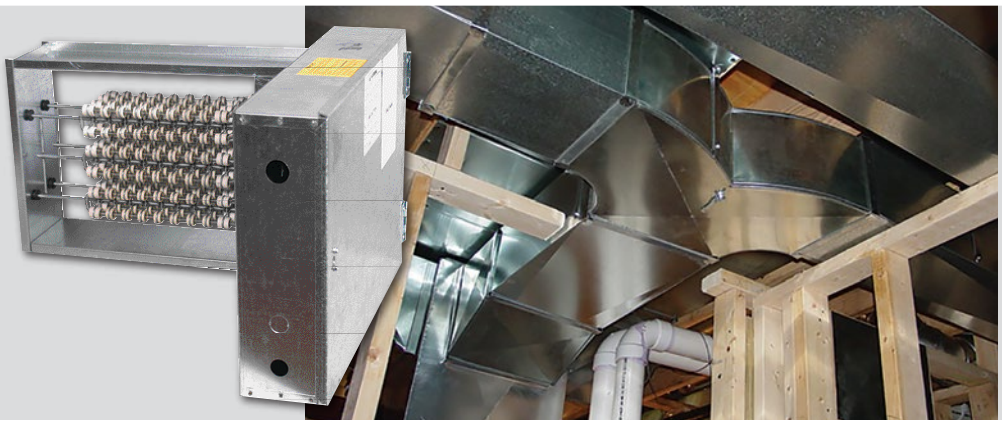
Electric Duct Heater DHC/DC Series



- Fan interlock
- Power terminal board
- Control terminal board
- Ground lugs
- Automatic limit switch for primary over temperature protection
- Manual reset limit switch for secondary over temperature protection
- Left hand offset control box
- Slip In or Flange mounted
- Recessed control box
- Right hand offset control box
- 80/20 (Ni/Cr) resistance wire
- Stainless steel terminals
- Vapor barrier
- Gasketed cover

The DHC/DC Heater Series

DHC/DC, products, brings innovation and flexibility custom duct heaters featuring much larger sizes (up to 10' wide x 12' high) and many accessory options. Duct heaters are used in forced air applications to provide standalone space heat or to supplement existing heating systems. Designed for zero clearance. Typical applications include; space heating, primary heating, secondary, heating, auxiliary heating, reheating, multizone and air variable volume heating.

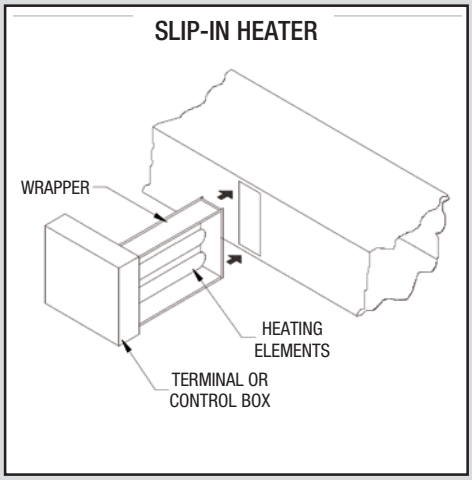
Engineering Specifications

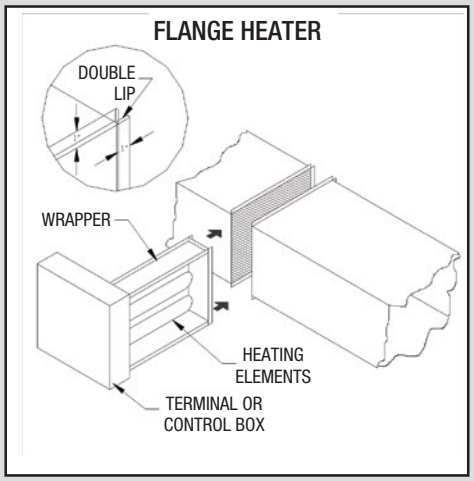
Composition and Materials: All sheet metal housing. 0.034+.008/-.00 minimum spangle galvanized sheet steel grade G-90.

Accessory Options: Standard supply & control voltages, single or three phase heaters, Slip In or Flange mounted, Recessed control box, 80/20 (Ni/Cr) resistance wire, Stainless steel terminals, vapor barrier, gasketed cover

Standard Features: Open-coil element, airflow switch, detailed wiring diagram, Control terminal board and Grounding lugs, Power fusing over 48 amps included, A disconnecting magnetic control contactor per stage or each 48-amp circuit within a stage, Automatic high-limit switch for primary over-temperature protection, Manual reset high-limit switch for secondary over-temperature protection, The wire rack element suspension system allows for a low pressure drop across the coils,
In horizontal applications, airflow can travel in either direction without any modification, allowing for easy field modifications, Control box features hinge and latch for easy access.

Approvals: cULus, ETL, UL International



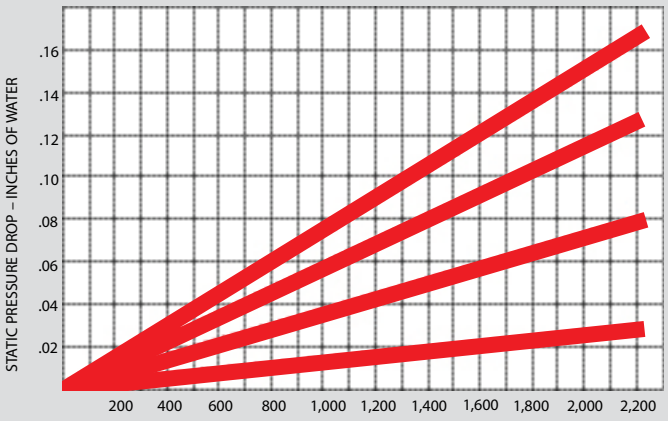


Electric Duct Heaters DHC/DC/E/R Series

TECHNICAL DATA

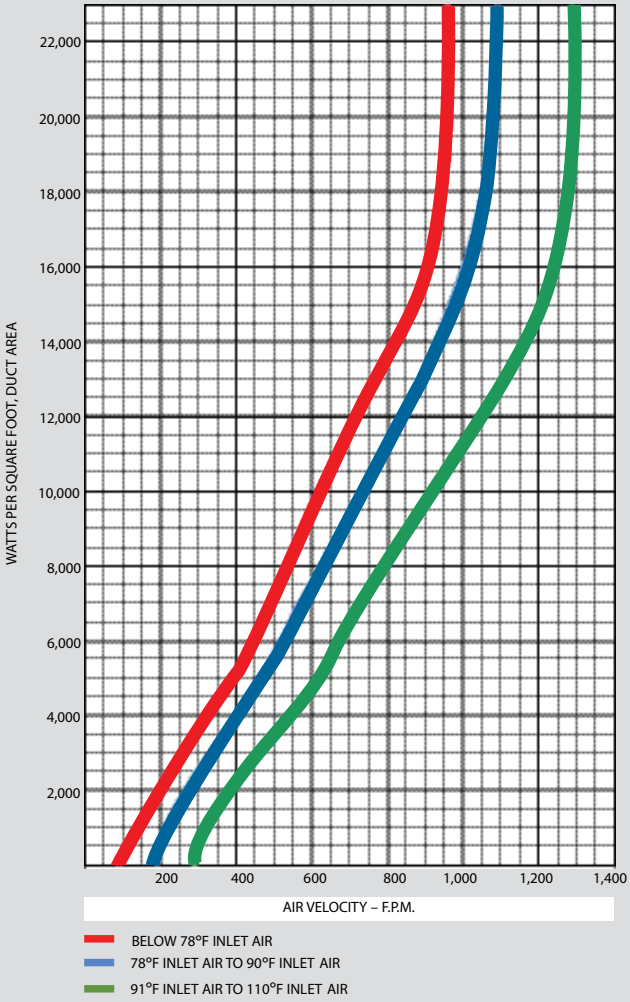
DETERMINING MAXIMUM HEATER KW
Duct Width (inches) x Duct Height (inches)
Total Square Inches x 156
Maximum Watts per Square Inch of Duct Face Area
Duct Width (feet) x Duct Height (feet)
Total Square Feet x 22.464
Maximum KW per Square Foot of Duct Face Area

PRESSURE DROP THROUGH HEATER



1, 2, 3 and 4 – the number of rows of heater coils
When the number of rows of heater coils is unknown, assume 4

MINIMUM AIR VELOCITIES



General

A. The minimum airflow in a duct heater is directly related to the inlet air temperature. Consideration must be given to both airflow across the heater and the inlet temperature.

B. To calculate the watts per sq. ft. of duct area, divide the total watts required by the duct area.

Example

C. Duct size equals 2 ft. x 3 ft., total watts equal 20,000 watts per square foot equals

$$\frac{20{,}000}{6} = 3333$$

D. If the air handling equipment is expressed in F.P.M., then a direct cross reference can be made by comparing the temperature of the air (as it enters the duct heater) to the KW rating on the table at the rated air velocity.

1. Draw a line horizontally from the watts/sq. ft. required to the inlet air temperature being used.
2. From this point of intersection on the inlet temperature line, draw a line down vertically to establish the air velocity.
3. In cases where the velocity is less than that determined from the chart, then either the velocity must be increased, the KW required must be reduced or both must be done.

E. In cases where the airflow is expressed in C.F.M., convert to F.P.M. by dividing the C.F.M. by the duct area.

$$\frac{\text{C.F.M.}}{\text{Duct Area}} = \text{F.P.M.}$$