

90-130 ton Packaged Industrial Rooftop

ALTERNATE - RTU-M1

Job Information

Legacy Meridian Park Ipak Repl. J93A70059

Portland OR Main Office
(D77)David Strasser



Tag	90 T High 80	Model number	SFHKC90
Nominal Capacity	90 Ton	Unit Type	SF: Natural Gas Heat

Model Description

Unit airflow	H: Single Zone	Development sequence	G
Power Supply	460/60/3	Heating Capacity	4:1 Mod. Gas Heat
Exhaust	100% - 25 Hp w/Statitrac	Exhaust fan drive selection	700 rpm
Filter	High-Efficiency Throwaway Filters	Supply Fan Hp	80 Hp (2-40 Hp Motors)
Supply fan RPM	1359 rpm	Outside Air Selection	0-100% Economizer
Max operating weight		Min operating weight	
		High cap evap / high eff cond coil	High cap evap coil & high eff cond coil

Cooling

Gross total capacity	1130.55 MBh	Gross sensible capacity	1000.37 MBh
Gross latent capacity	130.18 MBh	Net total capacity	1006.72 MBh
Net sensible capacity	876.54 MBh	Net sensible heat ratio	87.07 %
Leaving coil DB	53.85 F	Leaving coil WB	52.58 F
Leaving unit DB	57.41 F	Leaving unit WB	54.11 F

Power

Total static pressure	5.773 in H2O	Supply duct static pressure	2.250 in H2O
Return duct static pressure	1.500 in H2O	Roof curb (for static pressure add)	
Actual supply motor power	44.29 bhp	Supply fan RPM	1359 rpm
Actual exhaust motor power	17.97 bhp	Actual exhaust fan speed	695 rpm
System power	125.32 kW	Supply fan drive selection	1400 rpm

Electrical

Min circuit ampacity	304.30 A	Max overcurrent protection	350.00 A
Min disconnect switch size	336.00 A	Compressor 1 RLA	37.20 A
Compressor 1 count	4.00 Each	Compressor 2 RLA	0.00 A
Compressor 2 count	0.00 Each	Supply fan motor FLA	47.60 A
Supply fan count	2.00 Each	Condenser fan FLA	14.40 A
Exhaust fan motor FLA	31.00 A	Other FLA	2.00 A
IEER @ AHRI	15.1 EER	EER @ AHRI	10.8 EER

Electrical values provided are estimated only and are subject to change without notice and may differ from nameplate values.

90-130 ton Packaged Industrial Rooftop

Job Information

Legacy Meridian Park Ipak Repl. J93A70059

Portland OR Main Office
(D77)David Strasser



Tag **90 T High 80**

Model number

SFHKC90

Nominal Capacity

90 Ton

Unit Type

SF: Natural Gas Heat

Entering Conditions

Design airflow	34000 cfm	Exhaust fan airflow	28000 cfm
Ambient temp	95.00 F	Cooling EDB	80.00 F
Cooling EWB	64.00 F	Ent air relative humidity	41.56 %
Elevation		Heating EAT	60.00 F

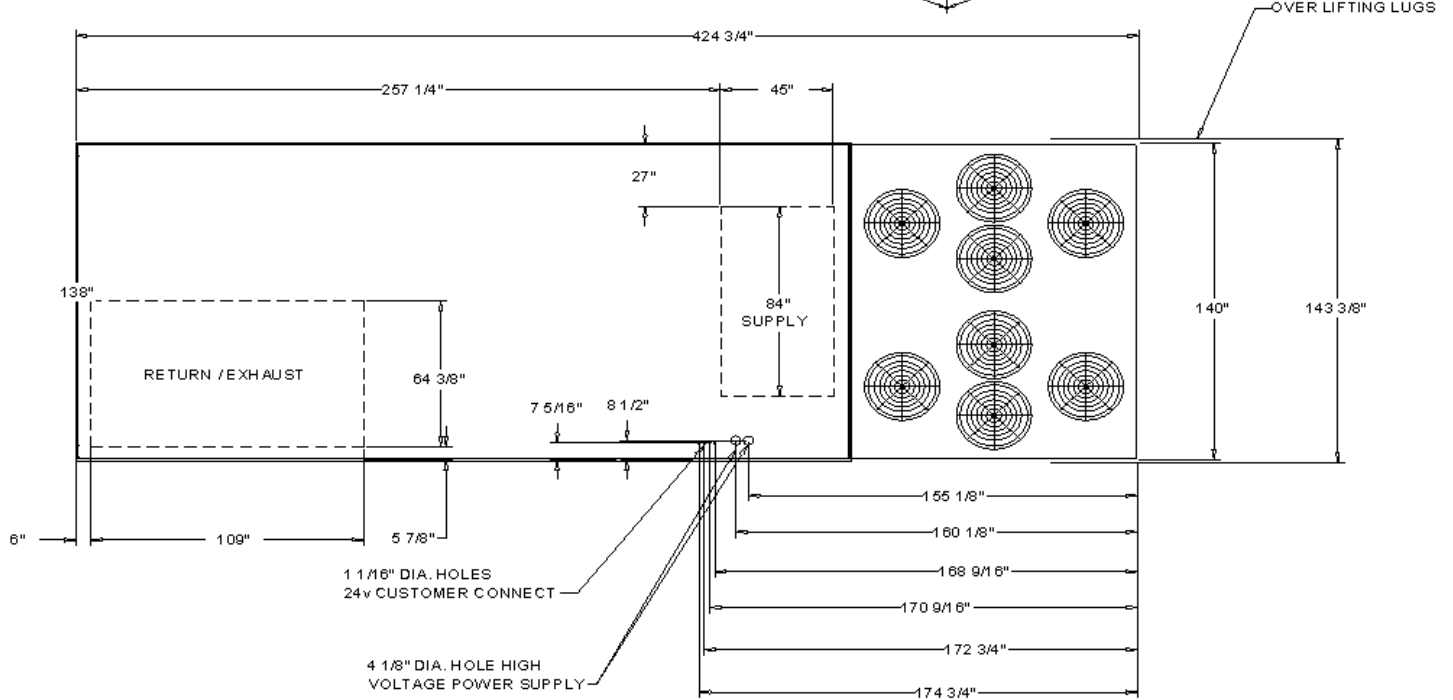
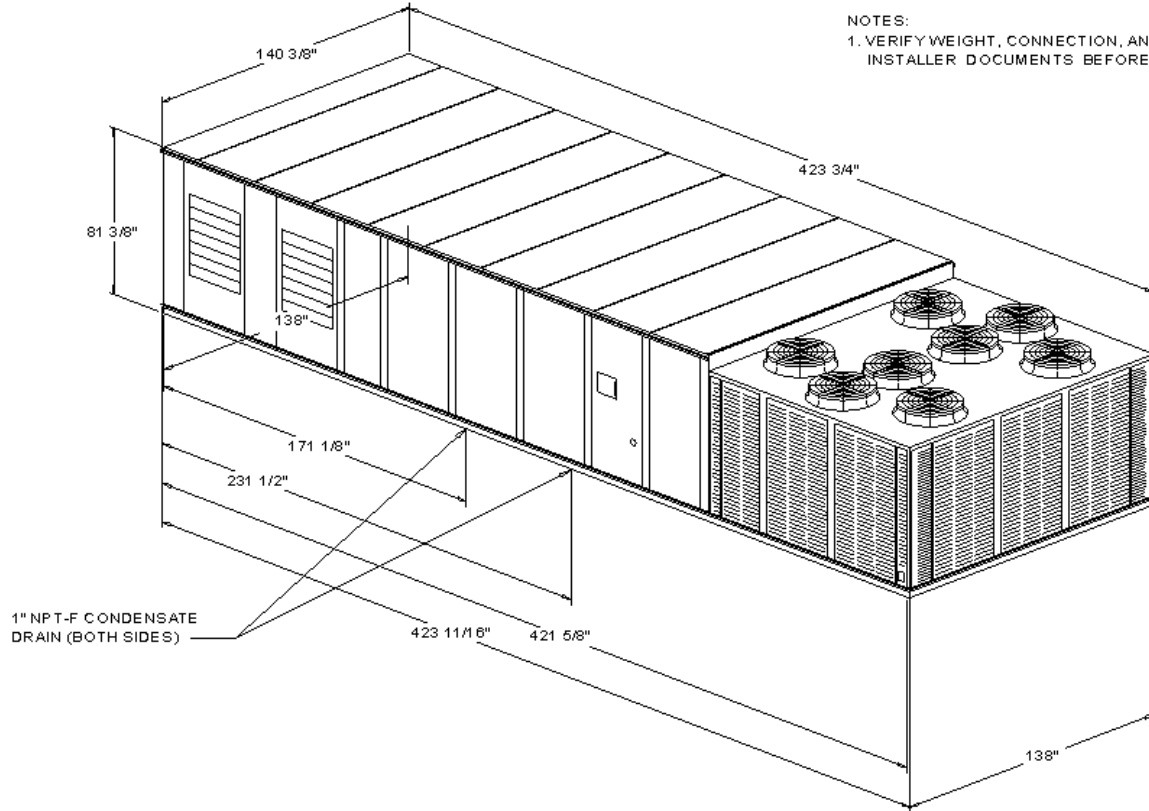
Coil Specification

Evaporator face area	59.30 sq ft	Evaporator rows	6.00 Each
Evaporator fin spacing	148 Per Foot		

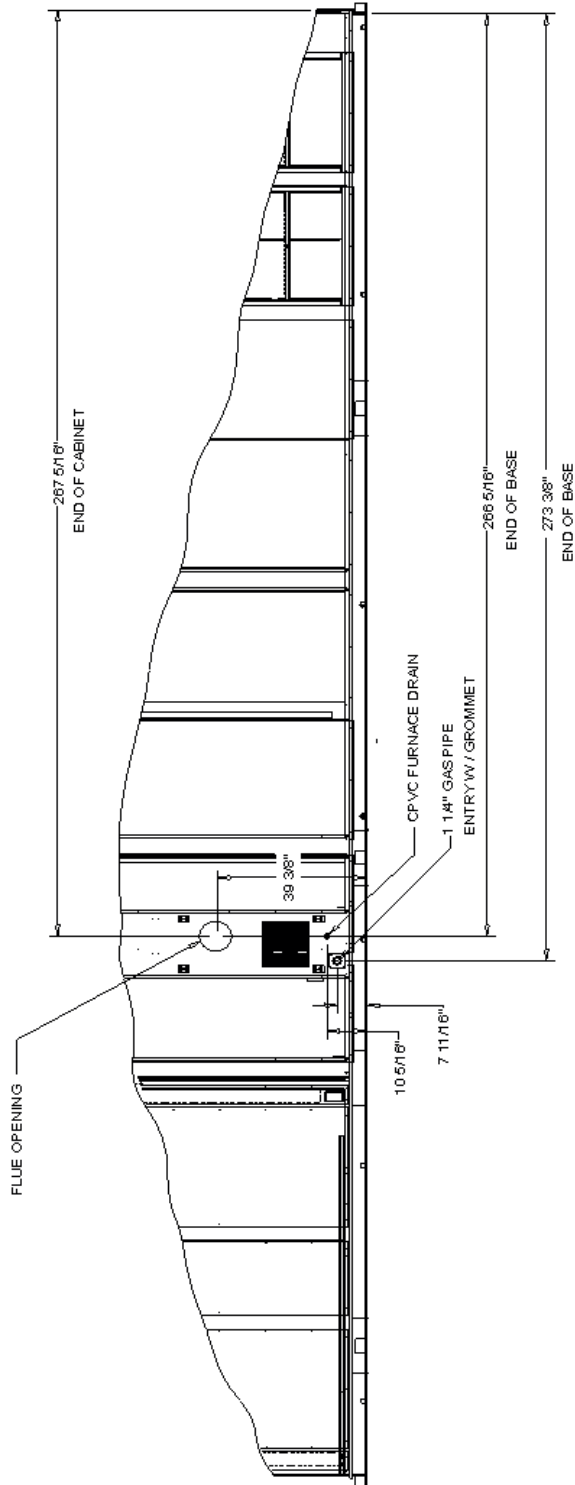
Heating

Input htg capacity	1000.00 MBh	Output htg capacity	800.00 MBh
Output htg capacity w/fan	912.81 MBh	Heating LAT	81.69 F
Heating delta T	21.69 F	Entering water temp	

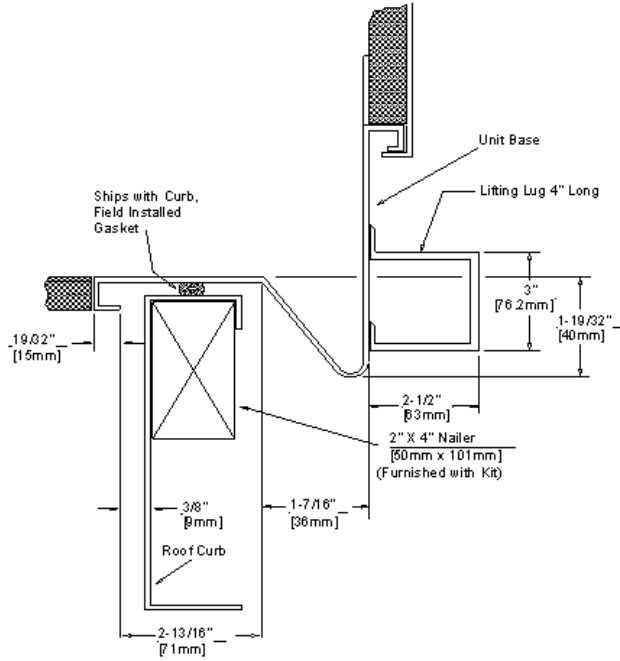
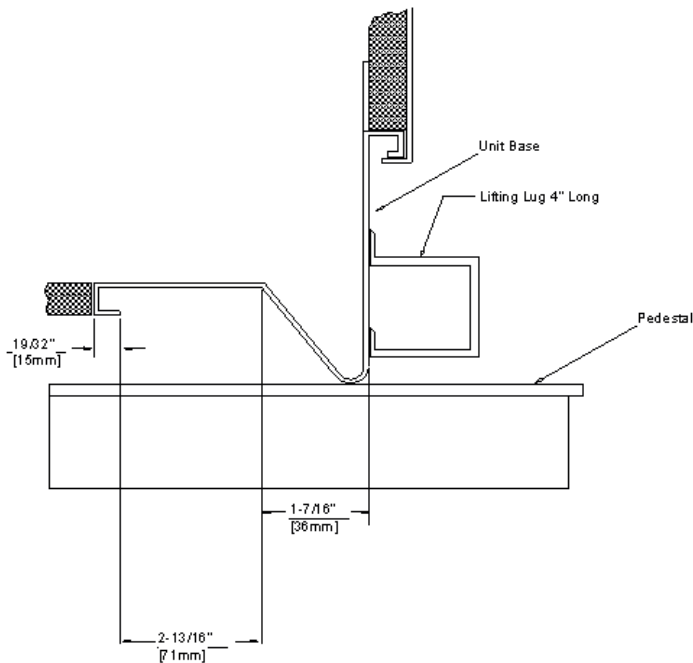
Electrical values provided are estimated only and are subject to change without notice and may differ from nameplate values.



90 - 130 TON SELF-CONTAINED
 PLAN VIEW DRAWING



90 - 130 TON GAS HEAT
RIGHT SIDE OF UNIT

TYPICAL ROOF CURB AND BASE PAN DETAIL

TYPICAL PEDESTAL AND BASE PAN DETAIL


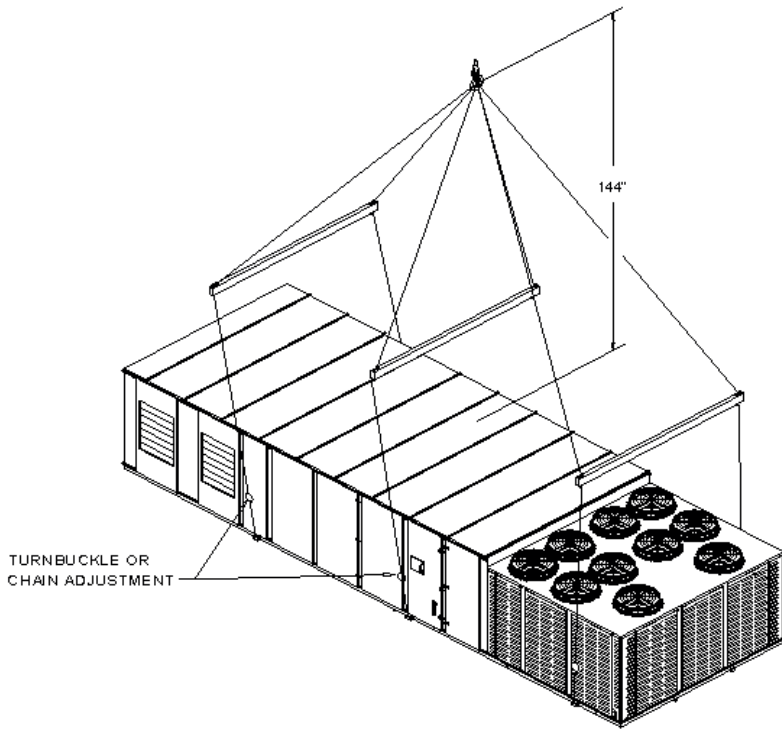


ELECTRICAL / GENERAL DATA

GENERAL DATA Tonnage: 90 Unit Operating Voltage Range: 414 -506 Unit Primary Voltage: 460 Unit Hertz: 60 Unit Phase: 3 EER: 10.8 EER		HEATING - PERFORMANCE Heat Input: 250-1000 Heat Output: 200-800 Capacity Steps: 4:1 HEATING - GENERAL DATA Gas Inlet Pressure (in w.c.): 14.0 w.c. / 7.0 w.c. Gas Pipe Connection Size: 1 1/4"	
ELECTRIC HEATER Electric Heater kw Electric Heater Full Load Amps			
COMPRESSOR Number: 2 Tons (Each) (5): 20/20 Compressor Rated Load Amps (Each): 37.20 A Locked Rotor Amps (Each): 215.0 / 215.0	Circuit #1	Circuit #2	
SUPPLY FAN MOTOR Number: 2 Horsepower (Each): 40.0 Supply Fan Motor Full Load Amps (Each): 47.60 A	EXHAUST FAN MOTOR Number: 1 Horsepower (Each): 25.0 Exhaust Fan Motor Full Load Amps (Each): 31.00 A		
CONDENSOR FAN MOTOR Number: 8 Horsepower (Each): 1.0 Condensor Fan Motor Full Load Amps (Each): 14.40 A	REFRIGERANT Refrigerant Type: R-410A Factory Charge (Circuit #1) (6): 64.8 lb Factory Charge (Circuit #2) (6): 64.8 lb		
FILTERS - TYPE T type: High Efficiency Rack-less Filter Yes Furnished: No Number: 25 Recommended Size: 24" x 24" x 2"			
FINAL FILTERS - TYPE T type: Furnished: Number: Recommended Size:			
Cooling MCA = (1.25 x LOAD 1) + LOAD 2 + LOAD 4 Cooling MOP = (2.25 x LOAD 1) + LOAD 2 + LOAD 4 Cooling RDE = (1.5 x LOAD 1) + LOAD 2 + LOAD 4			

Notes:

- LOAD 1= Current of the largest motor (Compressor or Fan Motor); LOAD 2=Sum of the currents of all remaining motors
- LOAD 3= FLA(Full Load Amps) of the electric heater; LOAD 4= Any other load rated at 1 amp or more.
- F or Electric Heat MCA, MOP, RDE values, calculate for both cooling and heating modes.
- If selected Max Over Cur is less than the Min Cir Amp, then select the lowest maximum fuse size which is equal to or larger than the Min Cir Amp, provided the selected fuse size does not exceed 800 amps.
- If the selected Recommended Dual Element fuse size is greater than the selected Max Over Cur Protection value, then select the Recommended Dual Element fuse size value to equal the Max Over Protection value.
- Compressor KVA at AHR I rating conditions of 80/87 -95
- Refrigerant charge is an approx. value. For a more precise value, see unit nameplate and service instructions.

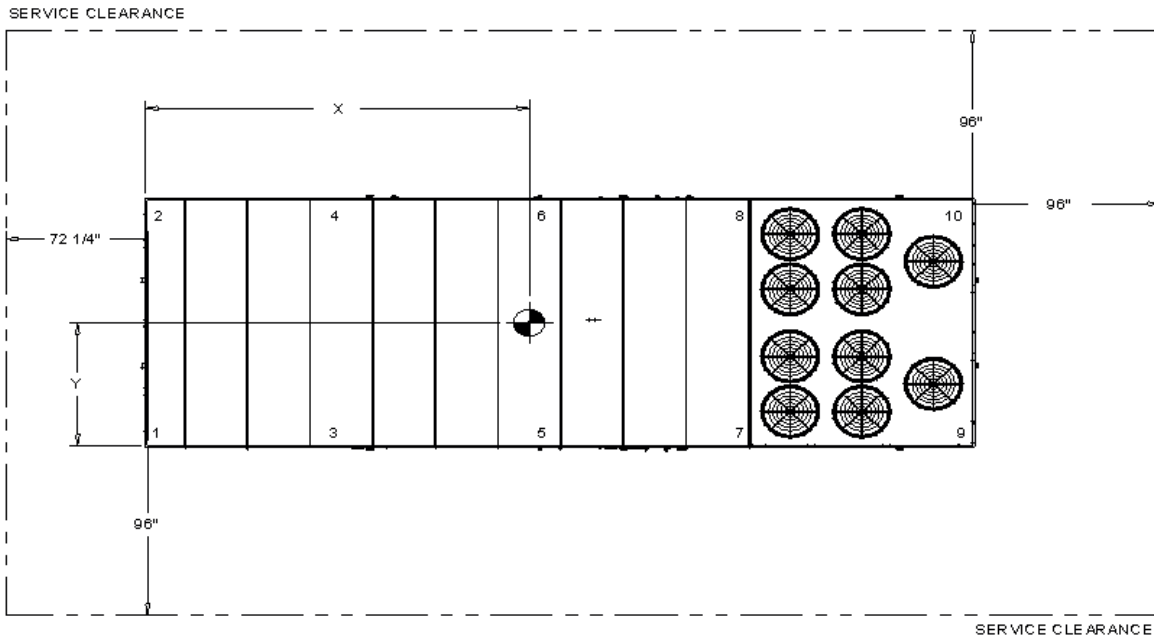


CALCULATED WEIGHT:	N/A
POINT LOAD 1:	1569.1 lb
POINT LOAD 2:	1678.9 lb
POINT LOAD 3:	1540.8 lb
POINT LOAD 4:	1650.6 lb
POINT LOAD 5:	1517.7 lb
POINT LOAD 6:	1627.4 lb
POINT LOAD 7:	1494.7 lb
POINT LOAD 8:	1604.5 lb
POINT LOAD 9:	1473.5 lb
POINT LOAD 10:	1583.3 lb
TOTAL WEIGHT:	15740.7 lb
CENTER OF GRIMT Y X:	17.16 ft
CENTER OF GRIMT Y Y:	6.02 ft

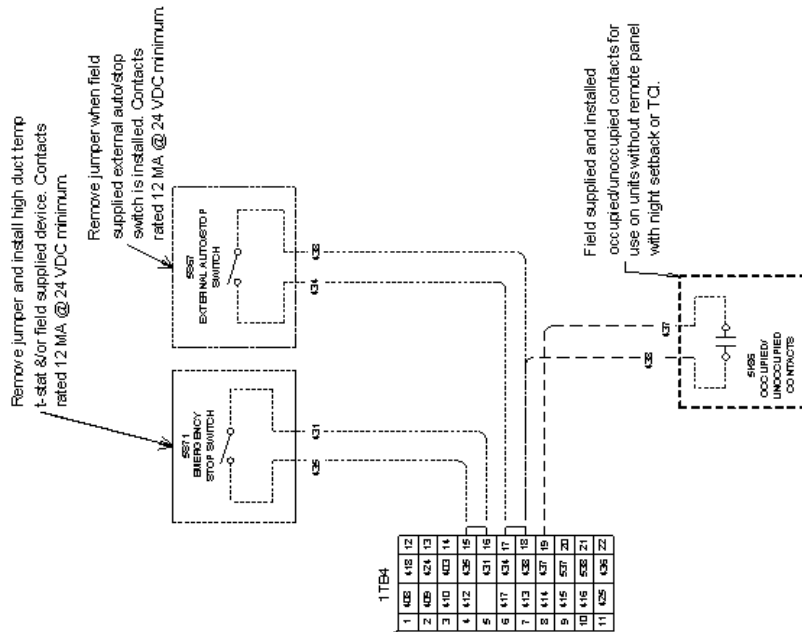
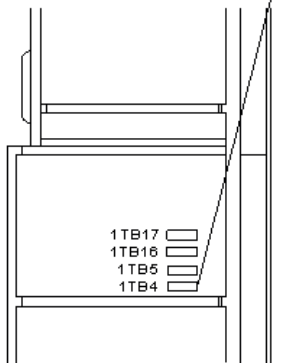
ADD WEIGHT
 1. DOUBLE WALL WIEGHT : ⁽³⁾ N/A

- NOTES:
1. The actual weight is stamped on the unit nameplate.
 2. The weight shown represents the typical unit operating weight for the configuration selected. Estimated at +/- 10% of the nameplate weight.
 3. Add weight to the total unit weight.
 4. Design special weights are not displayed. Any weight added through COD (Custom Order Design) will not be accounted in the +/- 10% estimate.
 5. When 2 or more units are to be placed side by side, the distance between the units should be increased to 150% of the recommended single unit clearance. The units should also be staggered to reduce span deflection & assure proper diffusion of exhaust air.

RIGGING
 ISOMETRIC VIEW OF UNIT



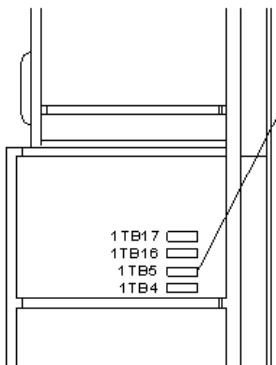
CENTER OF GRAVITY AND CLEARANCES
 PLAN VIEW OF UNIT



<p>WARNING HAZARDOUS VOLTAGE! DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS BEFORE SERVICING. FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.</p> <p>AVERTISSEMENT VOLTAGE HASARDEUX! DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUÉS A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN. FAUTE DE DECONNECTER LA SOURCE ELECTRIQUE AVANT D'EFFECTUER L'ENTRETIEN PEUT ENTRAINER DES BLESSURES CORPORELLES SEVERES O U LA MORT.</p> <p>CAUTION USE COPPER CONDUCTORS ONLY! UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS. FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.</p> <p>IMPORTANT! DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED</p>	<p>Remove jumper and install high duct temperature &/or field supplied device. Contacts rated 12 MA @ 24 VDC minimum.</p> <p>Remove jumper when field supplied external auto stop switch is installed. Contacts rated 12 MA @ 24 VDC minimum.</p> <p>Field supplied and installed occupied/unoccupied contacts for use on units without remote panel with night setback or TCI.</p>
---	---

DEVICE PREFIX	LOCATION CODE
AREA	LOCATION
1	INSIDE UNIT CONTROL BOX
2	CONDENSER SECTION
3	AIR HANDLER SECTION
4	HEATING SECTION
5	EXTERNAL FIELD MOUNTED DEVICE

Note: All wiring and components shown dashed to be supplied and installed by the customer in accordance with local electrical codes.



WARNING

HAZARDOUS VOLTAGE!
 DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS BEFORE SERVICING.
 FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.

AVERTISSEMENT

VOLTAGE HASARDEUX!
 DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.
 FAUTE DE DECONNECTER LA SOURCE ELECTRIQUE AVANT D'EFFECTUER L'ENTRETIEN PEUT ENTRAÎNER DES BLESSURES CORPORELLES SEVERES OU LA MORT.

CAUTION

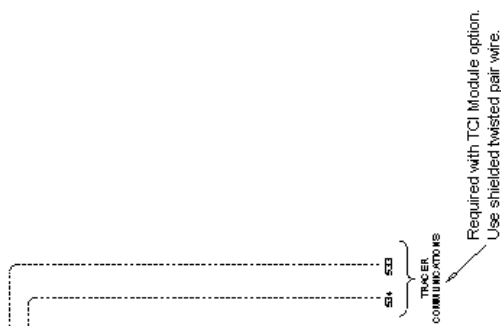
USE COPPER CONDUCTORS ONLY!
 UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.
 FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

IMPORTANT!
 DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED

DEVICE PREFIX LOCATION CODE	
AREA	LOCATION
1	INSIDE UNIT CONTROL BOX
2	CONDENSER SECTION
3	AIR HANDLER SECTION
4	HEATING SECTION
5	EXTERNAL FIELD MOUNTED DEVICE

1TB6

1	485	475	12
2	490	476	13
3	523	528	14
4	524	529	15
5	525	530	16
6	526	531	17
7	527	532	18
8	569	533	6
9	570	534	7
10	427	443	21
11	428	444	22



Note: All wiring and components shown dashed to be supplied and installed by the customer in accordance with local electrical codes.

90 T High 80 S_HG13

