

**ATEX**

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**AIR WARMERS**

# STW INDUSTRIAL CONVECTOR HEATERS

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.

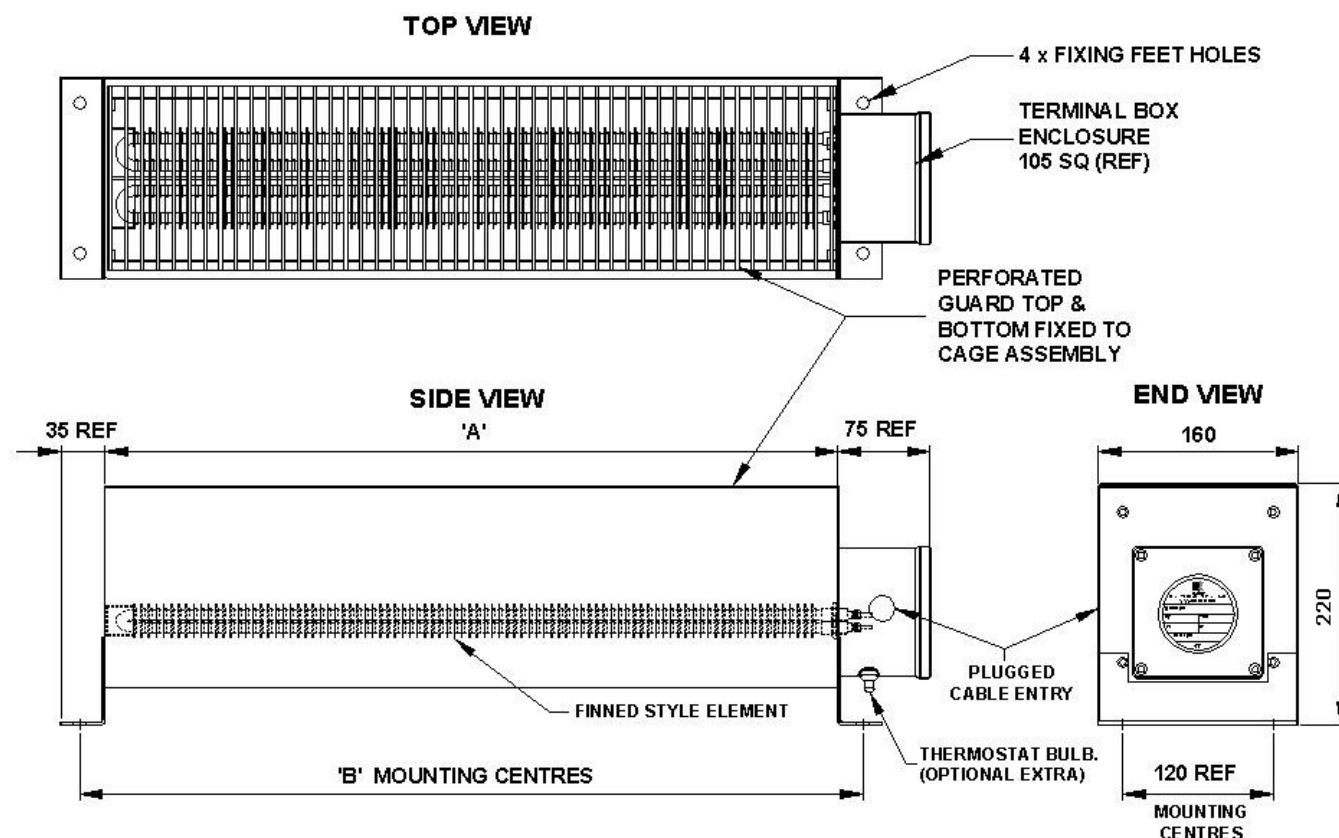


## FEATURES

- Heavy duty robust construction
- Suitable for floor or wall mounting
- Powder coated carbon steel construction
- Supplied with plugged cable entries
- Weatherproof protected to IP66 against water and dust
- Optional adjustable 0°C to 40°C room temperature controlled thermostat
- 1 x 25mm (plugged) cable entry provided as standard

## TYPICAL APPLICATIONS

- Container heating
- Crane cabs
- Dairies
- Engine bay
- Equipment rooms
- Frost protection
- Greenhouses
- Living quarters
- Pump stations
- Ships
- Storage units
- Wet rooms
- Workshops



Model	Stock Number	Rating (W)	Supply (V)	Dimensions (mm)			Weight (kg)
				A	B	Overall	
STW 1000	S62 01 01 00	1000	110 or 240	500	540	610	6.6
STW 2000	S62 01 02 00	2000	110 or 240	1000	1040	1110	14.5
STW 3000	S62 01 03 00	3000	110 or 240	1500	1540	1610	20
STW 1000T	S62 01 01 00-T	1000	110 or 240	500	540	610	6.6
STW 2000T	S62 01 02 00-T	2000	110 or 240	1000	1040	1110	14.5
STW 3000T	S62 01 03 00-T	3000	240	1500	1540	1610	20

## CONSTRUCTION

Powder coated carbon steel construction to RAL 9007 Grey

## TERMINAL BOX

Powder coated die cast aluminium, weatherproof to IP66

## ELEMENT

304 stainless steel finned type

## SUPPLY

Standard heaters are designed to 1 phase 110 to 120V and 230 to 240V

## MOUNTING

Support feet are pre-drilled and suitable for floor mounting or wall mounting; heaters should be mounted horizontally with unrestricted air flow around the unit

## RATING

1kW, 2kW and 3kW ratings available

# FWD FLAMEPROOF AIR WARMERS

The FWD range of air warmers is designed for use in small work or storage areas, and are certified for use in hazardous areas where the atmosphere is classified as a Zone 1 or 2 (IIA, IIB, IIC) gas group, or a Zone 21 or 22 (IIIA, IIIB, IIIC) dust group.

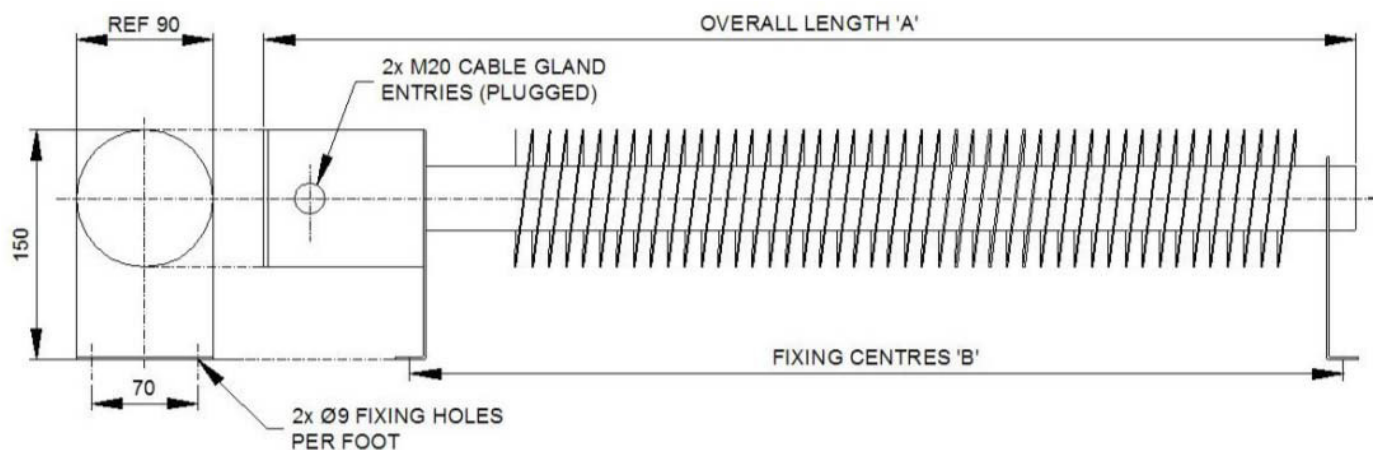


## FEATURES

- Certified to ATEX, IECEx, CU TR (EAC) and KGS standards
- Fabricated carbon steel enclosure weatherproof to IP66
- Temperature classes T2, T3 and T4 available
- Suitable for horizontal floor or wall mounting
- 2 x 20mm (plugged) cable entries provided as standard
- Corrosion resistant powder coated finish
- T3 / T4 units suitable for ambient temperatures from -60°C to +40°C and T2 units to +60°C
- Individually replaceable heating elements

## TYPICAL APPLICATIONS

- Aircraft hangar service bays
- Ammunition depots
- Battery stores
- Biogas plants
- Chemical plants
- Compressor enclosure
- Container heating
- Crane cabins
- Dusty environments
- Explosive stores
- Firework factories
- Fuel servicing areas
- Gas installations
- Offshore installations
- Paint / solvent stores
- Skid enclosure
- Spray booths
- Sugar refineries



Model	T Class	Watts Rating	Dimensions				Weight (kg)
			A (l)	B (leg length)	C (w)	D (h)	
FWD-500-T3	3	500	800	670	90	150	9
FWD-1000-T3	3	1000	1300	1170	90	150	12
FWD-1500-T3	3	1500	1900	1770	90	150	17
FWD-2000-T3	3	2000	2450	2320	90	150	20
FWD-500-T4	4	500	1300	1170	90	150	12
FWD-750-T4	4	750	1900	1770	90	150	17
FWD-1000-T4	4	1000	2450	2320	90	150	20

## CERTIFICATION

**ATEX/IECEX**  II 2 G/D

Ex d IIC T2 to T4 Gb suitable for Zones 1 and 2

Ex t IIIC T300 to T135°C Db suitable for Zones 21 and 22

**CU TR (EAC)**

1Ex db IIC T4...T2 Gb X

Ex tb IIIC T135°C...T300°C Db X

**KGS** certification available

## RATING

500W to 2kW

## 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 Industrial range of remote mounted thermostats available for use in hazardous areas

## MOUNTING

Pre-drilled support feet supplied as standard; heaters should be mounted horizontally with unrestricted air flow around the unit

## VOLTAGE

**1 phase:** 110 to 120V and 230 to 254V

**3 phase:** 380 to 440V, subject to design parameters

**Voltage tolerance:** +0/-10%

# FWD-T FLAMEPROOF ADJUSTABLE AIR WARMERS

The FWD range of air warmers is designed for use in small work or storage areas, and are certified for use in hazardous areas where the atmosphere is classified as a Zone 1 or 2 (IIA, IIB, IIC) gas group, or a Zone 21 or 22 (IIIA, IIIB, IIIC) dust group.

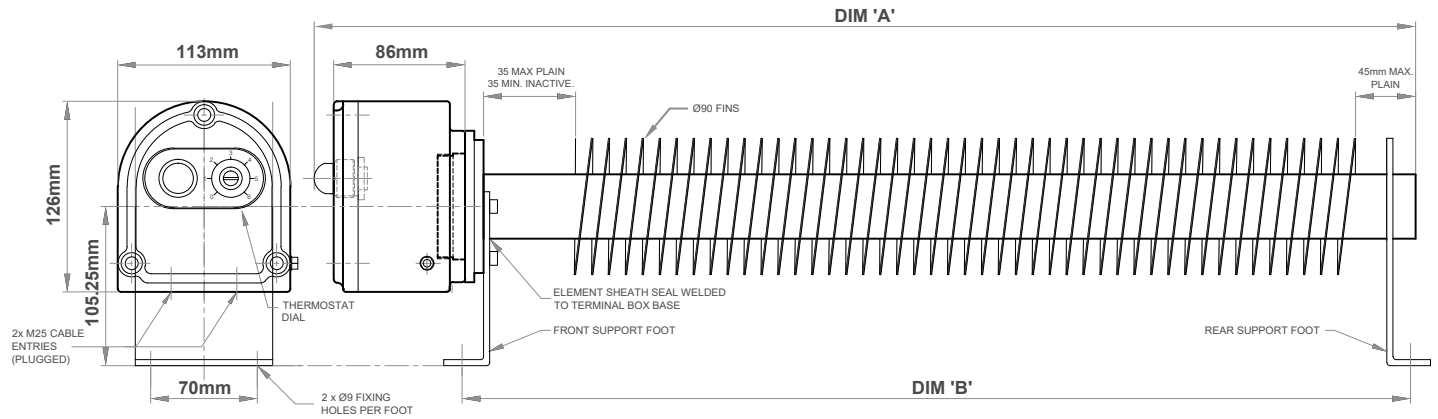


## FEATURES

- Certified to ATEX, IECEx, CU TR (EAC) and KGS standards
- Weatherproof to IP66
- Temperature classes T2, T3 and T4 available
- Suitable for horizontal floor and wall mounting
- 2 x 25mm (plugged) cable entries provided as standard
- Corrosion resistant powder coated finish
- T3 / T4 units suitable for ambient temperatures from -60°C to +40°C and T2 units to +60°C
- Rotatable terminal box

## TYPICAL APPLICATIONS

- Aircraft hangar service bays
- Ammunition depots
- Battery stores
- Biogas plants
- Chemical plants
- Compressor enclosure
- Container heating
- Crane cabins
- Dusty environments
- Explosive stores
- Firework factories
- Fuel servicing areas
- Gas installations
- Offshore installations
- Paint / solvent stores
- Skid enclosure
- Spray booths
- Sugar refineries



Model	T Class	Watts Rating	Dimensions				Weight (kg)
			A (l)	B (leg length)	C (w)	D (h)	
FWDT-500-T3	3	500	800	670	113	126	9
FWDT-1000-T3	3	1000	1300	1170	113	126	12
FWDT-1500-T3	3	1500	1900	1770	113	126	17
FWDT-2000-T3	3	2000	2450	2320	113	126	20
FWDT-500-T4	4	500	1300	1170	113	126	12
FWDT-750-T4	4	750	1900	1770	113	126	17
FWDT-1000-T4	4	1000	2450	2320	113	126	20

#### Certification

**ATEX/IECEX**  II 2 G/D

Ex d IIC T2 to T4 Gb suitable for Zones 1 and 2

Ex t IIIC T300 to T135°C Db suitable for Zones 21 and 22

**CU TR (EAC)**

1Ex db IIC T4...T2 Gb X

Ex tb IIIC T135°C...T300°C Db X

**KGS** certification available

#### Rating

500W to 2kW

#### Enclosure

Mild steel powder coated orange/grey

#### Controls

Externally adjustable 0 to 40°C room temperature controlled thermostat (max setting 25°C)

#### Mounting

Pre-drilled support feet supplied as standard; heaters should be mounted horizontally with unrestricted air flow around the unit

#### Voltage

**1 phase:** 110 to 120V and 230 to 254V

**Voltage tolerance:** +0/-10%

# HEF HAZARDOUS AREA ENCLOSURE/CABINET HEATERS

The HEF is self-regulating, automatically adjusting its output to match ambient temperatures. Coupled with its compact design, this makes the HEF ideal for anti-condensation, frost protection and temperature control for all instrumentation and switch gear applications. The HEF range is certified for use in hazardous areas where the atmosphere is classified as a Zone 1 or 2 (IIC) gas group.



## FEATURES

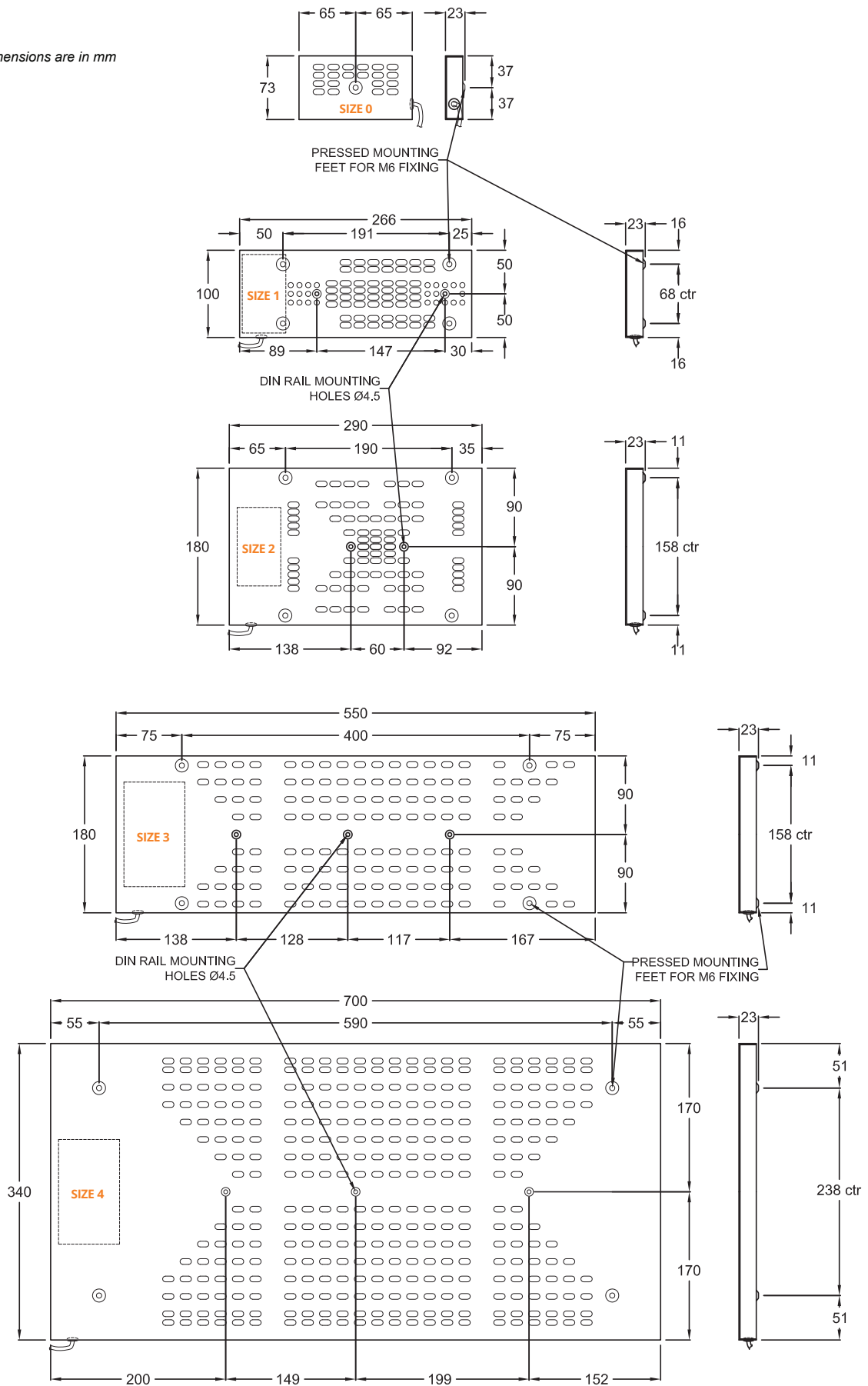
- Certified and declared in accordance with ATEX directive 2014/34/EU
- Certified to CSA (Divisions and Zones) standards for North American markets
- Compact, low profile, 316 stainless steel case, requires minimal space
- Self-regulating - can be used without a thermostat
- Suitable for ambient temperatures from -60°C (-55°C for CSA certified models only) to +80°C
- Mounting of the heater can be in any orientation
- Design allows for closer installation proximity to internal components and cables (minimum distance 100mm away)

## TYPICAL APPLICATIONS

- Condensation prevention
- Container skid housing
- Control/monitoring panels
- Control valve housings
- Fire hose cabinets
- Frost protection
- Generators
- Instrumentation cabinets
- Manifolds
- Motor enclosures/cabinets
- Temperature fluctuations



All dimensions are in mm



**ATEX/IECEX, CU TR (EAC), KGS** certification available

Model	Output	Temperature Class	Weight	Size of Casing
HEF30	30W	T4	0.4kg	SIZE 0
HEF50	50W	T4	1.0kg	SIZE 1
HEF100	100W	T4	1.5kg	SIZE 2
HEF200	200W	T4	3.0kg	SIZE 3
HEF500	500W	T4	6.5kg	SIZE 4

#### CSA

Model	Output	Temperature Class	Weight	Size of Casing
HEF30	30W	T3	0.4kg	SIZE 0
HEF50	50W	T3	1.0kg	SIZE 1
HEF100	100W	T3	1.5kg	SIZE 2
HEF200	200W	T3	3.0kg	SIZE 3
HEF500	500W	T3	6.5kg	SIZE 4

**Note:** CSA T4 certified models available upon special request.

#### CERTIFICATION

##### ATEX/IECEX

Ex II 2 G Ex e IIC T4 Gb

##### CSA ® (CAN & USA)

CAN: Class I, Division 2, Groups A, B, C and D, T3 or T4

CAN: Ex e IIC T3 or T4 Gb

USA: Class I, Division 2, Groups B, C and D, T3 or T4

USA: Class I, Zone 1, AEx e IIC T3 or T4 Gb

##### CU TR (EAC)

1Ex e II T4 GB

##### KGS certification available

Ex e IIC T4

#### CASING

316 perforated stainless steel

#### 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 be used in conjunction with the AFT, HFT or FXT flameproof air sensing thermostats

#### ELEMENTS

Self-regulating

#### MOUNTING

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

#### RATING

The HEF range is available in a nominal 30W, 50W, 100W, 200W and 500W outputs

#### VOLTAGE

Models available for 110V to 120V and 230V to 240V 1 phase supplies (max 254V subject to design parameters)

# FXS BLOCK HEATERS

The FXS self-regulating block heaters provide a bespoke solution tailored to suit your requirements. Unlike fixed duty heaters, the FXS does not require a thermostat to operate safely due to their inbuilt ability to reduce the output as the temperature increases. They can operate in ambient temperatures as high as 130°C (T4) or 180°C (T3) and down to -60°C.

The FXS range is certified for use in hazardous areas where the atmosphere is classified as Zone 1 or 2 (Gas groups IIA, IIB, IIC) and Zone 21 or 22 (Dust groups IIIA, IIIB, IIIC).

Block heaters offer a superior alternative to trace heating when either the size of the part being heated or installation time needs to be considered.

When bolted directly to a metal-based product (an aluminium housing for instance) the self-regulating properties of the FXS Block heater are enhanced, as the part being directly mounted on to acts as a heatsink, and draws the energy from the element far quicker than if left in air.

Trace heating may require several meters of cable to achieve the required duty, which will also need careful installation, securing, and splicing to ensure the protection offered by the cable's approval is maintained. With the FXS Block heater, you simply bolt the unit to your intended surface, and connect the supply cable in an appropriate way.



<b>CERTIFICATION</b>	<b>ATEX/IECEx</b> II 2 G D Ex db IIC T4 to T3 Gb Ex tb IIIC T135°C to T200°C Db  <b>CSA:</b> Class I Div 1, Groups A, B, C, D. T4...T3 Class II Div 1, Groups E, F, G. T4...T3 Class I Zone 1, AEx tb IIIC T4...T3 Zone 21, AEx tb IIIC T135°C...T200°C  <b>CU TR (EAC)</b> CU-TR.012/2011 Certified 1Ex db IIC T4...T3 Gb X Ex tb IIIC T135°C...T200°C Db X
<b>VOLTAGE</b>	100 to 140VAC or 200 to 265VAC
<b>OUTPUT</b>	Up to 1000W (subject to design, mounting and ambient conditions)
<b>AMBIENT</b>	<b>-60 to +130°C:</b> T4 heaters <b>-60 to +180°C:</b> T3 heaters
<b>T-CLASS</b>	T4 (135°C) or T3 (200°C)
<b>MOUNTING</b>	Directly bolted
<b>CABLING</b>	3m standard (up to 10m available on request)
<b>IP RATING</b>	IP66

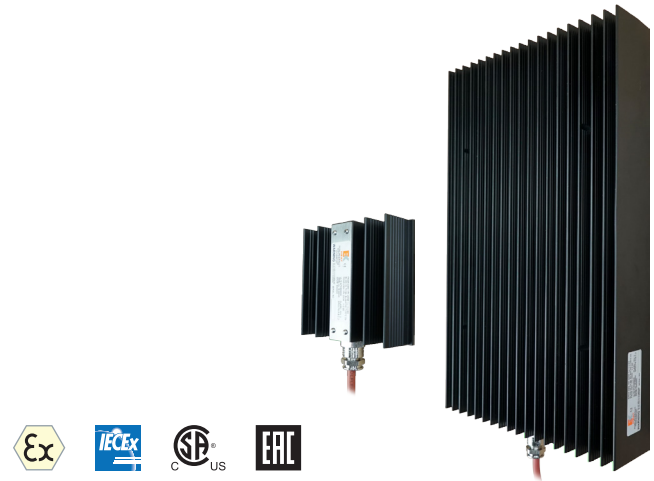
## FEATURES


- Hard anodised aluminium housing suitable for onshore and offshore applications
- Can be directly mounted to the component that requires heating
- Compact and efficient
- Suitable for ambient temperatures as low as -60°C and up to +180°C
- Available in T3 and T4 temperature classes

# FX RANGE OF SELF-REGULATING FLAMEPROOF ENCLOSURE HEATERS

EXHEAT Industrial's extended range of FX enclosure heaters provides an array of enclosure/cabinet heating solutions, and are available in both fixed duty and self-regulating variants. EXHEAT Industrial can also manufacture bespoke self-regulating designs to suit any space restraint or duty requirement. Please enquire about the FXS range for more information.

The FX range also includes the FXT control thermostats, available in both inline or remote designs. These thermostats provide frost protection, condensation prevention and temperature maintenance, and both heaters and thermostats are certified for use in hazardous areas where the atmosphere is classified as Zone 1 or 2 (Gas groups IIA, IIB, IIC) and Zone 21 or 22 (Dust groups IIIA, IIIB, IIIC).



<b>CERTIFICATION</b>	<b>ATEX/IECEx</b>  II 2 G D Ex db IIC T4 to T3 Gb Ex tb IIIC T135°C to T200°C Db  <b>CSA and CU TR (EAC) approval upcoming</b>
<b>AMBIENT</b>	-60°C to +180°C: T3 heaters -60°C to +130°C: T4 heaters Minimum of -50°C with the FXT thermostat
<b>CABLING</b>	3m standard (up to 10m available on request)
<b>IP RATING</b>	IP66 / IP68
<b>MOUNTING</b>	<b>FXB-SR:</b> Wall or rail mounted vertically using supplied mounting kit <b>FXH-SR:</b> Directly bolted to enclosure or bracket (not supplied)
<b>OUTPUT</b>	50 to 550W
<b>PROTECTION</b>	<b>Heater:</b> Flameproof <b>Thermostat:</b> Flameproof or encapsulated
<b>T-CLASS</b>	T4 (135°C) or T3 (200°C)
<b>VOLTAGE</b>	110 to 265VAC

## FXB-SR AND FXH-SR SELF-REGULATING FLAMEPROOF ENCLOSURE HEATERS

The self-regulating range of FX enclosure heaters utilise a hard anodised, extruded aluminium profile, making them suitable for offshore applications, and include a self-regulating, cartridge type heating element in order to provide a controlled heating solution for small and medium sized enclosures.

Self-regulating heating elements produce a variable power output based on the ambient temperature, which removes the necessity for a thermostat. EXHEAT Industrial's FX selfregulating

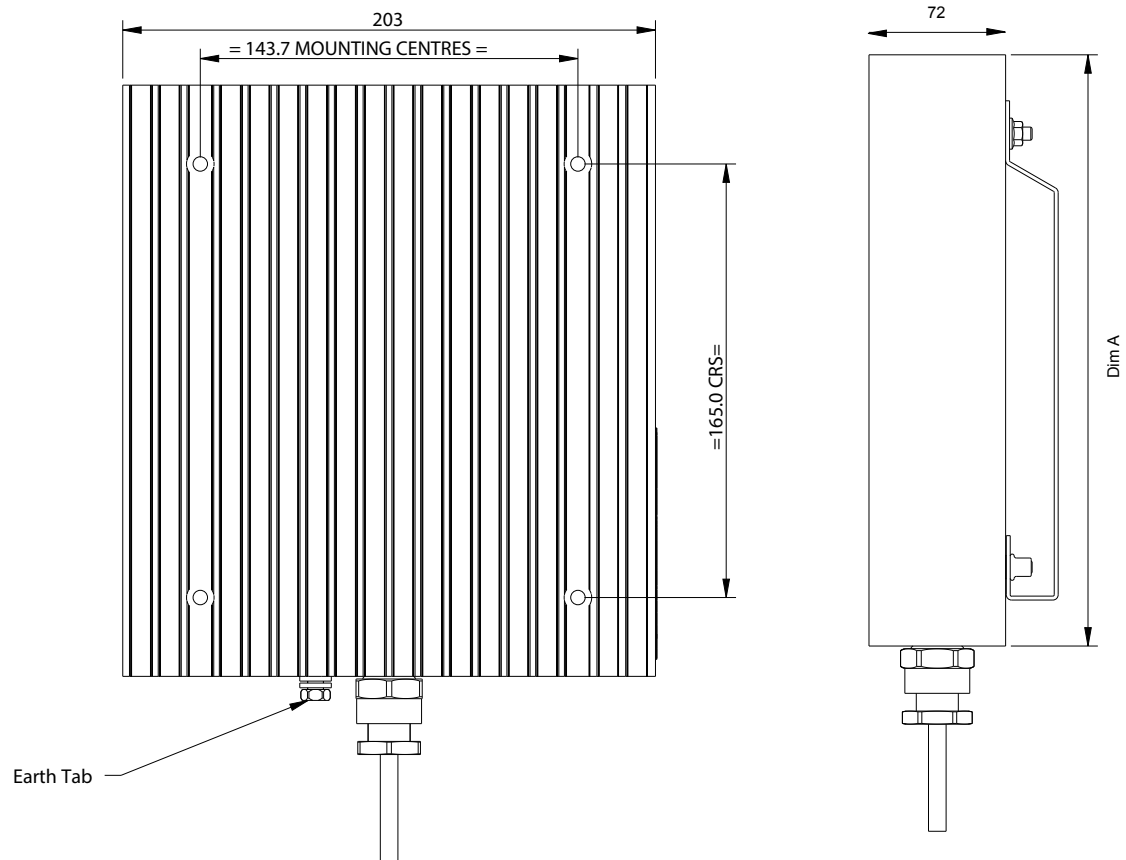
enclosure/cabinet heaters have been certified to operate in an ambient temperature range of -60°C to +180°C for T3 applications and -60°C to +130°C for T4 applications. The FXB-SR heaters are designed with a double-sided finned profile, but unlike the fixed duty heaters, may be installed in any orientation (although vertically will provide the greatest power output). These heaters are supplied with a single mounting solution that can be used to affix the heater either directly to an enclosure or to a rail within one. The FXH-SR heaters have one flat side which can allow flexibility, they can be mounted in any orientation and directly to components that require heating.

Due to the nature of self-regulating heating solutions, these

heaters cannot exceed their ambient temperature limits under their own power; if there are other sources of heat within the enclosure, it may be necessary to include an integral inline thermostat to safely de-energise the heater when the ambient temperature limit is reached.

### TYPICAL APPLICATIONS

- Condensation prevention
- Control / monitoring panels
- Control valve housings
- Fire hose cabinets
- Frost protection
- Generators
- Instrumentation cabinets
- Manifolds
- Motor enclosures
- Valve blocks



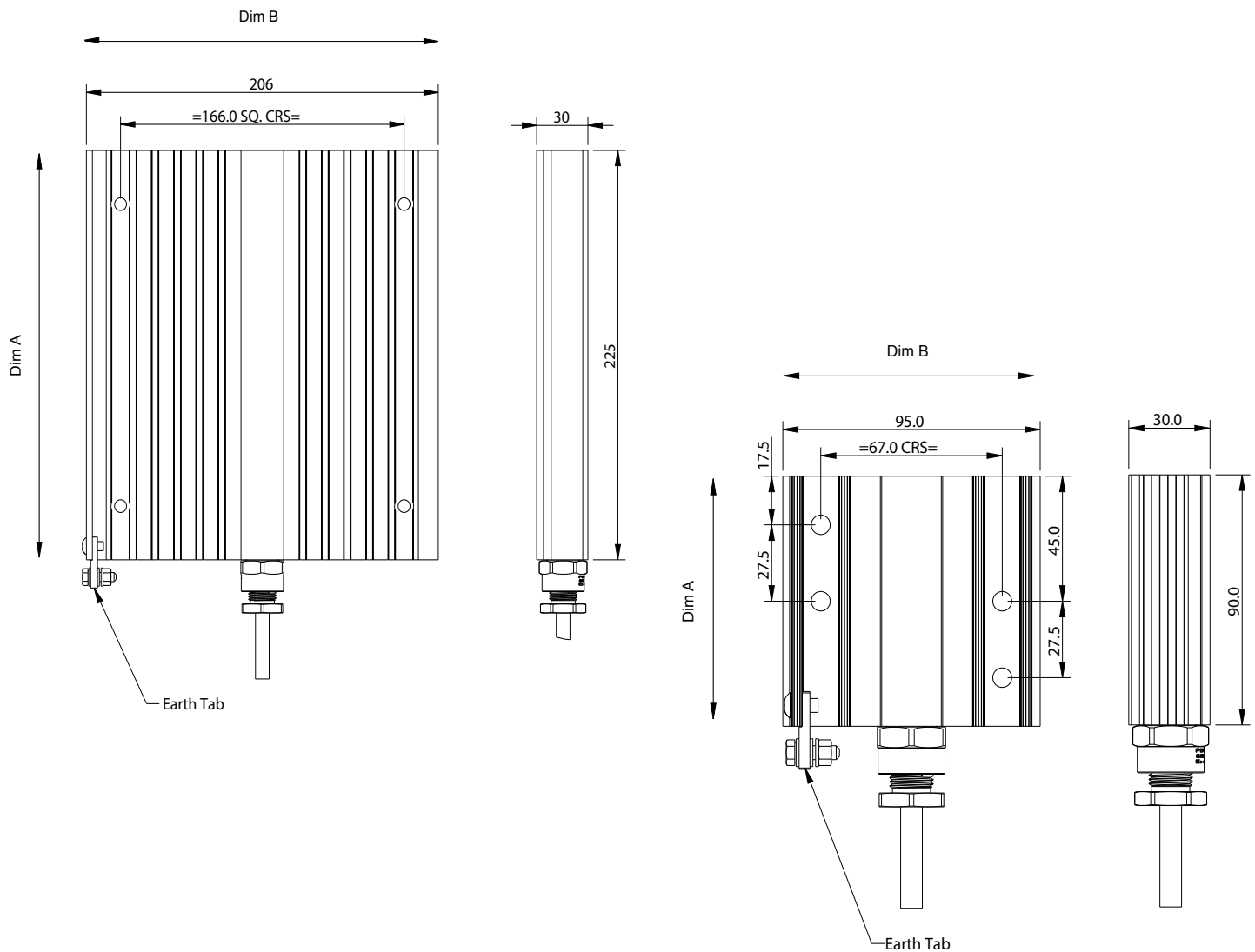
FXB-SR Self-Regulating Double-Finned Enclosure/Cabinet Heaters						
Nominal Power *	Voltage †	T Class	Ambient	Dim A	Weight §	Stock
130W	110-265V	T4	130°C	225mm	3.2kg	Yes
220W	110-265V	T3	180°C	225mm	3.2kg	Yes
220W	110-265V	T4	180°C	225mm	3.2kg	Yes
240W	110-265V	T3	180°C	325mm	4.5kg	Yes
350W	110-265V	T3	130°C	325mm	4.5kg	Yes
400W	110-265V	T3	180°C	325mm	4.5kg	Yes
400W	110-265V	T4	180°C	325mm	4.5kg	Yes
550W	110-265V	T3	180°C	325mm	4.5kg	Yes

\* Power output will vary based on ambient conditions, placement, orientation, mounting and enclosure environment

† +/-0% voltage tolerance

§ Weight including 3m cable

Refer to IOM for recommended mounting distance between heater and enclosure wall.



FXH-SR Self-Regulating 'Low Profile' Enclosure/Cabinet Heaters							
Nominal Power *	Voltage †	T Class	Ambient	Dim A	Dim B	Weight §	Stock
50W	110-265V	T4	130°C	90mm	95mm	0.7kg	Yes
80W	110-265V	T3	180°C	90mm	95mm	0.7kg	Yes
100W	110-265V	T3	180°C	90mm	95mm	0.7kg	Yes
120W	110-265V	T4	130°C	225mm	206mm	2.1kg	Yes
200W	110-265V	T3	180°C	225mm	206mm	2.1kg	Yes
300W	110-265V	T3	180°C	225mm	206mm	2.1kg	Yes

\* Power output will vary based on ambient conditions, placement, orientation, mounting and enclosure environment

† +/-0% voltage tolerance

§ Weight including 3m cable

Refer to IOM for recommended mounting distance between heater and enclosure wall.

# ADDITIONAL ACCESSORIES

## Extended Cable

FX heaters are supplied with 3m of cable as standard. Lengths up to 10m are available upon request.

## Bracket Kit

Bracket mounting kits (*stock code: S0960201650001*) are available for the FXH series.

## Thermostat

EXHEAT Industrial offers optional FXT thermostats that can be supplied fitted to the heaters' supply cable. Please speak to our sales representatives for more information on the range of available thermostats.

FXT-M Encapsulated Inline Thermostat						
Model	Open / Close Temperature (+/-3°C)	Stock Code	Voltage	Max Current	T Class	Max Ambient
FXT-M-5	16°C / 5°C	S760400500	0-277V	6.0 A 3.3 A 4.8 A	T6 T5	60°C 80°C
FXT-M-20	26°C / 15°C	S760402000				
FXT-M-30	37°C / 26°C	S760403000				
FXT-M-40	53°C / 42°C	S760404000				
FXT-M-60	69°C / 58°C	S760462000				
FXT-DI and FXT-DR Flameproof Thermostat						
Model	Open / Close Temperature (+/-3°C)	Stock Code	Voltage	Max Current	T Class	Max Ambient
FXT-DI-5 FXT-DR-5	16°C / 5°C	S760200500 S760300500	0-277V	9.0 A	T6 T5 T4 T3	80°C 95°C 130°C 195°C
FXT-DI-20 FXT-DR-20	26°C / 15°C	S760202000 S760302000				
FXT-DI-30 FXT-DR-30	37°C / 26°C	S760203000 S760303000				
FXT-DI-40 FXT-DR-40	53°C / 42°C	S760204000 S760304000				
FXT-DI-60 FXT-DR-60	69°C / 58°C	S760206000 S760308000				

## PRODUCT SELECTOR

Heater Model	Heater Output (W)	Heater Voltage (VAC) *	Thermostat Type (Optional)	Thermostat Set Point (°C)
• FXB-SR	• 130 • 220 • 240 • 350	• 120 • 240	• DI • DR • M • N †	• 5 • 20 • 40 §
• FXH-SR	• 50 • 80 • 100 • 200			

\* With +0/-10% voltage tolerance.

† Thermostat not required. Client to ensure that the maximum permissible ambient temperature is not exceeded.

§ 40°C set point not applicable for FXT-M models.

## Example (FXH-SR-200-240-N)

FXH-SR 'low profile' enclosure heater, 200W output, 240VAC nominal voltage, with NO additional thermostat (no need to include value from Thermostat Set Point)

# FX RANGE OF FIXED DUTY FLAMEPROOF ENCLOSURE / CABINET HEATERS

EXHEAT Industrial's extended range of FX enclosure / cabinet heaters provides an array of enclosure / cabinet heating solutions, and are available in both fixed duty and self-regulating variants. EXHEAT Industrial can also manufacture bespoke self-regulating designs to suit any space restraint or duty requirement. Please enquire about the FXS range for more information.

The FX range also includes the FXT control thermostats, available in both inline or remote designs. These thermostats provide frost protection, condensation prevention and temperature maintenance, and both heaters and thermostats are certified for use in hazardous areas where the atmosphere is classified as Zone 1 or 2 (Gas groups IIA, IIB, IIC) and Zone 21 or 22 (Dust groups IIIA, IIIB, IIIC).



<b>Certification</b>	<b>ATEX/IECEx</b> II 2 G D Ex db IIC T4 to T3 Gb Ex tb IIIC T135°C to T200°C Db  <b>CU TR (EAC)</b> CU-TR.012/2011 CERTIFIED 1 Ex db IIC T4...T3 Gb X Ex tb IIIC T135°C...T200°C Db X  <b>CSA:</b> Class I Div 2, Groups A, B, C, D T4...T3 Class II Div 2, Groups E, F, G T4...T3 Class I Zone 1, AEx db IIC T4...T3 Gb Zone 21, AEx tb IIIC T135°C...T200°C Db
<b>Ambient</b>	-50°C with options up to +80°C Minimum of -60°C without the FXT thermostat
<b>Cabling</b>	3m standard (up to 10m available on request)
<b>IP Rating</b>	IP66
<b>Mounting</b>	<b>FXB-FD:</b> Wall or rail mounted vertically using the supplied mounting kit <b>FXH-FD:</b> Directly bolted to the enclosure or a bracket (not supplied)
<b>Output</b>	45 to 500W
<b>Protection</b>	<b>Heater:</b> Flameproof <b>Thermostat:</b> Encapsulated as standard, with flameproof options available
<b>T Class</b>	T4 (135°C) and T3 (200°C)
<b>Voltage</b>	110 to 277VAC

## FXB-FD AND FXH-FD FIXED DUTY FLAMEPROOF ENCLOSURE / CABINET HEATERS

The fixed duty range of FX enclosure / cabinet heaters utilise a hard anodised, extruded aluminium profile, making them suitable for offshore applications, and include a fixed duty, cartridge type heating element in order to provide a powerful heating solution for small and medium sized enclosures/ cabinets.

Fixed duty heating elements produce a constant power output regardless of the ambient temperature, giving a specific temperature rise above the ambient. EXHEAT Industrial's FX fixed duty enclosure / cabinet heaters have been certified to operate in an ambient temperature range of -60°C to +40°C for T4 and T3 heaters, and -60°C to +80°C for some T3 heaters (see the tables on page 2).

The FXB-FD heaters are designed with a double-sided finned profile which may only be installed vertically to provide the greatest power output within the range. These heaters are supplied with a single mounting solution that can be used to affix the heater either directly to an enclosure or to a rail within one. The FXH-FD heaters have one flat side which can allow flexibility, they can be mounted horizontally or vertically to suit possible space constraints.

Due to the nature of fixed duty heating solutions, these heaters must not be allowed to exceed their temperature limits. All FX Fixed Duty Heaters are supplied with an integral FXT-M Encapsulated Thermostat as standard, to safely de-energise the heater when a certain ambient temperature is reached.

### TYPICAL APPLICATIONS

- Acoustic enclosures
- Condensation prevention
- Control / monitoring panels
- Control valve housings
- Fire hose cabinets
- Frost protection
- Generators
- Instrumentation cabinets
- Manifolds
- Motor enclosures
- Valve blocks





FXB-FD Fixed Duty Double-Finned Enclosure / Cabinet Heaters						
Power	Voltage *	T Class	Ambient	Dim A	Weight †	Stock
100W	110-120V 230-240V	T3 T4	80°C 40°C	225mm	3.2kg	Yes
200W	110-120V 230-240V	T3 T4	80°C 40°C	225mm	3.2kg	Yes
250W	110-120V 230-240V	T3 T4	80°C 40°C	325mm	4.5kg	Yes
350W	110-120V 230-240V	T3	40°C	225mm	3.2kg	Yes
400W	110-120V 230-240V	T3	40°C	325mm	4.5kg	Yes
500W	110-120V 230-240V	T3	40°C	325mm	4.5kg	Yes

\* Heaters are based on a nominal 120V and 240V with +0/-10% voltage tolerance on most models. 254V (+0/10%) and 277V (+0/10%) are available as a custom design which require special cartridge elements, pricing and lead time will vary.

† Weight including 3m cable

Direct Current (DCV) is now available on request

Refer to IOM for recommended mounting distance between heater and enclosure wall.



FXH-FD Fixed Duty 'Low Profile' Enclosure / Cabinet Heaters							
Power	Voltage *	T Class	Ambient	Dim A	Dim B	Weight †	Stock
45W	110-120V 230-240V	T3 T4	80°C 40°C	90mm	95mm	0.7kg	Yes
85W	110-120V 230-240V	T3	40°C	90mm	95mm	0.7kg	Yes
100W	110-120V 230-240V	T3 T4	80°C 40°C	225mm	206mm	2.1kg	Yes
200W	110-120V 230-240V	T3	40°C	225mm	206mm	2.1kg	Yes

\* Heaters are based on a nominal 120V and 240V with +0/-10% voltage tolerance on most models. 254V (+0/10%) and 277V (+0/10%) are available as a custom design which require special cartridge elements, pricing and lead time will vary.

† Weight including 3m cable

Direct Current (DCV) is now available on request

Refer to IOM for recommended mounting distance between heater and enclosure wall.

## Additional accssories

### Extended Cable

FX heaters are supplied with 3m of cable as standard. Lengths up to 10m are available upon request.

### Bracket Kit (Stock code: S0960201650001)

Bracket Kits are available for the FXH series.

### Thermostat

EXHEAT Industrial can integrate the following FXT thermostats in the heater's supply cable. Please speak to our sales representatives for more information on the range of available thermostats.

FXT-M Encapsulated Inline Thermostat						
Model	Open / Close Temperature (+/-3°C)	Stock Code	Voltage	Max Current	T Class	Max Ambient
FXT-M-5	16°C / 5°C	S760400500	0-277V	6.0 A 3.3 A 4.8 A	T6 T5	60°C 80°C
FXT-M-20	26°C / 15°C	S760402000				
FXT-M-30	37°C / 26°C	S760403000				
FXT-M-40	53°C / 42°C	S760404000				
FXT-M-60	69°C / 58°C	S760462000				
FXT-DI and FXT-DR Flameproof Thermostat						
Model	Open / Close Temperature (+/-3°C)	Stock Code	Voltage	Max Current	T Class	Max Ambient
FXT-DI-5 FXT-DR-5	16°C / 5°C	S760200500 S760300500	0-277V	9.0 A	T6 T5 T4 T3	80°C 95°C 130°C 195°C
FXT-DI-20 FXT-DR-20	26°C / 15°C	S760202000 S760302000				
FXT-DI-30 FXT-DR-30	37°C / 26°C	S760203000 S760303000				
FXT-DI-40 FXT-DR-40	53°C / 42°C	S760204000 S760304000				
FXT-DI-60 FXT-DR-60	69°C / 58°C	S760206000 S760308000				

## PRODUCT SELECTOR

Heater Model	Heater Output (W)	Heater Voltage (VAC)	Thermostat Type	Thermostat Set Point (°C)
• FXB-FD	• 100 • 200 • 250 • 350 • 400 • 500	• 110 • 120 • 220 • 230 • 240 • 254 • 277	• DI • DR • M • N †	• 5 • 20 • 40 • 60 • 80 §
• FXH-FD	• 45 • 85 • 100 • 200			

† Thermostat not required. Client to ensure that the maximum permissible ambient temperature is not exceeded.

§ 80°C set point not applicable for FXT-M models.

### Example (FXB-FD-100-110-DR-5)

FXB-FD fixed duty double-finned enclosure / cabinet heater, 100W output, 110 voltage AC, with FXT-DR flameproof remote thermostat at 5°C pre-set temperature trigger point

# FXS RANGE OF FLAMEPROOF ENCLOSURE/CABINET HEATERS



The FXS self-regulating enclosure/cabinet heater provides a bespoke solution tailored to suit your requirements. Unlike fixed duty heaters, the FXS does not require a thermostat to operate safely due to their inbuilt ability to reduce the output as the temperature increases. They can operate in ambient temperatures as high as 130°C (T4) or 180°C (T3) and down to -60°C.

The FXS is certified for use in hazardous areas where the atmosphere is classified as Zone 1 or 2 (Gas groups IIA, IIB, IIC) and Zone 21 or 22 (Dust groups IIIA, IIIB, IIIC).

The FXS concept can be applied to practically any enclosure, cabinet, or component heating requirement. Designs will utilise an anodised aluminium body fitted with a self-regulating PTC cartridge type heating element in order to provide effective heating of enclosures via convection and radiation.

PTC heating elements produce more power when it is needed at lower temperatures. As ambient temperature increases, the resistance of the PTC element increases with the effect of a steady reduction in power output so that no power is produced above a particular temperature set point.

FXS self-regulating heaters are not restricted to being vertically mounted, but instead can be mounted flat on the base of an enclosure, horizontal/diagonally on an enclosure wall or directly to whatever component needs the heat.

## Features

- Hard anodised aluminium housing suitable for onshore and offshore applications
- Can be directly mounted to the component that requires heating
- Compact and efficient
- Suitable for ambient temperatures as low as -60°C and up to +180°C
- Available in T3 and T4 temperature classes


<b>Certification</b>	<b>ATEX/IECEx</b> II 2 G D Ex db IIC T4 to T3 Gb Ex tb IIIC T135°C to T200°C Db  <b>CSA:</b> Class I Div 1, Groups A, B, C, D. T4...T3 Class II Div 1, Groups E, F, G. T4...T3 Class I Zone 1, AEx tb IIIC T4...T3 Zone 21, AEx tb IIIC T135°C...T200°C  <b>CU TR (EAC)</b> CU-TR.012/2011 Certified 1Ex db IIC T4...T3 Gb X Ex tb IIIC T135°C...T200°C Db X
<b>Voltage</b>	100 to 140VAC or 200 to 265VAC
<b>Output</b>	Up to 1000W (subject to design, mounting and ambient conditions)
<b>Ambient</b>	<b>-60 to +130°C:</b> T4 heaters <b>-60 to +180°C:</b> T3 heaters
<b>T Class</b>	T4 (135°C) or T3 (200°C)
<b>Mounting</b>	Directly bolted
<b>Cabling</b>	3m standard (up to 10m available on request)
<b>IP Rating</b>	IP66

# FXE RANGE OF FIXED DUTY COMPACT FLAMEPROOF ENCLOSURE/CABINET HEATERS

EXHEAT Industrial's original range of FXE enclosure/cabinet heaters provides an array of fixed duty heating solutions for smaller enclosures/cabinets. EXHEAT Industrial also offers a range of FX fixed duty and self-regulating heaters, as well as the FXS bespoke self-regulating models that can be custom engineered to suit the customer's space restraints or duty requirements.

The FX range also includes the FXT control thermostats, available in both inline or remote designs. These thermostats provide frost protection, condensation prevention and temperature maintenance, and both heaters and thermostats are certified for use in hazardous areas where the atmosphere is classified as Zone 1 or 2 (Gas groups IIA, IIB, IIC) and Zone 21 or 22 (Dust groups IIIA, IIIB, IIIC).



<b>Certification</b>	<b>ATEX/IECEx</b>  II 2 G D Ex d IIC T4 to T3 Gb Ex tb IIIC T135°C to T200°C Db  <b>CU TR</b> 1Ex db IIC T4...T3 Gb X Ex tb IIIC T135°C...T200°C Db X
<b>Ambient</b>	-50°C with options up to +80°C
<b>Cabling</b>	1.5m standard
<b>IP Rating</b>	IP66
<b>Mounting</b>	Wall or rail mounted vertically using the supplied mounting kit
<b>Output</b>	30 to 100W
<b>Protection</b>	<b>Heater:</b> Flameproof <b>Thermostat:</b> Flameproof or encapsulated
<b>T Class</b>	T4 (T135°C) and T3 (T200°C)
<b>Voltage</b>	110 to 254VAC

## FXE FIXED DUTY COMPACT FLAMEPROOF ENCLOSURE/CABINET HEATERS

The FXE range of enclosure/cabinet heaters utilise a hard anodised, extruded aluminium profile, making it suitable for offshore applications, and includes a fixed duty cartridge type heating element in order to provide a compact heating solution for small enclosures/cabinets.

Fixed duty heating elements produce a constant power output regardless of the ambient temperature, giving a specific temperature rise above the ambient. EXHEAT Industrial's FXE enclosure/cabinet heaters have been certified to operate in an ambient temperature range -50°C to +40°C for T4 class heaters, and -50°C to +60°C and +80°C for T3 class heaters.

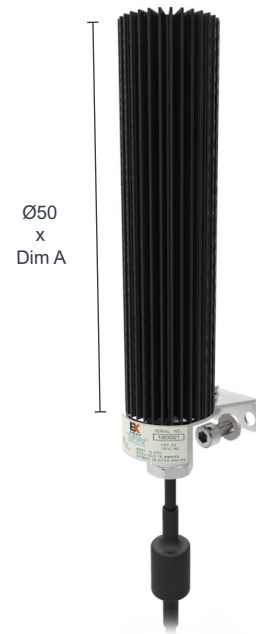
The FXE heaters are designed with a small, circular finned profile which may only be installed in a vertical orientation. These heaters are also supplied with a single mounting solution that can be used to affix the heater either directly to an enclosure, a bracket or terminal rail.

Due to the nature of fixed duty heating solutions, these heaters must not be allowed to exceed their ambient temperature limits; however EXHEAT Industrial can supply all heaters within the range with an integral inline thermostat which safely de-energises the heater when a certain ambient temperature is reached.

### Typical applications

- Acoustic enclosures
- Condensation prevention
- Control / monitoring panels
- Control valve housings
- Fire hose cabinets
- Frost protection
- Generators
- Instrumentation cabinets
- Manifolds
- Motor enclosures

Power	Voltage	T Class	Ambient	Dim A	Stock
30W	110-120V	T4	40°C	250mm	Yes
	220-254V	T3	80°C	175mm	
50W	110-120V	T4	40°C	325mm	Yes
	220-254V	T3	80°C	250mm	
75W	110-120V 220-254V	T3	60°C	250mm	Yes
100W	110-120V 220-254V	T3	60°C	325mm	Yes



## ADDITIONAL ACCESSORY - THERMOSTAT

EXHEAT Industrial offers FXT thermostats that can be supplied fitted to the heaters' supply cable. Please speak to our sales representatives for more information on the range of available thermostats.

FXT Flameproof Air Sensing Thermostat			
Model	On/Off Temperature (+/-1.5°C)	Fuse Trip Temperature	Rating
FXT1	-1.5°C/5°C	76°C (+/- 3°C)	Up to 1.30A
FXT2	11.5°C/17°C	76°C (+/- 3°C)	Up to 1.30A
FXT3	33.5°C/40°C	76°C (+/- 3°C)	Up to 1.30A

# FLR FLAMEPROOF LIQUID FILLED RADIATORS

The FLR range of liquid filled electrically heated radiators comes complete with an externally adjustable control thermostat, and is certified for use in hazardous areas where the atmosphere is classified as a Zone 1 or 2 (IIA, IIB, IIC) gas group, or a Zone 21 or 22 (IIIA, IIIB, IIIC) dust group.

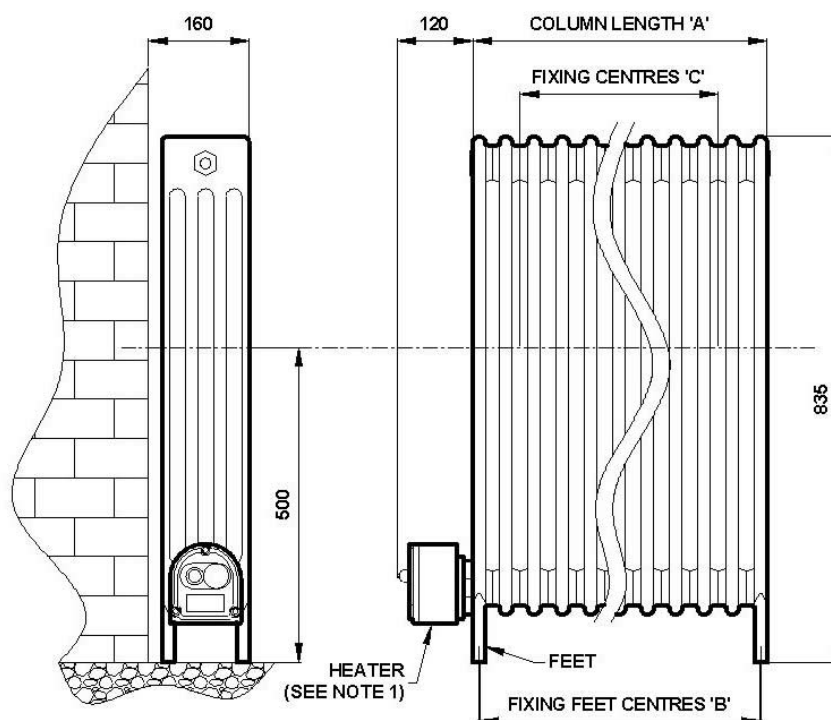
## FEATURES

- Certified to ATEX, CU TR (EAC)
- Low surface temperature
- Certified weatherproof protected to IP6X
- Integral preset surface temperature control thermostat
- Floor mounting
- Radiator filled with water/glycol mix
- Suitable for ambient temperatures from -20°C to +40°C
- Robust construction
- Manual reset over-temperature cut-out fitted to ensure radiator surface temperature never exceeds 80°C
- Optional externally adjustable control thermostat
- 2 × 25mm (plugged) cable entry provided as standard


## TYPICAL APPLICATIONS

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





Model	Stock Code	Rating kW	Dimensions			Weight (kg)
			A (w)	B (leg width)	C (h)	
FLR1	S63030001	1	580	510	835	47
FLR2	S63030002	2	1130	1060	835	94
FLR3	S63030003	3	1680	1610	835	140
Design includes an externally adjustable thermostat 0-40°C						
FLR1A	S63040001	1	580	510	835	47
FLR2A	S63040002	2	1130	1060	835	94
FLR3A	S63040003	3	1680	1610	835	140

**Certification**
**ATEX**  II 2 G/D

Ex d IIC T6 Gb (Gas) suitable for Zones 1 and 2

Ex t IIIC T85°C Db (Dust) suitable for Zones 21 and 22

**CU TR (EAC)**

1Ex db IIC T6 Gb X

Ex tb IIIC T85°C Db X

**Enclosure**

Cast aluminium finished in orange/grey

**Radiator**

Pressed steel with white powder coated finish to RAL 9016

**Element**

Long life 321 stainless steel rod-type, comprising high quality 80/20 nickel chrome resistance wire, compacted in magnesium oxide insulating powder

**Controls**

Preset radiator surface temperature control thermostat and manual reset safety temperature limiter (optional externally adjustable control thermostat)

**Mounting**

Floor standing with welded-on feet and wall retention brackets

**Rating**

Standard heater ratings 1kW, 2kW and 3kW

**Voltage**
**1 phase:** 230 to 240V

**Voltage tolerance:** +0/-10%

# FCR HAZARDOUS AREA CONVECTOR HEATERS

Heavy duty folded steel construction and finned stainless steel elements give the FCR range an exceptionally long life. The FCR range is certified for use in hazardous areas where the atmosphere is classified as a Zone 1 or 2 (IIA, IIB, IIC) gas group.



## FEATURES

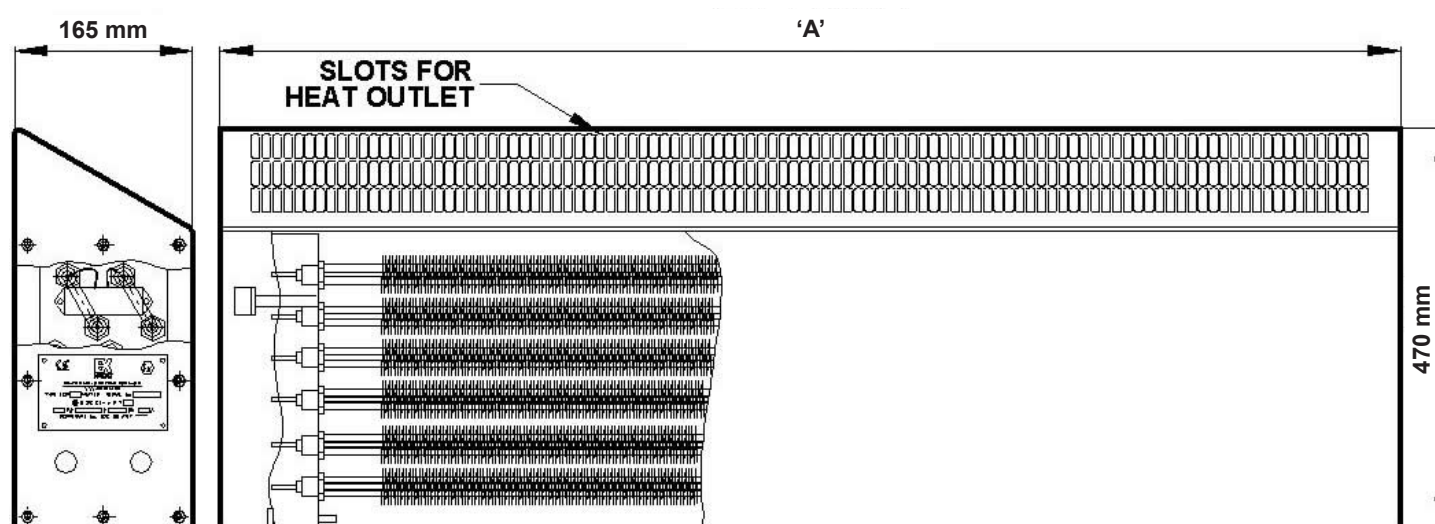
- Certified weatherproof protected to IP67
- Small footprint, occupying less floor space
- Sloped top, preventing objects being placed on the grill
- Floor or wall mounting
- Integral terminal enclosure
- Suitable for ambient temperatures from -60°C to +40°C
- Incoloy 800 finned elements for long life
- Grey gloss, powder coated, sheet steel construction
- Optional built-in room temperature control thermostat
- 2 x M20 (temporary plugged) cable entry provided as standard


## TYPICAL APPLICATIONS

- Aircraft hangars
- Battery stores
- Chemical plants
- Container heating
- Frost protection
- Fuel servicing areas
- Gas installations
- Offshore installations
- Storage areas



Model Name	Load (kW)	Voltage (V)	Weight (kg)	Dim A (mm)
<b>Convactor Heaters Ex e II T3</b>				
FCR 1110	1	110	17	1240
FCR 110A	1	110	19	1295
FCR 1240	1	240/415	17	1240
FCR 1240A	1	240	19	1295
FCR 2110	2	110	32	1240
FCR 2110A	2	110	34	1295
FCR 2240	2	240/415	32	1240
FCR 2240A	2	240	34	1295
FCR 3240	3	240/415	47	1750
FCR 3240A	3	240	49	1805


**Certification**

**ATEX/IECEX**  II 2 G  
 Ex e IIC T3...T2 Gb Zone 1 and 2 (IP67)  
**CU TR (EAC)** 1Ex e II T4...T2 Gb  
**CSA** approval upcoming

**Controls**

If required, the heaters can be controlled from the EXHEAT Industrial range of remote mounted thermostats available for use in hazardous areas

**Elements**

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

**Enclosure**

Heavy duty powder coated mild steel

**Mounting**

Wall or floor mounting via brackets/feet supplied

**Rating**

Standard heating ratings 1kW, 2kW and 3kW

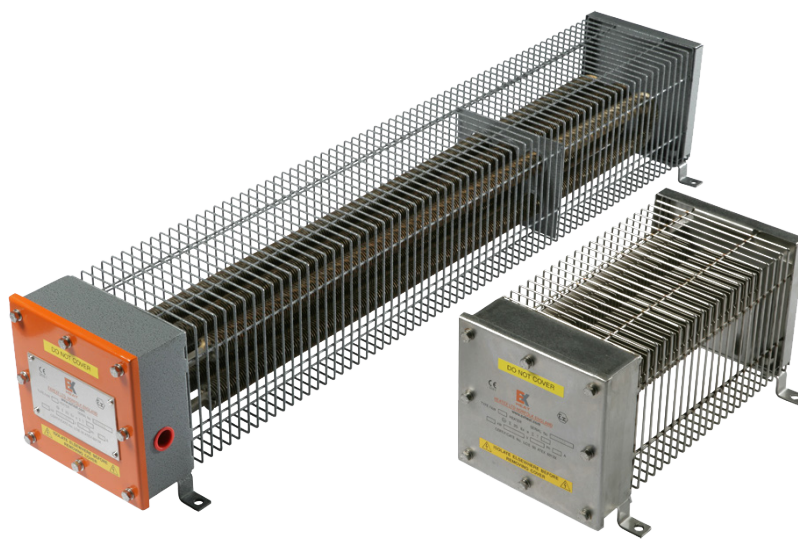
**Voltage**

**1 phase:** 110V to 120V and 230V to 254V  
**3 phase:** 380V to 440V, subject to design parameters

# FAW HAZARDOUS AREA AIR WARMERS

The FAW range offers a versatile, lightweight air warming solution for small work and storage areas, and is suitable for use with 1 phase or 3 phase power supplies up to 660 volts. The range can also be configured for use with DC power supplies.

This range is certified for use in hazardous areas where the atmosphere is classified as a Zone 1 or 2 (IIA, IIB, IIC) gas group. When space is limited, we offer our FAW-C compact range as an option.

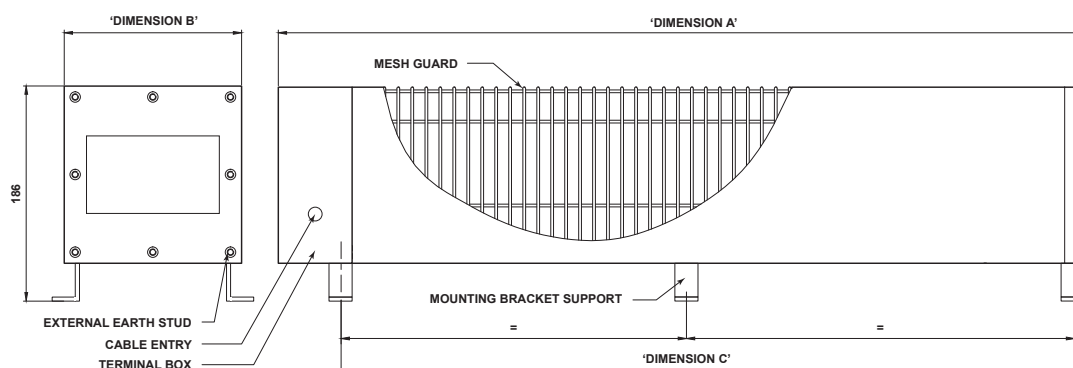


## Features

- Certified to ATEX, IECEx, CU TR (EAC), KGS and CSA standards
- Temperature classes T2, T3, and T4 available
- Lightweight enclosure certified weatherproof to IP67
- Suitable for 1 phase or 3 phase (3 or 4 wire) or DC power supplies
- Suitable for horizontal floor or wall mounting
- A 20mm cable entry is provided as standard, additional entries can be provided as required
- Powder coated finish on standard design / 316L Stainless Steel on compact design
- Optional range of flameproof room thermostats can also be provided
- T3 / T4 units suitable for ambient temperatures from -60°C to +40°C and T2 units to +60°C

## Typical applications

- Aircraft hangars
- Battery stores
- Chemical plants
- Container heating
- Crane / forklift cabins
- Deluge cabinet heating
- Enclosures / cabinets
- Frost protection
- Fuel servicing areas
- Gas installations
- Motor enclosures
- Offshore installations
- Paint / solvent stores
- Safety equipment enclosure
- Safety showers
- Spray booths



Model	T Class	Watts Rating	Voltage	Dimensions (mm)				Weight (kg)
				A (l)	B (w)	C (leg length)	D (h)	
Compact Range								
FAW-C-250	T2/T3	250	240 or 110	350	161	282	186	5
FAW-C-500	T2/T3	500	240 or 110	350	161	282	186	6
FAW-C-750	T2/T3	750	240 or 110	615	161	545	186	6
FAW-C-1000	T2/T3	1000	240 or 110	615	161	545	186	9

Model	T Class	Watts Rating	Voltage	Supports	Dimensions (mm)			Weight (kg)
					A	B	C	
Standard Range								
FAW250	T2/T3	250	240/254 or 110	2	971	161	860	8
FAW500	T2/T3	500	240/254 or 110	2	971	161	860	10
FAW750	T2/T3	750	240/254/415/440 or 110	2	971	161	860	12
FAW1000	T2/T3	1000	240/254/415/440 or 110	2	1221	161	1145	14
FAW1500	T2/T3	1500	240/254/415/440 or 110	3	1741	161	1670	20
FAW2000	T2/T3	2000	240/254 or 110	4	1741	272	1640	32
FAW2000-SB	T2/T3	2000	240/254/415/440 or 110	3	1221	272	1145	34
FAW2500	T2/T3	2500	240/254	4	1741	272	1670	38
FAW3000	T2/T3	3000	240/254/415/440	4	1741	272	1640	42
FAW250	T4	250	240/254	3	1886	161	1784	13
FAW500	T4	500	240/254	3	1886	161	1784	17
FAW750	T4	750	240/254/415/440	3	1886	161	1784	21
FAW1000	T4	1000	240/254	4	1886	272	1784	33
FAW1250	T4	1250	240/254	4	1886	272	1784	38
FAW1500	T4	1500	240/254/415/440	4	1886	272	1784	42

#### Certification

**ATEX/IECEX**  II 2 G

Ex e IIC T2 to T4 Gb Zone 1 and 2 (IP67)

**CSA** Class I, Division 2. Groups A, B, C, D. T Class T4, T3 or T2

**CU TR (EAC)**

1EX e II T4...T2 Gb

**KGS** certification available

#### Controls

If required, the heaters can be controlled from the EXHEAT Industrial range of remote mounted thermostats available for use in hazardous areas

#### Enclosure

Lightweight 304/316 stainless steel or powder coated mild steel

#### Mounting

Support feet are pre-drilled and suitable for floor mounting supplied as standard (wall mounting brackets available on request). The FAW-C compact design does not require separate brackets and can be wall mounted utilising the existing support feet. The heaters should be mounted horizontally with unrestricted air flow around the unit.

#### Rating

250W to 3kW

#### Voltage

**1 phase:** 110V to 120V and 220V to 254V

**3 phase:** 380V to 440V (max voltage 660V standard units and 550V compact units, subject to design parameters)

**Voltage tolerance:** +0/-10%



**ELVARME**

## VORES PRODUKTSORTIMENT INKLUDERER:



**IMMERSION HEATERS**



**THE BULLDOG**



**TEMPERATUR THERMOSTATS**



**ROBUST - DEMANDING EVIROMENTS**



**KX2 - SMALL AND PORTABLE**



**ATEX**

## VI FØRER PRODUKTER INDENFOR KATEGORIERNE:



**AUTOMATIK**



**HVAC & BYGNINGS-  
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