

HPT™

Power-Limiting Heating Cable

Product Specifications

Application . . .

Process Temperature Maintenance or Freeze Protection

High performance HPT power-limiting heating cables are designed specifically for process temperature maintenance or freeze protection where high maintain temperatures or high temperature exposure is required. HPT withstands the temperature exposures associated with steam purging.

A coiled resistor alloy heating element (patent pending) provides the power-limiting feature of HPT. This PTC (Positive Temperature Coefficient) characteristic decreases the cable's power output as the heat-traced product temperature increases and allows the cable to be overlapped during installation. The composite construction of the heating element and fibre substrate, plus an additional fibre cushion layer, provides an exceptionally durable high performance heating cable.

HPT cables are approved for use in ordinary (nonclassified) areas and are certified to the ATEX directive for use in Category 2 and 3 (Zone 1 and 2) classified areas.

Ratings . . .

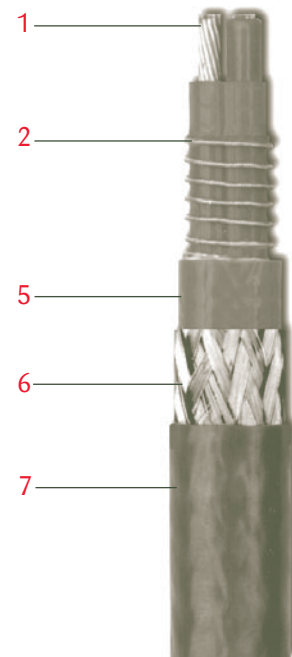
Available Watt densities	14, 28, 42, 57 W/m at 10°C
Nominal supply voltage ¹	230 Vac
Maximum maintenance temperature	149°C
Maximum continuous exposure temperature	
Power-off	260°C
Minimum installation temperature	-60°C
Minimum bend radius	
@ -15°C	10 mm
@ -60°C	32 mm
T-rating ²	
Based on stabilised design ³	T2 to T6

Basic Accessories⁴ . . .

Power Connection: All HPT cables require a TBX-4L power boot for terminating the circuit before connecting to power.

End-of-Circuit Termination: HPT cables with exposure temperatures below 240°C require the use of the ET-8 end cap and TT-6 fluoropolymer tape strip for terminating at the end of the circuit.

HPT cables with exposure temperatures between 240°C and 260°C require the HPEK-OJ end cap for terminating at the end of the circuit.



Construction . . .

- 1 Nickel-Plated Copper Bus Wires (3.3 mm²)
- 2 Composite Metal Alloy/Fibre
- 3 Heater Bus Connection (not shown)
- 4 Fibreglass Braid (not shown)
- 5 Fluoropolymer Dielectric Insulation
- 6 Nickel-Plated Copper Braid
- 7 Fluoropolymer Overjacket

Product Features . . .

- Withstands continuous flammability testing according to IEC 60332-1: 1993
- Allows cable to be installed at temperatures to -60°C
- Termination for system tested for ozone stability, UV stability and flammability testing according to ISO/IEC requirements

Notes . . .

1. Cable may be energised at other voltages; contact Thermon for design assistance.
2. T-rating per internationally recognised testing agency guidelines.
3. Thermon heating cables are approved for the listed T-ratings using the stabilised design method. This enables the cable to operate in hazardous areas without limiting thermostats. The T-rating may be determined using CompuTrace® Electric Heat Tracing Design Software or contact Thermon for design assistance.
4. Information on additional accessories to complete a heater circuit installation and to comply with approval requirements can be found in the "Power-Limiting Cables Systems Accessories" product specification sheet (Form TEP0010U).



THERMON . . . The Heat Tracing Specialists®
www.thermon.com

European Headquarters
Boezenweg 25 • PO Box 205
2640 AE Pijnacker • The Netherlands
Phone: +31 (0) 15-36 15 370

Corporate Headquarters
100 Thermon Dr. • PO Box 609
San Marcos, TX 78667-0609 • USA
Phone: +1 512-396-5801

For the Thermon office nearest you
visit us at . . .
www.thermon.com



HPT™

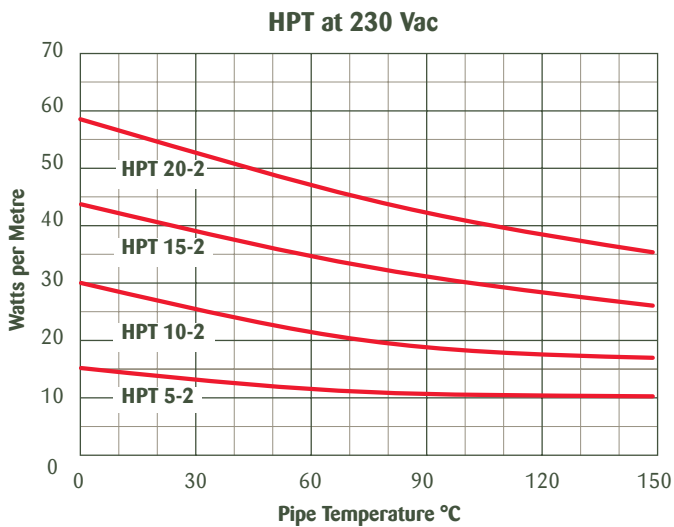
Power-Limiting Heating Cable

Product Specifications

Power Output Curves . . .

The power outputs shown apply to overjacketed cable installed on insulated metallic pipe at the service voltage stated below.

Product Type 230 Vac Nominal	Zone Length cm	Power Output at 10°C W/m
HPT 5-2	76	14
HPT 10-2	61	28
HPT 15-2	61	42
HPT 20-2	61	57



Certifications/Approvals . . .

CENELEC European Organisation for Electrotechnical Standardisation
Hazardous (Classified) Locations

CE II 2 G/D Ex e T2 to T6 DEMKO 02 ATEX 012337X

IEC Ex International Electrotechnical Commission
IEC Certification Scheme for Explosive Atmospheres
FMG 06.0006

FM Approved Factory Mutual Research
Hazardous (Classified) Locations

UL LISTED Underwriters Laboratories Inc.
Hazardous (Classified) Locations

HPT has additional hazardous area approvals including:

- DNV • Lloyd's • JIS • CCE/CMRS • GGTN

Contact Thermon for additional approvals and specific information.

Circuit Breaker Sizing and Type¹ . . .

Maximum circuit lengths for various circuit breaker amperages are shown below. Circuit breaker sizing and earth-fault protection should be based on applicable local codes. For information on design and performance on other voltages, contact Thermon.

Earth-fault protection of equipment should be provided for each branch circuit supplying electric heating equipment.

Type B and C Circuit Breakers

Product Type	230 Vac Service Voltage Start-Up Temperature ² °C	Max. Circuit Length ³ vs. Breaker Size Metres				
		16 A	25 A	32 A	40 A	50 A
HPT 5-2	10	174	280	280	280	280
	0	174	280	280	280	280
	-20	174	280	280	280	280
	-40	174	280	280	280	280
HPT 10-2	10	87	140	185	198	198
	0	87	140	185	198	198
	-20	87	140	185	198	198
	-40	87	140	185	198	198
HPT 15-2	10	58	93	122	157	162
	0	58	93	122	157	162
	-20	58	93	122	157	162
	-40	55	88	115	147	162
HPT 20-2	10	44	70	91	117	130
	0	43	69	89	114	130
	-20	40	64	83	106	130
	-40	38	60	77	98	124

Note . . .

1. Maximum circuit lengths shown are based on an instantaneous trip current characteristic per IEC 60898 at the referenced start-up temperature and a 10°C maintenance temperature. For maximum circuit lengths with other trip current characteristics contact Thermon.
2. While a heat tracing system is generally designed to keep the contents of a pipe at the desired maintain temperature, the cable may be energized at lower temperatures. For design data with lower start-up temperatures than represented above contact Thermon for design assistance.
3. The maximum circuit length is for one continuous length of cable, not the sum of segments of cable. Refer to CompuTrace® design software or contact Thermon for current loading of segments.

