

The IDHC series is Greenheck's most configurable electric duct heater model and is equipped with the following standard features:

- UL 1996 certified
- 50/60 Hz compatibly
- Zero clearance rating
- Fan interlock
- Power and Control terminal boards
- Automatic reset thermal safety switch for primary over temperature protection
- Manual reset thermal safety switch for secondary over temperature protection
- Heavy gage G60 construction with hinged access cover

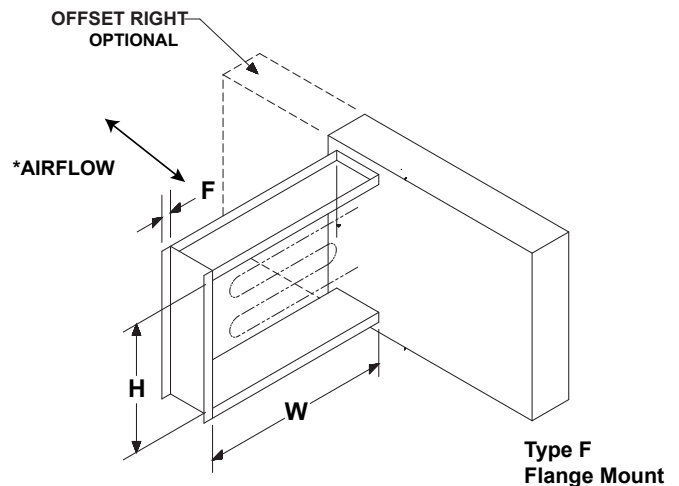
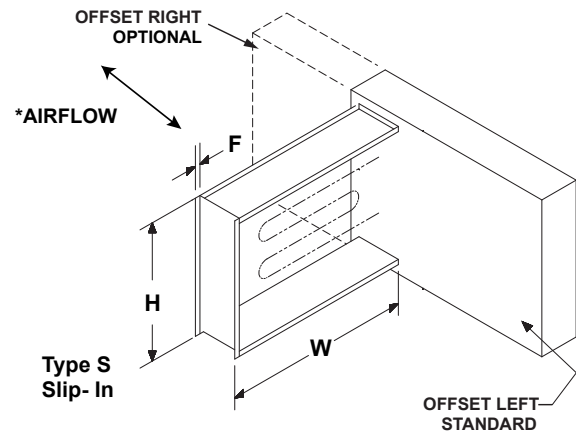
Individual maximum capacities are dependent on voltage/ phase and heater dimensions.

Absolute maximum capacity : 478.8 kW

Construction	Standard	Optional
<b>Airflow Direction</b>	Horizontal (bi-directional)	Vertical up
<b>Control Box Offset</b>	Left	Right
<b>Control Voltage</b>	24V	120V
<b>Element Wire</b>	Standard	80/20
<b>Heater Control</b>	Stage	SCR, Vernier SCR, Pneumatic
<b>Heater Type</b>	Slip in	Flange
<b>Heater Voltage/ Phase</b>	120/1	208/1, 208/3, 230/1, 230/3, 277/1, 460/1, 460/3, 480/1, 480/3
<b>Material</b>	Galvanized Steel	-
<b>Recess (in.)</b>	None	1,2,3

### Size Limitations

<i>W x H</i>	<i>Minimum Size</i>	<i>Maximum Size</i>
Inches	8 x 8	120 x 144
mm	203 x 203	3048 x 3658

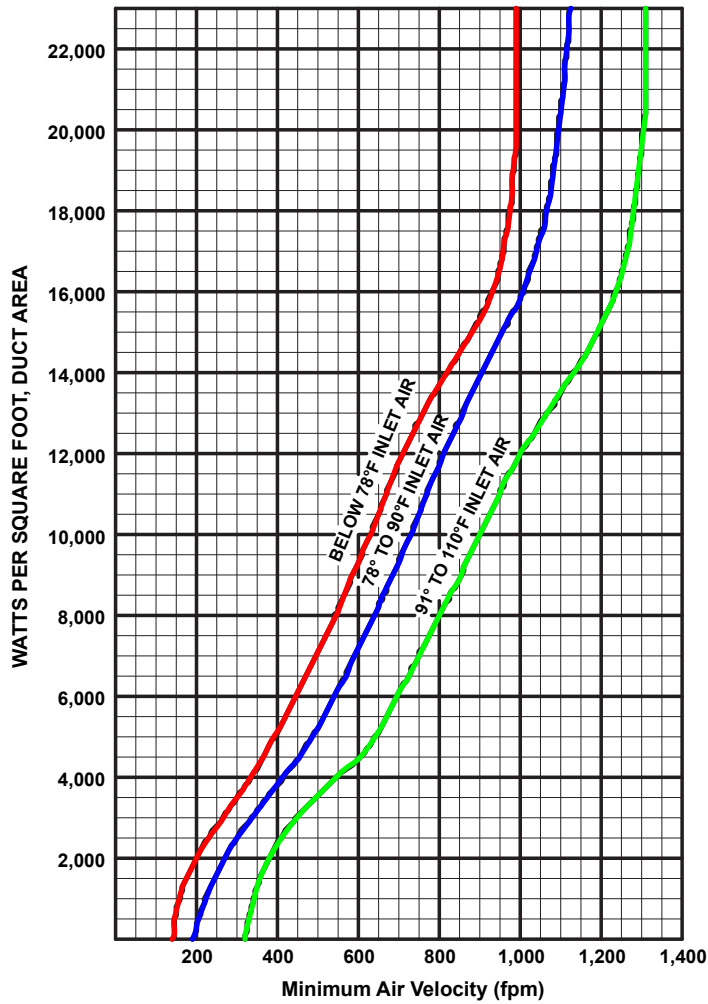


\* Greenheck duct heaters are universally configured to allow airflow in either direction in horizontal ducts.

### Options available:

- Airflow switch (adjustable/fixed set point)
- Control transformer (fused/unfused)
- Disconnect switch with door interlock
- Dust tight box with gasketed door
- Room thermostat
- Duct thermostat (available with SCR or Vernier SCR control)
- Vapor barrier
- 80/20 element wire
- De-rated coils
- Recess for internally insulated ducts
- Flush mount control cabinet for tight ceiling/floor installations
- Stainless steel hardware
- Right offset control cabinet

# Minimum Air Velocities



## General

- A. The minimum airflow through 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. (square foot) of duct area, divide the total watts required by the duct size (Watt density = watts/duct area (ft<sup>2</sup>)).
- Example: Duct size equal 2 ft. x 3 ft., total watts equal 20,000 watts per sq. ft.

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

- C. If airflow in the duct is expressed in FPM, 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 per 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 the velocity must be increased, the kW required must be reduced, or both must be done.
- D. In cases where the airflow is expressed in CFM, convert to FPM by dividing the CFM by the duct area.

$$\frac{\text{CFM}}{\text{Duct Area(ft}^2\text{)}} = \text{FPM}$$

