Schwank
Heating. Design. Comfort.

Submittal Data

duraSchwank STW Series

Outdoor, Car Wash & Harsh Environment
Low-Intensity Single-Stage Gas-Fired Infrared Tube Heater

Project

Schwank models #

Fuel

Date submitted

Features

Approvals / Certificates

UL Certification.

ANSI Z83.26 / CSA 2.37 Standard for gas-fired Outdoor Infrared Patio Heaters.

ANSI Z83.20 / CSA 2.34 Standard for Gas-Fired Low-Intensity Infrared Heaters.

Burner/Motor

Stainless Steel Water Resistant.

Complete with operation status indicator lights.

Potted direct spark ignition.

Housing: The "Clamshell Design" provides access from the 2 sides, end, and bottom.

Power

4' Length 16/3 electrical supply cord with 3 pin grounded plug.

120V/1PH

Safety Switch

Two separate air pressure switches sense adequate combustion air and blocked flue.

Gas connection

Natural gas: 3.5" W.C. Manifold.

Propane: 10" W.C. Manifold.

Canada: Type 1 hose gas connector is included with each burner kit.

1/2" X 30" 45,000 TO 130,000 AND
3/4" X 30" 150,000 TO 200,000

USA: Flexible gas connector is included with each burner kit.

1/2" X 24" 45,000 TO 130,000 AND
3/4" X 24" = 150,000 TO 200,000

Reflector

Aluminized steel.

Reflectors are closed at the start and end of each straight run of tubes by end plate hangers.

Controls/Thermostat

Factory ready for 24VAC or 120VAC control. On/Off switch control.

Moisture Proof Nema 4X Thermostat.

24V Digital Thermostat. Note: Multiple Heaters Per 24V Thermostat Require Relay Control Center Kit.

ThermoControlPlus.

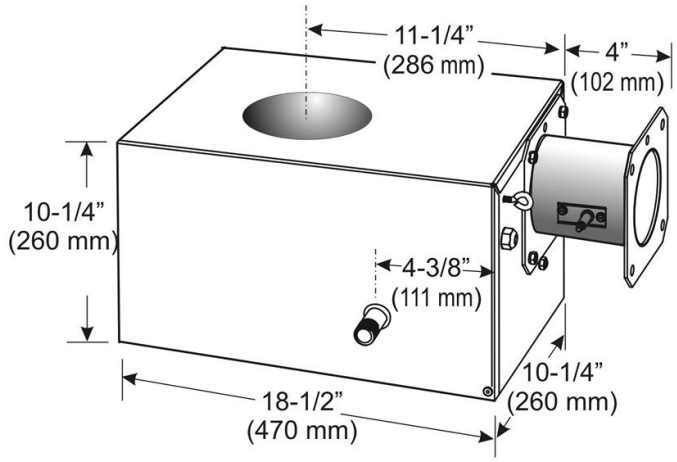
Read the I&O Manual

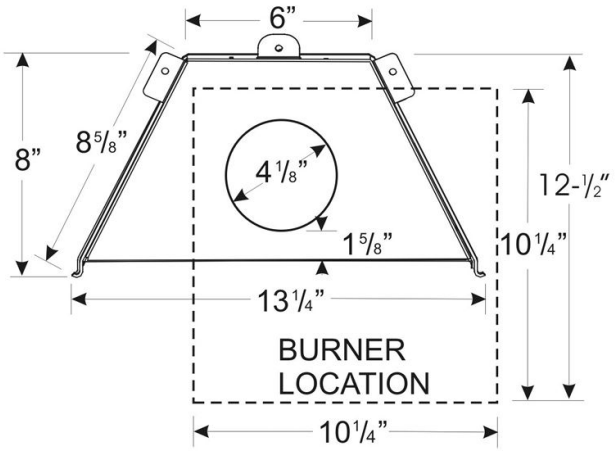
Performance

Tag	Qty	Model	Total Heater Length	Input (BTU/hr)	Turbulator Length	Line Pressure NG/LP	Manifold Pressure NG/LP	Flue & Air Vents	Shipping Weight (lbs.)
		STW-200-70	70' 0"		40" + 72"				324 Lbs
		STW-200-60	60' 4"	200,000	40" + 72"			5.0" / 4.0"	282 Lbs
		STW-200-50	50' 8"		40" + 72"				239 Lbs
		STW-175-70	70' 0"		40" + 72"				324 Lbs
		STW-175-60	60' 4"	175,000	40" + 72"				282 Lbs
		STW-175-50	50' 8"		40" + 72"				239 Lbs
		STW-155-60	60' 4"		24" (3rd Tube)	Line minimum:			282 Lbs
		STW-155-50	50' 8"	150,000	24" (3rd Tube)	5" W.C NG			239 Lbs
		STW-155-40	41' 0"		24" + 109"	11" W.C LP			197 Lbs
		STW-130-50	50' 8"		24" (3rd Tube)		3.5"/10"		239 Lbs
		STW-130-40	41' 0"	125,000	24" + 109"			4.0" / 4.0"	197 Lbs
		STW-130-30	31' 4"		60" + 96"	Line Maximum:		or	154 Lbs
		STW-110-50	50' 8"		24" (3rd Tube)			5.0" / 4.0"	239 Lbs
		STW-110-40	41' 0"	110,000	24" + 109"	NG or LP			197 Lbs
		STW-110-30	31' 4"		60" + 96"	14" W.C			154 Lbs
		STW-80-40	41' 0"		24" + 109"				197 Lbs
		STW-80-30	31' 4"	80,000	96"				154 Lbs
		STW-80-20	21' 8"		39" + 96"				111 Lbs
		STW-60-30	31' 4"	60,000	96"				154 Lbs
		STW-60-20	21' 8"		39" + 96"				111 Lbs
		STW-45-20	21' 8"	45,000	39" + 96"				111 Lbs

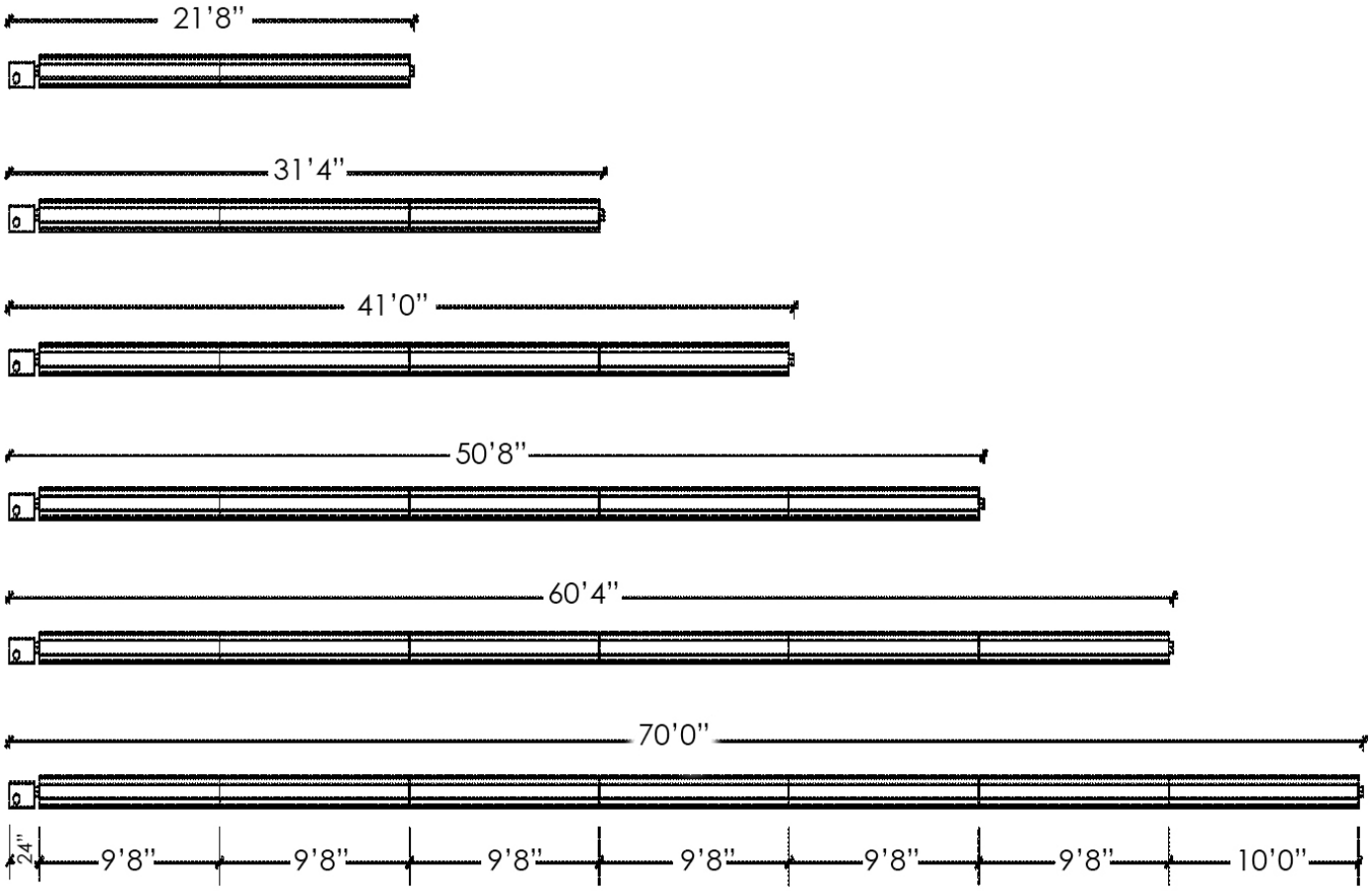
For all the heaters above; Gas Inlet is 1/2" NPT. For heaters above 150,000 Btu/hr; Gas Inlet is 3/4 NPT. Electrical is 120V-60Hz, 145 VA.

Dimensions



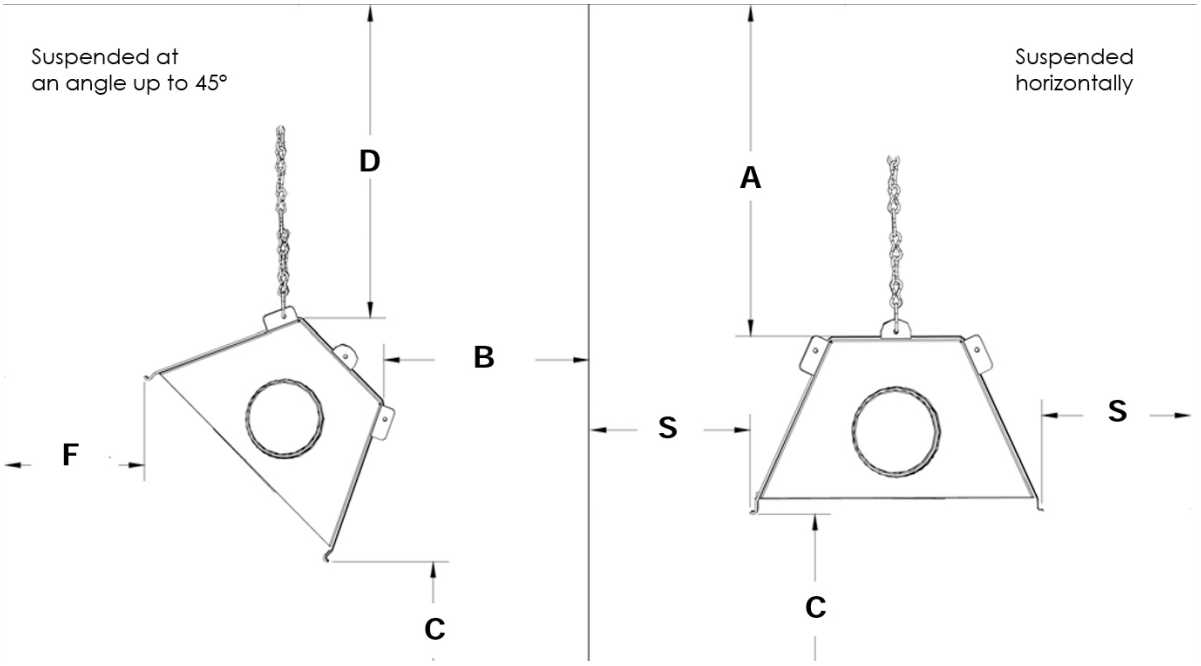


Side-view of systems:



Clearance to Combustibles:

The clearance to combustible material represents the minimum distance that must be maintained between heater and a nearby combustible surface. The stated clearance to combustibles represents a surface temperature of 90°F (50°C) above room temperature. Some materials such as awnings or plastic may require higher clearances. It is the installer's responsibility to ensure that building materials with a low heat tolerance which may degrade at lower temperature are protected to prevent degradation.



STW Minimum Clearances to Combustibles

MODEL SPW Input Rate (BTU/hr)	SUSPENDED AT AN ANGLE UP TO 45 DEGREES				SUSPENDED HORIZONTALLY		
Inches	D	B	F	C	A	S	C
STW-200	13"	6"	74"	70"	14"	44"	76"
STW-175	12"	6"	72"	68"	13"	42"	74"
STW-155	5.5"	1"	64"	64"	3.5"	22"	70"
STW-130	4.5"	1"	60"	60"	3.3"	21"	65"
STW-110	3.5"	1"	54"	54"	2"	19"	60"
STW-80	3"	1"	23"	38"	1.75"	6"	38"
STW-60	2.5"	1"	17"	34"	1.5"	5.5"	34"
STW-45	2.75"	1"	24"	32"	2.25"	7"	32"

Controls & Control Accessories

Tag	Qty	Item Number	Description
		JM-0504-TKX	Thermocontrol Plus Controller (See Separate Detailed Thermocontrol Plus Submittal Document)
		JS-0570-XX	Moisture Proof Nema 4X Thermostat Single-Stage
		JS-0568-CC	24V Relay Switch. Control Multiple Tube Heaters in a common zone with one 24V Thermostat (wired to 1st heater)
		JM-0408-XX	ACPT- 8. Up to 8 heaters (Arena control panel)
		JM-0412-XX	ACPT-12. Up to 12 heaters (Arena control panel)
		JM-0416-XX	ACPT-16. Up to 16 heaters (Arena control panel)
		JM-0204-NT	PCP-4. Up to 4 heaters (Patio control panel)
		JM-0208-NT	PCP-8. Up to 8 heaters (Patio control panel)
		JM-0212-NT	PCP-12. Up to 12 heaters (Patio control panel)
		JP-1236-RK	Remote Control Receiver Kit installs in burner. REQUIRED - Order one for each heater - High-intensity or Tube type
		JP-1236-HS	Hand Set Control (four On/Off buttons): REQUIRED - Order one for every four zones: a zone is 1 or more heaters - Control up to 4 individual heaters or up to 4 zones
		JP-1236-KT	Wireless Remote Control Keypad Transmitter: OPTIONAL - JP-1236-HS Required for master code programming - Control up to four patio zones - 3 Zones with unique 4 digit pin & 1 zone with direct push button - Weather resistant: Outdoor or indoor installation

Additional Accessories

Tag	Qty	Item Number	Description
		JL-0800-GR-B	Gripple Express™. For indoor use only. No tools required for adjustment. Ready to use 10 ft cable length kit - loop one end. 100 lb work load.
		JL-0800-XX	#2 Lion Chain. 115 lb work load - 200 ft roll.
		JL-0800-SH	Safety Snap Hooks - 2". Package of 24
		JL-0800-SH-B	Safety Snap Hooks - 2". Package of 100
		JL-0798-SH	"'S' Hooks - 1 7/8". Quantity of 'S' hooks needed: JZ Series quantity required = ((tube length/10) x 2) + 4 : ie: SPW-JZ x 40 ft = (40/10) x 2) +4 = 12 hooks"
		JL-0798-CS	Clearance to combustible sign. Metal sign - 18" x 6" - 3/4" red lettering on white background
		JS-0508-JZ	90° Aluminized Steel Elbow & Reflector Cover Kit. Compatible with STS-JZ, STW-JZ, STWS & SPW-JZ tube heater models. Elbow can be installed right or left hand. Includes coupler, reflector cover, hanger plate.
		JA-0528-XX	4" horizontal Flue Vent Terminals. Fits single wall vent pipe - field crimp required to fit to double wall pipe. Use this termination cap by Schwank or use an approved High Wind termination cap as supplied by others.
		JA-0514-XX	Common Flue Vent Tee Box Roof Termination: Use approved cap supplied by manufacturer of double-walled vent pipe. Not available in stainless steel.
		JA-0516-AA	4" x 8" Aluminized Steel Coupler with 2 x U-bolts. Optional Couplers for Vent Tee. ADD TWO optional tube couplers JA-0516-AA if desired for vent pipe connection to Tee.
		TG-0010-KT	Tuxedo Grill Kit | JZ Models ONLY Decorative 'Tuxedo' Grille Kit - 10 ft - Matte Black Grille
		JA-0780-XX	Tube Protection Screen. STS-JZ, STW-JZ, SPW-JZ Models. 5 ft length - 1/2" x 1/2" galvanized screen.
		JS-0509-KT	Reflector Side Extension. All models - 10" deep x 116" long c/w Qty 3 x 'S' hooks

Additional Items

Tag	Qty	Part #	Description

STW Straight Tube System

COMPONENT QUANTITIES PER HEATER MODEL	STW 45-20	STW 60-20 80-20	STW 60-30 80-30 110-30 130-30	STW 80-40 110-40 130-40 155-40	STW 110-50 130-50 155-50	STW 175-50 200-50	STW 155-60	STW 175-60 200-60	STW 175-70 200-70
10' Stainless Steel W/ Flange	0	0	0	0	0	1	0	1	1
10' Aluminized Steel W/ Flange	1	1	1	1	1	0	1	0	0
10' Aluminized Steel	0	0	0	0	0	1	0	1	1
10' Aluminized W/ Emissive Coating	1	1	2	3	4	3	5	4	5
Focus Shield Reflector 9'8"	2	2	3	4	5	5	6	6	7
Aluminized Coupler	1	1	2	3	4	4	5	5	6
End Webbed Plate Hanger	2	2	2	2	2	2	2	2	2
Tube / Reflector Webbed Hanger	1	1	2	3	4	4	5	5	6
Reflector Stabilizer	6	6	9	12	15	15	18	18	21

Notes:
1. Combustion Tube: 10' X 4" Diameter 16 Ga. Aluminized Steel Swaged One End.
Each Additional Tube: 10' X 4" Diameter, .16 Ga. Steel Tubes With Or Without High Temperature Emissive Coating, Swaged One End
2. Combustion Tube: 10' X 4" Diameter, 16 Ga. 439 Stainless Steel Swaged One End Second Tube: 10' X 4" Diameter, 16 Ga. 439 Stainless Steel Swaged One End
Third Tube: 10' X 4" Diameter, 16 Ga. Aluminized Steel Swaged One End.
Each Additional Tube: 10' X 4" Diameter, 16 Ga. Steel With Or Without High Temperature Emissive Coating Swaged One End
3. Combustion Air Ducted Directly To 4" Collar At Ntake Of Blower
4. All Vent Pipe Is Field Supplied By Others; Single Wall Vent Pipe Other Than Portion Through Wall Or Roof May Be Double Wall Vent Pipe
5. System Utilizes Wire Hanger S, Two Per 10' Tube. Allowing Convection Heat Flow Along System.
6. Ignition: Channel Direct Spark Module: Pre-Purge And Post-Purge Of Tube System
7. All Wiring Connections By Means Of Common Terminal Block; Jumper: For 120V Thermostat; Remove For 24V Thermostat