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.

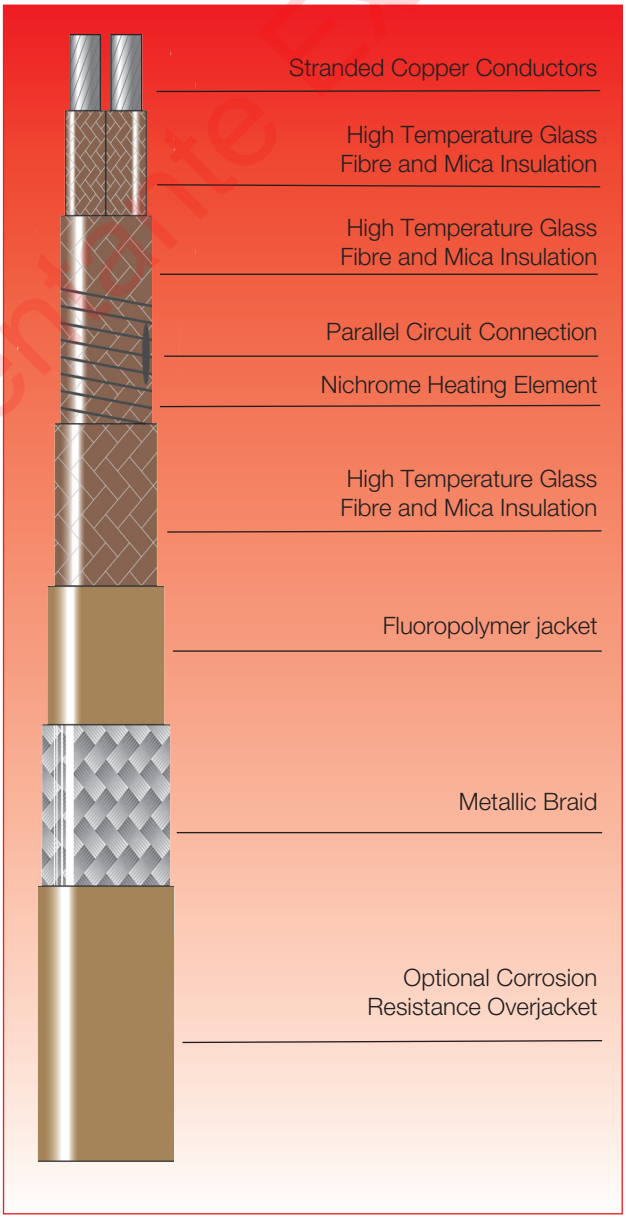
It can be cut-to-length at site and can replace mineral insulated (MI) cables for applications where the cut-to-length feature, or field fabricated heating cable is preferred.

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.



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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

Heat Trace 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

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

HEAT TRACE™
SETTING THE STANDARDS LEADING THE WAY

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