All INDEECO process air heaters are designed and built with the following construction features to assure the highest quality and long service life.

**Open Coil Heaters**

- Minimum bracket spacing reduces coil sag.
- Galvanized steel framing up to 250°F outlet air; Aluminized steel framing up to 600°F outlet air; 304 stainless steel for higher temperatures.
- Heavy gauge steel flange with pre-drilled mounting holes furnished for 400°F outlet air and higher.
- Stainless steel terminal hardware and 10-32 threaded studs assure reliable connections.
- Louvered terminal box cover keeps connections and wiring at safe temperatures.
- Pressure connectors welded or bolted to bus bars furnished for field wiring of 8 gauge and heavier.
- Removable bus bars are secured with stainless steel nuts and shakeproof washers.
- 1" of insulation in terminal box standard for outlet temperatures up to 750°F. 4" insulation below mounting flange standard for 1200°F construction. Optional for other constructions.
- Rib-strengthened brackets with formed gussets at corners for rigidity.
- 80/20 Nichrome coils for minimum sag and maximum life.
- Multiple concentric knockouts on all sides of the terminal box for convenient conduit entry.
Finned Tubular Heaters

Aluminized steel support brackets with flared openings allow elements to expand and contract smoothly.

Elements are .475" diameter, 304 stainless steel. Corrugated fins, 1-1/8" O.D. are the same material.

Heavy steel or stainless steel flange with pre-drilled mounting holes furnished for 400° F outlet air and higher.

Multiple concentric knockouts on all sides of the terminal box for convenient conduit entry.

Stainless steel terminal hardware and 10-32 threaded studs assure reliable connections.

Terminal box may be side or top mounted.

Removable bus bars are secured with stainless steel nuts and shakeproof washers.

Louvered terminal box cover keeps connections and wiring at safe temperatures.

Individually replaceable elements mounted to the terminal flange with push nuts.

Pressure connectors welded or bolted to bus bars furnished for field wiring of 8 gauge and heavier.

Optional 4" insulation below mounting flange cuts energy losses through oven walls, keeps electrical connections cool. 1" of insulation in terminal box is standard for 400° and 600° F outlet air.

1/2" diameter steel rods tie the assembly together in a rigid, yet expandable, mode.

Open framework allows universal mounting. Use with horizontal or vertical airflow.

Tubular Heaters


**Construction**

**Tubular Heaters**

- Heavy steel or stainless steel flange with pre-drilled mounting holes.
- Multiple concentric knockouts on all sides of the terminal box for convenient conduit entry.
- Terminal box may be side or top mounted.
- Removable bus bars are secured with stainless steel nuts and shakeproof washers.
- Stainless steel terminal hardware and 10-32 threaded studs assure reliable connections.
- 304 stainless steel support brackets with contoured openings to allow the elements to expand and contract smoothly.
- Recompressed bends eliminate hairline cracks in insulation, extending element life.
- Elements are .475" diameter Incoloy 800 sheath.
- Unique bending configuration reduces the number of element terminals by more than half, lowering terminal box temperatures.
- Pressure connectors welded or bolted to bus bars furnished for field wiring of 8 gauge and heavier.
- Individually replaceable elements mounted to the terminal flange with push nuts.
- 1/2" diameter steel rods tie the assembly together in a rigid, yet expandable, mode.
- 1" of insulation in terminal box standard for outlet temperatures up to 750° F. 4" insulation below mounting flange standard for 1200° F construction. Optional for other constructions.

1" of insulation in terminal box standard for outlet temperatures up to 750° F. 4" insulation below mounting flange standard for 1200° F construction. Optional for other constructions.
250° F Construction

Low temperature heaters, suitable for 250° F maximum outlet air, are available in both open coil and finned tubular constructions. They are identical to the heaters described on pages 2 and 3 except for the following features.

- The steel flange is omitted. The heater is attached to the oven or duct wall with sheet metal screws through the base of the terminal box.
- Individually replaceable finned tubular elements are flange mounted.
- The terminal box has 1” of insulation.
- A galvanized steel channel frame is provided on three sides, with the element support brackets welded to the frame.

Typical Applications

INDEECO Process Air Heaters are installed in plenums, ducts or pipes to heat forced air in industrial equipment and systems. A wide variety of heater designs and sizes are available to provide outlet air temperatures up to 1200° F. The air can be either recirculated or fresh. Recirculated air is used to reduce power consumption and heater size.

- Aircraft Manufacturing
- Air Curtains
- Air Drying
- Annealing
- Booster Heating
- Baking
- Batch Heating
- Chemical Processing
- Cooking
- Core Drying
- Cryogenic Exhaust Gas Heating
- Curing
- Dehumidification
- Dehydrating
- Drying
- Exhaust Gas Heating
- Film Drying
- Finishing Systems
- Food Processing
- Fruit Ripening
- Heat Recovery Supplement
- Heat Treating
- Hopper Heating
- Ink Drying
- Laboratory Testing
- Make-up Air Heating
- Metal Finishing
- Motor Winding Burnoff
- Paint Baking/Drying
- Pharmaceutical Manufacturing
- Plastic Curing
- Preheating
- Reheating
- Roasting (nut, coffee, corn, etc.)
- Semi-Conductor Manufacturing
- Sterilizing
- Standby Heating
- Textile Drying
- Varnish Drying
- Wire Manufacturing

Fresh air is used when ventilation of the process is necessary. Process air heaters are installed in ovens, furnaces, autoclaves, dryers, conveyor systems, pressure vessels, and other equipment to supply the precise amount of clean heat for: