

## SPECIFICATION CHECK PRINT COVER SHEET

<b>Contract Package No.</b>	L230
<b>Specification Number (XX XX XX):</b>	23 82 43
<b>Phase (90%, 100%, IFC)</b>	IFB

<b>ACTION</b>	<b>NAME</b> (First Initial, Last Name)	<b>DATE</b>
Originated by:	L. Coppa	8/18/22
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Backchecked by:		
Corrected by:	No errors found during QC Review – Eric Vander Mey – 09/02/2022	
Verified by:		

**SECTION 23 82 43**  
**ELECTRIC HEATERS**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. Section includes requirements for electric heaters, including wall heaters, unit heaters, and duct heaters.
- B. This section includes requirements for 130th Station's pursuit of LEED Gold Certification under LEED v4 Transit Stations and Sound Transit's Sustainability Checklist, as defined in Section 01 81 13.

**1.02 REFERENCES**

- A. This Section incorporates by reference the latest revisions of the following documents.
  - 1. National Fire Protection Agency (NFPA)
    - a. NFPA 70 National Electrical Code
  - 2. Underwriters Laboratories (UL)
    - a. UL 1025 Electric Air Heaters
    - b. UL 1030 Sheathed Heating Elements
    - c. UL 1042 Electric Baseboard Heating Equipment
- B. LEED v4 Building Design and Construction: Transit Stations.
- C. Sound Transit Sustainability Checklist.

**1.03 SUBMITTALS**

- A. Submit the following:
  - 1. Shop Drawings:
    - a. Include plans, elevations, sections, details, and attachments to other work. Detail equipment assemblies, suspension and attachment.
    - b. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
    - c. Include diagrams for power, signal, and control wiring.
- B. Transmit the following:
  - 1. Product Data: Include rated capacities, specialties, and accessories for each product indicated.
  - 2. Operation and Maintenance Data; Manufacturer's operation and maintenance material and manuals are to be in accordance with operation and maintenance data as stated elsewhere in the Contract Documents.

## **PART 2 - PRODUCTS**

### **2.01 ACCEPTABLE MANUFACTURERS:**

- A. Berko Electric Heating; a division of Marley Engineered Products
- B. Chromalox Inc.; a division of Emerson Electric Company
- C. Fostoria Industries, Inc.; a division of TPI Corporation
- D. Markel Products; a division of TPI Corporation
- E. Omega Engineering, Inc.
- F. QMark Electric Heating; a division of Marley Engineered Products
- G. King Electrical MFG. Co.

### **2.02 ELECTRIC WALL HEATERS**

- A. Cabinets:
  - 1. Housing: Minimum 20 gauge steel
  - 2. Front Panel: Extruded aluminum
  - 3. Finish: Standard color baked enamel.
- B. Heating Element: Sealed Tubular Type with Steel Fins
- C. Fan and Motor:
  - 1. Fan: Aluminum propeller or squirrel cage, directly connected to motor.
  - 2. Motor: Permanently lubricated
  - 3. Disconnect: refer to electrical drawings for disconnect.
- D. Controls
  - 1. Controls: Remote-mounted tamper-proof thermostat, thermal overload cut-off, fan delay switch, manual disconnect switch and fan delay switch. Provide with contacts for line voltage input from BMS via RIB. RIB shall be selected to match heater amps. Thermal overload cut-off,
  - 2. Electrical Connection: Factory wire motors and controls for a single field connection. ETL listed.

## **PART 3 - EXECUTION**

### **3.01 INSTALLATION**

- A. Install in conformance with the approved heater installation drawing, NFPA 70, UL listing, and manufacturer's instructions, with necessary clearances for air circulation, maintenance, inspection, service testing and repair.
- B. Ground electric units according to grounding and bonding for electrical systems requirements as stated elsewhere in the Contract Documents.

- C. Connect wiring according to low-voltage electrical power conductors and cable requirements as stated elsewhere in the Contract Documents.

### 3.02 WALL HEATERS

- A. Coordinate installation with electrical contractor.
- B. Where recessed mounting is indicated, seal entire recessed opening from exterior wall cavities, and provide a minimum 15 mm 1/2-inch thick rigid fire resistant insulation on the wall behind the cabinet. Maintain wall rating shown on Architectural plans.

### 3.03 FIELD QUALITY CONTROL

- A. After installing, inspect unit cabinet for damage to finish. Remove paint splatters and other spots, dirt, and debris. Repair damaged finish to match original finish.

### 3.04 COMMISSIONING

- A. In addition to commissioning required elsewhere in the Contract Documents, the systems and equipment included in this section shall be subject to commissioning process activities per LEED BD+C Transit Stations (v4) to comply with 130<sup>th</sup> Station's pursuit of LEED Gold Certification as outlined in Section 01 81 13 LEED Certification Requirements and 01 91 13 Commissioning Requirements, when systems or equipment included in this section relate to any of the following: HVAC, HVAC controls, domestic hot water, domestic hot water controls, lighting controls, switched receptacles, energy metering, and renewable energy systems.

## END OF SECTION

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