QTD SERIES TUBE HEATERS

SUBMITTAL DATA – QUAD TUBE, MULTI-BURNER, TWO-STAGE, LOW INTENSITY GAS-FIRED INFRARED TUBE HEATERS & ACCESSORIES

SUBMITTED BY: DATE:

JOB TITLE: _____ CONTRACTOR: _____

ADDRESS: _____ PHONE #: _____

CITY: _____ ADDRESS: _____

PROVINCE: _____ POSTAL CODE: _____ CITY: _____

POSTAL CODE: _____ POSTAL CODE: _____

ENGINEER: _____

LOCAL REPRESENTATIVE: _____

NOTES: _____

QTY.	MODEL #	TAG	GAS TYPE	BTU/H High Fire	BTU/H Low Fire	OVERALL UNIT LENGTH	UNIT WEIGHT	APPROX. COVERAGE AREA (L x W)	RECOMMENDED MOUNTING HEIGHTS*
	QTD-60N		Natural	60,000	40,000	107"	103 lbs.	30' x 40'	8' to 12'
	QTD-60P		Propane	60,000	40,000	107"	103 lbs.	30' x 40'	8' to 12'
	QTD-80N		Natural	80,000	50,000	107"	103 lbs.	35' x 45'	10' to 14'
	QTD-80P		Propane	80,000	50,000	107"	103 lbs.	35' x 45'	10' to 14'

* Recommended mounting heights are provided as a guideline. If infrared heaters are mounted too high or too low, they may produce adverse results. Actual conditions may dictate variations from this data.

Patent Pending

BRANT RADIANT HEATERS LIMITED

RE-VERBER-RAY® INFRARED RADIANT HEATERS

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VISIT OUR WEBSITE FOR:

- Product Specs
- Parts Support
- Dealer Locator
- Applications
- C.A.D. Library
- Design Guidelines
- Theory of Infrared
- and More!

QTD SERIES SPECIFICATIONS

BURNER CONTROL BOX
- Sight glass for burner inspection.
- Totally enclosed components.
- Coated enameled steel.
- Operational indicator lights.

GAS CONNECTION
- ½ or ¾ Type 1 Rubber Hose

GAS SUPPLY (Inches W.C.)
- Manifold pressure Nat 3.5; LP 10.0
- Min. Inlet pressure Nat 5.0; LP 11.0
- Max. Inlet pressure Nat 14.0; LP 14.0

COMBUSTION AIR INLET & VENTING
- Preset 4 in. combustion air inlet collar.
- Sidewall or roof venting.

POWER SUPPLY
- 120 VAC, 60 Hz GRD, 1 Ph., 3-wire.
- Ignition current - 1.5 amps.
- Running current - 1.1 amps.
- 24V burner input w/ 24V field select output switch.

CONTROLS
- Two-stage gas valve (at 100% and 65%).
- 3-try dual direct spark ignition.
- Safety pressure switch.
- Flame rod sensing.
- Self-diagnostic w/ LED.
- Pre & post purge controls.

REFLECTOR
- Highly polished aluminum.

RADIANT EMITTER TUBES
- 16ga. 2.25" O.D. aluminized coated steel radiant emitter tubes.
- All tubes coated with high temperature, corrosion resistant black coating, .95 emissivity.

APPROVALS
- CSA Design Certified.
- Indoor/outdoor Approval.
- Commercial Approval.
- Brooder Approval.

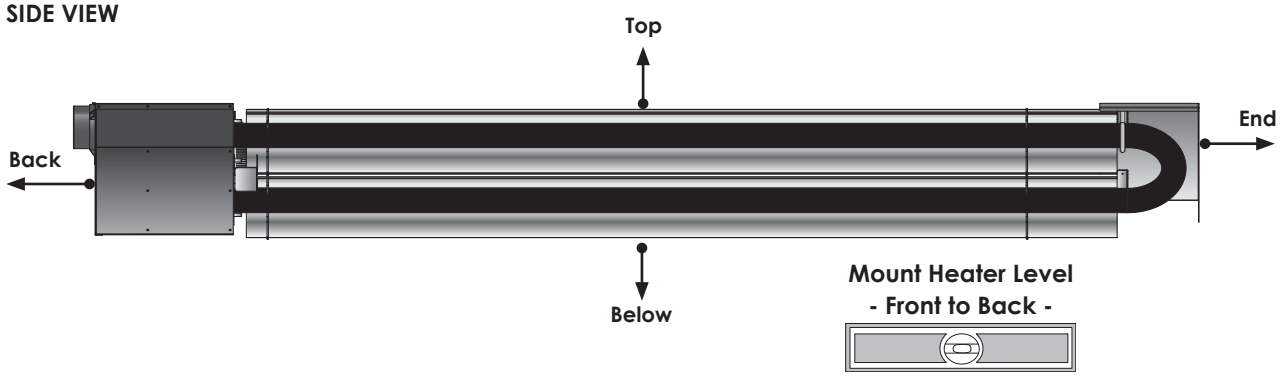
LIMITED WARRANTY
- 1 year - Burner box components.
- 3 years - Emitter tubes.
- 5 years - Burners.

Please contact the factory for further information on the terms and conditions.

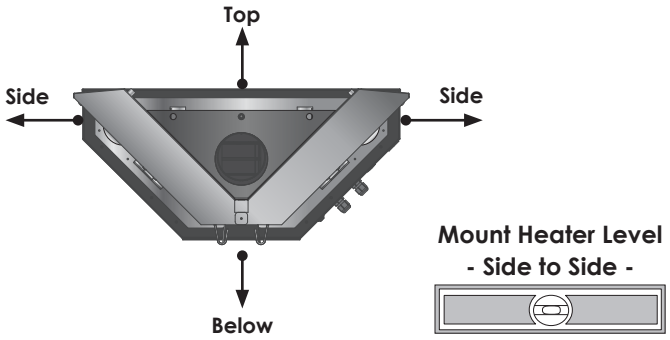
CLEARANCES TO COMBUSTIBLES (IN INCHES)

MODEL NO.	TOP	SIDES	BELOW	BACK	END
QTD-60 [N, P]	10	36	40	6	12
QTD-80 [N, P]	10	36	40	6	12

SIDE VIEW



END VIEW

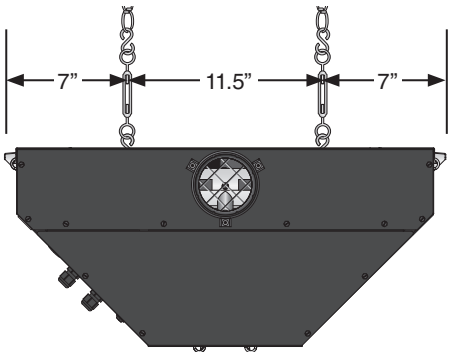


Read and understand the installation, operation and maintenance manual prior to installing or servicing this unit.

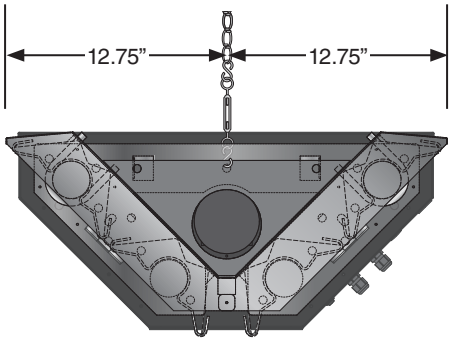
In locations used for the storage of combustible materials, signs must be posted adjacent to the heater's thermostat specifying stacking heights.

QTD SERIES FIELD DATA

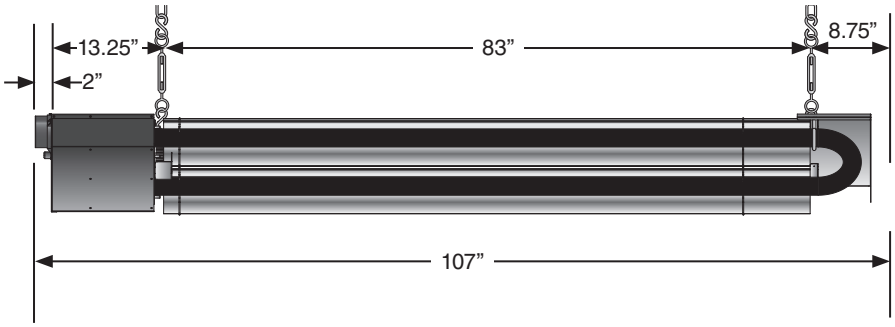
Unit Burner Control Box Dimensions - End View



QTD Series Unit Exhaust - End View



QTD Series Unit Dimensions - Side View



Visit www.reverberray.com/technical for wiring schematics.

OPTIONAL ACCESSORIES

QTY.	PART #	DESCRIPTION
	325-3	High pressure regulator with 150,000 BTU/H flow capacity.
	4-DSK	4 in. sidewall vent package. Used to vent through the sidewall. No vent pipe material included.
	AIRH	4 in. dia. flexible air inlet rubber hose with DWV adapter affixed. Mates to 4 in DWV pipe. 18" in length.
	AK-T4	Agricultural air intake kit consisting of AIRH and TEE-4. Field supply 4 in. DWV (18 in. to 20 ft.) to complete assembly.
	AV-CS	Three (3) Bulldog #1, 12-Ga 20" hanging chains with six (6) S-hooks.
	PLQ	Warning plaque.
	RTV-106	Tube of high temperature sealant. Used for sealing venting, combustion air inlet, and burner boxes.
	RTVP-4	4 in. rooftop vent package. Used to vent vertically through the roof. No vent or type B-vent pipe material included.
	RVC-4	4 in. rooftop vent cap. For use on vertical rooftop vent applications only. For use on air intake or vent exhaust.
	TEE-4	4 in. dia. drain waste vent tee with screened intakes. Used to provide outside combustion air to heater.
	THCS	5 ft. tube heater chain set with two (2) S-hooks used for hanging heater.
	WIV-4	4 in. O.D. wall inlet cap, with bird screen. For use with outside air option. Used for 0-20' of 4" intake.
	WVE-GALV	4 in. galvanized steel vent outlet cap with flapper. Must be used with unvented units.

NOTE: Refer to the QT Series Price Book for further specifications and limitations on any of the above options.

WRITTEN SPECIFICATIONS

PRODUCTS

1. TUBULAR INFRARED QUAD HEATERS
   A. Basis-of-design product: Subject to compliance with requirements, provide Brant Radiant Heaters Limited; Re-Verber-Ray QTD Series.
   B. Fuel type: Burner shall be designed for [natural] [propane] gas having characteristics same as those of gas available at project site.
   C. Gas control: Operation shall include a defined input differential. Heater must be CSA Design Certified to operate at an input differential of at least 35% between the low and nominal rated input modes.
      1. The heater's control system shall be designed to shut off the gas flow to the main burner in the event either a gas supply or power supply interruption occurs.
   D. Emitter tube: Shall be 2.25" O.D. 16ga. aluminized steel finished with a high emissivity rated, corrosion resistant, black coating with an emissivity level documented at .92 or higher.
   E. Burner type: Unit shall be a negative pressure burner with a combustion fan downstream of the burner.
      1. Power supplied to each burner shall be 120 VAC, 60Hz. Flame sensing shall be via two (2) independent sensing flame rods and circuitry.
   F. Fan enclosure: Combustion fan shall be totally housed inside burner control box and not exposed. Appliances with exposed combustion/exhauster fans shall not be permitted.
   G. Burner: Aluminized steel venturi burner.
   H. Ignition system: Heaters shall be equipped with a dual direct spark ignition system with a three (3) try ignition trial to sensing mode and an infinite trial after sensing mode. System shall incorporate a self-diagnostic ignition module including a LED readout display. System shall recycle the heater after an inadvertent shutdown.
   I. Reflectors: Shall be .025 polished aluminum with a multi-faceted design which includes reflector end caps. Reflector shall have a polished bright finish with clear visual reflection ability. (A sample will be required at time of submittal).
   J. Control box: Heater's control housing shall be totally enclosed with a corrosion resistant enameled steel exterior. The controls shall be easily serviceable by removing one (1) panel.
      1. Air intake: An air intake collar shall be supplied as part of the burner control assembly to accept a 4 inch O.D. supply duct.
      2. Outdoor modifications are required for any application that will be placed in space defined as outdoors. The rating label shall bear the outdoor certification approval.
   K. Heaters shall be equipped with a sight glass allowing a visual inspection of igniter and burner operation.
   L. The heaters shall utilize a downstream turbulator baffle for maximum heat transfer.
   M. Heater shall be supplied with a Type 1 rubber gas connector.
   N. Burner Safety Controls:
      1. Heater controls shall include a safety differential pressure switch to monitor combustion air flow, as to provide complete burner shutdown due to insufficient combustion air or flue blockage.
      2. The heater shall incorporate a self-diagnostic ignition module, and recycle the heater after an inadvertent shutdown.
      3. The heater's control system shall be designed to shut off the gas flow to the main burner in the event either a gas supply or power supply interruption occurs.
      4. The heater's blower motor shall be thermally protected and the motor's impeller shall be balanced.
      5. Heater control assembly shall include staging indicator lights that define the units operating input ranges.
      6. The heater's air flow control system shall provide a 7 second pre-purge prior to initiating burner operation and a 90 second post-purge upon completion, effectively removing all products of combustion from heat exchanger and/or radiant tubes.
      7. No condensation shall form as a result of combustion in the combustion chamber or radiant tubes while at operating temperatures.
   O. Venting: Shall be per manufacturer approval and specifications.
   P. Thermostat: Devices and wiring are specified in Division 23 Section "Instrumentation and Control for HVAC."
      1. Thermostat: 2-stage, digital programmable wall-mounting type with 50 to 90 deg F (10 to 32 deg C) operating range.
      2. Control Transformer: Integrally mounted.