



**Alexandra Construction**  
 1234 Chestnut Street Suite 211  
 Newton, Massachusetts 02464  
 P: +16176308150

**Project: 0523 Repair Building 51**  
 4930 Minuteman Way  
 Charlotte, North Carolina 28208

## Submittal #23 30 00-8.1 - Dedicated Outdoor Air Systems Product Information 23 30 00 - HVAC AIR DISTRIBUTION

<b>Revision</b>	1	<b>Submittal Manager</b>	Michaela Murphy (Alexandra Construction)
<b>Status</b>	Open	<b>Date Created</b>	Dec 29, 2023
<b>Issue Date</b>	Dec 29, 2023	<b>Spec Section</b>	23 30 00 - HVAC AIR DISTRIBUTION
<b>Responsible Contractor</b>	Superior Mechanical Systems	<b>Received From</b>	Ben Wyke (Superior Mechanical Systems)
<b>Received Date</b>		<b>Submit By</b>	<b>DOAS-1N PAGE 3 DOAS-2E PAGE 16</b>
<b>Final Due Date</b>	Mar 11, 2024	<b>Lead Time</b>	
		<b>Cost Code</b>	
<b>Location</b>		<b>Type</b>	Product Information
<b>Approvers</b>	Charlee Cowger (Mead & Hunt), James Eaton (NC ANG), Amy Daniels (NC ANG)		
<b>Ball in Court</b>	Charlee Cowger (Mead & Hunt)		
<b>Distribution</b>	Michaela Murphy (Alexandra Construction), Keith Clark (Alexandra Construction), Jim Thornton (Alexandra Construction), Hanson Pederson (NC ANG), Dan Lawsure (Alexandra Construction), Christopher Clark (Alexandra Construction)		
<b>Description</b>	SD-03 Product Data Dedicated Outdoor Air Systems revision 1		

### Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response
General Information Attachments				
Charlee Cowger	Jan 29, 2024	Feb 12, 2024		Pending
James Eaton		Feb 26, 2024		Pending
Amy Daniels		Mar 11, 2024		Pending

#### SUBMITTAL REVIEW

- Approved - No Exceptions Taken
- Approved as Noted - Make Corrections Noted (Resubmittal Not Required)
- Revise and Resubmit - Exceptions Taken
- Rejected
- Accepted - Informational Submittal
- Not Accepted - Informational Submittal
- Not Reviewed

Architect's/Engineer's action on this Submittal is based solely on the information submitted and is subject to the following: Architect's/Engineer's review is limited to verifying general compatibility with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents, and for general compliance with the information given in the Contract Documents. No detailed check of quantities or dimensions was made. Approval of a specific item shall not mean approval of an assembly of which the item is a component. Disposition or notations do not constitute a contract modification and do not relieve the Contractor from compliance with Contract Documents, governing codes and regulations. Contractor shall be solely responsible for complying with the Contract Documents, as well as with Supplier's/Manufacturer's instructions consistent with the Contract Documents, Owner's directions, and Laws and Regulations. The General Contractor, Subcontractor, and/or Construction Manager is solely responsible for: obtaining, correlating, confirming, and correcting dimensions at the Site; quantities, information and choices pertaining to fabrication techniques, means, methods, sequences, procedures, and techniques of construction; coordinating work with other trades; and ensuring that work is performed in a safe and satisfactory manner. Architect/Engineer is not responsible for resubmittals or tracking progress of resubmittals.

MEAD & HUNT, INC.  
 M & H ARCHITECTURE, INC.



BY Aaron Tervort

DATE 1/31/2024

Date	January 9, 2024
Hoffman & Hoffman Order #	470.481.10035
Branch Office	Charlotte, NC
Salesman	Colin Dee



**PROJECT:** NCANG Repair Maintenance Hanger Building 51  
Charlotte, NC  
Plan Revision Date: 7/20/22

**CONTRACTOR:** Superior Mechanical  
Charlotte, NC

**ENGINEER:** Mead & Hunt  
Ann Arbor, MI

**EQUIPMENT:** Dedicated Outdoor Air Systems  
Spec Section 233000

**REVISION:** 1

**SUBMITTAL**

**(2) "Vision Indoor air handling unit - DOAS-1N & 2E**

- Supply fan: changed to 12 DD plenum fan, 2 HP, 1.52 BHP, 3500 RPM, 54.13 hz.
- Added 4" base rail to both DOAS. 2.5" min needed for condensate drain.

**APPROVAL REQUIRED**

**HOFFMAN HOFFMAN, INC.**

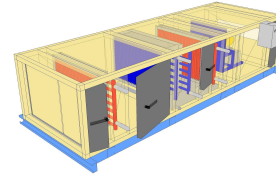
**HVAC Manufacturers Representative**

Website: [www.hoffman-hoffman.com](http://www.hoffman-hoffman.com)

Asheville, NC (828) 252-5782	Charleston, SC (843) 884-3201
Charlotte, NC (704) 364-4700	Columbia, SC (803) 765-9360
Raleigh, NC (919) 781-8011	Greenville, SC (864) 676-1888
Wilmington, NC (910) 791-4775	Chesapeake, VA (757) 548-1700
Chattanooga, TN (423) 693-2890	Richmond, VA (804) 272-1500
Knoxville, TN (865) 450-9770	Roanoke, VA (540) 725-8701
Corporate: Greensboro, NC (336) 292-8777	

We have exercised care in the preparation of this submittal. We believe it satisfies our interpretation of the designer's intent and scope. It contains the list of materials, quantities, sizes, style and the finish as we propose to furnish for this job. Please examine and check carefully that all items are exactly as required and that our interpretation of the applicable plans and/or specifications are consistent with the design. Approval by the engineer and purchaser will be required before release of this equipment for production. If any discrepancies are discovered, please notify us as soon as possible.

Job Information		Technical Data Sheet	
Job Name	NCANG 145th AW Repair Maintenance Hangar Building 51		
Date	January 09 2024		
Submitted By	EC		
Software Version	13.26		
Unit Tag	DOAS-1N - 1.3.2024		




Unit Overview						
Model Number	Air Volume cfm	Supply				
		Static Pressure		External Dimensions		
		External inWc	Total inWc	Height in	Width in	Length in
CAH005GDGM	2230	0.50	2.25	30*	46*	138

\*Not including base rails, coil connectors, drain connectors and control boxes.

Unit			
Model Number:	CAH005GDGM		
Approval:	ETL Listed / ETL Listed to Canadian Safety Standards (ETL Label / ETLc Label)		
Outer Panel:	Painted 24 gauge G60 Galvanized Steel		
Liner:	24 gauge Galvanized Steel (unless noted per section)		
Insulation:	R-13 Injected Foam		
Unit Configuration:	Inline horizontal	Drive (Handling) Location:	Right
Base:	4" formed channel	Wall Thickness:	2 in
Shipping Stretch Wrap:	Yes	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	395 ft/min	5.6 ft <sup>2</sup>	2230 cfm	Side		
Air Pressure Drop				Number of Filters	Height	Width	Depth
Clean Air	Mean Air	Dirty Air	User Spec				
0.17 inWc	<b>0.58</b> inWc	1.00 inWc	N/A	1	24 in	24 in	2 in
				1	24 in	12 in	2 in
Door							
Location		Width		Opening			
Drive side		8 in		Outward			
Special Options							
Sound Baffle				Filter Gauge			
(As casing details)				Minihelic II 0-2"			

Hot Water Coil		Component: 2		Length: 36 in		Shipping Section: 1		
Coil Model	Total Capacity	Number of Coils		Number of Rows		Fins per Inch	Tube Diameter	Tube Spacing (Face x Row)
5WQ1301B	85621 Btu/hr	1		1		13	0.625 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 Dry Bulb	Leaving Dry Bulb						
2230 cfm	21.0 °F	56.1 °F	0.13 inWc	21 in	30 in	4.38 ft <sup>2</sup>	510 ft/min	
Water		Flow Rate	Pressure Drop	Velocity	Volume	Weight		
Entering	Leaving	5.50 gpm	0.80 ftHd	1.50 ft/s	1.0 gal	14.00 lb		
160.0 °F	129.0 °F							
Connection [Data Per Coil]				Min. Fin Surface Temp.	Min. Tube Wall Surface Temp.	Fouling Factor		
Type	Size	Location	Material					
Threaded	1.50 in	Drive side	Carbon steel	129.0 °F	129.0 °F	0.000		
Material								
Fin		Tube		Header		Case		
Aluminum .0075 in		Copper .020 in		Copper		Galv. steel		
AHRI 410 Certification								
	Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at <a href="http://www.ahrirectory.org">www.ahrirectory.org</a>							
Door								
Location			Width			Opening		
Drive side			24 in			Outward		

<b>Combination Coil</b>	Component: 3	Length: 38 in	Shipping Section: 1
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**Chilled Water Coil**

Coil Model	Total Capacity	Sensible Capacity	Number of Coils	Number of Rows	Fins per Inch	Tube Diameter	Tube Spacing (Face x Row)			
5WH0908B	147388 Btu/hr	91089 Btu/hr	1	8	9	0.625 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							
2230 cfm	Dry Bulb	Wet Bulb	Dry Bulb	Wet Bulb	0.82 inWc	21 in	33 in	4.81 ft <sup>2</sup>	463 ft/min	
	92.0 °F	74.0 °F	54.6 °F	54.3 °F						
Water		Flow Rate	Pressure Drop	Velocity	Volume	Weight				
	Entering	Leaving	24.60 gpm	10.80 ftHd	3.80 ft/s	5.0 gal	46.00 lb			
	45.0 °F	57.0 °F								
Connection [Data Per Coil]					Min. Fin Surface Temp.	Min. Tube Wall Surface Temp.	Fouling Factor			
Type	Size	Location	Material							
Threaded	1.50 in	Drive side	Carbon steel	45.0 °F	45.0 °F	0.000				
Material					Drain Pan	Drain Side				
Fin	Tube	Header	Case							
Aluminum .0075 in	Copper .020 in	Copper	Galv. steel	Stainless steel	Drive side					

Component performance shown is based on the component air volume shown.

Static pressure shown is based on the component air volume shown.

**AHRI 410 Certification**



Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at [www.ahridirectory.org](http://www.ahridirectory.org)

**Reheat Hot Water Coil**

Coil Model	Total Capacity	Number of Coils	Number of Rows	Fins per Inch	Tube Diameter	Tube Spacing (Face x Row)				
5WQ0901B	44478 Btu/hr	1	1	9	0.625 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								
2230 cfm	Dry Bulb	Dry Bulb	0.10 inWc	21 in	30 in	4.38 ft <sup>2</sup>	510 ft/min			
	55.0 °F	73.2 °F								
Water		Flow Rate	Pressure Drop	Velocity	Volume	Weight				
	Entering	Leaving	2.90 gpm	0.20 ftHd	0.80 ft/s	1.0 gal	14.00 lb			
	160.0 °F	129.6 °F								
Connection [Data Per Coil]					Min. Fin Surface Temp.	Min. Tube Wall Surface Temp.	Fouling Factor			
Type	Size	Location	Material							
Threaded	1.50 in	Drive side	Carbon steel	129.6 °F	129.6 °F	0.000				
Material					Header	Case				
Fin	Tube	Header	Case							
Aluminum .0075 in	Copper .020 in	Copper	Galv. steel							

Component performance shown is based on the component air volume shown.

Static pressure shown is based on the component air volume shown.

**AHRI 410 Certification**



Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at [www.ahridirectory.org](http://www.ahridirectory.org)

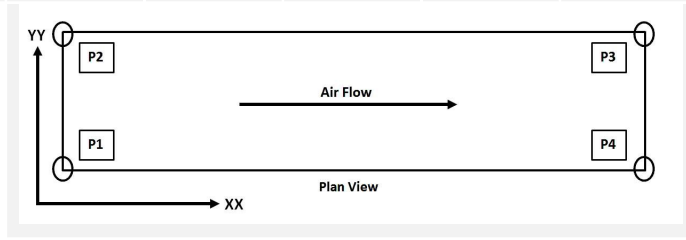
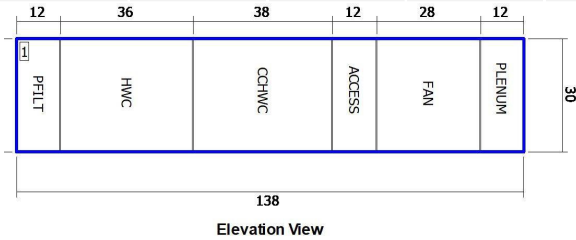
**Door**

Location	Width	Opening
Drive side	10 in	Outward

Access Section		Component: 4		Length: 12 in		Shipping Section: 1			
<b>Air Pressure Drop</b>									
0.00 inWc									
<b>Panel</b>									
Location		Width		Opening					
Removable panels		- in		Outward					
Supply Fan		Component: 5		Length: 28 in		Shipping Section: 1			
<b>Fan Performance</b>									
Air Volume	Static Pressure		Cabinet	Fan Energy Index(FEI)	Total Input Power	Fan Shaft Power	Speed	Outlet Velocity	
	External	Total							Operating
2230 cfm	0.50 inWc	2.25 inWc	0.00 inWc	1.13	1.4 kW	1.52 BHP	3157 rpm	4000 rpm	0 ft/min
<b>Fan Data</b>									
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	9	Axial	Behind Fan	
<b>Motor Data</b>									
Power	Electrical Supply	Speed	Efficiency	Enclosure	Frame Size	Supplier	Number of Poles	Lock Rotor Current	Full Load Current
2.0 HP	460/60/3 V/Hz/Phase	3500 rpm	Premium	ODP	145 T frame	Generic	2	25.00 A	2.60 A
<b>Fan Options</b>									
Shaft Grounding Kit:		Provided		Isolator Type:		Spring			
<b>VFD/Starter/Disconnect Data</b>									
Selection Type:		VFD		Vendor:		Danfoss (FC101)			
Voltage:		460 v		Height x Width x Depth:		12.13 in x 5.70 in x 7.95 in			
Mounting:		Door Side		Enclosure:		NEMA 1			
VFD Quantity:		1							
<b>Panel</b>									
Location		Width		Opening					
Removable panels		- in		Outward					
Plenum Section		Component: 6		Length: 12 in		Shipping Section: 1			
Opening Location		Opening Size		Air Pressure Drop					
End center		8.00" x 42.00"		0.12 inWc					
<b>Door</b>									
Location		Width		Opening					
Drive side		8 in		Outward					
Unit Sound Power (dB)									
Type	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
Radiated:	64	62	55	65	59	52	46	51	
Unit Discharge:	69	67	66	77	75	74	74	68	
Unit Return:	66	62	64	77	67	65	64	58	

**Shipping Section Details**

Section	Length in	Weight lb	Corner Weights (lb)				Center of Gravity (in)		
			P1	P2	P3	P4	XX	YY	ZZ
1	138	1386	361	337	332	356	68	22	16
<b>Entire Unit</b>	<b>138</b>	<b>1386</b>	<b>361</b>	<b>337</b>	<b>332</b>	<b>356</b>	<b>68</b>	<b>22</b>	<b>16</b>



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

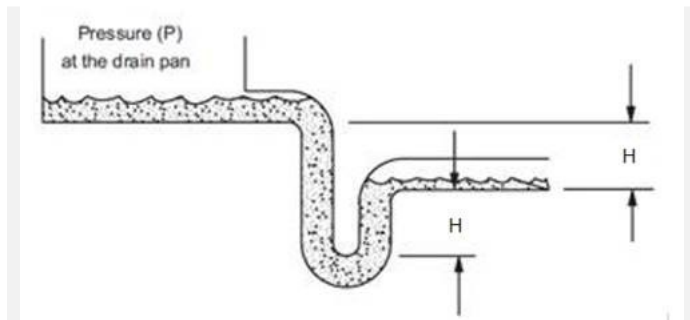
NOTE: Shipping weights listed do not include weight of water (listed in coil section(s) above).

**Supply Static Pressure Drop**

Component	Option	Static Pressure Drop
Panel Filter	Panel Filter	0.58 insWg
Hot Water Coil	Hot Water Coil	0.13 insWg
Combination Coil	Chilled Water Coil	0.82 insWg
Combination Coil	Reheat Water Coil	0.10 insWg
Access Section	Access Section	
Supply Fan	Cabinet	
Plenum Section	Plenum Section	0.12 insWg
<b>External Static</b>	<b>External Static</b>	<b>0.50 insWg</b>
<b>Total Supply Fan Static</b>		<b>2.25 insWg</b>

**Minimum Recommended Drain Pan Trap Dimensions**

Shipping Section	Component	H
1	Combination Coil	3.56



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](http://www.ahridirectory.org).

**Notes**

**Standard**

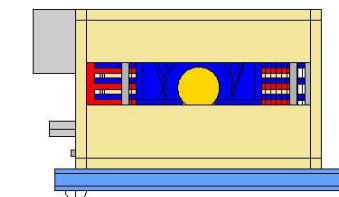
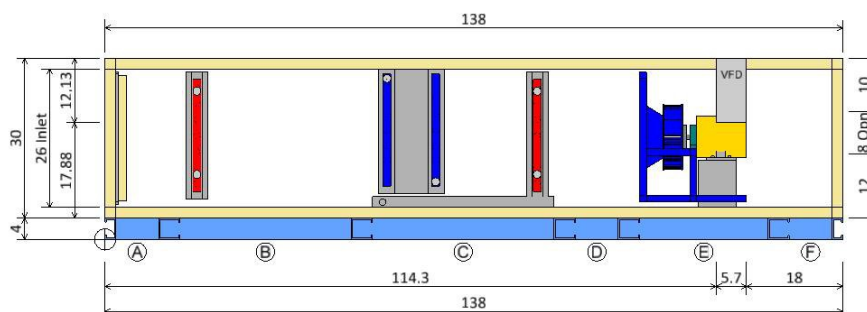
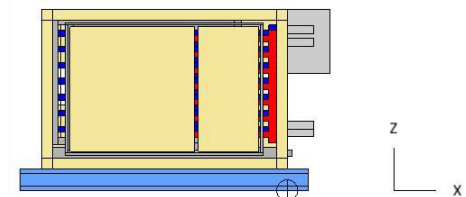
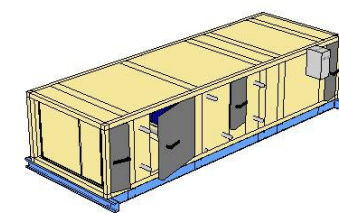
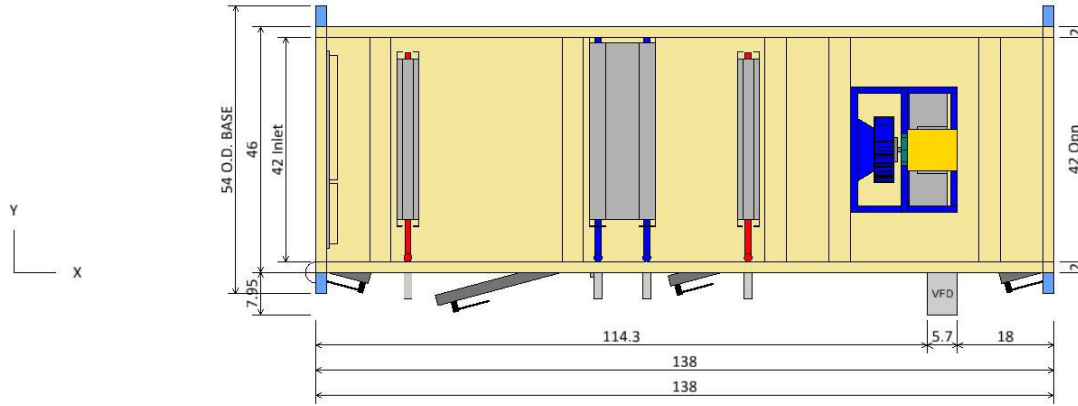
1. As a standalone component, unit meets or exceeds requirements of ASHRAE 90.1 - 2007. The approving authority is responsible for compliance of multi - component building systems.

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NCANG 145th AW Repair


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1/9/2024



DOAS-1N - 1.3.2024

Drawing

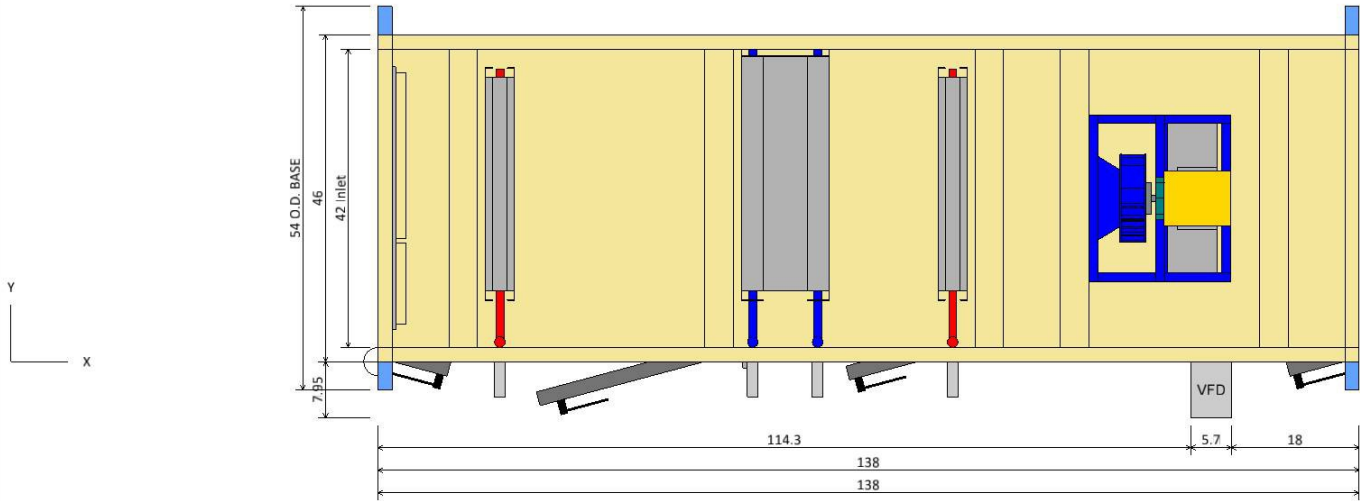
Plan/Elevation		Unit Tag: DOAS-1N - 1.3.2024		Sales Office: Hoffman & Hoffman, Inc.		 13600 Industrial Park Blvd, Minneapolis, MN 55441 <a href="http://www.DaikinApplied.com">www.DaikinApplied.com</a> Software Version: 13.26	
Product: Vision Air Handler		Project Name: NCANG 145th AW Repair Maintenance Hanger: Building 51		Scale: NTS			
Model: CAH005GDGM		Jan. 9, 2024	Ver/Rev:	Sheet: 1 of 1	Tolerance: +/-0.25"		

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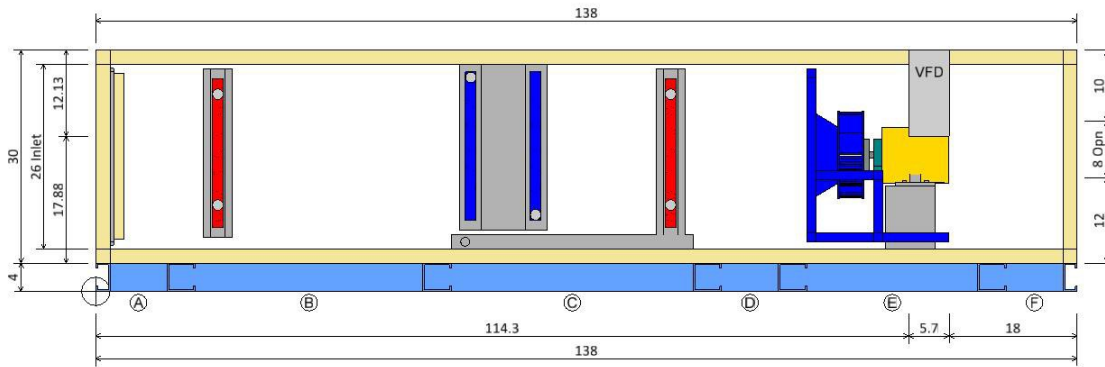
NCANG 145th AW Repair

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1/9/2024



PLAN VIEW



ELEVATION VIEW

Component Key

(A)	Panel Filter Filter Type: Pleated (MERV 8) Right Door (WxH): 8 ins x 26 ins
(B)	Hot Water Coil Coil Model: 5WQ1301B Total Capacity: 85621.0 Btu/hr Right Door (WxH): 24 ins x 26 ins
(C)	Combination Coil Heating Coil Type: Hot Water Heating Model: 5WQ0901B Cooling Coil Type: Cold Water Cooling Model: 5WH0908B Cooling Total Capacity: 147388.0 Btu/hr Heating Total Capacity: 44478.0 Btu/hr Right Door (WxH): 10 ins x 20 ins
(D)	Access Section
(E)	Supply Fan Fan Type: Centrifugal - Plenum Fan Size (Class): 12 (2) Air Flowrate: 2230.0 cfm T.S.P: 2.2 insWg Motor Power: 2.0 HP VFD door swing: 5.70 ins
(F)	Plenum Section Opening Location: End center Opening Size: 8 ins x 42 ins Right Door (WxH): 8 ins x 26 ins

DOAS-1N - 1.3.2024

Drawing

Plan/Elevation - No Ends

Unit Tag: DOAS-1N - 1.3.2024

Sales Office: Hoffman & Hoffman, Inc.

Product: Vision Air Handler

Project Name: NCANG 145th AW Repair Maintenance Hanger: Building 51

Model: CAH005GDGM

Jan. 9, 2024

Ver/Rev:

Sheet: 1 of 1

Scale: NTS

Tolerance: +/-0.25"

Dwg Units: in



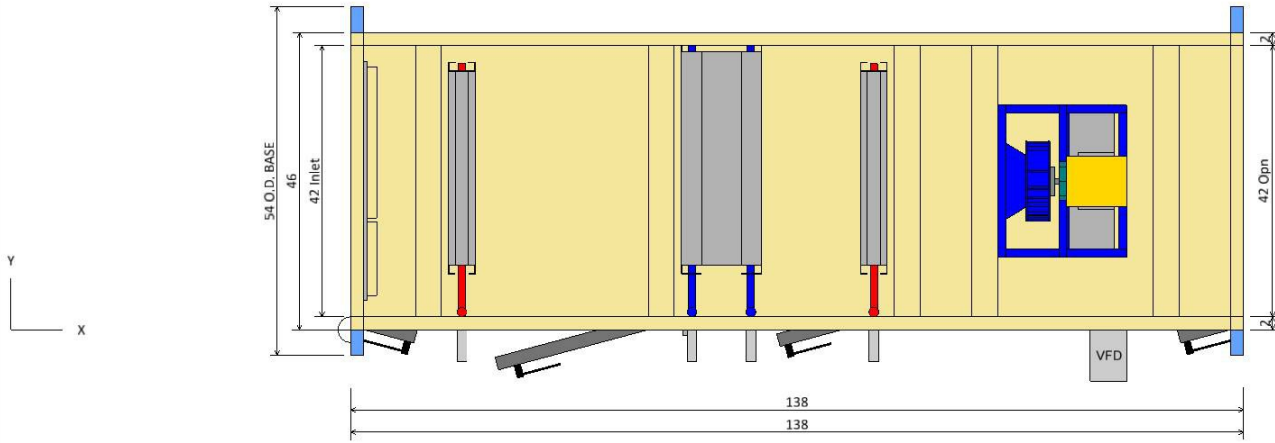
13600 Industrial Park Blvd, Minneapolis, MN 55441  
www.DaikinApplied.com Software Version: 13.26

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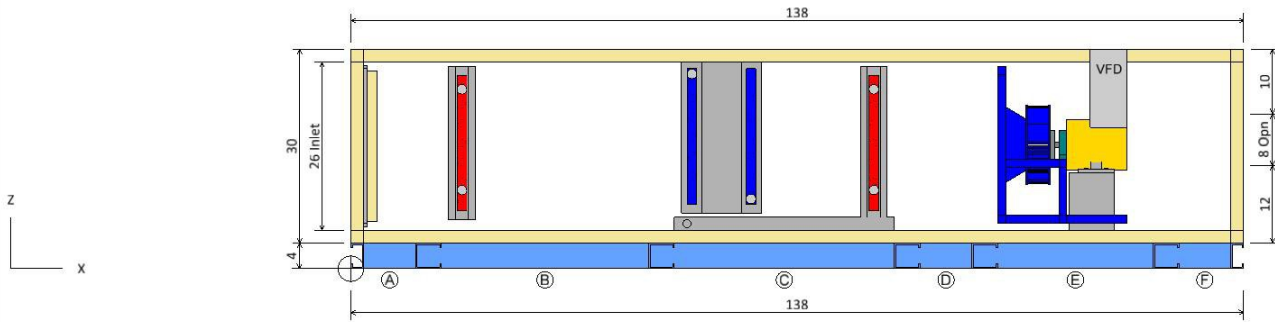
NCANG 145th AW Repair

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PLAN VIEW



ELEVATION VIEW

Component Key					
Type	X	Y	Z	Wid	Hgt
Ⓐ Panel Filter Opening	0.00	2.00	6.00	42.00	26.00
Ⓕ Plenum Section Opening	138.00	2.00	16.00	42.00	8.00

Note: Dimensions are measured from the origin point.

<b>Opening/Damper Connections</b>	Unit Tag: DOAS-1N - 1.3.2024		Sales Office: Hoffman & Hoffman, Inc.			 13600 Industrial Park Blvd, Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 13.26
Product: Vision Air Handler	Project Name: NCANG 145th AW Repair Maintenance Hangar: Building 51		Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in	
Model: CAH005GDGM	Jan. 9, 2024	Ver/Rev:	Sheet: 1 of 1			

DOAS-1N - 1.3.2024

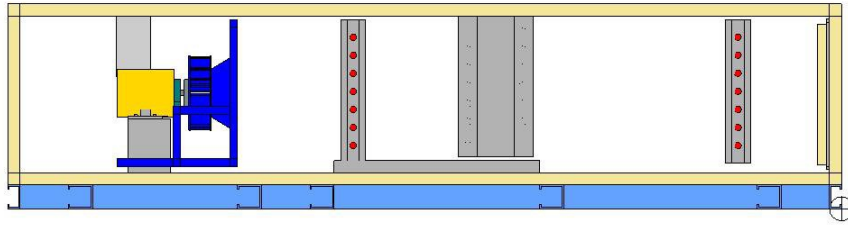
Drawing

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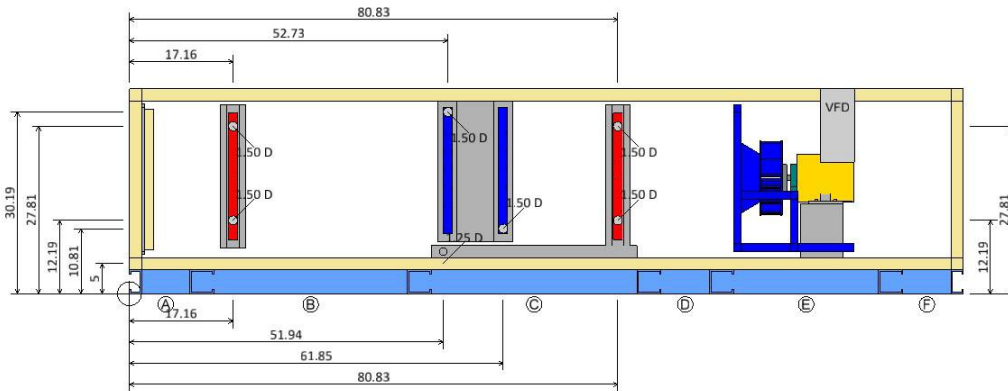
NCANG 145th AW Repair

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LEFT ELEVATION VIEW




RIGHT ELEVATION VIEW

Coil and Drain Connections

Type	X	Y	Z	Diam	
Ⓑ Hot Water Coil	Hot water inlet:	17.16	-5.00	12.19	1.50
	Hot water outlet:	17.16	-5.00	27.81	1.50
Ⓒ Combination Coil	Condensate drain conn:	51.94	-0.90	7.00	1.25
	Hot water inlet:	80.83	-5.00	12.19	1.50
	Hot water outlet:	80.83	-5.00	27.81	1.50
	Cold water inlet:	61.85	-5.00	10.81	1.50
	Cold water outlet:	52.73	-5.00	30.19	1.50

Note: Dimensions are measured from the origin point.

<b>Coil and Drain Connections</b>		Unit Tag: DOAS-1N - 1.3.2024		Sales Office: Hoffman & Hoffman, Inc.			 13600 Industrial Park Blvd, Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 13.26
Product: Vision Air Handler		Project Name: NCANG 145th AW Repair Maintenance Hangar: Building 51		Scale: NTS			
Model: CAH005GDGM	Jan. 9, 2024	Ver/Rev:	Sheet: 1 of 1	Tolerance: +/-0.25"	Dwg Units: in		

DOAS-1N - 1.3.2024

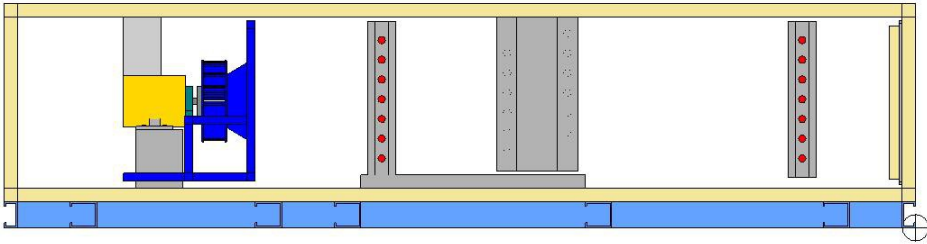
Drawing

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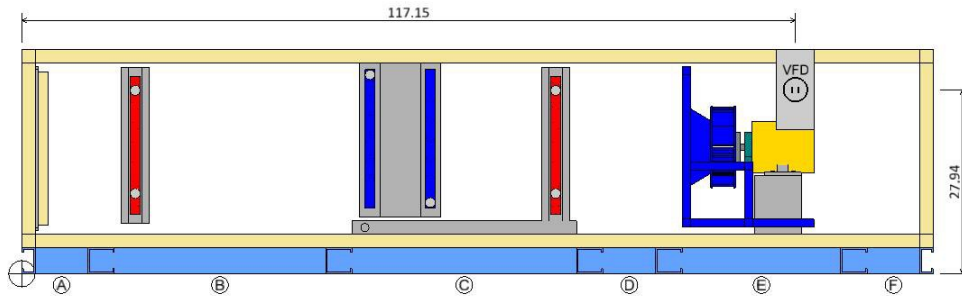
NCANG 145th AW Repair

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LEFT ELEVATION VIEW



RIGHT ELEVATION VIEW

Component Key						
	Type	X	Y	Z	Volts	Phase
(E)	Supply Fan Fan	117.15	0.00	27.94	460	3

Note: Dimensions are measured from the origin point.

DOAS-1N - 1.3.2024

Drawing

<b>Electrical Connections</b>	Unit Tag: DOAS-1N - 1.3.2024	Sales Office: Hoffman & Hoffman, Inc.					 13600 Industrial Park Blvd, Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 13.26
Product: Vision Air Handler	Project Name: NCANG 145th AW Repair Maintenance Hangar: Building 51						
Model: CAH005GDGM	Jan. 9, 2024	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in	

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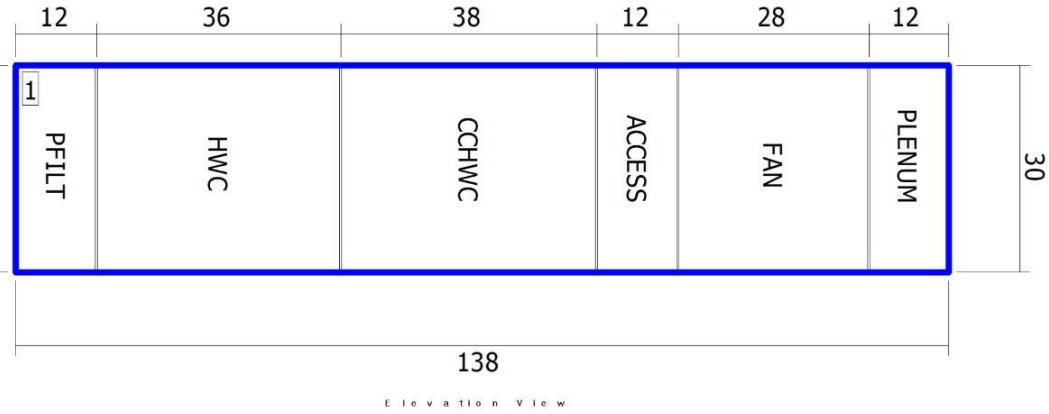
NCANG 145th AW Repair

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Shipping Sections				
Section	Weight (lb)	X	Y	Z
Section 1	1386.39	138	46	30
Total Unit	1386.39	138	46	30

Note: Base rails, curb ready base, coil connectors, drain connectors, and control boxes not included in height X, Y, Z dimensions. Shipping section may be 2" longer in air flow direction due to internal splice joint.



DOAS-1N - 1.3.2024

Drawing

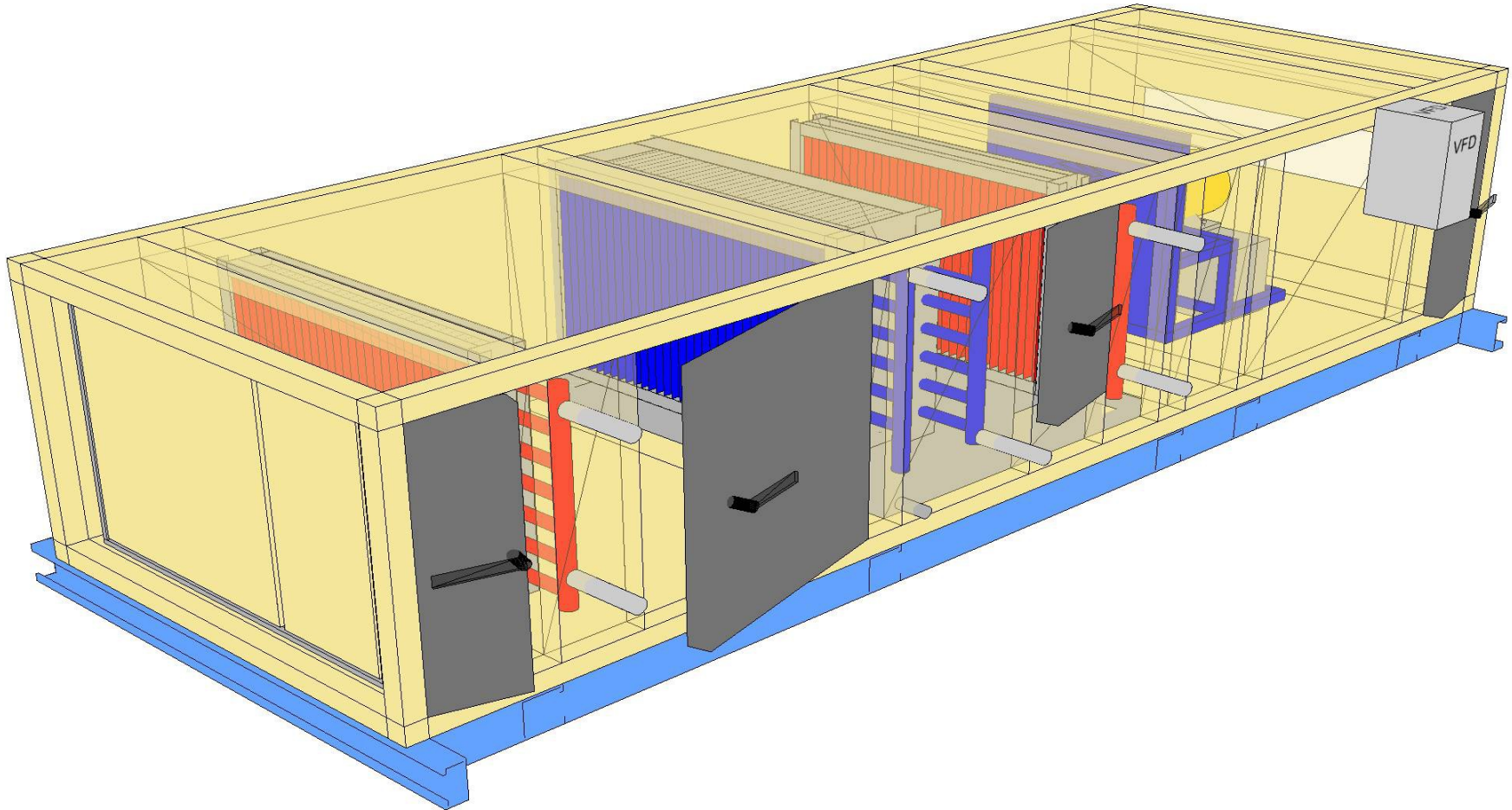
<b>Shipping Sections</b>	Unit Tag: DOAS-1N - 1.3.2024		Sales Office: Hoffman & Hoffman, Inc.			 13600 Industrial Park Blvd, Minneapolis, MN 55441 <a href="http://www.DaikinApplied.com">www.DaikinApplied.com</a> Software Version: 13.26
Product: Vision Air Handler	Project Name: NCANG 145th AW Repair Maintenance Hangar		Sales Hangar: Building 51			
Model: CAH005GDGM	Jan. 9, 2024	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/-0.25"	

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NCANG 145th AW Repair


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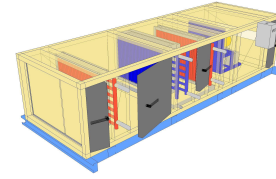


DOAS-1N - 1.3.2024

Drawing

<b>Product Drawing</b>	Unit Tag: DOAS-1N - 1.3.2024			Sales Office: Hoffman & Hoffman, Inc.			 13600 Industrial Park Blvd, Minneapolis, MN 55441 <a href="http://www.DaikinApplied.com">www.DaikinApplied.com</a> Software Version: 13.26
	Product: Vision Air Handler	Project Name: NCANG 145th AW Repair Maintenance Hangar: Building 51					
Model: CAH005GDGM	Jan. 9, 2024	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in	

Job Information		Technical Data Sheet	
Job Name	NCANG 145th AW Repair Maintenance Hangar Building 51		
Date	January 09 2024		
Submitted By	EC		
Software Version	13.26		
Unit Tag	DOAS-2E - 1.3.2024		




Unit Overview						
Model Number	Supply					
	Air Volume cfm	Static Pressure		External Dimensions		
		External inWc	Total inWc	Height in	Width in	Length in
CAH005GDGM	1125	0.50	1.37	30*	44*	134

\*Not including base rails, coil connectors, drain connectors and control boxes.

Unit			
Model Number:	CAH005GDGM		
Approval:	ETL Listed / ETL Listed to Canadian Safety Standards (ETL Label / ETLc Label)		
Outer Panel:	Painted 24 gauge G60 Galvanized Steel		
Liner:	24 gauge Galvanized Steel (unless noted per section)		
Insulation:	R-13 Injected Foam		
Unit Configuration:	Inline horizontal	Drive (Handling) Location:	Right
Base:	4" formed channel	Wall Thickness:	2 in
Shipping Stretch Wrap:	Yes	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	199 ft/min		5.6 ft <sup>2</sup>	1125 cfm	Side	
Air Pressure Drop				Number of Filters	Height	Width	Depth
Clean Air	Mean Air	Dirty Air	User Spec				
0.07 inWc	0.53 inWc	1.00 inWc	N/A	1	24 in	24 in	2 in
				1	24 in	12 in	2 in
Door							
Location				Width		Opening	
Drive side				8 in		Outward	
Special Options							
Sound Baffle				Filter Gauge			
(As casing details)				Minihelic II 0-2"			

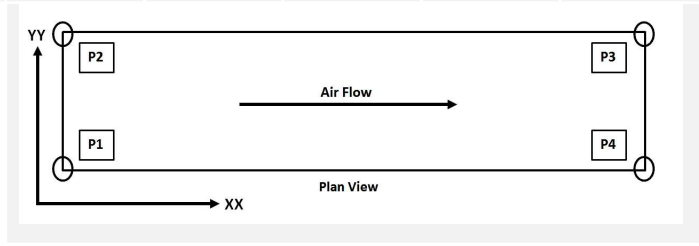
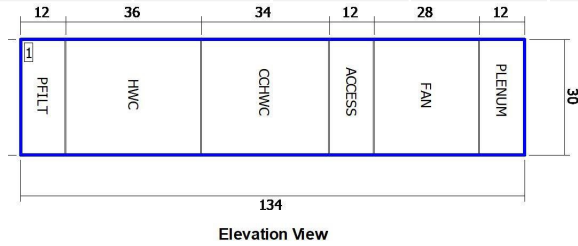
Hot Water Coil		Component: 2		Length: 36 in		Shipping Section: 1		
Coil Model	Total Capacity	Number of Coils		Number of Rows		Fins per Inch	Tube Diameter	Tube Spacing (Face x Row)
5WQ0901B	43416 Btu/hr	1		1		9	0.625 in	1.50 in x 1.299 in
Air Volume	Air Temperature		Coil Air Pressure Drop	Finned Height	Finned Length	Face Area	Face Velocity	
	Entering Dry Bulb	Leaving Dry Bulb						
1125 cfm	21.0 °F	56.3 °F	0.03 inWc	21 in	28 in	4.08 ft <sup>2</sup>	276 ft/min	
Water		Flow Rate	Pressure Drop	Velocity	Volume	Weight		
Entering	Leaving	2.80 gpm	0.20 ftHd	0.70 ft/s	1.0 gal	14.00 lb		
160.0 °F	128.9 °F							
Connection [Data Per Coil]				Min. Fin Surface Temp.	Min. Tube Wall Surface Temp.	Fouling Factor		
Type	Size	Location	Material					
Threaded	1.50 in	Drive side	Carbon steel	128.9 °F	128.9 °F	0.000		
Material								
Fin		Tube		Header		Case		
Aluminum .0075 in		Copper .020 in		Copper		Galv. steel		
AHRI 410 Certification								
	Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at <a href="http://www.ahrirectory.org">www.ahrirectory.org</a>							
Door								
Location		Width			Opening			
Drive side		24 in			Outward			

Combination Coil		Component: 3			Length: 34 in		Shipping Section: 1		
<b>Chilled Water Coil</b>									
Coil Model	Total Capacity	Sensible Capacity	Number of Coils	Number of Rows	Fins per Inch	Tube Diameter	Tube Spacing (Face x Row)		
5WH0806B	75556 Btu/hr	46178 Btu/hr	1	6	8	0.625 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						
1125 cfm	Dry Bulb	Wet Bulb	Dry Bulb	Wet Bulb	0.22 inWc	21 in	31 in	4.52 ft <sup>2</sup>	249 ft/min
	92.0 °F	74.0 °F	54.5 °F	53.9 °F					
Water		Flow Rate	Pressure Drop	Velocity	Volume	Weight			
Entering	Leaving	16.20 gpm	3.80 ftHd	2.50 ft/s	4.0 gal	36.00 lb			
45.0 °F	54.3 °F								
Connection [Data Per Coil]				Min. Fin Surface Temp.	Min. Tube Wall Surface Temp.	Fouling Factor			
Type	Size	Location	Material				45.0 °F	45.0 °F	0.000
Threaded	1.50 in	Drive side	Carbon steel						
Material					Drain Pan	Drain Side			
Fin	Tube	Header	Case						
Aluminum .0075 in	Copper .020 in	Copper	Galv. steel		Stainless steel	Drive side			
<i>Component performance shown is based on the component air volume shown.</i>									
<i>Static pressure shown is based on the component air volume shown.</i>									
<b>AHRI 410 Certification</b>									
	Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at <a href="http://www.ahridirectory.org">www.ahridirectory.org</a>								
<b>Reheat Hot Water Coil</b>									
Coil Model	Total Capacity	Number of Coils	Number of Rows	Fins per Inch	Tube Diameter	Tube Spacing (Face x Row)			
5WQ0701B	22987 Btu/hr	1	1	7	0.625 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							
1125 cfm	Dry Bulb	Dry Bulb	0.03 inWc	21 in	28 in	4.08 ft <sup>2</sup>	276 ft/min		
	55.0 °F	73.7 °F							
Water		Flow Rate	Pressure Drop	Velocity	Volume	Weight			
Entering	Leaving	1.50 gpm	0.10 ftHd	0.40 ft/s	1.0 gal	14.00 lb			
160.0 °F	128.9 °F								
Connection [Data Per Coil]				Min. Fin Surface Temp.	Min. Tube Wall Surface Temp.	Fouling Factor			
Type	Size	Location	Material				128.9 °F	128.9 °F	0.000
Threaded	1.50 in	Drive side	Carbon steel						
Material					Header	Case			
Fin	Tube	Header	Case						
Aluminum .0075 in	Copper .020 in	Copper	Galv. steel						
<i>Component performance shown is based on the component air volume shown.</i>									
<i>Static pressure shown is based on the component air volume shown.</i>									
<b>AHRI 410 Certification</b>									
Coil is NOT certified by AHRI									
<b>Door</b>									
Location			Width			Opening			
Drive side			10 in			Outward			

Access Section		Component: 4		Length: 12 in		Shipping Section: 1			
<b>Air Pressure Drop</b>									
0.00 inWc									
<b>Panel</b>									
Location		Width		Opening					
Removable panels		- in		Outward					
Supply Fan		Component: 5		Length: 28 in		Shipping Section: 1			
<b>Fan Performance</b>									
Air Volume	Static Pressure		Cabinet	Fan Energy Index(FEI)	Total Input Power	Fan Shaft Power	Speed		Outlet Velocity
	External	Total					Operating	Maximum	
1125 cfm	0.50 inWc	1.37 inWc	0.00 inWc	1.62	0.4 kW	0.40 BHP	1960 rpm	4000 rpm	0 ft/min
<b>Fan Data</b>									
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	9	Axial	Behind Fan	
<b>Motor Data</b>									
Power	Electrical Supply	Speed	Efficiency	Enclosure	Frame Size	Supplier	Number of Poles	Lock Rotor Current	Full Load Current
1.0 HP	460/60/3 V/Hz/Phase	1750 rpm	Premium	ODP	143 T frame	Generic	4	15.00 A	1.50 A
<b>Fan Options</b>									
Shaft Grounding Kit:		Provided			Isolator Type:		Spring		
<b>VFD/Starter/Disconnect Data</b>									
Selection Type:		VFD			Vendor:		Danfoss (FC101)		
Voltage:		460 v			Height x Width x Depth:		12.13 in x 5.70 in x 7.95 in		
Mounting:		Door Side			Enclosure:		NEMA 1		
VFD Quantity:		1							
<b>Panel</b>									
Location		Width		Opening					
Removable panels		- in		Outward					
Plenum Section		Component: 6		Length: 12 in		Shipping Section: 1			
Opening Location		Opening Size		Air Pressure Drop					
End center		6.00" x 40.00"		0.06 inWc					
<b>Door</b>									
Location		Width		Opening					
Drive side		8 in		Outward					
Unit Sound Power (dB)									
Type	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
Radiated:	64	54	54	49	44	41	46	51	
Unit Discharge:	64	57	66	60	60	61	57	51	
Unit Return:	64	58	66	64	54	55	50	51	

**Shipping Section Details**

Section	Length in	Weight lb	Corner Weights (lb)				Center of Gravity (in)		
			P1	P2	P3	P4	XX	YY	ZZ
1	134	1292	334	313	312	333	67	21	16
<b>Entire Unit</b>	<b>134</b>	<b>1292</b>	<b>334</b>	<b>313</b>	<b>312</b>	<b>333</b>	<b>67</b>	<b>21</b>	<b>16</b>



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

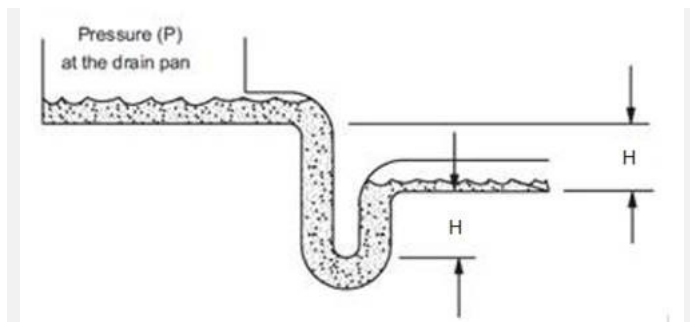
NOTE: Shipping weights listed do not include weight of water (listed in coil section(s) above).

**Supply Static Pressure Drop**

Component	Option	Static Pressure Drop
Panel Filter	Panel Filter	0.53 insWg
Hot Water Coil	Hot Water Coil	0.03 insWg
Combination Coil	Chilled Water Coil	0.22 insWg
Combination Coil	Reheat Water Coil	0.03 insWg
Access Section	Access Section	
Supply Fan	Cabinet	
Plenum Section	Plenum Section	0.06 insWg
<b>External Static</b>	<b>External Static</b>	<b>0.50 insWg</b>
<b>Total Supply Fan Static</b>		<b>1.37 insWg</b>

**Minimum Recommended Drain Pan Trap Dimensions**

Shipping Section	Component	H
1	Combination Coil	2.06



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.

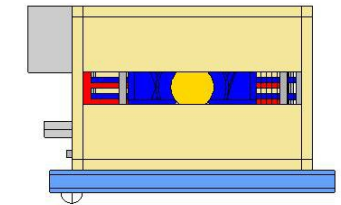
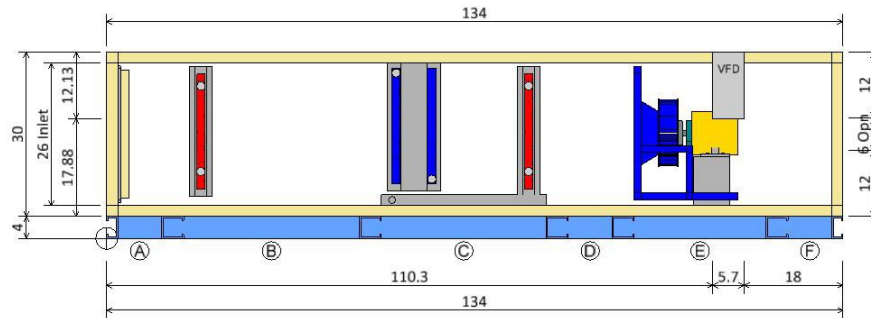
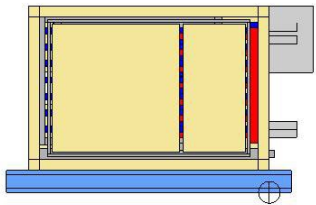
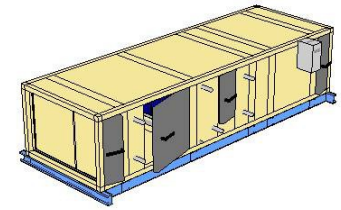
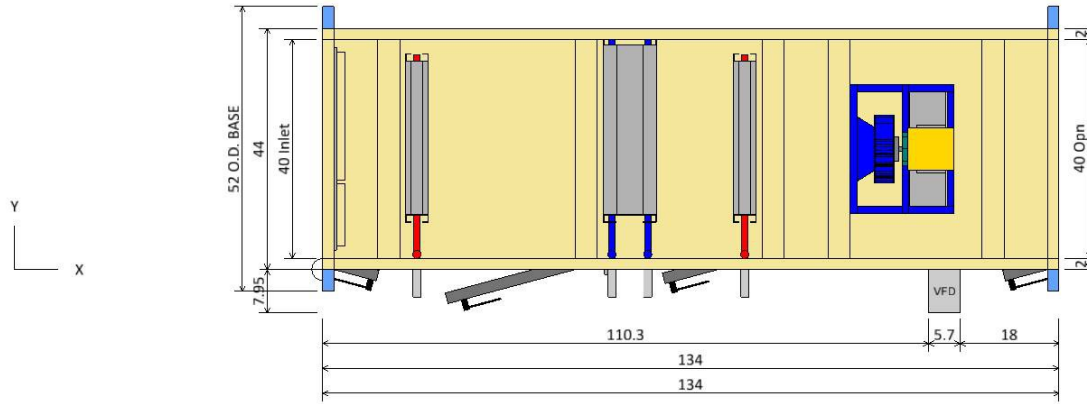
**AHRI Certification**




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](http://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.



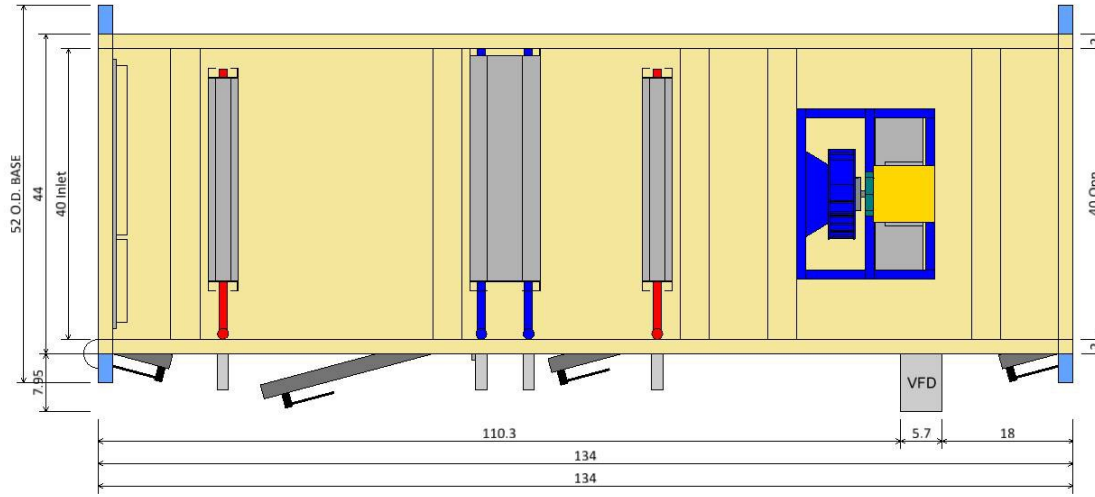
Plan/Elevation		Unit Tag: DOAS-2E - 1.3.2024		Sales Office: Hoffman & Hoffman, Inc.		 13600 Industrial Park Blvd, Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 13.26	
Product: Vision Air Handler		Project Name: NCANG 145th AW Repair Maintenance Hanger: Building 51		Scale: NTS		Tolerance: +/-0.25"	
Model: CAH005GDGM		Jan. 9, 2024	Ver/Rev:	Sheet: 1 of 1	Dwg Units: in		

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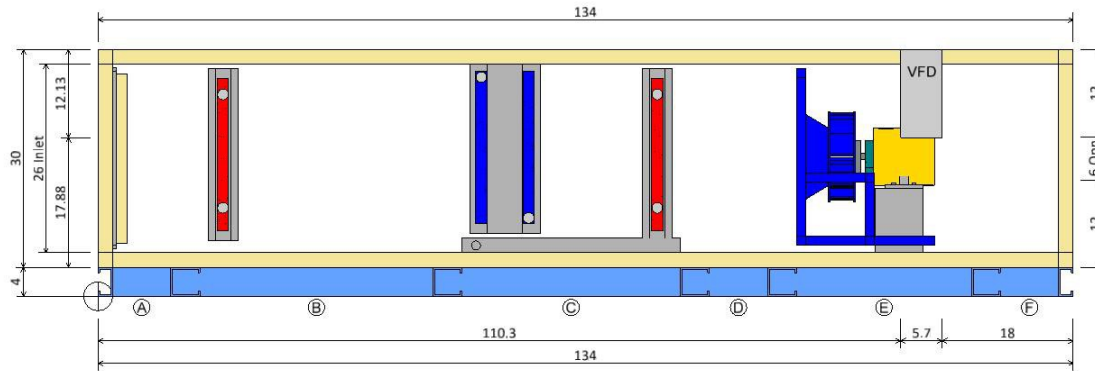
NCANG 145th AW Repair

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PLAN VIEW



ELEVATION VIEW

Component Key

(A)	Panel Filter Filter Type: Pleated (MERV 8) Right Door (WxH): 8 ins x 26 ins
(B)	Hot Water Coil Coil Model: 5WQ0901B Total Capacity: 43416.0 Btu/hr Right Door (WxH): 24 ins x 26 ins
(C)	Combination Coil Heating Coil Type: Hot Water Heating Model: 5WQ0701B Cooling Coil Type: Cold Water Cooling Model: 5WH0806B Cooling Total Capacity: 75556.0 Btu/hr Heating Total Capacity: 22987.0 Btu/hr Right Door (WxH): 10 ins x 20 ins
(D)	Access Section
(E)	Supply Fan Fan Type: Centrifugal - Plenum Fan Size (Class): 12 (2) Air Flowrate: 1125.0 cfm T.S.P: 1.4 insWg Motor Power: 1.0 HP VFD door swing: 5.70 ins
(F)	Plenum Section Opening Location: End center Opening Size: 6 ins x 40 ins Right Door (WxH): 8 ins x 26 ins

DOAS-2E - 1.3.2024

Drawing

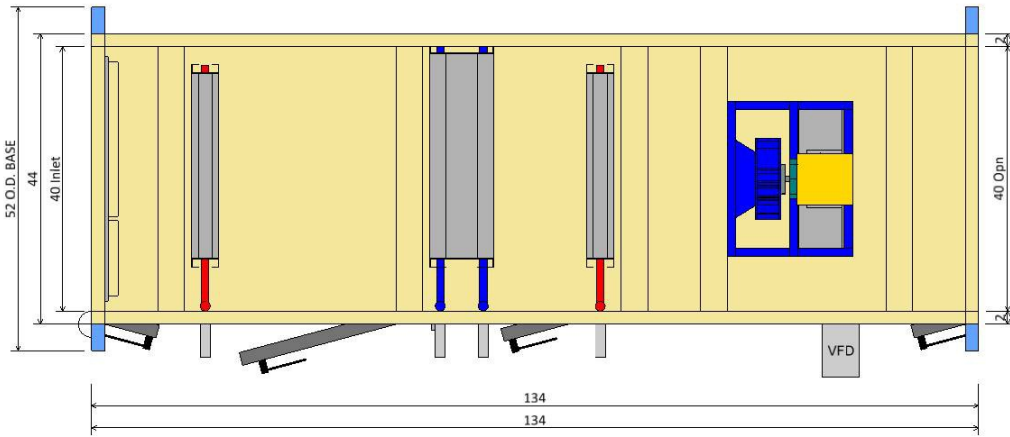
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Product: Vision Air Handler		Project Name: NCANG 145th AW Repair Maintenance Hangar: Building 51					
Model: CAH005GDGM	Jan. 9, 2024	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in	

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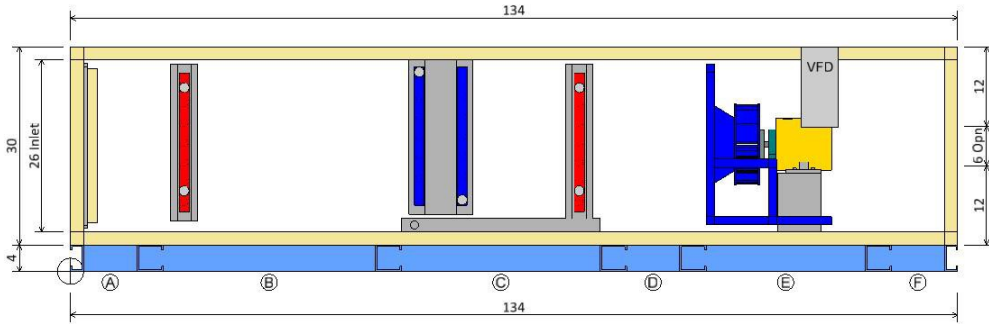
NCANG 145th AW Repair

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PLAN VIEW



ELEVATION VIEW

Component Key					
Type	X	Y	Z	Wid	Hgt
Ⓐ Panel Filter Opening	0.00	2.00	6.00	40.00	26.00
Ⓕ Plenum Section Opening	134.00	2.00	16.00	40.00	6.00

Note: Dimensions are measured from the origin point.

<b>Opening/Damper Connections</b>		Unit Tag: DOAS-2E - 1.3.2024		Sales Office: Hoffman & Hoffman, Inc.		 13600 Industrial Park Blvd, Minneapolis, MN 55441 <a href="http://www.DaikinApplied.com">www.DaikinApplied.com</a> Software Version: 13.26	
Product: Vision Air Handler		Project Name: NCANG 145th AW Repair Maintenance Hanger: Building 51					
Model: CAH005GDGM	Jan. 9, 2024	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/-0.25"		

DOAS-2E - 1.3.2024

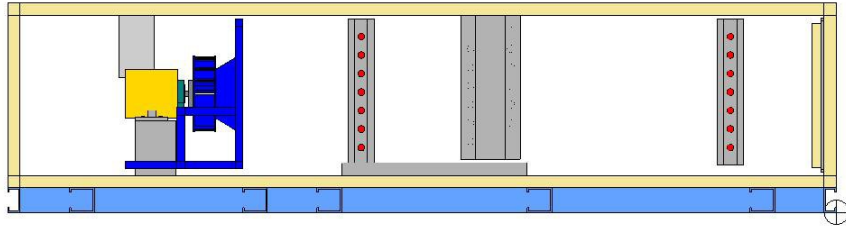
Drawing

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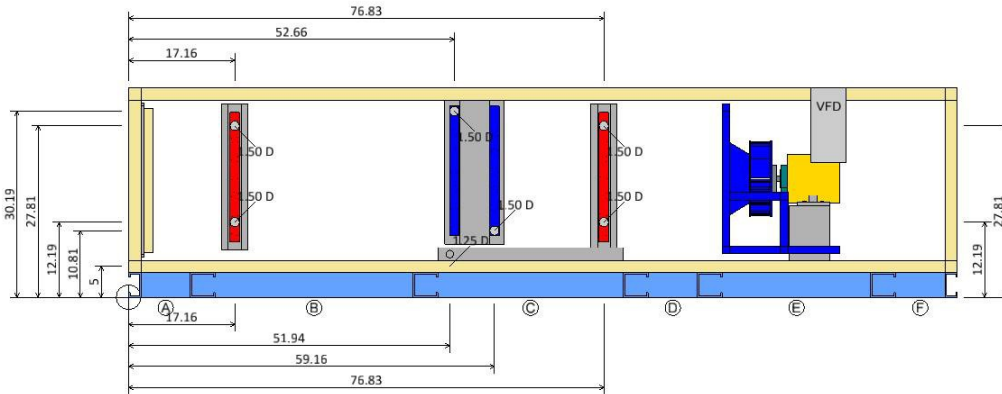
NCANG 145th AW Repair

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LEFT ELEVATION VIEW



Coil and Drain Connections

Type	X	Y	Z	Diam	
Ⓑ Hot Water Coil	Hot water inlet:	17.16	-5.00	12.19	1.50
	Hot water outlet:	17.16	-5.00	27.81	1.50
Ⓒ Combination Coil	Condensate drain conn:	51.94	-0.90	7.00	1.25
	Hot water inlet:	76.83	-5.00	12.19	1.50
	Hot water outlet:	76.83	-5.00	27.81	1.50
	Cold water inlet:	59.16	-5.00	10.81	1.50
	Cold water outlet:	52.66	-5.00	30.19	1.50

Note: Dimensions are measured from the origin point.

<b>Coil and Drain Connections</b>		Unit Tag: DOAS-2E - 1.3.2024		Sales Office: Hoffman & Hoffman, Inc.		 13600 Industrial Park Blvd, Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 13.26	
Product: Vision Air Handler		Project Name: NCANG 145th AW Repair Maintenance Hangar: Building 51		Scale: NTS			
Model: CAH005GDGM		Jan. 9, 2024	Ver/Rev:	Sheet: 1 of 1	Tolerance: +/-0.25"		

DOAS-2E - 1.3.2024

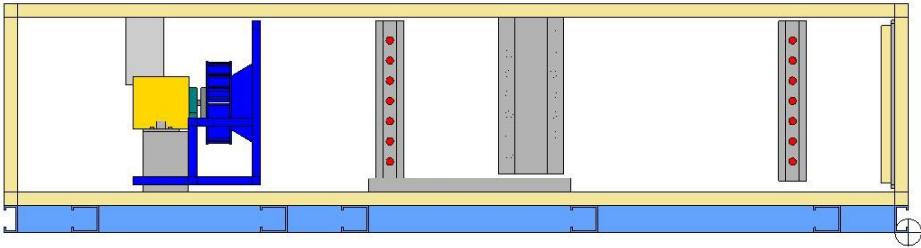
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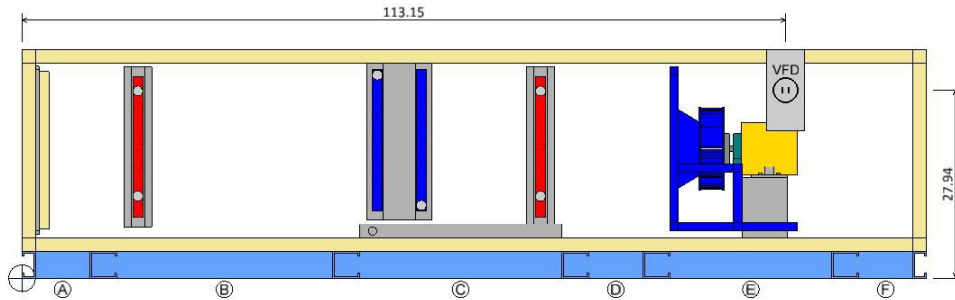
NCANG 145th AW Repair

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LEFT ELEVATION VIEW



RIGHT ELEVATION VIEW

Component Key						
Type	X	Y	Z	Volts	Phase	
Supply Fan Fan	113.15	0.00	27.94	460	3	(E)

Note: Dimensions are measured from the origin point.

DOAS-2E - 1.3.2024

Drawing

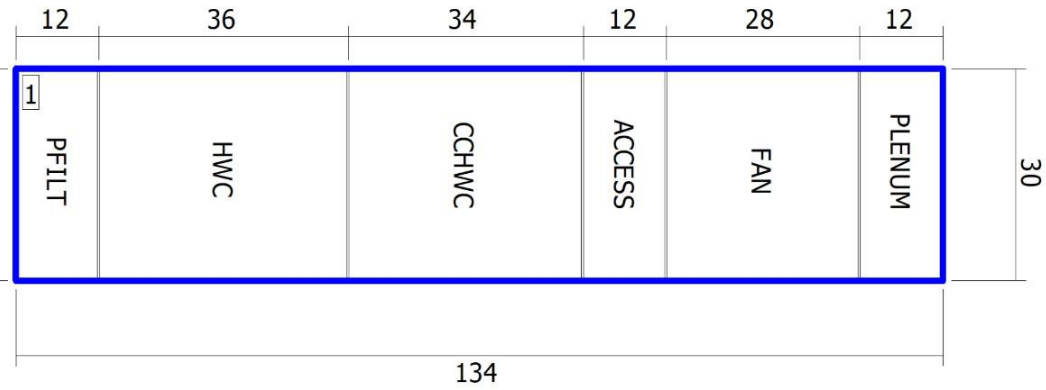
<b>Electrical Connections</b>	Unit Tag: DOAS-2E - 1.3.2024	Sales Office: Hoffman & Hoffman, Inc.					 13600 Industrial Park Blvd, Minneapolis, MN 55441 <a href="http://www.DaikinApplied.com">www.DaikinApplied.com</a> Software Version: 13.26
Product: Vision Air Handler	Project Name: NCANG 145th AW Repair Maintenance Hanger: Building 51						
Model: CAH005GDGM	Jan. 9, 2024	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in	

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Elevation View


Shipping Sections

Section	Weight (lb)	X	Y	Z
Section 1	1291.76	134	44	30
Total Unit	1291.76	134	44	30

Note: Base rails, curb ready base, coil connectors, drain connectors, and control boxes not included in height X, Y, Z dimensions. Shipping section may be 2" longer in air flow direction due to internal splice joint.

DOAS-2E - 1.3.2024

Drawing

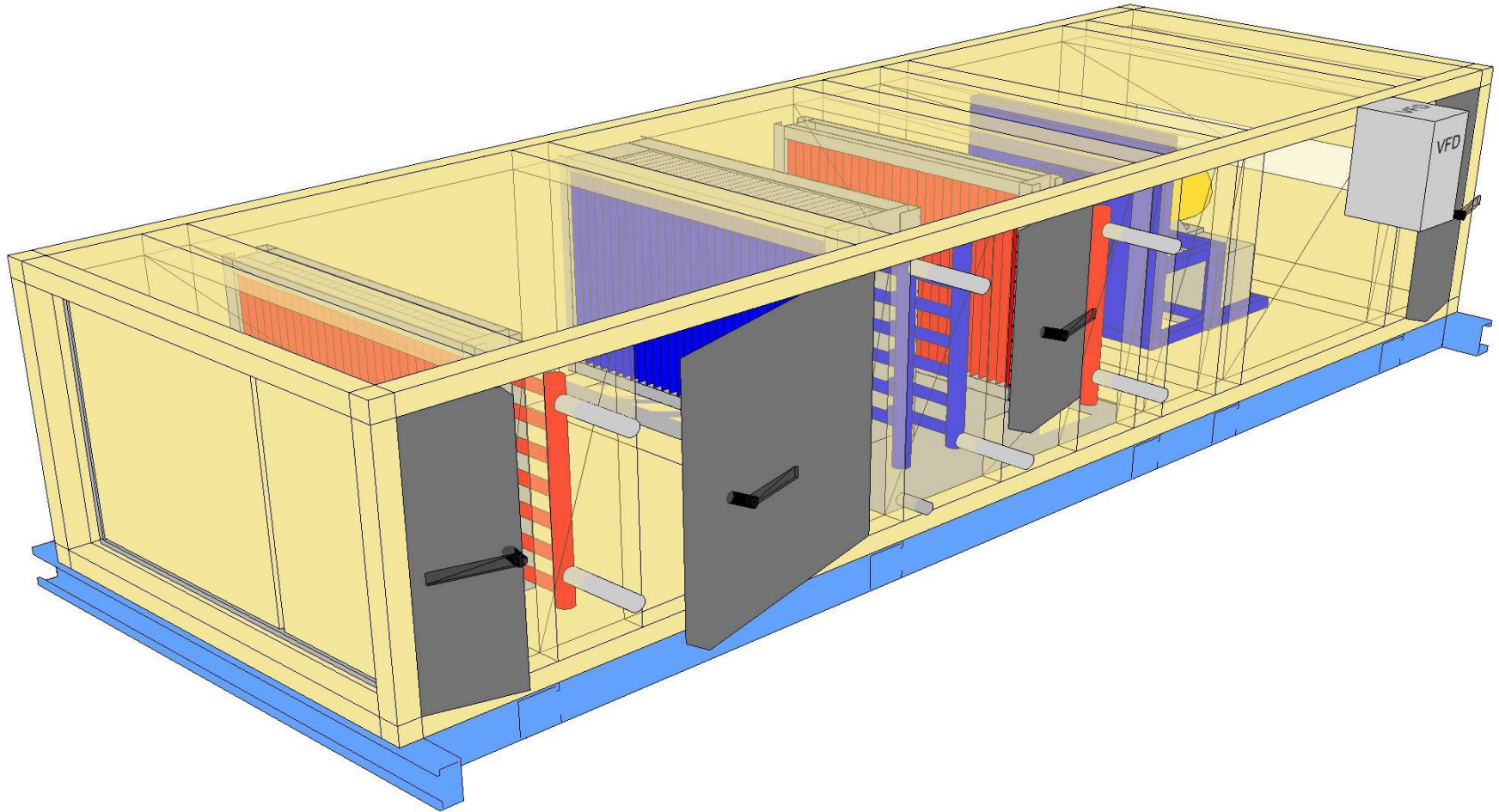
<b>Shipping Sections</b>		Unit Tag: DOAS-2E - 1.3.2024		Sales Office: Hoffman & Hoffman, Inc.			 13600 Industrial Park Blvd, Minneapolis, MN 55441 <a href="http://www.DaikinApplied.com">www.DaikinApplied.com</a> Software Version: 13.26
Product: Vision Air Handler		Project Name: NCANG 145th AW Repair Maintenance Hangar		Sales Hangar: Building 51			
Model: CAH005GDGM	Jan. 9, 2024	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in	

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Drawing

<b>Product Drawing</b>	Unit Tag: DOAS-2E - 1.3.2024		Sales Office: Hoffman & Hoffman, Inc.				 13600 Industrial Park Blvd, Minneapolis, MN 55441 <a href="http://www.DaikinApplied.com">www.DaikinApplied.com</a> Software Version: 13.26
	Product: Vision Air Handler	Project Name: NCANG 145th AW Repair Maintenance Hangar: Building 51		Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in	
Model: CAH005GDGM	Jan. 9, 2024	Ver/Rev:	Sheet: 1 of 1				