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PROJECT: CMS NWSA – New Building and Renovation
PROJECT NO: 223.063.00
SUBMITTAL: Submittal 237313-1.2 Modular Indoor Central Station Air Handling Units - PD
DATE RECEIVED: 08/14/2024

Engineer's review is for conformance with the general design concept and for general arrangement only. Review and approval shall not be construed to mean that the engineer accepts the detail calculations and dimensions shown in the submittal or any deviation from the requirements of the contract documents. Contractor is responsible for errors or omissions in the submittal; for meeting all requirements of the contract documents; for confirming and correlating job site dimensions; for information that pertains solely to fabrication processes or to techniques of construction; and for the coordination of his work with all other trades.

DISPOSITION LEGEND

NET NO EXCEPTIONS TAKEN
Fabrication may proceed. Changes to contract or contract sum are not authorized.

Reviewer: Carter Seibert

Date: 08.19.2024

ITEM – DISPOSITION; COMMENT(S):

1. No exceptions taken.

END OF SHOP DRAWING REVIEW



209 Burgess Street Greer, SC 29650
Voice 864-848-6116 WWW.KLGJONES.COM

Document Review Comments

Project Name:	CMS NW School of the Arts	Today's Date:	8/19/2024
KLGJ Project No.:	240911	Reviewed by:	J Wilson
Submittal No.:	237313-2.0		
Submittal Name:	Modular Indoor Central Station AHUs		

THIS REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. CORRECTIONS OR COMMENTS MADE ON THE SUBMITTAL DURING THIS REVIEW DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. REVIEW OF A SPECIFIC ITEM SHALL NOT INCLUDE REVIEW OF AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. THE CONTRACTOR IS RESPONSIBLE FOR: DIMENSIONS TO BE CONFIRMED AND CORRELATED AT THE JOBSITE; INFORMATION THAT PERTAINS SOLELY TO THE FABRICATION PROCESSES OR TO THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION; COORDINATION OF THE WORK WITH THAT OF ALL TRADES AND PERFORMING ALL WORK IN A SAFE AND SATISFACTORY MANNER. KLG JONES DOES NOT ASSUME ANY DESIGN RESPONSIBILITIES IN PROVIDING REVIEW COMMENTS. ALL COMMENTS ARE TO BE REVIEWED BY DESIGN TEAM.

No.	Comment
1	No Comments in addition to those from Rev #1 as KLG Jones was not copied on any of the conversations or emails between Trane and the EOR that Resubmittal #2 is based on. KLG Jones is not able to verify these units comply with the requirements of the project or CMS Guidelines.
	PREVIOUS COMMENTS;
	Submittal does not include individual motor protector as called for by note 16 of the AHU schedule on M104. 8/7/2024 BM: No change in Rev.1. Trane said this is by others.
	AHU-G1, G2 & G3 appear to have air pressure drops calculated at the heating cfm and not the cooling cfm. Will this affect unit total static at design air flow? 8/7/2024 BM: No change. Air flow listed for each heating coil is the heating air flow. No note has been provided saying the air pressure drop is at the maximum air flow. Using fan law, the pressure drop will actually be 4x the value in the table.
	The unit pressure summary on page 118 of 119 has external pressure of 2.5 instead of 2.0 for AHU-G2. This also makes the total pressure wrong.



Submittal Transmittal

LS3P | 227 West Trade Street Suite 700 Charlotte NC 28202 United States

PROJECT: CMS NWSA - New Building and Renovation
9201-224030

DATE SENT: 8/14/2024

RETURN BY: 8/21/2024

SUBJECT: MODULAR INDOOR CENTREAL-STATION AIR HANDLING UNITS - PD

SUBMITTAL ID: 237313-1-2

TYPE: Submittal

TRANSMITTAL ID: 00594

PURPOSE: For Review and Comment

VIA: Info Exchange

SPEC SECTION: 23 73 13

FROM

NAME	COMPANY	EMAIL	PHONE
Jacquelyn Satterwhite	LS3P	JacquelynSatterwhite@ls3p.com	704-333-6686

TO

NAME	COMPANY	EMAIL	PHONE
CLT Admin	CMTA	cltsupport@cmta.com	704-376-7072
Scott Willard	CMTA	Swillard@cmta.com	502-326-3085, 704.376.7072
Jay Wilson	KLG Jones Building Commissioning	jwilson@klgjones.com	(864) 580-9734
Judy White	KLG Jones Building Commissioning	jwhite@klgjones.com	(864) 848-6116

REMARKS:

NOTE: Received 2 files from Procore at 10:19 AM EDT on 08/14/2024. Any changes made to the Submittal in Procore after this time are not shown in Newforma.

Procore Due Date:
08/28/2024

General Description:

A. Product Data: For each air-handling unit indicated. 1. Unit dimensions and weight. 2. Cabinet material, metal thickness, finishes, insulation, and accessories. 3. Fans: a. Certified fan-performance curves with system operating conditions indicated. b. Certified fan-sound power ratings. c. Fan construction and accessories. d. Motor ratings, electrical characteristics, and motor accessories. 4. Certified coil-performance ratings with system operating conditions indicated. 5. Dampers, including housings, linkages, and operators. 6. Filters with performance characteristics.

Submittal Transmittal

DATE: 8/14/2024

ID: 00594

Workflow Comments:

DESCRIPTION OF CONTENTS

QTY	DATED	TITLE	NUMBER	NOTES
1	8/14/2024	23 73 13 - Modular Indoor Central Station AHU - PD & SHop Rev 2.pdf		
1	8/14/2024	23 73 13-1-2 - Submittal Form.pdf		



Submittal #23 73 13-1.2 23 73 13 - MODULAR INDOOR CENTREAL-STATION AIR HANDLING UNITS

Balfour Beatty Construction, LLC
1930 Camden Rd, Suite 280
Charlotte, North Carolina 28203
Phone: (704) 319-4000

Project: 17473001 - Northwest School Project 2
1414 Beatties Ford Rd
Charlotte, North Carolina 28216-4549

MODULAR INDOOR CENTREAL-STATION AIR HANDLING UNITS - Product Data

SPEC SECTION:	23 73 13 - MODULAR INDOOR CENTREAL-STATION AIR HANDLING UNITS	SUBMITTAL MANAGER:	Candace Parrish (Balfour Beatty)
STATUS:	Submitted to AE	DATE CREATED:	08/7/2024
ISSUE DATE:	08/7/2024	REVISION:	2
RESPONSIBLE CONTRACTOR:	PC Godfrey (Charlotte)	RECEIVED FROM:	Lee Parks
RECEIVED DATE:		SUBMIT BY:	
FINAL DUE DATE:	08/28/2024	LOCATION:	
SUB JOB:		COST CODE:	
APPROVERS:	Candace Parrish (Balfour Beatty), Bryan Manipole (LS3P Associates, LTD), Jacquelyn Satterwhite (LS3P Associates, LTD)		
BALL IN COURT:	Bryan Manipole (LS3P Associates, LTD), Jacquelyn Satterwhite (LS3P Associates, LTD)		
DISTRIBUTION:			
DESCRIPTION:	A. Product Data: For each air-handling unit indicated. 1. Unit dimensions and weight. 2. Cabinet material, metal thickness, finishes, insulation, and accessories. 3. Fans: a. Certified fan-performance curves with system operating conditions indicated. b. Certified fan-sound power ratings. c. Fan construction and accessories. d. Motor ratings, electrical characteristics, and motor accessories. 4. Certified coil-performance ratings with system operating conditions indicated. 5. Dampers, including housings, linkages, and operators. 6. Filters with performance characteristics.		
ATTACHMENTS:			

SUBMITTAL WORKFLOW

REVIEWER NAME	DUE DATE	RESPONSE DATE	RESPONSE	ATTACHMENTS	COMMENTS
Candace Parrish	8/14/2024	8/14/2024	BBC Reviewed	23 73 13 - Modular Indoor Central Station AHU - PD & SHop Rev 2.pdf	
Bryan Manipole	8/28/2024		Pending		
Jacquelyn Satterwhite	8/28/2024		Pending		

BY _____ DATE _____ COPIES TO _____

Submittal No. / Revision: 23 73 13-1 2 Subcontractor/Supplier: PC Godfrey (Charlotte)	Description: MODULAR INDOOR CENTREAL-STATION AIR HANDLING UNITS - Product Data
Submittal Type: Product Data Spec. Section & Paragraph No.: 23 73 13	Required on site by: Required lead time: Status: Submitted to AE
Notes: A. Product Data: For each air-handling unit indicated. 1. Unit dimensions and weight. 2. Cabinet material, metal thickness, finishes, insulation, and accessories. 3. Fans: a. Certified fan-performance curves with system operating conditions indicated. b. Certified fan-sound power ratings. c. Fan construction and accessories. d. Motor ratings, electrical characteristics, and motor accessories. 4. Certified coil-performance ratings with system operating conditions indicated. 5. Dampers, including housings, linkages, and operators. 6. Filters with performance characteristics.	

PC Godfrey (Charlotte)	Balfour Beatty Construction, LLC Stamp
<p>Submittal No. / Revision: 23 73 13-1 2</p> <p>Description: MODULAR INDOOR CENTREAL-STATION AIR HANDLING UNITS - Product Data</p> <p>Subcontractor certifies that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and contract documents.</p> <p>Submitted By: Lee Parks</p> <p>Date:</p>	<p>This submittal has been reviewed for general compliance with the plans and specification. This review and the response indicated below does not relieve subcontractor/ supplier of any contractual responsibilities including the furnishing of all items required by the contract documents and the confirmation of all quantities and dimensions.</p> <p>Submittal No.: 23 73 13-1 2</p> <p>Description: MODULAR INDOOR CENTREAL-STATION AIR HANDLING UNITS - Product Data</p> <p>Reviewed by: Candace Parrish</p> <p>Date: 08/07/2024</p>
Stamp	Consultant Stamp
<p>A/E Response: Date:</p>	
Consultant Stamp	Consultant Stamp

PC Godfrey (Charlotte)	Balfour Beatty Construction, LLC Stamp
<p>Submittal No. / Revision: 23 73 13-1 2</p> <p>Description: MODULAR INDOOR CENTREAL-STATION AIR HANDLING UNITS - Product Data</p> <p>Subcontractor certifies that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and contract documents.</p> <p>Submitted By: Lee Parks</p> <p>Date:</p>	<p>This submittal has been reviewed for general compliance with the plans and specification. This review and the response indicated below does not relieve subcontractor/ supplier of any contractual responsibilities including the furnishing of all items required by the contract documents and the confirmation of all quantities and dimensions.</p> <p>Submittal No.: 23 73 13-1 2</p> <p>Description: MODULAR INDOOR CENTREAL-STATION AIR HANDLING UNITS - Product Data</p> <p>Reviewed by: Candace Parrish</p> <p>Date: 08/07/2024</p>
Stamp	Consultant Stamp
<p>A/E Response: Date:</p>	
Consultant Stamp	



Submittal #23 73 13-1.2 23 73 13 - MODULAR INDOOR CENTREAL-STATION AIR HANDLING UNITS

Balfour Beatty Construction, LLC
1930 Camden Rd, Suite 280
Charlotte, North Carolina 28203
Phone: (704) 319-4000

Project: 17473001 - Northwest School Project 2
1414 Beatties Ford Rd
Charlotte, North Carolina 28216-4549

MODULAR INDOOR CENTREAL-STATION AIR HANDLING UNITS - Product Data

SPEC SECTION:	23 73 13 - MODULAR INDOOR CENTREAL-STATION AIR HANDLING UNITS	SUBMITTAL MANAGER:	Candace Parrish (Balfour Beatty)
STATUS:	Submitted to AE	DATE CREATED:	08/7/2024
ISSUE DATE:	08/7/2024	REVISION:	2
RESPONSIBLE CONTRACTOR:	PC Godfrey (Charlotte)	RECEIVED FROM:	Lee Parks
RECEIVED DATE:		SUBMIT BY:	
FINAL DUE DATE:	08/28/2024	LOCATION:	
SUB JOB:		COST CODE:	
APPROVERS:	Candace Parrish (Balfour Beatty), Bryan Manipole (LS3P Associates, LTD), Jacquelyn Satterwhite (LS3P Associates, LTD)		

BALL IN COURT:
Candace Parrish (Balfour Beatty)

DISTRIBUTION:

DESCRIPTION:

A. Product Data: For each air-handling unit indicated. 1. Unit dimensions and weight. 2. Cabinet material, metal thickness, finishes, insulation, and accessories. 3. Fans: a. Certified fan-performance curves with system operating conditions indicated. b. Certified fan-sound power ratings. c. Fan construction and accessories. d. Motor ratings, electrical characteristics, and motor accessories. 4. Certified coil-performance ratings with system operating conditions indicated. 5. Dampers, including housings, linkages, and operators. 6. Filters with performance characteristics.

ATTACHMENTS:

SUBMITTAL WORKFLOW

REVIEWER NAME	DUE DATE	RESPONSE DATE	RESPONSE	ATTACHMENTS	COMMENTS
Candace Parrish	8/14/2024		Pending		
Bryan Manipole	8/28/2024		Pending		
Jacquelyn Satterwhite	8/28/2024		Pending		

BY

DATE

COPIES TO

RESUBMITTAL #2

237313 MODULAR INDOOR CENTRAL STATION AIR HANDLING UNITS

NOTE: This resubmittal is based on various email conversations directly with Carter Seibert with CMTA. Trane was directed to submit this way, but it doesn't exactly match the plans. This should help in the submittal being approved



Re-Submittal #2

Prepared For:
PC Godfrey
Attn: Lee Parks

Date: August 09, 2024

Engineer:
CMTA Engineers
Zachary Schneider, P.E.

Job Name:
CMS Northwest School of Arts New Building and Renovations

Trane U.S. Inc. is pleased to provide the following submittal for your review and approval.

Product Summary

Qty Product

- 4 - Performance Climate Changer Indoor Units (CSAA)
- 3 - Performance Climate Changer Indoor Units (PSCA)

Notes:

1. This submittal is based on mechanical specifications and drawings issued 02-05-2024. In addition, returned comments from engineer dated 7-16-2024 plus various additional discussions with engineer have also been incorporated.
2. The mechanical contractor shall verify / confirm all piping locations, clearance requirements and access door locations and note any discrepancies / changes on the returned submittal.
3. Fan motors are compatible with VFDs and shall be provided with shaft grounding rings. All unit controls (space and unit sensors, unit controller, damper actuators, etc...) shall be provided and installed by others. Note: VFDs will be provided and installed others.
4. All electrical requirements shall be coordinated / confirmed with the electrical contractor prior to ordering equipment.
5. The following items are not included by Trane unless otherwise noted:
 - Chilled or hot water valves*
 - Controls, including unit controller*
 - Electrical disconnects*
 - Seismic restraints*

Jeff Auten
Trane U.S. Inc.
4501 South Tryon Street
Charlotte, NC 28217
Office Phone: (704) 525-9600

The attached information describes the equipment we propose to furnish for this project and is submitted for your approval.
Submittal acceptance and return is a critical step, so please ensure submittals are returned with approval to release to production within 14 days of submittal date.

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Tag Data - Performance Climate Changer (CSAA) (Qty: 4)

Item	Tag(s)	Qty	Description	Model Number
A1	AHU-C1	1	Size 50 Indoor Air Handler	CSAA050UA
A2	AHU-G1	1	Size 21 Indoor Air Handler	CSAA021UA
A3	AHU-G2	1	Size 21 Indoor Air Handler	CSAA021UA
A4	AHU-G3	1	Size 21 Indoor Air Handler	CSAA021UA

Product Data - Performance Climate Changer (CSAA)

Item: A1 Qty: 1 Tag(s): AHU-C1

Unit level options

- Indoor unit, size 50
- 6in. integral base frame
- UL listed unit
- Single metal handle - ganged latches
- 227.344" total unit length
- Field provided controls (by others)
- OSHPD seismic certification required - base mount
- IBC 2012, 2015, 2018, 2021

Controls and VFD/starter

- No unit controller
- Supply fan external junction box, field provided NEMA

Warranty

- 2 year parts warranty – entire unit
- 1st year labor warranty

Air mixing section (Pos #1)

- Reduced length mixing box
- Door- right side
- Front full face opening
- Top rectangular opening
- 2in. flat filter frame
- Pleated media for use during construction, MERV 8 (Field Installed)
- Metal filter frames with four (4) sets of MERV 10 media (Field Installed)

Access section (Pos #2)

- Medium large access section
- Door- right side

Fan section (Pos #3)

- Supply fan section
- Perforated panels
- 18.25in. direct drive plenum fan, full width, M press
- 4 fan array
- Right side drive
- NEMA premium compliant TEFC
- Voltage 460/3
- 7.5 HP (each fan)
- 1800 RPM
- Inverter balance with shaft grounding
- Motor wiring conduit
- External junction box
- Backdraft damper(s)

Access section (Pos #4)

- Medium large access section
- Door- right side

Coil section (Pos #5)

- Medium horizontal coil
- Right side - coil supply
- Service panel coil connection side
- 5W hot water heating coil, 1 row
- 80 coil fins per foot
- Aluminum fins
- Prima flo E (energy efficient)

.020" copper tubes, 5/8in. diameter
Galvanized steel coil casing
Coil connections - standard

Access section (Pos #6)

Medium large access section
Door- right side

Coil section (Pos #7)

Extended medium horizontal coil
Stainless steel drain pan
Right side - drain & coil connections
Service panel coil connection side
Type "UU" chilled water cooling coil, 6 rows
113 coil fins per foot
Aluminum fins
Delta flo H (Hi efficient)
.016" copper tubes, 1/2in. diameter
Stainless steel coil casing
Turbulators
Coil connections - standard

Discharge plenum (Pos #8)

Discharge plenum
Door- right side
2in. perforated interior walls
Top rectangular opening

Item: A2 Qty: 1 Tag(s): AHU-G1**Unit level options**

Indoor unit, size 21
6in. integral base frame
UL listed unit
Multiple composite handles/latches
215.378" total unit length
Field provided controls (by others)
OSHPD seismic certification required - base mount
IBC 2012, 2015, 2018, 2021

Controls and VFD/starter

No unit controller
Supply fan exterior junction box, field provided NEMA

Warranty

2-year parts warranty – entire unit
1st year labor warranty

Air mixing section (Pos #1)

Reduced length mixing box
Door- right side
Back damper - high velocity parallel
Front full face opening
Top damper - high velocity parallel
2in. flat filter frame
Pleated media for use during construction, MERV 8 (Field Installed)
Metal filter frames with four (4) sets of MERV 10 media (Field Installed)

Access section (Pos #2)

Medium large access section
Door- right side

Access section (Pos #3)

Small blank section

Fan section (Pos #4)

Supply fan section
20in. direct drive plenum fan, 80% width, M press
2 fan array
Right side drive
NEMA premium compliant TEFC

Voltage 460/3
 7.5 HP (each fan)
 1800 RPM
 Inverter balance with shaft grounding
 Motor wiring conduit
 External junction box
 Backdraft damper(s)

Access section (Pos #5)

Medium large access section
 Door- right side

Coil section (Pos #6)

Small horizontal coil
 Right side - coil supply
 Service panel coil connection side
 5W hot water heating coil, 1 row
 126 coil fins per foot
 Aluminum fins
 Prima flo H (Hi efficient)
 .020" copper tubes, 5/8in. diameter
 Galvanized steel coil casing
 Coil connections - standard

Access section (Pos #7)

Medium large access section
 Door- right side

Coil section (Pos #8)

Medium horizontal coil
 Stainless steel drain pan
 Right side - drain & coil connections
 Service panel coil connection side
 Type "3U" chilled water cooling coil, 8 rows
 106 coil fins per foot
 Aluminum fins
 Omega flo H (Hi efficient)
 .012" copper tubes, 3/8in. diameter
 Stainless steel coil casing
 Coil connections - standard

Discharge plenum (Pos #9)

Discharge plenum
 Door- right side
 Top rectangular opening

Item: A3 Qty: 1 Tag(s): AHU-G2

Unit level options

Indoor unit, size 21
 6in. integral base frame
 UL listed unit
 Multiple composite handles/latches
 215.378" total unit length
 Field provided controls (by others)
 OSHPD seismic certification required - base mount
 IBC 2012, 2015, 2018, 2021

Controls and VFD/starter

No unit controller
 Supply fan external junction box, field provided NEMA

Warranty

2-year parts warranty – entire unit
 1st year labor warranty

Air mixing section (Pos #1)

Reduced length mixing box
 Door- right side
 Back damper - high velocity parallel

Front full face opening
Top damper - high velocity parallel
2in. flat filter frame
Pleated media for use during construction, MERV 8 (Field Installed)
Metal filter frames with four (4) sets of MERV 10 media (Field Installed)

Access section (Pos #2)

Medium large access section
Door- right side

Access section (Pos #3)

Small blank section

Fan section (Pos #4)

Supply fan section
20in. direct drive plenum fan, full width, M press
2 fan array
Right side drive
NEMA premium compliant TEFC
Voltage 460/3
7.5 HP (each fan)
1800 RPM
Inverter balance with shaft grounding
Motor wiring conduit
External junction box
Backdraft damper(s)

Access section (Pos #5)

Medium large access section
Door- right side

Coil section (Pos #6)

Small horizontal coil
Right side - coil supply
Service panel coil connection side
5W hot water heating coil, 1 row
131 coil fins per foot
Aluminum fins
Prima flo H (Hi efficient)
.020" copper tubes, 5/8in. diameter
Galvanized steel coil casing
Coil connections - standard

Access section (Pos #7)

Medium large access section
Door- right side

Coil section (Pos #8)

Medium horizontal coil
Stainless steel drain pan
Right side - drain & coil connections
Service panel coil connection side
Type "3U" chilled water cooling coil, 8 rows
107 coil fins per foot
Aluminum fins
Omega flo H (Hi efficient)
.012" copper tubes, 3/8in. diameter
Stainless steel coil casing
Coil connections - standard

Discharge plenum (Pos #9)

Discharge plenum
Door- right side
Top rectangular opening

Item: A4 Qty: 1 Tag(s): AHU-G3**Unit level options**

Indoor unit, size 21
6in. integral base frame
UL listed unit
Multiple composite handles/latches
215.378" total unit length
Field provided controls (by others)
OSHPD seismic certification required - base mount
IBC 2012, 2015, 2018, 2021

Controls and VFD/starter

No unit controller
Supply fan external junction box, field provided NEMA

Warranty

2-year parts warranty – entire unit
1st year labor warranty

Air mixing section (Pos #1)

Reduced length mixing box
Door- right side
Back damper - high velocity parallel
Front full face opening
Top damper - high velocity parallel
2in. flat filter frame
Pleated media for use during construction, MERV 8 (Field Installed)
Metal filter frames with four (4) sets of MERV 10 media (Field Installed)

Access section (Pos #2)

Medium large access section
Door- right side

Access section (Pos #3)

Small blank section

Fan section (Pos #4)

Supply fan section
20in. direct drive plenum fan, full width, M press
2 fan array
Right side drive
NEMA premium compliant TEFC
Voltage 460/3
7.5 HP (each fan)
1800 RPM
Inverter balance with shaft grounding
Motor wiring conduit
External junction box
Backdraft damper(s)

Access section (Pos #5)

Medium large access section
Door- right side

Coil section (Pos #6)

Small horizontal coil
Right side - coil supply
Service panel coil connection side
5W hot water heating coil, 1 row
137 coil fins per foot
Aluminum fins
Prima flo H (Hi efficient)
.020" copper tubes, 5/8in. diameter
Galvanized steel coil casing
Coil connections - standard

Access section (Pos #7)

Medium large access section
Door- right side

Coil section (Pos #8)

Medium horizontal coil
Stainless steel drain pan
Right side - drain & coil connections
Service panel coil connection side
Type "3U" chilled water cooling coil, 8 rows
108 coil fins per foot
Aluminum fins
Omega flo H (Hi efficient)
.012" copper tubes, 3/8in. diameter
Stainless steel coil casing
Coil connections - standard

Discharge plenum (Pos #9)

Discharge plenum
Door- right side
Top rectangular opening

Performance Data - Performance Climate Changer (CSAA)

Tags	AHU-C1		AHU-G1		AHU-G2	
Unit Level Options						
Length (in)	227.344		215.378		215.378	
Width (in)	125.500		80.000		80.000	
Height (in)	79.250		56.250		56.250	
Rigging weight (lb)	7275.0		3423.4		3426.0	
Installed weight (lb)	7587.0		3560.8		3563.4	
Actual airflow (cfm)	22250		10225		10775	
Shipping split 1 weight (lb)	983.0		665.2		665.2	
Shipping split 2 weight (lb)	3139.7		1413.9		1413.9	
Shipping split 3 weight (lb)	1367.3		601.8		603.1	
Shipping split 4 weight (lb)	2097.0		880.0		881.3	
Discharge Plenum - Position						
	#8		#9		#9	
Discharge 1 top - airflow (cfm)	22250		10225		10775	
Discharge 1 top - area (sq ft)	10.86		7.00		7.00	
Discharge 1 top - pressure drop (in H2O)	0.131		0.066		0.074	
Discharge 1 top - face velocity (ft/min)	2049		1460		1539	
Fan Section - Position						
	#3		#4		#4	
Fan airflow (cfm)	22250		10225		10775	
Overall ESP (in H2O)	2.500		2.000		2.000	
Total static pressure (in H2O)	4.222		4.811		5.014	
Fan pressure drop (in H2O)	2.773		2.277		2.280	
Speed (rpm)	2471		2312		2181	
Total brake horsepower (hp)	24.983		13.096		13.699	
Unit static efficiency (%)	59.28		59.22		62.18	
Motor hertz (Hz)	84.00		78.00		74.00	
Discharge 1 front - face velocity (ft/min)	381		419		441	
Discharge 1 front - pressure drop (in H2O)	0.023		0.027		0.030	
Discharge 1 front - area (sq ft)	16.64		7.12		7.12	
Access Section - Position						
	#2, #4, #6		#2, #5, #7	#3	#2, #5, #7	#3
Section length (in)	24.500		24.500	10.000	24.500	10.000
Section weight (lb)	437.6		199.4	111.8	199.4	111.8
Coil Section - Position						
	#5	#7	#6	#8	#6	#8
Coil performance airflow (cfm)	11125	22250	5100	10225	5400	10775
Unit airflow (cfm)	22250	22250	10225	10225	10775	10775
Coil face area (sq ft)	47.08	49.05	19.83	20.45	19.83	20.45
Coil face velocity (ft/min)	236	454	257	500	272	527
Air pressure drop (in H2O)	0.018	0.599	0.040	0.963	0.047	1.049
Coil section pressure drop (in H2O)	0.061	0.599	0.118	0.963	0.134	1.049
Coil rigging weight (lb)	200.4	715.7	97.4	331.7	98.7	333.0
Coil installed weight (lb)	260.1	968.0	125.4	441.1	126.7	442.4
Top or single coil dry weight (lb)	90.2	357.8	97.4	331.7	98.7	333.0
Middle or bottom coil dry weight (lb)	110.2	357.8	-	-	-	-
Leaving dry bulb (F)	79.20	53.00	75.00	53.00	75.00	53.00
Leaving wet bulb (F)	-	52.90	-	52.79	-	52.90
Entering dry bulb (F)	51.90	76.50	18.00	83.40	18.00	82.90
Entering wet bulb (F)	-	64.20	-	69.30	-	68.90
Fluid type	Water	Water	Water	Water	Water	Water
Entering fluid temperature (F)	160.00	44.00	160.00	44.00	160.00	44.00
Leaving fluid temperature (F)	120.00	56.00	120.54	56.00	120.00	56.00
Standard fluid flow rate (gpm)	16.49	122.93	16.00	87.61	16.71	89.14
Fluid pressure drop (ft fluid)	0.33	5.22	0.64	6.91	0.69	7.14
Fluid velocity (ft/s)	0.91	2.20	1.26	3.13	1.32	3.18
Fluid volume (gal)	7.17	30.18	3.36	13.08	3.36	13.08
Sensible capacity (MBh)	-	575.15	-	343.22	-	355.62
Total capacity (MBh)	329.34	740.20	315.26	527.50	333.81	536.74

Tags	AHU-C1		AHU-G1		AHU-G2	
Air Mixing Section - Position	#1		#1		#1	
Opening 1 back - airflow (cfm)	-		10225		10775	
Opening 1 front - airflow (cfm)	22250		10225		10775	
Opening 1 top - airflow (cfm)	22250		10225		10775	
Opening 1 back - area (sq ft)	-		5.23		5.23	
Opening 1 front - area (sq ft)	58.43		24.41		24.41	
Opening 1 top - area (sq ft)	10.52		5.23		5.23	
Opening 1 back - face velocity (ft/min)	-		1955		2060	
Opening 1 top - face velocity (ft/min)	2116		1955		2060	
Opening 1 back - pressure drop (in H2O)	-		0.690		0.766	
Opening 1 top - pressure drop (in H2O)	0.000		0.690		0.766	
Back inlet type	-		Ducted		Ducted	
Top inlet type	Ducted		Ducted		Ducted	
Filter condition	Mid-life		Mid-life		Mid-life	
Filter airflow (cfm)	22250		10225		10775	
Filter area (sq ft)	55.00		21.53		21.53	
Filter face velocity (ft/min)	405		475		500	
Filter pressure drop (in H2O)	0.658		0.697		0.711	
Total mixing section pressure drop (in H2O)	0.658		1.386		1.477	

Tags	AHU-G3	
Unit Level Options		
Length (in)	215.378	
Width (in)	80.000	
Height (in)	56.250	
Rigging weight (lb)	3428.8	
Installed weight (lb)	3566.2	
Actual airflow (cfm)	11000	
Shipping split 1 weight (lb)	665.2	
Shipping split 2 weight (lb)	1413.9	
Shipping split 3 weight (lb)	604.7	
Shipping split 4 weight (lb)	882.5	
Discharge Plenum - Position	#9	
Discharge 1 top - airflow (cfm)	11000	
Discharge 1 top - area (sq ft)	7.00	
Discharge 1 top - pressure drop (in H2O)	0.077	
Discharge 1 top - face velocity (ft/min)	1571	
Fan Section - Position	#4	
Fan airflow (cfm)	11000	
Overall ESP (in H2O)	2.000	
Total static pressure (in H2O)	5.095	
Fan pressure drop (in H2O)	2.282	
Speed (rpm)	2209	
Total brake horsepower (hp)	14.262	
Unit static efficiency (%)	61.95	
Motor hertz (Hz)	75.00	
Discharge 1 front - face velocity (ft/min)	451	
Discharge 1 front - pressure drop (in H2O)	0.032	
Discharge 1 front - area (sq ft)	7.12	
Access Section - Position	#2, #5, #7	#3
Section length (in)	24.500	10.000
Section weight (lb)	199.4	111.8

Tags	AHU-G3	
Coil Section - Position	#6	#8
Coil performance airflow (cfm)	5500	11000
Unit airflow (cfm)	11000	11000
Coil face area (sq ft)	19.83	20.45
Coil face velocity (ft/min)	277	538
Air pressure drop (in H2O)	0.051	1.075
Coil section pressure drop (in H2O)	0.146	1.075
Coil rigging weight (lb)	100.3	334.2
Coil installed weight (lb)	128.3	443.6
Top or single coil dry weight (lb)	100.3	334.2
Leaving dry bulb (F)	75.00	53.00
Leaving wet bulb (F)	-	52.90
Entering dry bulb (F)	18.00	81.00
Entering wet bulb (F)	-	67.60
Fluid type	Water	Water
Entering fluid temperature (F)	160.00	44.00
Leaving fluid temperature (F)	117.44	56.00
Standard fluid flow rate (gpm)	16.00	82.35
Fluid pressure drop (ft fluid)	0.64	6.17
Fluid velocity (ft/s)	1.26	2.94
Fluid volume (gal)	3.36	13.08
Sensible capacity (MBh)	-	339.64
Total capacity (MBh)	339.99	495.81
Air Mixing Section - Position	#1	
Opening 1 back - airflow (cfm)	11000	
Opening 1 front - airflow (cfm)	11000	
Opening 1 top - airflow (cfm)	11000	
Opening 1 back - area (sq ft)	5.23	
Opening 1 front - area (sq ft)	24.41	
Opening 1 top - area (sq ft)	5.23	
Opening 1 back - face velocity (ft/min)	2103	
Opening 1 top - face velocity (ft/min)	2103	
Opening 1 back - pressure drop (in H2O)	0.798	
Opening 1 top - pressure drop (in H2O)	0.798	
Back inlet type	Ducted	
Top inlet type	Ducted	
Filter condition	Mid-life	
Filter airflow (cfm)	11000	
Filter area (sq ft)	21.53	
Filter face velocity (ft/min)	511	
Filter pressure drop (in H2O)	0.717	
Total mixing section pressure drop (in H2O)	1.515	

Mechanical Specifications - Performance Climate Changer (CSAA)**Item: A1 - A4 Qty: 4 Tag(s): AHU-C1, AHU-G1, AHU-G2, AHU-G3****GENERAL**

Per ASHRAE 62.1 recommendation, indoor air handling units will be wrapped to protect unit from in-transit rain and debris.

Installing contractor is responsible for long term storage in accordance with the Installation, Operation, and Maintenance manual (CLCH-SVX07*-EN). Unit shall be UL and C-UL Listed.

Supply fans within the scope of AHRI Standard 430 are "Certified by the AHRI Central Station Air-Handling Unit (AHU) Certification Program, 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".

Unit sound performance data shall be reported as sound power. Trane, in providing this program and data, does not certify or warrant NC levels. These levels are affected by factors specific to each application and/or installation and therefore unable to be predicted or certified by Trane. Refer to product data for specific fan footnote references.

Refer to product data for AHRI certification status. Propylene glycol and calcium chloride, or mixtures thereof, are outside the scope of AHRI Standard 410 and, therefore, do not require AHRI rating or certification. For coils within the scope of AHRI Standard 410 cooling coil performance is 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. Heating performance for heat pump or condenser mode is not certified.

IBC Seismic Certification

The Trane Corporation has qualified the listed air-handling units as CERTIFIED for seismic applications in accordance with the following International Building Code (IBC) releases:

IBC 2000, 2003, 2006, 2009, 2012, 2015, 2018, 2021

All unit sizes of the Performance Climate Changer are included in this certification. A complete list of certified models, options, and installation methods are detailed in report numbers VMA-48642-01C and VMA-48642-02C as issued by The VMC Group.

Seismic Qualification Testing and structural analysis were conducted in accordance with and strict adherence to the standards set forth within ASCE 7 by the independent approval agency, The VMC Group. The above referenced equipment is APPROVED for seismic applications when properly installed and used as intended.

The basis of this certification is through a combination of testing of the active and energized components and non active components. Additional calculations were conducted to ensure components, accessories, and options remained intact and attached to the unit under seismic load conditions.

Trane Performance Climate Changer Air Handler Base Mounted is approved for seismic application when properly installed used as intended and contains a Seismic Certification Label. Certified Seismic Design Levels $I_p=1.0$ or 1.5 ; $SDS \leq 1.85g$; $z/h < 0.0$ (equipment at grade) or 1.0 (Equipment on Roof) ; soil classes A,B,C,D Seismic Risk Category I, II, III, IV, and Seismic Design Categories A,B,C,D,E,F are all covered under this certification. Certified Seismic Installation Methods - 1.) Rigid Mounting from unit base to rigid structure or 2.) Directly to curb/rail

Structural floors, housekeeping pads, supporting curbs, and supporting steel must be seismically designed and approved by the project or building Structural Engineer of Record to withstand the seismic anchor loads. Installation details such as special inspection, attachment to a curb, or attachment to a non-building structure must be outlined and approved by the Engineer of Record for the project or building. The installing contractor is responsible for the proper installation of the equipment and must observe the seismic installation requirements set forth by the Engineer of Record. Certificate of Compliance and Final Certification Report are available upon request.

Unit Construction

All unit panels shall be 2" solid, double-wall construction to facilitate cleaning of unit interior. Unit panels shall be provided with a mid-span, no-through-metal, internal thermal break. Casing thermal performance shall be such that under 55°F supply air temperature and design conditions on the exterior of the unit of 81°F dry bulb and 73°F wet bulb,

condensation shall not form on the casing exterior. Casing construction will comply with NFPA 90A. All exterior and interior indoor AHU panels will be made of galvanized steel.

Unit Paint

Unit to ship unpainted from factory. If required, unit to be painted by 3rd party finisher, or by painting contractor at job site.

Casing Deflection

The casing shall not exceed 0.0042 inch deflection per inch of panel span at 1.50 times design static pressure. Total maximum static shall not exceed +8 inches w.g. in all positive pressure sections and -8 inches w.g. in all negative pressure sections.

Floor Construction

The unit floor shall be of sufficient strength to support a 300.0 lb load during maintenance activities and shall deflect no more than 0.0042 inch per inch of panel span.

Unit Base

Manufacturer to provide a full perimeter integral base frame for either ceiling suspension of units or to support and raise all sections of the unit for proper trapping. Indoor unit base frame will either be bolted construction or welded construction. All outdoor unit base frames shall be welded construction. For indoor units, refer to schedule for base height and construction type. Contractor will be responsible for providing a housekeeping pad when unit base frame is not of sufficient height to properly trap unit. Unit base frames not constructed of galvanized steel shall be chemically cleaned and coated with both a rust-inhibiting primer and finished coat of rust-inhibiting enamel. Unit base height to be included in total height required for proper trap height.

Insulation

Panel insulation shall provide a minimum thermal resistance (R) value of 13 ft²-h-°F/Btu throughout the entire unit. Insulation shall completely fill the panel cavities in all directions so that no voids exist and settling of insulation is prevented.

Drain Pan

In sections provided with a drain pan, the drain pan shall be designed in accordance with ASHRAE 62.1. To address indoor air quality (IAQ) the drain pan shall be sloped in two planes promoting positive drainage to eliminate stagnant water conditions. Drain pan shall be insulated, and of double wall construction. The outlet shall be the lowest point on the pan and shall be of sufficient diameter to preclude drain pan overflow under normally expected operating conditions. All drain pans connections shall have a threaded connection, extending a minimum of 2-1/2" beyond the unit base, and shall be made from the same material as the drain pan. Drain pan located under a cooling coil shall be of sufficient size to collect all condensate produced from the coil. Refer to Product Data for specific information on which sections are supplied with a drain pan, the drain pan material and connection location.

Access Door Construction

Access doors shall be 2" double wall construction. Interior and exterior door panels shall be of the same construction as the interior and exterior wall panels respectively. All doors shall be provided with a thermal break construction of door panel and door frame. Gasketing shall be provided around the full perimeter of the doors to prevent air leakage. Surface mounted handles shall be provided to allow quick access to the interior of the functional section and to prevent through cabinet penetrations that could likely weaken the casing leakage and thermal performance. Handle hardware shall be designed to prevent unintended closure. Outswing doors shall have easily removable hinges and handles that can be relocated to change the door swing if needed. Door hinges shall be made of galvanized steel.

All doors shall be a minimum of 60" high when sufficient height is available or the maximum height allowed by the unit height.

Door handles shall be provided for each latching point of the door necessary to maintain the specified air leakage integrity of the unit.

Refer to Product Data for specific information on which sections are supplied with an access door, the door location, a single handle and a window.

Lifting Instructions

The air handling units must be rigged, lifted, and installed in strict accordance with the Installation, Operation, and Maintenance manual (CLCH-SVX07G-EN). The units are also to be installed in strict accordance with the specifications. Units may be shipped fully assembled or disassembled to the minimum functional section size in accordance with shipping and job site requirements.

Indoor units shall be shipped on an integral base frame (variable from the standard 2.5" to 8" height) for the purpose of mounting units to a housekeeping pad and providing additional height to properly trap condensate from the unit. The integral base frame may be used for ceiling suspension, external isolation, or as a housekeeping pad. Indoor sizes 3 to 30 will also be shipped with a shipping skid designed for forklift transport. Refer to the unit As-Built or Product Data section of the submittal for the base frame height of each unit.

All units will be shipped with an integral base frame designed with the necessary number of lift points for safe installation. All lifting lugs are to be utilized during lift. The lift points will be designed to accept standard rigging devices and be removable after installation.

MIXING SECTION

A mixing section shall be provided to support the damper assembly for outdoor, return, and/or exhaust air.

Dampers

Dampers shall modulate the volume of outdoor, return, or exhaust air. The dampers shall be of double-skin airfoil design with metal, compressible jamb seals and flexible blade-edge seals on all blades. The blades shall rotate on stainless-steel sleeve bearings. The dampers shall be rated for a maximum leakage rate of 3 cfm/ft² at 1 in. w.g. complying with ASHRAE 90.1 maximum damper leakage. All leakage testing and pressure ratings shall be based on AMCA Standard 500-D. Dampers may be arranged in a parallel or opposed-blade configuration.

Filters

Mixing sections shall be provided with a filter rack as indicated in the Product Data and As-Built sections of the submittal.

2 inch pleated media filters made with 100% synthetic fibers that are continuously laminated to a supported steel wire grid with water repellent adhesive shall be provided for use during construction. Filters shall be capable of operating up to 625 fpm face velocity without loss of filter efficiency and holding capacity. The filters shall have a MERV 8 rating when tested in accordance with the ANSI/ASHRAE Standard 52.2. The filters to be installed at job completion have a MERV 10 rating and shall include metal frames.

Differential Pressure Gage

A differential pressure gage shall be flush-mounted with casing outer wall with probes piped to both sides of the filter bank to indicate status. Combination filter frames will be provided with a separate differential pressure gage piped across each of the high-efficient and pre-filter banks. The gage shall be diaphragm-actuated dial-type and shall maintain a +/- 5 percent accuracy within operating temperature limits of the air handler. Range shall be 0 - 2.0 in. w.g,

COIL SECTION WITH FACTORY INSTALLED COIL

The coil section shall be provided complete with coil and coil holding frame. The coils shall be installed such that headers and return bends are enclosed by unit casings. If two or more cooling coils are stacked in the unit, an intermediate drain pan shall be installed between each coil and be of the same material as the primary drain pan. Like the primary drain pan, the intermediate drain pan shall be designed being of sufficient size to collect all condensation produced from the coil and sloped to promote positive drainage to eliminate stagnant water conditions. The intermediate pan shall begin at the leading face of the water-producing device and be of sufficient length extending downstream to prevent condensate from passing through the air stream of the lower coil. Intermediate drain pan shall include downspouts to direct condensate to the primary drain pan. The outlet shall be located at the lowest point of the pan and shall be sufficient diameter to preclude drain pan overflow under any normally expected operating condition.

An easily removable service panel shall be provided in sections as specified, to facilitate access to unit for periodic servicing, or for removal and replacement of coils. Removal of service panel will not impact the structural integrity of the unit.

Hydronic coils shall be supplied with factory installed drain and vent piping to unit casing exterior. Piping is to facilitate field installation of automatic venting or drain valves on coils, which are not supplied with unit. *Refer to the Product Data section of the submittal for the units and/or coils supplied with drain and vent piping.*

Water Coils

The coils shall have aluminum fins and seamless copper tubes. Copper fins may be applied to coils with 5/8-inch tubes. Fins shall have collars drawn, belled, and firmly bonded to tubes by mechanical expansion of the tubes. The coil casing may be galvanized or stainless steel. Refer to the Product Data section of the submittal for the coil casing material. The coils shall be proof-tested to 300 psig and leak-tested under water to 200 psig. Refer to the Product Data section of the submittals for AHRI certification status.

Coil connections are constructed of cast iron with female connections, steel block with female connections or steel pipe with male connections. Type P or TT coil connections do not extend out of unit casing. All other water coil types have connections that extend out beyond unit casing. Headers on downstream coil bank of staggered coil sections do not extend beyond the unit casing and must be completed by the on-site piping contractor.

ACCESS/INSPECTION / TURNING SECTION

A section shall be provided to allow additional access/inspection of unit components and space for field-installed components as needed. An access door shall be provided for easy access. All access sections shall be complete with a double-wall, removable door downstream for inspection, cleaning, and maintenance. Interior and exterior door panels shall be of the same construction as the interior and exterior wall panels, respectively. All doors shall be provided with a thermal break construction of door panel and door frame.

DIRECT-DRIVE PLENUM FAN SECTION

The fan type shall be provided as required for stable operation and optimum energy efficiency. The fan shall be a single-width, single-inlet, multiblade-type direct-drive plenum fan. Motor bearing life of the direct-drive plenum fan shall be not less than L-10 250,000 hrs. *Refer to the Product Data section for fan quantity and number of blades selected within each unit.* Central Station Air Handling Unit Supply Fans are "Certified by the AHRI Central Station Air-Handling Unit (AHU) Certification Program, 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" Central Station Air Handling Unit Supply Fans shall be tested and rated in-accordance with AHRI Standard 260 for sound performance.

Fans that are selected with inverter balancing shall first be dynamically balanced at design RPM. The fans then will be checked in the factory from 25% to 100% of design RPM to insure they are operating within vibration tolerance specifications, and that there are no resonant frequency issues throughout this operating range. Inverter balancing that requires lockout frequencies inputted into a variable frequency drive to in order to bypass resonant frequencies shall not be acceptable. If supplied in this manner by the unit manufacturer, the contractor will be responsible for rebalancing in the field after unit installation. Fans selected with inverter balancing shall have a maintenance free grounding assembly installed on the fan motor to discharge both static and induced shaft currents to ground.

On units supplied with plenum fans, door guard(s) shall be supplied on the access door(s) to the fan and those downstream access door(s) where unintended access to the plenum impeller fan could occur. Door guard is intended to deter unauthorized entry and incidental contact with rotating components. *Refer to the Product Data section for fans with access door guard(s).*

Motor Frame

The motor shall be mounted integral to the isolated fan assembly and furnished by the unit manufacturer. The motor is mounted inside the unit casing on an adjustable base to permit adjustment of drive belt tension (not applicable for direct drive plenum fans). The motor shall meet or exceed all NEMA Standards Publication MG 1 requirements and comply with NEMA Premium efficiency levels when applicable except for fractional horsepower motors which are not covered by the NEMA classification. The motor shall be T-frame, squirrel cage with size, type, and electrical characteristics as shown on the equipment schedule. *Refer to the Product Data section for selected fan motors within each unit.*

Two-Inch Spring Isolators

Direct-drive fan and motor assemblies shall be internally isolated from the unit casing with 2-inch deflection spring isolators. The isolation system shall be designed to resist loads produced by external forces, such as earthquakes, and conform to the current IBC seismic requirements.

Motor Wiring Conduit

The fan motor wiring shall be factory-wired to the unit-mounted disconnect, variable frequency drive, or external motor junction box within flexible metal conduit of adequate length so that the fan vibration isolation, if applicable, will not be restricted. Refer to the Product Data section for fans with motor wiring conduit.

Indoor Units with an External Motor Junction Box

The fan section shall have motor leads extended to a factory-installed NEMA external junction box to facilitate field supplied VFD wiring and to maintain air leakage integrity of the casing. For units with a full-load amp rating less than or equal to 110 amps, the enclosure shall be a NEMA 1 enclosure. For units with a full-load amp rating greater than 110 amps, the enclosure shall be a NEMA 4 enclosure. *Refer to the Product Data section for fans with an external motor junction box.*

Each fan in the multiple-fan array shall be provided with integral back flow prevention: a backdraft damper that prohibits recirculation of air in the event a fan or multiple fans become disabled. Dampers are tested and rated based on AMCA Standard 500. Dampers to be heavy duty type capable of a maximum back pressure that exceeds the design total static pressure with minimal leakage. The dampers should have a minimal total effect on airflow performance-both pressure drop when open and system effect on the fan. The damper blades and frame shall be extruded aluminum with blade edge seals locked into the blade edge. Adhesive type seals are unacceptable. AHU manufacturer responsible for providing proper spacing upstream of dampers to ensure full, uniform airflow through upstream components. For units where the damper(s) are supplied at the jobsite, the installing contractor shall contract a certified TAB contractor to verify uniform airflow thru upstream components.

Refer to Product Data for specific information on which sections are supplied with a backdraft damper.

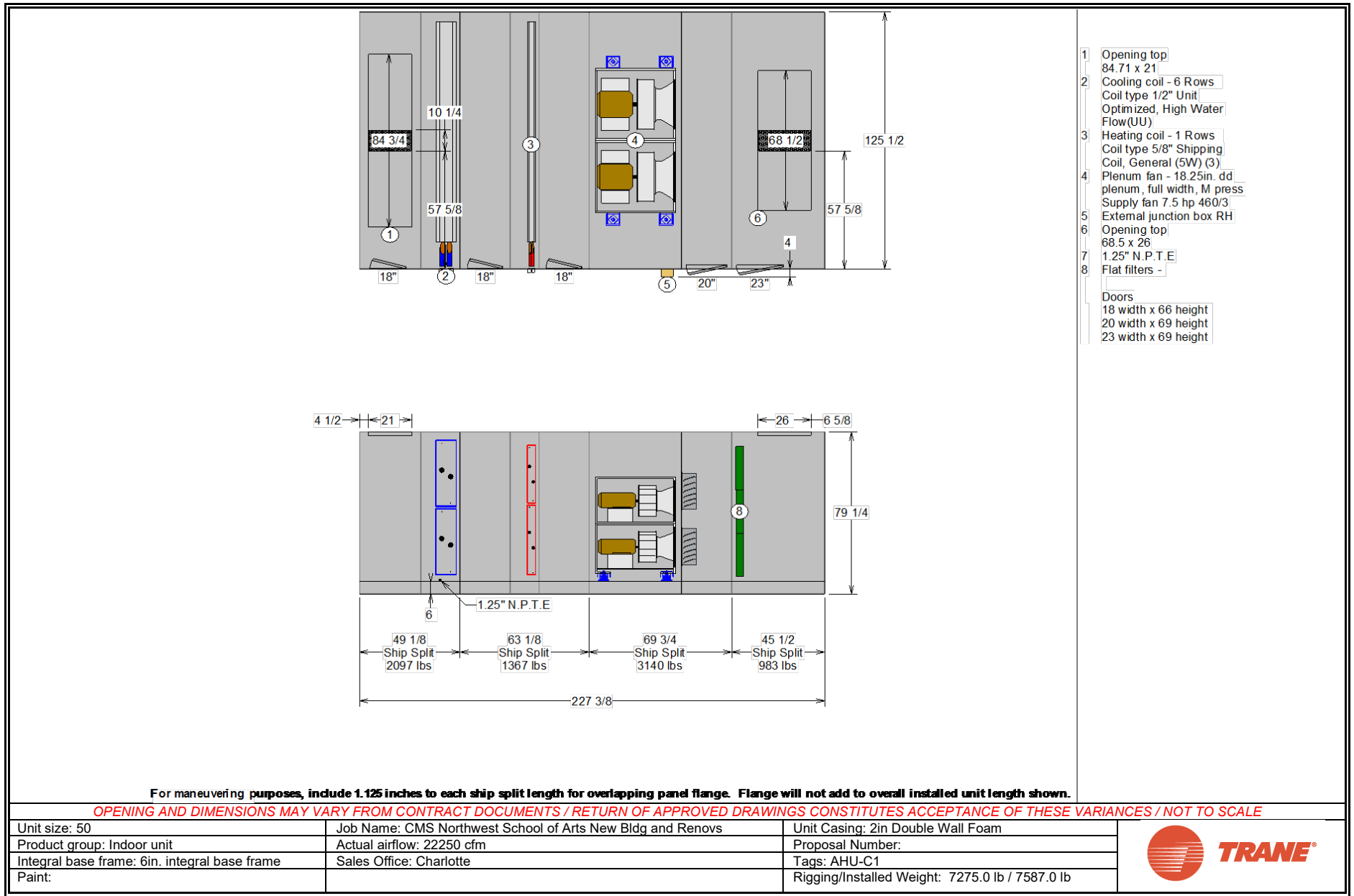
DISCHARGE PLENUM SECTION

Plenums shall be provided to efficiently turn air and provide sound attenuation. Discharge plenum opening types and sizes shall be scaled to meet engineering requirements. The vertical discharge plenum height may be scaled to accommodate the appropriate discharge duct height.

Discharge plenum panels shall include an acoustical liner. The liner shall be fabricated from perforated material, designed to completely encapsulate fiberglass insulation. The perforation spacing and hole size shall be such as to prevent insulation breakaway, flake off, or delamination when tested at 9,000 fpm, in accordance with UL specification 181.

Dimensional Drawings - Performance Climate Changer (CSAA)

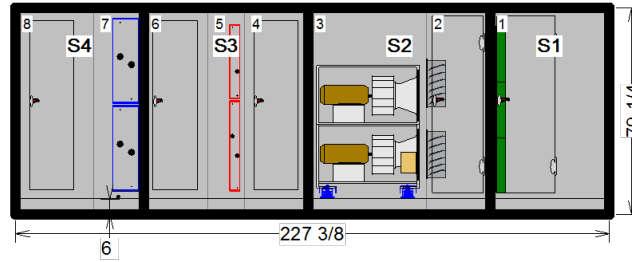
Item: A1 Qty: 1 Tag(s): AHU-C1



Dimensional Drawings - Performance Climate Changer (CSAA)

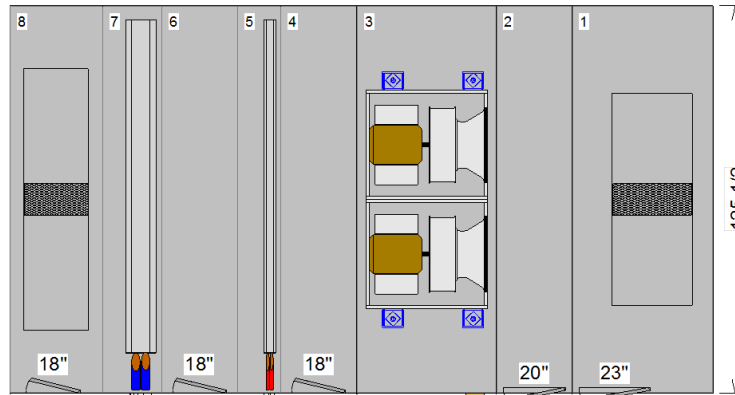
Item: A1 Qty: 1 Tag(s): AHU-C1

Shipping splits are indicated by thick black lines



For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length sh

Pos #	Module	Length	Weight
1	Air mixing section	45 1/2	983.00
2	Access section	24 5/8	437.57
3	Fan section	45 1/8	2702.09
4	Access section	24 5/8	437.57
5	Coil section	14	492.19
6	Access section	24 5/8	437.57
7	Coil section	19 1/8	1302.81
8	Discharge Plenum	30	794.16
			Installed Unit Weight 7586.97 lbs



Basic Overall Plan View: Top - Measurements in inches

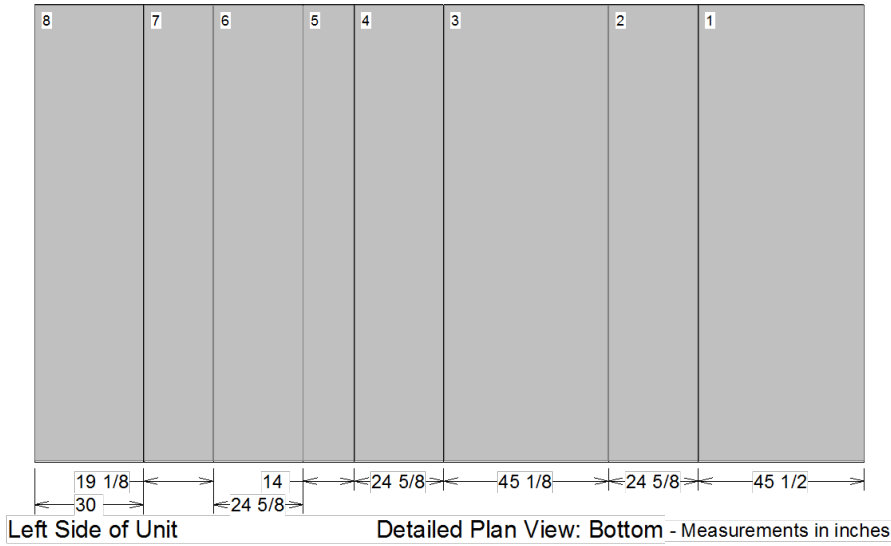
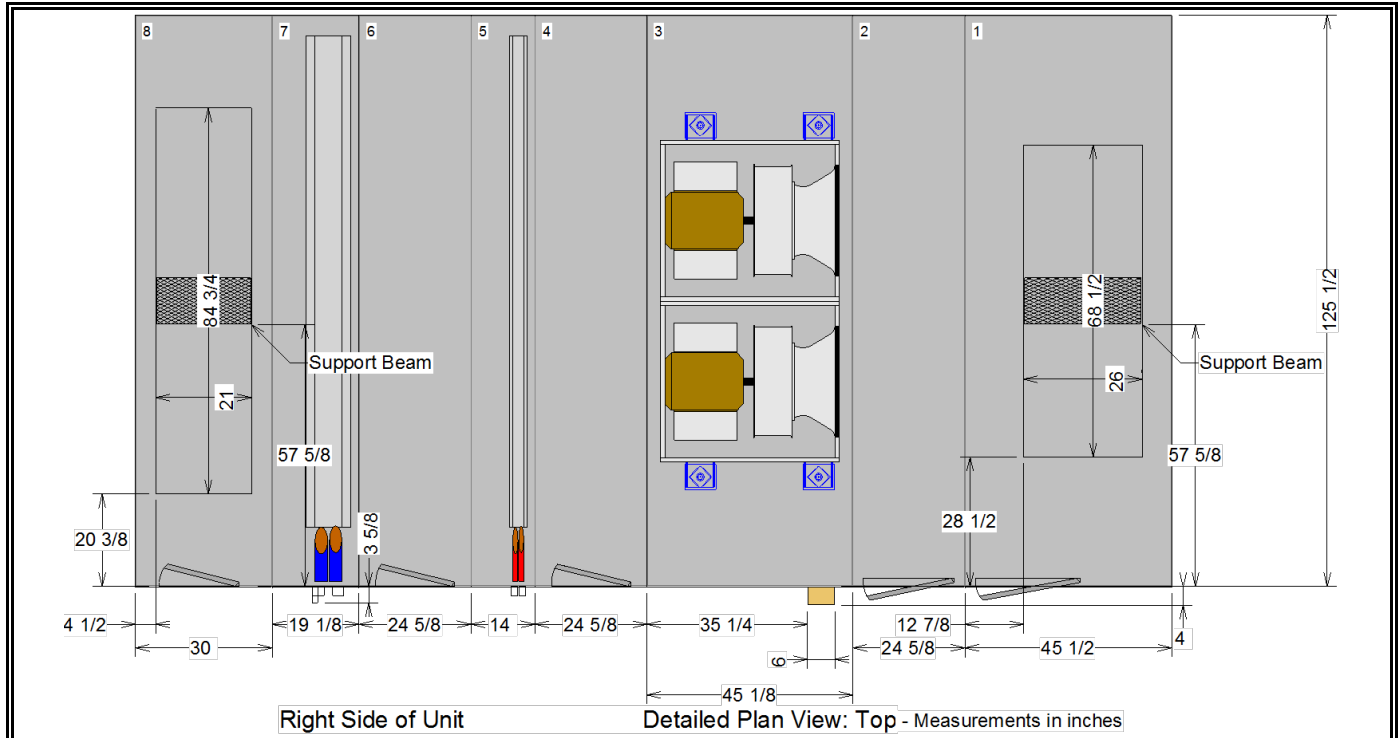
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 50	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 22250 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-C1
Paint:		Rigging/Installed Weight: 7275.0 lb / 7587.0 lb



Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A1 Qty: 1 Tag(s): AHU-C1



****Placement of electrical conduit may vary by a tolerance of 8" in any direction.**

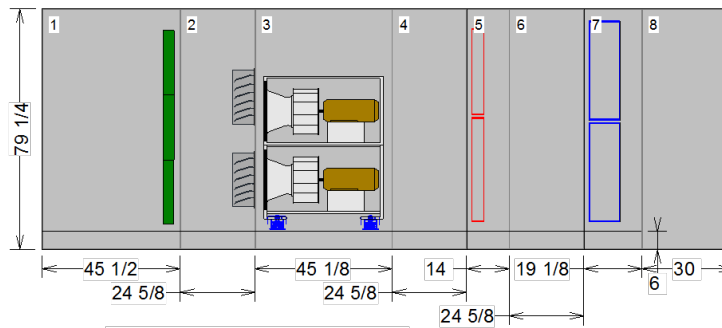
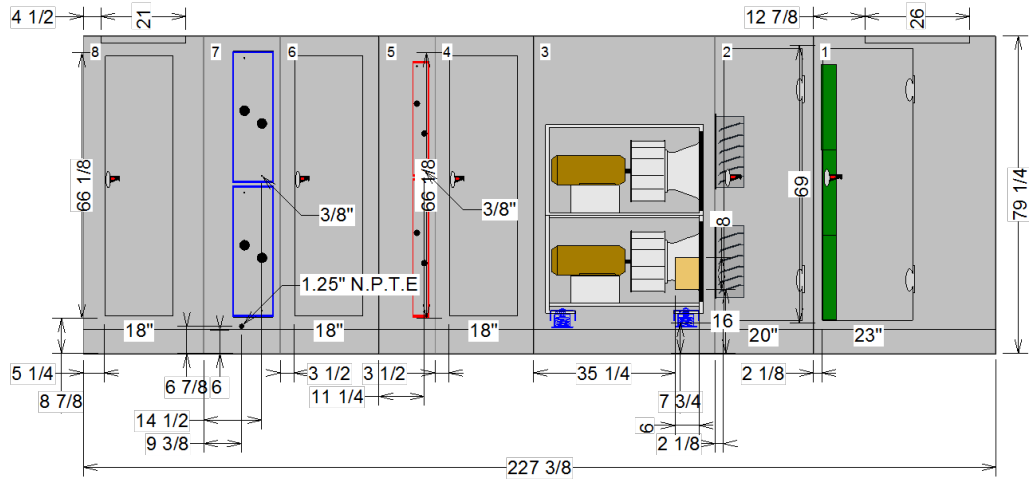
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Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-C1
Paint:		Rigging/Installed Weight: 7275.0 lb / 7587.0 lb



Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A1 Qty: 1 Tag(s): AHU-C1



Detailed Elevation View: Left - Measurements in inches

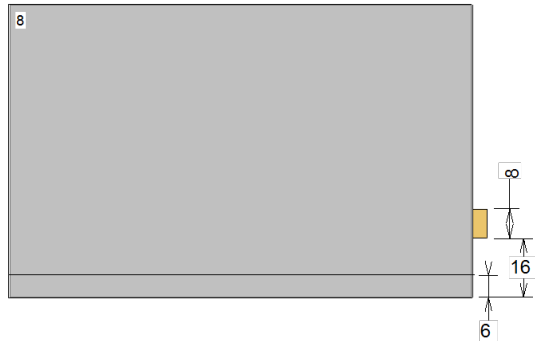
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 50	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 22250 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-C1
Paint:		Rigging/Installed Weight: 7275.0 lb / 7587.0 lb

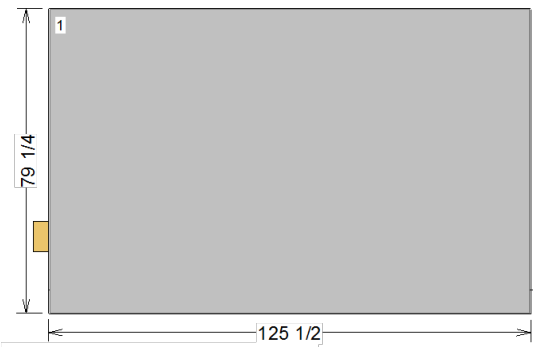


Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A1 Qty: 1 Tag(s): AHU-C1



Detailed Elevation View: Front - Measurements in inches



Detailed Elevation View: Back - Measurements in inches

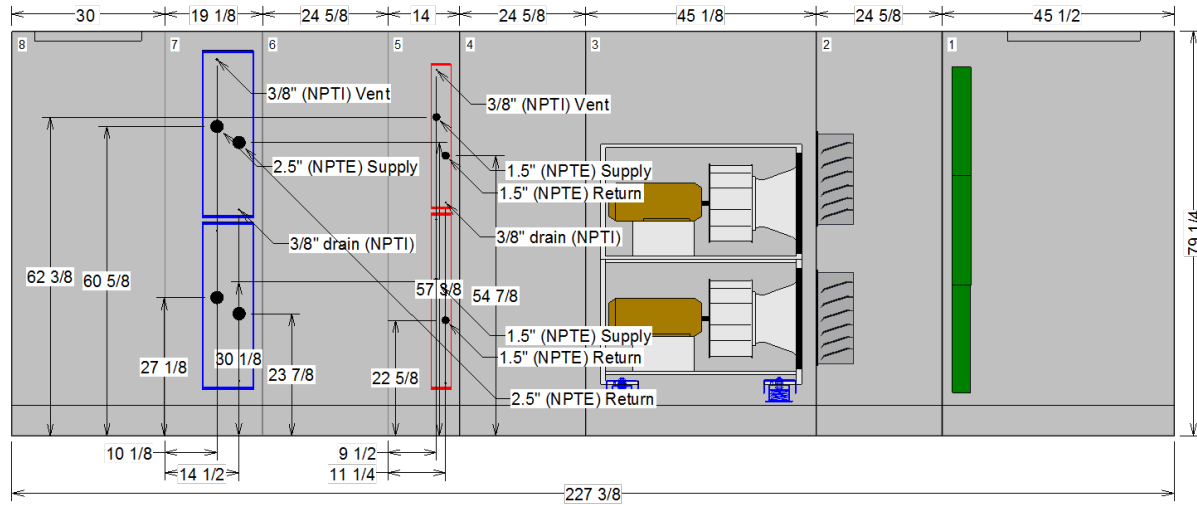
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 50	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 22250 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-C1
Paint:		Rigging/Installed Weight: 7275.0 lb / 7587.0 lb



Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A1 Qty: 1 Tag(s): AHU-C1



**NPTI : National Pipe Thread Internal Connection
 NPTE : National Pipe Thread External Connection**

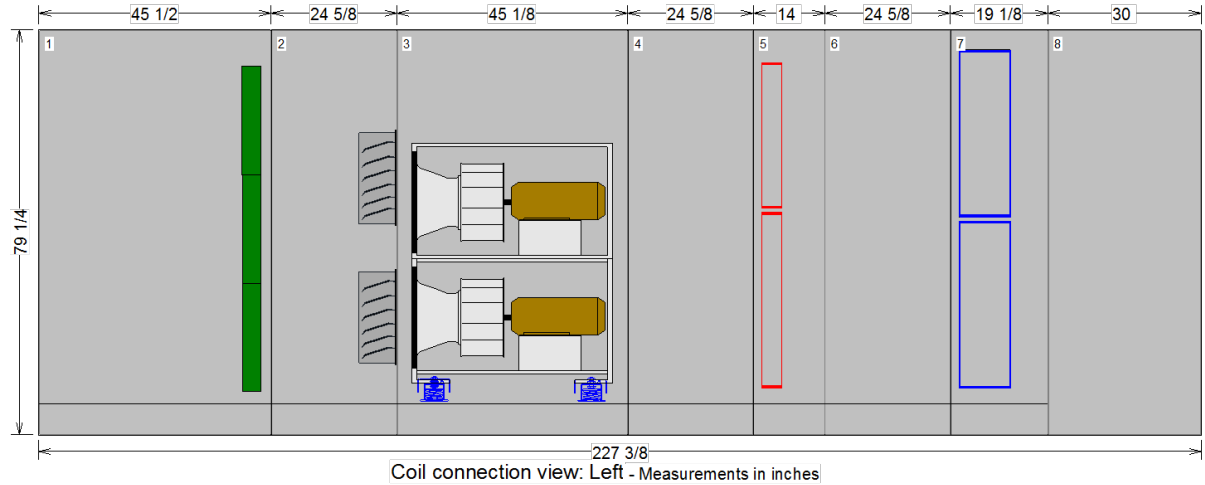
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 50	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 22250 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-C1
Paint:		Rigging/Installed Weight: 7275.0 lb / 7587.0 lb




Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A1 Qty: 1 Tag(s): AHU-C1



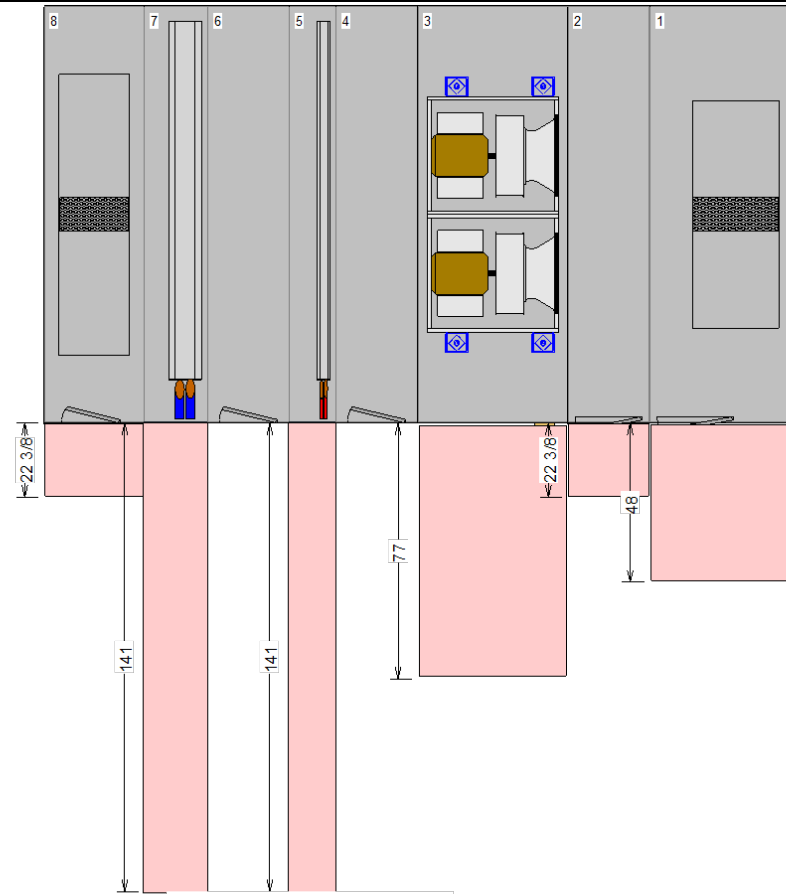
NPTI : National Pipe Thread Internal Connection
NPTE : National Pipe Thread External Connection

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 50	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam	
Product group: Indoor unit	Actual airflow: 22250 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-C1	
Paint:		Rigging/Installed Weight: 7275.0 lb / 7587.0 lb	


Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A1 Qty: 1 Tag(s): AHU-C1



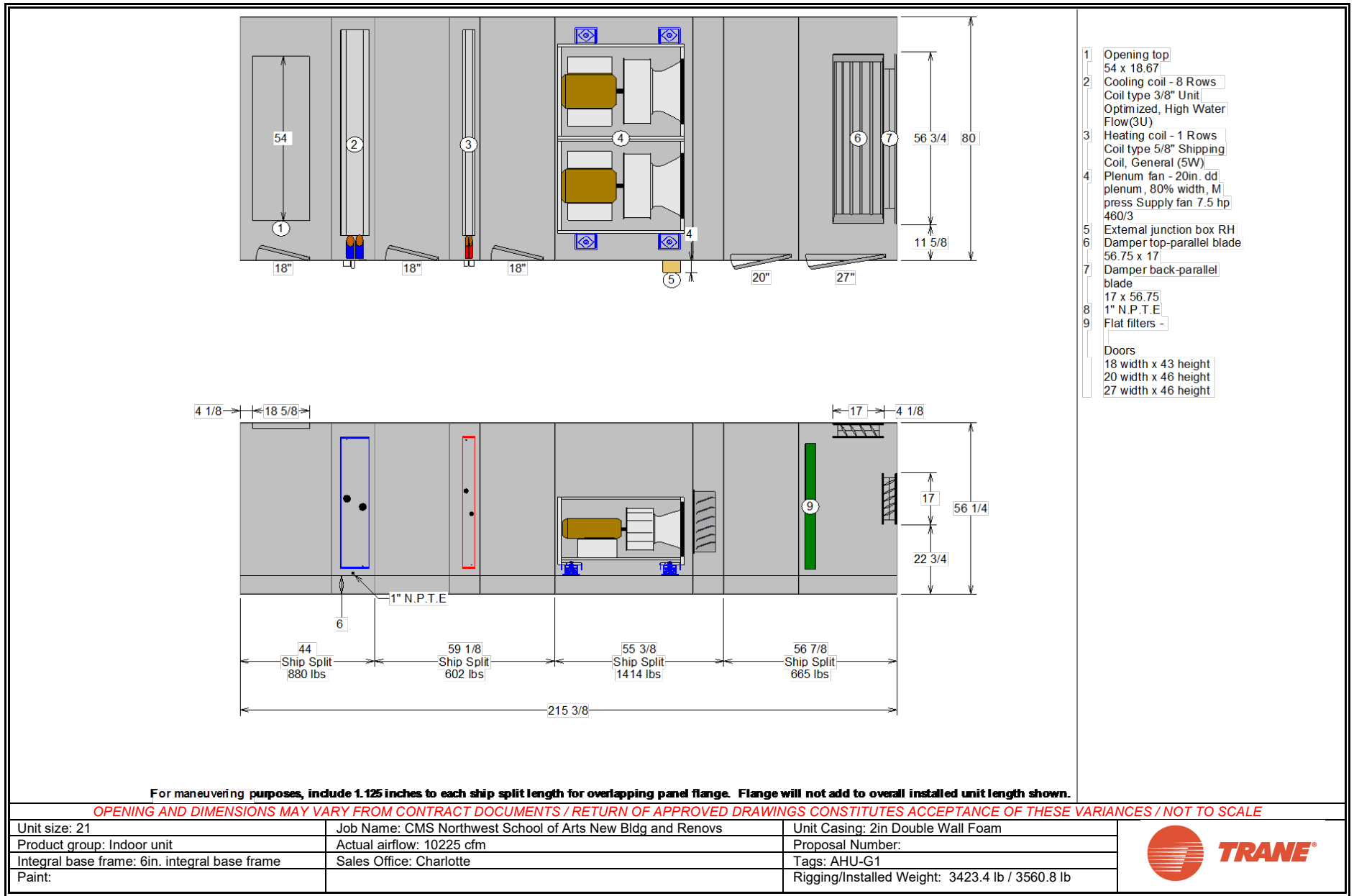
Basic Service Clearance - Plan - Measurements in inches

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 50	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam	
Product group: Indoor unit	Actual airflow: 22250 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-C1	
Paint:		Rigging/Installed Weight: 7275.0 lb / 7587.0 lb	

Dimensional Drawings - Performance Climate Changer (CSAA)

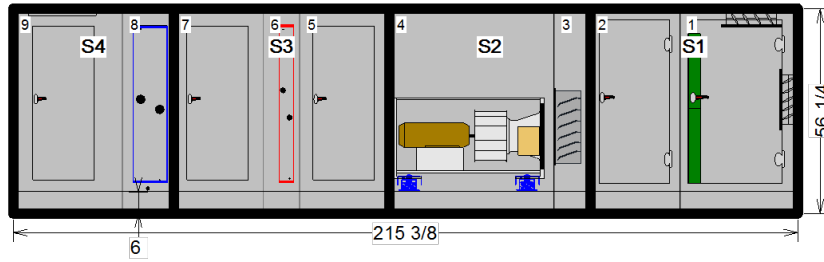
Item: A2 Qty: 1 Tag(s): AHU-G1



Dimensional Drawings - Performance Climate Changer (CSAA)

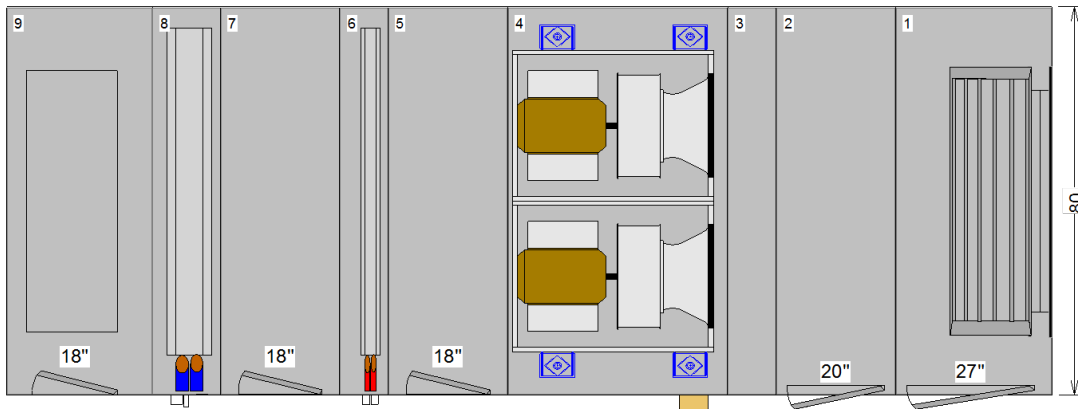
Item: A2 Qty: 1 Tag(s): AHU-G1

Shipping splits are indicated by thick black lines



For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length sh

Pos #	Module	Length	Weight
1	Air mixing section	32 1/4	465.83
2	Access section	24 5/8	199.38
3	Access section	10 1/8	111.80
4	Fan section	45 3/8	1302.07
5	Access section	24 5/8	199.38
6	Coil section	10	203.04
7	Access section	24 1/2	199.38
8	Coil section	14	562.44
9	Discharge Plenum	30	317.52
			Installed Unit Weight 3560.84 lbs



Basic Overall Plan View: Top - Measurements in inches

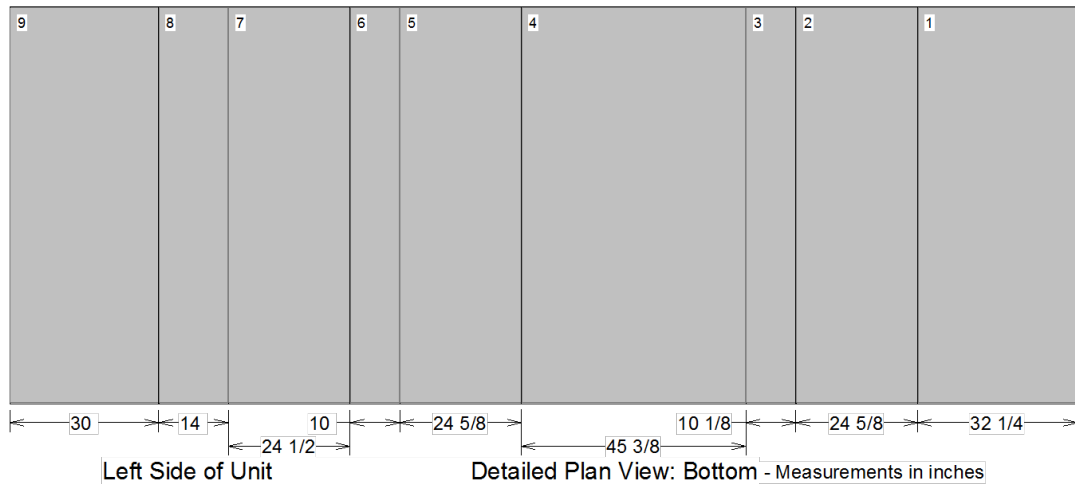
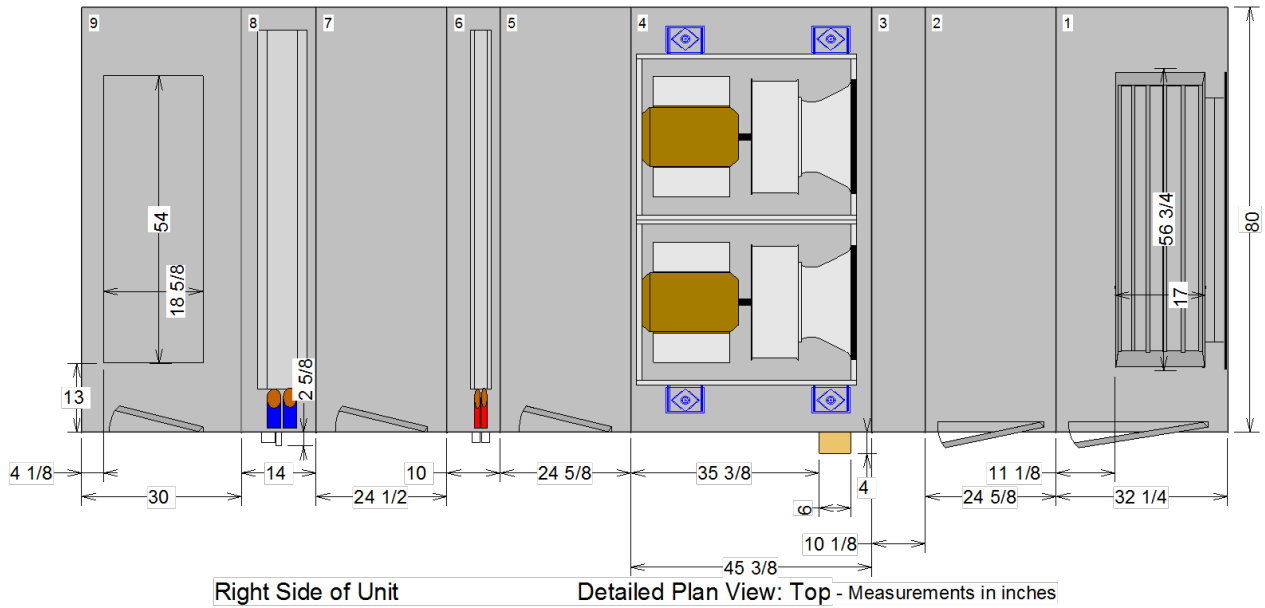
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10225 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G1
Paint:		Rigging/Installed Weight: 3423.4 lb / 3560.8 lb



Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A2 Qty: 1 Tag(s): AHU-G1



****Placement of electrical conduit may vary by a tolerance of 8" in any direction.**

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10225 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G1
Paint:		Rigging/Installed Weight: 3423.4 lb / 3560.8 lb

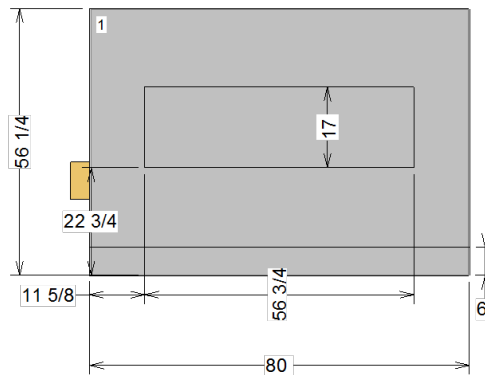


Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A2 Qty: 1 Tag(s): AHU-G1



Detailed Elevation View: Front - Measurements in inches



Detailed Elevation View: Back - Measurements in inches

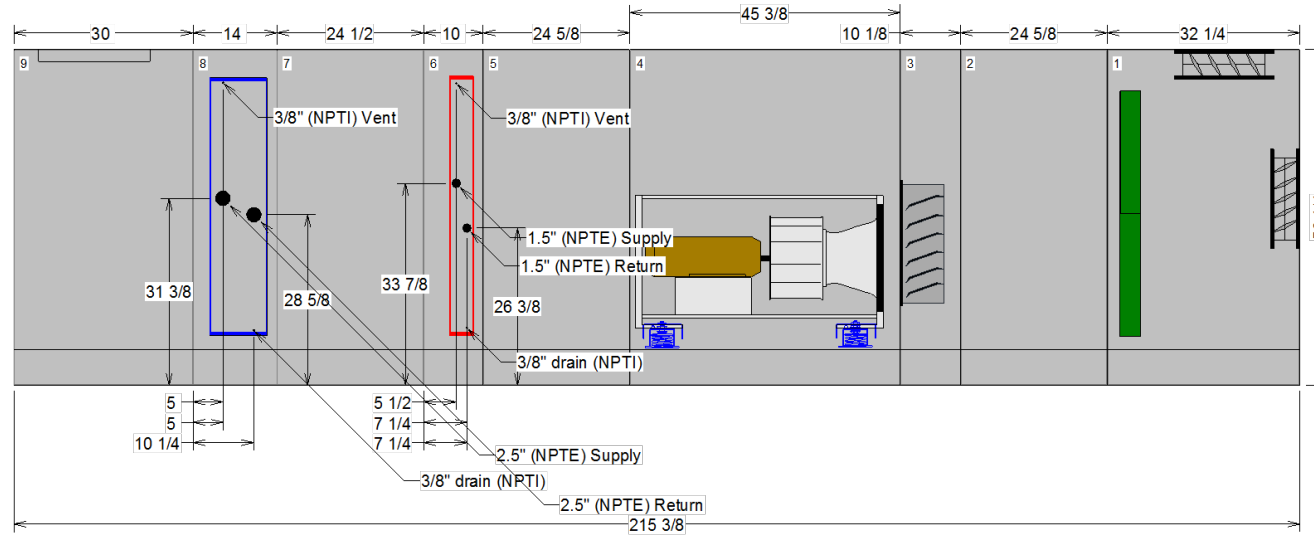
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10225 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G1
Paint:		Rigging/Installed Weight: 3423.4 lb / 3560.8 lb



Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A2 Qty: 1 Tag(s): AHU-G1



NPTI : National Pipe Thread Internal Connection
 NPTE : National Pipe Thread External Connection

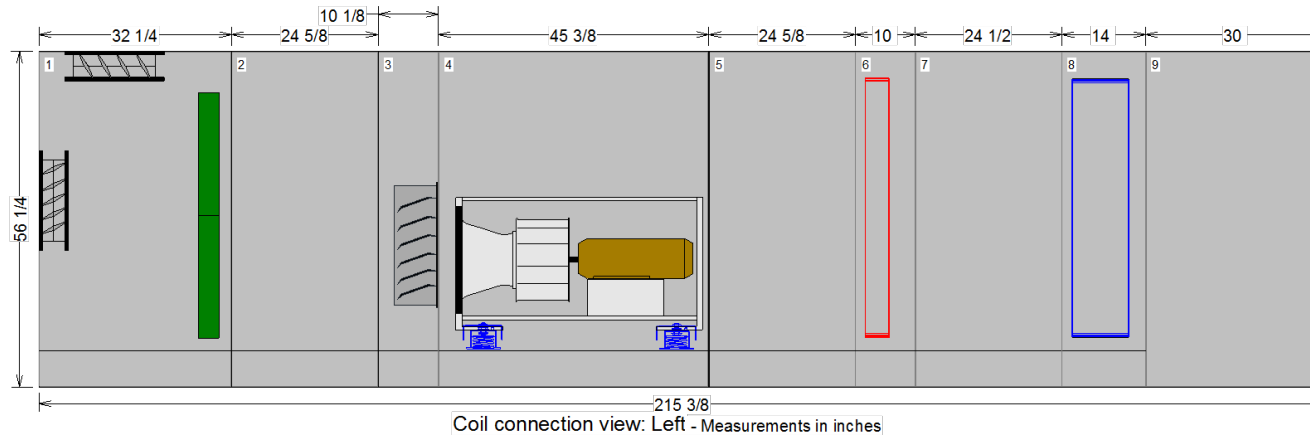
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10225 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G1
Paint:		Rigging/Installed Weight: 3423.4 lb / 3560.8 lb



Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A2 Qty: 1 Tag(s): AHU-G1



**NPTI : National Pipe Thread Internal Connection
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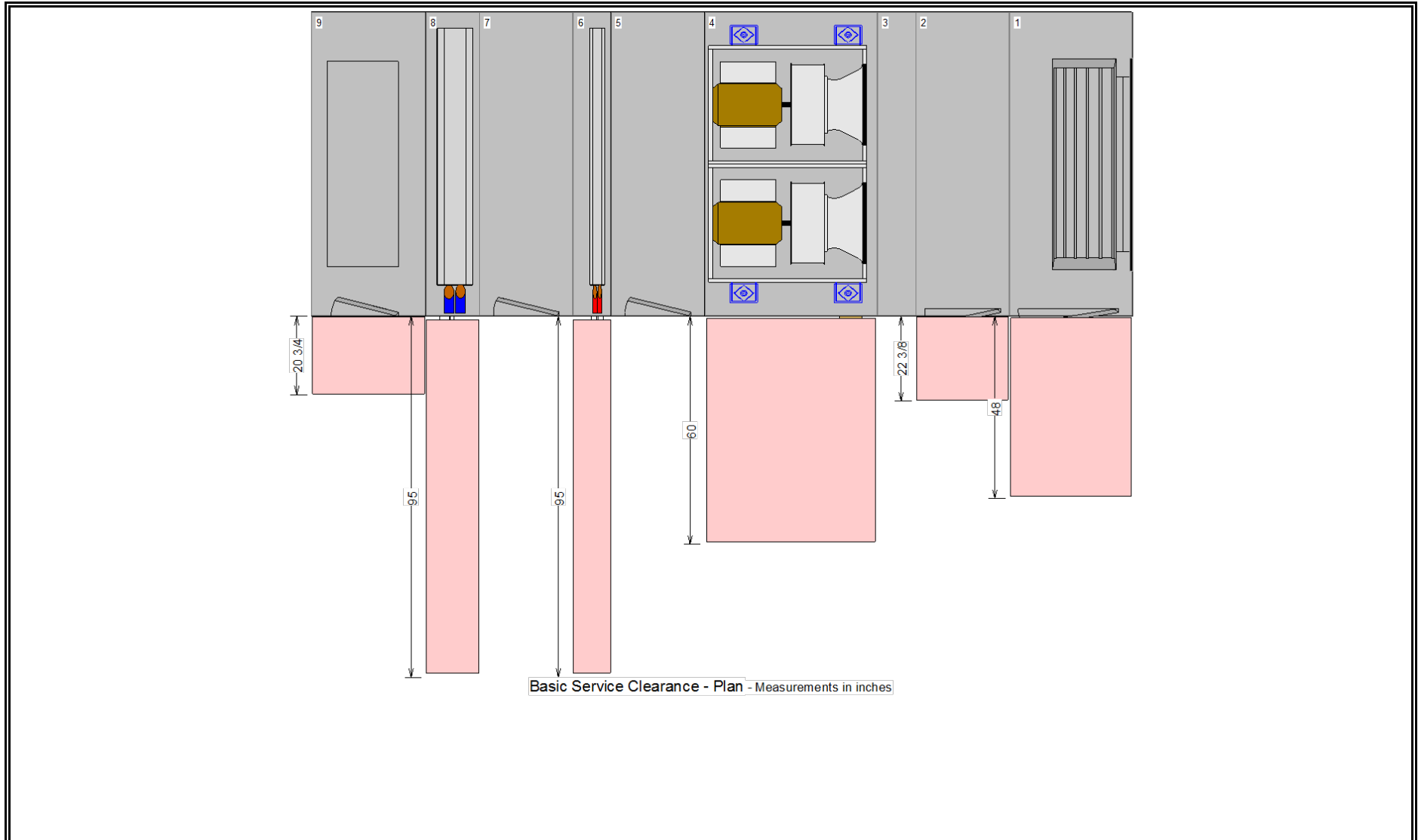
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10225 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G1
Paint:		Rigging/Installed Weight: 3423.4 lb / 3560.8 lb




Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A2 Qty: 1 Tag(s): AHU-G1

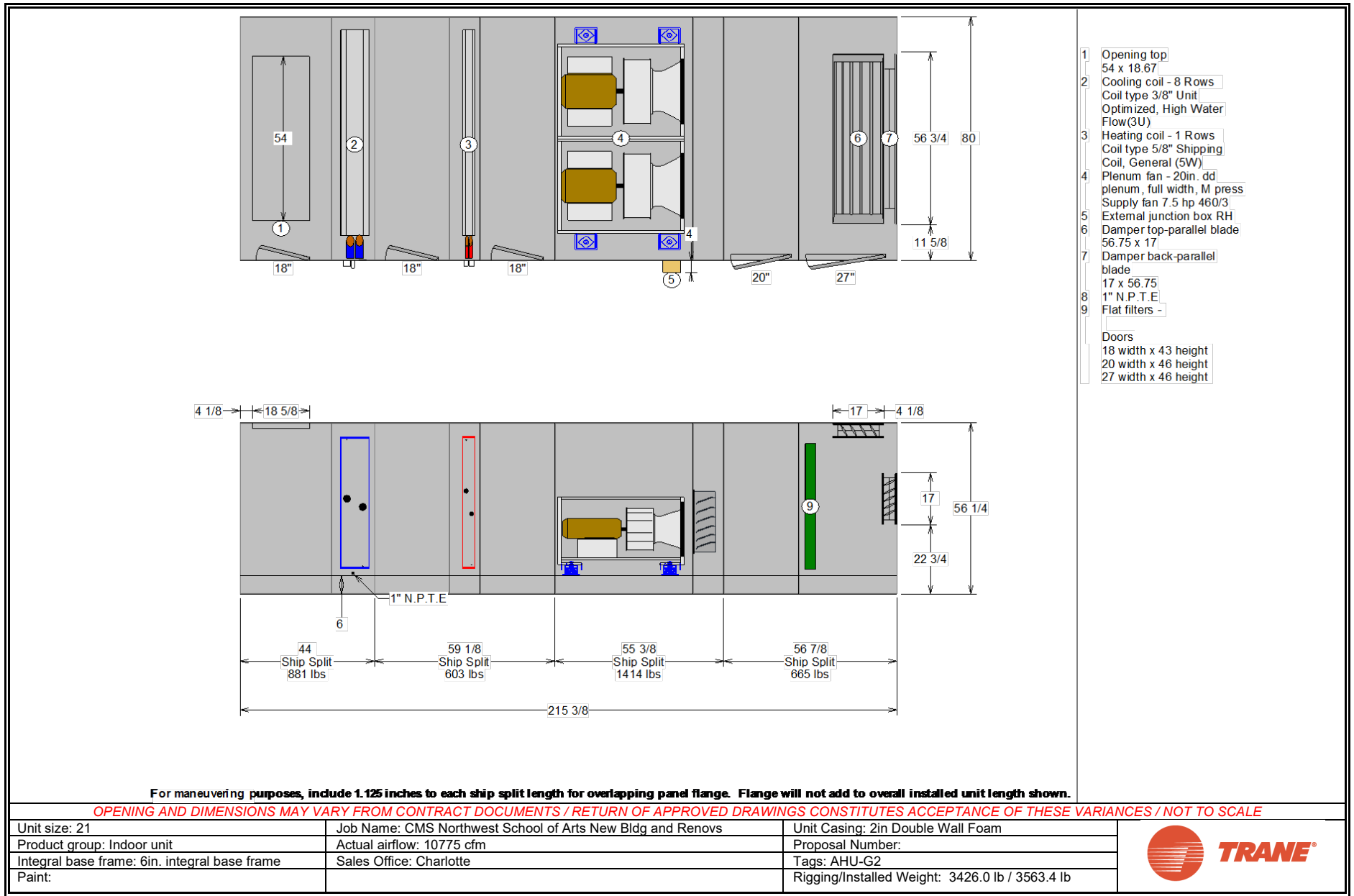


OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam	
Product group: Indoor unit	Actual airflow: 10225 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G1	
Paint:		Rigging/Installed Weight: 3423.4 lb / 3560.8 lb	

Dimensional Drawings - Performance Climate Changer (CSAA)

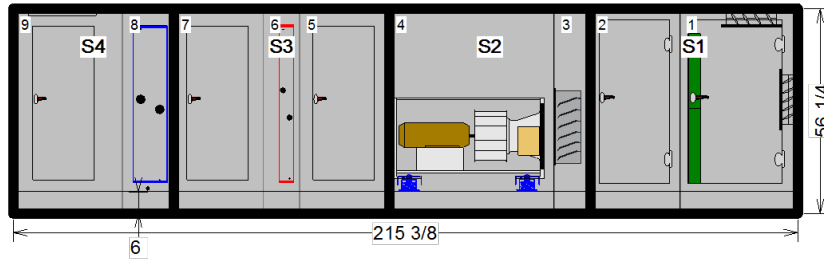
Item: A3 Qty: 1 Tag(s): AHU-G2



Dimensional Drawings - Performance Climate Changer (CSAA)

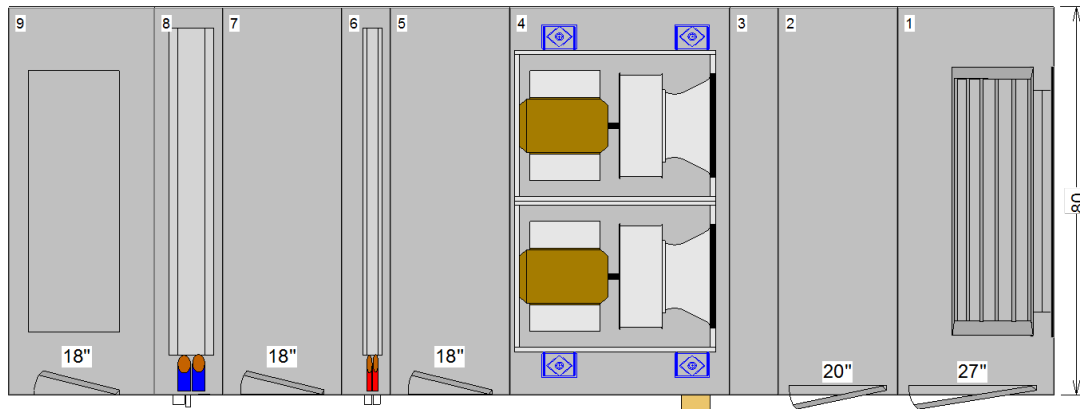
Item: A3 Qty: 1 Tag(s): AHU-G2

Shipping splits are indicated by thick black lines



For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length sh

Pos #	Module	Length	Weight
1	Air mixing section	32 1/4	465.83
2	Access section	24 5/8	199.38
3	Access section	10 1/8	111.80
4	Fan section	45 3/8	1302.07
5	Access section	24 5/8	199.38
6	Coil section	10	204.34
7	Access section	24 1/2	199.38
8	Coil section	14	563.74
9	Discharge Plenum	30	317.52
		Installed Unit Weight	3563.44 lbs



Basic Overall Plan View: Top - Measurements in inches

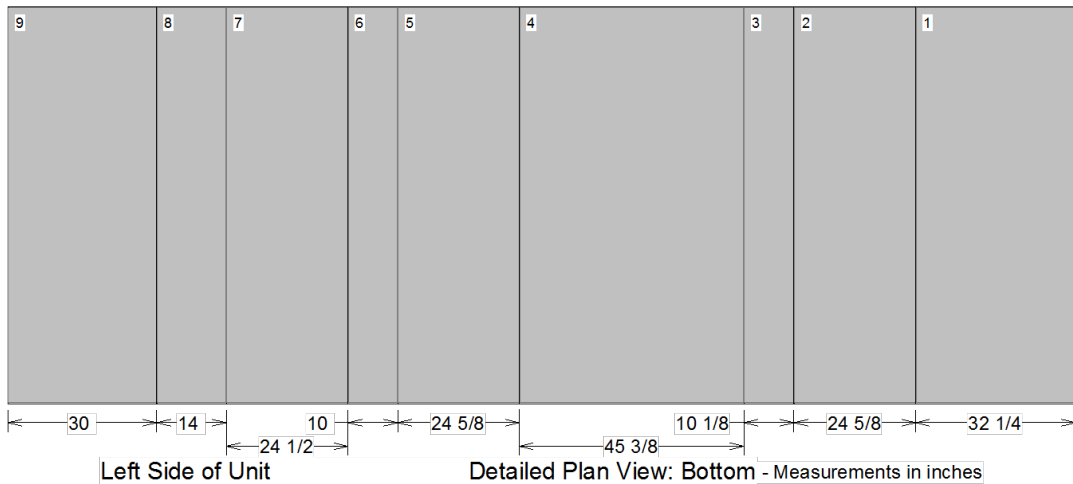
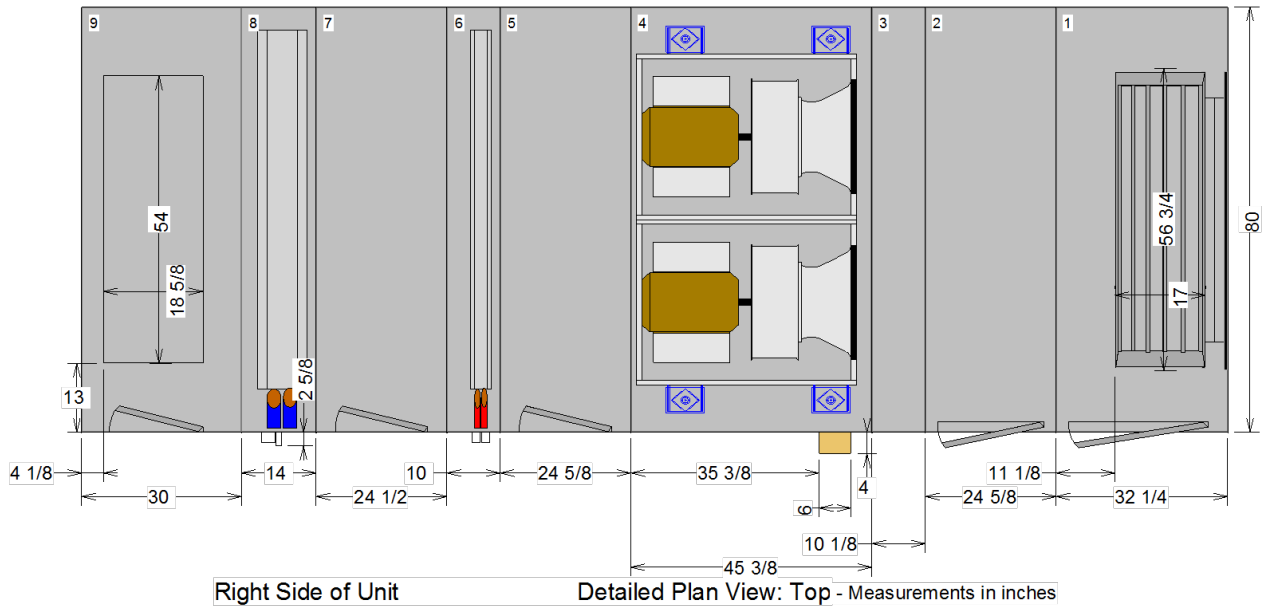
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10775 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G2
Paint:		Rigging/Installed Weight: 3426.0 lb / 3563.4 lb



Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A3 Qty: 1 Tag(s): AHU-G2



****Placement of electrical conduit may vary by a tolerance of 8" in any direction.**

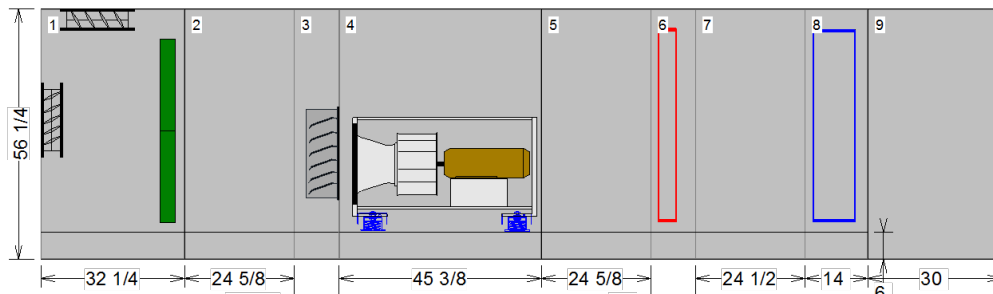
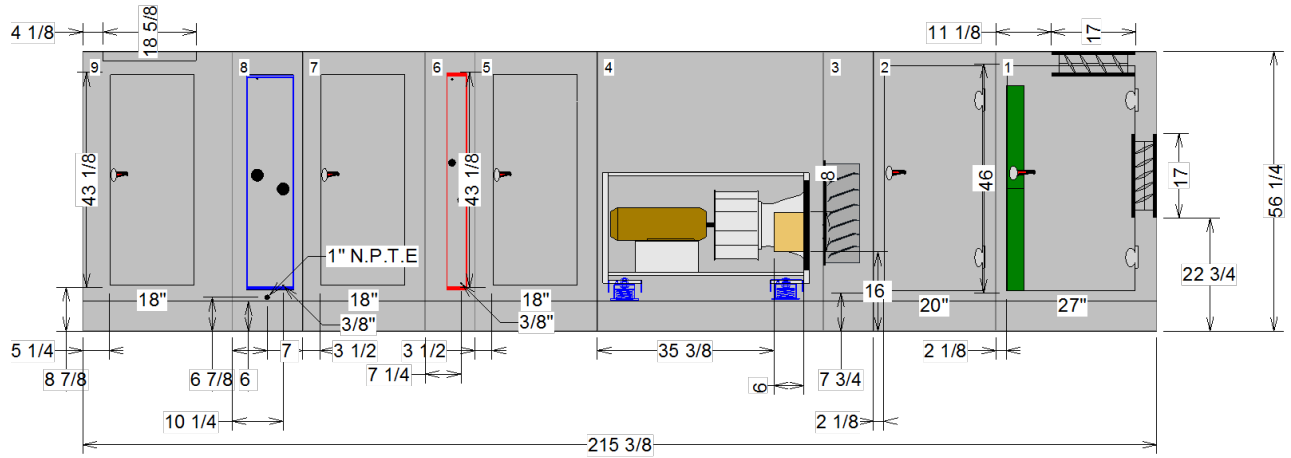
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10775 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G2
Paint:		Rigging/Installed Weight: 3426.0 lb / 3563.4 lb



Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A3 Qty: 1 Tag(s): AHU-G2



Detailed Elevation View: Left - Measurements in inches

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10775 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G2
Paint:		Rigging/Installed Weight: 3426.0 lb / 3563.4 lb

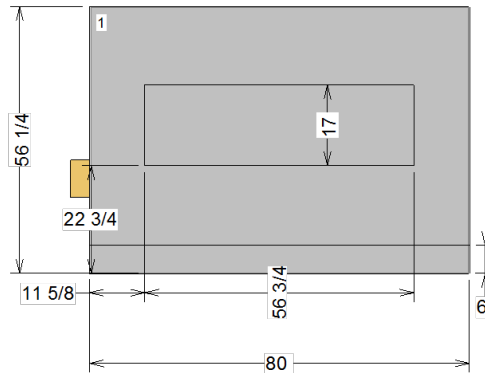


Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A3 Qty: 1 Tag(s): AHU-G2




Detailed Elevation View: Front - Measurements in inches



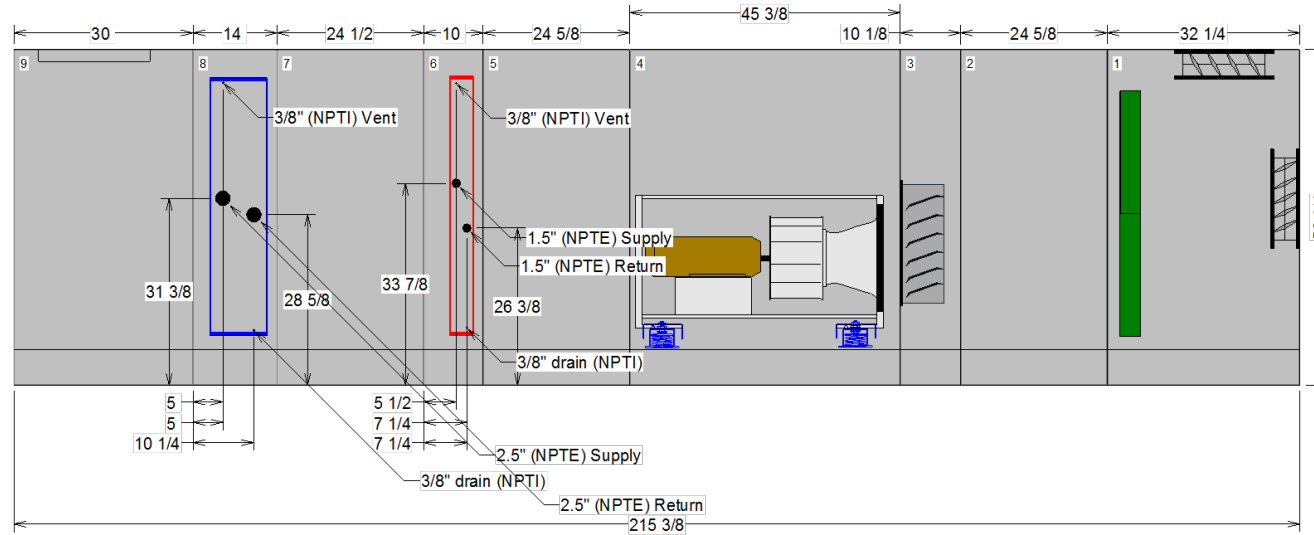
Detailed Elevation View: Back - Measurements in inches

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam	
Product group: Indoor unit	Actual airflow: 10775 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G2	
Paint:		Rigging/Installed Weight: 3426.0 lb / 3563.4 lb	


Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A3 Qty: 1 Tag(s): AHU-G2



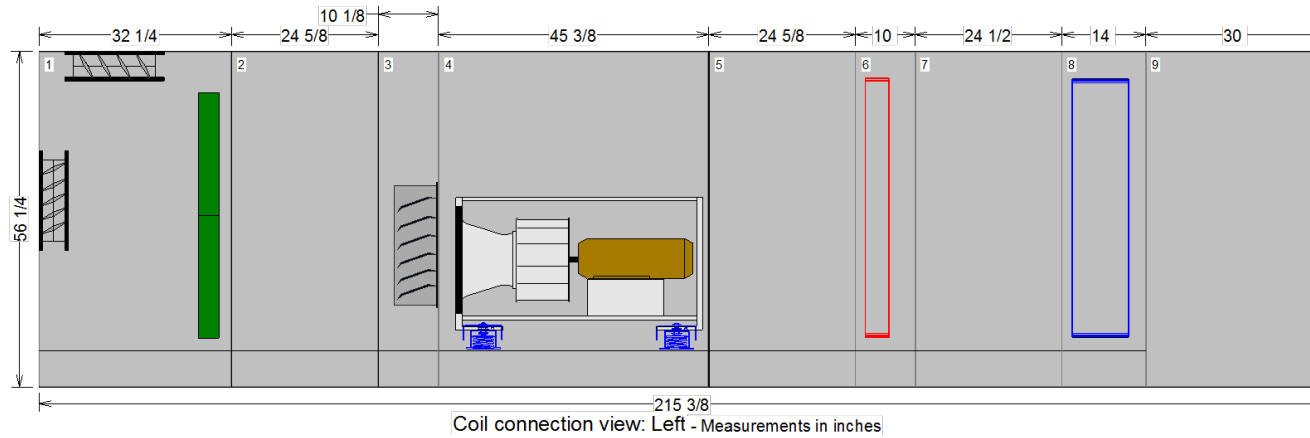
NPTI : National Pipe Thread Internal Connection
 NPTE : National Pipe Thread External Connection

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam	
Product group: Indoor unit	Actual airflow: 10775 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G2	
Paint:		Rigging/Installed Weight: 3426.0 lb / 3563.4 lb	

Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A3 Qty: 1 Tag(s): AHU-G2



**NPTI : National Pipe Thread Internal Connection
 NPTE : National Pipe Thread External Connection**

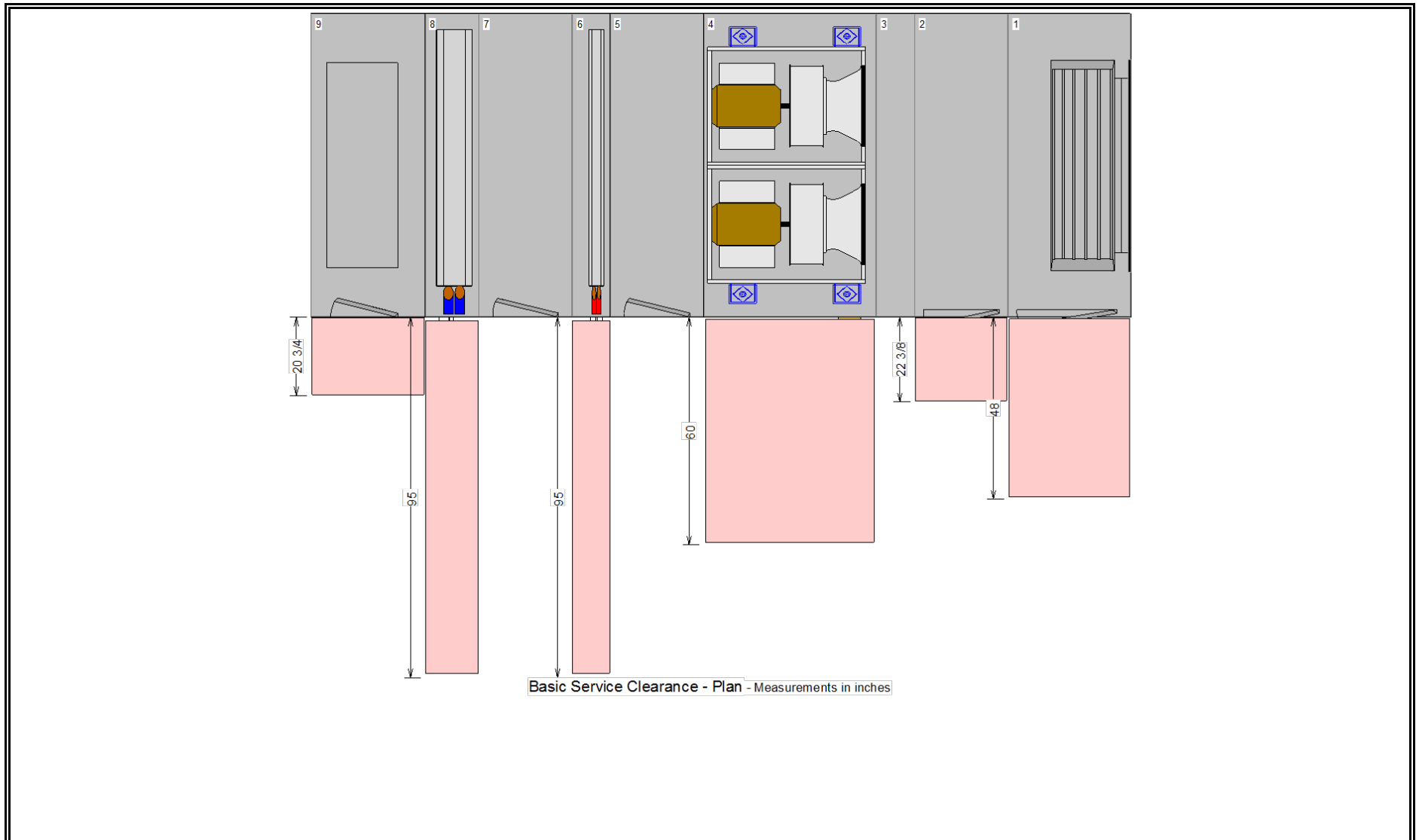
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10775 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G2
Paint:		Rigging/Installed Weight: 3426.0 lb / 3563.4 lb




Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A3 Qty: 1 Tag(s): AHU-G2

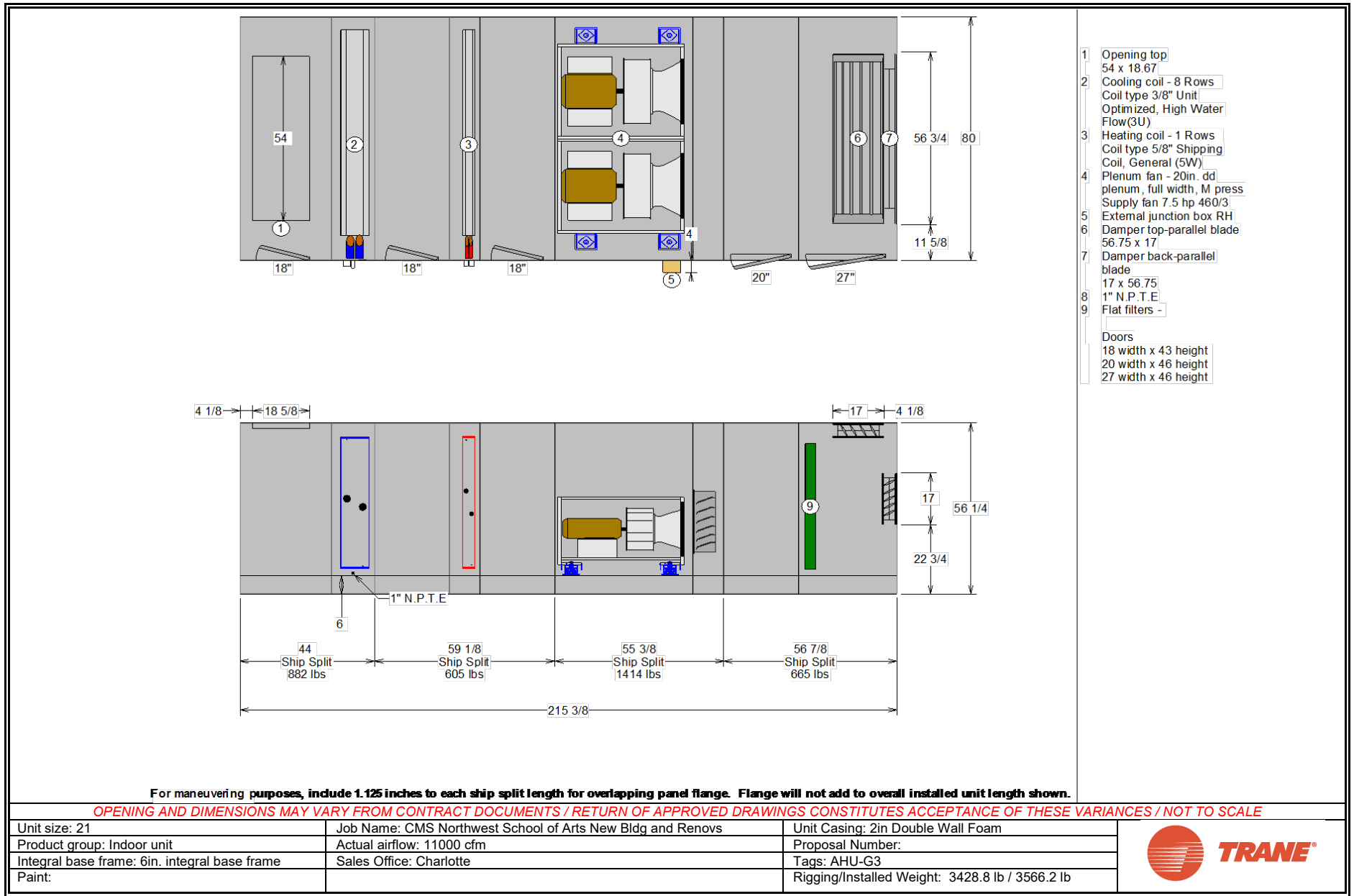


OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam	
Product group: Indoor unit	Actual airflow: 10775 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G2	
Paint:		Rigging/Installed Weight: 3426.0 lb / 3563.4 lb	

Dimensional Drawings - Performance Climate Changer (CSAA)

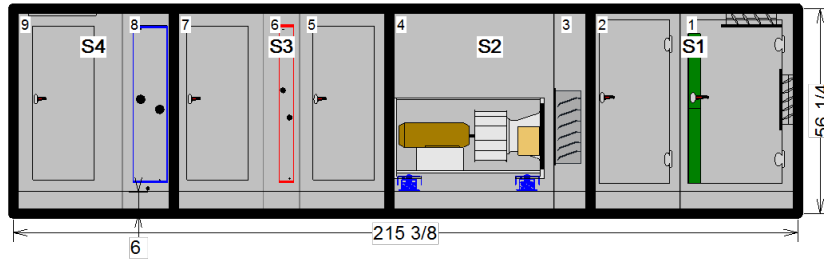
Item: A4 Qty: 1 Tag(s): AHU-G3



Dimensional Drawings - Performance Climate Changer (CSAA)

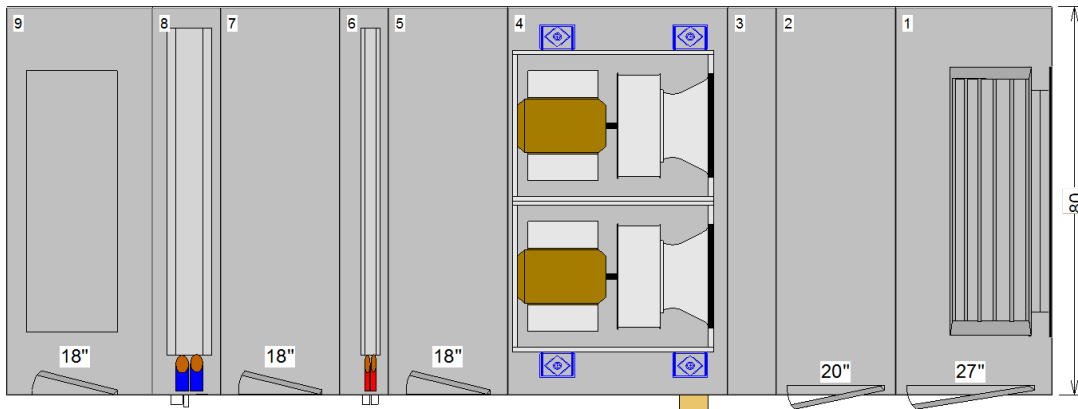
Item: A4 Qty: 1 Tag(s): AHU-G3

Shipping splits are indicated by thick black lines



For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length sh

Pos #	Module	Length	Weight
1	Air mixing section	32 1/4	465.83
2	Access section	24 5/8	199.38
3	Access section	10 1/8	111.80
4	Fan section	45 3/8	1302.07
5	Access section	24 5/8	199.38
6	Coil section	10	205.94
7	Access section	24 1/2	199.38
8	Coil section	14	564.94
9	Discharge Plenum	30	317.52
		Installed Unit Weight	3566.24 lbs



Basic Overall Plan View: Top - Measurements in inches

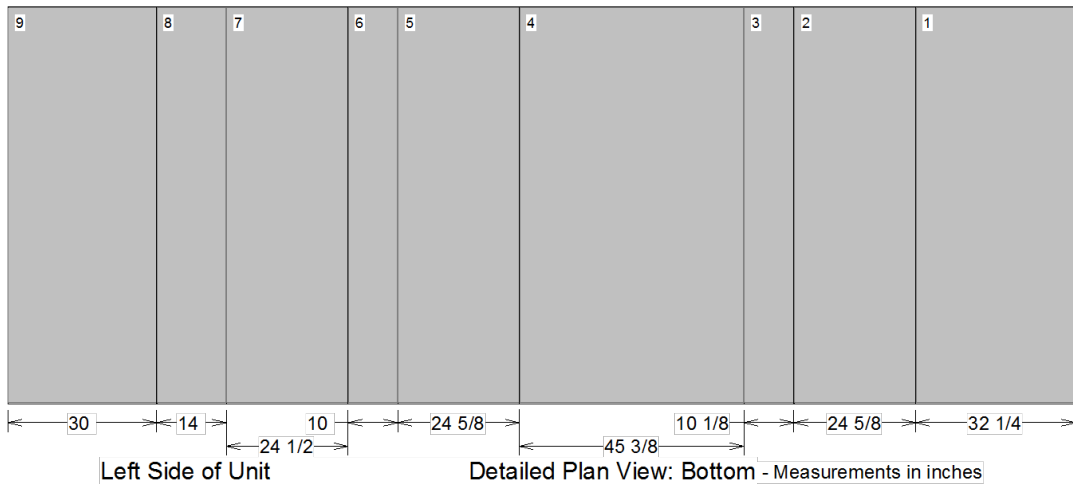
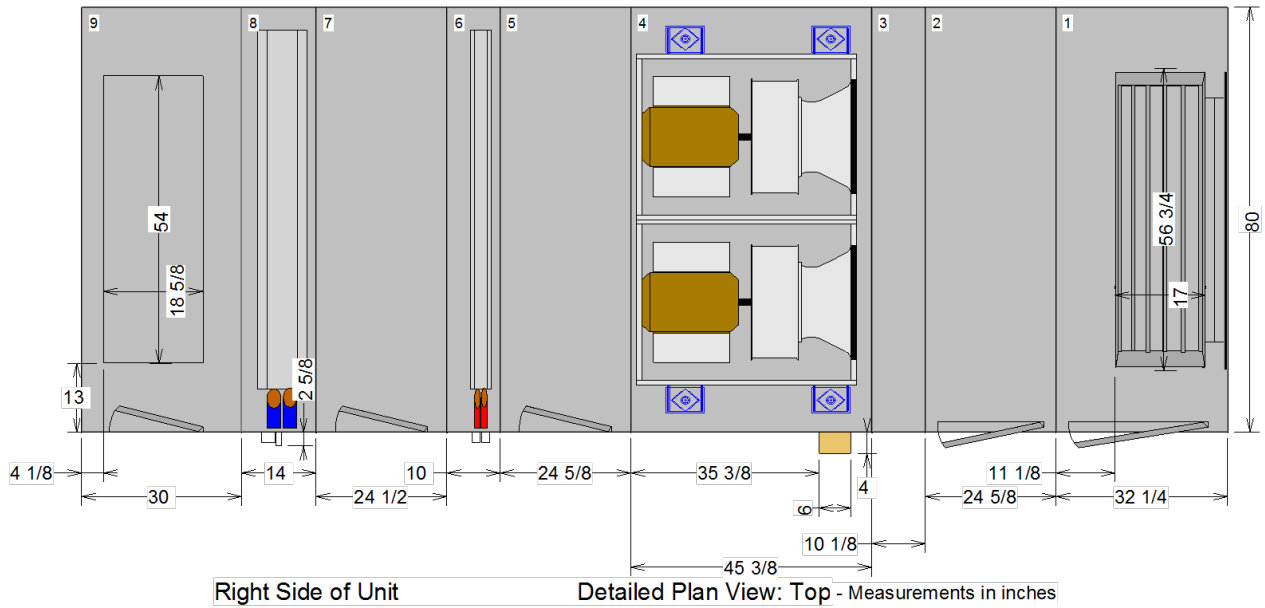
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 11000 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G3
Paint:		Rigging/Installed Weight: 3428.8 lb / 3566.2 lb



Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A4 Qty: 1 Tag(s): AHU-G3



****Placement of electrical conduit may vary by a tolerance of 8" in any direction.**

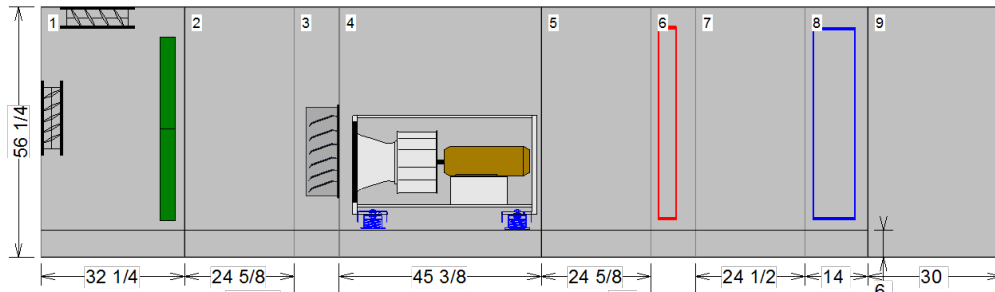
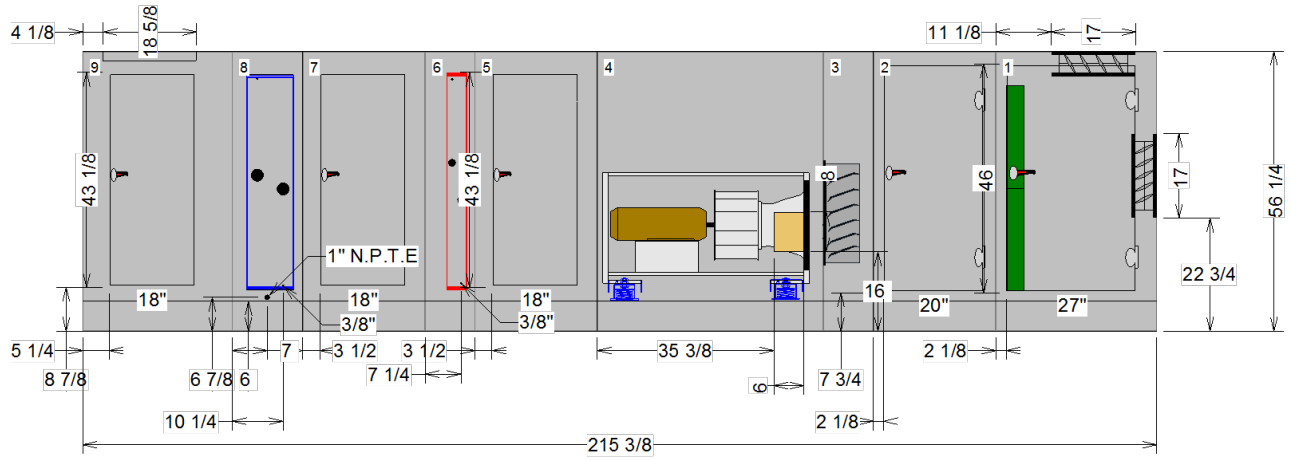
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 11000 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G3
Paint:		Rigging/Installed Weight: 3428.8 lb / 3566.2 lb



Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A4 Qty: 1 Tag(s): AHU-G3



Detailed Elevation View: Left - Measurements in inches

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 11000 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G3
Paint:		Rigging/Installed Weight: 3428.8 lb / 3566.2 lb

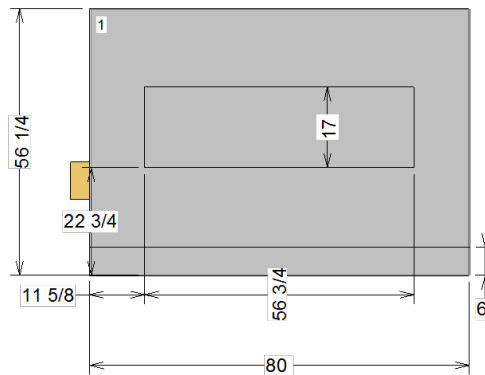


Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A4 Qty: 1 Tag(s): AHU-G3



Detailed Elevation View: Front - Measurements in inches



Detailed Elevation View: Back - Measurements in inches

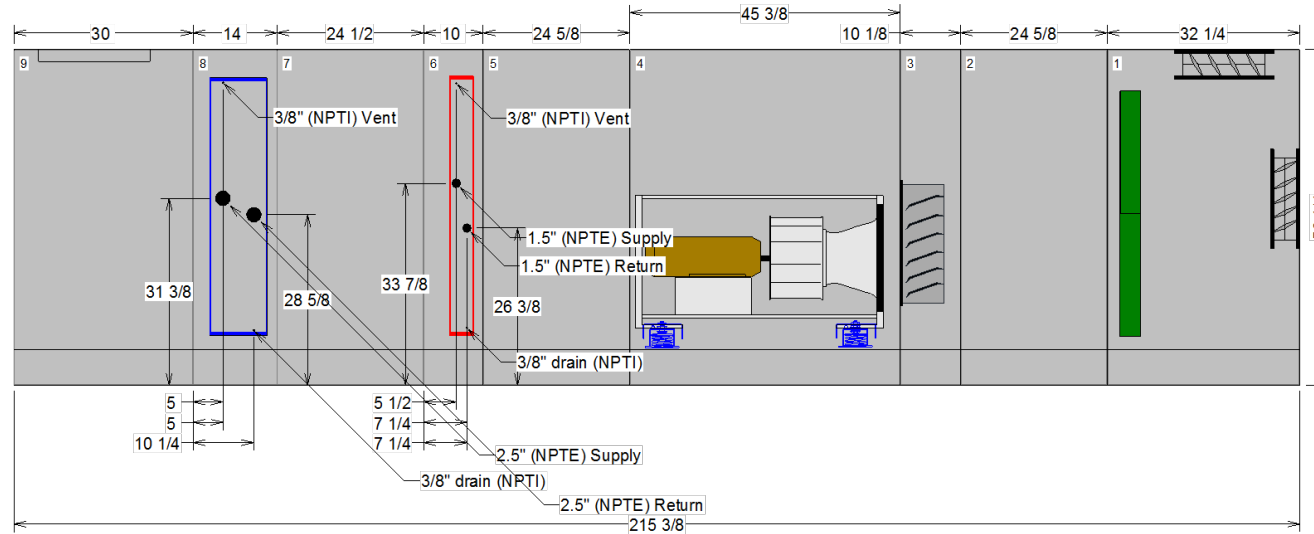
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 11000 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G3
Paint:		Rigging/Installed Weight: 3428.8 lb / 3566.2 lb



Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A4 Qty: 1 Tag(s): AHU-G3



NPTI : National Pipe Thread Internal Connection
 NPTE : National Pipe Thread External Connection

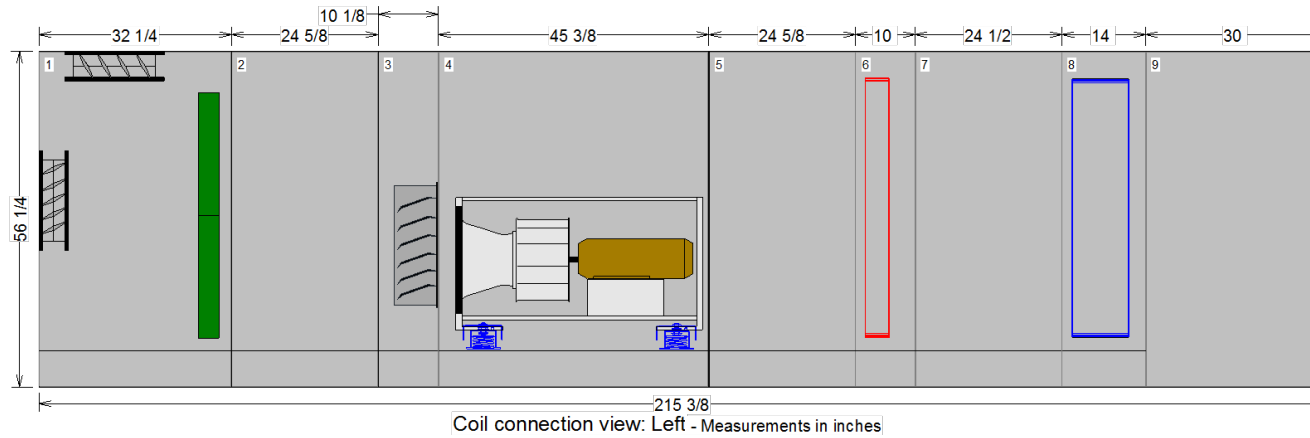
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 11000 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G3
Paint:		Rigging/Installed Weight: 3428.8 lb / 3566.2 lb



Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A4 Qty: 1 Tag(s): AHU-G3



**NPTI : National Pipe Thread Internal Connection
 NPTE : National Pipe Thread External Connection**

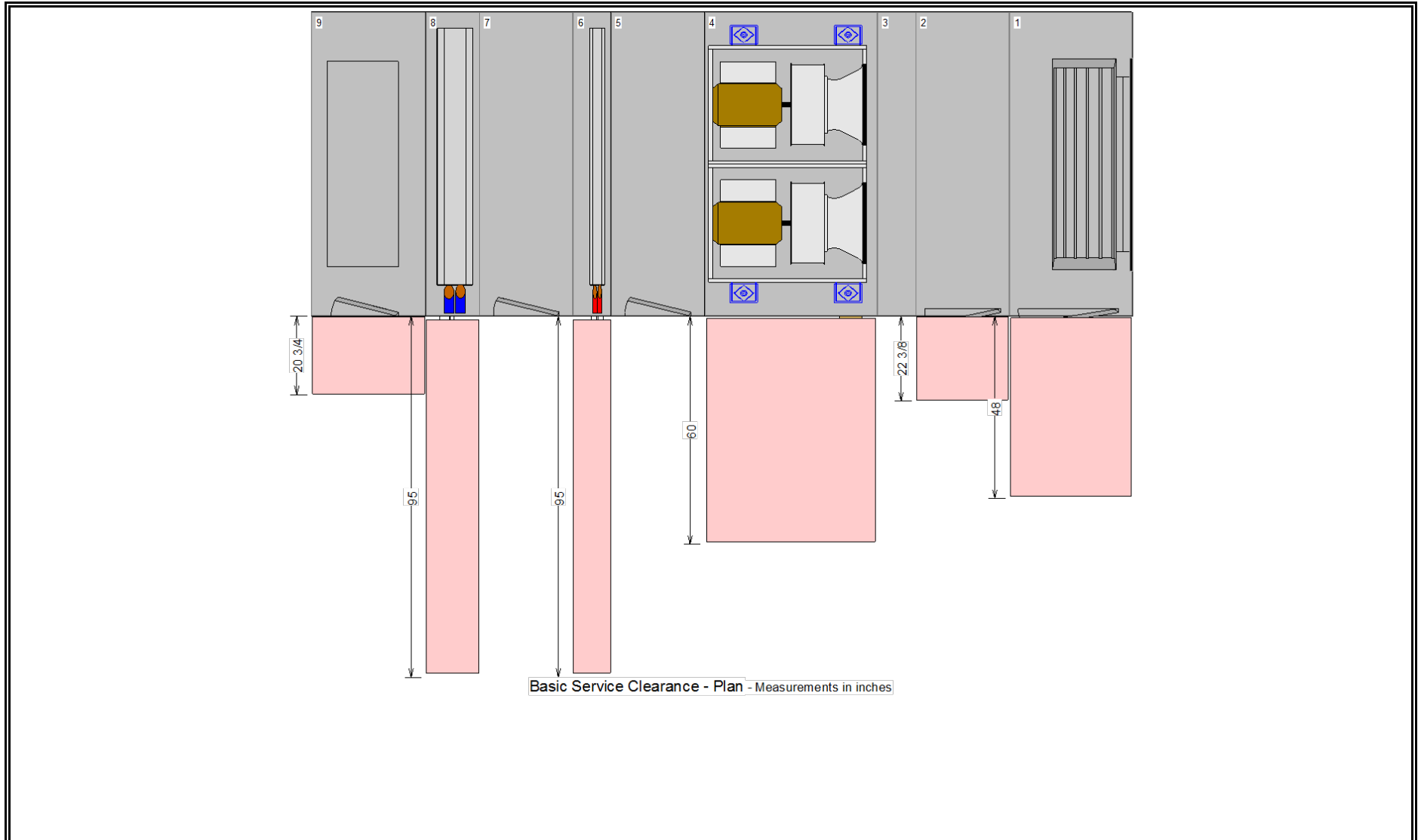
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

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Paint:		Rigging/Installed Weight: 3428.8 lb / 3566.2 lb




Dimensional Drawings - Performance Climate Changer (CSAA)

Item: A4 Qty: 1 Tag(s): AHU-G3



OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam	
Product group: Indoor unit	Actual airflow: 11000 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame	Sales Office: Charlotte	Tags: AHU-G3	
Paint:		Rigging/Installed Weight: 3428.8 lb / 3566.2 lb	

Fan Curve - Performance Climate Changer (CSAA)

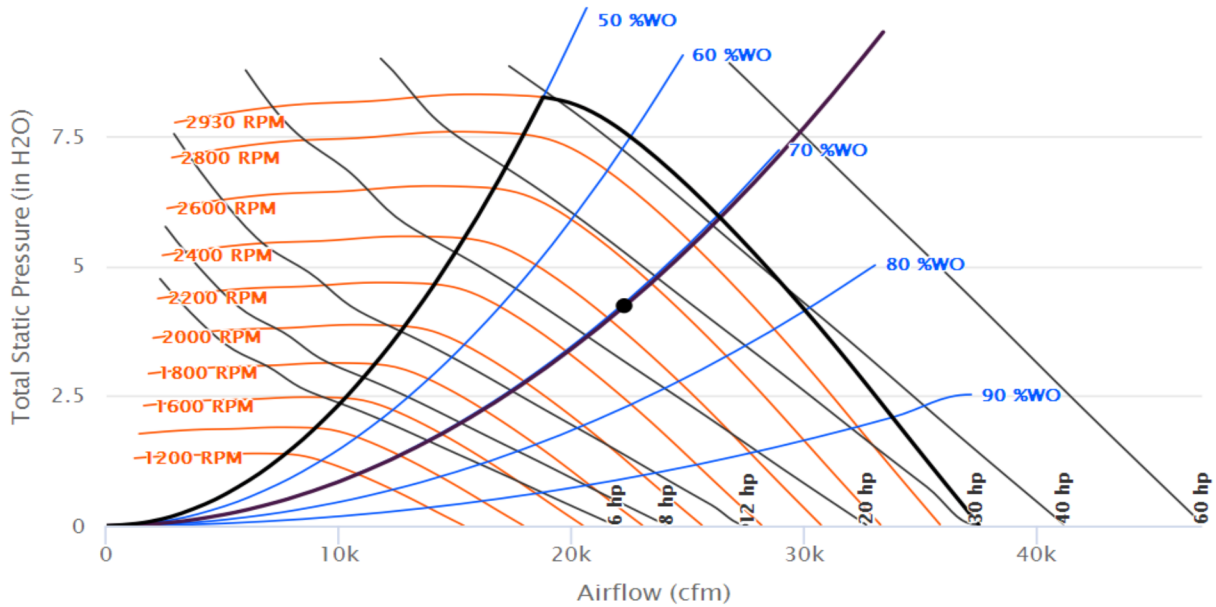
Item: A1 Qty: 1 Tag(s): AHU-C1

Fan Details

Unit Size	18TF	Operating Brake Power	24.983 hp
Motor Frequency	84.00 Hz	Altitude	0.00 ft
Operating Airflow	22,250 cfm	Design Temp.	70.00 F
Operating Static Pressure	4.222 in H2O	Efficiency	59.28 %
Operating RPM	2,471 rpm		

AHU-C1 - Supply

Size 50 DDP 18.25 inch AF M Press2x2 array 100% Width 12 blades



Fan Curve - Performance Climate Changer (CSAA)

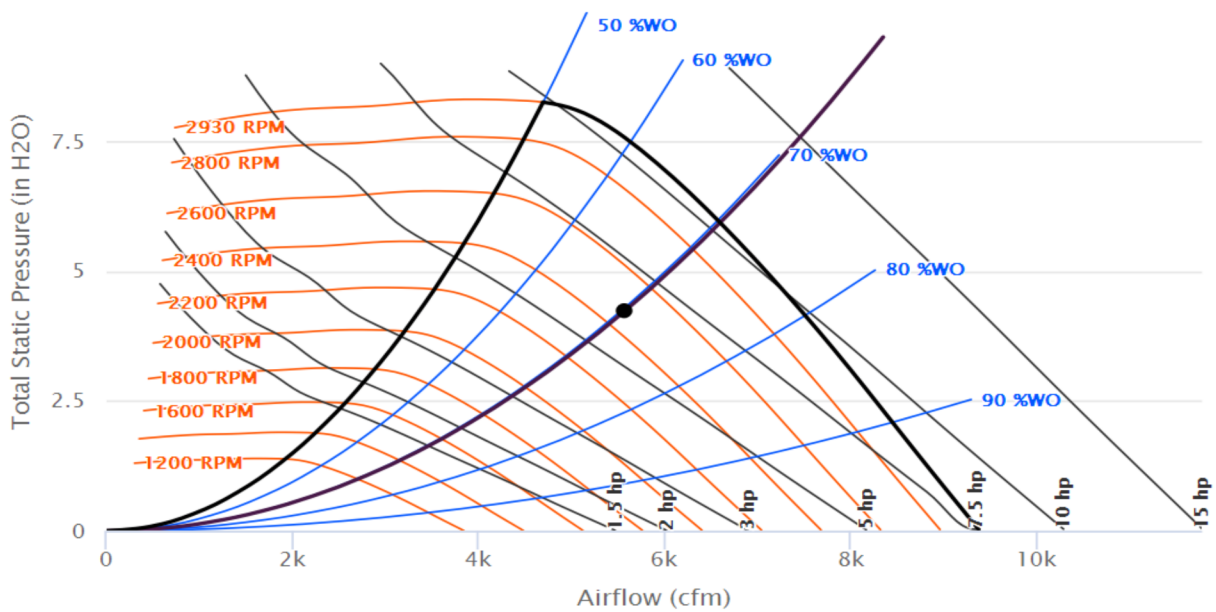
Item: A1 Qty: 1 Tag(s): AHU-C1

Fan Details

Unit Size	18TF	Operating Brake Power	6.246 hp
Motor Frequency	84.00 Hz	Altitude	0.00 ft
Operating Airflow	5,563 cfm	Design Temp.	70.00 F
Operating Static Pressure	4.222 in H2O	Efficiency	59.28 %
Operating RPM	2,471 rpm		

AHU-C1 - Supply - Single Fan

Size 50 DDP 18.25 inch AF M Press2x2 array 100% Width 12 blades



Fan Curve - Performance Climate Changer (CSAA)

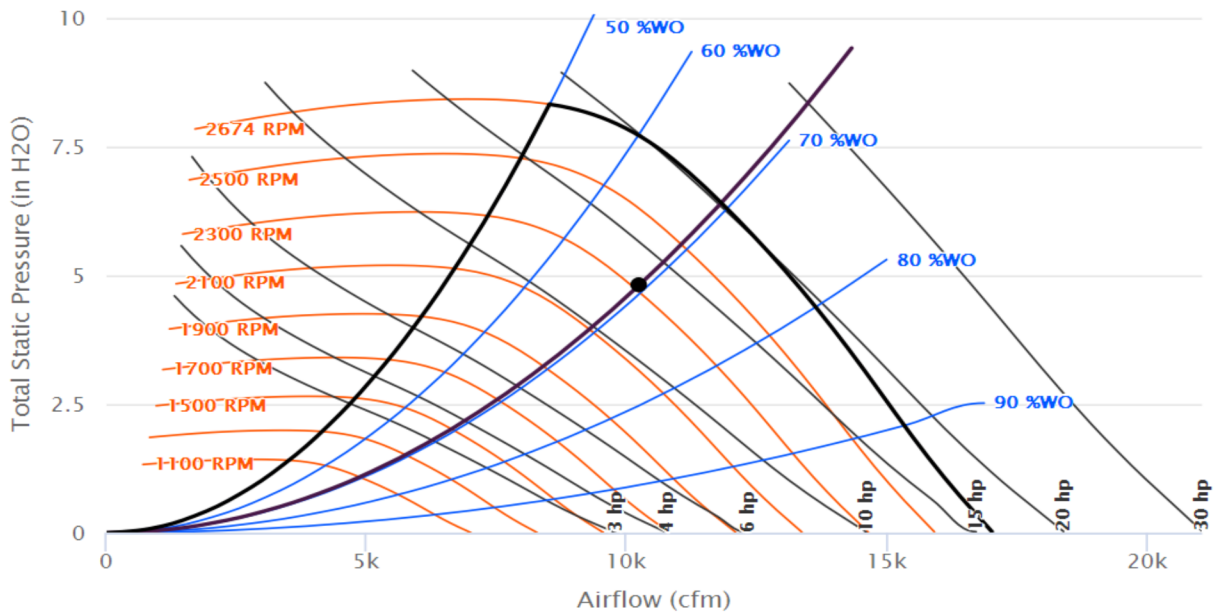
Item: A2 Qty: 1 Tag(s): AHU-G1

Fan Details

Unit Size	20TR	Operating Brake Power	13.096 hp
Motor Frequency	78.00 Hz	Altitude	0.00 ft
Operating Airflow	10,225 cfm	Design Temp.	70.00 F
Operating Static Pressure	4.811 in H2O	Efficiency	59.22 %
Operating RPM	2,312 rpm		

AHU-G1 - Supply

Size 21 DDP 20 inch AF M Press2x1 array 80% Width 12 blades



Fan Curve - Performance Climate Changer (CSAA)

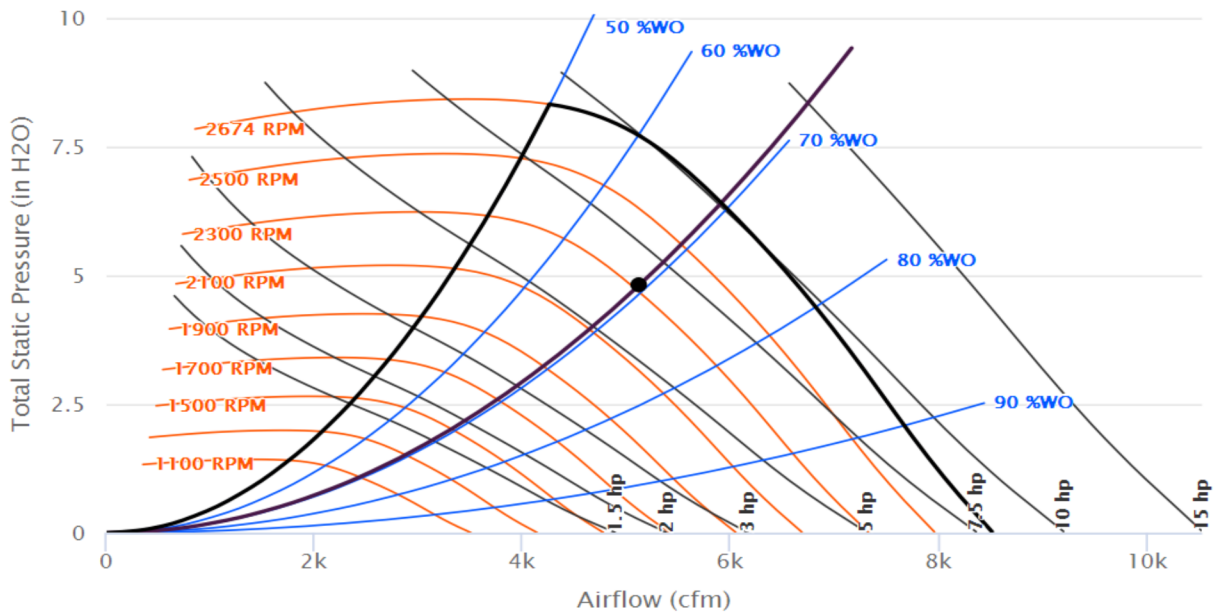
Item: A2 Qty: 1 Tag(s): AHU-G1

Fan Details

Unit Size	20TR	Operating Brake Power	6.548 hp
Motor Frequency	78.00 Hz	Altitude	0.00 ft
Operating Airflow	5,113 cfm	Design Temp.	70.00 F
Operating Static Pressure	4.811 in H2O	Efficiency	59.22 %
Operating RPM	2,312 rpm		

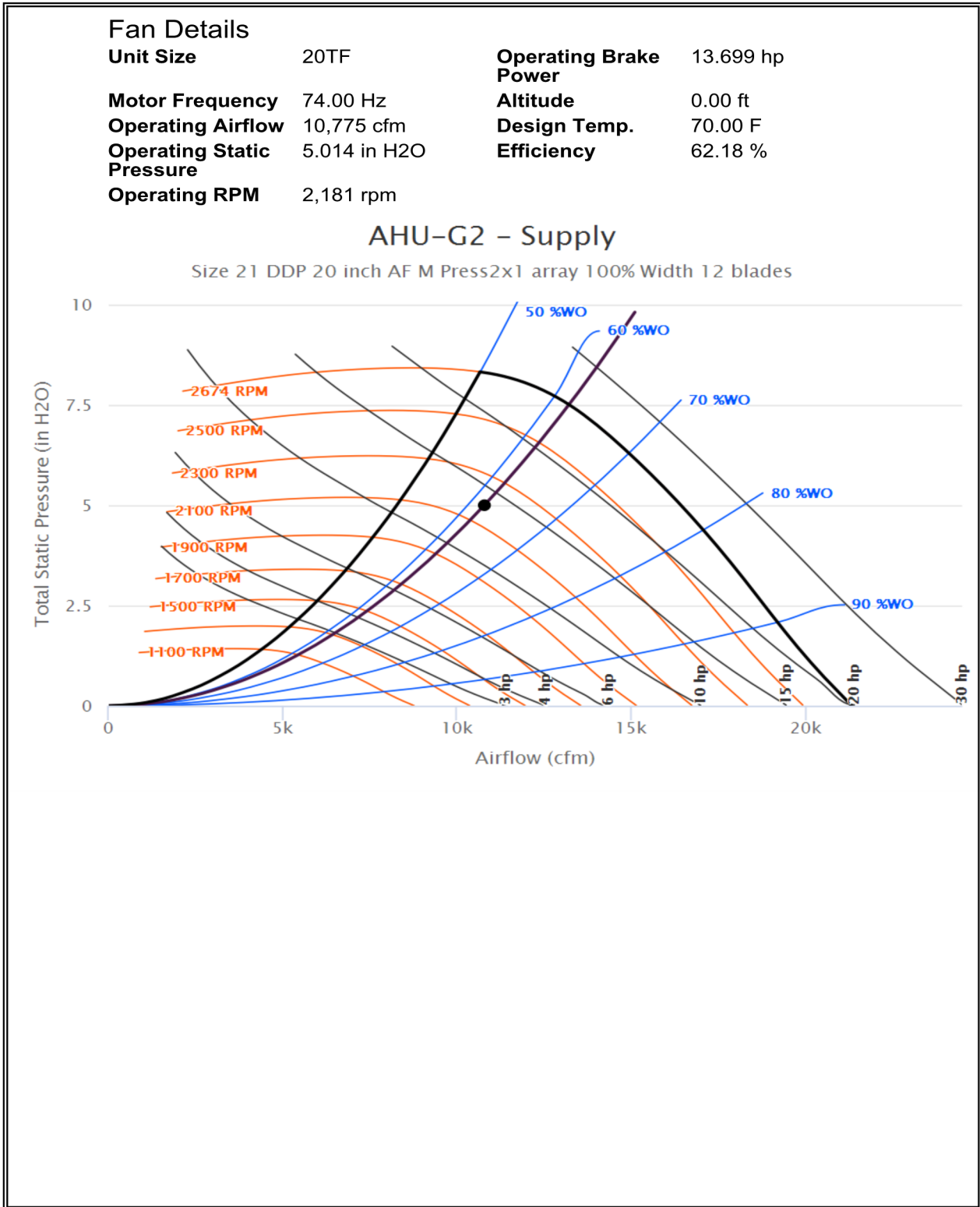
AHU-G1 - Supply - Single Fan

Size 21 DDP 20 inch AF M Press2x1 array 80% Width 12 blades



Fan Curve - Performance Climate Changer (CSAA)

Item: A3 Qty: 1 Tag(s): AHU-G2



Fan Curve - Performance Climate Changer (CSAA)

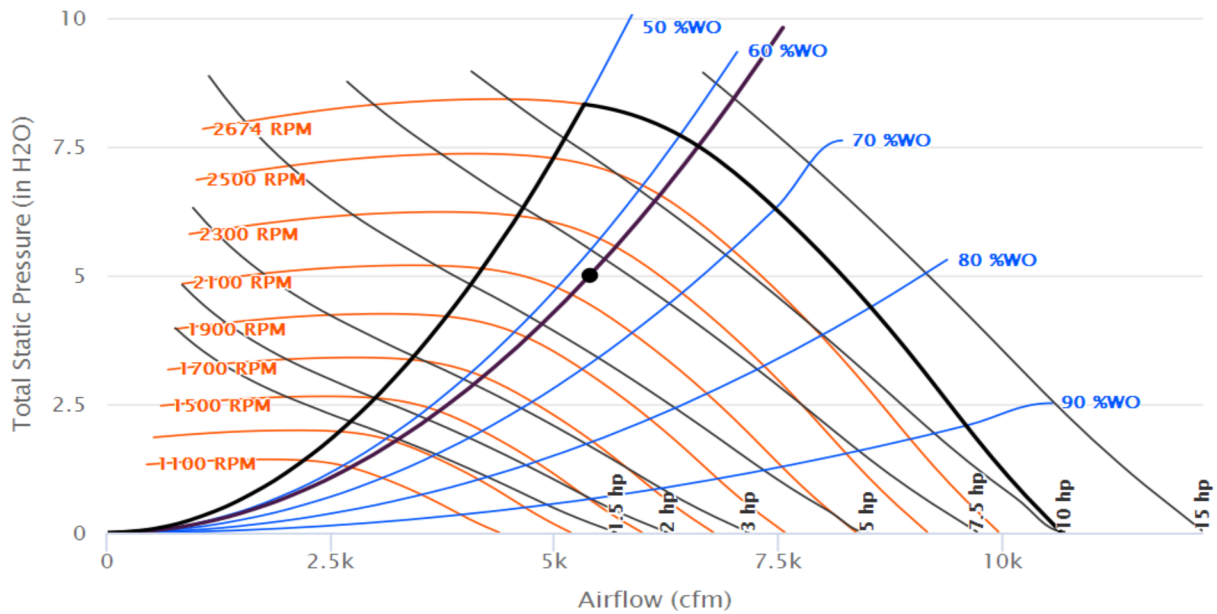
Item: A3 Qty: 1 Tag(s): AHU-G2

Fan Details

Unit Size	20TF	Operating Brake Power	6.850 hp
Motor Frequency	74.00 Hz	Altitude	0.00 ft
Operating Airflow	5,388 cfm	Design Temp.	70.00 F
Operating Static Pressure	5.014 in H2O	Efficiency	62.18 %
Operating RPM	2,181 rpm		

AHU-G2 - Supply - Single Fan

Size 21 DDP 20 inch AF M Press2x1 array 100% Width 12 blades



Fan Curve - Performance Climate Changer (CSAA)

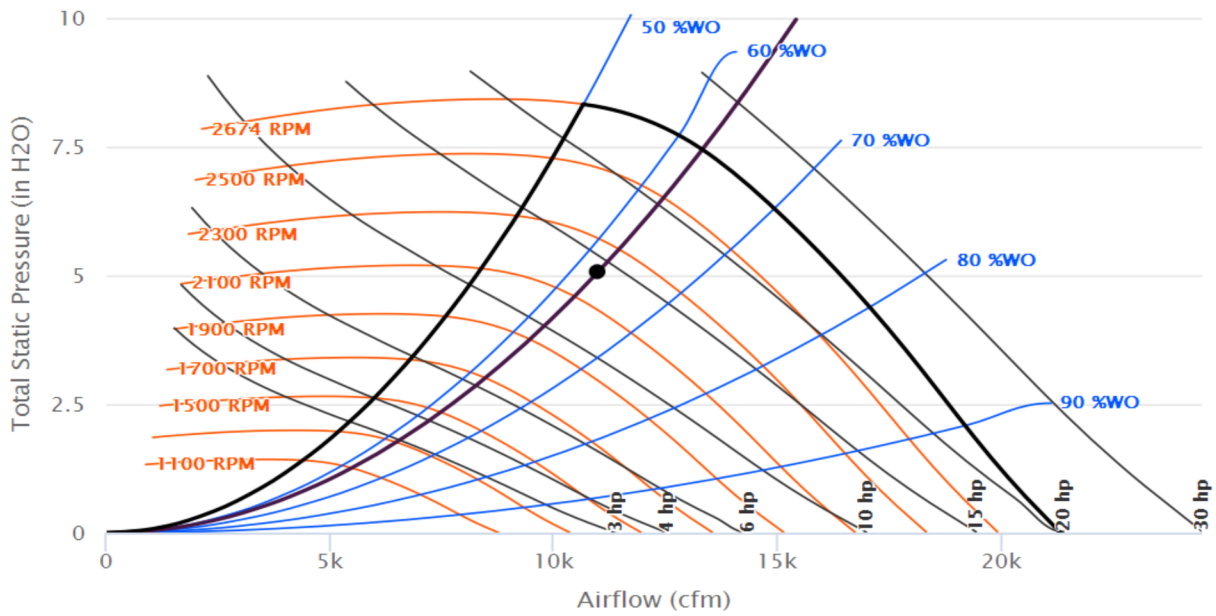
Item: A4 Qty: 1 Tag(s): AHU-G3

Fan Details

Unit Size	20TF	Operating Brake Power	14.262 hp
Motor Frequency	75.00 Hz	Altitude	0.00 ft
Operating Airflow	11,000 cfm	Design Temp.	70.00 F
Operating Static Pressure	5.095 in H2O	Efficiency	61.95 %
Operating RPM	2,209 rpm		

AHU-G3 - Supply

Size 21 DDP 20 inch AF M Press2x1 array 100% Width 12 blades



Fan Curve - Performance Climate Changer (CSAA)

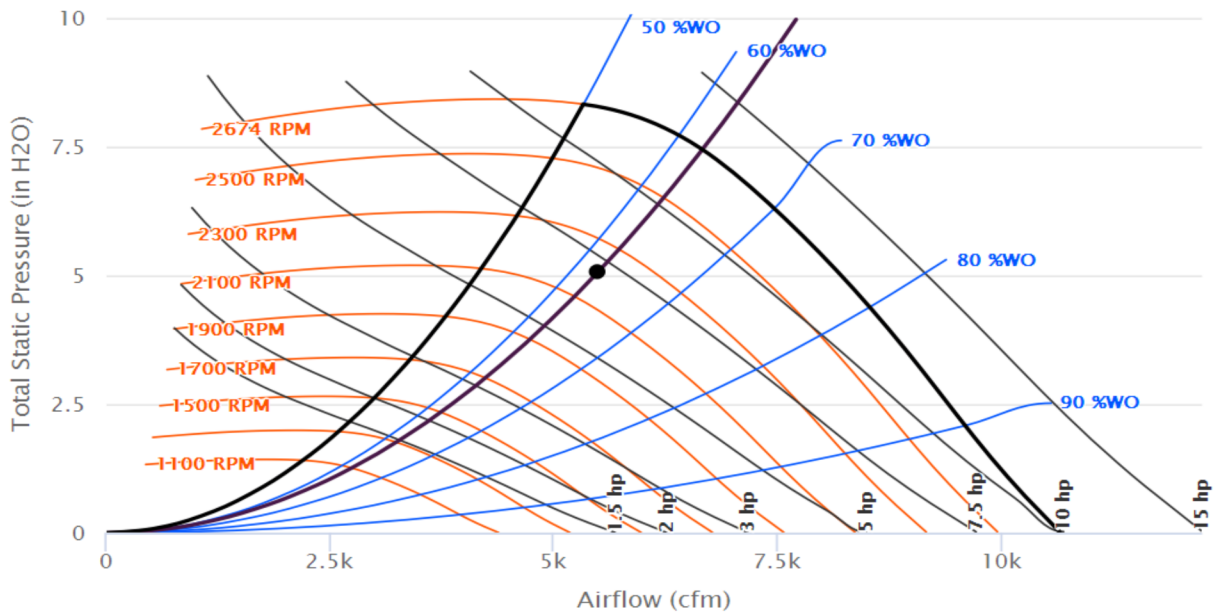
Item: A4 Qty: 1 Tag(s): AHU-G3

Fan Details

Unit Size	20TF	Operating Brake Power	7.131 hp
Motor Frequency	75.00 Hz	Altitude	0.00 ft
Operating Airflow	5,500 cfm	Design Temp.	70.00 F
Operating Static Pressure	5.095 in H2O	Efficiency	61.95 %
Operating RPM	2,209 rpm		

AHU-G3 - Supply - Single Fan

Size 21 DDP 20 inch AF M Press2x1 array 100% Width 12 blades



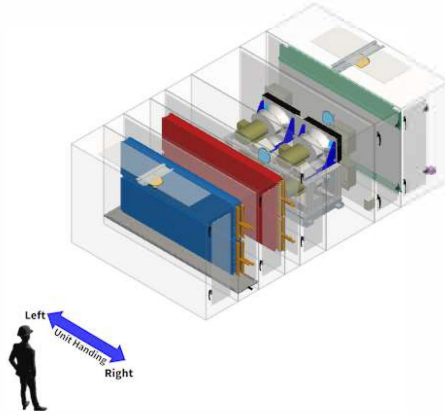
Trane Performance Climate Changer Acoustics

Unit Overview - AHU-C1

Application	Unit Size	External Dimensions			Weight	
		Height	Width	Length	Installed	Rigging
Indoor unit	CSAA050	79.3 in	125.5 in	227.344 in	7587 lb	7275 lb
Quantity of Shipping Sections		Largest Ship Split			Heaviest Ship Split	Elevation
4 piece(s)		Height	Width	Length		
		79.3 in	125.5 in	69.6 in	3140 lb	0.00 ft
Supply Fan						
Airflow	22250 cfm	Total Static Pressure	4.222 in H2O			

Construction Features

Panel	2in. foam injected R-13 with thermal break
Panel Material	All unit inner panels - galvanized
Integral Base Frame	6in. integral base frame
Seismic Certification	IBC Certified
Short Circuit Current Rating	5 kA
Agency Approval	UL listed unit



Unit Acoustics

Sound Path	63 (Hz)	125	250	500	1K	2K	4K	8K
Supply top:	79 dB	79 dB	72 dB	76 dB	73 dB	70 dB	67 dB	58 dB
Return:	84 dB	80 dB	77 dB	76 dB	74 dB	77 dB	74 dB	66 dB
Casing:	87 dB	82 dB	77 dB	82 dB	77 dB	69 dB	67 dB	63 dB

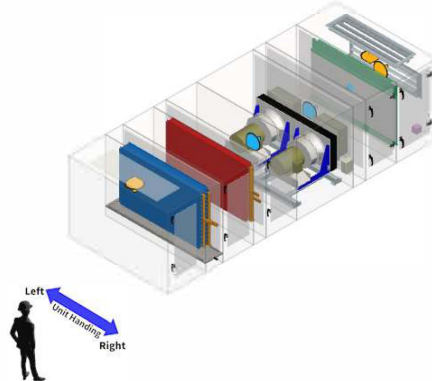
Trane Performance Climate Changer Acoustics

Unit Overview - AHU-G1

Application	Unit Size	External Dimensions			Weight	
		Height	Width	Length	Installed	Rigging
Indoor unit	CSAA021	56.3 in	80.0 in	215.378 in	3561 lb	3423 lb
Quantity of Shipping Sections		Largest Ship Split			Heaviest Ship Split	Elevation
4 piece(s)		Height	Width	Length		
		56.3 in	80.0 in	59.0 in	1414 lb	0.00 ft
Supply Fan						
Airflow	10225 cfm	Total Static Pressure	4.811 in H2O			

Construction Features

Panel	2in. foam injected R-13 with thermal break
Panel Material	All unit inner panels - galvanized
Integral Base Frame	6in. integral base frame
Seismic Certification	IBC Certified
Short Circuit Current Rating	5 kA
Agency Approval	UL listed unit



Unit Acoustics

Sound Path	63 (Hz)	125	250	500	1K	2K	4K	8K
Supply top:	70 dB	74 dB	74 dB	85 dB	77 dB	78 dB	70 dB	60 dB
Return:	71 dB	70 dB	81 dB	73 dB	66 dB	71 dB	65 dB	56 dB
Outdoor:	73 dB	75 dB	81 dB	74 dB	68 dB	74 dB	69 dB	61 dB
Casing:	84 dB	78 dB	74 dB	82 dB	77 dB	62 dB	53 dB	41 dB

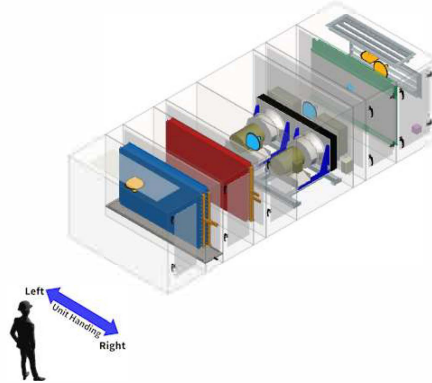
Trane Performance Climate Changer Acoustics

Unit Overview - AHU-G2

Application	Unit Size	External Dimensions			Weight	
		Height	Width	Length	Installed	Rigging
Indoor unit	CSAA021	56.3 in	80.0 in	215.378 in	3563 lb	3426 lb
Quantity of Shipping Sections	4 piece(s)	Largest Ship Split			Heaviest Ship Split	Elevation
		Height	Width	Length		
		56.3 in	80.0 in	59.0 in	1414 lb	0.00 ft
Supply Fan						
Airflow	10775 cfm	Total Static Pressure	5.014 in H2O			

Construction Features

Panel	2in. foam injected R-13 with thermal break
Panel Material	All unit inner panels - galvanized
Integral Base Frame	6in. integral base frame
Seismic Certification	IBC Certified
Short Circuit Current Rating	5 kA
Agency Approval	UL listed unit



Unit Acoustics

Sound Path	63 (Hz)	125	250	500	1K	2K	4K	8K
Supply top:	70 dB	74 dB	79 dB	83 dB	76 dB	76 dB	66 dB	58 dB
Return:	72 dB	69 dB	78 dB	77 dB	65 dB	69 dB	62 dB	55 dB
Outdoor:	75 dB	74 dB	78 dB	79 dB	67 dB	72 dB	66 dB	59 dB
Casing:	86 dB	79 dB	79 dB	80 dB	77 dB	61 dB	52 dB	39 dB

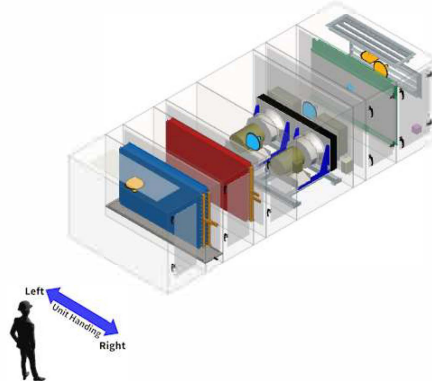
Trane Performance Climate Changer Acoustics

Unit Overview - AHU-G3

Application	Unit Size	External Dimensions			Weight	
		Height	Width	Length	Installed	Rigging
Indoor unit	CSAA021	56.3 in	80.0 in	215.378 in	3566 lb	3429 lb
Quantity of Shipping Sections		Largest Ship Split			Heaviest Ship Split	Elevation
4 piece(s)		Height	Width	Length		
		56.3 in	80.0 in	59.0 in	1414 lb	0.00 ft
Supply Fan						
Airflow	11000 cfm	Total Static Pressure	5.095 in H2O			

Construction Features

Panel	2in. foam injected R-13 with thermal break
Panel Material	All unit inner panels - galvanized
Integral Base Frame	6in. integral base frame
Seismic Certification	IBC Certified
Short Circuit Current Rating	5 kA
Agency Approval	UL listed unit



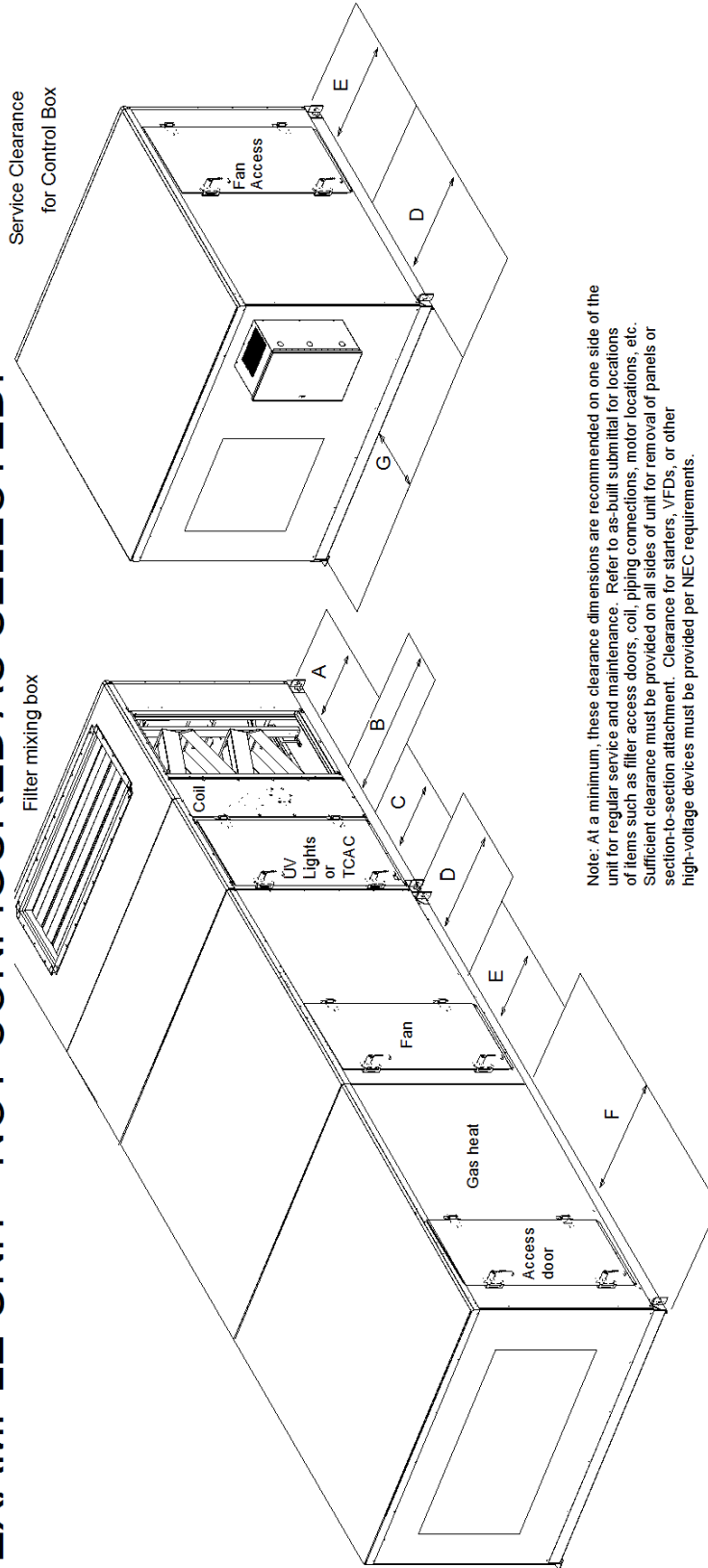
Unit Acoustics

Sound Path	63 (Hz)	125	250	500	1K	2K	4K	8K
Supply top:	71 dB	76 dB	76 dB	84 dB	76 dB	76 dB	67 dB	58 dB
Return:	73 dB	70 dB	76 dB	78 dB	66 dB	70 dB	62 dB	56 dB
Outdoor:	75 dB	75 dB	76 dB	80 dB	68 dB	73 dB	67 dB	60 dB
Casing:	86 dB	80 dB	76 dB	82 dB	78 dB	61 dB	52 dB	39 dB

Accessory - Performance Climate Changer (CSAA)

Item: A1 - A4 Qty: 4 Tag(s): AHU-C1, AHU-G1, AHU-G2, AHU-G3

EXAMPLE UNIT - NOT CONFIGURED AS SELECTED.



Note: At a minimum, these clearance dimensions are recommended on one side of the unit for regular service and maintenance. Refer to as-built submittal for locations of items such as filter access doors, coil, piping connections, motor locations, etc. Sufficient clearance must be provided on all sides of unit for removal of panels or section-to-section attachment. Clearance for starters, VFDs, or other high-voltage devices must be provided per NEC requirements.

Component	3	4	6	8	10	12	14	17	21	25	30	35	40	50	57	66	80	100	120
A (filter)	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	52	56	58	58
B (coil, humidifier)	48	59	66	77	82	87	87	87	95	95	109	115	128	141	141	156	156	170	197
B (staggered coil)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	67	67	76	80	88	96	96	105	105	113	129
C (UV Lights)	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	52	56	58	58
C (TCAC)	43	59	63	75	81	83	83	83	58	58	83	75	83	83	83	83	83	75	83
D (External Starter, VFD, LV box or Overload box)	61	61	61	61	61	61	61	61	64	64	64	64	64	64	64	64	64	64	64
D (Internal Starter or VFD)	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
E (fan)	48	48	48	48	51	54	58	61	60	66	66	66	70	77	77	93	93	101	101
F (Gas Heat Ext Vestible)	N/A	N/A	89	90	108	100	100	105	115	115	118	136	140	156	156	170	179	180	N/A
F (Gas Heat Int Vestible)	N/A	N/A	56	63	74	79	84	84	92	92	106	112	125	138	138	153	153	167	194

Component	All Sizes
G (Side mount LV box)	36
G (Front mount LV box)	13

Accessory - Performance Climate Changer (CSAA)

Item: A1 - A4 Qty: 4 Tag(s): AHU-C1, AHU-G1, AHU-G2, AHU-G3

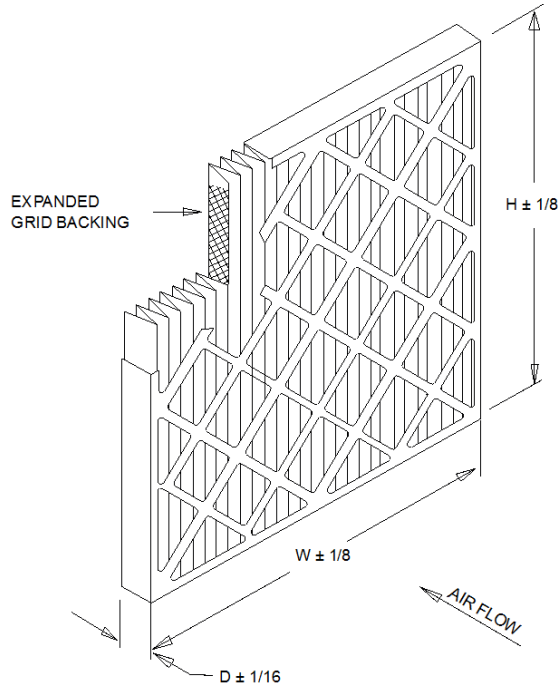
Base Detail



Accessory - Performance Climate Changer (CSAA)

Item: A1 - A4 Qty: 4 Tag(s): AHU-C1, AHU-G1, AHU-G2, AHU-G3

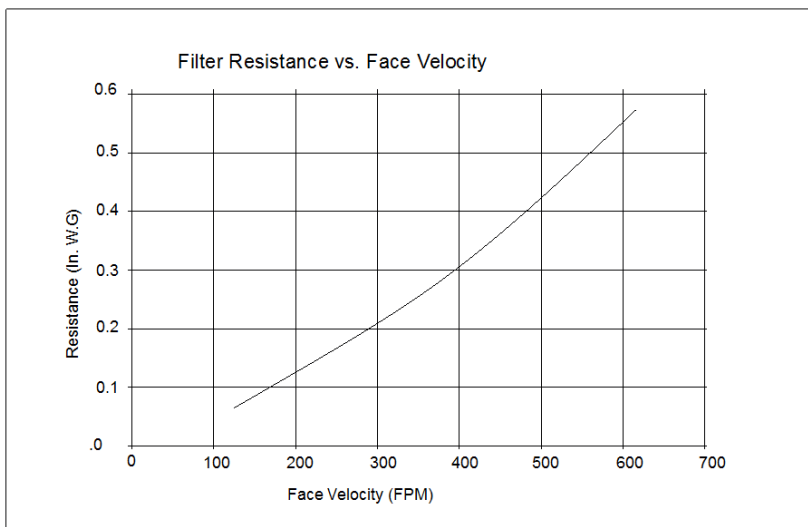
Filters Used During Construction



NOMINAL SIZE (WxHxD)	ACTUAL SIZE (WxHxD)	RATED AIR FLOW (CFM)	INITIAL RESISTANCE (IN. W.G.)	MEDIA AREA (SQUARE FEET)	FILTER UNIT WEIGHT (LBS)
12x24x2	11-3/8 x 23-3/8 x 1-3/4	1000	0.41	10.5	0.9
16x20x2	15-1/2 x 19-1/2 x 1-3/4	1120	0.41	10.9	1.1
16x25x2	15-1/2 x 24-1/2 x 1-3/4	1400	0.41	14.9	1.3
20x20x2	19-1/2 x 19-1/2 x 1-3/4	1400	0.41	14.5	1.3
20x24x2	19-3/8 x 23-3/8 x 1-3/4	1670	0.41	17.4	1.4
20x25x2	19-1/2 x 24-1/2 x 1-3/4	1750	0.41	18.5	1.4
24x24x2	23-3/8 x 23-3/8 x 1-3/4	2000	0.41	21.1	1.6

STANDARD CONSTRUCTION

1. 100 % Synthetic White Media
2. 17.5 Pleats Per Foot
3. Expanded Metal Pleat Supports
4. Moisture Resistant Beverage Board Frame
5. Double Wall Frame



NOTES

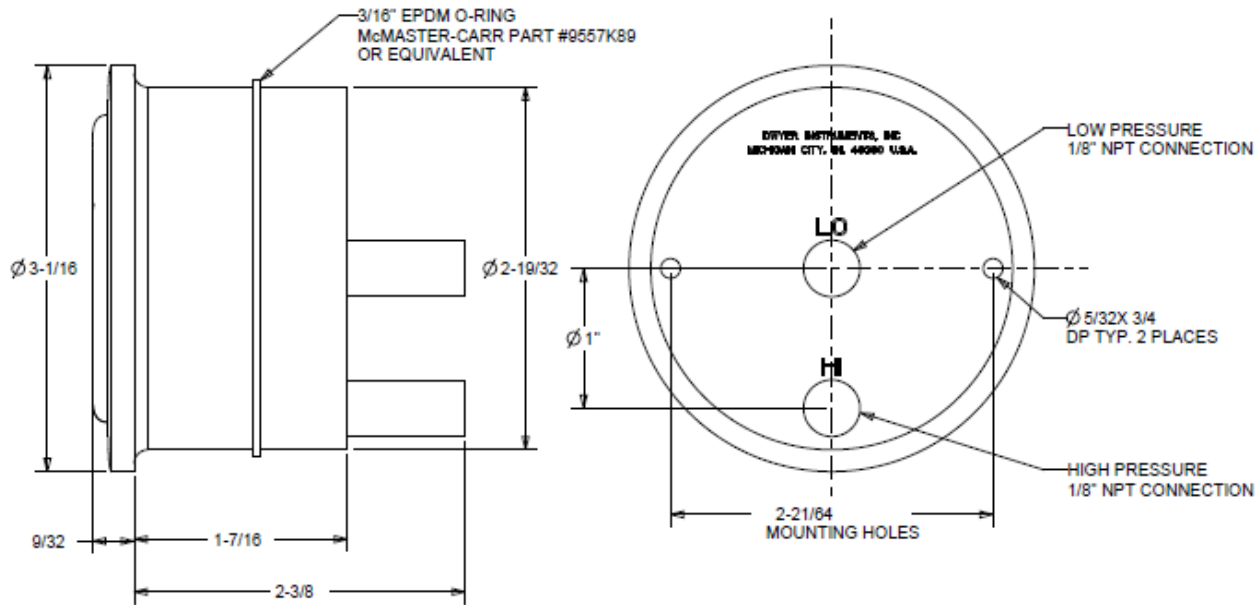
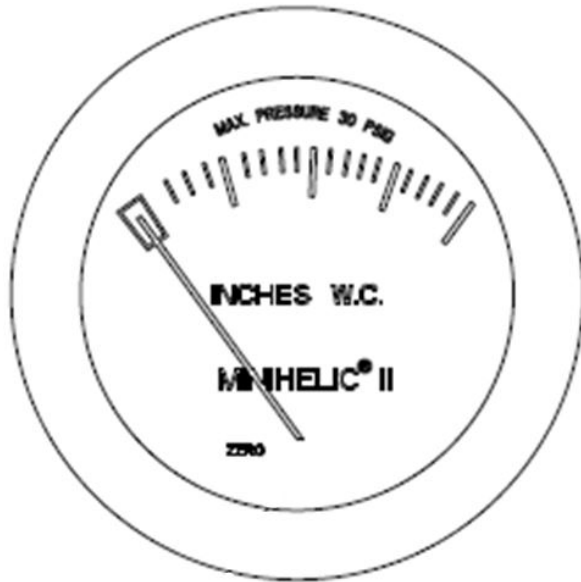
1. MERV 8 per ASHRAE 52.2-2012
2. Tested at 492 FPM on 24x24x2 Nominal Size
3. Final Resistance: 1.0" W.G.
3. Rated Velocity: 500 FPM
4. Classified per U.L. Standard 900 for Flammibility
5. Maximum Operating Temperature: 200 deg. F

Accessory - Performance Climate Changer (CSAA)

Item: A1 - A4 Qty: 4 Tag(s): AHU-C1, AHU-G1, AHU-G2, AHU-G3

Dirty Filter Status

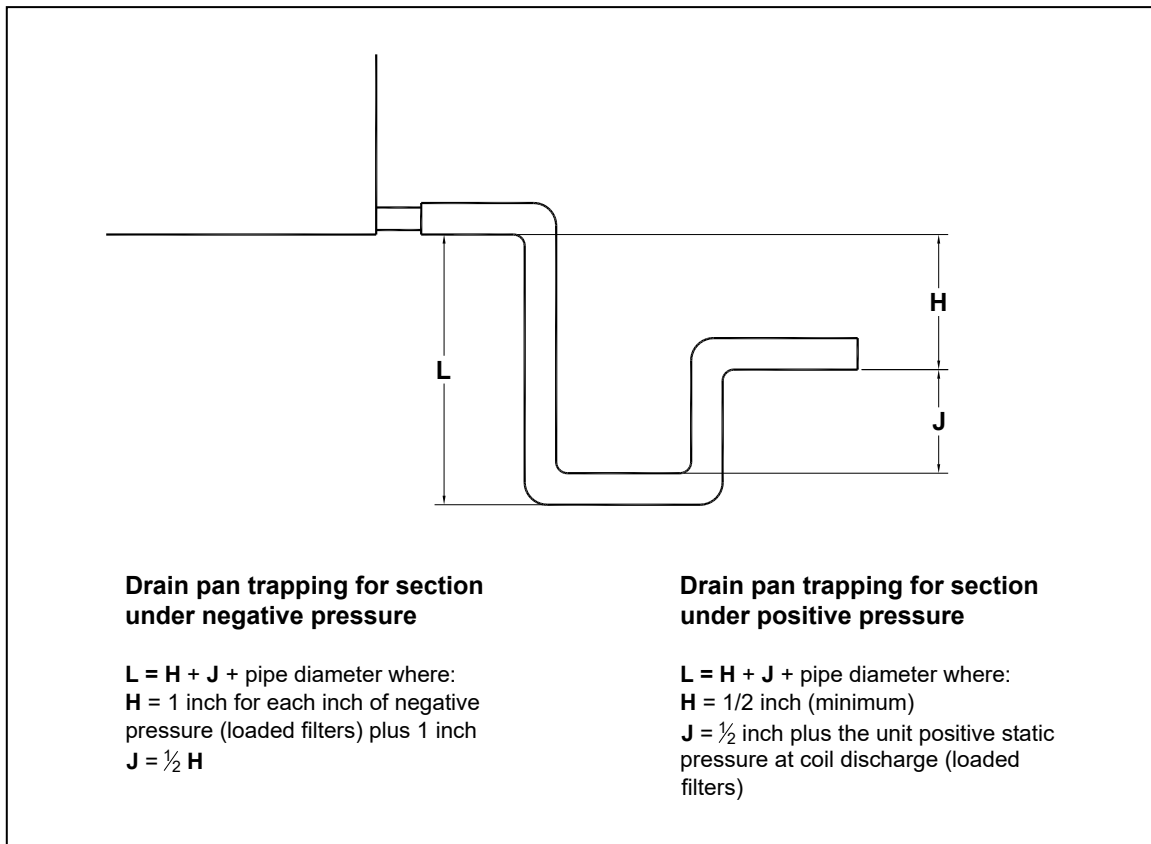
EXT	MODEL	RANGE
01	2-5002-NPT	0-2" WC
03	2-5003-NPT	0-3" WC
04	2-5005-NPT	0-5" WC



Accessory - Performance Climate Changer (CSAA)

Trap Schedule

Item: A1 - A4 Qty: 4 Tag(s): AHU-C1, AHU-G1, AHU-G2, AHU-G3



Unit Tag(s)	Unit Size	Entering Ext. Static Pressure (in H2O)	Discharge Ext. Static Pressure (in H2O)	Drain pan Section Location	Recommended Trap Dimensions ¹			Selected Baserail Height (in) ¹
					H (in)	J (in)	L (in)	
AHU-C1	Unit size 50	0.500	2.000	Coil section [7]	0.500	2.881	4.631	6.000
AHU-G1	Unit size 21	0.500	1.500	Coil section [8]	0.500	2.316	3.816	6.000
AHU-G2	Unit size 21	0.500	1.500	Coil section [8]	0.500	2.324	3.824	6.000
AHU-G3	Unit size 21	0.500	1.500	Coil section [8]	0.500	2.327	3.827	6.000

¹ To ensure proper condensate trapping the field installed housekeeping pad height is the responsibility of the contractor.

Accessory - Performance Climate Changer (CSAA)

Filter Schedule

Item: A1 - A4 Qty: 4 Tag(s): AHU-C1, AHU-G1, AHU-G2, AHU-G3

Unit Tag(s)	Filter Location	Filter Arrangement	Filter Depth	Filter Type	MERV Rating	Filter Quantity	Filter Size
AHU-C1	Air mixing section [1]	Flat	2in. filter frame	Pleated media	MERV 8-PREL. MERV 10-FINAL	1 4 12	16 x 20 16 x 25 20 x 25
AHU-G1	Air mixing section [1]	Flat	2in. filter frame	Pleated media	DITTO ABOVE	4 3	16 x 25 20 x 25
AHU-G2	Air mixing section [1]	Flat	2in. filter frame	Pleated media	DITTO ABOVE	4 3	16 x 25 20 x 25
AHU-G3	Air mixing section [1]	Flat	2in. filter frame	Pleated media	DITTO ABOVE	4 3	16 x 25 20 x 25

Field Wiring - Performance Climate Changer (CSAA)**MCA MOP Schedule****Item: A1 - A4 Qty: 4 Tag(s): AHU-C1, AHU-G1, AHU-G2, AHU-G3**

Unit Tag(s)	Circuit	Circuit Description	Voltage/Phase/Hz	MCA (A)	MOP (A)
AHU-C1	1	Supply fan motor (each x 4)	460/3/60	-	-
AHU-G1, AHU-G2, AHU-G3	1	Supply fan motor (each x 2)	460/3/60	-	-

Note: When motor interface is not provided by the factory, MCA and MOP must be determined by the electrical contractor.

Tag Data - Performance Climate Changer (PSCA) (Qty: 3)

Item	Tag(s)	Qty	Description	Model Number
B1	AHU-E1, AHU-E2	2	Size 22 Indoor Air Handler	PSCA022UA
B2	AHU-E3	1	Size 18 Indoor Air Handler	PSCA018UA

Product Data - Performance Climate Changer (PSCA)

Item: B1 Qty: 2 Tag(s): AHU-E1, AHU-E2

Unit level options

- Indoor unit, size 22
- 2 in. foam injected R-13 w thermal break
- 6 in. integral base frame
- UL listed unit
- Single handle - ganged latches
- All unit outer panels - galvanized
- 184.578" total unit length
- Field provided controls (by others)
- OSHPD seismic certification required - base mount
- IBC 2012, 2015, 2018, 2021

Warranty

- 2-year parts warranty – entire unit
- 1st year labor warranty

Air section (Pos #1)

- Mixing section w/filters
- Door- right side, outward swing
- Back rectangular opening
- Top rectangular opening
- 2in. flat filter frame
- Pleated media provided for use during construction, MERV 8 (Field Installed)
- Metal filter frames with MERV 10 media (4 sets) – (Field Installed)

Coil section (Pos #2)

- Medium horizontal coil
- Door- right side
- 18" standard door
- Right side - coil supply
- Service panel coil connection side
- Type "5W" hot water heating coil, 1 row
- 111 coil fins per foot
- Aluminum fins
- Prima flo H (Hi efficient)
- .020" copper tubes, 5/8in. diameter
- Galvanized steel coil casing

Coil section (Pos #3)

- Extended medium horizontal coil
- Door- right side
- 18" standard door
- Stainless steel drain pan
- Right side - drain & coil connections
- Service panel coil connection side
- Type "UW" chilled water cooling coil, 6 rows
- 111 coil fins per foot
- Aluminum fins
- Delta flo H (Hi efficient)
- .016" copper tubes, 1/2in. diameter
- Stainless steel coil casing

Air section (Pos #4)

- Blank section

Fan section (Pos #5)

Supply fan section
 Door- right side
 17.63 inch manufactured door
 Perforated panels
 18.25in. direct drive plenum fan, full width, M press
 1 wide by 2 tall array
 Right side drive
 NEMA premium compliant TEFC
 Voltage 460/3
 7.5 HP (each fan)
 1800 RPM
 Inverter balance with shaft grounding
 Top rectangular discharge
 Motor wiring conduit
 External junction box
 Backdraft damper(s)

Item: B2 Qty: 1 Tag(s): AHU-E3**Unit level options**

Indoor unit, size 18
 2 in. foam injected R-13 w thermal break
 6 in. integral base frame
 UL listed unit
 Single handle - ganged latches
 All unit outer panels - galvanized
 220.3234" total unit length
 Field provided controls (by others)
 OSHPD seismic certification required - base mount
 IBC 2012, 2015, 2018, 2021

Warranty

2-year parts warranty – entire unit
 1st year labor warranty

Air section (Pos #1)

Mixing section w/filters
 Door- right side, outward swing
 Back rectangular opening
 Top rectangular opening
 2in. flat filter frame
 Pleated media for use during construction, MERV 8 (Field Installed)
 Metal filter frames with MERV 10 media (4 sets) – (Field Installed)

Coil section (Pos #2)

Small horizontal coil
 Door- right side
 18" standard door
 Right side - coil supply
 Service panel coil connection side
 Type "UW" hot water heating coil, 2 rows
 133 coil fins per foot
 Aluminum fins
 Delta flo H (Hi efficient)
 .016" copper tubes, 1/2in. diameter
 Galvanized steel coil casing

Coil section (Pos #3)

Extended medium horizontal coil
 Door- right side
 18" standard door
 Stainless steel drain pan
 Right side - drain & coil connections
 Service panel coil connection side
 Type "W" chilled water cooling coil, 6 rows

99 coil fins per foot
Aluminum fins
Prima flo H (Hi efficient)
.020" copper tubes, 5/8in. diameter
Stainless steel coil casing
Turbulators

Coil section (Pos #4)

Small horizontal coil
Door- right side
18" standard door
Right side - coil supply
Service panel coil connection side
Type "5W" hot water heating coil, 1 row
90 coil fins per foot
Aluminum fins
Prima flo H (Hi efficient)
.020" copper tubes, 5/8in. diameter
Galvanized steel coil casing
Turbulators

Air section (Pos #5)

Blank section

Fan section (Pos #6)

Supply fan section
Door- right side
17.63 inch manufactured door
Perforated panels
16.5in. direct drive plenum fan, full width, M press
1 wide by 2 tall array
Right side drive
NEMA premium compliant TEFC
Voltage 460/3
5 HP (each fan)
1800 RPM
Inverter balance with shaft grounding
Top rectangular discharge
Motor wiring conduit
External junction box
Backdraft damper(s)

Performance Data - Performance Climate Changers (PSCA)

Tags	AHU-E1, AHU-E2		AHU-E3		
Unit Level Options					
Length (in)	184.578		220.323		
Width (in)	66.500		58.000		
Height (in)	70.750		65.000		
Unit size	22		18		
Rigging weight (lb)	3411.9		3382.1		
Installed weight (lb)	3554.8		3571.5		
Actual airflow (cfm)	10000		8000		
Shipping split 1 weight (lb)	505.0		882.0		
Shipping split 2 weight (lb)	1470.0		1362.2		
Shipping split 3 weight (lb)	1579.8		1327.4		
Fan Section - Position					
	#5		#6		
Fan airflow (cfm)	10000		8000		
Overall ESP (in H2O)	2.000		1.500		
Total static pressure (in H2O)	3.974		3.563		
Speed (rpm)	2342		2679		
Total brake horsepower (hp)	10.747		7.985		
Unit static efficiency (%)	58.30		56.28		
Motor hertz (Hz)	79.00		91.00		
Discharge 1 top - airflow (cfm)	10000		8000		
Discharge 1 top - face velocity (ft/min)	1000		1000		
Discharge 1 top - pressure drop (in H2O)	0.125		0.125		
Discharge 1 top - area (sq ft)	10.00		8.00		
Front total pressure drop (in H2O)	0.000		0.000		
Back total pressure drop (in H2O)	0.000		0.000		
Internal height of unit (in)	60.750		55.000		
Internal width of unit (in)	62.500		54.000		
Wire to air static efficiency (%)	53.72		50.59		
Watts before correction (kW)	10.75		7.99		
Coil Section - Position					
	#2	#3	#2	#3	#4
Coil performance airflow (cfm)	5000	10000	4000	8000	8000
Unit airflow (cfm)	10000	10000	8000	8000	8000
Coil face area (sq ft)	20.25	19.22	14.38	15.81	15.33
Coil face velocity (ft/min)	247	520	278	506	522
Air pressure drop (in H2O)	0.031	0.733	0.078	0.603	0.084
Coil section pressure drop (in H2O)	0.095	0.733	0.236	0.603	0.084
Coil rigging weight (lb)	96.6	291.6	115.6	350.7	75.5
Coil installed weight (lb)	126.8	404.3	155.8	475.5	99.9
Top or single coil dry weight (lb)	96.6	291.6	115.6	350.7	75.5
Leaving dry bulb (F)	75.00	55.00	95.00	55.00	75.00
Leaving wet bulb (F)	-	54.90	-	54.28	-
Entering dry bulb (F)	36.80	78.80	41.60	78.10	55.00
Entering wet bulb (F)	-	66.00	-	65.40	-
Fluid type	Water	Water	Water	Water	Water
Entering fluid temperature (F)	160.00	44.00	160.00	44.00	160.00
Leaving fluid temperature (F)	120.00	56.00	120.00	56.00	120.00
Standard fluid flow rate (gpm)	10.37	56.51	11.60	44.73	8.69
Fluid pressure drop (ft fluid)	0.21	3.54	0.10	2.71	0.56
Fluid velocity (ft/s)	0.64	2.42	0.57	1.50	0.60
Fluid volume (gal)	3.63	13.49	4.83	14.92	2.93
Sensible capacity (MBh)	-	262.14	-	203.45	-
Total capacity (MBh)	207.14	340.24	231.65	269.32	173.52

Tags	AHU-E1, AHU-E2		AHU-E3		
Air Section - Position	#1	#4	#1	#5	
Opening 1 back - airflow (cfm)	10000	10000	8000	8000	
Opening 1 front - airflow (cfm)	10000	10000	8000	8000	
Opening 1 top - airflow (cfm)	10000	-	8000	-	
Opening 1 back - area (sq ft)	9.98	26.37	8.00	20.63	
Opening 1 front - area (sq ft)	26.37	26.37	20.63	20.63	
Opening 1 top - area (sq ft)	7.21	-	6.10	-	
Opening 1 back - face velocity (ft/min)	1002	-	1000	-	
Opening 1 top - face velocity (ft/min)	1387	-	1313	-	
Opening 1 back - pressure drop (in H2O)	0.031	-	0.031	-	
Opening 1 top - pressure drop (in H2O)	0.060	-	0.054	-	
Back inlet type	Ducted	-	Ducted	-	
Top inlet type	Unducted	-	Unducted	-	
Filter condition	Mid-life	-	Mid-life	-	
Filter airflow (cfm)	10000	-	8000	-	
Filter area (sq ft)	20.00	-	16.00	-	
Filter face velocity (ft/min)	500	-	500	-	
Filter pressure drop (in H2O)	0.712	-	0.712	-	
Total mixing section pressure drop (in H2O)	0.772	0.000	0.765	0.000	
Internal height of unit (in)	60.750	60.750	55.000	55.000	
Internal width of unit (in)	62.500	62.500	54.000	54.000	

Mechanical Specifications - Performance Climate Changer (PSCA)
Item: B1, B2 Qty: 3 Tag(s): AHU-E3, AHU-E1, AHU-E2**GENERAL**

Per ASHRAE 62.1 recommendation, indoor air handling units will be wrapped to protect unit from in-transit rain and debris.

Installing contractor is responsible for long term storage in accordance with the Installation, Operation, and Maintenance manual (CLCH-SVX07*-EN). Unit shall be UL and C-UL Listed.

Unit is outside the scope of the AHRI Central Station Air-Handling Unit (AHU) Certification Program but is rated in accordance with AHRI Standard 430/431.

Unit sound performance data shall be reported as sound power. Trane, in providing this program and data, does not certify or warrant NC levels. These levels are affected by factors specific to each application and/or installation and therefore unable to be predicted or certified by Trane. *Refer to product data for specific fan footnote references.*

Refer to product data for AHRI certification status. Propylene glycol and calcium chloride, or mixtures thereof, are outside the scope of AHRI Standard 410 and, therefore, do not require AHRI rating or certification. For coils within the scope of AHRI Standard 410 cooling coil performance is 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. Heating performance for heat pump or condenser mode is not certified.

IBC Seismic Certification

The Trane Corporation has qualified the listed air-handling units as CERTIFIED for seismic applications in accordance with the following International Building Code (IBC) releases.

IBC 2000, 2003, 2006, 2009, 2012, 2015, 2018, 2021

All unit sizes of the Performance Climate Changer are included in this certification. A complete list of certified models, options, and installation methods are detailed in report number VMA-48642-01C as issued by The VMC Group.

Seismic Qualification Testing and structural analysis were conducted in accordance with and strict adherence to the standards set forth within ASCE 7 by the independent approval agency, The VMC Group. The above referenced equipment is APPROVED for seismic applications when properly installed and used as intended.

The basis of this certification is through a combination of testing of the active and energized components and non active components. Additional calculations were conducted to ensure components, accessories, and options remained intact and attached to the unit under seismic load conditions.

Trane Performance Climate Changer Air Handler Base Mounted is approved for seismic application when properly installed used as intended and contains a Seismic Certification Label. Certified Seismic Design Levels $I_p=1.0$ or 1.5 ; $SDS \leq 1.85g$; $z/h < 0.0$ (equipment at grade) or 1.0 (Equipment on Roof) ; soil classes A,B,C,D Seismic Risk Category I, II, III, IV, and Seismic Design Categories A,B,C,D,E,F are all covered under this certification. Certified Seismic Installation Methods - 1.) Rigid Mounting from unit base to rigid structure or 2.) Directly to curb/rail

Structural floors, housekeeping pads, supporting curbs, and supporting steel must be seismically designed and approved by the project or building Structural Engineer of Record to withstand the seismic anchor loads. Installation details such as special inspection, attachment to a curb, or attachment to a non-building structure must be outlined and approved by the Engineer of Record for the project or building. The installing contractor is responsible for the proper installation of the equipment and must observe the seismic installation requirements set forth by the Engineer of Record. Certificate of Compliance and Final Certification Report are available upon request.

Unit Construction

All unit panels shall be 2" solid, double-wall minimum R-13 construction to facilitate cleaning of unit interior. Unit panels shall be provided with a mid-span, no-through-metal, internal thermal break. Casing thermal performance shall be such that under 55°F supply air temperature and design conditions on the exterior of the unit of 81°F dry bulb and 73°F wet bulb, condensation shall not form on the casing exterior. Casing construction will comply with NFPA 90A. All exterior and interior indoor AHU panels will be made of galvanized steel.

Unit Paint

Unit to ship unpainted from factory. If required, unit to be painted by 3rd party finisher, or by painting contractor at job site.

Casing Deflection

The casing shall not exceed 0.0042 inch deflection per inch of panel span at 1.00 times design static pressure. Total maximum design static shall not exceed +10 inches w.g. in all positive pressure sections and -10 inches w.g. in all negative pressure sections.

Floor Construction

The unit floor shall be of sufficient strength to support a 300.0 lb load during maintenance activities and shall deflect no more than 0.0042 inch per inch of panel span.

Unit Base

Manufacturer to provide a full perimeter integral base frame for either ceiling suspension of units or to support and raise all sections of the unit for proper trapping. Indoor unit base frame will either be bolted construction or welded construction. All outdoor unit base frames shall be welded construction. For indoor units, refer to schedule for base height and construction type. Contractor will be responsible for providing a housekeeping pad when unit base frame is not of sufficient height to properly trap unit. Unit base frames not constructed of galvanized steel shall be chemically cleaned and coated with both a rust-inhibiting primer and finished coat of rust-inhibiting enamel. Unit base height to be included in total height required for proper trap height.

Insulation

Panel insulation shall provide a minimum thermal resistance (R) value of 13 ft²-h-°F/Btu throughout the entire unit. Insulation shall completely fill the panel cavities in all directions so that no voids exist and settling of insulation is prevented.

Drain Pan

In sections provided with a drain pan, the drain pan shall be designed in accordance with ASHRAE 62.1. To address indoor air quality (IAQ) the drain pan shall be sloped in two planes promoting positive drainage to eliminate stagnant water conditions. Drain pan shall be insulated, and of double wall construction. The outlet shall be the lowest point on the pan, and shall be of sufficient diameter to preclude drain pan overflow under normally expected operating conditions. All drain pans connections shall have a threaded connection, extending a minimum of 2-1/2" beyond the unit base, and shall be made from the same material as the drain pan. Drain pan located under a cooling coil shall be of sufficient size to collect all condensate produced from the coil.

Refer to Product Data for specific information on which sections are supplied with a drain pan, the drain pan material and connection location.

Access Door Construction

Access doors shall be the same R value as the main unit casing. Interior and exterior door panels shall be of the same construction as the interior and exterior wall panels respectively. All doors shall be provided with a thermal break construction of door panel and door frame. Gasketing shall be provided around the full perimeter of the doors to prevent air leakage. Surface mounted handles shall be provided to allow quick access to the interior of the functional section and to prevent through cabinet penetrations that could likely weaken the casing leakage and thermal performance. Handle hardware shall be designed to prevent unintended closure. Outswing doors shall have easily removable hinges and handles that can be relocated the change the door swing if needed. Door hinges shall be stainless steel.

All doors shall be a minimum of 60" high when sufficient height is available or the maximum height allowed by the unit height.

A single door handle linked to multiple latching points shall be provided for each door. An optional shatterproof window shall be provided in access doors where indicated on the plans. Window shall either be single pane, or thermal dual pane, as defined on schedule. Window shall be capable of withstanding unit operating pressures and shall be safe for viewing UV-C lamps.

Refer to Product Data for specific information on which sections are supplied with an access door, the door location, a single handle and a window.

MIXING SECTION

A mixing section shall be provided to support the damper assembly for outdoor, return, and/or exhaust air.

FILTERS

Mixing sections shall be provided with a filter rack as indicated in the Product Data and As-Built sections of the submittal.

2-inch pleated media filters coated with an anti-microbial agent shall be provided. Filters shall be nonwoven fabric, treated with adhesive and continuously laminated to a supported steel-wire grid. Filters shall be capable of operating up to 625 fpm face velocity without loss of filter efficiency and holding capacity. The construction filters shall have a MERV 8 rating when tested in accordance with the ANSI/ASHRAE Standard 52.2.

Differential Pressure Gage

A factory-installed dial type differential pressure gage shall be piped to both sides of the filter to indicate status. Gage shall maintain a +/- 5% accuracy within operating temperature limits of -20°F to 120°F. Gage shall be flush mounted with casing outer wall. Filter sections consisting of pre- and post- filters shall have a gage for each.

COIL SECTION WITH FACTORY INSTALLED COIL

The coil section shall be provided complete with coil and coil holding frame. The coils shall be installed such that headers and return bends are enclosed by unit casings. If two or more cooling coils are stacked in the unit, an intermediate drain pan shall be installed between each coil and be of the same material as the primary drain pan. Like the primary drain pan, the intermediate drain pan shall be designed being of sufficient size to collect all condensation produced from the coil and sloped to promote positive drainage to eliminate stagnant water conditions. The intermediate pan shall begin at the leading face of the water-producing device and be of sufficient length extending downstream to prevent condensate from passing through the air stream of the lower coil. Intermediate drain pan shall include downspouts to direct condensate to the primary drain pan. The outlet shall be located at the lowest point of the pan and shall be sufficient diameter to preclude drain pan overflow under any normally expected operating condition.

Coil with Inspection

The coil section shall include an inspection section complete with a double-wall, removable door downstream of the coil for inspection, cleaning, and maintenance. Interior and exterior door panels shall be of the same construction as the interior and exterior wall panels, respectively. All doors shall be provided with a thermal break construction of door panel and door frame.

In lieu of a door, an easily removable service panel shall be provided in sections as specified, to facilitate access to unit for periodic servicing, or for removal and replacement of coils. Removal of service panel will not impact the structural integrity of the unit.

Hydronic coils shall be supplied with factory installed drain and vent piping to unit casing exterior. Piping is to facilitate field installation of automatic venting or drain valves on coils, which are not supplied with unit. Refer to the Product Data section of the submittal for the units and/or coils supplied with drain and vent piping.

Water Coils

The coils shall have aluminum fins and seamless copper tubes. Copper fins may be applied to coils with 5/8-inch tubes. Fins shall have collars drawn, belled, and firmly bonded to tubes by mechanical expansion of the tubes. The coil casing may be galvanized or stainless steel. Refer to the Product Data section of the submittal for the coil casing material. The coils shall be proof-tested to 300 psig and leak-tested under water to 200 psig. Refer to the Product Data section of the submittals for AHRI certification status.

Coil connections are constructed of steel pipe with male connections. Type P or TT coil connections do not extend out of unit casing. All other water coil types have connections that extend out beyond unit casing.

Tubes are 1/2" OD, 0.016" or 5/8" OD, 0.020" thick copper.

Coil connections shall be stubbed into the tunnel adjacent to the coil section. Piping will not be extended outside of the unit. Piping contract shall provide extended piping.

ACCESS/INSPECTION / TURNING SECTION

A section shall be provided to allow additional access/inspection of unit components and space for field-installed components as needed. An access door shall be provided for easy access. All access sections shall be complete with a double-wall, removable door downstream for inspection, cleaning, and maintenance. Interior and exterior door panels shall be of the same construction as the interior and exterior wall panels, respectively. All doors downstream of cooling coils shall be provided with a thermal break construction of door panel and door frame.

Direct Drive Plenum Fan Section

The fan type shall be provided as required for stable operation and optimum energy efficiency. The fan shall be a single-width, single-inlet, multiblade-type direct-drive plenum fan. Motor bearing life of the direct-drive plenum fan shall be not less than L-10 250,000 hrs. *Refer to the Product Data section for fan quantity and number of blades selected within each unit.*

Fans that are selected with inverter balancing shall first be dynamically balanced at design RPM. The fans then will be checked in the factory from 25% to 100% of design RPM to insure they are operating within vibration tolerance specifications, and that there are no resonant frequency issues throughout this operating range. Inverter balancing that requires lockout frequencies inputted into a variable frequency drive to in order to bypass resonant frequencies shall not be acceptable. If supplied in this manner by the unit manufacturer, the contractor will be responsible for rebalancing in the field after unit installation. Fans selected with inverter balancing shall have a maintenance free grounding assembly installed on the fan motor to discharge both static and induced shaft currents to ground.

On units supplied with plenum fans, door guard(s) shall be supplied on the access door(s) to the fan and those downstream access door(s) where unintended access to the plenum fan could occur. Door guard is intended to deter unauthorized entry and incidental contact with rotating components. *Refer to the Product Data section for fans with access door guard(s).*

Motor Wiring Conduit

The fan motor wiring shall be factory-wired to the unit-mounted disconnect, variable frequency drive, or external motor junction box within flexible metal conduit of adequate length so that the fan vibration isolation will not be restricted. *Refer to the Product Data section for fans with motor wiring conduit.*

Indoor Units with an External Motor Junction Box

The fan section shall have motor leads extended to a factory-installed NEMA external junction box to facilitate wiring and to maintain air leakage integrity of the casing. For units with a full-load amp rating less than or equal to 110 amps, the enclosure shall be a NEMA 1 enclosure. For units with a full-load amp rating greater than 110 amps, the enclosure shall be a NEMA 4 enclosure. *Refer to the Product Data section for fans with an external motor junction box.*

Backdraft Damper

Each fan in the multiple-fan array shall be provided with integral back flow prevention: a backdraft damper that prohibits recirculation of air in the event a fan or multiple fans become disabled. Dampers are tested and rated based on AMCA Standard 500. Dampers to be heavy duty type capable of a maximum back pressure that exceeds the design total static pressure with minimal leakage. The dampers should have a minimal total effect on airflow performance-both pressure drop when open and system effect on the fan. The damper blades and frame shall be extruded aluminum with blade edge seals locked into the blade edge. Adhesive type seals are unacceptable. AHU manufacturer responsible for providing proper spacing upstream of dampers to ensure full, uniform airflow through upstream components. For units where the damper(s) are supplied at the jobsite, the installing contractor shall contract a certified TAB contractor to verify uniform airflow thru upstream components.

Refer to Product Data for specific information on which sections are supplied with a backdraft damper.

Lifting Instructions

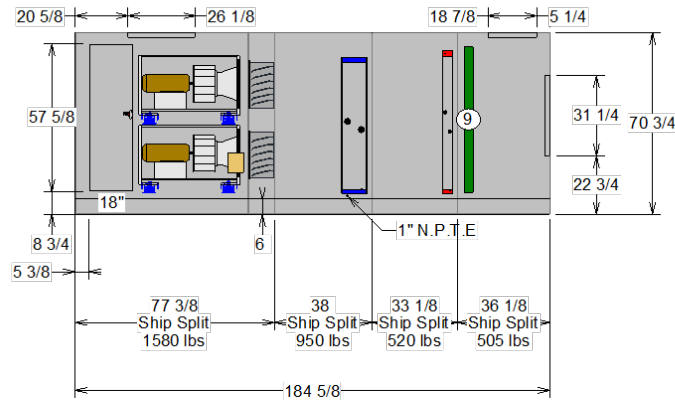
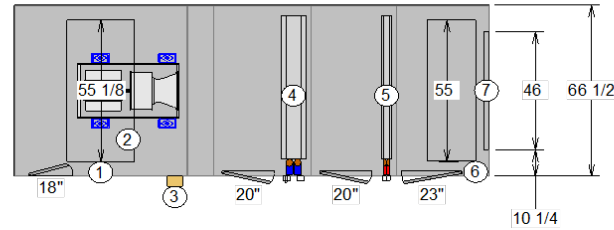
The air handling units must be rigged, lifted, and installed in strict accordance with the Installation, Operation, and Maintenance manual (CLCH-SVX013A-EN). The units are also to be installed in strict accordance with the specifications. Units may be shipped fully assembled or disassembled to the minimum functional section size in accordance with shipping and job site requirements.

Indoor units shall be shipped on an integral base frame (variable from the standard 4" to 10" height) for the purpose of mounting units to a housekeeping pad and providing additional height to properly trap condensate from the unit. The integral base frame may be used for ceiling suspension, external isolation, or as a housekeeping pad. Refer to the unit As-Built or Product Data section of the submittal for the base frame height of each unit.

All units will be shipped with an integral base frame designed with the necessary number of lift points for safe installation. All lifting lugs are to be utilized during lift. The lift points will be designed to accept standard rigging devices and be removable after installation. Units shipped in sections will have a minimum of four points of lift.

Dimensional Drawings - Performance Climate Changer (PSCA)

Item: A1 Qty: 2 Tag(s): AHU-E1, AHU-E2



- 1 Opening top
55.106 x 26.131
 - 2 Plenum fan - 18.25in. dd
plenum, full width, M press
Supply fan 7.5 hp 460/3
Backdraft damper (2)
 - 3 count=69
 - 4 Cooling coil - 6 Coil type
1/2" Unit Optimized,
General (UW)
 - 5 Heating coil - 1 Coil type
5/8" Shipping Coil, General
(5W)
 - 6 Opening top
55 x 18.875
 - 7 Opening back
31.25 x 46
 - 8 1" N.P.T.E
 - 9 Flat filters -
- Doors
18 width x 58 height
20 width x 61 height
23 width x 61 height

For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length shown.

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

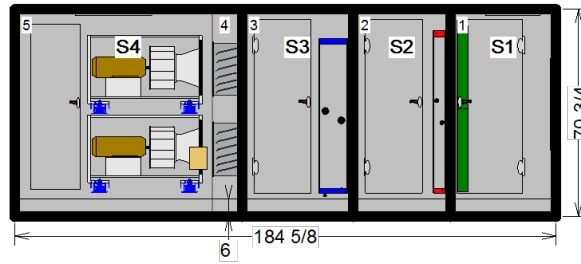
Unit size: 22	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10000 cfm	Proposal Number
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E1, AHU-E2
Paint:		Rigging/Installed Weight: 3411.9 lb / 3554.8 lb



Dimensional Drawings - Performance Climate Changer (PSCA)

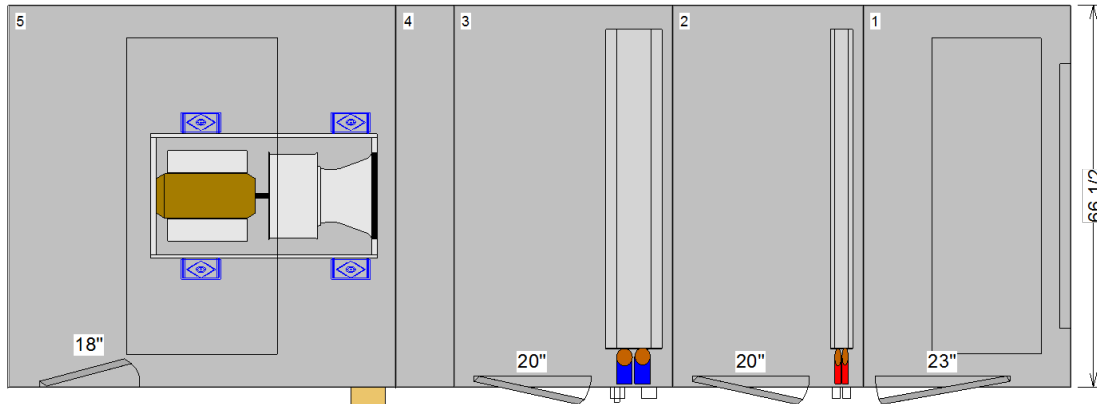
Item: A1 Qty: 2 Tag(s): AHU-E1, AHU-E2

Shipping splits are indicated by thick black lines



For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length sh

Pos #	Module	Length	Weight
1	Mixing Section w/ Filter	36 1/8	504.99
2	Coil section	33 1/8	520.35
3	Coil section	38	949.62
4	Stacking spacer	10 1/8	115.20
5	Fan section	67 3/8	1464.62
		Installed Unit Weight 3554.77 lbs	



Basic Overall Plan View: Top - Measurements in inches

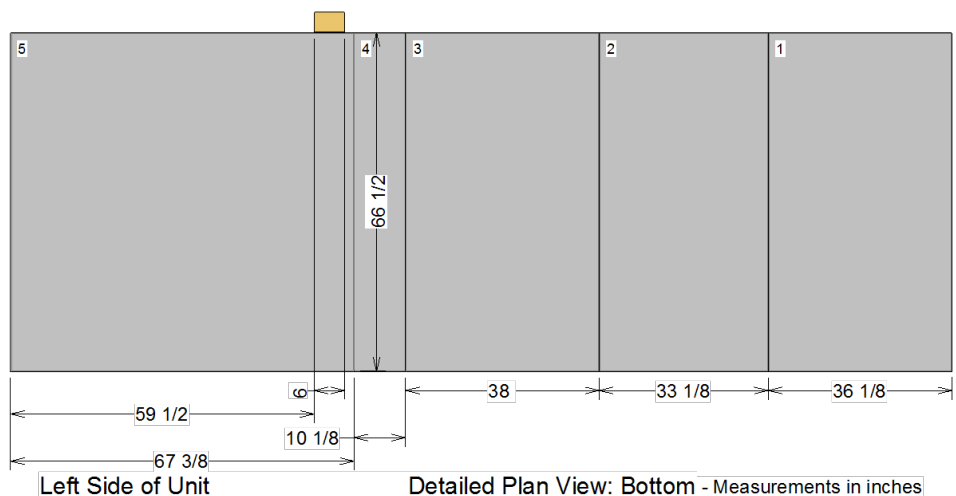
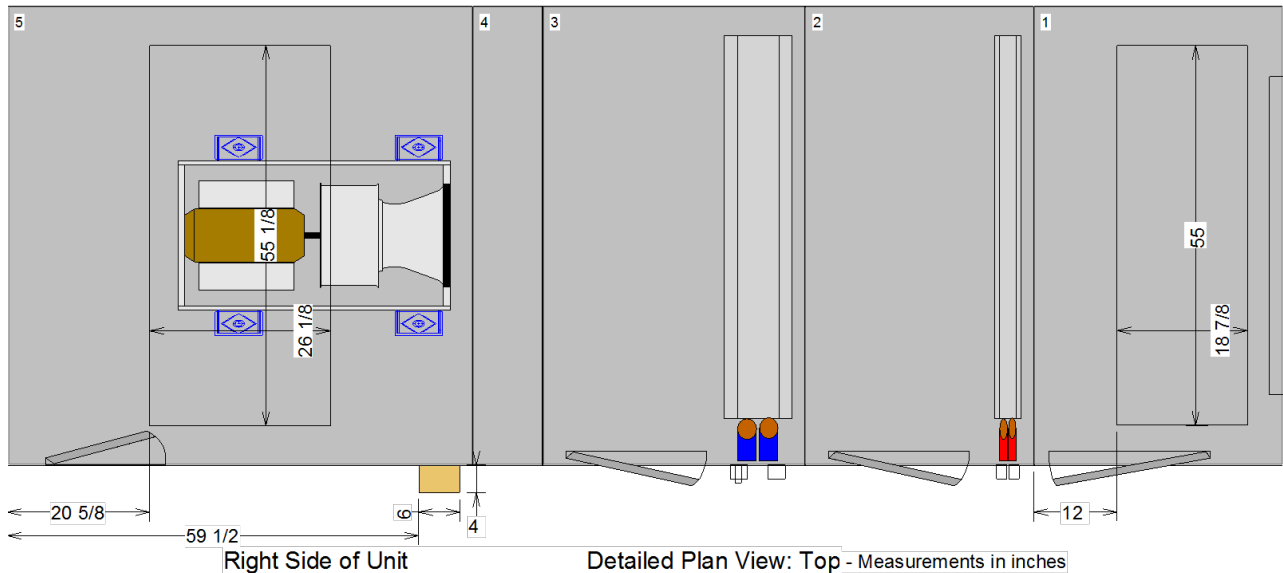
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Unit size: 22	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10000 cfm	Proposal Number
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E1, AHU-E2
Paint:		Rigging/Installed Weight: 3411.9 lb / 3554.8 lb



Dimensional Drawings - Performance Climate Changer (PSCA)

Item: A1 Qty: 2 Tag(s): AHU-E1, AHU-E2



****Placement of electrical conduit may vary by a tolerance of 8" in any direction.**

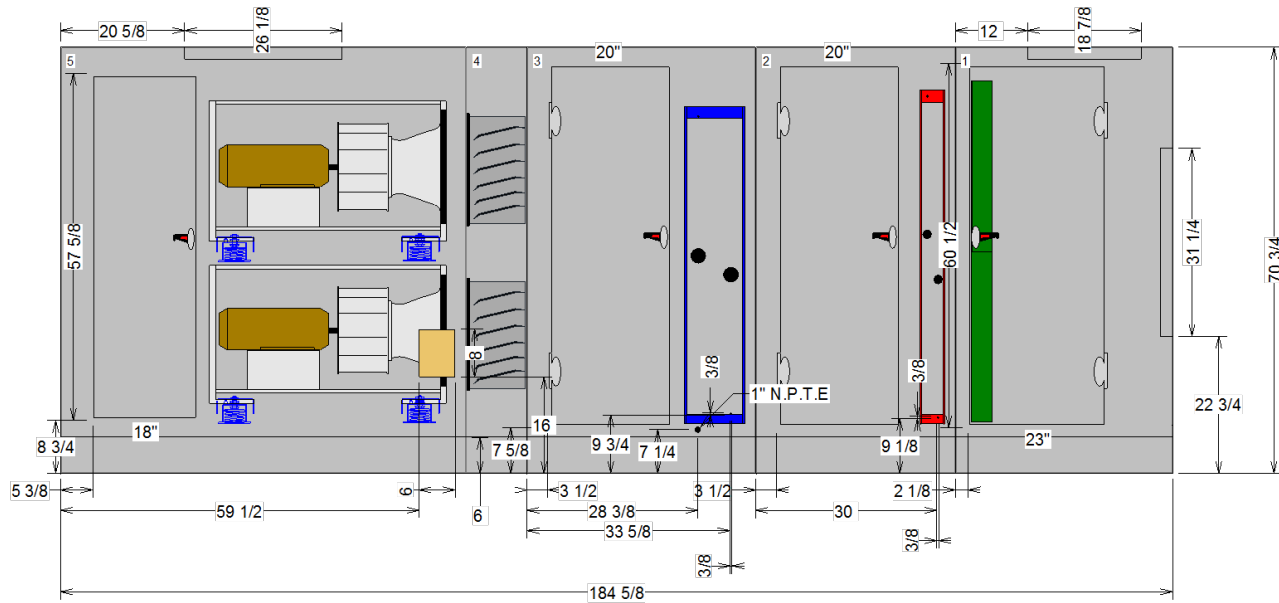
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 22	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10000 cfm	Proposal Number
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E1, AHU-E2
Paint:		Rigging/Installed Weight: 3411.9 lb / 3554.8 lb



Dimensional Drawings - Performance Climate Changer (PSCA)

Item: A1 Qty: 2 Tag(s): AHU-E1, AHU-E2



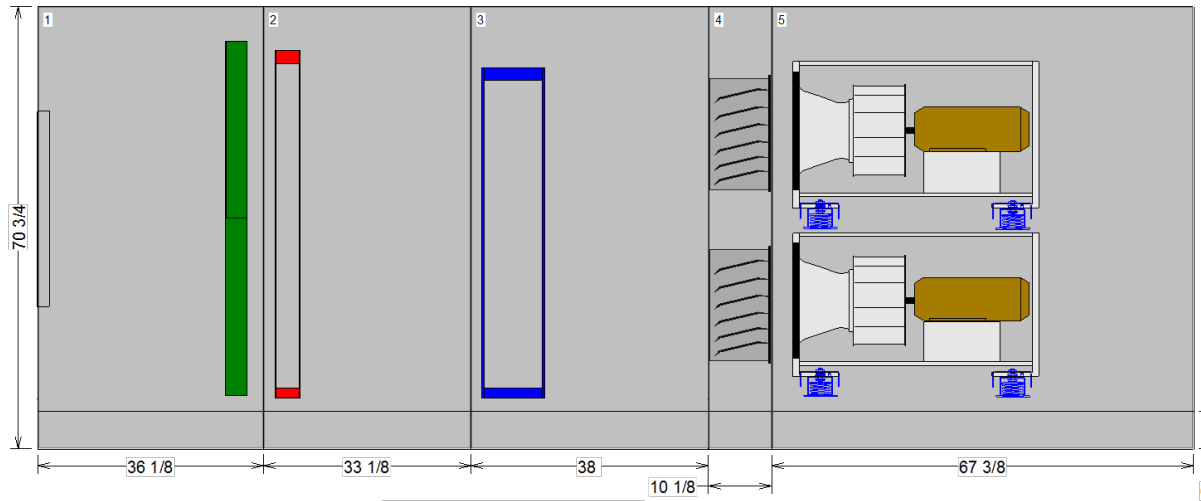
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 22	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10000 cfm	Proposal Number
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E1, AHU-E2
Paint:		Rigging/Installed Weight: 3411.9 lb / 3554.8 lb



Dimensional Drawings - Performance Climate Changer (PSCA)

Item: A1 Qty: 2 Tag(s): AHU-E1, AHU-E2



Detailed Elevation View: Left - Measurements in inches

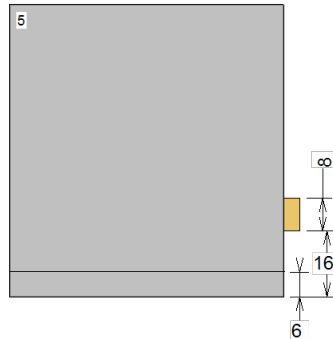
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 22	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10000 cfm	Proposal Number
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E1, AHU-E2
Paint:		Rigging/Installed Weight: 3411.9 lb / 3554.8 lb

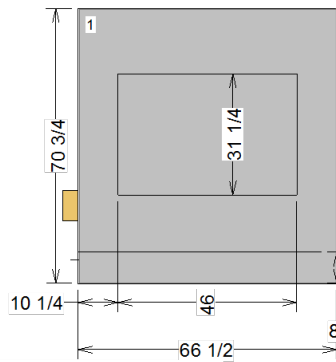


Dimensional Drawings - Performance Climate Changer (PSCA)

Item: A1 Qty: 2 Tag(s): AHU-E1, AHU-E2



Detailed Elevation View: Front - Measurements in inches



Detailed Elevation View: Back - Measurements in inches

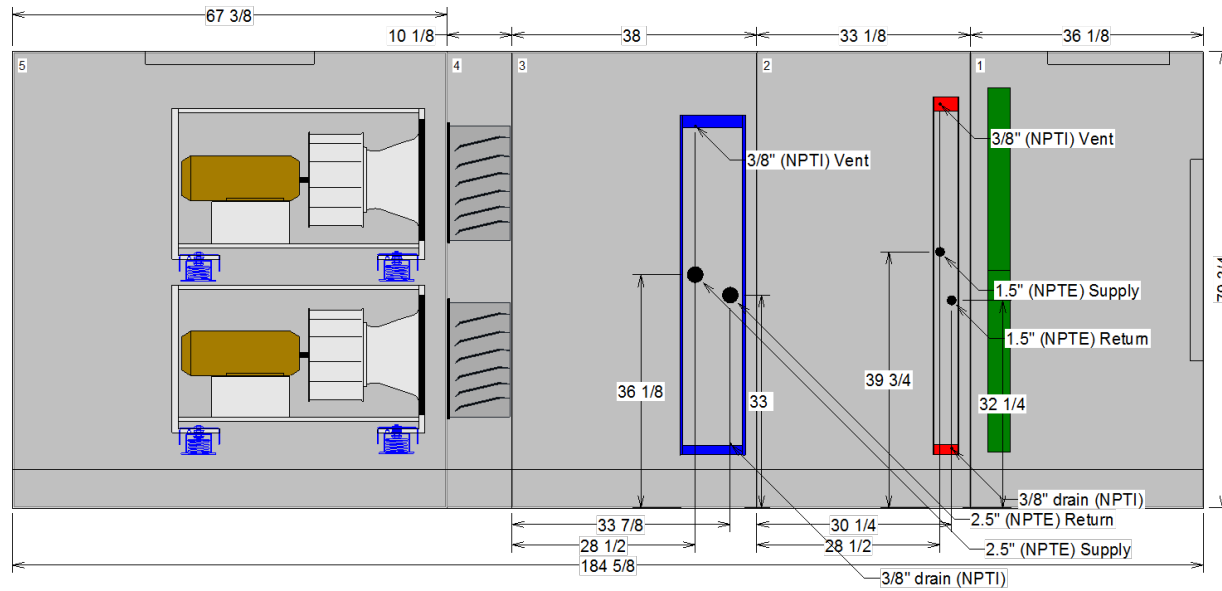
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 22	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10000 cfm	Proposal Number
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E1, AHU-E2
Paint:		Rigging/Installed Weight: 3411.9 lb / 3554.8 lb



Dimensional Drawings - Performance Climate Changer (PSCA)

Item: A1 Qty: 2 Tag(s): AHU-E1, AHU-E2



NPTI : National Pipe Thread Internal Connection
 NPTE : National Pipe Thread External Connection

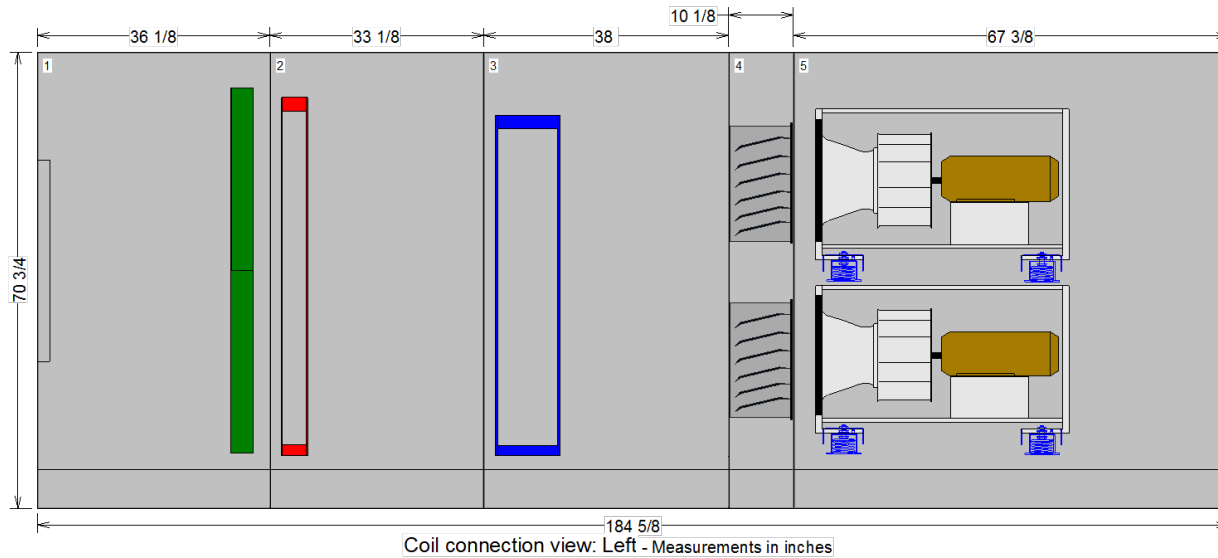
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 22	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10000 cfm	Proposal Number
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E1, AHU-E2
Paint:		Rigging/Installed Weight: 3411.9 lb / 3554.8 lb



Dimensional Drawings - Performance Climate Changer (PSCA)

Item: A1 Qty: 2 Tag(s): AHU-E1, AHU-E2



NPTI : National Pipe Thread Internal Connection
NPTE : National Pipe Thread External Connection

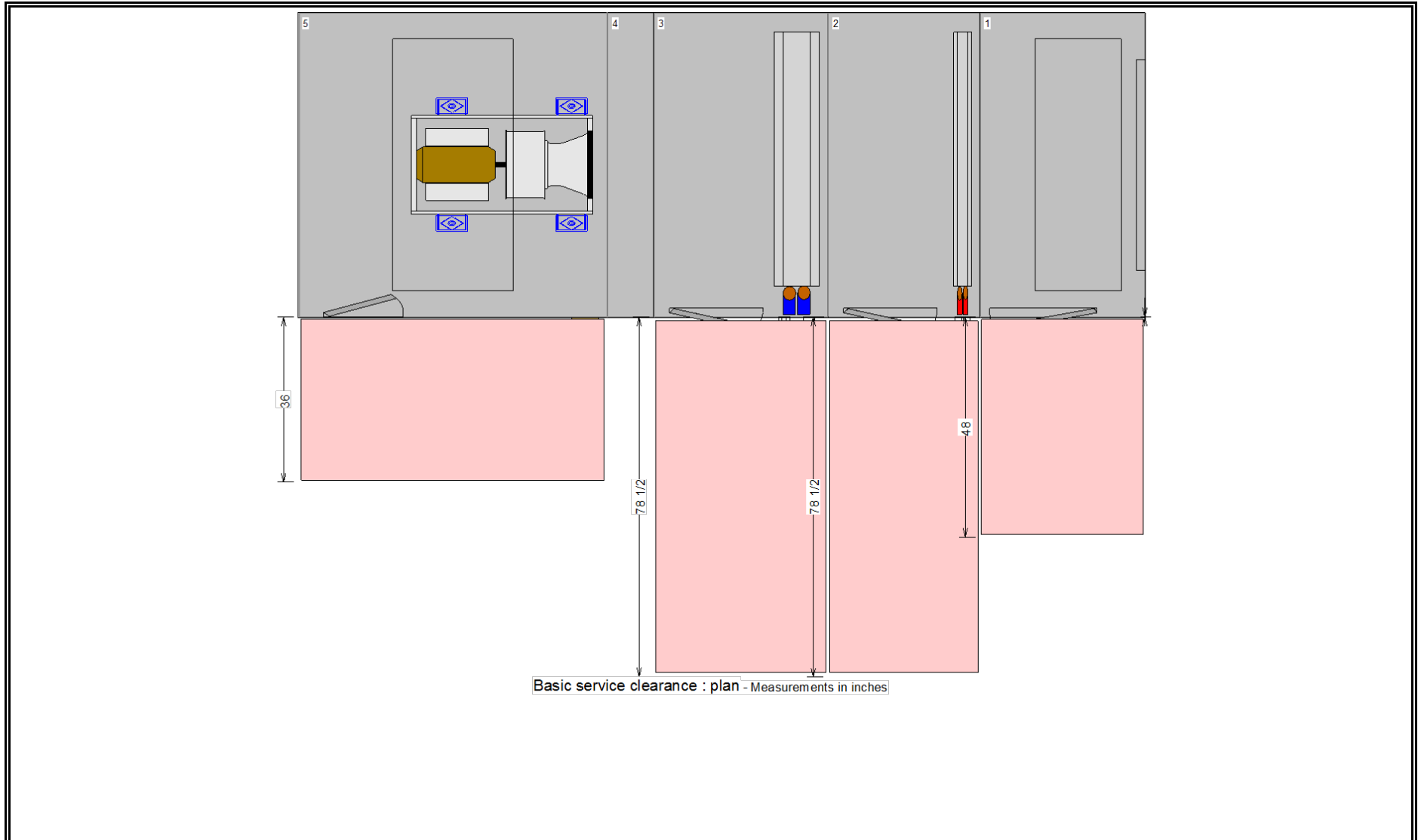
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 22	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 10000 cfm	Proposal Number
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E1, AHU-E2
Paint:		Rigging/Installed Weight: 3411.9 lb / 3554.8 lb




Dimensional Drawings - Performance Climate Changer (PSCA)

Item: A1 Qty: 2 Tag(s): AHU-E1, AHU-E2

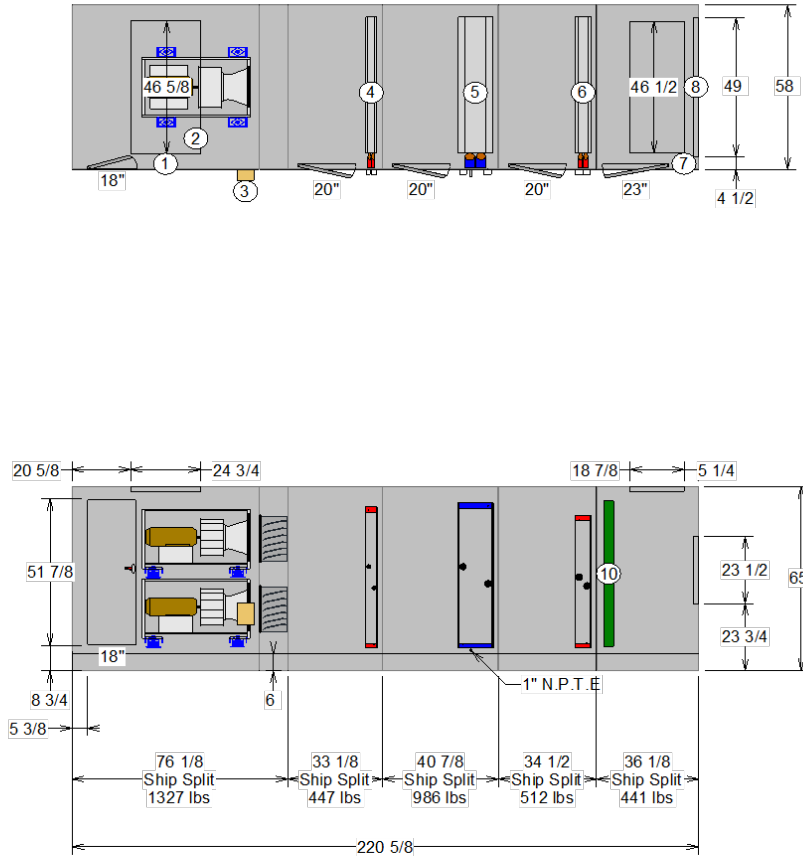


OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 22	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam	
Product group: Indoor unit	Actual airflow: 10000 cfm	Proposal Number	
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E1, AHU-E2	
Paint:		Rigging/Installed Weight: 3411.9 lb / 3554.8 lb	

Dimensional Drawings - Performance Climate Changer (PSCA)

Item: A2 Qty: 1 Tag(s): AHU-E3



- 1 Opening top
46.606 x 24.718
 - 2 Plenum fan - 16.5in. dd
plenum, full width, M press
Supply fan 5 hp 460/3
Backdraft damper (2)
count=86
 - 3
 - 4 Heating coil - 1 Coil type
5/8" Shipping Coil, General
(5W)
 - 5 Cooling coil - 6 Coil type
5/8" Shipping Coil, General
(W)
 - 6 Heating coil - 2 Coil type
1/2" Unit Optimized,
General (UW)
 - 7 Opening top
46.5 x 18.875
 - 8 Opening back
23.5 x 49
 - 9 1" N.P.T.E
 - 10 Flat filters -
- Doors
18 width x 52 height
20 width x 55 height
23 width x 55 height

For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length shown.

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

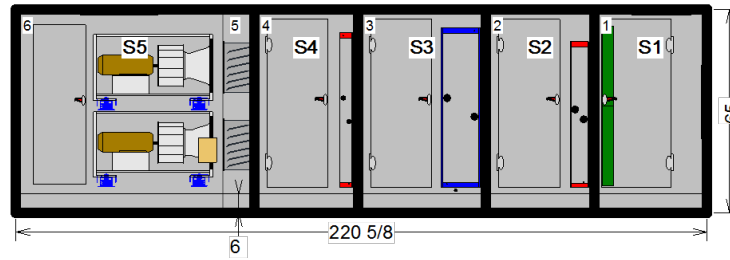
Unit size: 18	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 8000 cfm	Proposal Number
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E3
Paint:		Rigging/Installed Weight: 3524.4 lb / 3713.8 lb



Dimensional Drawings - Performance Climate Changer (PSCA)

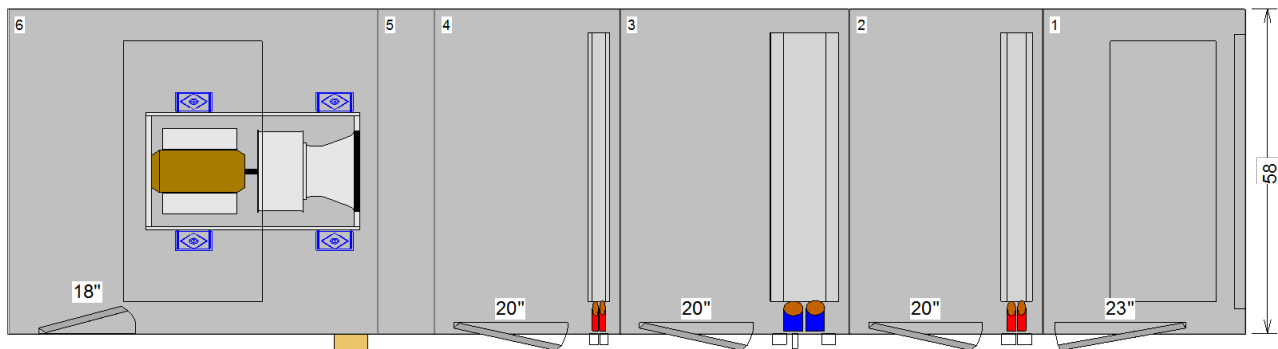
Item: A2 Qty: 1 Tag(s): AHU-E3

Shipping splits are indicated by thick black lines




For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length sh

Pos #	Module	Length	Weight
1	Mixing Section w/ Filter	36	441.33
2	Coil section	34 1/2	511.77
3	Coil section	40 7/8	986.44
4	Coil section	33 1/8	446.88
5	Stacking spacer	10 1/8	102.64
6	Fan section	66	1224.75
Installed Unit Weight			3713.80 lbs



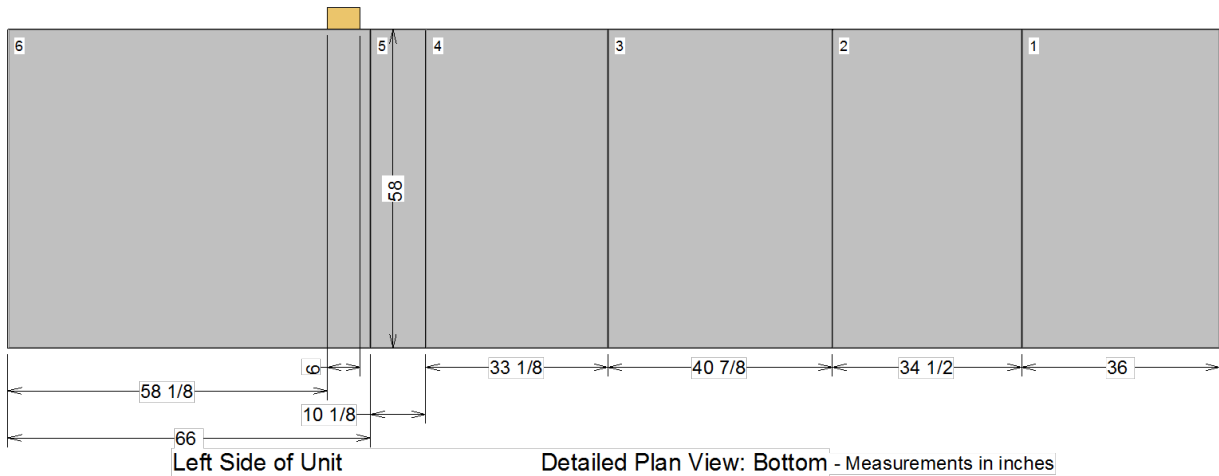
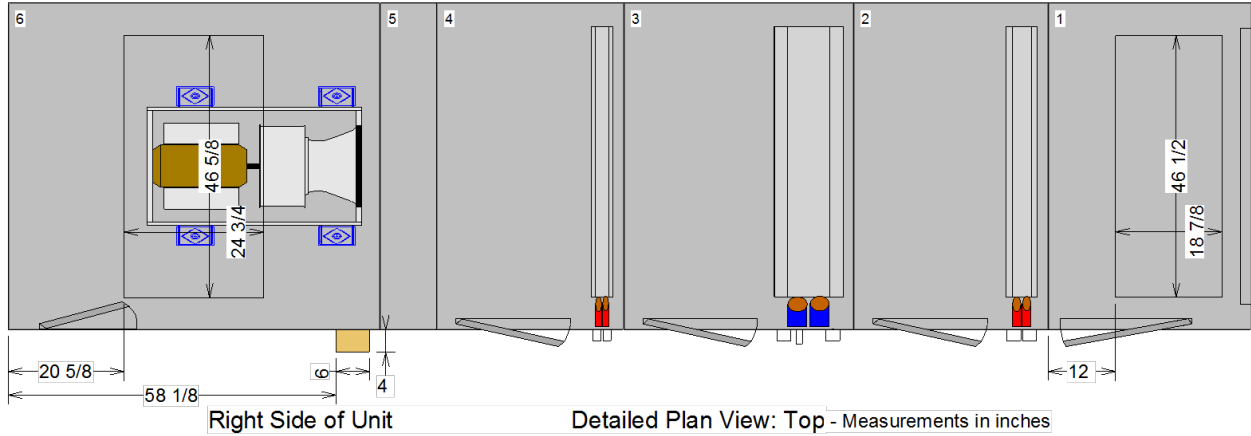
Basic Overall Plan View: Top - Measurements in inches

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 18	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam	
Product group: Indoor unit	Actual airflow: 8000 cfm	Proposal Number	
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E3	
Paint:		Rigging/Installed Weight: 3524.4 lb / 3713.8 lb	

Dimensional Drawings - Performance Climate Changer (PSCA)

Item: A2 Qty: 1 Tag(s): AHU-E3



****Placement of electrical conduit may vary by a tolerance of 8" in any direction.**

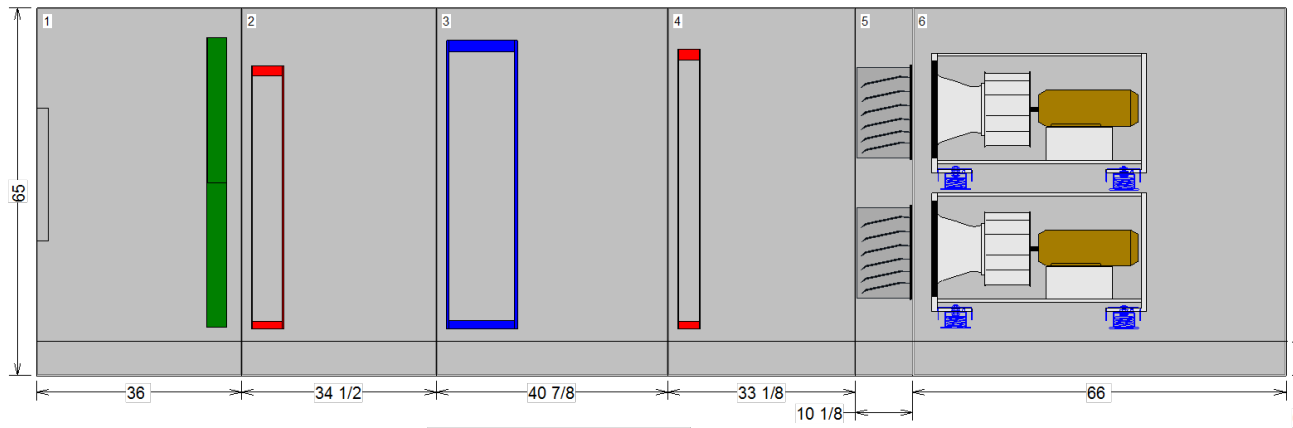
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 18	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 8000 cfm	Proposal Number
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E3
Paint:		Rigging/Installed Weight: 3524.4 lb / 3713.8 lb



Dimensional Drawings - Performance Climate Changer (PSCA)

Item: A2 Qty: 1 Tag(s): AHU-E3



Detailed Elevation View: Left - Measurements in inches

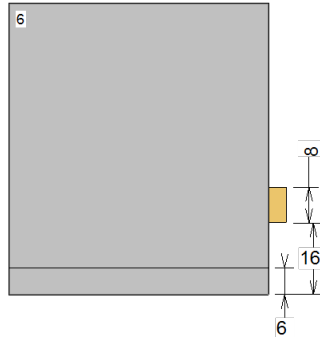
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 18	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 8000 cfm	Proposal Number
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E3
Paint:		Rigging/Installed Weight: 3524.4 lb / 3713.8 lb

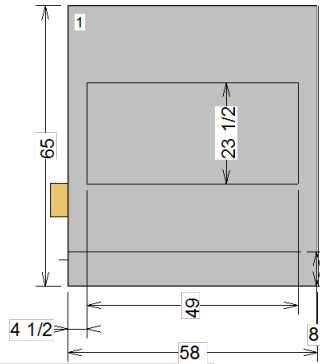


Dimensional Drawings - Performance Climate Changer (PSCA)

Item: A2 Qty: 1 Tag(s): AHU-E3



Detailed Elevation View: Front - Measurements in inches



Detailed Elevation View: Back - Measurements in inches

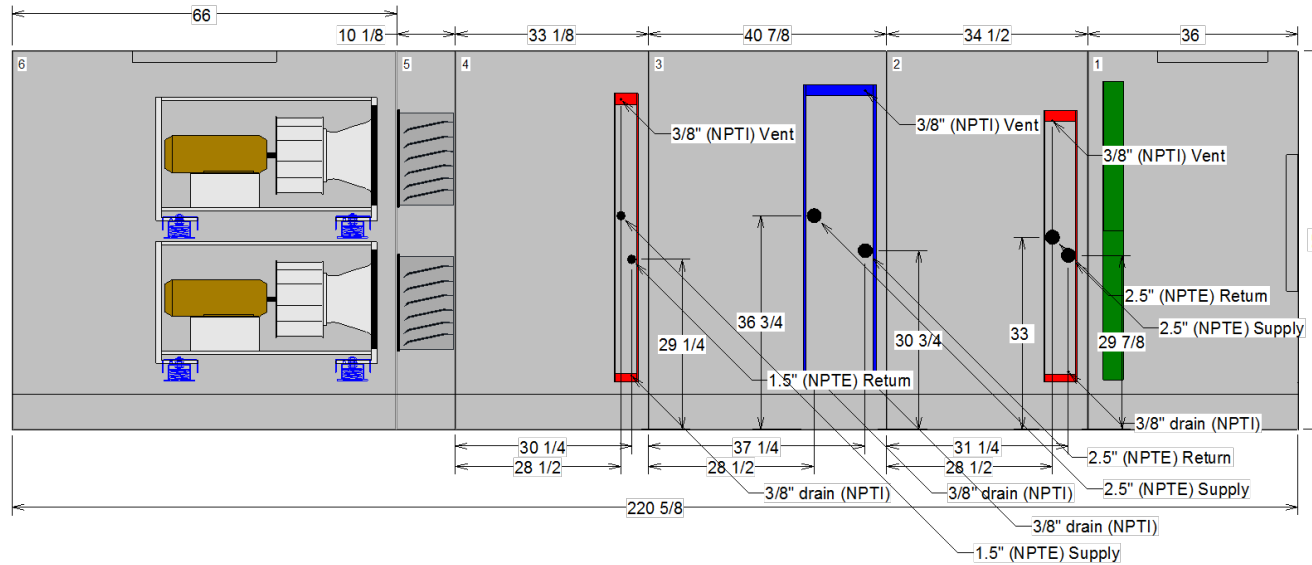
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Unit size: 18	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 8000 cfm	Proposal Number
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E3
Paint:		Rigging/Installed Weight: 3524.4 lb / 3713.8 lb



Dimensional Drawings - Performance Climate Changer (PSCA)

Item: A2 Qty: 1 Tag(s): AHU-E3



NPTI : National Pipe Thread Internal Connection
 NPTE : National Pipe Thread External Connection

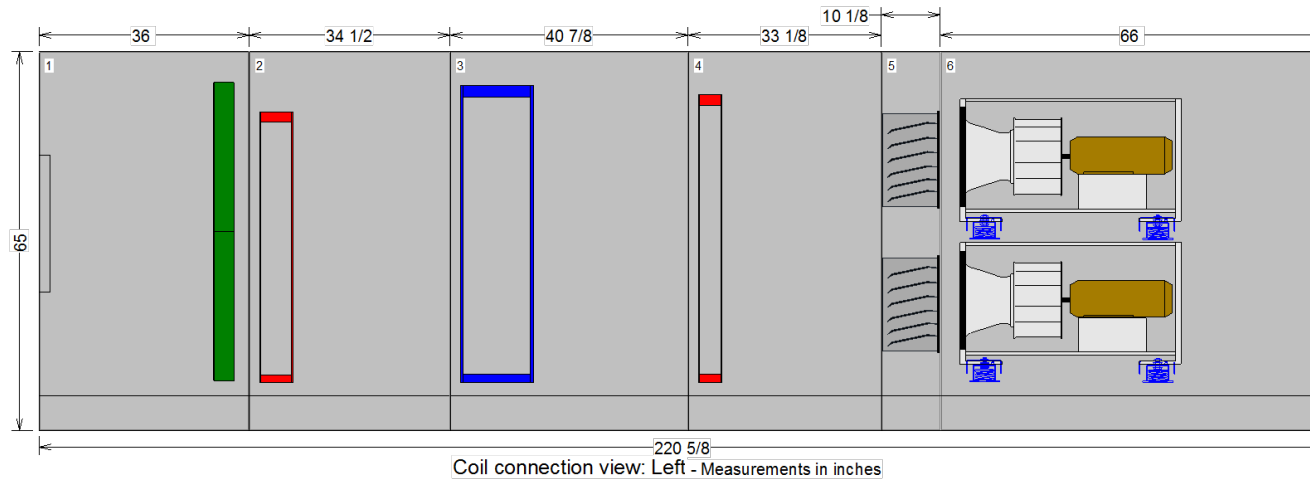
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

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Product group: Indoor unit	Actual airflow: 8000 cfm	Proposal Number
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E3
Paint:		Rigging/Installed Weight: 3524.4 lb / 3713.8 lb



Dimensional Drawings - Performance Climate Changer (PSCA)

Item: A2 Qty: 1 Tag(s): AHU-E3



NPTI : National Pipe Thread Internal Connection
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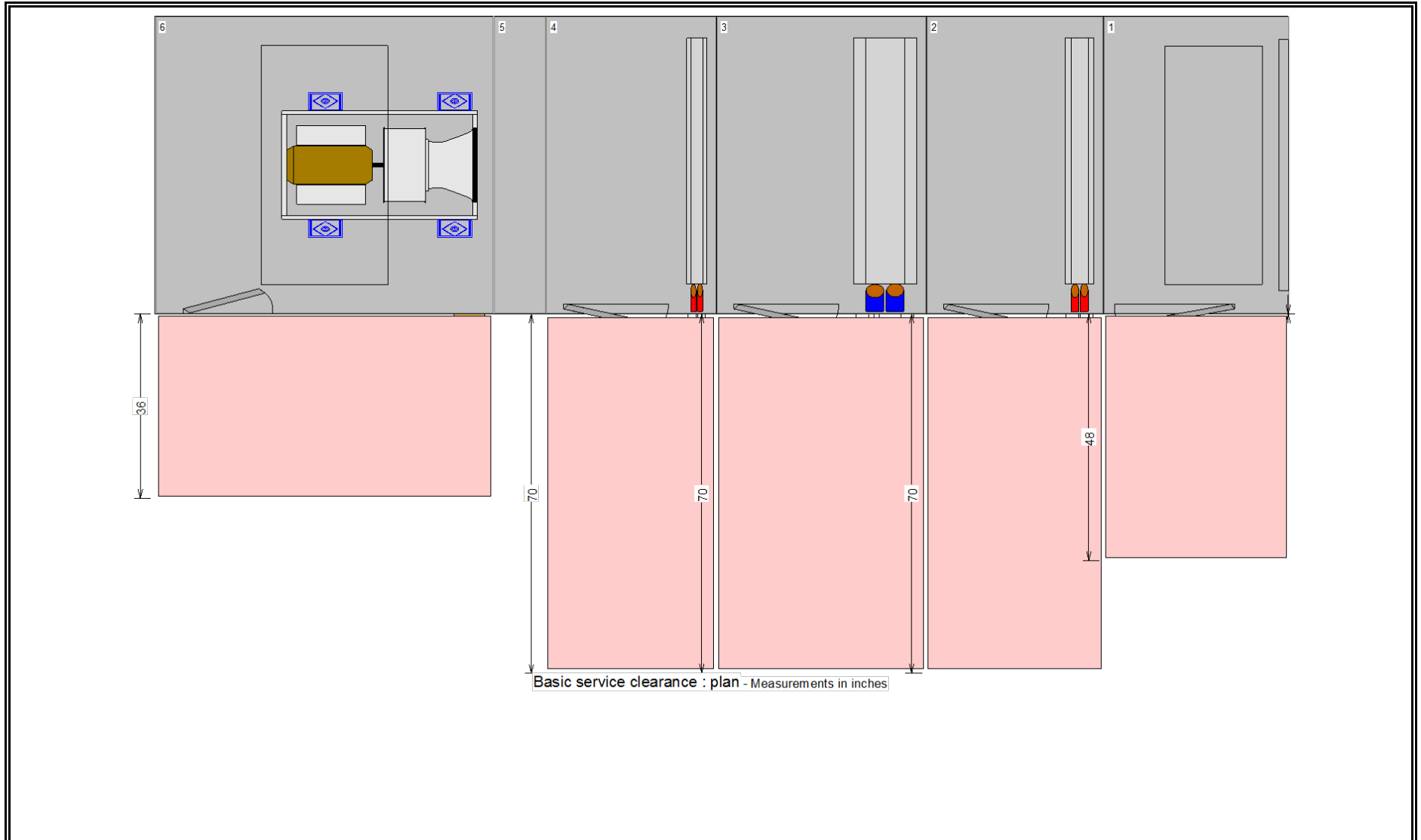
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Product group: Indoor unit	Actual airflow: 8000 cfm	Proposal Number
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E3
Paint:		Rigging/Installed Weight: 3524.4 lb / 3713.8 lb




Dimensional Drawings - Performance Climate Changer (PSCA)

Item: A2 Qty: 1 Tag(s): AHU-E3



OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 18	Job Name: CMS Northwest School of Arts New Bldg and Renovs	Unit Casing: 2in Double Wall Foam	
Product group: Indoor unit	Actual airflow: 8000 cfm	Proposal Number	
Integral base frame: 6 in. integral base frame	Sales Office	Tags: AHU-E3	
Paint:		Rigging/Installed Weight: 3524.4 lb / 3713.8 lb	

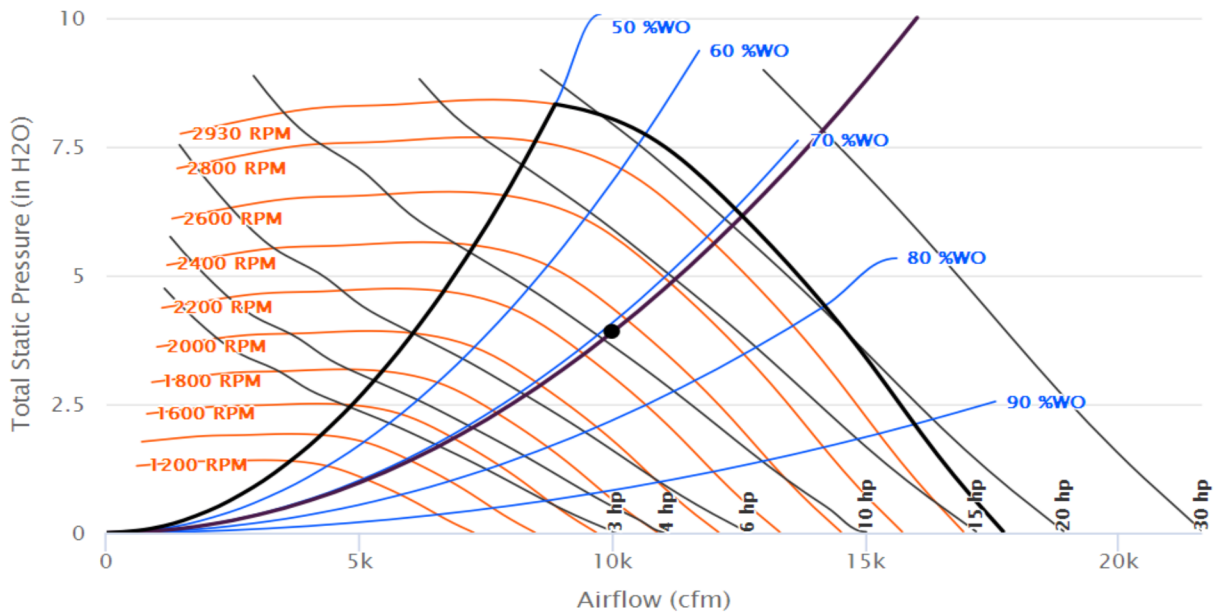
Fan Curve - Performance Climate Changer (PSCA)
 Item: A1 Qty: 2 Tag(s): AHU-E1, AHU-E2

Fan Details

Unit Size	18TF	Operating Brake Power	10.608 hp
Motor Frequency	79.00 Hz	Altitude	0.00 ft
Operating Airflow	10,000 cfm	Design Temp.	70.00 F
Operating Static Pressure	3.912 in H2O	Efficiency	58.13 %
Operating RPM	2,332 rpm		

AHU-E1 - Supply

Trane DDP 18in. 100% Width Class 2 1x2 Plenum Fan Array 12 Blades.



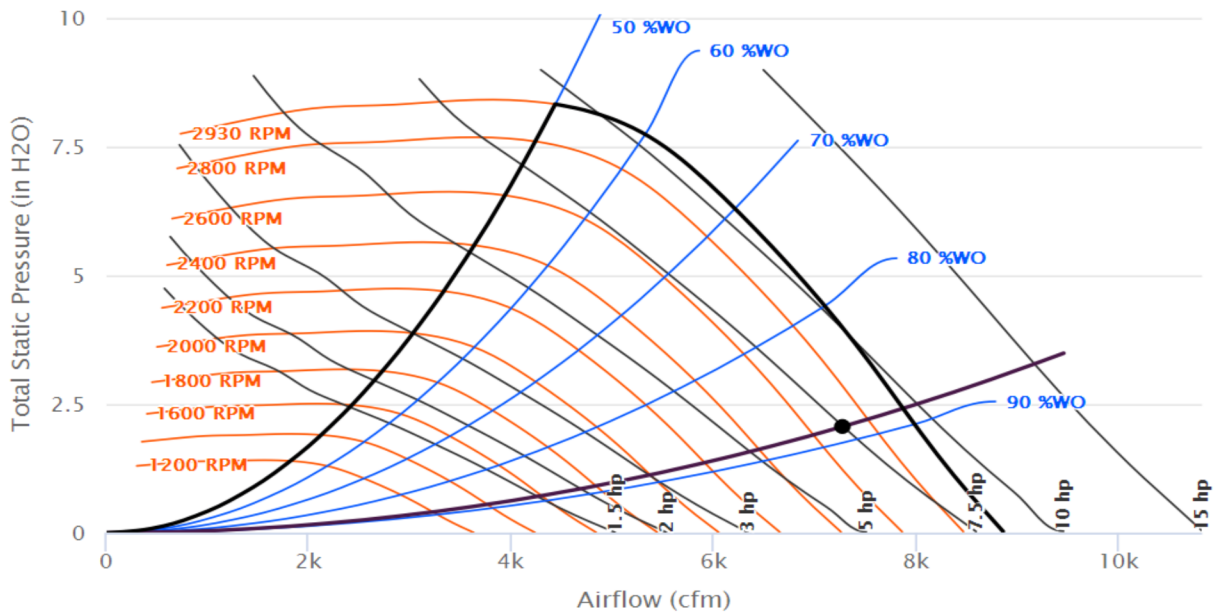
Fan Curve - Performance Climate Changer (PSCA)
 Item: A1 Qty: 2 Tag(s): AHU-E1, AHU-E2

Fan Details

Unit Size	18TF	Operating Brake Power	7.500 hp
Motor Frequency	91.00 Hz	Altitude	0.00 ft
Operating Airflow	7,267 cfm	Design Temp.	70.00 F
Operating Static Pressure	2.066 in H2O	Efficiency	31.55 %
Operating RPM	2,707 rpm	Redundancy	72.67 %

AHU-E1 – Supply – One Fan Down

Trane DDP 18in. 100% Width Class 2 1x2 Plenum Fan Array 12 Blades.



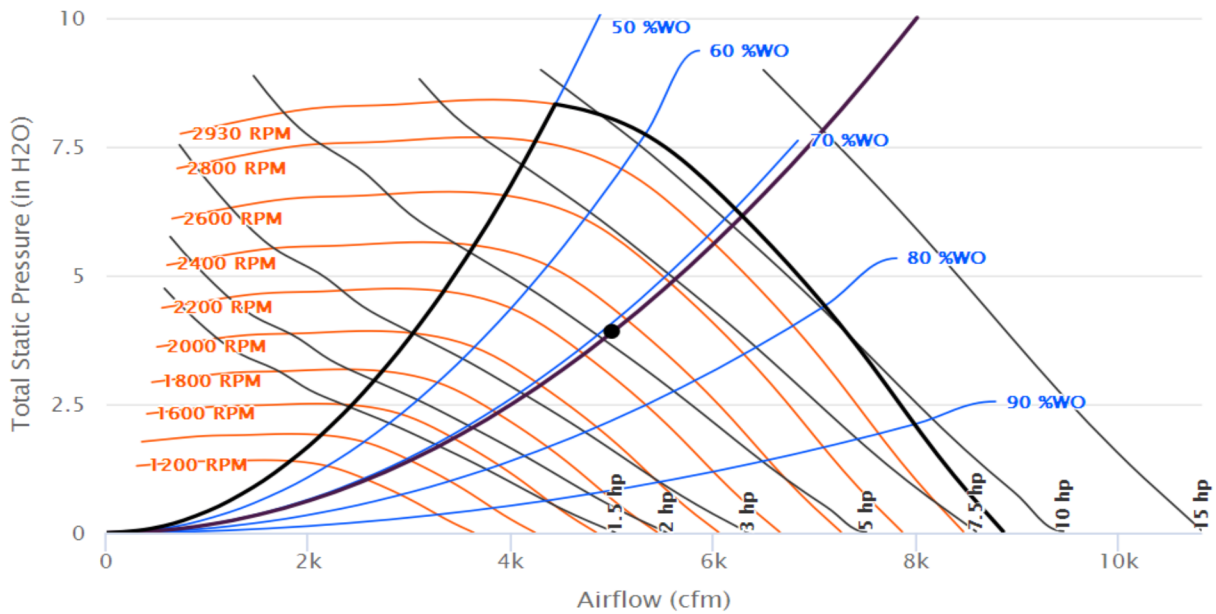
Fan Curve - Performance Climate Changer (PSCA)
 Item: A1 Qty: 2 Tag(s): AHU-E1, AHU-E2

Fan Details

Unit Size	18TF	Operating Brake Power	5.304 hp
Motor Frequency	79.00 Hz	Altitude	0.00 ft
Operating Airflow	5,000 cfm	Design Temp.	70.00 F
Operating Static Pressure	3.912 in H2O	Efficiency	58.13 %
Operating RPM	2,332 rpm		

AHU-E1 - Supply - Single Fan

Trane DDP 18in. 100% Width Class 2 1x2 Plenum Fan Array 12 Blades.



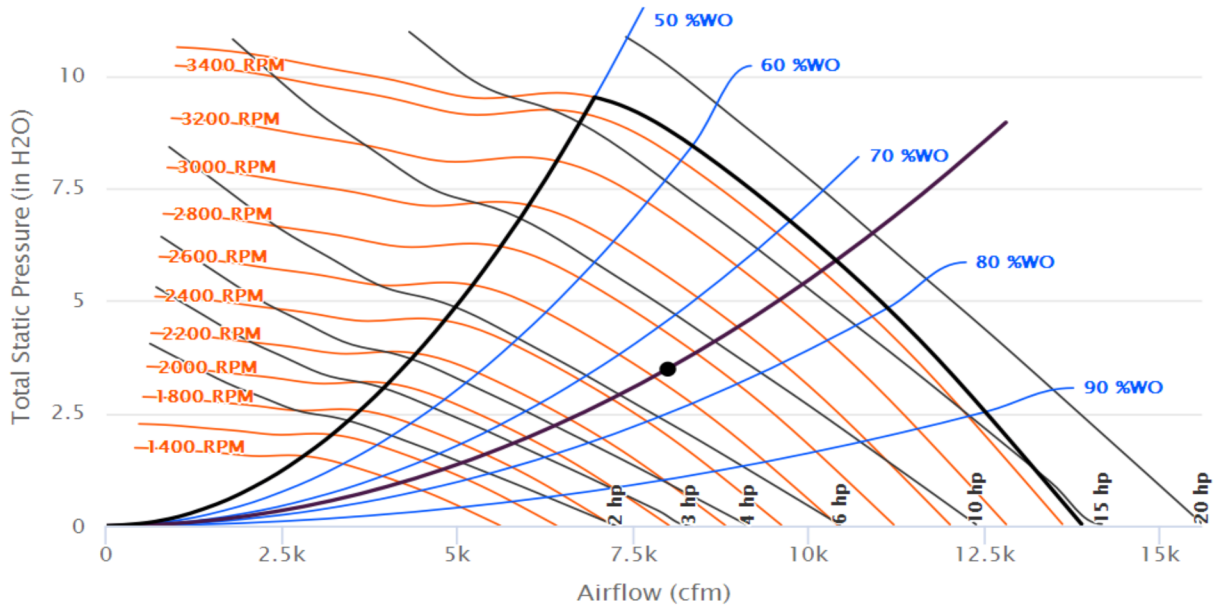
Fan Curve - Performance Climate Changer (PSCA)
Item: A2 Qty: 1 Tag(s): AHU-E3

Fan Details

Unit Size	16TF	Operating Brake Power	7.888 hp
Motor Frequency	90.00 Hz	Altitude	0.00 ft
Operating Airflow	8,000 cfm	Design Temp.	70.00 F
Operating Static Pressure	3.500 in H2O	Efficiency	55.97 %
Operating RPM	2,669 rpm		

AHU-E3 - Supply

Trane DDP 16in. 100% Width Class 2 1x2 Plenum Fan Array 12 Blades.



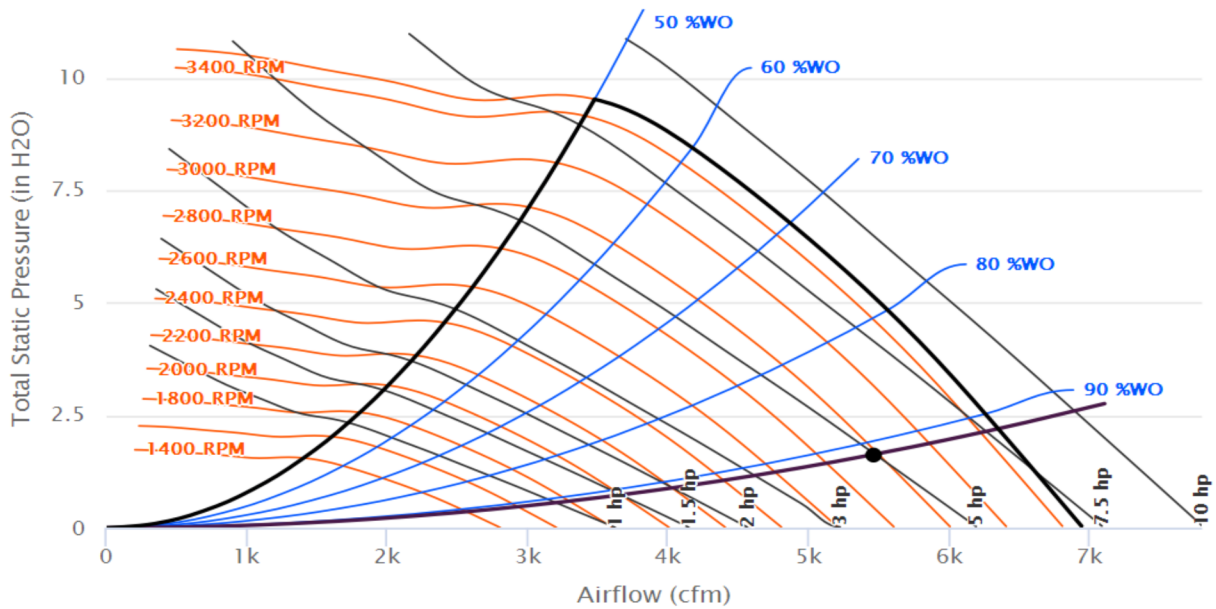
Fan Curve - Performance Climate Changer (PSCA)
 Item: A2 Qty: 1 Tag(s): AHU-E3

Fan Details

Unit Size	16TF	Operating Brake Power	5.000 hp
Motor Frequency	100.00 Hz	Altitude	0.00 ft
Operating Airflow	5,463 cfm	Design Temp.	70.00 F
Operating Static Pressure	1.632 in H2O	Efficiency	28.11 %
Operating RPM	2,985 rpm	Redundancy	68.29 %

AHU-E3 – Supply – One Fan Down

Trane DDP 16in. 100% Width Class 2 1x2 Plenum Fan Array 12 Blades.



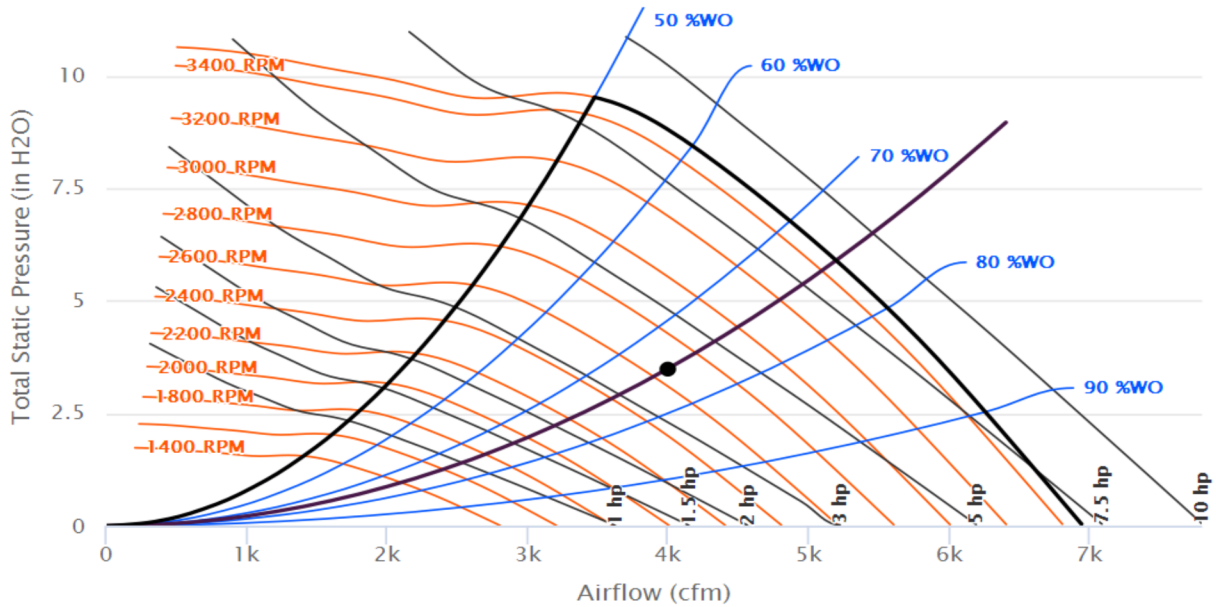
Fan Curve - Performance Climate Changer (PSCA)
 Item: A2 Qty: 1 Tag(s): AHU-E3

Fan Details

Unit Size	16TF	Operating Brake Power	3.944 hp
Motor Frequency	90.00 Hz	Altitude	0.00 ft
Operating Airflow	4,000 cfm	Design Temp.	70.00 F
Operating Static Pressure	3.500 in H2O	Efficiency	55.97 %
Operating RPM	2,669 rpm		

AHU-E3 - Supply - Single Fan

Trane DDP 16in. 100% Width Class 2 1x2 Plenum Fan Array 12 Blades.



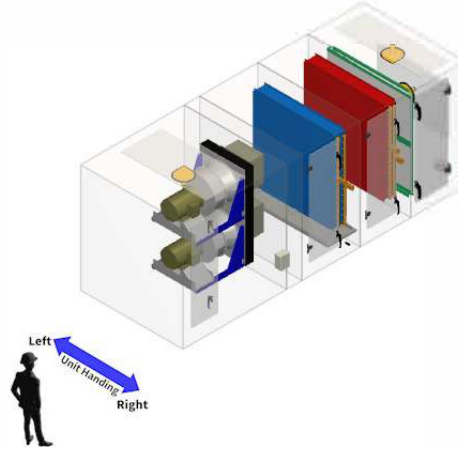
Trane Performance Climate Changer Acoustics

Unit Overview - AHU-E1, AHU-E2

Application	Unit Size	External Dimensions			Weight	
		Height	Width	Length	Installed	Rigging
Indoor unit	22	70.8 in	66.5 in	184.577 in	3555 lb	3412 lb
Quantity of Shipping Sections	Largest Ship Split			Heaviest Ship Split	Elevation	
	Height	Width	Length			
3 piece(s)	70.8 in	66.5 in	77.4 in	1580 lb	0.00 ft	
Supply Fan						
Airflow	10000 cfm	Total Static Pressure	3.973 in H2O			

Construction Features

Panel	2 in. foam injected R-13 w therm break
Panel Material	All unit inner panels - galvanized
Integral Base Frame	6 in. integral base frame
Seismic Certification	OSHPD
Short Circuit Current Rating	5 kA
Agency Approval	UL listed unit



Unit Acoustics

Sound Path	63 (Hz)	125	250	500	1K	2K	4K	8K
Supply top:	80 dB	79 dB	76 dB	85 dB	76 dB	76 dB	70 dB	62 dB
Return:	70 dB	67 dB	67 dB	67 dB	57 dB	60 dB	52 dB	46 dB
Outdoor:	72 dB	71 dB	67 dB	69 dB	59 dB	64 dB	57 dB	51 dB
Casing:	84 dB	78 dB	73 dB	81 dB	77 dB	60 dB	51 dB	38 dB

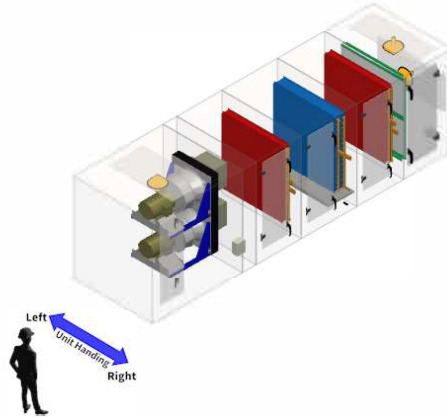
Trane Performance Climate Changer Acoustics

Unit Overview - AHU-E3

Application	Unit Size	External Dimensions			Weight	
		Height	Width	Length	Installed	Rigging
Indoor unit	18	65.0 in	58.0 in	220.322 in	3572 lb	3382 lb
Quantity of Shipping Sections	3 piece(s)	Largest Ship Split			Heaviest Ship Split	Elevation
		Height	Width	Length		
		65.0 in	58.0 in	76.0 in	1362 lb	0.00 ft
Supply Fan						
Airflow	8000 cfm	Total Static Pressure	3.563 in H2O			

Construction Features

Panel	2 in. foam injected R-13 w therm break
Panel Material	All unit inner panels - galvanized
Integral Base Frame	6 in. integral base frame
Seismic Certification	OSHPD
Short Circuit Current Rating	5 kA
Agency Approval	UL listed unit

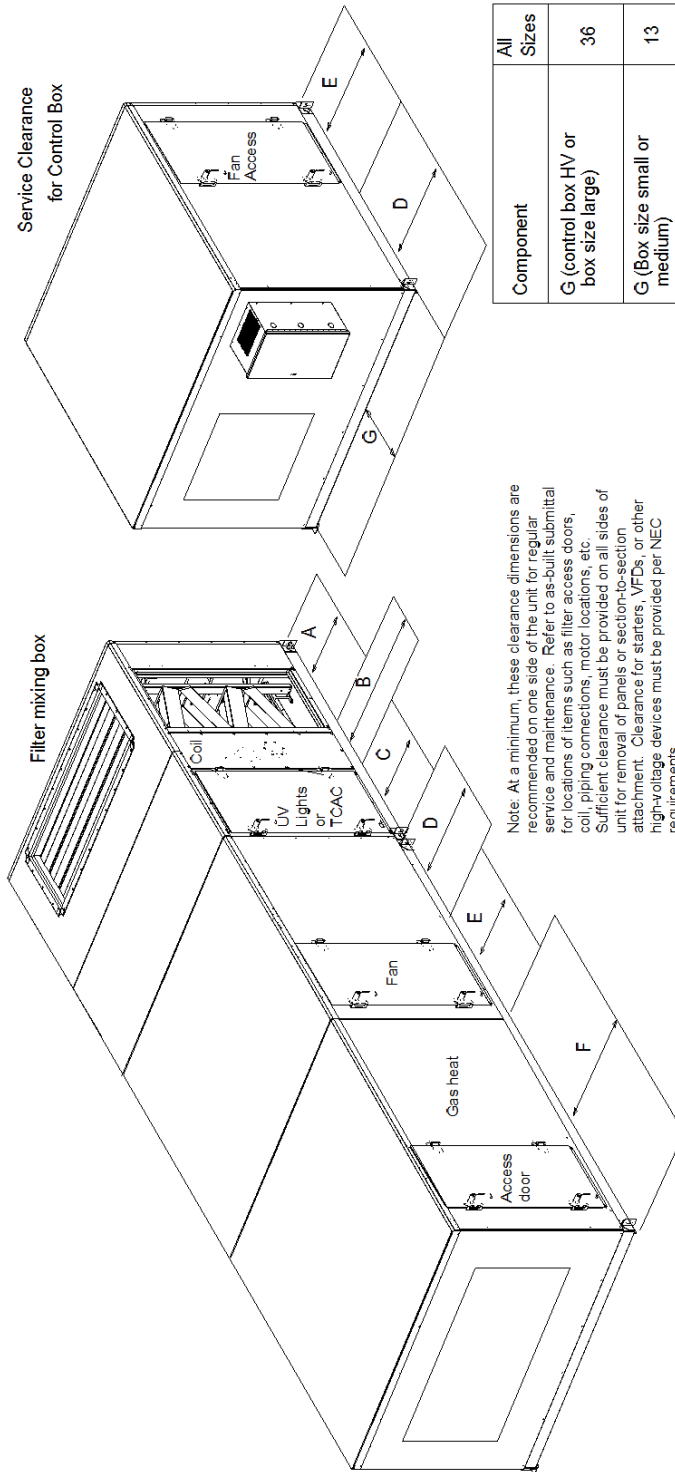


Unit Acoustics

Sound Path	63 (Hz)	125	250	500	1K	2K	4K	8K
Supply top:	82 dB	80 dB	75 dB	85 dB	77 dB	77 dB	74 dB	65 dB
Return:	71 dB	67 dB	66 dB	63 dB	57 dB	59 dB	53 dB	46 dB
Outdoor:	73 dB	71 dB	66 dB	65 dB	59 dB	63 dB	58 dB	51 dB
Casing:	85 dB	79 dB	71 dB	81 dB	78 dB	61 dB	54 dB	41 dB

Accessory - Performance Climate Changer (PSCA)
Item: A1, A2 Qty: 3 Tag(s): AHU-E1, AHU-E2, AHU-E3

SERVICE CLEARANCES
EXAMPLE UNIT - NOT CONFIGURED AS SELECTED.



Note: At a minimum, these clearance dimensions are recommended on one side of the unit for regular service and maintenance. Refer to as-built submittal for locations of items such as filter access doors, coil, piping connections, motor locations, etc. Sufficient clearance must be provided on all sides of unit for removal of panels or section-to-section attachment. Clearance for starters, VFDs, or other high-voltage devices must be provided per NEC requirements.

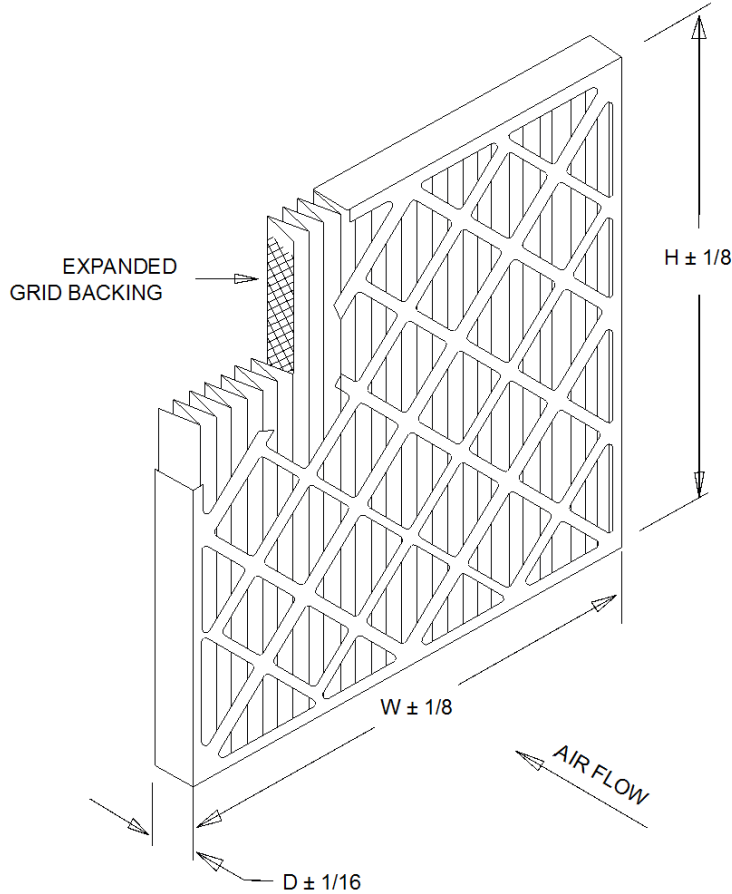
Component	UNIT WIDTH																								
	27.5	35	40	52	58	66.5	72	76	80	88	93.5	100	106	112.5	118	125.5	130	136	140.5	148	154.5	160	166	172	
A (filter)	40	40	40	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
D (coil)	44	51	56	44	51	56	64	70	79	84	88	92	100	125	130	138	142	148	153	160	167	172	178	184	184
B (electric heat coil)	48	48	48	54	60	69	74	78	82	90	96	102	108	115	120	128	132	138	143	150	157	162	168	174	174
C (UV or TCAC)	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
D (External VFD)	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
D (Internal VFD)	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
E (fan - DDP)	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
E (fan - impeller)	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
F-NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Accessory - Performance Climate Changer (PSCA)
Item: A1, A2 Qty: 3 Tag(s): AHU-E1, AHU-E2, AHU-E3

Base Detail



Accessory - Performance Climate Changer (PSCA)
Item: A1, A2 Qty: 3 Tag(s): AHU-E1, AHU-E2, AHU-E3



STANDARD CONSTRUCTION

1. 100 % Synthetic White Un-Dyed Media
2. 10.0 Pleats Per Foot
3. Expanded Metal Pleat Supports
4. Moisture Resistant Beverage Board Frame
5. Double Wall Frame

NOTES

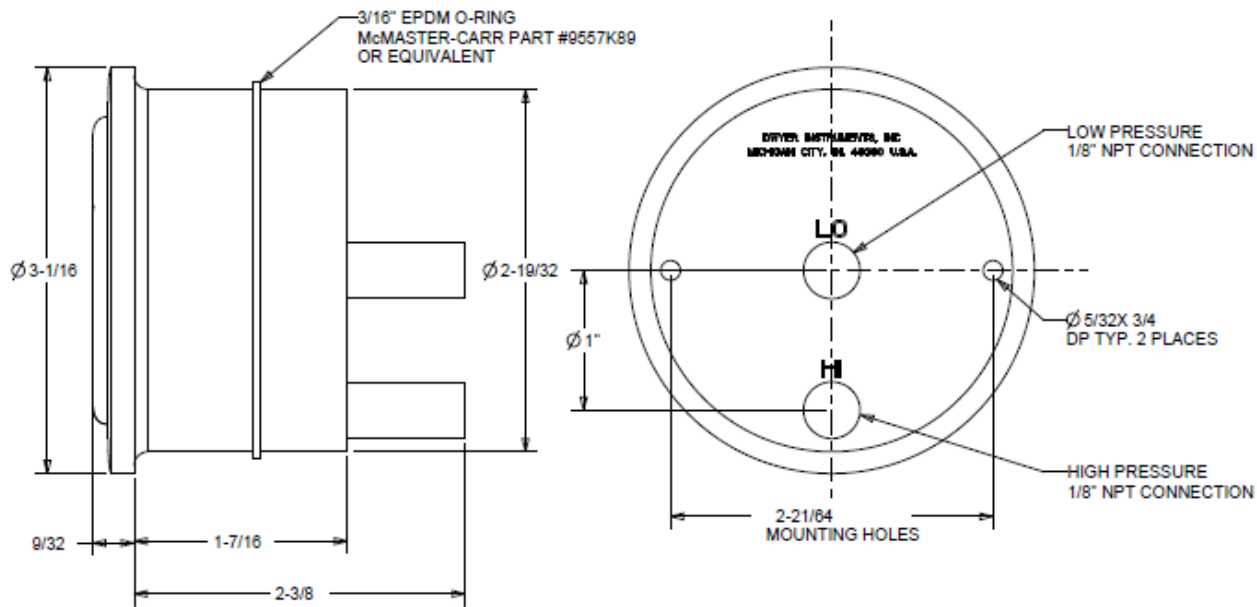
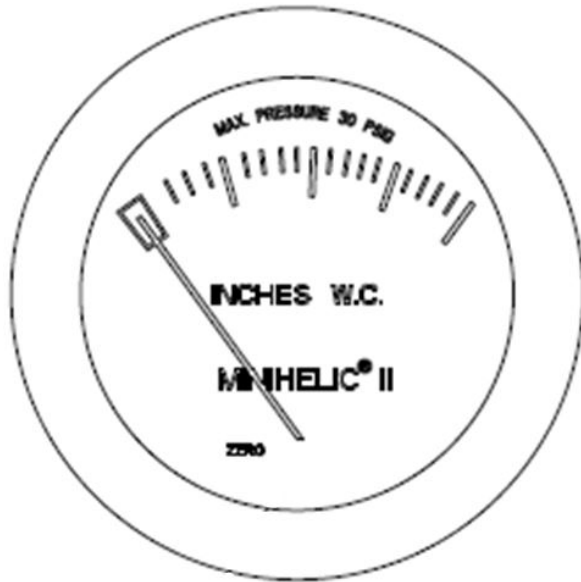
1. MERV 8-A Per ASHRAE 52.2-2007 Appendix J.
2. Final Resistance: 1/0" W.G.
3. Rated Velocity: 500 FPM
4. Class 2 Filter Per U.L. Standard 900
5. Maximum Operating Temperature: 225 DEG. F

MODEL NUMBER	NOMINAL SIZE IN. W X H X D	ACTUAL SIZE IN. W X H X D	RATED AIR FLOW CFM	INITIAL RESISTANCE IN. W.G.	MEDIA AREA SQ. FT.
MX40-STD2-210	12 X 24 X 2	11-3/8 X 23-3/8 X 1-3/4	1000	0.29	6.2
MX40-STD2-201	16 X 20 X 2	15-1/2 X 19-1/2 X 1-3/4	1120	0.29	6.7
MX40-STD2-202	16 X 25 X 2	15-1/2 X 24-1/2 X 1-3/4	1400	0.29	8.0
MX40-STD2-203	20 X 20 X 2	19-1/2 X 19-1/2 X 1-3/4	1400	0.29	8.3
MX40-STD2-211	20 X 24 X 2	19-1/2 X 23-1/2 X 1-3/4	1670	0.29	9.9
MX40-STD2-204	20 X 25 X 2	19-1/2 X 24-1/2 X 1-3/4	1750	0.29	10.3
MX40-STD2-205	24 X 24 X 2	23-3/8 X 23-3/8 X 1-3/4	2000	0.29	11.7

Accessory - Performance Climate Changer (PSCA)
 Item: A1, A2 Qty: 3 Tag(s): AHU-E1, AHU-E2, AHU-E3

Dirty Filter Status

EXT	MODEL	RANGE
01	2-5002-NPT	0-2" WC
03	2-5003-NPT	0-3" WC
04	2-5005-NPT	0-5" WC



Accessory - Performance Climate Changer (PSCA)

Filter Schedule

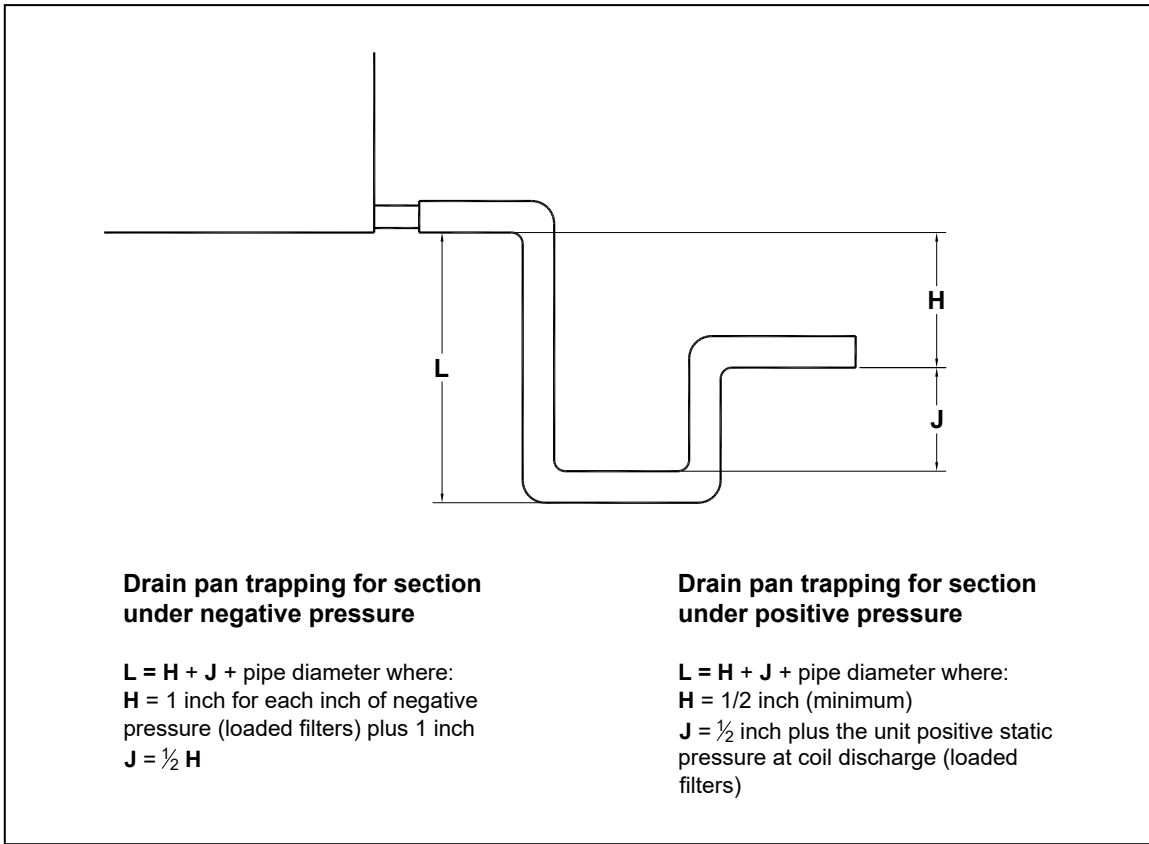
Item: A1, A2 Qty: 3 Tag(s): AHU-E1, AHU-E2, AHU-E3

Unit Tag(s)	Filter Location	Filter Arrangement	Filter Depth	Filter Type	MERV Rating	Filter Quantity	Filter Size
AHU-E1	Air section [1]	Side load filters	2in. flat filter frame	Pleated media	MERV 10	2 4	12 x 24 24 x 24
	Air section [1]	Side load filters	2in. flat filter frame	Pleated media	MERV 10	2 4	12 x 24 24 x 24
AHU-E2	Air section [1]	Side load filters	2in. flat filter frame	Pleated media	MERV10	2 4	12 x 24 24 x 24
	Air section [1]	Side load filters	2in. flat filter frame	Pleated media	MERV 10	2 4	12 x 24 24 x 24
AHU-E3	Air section [1]	Side load filters	2in. flat filter frame	Pleated media	MERV 10	4	24 x 24
	Air section [1]	Side load filters	2in. flat filter frame	Pleated media	MERV 10	4	24 x 24

Accessory - Performance Climate Changer (PSCA)

Trap Schedule

Item: A1, A2 Qty: 3 Tag(s): AHU-E1, AHU-E2, AHU-E3



Unit Tag(s)	Unit Size	Entering Ext. Static Pressure (in H2O)	Discharge Ext. Static Pressure (in H2O)	Drain pan Section Location	Recommended Trap Dimensions ¹			Selected Baseraill Height (-) ¹
					H (in)	J (in)	L (in)	
AHU-E1, AHU-E2	22 calculated unit size	0.500	1.500	Coil section [3]	3.638	1.819	6.457	6 in. integral base frame
AHU-E3	18 calculated unit size	0.500	1.000	Coil section [3]	3.643	1.821	6.464	6 in. integral base frame

¹ To ensure proper condensate trapping the field installed housekeeping pad height is the responsibility of the contractor.

Field Wiring - Performance Climate Changer (PSCA)**MCA MOP Schedule****Item: A1, A2 Qty: 3 Tag(s): AHU-E1, AHU-E2, AHU-E3**

Unit Tag(s)	Circuit	Circuit Description	Voltage/Phase/Hz	MCA (A)	MOP (A)
AHU-E1, AHU-E2	1	Supply fan motor (each x 2)	460/3/60	12.25	20.00
AHU-E3	1	Supply fan motor (each x 2)	460/3/60	8.38	15.00

UNIT PRESSURE DROP in (in. wg.)

UNIT TAG	AHU-C1	AHU-E1	AHU-E2	AHU-E3	AHU-G1	AHU-G2	AHU-G3
Air mixing section	0.66	0.71	0.71	0.70	1.39	1.48	1.52
Coil section	0.06	0.09	0.09	0.24	0.12	0.13	0.15
Coil section	0.60	0.73	0.73	0.60	0.96	1.05	1.08
Coil section	n/a	n/a	n/a	0.08	n/a	n/a	n/a
Fan section	0.27	0.37	0.37	0.37	0.28	0.28	0.28
Discharge plenum	0.13	n/a	n/a	n/a	0.07	0.07	0.08
Internal Static Pressure	1.72	1.91	1.91	2.00	2.82	3.01	3.11
External Static Pressure	2.50	2.00	2.00	1.50	2.00	2.50	2.00
Total Static Pressure	4.22	3.91	3.91	3.50	4.82	5.51	5.11

NOTE:

1. THE INFORMATION PROVIDED ABOVE COMES PERFORMANCE TABLE CREATED IN TRANE SELECTION ASSIST.



Shipping Split Report

PROJECT: CMS Northwest School of Arts

EQUIPMENT:

Tag	Qty	Description	Dimensions	Shipping Sections
AHU-C1	1	AHU-C1	226.97"L x 125.50"W x 79.25"H	4
AHU-G1	1	AHU-G1	215.00"L x 80"W x 56.25"H	4
AHU-G2	1	AHU-G2	215.00"L x 80"W x 56.25"H	4
AHU-G3	1	AHU-G3	215.00"L x 80"W x 56.25"H	4

SHIPPING SECTION INFO:

Tag	Overall Length	Overall Weight	Section	Section Length	Section Weight
AHU-C1	226.97	7590	1	45.38	990
			2	69.59	3140
			3	63	1370
			4	49	2100
AHU-G1	215.00	3570	1	56.75	670
			2	55.25	1420
			3	59	610
			4	44	880
AHU-G2	215.00	3570	1	56.75	670
			2	55.25	1420
			3	59	610
			4	44	890
AHU-G3	215.00	3570	1	56.75	670
			2	55.25	1420
			3	59	610
			4	44	890



Shipping Split Report

PROJECT: CMS Northwest School of Arts

EQUIPMENT:

Tag	Qty	Description	Dimensions	Shipping Sections
AHU-E1	1	AHU-E1	184.20"L x 66.50"W x 70.75"H	4
AHU-E2	1	AHU-E1	184.20"L x 66.50"W x 70.75"H	4
AHU-E3	1	AHU-E3	220.07"L x 58"W x 65"H	5

SHIPPING SECTION INFO:

Tag	Overall Length	Overall Weight	Section	Section Length	Section Weight
AHU-E1	184.20	3560	1	36	510
			2	33.00	530
			3	37.84	950
			4	77.37	1580
AHU-E2	184.20	3560	1	36	510
			2	33.00	530
			3	37.84	950
			4	77.37	1580
AHU-E3	220.07	3720	1	36	450
			2	34.34	520
			3	40.72	990
			4	33.00	450
			5	76.02	1330

Field Installed Options - Part/Order Number Summary

This is a report to help you locate field installed options that arrive at the jobsite. This report provides part or order numbers for each field installed option and references it to a specific product tag. It is NOT intended as a bill of material for the job.

Product Family - Performance Climate Changer (CSAA)

Item	Tag(s)	Qty	Description	Model Number
A1	AHU-C1	1	Size 50 Indoor Air Handler	CSAA050UA
A2	AHU-G1	1	Size 21 Indoor Air Handler	CSAA021UA
A3	AHU-G2	1	Size 21 Indoor Air Handler	CSAA021UA
A4	AHU-G3	1	Size 21 Indoor Air Handler	CSAA021UA

Field Installed Option Description	Part/Ordering Number
Pleated media	

Product Family - Performance Climate Changer (PSCA)

Item	Tag(s)	Qty	Description	Model Number
B1	AHU-E1, AHU-E2	2	Size 22 Indoor Air Handler	PSCA022UA
B2	AHU-E3	1	Size 18 Indoor Air Handler	PSCA018UA

Field Installed Option Description	Part/Ordering Number
Pleated media	