

HTP1FCE

Electrical heating tape for the heating of moderately long pipelines

LONGLINE High Efficiency Series Resistance Single Conductor Heating Tape

- Circuit lengths up to 5km
- Single supply point – minimises supply cabling costs
- High efficiency, flat and flexible
- For process temperature maintenance, freeze protection or heat raising
- Power outputs up to 23W/m
- Easy installation in convenient lengths

APPLICATIONS

LONGLINE HTP1F is a series resistance, single conductor heating cable supplied in multiples of 3 cables for configuring with a 3 phase heating system. It is used for freeze protection or process temperature maintenance of long pipelines, eg. up to 5km.

A typical application is the freeze protection of above ground water pipelines.

MINIMAL SUPPLY / DISTRIBUTION COSTS

LONGLINE minimises the number of electrical supplies needed and so minimises supply cabling / distribution equipment costs. Circuits are often fed at the pipe ends only.

FEATURES

Construction

The insulated conductors are sheathed with thermoplastic for flexibility.

A copper braid and overjacket can be provided for additional mechanical protection or for grounding purposes.

The Design

The number of heating cables and their conductor sizes are designed to produce the desired heat output for the circuit length required. The LONGLINE heaters are connected directly to the 3 phase mains voltage or, when required, to a step-up transformer.

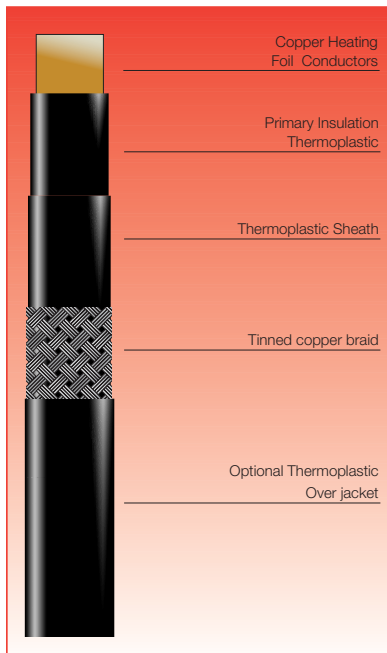
Improved Safety and Efficiency

The large heated surface of LONGLINE's flat foil construction results in lower operating temperatures than equivalent round conductor constructions thereby improving safety and system life. The high efficiency produces high power capability (up to 23W/m).

Installation

LONGLINE cable may be straight run or spiralled to above ground pipes. For buried lines, cables are usually drawn into channel raceways within a pre-insulated pipeline system.

Cable is provided in convenient lengths, eg. 200m for series connection at site.



LONGLINE – A COMPLETE SYSTEM

Reliability of the heating system is usually paramount. LONGLINE cables form only part of a high integrity LONGLINE heating system including power control, temperature control and circuit health monitoring/alarm equipment.

SPECIFICATION

MAXIMUM TEMPERATURE	Un-energised	125°C (257°F)
MINIMUM INSTALLATION TEMPERATURE		-40°C (-40°F)
POWER SUPPLY	up to 600V 3 phase according to design requirements	
POWER OUTPUT	up to 23W/m by design according to application requirements	
HEATING CONDUCTOR THICKNESSES	i) 16mm wide 1.0, 1.25, 1.5mm ii) 20mm wide 1.75, 2.0mm	
	Please note that Heat Trace will size conductors to provide the required W/m output for required circuit length.	

WEIGHTS AND DIMENSIONS

16mm Foil Width

Type Ref	Nom. Dims (mm)	Weight kg/100m	Min. Bending Radius (mm)
HTP1F	20.0 x 6.0	36	35
HTP1F-C	21.0 x 7.0	44	35
HTP1F-CT	22.0 x 8.0	65	75

20mm Foil Width

Type Ref	Nom. Dims (mm)	Weight kg/100m	Min. Bending Radius (mm)
HTP1F	24.0 x 6.0	48	35
HTP1F-C	25.0 x 7.0	58	35
HTP1F-CT	27.0 x 8.0	86	75

CONSTRUCTION

Heating Conductors	Copper
Primary Insulation	Thermoplastic
Sheath	Thermoplastic
Braid (optional)	Tinned Copper
Over Jacket (optional)	Thermoplastic

ORDERING INFORMATION

Example	HTP1F-CT/1.0
Thermoplastic Sheath	_____
Single heating conductor	_____
Tinned Copper Braid	_____
Thermoplastic over jacket	_____
Conductor Thickness (mm)	_____

MAXIMUM PIPE/WORKPIECE TEMPERATURE

The surface of the heater must not exceed the maximum withstand temperature of its constructional materials or the Temperature Classification (if installed in a hazardous area). This is ensured by limiting the pipe or workpiece temperature to a safe level either by design calculation (a Stabilised Design) or by means of temperature controls.

For worst case conditions, the temperature of steel pipes should be limited to the following levels.

MAXIMUM PIPE / WORKPIECE TEMPERATURE (°C)

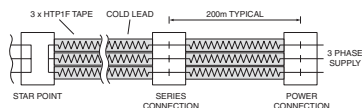
HEATER NOMINAL OUTPUT (W/m)	MAXIMUM PERMISSIBLE PIPE TEMP (°C)		
	HTP1F	HTP1F-C	HTP1F-CT
10	112	109	100
15	94	95	85
23	78	80	70

For conditions other than worst case, or pipes of other materials (eg. Plastic, Stainless Steel, etc.), consult Heat Trace.

Tolerances : Voltage +10%; Resistance ±10%

Pipe temperatures much higher than those given above may be accommodated by using Heat Trace Ltd voltage compensating devices eg. POWERMATCH™ – call for further details.

TYPICAL ARRANGEMENT



CIRCUIT PROTECTION

Circuit breakers, switch gear and supply cabling should be sized to cater for cold start-up conditions. O.E.M. Heaters will advise operation and start-up loads.

ACCESSORIES

O.E.M. Heaters supplies a complete range of accessories including termination/splice kits, end seals, junction boxes, controls and fixing tape. When used in hazardous areas, only use approved components.

O.E.M. HEATERS

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