

## UHE SERIES ultraSchwank HIGH RADIANT FACTOR POSITIVE PRESSURE GAS FIRED INFRARED TUBE HEATERS

<b>PROJECT:</b>		
<b>LOCATION:</b>		
<b>ENGINEER:</b>		
<b>CONTRACTOR:</b>		
<b>DISTRIBUTOR:</b>		
<b>SCHWANK MODEL:</b>		UHE-60-20 60,000 Btuh x 20 ft
		UHE-60-30 60,000 Btuh x 30 ft
		UHE-90-30 90,000 Btuh x 30 ft
		UHE-90-40 90,000 Btuh x 40 ft
		UHE-130-40 130,000 Btuh x 40 ft
		UHE-130-50 130,000 Btuh x 50 ft
		UHE-160-50 160,000 Btuh x 50 ft
		UHE-160-60 160,000 Btuh x 60 ft
		UHE-200-60 200,000 Btuh x 60 ft
		UHE-200-70 200,000 Btuh x 70 ft
<b>FUEL:</b>		Natural Gas
<b>APPROVED BY:</b>		
<b>DATE:</b>		
<b>APPROVAL #:</b>		

ultraSchwank UHE Series tube heater is tested and certified by CSA International to ANSI Z83.20-2008 / CSA 2.34-2008 Gas-Fired Low-Intensity Infrared Heaters

[www.schwankgroup.com](http://www.schwankgroup.com)



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*Schwank reserves the right to make changes to equipment and specifications without obligation or notification.*

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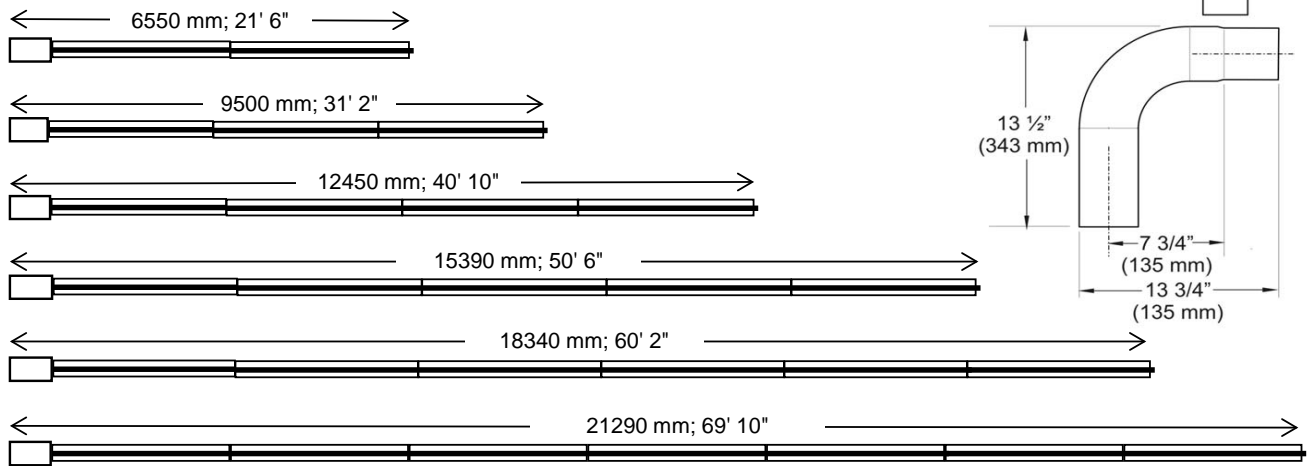
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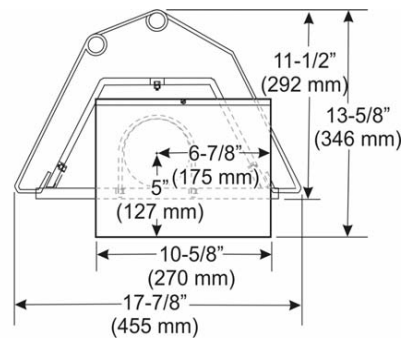
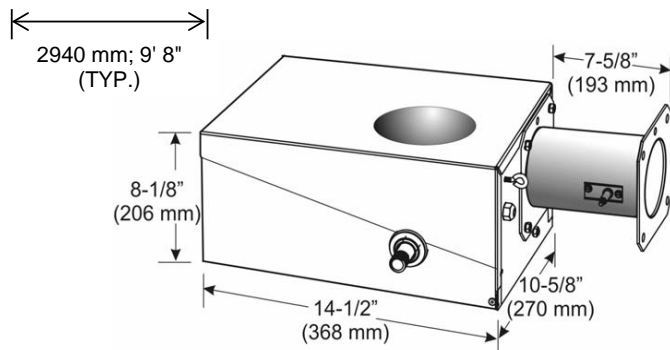
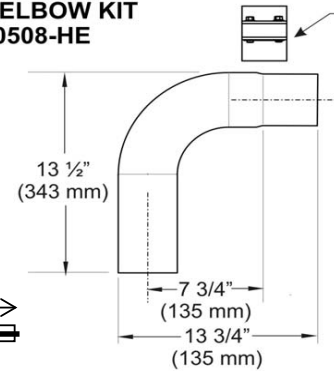
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QUANTITY ON PROJECT	MODEL	CAPACITY KW (BTU/HOUR) 0 to 1,371 m (4,500 ft.) Above Sea Level	TOTAL HEATER LENGTH	TURBULATOR REQUIRED LENGTH	SHIPPING WEIGHT Kg (LBS.)	GAS PRESSURE	FLUE & AIR VENTS	ELECTRICAL
	UHE-60-20	18 KW (60,000 Btu/Hr)	6,550 mm (21' 6")	1830 mm (72")	86 Kg (190 Lbs)	12.45 mbar NG (5" W.C. NG)	INDIVIDUAL HEATER VENT & DUCT 1017 mm 4"	THERMOSTAT Factory ready for 24V or 120V thermostat control
	UHE-60-30		9,500 mm (31' 2")	NONE	123 Kg (272 Lbs)			
	UHE-90-30	26 KW (90,000 Btu/hr)	9,500 mm (31' 2")	915 mm (36")	123 Kg (272 Lbs)	LINE MAXIMUM NG 34.86 mbar (14" W.C.)	COMMON VENT TWO HEATERS 1017 mm x 1017 mm x 1526 mm	
	UHE-90-40		12,450 mm (40' 10")	NONE	161 Kg (354 Lbs)			
	UHE-130-40	38KW (130,000 Btu/hr)	12,450 mm (40' 10")	1830 mm (72")	161 Kg (354 Lbs)	MANIFOLD 8.71 mbar NG (3½" W.C. NG)	4" x 4" x 6"	
	UHE-130-50		15,390 mm (50' 6")	NONE	198 Kg (436 Lbs)			
	UHE-160-50	47 KW (160,000 Btu/hr)	15,390 mm (50' 6")	1830 mm (72")	198 Kg (436 Lbs)	GAS INLET 12.7 mm (½")	4" x 4" x 6"	
	UHE-160-60		18,340 mm (60' 2")	610 mm	235 Kg (518 Lbs)			
	UHE-200-60	59 KW (200,000 Btu/hr)	18,340 mm (60' 2")	610 mm (24")	235 Kg (518 Lbs)	12.7 mm (½")	4" x 4" x 6"	
	UHE-200-70		21,290 mm (69' 10")	NONE	272 Kg (600 Lbs)			

**SYSTEM DIMENSIONS**



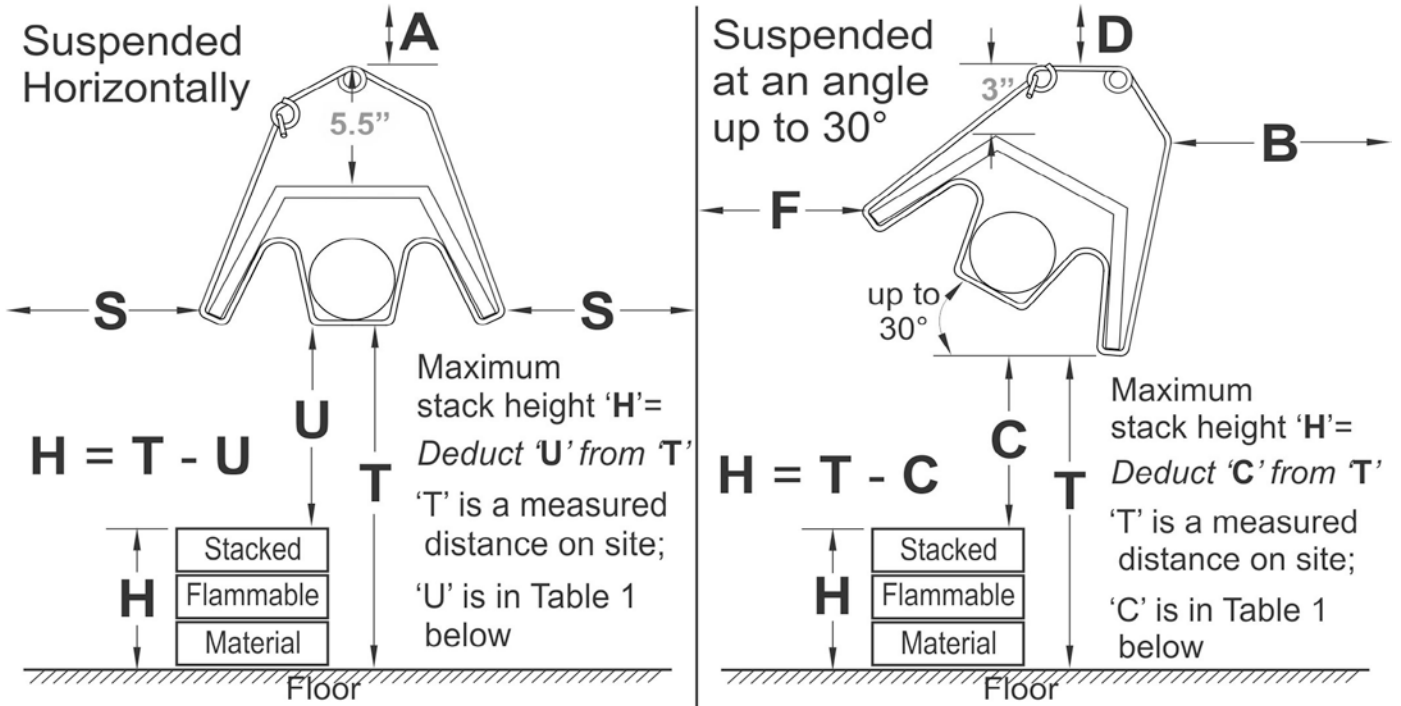
**90° ELBOW KIT JS-0508-HE**



<b>MODEL QUANTITY ON PROJECT:</b>										
<b>COMPONENTS PER <u>EACH</u> UHE MODEL HEATER</b>	<b>60-20</b>	<b>60-30</b>	<b>90-30</b>	<b>90-40</b>	<b>130-40</b>	<b>130-50</b>	<b>160-50</b>	<b>160-60</b>	<b>200-60</b>	<b>200-70</b>
<b>SWAGED TUBE(S):</b>										
3048 mm (10') ALUMINIZED TUBE w/ FLANGE	1	1	1	1	1	1				
3048 mm (10') EMISSIVE COATED STEEL TUBE	1	2	2	3	3	4	3	4	4	5
							1	1	1	1
							1	1	1	1
ALUMINIZED COUPLER	1	2	2	3	3	4	3	4	4	5
							1	1	1	1
INSULATED REFLECTOR	2	3	3	4	4	5	5	6	6	7
REFLECTOR END CAP	2	2	2	2	2	2	2	2	2	2
TUBE/REFLECTOR HANGER	4	6	6	8	8	10	10	12	12	14
<b>TURBULATOR:</b>										
610 mm (24") ALUMINIZED STEEL								1	1	1
915 mm (36") ALUMINIZED STEEL			1							
1830 mm (72") ALUMINIZED STEEL	1				1		1			
<b>USA: FLEXIBLE GAS CONNECTOR</b>	1	1	1	1	1	1	1	1	1	1
<b>CANADA: TYPE 1 HOSE GAS CONNECTOR</b>										

<b>OPTIONAL ACCESSORIES</b>	<b>QUANTITY ON PROJECT</b>
90 DEGREE SWAGED ELBOW KIT JS-0508-UH 1 Aluminized Steel Elbow, 1 Coupler	
180 DEGREE SWAGED ELBOW KIT 2 x JS-0508-UH 2 x 90 Degree Elbows, 2 couplers	
FRESH AIR INTAKE - WALL HOOD JS-0532-VC	
FRESH AIR INTAKE - ROOF 102 mm (4") JA-0530-XX	
FRESH AIR INTAKE - ROOF 152 mm (6") JA-0531-XX	
WALL VENT TERMINAL 102 mm (4") JA-0528-XX	
WALL VENT TERMINAL 152 mm (6") JA-0529-XX	
FLUE VENT TEE JA-0514-XX (102 mm x 102 mm x 152 mm) (4" x 4" x 6")	
COUPLING KIT FOR TEE JA-0516-SW	
TRU-TEMP THERMOSTAT JM-0150-XX	
THERMOSTAT 24 VOLT JS-0569-WR	
THERMOSTAT 120 VOLT JL-0772-XX	
<b>MULTIPLE HEATERS PER 24V THERMOSTAT OPTION:</b>	
HEATERS 2 TO 7 IN SAME ZONE: ONE RELAY PER HEATER: JS-0568-CC	

# MINIMUM CLEARANCES TO COMBUSTIBLES



ON THIS PROJECT	MODEL	SUSPENDED HORIZONTALLY			SUSPENDED AT AN ANGLE OF 35 DEGREES			
		A inches (cm)	S inches (cm)	U inches (cm)	D inches (cm)	B inches (cm)	F inches (cm)	c inches (cm)
	UHE 60	0.5 (1.25)	16 (41)	45 (114.3)	1.0 (2.5)	3.25 (8.3)	35 (89)	41 (104)
	UHE 90	1.25 (3.2)	26 (66)	70 (178)	2.5 (6.4)	5.25 (13.3)	50 (127)	60 (152)
	UHE 130	1.5 (4)	30 (76.2)	86 (218.5)	3.0 (7.6)	6.25 (16)	57 (145)	70 (178)
	UHE 160	3.0 (7.6)	45 (114.3)	105 (267)	5.5 (14)	10 (25.4)	75 (191)	85 (216)
	UHE 200	3.5 (9)	56 (142.2)	111 (282)	8.0 (20.3)	12.5 (31.8)	90 (229)	93 (236)

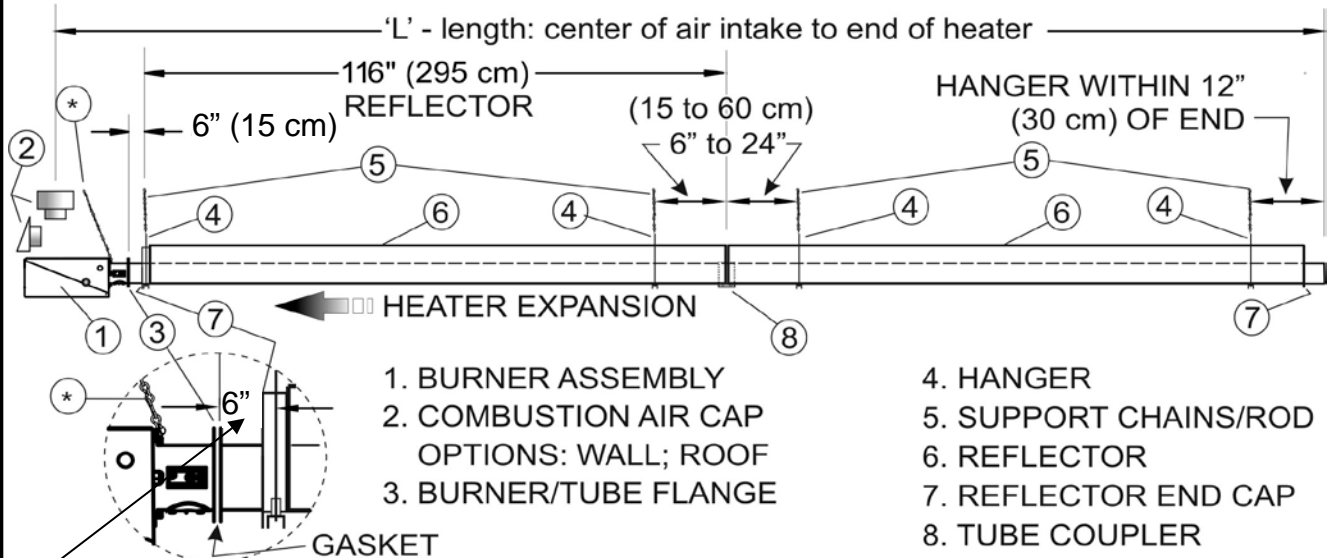
Heaters mounted at an angle between 0° & 35° must maintain the greater clearance posted for either 0° or 35°. (A or D; S or F, S or B; U or C)

The clearance to combustible materials represents the minimum distance that must be maintained between the heater and a nearby surface. **The stated clearance to combustibles represents a surface temperature of 90F° (50C°) above room temperature.**

NOTE that in the above table the clearances are measured from the hanger to facilitate the correct locating of the heater during installation.

It is the installer's responsibility to ensure that building materials with a low heat tolerance which may degrade at lower temperatures are protected to prevent degradation.

## HANGER POSITIONING / SPACING



POSITION BURNER END HANGER 6 INCHES (15 CM) FROM BURNER/TUBE FLANGE

POSITION INTERMEDIATE HANGERS FROM 6" (15 CM) TO 24 INCHES (60 CM) FROM EACH SIDE OF A TUBE CONNECTION

LOCATE VENT END HANGER WITHIN 12 INCHES (30 CM) OF THE END OF THE LAST REFLECTOR - TIGHTEN 'U'-BOLT TO TUBE LAST HANGER ONLY

⊙ ANGLE BURNER SUPPORT CHAIN BACK OVER BURNER TO ALLOW TUBE SYSTEM EXPANSION

## DIMENSIONS AIR INTAKE TO VENT END

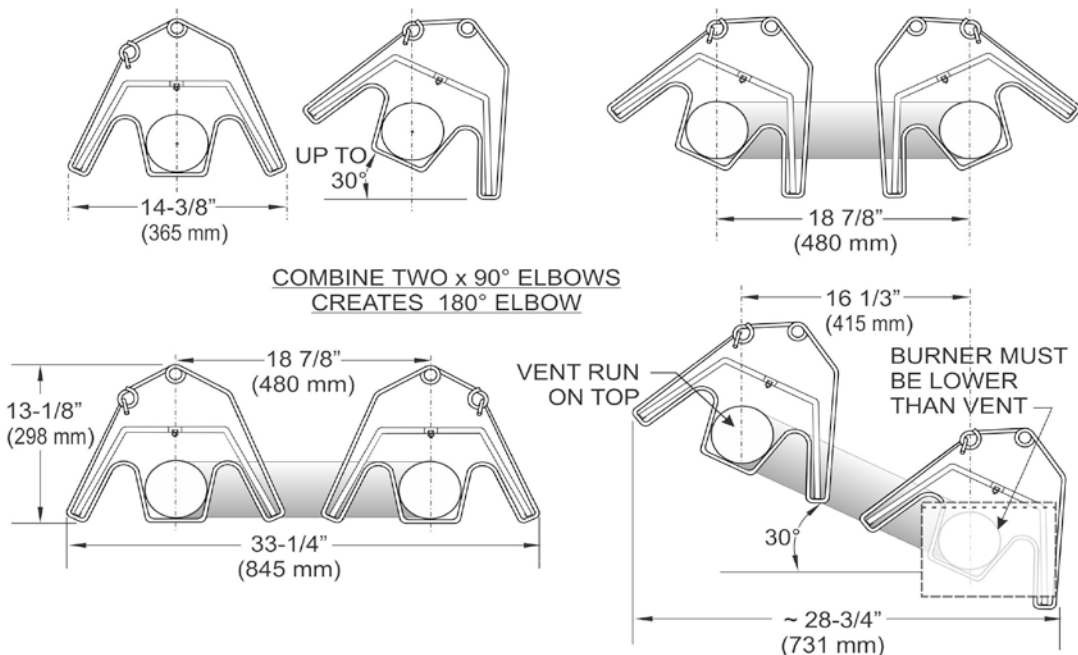
Tube Length 'L' = center air intake to end

20'20'-7 1/4"; 247 1/4"; 628 cm

30'30'-3 1/4"; 363 1/4"; 923 cm

40'39'-11 1/4"; 479 1/4"; 1217 cm

## HANGER / REFLECTOR ORIENTATION HORIZONTAL TO 350



## COMPONENT DESCRIPTION

IGNITION CONTROL	FENWAL 24VAC DIRECT SPARK MODULE: PRE-PURGE AND POST-PURGE FUNCTIONS NOTE: 24VAC THERMOSTAT CONTROL REQUIRED FOR POST-PURGE FUNCTION
COMBINATION GAS VALVE	HONEYWELL 24 VOLT -NATURAL GAS 8.17 mbar (3 ½" W.C.) AT MANIFOLD -PROPANE 24.9 mbar (10" W.C.) AT MANIFOLD
REFLECTORS	SUPERWOOL 607 THERMALCERAMIC HIGH TEMPERATURE (1100°C - 2012°F) INSULATION IS SANDWICHED BETWEEN INNER AND OUTER ALUMINIZED STEEL REFLECTORS  REFLECTORS ARE CLOSED AT START AND END OF EACH STRAIGHT RUN OF TUBES BY MEANS OF END CAPS
HEATER TUBE(S) 63,000 to 136,500 Kj (60 to 130 MBTUH)	FIRST SECTION IS 3040 mm (10') LONG, 102 mm (4") DIAMETER, .95 mm (16 GA.) ALUMINIZED STEEL SWAGED ONE END EACH ADDITIONAL SECTION IS 3040 mm (10') LONG, 102 mm (4") DIAMETER, .95 mm (16 GA.) HOT ROLLED STEEL WITH EMISSIVE COATING, SWAGED ONE END
HEATER TUBE(S) 168,000 & 210,000 Kj (160 & 200 MBTUH)	THE FIRST SECTION IS 3040 mm (10') LONG, 102 mm (4") DIAMETER, .95 mm (16 GA.) ALUMATHERM SWAGED ONE END THE SECOND SECTION IS 3040 mm (10') LONG, 102 mm (4") DIAMETER, .95 mm (16 GA.) ALUMINIZED STEEL SWAGED ONE END EACH ADDITIONAL SECTION IS 3040 mm (10') LONG, 102 mm (4") DIAMETER, .95 mm (16 GA.) HOT ROLLED STEEL WITH EMISSIVE COATING, SWAGED ONE END
HANGERS	QUANTITY 2 x 1/4" WIRE HANGER SUPPORT EACH 3040 mm (10') OF TUBE,
COUPLING KIT	ALUMINIZED STEEL COUPLER; STAINLESS STEEL COUPLER 1st CONNECTION 200 MBH
ELBOWS	90 DEGREE ELBOW 102 mm (4") DIAMETER, .95 mm (16 GA.) ALUMINIZED STEEL, 216 mm (8 ½") CENTRE RADIUS SWAGED ONE END
	180 DEGREE ELBOW 102 mm (4") DIAMETER, .95 mm (16 GA.) ALUMINIZED STEEL, 216 mm (8 ½") CENTRE RADIUS (ASSEMBLY OF TWO 90 DEGREE ELBOW KITS)
BURNER HOUSING	BOTTOM JAW SWINGS DOWN, PROVIDING ACCESS FROM TWO SIDES, END AND BOTTOM
BURNER	INCORPORATES EFFECTILE CERAMIC BURNER HEAD WITH MINIMUM OF 835 FLAME PORTS HIGH EFFICIENCY DESIGN HAS EXCESS AIR <= 55% COMPLETE WITH OPERATION STATUS INDICATOR LIGHTS
TRANSFORMER	120/24VAC; 20VA
SAFETY SWITCHES	TWO SEPARATE AIR PRESSURE SWITCHES SENSE ADEQUATE COMBUSTION AIR AND BLOCKED FLUE
STATUS INDICATOR LIGHTS	GREEN: CALL FOR HEAT; YELLOW: IGNITION TRIAL; RED: FLAME ESTABLISHED
COMBUSTION AIR	COMBUSTION AIR DUCTED DIRECTLY TO INTAKE OF BLOWER
CONTROL / THERMOSTAT OPTIONS	SCHWANK THERMOCONTROL PLUS (24V) BUILDING MANAGEMENT SYSTEM: SMART ADAPTIVE RECOVERY; RADIANT & AMBIENT SENSORS; PROGRAMMABLE HOLIDAYS; CM232 & CM485 COMMUNICATION CARD OPTIONS  SCHWANK TRU-TEMP (24V) SET BACK THERMOSTAT WITH RADIANT & AMBIENT SENSORS, AND AUTOMATIC UNOCCUPIED SETBACK MODE 24V THERMOSTAT NOTE: MULTIPLE HEATERS PER 24V THERMOSTAT & TRUTEMP : FIRST BURNER IS CONTROLLED BY 24V THERMOSTAT / TRUTEMP / CONTROL EACH ADDITIONAL BURNER AFTER THE FIRST REQUIRES A RELAY KIT JS-0568-CC LINE VOLTAGE THERMOSTAT
TERMINAL BLOCK	ALL WIRING CONNECTIONS BY MEANS OF COMMON TERMINAL BLOCK; JUMPER: FOR 120V THERMOSTAT; REMOVE FOR 24V THERMOSTAT
ELECTRICAL CORD	1220 mm (4') LENGTH 16/3 ELECTRICAL SUPPLY CORD WITH 3 PIN GROUNDED PLUG