area Air Heaters

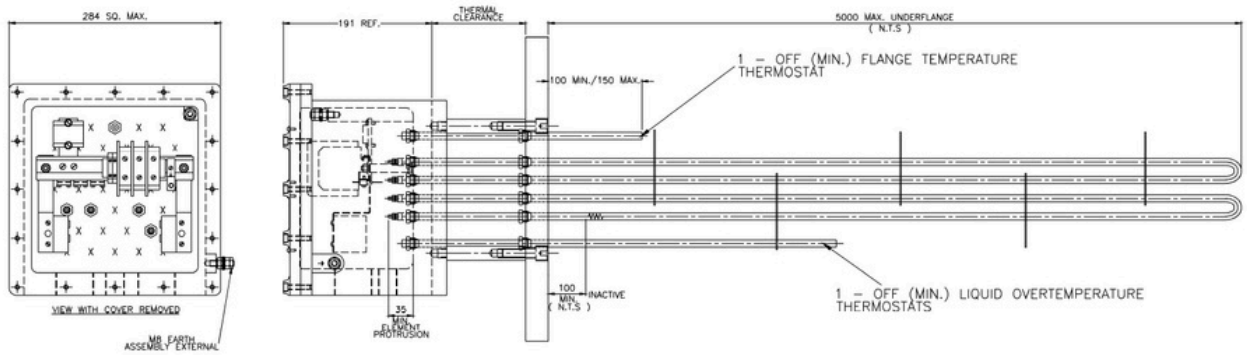
A wide range of complete duct heaters or stab-in heater batteries, in aluminium, carbon and stainless steel. Used for anti-condensation and HVAC applications in hazardous areas.

FP-RL-2
E Exd IIB Flameproof Immersion Heater

Specification	E Exd IIB Flameproof Immersion Heater
Standards	EN 60079-0 & EN 60079-1 Group IIB
Terminal Enclosure	Cast Iron - BS EN1561/Stainless Steel 316
Element Materials	Copper, Mild Steel, Incoloy, Stainless Steel, Titanium
Element Diameters	9mm - 14mm
Max. No. Elements	18
Controls	Overtemperature thermostat & cut-outs
Maximum Rating	216kW 690V
Wiring	Single or Three Phase, Star or Delta
Max. Watt Density	9.92 W/cm² (64 W/in²)
Fixings	Threaded or Flanged

Temperature Class				
T Class	**Thermal Clearance**	**Max. Term'l Box Temp.**	**Flange Temp.**	**Max. Temp.**
T1	200mm	110°C	440°C	450°C
T2			290°C	300°C
T3			190°C	200°C
T4	150mm	80°C	125°C	135°C
T5	125mm	70°C	90°C	100°C
T6		55°C	75°C	85°C

The above table assumes unit vertical (terminal box at top) with max. no. of elements in a 40°C ambient.



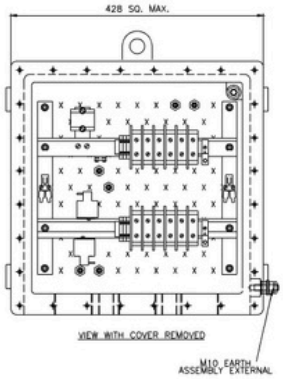
FP-RL-3
E Exd IIB Flameproof Immersion Heater

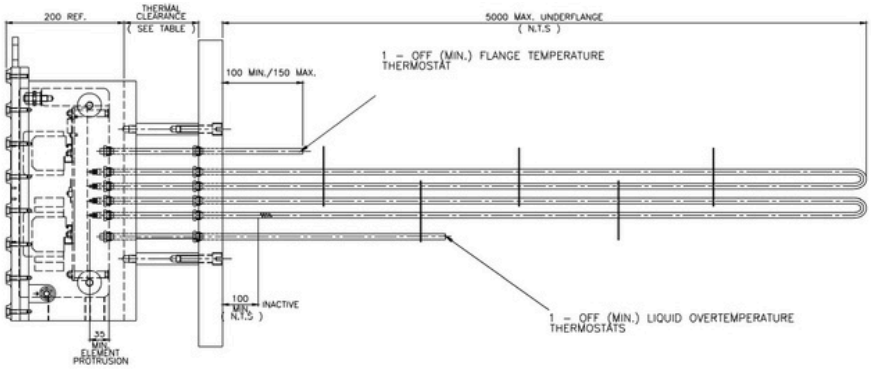
Specification	E Exd IIB Flameproof Immersion Heater
Standards	EN 60079-0 & EN 60079-1 Group IIB
Terminal Enclosure	Cast Iron - BS EN1561/Stainless Steel 316
Element Materials	Copper, Mild Steel, Incoloy, Stainless Steel, Titanium
Element Diameters	9mm - 14mm
Max. No. Elements	50
Controls	Overtemperature thermostat & cut-outs
Maximum Rating	600kW 690V
Wiring	Single or Three Phase, Star or Delta
Max. Watt Density	9.92 W/cm² (64 W/in²)
Fixings	Threaded or Flanged

Temperature Class

T Class	Thermal Clearance	Max. Term'l Box Temp.	Flange Temp.	Max. Temp.
T1	200mm	110°C	440°C	450°C
T2			290°C	300°C
T3			190°C	200°C
T4	150mm	80°C	125°C	135°C
T5	125mm	70°C	90°C	100°C
T6		55°C	75°C	85°C

The above table assumes unit vertical (terminal box at top) with max. no. of elements in a 40°C ambient.





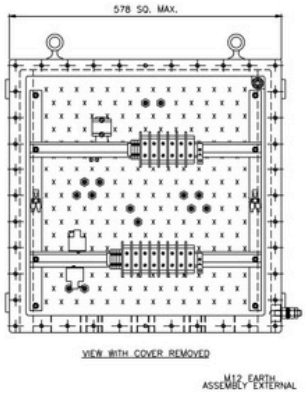
FP-RL-4
E Exd IIB Flameproof Immersion Heater

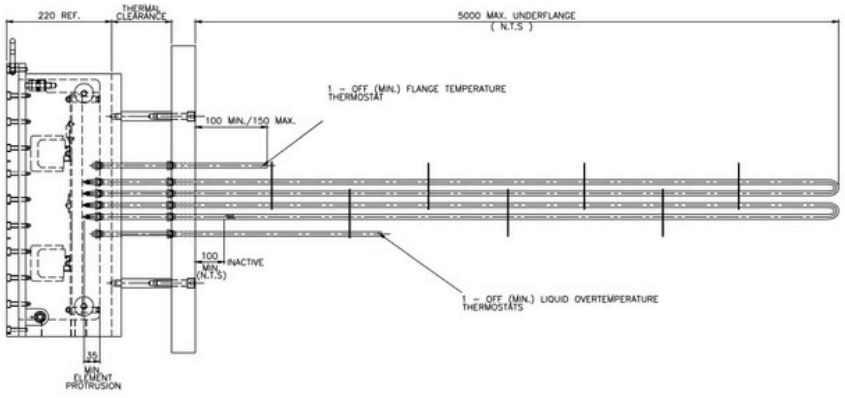
Specification	E Exd IIB Flameproof Immersion Heater
Standards	EN 60079-0 & EN 60079-1 Group IIB
Terminal Enclosure	Cast Iron - BS EN1561/Stainless Steel 316
Element Materials	Copper, Mild Steel, Incoloy, Stainless Steel, Titanium
Element Diameters	9mm - 14mm
Max. No. Elements	117
Controls	Overtemperature thermostat & cut-outs
Maximum Rating	1400kW 690V
Wiring	Single or Three Phase, Star or Delta
Max. Watt Density	9.92 W/cm² (64 W/in²)
Fixings	Threaded or Flanged

Temperature Class

T Class	Thermal Clearance	Max. Term'l Box Temp.	Flange Temp.	Max. Temp.
T1	200mm	110°C	440°C	450°C
T2			290°C	300°C
T3			190°C	200°C
T4	150mm	80°C	125°C	135°C
T5	125mm	70°C	90°C	100°C
T6		55°C	75°C	85°C

The above table assumes unit vertical (terminal box at top) with max. no. of elements in a 40°C ambient.





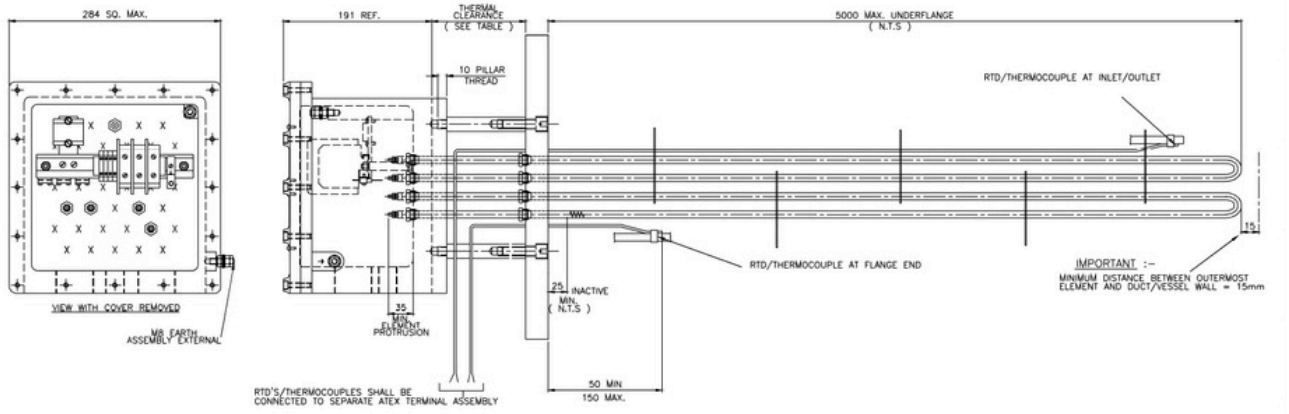
FP-RAG-2
E Exd IIB Flameproof Air/Gas Heater

Specification	E Exd IIB Flameproof Air/Gas Heater
Standards	EN 60079-0 & EN 60079-1 Group IIB
Terminal Enclosure	Cast Iron - BS EN1561/Stainless Steel 316
Element Materials	Copper, Mild Steel, Incoloy, Stainless Steel, Titanium
Element Diameters	9mm - 14mm
Max. No. Elements	18
Controls	RTD & Thermocouple
Maximum Rating	216kW 690V
Wiring	Single or Three Phase, Star or Delta
Max. Watt Density	9.92 W/cm² (64 W/in²)
Fixings	Threaded or Flanged

Temperature Class

T Class	Thermal Clearance	Max. Term'l Box Temp.	Flange Temp.	Max. Temp.	T/C Max. Set Point
T1	200mm	110°C	440°C	450°C	410°C
T2			290°C	300°C	260°C
T3			190°C	200°C	160°C
T4	150mm	80°C	125°C	135°C	85°C

The above table assumes unit vertical (terminal box at top) with max. no. of elements in a 40°C ambient.



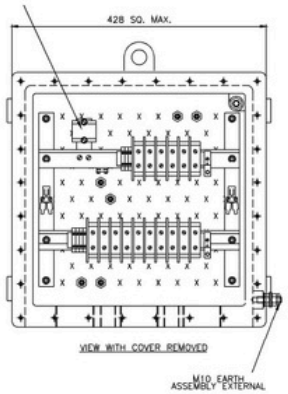
FP-RAG-3
E Exd IIB Flameproof Air/Gas Heater

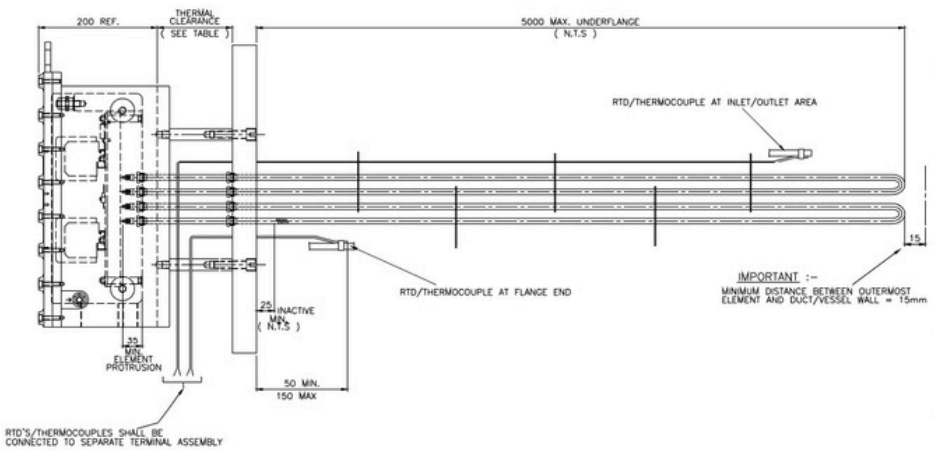
Specification	E Exd IIB Flameproof Air/Gas Heater
Standards	EN 60079-0 & EN 60079-1 Group IIB
Terminal Enclosure	Cast Iron - BS EN1561/Stainless Steel 316
Element Materials	Copper, Mild Steel, Incoloy, Stainless Steel, Titanium
Element Diameters	9mm - 14mm
Max. No. Elements	50
Controls	RTD & Thermocouple
Maximum Rating	600kW 690V
Wiring	Single or Three Phase, Star or Delta
Max. Watt Density	9.92 W/cm² (64 W/in²)
Fixings	Threaded or Flanged

Temperature Class

T Class	Thermal Clearance	Max. Term'l Box Temp.	Flange Temp.	Max. Temp.	T/C Max. Set Point
T1	200mm	110°C	440°C	450°C	410°C
T2			290°C	300°C	260°C
T3			190°C	200°C	160°C
T4	150mm	80°C	125°C	135°C	85°C

The above table assumes unit vertical (terminal box at top) with max. no. of elements in a 40°C ambient.





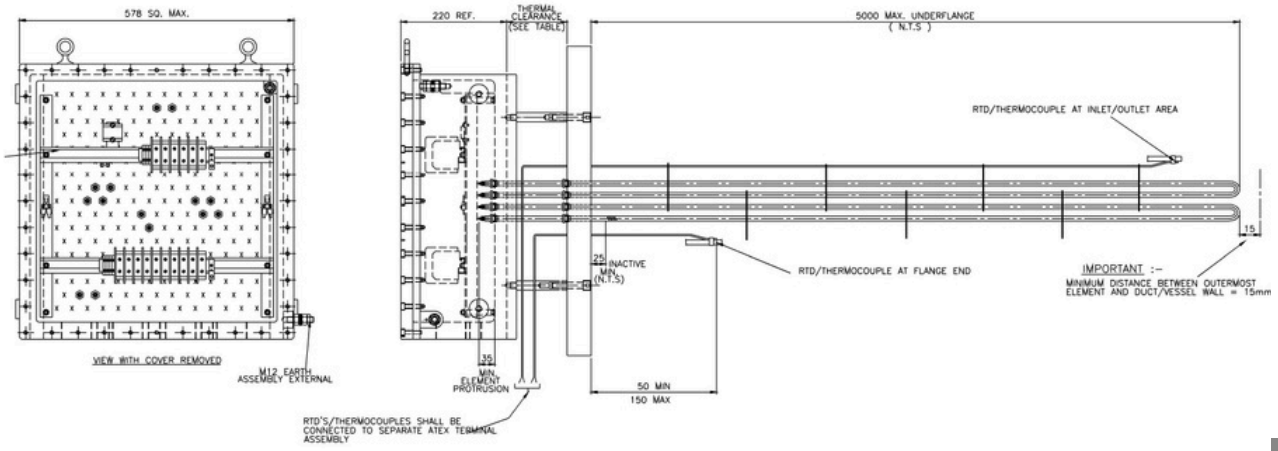
FP-RAG-4
E Exd IIB Flameproof Air/Gas Heater

Specification	E Exd IIB Flameproof Air/Gas Heater
Standards	EN 60079-0 & EN 60079-1 Group IIB
Terminal Enclosure	Cast Iron - BS EN1561/Stainless Steel 316
Element Materials	Copper, Mild Steel, Incoloy, Stainless Steel, Titanium
Element Diameters	9mm - 14mm
Max. No. Elements	117
Controls	RTD & Thermocouple
Maximum Rating	1400kW 690V
Wiring	Single or Three Phase, Star or Delta
Max. Watt Density	9.92 W/cm² (64 W/in²)
Fixings	Threaded or Flanged

Temperature Class

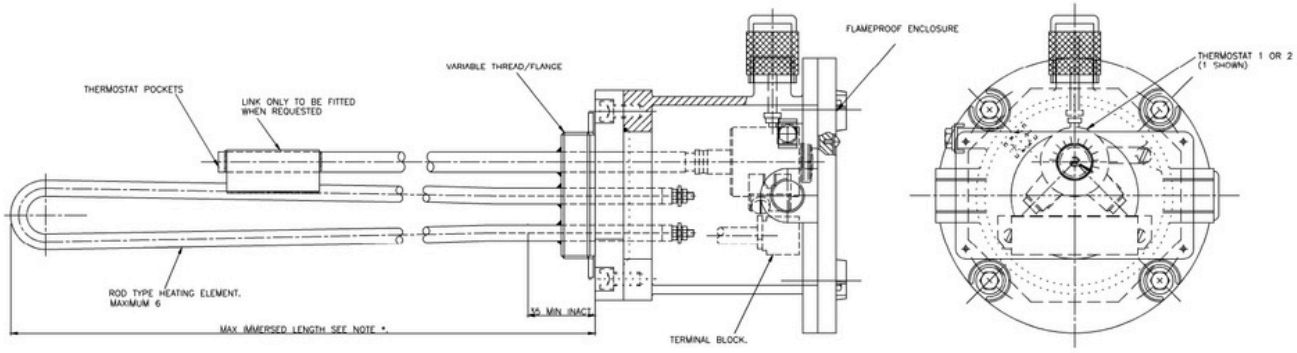
T Class	Thermal Clearance	Max. Term'l Box Temp.	Flange Temp.	Max. Temp.	T/C Max. Set Point
T1	200mm	110°C	440°C	450°C	410°C
T2			290°C	300°C	260°C
T3			190°C	200°C	160°C
T4	150mm	80°C	125°C	135°C	85°C

The above table assumes unit vertical (terminal box at top) with max. no. of elements in a 40°C ambient.



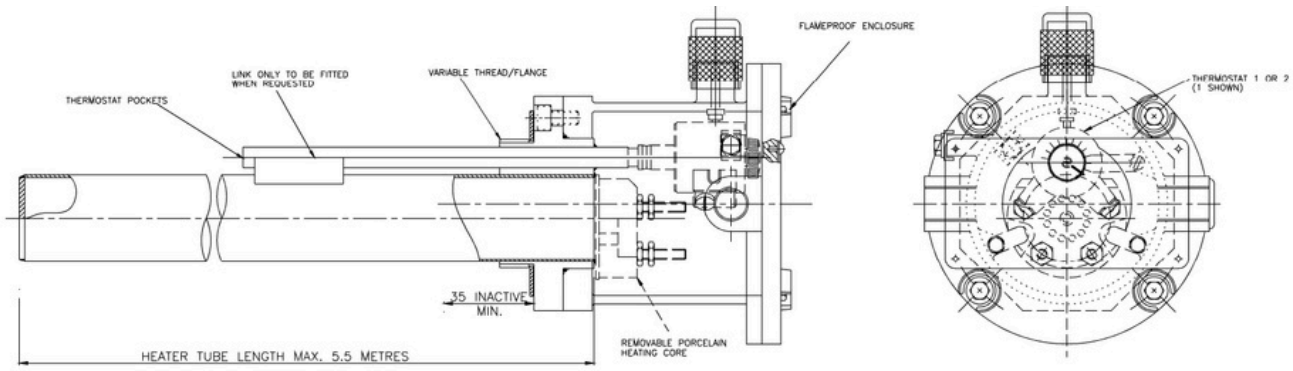
FP-RGL-1
E Exd IIB Flameproof Air/Gas Heater

Specification	E Exd IIB Flameproof Air/Gas Heater
Standards	EN 60079-0 & EN 60079-1 Group IIB
Terminal Enclosure	Cast Iron - BS EN1561
Element Materials	Copper, Stainless Steel, Inconel 600, Incoloy 800 & 825
Element Diameters	6.35mm - 16mm
Controls	Up to 2 Thermostats
Maximum Rating	30 AMPS 690V
Wiring	Single or Three Phase, Star or Delta
Max. Watt Density	9.92 W/cm^2 (64 W/in^2)
Fixings	Gun Metal, Steel, Stainless Steel



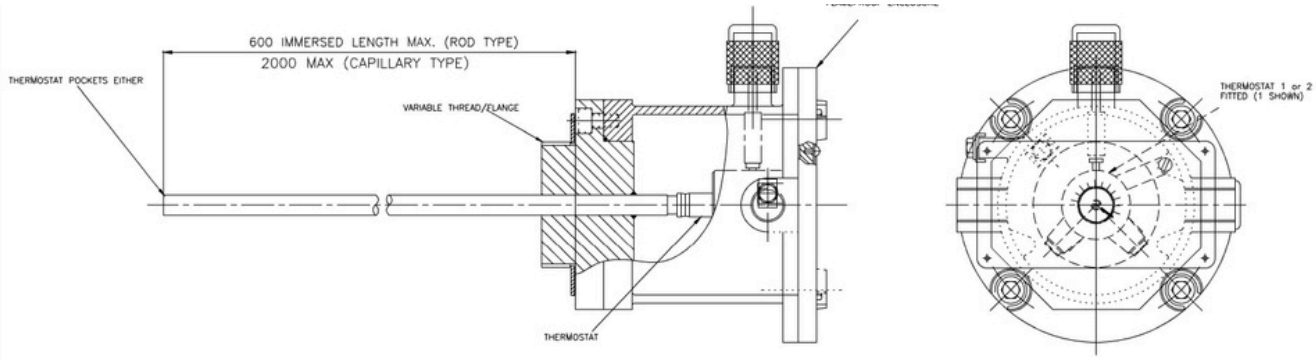
FP-CL-1
E Exd IIB Flameproof Liquid Heater

Specification	E Exd IIB Flameproof Liquid Heater
Standards	EN 60079-0 & EN 60079-1 Group IIB
Terminal Enclosure	Cast Iron - BS EN1561
Element Materials	Copper, Mild Steel, Incoloy, Stainless Steel, Titanium
Element Diameters	35mm Core
Max. No. Elements	1
Controls	1 Thermostat
Maximum Rating	30 AMPS 690V
Wiring	Single or Three Phase, Star or Delta
Fixings	Threaded or Flanged



FP-TGL-1
Thermostats for Gas or Liquid Flameproof Heaters

Specification	Thermostats for Gas or Liquid Flameproof Heaters
Standards	EN 60079-0 & EN 60079-1 Group IIB
Terminal Enclosure	Cast Iron - BS EN1561
IP Rating	IP67
Controls	Thermostat



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