

Part 1 General

1.1 SUMMARY

- .1 Section Includes:
 - .1 Materials and application of electric duct heaters.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA International).
 - .1 CSA C22.2 No. 155– Electric Duct Heaters.

1.3 PRODUCT DATA

- .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit product data sheets for duct heater. Include:
 - .1 Product characteristics;
 - .2 Performance criteria;
 - .3 Mounting methods;
 - .4 Physical size;
 - .5 kW rating, voltage, phase;
 - .6 Cabinet material thicknesses;
 - .7 Limitations; and,
 - .8 Colour and finish.
- .3 Submit product data sheets for duct heater.
 - .1 Include product characteristics, performance criteria, physical size, limitations and finish.

1.4 CLOSEOUT SUBMITTALS

- .1 Provide operation and maintenance data for duct heater for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

Part 2 Products

2.1 DUCT HEATERS

- .1 Duct heaters: flange type.
- .1 Elements:
 - .1 Open coil.
- .2 Staging:
 - .1 Staged heaters: balanced line current at each stage.

- .2 Each stage: uniform face distribution.
- .3 Maximum temperature at discharge: 40°C.
- .4 Controls:
 - .1 Factory mounted and wired in control box. Use terminal blocks for power and control wiring to thermostat and sail switch.
 - .2 Controls mounted in a CSA type enclosure and to include:
 - .1 Magnetic contactors;
 - .2 Pneumatic electric relays;
 - .3 Control transformers; and,
 - .4 SCR controller.
 - .3 Where controls are mounted in heater, exercise care in mounting contactors to minimize switching noise transmission through ductwork.
 - .4 High temperature cut-out and air proving switch.
- .5 Electrical:
 - .1 As indicated on Drawings.
- .6 Main isolation disconnect switch.
- .7 Acceptable Manufacturers: Greenheck, Price, Thermolec, Stelpro.

Part 3 Execution

3.1 INSTALLATION

- .1 Make power and control connections to CSA C22.2 No.155.

3.2 FIELD QUALITY CONTROL

- .1 Perform tests in accordance with Section 26 05 00 – Common Work Results – Electrical.
- .2 Test cut-out protection when air movement is obstructed.
- .3 Test fan delay switch to assure dissipation of heat after element shut down.
- .4 Test unit cut-off when fan motor overload protection has operated.
- .5 Ensure heaters and controls operate correctly.

END OF SECTION