

# SUBMITTAL DATA

**Schwank**  
INNOVATIVE HEATING SOLUTIONS



## SCHWANK GAS-FIRED

## CAR WASH / HARSH ENVIRONMENT

# STW-JZ SERIES LOW INTENSITY TUBE TYPE INFRA RED HEATERS

PROJECT:	
ENGINEER:	
CONTRACTOR:	
DISTRIBUTOR:	
SCHWANK MODEL #:	
FUEL:	N.G. L.P.G.
APPROVED BY:	
DATE:	
APPROVAL #:	



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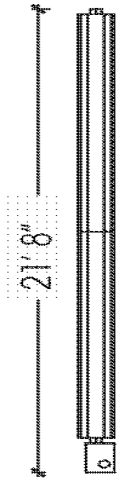
e-mail: [csr@schwankgroup.com](mailto:csr@schwankgroup.com)

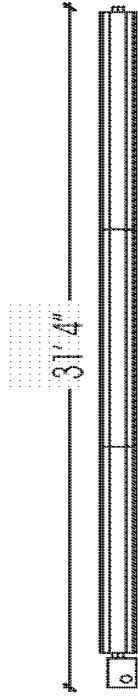
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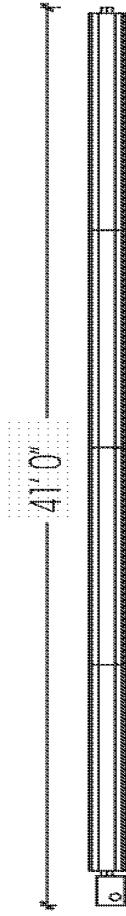
Quantity On This Project	<u>TABLE 1:</u> <u>MODEL CONFIGURATIONS</u>	TOTAL HEATER LENGTH	CAPACITY BTU/HR kW	TURBULATOR	GAS PRESSURE & ELECTRICAL	FLUE & AIR VENTS	SHIPPING WEIGHT Kg (LBS.)
				REQUIRED LENGTH			
	STW-JZ-200-70	70' 0"	200,000 Btu/hr 59 Kw	6'	<u>LINE MINIMUM</u> 5" W.C. NG  11" W.C. LP	4"	324 Lbs
	STW-JZ-200-60	60' 4"		6'			282 Lbs
	STW-JZ-200-50	50' 8"		10'			239 Lbs
	STW-JZ-175-70	70' 0"	175,000 Btu/hr 51 kW	10'	<u>LINE MAXIMUM</u> NG or LP 14" W.C.		324 Lbs
	STW-JZ-175-60	60' 4"		10'			282 Lbs
	STW-JZ-175-50	50' 8"		10'			239 Lbs
	STW-JZ-155-60	60' 4"	150,000 Btu/hr 44 kW	2'	<u>MANIFOLD</u> 3½" W.C. NG		282 Lbs
	STW-JZ-155-50	50' 8"		2'			239 Lbs
	STW-JZ-155-40	41' 0"		12'			197 Lbs
	STW-JZ-130-50	50' 8"	125,000 Btu/hr 37 kW	2'	10" W.C. LP		239 Lbs
	STW-JZ-130-40	41' 0"		12'			197 Lbs
	STW-JZ-130-30	31' 4"		13'			154 Lbs
	STW-JZ-110-50	50' 8"	110,000 Btu/hr 32 kW	2'	½" NPT GAS INLET		239 Lbs
	STW-JZ-110-40	41' 0"		12'			197 Lbs
	STW-JZ-110-30	31' 4"		13'			154 Lbs
	STW-JZ-80-40	41' 0"	80,000 Btu/hr 23 kW	12'	ELECTRICAL 120V, 60 HZ 145 VA		197 Lbs
	STW-JZ-80-30	31' 4"		8'			154 Lbs
	STW-JZ-80-20	21' 8"		14'			111 Lbs
	STW-JZ-60-30	31' 4"	60,000 Btu/Hr 18 kW	8'	THERMOSTAT Factory ready for 24V or 120V thermostat		154 Lbs
	STW-JZ-60-20	21' 8"		14'			111 Lbs
	STW-JZ-45-20	21' 8"		14'			111 Lbs

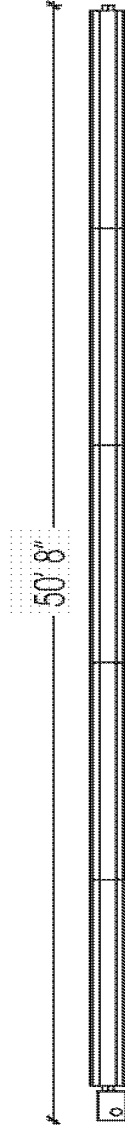
**TOP VIEW OF STW-JZ TUBE SYSTEMS**

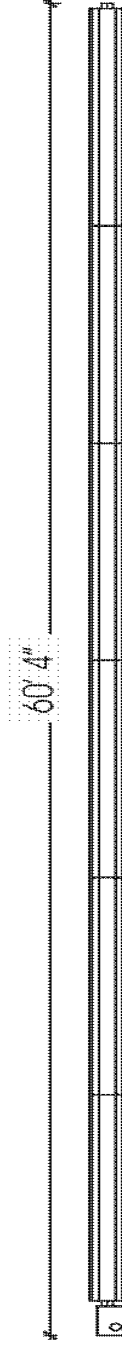
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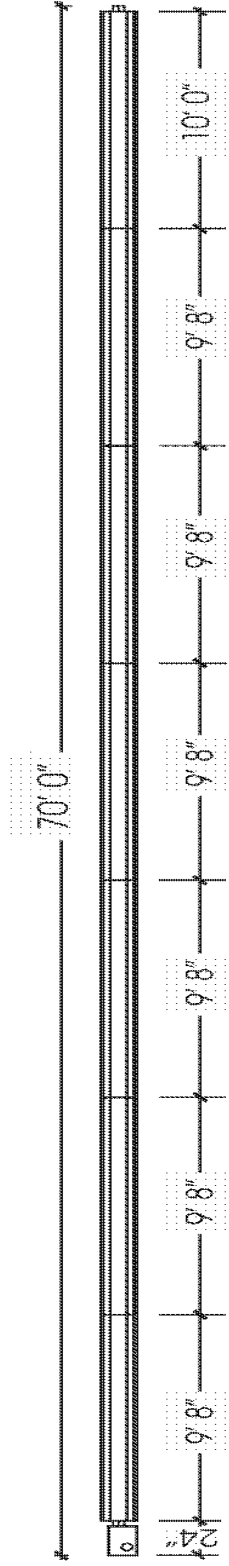










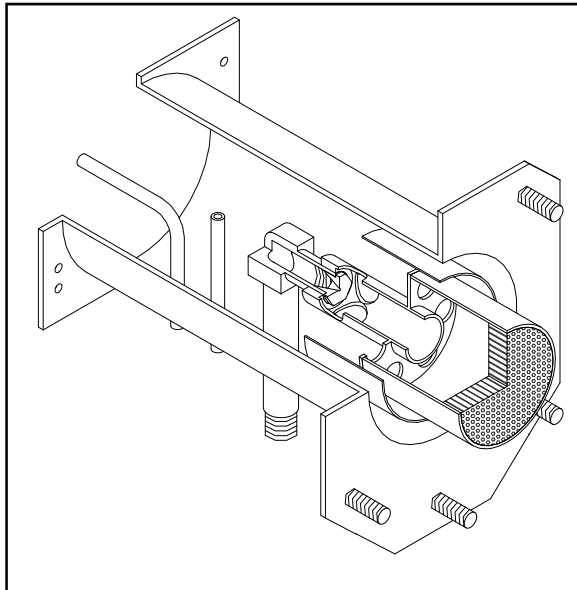


<b><u>COMPONENT QUANTITIES PER HEATER MODEL</u></b>	<b><u>STW-JZ 45-20</u></b>	<b><u>STW-JZ 60-20 80-20</u></b>	<b><u>STW-JZ 60-30 80-30 110-30 130-30</u></b>	<b><u>STW-JZ 80-40 110-40 130-40 155-40</u></b>	<b><u>STW-JZ 110-50 130-50 155-50</u></b>	<b><u>STW-JZ 175-50 200-50</u></b>	<b><u>STW-JZ 155-60</u></b>	<b><u>STW-JZ 175-60 200-60</u></b>	<b><u>STW-JZ 175-70 200-70</u></b>
QUANTITIES ON PROJECT									
SWAGED TUBE(S):									
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

**NOTE:**

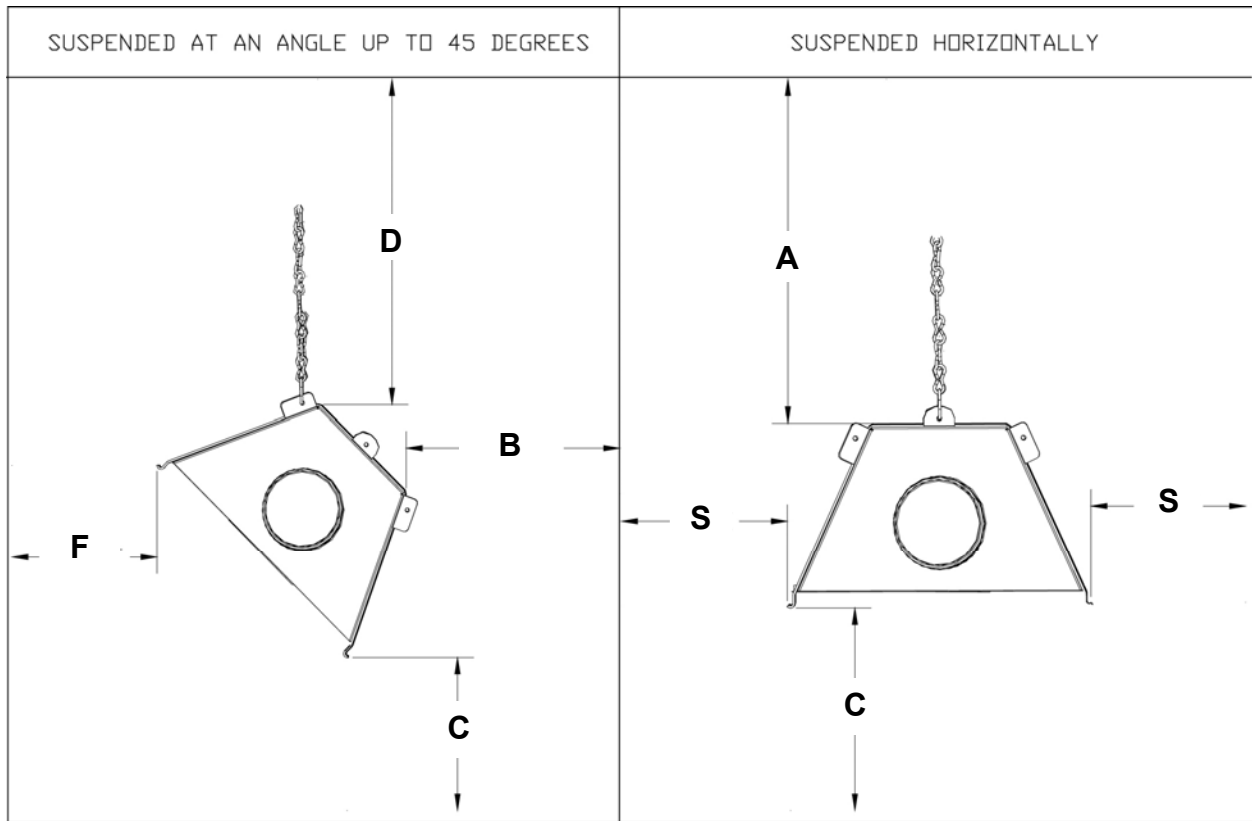
- CANADA: TYPE 1 HOSE GAS CONNECTOR IS INCLUDED WITH EACH BURNER KIT  
1/2" X 30" 45,000 TO 130,000 AND 3/4" X 30" = 150,000 TO 200,000
- USA : FLEXIBLE GAS CONNECTOR IS INCLUDED WITH EACH BURNER KIT  
1/2" X 24" 45,000 TO 130,000 AND 3/4" X 24" = 150,000 TO 200,000

**CUT-AWAY BURNER VIEW**



<b><u>OPTIONAL ACCESSORIES</u></b>	QUANTITY ON THIS PROJECT
90 DEGREE SWAGED ELBOW KIT JS-0508-JZ 1 elbow, 1 reflector cap, 1 webbed hanger, 1 coupler	
180 DEGREE SWAGED ELBOW KIT 2 x JS-0508-JZ 2 x 90 degree elbow kits - 2 webbed hangers, 2 couplers	
WALL VENT TERMINAL 4" (102 mm) JA-0528-XX	
WALL VENT TERMINAL 6" (152 mm) JA-0529-XX	
FLUE VENT TEE (4" x 4" x 6") JA-0514-	
COUPLING KIT FOR VENT TEE JA-0516-SW	
MOISTURE PROOF THERMOSTAT - NEMA 4X JS-0570-XX	
RELAY MULTIPLE HEATERS / 24V THERMOSTAT 2 TO 7 HEATERS PER THERMOSTAT JM-0303-KT	

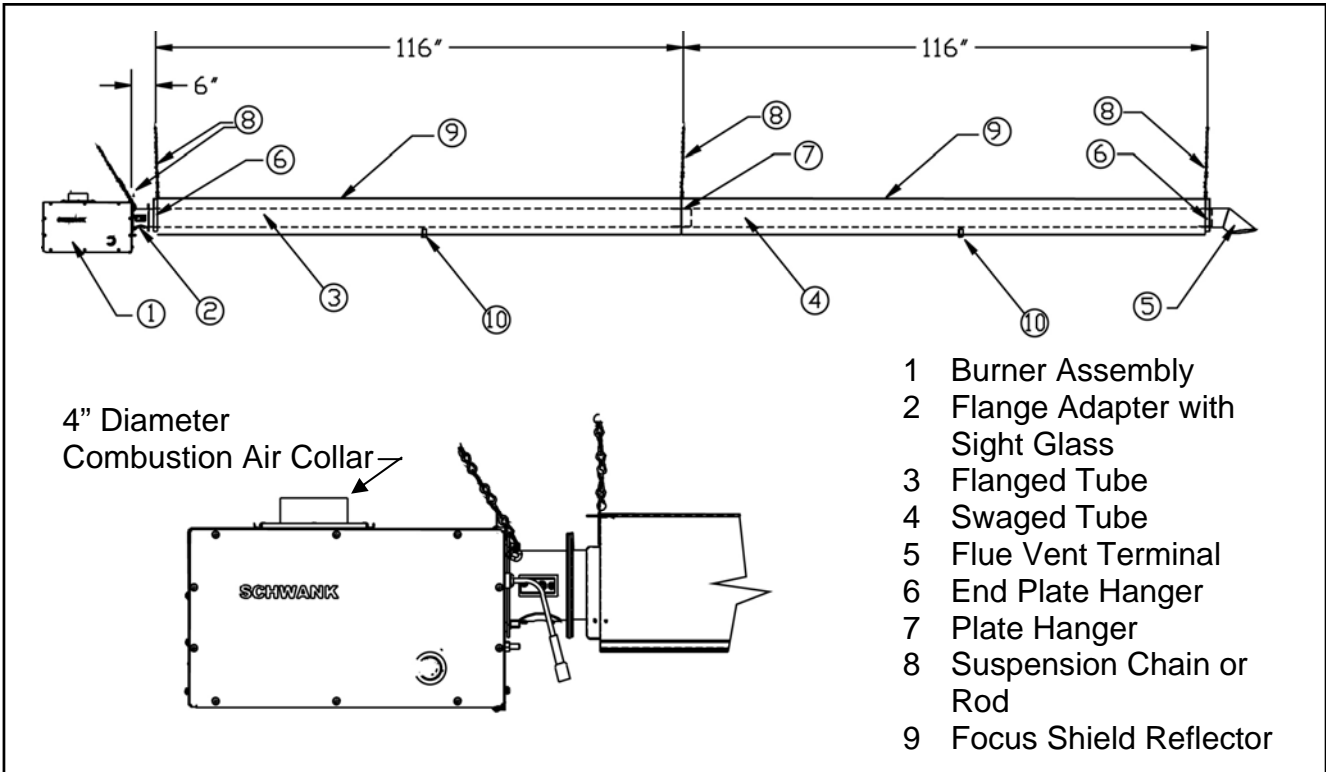
## MINIMUM CLEARANCES TO COMBUSTIBLES



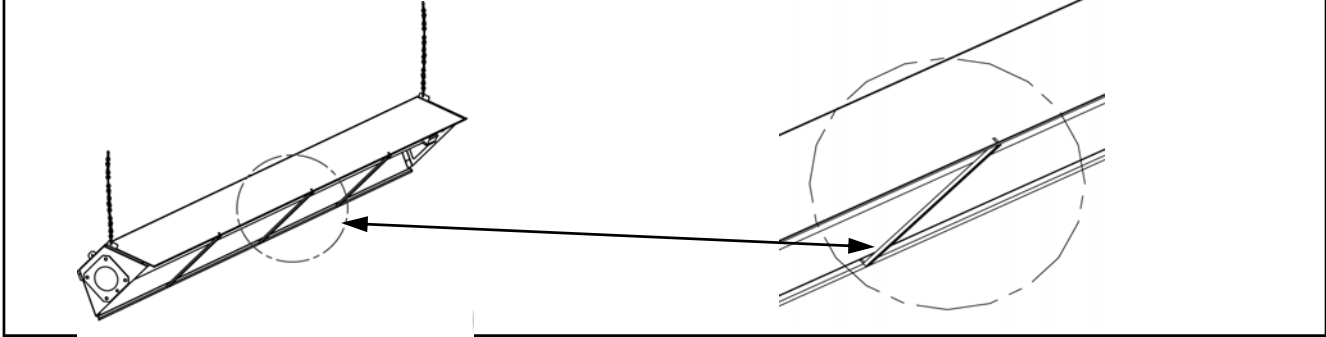
Q T Y	MODEL	SUSPENDED AT AN ANGLE UP TO 45 DEGREES				SUSPENDED HORIZONTALLY		
		D	B	F	C	A	S	C
	STW-JZ 200	13"	6"	74"	70"	14"	44"	76"
	STW-JZ 175	12"	6"	72"	68"	13"	42"	74"
	STW-JZ 155	5.5"	1"	64"	64"	3.5"	22"	70"
	STW-JZ 130	4.5"	1"	60"	60"	3.3"	21"	65"
	STW-JZ 110	3.5"	1"	54"	54"	2"	19"	60"
	STW-JZ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

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.**

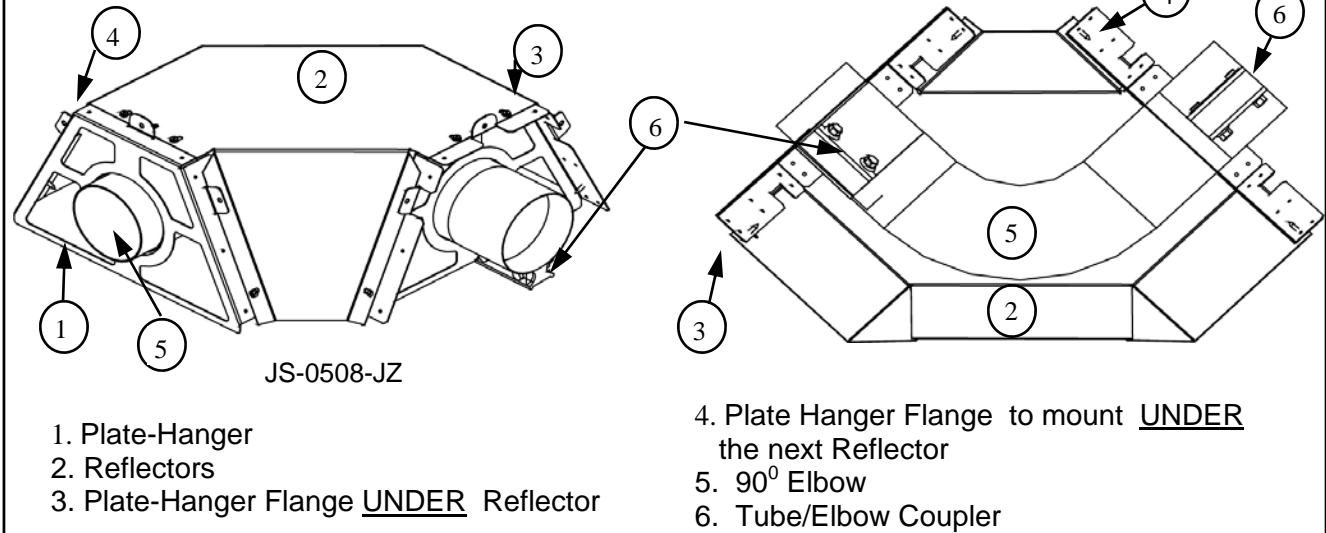
# TYPICAL HANGER & SUPPORT SPACING RECOMMENDATIONS



## REFLECTOR STABILIZER - 3 per Reflector



## PLATE HANGER/ELBOW INSTALLATION



## **COMPONENT DESCRIPTION**

<b>IGNITION</b>	POTTED DIRECT SPARK MODULE
<b>THERMOSTAT OPTIONS</b>	NEMA 4X MOISTURE PROOF THERMOSTAT
	THERMOCONTROL PLUS
	FIELD SUPPLIED THERMOSTAT BY OTHERS
<b>ELBOWS</b>	90 DEGREE ELBOW 4" DIAMETER, 16 GA. ALUMINIZED STEEL, SWAGED ONE END
	180 DEGREE ELBOW 4" DIAMETER, 16 GA. ALUMINIZED STEEL, 19" ON CENTRE (ASSEMBLY OF TWO 90 DEGREE ELBOW KITS)
<b>HEATER TUBE(S) 45 to 155 MBH</b>	COMBUSTION TUBE: FLANGED 10' x 4" DIAMETER 16 GA. ALUMINIZED STEEL SWAGED ONE END SECOND TUBE: 10' x 4" DIAMETER 16 GA. ALUMINIZED STEEL SWAGED ONE END EACH ADDITIONAL TUBE: 10' x 4" DIAMETER, .16 GA. ALUMINIZED STEEL TUBES WITH HIGH
<b>HEATER TUBE(S) 175 &amp; 200 MBH</b>	COMBUSTION TUBE: 10' x 4" DIAMETER, 16 GA. 439 STAINLESS STEEL SWAGED ONE END SECOND TUBE: 10' x 4" DIAMETER, 16 GA. ALUMINIZED STEEL SWAGED ONE END EACH ADDITIONAL TUBE: 10' x 4" DIAMETER, 16 GA. ALUMINIZED STEEL WITH HIGH TEMPERATURE EMISSIVE COATING SWAGED ONE END
<b>COMBINATION GAS VALVE</b>	HONEYWELL 24 VOLT NATURAL GAS: 3 1/2" W.C. MANIFOLD PROPANE: 10" W.C. MANIFOLD
<b>REFLECTORS</b>	REFLECTORS EXTEND 1.5" BELOW BOTTOM OF TUBE SURFACE
	REFLECTORS ARE CLOSED AT START AND END OF EACH STRAIGHT RUN OF TUBES BY MEANS OF END PLATE HANGERS
<b>HANGERS</b>	ONE WEBBED HANGER SUPPORTS EACH 10' OF TUBE, EXCEPT THE FIRST AND LAST TUBES WHICH UTILIZE ONE WEBBED HANGER AND ONE PLATE HANGER AT EACH END .
<b>COUPLING KIT</b>	ALUMINIZED STEEL COUPLER
<b>BURNER HOUSING</b>	STAINLESS STEEL WATER RESISTANT
<b>BURNER</b>	INCORPORATES EFFECTILE CERAMIC BURNER HEAD WITH MINIMUM OF 835 FLAME PORTS
	COMPLETE WITH OPERATION STATUS INDICATOR LIGHTS
<b>TRANSFORMER</b>	120/24VAC; 20VA
<b>SAFETY SWITCHES</b>	TWO SEPARATE AIR PRESSURE SWITCHES SENSE ADEQUATE COMBUSTION AIR AND BLOCKED FLUE
<b>STATUS INDICATOR LIGHTS</b>	GREEN: CALL FOR HEAT; YELLOW: IGNITION TRIAL; RED: FLAME ESTABLISHED
<b>COMBUSTION AIR</b>	COMBUSTION AIR DUCTED DIRECTLY TO INTAKE OF BLOWER
<b>TERMINAL BLOCK</b>	ALL WIRING CONNECTIONS BY MEANS OF COMMON TERMINAL BLOCK; JUMPER: FOR 120V THERMOSTAT; REMOVE FOR 24V THERMOSTAT
<b>ELECTRICAL CORD</b>	4' LENGTH 16/3 ELECTRICAL SUPPLY CORD WITH 3 PIN GROUNDED PLUG