# Duo-Tape®: Flexible Heating Tape







## **Heating Tape**

We provide high temperature, flexible electric heating elements. They were developed to offer the unique convenience of wrap-on heat for tubing, laboratory apparatus or any dry environment application where flexible surface spot heat is required. Heating tapes are offered in many standard sizes, having watt densities from 3.25 to 13 watts per square inch, and temperature ratings to  $1400^{\circ}F$  (760°C).

## **Design Features:**

- 1400°F (760°C) temperature rating
- 2 ft. (610 mm) long high temperature lead wires on one end
- Highly flexible & rugged, knitted design
- High, medium and low watt density designs
- Constant wattage (min. ohm change cold to hot)

#### **Construction:**

The construction begins with bundled, fine strand resistance wire, 37 to 40 gauge, covered with a minimum of 2 layers of high temperature braided AMOX yarn. The insulated resistance wire is then knitted into a serpentine configuration, forming a flat tape. Once the lead wires are attached, most tapes have an additional braided, dielectric protection layer of AMOX yarn for use on conductive (metal) surfaces.

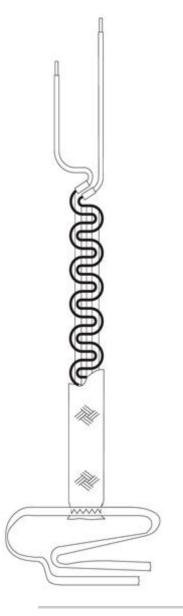
#### **Durability Feature:**

Unlike other straight element heating wires and tapes, knitting allows for cushioning during heating and cooling. The element expands in all directions rather than one, virtually eliminating "thermal growth." In addition, knitting prevents the tape from tensile stress when stretched (a typical problem of elements applied to flexible hoses).

### Low Watt Density, Well Distributed Heat Feature:

Knitting allows dense distribution of wire per unit length of tape. This feature

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provides longer life resulting from lower watts per inch of wire. (A typical 1-inch-wide tape may contain 10 inches (25.4 cm) of wire element.)

## **Duo-Tape®:**

Duo-Tape® is a breakthrough design innovation that allows two wires to be knitted side by side. The advantage is that the lead wires may be attached on the same end rather than opposite ends. The balance of the tape is constructed the same as the other single wire tapes.

# **Typical Applications**

- Laboratory, general application
- Research and Development
- Pilot plant research heaters
- High temperature hose heating
- Industrial applications, anywhere high temperature and flexibility are required (non-hazardous and dry locations only)

# **Options**

- 1. Plug: A 120V plug can be ordered on indicated heaters only as a custom assembly.
- Since the leads of the Duo-Tape are on one end, the plug is a single molded unit.
- 2. Lead Wire: Standard lead wire length is 2ft. (61 cm)

## Notes:

When a plug is requested, lead wire length may be 2 ft. or shorter. Optional Lengths may be ordered to 8 ft. For special length, width, watts or volts please contact PTSHEAT.

# **Duo-Tape Standard (Non-Stock) Sizes and Ratings**

# Note: Part Numbers in table are for heaters without plugs. Plugs are available for 120V heaters only.

| Watt<br>Density               | Size       | Watts | Part Number |          |
|-------------------------------|------------|-------|-------------|----------|
|                               |            |       | 120V        | 240V     |
| 13<br>W/in2<br>2<br>W/cm2     | 1⁄2" × 2'  | 156   | FTF00101    | FTF00107 |
|                               | 1⁄2" × 4'  | 312   | FTF00102    | FTF00108 |
|                               | 1⁄2" × 6'  | 468   | FTF00103    | FTF00109 |
|                               | 1⁄2" × 8'  | 624   | FTF00104    | FTF00110 |
|                               | 1⁄2" × 10' | 780   | _           | FTF00111 |
|                               | 1⁄2" × 12' | 936   | _           | FTF00112 |
|                               | 1⁄2" × 16' | 1248  | _           | FTF00113 |
|                               | 1" × 2'    | 312   | FTF00105    | FTF00114 |
|                               | 1" × 4'    | 624   | FTF00106    | FTF00115 |
|                               | 1" × 6'    | 936   | _           | FTF00116 |
|                               | 1" × 8'    | 1248  | _           | FTF00117 |
|                               | 1⁄2" × 2'  | 104   | FTF00118    | —        |
|                               | 1⁄2" × 4'  | 208   | FTF00119    | FTF00125 |
|                               | 1⁄2" × 6'  | 312   | FTF00120    | FTF00126 |
|                               | 1⁄2" × 8'  | 416   | FTF00121    | FTF00127 |
| 8.67                          | 1⁄2" × 10' | 520   | FTF00122    | FTF00128 |
| W/in2                         | 1⁄2" × 12' | 624   | _           | FTF00129 |
| 1.3                           | 1⁄2" × 16' | 832   | —           | FTF00130 |
| W/cm2                         | 1" × 2'    | 208   | FTF00123    | FTF00131 |
|                               | 1" × 4'    | 416   | FTF00124    | FTF00132 |
|                               | 1" × 6'    | 624   | —           | FTF00133 |
|                               | 1" × 8'    | 832   | —           | FTF00134 |
|                               | 1" × 10'   | 986   | —           | FTF00135 |
| 3.25<br>W/in2<br>0.5<br>W/cm2 | 1⁄2" × 2'  | 39    | FTF00136    |          |
|                               | 1⁄2" × 4'  | 78    | FTF00137    | FTF00147 |
|                               | 1⁄2" × 6'  | 117   | FTF00138    | FTF00148 |
|                               | 1⁄2" × 8'  | 156   | FTF00139    | FTF00149 |
|                               | 1⁄2" × 10' | 195   | FTF00140    | FTF00150 |
|                               | 1⁄2" × 12' | 234   | FTF00141    | FTF00151 |
|                               | 1⁄2" × 16' | 312   | FTF00142    | FTF00152 |
|                               | 1" × 2'    | 78    | FTF00143    | FTF00153 |

|  | 1" × 4'  | 156 | FTF00144 | FTF00154 |
|--|----------|-----|----------|----------|
|  | 1" × 6'  | 234 | FTF00145 | FTF00155 |
|  | 1" × 8'  | 312 | FTF00146 | FTF00156 |
|  | 1" × 10' | 385 | —        | FTF00157 |
|  | 1" × 12' | 468 | _        | FTF00158 |
|  | 1" × 16' | 624 | _        | FTF00159 |

## **How To Order**

**Standard Heaters** Choose the Duo-Tape Heater from the

above table that meets your needs. Specify Part Number.

# **Custom Engineered/Manufactured Heaters**

Understanding that an electric heater can be very application specific, for sizes and ratings not listed, PTSHEAT will design and manufacture a Duo-Tape Heater to meet your requirements.

# Standard Lead time is 3 weeks.

## **Please Specify the following:**

- Application
- Length
- Wattage
- Voltage

- Termination
- Leads
- Crimp Connectors



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