# **Open Coil Heaters**

As the world's largest manufacturer of open coil heating elements, Tutco has gained a reputation for producing products that are second to none. We design and build each product to perform with incredible reliability.

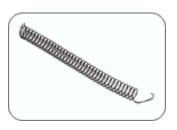


GET A QUOTE

<ul> <li>Additional Information</li> </ul>		
Coils		
Insulators		
Termination Styles		
Controls & Safety Limits		
Construction		
Industries & Applications		
• Technology leader NXT Wire		

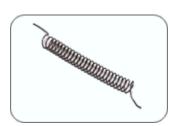
- High Quality Nickel/Chromium resistance wire
- Wire Grades C (60%Ni 15%Cr 25%Fe), A (80%Ni 20%Cr)
- Available Gauges 14 28
- Coil Diameters .250 to .875
- Consistent Pitch Windings (Distance between Helixes)
- · Solutions provided to best fit design objectives utilizing various coil return configurations (Large Diameter Coils Only)

#### **Small Diameter Coils**





## Large Diameter Coils





#### **Coil Returns**







### Specifications

- Patented Point Suspension or Traditional Cylindrical Bushings
- Steatite Material
- · Manufactured to the industry's tightest current leakage specifications
- Point Suspension Offers:
  - Full Coil Exposure to the Airflow
  - Allows Utilization of Large Diameter Coils
  - Greater Stretch Ratios
  - Positive Coil Locking
  - Minimal Insulator Abrasion





**Cylindrical Bushing** 



Single Plane Point Suspension



**Double Plane Point Suspension** 



**Double Plane Point Suspension** 



Clip and Insulator Assembly



Clip and Insulator Assembly

Single Plane Point Suspension



**Double Plane Point Suspension** 



**Double Plane Point Suspension** 



Clip and Insulator Assembly

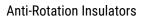


Clip and Insulator Assembly

Two proven methods of heating element terminations at Tutco insure a sturdy and electrically sound connection. The methods are compatible with ring, slotted and female terminals.

1. The resistance wire is mechanically staked and heli-arc welded to an appropriately sized slotted-head machine screw. It is then mounted with anti-rotational insulators to prevent movement during installations and operation.







Staked and Heli-Arc Weld

2. The resistance wire is mechanically crimped to a 1/4" of 5/16" spade terminal which is then mounted in either a single or double ceramic insulator block. Pioneered by Tutco in the early 1980's, it has proven both reliable and cost effective for applications of 25 amps or less.



Crimp Option 1



Crimp Option 2



Crimp Option 2



**Double Ceramic Insulator Block** 



Single Ceramic Insulator Block

Tutco's, engineering and research & development have spent years providing the highest of quality products. A full line of safety limits and controls are available with any needed assistance from our staff.

#### **One-Shot Fusible Line**



### **Relays and Sequencers**





## **Bi-Metal Disc Thermostats**



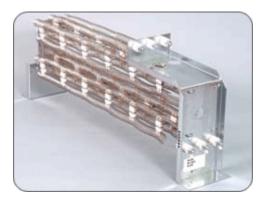




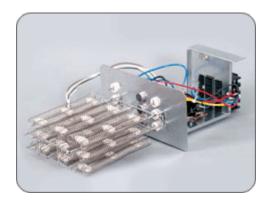
Tutco's Open Coil Heaters feature:

- High Quality Resistance Wire
  - Nickel Chromium Wire
  - Sag Resistant
  - Long Lasting
- Sturdy Mechanical Joints

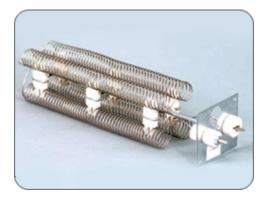
- Welded Construction
- No Eyelets or Rivets Used
- Eliminates Mechanical Failure Points
- Industry Proven User Termination
  - Tough Ceramic Terminal Block
  - Rugged Male Quick Connect Terminal
- All Metal Frame
  - Durable Vibration Tested Construction
  - Coated Steel
- Rugged High Temperature Heating Element Terminal Connection
  - Nickel Plated Steel
  - Withstands Continuous 25 Amp Current
  - Improved Electrical Termination Over Eyelet Construction
- Mica Supports
  - Resists Delamination Due to Temperature and Moisture
- Bus Bar Connection
  - High Temperature Nickel Chromium
  - Resists Oxidation and Corrosion
  - Superior Weldability

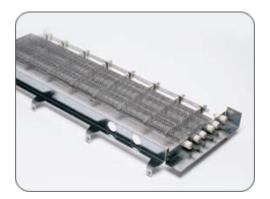




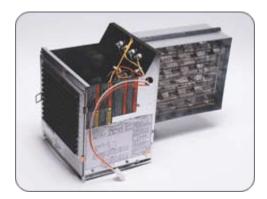






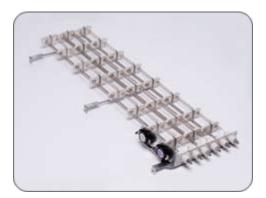












TUTCO's heating design innovations are made available with the most advanced materials having the highest performance level possible. To ensure performance every product meets the most rigorous quality standards. Those standards as applied by U.L. and C.S.A. regulations. Product applications undergo testing in our state of the art Research & Development Lab where years of experience combined with technical expertise allow for every design to be reviewed for functional integrity, adherence to industry standards and the highest quality product to support innovation in heating design.

- Furnaces
  - Heat Pumps
  - Central Heating/Air Conditioning Units
- Clothes Dryers
  - Residential
  - Commercial
  - Mini-Dryers
- PTAC
  - Air Conditioning
- Roof Top
  - Commercial and Industrial Units
- Unitary
  - Room Air Conditioning/Heating Units
  - Fan Heating Coils
- Miscellaneous
  - Electric Fireplaces
  - Lab Ovens
  - Fast Food Ovens
  - etc.

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