EMTS CE

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

MICROTRACER

Constant Wattage Heating Tape

- *Withstand temperatures upto 200°C*
- *Available in outputs upto 50W/m*
- *Can be cut to length at site*
- *Particularly suited to small bore pipework*
- *Full range of controls and accessories*
- *Available for 110/120 and 220/240VAC*
- *Highly flexible*

FEATURES

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.

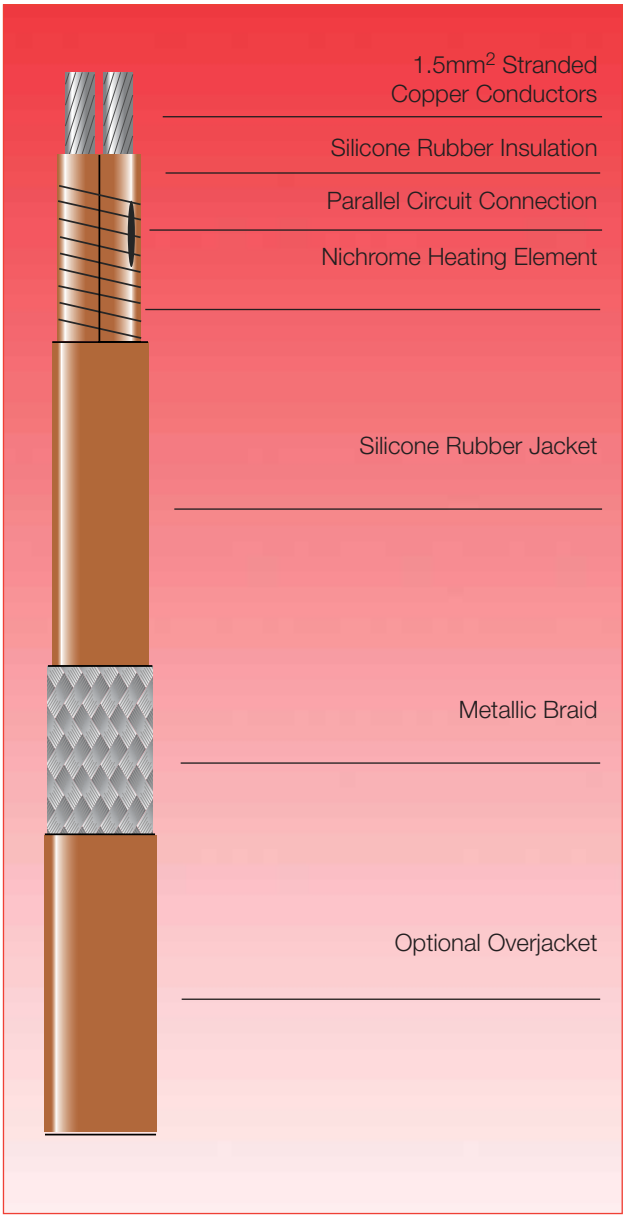
Microtracer type EMTS is chosen when short or moderate circuit lengths are required (select Minitracer if longer circuits are required).

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

The installation of EMTS heating tape 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 of vapours may be present.



SPECIFICATION

MAXIMUM TEMPERATURE	Un-energised Energised	200°C(392°F) See Table
MINIMUM INSTALLATION TEMPERATURE		–80°C (-112°F)
POWER SUPPLY		220 - 240 VAC or 110 - 120 VAC
MAXIMUM RESISTANCE OF PROTECTIVE BRAIDING		18.2 Ohm/km

WEIGHTS & DIMENSIONS

Type Ref	Nom. Dims. (mm)	Weight kg/100m	Min. Bending radius (mm)	Gland Size
EMTS	8.2 x 6.0	7.4	10	M16
EMTS..C	9.0 x 6.8	11.7	12	M16
EMTS..CS	11.0 x 8.8	14.3	15	M20
EMTS..CF	10.2 x 8.0	14.3	25	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 (FEP)

ORDERING INFORMATION

Example 23 EMTS 2 -CS

- Output 23W/m
- Microtracer type EMTS
- Supply Voltage 220 - 240 VAC
- Tinned Copper Braid
- Silicone Rubber overjacket

ACCESSORIES

We 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.

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 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 TEMPERATURES (°C)

HEATER NOMINAL OUTPUT (W/m)	MAXIMUM PERMISSIBLE PIPE TEMP (°C)			
	EMTS	EMTS-C	EMTS-CS	EMTS-CF
6.5	190	190	190	190
13	180	180	185	185
23	150	150	160	160
33	110	110	115	115
50	70	75	80	75

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

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

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

MAXIMUM CIRCUIT LENGTH

OUTPUT (W/m)	MAX. CIRCUIT LENGTH* 115V	230V	ZONE LENGTH (NOM.) 115V	230V
6.5	82m	164m	1000mm	1500mm
13	58m	116m	741mm	1100mm
23	44m	87m	900mm	1000mm
33	36m	73m	1000mm	950mm
50	30m	59m	995mm	900mm

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

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

THERMELEC

Thermelec Limited, Old Naas Road, Bluebell, Dublin 12, Ireland.
Tel: +353 (1) 4568111 Fax: +353 (1) 4568108 www.thermelec.ie

EMTF CE

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

MICROTRACER

Constant Wattage Heating Tape

- *Withstand temperatures upto 200°C*
- *Available in outputs upto 50W/m*
- *Can be cut to length at site*
- *Particularly suited to small bore pipework*
- *Full range of controls and accessories*
- *Available for 110/120 and 220/240VAC*
- *High Corrosion Resistance*

FEATURES

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

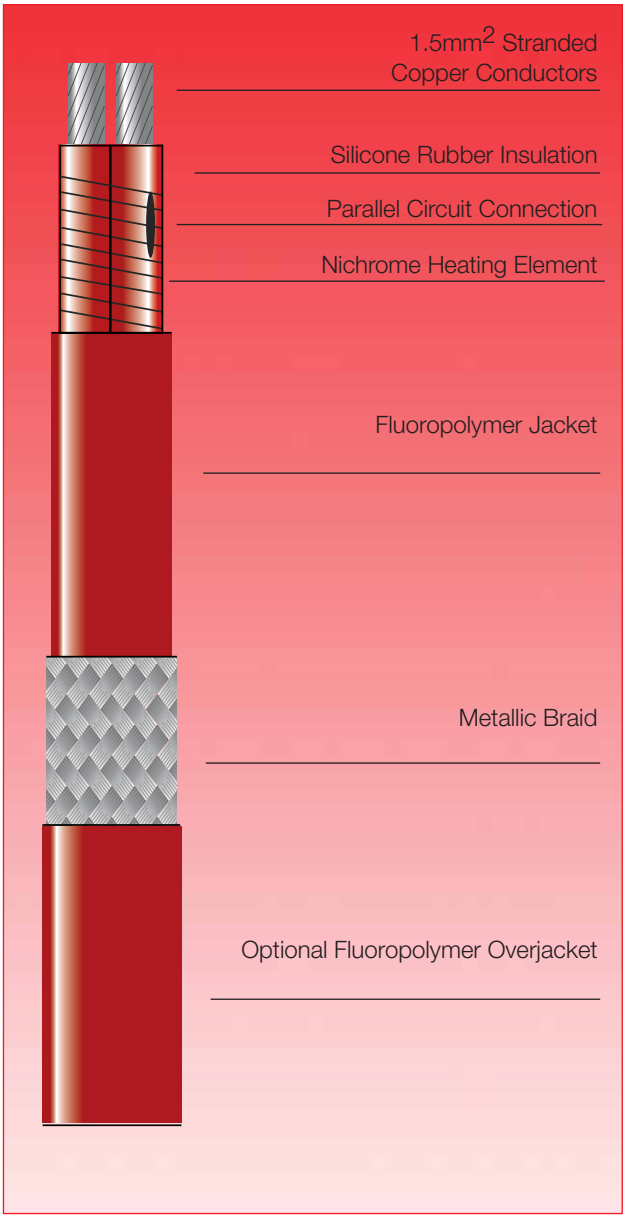
It is particularly suited to small instrument impulse, analyser lines, or process pipes located in non-hazardous areas.

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 tape 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 of vapours may be present.



SPECIFICATION

MAXIMUM TEMPERATURE	Un-energised Energised	200°C (392°F) See Table
MINIMUM INSTALLATION TEMPERATURE		–80°C (-112°F)
POWER SUPPLY		220 - 240 VAC or 110 - 120 VAC

WEIGHTS & DIMENSIONS

Type Ref	Nom. Dims. (mm)	Weight kg/100m	Min. Bending radius (mm)	Gland Size
EMTF	7.0 x 4.3	6.4	20	M16
EMTF..C	7.8 x 5.1	9.6	25	M16
EMTF..CF	9.0 x 6.3	12.0	30	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 (FEP)
Braid	Tinned Copper
Overjacket (Optional)	Fluoropolymer (FEP)

ORDERING INFORMATION

Example 33 EMTF 2 -CF

- 33 — Output 33W/m
- EMTF — Microtracer type EMTF
- 2 — Supply Voltage 220 - 240 VAC
- (blank) — Tinned Copper Braid
- -CF — Fluoropolymer overjacket

ACCESSORIES

We 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.

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 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 TEMPERATURES (°C)

HEATER NOMINAL OUTPUT (W/m)	MAXIMUM PERMISSIBLE PIPE TEMP (°C)		
	EMTF	EMTF-C	EMTF-CF
6.5	190	190	190
13	175	175	185
23	135	145	155
33	95	100	100
50	45	60	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%; -0%

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

MAXIMUM CIRCUIT LENGTH

OUTPUT (W/m)	MAX. CIRCUIT LENGTH* 115V	230V	ZONE LENGTH (NOM.) 115V	230V
6.5	82m	164m	1000mm	1500mm
13	58m	116m	741mm	1100mm
23	44m	87m	900mm	1000mm
33	36m	73m	1000mm	950mm
50	30m	59m	995mm	900mm

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

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

THERMELEC

Thermelec Limited, Old Naas Road, Bluebell, Dublin 12, Ireland.
Tel: +353 (1) 4568111 Fax: +353 (1) 4568108 www.thermelec.ie

MTF CE

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

MINITRACER

Constant Wattage
Heating Tape

- *Withstand temperatures up to 200°C*
- *Available in outputs up to 50W/m*
- *Can be cut to length at site*
- *High Corrosion Resistance*
- *Approved to IEEE Standards for use in non-hazardous areas and hazardous areas.*
- *Full range of controls and accessories*
- *Available for 110/120 and 220/240VAC*

FEATURES

MINITRACER type MTF is a parallel resistance, constant wattage, cut-to-length heating tape to BS6351 Grade 22 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.

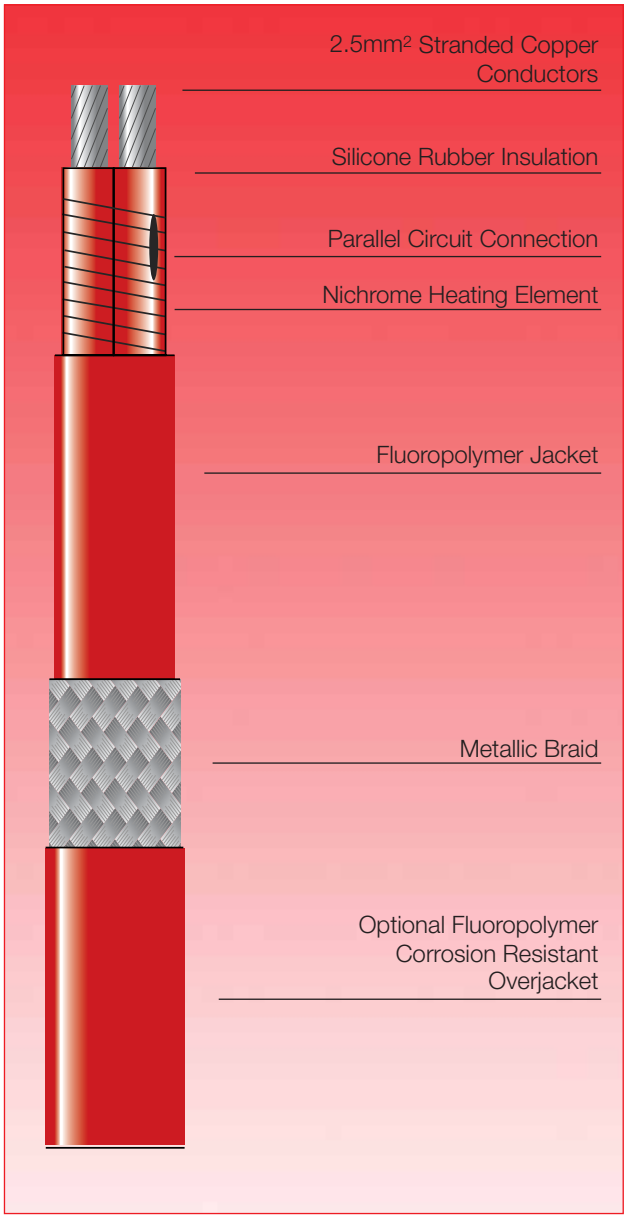
MTF is Factory Mutual (IEEE) Approved for use in non-hazardous and hazardous areas.

Minitracer has large 2.5mm^2 power busbars for long circuit lengths.

The installation of MTF heating tape 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, hazardous areas (Class 1, Div 2) 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)
MINIMUM INSTALLATION TEMPERATURE		–40°C (–40°F)
TEMPERATURE CLASSIFICATION	200°C (T3) T4 (135°C) T5 (100°C) or T6 (85°C)	Devices are classified to rated output and conditions of use. ie. limited pipe temp.
POWER SUPPLY		220 - 240 VAC or 110 - 120 VAC

WEIGHTS & DIMENSIONS

Type Ref	Nom. Dims. (mm)	Weight kg/100m	Min. Bending radius (mm)	Gland Size
MTF	9.2 x 6.2	7	25	M20
MTF..C	10.0 x 7.0	11	30	M20
MTF..CF	11.2 x 8.2	15	35	M20

APPROVAL DETAILS

Factory Mutual Research

Certificate No.	3W9A9.AX
Standard	ANSI/IEEE Std 515-1989
Area Approval	Class I Div 2 Grps B, C and D Class II Div 2 Grps F and G Class III Div 1&2 Hazardous and ordinary locations.

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 13MTF2-CF

- Output 13W/m
- Minitracer type MTF
- Supply Voltage 220 - 240 VAC
- Tinned Copper Braid
- Fluoropolymer overjacket

ACCESSORIES

We 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 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 TEMPERATURES (°C)

CAT REF	NOM. OUTPUT	AREA CLASSIFICATION						
		HAZARDOUS[1]						SAFE[2]
	(W/m)	T6	T5	T4	T3	T2	T1	
MTF	6.5	NOT APPROVED						190
	13							180
	23							150
	33							110
	50							70
MTF..C	6.5	60	75	120	190	190	190	190
	13	40	55	95	175	180	180	180
	23	-	30	65	155	155	155	155
	33	-	-	40	115	120	120	120
	50	-	-	-	70	80	80	80
MTF..CF	6.5	60	80	125	190	190	190	190
	13	35	50	100	185	185	185	185
	23	-	25	55	160	165	165	165
	33	-	-	35	115	120	120	120
	50	-	-	-	80	85	85	85

For conditions other than worst case, or pipes of other materials (eg. plastic, stainless steel, etc.), consult Heat Trace Ltd.
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* 115V	230V	ZONE LENGTH (NOM.) 115V	230V
6.5	106	212	950mm	1400mm
13	75	150	900mm	950mm
23	56	113	925mm	950mm
33	47	94	750mm	1000mm
50	38	76	905mm	1000mm

* For 10% volt drop variation

THERMELEC

Thermelec Limited, Old Naas Road, Bluebell, Dublin 12, Ireland.
Tel: +353 (1) 4568111 Fax: +353 (1) 4568108 www.thermelec.ie

MTFJ CE 0518

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

MINITRACER

Constant Wattage Heating Tape

- *Withstand temperatures up to 200°C*
- *Outputs available to 33W/m*
- *Can be cut to length without waste*
- *CENELEC approved for use in hazardous areas*
- *Full range of controls and accessories*
- *Available for 110/120 and 220/240VAC*

FEATURES

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

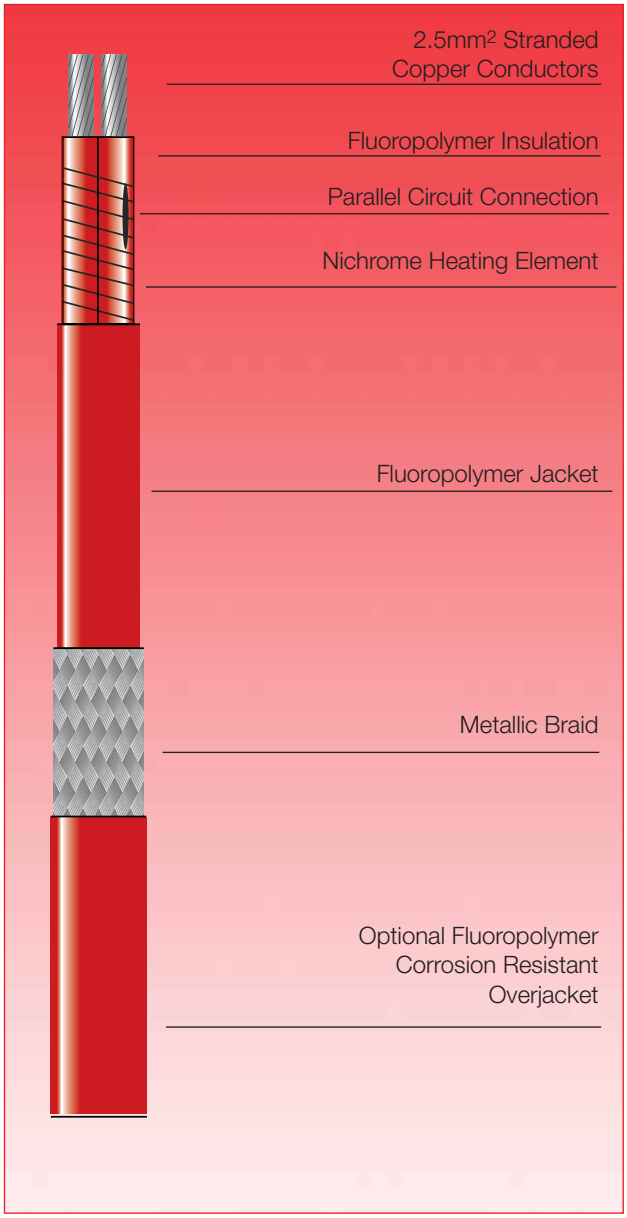
It can be cut-to-length at site if field fabricated heating cable is preferred.

MTFJ is CENELEC approved for use in hazardous areas.

The installation of MTFJ heating tape 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 — 200°C (T3), T4 (135°C), T5 (100°C) or T6 (85°C) } Devices are classified according to rated output and the conditions of use. ie. limited pipe temp

POWER SUPPLY — 220 - 240 VAC or 110 - 120 VAC

WEIGHTS AND DIMENSIONS

Type Ref	Nom. Dims. (mm)	Weight kg/100m	Min. Bending radius (mm)	Gland Size
MTFJ	7.5 x 4.8	6	20	M16
MTFJ..C	9.0 x 6.0	9	25	M16
MTFJ..CF	9.8 x 6.8	11	30	M20

APPROVAL DETAILS

ATEX Ⓔx	Certificate No: Sira 02ATEX3077
CENELEC Ⓔx	Certificate No. SCS Ex 94D3114
Standard Ⓔx	EN50014:1992 & EN50019:1994
Area Approval	Zone 1 and 2

CONSTRUCTION

Heating Element	Nickel Chromium
Power Conductors	Tinned Plated Copper 2.5mm²
Conductor Insulation	Fluoropolymer (FEP) and Silicone Rubber
Jacket	Fluoropolymer (FEP)
Braid	Tinned Copper
Over Jacket (optional)	Fluoropolymer (FEP)

ORDERING INFORMATION

Example 23MTFJ2-CF

- Output 23W/m
- Minitracer type MTFJ
- Supply Voltage 220 - 240 VAC
- Tinned Copper Braid
- Fluoropolymer overjacket

ACCESSORIES

We 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 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 TEMPERATURES (°C)

CAT REF	NOM OUTPUT	AREA CLASSIFICATION						
		HAZARDOUS[1]						SAFE[2]
	(W/m)	T6	T5	T4	T3	T2	T1	
MTFJ	6.5	NOT APPROVED						190
	13							176
	23							139
	33							97
MTFJ..C	6.5	54	72	115	187	190	190	190
	13	30	45	87	173	179	179	179
	23	-	-	47	144	149	149	149
	33	-	-	-	102	107	107	107
MTFJ..CF	6.5	54	74	121	190	190	190	190
	13	21	41	90	180	187	185	185
	23	-	-	39	152	159	159	159
	33	-	-	-	103	108	108	108

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* 115V	230V	ZONE LENGTH (NOM.) 115V	230V
6.5	111m	212m	1000mm	1500mm
13	78m	150m	741mm	1100mm
23	59m	113m	900mm	1000mm
33	49m	94m	1000mm	950mm

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

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

Thermelec Limited, Old Naas Road, Bluebell, Dublin 12, Ireland.
Tel: +353 (1) 4568111 Fax: +353 (1) 4568108 www.thermelec.ie

PHT CE 0518

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

POWERHEAT

Constant Wattage Heating Cable

- *Withstand temperatures up to 285°C*
- *Outputs available to 70W/m*
- *Can be cut to length with no wastage*
- *Approved & certified for use in hazardous areas*
- *Full range of controls and accessories*
- *Available for 110/120 and 220/240VAC*

FEATURES

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 maintenance of process temperatures in pipework and vessels.

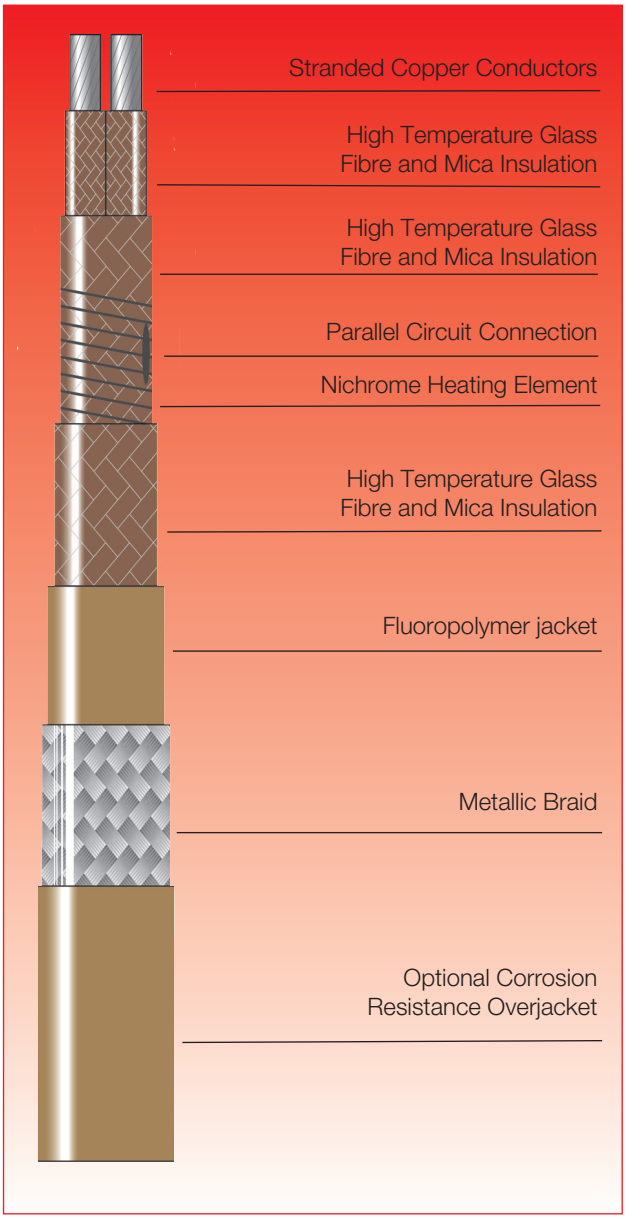
It can be cut-to-length at site and can replace mineral insulated (MI) cables for applications where the cut-to-length feature, or field fabricated heating cable is preferred.

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 TEMPERATURE	Un-energised	285°C (545°F)
MINIMUM INSTALLATION TEMPERATURE		–20°C (–4°F)
TEMPERATURE CLASSIFICATION	285°C (T2) T3 (200°C) T4 (135°C) T5 (100°C) or T6 (85°C)	Devices are classified according to rated output and the conditions of use. ie. limited pipe temp.
POWER SUPPLY		220 - 240 VAC or 110 - 120 VAC

WEIGHTS & DIMENSIONS

Type Ref	Nom. Dims. (mm)	Weight kg/100m	Min. Bending radius (mm)	Gland Size
PHT	8.8 x 6.0	12	25	M20
PHT..N	9.6 x 6.8	16	30	M20
PHT..NF	10.3 x 7.5	19	35	M20

APPROVAL DETAILS

ATEX	Sira 02ATEX3078	EN60079-0: 2009 IEC6009-31: 2008 EN60079-30-1: 2007
IEC	Sira Ex 02Y3068	IEC60079-0: 2000 IEC6009-7: 2001 IEC62086-1 2001
GOST	Awaiting updated certification details	

CONSTRUCTION

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

ORDERING INFORMATION

Example 70PHT2-NF

- Output 70W/m
- Powerheat type PHT
- Supply Voltage 220 - 240 VAC
- Nickel Plated Copper Braid
- Fluoropolymer overjacket

ACCESSORIES

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

MAXIMUM PIPE / WORKPIECE TEMPERATURES (°C)

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:-

CAT REF	NOM OUTPUT	AREA CLASSIFICATION						
		HAZARDOUS[1]						SAFE[2]
	(W/m)	T6	T5	T4	T3	T2	T1	
PHT	10							275
	30							239
	50							192
	70							133
PHT..N	10	44	61	102	180	275	275	275
	30	-	-	24	116	246	246	246
	50	-	-	-	48	200	200	200
	70	-	-	-	-	144	144	144
PHT..NF	10	40	60	105	186	275	275	275
	30	-	-	22	132	255	255	255
	50	-	-	-	63	215	215	215
	70	-	-	-	-	168	168	168

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* 115V	230V	ZONE LENGTH (NOM.) 115V	230V
10	79m	152m	contact your local Heat Trace representitive 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	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

* Note

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.

THERMELEC

Thermelec Limited, Old Naas Road, Bluebell, Dublin 12, Ireland.
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AHT

Electrical heating tape for process temperature maintenance of pipework and vessels in safe or hazardous locations

POWERHEAT

Constant Wattage Heating Tape

- *Withstand temperatures up to 425°C*
- *Outputs available to 150W/m*
- *Can be cut to length with no wastage*
- *Approved for use in non-hazardous, hazardous and corrosive environments*
- *Full range of controls and accessories*
- *Available for 110-120VAC and 220-277VAC*

FEATURES

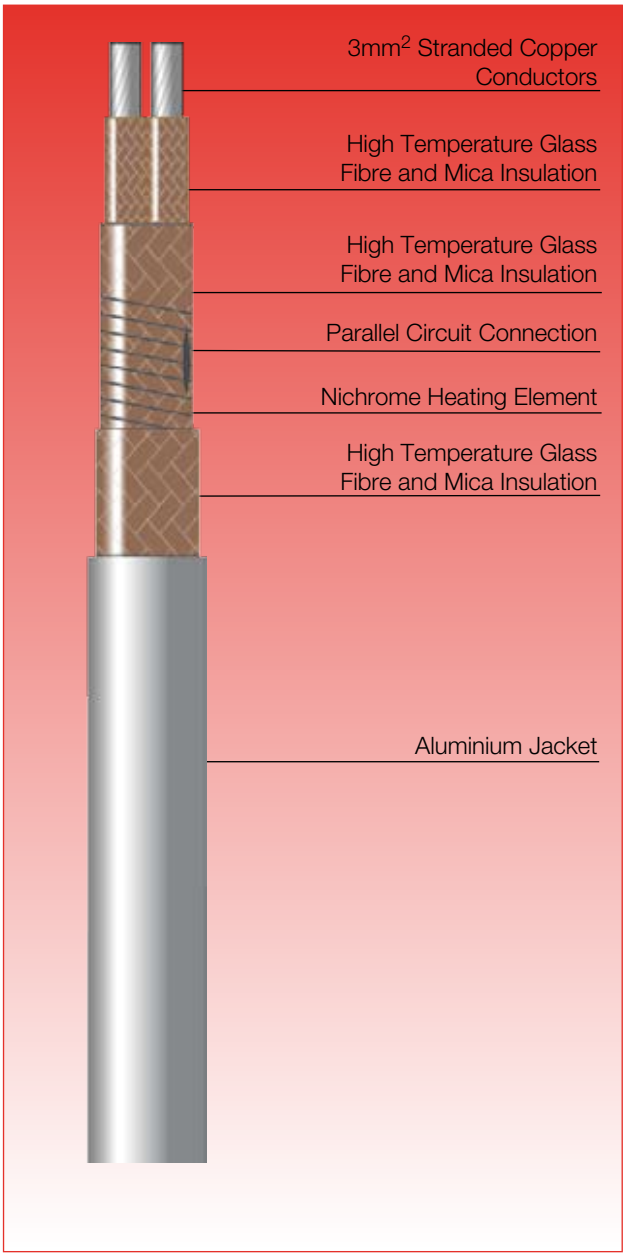
POWERHEAT Type AHT is a constant wattage heating tape that can be used for freeze protection or maintenance of process temperatures in pipework and vessels.

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 tape 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, even after severe process upsets.



SPECIFICATION

MAXIMUM EXPOSURE TEMPERATURE	Continuous Intermittent	350°C (644°F) 425°C (797°F)
MINIMUM OPERATING TEMPERATURE		–65°C * (–85°F)
MINIMUM INSTALLATION TEMPERATURE		–40°C (–40°F)
TEMPERATURE CLASSIFICATION	350°C (T1) T2 (300°C) T3 (200°C) T4 (135°C) T5 (100°C) or T6 (85°C)	Devices are classified according to rated output and the conditions of use. ie. limited pipe temp
POWER SUPPLY		0 - 277 VAC

WEIGHTS & DIMENSIONS

Type Ref	Nom. Dims. (mm)	Weight kg/100m	Min. Bending radius (mm)	Gland Size
AHT	10 x 7	16.5	25	M20

APPROVAL DETAILS

Testing Authority	Certificate No.
ATEX	Sira 02ATEX3079
IECEx	Sira 11.0124
FM	3009080
CSA	1350782 1352981
DNV-GL	E12836
EAC *	TC RU C-GB.ГБ05.В.00188

Further approvals are available on request.

CONSTRUCTION

Heating Element	Nickel Chromium
Power	Nickel Plated
Conductors	Copper 3mm^2
Conductor Insulation	Glass/Mica
Primary Insulation	Glass/Mica
Jacket	Aluminium

ORDERING INFORMATION

Example 50AHT2

Nominal Output 50W/m
Powerheat type AHT
Supply Voltage 220 - 277VAC

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:-

MAXIMUM PIPE / WORKPIECE TEMPERATURES (°C)

Area Classification	Hazardous[1]						Safe[2]
	T6	T5	T4	T3	T2	T1	
Catalogue Ref.							
15AHT	-	36	71	160	289	350	350
30AHT	-	11	28	100	246	323	323
50AHT	-	-	-	39	178	276	276
70AHT	-	-	-	-	48	140	140
100AHT	-	-	-	-	48	140	140
150AHT	-	-	-	-	-	36	36

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

We 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.

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