

Electrical heating cable for process temperature maintenance of pipework and vessels in safe or hazardous areas

## MINITRACER

Constant Wattage Heating Cable

- Can be cut-to-length.
- Available for 110-120VAC and 220-240VAC.
- Power outputs up to 33W/m.
- Suitable for use in safe, hazardous and corrosive areas.
- Full range of controls and accessories available.

### DESCRIPTION

Minitracer type MTFJ is a constant wattage heating cable that can be used for freeze protection or maintenance of process temperatures in pipes and vessels.

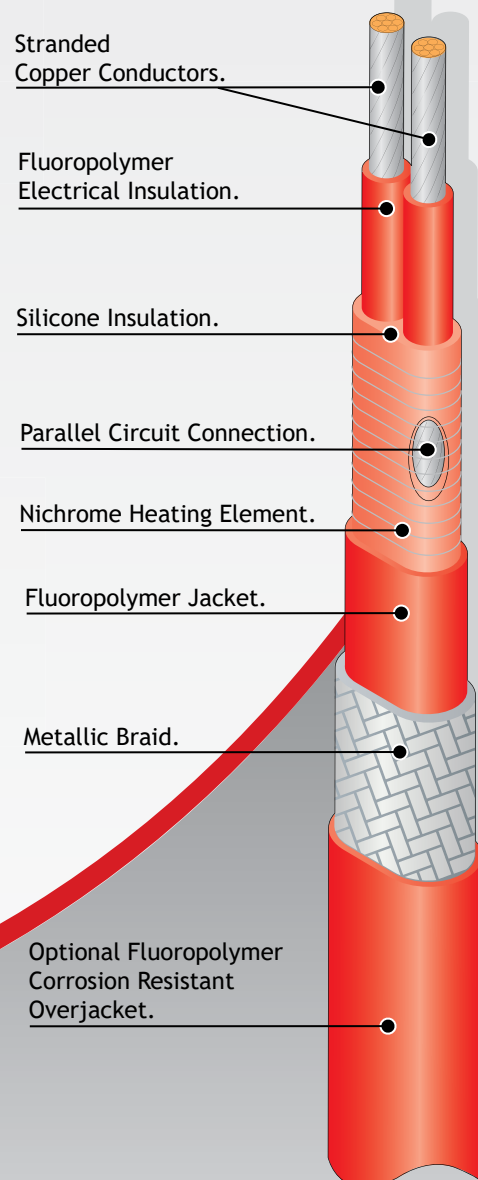
It can be cut-to-length at site if field fabricated heating cable is preferred.

MTFJ is approved for use in hazardous areas.

The installation of MTFJ heating cable is quick and simple, and requires few special skills or tools. Termination and power connection components are all provided in convenient kits.

### OPTIONS

MTFJ...C	Tinned Copper braid for non-hazardous areas, hazardous areas (Zone 1 or 2) or where traced equipment does not provide an effective earth path.
MTFJ...CF	Fluoropolymer over jacket over tinned copper braid provides corrosion protection for braid where chemical solutions or vapours may be present.



## SPECIFICATION

**MAXIMUM TEMPERATURE** Un-energised 200°C (392°F)

**MINIMUM INSTALLATION TEMPERATURE:** -40°C (-40°F)




**TEMPERATURE CLASSIFICATION:** See workpiece temperature table.

**POWER SUPPLY:** 12 - 277 VAC

### WEIGHTS & DIMENSIONS:

Type Ref	Dimensions (mm) +/-0.5	Weight kg/100m	Min Bend radius	Gland Size
MTFJ..C	9.1 x 5.7	9.0	25mm	M16
MTFJ..CF	9.9 x 6.5	11.0	30mm	M20

### APPROVAL DETAILS:

Testing Authority	Certificate No.
ATEX 	Sira 02ATEX3077
IEC 	02Y3067
Standard Area Approval 	EN50014:1992 & EN50019:1994 Zone 1 & 2

### CONSTRUCTION:

Heating Element	Nickel Chromium
Power Conductors	Tinned Plated Copper 2.5mm <sup>2</sup>
Conductor Insulation	Fluoropolymer & Silicone Rubber
Jacket	Fluoropolymer
Braid	Tinned Copper
Over Jacket (optional)	Fluoropolymer

### ORDERING INFORMATION:

Example	23MTFJ 2-CF
Output 23W/m	_____
Minitracer Type MTFJ	_____
Supply Voltage 220-240 VAC	_____
Tinned Copper Braid	_____
Fluoropolymer Overjacket	_____

### ACCESSORIES:

Heat Trace supply a complete range of accessories including termination/splice kits, end seals, junction boxes and controls. Such items carry separate approvals from the heating cable. When used in hazardous areas, only use approved components.

### MAXIMUM PIPE/WORKPIECE TEMPERATURES:

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:-

Catalogue Ref.	Nom Output (W/m)	Area Classification					
		Hazardous <sup>1</sup>			Safe <sup>2</sup>		
		T6	T5	T4	T3	T2	T1
MTFJ..C	6.5	54	72	115	187	190	190
	13	30	45	87	173	179	179
	23	-	-	47	144	151	151
	33	-	-	-	102	111	111
MTFJ..CF	6.5	54	74	121	190	190	190
	13	21	41	90	180	186	186
	23	-	-	39	152	158	158
	33	-	-	-	103	113	113

Pipe temperatures higher than those given above may be accommodated by using Heat Trace Ltd voltage compensating devices. Please call for further details.

Tolerances: Voltage +10%; Resistance +10%; - 0%

### Notes

- 1 Surface temperature limits in accordance with EN50014.
- 2 Surface temperature limited by materials of construction (withstand temperature).

### MAXIMUM CIRCUIT LENGTH:

OUTPUT (W/m)	MAX. CIRCUIT LENGTH*		ZONE LENGTH (NOM.)	
	115V	230V	115V	230V
6.5	111m	212m	1000mm	1500mm
13	78m	150m	800mm	1110mm
23	59m	113m	900mm	1000mm
33	49m	94m	750mm	1000mm

\*For ±10% end-to-end power output variation

### POWER CONVERSION FACTORS:

115V Heating Cable	230V Heating Cable
277V x output by 5.8	277V x output by 1.45
230V x output by 4.0	240V x output by 1.09
208V x output by 3.27	220V x output by 0.91
120V x output by 1.09	208V x output by 0.82
110V x output by 0.91	115V x output by 0.25