

Submittal

Project: ELON HAWK RIDGE POLO RELIEF ES

View Date: 04/27/2022

Superior Mechanical Systems (Charlotte)	Balfour Beatty Construction, LLC Stamp
<p>Submittal No. / Revision: 237313-1 1</p> <p>Description: Modular Indoor Central-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: Ben Wyke</p> <p>Date:</p>	<p style="color: green;">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.: 237313-1 1</p> <p>Description: Modular Indoor Central-station Air-handling Units - Product Data</p> <p>Reviewed by: Aidan Mulligan</p> <p>Date: 04/27/2022</p>
Little Diversified Architectural Consul (Charlotte) Stamp	Consultant Stamp
<p style="text-align: center;">A/E Response: Date:</p>	<div style="border: 1px solid red; padding: 10px;"> <p style="text-align: center;">SHOP DRAWING REVIEW</p> <div style="display: flex; align-items: center;"> <div> <p><input type="checkbox"/> NO EXCEPTION TAKEN</p> <p><input checked="" type="checkbox"/> APPROVED AS NOTED</p> <p><input type="checkbox"/> REVISE AND RESUBMIT</p> <p><input type="checkbox"/> REJECTED</p> </div> </div> <p style="font-size: 8px; margin-top: 5px;">REVIEW IS FOR GENERAL COMPLIANCE WITH THE INTENT OF THE CONTRACT DOCUMENTS. MECHANICAL CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR CORRECTNESS, DIMENSIONS, DETAILS, QUANTITIES AND ALL COST ASSOCIATED WITH SUBSTITUTED EQUIPMENT, INCLUDING STRUCTURAL AND ELECTRICAL CHANGES, MAINTENANCE ACCESS, CLEARANCES, BUILDING ALTERATIONS, PIPING, SHEET METAL, REPLACEMENT OF OTHER SYSTEM COMPONENTS, ETC.</p> <p style="font-size: 8px; margin-top: 5px;">BY T Hogue DATE 5/6/2022</p> </div> <div style="border: 1px solid red; padding: 5px; margin-top: 10px; text-align: center; color: red;"> <p>See submittal for comments</p> </div>
Consultant Stamp	



Charlotte Office
Commissioning Group
8801 JM Keynes Drive, Suite 240
Charlotte, North Carolina 28262
Phone 704-376-7072

PROJECT: CMS Elon Park Relief ES
ML PROJECT NO: 221.038
SUBMITTAL: 237313-1-1 Modular Indoor Central Station Air Handling Units

DISPOSITION LEGEND

RO REVIEW ONLY

Commissioning Authority neither approves nor disapproves submittal. Notations, if any, are for Designer use.

Reviewer: Kevin Richey

Date: May 6, 2022

1. Supply fan performance (ESP) for each unit needs to be calculated using MERV-10 filter media, not 2" throwaway.
2. Provide air mixing assemblies downstream of the mixing section for each unit. Ensure adequate space is provided for service.
3. Air cleaning systems (Bi-Polar Ionization) are not included with the submittal.

End of Comments



SUBMITTAL

Project

CMS Elon, Hawk, Polo Ridge

Date

April 26, 2022

Mechanical Engineer

Optima Engineering

Mechanical Contractor

Superior Mechanical Systems Inc.

In accordance with Specification Section 237313
MODULAR INDOOR CENTRAL-STATION AIR-HANDLING UNITS

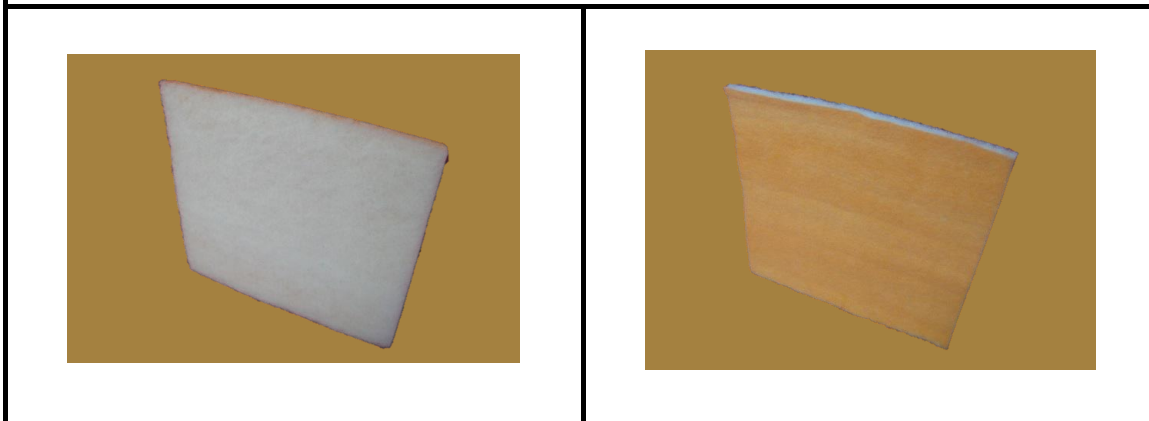
Notes:

1. Cabinets are painted
2. Motors are TEFC
3. Metal frame and MERV 10 media pads will be furnished for all filters
4. VFDs and GPS are by others
5. Please coordinate with the VFD supplier to provide the correct HP VFDs
6. VFDs control the motors so the unit SCCR rating and phase loss protection come from the VFDs.
7. There are very minor variances on some coil APD. These are overcome by the fans on the units.
8. The doors in 39M units usually open against pressure, but there are some instances where there are items inside the unit that prevent inward swing doors. When that happens the door must swing out, but come with a safety latch that stops the door from opening completely until the handle is moved again.
9. Please verify AHU handing configurations are below are correct:

AHU-1 - Left	AHU-5 - Left
AHU-2 - Left	AHU-6 - Left
AHU-3 - Left	AHU-7 - Right
AHU-4 - Left	

 <p style="text-align: center; margin-top: 10px;">2820 S. English Station Road - Louisville, KY 40299 Tel: (502) 357-0132 Fax (502) 267-8379</p>	<p>Date: 23-Oct-17 TEST NO. 17-607-1A</p> <p style="text-align: center; font-size: 1.2em;">ASHRAE Standard 52.2-2017</p> <p style="text-align: center; font-size: 1.2em;">TEST REPORT</p> <p style="text-align: center; font-weight: bold;">Initial Efficiency / Resistance</p>
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Filter Description	
Manufacturer Filter Model Part Number Generic Filter Type Nominal Dimensions (H x W x D) Pocket / Pleat Quantity Media Type Est. Gross Media Area Adhesive Type	Fibrix 125UWMNOTG125-10 N A Pleated 24" x 24" x 1" Flat Polyester 4 Ft ² Dry Tack



Test Conditions			
Loading Dust Type	NA	Test Air Temp (degrees F.)	74
Barometric Pressure (In. Hg.)	29.66	Relative Humidity (%)	45

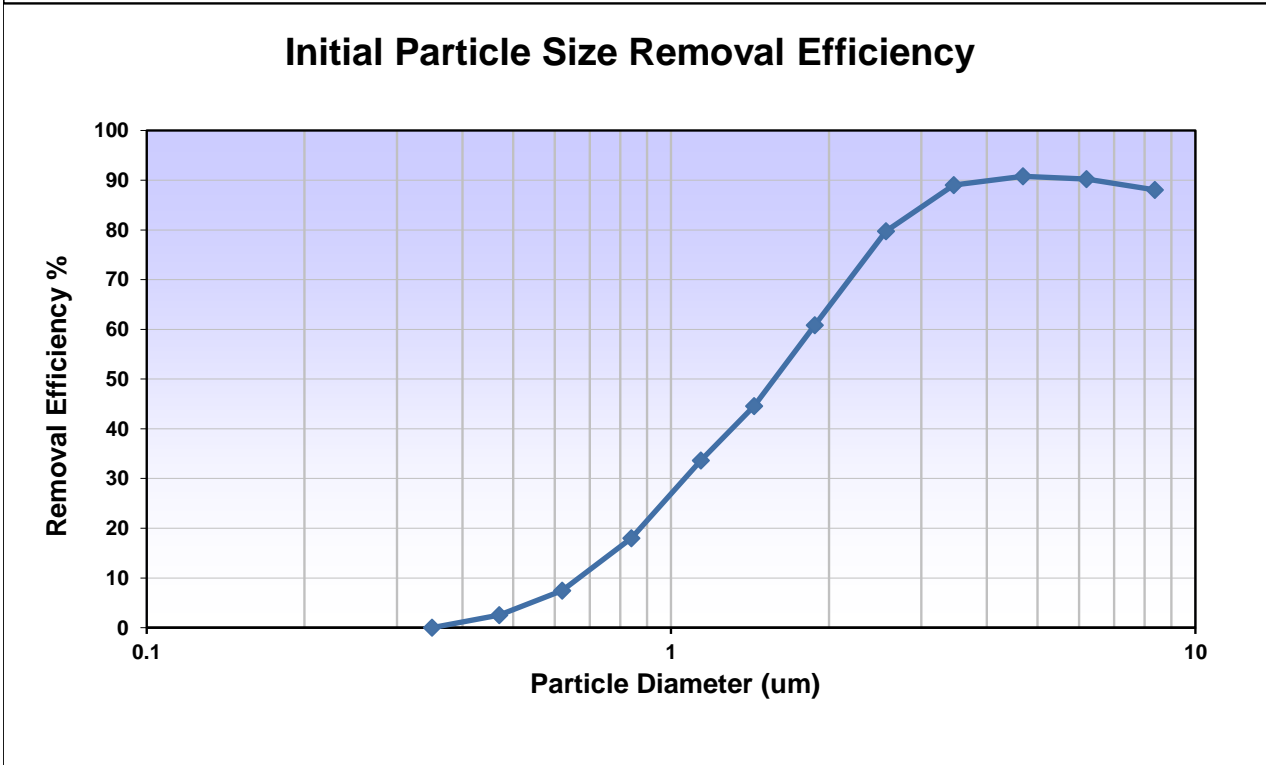
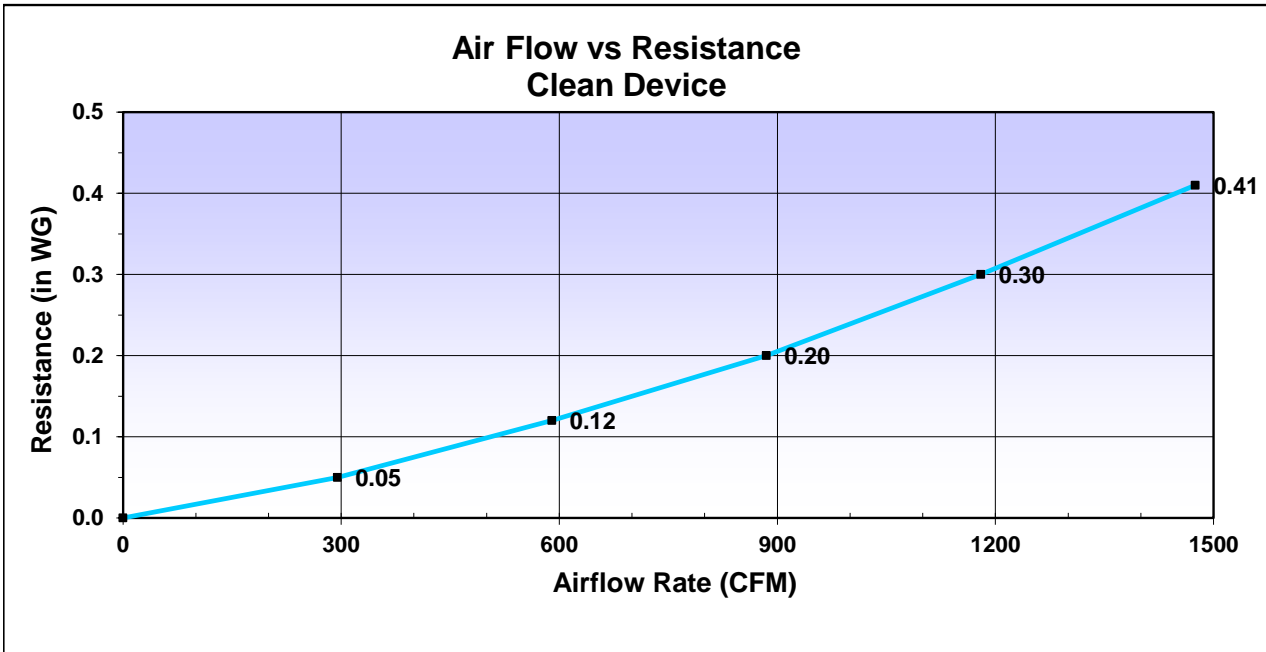
Test Results	
Airflow Rate (CFM)	1180
Nominal Face Velocity (fpm)	295
Initial Resistance (in WG)	0.30
E1 (%) Initial Efficiency 0.30 - 1.0 um	7
E2 (%) Initial Efficiency 1.0 - 3.0 um	55
E3 (%) Initial Efficiency 3.0 - 10.0 um	90
Estimated * Minimum Efficiency Reporting Value (MERV)	MERV 10 @ 1180 CFM
* If initial data is minimum	

Comments Tested For: Fibrix

Test Performed by: RAS Approved By: 

Important Note: Please be advised that the ASHRAE committee SSPC 52.2, in March 2016, has published "addendum e" relative to the 52.2-2012 test protocol. This addendum restricts the use of the acronym "MERV" as only applicable to a test report that has been completed using the "entire procedure prescribed by the standard". This report is a modified version of the procedure and therefore, subject to that ruling. In the best interest of our customers, Blue Heaven Technologies has elected to delay this action until further assessment can be made at committee level. Where applicable, the qualified use of the term "MERV" will continue to be part of our reported data.

Test No. 17-607-1A
Date: 23-Oct-17



Test No. 17-607-1A
Date: 23-Oct-17

Data - Initial Resistance

Airflow (CFM)	Resistance (in WG)
0	0.00
295	0.05
590	0.12
885	0.20
1180	0.30
1475	0.41

Data - Particle Removal Efficiency

Particle Size Range (um)	Geometric Mean Diam (um)	Initial Particle Removal Efficiency (%)
0.30 - 0.40	0.35	0.0
0.40 - 0.55	0.47	2.6
0.55 - 0.70	0.62	7.4
0.70 - 1.00	0.84	18.0
1.00 - 1.30	1.14	33.6
1.30 - 1.60	1.44	44.6
1.60 - 2.20	1.88	60.9
2.20 - 3.00	2.57	79.8
3.00 - 4.00	3.46	89.0
4.00 - 5.50	4.69	90.8
5.50 - 7.00	6.20	90.2
7.00 - 10.00	8.37	88.1

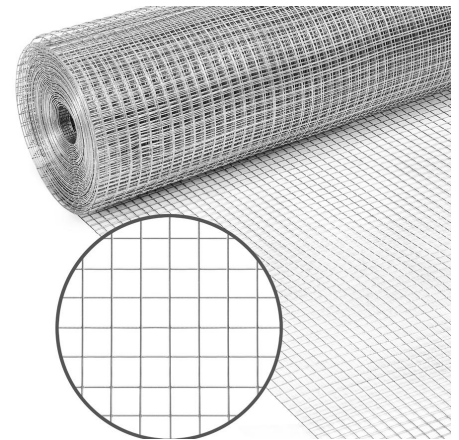


Tuck-In Frame



Construction

- Channel and mesh made with 100% galvanized steel
- 26-gauge channels
- Spring loaded 16-gauge welded wire mesh
- Durable construction
- Customized up to 12-feet
- Press-in frames are made in 1" or 2"
- Larger frames are supported by center channel



Benefits

- 100% galvanized construction ensures no rust
- Ideal in high CFM air handlers
- Loaded to ensure a snug fit for all media types
- Slide easily within the filter track
- Eliminate air bypass, allowing the removal of spacers



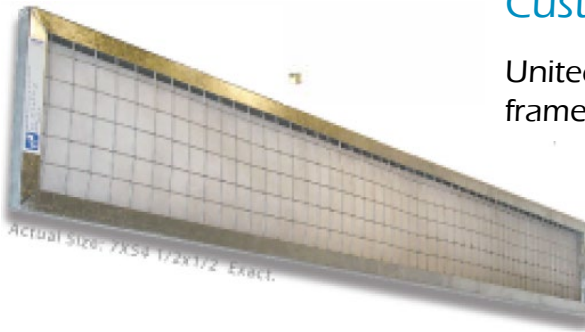
United Air Filter has again made retro-fitting a simple task. By using Tuck-In Frames, you are being insured that you'll have a weather resistant customized frame. Having manufactured frames since 1968, our Tuck-In Frames have been a proven quality product unmatched by the competition.

In high velocity HVAC units, the Tuck-In Frame will give the filter media a steady backing. This is also a benefit in humid climates. Paper or other materials will break away possibly causing filter blowout.



Custom Frame Sizes

United Air Filter makes a variety of standard sized as well as Custom frame sizes to suit your HVAC unit needs



Tuck-In Frames will allow you to make up to a 12-foot length track. While the depth of the frame may be half an inch, one inch, or two inches deep. Frames can be made in nominal and exact sizes.

Pleats vs. Frames

When pleated filters line up in a series of four 20x20x2, there will be three interior gaps (see image) and a gap at each filter end.

Tuck-In Frames will eliminate this problem by having only 1 filter frame per track.

By having one 20x80x2 frame, rather than 4 20x20x2 pleats, gaps are non-existent. The ends of the frames are gasket sealed to prevent bypass.



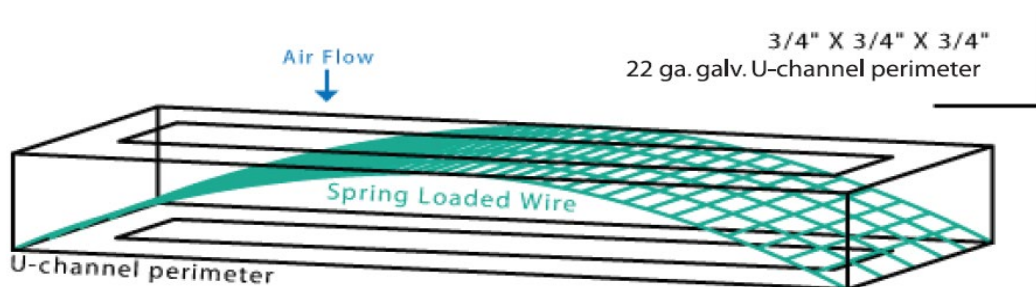
Pleated Filter Gap

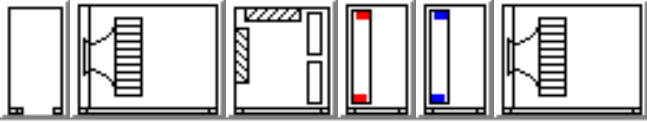


Four 20X20X2 Pleats

One 20X80X2 Pressed-In-Frame

Frame Diagram





Unit Parameters

Aero Indoor Air Handler

39MN Size 21W

Insulation: R-13 Double Wall Sealed Panel

Exterior Finish: Painted Exterior Panels 18ga

Interior Finish: Galvanized Interior Panels

Level I Thermal Break

6 inch tall Base Rail

Turning Plenum

Discharge : Bottom

Door Left Side

Return Fan

Damper: Top Premium Parallel

Rear Inlet

Fan Sled

Plenum Fan A PDLA01245

Direct Drive Fan

1174 fanRPM Class II

Full Open Discharge

Spring Fan Isolation

Motor Shaft Grounding

Motor

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Manufacturer - Generic

Frame Size - 213T

Motor Shaft Diameter (in.) - 1.375

Voltage Selected - 460/3/60

Full Load Amps - 4.6

Efficiency - 89.5%

Door Left Side

Filter Mixing Box

Damper: Rear Premium Parallel

Damper: Top Premium Parallel

2In. Flat Filter

Field Supplied 2in. MERV 8 Throwaway Filter

Construction Filters

Confirmed,
MERV 10 will
be supplied

Contractor:
Verify motor rating minimum SCCR
Rating 35 KAIC
Verify Phase Loss protection provided

Job Name CMS Elon, Hawk, Polo Ridge
Mark for AHU-1

Qty (6) 20in. x 25in.

Door Left Side
Minihelic Differential Pressure Gage 0-2" w.c. Left Side

Hot Water Coil and Plenum

304 Stainless Steel Drain Pan Left Side
Hot Water 21.44 sq.ft 1 Row 8 FPI Half Circuit
Coil Connection Left Side
1/2 in. Tube Diameter
Fin Thickness: 0.0060
AL fins Galv. Casing
Steel Header
No Coating
Door Left Side

Chilled Water Coil and Plenum

304 Stainless Steel Drain Pan Left Side
Chilled Water 21.44 sq.ft 8 Row 11 FPI Full Circuit
Coil Connection Left Side
1/2 in. Tube Diameter
AL fins Galv. Casing
Steel Header
No Coating
Door Left Side

Draw-Thru Supply Fan

Rear Inlet
Fan Sled
Plenum Fan B PDLA01270

Direct Drive Fan
1342 fanRPM Class II

Field Supplied Discharge

Spring Fan Isolation
Motor Shaft Grounding

Motor

7.5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Manufacturer - Generic

Frame Size - 254T
Motor Shaft Diameter (in.) - 1.625
Voltage Selected - 460/3/60
Full Load Amps - 11.0

Efficiency - 91.0%

Door Left Side

Configuration Notes

Preheat coil configurations can cause freezstat to trip if the downstream cooling coil isn't drained in heating season and/or PID valve control loop is too slow to react.

Contractor:
Verify motor rating minimum SCCR
Rating 35 KAIC
Verify Phase Loss protection provided
Coordinate VFD requirements with
vendor providing drives.

Job Name CMS Elon, Hawk, Polo Ridge
Mark for AHU-1

If a bottom connection is required, use an Inlet Plenum Section.

If a bottom connection is required, use a Discharge Plenum Section.

Discharge duct(s) must be gasketed and screwed directly to the discharge panel of the unit.

Weights and Dimensions

(LxWxH in ft in) 19' 7" x 6' 7" x 5' 0" **

Operating 5171 LB **

Coordinate unit weight with Structural

Warranty Part Number(s) (NET PRICING)

Qty 1 First 39 Series Start-up

Qty 1 2nd Year Parts only 39M - Size 21 - 30

Weights and Dimensions are approximate. Weights include base unit weight, coils (wet & dry), fans and fan motors, and other components, but does not include filters, drives and skids. Approximate dimensions are provided primarily for shipping purposes. Shipping skids are not included.

All filter media efficiency ratings are for the filter media only.

Chilled Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-1

Cooling Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Total Cooling Capacity _____
 Sensible Cooling Capacity _____
Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Rise _____
 Entering Air Dry Bulb _____
 Entering Air Wet Bulb _____
 Entering Air Enthalpy _____
 Leaving Air Dry Bulb _____
 Leaving Air Wet Bulb _____
 Leaving Air Enthalpy _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MC	1	
8 / 11 / FL		
.0042	in	
Sine Wave		
Large		
21.44	sqft	
396.5	fpm	
Al-Galv.		
0.5	in	
1.25 x 0.781	in	
0.016	in	
8500	CFM	
0	ft	
8160	SCFM	
400.55	MBH	
292.04	MBH	
64.0	gpm	
7.5	ft wg	
2.9	ft/s	
44.00	F	
56.48	F	
12.5	F	
83.00	F	
67.00	F	
31.48	BTU/lb	
50.42	F	
50.39	F	
20.5	BTU/lb	
0.73	in wg	
FW		
0	%	
0.0	(hr-sqft-F)/BTU	



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Hot Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-1

Heating Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Heating Capacity _____
 Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Drop _____
 Entering Air Temperature _____
 Leaving Air Temperature _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MH
1
1 / 8 / HF
.0060 in
Sine Wave
Large
21.44 sqft
396.5 fpm
Al-Galv.
0.5 in
1.25 x 0.781 in
0.016 in
8500 CFM
0 ft
8581 SCFM
145.88 MBH
6.4 gpm
0.1 ft wg
0.6 ft/s
160.00 F
113.43 F
46.6 F
65.00 F
80.55 F
0.13 in wg
FW
0 %
0.0 (hr-sqft-F)/BTU



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Unit Acoustics Summary

Project: CMS Elon, Hawk, Polo Ridge
Tag: AHU-1

Unit Acoustics Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	88	82	80
125 Hz _____	88	87	84
250 Hz _____	89	88	85
500 Hz _____	83	80	77
1000 Hz _____	81	73	69
2000 Hz _____	79	73	69
4000 Hz _____	77	71	67
8000 Hz _____	74	67	63

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Unit Acoustics A-weighted Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	62	56	54
125 Hz _____	72	71	68
250 Hz _____	80	80	76
500 Hz _____	79	77	74
1000 Hz _____	81	73	69
2000 Hz _____	80	74	70
4000 Hz _____	78	72	68
8000 Hz _____	73	66	62

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Sound contributed by Supply and Return Fans

Unit Acoustics PART-LOAD Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	83	81	78
125 Hz _____	83	85	80
250 Hz _____	83	86	81
500 Hz _____	78	77	72
1000 Hz _____	76	70	65
2000 Hz _____	74	70	64
4000 Hz _____	70	67	61
8000 Hz _____	68	65	59

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Unit Acoustics PART-LOAD A-weighted Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	57	55	52
125 Hz _____	67	69	64
250 Hz _____	74	77	72
500 Hz _____	74	74	69
1000 Hz _____	76	70	65
2000 Hz _____	75	71	65
4000 Hz _____	71	68	62
8000 Hz _____	67	64	58

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

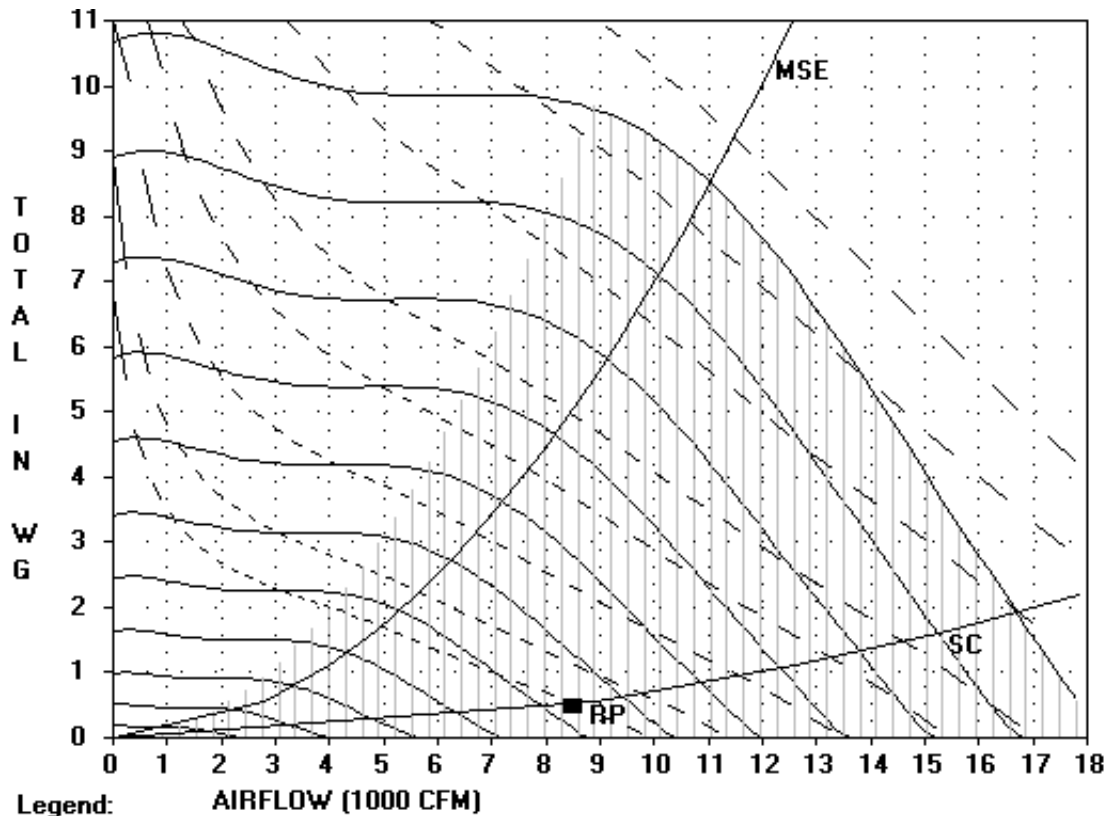
Sound contributed by Supply and Return Fans

Return Fan Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-1

Fan Model	39M2101HPDL
Unit Size	21W
Fan Type	DIRECT DRIVE PLENUM (Return)
Fan Wheel Diameter	24.5
Fan Class	II
Static Efficiency (%)	34
Fan Application	Draw Thru
Orientation	Horizontal
Actual Airflow, CFM	8500
Site Altitude, , ft	0
Total Upstream Static Losses, in wg	0.50
Number of Fans	1
Calculated Fan RPM / Motor RPM	1174 / 1200
Class II Max. RPM	2269
Fan BHP	2.0
Fan Electrical Power, kW	1.7

Unit is outside of the scope of AHRI Standard 430/431.



Legend: AIRFLOW (1000 CFM)

\ - RPM \ - BHP MSE - Max. Static Eff. SC - System Curve RP - Rated Point

RPM = 1174 BHP = 2.0 CLASS II MAX. RPM = 2269

RPM's (x 100, L to R): 3. 5. 7. 9. 11. 13. 15. 17. 19. 21. 23.

BHP's (L to R): 2 3 5 7.5 10 15 20 25

Supply Fan Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-1

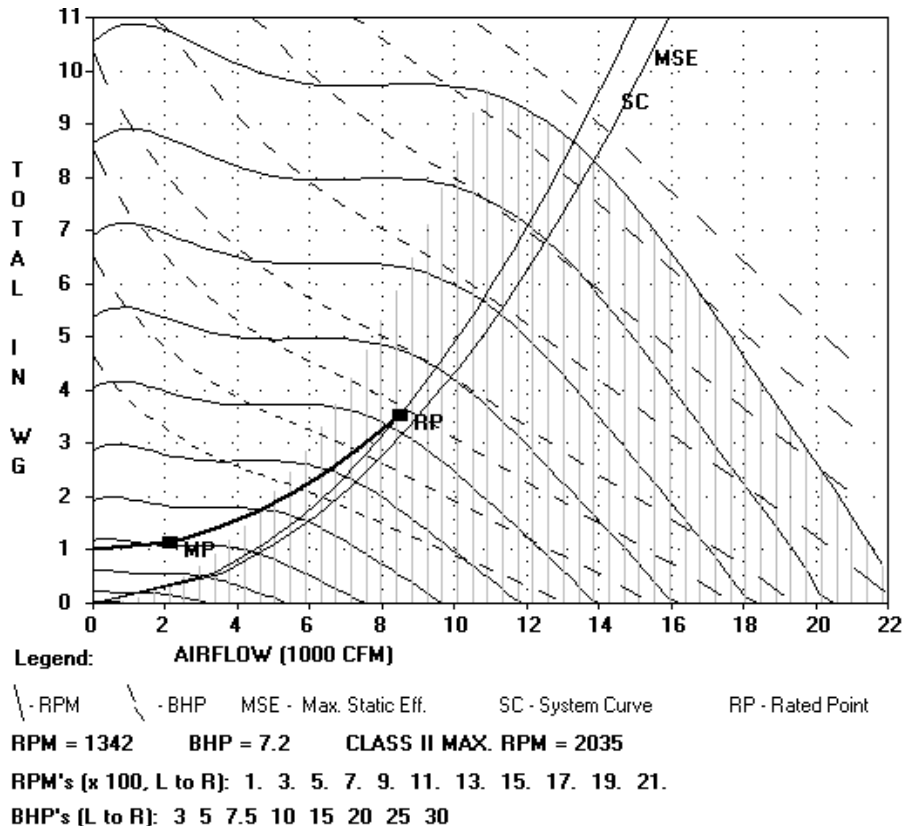
Fan Model	39M2101HPDL-U
Unit Size	21W
Fan Type	DIRECT DRIVE PLENUM
Fan Wheel Diameter	27
Fan Class	II
Fan Application	Draw Thru
Orientation	Horizontal
Actual Airflow, CFM	8500
Site Altitude, ft	0
Upstream Ext. Static, in wg	0.00
Downstream Ext. Static, in wg	2.25
Cooling Coil Static, in wg	0.73
Heating Coil Static, in wg	0.13
Total Accessory Static, in wg	0.43
Total Static Pressure, in wg	3.54
Calculated Fan RPM / Motor RPM	1342 / 1200
Class II Max. RPM	2035
Static Efficiency (%)	66
Number of Fans	1
Fan BHP	7.2
Fan Electrical Power, kW	5.9



Accessories:

- (1) Flat Throwaway (2 in.), Dirty [0.35]
- (1) Mixing or Exhaust Box [0.08]

NOTE: Certified in accordance with the AHRI Central Station Air-Handling Unit Certification Program, which is based on AHRI Standards 430/431. Certified units may be found in the AHRI Directory at www.ahridirectory.org



Unit width: 6'-7" (plus lifting lugs)
 Return Fan
 3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 2In. Flat Filter
 Qty (6) 20in. x 25in.
 Hot Water 1 Row 8 FPI Half Circuit (qty. 1)
 Chilled Water 8 Row 11 FPI Full Circuit (qty. 1)

Draw-Thru Supply Fan
 7.5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 Operating weight: 5172.0 lbs.
 Upstream Corner Weight (each): 1195.0 lbs.
 Downstream Corner Weight (each): 1391.0 lbs.

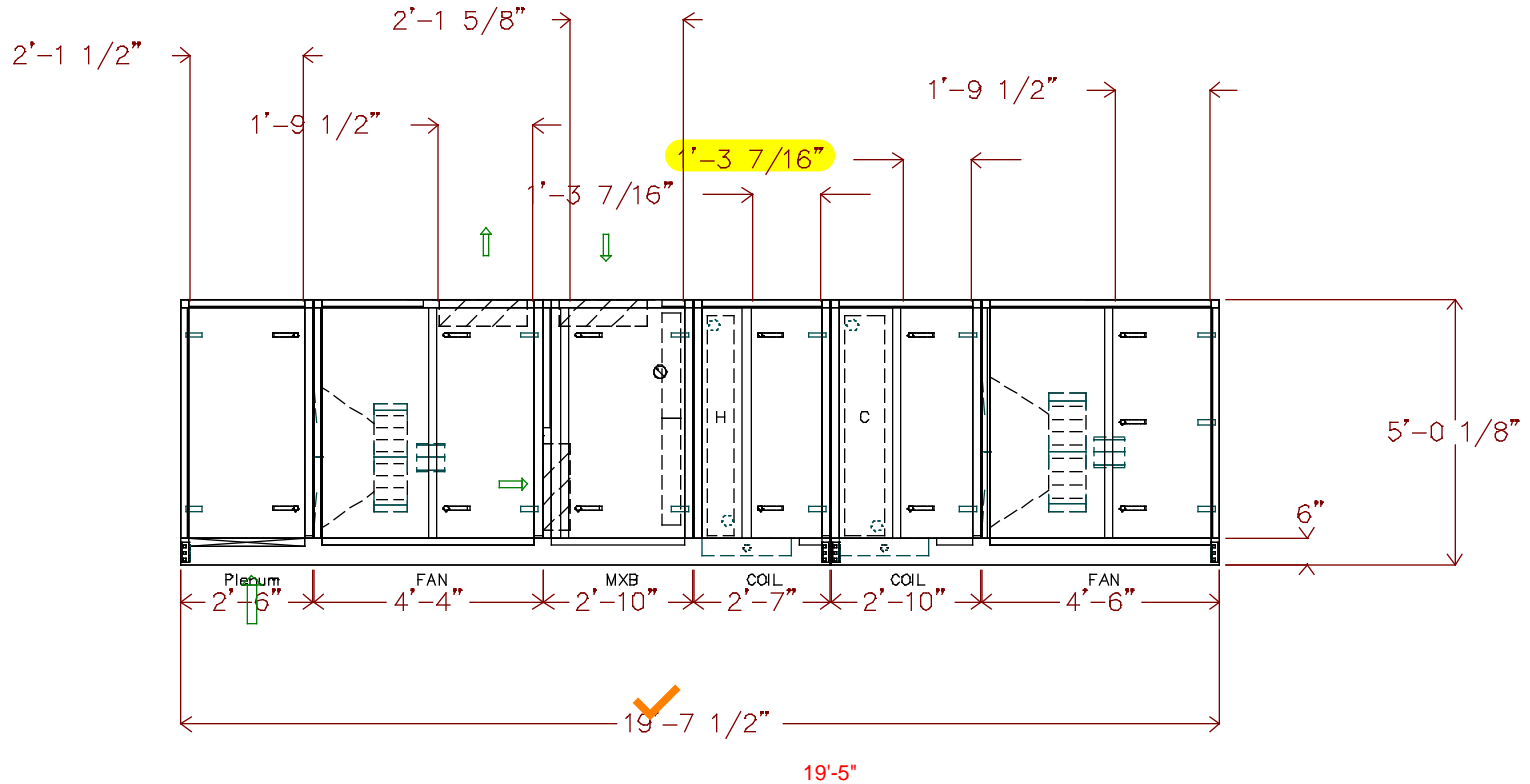


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39MN

Split	Airway Length	Weight (lbs.)
(Split 1)	19'-7 1/2"	5172



DATE
4/26/2022

AHUBuilder
v6.691

39M Central Station Air-Handler, Size 21W
 CMS Elon, Hawk, Polo Ridge: AHU-1
 Assembly Drawing

REVISION
Side View

Unit viewed from right side of side elevation view.

Unit length: 19'-7 1/2"

Return Fan

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2In. Flat Filter

Qty (6) 20in. x 25in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Chilled Water 8 Row 11 FPI Full Circuit (qty. 1)

Draw-Thru Supply Fan

7.5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 5172.0 lbs.

Upstream Corner Weight (each): 1195.0 lbs.

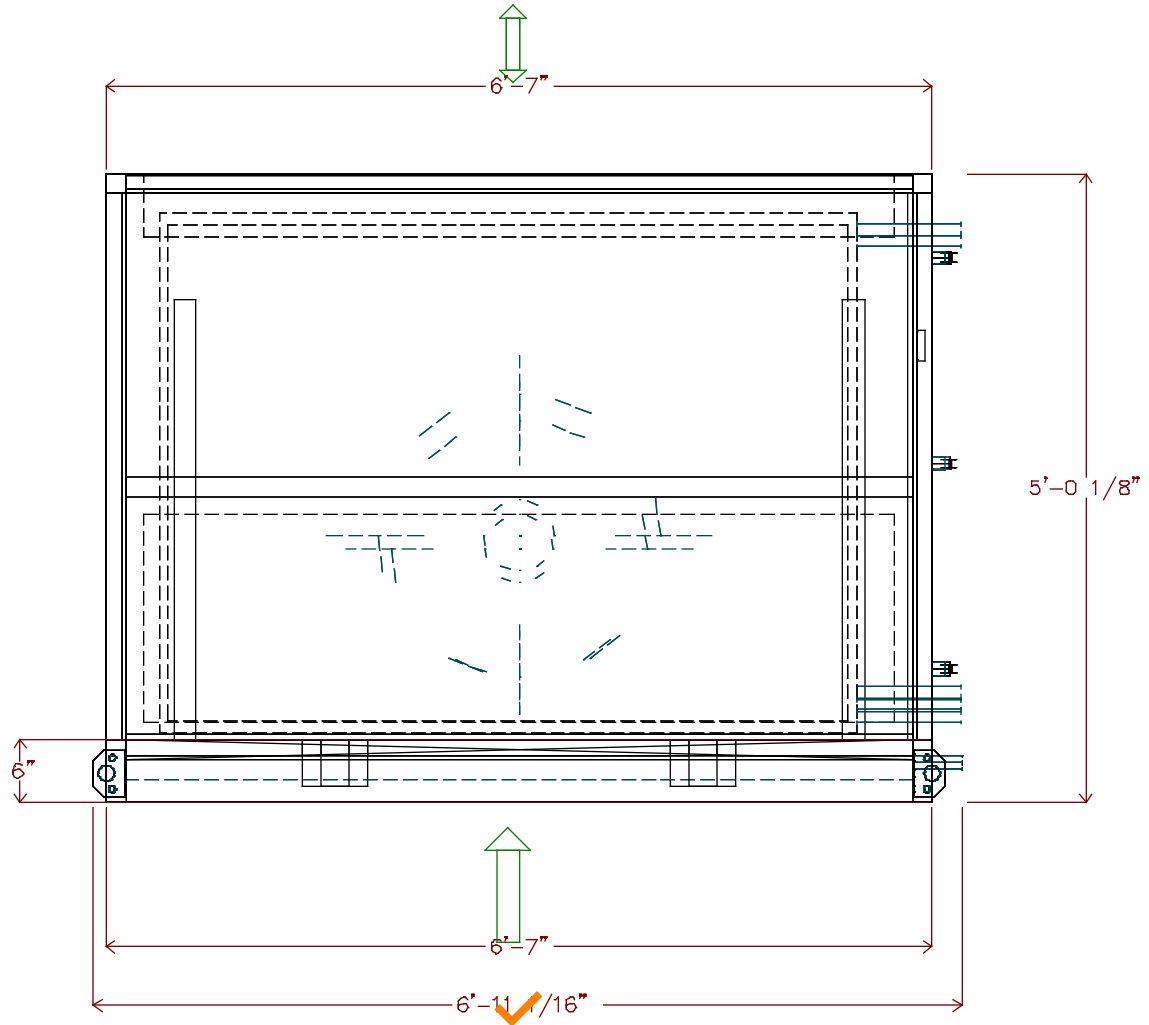
Downstream Corner Weight (each): 1391.0 lbs.



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39MN



DATE
4/26/2022

AHUBuilder
v6.69I

39M Central Station Air-Handler, Size 21W
CMS Elon, Hawk, Polo Ridge: AHU-1
Assembly Drawing

REVISION
End View

Unit height: 5'-0 1/8"

Return Fan

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2in. Flat Filter

Qty (6) 20in. x 25in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Chilled Water 8 Row 11 FPI Full Circuit (qty. 1)

Draw-Thru Supply Fan

7.5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 5172.0 lbs.

Upstream Corner Weight (each): 1195.0 lbs.

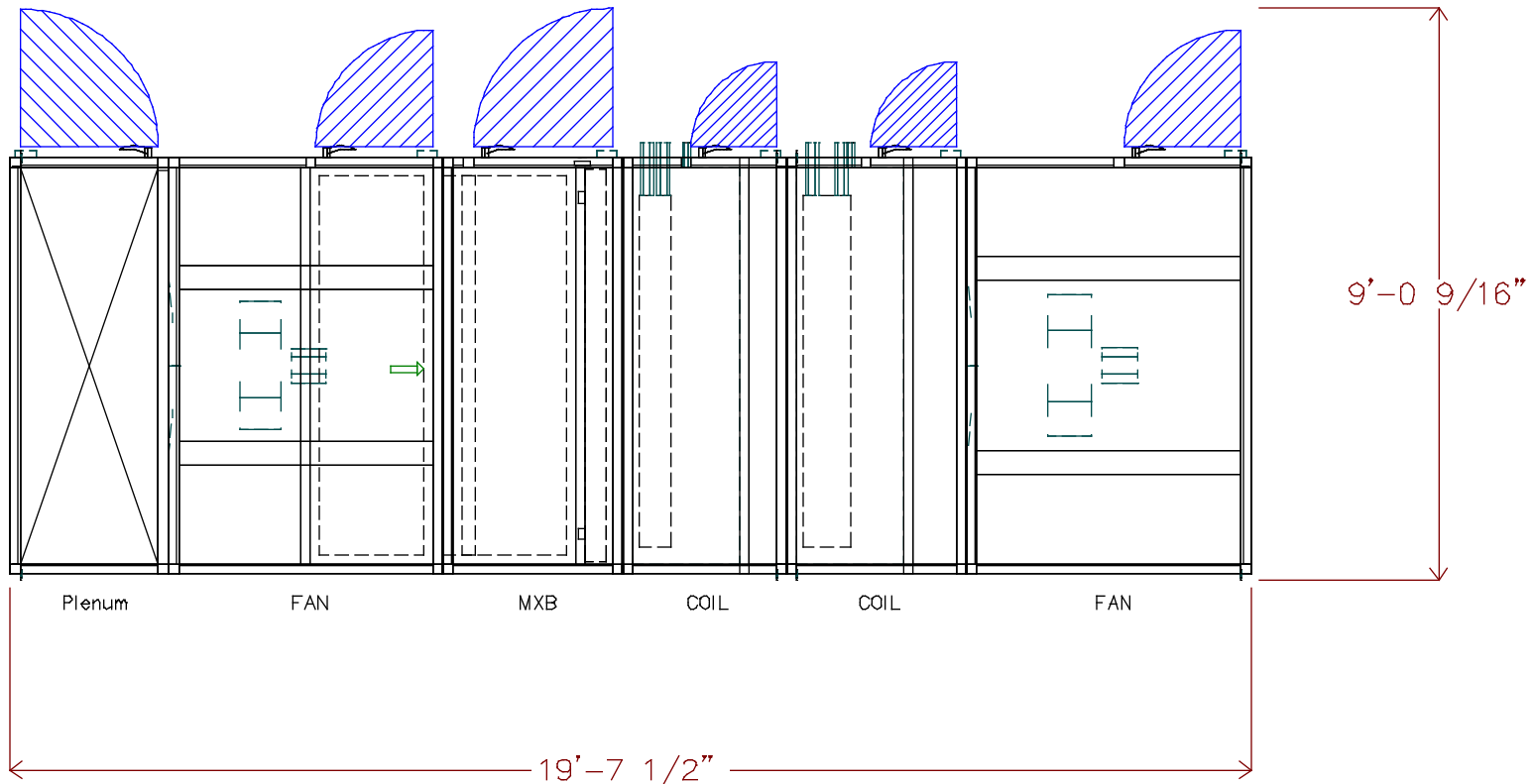
Downstream Corner Weight (each): 1391.0 lbs.



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DATE
4/26/2022

AHUBuilder
v6.691

39M Central Station Air-Handler, Size 21W
CMS Elon, Hawk, Polo Ridge: AHU-1
Assembly Drawing

REVISION
Top View

Unit height: 5'-0 1/8"

Return Fan

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2ln. Flat Filter

Qty (6) 20in. x 25in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Chilled Water 8 Row 11 FPI Full Circuit (qty. 1)

Draw-Thru Supply Fan

7.5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 5172.0 lbs.

Upstream Corner Weight (each): 1195.0 lbs.

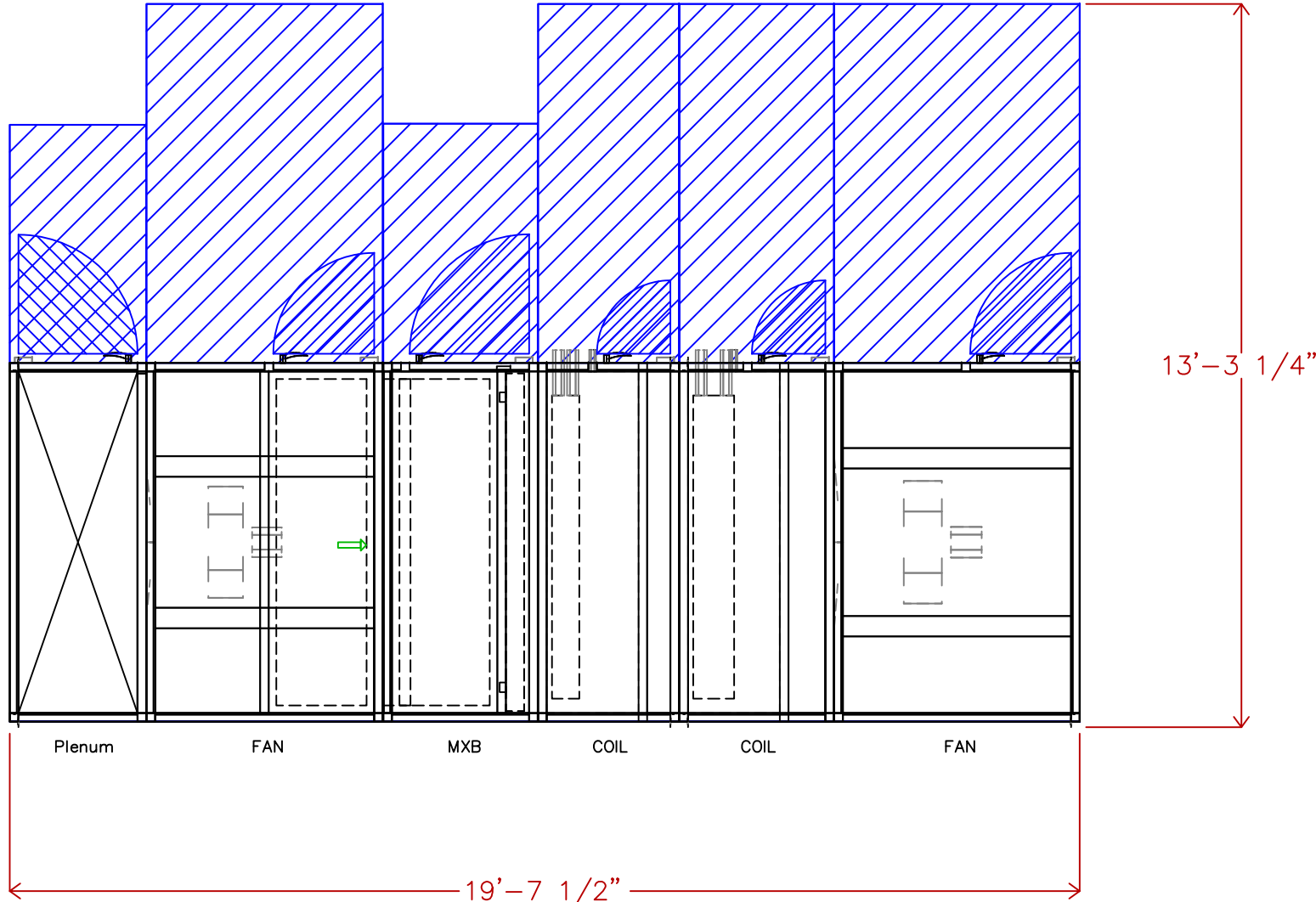
Downstream Corner Weight (each): 1391.0 lbs.



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DATE
4/26/2022

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39M Central Station Air-Handler, Size 21W
CMS Elon, Hawk, Polo Ridge: AHU-1
Assembly Drawing

REVISION
Top View

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)
 Chilled Water 8 Row 11 FPI Full Circuit (qty. 1)

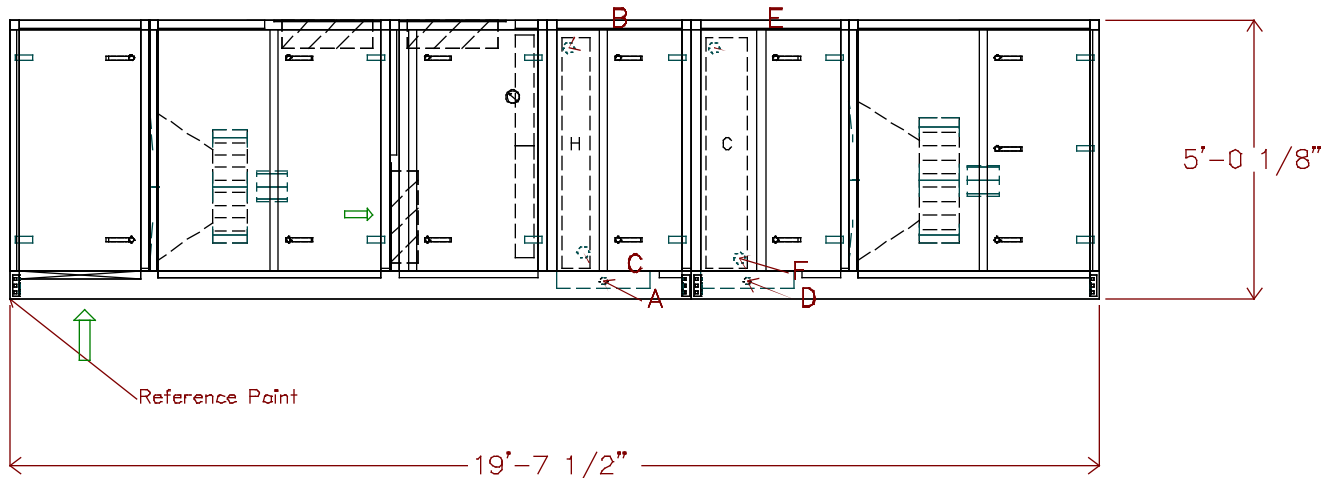


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Pipe	x	y	diameter	Usage
A	10'-8 5/16"	3 13/16"	1 1/2"	DrainPan
B	10'-0 3/4"	4'-6 3/16"	2 1/2"	HW Outlet
C	10'-3 15/16"	9 15/16"	2 1/2"	HW Inlet
D	13'-3 3/8"	3 13/16"	1 1/2"	DrainPan
E	12'-8 3/16"	4'-6 3/16"	2 1/2"	CW Outlet
F	13'-1 11/16"	8 11/16"	2 1/2"	CW Inlet



DATE
4/26/2022

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39M Central Station Air-Handler, Size 21W
 CMS Elon, Hawk, Polo Ridge: AHU-1
 Assembly Drawing

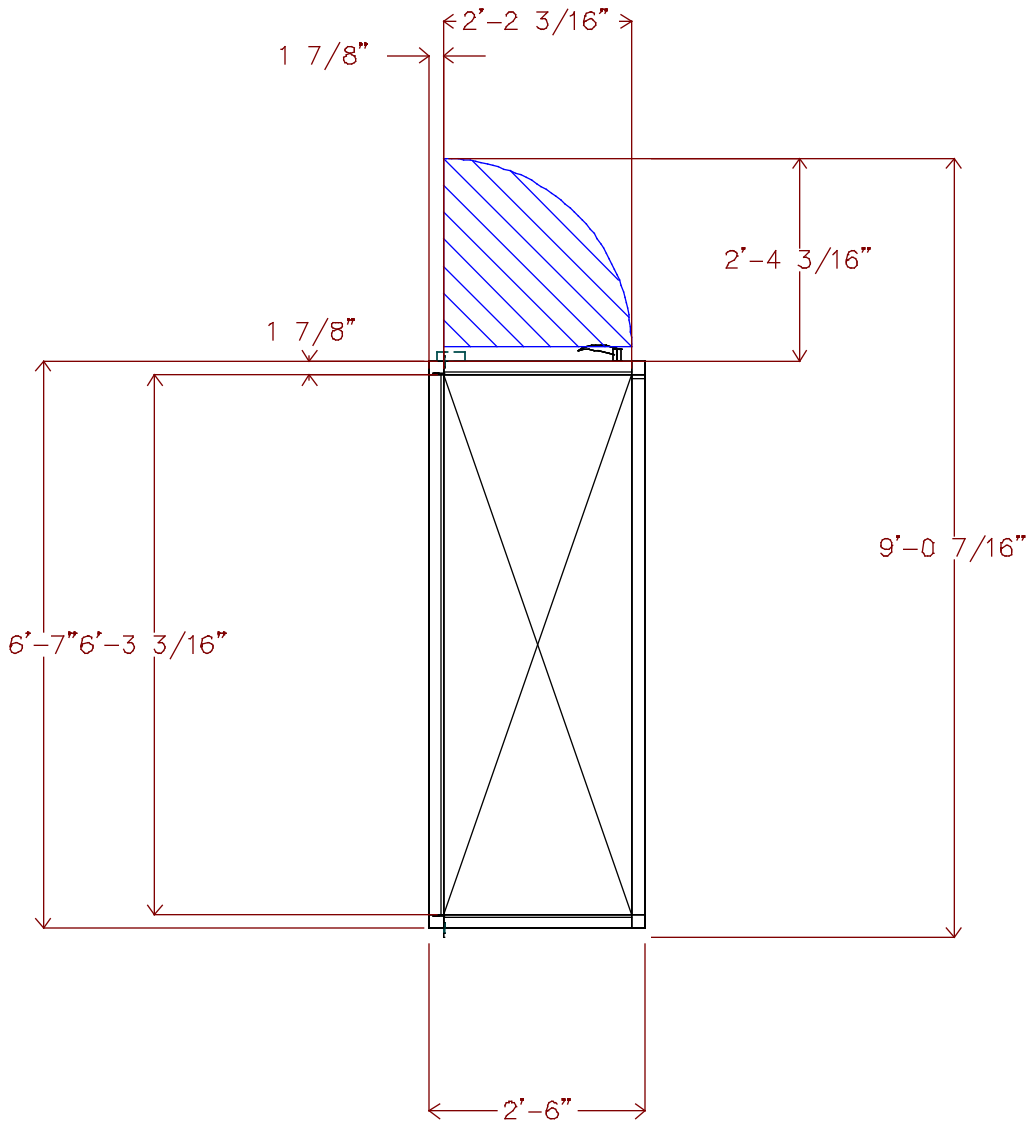
REVISION
Side View



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39M Central Station Air-Handler, Size 21W
CMS Elon, Hawk, Polo Ridge: AHU-1
Turning Plenum

REVISION
Top View

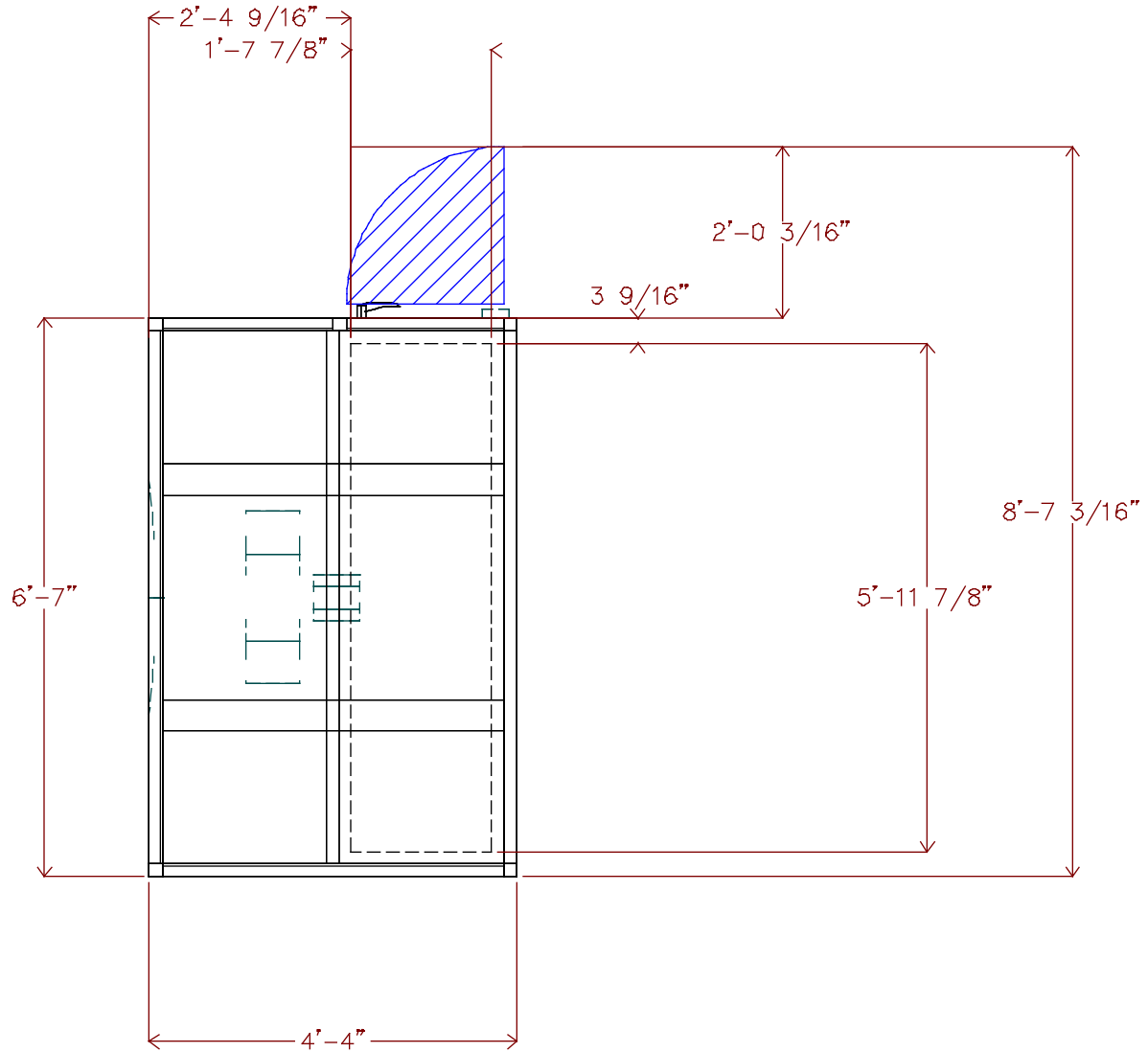
Return Fan
 3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM



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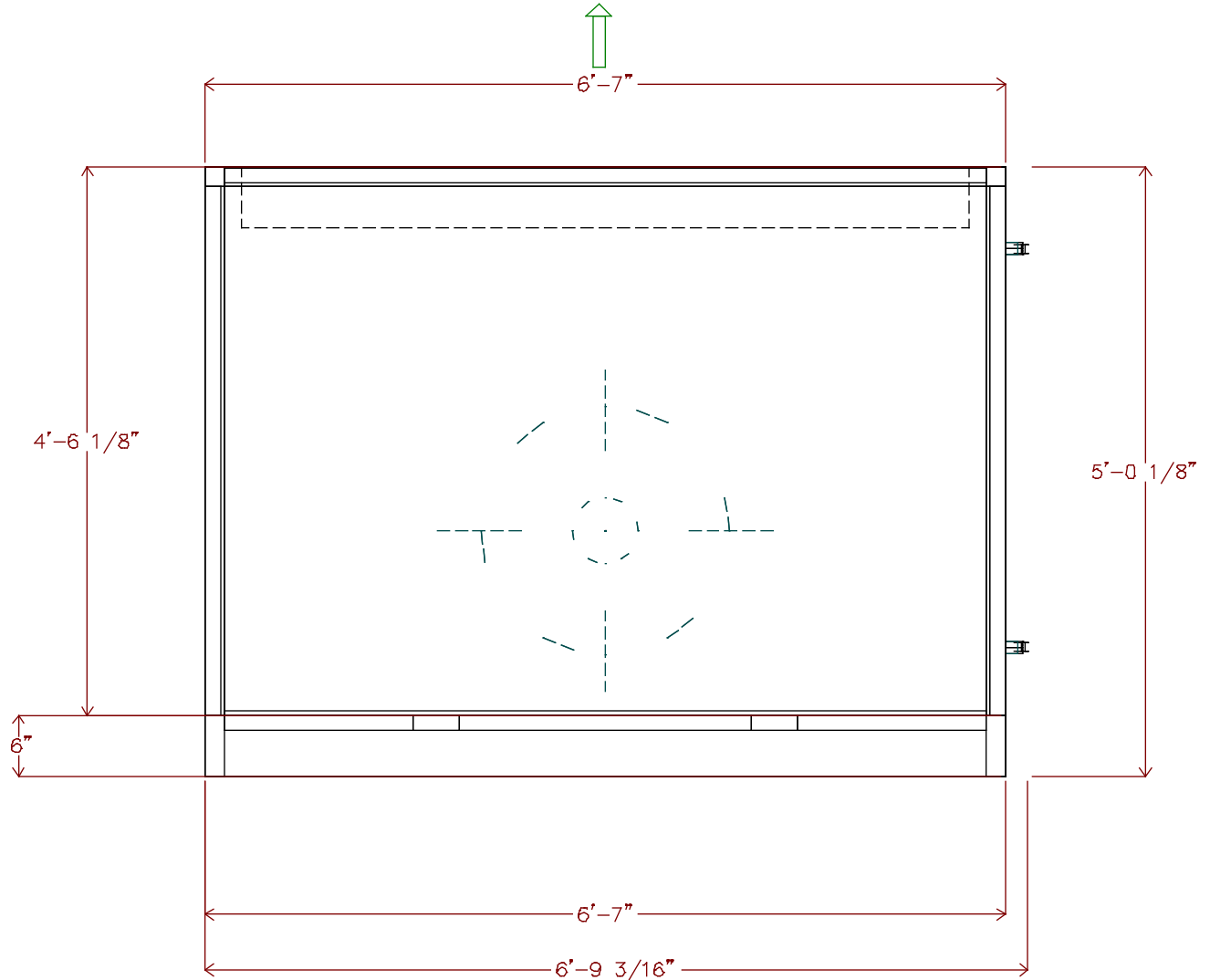


DATE 4/26/2022	AHUBuilder v6.69I	39M Central Station Air-Handler, Size 21W CMS Elon, Hawk, Polo Ridge: AHU-1 Return Fan	REVISION Top View
-------------------	----------------------	--	----------------------

Unit viewed from right side of side elevation view.

Return Fan

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM



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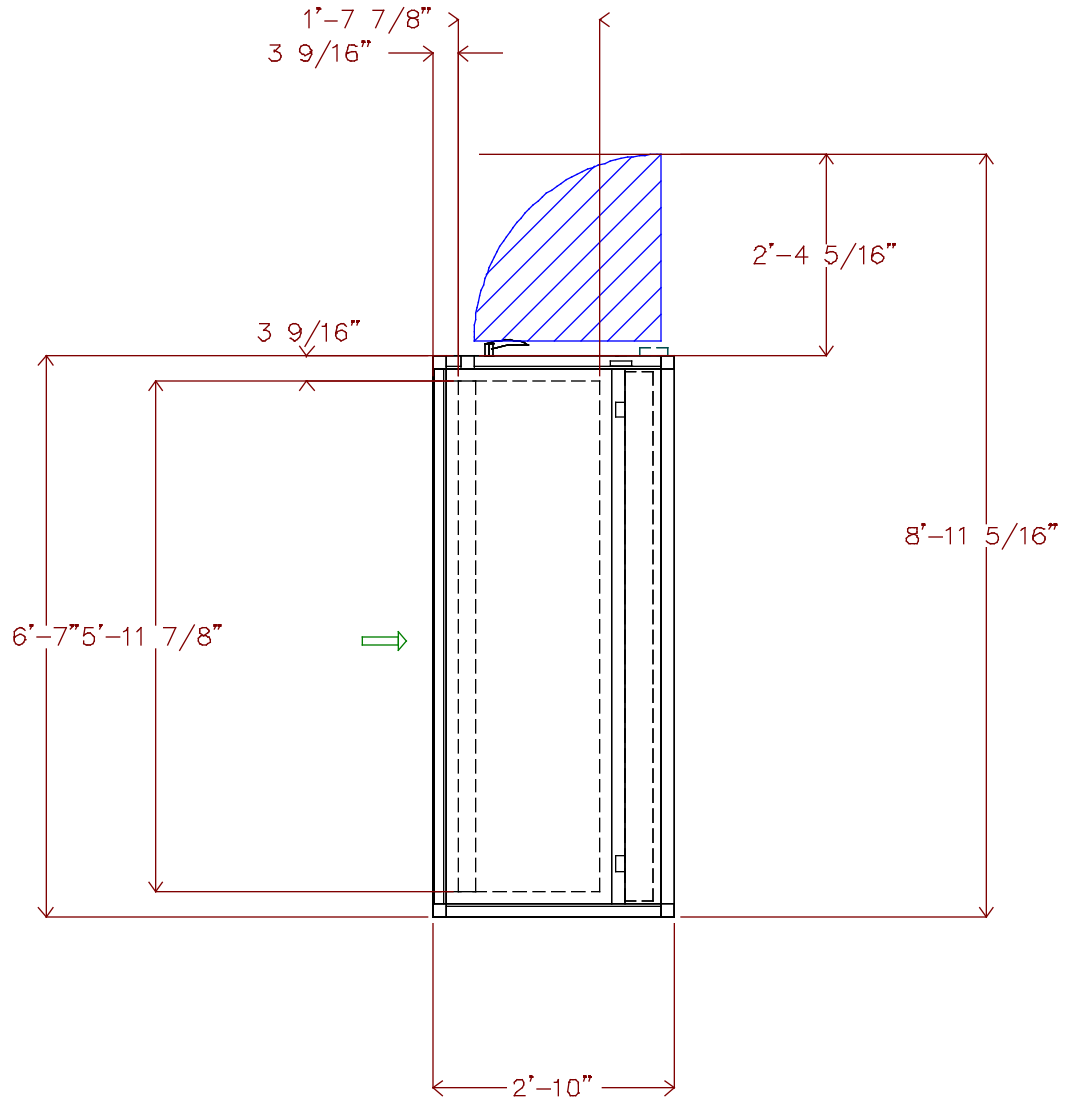
DATE
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AHUBuilder
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39M Central Station Air-Handler, Size 21W
CMS Elon, Hawk, Polo Ridge: AHU-1
Return Fan

REVISION
End View

2In. Flat Filter
 Qty (6) 20in. x 25in.



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39M Central Station Air-Handler, Size 21W
 CMS Elon, Hawk, Polo Ridge: AHU-1
 Filter Mixing Box

REVISION
Top View

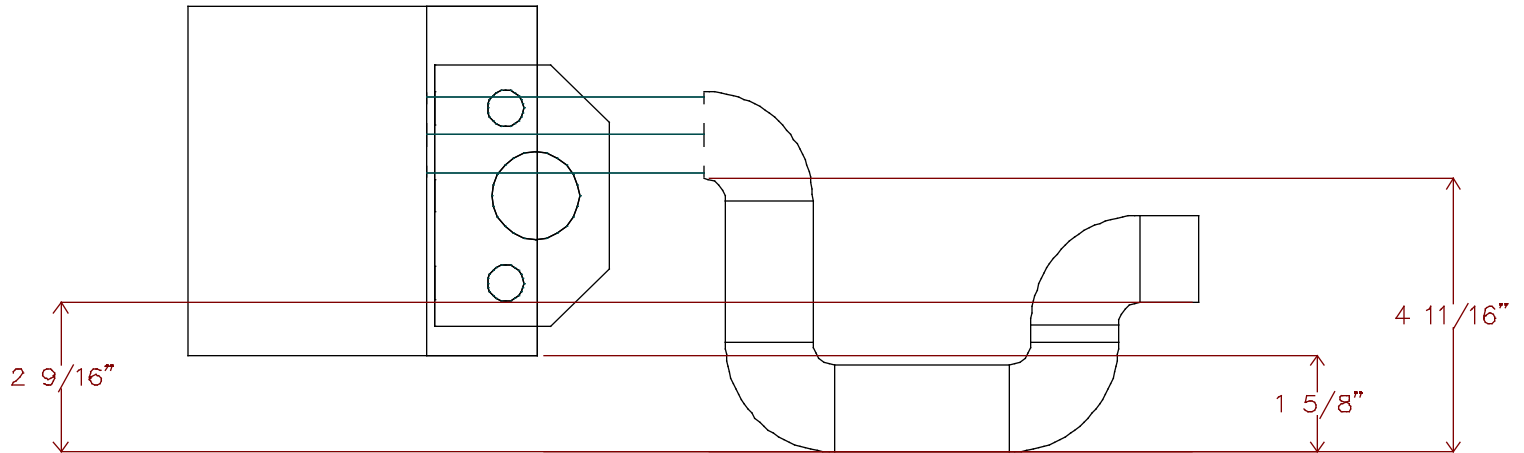


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DRAW-THRU



DATE
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39M Central Station Air-Handler, Size 21W
CMS Elon, Hawk, Polo Ridge: AHU-1
Condensate Trap Dimensions

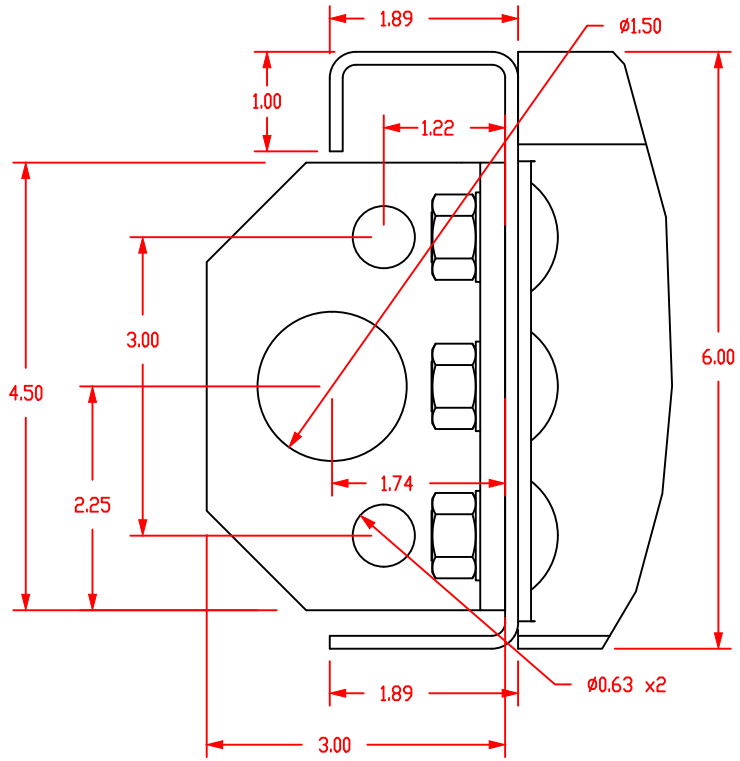
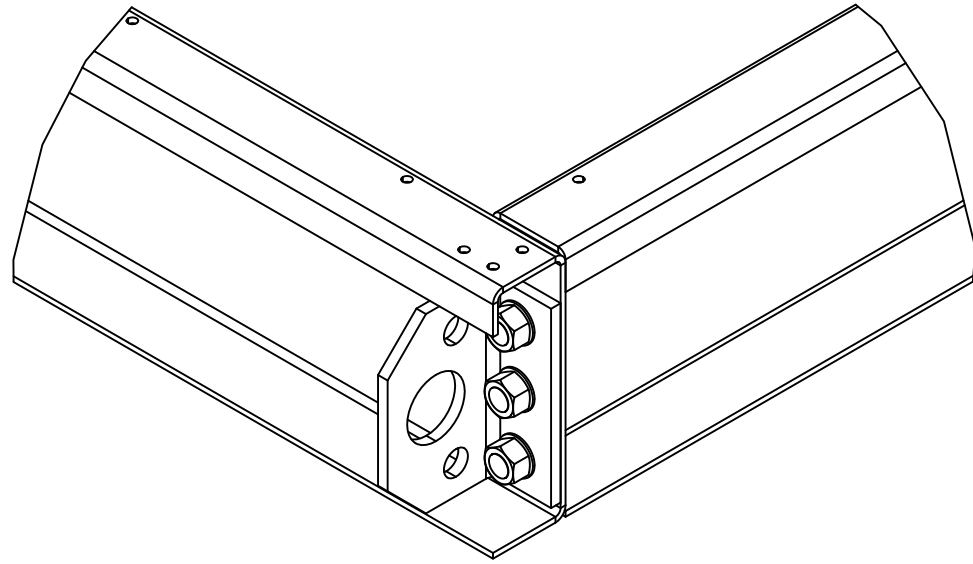
REVISION
End View



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39M

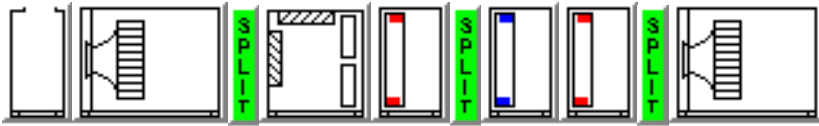


DATE
4/26/2022

AHUBuilder
v6.69l

39M Central Station Air-Handler, Size: 03 - 110
6" Baserail and Lifting Lug Detail

REVISION



Unit Parameters

Aero Indoor Air Handler

39MN Size 30W

Insulation: R-13 Double Wall Sealed Panel

Exterior Finish: Painted Exterior Panels 18ga

Interior Finish: Galvanized Interior Panels

Level I Thermal Break

6 inch tall Base Rail

Turning Plenum

Discharge : Top

Door Left Side

Return Fan

Shipping Split After

Damper: Top Premium Parallel

Rear Inlet

Fan Sled

Plenum Fan A PDLA01270

Direct Drive Fan

1239 fanRPM Class II

Full Open Discharge

Spring Fan Isolation

Motor Shaft Grounding

Motor

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Manufacturer - Generic

Frame Size - 215T

Motor Shaft Diameter (in.) - 1.375

Voltage Selected - 460/3/60

Full Load Amps - 7.3

Efficiency - 89.5%

Contractor:
Verify motor rating minimum SCCR
Rating 35 KAIC
Verify Phase Loss protection provided
Coordinate VFD requirements with
vendor providing drives.

Door Left Side

Filter Mixing Box

Damper: Rear Premium Parallel

Damper: Top Premium Parallel

2In. Flat Filter

Field Supplied 2in. MERV 8 Throwaway Filter

Confirmed,
MERV 10 will
be supplied

Job Name CMS Elon, Hawk, Polo Ridge
Mark for AHU-2

Construction Filters

Qty (10) 20in. x 24in.

Door Left Side

Minihelic Differential Pressure Gage 0-2" w.c. Left Side

Hot Water Coil and Plenum

Shipping Split After

304 Stainless Steel Drain Pan Left Side

Hot Water 30.35 sq.ft 1 Row 8 FPI Half Circuit

Coil Connection Left Side

1/2 in. Tube Diameter

Fin Thickness: 0.0060

AL fins Galv. Casing

Steel Header

No Coating

Door Left Side

Chilled Water Coil and Plenum

304 Stainless Steel Drain Pan Left Side

Chilled Water 30.35 sq.ft 8 Row 14 FPI Double Circuit

Coil Connection Left Side

1/2 in. Tube Diameter

AL fins Galv. Casing

Steel Header

No Coating

Door Left Side

Hot Water Coil and Plenum

Shipping Split After

304 Stainless Steel Drain Pan Left Side

Hot Water 30.35 sq.ft 1 Row 8 FPI Half Circuit

Coil Connection Left Side

1/2 in. Tube Diameter

Fin Thickness: 0.0060

AL fins Galv. Casing

Steel Header

No Coating

Door Left Side

Draw-Thru Supply Fan

Rear Inlet

Fan Sled

Plenum Fan A PDLA01270

Direct Drive Fan

1490 fanRPM Class II

Field Supplied Discharge

Spring Fan Isolation

Job Name CMS Elon, Hawk, Polo Ridge
Mark for AHU-2

Motor Shaft Grounding

Motor

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Manufacturer - Generic

Frame Size - 256T

Motor Shaft Diameter (in.) - 1.625

Voltage Selected - 460/3/60

Full Load Amps - 14.1

Efficiency - 91.0%

Contractor:
Verify motor rating minimum SCCR
Rating 35 KAIC
Verify Phase Loss protection provided

Door Left Side

Configuration Notes

Preheat coil configurations can cause freeze stat to trip if the downstream cooling coil isn't drained in heating season and/or PID valve control loop is too slow to react.

If a bottom connection is required, use an Inlet Plenum Section.

If a bottom connection is required, use a Discharge Plenum Section.

Discharge duct(s) must be gasketed and screwed directly to the discharge panel of the unit.

Weights and Dimensions

(LxWxH in ft in) 22' 6" x 8' 9" x 5' 0" **

Operating 7456 LB **

Coordinate unit weight with Structural

Warranty Part Number(s) (NET PRICING)

Qty 1 Each Additional 39 Series Start-up

Qty 1 2nd Year Parts only 39M - Size 21 - 30

Weights and Dimensions are approximate. Weights include base unit weight, coils (wet & dry), fans and fan motors, and other components, but does not include filters, drives and skids. Approximate dimensions are provided primarily for shipping purposes. Shipping skids are not included.
All filter media efficiency ratings are for the filter media only.

Chilled Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-2

Cooling Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Total Cooling Capacity _____
 Sensible Cooling Capacity _____
Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Rise _____
 Entering Air Dry Bulb _____
 Entering Air Wet Bulb _____
 Entering Air Enthalpy _____
 Leaving Air Dry Bulb _____
 Leaving Air Wet Bulb _____
 Leaving Air Enthalpy _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MC	1	
8 / 14 / DB	.0042	in
Sine Wave	Large	
	30.35	sqft
	411.9	fpm
Al-Galv.	0.5	in
1.25 x 0.781	0.016	in
	12500	CFM
	0	ft
	11999	SCFM
	589.65	MBH
	430.16	MBH
	95.0	gpm
	3.8	ft wg
	2.1	ft/s
	44.00	F
	56.37	F
	12.4	F
	83.00	F
	67.00	F
	31.48	BTU/lb
	50.36	F
	50.36	F
	20.5	BTU/lb
	0.84	in wg
	FW	
	0	%
	0.0	(hr-sqft-F)/BTU



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Hot Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-2

Heating Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Heating Capacity _____
 Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Drop _____
 Entering Air Temperature _____
 Leaving Air Temperature _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MH
1
1 / 8 / HF
.0060 in
Sine Wave
Large
30.35 sqft
411.9 fpm
Al-Galv.
0.5 in
1.25 x 0.781 in
0.016 in
12500 CFM
0 ft
12619 SCFM
318.42 MBH
26.3 gpm
2.1 ft wg
2.3 ft/s
160.00 F
135.28 F
24.7 F
65.00 F
88.07 F
0.14 in wg
FW
0 %
0.0 (hr-sqft-F)/BTU



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Hot Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-2

Heating Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Heating Capacity _____
Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Drop _____
 Entering Air Temperature _____
 Leaving Air Temperature _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MH
1
1 / 8 / HF
.0060 in
Sine Wave
Large
30.35 sqft
411.9 fpm
Al-Galv.
0.5 in
1.25 x 0.781 in
0.016 in
12500 CFM
0 ft
12619 SCFM
213.67 MBH
8.3 gpm
0.2 ft wg
0.7 ft/s
160.00 F
107.40 F
52.6 F
65.00 F
80.49 F
0.14 in wg
FW
0 %
0.0 (hr-sqft-F)/BTU



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Unit Acoustics Summary

Project: CMS Elon, Hawk, Polo Ridge
Tag: AHU-2

Unit Acoustics Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	93	88	85
125 Hz _____	90	90	87
250 Hz _____	94	93	89
500 Hz _____	87	85	82
1000 Hz _____	85	77	74
2000 Hz _____	84	77	73
4000 Hz _____	81	74	70
8000 Hz _____	79	72	68

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Unit Acoustics A-weighted Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	67	62	59
125 Hz _____	74	74	71
250 Hz _____	86	84	81
500 Hz _____	84	82	79
1000 Hz _____	85	77	74
2000 Hz _____	85	78	74
4000 Hz _____	82	75	71
8000 Hz _____	78	71	67

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Sound contributed by Supply and Return Fans

Unit Acoustics PART-LOAD Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	89	86	82
125 Hz _____	85	88	83
250 Hz _____	88	90	84
500 Hz _____	82	82	77
1000 Hz _____	80	74	68
2000 Hz _____	78	74	68
4000 Hz _____	74	71	65
8000 Hz _____	74	69	64

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Unit Acoustics PART-LOAD A-weighted Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	63	59	55
125 Hz _____	69	72	67
250 Hz _____	79	81	76
500 Hz _____	79	79	74
1000 Hz _____	80	74	68
2000 Hz _____	79	75	69
4000 Hz _____	75	72	66
8000 Hz _____	72	68	63

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

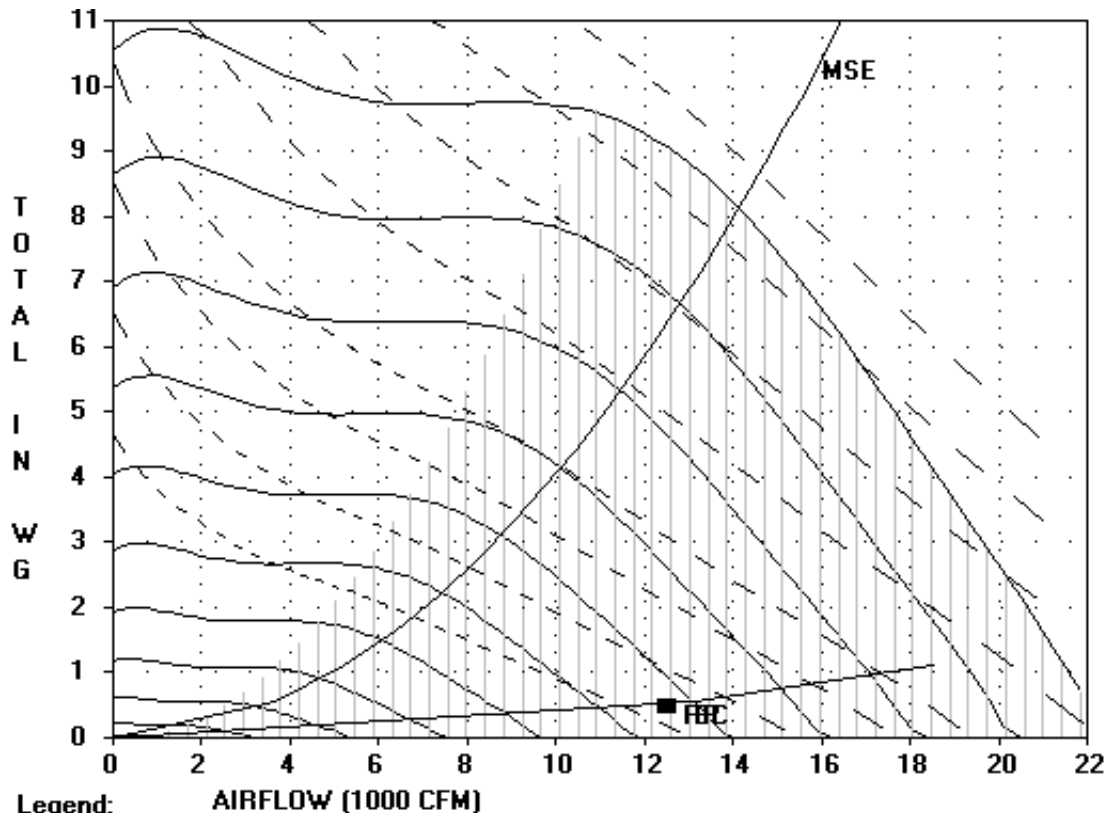
Sound contributed by Supply and Return Fans

Return Fan Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-2

Fan Model	39M3001HPDL
Unit Size	30W
Fan Type	DIRECT DRIVE PLENUM (Return)
Fan Wheel Diameter	27
Fan Class	II
Static Efficiency (%)	26
Fan Application	Draw Thru
Orientation	Horizontal
Actual Airflow, CFM	12500
Site Altitude, , ft	0
Total Upstream Static Losses, in wg	0.50
Number of Fans	1
Calculated Fan RPM / Motor RPM	1239 / 1200
Class II Max. RPM	2035
Fan BHP	3.8
Fan Electrical Power, kW	3.1

Unit is outside of the scope of AHRI Standard 430/431.



Legend:

AIRFLOW (1000 CFM)

- RPM
- BHP
MSE - Max. Static Eff.
SC - System Curve
RP - Rated Point

RPM = 1239 BHP = 3.8 CLASS II MAX. RPM = 2035

RPM's (x 100, L to R): 1. 3. 5. 7. 9. 11. 13. 15. 17. 19. 21.

BHP's (L to R): 3 5 7.5 10 15 20 25 30

Supply Fan Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-2

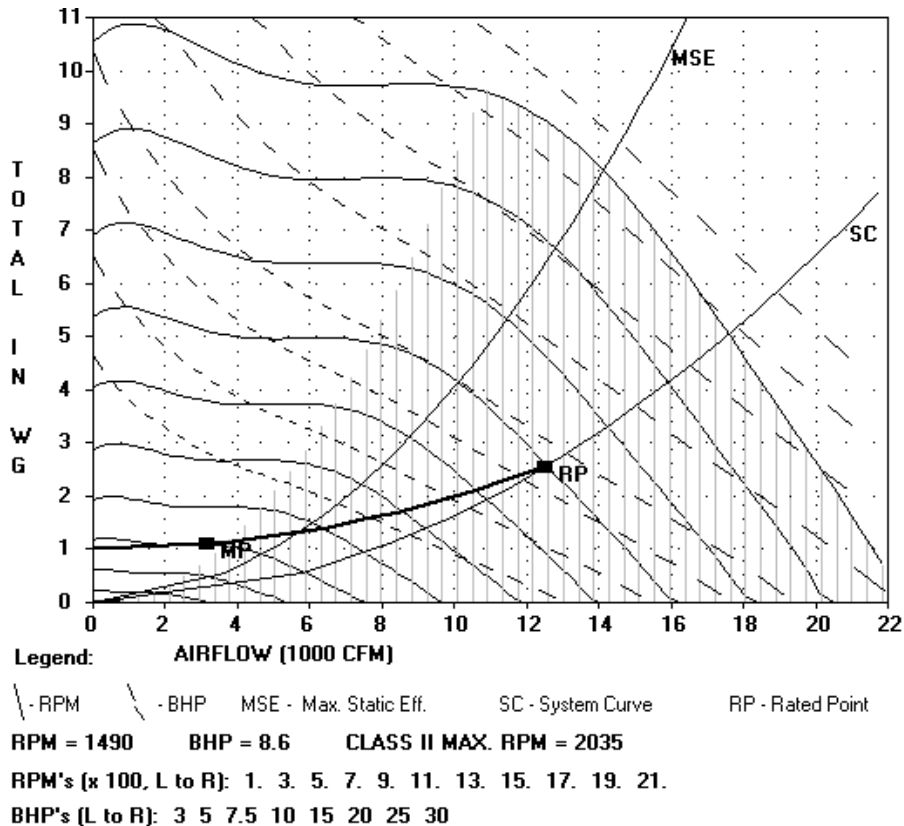
Fan Model	39M3001HPDL-U
Unit Size	30W
Fan Type	DIRECT DRIVE PLENUM
Fan Wheel Diameter	27
Fan Class	II
Fan Application	Draw Thru
Orientation	Horizontal
Actual Airflow, CFM	12500
Site Altitude, ft	0
Upstream Ext. Static, in wg	0.00
Downstream Ext. Static, in wg	1.00
Cooling Coil Static, in wg	0.84
Heating Coil Static, in wg	0.28
Total Accessory Static, in wg	0.43
Total Static Pressure, in wg	2.55
Calculated Fan RPM / Motor RPM	1490 / 1200
Class II Max. RPM	2035
Static Efficiency (%)	58
Number of Fans	1
Fan BHP	8.6
Fan Electrical Power, kW	7.0



Accessories:

- (1) Flat Throwaway (2 in.), Dirty [0.33]
- (1) Mixing or Exhaust Box [0.10]

NOTE: Certified in accordance with the AHRI Central Station Air-Handling Unit Certification Program, which is based on AHRI Standards 430/431. Certified units may be found in the AHRI Directory at www.ahridirectory.org

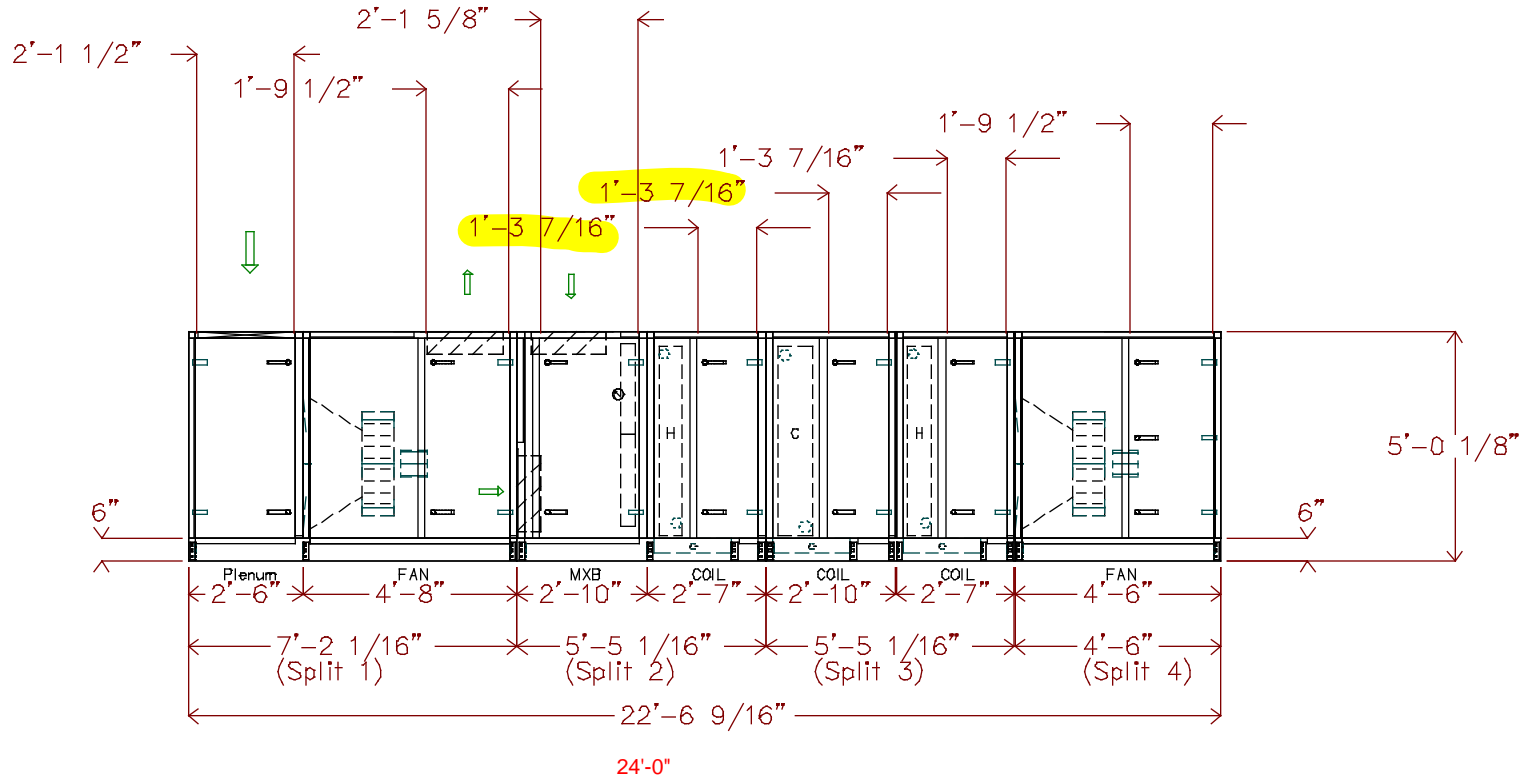


Unit width: 8'-9 11/16" (plus lifting lugs)
 Return Fan
 5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 2In. Flat Filter
 Qty (10) 20in. x 24in.
 Hot Water 1 Row 8 FPI Half Circuit (qty. 1)
 Chilled Water 8 Row 14 FPI Double Circuit (qty. 1)

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)
 Draw-Thru Supply Fan
 10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 Operating weight: 7457.0 lbs.
 Upstream Corner Weight (each): 1763.0 lbs.
 Downstream Corner Weight (each): 1965.0 lbs.



Split	Airway Length	Weight (lbs.)
(Split 1)	7'-2 1/16"	1910
(Split 2)	5'-5 1/16"	1746
(Split 3)	5'-5 1/16"	2252
(Split 4)	4'-6"	1549



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DATE 4/26/2022	AHUBuilder v6.69l	39M Central Station Air-Handler, Size 30W CMS Elon, Hawk, Polo Ridge: AHU-2 Assembly Drawing	REVISION Side View
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Unit viewed from right side of side elevation view.
 Unit length: 22'-6 9/16"
 Return Fan
 5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 2In. Flat Filter
 Qty (10) 20in. x 24in.
 Hot Water 1 Row 8 FPI Half Circuit (qty. 1)
 Chilled Water 8 Row 14 FPI Double Circuit (qty. 1)

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)
 Draw-Thru Supply Fan
 10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 Operating weight: 7457.0 lbs.
 Upstream Corner Weight (each): 1763.0 lbs.
 Downstream Corner Weight (each): 1965.0 lbs.

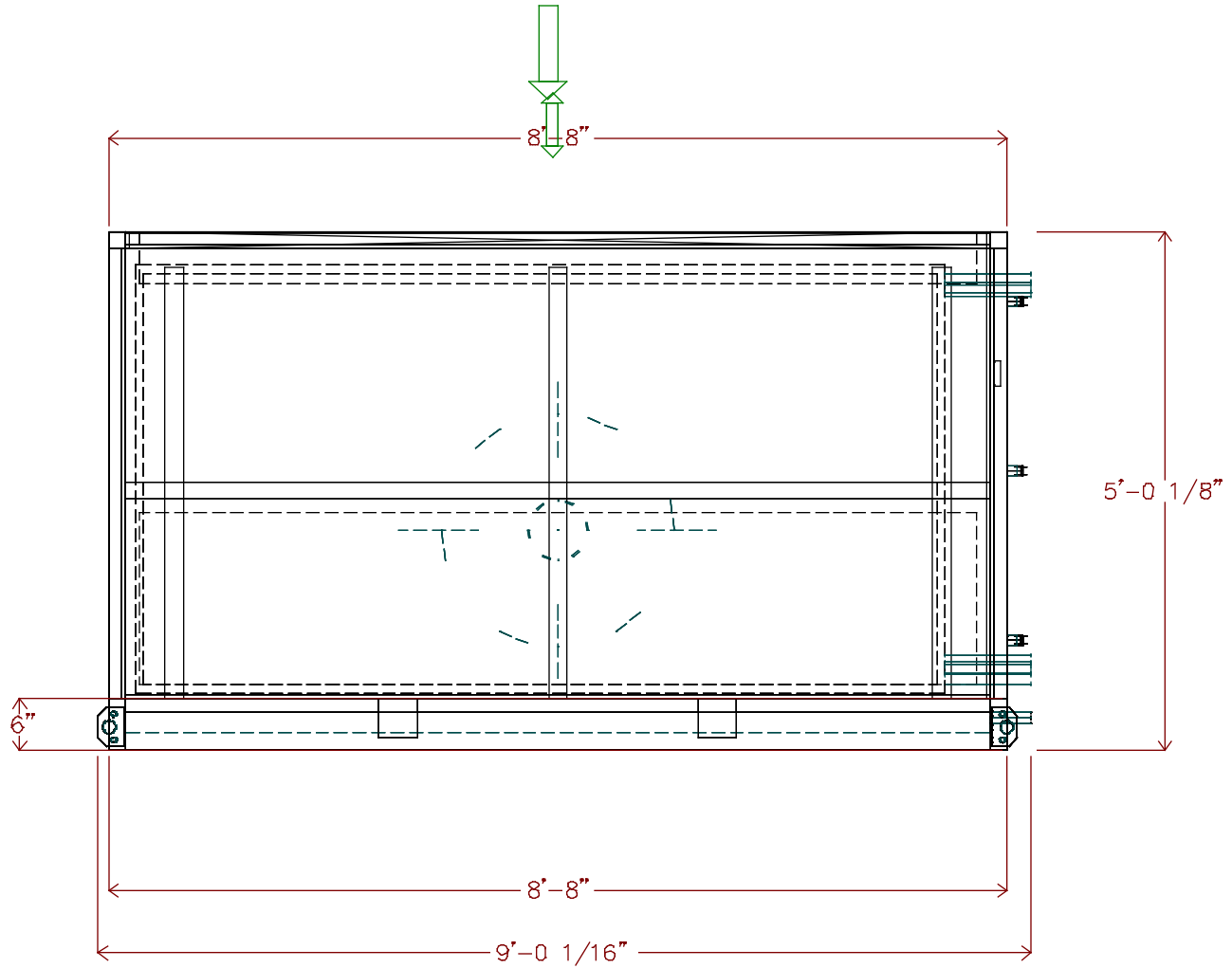


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39MN

Review unit width Return Fan requirements relative to AHU-1



DATE 4/26/2022	AHUBuilder v6.69I	39M Central Station Air-Handler, Size 30W CMS Elon, Hawk, Polo Ridge: AHU-2 Assembly Drawing	REVISION End View
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Unit height: 5'-0 7/8"

Return Fan

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2In. Flat Filter

Qty (10) 20in. x 24in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Chilled Water 8 Row 14 FPI Double Circuit (qty. 1)

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Draw-Thru Supply Fan

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 7457.0 lbs.

Upstream Corner Weight (each): 1763.0 lbs.

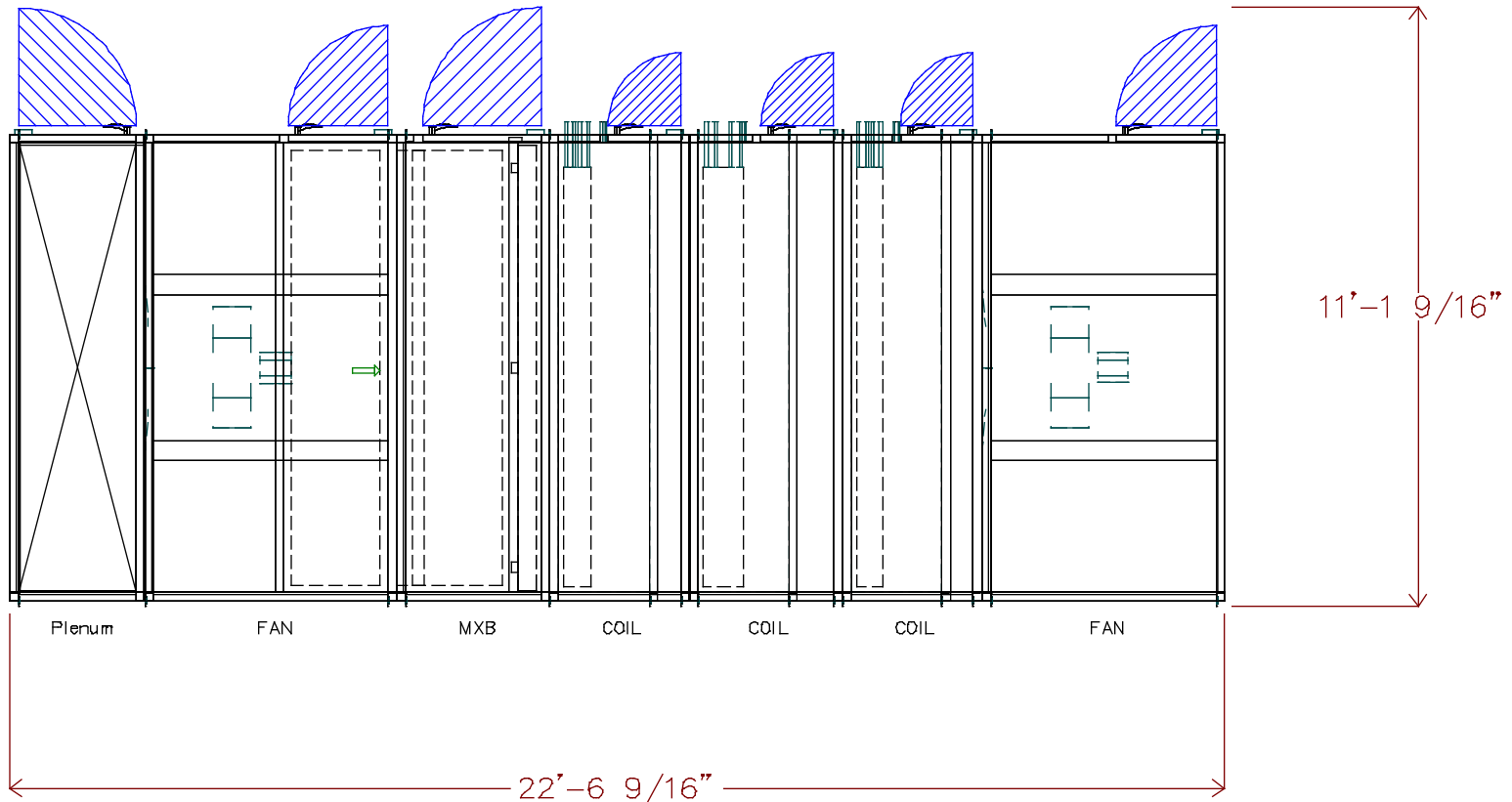
Downstream Corner Weight (each): 1965.0 lbs.



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39M Central Station Air-Handler, Size 30W
CMS Elon, Hawk, Polo Ridge: AHU-2
Assembly Drawing

REVISION
Top View

Unit height: 5'-0 7/8"

Return Fan

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2ln. Flat Filter

Qty (10) 20in. x 24in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Chilled Water 8 Row 14 FPI Double Circuit (qty. 1)

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Draw-Thru Supply Fan

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 7457.0 lbs.

Upstream Corner Weight (each): 1763.0 lbs.

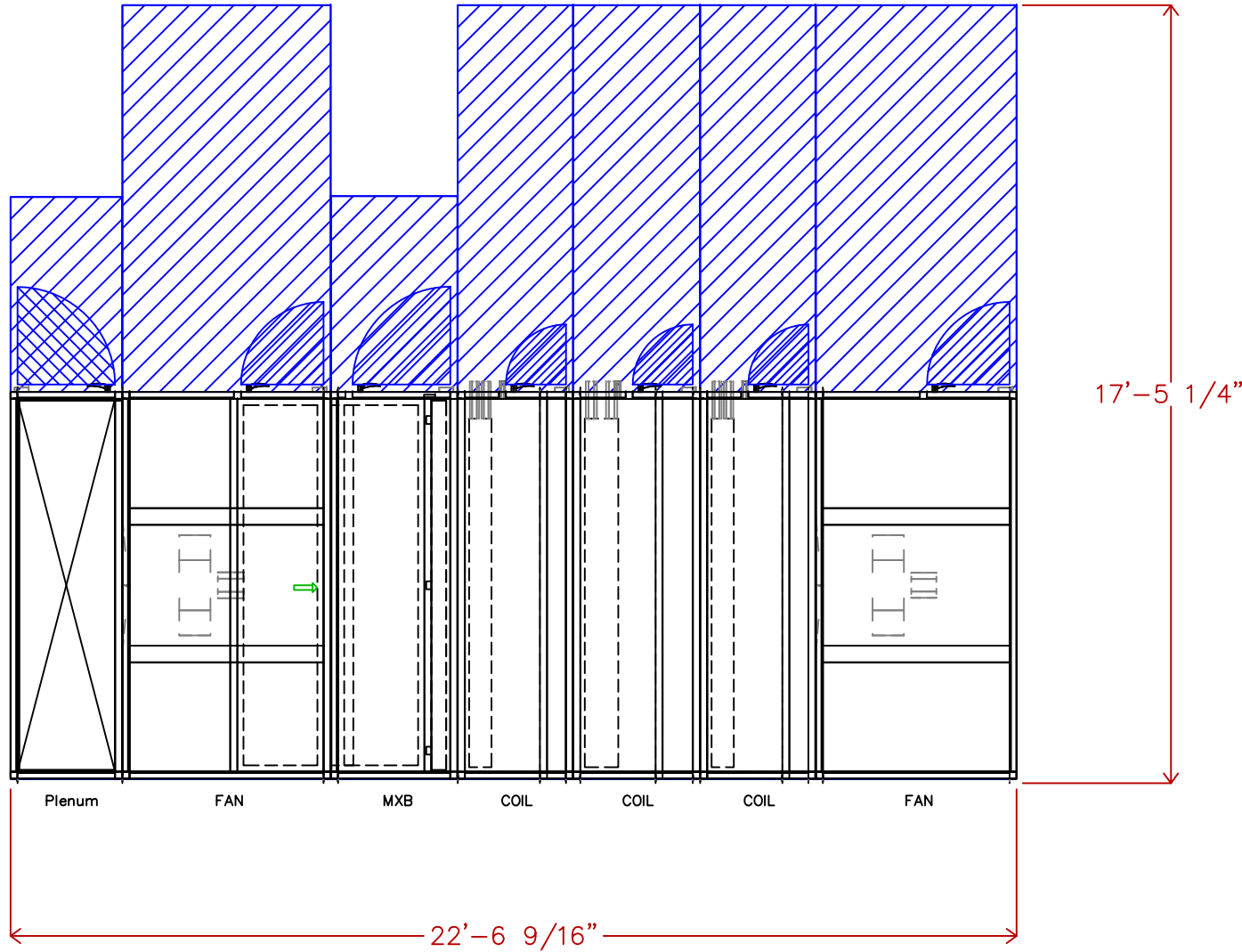
Downstream Corner Weight (each): 1965.0 lbs.



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39M Central Station Air-Handler, Size 30W
CMS Elon, Hawk, Polo Ridge: AHU-2
Assembly Drawing

REVISION
Top View

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)
 Chilled Water 8 Row 14 FPI Double Circuit (qty. 1)
 Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

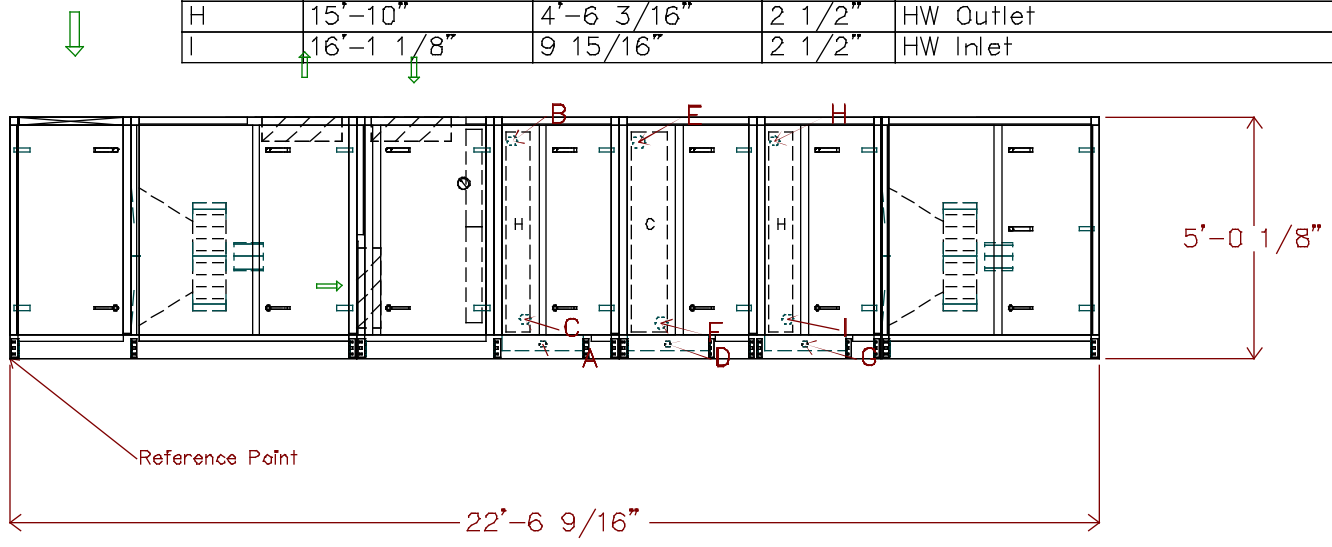


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Pipe	x	y	diameter	Usage
A	11'-0 5/16"	3 13/16"	1 1/2"	DrainPan
B	10'-4 3/4"	4'-6 3/16"	2 1/2"	HW Outlet
C	10'-7 15/16"	9 15/16"	2 1/2"	HW Inlet
D	13'-7 3/8"	3 13/16"	1 1/2"	DrainPan
E	13'-0 3/16"	4'-5 15/16"	3"	CW Outlet
F	13'-5 11/16"	9"	3"	CW Inlet
G	16'-5 1/2"	3 13/16"	1 1/2"	DrainPan
H	15'-10"	4'-6 3/16"	2 1/2"	HW Outlet
I	16'-1 1/8"	9 15/16"	2 1/2"	HW Inlet



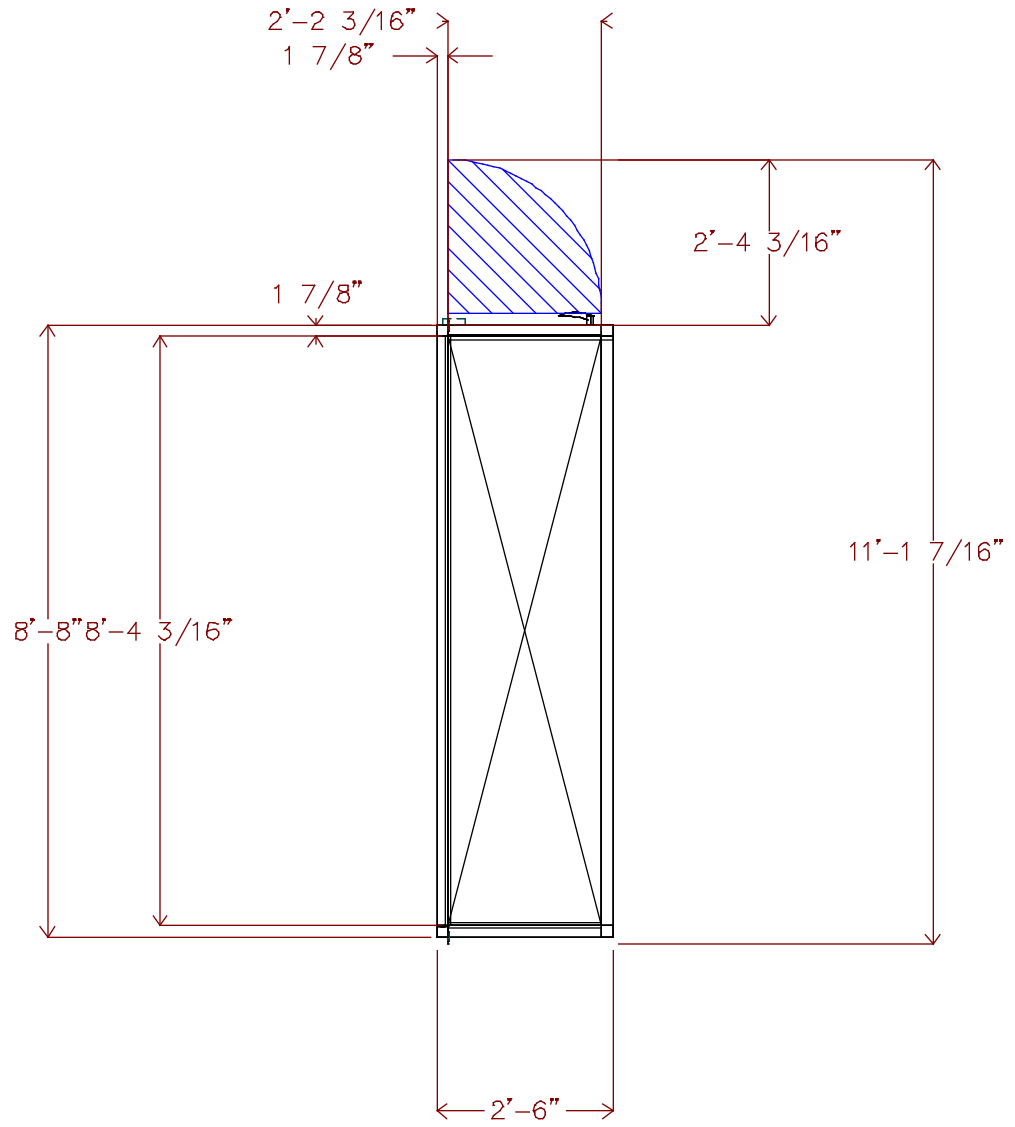
DATE 4/26/2022	AHUBuilder v6.691	39M Central Station Air-Handler, Size 30W CMS Elon, Hawk, Polo Ridge: AHU-2 Assembly Drawing	REVISION Side View
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39M Central Station Air-Handler, Size 30W
CMS Elon, Hawk, Polo Ridge: AHU-2
Turning Plenum

REVISION
Top View

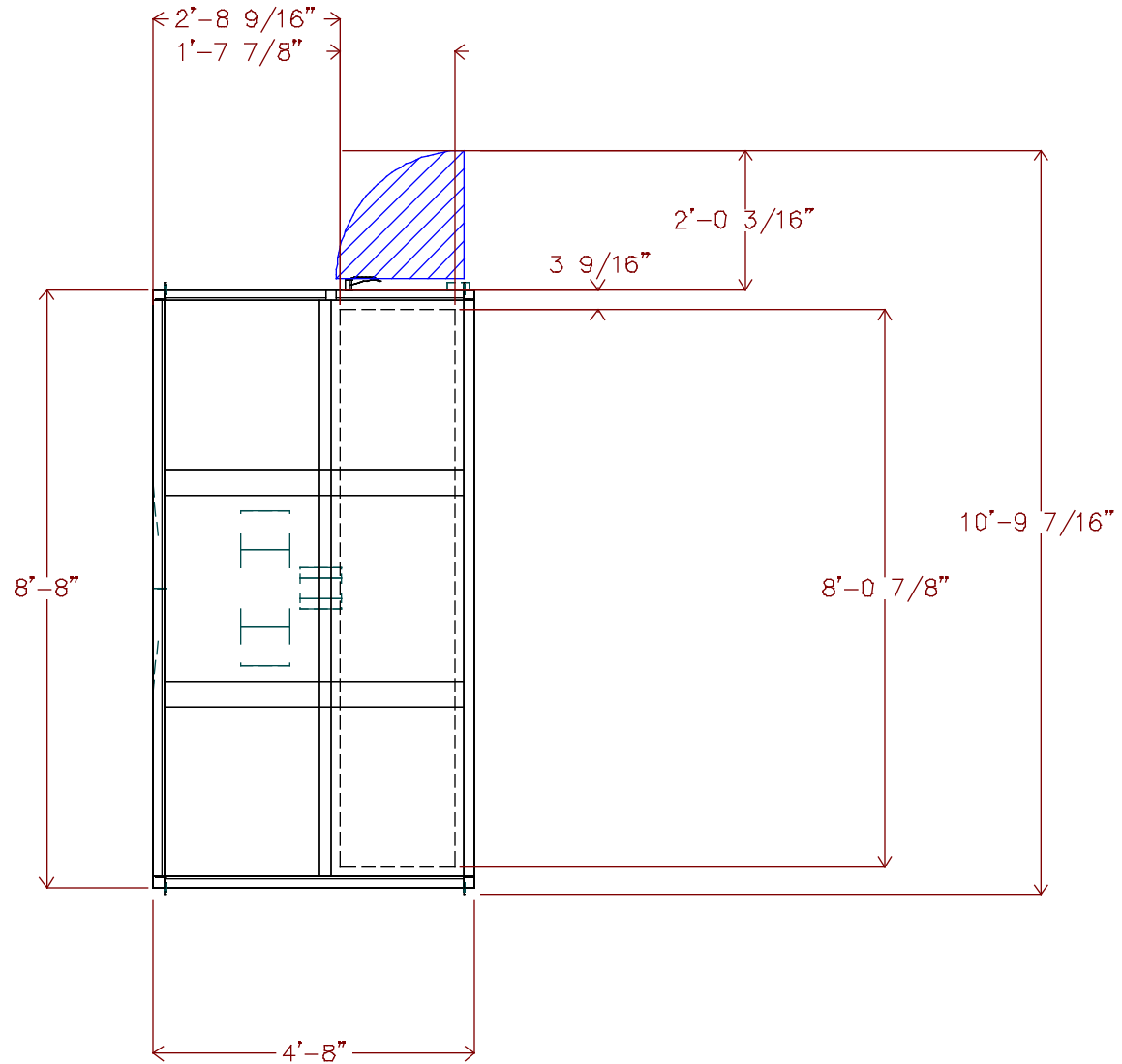
Return Fan
 5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM



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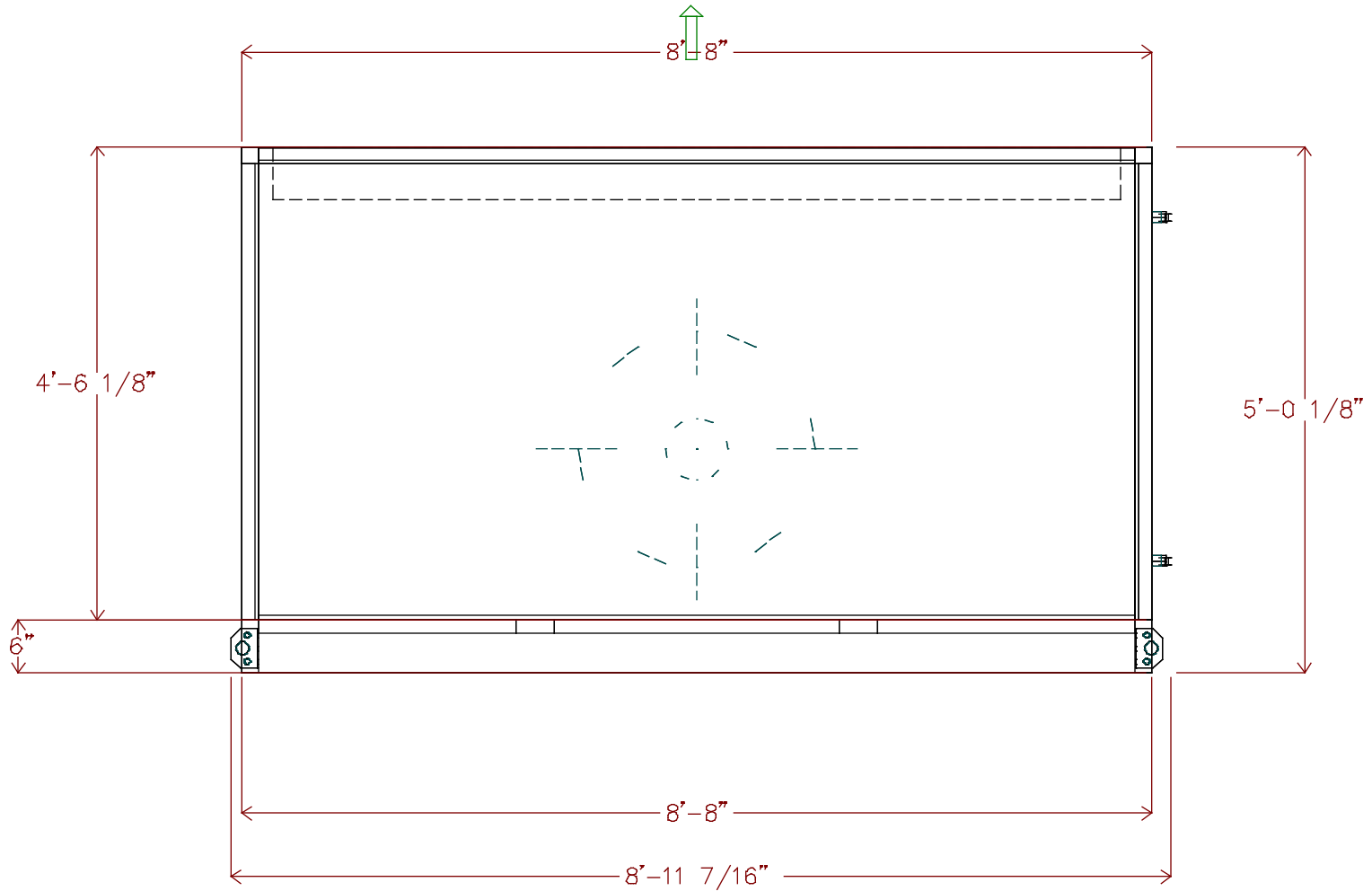
39M Central Station Air-Handler, Size 30W
 CMS Elon, Hawk, Polo Ridge: AHU-2
 Return Fan

REVISION
Top View

Unit viewed from right side of side elevation view.

Return Fan

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM



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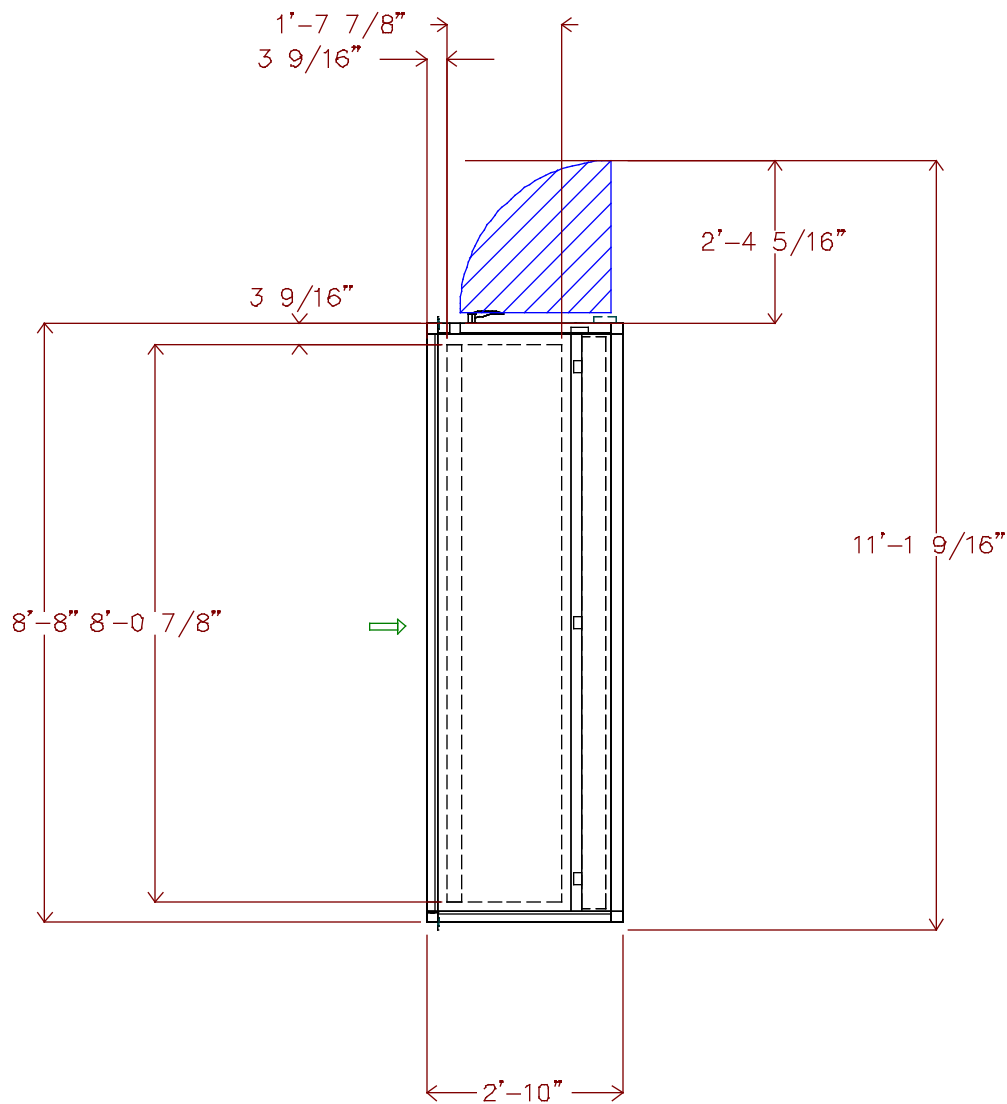
DATE
4/26/2022

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39M Central Station Air-Handler, Size 30W
CMS Elon, Hawk, Polo Ridge: AHU-2
Return Fan

REVISION
End View

2In. Flat Filter
 Qty (10) 20in. x 24in.



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39M Central Station Air-Handler, Size 30W
 CMS Elon, Hawk, Polo Ridge: AHU-2
 Filter Mixing Box

REVISION
 Top View

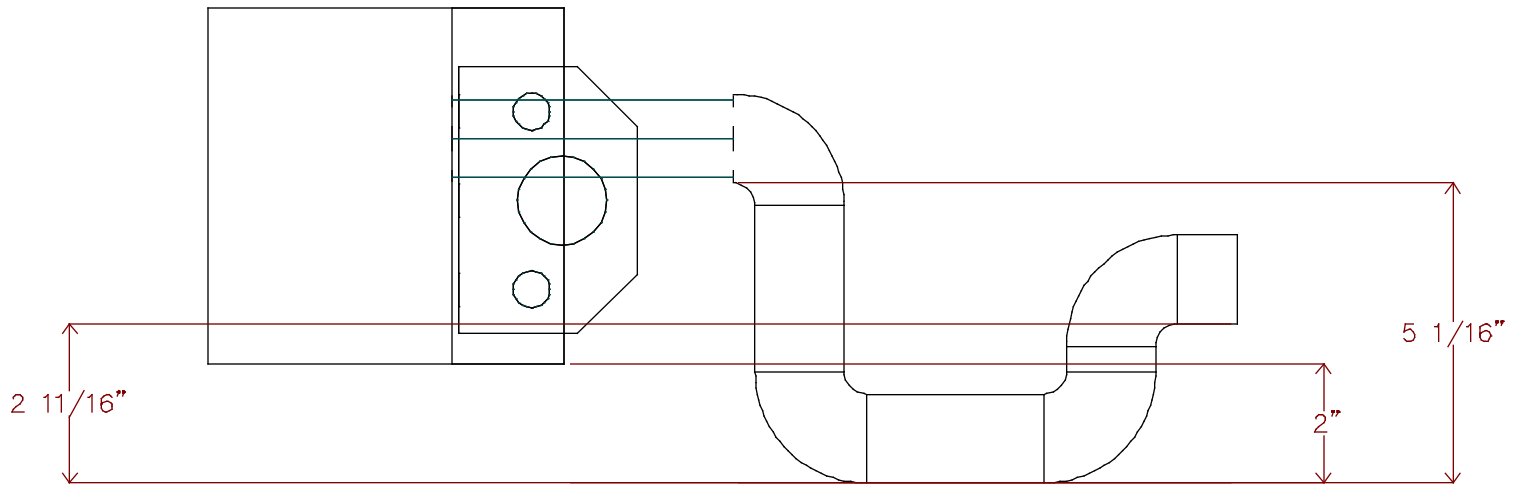


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DRAW-THRU



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39M Central Station Air-Handler, Size 30W
CMS Elon, Hawk, Polo Ridge: AHU-2
Condensate Trap Dimensions

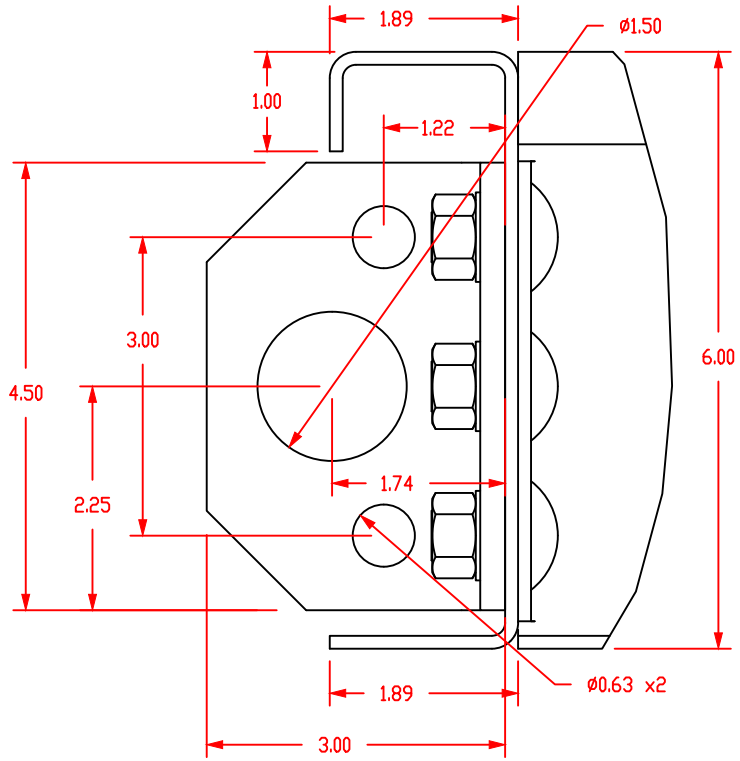
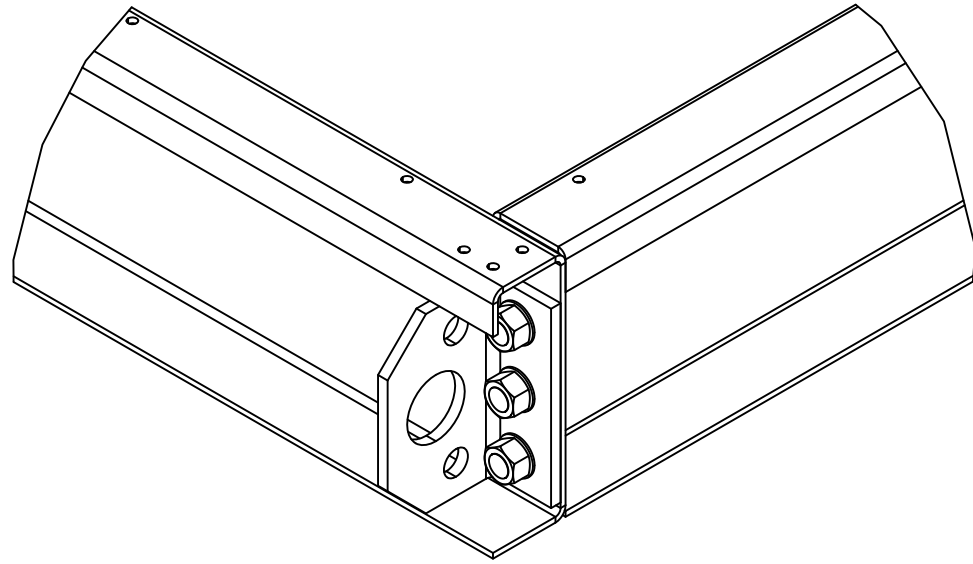
REVISION
End View



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39M



DATE
4/26/2022

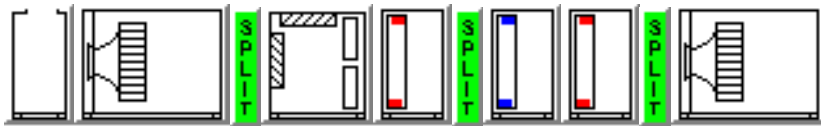
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39M Central Station Air-Handler, Size: 03 - 110
6" Baserail and Lifting Lug Detail

REVISION

Job Name CMS Elon, Hawk, Polo Ridge

Mark for AHU-3



Unit Parameters

Aero Indoor Air Handler

39MN Size 21W

Insulation: R-13 Double Wall Sealed Panel

Exterior Finish: Painted Exterior Panels 18ga

Interior Finish: Galvanized Interior Panels

Level I Thermal Break

6 inch tall Base Rail

Turning Plenum

Discharge : Top

Door Left Side

Return Fan

Shipping Split After

Damper: Top Premium Parallel

Rear Inlet

Fan Sled

Plenum Fan A PDLA01245

Direct Drive Fan

1248 fanRPM Class II

Full Open Discharge

Spring Fan Isolation

Motor Shaft Grounding

Motor

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Manufacturer - Generic

Frame Size - 213T

Motor Shaft Diameter (in.) - 1.375

Voltage Selected - 460/3/60

Full Load Amps - 4.6

Efficiency - 89.5%

Contractor:
Verify motor rating minimum SCCR
Rating 35 KAIC
Verify Phase Loss protection provided
Coordinate VFD requirements with
vendor providing drives.

Door Left Side

Filter Mixing Box

Damper: Rear Premium Parallel

Damper: Top Premium Parallel

2In. Flat Filter

Field Supplied 2in. MERV 8 Throwaway Filter

Job Name CMS Elon, Hawk, Polo Ridge
Mark for AHU-3

Construction Filters

Qty (6) 20in. x 25in.

Door Left Side

Minihelic Differential Pressure Gage 0-2" w.c. Left Side

Hot Water Coil and Plenum

Shipping Split After

304 Stainless Steel Drain Pan Left Side

Hot Water 21.44 sq.ft 1 Row 8 FPI Half Circuit

Coil Connection Left Side

1/2 in. Tube Diameter

Fin Thickness: 0.0060

AL fins Galv. Casing

Steel Header

No Coating

Door Left Side

Chilled Water Coil and Plenum

304 Stainless Steel Drain Pan Left Side

Chilled Water 21.44 sq.ft 8 Row 11 FPI Full Circuit

Coil Connection Left Side

1/2 in. Tube Diameter

AL fins Galv. Casing

Steel Header

No Coating

Door Left Side

Hot Water Coil and Plenum

Shipping Split After

304 Stainless Steel Drain Pan Left Side

Hot Water 21.44 sq.ft 1 Row 8 FPI Half Circuit

Coil Connection Left Side

1/2 in. Tube Diameter

Fin Thickness: 0.0060

AL fins Galv. Casing

Steel Header

No Coating

Door Left Side

Draw-Thru Supply Fan

Rear Inlet

Fan Sled

Plenum Fan A PDLA01245

Direct Drive Fan

1538 fanRPM Class II

Field Supplied Discharge

Spring Fan Isolation

Job Name CMS Elon, Hawk, Polo Ridge
Mark for AHU-3

Motor Shaft Grounding

Motor

7.5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Manufacturer - Generic

Frame Size - 254T

Motor Shaft Diameter (in.) - 1.625

Voltage Selected - 460/3/60

Full Load Amps - 11.0

Efficiency - 91.0%

Contractor:
Verify motor rating minimum SCCR
Rating 35 KAIC
Verify Phase Loss protection provided

Door Left Side

Configuration Notes

Preheat coil configurations can cause freezstat to trip if the downstream cooling coil isn't drained in heating season and/or PID valve control loop is too slow to react.

If a bottom connection is required, use an Inlet Plenum Section.

If a bottom connection is required, use a Discharge Plenum Section.

Discharge duct(s) must be gasketed and screwed directly to the discharge panel of the unit.

Weights and Dimensions

(LxWxH in ft in) 21' 11" x 6' 8" x 5' 0" **

Operating 5545 LB **

Coordinate unit weight with Structural

Warranty Part Number(s) (NET PRICING)

Qty 1 Each Additional 39 Series Start-up

Qty 1 2nd Year Parts only 39M - Size 21 - 30

Weights and Dimensions are approximate. Weights include base unit weight, coils (wet & dry), fans and fan motors, and other components, but does not include filters, drives and skids. Approximate dimensions are provided primarily for shipping purposes. Shipping skids are not included.
All filter media efficiency ratings are for the filter media only.

Chilled Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-3

Cooling Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Total Cooling Capacity _____
 Sensible Cooling Capacity _____
Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Rise _____
 Entering Air Dry Bulb _____
 Entering Air Wet Bulb _____
 Entering Air Enthalpy _____
 Leaving Air Dry Bulb _____
 Leaving Air Wet Bulb _____
 Leaving Air Enthalpy _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MC
1
8 / 11 / FL
.0042 in
Sine Wave
Large
21.44 sqft
424.4 fpm
Al-Galv.
0.5 in
1.25 x 0.781 in
0.016 in
9100 CFM
0 ft
8736 SCFM
425.03 MBH
310.88 MBH
69.0 gpm
8.6 ft wg
3.1 ft/s
44.00 F
56.28 F
12.3 F
83.00 F
67.00 F
31.48 BTU/lb
50.60 F
50.56 F
20.6 BTU/lb
0.81 in wg
FW
0 %
0.0 (hr-sqft-F)/BTU



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Hot Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-3

Heating Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Heating Capacity _____
Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Drop _____
 Entering Air Temperature _____
 Leaving Air Temperature _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MH
1
1 / 8 / HF
.0060 in
Sine Wave
Large
21.44 sqft
424.4 fpm
Al-Galv.
0.5 in
1.25 x 0.781 in
0.016 in
9100 CFM
0 ft
9187 SCFM
231.05 MBH
22.8 gpm
1.4 ft wg
2.0 ft/s
160.00 F
139.32 F
20.7 F
65.00 F
87.99 F
0.15 in wg
FW
0 %
0.0 (hr-sqft-F)/BTU



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Hot Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-3

Heating Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Heating Capacity _____
Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Drop _____
 Entering Air Temperature _____
 Leaving Air Temperature _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MH
1
1 / 8 / HF
.0060 in
Sine Wave
Large
21.44 sqft
424.4 fpm
Al-Galv.
0.5 in
1.25 x 0.781 in
0.016 in
9100 CFM
0 ft
9187 SCFM
156.19 MBH
7.0 gpm
0.1 ft wg
0.6 ft/s
160.00 F
114.42 F
45.6 F
65.00 F
80.55 F
0.14 in wg
FW
0 %
0.0 (hr-sqft-F)/BTU



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Unit Acoustics Summary

Project: CMS Elon, Hawk, Polo Ridge
Tag: AHU-3

Unit Acoustics Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	88	84	81
125 Hz _____	88	87	84
250 Hz _____	92	90	86
500 Hz _____	84	83	79
1000 Hz _____	82	74	71
2000 Hz _____	81	74	70
4000 Hz _____	78	72	68
8000 Hz _____	76	69	65

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Unit Acoustics A-weighted Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	62	58	55
125 Hz _____	72	71	68
250 Hz _____	84	81	77
500 Hz _____	81	80	76
1000 Hz _____	82	74	71
2000 Hz _____	82	75	71
4000 Hz _____	79	73	69
8000 Hz _____	75	68	64

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Sound contributed by Supply and Return Fans

Unit Acoustics PART-LOAD Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	84	82	79
125 Hz _____	83	84	79
250 Hz _____	84	87	82
500 Hz _____	78	80	75
1000 Hz _____	77	71	66
2000 Hz _____	75	71	65
4000 Hz _____	72	69	63
8000 Hz _____	70	67	61

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Unit Acoustics PART-LOAD A-weighted Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	58	56	53
125 Hz _____	67	68	63
250 Hz _____	76	79	73
500 Hz _____	75	77	72
1000 Hz _____	77	71	66
2000 Hz _____	76	73	67
4000 Hz _____	73	70	64
8000 Hz _____	69	65	60

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

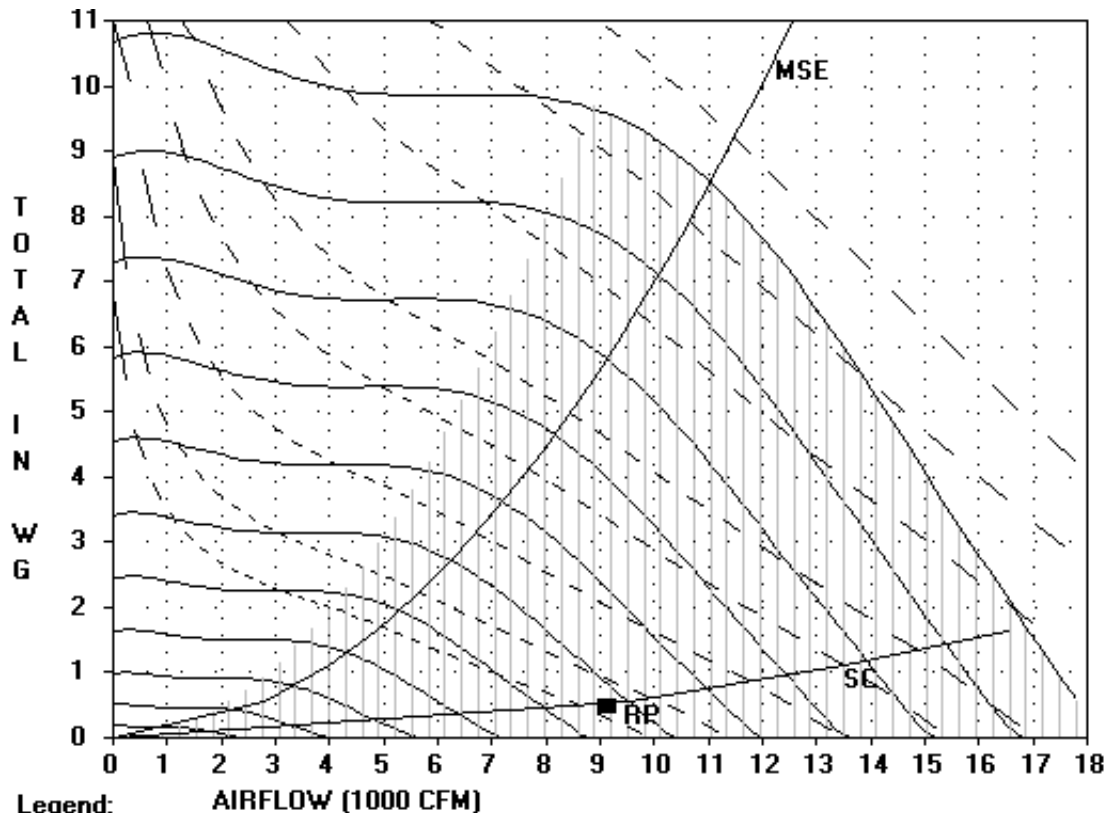
Sound contributed by Supply and Return Fans

Return Fan Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-3

Fan Model	39M2101HPDL
Unit Size	21W
Fan Type	DIRECT DRIVE PLENUM (Return)
Fan Wheel Diameter	24.5
Fan Class	II
Static Efficiency (%)	31
Fan Application	Draw Thru
Orientation	Horizontal
Actual Airflow, CFM	9100
Site Altitude, , ft	0
Total Upstream Static Losses, in wg	0.50
Number of Fans	1
Calculated Fan RPM / Motor RPM	1248 / 1200
Class II Max. RPM	2269
Fan BHP	2.3
Fan Electrical Power, kW	1.9

Unit is outside of the scope of AHRI Standard 430/431.



Legend:

- RPM
 - BHP
 MSE - Max. Static Eff.
 SC - System Curve
 RP - Rated Point

RPM = 1248 BHP = 2.3 CLASS II MAX. RPM = 2269

RPM's (x 100, L to R): 3. 5. 7. 9. 11. 13. 15. 17. 19. 21. 23.

BHP's (L to R): 2 3 5 7.5 10 15 20 25

Supply Fan Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-3

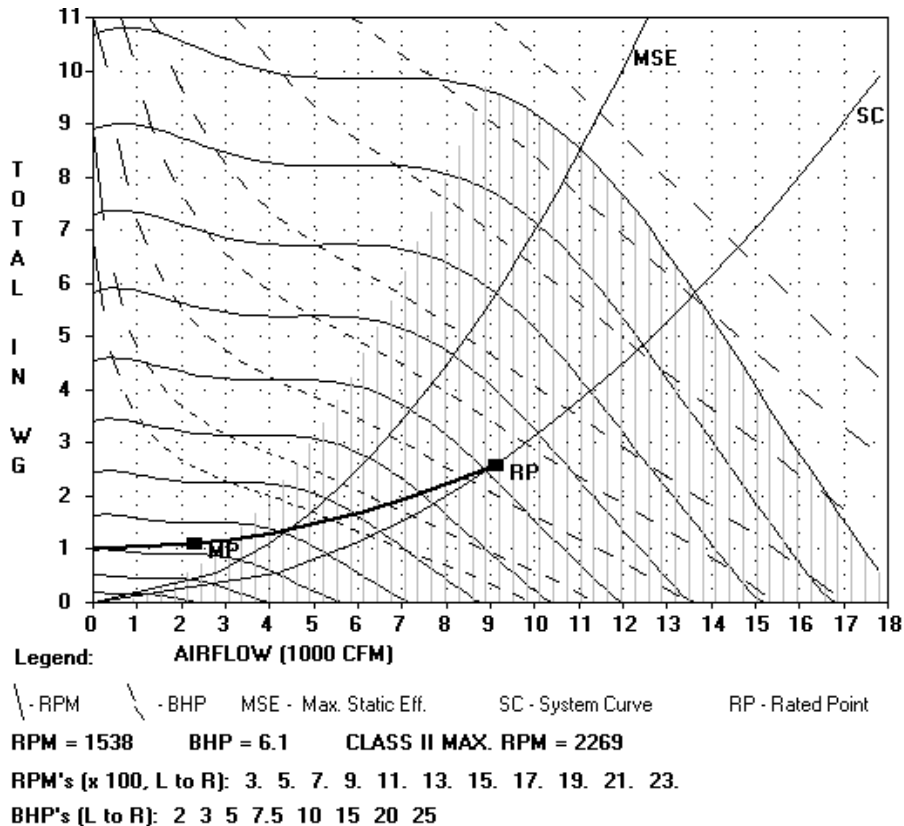
Fan Model	39M2101HPDL-U
Unit Size	21W
Fan Type	DIRECT DRIVE PLENUM
Fan Wheel Diameter	24.5
Fan Class	II
Fan Application	Draw Thru
Orientation	Horizontal
Actual Airflow, CFM	9100
Site Altitude, ft	0
Upstream Ext. Static, in wg	0.00
Downstream Ext. Static, in wg	1.00
Cooling Coil Static, in wg	0.85
Heating Coil Static, in wg	0.29
Total Accessory Static, in wg	0.45
Total Static Pressure, in wg	2.59
Calculated Fan RPM / Motor RPM	1538 / 1200
Class II Max. RPM	2269
Static Efficiency (%)	61
Number of Fans	1
Fan BHP	6.1
Fan Electrical Power, kW	5.0



Accessories:

- (1) Flat Throwaway (2 in.), Dirty [0.36]
- (1) Mixing or Exhaust Box [0.09]

NOTE: Certified in accordance with the AHRI Central Station Air-Handling Unit Certification Program, which is based on AHRI Standards 430/431. Certified units may be found in the AHRI Directory at www.ahridirectory.org



Unit width: 6'-8 11/16" (plus lifting lugs)

Return Fan

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2In. Flat Filter

Qty (6) 20in. x 25in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Chilled Water 8 Row 11 FPI Full Circuit (qty. 1)

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Draw-Thru Supply Fan

7.5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

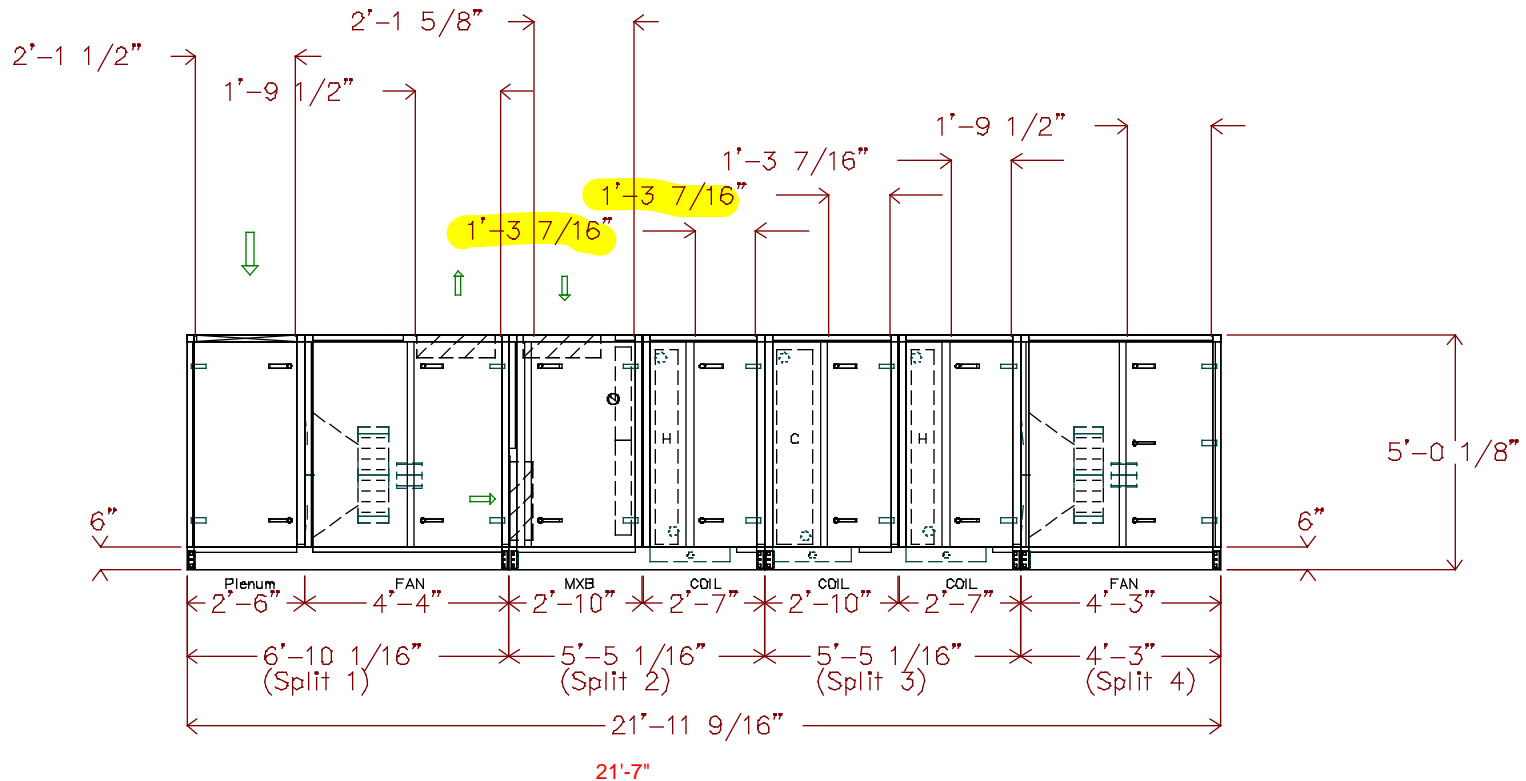
Operating weight: 5545.0 lbs.

Upstream Corner Weight (each): 1304.0 lbs.

Downstream Corner Weight (each): 1469.0 lbs.



Split	Airway Length	Weight (lbs.)
(Split 1)	6'-10 1/16"	1439
(Split 2)	5'-5 1/16"	1289
(Split 3)	5'-5 1/16"	1590
(Split 4)	4'-3"	1228



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39M Central Station Air-Handler, Size 21W
CMS Elon, Hawk, Polo Ridge: AHU-3
Assembly Drawing

REVISION
Side View

Unit viewed from right side of side elevation view.

Unit length: 21'-11 9/16"

Return Fan

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2In. Flat Filter

Qty (6) 20in. x 25in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Chilled Water 8 Row 11 FPI Full Circuit (qty. 1)

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

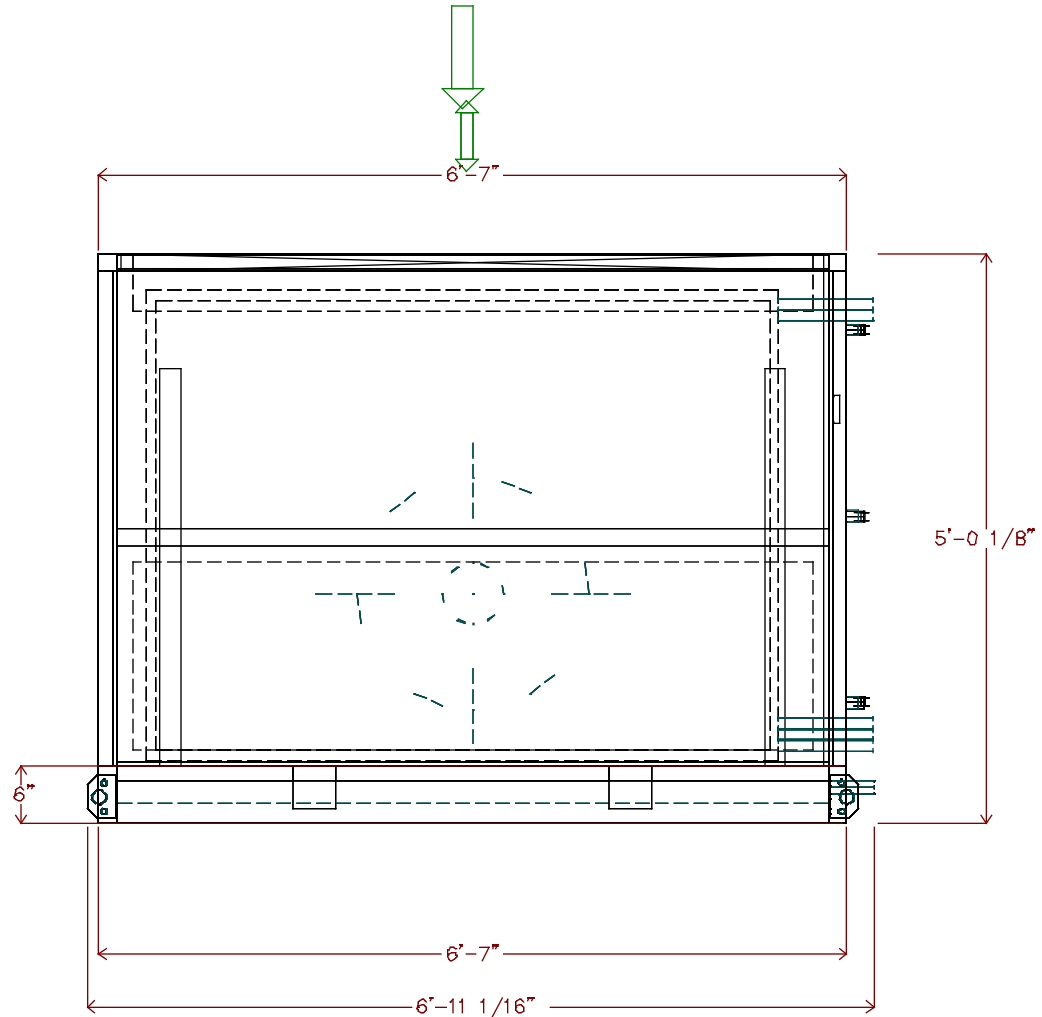
Draw-Thru Supply Fan

7.5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 5545.0 lbs.

Upstream Corner Weight (each): 1304.0 lbs.

Downstream Corner Weight (each): 1469.0 lbs.



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DATE
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39M Central Station Air-Handler, Size 21W
CMS Elon, Hawk, Polo Ridge: AHU-3
Assembly Drawing

REVISION
End View

Unit height: 5'-0 7/8"

Return Fan

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2In. Flat Filter

Qty (6) 20in. x 25in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Chilled Water 8 Row 11 FPI Full Circuit (qty. 1)

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Draw-Thru Supply Fan

7.5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 5545.0 lbs.

Upstream Corner Weight (each): 1304.0 lbs.

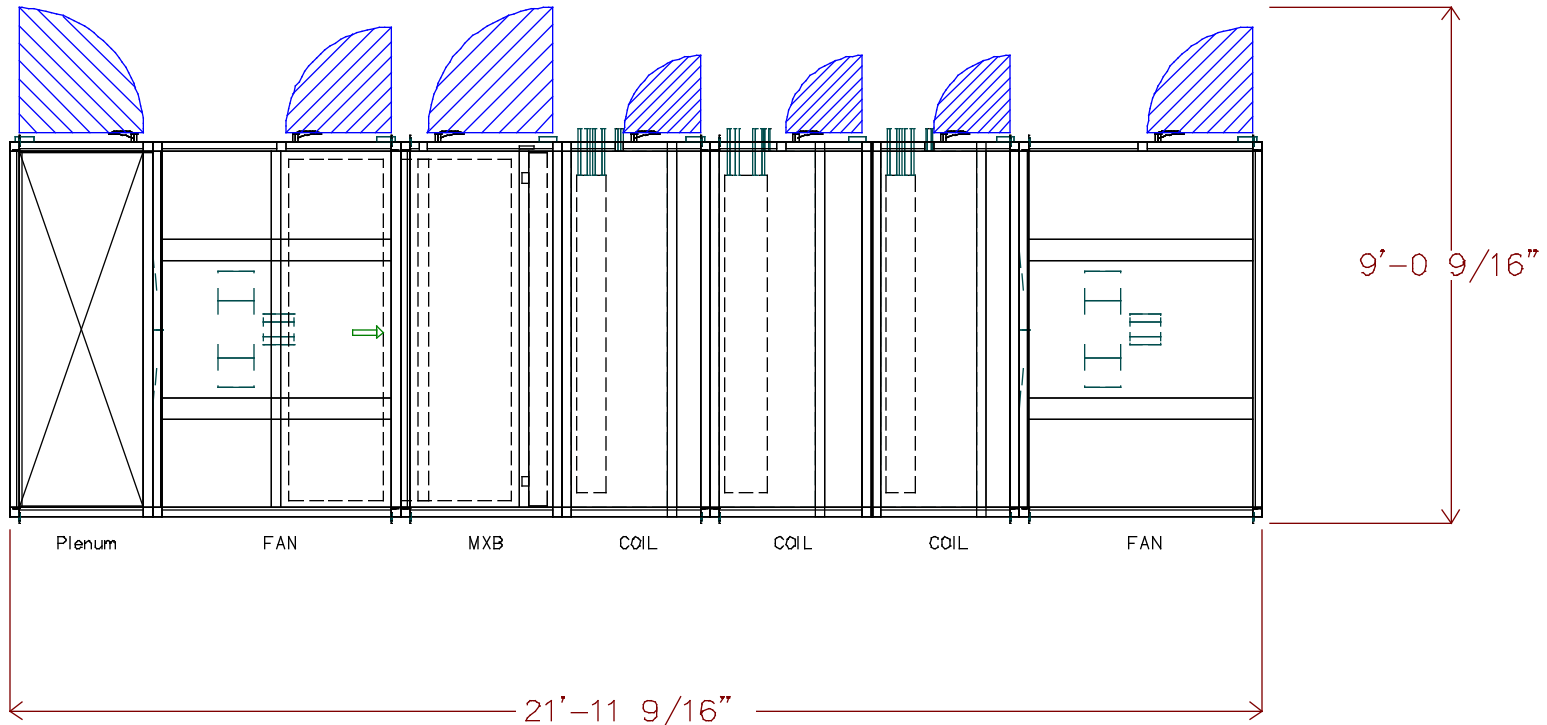
Downstream Corner Weight (each): 1469.0 lbs.



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39M Central Station Air-Handler, Size 21W
CMS Elon, Hawk, Polo Ridge: AHU-3
Assembly Drawing

REVISION
Top View

Unit height: 5'-0 7/8"

Return Fan

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2In. Flat Filter

Qty (6) 20in. x 25in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Chilled Water 8 Row 11 FPI Full Circuit (qty. 1)

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

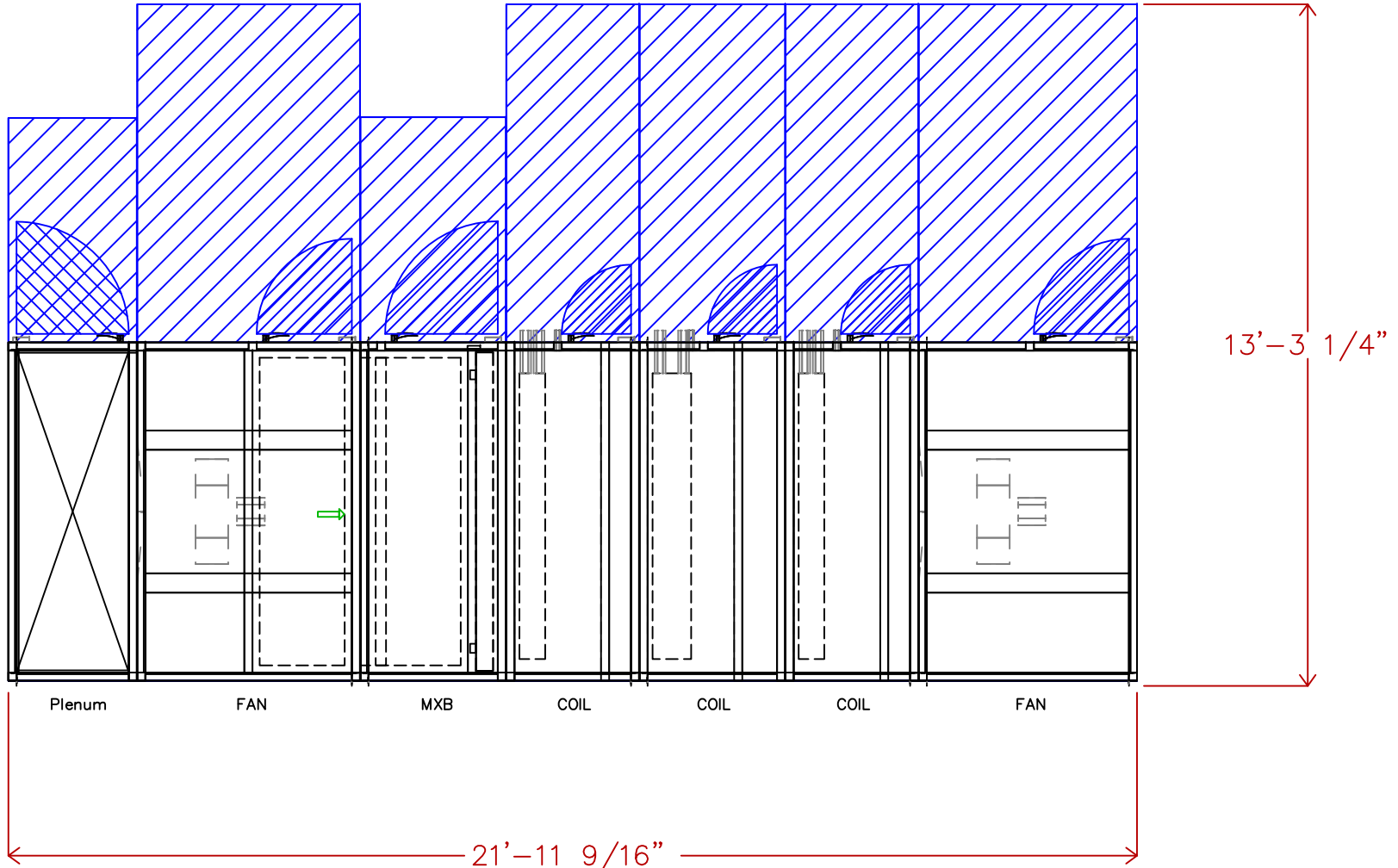
Draw-Thru Supply Fan

7.5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 5545.0 lbs.

Upstream Corner Weight (each): 1304.0 lbs.

Downstream Corner Weight (each): 1469.0 lbs.



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39M Central Station Air-Handler, Size 21W
CMS Elon, Hawk, Polo Ridge: AHU-3
Assembly Drawing

REVISION
Top View

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)
 Chilled Water 8 Row 11 FPI Full Circuit (qty. 1)
 Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

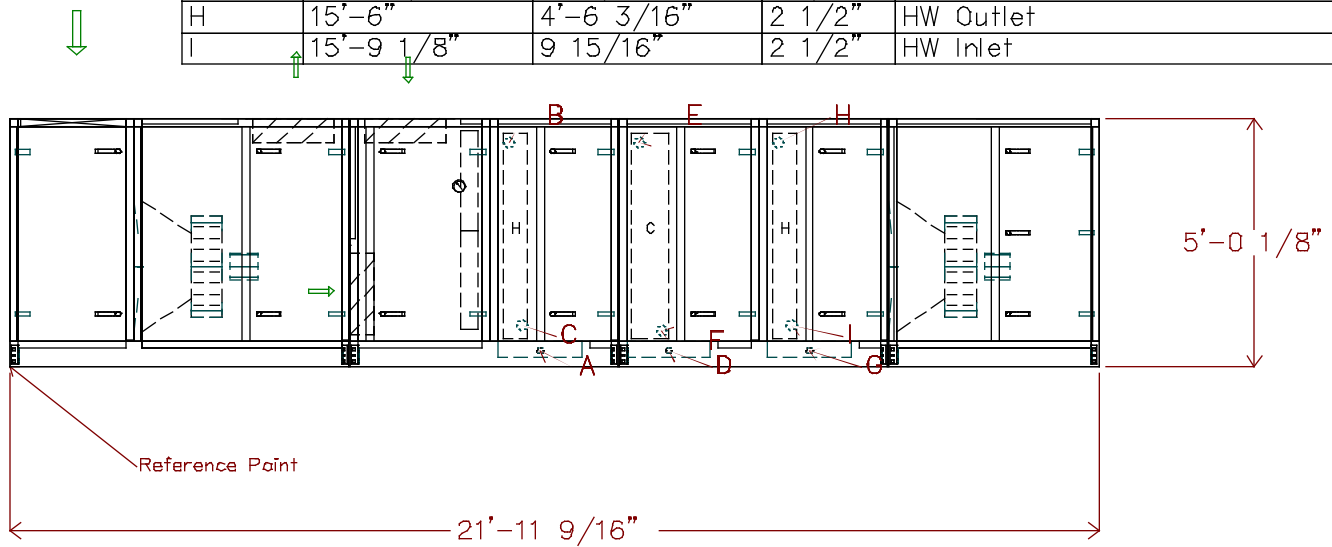


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Pipe	x	y	diameter	Usage
A	10'-8 5/16"	3 13/16"	1 1/2"	DrainPan
B	10'-0 3/4"	4'-6 3/16"	2 1/2"	HW Outlet
C	10'-3 15/16"	9 15/16"	2 1/2"	HW Inlet
D	13'-3 3/8"	3 13/16"	1 1/2"	DrainPan
E	12'-8 3/16"	4'-6 3/16"	2 1/2"	CW Outlet
F	13'-1 11/16"	8 11/16"	2 1/2"	CW Inlet
G	16'-1 1/2"	3 13/16"	1 1/2"	DrainPan
H	15'-6"	4'-6 3/16"	2 1/2"	HW Outlet
I	15'-9 1/8"	9 15/16"	2 1/2"	HW Inlet



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39M Central Station Air-Handler, Size 21W
 CMS Elon, Hawk, Polo Ridge: AHU-3
 Assembly Drawing

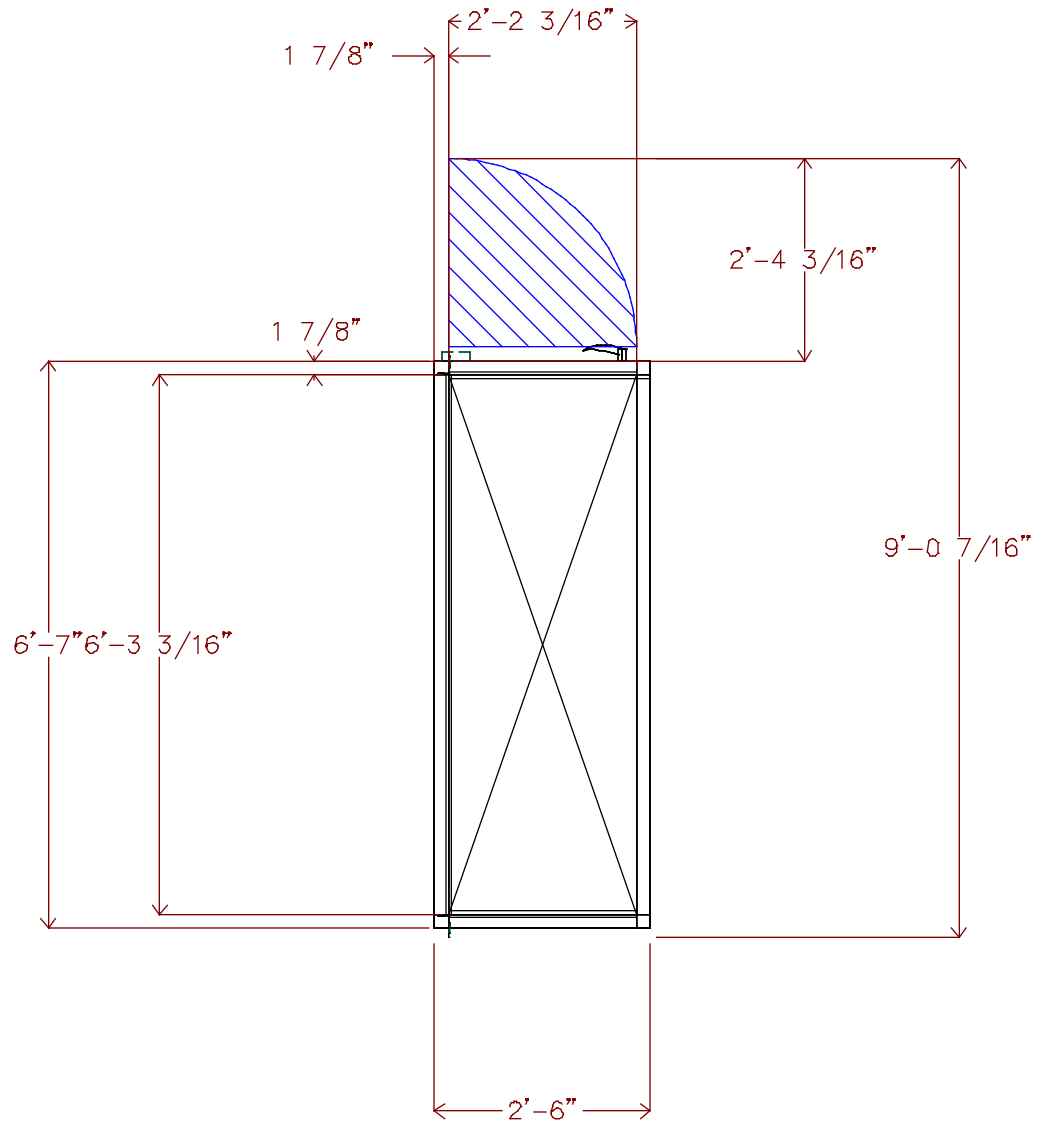
REVISION
Side View



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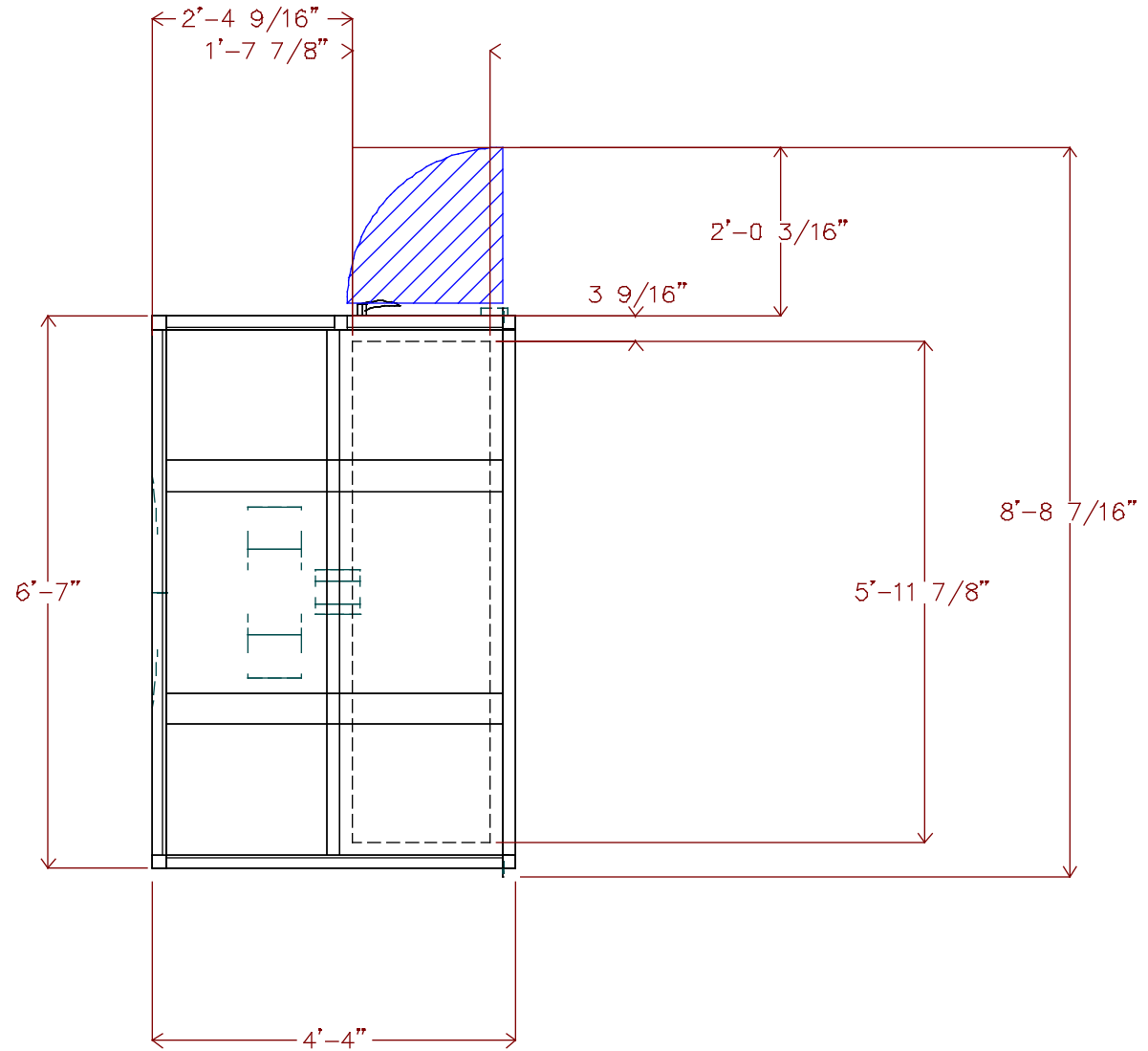
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39M Central Station Air-Handler, Size 21W
CMS Elon, Hawk, Polo Ridge: AHU-3
Turning Plenum

REVISION
Top View

Return Fan

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM



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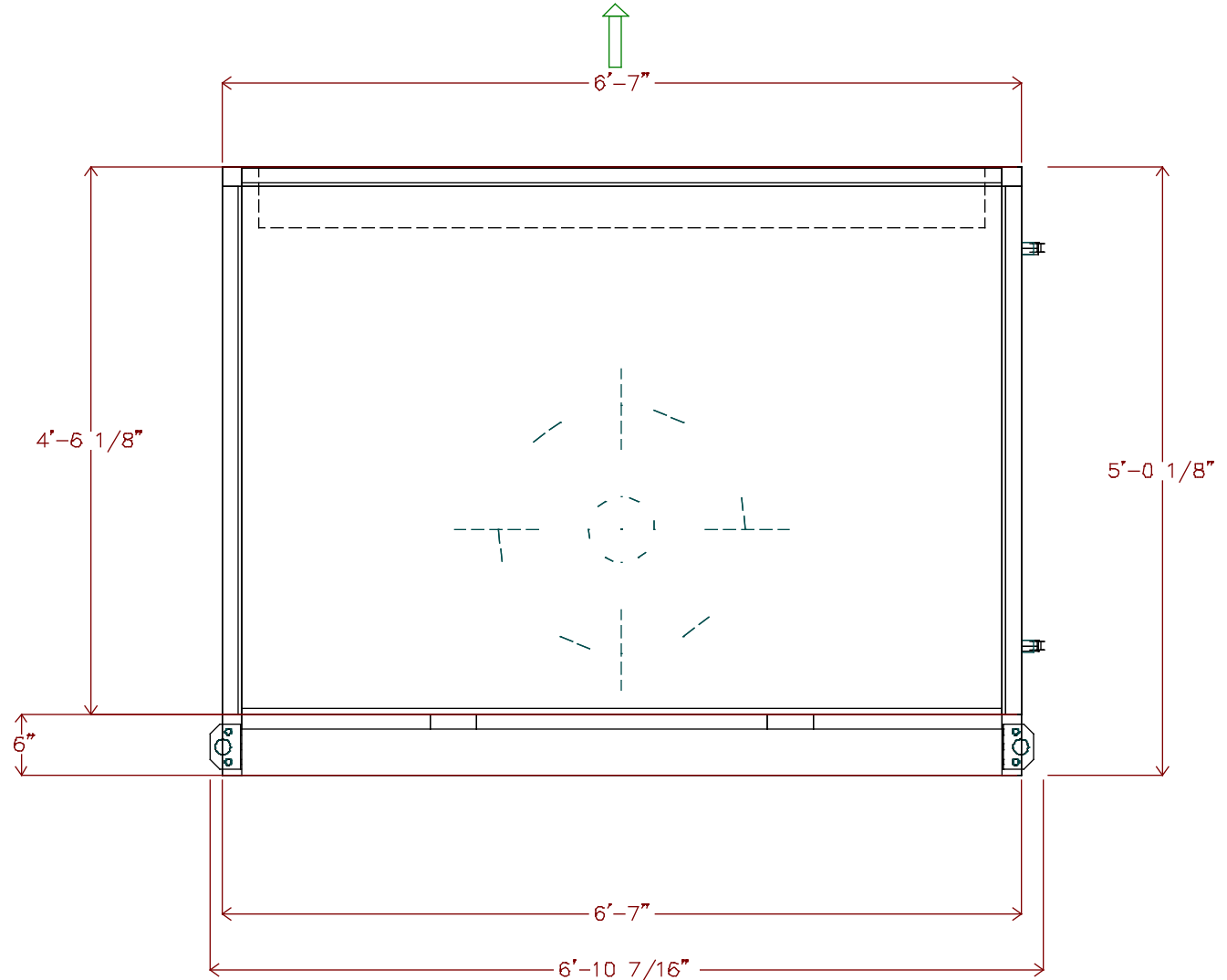
39M Central Station Air-Handler, Size 21W
CMS Elon, Hawk, Polo Ridge: AHU-3
Return Fan

REVISION
Top View

Unit viewed from right side of side elevation view.

Return Fan

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM



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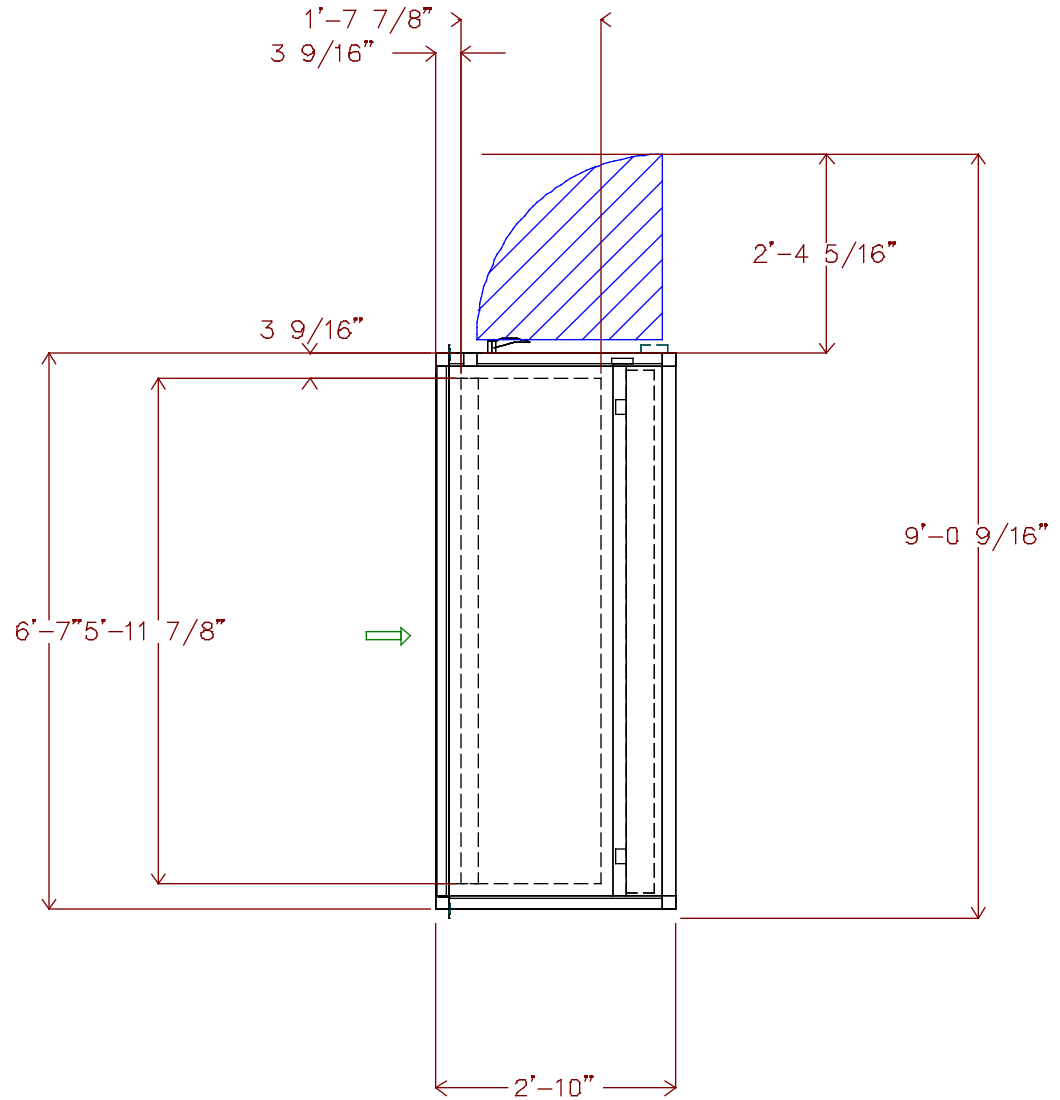
DATE
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39M Central Station Air-Handler, Size 21W
CMS Elon, Hawk, Polo Ridge: AHU-3
Return Fan

REVISION
End View

2In. Flat Filter
 Qty (6) 20in. x 25in.



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39M Central Station Air-Handler, Size 21W
 CMS Elon, Hawk, Polo Ridge: AHU-3
 Filter Mixing Box

REVISION
 Top View

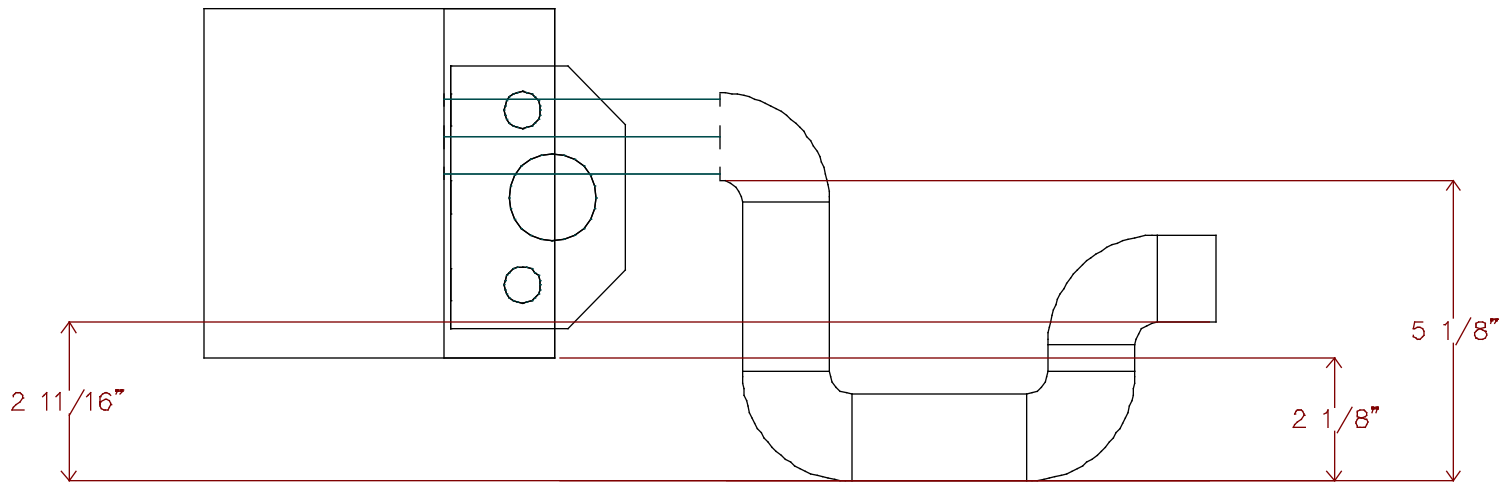


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DRAW-THRU



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39M Central Station Air-Handler, Size 21W
CMS Elon, Hawk, Polo Ridge: AHU-3
Condensate Trap Dimensions

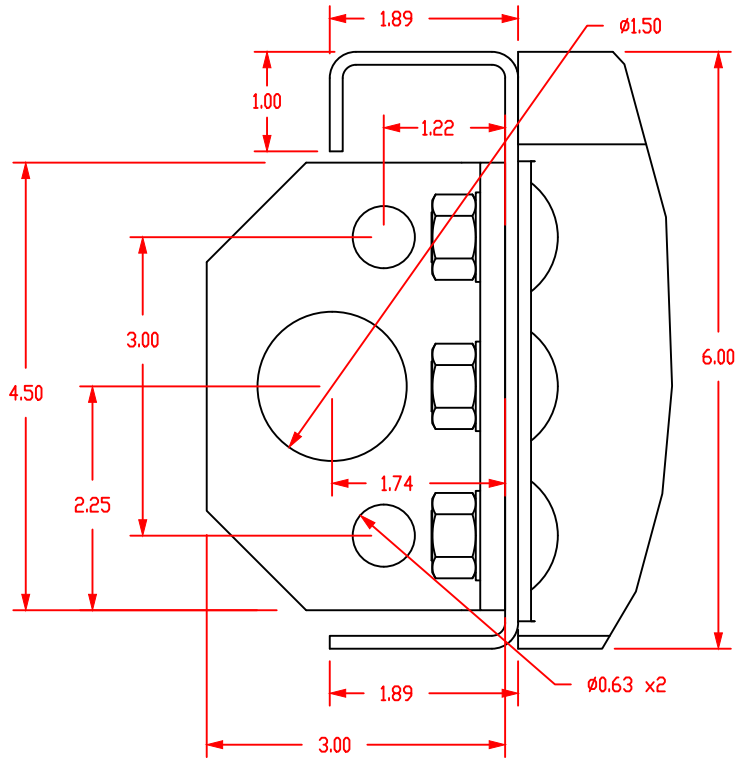
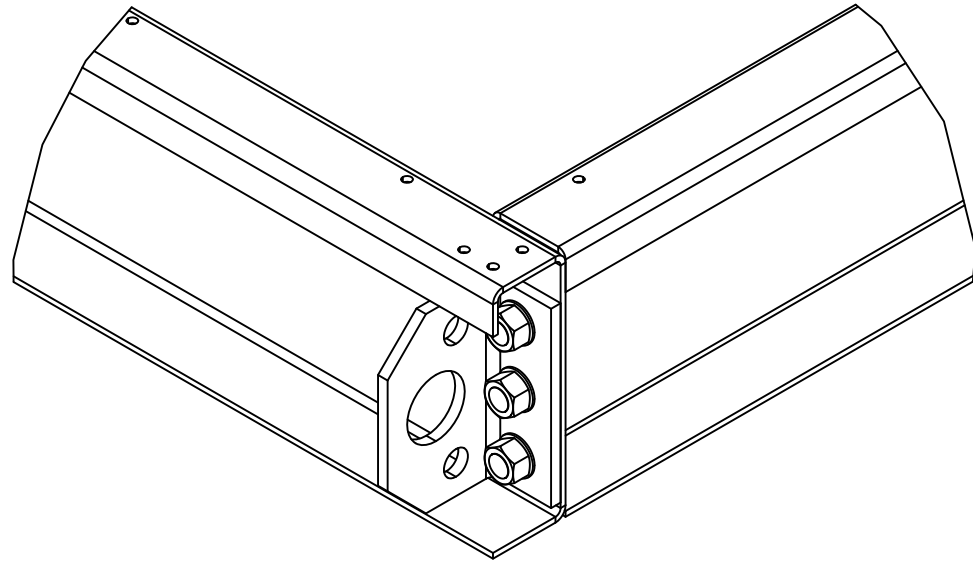
REVISION
End View



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39M



DATE
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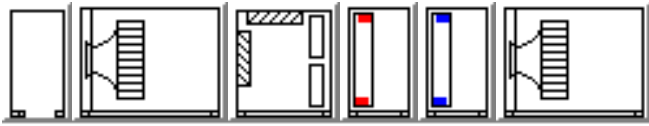
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39M Central Station Air-Handler, Size: 03 - 110
6" Baserail and Lifting Lug Detail

REVISION

Job Name CMS Elon, Hawk, Polo Ridge

Mark for AHU-4



Unit Parameters

Aero Indoor Air Handler

39MN Size 25W

Insulation: R-13 Double Wall Sealed Panel

Exterior Finish: Painted Exterior Panels 18ga

Interior Finish: Galvanized Interior Panels

Level I Thermal Break

6 inch tall Base Rail

Turning Plenum

Discharge : Bottom

Door Left Side

Return Fan

Damper: Top Premium Parallel

Rear Inlet

Fan Sled

Plenum Fan A PDLA01270

Direct Drive Fan

1022 fanRPM Class II

Full Open Discharge

Spring Fan Isolation

Motor Shaft Grounding

Motor

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Manufacturer - Generic

Frame Size - 213T

Motor Shaft Diameter (in.) - 1.375

Voltage Selected - 460/3/60

Full Load Amps - 4.6

Efficiency - 89.5%

Door Left Side

Filter Mixing Box

Damper: Rear Premium Parallel

Damper: Top Premium Parallel

2In. Flat Filter

Field Supplied 2in. MERV 8 Throwaway Filter

Construction Filters

Contractor:
Verify motor rating minimum SCCR
Rating 35 KAIC
Verify Phase Loss protection provided
Coordinate VFD requirements with
vendor providing drives.

Job Name CMS Elon, Hawk, Polo Ridge
Mark for AHU-4

Qty (8) 20in. x 24in.

Door Left Side

Minihelic Differential Pressure Gage 0-2" w.c. Left Side

Hot Water Coil and Plenum

304 Stainless Steel Drain Pan Left Side

Hot Water 24.41 sq.ft 1 Row 8 FPI Half Circuit

Coil Connection Left Side

1/2 in. Tube Diameter

Fin Thickness: 0.0060

AL fins Galv. Casing

Steel Header

No Coating

Door Left Side

Chilled Water Coil and Plenum

304 Stainless Steel Drain Pan Left Side

Chilled Water 24.41 sq.ft 8 Row 14 FPI Double Circuit

Coil Connection Left Side

1/2 in. Tube Diameter

Fin Thickness: 0.0060

AL fins Galv. Casing

Steel Header

No Coating

Door Left Side

Draw-Thru Supply Fan

Rear Inlet

Fan Sled

Plenum Fan A PDLA01270

Direct Drive Fan

1447 fanRPM Class II

Field Supplied Discharge

Spring Fan Isolation

Motor Shaft Grounding

Motor

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Manufacturer - Generic

Frame Size - 256T

Motor Shaft Diameter (in.) - 1.625

Voltage Selected - 460/3/60

Full Load Amps - 14.1

Efficiency - 91.0%

Door Left Side

Configuration Notes

Contractor:
Verify motor rating minimum SCCR
Rating 35 KAIC
Verify Phase Loss protection provided.

Job Name CMS Elon, Hawk, Polo Ridge
Mark for AHU-4

Preheat coil configurations can cause freezstat to trip if the downstream cooling coil isn't drained in heating season and/or PID valve control loop is too slow to react.

If a bottom connection is required, use an Inlet Plenum Section.

If a bottom connection is required, use a Discharge Plenum Section.

Discharge duct(s) must be gasketed and screwed directly to the discharge panel of the unit.

Weights and Dimensions

(LxWxH in ft in) 19' 9" x 7' 2" x 5' 0" **

Operating 5621 LB **

Coordinate unit weight with Structural

Warranty Part Number(s) (NET PRICING)

Qty 1 Each Additional 39 Series Start-up

Qty 1 2nd Year Parts only 39M - Size 21 - 30

Weights and Dimensions are approximate. Weights include base unit weight, coils (wet & dry), fans and fan motors, and other components, but does not include filters, drives and skids. Approximate dimensions are provided primarily for shipping purposes. Shipping skids are not included.
All filter media efficiency ratings are for the filter media only.

Chilled Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-4

Cooling Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Total Cooling Capacity _____
 Sensible Cooling Capacity _____
Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Rise _____
 Entering Air Dry Bulb _____
 Entering Air Wet Bulb _____
 Entering Air Enthalpy _____
 Leaving Air Dry Bulb _____
 Leaving Air Wet Bulb _____
 Leaving Air Enthalpy _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MC
1
8 / 14 / DB
.0060 in
Sine Wave
Large
24.41 sqft
409.7 fpm
Al-Galv.
0.5 in
1.25 x 0.781 in
0.016 in
10000 CFM
0 ft
9600 SCFM
466.24 MBH
341.75 MBH
76.0 gpm
2.3 ft wg
1.7 ft/s
44.00 F
56.23 F
12.2 F
83.00 F
67.00 F
31.48 BTU/lb
50.59 F
50.59 F
20.6 BTU/lb
0.89 in wg
FW
0 %
0.0 (hr-sqft-F)/BTU



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Hot Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-4

Heating Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Heating Capacity _____
 Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Drop _____
 Entering Air Temperature _____
 Leaving Air Temperature _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MH
1
1 / 8 / HF
.0060 in
Sine Wave
Large
24.41 sqft
409.7 fpm
Al-Galv.
0.5 in
1.25 x 0.781 in
0.016 in
10000 CFM
0 ft
10095 SCFM
181.76 MBH
8.1 gpm
0.2 ft wg
0.7 ft/s
160.00 F
114.16 F
45.8 F
65.00 F
81.46 F
0.14 in wg
FW
0 %
0.0 (hr-sqft-F)/BTU



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Unit Acoustics Summary

Project: CMS Elon, Hawk, Polo Ridge
Tag: AHU-4

Unit Acoustics Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	90	83	81
125 Hz _____	89	89	85
250 Hz _____	91	89	86
500 Hz _____	84	80	78
1000 Hz _____	82	74	71
2000 Hz _____	80	74	70
4000 Hz _____	78	71	68
8000 Hz _____	76	68	65

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Unit Acoustics A-weighted Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	63	57	55
125 Hz _____	73	73	69
250 Hz _____	83	80	78
500 Hz _____	81	77	75
1000 Hz _____	82	74	71
2000 Hz _____	81	75	71
4000 Hz _____	79	72	69
8000 Hz _____	75	67	63

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Sound contributed by Supply and Return Fans

Unit Acoustics PART-LOAD Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	84	81	78
125 Hz _____	84	87	82
250 Hz _____	81	80	75
500 Hz _____	77	73	69
1000 Hz _____	76	70	65
2000 Hz _____	73	69	63
4000 Hz _____	69	66	60
8000 Hz _____	68	63	58

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Unit Acoustics PART-LOAD A-weighted Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	58	55	52
125 Hz _____	68	71	66
250 Hz _____	72	72	67
500 Hz _____	74	70	66
1000 Hz _____	76	70	65
2000 Hz _____	74	70	65
4000 Hz _____	70	67	61
8000 Hz _____	67	62	57

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

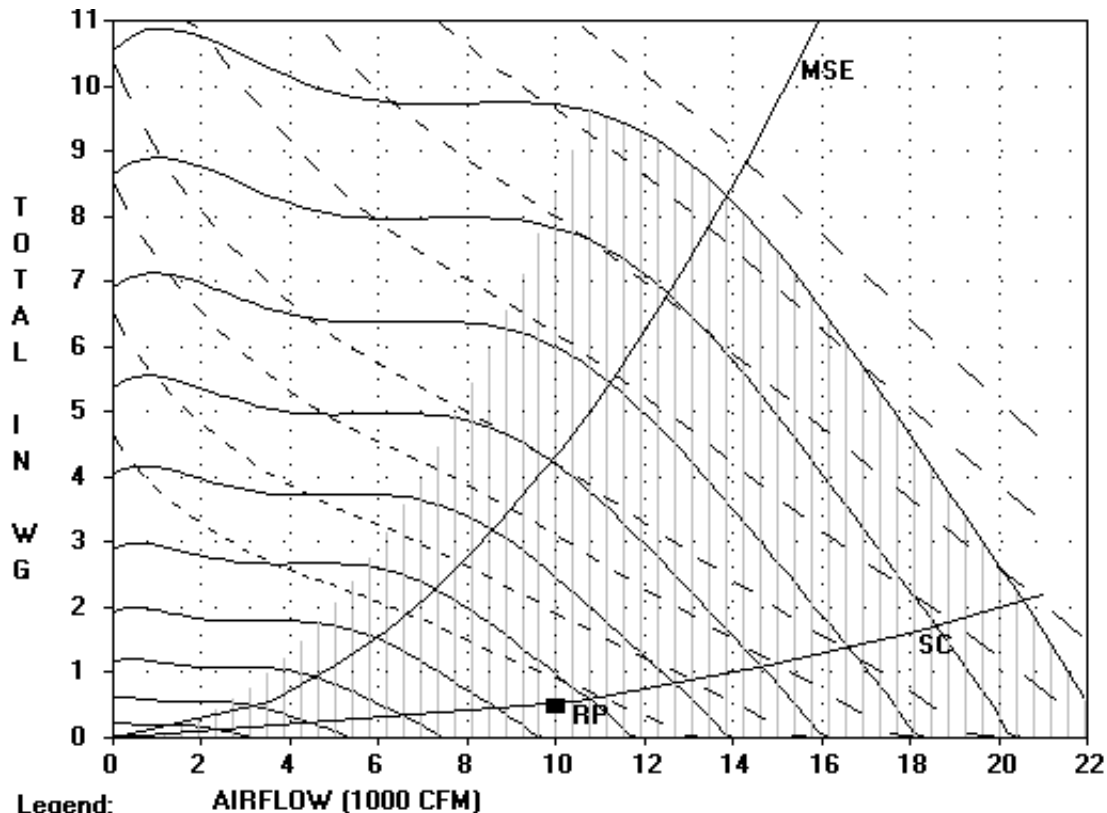
Sound contributed by Supply and Return Fans

Return Fan Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-4

Fan Model	39M2501HPDL
Unit Size	25W
Fan Type	DIRECT DRIVE PLENUM (Return)
Fan Wheel Diameter	27
Fan Class	II
Static Efficiency (%)	35
Fan Application	Draw Thru
Orientation	Horizontal
Actual Airflow, CFM	10000
Site Altitude, , ft	0
Total Upstream Static Losses, in wg	0.50
Number of Fans	1
Calculated Fan RPM / Motor RPM	1022 / 1200
Class II Max. RPM	2035
Fan BHP	2.2
Fan Electrical Power, kW	1.9

Unit is outside of the scope of AHRI Standard 430/431.



Legend:

AIRFLOW (1000 CFM)

- RPM
 - BHP
 MSE - Max. Static Eff.
 SC - System Curve
 RP - Rated Point

RPM = 1022 BHP = 2.2 CLASS II MAX. RPM = 2035

RPM's (x 100, L to R): 1. 3. 5. 7. 9. 11. 13. 15. 17. 19. 21.

BHP's (L to R): 3 5 7.5 10 15 20 25 30

Supply Fan Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-4

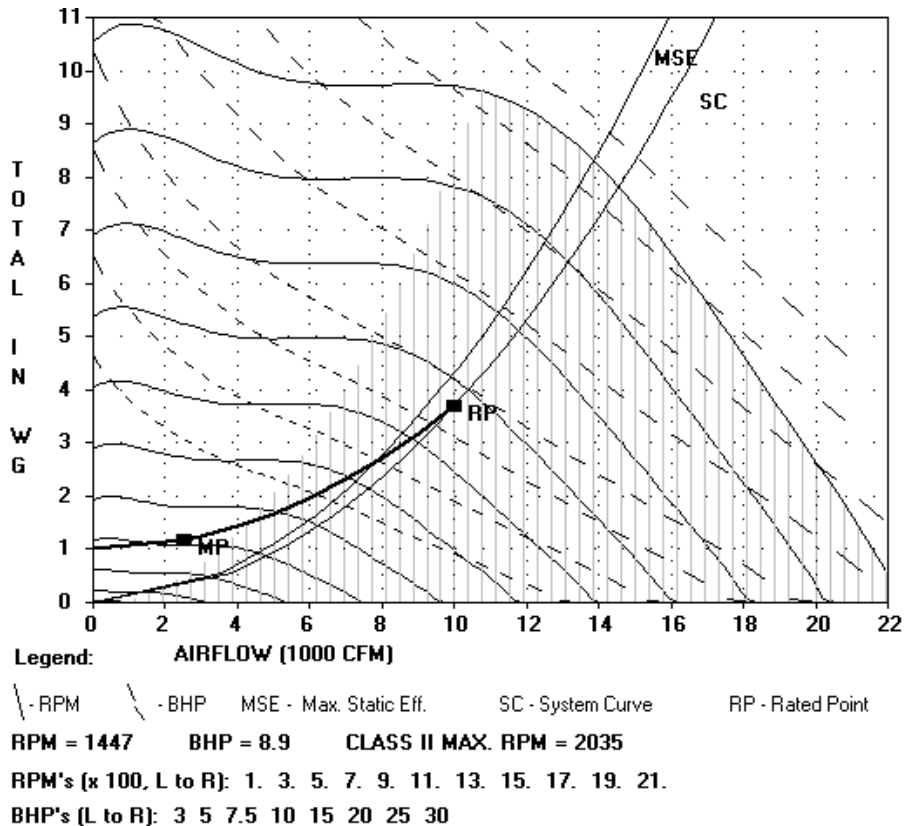
Fan Model	39M2501HPDL-U
Unit Size	25W
Fan Type	DIRECT DRIVE PLENUM
Fan Wheel Diameter	27
Fan Class	II
Fan Application	Draw Thru
Orientation	Horizontal
Actual Airflow, CFM	10000
Site Altitude, ft	0
Upstream Ext. Static, in wg	0.00
Downstream Ext. Static, in wg	2.25
Cooling Coil Static, in wg	0.89
Heating Coil Static, in wg	0.14
Total Accessory Static, in wg	0.42
Total Static Pressure, in wg	3.70
Calculated Fan RPM / Motor RPM	1447 / 1200
Class II Max. RPM	2035
Static Efficiency (%)	66
Number of Fans	1
Fan BHP	8.9
Fan Electrical Power, kW	7.2



Accessories:

- (1) Flat Throwaway (2 in.), Dirty [0.33]
- (1) Mixing or Exhaust Box [0.09]

NOTE: Certified in accordance with the AHRI Central Station Air-Handling Unit Certification Program, which is based on AHRI Standards 430/431. Certified units may be found in the AHRI Directory at www.ahridirectory.org



Unit width: 7'-2" (plus lifting lugs)
 Return Fan
 3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 2In. Flat Filter
 Qty (8) 20in. x 24in.
 Hot Water 1 Row 8 FPI Half Circuit (qty. 1)
 Chilled Water 8 Row 14 FPI Double Circuit (qty. 1)

Draw-Thru Supply Fan
 10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 Operating weight: 5622.0 lbs.
 Upstream Corner Weight (each): 1301.0 lbs.
 Downstream Corner Weight (each): 1510.0 lbs.

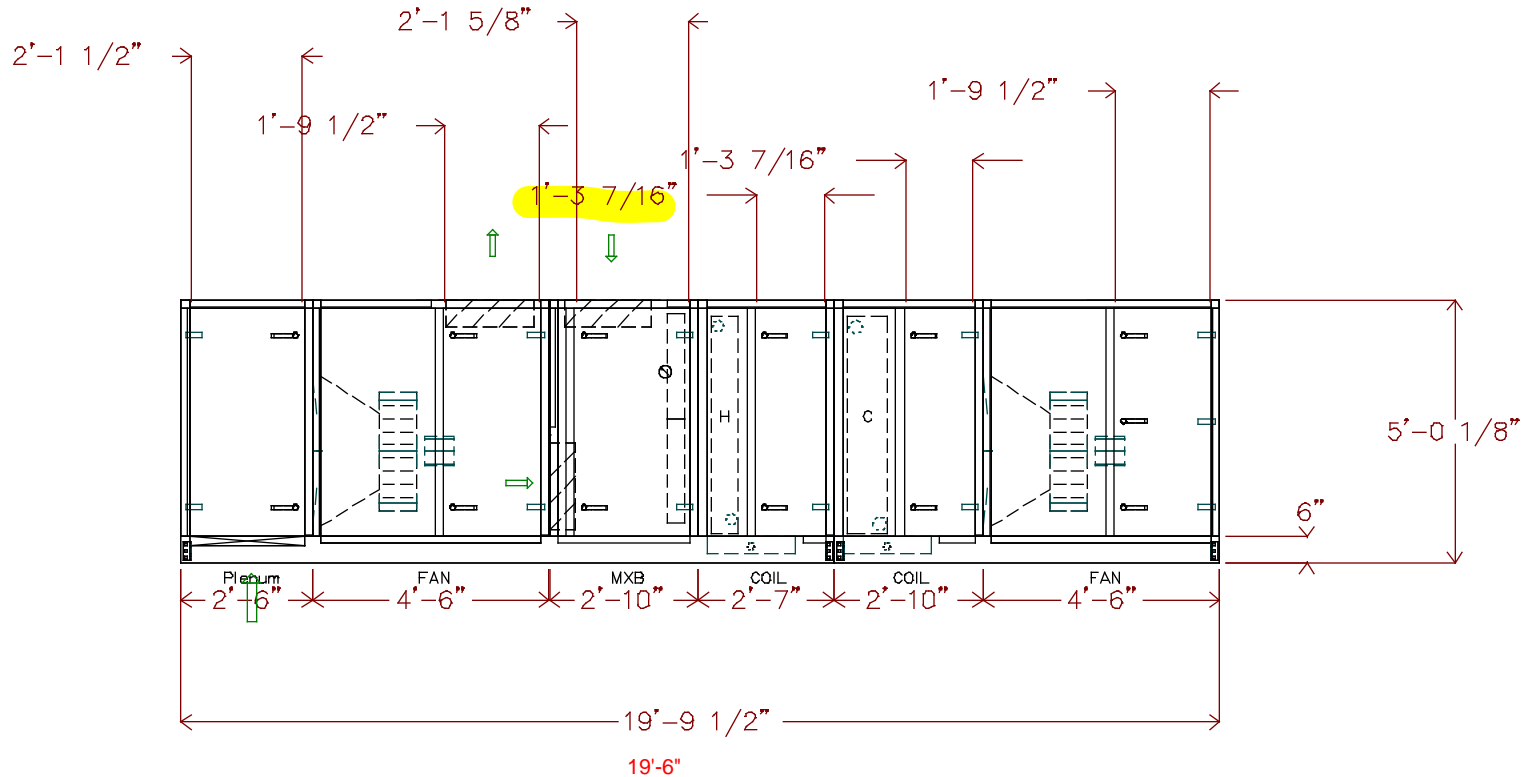


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Split	Airway Length	Weight (lbs.)
(Split 1)	19'-9 1/2"	5622



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39M Central Station Air-Handler, Size 25W
 CMS Elon, Hawk, Polo Ridge: AHU-4
 Assembly Drawing

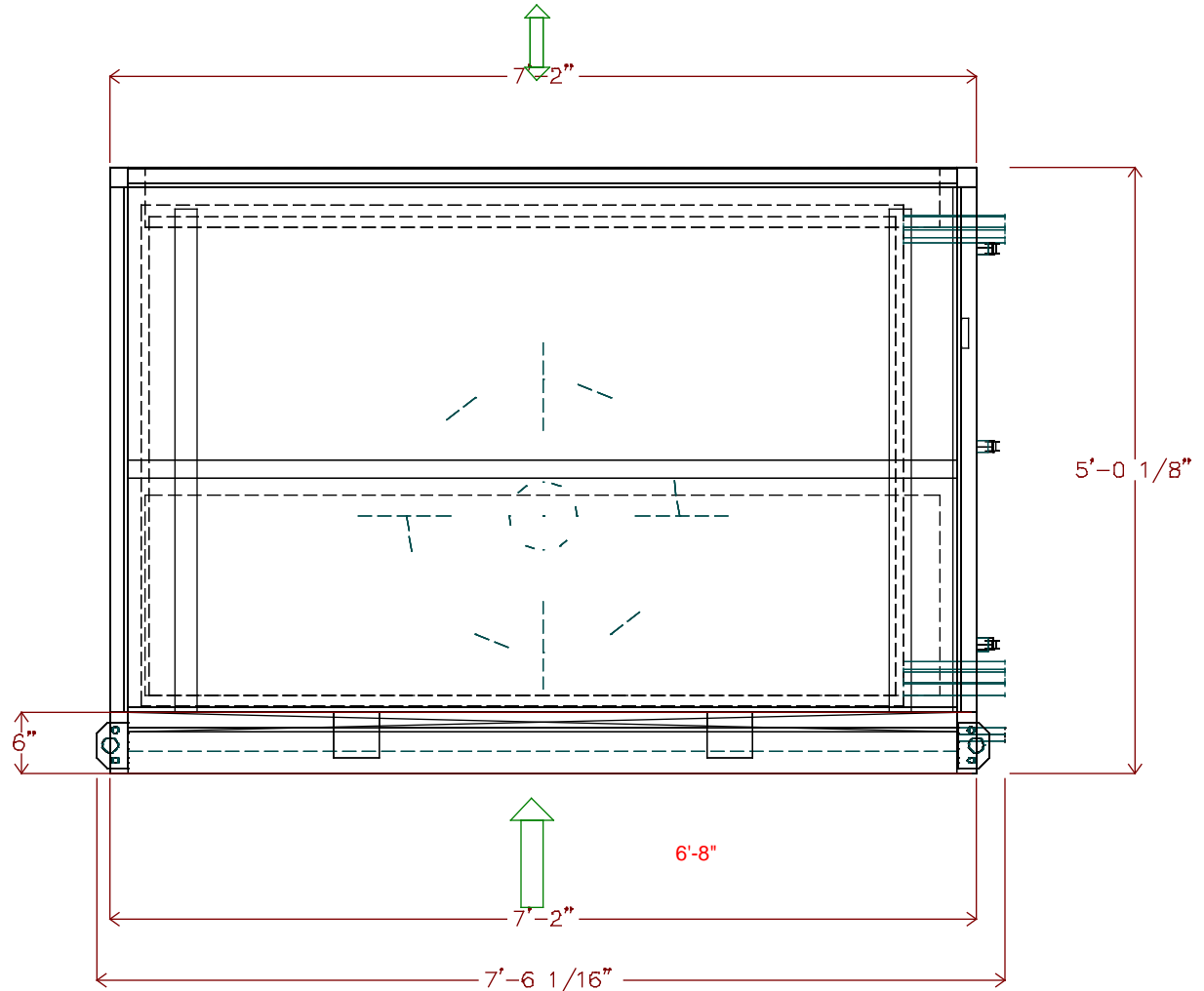
REVISION
Side View

Unit viewed from right side of side elevation view.
 Unit length: 19'-9 1/2"
 Return Fan
 3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 2In. Flat Filter
 Qty (8) 20in. x 24in.
 Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Chilled Water 8 Row 14 FPI Double Circuit (qty. 1)
 Draw-Thru Supply Fan
 10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 Operating weight: 5622.0 lbs.
 Upstream Corner Weight (each): 1301.0 lbs.
 Downstream Corner Weight (each): 1510.0 lbs.



Review unit width and service requirements at Return Fan, relative to AHU-3.



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39M Central Station Air-Handler, Size 25W
 CMS Elon, Hawk, Polo Ridge: AHU-4
 Assembly Drawing

REVISION
End View

Unit height: 5'-0 1/8"

Return Fan

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2In. Flat Filter

Qty (8) 20in. x 24in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Chilled Water 8 Row 14 FPI Double Circuit (qty. 1)

Draw-Thru Supply Fan

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 5622.0 lbs.

Upstream Corner Weight (each): 1301.0 lbs.

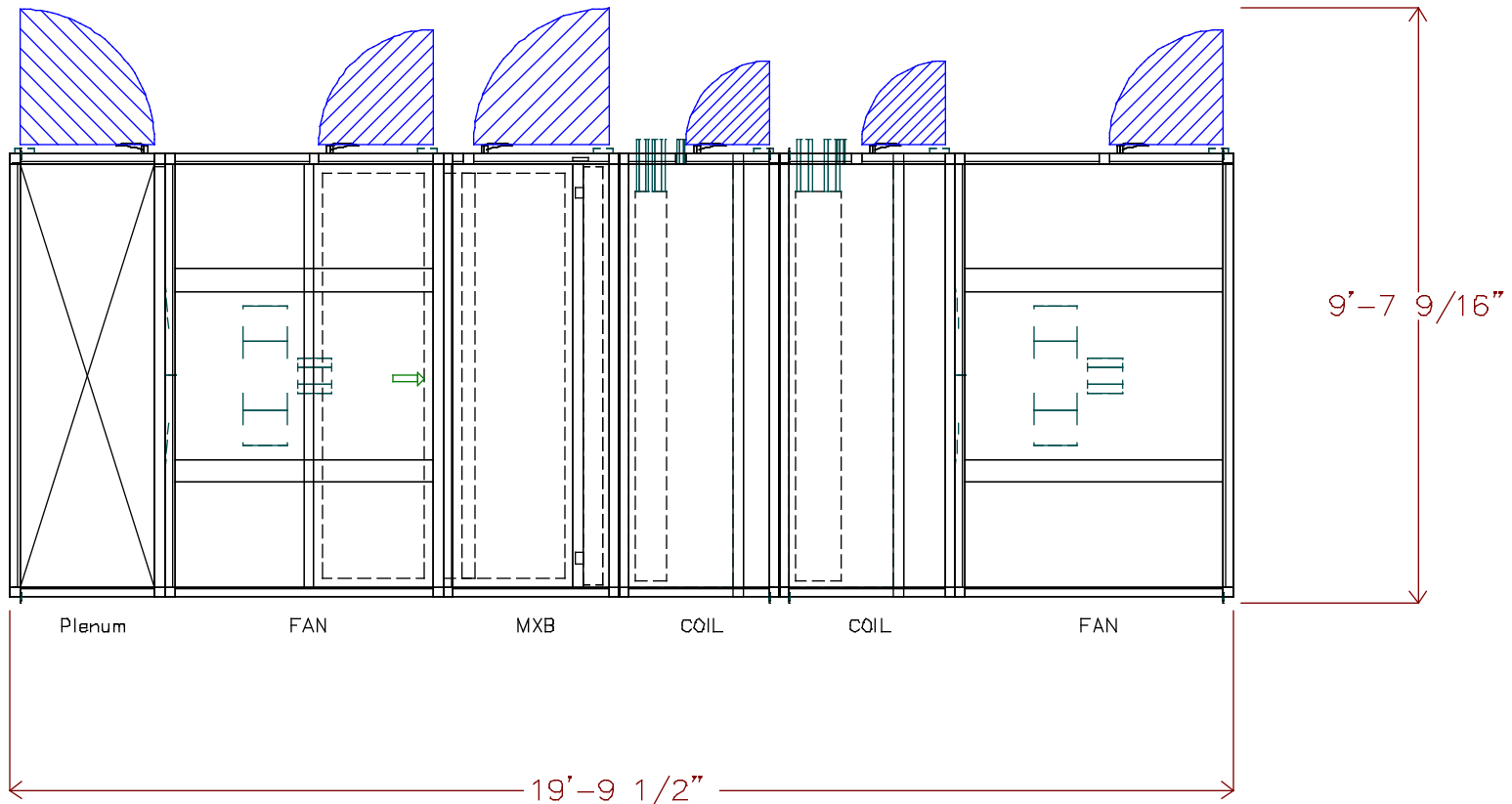
Downstream Corner Weight (each): 1510.0 lbs.



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39M Central Station Air-Handler, Size 25W
CMS Elon, Hawk, Polo Ridge: AHU-4
Assembly Drawing

REVISION
Top View

Unit height: 5'-0 1/8"

Return Fan

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2In. Flat Filter

Qty (8) 20in. x 24in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Chilled Water 8 Row 14 FPI Double Circuit (qty. 1)

Draw-Thru Supply Fan

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 5622.0 lbs.

Upstream Corner Weight (each): 1301.0 lbs.

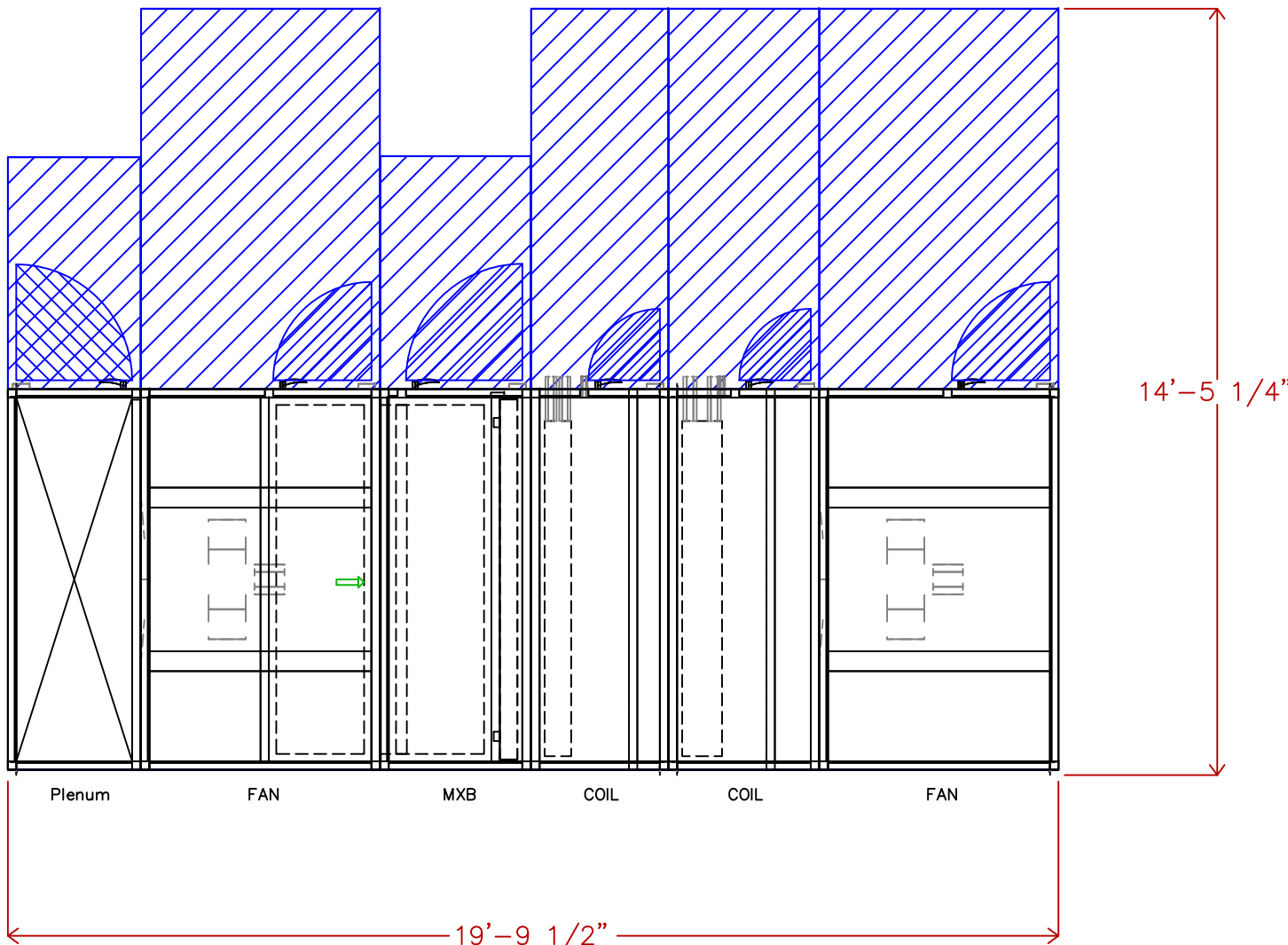
Downstream Corner Weight (each): 1510.0 lbs.



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AHUBuilder
v6.69I

39M Central Station Air-Handler, Size 25W
CMS Elon, Hawk, Polo Ridge: AHU-4
Assembly Drawing

REVISION
Top View

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)
 Chilled Water 8 Row 14 FPI Double Circuit (qty. 1)

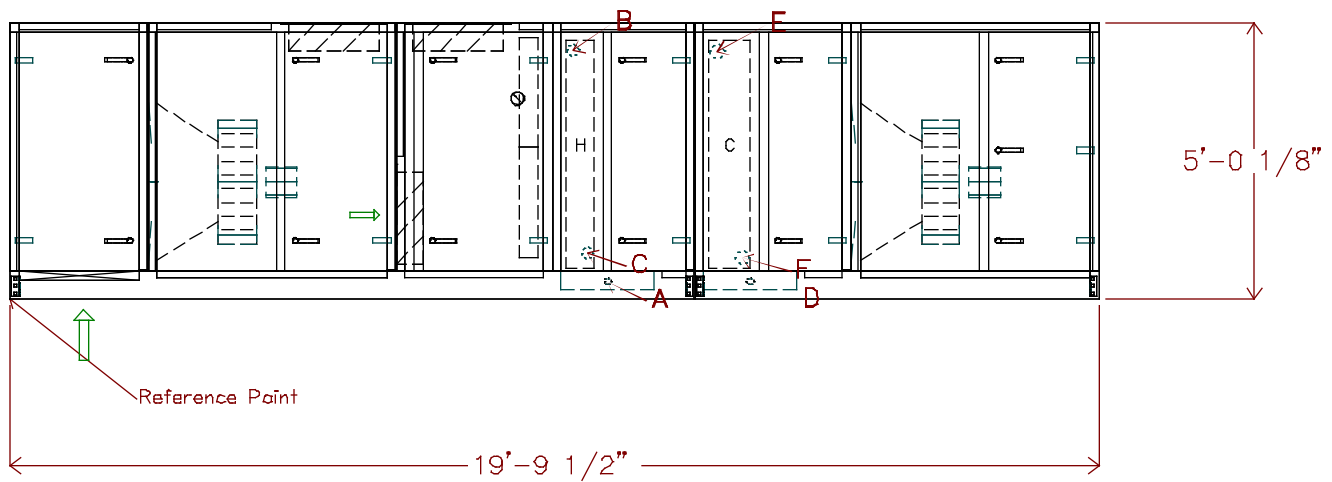


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Pipe	x	y	diameter	Usage
A	10'-10 5/16"	3 13/16"	1 1/2"	DrainPan
B	10'-2 3/4"	4'-6 3/16"	2 1/2"	HW Outlet
C	10'-5 15/16"	9 15/16"	2 1/2"	HW Inlet
D	13'-5 3/8"	3 13/16"	1 1/2"	DrainPan
E	12'-10 3/16"	4'-5 15/16"	3"	CW Outlet
F	13'-3 11/16"	9"	3"	CW Inlet



DATE
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39M Central Station Air-Handler, Size 25W
 CMS Elon, Hawk, Polo Ridge: AHU-4
 Assembly Drawing

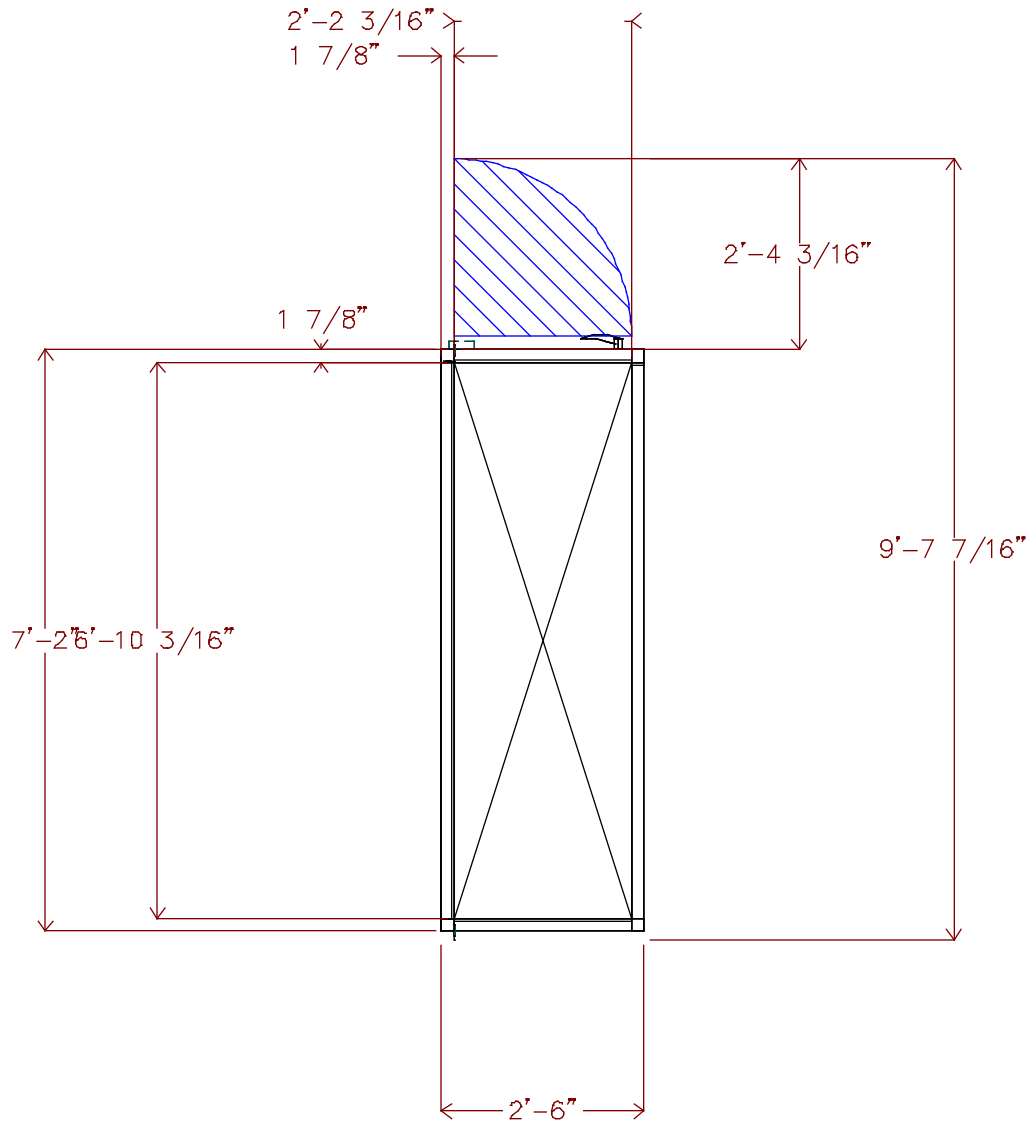
REVISION
Side View



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39M Central Station Air-Handler, Size 25W
CMS Elon, Hawk, Polo Ridge: AHU-4
Turning Plenum

REVISION
Top View

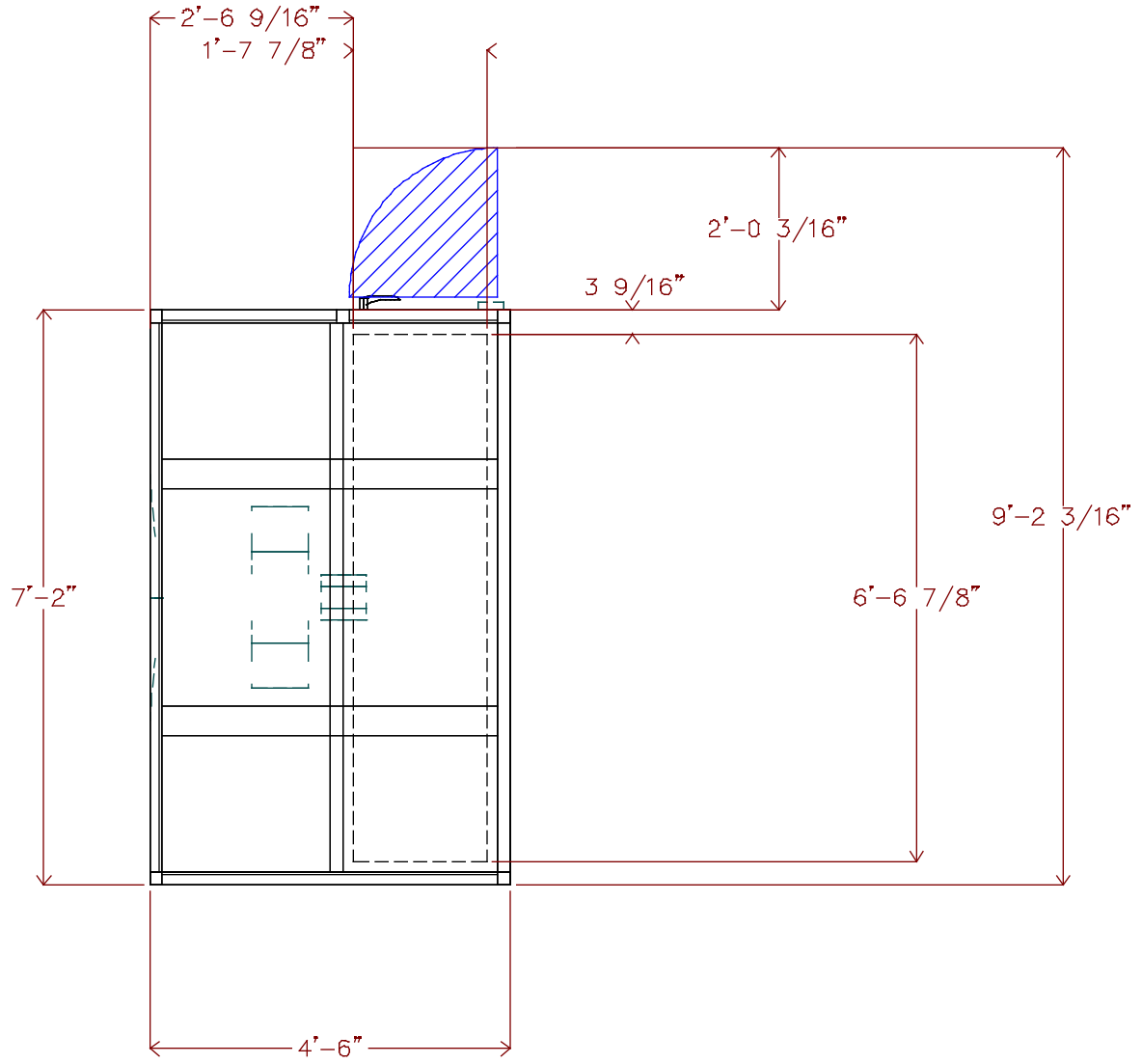
Return Fan
 3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM



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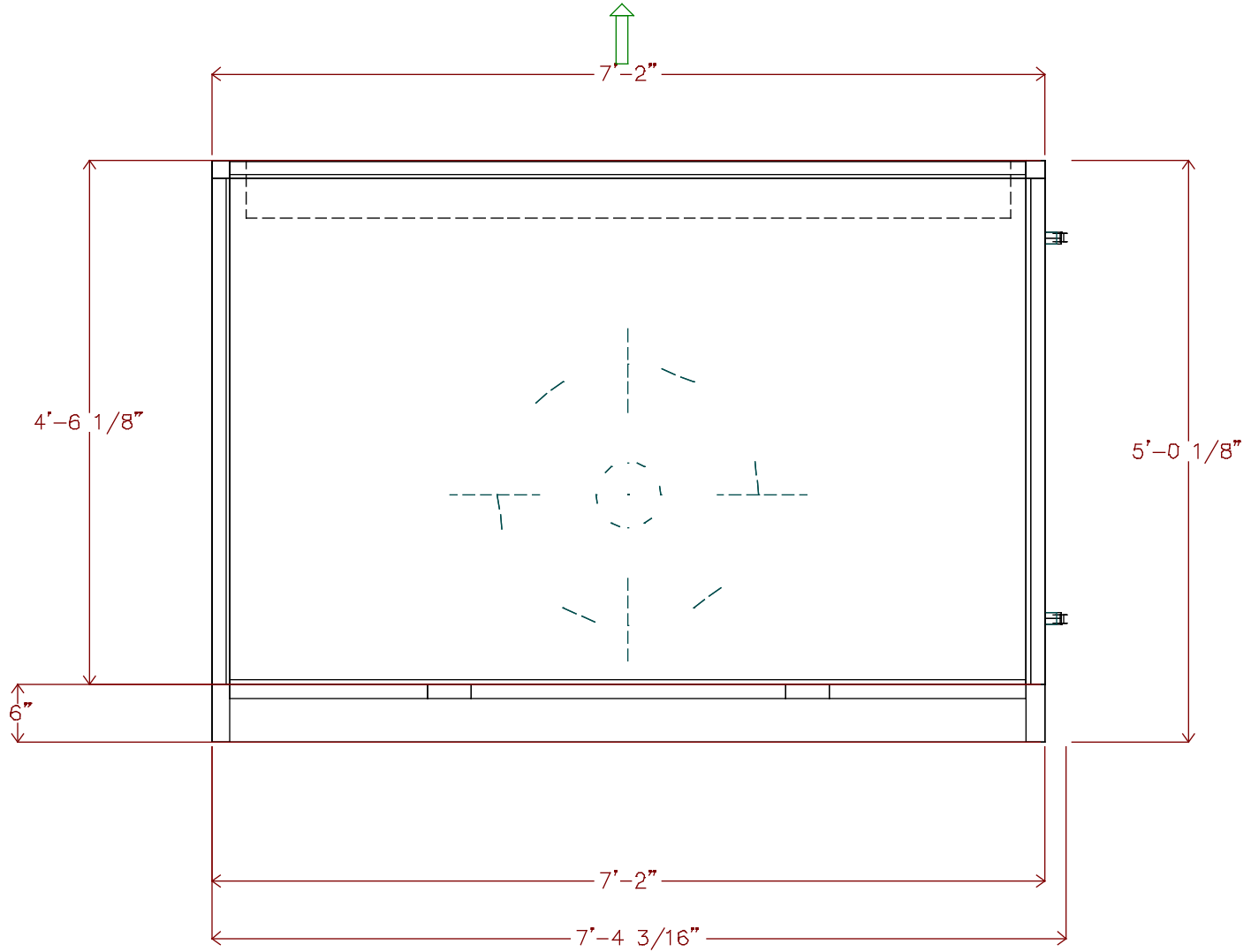
39M Central Station Air-Handler, Size 25W
 CMS Elon, Hawk, Polo Ridge: AHU-4
 Return Fan

REVISION
Top View

Unit viewed from right side of side elevation view.

Return Fan

3 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM



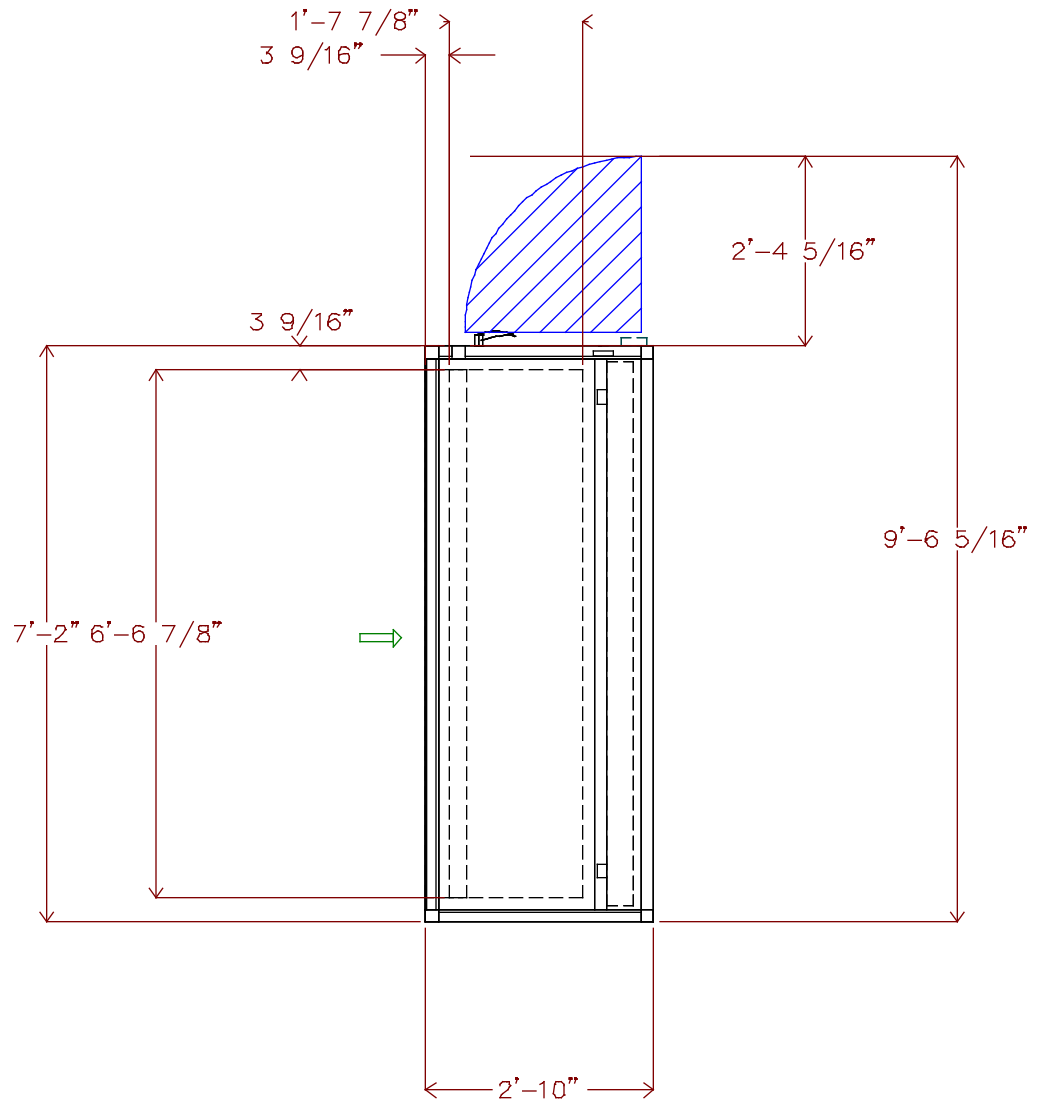
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DATE 4/26/2022	AHUBuilder v6.69I	39M Central Station Air-Handler, Size 25W CMS Elon, Hawk, Polo Ridge: AHU-4 Return Fan	REVISION End View
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2In. Flat Filter
 Qty (8) 20in. x 24in.



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39M Central Station Air-Handler, Size 25W
 CMS Elon, Hawk, Polo Ridge: AHU-4
 Filter Mixing Box

REVISION
 Top View

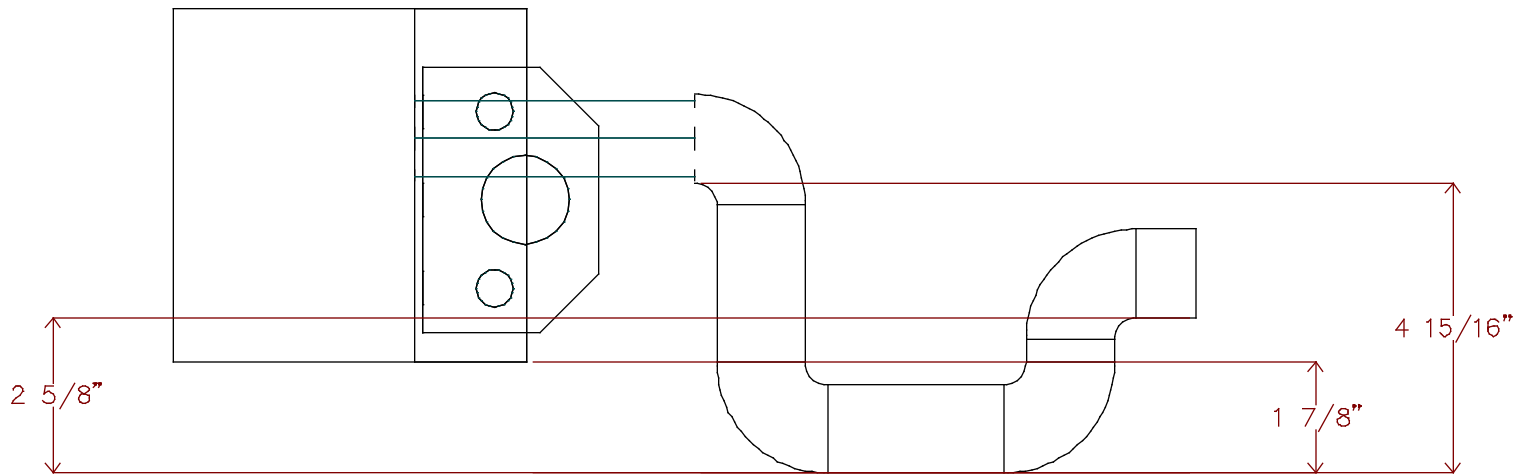


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DRAW-THRU



DATE
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39M Central Station Air-Handler, Size 25W
CMS Elon, Hawk, Polo Ridge: AHU-4
Condensate Trap Dimensions

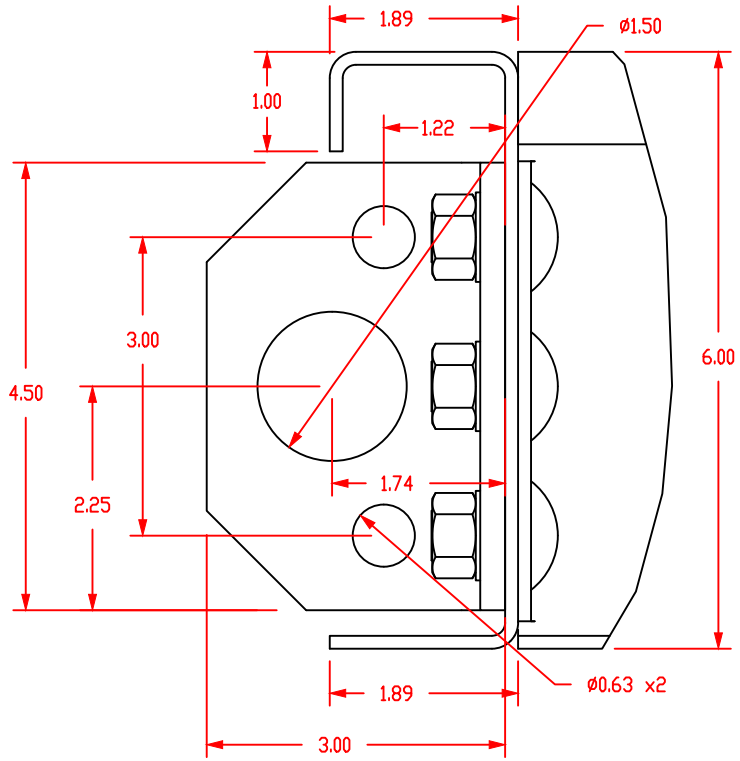
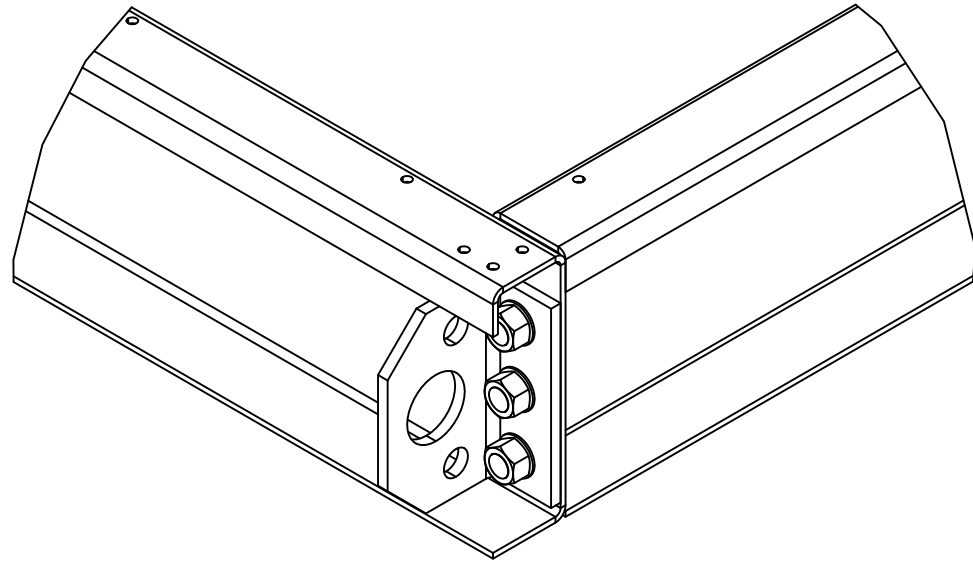
REVISION
End View



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39M



DATE
4/26/2022

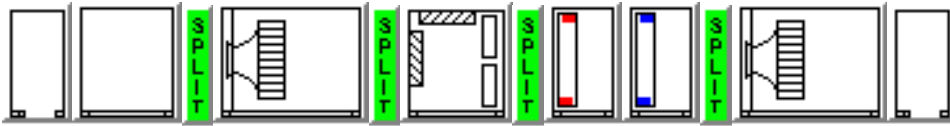
AHUBuilder
v6.69l

39M Central Station Air-Handler, Size: 03 - 110
6" Baserail and Lifting Lug Detail

REVISION

Job Name CMS Elon, Hawk, Polo Ridge

Mark for AHU-5



Unit Parameters

Aero Indoor Air Handler

39MN Size 36W

Insulation: R-13 Double Wall Sealed Panel

Exterior Finish: Painted Exterior Panels 18ga

Interior Finish: Galvanized Interior Panels

Level I Thermal Break

6 inch tall Base Rail

Turning Plenum

Discharge : Bottom

Door Left Side

Plenum

Shipping Split After

Length 36 inches

Door Left Side

Return Fan

Shipping Split After

Damper: Top Premium Parallel

Rear Inlet

Fan Sled

Plenum Fan A PDLA01222

Direct Drive Fans

Fan Count 2

1675 fanRPM Class II

Full Open Discharge

Backdraft Dampers

Spring Fan Isolation

Motor Shaft Grounding

Motor

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Manufacturer - Generic

Frame Size - 215T

Motor Shaft Diameter (in.) - 1.375

Voltage Selected - 460/3/60

Full Load Amps - 7.3 (Each)

Efficiency - 89.5%

Contractor:
Verify motor rating minimum SCCR
Rating 35 KAIC
Verify Phase Loss protection provided

Job Name CMS Elon, Hawk, Polo Ridge
Mark for AHU-5

Door Left Side

Filter Mixing Box

Shipping Split After

Damper: Rear Premium Parallel

Damper: Top Premium Parallel

2In. Flat Filter

Field Supplied 2in. MERV 8 Throwaway Filter

Construction Filters

Qty (12) 20in. x 25in.

Door Left Side

Minihelic Differential Pressure Gage 0-2" w.c. Left Side

Hot Water Coil and Plenum

304 Stainless Steel Drain Pan Left Side

Hot Water 36.67 sq.ft 1 Row 8 FPI Half Circuit

Coil Connection Left Side

1/2 in. Tube Diameter

Fin Thickness: 0.0060

AL fins Galv. Casing

Steel Header

No Coating

Door Left Side

Chilled Water Coil and Plenum

Shipping Split After

304 Stainless Steel Drain Pan Left Side

Chilled Water 36.67 sq.ft 8 Row 14 FPI Double Circuit

Coil Connection Left Side

1/2 in. Tube Diameter

AL fins Galv. Casing

Steel Header

No Coating

Door Left Side

Blow-Thru Supply Fan

Rear Inlet

Fan Sled

Plenum Fan B PDLA01270

Direct Drive Fans

Fan Count 2

1437 fanRPM Class II

Full Open Discharge

Backdraft Dampers

Spring Fan Isolation

Motor Shaft Grounding

Motor

Job Name CMS Elon, Hawk, Polo Ridge
Mark for AHU-5

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Manufacturer - Generic

Frame Size - 256T

Motor Shaft Diameter (in.) - 1.625

Voltage Selected - 460/3/60

Full Load Amps - 14.1 (Each)

Efficiency - 91.0%

Contractor:
Verify motor rating minimum SCCR
Rating 35 KAIC
Verify Phase Loss protection provided.

Door Left Side

Blow Thru Plenum Section

Discharge : Bottom

Configuration Notes

Preheat coil configurations can cause freeze stat to trip if the downstream cooling coil isn't drained in heating season and/or PID valve control loop is too slow to react.

Backdraft dampers are close to door(s.) Ensure adequate access exists.

If a bottom connection is required, use an Inlet Plenum Section.

Backdraft dampers are close to door(s.) Ensure adequate access exists.

If a bottom connection is required, use a Discharge Plenum Section.

Discharge duct(s) must be gasketed and screwed directly to the discharge panel of the unit.

Discharge duct(s) must be gasketed and screwed to the discharge opening of the unit.

Weights and Dimensions

(LxWxH in ft in) 28' 6" x 9' 2" x 5' 11" **

Operating 10000 LB **

Coordinate unit weight with Structural

Warranty Part Number(s) (NET PRICING)

Qty 1 Each Additional 39 Series Start-up

Qty 1 2nd Year Parts only 39M - Size 36 - 61

Weights and Dimensions are approximate. Weights include base unit weight, coils (wet & dry), fans and fan motors, and other components, but does not include filters, drives and skids. Approximate dimensions are provided primarily for shipping purposes. Shipping skids are not included.
All filter media efficiency ratings are for the filter media only.

Chilled Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-5

Cooling Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Total Cooling Capacity _____
 Sensible Cooling Capacity _____
Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Rise _____
 Entering Air Dry Bulb _____
 Entering Air Wet Bulb _____
 Entering Air Enthalpy _____
 Leaving Air Dry Bulb _____
 Leaving Air Wet Bulb _____
 Leaving Air Enthalpy _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MC
1
8 / 14 / DB
.0042 in
Sine Wave
Large
36.67 sqft
488.1 fpm
Al-Galv.
0.5 in
1.25 x 0.781 in
0.016 in
17900 CFM
0 ft
17183 SCFM
826.99 MBH
608.26 MBH
135.0 gpm
6.1 ft wg
2.6 ft/s
44.00 F
56.21 F
12.2 F
83.00 F
67.00 F
31.48 BTU/lb
50.78 F
50.77 F
20.7 BTU/lb
1.09 in wg
FW
0 %
0.0 (hr-sqft-F)/BTU



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Hot Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-5

Heating Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Heating Capacity _____
Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Drop _____
 Entering Air Temperature _____
 Leaving Air Temperature _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MH
1
1 / 8 / HF
.0060 in
Sine Wave
Large
36.67 sqft
488.1 fpm
Al-Galv.
0.5 in
1.25 x 0.781 in
0.016 in
17900 CFM
0 ft
18071 SCFM
330.10 MBH
15.0 gpm
0.6 ft wg
1.1 ft/s
160.00 F
115.04 F
45.0 F
65.00 F
81.71 F
0.19 in wg
FW
0 %
0.0 (hr-sqft-F)/BTU



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Unit Acoustics Summary

Project: CMS Elon, Hawk, Polo Ridge
Tag: AHU-5

Unit Acoustics Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	100	95	91
125 Hz _____	94	92	88
250 Hz _____	100	96	93
500 Hz _____	93	92	87
1000 Hz _____	91	84	81
2000 Hz _____	88	83	78
4000 Hz _____	87	83	78
8000 Hz _____	89	83	78

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Unit Acoustics A-weighted Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	73	68	65
125 Hz _____	78	75	72
250 Hz _____	91	88	85
500 Hz _____	90	88	84
1000 Hz _____	91	84	81
2000 Hz _____	89	84	80
4000 Hz _____	88	84	79
8000 Hz _____	88	82	77

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Sound contributed by Supply and Return Fans

Unit Acoustics PART-LOAD Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	90	94	90
125 Hz _____	89	90	86
250 Hz _____	95	92	87
500 Hz _____	87	90	85
1000 Hz _____	86	83	79
2000 Hz _____	84	81	76
4000 Hz _____	83	81	75
8000 Hz _____	85	81	76

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Unit Acoustics PART-LOAD A-weighted Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	64	68	64
125 Hz _____	72	74	70
250 Hz _____	86	84	79
500 Hz _____	84	87	82
1000 Hz _____	86	83	79
2000 Hz _____	85	83	77
4000 Hz _____	84	82	76
8000 Hz _____	84	80	75

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

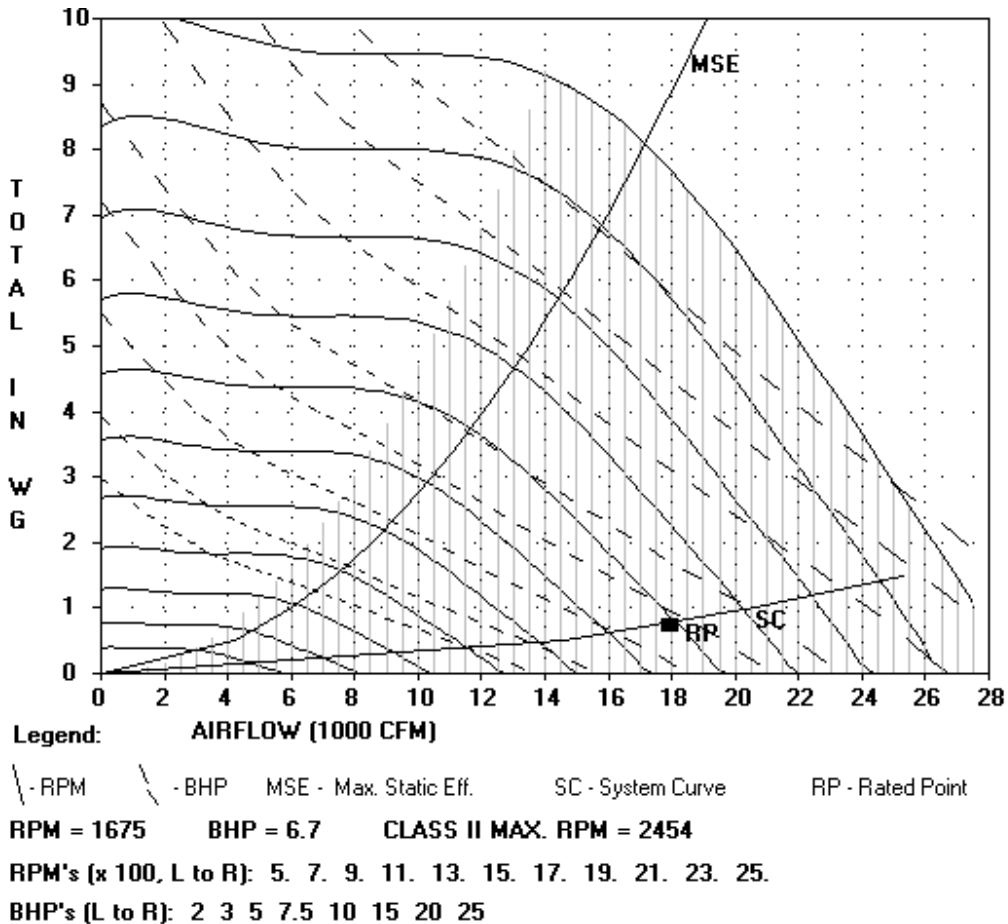
Sound contributed by Supply and Return Fans

Return Fan Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-5

Fan Model	39M3602HPDL
Unit Size	36W
Fan Type	DIRECT DRIVE PLENUM (Return)
Fan Wheel Diameter	22.2
Fan Class	II
Static Efficiency (%)	21
Fan Application	Draw Thru
Orientation	Horizontal
Actual Airflow, CFM	17900
Site Altitude, , ft	0
Backdraft Damper Loss, in wg	0.25
Total Upstream Static Losses, in wg	0.75
Number of Fans	2
Fan RPM / Max RPM	1675/2331
Each Fan BHP	3.4
Fan Total BHP	6.7
(n-1) Airflow, CFM	11374
(n-1) Redundancy (%)	64
Fan Electrical Power, kW	5.6

Unit is outside of the scope of AHRI Standard 430/431.



Supply Fan Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-5

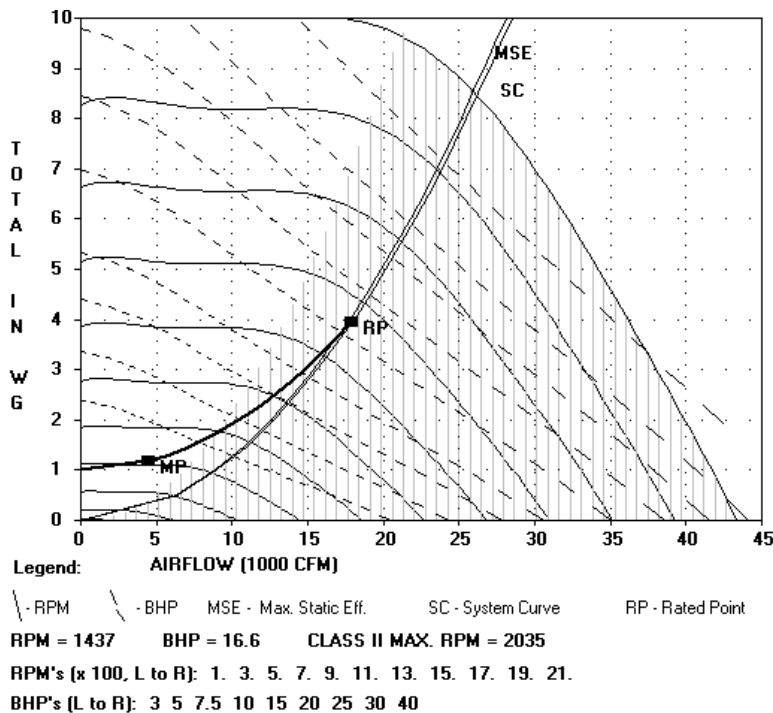
Fan Model	39M3602HPDL-D
Unit Size	36W
Fan Type	DIRECT DRIVE PLENUM
Fan Wheel Diameter	27
Fan Class	II
Fan Application	Blow Thru
Orientation	Horizontal
Actual Airflow, CFM	17900
Site Altitude, ft	0
Upstream Ext. Static, in wg	0.00
Downstream Ext. Static, in wg	2.25
Cooling Coil Static, in wg	1.09
Heating Coil Static, in wg	0.19
Backdraft Damper Losses, in wg	0.13
Total Accessory Static, in wg	0.29
Total Static Pressure, in wg	3.95
Calculated Fan RPM / Motor RPM	1437 / 1200
Class II Max. RPM	2035
Static Efficiency (%)	65
Number of Fans	2
Each Fan BHP	8.3
Fan Total BHP	16.6
(n-1) Airflow, CFM	14205
(n-1) Redundancy (%)	79
Fan Electrical Power, kW	13.5



Accessories:

- (1) Flat Throwaway (2 in.) [0.21]
- (1) Mixing or Exhaust Box [0.08]

NOTE: Certified in accordance with the AHRI Central Station Air-Handling Unit Certification Program, which is based on AHRI Standards 430/431. Certified units may be found in the AHRI Directory at www.ahridirectory.org



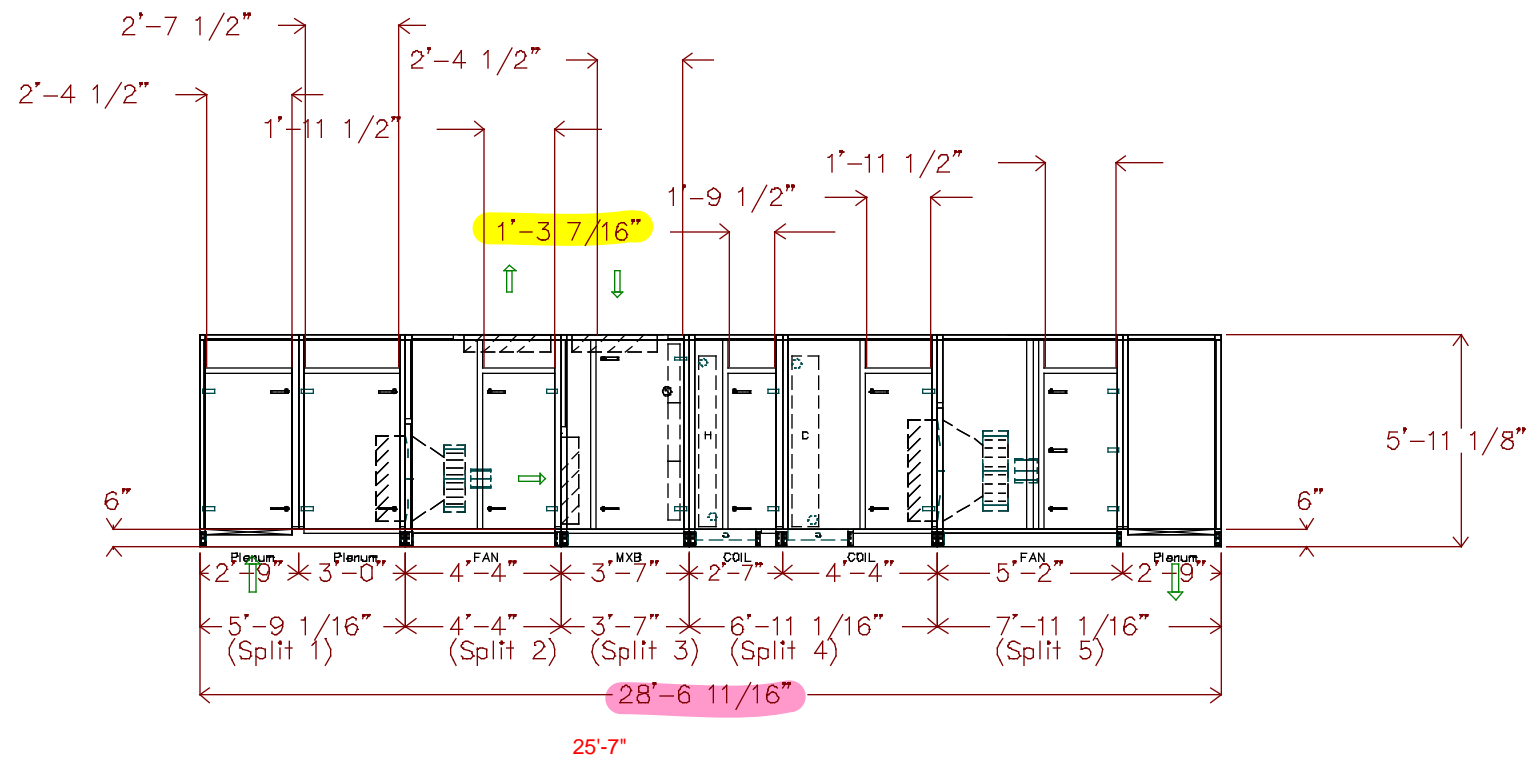
Unit width: 9'-2 11/16" (plus lifting lugs)
 Return Fan
 5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 2In. Flat Filter
 Qty (12) 20in. x 25in.
 Hot Water 1 Row 8 FPI Half Circuit (qty. 1)
 Chilled Water 8 Row 14 FPI Double Circuit (qty. 1)

Blow-Thru Supply Fan
 10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 Operating weight: 10000.0 lbs.
 Upstream Corner Weight (each): 2352.0 lbs.
 Downstream Corner Weight (each): 2649.0 lbs.



Review length requirements for this AHU relative to location of double doors into Mechanical Room

Split	Airway Length	Weight (lbs.)
(Split 1)	5'-9 1/16"	1360
(Split 2)	4'-4"	1650
(Split 3)	3'-7"	1265
(Split 4)	6'-11 1/16"	2787
(Split 5)	7'-11 1/16"	2938



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39MN

DATE 4/26/2022	AHUBuilder v6.69l	39M Central Station Air-Handler, Size 36W CMS Elon, Hawk, Polo Ridge: AHU-5 Assembly Drawing	REVISION Side View
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Unit viewed from right side of side elevation view.
 Unit length: 28'-6 11/16"
 Return Fan
 5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 2In. Flat Filter
 Qty (12) 20in. x 25in.
 Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

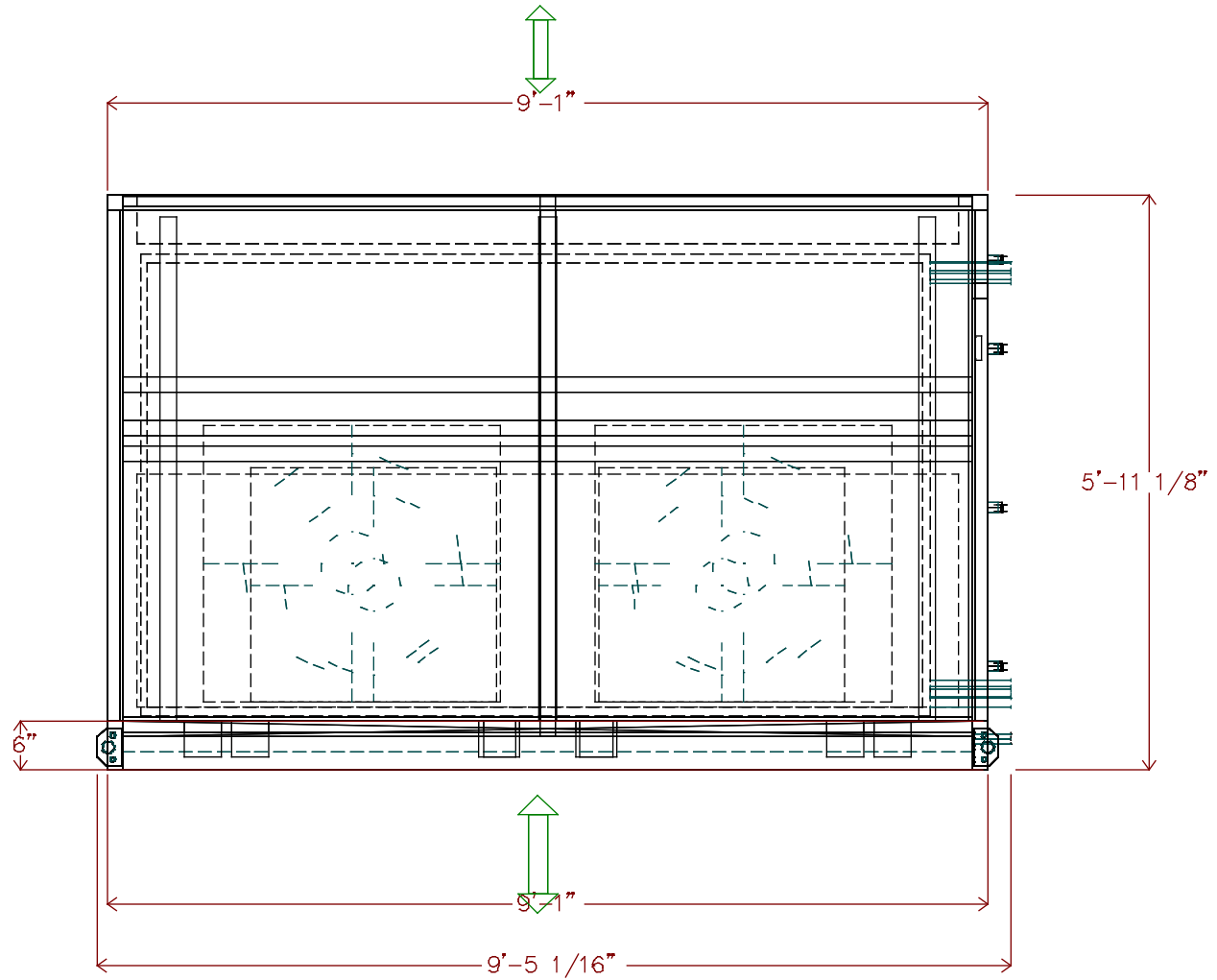
Chilled Water 8 Row 14 FPI Double Circuit (qty. 1)
 Blow-Thru Supply Fan
 10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 Operating weight: 10000.0 lbs.
 Upstream Corner Weight (each): 2352.0 lbs.
 Downstream Corner Weight (each): 2649.0 lbs.



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DATE 4/26/2022	AHUBuilder v6.69I	39M Central Station Air-Handler, Size 36W CMS Elon, Hawk, Polo Ridge: AHU-5 Assembly Drawing	REVISION End View
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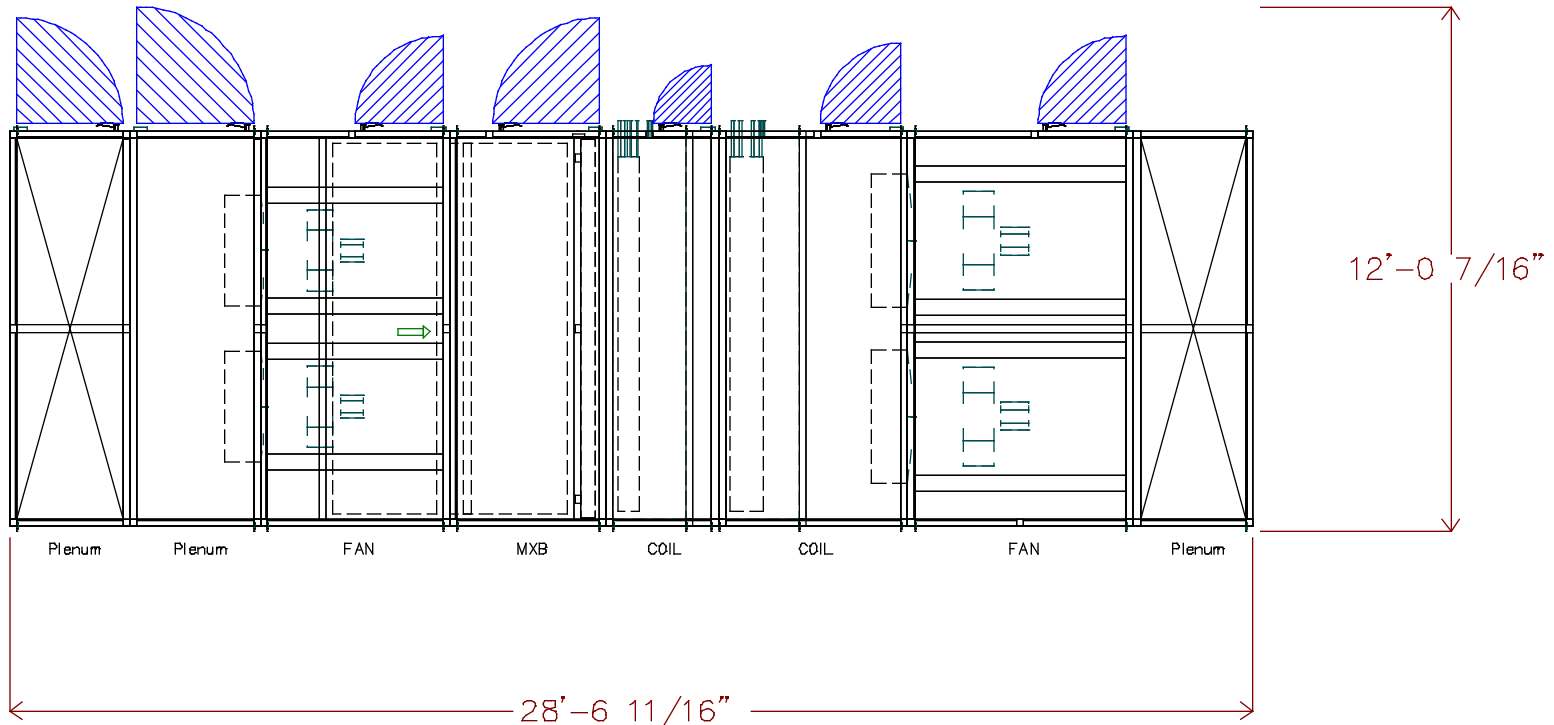
Unit height: 5'-11 7/8"
 Return Fan
 5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 2In. Flat Filter
 Qty (12) 20in. x 25in.
 Hot Water 1 Row 8 FPI Half Circuit (qty. 1)
 Chilled Water 8 Row 14 FPI Double Circuit (qty. 1)

Blow-Thru Supply Fan
 10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 Operating weight: 10000.0 lbs.
 Upstream Corner Weight (each): 2352.0 lbs.
 Downstream Corner Weight (each): 2649.0 lbs.



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DATE
4/26/2022

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v6.691

39M Central Station Air-Handler, Size 36W
 CMS Elon, Hawk, Polo Ridge: AHU-5
 Assembly Drawing

REVISION
Top View

39MN

Unit height: 5'-11 7/8"

Return Fan

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2In. Flat Filter

Qty (12) 20in. x 25in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 1)

Chilled Water 8 Row 14 FPI Double Circuit (qty. 1)

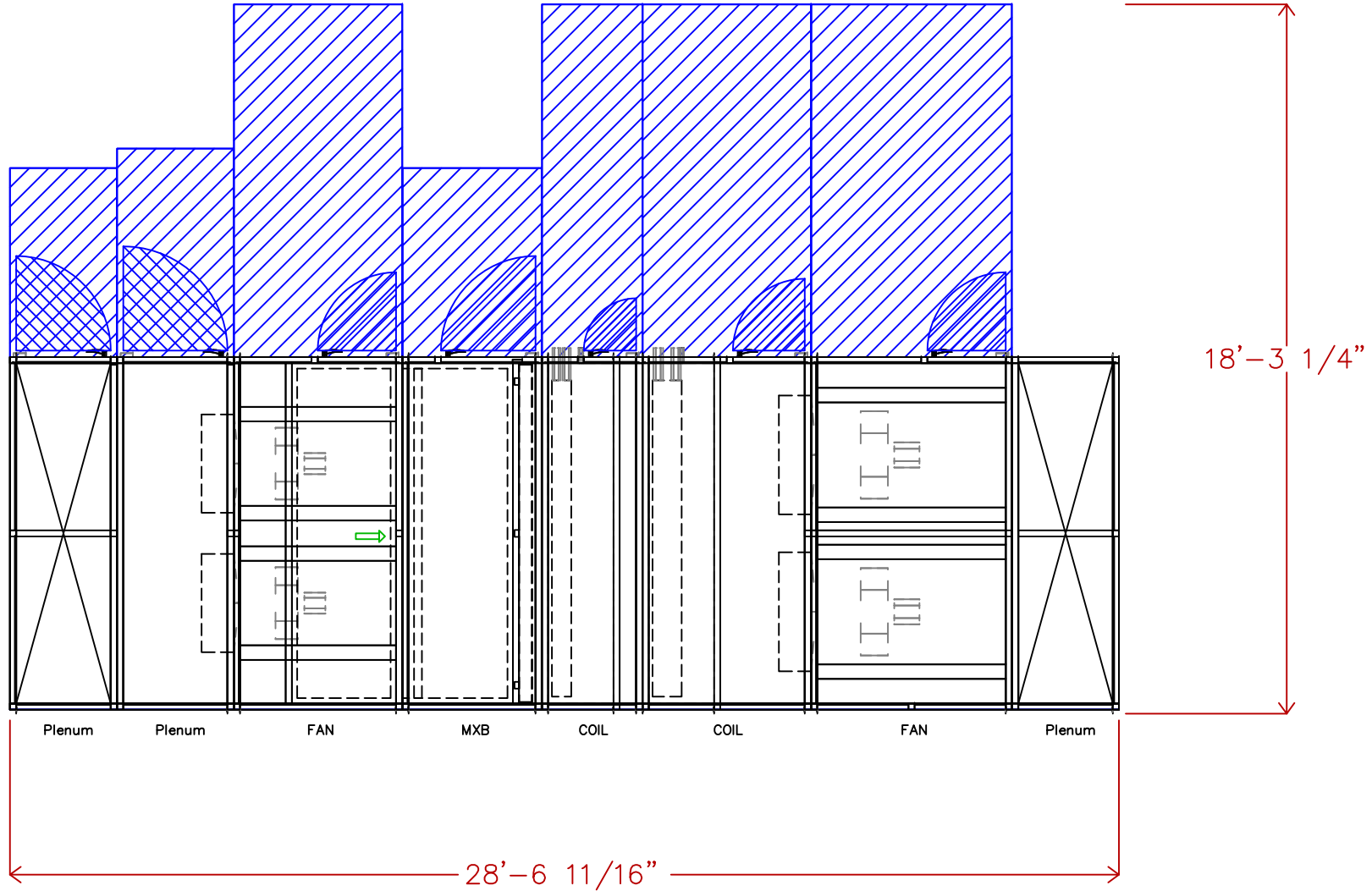
Blow-Thru Supply Fan

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 10000.0 lbs.

Upstream Corner Weight (each): 2352.0 lbs.

Downstream Corner Weight (each): 2649.0 lbs.



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DATE
4/26/2022

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39M Central Station Air-Handler, Size 36W
CMS Elon, Hawk, Polo Ridge: AHU-5
Assembly Drawing

REVISION
Top View

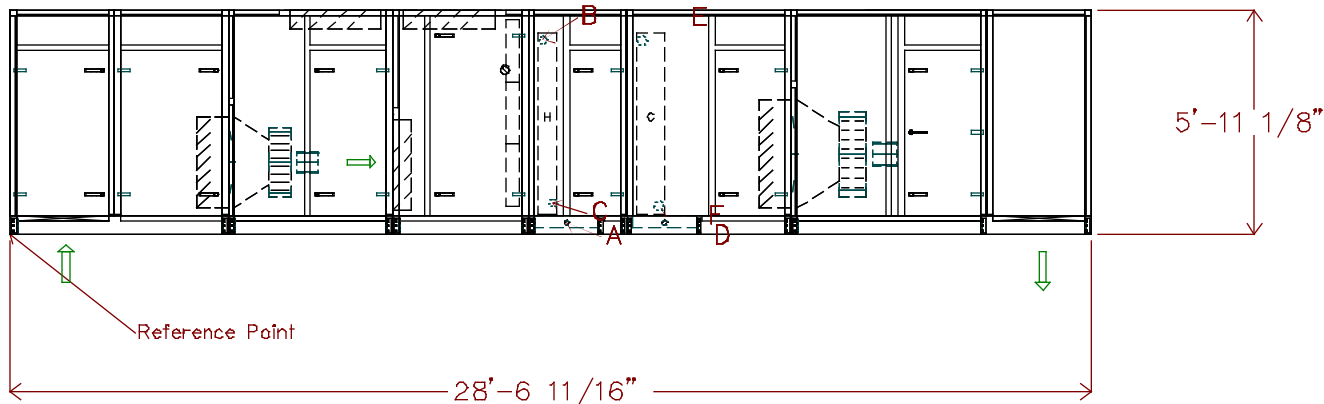
Hot Water 1 Row 8 FPI Half Circuit (qty. 1)
 Chilled Water 8 Row 14 FPI Double Circuit (qty. 1)



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Pipe	x	y	diameter	Usage
A	14'-8 3/8"	3 13/16"	1 1/2"	DrainPan
B	14'-0 7/8"	5'-1 11/16"	2 1/2"	HW Outlet
C	14'-4"	9 15/16"	2 1/2"	HW Inlet
D	17'-3 1/2"	3 13/16"	1 1/2"	DrainPan
E	16'-8 5/16"	5'-1 7/16"	3"	CW Outlet
F	17'-1 3/4"	9"	3"	CW Inlet



39MN

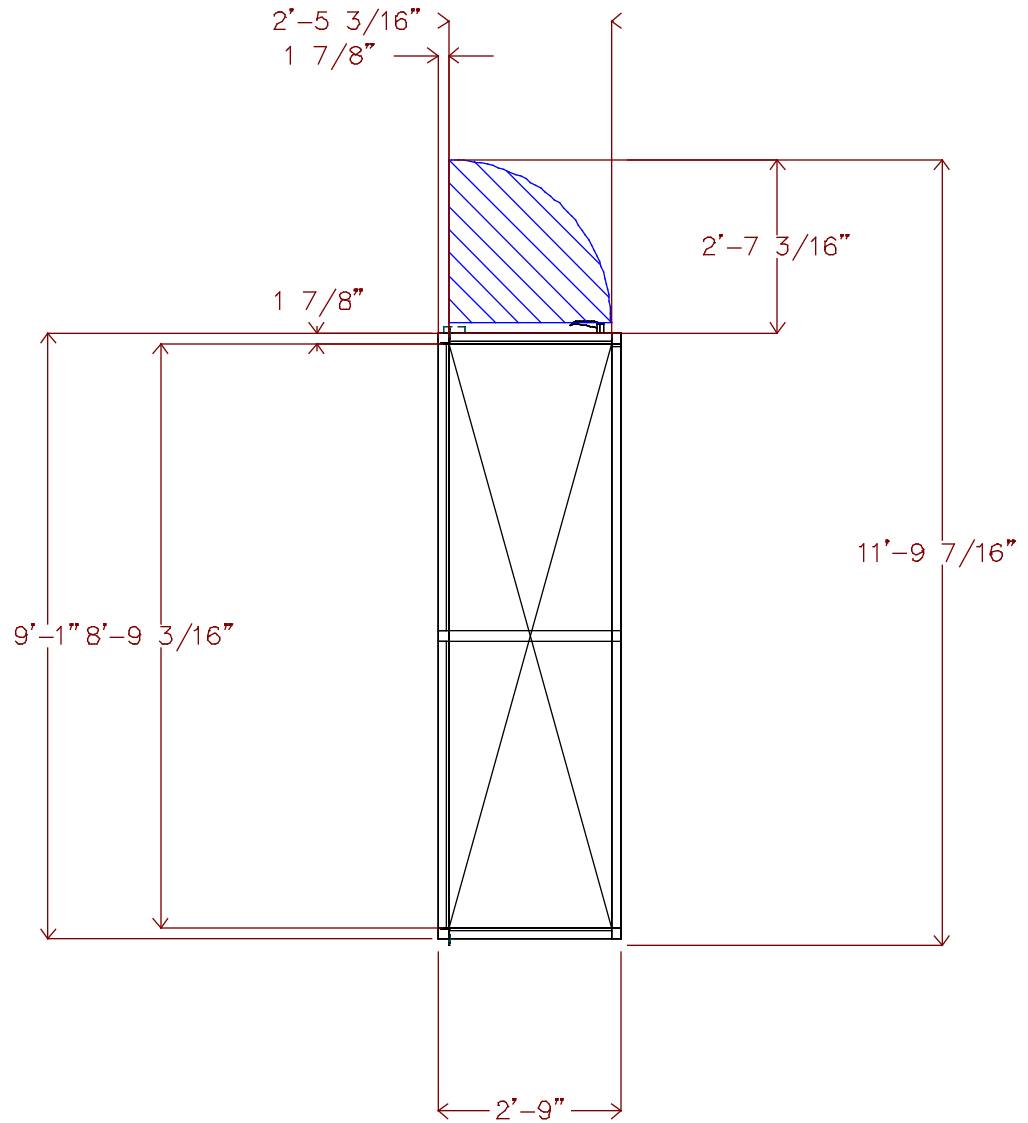
DATE 4/26/2022	AHUBuilder v6.69l	39M Central Station Air-Handler, Size 36W CMS Elon, Hawk, Polo Ridge: AHU-5 Assembly Drawing	REVISION Side View
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39M Central Station Air-Handler, Size 36W
CMS Elon, Hawk, Polo Ridge: AHU-5
Turning Plenum

REVISION
Top View

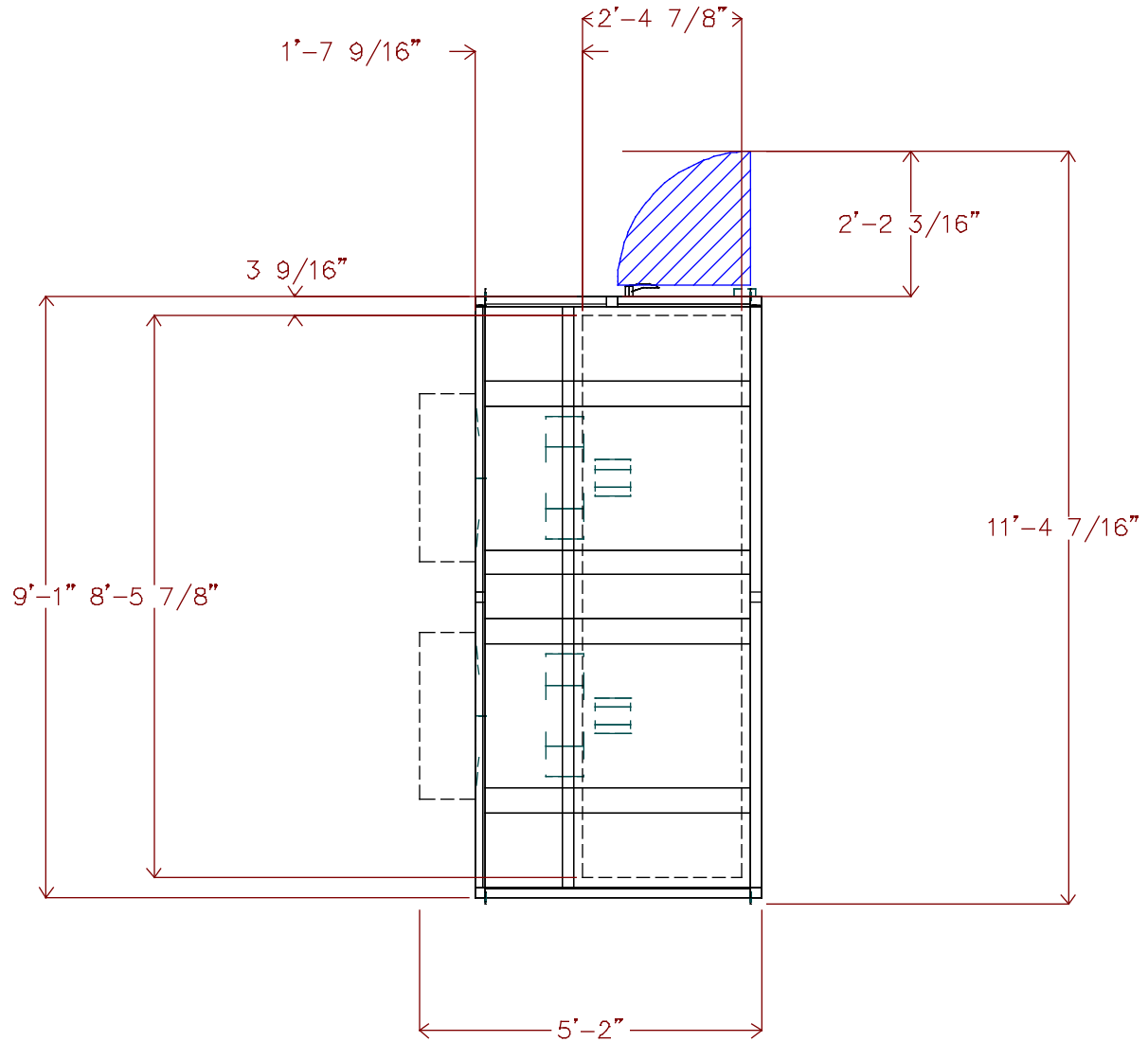
Return Fan
 5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM



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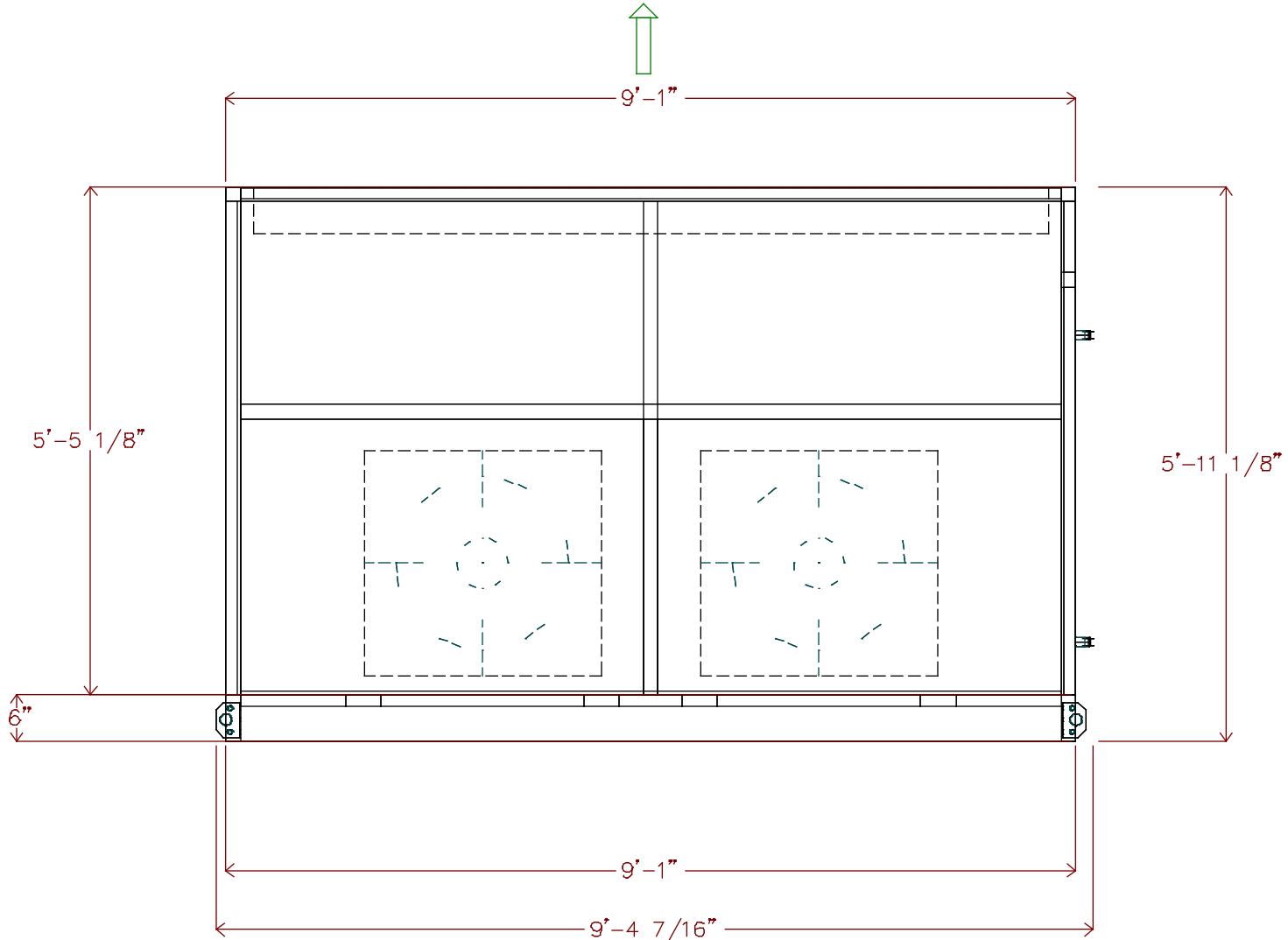
39M Central Station Air-Handler, Size 36W
 CMS Elon, Hawk, Polo Ridge: AHU-5
 Return Fan

REVISION
Top View

Unit viewed from right side of side elevation view.

Return Fan

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM



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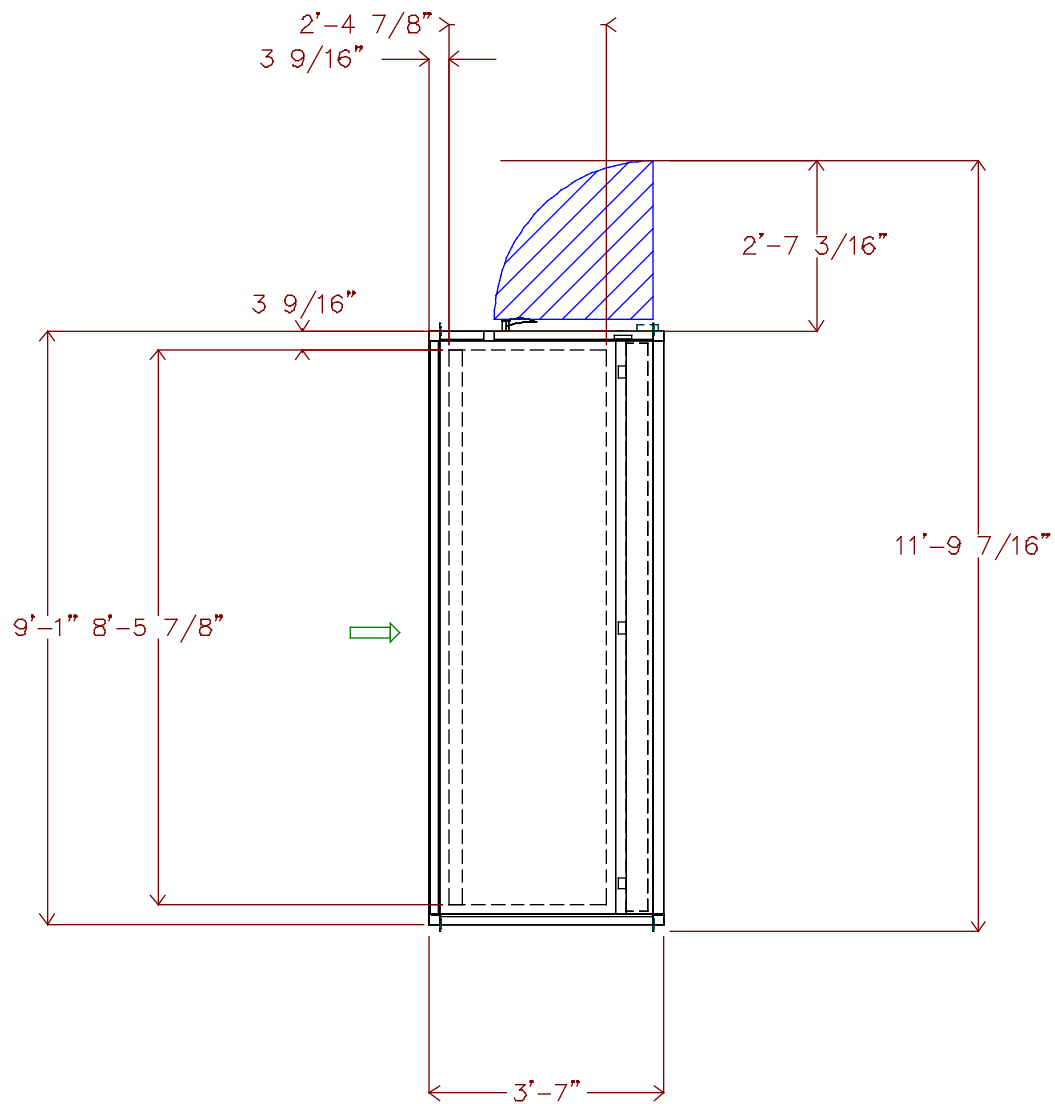
DATE
4/26/2022

AHUBuilder
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39M Central Station Air-Handler, Size 36W
CMS Elon, Hawk, Polo Ridge: AHU-5
Return Fan

REVISION
End View

2In. Flat Filter
 Qty (12) 20in. x 25in.



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39M Central Station Air-Handler, Size 36W
 CMS Elon, Hawk, Polo Ridge: AHU-5
 Filter Mixing Box

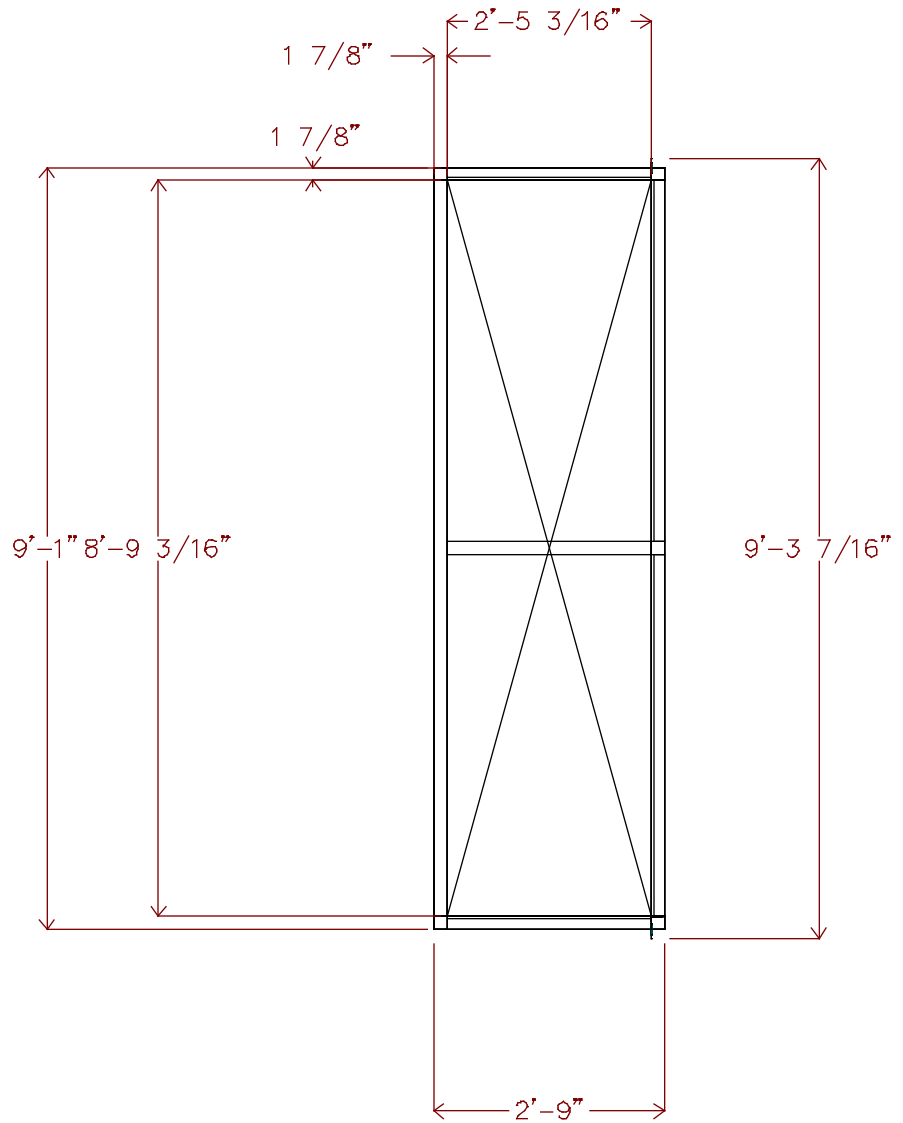
REVISION
 Top View



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39M Central Station Air-Handler, Size 36W
CMS Elon, Hawk, Polo Ridge: AHU-5
Blow Thru Plenum Section

REVISION
Top View

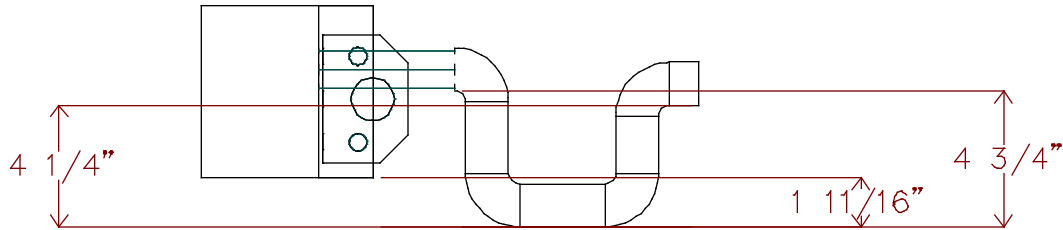


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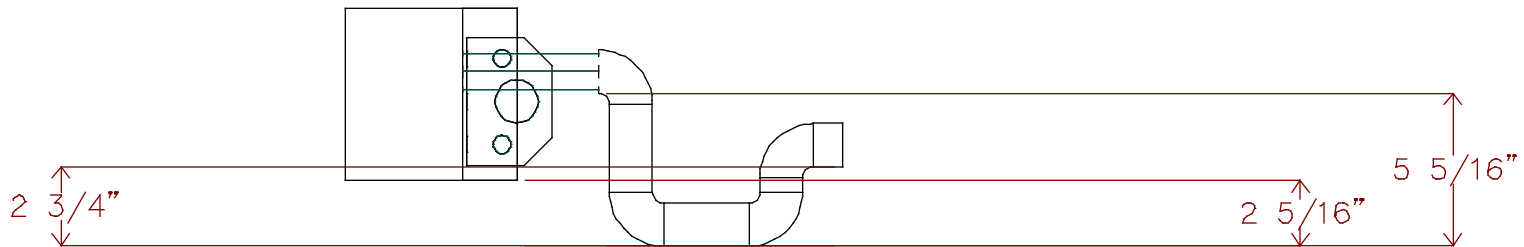
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39MN

BLOW-THRU



DRAW-THRU



DATE
4/26/2022

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v6.69I

39M Central Station Air-Handler, Size 36W
CMS Elon, Hawk, Polo Ridge: AHU-5
Condensate Trap Dimensions

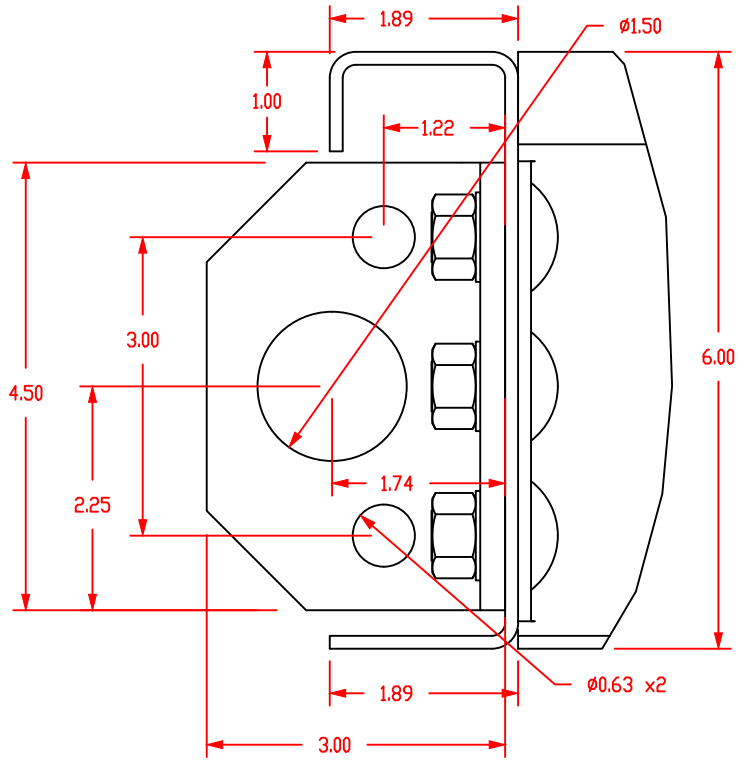
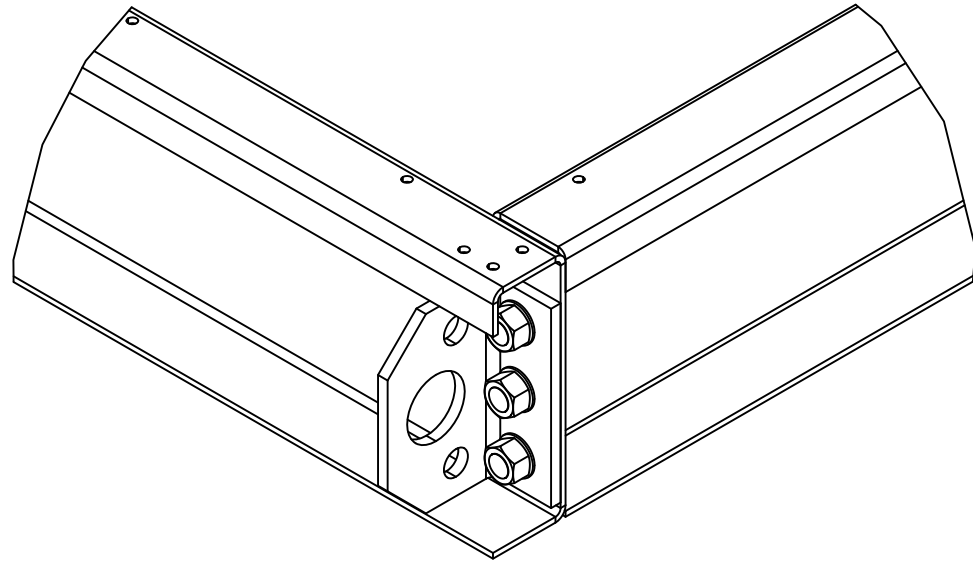
REVISION
End View



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39M

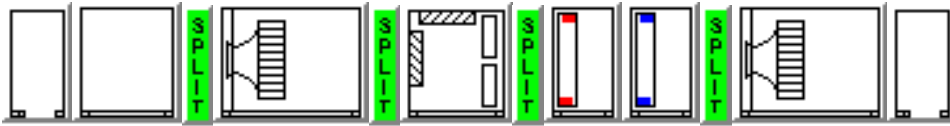


DATE
4/26/2022

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v6.69l

39M Central Station Air-Handler, Size: 03 - 110
6" Baserail and Lifting Lug Detail

REVISION



Unit Parameters

Aero Indoor Air Handler

39MN Size 40W

Insulation: R-13 Double Wall Sealed Panel

Exterior Finish: Painted Exterior Panels 18ga

Interior Finish: Galvanized Interior Panels

Level I Thermal Break

6 inch tall Base Rail

Turning Plenum

Discharge : Bottom

Door Left Side

Plenum

Shipping Split After

Length 36 inches

Door Left Side

Return Fan

Shipping Split After

Damper: Top Premium Parallel

Rear Inlet

Fan Sled

Plenum Fan A PDLA01222

Direct Drive Fans

Fan Count 2

1717 fanRPM Class II

Full Open Discharge

Backdraft Dampers

Spring Fan Isolation

Motor Shaft Grounding

Motor

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Manufacturer - Generic

Frame Size - 215T

Motor Shaft Diameter (in.) - 1.375

Voltage Selected - 460/3/60

Full Load Amps - 7.3 (Each)

Efficiency - 89.5%

Contractor:
Verify motor rating minimum SCCR
Rating 35 KAIC
Verify Phase Loss protection provided.

Job Name CMS Elon, Hawk, Polo Ridge
Mark for AHU-6

Door Left Side

Filter Mixing Box

Shipping Split After

Damper: Rear Premium Parallel

Damper: Top Premium Parallel

2In. Flat Filter

Field Supplied 2in. MERV 8 Throwaway Filter

Construction Filters

Qty (13) 20in. x 25in.

Door Left Side

Minihelic Differential Pressure Gage 0-2" w.c. Left Side

Hot Water Coil and Plenum

304 Stainless Steel Drain Pan Left Side

Hot Water 40.0 sq.ft 1 Row 8 FPI Half Circuit

Coil Connection Left Side

1/2 in. Tube Diameter

Fin Thickness: 0.0060

AL fins Galv. Casing

Steel Header

No Coating

Door Left Side

Chilled Water Coil and Plenum

Shipping Split After

304 Stainless Steel Drain Pan Left Side

Chilled Water 40.0 sq.ft 8 Row 14 FPI Double Circuit

Coil Connection Left Side

1/2 in. Tube Diameter

AL fins Galv. Casing

Steel Header

No Coating

Door Left Side

Blow-Thru Supply Fan

Rear Inlet

Fan Sled

Plenum Fan B PDLA01270

Direct Drive Fans

Fan Count 2

1435 fanRPM Class II

Full Open Discharge

Backdraft Dampers

Spring Fan Isolation

Motor Shaft Grounding

Motor

Job Name CMS Elon, Hawk, Polo Ridge
Mark for AHU-6

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Manufacturer - Generic

Frame Size - 256T

Motor Shaft Diameter (in.) - 1.625

Voltage Selected - 460/3/60

Full Load Amps - 14.1 (Each)

Efficiency - 91.0%

Contractor:

Verify motor rating minimum SCCR

Rating 35 KAIC

Verify Phase Loss protection provided

Door Left Side

Blow Thru Plenum Section

Discharge : Bottom

Door Left Side

Configuration Notes

Preheat coil configurations can cause freeze stat to trip if the downstream cooling coil isn't drained in heating season and/or PID valve control loop is too slow to react.

Backdraft dampers are close to door(s.) Ensure adequate access exists.

If a bottom connection is required, use an Inlet Plenum Section.

Backdraft dampers are close to door(s.) Ensure adequate access exists.

If a bottom connection is required, use a Discharge Plenum Section.

Discharge duct(s) must be gasketed and screwed directly to the discharge panel of the unit.

Discharge duct(s) must be gasketed and screwed to the discharge opening of the unit.

Weights and Dimensions

(LxWxH in ft in) 29' 3" x 9' 2" x 6' 5" **

Operating 10530 LB **

Coordinate unit weight with Structural

Warranty Part Number(s) (NET PRICING)

Qty 1 Each Additional 39 Series Start-up

Qty 1 2nd Year Parts only 39M - Size 36 - 61

Weights and Dimensions are approximate. Weights include base unit weight, coils (wet & dry), fans and fan motors, and other components, but does not include filters, drives and skids. Approximate dimensions are provided primarily for shipping purposes. Shipping skids are not included. All filter media efficiency ratings are for the filter media only.

Chilled Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-6

Cooling Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Total Cooling Capacity _____
 Sensible Cooling Capacity _____
Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Rise _____
 Entering Air Dry Bulb _____
 Entering Air Wet Bulb _____
 Entering Air Enthalpy _____
 Leaving Air Dry Bulb _____
 Leaving Air Wet Bulb _____
 Leaving Air Enthalpy _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MC
2
8 / 14 / DB
.0042 in
Sine Wave
Large
40.00 sqft
460.0 fpm
Al-Galv.
0.5 in
1.25 x 0.781 in
0.016 in
18400 CFM
0 ft
17663 SCFM
857.83 MBH
628.74 MBH
139.0 gpm
4.1 ft wg
2.5 ft/s
44.00 F
56.34 F
12.3 F
83.00 F
67.00 F
31.48 BTU/lb
50.04 F
50.04 F
20.7 BTU/lb
0.99 in wg
FW
0 %
0.0 (hr-sqft-F)/BTU



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Hot Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-6

Heating Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Heating Capacity _____
Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Drop _____
 Entering Air Temperature _____
 Leaving Air Temperature _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MH
2
1 / 8 / HF
.0060 in
Sine Wave
Large
40.00 sqft
460.0 fpm
Al-Galv.
0.5 in
1.25 x 0.781 in
0.016 in
18400 CFM
0 ft
18575 SCFM
342.06 MBH
15.2 gpm
0.5 ft wg
1.1 ft/s
160.00 F
114.99 F
45.0 F
65.00 F
82.23 F
0.17 in wg
FW
0 %
0.0 (hr-sqft-F)/BTU



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Unit Acoustics Summary

Project: CMS Elon, Hawk, Polo Ridge
Tag: AHU-6

Unit Acoustics Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	100	95	92
125 Hz _____	94	92	89
250 Hz _____	100	97	94
500 Hz _____	93	92	88
1000 Hz _____	91	85	81
2000 Hz _____	88	83	79
4000 Hz _____	87	83	79
8000 Hz _____	89	83	79

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Unit Acoustics A-weighted Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	73	69	65
125 Hz _____	78	76	73
250 Hz _____	92	88	85
500 Hz _____	90	89	84
1000 Hz _____	91	85	81
2000 Hz _____	89	85	80
4000 Hz _____	88	84	80
8000 Hz _____	88	82	78

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Sound contributed by Supply and Return Fans

Unit Acoustics PART-LOAD Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	91	95	91
125 Hz _____	89	91	87
250 Hz _____	96	93	88
500 Hz _____	88	91	85
1000 Hz _____	86	84	80
2000 Hz _____	85	82	76
4000 Hz _____	83	81	75
8000 Hz _____	86	82	76

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Unit Acoustics PART-LOAD A-weighted Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	64	68	65
125 Hz _____	73	75	71
250 Hz _____	88	85	80
500 Hz _____	85	88	82
1000 Hz _____	86	84	80
2000 Hz _____	86	83	77
4000 Hz _____	84	82	76
8000 Hz _____	85	81	75

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

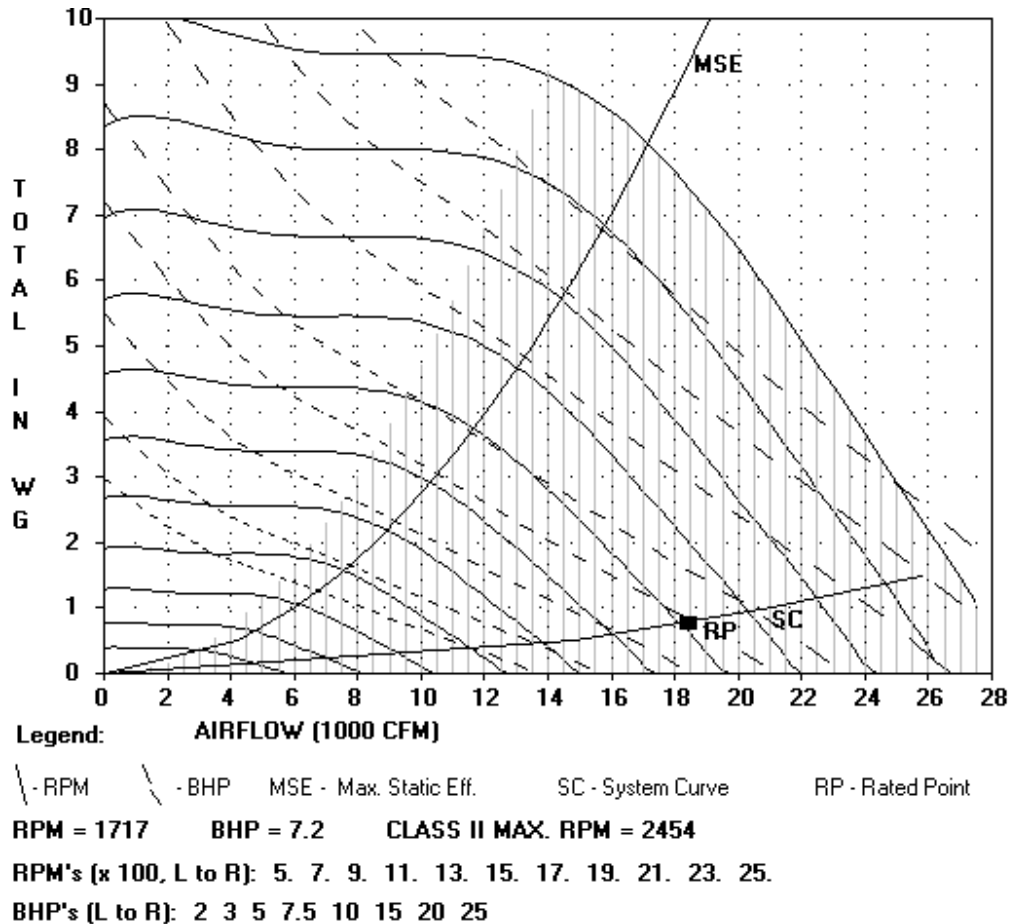
Sound contributed by Supply and Return Fans

Return Fan Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-6

Fan Model	39M4002HPDL
Unit Size	40W
Fan Type	DIRECT DRIVE PLENUM (Return)
Fan Wheel Diameter	22.2
Fan Class	II
Static Efficiency (%)	20
Fan Application	Draw Thru
Orientation	Horizontal
Actual Airflow, CFM	18400
Site Altitude, , ft	0
Backdraft Damper Loss, in wg	0.26
Total Upstream Static Losses, in wg	0.76
Number of Fans	2
Fan RPM / Max RPM	1717/2331
Each Fan BHP	3.6
Fan Total BHP	7.2
(n-1) Airflow, CFM	11388
(n-1) Redundancy (%)	62
Fan Electrical Power, kW	6.0

Unit is outside of the scope of AHRI Standard 430/431.



Supply Fan Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-6

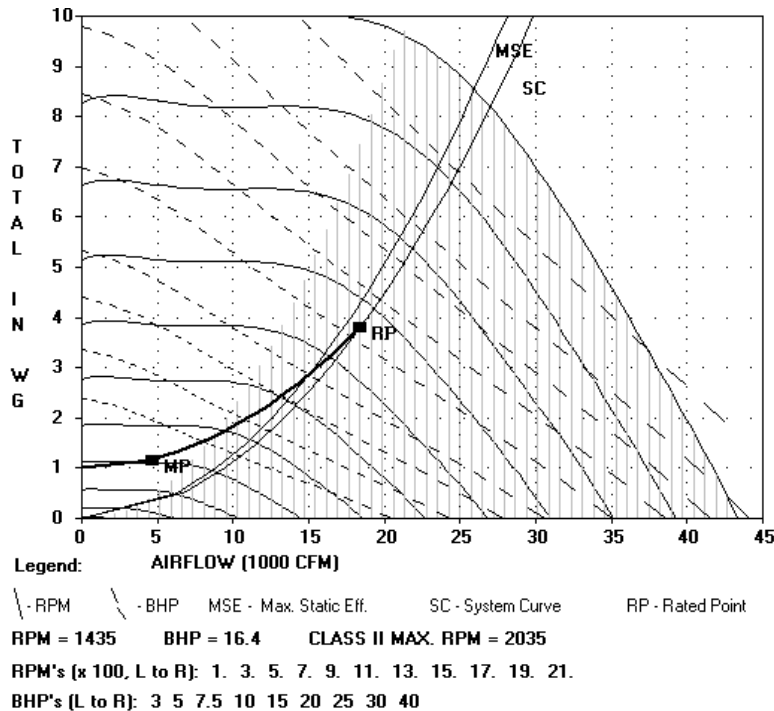
Fan Model	39M4002HPDL-D
Unit Size	40W
Fan Type	DIRECT DRIVE PLENUM
Fan Wheel Diameter	27
Fan Class	II
Fan Application	Blow Thru
Orientation	Horizontal
Actual Airflow, CFM	18400
Site Altitude, ft	0
Upstream Ext. Static, in wg	0.00
Downstream Ext. Static, in wg	2.25
Cooling Coil Static, in wg	0.99
Heating Coil Static, in wg	0.17
Backdraft Damper Losses, in wg	0.13
Total Accessory Static, in wg	0.26
Total Static Pressure, in wg	3.80
Calculated Fan RPM / Motor RPM	1435 / 1200
Class II Max. RPM	2035
Static Efficiency (%)	65
Number of Fans	2
Each Fan BHP	8.2
Fan Total BHP	16.4
(n-1) Airflow, CFM	14490
(n-1) Redundancy (%)	79
Fan Electrical Power, kW	13.4



Accessories:

- (1) Flat Throwaway (2 in.) [0.19]
- (1) Mixing or Exhaust Box [0.07]

NOTE: Certified in accordance with the AHRI Central Station Air-Handling Unit Certification Program, which is based on AHRI Standards 430/431. Certified units may be found in the AHRI Directory at www.ahridirectory.org



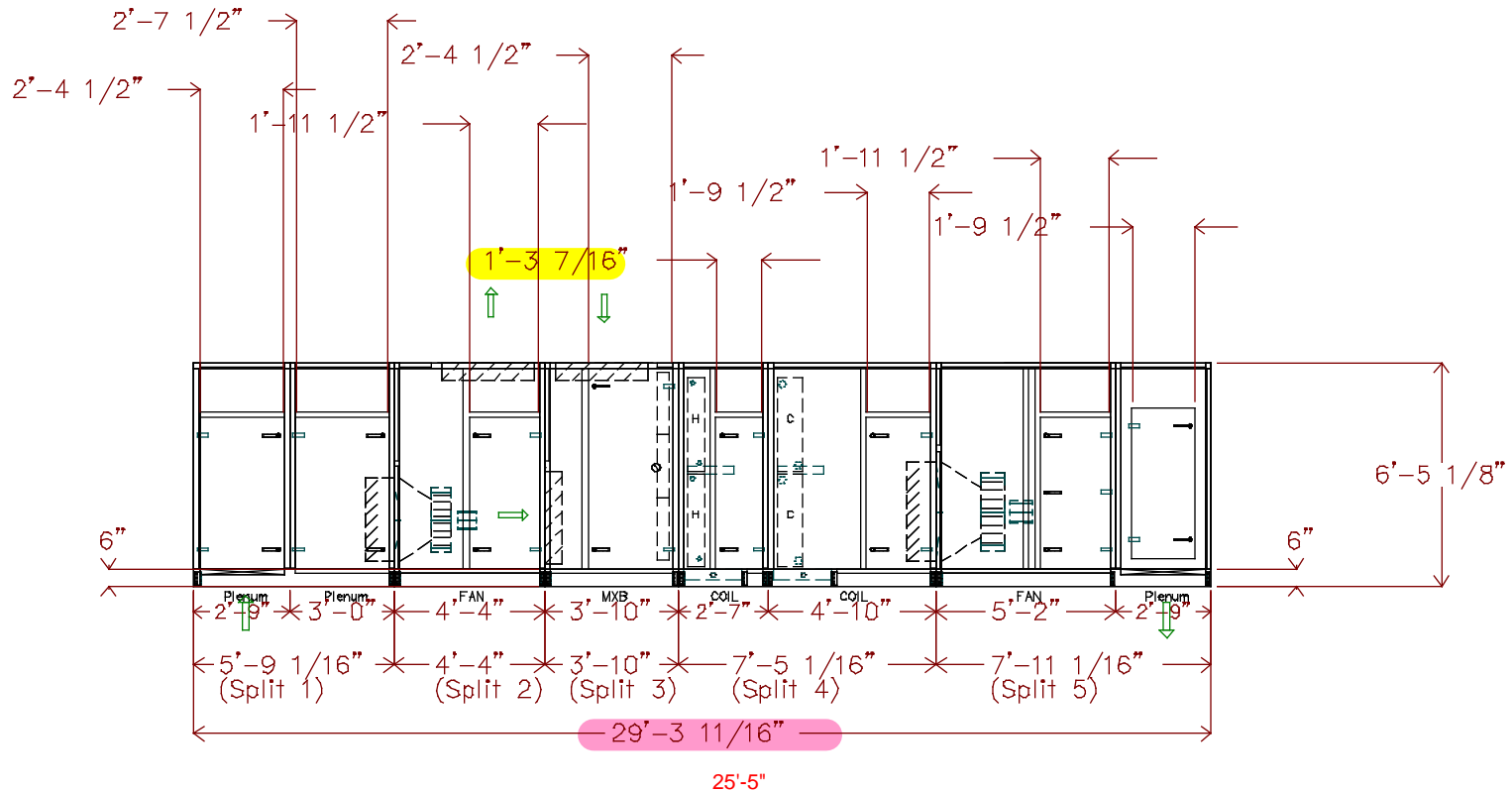
Unit width: 9'-2 11/16" (plus lifting lugs)
 Return Fan
 5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 2In. Flat Filter
 Qty (13) 20in. x 25in.
 Hot Water 1 Row 8 FPI Half Circuit (qty. 2)
 Chilled Water 8 Row 14 FPI Double Circuit (qty. 2)

Blow-Thru Supply Fan
 10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 Operating weight: 10531.0 lbs.
 Upstream Corner Weight (each): 2476.0 lbs.
 Downstream Corner Weight (each): 2789.0 lbs.



Review length requirements for this AHU relative to location of double doors into Mechanical Room

Split	Airway Length	Weight (lbs.)
(Split 1)	5'-9 1/16"	1409
(Split 2)	4'-4"	1692
(Split 3)	3'-10"	1371
(Split 4)	7'-5 1/16"	3015
(Split 5)	7'-11 1/16"	3043



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39MN

DATE 4/26/2022	AHUBuilder v6.69l	39M Central Station Air-Handler, Size 40W CMS Elon, Hawk, Polo Ridge: AHU-6 Assembly Drawing	REVISION Side View
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Unit viewed from right side of side elevation view.

Unit length: 29'-3 11/16"

Return Fan

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2In. Flat Filter

Qty (13) 20in. x 25in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 2)

Chilled Water 8 Row 14 FPI Double Circuit (qty. 2)

Blow-Thru Supply Fan

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 10531.0 lbs.

Upstream Corner Weight (each): 2476.0 lbs.

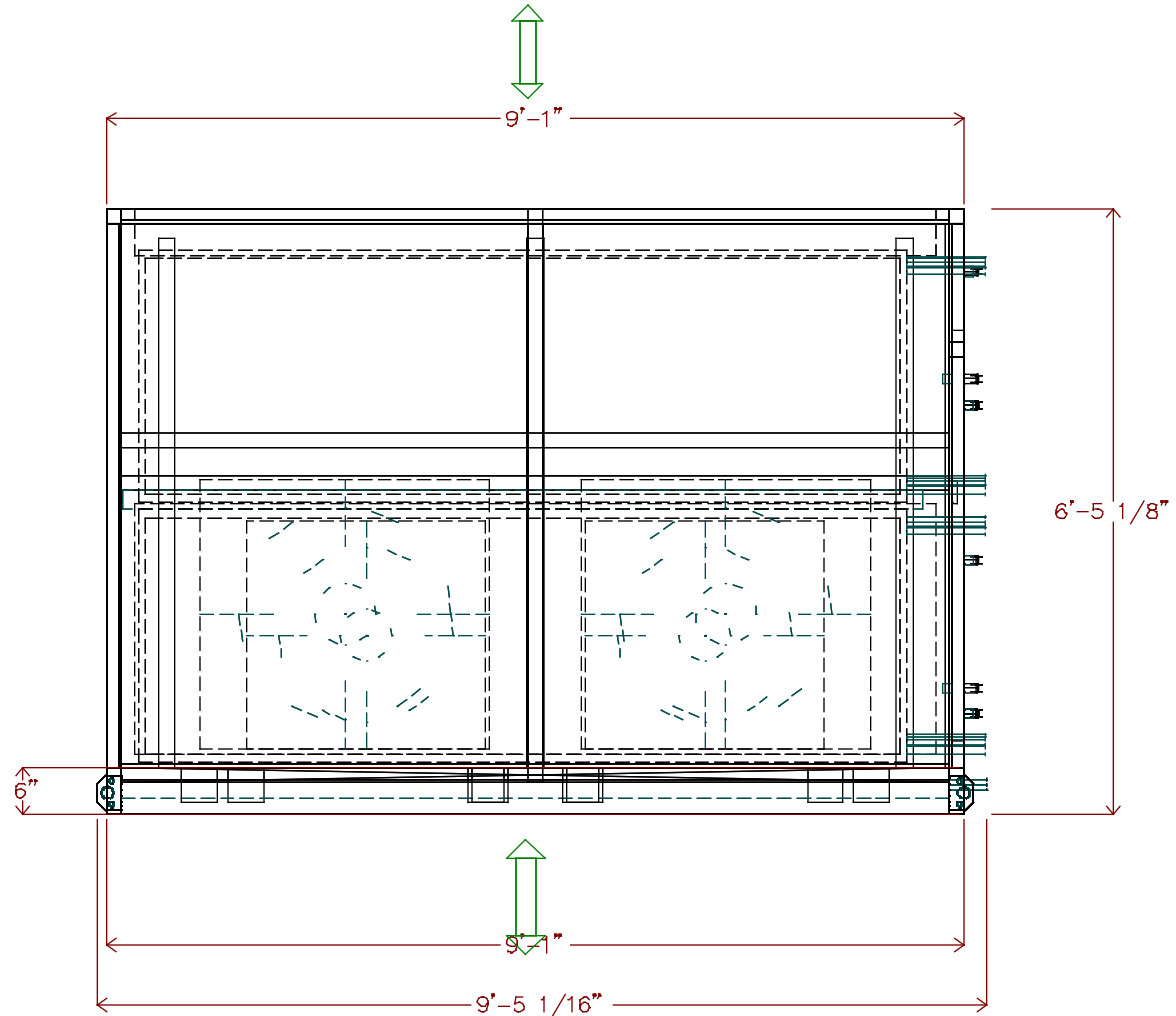
Downstream Corner Weight (each): 2789.0 lbs.



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DATE
4/26/2022

AHUBuilder
v6.691

39M Central Station Air-Handler, Size 40W
CMS Elon, Hawk, Polo Ridge: AHU-6
Assembly Drawing

REVISION
End View

Unit height: 6'-5 7/8"

Return Fan

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2In. Flat Filter

Qty (13) 20in. x 25in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 2)

Chilled Water 8 Row 14 FPI Double Circuit (qty. 2)

Blow-Thru Supply Fan

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 10531.0 lbs.

Upstream Corner Weight (each): 2476.0 lbs.

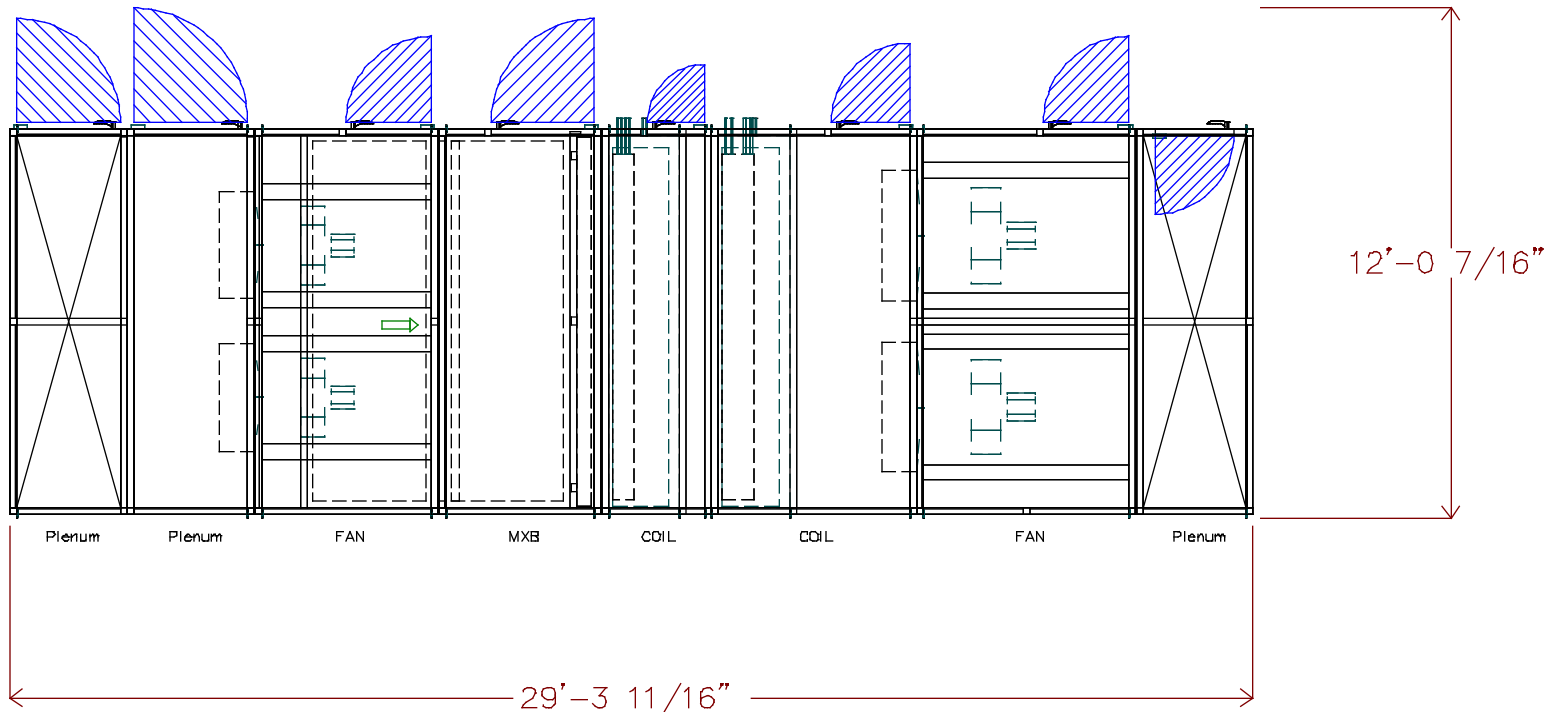
Downstream Corner Weight (each): 2789.0 lbs.



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39MN



DATE
4/26/2022

AHUBuilder
v6.691

39M Central Station Air-Handler, Size 40W
CMS Elon, Hawk, Polo Ridge: AHU-6
Assembly Drawing

REVISION
Top View

Unit height: 6'-5 7/8"

Return Fan

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2In. Flat Filter

Qty (13) 20in. x 25in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 2)

Chilled Water 8 Row 14 FPI Double Circuit (qty. 2)

Blow-Thru Supply Fan

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 10531.0 lbs.

Upstream Corner Weight (each): 2476.0 lbs.

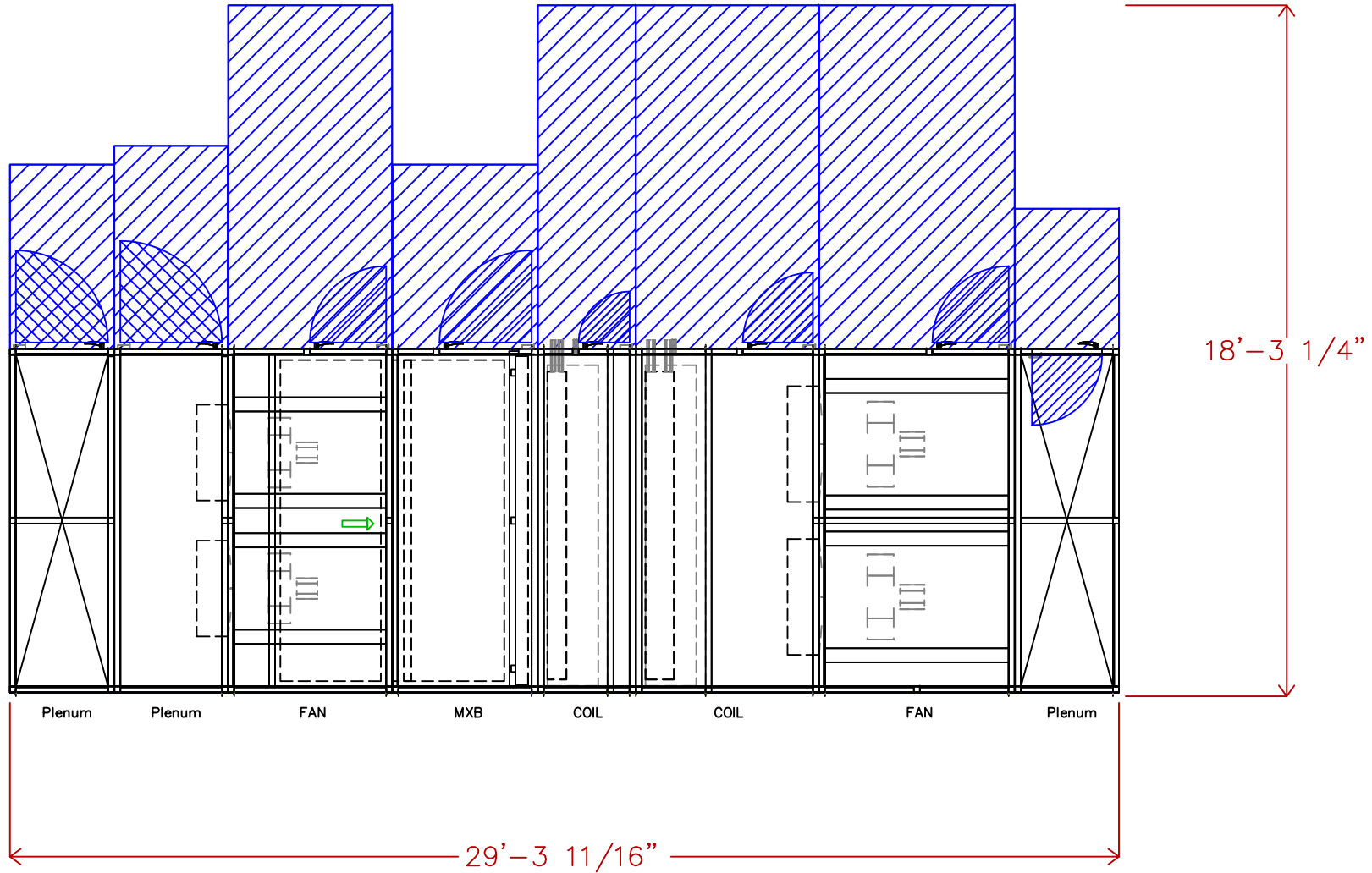
Downstream Corner Weight (each): 2789.0 lbs.



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39MN



DATE
4/26/2022

AHUBuilder
v6.69I

39M Central Station Air-Handler, Size 40W
CMS Elon, Hawk, Polo Ridge: AHU-6
Assembly Drawing

REVISION
Top View

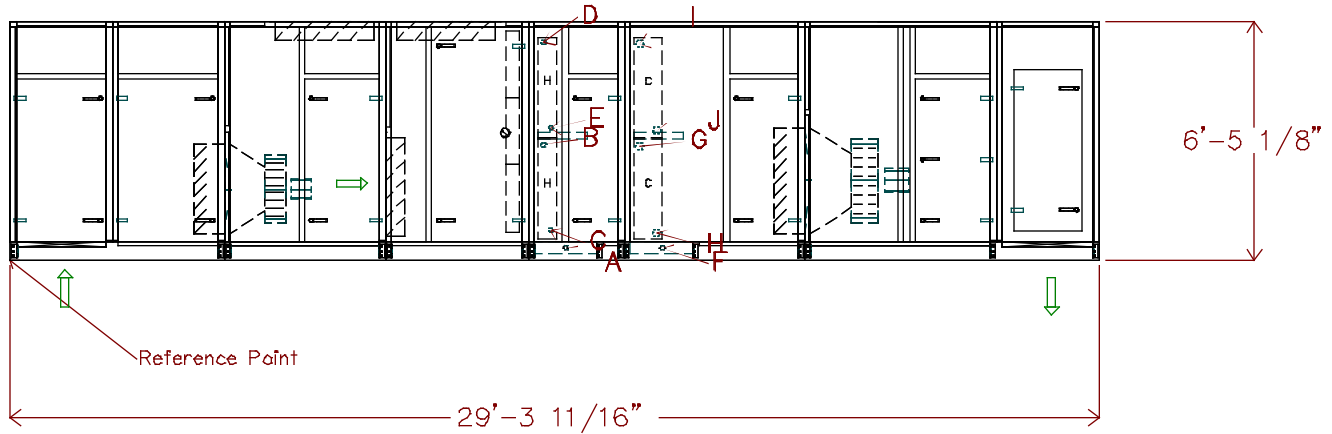
Hot Water 1 Row 8 FPI Half Circuit (qty. 2)
 Chilled Water 8 Row 14 FPI Double Circuit (qty. 2)



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Pipe	x	y	diameter	Usage
A	14'-11 3/8"	3 13/16"	1 1/2"	DrainPan
B	14'-4 1/4"	3'-1 3/16"	1 1/2"	HW Outlet
C	14'-6 5/8"	9 7/16"	1 1/2"	HW Inlet
D	14'-4 1/4"	5'-10 1/4"	1 1/2"	HW Outlet
E	14'-6 5/8"	3'-6 1/2"	1 1/2"	HW Inlet
F	17'-6 1/2"	3 13/16"	1 1/2"	DrainPan
G	16'-11 5/16"	3'-0 11/16"	2 1/2"	CW Outlet
H	17'-4 3/4"	8 11/16"	2 1/2"	CW Inlet
I	16'-11 5/16"	5'-9 3/4"	2 1/2"	CW Outlet
J	17'-4 3/4"	3'-5 3/4"	2 1/2"	CW Inlet



39MN

DATE
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39M Central Station Air-Handler, Size 40W
 CMS Elon, Hawk, Polo Ridge: AHU-6
 Assembly Drawing

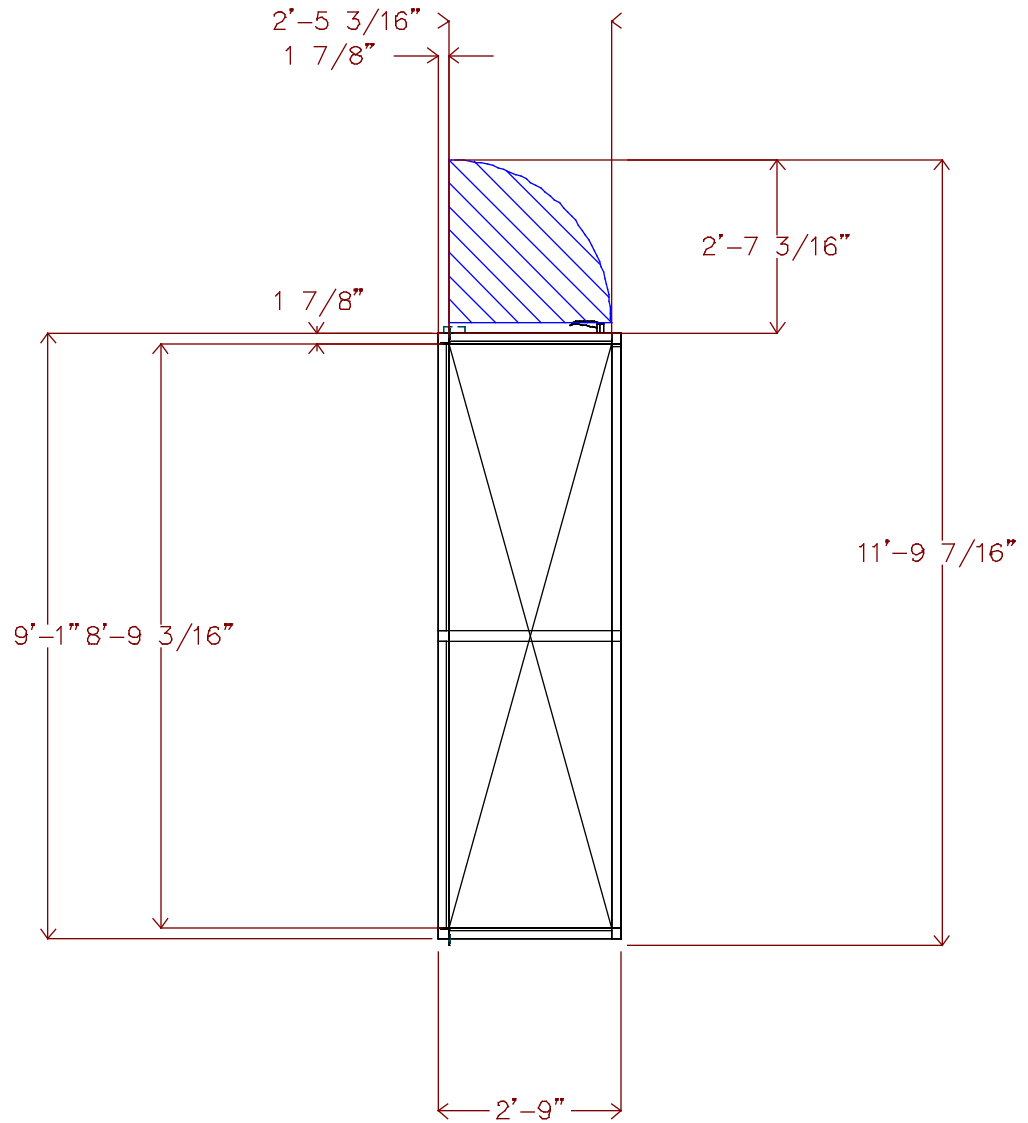
REVISION
Side View



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39M Central Station Air-Handler, Size 40W
CMS Elon, Hawk, Polo Ridge: AHU-6
Turning Plenum

REVISION
Top View

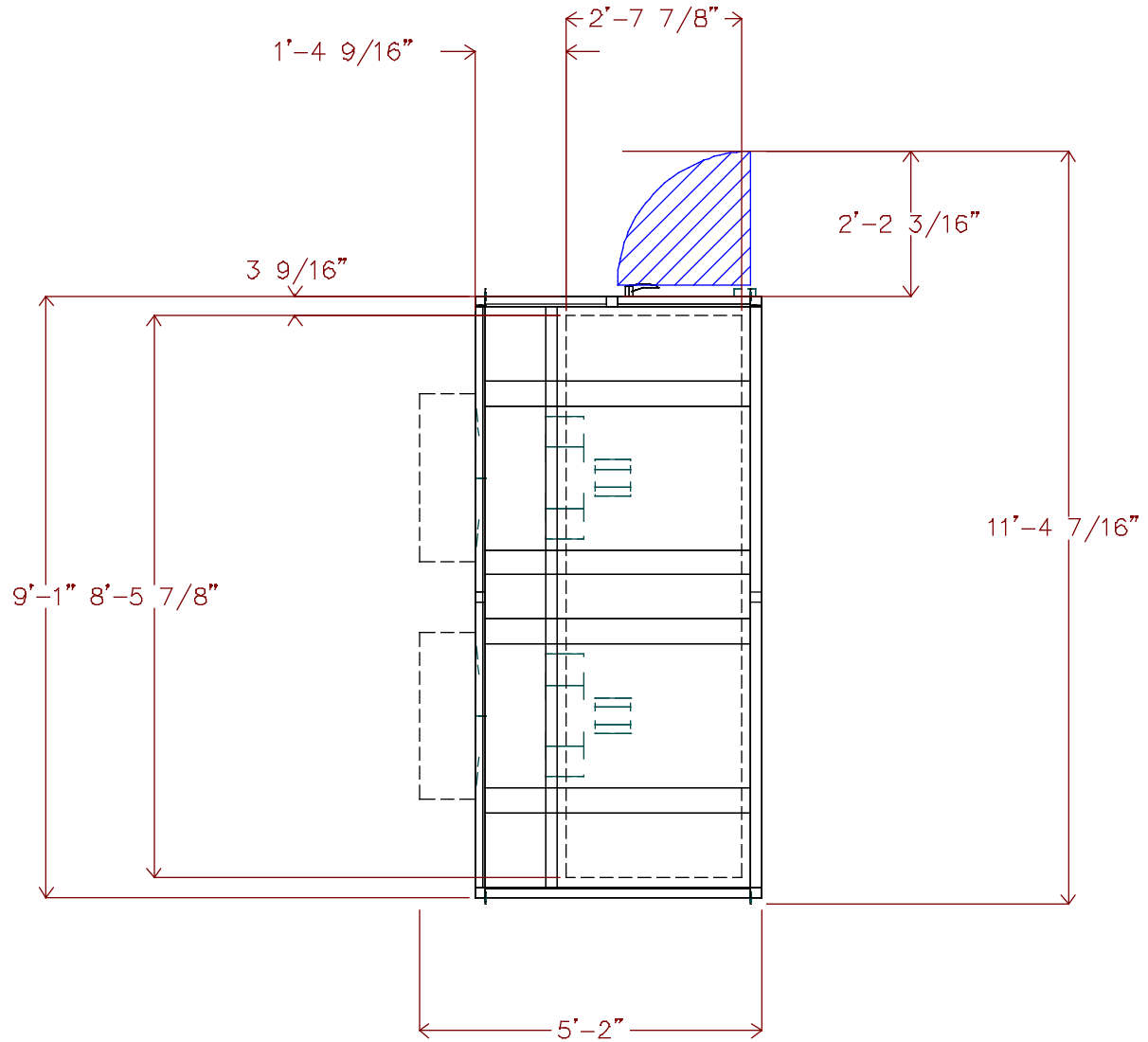
Return Fan
 5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM



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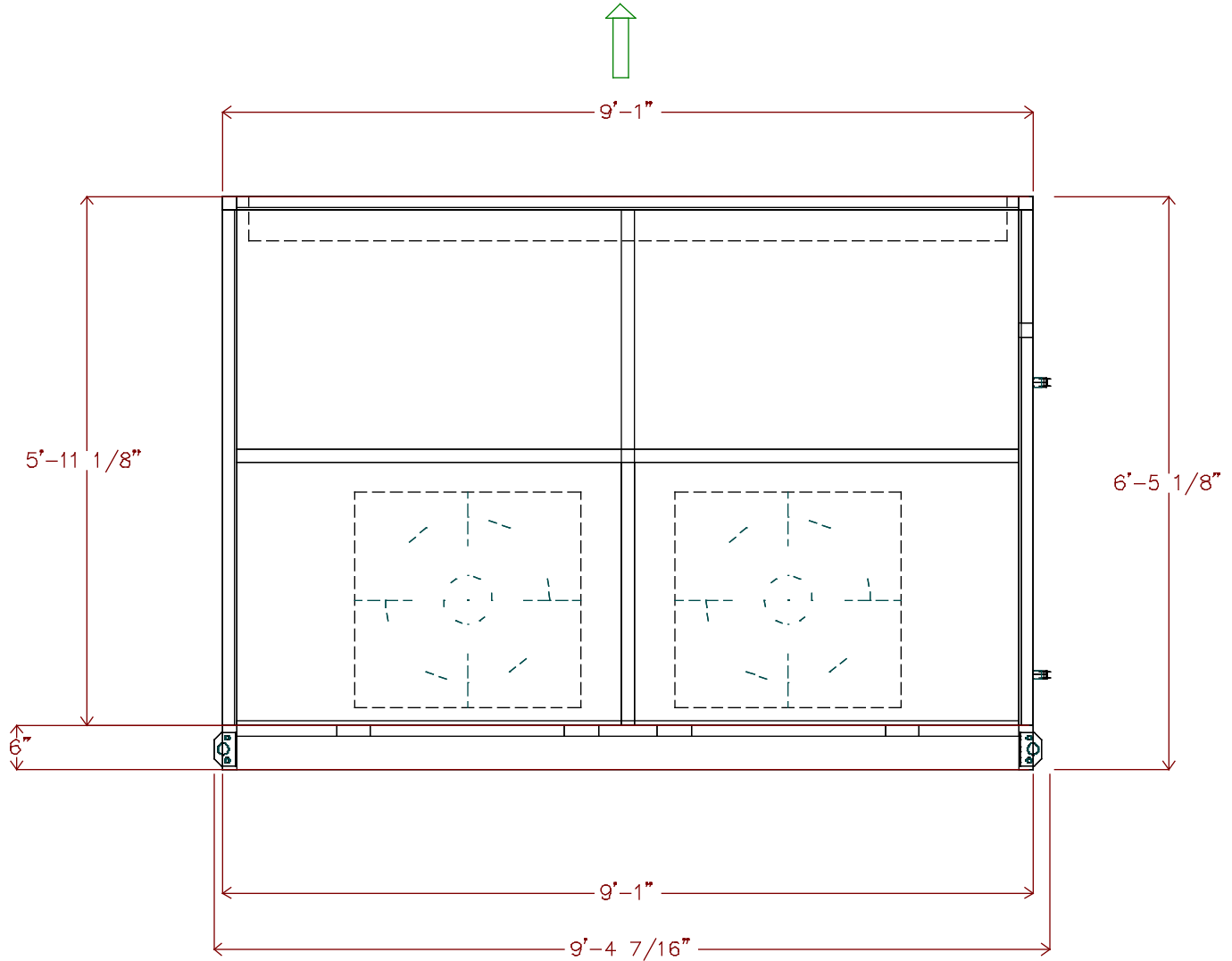
39M Central Station Air-Handler, Size 40W
 CMS Elon, Hawk, Polo Ridge: AHU-6
 Return Fan

REVISION
Top View

Unit viewed from right side of side elevation view.

Return Fan

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM



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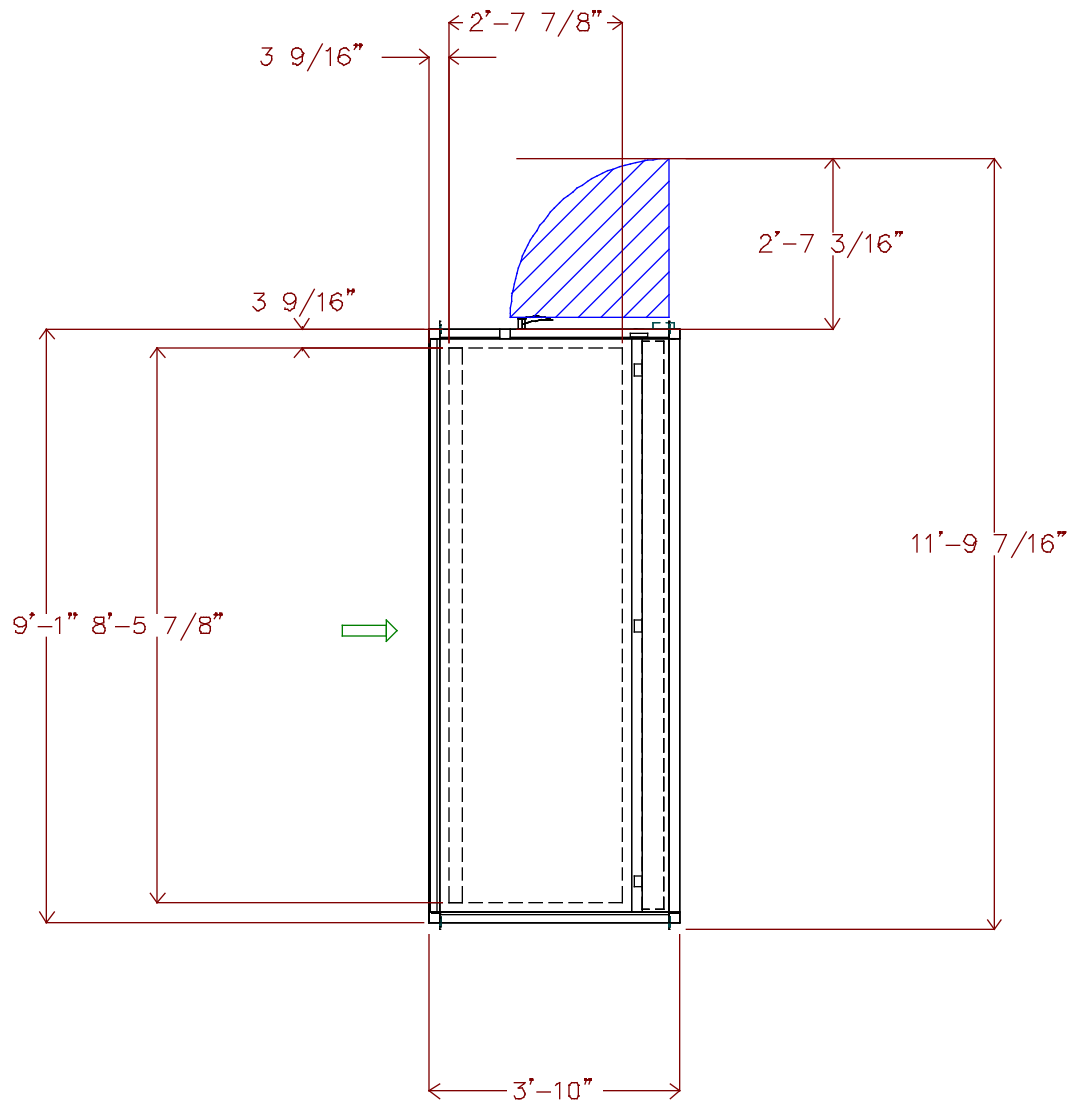
DATE
4/26/2022

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39M Central Station Air-Handler, Size 40W
CMS Elon, Hawk, Polo Ridge: AHU-6
Return Fan

REVISION
End View

2In. Flat Filter
 Qty (13) 20in. x 25in.



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39M Central Station Air-Handler, Size 40W
 CMS Elon, Hawk, Polo Ridge: AHU-6
 Filter Mixing Box

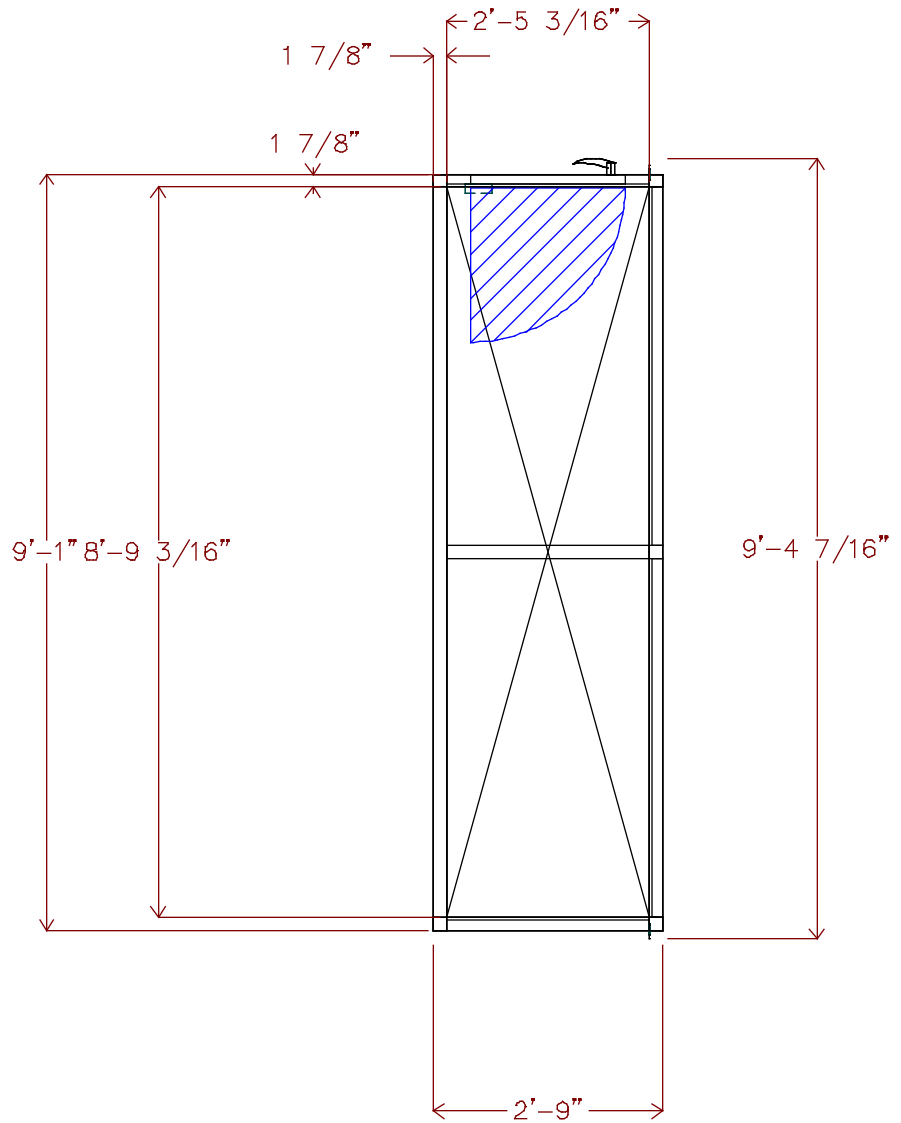
REVISION
Top View



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39M Central Station Air-Handler, Size 40W
CMS Elon, Hawk, Polo Ridge: AHU-6
Blow Thru Plenum Section

REVISION
Top View

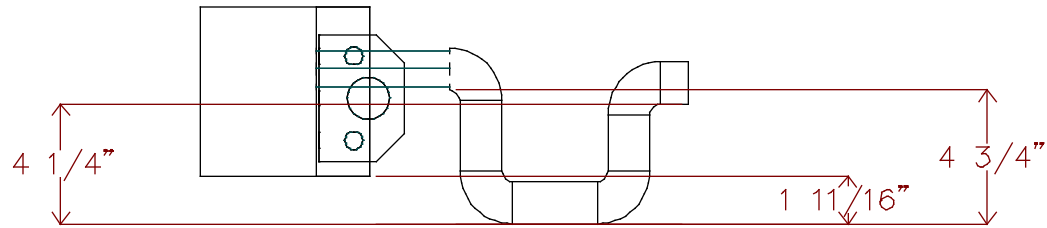


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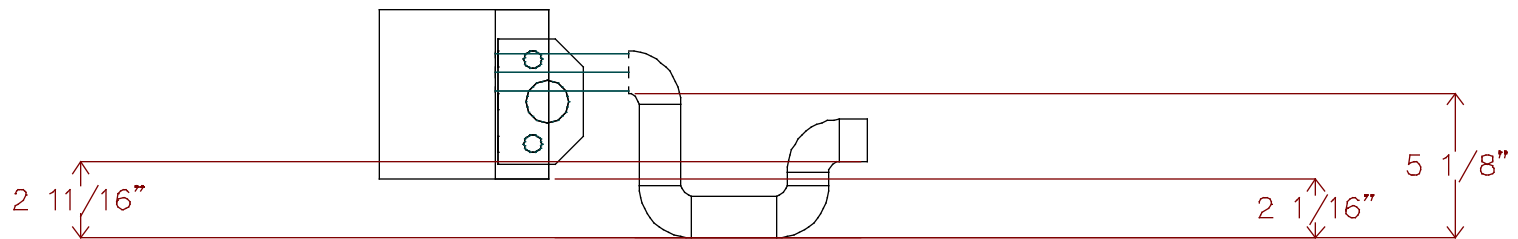
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39MN

BLOW-THRU



DRAW-THRU



DATE
4/26/2022

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39M Central Station Air-Handler, Size 40W
CMS Elon, Hawk, Polo Ridge: AHU-6
Condensate Trap Dimensions

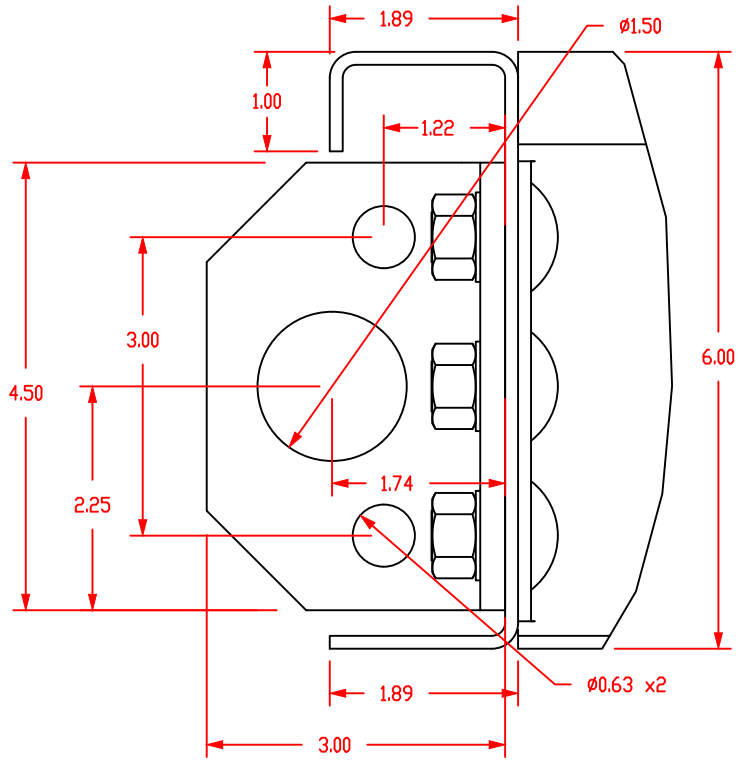
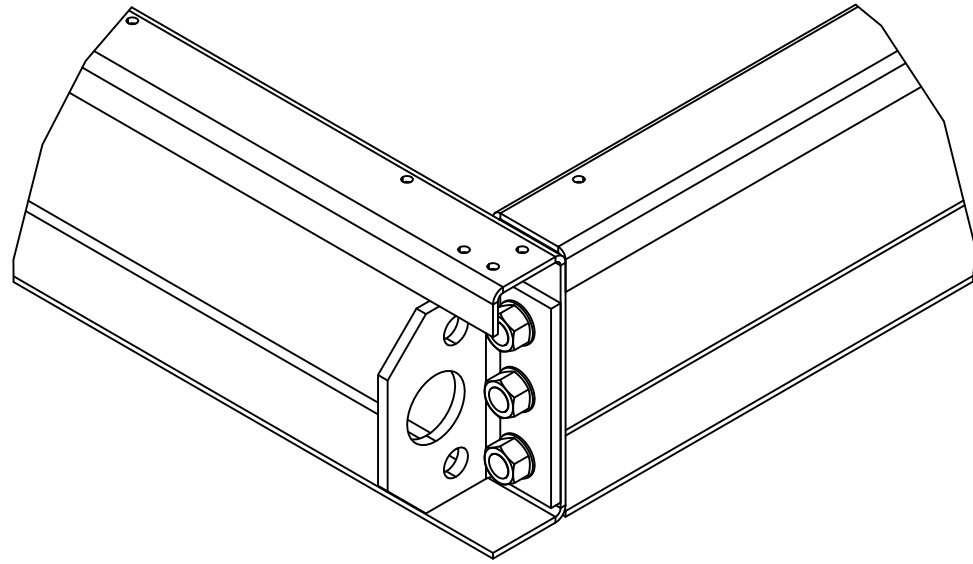
REVISION
End View



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39M



DATE
4/26/2022

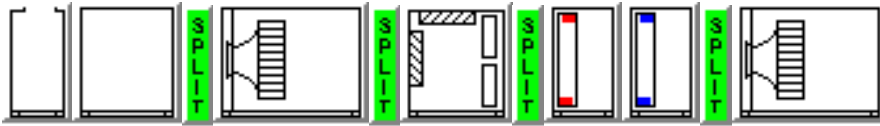
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39M Central Station Air-Handler, Size: 03 - 110
6" Baserail and Lifting Lug Detail

REVISION

Job Name CMS Elon, Hawk, Polo Ridge

Mark for AHU-7



Unit Parameters

Aero Indoor Air Handler

39MN Size 40W

Insulation: R-13 Double Wall Sealed Panel

Exterior Finish: Painted Exterior Panels 18ga

Interior Finish: Galvanized Interior Panels

Level I Thermal Break

6 inch tall Base Rail

Turning Plenum

Discharge : Top

Door Right Side

Plenum

Shipping Split After

Length 36 inches

Door Right Side

Return Fan

Shipping Split After

Damper: Top Premium Parallel

Rear Inlet

Fan Sled

Plenum Fan A PDLA01222

Direct Drive Fans

Fan Count 2

1717 fanRPM Class II

Full Open Discharge

Backdraft Dampers

Spring Fan Isolation

Motor Shaft Grounding

Motor

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Manufacturer - Generic

Frame Size - 215T

Motor Shaft Diameter (in.) - 1.375

Voltage Selected - 460/3/60

Full Load Amps - 7.3 (Each)

Efficiency - 89.5%

Contractor:
Verify motor rating minimum SCCR
Rating 35 KAIC
Verify Phase Loss protection provided.

Job Name CMS Elon, Hawk, Polo Ridge
Mark for AHU-7

Door Right Side

Filter Mixing Box

Shipping Split After

Damper: Rear Premium Parallel

Damper: Top Premium Parallel

2In. Flat Filter

Field Supplied 2in. MERV 8 Throwaway Filter

Construction Filters

Qty (13) 20in. x 25in.

Door Right Side

Minihelic Differential Pressure Gage 0-2" w.c. Right Side

Hot Water Coil and Plenum

304 Stainless Steel Drain Pan Right Side

Hot Water 40.0 sq.ft 1 Row 8 FPI Half Circuit

Coil Connection Right Side

1/2 in. Tube Diameter

Fin Thickness: 0.0060

AL fins Galv. Casing

Steel Header

No Coating

Door Right Side

Chilled Water Coil and Plenum

Shipping Split After

304 Stainless Steel Drain Pan Right Side

Chilled Water 40.0 sq.ft 8 Row 14 FPI Double Circuit

Coil Connection Right Side

1/2 in. Tube Diameter

AL fins Galv. Casing

Steel Header

No Coating

Door Right Side

Draw-Thru Supply Fan

Rear Inlet

Fan Sled

Plenum Fan B PDLA01270

Direct Drive Fans

Fan Count 2

1426 fanRPM Class II

Field Supplied Discharge

Backdraft Dampers

Spring Fan Isolation

Motor Shaft Grounding

Motor

Job Name CMS Elon, Hawk, Polo Ridge
Mark for AHU-7

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Manufacturer - Generic

Frame Size - 256T

Motor Shaft Diameter (in.) - 1.625

Voltage Selected - 460/3/60

Full Load Amps - 14.1 (Each)

Efficiency - 91.0%

Contractor:
Verify motor rating minimum SCCR
Rating 35 KAIC
Verify Phase Loss protection provided.

Door Right Side

Configuration Notes

Preheat coil configurations can cause freeze stat to trip if the downstream cooling coil isn't drained in heating season and/or PID valve control loop is too slow to react.

Backdraft dampers are close to door(s.) Ensure adequate access exists.

If a bottom connection is required, use an Inlet Plenum Section.

Backdraft dampers are close to door(s.) Ensure adequate access exists.

If a bottom connection is required, use a Discharge Plenum Section.

Discharge duct(s) must be gasketed and screwed directly to the discharge panel of the unit.

Weights and Dimensions

(LxWxH in ft in) 25' 10" x 9' 2" x 6' 5" **

Operating 9752 LB **

Coordinate unit weight with Structural

Warranty Part Number(s) (NET PRICING)

Qty 1 Each Additional 39 Series Start-up

Qty 1 2nd Year Parts only 39M - Size 36 - 61

Weights and Dimensions are approximate. Weights include base unit weight, coils (wet & dry), fans and fan motors, and other components, but does not include filters, drives and skids. Approximate dimensions are provided primarily for shipping purposes. Shipping skids are not included.
All filter media efficiency ratings are for the filter media only.

Chilled Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-7

Cooling Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Total Cooling Capacity _____
 Sensible Cooling Capacity _____
Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Rise _____
 Entering Air Dry Bulb _____
 Entering Air Wet Bulb _____
 Entering Air Enthalpy _____
 Leaving Air Dry Bulb _____
 Leaving Air Wet Bulb _____
 Leaving Air Enthalpy _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MC
2
8 / 14 / DB
.0042 in
Sine Wave
Large
40.00 sqft
460.0 fpm
Al-Galv.
0.5 in
1.25 x 0.781 in
0.016 in
18400 CFM
0 ft
17663 SCFM
857.83 MBH
628.74 MBH
139.0 gpm
4.1 ft wg
2.5 ft/s
44.00 F
56.34 F
12.3 F
83.00 F
67.00 F
31.48 BTU/lb
50.04 F
50.04 F
20.7 BTU/lb
0.99 in wg
FW
0 %
0.0 (hr-sqft-F)/BTU



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Hot Water Coil Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-7

Heating Application's Balance Criteria: Fluid Flow

Coil Model _____
 Number of Coils _____
 Row / FPI / Circ _____
 Fin Thickness _____
 Fin Type _____
 Face Area Type _____
 Coil Face Area _____
 Face Velocity _____
 Fin-Casing Material _____
 Tube Diameter _____
 Tube spacing: Stf x Str _____
 Tube Wall Thickness _____
 Actual Airflow _____
 Site Altitude _____
 Standard Airflow (adj. to std. dry atmosphere) _____
 Heating Capacity _____
Fluid Flow Rate _____
 Fluid Pressure Drop _____
 Fluid Velocity _____
 Entering Fluid Temperature _____
 Leaving Fluid Temperature _____
 Fluid Temperature Drop _____
 Entering Air Temperature _____
 Leaving Air Temperature _____
 Air Friction _____
 Brine _____
 Brine Concentration _____
 Fouling Factor _____

Carrier 28MH
2
1 / 8 / HF
.0060 in
Sine Wave
Large
40.00 sqft
460.0 fpm
Al-Galv.
0.5 in
1.25 x 0.781 in
0.016 in
18400 CFM
0 ft
18575 SCFM
342.06 MBH
15.2 gpm
0.5 ft wg
1.1 ft/s
160.00 F
114.99 F
45.0 F
65.00 F
82.23 F
0.17 in wg
FW
0 %
0.0 (hr-sqft-F)/BTU



NOTE: 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 (www.ahrirectory.org).

LEGEND:

- Stf -- Tube spacing across coil face
- Str -- Tube spacing in direction of airflow

Unit Acoustics Summary

Project: CMS Elon, Hawk, Polo Ridge
Tag: AHU-7

Unit Acoustics Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	99	96	93
125 Hz _____	93	92	88
250 Hz _____	101	95	91
500 Hz _____	91	91	87
1000 Hz _____	89	85	81
2000 Hz _____	88	83	78
4000 Hz _____	88	83	78
8000 Hz _____	90	83	78

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Unit Acoustics A-weighted Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	73	69	66
125 Hz _____	77	76	72
250 Hz _____	92	86	82
500 Hz _____	88	88	83
1000 Hz _____	89	85	81
2000 Hz _____	89	84	79
4000 Hz _____	89	84	79
8000 Hz _____	89	82	77

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Sound contributed by Supply and Return Fans

Unit Acoustics PART-LOAD Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	91	95	91
125 Hz _____	89	91	87
250 Hz _____	96	93	88
500 Hz _____	88	91	85
1000 Hz _____	87	84	80
2000 Hz _____	85	82	76
4000 Hz _____	83	81	75
8000 Hz _____	86	82	76

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

Unit Acoustics PART-LOAD A-weighted Sound Power Level:

	Discharge Inlet Casing		
63 Hz _____	65	68	64
125 Hz _____	73	75	71
250 Hz _____	88	85	80
500 Hz _____	85	88	82
1000 Hz _____	87	84	80
2000 Hz _____	86	83	77
4000 Hz _____	84	82	76
8000 Hz _____	85	81	75

Sound power levels for 39M units are rated in accordance with AHRI Standard 260.

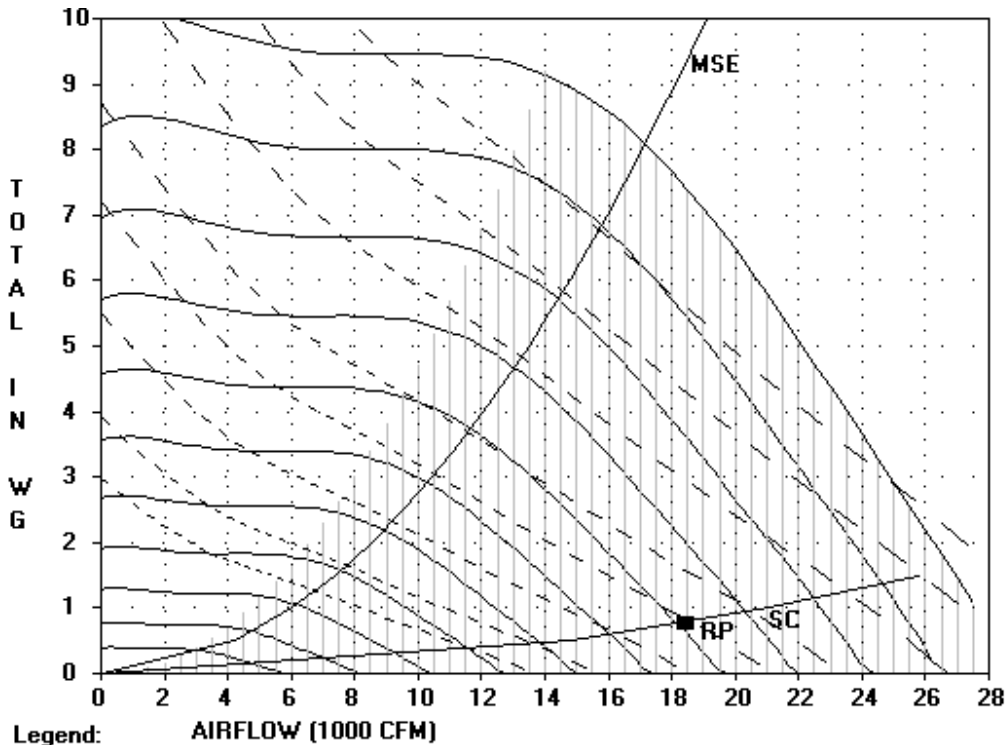
Sound contributed by Supply and Return Fans

Return Fan Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-7

Fan Model	39M4002HPDL
Unit Size	40W
Fan Type	DIRECT DRIVE PLENUM (Return)
Fan Wheel Diameter	22.2
Fan Class	II
Static Efficiency (%)	20
Fan Application	Draw Thru
Orientation	Horizontal
Actual Airflow, CFM	18400
Site Altitude, , ft	0
Backdraft Damper Loss, in wg	0.26
Total Upstream Static Losses, in wg	0.76
Number of Fans	2
Fan RPM / Max RPM	1717/2331
Each Fan BHP	3.6
Fan Total BHP	7.2
(n-1) Airflow, CFM	11388
(n-1) Redundancy (%)	62
Fan Electrical Power, kW	6.0

Unit is outside of the scope of AHRI Standard 430/431.



Legend:

- RPM
 - BHP
 MSE - Max. Static Eff.
 SC - System Curve
 RP - Rated Point

RPM = 1717 BHP = 7.2 CLASS II MAX. RPM = 2454

RPM's (x 100, L to R): 5. 7. 9. 11. 13. 15. 17. 19. 21. 23. 25.

BHP's (L to R): 2 3 5 7.5 10 15 20 25

Supply Fan Performance Summary

Project: CMS Elon, Hawk, Polo Ridge
 Tag: AHU-7

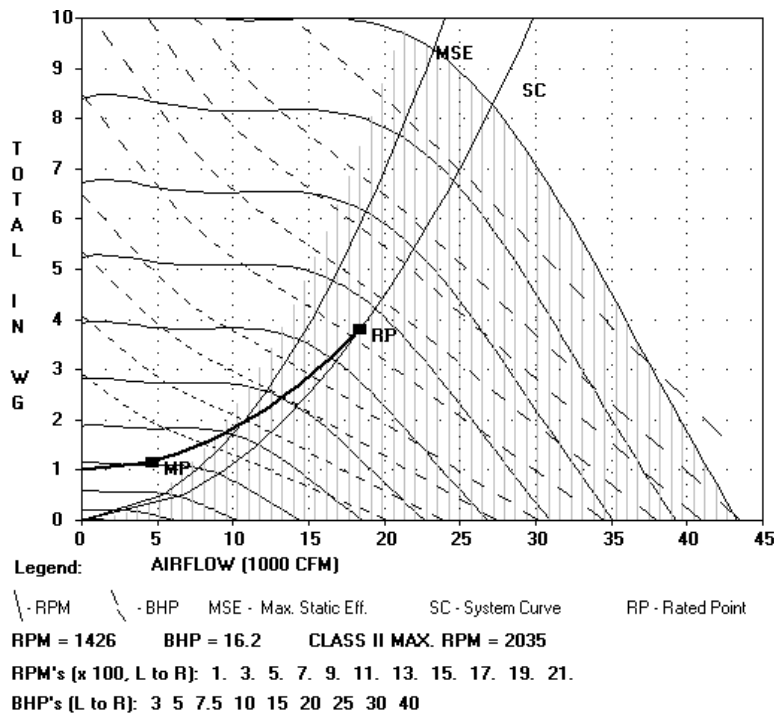
Fan Model	39M4002HPDL-U
Unit Size	40W
Fan Type	DIRECT DRIVE PLENUM
Fan Wheel Diameter	27
Fan Class	II
Fan Application	Draw Thru
Orientation	Horizontal
Actual Airflow, CFM	18400
Site Altitude, ft	0
Upstream Ext. Static, in wg	0.00
Downstream Ext. Static, in wg	2.25
Cooling Coil Static, in wg	0.99
Heating Coil Static, in wg	0.17
Backdraft Damper Losses, in wg	0.13
Total Accessory Static, in wg	0.26
Total Static Pressure, in wg	3.80
Calculated Fan RPM / Motor RPM	1426 / 1200
Class II Max. RPM	2035
Static Efficiency (%)	65
Number of Fans	2
Each Fan BHP	8.1
Fan Total BHP	16.2
(n-1) Airflow, CFM	14329
(n-1) Redundancy (%)	78
Fan Electrical Power, kW	13.3



Accessories:

- (1) Flat Throwaway (2 in.) [0.19]
- (1) Mixing or Exhaust Box [0.07]

NOTE: Certified in accordance with the AHRI Central Station Air-Handling Unit Certification Program, which is based on AHRI Standards 430/431. Certified units may be found in the AHRI Directory at www.ahridirectory.org



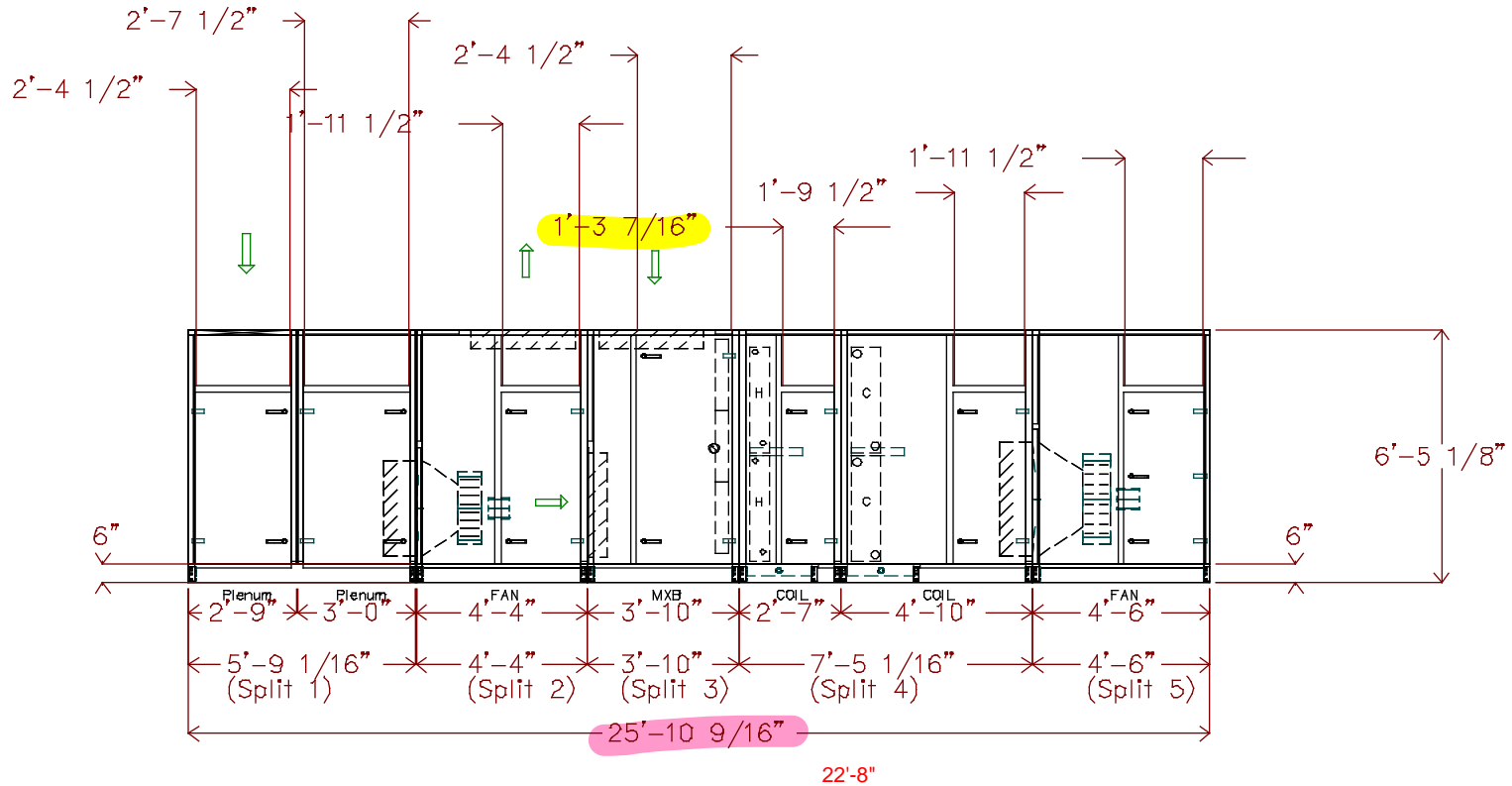
Unit width: 9'-2 11/16" (plus lifting lugs)
 Return Fan
 5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 2In. Flat Filter
 Qty (13) 20in. x 25in.
 Hot Water 1 Row 8 FPI Half Circuit (qty. 2)
 Chilled Water 8 Row 14 FPI Double Circuit (qty. 2)

Draw-Thru Supply Fan
 10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM
 Operating weight: 9752.0 lbs.
 Upstream Corner Weight (each): 2123.0 lbs.
 Downstream Corner Weight (each): 2753.0 lbs.



Review length requirements for this AHU relative to location of double doors into Mechanical Room

Split	Airway Length	Weight (lbs.)
(Split 1)	5'-9 1/16"	1343
(Split 2)	4'-4"	1692
(Split 3)	3'-10"	1371
(Split 4)	7'-5 1/16"	3015
(Split 5)	4'-6"	2331



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DATE 4/26/2022	AHUBuilder v6.69l	39M Central Station Air-Handler, Size 40W CMS Elon, Hawk, Polo Ridge: AHU-7 Assembly Drawing	REVISION Side View
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Unit viewed from right side of side elevation view.

Unit length: 25'-10 9/16"

Return Fan

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2In. Flat Filter

Qty (13) 20in. x 25in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 2)

Chilled Water 8 Row 14 FPI Double Circuit (qty. 2)

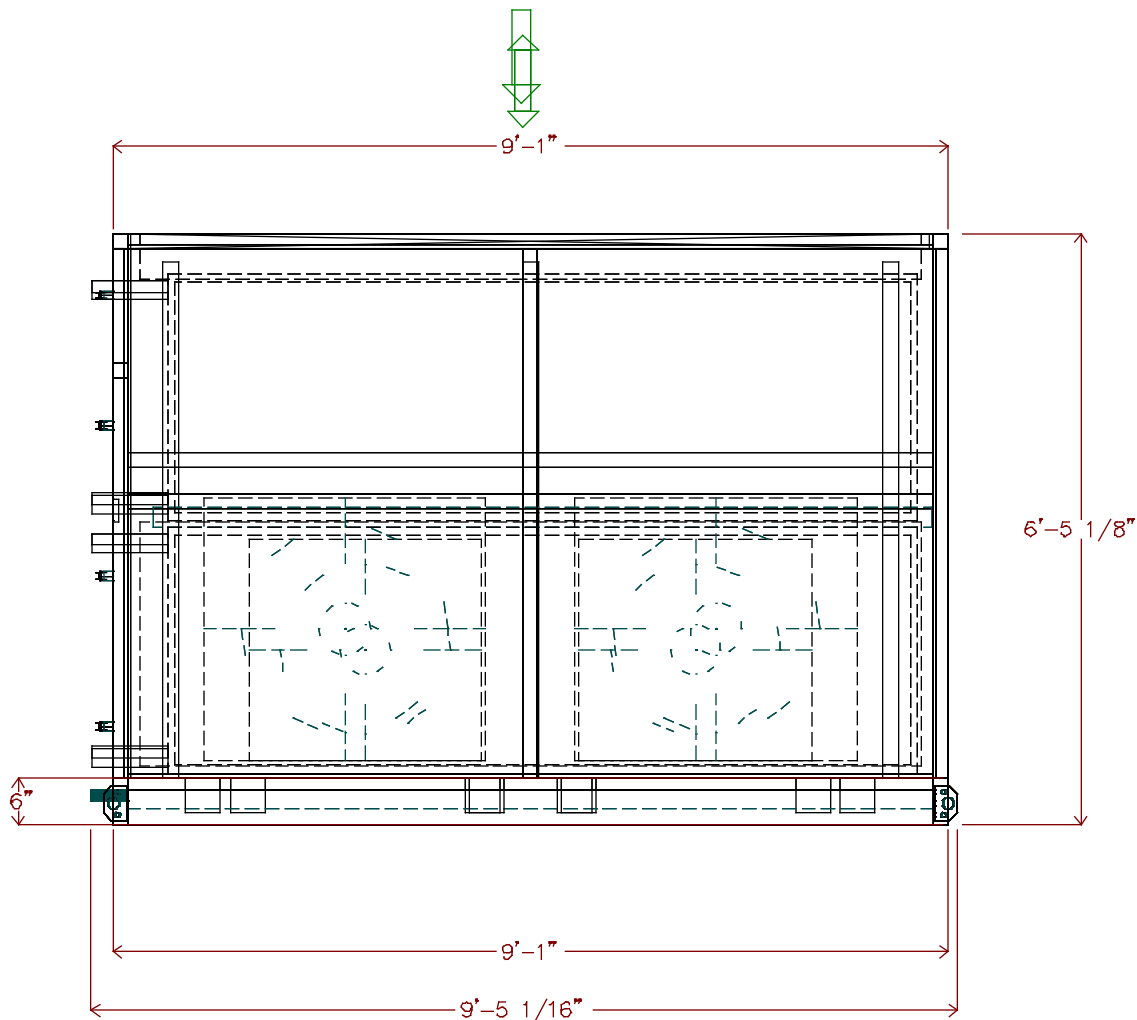
Draw-Thru Supply Fan

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 9752.0 lbs.

Upstream Corner Weight (each): 2123.0 lbs.

Downstream Corner Weight (each): 2753.0 lbs.



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DATE
4/26/2022

AHUBuilder
v6.691

39M Central Station Air-Handler, Size 40W
CMS Elon, Hawk, Polo Ridge: AHU-7
Assembly Drawing

REVISION
End View

Unit height: 6'-5 7/8"

Return Fan

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2In. Flat Filter

Qty (13) 20in. x 25in.

Hat Water 1 Row 8 FPI Half Circuit (qty. 2)

Chilled Water 8 Row 14 FPI Double Circuit (qty. 2)

Draw-Thru Supply Fan

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 9752.0 lbs.

Upstream Corner Weight (each): 2123.0 lbs.

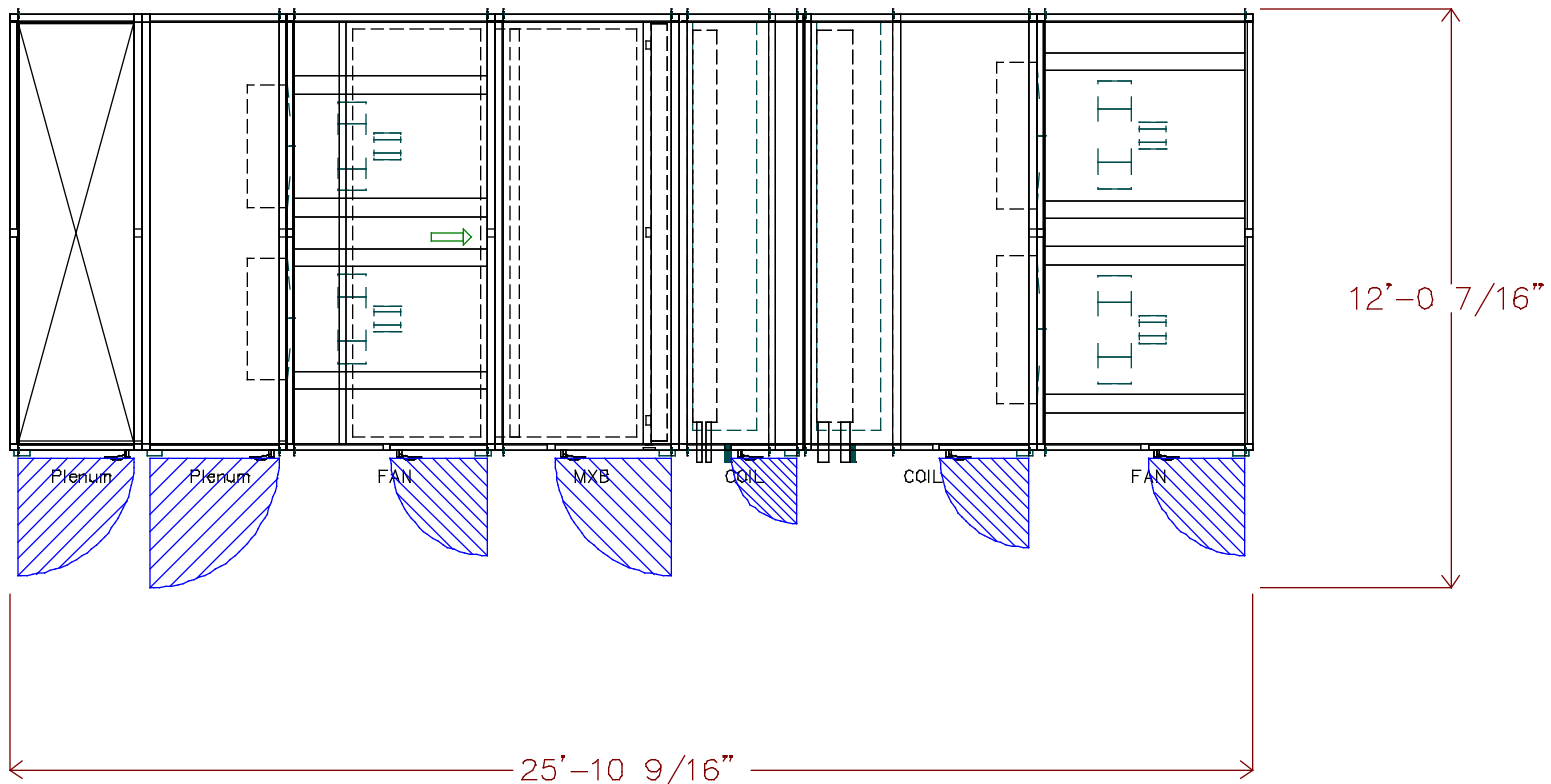
Downstream Corner Weight (each): 2753.0 lbs.



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DATE
4/26/2022

AHUBuilder
v6.691

39M Central Station Air-Handler, Size 40W
CMS Elon, Hawk, Polo Ridge: AHU-7
Assembly Drawing

REVISION
Top View

Unit height: 6'-5 7/8"

Return Fan

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

2ln. Flat Filter

Qty (13) 20in. x 25in.

Hot Water 1 Row 8 FPI Half Circuit (qty. 2)

Chilled Water 8 Row 14 FPI Double Circuit (qty. 2)

Draw-Thru Supply Fan

10 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM

Operating weight: 9752.0 lbs.

Upstream Corner Weight (each): 2123.0 lbs.

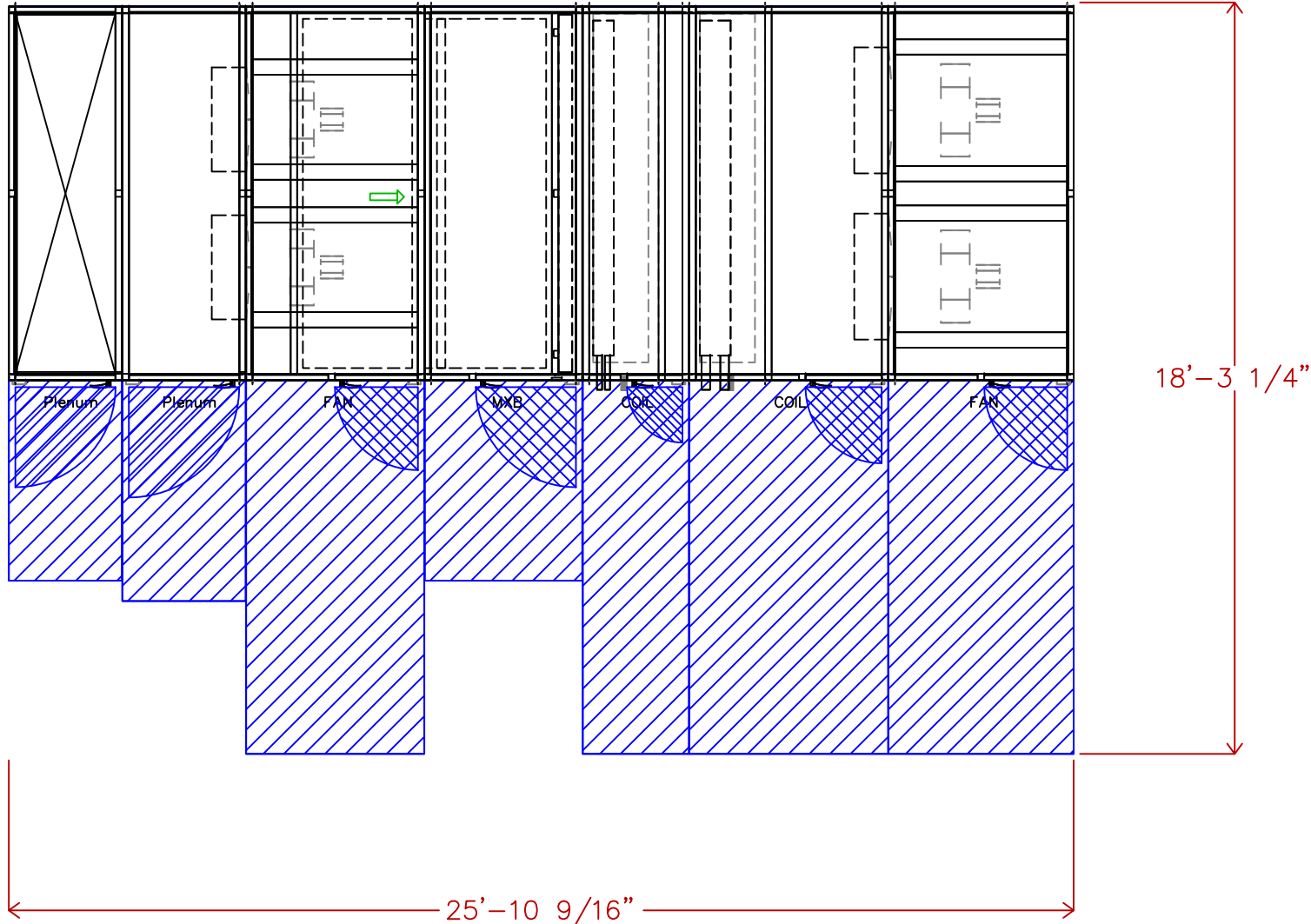
Downstream Corner Weight (each): 2753.0 lbs.



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39M Central Station Air-Handler, Size 40W
CMS Elon, Hawk, Polo Ridge: AHU-7
Assembly Drawing

REVISION
Top View

Hot Water 1 Row 8 FPI Half Circuit (qty. 2)
 Chilled Water 8 Row 14 FPI Double Circuit (qty. 2)

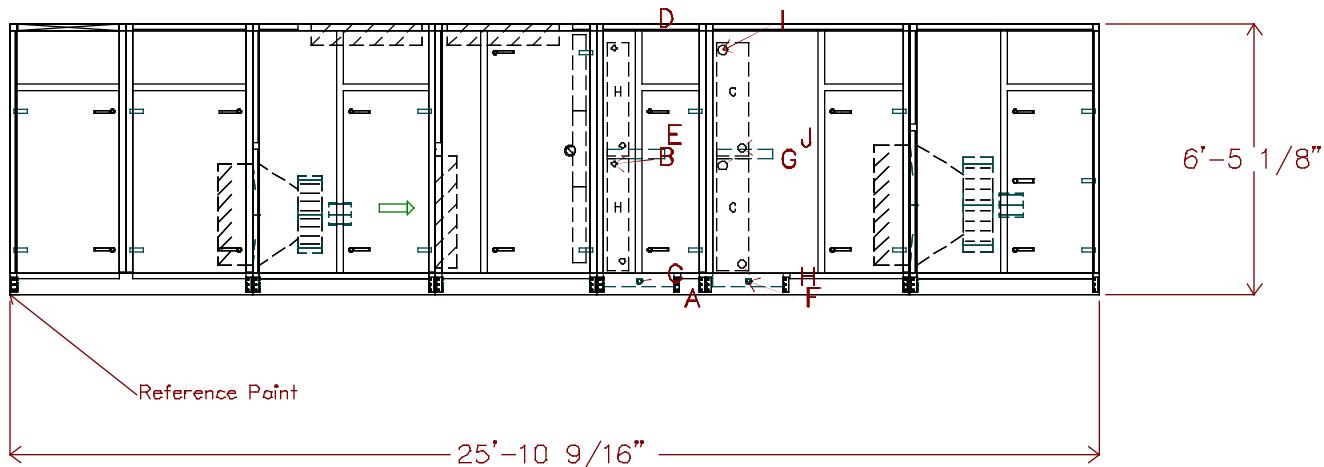


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Pipe	x	y	diameter	Usage
A	14'-11 3/8"	3 13/16"	1 1/2"	DrainPan
B	14'-4 1/4"	3'-1 3/16"	1 1/2"	HW Outlet
C	14'-6 5/8"	9 7/16"	1 1/2"	HW Inlet
D	14'-4 1/4"	5'-10 1/4"	1 1/2"	HW Outlet
E	14'-6 5/8"	3'-6 1/2"	1 1/2"	HW Inlet
F	17'-6 1/2"	3 13/16"	1 1/2"	DrainPan
G	16'-11 5/16"	3'-0 11/16"	2 1/2"	CW Outlet
H	17'-4 3/4"	8 11/16"	2 1/2"	CW Inlet
I	16'-11 5/16"	5'-9 3/4"	2 1/2"	CW Outlet
J	17'-4 3/4"	3'-5 3/4"	2 1/2"	CW Inlet



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39M Central Station Air-Handler, Size 40W
 CMS Elon, Hawk, Polo Ridge: AHU-7
 Assembly Drawing

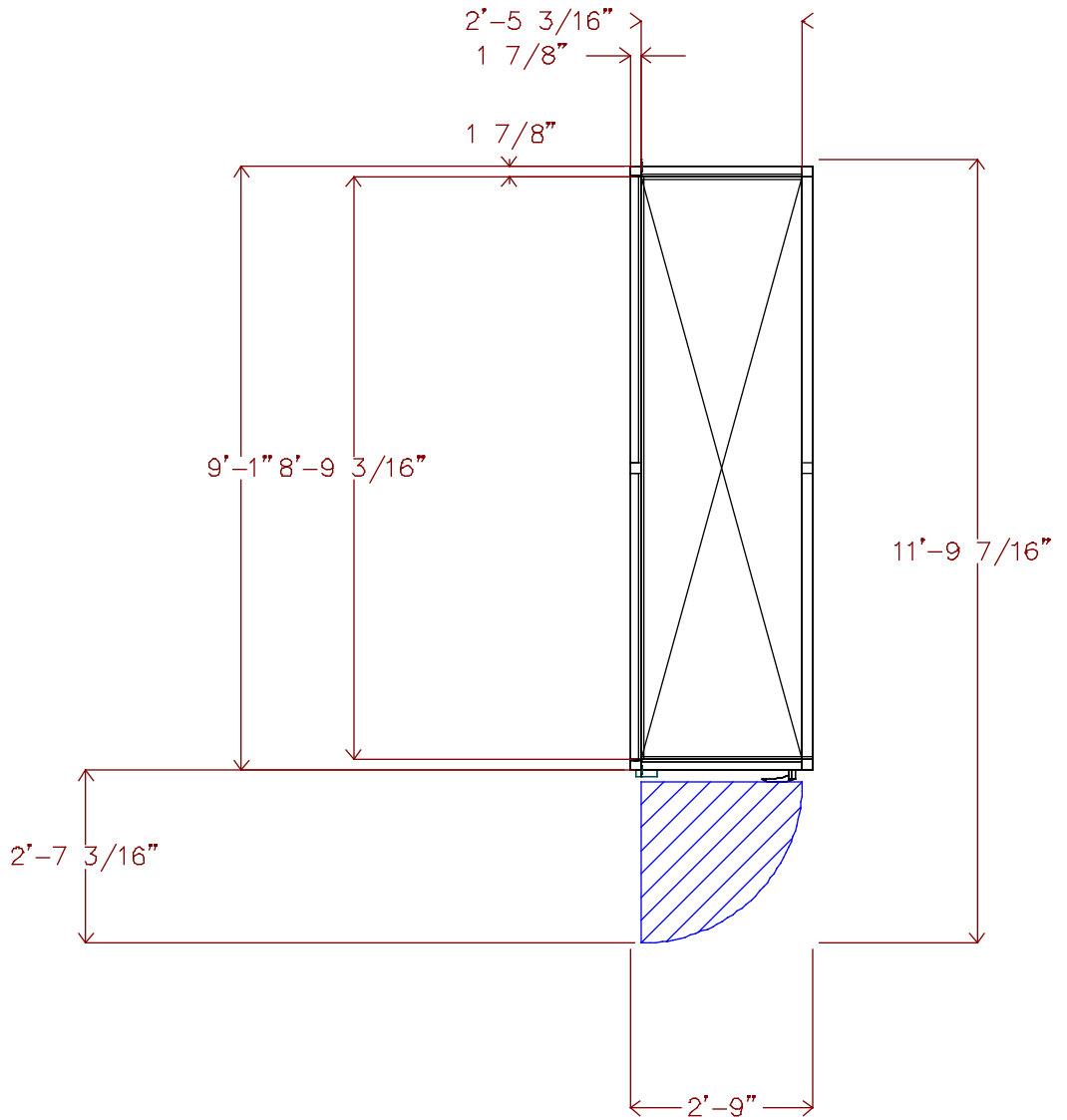
REVISION
Side View



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39M Central Station Air-Handler, Size 40W
CMS Elon, Hawk, Polo Ridge: AHU-7
Turning Plenum

REVISION
Top View

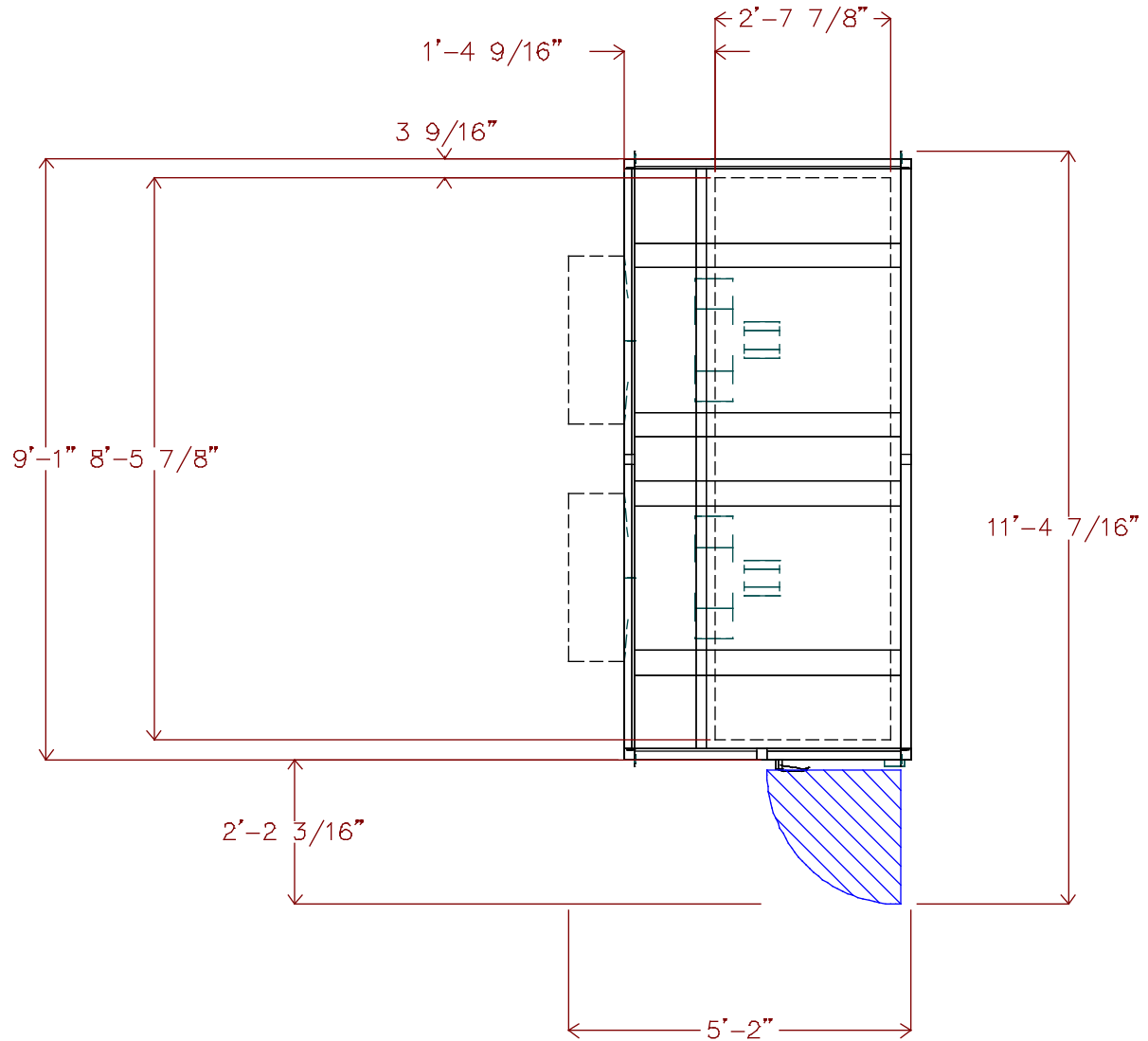
Return Fan
 5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM



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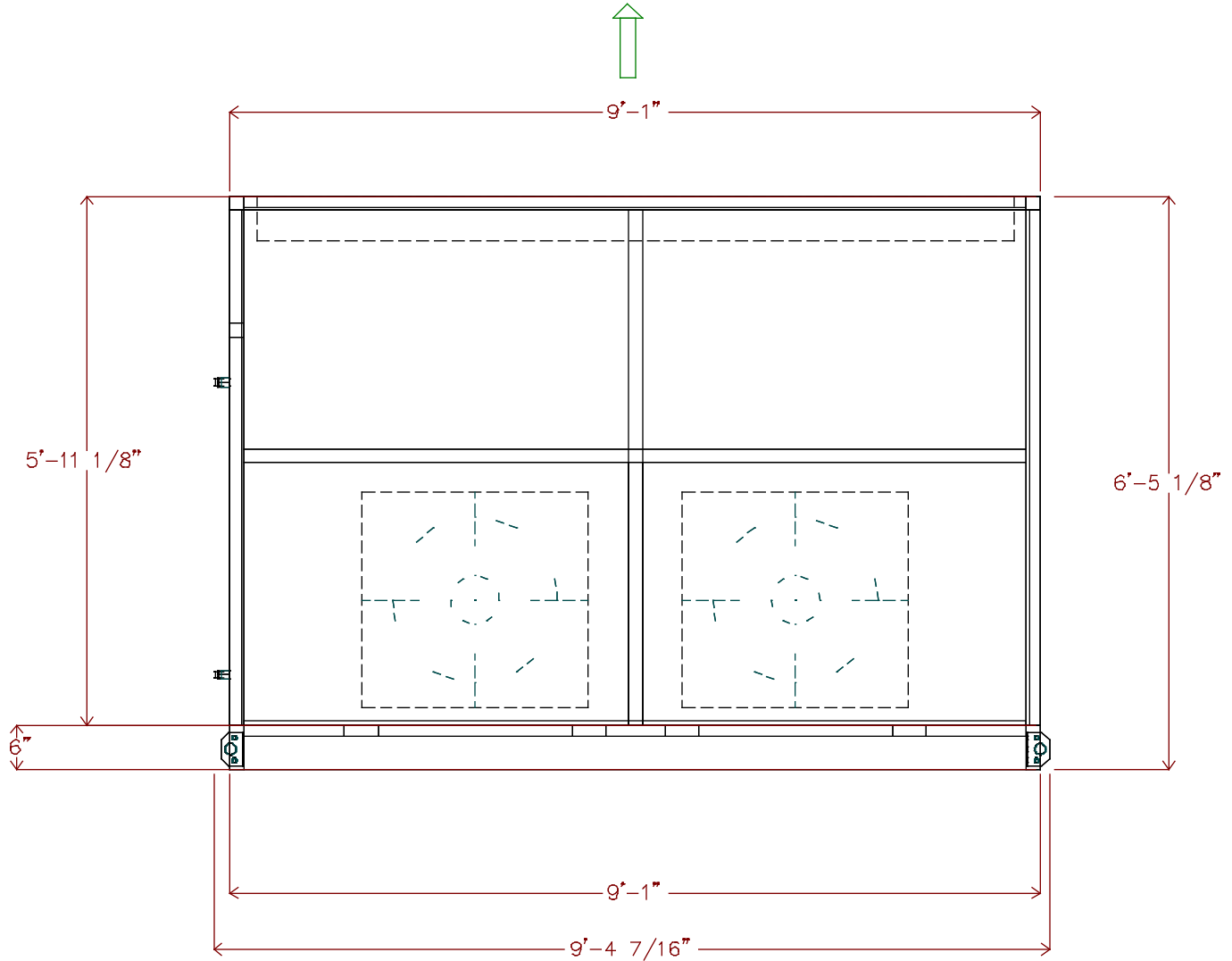
39M Central Station Air-Handler, Size 40W
 CMS Elon, Hawk, Polo Ridge: AHU-7
 Return Fan

REVISION
Top View

Unit viewed from right side of side elevation view.

Return Fan

5 HP Premium Efficiency TEFC 208-230/460 3Ph 60Hz 1200 RPM



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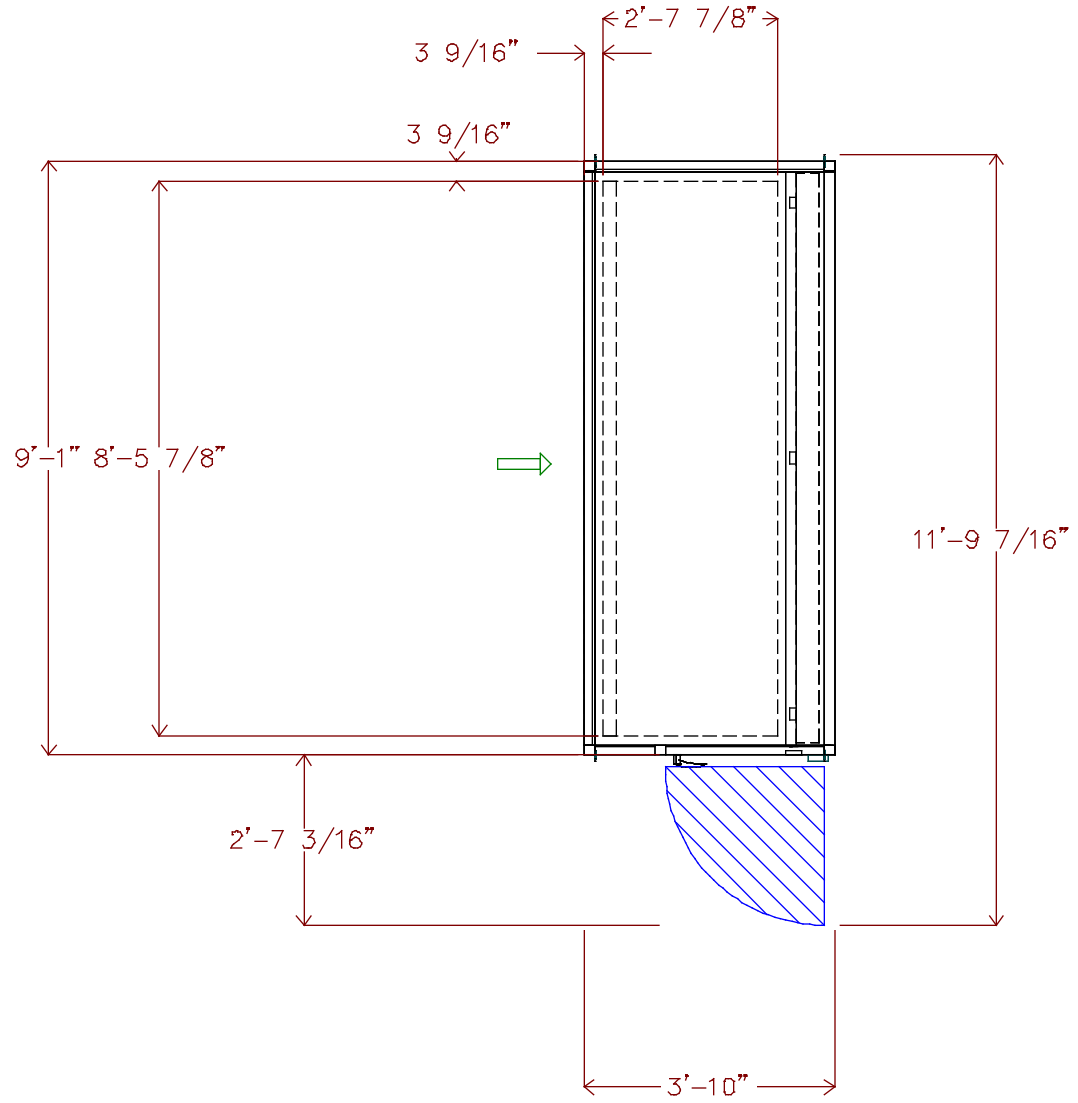
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39M Central Station Air-Handler, Size 40W
CMS Elon, Hawk, Polo Ridge: AHU-7
Return Fan

REVISION
End View

2In. Flat Filter
 Qty (13) 20in. x 25in.



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39M Central Station Air-Handler, Size 40W
 CMS Elon, Hawk, Polo Ridge: AHU-7
 Filter Mixing Box

REVISION
 Top View

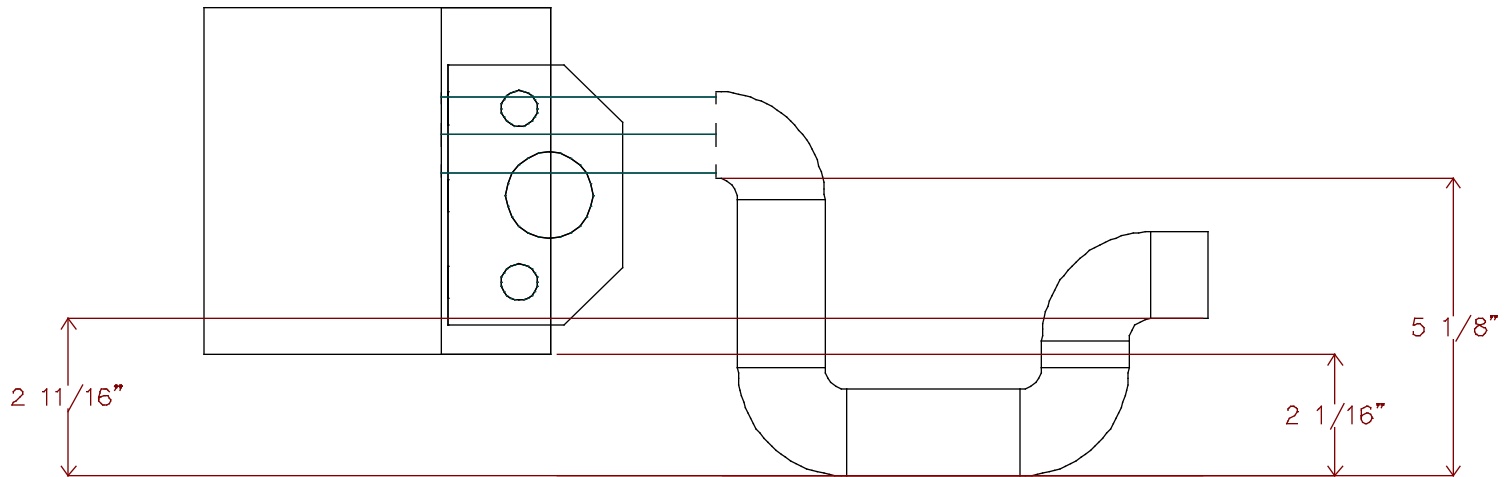


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DRAW-THRU



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39M Central Station Air-Handler, Size 40W
CMS Elon, Hawk, Polo Ridge: AHU-7
Condensate Trap Dimensions

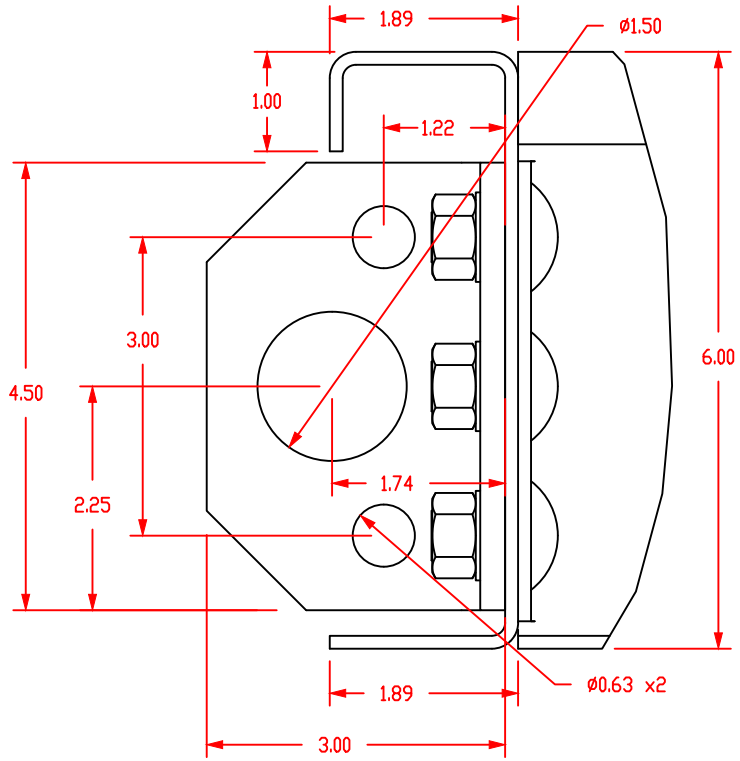
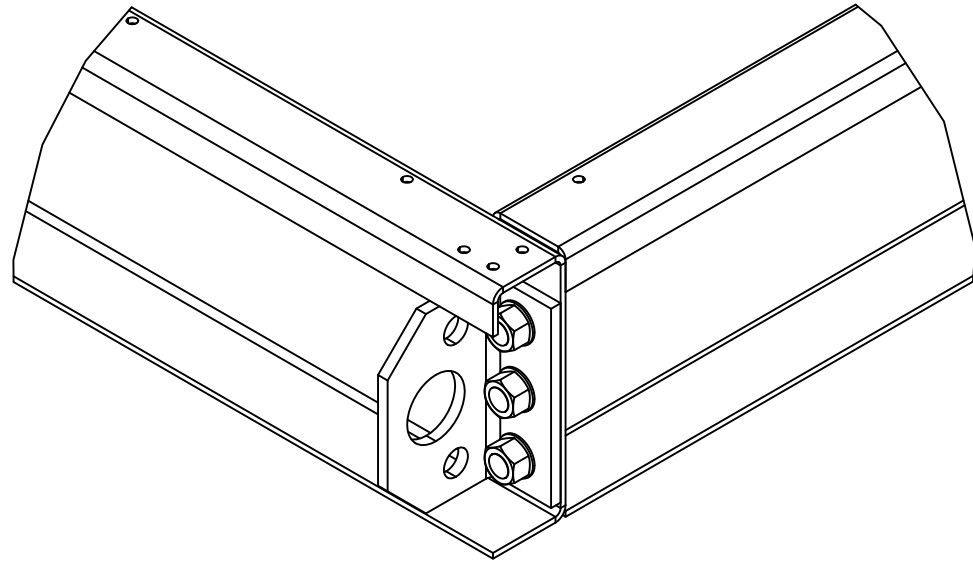
REVISION
End View



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39M Central Station Air-Handler, Size: 03 - 110
6" Baserail and Lifting Lug Detail

REVISION