

## Horizontal and Vertical

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### ELECTRIC COILS

Electric coils shall be factory-mounted and of the capacity scheduled on the drawings. Blower Coil and heater assembly shall be UL 1995 and ETL certified. The heater frame and cabinet shall be constructed of heavy gauge galvanized steel. Heating elements shall be open-coil type constructed of high grade 80/20 NiCr resistance wire. Elements shall be low density and designed to minimize hot spots and nuisance cycling of the thermal resets. Coil elements shall be insulated from the frame using floating ceramic bushings.

Electric coils shall be supplied with contactors, relays, and transformers as required. Two thermal cutouts of automatic reset and manual reset type shall be provided as primary and secondary overload protection, respectively. Fused secondary thermal cutout devices are not acceptable. A differential pressure switch shall be provided to ensure air flow is present before heater is energized. A door-interlock disconnect switch shall be provided to cut power to the electric coil prior to accessing components in the control enclosure.

#### Modulating Control (SCR) option:

Where desired, heater shall be capable of providing proportional control of reheat capacity using an analog input signal (0-10 VDC, 4-20 mA, or PWM) from a room thermostat or from the unit controller. The SCR shall pulse the coil on and off in proportion to the heating demand indicated by the room thermostat. The SCR controller shall provide solid state switching with zero crossover for silent operation. Magnetic or mercury contactors are not acceptable for control of reheat capacity.

SCR with Discharge Air Temperature (DAT) control option:

Heater shall be supplied with SCR controller featuring discharge air temperature sensor. The controller shall feature adjustable discharge air temperature set-point controlled by a dial on the SCR controller. The SCR shall pulse the coil in proportion to the heating demand indicated by the room thermostat, while ensuring the discharge air temperature does not exceed the set-point indicated on the dial. Upon sensing DAT above set-point, the controller shall reduce the heater output in order to maintain desired discharge air temperature set-point. Discharge air temperature set-point shall be variable from 70-130 °F [21-54 °C].

- Staged Reheat Control, Quiet option (Price SilentGuard™)
- Electric heaters shall be supplied with Price 'SilentGuard™' control circuit board or equivalent, to be complete with:
- Quiet PCB relays with indicator LEDs for up to 3 stages of electric heat.
- Integrated differential air pressure switch (with control algorithm to prevent nuisance tripping).
- Blinking status LED to aid in troubleshooting of heater. Status LED shall indicate heater condition and fault; eg: no air flow, tripped manual /automatic reset, etc.
- Automatic reset 24VAC control circuit fusing.

The electric heater circuit board shall be capable of automatically adjusting to accept either a 24VAC switched HOT or switched COMMON signal from the controller in order to energize the PCB relays. The electric heater and circuit board shall be ETL listed.