

FP-MLH Flameproof Mini Line Heaters

The range of flameproof mini line heaters consist of a screw plug or flanged type immersion heater mounted in a thermally insulated heating vessel, and is designed to efficiently transfer heat to a flowing medium (liquid, air or gas). The FP-MLH 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 to ATEX standards

Weatherproof protected to IP66 or NEMA 4 (FP4-MLH only)

Choice of built in process temperature sensors and externally adjustable option

Mild steel or 316 stainless steel vessel

Suitable for ambient temperatures from -40°C to +40°C (FP-MLH) and -60°C to +60°C (FP4-MLH)

Standard range of high quality Incoloy or stainless steel rod-type elements, designed for water or withdrawable ceramic core elements, designed for oil

Maximum allowable working pressure up to 10 barg / 145 psig, subject to design parameters

Designed for both horizontal and vertical installation (if mounted vertically, terminal box must be located at the bottom)

FP4-MLH range available with multi approvals

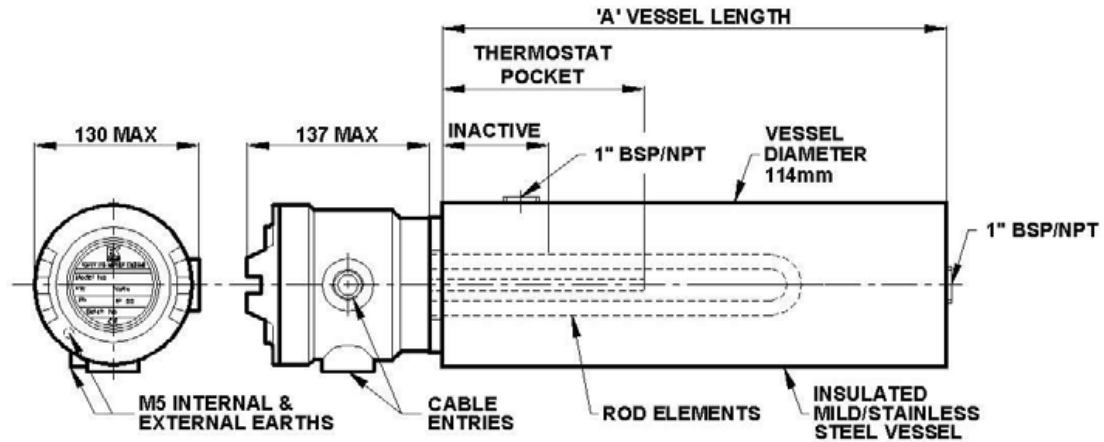
TYPICAL APPLICATIONS

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 and platens, closed loop systems for bitumen, etc

Fuel oil heating: Pre-heating to pumping viscosity



Model	Loading (kW)	Dimension A (mm)	BSP/NPT
WATER			
Short Body			
FP-MLH1S	1	475	1"
FP-MLH2S	2	475	1"
FP-MLH3S	3	475	1"
Long Body			
FP-MLH3L	3	925	1"
FP-MLH6L	6	925	1"
FP-MLH9L	9	925	1"
FP-MLH12L	12	925	1"
OIL			
Long Body			
FP-MLHX1	1	925	1"
FP-MLHX2	2	925	1"
FP-MLHX3	3	925	1"

Note 1½" BSP Connections available on request

Certification

ATEX II 2 G
 Ex d IIC T4 to T6 Gb Zone 1 and 2
 EN 60079-0, EN 60079-1, EN 60079-7, EN 60079-31
 CU TR (formerly GOST)

FP4-MLH also certified to:
 ATEX / IECEx, CSA, Inmetro, KGS, CNEx, CCOE

Enclosure

Cast aluminium alloy with a maximum of one M20 and one M25 cable entry, external and internal earths and screwed terminal cover (FP4-MLH - mild steel or 316 stainless steel)

Elements

High quality nickel chrome resistance wire compacted in magnesium oxide insulating powder and sheathed in corrosion resistant Incoloy 825/800, 316L stainless steel, withdrawable ceramic core elements housed in mild steel or 316L stainless steel tube

Pressure

Maximum allowable working pressure up to 10 barg / 145 psig subject to design parameters

Design Code

Sound Engineering Practice (SEP)

Vessel

Mild steel or stainless steel

Insulation

Mineral wool

Cladding

Coated mild steel or 304 stainless steel

Voltage

Standard units are normally designed for 220V to 254V (1 phase) or 380 to 440V (3 phase)