



SECTION 23 55 23

GAS FIRED RADIANT HEATERS
TUNGSTEN GAS

Product	Product Code (US/CA)	BTU Output	Heat Area	Current
Tungsten 300 – NG	BH0210001-1	26,000	160ft ²	110V/2A
Tungsten 300 - LPG	BH0210002-1	26,000	160ft ²	110V/2A
Tungsten 500 – NG	BH0210003-1	43,000	215ft ²	110V/2A
Tungsten 500 - LPG	BH0210004-1	43,000	215ft ²	110V/2A
Tungsten Portable - NG	BH0510005	38,500	215ft ²	N/A
Tungsten Portable - LPG	BH0510001	38,500	215ft ²	N/A

PART 1 – GENERAL

1.01 SUBMITTALS

- A. Action Submittals:
 - 1. Product Data: Manufacturer’s descriptive data and product attributes including heat output and heat distribution area, control components and connections, mounting hardware, and installation instructions.
- B. Closeout Submittals:
 - 1. Operation and Maintenance Data.
 - 2. Portable Heater Covers: Heater covers for each Tungsten portable heater, handed to the Owner at Substantial Performance.

1.02 QUALITY ASSURANCE

- A. Installer Qualifications:
 - 1. Journeyman tradesmen licensed to install gas fired equipment.
- B. Regulatory Requirements: Radiant heaters and installation are to be in accordance with requirements of:
 - 1. ANSI Z83.26/CSA 2.37, Gas Fired Outdoor Infrared Patio Heaters
 - 2. NFPA 54/ANSI Z223.1, National Fuel Gas Code
 - 3. ANSI/IEC 60529, Degrees of Protection by Enclosures (IP Code)

4. State or Municipal requirements.

1.03 WARRANTY

- A. Manufacturer's standard warranty against parts failure.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Contract documents are based on Bromic Heating www.bromic.com
- B. Substitutions: Not permitted.

2.02 OUTDOOR SURFACE MOUNTING GAS RADIANT HEATERS AND CONTROLS

- A. Heater: Bromic "TUNGSTEN SMART-HEAT Series weatherproof heaters for outdoor wall bracket mounting or ceiling pole mounting, ANSI/IEC 60529 IPX4 rated, 500 Series Model 43,000 BTU output or 300 Series Model 26,000 BTU output for use with natural or propane gas and equipped with:
 1. Stainless steel framework and enclosure with ceramic burner head and black fascia
 2. Heat deflectors where scheduled/indicated.
 3. Mounting bracket/control box with a Honeywell electronic gas burner control system with gas control valve, pressure regulator, electric spark ignition, and flame monitoring with 100% safety shutdown.
 4. Wall mounting assembly with pivot bracket for heater angle adjustment, 20deg left/right, permanent position.
 5. Surface ceiling mounting pole accessory (minimum 10'-4" ceiling height required) suitable for a sloped ceiling with pole remaining 100% vertical, and capable of mounting two heaters back-to-back to a single ceiling pole to minimize visual obstructions.
 6. Control Components: "On/Off Controller" 110/230 VAC 4-channel controllers supplied loose, each capable of wireless ON/OFF control of 2 gas heaters or 4 gas heaters in groups of 2 per output within a 100-foot range.

2.03 OUTDOOR PORTABLE GAS RADIANT HEATERS AND CONTROLS

- A. Heaters: Bromic "TUNGSTEN SMART-HEAT", ANSI/IEC 60529 IPX4 rated, portable, outdoor, weatherproof, free-standing, ETL approved heater for use with piped natural gas or 20- or 30-pound bottled propane gas and equipped with:
 1. Black, enameled, 85-inches high assembly with 19 x 27-inch wheeled base.
 2. Ventilated bottom storage area.
 3. Top, angled, 27-inch-wide black honeycomb burner head with heat deflector.
 4. A control box with gas valve, spark ignition, flame failure and anti-tilt shut-down controls.
 5. Propane gas supply pressure requirements of minimum 11-inch w.c, maximum 14- inch w.c.
 6. Natural gas supply pressure requirements of minimum 6-inch w.c., maximum 14-inch w.c.

7. Heater assembly contoured arm mounted adjustable heat controls.
8. A protective cover supplied loose.

PART 3 - EXECUTION

3.01 INSTALLATION OF OUTDOOR SURFACE MOUNTING GAS RADIANT HEATERS

- A. Provide outdoor surface mounting gas fired radiant heaters where shown.
- B. Install all heaters in accordance with the manufacturer's published instructions and NFPA 54/ANSI Z223.1 requirements. In particular, maintain required clearances.
- C. Wall and Ceiling Mounted Heaters: Ensure that proper flexible gas piping connects each heater wall bracket/control box. Adjust heater angles to the Owner's requirements. Ensure that all heaters are protected from the elements.
- D. Test all gas piping connections for leakage.
- E. Provide wireless controllers where indicated.
- F. Coordinate electrical connections to controllers and heaters with the electrical work.

3.02 INSTALLATION OF PORTABLE GAS RADIANT HEATERS

- A. Provide outdoor portable gas radiant heaters where indicated. Provide a new 20 or 30 pound filled bottle of propane for each heater.
- B. Store propane bottles in heater storage areas. Ensure that proper flexible gas piping connects each heater control box.
- C. Adjust heater angles to the Owner's requirements.
- D. Test all gas piping connections for leakage.
- E. Provide wireless controllers where indicated.
- F. Coordinate electrical connections to controllers and heaters with the electrical work.

3.03 START-UP

- A. After heater and control installation is complete, start each heater and test and confirm proper operation of all phases of heater operation.

3.04 COMMISSIONING

- A. Commission the heaters in accordance with specified commissioning requirements.

3.05 DEMONSTRATION AND TRAINING

- A. Include training for 2 hours of on-site operation and maintenance demonstration and training for 2 groups of 4 people.

END OF SECTION