Schwank
infra-red gas heaters
ISO 9001:2000 REGISTERED

SCHWANK GAS FIRED
STSp-WP1 and WP2
SERIES

LOW INTENSITY TUBE TYPE
INFRA RED HEATERS

TUBE KIT SUPPLEMENT

CERTIFIED

DESIGN CERTIFIED

STSp-WP1/2 Supplement
RD: NOV, 2003
RL:2
KH

STSp-WP1 HEATER KIT ASSEMBLY CHART

HEATER MODEL	BURNER KIT	STSp-WP-1 TUBE KIT PART # & QUANTITY REQUIRED							
		Stand-Alone			Primary		Secondary		
		TW-1420-S1	TW-1430-S1	TW-1040-S1	TW-F030-S1	TW-1030-S1	TW-1010-S1	TW-0020-S1	TW-0030-S1
STSp 60 20 WP1	JS-060P-B N/L	1							
STSp 60 30 WP1	JS-060P-B N/L		1						
STSp 80 20 WP1	JS-080P-B N/L	1							
STSp 80 30 WP1	JS-080P-B N/L		1						
STSp 80 40 WP1	JS-080P-B N/L			1	*or 1+*	->	*1*		
STSp 110 30 WP1	JS-110P-B N/L		1						
STSp 110 40 WP1	JS-110P-B N/L			1	*or 1+*	->	*1*		
STSp 110 50 WP1	JS-110P-B N/L				1+			1	
STSp 130 30 WP1	JS-130P-B N/L		1						
STSp 130 40 WP1	JS-130P-B N/L			1	*or 1+*	->	*1*		
STSp 130 50 WP1	JS-130P-B N/L				1+			1	
STSp 155 40 WP1	JS-155P-B N/L			1	*or 1+*	->	*1*		
STSp 155 50 WP1	JS-155P-B N/L				1+			1	
STSp 155 60 WP1	JS-155P-B N/L				1+				1
STSp 175 50 WP1	JS-175P-B N/L					1+		1	
STSp 175 60 WP1	JS-175P-B N/L					1+			1
STSp 175 70 WP1	JS-175P-B N/L					1+		2	
STSp 200 50 WP1	JS-200P-B N/L					1+		1	
STSp 200 60 WP1	JS-200P-B N/L					1+			1
STSp 200 70 WP1	JS-200P-B N/L					1+		2	

Stand-Alone Tube Kits require no additional tube kits.
Primary Tube Kits require at least one additional Secondary Tube Kit.
Secondary Tube Kits require a Primary Tube Kit.
Secondary Tube Kit TW-1010-S1 can also be used as a 10 ft extension kit. The installer *may* need to remove the turbulator (refer to Turbulator Chart in the I&O Manual).

STSp-WP2 HEATER KIT ASSEMBLY CHART

HEATER MODEL	BURNER KIT	STSp-WP2 TUBE KIT PART # & QUANTITY REQUIRED							
		Stand-Alone			Primary		Secondary		
		TW-1420-S2	TW-1430-S2	TW-1040-S2	TW-F030-S2	TW-1030-S2	TW-1010-S2	TW-0020-S2	TW-0030-S2
STSp 60 20 WP2	JS-060P-B N/L	1							
STSp 60 30 WP2	JS-060P-B N/L		1						
STSp 80 20 WP2	JS-080P-B N/L	1							
STSp 80 30 WP2	JS-080P-B N/L		1						
STSp 80 40 WP2	JS-080P-B N/L			1	*or 1+*	->	*1*		
STSp 110 30 WP2	JS-110P-B N/L		1						
STSp 110 40 WP2	JS-110P-B N/L			1	*or 1+*	->	*1*		
STSp 110 50 WP2	JS-110P-B N/L				1+			1	
STSp 130 30 WP2	JS-130P-B N/L		1						
STSp 130 40 WP2	JS-130P-B N/L			1	*or 1+*	->	*1*		
STSp 130 50 WP2	JS-130P-B N/L				1+			1	
STSp 155 40 WP2	JS-155P-B N/L			1	*or 1+*	->	*1*		
STSp 155 50 WP2	JS-155P-B N/L				1+			1	
STSp 155 60 WP2	JS-155P-B N/L				1+				1
STSp 175 50 WP2	JS-175P-B N/L					1+		1	
STSp 175 60 WP2	JS-175P-B N/L					1+			1
STSp 175 70 WP2	JS-175P-B N/L					1+		2	
STSp 200 50 WP2	JS-200P-B N/L					1+		1	
STSp 200 60 WP2	JS-200P-B N/L					1+			1
STSp 200 70 WP2	JS-200P-B N/L					1+		2	

Stand-Alone Tube Kits require no additional tube kits.
Primary Tube Kits require at least one additional Secondary Tube Kit.
Secondary Tube Kits require a Primary Tube Kit.
Secondary Tube Kit TW-1010-S2 can also be used as a 10 ft extension kit. The installer *may* need to remove the turbulator (refer to Turbulator Chart in the I&O Manual).

GENERAL INSTALLATION INSTRUCTIONS

The following instructions are a guide to installation only, and supplement, but do not replace design instructions given in the Schwank Engineering Manual. Since most installations will differ in many details, these instructions are general. Sound judgment must be exercised and careful supervision is essential to assure that the installation will be made in the best manner possible for trouble-free operation and at the very least cost.

The general procedure for installing the heater system is to install the burner and the system tubing, followed by the reflectors, gas piping, and wiring. Carefully survey the area to be heated and place the burner end in the coldest area, if possible.

The procedure for installing the tube system is based on structural members of the building and how they can be used to support the tubing system. Before proceeding with the installation of the system, we suggest that you consult with your Schwank distributor for the proper procedure for your particular job.

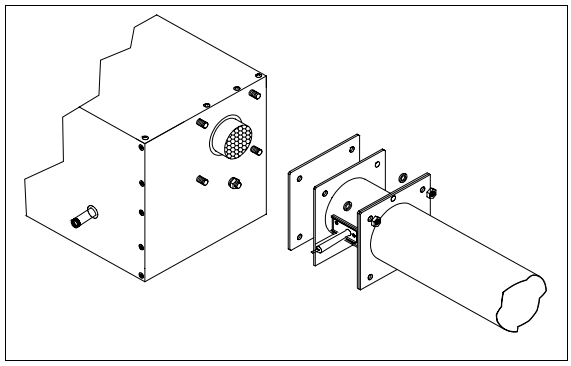
All system tubing must be supported in accordance with acceptable practice, local codes, and applicable standards.

The heater is suitable for reflector mounting angles up to 45° along the short axis. Each section of shade can be individually angle mounted using the supplied shade end plate hangers Improper angle mounting can result in overheating of controls and combustible material.

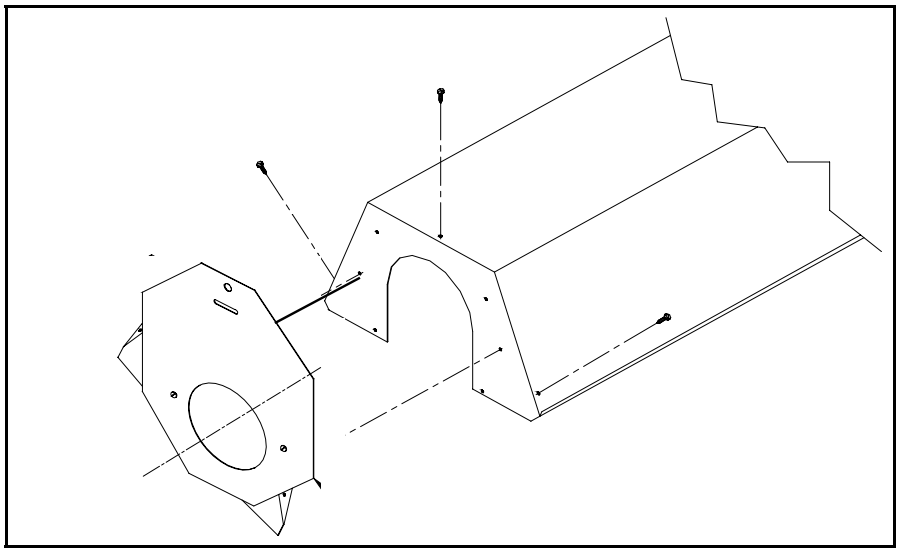
Chain is recommended for hanging the heater and connecting the hanger (s) to a beam or other support. This will permit normal expansions and contractions of the pipe system. NOTE: It is the responsibility of the installer to insure that the chosen suspension system will support the overall weight of the system.

If rigid means such as rods are used in place of chains, swing joints, or other means of sufficient length must be provided to compensate for expansion. IMPORTANT: For either horizontal or angle mounting, the long axis of the tube must be level. Only noncombustible mounting hardware should be used.

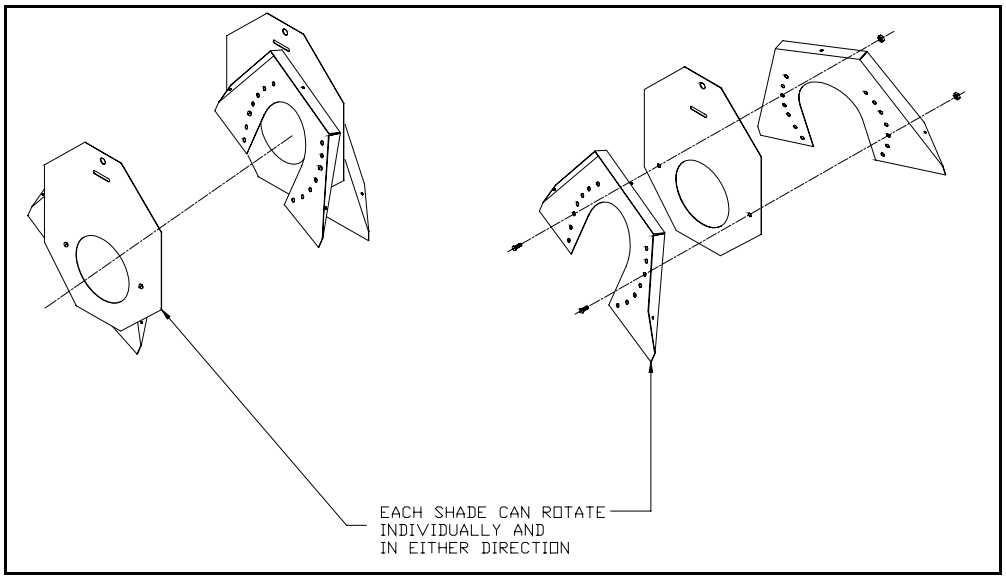
These installation instructions are for the standard straight tube applications only. Call your local distributor for engineered systems differing from the standard series tube kits.



1. Attach the burner box to the flanged aluminized or alumatherm tube using the bolts, nuts, and washers provided. Ensure that the gasket is sandwiched between the two flanges.



2. Assemble two reflector end plate hangers by attaching 1 of the reflector end plates to the hanger plate using the supplied slotted screws and nuts. If the system is longer than 10 feet, additional reflector plate hangers must be assembled. To assemble a reflector plate hanger, attach 2 of the reflector end plates to opposite sides of the hanger plate and screws using the supplied slotted screws and nuts. The reflector end plate hangers are used on each end of the total system. The reflector plate hanger is used in between shades and allows the reflector to be mechanically attached to either side of the hanger. An alternative method is to place only the hanger plates on the tube and assemble the reflector end plates after the system has been fully or partially suspended. The reflector end plates can be mounted to the hangers and then install the shades or install the reflector end plates on both ends of the reflector and attaching the reflector to the plate hangers. If this method is used, attach the reflector near to the burner box first and work down toward the vent end.



3. If any of the sections of reflector need to be angled, this can be accomplished by placing the slotted screw in any of the mounting holes situated in a circular pattern. Each section of reflector can be individually adjusted independent of the previous or next shades orientation.

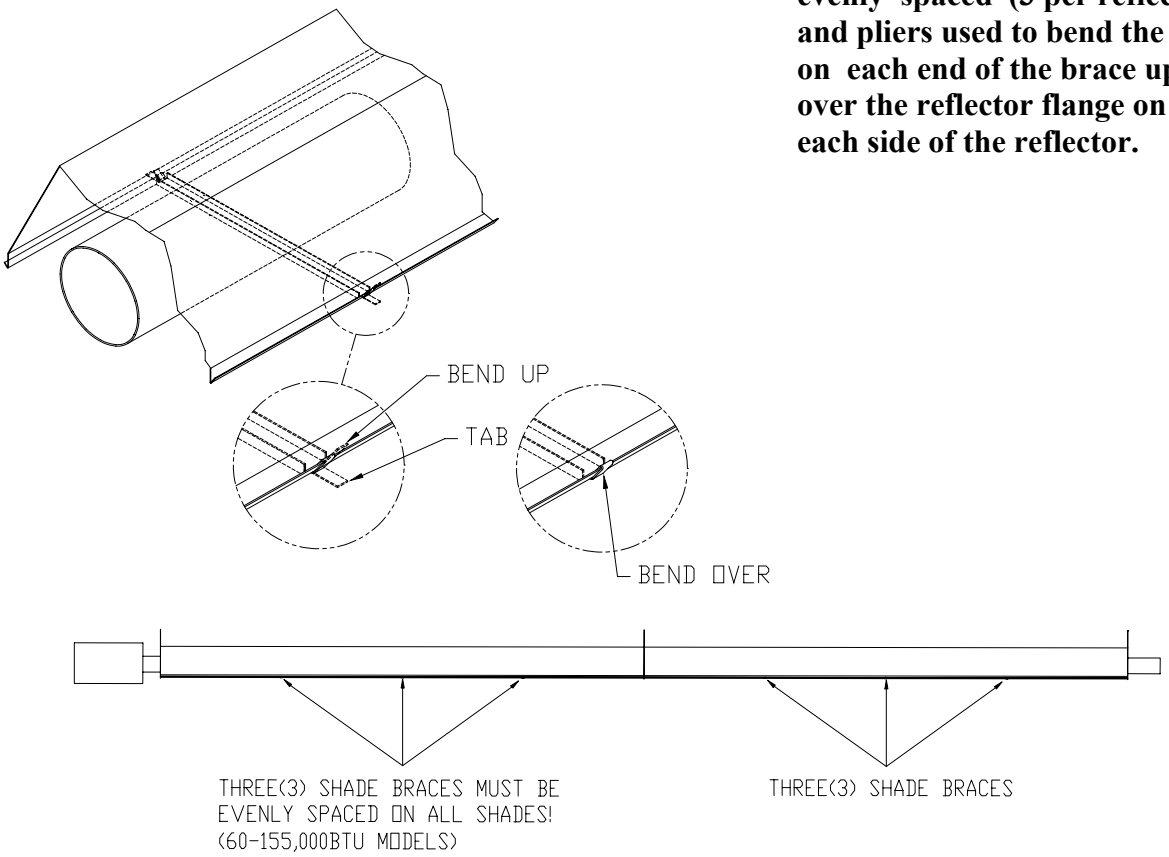
4. Slide the reflector end plate hangers and reflector plate hangers on the tubes before assembling the tubes. An additional coupling and reflector end plate hanger will be required for each additional tube.

5. Slide the swaged end of the tube into the unswaged end of the adjacent tube. Center the tube clamps over the joint between the two tubes and tighten the clamps.

6. After the first two tubes are assembled, the heater can be suspended and the rest of the tubes can be attached one at a time in the air, or they can be completely assembled on the ground and hoisted into position at one time. The reflectors can be installed at this time using the Philips screws provided with the heater. Always start at the burner box and work in the opposite direction.

7. Next, the turbulator needs to be installed. Consult the typical tube arrangements on the following page concerning turbulator placement. Turbulators are not required for some models such as the STSp -WP 80 at 40'. The turbulator is always installed in the last section of tube.

8. Install the reflector braces as shown below. The reflector brace should be evenly spaced (3 per reflector) and pliers used to bend the tab on each end of the brace up and over the reflector flange on each side of the reflector.



⚠ WARNING

Installation of the turbulator is imperative to the warranty of the tubes. Install the turbulator in the last section of tubes. If installed in the first section of tube, it will cause tubes to burn out. This will void the warranty. See typical arrangements for turbulator requirements and placement.

MODEL	TURBULATOR LENGTH (IF REQUIRED)
STSp-WP 200-70/60/50	10’
STSp-WP 175-70/60/50	10’
STSp-WP 155-60	not required
STSp-WP 155-50	not required
STSp-WP 155-40	10'
STSp-WP 130-50	not required
STSp-WP 130-40	10'
STSp-WP 130-30	14'
STSp-WP 110-50	not required

MODEL	TURBULATOR LENGTH (IF REQUIRED)
STSp-WP 110-40	10'
STSp-WP 110-30	14'
STSp-WP 80-40	10’
STSp-WP 80-30	14'
STSp-WP 80-20	14'
STSp-WP 60-30	14’
STSp-WP 60-20	14'

Where required the STSp-WP Series Heaters will be supplied with the turbulators, factory installed into the end tube(s) of the system configuration.