

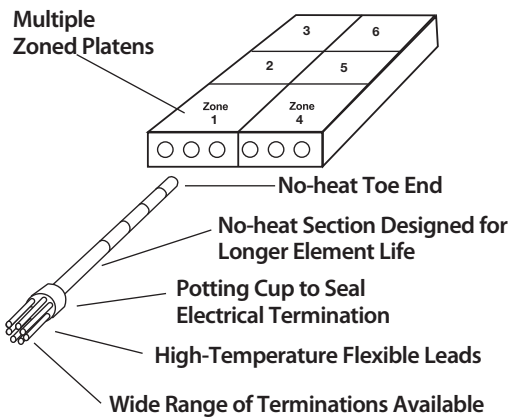
# MULTICELL™ Insertion Heaters

## 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

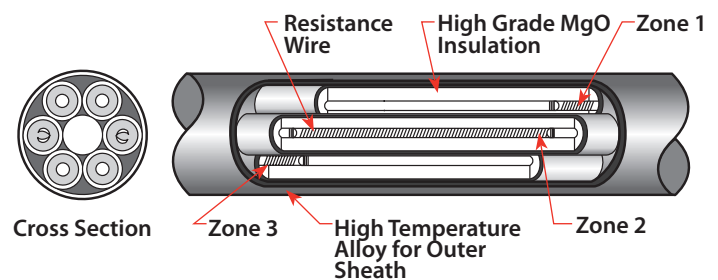
- Allows for loose insertion in boiling holes and piping holes
- Permits easy removal and replacement with minimal down time since it will not bind or seize in the hole

#### Oxidized sheath

- Provides high emissivity and improves the heater's performance as oxidation increases



### Independently Controllable Heated Zones



### 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 platens
- Super plastic forming
- Heated platens (single and multiple zones)
- Heat treating processes
- Super plastic forming with diffusion bonding
- Polysilicon ingots
- Hot gas generation
- Hazardous waste treatment systems

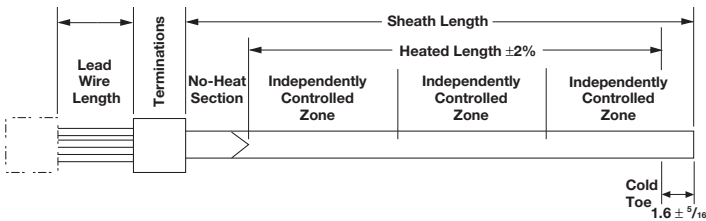
## Definition of Terms

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

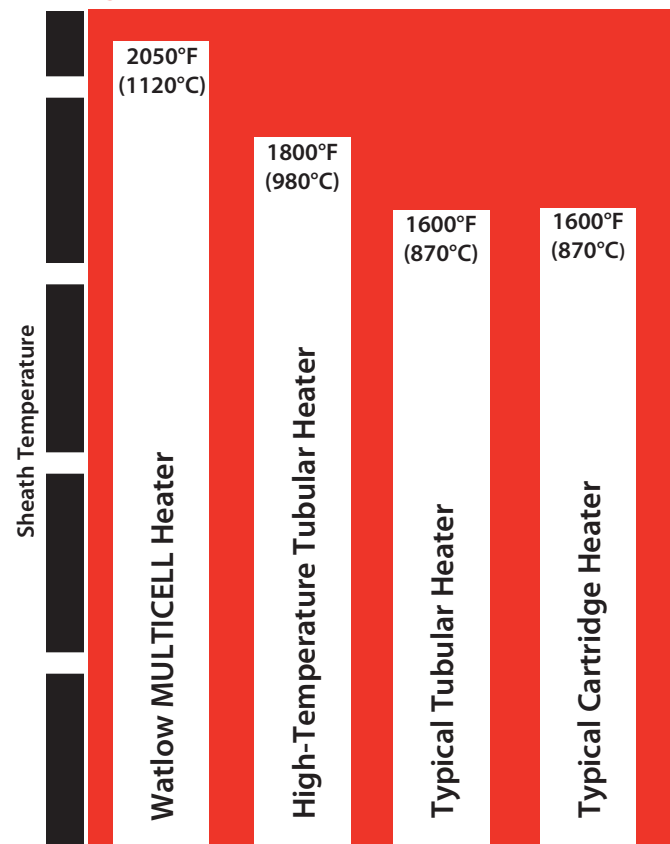
**Independent Zone:** Up to three, separately controlled zones, which can be of varying lengths and wattages

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

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



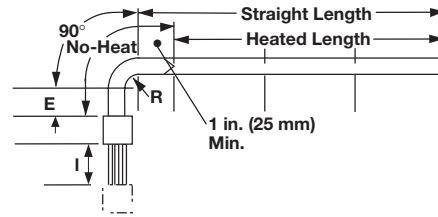
## MULTICELL Heaters: The High Temperature Choice



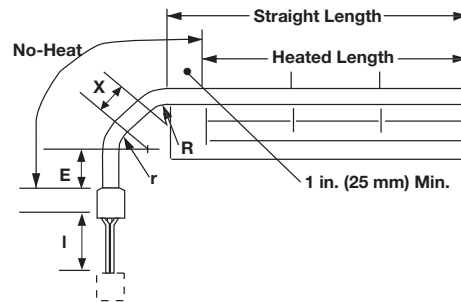
## Physical Design Parameters

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.

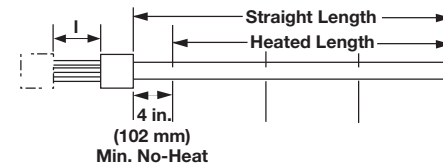
“L”



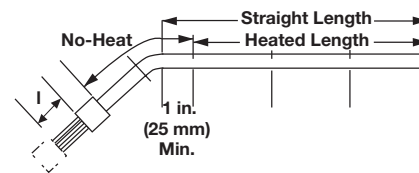
### Droop



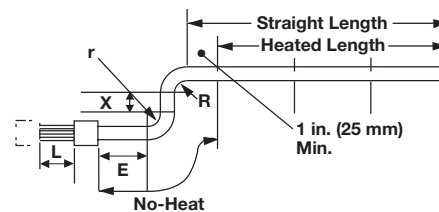
### Straight



### Angle

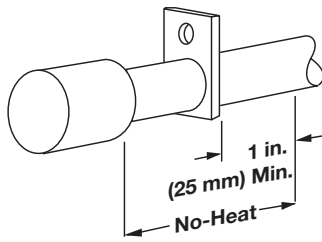


### Crank

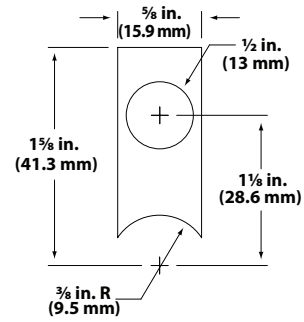


## Tab Styles

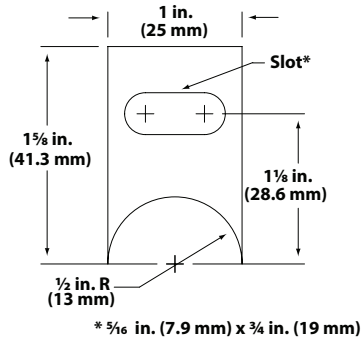
Full View



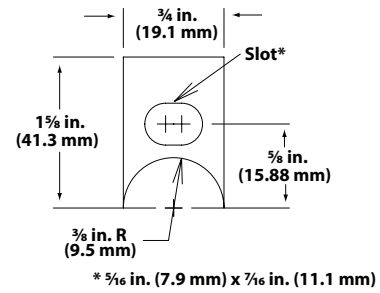
Style S1



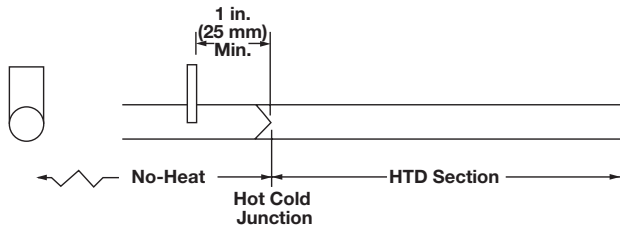
Style S2



Style S3



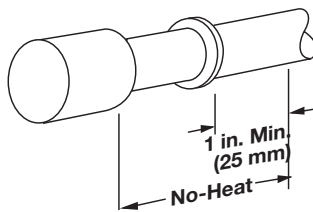
## Weldments to the MULTICELL Heater Element



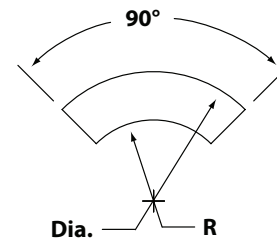
Tabs and rings are used to hold the heater in place and keep it from creeping. Available in carbon steel, 304 and 316 SS.

## Ring Styles

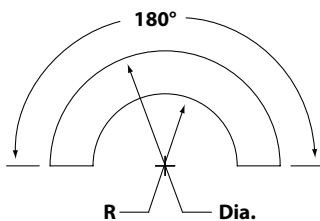
Full View



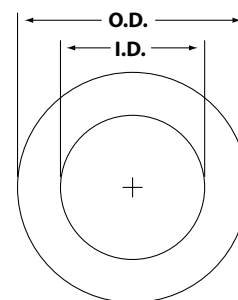
Style S4



Style S5

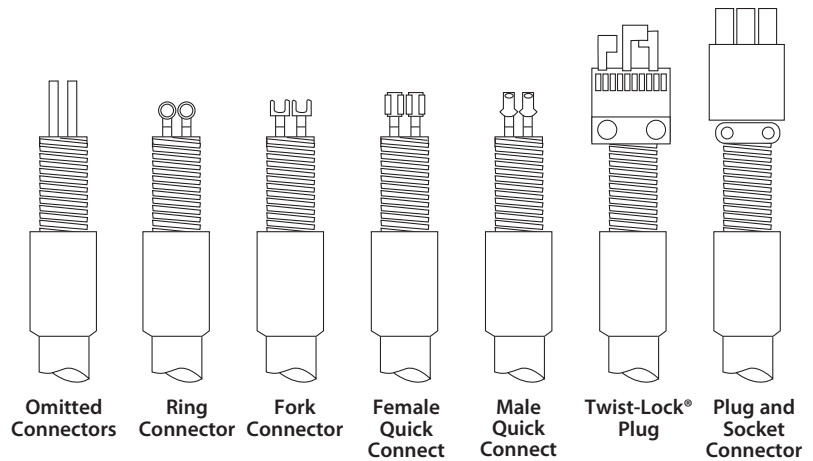


Style H1



## 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.



Note: Termination illustrations shown with armor flex covering.

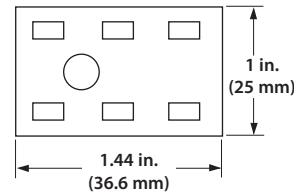
## Options

### 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.

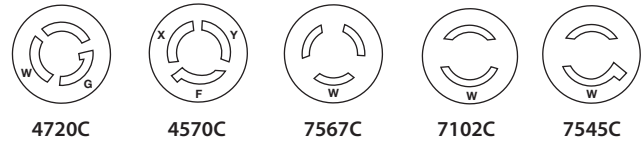
Note: Mating connectors are also available for plug terminations listed. Contact your Watlow representative.

### Plug and Socket

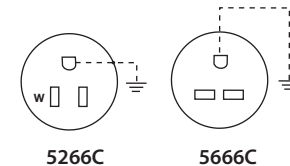


6 Contacts

### Twist-Lock®



### Straight



Male Plug	Zones	Type	Voltage	Amperage	Blade Type
P406-CCT	3	6 wire	600	15	Straight
4570C	1	3 wire	250	15	Twist-Lock®
4720C	1	3 wire	125	15	Twist-Lock®
5266C	1	3 wire	125	15	Straight
5666C	1	3 wire	250	15	Straight
7102C	1	2 wire	250	20	Twist-Lock®
7545C	1	2 wire	250	15	Twist-Lock®
7567C	1	3 wire	125	10	Twist-Lock®

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

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