



PRODUCT SPECIFICATIONS

# HTEK™ SERIES CONSTANT WATT HEATING CABLE

### APPLICATION

High performance HTEK series resistance constant watt heating cables are used where circuit lengths exceed the limitations of parallel resistance heating cables and high maintain temperatures or high temperature exposure is required. Circuit lengths up to 3,658 m can be energized from a single power supply point.

The series circuitry of HTEK provides consistent watt-per-foot power output along the entire length of the cable without the voltage drop concerns associated with parallel tracer constructions.

HTEK cables are certified for use in ordinary (nonclassified) areas and in potentially explosive atmospheres in accordance with the ATEX Directive and the IEC Ex Scheme.

### RATINGS

|   |                             |
|---|-----------------------------|
| Rated voltage <sup>1</sup> .....                        | for operation up to 750 Vac |
| Max. maintenance temperature <sup>2</sup> .....         | 204°C                       |
| Max. continuous exposure temperature                    |                             |
| Power-off .....   | 260°C                       |
| Minimum installation temperature .....                  | -60°C                       |
| Minimum bend radius                                     |                             |
| @ -15°C .....   | 22 mm                       |
| @ -60°C .....   | 32 mm                       |
| T-rating .....  | T2 to T6 <sup>3</sup>       |
| (using the principles of stabilized design or limiters) |                             |

### STABILISED DESIGN

The watt density limitation for HTEK cables is directly related to the desired maintain temperature. Thermon is able to ensure the T-rating based on a stabilized design that enables series constant watt heating cables to operate in hazardous areas without the use of limiter thermostats.

#### Notes

1. Definition as stated in IEC 60079-30-1. Specific voltage depends on circuit length and design conditions.
2. Watt density limitations are correlated to maintain temperatures.
3. Heating cable output and T-rating are dependent upon supply voltage, cable resistance, temperature conditions as well as additional variables. These may be determined using CompuTrace® Electric Heat Tracing Design Software or by contacting Thermon design assistance



### CONSTRUCTION

- 1 Heating Conductors (2 or 3)
- 2 Fluoropolymer dielectric insulation over Fiberglass composite
- 3 Fluoropolymer pairing jacket
- 4 Nickel-plated copper braid
- 5 Fluoropolymer overjacket provides additional protection to cable and braid where exposure to chemicals or corrosives is expected.

### BASIC ACCESSORIES

**Power Connection:** All HTEK cables require a cold lead transition for connection to power (available as a factory termination or a field fabricated kit). Refer to the back of this specification sheet for details.

**End-of-Circuit Termination:** An end-of-circuit termination must also be used with HTEK cables. This termination, detailed on the back of this specification sheet, is available as a factory termination or a field fabricated kit.

**THERMON The Heat Tracing Specialists®**

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**AVAILABLE CABLES**

| Catalog Number |             | Resistance per Conductor <sup>1</sup> at 20°C<br>Ohms/m | Conductor Size<br>(mm) <sup>2</sup> |
|----------------|-------------|---|-------------------------------------|
| 2 Conductor    | 3 Conductor |   |                                     |
| HTEK 2C30      | HTEK 3C30   | 0.01905   | 0.82                                |
| HTEK 2C40      | HTEK 3C40   | 0.01492   | 1.3                                 |
| HTEK 2C50      | HTEK 3C50   | 0.009449  | 2.1                                 |
| HTEK 2C60      | HTEK 3C60   | 0.005945  | 3.3                                 |
| HTEK 2C70      | HTEK 3C70   | 0.003478  | 5.3                                 |

**Note** 1. Consult factory for higher resistance conductor options.

**CIRCUIT BREAKER SIZING AND TYPE**

Circuit breaker sizing and earth-fault protection should be based on applicable local codes. For information on design and performance, contact TC-E.

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

**TERMINATIONS AND SPLICES**

Prior to connection to power, HTEK heating cables should be terminated with a certified non heating “cold lead” and a “hot-end” termination. To facilitate ease of installation in-line splices may also be required. These connections/terminations are available as factory fabricated assemblies or as field fabricated kits.

**Power Connection:** Provides fluoropolymer insulated nickel-plated stranded copper cold leads and ground wire extension plus required splices, insulating tape and sealant. A flexible stainless steel conduit with a 3/4” fitting protects the leads. The number and size of the cold leads is based on the HTEK heater type.

**End Termination:** The hot end (opposite end from power) utilizes an under insulation stainless steel fitting that houses the lug, insulating tape, sealant and grounding lug. The size and style of the termination is based on the number and size of conductors.

**In-Line Splices:** To facilitate the installation of the cable, an under insulation splice may be required. The splice utilizes a stainless steel housing (sized for the conductor type and number), butt lug splices, grounding lugs, insulating tape and sealant.



**CET:**  
Factory fabricated cold-end termination.



**HET:**  
Factory fabricated hot-end termination.




**HST:**  
Factory fabricated splice termination.


**CETK:**  
Field fabricated cold-end termination kit.


**HETK:**  
Field fabricated hot-end termination kit.


**HSTK:**  
Field fabricated splice termination kit.

**CERTIFICATIONS/APPROVALS**

 II 2 g Ex eb IIC T260°C (T2) to T6  
II 2 D Ex tb IIIC T260°C to T85°C FM 11ATEX0050

 International Electrotechnical Commission  
IEC Certification Scheme for Explosive Atmospheres  
CCVE 11.0002

 Factory Mutual Research  
Ordinary and Hazardous (Classified) Locations

 Underwriters Laboratories Inc.  
Hazardous (Classified) Locations

HTEK has additional hazardous area approvals including:  
DNV • Lloyd's • JIS • CCE/CMRS • GGTN  
Contact TC-E for additional approvals and specific information.



**Terminator ZP-M:**

Designed to fabricate power connections, in-line splice connections or for making end terminations. Electrical connections are made in terminal blocks utilizing nickel-plated copper terminals to ensure corrosion-free electrical integrity. No cold leads are required.