



**RAMA CORPORATION**

**RAMA® CELL HEATERS**

*ESTABLISHED  
1947*



**RAMA CORPORATION**

**“INNOVATION THROUGH EXPERIENCE”**

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# Rama®Cell High Temperature Insertion Heaters

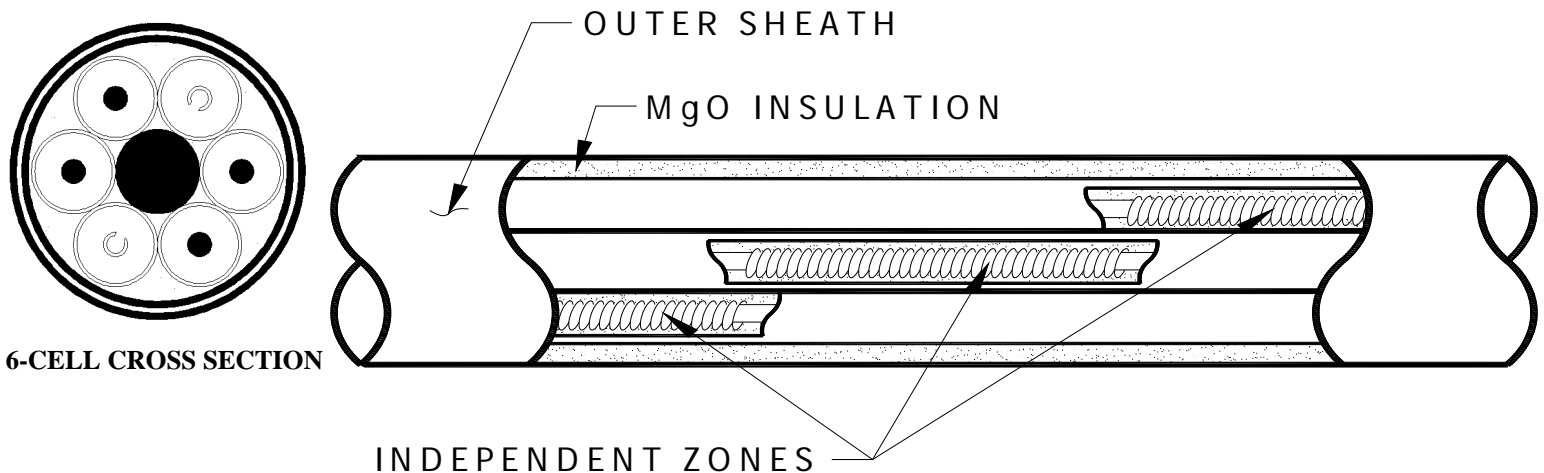
Rama's high temperature insertion heaters can be applied to many industrial uses ranging from super heating of gasses to titanium metal forming. This versatile product is made from the highest quality materials allowing it to achieve higher temperatures and have a prolonged life.

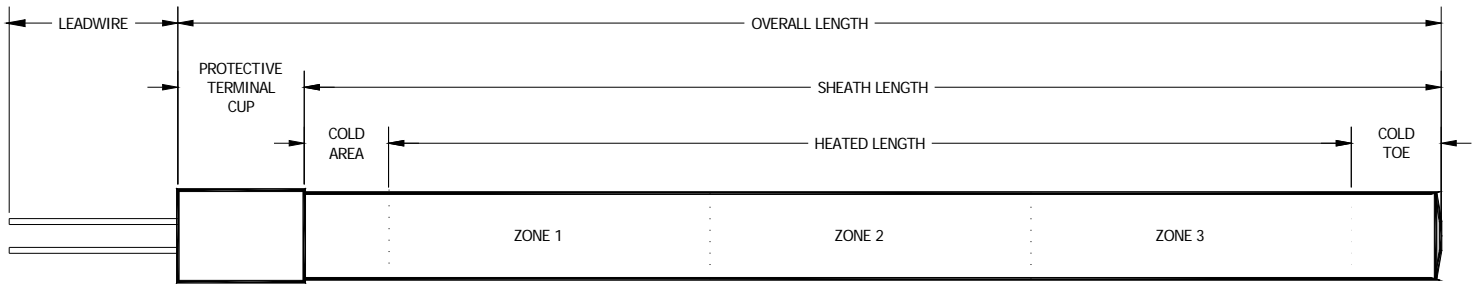
## Typical Applications:

- Titanium Metal Forming
- Heated Platens/Ceramic presses
- Glass Forming
- Super Plastic Forming
- Fluidized Beds
- Superheating Gases
- Superheating Air
- Heat Treating
- Furnaces

## Features Include:

- Designed for applications requiring continuous sheath temperatures of up to 2000°F (1095°C)
- Outer sheath is available in Incoloy 800 or Inconel 600
- Elements may be designed with one, two, or three independently controllable zones making it ideal for multiple zone platens.
- Undersized diameter reduces risk of binding or seizing allowing for easy removal and less down time.
- Heat transfer by means of radiation causes continuing oxidation of the sheath and inside of wall of the fitting.
- The oxidation produces excellent heat transfer and improved emissivity allowing sheath and process temperatures to be nearly identical.
- To prevent element burn out, coils are individually sheathed and swaged into a high temperature outer tube.
- Variety of terminations available. Standard assemblies are manufactured with flexible leads capable of withstanding up to 842°F (450°C) continuous. Lead armor may be added to protect from wear and tear.





## Standard Specifications:

- Available in .935” or .685” diameters
- Outer sheath material available in Inconel 600 or Incoloy 800
- Standard cold toe length is 2.00” +/- 3/8” For special cold toe requests consult factory
- Standard protective termination cup length is 1.50”. Special cup lengths may be available upon request.
- Standard units are made with all flex leads. Protective armor and special sizes may be available upon request.
- All units may be designed with one, two, or three individually controlled zones. Zones can be designed with varying lengths and wattages.

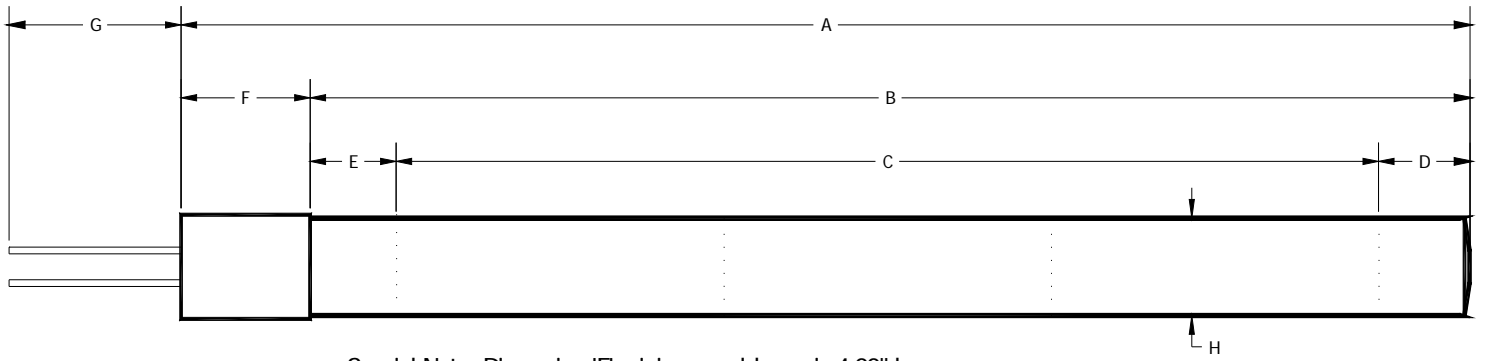
**Special Note:** The total wattage rating on any specific unit will be the sum combined of all the independent zones unless otherwise specified. If profiled heat is required, customer must specify the wattage of each zone.

- Minimum cold area on a straight unit will be 4.00” long at the lead end. Minimum cold area on a formed unity will be 1.00” long before the start of the radius point.
- On formed units, standard bend radius is 2.50”.

**Special Note:** Minimum bend radius on any formed unit is 1.50”

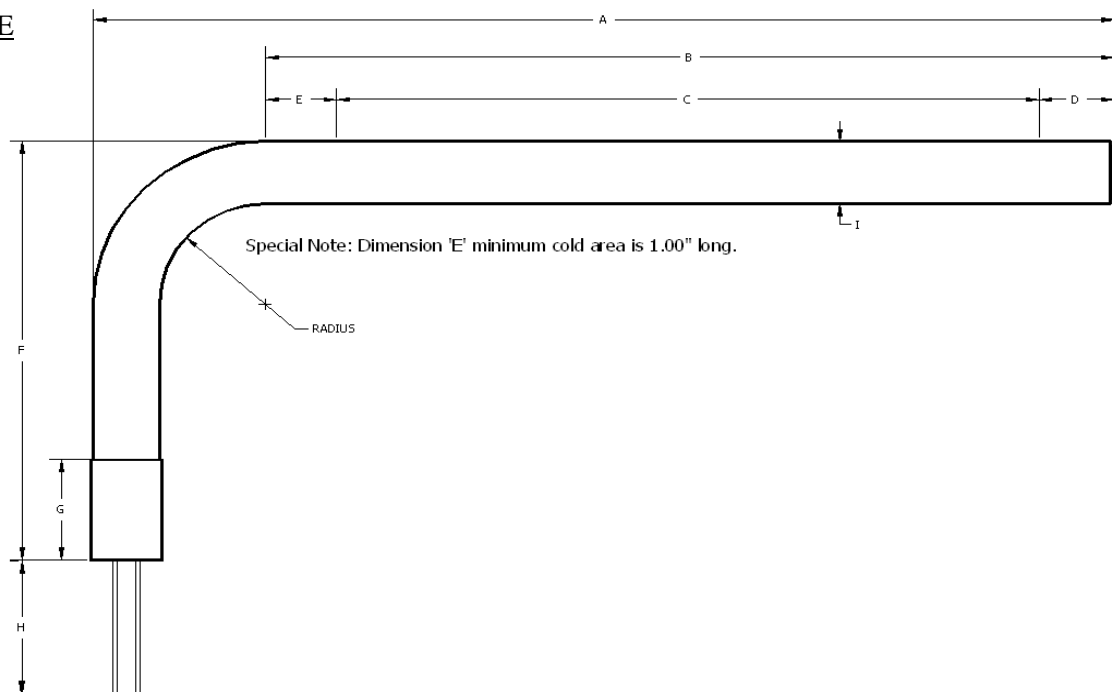


STRAIGHT



Special Note: Dimension 'E' minimum cold area is 4.00" long.

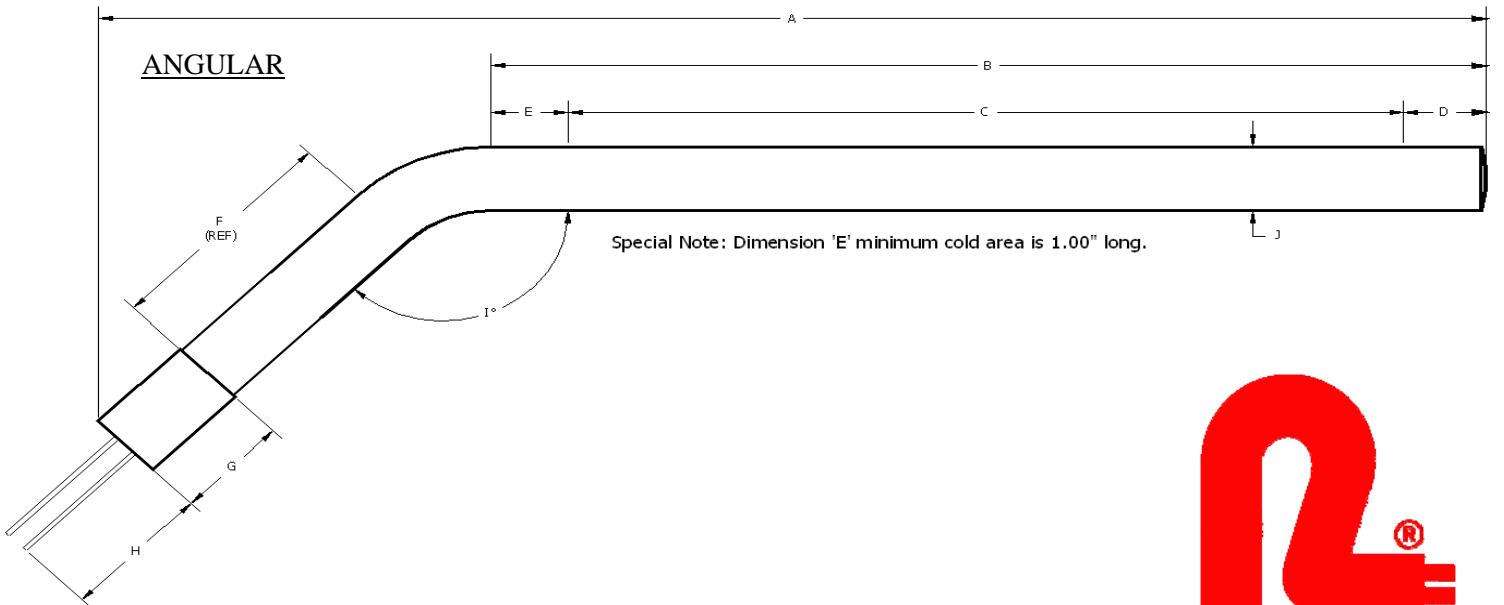
90 DEGREE



Special Note: Dimension 'E' minimum cold area is 1.00" long.

RADIUS

ANGULAR



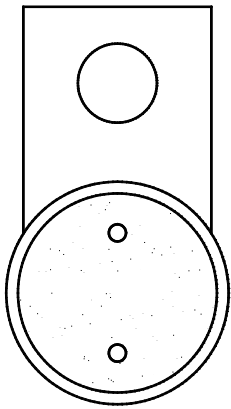
Special Note: Dimension 'E' minimum cold area is 1.00" long.



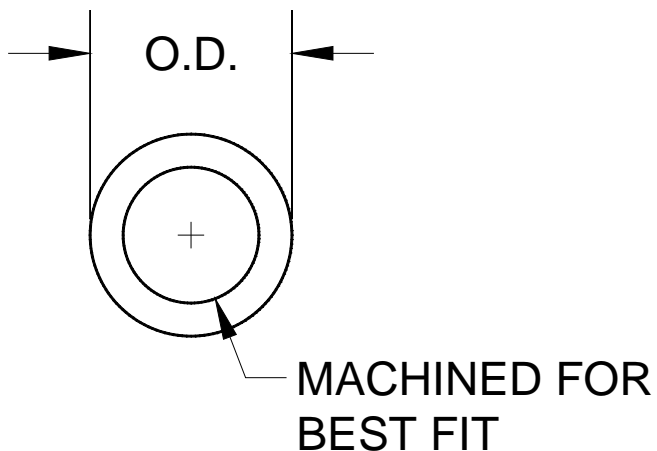
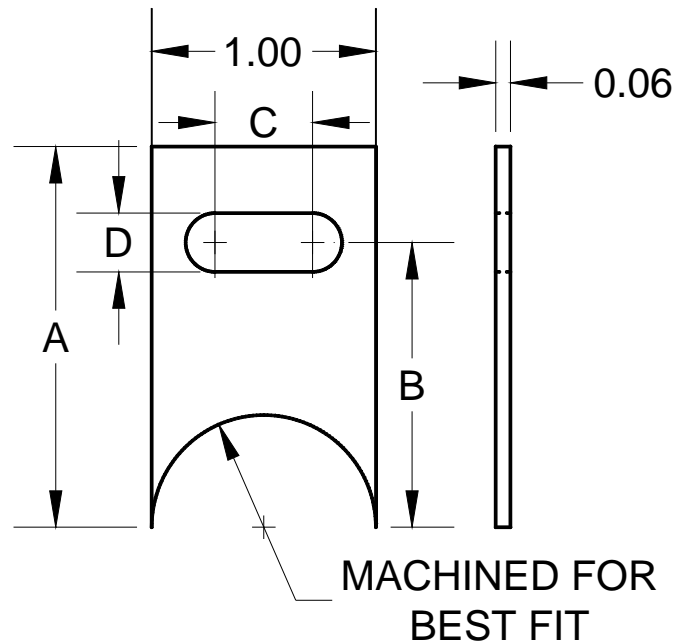
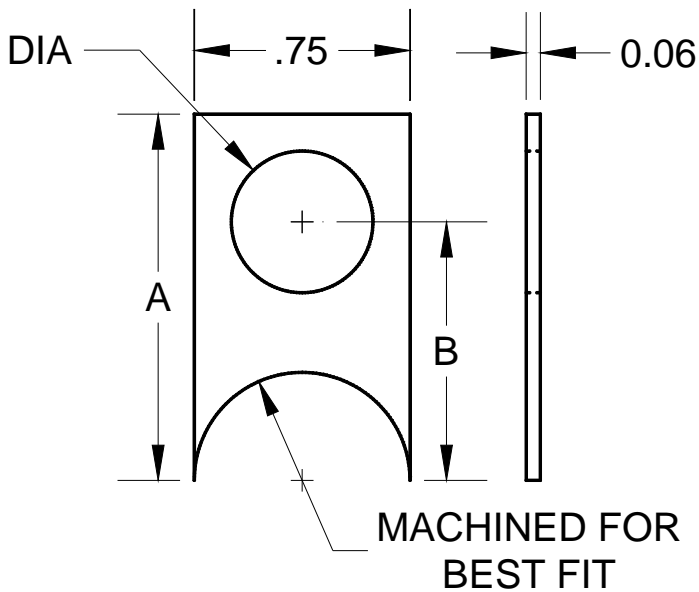
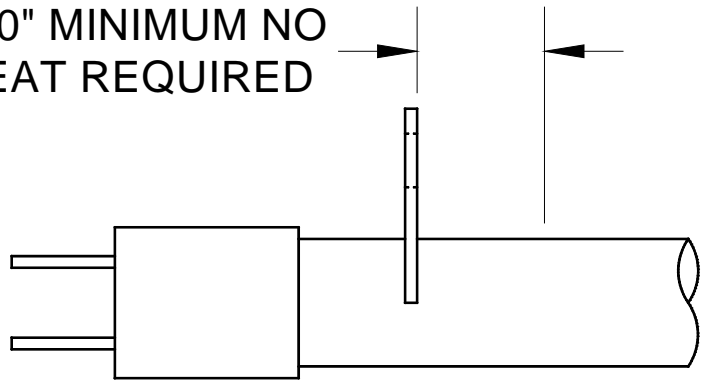


### ACCESSORIES:

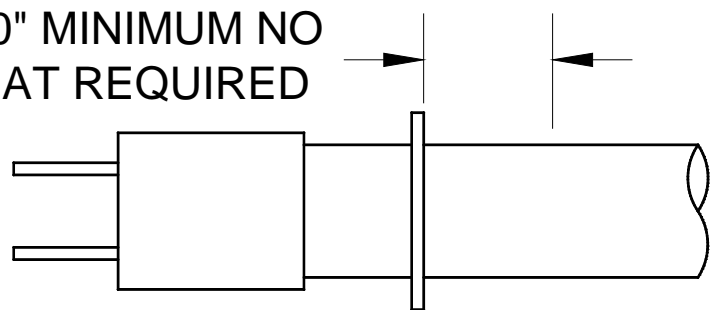
Tabs and ring stops are available upon customer request. All tabs are custom made to fit the customers need and are manufactured from 16 gauge 304 stainless steel. For special materials or gauges consult factory.



1.00" MINIMUM NO  
HEAT REQUIRED



1.00" MINIMUM NO  
HEAT REQUIRED





## OTHER OPTIONS:

- Standard units are available with flexible leads only
- Protective flexible sleeving may be added at customer request
- Standard size potting cups are 1.50" long. For non-standard lengths consult factory.
- See the list below for more options:
  - Ring Connectors
  - Spade Connectors
  - Female Fastons
  - Male Fastons
  - Straight Block Plugs
  - Twist-Lock Plugs
  - Plug and Socket Connectors

### **Maintenance:**

Maintenance is the key to help ensure optimal performance and prolonged life for your Rama®Cell unit. The following information is recommended for basic maintenance.

- Check lead insulation for fraying, cracking, tearing, or breakage at potting cup.
- Check potting cup for broken potting or lead exposure.
- Check sheath for stress cracks.
- Check sheath for abnormal discoloration indicating possible overheating.

