

**RADIANT ELECTRIC HEAT  
BEDFORD HEIGHTS, OHIO  
SECTION 238330 – RADIANT HEATING UNITS**

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**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Section Includes: High efficiency short-wave infrared tungsten/halogen radiant heaters for [wall] [ceiling] [stand] mounting.
- B. Related Sections
  - 1. Division 00 - General and Supplementary Conditions.
  - 2. Division 26 – Electrical: Wiring.
- C. References
  - 1. Intertek (ETL)
  - 2. National Electrical Manufacturers Association (NEMA)
  - 3. International Electrical Code (IEC)
- D. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.
- E. Substitutions: *\*\*\*One of the following\*\*\**
  - 1. [Substitutions will be considered only under the terms and conditions of Section 016000. ]
  - 2. [Substitutions not allowed.]

**1.2 SUBMITTALS**

- A. Make submittals in accordance with Section 013300.
- B. Product Data: Manufacturer's complete product data including wiring support diagram, switching, heater size and wattage, and color selector.
- C. Warranty: A sample copy of the Manufacturer warranty for the periods stipulated. Each specimen must be a preprinted representative sample of the issuing company's standard warranty for the units specified.
- D. Certification: Documentation demonstrating ETL listing.

**1.3 DESIGN REQUIREMENTS**

- A. Radiant heater units shall be tungsten element, halogen gas-filled quartz tube. Non-halogen gas filled element type radiant heaters are not acceptable.

**1.4 QUALITY ASSURANCE**

- A. Manufacturer: Company specializing in the manufacture of short-wave tungsten/halogen infrared radiant heaters.
- B. Installer: Hard-wired units shall be installed by a licensed electrician as applicable to the jurisdiction.

**1.5 REGULATORY REQUIREMENTS**

- A. Conform to applicable building and jurisdictional codes for installation of heaters.

**1.6 DELIVERY, STORAGE, AND PROTECTION**

- A. In accordance with Section 016000.
- B. The Contractor together with the Owner or his designated Representative shall designate a storage area for all components. The area shall be cool, dry, out of direct sunlight, and in accordance with manufacturer's recommendations and relevant regulatory agencies. Materials shall not be stored in quantities that will exceed design loads, damage substrate materials, or hinder installation.

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**1.7 ENVIRONMENTAL REQUIREMENTS**

- A. Install the heater on a wall or ceiling with at least 12” of clearance from the structure above with a minimum installation height of 8’, and at least 7’ of clearance from the front of the heater to combustibles and away from the side and rear.
- B. The heater must be installed horizontally to the ground.

**1.8 COORDINATION & PROTECTION**

- A. Coordinate the work with the installation of associated wiring, panels, switches, and accessories, as the work of this section proceeds.

**1.9 WARRANTY**

- A. In accordance with Section 017700.
- B. Manufacturer’s Limited Warranty: Provide 1-year manufacturer’s limited warranty under provisions of this section. This warranty provides for replacement of failed heating element at no cost to the Owner for 1 year.

**PART 2 - PRODUCT**

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*Use the next Article and one or more of the following 6 Articles for Proprietary Specification*

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**2.1 MANUFACTURER/US DISTRIBUTOR**

- A. Star Progetti Technologie Applicate S.p.a.(Tribiano, Italy; +390290639261)
- B. Radiant Electric Heat, LLC (Bedford Heights, OH; 800-774-4450).

**2.2 HELIOSA 66 SHORT-WAVE INFRARED TUNGSTEN/HALOGEN INFRARED RADIANT HEATER**

- A. [120 Volt-1,500 Watt] [208 Volt-1,500 Watt] [240 Volt-2,000 Watt].
- B. Color: [Black].
- C. [Hard-wire installation] [Plug-in 120 Volt].

**2.3 HELIOSA 66 BLACK SHORT-WAVE INFRARED TUNGSTEN/HALOGEN INFRARED RADIANT HEATER WITH DARKENED SAFETY GLASS FILTER**

- A. [120 Volt-1,500 Watt] [208 Volt-1,500 Watt] [240 Volt-2,000 Watt].
- B. Color: [Black].
- C. [Hard-wire installation] [Plug-in 120 Volt].

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**2.4 HELIOSA TITAN SP SHORT-WAVE INFRARED TUNGSTEN/HALOGEN INFRARED RADIANT HEATER**

- A. [120 Volt-1,500 Watt] [208 Volt-1,500 Watt] [240 Volt-2,000 Watt].
- B. Color: [White].
- C. [Hard-wire installation] [Plug-in 120 Volt].

**2.5 ACCESSORIES**

- A. Thermostat: [Programmable] [Non-Programmable] [Digital Readout] [Line Voltage] [Low Voltage] [O3 Sensor Hub].
- B. Relays: [Mechanical Relay] [Solid State Relay].
- C. Mounting Brackets: As standard for type of unit specified.
- D. Heater Stand: 82" Powder coated aluminum heater stand.

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*Use the next Article for Descriptive or Performance Specification*

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**2.6 SHORT-WAVE INFRARED HEATER**

- A. Heating Elements:
  - 1. Element with tungsten filament and halogen gas-filled quartz tube.
- B. Heater Body:
  - 1. Powder coated aluminum casting.
  - 2. Polished aluminum parabolic reflector.
  - 3. Heater body safety grill as standard with type of unit specified.
- C. Design: [Wall-Mounted] [Ceiling-Mounted] type.
- D. Voltage-Wattage: **\*\*\*Select one or more of the following\*\*\***
  - 1. [120 Volts-1,500 Watts] [208 Volts-1,500 Watts] [240 Volts-2,000 Watts]
- E. For [plug-in] [hard-wire] installation.
- F. Accessories:
  - 1. Thermostat: [Programmable] [Non-Programmable] [Digital Readout] [Line Voltage] [Low Voltage].
  - 2. Relays: [Mechanical Relay] [Solid State Relay].
  - 3. Mounting Brackets: As standard for type of unit specified.
  - 4. Heater Stand: 82" Powder coated aluminum heater stand.

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**PART 3 - EXECUTION**

**3.1 EXAMINATION**

- A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin installation until all unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.

**3.2 PREPARATION**

- A. Coordinate the location of heating units with other work. Ensure units are located to accommodate fittings and units of equipment which are to be placed after the installation of heating units.

**3.3 INSTALLATION**

- A. General: Install heating units where indicated, in accordance with manufacturer's written instructions, applicable requirements of IEC, in compliance with recognized industry practices to ensure products fulfill requirements.
- B. Secure in place with mounting brackets or by fastening back panel of unit to wall, as applicable to type of model specified, unless otherwise noted. Top of heater unit and trim shall be level. Firmly anchor heating units directly or with concealed bracing to building structure. Where heating units are mounted adjacent to each other, the top edges shall be at the same height.

**3.4 TESTING**

- A. Provide testing as required by Division [00] [23] [26].

**END OF SECTION**