

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.

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 fiber substrate, plus an additional fiber cushion layer, provide an exceptionally durable high performance heating cable.

HPT cables are approved for use in ordinary (nonclassified) areas, hazardous (classified) areas, and Zone 1 and 2 classified areas.

Ratings . . .

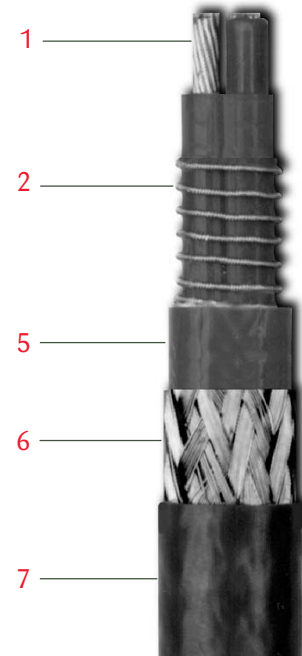
Available watt densities	5, 10, 15, 20 w/ft @ 50°F (16, 33, 49, 66 w/m @ 10°C)
Supply voltages	120/240 Vac nominal ¹
Max. maintenance temperature	300°F (149°C)
Max. continuous exposure temperature	
Power-off	500°F (260°C)
Minimum installation temperature	-60°F (-51°C)
Minimum bend radius	1.25" (32 mm)
T-rating ²	
Based on stabilized design ³	T2 to T6

Basic Accessories⁴ . . .

Power Connection: All HPT cables require a Terminator, PCA or ECA power connection kit for terminating the circuit before connecting to power.

End-of-Circuit Termination: HPT cables with the metallic ground braid require the use of the ET-7 end cap for terminating at the end of the circuit.

HPT cables with the overjacket wire option require the ET-8 end cap for terminating at the end of the circuit.



Construction . . .

- 1 Nickel-Plated Copper Bus Wires (12 AWG)
- 2 Composite Metal Alloy/Fiber
- 3 Heater Bus Connection (not shown)
- 4 Fiberglass Braid (not shown)
- 5 Fluoropolymer Dielectric Insulation
- 6 Nickel-Plated Copper Braid

Options . . .

- 7 OJ Fluoropolymer overjacket over nickel-plated copper braid provides additional protection to cable and braid where exposure to chemicals or corrosives is expected.

Notes . . .

1. Higher maintenance temperatures and operating voltages up to 480 Vac may be possible; contact Thermon for design assistance.
2. T-rating per internationally recognized testing agency guidelines.
3. Thermon heating cables are approved for the listed T-ratings using the stabilized 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 TEP0018).

THERMON . . . The Heat Tracing Specialists®

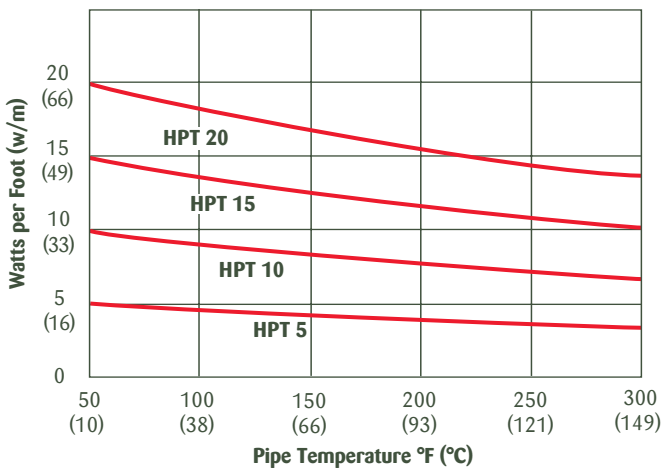
100 Thermon Dr. PO Box 609 San Marcos, TX 78667-0609
 Phone: (512) 396-5801 Facsimile: (512) 396-3627 **1-800-820-HEAT**
 www.thermon.com In Canada call **1-800-563-8461**

ISO 9001
REGISTERED

Power Output Curves . . .

The power outputs shown apply to cable installed on insulated metallic pipe (using the procedures outlined in IEEE Standard 515-2004) at the service voltages stated below. For use on other service voltages, contact Thermon.

Catalog Number 120 Vac	Zone Length in (cm)	Catalog Number 240 Vac	Zone Length in (cm)	Power Output at 50°F (10°C) w/ft (m)
HPT 5-1	24 (61)	HPT 5-2	30 (76)	5 (16)
HPT 10-1	18 (46)	HPT 10-2	24 (61)	10 (33)
HPT 15-1	18 (46)	HPT 15-2	24 (61)	15 (49)
HPT 20-1	12 (30)	HPT 20-2	24 (61)	20 (66)



Certifications/Approvals . . .



Factory Mutual Research

Ordinary Locations
 Hazardous (Classified) Locations
 Class I, Division 2, Groups B, C and D
 Class II, Division 2, Groups F and G*
 Class III, Divisions 1 and 2
 Class I, Zones 1 and 2, AEx e II



Underwriters Laboratories Inc.

Ordinary Locations
 Hazardous (Classified) Locations
 Class I, Division 2, Groups B, C and D
 Class II, Division 2, Groups E, F and G*
 Class III, Divisions 1 and 2
 Class I, Zones 1 and 2, AEx e II



Canadian Standards Association

Ordinary Locations
 Hazardous (Classified) Locations
 Class I, Division 2, Groups A, B, C and D
 Class II, Division 2, Groups E, F and G
 (requires BNOJ option)
 Class I, Division 1, Groups A, B, C and D
 Class II, Division 1, Groups E, F and G

*CL. II, Div. 2 requires Thermon design review.

Circuit Breaker Sizing and Type . . .

Maximum circuit lengths for various circuit breaker amperages are shown below. Breaker sizing should be based on the National Electrical Code, Canadian Electrical Code or any other applicable code. For information on design and performance on other voltages, contact Thermon.

The National Electrical Code and Canadian Electrical Code require ground-fault protection of equipment for each branch circuit supplying electric heating equipment. Check local codes for ground-fault protection requirements.

Catalog Number	Start-Up Temperature °F (°C)	Max. Circuit Length vs. Breaker Size ft (m)			
		20A	30A	40A	50A
HPT 5-1	50 (10)	325 (99)	445 (136)	445 (136)	445 (136)
	0 (-18)	325 (99)	445 (136)	445 (136)	445 (136)
	-20 (-29)	325 (99)	445 (136)	445 (136)	445 (136)
	-40 (-40)	325 (99)	445 (136)	445 (136)	445 (136)
HPT 10-1	50 (10)	165 (50)	260 (79)	315 (96)	315 (96)
	0 (-18)	165 (50)	260 (79)	315 (96)	315 (96)
	-20 (-29)	165 (50)	260 (79)	315 (96)	315 (96)
	-40 (-40)	160 (49)	250 (76)	310 (95)	310 (95)
HPT 15-1	50 (10)	115 (35)	175 (53)	245 (75)	250 (76)
	0 (-18)	105 (32)	160 (49)	220 (67)	250 (76)
	-20 (-29)	100 (30)	150 (46)	210 (64)	235 (72)
	-40 (-40)	95 (29)	145 (44)	205 (63)	230 (70)
HPT 20-1	50 (10)	75 (23)	115 (35)	160 (49)	205 (62)
	0 (-18)	70 (21)	105 (32)	145 (44)	185 (56)
	-20 (-29)	65 (20)	100 (30)	140 (43)	175 (53)
	-40 (-40)	65 (20)	100 (30)	135 (41)	170 (52)

Catalog Number	Start-Up Temperature °F (°C)	Max. Circuit Length vs. Breaker Size ft (m)			
		20A	30A	40A	50A
HPT 5-2	50 (10)	655 (200)	885 (270)	885 (270)	885 (270)
	0 (-18)	655 (200)	885 (270)	885 (270)	885 (270)
	-20 (-29)	655 (200)	885 (270)	885 (270)	885 (270)
	-40 (-40)	645 (197)	815 (248)	885 (270)	885 (270)
HPT 10-2	50 (10)	335 (102)	525 (160)	620 (189)	620 (189)
	0 (-18)	335 (102)	525 (160)	620 (189)	620 (189)
	-20 (-29)	335 (102)	525 (160)	620 (189)	620 (189)
	-40 (-40)	325 (99)	500 (152)	620 (189)	620 (189)
HPT 15-2	50 (10)	230 (70)	355 (108)	495 (151)	500 (152)
	0 (-18)	210 (64)	320 (98)	440 (134)	500 (152)
	-20 (-29)	200 (61)	310 (94)	425 (130)	480 (146)
	-40 (-40)	190 (58)	295 (90)	405 (123)	455 (139)
HPT 20-2	50 (10)	155 (47)	235 (72)	325 (99)	415 (127)
	0 (-18)	140 (43)	215 (66)	295 (90)	370 (113)
	-20 (-29)	135 (41)	205 (63)	280 (85)	355 (108)
	-40 (-40)	130 (40)	200 (61)	270 (82)	340 (104)

