

SUBMITTAL DATA



ITB(U)

POSITIVE PRESSURE SERIES GAS FIRED INFRA-RED TUBE HEATERS

PROJECT:	
ENGINEER:	
CONTRACTOR:	
DISTRIBUTOR:	
INFRASAVE MODEL #:	
FUEL:	
APPROVED BY:	
DATE:	
APPROVAL #:	



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TABLE 1: MODEL CONFIGURATIONS		OVERALL HEATER LENGTH	BTU/HOUR INPUT 0 TO 4500 FT ABOVE SEA LEVEL	TURBULATOR REQUIRED LENGTH	GAS PRESSURE & ELECTRICAL	SHIPPING WEIGHT (LBS.)
ITB 200-70		69' 4"	200,000	10'	<u>LINE MINIMUM</u> 5" W.C. N.G. 11" W.C. L.P.	240
ITB 200-60		59' 8"		10'		210
ITB 200-50		50' 0"		10'		180
ITBU 200-30		31' 11"		10'		210
ITB 175-70		69' 4"	175,000	10'	<u>LINE MAXIMUM</u> 14" W.C. N.G. 14" W.C. L.P.	240
ITB 175-60		59' 8"		10'		210
ITB 175-50		50' 0"		10'		180
ITBU 175-30		31' 11"		10'		210
ITB 155-60		59' 8"	155,000	Not Required	<u>MANIFOLD</u> 3½" W.C. N.G. 10" W.C. L.P. ½" INLET ELECTRICAL 120V, 60 HZ	210
ITB 155-50		50' 0"		Not Required		180
ITB 155-40		40' 4"		10'		150
ITBU 155-30		31' 11"		Not Required		210
ITBU 155-20		22' 3"		10'		150
ITB 130-50		50' 0"	130,000	Not Required		180
ITB 130-40		40' 4"		10'		150
ITB 130-30		30' 8"		14'		120
ITBU 130-20		22' 3"		10'		150
ITBU 130-15		17' 3"		14'		120
ITB 110-50		50' 0"	110,000	Not Required	ELECTRICAL 120V, 60 HZ	180
ITB 110-40		40' 4"		10'		150
ITB 110-30		30' 8"		14'		120
ITBU 110-20		22' 3"		10'		150
ITBU 110-15		17' 3"		14'		120
ITB 100-20		21' 0"	100,000	10' S/S		90
ITB 80-40		40' 4"	80,000	10'		150
ITB 80-30		30' 8"		14'		120
ITB 80-20		21' 0"		14'		90
ITBU 80-10		12' 7"		14'		90
ITB 60-30		30' 8"	60,000	14'		120
ITB 60-20		21' 0"		14'		90
ITBU 60-10		12' 7"		14'		90
ITB 45-20		21' 0"	45,000	14'		90
ITB 45-10		11' 4"		5'		60

NOTE: As required, the series ITB/U heaters will be supplied with the turbulator, snugly installed into the end tube(s) of the system configuration.

ITB STRAIGHT TUBE SYSTEM

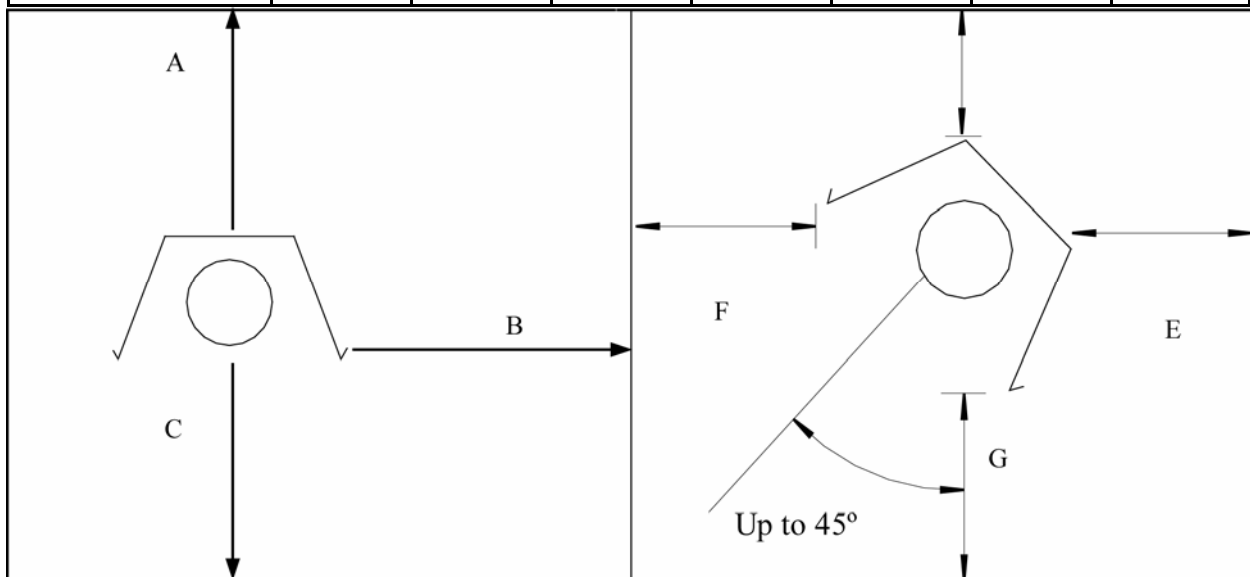
<u>TABLE 2: COMPONENT QUANTITIES PER HEATER MODEL</u>	<u>ITB 45-10</u>	<u>ITB 45-20</u>	<u>ITB 60-20 80-20</u>	<u>ITB 100-20</u>	<u>ITB 60-30 80-30</u>	<u>ITB 80-40 110-40</u>	<u>ITB 110-50 130-50</u>	<u>ITB 175-50 200-50</u>	<u>ITB 155-60</u>	<u>ITB 175-60 200-60</u>	<u>ITB 175-70 200-70</u>
10' ALUMATHERM TUBE w/ FLANGE	0	0	0	0	0	0	0	1	0	1	1
10' ALUMINIZED TUBE w/ FLANGE	1	1	1	1	1	1	1	0	1	0	0
10' ALUMINIZED TUBE	0	0	0	0	0	0	0	1	0	1	1
10' STEEL TUBE	0	1	1	1	2	3	4	3	5	4	5
10' REFLECTOR	1	2	2	2	3	4	5	5	6	6	7
REFLECTOR END CAP	2	2	2	2	2	2	2	2	2	2	2
TORCTITE COUPLER	0	1	1	1	2	3	4	3	5	4	5
ACCUSEAL TUBE CLAMP	0	0	0	0	0	0	0	1	0	1	1
TUBE / REFLECTOR WIRE HANGER	2	4	4	4	6	8	10	10	12	12	14
5' STAINLESS STEEL TURBULATOR	1	0	0	0	0	0	0	0	0	0	0
10' STAINLESS STEEL TURBULA-	0	0	0	1	0	0	0	0	0	0	0
10' ALUMINIZED STEEL TURBULA-	0	1	1	0	1	1	0	1	0	1	1
4' ALUMINIZED STEEL TURBULA-	0	1	1	0	1	0	0	0	0	0	0
HEATERS ON THIS PROJECT											

ITBU 'U' TUBE SYSTEM

<u>TABLE 2: COMPONENT QUANTITIES PER HEATER MODEL</u>	<u>ITBU 60-10 80-10</u>	<u>ITBU 110-15 130-15 80-15</u>	<u>ITBU 110-20 130-20 155-20</u>	<u>ITBU 155-30</u>	<u>ITBU 175-30 200-30</u>
10' ALUMA-THERM TUBE w/ FLANGE	0	0	0	0	1
10' ALUMINIZED TUBE w/ FLANGE	1	1	1	1	0
10' ALUMINIZED TUBE	0	0	0	0	1
10' STEEL TUBE	1	1	3	5	4
5' STEEL TUBE	0	2	0	0	0
10' REFLECTOR	1	2	2	3	3
5' REFLECTOR	0	2	0	0	0
REFLECTOR END CAP	2	2	2	2	2
TORCTITBE COUPLER	2	4	4	6	5
ACCUSEAL TUBE CLAMP	0	0	0	0	1
TUBE / REFLECTOR WIRE HANGER	2	4	4	6	6
10' ALUMINIZED STEEL TURBULATOR	1	1	1	0	1
4' ALUMINIZED STEEL TURBULATOR	1	1	0	0	0
180 DEGREE TURN-AROUND BOX	1	1	1	1	1
HEATERS ON THIS PROJECT					

TABLE 3: APPROVED MINIMUM CLEARANCES TO COMBUSTIBLES—ITB STRAIGHT TUBE

<u>TABLE 3:</u> <u>CLEARANCES TO</u> <u>COMBUSTIBLES</u>	SUSPENDED HORIZONTALLY			SUSPENDED AT AN ANGLE UP TO 45 DEGREES			
	TOP	SIDE	BELOW	TOP	REAR	FRONT	BELOW
	A	B	C	D	E	F	G
ITB 200	7"	22"	68"	7"	1"	57"	68"
ITB 175	6.5"	20"	68"	6.5"	1"	47"	68"
ITB 155	6"	19"	64"	6"	1"	44"	64"
ITB 130	4"	11"	60"	5"	1"	35"	56"
ITB 110	3"	10"	54"	4.5"	1"	26"	54"
ITB 100	7"	22"	68"	7"	1"	57"	68"
ITB 80	2.5"	6.0"	36"	3.5"	1"	23"	38"
ITB 60	1.5"	5.5"	34"	3.0"	1"	17"	34"
ITB 45	4"	8.5"	32"	5"	1"	29"	32"

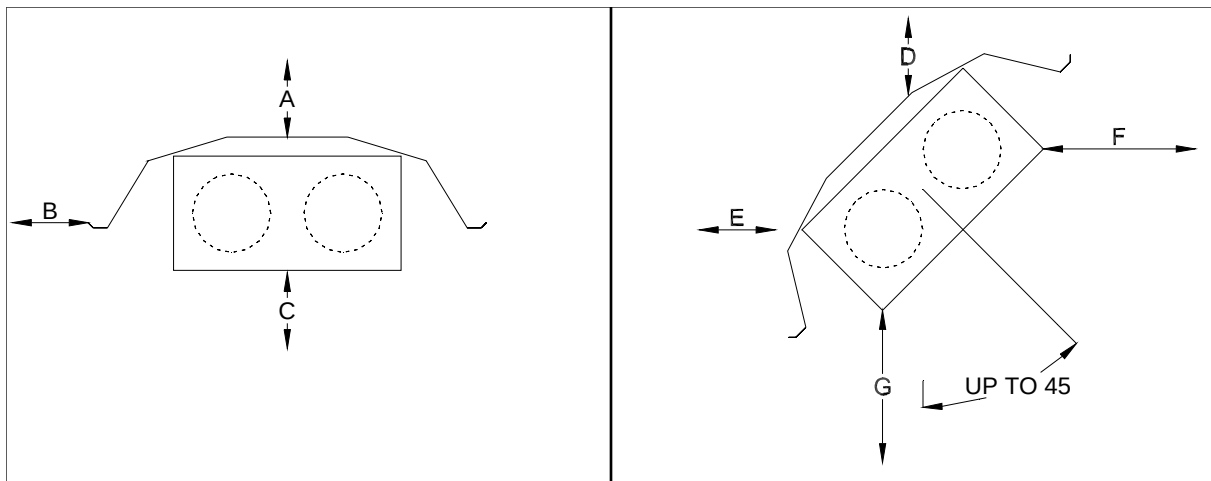


SECTION DETAILS

SIDE VIEW	END VIEW
The side view diagram shows a cross-section of the ITB straight tube. It includes a dimension of 10, 3/4" for the height of the main body and 16" for the width of the base.	The end view diagram shows a cross-section of the ITB straight tube. It includes a dimension of 13" for the width of the base and 4 1/2" for the height of the main body.

TABLE 4: APPROVED MINIMUM CLEARANCES TO COMBUSTIBLES—ITBU ‘U’ TUBE

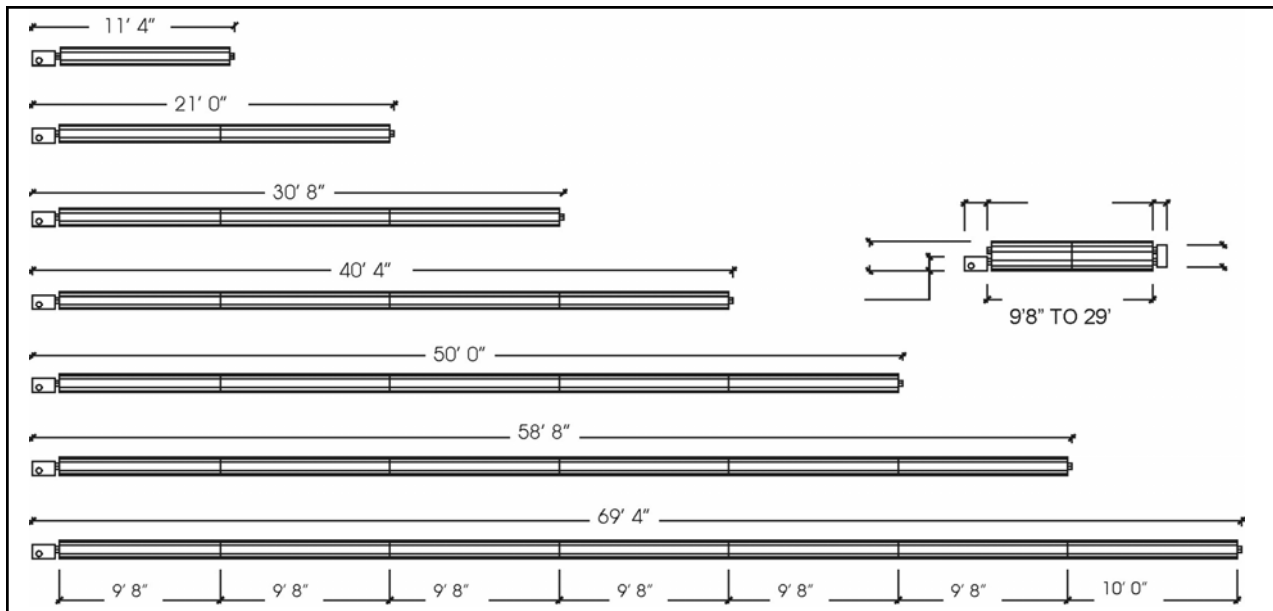
TABLE 4: CLEARANCES TO COMBUSTIBLES		SUSPENDED HORIZONTALLY			SUSPENDED AT AN ANGLE UP TO 45 DEGREES			
		TOP	SIDE	BELOW	TOP	REAR	FRONT	BELOW
		A	B	C	D	E	F	G
ITBU 200		7"	22"	68"	7"	1"	57"	68"
ITBU 175		6.5"	20"	68"	6.5"	1"	47"	68"
ITBU 155		6"	19"	64"	6"	1"	44"	64"
ITBU 130		4"	10.5"	60"	5"	1"	35"	56"
ITBU 110		4"	9.5"	60"	4.5"	1"	25.5"	54"
ITBU 80		2.5"	6"	42"	3.5"	1"	22.5"	38"
ITBU 60		2.5"	5.5"	33"	3"	1"	17"	34"



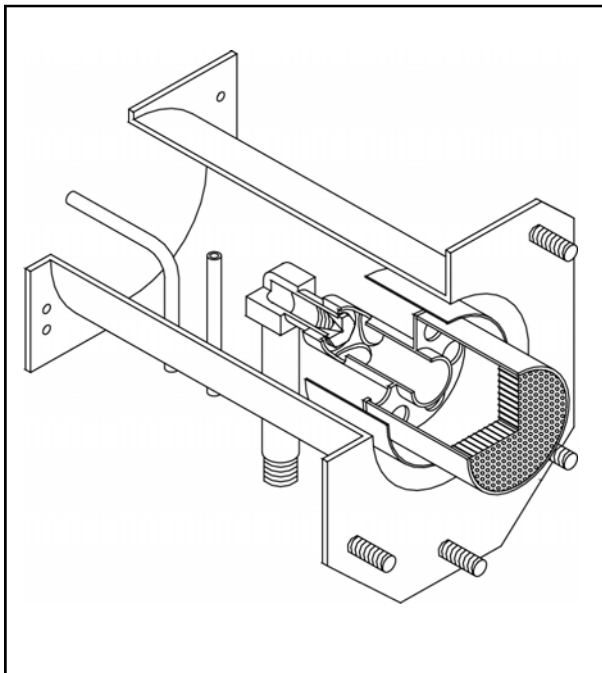
SECTION DETAILS

SIDE VIEW	END VIEW
Side view diagram showing dimensions: 10 3/4" height, 16" width, 9' 8" TO 29' length, and 10" width.	End view diagram showing dimensions: 21" width and 4 1/2" height.

TOP VIEWS OF ITB & ITBU SYSTEMS



CUT-AWAY BURNER VIEW



OPTIONAL ACCESSORIES		PROJECT QTY
90 DEGREE ELBOW KIT	JM-0508-KT	
1 ELBOW, 2 REFLECTOR END CAPS, 1 CLAMP.		
180 DEGREE ELBOW KIT	JM-0513-KT	
1 ELBOW, 2 REFLECTOR END CAPS, 1 CLAMP.		
4" FRESH AIR INTAKE ADAPTER	JS-0532-SE	
4" FRESH AIR INTAKE CAP	JS-0532-VC	
4" ROOF FLUE VENT TERMINAL	JA-0530-XX	
6" ROOF FLUE VENT TERMINAL	JA-0531-XX	
4" WALL FLUE VENT TERMINAL	JA-0528-XX	
6" WALL FLUE VENT TERMINAL	JA-0529-XX	
FLUE VENT TEE (4" x 4" x 6")	JA-0514-AA	
USA ONLY:		
FLEX GAS CONNECTOR 1/2" x 24"		
45,000 TO 155,000 BTUH	JL-0771-XX	
FLEX GAS CONNECTOR 3/4" x 24"		
175,000 TO 200,000 BTUH	JL-0771-XX	
CANADA ONLY:		
HOSE GAS CONNECTOR 1/2" x 36"		
45,000 TO 155,000 BTUH	JL-0771-RC	
HOSE GAS CONNECTOR 3/4" x 36"		
175,000 TO 200,000 BTUH	JL-0771-RB	
TRU-TEMP THERMOSTAT	JM-0150-XX	
THERMOSTAT 120 VOLT	JL-0772-XX	
THERMOSTAT 24 VOLT DIGITAL	JL-0569-WR	
24V THERMOSTAT RELAY KITS:		
Single Heater per 24V T-stat	JS-0568-KT	
Multiple Heaters per 24V T-stat	JM-0303-KT	

COMPONENT DESCRIPTION

IGNITION	DIRECT SPARK MODULE		HONEYWELL
COMBINATION GAS VALVE	HONEYWELL 24 VOLT		MANIFOLD PRESSURE: -NATURAL GAS 3.5" W.C. -PROPANE 10" W.C.
REFLECTORS	10' LONG, OVERLAPPING ENTIRE LENGTH OF THE HEATER- EXCEPT FOR 15' SYSTEMS WHICH WILL ALSO HAVE 5' REFLECTORS		
REFLECTOR END CAPS	ALUMINIZED STEEL		
TUBES 45 THRU 155 MBTUH INPUT	FIRST SECTION IS 10' LONG, 4" DIAMETER, 16 GA. ALUMINIZED STEEL WITH ONE SWAGED END' EACH ADDITIONAL SECTION IS 10' LONG, 4" DIAMETER, 16 GA. HOT ROLLED STEEL WITH ONE SWAGED END, EXCEPT FOR 15' SYSTEMS WHICH WILL ALSO HAVE 5' TUBE(S)		
TUBES 175 & 200 MBTUH INPUT	FIRST SECTION IS 10' LONG, 4" DIAMETER, 16 GA. ALUMA-THERM WITH ONE SWAGED END. SECOND SECTION IS 10' LONG, 4" DIAMETER, 16 GA. ALUMINIZED STEEL WITH ONE SWAGED END. EACH ADDITIONAL SECTION IS 10' LONG, 4" DIAMETER, 16 GA. HOT ROLLED STEEL WITH ONE SWAGED END.		
HANGERS	TWO HANGERS SUPPORT EACH LENGTH OF TUBE		
COUPLING KIT	TORCTITE COUPLER C/W 2 BOLTS 100,000, 175,000, & 200,000 Btuh HAVE ACCUSEAL TUBE CLAMP AT JUNCTION OF FIRST TO SECOND TUBE		
ELBOWS	90 DEGREE ELBOW 4" DIAMETER, 16 GA. ALUMINIZED STEEL, 8 ½" CENTRE RADIUS WITH ONE SWAGED END. 180 DEGREE ALUMINIZED STEEL TURN-AROUND BOX WITH ONE SWAGED END.		
BURNER HOUSING	BOTTOM FOLDS AWAY, PROVIDING ACCESS FROM TWO SIDES, END, AND BOTTOM		
BURNER	INCORPORATES EFFECTILE CERAMIC BURNER HEAD.		
TRANSFORMER	120/24VAC; 20VA		
SAFETY SWITCHES	TWO SEPARATE PRESSURE SWITCHES SENSE ADEQUATE COMBUSTION AIR AND POTENTIAL BLOCKED FLUE		
BLOWER	3300 RPM 110 VOLT		
THERMOSTAT OPTIONS	LINE VOLTAGE THERMOSTAT — FACTORY READY CONTROL SCHWANK TRU-TEMP (24V) SET BACK THERMOSTAT WITH RADIANT & AMBIENT SENSORS, AND AUTOMATIC UNOCCUPIED SETBACK MODE 24V THERMOSTAT THE ABOVE 24V THERMOSTATS REQUIRE FIELD MOUNTED 24V CONTROL OPTION: SINGLE HEATER PER THERMOSTAT: RELAY KIT JS-0568-KT MULTIPLE HEATERS PER THERMOSTAT: TRANSFORMER/RELAY KIT JM-0303-KT		