

ELECTRIC HEATERS

**Part 1 General**

**1.1 RELATED SECTIONS**

- .1 Section 26 05 01 Common Work Results - Electrical.
- .2 Section 26 99 99 – Commissioning.

**1.2 REFERENCES**

- .1 CSA International:
  - .1 CSA C22.2 No.46-M1988(R2006), Electric Air-Heaters.
- .2 Underwriters' Laboratories (UL) Inc.:
  - .1 UL 1042-2009, Standard for Electric Baseboard Heating Equipment.

**1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 26 05 01 Common Work Results - Electrical.
- .2 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for forced air electric baseboard heaters and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Manufacturer's Instructions: provide to indicate special handling criteria, installation sequence and cleaning procedures.

**1.4 CLOSEOUT SUBMITTALS**

- .1 Submit in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Operation and Maintenance Data: submit operation and maintenance data for incorporation into manual.

**1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
  - .1 Store materials off ground, indoors, in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Store and protect equipment from nicks, scratches, and blemishes.
  - .3 Replace defective or damaged materials with new.
- .4 Packaging Waste Management: remove for reuse of packaging materials as specified in Construction Waste Management Plan in accordance with Section 01 74 21 – Construction Demolition Waste Management.

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**Part 2 Products**

**2.1 FORCED AIR BASEBOARD HEATER**

- .1 Heaters: to CSA C22.2 No.46 wattage density as indicated with connection box both ends
- .2 Voltage 208V, 1 Ph.
- .3 Wall/surface mount c/w surface adapter for all electrical buildings.
- .4 Recessed mount for oTENTIKs. Dimensions for forced air baseboard heater installed in oTENTIKs electrical cabinet shall be 220 mm (width) x 435 mm (length) x 60 mm (depth).
- .5 Almond colour.
- .6 Finish: Epoxy-polyester powder coat.
- .7 Top air intake with bottom air discharge.
- .8 Thermal protection with automatic reset.
- .9 CSA approved.
- .10 Approved wiring channel for interconnection of heaters and components.
- .11 Knock-outs for conduit connection.
- .12 Additional accessories as indicated:
  - .1 Relay section.

**2.2 CONTROLS**

- .1 Electrical buildings:
  - .1 Wall mounted thermostats: type electronic, programmable, Energy Star certified.
  - .2 Line voltage 208V, able to accommodate up to 2600W at 208V.
  - .3 Relays and transformers to switch loads in excess of thermostat rating.
- .2 oTENTIKs:
  - .1 Built-in thermostat.

**Part 3 Execution**

**3.1 EXAMINATION**

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for convectors installation in accordance with manufacturer's written instructions.
  - .1 Visually inspect substrate in presence of Departmental Representative.
  - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.

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- .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

**3.2 INSTALLATION**

- .1 Attach baseboard heaters surface mount to wall in electrical buildings.
- .2 Install thermostats in locations indicated in electrical buildings.
- .3 Install baseboard heater recessed mounted in wood cabinet for oTENTIKs.
- .4 Make power and control connections.
- .5 Install all wiring in conduit.
- .6 Provide identification with lamicoid nameplate in accordance with Section 26 05 01 Common Work Results – Electrical.

**3.3 FIELD QUALITY CONTROL**

- .1 Perform tests in accordance with Section 26 05 01 - Common Work Results - Electrical.
- .2 Ensure that heaters and controls operate correctly.

**3.4 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
  - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .3 Waste Management: separate waste materials for recycling in accordance with Section 01 74 21 – Construction Demolition Waste Management.
  - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

**3.5 PROTECTION**

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by residential convectors installation.

**END OF SECTION**