Efficient Heat Dissipation and Long Life to Meet Your Highest Demands

The advanced design of the MULTICELL™ insertion heater from Watlow® offers three major advantages: extreme process temperature capability, independent zone control for precise temperature uniformity and loose fit design for easy insertion and removal.

**Performance Capabilities**
- Engineered to achieve sheath temperatures up to 2050°F (1120°C)
- Up to six independently controllable zones

**Features and Benefits**
- Multiple, independently controllable zones
  - Allows process temperature uniformity not possible with any other single-sheathed heater

**Radiant design of heater**
- Allows for loose insertion in boiling holes and piping holes
- Permits easy removal and replacement with minimal down time since it will not bind or seize in the hole

**Oxidized sheath**
- Provides high emissivity and improves the heater’s performance as oxidation increases

**Features and Benefits (con’t)**
- Individually metal-sheathed coils swaged into a larger, high-temperature alloy outer sheath
  - Provides maximum protection against element burnout through the outer sheath
- Quick disconnect plug and jack
  - Permits fast replacement of individual elements while the press stays at operating temperature
- Special bending capabilities
  - Solves unusual machinery needs and keeps leads away from heated zones
- Flexible leads up to 842°F (450°C)
  - Protects termination from high temperature environment
**Typical Applications**

- Hot isothermal forming
- Soil remediation
- Hot forging dies
- Heated platen
- Super plastic forming
- Heated platen (single and multiple zones)
- Heat treating processes
- Super plastic forming with diffusion bonding
- Polysilicon ingots
- Hot gas generation
- Hazardous waste treatment systems

**Definition of Terms**

**Cold Toe:** A physical minimum requirement of $1\frac{7}{8} \pm \frac{5}{16}$ inch

**Independent Zone:** Up to three, separately controlled zones, which can be of varying lengths and wattages

**Heated Length:** The combined sum of all independent zones

**Wattage:** Ratings are the combined sum of all independent zones

**MULTICELL Heaters:**

**The High Temperature Choice**

- **Sheath Temperature**
  - High-Temperature Tubular Heater
  - Typical Tubular Heater
  - Typical Cartridge Heater

**Physical Design Parameters**

All bending of a MULTICELL heater is restricted to the cold area of the heater. All bend radii points must be 1 in. (25 mm) from the hot/cold junction.

- **Droop**
- **Straight**
- **Angle**
- **Crank**
Tab Styles

Full View

Style S2

Style S3

Weldments to the MULTICELL Heater Element

Tabs and rings are used to hold the heater in place and keep it from creeping. Available in carbon steel, 304 and 316 SS.

Ring Styles

Full View

Style S5

Style H1
**Options**

**Plug and Socket and Twist-Lock® Plug Variations**

Three zone heaters requiring a quick disconnect plug will typically be supplied with a six contact Plug and Socket. Twist-Lock® plug variations are typically supplied with single zone MULTICELL heaters. When ordering a Twist-Lock® plug, please specify the type as shown below. For any other plug variations, please contact your Watlow representative.

**Note:** Mating connectors are also available for plug terminations listed. Contact your Watlow representative.

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**Termination Assemblies**

All termination assemblies are available with potting sleeves or cups, with or without armor flex lead wire protection. Please specify **potting vessel** and **lead cover option** when ordering.

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<table>
<thead>
<tr>
<th>Male Plug</th>
<th>Zones</th>
<th>Type</th>
<th>Voltage</th>
<th>Amperage</th>
<th>Blade Type</th>
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<td>6 wire</td>
<td>600</td>
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</tbody>
</table>

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**Plug and Socket**

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**Twist-Lock®**

Watlow® is a registered trademark of Watlow Electric Manufacturing Company.
MULTICELL™ is a trademark of Watlow Electric Manufacturing Company.
Twist-Lock® is a registered trademark of Hubbell Incorporated.