SV 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.

SV SERIES TUBE HEATERS

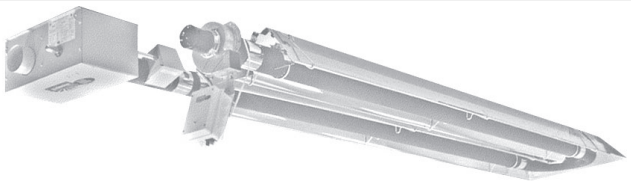
ENGINEERING SUBMITTAL DATA - LOW INTENSITY GAS FIRED INFRA-RED TUBE HEATERS & ACCESSORIES.

Qty.	☑	Model #	Gas Type (circle one)	BTU's	Length	U-Tube Length	Weight	Typical Mounting Height	Allowable Vent Length	Field use only	
										"Type" Tube Pkg #1 *	"Type" Tube Pkg. #2 *
		SV 20-50	N or LP	50,000	22'-4"	13'-0"	140 #	9' - 14'	25	20-4 Alum	N/A
		SV 20-60	N or LP	60,000	22'-4"	13'-0"	140 #	10' - 15'	25	20-4 Alum	N/A
		SV 20-75	N or LP	75,000	22'-4"	13'-0"	140 #	11' - 18'	30	20-4 Alum	N/A
		SV 20-100	N or LP	100,000	22'-4"	13'-0"	140 #	12' - 20'	35	20-4 Alum	N/A
		SV 30-50	N or LP	50,000	32'-0"	**17'-10"	140 #	10' - 15'	20	30-4 Alum	N/A
		SV 30-60	N or LP	60,000	32'-0"	**17'-10"	180 #	11' - 18'	20	30-4 Alum	N/A
		SV 30-75	N or LP	75,000	32'-0"	**17'-10"	180 #	12' - 20'	25	30-4 Alum	N/A
		SV 30-100	N or LP	100,000	32'-0"	**17'-10"	180 #	13' - 23'	30	30-4 Alum	N/A
		SV 30-125	N or LP	125,000	32'-0"	**17'-10"	180 #	14' - 25'	35	30-4 Alum	N/A
		SV 40-50	N or LP	50,000	41'-8"	22'-8"	210 #	11' - 18'	20	40-4 Alum	N/A
		SV 40-60	N or LP	60,000	41'-8"	22'-8"	210 #	11' - 18'	20	40-4 Alum	N/A
		SV 40-75	N or LP	75,000	41'-8"	22'-8"	210 #	12' - 20'	25	40-4 Alum	N/A
		SV 40-100	N or LP	100,000	41'-8"	22'-8"	210 #	13' - 23'	25	40-4 Alum	N/A
		SV 40-125	N or LP	125,000	41'-8"	22'-8"	210 #	14' - 25'	30	40-4 Alum	N/A
		SV 40-150	N or LP	150,000	41'-8"	22'-8"	210 #	15' - 27'	35	40-4 Titan	N/A
		SV 40-175	N or LP	175,000	41'-8"	22'-8"	210 #	16' - 30'	35	40-4 Titan	N/A
		SV 50-100	N or LP	100,000	51'-4"	**27'-6"	255 #	15' - 27'	25	40-4 Alum	10-4 Alum
		SV 50-125	N or LP	125,000	51'-4"	**27'-6"	255 #	15' - 27'	30	40-4 Alum	10-4 Alum
		SV 50-150	N or LP	150,000	51'-4"	**27'-6"	255 #	16' - 30'	30	40-4 Titan	10-4 Alum
		SV 50-175	N or LP	175,000	51'-4"	**27'-6"	255 #	17' - 35'	35	40-4 Titan	10-4 Alum
		SV 50-200	N or LP	200,000	51'-4"	**27'-6"	255 #	18' - 40'	35	40-4 Titan	10-4 Alum
		SV 60-125	N or LP	125,000	61'-0"	32'-4"	285 #	16' - 30'	25	40-4 Alum	20-4 Alum
		SV 60-150	N or LP	150,000	61'-0"	32'-4"	285 #	17' - 35'	25	40-4 Titan	20-4 Alum
		SV 60-175	N or LP	175,000	61'-0"	32'-4"	285 #	17' - 35'	30	40-4 Titan	20-4 Alum
		SV 60-200	N or LP	200,000	61'-0"	32'-4"	285 #	18' - 40'	30	40-4 Titan	20-4 Alum
		SV 70-175	N or LP	175,000	70'-8"	**37'-2"	320 #	19' - 42'	25	40-4 Titan	30-4 Alum
		SV 70-200	N or LP	200,000	70'-8"	**37'-2"	320 #	19' - 42'	30	40-4 Titan	30-4 Alum
		SV 80-200	N or LP	200,000	80'-4"	42'-0"	350 #	20' - 45'	25	40-4 Titan	40-4 Alum

* 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.
N/A-This model is not available with this feature.

Project: _____ **Date:** _____
Location: _____
City: _____ **State:** _____ **Zip:** _____
Contractor: _____
Engineer: _____
Local Representative: _____
Customer Name: _____
Address: _____
City: _____ **State:** __ **Zip:** _____ **Phone #:** _____
Notes: _____

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



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

Specifications & Clearances

Product Features

APPROVALS
- AGA/CSA, IAS.
- Commercial Approval only.

BURNER CONTROL BOX
- Sight glass for burner inspection.
- 4" Male duct air intake.
- Totally enclosed components.
- Coated enameled steel.

GAS CONNECTION
- 7/8" flare M NPT connecton to 1/2"x2' SS (304) flex connector included.
- 1/2" F NPT gas cock included.

GAS SUPPLY-W.C.P.

	NAT	LP
• Manifold pressure	3.5"	10.0"
• Min.Inlet pressure	5.5"	11.0"
• Max.Inlet pressure	14.0"	14.0"

INDICATOR LIGHTS
- Light #1-Indicates switch(s) operation.
- Light #2-Indicates gas valve power.

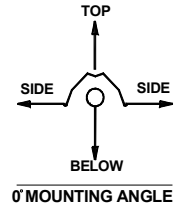
POWER SUPPLY
- 120 V.A.C., 60 Hz GRD, 3-wire.
- Ignition current 3.0 amps.
- Running current 2.0 amps.

CONTROLS
- 100% safety shut off.
- Self-diagnostic circuit board.
- Differential pressure switch.
- Silicon carbide hot surface igniter.
- Flame rod sensing.

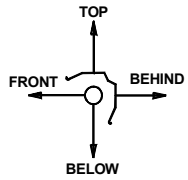
EMMITER & COMBUSTION TUBES
- 16ga. 4" O.D. aluminized steel radiant tubes. High temperature, corrosion resistant black coating .95 emissivity. Slip fit connection.
- Titanium alloy treated combustion chamber (150-200 MBTU/H models).

WARRANTY
1 year - Burner box & exhauster components.
3 years- Combustion and radiant tubes.
5 years- Burner.

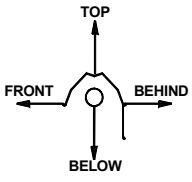
OTHER
- One reflector center support per reflector.
- Turbulator baffle included.
- Made in U.S.A.



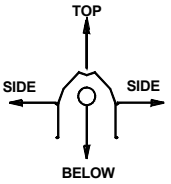
0° MOUNTING ANGLE



45° MOUNTING ANGLE

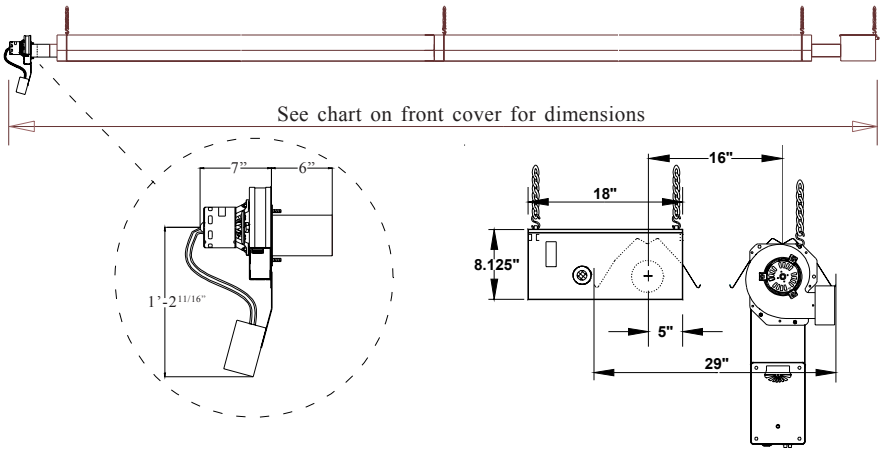


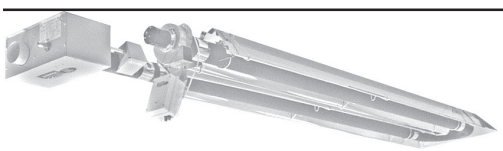
0° W/1 SIDE SHIELD



0° W/2 SIDE SHIELDS

CLEARANCES TO COMBUSTIBLES (IN.)					
MODEL NO.	MOUNTING ANGLE	SIDE		TOP	BELOW
		FRONT	BEHIND		
SV (20,30,40)-50 [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
SV (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
SV (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
SV (20,30,40,50)-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
SV (30,40,50,60)-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
SV (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
SV (40,50,60,70)-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
SV (50,60,70,80)-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

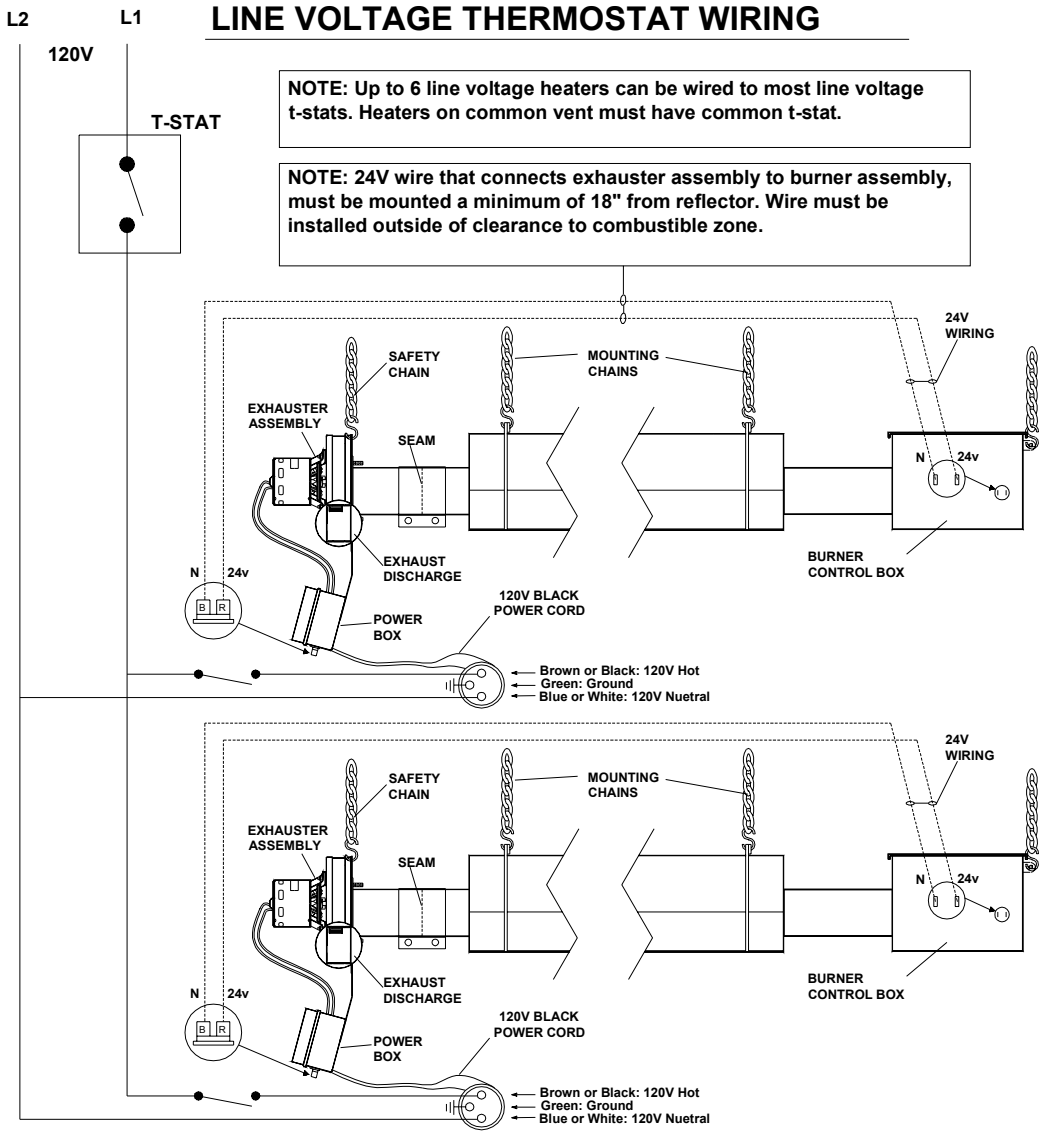




RE-VERBER-RAY
GAS-FIRED INFRA-RED HEATERS

Field Data & Accessories

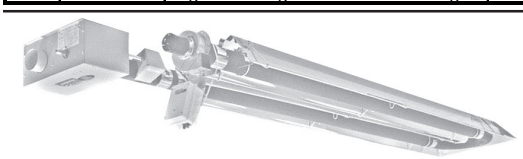
LINE VOLTAGE THERMOSTAT WIRING



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 0-30 ft. 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.
	RTVP-4	4" rooftop vent package	Used to vent vertically through the roof.
	RTVP-6	6" rooftop vent package	Used to vent vertically through the roof.
	YSM	4" x 6" x 4" common Y vent fitting	Used for joining two heaters on one vent. Same T-stat required.
	REP	Reflector & elbow package	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.
	RU	Reflector "U" shield	Reflector and aseccories used to cover TF1B.
	SMB	Single mount bracket	Provides units with "U" bend uniform mounting points. One per 10'.
	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	Hung below heater, restates the clearance to combustible warning.
	BK	Angle mounting bracket 10-25-45 Deg.	Rotates unit to preset mounting angles.

OPTIONAL ACCESSORIES

- ☐ **SSTRAO.** Tubes and reflectors are fully upgradeable to stainless steel.
- ☐ **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.
- ☐ **R8285.** Allows for low voltage thermostat operation. Refer to manual for field wiring diagram.



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

Written Specifications

HEATER PARAMETERS/SPECIFICATIONS

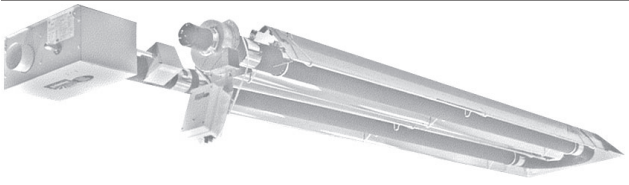
- Gas fired radiant tube heaters shall be furnished and installed in accordance with governing codes and as shown per drawing(s) provided. Radiant tube heaters shall be **RE-VERBER-RAY SV SERIES** of the model numbers and inputs(s) in BTU/H as manufactured by Detroit Radiant Products Company, Warren, MI 48089.
- Radiant tube heaters shall be Design Certified by CSA and comply with current Occupational Safety and Health Act (OSHA) Requirements. The supplier shall provide the CSA Certification Number and the heaters shall bear the CSA 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.P. to a maximum inlet pressure of _____ inches W.C.P.
- 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

- Heater shall be a negative pressure operation with a power exhauster assembly at the exhaust end.
- Heater's power exhauster shall have a stainless steel shaft and sealed bearing motor.
- Heater shall have a self-diagnostic ignition control module.
- Heater shall be equipped with a hot surface ignitor with a three (3) time ignition trial to sensing mode.
- Power supplied to each exhauster assembly shall be 120VAC, 60HZ. the power output from the exhauster assembly to the burner control box assembly shall be 24V-28V.
- Flame sensing shall be via an independent sensing rod and circuit.
- The main burner shall be constructed of stainless steel.
- The control assembly shall be Design Certified by CSA, shall provide main burner regulation, and shall be of the redundant type.
- Heater controls shall include a safety differential pressure switch.
- 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 4 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.
- Total heater shutdown shall occur in the event of circuit control lockout. 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.
- Heater's combustion chamber shall be 4" O.D. 16ga. titanium alloy treated (150M - 200M) or aluminized steel (50M-125M)finished with a high emissivity rated, corrosion resistant, black coating.
- Heater's radiant emitter tube shall be 4" O.D. 16ga. aluminized steel finished with a high emissivity rated, corrosion resistant, black coating.
- 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 hot surface ignitor shall be readily accessible and serviceable with the use of a 1/4" nutdriver.
- 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 minimizing noise and/or rattles. Reflectors shall be assembled to the heater without the use of tools.
- The heaters shall include a downstream turbulator baffle for maximum thermal efficiency, 2' stainless steel flex connector, hanging kit and 1/2" gas cock shut-off.
- 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 customers 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.
- The heater's tubes may be upgraded to stainless steel (models 75,000 - 150,000 only).
- All reflectors may be upgraded to 304 Series stainless steel.



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