

Part 1 General

1.1 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CSA C22.2 No.46-M1988 (R2011), Electric Air-Heaters.

1.2 SUBMITTALS

- .1 Product Data: Submit manufacturer's product literature, specifications and datasheet in accordance with Section E3. Include product characteristics, performance criteria, materials and limitations.
- .2 Shop Drawings: Submit product data sheets for unit heaters. Include:
 - .1 Product characteristics.
 - .2 Mounting methods.
 - .3 Physical size.
 - .4 kW rating, voltage, phase.
 - .5 Cabinet material thicknesses.
 - .6 Colour and finish.
- .3 Closeout Submittals: Provide operation and maintenance data for unit heaters for incorporation into manual specified in Section E4.

Part 2 Products

2.1 UNIT HEATERS

- .1 Unit heater: to CSA C22.2 No.46, horizontal discharge complete with adjustable louvers finished to match cabinet.
- .2 Fan type unit heaters with built-in high-heat limit protection, fan-delay switches.
 - .1 Built-in fan motor thermal overload protection.
- .3 Hangers: as indicated.
- .4 Elements:
 - .1 2 to 10 kW: Stainless steel tubular heating element
 - .2 15 to 40 kW: Finned tubular heating elements
- .5 Cabinet:
 - .1 2 to 10 kW: 20 gauge steel
 - .2 15 to 40 kW: 18 gauge steel.
 - .3 Phosphatized and finished with a grey coloured epoxy rust protection.
 - .4 Individual adjustable extracted aluminum louvers.

- .5 Mounting brackets
- .6 Motor:
 - .1 Mounted outside of the element bundle
 - .2 TEFC with permanently lubricated ball bearings and built-in thermal overloads
- .7 Controls:
 - .1 Built-in transformer to step down the primary power down to the control power.
 - .2 Overheat protection: auto-reset bimetal type.
 - .3 Low voltage relay for remote 24V control.
- .8 Acceptable material: Ruffneck, Reznor.

2.2 CONTROLS

- .1 Wall mounted thermostats: low voltage.

Part 3 Execution

3.1 INSTALLATION

- .1 Suspend unit heaters from ceiling or mount on wall as indicated by manufacturer.
- .2 Install thermostats in locations as indicated.
- .3 Make power and control connections.

3.2 FIELD QUALITY CONTROL

- .1 Test cut-out protection when air movement is obstructed.
- .2 Test fan delay switch to assure dissipation of heat after element shut down.
- .3 Test unit cut-off when fan motor overload protection has operated.
- .4 Ensure heaters and controls operate correctly.

END OF SECTION