

AIRTEMP INC.
MECHANICAL CONTRACTORS
11 WALLACE AVE.
S. PORTLAND ME 04106
207-774-2300
207-871-1345 FAX

A COMFORT SYSTEMS USA COMPANY
QUALITY PEOPLE – BUILDING SOLUTIONS

SUBMITTAL

JOB: EYECARE MEDICAL GROUP ADDITION
DATE: 11/20/13
LOCATION: 53 SEWALL ST. PORTLAND MAINE
MECHANICAL CONTRACTOR: AIRTEMP INC.
ENGINEER: ALLIED ENGINEERING
AIRTEMP JOB NUMBER: 515

AIRTEMP IS PLEASED TO SUBMIT THE FOLLOWING ITEMS FOR APPROVAL:

237314 CUSTOM AIR HANDLING UNITS

PLEASE RETURN .PDF OF REVIEWED SUBMITTALS TO US



Submittal

Trane U.S. Inc.

Engineer: Allied Engineering Inc

Date: November 18, 2013

Prepared For:

Airtemp Incorporated

11 Wallace Avenue

South Portland, ME 04106

Customer P.O. Number: 14347

Customer Project Number:

Job Name:

Eyecare Medical Group

53 Sewall Street

Portland, ME 04102

Job Number: A223355

Trane is pleased to provide the enclosed submittal for your review and approval.

AIR HANDLING UNITS

Dan Broderick

Trane U.S. Inc. dba Trane

860 Spring Street, Unit #1

Westbrook, ME 04092-3824

Phone: (207) 828-1777

Fax: (207) 828-1511

E-Mail: djbroderick@trane.com

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

<u>Qty</u>	<u>Description</u>	<u>Tag(s)</u>
	Modular Air Handling Units	
1	Trane CSOA025 Performance Climate Changer Outdoor Central Station Air Handling Unit	RTU-1
1	Trane CSOA008 Performance Climate Changer Outdoor Central Station Air Handling Unit	RTU-2

Tag Data - Performance Climate Changer (Qty: 2)

Item	Tag(s)	Qty	Description	Model Number
A1	RTU-1	1	CSOA025 CDQ	CSAA025UB
A2	RTU-2	1	CSOA008	CSAA008UB

Mechanical Specifications - Performance Climate Changer

Item: A1, A2 Qty: 2 Tag(s): RTU-1 , RTU-2

GENERAL**Lifting Instructions**

The air handling units must be rigged, lifted, and installed in strict accordance with the Installation, Operation, and Maintenance manual (CLCH-SVX07B-EN). The units are also to be installed in strict accordance with the specifications. Units may be shipped fully assembled or disassembled to the minimum functional section size in accordance with shipping and job site requirements.

Outdoor units shall be shipped on 6" integral base frame for the purpose of mounting units on a roof curb or field-supplied pier support system. *Refer to the Product Data section for type of the base frame provided (for roof curb or pier-mount).*

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

Outdoor air handling units will be shipped with all openings covered to protect unit interior from in-transit debris.

Installing contractor is responsible for long term storage in accordance with the Installation, Operation, and Maintenance manual (CLCH-SVX07B-EN).

Unit shall be UL and C-UL Listed.

Air-handling performance data shall be certified in accordance with AHRI Standard 430.

Unit sound performance data shall be provided using AHRI Standard 260 test methods and reported as sound power. Trane, in providing this program and data, does not certify or warrant NC levels. These levels are affected by factors specific to each application and/or installation and therefore unable to be predicted or certified by Trane.

IBC Seismic Certification – RTU-1 only

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

IBC 2000, 2003, 2006, 2009

All unit sizes of the Performance Climate Changer are included in this certification. A complete list of certified models, options, and installation methods are detailed in report number VMA-45094-3 as issued by The VMC Group.

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

The basis of this certification is through a combination of testing of the active and energized components per AC156, and analysis of the main force resisting members of the unit. Additional calculations were conducted to ensure components, accessories, and options remained intact and attached to the unit under seismic load conditions.

This certification is based on a maximum FP/WP as shown on the schedule. This is obtained from the Maximum Considered Earthquake Short Period Spectral Response Acceleration, SDS, as determined by the ASCE 7 seismic maps. Various installation locations/isolation configurations are covered under this certification, limited by the SDS value stated below. A seismic importance factor, I_p , of 1.5 applies to this certification to include essential facility requirements and life safety applications (e.g., Hospitals, Police and Fire Stations, Emergency Shelters, etc.) for post event functionality.

$FP/WP = 0.4 \times (SD=(\text{see schedule})) \times (IP=1.5) \times (aP/RP) \times (1+2(z/h)) = (\text{see schedule})$

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

Certificate of Compliance and Final Certification Report are available upon request.

Unit Construction

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

All outdoor AHU interior casing panels will be made of galvanized steel.

Unit Paint

External surface of unit casing will be coated with water-based polyurethane paint. Color to be standard "Slate Gray". Factory-painted units will be able to withstand a salt spray test in accordance with ASTM B117 for a minimum of 500 consecutive hours and shall meet the following requirements following the salt-spray test:

- Mean scribe creepage rating of at least 6 per ASTM D1654 procedure A
- Blister size no larger than #6 per ASTM D714
- Blister density no greater than Medium per ASTM D714
- No onset of red rust

Casing Deflection

The casing shall not exceed 0.0042 inch deflection per inch of panel span at 1.00 times design static pressure. Maximum design static shall not exceed +8 inches w.g. in all positive pressure sections and -8 inches w.g. in all negative pressure sections.

Floor Construction

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

Insulation

Panel insulation shall provide a minimum thermal resistance (R) value of 13 ft²-h-°F/Btu throughout the entire unit. Insulation shall completely fill the panel cavities in all directions so that no voids exist and settling of insulation is prevented. Panel insulation shall comply with NFPA 90A.

Drain Pan

All cooling coil sections shall be provided with an insulated, double-wall, galvanized or stainless steel drain pan. To address indoor air quality (IAQ), the drain pan shall be designed in accordance with ASHRAE 62.1 being of sufficient size to collect all condensation produced from the coil and sloped in two planes promoting positive drainage to eliminate stagnant water conditions. The outlet shall be located at the lowest point of the pan and shall be sufficient diameter to preclude drain pan overflow under any normally expected operating condition. All drain pan threaded connections shall be visible external to the unit. Drain connections shall be of the same material as the primary drain pan and shall extend a minimum of 2-1/2" beyond the base to ensure adequate room for field piping of condensate drain traps.

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

Factory-supplied Curb

Outdoor AHU will be provided with a factory-supplied AHU roof curb. Curb will be shipped to jobsite disassembled. Contractor will be responsible for assembly and mounting to roof structure per the Roof Curb Manual. Units with factory-supplied external piping cabinet(s), the factory-supplied curb will include a curb section for the pipe cabinet(s). *Refer to the Roof Curb Detail drawing and Product Data section of submittal for height of factory-supplied roof curb(s).*

Field supplied Curb – RTU-1 Seismic Rated

Outdoor AHU is to be mounted on field-supplied specialty curb. Refer to the specialty curb manufacturer's installation requirements for any curb assembly, curb mounting to roof structure, or unit-to-curb attachment. For units requiring external piping cabinet(s), the specialty curb manufacturer is to also provide a curb for external pipe chase(s).

MIXING SECTION

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

Inlet Hoods

Inlet hoods are provided on the outside air openings and equipped with high performance moisture eliminators to minimize water carryover from the outside into the unit casing. Eliminators also perform the function of a bird screen to prevent nesting.

Refer to the unit As-Built and Product Data section for specific information on which sections are supplied with inlet hood.

Inlet Hoods

Inlet hoods are provided on the outside air openings and equipped with high performance moisture eliminators to minimize water carryover from the outside into the unit casing. Eliminators also perform the function of a bird screen to prevent nesting.

Refer to the unit As-Built and Product Data section for specific information on which sections are supplied with inlet hood.

Dampers

Dampers shall modulate the volume of outdoor, return, or exhaust air. The dampers shall be of double-skin airfoil design with metal, compressible jamb seals and extruded-vinyl blade-edge seals on all blades. The blades shall rotate on stainless-steel sleeve bearings. The dampers shall be rated for a maximum leakage rate of 4 cfm/ft² at 1 in. w.g. complying with ASHRAE 90.1 maximum damper leakage. All leakage testing and pressure ratings shall be based on AMCA Standard 500-D. Dampers may be arranged in a parallel or opposed-blade configuration.

Airflow Measurement Station (Std. TRAQ Dampers)

A factory-mounted airflow measurement station tested in accordance with AMCA Standard 611 and bearing the AMCA Ratings Seal for Airflow Measurement Performance shall be provided in the outdoor and/or return air opening to measure airflow. The damper blades shall be galvanized steel, housed in a galvanized steel frame and mechanically fastened to a rotating axle rod. The dampers shall be rated for a maximum leakage rate of 4 cfm/ft² at 1 in. w.g. complying with ASHRAE 90.1 maximum damper leakage. The standard airflow measurement station shall be capable of measuring from 15 percent to 100 percent of unit nominal airflow. The airflow measurement station shall adjust for temperature variations and provide a 2 to 10 Vdc signal that corresponds to actual airflow for controlling and documenting airflow. The accuracy of the airflow measurement station shall be ±5 percent.

Airflow Measurement Station (Low Flow TRAQ Dampers)

A factory-mounted airflow measurement station tested in accordance with AMCA Standard 611 and bearing the AMCA Ratings Seal for Airflow Measurement Performance shall be provided in the outdoor and/or return air opening to measure airflow. The damper blades shall be galvanized steel, housed in a galvanized steel frame and mechanically fastened to a rotating axle rod. The dampers shall be rated for a maximum leakage rate of 4 cfm/ft² at 1 in. w.g. complying with ASHRAE 90.1 maximum damper leakage. The standard airflow measurement station shall be capable of measuring from 15 percent to 100 percent of unit nominal airflow. The low-flow airflow measurement station shall be capable of measuring from 7.5 percent to 100 percent of unit nominal airflow. The airflow measurement station shall adjust for temperature variations and provide a 2 to 10 Vdc signal that corresponds to actual airflow for controlling and documenting airflow. The accuracy of the airflow measurement station shall be ±5 percent.

Mixing Section Damper Actuators

Spring return actuators shall be mounted with the outside air damper linked normally closed and the return air damper linked normally open.

Dampers

Dampers shall modulate the volume of outdoor, return, or exhaust air. The dampers shall be of double-skin airfoil design with metal, compressible jamb seals and extruded-vinyl blade-edge seals on all blades. The blades shall rotate on stainless-steel sleeve bearings. The dampers shall be rated for a maximum leakage rate of 4 cfm/ft² at 1 in. w.g. complying with ASHRAE 90.1 maximum damper leakage. All leakage testing and pressure ratings shall be based on AMCA Standard 500-D. Dampers may be arranged in a parallel or opposed-blade configuration.

Dampers

Dampers shall modulate the volume of outdoor, return, or exhaust air. The dampers shall be of double-skin airfoil design with metal, compressible jamb seals and extruded-vinyl blade-edge seals on all blades. The blades shall rotate on stainless-steel sleeve bearings. The dampers shall be rated for a maximum leakage rate of 4 cfm/ft² at 1 in. w.g. complying with ASHRAE 90.1 maximum damper leakage. All leakage testing and pressure ratings shall be based on AMCA Standard 500-D. Dampers may be arranged in a parallel or opposed-blade configuration.

ECONOMIZER SECTION

An economizer section shall be provided to support the damper assembly for outside, return, and exhaust air.

Inlet Hood

Inlet hoods are provided on the outside air openings and equipped with high performance moisture eliminators to minimize water carryover from the outside into the unit casing. Eliminators also perform the function of a bird screen to

prevent nesting.

Refer to the unit As-Built and Product Data section for specific information on which sections are supplied with inlet hood.

Exhaust Hood

Exhaust hoods are provided on exhaust air openings and equipped with bird screens to prevent nesting.

Refer to unit As-Built and Product Data section for specific information on which sections are supplied with an exhaust hood.

FILTER SECTION

A section shall be provided to support the filter rack as indicated throughout the unit. Refer to Product Data and As-Built sections of the submittal for specific locations within each unit.

Primary Filters

4-inch pleated media filters made with 100% synthetic fibers that are continuously laminated to a supported steel-wire grid with water repellent adhesive shall be provided. Filters shall be capable of operating up to 625 fpm face velocity without loss of filter efficiency and holding capacity. The filters shall have a MERV 8 rating when tested in accordance with the ANSI/ASHRAE Standard 52.2.

Cartridge Filters

The filters shall be 12-inch cartridge filters constructed with a continuous sheet of fine-fiber media made into closely spaced pleats. The filters shall be capable of operating up to 625 fpm face velocity without loss of filter efficiency and holding capacity. The filters shall be sealed into a metal frame assembled in a rigid manner. A gasket material shall be installed on the metal header of the filter to prevent filter bypass where the metal headers meet on the side-access racks. All cartridge filters shall be furnished with a 2-inch prefilter to provide extended cartridge filter life. The manufacturer shall supply a side-access filter rack capable of holding cartridge filters and prefilters.

The cartridge filters shall have a MERV 15 rating when tested in accordance with the ANSI/ASHRAE Standard 52.2.

Differential Pressure Gage

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

Dirty Filter Switch

A differential pressure switch piped to both sides of the filter shall indicate filter status.

COIL SECTION

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

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

Casing penetrations supplied for hydronic drain and vents. Piping contractor shall provide extended piping.

Water Coils (UW, UU, UA, W, 5W, 5A, WD, 5D, D1, D2, P, or TT)

The coils shall have aluminum fins and seamless copper tubes. Copper fins may be applied to coils with 5/8-inch tubes. Fins shall have collars drawn, belled, and firmly bonded to tubes by mechanical expansion of the tubes. The coil casing may be galvanized or stainless steel. Refer to the Product Data section of the submittal for the coil casing material.

The coils shall be proof-tested to 300 psig and leak-tested under water to 200 psig. Coils containing water or ethylene glycol are outside of the scope of AHRI Standard 410. Propylene glycol and calcium chloride, or mixtures thereof, are outside the scope of AHRI Standard 410 and, therefore, do not require AHRI 410 rating or certification.

Coil header connections are constructed of cast iron with female connections, steel block with female connections or steel pipe with male connections.

Tubes are 1/2" [13mm] OD 0.016" [0.406mm] thick copper.

Tubes are 5/8" [16mm] OD 0.020" [0.508 mm] thick copper.

Averaging Temperature Sensor

An averaging temperature sensor shall be serpentine across the module. All capillaries bends shall be radiused and fastened with capillary clips to prevent crimping and minimize wear.

A 1,000 ohm, platinum 385 curve, resistive temperature detector (RTD) is the sensor material that shall be mounted.

Low Limit

A double-pole low limit switch shall be wired to a momentary push-button reset circuit. Capillaries are serpentine across the entering side of the coil. The bends of the capillaries shall be curved and fastened with capillary clips to prevent crimping and minimize wear. A separate low limit shall be provided for each coil in a coil stack.

ACCESS/INSPECTION / TURNING SECTION

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

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

DIRECT-DRIVE PLENUM FAN SECTION

The fan type shall be provided as required for stable operation and optimum energy efficiency. The fan shall be a single-width, single-inlet, multiblade-type direct-drive plenum fan. Refer to the Product Data section for fan quantity and *number of blades selected within each unit*.

Fans sections with plenum fans shall be provided with an expanded-metal guard screen for the access door, mounted on the door opening, to deter unauthorized entry and incidental contact with rotating components. Refer to the Product Data section for fans with access door guards.

Motor Frame

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

One-Inch Spring Isolators

The fan and motor assembly (on sizes 3 to 8) shall be internally isolated from the unit casing with 1-inch (25.3mm) deflection spring isolators, furnished and installed by the unit manufacturer. The isolation system shall be designed to resist loads produced by external forces, such as earthquakes, and conform to the current IBC seismic requirements.

Two-Inch Spring Isolators

The fan and motor assembly (on sizes 10 to 120) shall be internally isolated from the unit casing with 2-inch (50.8 mm) deflection spring isolators, furnished and installed by the unit manufacturer. The isolation system shall be designed to resist loads produced by external forces, such as earthquakes, and conform to the current IBC seismic requirements.

A 10,000 ohm, Type II thermistor is the sensor material that shall be mounted.

Fan Discharge Temperature Sensor

A button or probe temperature sensor shall be mounted in the fan discharge.

Airflow Switch

A differential pressure switch piped to the discharge and suction sides of the fan shall indicate fan status.

Flow Meter

The fan shall have an airflow measurement system to measure fan airflow directly or to measure differential pressure that can be used to calculate fan airflow. The system shall predict airflow within +/-5 percent total accuracy (device & transmitter) when operating within the stable operating region of the fan curve. On units supplied with multiple direct drive fans, one transducer is supplied for the total array. The submitted fan airflow performance and noise levels shall not be affected by the installation of the device. Any device that provides an obstruction to the fan inlet will not be accepted. *Refer to the Product Data section for fans with flow meters.*

Combination VFD / Disconnect

A combination Variable Frequency Drive (VFD) / disconnect shall be provided when variable air volume control is required for fan operation. Whether for single fan, dual fan, or fan array applications, a single VFD shall be provided to ensure proper operation and to optimize operating life. Each VFD / disconnect shall be properly sized, factory mounted in a full metal enclosure, wired to the fan motor, and commissioned to facilitate temporary heating, cooling, ventilation, and/or timely completion of the project. VFD / disconnects shall include a circuit breaker disconnect with a through-the-door interlocking handle and shall be lockable. The VFD package shall also include:

- a) Electronic manual speed control
- b) Hand-Off-Auto (H-O-A) selector switch
- c) Inlet fuses to provide maximum protection against inlet short circuit
- d) Current limited stall prevention
- e) Auto restart after momentary power loss
- f) Speed search for starting into rotating motor
- g) Anti-windmill w/DC injection before start
- h) Phase-to-phase short circuit protection
- i) Ground fault protection

Units with factory-mounted controls shall include power wiring from the VFD panel to the control system transformers, binary output on/off wiring, analog output-speed-signal wiring, and all interfacing wiring between the VFD and the direct digital controller.

The VFD shall be UL508C listed and CSA certified and conform to applicable NEMA, ICS, NFPA, & IEC standards.

The supply fan's Starter/VFD shall be mounted internal of unit casing in the controls section. The internal enclosure shall be an integral part of the unit casing to allow for thermal venting to casing interior, but shall be accessible from unit exterior through access door. Internally mounted starters shall have doors with the same construction as other doors on unit. An external disconnect shall be mounted through the door to the starter/VFD to disconnect full power from starter/VFD.

The return/exhaust fan's Starter/VFD shall be mounted internal of unit casing in the controls section. The internal enclosure shall be an integral part of the unit casing to allow for thermal venting to casing interior, but shall be accessible from unit exterior through access door. Internally mounted starters shall have doors with the same construction as other doors on unit. An external disconnect shall be mounted through the door to the starter/VFD to disconnect full power from starter/VFD.

Variable Volume Control System

Factory-mounted direct-digital control (DDC) systems shall be engineered, mounted, wired, and tested by the air handler manufacturer to reduce installed costs, improve reliability, and save time at unit startup. Each control system shall be fully functional in a stand-alone mode or may be tied to a building automation system with a single pair of twisted wires. All factory-mounted controls shall be covered by the air handler manufacturer's standard warranty.

Field Programmable UC600

A dedicated programmable direct-digital controller with the appropriate point capabilities shall be unit mounted on the air handling unit. Point expansion is accomplished using expansion modules with the capacity to add points in 4 to 18 point increments. The controller will utilize the latest graphical programming methods that are easy to learn, powerful, self-documenting. Graphical programming will help minimize programming costs, aid in program troubleshooting, and

save time at unit startup. Programmable controllers optimize unit control flexibility. 120V power wiring to the control system transformer, which provides 24VAC to the DDC controller and end devices, shall be customer supplied. The UC600 communicates using the BACnet protocol.

Unit Mounted Control System

All factory installed end devices shall be wired and terminated to the DDC controller.

AIR BLENDER SECTION

An air blender section shall be provided to mix outside and return air, minimize stratification, and reduce the risk of frozen coils. Mixer panels shall be sized and installed in the unit with adequate distances upstream and downstream to ensure a minimum mixing effectiveness of 70% at 25% outside air, one mixer diameter downstream of the mixer.

COOL DRY QUIET (CDQ(TM)) DESICCANT WHEEL SECTION

The air handling unit shall be provided with a CDQ desiccant wheel to control space humidity based on the specified requirements. The wheel media shall meet the flammability requirements governing this class of products and shall be a UL-recognized component in accordance with UL 1812 and UL1995. The CDQ desiccant wheel speed is not modulated for temperature control nor recommended. The CDQ wheel is for humidity control and should be turned off during winter heating. Supply temperature is controlled by the cooling coil or a reheat coil.

Wheel Construction

The CDQ desiccant wheel shall be constructed of a synthetic matrix with a type III desiccant. The wheel shall be structurally reinforced with a spoke system to minimize wheel deflection. All diameter and perimeter seals shall be provided as part of the cassette assembly. The drive system shall consist of a heavy-duty fractional horsepower A/C gear motor mounted in the cassette.

CDQ Wheel Drive System

The motor shall have permanently lubricated bearings. The bearings, which support rotation of the wheel around a center shaft, shall be provided with grease fittings for periodic lubrication.

Maintenance and Access Doors

The wheel matrix shall be cleanable. The desiccant shall not dissolve in the presence of water or high humidity. Access doors shall be provided immediately upstream and downstream of the CDQ wheel cassette. Adequate space shall be provided for cleaning, service, and maintenance of the wheel, motor, bearing, and belt.

Product Data - Performance Climate Changer**Item: A1 Qty: 1 Tag(s): RTU-1****Unit level options**

Outdoor unit
Unit size 25
6in. integral base frame
UL listed unit
Single metal handle - ganged latches
313.25 Unit length
313 Second level length
IBC seismic certification required
Seismic cert. Sds IBC '06/'09 9.24
Seismic cert. Calculated Fp/Wp 4.16 g's

Controls and VFD/starter

Variable volume control system
UC600
Left

Warranty

Standard warranty only

Pipe cabinet section

No pipe cabinet

Controls section (Pos #1)

Starter/VFD only
Return/exhaust section
Internal NEMA
Ret/Exh high volt. door - right

Access section (Pos #2)

Access/blank/turning section
Small

Fan section (Pos #3)

Fan section
Return fan
Door- right side
Window- right side
Perforated panels
20in. direct-drive plenum, 80% width
Nine blades
2 Fan quantity
Plenum fan
Right side drive
NEMA premium compliant ODP
Voltage 460/3
3 hp
1800 RPM
Inverter balance with SGR
Flow meter
No conduit
VFD

Air mixing section (Pos #4)

Air mixing section
Mixing box w/o filter
Door- right side

Air mixing section (Pos #5)

Air mixing section
Mixing box w/o filter

Custom length section (Pos #6)

Access/blank
Door - right side

Air blender (Pos #7)

Air blender
Door- right side

Filter section (Pos #8)

Filter

Flat filter

Door- right side

Coil section (Pos #9)

Horizontal coil

Small

Galvanized drain pan

Right side - drain connection

Left side - coil supply

Service panel opposite connection side

Unit coil height

Heating coil

Single use coil

Type "5W" coil

1 row

80 fins per foot nominal fin spacing

Aluminum fins

Prima flo E (energy efficient)

.020" (0.508mm) copper tubes

5/8in. tube diameter (15.875 mm)

Galvanized steel coil casing

Custom length section (Pos #10)

Access/blank

Door - right side

Fan section (Pos #11)

Fan section

Supply fan

Door- right side

Window- right side

Perforated panels

22.25n. direct-drive plenum, 80% width

Nine blades

2 Fan quantity

Plenum fan

Right side drive

NEMA premium compliant ODP

Voltage 460/3

10 hp

1800 RPM

Inverter balance with SGR

Flow meter

No conduit

VFD

Access section (Pos #12)

Access/blank/turning section

Extra large

Door- right side

Coil section (Pos #13)

Horizontal coil

Medium

Stainless steel drain pan

Right side - drain connection

Left side - coil supply

Service panel opposite connection side

Unit coil height

Cooling coil

Single use coil

Type "UU" coil

8 rows

137 fins per foot nominal fin spacing

Aluminum fins

Delta flo E (energy efficient)

.016" (0.406mm) copper tubes

1/2in. tube diameter (12.7 mm)

Stainless steel coil casing
Turbulators

Wheel (Pos #14)

CDQ wheel
Series application
10500 nominal CFM wheel
Regeneration air bypass damper
Voltage 460/3
Right side drive
Doors - right side
Starter

Access section (Pos #15)

Access/blank/turning section
Small

Filter section (Pos #16)

Filter
Short Bag/Cartridge filter
Door- right side

Controls section (Pos #17)

Controls and starter/VFD
Supply section
Internal NEMA
Controller door- left
Supply high volt. door - right

Performance Data - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1



Job Name Eyecare Medical Group
 User Name (B16)Daniel Broderick
 Address Portland ME

Performance Climate Changer RTU-1
 Quantity 1
 Job Comments

Unit level options Module Position: 0

<u>Actual airflow</u>	10670 cfm	<u>Circuit number 1</u>	Supply fan + controls-LL
<u>Unit elevation</u>	0.00 ft	<u>FLA circuit 1</u>	25.65 A
<u>Unit size</u>	25	<u>MCA circuit 1</u>	43.15 A
<u>Integral base frame</u>	6in. integral base frame	<u>MOP circuit 1</u>	77.15 A
<u>Roof curb type</u>	Field supplied roof curb	<u>Fuse size circuit 1</u>	70.00 A
<u>Shipping split type</u>	Factory splits	<u>Circuit number 2</u>	Return/booster fan motor(s)
<u>Product group</u>	Outdoor unit	<u>FLA circuit 2</u>	8.40 A
<u>UL listed unit</u>	UL listed unit	<u>MCA circuit 2</u>	12.07 A
<u>Available Sds (based on IBC 2006 & 2009)</u>	9.24	<u>MOP circuit 2</u>	21.73 A
<u>Hurricane certification</u>	No	<u>Fuse size circuit 2</u>	20.00 A
<u>High voltage location</u>	Right	<u>Circuit number 3</u>	Cool-dry quiet
<u>Inner panel material - unit level</u>	All unit inner panels - galvanized	<u>FLA circuit 3</u>	0.12 A
<u>Paint</u>	Factory painted - slate gray	<u>MCA circuit 3</u>	0.37 A
<u>Door handle type - unit level</u>	Single metal handle - ganged latches	<u>MOP circuit 3</u>	0.49 A
<u>Drain pan connection - unit level</u>	Right side drain pan connections	<u>Fuse size circuit 3</u>	15.00 A
<u>Power wiring</u>	Field Provided (mtrs, lights, controls)	<u>Number of marine LED lights</u>	0 Lights
<u>Length</u>	313.250 in	<u>First transformer circuit 1</u>	0.00 A
<u>Width</u>	80.000 in	<u>Second transformer circuit 1</u>	0.65 A
<u>Installed weight</u>	10893.2 lb	<u>First transformer circuit 2</u>	0.00 A
<u>Rigging weight</u>	10659.9 lb	<u>First transformer circuit 3</u>	0.22 A
<u>Roof curb weight</u>	0.0 lb		

Controls and VFD/starter Module Position: 0

<u>NEMA SE</u>	VFD	<u>Factory controls package</u>	Variable volume
<u>VFD/Starter location supply fan</u>	Internal mounting	<u>Controller mounting</u>	Unit mounted
<u>Fan wheel balance SF</u>	Inverter balance with SGR	<u>Unit mounting controller location</u>	Left
<u>NEMA RF/EF</u>	VFD	<u>Controller type</u>	UC600
<u>VFD/Starter location ret/exh fan</u>	Internal mounting	<u>LCD screen and keypad</u>	No LCD
<u>Fan wheel balance RF/EF</u>	Inverter balance with SGR	<u>Duct static transducer</u>	Duct static transducer

Warranty Module Position: 0

<u>Warranty section</u>	Std. warranty only
-------------------------	--------------------

Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard.
 Certified units may be found in the AHRI Directory at www.ahridirectory.org

Air-handling performance data is certified in accordance with AHRI standard 430. Air handlers with plenum fans and vertical draw-thru air handlers where the coil is mounted immediately below the fan section are not covered under the scope of AHRI 430.

All weights and dimensions are approximate. Certified prints on request.

Performance Data - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

Performance Climate Changer

11/18/2013

Controls section

Module Position: 1

<u>Section type</u>	Starter/VFD only	<u>Motor voltage RF/EF</u>	460/3
<u>Unit size</u>	Unit size 25	<u>Motor RPM RF/EF</u>	1800
<u>Starter/VFD</u>	Return/exhaust section	<u>Section length</u>	46.000 in
<u>Side access door</u>	No	<u>Section width</u>	80.000 in
<u>Ret/Exh fan high voltage door</u>	Right	<u>Section height</u>	65.000 in
<u>Design sequence</u>	B	<u>Section weight</u>	566.2 lb
<u>NEMA RF/EF</u>	VFD	<u>NEMA application type</u>	Internal NEMA
<u>Fan wheel balance RF/EF</u>	Inverter balance	<u>High volt. door qty</u>	1 high volt. door
<u>Motor hp RF/EF</u>	3 hp		

Access section

Module Position: 2

<u>Section type</u>	Access/blank/turning	<u>Side access door</u>	No
<u>Unit size</u>	25	<u>Section length</u>	10.000 in
<u>Section size</u>	Small	<u>Section weight</u>	116.8 lb

Fan section

Module Position: 3

<u>Fan sec [3]-1</u>		<u>Overall ESP</u>	1.500 in H2O
<u>Section type</u>	Fan	<u>Plenum fan top discharge</u>	Sizeable rectangular opening
<u>Fan application</u>	Return fan	<u>Fan type</u>	Plenum
<u>Unit size</u>	25	<u>Fan size and type</u>	20in. direct-drive plenum, 80% width
<u>Inlet location</u>	Back inlet	<u>Access door guard</u>	Yes
<u>Fan discharge</u>	Top front	<u>Direct drive fan blades</u>	Nine
<u>Perforated panel</u>	Perforated panels	<u>Fan quantity</u>	2.00 Each
<u>Side access door</u>	Yes	<u>Total brake horsepower</u>	5.866 hp
<u>Side access door location</u>	Right	<u>Brake horsepower per fan</u>	2.933 hp
<u>Side window</u>	Right	<u>Brake horsepower at min temp per fan</u>	3.109 hp
<u>Drive location</u>	Right side drive	<u>Total static pressure</u>	2.007 in H2O
<u>Motor horsepower per fan</u>	3 hp	<u>Speed</u>	1990 rpm
<u>Motor class</u>	NEMA premium compliant	<u>Motor hertz</u>	67.00 Hz
<u>Motor voltage</u>	ODP	<u>Fan module pressure drop</u>	1.535 in H2O
<u>Cycle</u>	60 cycles/sec	<u>Section length</u>	50.250 in
<u>Drive service factor</u>	Direct drive	<u>Section weight</u>	1392.2 lb
<u>Motor RPM</u>	1800	<u>Starter/VFD - factory mounted & wired</u>	VFD
<u>Airflow switch</u>	Yes	<u>Fan wheel balance</u>	Inverter balance with SGR
<u>Flow meter</u>	Flow meter	<u>Discharge 1 top - pressure drop</u>	0.035 in H2O
<u>Fan airflow</u>	10670 cfm		

Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard.

Certified units may be found in the AHRI Directory at www.ahridirectory.org

Air-handling performance data is certified in accordance with AHRI standard 430. Air handlers with plenum fans and vertical draw-thru air handlers where the coil is mounted immediately below the fan section are not covered under the scope of AHRI 430.

All weights and dimensions are approximate. Certified prints on request.

Performance Data - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

Air mixing section

Module Position: 4

<u>Section type</u>	Air mixing section	<u>Front opening type</u>	Opposed blade damper
<u>Unit size</u>	25	<u>Front air path type</u>	Exhaust
<u>Mixing section type</u>	without filter	<u>Opening 1 front - airflow</u>	10670 cfm
<u>Side access door</u>	Yes	<u>Left side opening type</u>	No opening
<u>Side access door location</u>	Right	<u>Right side opening type</u>	No opening
<u>Filter airflow</u>	10670 cfm	<u>Actuator</u>	Electronic actuator
<u>Back opening type</u>	Full face opening	<u>Opening 1 back - area</u>	29.03 sq ft
<u>Opening 1 back - airflow</u>	10670 cfm	<u>Opening 1 front - area</u>	10.36 sq ft
<u>Top opening type</u>	No opening	<u>Opening 1 front - face velocity</u>	1030 ft/min
<u>Opening 1 top - airflow</u>	10670 cfm	<u>Opening 1 front - pressure drop</u>	0.185 in H2O
<u>Bottom opening type</u>	Full face opening	<u>Opening 1 front total pressure drop</u>	0.185 in H2O
<u>Protective grate</u>	No	<u>Opening 1 bottom - area</u>	22.17 sq ft
<u>Opening 1 bottom - airflow</u>	10670 cfm	<u>Total mixing section pressure drop</u>	0.185 in H2O

Air mixing section

Module Position: 5

<u>Section type</u>	Air mixing section	<u>Right side opening type</u>	Std TRAQ
<u>Unit size</u>	25	<u>Right side air path type</u>	Return
<u>Mixing section type</u>	without filter	<u>Opening 1 right - airflow</u>	5335 cfm
<u>Side access door</u>	No	<u>Opening 1 back - area</u>	29.03 sq ft
<u>Filter airflow</u>	10670 cfm	<u>Opening 1 front - area</u>	10.36 sq ft
<u>Back opening type</u>	Full face opening	<u>Opening 1 front - face velocity</u>	1030 ft/min
<u>Opening 1 back - airflow</u>	10670 cfm	<u>Opening 1 front - pressure drop</u>	0.185 in H2O
<u>Top opening type</u>	No opening	<u>Opening 1 front total pressure drop</u>	0.185 in H2O
<u>Opening 1 top - airflow</u>	10670 cfm	<u>Opening 1 right - area</u>	2.79 sq ft
<u>Bottom opening type</u>	No opening	<u>Opening 1 right - face velocity</u>	1910 ft/min
<u>Opening 1 bottom - airflow</u>	10670 cfm	<u>Opening 1 right - pressure drop</u>	0.324 in H2O
<u>Front opening type</u>	Parallel blade damper	<u>Opening 1 right side total pressure drop</u>	0.324 in H2O
<u>Front air path type</u>	Return	<u>Opening 1 left - area</u>	2.79 sq ft
<u>Opening 1 front - airflow</u>	10670 cfm	<u>Opening 1 left - face velocity</u>	1910 ft/min
<u>Left side opening type</u>	Low flow TRAQ	<u>Opening 1 left - pressure drop</u>	0.324 in H2O
<u>Left side air path type</u>	Outside	<u>Opening 1 left side total pressure drop</u>	0.324 in H2O
<u>Opening 1 left - airflow</u>	5335 cfm	<u>Total mixing section pressure drop</u>	0.472 in H2O

Custom length section

Module Position: 6

<u>Section type</u>	Access/blank	<u>Custom section length</u>	24.750 in
<u>Unit size</u>	25	<u>Section length</u>	24.750 in
<u>Access door</u>	Yes	<u>Section width</u>	80.000 in
<u>Access door location</u>	Right	<u>Section height</u>	61.500 in
<u>Door swing direction</u>	Outward swing	<u>Section weight</u>	234.1 lb
<u>Design sequence</u>	B	<u>Door size</u>	Extended medium

Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard.

Certified units may be found in the AHRI Directory at www.ahridirectory.org

Air-handling performance data is certified in accordance with AHRI standard 430. Air handlers with plenum fans and vertical draw-thru air handlers where the coil is mounted immediately below the fan section are not covered under the scope of AHRI 430.

All weights and dimensions are approximate. Certified prints on request.

Performance Data - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

Air blender

Module Position: 7

<u>Section type</u>	Air blender	<u>Blender area</u>	11.80 sq ft
<u>Unit size</u>	Unit size 25	<u>Blender PD</u>	0.110 in H2O
<u>Access door</u>	Yes	<u>Blender section PD</u>	0.110 in H2O
<u>Access door location</u>	Right	<u>Section length</u>	46.000 in
<u>Design sequence</u>	B	<u>Section width</u>	80.000 in
<u>Average temperature sensor</u>	Leaving air avg temp sensor	<u>Section height</u>	61.500 in
<u>Blender airflow</u>	10670 cfm	<u>Section weight</u>	498.2 lb

Filter section

Module Position: 8

<u>Section type</u>	Filter	<u>Prefilter filter type</u>	No prefilter
<u>Unit size</u>	25	<u>Dirty filter status</u>	Dirty filter switch
<u>SDU Outside air section</u>	No	<u>Filter airflow</u>	10670 cfm
<u>Filter loading</u>	Side load filters	<u>Filter condition</u>	Mid-life
<u>Filter type</u>	Flat filter	<u>Filter area</u>	27.11 sq ft
<u>Filter frame</u>	4in. filter frame	<u>Filter face velocity</u>	394 ft/min
<u>Access door</u>	Yes	<u>Filter pressure drop</u>	0.567 in H2O
<u>Access door location</u>	Right	<u>Filter section pressure drop</u>	0.567 in H2O
<u>Door swing direction</u>	Outward swing	<u>Section length</u>	14.000 in
<u>Primary filter type 1 - run set</u>	Pleated media - MERV 8	<u>Section weight</u>	201.8 lb

Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard.

Certified units may be found in the AHRI Directory at www.ahridirectory.org

Air-handling performance data is certified in accordance with AHRI standard 430. Air handlers with plenum fans and vertical draw-thru air handlers where the coil is mounted immediately below the fan section are not covered under the scope of AHRI 430.

All weights and dimensions are approximate. Certified prints on request.

Performance Data - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

Coil section

Module Position: 9

<u>Coil se [9]-1</u>			
<u>Section type</u>	Horizontal coil	<u>Coil fouling factor</u>	0.00050 hr-sq ft-deg F/Btu
<u>Unit size</u>	25	<u>Fluid type</u>	Water
<u>Section size</u>	Small	<u>Coil fluid percentage</u>	100.00 %
<u>Access door</u>	No	<u>Low limit switch</u>	Leaving air
<u>Energy recovery capacity</u>	User input values	<u>Coil type</u>	5W
<u>Coil application</u>	Heating coil	<u>Rows</u>	1 row
<u>Changeover coil</u>	No	<u>Fin type</u>	Prima flo E (energy efficient)
<u>System type</u>	Hot water	<u>Fin material</u>	Aluminum fins
<u>Coil supply/cabinet side</u>	Left	<u>Tube diameter</u>	5/8in. tube diameter (15.875 mm)
<u>Service panel</u>	Opposite coil connection side	<u>Tube mat/wall thickness</u>	.020" (0.508mm) copper tubes
<u>Coil casing</u>	Galvanized	<u>Corrosion resistant coating</u>	None
<u>Coil height</u>	Unit coil height	<u>Total cap top or single coil</u>	118.69 MBh
<u>Extended drain and vent</u>	Holes only	<u>Coil face velocity</u>	443 ft/min
<u>Drain pan</u>	Galvanized	<u>Air pressure drop</u>	0.054 in H2O
<u>Drain connection location</u>	Right	<u>J trap dimension</u>	2.410 in
<u>Apply AHRI ranges</u>	No	<u>H trap dimension</u>	4.819 in
<u>Coil performance airflow</u>	10670 cfm	<u>Leaving fluid temperature</u>	100.00 F
<u>Unit airflow</u>	10670 cfm	<u>Fluid pressure drop</u>	0.08 ft H2O
<u>Entering dry bulb</u>	46.80 F	<u>Fluid volume</u>	4.03 gal
<u>Leaving dry bulb</u>	57.06 F	<u>Fluid velocity</u>	0.39 ft/s
<u>Total capacity</u>	118.69 MBh	<u>Coil rigging weight</u>	99.1 lb
<u>Nominal fin spacing</u>	80 Per Foot	<u>Coil section pressure drop</u>	0.054 in H2O
<u>Entering fluid temperature</u>	140.00 F	<u>Section length</u>	10.000 in
<u>Fluid temperature drop</u>	40.00 F	<u>Section weight</u>	310.7 lb
<u>Standard fluid flow rate</u>	5.95 gpm		

Custom length section

Module Position: 10

<u>Section type</u>	Access/blank	<u>Custom section length</u>	20.250 in
<u>Unit size</u>	25	<u>Section length</u>	20.250 in
<u>Access door</u>	Yes	<u>Section width</u>	80.000 in
<u>Access door location</u>	Right	<u>Section height</u>	61.500 in
<u>Door swing direction</u>	Outward swing	<u>Section weight</u>	192.3 lb
<u>Design sequence</u>	B	<u>Door size</u>	Medium

Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org

Air-handling performance data is certified in accordance with AHRI standard 430. Air handlers with plenum fans and vertical draw-thru air handlers where the coil is mounted immediately below the fan section are not covered under the scope of AHRI 430.

All weights and dimensions are approximate. Certified prints on request.

Performance Data - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

Fan section

Module Position: 11

<u>Fan se [11]-1</u>			
<u>Section type</u>	Fan	<u>Overall ESP</u>	2.500 in H2O
<u>Fan application</u>	Supply fan	<u>Plenum fan bottom discharge</u>	Bottom rectangular discharge
<u>Unit size</u>	25	<u>Fan type</u>	Plenum
<u>Inlet location</u>	Front inlet	<u>Fan size and type</u>	22.25n. direct-drive plenum, 80% width
<u>Fan discharge</u>	Bottom back	<u>Access door guard</u>	Yes
<u>Perforated panel</u>	Perforated panels	<u>Direct drive fan blades</u>	Nine
<u>Side access door</u>	Yes	<u>Fan quantity</u>	2.00 Each
<u>Side access door location</u>	Right	<u>Total brake horsepower</u>	19.379 hp
<u>Side window</u>	Right	<u>Brake horsepower per fan</u>	9.690 hp
<u>Drive location</u>	Right side drive	<u>Brake horsepower at min temp per fan</u>	10.272 hp
<u>Motor horsepower per fan</u>	10 hp	<u>Total static pressure</u>	7.171 in H2O
<u>Motor class</u>	NEMA premium compliant	<u>Speed</u>	2252 rpm
<u>Motor voltage</u>	460/3	<u>Motor hertz</u>	76.00 Hz
<u>Cycle</u>	60 cycles/sec	<u>Fan module pressure drop</u>	2.530 in H2O
<u>Drive service factor</u>	Direct drive	<u>Section length</u>	50.250 in
<u>Motor RPM</u>	1800	<u>Section weight</u>	1598.0 lb
<u>Fan discharge temp sensor</u>	Fan mounted	<u>Starter/VFD - factory mounted & wired</u>	VFD
<u>Airflow switch</u>	Yes	<u>Fan wheel balance</u>	Inverter balance with SGR
<u>Flow meter</u>	Flow meter	<u>Discharge 1 bottom - pressure drop</u>	0.030 in H2O
<u>Fan airflow</u>	11264 cfm		

Access section

Module Position: 12

<u>Section type</u>	Access/blank/turning	<u>Side access door location</u>	Right
<u>Unit size</u>	25	<u>Door swing direction</u>	Outward swing
<u>Section size</u>	Extra large	<u>Section length</u>	56.500 in
<u>Side access door</u>	Yes	<u>Section weight</u>	507.5 lb

Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard.

Certified units may be found in the AHRI Directory at www.ahridirectory.org

Air-handling performance data is certified in accordance with AHRI standard 430. Air handlers with plenum fans and vertical draw-thru air handlers where the coil is mounted immediately below the fan section are not covered under the scope of AHRI 430.

All weights and dimensions are approximate. Certified prints on request.

Performance Data - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

Coil section

Module Position:

13

Coil s [13]-1			
<u>Section type</u>	Horizontal coil	<u>Fluid temperature rise</u>	10.00 F
<u>Unit size</u>	25	<u>Standard fluid flow rate</u>	80.61 gpm
<u>Section size</u>	Medium	<u>Coil fouling factor</u>	0.00050 hr-sq ft-deg F/Btu
<u>Access door</u>	No	<u>Fluid type</u>	Propylene glycol
<u>Energy recovery capacity</u>	Use CDQ wheel values	<u>Coil fluid percentage</u>	30.00 %
<u>CDQ selection type</u>	Fix cooling coil LAT	<u>CDQ Coil 1st Selection Criteria</u>	Water pressure drop
<u>Coil application</u>	Cooling coil	<u>Averaging temperature sensor</u>	Leaving air avg temp sensor
<u>Changeover coil</u>	No	<u>Coil type</u>	UU
<u>System type</u>	Chilled water	<u>Rows</u>	8 rows
<u>Coil supply/cabinet side</u>	Left	<u>Fin type</u>	Delta flo E (energy efficient)
<u>Service panel</u>	Opposite coil connection side	<u>Fin material</u>	Aluminum fins
<u>Coil casing</u>	Stainless steel	<u>Tube diameter</u>	1/2in. tube diameter (12.7 mm)
<u>Coil height</u>	Unit coil height	<u>Tube mat/wall thickness</u>	.016" (0.406mm) copper tubes
<u>Extended drain and vent</u>	Holes only	<u>Turbulators</u>	Yes
<u>Drain pan</u>	Stainless steel	<u>Corrosion resistant coating</u>	None
<u>Drain connection location</u>	Right	<u>Coil face velocity</u>	451 ft/min
<u>Apply AHRI ranges</u>	No	<u>Air pressure drop</u>	0.821 in H2O
<u>Coil performance airflow</u>	11264 cfm	<u>J trap dimension</u>	2.218 in
<u>Unit airflow</u>	11264 cfm	<u>H trap dimension</u>	0.500 in
<u>Entering dry bulb</u>	70.79 F	<u>Leaving fluid temperature</u>	54.00 F
<u>Entering wet bulb</u>	63.33 F	<u>Fluid pressure drop</u>	5.00 ft H2O
<u>Leaving dry bulb</u>	52.00 F	<u>Fluid volume</u>	21.50 gal
<u>Leaving wet bulb</u>	51.90 F	<u>Fluid velocity</u>	1.69 ft/s
<u>Total capacity</u>	372.58 MBh	<u>Coil rigging weight</u>	509.1 lb
<u>Sensible capacity</u>	233.16 MBh	<u>Coil section pressure drop</u>	0.821 in H2O
<u>Nominal fin spacing</u>	137 Per Foot	<u>Section length</u>	14.000 in
<u>Entering fluid temperature</u>	44.00 F	<u>Section weight</u>	917.9 lb

Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard.

Certified units may be found in the AHRI Directory at www.ahridirectory.org

Air-handling performance data is certified in accordance with AHRI standard 430. Air handlers with plenum fans and vertical draw-thru air handlers where the coil is mounted immediately below the fan section are not covered under the scope of AHRI 430.

All weights and dimensions are approximate. Certified prints on request.

Performance Data - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

Wheel

Module Position:

14

<u>Wheel type</u>	CDQ wheel	<u>Leaving supply ESP</u>	0.500 in H2O
<u>Unit type</u>	Series	<u>Leaving supply air DB</u>	55.33 F
<u>Wheel size</u>	10500 CFM	<u>Leaving supply air HR</u>	47.00 gr/lb
<u>Access door</u>	Yes	<u>Regeneration EDB</u>	72.00 F
<u>Access door location</u>	Right	<u>Regeneration entering RH</u>	56.40 %
<u>Unit size</u>	25	<u>Fan heat</u>	3.00 F
<u>Supply air outlet location</u>	Front-bottom	<u>Regeneration LDB</u>	68.67 F
<u>Drive location</u>	Right side drive	<u>Regeneration leaving RH</u>	72.65 %
<u>Motor voltage</u>	460/3	<u>Supply entering DB</u>	52.00 F
<u>Cycle</u>	60 cycle/sec	<u>Supply entering relative humidity</u>	99.36 %
<u>Variable Effectiveness</u>	No	<u>Supply entering humidity ratio</u>	57.00 gr/lb
<u>CDQ Regeneration air bypass damper</u>	Yes	<u>Leaving supply air RH</u>	72.64 %
<u>CDQ Supply air bypass damper</u>	No	<u>Supply air wheel PD</u>	0.893 in H2O
<u>EW Exhaust air bypass damper</u>	No	<u>Greatest wheel exhaust PD</u>	0.000 in H2O
<u>EW Outside air bypass damper</u>	No	<u>Regeneration air wheel PD</u>	0.933 in H2O
<u>Recirculation damper</u>	No	<u>Mixed regeneration airflow</u>	11264 cfm
<u>Design sequence</u>	B	<u>Cross Leakage Airflow</u>	594 cfm
<u>Supply air temp sensor</u>	Supply air temp sensor	<u>Mixed regeneration air DB</u>	67.79 F
<u>Actuators</u>	Electronic actuator	<u>Mixed regeneration air RH</u>	73.91 %
<u>Leaving regen air humidity sensor</u>	1% RH sensor, duct, range 40-60	<u>Max supply level module PD</u>	0.893 in H2O
<u>Entering supply air humidity sensor</u>	1% RH sensor, duct, range 40-60	<u>Max exhaust module PD</u>	0.933 in H2O
<u>Entering regen air humidity sensor</u>	1% RH sensor, duct, range 55-75	<u>Max regeneration air module PD</u>	0.933 in H2O
<u>Supply air humidity sensor</u>	1% RH sensor, duct, range 40-60	<u>Starter - factory mounted & wired</u>	Starter
<u>Filter frame</u>	No filter	<u>Section length</u>	55.500 in
<u>CDQ selection type</u>	Fix cooling coil LAT	<u>Section height</u>	126.750 in
<u>Leaving supply airflow</u>	10670 cfm	<u>Section width</u>	80.000 in
<u>Elevation</u>	0.00 ft	<u>Section weight</u>	1926.6 lb
<u>Entering regeneration ESP</u>	0.500 in H2O		

Access section

Module Position:

15

<u>Section type</u>	Access/blank/turning	<u>Side access door</u>	No
<u>Unit size</u>	25	<u>Section length</u>	10.000 in
<u>Section size</u>	Small	<u>Section weight</u>	116.8 lb

Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard.

Certified units may be found in the AHRI Directory at www.ahridirectory.org

Air-handling performance data is certified in accordance with AHRI standard 430. Air handlers with plenum fans and vertical draw-thru air handlers where the coil is mounted immediately below the fan section are not covered under the scope of AHRI 430.

All weights and dimensions are approximate. Certified prints on request.

Performance Data - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

Filter section

Module Position: 16

<u>Section type</u>	Filter	<u>Prefilter filter type</u>	No prefilter
<u>Unit size</u>	25	<u>Dirty filter status</u>	Dirty filter switch and filter gage
<u>SDU Outside air section</u>	No	<u>Filter airflow</u>	10670 cfm
<u>Filter loading</u>	Side load filters	<u>Filter condition</u>	Mid-life
<u>Filter type</u>	Short Bag/Cartridge filter	<u>Filter area</u>	26.00 sq ft
<u>Filter frame</u>	Bag/cartridge filter frame	<u>Filter face velocity</u>	410 ft/min
<u>Access door</u>	Yes	<u>Filter pressure drop</u>	0.736 in H2O
<u>Access door location</u>	Right	<u>Filter section pressure drop</u>	0.736 in H2O
<u>Door swing direction</u>	Outward swing	<u>Section length</u>	24.500 in
<u>Primary filter type 1 - run set</u>	12in. cartridge - 95% eff - MERV 15	<u>Section weight</u>	437.7 lb
<u>Extra sets of filter type 1</u>	1 extra set		

Controls section

Module Position: 17

<u>Section type</u>	Controls and starter/VFD	<u>Motor voltage SF</u>	460/3
<u>Unit size</u>	Unit size 25	<u>Motor RPM SF</u>	1800
<u>Starter/VFD</u>	Supply section	<u>Section length</u>	46.000 in
<u>Side access door</u>	No	<u>Section width</u>	80.000 in
<u>Controller door</u>	Left	<u>Section height</u>	65.000 in
<u>Supply fan high voltage door</u>	Right	<u>Section weight</u>	646.2 lb
<u>Design sequence</u>	B	<u>NEMA application type</u>	Internal NEMA
<u>NEMA SF</u>	VFD	<u>Low volt. door qty</u>	1 low volt. door
<u>Fan wheel balance SF</u>	Inverter balance	<u>High volt. door qty</u>	1 high volt. door
<u>Motor hp SF</u>	10 hp		

Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org

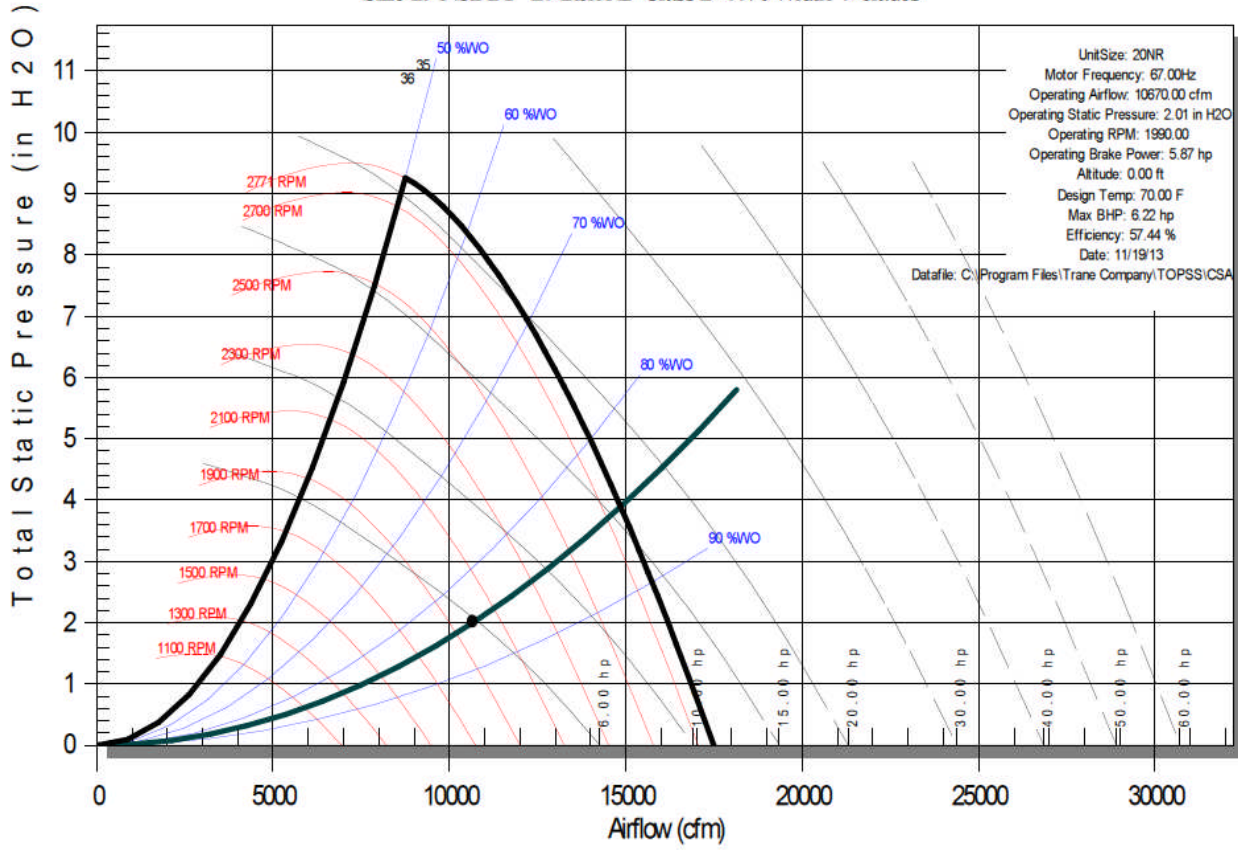
Air-handling performance data is certified in accordance with AHRI standard 430. Air handlers with plenum fans and vertical draw-thru air handlers where the coil is mounted immediately below the fan section are not covered under the scope of AHRI 430.

All weights and dimensions are approximate. Certified prints on request.

Fan Curve - Performance Climate Changer
 Item: A1 Qty: 1 Tag(s): RTU-1

RTU-1 - Return Fan sec [3]-1

Size 25 NSDDP 20 inch AF Class 2 80% Width 9 blades



RTU-1 - Return Fan sec [3]-1

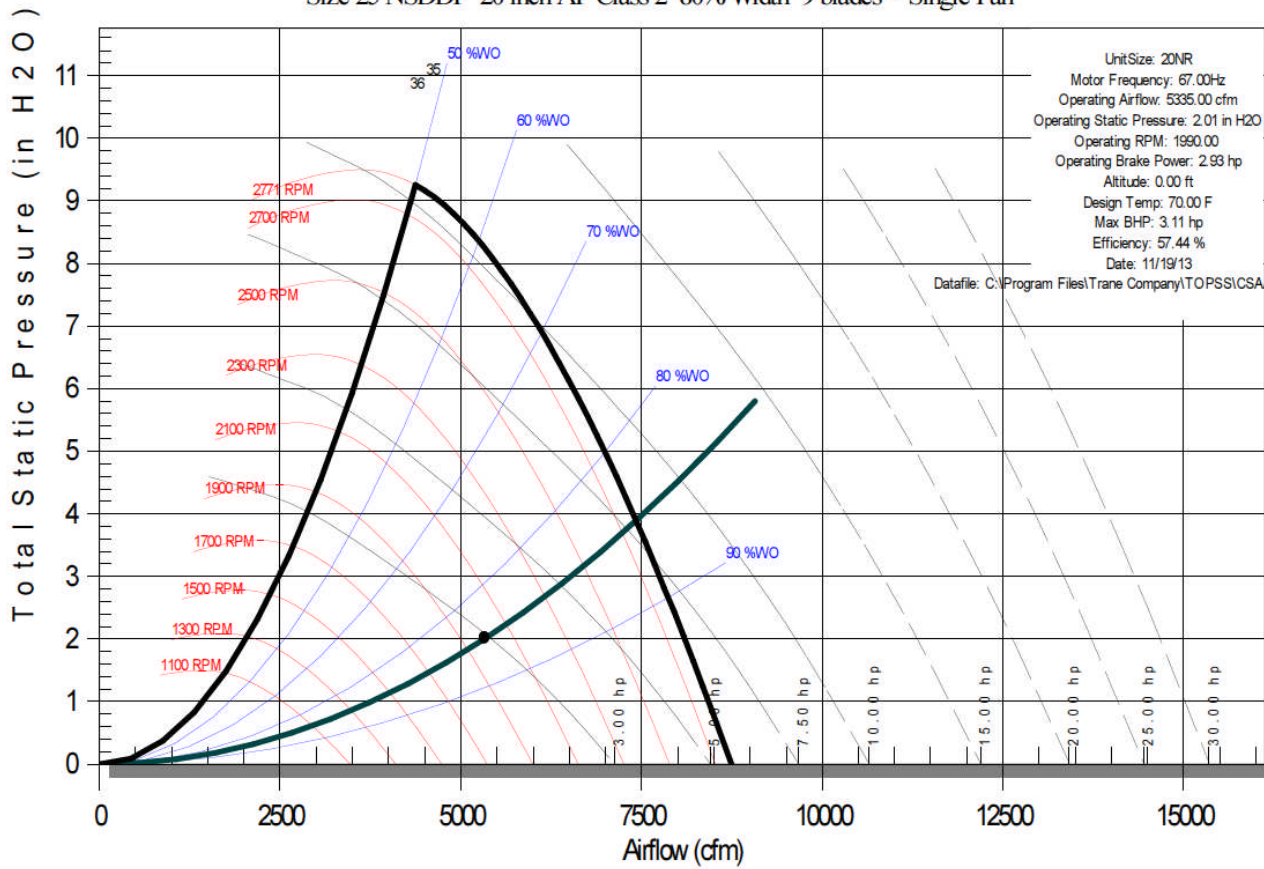
Size 25 NSDDP 20 inch AF Class 2 80% Width 9 blades

	63Hz	125Hz	250Hz	500Hz	1 kHz	2 kHz	4 kHz	8 kHz
Discharge	68	76	60	62	60	65	58	51
Inlet + Casing	92	96	88	89	81	82	89	80
Casing	80	80	73	75	72	58	56	52
Ducted Inlet	91	92	83	85	72	75	80	74

Fan Curve - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

RTU-1 - Return Fan sec [3]-1

Size 25 NSDDP 20 inch AF Class 2 80% Width 9 blades - Single Fan

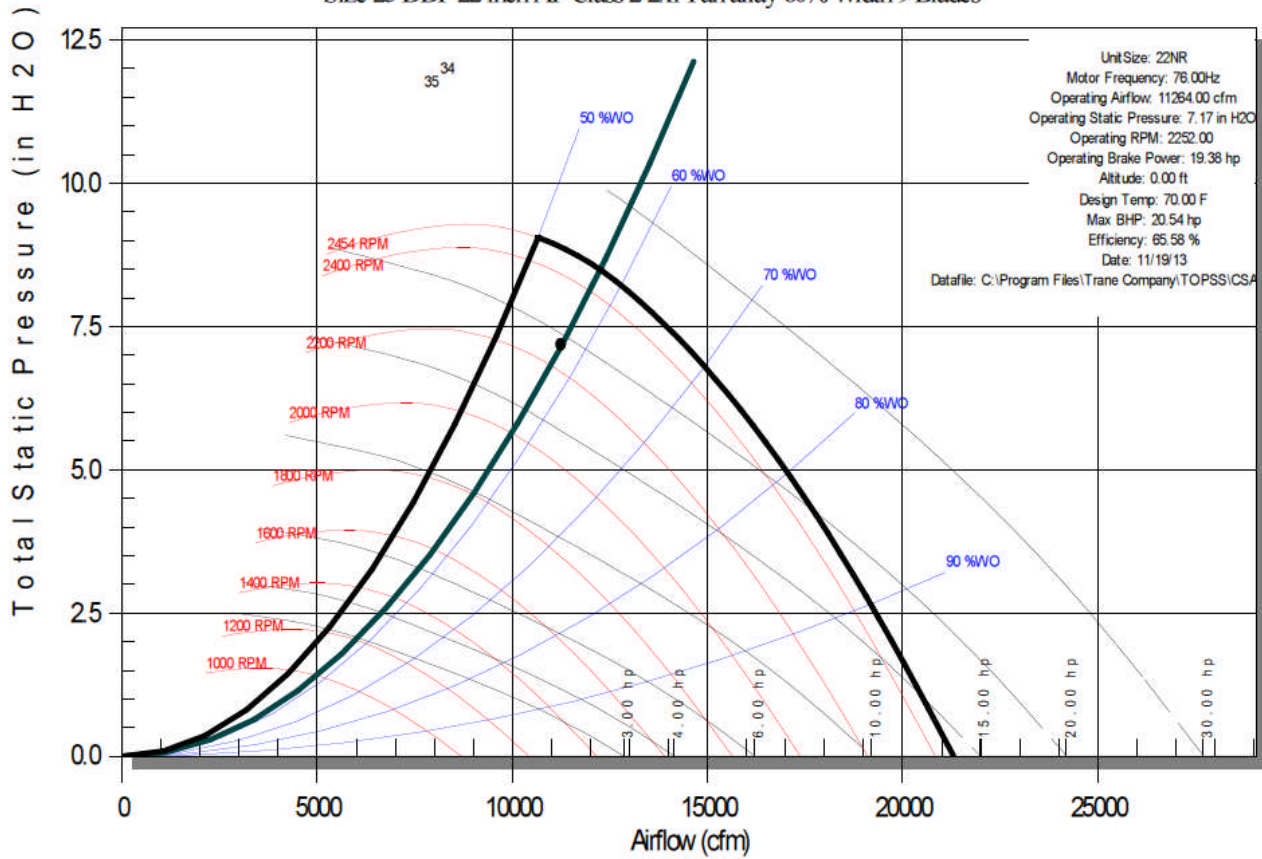


ans.ran

Fan Curve - Performance Climate Changer
 Item: A1 Qty: 1 Tag(s): RTU-1

RTU-1 - Supply Fan se [11]-1

Size 25 DDP 22 inch AF Class 2 2x1 Fan array 80% Width 9 Blades



RTU-1 - Supply Fan se [11]-1

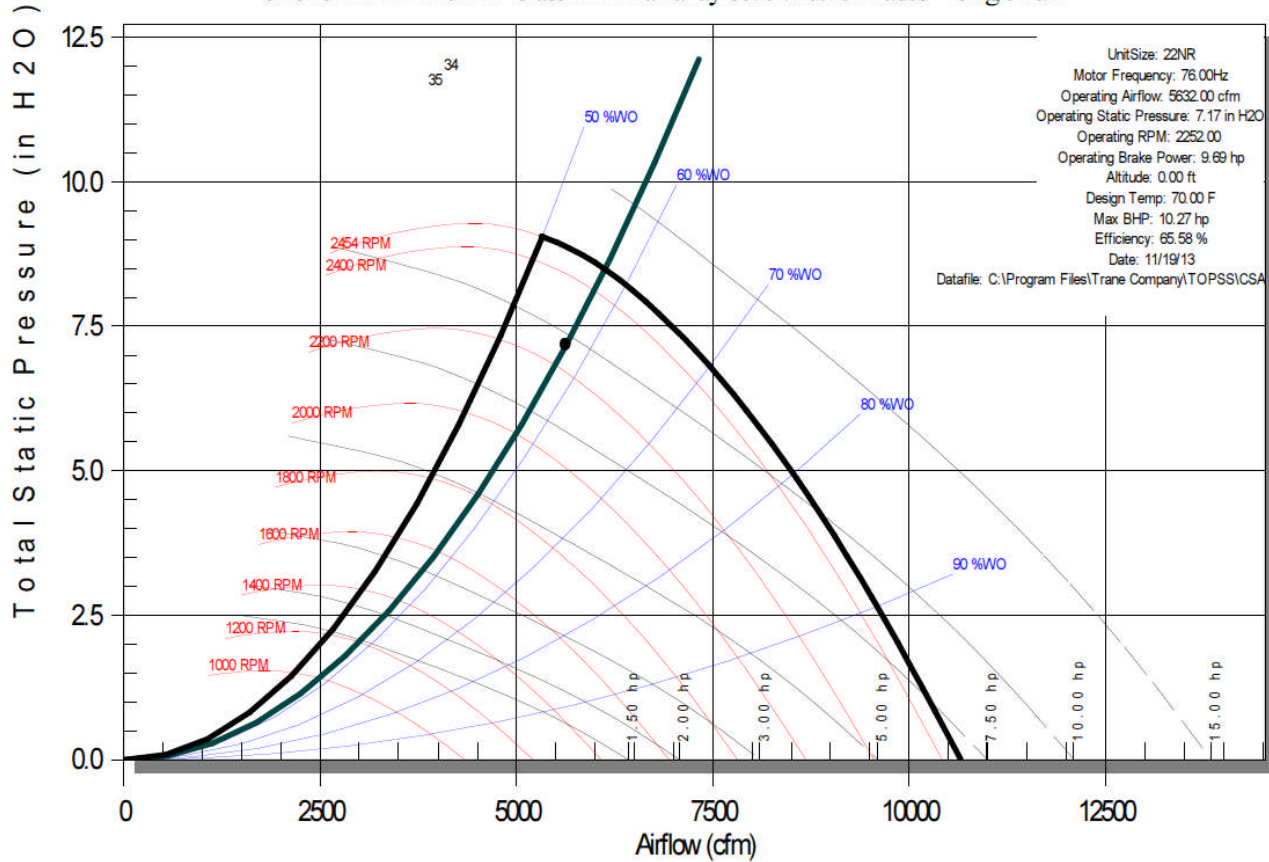
Size 25 DDP 22 inch AF Class 2 2x1 Fan array 80% Width 9 Blades

	63Hz	125Hz	250Hz	500Hz	1 kHz	2 kHz	4 kHz	8 kHz
Discharge	69	80	68	73	65	72	60	52
Inlet + Casing	95	96	91	93	84	87	90	80
Casing	85	83	82	85	79	72	67	61
Ducted Inlet	80	85	86	89	72	79	74	69

Fan Curve - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

RTU-1 - Supply Fan se [11]-1

Size 25 DDP 22 inch AF Class 2 2x1 Fan array 80% Width 9 Blades - Single Fan



Acoustics - Performance Climate Changer

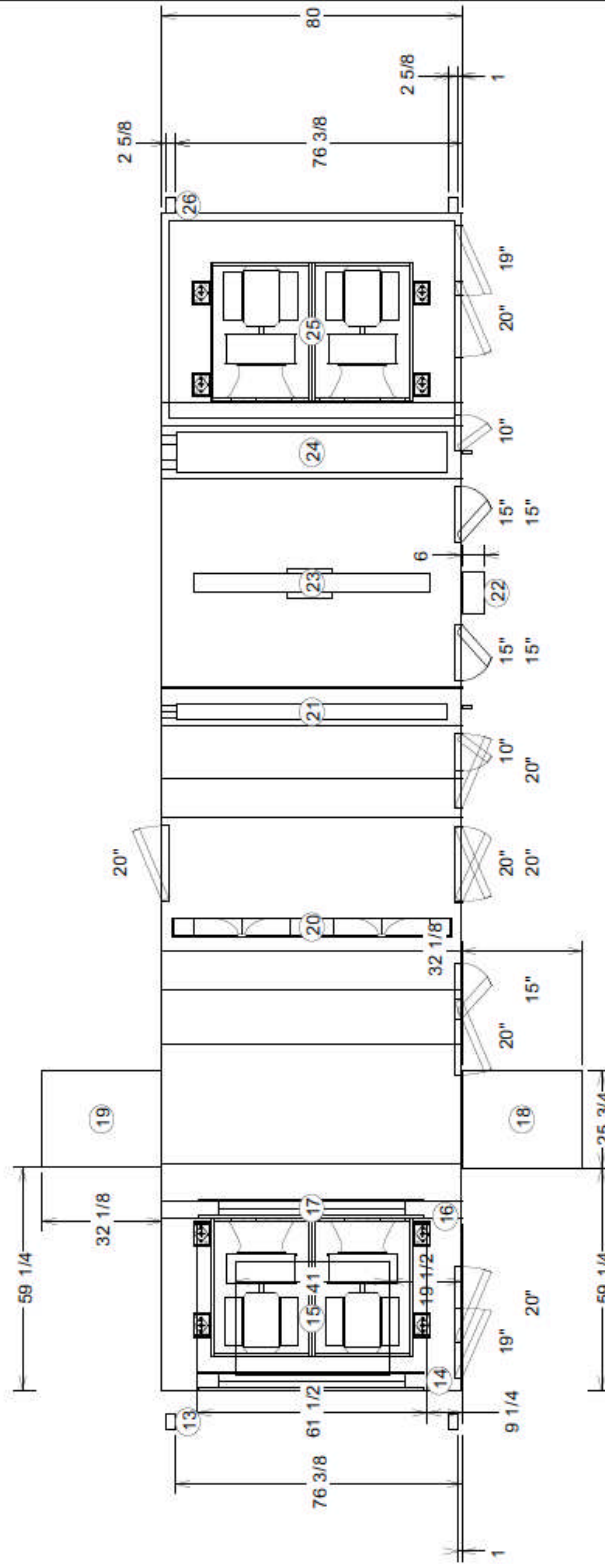
Item: A1 Qty: 1 Tag(s): RTU-1

Overall Unit Acoustics

	63Hz	125Hz	250Hz	500Hz	1 kHz	2 kHz	4 kHz	8 kHz
Discharge	71	81	68	73	66	72	62	54
Inlet + Casing	96	99	92	94	85	88	92	83
Casing	86	84	82	85	79	72	67	61
Ducted Inlet	91	92	87	90	75	80	80	75

As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

- 1 1.5" (NPTE) Return
- 2 1.5" (NPTE) Supply
- 3 3/8" drain (NPTI)
- 4 3/8" (NPTI) Vent
- 5 2.5" (NPTE) Return
- 6 2.5" (NPTE) Supply
- 7 1.5" (NPTE) Return
- 8 1.5" (NPTE) Supply
- 9 3/8" drain (NPTI)
- 10 3/8" (NPTI) Vent
- 11 2.5" (NPTE) Return
- 12 2.5" (NPTE) Supply
- 13 Wiring raceway front
- 14 Damper front-opposed blade
- 15 28.500 x 61.500
- 16 Opening top
- 17 30.000 x 41.000
- 18 Plenum fan - 20in. direct-drive plenum, 80% width Return fan 3 hp 460/3
- 19 Damper front-parallel blade
- 20 28.500 x 61.500
- 21 Hood right
- 22 Hood left
- 23 Air Blender
- 24 Heating coil - 1 row Coil type 5W
- 25 External starter RH
- 26 CDQ wheel - 10500 CFM
- 27 Cooling coil - 8 rows Coil type UU
- 28 Plenum fan - 22.25in. direct-drive plenum, 80% width Supply fan 10 hp 460/3
- 29 Wiring raceway back
- 30 Doors
- 31 19" width x 55" height
- 32 20" width x 55" height
- 33 15" width x 55" height
- 34 10" width x 55" height



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

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

Unit size: 25
 Product group: Outdoor unit
 Integral base frame: 6in. integral base frame
 Paint: Factory painted - slate gray

Job Name: Eyecare Medical Group
 Actual airflow: 10670 cfm
 Sales Office: Portland ME

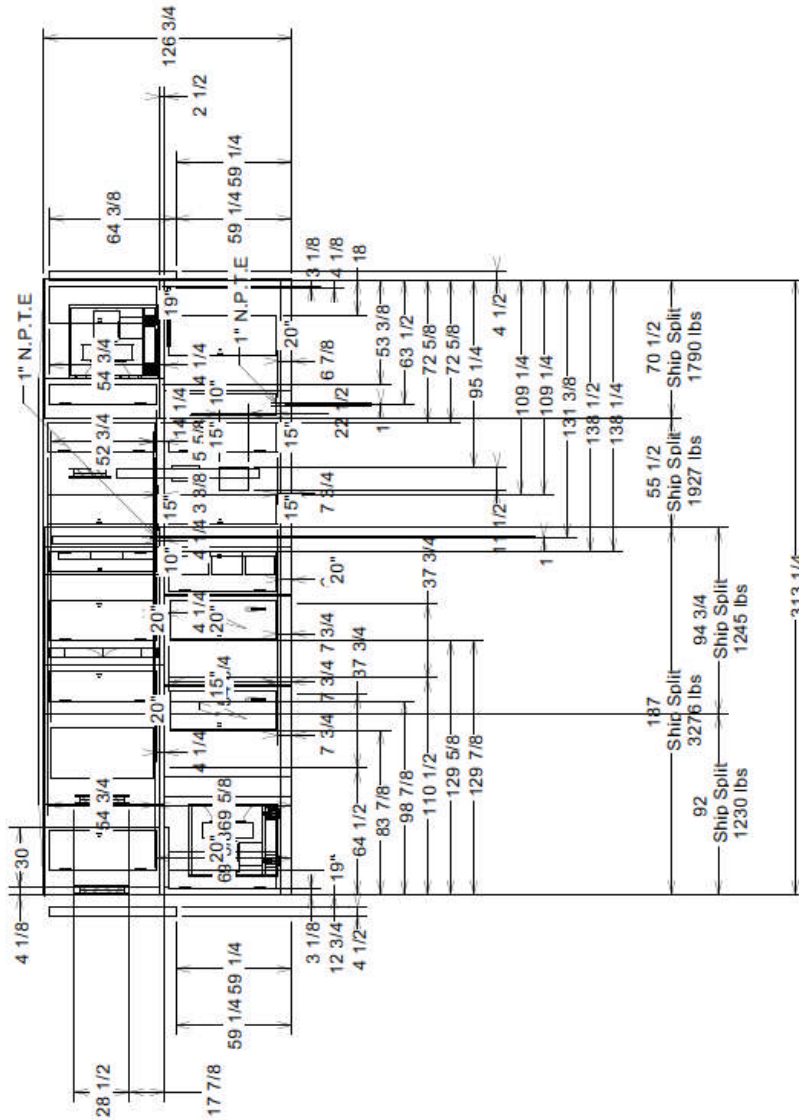
Unit Casing: 2in Double Wall
 Proposal Number:
 Tags: RTU-1
 Rigging/Installed Weight: 10659.9 lb/ 10893.2 lb



As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

- 1 1.5" (NPTE) Return
- 2 1.5" (NPTE) Supply
- 3 3/8" drain (NPTI)
- 4 3/8" (NPTI) Vent
- 5 2.5" (NPTE) Return
- 6 2.5" (NPTE) Supply
- 7 1.5" (NPTE) Return
- 8 1.5" (NPTE) Supply
- 9 3/8" drain (NPTI)
- 10 3/8" (NPTI) Vent
- 11 2.5" (NPTE) Return
- 12 2.5" (NPTE) Supply
- 13 Wiring raceway front
- 14 Damper front-opposed blade
- 15 28,500 x 61,500 Opening top
- 16 30,000 x 41,000 Plenum fan - 20in. direct-drive plenum, 80% width Return fan 3 hp 460/3
- 17 Damper front-parallel blade
- 18 28,500 x 61,500 Hood right
- 19 Hood left
- 20 Air Blender
- 21 Heating coil - 1 row Coil type 5W
- 22 External starter RH
- 23 CDQ wheel - 10500 CFM
- 24 Cooling coil - 8 rows Coil type UU
- 25 Plenum fan - 22,25n. direct-drive plenum, 80% width Supply fan 10 hp 460/3
- 26 Wiring raceway back
- 27 1" N.P.T.E

- Doors
- 19 width x 55 height
- 20 width x 55 height
- 15 width x 55 height
- 10 width x 55 height



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



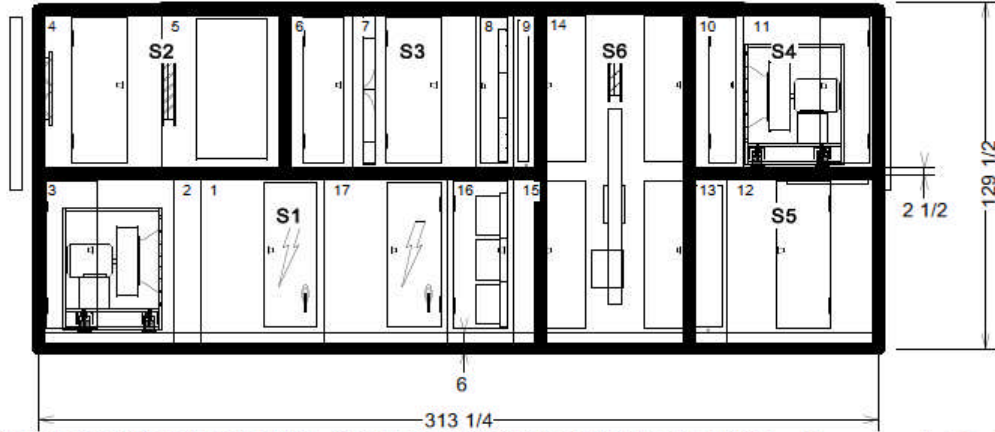
Unit Casing: 2in Double Wall
 Proposal Number:
 Tags: RTU-1
 Rigging/Installed Weight: 10659.9 lb/ 10893.2 lb

Unit size: 25
 Product group: Outdoor unit
 Integral base frame: 6in. integral base frame
 Paint: Factory painted - slate gray

Job Name: Eyecare Medical Group
Actual airflow: 10670 cfm
Sales Office: Portland ME

As-Built - Performance Climate Changer

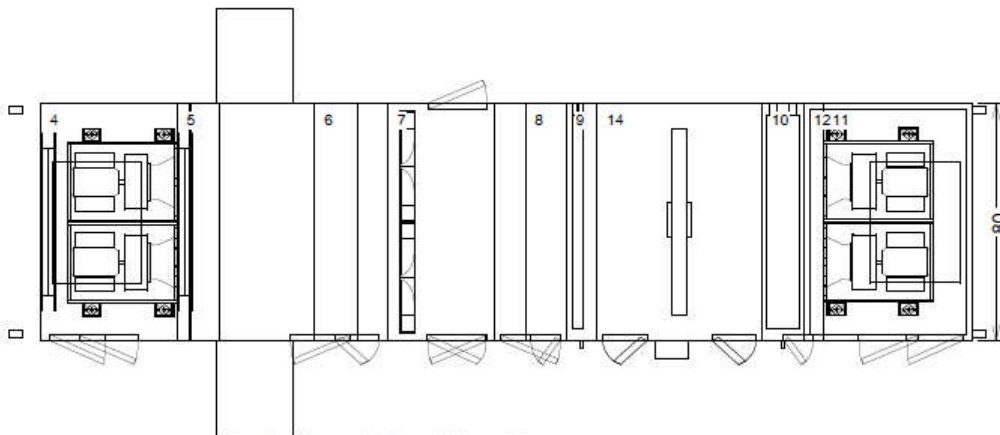
Item: A1 Qty: 1 Tag(s): RTU-1



Overall Elevation View: Right - Shipping splits indicated by bold outline. - Measurements in inches


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

Pos #	Module	Length	Weight	Pos #	Module	Length	Weight
1	Controls section	46 1/8	566.18	14	Wheel	55 1/2	1926.59
2	Access section	10 1/8	116.80	15	Access section	10	116.80
3	Fan section	50 3/8	1392.16	16	Filter section	24 1/2	437.74
4	Air mixing section	46	516.80	17	Controls section	46 1/8	646.18
5	Air mixing section	46	713.53	Installed Unit Weight 10893.18 lbs			
6	Custom length section	24 3/4	234.08				
7	Air blender	46	498.25				
8	Filter section	14	201.77				
9	Coil section	10	310.65				
10	Custom length section	20 1/4	192.33				
11	Fan section	50 1/4	1597.97				
12	Access section	56 1/2	507.49				
13	Coil section	14	917.86				

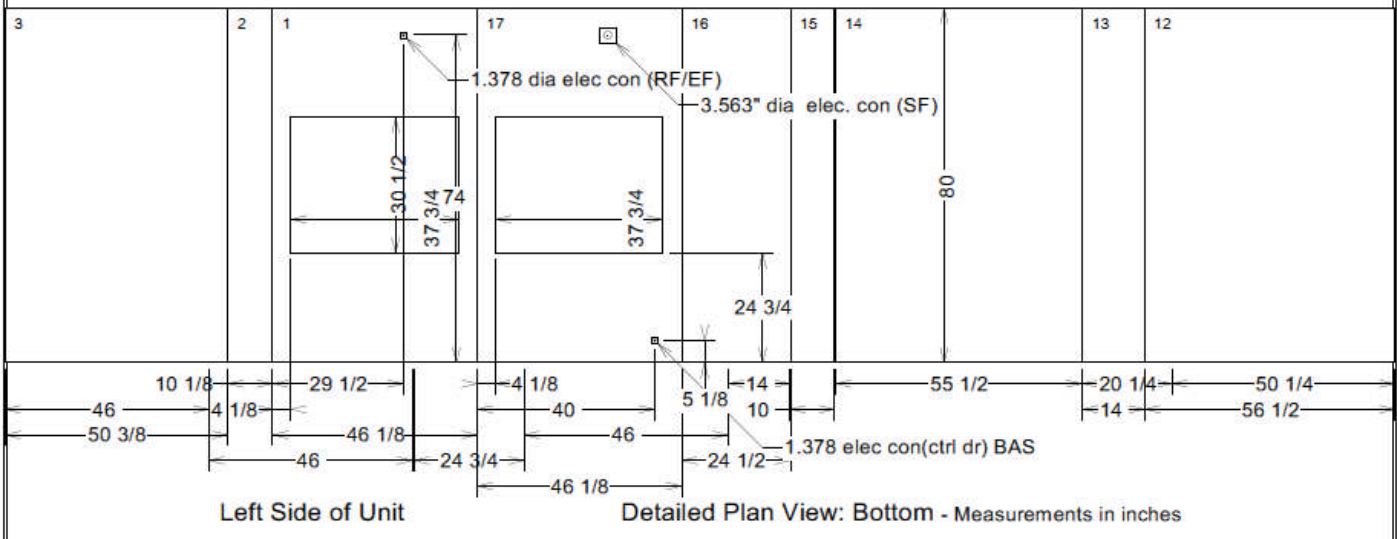
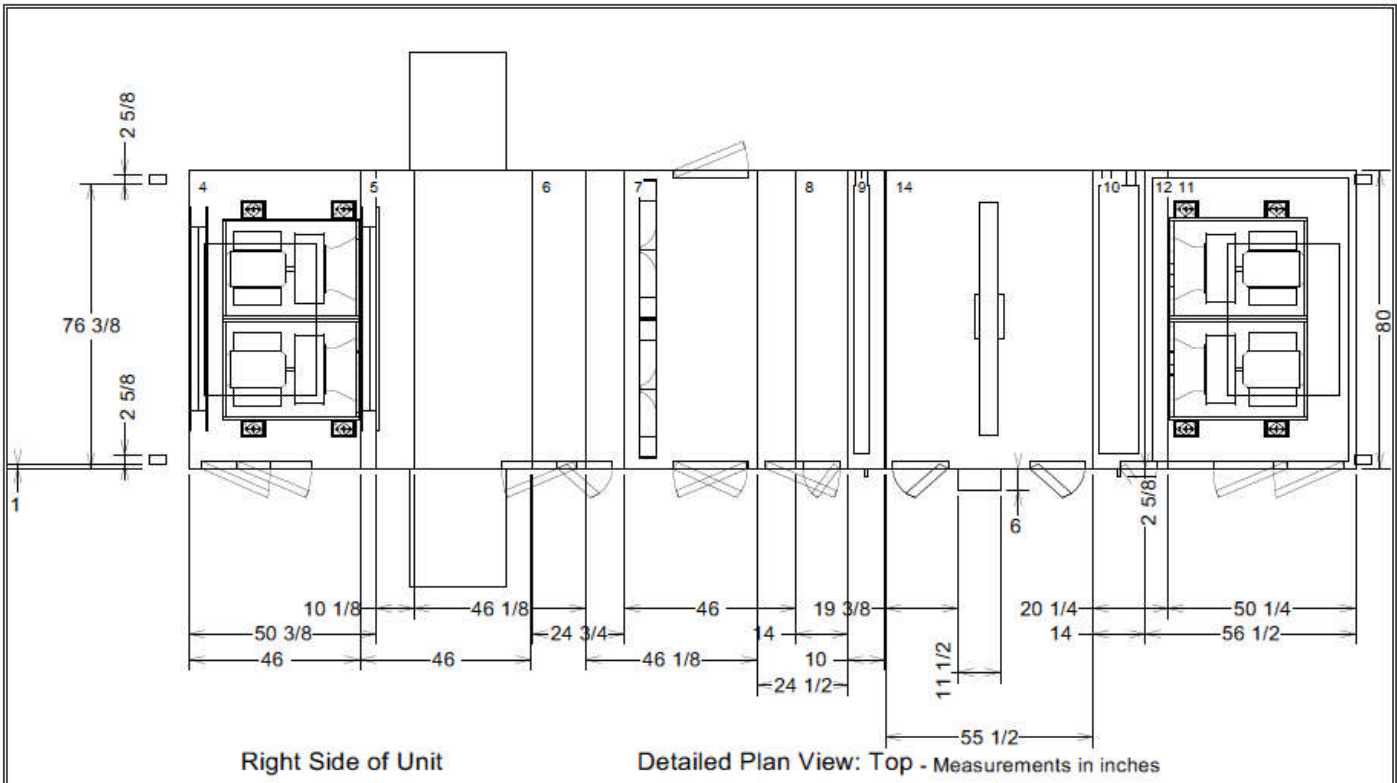


Basic Overall Plan View: Top - Measurements in inches

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

Unit size: 25	Job Name: Eyecare Medical Group	Unit Casing: 2in Double Wall	 Performance Climate Changer Air Handlers
Product group: Outdoor unit	Actual airflow: 10670 cfm	Proposal Number:	
Integral base frame: 6in. Integral base frame	Sales Office: Portland ME	Tags: RTU-1	
Paint: Factory painted - slate gray		Rigging/Installed Weight: 10859.9 lb/ 10893.2 lb	

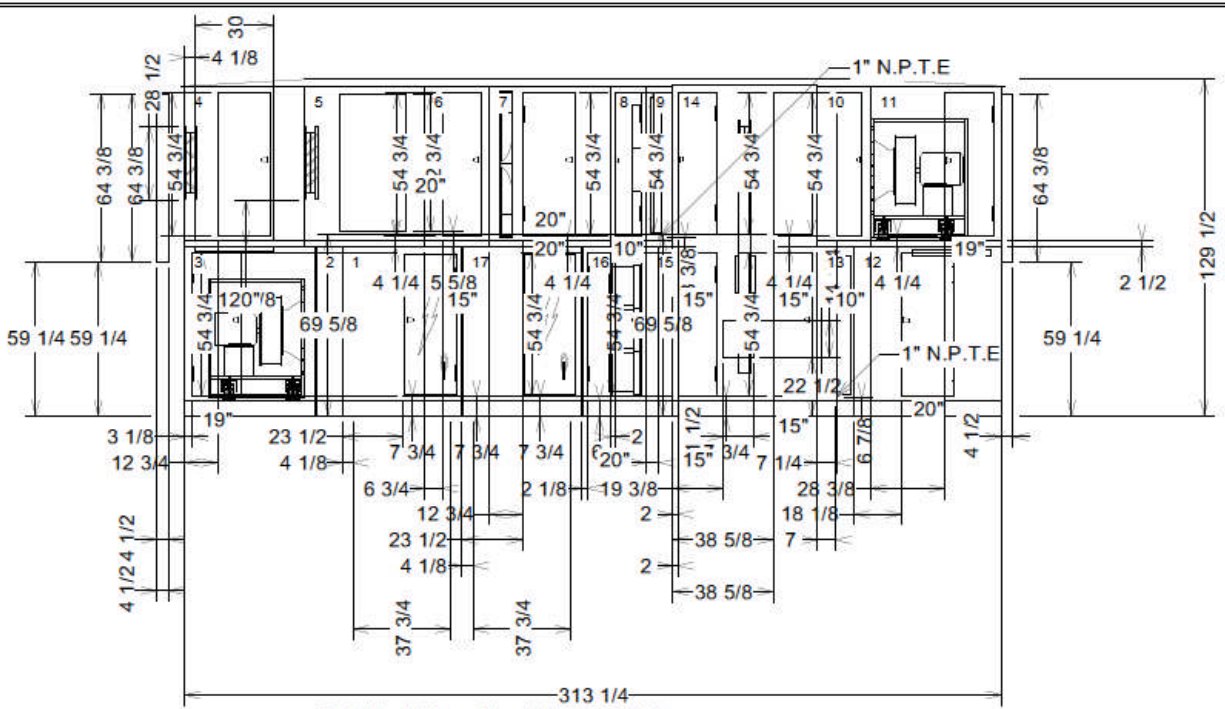
As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1



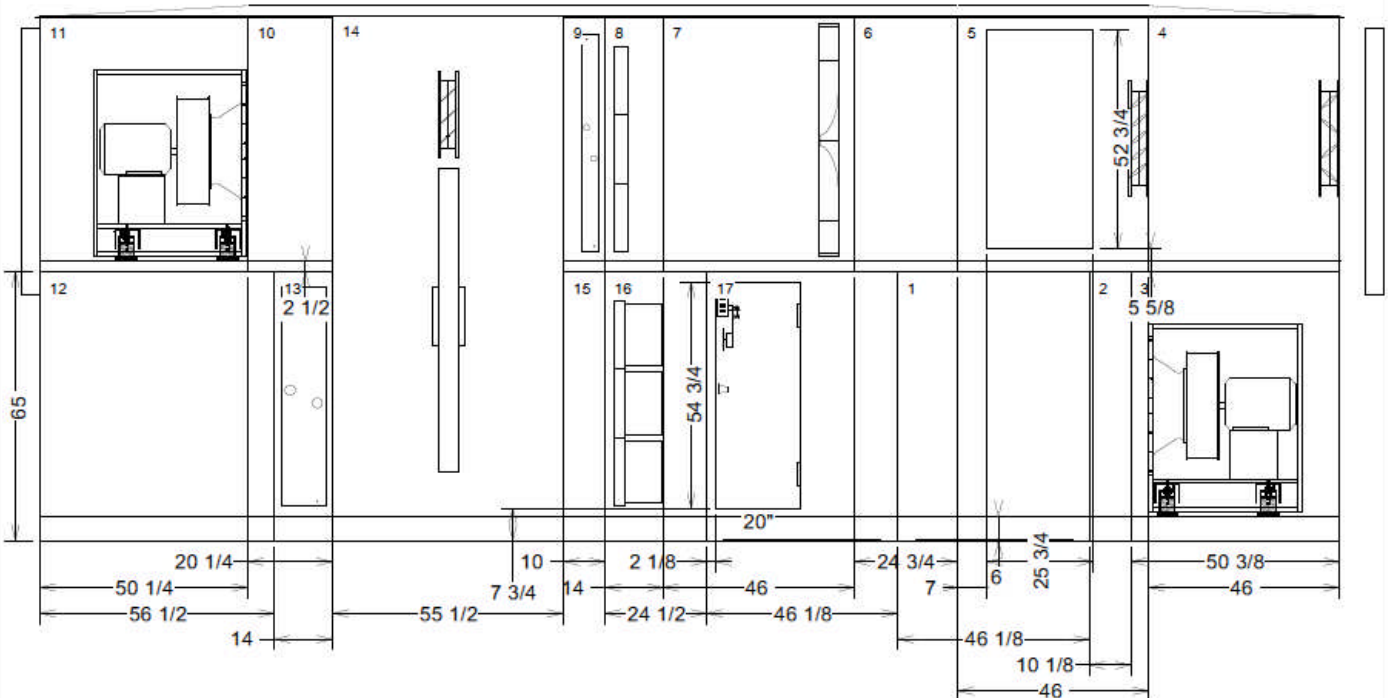
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 25	Job Name: Eyecare Medical Group	Unit Casing: 2in Double Wall	
Product group: Outdoor unit	Actual airflow: 10670 cfm	Proposal Number:	
Integral base frame: 6in. Integral base frame	Sales Office: Portland ME	Tags: RTU-1	
Paint: Factory painted - slate gray		Rigging/Installed Weight: 10859.9 lb/ 10893.2 lb	

As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1




Detailed Elevation View: Right - Measurements in inches



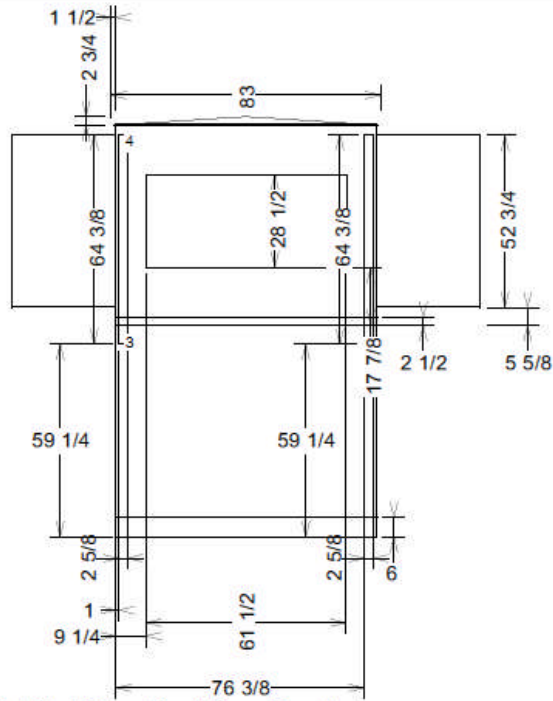
Detailed Elevation View: Left - Measurements in inches

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

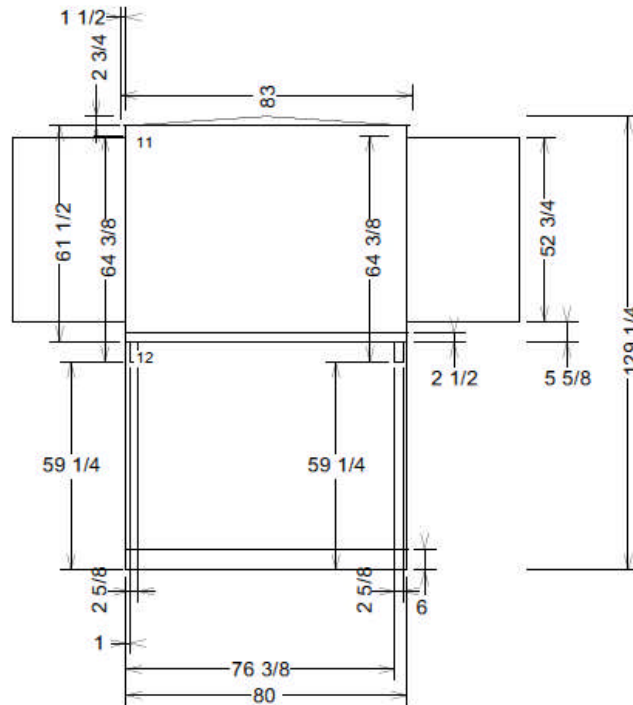
Unit size: 25	Job Name: Eyecare Medical Group	Unit Casing: 2in Double Wall	 Performance Climate Changer™ Air Handlers
Product group: Outdoor unit	Actual airflow: 10670 cfm	Proposal Number:	
Integral base frame: 6in. Integral base frame	Sales Office: Portland ME	Tags: RTU-1	
Paint: Factory painted - slate gray		Rigging/Installed Weight: 10659.9 lb/ 10893.2 lb	

As-Built - Performance Climate Changer

Item: A1 Qty: 1 Tag(s): RTU-1




Detailed Elevation View: Front - Measurements in inches

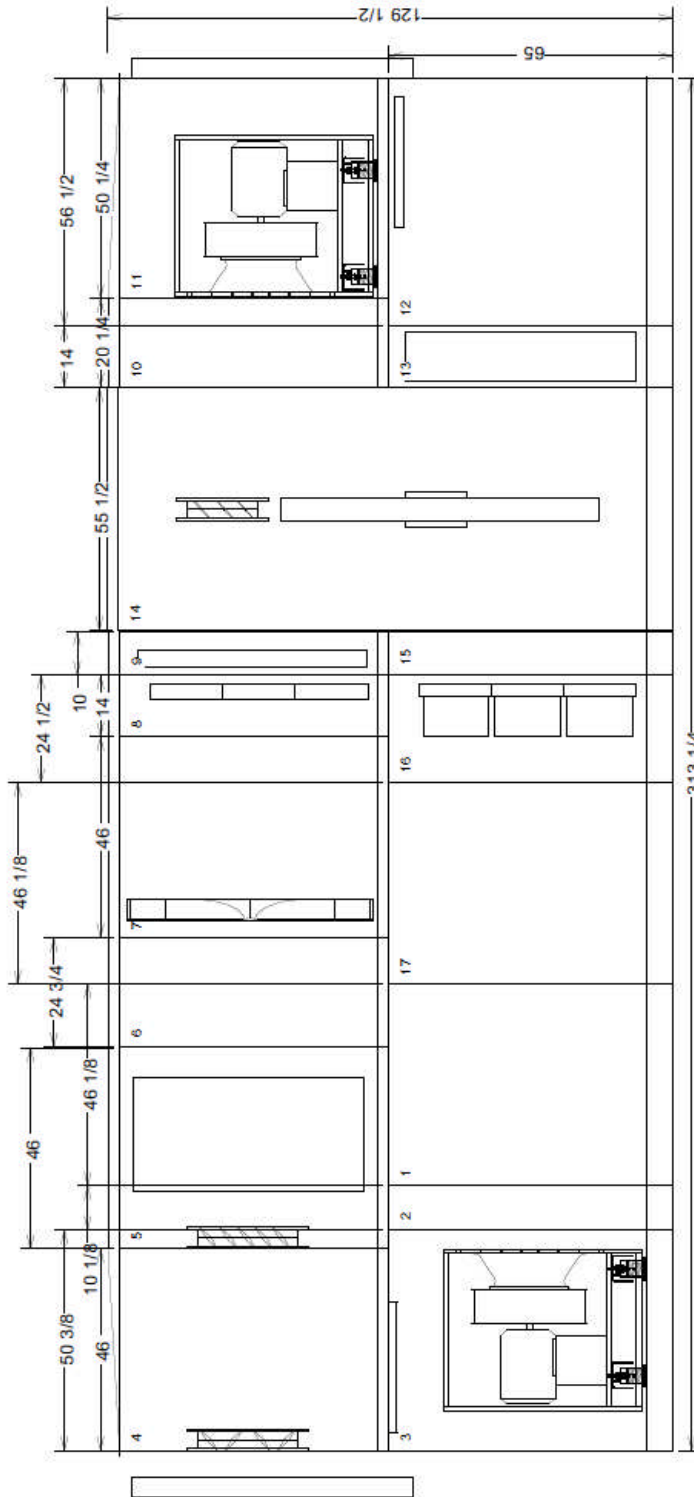


Detailed Elevation View: Back - Measurements in inches

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

Unit size: 25	Job Name: Eyecare Medical Group	Unit Casing: 2in Double Wall	 TRANE Performance Climate Changer Air Handlers
Product group: Outdoor unit	Actual airflow: 10670 cfm	Proposal Number:	
Integral base frame: 6in. Integral base frame	Sales Office: Portland ME	Tags: RTU-1	
Paint: Factory painted - slate gray		Rigging/Installed Weight: 10659.9 lb/ 10893.2 lb	


As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1



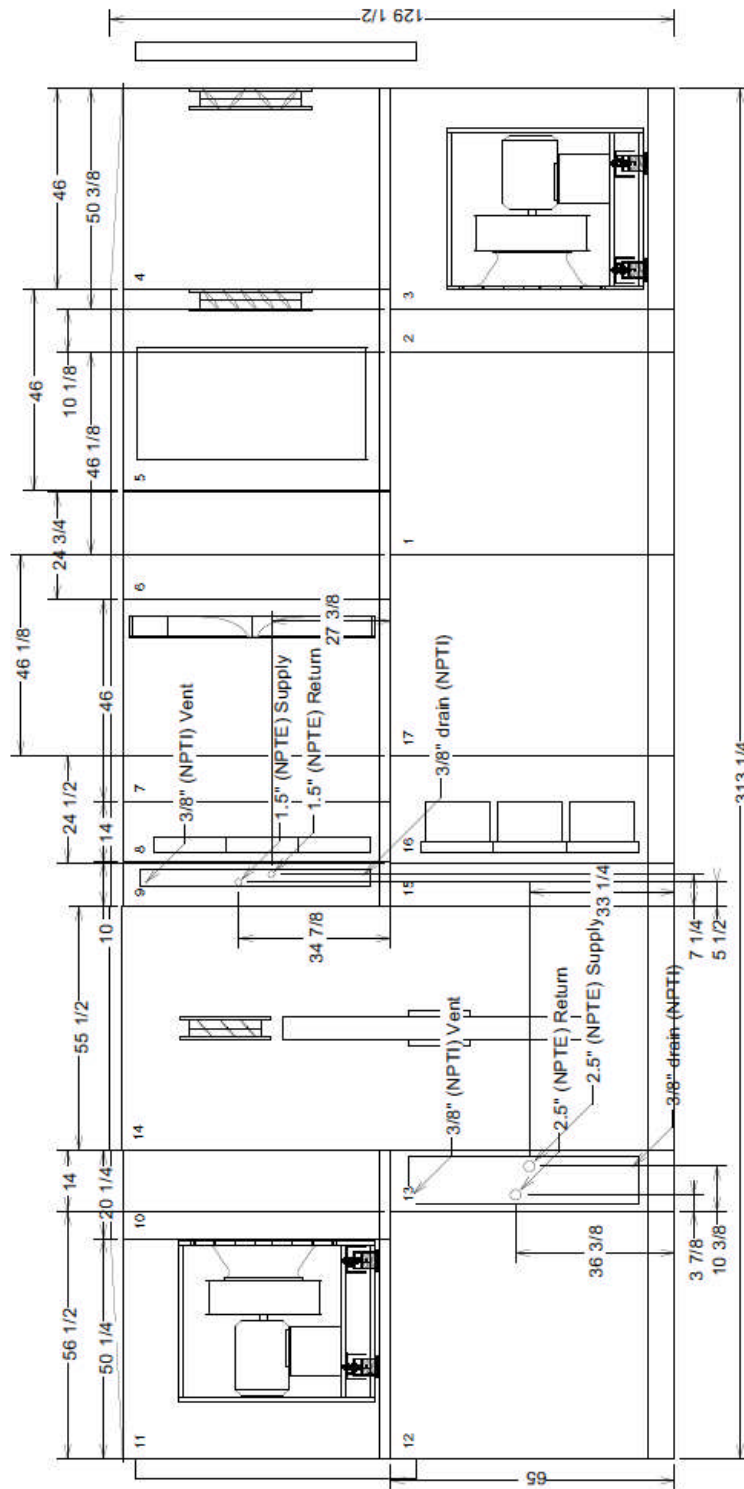
Coil connection view: Right - Measurements in inches

NPT1 : National Pipe Thread Internal Connection
NPTE : National Pipe Thread External Connection

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

Unit size: 25	Job Name: Eyecare Medical Group	Unit Casing: 2h Double Wall	 TRANE Performance Climate Changer [®] Air Handlers
Product group: Outdoor unit	Actual airflow: 10670 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame	Sales Office: Portland ME	Tags: RTU-1	
Paint: Factory painted - slate gray		Rigging/Installed Weight: 10659.9 lb/ 10893.2 lb	

As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1



Coil connection view: Left - Measurements in inches

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



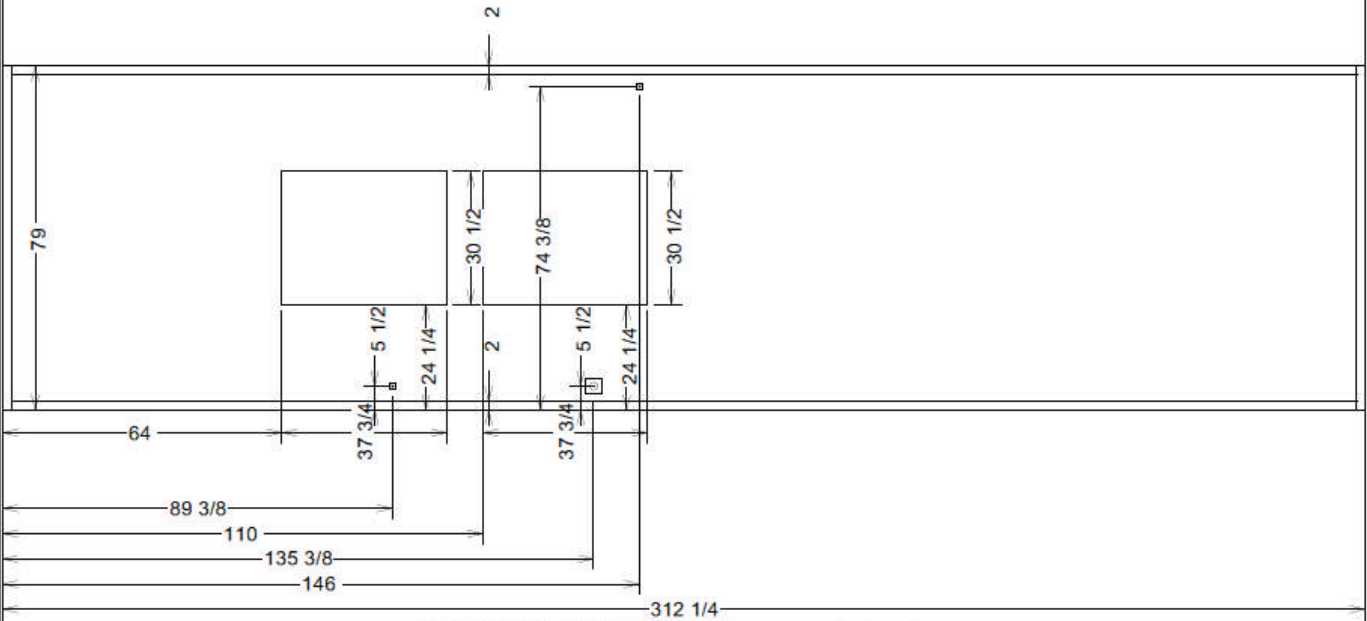
Unit size: 25	Unit Casing: 2h Double Wall
Product group: Outdoor unit	Proposal Number:
Integral base frame: 6in. integral base frame	Tags: RTU-1
Paint: Factory painted d - slate gray	Rigging/Installed Weight: 10659.9 lb/ 10893.2 lb
Job Name: Eyecare Medical Group	
Actual airflow: 10670 cfm	
Sales Office: Portland ME	

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

As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1


Roof curb details included are intended to show dimensions for mounting unit to "A" roof curb on a flat roof.
 All special curb details such as isolation curbs, adapter curbs and pitched roof curbs are to be provided by others.

Seismic rated roof curb will be provided. Curb details to follow in separate package.



Detailed Plan View: Curb - Measurements in inches

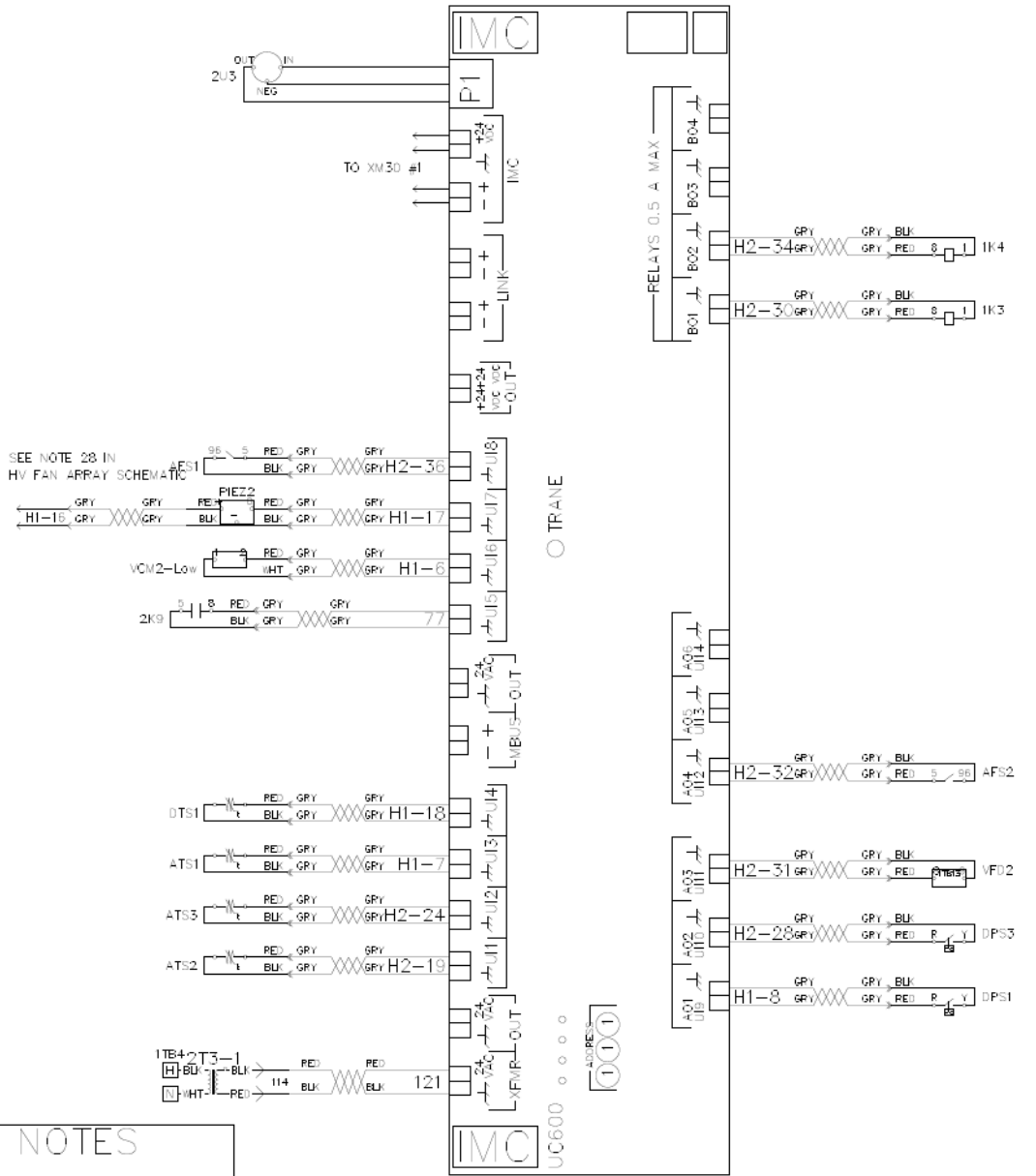
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 25	Job Name: Eyecare Medical Group	Unit Casing: 2in Double Wall	 Performance Climate Changer Air Handlers
Product group: Outdoor unit	Actual airflow: 10670 cfm	Proposal Number:	
Integral base frame: 6in. Integral base frame	Sales Office: Portland ME	Tags: RTU-1	
Paint: Factory painted - slate gray		Rigging/Installed Weight: 10659.9 lb/ 10893.2 lb	

As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

CONTROLLER DETAIL 1 (MOUNTED IN MC05)

DEVICE NAME	DEVICE LOCATION
PREFIX	
1	HIGH VOLTAGE PANEL
2	LOW VOLTAGE PANEL
5	CUSTOMER INSTALLED



SEE NOTE 28 IN HV FAN ARRAY SCHEMATIC

SEE NOTE 28 IN HV FAN ARRAY SCHEMATIC

NOTES

UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 250C (77F), AT ATMOSPHERIC PRESSURE, AT 50% RELATIVE HUMIDITY, WITH ALL UTILITIES TURNED OFF, AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.

DASHED LINES INDICATE FIELD WIRING BY OTHERS. SOLID LINES INDICATE WIRING BY TRANE.

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

COMMUNICATION WIRE MUST BE TRANE PART NO. 400-20-25 OR EQUIVALENT MAXIMUM FOOT SPREAD RATE RUN. CAUTION: DO NOT RUN POWER IN THE SAME CONDUIT/WIRE BUNDLE WITH COMMUNICATION LINK.

CONTROL RELAY(S) CONTACTS: SILVER CALCIUM SWIDE RATED AT 1/2HP 5A 120VAC AND 1/3 HP 5A 240VAC.

MP GR 4H CONTROLLER OUTPUT RELAYS ARE RATED 24V AC/DC, 1A, 24V PILOT DUTY. EXTERNAL RELAY REQUIRED FOR HIGHER VOLTAGE CIRCUIT.

CAUTION

USE COPPER CONDUCTORS ONLY. WIRE TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS. FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

ATTENTION

UTILISER QUE LES CONDUCTEURS EN COPRE. LES TERMINAUX NE SONT PAS CONÇUS POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS. L'EMPLOI D'AUTRES TYPES DE CONDUCTEURS PEUT ENTRAINER DES DOMMAGES À L'ÉQUIPEMENT.

PRECAUCIÓN

UTILICE ÚNICAMENTE CONDUCTORES DE COPRE. LAS TERMINALES DE LAS UNIDADES NO ESTÁN DISEÑADAS PARA RECEBIR OTROS TIPOS DE CONDUCTORES. NO REALIZAR LAS INSTALACIONES ANTERIORES PUEDE PROVOCAR DAÑOS EN EL EQUIPO.

WARNING

HIGH-VOLTAGE (240V) DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS AND FOLLOW LOCK-OUT AND TAG-OUT PROCEDURE BEFORE SERVICE. ENSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED STORED VOLTAGE AND WITH VARIABLE FREQUENCY MOTOR TO PREVENT INJURY FOR CAPACITOR DISCHARGE. FAILURE TO DO THE ABOVE SERVICE WORKING CAN RESULT IN DEATH OR SERIOUS INJURY.

AVERTISSEMENT

TENSION DANGEREUSE (240V). DÉCONNECTEZ TOUS LES TENDONS ET OUVREZ LES ÉCROUS DÉTACHABLES À DISTANCE. ASSUREZ-VOUS DE SUIVRE LA PROCÉDURE DE VERROUILLAGE ET D'ÉTIQUETAGE AVANT TOUT TRAVAIL ÉLECTRIQUE. LE DÉTACHEMENT DES CONDENSATEURS DE LA TENSION VARIABLE PEUT CAUSER DES BLESSURES. L'ÉCHEC À SUIVRE LES PROCÉDURES DE DÉTACHEMENT DES CONDENSATEURS DE LA TENSION VARIABLE PEUT ENTRAINER LA MORT OU DES BLESSURES GRAVES.

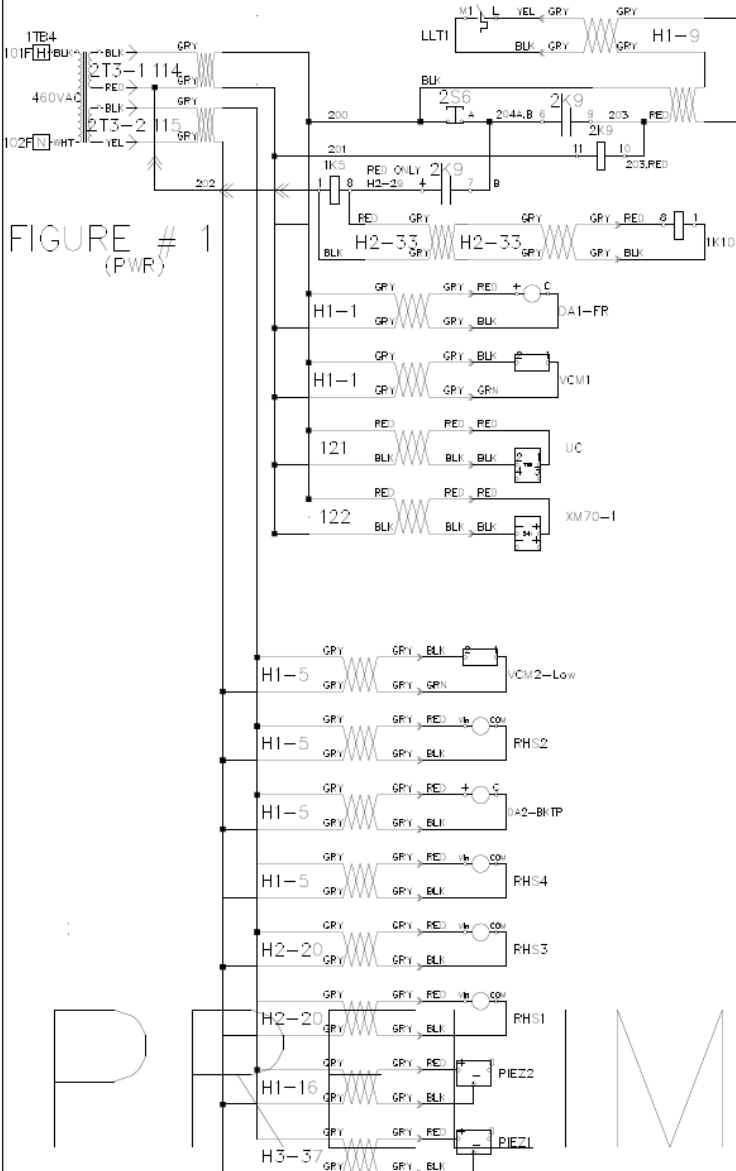
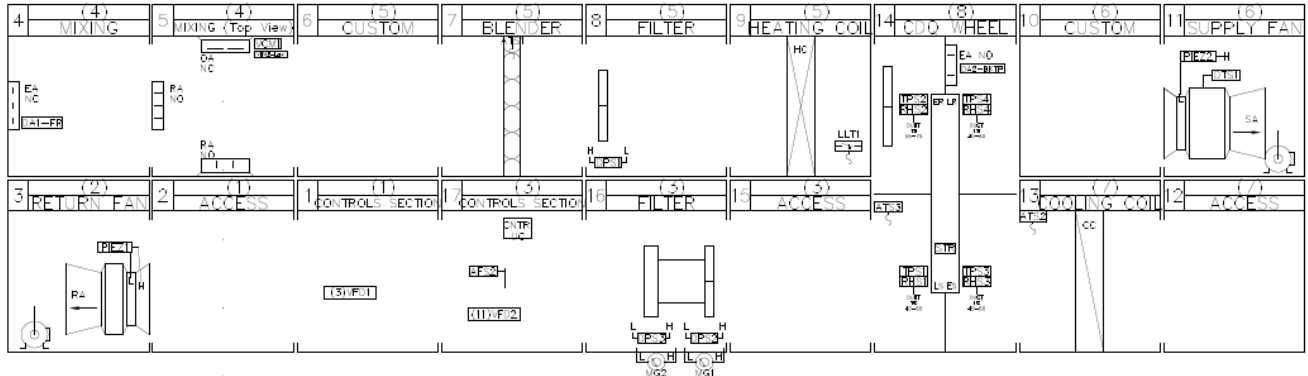
ADVERTENCIA

¡ALTA TENSION! PELIGRO DE ELECTRICIDAD. DESCONECTE TODA LA ENERGÍA ELÉCTRICA INCLUIDO LAS TENDONES REMOVIBLES Y SIGA LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO ANTES DE PROCEDER AL TRABAJO. ASEGURESE DE SEGUIR LOS PASOS DE LOS PROCEDIMIENTOS DE BLOQUEO Y ETIQUETADO ANTES DE REALIZAR CUALQUIER TRABAJO ELÉCTRICO. EL NO REALIZAR LAS INSTALACIONES ANTERIORES PUEDE PROVOCAR DAÑOS EN EL EQUIPO.

DRAWN BY: Unkchinn DATE: 11/19/2013 SOFTWARE: EPCAD 13.0 DRAWING NUMBER:	Trane	CSOA—SCHEMATIC UNIT SIZE: 25 UNIT TAG: RTU-1
---	-------	--

As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

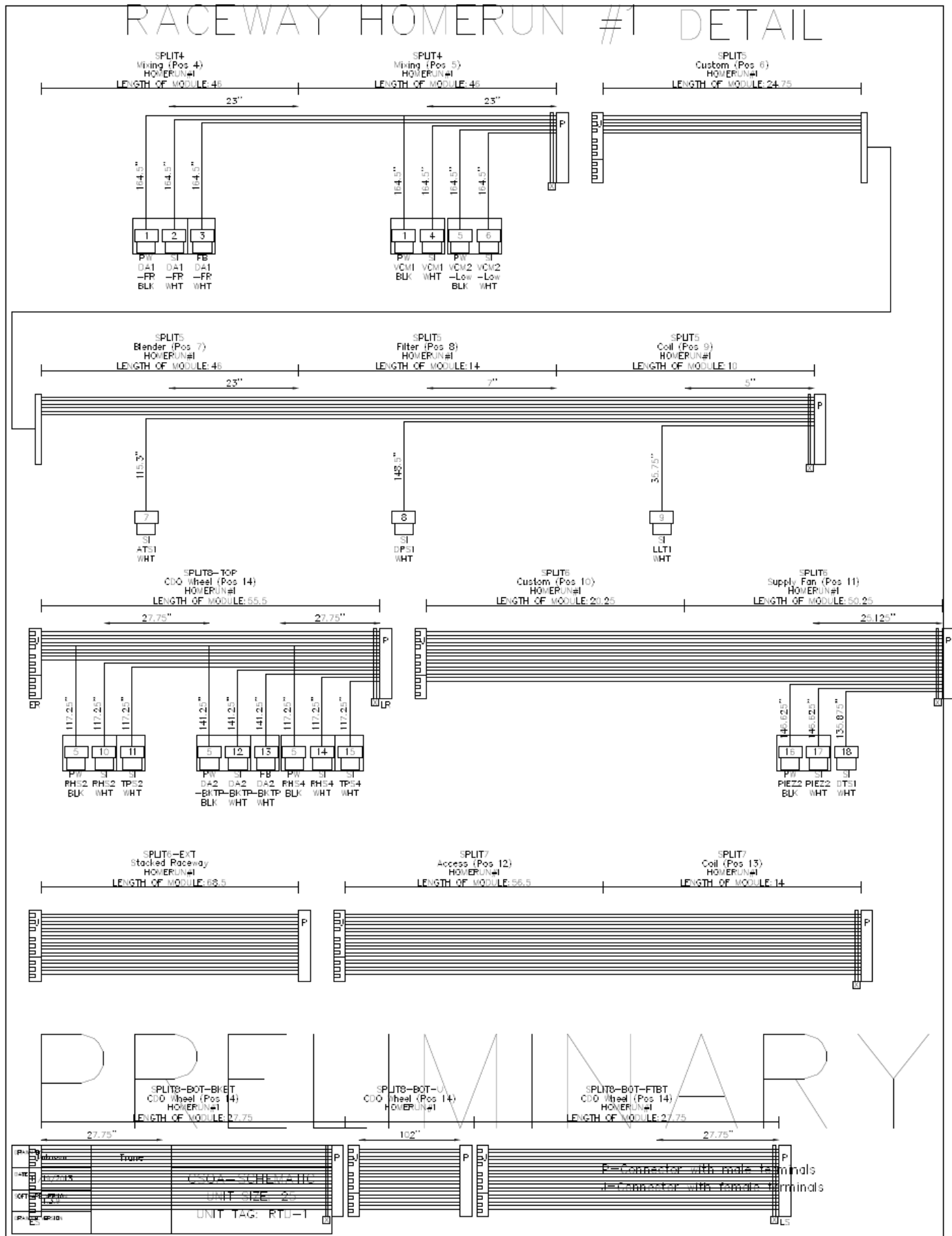
WIRING DETAIL 1 (OUTDOOR)



P R I M I N A R Y

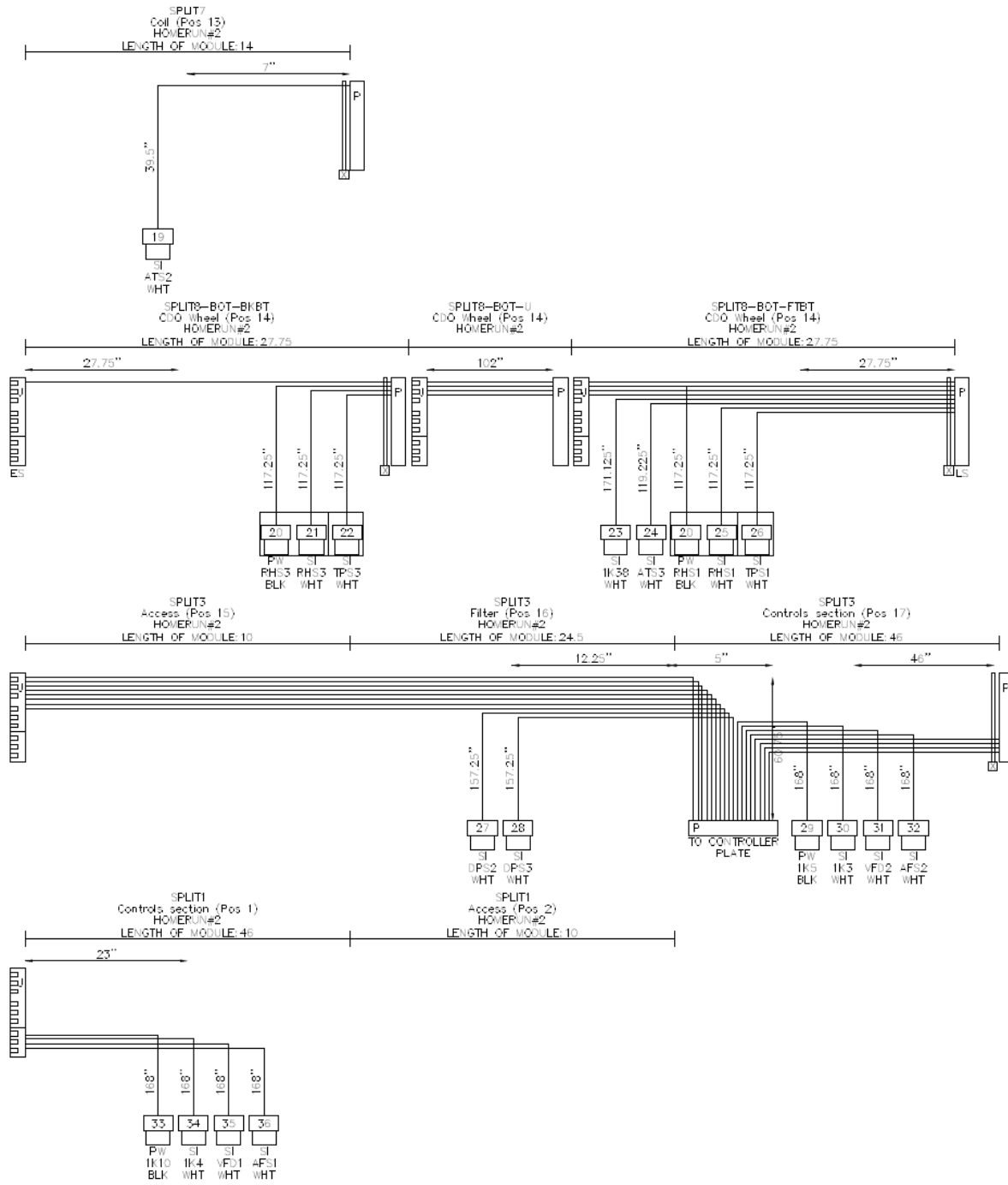
IPADW: B1 DATE: 11/19/2013 DPT: RE IPADW: B1	Trane	CSOA-SCHMATIC UNIT SIZE: 25 UNIT TAG: RTU-1
---	-------	---

As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1



As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

RACEWAY HOMERUN #2 DETAIL



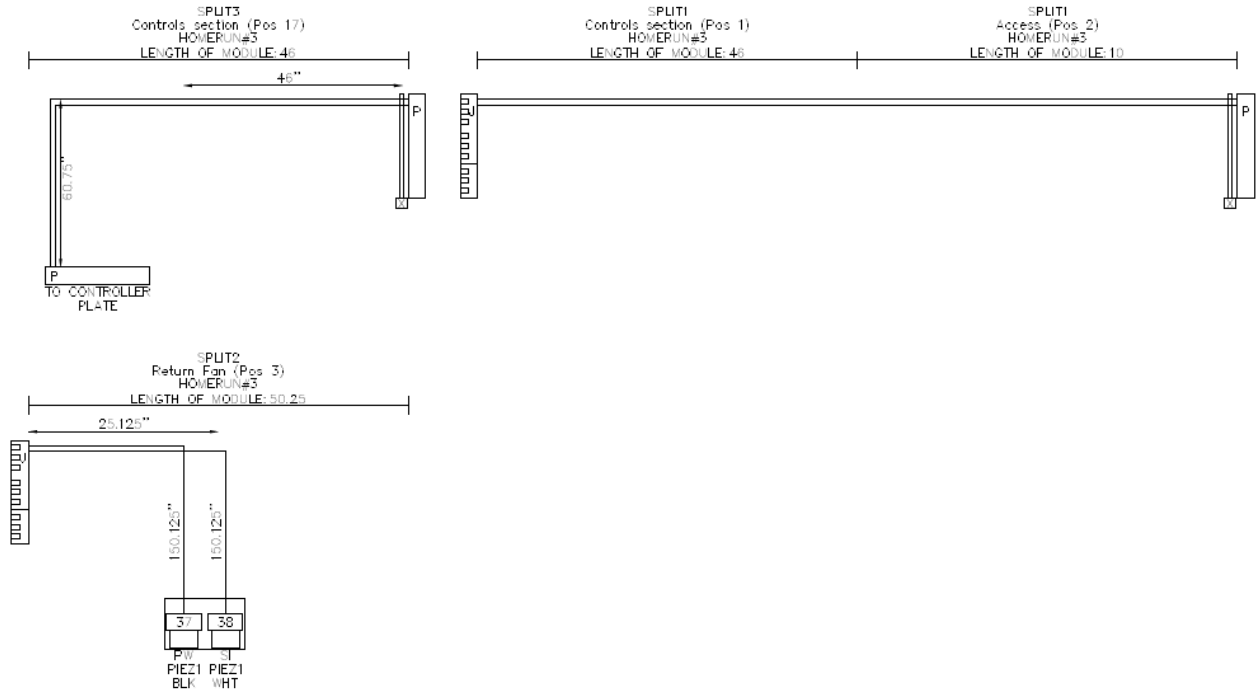
PRELIMINARY

Drawn By: Chilborn	Trone	CSQA-SCHMATIC UNIT SIZE: 25 UNIT TAG: RTU-1
DATE: 11/19/2013		
SOFTWARE VERSION: 13.0		
PLANTING VERSION: 		

P=Connector with male terminals
 J=Connector with female terminals

As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

RACEWAY HOMERUN #3 DETAIL



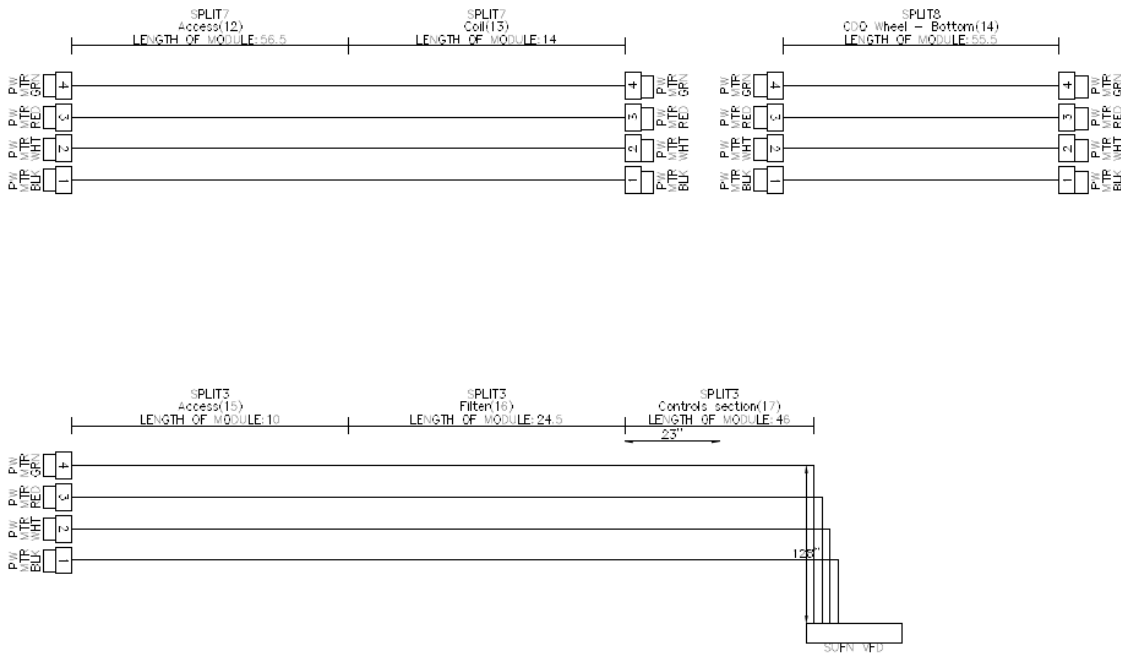
PRELIMINARY

Drawn By: Chikobun	Trane	CSQA—SCHEMATIC UNIT SIZE: 25 UNIT TAG: RTU-1
DATE: 11/19/2013		
SOFTWARE: EPLAN		
DRAWING VERSION:		

P=Connector with male terminals
 J=Connector with female terminals

As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

RACEWAY HV HOMERUN #1 DETAIL Harness1



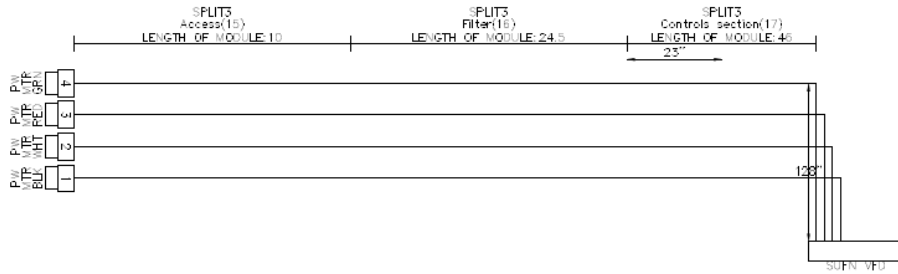
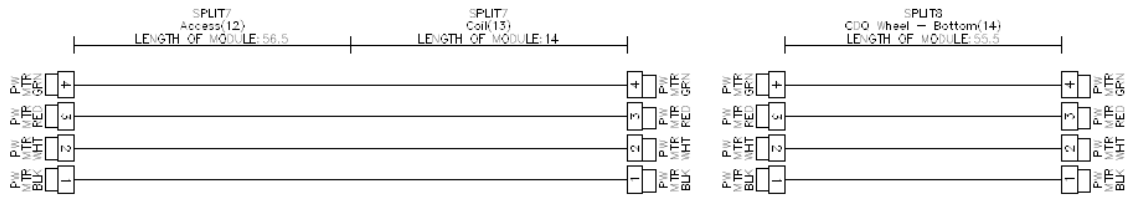
PRELIMINARY

DESIGN: B. Johnson	Trace	CSQA-SCHMATIC UNIT SIZE: 25 UNIT TAG: RTU-1
DATE: 11/19/2013		
OFFICE: PE (2010)		
PROJECT: (2010)		

As-Built - Performance Climate Changer

Item: A1 Qty: 1 Tag(s): RTU-1

RACEWAY HV HOMERUN #1 DETAIL Harness2

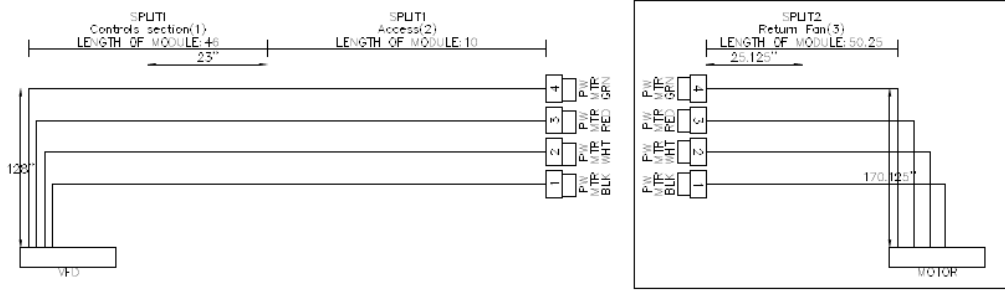


PRELIMINARY

Drawn By: Chinnon	Trane	CSOA-SCHMATIC UNIT SIZE: 25 UNIT TAG: RTU-1
DATE: 11/19/2013		
SOFTWARE: AutoCAD		
SCALE: 1:1		

As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

RACEWAY HV HOMERUN #2 DETAIL Harness1

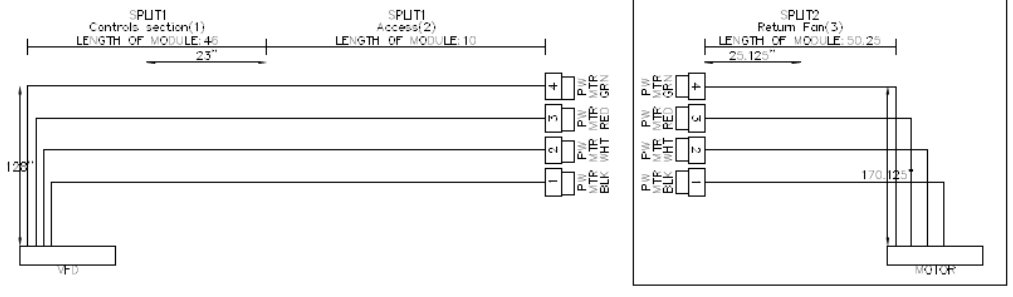


PRELIMINARY

DESIGN BY: Unknown	Trane	CSOA-SCHMATIC UNIT SIZE: 25 UNIT TAG: RTU-1
DATE: 11/19/2013		
SOFTWARE: EPLAN		
DESIGN OFFICE:		

As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

RACEWAY HV HOMERUN #2 DETAIL Harness2

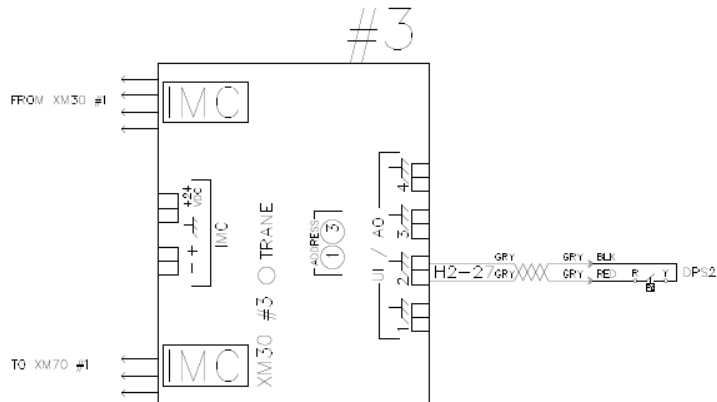
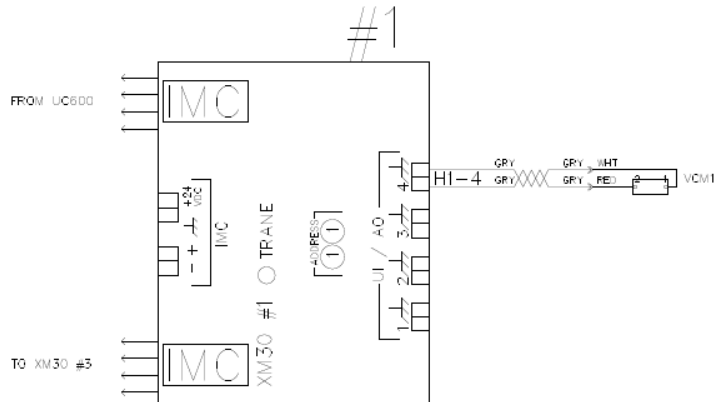


PRELIMINARY

DESIGN BY: TRANE	Trane	CSQA—SCHEMATIC UNIT SIZE: 25 UNIT TAG: RTU-1
DATE: 11/19/2013		
DESIGN BY: TRANE		
DESIGN BY: TRANE		

As-Built - Performance Climate Changer
 Item: A1 Qty: 1 Tag(s): RTU-1

XM30 EXPANSION CARD DETAIL (OUTDOOR)

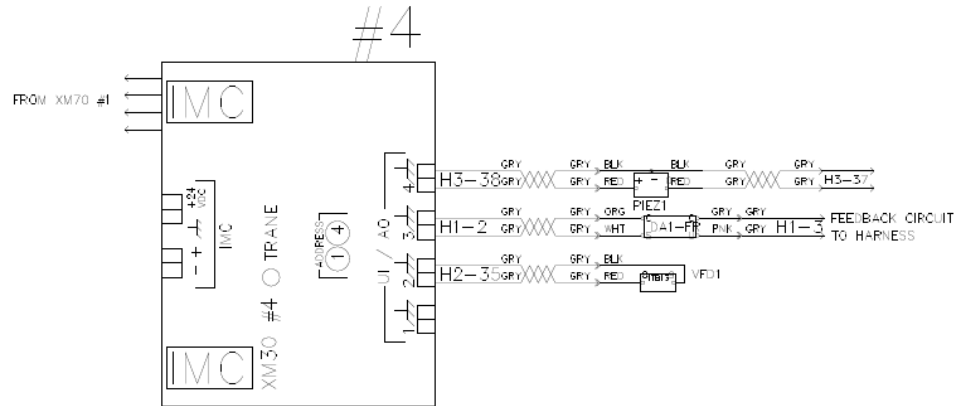


PRELIMINARY

Drawn By: Entaborn DATE: 11/19/2013 SOFTWARE: EPLAN DRAWING VERSION:	Trane	CSQA-SCHMATIC UNIT SIZE: 25 UNIT TAG: RTU-1
---	-------	---

As-Built - Performance Climate Changer
 Item: A1 Qty: 1 Tag(s): RTU-1

XM30 EXPANSION CARD DETAIL (OUTDOOR)

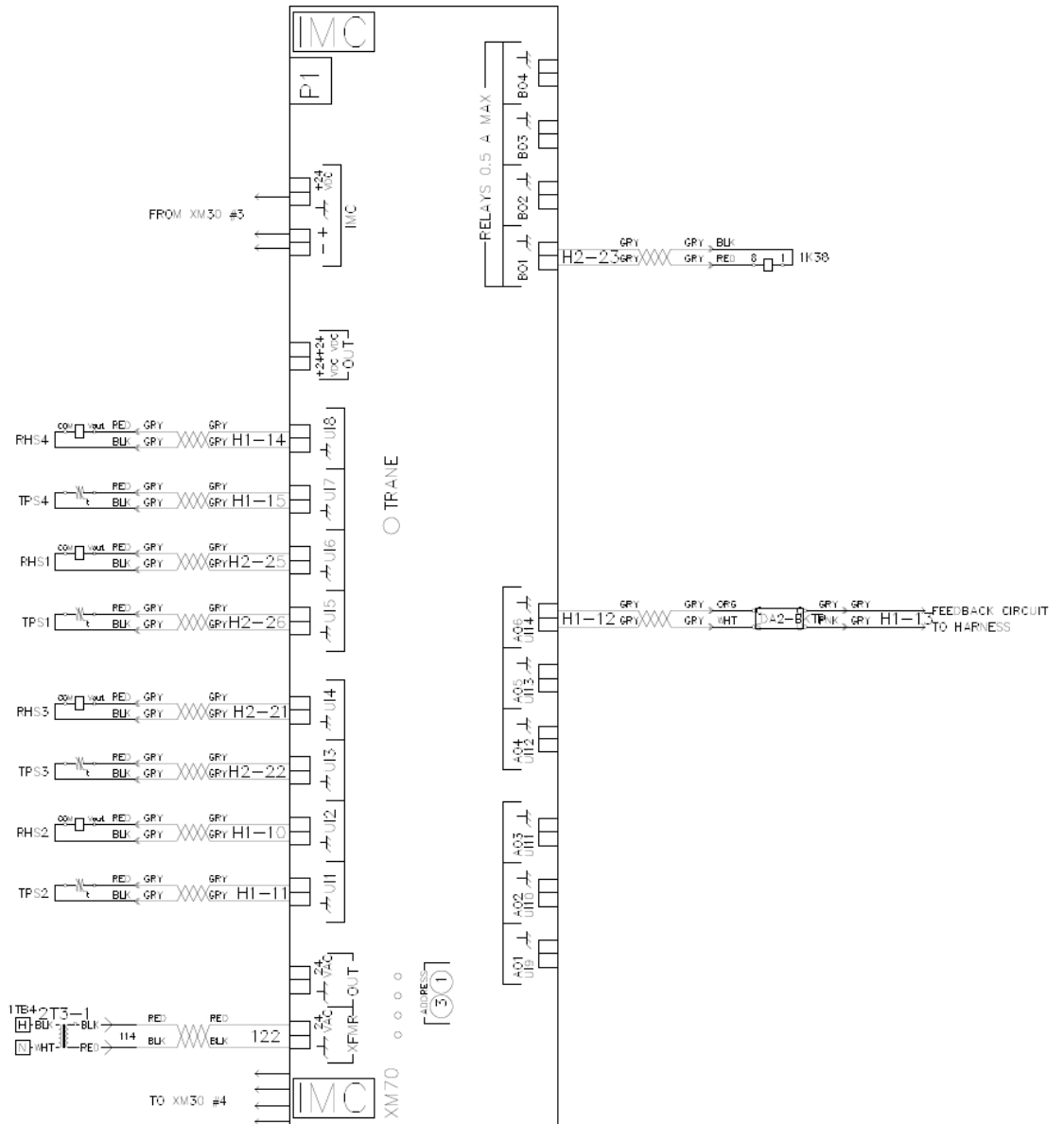


PRELIMINARY

DRAWN BY Unl.nonn	Trane	CS0A-SCHMATIC UNIT SIZE: 25 UNIT TAG: RTU-1
DATE 11/19/2013		
SOFTWARE 13.9		
DRAWING REVISION		

As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

XM70 EXPANSION CARD DETAIL (OUTDOOR)



PRELIMINARY

DRAWN BY Unknown	Trane	CSOA—SCHEMATIC UNIT SIZE: 25 UNIT TAG: RTU-1
DATE 11/19/2013		
OFFICE 139		
DRAWING NUMBER		

As-Built - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

LEGEND DETAIL 1
 (OUTDOOR)

POS#	DESCRIPTION	PT	LABEL	PWR HR-WIRE	SIGNAL HR-WIRE	XFMR	POWER VA
0	150VA TRANSFORMER			2T3			
0	Differential Press. Transmitter	P1	2U3				
0	UC600 Controller		UC	121		2T3-1	26
0	XM30 Expansion module		XM30-1				
0	XM30 Expansion module		XM30-3				
0	XM30 Expansion module		XM30-4				
0	XM70 Expansion module		XM70-1	122		2T3-1	26
1	Return/Exhaust Fan Low Limit Circuit Relay		1K10	H2-33		2T3-1	1
1	Return/Exhaust Fan S/S	B02	1K4		H2-34		
1	Return/Exhaust Fan Speed	A020	VFD1		H2-35		
1	Air Flow Switch	U18	AFS1		H2-36		
3	Flow meter	U130	PIEZ1	H3-37	H3-38	2T3-2	2
4	Front Damper Actuator	A021	DA1-FR	H1-1	H1-2	2T3-1	10
5	Ventilation Control Module	U118	VCM1	H1-1	H1-4	2T3-1	8
5	Ventilation Control Module	U16	VCM2-Low	H1-5	H1-6	2T3-2	8
7	Averaging Temperature Sensor (1K PT)	U13	ATS1		H1-7		
8	Dirty Filter Switch	U19	DPS1		H1-8		
9	Low Limit (Leaving)		LLT1		H1-9	2T3-1	
11	Flow meter	U17	PIEZ2	H1-16	H1-17	2T3-2	2
11	Discharge Air Sensor (10K Type 2)	U14	DTS1		H1-18		
13	Averaging Temperature Sensor (1K PT)	U11	ATS2		H2-19		
14	Entering Regeneration Relative Humidity Sensor (RHR 1% 55-75)	U136	RHS2	H1-5	H1-10	2T3-2	1
14	Entering Regeneration Temperature Sensor (RHR)	U135	TPS2		H1-11		
14	Regeneration Damper Actuator	A032	DA2-BKTP	H1-5	H1-12	2T3-2	10
14	Leaving Regeneration Relative Humidity Sensor (RHE 1% 40-60)	U142	RHS4	H1-5	H1-14	2T3-2	1
14	Leaving Regeneration Temperature Sensor (RHE)	U141	TPS4		H1-15		
14	Entering Supply Relative Humidity Sensor (RHO 1% 40-60)	U138	RHS3	H2-20	H2-21	2T3-2	1
14	Entering Supply Temperature Sensor (RHO)	U137	TPS3		H2-22		
14	CO ₂ S/S	B09	1K38		H2-23		
14	Supply Averaging Temperature Sensor (1K PT)	U12	ATS3		H2-24		
14	Leaving Supply Relative Humidity Sensor (RHS 1% 40-60)	U140	RHS1	H2-20	H2-25	2T3-2	1
14	Leaving Supply Temperature Sensor (RHS)	U139	TPS1		H2-26		
16	Dirty Filter Switch	U124	DPS2		H2-27		
16	Dirty Filter Switch	U110	DPS3		H2-28		
16	Minihelic Gauge		MG1				
16	Minihelic Gauge		MG2				
17	Low Limit Reset Circuit Relay	U15	2K9		77	2T3-1	2
17	Supply Fan Low Limit Circuit Relay		1K5	H2-29		2T3-1	1
17	Supply Fan S/S	B01	1K3		H2-30		
17	Supply Fan Speed	A03	VFD2		H2-31		
17	Air Flow Switch	U112	AFS2		H2-32		

PRELIMINARY

DRAWN BY: DATE: 11/19/2013 CHECKED BY: DATE: 11/19/2013	Trane CSOA-SCHEMATIC UNIT SIZE: 25 UNIT TAG: RTU-1
--	---

Product Data - Performance Climate Changer**Item: A2 Qty: 1 Tag(s): RTU-2****Unit level options**

Outdoor unit
Unit size 8
6in. integral base frame
UL listed unit
Single metal handle - ganged latches
312.75 Unit length
No seismic certification required

Controls and VFD/starter

Variable volume control system
UC600
Left

Warranty

Standard warranty only

Pipe cabinet section

No pipe cabinet

Air mixing section (Pos #1)

Air mixing section
Reduced length mixing box w/o filter
Door- right side

Fan section (Pos #2)

Fan section
Return fan
Door- right side
16.5in. direct-drive plenum, full width
Nine blades
1 Fan quantity
Plenum fan
Right side drive
NEMA premium compliant ODP
Voltage 460/3
2 hp
1800 RPM
Inverter balance with SGR
Flow meter
No conduit
VFD

Economizer section (Pos #3)

Economizer section
Return fan economizer section
Door right hand

Controls section (Pos #4)

Controls and starter/VFD
Return/exhaust section
Internal NEMA
Controller door- left
Ret/Exh high volt. door - right

Filter section (Pos #5)

Filter
Flat filter
Door- right side

Filter section (Pos #6)

Filter
Short Bag/Cartridge filter
Door- right side

Coil section (Pos #7)

Horizontal coil
Small
Galvanized drain pan
Right side - drain connection
Right side - coil supply

Service panel opposite connection side
Unit coil height
Heating coil
Single use coil
Type "5W" coil
1 row
80 fins per foot nominal fin spacing
Aluminum fins
Prima flo E (energy efficient)
.020" (0.508mm) copper tubes
5/8in. tube diameter (15.875 mm)
Galvanized steel coil casing
Turbulators

Access section (Pos #8)

Access/blank/turning section
Medium
Door- right side

Coil section (Pos #9)

Horizontal coil
Medium
Galvanized drain pan
Right side - drain connection
Right side - coil supply
Service panel opposite connection side
Unit coil height
Cooling coil
Single use coil
Type "UW" coil
6 rows
115 fins per foot nominal fin spacing
Aluminum fins
Delta flo H (Hi efficient)
.016" (0.406mm) copper tubes
1/2in. tube diameter (12.7 mm)
Stainless steel coil casing
Turbulators

Access section (Pos #10)

Access/blank/turning section
Medium


Fan section (Pos #11)

Fan section
Supply fan
Door- right side
Window- right side
16.5in. direct-drive plenum, full width
Nine blades
1 Fan quantity
Plenum fan
Right side drive
NEMA premium compliant ODP
Voltage 460/3
5 hp
1800 RPM
Inverter balance with SGR
Flow meter
No conduit
VFD

Controls section (Pos #12)

Starter/VFD only
Supply section
Internal NEMA
Door- left side
Supply high volt. door - right

Performance Data- Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2

	Job Name	Eyecare Medical Group
	User Name	(B16)Daniel Broderick
	Address	Portland ME

Performance Climate Changer	RTU-2
Quantity	1
Job Comments	

Unit level options Module Position: 0

<u>Actual airflow</u>	3350 cfm	<u>Installed weight</u>	4141.1 lb
<u>Unit elevation</u>	0.00 ft	<u>Rigging weight</u>	3726.8 lb
<u>Unit size</u>	8	<u>Roof curb weight</u>	349.6 lb
<u>Integral base frame</u>	6in. integral base frame	<u>Circuit number 1</u>	Supply fan + controls-LL
<u>Roof curb type</u>	Standard roof curb	<u>FLA circuit 1</u>	7.35 A
<u>Curb height</u>	14 in.	<u>MCA circuit 1</u>	10.90 A
<u>Shipping split type</u>	Factory splits	<u>MOP circuit 1</u>	19.10 A
<u>Product group</u>	Outdoor unit	<u>Fuse size circuit 1</u>	15.00 A
<u>UL listed unit</u>	UL listed unit	<u>Circuit number 2</u>	Return/booster fan motor(s)
<u>Hurricane certification</u>	No	<u>FLA circuit 2</u>	2.90 A
<u>High voltage location</u>	Right	<u>MCA circuit 2</u>	4.25 A
<u>Inner panel material - unit level</u>	All unit inner panels - galvanized	<u>MOP circuit 2</u>	7.65 A
<u>Paint</u>	Factory painted - slate gray	<u>Fuse size circuit 2</u>	15.00 A
<u>Door handle type - unit level</u>	Single metal handle - ganged latches	<u>Number of marine LED lights</u>	0 Lights
<u>Drain pan connection - unit level</u>	Right side drain pan connections	<u>First transformer circuit 1</u>	0.00 A
<u>Power wiring</u>	Field Provided (mtrs, lights, controls)	<u>Second transformer circuit 1</u>	0.65 A
<u>Length</u>	312.755 in	<u>First transformer circuit 2</u>	0.00 A
<u>Width</u>	50.500 in		

Controls and VFD/starter Module Position: 0

<u>NEMA SF</u>	VFD	<u>Factory controls package</u>	Variable volume
<u>VFD/Starter location supply fan</u>	Internal mounting	<u>Controller mounting</u>	Unit mounted
<u>Fan wheel balance SF</u>	Inverter balance with SGR	<u>Unit mounting controller location</u>	Left
<u>NEMA RF/EF</u>	VFD	<u>Controller type</u>	UC600
<u>VFD/Starter location ret/exh fan</u>	Internal mounting	<u>LCD screen and keypad</u>	No LCD
<u>Fan wheel balance RF/EF</u>	Inverter balance with SGR	<u>Duct static transducer</u>	Duct static transducer

Warranty Module Position: 0

<u>Warranty section</u>	Std. warranty only
-------------------------	--------------------

Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org

Air-handling performance data is certified in accordance with AHRI standard 430. Air handlers with plenum fans and vertical draw-thru air handlers where the coil is mounted immediately below the fan section are not covered under the scope of AHRI 430.

All weights and dimensions are approximate. Certified prints on request.

Performance Data- Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2

Air mixing section

Module Position: 1

<u>Section type</u>	Air mixing section	<u>Front opening type</u>	Full face opening
<u>Unit size</u>	8	<u>Opening 1 front - airflow</u>	3350 cfm
<u>Mixing section type</u>	reduced length without filter	<u>Left side opening type</u>	No opening
<u>Side access door</u>	Yes	<u>Right side opening type</u>	No opening
<u>Side access door location</u>	Right	<u>Opening 1 front - area</u>	10.09 sq ft
<u>Back opening type</u>	No opening	<u>Opening 1 bottom - area</u>	2.16 sq ft
<u>Top opening type</u>	No opening	<u>Opening 1 bottom - face velocity</u>	1553 ft/min
<u>Bottom opening type</u>	Bottom rectangular opening	<u>Opening 1 bottom - pressure drop</u>	0.000 in H2O
<u>Bottom air path type</u>	Return	<u>Opening 1 bottom total pressure drop</u>	0.000 in H2O
<u>Opening 1 bottom - airflow</u>	3350 cfm	<u>Total mixing section pressure drop</u>	0.000 in H2O

Fan section

Module Position: 2

Fan sec [2]-1			
<u>Section type</u>	Fan	<u>Fan airflow</u>	3350 cfm
<u>Fan application</u>	Return fan	<u>Overall ESP</u>	1.000 in H2O
<u>Unit size</u>	8	<u>Fan type</u>	Plenum
<u>Inlet location</u>	Back inlet	<u>Fan size and type</u>	16.5in. direct-drive plenum, full width
<u>Fan discharge</u>	Front top	<u>Access door guard</u>	Yes
<u>Side access door</u>	Yes	<u>Direct drive fan blades</u>	Nine
<u>Side access door location</u>	Right	<u>Fan quantity</u>	1.00 Each
<u>Drive location</u>	Right side drive	<u>Total brake horsepower</u>	1.603 hp
<u>Motor horsepower per fan</u>	2 hp	<u>Total static pressure</u>	1.868 in H2O
<u>Motor class</u>	NEMA premium compliant	<u>Speed</u>	1889 rpm
<u>Motor voltage</u>	460/3	<u>Motor hertz</u>	64.00 Hz
<u>Cycle</u>	60 cycles/sec	<u>Fan module pressure drop</u>	1.017 in H2O
<u>Drive service factor</u>	Direct drive	<u>Section length</u>	44.000 in
<u>Motor RPM</u>	1800	<u>Section weight</u>	651.1 lb
<u>Fan discharge temp sensor</u>	Fan mounted	<u>Starter/VFD - factory mounted & wired</u>	VFD
<u>Airflow switch</u>	Yes	<u>Fan wheel balance</u>	Inverter balance with SGR
<u>Flow meter</u>	Flow meter	<u>Discharge 1 front - pressure drop</u>	0.017 in H2O

Controls section

Module Position: 4

<u>Section type</u>	Controls and starter/VFD	<u>Motor voltage RF/EF</u>	460/3
<u>Unit size</u>	Unit size 8	<u>Motor RPM RF/EF</u>	1800
<u>Starter/VFD</u>	Return/exhaust section	<u>Section length</u>	24.500 in
<u>Side access door</u>	No	<u>Section width</u>	50.500 in
<u>Controller door</u>	Left	<u>Section height</u>	41.250 in
<u>Ret/Exh fan high voltage door</u>	Right	<u>Section weight</u>	339.0 lb
<u>Design sequence</u>	B	<u>NEMA application type</u>	Internal NEMA
<u>NEMA RF/EF</u>	VFD	<u>Low volt. door qty</u>	1 low volt. door
<u>Fan wheel balance RF/EF</u>	Inverter balance	<u>High volt. door qty</u>	1 high volt. door
<u>Motor hp RF/EF</u>	2 hp		

Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard.

Certified units may be found in the AHRI Directory at www.ahridirectory.org

Air-handling performance data is certified in accordance with AHRI standard 430. Air handlers with plenum fans and vertical draw-thru air handlers where the coil is mounted immediately below the fan section are not covered under the scope of AHRI 430.

All weights and dimensions are approximate. Certified prints on request.

Performance Data- Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2

Filter section

Module Position:

5

<u>Section type</u>	Filter	<u>Prefilter filter type</u>	No prefilter
<u>Unit size</u>	8	<u>Dirty filter status</u>	Dirty filter switch
<u>SDU Outside air section</u>	No	<u>Filter airflow</u>	3350 cfm
<u>Filter loading</u>	Side load filters	<u>Filter condition</u>	Mid-life
<u>Filter type</u>	Flat filter	<u>Filter area</u>	7.33 sq ft
<u>Filter frame</u>	4in. filter frame	<u>Filter face velocity</u>	457 ft/min
<u>Access door</u>	Yes	<u>Filter pressure drop</u>	0.583 in H2O
<u>Access door location</u>	Right	<u>Filter section pressure drop</u>	0.583 in H2O
<u>Door swing direction</u>	Outward swing	<u>Section length</u>	14.000 in
<u>Primary filter type 1 - run set</u>	Pleated media - MERV 8	<u>Section weight</u>	132.0 lb
<u>Extra sets of filter type 1</u>	1 extra set		

Filter section

Module Position:

6

<u>Section type</u>	Filter	<u>Prefilter filter type</u>	No prefilter
<u>Unit size</u>	8	<u>Dirty filter status</u>	Dirty filter switch
<u>SDU Outside air section</u>	No	<u>Filter airflow</u>	3350 cfm
<u>Filter loading</u>	Side load filters	<u>Filter condition</u>	Clean
<u>Filter type</u>	Short Bag/Cartridge filter	<u>Filter area</u>	8.00 sq ft
<u>Filter frame</u>	Bag/cartridge filter frame	<u>Filter face velocity</u>	419 ft/min
<u>Access door</u>	Yes	<u>Filter pressure drop</u>	0.277 in H2O
<u>Access door location</u>	Right	<u>Filter section pressure drop</u>	0.277 in H2O
<u>Door swing direction</u>	Outward swing	<u>Section length</u>	26.500 in
<u>Primary filter type 1 - run set</u>	12in. cartridge - 95% eff - MERV 15	<u>Section weight</u>	264.7 lb
<u>Extra sets of filter type 1</u>	1 extra set		

Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard.

Certified units may be found in the AHRI Directory at www.ahridirectory.org

Air-handling performance data is certified in accordance with AHRI standard 430. Air handlers with plenum fans and vertical draw-thru air handlers where the coil is mounted immediately below the fan section are not covered under the scope of AHRI 430.

All weights and dimensions are approximate. Certified prints on request.

Performance Data- Performance Climate Changer

Item: A2 Qty: 1 Tag(s): RTU-2

Coil section

Module Position:

7

<u>Coil se [6]-1</u>			
<u>Section type</u>	Horizontal coil	<u>Fluid type</u>	Water
<u>Unit size</u>	8	<u>Coil fluid percentage</u>	100.00 %
<u>Section size</u>	Small	<u>Averaging temperature sensor</u>	Leaving air avg temp sensor
<u>Access door</u>	No	<u>Low limit switch</u>	Leaving air
<u>Coil application</u>	Heating coil	<u>Coil type</u>	5W
<u>Changeover coil</u>	No	<u>Rows</u>	1 row
<u>System type</u>	Hot water	<u>Fin type</u>	Prima flo E (energy efficient)
<u>Coil supply/cabinet side</u>	Right	<u>Fin material</u>	Aluminum fins
<u>Service panel</u>	Opposite coil connection side	<u>Tube diameter</u>	5/8in. tube diameter (15.875 mm)
<u>Coil casing</u>	Galvanized	<u>Tube mat/wall thickness</u>	.020" (0.508mm) copper tubes
<u>Coil height</u>	Unit coil height	<u>Turbulators</u>	Yes
<u>Extended drain and vent</u>	Holes only	<u>Corrosion resistant coating</u>	None
<u>Drain pan</u>	Galvanized	<u>Total cap top or single coil</u>	64.27 MBh
<u>Drain connection location</u>	Right	<u>Coil face velocity</u>	458 ft/min
<u>Apply AHRI ranges</u>	Yes	<u>Air pressure drop</u>	0.058 in H2O
<u>Coil performance airflow</u>	3350 cfm	<u>J trap dimension</u>	2.341 in
<u>Unit airflow</u>	3350 cfm	<u>H trap dimension</u>	4.681 in
<u>Entering dry bulb</u>	41.00 F	<u>Leaving fluid temperature</u>	110.00 F
<u>Leaving dry bulb</u>	58.69 F	<u>Fluid pressure drop</u>	0.45 ft H2O
<u>Total capacity</u>	64.27 MBh	<u>Fluid volume</u>	1.57 gal
<u>Nominal fin spacing</u>	80 Per Foot	<u>Fluid velocity</u>	0.53 ft/s
<u>Entering fluid temperature</u>	140.00 F	<u>Coil rigging weight</u>	43.5 lb
<u>Fluid temperature drop</u>	30.00 F	<u>Coil section pressure drop</u>	0.058 in H2O
<u>Standard fluid flow rate</u>	4.29 gpm	<u>Section length</u>	10.000 in
<u>Coil fouling factor</u>	0.00050 hr-sq ft-deg F/Btu	<u>Section weight</u>	159.3 lb

Access section

Module Position:

8

<u>Section type</u>	Access/blank/turning	<u>Side access door location</u>	Right
<u>Unit size</u>	8	<u>Door swing direction</u>	Outward swing
<u>Section size</u>	Medium	<u>Section length</u>	14.000 in
<u>Side access door</u>	Yes	<u>Section weight</u>	105.3 lb

Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard.

Certified units may be found in the AHRI Directory at www.ahridirectory.org

Air-handling performance data is certified in accordance with AHRI standard 430. Air handlers with plenum fans and vertical draw-thru air handlers where the coil is mounted immediately below the fan section are not covered under the scope of AHRI 430.

All weights and dimensions are approximate. Certified prints on request.

Performance Data- Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2

Coil section

Module Position:

9

<u>Coil se [8]-1</u>			
<u>Section type</u>	Horizontal coil	<u>Fluid temperature rise</u>	10.00 F
<u>Unit size</u>	8	<u>Standard fluid flow rate</u>	22.28 gpm
<u>Section size</u>	Medium	<u>Coil fouling factor</u>	0.00000 hr-sq ft-deg F/Btu
<u>Access door</u>	No	<u>Fluid type</u>	Propylene glycol
<u>Coil application</u>	Cooling coil	<u>Coil fluid percentage</u>	30.00 %
<u>Changeover coil</u>	No	<u>Coil type</u>	UW
<u>System type</u>	Chilled water	<u>Rows</u>	6 rows
<u>Coil supply/cabinet side</u>	Right	<u>Fin type</u>	Delta flo H (Hi efficient)
<u>Service panel</u>	Opposite coil connection side	<u>Fin material</u>	Aluminum fins
<u>Coil casing</u>	Stainless steel	<u>Tube diameter</u>	1/2in. tube diameter (12.7 mm)
<u>Coil height</u>	Unit coil height	<u>Tube mat/wall thickness</u>	.016" (0.406mm) copper tubes
<u>Extended drain and vent</u>	Holes only	<u>Turbulators</u>	Yes
<u>Drain pan</u>	Galvanized	<u>Corrosion resistant coating</u>	None
<u>Drain connection location</u>	Right	<u>Coil face velocity</u>	419 ft/min
<u>Apply AHRI ranges</u>	No	<u>Air pressure drop</u>	0.533 in H2O
<u>Coil performance airflow</u>	3350 cfm	<u>J trap dimension</u>	2.607 in
<u>Unit airflow</u>	3350 cfm	<u>H trap dimension</u>	5.214 in
<u>Entering dry bulb</u>	75.90 F	<u>Leaving fluid temperature</u>	55.00 F
<u>Entering wet bulb</u>	64.30 F	<u>Fluid pressure drop</u>	3.67 ft H2O
<u>Leaving dry bulb</u>	54.24 F	<u>Fluid volume</u>	5.57 gal
<u>Leaving wet bulb</u>	53.99 F	<u>Fluid velocity</u>	1.74 ft/s
<u>Total capacity</u>	103.00 MBh	<u>Coil rigging weight</u>	135.1 lb
<u>Sensible capacity</u>	79.83 MBh	<u>Coil section pressure drop</u>	0.533 in H2O
<u>Nominal fin spacing</u>	115 Per Foot	<u>Section length</u>	14.000 in
<u>Entering fluid temperature</u>	45.00 F	<u>Section weight</u>	312.1 lb

Access section

Module Position:

10

<u>Section type</u>	Access/blank/turning	<u>Side access door</u>	No
<u>Unit size</u>	8	<u>Section length</u>	14.000 in
<u>Section size</u>	Medium	<u>Section weight</u>	113.3 lb

Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard.

Certified units may be found in the AHRI Directory at www.ahridirectory.org

Air-handling performance data is certified in accordance with AHRI standard 430. Air handlers with plenum fans and vertical draw-thru air handlers where the coil is mounted immediately below the fan section are not covered under the scope of AHRI 430.

All weights and dimensions are approximate. Certified prints on request.

Performance Data- Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2

Fan section

Module Position: 11

<u>Fan se [10]-1</u>			
<u>Section type</u>	Fan	<u>Fan airflow</u>	3350 cfm
<u>Fan application</u>	Supply fan	<u>Overall ESP</u>	2.000 in H2O
<u>Unit size</u>	8	<u>Fan type</u>	Plenum
<u>Inlet location</u>	Back inlet	<u>Fan size and type</u>	16.5in. direct-drive plenum, full width
<u>Fan discharge</u>	Front top	<u>Access door guard</u>	Yes
<u>Side access door</u>	Yes	<u>Direct drive fan blades</u>	Nine
<u>Side access door location</u>	Right	<u>Fan quantity</u>	1.00 Each
<u>Side window</u>	Right	<u>Total brake horsepower</u>	3.063 hp
<u>Drive location</u>	Right side drive	<u>Total static pressure</u>	3.940 in H2O
<u>Motor horsepower per fan</u>	5 hp	<u>Speed</u>	2338 rpm
<u>Motor class</u>	NEMA premium compliant	<u>Motor hertz</u>	79.00 Hz
	ODP	<u>Fan module pressure drop</u>	2.017 in H2O
<u>Motor voltage</u>	460/3	<u>Section length</u>	44.000 in
<u>Cycle</u>	60 cycles/sec	<u>Section weight</u>	679.1 lb
<u>Drive service factor</u>	Direct drive	<u>Starter/VFD - factory mounted & wired</u>	VFD
<u>Motor RPM</u>	1800	<u>Fan wheel balance</u>	Inverter balance with SGR
<u>Fan discharge temp sensor</u>	Fan mounted	<u>Discharge 1 front - pressure drop</u>	0.017 in H2O
<u>Airflow switch</u>	Yes		
<u>Flow meter</u>	Flow meter		

Controls section

Module Position: 12

<u>Section type</u>	Starter/VFD only	<u>Motor hp SF</u>	5 hp
<u>Unit size</u>	Unit size 8	<u>Motor voltage SF</u>	460/3
<u>Starter/VFD</u>	Supply section	<u>Motor RPM SF</u>	1800
<u>Side access door</u>	Yes	<u>Section length</u>	36.000 in
<u>Side access door location</u>	Left	<u>Section width</u>	50.500 in
<u>Access door swing direction</u>	Outward swing	<u>Section height</u>	41.250 in
<u>Supply fan high voltage door</u>	Right	<u>Section weight</u>	400.5 lb
<u>Design sequence</u>	B	<u>NEMA application type</u>	Internal NEMA
<u>NEMA SF</u>	VFD	<u>Side access door quantity</u>	1 door
<u>Fan wheel balance SF</u>	Inverter balance	<u>High volt. door qty</u>	1 high volt. door

Unless otherwise noted in the product report, performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard.

Certified units may be found in the AHRI Directory at www.ahridirectory.org

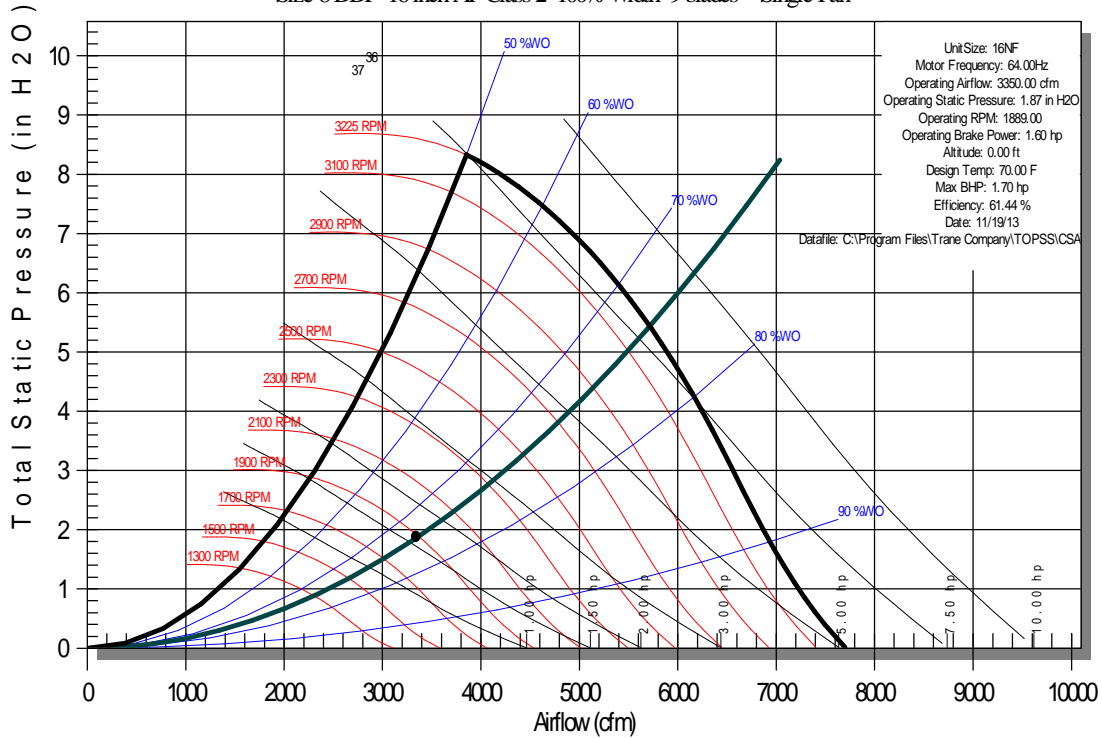
Air-handling performance data is certified in accordance with AHRI standard 430. Air handlers with plenum fans and vertical draw-thru air handlers where the coil is mounted immediately below the fan section are not covered under the scope of AHRI 430.

All weights and dimensions are approximate. Certified prints on request.

Fan Curve - Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2

Return

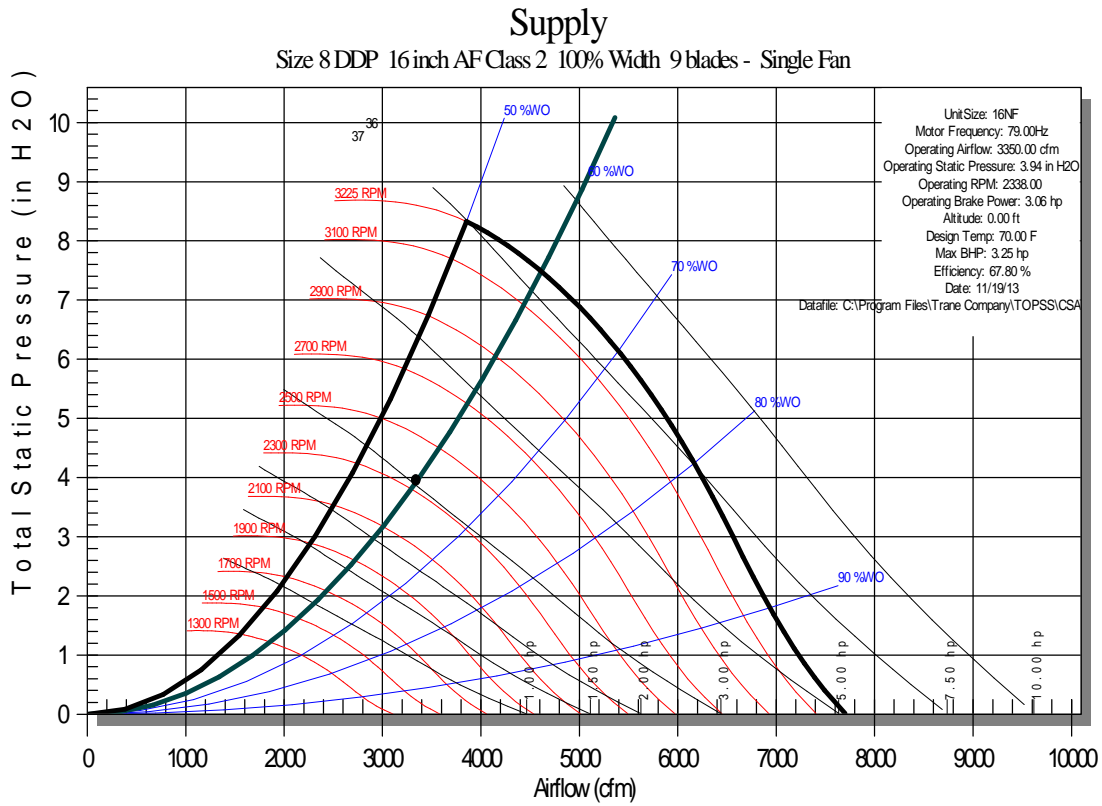
Size 8 DDP 16 inch AF Class 2 100% Width 9 blades - Single Fan



Size 8 DDP 16 inch AF Class 2 100% Width 9 blades

	63-hz	125-hz	250-hz	500-hz	1 kHz	2 kHz	4 kHz	8 kHz
Discharge	64	65	76	71	69	80	67	56
Inlet + Casing	88	85	90	87	80	84	84	76
Casing	73	68	75	72	72	63	55	50
Ducted Inlet	79	76	84	80	72	74	72	71

Fan Curve - Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2



Size 8 DDP 16 inch AF Class 2 100% Width 9 blades

	63-hz	125-hz	250-hz	500-hz	1 kHz	2 kHz	4 kHz	8 kHz
Discharge	79	83	85	93	89	90	83	81
Inlet + Casing	91	93	84	89	78	82	80	74
Casing	79	78	77	84	79	68	60	60
Ducted Inlet	75	79	76	79	66	73	64	57

Acoustics - Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2

Overall Unit Acoustics

	63Hz	125Hz	250Hz	500Hz	1 kHz	2 kHz	4 kHz	8 kHz
Discharge	79	83	85	93	89	90	83	81
Inlet + Casing	92	93	90	91	82	86	85	78
Casing	79	78	79	84	79	69	61	60
Ducted Inlet	80	80	84	82	72	76	72	71

As-Built - Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2

- 1 Plenum fan - 16.5n. direct-drive plenum, full width S supply fan 5 hp 460/3
- 2 Cooling coil - 6 rows Coil type UVW
- 3 Heating coil - 1 row Coil type SW
- 4 Hood left
- 5 Return air damper left
- 6 Hood right
- 7 Plenum fan - 16.5n. direct-drive plenum, full width R return fan 2 hp 460/3
- 8 1\" N.P.T.E
- 9 Opening bottom 24,000 x 16,000
- 10 Cartridge filters - 12in. cartridge - 95% eff - MERV 15
- 11 Flat filters - Pleated media - MERV 8
- 12 Opening bottom 8,750 x 35,500

Doors:
 20 width x 31 height
 19 width x 31 height
 10 width x 31 height
 22 width x 31 height
 17 width x 31 height

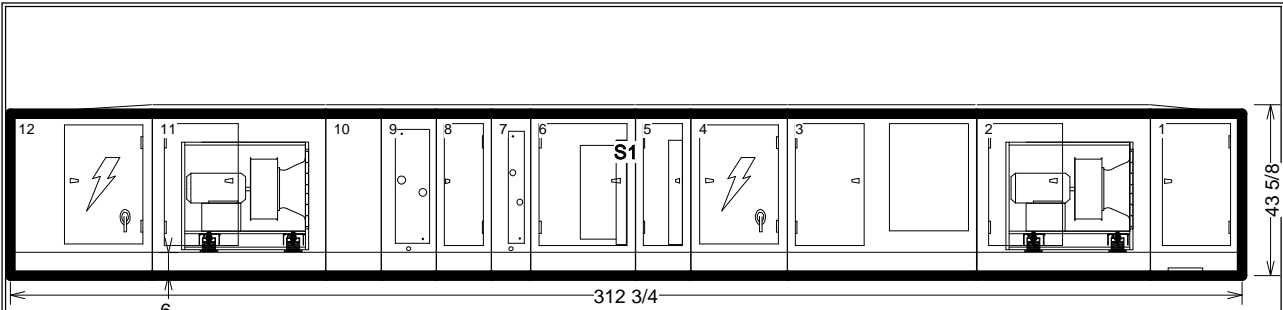
For maneuvering purposes, include 1.50 inches to each side with height for overlapping panel flange. Flange will not add to overall installed unit length shown.

OFFERING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTE A REAFFIRMATION OF THESE DIMENSIONS / NOT TO SCALE

Unit size: 8	Job Name:	Heat/Cooling: 2in Double Wall
Product group: Outdoor unit	Actual airflow: 3350 cfm	Proposed Number:
Manufacturer Name: CR. Integrated Access Frame	Sales Office:	Enging Installed Weight: 3720.8 lb / 4141.1 lb
Paint: Factory painted - slate grey		

As-Built - Performance Climate Changer

Item: A2 Qty: 1 Tag(s): RTU-2

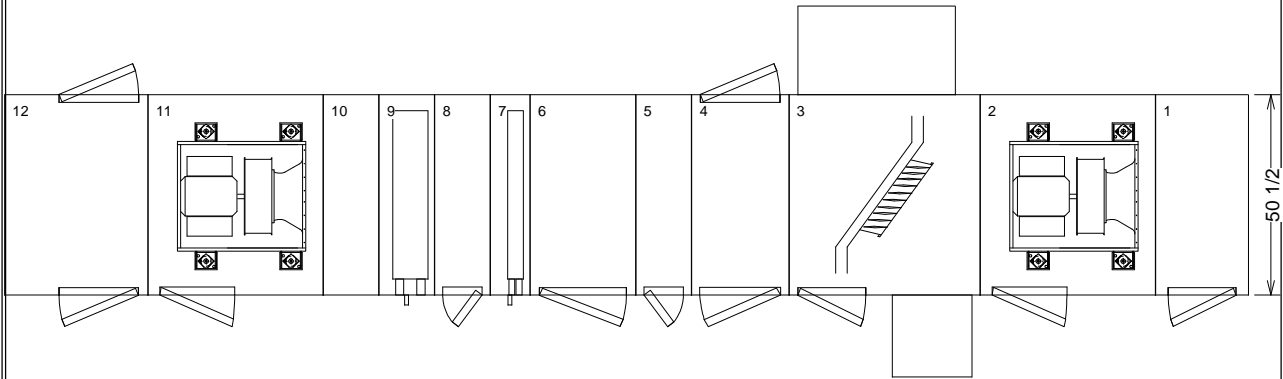


Overall Elevation View: Right - Shipping splits indicated by bold outline. - Measurements in inches

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


Pos #	Module	Length	Weight
1	Air mixing section	23 3/8	208.94
2	Fan section	44 1/8	651.09
3	Economizer section	48 1/8	426.06
4	Controls section	24 1/2	338.96
5	Filter section	14 1/8	132.02
6	Filter section	26 5/8	264.73
7	Coil section	10	159.28
8	Access section	14	105.35
9	Coil section	14	312.15
10	Access section	14 1/8	113.32
11	Fan section	44 1/8	679.09
12	Controls section	36	400.51
	Roof Curb		349.64

Installed Unit Weight 4141.13 lb



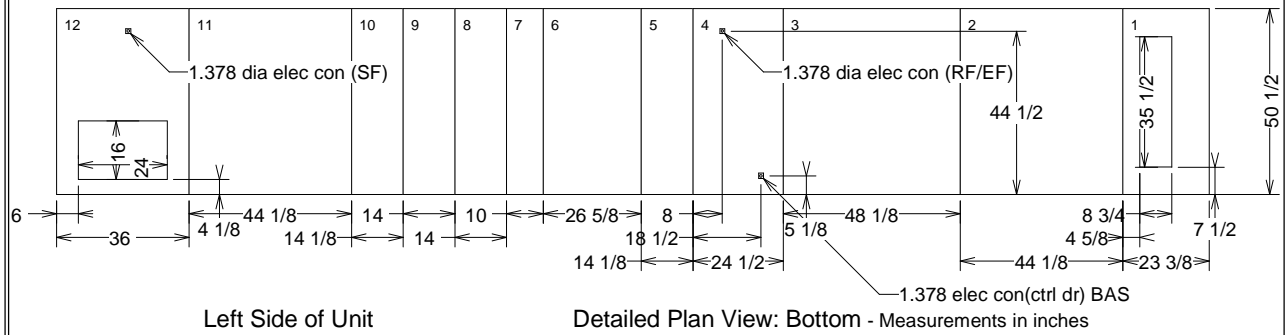
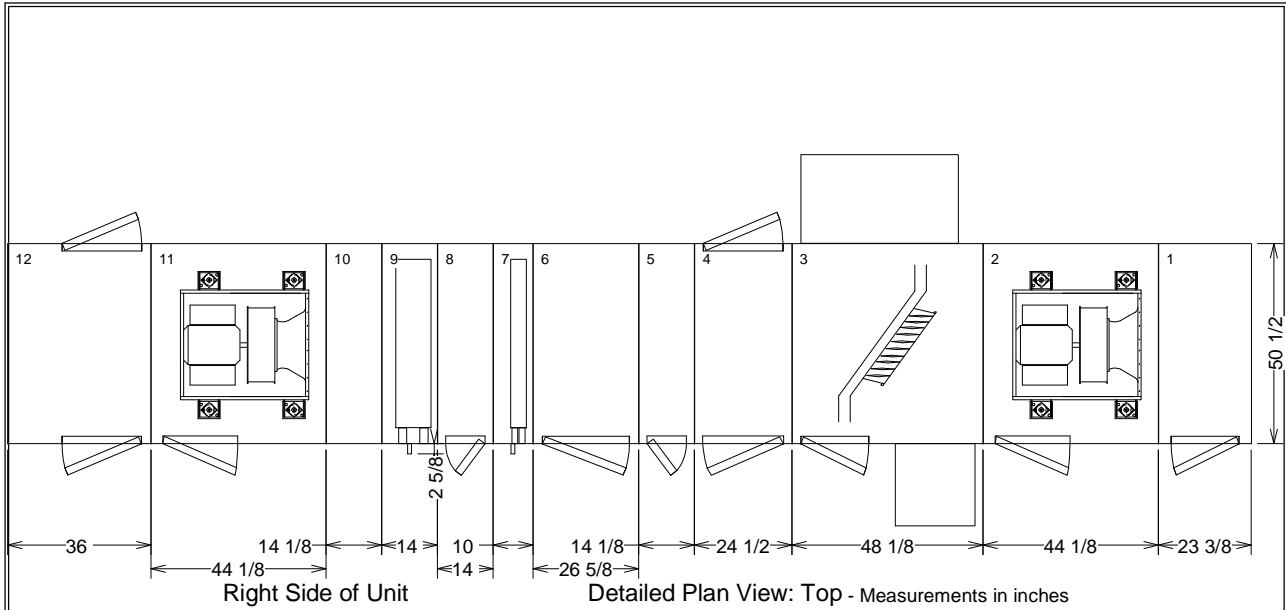
Basic Overall Plan View: Top - Measurements in inches

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


Unit size: 8	Job Name:	Unit Casing: 2in Double Wall	 Performance Climate Changer™ Air Handlers
Product group: Outdoor unit	Actual airflow: 3350 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame	Sales Office:	Rigging/Installed Weight: 3726.6 lb/ 4141.1 lb	
Paint: Factory painted - slate gray			

As-Built - Performance Climate Changer

Item: A2 Qty: 1 Tag(s): RTU-2

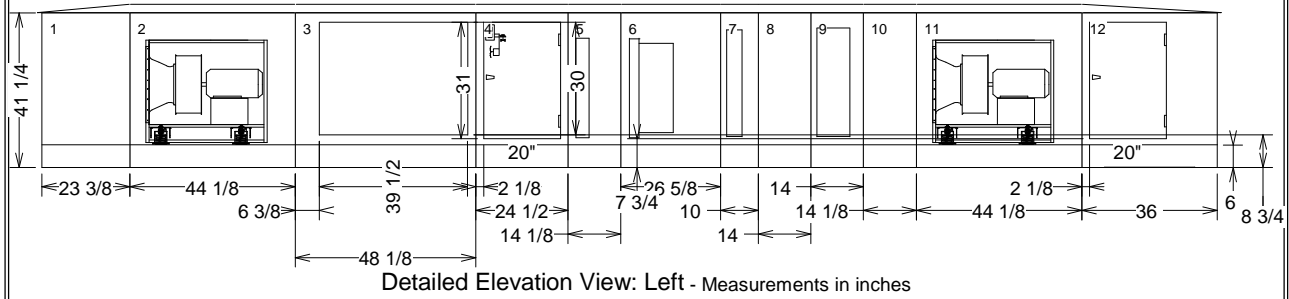
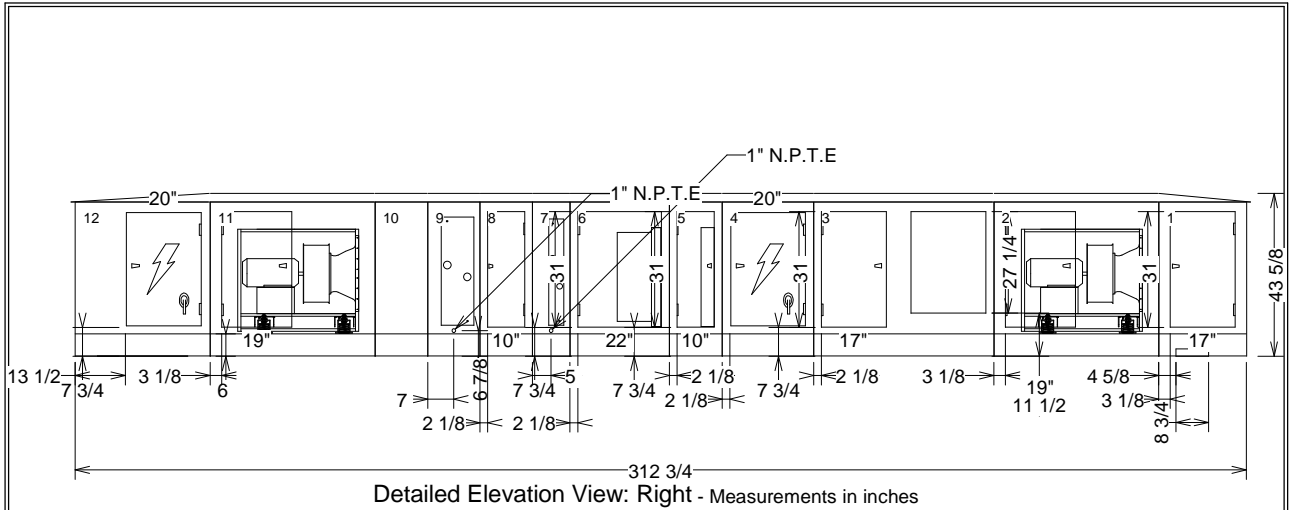


OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE


Unit size: 8	Job Name:	Unit Casing: 2in Double Wall	 Performance Climate Changer™ Air Handlers
Product group: Outdoor unit	Actual airflow: 3350 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame	Sales Office:	Rigging/Installed Weight: 3726.6 lb/ 4141.1 lb	
Paint: Factory painted - slate gray			

As-Built - Performance Climate Changer

Item: A2 Qty: 1 Tag(s): RTU-2

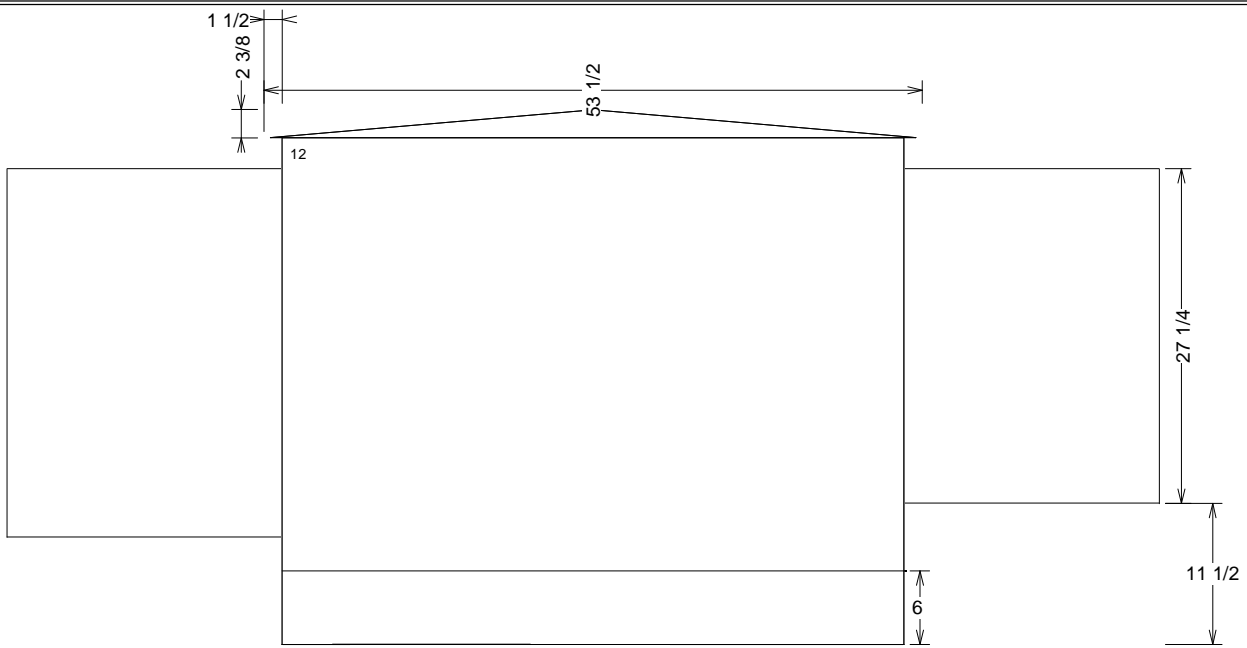


OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

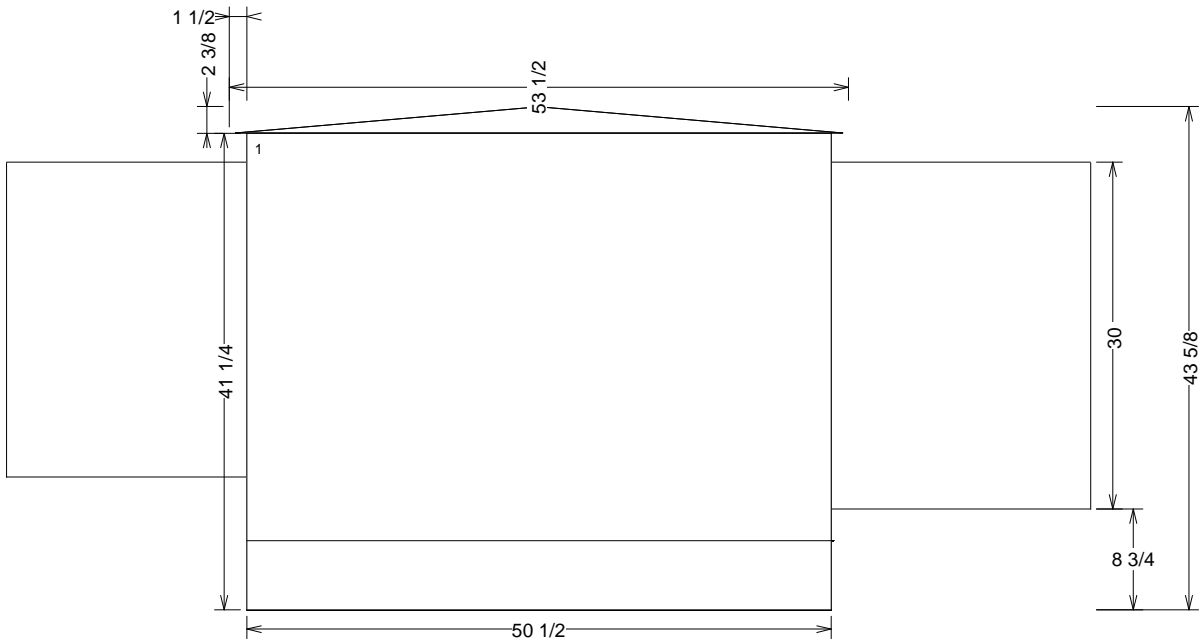
Unit size: 8	Job Name:	Unit Casing: 2in Double Wall	 TRANE Performance Climate Changer™ Air Handlers
Product group: Outdoor unit	Actual airflow: 3350 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame	Sales Office:	Rigging/Installed Weight: 3726.6 lb/ 4141.1 lb	
Paint: Factory painted - slate gray			

As-Built - Performance Climate Changer

Item: A2 Qty: 1 Tag(s): RTU-2




Detailed Elevation View: Front - Measurements in inches

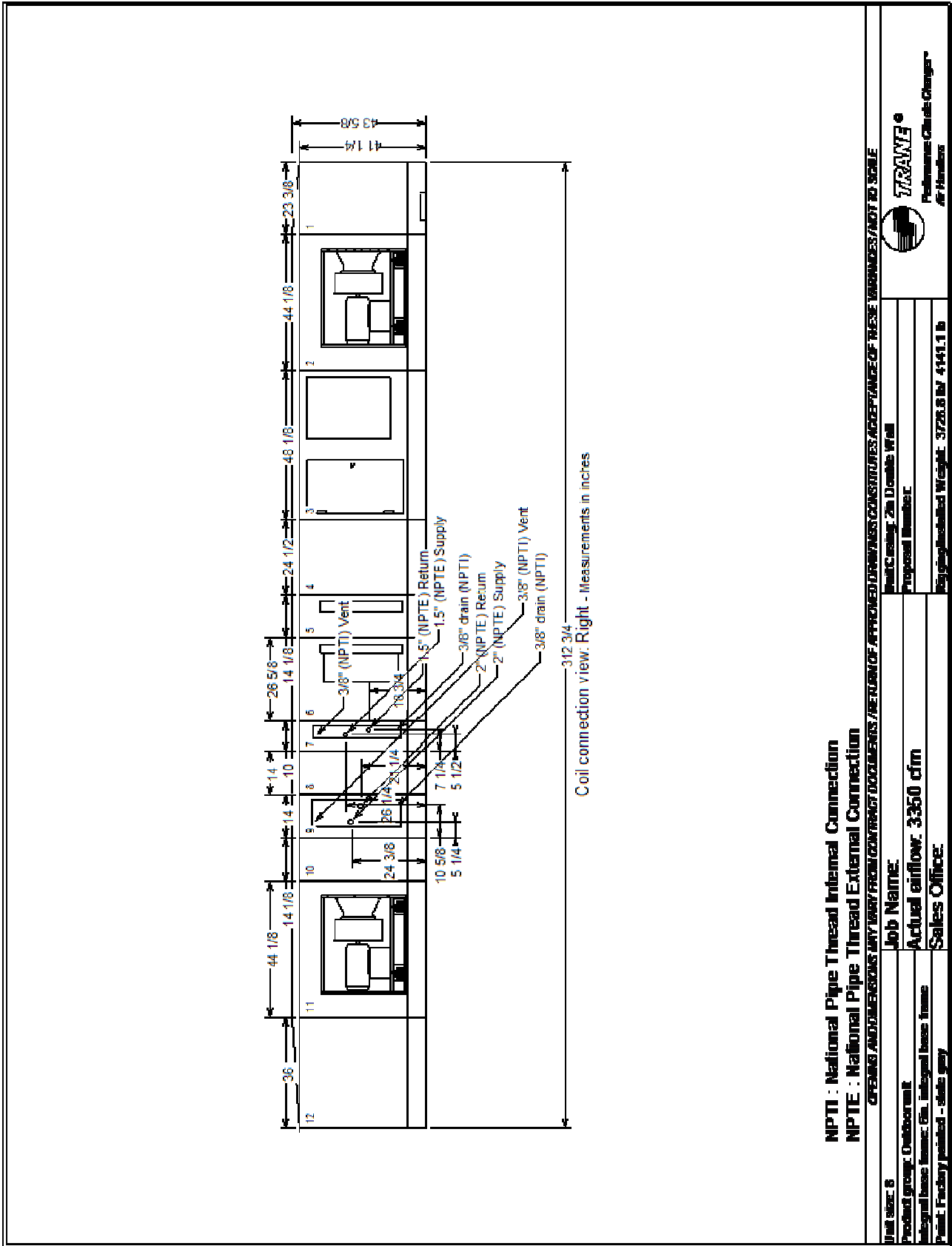


Detailed Elevation View: Back - Measurements in inches

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

Unit size: 8	Job Name:	Unit Casing: 2in Double Wall	 TRANE Performance Climate Changer™ Air Handlers
Product group: Outdoor unit	Actual airflow: 3350 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame	Sales Office:	Rigging/Installed Weight: 3726.6 lb/ 4141.1 lb	
Paint: Factory painted - slate gray			

As-Built - Performance Climate Changer
 Item: A2 Qty: 1 Tag(s): RTU-2



Unit size: 8
 Product group: Outdoor unit
 Model name: 08L Integrated base frame
 Paint: Factory painted - slate grey

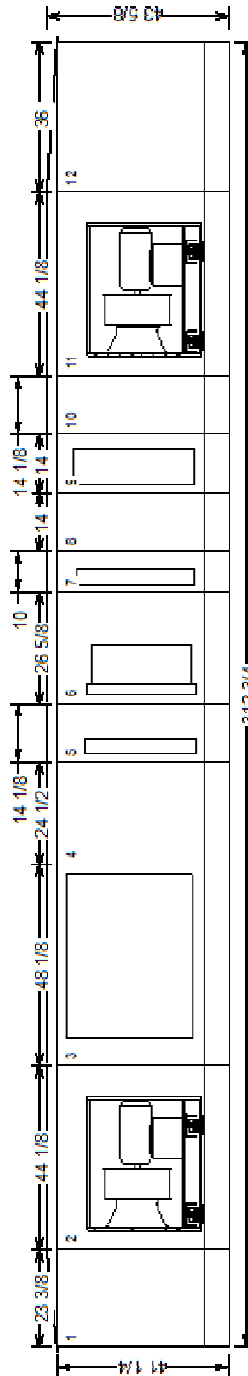
Job Name:
 Actual airflow: 3350 cfm
 Sales Office:

Unit size: 8
 Product group: Outdoor unit
 Model name: 08L Integrated base frame
 Paint: Factory painted - slate grey

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

CREATING AND DIMENSIONS ANY WAY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DIMENSIONS CONSTITUTE ACCEPTANCE OF THESE DIMENSIONS AND NOT TO SCALE


As-Built - Performance Climate Changer
 Item: A2 Qty: 1 Tag(s): RTU-2



Coil connection view: Left - Measurements in inches

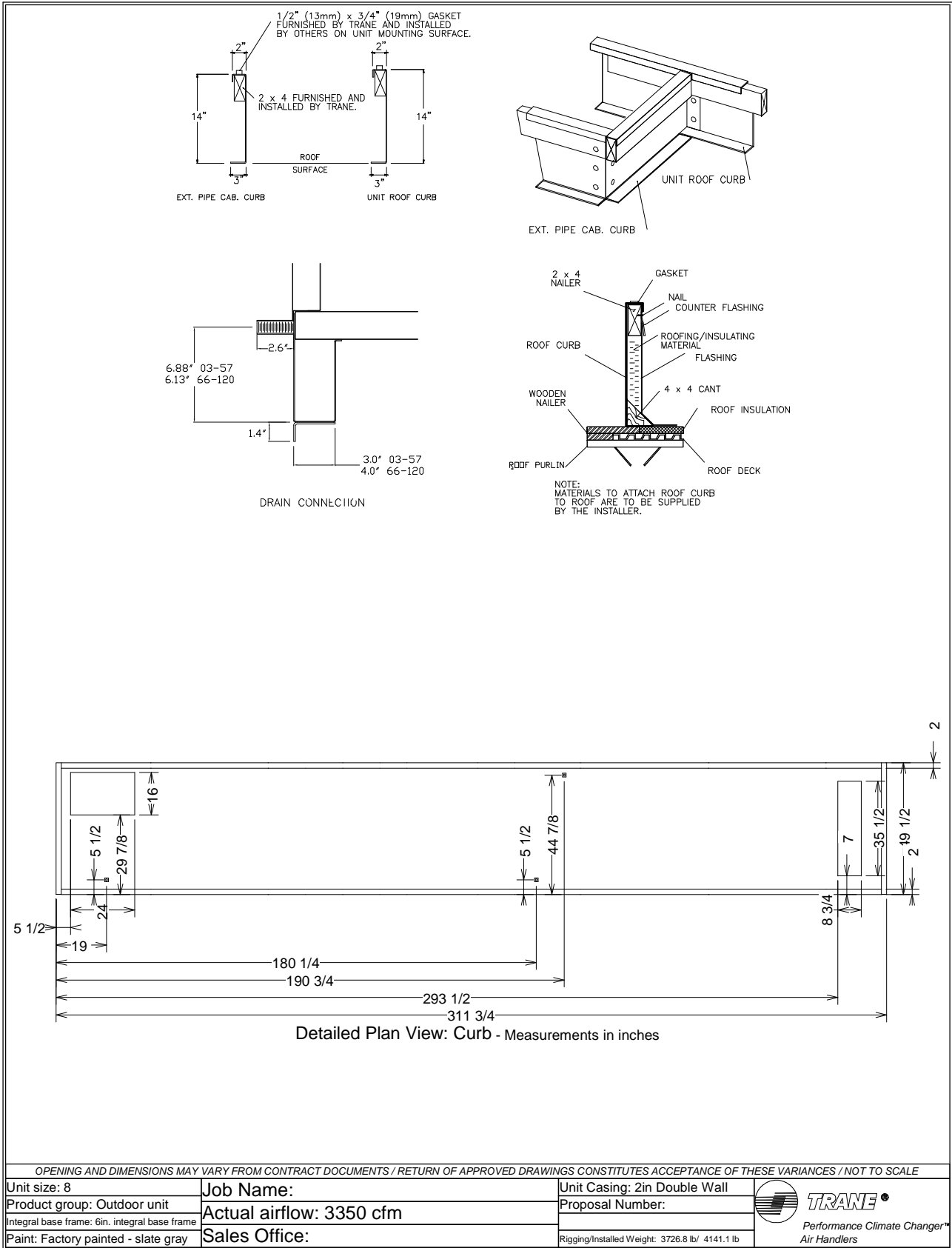
NPTI : National Pipe Thread Internal Connection
NPTE : National Pipe Thread External Connection

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

Unit size: 8	Job Name:	 TRANE Performance Climate Changer Air Handlers
Product group: Outdoor unit	Proposed Number:	
Manufacturer name: Oil, integral base, frame	Actual airflow: 3350 cfm	
Paint: Factory painted - slate grey	Sales Office:	
	Eng. Part Number: 3720.8	BY 4141.1 b

As-Built - Performance Climate Changer

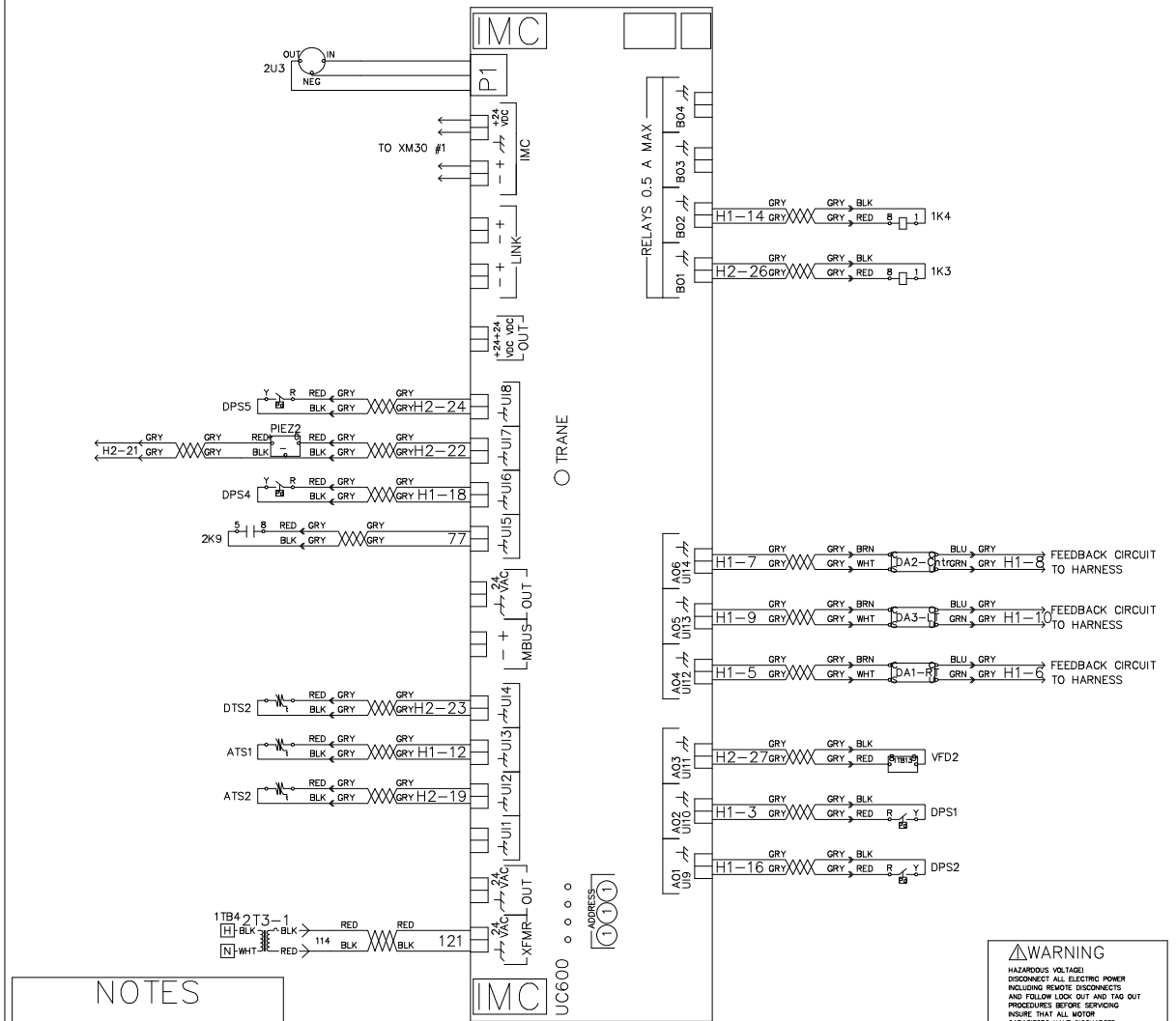
Item: A2 Qty: 1 Tag(s): RTU-2



As-Built - Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2

CONTROLLER DETAIL 1 (MOUNTED IN MC05)

DEVICE NAME	DEVICE LOCATION
1	HIGH VOLTAGE PANEL
2	LOW VOLTAGE PANEL
5	CUSTOMER INSTALLED



NOTES

UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25C (77F), AT ATMOSPHERIC PRESSURE, AT 50% RELATIVE HUMIDITY, WITH ALL UTILITIES TURNED OFF, AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.

DASHED LINES INDICATE FIELD WIRING BY OTHERS. SOLID LINES INDICATE WIRING BY TRANE.

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

COMMUNICATION WIRE MUST BE TRANE PART NO.400-20-28 OR [EQUIVALENT]-MAXIMUM FOOT AGGREGATE RUN. CAUTION DO NOT RUN POWER IN THE SAME CONDUIT/WIRE BUNDLE WITH COMMUNICATION LINK.

CONTROL RELAY(S) CONTACTS: SILVER CASIUM OXIDE RATED AT 1/HP 5A 120VAC AND 1/3 HP 5A 240VAC.

MP OR AH CONTROLLER OUTPUT RELAYS ARE RATED 24V AC/DC, 1A, 24V(A) PILOT DUTY.

EXTERNAL RELAY REQUIRED FOR HIGHER VOLTAGE CIRCUITS.

DRAWN BY: Unknown	Trane	CSOA-SCHMATIC UNIT SIZE: 8 UNIT TAG:
DATE: 11/19/2013		
SOFTWARE VERSION: 1.3.9		
DRAWING VERSION		

CAUTION
 USE COPPER CONDUCTORS ONLY. WHT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS. FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

ATTENTION
 UTILISER UNIQUEMENT CONDUCTEURS DE COPREI. LES TERMINALES DE LA UNIDAD NO ESTAN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES. NO SEGUIR LAS INSTRUCCIONES ANTERIORES PUEDE PROVOCAR DAÑOS EN EL EQUIPO.

PRECAUCIÓN

ADVERTENCIA

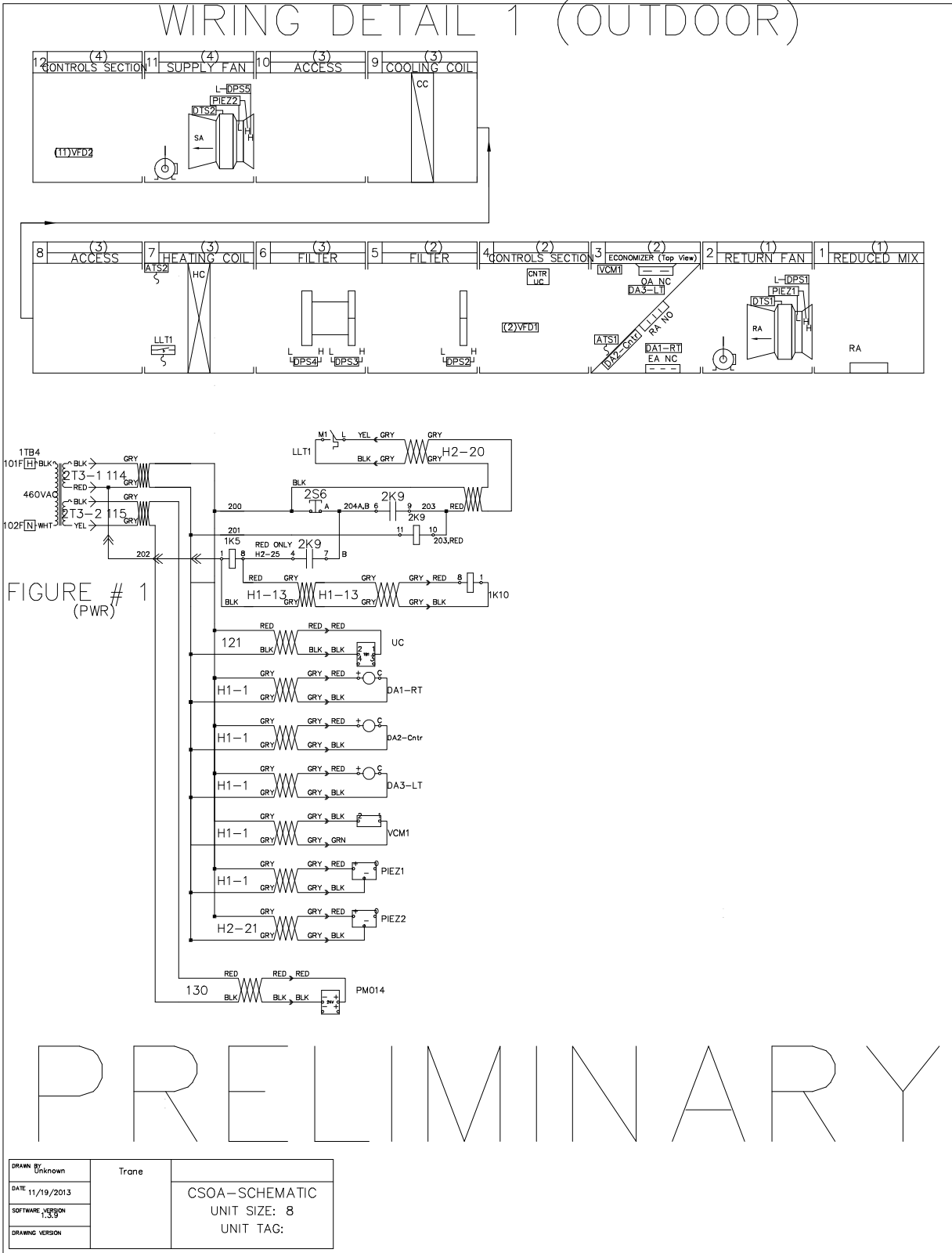
WARNING
 HAZARDOUS VOLTAGE! DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS AND FOLLOW LOCK OUT AND TAG OUT PROCEDURES BEFORE SERVING. INSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED STORED VOLTAGE. UNITS WITH VARIABLE SPEED DRIVE, REFER TO DRIVE INSTRUCTIONS FOR CAPACITOR DISCHARGE. FAILURE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

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

ADVERTENCIA
 VOLTAJE PELIGROSO. DESCONECTE TODA LA ENERGIA ELECTRICA INCLUIDO LAS DESCONEXIONES REMOTAS Y SIGA LOS PROCEDIMIENTOS DE CERRRE Y ETIQUETADO ANTES DE PROCEDER AL SERVICIO. ASIGURESE DE QUE TODOS LOS CONDENSADORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. PARA LAS UNIDADES CON E.E.E DE DRECCION DE VELOCIDAD VARIABLE, CONSULTE LAS INSTRUCCIONES PARA LA DESCARGA DEL CONDENSADOR. EL NO REALIZAR LO ANTERIORMENTE INDICADO, PODRIA CAUSAR LA MUERTE O SERIAS LESIONES PERSONALES.

As-Built - Performance Climate Changer
 Item: A2 Qty: 1 Tag(s): RTU-2

WIRING DETAIL 1 (OUTDOOR)

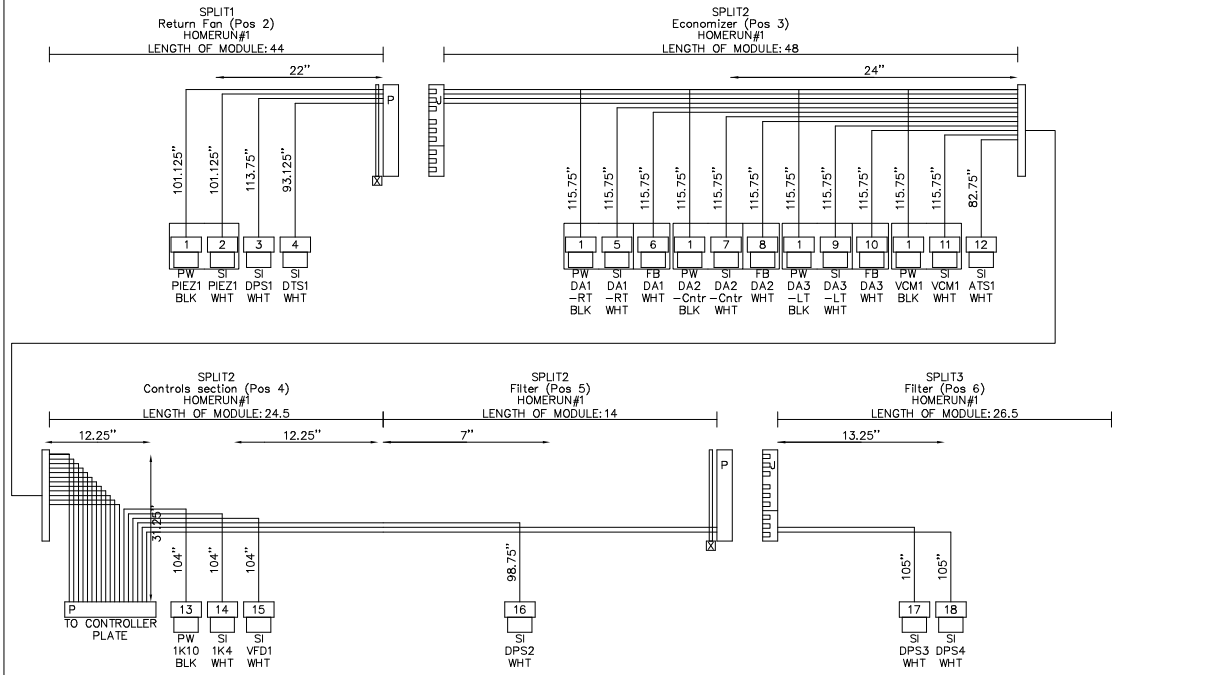


PRELIMINARY

DRAWN BY: Unknown	Trane	CSOA-SCHEMATIC UNIT SIZE: 8 UNIT TAG:
DATE: 11/19/2013		
SOFTWARE VERSION: 1.3.9		
DRAWING VERSION:		

As-Built - Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2

RACEWAY HOMERUN #1 DETAIL

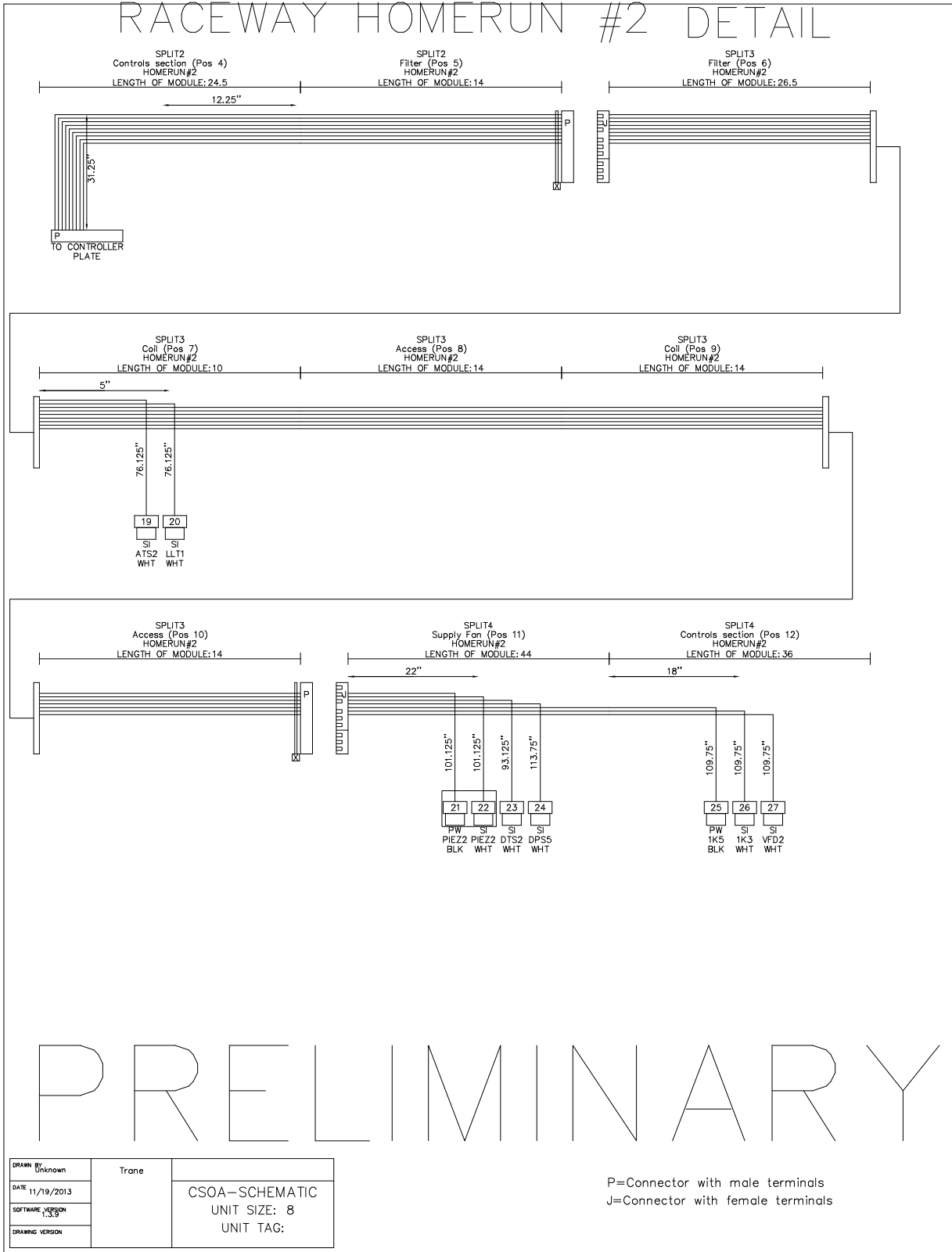


PRELIMINARY

DRAWN BY: Unknown	Trane	CSOA-SCHEMATIC UNIT SIZE: 8 UNIT TAG:
DATE: 11/19/2013		
SOFTWARE VERSION: 1.3.9		
DRAWING VERSION		

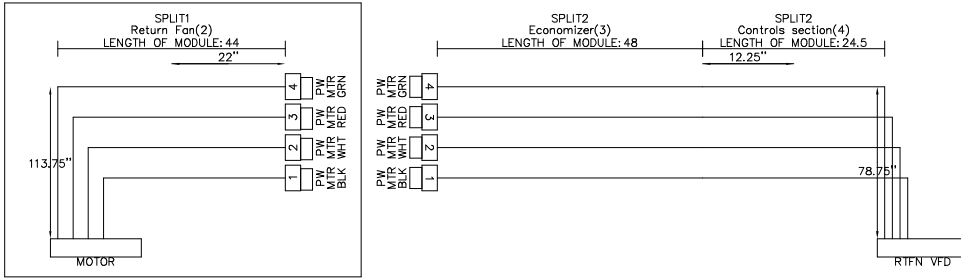
P=Connector with male terminals
 J=Connector with female terminals

As-Built - Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2



As-Built - Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2

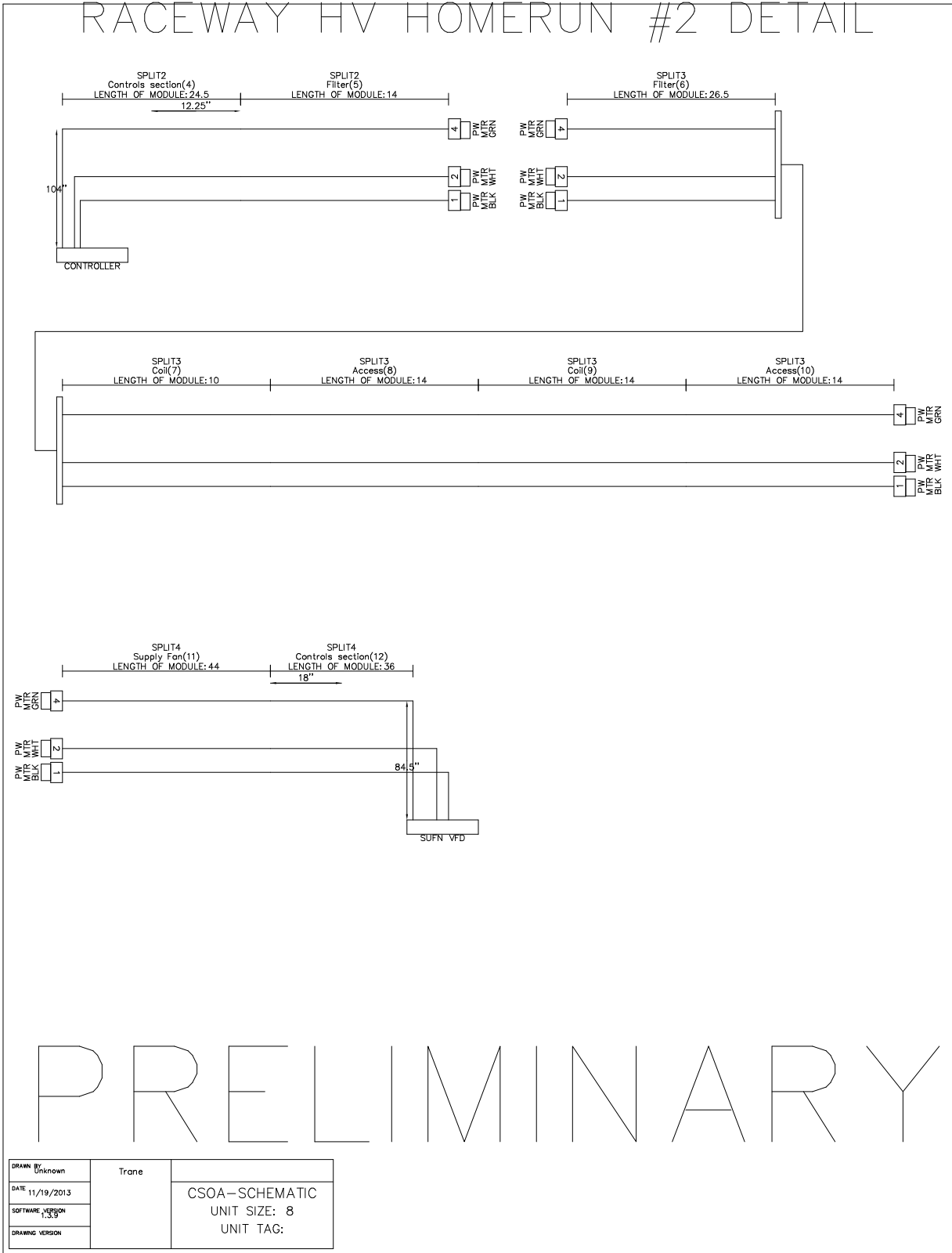
RACEWAY HV HOMERUN #1 DETAIL



PRELIMINARY

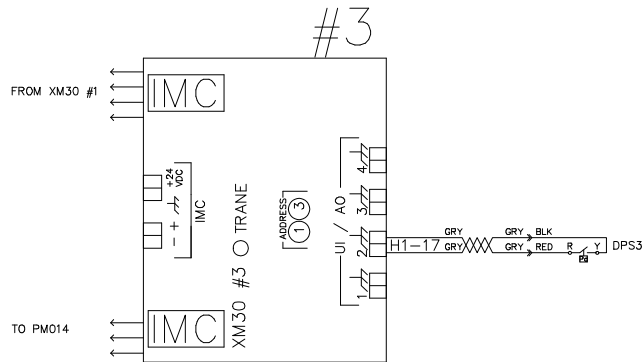
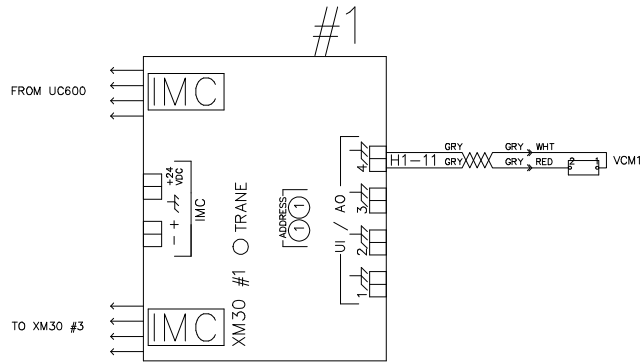
DRAWN BY: Unknown	Trane	CSOA-SCHEMATIC UNIT SIZE: 8 UNIT TAG:
DATE: 11/19/2013		
SOFTWARE VERSION: 1.3.9		
DRAWING VERSION:		

As-Built - Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2



As-Built - Performance Climate Changer
 Item: A2 Qty: 1 Tag(s): RTU-2

XM30 EXPANSION CARD DETAIL (OUTDOOR)

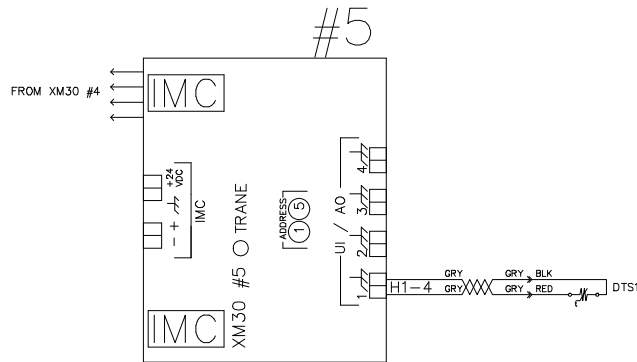
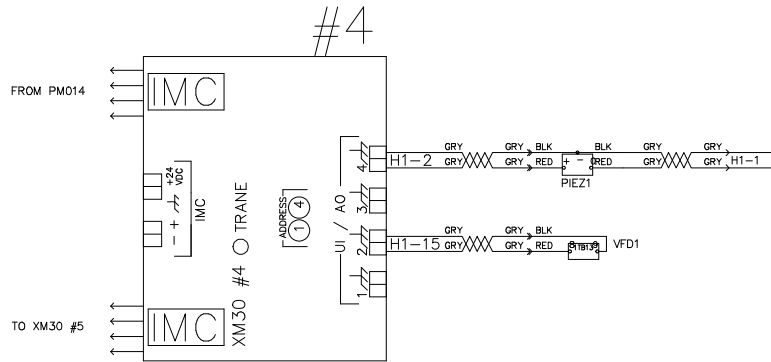


PRELIMINARY

<table border="1"> <tr> <td>DRAWN BY: Unknown</td> <td rowspan="4" style="text-align: center; vertical-align: middle;">Trane</td> <td rowspan="4" style="text-align: center; vertical-align: middle;">CSOA-SCHMATIC UNIT SIZE: 8 UNIT TAG:</td> </tr> <tr> <td>DATE: 11/19/2013</td> </tr> <tr> <td>SOFTWARE VERSION: 1.3.9</td> </tr> <tr> <td>DRAWING VERSION:</td> </tr> </table>	DRAWN BY: Unknown	Trane	CSOA-SCHMATIC UNIT SIZE: 8 UNIT TAG:	DATE: 11/19/2013	SOFTWARE VERSION: 1.3.9	DRAWING VERSION:
DRAWN BY: Unknown	Trane			CSOA-SCHMATIC UNIT SIZE: 8 UNIT TAG:		
DATE: 11/19/2013						
SOFTWARE VERSION: 1.3.9						
DRAWING VERSION:						

As-Built - Performance Climate Changer
 Item: A2 Qty: 1 Tag(s): RTU-2

XM30 EXPANSION CARD DETAIL (OUTDOOR)

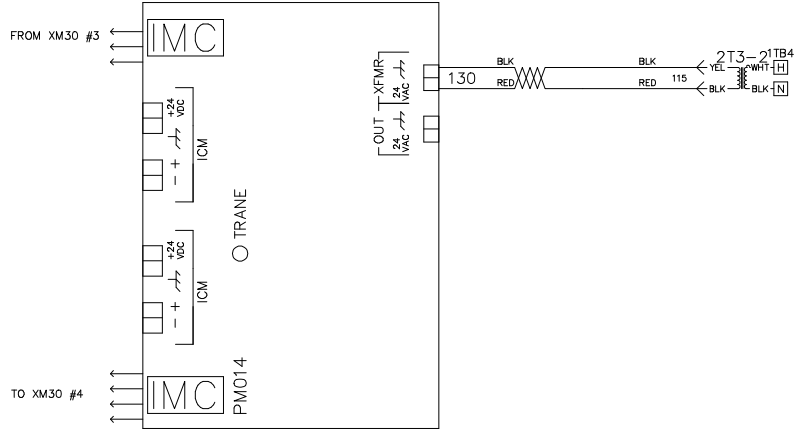


PRELIMINARY

<table border="1"> <tr> <td>DRAWN BY: Unknown</td> <td rowspan="4" style="text-align: center; vertical-align: middle;">Trane</td> <td rowspan="4" style="text-align: center; vertical-align: middle;">CSOA-SCHMATIC UNIT SIZE: 8 UNIT TAG:</td> </tr> <tr> <td>DATE: 11/19/2013</td> </tr> <tr> <td>SOFTWARE VERSION: 1.3.9</td> </tr> <tr> <td>DRAWING VERSION:</td> </tr> </table>	DRAWN BY: Unknown	Trane	CSOA-SCHMATIC UNIT SIZE: 8 UNIT TAG:	DATE: 11/19/2013	SOFTWARE VERSION: 1.3.9	DRAWING VERSION:
DRAWN BY: Unknown	Trane			CSOA-SCHMATIC UNIT SIZE: 8 UNIT TAG:		
DATE: 11/19/2013						
SOFTWARE VERSION: 1.3.9						
DRAWING VERSION:						

As-Built - Performance Climate Changer
 Item: A2 Qty: 1 Tag(s): RTU-2

PM014 POWER SUPPLY DETAIL



PRELIMINARY

DRAWN BY: Unknown	Trane	CSOA-SCHEMATIC UNIT SIZE: 8 UNIT TAG:
DATE: 11/19/2013		
SOFTWARE VERSION: 1.3.9		
DRAWING VERSION		

As-Built - Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2

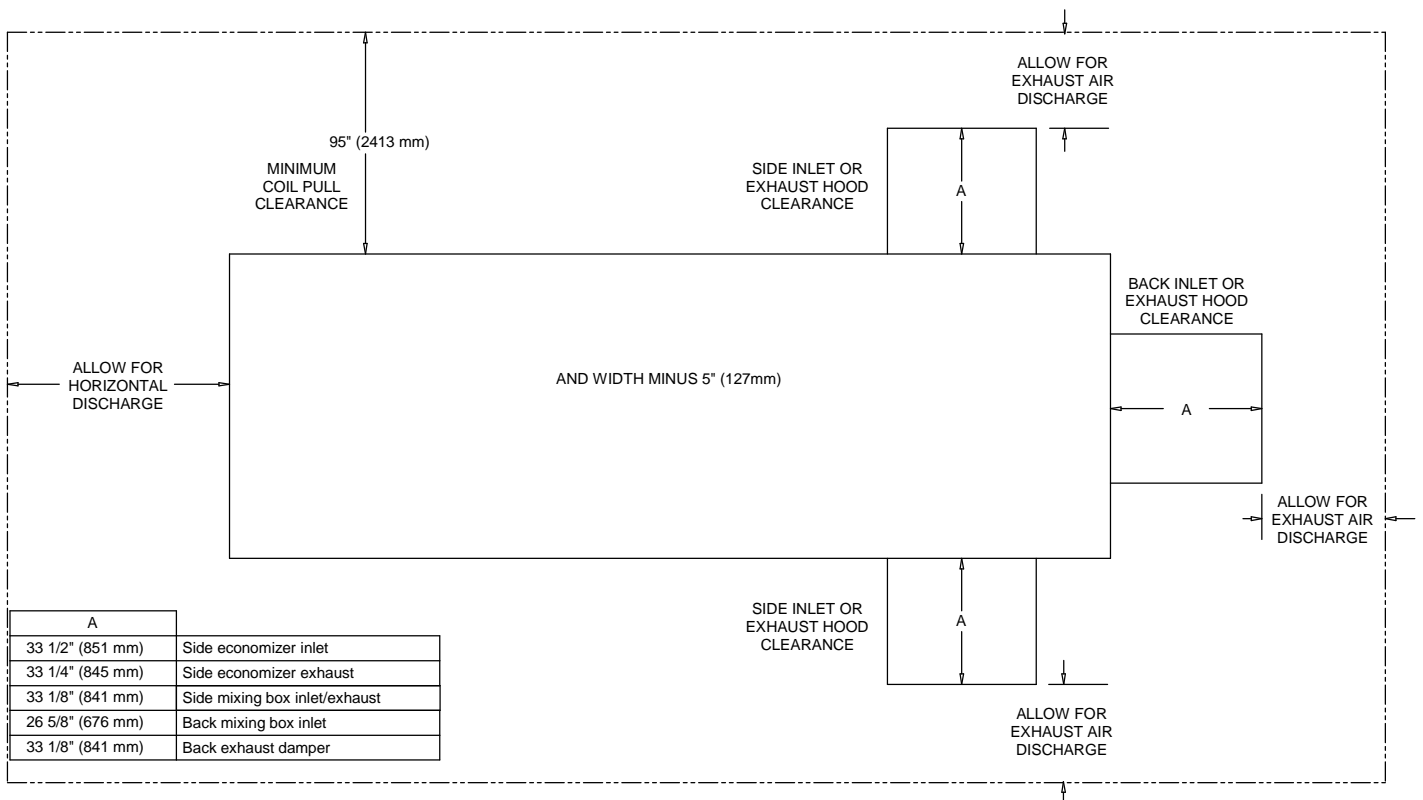
LEGEND DETAIL 1
 (OUTDOOR)

POS#	DESCRIPTION	PT	LABEL	PWR HR-WIRE	SIGNAL HR-WIRE	XFMR	POWER VA
0	150VA TRANSFORMER		2T3				
0	Differential Press. Transmitter	P1	2U3				
0	UC600 Controller		UC	121		2T3-1	26
0	XM30 Expansion module		XM30-1				
0	XM30 Expansion module		XM30-3				
0	XM30 Expansion module		XM30-4				
0	XM30 Expansion module		XM30-5				
0	PM014 Power supply		PM014	130		2T3-2	75
2	Flow meter	UI30	PIEZ1	H1-1	H1-2	2T3-1	2
2	Air Flow Switch	UI10	DPS1		H1-3		
2	Discharge Air Sensor (10K Type 2)	UI31	DTS1		H1-4		
3	Damper Actuator	A04	DA1-RT	H1-1	H1-5	2T3-1	7
3	Damper Actuator	A06	DA2-Cntr	H1-1	H1-7	2T3-1	7
3	Damper Actuator	A05	DA3-LT	H1-1	H1-9	2T3-1	7
3	Ventilation Control Module	UI18	VCM1	H1-1	H1-11	2T3-1	8
3	Averaging Temperature Sensor (1K PT)	UI3	ATS1		H1-12		
4	Return/Exhaust Fan Low Limit Circuit Relay		1K10	H1-13		2T3-1	1
4	Return/Exhaust Fan S/S	B02	1K4		H1-14		
4	Return/Exhaust Fan Speed	A020	VFD1		H1-15		
4	Low Limit Reset Circuit Relay	UI5	2K9		77	2T3-1	2
5	Dirty Filter Switch	UI9	DPS2		H1-16		
6	Dirty Filter Switch	UI24	DPS3		H1-17		
6	Dirty Filter Switch	UI6	DPS4		H1-18		
7	Averaging Temperature Sensor (1K PT)	UI2	ATS2		H2-19		
7	Low Limit (Leaving)		LLT1		H2-20	2T3-1	
11	Flow meter	UI7	PIEZ2	H2-21	H2-22	2T3-1	2
11	Discharge Air Sensor (10K Type 2)	UI4	DTS2		H2-23		
11	Air Flow Switch	UI8	DPS5		H2-24		
12	Supply Fan Low Limit Circuit Relay		1K5	H2-25		2T3-1	1
12	Supply Fan S/S	B01	1K3		H2-26		
12	Supply Fan Speed	A03	VFD2		H2-27		

PRELIMINARY

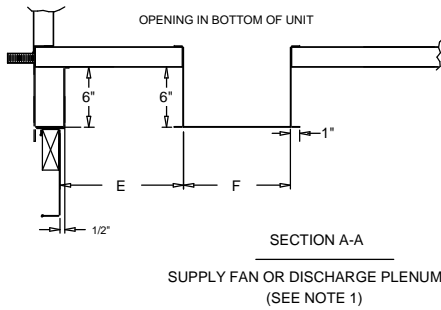
DRAWN BY: Unknown	Trane	CSOA-SCHMATIC UNIT SIZE: 8 UNIT TAG:
DATE: 11/19/2013		
SOFTWARE VERSION: 1.3.9		
DRAWING VERSION:		

Accessory - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1

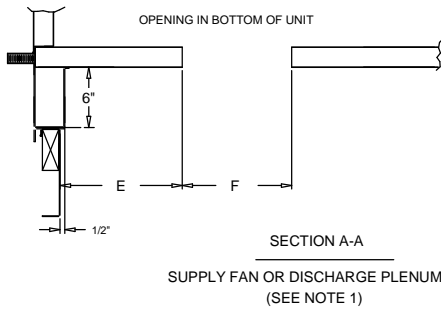
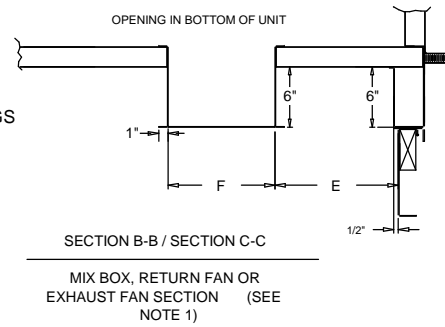


Accessory - Performance Climate Changer
Item: A1, A2 Qty: 2 Tag(s): RTU-1 , RTU-2

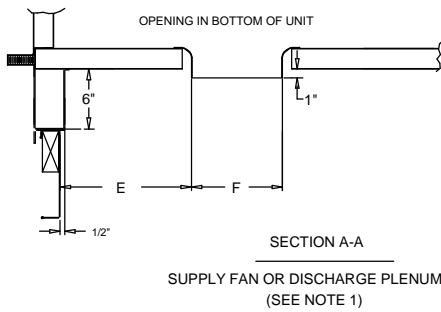
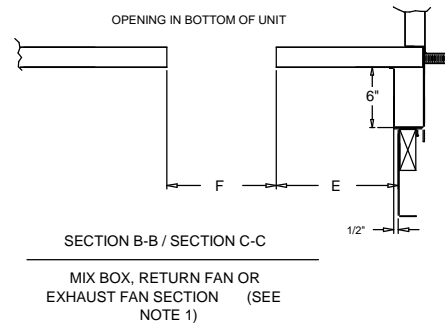
RELATIONSHIP OF CURB TO UNIT AS-BUILT



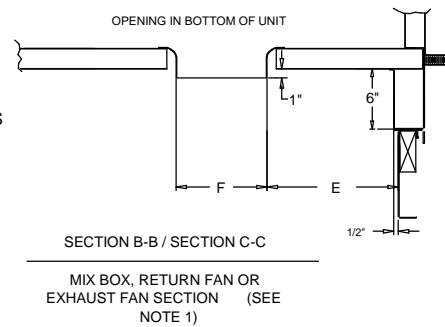
RECTANGULAR OPENINGS



ROUND OPENINGS

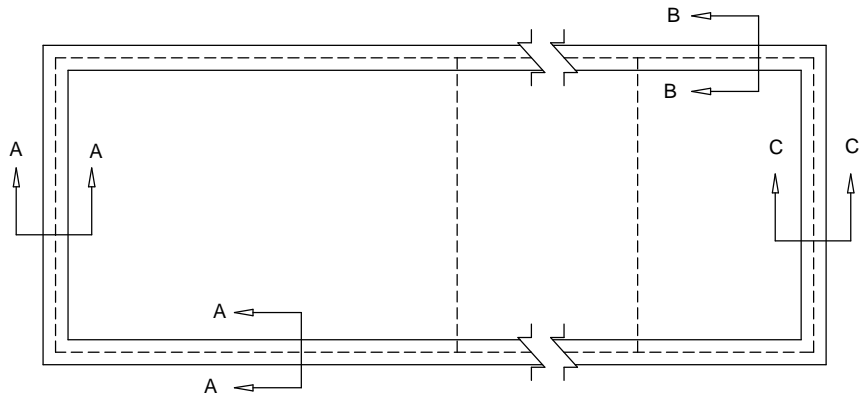


BELLMOUTH OPENINGS



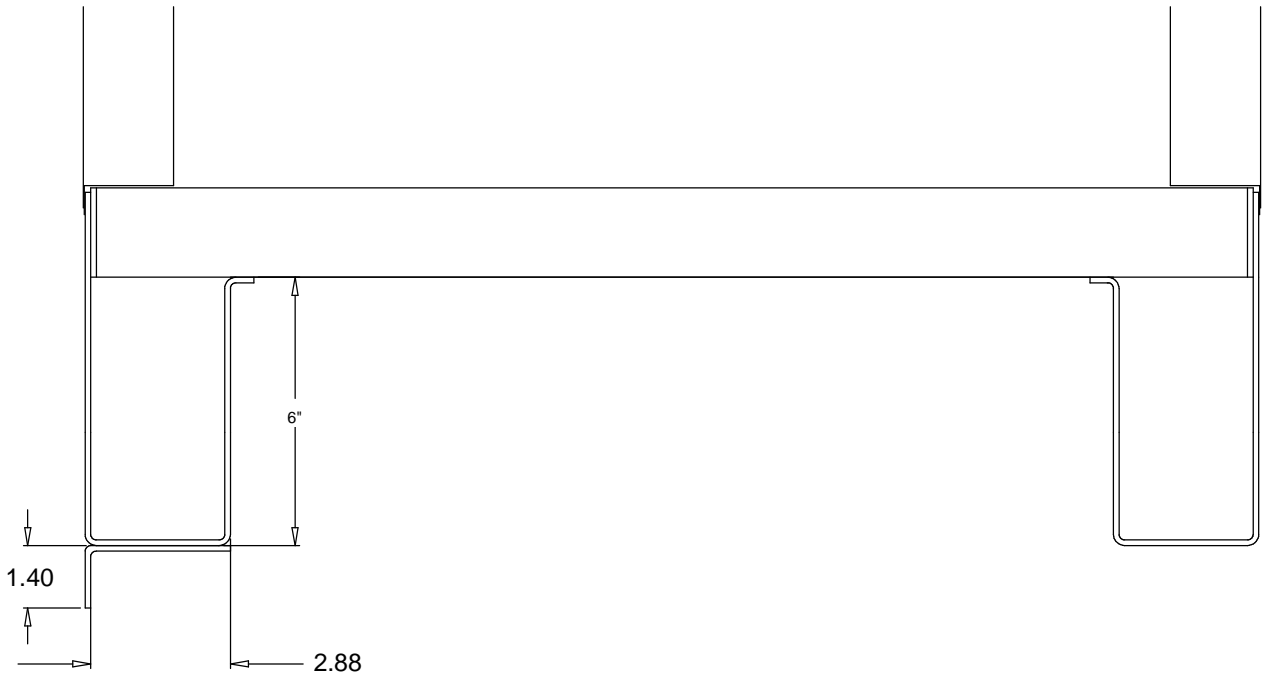
NOTE:

1. E and F are representative of dimensions on the accessory as-built used to locate opening(s) in the roof surface.



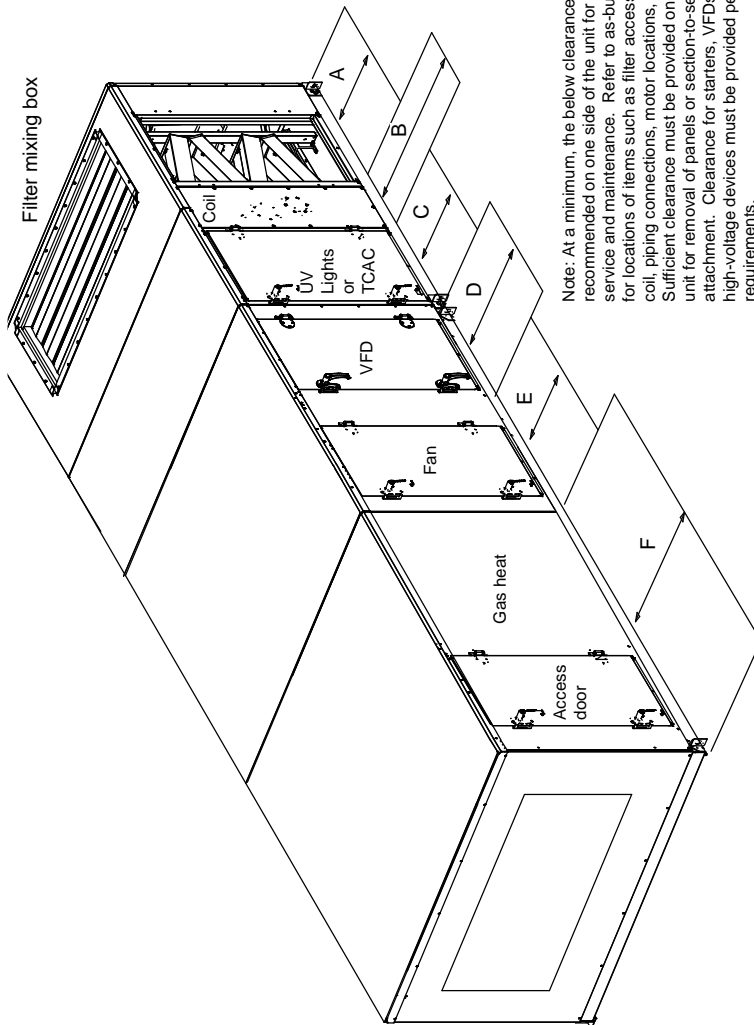
Accessory - Performance Climate Changer
Item: A1, A2 Qty: 2 Tag(s): RTU-1 , RTU-2

Base Detail



Accessory - Performance Climate Changer
 Item: A1, A2 Qty: 2 Tag(s): RTU-1 , RTU-2

EXAMPLE UNIT - NOT CONFIGURED AS SELECTED.



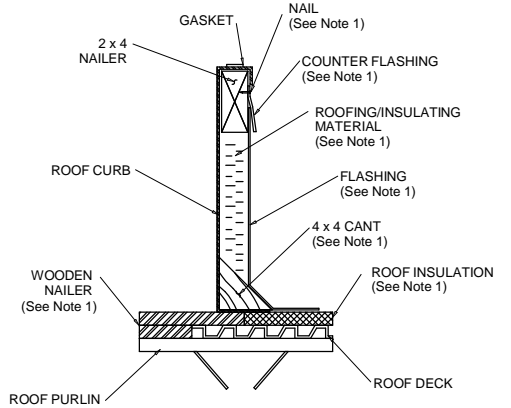
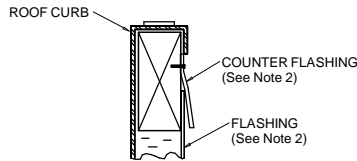
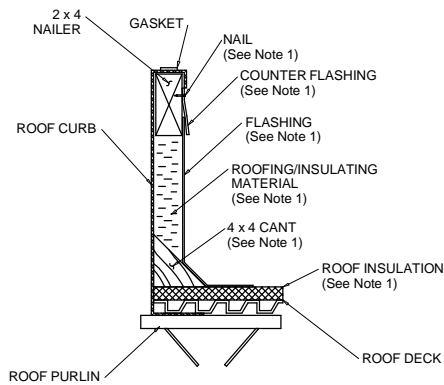
Note: At a minimum, the below clearance dimensions are recommended on one side of the unit for regular service and maintenance. Refer to as-built submittal for locations of items such as filter access doors, coil, piping connections, motor locations, etc. Sufficient clearance must be provided on all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

Clearance items	3	4	6	8	10	12	14	17	21	21	25	25	30	30	35	35	40	40	40	40	40	50	50	57	57	66	66	80	80	100	100	120
A (filter, gas heat)	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	52	52	56	56	58	58	
B (coil, humidifier)	48	59	59	66	77	82	87	87	95	95	95	95	109	87	115	96	128	128	128	128	128	141	110	110	141	156	156	170	170	197	197	
C (UV Lights)	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	52	52	56	56	58	58	
C (TCAC)	43	59	59	63	75	81	83	83	58	75	58	58	83	83	75	59	83	83	83	83	83	83	83	83	83	83	83	83	75	83	83	
D (External Starter or VFD - shown)	61	61	61	61	61	61	61	61	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	
D (Internal Starter or VFD)	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
E (fan)	48	48	48	48	51	54	58	61	60	51	66	66	66	58	66	60	70	70	70	70	70	66	66	66	77	93	93	101	101	101	101	
F (Gas Heat Ext Vestible)	N/A	N/A	89	90	108	100	100	105	115	N/A	115	N/A	118	N/A	136	N/A	140	140	140	140	140	156	N/A	N/A	156	170	179	180	180	N/A	N/A	
F (Gas Heat Int Vestible)	N/A	N/A	56	63	74	79	84	84	92	N/A	92	N/A	106	N/A	112	N/A	125	125	125	125	125	138	N/A	N/A	138	153	153	167	167	194	194	

Accessory - Performance Climate Changer
Item: A1, A2 Qty: 2 Tag(s): RTU-1 , RTU-2

Recommendation for Roof Curb Installation

Refer to Performance IOM for specific installation instructions

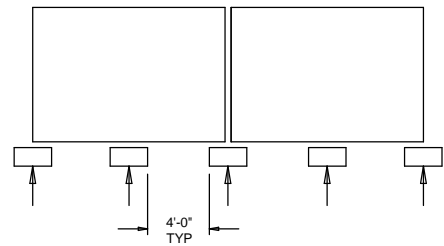
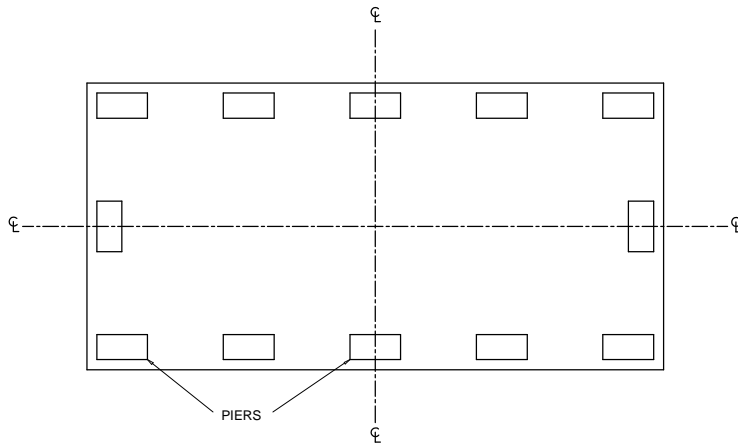


Note:

1. Materials to attach roof curb to roof are to be supplied by the installer.
2. Flashing or counter flashing should not come to or over top of curb.
3. Roof curb must be mechanically fastened to roof surface.

Recommendation for Pier Mounting

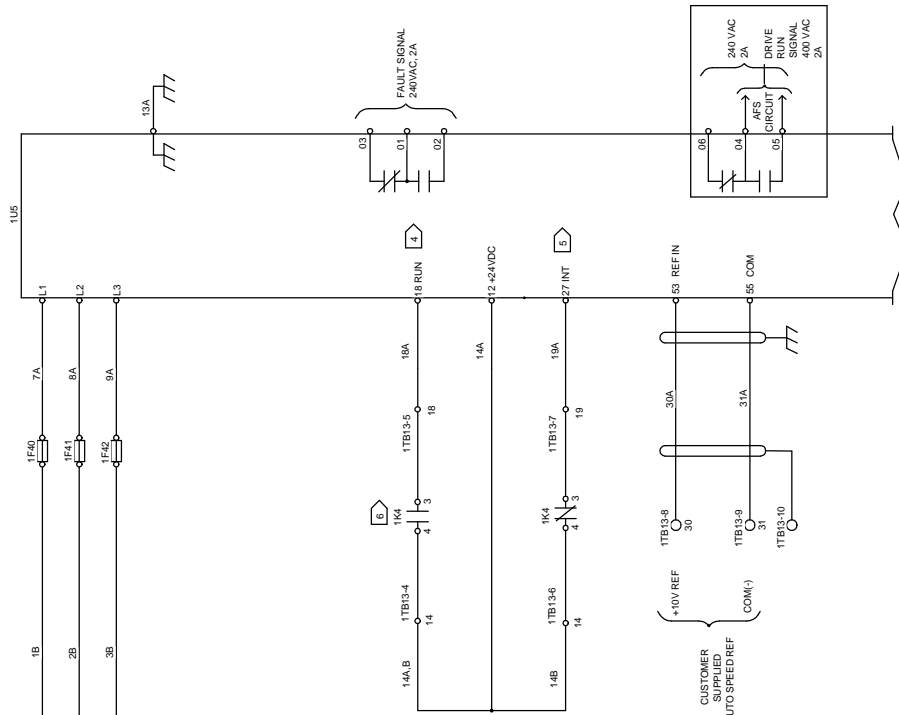
Refer to Performance IOM for specific installation instructions



Note:

1. Pier supports should be inside 3" (3 - 50) or 4" (57 - 120) flat of unit base. Unit cannot be supported by unit base drip leg.
2. Pier supports should be no wider than 2 3/4", due to supports perpendicular to airflow.
3. Piers beneath shipping splits must be structurally sound to support the weight of the unit.

Accessory - Performance Climate Changer
 Item: A1 Qty: 1 Tag(s): RTU-1



FUSE	VOLTAGE	MPTRAMP	PN	CLASS
1F40	200	2x5	LP-CC-20	CC
1F41	200	2x10	LP-CC-30	CC
1F42	200	2x10	LP-CC-30	CC
1F43	400	2x5	LP-CC-10	CC
1F44	400	2x5	LP-CC-10	CC
1F45	400	2x5	LP-CC-10	CC
1F46	400	2x5	LP-CC-10	CC
1F47	400	2x5	LP-CC-10	CC
1F48	400	2x5	LP-CC-10	CC
1F49	400	2x5	LP-CC-10	CC
1F50	400	2x5	LP-CC-10	CC
1F51	400	2x5	LP-CC-10	CC
1F52	400	2x5	LP-CC-10	CC
1F53	400	2x5	LP-CC-10	CC
1F54	400	2x5	LP-CC-10	CC
1F55	400	2x5	LP-CC-10	CC
1F56	400	2x5	LP-CC-10	CC
1F57	400	2x5	LP-CC-10	CC
1F58	400	2x5	LP-CC-10	CC
1F59	400	2x5	LP-CC-10	CC
1F60	400	2x5	LP-CC-10	CC
1F61	400	2x5	LP-CC-10	CC
1F62	400	2x5	LP-CC-10	CC
1F63	400	2x5	LP-CC-10	CC
1F64	400	2x5	LP-CC-10	CC
1F65	400	2x5	LP-CC-10	CC
1F66	400	2x5	LP-CC-10	CC
1F67	400	2x5	LP-CC-10	CC
1F68	400	2x5	LP-CC-10	CC
1F69	400	2x5	LP-CC-10	CC
1F70	400	2x5	LP-CC-10	CC
1F71	400	2x5	LP-CC-10	CC
1F72	400	2x5	LP-CC-10	CC
1F73	400	2x5	LP-CC-10	CC
1F74	400	2x5	LP-CC-10	CC
1F75	400	2x5	LP-CC-10	CC
1F76	400	2x5	LP-CC-10	CC
1F77	400	2x5	LP-CC-10	CC
1F78	400	2x5	LP-CC-10	CC
1F79	400	2x5	LP-CC-10	CC
1F80	400	2x5	LP-CC-10	CC
1F81	400	2x5	LP-CC-10	CC
1F82	400	2x5	LP-CC-10	CC
1F83	400	2x5	LP-CC-10	CC
1F84	400	2x5	LP-CC-10	CC
1F85	400	2x5	LP-CC-10	CC
1F86	400	2x5	LP-CC-10	CC
1F87	400	2x5	LP-CC-10	CC
1F88	400	2x5	LP-CC-10	CC
1F89	400	2x5	LP-CC-10	CC
1F90	400	2x5	LP-CC-10	CC
1F91	400	2x5	LP-CC-10	CC
1F92	400	2x5	LP-CC-10	CC
1F93	400	2x5	LP-CC-10	CC
1F94	400	2x5	LP-CC-10	CC
1F95	400	2x5	LP-CC-10	CC
1F96	400	2x5	LP-CC-10	CC
1F97	400	2x5	LP-CC-10	CC
1F98	400	2x5	LP-CC-10	CC
1F99	400	2x5	LP-CC-10	CC
1F100	400	2x5	LP-CC-10	CC

FUSE	VOLTAGE	HP	PN	CLASS
1F40	200	0.5	LP-CC-5	CC
1F41	200	0.75-1.5	LP-CC-10	CC
1F42	200	3	LP-CC-15	CC
1F43	200	3	LP-CC-20	CC
1F44	200	3	LP-CC-20	CC
1F45	200	3	LP-CC-20	CC
1F46	200	3	LP-CC-20	CC
1F47	200	3	LP-CC-20	CC
1F48	200	3	LP-CC-20	CC
1F49	200	3	LP-CC-20	CC
1F50	200	3	LP-CC-20	CC
1F51	200	3	LP-CC-20	CC
1F52	200	3	LP-CC-20	CC
1F53	200	3	LP-CC-20	CC
1F54	200	3	LP-CC-20	CC
1F55	200	3	LP-CC-20	CC
1F56	200	3	LP-CC-20	CC
1F57	200	3	LP-CC-20	CC
1F58	200	3	LP-CC-20	CC
1F59	200	3	LP-CC-20	CC
1F60	200	3	LP-CC-20	CC
1F61	200	3	LP-CC-20	CC
1F62	200	3	LP-CC-20	CC
1F63	200	3	LP-CC-20	CC
1F64	200	3	LP-CC-20	CC
1F65	200	3	LP-CC-20	CC
1F66	200	3	LP-CC-20	CC
1F67	200	3	LP-CC-20	CC
1F68	200	3	LP-CC-20	CC
1F69	200	3	LP-CC-20	CC
1F70	200	3	LP-CC-20	CC
1F71	200	3	LP-CC-20	CC
1F72	200	3	LP-CC-20	CC
1F73	200	3	LP-CC-20	CC
1F74	200	3	LP-CC-20	CC
1F75	200	3	LP-CC-20	CC
1F76	200	3	LP-CC-20	CC
1F77	200	3	LP-CC-20	CC
1F78	200	3	LP-CC-20	CC
1F79	200	3	LP-CC-20	CC
1F80	200	3	LP-CC-20	CC
1F81	200	3	LP-CC-20	CC
1F82	200	3	LP-CC-20	CC
1F83	200	3	LP-CC-20	CC
1F84	200	3	LP-CC-20	CC
1F85	200	3	LP-CC-20	CC
1F86	200	3	LP-CC-20	CC
1F87	200	3	LP-CC-20	CC
1F88	200	3	LP-CC-20	CC
1F89	200	3	LP-CC-20	CC
1F90	200	3	LP-CC-20	CC
1F91	200	3	LP-CC-20	CC
1F92	200	3	LP-CC-20	CC
1F93	200	3	LP-CC-20	CC
1F94	200	3	LP-CC-20	CC
1F95	200	3	LP-CC-20	CC
1F96	200	3	LP-CC-20	CC
1F97	200	3	LP-CC-20	CC
1F98	200	3	LP-CC-20	CC
1F99	200	3	LP-CC-20	CC
1F100	200	3	LP-CC-20	CC

WARNING
 HAZARDOUS VOLTAGE!
 DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS AND REMOTE FUSES BEFORE SERVICING. INSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED. STORED VOLTAGE UNITS WITH VARIABLE SPEED DRIVE REFER TO DRIVE INSTRUCTIONS FOR DISCHARGE PROCEDURE. SERVICING COULD RESULT IN DEATH OR SERIOUS LESIONES PERSONALES.

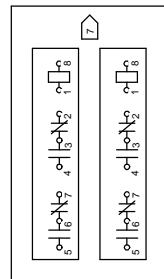
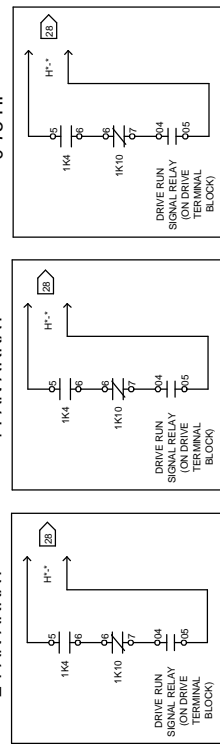
AVERTISSEMENT
 TENSION DANGEREUSE!
 COUPER TOUTES LES TENSIONS ET OUVRIR LES SECTIONNERS A DISTANCE. PUIS SUIVRE LES PROCEDURES DE VERROUILLAGE ET DES ETIQUETTES AVANT DE SERVICER. ASSUREZ-VOUS QUE LES CONDENSATEURS DES MOTEURS SONT DECHARGES. DANS LE CAS D'UNITES A VITESSE VARIABLE, SE REPORTER AUX INSTRUCTIONS POUR LA DISCHARGE DES CONDENSATEURS. LE SERVICER PEUT ENTRAINER DES BLESSURES GRAVES POUVANT ETRE MORTELLES.

ADVERTENCIA
 ¡VOLTAJE PELIGROSO!
 DESCONECTE TODA LA ENERGIA ELECTRICA, INCLUIDO LAS DESCONEXIONES REMOTAS Y LAS FUSIBLES REMOTOS, ANTES DE SERVICIAR. ASEGURESE DE QUE TODOS LOS CAPACITORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. CONSULTAR LAS INSTRUCCIONES PARA LA DISCHARGE DEL CONDENSADOR. EL NO REALIZAR LO ANTERIORMENTE INDICADO, PODRIA OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.

CAUTION
 USE COPPER CONDUCTORS ONLY!
 UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.
 FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

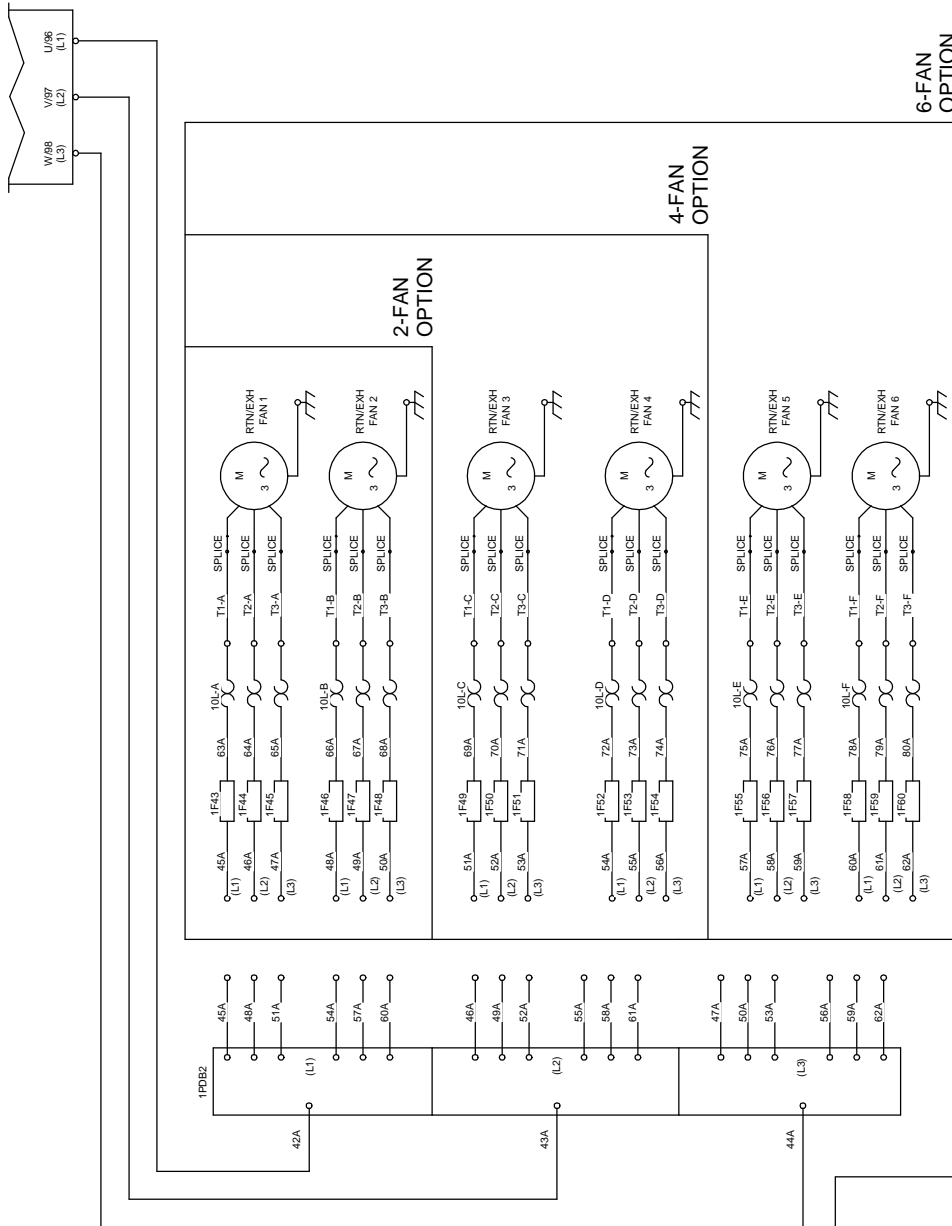
ATTENTION
 N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!
 LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.
 L'UTILISATION DE TOUT AUTRE CONDUCTEUR PEUT ENDOMMAGER L'EQUIPEMENT.

PRECAUCIÓN
 ¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
 LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.
 SI NO LO HACE, PUEDE OCASIONAR DAÑO AL EQUIPO.



AREA	DESCRIPTION
1	HIGH VOLTAGE PANEL (UNIT SCHEMATIC)
2	LOW VOLTAGE PANEL (UNIT SCHEMATIC)
3	AIR HANDLER SECTION

Accessory - Performance Climate Changer
 Item: A1 Qty: 1 Tag(s): RTU-1



6-FAN OPTION

4-FAN OPTION

2-FAN OPTION

DEVICE DESIGNATION	LEGEND	DESCRIPTION
1CB11		CIRCUIT BREAKER
1F40 TO 1F42		VFD FUSES
1K4		START / STOP RELAY
1K10		LOW LIMIT RELAY
1TB 03		TERMINAL STRIP CONTROL CIRCUIT
1U5		VFD CONTROLLER
3B1-A TO 3B1-F		MOTORS (FAN ARRAY)
1F43 TO 1F40		MOTOR FUSES (FAN ARRAY)
1K39		START / STOP RELAY (FAN ARRAY/VD2)
10L-A TO 10L-F		OVERLOAD RELAYS (FAN ARRAY)
1PD82		POWER DISTRIBUTION BLOCK (FAN ARRAY)

- NOTES:
- DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. PHANTOM LINES INDICATE CONTROL OPTION. REF. CONTROL PANEL SCHEMATIC FOR SPECIFIC DETAIL.
 - ALL FIELD WIRING MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, STATE, AND LOCAL REQUIREMENTS. OTHER COUNTRIES APPLICABLE NATIONAL AND/OR LOCAL REQUIREMENTS SHALL APPLY. FIELD CONDUCTORS SHALL HAVE INSULATION RATING NOT LESS THAN 600V COPPER CONDUCTORS ONLY.
 - MINIMUM CIRCUIT AMPACITY, MAXIMUM FUSE SIZE, AND DISCONNECT SIZE ARE CALCULATED BASED ON THE INVERTER INPUT LINE CURRENTS PER ARTICLE 430-2 OF THE NATIONAL ELECTRICAL CODE.
 - PROGRAM TERMINAL 16 AS RUN.
 - PROGRAM TERMINAL 27 INV. COASTING STOP.
 - CLOSES TO RUN AUTO MODE OR BYPASS AUTO FOR OPTION VFD OR STARTER.
 - RELAYS--CONTACTS: SILVER-CADMIUM OXIDE: 16 HP 5AMP @ 120V AC, 1/3 HP 5AMP @240V AC. SEE 24V SCHEMATIC DIAGRAM FOR COIL CONNECTIONS AND ACTUAL QUANTITY OF TRANSFORMER RELAYS.
 - ATTACH GROUND OR EQUIPMENT GROUND.
 - AIRFLOW SWITCH INPUT, REFER TO LOW VOLTAGE SCHEMATIC.

⚠ WARNING
 HAZARDOUS VOLTAGE!
 DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS, AND FOLLOW LOCKOUT 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 CAN RESULT IN DEATH OR SERIOUS INJURY.

⚠ AVERTISSEMENT
 TENSION DANGEREUSE!
 COUPER TOUTES LES TENSIONS ET OUVRIR LES SECTIONNEURS A DISTANCE. SUIVRE LES PROCEDURES DE VERROUILLAGE ET DES ETIQUETTES AVANT TOUTE INTERVENTION. VERIFIER QUE TOUS LES CONDENSATEURS DES MOTEURS SONT DECHARGES. DANS LE CAS D'UNITES COMPORTANT DES ENTRAINEMENTS A VITESSE VARIABLE, VOUS DEVEZ SUIVRE LES INSTRUCTIONS DE L'ENTRAINEMENT POUR DECHARGER LES CONDENSATEURS. NE PAS RESPECTER CES MESURES DE PRECAUTION PEUT ENTRAINER DES BLESSURES GRAVES POUVANT ETRE MORTELLES.

⚠ ADVERTENCIA
 ¡VOLTAJE PELIGROSO!
 DESCONECTE TODA LA ENERGIA ELECTRICA, INCLUIDO LAS DESCONECCIONES REMOTAS Y SIGA LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO ANTES DE PROCEDER AL SERVICIO. ASEGURESE DE QUE TODOS LOS CONDENSADORES DE LOS MOTORES HAYAN SIDO DESCARGADOS. NO RESPETAR ESTAS MEDIDAS DE PRECAUCION PARA LAS UNIDADES CON LEJE DE DIRECCION DE VELOCIDAD VARIABLE, CONSULTE LAS INSTRUCCIONES PARA LA DES CARGA DEL CONDENSADOR. EL NO REALIZAR LO ANTERIORMENTE INDICADO, PODRIA OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.

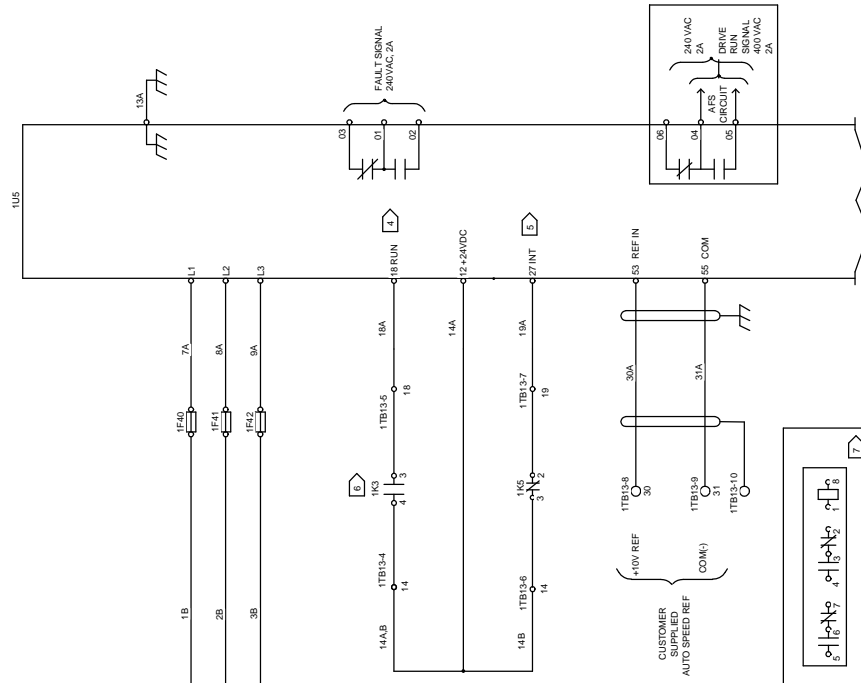
CAUTION
 USE COPPER CONDUCTORS ONLY!
 UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.
 FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

ATTENTION
 N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!
 LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.
 L'UTILISATION DE TOUT AUTRE CONDUCTEUR PEUT ENDOMMAGER L'EQUIPEMENT.

PRECAUCIÓN
 ¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
 LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.
 SI NO LO HACE, PUEDE OCASIONAR DAÑO AL EQUIPO.

10149-2

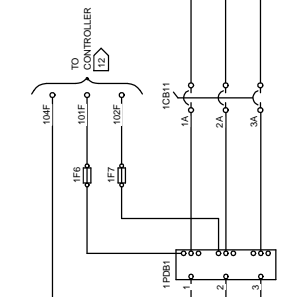
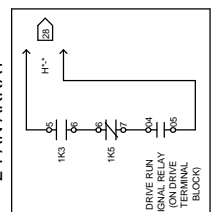
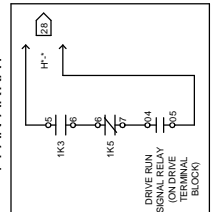
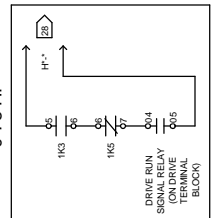
Accessory - Performance Climate Changer
 Item: A1 Qty: 1 Tag(s): RTU-1



AFS CIRCUIT
6-FAN ARRAY
0-75 HP

AFS CIRCUIT
4-FAN ARRAY

AFS CIRCUIT
2-FAN ARRAY



FUSE	VOLTAGE	AMP	CLASS
1FB1	120	15	LP-CC-10
1FB2	120	15	LP-CC-10
1FB3	120	15	LP-CC-10
1FB4	120	15	LP-CC-10
1FB5	120	15	LP-CC-10
1FB6	120	15	LP-CC-10
1FB7	120	15	LP-CC-10
1FB8	120	15	LP-CC-10
1FB9	120	15	LP-CC-10
1FB10	120	15	LP-CC-10
1FB11	120	15	LP-CC-10
1FB12	120	15	LP-CC-10
1FB13	120	15	LP-CC-10
1FB14	120	15	LP-CC-10
1FB15	120	15	LP-CC-10
1FB16	120	15	LP-CC-10
1FB17	120	15	LP-CC-10
1FB18	120	15	LP-CC-10
1FB19	120	15	LP-CC-10
1FB20	120	15	LP-CC-10
1FB21	120	15	LP-CC-10
1FB22	120	15	LP-CC-10
1FB23	120	15	LP-CC-10
1FB24	120	15	LP-CC-10
1FB25	120	15	LP-CC-10
1FB26	120	15	LP-CC-10
1FB27	120	15	LP-CC-10
1FB28	120	15	LP-CC-10
1FB29	120	15	LP-CC-10
1FB30	120	15	LP-CC-10
1FB31	120	15	LP-CC-10
1FB32	120	15	LP-CC-10
1FB33	120	15	LP-CC-10
1FB34	120	15	LP-CC-10
1FB35	120	15	LP-CC-10
1FB36	120	15	LP-CC-10
1FB37	120	15	LP-CC-10
1FB38	120	15	LP-CC-10
1FB39	120	15	LP-CC-10
1FB40	120	15	LP-CC-10
1FB41	120	15	LP-CC-10
1FB42	120	15	LP-CC-10
1FB43	120	15	LP-CC-10
1FB44	120	15	LP-CC-10
1FB45	120	15	LP-CC-10
1FB46	120	15	LP-CC-10
1FB47	120	15	LP-CC-10
1FB48	120	15	LP-CC-10
1FB49	120	15	LP-CC-10
1FB50	120	15	LP-CC-10
1FB51	120	15	LP-CC-10
1FB52	120	15	LP-CC-10
1FB53	120	15	LP-CC-10
1FB54	120	15	LP-CC-10
1FB55	120	15	LP-CC-10
1FB56	120	15	LP-CC-10
1FB57	120	15	LP-CC-10
1FB58	120	15	LP-CC-10
1FB59	120	15	LP-CC-10
1FB60	120	15	LP-CC-10

FUSE	VOLTAGE	AMP	CLASS
1FB1	120	15	LP-CC-10
1FB2	120	15	LP-CC-10
1FB3	120	15	LP-CC-10
1FB4	120	15	LP-CC-10
1FB5	120	15	LP-CC-10
1FB6	120	15	LP-CC-10
1FB7	120	15	LP-CC-10
1FB8	120	15	LP-CC-10
1FB9	120	15	LP-CC-10
1FB10	120	15	LP-CC-10
1FB11	120	15	LP-CC-10
1FB12	120	15	LP-CC-10
1FB13	120	15	LP-CC-10
1FB14	120	15	LP-CC-10
1FB15	120	15	LP-CC-10
1FB16	120	15	LP-CC-10
1FB17	120	15	LP-CC-10
1FB18	120	15	LP-CC-10
1FB19	120	15	LP-CC-10
1FB20	120	15	LP-CC-10
1FB21	120	15	LP-CC-10
1FB22	120	15	LP-CC-10
1FB23	120	15	LP-CC-10
1FB24	120	15	LP-CC-10
1FB25	120	15	LP-CC-10
1FB26	120	15	LP-CC-10
1FB27	120	15	LP-CC-10
1FB28	120	15	LP-CC-10
1FB29	120	15	LP-CC-10
1FB30	120	15	LP-CC-10
1FB31	120	15	LP-CC-10
1FB32	120	15	LP-CC-10
1FB33	120	15	LP-CC-10
1FB34	120	15	LP-CC-10
1FB35	120	15	LP-CC-10
1FB36	120	15	LP-CC-10
1FB37	120	15	LP-CC-10
1FB38	120	15	LP-CC-10
1FB39	120	15	LP-CC-10
1FB40	120	15	LP-CC-10
1FB41	120	15	LP-CC-10
1FB42	120	15	LP-CC-10
1FB43	120	15	LP-CC-10
1FB44	120	15	LP-CC-10
1FB45	120	15	LP-CC-10
1FB46	120	15	LP-CC-10
1FB47	120	15	LP-CC-10
1FB48	120	15	LP-CC-10
1FB49	120	15	LP-CC-10
1FB50	120	15	LP-CC-10
1FB51	120	15	LP-CC-10
1FB52	120	15	LP-CC-10
1FB53	120	15	LP-CC-10
1FB54	120	15	LP-CC-10
1FB55	120	15	LP-CC-10
1FB56	120	15	LP-CC-10
1FB57	120	15	LP-CC-10
1FB58	120	15	LP-CC-10
1FB59	120	15	LP-CC-10
1FB60	120	15	LP-CC-10

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

AVERTISSEMENT
 TENSION DANGEREUSE!
 COUPER TOUTES LES TENSIONS ET
 OUVRIR LES SECTIONNEURS A DISTANCE.
 PUIS SUIVRE LES PROCEDURES DE
 VERIFICATION DE LA TENSION AVANT
 TOUTE INTERVENTION. VÉRIFIER QUE TOUTES
 LES CONDENSATEURS DES MOTEURS SONT
 DÉCHARGÉS. DANS LE CAS D'UNITE A
 VITESSE VARIABLE SE RAPORTER AUX
 INSTRUCTIONS DE L'ENTRAÎNEMENT POUR
 DÉCHARGER LES CONDENSATEURS.
 NE PAS RESPECTER CES MESURES DE
 SECURITE PEUT CAUSER LA MORT
 OU DES BLESSURES GRAVES POUVANT ETRE
 MORTELLES.

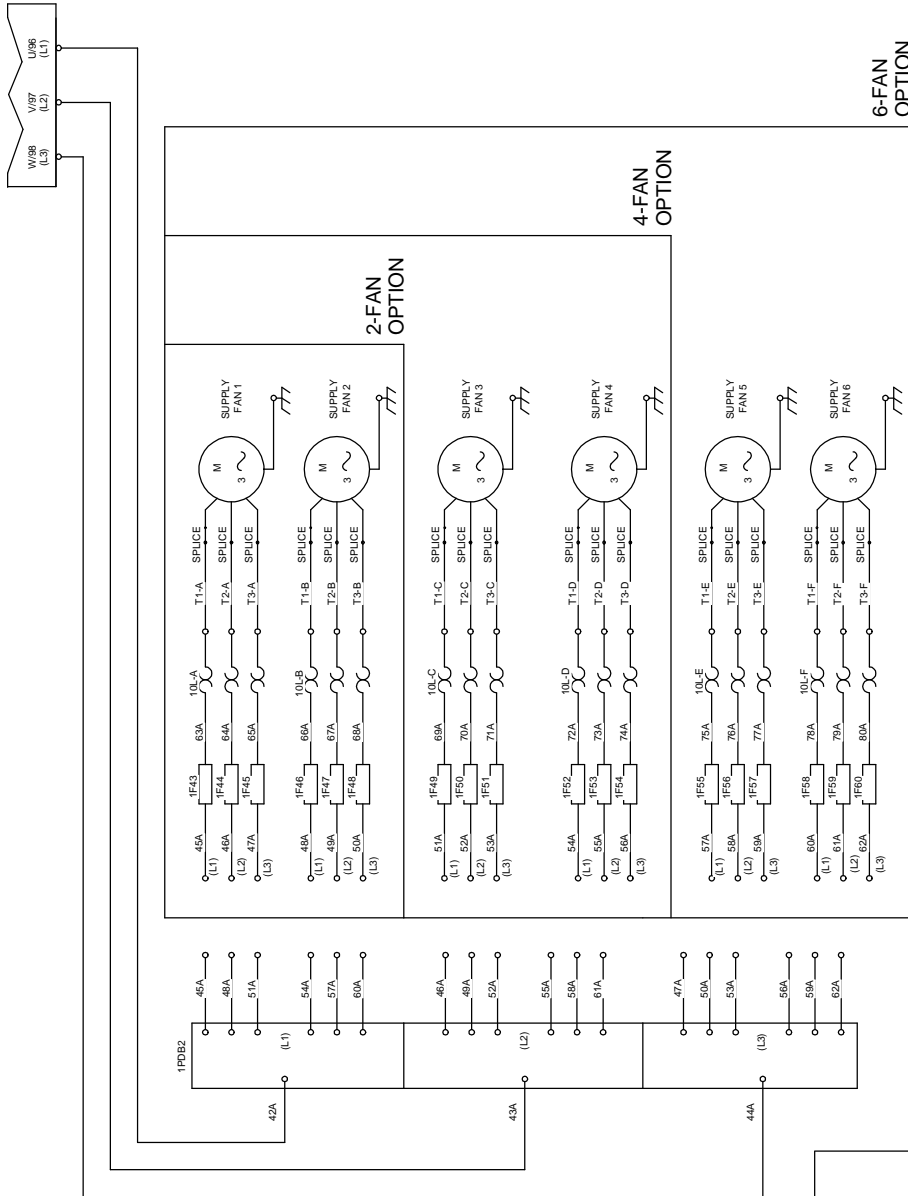
ADVERTENCIA
 ¡VOLTAJE PELIGROSO!
 DESCONECTE TODA LA ENERGÍA ELÉCTRICA,
 INCLUIDOS LOS SECCIONNEURS Y
 ETIQUETADO ANTES DE PROCEDER AL
 SERVICIO. ASEGURESE DE QUE TODOS
 LOS CONDENSADORES DE LOS MOTORES
 SEAN DESCARGADOS. EN EL CASO DE
 PARA LAS UNIDADES CON VELOCIDAD
 DIRECCION DE VELOCIDAD VARIABLE,
 REFERIRSE A LAS INSTRUCCIONES PARA LA
 DESCARGA DEL CONDENSADOR.
 EL NO REALIZARLO ANTERIORMENTE
 INDICADO, PODRIA OCASIONAR LA MUERTE
 O SERIAS LESIONES PERSONALES.

CAUTION
 USE COPPER CONDUCTORS ONLY!
 UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT
 OTHER TYPES OF CONDUCTORS.
 FAILURE TO DO SO MAY CAUSE DAMAGE TO THE
 EQUIPMENT.

ATTENTION
 N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!
 LES TERMINAUX DE L'UNITE NE SONT PAS
 CONÇUS POUR ACCEPTER D'AUTRES TYPES DE CONDUCTEURS.
 L'UTILISATION DE TOUT AUTRE CONDUCTEUR PEUT
 ENDOMMAGER L'EQUIPEMENT.

PRECAUCIÓN
 ¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
 LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS
 PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.
 SI NO LO HACE, PUEDE OCASIONAR DAÑO AL EQUIPO.

Accessory - Performance Climate Changer
 Item: A1 Qty: 1 Tag(s): RTU-1



DEVICE DESIGNATION	DESCRIPTION
1CB11	CIRCUIT BREAKER
1FR, 1F7	PRIMARY CONTROLLER FUSE
1F40 TO 1F42	VFD FUSES
1K3	START / STOP RELAY
1K5	LOW LIMIT RELAY
1PDB1	POWER DISTRIBUTION BLOCK
1TB13	TERMINAL STRIP CONTROL CIRCUIT
1U5	VFD CONTROLLER
3R1A TO 3R1F	MOTORS (FAN ARRAY)
1F63 TO 1F60	MOTOR FUSES (FAN ARRAY)
1K1	START / STOP RELAY (FAN ARRAY)
1O1A TO 1O1F	OVERLOAD RELAYS (FAN ARRAY)
1PDB2	POWER DISTRIBUTION BLOCK (FAN ARRAY)

NOTES:

- DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. PHANTOM LINES INDICATE CONTROL OPTION. REF. CONTROL PANEL SCHEMATIC FOR SPECIFIC DETAIL.
- ALL FIELD WIRING MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, STATE, AND LOCAL REQUIREMENTS. OTHER COUNTRIES APPLICABLE NATIONAL AND/OR LOCAL REQUIREMENTS SHALL APPLY. FIELD CONDUCTORS SHALL HAVE INSULATION RATING NOT LESS THAN 600V COPPER CONDUCTORS ONLY.
- MINIMUM CIRCUIT AMPACITY, MAXIMUM FUSE SIZE, AND DISCONNECT SIZE ARE CALCULATED BASED ON THE INVERTER INPUT LINE CURRENTS PER ARTICLE 430.2 OF THE NATIONAL ELECTRICAL CODE.
 - PROGRAM TERMINAL 18 AS RUN.
 - PROGRAM TERMINAL 27 INV / COASTING STOP.
 - CLOSURE TO RUN AUTO MODE OR BYPASS AUTO FOR OPTION VFD OR STARTER.
 - RELAYS (S)-CONTACTS SILVER-CADMIUM OXIDE. 16-HP 5AMP @ 240VAC. CONTACTS ARE NOT TO BE USED FOR COIL CONNECTIONS AND ACTUAL QUANTITY OF TRANSFORMER RELAYS.
- IF UNIT HAS SHIPPING SPLITS, WIRING WILL TERMINATE TO MODULE AT EACH SHIPPING SPLIT.
- ATTACH GROUND OR EQUIPMENT GROUND.
- AIRFLOW SWITCH INPUT, REFER TO LOW VOLTAGE SCHEMATIC.

⚠ 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 COMPLETELY. SPEED DRIVE VARIABLE 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 OUVRIRE LES SECTIONNEURS A DISTANCE. PUIS SUIVRE LES PROCEDURES DE VERROUILLAGE ET DES ETIQUETTES AVANT SERVICER. ASSUREZ-VOUS QUE LES CONDENSATEURS DES MOTEURS SONT DECHARGES. DANS LE CAS D'UNITES COMPORTANT DES ENTRAINEMENTS A VITESSE VARIABLE, SE REPORTER AUX INSTRUCTIONS POUR LEUR DECHARGER LES CONDENSATEURS. NE PAS RESPECTER CES MESURES DE PRECAUTION PEUT ENTRAINER DES BLESSURES GRAVES POUVANT ETRE MORTELLES.

⚠ ADVERTENCIA
 ¡VOLTAJE PELIGROSO!
 DESCONECTE TODA LA ENERGIA ELECTRICA, INCLUIDO LAS DESCONEXIONES REMOTAS Y SIGA LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO ANTES DE PROCEDER AL SERVICIO. SI LAS UNIDADES TIENEN MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. PARA LAS UNIDADES CON EJE DE DIRECCION DE VELOCIDAD VARIABLE, CONSULTAR LAS INSTRUCCIONES PARA LA DESCARGA DE LOS CONDENSADORES PARA EL MOTOR. NO ACEPTAR LAS OCASIONALES LESIONES PERSONALES.

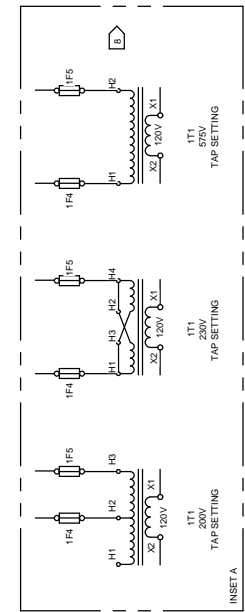
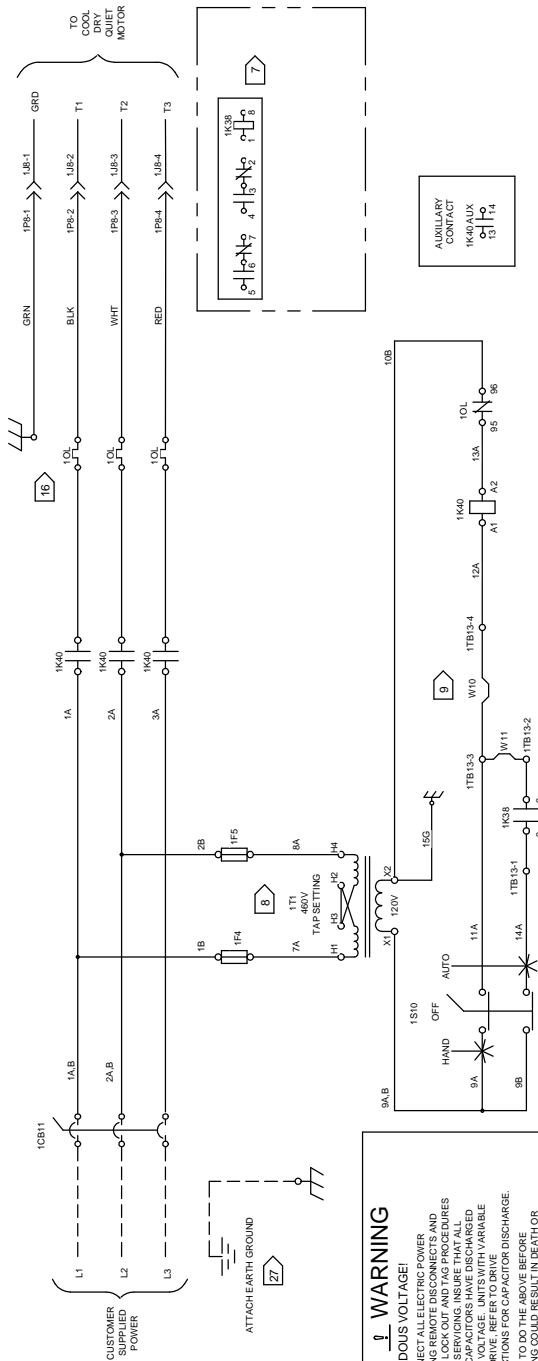
CAUTION
 USE COPPER CONDUCTORS ONLY!
 UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.
 FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

ATTENTION
 N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!
 LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.
 L'UTILISATION DE TOUT AUTRE CONDUCTEUR PEUT ENDOMMAGER L'EQUIPEMENT.

PRECAUCIÓN
 ¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
 LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.
 SI NO LO HACE, PUEDE OCASIONAR DAÑO AL EQUIPO.

10049-2

Accessory - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): RTU-1



- NOTE(S):
- DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. PHANTOM LINES INDICATE CONTROL OPTION. REF. CONTROL PANEL SCHEMATIC FOR SPECIFIC DETAIL.
 - ALL FIELD WIRING MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, STATE AND LOCAL REQUIREMENTS. OTHER CODES MAY APPLY. FIELD CONDUCTORS SHALL HAVE INSULATION RATING NOT LESS THAN 600V COPPER CONDUCTORS ONLY.
 - MINIMUM CIRCUIT AMPACITY, MAXIMUM FUSE SIZE, AND DISCONNECT SIZE ARE CALCULATED BASED ON THE INVERTER INPUT LINE CURRENTS PER ARTICLE 430-2 OF THE NATIONAL ELECTRICAL CODE.
 - CLOSES TO RUN AUTO MODE OR BYPASS AUTO FOR OPTION VFD OR STARTER.
 - RELAY(S) CONTACTS: SILVER-CADMIUM OXIDE, 16 HP 5 A @ 120 VAC, 1/3 HP 5 A @ 240 VAC; SEE 24V SCHEMATIC DIAGRAM FOR COIL CONNECTIONS AND ACTUAL QUANTITY OF TRANSFORMER RELAY(S).
 - 230V OR 575V REFER TO INSET A.
 - CONTROL TRANSFORMER SHOWN FOR 460V PRIMARY. FOR 200V OR 480V PRIMARY, REMOVE JUMPER AND INSTALL FIELD SAFETY CONTACT.
 - OVERLOAD RELAY TRIP SETTING MUST BE ADJUSTED TO MATCH MOTOR FULL LOAD CURRENT AS SHOWN ON THE MOTOR NAMEPLATE.
 - ATTACH GROUND OR EQUIPMENT GROUND.

REVISE DESIGNATION	DESCRIPTION
1CB11	CIRCUIT BREAKER
1F4 TO 1F5	PRIMARY CONTROL TRANSFORMER FUSES
1K38	STARTER CONTACTOR
1K40	OVERLOAD RELAY
1S10	HAND/OFF/AUTO SWITCH
1T1	PRIMARY CONTROL TRANSFORMER
1TB13	TERMINAL STRIP CONTROL CIRCUIT

PRIMARY CONTROL TRANSFORMER FUSES (CLASS LP-CO)		
FUSE	VOLTAGE	PN
1F4	200	KLDR-1/2
1F5	460	KLDR-1/4
	575	KLDR-1/4

AREA	DEVICE PREFIX	LOCATION CODE	LOCATION
1			HIGH VOLTAGE PANEL
2			LOW VOLTAGE PANEL (UNIT SCHEMATIC)
3			AIR HANDLER SECTION

⚠ WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER FROM THE UNIT AND FOLLOW LOCK OUT AND TAG PROCEDURES BEFORE SERVICING. INSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED COMPLETELY. SPEED VARIABLE 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!
DÉCONNECTEZ TOUS LES ÉLÉMENTS DE COURANT ÉLECTRIQUE DE L'UNITÉ AVANT DE COMMENCER LES TRAVAUX D'ENTRETIEN. SUIVRE LES PROCÉDURES DE VERROUILLAGE ET DES ÉTIQUETTES AVANT D'ENTREPRENDRE DES TRAVAUX. TOUS LES CONDENSATEURS DU MOTEUR SONT DÉCHARGÉS. DANS LE CAS D'UNITÉS À VITESSE VARIABLE, SE RÉFÉRER AUX INSTRUCTIONS D'ENTRETIEN POUR DÉCHARGER LES CONDENSATEURS. NE PAS RESPECTER CES MESURES DE PRÉCAUTION PEUT ENTRAINER DES BLESSURES GRAVES POUVANT ÊTRE MORTELLES.

⚠ ADVERTENCIA
¡VOLTAJE PELIGROSO!
DESCONECTE TODA LA ENERGÍA ELÉCTRICA ANTES DE EMPEZAR LOS TRABAJOS DE MANTENIMIENTO. SIGA LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO ANTES DE PROCEDER AL SERVICIO. TODOS LOS CONDENSADORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. PARA LAS UNIDADES CON VEJE DE VITESSE VARIABLE, SE REFIERIR A LAS INSTRUCCIONES PARA LA DESCARGA DEL CONDENSADOR. EL NO REALIZARLO ANTERIORMENTE EN EL REALIZARLO OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.

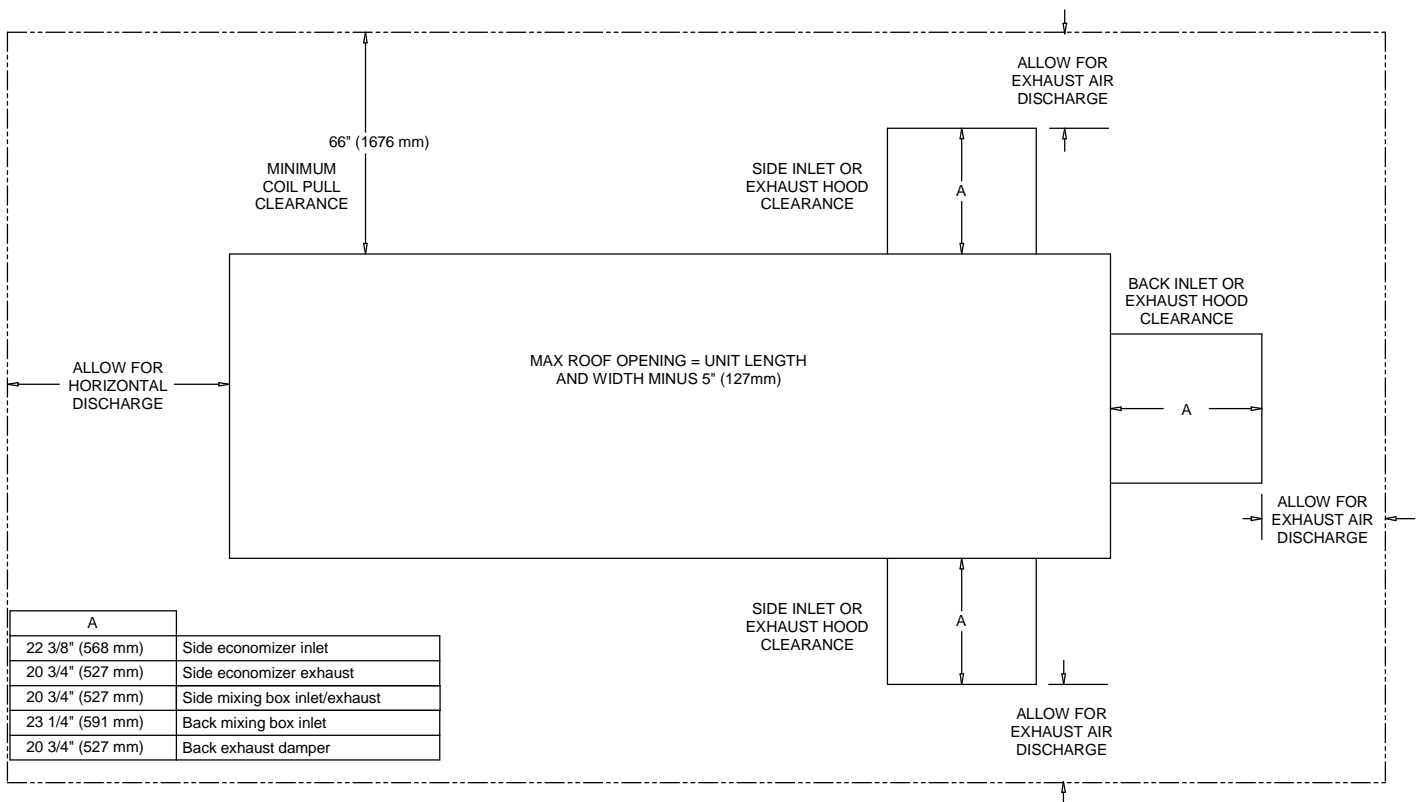
CAUTION
USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.
FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

ATTENTION
N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!
LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.
L'UTILISATION DE TOUT AUTRE CONDUCTEUR PEUT ENDOMMAGER L'ÉQUIPEMENT.

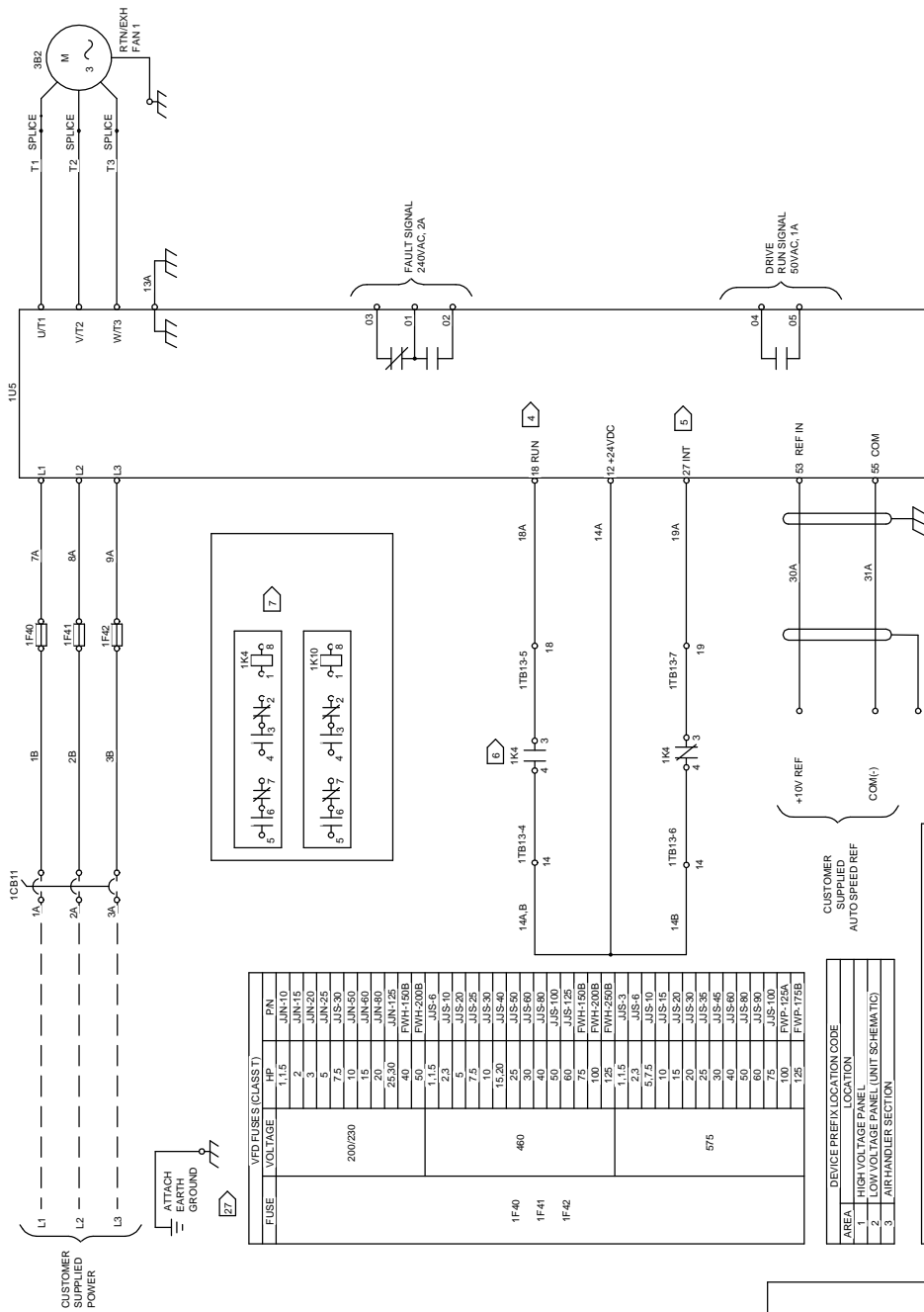
PRECAUCIÓN
¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.
SI NO LO HACE, PUEDE OCASIONAR DAÑO AL EQUIPO.

20083

Accessory - Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2



Accessory - Performance Climate Changer
 Item: A2 Qty: 1 Tag(s): RTU-2



- NOTES:
- PANEL LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. PHANTOM LINES INDICATE CONTROL OPTION. REF: CONTROL PANEL SCHEMATIC FOR SPECIFIC DETAIL.
 - ALL FIELD WIRING MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC), STATE AND LOCAL REQUIREMENTS. OTHER COUNTRIES APPLICABLE NATIONAL AND/OR LOCAL REQUIREMENTS SHALL APPLY. FIELD CONDUCTORS SHALL HAVE INSULATION RATINGS NOT LESS THAN 600V COPPER CONDUCTORS ONLY.
 - THE MINIMUM CIRCUIT AMPACITY, THE MAXIMUM FUSE SIZE, AND DISCONNECT SIZE ARE CALCULATED BASED ON THE INVERTER INPUT LINE CURRENTS PER ARTICLE 430-2 OF THE NATIONAL ELECTRICAL CODE.

LEGEND

DEVICE DESIGNATION	DESCRIPTION
1CB11	CIRCUIT BREAKER
1F40 TO 1F42	VDF FUSES
1K10	LOW LIMIT RELAY
1K14	START/STOP RELAY
1TB13	TERMINAL STRIP CONTROL CIRCUIT
1U5	VFD CONTROLLER
3B2	MOTOR 1

WARNING
 HAZARDOUS VOLTAGE!
 DISCONNECT ALL ELECTRIC POWER FROM THE UNIT BEFORE ANY MAINTENANCE, REPAIR, OR SERVICE. BEFORE SERVICING, INSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED TO ZERO 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 DÉCONNECTER TOUTE L'ÉNERGIE ÉLECTRIQUE AVANT TOUTE INTERVENTION. VÉRIFIER QUE TOUS LES CONDENSATEURS DES MOTEURS SONT DÉCHARGÉS À ZÉRO VOLTS. LES UNITÉS À VITESSE VARIABLE, SE REPORTER AUX INSTRUCTIONS DE L'ENTRAÎNEMENT POUR DÉCHARGER LES CONDENSATEURS. NE PAS RESPECTER CES MESURES DE PRÉCAUTION PEUT ENTRAINER DES BLESSURES GRAVES POUVANT ÊTRE MORTELLES.

ADVERTENCIA
 ¡VOLTAJE PELIGROSO!
 DESCONECTE TODA LA ENERGÍA ELÉCTRICA, INCLUIDO LAS DESCONEXIONES REMOTAS Y EL INTERRUPTOR DE EMERGENCIA, ANTES DE TRABAJAR EN EL EQUIPO. ASEGURESE DE QUE TODOS LOS CAPACITORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACEENADO. PARA LAS UNIDADES CON VELOCIDAD VARIABLE, CONSULTE LAS INSTRUCCIONES PARA LA DESCARGA DEL CONDENSADOR. EL NO REALIZARLO ANTERIORMENTE INDICADO, PODRÍA OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.

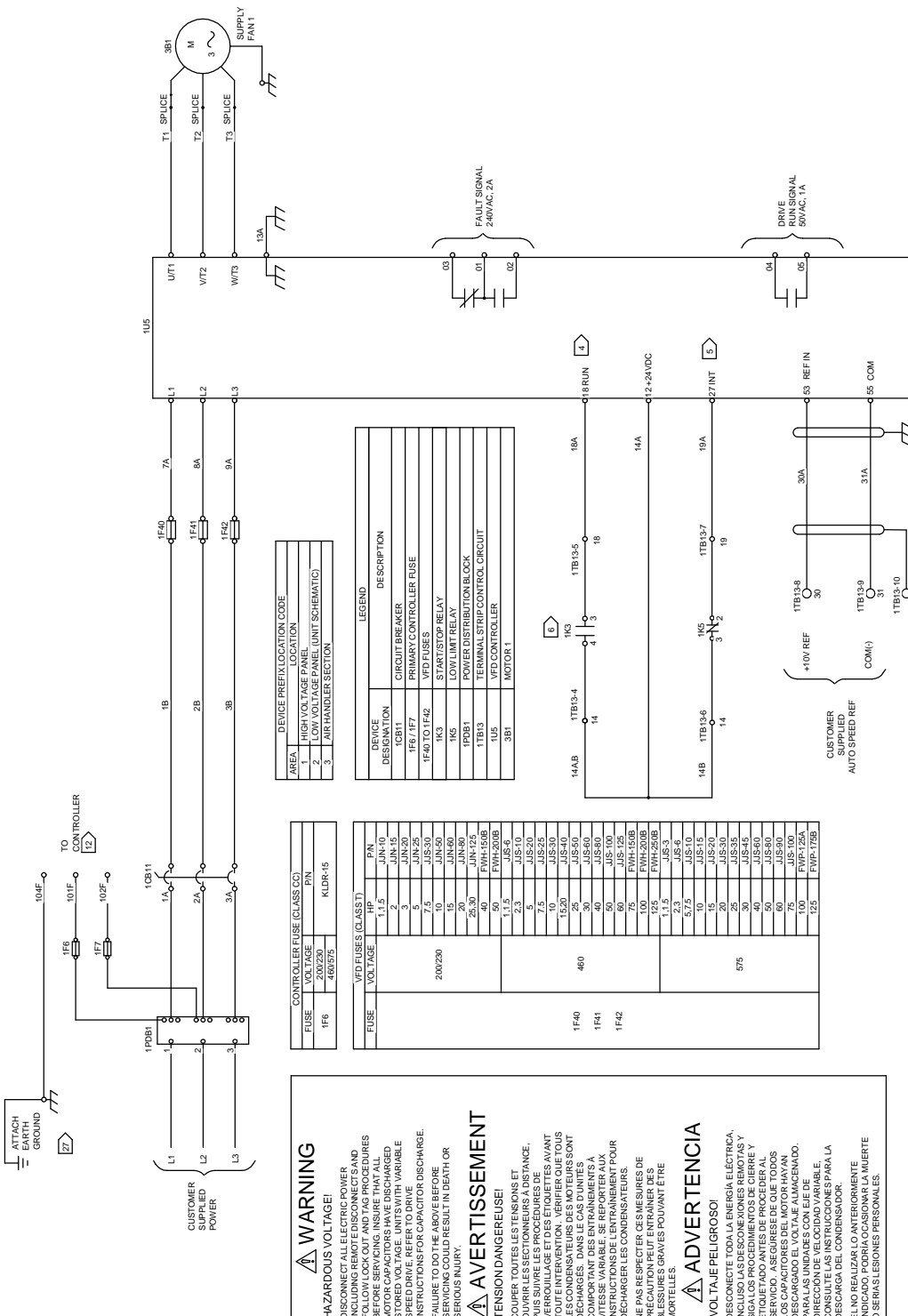
CAUTION
 USE COPPER CONDUCTORS ONLY!
 UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.
 FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

ATTENTION
 UTILISER QUE DES CONDUCTEURS EN CUIVRE!
 LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS. L'UTILISATION DE TOUT AUTRE CONDUCTEUR PEUT ENDOMMAGER L'EQUIPEMENT.

PRECAUCIÓN
 ¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
 LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES. SI NO LO HACE, PUEDE OCASIONAR DAÑO AL EQUIPO.

10-143

Accessory - Performance Climate Changer
Item: A2 Qty: 1 Tag(s): RTU-2



WARNING
 HAZARDOUS VOLTAGE!
 DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECT AND FOLLOW LOCK OUT AND TAG PROCEDURES BEFORE WORKING ON THIS UNIT. MOTOR CAPACITORS HAVE DISCHARGE STORED VOLTAGE. UNITS WITH DISCHARGE SPEED DRIVE REFER TO DRIVE INSTRUCTIONS FOR CAPACITOR DISCHARGE. ALWAYS DISCHARGE CAPACITORS ABOVE BEFORE SERVICE TO AVOID RESULT IN DEATH OR SERIOUS INJURY.

AVERTISSEMENT
 TENSION DANGEREUSE!
 COUPER TOUTES LES TENSIONS ET OUVRIR LES SECTIONNEURS A DISTANCE. PUIS SUIVRE LES PROCEDURES DE VERIFICATION DE LA VERIFICATION DE LA TOUTE INTERVENTION. VÉRIFIER QUE TOUTS LES CONDENSATEURS DES MOTEURS SONT DÉCHARGÉS. DANS LE CAS D'UNITES 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, INCLUIDO LAS DESCONEXIONES REMOTAS Y SIGA LOS PROCEDIMIENTOS DE CIERRE Y VERIFICACIÓN DE LA VERIFICACIÓN DE LOS CAPACITORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. PARA LAS UNIDADES CON VELOCIDAD VARIABLE, CONSULTAR LAS INSTRUCCIONES PARA LA DESCARGA DEL CONDENSADOR. EL NO REALIZAR LO ANTERIORMENTE INDICADO, PODRÍA OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.

AREA	LOCATION
2	HIGH VOLTAGE PANEL (UNIT SCHEMATIC)
3	AIR HANDLER SECTION

DEVICE	DESCRIPTION
ICB11	CIRCUIT BREAKER
1F6 / 1F7	PRIMARY CONTROL FUSE
1F40 / 1F42	VFD FUSES
1K3	START/STOP RELAY
1K5	LOW LIMIT RELAY
1PDB1	POWER DISTRIBUTION BLOCK
1TB13	TERMINAL STRIP CONTROL CIRCUIT
1U5	VFD CONTROLLER
3B1	MOTOR 1

FUSE	VOLTAGE	HP	PN
1F6	480/575	1.1.5	JUN-10
		2	JUN-15
		5	JUN-25
		7.5	JUN-30
		10	JUN-50
		15	JUN-60
		25	JUN-75
		25.30	JUN-125
		40	FVN-150B
		50	FVN-200B
		1.1.5	JUN-10
		2	JUN-15
		5	JUN-25
		7.5	JUN-30
		10	JUN-50
		15	JUN-60
		25	JUN-75
		30	JUN-80
		40	JUN-100
		50	JUN-125
		60	JUN-150
		75	JUN-175
		100	FVN-200B
		125	FVN-250B
		1.1.5	JUN-3
		2	JUN-6
		5	JUN-15
		10	JUN-20
		15	JUN-30
		20	JUN-50
		25	JUN-60
		30	JUN-75
		40	JUN-100
		50	JUN-125
		60	JUN-150
		75	JUN-175
		100	FVN-200B
		125	FVN-250B

CAUTION
 USE COPPER CONDUCTORS ONLY!
 UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.
 EQUIPMENT DAMAGE TO THE EQUIPMENT.

ATTENTION
 N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!
 LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.
 L'UTILISATION DE TOUT AUTRE CONDUCTEUR PEUT ENDOMMAGER L'ÉQUIPEMENT.

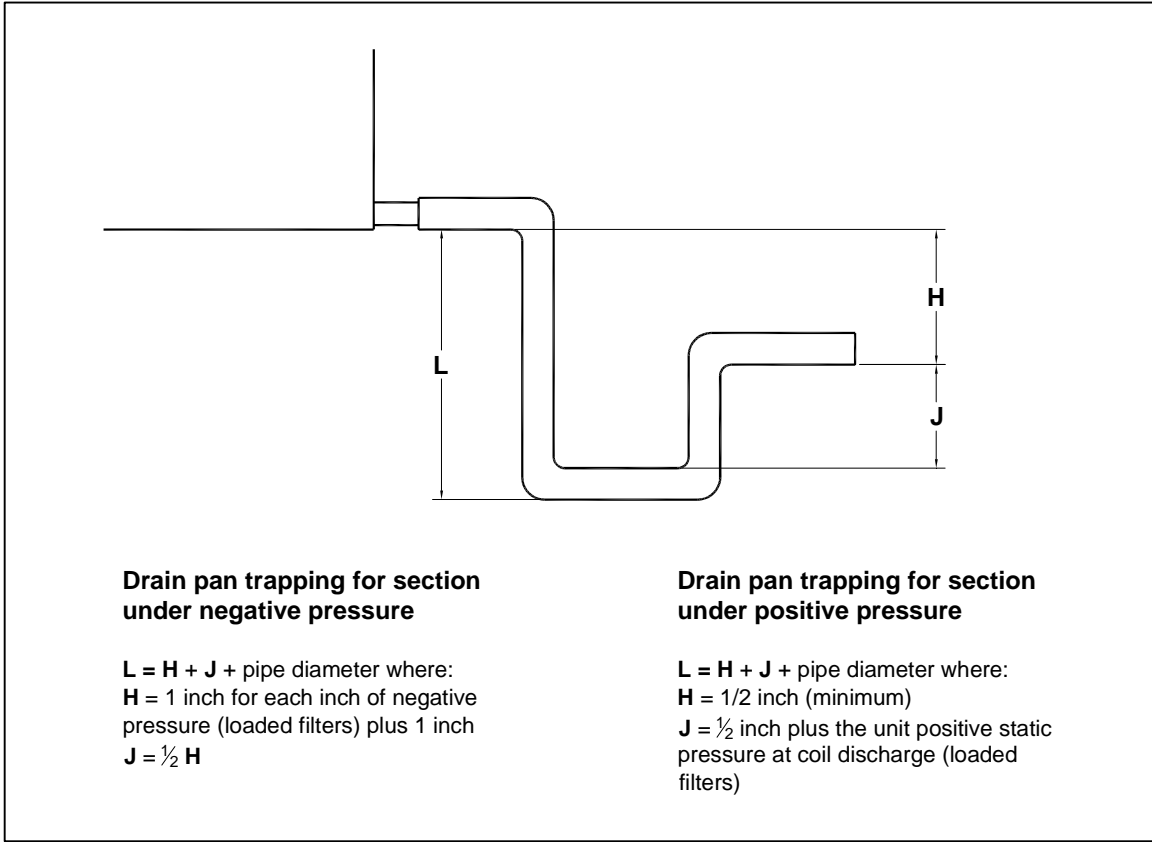
PRECAUCIÓN
 ¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
 LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.
 SI NO LO HACE, PUEDE OCASIONAR DAÑO AL EQUIPO.

- NOTES:
- DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. PHANTOM LINES INDICATE CONTROL OPTION. REF. CONTROL PANEL SCHEMATIC FOR SPECIFIC DETAIL.
 - ALL FIELD WIRING MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC), STATE AND LOCAL REQUIREMENTS. OTHER COUNTRIES FIELD WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. CONDUCTORS SHALL HAVE INSULATION RATINGS NOT LESS THAN 600V COPPER CONDUCTORS ONLY.
 - THE MINIMUM CIRCUIT AMPACITY, THE MAXIMUM FUSE SIZE, AND DISCONNECT SIZE ARE CALCULATED BASED ON THE INVERTER INPUT LINE CURRENTS PER ARTICLE 430-2 OF THE NATIONAL ELECTRICAL CODE.
 - PROGRAM TERMINAL 18 AS RUN.
 - PROGRAM TERMINAL 27 INV. COASTING STOP.
 - CLOSES TO RUN AUTO MODE OR BYPASS AUTO FOR OPTION VFD OR STARTER.
 - RELAY(S)-CONTACTS SILVER-CADMIUM OXIDE: 1/8 HP 5AMP @ 120V AC, 1/3 HP 5AMP @ 240V AC. SEE 2AV SCHEMATIC DIAGRAM FOR COIL CONNECTIONS AND ACTUAL IDENTIFY OF TRANSFORMER RELAYS.
 - WIRING SHIPPING SPITS WIRING WILL TERMINATE TO MODULE AT EACH SHIPPING SPIT.
 - ATTACH GROUND OR EQUIPMENT GROUND.

Accessory - Performance Climate Changer

Trap Schedule

Item: A1, A2 Qty: 2 Tag(s): RTU-1 , RTU-2



Unit Tag(s)	Unit Size	Entering Ext. Static Pressure (in H2O)	Discharge Ext. Static Pressure (in H2O)	Drain pan Section Location	Recommended Trap Dimensions ¹			Selected Baserail Height (in) ¹
					H (in)	J (in)	L (in)	
RTU-1 ²	Unit size 25	1.250	1.250	Coil section [13]	0.500	2.219	3.719	6.000
RTU-2 ²	Unit size 8	1.000	1.000	Coil section [9]	5.214	2.607	8.821	6.000

¹ Trap height and selected baserail heights should be reviewed to determine appropriate housekeeping pad height.

² The external static pressure used for fan selection was assumed to be divided 50% to entering duct external static pressure and 50% discharge external static pressure.

Accessory - Performance Climate Changer

Filter Schedule

Item: A1, A2 Qty: 2 Tag(s): RTU-1 , RTU-2

Unit Tag(s)	Unit Size	Filter Location	Filter Arrangement	Filter Depth	Filter Type	MERV Rating	Filter Quantity	Filter Size
RTU-1	Unit size 25	Filter section [8]	Flat filter	4in. filter frame	No prefilter	Customer supplied	-	-
					Pleated media - run set	MERV 8	3 2 6	12in.x24in. 16in.x20in. 20in.x20in.
		Filter section [16]	Short Bag/Cartridge filter	Bag/cartridge filter frame	No prefilter	Customer supplied	3 6	12in.x24in. 20in.x24in.
					12in. cartridge - 95% eff - run set	MERV 15	3 6	12in.x24in. 20in.x24in.
RTU-2	Unit size 8	Filter section [5]	Flat filter	4in. filter frame	No prefilter	Customer supplied	-	-
					Pleated media - run set	MERV 8	1 1	20in.x24in. 24in.x24in.
		Filter section [6]	Short Bag/Cartridge filter	Bag/cartridge filter frame	No prefilter	Customer supplied	4	24in.x12in.
					12in. cartridge - 95% eff - run set	MERV 15	4	24in.x12in.

Field Wiring - Performance Climate Changer**MCA MOP Schedule****Item: A1, A2 Qty: 2 Tag(s): RTU-1 , RTU-2**

Unit Tag(s)	Circuit	Circuit Description	Voltage/Phase/Hz	MCA (A)	MOP (A)
RTU-1	1	Supply fan + controls-LL	460/3/60	43.15	77.15
	2	Return/booster fan motor(s)	460/3/60	12.07	21.73
	3	Cool-dry quiet	460/3/60	0.37	0.49
RTU-2	1	Supply fan + controls-LL	460/3/60	10.90	19.10
	2	Return/booster fan motor(s)	460/3/60	4.25	7.65