



Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc.
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Date: 2/4/2025

Return Request: 2/14/2025

Project: City Of Sherwood Public Works (Administration Building)

Supplier: Harrison Energy Partners

Manufacturer: Daikin

Submittal: 23 74 13-01

Submittal Number: Packaged Outdoor Central Station AHUs

Drawing # and Installation: Mechanical Drawings

ARCHITECT

Cromwell
1300 East 6th Street
Little Rock, AR 72202
501-372-2900

ENGINEER

Cromwell
1300 East 6th Street
Little Rock, AR 72202
501-372-2900

GENERAL CONTRACTOR

Baldwin & Shell
1000 W. Capitol Ave.
Little Rock, AR 72201
501-374-8677

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc.
9924 Landers Rd.
N. Little Rock, AR 72117
501-834-3320

Notes:

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CSUSA PROJECT NO.

24-6084

sean@comfortar.com

9924 Landers Rd.
No. Little Rock, AR 72117



Submittal

Prepared For:
Cromwell Architects Engineers

Date:
12/10/2024

Sold To:
Comfort Systems USA

Job Name:
Sherwood Public Works

Harrison Energy Partners is pleased to provide the enclosed submittal for your review and approval.

Qty. Product Summary
2 Air Handling Units / Condensing Units (AHU/CU-1,2)

Josh Robinson, New Systems Sales 501-539-0633 • harrisonenergy.com Harrison Energy Partners • Commercial HVAC Excellence 1501 Westpark Dr., Ste. 9 • Little Rock, AR 72204	The attached information describes the equipment we propose to furnish for this project and is submitted for your approval.
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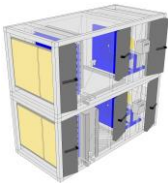
Daikin Vision Air Handler (AHU-1,2)

- Stacked Configuration
- MERV 8 Filter Selection
- DX Cooling Coil Section – R32 Refrigerant
- Supply Fan Section
- 2” Double Wall Foam Injected Panels
- External Junction Box – Field Installed VFD to be Provided by Others
- 208v/60Hz/3Ph

Daikin Condensing Unit (CU-1,2)

- 7.5 Ton Nominal Capacity
- 208v/60Hz/3Ph
- Low Ambient Control
- Hail Protection
- Refrigerant Specialties

Job Information		Technical Data Sheet
Job Name	City of Sherwood Bldgs	
Date	December 12 2024	
Submitted By	BL	
Software Version	13.51	
Unit Tag	AHU-1,2	



Unit Overview												
Model Number	Supply						Return/Exhaust					
	Air Volume cfm	Static Pressure		External Dimensions			Air Volume cfm	Static Pressure		External Dimensions		
		External inWc	Total inWc	Height in	Width in	Length in		External inWc	Total inWc	Height in	Width in	Length in
CAH004GDGM	1780	1.30	2.22	34*	36*	78	1860	1.30	2.16	34*	36*	78
*Not including base rails, coil connectors, drain connectors and control boxes.												

Unit												
Model Number:		CAH004GDGM										
Approval:		ETL Listed / ETL Listed to Canadian Safety Standards (ETL Label / ETLc Label)										
Outer Panel:		24 gauge G90 Galvanized Steel (unpainted)										
Liner:		24 gauge Galvanized Steel (unless noted per section)										
Insulation:		R-13 Injected Foam										
Unit Configuration:		Stacked with parallel air flows					Drive (Handling) Location:		Right			
Base:		None					Wall Thickness:		2 in			
Altitude:		0 ft					Parts Warranty:		Standard One Year			

Panel Filter		Component: 1		Length: 12 in		Shipping Section: 1	
Type	Efficiency		Face Velocity	Face Area		Air Volume	Filter Loading
Pleated	MERV 8		371 ft/min	5.0 ft²		1860 cfm	Side
Air Pressure Drop				Number of Filters	Height	Width	Depth
Clean Air	Mean Air	Dirty Air	User Spec				
0.15 inWc	0.58 inWc	1.00 inWc	N/A	1	24 in	20 in	2 in
				1	24 in	12 in	2 in
Door							
Location			Width		Opening		
Drive side			8 in		Outward		

Direct Expansion Coil		Component: 2			Length: 38 in		Shipping Section: 1						
Coil Model	Total Capacity	Sensible Capacity	Number of Coils		Number of Rows	Fins per Inch	Tube Diameter	Tube Spacing (Face x Row)					
4EJ0706B003	64087 Btu/hr	46686 Btu/hr	1		6	7	0.500 in	1.50 in x 1.299 in					
Air Volume	Air Temperature				Coil Air Pressure Drop	Finned Height	Finned Length	Face Area	Face Velocity				
	Entering		Leaving										
	Dry Bulb	Wet Bulb	Dry Bulb	Wet Bulb									
1860 cfm	78.1 °F	65.1 °F	55.0 °F	53.4 °F	0.66 insWg	24 in	23 in	3.79 ft²	498 ft/min				
Fluid			Sub-Cooled Refrigerant Liquid Temp.		Suction Vapor Superheat Temp. at Coil Outlet		Design Saturated Condensing Temp.		Total Refrigerant Weight				
Suction Temp.		Refrigerant											
44.0 °F		R32		110.0 °F		8.0 °F		110.0 °F		2.00 lb			
Connection [Data Per Coil]							Min. Fin Surface Temp.		Min. Tube Wall Surface Temp.				
Type	Liquid [Qty - Size]		Suction [Qty - Size]	Location		Material							
OD Sweat		2-0.88 in		2-0.875 in		Drive side		Copper tube		32.0 °F		32.0 °F	
Material							Drain Pan		Drain Side				
Fin		Tube		Header		Case							
Aluminum .0075 in		Copper .020 in		Copper		Galv. steel		Stainless steel		Drive side			
Control Panel													
Location:		Remote Mounted				Voltage:		120					
Height x Width x Depth:		24.00 in x 16.00 in x 8.00 in				MCA:		2A					
Equipment:		EEV Driver, Leak Detection				MOP:		10A					
Enclosure:		NEMA 3				Wiring Harness:		40 ft					
Total Refrigerant Weight is the total for all circuits of all coils in this coil section and is estimated. Refer to the AHU and Condensing Unit IOMs for recommendations on system start-up.													
Minimum allowable face velocity = 150 fpm													
AHRI 410 Certification													
Coil is NOT certified by AHRI													
Door													
Location				Width				Opening					
Drive side				12 in				Outward					

Return/Exhaust Fan			Component: 3		Length: 28 in		Shipping Section: 1		
Fan Performance									
Air Volume	Static Pressure			Fan Energy Index(FEI)	Total Input Power	Fan Shaft Power	Speed		Outlet Velocity
	External	Total	Cabinet				Operating	Maximum	
1860 cfm	1.30 inWc	2.16 inWc	0.04 inWc	1.04	1.3 kW	1.36 BHP	3497 rpm	4000 rpm	0 ft/min
Fan Data									
Fan Type	Blade Type / Class	Nominal Fan Size	Quantity of Fans	Wheel Diameter	Material Type	Number of Blades	Discharge	Motor Location	
Centrifugal - Plenum	Airfoil / 2	DDPL11	1	12.38 in	Aluminum	9	Top, single opening	Behind Fan	
Motor Data									
Power	Electrical Supply	Speed	Efficiency	Enclosure	Frame Size	Supplier	Number of Poles	Lock Rotor Current	Full Load Current
1.5 HP	200/60/3 V/Hz/Phase	3500 rpm	Premium	ODP	143 T frame	Generic	2	0.00 A	4.60 A
Fan Options									
Shaft Grounding Kit:		Provided			Isolator Type:		Rubber in shear		
VFD/Starter/Disconnect Data									
Selection Type:		External J-Box			Vendor:		Factory Standard		
VFD Power:		1.5 HP			Voltage:		200 v		
Height x Width x Depth:		6.00 in x 6.00 in x 4.00 in			Mounting:		Door Side		
Enclosure:		NEMA 1							
Door									
Location			Width			Opening			
Drive side			12 in			Outward			
Panel Filter			Component: 4		Length: 12 in		Shipping Section: 2		
Type	Efficiency		Face Velocity		Face Area	Air Volume		Filter Loading	
Pleated	MERV 8		355 ft/min		5.0 ft²	1780 cfm		Side	
Air Pressure Drop					Number of Filters	Height	Width	Depth	
Clean Air	Mean Air	Dirty Air	User Spec						
0.15 inWc	0.57 inWc	1.00 inWc	N/A		1	24 in	20 in	2 in	
					1	24 in	12 in	2 in	
Door									
Location			Width			Opening			
Drive side			8 in			Outward			

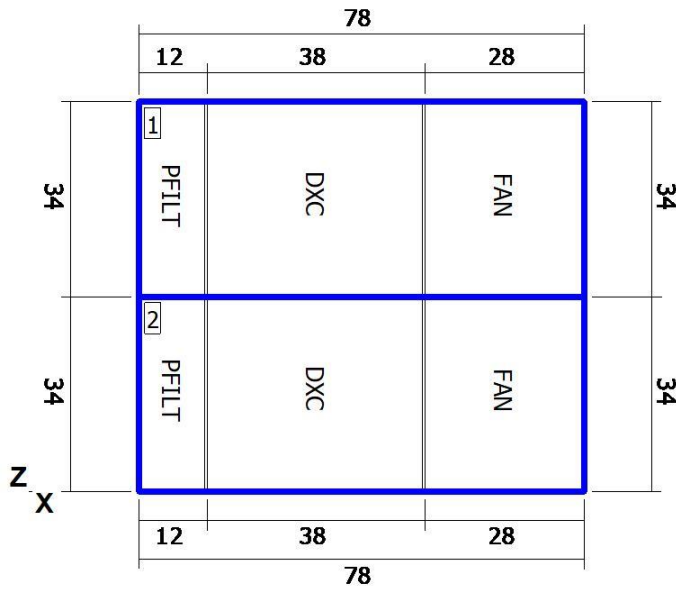
Direct Expansion Coil		Component: 5		Length: 38 in		Shipping Section: 2			
Coil Model	Total Capacity	Sensible Capacity	Number of Coils	Number of Rows	Fins per Inch	Tube Diameter	Tube Spacing (Face x Row)		
4EJ0706B003	60950 Btu/hr	44669 Btu/hr	1	6	7	0.500 in	1.50 in x 1.299 in		
Air Volume	Air Temperature				Coil Air Pressure Drop	Finned Height	Finned Length	Face Area	Face Velocity
	Entering		Leaving						
	Dry Bulb	Wet Bulb	Dry Bulb	Wet Bulb					
1780 cfm	77.6 °F	64.7 °F	54.5 °F	53.0 °F	0.61 insWg	24 in	23 in	3.79 ft²	476 ft/min
Fluid			Sub-Cooled Refrigerant Liquid Temp.	Suction Vapor Superheat Temp. at Coil Outlet	Design Saturated Condensing Temp.	Total Refrigerant Weight			
Suction Temp.	Refrigerant								
44.0 °F		R32		110.0 °F		110.0 °F		2.00 lb	
Connection [Data Per Coil]							Min. Fin Surface Temp.	Min. Tube Wall Surface Temp.	
Type	Liquid [Qty - Size]	Suction [Qty - Size]	Location	Material					
OD Sweat	2-0.88 in	2-0.875 in	Drive side	Copper tube		32.0 °F		32.0 °F	
Material						Drain Pan		Drain Side	
Fin	Tube	Header	Case						
Aluminum .0075 in	Copper .020 in	Copper	Galv. steel		Stainless steel		Drive side		
Control Panel									
Location:		Remote Mounted			Voltage:		120		
Height x Width x Depth:		24.00 in x 16.00 in x 8.00 in			MCA:		2A		
Equipment:		EEV Driver, Leak Detection			MOP:		10A		
Enclosure:		NEMA 3			Wiring Harness:		26 ft		
Total Refrigerant Weight is the total for all circuits of all coils in this coil section and is estimated. Refer to the AHU and Condensing Unit IOMs for recommendations on system start-up.									
Minimum allowable face velocity = 150 fpm									
AHRI 410 Certification									
Coil is NOT certified by AHRI									
Door									
Location			Width			Opening			
Drive side			12 in			Outward			

Supply Fan		Component: 6		Length: 28 in		Shipping Section: 2			
Fan Performance									
Air Volume	Static Pressure			Fan Energy Index(FEI)	Total Input Power	Fan Shaft Power	Speed		Outlet Velocity
	External	Total	Cabinet				Operating	Maximum	
1780 cfm	1.30 inWc	2.22 inWc	0.16 inWc	1.20	1.1 kW	1.15 BHP	2833 rpm	4000 rpm	0 ft/min
Fan Data									
Fan Type	Blade Type / Class	Nominal Fan Size	Quantity of Fans	Wheel Diameter	Material Type	Number of Blades	Discharge	Motor Location	
Centrifugal - Plenum	Airfoil / 2	DDPL12	1	12.38 in	Aluminum	12	End, single opening	Behind Fan	
Motor Data									
Power	Electrical Supply	Speed	Efficiency	Enclosure	Frame Size	Supplier	Number of Poles	Lock Rotor Current	Full Load Current
1.5 HP	200/60/3 V/Hz/Phase	3500 rpm	Premium	ODP	143 T frame	Generic	2	0.00 A	4.60 A
Fan Options									
Shaft Grounding Kit:		Provided			Isolator Type:		Rubber in shear		
VFD/Starter/Disconnect Data									
Selection Type:		External J-Box			Vendor:		Factory Standard		
VFD Power:		1.5 HP			Voltage:		200 v		
Height x Width x Depth:		6.00 in x 6.00 in x 4.00 in			Mounting:		Door Side		
Enclosure:		NEMA 1							
Door									
Location			Width			Opening			
Drive side			12 in			Outward			
Unit Sound Power (dB)									
Type	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
Radiated:	68	63	55	64	59	53	46	51	
Unit Discharge:	74	69	69	78	77	77	76	68	
Unit Return:	68	63	65	77	68	65	63	56	

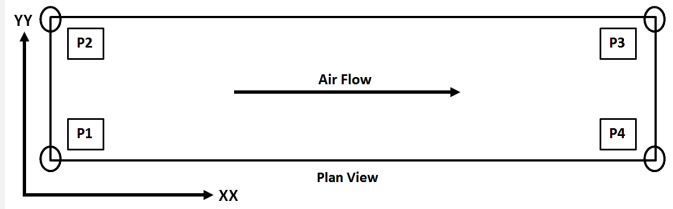
Shipping Section Details

Section	Length in	Weight lb	Corner Weights (lb)				Center of Gravity (in)		
			P1	P2	P3	P4	XX	YY	ZZ
1	78	847	230	213	194	210	37	17	15
2	78	848	229	213	195	212	37	17	15
Entire Unit	78	1695	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Lower level only



Elevation View



NOTE: Special components aren't included in the corner weights and center of gravity data.

Shipping Protection

None

Supply Static Pressure Drop

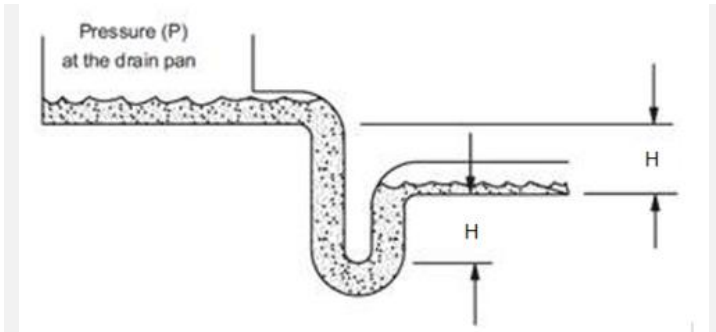
Component	Option	Static Pressure Drop
Panel Filter	Panel Filter	0.15 insWg
DX Coil	DX Coil	0.61 insWg
Supply Fan	Cabinet	0.16 insWg
External Static	External Static	1.30 insWg
Total Supply Fan Static		2.22 insWg

Exhaust Static Pressure Drop

Component	Option	Static Pressure Drop
Panel Filter	Panel Filter	0.15 insWg
DX Coil	DX Coil	0.66 insWg
Return Fan	Cabinet	0.04 insWg
External Static	External Static	1.30 insWg
Total Return/Exhaust Fan Static		2.16 insWg

Minimum Recommended Drain Pan Trap Dimensions

Shipping Section	Component	H
1	DX Coil	4.22
2	DX Coil	1.52



Dimensions provided as a courtesy and are recommended minimums only. Daikin is not responsible for supplying or designing drain pan traps and is not responsible for any damage caused by incorrect trap heights. The dimensions listed above should be reviewed and approved by a licensed plumbing professional.

AHRI Certification

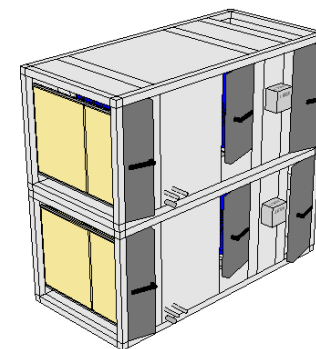


Certified by the AHRI Central Station Air-Handling Unit (AHU) Certification Program, which is based on AHRI Standard 430/431. AHRI certified units are subject to rigorous and continuous testing, have performance ratings independently measured and are third-party verified. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

Notes

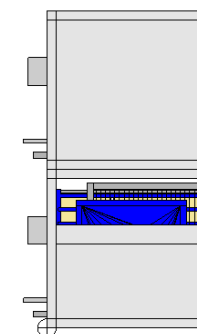
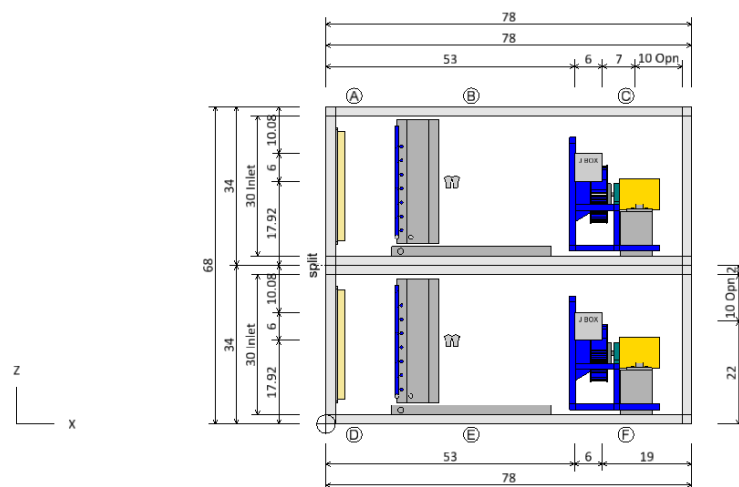
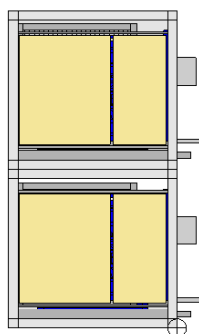
Standard

1. As a standalone component, unit meets or exceeds requirements of ASHRAE 90.1 - 2007. The approving authority is responsible for compliance of multi - component building systems.




Technical drawing of a kitchen island. The top view shows a rectangular island with a width of 78 cm and a depth of 36 cm. A central section is 53 cm wide, flanked by 19 cm wide sections on each side. A 6 cm wide section is located between the 53 cm and 19 cm sections. The side view shows a height of 84 cm and a depth of 36 cm. A 4 cm wide section is located at the front. The island features a sink and a stove.

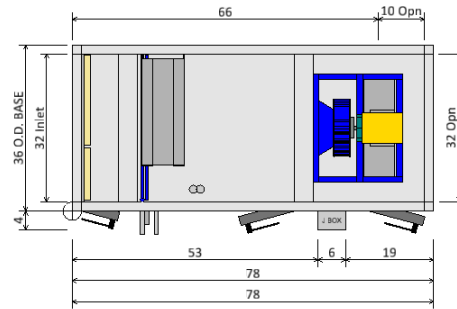
ISOMETRIC VIEW



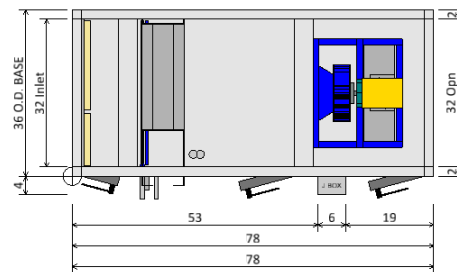
REAR END VIEW

FRONT END VIEW			ELEVATION VIEW			REAR END VIEW	
Product Drawing			Unit Tag: AHU-1,2			Sales Office: Harrison Energy Partners	
Product: Vision Air Handler			Project Name: City of Sherwood Bldgs			Sales Engineer:	
Model: CAH004GDGM			Dec. 12, 2024	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/-0.25"
						Dwg Units: in	
 13600 Industrial Park Blvd, Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 13.51							
All opening dimensions have a 1" mounting flange along the inner edge. The actual airflow area of the opening is 2" smaller in each dimension.							

Y
X

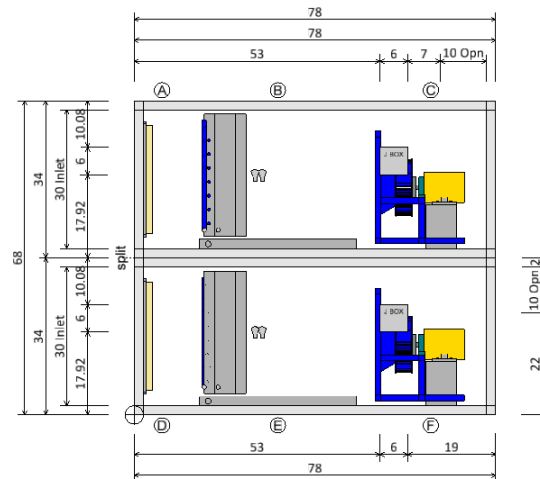


Y
X



BOTTOM DECK PLAN VIEW

Z
X



Component Key

A	Panel Filter	
	Filter Type:	Pleated (MERV 8)
	Right Door (WxH):	8 ins x 30 ins
B	DX Coil	
	Coil Model:	4EJ0706B003
	Total Capacity:	64087.0 Btu/hr
C	Return Fan	
	Fan Type:	Centrifugal - Plenum
	Fan Size (Class):	11 (2)
D	Air Flowrate:	1860.0 cfm
	T.S.P.:	2.2 insWg
	Motor Power:	1.5 HP
E	Right Door (WxH):	12 ins x 30 ins
	Panel Filter	
	Filter Type:	Pleated (MERV 8)
F	Right Door (WxH):	8 ins x 30 ins
	DX Coil	
	Coil Model:	4EJ0706B003
	Total Capacity:	60950.0 Btu/hr
	Right Door (WxH):	12 ins x 24 ins
	Supply Fan	
	Fan Type:	Centrifugal - Plenum
	Fan Size (Class):	12 (2)
	Air Flowrate:	1780.0 cfm
	T.S.P.:	2.2 insWg
	Motor Power:	1.5 HP
	Right Door (WxH):	12 ins x 30 ins

Product Drawing

Product: Vision Air Handler

Model: CAH004GDGM

Unit Tag: AHU-1,2

Project Name: City of Sherwood Bldgs

Dec. 12, 2024

Ver/Rev:

Sheet: 1 of 1

Sales Office: Harrison Energy Partners

Sales Engineer:

Scale: NTS

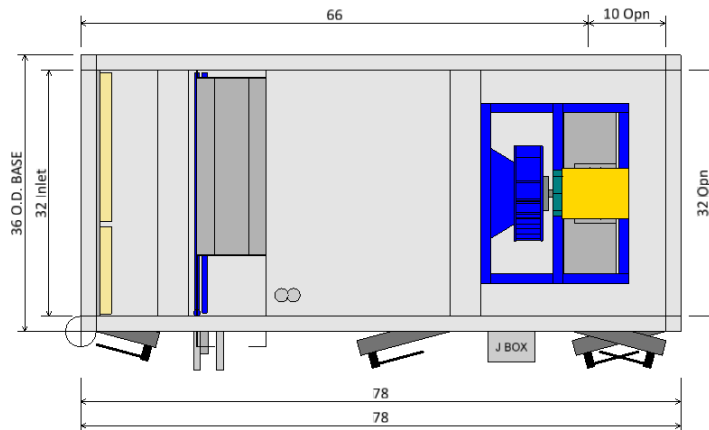
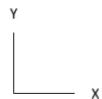
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Dwg Units: in

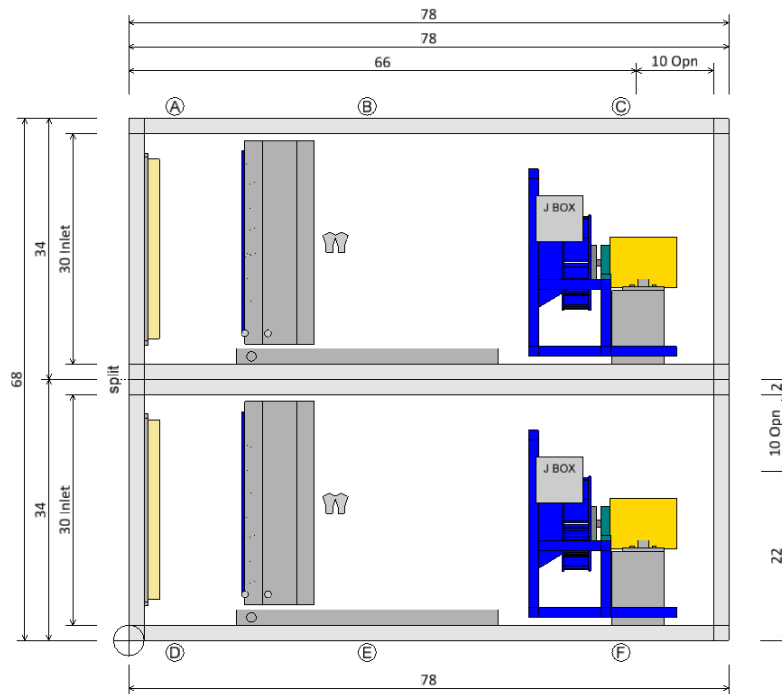
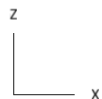


13600 Industrial Park Blvd, Minneapolis, MN 55441
www.DaikinApplied.com Software Version: 13.51

All opening dimensions have a 1" mounting flange along the inner edge. The actual airflow area of the opening is 2" smaller in each dimension.



PLAN VIEW



ELEVATION VIEW

Component Key

	Type	X	Y	Z	Wid	Hgt
(A)	Panel Filter Opening	0.00	2.00	36.00	32.00	30.00
(C)	Return Fan Fan Discharge	66.00	2.00	68.00	32.00	10.00
(D)	Panel Filter Opening	0.00	2.00	2.00	32.00	30.00
(F)	Supply Fan Fan Discharge	78.00	2.00	22.00	32.00	10.00

Note: Dimensions are measured from the origin point.
Note: Openings with or without dampers are recessed into the unit by approximately 1.75 in.

Opening/Damper Connections

Product: Vision Air Handler

Model: CAH004GDGM

Unit Tag: AHU-1,2

Project Name: City of Sherwood Bldgs

Dec. 12, 2024

Ver/Rev:

Sheet: 1 of 1

Sales Office: Harrison Energy Partners

Sales Engineer:

Scale: NTS

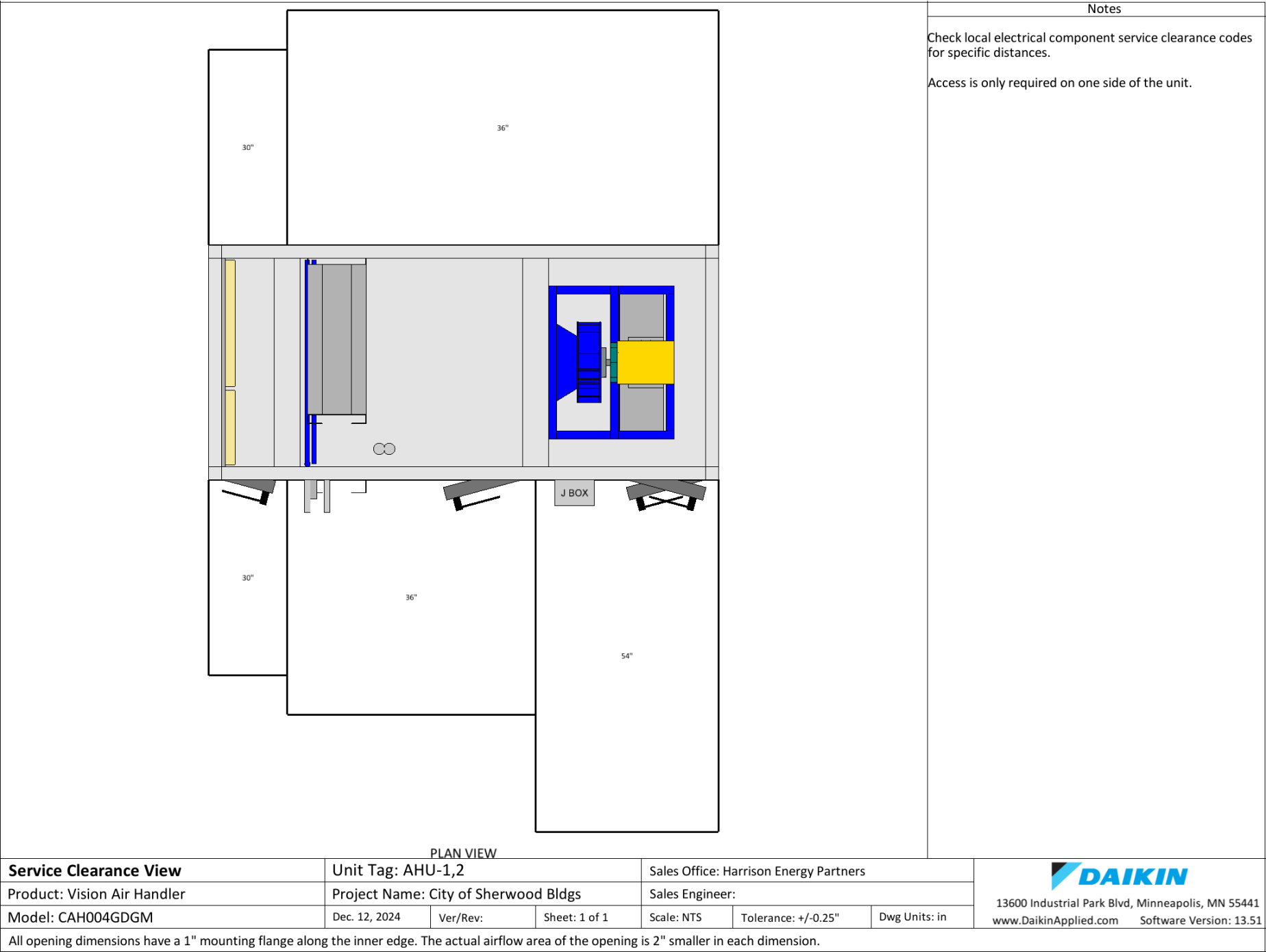
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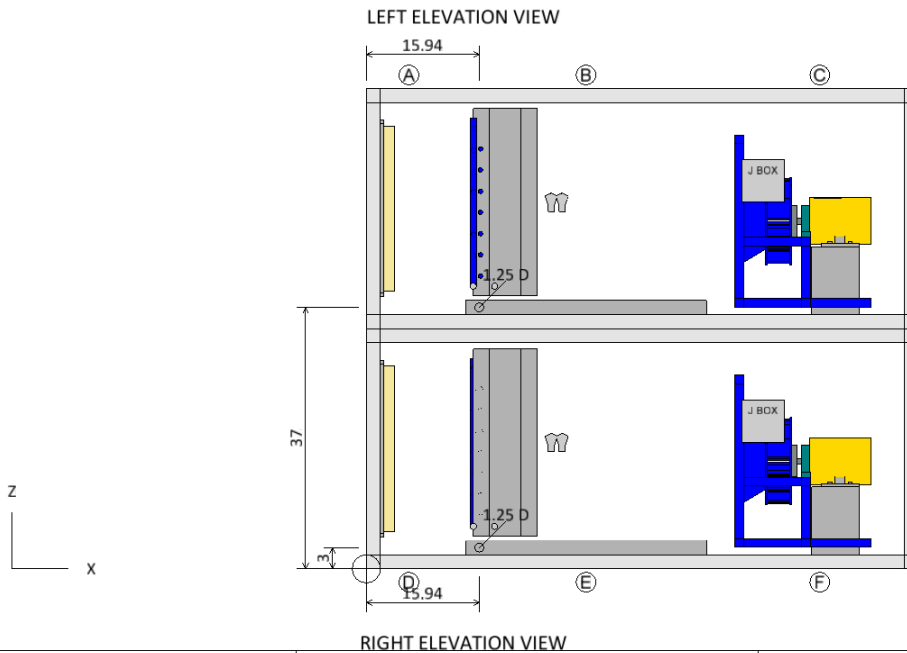
Dwg Units: in




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www.DaikinApplied.com Software Version: 13.51

All opening dimensions have a 1" mounting flange along the inner edge. The actual airflow area of the opening is 2" smaller in each dimension.

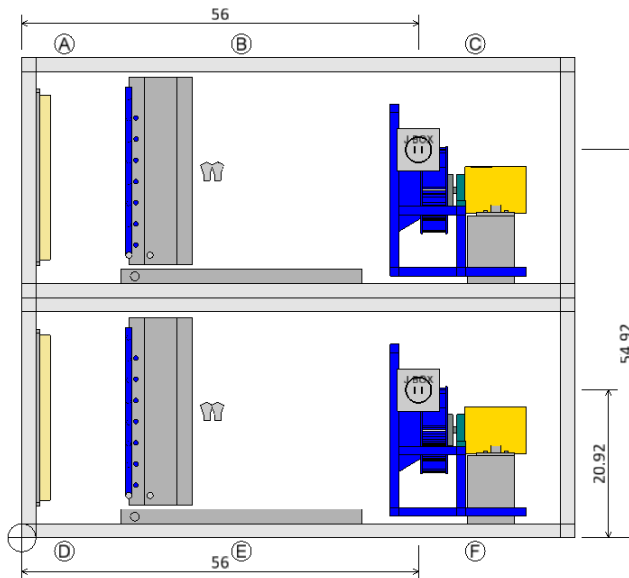




Note: Dimensions are measured from the origin point.

Coil and Drain Connections			Unit Tag: AHU-1,2		Sales Office: Harrison Energy Partners			 13600 Industrial Park Blvd, Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 13.51
Product: Vision Air Handler			Project Name: City of Sherwood Bldgs		Sales Engineer:			
Model: CAH004GDGM			Dec. 12, 2024	Ver/Rev:	Sheet: 1 of 1	Scale: NTS Tolerance: +/-0.25"	Dwg Units: in	
All opening dimensions have a 1" mounting flange along the inner edge. The actual airflow area of the opening is 2" smaller in each dimension.								


LEFT ELEVATION VIEW

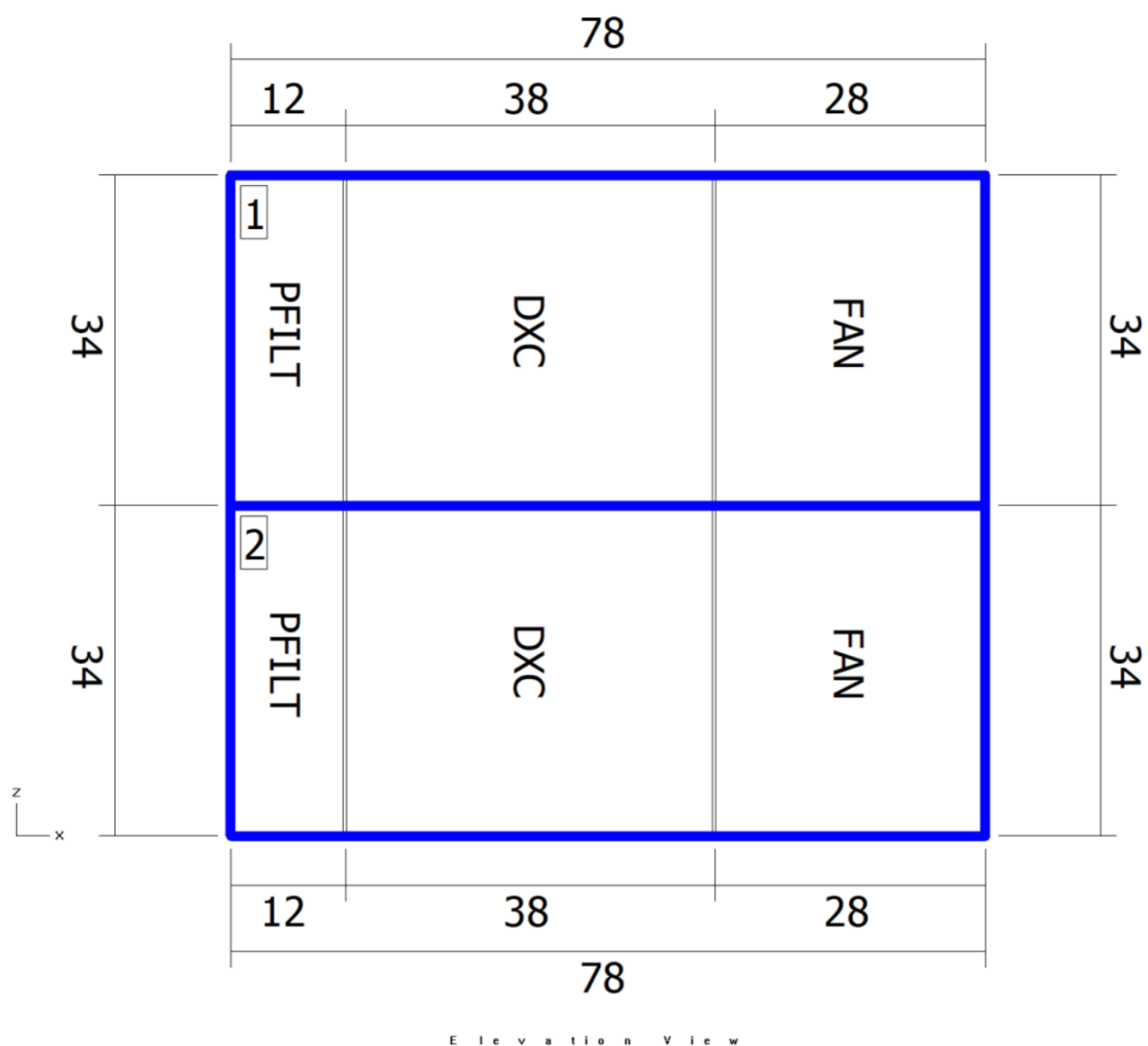


RIGHT ELEVATION VIEW


Component Key						
	Type	X	Y	Z	Volts	Phase
Ⓒ	Return Fan	56.00	0.00	54.92	200	3
Ⓕ	Supply Fan	56.00	0.00	20.92	200	3

Note: Dimensions are measured from the origin point.

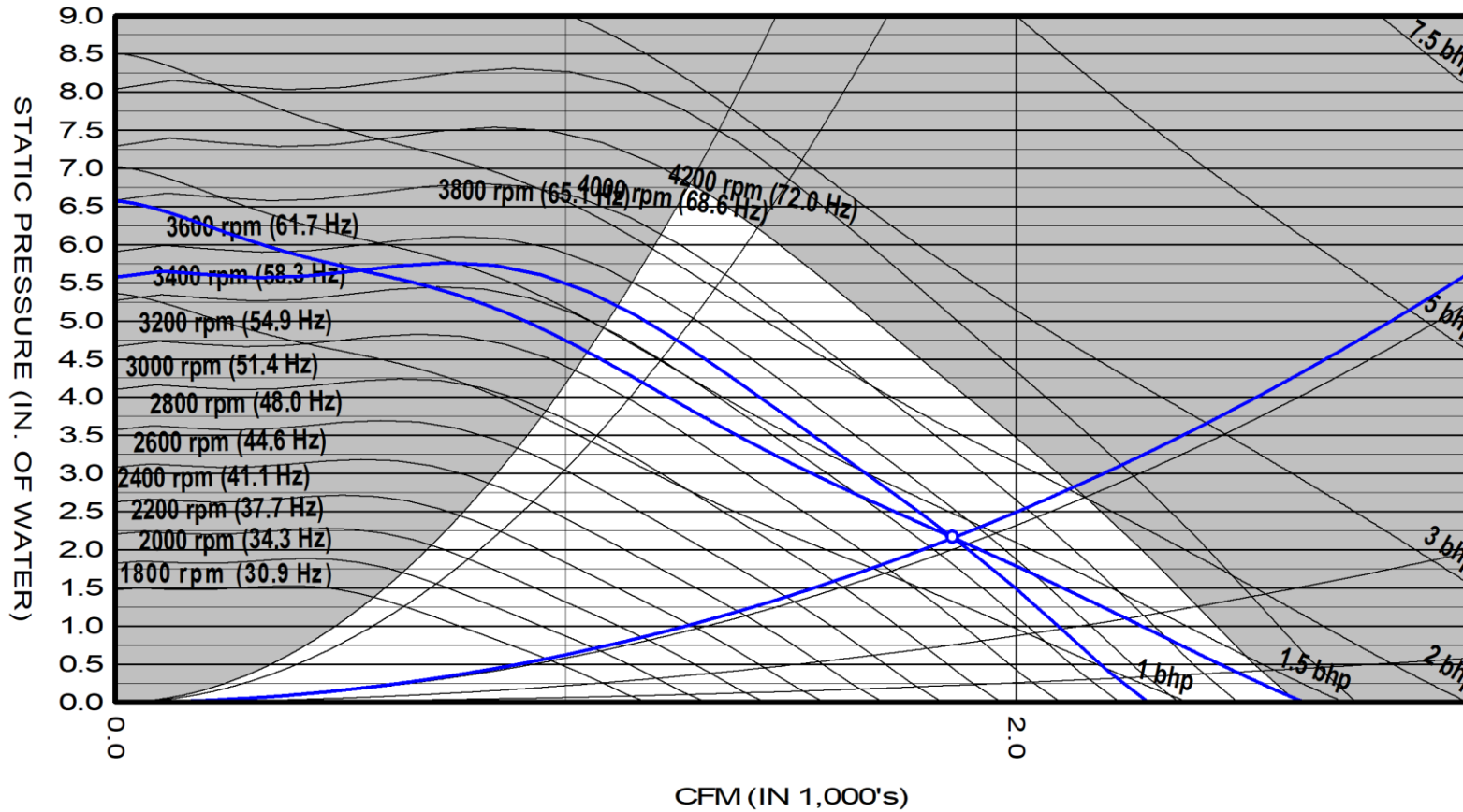
Electrical Connections		Unit Tag: AHU-1,2		Sales Office: Harrison Energy Partners			 13600 Industrial Park Blvd, Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 13.51
Product: Vision Air Handler		Project Name: City of Sherwood Bldgs		Sales Engineer:			
Model: CAH004GDGM		Dec. 12, 2024	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/-0.25" Dwg Units: in	
All opening dimensions have a 1" mounting flange along the inner edge. The actual airflow area of the opening is 2" smaller in each dimension.							



Shipping Sections					
Section	Weight (lb)	X	Y	Z	
Section 1	847.38	78	36	34	
Section 2	848.41	78	36	34	
Total Unit	1695.79	78	36	68	

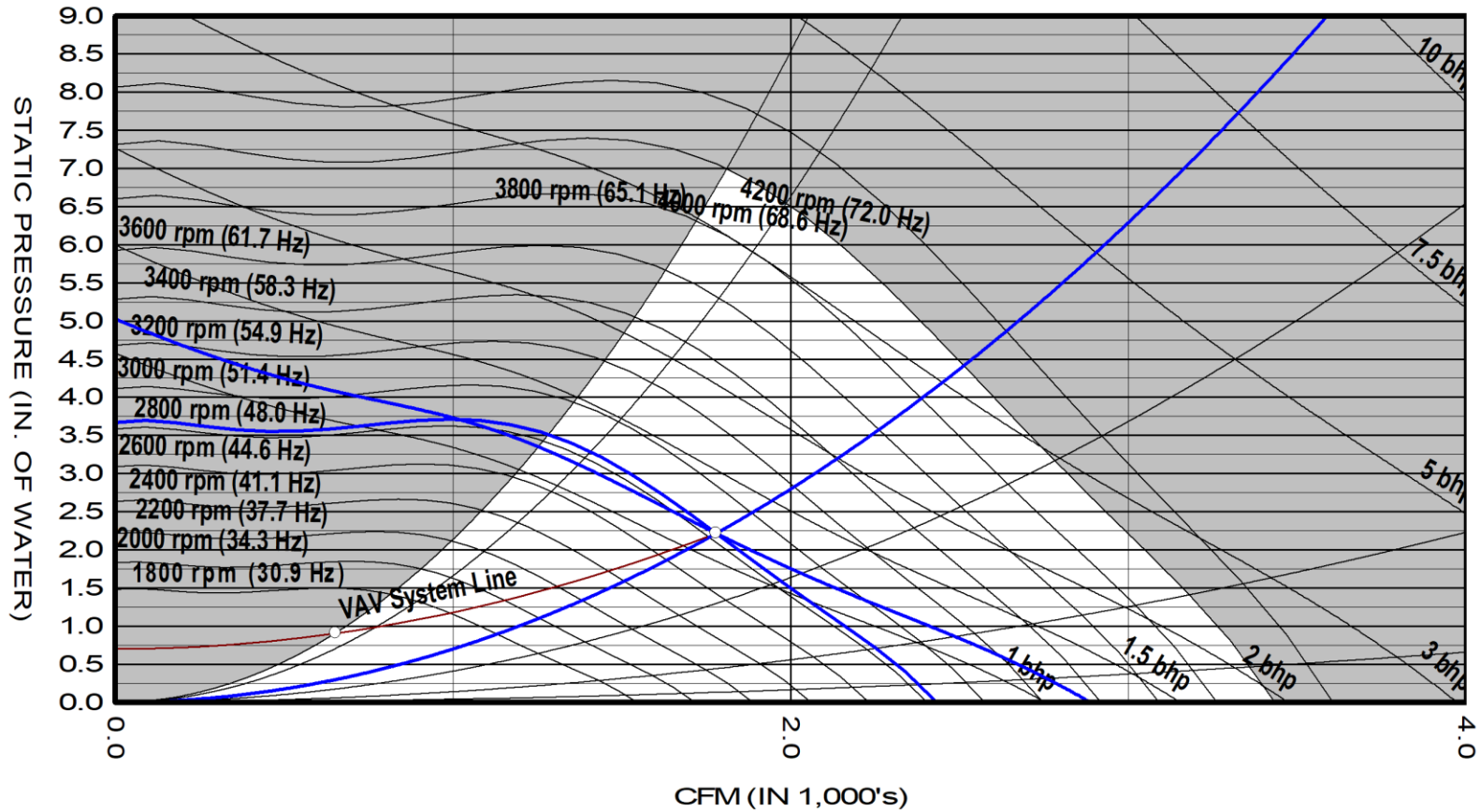
Shipping Sections		Unit Tag: AHU-1,2		Sales Office: Harrison Energy Partners			 13600 Industrial Park Blvd, Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 13.51
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Model: CAH004GDGM	Dec. 12, 2024	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in	
All opening dimensions have a 1" mounting flange along the inner edge. The actual airflow area of the opening is 2" smaller in each dimension.							

Daikin AHU Fan Curve



AF 11 DD PLENUM 9BL (100% Width) 1x1 Ret/Exh Fan at Standard Conditions					
Air volume	1860	cfm	Fan speed	3497	rpm
Total static	2.16	insWg	Max speed	4000	rpm
Fan Shaft Power	1.4	bhp	Efficiency	46.5	%
Approx VFD Setting	59.9	Hz	Motor Speed	3500	rpm
Fan Energy Index(FEI)	1.04				
Unit tagging	AHU-1,2		Date	December-12-2024	
Job name	City of Sherwood Bldgs		Time	15:18	

Daikin AHU Fan Curve



AF 12 DD PLENUM 12BL (100% Width) 1x1 Supply Fan at Standard Conditions					
Air volume	1780	cfm	Fan speed	2833	rpm
Total static	2.22	insWg	Max speed	4000	rpm
Fan Shaft Power	1.2	bhp	Efficiency	53.9	%
Minimum CFM	653	cfm	Minimum Fan Speed	1439	rpm
Approx VFD Setting	48.6	Hz	Motor Speed	3500	rpm
Fan Energy Index(FEI)	1.20				
Unit tagging	AHU-1,2		Date	December-12-2024	



me City of Sherwood Bldgs Time 15:18
 Supply fan performance is certified in accordance with the Central Station
 Air-Handling Unit Certification Program, which is based on AHRI Standard 430.