



FILL IN AND SIGN WITH INK

APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 12/30/14

To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to install the following heating, cooking or power equipment in accordance with the Laws of Maine, the Building Code of the City of Portland, and the following specifications:

Location / CBL 66 Perl St. Use of Building Commercial / Retail Date 12/18/2014

Name and address of owner of appliance East Brown Cow
100 Commercial St. Portland, Maine

Installer's name and address HVAC Services 73 Bradley Drive Westbrook, Maine
Telephone _____

Location of appliance:

- Basement
- Floor
- Attic
- Roof

Type of Fuel:

- Gas
- Oil
- Solid

Appliance Name: Air Handlers / Ductwork

U.L. Approved Yes No

Tie into existing hot water system.

Will appliance be installed in accordance with the manufacture's installation instructions? Yes No

IF NO Explain: _____

The Type of License of Installer:

- Master Plumber # _____
- Solid Fuel # _____
- Oil # _____
- Gas # PNT 1138
- Other _____

Type of Chimney:

- Masonry Lined
Factory built N/A
- Metal
Factory Built U.L. Listing # N/A
- Direct Vent
Type N/A UL# _____

Type of Fuel Tank

- Oil
- Gas

Size of Tank _____

Number of Tanks _____

Distance from Tank to Center of Flame _____ feet.

Cost of Work: \$ 38,670.00

Permit Fee: \$ _____

Approved

Fire: _____

Ele.: _____

Bldg.: _____

Approved with Conditions

- See attached letter or requirement

Inspector's Signature

Date Approved

Signature of Installer

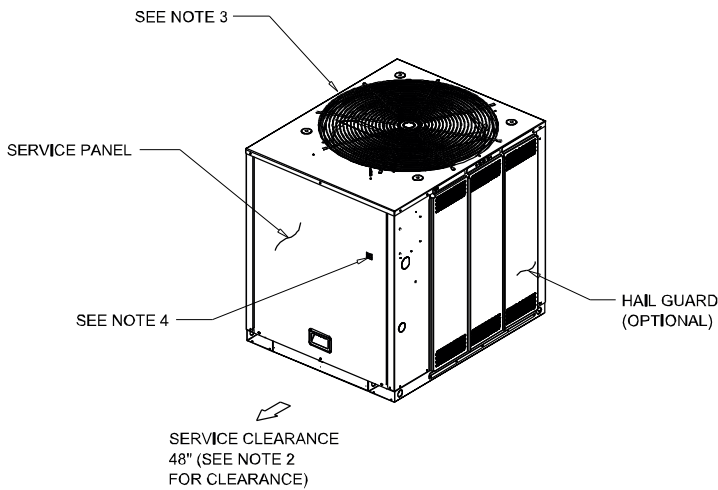
White - Inspection Yellow - File Pink - Applicant's Gold - Assessor's Copy

Unit Dimensions - Split System Air Conditioning Units (Large)

Item: B1, B2 Qty: 2 Tag(s): CU-3 / FCU-3, CU-4/ FCU-4



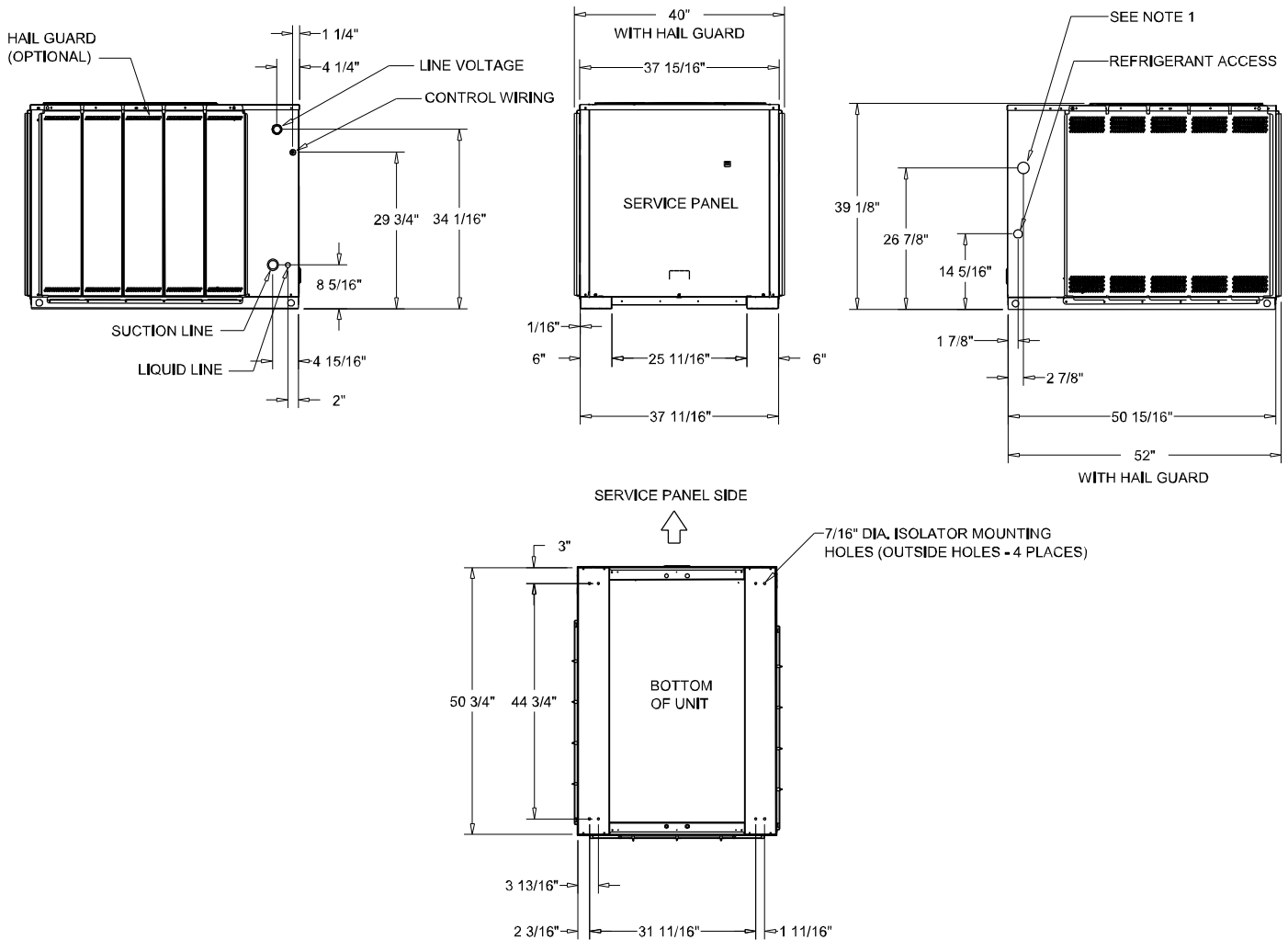
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NOTES:

1. ACCESS OPENING IS FOR FIELD INSTALLED
2. MINIMUM CLEARANCE FOR PROPER OPERATION WALLS, SHRUBBERY, PRIVACY FENCES ETC, MINIMUM CLEARANCE BETWEEN ADJACENT UNITS IS 72". RECOMMENDED SERVICE CLEARANCE 48"
3. TOP DISCHARGE AREA SHOULD BE UNRESTRICTED FOR 100" MINIMUM. UNIT SHOULD BE PLACED SO ROOF RUN-OFF WATER DOES NOT POUR DIRECTLY ON UNIT
4. OUTDOOR AIR TEMPERATURE SENSOR OPENING (DO NOT BLOCK OPENING)

Date: 12/30/14



10 TON COOLING CONDENSER (MANIFOLDED COMPRESSOR)

DIMENSIONAL DRAWING

Unit Dimensions - Split System Air Conditioning Units (Large)

Item: B1, B2 Qty: 2 Tag(s): CU-3 / FCU-3, CU-4/ FCU-4



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ELECTRICAL DATA CONDENSER

<p>ELECTRICAL DATA</p> <p>Model: TTA120F3 Unit Operating Voltage: 187 - 253 Minimum Circuit Ampacity: 44.6 Maximum Fuse Size: 50.0 Maximum Circuit Breaker: 50.0</p>	<p>COMPRESSOR MOTOR</p> <p>No.: 2 Volts: 208-230 Phase: 3 Amp-RLA: 17.6 Amp-LRA: 123.0</p>	<p>CONDENSER FAN MOT</p> <p>No.: 1 Volts: 208-230 Phase: 1 Amp-FLA: 5.0 Amp-LRA: 14.4</p>
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Date: 12/30/14

GENERAL DATA CONDENSER

<p>COOLING PERFORMANCE (1)(2)(3)(4)(5)</p> <p>Matched Air Handler: 123,000 Condensing Unit Only: 114,000 ARI Net Cooling Capacity: 120,000</p> <p>Matched Air Handler: 11.2 Condensing Unit Only: 12.2 System Integrated Part Load Value: 14.5 Condensing Unit Only IPLV: 17.2 System KW: 10.72 Condensing Unit KW: 9.35</p> <p>EER: 14.5</p>	<p>COMPRESSOR</p> <p>Number: 2 Motors/HP (each): 4.5 Motor RPM: 3500 No. Compressor / Tons: 2 4.5 3500</p> <p>SYSTEM DATA (7)</p> <p>No. Refrigerant Circuits: 1 Suction Line (in.) OD: 1 3/8" Liquid Line (in.) OD: 1/2"</p>
<p>OUTDOOR COIL</p> <p>Tube Size (in.) OD: 3/8" Face Area (sq. ft.): 24" Rows/FPI: 2/18</p>	<p>OUTDOOR FAN</p> <p>No. Used/Diameter (in.): 1 / 28" Drive Type/No. Speeds: DIRECT / 1 CFM: 9,600 No. Motors/HP: 1 / 1 Motor RPM: 1,100</p>
<p>REFRIGERANT CHARGE (Fld Supplied) (7)(8)</p> <p>TYPE: R-410A (Circuits #1): 21.2 lb (Circuits #2): N/A</p>	

NOTES:

- Cooling performance is rated at 95 F ambient, 80 F entering dry bulb, 67 F entering wet bulb. Gross capacity does not include the effect of fan motor heat. AHRI capacity is net and includes the effect of fan motor heat. Ratings shown are tested and certified in accordance with AHRI
- Standard 340/360 or 365 certification program.
- Condensing Unit Only Gross Cooling Capacity rate at 45 F saturated suction temperature and at 95 F ambient.
- ARI Net Cooling Capacity is calculated with matched blower coil and 25 ft. of OD interconnecting tubing. EER is rated at AHRI conditions and in accordance with DOE test procedures.
- Integrated Part Load Value is based on AHRI Standard 340/360 or 365. Units are rated at 80 F ambient, 80 F entering dry bulb, and 67 F entering wet bulb at AHRI rated CFM.
- Sound Rating shown is tested in accordance with AHRI Standard 270.
- Refer to refrigerant piping program for line sizing and line length.
- Refrigerant (operating) charge is for condensing unit (all circuits) with matching blower coils and 25 ft. of interconnecting refrigerant lines. All units are shipped with a small nitrogen holding charge only.



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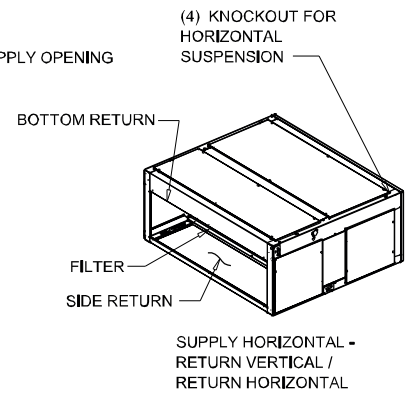
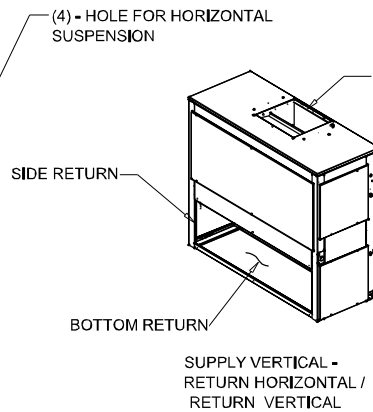
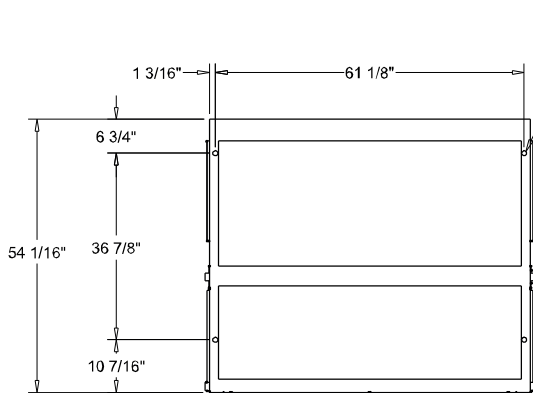
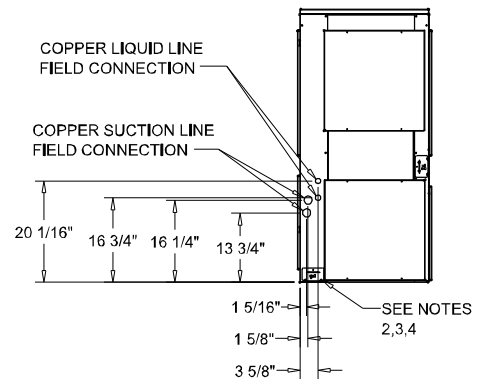
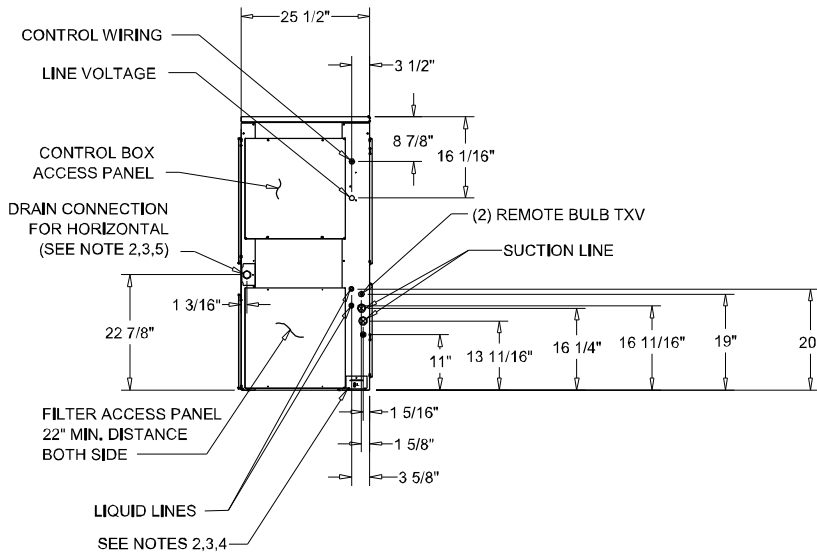
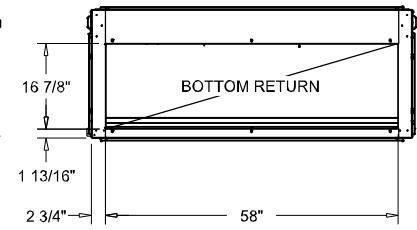
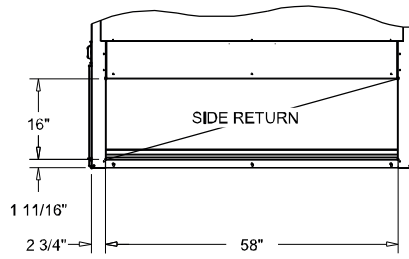
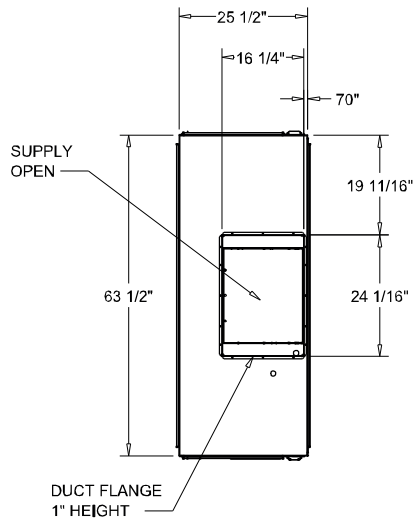
Unit Dimensions - Split System Air Conditioning Units (Large)

Item: B1 Qty: 1 Tag(s): CU-3 / FCU-3

NOTES:

1. PANEL DEPTH 1/2" (TYP. ALL PANELS).
2. REMOVABLE DRAIN PAN AND ATTACHED DRAIN CONNECTION MAY BE OF UNIT IN EITHER THE VERTICAL OR HORIZONTAL CONFIGURATION, ACCESS PLATE ON THE END OF UNIT OPPOSITE DRAIN CONNECTION SLIDE DRAIN PAN OUT OF UNIT FOR CLEANING. ACCESS PLATE MUST SLIDING DRAIN PAN BACK INTO UNIT.
3. IF PERIODIC DRAIN PAN CLEANING IS REQUIRED, ALLOW ROOM FOR DRAIN PAN CONNECTION AT END OF UNIT.
4. 1" FEMALE SCHED. 40 PVC PIPE DRAIN CONNECTION VERTICAL CONFIGURATION.
5. 1" FEMALE SCHED. 40 PVC PIPE DRAIN CONNECTION HORIZONTAL CONFIGURATION.

Date: 12/30/14



10 TON AIR HANDLER (DUAL CIRCUIT)

DIMENSIONAL DRAWING

Unit Dimensions - Split System Air Conditioning Units (Large)

Item: B1 Qty: 1 Tag(s): CU-3 / FCU-3



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AIR HANDLER ELECTRICAL DATA CONDENSER

Date: 12/30/14

ELECTRICAL DATA Model: TWE120 Unit Operating Voltage: 187-253 Minimum Circuit Ampacity: 10.6 - 9.6 Maximum Fuse Size: 20.0/20.0 Maximum Circuit Breaker: 20.0/20.0		EVAPORATOR FAN MOTOR (9) No.: 1 Volts: 208-230 Phase: 1 Motor HP: 2.0 Amp-FLA: 8.5 - 7.7 Amp-LRA: 57.4 - 57.4	
GENERAL DATA			
SYSTEM DATA No. Refrigerant Circuits: 2 Suction Line (in.) OD: 1 1/8" Liquid Line (in.) OD: 1/2"		INDOOR COIL - TYPE Tube Size: 3/8" Face Area: 11 3/16" Row/FPI: 4 / 14 Refrigerant Control: EXPANSION VALVE Drain Connection Size: 1" PVC	
INDOOR FAN Type: CENTRIFUGAL No. Used/Diameter x Width: 1 / 15"X15" Drive Type/No. Speed: BELT/ADJUSTABLE CFM: 4000 No. Motor: 1 Motor HP - Standard/Oversized: 2.0 Motor RPM: 1725 Motor Frame Size: 56Z		FILTER Type: THROWAWAY Furnished: YES No. Size Recommended: (4) 16"X25"X1"	
HEATER DATA			
ELECTRICAL DATA Heat Rating (kW): Control Stages: Power Supply: Minimum Circuit Ampacity: Maximum Fuse Size: Maximum Circuit Breaker:		Notes: 1. KW ratings are at: 208/240V for 208-230V air handlers 480V for 460V air handlers 600V for 575V air handlers For other than rated voltage, capacity = ($\frac{\text{Voltage}}{\text{Rated Voltage}}$) x 2 Rated Capacity 2. Any power supply and circuits must be wired and protected in accordance with local electrical codes. 3. The HACR circuit breaker is for U.S.A. installations only.	

NOTES:

- Cooling performance is rated at 95 F ambient, 80 F entering dry bulb, 67 F entering wet bulb.
- Gross capacity does not include the effect of fan motor heat. AHRI capacity is net and includes the effect of fan motor heat. Ratings shown are tested and certified in accordance with AHRI Standard 340/360 or 365 certification program.
- Condensing Unit Only Gross Cooling Capacity rate at 45 F saturated suction temperature and at 95 F ambient.
- AHRI Net Cooling Capacity is calculated with matched blower coil and 25 ft. of OD interconnecting tubing. EER is rated at AHRI conditions and in accordance with DOE test procedures.
- Integrated Part Load Value is based on AHRI Standard 340/360 or 365. Units are rated at 80 F ambient, 80 F entering dry bulb, and 67 F entering wet bulb at AHRI rated CFM.
- Sound Rating shown is tested in accordance with AHRI Standard 270.
- Refer to refrigerant piping program for line sizing and line length.
- Refrigerant (operating) charge is for condensing unit (all circuits) with matching blower coils and 25 ft. of interconnecting refrigerant lines. All units are shipped with a small nitrogen holding charge only.
- Second Column data Coverable to 460 volt

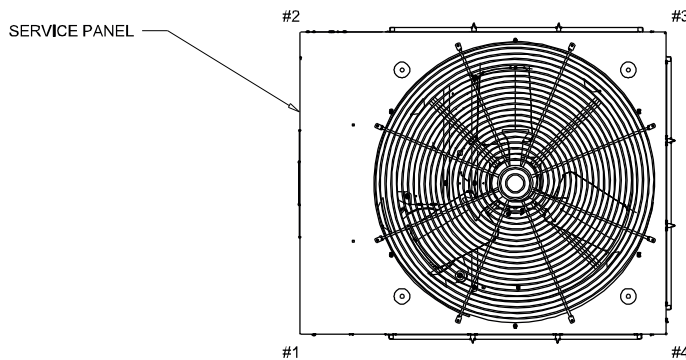
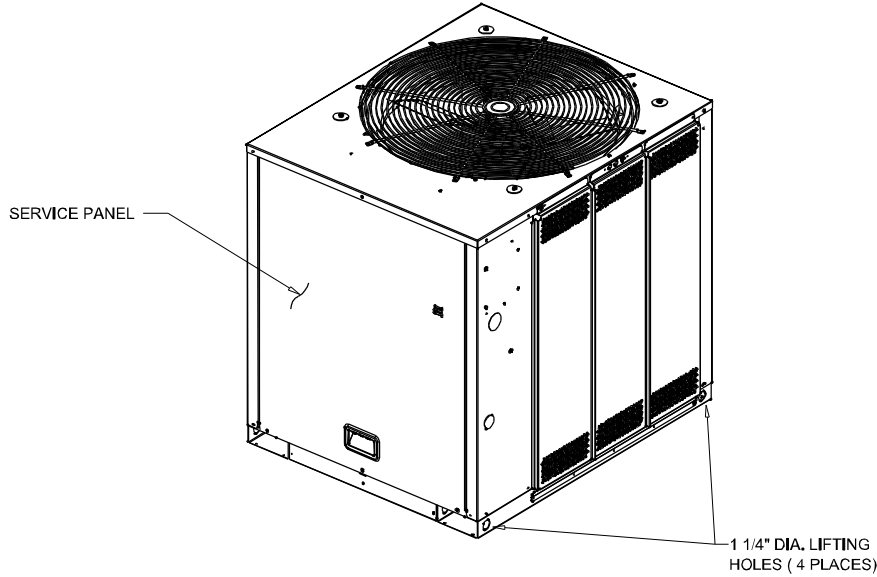
Weight, Clearance & Rigging Diagram - Split System Air Conditioning Units (Large)

Item: B1, B2 Qty: 2 Tag(s): CU-3 / FCU-3, CU-4/ FCU-4



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WEIGHTS AND CORNER WEIGHTS

Shipping:	509.0 lb
Net	438.0 lb.
Corner 1:	129.0 lb
Corner 2:	140.0 lb
Corner 3:	83.0 lb
Corner 4:	86.0 lb

WEIGHTS AND LOAD POINT LOCATION

WEIGHT AND RIGGING

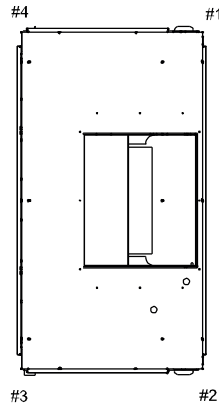
Weight, Clearance & Rigging Diagram - Split System Air Conditioning Units (Large)

Item: B1 Qty: 1 Tag(s): CU-3 / FCU-3



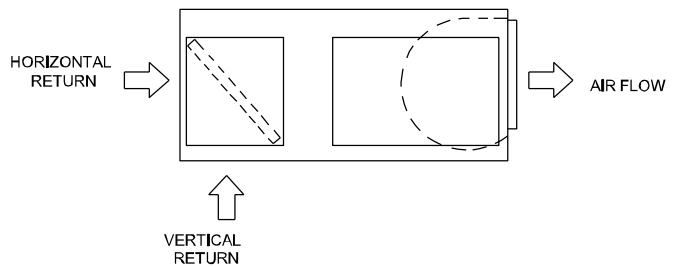
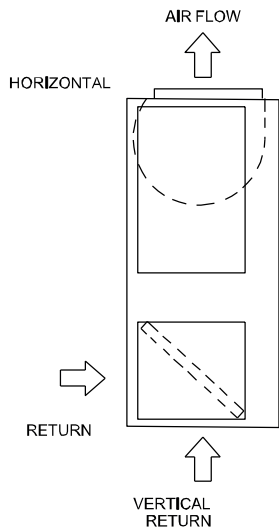
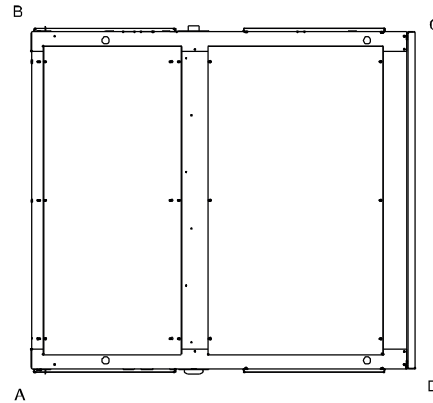
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WEIGHTS AND CORNER WEIGHTS

Shipping:	429.0 lb
Net	393.0 lb
VERTICAL	
Corner 1:	77.0 lb
Corner 2:	121.0 lb
Corner 3:	110.0 lb
Corner 4:	85.0 lb
HORIZOTNAL	
Corner A:	79.0 lb
Corner B:	118.0 lb
Corner C:	77.0 lb
Corner D:	119.0 lb



WEIGHTS AND LOAD POINT LOCATION FOR CONDENSOR

WEIGHT AND RIGGING

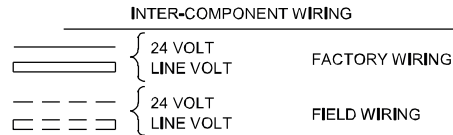
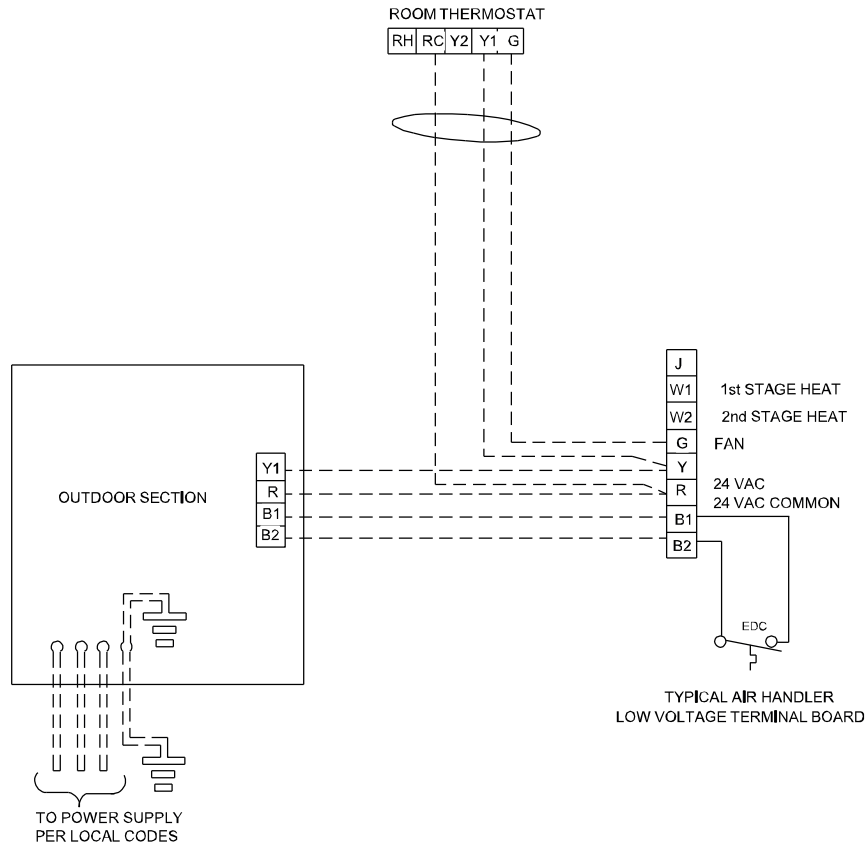
Field Wiring - Split System Air Conditioning Units (Large)

Item: B1, B2 Qty: 2 Tag(s): CU-3 / FCU-3, CU-4/ FCU-4



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NOTES:

1. POWER WIRING AND GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
2. BE SURE POWER SUPPLY AGREES WITH EQUIPMENT NAMEPLATE.
3. LOW VOLTAGE WIRING TO BE 18 A.W.G. MINIMUM CONDUCTOR.
4. USE COPPER CONDUCTORS ONLY.

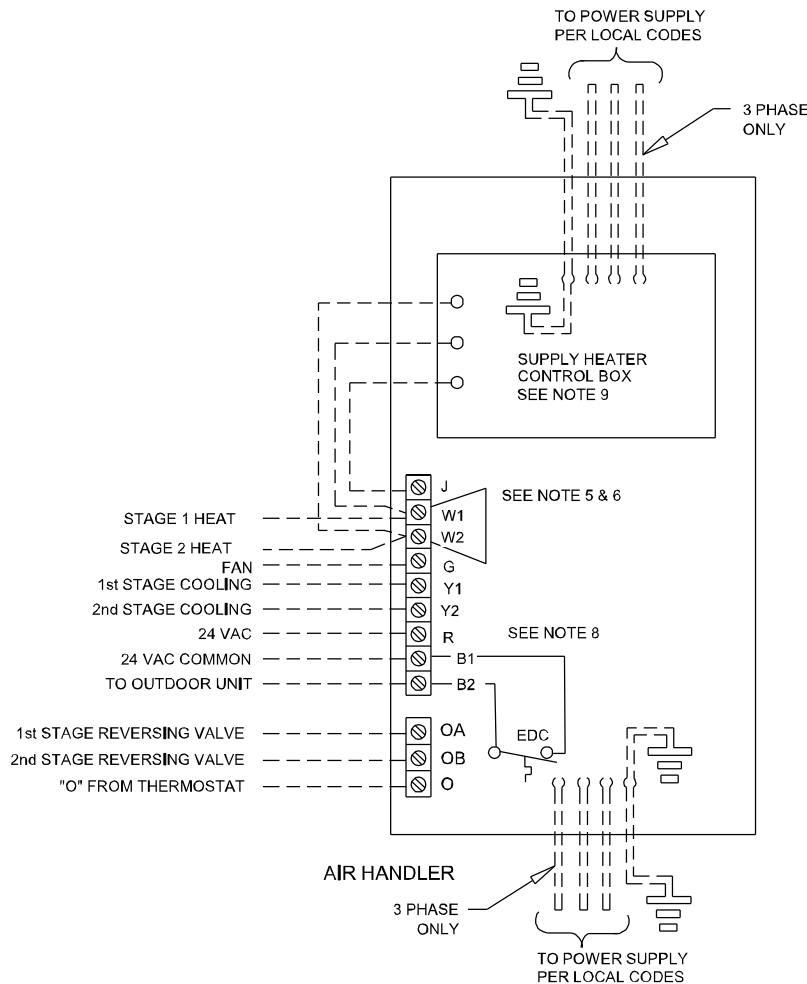
Field Wiring - Split System Air Conditioning Units (Large)

Item: B1 Qty: 1 Tag(s): CU-3 / FCU-3

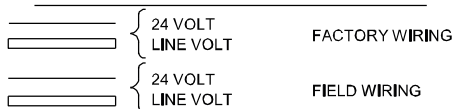


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INTER-COMPONENT WIRING



NOTES:

1. POWER WIRING AND GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
2. BE SURE POWER SUPPLY AGREES WITH EQUIPMENT NAMEPLATE.
3. LOW VOLTAGE WIRING TO BE 18 A.W.G. MINIMUM CONDUCTOR.
4. USE COPPER CONDUCTORS ONLY.
5. IF TWO STAGE ELECTRIC HEATERS AND THERMOSTAT ARE USED, REMOVE JUMPER BETWEEN W1 AND W2.
6. FOR SINGLE STAGE ELECTRIC HEATER, OMIT WIRE BETWEEN W2 AND THERMOSTAT AND W2 AND ELECTRIC HEATER.
7. FOR COOLING ONLY, OMIT WIRES BETWEEN W1,W2 AND THERMOSTAT AND OMIT ELECTRIC HEATER.
8. IF THE EDC SWITCH IS TO BE CONNECTED IN THE CIRCUIT, THE EDC WIRE MUST BE REMOVED FROM THE B1 TERMINAL AND RECONNECTED TO THE "Y" TERMINAL ON THE INDOOR SECTION LOW VOLTAGE TERMINAL BOARD AS SHOWN.
9. WHEN ELECTRIC HEATER ACCESSORY IS USED, SINGLE POINT POWER ENTRY OR DUAL POINT POWER ENTRY IS FIELD OPTIONAL. SINGLE POINT POWER ENTRY OPTION IS THROUGH ELECTRIC HEATER ONLY.



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Tag Data - BCXD Blower Coil - Direct Drive (Qty: 2)

Item	Tag(s)	Qty	Description	Model Number
C1	FCU-1	1	BCXD036	BCHD036B2**A22L2K000000B010000000
C2	FCU-2	1	BCXD054	BCHD054B2**A22L4G000000B010000000

Product Data - BCXD Blower Coil - Direct Drive

All Units

HORIZONTAL CONFIGURATION

Horizontal Configuration

208/60/1

Foil Faced Insulation 1"

Motor, drive & control box on Same Side as Coil & Drainpan Connection

Polymer Drainpan - Left Hand Coil & Drainpan Connections

4 Row DX, 3/16" (0.032 wall) Distributor

2 Row High Capacity Hydronic Coil

2" Pleated MERV 8 Throwaway Filter

Customer Supplied Terminal Interface

Date: 12/30/14

Item: C1 Qty: 1 Tag(s): FCU-1

Unit Size 36; 3 Ton

1/2 Horsepower

1400 rpm

Item: C2 Qty: 1 Tag(s): FCU-2

Unit Size 54; 4-1/2 Ton

1 Horsepower

1100 rpm



Mechanical Specifications - BCXD Blower Coil - Direct Drive

Item: C1, C2 Qty: 2 Tag(s): FCU-1, FCU-2

BCHD General

The product line consists of a horizontal air handling unit and optional mixing box. Air-handling accordance with AHRI standard 430. Acoustical data is tested in accordance with AHRI 260. S. and Canadian safety standards and complies with NFPA 90A. Air handlers consist of a hydr pan, and centrifugal fan with motor in a common cabinet. Motor location and coil connections same or opposite side location. Air handlers are provided with knockouts in all four corners fo suspended from the ceiling with threaded rods. Unit and accessories are insulated with 1" 1.5I insulation. 1" foil faced insulation is also available. Large motor access panels are provided on both sides of the unit and accessories.

Date: 12/30/14

Casing

Casings (structural components) are constructed of 18-gauge galvanized steel, insulated with 1" 1.5 lb/cu. ft density fiberglass fire resistant and odorless glass fiber material to provide thermal and acoustical insulation. Fan housing sides are directly attached to the air handler top and bottom panels strengthening the entire unit assembly. Coil access panels are located on both sides of the air handler and allow easy removal of the internal coils and drain pan. Main access panels provide generous access to the fan and motor from both sides of the air handler.

Foil Faced Insulation

The interior surface of the unit is acoustically and thermally lined with 1" 2.0 lb/cu. ft R-Value of 4.3 density glass fiber with a foil facing. The insulation is UL listed and meets NFPA-90A, UL 181 and bacteriological C665 standards.

Coil #1 Direct Expansion (DX) Coils

DX coils for use with refrigerant 22 or 410a, have 1/2" OD x .016" W round seamless copper tubes expanded into full fin collars for permanent fin-tube bond and use highly efficient Trane Delta Flo, Type H aluminum fins mechanically bonded. 4 and 6 row coils are available with 12 fins per inch fin spacing. Coils have round, seamless, copper pipe liquid lines and suction headers with male sweat connections. Suction headers have bottom connections to aid drainage of any oil that may collect in the coil. Liquid line and suction connections are outside the unit casing (on the same side of the unit) to facilitate field piping. Coils are dehydrated and sealed with a dry air charge. Connections are clearly labeled to ensure coils are piped correctly. Coils are proof tested at 715.00 psi and leak tested at 650.00 psi air-under-water. Max std operating conditions are 650.00 psi at 127.0 F with R-22 and R410a. Coil performance data is rated and certified in accordance with the current edition of AHRI standard 410.

Coil #2 Hydronic Cooling Coils

Cooling coils are two, four, or six-row, chilled water. All water coils are 12 fins per inch. All water coils use highly efficient Trane Delta Flo, Type H aluminum fins, mechanically bonded to seamless copper tubes. All coils are specifically designed and circuited for water use. All coils are factory tested with 450.00 psi air under water. Maximum standard operating conditions are 300.00 psi at 200.0 F. Sweat type connections are standard. Coil performance data is rated and certified in accordance with the current edition of AHRI standard 410. Propylene glycol is not covered under the scope of AHRI 410.

Unit Fan

The fans are DWDI (double width double inlet) forward curved centrifugal blower type. The fans are direct drive mounted directly to the motor shaft. All fans are dynamically balanced. All air handlers have a single fan.

EC Motor

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 with a field-supplied variable speed controller. The motor will choose the highest speed if there are simultaneous/conflicting speed requests. All motors have integral thermal overload protection with a maximum ambient operating temperature of 104°F and are permanently lubricated. Motors are capable of starting at 50 percent of rated voltage and operating at 90 percent of rated voltage on all speed settings. Motors can operate at up to 10 percent over rated voltage.

2" Pleated Throw-Away Merv8 Filter

The units are equipped with 2" flat pleated media filters with a rated average dust spot efficiency of no less than 35 to 40 percent when tested in accordance with ASHRAE 52.1 atmospheric dust spot method and a Merv8 rating based on ASHRAE Standard 52.2.



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Polymer Drain Pan

The drain pan is noncorrosive and double-sloped to allow condensate drainage. The drainpan Coils mount above the drain pan, not in the drain pan - thus allowing the drain pan to be fully The drain pan can also be removed for cleaning. The drain pan connections are unthreaded & solvent bonding. The main drain connection is at the lowest point of the drain pan. An auxiliar provided on the same side as the main connection.

Customer Supplied Terminal Interface (CSTI)

The customer supplied terminal interface (CSTI) is a pre-wired control offering of selected cor option intended to be used with a field-supplied, low-voltage thermostat or controller and field sensors. The control box contains a relay board which includes a line voltage to 24-volt transformer. Selected components are wired to a low-voltage terminal block and are run-tested, so the only a power connection and thermostat/controller connection are needed to commission the unit.

Date: 12/30/14

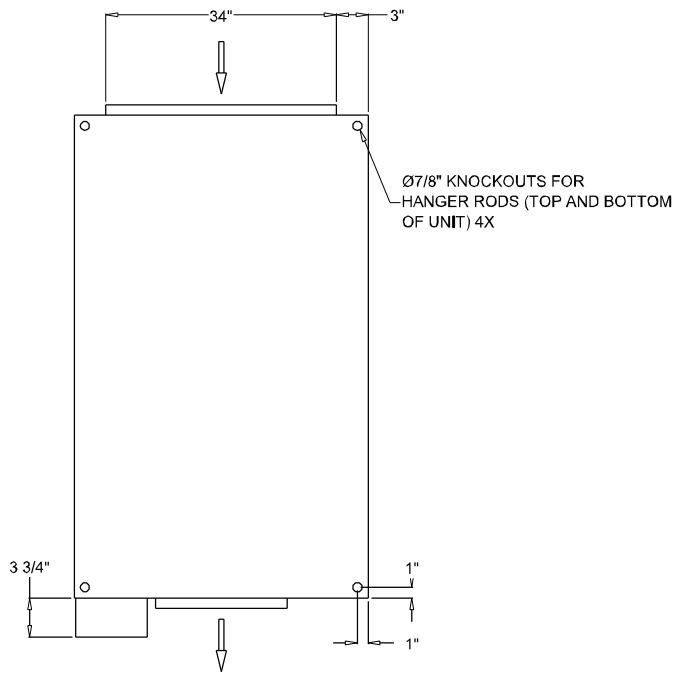
Unit Dimensions - BCXD Blower Coil - Direct Drive

Item: C1 Qty: 1 Tag(s): FCU-1

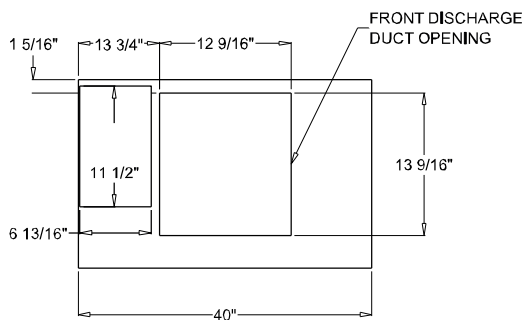


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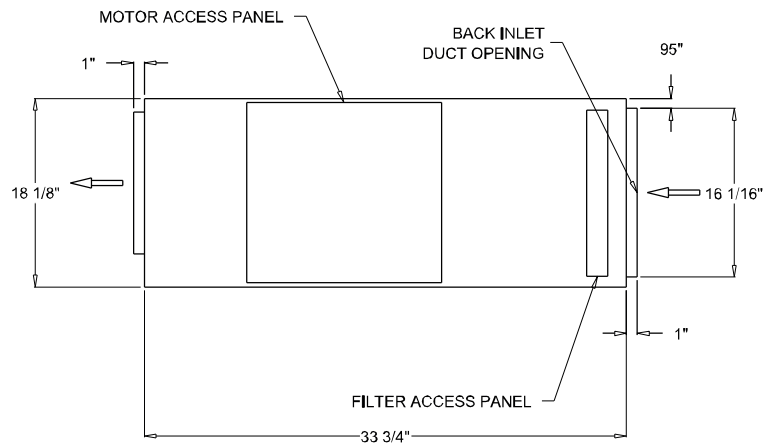
Date: 12/30/14



TOP VIEW



FRONT VIEW



RIGHT VIEW

NOTES:

1. ACCESS PANELS ARE LOCATED ON BOTH SIDES OF THE UNIT TO PROVIDE ACCESS TO THE UNIT'S INTERNAL COMPONENTS.
2. CONTROL BOX IS FACTORY MOUNTED ON DRIVE SIDE AND PROVIDED WITH 7/8" DIAMETER KNOCKOUTS FOR FIELD WIRING.
3. ARROWS INDICATE THE DIRECTION OF AIRFLOW.

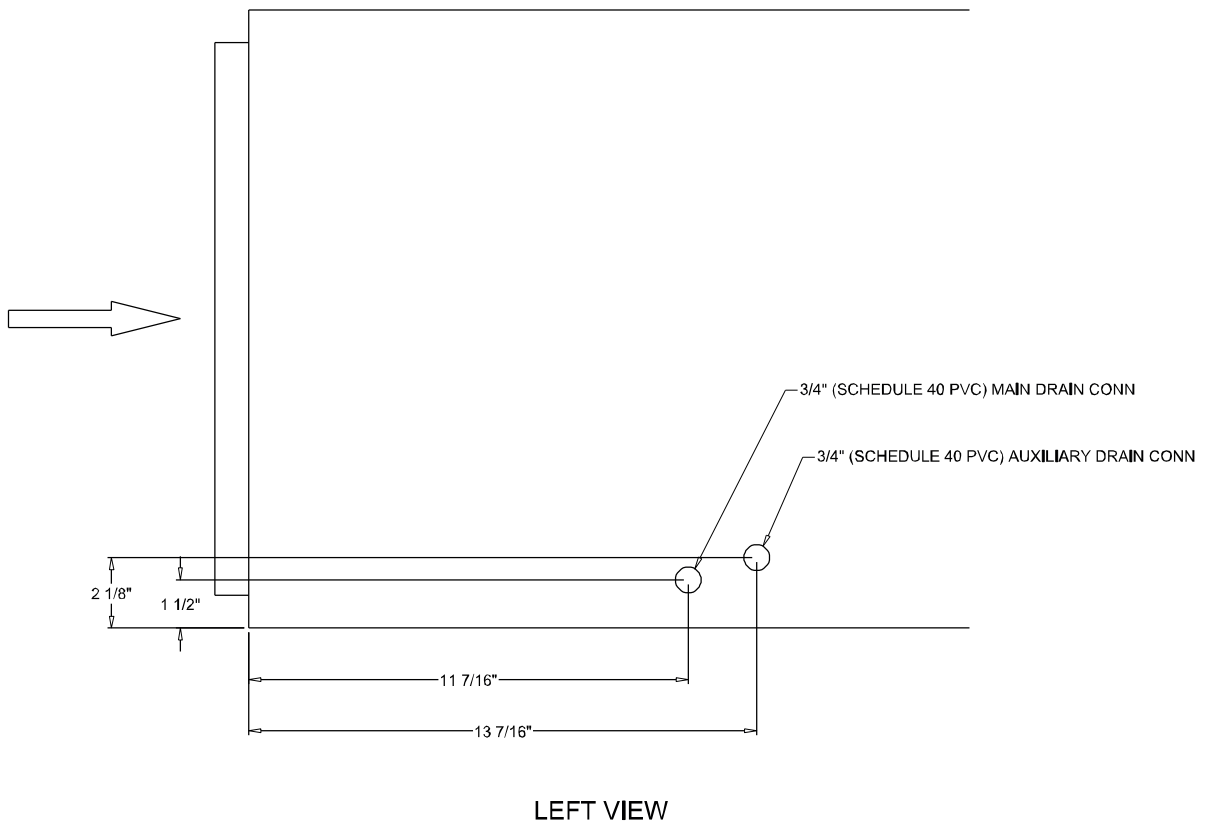
Unit Dimensions - BCXD Blower Coil - Direct Drive

Item: C1, C2 Qty: 2 Tag(s): FCU-1, FCU-2



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LEFT VIEW

NOTES:

1. ALL DIMENSIONS ARE SHOWN FROM THE BOTTOM REAR CORNER OF UNIT.
2. STUBOUTS PROTRUDE 2 1/8" FROM EXTERIOR CASING OF UNIT.
3. ARROW INDICATES THE DIRECTION OF AIRFLOW.
4. DRAIN CONNECTIONS ARE UNTHREADED.

Unit Dimensions - BCXD Blower Coil - Direct Drive

Item: C1 Qty: 1 Tag(s): FCU-1



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NOTES:

1. WEIGHT OF BASIC UNIT INCLUDES ONLY CABINET, FAN, AVERAGE DRIVE, WIRING AND AVERAGE FILTER.

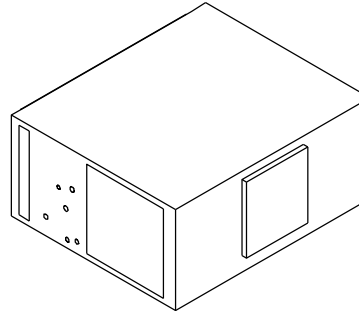
2. WEIGHT OF STEAM COIL MODULE INCLUDES ONLY CABINET WITH AVERAGE FILTER.

3. BEFORE PREPARING ANY UNIT OR ACCESSORY MODULE FOR LIFTING, ESTIMATE THE APPROXIMATE CENTER OF GRAVITY AND TEST LIFT THE UNIT OR ACCESSORY MODULE TO DETERMINE BALANCE AND STABILITY. USE A PROPER RIGGING METHOD SUCH AS STRAPS, SLINGS OR SPREADER BARS FOR PROTECTION AND SAFETY BEFORE HOISTING THE UNIT OR ACCESSORY MODULE.

4. DO NOT LIFT UNITS OR ACCESSORY MODULES IN WINDY CONDITIONS OR ABOVE INSTALLATION PERSONNEL. FAILURE TO PROPERLY LIFT UNIT OR ACCESSORY MODULE COULD RESULT IN DEATH, SERIOUS INJURY, EQUIPMENT DAMAGE OR PROPERTY-ONLY DAMAGE.

5. DO NOT RIG OR LIFT UNITS OR ACCESSORY MODULES WITH FORK LIFT FORKS.

6. ASSEMBLY OF THE UNIT MUST BE PERFORMED AT THE INSTALLATION SITE. ALWAYS RIG UNITS AND ACCESSORY MODULES AS SHIPPED FROM THE FACTORY.



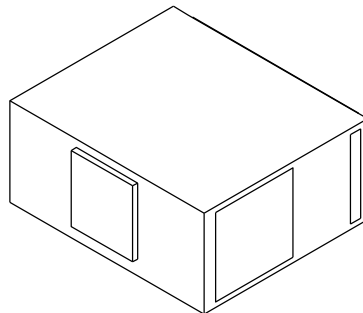
ISO1 VIEW

UNIT, COIL & ACCESSORY MODULE WEIGHTS

BASIC UNIT	COIL 1 DRY	COIL 1 WET	COIL 2 DRY	COIL 2 WET	MOTOR	ELECTRIC HEATER	MIXING BOX	ANGLED FILTER BOX	ANGLED FILTER MIXING BOX
116.1 lb	25.5 lb		14.1 lb	17.6 lb	14.0 lb				

FILTER ACCESS MODULE	STEAM COIL MODULE	STEAM COIL DRY	STEAM COIL WET

UNIT SIZE	SERVICE CLEARANCE
36	37"



ISO2 VIEW

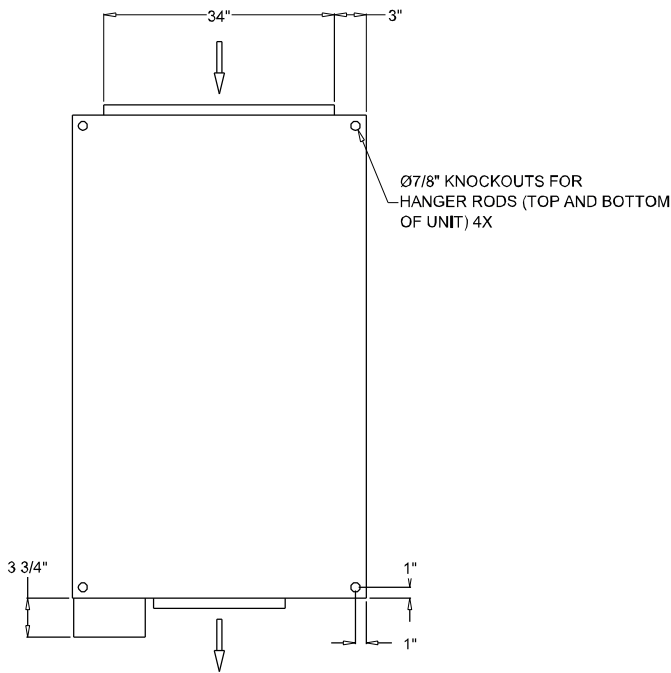
Unit Dimensions - BCXD Blower Coil - Direct Drive

Item: C2 Qty: 1 Tag(s): FCU-2

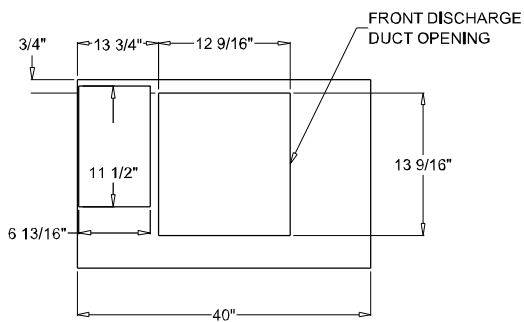


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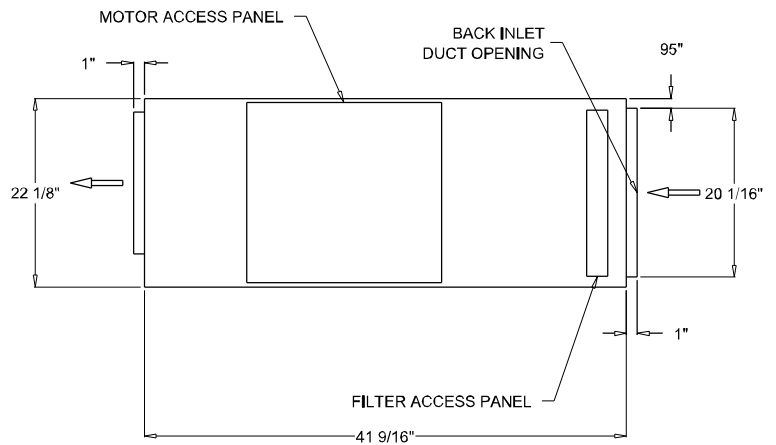
Date: 12/30/14



TOP VIEW



FRONT VIEW



RIGHT VIEW

NOTES:

1. ACCESS PANELS ARE LOCATED ON BOTH SIDES OF THE UNIT TO PROVIDE ACCESS TO THE UNIT'S INTERNAL COMPONENTS.
2. CONTROL BOX IS FACTORY MOUNTED ON DRIVE SIDE AND PROVIDED WITH 7/8" DIAMETER KNOCKOUTS FOR FIELD WIRING.
3. ARROWS INDICATE THE DIRECTION OF AIRFLOW.

Unit Dimensions - BCXD Blower Coil - Direct Drive

Item: C2 Qty: 1 Tag(s): FCU-2



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Date: 12/30/14

NOTES:

1. WEIGHT OF BASIC UNIT INCLUDES ONLY CABINET, FAN, AVERAGE DRIVE, WIRING AND AVERAGE FILTER.

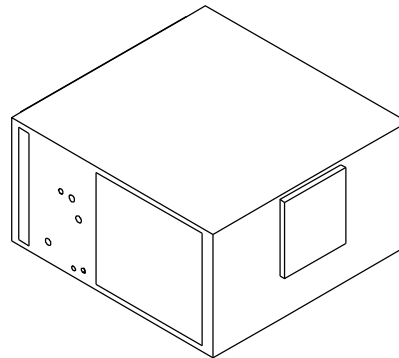
2. WEIGHT OF STEAM COIL MODULE INCLUDES ONLY CABINET WITH AVERAGE FILTER.

3. BEFORE PREPARING ANY UNIT OR ACCESSORY MODULE FOR LIFTING, ESTIMATE THE APPROXIMATE CENTER OF GRAVITY AND TEST LIFT THE UNIT OR ACCESSORY MODULE TO DETERMINE BALANCE AND STABILITY. USE A PROPER RIGGING METHOD SUCH AS STRAPS, SLINGS OR SPREADER BARS FOR PROTECTION AND SAFETY BEFORE HOISTING THE UNIT OR ACCESSORY MODULE.

4. DO NOT LIFT UNITS OR ACCESSORY MODULES IN WINDY CONDITIONS OR ABOVE INSTALLATION PERSONNEL. FAILURE TO PROPERLY LIFT UNIT OR ACCESSORY MODULE COULD RESULT IN DEATH, SERIOUS INJURY, EQUIPMENT DAMAGE OR PROPERTY-ONLY DAMAGE.

5. DO NOT RIG OR LIFT UNITS OR ACCESSORY MODULES WITH FORK LIFT FORKS.

6. ASSEMBLY OF THE UNIT MUST BE PERFORMED AT THE INSTALLATION SITE. ALWAYS RIG UNITS AND ACCESSORY MODULES AS SHIPPED FROM THE FACTORY.



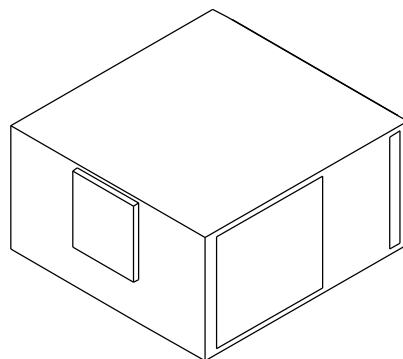
ISO1 VIEW

UNIT, COIL & ACCESSORY MODULE WEIGHTS

BASIC UNIT	COIL 1 DRY	COIL 1 WET	COIL 2 DRY	COIL 2 WET	MOTOR	ELECTRIC HEATER	MIXING BOX	ANGLED FILTER BOX	ANGLED FILTER MIXING BOX
138.9 lb	37.2 lb		27.2 lb	36.1 lb	19.2 lb				

FILTER ACCESS MODULE	STEAM COIL MODULE	STEAM COIL DRY	STEAM COIL WET

UNIT SIZE	SERVICE CLEARANCE
54	37"



ISO2 VIEW

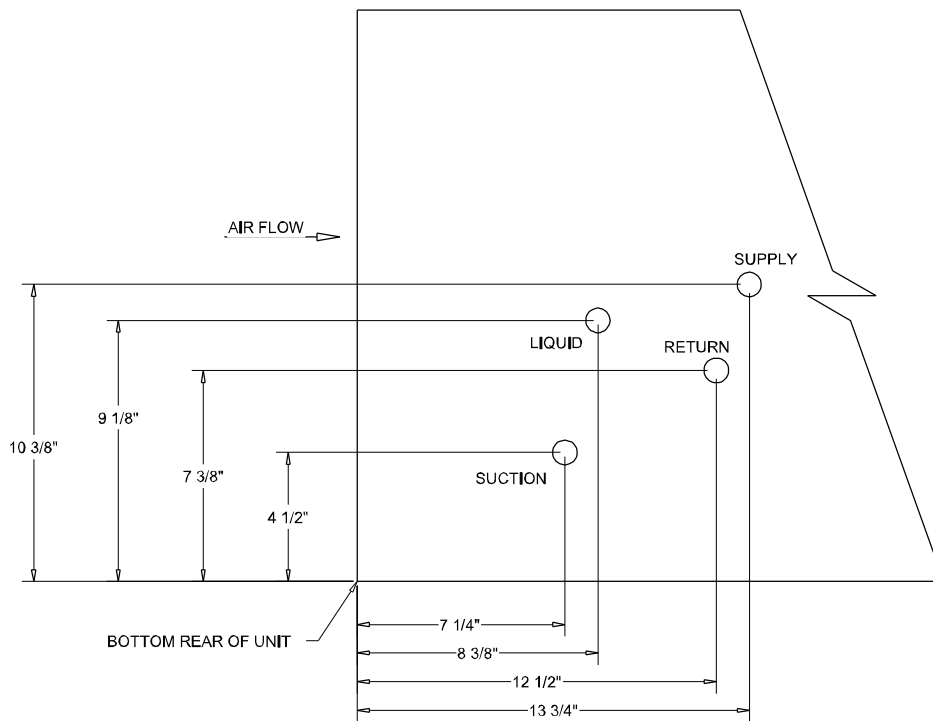


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MAIN UNIT COIL CONNECTIONS

Date: 12/30/14

SUCTION	7/8"
LIQUID	5/8"
RETURN	7/8"
SUPPLY	7/8"



NOTES:

1. PICTORIAL HEADER STUBOUT LOCATIONS RELATIVE TO EACH OTHER MAY NOT BE ACCURATE.
2. LOCATING DIMENSIONS HAVE A PLUS / MINUS 2" TOLERANCE.
3. FOR UNITS WITH A FILTER ACCESS MODULE, ADD 7 3/16" TO HORIZONTAL DIMENSIONS SHOWN.
4. PIPING CONNECTIONS ARE SPECIFIED AS OUTSIDE DIAMETER (O.D.).
5. THERMAL EXPANSION VALVE IS TO BE FIELD SUPPLIED FOR DX COOLING.

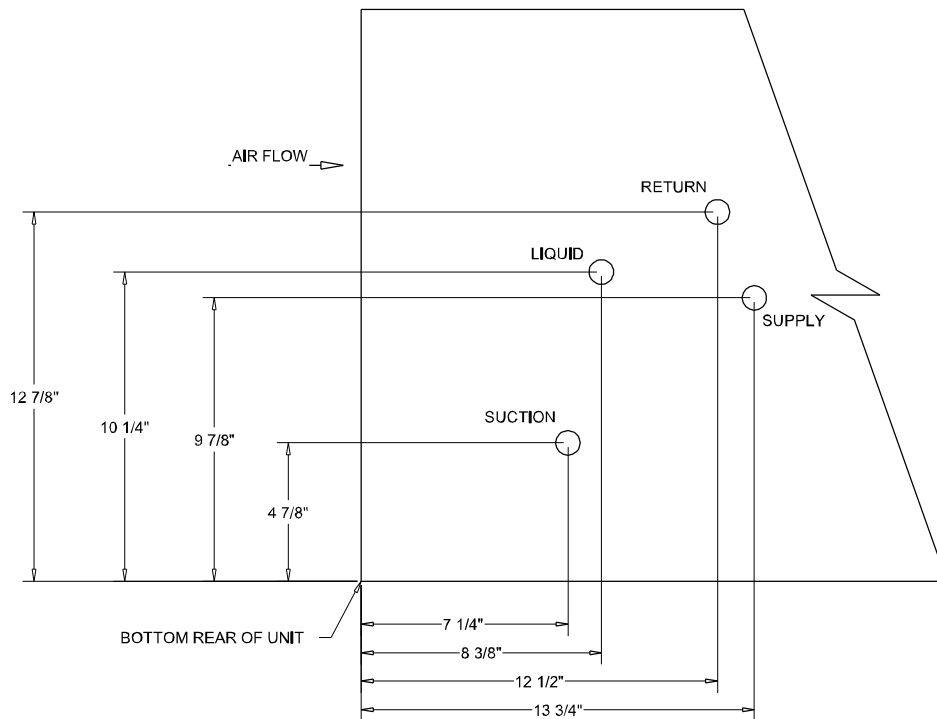


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MAIN UNIT COIL CONNECTIONS

Date: 12/30/14

SUCTION	1 1/8"
LIQUID	7/8"
RETURN	1 1/8"
SUPPLY	1 1/8"



NOTES:

1. PICTORIAL HEADER STUBOUT LOCATIONS RELATIVE TO EACH OTHER MAY NOT BE ACCURATE.
2. LOCATING DIMENSIONS HAVE A PLUS / MINUS 2" TOLERANCE.
3. FOR UNITS WITH A FILTER ACCESS MODULE, ADD 7 3/16" TO HORIZONTAL DIMENSIONS SHOWN.
4. PIPING CONNECTIONS ARE SPECIFIED AS OUTSIDE DIAMETER (O.D.).
5. THERMAL EXPANSION VALVE IS TO BE FIELD SUPPLIED FOR DX COOLING.

Field Wiring - BCXD Blower Coil - Direct Drive

Item: C1, C2 Qty: 2 Tag(s): FCU-1, FCU-2



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WARNING
HAZARDOUS VOLTAGE
DISCONNECT ALL ELECTRICAL POWER
BEFORE ATTEMPTING TO WIRE THIS UNIT.
FOLLOW ALL LOCAL AND STATE ELECTRICAL
CODES AND REGULATIONS.
BEFORE ATTEMPTING TO WIRE THIS UNIT,
STUDY THE WIRING MANUAL AND THE
WIRING DIAGRAMS.
FIELD WIRING MUST BE IN ACCORDANCE
WITH THE NATIONAL ELECTRICAL CODE (NEC),
STATE AND LOCAL REQUIREMENTS, ALL FIELD
WIRING MUST HAVE AN INSULATION VOLTAGE RATING
THAT EQUALS OR EXCEEDS UNIT RATED VOLTAGE.

AVERTISSEMENT
DANGER DE CHOC ÉLECTRIQUE
DÉBRANCHER TOUS LES TENDRISSEMENTS
AVANT D'ESSAYER DE BRICOLER CE
MATÉRIEL.
RESPECTER TOUS LES RÈGLEMENTS
ÉLECTRIQUES LOCAUX ET ÉTATS.
AVANT D'ESSAYER DE BRICOLER CE
MATÉRIEL, ÉTUDIER LE MANUEL DE
MONTAGE ET LES DIAGRAMMES DE
BRICOLAGE.
LE BRICOLAGE DOIT ÊTRE EN ACCORD
AVEC LE CODE NATIONAL ÉLECTRIQUE
(NEC), LES EXIGENCES ÉTAT ET
LOCALES, TOUS LES BRICOLAGES
DOIVENT AVOIR UN NIVEAU D'ISOLATION
ÉGAL OU SUPÉRIEUR À CELUI DU
MATÉRIEL.

NOTICE

USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT
ALUMINUM CONDUCTORS.
FAILURE TO DO THE ABOVE COULD RESULT IN
EQUIPMENT DAMAGE.

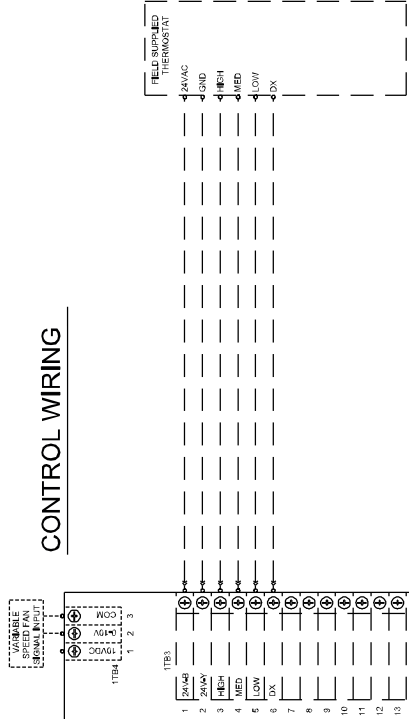
AVIS

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 D'ÉCRASSEMENT
ENTRANÉES DES DOMMAGES À L'ÉQUIPEMENT.

AVISO

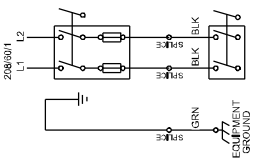
UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
LAS BORNES DE LA UNIDAD NO ESTÁN DISEÑADAS
PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.
NO SEGUER LAS INSTRUCCIONES ANTERIORES PUEDE
PROVOCAR DAÑOS EN EL EQUIPO.

CONTROL WIRING



ADAPTER BOARD

POWER WIRING



**MINIMUM CIRCUIT AMPACITY: RUN SELECTION IN TOPSS FOR MINIMUM CIRCUIT AMPACITY RATING.
MAXIMUM FUSE SIZE: RUN SELECTION IN TOPSS FOR MAXIMUM FUSE SIZE RATING.**

- NOTES:
- UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 75°F. AT ATMOSPHERIC PRESSURE. AT 85% RH. RELATIVE HUMIDITY WITH ALL UTILITIES TURNED OFF AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.
 - DASHED LINES INDICATE RECOMMENDED FIELD WIRING. SOLID LINES INDICATE RECOMMENDED WIRING. COMPONENTS PROVIDED BY THE FIELD.
 - SOLID LINES INDICATE WIRING BY TRANE CO.
 - ALL FIELD WIRING MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC), STATE AND LOCAL REQUIREMENTS. ALL FIELD WIRING MUST HAVE AN INSULATION VOLTAGE RATING THAT EQUALS OR EXCEEDS UNIT RATED VOLTAGE.

1. FIELD INSTALLED CONDENSING UNIT CAN BE WIRED BETWEEN TERMINALS 1TB-1 AND 1TB-2 FOR CONDENSER. DX OUTPUTS RATED FOR 24VAC MAXIMUM.
1. USE CLASS 2 WIRING FOR LOW VOLTAGE APPLICATIONS.

GENERAL NOTES:

- 1. ALL CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ALL MECHANICAL SYSTEMS... 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ALL MECHANICAL SYSTEMS... 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ALL MECHANICAL SYSTEMS...

MECHANICAL NOTES AND SPECIFICATIONS

- 1. ALL MECHANICAL SYSTEMS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE ASHRAE HANDBOOKS... 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ALL MECHANICAL SYSTEMS...

TEMPERATURE CONTROL

- 1. ALL MECHANICAL SYSTEMS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE ASHRAE HANDBOOKS... 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ALL MECHANICAL SYSTEMS...

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Portland, ME 04101

HALEBERG
ENGINEERING
1000 1/2 1st Street
Portland, ME 04101



DESIGNED BY: MDT - CHECKED BY: CONTROL
MANAGED BY: MDM - NUMBER:
SUBMITTED BY: ELM - REVISIONS:
ISSUE DATE:
DATE DISPOSED:
BY:
PROJECT:



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