

# Technical Data Sheet for 7900 CFM



Job Information		Technical Data Sheet
Job Name	Cambria	
Date	3/7/2022	
Submitted By	Kurt Schultheis	
Software Version	09.80	
Unit Tag	7900 CFM	

Unit Overview					
Model Number	Voltage V/Hz/Phase	Design Cooling Capacity Btu/hr	EER@95/75 EAT & 200 CFM/ton		ISMRE Per AHRI 920-2016
			EER	IEER	
DPS016A	460/60/3	204302	11.7	Not Available	ASHRAE 90.1-2016 compliant

Unit	
Model Number:	DPS016A
Model Type:	Cooling
Heat Type:	Gas
Energy Recovery:	ERW-Large Cab-Econ: 5145cfm max, 100% OA: 8820 cfm max
Application:	Variable Air Volume, Single Zone (Mixed Air or 100% OA)
Controls:	Microtech III
Outside Air:	100% Outside Air
Altitude:	0 ft
Approval	cETLus

Physical			
Dimensions and Weight			
Length	Height	Width	Weight
182.3 in	in	76.5 in	4546 lb
Corner Weights			
L1	L2	L3	L4
1395 lb	1010 lb	899 lb	1242 lb
Construction			
Exterior	Insulation and Liners	Air Opening Location	
		Return	Supply
Painted Galvanized Steel	2" Injected Foam, R13, Galvanized Steel Liner	Bottom	Bottom

Electrical			
Unit FLA	MCA	MROPD	SCCR
53.8 A	59.5 A	80 A	10 kAIC
Note:	Use only copper supply wires with ampacity based on 75° C conductor rating. Connections to terminals must be made with copper lugs and copper wire.		

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Return/Outside/Exhaust Air			
Outside Air Option			
Type	Damper Pressure Drop		Exhaust Air Type
None	0.17 inH <sub>2</sub> O		Powered, Modulating with Building Pressure Control
Exhaust Fan			
Type	Drive Type		Wheel Diameter
SWSI AF	Direct Drive		16 in
Motor			
(Qty) Horsepower	Type	Efficiency	Full Load Current (Each)
(2) 4.0 HP	ECM - Series A	Premium	4.0 A
Performance			
Air Flow CFM	External Static Pressure inH <sub>2</sub> O		Brake Horsepower HP
7900	1.50		6.68

Energy Recovery										
Design OA Volume		Design Exhaust Volume		Wheel Pressure Drop		Motor HP		Motor FLA		
7900 CFM		7900 CFM		1.00 inH <sub>2</sub> O		0.17 HP		0.4 A		
Summer Conditions										
Temperature								Recovered Capacity Btu/hr	Effectiveness	
Outside Air		Return Air		Wheel Leaving		Mixed Air			Total	Sensible
Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F			
95.0	68.0	75.0	60.0	83.5	63.7	83.5	63.7	110352	0.55	0.56
Winter Conditions										
Temperature								Recovered Capacity Btu/hr	Effectiveness	
Outside Air		Return Air		Wheel Leaving		Mixed Air			Total	Sensible
Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F			
22.0	20.0	70.0	50.0	48.1	37.8	48.1	37.8	252651	0.54	0.55
Bypass Damper:		No								
Energy Recovery Filters										
Efficiency	Quantity/Size				Face Area		Face Velocity		Air Pressure Drop	
	Outdoor		Exhaust		Outdoor ft <sup>2</sup>	Exhaust ft <sup>2</sup>	Outdoor ft/min	Exhaust ft/min	Outdoor inH <sub>2</sub> O	Exhaust inH <sub>2</sub> O
2 in. MERV 8	(3) 20 in. X 25 in.		(3) 20 in. X 25 in.		10.4	10.4	759.6	759.6	0.91	0.91
Combined Efficiency Factor										
Application Specific CEF:		10.2								

Filter Section					
Physical					
Type	Quantity / Size		Face Area	Face Velocity	Air Pressure Drop
Combo 2"/4" rack with 2" MERV 8	9 / 18 in x 24 in x 2 in		27.0 ft <sup>2</sup>	292.6 ft/min	0.13

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## DX Cooling Coil

Physical								
Coil Type	Refrigerant Type	Fins per Inch	Rows	Face Area	Face Velocity	Air Pressure drop	Drain Pan Material	
Cu Tube/ Al Fin	R410A	15	4	18.9 ft <sup>2</sup>	418.0 ft/min	0.43 inH <sub>2</sub> O	Stainless Steel	
Cooling Performance								
Capacity			Indoor Air Temperature					Ambient air Temperature °F
Total Btu/hr	Sensible Btu/hr	Moisture Removal lb/h	Entering		Leaving			
			Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F	Dewpoint °F	
204302	204302	0.0	84.0	64.8	60.4	56.3	53.6	95.0
Condensate Connection Size:		1.0 in. Male NPT						

## Fan Section

Fan				
Type	Fan Wheel Diameter	Fan Isolation		
SWSI AF	24 in	Spring Isolation		
Performance				
Airflow	Total Static Pressure	Fan Speed	Brake Horsepower	Altitude
7900 CFM	4.4 inH <sub>2</sub> O	1659 rpm	8.33 HP	0 ft
Motor				Drive
Type	Horsepower	Efficiency	FLA	Type
premium Eff Induction Motor with Shaft Grounding	15.0	Premium	17.7 A	Direct Drive

## Gas Heat Section

Physical						
Airflow	Max Allowable Burner Temp Rise	Size	Connection (Qty) Size	Heat Exchanger Material		
7900 CFM	60.0 °F	450 MBH	(2) 0.75 in. Female NPT	Stainless Steel		
Performance						
Capacity Btu/hr	Air Temperature Dry Bulb		Air Pressure Drop inH <sub>2</sub> O	Gas Pressure		Modulation
	Entering °F	Leaving °F		Minimum inH <sub>2</sub> O	Maximum inH <sub>2</sub> O	
360000	48.1	90.1	0.26	5	14	Modulating 12:1 Turndown
Note:	Two gas connections inside the unit. Single pipe enters unit and splits to two manifolds. Refer to IM 1125 for details on piping.					

## Unit Discharge Conditions

Air Temperature				
Motor Heat Btu/hr	Moisture Removal lb/h	Unit Leaving Dry Bulb °F	Unit Leaving Wet Bulb °F	Unit Leaving Dewpoint °F
25033	0.0	63.3	57.3	53.6
Minimum Airflows				
Fan Only Minimum Airflow	Cooling Minimum Airflow	Heating Minimum Airflow		
2607 CFM	1418 CFM	5530 CFM		
Notes:	Refer to fan curve for applicability of approximate airflows			

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Condensing Section					
Compressor					
Type	Quantity	Refrigerant Charge lb	Total Power	Capacity Control	Compressor Isolation
Inverter Scroll	1	30.3	11.39 kW	Mod Control with Inverter Compressor	Rubber in Shear
Compressor Amps:					
Compressor 1			22.9 A		
<b>Compressor Options:</b>	Suction and Discharge Isolation Valves				
Condenser Coil					
Type	Fins per Inch		Fin Material		
Aluminum Microchannel	23		Aluminum		
Condenser Fan Motors					
Number of Motors			Full Load Current (Total)		
2			5.2 A		

Internal Pressure Drop Calculation	
<b>External Static Pressure:</b>	1.50 inH <sub>2</sub> O
<b>Filter:</b>	0.13 inH <sub>2</sub> O
<b>Outside Air:</b>	0.17 inH <sub>2</sub> O
<b>Energy Recovery:</b>	1.91 inH <sub>2</sub> O
<b>DX Coil:</b>	0.43 inH <sub>2</sub> O
<b>Gas Heat:</b>	0.26 inH <sub>2</sub> O
<b>Total Static Pressure:</b>	4.39 inH <sub>2</sub> O

Sound								
	Sound Power (db)							
Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
<b>Inlet</b>	79	78	86	78	73	72	67	64
<b>Discharge</b>	85	84	89	84	82	79	74	69
<b>Radiated</b>	51	62	71	73	74	67	61	52

Options	
Unit	
<b>Smoke Detectors:</b>	Return Air Smoke Detector
Electrical	
<b>Field Connection:</b>	Non-Fused Disconnect Switch
<b>Powered Receptacle:</b>	Unit powered 115V GFI outlet

Factory Installed Sensors
Leaving Coil/Entering Fan Temperature Sensor
Duct High Limit Switch
Return Air Temperature Sensor
Discharge Air Temperature sensor – Wired in unit, mounted in supply duct
Outside Air Temperature Sensor
Dirty Filter On/Off Switch
Supply Fan Air Proving Via Modbus
Building Static Pressure Sensor
Supply Leaving Wheel Temperature Sensor
Exhaust Leaving Wheel Temperature Sensor

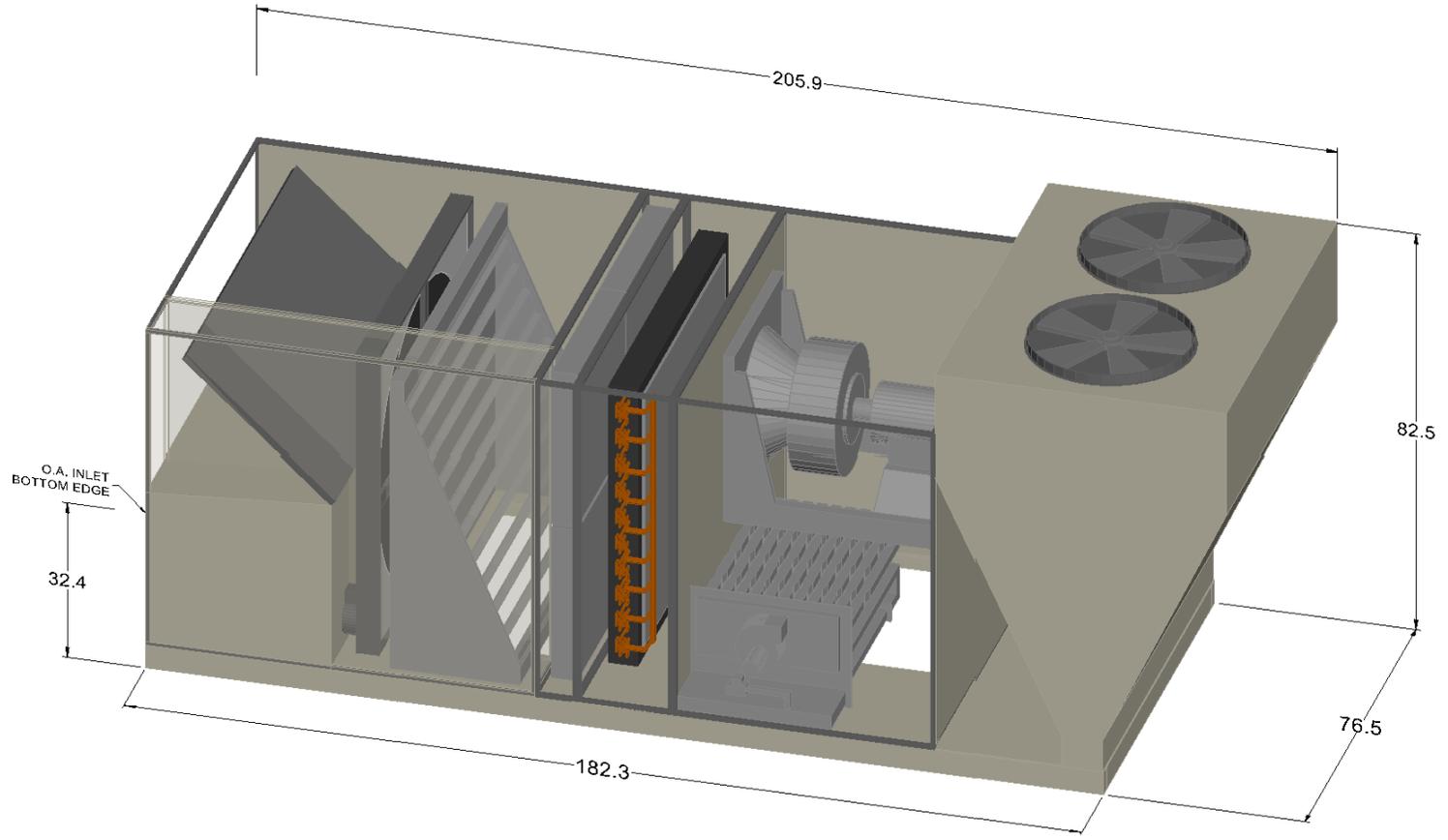
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### Warranty

<b>Parts:</b>	Standard One Year
<b>Compressor:</b>	Standard One Year
<b>Gas Heat Exchanger:</b>	Standard one Year

### Notes

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.



- Notes:
- (1) Recommended location for optional field cut side power connection.
  - (2) Horizontal gas connection only. Gas pipe routing within the roofcurb is not available.

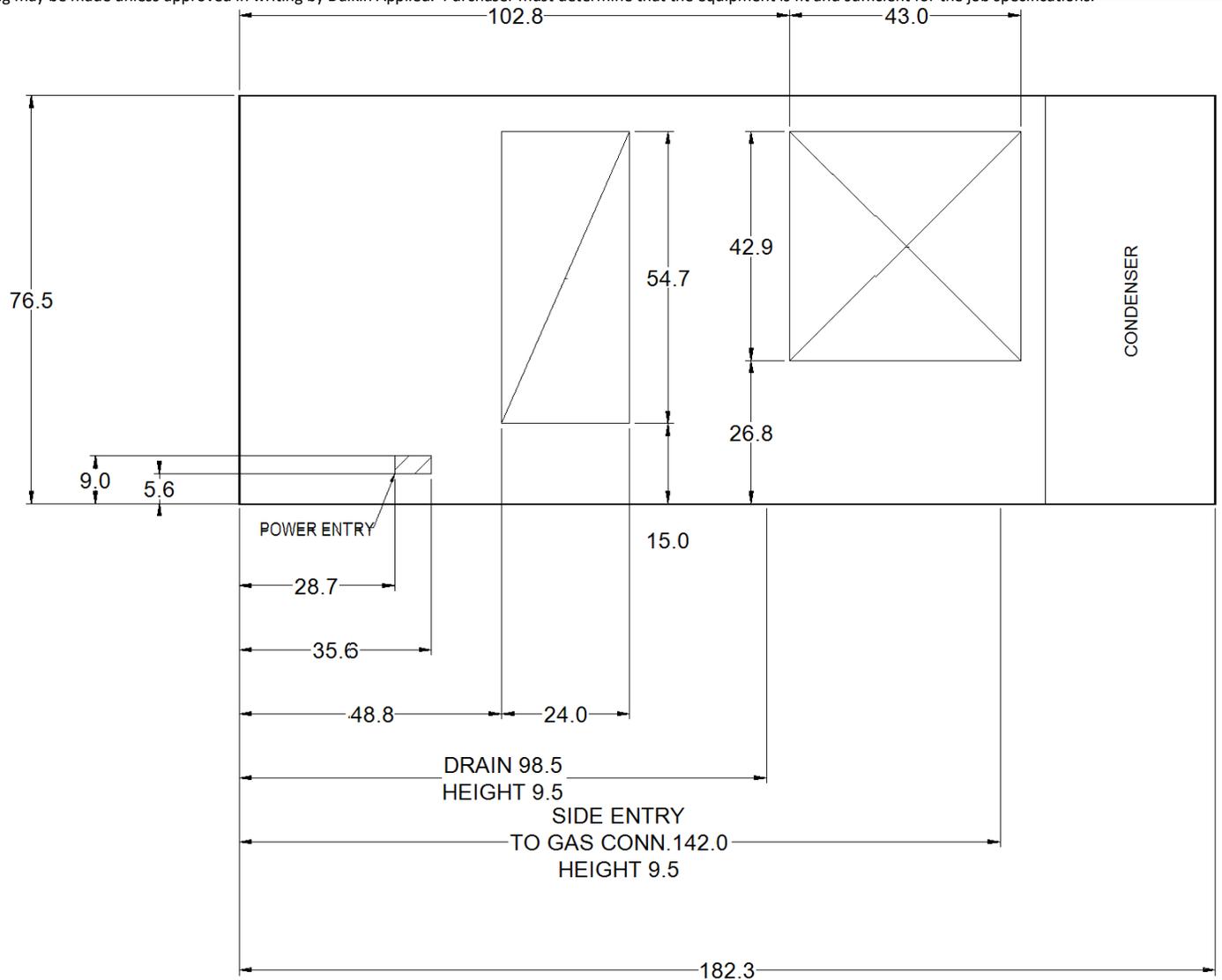
Job Number: 2011220  
Job Name: Cambodia

Date: 10 of 10

Prepared Date:

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PLAN VIEW - OPENINGS & OVERALL

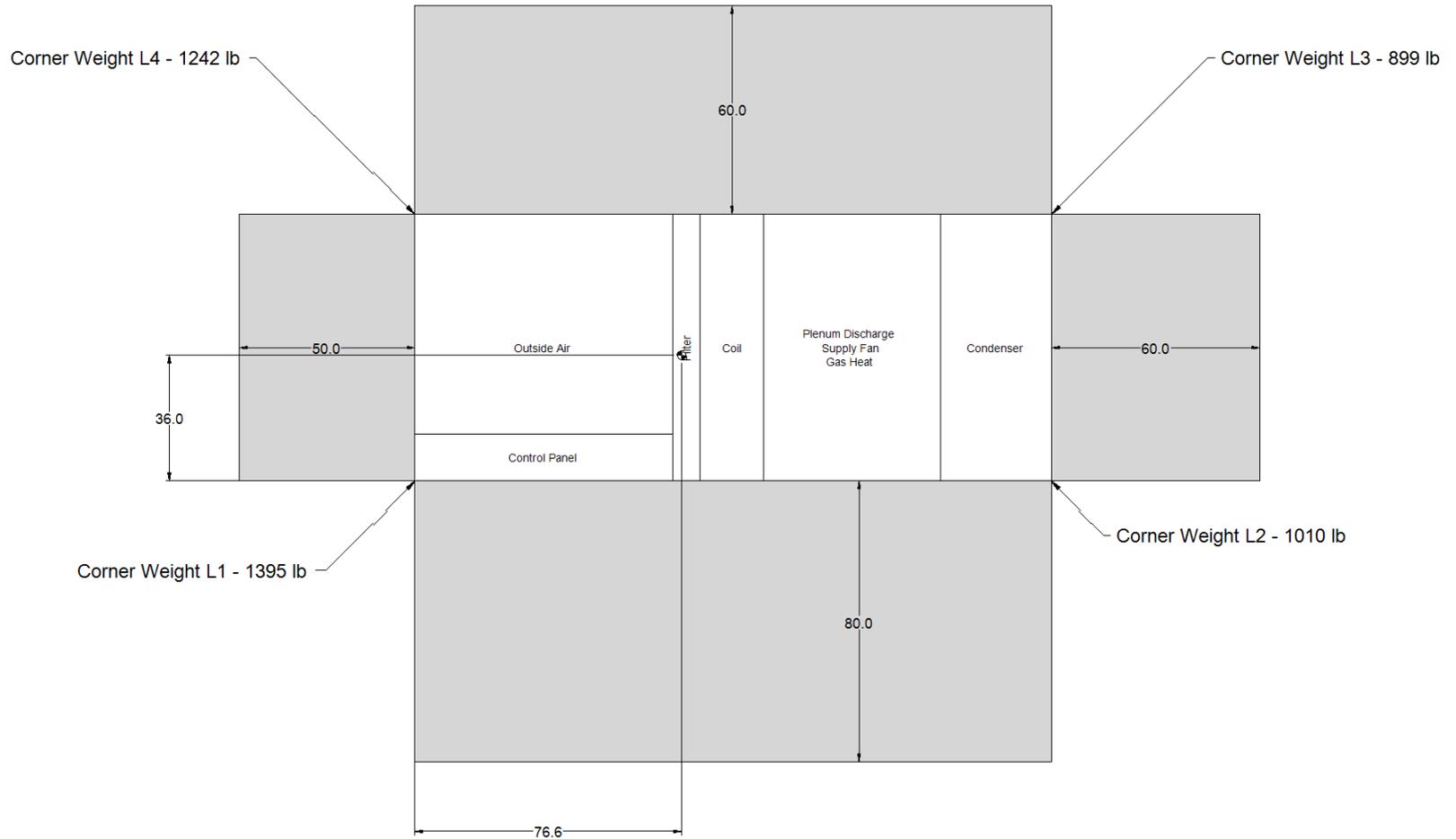
Job Number: 201122D  
Job Name: Cambria

Date: 12 of 10

Prepared Date:

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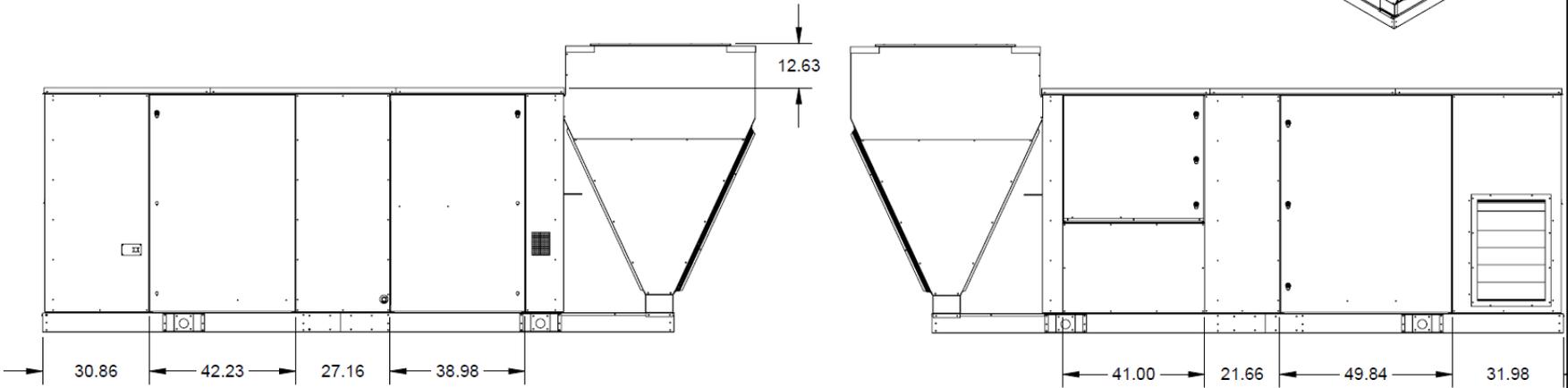
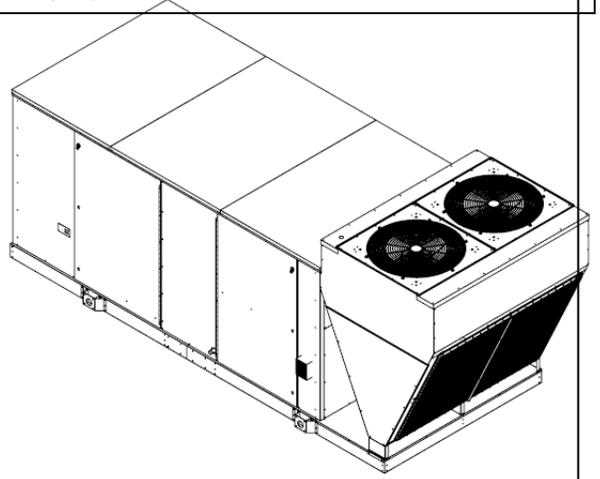


PLAN VIEW - CG, CORNER WEIGHTS, SERVICE CLEARANCE

Notes:

- (1) Center of Gravity Height = 35
- (2) Total Weight = 4546 lb

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Job Number: 201122D  
Job Name: Cambodia

Date: 16 of 10

Prepared Date:

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