

MEMORANDUM NO. 1

The following recommendations are based upon a check of this submission against contract requirements.

APPROVAL IS RECOMMENDED AS TO GENERAL ARRANGEMENT SUBJECT TO COMPLIANCE WITH CIRCLED A/E COMMENTS AND/OR CORRECTIONS ON THE ATTACHED MATERIAL.

~~ALSO RECOMMENDED:~~

- ~~○ CREDIT PROPOSAL~~
- ~~○ AT NO ADDITIONAL COST~~
- ~~○ MINOR MODIFICATIONS~~

A/E ASSUME NO RESPONSIBILITIES FOR CHECKING SCHEDULES, QUANTITIES, LAYOUT DRAWINGS, LAYOUT ILLUSTRATIONS OR DIMENSIONS.

CHECKED DATE:	December 7, 2022	BY:	Jon Coyle
VA PROJECT NO:	539-21-205	A/E FILE NO:	23 82 00-1 Fan Coil Units – resubmittal #1
A/E:	Stan Engineers		

COMMENTS:

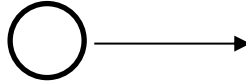
1. Submittal includes “valve package supplement” drawing showing various valve package options, and guide specs in submittal seem to indicate factory furnished valve packages/piping components. Per 23 82 00 (2.1-H), piping packages by fan coil unit manufacturer shall not be acceptable, and piping packages shall be submitted separately and field-installed by the contractor to fit control valves provided by the controls supplier. **Provide FCUs without factory valve packages.**
2. Sound levels for most FCUs still exceed the specified noise criteria, but FCU-B123 is of particular concern as it serves the sound sensitive Audio Suite. Per 23 82 00 (2.1-C), operating at full cooling capacity, FCU sound power level shall not exceed by more than 5 dB the numerical value of sound pressure levels specified in Section 23 05 41. Per 23 05 41 (1.3-B-1), Noise level in all 8 octave bands due to equipment and duct systems shall not exceed 25 NC for Audio Suite. Therefore, after adding 5 dB to the NC values specified in 23 05 41, **the maximum allowable dB in each octave band for FCU-B123 shall be as follows – resubmit FCU-B123 to meet this criteria:**
 - 63 Hz: 59 dB (this octave band not indicated in submittal)
 - 125: 49 dB (56/59 dB radiated/discharge indicated in submittal)
 - 250: 42 dB (53/54 dB radiated/discharge indicated in submittal)
 - 500: 36 dB (54/55 dB radiated/discharge indicated in submittal)
 - 1k: 32 dB (52/53 dB radiated/discharge indicated in submittal)
 - 2k: 29 dB (46/47 dB radiated/discharge indicated in submittal)
 - 4k: 27 dB (41/41 dB radiated/discharge indicated in submittal)
 - 8k: 26 dB (37/36 dB radiated/discharge indicated in submittal)
3. Fan speeds were changed from high to medium for this submittal, compared to the previous submittal. Some FCUs show reduced airflow with medium fan speed, while other FCUs show the same airflow when changed from high to medium fan speed – it is unclear how this would be the case.

STAN ENGINEERS

REPLACE OZONE DEPLETING EQUIPMENT

STATION & LOCATION: Cincinnati VAMC
VA PROJECT NO: 539-21-205
A/E FILE NO: 23 82 00-1
DATE RECEIVED: 11/18/2022
FOR RECORD ONLY:
SUPERSEDES A/E FILE NO: 23 64 00-1
SUPERSEDED BY A/E FILE NO: N/A
NOT CHECKED:

A/E COMMENTS AND / OR CORRECTIONS ARE CIRCLED
THUS



BY (A/E): Jon Coyle
DATE: 12/07/2022

VA ACTION

- APPROVED REJECTED / RESUBMIT
 OTHER

BY: (COR) _____
DATE: _____



FAN COIL UNIT SUBMITTAL

Project

Cincinnati VA - FCUS

Date

October 24, 2022

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FCU-B017 PAGE 25

FCU-B017B PAGE 30

FCU-B019 PAGE 35

FCU-B123 PAGE 40

FCU-A430 PAGE 45

FCU-A431 PAGE 50

15-FCU-B04 PAGE 55

FCU-B211 NOT IN SUBMITTAL

Jeff Gries
Habegger Corp,



Product Data

Fan Coil Air Conditioners

150 to 3000 cfm

42C HORIZONTAL



42VB VERTICAL



42C,D,S,V Series
Fan Coil Air Conditioners



42VAC

Furred-in model for concealed applications, typically along the building perimeter, with top or front discharge. (200-1200 cfm)



42VCA

Furred-in lowboy model for concealed under-the-window applications. (200-600 cfm)



42VBC

Painted cabinet model with top or front discharge. (200-1200 cfm)



42VEA

Cabinet lowboy model with stamped louver discharge grille and 2 control access doors. (200-600 cfm)



42VFC

Painted cabinet model with slant top and top or front discharge. (200-1200 cfm)



42VGA

Furred-in wall model. Available with a 10-in. valve compartment extension. (150 and 300 cfm)

Features/Benefits (cont)



42CA
Furred-in ceiling model with low silhouette.
(200-1200 cfm)



42CG
Cabinet model for under-ceiling mount with bottom or rear stamped louver return air grille.
(200-1200 cfm)



42CE
Furred-in ceiling model with factory-installed plenum.
(200-1200 cfm)



42CK
Cabinet model with telescoping flip-down panel and stamped louver bottom return or duct collar rear return.
(200-1200 cfm)

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Prepared By: Jeff Gries

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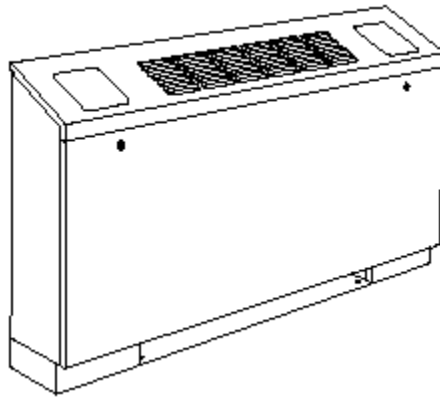
FCU-SB08

**Tag Cover Sheet
Unit Report
Certified Drawing
Performance Report
Guide Specification**

Unit Report For FCU-SB08

Project: Cincinnati VA - FCUS
 Prepared By: Jeff Gries

10/23/2022
 11:46AM



Unit Parameters

Tag Name: **FCU-SB08**
 Quantity: **1**
 Unit Model: **42VFD10BLBY5AYBR**
 Unit Type: ... **42VF Vertical, Slant-Top Cabinet**
 Unit Size: **1000 CFM**
 Shipping Options: **Standard**
 Fan Speed: **Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Dimensions

Unit Length: **9.00** in
 Unit Width: **77.00** in
 Unit Height: **28.75** in
 Shipping Weight: **135** lb

Coil Parameters

System Type: **2-Pipe Cooling Only**
 Cooling Coil: **Cold Fluid Cooling**
 Cooling Coil Rows: **4 rows**
 Coil Hand: **Left Hand**
 Hydronic Coil Test Pressure: **350 psig Coil Test Pressure**

Electrical

Motor Voltage: **115-1-60 ECM V2 Variable Airflow for 0-10VDC input** V-Ph-Hz

Warranty Information

First Year - Parts Only (Standard)

Ordering Information

Part Number	Description	Quantity
Base Unit		
	42VFD10BLBY5AYBR	1
	42VFD10:Vertical, Slant-Top Cabinet Fan Coil Unit 1000 CFM Cooling	
	115-1-60 ECM V2 Variable Airflow for 0-10VDC input	
	Torx Tamper Proof Fasteners on both control doors	
	High Cap 4-Row, in lieu of std 3-Row (2-pipe system)	
	20 Non-Fused Service Switch with Incoming Power Fusing	
	115-1-60 ECM V2 Variable Airflow for 0-10VDC input	
	Condensate Overflow Switch	
	Controls by other	

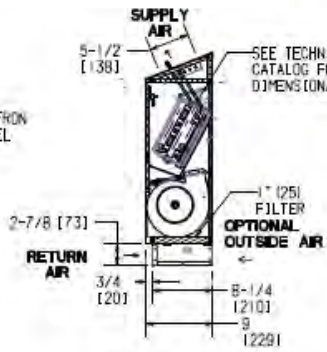
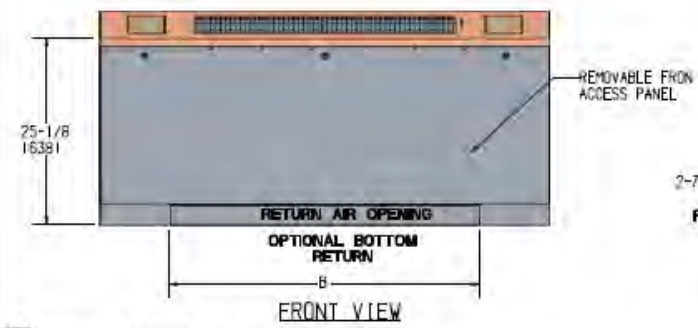
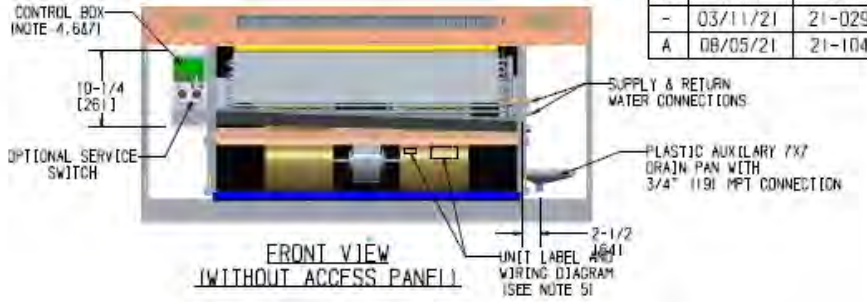
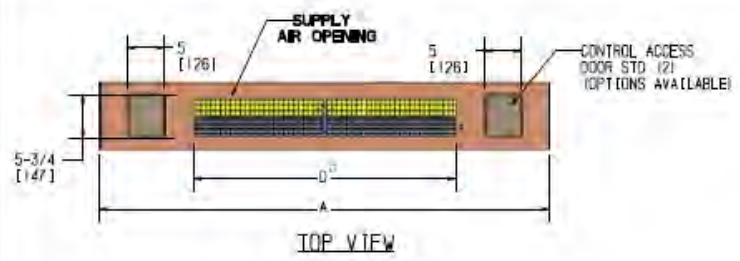
Not all valve components are rated for the selected Hydronic Coil Test Pressure. Refer to the valve component cut sheets in the Product Library, under Help.

Certified Drawing for FCU-SB08

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

07/06/2022
07:19AM

REVISION HISTORY		
REV	DATE	ECN
-	03/11/21	21-0295
A	08/05/21	21-1048



- NOTES:**
1. RH COIL SHOWN IN OPPOSITE.
 2. ALL DIMENSIONS ARE +/- .25 (6.35) IN. DRAWING NOT TO SCALE.
 3. PRODUCT SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.
 4. CONTROL BOX SIZE AND POSITION MAY VARY (CONSULT FACTORY).
 5. POSITION MAY VARY.
 6. SERVICE ACCESS IS LOCATED ON THE FRONT OF THE CONTROL BOX.
 7. KNOCKOUTS ON THE BOTTOM AND SIDE OF THE CONTROL BOX FOR INCOMING POWER CONNECTIONS.

Unit Model	Dimensions - Inches (Millimeters)				Quantity/Unit	
	A	B	C	D	Blower	Motor
42VFC 02	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1
42VFC 03	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1
42VFC 04	51 (1295)	32 (813)	33 (838)	26 (660)	2	1
42VFC 05	51 (1295)	32 (813)	33 (838)	26 (660)	2	1
42VFC 06	61 (1549)	42 (1067)	43 (1092)	39 (991)	2	1
42VFC 08	63 (1600)	44 (1118)	45 (1143)	39 (991)	2	1
42VFC 10	77 (1956)	58 (1473)	59 (1498)	52-1/8 (1324)	4	2
42VFC 12	85 (2159)	66 (1676)	67 (1702)	61 (1549)	4	2



TITLE

VERT CLASSIC SLOPED CABINET TOP SPLY

DATE **1100-90044336** **REV** **A**

DRAWN J. FUSON	DATE 03/20/12	APPROVED J. CRAVES	DATE 03/20/12
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Performance Summary For FCU-SB08

Project: Cincinnati VA - FCUS
 Prepared By: Jeff Gries

NOT DUCTED

10/23/2022
 11:46AM

Unit Parameters

Tag Name: **FCU-SB08**
 Quantity: **1**
 Unit Model: **42VFD10BLBY5AYBR**
 Unit Type: ... **42VF Vertical, Slant-Top Cabinet**
 Unit Size: **1000 CFM**
 System Type: **2-Pipe Cooling Only**
 Cooling Coil: **Cold Fluid Cooling**
 Cooling Coil Rows: **4 rows**
 Coil Hand: **Left Hand**
 Coil Wrapping: . **Condensate Overflow Switch**
 Shipping Options: **Standard**
 Fan Speed: **Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Unit Performance

Actual Airflow: **798.0** CFM
 Altitude: **0** ft
 External Static Pressure: **.00** in wg
 Voltage: **115-1-60 ECM V2 Variable Airflow for 0-10VDC**
 input..... V-Ph-Hz

External Static Pressure includes 0 in wg for filter static.

Cooling Data

Coil Type: **Cold Fluid Cooling**
 Coil Rows: **4 rows**
 Fluid Type: **Fresh Water**
 Total Capacity: **20,008** BTU/hr
 Sensible Capacity: **19,490** BTU/hr
 Entering Air Dry Bulb Temperature: **72.0** F
 Entering Air Wet Bulb Temperature: **60.0** F
 Leaving Air Dry Bulb Temperature: **54.3** F
 Leaving Air Wet Bulb Temperature: **52.8** F
 Fluid Flow Rate: **2.6** gpm
 Fluid Pressure Drop: **1.10** ft wg
 Fluid Entering Temperature: **45.0** F
 Fluid Leaving Temperature: **57.3** F

Electrical Data

Motor Voltage: **115-1-60 ECM V2 Variable Airflow for 0-10VDC** input V-Ph-Hz
 Motor FLA: **3.9**
 Unit MCA: **4.88**
 MFS: **15**

Acoustical Data:

Octave Band Center Frequency, Hz	125	250	500	1k	2k	4k	8k	dBA
Sound Power Data								
Radiated Sound Power, dB	48	52	48	42	35	28	25	46
Discharge Sound Power, dB	NA	NA	NA	NA	NA	NA	NA	NA

Factory-Installed Options

Unit Arrangement: **Front Return / Top Supply**
 Filters: **Std 1 in. Throaway**
 Cabinet Colors: **Arctic White (Standard)**
 Drain Pans: **Standard Drain Pan**
 Coil Hand: **Left Hand**
 Control Access Doors: **Torx Tamper Proof Fasteners on both control doors**
 AAV / Drains: **Manual Air Vents only**
 Control Packages: **24V Controls by other**
 Switches: **20A Service Switch w/inline Fusing**
 Insulation: **Std. Fiberglass Insulation**
 Packaging: **Units shipped on treated wood pallet**
 Condensate: **Condensate Overflow Switch**
 Mounting Type: **Floor Mount**
 Cabinet Construction: **Standard Cabinet Construction**
 Coil Tube Wall: **0.016-inch wall thickness (Standard)**

Fan Coil Unit — Vertical Models

HVAC Guide Specifications — 42V

Size Range: 200 to 1200 Nominal Cfm

Carrier Model Numbers:

42VAC (Furred-in)

42VBC (Cabinet)

42VCA (Furred-in, Lowboy, 200 to 600 cfm)

42VEA (Cabinet, Lowboy, 200 to 600 cfm)

42VFC (Cabinet, Slant Top)

42VGA (Furred-in, Wall, 150 and 300 cfm)

•General

- SYSTEM DESCRIPTION

Vertical, 2-pipe or 4-pipe, or electric heat, room fan coil unit for furred-in, or cabinet floor mounted installation. (42VCA and VEA are low profile units.)

- QUALITY ASSURANCE

Unit shall be tested and certified in accordance with AHRI (Air-Conditioning, Heating, and Refrigeration Institute) Standard 440, latest edition, and base unit ETL certified. All units shall have C-ETL-US listing signifying the units have been examined by ETL and are in compliance with both the US and Canadian applicable standards. (Units with special features may not have ETL certification.) Each coil shall be factory tested for leakage at 300 psig air pressure with coil submerged in water. Insulation and adhesive shall meet NFPA (National Fire Protection Association) 90A requirements for flame spread and smoke generation. Adhesive shall be certified according to the GREENGUARD Indoor Air Quality Certification for Low Emitting Products.

- DELIVERY, STORAGE AND HANDLING

Each unit shall be individually packaged from point of manufacture. Unit shall be handled and stored in accordance with the manufacturer's instructions.

•Products

- EQUIPMENT

- General:

Factory-assembled, vertical, blow-thru type floor- mounted fan coil for furred-in or exposed installations. Unit shall be complete with water coil, fan(s), motor(s), drain pan, and all required wiring, piping, controls and special features. Standard insulation shall be dual density fiberglass insulation.

- Base Unit (42VAC, VCA):

- Outside panels are made of heavy gage galvanized steel. Lined on the inside with 1/2-in. thick fiberglass insulation, with a 1 in. long collar for top supply duct connection. Units shall be supplied with a 1-in. fiberglass throwaway filter.
- The drain pan shall be constructed of 18-gage galvanized steel extending the entire length and width of the coils and pitched for drainage. The painted galvanized interior drain pan shall be externally coated with 2-part closed cell foam insulation. (Stainless steel pans shall be externally coated).

Guide Specification for FCU-SB08

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
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- Cabinet Models (42VBC, VEA, VFC):
 - Cabinet models shall be coated with an Arctic White powder-coat finish, and include a 1-in. fiberglass throwaway filter.
 - Cabinet models shall be free standing with 2 access doors. A stamped supply-air grille shall be included in the top of the cabinet.
 - The 42VFC top panel shall slope down from back to front at an angle of 25 degrees. Standard stamped grille shall provide a discharge into the room at a nominal 60 degrees from the vertical.
- Fans:

Direct-driven, double-width fan wheels shall have forward-curved blades and shall be statically and dynamically balanced. Scrolls and fan wheels shall be constructed of galvanized steel.
- Coils:

All coils shall have $\frac{3}{8}$ -in. copper tubes and aluminum fins (12 fins per inch for 42VAC, VBC, VFC and 10 fins per inch for 42VCA, VEA, VGA) spacing; Coil fins are mechanical bonded to tube joints. The copper tubes comply with the ASTM B-75. The fin thickness is 0.0045 in. and tube thickness is 0.014 in. All coils shall be leak tested with air at 300 psig under water.
- Controls and Safeties:

Internal wiring from motor and valves shall be in flexible metal conduit, terminating in the junction box.
- Operating Characteristics:
 - A one-coil unit installed in a 2-pipe system shall be capable of providing heating and cooling as determined by the operating mode of the central water supply system.
 - A double-circuit coil unit installed with a 4-pipe system shall be capable of providing sequenced heating and cooling.
- Electrical Requirements:

Standard unit shall operate on 115 v, single-phase, 60 Hz electric power. All internal wiring shall be in flexible conduit.
- Motor(s):

Motors shall have integral automatic temperature reset for motor protection.
- Special Features:

Certain standard features are not applicable when the features designated by * are specified. See your local Carrier Sales Office for amending specifications.

 - Unit coil(s) shall be equipped with manual air vents.
 - For installation in a 2-pipe system, unit shall be equipped with a 3-row or 4-row cooling/heating coil (42VAC,VBC,VFC units) or a 3-row cooling/heating coil (42VCA,VEA).
 - Fan motor shall be constant torque electrically commutated type, 115 volt, single phase, 60 Hz as specified on the equipment schedule. The operating sequence shall be the following, as specified:
 - Variable Airflow for 0 to 10 VDC / 4 to 20 mA Input. Requires a 0 to 10 VDC input signal and is not compatible with a 3-speed thermostat.
 - Cleanable filter shall be factory installed in the filter track.
 - Leveling legs shall be factory installed on the unit and permit a maximum adjustment of $\frac{3}{4}$ inch.
 - Switch box complete with switch shall be factory installed on the unit.
 - Discharge-air grille with double deflection steel or aluminum construction shall be shipped installed in the unit (42VBC,VFC,VEA units). Steel grilles shall be painted to match cabinet. Aluminum grilles shall be a natural anodized

Guide Specification for FCU-SB08

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
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finish.

- Manual stop, balancing, combination balance and stop (ball type), and flow control valves shall be factory furnished.
- Tamper-proof fasteners (Allen head) shall be installed on front panel and access doors on cabinet models.
- A stainless steel drain pan shall be available for factory installation.
- Factory-installed insulation options shall include foil faced fiberglass or closed cell insulation.
- Control Options:
 - Controls & Valves by others.

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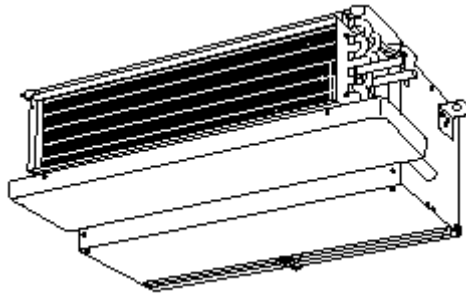
FCU-B014

**Tag Cover Sheet
Unit Report
Certified Drawing
Performance Report**

Unit Report For FCU-B014

Project: Cincinnati VA - FCUS
 Prepared By: Jeff Gries

10/23/2022
 11:46AM



Unit Parameters

Tag Name: **FCU-B014**
 Quantity:..... **1**
 Unit Model:..... **42CEA08ALBY6AYBR**
 Unit Type:**42CE Ceiling, Furred-In with Plenum**
 Unit Size:.....**800 CFM**
 Shipping Options:.....**Standard**
 Fan Speed:**Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Dimensions

Unit Length:..... **20.00** in
 Unit Width:..... **43.25** in
 Unit Height: **10.50** in
 Shipping Weight:..... **95** lb

Coil Parameters

System Type: **2-Pipe Cooling Only**
 Cooling Coil:..... **Cold Fluid Cooling**
 Cooling Coil Rows:..... **3 rows**
 Coil Hand: **Left Hand**
 Hydronic Coil Test Pressure:**350 psig Coil Test Pressure**

Electrical

Motor Voltage:**115-1-60 ECM V2 Variable Airflow for 0-10VDC input**.....V-Ph-Hz

Warranty Information

First Year - Parts Only (Standard)

Ordering Information

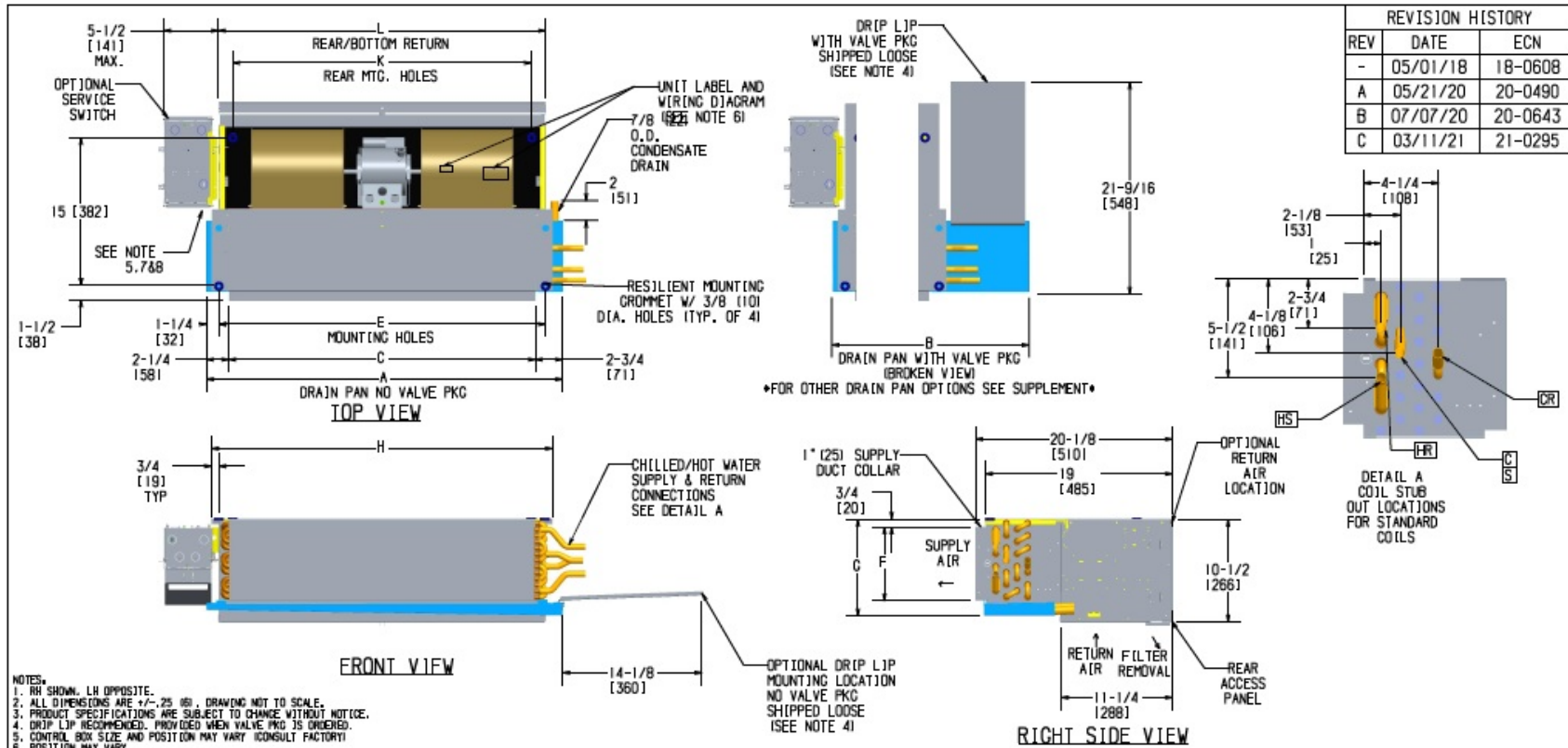
Part Number	Description	Quantity
Base Unit		
	42CEA08ALBY6AYBR	1
	42CEA08:Ceiling, Furred-In with Plenum Fan Coil Unit 800 CFM Cooling 115-1-60 ECM V2 Variable Airflow for 0-10VDC input	
	20 Non-Fused Service Switch with Incoming Power Fusing	
	115-1-60 ECM V2 Variable Airflow for 0-10VDC input	
	Condensate Overflow Switch	
	Controls by other	

Not all valve components are rated for the selected Hydronic Coil Test Pressure. Refer to the valve component cut sheets in the Product Library, under Help.

Certified Drawing for FCU-B014

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM



Unit Model	Dimensions - Inches (Millimeters)											Quantity/Unit	
	A	B	C	E	F	G	H	J	K	L	BLWR	MOTOR	
42CE 02	21-1/4 (540)	28-1/2 (724)	16 (406)	18-1/4 (464)	6-1/4 (159)	8-3/4 (222)	19-3/4 (502)	38 (965)	15-3/8 (391)	18-1/4 (464)	1	1	
42CE 03	25-1/4 (641)	32-1/2 (826)	20 (508)	22-1/4 (565)	6-1/4 (159)	8-3/4 (222)	23-3/4 (603)	38 (965)	19-3/8 (493)	22-1/4 (565)	1	1	
42CE 04	31-1/4 (794)	38-1/2 (978)	26 (660)	28-1/4 (718)	6-1/4 (159)	8-3/4 (222)	29-3/4 (756)	38 (965)	25-3/8 (654)	28-1/4 (718)	2	1	
42CE 06	36-1/4 (921)	43-1/2 (1105)	31 (787)	33-1/4 (845)	7-1/2 (191)	10 (254)	34-3/4 (883)	38 (965)	30-3/8 (772)	33-1/4 (845)	2	1	
42CE 08	43-1/4 (1099)	50-1/2 (1283)	38 (965)	40-1/4 (1022)	7-1/2 (191)	10 (254)	41-3/4 (1060)	38 (965)	37-3/8 (950)	40-1/4 (1022)	2	1	
42CE 10	57-1/4 (1454)	64-1/2 (1638)	52 (1321)	54-1/4 (1378)	7-1/2 (191)	10 (254)	55-3/4 (1416)	60 (1524)	51-3/8 (1306)	54-1/4 (1378)	4	2	
42CE 12	65-1/4 (1657)	72-1/2 (1842)	60 (1524)	62-1/4 (1581)	7-1/2 (191)	10 (254)	63-3/4 (1619)	65 (1651)	59-3/8 (1509)	62-1/4 (1581)	4	2	



HORIZONTAL HIDEAWAY W/PLENUM

100-90041391

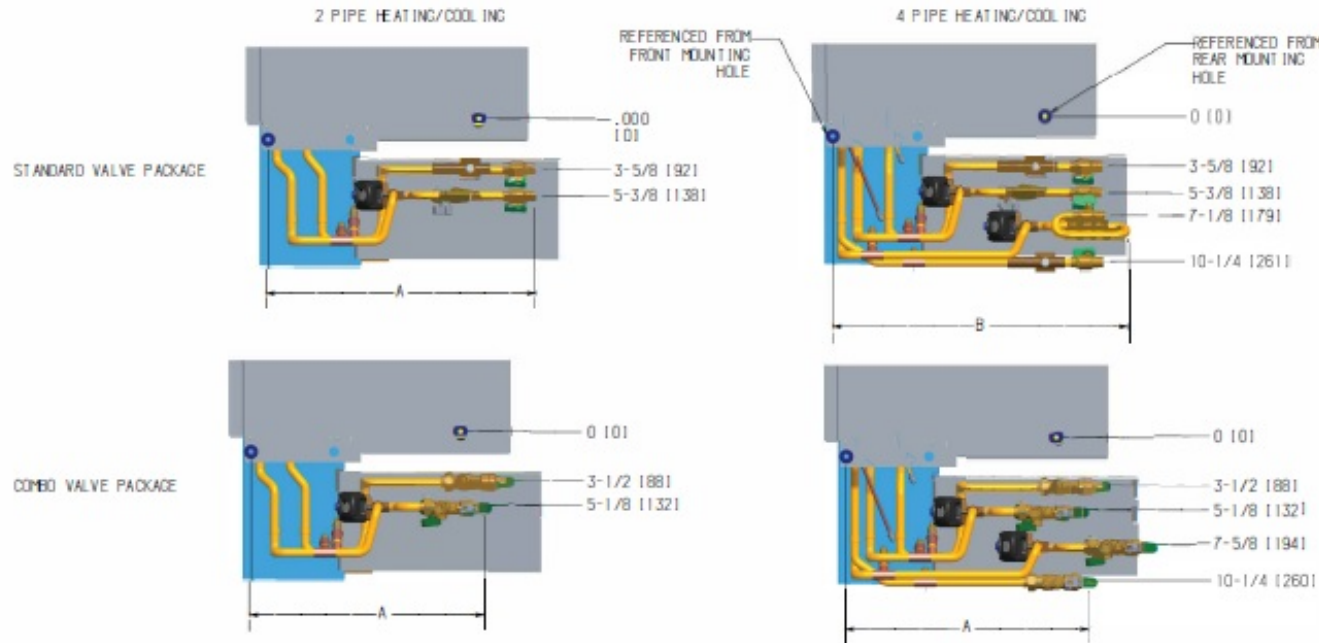
DATE: 2/13/20 APPROVED: S. STOTTS DATE: 2/13/20

Certified Drawing for FCU-B014

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM

REVISION HISTORY		
REV	DATE	ECN
-	05/01/18	18-0608




PARTIAL TOP VIEW OF 42CE/42CA UNITS

DIMENSIONS - INCHES AND (MILLIMETERS)		
	A	B
NO COMBO VALVES		
3 WAY TACO/ERIE COOL	19 1/8 (486)	
3 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
3 WAY MODULATING COOL	19 1/8 (486)	
3 WAY MODULATING HEAT	19 1/4 (489)	21 9/16 (548)
2 WAY TACO/ERIE COOL	19 1/8 (486)	
2 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
2 WAY MODULATING COOL	19 1/8 (486)	
2 WAY MODULATING HEAT	21 1/8 (537)	21 9/16 (548)
COMBO VALVES SUPPLY/RETURN		
3 WAY TACO/ERIE COOL	17 5/16 (440) / 19 1/4 (489)	
3 WAY TACO/ERIE HEAT	20 7/8 (530) / 19 1/4 (489)	
3 WAY MODULATING COOL	19 1/8 (486) / 18 1/16 (459)	
3 WAY MODULATING HEAT	20 7/8 (530) / 20 7/8 (530)	
2 WAY TACO/ERIE COOL	18 1/4 (464) / 16 5/8 (422)	
2 WAY TACO/ERIE HEAT	21 5/8 (549) / 17 3/8 (441)	
2 WAY MODULATING COOL	19 3/16 (487) / 16 5/8 (422)	
2 WAY MODULATING HEAT	19 7/16 (494) / 18 13/16 (477)	

NOTES:

1. ALL DIMENSIONS ARE ± 1/4" (6.3 MM)

NA
COMBO VLV
CONNECTION DOES
NOT EXCEED
DISTANCE
"A"



VALVE PACKAGE SUPPLEMENT 42CE/42CA UNITS			
1100-90041802			REV -
DRAWN J. FUSON	DATE 03/19/20	APPROVED S. STOTTS	DATE 03/19/20

Performance Summary For FCU-B014

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

DUCTED

10/23/2022
11:46AM

Unit Parameters

Tag Name: **FCU-B014**
 Quantity: **1**
 Unit Model: **42CEA08ALBY6AYBR**
 Unit Type: **42CE Ceiling, Furred-In with Plenum**
 Unit Size: **800 CFM**
 System Type: **2-Pipe Cooling Only**
 Cooling Coil: **Cold Fluid Cooling**
 Cooling Coil Rows: **3 rows**
 Coil Hand: **Left Hand**
 Coil Wrapping: . **Condensate Overflow Switch**
 Shipping Options: **Standard**
 Fan Speed: **Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Cooling Data

Coil Type: **Cold Fluid Cooling**
 Coil Rows: **3 rows**
 Fluid Type: **Fresh Water**
 Total Capacity: **12,424** BTU/hr
 Sensible Capacity: **11,957** BTU/hr
 Entering Air Dry Bulb Temperature: **72.0** F
 Entering Air Wet Bulb Temperature: **60.0** F
 Leaving Air Dry Bulb Temperature: **55.4** F
 Leaving Air Wet Bulb Temperature: **53.2** F
 Fluid Flow Rate: **2.4** gpm
 Fluid Pressure Drop: **3.40** ft wg
 Fluid Entering Temperature: **45.0** F
 Fluid Leaving Temperature: **55.6** F

Electrical Data

Motor Voltage: **115-1-60** **ECM V2 Variable Airflow for 0-10VDC** input V-Ph-Hz
 Motor FLA: **2.4**
 Unit MCA: **3.00**
 MFS: **15**

Acoustical Data:

Octave Band Center Frequency, Hz	125	250	500	1k	2k	4k	8k	dBA
Sound Power Data								
Radiated Sound Power, dB	55	56	54	47	44	41	39	55
Discharge Sound Power, dB	56	55	52	51	46	42	40	55

Factory-Installed Options

Unit Arrangement: **Rear Return / Front Supply**
 Filters: **Std 1 in. Throaway**
 Drain Pans: **Standard Drain Pan**
 Coil Hand: **Left Hand**
 AAV / Drains: **Manual Air Vents only**
 Control Packages: **24V Controls by other**
 Switches: **20A Service Switch w/inline Fusing**
 Insulation: **Std. Fiberglass Insulation**
 Packaging: **Units shipped on treated wood pallet**
 Condensate: **Condensate Overflow Switch**

Unit Performance

Actual Airflow: **667.0** CFM
 Altitude: **0** ft
 External Static Pressure: **.30** in wg
 Voltage: **115-1-60 ECM V2 Variable Airflow for 0-10VDC**
 input..... V-Ph-Hz

External Static Pressure includes 0 in wg for filter static.

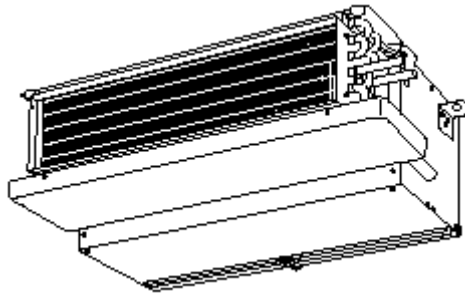
FCU-B017

**Tag Cover Sheet
Unit Report
Certified Drawing
Performance Report**

Unit Report For FCU-B017

Project: Cincinnati VA - FCUS
 Prepared By: Jeff Gries

10/23/2022
 11:46AM



Unit Parameters

Tag Name: **FCU-B017**
 Quantity:..... **1**
 Unit Model:.....**42CEA08BRBY6AYBR**
 Unit Type:**42CE Ceiling, Furred-In with Plenum**
 Unit Size:.....**800 CFM**
 Shipping Options:.....**Standard**
 Fan Speed:**Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Dimensions

Unit Length:..... **20.00** in
 Unit Width:.....**43.25** in
 Unit Height: **10.50** in
 Shipping Weight:..... **95** lb

Coil Parameters

System Type: **2-Pipe Cooling Only**
 Cooling Coil:..... **Cold Fluid Cooling**
 Cooling Coil Rows:..... **4 rows**
 Coil Hand: **Right Hand**
 Hydronic Coil Test Pressure:**350 psig Coil Test Pressure**

Electrical

Motor Voltage:**115-1-60 ECM V2 Variable Airflow for 0-10VDC input**.....V-Ph-Hz

Warranty Information

First Year - Parts Only (Standard)

Ordering Information

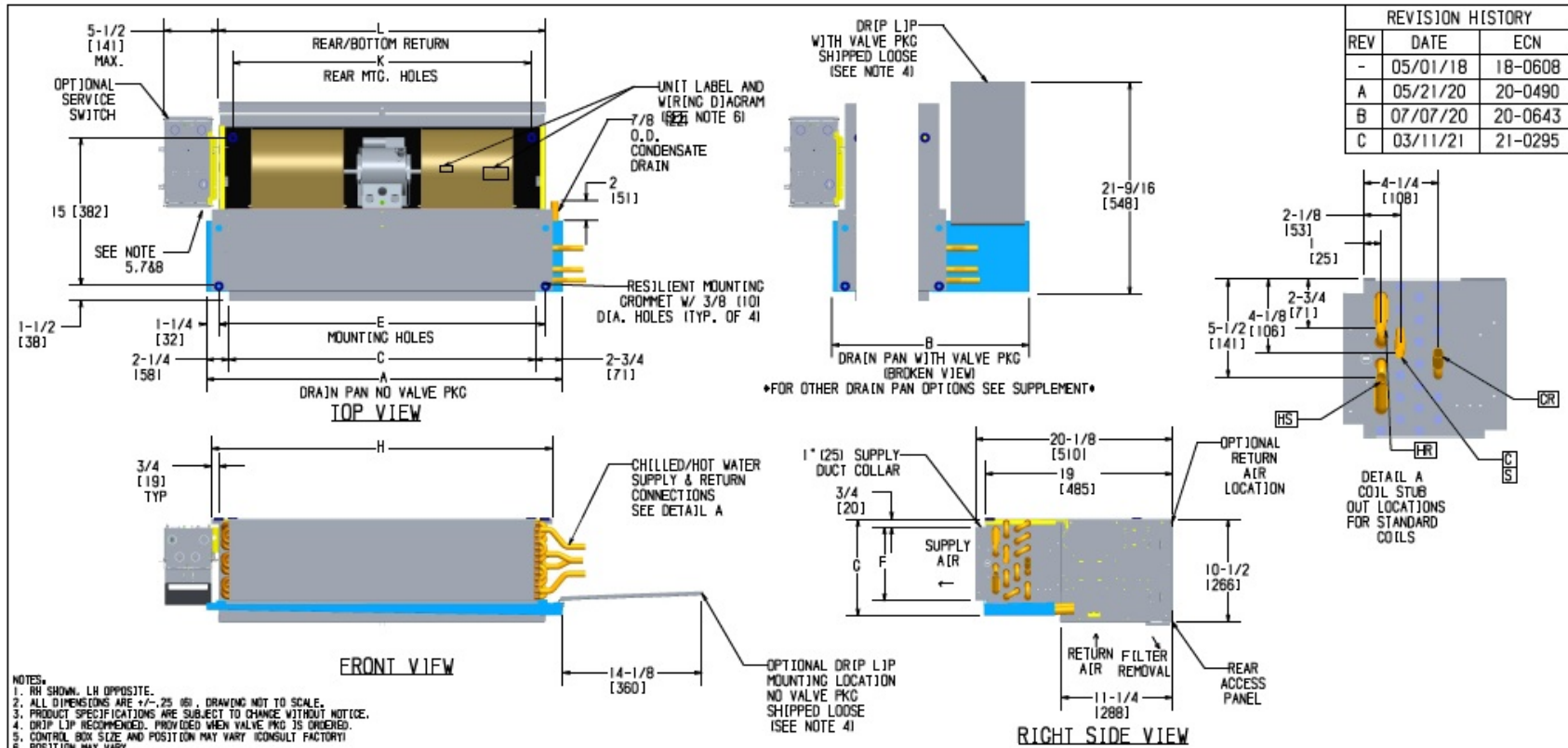
Part Number	Description	Quantity
Base Unit		
	42CEA08BRBY6AYBR	1
	42CEA08:Ceiling, Furred-In with Plenum Fan Coil Unit 800 CFM Cooling 115-1-60 ECM V2 Variable Airflow for 0-10VDC input High Cap 4-Row, in lieu of std 3-Row (2-pipe system); High Cap 3-Row for std 2-Row (42VC/VE/VG only)	
	20 Non-Fused Service Switch with Incoming Power Fusing	
	115-1-60 ECM V2 Variable Airflow for 0-10VDC input	
	Condensate Overflow Switch	
	Controls by other	

Not all valve components are rated for the selected Hydronic Coil Test Pressure. Refer to the valve component cut sheets in the Product Library, under Help.

Certified Drawing for FCU-B017

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM



Unit Model	Dimensions - Inches (Millimeters)											Quantity/Unit	
	A	B	C	E	F	G	H	J	K	L	BLWR	MOTOR	
42CE 02	21-1/4 (540)	28-1/2 (724)	16 (406)	18-1/4 (464)	6-1/4 (159)	8-3/4 (222)	19-3/4 (502)	38 (965)	15-3/8 (391)	18-1/4 (464)	1	1	
42CE 03	25-1/4 (641)	32-1/2 (826)	20 (508)	22-1/4 (565)	6-1/4 (159)	8-3/4 (222)	23-3/4 (603)	38 (965)	19-3/8 (493)	22-1/4 (565)	1	1	
42CE 04	31-1/4 (794)	38-1/2 (978)	26 (660)	28-1/4 (718)	6-1/4 (159)	8-3/4 (222)	29-3/4 (756)	38 (965)	25-3/8 (654)	28-1/4 (718)	2	1	
42CE 06	36-1/4 (921)	43-1/2 (1105)	31 (787)	33-1/4 (845)	7-1/2 (191)	10 (254)	34-3/4 (883)	38 (965)	30-3/8 (772)	33-1/4 (845)	2	1	
42CE 08	43-1/4 (1099)	50-1/2 (1283)	38 (965)	40-1/4 (1022)	7-1/2 (191)	10 (254)	41-3/4 (1060)	38 (965)	37-3/8 (950)	40-1/4 (1022)	2	1	
42CE 10	57-1/4 (1454)	64-1/2 (1638)	52 (1321)	54-1/4 (1378)	7-1/2 (191)	10 (254)	55-3/4 (1416)	60 (1524)	51-3/8 (1306)	54-1/4 (1378)	4	2	
42CE 12	65-1/4 (1657)	72-1/2 (1842)	60 (1524)	62-1/4 (1581)	7-1/2 (191)	10 (254)	63-3/4 (1619)	65 (1651)	59-3/8 (1509)	62-1/4 (1581)	4	2	



HORIZONTAL HIDEAWAY W/PLENUM

100-90041391

REVISION: **C**

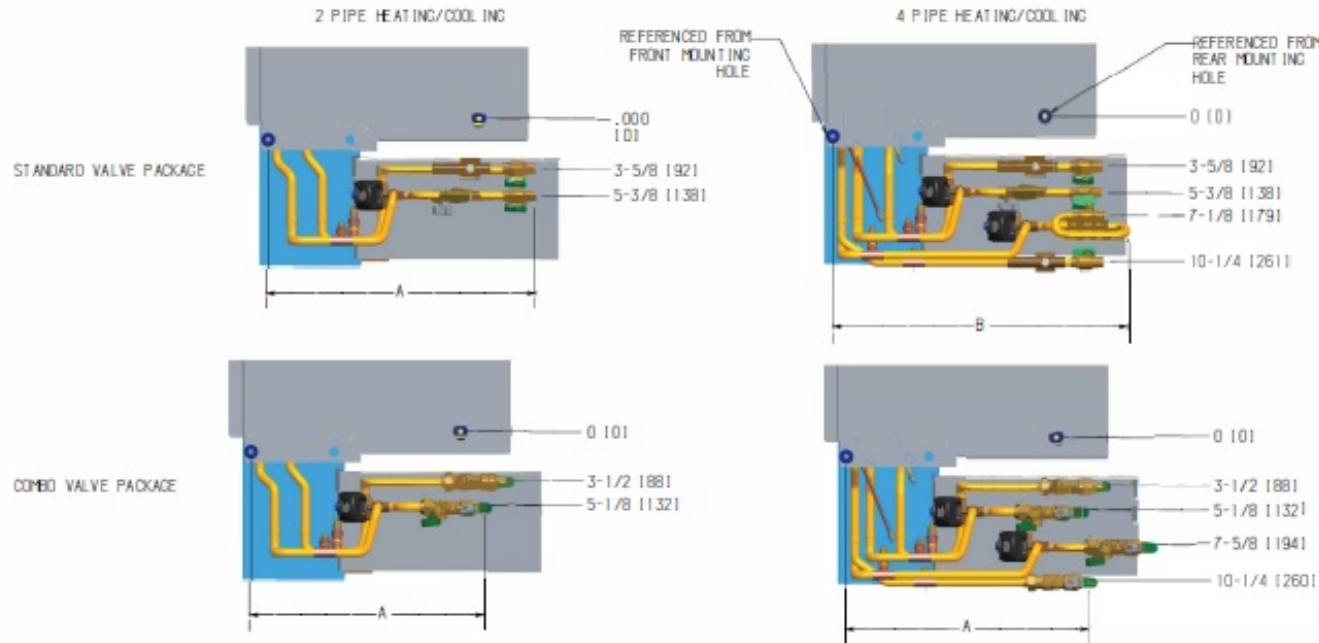
DATE: 2/13/20

Certified Drawing for FCU-B017

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM

REVISION HISTORY		
REV	DATE	ECN
-	05/01/18	18-0608



PARTIAL TOP VIEW OF 42CE/42CA UNITS

DIMENSIONS - INCHES AND (MILLIMETERS)		
	A	B
NO COMBO VALVES		
3 WAY TACO/ERIE COOL	19 1/8 (486)	
3 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
3 WAY MODULATING COOL	19 1/8 (486)	
3 WAY MODULATING HEAT	19 1/4 (489)	21 9/16 (548)
2 WAY TACO/ERIE COOL	19 1/8 (486)	
2 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
2 WAY MODULATING COOL	19 1/8 (486)	
2 WAY MODULATING HEAT	21 1/8 (537)	21 9/16 (548)
COMBO VALVES SUPPLY/RETURN		
3 WAY TACO/ERIE COOL	17 5/16 (440) / 19 1/4 (489)	
3 WAY TACO/ERIE HEAT	20 7/8 (530) / 19 1/4 (489)	
3 WAY MODULATING COOL	19 1/8 (486) / 18 1/16 (459)	
3 WAY MODULATING HEAT	20 7/8 (530) / 20 7/8 (530)	
2 WAY TACO/ERIE COOL	18 1/4 (464) / 16 5/8 (422)	
2 WAY TACO/ERIE HEAT	21 5/8 (549) / 17 3/8 (441)	
2 WAY MODULATING COOL	19 3/16 (487) / 16 5/8 (422)	
2 WAY MODULATING HEAT	19 7/16 (494) / 18 13/16 (477)	

NOTES:

1. ALL DIMENSIONS ARE ± 1/4" (6.3 MM)

NA
COMBO VLV
CONNECTION DOES
NOT EXCEED
DISTANCE
"A"

VALVE PACKAGE SUPPLEMENT 42CE/42CA UNITS			
1100-90041802	REV -		
DRAWN J. FUSON	DATE 03/19/20	APPROVED S. STOTTIS	DATE 03/19/20

Performance Summary For FCU-B017

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM

DUCTED

Unit Parameters

Tag Name: **FCU-B017**
 Quantity: **1**
 Unit Model: **42CEA08BRBY6AYBR**
 Unit Type: **42CE Ceiling, Furred-In with Plenum**
 Unit Size: **800 CFM**
 System Type: **2-Pipe Cooling Only**
 Cooling Coil: **Cold Fluid Cooling**
 Cooling Coil Rows: **4 rows**
 Coil Hand: **Right Hand**
 Coil Wrapping: . **Condensate Overflow Switch**
 Shipping Options: **Standard**
 Fan Speed: **Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Unit Performance

Actual Airflow: **638.0** CFM
 Altitude: **0** ft
 External Static Pressure: **.30** in wg
 Voltage: **115-1-60 ECM V2 Variable Airflow for 0-10VDC**
 input..... V-Ph-Hz

External Static Pressure includes 0 in wg for filter static.

Cooling Data

Coil Type: **Cold Fluid Cooling**
 Coil Rows: **4 rows**
 Fluid Type: **Fresh Water**
 Total Capacity: **13,242** BTU/hr
 Sensible Capacity: **12,539** BTU/hr
 Entering Air Dry Bulb Temperature: **72.0** F
 Entering Air Wet Bulb Temperature: **60.0** F
 Leaving Air Dry Bulb Temperature: **54.1** F
 Leaving Air Wet Bulb Temperature: **52.6** F
 Fluid Flow Rate: **1.9** gpm
 Fluid Pressure Drop: **3.20** ft wg
 Fluid Entering Temperature: **45.0** F
 Fluid Leaving Temperature: **59.2** F

Electrical Data

Motor Voltage: **115-1-60 ECM V2 Variable Airflow for 0-10VDC** input V-Ph-Hz
 Motor FLA: **2.4**
 Unit MCA: **3.00**
 MFS: **15**

Acoustical Data:

Octave Band Center Frequency, Hz	125	250	500	1k	2k	4k	8k	dBA
Sound Power Data								
Radiated Sound Power, dB	55	56	55	48	44	42	40	56
Discharge Sound Power, dB	57	52	54	52	46	43	39	55

Factory-Installed Options

Unit Arrangement: **Rear Return / Front Supply**
 Filters: **Std 1 in. Throaway**
 Drain Pans: **Standard Drain Pan**
 Coil Hand: **Right Hand**
 AAV / Drains: **Manual Air Vents only**
 Control Packages: **24V Controls by other**
 Switches: **20A Service Switch w/inline Fusing**
 Insulation: **Std. Fiberglass Insulation**
 Packaging: **Units shipped on treated wood pallet**
 Condensate: **Condensate Overflow Switch**

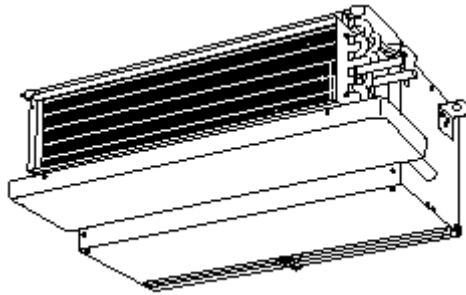
FCU-B017B

**Tag Cover Sheet
Unit Report
Certified Drawing
Performance Report**

Unit Report For FCU-B017B

Project: Cincinnati VA - FCUS
 Prepared By: Jeff Gries

10/23/2022
 11:46AM



Unit Parameters

Tag Name:**FCU-B017B**
 Quantity:..... **1**
 Unit Model:.....**42CEA08ARBY6AYBR**
 Unit Type:**42CE Ceiling, Furred-In with Plenum**
 Unit Size:.....**800 CFM**
 Shipping Options:.....**Standard**
 Fan Speed:**Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Dimensions

Unit Length:..... **20.00** in
 Unit Width:..... **43.25** in
 Unit Height: **10.50** in
 Shipping Weight:..... **95** lb

Coil Parameters

System Type: **2-Pipe Cooling Only**
 Cooling Coil:..... **Cold Fluid Cooling**
 Cooling Coil Rows:..... **3 rows**
 Coil Hand: **Right Hand**
 Hydronic Coil Test Pressure:**350 psig Coil Test Pressure**

Electrical

Motor Voltage:**115-1-60 ECM V2 Variable Airflow for 0-10VDC input**.....V-Ph-Hz

Warranty Information

First Year - Parts Only (Standard)

Ordering Information

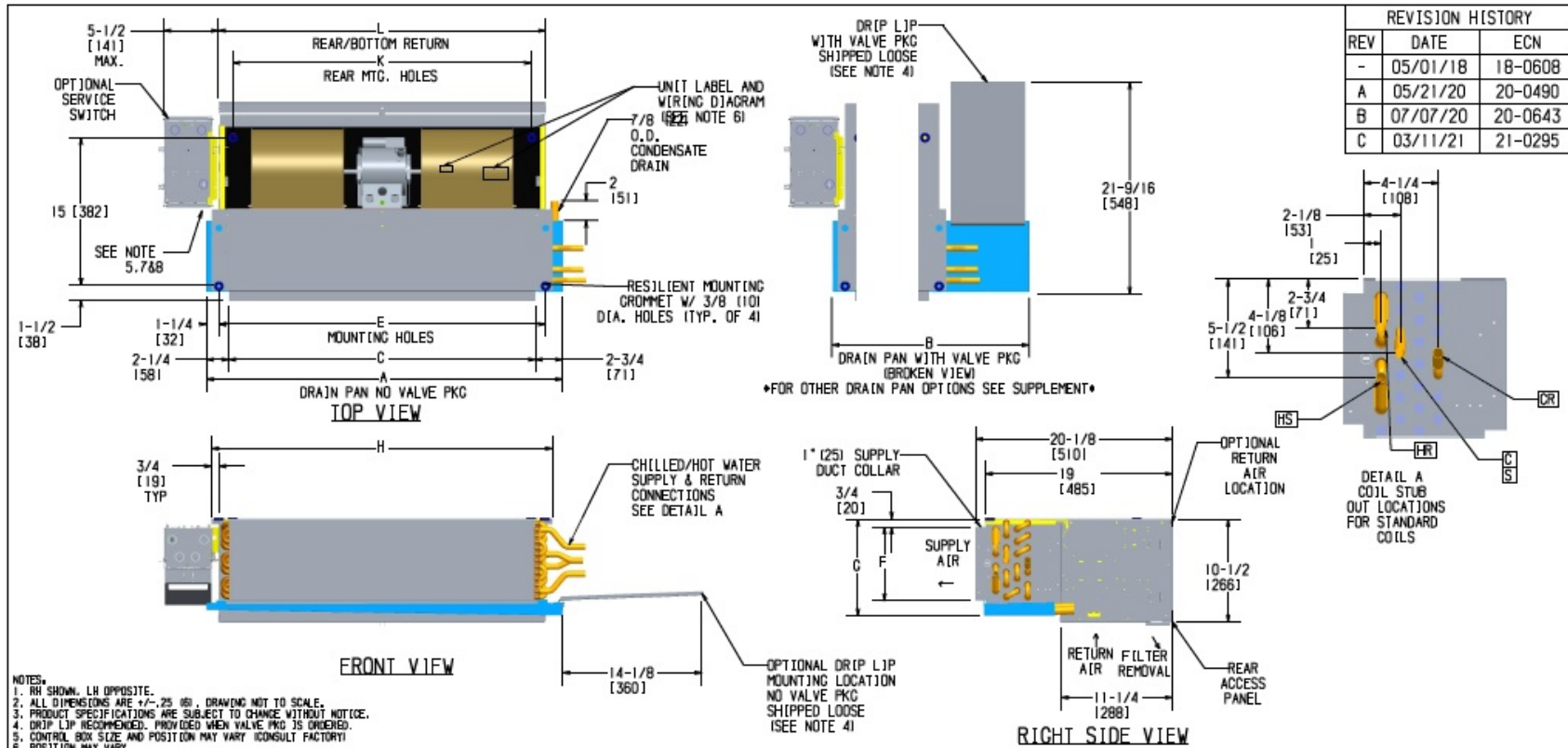
Part Number	Description	Quantity
Base Unit		
	42CEA08ARBY6AYBR	1
	42CEA08:Ceiling, Furred-In with Plenum Fan Coil Unit 800 CFM Cooling 115-1-60 ECM V2 Variable Airflow for 0-10VDC input	
	20 Non-Fused Service Switch with Incoming Power Fusing	
	115-1-60 ECM V2 Variable Airflow for 0-10VDC input	
	Condensate Overflow Switch	
	Controls by other	

Not all valve components are rated for the selected Hydronic Coil Test Pressure. Refer to the valve component cut sheets in the Product Library, under Help.

Certified Drawing for FCU-B017B

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM



Unit Model	Dimensions - Inches (Millimeters)											Quantity/Unit	
	A	B	C	E	F	G	H	J	K	L	BLWR	MOTOR	
42CE 02	21-1/4 (540)	28-1/2 (724)	16 (406)	18-1/4 (464)	6-1/4 (159)	8-3/4 (222)	19-3/4 (502)	38 (965)	15-3/8 (391)	18-1/4 (464)	1	1	
42CE 03	25-1/4 (641)	32-1/2 (826)	20 (508)	22-1/4 (565)	6-1/4 (159)	8-3/4 (222)	23-3/4 (603)	38 (965)	19-3/8 (493)	22-1/4 (565)	1	1	
42CE 04	31-1/4 (794)	38-1/2 (978)	26 (660)	28-1/4 (718)	6-1/4 (159)	8-3/4 (222)	29-3/4 (756)	38 (965)	25-3/8 (654)	28-1/4 (718)	2	1	
42CE 06	36-1/4 (921)	43-1/2 (1105)	31 (787)	33-1/4 (845)	7-1/2 (191)	10 (254)	34-3/4 (883)	38 (965)	30-3/8 (772)	33-1/4 (845)	2	1	
42CE 08	43-1/4 (1099)	50-1/2 (1283)	38 (965)	40-1/4 (1022)	7-1/2 (191)	10 (254)	41-3/4 (1060)	38 (965)	37-3/8 (950)	40-1/4 (1022)	2	1	
42CE 10	57-1/4 (1454)	64-1/2 (1638)	52 (1321)	54-1/4 (1378)	7-1/2 (191)	10 (254)	55-3/4 (1416)	60 (1524)	51-3/8 (1306)	54-1/4 (1378)	4	2	
42CE 12	65-1/4 (1657)	72-1/2 (1842)	60 (1524)	62-1/4 (1581)	7-1/2 (191)	10 (254)	63-3/4 (1619)	65 (1651)	59-3/8 (1509)	62-1/4 (1581)	4	2	



HORIZONTAL HIDEAWAY W/PLENUM

100-90041391

REVISION: **C**

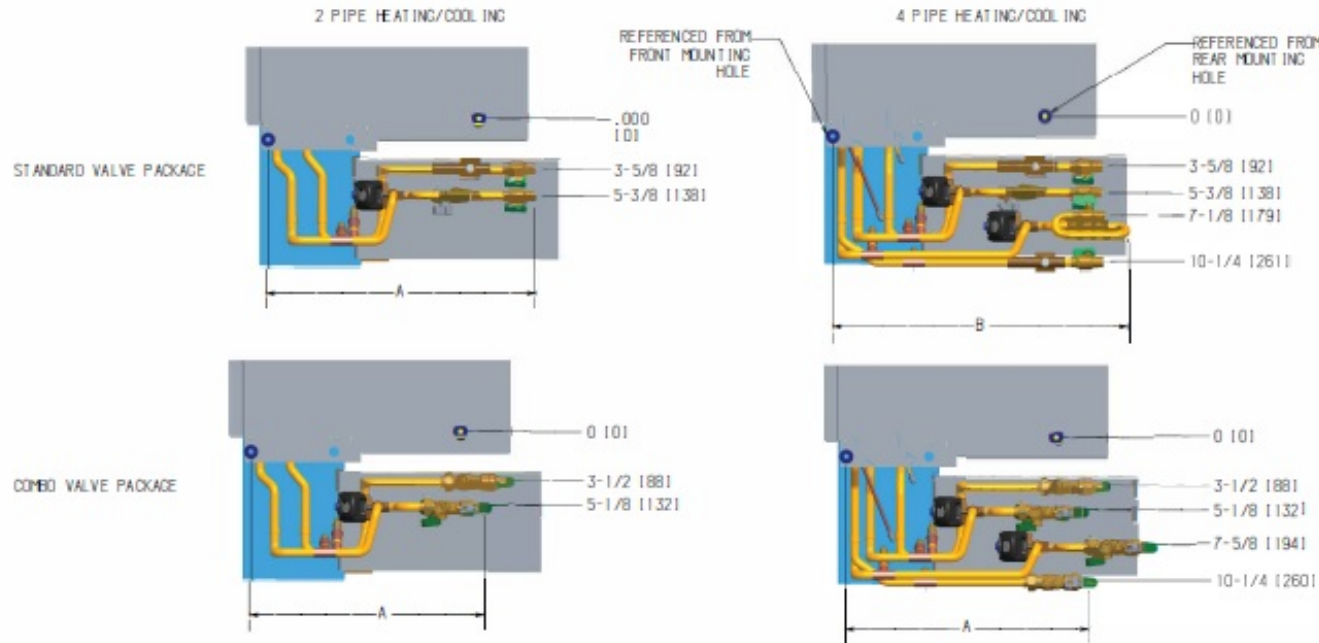
DRAWN: J. FUSON DATE: 2/13/20 APPROVED: S. STOTTS DATE: 2/13/20

Certified Drawing for FCU-B017B

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM

REVISION HISTORY		
REV	DATE	ECN
-	05/01/18	18-0608




PARTIAL TOP VIEW OF 42CE/42CA UNITS

	DIMENSIONS - INCHES AND (MILLIMETERS)	
	A	B
NO COMBO VALVES		
3 WAY TACO/ERIE COOL	19 1/8 (486)	
3 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
3 WAY MODULATING COOL	19 1/8 (486)	
3 WAY MODULATING HEAT	19 1/4 (489)	21 9/16 (548)
2 WAY TACO/ERIE COOL	19 1/8 (486)	
2 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
2 WAY MODULATING COOL	19 1/8 (486)	
2 WAY MODULATING HEAT	21 1/8 (537)	21 9/16 (548)
COMBO VALVES	SUPPLY/RETURN	
3 WAY TACO/ERIE COOL	17 5/16 (440) / 19 1/4 (489)	NA COMBO VLV CONNECTION DOES NOT EXCEED DISTANCE "A"
3 WAY TACO/ERIE HEAT	20 7/8 (530) / 19 1/4 (489)	
3 WAY MODULATING COOL	19 1/8 (486) / 18 1/16 (459)	
3 WAY MODULATING HEAT	20 7/8 (530) / 20 7/8 (530)	
2 WAY TACO/ERIE COOL	18 1/4 (464) / 16 5/8 (422)	
2 WAY TACO/ERIE HEAT	21 5/8 (549) / 17 3/8 (441)	
2 WAY MODULATING COOL	19 3/16 (487) / 16 5/8 (422)	
2 WAY MODULATING HEAT	19 7/16 (494) / 18 13/16 (477)	

NOTES:

1. ALL DIMENSIONS ARE ± 1/4" (6.3 MM)



VALVE PACKAGE SUPPLEMENT 42CE/42CA UNITS			
1100-90041802			REV -
DRAWN J. FUSON	DATE 03/19/20	APPROVED S. STOTTS	DATE 03/19/20

Performance Summary For FCU-B017B

Project: Cincinnati VA - FCUS
 Prepared By: Jeff Gries

10/23/2022
 11:46AM

DUCTED

Unit Parameters

Tag Name: **FCU-B017B**
 Quantity: **1**
 Unit Model: **42CEA08ARBY6AYBR**
 Unit Type: **42CE Ceiling, Furred-In with Plenum**
 Unit Size: **800 CFM**
 System Type: **2-Pipe Cooling Only**
 Cooling Coil: **Cold Fluid Cooling**
 Cooling Coil Rows: **3 rows**
 Coil Hand: **Right Hand**
 Coil Wrapping: . **Condensate Overflow Switch**
 Shipping Options: **Standard**
 Fan Speed: **Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Unit Performance

Actual Airflow: **667.0** CFM
 Altitude: **0** ft
 External Static Pressure: **.30** in wg
 Voltage: **115-1-60 ECM V2 Variable Airflow for 0-10VDC**
 input..... V-Ph-Hz

External Static Pressure includes 0 in wg for filter static.

Cooling Data

Coil Type: **Cold Fluid Cooling**
 Coil Rows: **3 rows**
 Fluid Type: **Fresh Water**
 Total Capacity: **11,655** BTU/hr
 Sensible Capacity: **11,655** BTU/hr
 Entering Air Dry Bulb Temperature: **72.0** F
 Entering Air Wet Bulb Temperature: **60.0** F
 Leaving Air Dry Bulb Temperature: **56.1** F
 Leaving Air Wet Bulb Temperature: **53.8** F
 Fluid Flow Rate: **1.7** gpm
 Fluid Pressure Drop: **2.00** ft wg
 Fluid Entering Temperature: **45.0** F
 Fluid Leaving Temperature: **58.6** F

Electrical Data

Motor Voltage: **115-1-60 ECM V2 Variable Airflow for 0-10VDC** input V-Ph-Hz
 Motor FLA: **2.4**
 Unit MCA: **3.00**
 MFS: **15**

Acoustical Data:

Octave Band Center Frequency, Hz	125	250	500	1k	2k	4k	8k	dBA
Sound Power Data								
Radiated Sound Power, dB	55	56	55	48	44	42	40	56
Discharge Sound Power, dB	57	52	54	52	46	43	39	55

Factory-Installed Options

Unit Arrangement: **Rear Return / Front Supply**
 Filters: **Std 1 in. Throaway**
 Drain Pans: **Standard Drain Pan**
 Coil Hand: **Right Hand**
 AAV / Drains: **Manual Air Vents only**
 Control Packages: **24V Controls by other**
 Switches: **20A Service Switch w/inline Fusing**
 Insulation: **Std. Fiberglass Insulation**
 Packaging: **Units shipped on treated wood pallet**
 Condensate: **Condensate Overflow Switch**

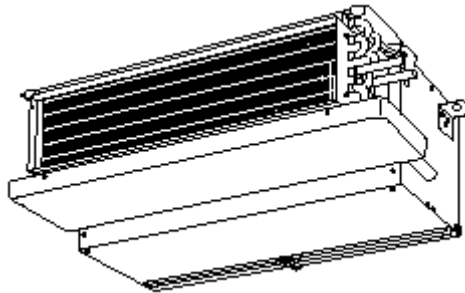
FCU-B019

**Tag Cover Sheet
Unit Report
Certified Drawing
Performance Report**

Unit Report For FCU-B019

Project: Cincinnati VA - FCUS
 Prepared By: Jeff Gries

10/23/2022
 11:46AM



Unit Parameters

Tag Name: **FCU-B019**
 Quantity:..... **1**
 Unit Model:.....**42CEA03BRBY6AYBR**
 Unit Type:**42CE Ceiling, Furred-In with Plenum**
 Unit Size:.....**300 CFM**
 Shipping Options:.....**Standard**
 Fan Speed:**Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Dimensions

Unit Length:..... **20.00** in
 Unit Width:.....**25.25** in
 Unit Height: **10.50** in
 Shipping Weight:..... **60** lb

Coil Parameters

System Type: **2-Pipe Cooling Only**
 Cooling Coil:..... **Cold Fluid Cooling**
 Cooling Coil Rows:..... **4 rows**
 Coil Hand: **Right Hand**
 Hydronic Coil Test Pressure:**350 psig Coil Test Pressure**

Electrical

Motor Voltage:**115-1-60 ECM V2 Variable Airflow for 0-10VDC input**.....V-Ph-Hz

Warranty Information

First Year - Parts Only (Standard)

Ordering Information

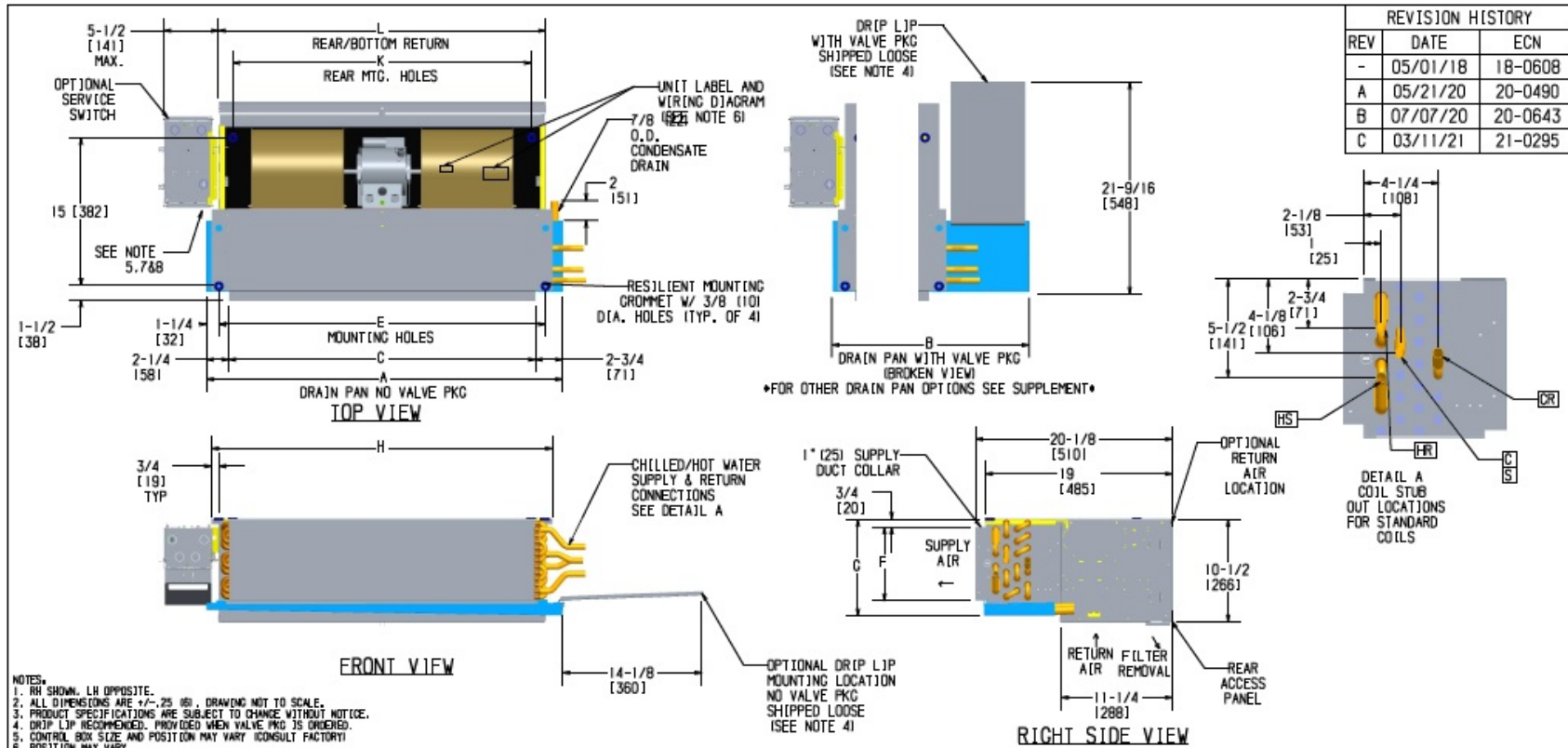
Part Number	Description	Quantity
Base Unit		
	42CEA03BRBY6AYBR	1
	42CEA03:Ceiling, Furred-In with Plenum Fan Coil Unit 300 CFM Cooling 115-1-60 ECM V2 Variable Airflow for 0-10VDC input High Cap 4-Row, in lieu of std 3-Row (2-pipe system); High Cap 3-Row for std 2-Row (42VC/VE/VG only)	
	20 Non-Fused Service Switch with Incoming Power Fusing	
	115-1-60 ECM V2 Variable Airflow for 0-10VDC input	
	Condensate Overflow Switch	
	Controls by other	

Not all valve components are rated for the selected Hydronic Coil Test Pressure. Refer to the valve component cut sheets in the Product Library, under Help.

Certified Drawing for FCU-B019

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM



Unit Model	Dimensions - Inches (Millimeters)											Quantity/Unit	
	A	B	C	E	F	G	H	J	K	L	BLWR	MOTOR	
42CE 02	21-1/4 (540)	28-1/2 (724)	16 (406)	18-1/4 (464)	6-1/4 (159)	8-3/4 (222)	19-3/4 (502)	38 (965)	15-3/8 (391)	18-1/4 (464)	1	1	
42CE 03	25-1/4 (641)	32-1/2 (826)	20 (508)	22-1/4 (565)	6-1/4 (159)	8-3/4 (222)	23-3/4 (603)	38 (965)	19-3/8 (493)	22-1/4 (565)	1	1	
42CE 04	31-1/4 (794)	38-1/2 (978)	26 (660)	28-1/4 (718)	6-1/4 (159)	8-3/4 (222)	29-3/4 (756)	38 (965)	25-3/8 (654)	28-1/4 (718)	2	1	
42CE 06	36-1/4 (921)	43-1/2 (1105)	31 (787)	33-1/4 (845)	7-1/2 (191)	10 (254)	34-3/4 (883)	38 (965)	30-3/8 (772)	33-1/4 (845)	2	1	
42CE 08	43-1/4 (1099)	50-1/2 (1283)	38 (965)	40-1/4 (1022)	7-1/2 (191)	10 (254)	41-3/4 (1060)	38 (965)	37-3/8 (950)	40-1/4 (1022)	2	1	
42CE 10	57-1/4 (1454)	64-1/2 (1638)	52 (1321)	54-1/4 (1378)	7-1/2 (191)	10 (254)	55-3/4 (1416)	60 (1524)	51-3/8 (1306)	54-1/4 (1378)	4	2	
42CE 12	65-1/4 (1657)	72-1/2 (1842)	60 (1524)	62-1/4 (1581)	7-1/2 (191)	10 (254)	63-3/4 (1619)	65 (1651)	59-3/8 (1509)	62-1/4 (1581)	4	2	



HORIZONTAL HIDEAWAY W/PLENUM

100-90041391

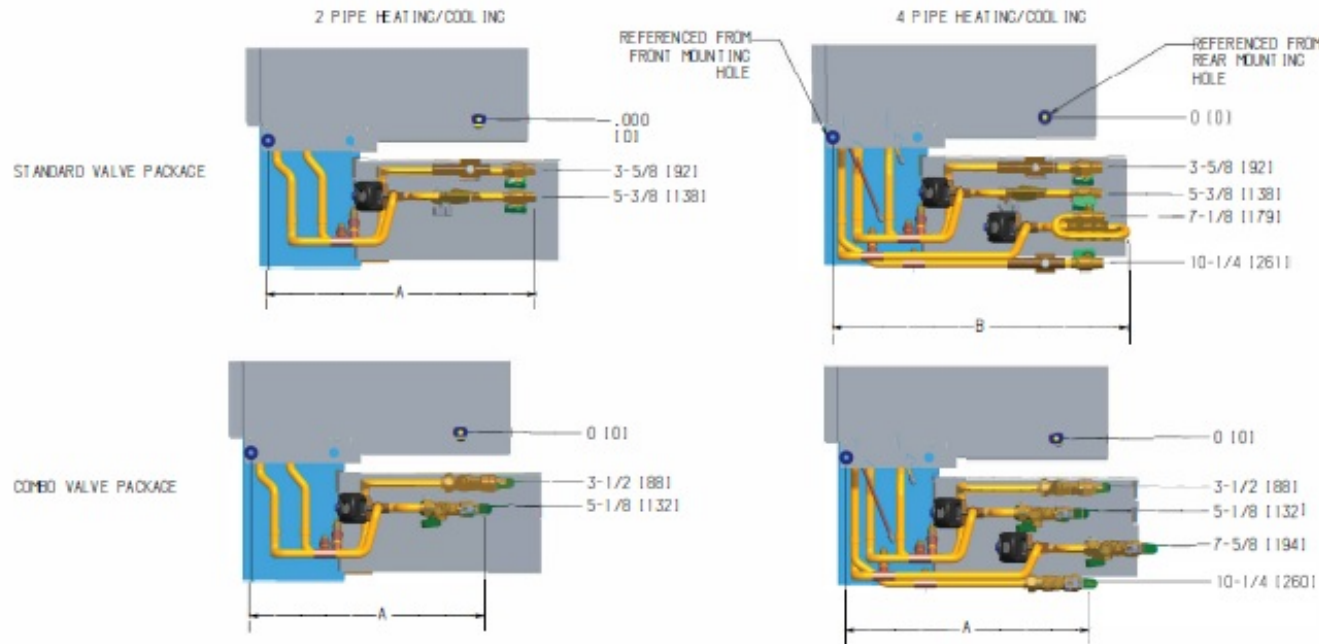
DATE: 2/13/20
APPROVED: S. STOTTS
DATE: 2/13/20

Certified Drawing for FCU-B019

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM

REVISION HISTORY		
REV	DATE	ECN
-	05/01/18	18-0608




PARTIAL TOP VIEW OF 42CE/42CA UNITS

DIMENSIONS - INCHES AND (MILLIMETERS)		
	A	B
NO COMBO VALVES		
3 WAY TACO/ERIE COOL	19 1/8 (486)	
3 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
3 WAY MODULATING COOL	19 1/8 (486)	
3 WAY MODULATING HEAT	19 1/4 (489)	21 9/16 (548)
2 WAY TACO/ERIE COOL	19 1/8 (486)	
2 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
2 WAY MODULATING COOL	19 1/8 (486)	
2 WAY MODULATING HEAT	21 1/8 (537)	21 9/16 (548)
COMBO VALVES SUPPLY/RETURN		
3 WAY TACO/ERIE COOL	17 5/16 (440) / 19 1/4 (489)	
3 WAY TACO/ERIE HEAT	20 7/8 (530) / 19 1/4 (489)	
3 WAY MODULATING COOL	19 1/8 (486) / 18 1/16 (459)	
3 WAY MODULATING HEAT	20 7/8 (530) / 20 7/8 (530)	
2 WAY TACO/ERIE COOL	18 1/4 (464) / 16 5/8 (422)	
2 WAY TACO/ERIE HEAT	21 5/8 (549) / 17 3/8 (441)	
2 WAY MODULATING COOL	19 3/16 (487) / 16 5/8 (422)	
2 WAY MODULATING HEAT	19 7/16 (494) / 18 13/16 (477)	

NOTES:

1. ALL DIMENSIONS ARE ± 1/4" (6.3 MM)

NA
COMBO VLV
CONNECTION DOES
NOT EXCEED
DISTANCE
"A"



VALVE PACKAGE SUPPLEMENT 42CE/42CA UNITS			
1100-90041802		REV	-
DRAWN	DATE	APPROVED	DATE
J. FUSON	03/19/20	S. STOTTIS	03/19/20

Performance Summary For FCU-B019

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

DUCTED

10/23/2022
11:46AM

Unit Parameters

Tag Name: **FCU-B019**
 Quantity: **1**
 Unit Model: **42CEA03BRBY6AYBR**
 Unit Type: **42CE Ceiling, Furred-In with Plenum**
 Unit Size: **300 CFM**
 System Type: **2-Pipe Cooling Only**
 Cooling Coil: **Cold Fluid Cooling**
 Cooling Coil Rows: **4 rows**
 Coil Hand: **Right Hand**
 Coil Wrapping: . **Condensate Overflow Switch**
 Shipping Options: **Standard**
 Fan Speed: **Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Unit Performance

Actual Airflow: **256.0** CFM
 Altitude: **0** ft
 External Static Pressure: **.30** in wg
 Voltage: **115-1-60 ECM V2 Variable Airflow for 0-10VDC**
 input..... V-Ph-Hz

External Static Pressure includes 0 in wg for filter static.

Cooling Data

Coil Type: **Cold Fluid Cooling**
 Coil Rows: **4 rows**
 Fluid Type: **Fresh Water**
 Total Capacity: **6,218** BTU/hr
 Sensible Capacity: **5,794** BTU/hr
 Entering Air Dry Bulb Temperature: **72.0** F
 Entering Air Wet Bulb Temperature: **60.0** F
 Leaving Air Dry Bulb Temperature: **52.9** F
 Leaving Air Wet Bulb Temperature: **51.5** F
 Fluid Flow Rate: **1.3** gpm
 Fluid Pressure Drop: **6.30** ft wg
 Fluid Entering Temperature: **45.0** F
 Fluid Leaving Temperature: **54.2** F

Electrical Data

Motor Voltage: **115-1-60 ECM V2 Variable Airflow for 0-10VDC** input V-Ph-Hz
 Motor FLA: **1.5**
 Unit MCA: **1.88**
 MFS: **15**

Acoustical Data:

Octave Band Center Frequency, Hz	125	250	500	1k	2k	4k	8k	dBA
Sound Power Data								
Radiated Sound Power, dB	46	45	47	39	36	33	29	48
Discharge Sound Power, dB	46	41	42	38	35	29	27	43

Factory-Installed Options

Unit Arrangement: **Rear Return / Front Supply**
 Filters: **Std 1 in. Throaway**
 Drain Pans: **Standard Drain Pan**
 Coil Hand: **Right Hand**
 AAV / Drains: **Manual Air Vents only**
 Control Packages: **24V Controls by other**
 Switches: **20A Service Switch w/inline Fusing**
 Insulation: **Std. Fiberglass Insulation**
 Packaging: **Units shipped on treated wood pallet**
 Condensate: **Condensate Overflow Switch**

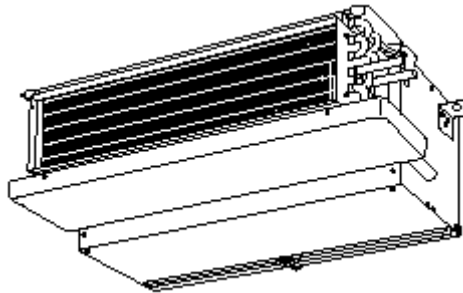
FCU-B123

**Tag Cover Sheet
Unit Report
Certified Drawing
Performance Report**

Unit Report For FCU-B123

Project: Cincinnati VA - FCUS
 Prepared By: Jeff Gries

10/23/2022
 11:46AM



Unit Parameters

Tag Name: **FCU-B123**
 Quantity:..... **1**
 Unit Model:.....**42CEA10ARBY6AYBR**
 Unit Type:**42CE Ceiling, Furred-In with Plenum**
 Unit Size:.....**1000 CFM**
 Shipping Options:.....**Standard**
 Fan Speed:**Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Dimensions

Unit Length:..... **20.00** in
 Unit Width:.....**57.25** in
 Unit Height: **10.50** in
 Shipping Weight:..... **135** lb

Coil Parameters

System Type: **2-Pipe Cooling Only**
 Cooling Coil:..... **Cold Fluid Cooling**
 Cooling Coil Rows:..... **3 rows**
 Coil Hand: **Right Hand**
 Hydronic Coil Test Pressure:**350 psig Coil Test Pressure**

Electrical

Motor Voltage:**115-1-60 ECM V2 Variable Airflow for 0-10VDC input**.....V-Ph-Hz

Warranty Information

First Year - Parts Only (Standard)

Ordering Information

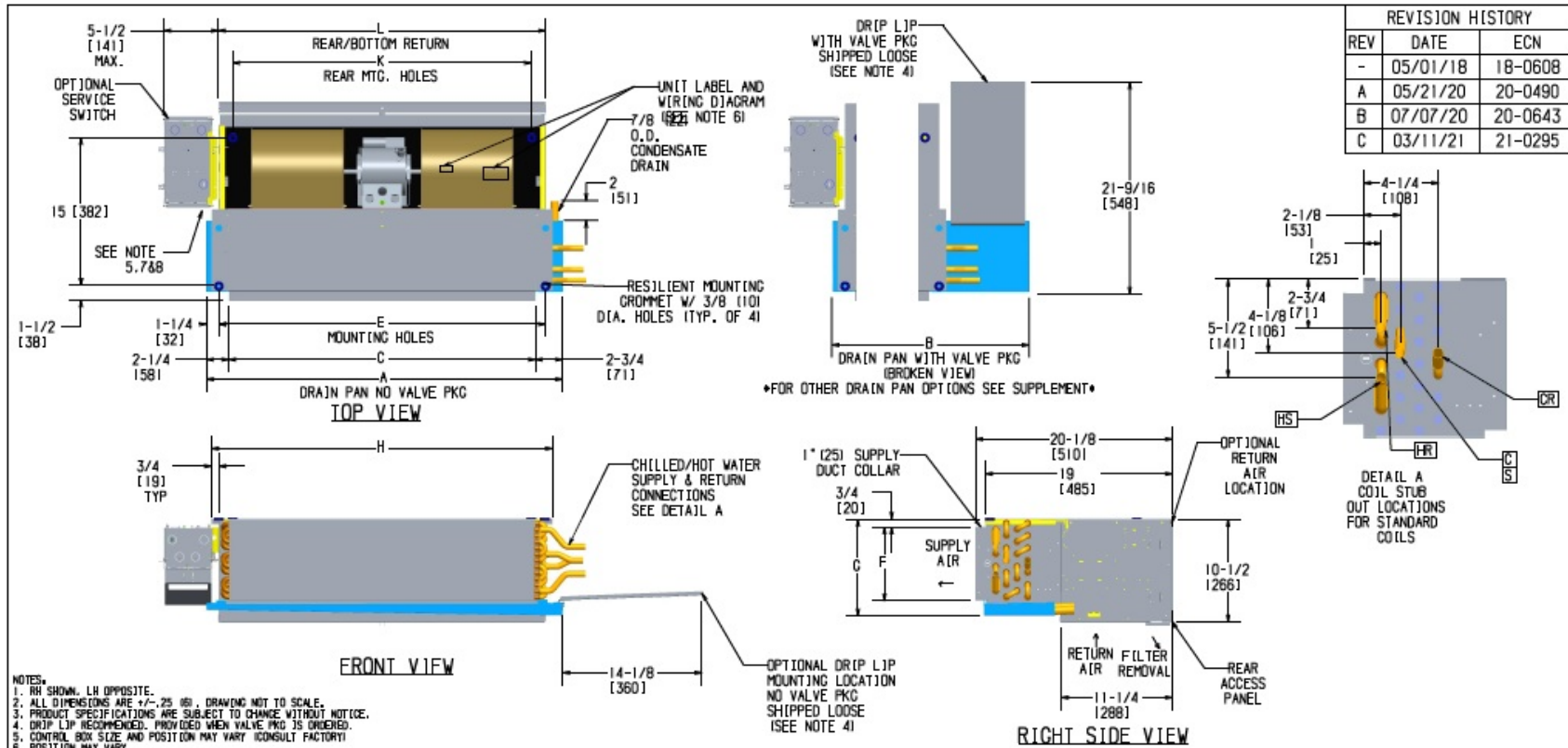
Part Number	Description	Quantity
Base Unit		
	42CEA10ARBY6AYBR	1
	42CEA10:Ceiling, Furred-In with Plenum Fan Coil Unit 1000 CFM Cooling 115-1-60 ECM V2 Variable Airflow for 0-10VDC input	
	20 Non-Fused Service Switch with Incoming Power Fusing	
	115-1-60 ECM V2 Variable Airflow for 0-10VDC input	
	Condensate Overflow Switch	
	Controls by other	

Not all valve components are rated for the selected Hydronic Coil Test Pressure. Refer to the valve component cut sheets in the Product Library, under Help.

Certified Drawing for FCU-B123

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM



Unit Model	Dimensions - Inches (Millimeters)											Quantity/Unit	
	A	B	C	E	F	G	H	J	K	L	BLWR	MOTOR	
42CE 02	21-1/4 (540)	28-1/2 (724)	16 (406)	18-1/4 (464)	6-1/4 (159)	8-3/4 (222)	19-3/4 (502)	38 (965)	15-3/8 (391)	18-1/4 (464)	1	1	
42CE 03	25-1/4 (641)	32-1/2 (826)	20 (508)	22-1/4 (565)	6-1/4 (159)	8-3/4 (222)	23-3/4 (603)	38 (965)	19-3/8 (493)	22-1/4 (565)	1	1	
42CE 04	31-1/4 (794)	38-1/2 (978)	26 (660)	28-1/4 (718)	6-1/4 (159)	8-3/4 (222)	29-3/4 (756)	38 (965)	25-3/8 (654)	28-1/4 (718)	2	1	
42CE 06	36-1/4 (921)	43-1/2 (1105)	31 (787)	33-1/4 (845)	7-1/2 (191)	10 (254)	34-3/4 (883)	38 (965)	30-3/8 (772)	33-1/4 (845)	2	1	
42CE 08	43-1/4 (1099)	50-1/2 (1283)	38 (965)	40-1/4 (1022)	7-1/2 (191)	10 (254)	41-3/4 (1060)	38 (965)	37-3/8 (950)	40-1/4 (1022)	2	1	
42CE 10	57-1/4 (1454)	64-1/2 (1638)	52 (1321)	54-1/4 (1378)	7-1/2 (191)	10 (254)	55-3/4 (1416)	60 (1524)	51-3/8 (1306)	54-1/4 (1378)	4	2	
42CE 12	65-1/4 (1657)	72-1/2 (1842)	60 (1524)	62-1/4 (1581)	7-1/2 (191)	10 (254)	63-3/4 (1619)	65 (1651)	59-3/8 (1509)	62-1/4 (1581)	4	2	



HORIZONTAL HIDEAWAY W/PLENUM

100-90041391

DATE: 2/13/20

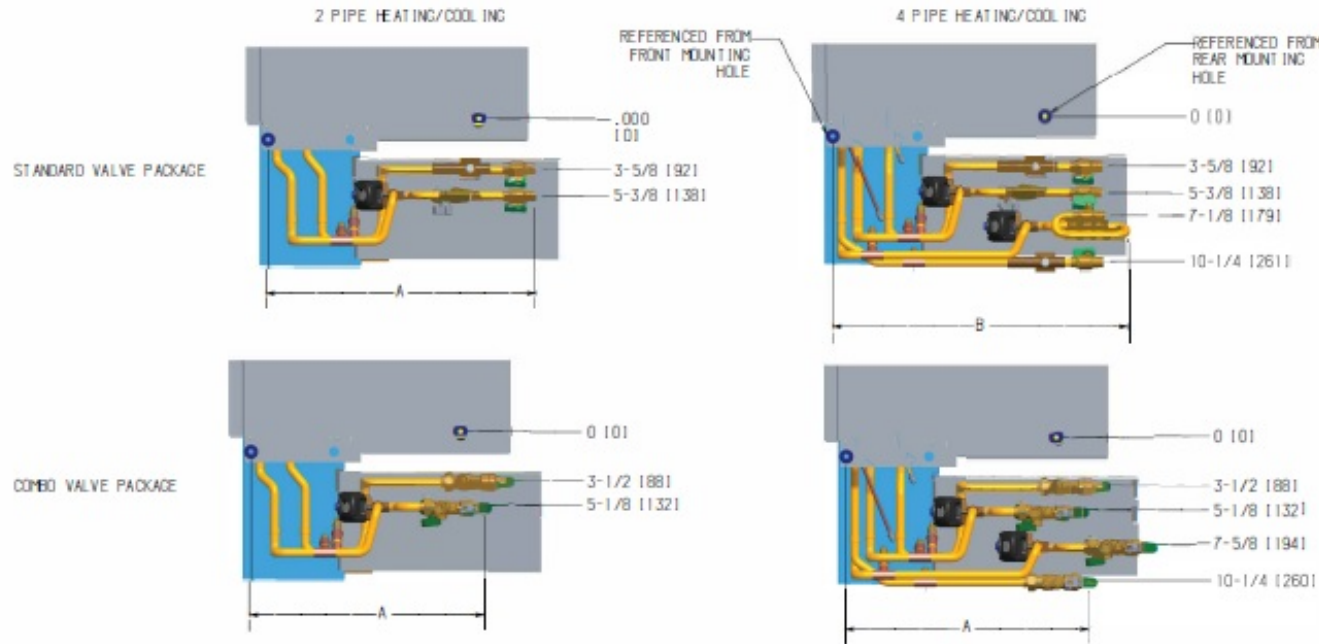
DATE: 2/13/20	DATE: 2/13/20
APPROVED: S. STOTTS	DATE: 2/13/20

Certified Drawing for FCU-B123

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM

REVISION HISTORY		
REV	DATE	ECN
-	05/01/18	18-0608




PARTIAL TOP VIEW OF 42CE/42CA UNITS

DIMENSIONS - INCHES AND (MILLIMETERS)		
	A	B
NO COMBO VALVES		
3 WAY TACO/ERIE COOL	19 1/8 (486)	
3 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
3 WAY MODULATING COOL	19 1/8 (486)	
3 WAY MODULATING HEAT	19 1/4 (489)	21 9/16 (548)
2 WAY TACO/ERIE COOL	19 1/8 (486)	
2 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
2 WAY MODULATING COOL	19 1/8 (486)	
2 WAY MODULATING HEAT	21 1/8 (537)	21 9/16 (548)
COMBO VALVES	SUPPLY/RETURN	
3 WAY TACO/ERIE COOL	17 5/16 (440) / 19 1/4 (489)	NA COMBO VLV CONNECTION DOES NOT EXCEED DISTANCE "A"
3 WAY TACO/ERIE HEAT	20 7/8 (530) / 19 1/4 (489)	
3 WAY MODULATING COOL	19 1/8 (486) / 18 1/16 (459)	
3 WAY MODULATING HEAT	20 7/8 (530) / 20 7/8 (530)	
2 WAY TACO/ERIE COOL	18 1/4 (464) / 16 5/8 (422)	
2 WAY TACO/ERIE HEAT	21 5/8 (549) / 17 3/8 (441)	
2 WAY MODULATING COOL	19 3/16 (487) / 16 5/8 (422)	
2 WAY MODULATING HEAT	19 7/16 (494) / 18 13/16 (477)	

NOTES:

1. ALL DIMENSIONS ARE ± 1/4" (6.3 MM)



VALVE PACKAGE SUPPLEMENT 42CE/42CA UNITS			
1100-90041802		REV	-
DRAWN	DATE	APPROVED	DATE
J. FUSON	03/19/20	S. STOTTS	03/19/20

Performance Summary For FCU-B123

Project: Cincinnati VA - FCUS
 Prepared By: Jeff Gries

DUCTED

10/23/2022
 11:46AM

Unit Parameters

Tag Name: **FCU-B123**
 Quantity: **1**
 Unit Model: **42CEA10ARBY6AYBR**
 Unit Type: **42CE Ceiling, Furred-In with Plenum**
 Unit Size: **1000 CFM**
 System Type: **2-Pipe Cooling Only**
 Cooling Coil: **Cold Fluid Cooling**
 Cooling Coil Rows: **3 rows**
 Coil Hand: **Right Hand**
 Coil Wrapping: **Condensate Overflow Switch**
 Shipping Options: **Standard**
 Fan Speed: **Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Cooling Data

Coil Type: **Cold Fluid Cooling**
 Coil Rows: **3 rows**
 Fluid Type: **Fresh Water**
 Total Capacity: **13,024** BTU/hr
 Sensible Capacity: **12,824** BTU/hr
 Entering Air Dry Bulb Temperature: **72.0** F
 Entering Air Wet Bulb Temperature: **60.0** F
 Leaving Air Dry Bulb Temperature: **55.4** F
 Leaving Air Wet Bulb Temperature: **53.6** F
 Fluid Flow Rate: **2.1** gpm
 Fluid Pressure Drop: **.60** ft wg
 Fluid Entering Temperature: **45.0** F
 Fluid Leaving Temperature: **55.6** F

Electrical Data

Motor Voltage: **115-1-60** ECM V2 Variable Airflow for 0-10VDC input V-Ph-Hz
 Motor FLA: **3.9**
 Unit MCA: **4.88**
 MFS: **15**

Acoustical Data:

Octave Band Center Frequency, Hz	125	250	500	1k	2k	4k	8k	dBA
Sound Power Data								
Radiated Sound Power, dB	56	53	54	52	46	41	37	54
Discharge Sound Power, dB	59	54	55	53	47	41	36	54

Factory-Installed Options

Unit Arrangement: **Rear Return / Front Supply**
 Filters: **Std 1 in. Throaway**
 Drain Pans: **Standard Drain Pan**
 Coil Hand: **Right Hand**
 AAV / Drains: **Manual Air Vents only**
 Control Packages: **24V Controls by other**
 Switches: **20A Service Switch w/inline Fusing**
 Insulation: **Std. Fiberglass Insulation**
 Packaging: **Units shipped on treated wood pallet**
 Condensate: **Condensate Overflow Switch**

Unit Performance

Actual Airflow: **609.0** CFM
 Altitude: **0** ft
 External Static Pressure: **.30** in wg
 Voltage: **115-1-60 ECM V2 Variable Airflow for 0-10VDC**
 input: **V-Ph-Hz**

External Static Pressure includes 0 in wg for filter static.

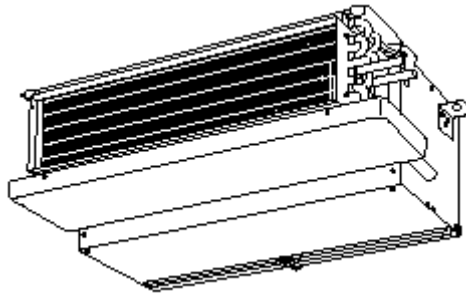
FCU-A430

**Tag Cover Sheet
Unit Report
Certified Drawing
Performance Report
Guide Specification**

Unit Report For FCU-A430

Project: Cincinnati VA - FCUS
 Prepared By: Jeff Gries

10/23/2022
 11:46AM



Unit Parameters

Tag Name: **FCU-A430**
 Quantity:..... **1**
 Unit Model:.....**42CEA12BRBY6AYBR**
 Unit Type:**42CE Ceiling, Furred-In with Plenum**
 Unit Size:.....**1200 CFM**
 Shipping Options:.....**Standard**
 Fan Speed:**Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Dimensions

Unit Length:..... **20.00** in
 Unit Width:.....**65.25** in
 Unit Height: **10.50** in
 Shipping Weight:..... **154** lb

Coil Parameters

System Type: **2-Pipe Cooling Only**
 Cooling Coil:..... **Cold Fluid Cooling**
 Cooling Coil Rows:..... **4 rows**
 Coil Hand: **Right Hand**
 Hydronic Coil Test Pressure:**350 psig Coil Test Pressure**

Electrical

Motor Voltage:**115-1-60 ECM V2 Variable Airflow for 0-10VDC input**.....V-Ph-Hz

Warranty Information

First Year - Parts Only (Standard)

Ordering Information

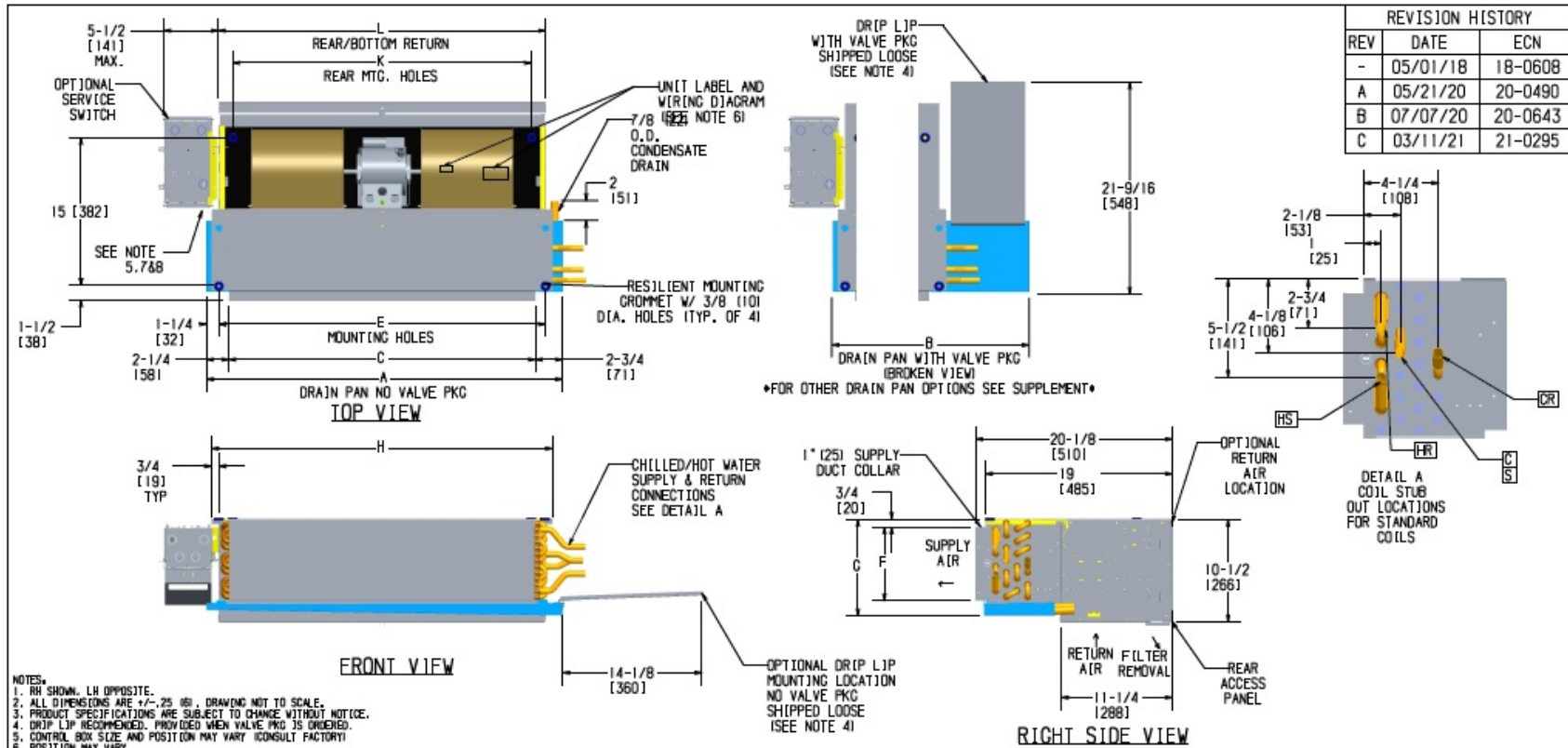
Part Number	Description	Quantity
Base Unit		
	42CEA12BRBY6AYBR	1
	42CEA12:Ceiling, Furred-In with Plenum Fan Coil Unit 1200 CFM Cooling 115-1-60 ECM V2 Variable Airflow for 0-10VDC input High Cap 4-Row, in lieu of std 3-Row (2-pipe system); High Cap 3-Row for std 2-Row (42VC/VE/VG only)	
	20 Non-Fused Service Switch with Incoming Power Fusing	
	115-1-60 ECM V2 Variable Airflow for 0-10VDC input	
	Condensate Overflow Switch	
	Controls by other	

Not all valve components are rated for the selected Hydronic Coil Test Pressure. Refer to the valve component cut sheets in the Product Library, under Help.

Certified Drawing for FCU-A430

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM



Unit Model	Dimensions - Inches (Millimeters)											Quantity/Unit	
	A	B	C	E	F	G	H	J	K	L	BLWR	MOTOR	
42CE 02	21-1/4 (540)	28-1/2 (724)	16 (406)	18-1/4 (464)	6-1/4 (159)	8-3/4 (222)	19-3/4 (502)	38 (965)	15-3/8 (391)	18-1/4 (464)	1	1	
42CE 03	25-1/4 (641)	32-1/2 (826)	20 (508)	22-1/4 (565)	6-1/4 (159)	8-3/4 (222)	23-3/4 (603)	38 (965)	19-3/8 (493)	22-1/4 (565)	1	1	
42CE 04	31-1/4 (794)	38-1/2 (978)	26 (660)	28-1/4 (718)	6-1/4 (159)	8-3/4 (222)	29-3/4 (756)	38 (965)	25-3/8 (654)	28-1/4 (718)	2	1	
42CE 06	36-1/4 (921)	43-1/2 (1105)	31 (787)	33-1/4 (845)	7-1/2 (191)	10 (254)	34-3/4 (883)	38 (965)	30-3/8 (772)	33-1/4 (845)	2	1	
42CE 08	43-1/4 (1099)	50-1/2 (1283)	38 (965)	40-1/4 (1022)	7-1/2 (191)	10 (254)	41-3/4 (1060)	38 (965)	37-3/8 (950)	40-1/4 (1022)	2	1	
42CE 10	57-1/4 (1454)	64-1/2 (1638)	52 (1321)	54-1/4 (1378)	7-1/2 (191)	10 (254)	55-3/4 (1416)	60 (1524)	51-3/8 (1306)	54-1/4 (1378)	4	2	
42CE 12	65-1/4 (1657)	72-1/2 (1842)	60 (1524)	62-1/4 (1581)	7-1/2 (191)	10 (254)	63-3/4 (1619)	65 (1651)	59-3/8 (1509)	62-1/4 (1581)	4	2	



HORIZONTAL HIDEAWAY W/PLENUM

100-90041391

REVISION: **C**

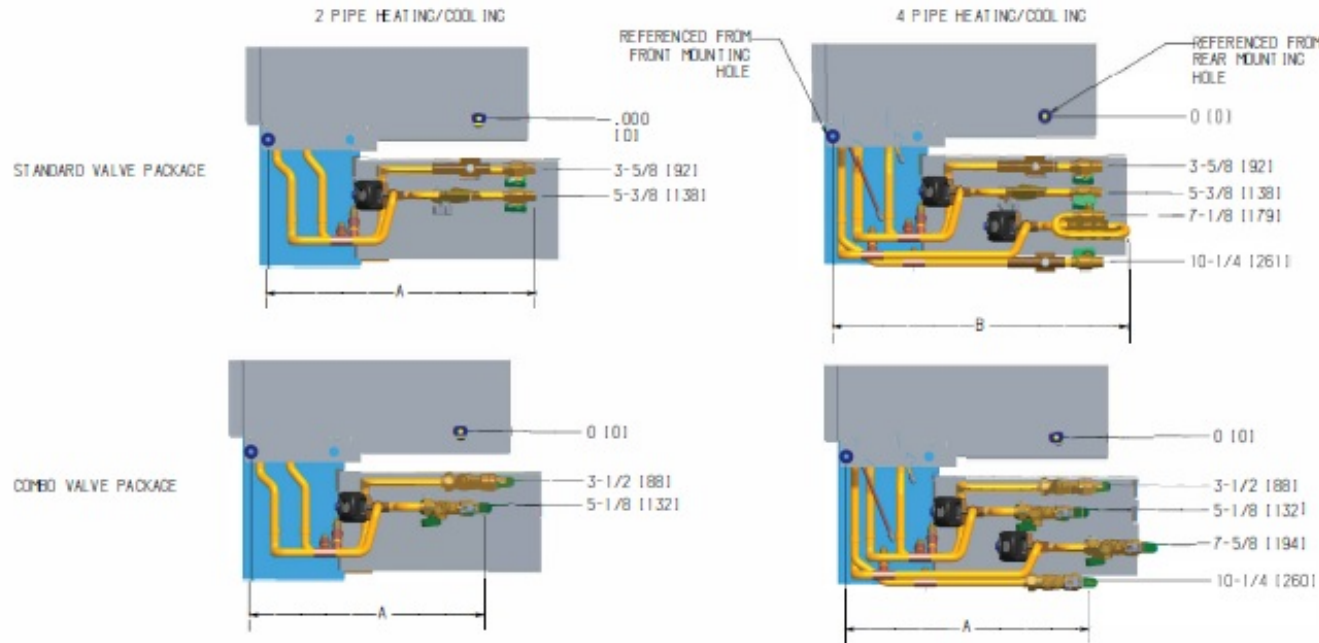
DATE: 2/13/20

Certified Drawing for FCU-A430

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM

REVISION HISTORY		
REV	DATE	ECN
-	05/01/18	18-0608




PARTIAL TOP VIEW OF 42CE/42CA UNITS

DIMENSIONS - INCHES AND (MILLIMETERS)		
	A	B
NO COMBO VALVES		
3 WAY TACO/ERIE COOL	19 1/8 (486)	
3 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
3 WAY MODULATING COOL	19 1/8 (486)	
3 WAY MODULATING HEAT	19 1/4 (489)	21 9/16 (548)
2 WAY TACO/ERIE COOL	19 1/8 (486)	
2 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
2 WAY MODULATING COOL	19 1/8 (486)	
2 WAY MODULATING HEAT	21 1/8 (537)	21 9/16 (548)
COMBO VALVES	SUPPLY/RETURN	
3 WAY TACO/ERIE COOL	17 5/16 (440) / 19 1/4 (489)	
3 WAY TACO/ERIE HEAT	20 7/8 (530) / 19 1/4 (489)	
3 WAY MODULATING COOL	19 1/8 (486) / 18 1/16 (459)	
3 WAY MODULATING HEAT	20 7/8 (530) / 20 7/8 (530)	
2 WAY TACO/ERIE COOL	18 1/4 (464) / 16 5/8 (422)	
2 WAY TACO/ERIE HEAT	21 5/8 (549) / 17 3/8 (441)	
2 WAY MODULATING COOL	19 3/16 (487) / 16 5/8 (422)	
2 WAY MODULATING HEAT	19 7/16 (494) / 18 13/16 (477)	

NOTES:

1. ALL DIMENSIONS ARE ± 1/4" (6.3 MM)

NA
COMBO VLV
CONNECTION DOES
NOT EXCEED
DISTANCE
"A"



VALVE PACKAGE SUPPLEMENT 42CE/42CA UNITS			
1100-90041802			REV -
DRAWN J. FUSON	DATE 03/19/20	APPROVED S. STOTTS	DATE 03/19/20

Performance Summary For FCU-A430

Project: Cincinnati VA - FCUS
 Prepared By: Jeff Gries

DUCTED

10/23/2022
 11:46AM

Unit Parameters

Tag Name: **FCU-A430**
 Quantity: **1**
 Unit Model: **42CEA12BRBY6AYBR**
 Unit Type: **42CE Ceiling, Furred-In with Plenum**
 Unit Size: **1200 CFM**
 System Type: **2-Pipe Cooling Only**
 Cooling Coil: **Cold Fluid Cooling**
 Cooling Coil Rows: **4 rows**
 Coil Hand: **Right Hand**
 Coil Wrapping: . **Condensate Overflow Switch**
 Shipping Options: **Standard**
 Fan Speed: **Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Cooling Data

Coil Type: **Cold Fluid Cooling**
 Coil Rows: **4 rows**
 Fluid Type: **Fresh Water**
 Total Capacity: **22,138** BTU/hr
 Sensible Capacity: **21,698** BTU/hr
 Entering Air Dry Bulb Temperature: **72.0** F
 Entering Air Wet Bulb Temperature: **60.0** F
 Leaving Air Dry Bulb Temperature: **53.6** F
 Leaving Air Wet Bulb Temperature: **52.2** F
 Fluid Flow Rate: **3.1** gpm
 Fluid Pressure Drop: **1.70** ft wg
 Fluid Entering Temperature: **45.0** F
 Fluid Leaving Temperature: **56.5** F

Electrical Data

Motor Voltage: **115-1-60** **ECM V2 Variable Airflow for 0-10VDC** input V-Ph-Hz
 Motor FLA: **4.8**
 Unit MCA: **6.00**
 MFS: **15**

Acoustical Data:

Octave Band Center Frequency, Hz	125	250	500	1k	2k	4k	8k	dBA
Sound Power Data								
Radiated Sound Power, dB	56	57	59	57	52	50	45	58
Discharge Sound Power, dB	59	57	58	56	52	48	42	57

Factory-Installed Options

Unit Arrangement: **Rear Return / Front Supply**
 Filters: **Std 1 in. Throaway**
 Drain Pans: **Standard Drain Pan**
 Coil Hand: **Right Hand**
 AAV / Drains: **Manual Air Vents only**
 Control Packages: **24V Controls by other**
 Switches: **20A Service Switch w/inline Fusing**
 Insulation: **Std. Fiberglass Insulation**
 Packaging: **Units shipped on treated wood pallet**
 Condensate: **Condensate Overflow Switch**

Unit Performance

Actual Airflow: **829.0** CFM
 Altitude: **0** ft
 External Static Pressure: **.30** in wg
 Voltage: **115-1-60 ECM V2 Variable Airflow for 0-10VDC**
 input..... V-Ph-Hz

External Static Pressure includes 0 in wg for filter static.

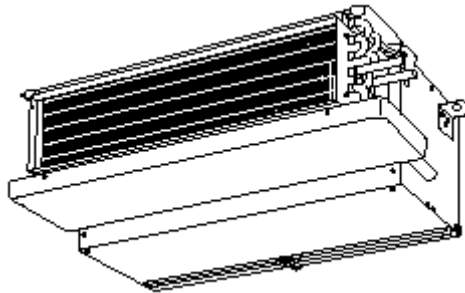
FCU-A431

**Tag Cover Sheet
Unit Report
Certified Drawing
Performance Report**

Unit Report For FCU-A431

Project: Cincinnati VA - FCUS
 Prepared By: Jeff Gries

10/23/2022
 11:46AM



Unit Parameters

Tag Name: **FCU-A431**
 Quantity:..... **1**
 Unit Model:.....**42CEA10ARBY6AYBR**
 Unit Type:**42CE Ceiling, Furred-In with Plenum**
 Unit Size:.....**1000 CFM**
 Shipping Options:.....**Standard**
 Fan Speed:**Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Dimensions

Unit Length:..... **20.00** in
 Unit Width:.....**57.25** in
 Unit Height: **10.50** in
 Shipping Weight:..... **135** lb

Coil Parameters

System Type: **2-Pipe Cooling Only**
 Cooling Coil:..... **Cold Fluid Cooling**
 Cooling Coil Rows:..... **3 rows**
 Coil Hand: **Right Hand**
 Hydronic Coil Test Pressure:**350 psig Coil Test Pressure**

Electrical

Motor Voltage:**115-1-60 ECM V2 Variable Airflow for 0-10VDC input**.....V-Ph-Hz

Warranty Information

First Year - Parts Only (Standard)

Ordering Information

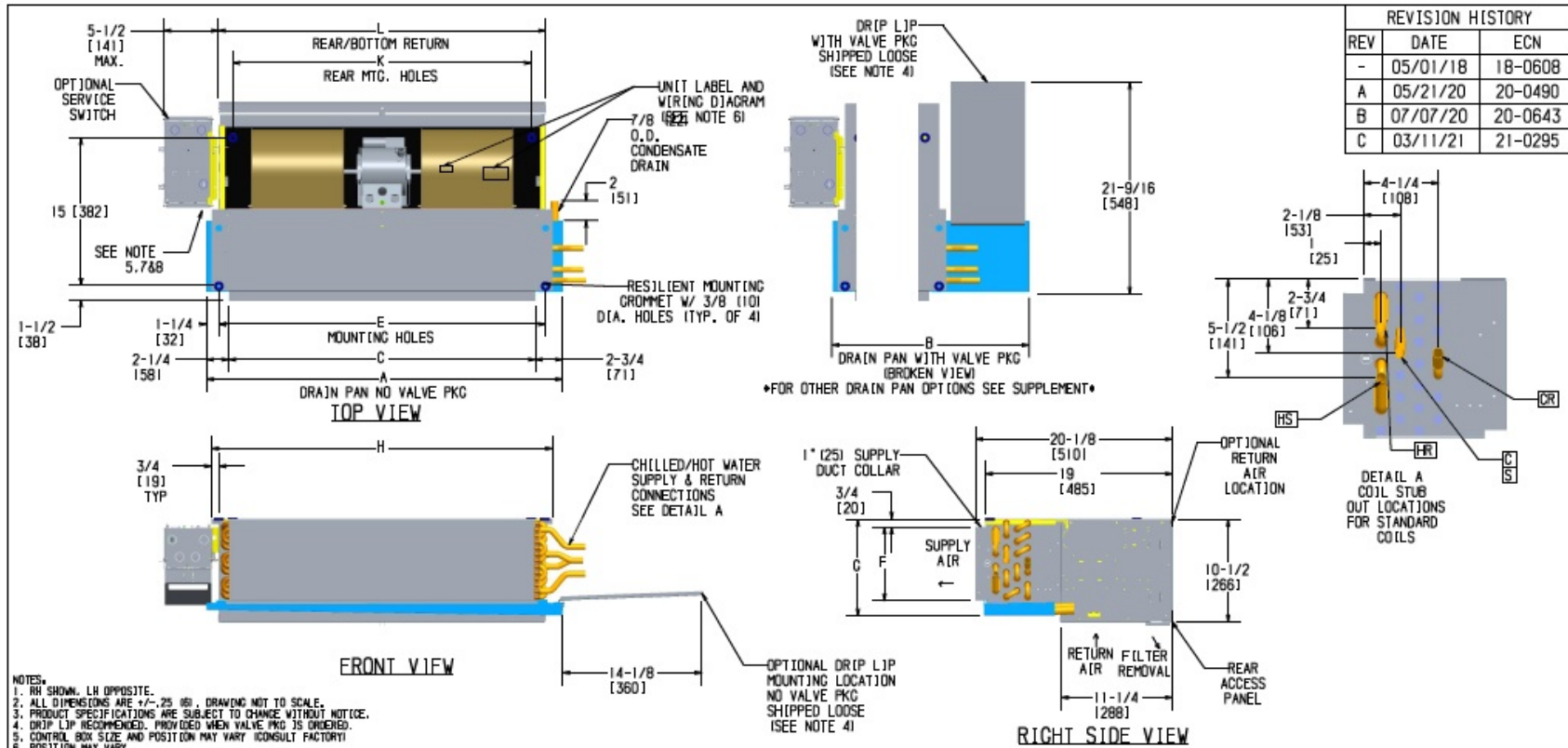
Part Number	Description	Quantity
Base Unit		
	42CEA10ARBY6AYBR	1
	42CEA10:Ceiling, Furred-In with Plenum Fan Coil Unit 1000 CFM Cooling 115-1-60 ECM V2 Variable Airflow for 0-10VDC input	
	20 Non-Fused Service Switch with Incoming Power Fusing	
	115-1-60 ECM V2 Variable Airflow for 0-10VDC input	
	Condensate Overflow Switch	
	Controls by other	

Not all valve components are rated for the selected Hydronic Coil Test Pressure. Refer to the valve component cut sheets in the Product Library, under Help.

Certified Drawing for FCU-A431

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM



Unit Model	Dimensions - Inches (Millimeters)											Quantity/Unit	
	A	B	C	E	F	G	H	J	K	L	BLWR	MOTOR	
42CE 02	21-1/4 (540)	28-1/2 (724)	16 (406)	18-1/4 (464)	6-1/4 (159)	8-3/4 (222)	19-3/4 (502)	38 (965)	15-3/8 (391)	18-1/4 (464)	1	1	
42CE 03	25-1/4 (641)	32-1/2 (826)	20 (508)	22-1/4 (565)	6-1/4 (159)	8-3/4 (222)	23-3/4 (603)	38 (965)	19-3/8 (493)	22-1/4 (565)	1	1	
42CE 04	31-1/4 (794)	38-1/2 (978)	26 (660)	28-1/4 (718)	6-1/4 (159)	8-3/4 (222)	29-3/4 (756)	38 (965)	25-3/8 (654)	28-1/4 (718)	2	1	
42CE 06	36-1/4 (921)	43-1/2 (1105)	31 (787)	33-1/4 (845)	7-1/2 (191)	10 (254)	34-3/4 (883)	38 (965)	30-3/8 (772)	33-1/4 (845)	2	1	
42CE 08	43-1/4 (1099)	50-1/2 (1283)	38 (965)	40-1/4 (1022)	7-1/2 (191)	10 (254)	41-3/4 (1060)	38 (965)	37-3/8 (950)	40-1/4 (1022)	2	1	
42CE 10	57-1/4 (1454)	64-1/2 (1638)	52 (1321)	54-1/4 (1378)	7-1/2 (191)	10 (254)	55-3/4 (1416)	60 (1524)	51-3/8 (1306)	54-1/4 (1378)	4	2	
42CE 12	65-1/4 (1657)	72-1/2 (1842)	60 (1524)	62-1/4 (1581)	7-1/2 (191)	10 (254)	63-3/4 (1619)	65 (1651)	59-3/8 (1509)	62-1/4 (1581)	4	2	



HORIZONTAL HIDEAWAY W/PLENUM

100-90041391

REVISION: **C**

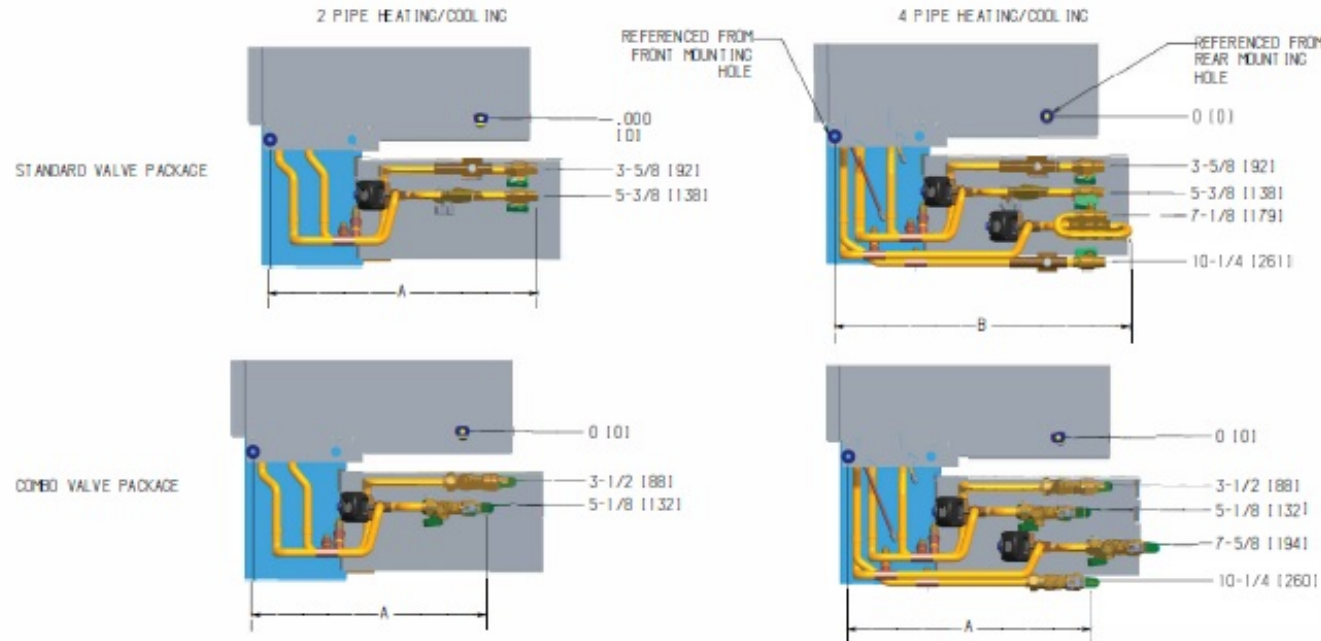
DRAWN: J. FUSON DATE: 2/13/20 APPROVED: S. STOTTS DATE: 2/13/20

Certified Drawing for FCU-A431

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM


REVISION HISTORY		
REV	DATE	ECN
-	05/01/18	18-0608



PARTIAL TOP VIEW OF 42CE/42CA UNITS

DIMENSIONS - INCHES AND (MILLIMETERS)		
	A	B
NO COMBO VALVES		
3 WAY TACO/ERIE COOL	19 1/8 (486)	
3 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
3 WAY MODULATING COOL	19 1/8 (486)	
3 WAY MODULATING HEAT	19 1/4 (489)	21 9/16 (548)
2 WAY TACO/ERIE COOL	19 1/8 (486)	
2 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
2 WAY MODULATING COOL	19 1/8 (486)	
2 WAY MODULATING HEAT	21 1/8 (537)	21 9/16 (548)
COMBO VALVES SUPPLY/RETURN		
3 WAY TACO/ERIE COOL	17 5/16 (440) / 19 1/4 (489)	
3 WAY TACO/ERIE HEAT	20 7/8 (530) / 19 1/4 (489)	
3 WAY MODULATING COOL	19 1/8 (486) / 18 1/16 (459)	
3 WAY MODULATING HEAT	20 7/8 (530) / 20 7/8 (530)	
2 WAY TACO/ERIE COOL	18 1/4 (464) / 16 5/8 (422)	
2 WAY TACO/ERIE HEAT	21 5/8 (549) / 17 3/8 (441)	
2 WAY MODULATING COOL	19 3/16 (487) / 16 5/8 (422)	
2 WAY MODULATING HEAT	19 7/16 (494) / 18 13/16 (477)	

NOTES:
1. ALL DIMENSIONS ARE ± 1/4" (6.3 MM)



VALVE PACKAGE SUPPLEMENT 42CE/42CA UNITS			
1100-90041802		REV	-
DRAWN	DATE	APPROVED	DATE
J. FUSON	03/19/20	S. STOTTS	03/19/20

Performance Summary For FCU-A431

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

DUCTED

10/23/2022
11:46AM

Unit Parameters

Tag Name: **FCU-A431**
 Quantity: **1**
 Unit Model: **42CEA10ARBY6AYBR**
 Unit Type: **42CE Ceiling, Furred-In with Plenum**
 Unit Size: **1000 CFM**
 System Type: **2-Pipe Cooling Only**
 Cooling Coil: **Cold Fluid Cooling**
 Cooling Coil Rows: **3 rows**
 Coil Hand: **Right Hand**
 Coil Wrapping: . **Condensate Overflow Switch**
 Shipping Options: **Standard**
 Fan Speed: **Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Cooling Data

Coil Type: **Cold Fluid Cooling**
 Coil Rows: **3 rows**
 Fluid Type: **Fresh Water**
 Total Capacity: **14,203** BTU/hr
 Sensible Capacity: **13,882** BTU/hr
 Entering Air Dry Bulb Temperature: **72.0** F
 Entering Air Wet Bulb Temperature: **60.0** F
 Leaving Air Dry Bulb Temperature: **54.9** F
 Leaving Air Wet Bulb Temperature: **53.1** F
 Fluid Flow Rate: **2.5** gpm
 Fluid Pressure Drop: **.80** ft wg
 Fluid Entering Temperature: **45.0** F
 Fluid Leaving Temperature: **54.3** F

Electrical Data

Motor Voltage: **115-1-60** **ECM V2 Variable Airflow for 0-10VDC** input V-Ph-Hz
 Motor FLA: **3.9**
 Unit MCA: **4.88**
 MFS: **15**

Acoustical Data:

Octave Band Center Frequency, Hz	125	250	500	1k	2k	4k	8k	dBA
Sound Power Data								
Radiated Sound Power, dB	55	56	57	55	51	49	45	55
Discharge Sound Power, dB	57	56	55	54	50	47	42	54

Factory-Installed Options

Unit Arrangement: **Rear Return / Front Supply**
 Filters: **Std 1 in. Throaway**
 Drain Pans: **Standard Drain Pan**
 Coil Hand: **Right Hand**
 AAV / Drains: **Manual Air Vents only**
 Control Packages: **24V Controls by other**
 Switches: **20A Service Switch w/inline Fusing**
 Insulation: **Std. Fiberglass Insulation**
 Packaging: **Units shipped on treated wood pallet**
 Condensate: **Condensate Overflow Switch**

Unit Performance

Actual Airflow: **609.0** CFM
 Altitude: **0** ft
 External Static Pressure: **.30** in wg
 Voltage: **115-1-60 ECM V2 Variable Airflow for 0-10VDC**
 input..... V-Ph-Hz

External Static Pressure includes 0 in wg for filter static.

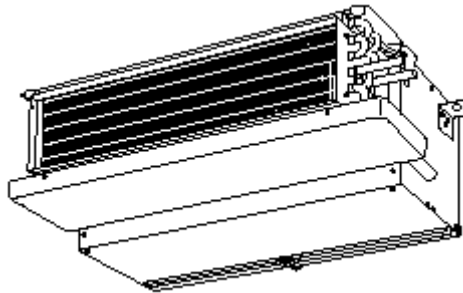
15-FCU-B04

**Tag Cover Sheet
Unit Report
Certified Drawing
Performance Report
Guide Specification**

Unit Report For 15-FCU-B04

Project: Cincinnati VA - FCUS
 Prepared By: Jeff Gries

10/23/2022
 11:46AM



Unit Parameters

Tag Name: **15-FCU-B04**
 Quantity:..... **1**
 Unit Model:.....**42CEA08ARBY6AYBR**
 Unit Type:**42CE Ceiling, Furred-In with Plenum**
 Unit Size:.....**800 CFM**
 Shipping Options:.....**Standard**
 Fan Speed:**Medium**
 Motor/Drive: **ECM Motor Variable Air Flow**

Dimensions

Unit Length:..... **20.00** in
 Unit Width:.....**43.25** in
 Unit Height: **10.50** in
 Shipping Weight:..... **95** lb

Coil Parameters

System Type: **2-Pipe Cooling Only**
 Cooling Coil:..... **Cold Fluid Cooling**
 Cooling Coil Rows:..... **3 rows**
 Coil Hand: **Right Hand**
 Hydronic Coil Test Pressure:**350 psig Coil Test Pressure**

Electrical

Motor Voltage:**115-1-60 ECM V2 Variable Airflow for 0-10VDC input**.....V-Ph-Hz

Warranty Information

First Year - Parts Only (Standard)

Ordering Information

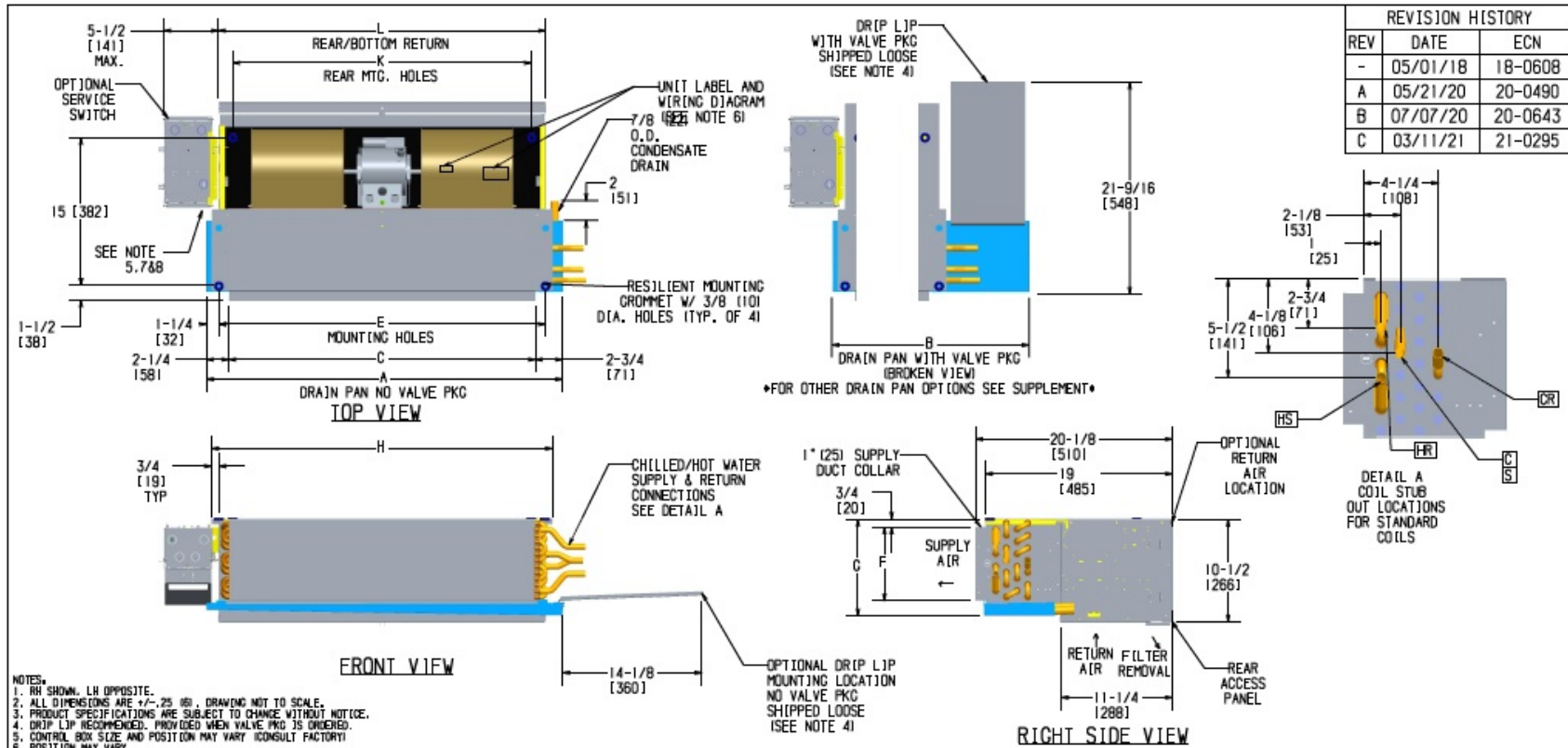
Part Number	Description	Quantity
Base Unit		
	42CEA08ARBY6AYBR	1
	42CEA08:Ceiling, Furred-In with Plenum Fan Coil Unit 800 CFM Cooling 115-1-60 ECM V2 Variable Airflow for 0-10VDC input	
	20 Non-Fused Service Switch with Incoming Power Fusing	
	115-1-60 ECM V2 Variable Airflow for 0-10VDC input	
	Condensate Overflow Switch	
	Controls by other	

Not all valve components are rated for the selected Hydronic Coil Test Pressure. Refer to the valve component cut sheets in the Product Library, under Help.

Certified Drawing for 15-FCU-B04

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM



Unit Model	Dimensions - Inches (Millimeters)											Quantity/Unit	
	A	B	C	E	F	G	H	J	K	L	BLWR	MOTOR	
42CE 02	21-1/4 (540)	28-1/2 (724)	16 (406)	18-1/4 (464)	6-1/4 (159)	8-3/4 (222)	19-3/4 (502)	38 (965)	15-3/8 (391)	18-1/4 (464)	1	1	
42CE 03	25-1/4 (641)	32-1/2 (826)	20 (508)	22-1/4 (565)	6-1/4 (159)	8-3/4 (222)	23-3/4 (603)	38 (965)	19-3/8 (493)	22-1/4 (565)	1	1	
42CE 04	31-1/4 (794)	38-1/2 (978)	26 (660)	28-1/4 (718)	6-1/4 (159)	8-3/4 (222)	29-3/4 (756)	38 (965)	25-3/8 (654)	28-1/4 (718)	2	1	
42CE 06	36-1/4 (921)	43-1/2 (1105)	31 (787)	33-1/4 (845)	7-1/2 (191)	10 (254)	34-3/4 (883)	38 (965)	30-3/8 (772)	33-1/4 (845)	2	1	
42CE 08	43-1/4 (1099)	50-1/2 (1283)	38 (965)	40-1/4 (1022)	7-1/2 (191)	10 (254)	41-3/4 (1060)	38 (965)	37-3/8 (950)	40-1/4 (1022)	2	1	
42CE 10	57-1/4 (1454)	64-1/2 (1638)	52 (1321)	54-1/4 (1378)	7-1/2 (191)	10 (254)	55-3/4 (1416)	60 (1524)	51-3/8 (1306)	54-1/4 (1378)	4	2	
42CE 12	65-1/4 (1657)	72-1/2 (1842)	60 (1524)	62-1/4 (1581)	7-1/2 (191)	10 (254)	63-3/4 (1619)	65 (1651)	59-3/8 (1509)	62-1/4 (1581)	4	2	



HORIZONTAL HIDEAWAY W/PLENUM

100-90041391

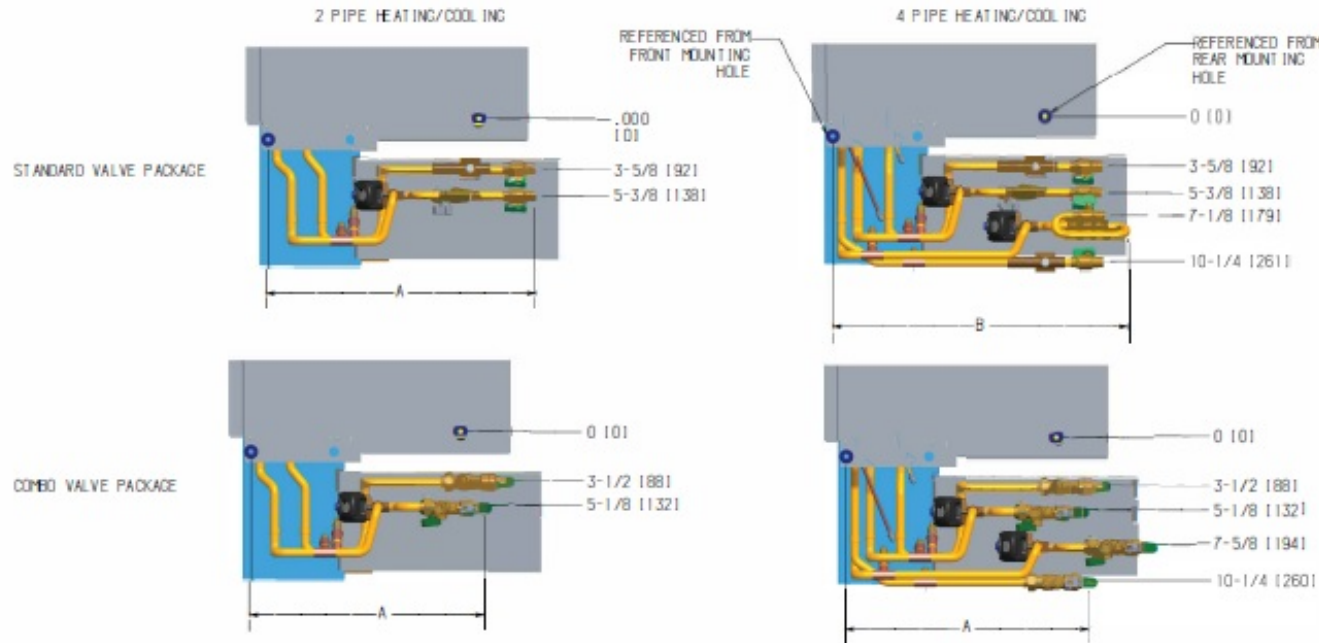
DRAWN: J. FUSON DATE: 2/13/20 APPROVED: S. STOTTS DATE: 2/13/20

Certified Drawing for 15-FCU-B04

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM

REVISION HISTORY		
REV	DATE	ECN
-	05/01/18	18-0608




PARTIAL TOP VIEW OF 42CE/42CA UNITS

DIMENSIONS - INCHES AND (MILLIMETERS)		
	A	B
NO COMBO VALVES		
3 WAY TACO/ERIE COOL	19 1/8 (486)	
3 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
3 WAY MODULATING COOL	19 1/8 (486)	
3 WAY MODULATING HEAT	19 1/4 (489)	21 9/16 (548)
2 WAY TACO/ERIE COOL	19 1/8 (486)	
2 WAY TACO/ERIE HEAT	19 1/4 (489)	21 1/8 (537)
2 WAY MODULATING COOL	19 1/8 (486)	
2 WAY MODULATING HEAT	21 1/8 (537)	21 9/16 (548)
COMBO VALVES	SUPPLY/RETURN	
3 WAY TACO/ERIE COOL	17 5/16 (440) / 19 1/4 (489)	NA COMBO VLV CONNECTION DOES NOT EXCEED DISTANCE "A"
3 WAY TACO/ERIE HEAT	20 7/8 (530) / 19 1/4 (489)	
3 WAY MODULATING COOL	19 1/8 (486) / 18 1/16 (459)	
3 WAY MODULATING HEAT	20 7/8 (530) / 20 7/8 (530)	
2 WAY TACO/ERIE COOL	18 1/4 (464) / 16 5/8 (422)	
2 WAY TACO/ERIE HEAT	21 5/8 (549) / 17 3/8 (441)	
2 WAY MODULATING COOL	19 3/16 (487) / 16 5/8 (422)	
2 WAY MODULATING HEAT	19 7/16 (494) / 18 13/16 (477)	

NOTES:

1. ALL DIMENSIONS ARE ± 1/4" (6.3 MM)



VALVE PACKAGE SUPPLEMENT 42CE/42CA UNITS			
1100-90041802		REV: -	
DESIGN	DATE	APPROVED	DATE
J. FUSON	03/19/20	S. STOTTS	03/19/20

Performance Summary For 15-FCU-B04

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

DUCTED

10/23/2022
11:46AM

Unit Parameters

Tag Name: 15-FCU-B04
 Quantity: 1
 Unit Model: 42CEA08ARBY6AYBR
 Unit Type: 42CE Ceiling, Furred-In with Plenum
 Unit Size: 800 CFM
 System Type: 2-Pipe Cooling Only
 Cooling Coil: Cold Fluid Cooling
 Cooling Coil Rows: 3 rows
 Coil Hand: Right Hand
 Coil Wrapping: . Condensate Overflow Switch
 Shipping Options: Standard
 Fan Speed: Medium
 Motor/Drive: ECM Motor Variable Air Flow

Cooling Data

Coil Type: Cold Fluid Cooling
 Coil Rows: 3 rows
 Fluid Type: Fresh Water
 Total Capacity: 11,533 BTU/hr
 Sensible Capacity: 11,533 BTU/hr
 Entering Air Dry Bulb Temperature: 72.0 F
 Entering Air Wet Bulb Temperature: 60.0 F
 Leaving Air Dry Bulb Temperature: 56.1 F
 Leaving Air Wet Bulb Temperature: 53.9 F
 Fluid Flow Rate: 1.7 gpm
 Fluid Pressure Drop: 1.90 ft wg
 Fluid Entering Temperature: 45.0 F
 Fluid Leaving Temperature: 58.9 F

Electrical Data

Motor Voltage: 115-1-60 ECM V2 Variable Airflow for 0-10VDC input V-Ph-Hz
 Motor FLA: 2.4
 Unit MCA: 3.00
 MFS: 15

Acoustical Data:

Octave Band Center Frequency, Hz	125	250	500	1k	2k	4k	8k	dBA
Sound Power Data								
Radiated Sound Power, dB	55	56	55	48	44	42	40	56
Discharge Sound Power, dB	57	52	54	52	46	43	39	55

Factory-Installed Options

Unit Arrangement: Rear Return / Front Supply
 Filters: Std 1 in. Throaway
 Drain Pans: Standard Drain Pan
 Coil Hand: Right Hand
 AAV / Drains: Manual Air Vents only
 Control Packages: 24V Controls by other
 Switches: 20A Service Switch w/inline Fusing
 Insulation: Std. Fiberglass Insulation
 Packaging: Units shipped on treated wood pallet
 Condensate: Condensate Overflow Switch

Unit Performance

Actual Airflow: 667.0 CFM
 Altitude: 0 ft
 External Static Pressure:30 in wg
 Voltage: 115-1-60 ECM V2 Variable Airflow for 0-10VDC
 input..... V-Ph-Hz

External Static Pressure includes 0 in wg for filter static.

Fan Coil Unit — Horizontal Models

HVAC Guide Specifications — 42C

Size Range: 200 to 1200 Nominal Cfm

Carrier Model Numbers:

42CE (Furred-in with Plenum)

General

- SYSTEM DESCRIPTION

Horizontal, 2-pipe or 4-pipe (or electric heat), room fan coil unit with furred-in, above ceiling cabinet for ducting, or with cabinet for exposed ceiling installations.

- QUALITY ASSURANCE

Units shall be tested and certified in accordance with AHRI (Air-Conditioning, Heating, and Refrigeration Institute) standard 440, latest edition. All base or standard units shall have C-ETL-US listing signifying the units have been examined by ETL and are in compliance with both the US and Canadian applicable standards. Each coil shall be factory tested for leakage at 300 psig air pressure with coil submerged in water. Insulation and adhesive shall meet NFPA (National Fire Protection Association) 90A requirements for flame spread and smoke generation. All equipment wiring shall comply with NEC (National Electrical Code) requirements.

- DELIVERY, STORAGE AND HANDLING

Each unit shall be individually packaged from point of manufacture. Unit shall be handled and stored in accordance with the manufacturer's instructions.

•Products

- EQUIPMENT

- General:

Factory-assembled, horizontal, blow-thru type fan coil for furred-in, exposed ceiling or ducted installations. Unit shall be complete with water coil(s), fan(s), motor(s), drain pan, and all required wiring, piping, controls and special features. Standard insulation shall be dual density fiberglass insulation.

- Furred-in Units with Plenum (42CE):

Base unit with factory-installed plenum section and 1-in. fiberglass throwaway filter as shown on equipment drawings. The plenum shall be bottom or rear air return, shall enclose the fan/motor assemblies, and shall be lined with 1/2-in. fiberglass insulation. Unit shall have a removable panel to provide access to fan/motor assemblies and unit identification label.

- Fans:

Direct-driven, double-width fan wheels with forward-curved blades shall be statically and dynamically balanced. Scrolls shall be constructed of galvanized steel. Fan wheels shall be constructed of galvanized steel.

- Coils:

Standard base unit shall be equipped with a 3-row or 4-row coil for installation in a 2-pipe system. Additional coil depth and circuiting shall be provided for installation in a 4-pipe system as described in the Special Features section. All coils shall have 1/2-in. copper tubes and aluminum fins (10 fins per inch) spacing. Coil fins are mechanical bonded to tube joints. The copper tubes comply with the ASTM (American Society for Testing and Materials) B-75. The fin thickness is 0.0045-in. and tube thickness is 0.016 inch. All coils shall be leak tested with air at 300 psig under water.

Guide Specification for 15-FCU-B04

Project: Cincinnati VA - FCUS
Prepared By: Jeff Gries

10/23/2022
11:46AM

- Controls and Safeties:
The fan motor(s) shall be equipped with integral automatic temperature reset for motor protection.
- Operating Characteristics:
 - A one-coil unit installed in a 2-pipe system shall be capable of providing heating or cooling as determined by the operating mode of the central water supply system.
- Electrical Requirements:
Standard unit shall operate on 115 v, single-phase, 60 Hz electric power. All internal wiring shall be in flexible conduit.
- Special Features:
Certain standard features are not applicable when the features designated by * are specified. See your local Carrier Sales Offices for amending specifications.
 - Unit coil(s) shall be equipped with manual air vents.
 - For installation on a 2-pipe chilled water units shall be equipped with a 2-row, 3-row, or 4-row, cooling/heating coil.
 - Fan motor shall be constant torque electrically commutated type, 115 volt single phase, 50 or 60 Hz as specified on the equipment schedule. The operating sequence shall be one of the following, as specified:
 - Variable Airflow for 0 to 10 VDC / 4 to 20 mA Input. Requires a 0 to 10 VDC input signal and is not compatible with a 3-speed thermostat.
 - Filter track and cleanable filter shall be installed in the plenum.
 - Drain pan shall include a second drain connection located above the main drain connection to act as an indicator that the main drain is plugged.
 - A stainless steel drain pan shall be available for factory installation.
 - Control Options:
 - Controls and valves by others.