FP Cast Line Heaters

EXHEAT's range of cast aluminium line heaters provide a compact and efficient heating solution for constant flow liquids or gases. Cast heaters are increasingly being selected over traditional pressure vessel type heaters for the following reasons:

- Suitable for high process design pressures
- Cost effective
- Increased safety due to the encasement
- Compact size with a reduced footprint
- Excellent heat transfer and residual heating from the aluminium casting
- High reliability and increased service life
- Uniform heat distribution
- Resistant to any internal vibrations
- Available on shorter lead times

The design incorporates electric heating elements and an indirect process heating coil embedded within marine grade cast aluminium. This provides excellent heat transfer properties combined with low surface temperatures.

FEATURES

Certified to ATEX, IECEx or CSA standards

Certified under EN/IEC 60079-0, 60079-1, 60079-7, 60079-31 and standards per CEC/NEC 500

Flameproof IP66 rated terminal enclosure

Cellular glass insulated with stainless steel cladding

Maximum design pressure and temperature of 660 barg at up to 400°C

Process control and over-temperature protection sensors: RTD Pt100, thermocouple type K or thermostats

Wall or floor, vertical or horizontal mounting

Multiple heating elements allow for step control, alternatively, solid state relay or thyristor control can be employed

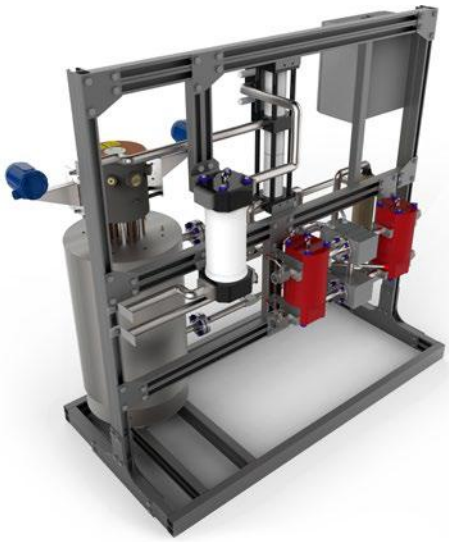
Coil materials: stainless steel 316L, duplex S31803, super duplex S32760 (others, including nickel alloys available on request)

Process connections available using standard flanged or compression joints

TYPICAL APPLICATIONS

Seal gas	Air
Natural gas	Biogas
Paint heating	Nitrogen
CO_2	Solvent
Instrument air	Pasteurisation

Certification	ATEX / IECEx Ⓔx II 2 G/D Ex d IIC T1 to T6 Gb Ex tb IIIC T85 to T450°C Db IP66 EN/IEC 60079-0, EN/IEC 60079-1, EN/IEC 60079-7, EN/IEC 60079-31 CCOE (India), KGS (Korea), Inmetro (Brazil) CSA (Canada and US), CU TR (formerly GOST)
Enclosure	Stainless steel or painted mild steel
Elements	XX Small: Hairpin type 316/L sheathed with 80/20 nickel chrome resistance wire embedded in high purity magnesium oxide X Small: Cartridge type stainless steel 316/L sheathed with 80/20 nickel chrome resistance wire embedded in high purity magnesium oxide Small / Medium / Large: Hairpin type nickel alloy N08800 (Alloy 800) sheathed with 80/20 nickel chrome resistance wire embedded in high purity magnesium oxide
Casting	Marine grade aluminium Gr. LM25 (Al-Si7Mg)
Cladding	Stainless steel ASTM A366 TP316 2B finish
Insulation	Cellular glass insulation (-260°C / +430°C)
Process Coil	Stainless steel Gr. 316L Duplex S31803 Super duplex S32760 Others, including nickel alloys available on request All with NACE MR1075 compliance
Design Code	Designed SEP (Sound Engineering Practice) in accordance with the PED for installation within the European Union; designed in accordance with ASME B31.3, EN 13445 or PD5500
CE Marked	In accordance with relevant EC Directives
Voltage	Up to 690VAC
Delivery	From 10 weeks, depending on options
Duty	XX Small: up to 3kW X Small: up to 10kW Small: up to 24kW Medium: up to 40kW Large: up to 70kW



EXHEAT has developed a series of standard cast heaters which serve a broad variety of processes and design conditions. These heaters are highly cost effective, can be ordered simply by model number and are available with short lead times for delivery. If all standard options are taken, the engineering will be furnished by EXHEAT alongside the proposal. Upon receipt of PO, the goods will go straight into production and packing for dispatch without any engineering or documentation approval process post PO award.

If a bespoke design or additional options are required, then EXHEAT can also provide a unique designed solution. However, an engineering phase and special purchase items must be considered in the lead time of the project and the pricing.

	Standard	Additional Options
Mounting	Natural finish Floor or wall mounted	Painted Floor or wall mounting
Terminal Box	Ex d stainless steel (natural finish) Ex d carbon steel - painted (EXHEAT standard)	Ex e stainless steel - natural finish (not for CAN or USA) Ex d stainless steel - painted (client specification) Ex d carbon steel - painted (client specification)
Junction Box	Ex e Ex d Instrinsically safe *	Transmitters *
Sensors (Type)	RTD Pt100 simplex RTD Pt100 duplex	Thermocouple type K simplex * Thermocouple type K duplex * Thermostats *
Sensors (Quantity)	1 × over-temperature protection sensor 1 × process control sensor	Additional sensors to suit control system *
Sunshade	None	EXHEAT standard
Process Coil	Stainless steel 316L: SCH 10†, SCH 40, SCH 80 Duplex steel S31803: SCH 10†, SCH 40, SCH 80	Any SCH 40§, SCH 160 Super duplex S32760 Nickel alloys Others (please enquire)
Flanges	150 to 2500lbs Raised Face (RF) flange 150 to 2500lbs Ring Type Joint (RTJ) flange	Graylock NPT fittings 5000/10000 API flanges PN25, PN32, PN50 flanges Client specified flanges

* Not available with EXHEAT standard control panel.
† Only for XX Small and X Small models.
§ Only for X Small models.