# SUBMITTAL DATA

# ITT(U)

## POSITIVE PRESSURE TWO STAGE SERIES GAS FIRED INFRA-RED TUBE HEATERS

| | |
|---|---|
| **PROJECT:** | |
| **ENGINEER:** | |
| **CONTRACTOR:** | |
| **DISTRIBUTOR:** | |
| **MODEL #:** | |
| **FUEL:** | |
| **APPROVED BY:** | |
| **DATE:** | |
| **APPROVAL #:** | |

AP-SITT-BX-02B
ITT SD
RL: 2C
RD: FEB 2007
BA

***NOTICE:***

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

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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.)** |
|---|---|---|---|---|---|---|
| **ITT 200/140-60 *** | | 59’ 8” | 200,000 / 140,000 (N.G. Only) | 10' | | 210 |
| **ITT 200/140-50 *** | | 50’ 0” | | 10' | | 180 |
| **ITTU 200/140-30 *** | | 31’ 11” | | 10' | | 210 |
| **ITT 175/125-60 *** | | 59’ 8” | 175,000 / 125,000 (N.G. Only) | 10' | *LINE MINIMUM* 5" W.C. N.G. 11" W.C. L.P. | 210 |
| **ITT 175/125-50 *** | | 50’ 0” | | 10' | | 180 |
| **ITTU 175/125-30 *** | | 31’ 11” | | 10' | | 210 |
| **ITT 155/110-50** | | 50’ 0”' | 155,000 / 110,000 | Not Required | | 180 |
| **ITT 155/110-40** | | 40' 4” | | 10' | *LINE MAXIMUM* 14" W.C. N.G. 14" W.C. L.P. | 150 |
| **ITTU 155/110-20** | | **22' 3”** | | 10' | | 150 |
| **ITT 130/90-40** | | 40’ 4” | 130,000 / 90,000 | 10' | | 150 |
| **ITT 130/90-30** | | 30’ 8” | | 14' | | 120 |
| **ITTU 130/90-20** | | **22’ 3”** | | 10' | *MANIFOLD* 3.5" W.C. N.G. 10" W.C. L.P. | 150 |
| **ITTU 130/90-15** | | **17’ 3”** | | 14’ | | 120 |
| **ITT 110/75-40** | | 40’ 4” | 110,000 / 75,000 | 10' | ½" INLET | 150 |
| **ITT 110/75-30** | | 30’ 8” | | 14' | | 120 |
| **ITTU 110/75-20** | | **22’ 3”** | | 10' | ELECTRICAL 120V, 60 HZ | 150 |
| **ITTU 110/75-15** | | **17’ 3”** | | 14’ | | 120 |
| **ITT 80/60-30** | | 30’ 8” | 80,000 / 60,000 | 14' | | 120 |
| **ITT 80/60-20** | | 21’ 0” | | 14' | | 90 |
| **ITTU 80/60-15** | | **17’ 3”** | | 14' | | 120 |
| **ITTU 80/60-10** | | **12’ 7”** | | 14' | | 90 |

* ITT(U) 175/125 and ITT(U) 200/140 are available in Natural Gas only.

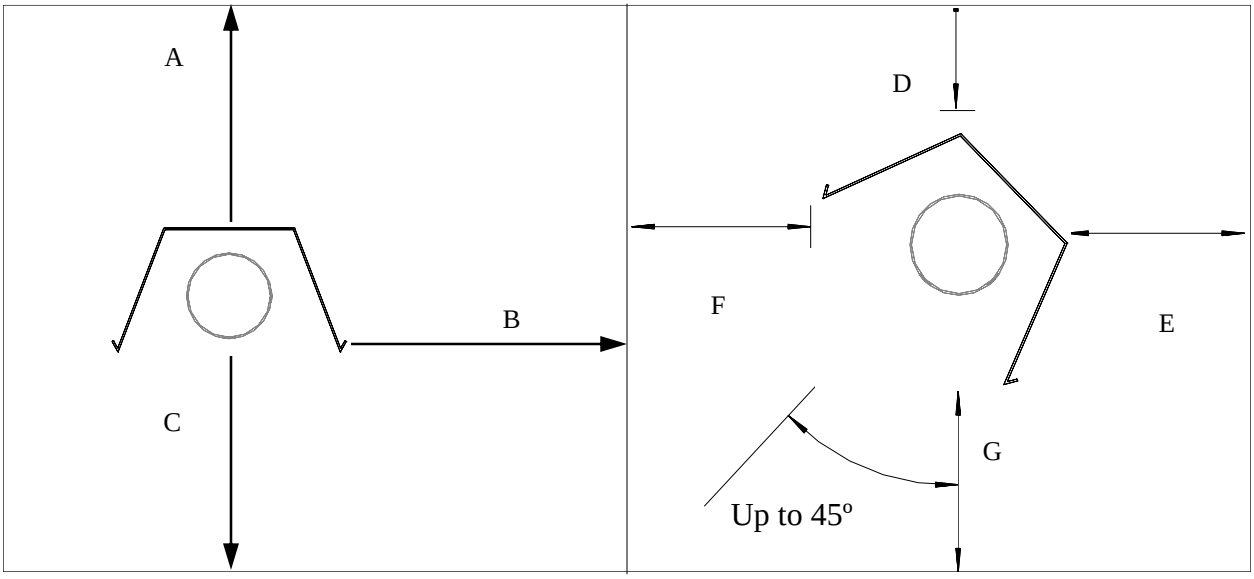
NOTE: Where required, series ITT(U) heaters will be supplied with the turbulator(s), snugly installed into the end tube(s) of the system configurations.

| ***TABLE 2: COMPONENT QUANTITIES PER HEATER MODEL*** | **ITT** ❒ **80/60** **20'** | **ITT** ❒ **80/60** ❒ **110/75** ❒ **130/90** **30'** | **ITT** ❒ **110/75** ❒ **130/90** ❒ **155/110** **40'** | **ITT** ❒ **155/110** **50'** | **ITT** ❒ **175/125** ❒ **200/140** **50'** | **ITT** ❒ **175/125** ❒ **200/140** **60'** |
|---|---|---|---|---|---|---|
| **10' ALUMA-THERM TUBE w/ FLANGE** | 0 | 0 | 0 | 0 | 1 | 1 |
| **10' ALUMINIZED TUBE w/ FLANGE** | 1 | 1 | 1 | 1 | 0 | 0 |
| **10' ALUMINIZED TUBE** | 0 | 0 | 0 | 0 | 1 | 1 |
| **10' STEEL TUBE** | 1 | 2 | 3 | 4 | 3 | 4 |
| **10' REFLECTOR** | 2 | 3 | 4 | 5 | 5 | 6 |
| **REFLECTOR END CAP** | 2 | 2 | 2 | 2 | 2 | 2 |
| **TORCTITE COUPLER** | 1 | 2 | 3 | 4 | 4 | 5 |
| **TUBE / REFLECTOR WIRE HANGER** | 4 | 6 | 8 | 10 | 10 | 12 |
| **10' ALUMINIZED STEEL TURBULATOR** | 1 | 1 | 1 | 0 | 1 | 1 |
| **4' ALUMINIZED STEEL TURBULATOR** | 1 | 1 | 0 | 0 | 0 | 0 |
| **HEATERS ON THIS JOB** | | | | | | |

| ***TABLE 2: COMPONENT QUANTITIES PER HEATER MODEL*** | **ITTU** ❒ **80/60** **10'** | **ITTU** ❒ **80/60** ❒ **110/75** ❒ **130/90** **15'** | **ITTU** ❒ **110/75** ❒ **130/90** ❒ **155/110** **20'** | **ITTU** ❒ **175/125** ❒ **200/140** **30'** |
|---|---|---|---|---|
| **10' ALUMA-THERM TUBE w/ FLANGE** | 0 | 0 | 0 | 1 |
| **10' ALUMINIZED TUBE w/ FLANGE** | 1 | 1 | 1 | 0 |
| **10' ALUMINIZED TUBE** | 0 | 0 | 0 | 1 |
| **10' STEEL TUBE** | 1 | 1 | 3 | 4 |
| **5' STEEL TUBE** | 0 | 2 | 0 | 0 |
| **10' REFLECTOR** | 1 | 2 | 2 | 3 |
| **5' REFLECTOR** | 0 | 2 | 0 | 0 |
| **REFLECTOR END CAP** | 2 | 2 | 2 | 2 |
| **TORCTITE COUPLER** | 2 | 4 | 4 | 6 |
| **TUBE / REFLECTOR WIRE HANGER** | 2 | 4 | 4 | 6 |
| **10' ALUMINIZED STEEL TURBULATOR** | 1 | 1 | 1 | 1 |
| **4' ALUMINIZED STEEL TURBULATOR** | 1 | 1 | 0 | 0 |
| **180 DEGREE TURN-AROUND BOX** | 1 | 1 | 1 | 1 |
| **HEATERS ON THIS JOB** | | | | |

**TABLE 3: APPROVED MINIMUM CLEARANCES TO COMBUSTIBLES**

| MODEL | SUSPENDED HORIZONTALLY | | | SUSPENDED AT AN ANGLE UP TO 45 DEGREES | | | |
|---|---|---|---|---|---|---|---|
| | TOP | SIDE | BELOW | TOP | REAR | FRONT | BELOW |
| | A | B | C | D | E | F | G |
| **ITT 200 / 140** | 7" | 22" | 68" | 7" | 1" | 57" | 68" |
| **ITT 175 / 125** | 6.5" | 20" | 68" | 6.5" | 1" | 47" | 68" |
| **ITT 155 / 110** | 6" | 19" | 64" | 6" | 1" | 44" | 64" |
| **ITT 130 / 90** | 4" | 11" | 60" | 5' | 1" | 35" | 56" |
| **ITT 110 / 75** | 3" | 10" | 60" | 4.5" | 1" | 26" | 54" |
| **ITT 80 / 60** | 2.5" | 6" | 42" | 3.5" | 1" | 23" | 38" |




## SECTION DETAILS

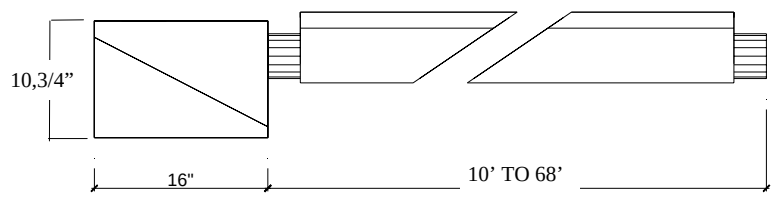
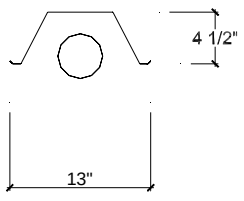
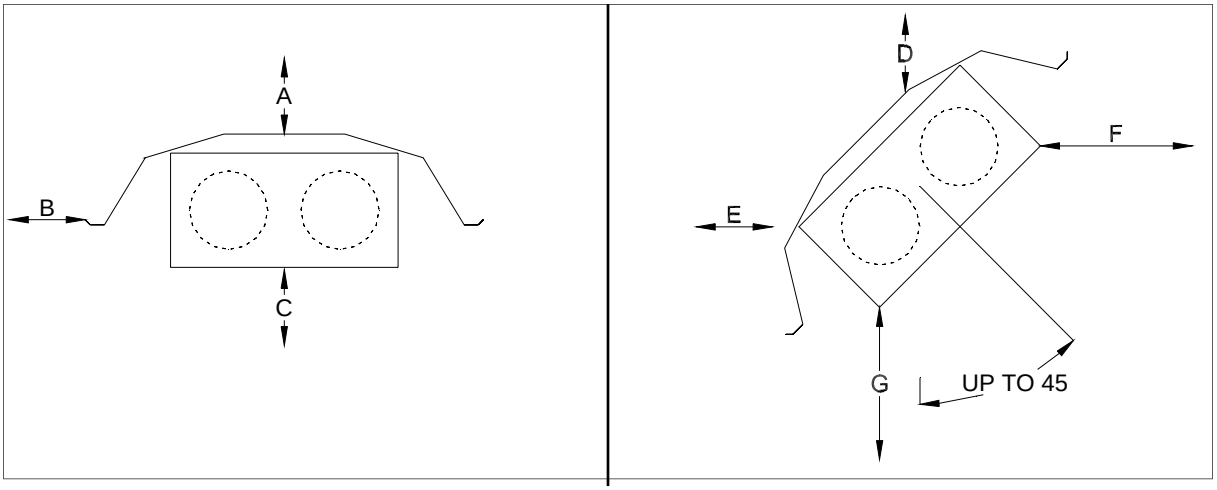
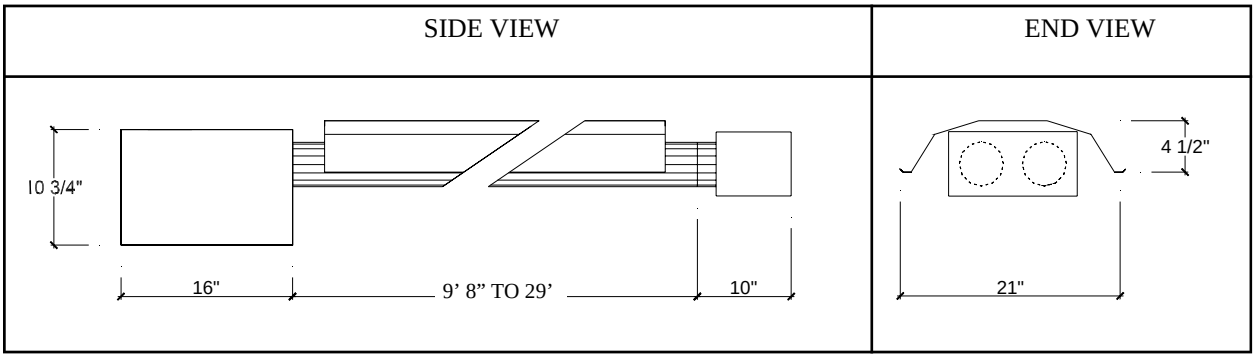
| SIDE VIEW | END VIEW |
|---|---|
|  |  |

**TABLE 3: APPROVED MINIMUM CLEARANCES TO COMBUSTIBLES**

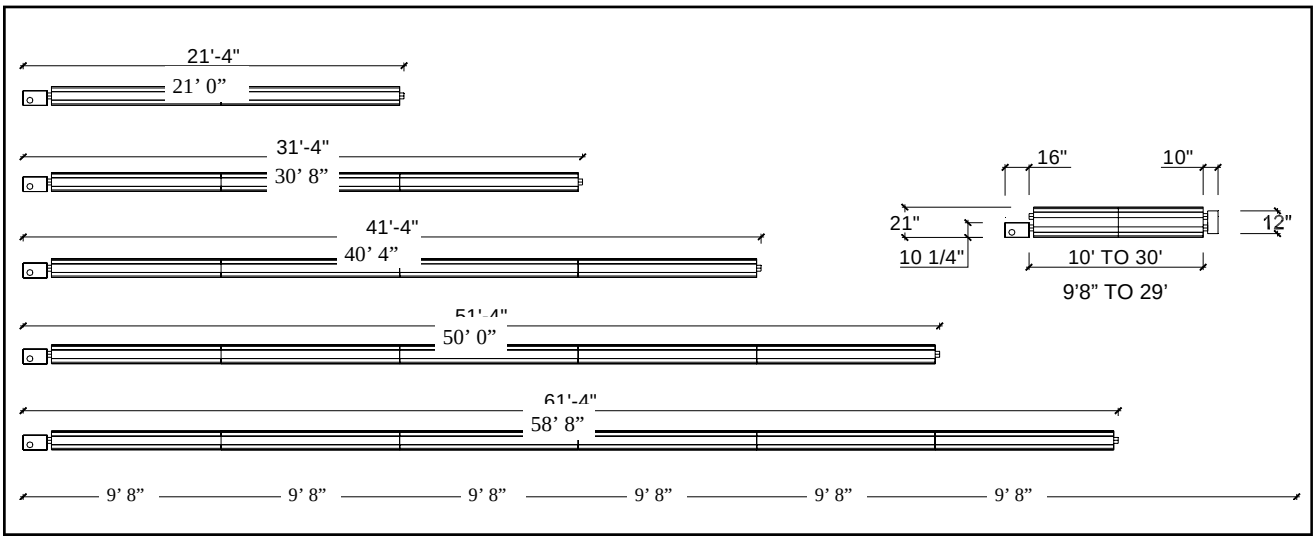
| MODEL | SUSPENDED HORIZONTALLY | | | SUSPENDED AT AN ANGLE UP TO 45 DEGREES | | | |
|---|---|---|---|---|---|---|---|
| | TOP | SIDE | BELOW | TOP | REAR | FRONT | BELOW |
| | A | B | C | D | E | F | G |
| **ITTU 200 / 140** | 7" | 22" | 68" | 7" | 1" | 57" | 68" |
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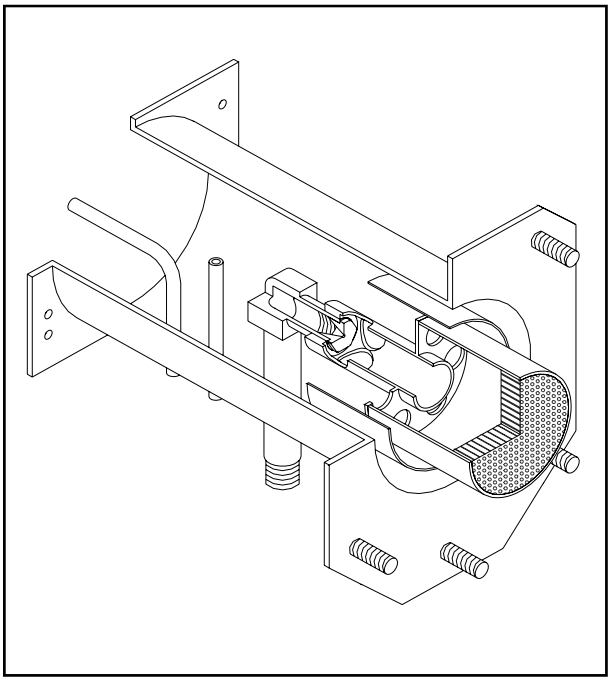

## SECTION DETAILS



## TOP VIEWS OF SYSTEMS




## CUT-AWAY BURNER VIEW



| OPTIONAL ACCESSORIES | PROJECT QTY |
|---|---|
| 90 DEGREE ELBOW KIT JM-0508-KT<br>1 ELBOW, 2 REFLECTOR END CAPS, 1 CLAMP. | |
| 180 DEGREE ELBOW KIT JM-0513-KT<br>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 | |
| 4" WALL FLUE VENT TERMINAL JA-0528-XX | |
| **USA ONLY:**<br>FLEX GAS CONNECTOR 1/2" x 24"<br>45,000 TO 155,000 BTUH JL-0771-XX | |
| FLEX GAS CONNECTOR 3/4" x 24"<br>175,000 TO 200,000 BTUH JL-0771-XX | |
| **CANADA ONLY:**<br>HOSE GAS CONNECTOR 1/2" x 36"<br>45,000 TO 155,000 BTUH JL-0771-RC | |
| HOSE GAS CONNECTOR 3/4" x 36"<br>175,000 TO 200,000 BTUH JL-0771-RB | |
| THERMOSTAT 2 STAGE 24V DIGITAL JS-0569-DT<br>NOTE: Each heater requires individual thermostat - control logic for multiple heaters per thermo-stat is not supplied or supported by InfraSave. | |
| | |

## COMPONENT DESCRIPTION

| | | | |
|---|---|---|---|
| **IGNITION** | DIRECT SPARK | | HONEWELL S87J - 24 VAC |
| **COMBINATION GAS VALVE** | HONEYWELL 24 VOLT<br>TWO STAGE<br><br>NOTE: ITT(U) 175/125 and ITT(U) 200/140 are available in Natural Gas only. | | -NATURAL GAS 3.5” / 1.7" W.C. MANIFOLD PRESSURE<br><br>-PROPANE 10” / 4.9" W.C. MANIFOLD PRESSURE |
| **REFLECTORS** | 10’ LONG, OVERLAPPING ENTIRE LENGTH OF THE HEATER-<br>EXCEPT FOR 15’ SYSTEMS WHICH WILL ALSO HAVE 5’ REFLECTORS | | |
| **REFLECTOR END CAPS** | ALUMINIZED STEEL | | |
| **TUBES 60 THRU 155 MBTUH INPUT** | FIRST SECTION IS 10' LONG, 4" DIAMETER, 16 GA.ALUMINIZED STEEL WITH ONE SWAGED END’<br>EACH ADDITIONAL SECTION IS 10' LONG, 4" DIAMETER, 16 GA. HOT ROLLED STEEL WITH AND ONE SWAGED END<br>EXCEPT FOR 15’ SYSTEMS WHICH WILL ALSO HAVE 5’ TUBES | | |
| **TUBES 175 & 200 MBTUH INPUT** | FIRST SECTION IS 10' LONG, 4" DIAMETER, 16 GA. ALUMA-THERM WITH ONE SWAGED END.<br>SECOND SECTION IS 10' LONG, 4" DIAMETER, 16 GA. ALUMINIZED STEEL WITH ONE SWAGED END.<br><br>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 | | |
| **ELBOWS** | 90 DEGREE ELBOW 4" DIAMETER, 16 GA. ALUMINIZED STEEL, 8 ½" CENTRE RADIUS WITH ONE SWAGED END.<br><br>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. | | |
| **SAFETY SWITCHES** | TWO SEPARATE AIR PRESSURE SWITCHES SENSE ADEQUATE COMBUSTION AIR AND POTENTIAL BLOCKED FLUE | | |
| **BLOWER** | 3300 RPM 110 VOLT | | |