

QTS SERIES TUBE HEATERS

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

SUBMITTED BY: _____

DATE: _____

JOB TITLE: _____ CONTRACTOR: _____

ADDRESS: _____ PHONE #: _____

CITY: _____ ADDRESS: _____

STATE: _____ ZIP: _____ CITY: _____

STATE: _____ ZIP: _____

ENGINEER: _____

LOCAL REPRESENTATIVE: _____

NOTES: _____

QTY.	MODEL #	TAG	GAS TYPE (Circle One)	Input BTU/h*	OVERALL UNIT LENGTH	UNIT WEIGHT	APPROX. COVERAGE AREA (LXW)	RECOMMENDED MOUNTING HEIGHTS**
	QTS-40N		Natural	40,000	107"	103 lbs.	25' x 35'	8' to 10'
	QTS-40P		Propane	40,000	107"	103 lbs.	25' x 35'	8' to 10'
	QTS-60N		Natural	60,000	107"	103 lbs.	30' x 40'	8' to 12'
	QTS-60P		Propane	60,000	107"	103 lbs.	30' x 40'	8' to 12'
	QTS-80N		Natural	80,000	107"	103 lbs.	35' x 45'	10' to 14'
	QTS-80P		Propane	80,000	107"	103 lbs.	35' x 45'	10' to 14'

* Input at full rate.

** 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

DETROIT RADIANT PRODUCTS CO.

VISIT OUR WEBSITE FOR:



21400 Hoover Rd.
Warren, MI 48089-3162

Phone: (586) 756-0950
Toll Free: 1-800-222-1100
Fax: (586) 756-2626
Email: sales@drp-co.com
Website: www.reverberray.com

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

QTS SERIES SPECIFICATIONS

BURNER CONTROL BOX

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

GAS CONNECTION

- 7/8 in. flare-M FPT connection to 1/2 in. x 24 in. (304) SS flex connector.
- 1/2" F NPT ball valve & inlet tap.

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 thermostatic control.

CONTROLS

- 3-try dual direct spark ignition.
- Safety pressure switch.
- Flame rod sensing.
- Self-diagnostic w/ LED.
- Pre & post purge controls.

REFLECTOR

- Highly polished aluminum.

COMBUSTION & RADIANT 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

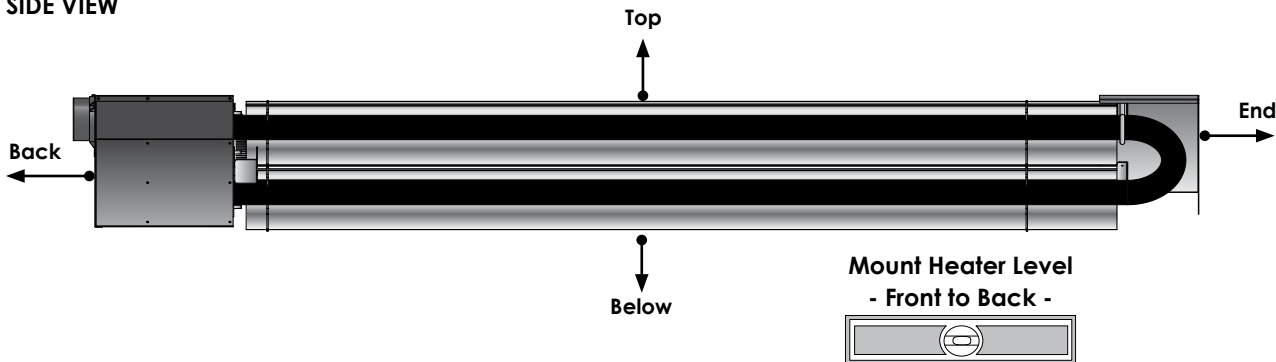
- 1 year - Burner box components.
- 3 years - Emitter tubes.
- 5 years - Burners.

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

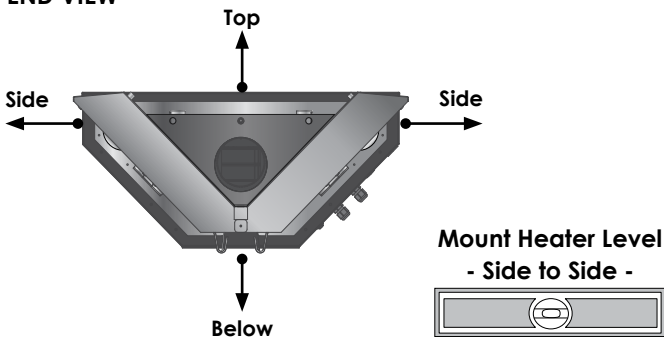
CLEARANCES TO COMBUSTIBLES (IN INCHES)

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

SIDE VIEW



END VIEW

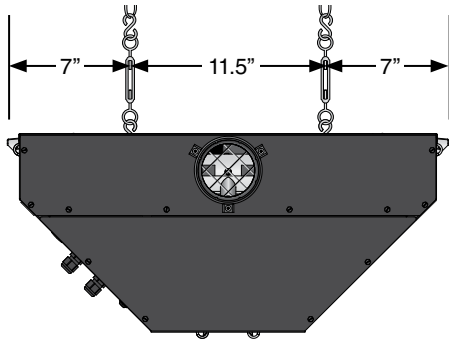


Read and understand the installation, operation and maintenance manual prior to installing or servicing this unit.

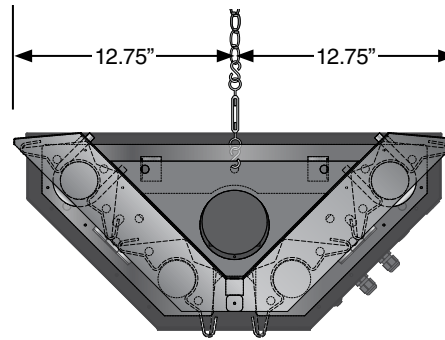
In locations used for the storage of combustible materials, signs must be posted adjacent to the heater's thermostat specifying stacking heights.

QTS SERIES FIELD DATA

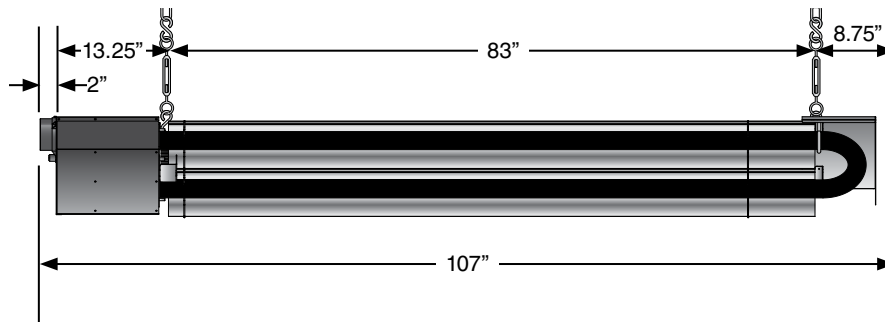
Unit Burner Control Box Dimensions - End View



QTS Series Unit Exhaust End View



QTS 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.
	4000-01V	40 VA transformer 120-25V. Mounted on 4 in. x 4 in. base plate.
	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.
	S-HOOK	Chain set "S" hook.
	TEE-4	4 in. dia. drain waste vent tee with screened intakes. Used to provide outside combustion air to heater.
	TH-115	Thermostat with rain tight enclosure. Watertight NEMA 4X when used with watertight connections (24, 120 or 220V).
	TH-1F78	24V single-stage advanced programmable heat /cool digital thermostat. with LCD display.
	TH-ET5	Columbus Electric thermostat. 125-277 VAC, 22.0 amps. May be used to switch either 24V, 120V or 220V.
	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

HEATER PARAMETER/SPECIFICATIONS

- Gas fired single-stage radiant quad tube heater(s) shall be furnished and installed in accordance with governing codes and as shown per drawing(s) provided. Radiant quad tube heater(s) shall be **RE-VERBER-RAY® QTS SERIES** of the model numbers and inputs(s) in BTU/h as manufactured by Detroit Radiant Products Company, Warren, MI 48089.
- Radiant QTS Series tube heaters shall be Design Certified by Canadian Standards Association (CSA) to ANSI Z83.20. The supplier shall provide the CSA Certification Number and the heaters shall bear the CSA Seal of Certification. The heaters low fire and high fire modes of operation must be Design Certified by CSA.
- The supplier shall provide a manufacturer's published limited warranty covering the heater's burner for a period of five (5) years, emitter tubes for a period of three (3) years, and all components utilized in the heater control assembly for a period of one (1) year.
- The supplier shall furnish the owner/contractor with _____ copies of the engineering specification forms, showing physical dimensions, installation detail, recommendations, control wiring diagrams, and spare parts list.
- Radiant quad tube heaters shall be designed to satisfactorily operate at a minimum inlet pressure of _____ inches W.C. to a maximum inlet pressure of _____ inches W.C.
- Radiant quad tube heaters shall be designed to operate without adjustments when burning natural gas having a heat value of _____ BTU per cubic foot with a specific gravity of _____, or when burning propane gas have a heat value of 2500 BTU per cubic foot with a specific gravity of 1.53.
- An Installation, Operation, Maintenance, and Parts Manual (IOPM) shall be supplied with each heater.

RADIANT TUBE HEATER BURNER CONTROLS

- 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.
- Power supplied to each burner shall be 120 VAC, 60Hz. Flame sensing shall be via two (2) independent sensing flame rods and circuitry.
- The control assembly shall be Design Certified by CSA, shall provide main burner regulation, and shall be of the redundant type.

- Control system shall provide a seven (7) second pre-purge and 90 (ninety) second post-purge to clear the emitter pipes of combustion byproducts both before and after ignition.
- Heater controls shall include a safety differential pressure switch to monitor combustion air flow, so as to provide complete burner shutdown due to insufficient combustion air or flue blockage.
- 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.
- No condensation shall form as a result of combustion in the emitter tubes while at operating temperatures.
- The thermostats shall be single-stage operating on 24Vvolts. Field supply 24V to control appliance
- Total heater shutdown shall occur in the event of circuit control lockout, including burner operation and combustion air blower. An interruption of power (reset thermostat) will restart the firing sequence.

RADIANT TUBE HEATER CONSTRUCTION

- 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.
- The heater's radiant emitter tubes shall be 2.25" O.D. 16ga. aluminized steel finished with a high emissivity rated, corrosion resistant, black coating.
- Reflectors shall be .025 polished aluminum with a multi-faceted design. The heater's reflector mounting system shall be designed to permit expansion while minimizing noise/rattles. Reflectors shall be assembled to the heater without the use of tools.
- Heaters shall be equipped with a sight glass allowing a visual inspection of ignitor and burner operation from the floor.
- The single-stage radiant QTS Series heaters shall be designed such that, at the customer's option, outside combustion air may be supplied without the use of additional supply fans. An air intake collar shall be supplied as part of the burner control assembly to accept a 4" O.D. supply duct.