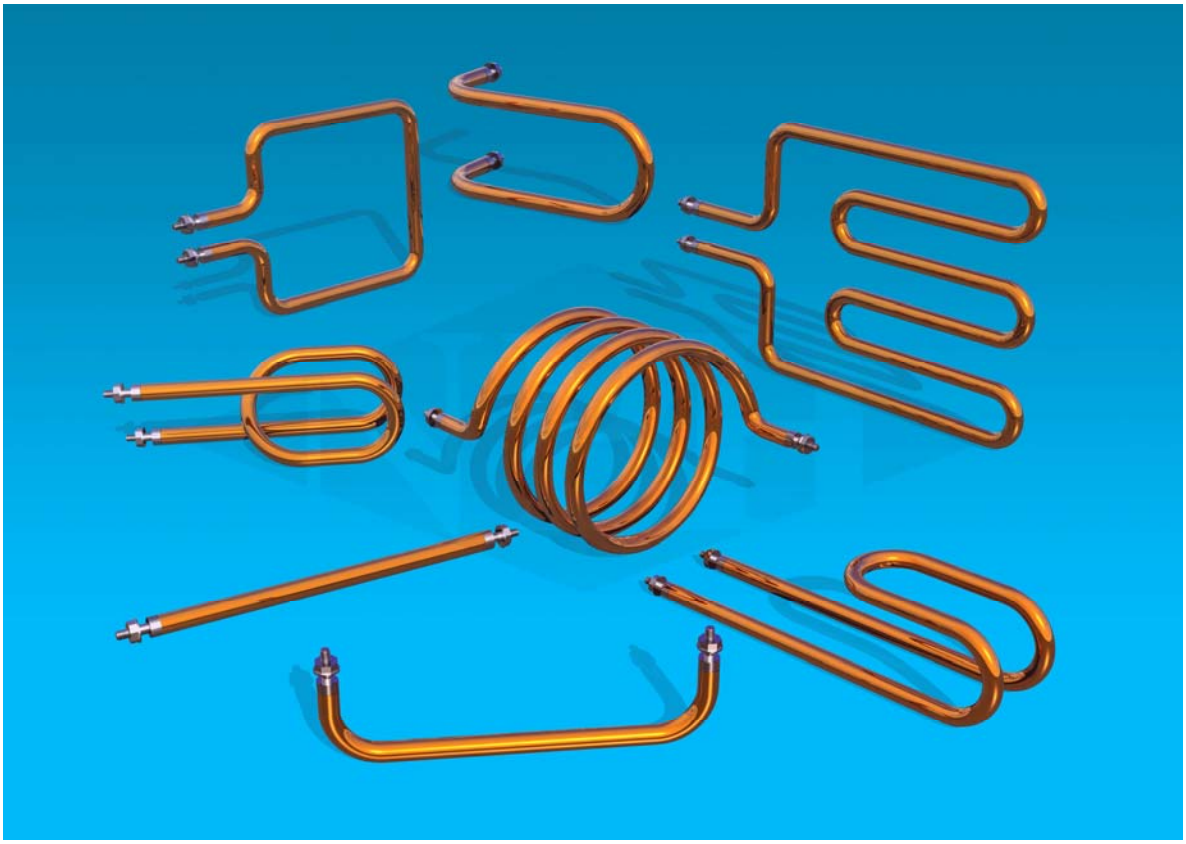
Tubular Heaters and Heating Elements



Tubular Heaters

Formed Tubular Heating Elements provide an economical, robust, and versatile heat source. Tubular Heating Elements are commonly used to fit into milled grooves for hot runner molding systems. The precision fit optimizes heat transfer to the working surface. National Plastic Heater can provide Formed Tubular Heating Elements“ready to go” into your existing channel or new tool design. Tubular Heating Elements are made of incolloy and can be bent into all shapes and sizes. These elements could be designed to fit various applications from radiant to contact heating with watt densities for liquids, solids or gases . Tubular heaters are also used in heating oils, food metal Plastics or various other processes. Available in various diameter from 0.125” to 0.625 “ and voltages from 12 volts to 600 volts .

Features and Benefits:

- easy and convenient installation
- available in a wide variety of sheaths, diameters and ratings
- electrically isolated sheath

- placement of heat source to specification
- compact, space-efficient design
- precise and versatile heat control
- long life with minimal maintenance required
- excellent internal electrical insulation and heat conduct

APPLICATIONS:

Liquid Heating

Direct Immersion–Water and water solutions generally can be heated to any desired temperature. If liquid is under pressure, temperatures should not exceed the maximum sheath temperature of the element minus 100°F.

For Heating Oil (SAE 20 weight) –
Steel sheath elements can be used 180°F. Heat transfer oils and other solutions not corrosive to steel sheath 500°F.*(Note: Some liquids are corrosive. For additional information on selecting the proper sheath materials, refer to our Technical Resource Center. Heated section of element must be immersed at all times when energized. Longer cold ends can be provided if required.)* Threaded fittings are available for mounting through tank walls.

INSTALLATION AND MAINTENANCE INSTRUCTIONS: TUBULAR HEATERS

APPLICATION

- Tubular elements of proper rating, material and shape can be applied to most heating applications requiring process temperatures to 750°C (1382°F).
- Tubular elements may be clamped, immersed, cast into metal or spaced away from the work as radiant heaters. Elements can also be positioned in ducts or vessels for heating air or other gases.
- Check factory for recommendations if you are unsure of the suitability of the heater to your application.

INSTALLATION

- The terminals must be protected at all times from moisture or vapour. In hazardous locations, explosion resistant terminal housings must be used. In outdoor locations, moisture resistant housings are required.
- Protect terminals of heating elements from drippings, condensation, fumes, spray or any other substance which could result in element contamination.
- When melting solids by direct immersion, a surface vent should be provided to allow gases to escape.
- Operate the heater at ½ voltage until melted material completely covers the heating elements. Heaters used for this purpose may require special design features. Check factory for recommendations.

WIRING AND CONTROL

- Heaters must be wired by qualified personnel to electrical code requirements.
- Check supply voltage for compliance with heater nameplate voltage.
- A line voltage or pilot duty thermostat should be used to control the heater. The pilot duty thermostat must be used with a contactor and (if required) a transformer. Generally, heaters supplied with built-in thermostats will be factory prewired if suitable for line voltage operation. Integral thermostats not factory prewired are usually intended for pilot duty.
- Heaters with explosion resistant terminal housings must only be used in locations for which the heaters are certified.
- Check heater nameplate information for approval code.
- Never energize an explosion resistant heater unless the terminal housing cover is properly tightened.

START-UP INSPECTION

- Check that all terminal connections are tight.
- Heaters stored for prolonged periods may absorb moisture. Using a megger (insulation resistance tester) check the value of the insulation resistance to ground for each circuit. Initial readings of over 500,000 ohms to ground are normally acceptable. Should lower readings be observed, check factory for instructions.

MAINTENANCE

- DISCONNECT POWER BEFORE SERVICING.
- Inspect periodically for corrosion, sludge build-up and for scale removal.
- Periodically check electrical connections for tightness.

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