

Special Features

A wide variety of special features can be incorporated into Heatrex process duct heaters. Please contact us if you have other requirements.

Built-in Controls

(Available for heaters operating up to 150° F outlet air temperature.)

Built-in contactors, fuses, control transformers, and disconnect switches save installation labor and provide single source responsibility for the heater-control package.



Built-in Thermostat

(Available for heaters operating up to 150° F outlet air temperature.)



For automatic control of outlet air temperature. Adjustable over a range of 60-250° F. Outlet temperature will be lower than set point as the thermostat senses heat from elements as well as outlet air. Do not use where outlet air temperature will exceed 150° F. May also be used as an automatic high temperature thermal cutout.

Built-in Combination Thermostat/Thermal Cutout

(Available for heaters operating up to 150° F outlet air temperature.)



Control normally cycles the heater on and off, but shuts the heater down until reset button is pressed if temperature rise is more than 50° F above the control set point. (60-250° F range).

Remote Mounted Thermostats

For air temperature control or high temperature thermal cutout protection, a bulb and capillary type thermostat can be mounted in a cool location up to 8' away from the heater. A well is provided to mount the thermostat bulb into the airstream. Two models are available:

DA1-6E96: 200-550° F
DA1-6F96: 300-700° F



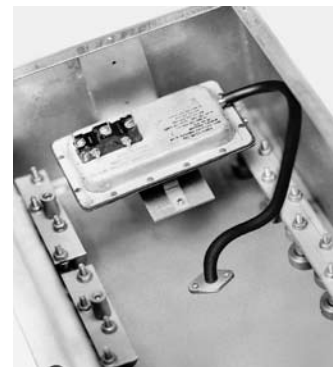
Built-in Thermocouple

Built-in sheathed thermocouple available for high temperature limit. This can be mounted in the airstream or clamped to a tubular/finned tubular element to prevent overheating.

Built-in Airflow Switch

(Available for heaters operating up to 150° F outlet air temperature.)

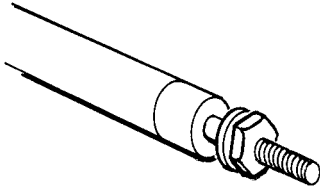
A diaphragm-operated differential pressure switch normally prevents the heater from operating unless the air is flowing. It senses pressure between process air and the terminal housing.



Special Features

Moisture-Resistant Element Seal

RTV or epoxy seals are inserted into each end of tubular or finned tubular elements. Recommended when heater may be stored in high humidity or where terminals are exposed to high humidity during operation.



Angle Iron Frame

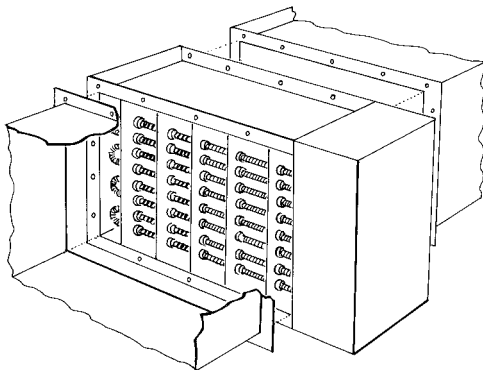
(Available for all tubular and finned tubular heaters except those with 250° F Construction.)

Support rods are replaced by heavy angle iron welded to element supports and terminal box. May increase C and H dimensions. Specify steel or stainless steel angle iron.



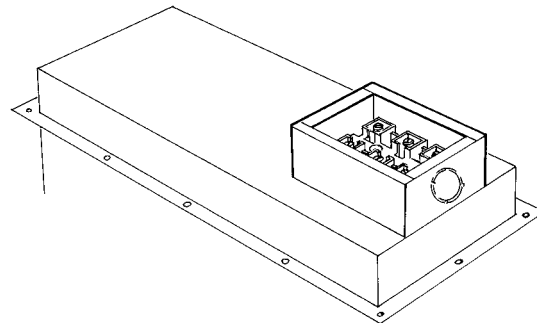
Flanged Duct Mounting

For attaching heater to external duct flanges. No internal support required. Note that heater face dimensions W and H match the inside dimensions of the duct. While integral flange design is a standard option on the 250° F Construction, other heaters can be supplied with separate flange mounted plenum sections where required.



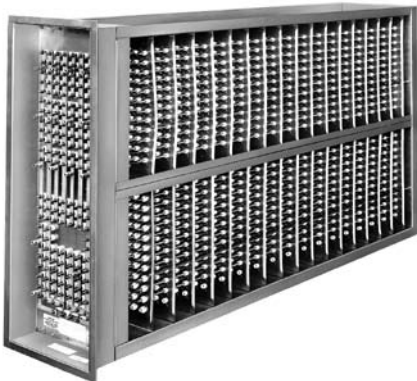
Isolated Junction Box

Power connections are housed in a separate isolated junction box, factory connected to heating element terminals. Used where field wiring is not suitable for high ambient temperatures.



Flanged Terminal Box

A 1" full flange at end of terminal box is available for mounting heater. Especially useful when heater is mounted inside an oven, where ready access to electrical connections and minimum terminal box size are desirable. No terminal box cover is supplied.

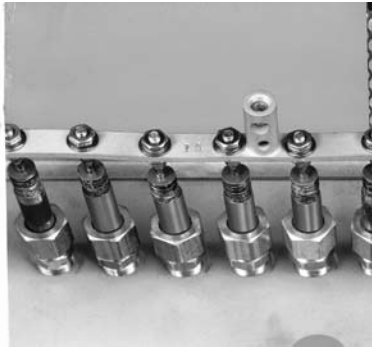


Special Features

Airtight Terminal Box

(Available for all tubular and finned tubular heaters except those with 250° F Construction.)

Terminal box isolated from the duct or oven with compression fittings on each element to prevent leakage of process air into terminal box.



Dust-Tight Terminal Box

For dirty environments. Boxes are welded, stainless steel with hinged, latched cover and Scru-tite hubs for incoming power.

Insulation under the mounting flange is required for all heaters operating above 250° F outlet air.

Special Wattage, Voltage and Dimensions

Heatrex specializes in custom designed process duct heaters.

Voltages up to 600V are available in single or three phase.

Special Materials

Nonstandard fin, sheath and frame materials available for special applications.

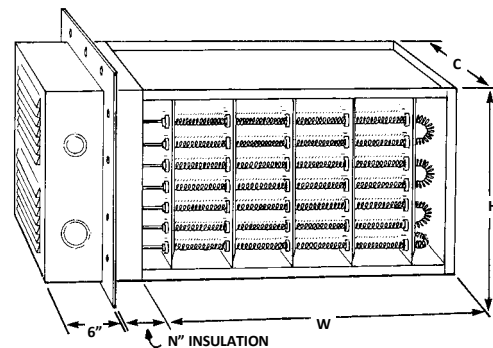
Finned tubular elements available with Monel sheath and fins. Tubular elements available in Monel, 304 and 316 stainless steel and Inconel sheath. Other element diameters and sheath materials are available to meet your custom design requirements. Stainless steel frames available for all constructions.

Nonstandard Circuiting

Additional circuits available on standard heaters. However, number of circuits must be consistent with number of elements in tubular and finned tubular constructions. Number of circuits shown in standard listings can also be reduced for high amperage SCR control.

Insulation Under Mounting Flange

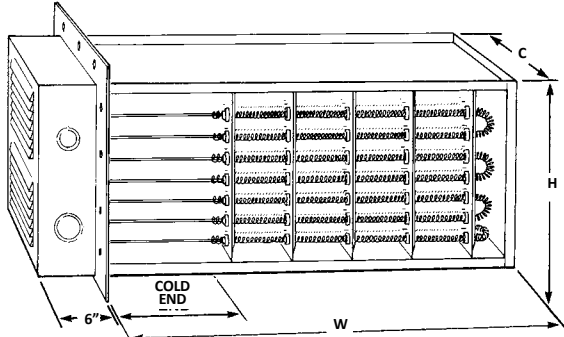
Insulation is furnished under mounting flange to save energy and reduce terminal housing temperatures. This is standard on 1200° F Construction and optional on all others.



Special Features

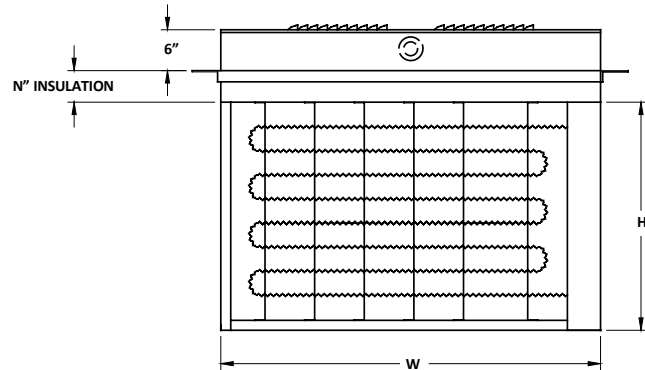
Special Cold Ends

To clear oven wall or to place active portion of heating element well into airstream, long cold ends may be provided. All heaters have 2" cold ends as standard.



Top Mounted Heater Construction

A special top mounted design is available on open coil heaters. This feature allows easier installation when there are space restrictions on the sides of the heater but access is available from the top. In these applications, the coils are strung horizontally for proper heating of the airflow.



Front View

Pressure Plate

A 40% open pressure plate on the inlet side of the heater evens out the airflow pattern where it is not normally uniform. A pressure plate significantly increases the pressure drop across the heater, as shown in the chart.

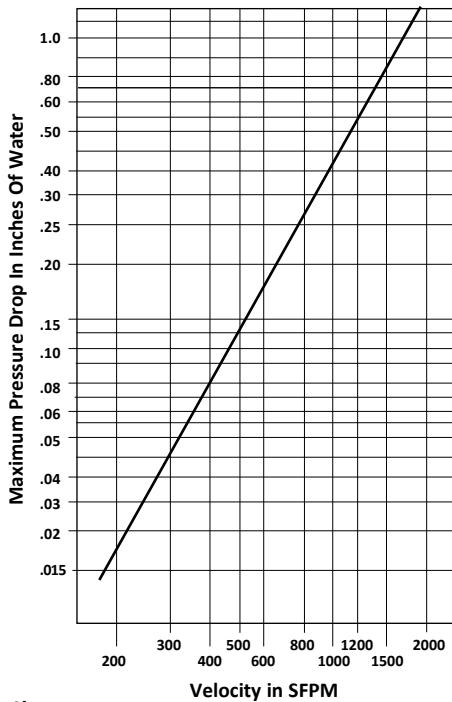
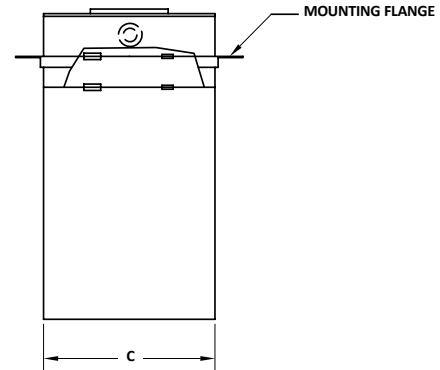


Chart E
Pressure Drop



Side View

