XTS Series - Tube Heater Specification Sheet

***WARNING:** This heater must be installed and serviced by trained gas installation and service personnel only! Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment. Protect yourself and others by observing all safety information. Retain instructions for future reference.*

XTS SERIES TUBE HEATERS

ENGINEERING SUBMITTAL DATA - LOW INTENSITY GAS FIRED INFRA-RED TUBE HEATERS & ACCESSORIES.

Qty.	☑	Model #	Gas Type (circle one)	BTU's	Length	U-Tube Length	Weight	Typ. Mount Height	Field use only "Type" Tube Pkg #1 *	Field use only "Type" Tube Pkg. #2 *
		XTS 20-50	N or LP	50,000	21'-7'	13'-0"	120 #	9' - 14'	20-4 Alum-HRT	N/A
		XTS 20-60	N or LP	60,000	21'-7'	13'-0"	120 #	10' - 15'	20-4 Alum-HRT	N/A
		XTS 20-75	N or LP	75,000	21'-7'	13'-0"	120 #	11' - 18'	20-4 Alum-HRT	N/A
		XTS 30-50	N or LP	50,000	31'-3'	**17'-10"	120 #	10' - 15'	30-4 Alum-HRT	N/A
		XTS 30-60	N or LP	60,000	31'-3'	**17'-10"	160 #	11' - 18'	30-4 Alum-HRT	N/A
		XTS 30-75	N or LP	75,000	31'-3'	**17'-10"	160 #	12' - 20'	30-4 Alum-HRT	N/A
		XTS 30-100	N or LP	100,000	31'-3'	**17'-10"	160 #	13' - 23'	30-4 Alum-HRT	N/A
		XTS 40-50	N or LP	50,000	40'-11'	22'-8"	190 #	11' - 18'	40-4 Alum-HRT	N/A
		XTS 40-60	N or LP	60,000	40'-11'	22'-8"	190 #	11' - 18'	40-4 Alum-HRT	N/A
		XTS 40-75	N or LP	75,000	40'-11'	22'-8"	190 #	12' - 20'	40-4 Alum-HRT	N/A
		XTS 40-100	N or LP	100,000	40'-11'	22'-8"	190 #	13' - 23'	40-4 Alum-HRT	N/A
		XTS 40-125	N or LP	125,000	40'-11'	22'-8"	190 #	14' - 25'	40-4 Alum-HRT	N/A
		XTS 40-150	N or LP	150,000	40'-11'	22'-8"	190 #	15' - 27'	40-4 Titan-Alum-HRT	N/A
		XTS 50-100	N or LP	100,000	50'-7'	**27'-6"	235 #	15' - 27'	40-4 Alum-HRT	10-4-HRT
		XTS 50-125	N or LP	125,000	50'-7'	**27'-6"	235 #	15' - 25'	40-4 Alum-HRT	10-4-HRT
		XTS 50-150	N or LP	150,000	50'-7'	**27'-6"	235 #	16' - 30'	40-4 Titan-Alum-HRT	10-4-HRT
		XTS 50-175	N or LP	175,000	50'-7'	**27'-6"	235 #	17' - 35'	40-4 Titan-Alum-HRT	10-4-HRT
		XTS 50-200	N or LP	200,000	50'-7'	**27'-6"	235 #	18' - 40'	40-4 Titan-Alum-HRT	10-4-HRT
		XTS 60-125	N or LP	125,000	60'-3'	32'-4"	265 #	16' - 30'	40-4 Alum-HRT	20-4-HRT
		XTS 60-150	N or LP	150,000	60'-3'	32'-4"	265 #	17' - 35'	40-4 Titan-Alum-HRT	20-4-HRT
		XTS 60-175	N or LP	175,000	60'-3'	32'-4"	265 #	17' - 35'	40-4 Titan-Alum-HRT	20-4-HRT
		XTS 60-200	N or LP	200,000	60'-3'	32'-4"	265 #	18' - 40'	40-4 Titan-Alum-HRT	20-4-HRT

* Type packages refer to the tube package that will ship with models (length, diameter, combustion tube type and radiant tube).
**Model requires 5EA-SUB accessory package.

For additional literature on this and other products, please visit www.reverberray.com

Project: _____ **Date:** _____

Location: _____

City: _____ **State:** _____ **Zip:** _____

Contractor: _____

Engineer: _____

Local Representative: _____

Customer Name: _____

Address: _____

City: _____ **State:** __ **Zip:** _____ **Phone #:** _____

Notes: _____

_____

Printed in U.S.A.

21400 Hoover Rd., Warren, MI 48089
T. (586) 756-0950 F. (586) 756-2626
Website: www.reverberray.com
Email: sales@detroitradiant.com
Form# LSXTS-3M-07/03 (ID)

Specifications & Clearances

SPECIFICATIONS

APPROVALS
- IAS, CGA, CSA/AGA.
- Commercial / Industrial Approval.

CONTROLS
- 100% Safety shut off.
- Moisture and corrosion resistant ignition module.
- Silicon carbide hot surface igniter.
- Flame rod sensing.
- Pre-purge controls.

COMBUSTION AIR INLET & VENT
- 4" Male Duct.

MOUNTING ANGLE
- 0 to 45 degrees from horizontal

EMITTER & COMBUSTION TUBES
- 16ga. 4" O.D. hot rolled steel radiant tubes.
- Coated aluminized combustion chamber (50-125 MBTU/H models).
- Coated titanium combustion chamber (150-175 MBTU/H models).
- Turbulator baffle provided.

ENAMELED CONTROL BOX
- Outside air collar (4") attached.
- Totally enclosed components.
- Sight glass for burner inspection.

REFLECTOR
- Highly polished aluminum material.
- End caps included.
- Continuous overlap design.
- Anti-rattle spring clips.
- One reflector center support per heater.

GAS CONNECTION
- 1/2" F NPT gas cock attached.

GAS SUPPLY-W.C.P.	**NAT**	**LP**
• Manifold pressure	3.5"	10.0"
• Min. Inlet pressure	5.0"	11.0"
• Max. Inlet pressure	14.0"	14.0"

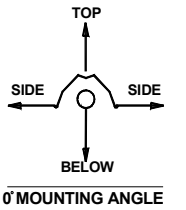
POWER SUPPLY
- 120 V.A.C., 60 Hz GRD, 3-wire.
- Ignition current-4.8 amps.
- Running current-1.1 amps.

WARRANTY
- 1 year-Burner box components.
- 3 years-Combustion and radiant tubes.
- 5 years-Stainless steel burner.

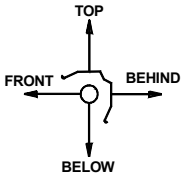
Made in the U.S.A.

CLEARANCES TO COMBUSTIBLES (IN.)

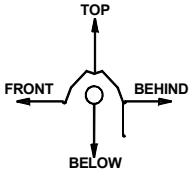
MODEL NO.	MOUNTING ANGLE	SIDE		TOP	BELOW
		FRONT	BEHIND		
XTS (20,30,40) - 50, 60 [N,P]	0º	9	9	6	47
	45º	39	8	10	47
W/1 side shield	0º	29	8	6	47
W/2 side shields	0º	9	9	6	47
20 ft from burner	0º	7	7	6	30
XTS (20,30,40)-60 [N,P]	0º	9	9	6	47
	45º	39	8	10	47
W/1 side shield	0º	29	8	6	47
W/2 side shields	0º	9	9	6	47
20 ft from burner	0º	7	7	6	30
XTS (20,30,40) - 75 [N,P]	0º	9	9	6	60
	45º	39	8	10	60
W/1 side shield	0º	29	8	6	60
W/2 side shields	0º	9	9	6	60
20 ft from burner	0º	7	7	6	30
XTS (30,40,50) - 100 [N,P]	0º	14	14	6	66
	45º	39	8	10	66
W/1 side shield	0º	29	8	6	66
W/2 side shields	0º	16	16	6	66
20 ft from burner	0º	7	7	6	30
XTS (40,50,60) - 125 [N,P]	0º	20	20	6	76
	45º	58	8	10	76
W/1 side shield	0º	42	8	6	76
W/2 side shields	0º	20	20	6	76
20 ft from burner	0º	7	7	6	30
XTS (40,50,60) - 150 [N,P]	0º	24	24	6	81
	45º	58	8	10	81
W/1 side shield	0º	42	8	6	81
W/2 side shields	0º	23	23	6	81
20 ft from burner	0º	11	11	6	44
XTS (50,60) - 175 [N,P]	0º	34	34	6	92
	45º	63	8	10	92
W/1 side shield	0º	50	8	6	92
W/2 side shields	0º	30	30	6	92
20 ft from burner	0º	11	11	6	44
XTS (50,60) - 200 [N,P]	0º	41	41	6	94
	45º	63	8	10	94
W/1 side shield	0º	54	8	6	94
W/2 side shields	0º	30	30	6	94
20 ft from burner	0º	11	11	6	44



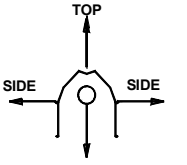
0˚ MOUNTING ANGLE



45˚ MOUNTING ANGLE



0˚ W/1 SIDE SHIELD



0˚ W/2 SIDE SHIELDS

OPTIONAL ACCESSORIES

☐ **PC-36.** Three prong power cord set. Allows heater to be plugged into 120V grounded outlet.

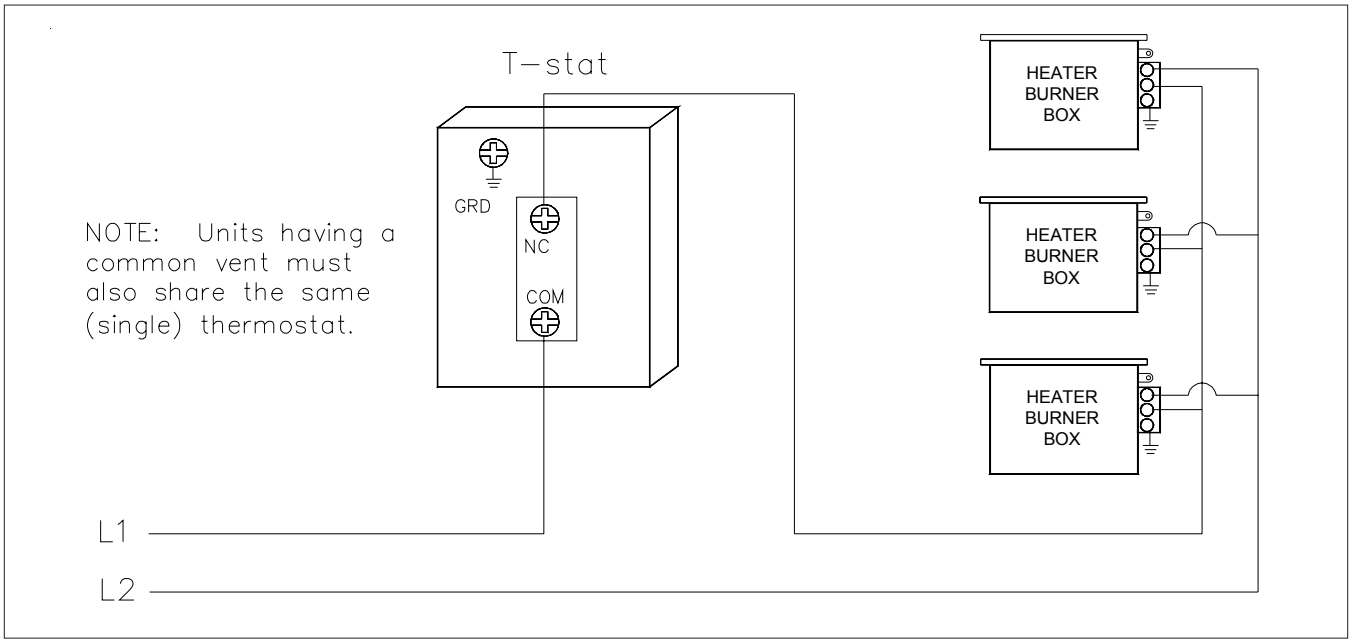
☐ **5EA-SUB.** Substitute one 10' radiant tube and reflector for two 5' pieces. This is ideal for making "U" heaters from 30', 50' and 70' models. Maximum of one per heater.

☐ **IND-LT.** Indicator lights for burner and exhaust.

☐ **24VAO.** Internally mounted, 24V controlled relay with power cord and terminal plug. Allows for separate circuit operation.

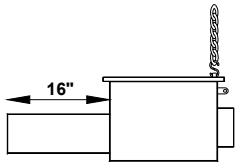
RE-VERBER-RAY
GAS-FIRED INFRA-RED HEATERS

Field Data & Accessories

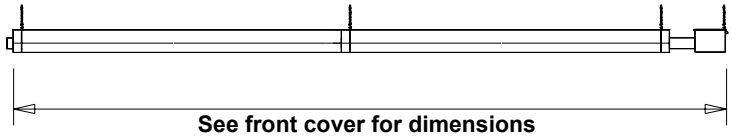


Typical Field Wiring Diagram

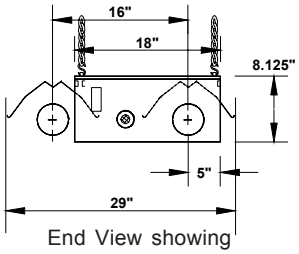
(Other wiring diagrams are available upon request (24V, relays, etc.))



Side View



See front cover for dimensions



End View showing "U" configuration

OPTIONAL ACCESSORIES (*Consult Tube Heater Accessory Guide (LPKTH) for additional accessories)*			
QTY.	**PART#**	**DESCRIPTION**	**NOTES**
	WIV-4	4" combustion air intake - sidewall cap	Used to duct fresh (cold) air 0-20ft. to a heater. Sidewall only.
	WVE-GALV	4" unvented exhaust termination cap	Required on all units when operating unvented.
	4-DSK	4" sidewall vent kit	Required for all single sidewall vents. No roof venting.
	6-DSK	6" sidewall vent kit	Required for all common sidewall vents. No roof venting.
	Y	4" x 4" x 6" common Y vent fitting	Used for joining two heaters on one vent. Same T-stat required.
	E6	90 degree, 4" radiant elbow	Used for making a "L" tube shaped heater. Max. two per unit.
	RE	Reflector elbow shield	Reflector and accessories used to cover E6.
	TF1B	180 degree, 4" radiant "U" bend	Used for making a "U" shaped heater. Max. one per unit.
	SMB	Single mount bracket	Provides units with "U" bend uniform mounting points. One per 10'.
	RU	Reflector "U" shield	Reflector and asseccories used to cover TF1B.
	TR60	5' x 4" tube & reflector extension	Optional 5' extension package. Max. two per unit.
	10EA	10' x 4" tube & reflector extension	Optional 10' extension package. Max. one per unit.
	SSE	Side shield extension	Reflector side guard used to lower side clearances. Each 5' in length.
	PG	Protective guard	Protects heat exchanger from contact or objects. Each 5' in length.
	PLQ	Warning plaque	Restates the clearance to combustible warning.
	BK	Angle mounting bracket 15-30-45 Deg.	Rotates unit to preset mounting angles.

RE-VERBER-RAY GAS-FIRED INFRA-RED HEATERS

Written Specifications

HEATER PARAMETERS / SPECIFICATIONS

- Gas fired radiant tube heaters shall be furnished and installed in accordance with governing codes and as shown per drawing(s) provided. Radiant tube heaters shall be **RE-VERBER-RAY XTS SERIES** of the model numbers and inputs(s) in BTU/H as manufactured by Detroit Radiant Products Company, Warren, MI 48089.
- Radiant tube heaters shall be Design Certified by the American Gas Association (AGA) and comply with current Occupational Safety and Health Act (OSHA) Requirements. The supplier shall provide the AGA Certification Number and the heaters shall bear the AGA Seal of Certification.
- The supplier shall provide a manufacturer's published warranty covering the heater's stainless steel burner for a period of five (5) years, combustion and radiant emitter tube assembly 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 tube heaters shall be designed to satisfactorily operate at a minimum inlet pressure of _____ inches W.C. on natural gas, _____ inches W.C. on LP gas to a maximum inlet pressure of _____ inches W.C. on natural or LP gas.
- Radiant 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, and Maintenance Manual shall be supplied with each heater.

RADIANT TUBE HEATER BURNER CONTROLS

- Heaters shall be equipped with a direct silicon carbide ignition system with a one (1)-time ignition trial to sensing mode and an infinite trial after sensing mode. Power supplied to each burner shall be 120 VAC, 60 Hz.
- Heater controls shall have independent flame rod sensing.
- The main burner shall be constructed of stainless steel.
- The control assembly shall be Design Certified by AGA, shall provide main burner regulation, and shall be of the redundant type.
- 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 shutoff the gas flow to the main burner in the event either a gas supply or power supply interruption occurs.
- The heater's air flow control system shall provide a 45 second pre-purge prior to initiating burner operation.
- No condensation shall form as a result of combustion in the combustion chamber or radiant tubes while at operating temperatures.

RADIANT TUBE HEATER CONSTRUCTION

- Total heater shutdown shall occur in the event of circuit control lockout. An interruption of power (reset thermostat) will restart the firing sequence.
- The 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 combustion chamber shall be 4" O.D. 16ga. titanium alloy or aluminized steel finished with a high emissivity rated, corrosion resistant, black coating.
- Heater's radiant emitter tube shall be 4" O.D. 16ga.hot rolled steel.
- The heater's combustion chamber and radiant emitter tube shall incorporate a 4" slip fit connection in which the upstream tube slides into the next tube and is held by a bolted clamp.
- The silicon carbide ignitor shall be readily accessible and serviceable without the use of tools.
- Reflectors shall be .025 polished aluminum with a multi-faceted design which includes reflector end caps. Reflectors shall be rotatable from 0 to 45 degrees when required. The heater's reflector hanging system shall be designed to permit expansion while preventing noise and/or rattles. Reflectors shall be assembled to the heater without the use of tools.
- The heaters shall utilize a downstream turbulator baffle for maximum thermal efficiency.
- Heaters shall be equipped with a sight glass allowing a visual inspection of ignitor and burner operation from the floor.
- The radiant tube 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.

RE-VERBER-RAY
GAS-FIRED INFRA-RED HEATERS