

Electrical heating cable for freeze protection, refrigeration duties or process heating of pipework and vessels.

MicroTracer

Constant Wattage Heating Cable

- Can be cut-to-length.
- Available for 110-120VAC and 208-277VAC
- Power outputs up to 50W/m.
- Full range of controls and accessories available.

DESCRIPTION

Microtracer type **EMTS** is a medium temperature parallel resistance, constant wattage, cut-to-length heating tape that can be used for freeze protection or process heating.

It is particularly suited to refrigeration applications or for small bore instrument lines or process pipework located in non-hazardous areas.

Microtracer type **EMTS** is chosen when short or moderate circuit lengths are required (select Minitracer if longer circuits are required)

The silicone rubber insulation is particularly suited to applications where great flexibility is required.

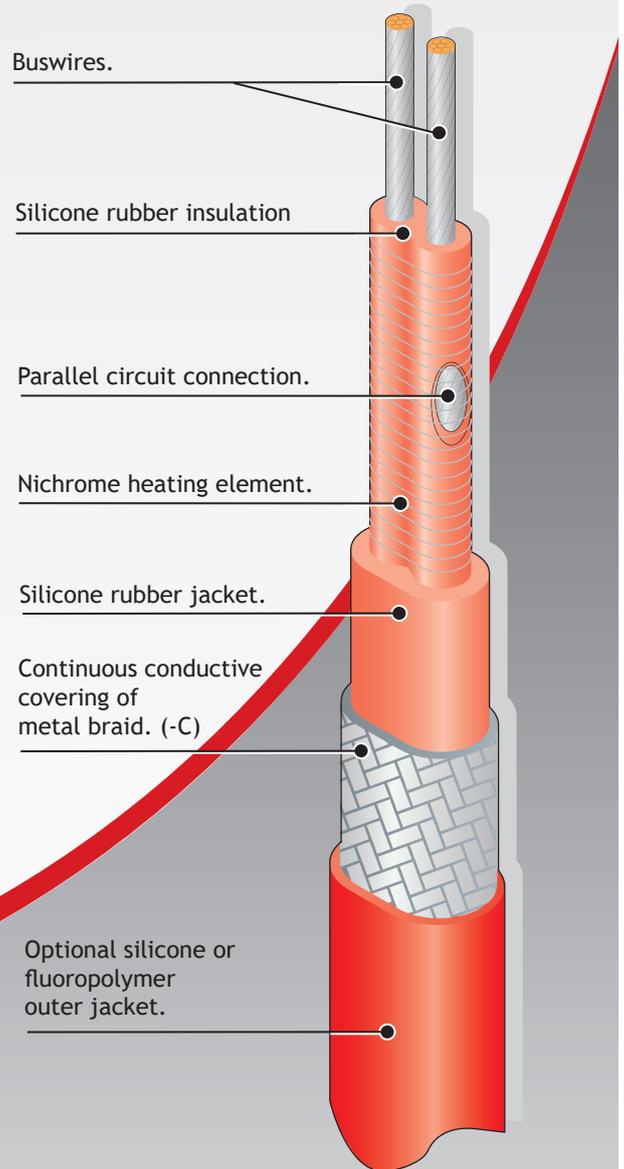
The installation of **EMTS** heating cable is quick and simple and requires no special skills or tools. Termination and power connection components are all provided in convenient kits.

OPTIONS

EMTS..C Tinned copper braid provides mechanical protection for base heater and may be used when traced equipment does not provide an effective earth path.

EMTS..CS Silicone rubber overjacket over tinned copper braid provides additional protection.

EMTS..CF Fluoropolymer overjacket over tinned copper braid provides protection where corrosive chemical solutions or vapours may be present.



SPECIFICATION

MAXIMUM TEMPERATURE:

Un-energised	200°C (392°F)
Energised	See table

MINIMUM INSTALLATION

TEMPERATURE:	-40°C (-40°F)
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POWER SUPPLY:

208 - 277V AC or 110 - 120V AC

MAXIMUM RESISTANCE OF PROTECTIVE BRAIDING:

18.2 Ohm/km

WEIGHTS & DIMENSIONS:

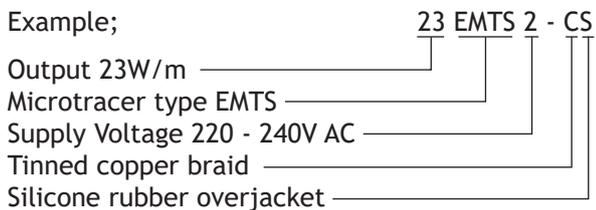
Type Ref	Dimensions (mm)+/-0.5	Weight kg/100m	Min Bending radius	Gland Size
EMTS..C	9.4 x 6.2	11.7	12mm	M16
EMTS..CS	11.4 x 8.2	14.3	15mm	M20
EMTS..CF	10.2 x 7.0	14.3	25mm	M20

CONSTRUCTION:

Grade:	2.2 to BS6351: Part 1
Heating Element:	Nickel Chromium
Power Conductors:	Tin Plated Copper 1.5mm ²
Conductor Insulation:	Silicone Rubber
Jacket:	Silicone Rubber
Braid:	Tinned Copper
Overjacket (Optional):	Silicone Rubber or Fluoropolymer

ORDERING INFORMATION:

Example;



ACCESSORIES:

Heat Trace supply a complete range of accessories including termination/splice kits, end seals, junction boxes and controls. These items are recommended for the correct operation of EMTS products.

FURTHER INFORMATION:

Please consult the appropriate termination instructions and the Heat Trace Installation, Maintenance and Testing Manual (HTDIMM 010) for further details.

MAXIMUM PIPE / WORKPIECE TEMPERATURES:

The surface of the heater must not exceed the maximum withstand temperature of its constructional materials. This is ensured by limiting the pipe or workpiece temperatures 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:-

HEATER NOMINAL OUTPUT (W/m)	MAXIMUM PERMISSIBLE PIPE TEMP (°C)		
	EMTS-C	EMTS-CS	EMTS-CF
6.5	190	190	190
13	180	185	185
23	150	160	160
33	110	115	115
50	75	80	75

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

Pipe temperatures higher than those given above may be accommodated by using Heat Trace Ltd voltage compensating devices e.g. POWERMATCH™ Call for further details.

MAXIMUM CIRCUIT LENGTH:

OUTPUT (W/m)	MAX.CIRCUIT LENGTH*		ZONE LENGTH (NOM)	
	115V	230V	115V	230V
6.5	82m	164m	1000mm	1500mm
13	58m	116m	800mm	1100mm
23	44m	87m	900mm	1000mm
33	36m	73m	750mm	1000mm
50	30m	59m	1000mm	1000mm

POWER CONVERSION FACTORS:

115V HEATING CABLE	230 HEATING CABLE
277V Multiply output by 5.80	277V Multiply output by 1.45
230V Multiply output by 4.00	240V Multiply output by 1.09
208V Multiply output by 3.27	220V Multiply output by 0.91
120V Multiply output by 1.09	208V Multiply output by 0.82
110V Multiply output by 0.91	115V Multiply output by 0.25

Electrical heating cable for freeze protection or process heating of pipework and vessels.

MicroTracer Constant Wattage Heating Cable

- Can be cut-to-length.
- Available for 110-120VAC and 208-277VAC.
- Power outputs up to 50W/m.
- Suitable for use in safe and corrosive areas.
- Full range of controls and accessories available.

DESCRIPTION

Microtracer type **EMTF** is a medium temperature parallel resistance, constant wattage, cut-to-length heating cable that can be used for freeze protection or process heating.

It is particularly suited to small instrument impulse, analyser lines or process pipes located in non-hazardous areas.

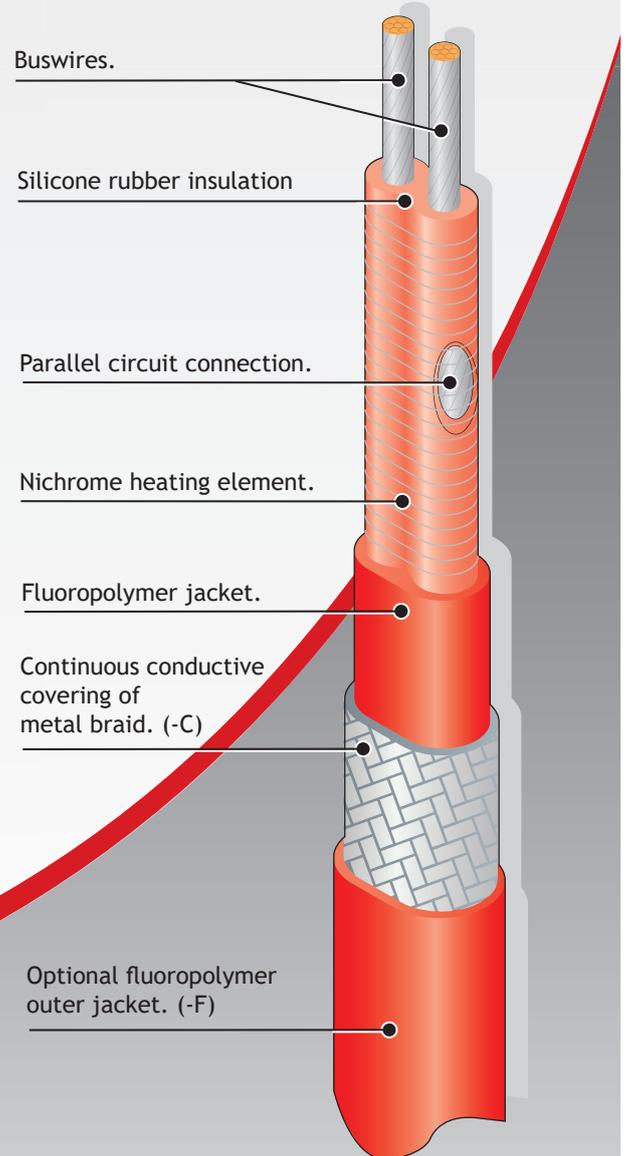
Microtracer type **EMTF** is chosen when short or moderate circuit lengths are required (select Minitracer if longer circuits are required)

The installation of **EMTF** heating cable is quick and simple and requires no special skills or tools. Termination and power connection components are all provided in convenient kits.

OPTIONS

EMTF..C Tinned copper braid provides mechanical protection for base heater and may be used when traced equipment does not provide an effective earth path.

EMTF..CF Fluoropolymer overjacket over tinned copper braid provides protection where corrosive chemical solutions or vapours may be present.



SPECIFICATION

MAXIMUM TEMPERATURE:

Un-energised	200°C (392°F)
Energised	See table

MINIMUM INSTALLATION

TEMPERATURE:	-40°C (-40°F)
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POWER SUPPLY:

208 - 277V AC
or 110 - 120V AC

MAXIMUM RESISTANCE OF PROTECTIVE BRAIDING:

18.2 Ohm/km

WEIGHTS & DIMENSIONS:

Type Ref	Dimensions (mm)+/-0.5	Weight kg/100m	Min Bending radius	Gland Size
EMTF..C	8.2 x 5.0	9.6	25mm	M16
EMTF..CF	9.0 x 5.8	12.0	30mm	M16

CONSTRUCTION

Grade:	2.2 to BS6351: Part 1
Heating Element:	Nickel Chromium
Power Conductors:	Tin Plated Copper 1.5mm ²
Conductor Insulation:	Silicone Rubber
Jacket:	Fluoropolymer
Braid:	Tinned Copper
Overjacket (Optional):	Fluoropolymer

ORDERING INFORMATION:

Example; 33 EMTF 2 - CF

Output 33W/m	_____	_____	_____	_____
Microtracer type EMTF	_____	_____	_____	_____
Supply Voltage 220 - 240V AC	_____	_____	_____	_____
Tinned copper braid	_____	_____	_____	_____
Fluoropolmer overjacket	_____	_____	_____	_____

ACCESSORIES:

Heat Trace supply a complete range of accessories including termination/splice kits, end seals, junction boxes and controls. These items are recommended for the correct operation of EMTF products.

FURTHER INFORMATION:

Please consult the appropriate termination instructions and the Heat Trace Installation, Maintenance and Testing Manual (HTDIMM 010) for further details.

MAXIMUM PIPE / WORKPIECE TEMPERATURES:

The surface of the heater must not exceed the maximum withstand temperature of its constructional materials. This is ensured by limiting the pipe or workpiece temperatures 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:-

HEATER NOMINAL OUTPUT (W/m)	MAXIMUM PERMISSIBLE PIPE TEMP (°C)	
	EMTF-C	EMTF-CF
6.5	190	190
13	175	185
23	145	155
33	100	100
50	60	70

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

Pipe temperatures higher than those given above may be accommodated by using Heat Trace Ltd voltage compensating devices e.g. POWERMATCH™ - Call for further details.

MAXIMUM CIRCUIT LENGTH:

OUTPUT (W/m)	MAX.CIRCUIT LENGTH*		ZONE LENGTH (NOM)	
	115V	230V	115V	230V
6.5	82m	164m	1000mm	1500mm
13	58m	116m	800mm	1100mm
23	44m	87m	900mm	1000mm
33	36m	73m	750mm	1000mm
50	30m	59m	1000mm	1000mm

POWER CONVERSION FACTORS:

115V HEATING CABLE	230 HEATING CABLE
277V Multiply output by 5.80	277V Multiply output by 1.45
230V Multiply output by 4.00	240V Multiply output by 1.09
208V Multiply output by 3.27	220V Multiply output by 0.91
120V Multiply output by 1.09	208V Multiply output by 0.82
110V Multiply output by 0.91	115V Multiply output by 0.25

Electrical heating cable for frost protection or process heating of pipework and vessels.

MiniTracer Constant Wattage Heating Cable

- Can be cut-to-length.
- Available for 110-120VAC and 208-277VAC.
- Power outputs up to 50W/m.
- Suitable for use in safe and corrosive areas.
- Full range of controls and accessories available.

DESCRIPTION

MiniTracer type MTF is a parallel resistance, constant wattage, cut-to-length heating cable to BS6351 Grade 2.2 that can be used for freeze protection or process heating of pipework and vessels.

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

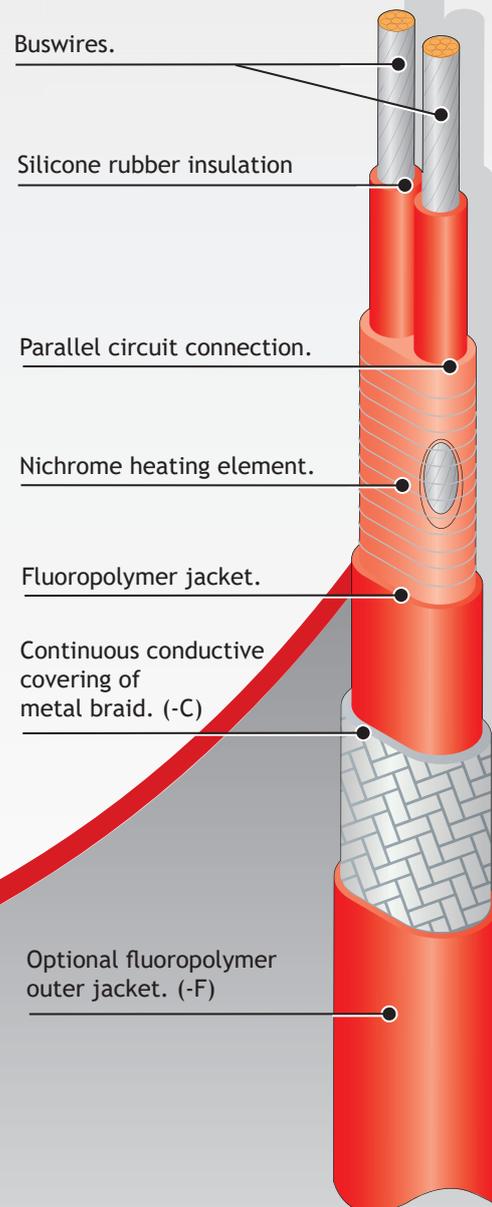
MiniTracer has large 2.5mm² power busbars for long circuit lengths.

The installation of MTF heating cable is quick and simple and requires no special skills or tools. Termination and power connection components are all provided in convenient kits.

OPTIONS

MTF..C Tinned copper braid for non-hazardous areas, or where traced equipment does not provide an effective earth path.

MTF..CF Fluoropolymer overjacket over tinned copper braid provides protection where corrosive chemical solutions or vapours may be present.



SPECIFICATION

MAXIMUM TEMPERATURE:

Un-energised	200°C (392°F)
Energised	See table

MINIMUM INSTALLATION TEMPERATURE:

-40°C (-40°F)

POWER SUPPLY:

208 - 277V AC
or 110 - 120V AC

MAXIMUM RESISTANCE OF PROTECTIVE BRAIDING:

18.2 Ohm/km

WEIGHTS & DIMENSIONS:

Type Ref	Dimensions (mm)+/-0.5	Weight kg/100m	Min Bending radius	Gland Size
MTF..C	10.0 x 6.0	11.0	30mm	M20
MTF..CF	10.8 x 6.7	15.0	35mm	M20

CONSTRUCTION

Heating Element:	Nickel Chromium
Power Conductors:	Tin Plated Copper 2.5mm ²
Conductor Insulation:	Silicone Rubber
Jacket:	Fluoropolymer
Braid (Optional):	Tinned Copper
Overjacket (Optional):	Fluoropolymer

ORDERING INFORMATION:

Example; 13 MTF 2 - CF

Output 13W/m	_____	_____	_____	_____
Minitracer type MTF	_____	_____	_____	_____
Supply Voltage 220 - 240V AC	_____	_____	_____	_____
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 tapes. 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. This is ensured by limiting the pipe or workpiece temperatures 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 TEMPERATURES (°C)

CAT REF	NOM. OUTPUT	MAXIMUM PIPE/WORKPIECE TEMPERATURE
	(W/m)	
MTF..C	6.5	190
	13	180
	23	155
	33	120
	50	85
MTF..CF	6.5	190
	13	185
	23	165
	33	120
	50	85

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

Notes:

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

Pipe temperatures higher than those given above may be accommodated by using Heat Trace Ltd voltage compensating devices e.g. POWERMATCH™ - Call for further details.

MAXIMUM CIRCUIT LENGTH:

OUTPUT (W/m)	MAX.CIRCUIT LENGTH*		ZONE LENGTH (NOM)	
	115V	230V	115V	230V
6.5	106m	212m	1000mm	1500mm
13	75m	150m	800mm	1110mm
23	56m	113m	900mm	1000mm
33	47m	94m	750mm	1000mm
50	38m	76m	1000mm	1000mm

POWER CONVERSION FACTORS:

115V HEATING TAPE		230V HEATING TAPE	
277V	Multiply output by 5.80	277V	Multiply output by 1.45
230V	Multiply output by 4.00	240V	Multiply output by 1.09
208V	Multiply output by 3.27	220V	Multiply output by 0.91
120V	Multiply output by 1.09	208V	Multiply output by 0.82
110V	Multiply output by 0.91	115V	Multiply output by 0.25

HEAT TRACE™

SETTING THE STANDARDS LEADING THE WAY

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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.

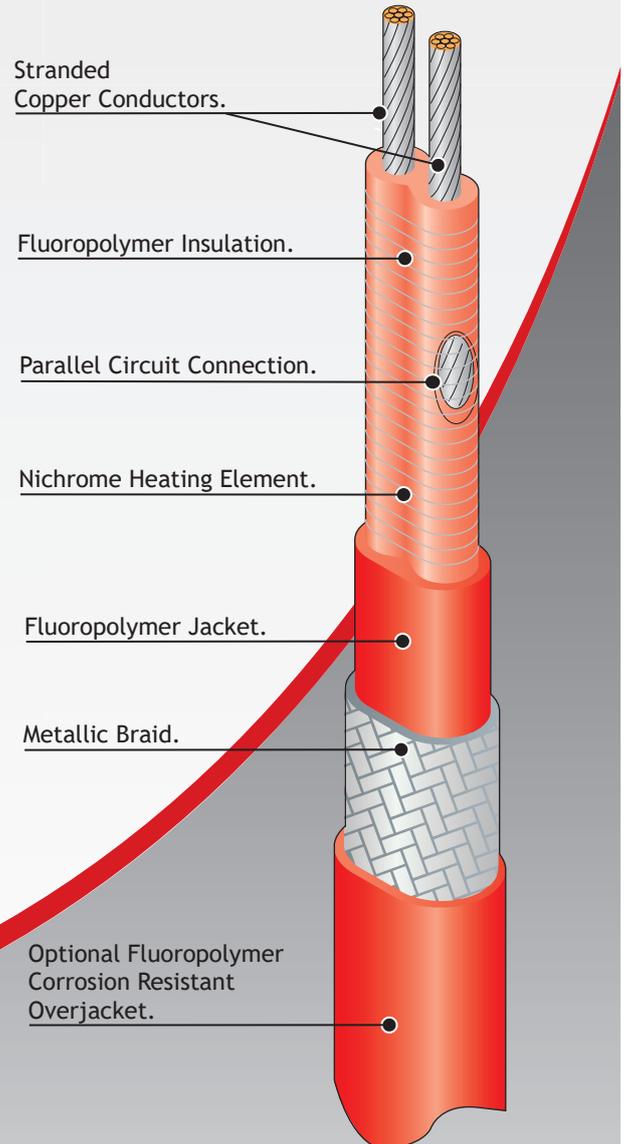
It can be cut-to-length at site if field fabricated heating cable is preferred.

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 ²
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 ¹			Safe ²		
		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

HEAT TRACE™

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

POWERHEAT
Constant Wattage Heating Cable

- Can be cut-to-length.
- Power outputs up to 70W/m.
- Flexible and easy to install.
- Suitable for use in safe, hazardous and corrosive areas.
- High resistance to chemical attack.
- Full range of controls and accessories available.

DESCRIPTION

Powerheat type PHT is a constant wattage heating cable manufactured in accordance with the latest International Standards. It can be used for freeze protection or process temperature maintenance of pipework and vessels.

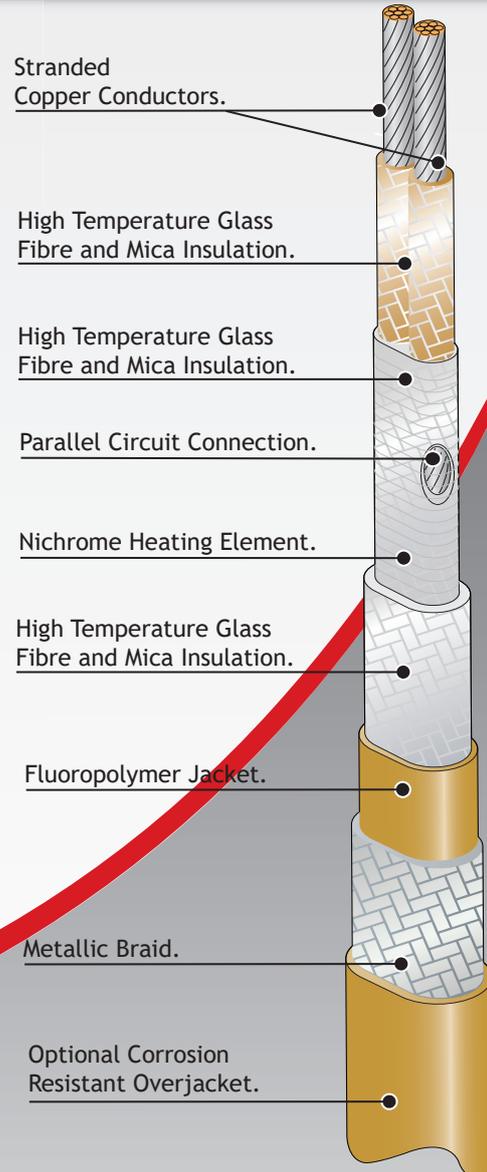
It can be cut-to-length at site, and can replace mineral insulated (MI) cables for applications where the cut-to-length feature, or field fabricated heating cable is preferred.

PHT is approved for use in hazardous areas.

The installation of PHT heating cable is quick and simple, and requires no special skills or tools. Termination and power connection components are all provided in convenient kits.

OPTIONS

PHT...N	Nickel Plated Copper braid for non-hazardous areas, hazardous areas (Zone 1 or 2) or where traced equipment does not provide an effective earth path.
PHT...NF	Fluoropolymer over jacket over nickel plated copper braid provides corrosion protection for braid where chemical solutions or vapours may be present.



SPECIFICATION

MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE (Power OFF) 285°C (545°F)

MAXIMUM PERMISSIBLE EXPOSURE TEMPERATURE (Power ON) See workpiece Temperature table

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

POWER SUPPLY: 12 - 277 VAC

WEIGHTS & DIMENSIONS:

Type Ref	Dimensions (mm) +/-0.5	Weight kg/100m	Min Bend Radius	Gland Size
PHT..N	10.23 X 7.1	15	45mm	M20
PHT..NF	11.13 X 8.0	17	50mm	M20

APPROVAL DETAILS:

Testing Authority	Certificate No.
ATEX 	CML 17ATEX3169
IECEX 	IECEX CML 17.0084

CONSTRUCTION:

Heating Element	Nickel Chromium
Power Conductors	Nickel Plated Copper
Conductor Insulation	Glass/Mica
Primary Insulation	Glass/Mica
Jacket	Fluoropolymer
Braid	Nickel Plated Copper
Over Jacket (optional)	Fluoropolymer

ORDERING INFORMATION:

Example	70PHT2-NF
Output 70W/m	
Powerheat Type PHT	
Supply Voltage 220-240 VAC	
Nickel Plated 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 ¹				Safe ²		
		T6	T5	T4	T3	T2	T1	
PHT..N	10	43	60	100	181	275	275	275
	30	-	-	25	114	234	234	234
	50	-	-	-	49	186	186	186
	70	-	-	-	-	125	125	125
PHT..NF	10	39	59	106	186	275	275	275
	30	-	-	20	133	243	243	243
	50	-	-	-	64	201	201	201
	70	-	-	-	-	147	147	147

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 current standards.
- 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
10	79m	152m	Contact your local Heat Trace representative for details.	
30	46m	88m		
50	35m	68m		
70	30m	56m		

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

POWER CONVERSION FACTORS **See note below*

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

*Maximum power output of cable in hazardous area should not exceed 70W/m. Do not use voltage multiplier if resulting power output exceeds 70W/m.

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

POWERHEAT Constant Wattage Heating Cable

- Can be cut-to-length.
- Available for 110-120VAC and 220-240VAC.
- Power outputs up to 150W/m.
- Suitable for use in safe, hazardous and corrosive areas.
- Continuous aluminium outer-jacket.
- Full range of controls and accessories available.

DESCRIPTION

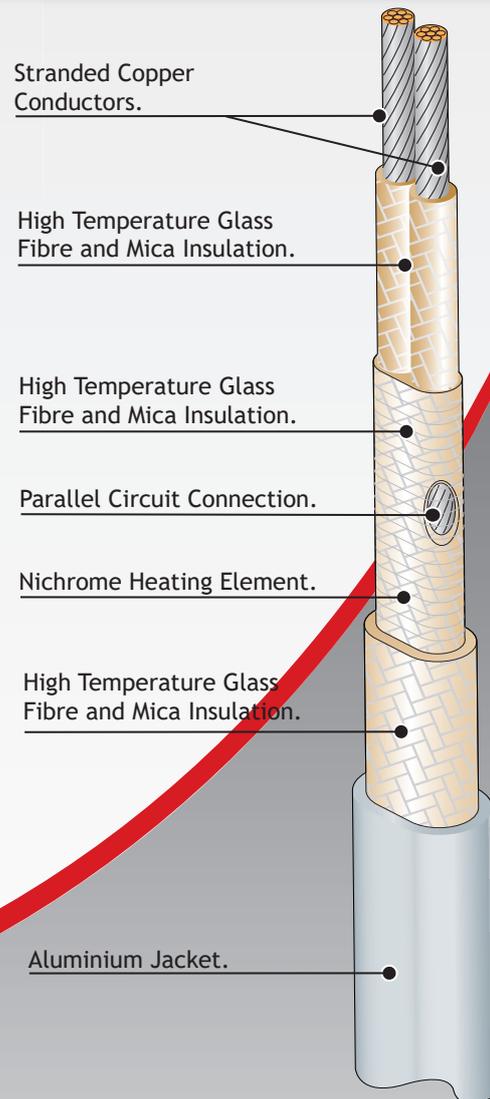
POWERHEAT Type AHT is a constant wattage heating cable that can be used for freeze protection or temperature maintenance of process temperatures in pipework and vessels.

It can be cut-to-length at site and can replace mineral insulated (MI) cables for applications where the cut-to-length feature, or field fabricated heating cable is preferred.

AHT is approved for use in non-hazardous and hazardous areas to world wide standards.

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

AHT is jacketted in a continuous aluminum extrusion for maximum mechanical strength.



SPECIFICATION

MAXIMUM EXPOSURE TEMPERATURE	Continuous	350°C (644°F)
	Intermittent	425°C (797°F)

MINIMUM OPERATING TEMPERATURE:	-65°C* (-85°F)
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MINIMUM INSTALLATION TEMPERATURE:	-40°C (-40°F)
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TEMPERATURE CLASSIFICATION:	See workpiece temperature table.
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POWER SUPPLY:	12 - 277 VAC
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INGRESS PROTECTION:	IP67
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WEIGHTS & DIMENSIONS:

Type Ref	Dimensions (mm) +/-0.5	Weight kg/100m	Min Bend radius	Gland Size
AHT	10.7 x 7.7	16.5	25mm	M20

APPROVAL DETAILS:

Testing Authority	Certificate No.
ATEX 	Sira 02ATEX3079
IECEX 	Sira 11.0124
FM 	3009080
CSA 	1350782 1352981
CNEX 	CNEX19.1551U
DNV-GL 	TAE000021KD
EAC* 	EAЭC RU C-GB.MIO62.B.00172/19

CONSTRUCTION:

Heating Element	Nickel Chromium
Power Conductors	Nickel Plated Copper
Conductor Insulation	Glass/Mica
Primary Insulation	Glass/Mica
Jacket	Aluminium

ORDERING INFORMATION:

Example	50AHT2
Nominal Output 50W/m	_____
Powerheat Type AHT	_____
Supply Voltage 220-277 VAC	_____

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:-

Area Classification	Hazardous ¹					Safe ²
	T6	T5	T4	T3	T2	

Catalogue Ref.

Catalogue Ref.	T6	T5	T4	T3	T2	T1
10AHT	34	50	100	188	290	340
15AHT	-	36	71	160	289	350
30AHT	-	11	28	100	246	323
50AHT	-	-	-	39	178	276
70AHT	-	-	-	-	48	140
100AHT	-	-	-	-	48	140
150AHT	-	-	-	-	-	36

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

Tolerances: 115/230V + 10%; Resistance + 10%;-0%

The above data is for 230V heaters. For 277V heaters, contact your local Heat Trace Representative

Notes

- 1 Surface temperature limits in accordance with EN60079.
- 2 Surface temperature limited by materials of construction (withstand temperature).

MAXIMUM CIRCUIT LENGTH*

Catalogue Ref.	115V	230V/277V
15AHT	59m	118m
30AHT	42m	83m
50AHT	32m	64m
70AHT	26m	54m
100AHT	23m	46m
150AHT	19m	37m

*For 10% volt drop variation

POWER CONVERSION FACTORS

115V HEATING TAPE	230V HEATING TAPE
125V Multiply output by 1.18	277V Multiply output by 1.45
120V Multiply output by 1.09	240V Multiply output by 1.09
110V Multiply output by 0.91	220V Multiply output by 0.91
100V Multiply output by 0.76	208V Multiply output by 0.82

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 cables. When used in hazardous areas, only use approved components.

HEAT TRACE™

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SETTING THE STANDARDS LEADING THE WAY

www.heat-trace.com

Email: info@heat-trace.com

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RHT

Electrical heating cable for freeze protection of rails, switch points, tramways and monorails.

Rail & Switch Point Heater

- Outputs available up to 220W/m.
- Heated lengths up to 6 metres for turnouts.
- Can be cut-to-length to suit switch size.
- Full range of controls and accessories.
- Available for 115 & 230VAC (nom).
- Voltages to 1000V AC or DC for 3rd rails.

DESCRIPTION

Rail heater type RHT is a parallel resistance, constant power output cable for use on main rail switch point systems, electrified 3 rails, monorails and tramway systems.

RHT is a cut-to-length cable designed to maintain snow and ice free systems to ensure track operational integrity in winter conditions. Simple and quick installation ensures minimum track possession time.

When used for point heating systems RHT is intended to be pre-terminated in 3m; 4m; 5m & 6m heated lengths to suit the turnout dimensions. It is suitable for direct replacement of existing strip heaters on the stock rails and switch rails.

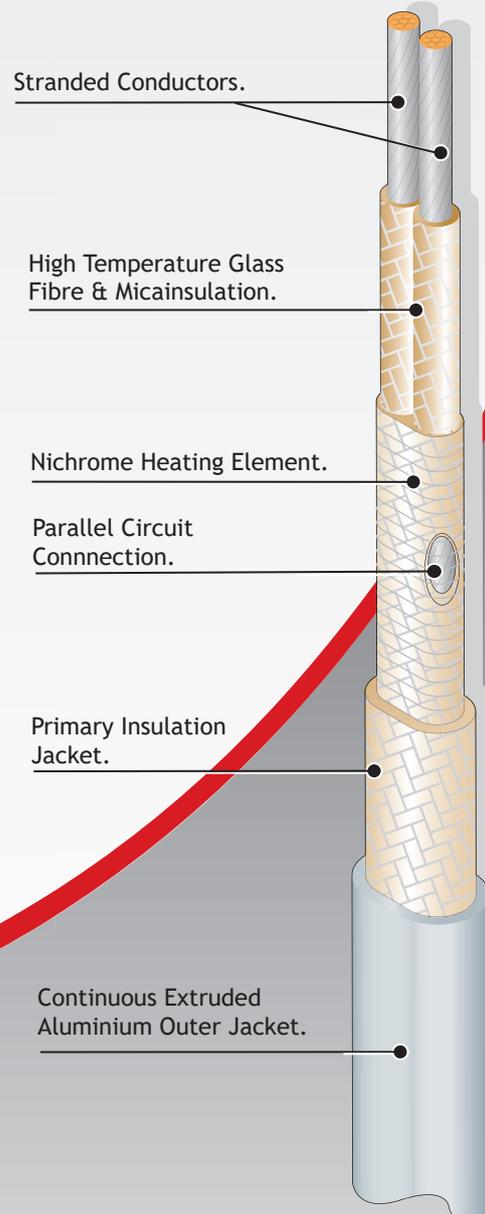
The cable is designed to utilise rail industry standard and approved heater retaining clips. Thermally insulated capping is also available if required.

ACCESSORIES

Heat Trace supply a complete range of rail heater accessories: termination components, c/w remote end seal and sealant; EPR cold lead to heater power connection kit; EPR 2 core cold lead cable; thermally insulated capping; heater retaining clips; termination, installation and testing instructions. These items are recommended for the correct usage and operation of RHT heaters.

FURTHER INFORMATION

Please consult the appropriate TK/RHT termination instructions and the RHT Installation Instructions (currently under revision) contact HTL for details.



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SPECIFICATION

MAXIMUM EXPOSURE TEMPERATURE: Continuous 350°C (644°F)
Intermittent 425°C (797°F)

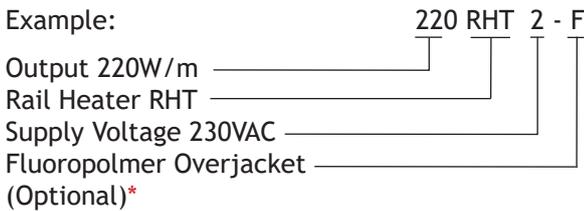
MINIMUM INSTALLATION TEMPERATURE: -65°C (-85°F)

POWER SUPPLY: 230 or 115VAC (nominal)
(voltages also available to order 24V to 1000V AC or DC)

WEIGHTS & DIMENSIONS:

Type Ref	Dimensions (mm)+/-0.5	Weight kg/100m	Min Bending radius	Gland Size
RHT	10.0 x 7.0	16.5	25mm	M20

ORDERING INFORMATION:



IMPORTANT NOTES 1:

The RHT range of rail heaters should only be fitted to rails using the manufacturer's recommended and approved methods. The heating cables should only be terminated in accordance with the manufacturer's instructions, in order to ensure the heaters integrity is not compromised.

When the heater is being used on 3rd/live rails, outer insulating jackets of fluoropolymer are available and are extruded over the outer metal jacket. *This jacket will reduce the maximum withstand of the cable to 265°C (509°F).

Full details of all control and ancillary equipment is available on request.



Typical Heated Points Systems - Milan, Italy.

MAXIMUM CIRCUIT LENGTH:

OUTPUT (W/m)	MAX.CIRCUIT LENGTH*		ZONE LENGTH (NOM)	
	115V	230V	115V	230V
100	16m	32m	Zone lengths can vary. Contact HTL for more information.	
150	13m	26m		
220	11m	22m		

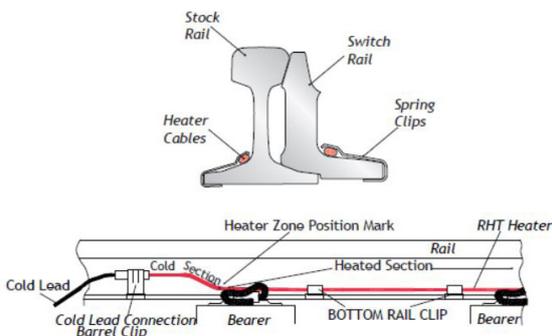
* For 10% end-to-end power output variation

POWER CONVERSION FACTORS:

115V HEATING CABLE	230V HEATING CABLE
277V Multiply output by 5.80	277V Multiply output by 1.45
230V Multiply output by 4.00	240V Multiply output by 1.09
208V Multiply output by 3.27	220V Multiply output by 0.91
120V Multiply output by 1.09	208V Multiply output by 0.82
110V Multiply output by 0.91	115V Multiply output by 0.25

IMPORTANT NOTES 2:

When fitting the RHT range of rail heaters it is important to ensure that the rail profile reference is known. This is so that the right clips can be provided, to ensure correct fitment to the rail. The heaters need to be kept in contact with the rail, but still retain the ability to move longitudinally under normal expansion and contraction and to withstand the vibration and flexing of the rail during the expected operating conditions. It is recommended that clips are provided on either side of each bearer - as shown in the image below.



Recommended Heater & clip position (UIC60/60B rail)



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