Submittal

Prepared For:
Superior Mechanical
Attn: Ben Wyke

Engineer:
US Army Corps of Engineers
Joel Rutledge, P.E.

Date: *October 10, 2022*

Job Name:
MATOC SRM 81st Readiness Div NC009 HVAC Reset
500 Wilshire Avenue SW
Concord, NC 28025

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

Product Summary

Qty	Product
12 -	Fan Coil Air Conditioning Units
1 -	Cabinet Unit Heater

Notes:

1. This submittal is based on mechanical specifications and drawings sealed 7-13-2022.

2. The mechanical contractor shall verify / confirm all required piping locations and note any necessary changes on the returned submittal.

3. The chilled water flow rates have been "tweeked" as necessary in order to provide the scheduled cooling capacities. Engineer to review and confirm that this is acceptable.

4. All electrical requirements shall be coordinated / confirmed with the electrical contractor prior to ordering equipment.

5. The following items are not included unless noted otherwise:

Chilled or hot water control valves
Auxiliary drain pans or condensate pumps
Unit controls or thermostats
Smoke detectors
Spring vibration isolators
Seismic restraints
MERV 13 filters
Equipment startup

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

The attached information describes the equipment we propose to furnish for this project and is submitted for your approval.

Submittal acceptance and return is a critical step, so please ensure submittals are returned with approval to release to production within 14 days of submittal date.

Table of Contents

Tag Data - Fan Coil Air Conditioning Units (Qty: 12)

Item	Tag(s)	Qty	Description	Model Number
A1	FCU-01	1	Size 80 Horizontal Concealed UniTrane	FCCB0802KAYF0A00B13M0000DA00BH0000EB EA000000
A2	FCU-02	1	Size 80 Horizontal Concealed UniTrane	FCCB0802KAYF0A00B13M0000DA00BH0000EB EA000000
A3	FCU-03	1	Size 100 Horizontal Concealed UniTrane	FCCB1002KAYF0A00B13M0000DA00BH0000EB EA000000
A4	FCU-04	1	Size 120 Horizontal Concealed UniTrane	FCCB1202KAYF0A00B13M0000DA00BH0000EB EA000000
A5	FCU-05	1	Size 80 Horizontal Concealed UniTrane	FCCB0802JAYF0A00B13M0000D000BH0000EB EA000000
A6	FCU-06	1	Size 60 Horizontal Concealed UniTrane	FCCB0402KAYF0A00BD3M0000DA00BH0000E AEA000000
A7	FCU-07	1	Size 40 Horizontal Concealed UniTrane	FCCB0402JAYF0A00B13M0000DA00BH0000EA EA000000
A8	FCU-08	1	Size 80 Horizontal Concealed UniTrane	FCCB0802KAYF0A00B13M0000DA00BH0000EB EA000000
A9	FCU-09	1	Size 120 Horizontal Concealed UniTrane	FCCB1202JAYF0A00B13M0000DA00BH0000EB EA000000
A10	FCU-11	1	Size 100 Horizontal Concealed UniTrane	FCCB1002KAYF0A00B13M0000DA00BH0000EB EA000000
A11	FCU-12	1	Size 60 Horizontal Concealed UniTrane	FCCB0402JAYF0A00BF3M0000DA00BH0000EA EA000000
A12	FCU-13	1	Size 100 Horizontal Recessed UniTrane	FCEB1002KAYF0A10B13M0000DA00BH0000EB EA000000

Product Data - Fan Coil Air Conditioning Units

All Units

Horizontal fan coil
208v/60hz/1ph
Front and back duct collar return
High static fan motor
Polymer drain pan
Manual air vent
Disconnect switch
Basic ball valve (supply) & manual circuit setter return
CS T-Stat interface
2-way, modulating

Item: A1, A2, A8 Qty: 3 Tag(s): FCU-01, FCU-02, FCU-08

Horizontal concealed, size 080
With piping, left hand connection
High capacity 3 row clg, 1 row preheat
2 way 2.4 Cv

Item: A3, A10 Qty: 2 Tag(s): FCU-03, FCU-11

Horizontal concealed, size 100
With piping, left hand connection
High capacity 3 row clg, 1 row preheat
2 Way 2.4 Cv

Item: A4 Qty: 1 Tag(s): FCU-04

Horizontal concealed, size 120
With piping, left hand connection
High capacity 3 row clg, 1 row preheat
MERV 13 filter
2 Way 2.4 Cv

Item: A5 Qty: 1 Tag(s): FCU-05
Horizontal concealed, size 080
With piping, right hand connection
High capacity 3 row clg, 1 row preheat
2 way 2.4 Cv

Item: A6 Qty: 1 Tag(s): FCU-06
Horizontal concealed, size 040
With piping, left hand connection
2 row cooling, 1 row preheat
2 way 1.4 Cv

Item: A7 Qty: 1 Tag(s): FCU-07
Horizontal concealed, size 040
With piping, right hand connection
High capacity 3 row clg, 1 row preheat
2 way 1.4 Cv

Item: A9 Qty: 1 Tag(s): FCU-09
Horizontal concealed, size 120
With piping, right hand connection
High capacity 3 row clg, 1 row preheat
1" MERV 13 filter
2 way 2.4 Cv

Item: A11 Qty: 1 Tag(s): FCU-12
Horizontal concealed, size 040
With piping, right hand connection
3 row cooling, 1 row preheat
2 way 1.4 Cv

Item: A12 Qty: 1 Tag(s): FCU-13
Horizontal recessed, size 100
With piping, left hand connection
Color to be selected from Trane standard colors by the architect
High capacity 3 row clg, 1 row preheat
1" MERV 13 filter
2 way 2.4 Cv

Performance Data - Fan Coil Air Conditioners (UniTrane) (FANCOIL)

Tags	FCU-01	FCU-02	FCU-03	FCU-04	FCU-05	FCU-06
Design airflow (cfm)	525	525	825	875	650	300
Total cooling capacity (MBh)	12.08	13.80	17.90	18.70	15.40	7.20
Sensible capacity (MBh)	11.45	12.16	17.59	18.52	14.31	6.17
Cooling EDB (F)	75.20	75.20	75.20	75.20	75.20	75.20
Cooling EWB (F)	62.50	62.50	62.50	62.50	62.50	62.50
Cooling LDB (F)	55.16	53.92	55.61	55.75	54.97	56.29
Cooling LWB (F)	54.57	53.35	55.05	55.17	54.32	54.22
Cooling ent fluid temp (F)	44.00	44.00	44.00	44.00	44.00	44.00
Cooling lvg fluid temp (F)	56.56	55.23	56.76	57.00	56.36	50.51
Cooling delta T (F)	12.56	11.23	12.76	13.00	12.36	6.51
Cooling flow rate (gpm)	1.92	2.45	2.80	2.87	2.48	2.22
Cooling fluid PD (ft H2O)	1.78	2.78	2.36	2.48	2.83	5.63
Fluid freeze pt (F)	32.00	32.00	32.00	32.00	32.00	32.00
Cooling fluid type	Water	Water	Water	Water	Water	Water
Total heating cap. (MBh)	8.57	8.57	13.91	14.28	9.94	5.10
Heating EAT (F)	68.00	68.00	68.00	68.00	68.00	68.00
Heating LAT (F)	83.05	83.05	83.54	83.05	82.10	83.67
Heating ent fluid temp (F)	120.00	120.00	120.00	120.00	120.00	120.00
Heating LWT (F)	91.37	91.37	91.55	91.37	93.07	99.55
Heating delta T (F)	28.63	28.63	28.45	28.63	26.93	20.45
Heating flow rate (gpm)	0.60	0.60	0.98	1.00	0.74	0.50
Heating fluid PD (ft H2O)	1.82	1.82	5.89	6.11	2.62	0.84
ESP (in H2O)	0.400	0.400	0.400	0.400	0.400	0.400
Motor power (W)	178.0	179.0	280.0	318.0	177.0	112.0
Motor rpm #1 (rpm)	1578	1583	1646	1670	1496	1600
Motor rpm #2 (rpm)	-	-	1646	1670	-	-
Motor hp #1 (hp)	0.220	0.220	0.130	0.130	0.220	0.130
Motor hp #2 (hp)	-	-	0.220	0.220	-	-
Min circuit ampacity (A)	2.25	2.25	3.65	3.65	2.25	1.75
Max fuse size (A)	15.00	15.00	15.00	15.00	15.00	15.00
Shipping weight (lb)	131.0	131.0	182.0	182.0	131.0	96.0
Operating weight (lb)	147.0	147.0	200.0	200.0	147.0	109.0
Heating fluid type	Water	Water	Water	Water	Water	Water
Brake HP #1 (hp)	0.156	0.157	0.085	0.097	0.154	0.091
Brake HP #2 (hp)	-	-	0.165	0.188	-	-
Max Brake HP #1 (hp)	0.248	0.248	0.136	0.134	0.239	0.140
Max Brake HP #2 (hp)	-	-	0.250	0.250	-	-

Tags	FCU-07	FCU-08	FCU-09	FCU-11	FCU-12	FCU-13
Design airflow (cfm)	200	475	1000	750	300	575
Total cooling capacity (MBh)	5.60	11.40	20.80	16.80	8.10	15.00
Sensible capacity (MBh)	4.78	10.55	20.28	16.21	6.89	13.24
Cooling EDB (F)	75.20	75.20	75.20	75.20	75.20	75.20
Cooling EWB (F)	62.50	62.50	62.50	62.50	62.50	62.50
Cooling LDB (F)	53.25	54.79	56.01	55.34	54.09	54.04
Cooling LWB (F)	52.69	54.20	55.38	54.79	53.08	53.42
Cooling ent fluid temp (F)	44.00	44.00	44.00	44.00	44.00	44.00
Cooling lvg fluid temp (F)	55.37	56.04	57.44	56.28	53.59	54.50
Cooling delta T (F)	11.37	12.04	13.44	12.28	9.59	10.50
Cooling flow rate (gpm)	0.98	1.89	3.09	2.72	1.68	2.85
Cooling fluid PD (ft H2O)	1.80	1.73	2.85	2.24	4.70	2.45
Fluid freeze pt (F)	32.00	32.00	32.00	32.00	32.00	32.00
Cooling fluid type	Water	Water	Water	Water	Water	Water
Total heating cap. (MBh)	4.37	7.67	15.58	11.43	5.10	11.47
Heating EAT (F)	68.00	68.00	68.00	68.00	68.00	68.00
Heating LAT (F)	88.14	82.89	82.36	82.05	83.67	86.39
Heating ent fluid temp (F)	120.00	120.00	120.00	120.00	120.00	120.00
Heating LWT (F)	102.48	89.23	92.36	85.28	99.55	91.62
Heating delta T (F)	17.52	30.77	27.64	34.72	20.45	28.38
Heating flow rate (gpm)	0.50	0.50	1.13	0.66	0.50	0.81
Heating fluid PD (ft H2O)	0.84	1.33	7.55	2.99	0.84	4.23
ESP (in H2O)	0.400	0.400	0.400	0.400	0.400	0.400
Motor power (W)	69.0	155.0	404.0	240.0	116.0	166.0
Motor rpm #1 (rpm)	1379	1510	1787	1573	1630	1408
Motor rpm #2 (rpm)	-	-	1787	1573	-	1408
Motor hp #1 (hp)	0.130	0.220	0.130	0.130	0.130	0.130
Motor hp #2 (hp)	-	-	0.220	0.220	-	0.220
Min circuit ampacity (A)	1.75	2.25	3.65	3.65	1.75	3.65
Max fuse size (A)	15.00	15.00	15.00	15.00	15.00	15.00
Shipping weight (lb)	96.0	131.0	182.0	182.0	96.0	243.0
Operating weight (lb)	109.0	147.0	200.0	200.0	109.0	253.0
Heating fluid type	Water	Water	Water	Water	Water	Water
Brake HP #1 (hp)	0.050	0.133	0.124	0.072	0.095	0.047
Brake HP #2 (hp)	-	-	0.240	0.139	-	0.091
Max Brake HP #1 (hp)	0.156	0.241	0.130	0.143	0.138	0.155
Max Brake HP #2 (hp)	-	-	0.250	0.247	-	0.225

Mechanical Specifications - Fan Coil Air Conditioning Units
Item: A1 - A12 Qty: 12 Tag(s): FCU-01, FCU-02, FCU-03, FCU-04, FCU-05, FCU-06, FCU-07, FCU-08, FCU-09, FCU-11, FCU-12, FCU-13

Performance Data
Capacity: Unit capacities are certified under the Industry Room Fan Coil Air Conditioner Certification Program in accordance with AHRI standard 440-97. All standard units are UL and CUL approved.

Concealed Unit Basic Construction
The basic unit includes a chassis, coil(s), fan wheel(s), fan casing(s), fan board and motor(s). Units also include non-corrosive main drain pan which is positively sloped in every plane and is insulated with closed cell insulation. Thermoplastic auxiliary drain pan is included on fan coil units with standard piping packages. Steel parts exposed to moisture are galvanized. The fan board assembly and both drain pans are easily removable. The fan board assembly includes a quick-disconnect motor plug. The chassis is the structural frame constructed of 18 gauge galvanized steel. The unit is acoustically and thermally insulated with closed cell insulation.

Recessed Unit Basic Construction
The basic unit includes a chassis, coil(s), fan wheel(s) and fan casing(s), fan board and motor(s). Units also include non-corrosive main drain pan which is positively sloped in every plane and insulated with closed cell insulation. A thermoplastic auxiliary drain pan is included on fan coil units with standard piping packages. Steel parts exposed to moisture are galvanized. The fan board assembly and both drains pan are easily removable. The fan board assembly includes a quick-disconnect motor plug. The chassis is the structural frame constructed of 18 gauge galvanized steel. The unit is acoustically and thermally insulated with closed cell insulation. Exposed recessed panel is fabricated from 16 gauge steel and ships separate from the unit. All panels are made rigid by channel forming.

Unit Finish
All cabinet parts are cleaned, bonderized, phosphatized and painted with one of six decorator colors. Standard finish meets ASTM B117 specifications (salt spray test).

Fan
The galvanized steel fan wheels are centrifugal forward-curved and double-width. Fan wheels and housings are corrosion resistant. Fan housings are constructed of formed sheet metal.

Electronically Commutated Motors (ECM)
All motors are brushless DC (BLDC) electronically commutated motors (ECM) factory programmed and run tested in assembled units. The motor controller is mounted in a control box with a built-in integrated user interface and LED tachometer. If adjustments are needed, motor parameters can be adjusted through momentary contact switches accessible without factory service personnel on the motor control board. Motors will soft ramp between speeds to lessen the acoustics due to sudden speed changes. Motors can be operated at three speeds or at variable speed with factory supplied or field supplied controllers. The motor will choose the highest speed if there are simultaneous or conflicting speed requests. All motors have integral overload protection with a maximum ambient operating temperature of 104.0 F and use permanently sealed ball bearings. Motors can operate at plus or minus 10 percent of rated voltage on all speed settings.

Coil
All water coils are burst tested at 450.00 psi (air) and leak tested at 100.00 psi (air under water). Maximum main coil working pressure is 300.00 psi. Maximum entering water temperature is 200.0 F. Tubes and U-bends are 3/8" OD copper. Fins are aluminum and are mechanically bonded to the copper tubes. Coil connections are 5/8" OD copper tubing.

Coil Air Vents - Manual
Manual air vents are rated at 300 psig.

Basic Piping Package with Manual Circuit Setter
The basic piping package with circuit setter includes a shut-off ball valve on the supply line and a control valve and manual circuit setter on the return line. Three-way packages have a balancing fitting on the bypass line. Ball valves allow the unit to be cut off for service purposes. These valves have a two inch handle that rotate 90 degrees to a fully open position. A manual circuit setter acts as both a flow setting device and a stop valve. The manual circuit setter includes ¼ in. Schrader ports in the valve body. These ports are used to measure the pressure drop across the valve. The pressure drop can be compared to factory supplied curves that relate the pressure drop to a specific flow rate. This valve also has a memory stop that helps find the correct setting quickly. All piping packages are burst tested at 300

PSIG (air) and leak tested at 100 PSIG (air under water). The interconnecting piping maximum working pressure is 300 PSIG. The maximum entering fluid temperature is 200.0 F. Any condensation from the piping package is designed to be collected by the auxiliary drain pan. Insulation of the piping package is not required.

2-Way, Modulating and Analog Control Valve
-Valve Type
2-way QCV
-Cv Ranges
1.4, 2.4, 3.4
-Material
QCV Body - Forged Brass
QCV Ball - Chrome Plated Brass
QCV Stem - Brass
Seats - PTFE
O-Ring Seals - EPDM
-Temperature Limits
212.0 F fluid
212.0 F ambient
-Operating Pressure
360.00 psi max
-Close-off Pressure
75.00 psi

Installation Note
Unit leveling and drain line pitch: Set unit level by checking the casing. The Trane Company and the industry in general recommends a drain line pitch of 1" drop per ten feet.

WARNING: Tighten all unions when piping units. Factory tightens unions, but they may loosen during shipping.

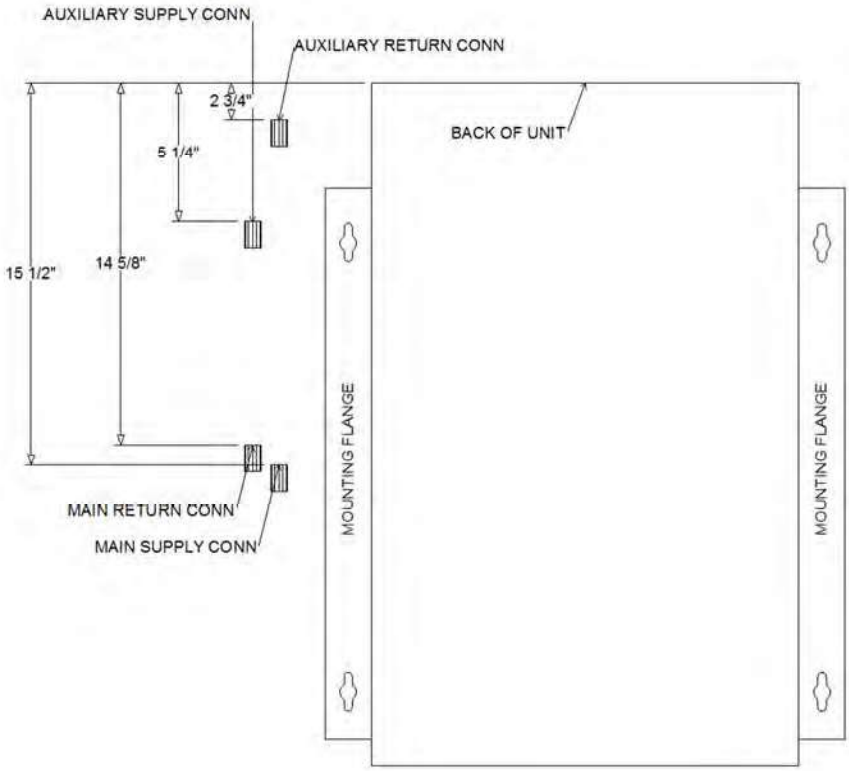
Modulating and Analog Actuator – Cooling & Heating
-Drive Time
75 seconds @ 60 Hz @ 1.4 Cv
55 seconds @ 60 Hz @ 2.4 Cv
62 seconds @ 60 Hz @ 3.4 Cv
-Voltage
24 VAC 50 & 60 Hz
-Power Consumption
0.3 watts
-Operating Ambient Temperature
35.0 F to 104.0 F ambient
36.0 F to 200.0 F fluid

CSTI - Thermostat Interface
The control interface is intended to be used with a field-supplied, low-voltage thermostat or controller. The control box contains a relay board which includes a line voltage to 24-volt transformer; quiet contactors (for electric heat units); and an optional disconnect switch. All end devices are wired to a low voltage terminal block and run tested, so the only a power connection and thermostat connection is needed to commission the unit. When NO valves are selected, inverting relays are provided for use with standard thermostats.

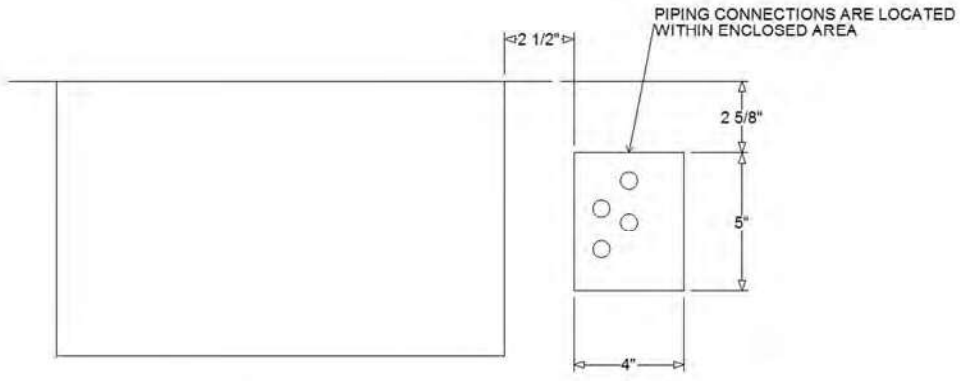
Disconnect Switch
A unit mounted, non-fused disconnect switch is available as a standard option on all units.

1" MERV 13 Filter
The filter is concealed from sight and easily removable. A 1"MERV 13 filter is provided in the unit. The MERV 13 filters have a rating based on ASHRAE Standard 52.2. The average dust spot efficiency is no less than 90% percent efficiency on 1 - 3 micron particles and greater than 90% efficiency on 3 - 10 micron particles when tested in accordance with ASHRAE test standard 52.2 atmospheric dust spot method.

Dimensional Drawings - Fan Coil Air Conditioning Units
Item: A1 - A4, A6, A8, A10, A12 Qty: 8 Tag(s): FCU-01, FCU-02, FCU-03, FCU-04, FCU-06, FCU-08, FCU-11, FCU-13



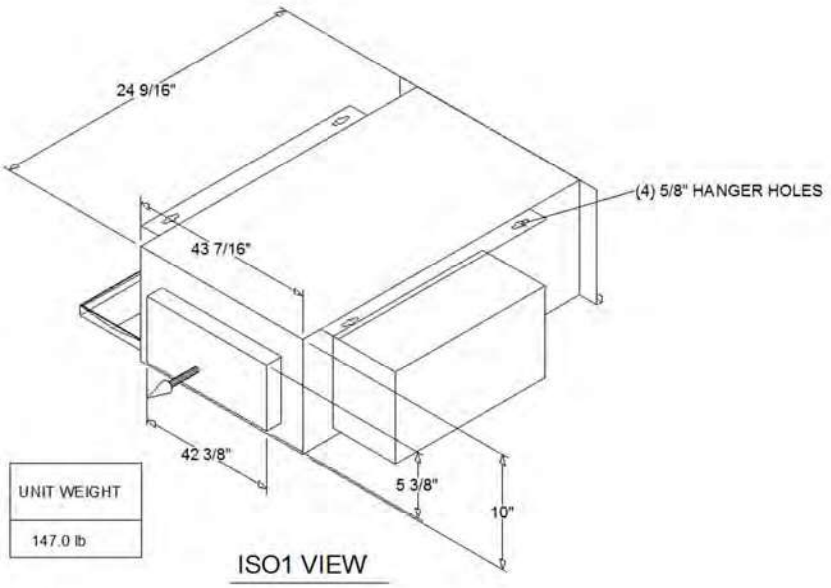
TOP VIEW



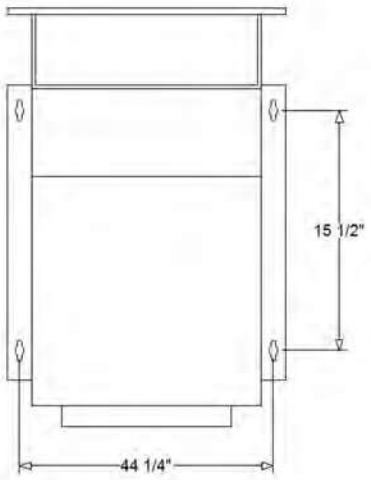
BACK VIEW

NOTES:
1. PIPING CONNECTIONS ARE 5/8" OUTSIDE DIAMETER COPPER.
2. LOCATING DIMENSIONS HAVE A PLUS OR MINUS 1" TOLERANCE.

Dimensional Drawings - Fan Coil Air Conditioning Units
Item: A1, A2, A8 Qty: 3 Tag(s): FCU-01, FCU-02, FCU-08



ISO1 VIEW



BOTTOM VIEW

NOTES:

1. ARROW(S) INDICATE THE DIRECTION OF AIRFLOW.

2. FILTERS ARE ACCESSED THROUGH THE BOTTOM OF UNIT.

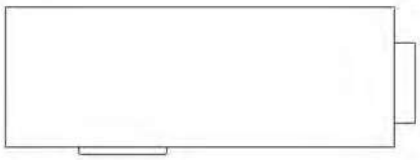
3. CONTROL WIRES SHOULD ENTER CONTROL BOX THROUGH TOP FRONT KNOCKOUT.

4. POWER WIRES ARE TO ENTER CONTROL BOX THROUGH FRONT BOTTOM CONDUIT ENTRANCE KNOCKOUTS.

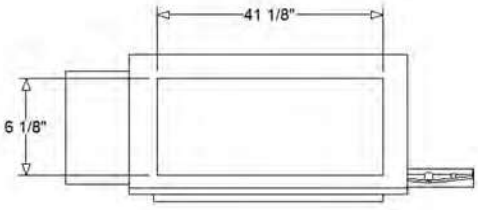
5. PIPING CONNECTIONS ARE 5/8" OD COPPER.

6. AUXILIARY DRAINPAN CONN: MAIN: 7/8" OD TUBE & CLAMP SECONDARY: 3/8" ID TUBE

7. STANDARD ENDPOCKET WIDTH IS 8"



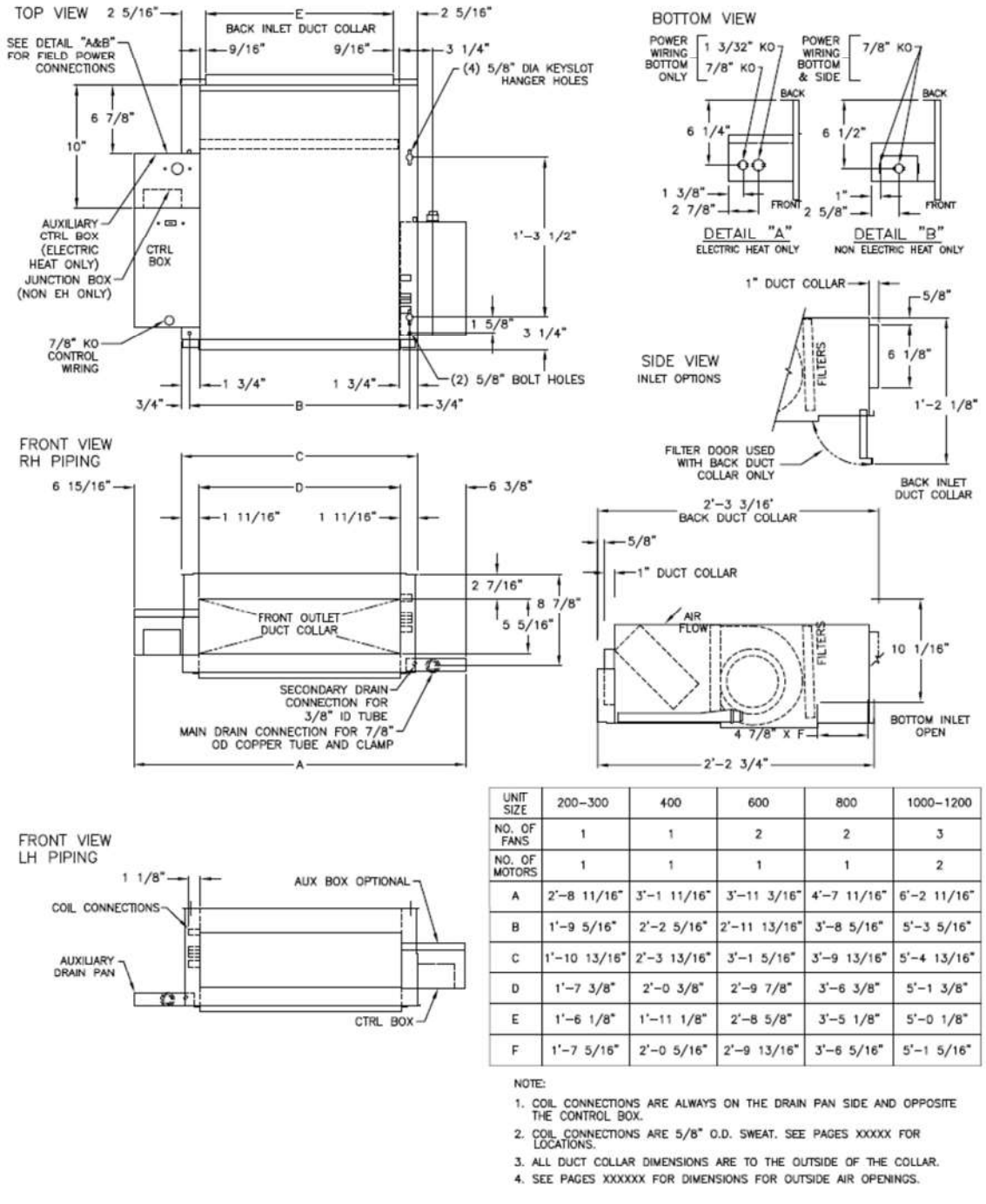
LEFT VIEW



BACK VIEW

RIGHT VIEW

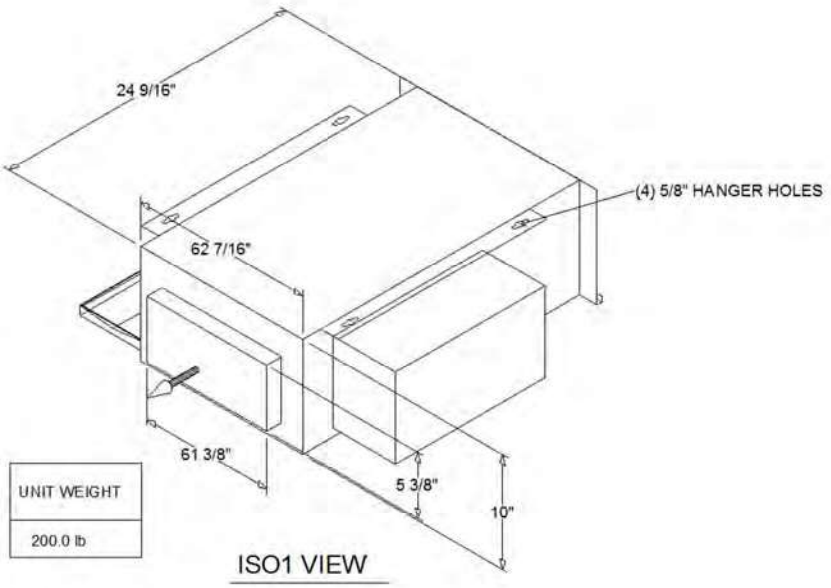
Dimensional Drawings - Fan Coil Air Conditioning Units
Item: A1 - A11 Qty: 11 Tag(s): FCU-01, FCU-02, FCU-03, FCU-04, FCU-05, FCU-06, FCU-07, FCU-08, FCU-09, FCU-11, FCU-12



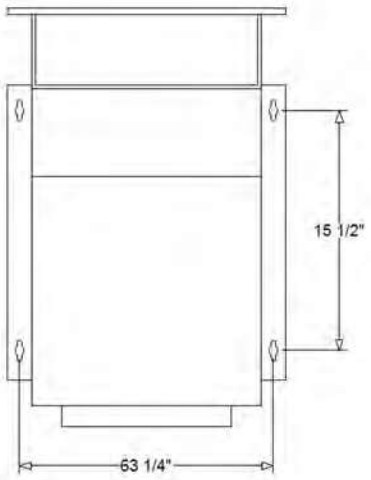
UNIT SIZE	200–300	400	600	800	1000–1200
NO. OF FANS	1	1	2	2	3
NO. OF MOTORS	1	1	1	1	2
A	2'–8 11/16"	3'–1 11/16"	3'–11 3/16"	4'–7 11/16"	6'–2 11/16"
B	1'–9 5/16"	2'–2 5/16"	2'–11 13/16"	3'–8 5/16"	5'–3 5/16"
C	1'–10 13/16"	2'–3 13/16"	3'–1 5/16"	3'–9 13/16"	5'–4 13/16"
D	1'–7 3/8"	2'–0 3/8"	2'–9 7/8"	3'–6 3/8"	5'–1 3/8"
E	1'–6 1/8"	1'–11 1/8"	2'–8 5/8"	3'–5 1/8"	5'–0 1/8"
F	1'–7 5/16"	2'–0 5/16"	2'–9 13/16"	3'–6 5/16"	5'–1 5/16"

NOTE:
1. COIL CONNECTIONS ARE ALWAYS ON THE DRAIN PAN SIDE AND OPPOSITE THE CONTROL BOX.
2. COIL CONNECTIONS ARE 5/8" O.D. SWEAT. SEE PAGES XXXXX FOR LOCATIONS.
3. ALL DUCT COLLAR DIMENSIONS ARE TO THE OUTSIDE OF THE COLLAR.
4. SEE PAGES XXXXXX FOR DIMENSIONS FOR OUTSIDE AIR OPENINGS.

Dimensional Drawings - Fan Coil Air Conditioning Units
Item: A3, A4, A10 Qty: 3 Tag(s): FCU-03, FCU-04, FCU-11



ISO1 VIEW



BOTTOM VIEW

NOTES:

1. ARROW(S) INDICATE THE DIRECTION OF AIRFLOW.

2. FILTERS ARE ACCESSED THROUGH THE BOTTOM OF UNIT.

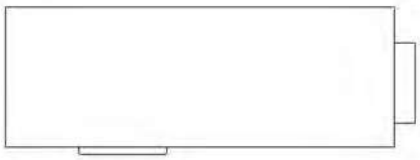
3. CONTROL WIRES SHOULD ENTER CONTROL BOX THROUGH TOP FRONT KNOCKOUT.

4. POWER WIRES ARE TO ENTER CONTROL BOX THROUGH FRONT BOTTOM CONDUIT ENTRANCE KNOCKOUTS.

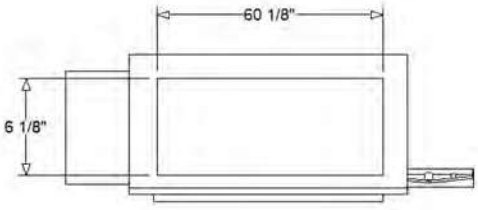
5. PIPING CONNECTIONS ARE 5/8" OD COPPER.

6. AUXILIARY DRAINPAN CONN: MAIN: 7/8" OD TUBE & CLAMP SECONDARY: 3/8" ID TUBE

7. STANDARD ENDPOCKET WIDTH IS 8"



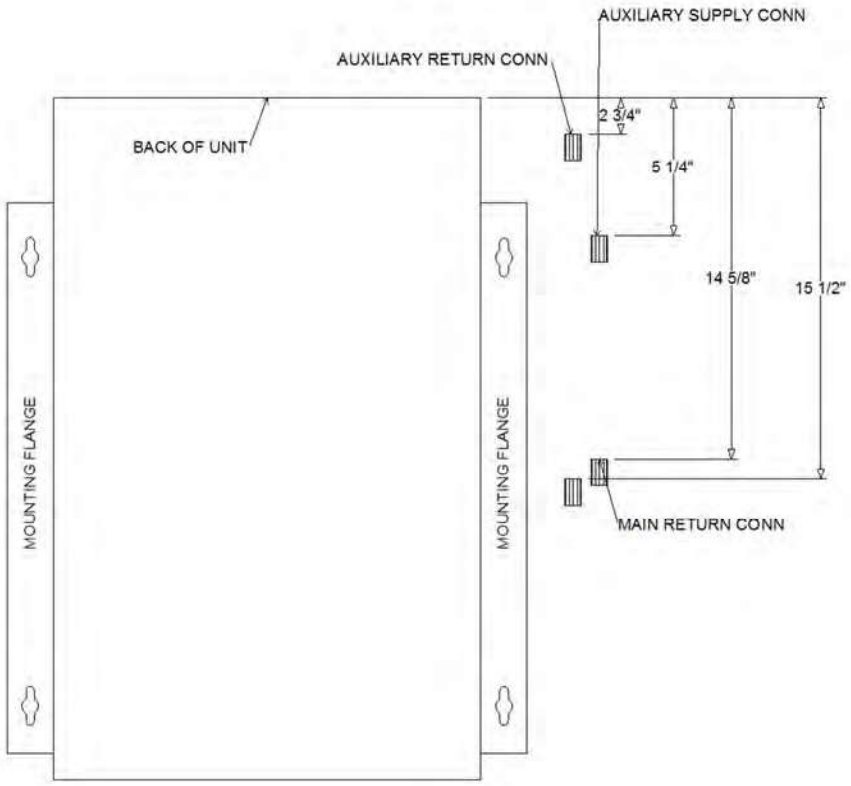
LEFT VIEW



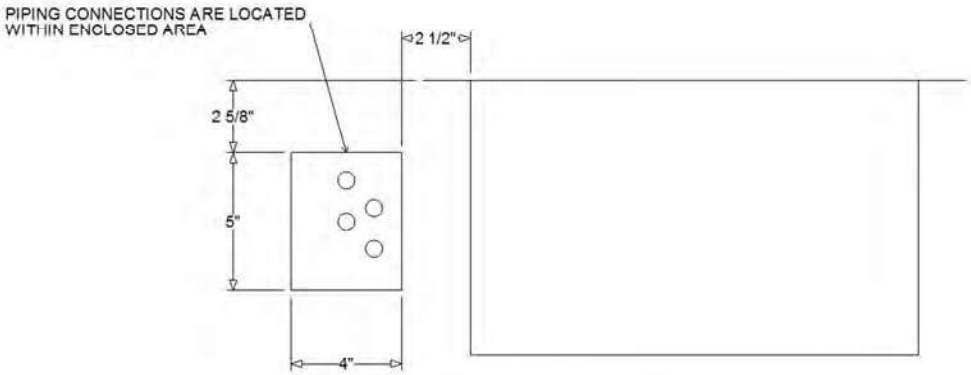
BACK VIEW

RIGHT VIEW

Dimensional Drawings - Fan Coil Air Conditioning Units
Item: A5, A7, A9, A11 Qty: 4 Tag(s): FCU-05, FCU-07, FCU-09, FCU-12



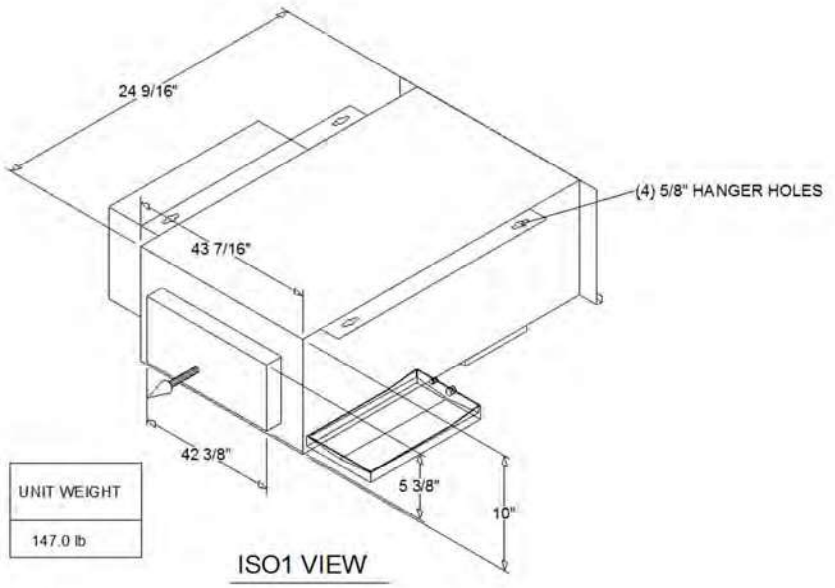
TOP VIEW



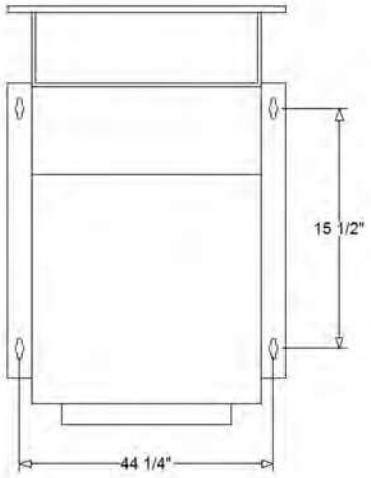
BACK VIEW

NOTES:
1. PIPING CONNECTIONS ARE 5/8" OUTSIDE DIAMETER COPPER.
2. LOCATING DIMENSIONS HAVE A PLUS OR MINUS 1" TOLERANCE.

Dimensional Drawings - Fan Coil Air Conditioning Units
Item: A5 Qty: 1 Tag(s): FCU-05



ISO1 VIEW



BOTTOM VIEW

NOTES:

1. ARROW(S) INDICATE THE DIRECTION OF AIRFLOW.

2. FILTERS ARE ACCESSED THROUGH THE BOTTOM OF UNIT.

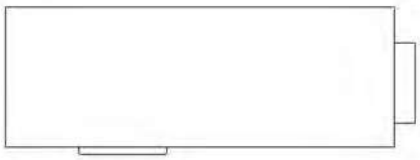
3. CONTROL WIRES SHOULD ENTER CONTROL BOX THROUGH TOP FRONT KNOCKOUT.

4. POWER WIRES ARE TO ENTER CONTROL BOX THROUGH FRONT BOTTOM CONDUIT ENTRANCE KNOCKOUTS.

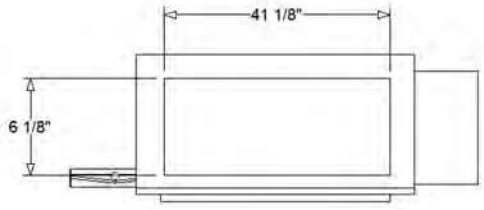
5. PIPING CONNECTIONS ARE 5/8" OD COPPER.

6. AUXILIARY DRAINPAN CONN: MAIN: 7/8" OD TUBE & CLAMP SECONDARY: 3/8" ID TUBE

7. STANDARD ENDPOCKET WIDTH IS 8"



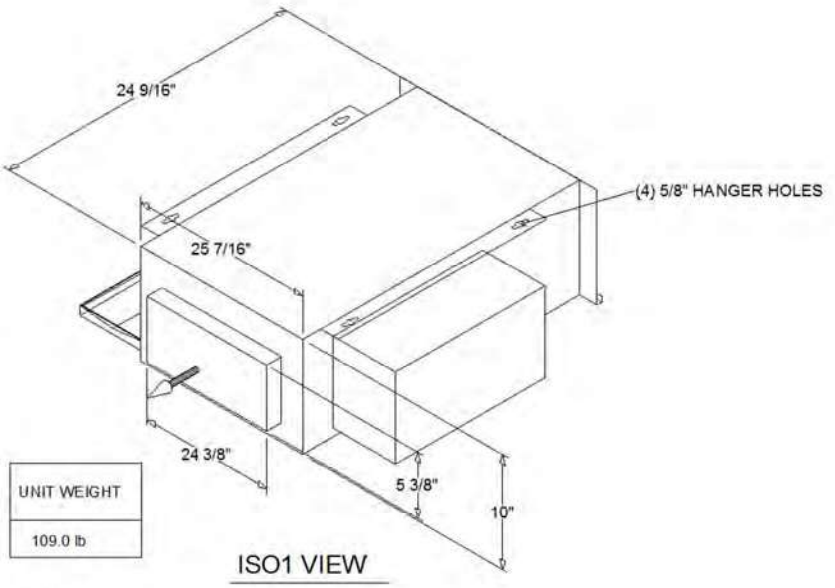
LEFT VIEW



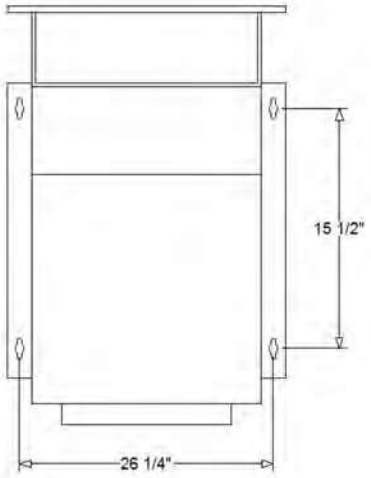
BACK VIEW

RIGHT VIEW

Dimensional Drawings - Fan Coil Air Conditioning Units
Item: A6 Qty: 1 Tag(s): FCU-06



ISO1 VIEW



BOTTOM VIEW

NOTES:

1. ARROW(S) INDICATE THE DIRECTION OF AIRFLOW.

2. FILTERS ARE ACCESSED THROUGH THE BOTTOM OF UNIT.

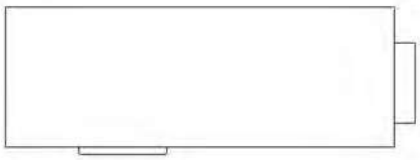
3. CONTROL WIRES SHOULD ENTER CONTROL BOX THROUGH TOP FRONT KNOCKOUT.

4. POWER WIRES ARE TO ENTER CONTROL BOX THROUGH FRONT BOTTOM CONDUIT ENTRANCE KNOCKOUTS.

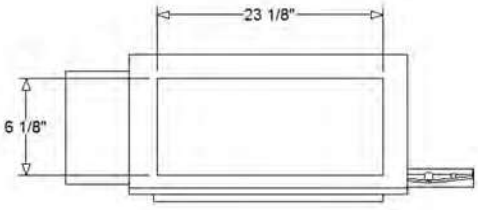
5. PIPING CONNECTIONS ARE 5/8" OD COPPER.

6. AUXILIARY DRAINPAN CONN:
MAIN: 7/8" OD TUBE & CLAMP
SECONDARY: 3/8" ID TUBE

7. STANDARD ENDPOCKET WIDTH IS 8"



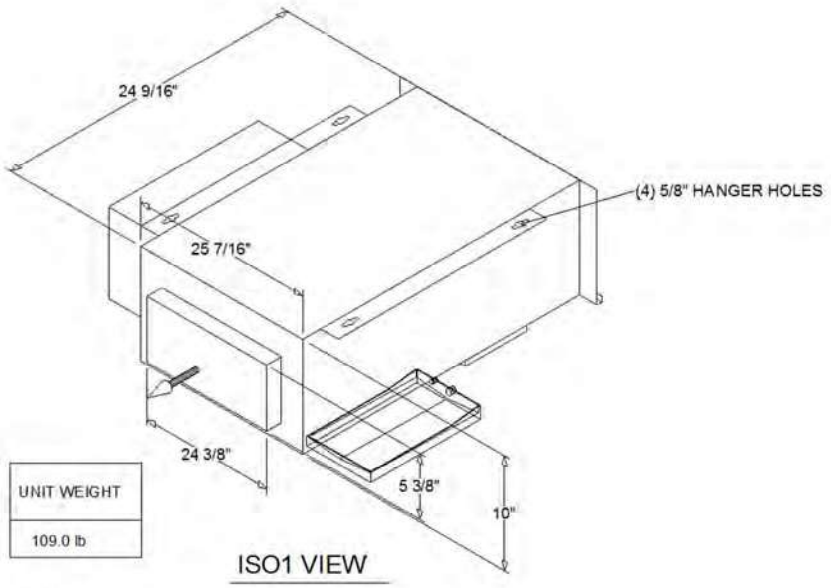
LEFT VIEW



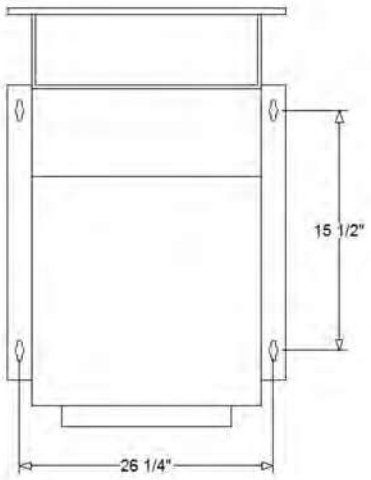
BACK VIEW

RIGHT VIEW

Dimensional Drawings - Fan Coil Air Conditioning Units
Item: A7, A11 Qty: 2 Tag(s): FCU-07, FCU-12



ISO1 VIEW



BOTTOM VIEW

NOTES:

1. ARROW(S) INDICATE THE DIRECTION OF AIRFLOW.

2. FILTERS ARE ACCESSED THROUGH THE BOTTOM OF UNIT.

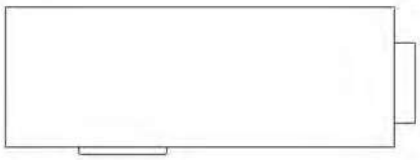
3. CONTROL WIRES SHOULD ENTER CONTROL BOX THROUGH TOP FRONT KNOCKOUT.

4. POWER WIRES ARE TO ENTER CONTROL BOX THROUGH FRONT BOTTOM CONDUIT ENTRANCE KNOCKOUTS.

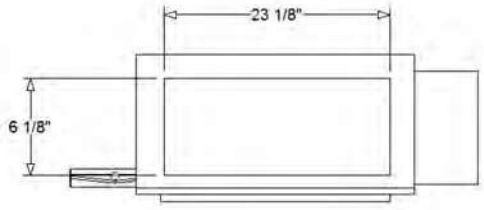
5. PIPING CONNECTIONS ARE 5/8" OD COPPER.

6. AUXILIARY DRAINPAN CONN:
MAIN: 7/8" OD TUBE & CLAMP
SECONDARY: 3/8" ID TUBE

7. STANDARD ENDPOCKET WIDTH IS 8"



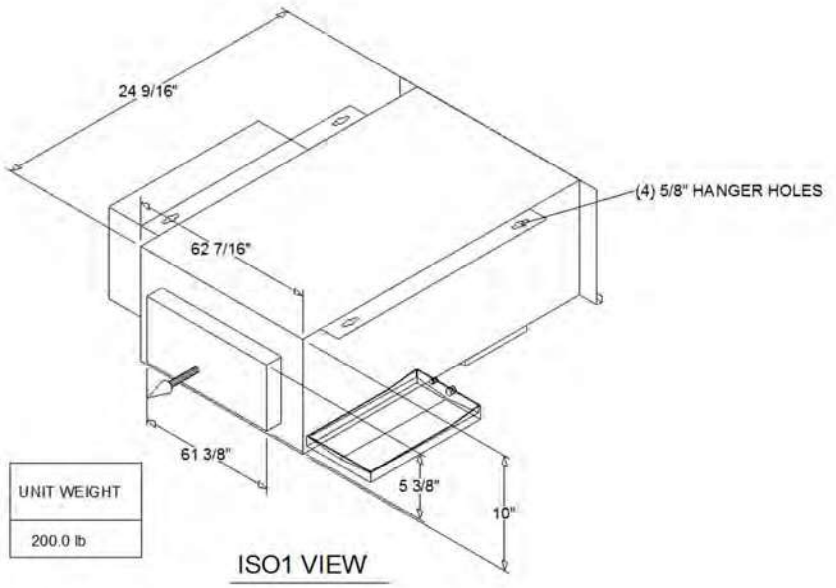
LEFT VIEW



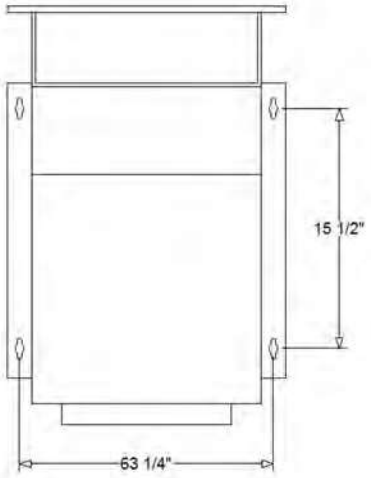
BACK VIEW

RIGHT VIEW

Dimensional Drawings - Fan Coil Air Conditioning Units
Item: A9 Qty: 1 Tag(s): FCU-09



ISO1 VIEW



BOTTOM VIEW

NOTES:

1. ARROW(S) INDICATE THE DIRECTION OF AIRFLOW.

2. FILTERS ARE ACCESSED THROUGH THE BOTTOM OF UNIT.

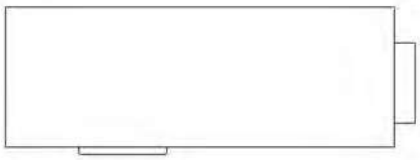
3. CONTROL WIRES SHOULD ENTER CONTROL BOX THROUGH TOP FRONT KNOCKOUT.

4. POWER WIRES ARE TO ENTER CONTROL BOX THROUGH FRONT BOTTOM CONDUIT ENTRANCE KNOCKOUTS.

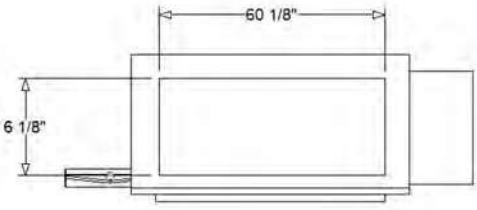
5. PIPING CONNECTIONS ARE 5/8" OD COPPER.

6. AUXILIARY DRAINPAN CONN: MAIN: 7/8" OD TUBE & CLAMP SECONDARY: 3/8" ID TUBE

7. STANDARD ENDPOCKET WIDTH IS 8"



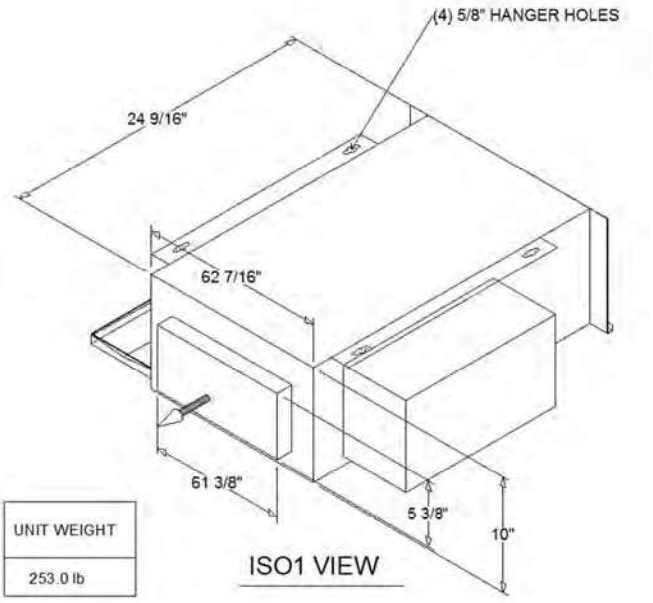
LEFT VIEW



BACK VIEW

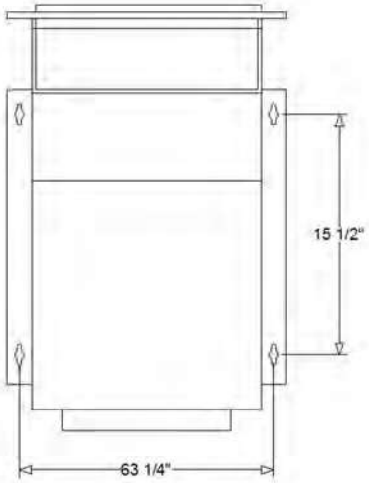
RIGHT VIEW

Dimensional Drawings - Fan Coil Air Conditioning Units
Item: A12 Qty: 1 Tag(s): FCU-13



UNIT WEIGHT
253.0 lb

ISO1 VIEW



BOTTOM VIEW

NOTES:

1. ARROW(S) INDICATE THE DIRECTION OF AIRFLOW.

2. FILTERS ARE ACCESSED THROUGH THE BOTTOM OF UNIT.

3. RECESSED UNIT CEILING CUTOUT OPENING IS 28 3/8" X 76 1/8". RECESSING TRIM RING IS CENTERED IN THE OPENING.

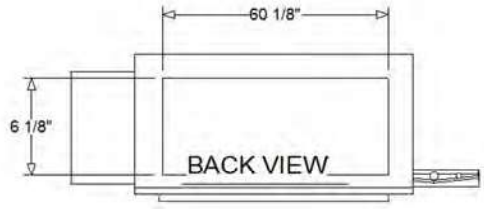
4. CONTROL WIRES SHOULD ENTER CONTROL BOX THROUGH TOP FRONT KNOCKOUT.

5. POWER WIRES ARE TO ENTER CONTROL BOX THROUGH FRONT BOTTOM CONDUIT ENTRANCE KNOCKOUTS.

6. AUXILIARY DRAINPAN CONN: MAIN: 7/8" OD TUBE & CLAMP SECONDARY: 3/8" ID TUBE

7. PIPING CONNECTIONS ARE 5/8" OD COPPER.

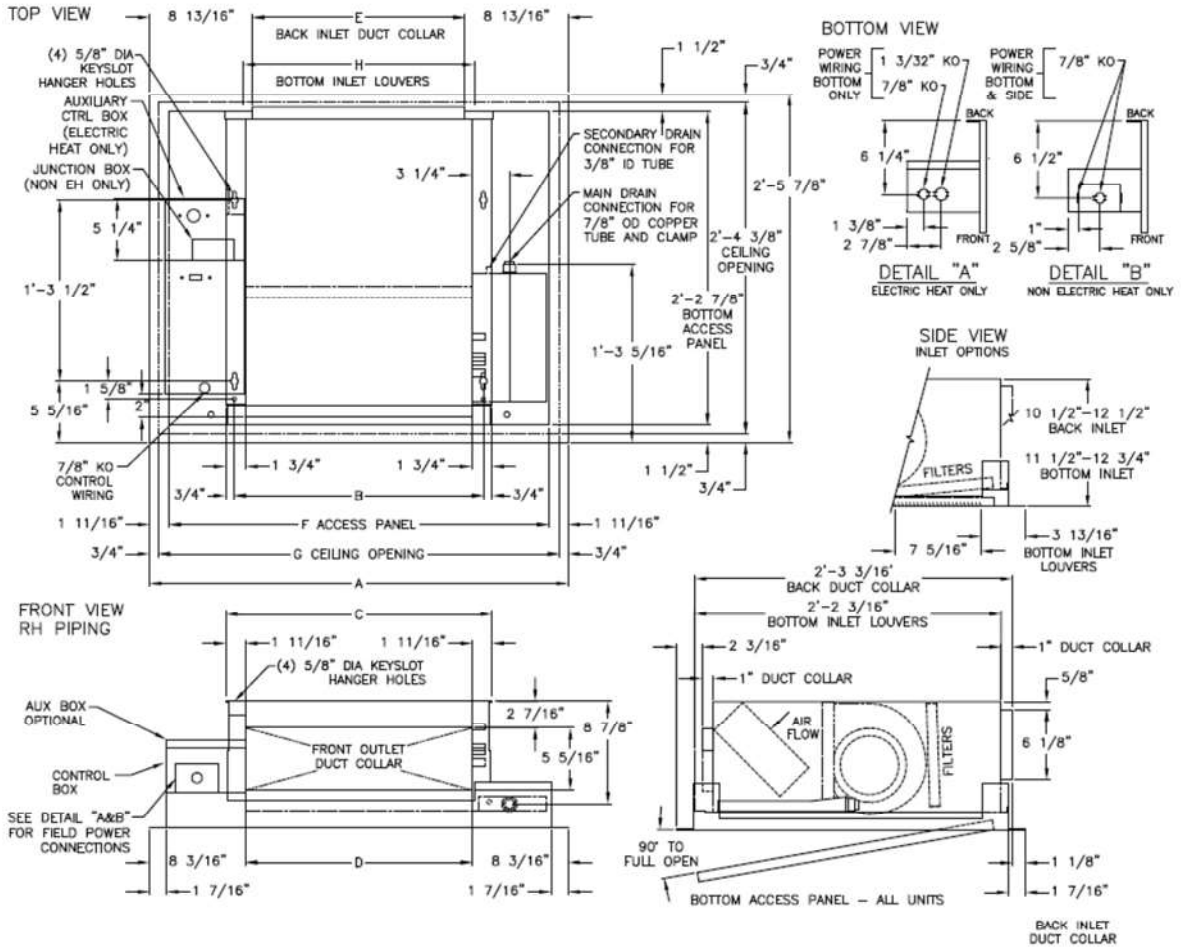
LEFT VIEW



BACK VIEW

RIGHT VIEW

Dimensional Drawings - Fan Coil Air Conditioning Units
Item: A12 Qty: 1 Tag(s): FCU-13



UNIT SIZE	200–300	400	600	800	1000–1200
NO. OF FANS	1	1	2	2	3
NO. OF MOTORS	1	1	1	1	2
A	2'–11 13/16"	3'–4 13/16"	4'–2 5/16"	4'–10 13/16"	6'–5 13/16"
B	1'–9 5/16"	2'–2 5/16"	2'–11 13/16"	3'–8 5/16"	5'–3 5/16"
C	1'–10 13/16"	2'–3 13/16"	3'–1 5/16"	3'–9 13/16"	5'–4 13/16"
D	1'–7 3/8"	2'–0 3/8"	2'–9 7/8"	3'–6 3/8"	5'–1 3/8"
E	1'–6 1/8"	1'–11 1/8"	2'–8 5/8"	3'–5 1/8"	5'–0 1/8"
F	2'–8 7/16"	3'–1 7/16"	3'–10 15/16"	4'–7 7/16"	6'–2 7/16"
G	2'–10 5/16"	3'–3 5/16"	4'–0 13/16"	4'–9 5/16"	6'–4 5/16"
H	1'–7 3/4"	1'–11 3/4"	2'–7 3/4"	3'–3 3/4"	4'–11 3/4"

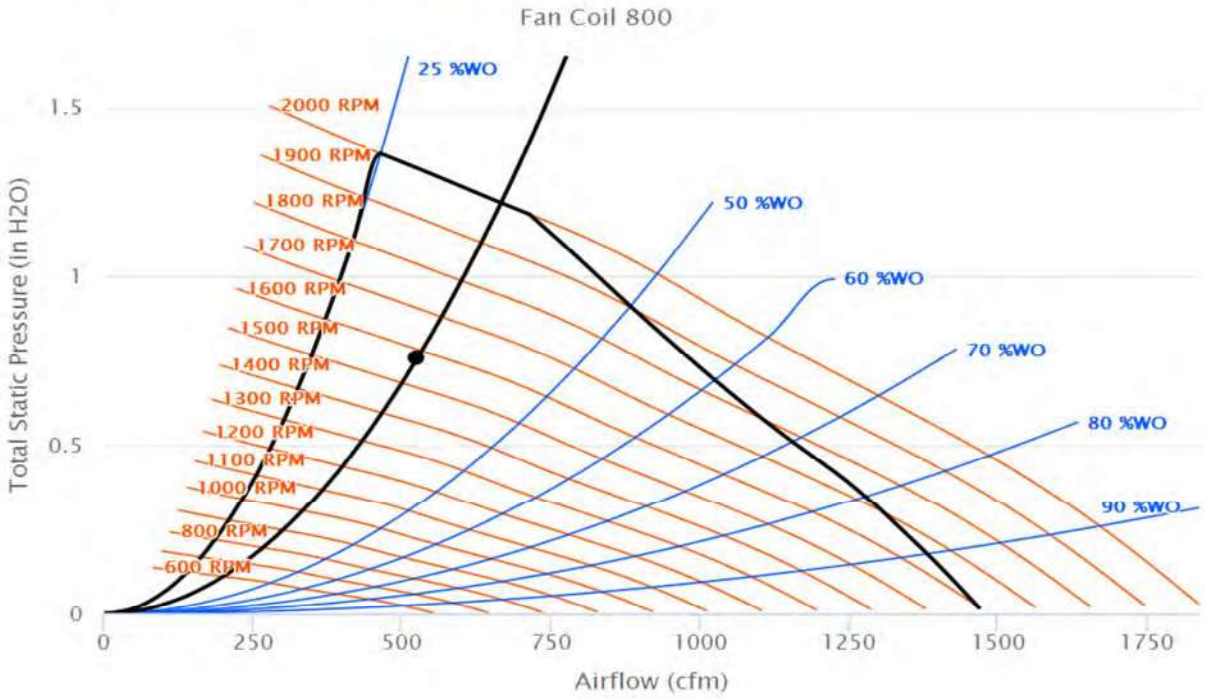
NOTE:

1. COIL CONNECTIONS ARE ALWAYS ON THE DRAIN PAN SIDE AND OPPOSITE THE CONTROL BOX.
2. COIL CONNECTIONS ARE 5/8" O.D. SWEAT. SEE PAGES XXXXX FOR LOCATIONS.
3. ALL DUCT COLLAR DIMENSIONS ARE TO THE OUTSIDE OF THE COLLAR.
4. SEE PAGES XXXXXX FOR DIMENSIONS FOR OUTSIDE AIR OPENINGS.

Fan Curve - Fan Coil Air Conditioning Units
Item: A1 Qty: 1 Tag(s): FCU-01

Fan Details

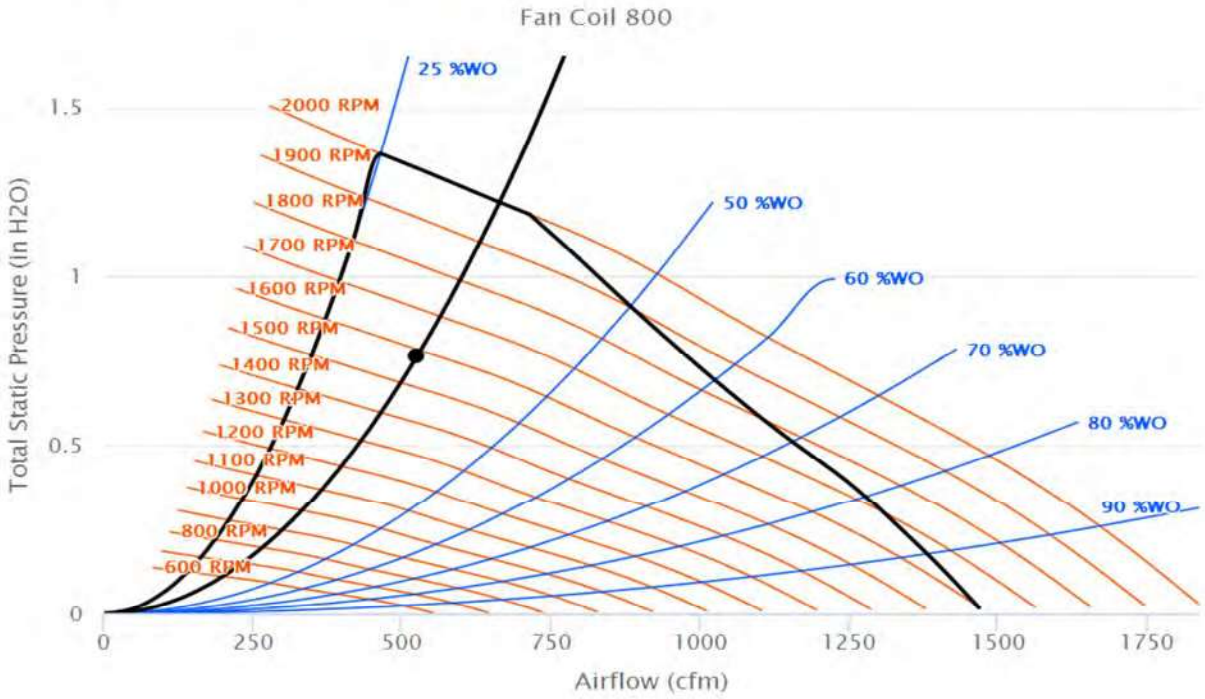
Unit Size	Size 080	**Operating Brake Power**	0.156 hp
Operating Airflow	525 cfm	**Altitude**	0.00 ft
Operating Static Pressure	0.758 in H2O	**Design Temp.**	75.20 F
Operating RPM	1,578 rpm		



Fan Curve - Fan Coil Air Conditioning Units
Item: A2 Qty: 1 Tag(s): FCU-02

Fan Details

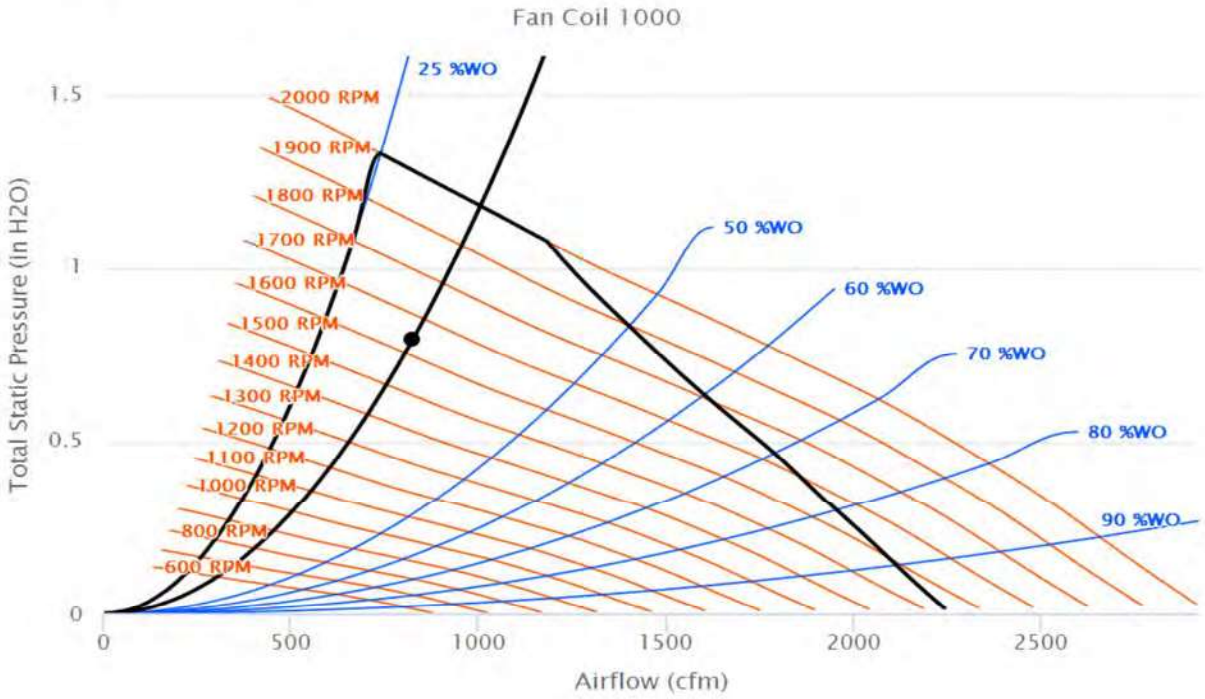
Unit Size	Size 080	**Operating Brake Power**	0.157 hp
Operating Airflow	525 cfm	**Altitude**	0.00 ft
Operating Static Pressure	0.765 in H2O	**Design Temp.**	75.20 F
Operating RPM	1,583 rpm		



Fan Curve - Fan Coil Air Conditioning Units
Item: A3 Qty: 1 Tag(s): FCU-03

Fan Details

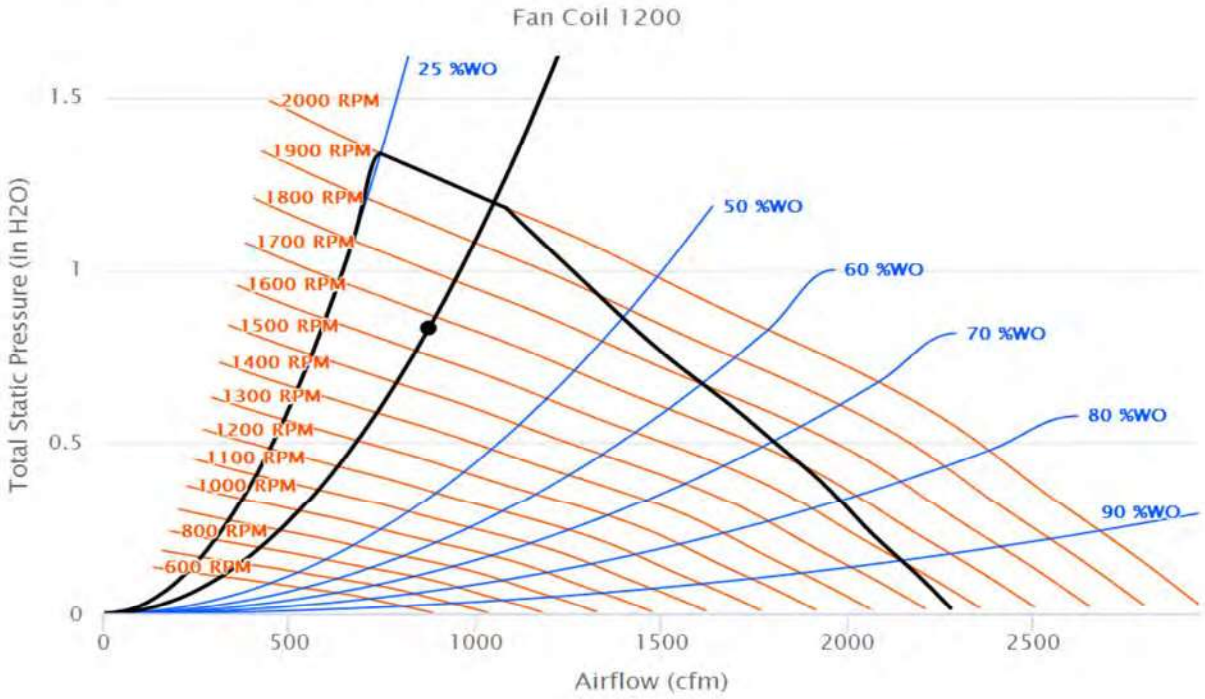
Unit Size	Size 100	**Operating Brake Power**	0.085 hp
Operating Airflow	825 cfm	**Altitude**	0.00 ft
Operating Static Pressure	0.796 in H2O	**Design Temp.**	75.20 F
Operating RPM	1,646 rpm		



Fan Curve - Fan Coil Air Conditioning Units
Item: A4 Qty: 1 Tag(s): FCU-04

Fan Details

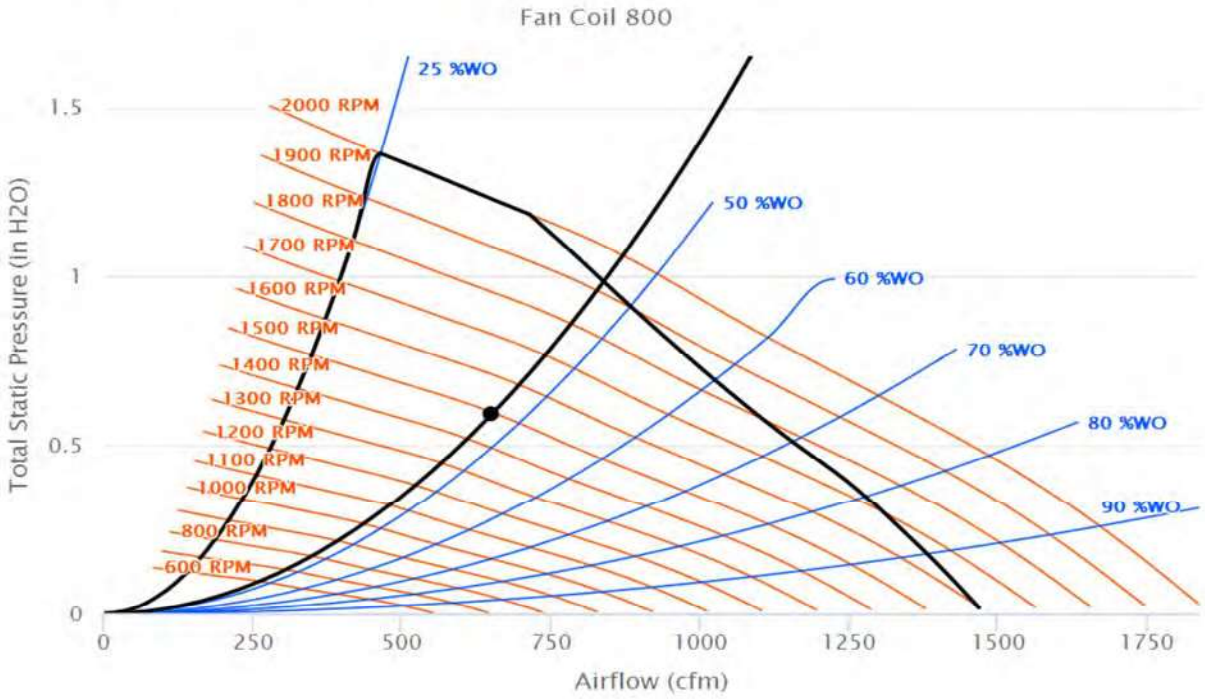
Unit Size	Size 120	**Operating Brake Power**	0.097 hp
Operating Airflow	875 cfm	**Altitude**	0.00 ft
Operating Static Pressure	0.832 in H2O	**Design Temp.**	75.20 F
Operating RPM	1,670 rpm		



Fan Curve - Fan Coil Air Conditioning Units
Item: A5 Qty: 1 Tag(s): FCU-05

Fan Details

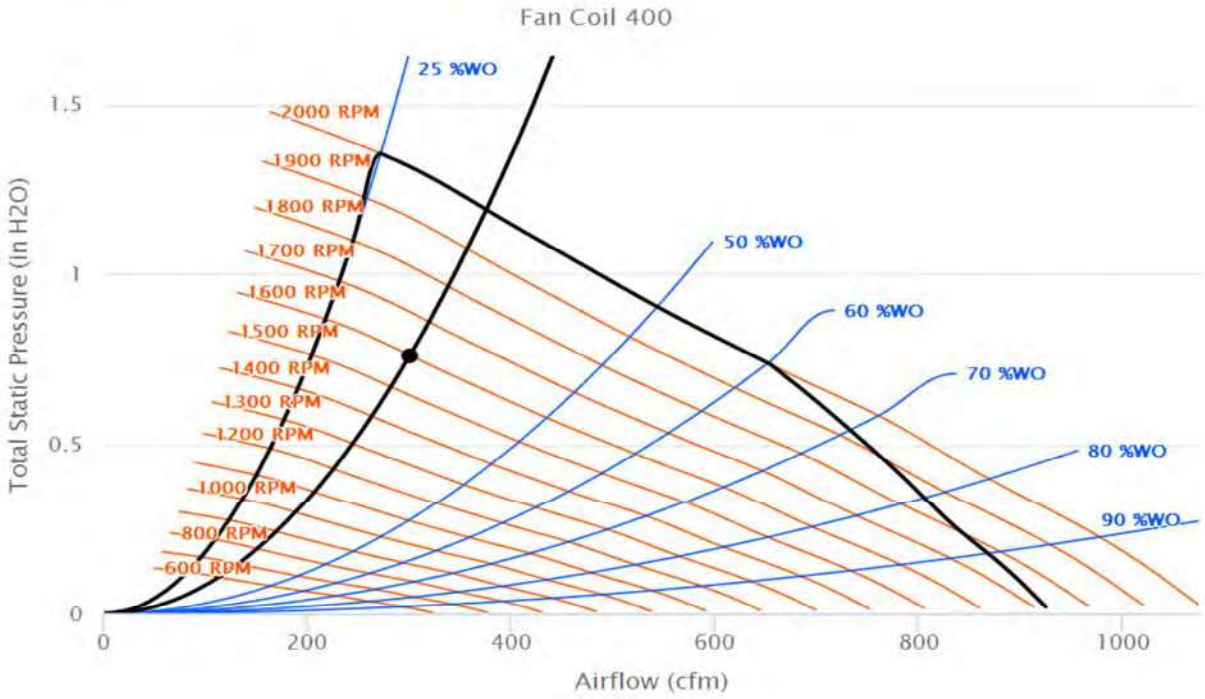
Unit Size	Size 080	**Operating Brake Power**	0.154 hp
Operating Airflow	650 cfm	**Altitude**	0.00 ft
Operating Static Pressure	0.593 in H2O	**Design Temp.**	75.20 F
Operating RPM	1,496 rpm		



Fan Curve - Fan Coil Air Conditioning Units
Item: A6 Qty: 1 Tag(s): FCU-06

Fan Details

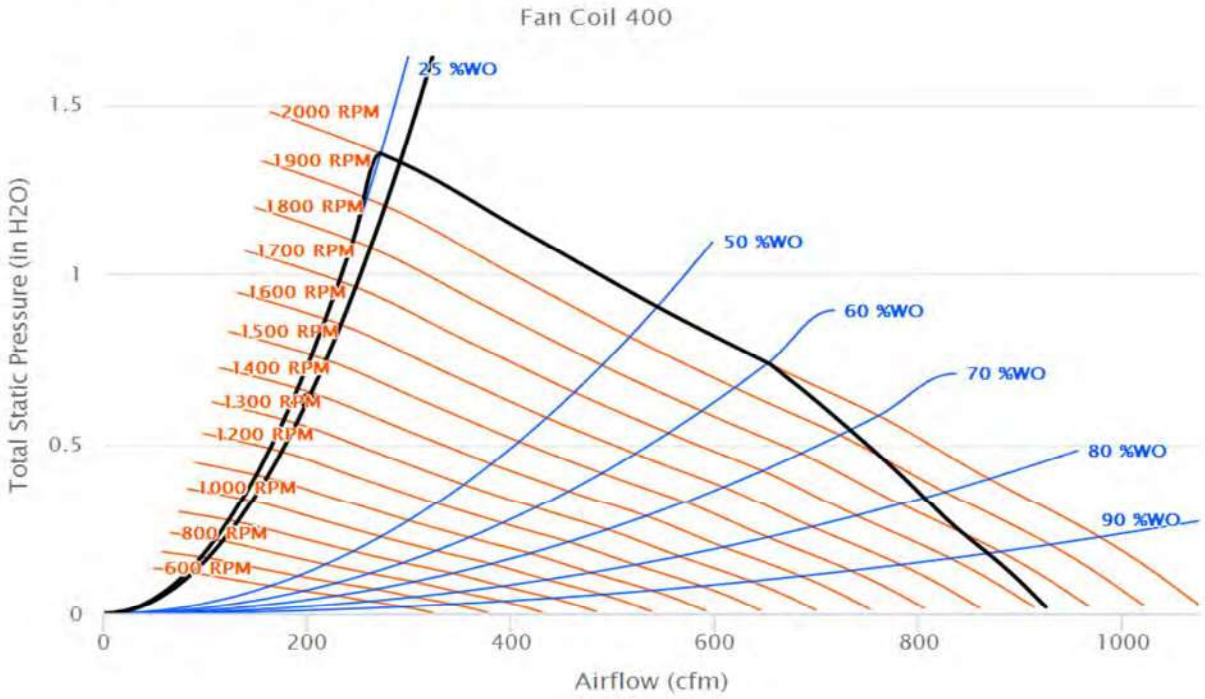
Unit Size	Size 040	**Operating Brake Power**	0.091 hp
Operating Airflow	300 cfm	**Altitude**	0.00 ft
Operating Static Pressure	0.761 in H2O	**Design Temp.**	75.20 F
Operating RPM	1,600 rpm		



Fan Curve - Fan Coil Air Conditioning Units
Item: A7 Qty: 1 Tag(s): FCU-07

Fan Details

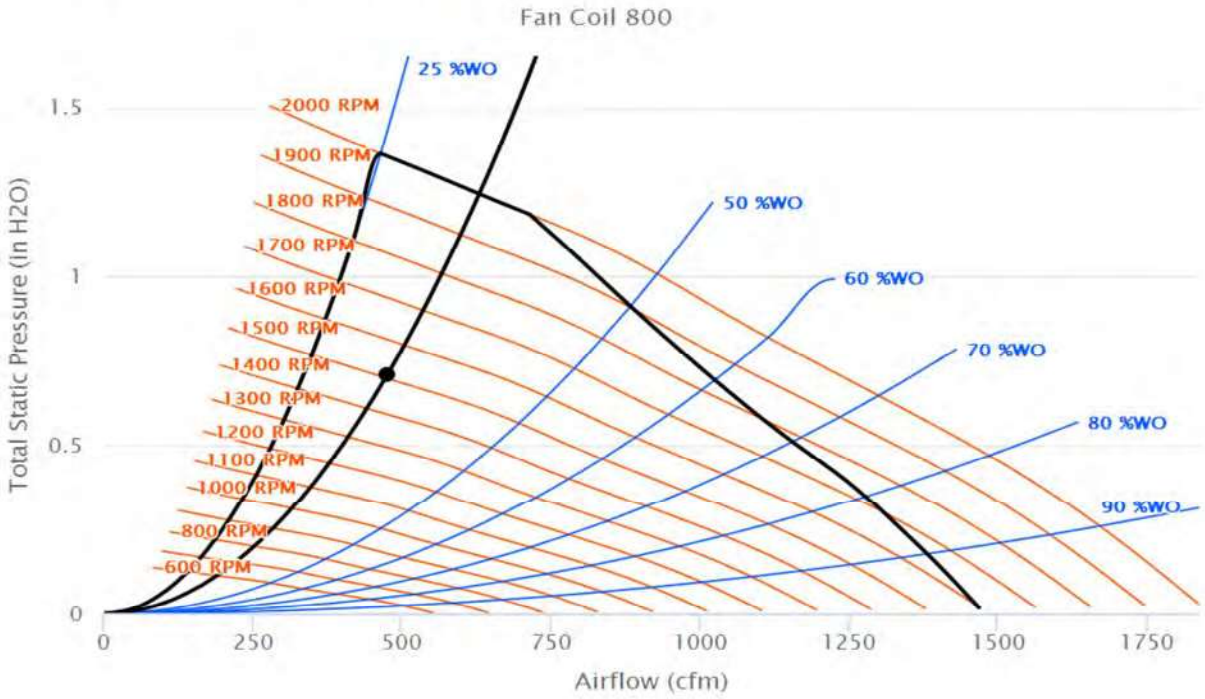
Unit Size	Size 040	**Operating Brake Power**	0.050 hp
Operating Airflow	200 cfm	**Altitude**	0.00 ft
Operating Static Pressure	0.631 in H2O	**Design Temp.**	75.20 F
Operating RPM	1,379 rpm		



Fan Curve - Fan Coil Air Conditioning Units
Item: A8 Qty: 1 Tag(s): FCU-08

Fan Details

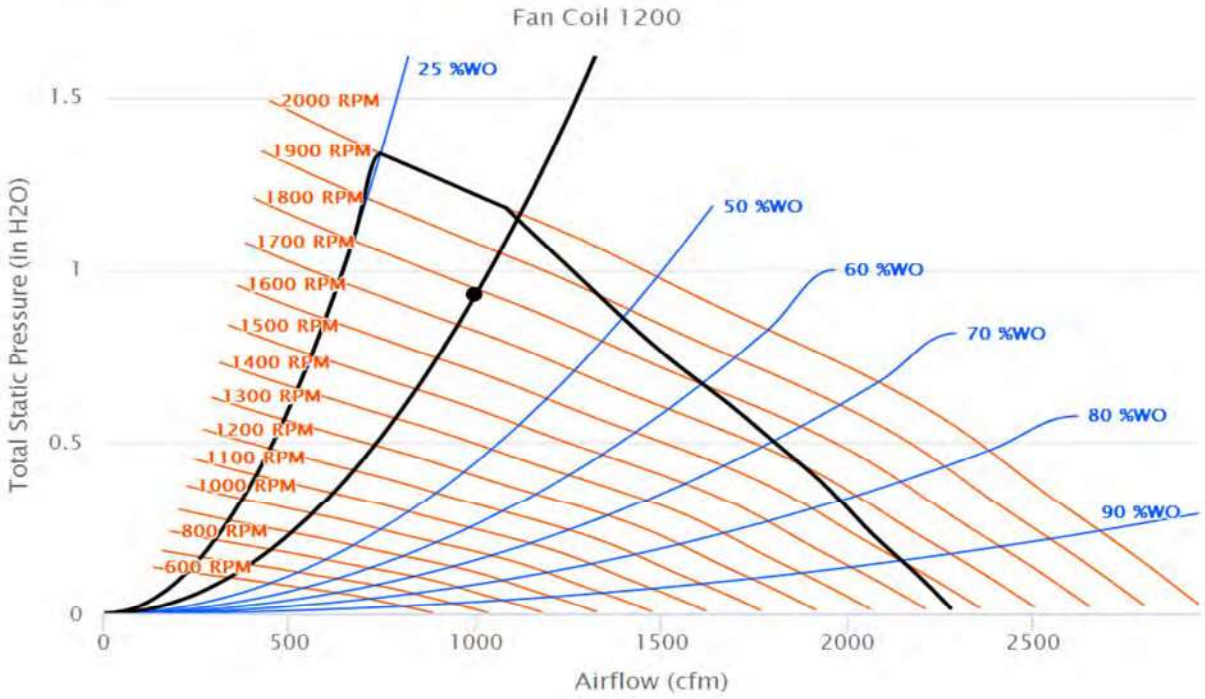
Unit Size	Size 080	**Operating Brake Power**	0.133 hp
Operating Airflow	475 cfm	**Altitude**	0.00 ft
Operating Static Pressure	0.710 in H2O	**Design Temp.**	75.20 F
Operating RPM	1,510 rpm		



Fan Curve - Fan Coil Air Conditioning Units
Item: A9 Qty: 1 Tag(s): FCU-09

Fan Details

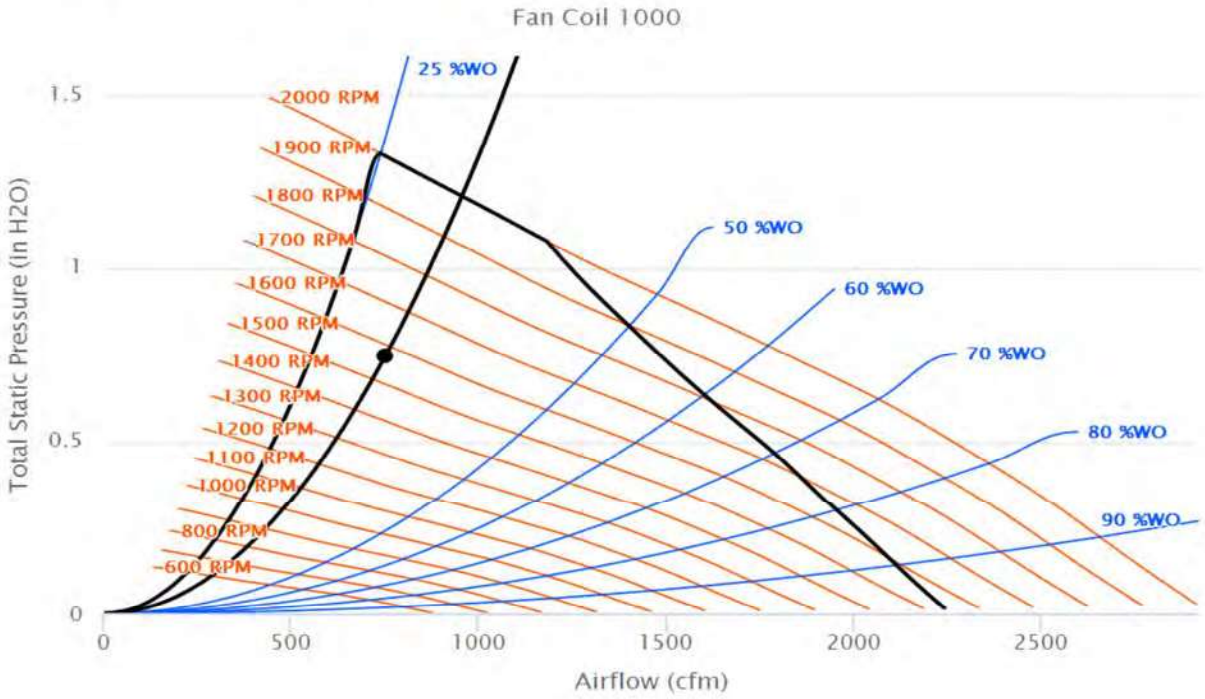
Unit Size	Size 120	**Operating Brake Power**	0.124 hp
Operating Airflow	1,000 cfm	**Altitude**	0.00 ft
Operating Static Pressure	0.927 in H2O	**Design Temp.**	75.20 F
Operating RPM	1,787 rpm		



Fan Curve - Fan Coil Air Conditioning Units
Item: A10 Qty: 1 Tag(s): FCU-11

Fan Details

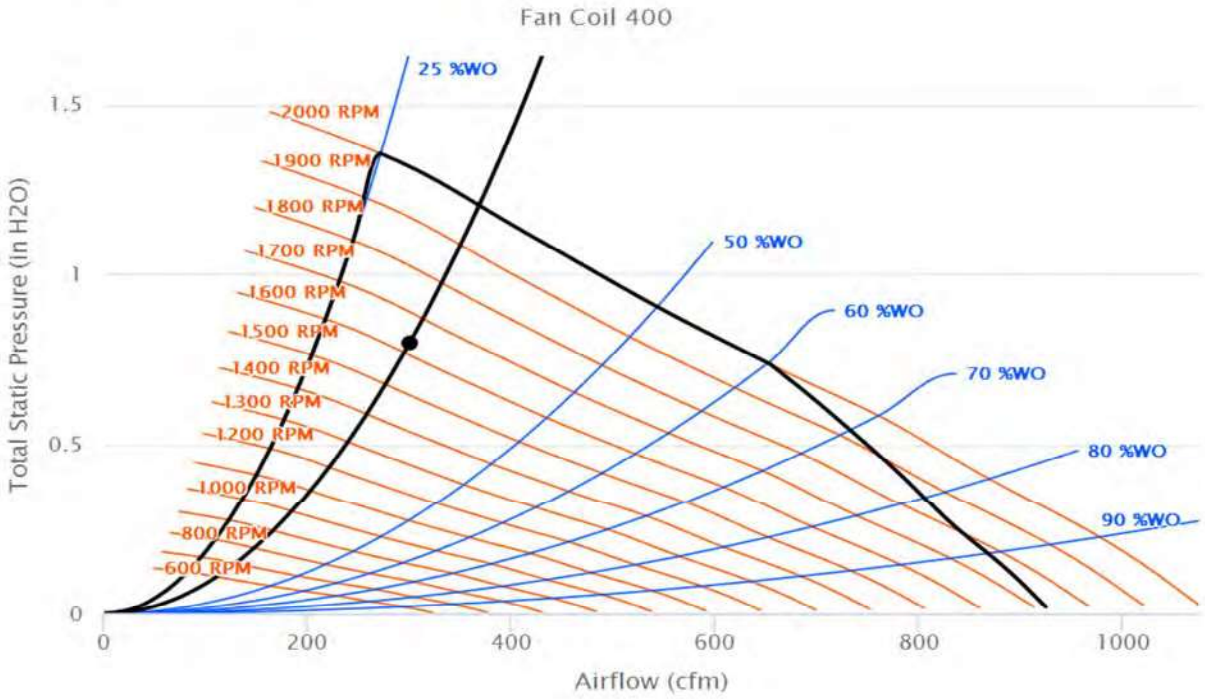
Unit Size	Size 100	**Operating Brake Power**	0.072 hp
Operating Airflow	750 cfm	**Altitude**	0.00 ft
Operating Static Pressure	0.745 in H2O	**Design Temp.**	75.20 F
Operating RPM	1,573 rpm		



Fan Curve - Fan Coil Air Conditioning Units
Item: A11 Qty: 1 Tag(s): FCU-12

Fan Details

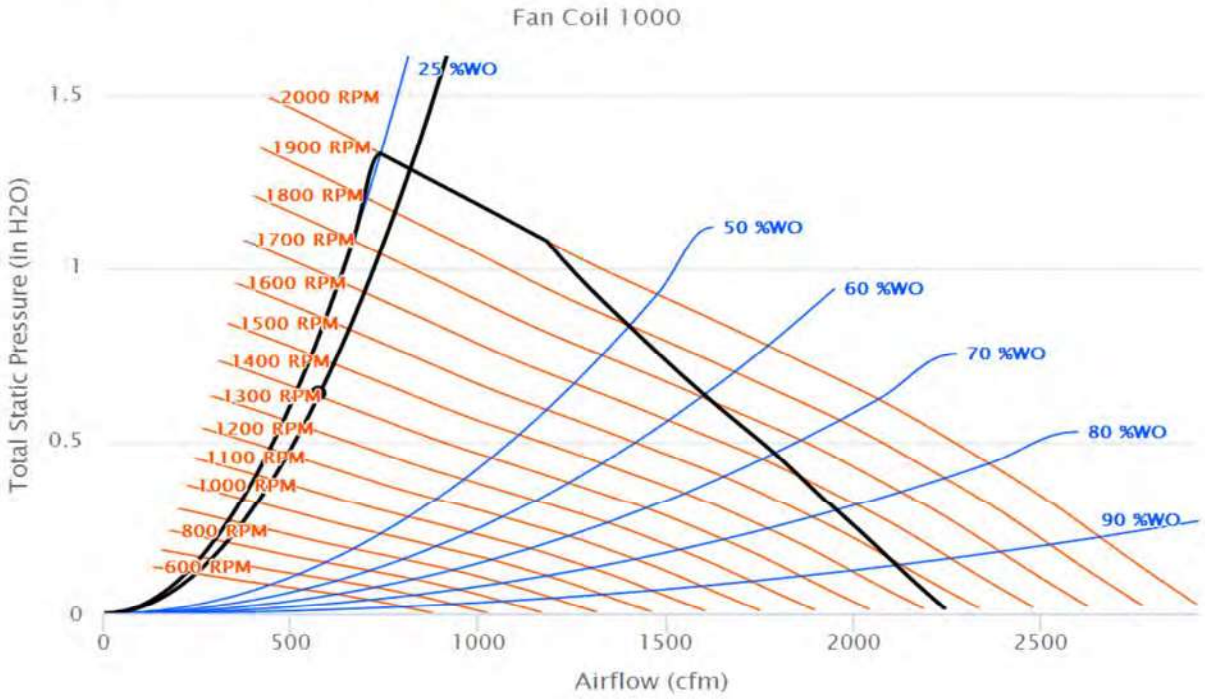
Unit Size	Size 040	**Operating Brake Power**	0.095 hp
Operating Airflow	300 cfm	**Altitude**	0.00 ft
Operating Static Pressure	0.799 in H2O	**Design Temp.**	75.20 F
Operating RPM	1,630 rpm		



Fan Curve - Fan Coil Air Conditioning Units
Item: A12 Qty: 1 Tag(s): FCU-13

Fan Details

Unit Size	Size 100	**Operating Brake Power**	0.047 hp
Operating Airflow	575 cfm	**Altitude**	0.00 ft
Operating Static Pressure	0.637 in H2O	**Design Temp.**	75.20 F
Operating RPM	1,408 rpm		



Accessory - Fan Coil Air Conditioning Units
Item: A1 - A12 Qty: 12 Tag(s): FCU-01, FCU-02, FCU-03, FCU-04, FCU-05, FCU-06, FCU-07, FCU-08, FCU-09, FCU-11, FCU-12, FCU-13

Table 1. UniTrane® Fan-Coil general data

Unit Size	02	03	04	06	08	10	12
Coil Data							
Face Area—ft² (cm²)	0.8 (743)	0.8 (743)	1.1 (1020)	1.6 (1490)	2.1 (1950)	3.2 (2970)	3.2 (2970)
L x D x H—in. (cm)							
2-Row	15 x 1.7 x 8 (38 x 4 x 20)	15 x 1.7 x 8 (38 x 4 x 20)	20 x 1.7 x 8 (51 x 4 x 20)	29.5 x 1.7 x 8 (75 x 4 x 20)	38 x 1.7 x 8 (97 x 4 x 20)	57 x 1.7 x 8 (145 x 4 x 20)	57 x 1.7 x 8 (145 x 4 x 20)
3-Row	15 x 2.6 x 8 (38 x 7 x 20)	15 x 2.6 x 8 (38 x 7 x 20)	20 x 2.6 x 8 (51 x 7 x 20)	29.5 x 2.6 x 8 (75 x 7 x 20)	38 x 2.6 x 8 (97 x 7 x 20)	57 x 2.6 x 8 (145 x 7 x 20)	57 x 2.6 x 8 (145 x 7 x 20)
4-Row	15 x 3.5 x 8 (38 x 9 x 20)	15 x 3.5 x 8 (38 x 9 x 20)	20 x 3.5 x 8 (51 x 9 x 20)	29.5 x 3.5 x 8 (75 x 9 x 20)	38 x 3.5 x 8 (97 x 9 x 20)	57 x 3.5 x 8 (145 x 9 x 20)	57 x 3.5 x 8 (145 x 9 x 20)
Volume—gal (L)							
1-Row (Heat)	0.06 (0.23)	0.06 (0.23)	0.08 (0.30)	0.11 (0.42)	0.14 (0.53)	0.21 (0.79)	0.21 (0.79)
2-Row	0.12 (0.45)	0.12 (0.45)	0.15 (0.57)	0.22 (0.83)	0.28 (1.06)	0.42 (1.59)	0.42 (1.59)
3-Row	0.18 (0.68)	0.18 (0.68)	0.23 (0.87)	0.33 (1.25)	0.42 (1.59)	0.62 (2.35)	0.62 (2.35)
4-Row	0.24 (0.91)	0.24 (0.91)	0.30 (1.14)	0.44 (1.67)	0.56 (2.12)	0.83 (3.14)	0.83 (3.14)
Fins/ft (cm)							
2-Row	144 (4.7)	144 (4.7)	144 (4.7)	144 (4.7)	144 (4.7)	144 (4.7)	144 (4.7)
3-Row	144 (4.7)	144 (4.7)	144 (4.7)	144 (4.7)	144 (4.7)	144 (4.7)	144 (4.7)
4-Row	144 (4.7)	144 (4.7)	144 (4.7)	144 (4.7)	144 (4.7)	144 (4.7)	144 (4.7)
Reheat Coil Data (1-Row)							
Hot Water or Steam							
Face Area—ft² (cm²)	0.6 (557)	0.6 (557)	0.8 (743)	1.2 (1120)	1.6 (1490)	2.4 (2230)	2.4 (2230)
L x D x H—in. (cm)	15 x 1.5 x 6 (38 x 4 x 15)	15 x 1.5 x 6 (38 x 4 x 15)	20 x 1.5 x 6 (51 x 4 x 15)	29.5 x 1.5 x 6 (75 x 4 x 15)	38 x 1.5 x 6 (97 x 4 x 15)	57 x 1.5 x 6 (145 x 4 x 15)	57 x 1.5 x 6 (145 x 4 x 15)
Volume—gal (L)	0.12 (0.45)	0.12 (0.45)	0.15 (0.57)	0.22 (0.83)	0.28 (1.06)	0.42 (1.59)	0.42 (1.59)
Fins/ft (cm)	48 (1.6)	48 (1.6)	48 (1.6)	48 (1.6)	48 (1.6)	48 (1.6)	48 (1.6)
Fan/Motor Data							
Fan Quantity	1	1	1	2	2	3	3
Size—Dia" x Width" (cm)	6.31 x 4 (16 x 10)	6.31 x 6.5 (16 x 17)	6.31 x 7.5 (16 x 19)	6.31 x 6.5 (16 x 17)	6.31 x 7.5 (16 x 19)	(1) 6.31 x 7.5 (16 x 19)	6.31 x 7.5 (16 x 19)
Size—Dia" x Width" (cm)						(2) 6.31x6.5 (16 x 6.5)	
Motor Quantity	1	1	1	1	1	2	2
Filter Data							
1" (cm) TA and Pl. Media							
Quantity	1	1	1	1	1	1	1
Size—in. (cm)	8-7/8 x 19-1/8 (23 x 49)	8-7/8 x 19-1/8 (23 x 49)	8-7/8 x 24-1/8 (23 x 61)	8-7/8 x 33-5/8 (23 x 85)	8-7/8 x 42-1/8 (23 x 107)	8-7/8 x 61-1/8 (23 x 155)	8-7/8 x 61-1/8 (23 x 155)
1" Fresh Air Filter (only on cabinet styles D, E, and H with bottom return and fresh air opening)							
Quantity	1	1	1	1	1	1	1
Size—in. (cm)	5-1/2 x 19-1/8 (14 x 49)	5-1/2 x 19-1/8 (14 x 49)	5-1/2 x 24-1/8 (14 x 61)	5-1/2 x 33-5/8 (14 x 85)	5-1/2 x 42-1/8 (14 x 107)	5-1/2 x 61-1/8 (14 x 156)	5-1/2 x 61-1/8 (14 x 156)

Accessory - Fan Coil Air Conditioning Units
Item: A1 - A12 Qty: 12 Tag(s): FCU-01, FCU-02, FCU-03, FCU-04, FCU-05, FCU-06, FCU-07, FCU-08, FCU-09, FCU-11, FCU-12, FCU-13

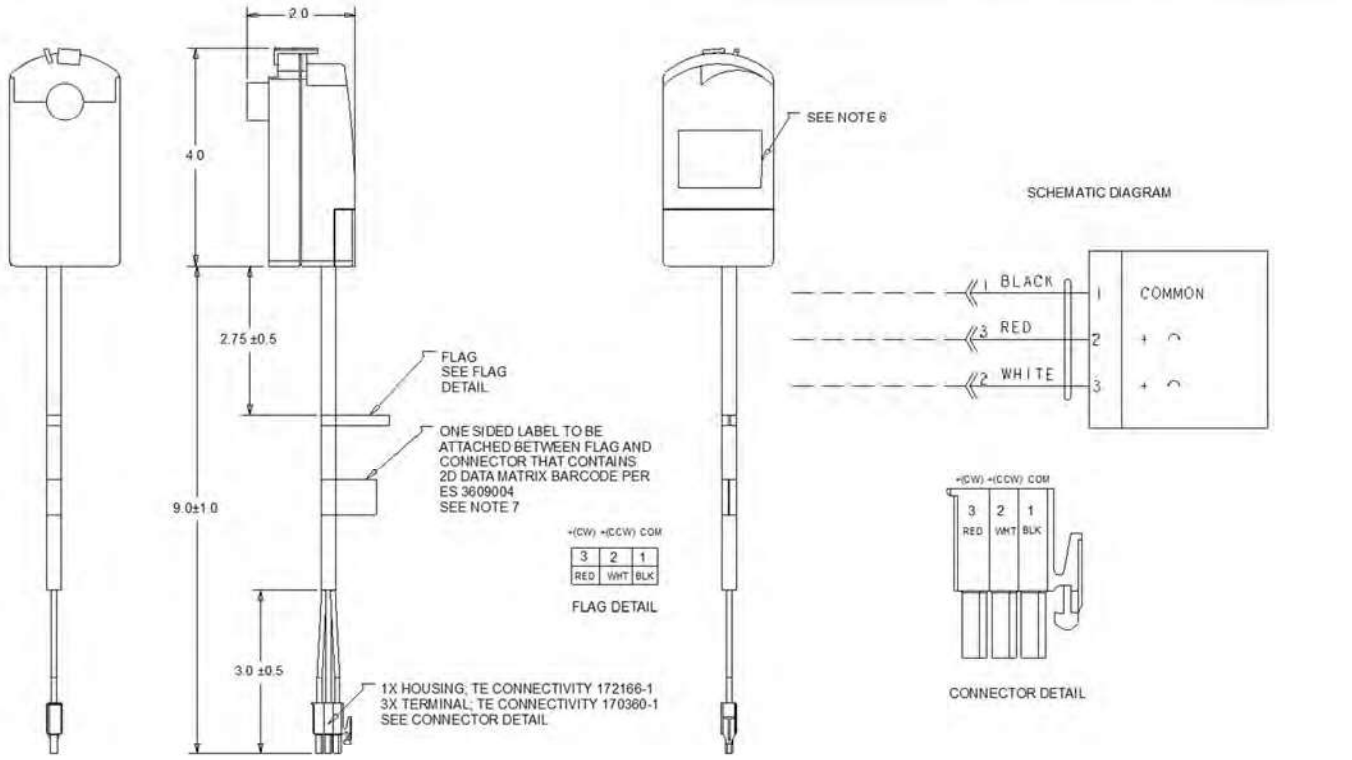
ACTUATOR

X13612093

EXT	NAME	STROKE_TIME
X13612093001	ACTUATOR; MODULATING, CLIP POSITION 4	49 SEC
X13612093002	ACTUATOR; MODULATING, CLIP POSITION 5	55 SEC
X13612093003	ACTUATOR; MODULATING, CLIP POSITION 6	62 SEC
X13612093004	ACTUATOR; MODULATING, CLIP POSITION N	68 SEC
X13612093005	ACTUATOR; MODULATING, NO END STOP	75 SEC

SPECIFICATIONS:
1. ACTUATOR MUST BE UL LISTED OR RECOGNIZED.
2. ALL LEAD WIRES ARE 18 AWG, COLOR CODED. LENGTH 9.0 ± 1.0 INCHES.
3. ACTUATOR CABLE MUST BE PLENUM RATED.
4. ENCLOSURE PROTECTION CLASS MINIMUM: NEMA 2, IP40.
5. ACTUATOR IS FAIL IN PLACE.
6. LABEL TO BE ATTACHED THAT CONTAINS TRANE X CODE, VOLTAGE, HZ, VA, POWER CONSUMPTION, STROKE TIME, AND WIRING DETAIL.
7. BARCODE LABEL SHALL BE LEGIBLE FOR SCANNING OVER THE LIFE CYCLE OF THE PRODUCT.

VOLTAGE	TRANSFORMER VA	WATTS RUN	WATTS HOLD	OPERATING AMBIENT TEMP
24VAC 50/60HZ	0.6	0.3	0.2	35°F - 104°F



Accessory - Fan Coil Air Conditioning Units
Item: A1 - A5, A8 - A10, A12 Qty: 9 Tag(s): FCU-01, FCU-02, FCU-03, FCU-04, FCU-05, FCU-08, FCU-09, FCU-11, FCU-13

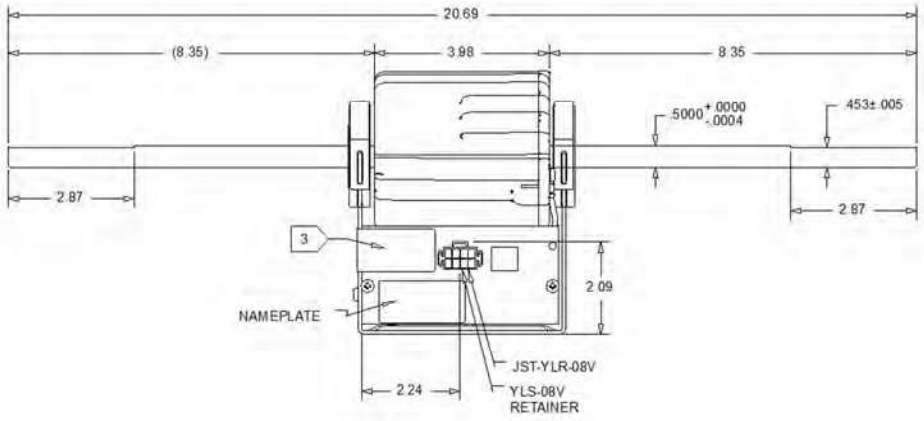
MOTOR INFORMATION

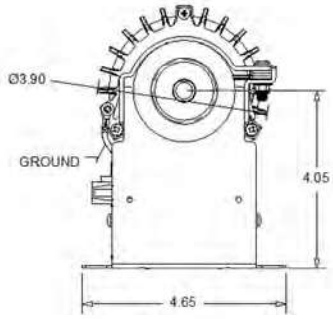
DRIVER FUNCTION:
1. RPM Output
   Connect COM of driver wire with DC+5V, and FG serially connect 470 to GND. When motor rotates, continuously pulse signal can be obtained by measuring FG signal wire. One rotation has 12 pulse signals, and each pulse is 0.9ms.
2. RPM Control
   Connect COM of driver wire with DC+5V, and input PWM signal to VSP (Low motion). RPM control by adjusting PWM output.

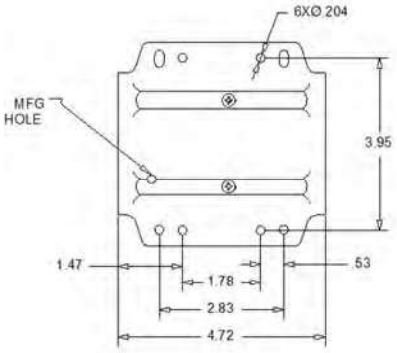
3. Barcode required per ES3609004 Format Code 128. Include part number and revision on barcode.

X70371318

EXT	VOLT (AC)	POLE (P)	CLASS	COLOR	RATED POWER	RATED SPEED	ROATION	Vendor Part Number
010	115/230 10 % 50/60 HZ	8	A	Green	180W	1580 RPM	CW	HMF259S01
020	277 10 % 50/60 HZ	8	A	Green	180W	1580 RPM	CW	HMF258S04
030	115/230 10 % 50/60 HZ	8	A	Green	160W	1550 RPM	CW	HMF256S04



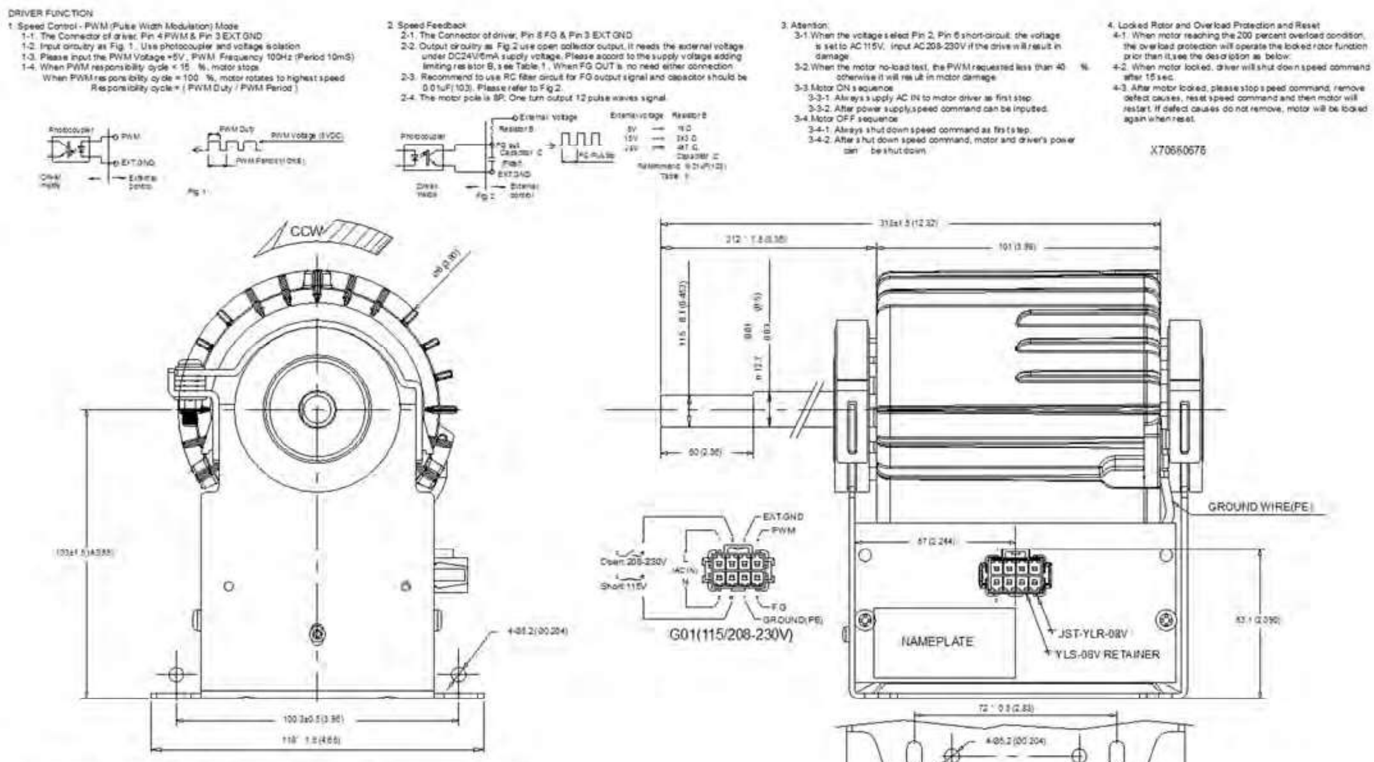




Operating Point	PWM In	RPM	TORQUE	PWR Input
Off	<19 %	000	0.00	2W +/- 5 %
Min. Constant Power	TBD	610	19.43	TBD +/- 5 %
Max. Constant Power	TBD	1530	159.00	TBD +/- 5 %

Accessory - Fan Coil Air Conditioning Units
Item: A3, A4, A6, A7, A9 - A12 Qty: 8 Tag(s): FCU-03, FCU-04, FCU-06, FCU-07, FCU-09, FCU-11, FCU-12, FCU-13

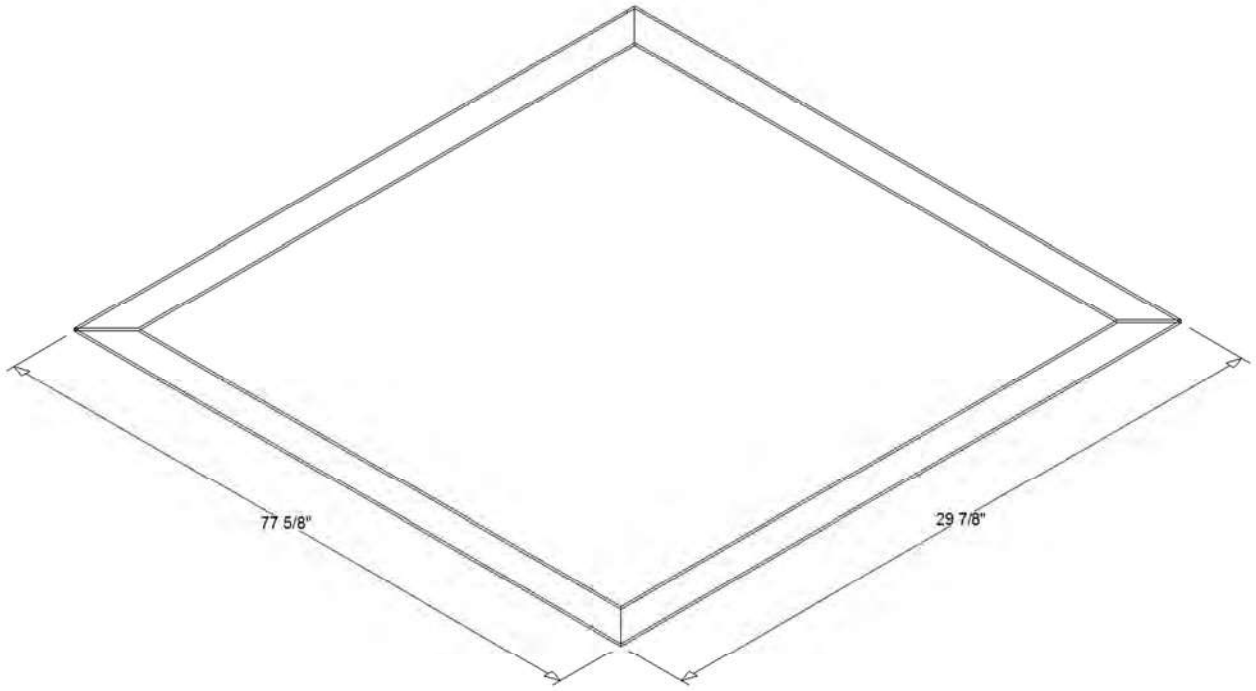
Motor Information



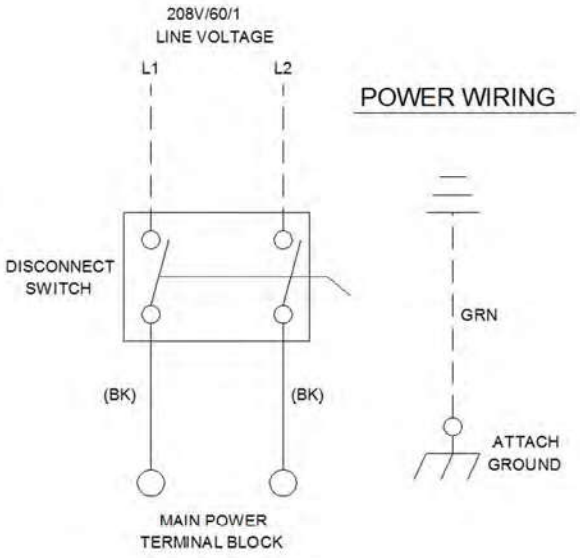
EXT.	VOLT (AC)	POLE (P)	Class	Color	RATED POWER	RATED SPEED	Vendor Part Number
010	115/230 ~ 10% 50/60Hz	8	A	Green	55W	[illegible]	HMF16503

Accessory - Fan Coil Air Conditioning Units
Item: A12 Qty: 1 Tag(s): FCU-13

HORIZONTAL RECESSED PANEL



Field Wiring - Fan Coil Air Conditioning Units
Item: A1, A2, A5, A8 Qty: 4 Tag(s): FCU-01, FCU-02, FCU-05, FCU-08



NOTES:

1. ALL FIELD WIRING MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC), STATE AND LOCAL REQUIREMENTS.

2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES AND / OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. SOLID LINES INDICATE WIRING BY TRANE COMPANY.

3. ALL FIELD POWER AND CONTROL WIRING SHOULD HAVE AN INSULATION RATING GREATER THAN OR EQUAL TO THE UNIT VOLTAGE RATING.

4. LINE VOLTAGE CONNECTIONS ARE TO BE SPLICED TO WIRES OR CONNECTED TO TERMINAL BLOCK INSIDE OF UNIT CONTROL BOX.

MCA: 2.25 A

MFS: 15.00 A

NOTICE

USE COPPER CONDUCTORS ONLY!

UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.

FAILURE TO DO THE ABOVE COULD RESULT IN EQUIPMENT DAMAGE.

AVIS

N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!

LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.

FAIRE DÉFAUT À LA PROCÉDURE CI-DESSUS PEUT ENTRAÎNER DES DOMMAGES À L'ÉQUIPEMENT.

AVISO

¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!

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NO SEGUIR LAS INSTRUCCIONES ANTERIORES PUEDE PROVOCAR DAÑOS EN EL EQUIPO.

⚠ WARNING

HAZARDOUS VOLTAGE!

DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS AND FOLLOW LOCK OUT AND TAG PROCEDURES BEFORE SERVICING. INSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED STORED VOLTAGE. UNITS WITH VARIABLE SPEED DRIVE, REFER TO DRIVE INSTRUCTIONS FOR CAPACITOR DISCHARGE.

FAILURE TO DO THE ABOVE BEFORE SERVICING COULD RESULT IN DEATH OR SERIOUS INJURY.

⚠ AVERTISSEMENT

TENSION DANGEREUSE!

COUPER TOUTES LES TENSIONS ET OUVRIR LES SECTIONNEURS À DISTANCE. PUIS SUIVRE LES PROCÉDURES DE VERROUILLAGE ET DES ÉTIQUETTES AVANT TOUTE INTERVENTION. VÉRIFIER QUE TOUS LES CONDENSATEURS DES MOTEURS SONT DÉCHARGÉS. DANS LE CAS D'UNITÉS COMPORTANT DES ENTRAÎNEMENTS À VITESSE VARIABLE, SE REPORTER AUX INSTRUCTIONS DE L'ENTRAÎNEMENT POUR DÉCHARGER LES CONDENSATEURS.

NE PAS RESPECTER CES MESURES DE PRÉCAUTION PEUT ENTRAÎNER DES BLESSURES GRAVES POUVANT ÊTRE MORTELLES.

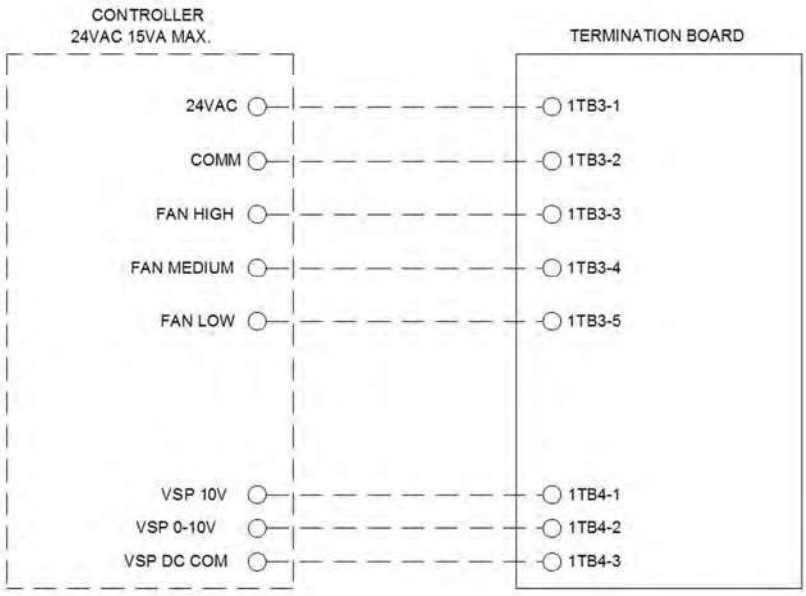
⚠ ADVERTENCIA

¡VOLTAJE PELIGROSO!

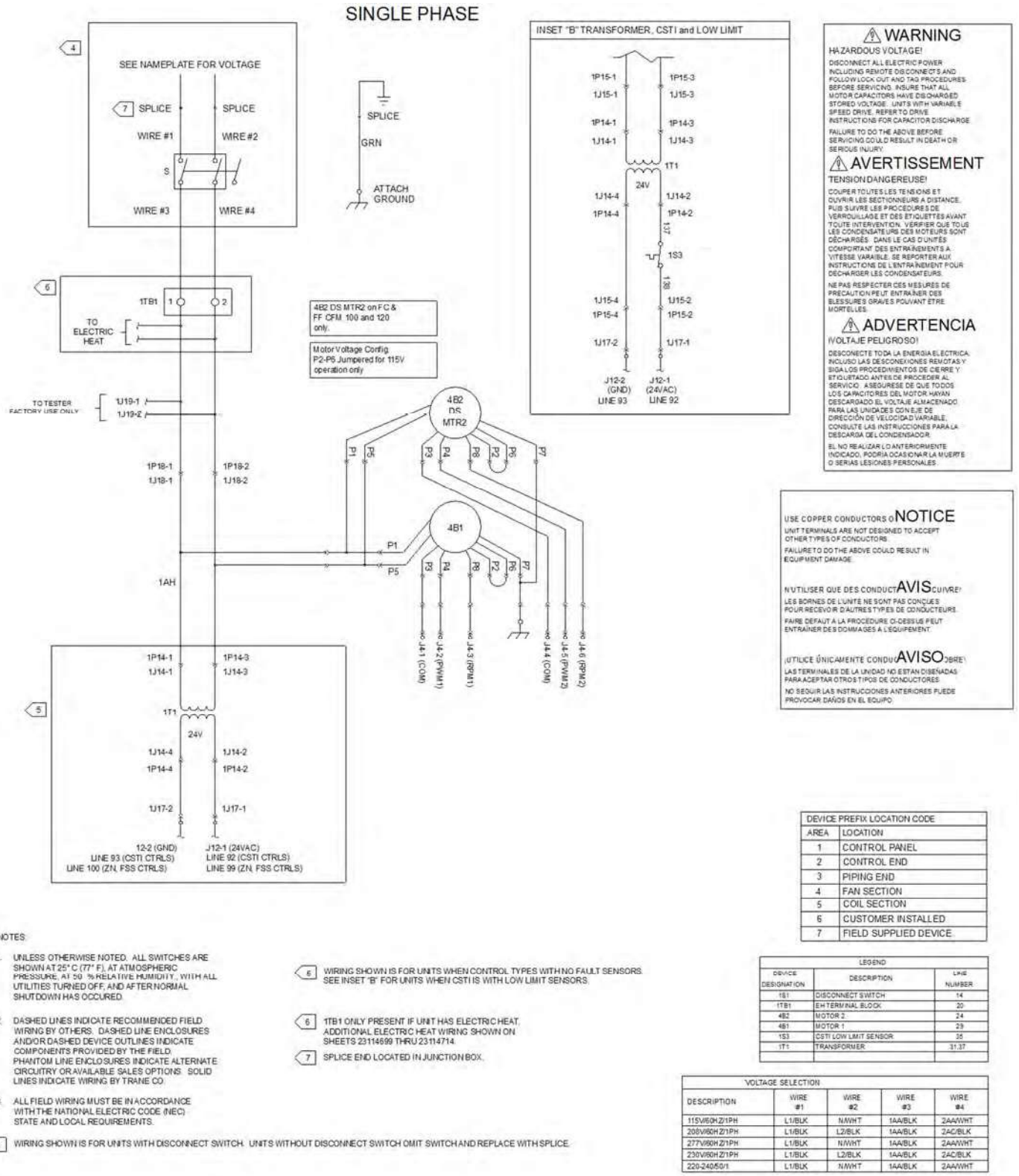
DESCONECTE TODA LA ENERGÍA ELÉCTRICA, INCLUSO LAS DESCONEXIONES REMOTAS Y SIGA LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO ANTES DE PROCEDER AL SERVICIO. ASEGÚRESE DE QUE TODOS LOS CAPACITORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. PARA LAS UNIDADES CON EJE DE DIRECCIÓN DE VELOCIDAD VARIABLE, CONSULTE LAS INSTRUCCIONES PARA LA DESCARGA DEL CONDENSADOR.

EL NO REALIZAR LO ANTERIORMENTE INDICADO, PODRÍA OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.

CONTROL WIRING



Field Wiring - Fan Coil Air Conditioning Units
Item: A1 - A12 Qty: 12 Tag(s): FCU-01, FCU-02, FCU-03, FCU-04, FCU-05, FCU-06, FCU-07, FCU-08, FCU-09, FCU-11, FCU-12, FCU-13



WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS AND FOLLOW LOCK OUT AND TAG PROCEDURES BEFORE SERVICING. INSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED STORED VOLTAGE. UNITS WITH VARIABLE SPEED DRIVE, REFER TO DRIVE INSTRUCTIONS FOR CAPACITOR DISCHARGE.
FAILURE TO DO THE ABOVE BEFORE SERVICING COULD RESULT IN DEATH OR SERIOUS INJURY.

AVERTISSEMENT
TENSION DANGEREUSE!
COUPER TOUTES LES TENSIONS ET OUVRIR LES SECTIONNEURS A DISTANCE, PUIS SUIVRE LES PROCEDURES DE VERROUILLAGE ET DES ETIQUETTES AVANT TOUTE INTERVENTION. VERIFIER QUE TOUS LES CONDENSATEURS DES MOTEURS SONT DÉCHARGÉS. DANS LE CAS D'UNITÉS COMPORTANT DES ENTRAÎNEMENTS A VITESSE VARIABLE, SE REPORTER AUX INSTRUCTIONS DE L'ENTRAÎNEMENT POUR DÉCHARGER LES CONDENSATEURS.
NE PAS RESPECTER CES MESURES DE PRECAUTION PEUT ENTRAÎNER DES BLESSURES GRAVES POUVANT ETRE MORTELLES.

ADVERTENCIA
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EL NO REALIZAR LO ANTERIORMENTE INDICADO, PODRÍA OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.

NOTICE
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UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.
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AVIS
N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!
LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.
FAIRE DEFAUT À LA PROCÉDURE CI-DESSUS PEUT ENTRAÎNER DES DOMMAGES À L'ÉQUIPEMENT.

AVISO
¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
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NO SEGUIR LAS INSTRUCCIONES ANTERIORES PUEDE PROVOCAR DAÑOS EN EL EQUIPO.

DEVICE PREFIX LOCATION CODE	
AREA	LOCATION
1	CONTROL PANEL
2	CONTROL END
3	PIPING END
4	FAN SECTION
5	COIL SECTION
6	CUSTOMER INSTALLED
7	FIELD SUPPLIED DEVICE

NOTES:

1. UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25° C (77° F), AT ATMOSPHERIC PRESSURE, AT 50 % RELATIVE HUMIDITY, WITH ALL UTILITIES TURNED OFF, AND AFTER NORMAL SHUTDOWN HAS OCCURED.
2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES AND/OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS. SOLID LINES INDICATE WIRING BY TRANE CO.
3. ALL FIELD WIRING MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC) STATE AND LOCAL REQUIREMENTS.

4 WIRING SHOWN IS FOR UNITS WITH DISCONNECT SWITCH. UNITS WITHOUT DISCONNECT SWITCH OMIT SWITCH AND REPLACE WITH SPLICE.

5 WIRING SHOWN IS FOR UNITS WHEN CONTROL TYPES WITH NO FAULT SENSORS. SEE INSET "B" FOR UNITS WHEN CSTI IS WITH LOW LIMIT SENSORS.

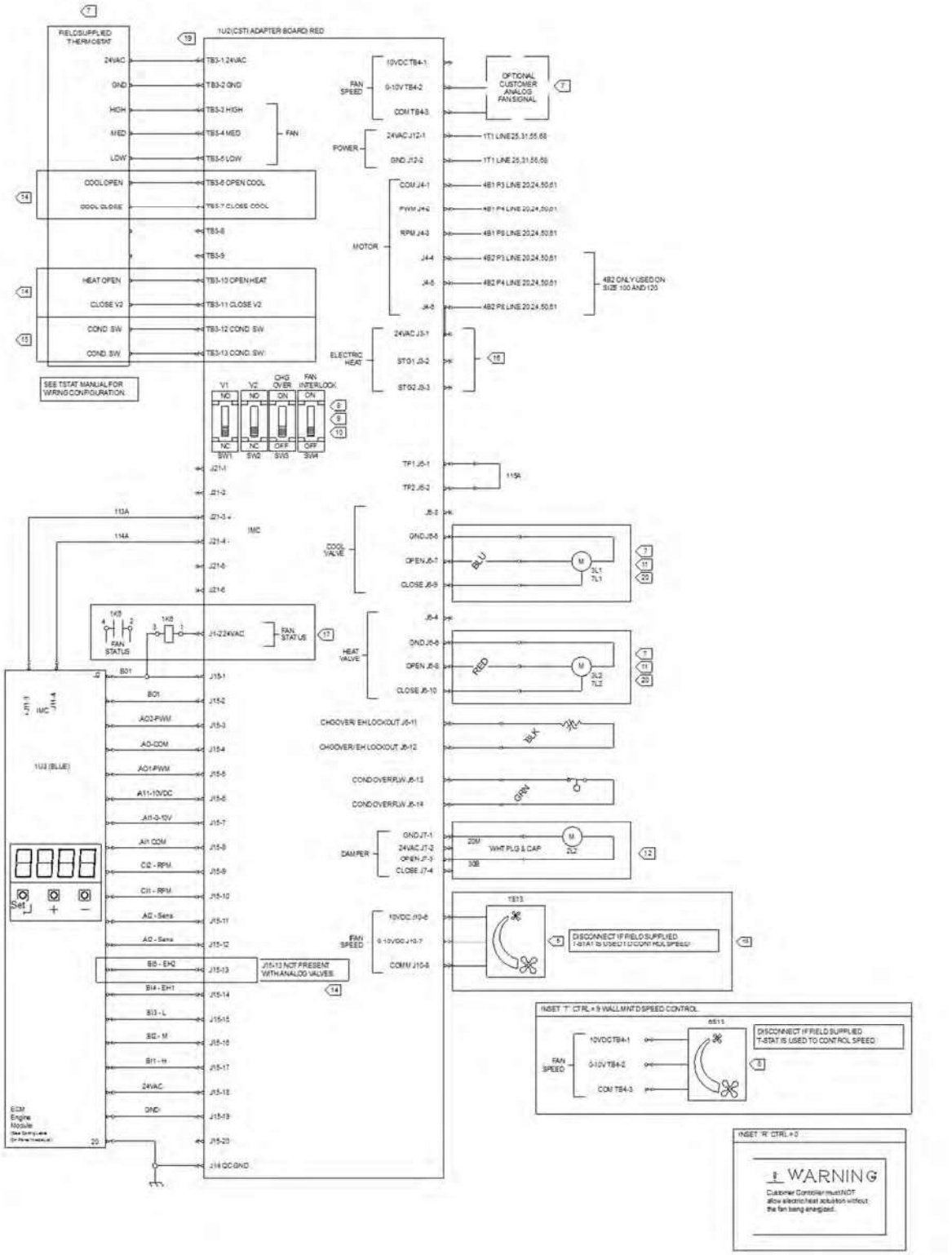
6 1TB1 ONLY PRESENT IF UNIT HAS ELECTRIC HEAT. ADDITIONAL ELECTRIC HEAT WIRING SHOWN ON SHEETS 23114699 THRU 23114714.

7 SPLICE END LOCATED IN JUNCTION BOX.

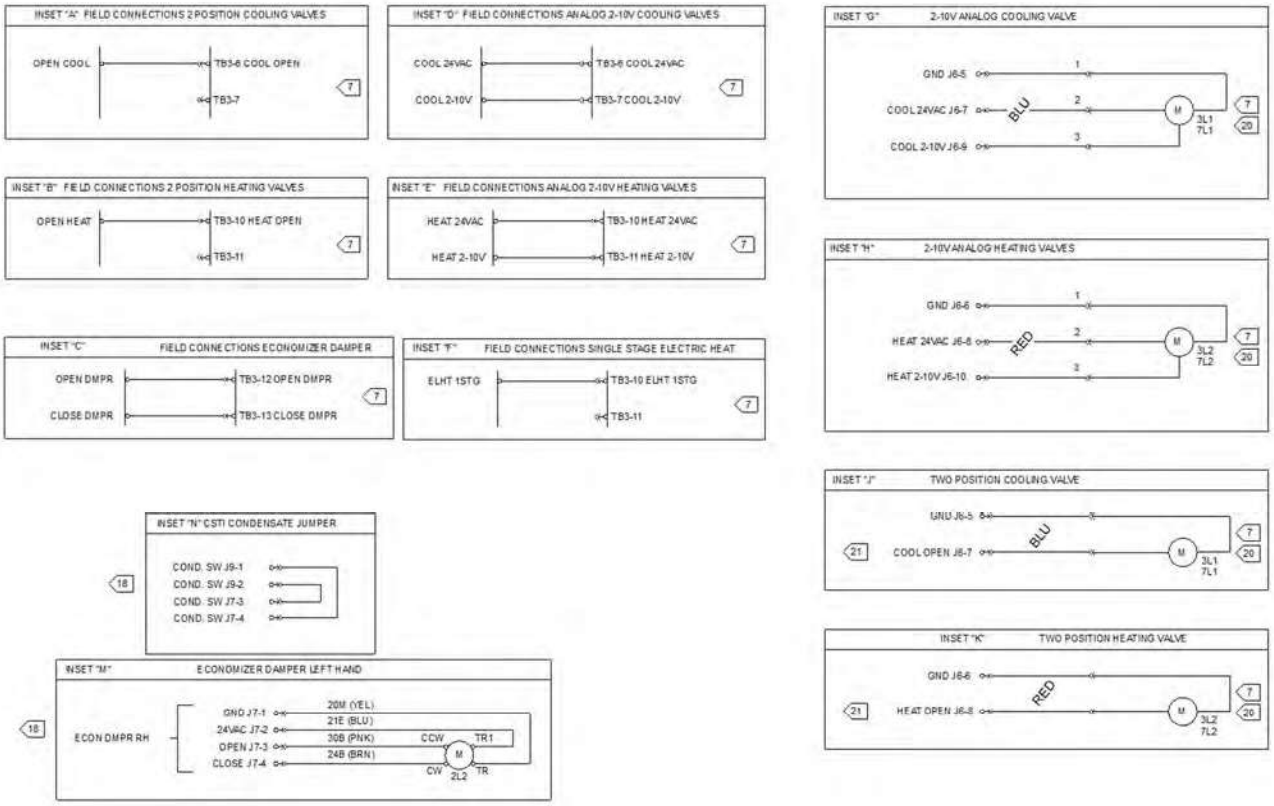
LEGEND		
DEVICE DESIGNATION	DESCRIPTION	LINE NUMBER
1S1	DISCONNECT SWITCH	14
1TB1	EH TERMINAL BLOCK	20
4B2	MOTOR 2	24
4B1	MOTOR 1	29
1S3	CSTI LOW LIMIT SENSOR	35
1T1	TRANSFORMER	31,37

VOLTAGE SELECTION				
DESCRIPTION	WIRE #1	WIRE #2	WIRE #3	WIRE #4
115V/60HZ/1PH	L1/BLK	N/WHT	1AA/BLK	2AA/WHT
208V/60HZ/1PH	L1/BLK	L2/BLK	1AA/BLK	2AC/BLK
277V/60HZ/1PH	L1/BLK	N/WHT	1AA/BLK	2AA/WHT
230V/60HZ/1PH	L1/BLK	L2/BLK	1AA/BLK	2AC/BLK
220-240/50/1	L1/BLK	N/WHT	1AA/BLK	2AA/WHT

Field Wiring - Fan Coil Air Conditioning Units
Item: A1 - A12 Qty: 12 Tag(s): FCU-01, FCU-02, FCU-03, FCU-04, FCU-05, FCU-06, FCU-07, FCU-08, FCU-09, FCU-11, FCU-12, FCU-13



Field Wiring - Fan Coil Air Conditioning Units
Item: A1 - A12 Qty: 12 Tag(s): FCU-01, FCU-02, FCU-03, FCU-04, FCU-05, FCU-06, FCU-07, FCU-08, FCU-09, FCU-11, FCU-12, FCU-13



NOTES (SHEET TWO):

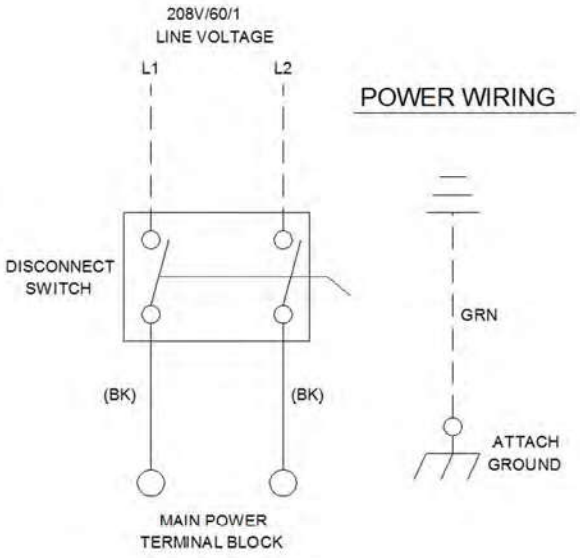
1. UNLESS OTHERWISE NOTED: ALL SWITCHES ARE SHOWN AT 25° C (77° F), AT ATMOSPHERIC PRESSURE, AT 50 % RELATIVE HUMIDITY, WITH ALL UTILITIES TURNED OFF, AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.
2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINED ENCLOSURES AND/OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS. SOLID LINES INDICATE WIRING BY TRANE.
3. NUMBERS ALONG THE LEFT SIDE OF SCHEMATIC DESIGNATE THE LOCATION OF COMPONENTS BY LINE NUMBER.
4. ALL FIELD WIRING MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC), STATE AND LOCAL REQUIREMENTS. ALL FIELD WIRING MUST HAVE AN INSULATION VOLTAGE RATING THAT EQUALS OR EXCEEDS UNIT RATED VOLTAGE.
5. VALVE ACTUATOR POWER CONSUMPTION IS 4 WATTS MAXIMUM @24 VAC (DURING VALVE POSITION CHANGE).

7. USE CLASS 2 WIRING.
8. SW1 AND SW2 ARE SHOWN IN THE NC POSITION. SW1 AND OR SW2 ARE IN THE NC POSITION WHEN VALVES ARE NORMALLY CLOSED OR MODULATING. SW1 AND/OR SW2 ARE IN THE NO POSITION WHEN VALVES ARE NORMALLY OPEN. SW1 IS MAIN VALVE (COOLING) AND SW2 IS AUX VALVE (HEATING) FOR FANCOIL AND LOWBOY. SW2 IS MAIN VALVE (HEATING) FOR FF.
9. SW3 IS SHOWN IN THE OFF POSITION. SW3 IS TURNED ON WHEN CHANGE OVER COILS ARE SELECTED.
10. SW4 IS SHOWN IN THE OFF POSITION. SW4 IS TURNED ON WHEN UNIT HAS ELECTRIC HEAT.
11. WIRING SHOWN IS FOR MODULATING VALVES. SEE INSETS "G" AND "H" FOR 2-10V ANALOG VALVE WIRING. SEE INSETS "J" AND "K" FOR 2 POSITION VALVE WIRING. FIELD SUPPLIED ACTUATOR UTILIZES THE SAME CONNECTION POINTS AS FACTORY WIRING.
12. WIRING SHOWN IS FOR TWO POSITION DAMPER. SEE INSET "M" FOR ECONOMIZER DAMPER WIRING. SEE INSET "N" FOR CONDENSATE OVERFLOW WIRING.
13. WIRING SHOWN IS FOR UNIT MOUNTED VARIABLE SPEED CONTROL (CTRL = 6). SEE INSET "R" FOR UNITS WITH NO SPEED CONTROL (CTRL = 0). SEE INSET "T" FOR WALL MOUNTED VARIABLE SPEED CONTROL WIRING (CTRL = 9).
14. FIELD CONNECTIONS SHOWN ON TB3-6 TB3-7, TB3-10 AND TB3-11 ARE FOR UNITS WITH MODULATING VALVES. SEE INSETS "A" AND "B" FOR TWO POSITION VALVE WIRING. SEE INSETS "D" AND "E" FOR ANALOG VALVES. FIELD SUPPLIED ACTUATOR UTILIZES THE SAME CONNECTION POINTS AS FACTORY WIRING. SEE INSET "F" FOR SINGLE STAGE ELECTRIC HEAT FIELD WIRING.
15. FIELD CONNECTIONS SHOWN ON TB3-12 AND TB3-13 ARE FOR UNITS WITH CONDENSATE OVERFLOW. SEE INSET "C" FOR ECONOMIZER DAMPER WIRING.
16. ELECTRIC HEAT WIRING SHOWN ON SHEETS 23114699 THRU 23114714.
17. WIRING SHOWN IS FOR CSTI WITH FAN STATUS. (CTYP = N).
18. OPTION NOT AVAILABLE ON LOW VERTICAL (MODL=K,L).
19. 24V OUTPUT IS RATED 15VA
20. FIELD SUPPLIED ACTUATOR WIRING UTILIZES THE SAME CONNECTION POINTS AS FACTORY ACTUATOR WIRING.
21. VALVES SHOWN IN NORMALLY CLOSED POSITION. FOR NORMALLY OPEN POSITION, THE VALVE SIGNAL BECOMES CLOSE.

DEVICE PREFIX LOCATION CODE	
AREA	LOCATION
1	CONTROL PANEL
2	CONTROL END
3	PIPING END
4	FAN SECTION
5	COIL SECTION
6	CUSTOMER INSTALLED
7	FIELD SUPPLIED DEVICE

LEGEND		
DEVICE DESIGNATION	DESCRIPTION	LINE NUMBER
1U2	CSTI ADAPTER BOARD	88
1U3	ECM ENGINE BOARD	114
3L1	COOLING/ CHANGEOVER VALVE	87,100,110
7L1	COOLING/ CHANGEOVER VALVE	87,100,110
3L2	HEATING COIL VALVE	94,103,114
7L2	HEATING COIL VALVE	94,103,114
2L2	ECON DAMPER ACTUATOR	119
2L2	DAMPER ACTUATOR	121
1K6	CSTI FAN STATUS RELAY	111,112
3RT1	AUTOCHG TEMP SENSOR	116
3S6	CONDENSATE OVERFLOW	118
1S13	CSTI UNIT MNTD FAN SWITCH	124
6S13	CSTI WALL MNTD FAN SWITCH	124

Field Wiring - Fan Coil Air Conditioning Units
Item: A3, A4, A9, A10, A12 Qty: 5 Tag(s): FCU-03, FCU-04, FCU-09, FCU-11, FCU-13



NOTES:

1. ALL FIELD WIRING MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC), STATE AND LOCAL REQUIREMENTS.

2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES AND / OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. SOLID LINES INDICATE WIRING BY TRANE COMPANY.

3. ALL FIELD POWER AND CONTROL WIRING SHOULD HAVE AN INSULATION RATING GREATER THAN OR EQUAL TO THE UNIT VOLTAGE RATING.

4. LINE VOLTAGE CONNECTIONS ARE TO BE SPLICED TO WIRES OR CONNECTED TO TERMINAL BLOCK INSIDE OF UNIT CONTROL BOX.

MCA: 3.65 A

MFS: 15.00 A

NOTICE

USE COPPER CONDUCTORS ONLY!

UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.

FAILURE TO DO THE ABOVE COULD RESULT IN EQUIPMENT DAMAGE.

AVIS

N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!

LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.

FAIRE DÉFAUT À LA PROCÉDURE CI-DESSUS PEUT ENTRAÎNER DES DOMMAGES À L'ÉQUIPEMENT.

AVISO

¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!

LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.

NO SEGUIR LAS INSTRUCCIONES ANTERIORES PUEDE PROVOCAR DAÑOS EN EL EQUIPO.

⚠ WARNING

HAZARDOUS VOLTAGE!

DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS AND FOLLOW LOCK OUT AND TAG PROCEDURES BEFORE SERVICING. INSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED STORED VOLTAGE. UNITS WITH VARIABLE SPEED DRIVE, REFER TO DRIVE INSTRUCTIONS FOR CAPACITOR DISCHARGE.

FAILURE TO DO THE ABOVE BEFORE SERVICING COULD RESULT IN DEATH OR SERIOUS INJURY.

⚠ AVERTISSEMENT

TENSION DANGEREUSE!

COUPER TOUTES LES TENSIONS ET OUVRIR LES SECTIONNEURS À DISTANCE. PUIS SUIVRE LES PROCÉDURES DE VERROUILLAGE ET DES ÉTIQUETTES AVANT TOUTE INTERVENTION. VÉRIFIER QUE TOUS LES CONDENSATEURS DES MOTEURS SONT DÉCHARGÉS. DANS LE CAS D'UNITÉS COMPORTANT DES ENTRAÎNEMENTS À VITESSE VARIABLE, SE REPORTER AUX INSTRUCTIONS DE L'ENTRAÎNEMENT POUR DÉCHARGER LES CONDENSATEURS.

NE PAS RESPECTER CES MESURES DE PRÉCAUTION PEUT ENTRAÎNER DES BLESSURES GRAVES POUVANT ÊTRE MORTELLES.

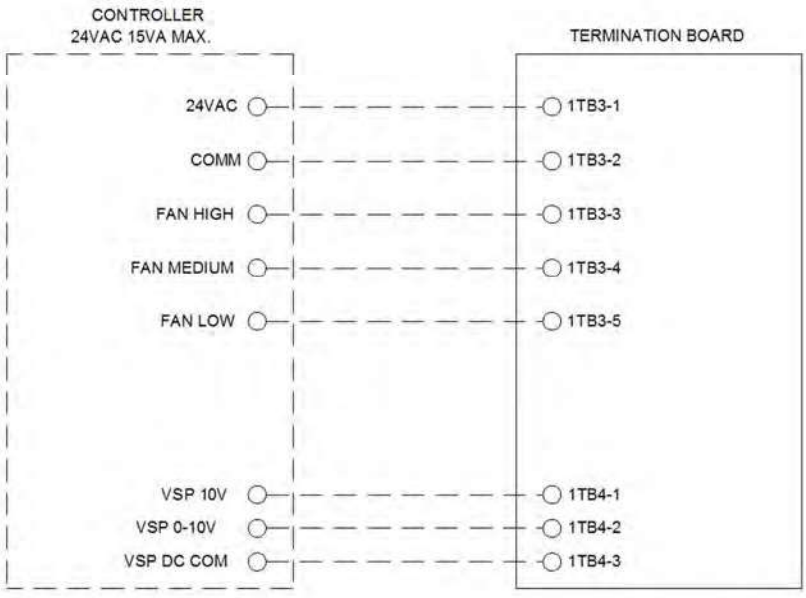
⚠ ADVERTENCIA

¡VOLTAJE PELIGROSO!

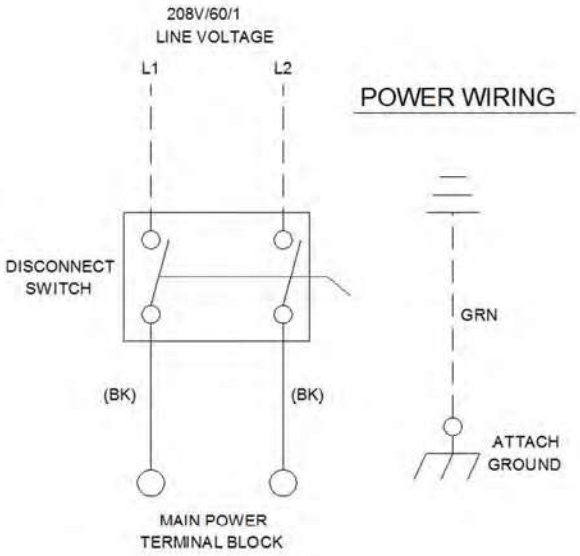
DESCONECTE TODA LA ENERGÍA ELÉCTRICA, INCLUSO LAS DESCONEXIONES REMOTAS Y SIGA LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO ANTES DE PROCEDER AL SERVICIO. ASEGÚRESE DE QUE TODOS LOS CAPACITORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. PARA LAS UNIDADES CON EJE DE DIRECCIÓN DE VELOCIDAD VARIABLE, CONSULTE LAS INSTRUCCIONES PARA LA DESCARGA DEL CONDENSADOR.

EL NO REALIZAR LO ANTERIORMENTE INDICADO, PODRÍA OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.

CONTROL WIRING



Field Wiring - Fan Coil Air Conditioning Units
Item: A6, A7, A11 Qty: 3 Tag(s): FCU-06, FCU-07, FCU-12



NOTES:

1. ALL FIELD WIRING MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC), STATE AND LOCAL REQUIREMENTS.

2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES AND / OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. SOLID LINES INDICATE WIRING BY TRANE COMPANY.

3. ALL FIELD POWER AND CONTROL WIRING SHOULD HAVE AN INSULATION RATING GREATER THAN OR EQUAL TO THE UNIT VOLTAGE RATING.

4. LINE VOLTAGE CONNECTIONS ARE TO BE SPLICED TO WIRES OR CONNECTED TO TERMINAL BLOCK INSIDE OF UNIT CONTROL BOX.

MCA: 1.75 A

MFS: 15.00 A

NOTICE

USE COPPER CONDUCTORS ONLY!

UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.

FAILURE TO DO THE ABOVE COULD RESULT IN EQUIPMENT DAMAGE.

AVIS

N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!

LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.

FAIRE DÉFAUT À LA PROCÉDURE CI-DESSUS PEUT ENTRAÎNER DES DOMMAGES À L'ÉQUIPEMENT.

AVISO

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⚠ ADVERTENCIA

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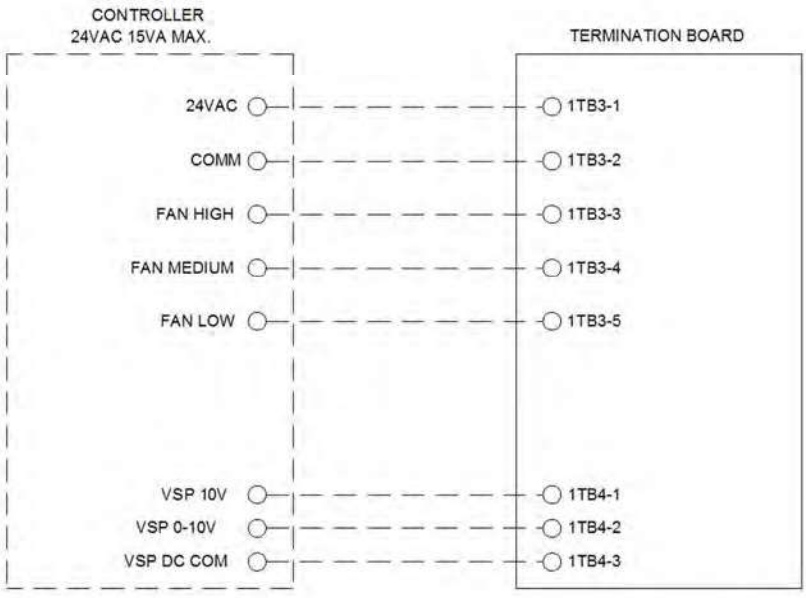
EL NO REALIZAR LO ANTERIORMENTE INDICADO, PODRÍA OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.

CONTROL WIRING



Tag Data - Cabinet Unit Heaters (Qty: 1)

Item	Tag(s)	Qty	Description	Model Number
B1	FCU-10	1	Size 60 Horizontal Concealed Force-Flo	FFCB0602JAYF0A00BG0M0000DA00BH0000EA00000000

Product Data - Cabinet Unit Heaters
Item: B1 Qty: 1 Tag(s): FCU-10

Force-Flo cabinet heater
Horizontal concealed
Size 060
208v/60hz/1ph
With piping, right hand connection
Back duct collar return
Front duct collar supply
High static fan motor
2 row hot water coil
Manual air vent
Disconnect switch
1" MERV 13 filter (Field Installed)
Basic ball valve (supply) & armstrong return valve
CS T-Stat interface
2-way, modulating, 1.4 Cv

Performance Data - Unit Cabinet Heater (Force-Flo) (FORCFLO)

Tags	FCU-10
Design airflow (cfm)	375
Total heating capacity (MBh)	7.98
Heating EAT (F)	68.00
Heating LAT (F)	87.61
Heating flow rate (gpm)	0.50
Heating ent fluid temp (F)	120.00
Heating lvg fluid temp (F)	88.01
Heating delta T (F)	31.99
Heating fluid PD (ft H2O)	0.42
Max fluid PD (ft H2O)	10.00
Fluid freeze pt (F)	32.00
Fluid type	Water
ESP (in H2O)	0.400
Motor rpm #1 (rpm)	1297
Motor hp #1 (hp)	0.095
Min circuit ampacity (A)	2.25
Max fuse size (A)	15.00
Motor power (W)	117.0
Shipping weight (lb)	123.0
Operating weight (lb)	139.0

Mechanical Specifications - Cabinet Unit Heaters
Item: B1 Qty: 1 Tag(s): FCU-10

Concealed Unit Basic Construction
The basic unit includes the coil, chassis, fan(s) and fan casing(s), fan board and motor(s). Steel parts exposed to moisture are galvanized. The fan board assembly includes a quick-disconnect motor plug. The chassis is the structural frame constructed of 18 gauge galvanized steel. The unit is acoustically insulated with closed cell insulation. The unit is UL labeled and approved.

Fan
The galvanized steel fan wheels are centrifugal forward-curved and double-width. Fan wheels and housings are corrosion resistant. Fan housings are constructed of formed sheet metal.

Coil
All hot water coils are burst tested at 450 PSIG (air) and leak tested at 100 PSIG (air under water). Maximum main coil working pressure is 300 PSIG. Maximum entering water temperature is 200 degrees F (93 degrees C). Tubes and U-bends are 3/8" (10 mm) O.D. copper. Fins are aluminum and are mechanically bonded to the copper tubes. Coil connections are expanded to accept standard 5/8" (16 mm) O.D. copper tubing.

Coil Air Vents - Manual
A manual air vent shall be provided on the hydronic coil and is rated at 300 psig.

Electronically Commutated Motors (ECM)
All motors are brushless DC (BLDC) electronically commutated motors (ECM) factory programmed and run tested in assembled units. The motor controller is mounted in a control box with a built in integrated user interface and LED tachometer. If adjustments are needed, motor parameters can be adjusted through momentary contact switches accessible without factory service personnel on the motor control board. Motors will soft ramp between speeds to lessen the acoustics due to sudden speed changes. Motors can be operated at three speeds or at variable speed with factory supplied or field supplied controllers. The motor will choose the highest speed if there are simultaneous or conflicting speed requests. All motors have integral overload protection with a maximum ambient operating temperature of 104.0 F and use permanently sealed ball bearings. Motors can operate at plus or minus 10 percent of rated voltage on all speed settings.

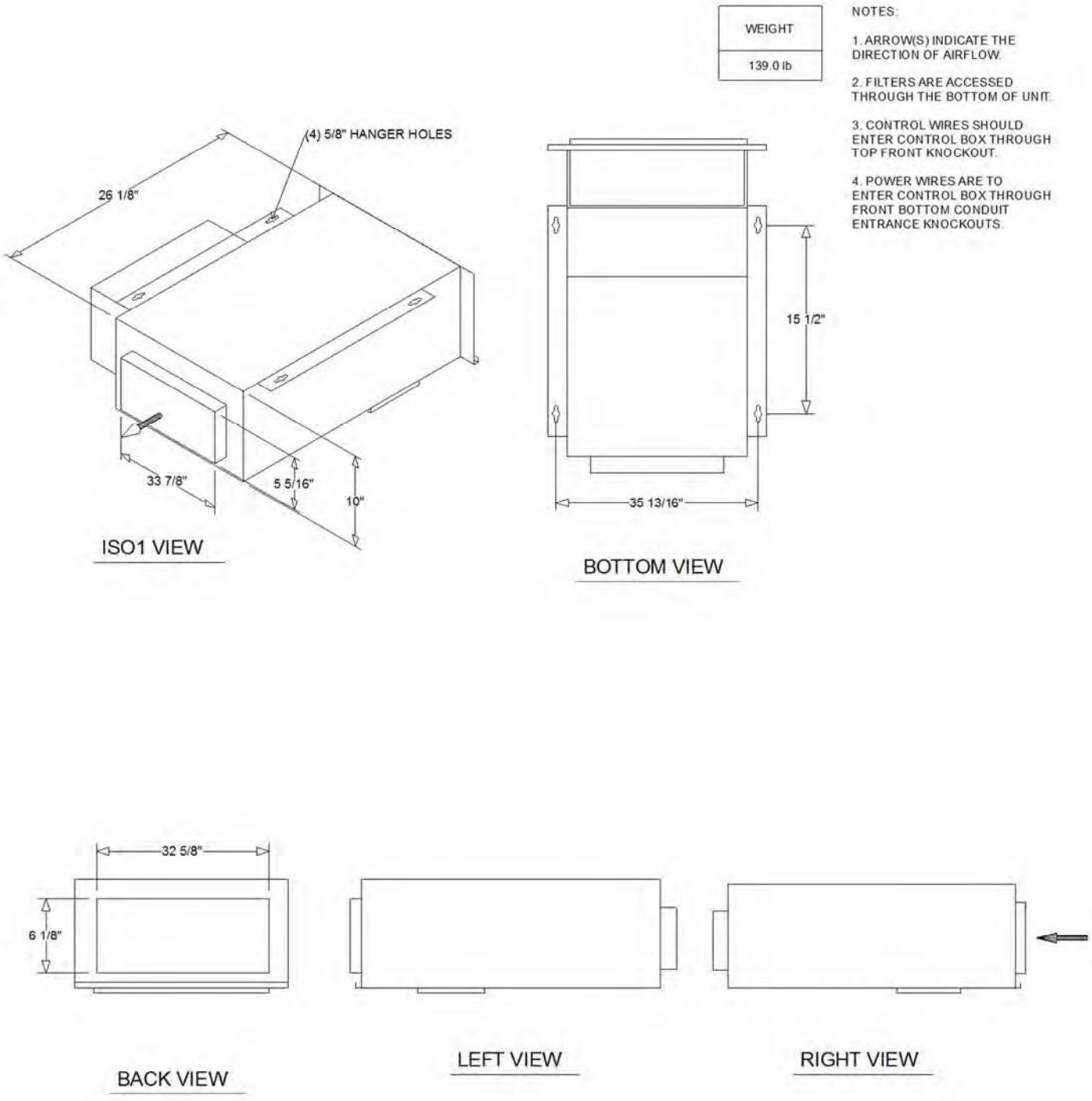
Basic Piping Package with Manual Circuit Setter
The basic piping package with circuit setter includes a shut-off ball valve on the supply line and a control valve and manual circuit setter on the return line. Three-way packages have a balancing fitting on the bypass line. Ball valves allow the unit to be cut off for service purposes. These valves have a two inch handle that rotate 90 degrees to a fully open position. A manual circuit setter acts as both a flow setting device and a stop valve. The manual circuit setter includes ¼ in. Schrader ports in the valve body. These ports are used to measure the pressure drop across the valve. The pressure drop can be compared to factory supplied curves that relate the pressure drop to a specific flow rate. This valve also has a memory stop that helps find the correct setting quickly. All piping packages are burst tested at 300 PSIG (air) and leak tested at 100 PSIG (air under water). The interconnecting piping maximum working pressure is 300 PSIG. The maximum entering fluid temperature is 200.0 F.

CSTI - Thermostat Interface
The control interface is intended to be used with a field-supplied, low-voltage thermostat or controller. The control box contains a relay board which includes a line voltage to 24-volt transformer; quiet contactors (for electric heat units); and an optional disconnect switch. All end devices are wired to a low voltage terminal block and run tested, so the only a power connection and thermostat connection is needed to commission the unit. Changeover sensors and controls are provided whenever a change over coil is selected. When NO valves are selected, inverting relays are provided for use with standard thermostats.

Disconnect Switch
A unit mounted non-fused disconnect switch is available as a standard option on all units.

1" MERV 13 Filter
The filter is concealed from sight and easily removable. A 1" MERV 13 filter is provided in the unit. The MERV 13 filters have a rating based on ASHRAE Standard 52.2. The average dust spot efficiency is no less than 90% percent efficiency on 1 - 3 micron particles and greater than 90% efficiency on 3 - 10 micron particles when tested in accordance with ASHRAE test standard 52.2 atmospheric dust spot method.

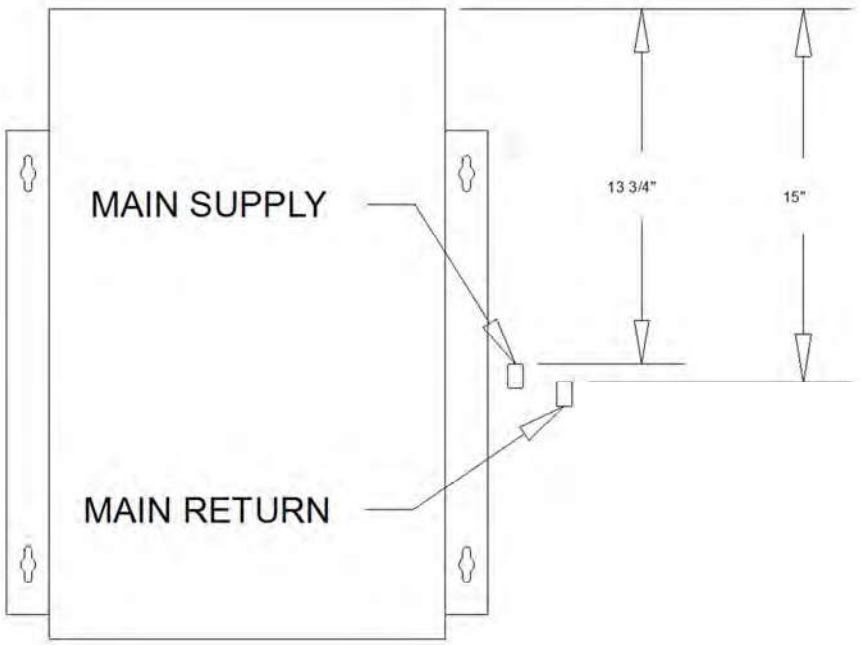
Dimensional Drawings - Cabinet Unit Heaters
Item: B1 Qty: 1 Tag(s): FCU-10



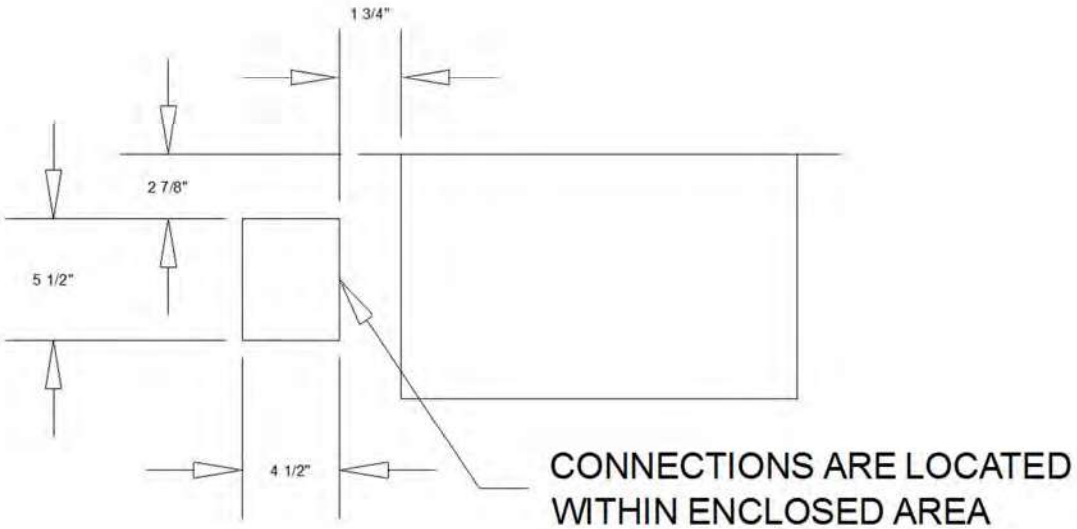
Dimensional Drawings - Cabinet Unit Heaters
Item: B1 Qty: 1 Tag(s): FCU-10

NOTES:

1. PIPING CONNECTIONS ARE 5/8" O.D. COPPER.
2. LOCATING DIMENSIONS HAVE A PLUS OR MINUS 1 1/4" TOLERANCE.

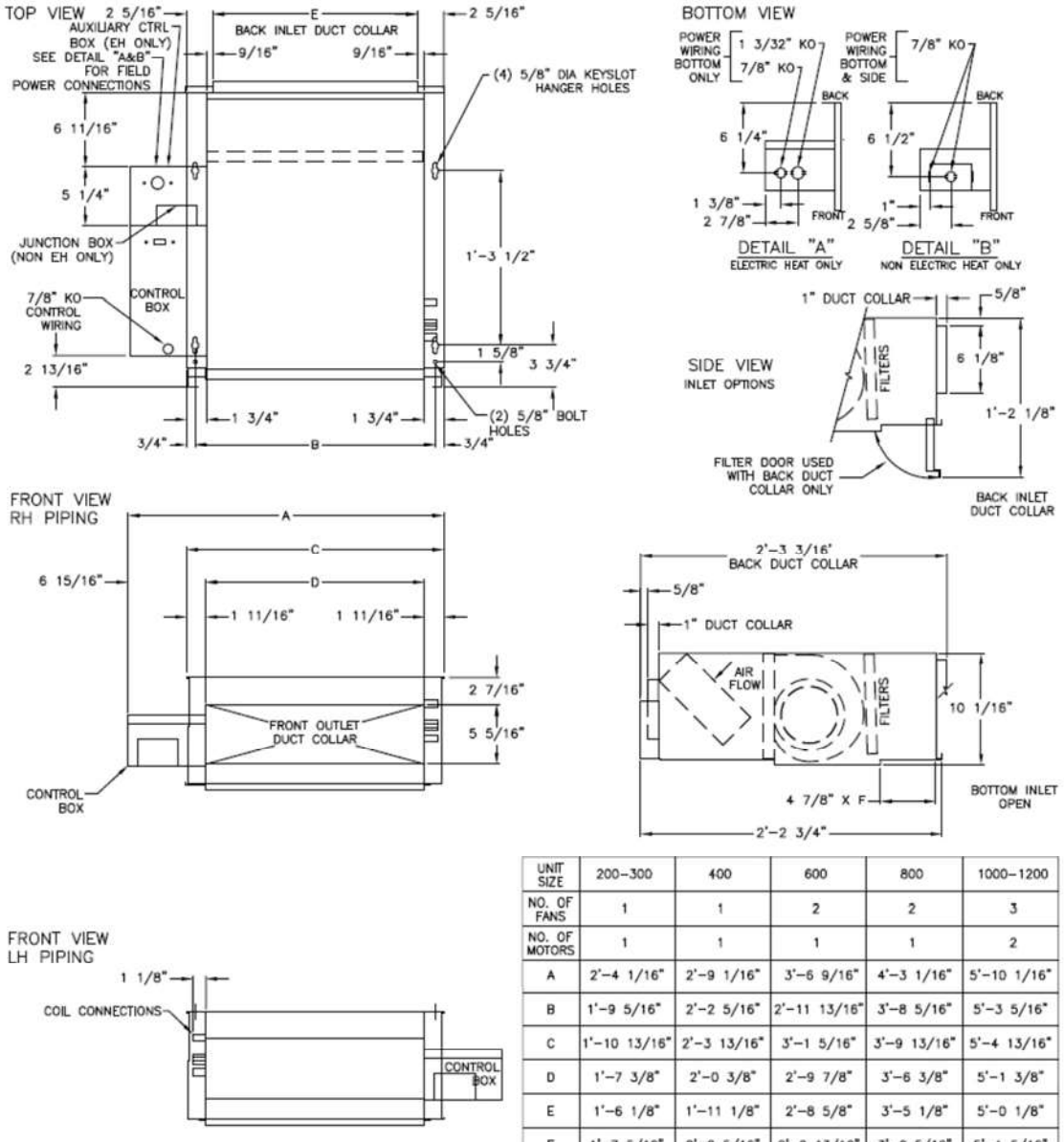


TOP VIEW



BACK VIEW

Dimensional Drawings - Cabinet Unit Heaters
Item: B1 Qty: 1 Tag(s): FCU-10



UNIT SIZE	200–300	400	600	800	1000–1200
NO. OF FANS	1	1	2	2	3
NO. OF MOTORS	1	1	1	1	2
A	2'–4 1/16"	2'–9 1/16"	3'–6 9/16"	4'–3 1/16"	5'–10 1/16"
B	1'–9 5/16"	2'–2 5/16"	2'–11 13/16"	3'–8 5/16"	5'–3 5/16"
C	1'–10 13/16"	2'–3 13/16"	3'–1 5/16"	3'–9 13/16"	5'–4 13/16"
D	1'–7 3/8"	2'–0 3/8"	2'–9 7/8"	3'–6 3/8"	5'–1 3/8"
E	1'–6 1/8"	1'–11 1/8"	2'–8 5/8"	3'–5 1/8"	5'–0 1/8"
F	1'–7 5/16"	2'–0 5/16"	2'–9 13/16"	3'–6 5/16"	5'–1 5/16"

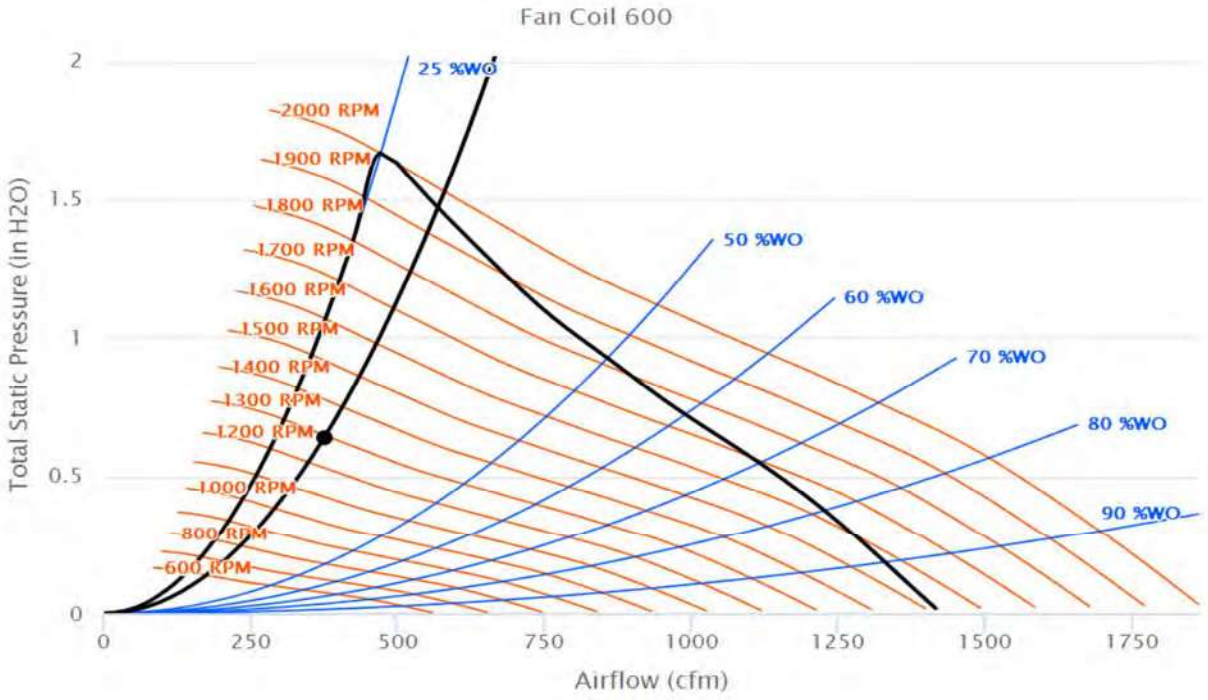
NOTE:

1. COIL CONNECTIONS ARE ALWAYS OPPOSITE THE CONTROL BOX SIDE.
2. COIL CONNECTIONS ARE 5/8" O.D. SWEAT. SEE PAGES XXXXX FOR LOCATIONS.
3. ALL DUCT COLLAR DIMENSIONS ARE TO THE OUTSIDE OF THE COLLAR.
4. SEE PAGES XXXXXX FOR DIMENSIONS FOR OUTSIDE AIR OPENINGS.

Fan Curve - Cabinet Unit Heaters
Item: B1 Qty: 1 Tag(s): FCU-10

Fan Details

Unit Size	Size 060	**Operating RPM**	1,297 rpm
Operating Airflow	375 cfm	**Operating Brake Power**	0.095 hp
Operating Static Pressure	0.641 in H2O	**Altitude**	0.00 ft



Field Wiring - Cabinet Unit Heaters
Item: B1 Qty: 1 Tag(s): FCU-10