

- 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

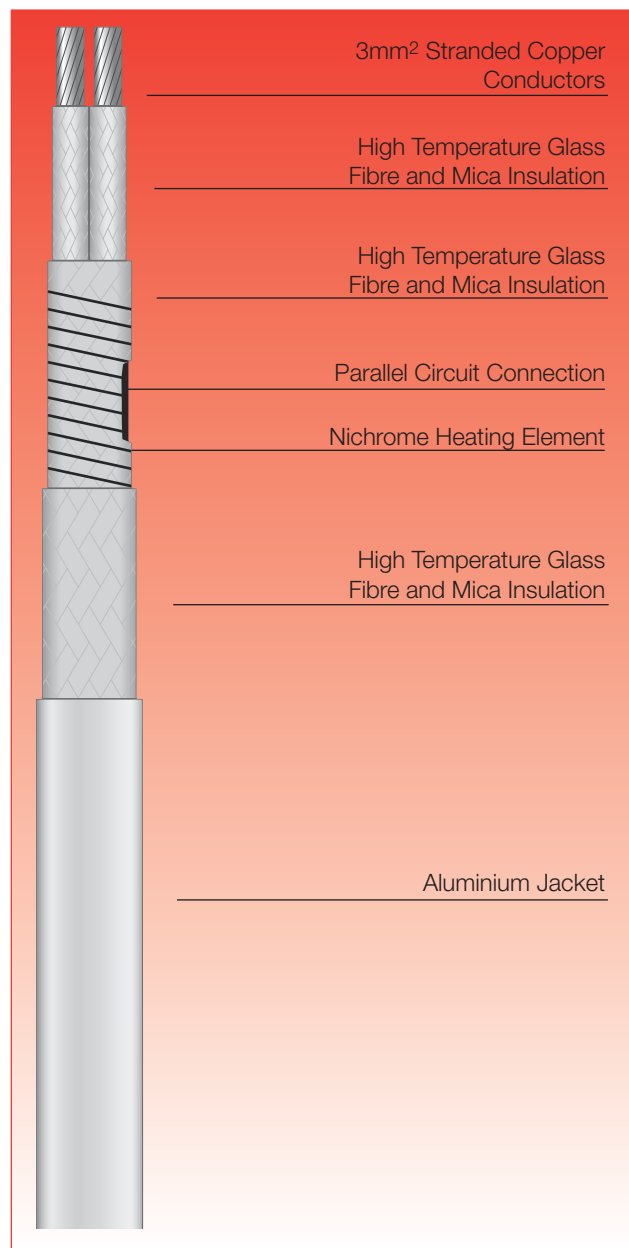
POWERHEAT Type AHT is a constant wattage heating tape that can be used for freeze protection or maintenance of process temperatures in pipework and vessels.

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

<b>MAXIMUM EXPOSURE TEMPERATURE</b>	Continuous	340°C (644°F)
	Intermittent	425°C (797°F)

<b>MINIMUM INSTALLATION TEMPERATURE</b>	-40°C (-40°F) (CENELEC -20°C, -4°F)
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<b>TEMPERATURE CLASSIFICATION</b>	350°C (T1)	Devices are classified according to rated output and the conditions of use. ie. limited pipe temp
	T2 (300°C)	
	T3 (200°C)	
	T4 (135°C)	
	T5 (100°C)	
	or T6 (85°C)	

<b>POWER SUPPLY</b>	220 - 277 VAC or 110 - 120 VAC
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### 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.	Standard
CENELEC 	SCS Ex 99E3146	EN50014 & EN50019
ATEX 	Sira 02ATEX3079	EN50014, EN50019 & IEC62086
IEC 	Sira 02Y3069	CEI IEC62086 & IEC60079-7
FM 	3009080	IEEE Std 515
CSA 	214197-1295278	C22.2 No. 130.1 C22.2 No. 130.2 C22.2 No. 138
Lloyds Register	02/00062	EN50014, EN50019, BS6351, IEEE Std 515

Further approvals are available on request.

### CONSTRUCTION

Heating Element	Nickel Chromium
Power Conductors	Nickel Plated Copper 3mm <sup>2</sup>
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 <sup>1</sup>						Safe <sup>2</sup>
	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
100AHT	-	-	-	-	48	140	140
150AHT	-	-	-	-	-	36	36

Pipe temperatures higher than those given above may be accommodated by using Heat Trace Ltd voltage compensating devices eg. POWERMATCH™ - 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 EN50014.
- 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
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 tapes. When used in hazardous areas, only use approved components.



Tracer House, Cromwell Road, Bredbury, Stockport, Cheshire SK6 2RF  
Tel: +44(0)161-430 8333 Fax: +44(0)161-430 8654 <http://www.heat-trace.com>

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- Withstand temperatures up to 285°C
- Outputs available to 70W/m
- Can be cut to length with no wastage
- CENELEC approved 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 tape to BS6351 Grade 22 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.

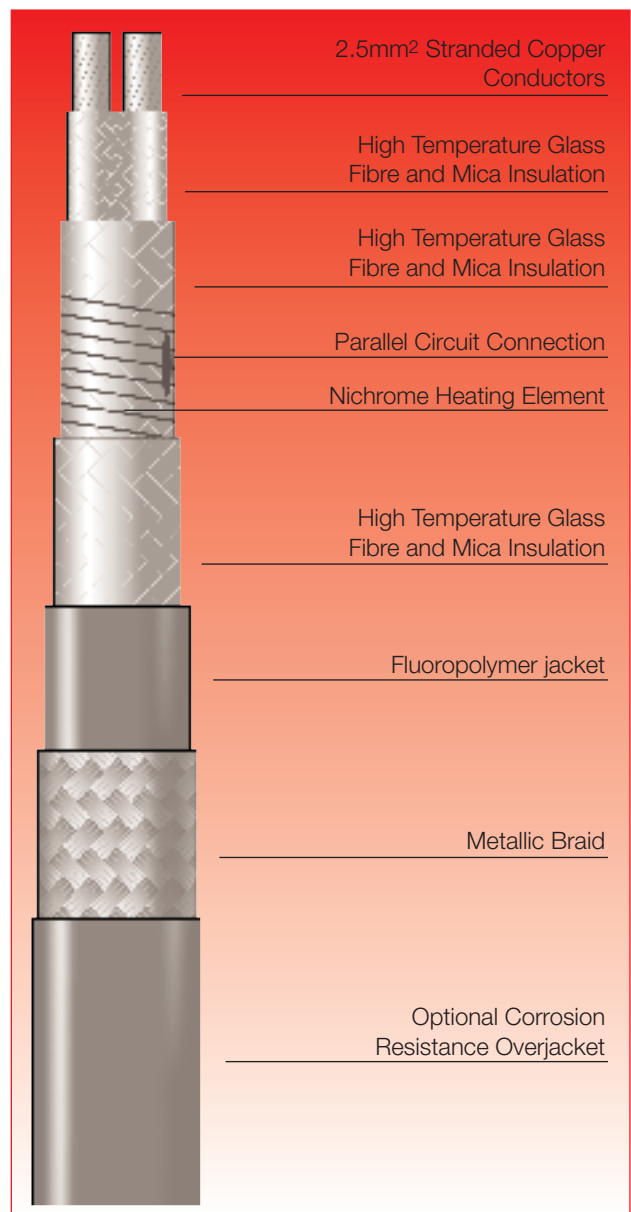
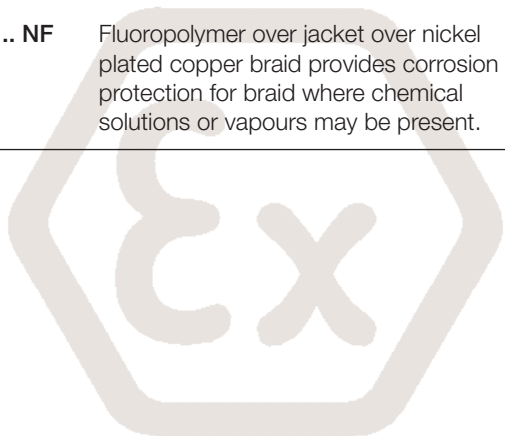
PHT is CENELEC approved for use in hazardous areas.

The installation of PHT 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**

**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** -40°C (-40°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

CENELEC 

Certificate No. SCS Ex 94D3114  
Standard EN50014:1992 & EN50019:1994  
Area Approval Zone 1 and 2

### CONSTRUCTION

Heating Element Nickel Chromium  
Power Conductors Nickel Plated Copper 2.5mm<sup>2</sup>  
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

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 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 (W/m)	AREA CLASSIFICATION						SAFE <sup>2</sup>
		HAZARDOUS <sup>1</sup>						
		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	241	241	241
	50	-	-	-	48	190	190	190
	70	-	-	-	-	129	129	129
PHT..NF	10	40	60	105	186	275	275	275
	30	-	-	22	132	249	249	249
	50	-	-	-	63	204	204	204
	70	-	-	-	-	147	147	147

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

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 LTD

Tracer House, Cromwell Road, Bredbury, Stockport, Cheshire SK6 2RF  
Tel: +44(0)161-430 8333 Fax: +44(0)161-430 8654 <http://www.heat-trace.ltd.uk>

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