

SUBMITTAL DATA



Infrasave superTube Series Model IST-S

SINGLE-STAGE LOW INTENSITY GAS-FIRED
INFRARED TUBE HEATERS

PROJECT:	
ENGINEER:	
CONTRACTOR:	
DISTRIBUTOR:	
INFRASAVE MODEL #:	
FUEL:	N.G. Propane
APPROVED BY:	
DATE:	
APPROVAL #:	



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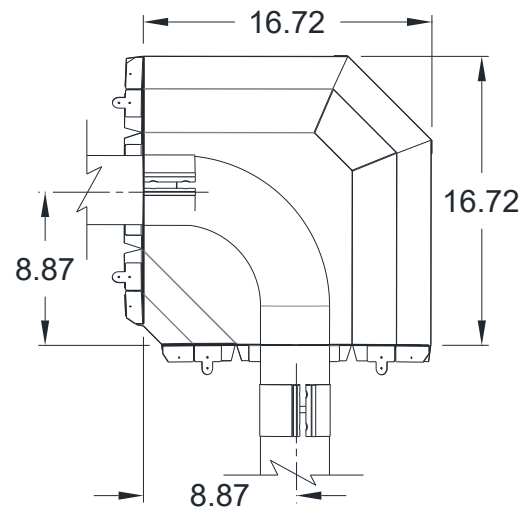
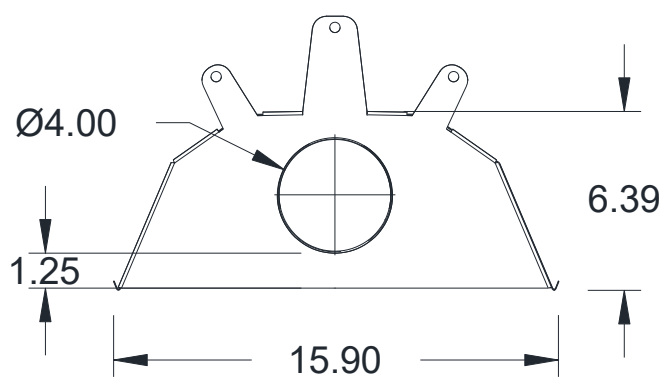
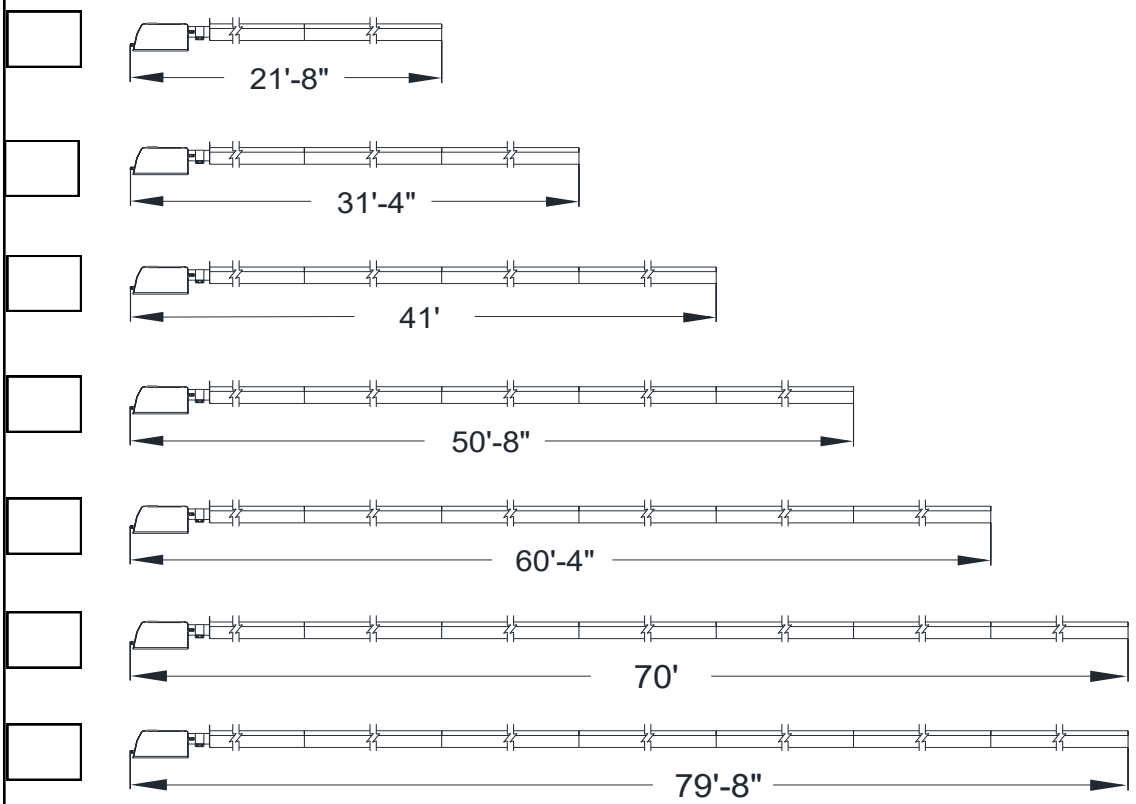
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QTY.	MODEL	TOTAL HEATER LENGTH	INPUT (BTU/HR)	TURBULATOR LENGTH & LOCATION	LINE PRESSURE NG / LP	MANIFOLD PRESSURE NG / LP	FLUE & AIR VENTS	SHIPPING WEIGHT (lbs.)
	IST-SB25-80	79' 8"	250,000	1 X 36" in 6th tube	NG 6.5"	NG 4.2"	5.0"	366 lbs.
	IST-SB25-70	70.0"					5.0"	324 lbs.
	IST-SB25-60	60' 4"					5.0"	282 lbs.
	IST-SB22-80	79' 8"	225,000	1 X 36" in 6th tube	LP 12.0"	LP 10.0"	5.0"	366 lbs.
	IST-SB22-70	70.0"					5.0"	324 lbs.
	IST-SB22-60	60' 4"					5.0"	282 lbs.
	IST-SB20-70	70.0"	205,000	2 X 36" in 5th tube			5.0"	324 lbs.
	IST-SB20-60	60' 4"					5.0"	282 lbs.
	IST-SB20-50	50' 8"					5.0"	239 lbs.
	IST-SB18-70	70.0"	180,000	2 X 36" in 5th tube			4.0"	324 lbs.
	IST-SB18-60	60' 4"					4.0"	282 lbs.
	IST-SB18-50	50' 8"					4.0"	239 lbs.
	IST-SB15-60	60' 4"	155,000	3 X 36" in 4th tube			4.0"	282 lbs.
	IST-SB15-50	50' 8"					4.0"	239 lbs.
	IST-SB15-40	41.0"					4.0"	197 lbs.
	IST-SB13-50	50' 8"	130,000	3 X 36" in 3rd tube	NG 5.0"	NG 3.5"	4.0"	239 lbs.
	IST-SB13-40	41.0"					4.0"	197 lbs.
	IST-SB13-30	31' 4"					4.0"	154 lbs.
	IST-SB11-50	50' 8"	115,000	3 X 36" in 3rd tube	LP 11.0"	LP 10.0"	4.0"	239 lbs.
	IST-SB11-40	41.0"					4.0"	197 lbs.
	IST-SB11-30	31' 4"					4.0"	154 lbs.
	IST-SB08-40	41.0"	80,000	3 X 36" in 2nd tube			4.0"	197 lbs.
	IST-SB08-30	31' 4"					4.0"	154 lbs.
	IST-SB08-20	21' 8"					4.0"	111 lbs.
	IST-SB06-40	41.0"	65,000	3 X 36" in 2nd tube			4.0"	197 lbs.
	IST-SB06-30	31' 4"					4.0"	154 lbs.
	IST-SB06-20	21' 8"					4.0"	111 lbs.
	IST-SB05-40	41.0"	50,000	3 X 36" in 2nd tube			4.0"	197 lbs.
	IST-SB05-30	31' 4"					4.0"	154 lbs.
	IST-SB05-20	21' 8"					4.0"	111 lbs.

For all the heaters above; Gas Inlet is 1/2" NPT & Electrical is 120V-60Hz, 145 VA

SIDE VIEWS OF SYSTEMS

QTY

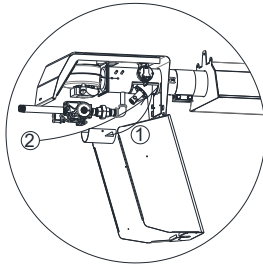


IST-S STRAIGHT TUBE SYSTEM

<u>COMPONENT QUANTITIES PER HEATER MODEL</u>	<u>IST-S</u>	<u>IST-S</u>	<u>IST-S</u>	<u>IST-S</u>	<u>IST-S</u>	<u>IST-S</u>	<u>IST-S</u>	<u>IST-S</u>	<u>IST-S</u>
	50-20 65-20 80-20	50-30 65-30 80-30 115-30 130-30	50-40 65-40 80-40 115-40 130-40 155-40	115-50 130-50 155-50 180-50 205-50	155-60 180-60 205-60	180-70 205-70	225-60 250-60	225-70 250-70	225-80 250-80
10' ALUMINIZED STEEL, SWAGED	1	1	1	1	1	1	1	1	1
10' STEEL TUBE, SWAGED, WITH HIGH TEMPERATURE EMISSIVE COATING	1	2	3	4	5	6	3	4	5
10' STAINLESS STEEL TUBE, SWAGED	0	0	0	0	0	0	2	2	2
FOCUS SHIELD REFLECTOR 10'	2	3	4	5	6	7	6	7	8
ALUMINIZED COUPLER	1	2	3	4	5	6	3	4	5
ACCUSEAL TUBE CLAMP	0	0	0	0	0	0	2	2	2
END PLATE HANGER	1	1	1	1	1	1	1	1	1
END PLATE	1	1	1	1	1	1	1	1	1

NOTE: GAS CONNECTOR SIZE

- CANADA: TYPE 1 HOSE GAS CONNECTOR
 1/2" X 30" 50,000 TO 130,000
 3/4" X 30" 155,000 TO 250,000
- U.S.A.: STAINLESS STEEL FLEXIBLE GAS CONNECTOR
 1/2" X 24" 50,000 TO 130,000
 3/4" X 24: 155,000 TO 250,000



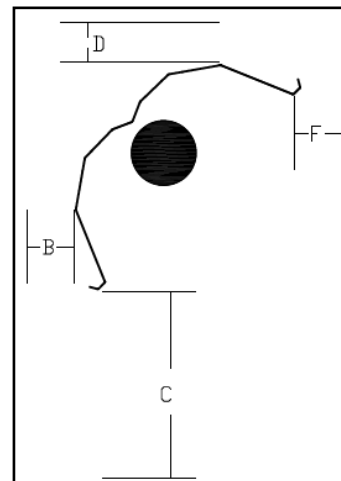
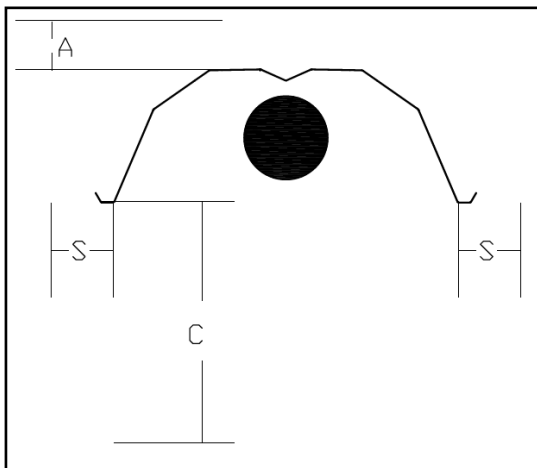
REMOVING THE BURNER CUP AND THE ORIFICE

- Unscrew the 2 screws holding the burner cup cover and remove the cover
- Break the burner cup loose and unscrew it.
- Move the burner cup forward a little and tilt the stem down.
- Pull out the Burner cup.
- Once the burner cup is removed the orifice can be reached at the orifice holder in the combustion chamber.

<u>OPTIONAL ACCESSORIES</u>	QTY THIS PROJECT
90 DEGREE SWAGED ELBOW KIT JS-0508-IST 1 elbow, 1 coupler, 2 webbed braces, 90 deg. Reflector & hardware	
180 DEGREE SWAGED ELBOW KIT 2 x JS-0508-IST Two 90 degree swaged elbow kits	
FRESH AIR INTAKE WALL HOOD JS-0532-VC	
WALL VENT TERMINAL 102 mm (4") JA-0528-XX	
WALL VENT TERMINAL 152 mm (6") JA-0529-XX	
FLUE VENT TEE 4" x 4" x 6") JA-0514-XX	
COUPLING KIT FOR VENT TEE JA-0516-SW	
TRU-TEMP 24V SET BACK THERMOSTAT JM-0150-XX	
24 VOLT DIGITAL THERMOSTAT JS-0569-WR	
THERMOSTAT 120 VOLT JL-0772-XX	
RELAY MULTIPLE HEATERS / 24V THERMOSTAT 2 TO 7 HEATERS PER THERMOSTAT JM-0303-KT	
NOTE: ALL VENT PIPE FIELD SUPPLIED BY OTHERS	
ROOF VENT TERMINALS FIELD SUPPLIED BY OTHERS	

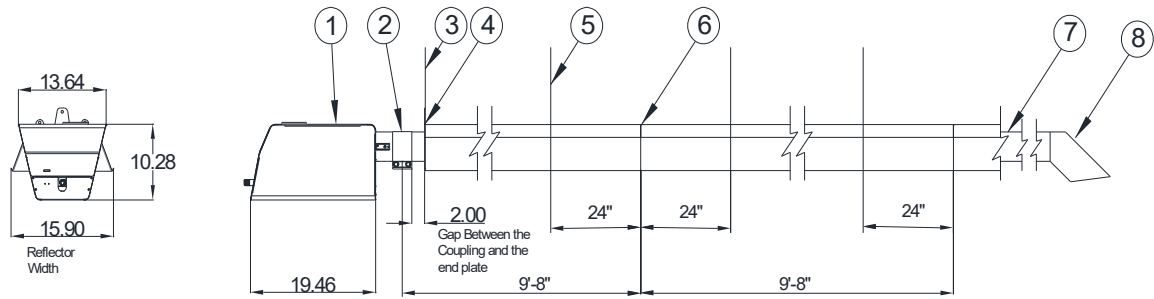
MINIMUM CLEARANCES TO COMBUSTIBLES

superTube IST Models (BTU/HR)	superTube HEATER SERIES CLEARANCES IN INCHES							
	SUSPENDED HORIZONTALLY				SUSPENDED AT AN ANGLE UP TO 45°			
	Top A	Side B	Bottom C	Side D	Top D	Side B	Bottom C	Front F
50,000	4	20	42	20	4	3	44	40
65,000	4	22	52	22	4	3	50	48
80,000	5	24	62	24	5	3	60	54
115,000	5	26	74	26	5	3	70	62
130,000	6	28	78	28	7	3	72	64
155,000	6	30	80	30	7	4	74	66
180,000	7	36	84	36	8	4	76	72
205,000	8	40	88	40	10	6	78	74
225,000	12	42	92	42	12	6	78	78
250,000	12	44	95	44	14	6	78	82

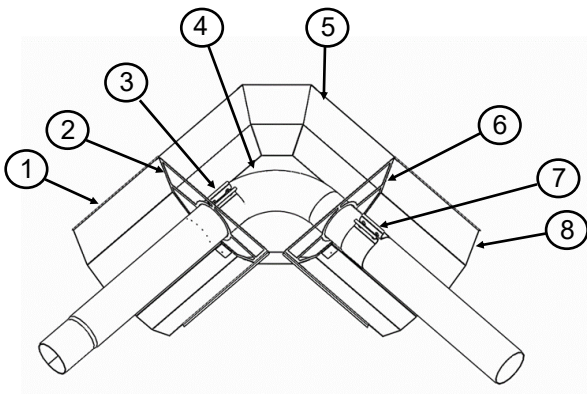


The clearance to combustible material represents the minimum distance that must be maintained between heater and a nearby combustible surface. **The stated clearance to combustibles represents a surface temperature of 90°F (50°C) above room temperature. Some materials such as awnings or plastic may require 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.**

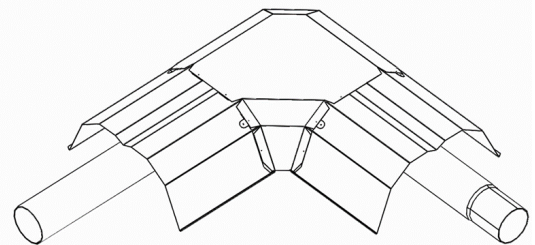
TYPICAL HANGER & SUPPORT SPACING RECOMMENDATIONS



1. Burner Assembly
2. Coupling
3. Suspension Chain or Rod
4. Hanger End Plate
5. Suspension Chain or Rod
6. Section End of Tube Not The Reflector
7. 10 ft. Swaged Tube At One End
8. Flue Vent Terminal



1. 10 ft. long reflector
2. Webbed brace (flanges facing the 10 long reflector it is attached to)
3. Coupling
4. 90-degree 4-inch tube elbow
5. 90-degree reflector
6. Webbed brace (flanges facing the 10 ft. reflector it is attached to)
7. Coupling
8. 10 ft. long reflector



1. Install the Webbed Brace on each of the tubes. Be sure to have the flanges facing the ends of the reflectors they are attached to.
2. Attach the webbed braces to the ends of the 10 ft. long reflectors, by placing the brace's flanges on top of the reflectors and installing 2 screws in the screw holes.
3. Install the 90-degree, 4 inch tube elbow and attach the couplings. Pay attention to the position of the parts with respect to the direction of flow of heat.
4. Install the 90-degree reflector over the ends of the two straight reflectors and attach the corner reflector using self drilling screws.

COMPONENT SPECIFICATIONS

IGNITION	FENWAL DIRECT SPARK MODULE: PRE-PURGE AND POST-PURGE OF TUBE SYSTEM
THERMOSTAT OPTIONS <i>(Factory ready for 24Vac or 120Vac control)</i>	INFRASAVE TRU-TEMP (24V) SET BACK THERMOSTAT WITH RADIANT & AMBIENT SENSORS, AND AUTOMATIC UNOCCUPIED SETBACK MODE
	24V DIGITAL THERMOSTAT NOTE: MULTIPLE HEATERS PER 24V THERMOSTAT REQUIRE RELAY CONTROL CENTER KIT JM-0303-KT
	LINE VOLTAGE THERMOSTAT; <i>Caution: Post-purge feature disabled with 120V thermostat</i>
	THERMOCONTROL PLUS
	FIELD SUPPLIED THERMOSTAT BY OTHERS
ELBOWS	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)
HEATER TUBE(S) 50 to 205 MBH	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
HEATER TUBE(S) 225 & 250 MBH	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
COMBINATION GAS VALVE	HONEYWELL 24 VOLT NATURAL GAS: 3 1/2" W.C. MANIFOLD UP TO 205,000 MBTUH & FOR 225,000 & 250,000 4.2" MANIFOLD PROPANE: 10" W.C. MANIFOLD
GAS CONNECTION	USA: FLEXIBLE STAINLESS STEEL GAS CONNECTOR REQUIRED BY CODE: SUPPLIED WITH BURNER
	CANADA: TYPE 1 GAS HOSE CONNECTOR REQUIRED BY CODE: SUPPLIED WITH BURNER
REFLECTORS	26 GA. ALUMINIZED STEEL REFLECTOR EXTENDS BELOW BOTTOM OF TUBE SURFACE
	REFLECTORS ARE CLOSED AT START AND END OF EACH STRAIGHT RUN OF TUBES BY MEANS OF END PLATE HANGERS
HANGERS	SYSTEM UTILIZES WIRE HANGER S, TWO PER 10' TUBE. ALLOWING CONVECTION HEAT FLOW ALONG SYSTEM.
COUPLING KIT	ALL ALUMINIZED STEEL COUPLER UP TO 205,000 MBTUH ; STAINLESS STEEL COUPLER FOR FIRST TWO TUBE CONNECTIONS ON 225 & 250 MBTUH
BURNER HOUSING	BOTTOM FOLDS AWAY, PROVIDING ACCESS FROM TWO SIDES, END AND BOTTOM
BURNER	INCORPORATES STEEL BURNER HEAD
	24VDC HI EFFICIENCY ECM BLOWER
TRANSFORMER	120/24VAC; 20VA
SAFETY SWITCHE	ONE DIFFERENTIAL PRESSURE SWITCHE SENSES ADEQUATE COMBUSTION AIR AND BLOCKED FLUE
24VDC POWER	120V/24VDC SMPS POWER SUPPLY FOR THE ECM BLOWER
COMBUSTION AIR	COMBUSTION AIR DUCTED DIRECTLY TO 4" COLLAR AT NTAKE OF BLOWER
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
VENT PIPE	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
ROOF VENT CAPS	FIELD SUPPLIED BY OTHERS TO MATE WITH VENT PIPE