



Job Name: UR Las Vegas 20 Tons  
 Prepared By:  
 Unit Tag: 20 ton, (9)  
 Quantity: 10

# Trane Voyager Cooling Packaged Rooftop

## Unit Overview - TSH240G3RNC\*\*01A1A10000000000000000000000

Application	Unit Size	Supply Fan		External Dimensions (in.)			Operating Weight		EER	IEER/SEER	Elevation
		Airflow	External Static Pressure	Height	Width	Length	Minimum	Maximum			
DX cooling	20 Ton	7000 cfm	1.800 in H2O	4.68 ft	7.02 ft	10.14 ft	1902.0 lb	2984.0 lb	10.0 EER	11.60	

## Unit Features

SupplyFan/Drive/ MotorType	Oversize motor
Panels/Filters	Hinged panels/std filters

## Unit Electrical

Voltage/phase/hertz	208-230/60/3
MCA	126.00 A
MOP	150.00 A
MCA (230 w/ Elec Heat)	140.00 A
MOP (230 w/ Elec Heat)	150.00 A



## Controls

Unit Controls Reliabel

## Cooling Section

		Capacity	
Entering Dry Bulb	80.00 F	Gross Total	250.91 MBh
Entering Wet Bulb	67.00 F	Gross Sensible	185.45 MBh
Ambient Temp	95.00 F	Net Total	230.34 MBh
Leaving Coil Dry Bulb	55.47 F	Net Sensible	164.88 MBh
Leaving Coil Wet Bulb	55.22 F	Fan Motor Heat	20.57 MBh
Leaving Unit Dry Bulb	58.64 F	Refrig Charge-circuit 1	12.4 lb
Leaving Unit Wet Bulb	56.48 F	Refrig Charge-circuit 2	7.2 lb
Refrigeration System Options			
Leaving Dew Point	55.05 F		

## Heating Section

Heat Type	Electric
Heating Stages	2
Output Heating Capacity	122.94 MBh
Heating EAT	70.00 F
Heating LAT	86.17 F
Heating Temp Rise	16.17 F

## Fan Section

Indoor Fan Data		Outdoor Fan Data	
Type	FC Centrifugal	Type	Propeller
Drive Type	Belt	Fan Quantity	2
Indoor Fan Performance		Drive Type	Direct
Airflow	7000 cfm	Outdoor Fan Performance	
Design ESP	1.800 in H2O	Outdoor Motor Power	1.73 kW
Component SP	0.000 in H2O	Condenser Fan FLA	4.80 A
Total SP	1.875 in H2O	Exhaust Fan Performance	
Supply Motor Horsepower	7.500 hp	Exhaust Fan FLA	24.20 A
Indoor Motor Operating Power	6.53 bhp		
Indoor Motor Power	4.86 kW		
Indoor RPM	910 rpm		

## Compressor Section

Power	19.70 kW
Circuit 1 RLA	44.16 A
Circuit 2 RLA	24.96 A

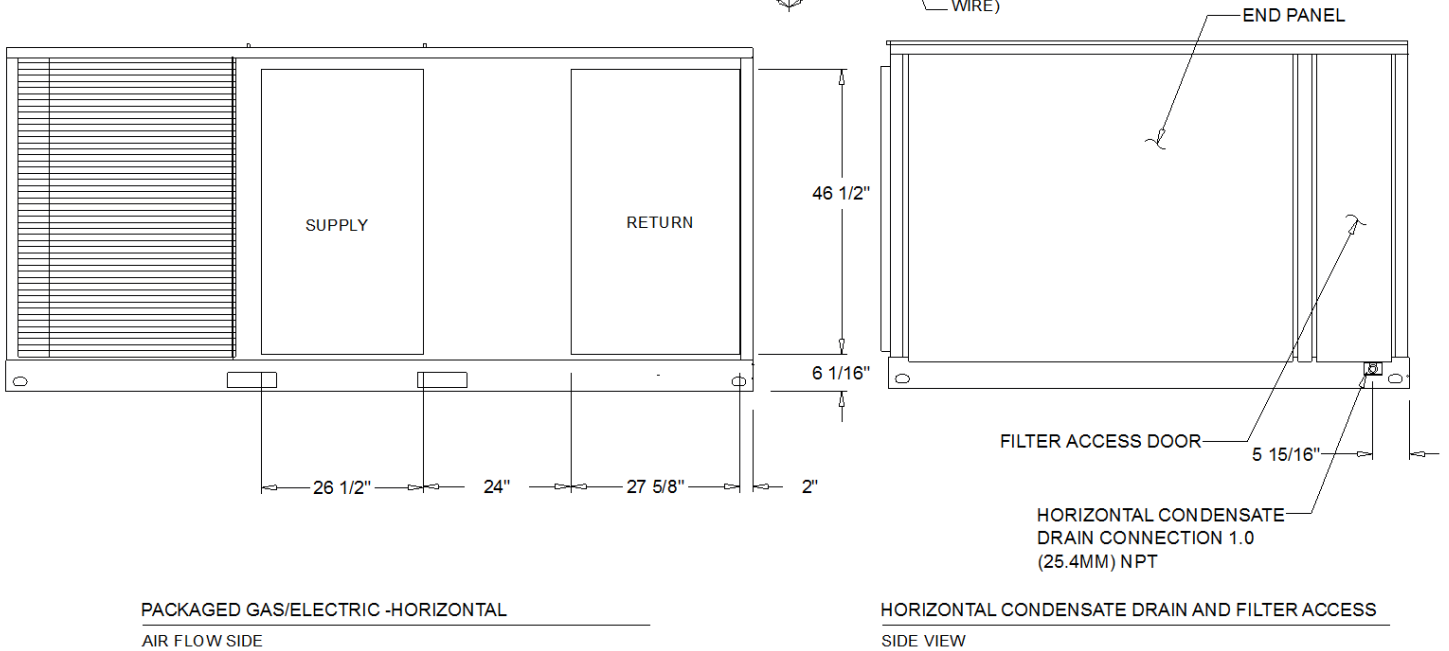
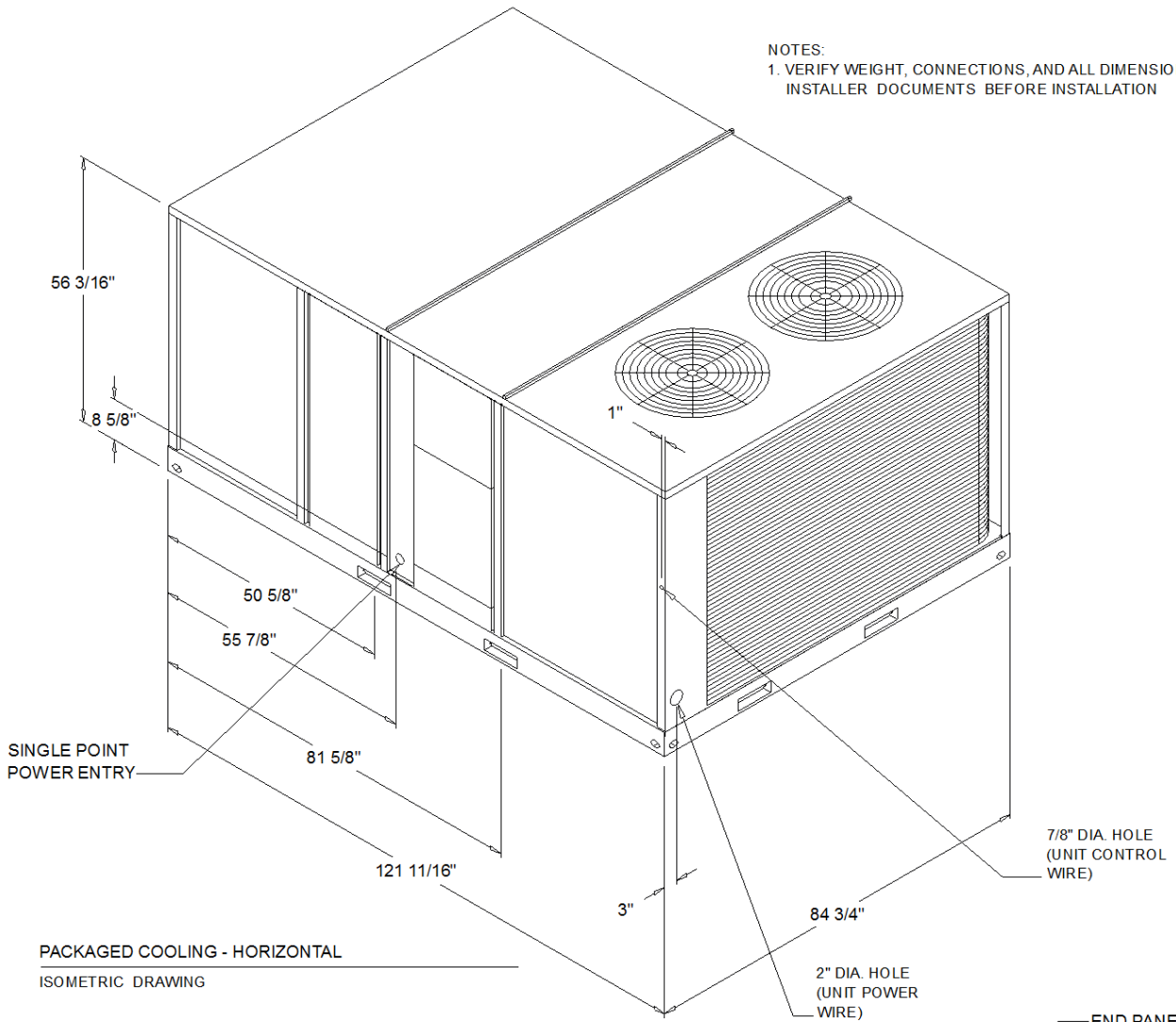


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## Acoustics

Sound Path	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Ducted Discharge	94 dB	87 dB	78 dB	78 dB	77 dB	77 dB	76 dB	70 dB
Ducted Inlet	92 dB	83 dB	79 dB	73 dB	68 dB	69 dB	68 dB	63 dB
Outdoor Noise	105 dB	94 dB	96 dB	93 dB	90 dB	85 dB	82 dB	77 dB

NOTES:  
 1. VERIFY WEIGHT, CONNECTIONS, AND ALL DIMENSIONS WITH  
 INSTALLER DOCUMENTS BEFORE INSTALLATION



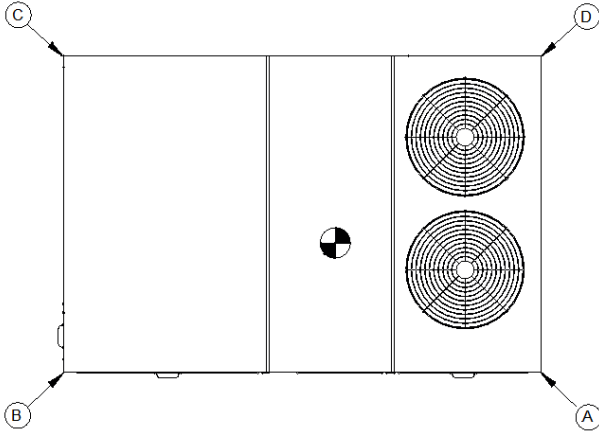


## ELECTRICAL / GENERAL DATA

<b>GENERAL</b>		
Model (Tons): TSH240G (20.0) Unit Operating Voltage Range: 187-253 Unit Primary Voltage: 208 Unit Secondary Voltage: 230 Unit Hertz: 60 Unit Phase: 3	<b>Standard Motor</b> <sup>(1)(3)(4)</sup>  Minimum Circuit Ampacity: 107.0/107.0 Maximum Fuse Size: 150.0/150.0 Maximum (HACR) Circuit Breaker: 150.0/150.0	<b>Field Installed Oversized Motor</b> <sup>(1)(3)(5)</sup>  Minimum Circuit Ampacity: 115.0/115.0 Maximum Fuse Size: 150.0/150.0 Maximum (HACR) Circuit Breaker: 150.0/150.0
EER: <sup>(6)</sup> 10.0	<b>Oversized Motor</b> <sup>(1)(3)(5)</sup>	<b>Field Installed Oversized Motor</b> <sup>(1)(3)(5)</sup>
<b>HEATER</b>		
Standard Motor with Heat <sup>(1)(4)</sup> Heater kW Rating: 27.0/36.0 Stage: 2 Minimum Circuit Ampacity: 116.0/131.0 Maximum Fuse Size: 150.0/150.0 Maximum (HACR) Circuit Breaker: 150.0/150.0	<b>Oversized Motor</b> <sup>(1)(5)</sup>  Minimum Circuit Ampacity: 126.0/140.0 Maximum Fuse Size: 150.0/150.0 Maximum (HACR) Circuit Breaker: 150.0/150.0	<b>Field Installed Oversized Motor</b> <sup>(1)(5)</sup>  Minimum Circuit Ampacity: Maximum Fuse Size: Maximum (HACR) Circuit Breaker:
<b>COMPRESSOR</b>	<b>Circuit(s)</b>	<b>OUTDOOR MOTOR</b>
Number: 2 Horsepower: 11.7/6.9 Phase: 3 Rated Load Amps: 44.16/24.96 Locked Rotor Amps: 315.0/164.0		Number: 2 Horsepower: 1.00 Motor speed (RPM): 1,125 Phase: 3 Full Load Amps: 4.8 Locked Rotor Amps: 20.0
<b>INDOOR MOTOR</b>		
<b>Standard Motor</b> <sup>(3)(4)</sup>  Number: 1 Horsepower: 5.00 Motor Speed (RPM): 3,450 Phase: 3 Full Load Amps: 16.7 Locked Rotor Amps: 109.8	<b>Oversized Motor</b> <sup>(3)(5)</sup>  Number: 1 Horsepower: 7.50 Motor Speed (RPM): 3,470 Phase: 3 Full Load Amps: 24.2 Locked Rotor Amps: 120.4	<b>Field Installed Oversized Motor</b> <sup>(3)(5)</sup>  Number: Horsepower: Motor Speed (RPM): Phase: Full Load Amps: Locked Rotor Amps:
<b>POWER EXHAUST ACCESSORY</b> <sup>(6)</sup> (Field Installed Power Exhaust)  Horsepower: Motor Speed (RPM): Phase: Full Load Amps: Locked Rotor Amps:	<b>FILTERS</b>  Type: Throwaway Furnished: Yes Number: 8 Recommended Size: 20"x25"x2"	<b>REFRIGERANT</b> <sup>(2)</sup>  Circuit #1 / 2  Type: R410 Factory Charge Circuit #1 / 2: 11.7 lb/ 6.8 lb

**NOTES:**

1. Maximum (HACR) Circuit Breaker sizing is for installations in the United States only.
2. Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.
3. Value include Standard Motor.
4. Value include Oversized Motor
5. EER is rated at AHRI conditions and in accordance with DOE test procedures.
6. Installation of this power exhaust kit will affect unit level MCA and could affect MOP sizing having a direct impact on existing field wiring and unit protection devices. The change in MCA/MOP is the sole responsibility of the field installing party. Trane will not issue new nameplates as a result of this power exhaust accessory installation. FLA of the power exhaust kit option must be added to the MCA of the unit for building supply conductor sizing determination.



### Base Unit and Corner Weights Only

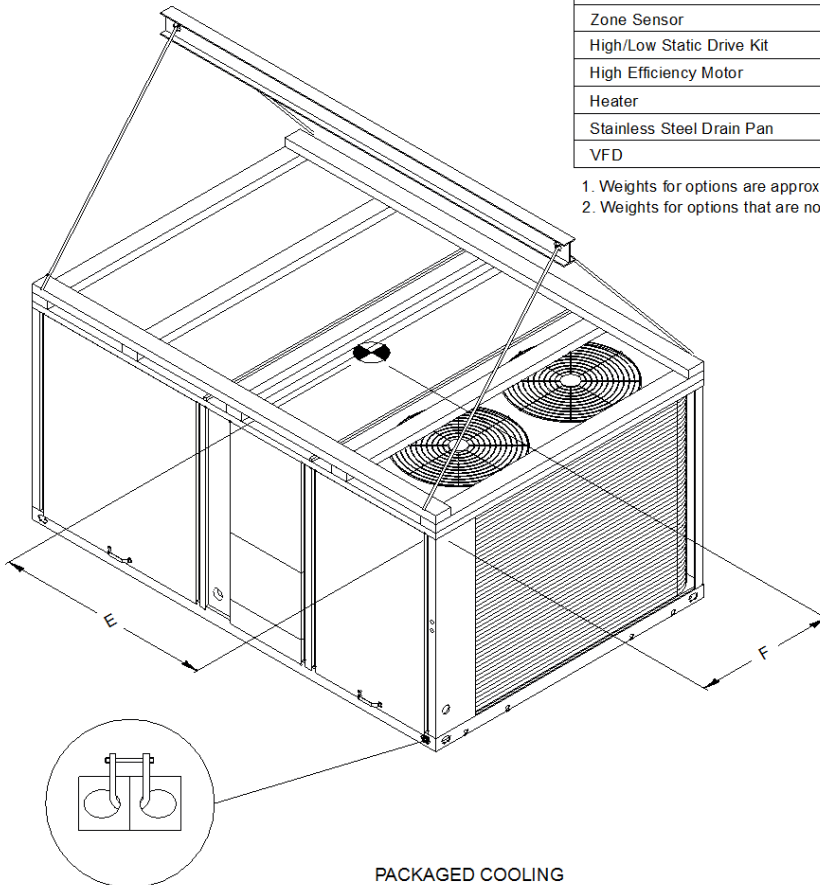
Base unit weights		Corner Weights				Center of Gravity	
SHIPPING	NET	(A)	(B)	(C)	(D)	E	F
2334.0 lb	1902.0 lb	615.0 lb	498.0 lb	375.0 lb	433.0 lb	55"	35"

1. All weights are approximate.
2. The actual weight are listed on the unit nameplate.
3. Refer to unit nameplate and installation guide for weights before scheduling transportation and installation of unit.
4. The weight shown represents the typical unit operating weight for the configuration selected. Estimated at +/- 10 % of the nameplate weight. .
5. Verify weight, connection, and all dimension with installer documents before installation.
6. Corner weights are given for information only.
7. Net/Shipping weight of optional accessories should be added to unit weight when ordering factory or field installed accessories.

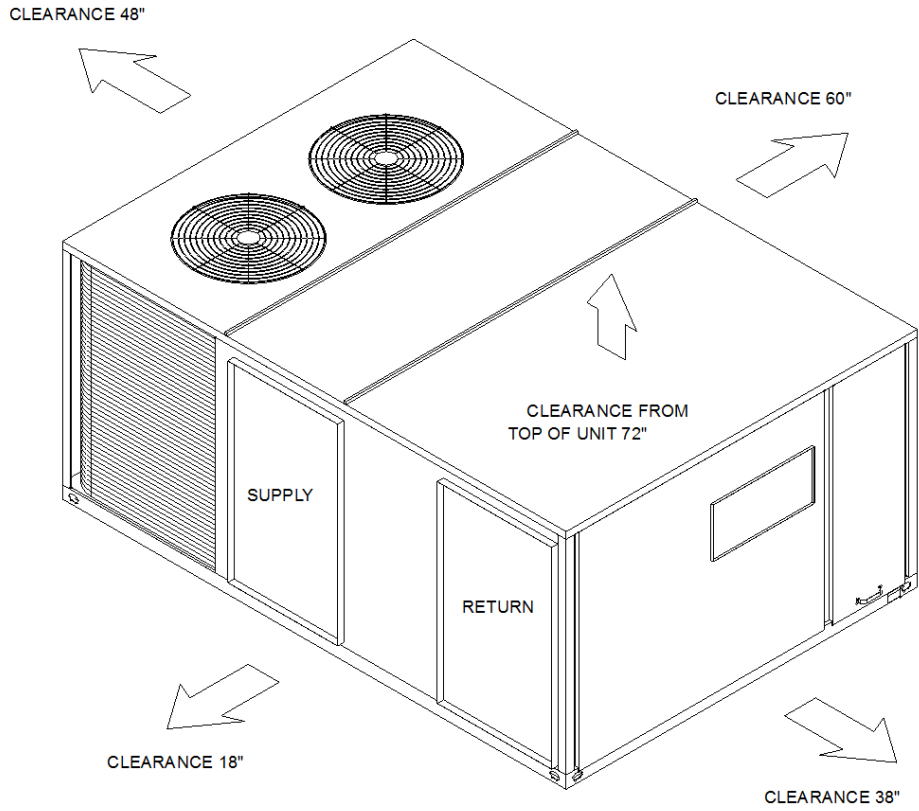
### Installed Options Net Weight Data

Accessory	Weight
Economizer, Manual and Motorized Outside Air Damper	
Power Exhaust	
Roof Curb	
Oversized Motor	5.0 lb
Hail Guard	43.0 lb
Hinged Access Doors	27.0 lb
Power Conv. Outlet	
Through the Base Electrical	23.0 lb
Circuit Breaker	
Disconnect	10.0 lb
Smoke Detector	
Novar	
Zone Sensor	
High/Low Static Drive Kit	
High Efficiency Motor	
Heater	
Stainless Steel Drain Pan	
VFD	

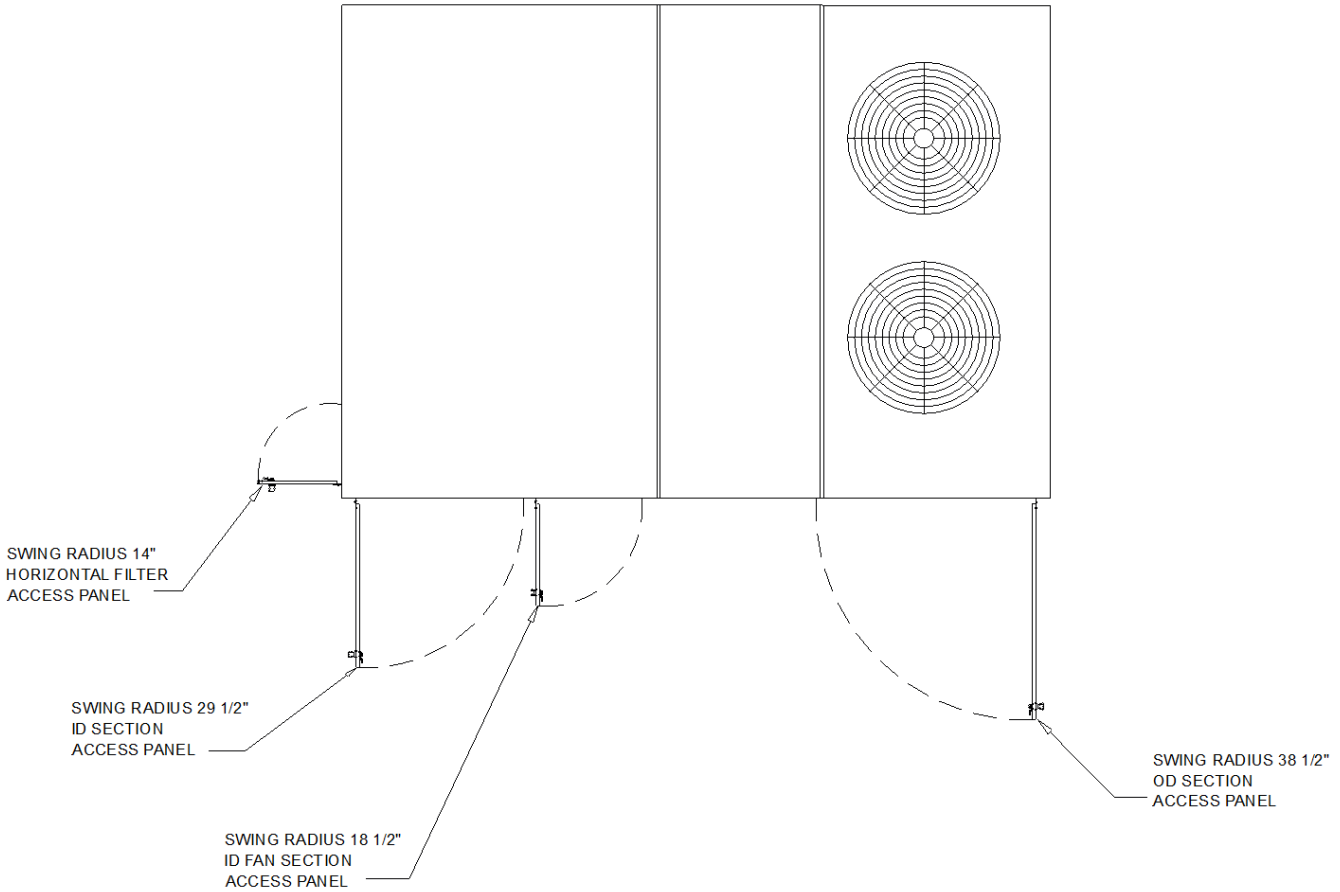
1. Weights for options are approximate.
2. Weights for options that are not list refer to Installation guide.



**PACKAGED COOLING**  
 RIGGING AND CENTER OF GRAVITY



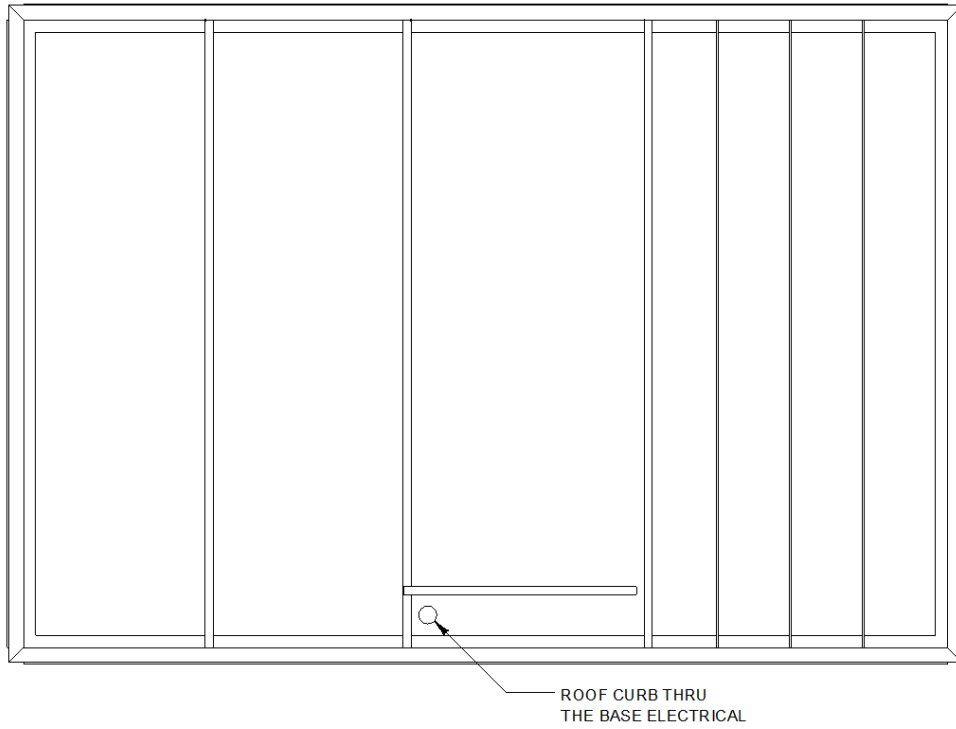
HORIZONTAL ISOMETRIC-PACKAGED COOLING WITH ELECTRIC CLEARANCE



HINGGING ACCESS  
ACCESSORY DRAWING

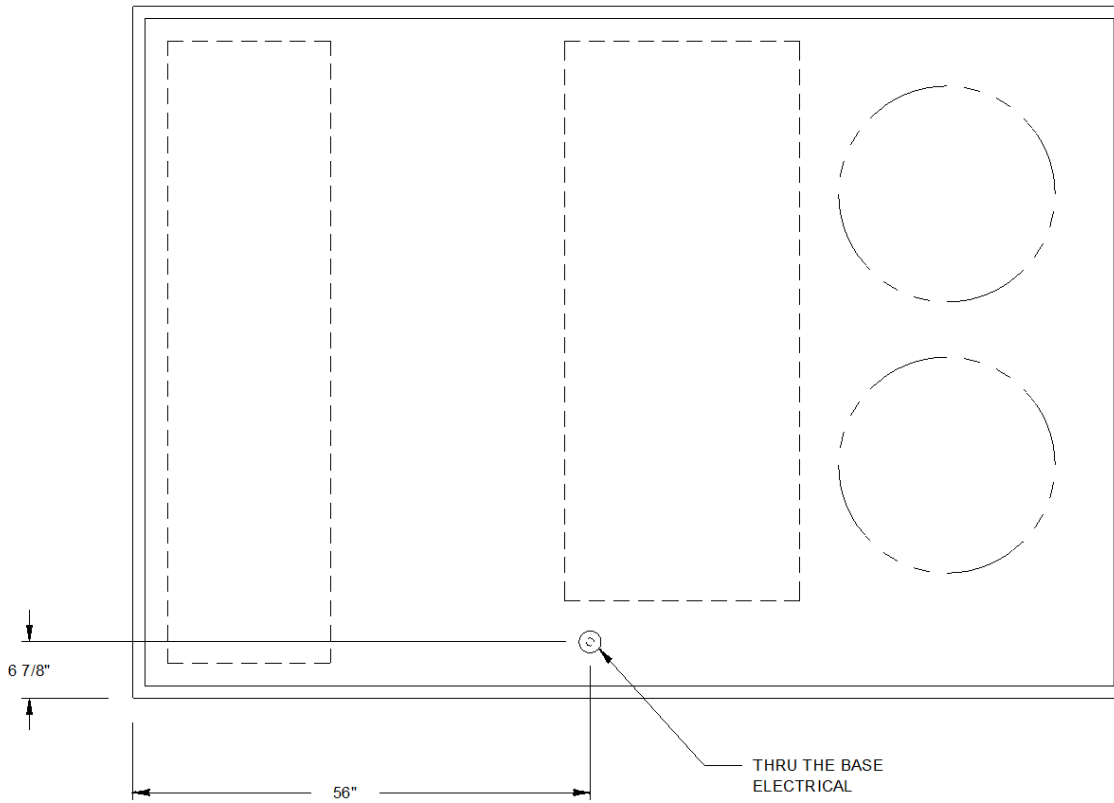


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ROOF CURB THRU THE BASE ELECTRICAL

ACCESSORY DRAWING



THRU THE UNIT BASE ELECTRICAL

ACCESSORY DRAWING