Marley® Engineered Products

Electric Duct Heater - Submittal Form

CUSTOMER INFORMATION

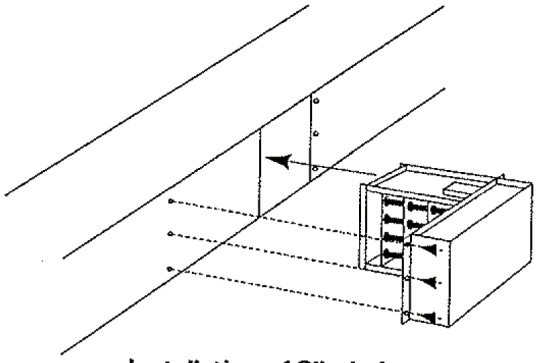
Name: _____
Address: _____
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City: _____
Contact: _____
Phone: _____
Fax: _____
E-mail: _____
P.O. #: _____
Job Name: _____

REPRESENTATIVE

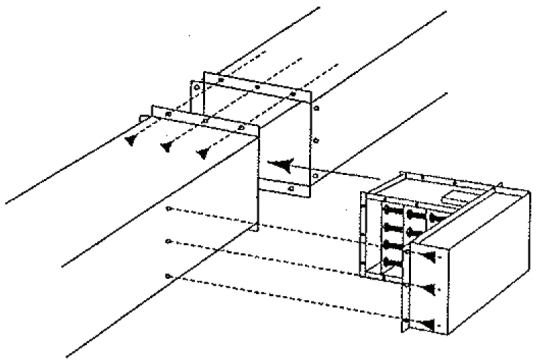
Name: _____
Address: _____
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City: _____
Contact: _____
Phone: _____
Fax: _____
E-mail: _____
Quote #: _____
Date: _____ ☐ Duct Heater ☐ Control Panel ☐ Accessories

TAG	QTY	MODEL NUMBER	KW	VOLTS	PH	NO. STEPS	CTRL. VOLTS	DIM (W)	DIM (H)	DESCRIPTION OR KEY CODES

Electric Duct Heater - Dimensions

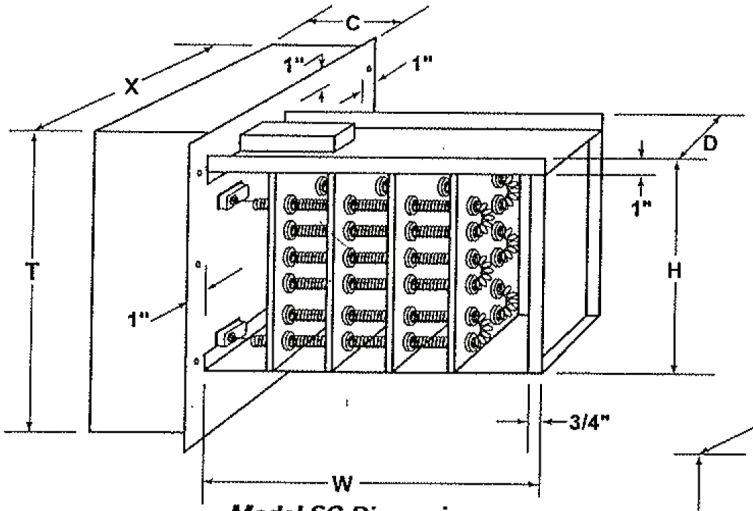


Installation of Slip-in heater



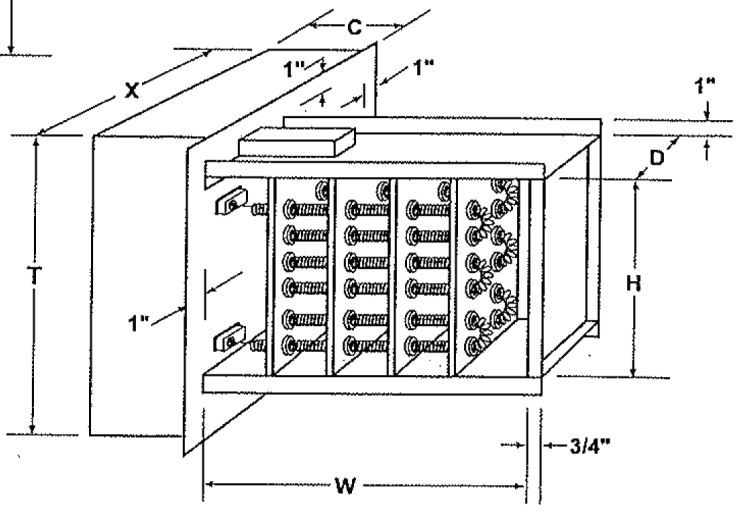
Installation of flanged heater

Details of the Mechanical construction

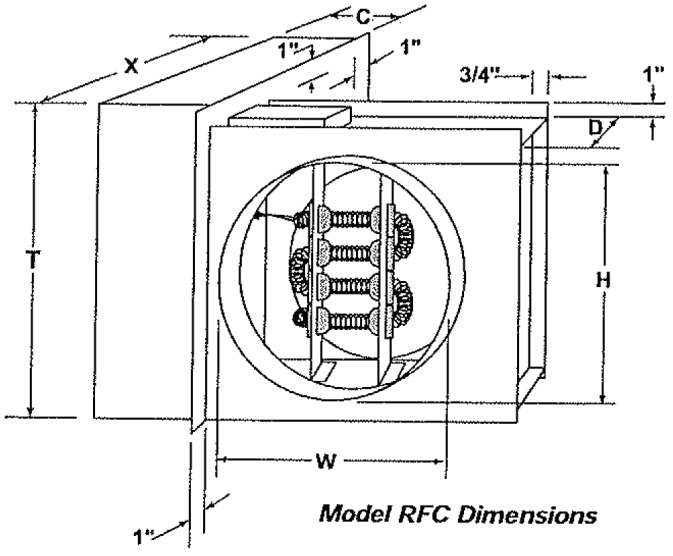


Model SC Dimensions

Detailed dimensions:



Model FC Dimensions



Model RFC Dimensions

Conversion to metric
1" = 25.4 mm
3/4" = 19.05 mm

TECHNICAL SPECIFICATION

General: Electric duct heaters shall be as provided by Marley Engineered Products. Voltage, size, KW, steps and control voltage shall be as scheduled. Three phase heaters shall have balanced phases.

1. Heaters shall be CSA and UL Listed for zero clearance and shall meet all NEC requirements, unless otherwise specified.
2. Type: Heaters shall be of the following configuration:
   For Duct Mounting . . . . . All Slip-in or Flanged
   For Air Handling Unit Coils . . . . . All Slip-in or Flanged
   Multi zone Hot Deck Coils . . . . . Slip-in Type
3. Elements for Finned Tubular heaters shall have steel fins brazed to copper plated sheath. Element wire shall be 80/20 Nickel/Chromium. Elements shall be protected against corrosion by a high-temperatu-realuminum coating. Terminals shall be sealed with silicone rubber to protect against moisture.
4. Open coil heating elements shall be 80% nickel and 20% chromium; steps shall be arranged to prevent stratification when operating at less than full capacity. Elements for draw-through air handling units shall be de-rated to 35 watts per square inch; blow-through air handling coils and variable volume reheat coils shall be de-rated to 25 watts per square inch.
5. Element terminals shall be stainless steel; insulators and bracket bushings shall be nonporous ceramic and securely positioned. Terminals shall be machine crimped to elements.
6. Frame shall be constructed of heavy gauge galvanized steel with galvanized steel brackets, stiffening ribs and gussets spot welded to the frame. Stainless and Aluminized steel frames are available.
7. Terminal box shall be spot welded construction with solid, hinged cover, totally enclosed, without louvers or grilles per the CSA and UL Standard, unless otherwise specified.
8. Recessed terminal box to be provided when coils are installed in ducts with internal insulation or obstruction greater than 1".
9. Direction of airflow: heaters shall be interchangeable for horizontal left or right or vertical up airflow except when position sensitive mercury contactors or SCRs are built-in. In these cases, airflow direction shall be as scheduled.
10. Safety devices: a disc-type automatic reset thermal cutout shall be furnished for primary over temperature protection. For secondary protection, a sufficient number of replaceable thermal cutouts in the power lines shall de-energize elements if the primary cutout fails. All safety devices shall be serviceable through the terminal box without removing the heater from the duct.
11. Wiring diagrams: a unique wiring diagram shall be furnished for each heater. Diagram shall include recommended supply wire gauges per NEC and fuse sizes.
12. Built-in components shall include safety interlocking disconnect switch, disconnecting break magnetic contactors, transformer with primary fusing per CSA and UL, pressure-type airflow switch set at .05" WC, supplementary circuit fuses per NEC (one set of fuses per 48 amp circuit), and separate load and control terminal blocks to accept conductors as shown on the electrical plan.
13. Special features: the following special features are available:

SPECIAL CONSTRUCTION
- Insulated Terminal Box
- Dust tight Terminal Box
- Weather Resistant Terminal Box (non-removable flange)
- Recessed Terminal Box
- Bottom Insert - open coil only
- Round-duct Construction
- Stainless Steel Frame
- Aluminized Steel Frame
- Hinged Terminal Box Cover
- High Pressure Construction
- Protective Screens
  - A. Inlet Side Only
  - B. Outlet Side Only
  - C. Both Sides

OVER-CURRENT PROTECTION
- Automatic Circuit Breakers (in lieu of fuses)
- Fuses Per Step (in lieu of one per 48 amperes)
- Main Supply Over-current Protection (heaters 48 amperes or less)

OVER-TEMPERATURE PROTECTION
- Manual Reset Thermal Cutout in control circuit in series with automatic
- Manual Reset Thermal Cutout in power lines (in lieu of secondary cutouts)
- Manual Reset Thermal Cutout operating back-up contactors
- Automatic Reset Thermal Cutout

SWITCHING DEVICES AND CONTROLS
- Magnetic Contactors, De-energizing (in lieu of disconnecting)
- SCRs (solid state modulating control)
- Toggle Switch(es)
  - A. One Per Step
  - B. Interrupts Control Voltage
  - C. NEMA 12
- Door Interlock Switch (to break control circuit)
- Step Controller(s) (specify input)
  - A. Electronic Modulating
- Time Delay Relay
- PE Switch(es) (for pneumatic control; specify close or open on pressure rise)
- Transducer (pneumatic to 135 Ohm)
- Pilot Light(s)
  - A. One Per Step (x # of steps)
  - B. Control Voltage ON
  - C. Power ON (Line Volts)
  - D. Normal Operation (Automatic Reset Circuit is Closed)
  - E. Airflow Switch Open
  - F. Manual Reset Thermal Cutout ON
  - G. Push-To-Test Type (Not CSA and UL except with 16E)
  - H. Over-temperature (Automatic Reset Cutout Circuit is Open)
  - I. Nema - 12 (non-CSA and UL) or Nema - 4 (non-CSA and UL)
  - J. Heater ON

14. Manufacturer to provide two year limited warranty.

Marley® Engineered Products
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