ELECTRIC HEATING

PART 1 - GENERAL

1.1 SCOPE

A. Furnish and install electrical heating systems work, including:

B. Convector, Architectural Sill Height, Aluminum

1.2 SUBMITTALS

A. For all work specified in Division 23, submittals to include Type 1 (Manufacturer's Name) and Type 2 (Product Data) information. In addition, submittals for the work listed below shall include the indicated type of information.

PART 2 - PRODUCTS

2.1 Convector, Aluminum Architectural Sill Height

A. Heaters shall be designed for a range in heating outputs. Each unit shall have a minimum capacity of 100 watts per linear foot. Maximum capacity shall be 750 watts per linear foot.

B. Enclosures shall be 12 gauge (.080" min.) aluminum extrusion designed to withstand heavy-duty commercial and institutional use. The one-piece top and front shall join to the one piece back and bottom utilizing a patent pending snap lock design.

1. Enclosures shall be flash anodized to resist corrosion and then finished in baked enamel powder coating or anodized finish. Finish shall be mar and temperature-resistant. Color determined by Architect. Unlimited custom colors available.
2. Enclosure and heater shall be UL approved. Enclosure to include end-to-end factory installed wire way. Knockouts to be included to allow wire entry from either end, bottom, or back of enclosure.
3. Enclosures shall be available in bottom inlet and/or front inlet with pencil-proof slots, negating the need for mesh under the grille.
4. Enclosures shall have the option of a finished painted or anodized back. Enclosure backs shall include option to have knockouts removed for a clean smooth finish.

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C. Heaters and blank sections shall be designed so they can be butted together and leveled in a manor to maintain the continuous design. Enclosures and blanks shall include alignment tabs to align butted units.

D. Heaters shall be designed with a built-in pre-wired raceway to enable multiple unit wiring from one branch circuit, on either end of the unit. Blanks units are UL listed for use as a wire-way

E. Heaters shall range from 3 5/8" wide by 6" in height or 5 5/8" wide by 7" in height, and designed for variable lengths from 28" to 15'. Heater designed to allow for custom lengths and miters for both straight and curved installations, as shown on Architectural Plans. (move this up in the list to highlight the custom work and therefore, differentiation?)

F. Discharge louvers shall be punched into the extruded aluminum one-piece top and front cover. Front cover color to be selected by Architect. Unit shall have top air discharge, and either front or bottom air intake as selected by Architect. The one-piece top and front finish shall be a polyester powder paint or an anodized finish.

G. A mesh screen shall be available as optional.

H. Heating elements shall be constructed with nickel chromium wire encased in a steel sheath or stainless steel sheath, and MgO material. Aluminum fins are to be designed for a chimney effect to maximize airflow and pressure bonded to the steel sheath for efficient heat transfer. Elements shall be center-anchored and shall float freely on each end through nylon bushings for quietness. No noise shall be emitted from the units.

I. Built-in optional controls shall all be included in the standard unit enclosure with no separate control box needed. The built-in optional controls shall include a power on/off switch, single pole thermostat, double pole thermostat, Transformer relay, power relay, two stage thermostat, single pole pilot duty rated thermostat, double pole pilot duty rates thermostat, Pneumatic/electric switch, SCRs

J. Heaters available with relay for automatic setback control from the BMS/EMS systems.

K. Heater shall include an automatic reset thermal overheat protector that shall run the full-length of the heater and shall turn off heating elements should overheating occur at any point along heating length.

L. Heater shall be capable of floor mounting, wall mounting, and pedestal mounting out of the box. Pedestals can be used as a power supply entry point in either end of the heater.

M. Mechanical Accessories shall include blank sections, inside corners, outside corners, end caps, decorative end sections, and filler sections. Units designed to allow for custom lengths and mitered corners, as shown on Architectural Plans .

N. Manufacturer: Architectural Sill-Height Convection Heaters: Berko ASL3 and ASL5 Series, Qmark DBA and SHA Series.

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PART 3 - EXECUTION

3.1 INSTALLATION

A. Install Architectural convector heaters complete as per manufactures instructions and provide branch circuits and controls.

3.2 CONVECTOR ARCHITECTURAL SILL-HEIGHT HEATER INSTALLATION

B. Aluminum Architectural Sill-Height Convector

1. Complete installation shall conform to UL standards and shall be in accordance with manufacturer's specification as listed by UL.
2. Convector shall be secured to floor, wall or pedestal mounted, as listed in manufactures installation instructions.
3. In-coming power must match nameplate rated voltage of the heater. Connections by approved methods.

3.3 RANCH CIRCUIT INSTALLATION

C. Provide Branch Circuits for the Following Items:

1. Aluminum Architectural Sill-Height Convector.

D. Provide local switch to disconnect power for heating equipment and the necessary raceway and wiring.

3.2 CONTROLS

A. Provide controls as per specifications noted on drawings.

B. BMS connections to be made to internal control relay as specified.

3.3 TESTING

A. Perform adjustments and tests, including setting of thermostats furnished under this Section to assure satisfactory operation.

END OF SECTION

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