Tag Data - Performance Climate Changer (Qty: 3)

Item	Tag(s)	Qty	Description	Model Number
A1	AHU-1	1	CSAA010	CSAA010UA
A2	AHU-2	1	CSAA004	CSAA004UA
A3	AHU-3	1	CSAA004	CSAA004UA

Product Data - Performance Climate Changer

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

Unit level options

Indoor unit
Unit size 10
6in. integral base frame
UL listed unit
Multiple composite handles/latches
170.88 Unit length
No seismic certification required

Controls and VFD/starter

Trane TR150 VFD/disconnect

Air mixing section (Pos #1)

Air mixing section
Mixing box w/filter
Door- left side
Back damper - opposed blade
Top damper - opposed blade
2in. filter frame
MERV 8 Pleated media - 2 sets (Fld)

Coil section (Pos #2)

Horizontal coil
Medium
Stainless steel drain pan
Left side - drain connection
Left side - coil supply
Service panel coil connection side
Cooling coil
Chilled water
Type "UW" coil
6 rows
133 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)
Galvanized steel coil casing
Turbulators

Access section (Pos #3)

Access/blank section
Medium
Door- left side

Coil section (Pos #4)

Horizontal coil
Small
Galvanized drain pan
Left side - drain connection
Left side - coil supply
Service panel coil connection side
Heating coil
Hot water
Type "5W" coil
1 row
135 fins per foot nominal fin spacing
Aluminum fins
Prima flo H (Hi efficient)
.020" (0.508mm) copper tubes

5/8in. tube diameter (15.875 mm)
Galvanized steel coil casing
Turbulators

Access section (Pos #5)
Access/blank section
Medium
Door- left side

Fan section (Pos #6)
Fan section
Supply fan
Door- left side
18.25in. direct-drive plenum, 80% width
Twelve blades
1 Fan quantity
Plenum fan
Left side drive
NEMA premium compliant ODP
Voltage 200-208/3
5hp
1800 RPM
Inverter balance with SGR
Trane TR150 VFD

Discharge plenum (Pos #7)
Discharge plenum
Front rectangular opening
Top rectangular opening

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

Unit level options
Indoor unit
Unit size 4
6in. integral base frame
UL listed unit
Multiple composite handles/latches
161.13 Unit length
Field Provided (mtrs, lights, controls)
No seismic certification required

Controls and VFD/starter
Trane TR150 VFD/disconnect

Air mixing section (Pos #1)
Air mixing section
Mixing box w/filter
Door- right side
Back damper - opposed blade
Top damper - opposed blade
2in. filter frame
MERV 8 Pleated media - 2 sets (Fld)

Coil section (Pos #2)
Horizontal coil
Medium
Stainless steel drain pan
Right side - drain connection
Right side - coil supply
Service panel coil connection side
Cooling coil
Chilled water
Type "UW" coil
8 rows
116 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)

Galvanized steel coil casing
Turbulators

Access section (Pos #3)
Access/blank section
Medium
Door- right side

Coil section (Pos #4)
Horizontal coil
Small
Galvanized drain pan
Right side - drain connection
Right side - coil supply
Service panel coil connection side
Heating coil
Hot water
Type "UW" coil
2 rows
77 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)
Galvanized steel coil casing
Turbulators

Access section (Pos #5)
Access/blank section
Medium
Door- right side

Fan section (Pos #6)
Fan section
Supply fan
Door- right side
12.25in. direct-drive plenum, 80% width
Twelve blades
1 Fan quantity
Plenum fan
Right side drive
NEMA premium compliant ODP
Voltage 200-208/3
1.5hp
1800 RPM
Inverter balance with SGR
Trane TR150 VFD

Discharge plenum (Pos #7)
Discharge plenum
Top rectangular opening

Item: A3 Qty: 1 Tag(s): AHU-3

Unit level options
Indoor unit
Unit size 4
2.5in. integral base frame
UL listed unit
Multiple composite handles/latches
161.13 Unit length
Field Provided (mtrs, lights, controls)

Controls and VFD/starter
Trane TR150 VFD/disconnect

Air mixing section (Pos #1)
Air mixing section
Mixing box w/filter
Door- left side
Back damper - opposed blade

Front full face opening
Top damper - opposed blade
2in. filter frame
MERV 8 Pleated media - 2 sets (Fld)

Coil section (Pos #2)

Horizontal coil
Medium
Stainless steel drain pan
Left side - drain connection
Left side - coil supply
Service panel coil connection side
Cooling coil
Chilled water
Type "UW" coil
8 rows
157 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)
Galvanized steel coil casing
Turbulators

Access section (Pos #3)

Access/blank section
Medium
Door- left side

Coil section (Pos #4)

Horizontal coil
Small
Galvanized drain pan
Left side - drain connection
Left side - coil supply
Service panel coil connection side
Heating coil
Hot water
Type "UW" coil
2 rows
98 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)
Galvanized steel coil casing
Turbulators

Access section (Pos #5)

Access/blank section
Medium
Door- left side

Fan section (Pos #6)

Fan section
Supply fan
Door- left side
12.25in. direct-drive plenum, 80% width
Nine blades
1 Fan quantity
Plenum fan
Left side drive
NEMA premium compliant ODP
Voltage 200-208/3
3hp
3600 RPM
Inverter balance with SGR
Trane TR150 VFD/disconnect

Discharge plenum (Pos #7)

Discharge plenum
Front rectangular opening
Right rectangular opening

Fld = Furnished by Trane U.S. Inc. dba Trane / Installed by Others

Mechanical Specifications - Performance Climate Changer
Item: A1 - A3 Qty: 3 Tag(s): AHU-1, AHU-2, AHU-3

GENERAL

Per ASHRAE 62.1 recommendation, indoor air handling units will be shipped stretch-wrapped to protect unit from in-transit rain and 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.

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 exterior and interior indoor AHU panels will be made of galvanized steel.

Unit Paint

Unit to ship unpainted from factory. Unit to be painted by 3rd party finisher, or by painting contractor at job site.

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.

Unit base

Manufacturer to provide a full perimeter integral base frame for either ceiling suspension of units or to support and raise all sections of the unit for proper trapping. Indoor unit base frame will either be bolted construction or welded construction. All outdoor unit base frames shall be welded construction. For indoor units, refer to schedule for base height and construction type. Contractor will be responsible for providing a housekeeping pad when unit base frame is not of sufficient height to properly trap unit. Unit base frames not constructed of galvanized steel shall be chemically cleaned and coated with both a rust-inhibiting primer and finished coat of rust-inhibiting enamel. Unit base height to be included in total height required for proper trap height.

Insulation

Panel insulation shall provide a minimum thermal resistance (R) value of 13 ft^2-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

In sections provided with a drain pan, the drain pan shall be designed in accordance with ASHRAE 62.1. To address indoor air quality (IAQ) the drain pan shall be sloped in two planes promoting positive drainage to eliminate stagnant water conditions. Drain pan shall be insulated, and of double wall construction. The outlet shall be the lowest point on the pan, and shall be of sufficient diameter to preclude drain pan overflow under normally expected operating conditions. All drain pans connections shall have a threaded connection, extending a minimum of 2-1/2" beyond the unit base, and shall be made from the same material as the drain pan. Drain pan located under a cooling coil shall be of sufficient size to collect all condensate produced from the coil.
Refer to Product Data for specific information on which sections are supplied with a drain pan, the drain pan material and connection location.

Access Door Construction

Access doors shall be 2" double wall construction. Interior and exterior door panels shall be of the same construction as the interior and exterior wall panels respectively. All doors shall be provided with a thermal break construction of door panel and door frame. Gasketing shall be provided around the full perimeter of the doors to prevent air leakage. Surface mounted handles shall be provided to allow quick access to the interior of the functional section and to prevent through cabinet penetrations that could likely weaken the casing leakage and thermal performance. Handle hardware shall be designed to prevent unintended closure. Access doors shall be hinged and removable for quick easy access. Hinges shall be interchangeable with the door handle hardware to allow for alternating door swing in the field to minimize access interference due to unforeseen job site obstructions. Door handle hardware shall be adjustable and visually indicate locking position of door latch external to the section. Door hinges shall be galvanized.

All doors shall be a minimum of 60" high when sufficient height is available or the maximum height allowed by the unit height.

Door handles shall be provided for each latching point of the door necessary to maintain the specified air leakage integrity of the unit. Optionally for indoor AHUs and as standard on outdoor AHUs, outward swing doors are provided with a single handle linked to multiple latching points. An optional shatterproof window shall be provided in access doors where indicated on the plans. Window shall either be single pane, or thermal dual pane, as defined on schedule. Window shall be capable of withstanding unit operating pressures and shall be safe for viewing UV-C lamps.
Refer to Product Data for specific information on which sections are supplied with an access door, the door location, a single handle and a window.

MIXING SECTION

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

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 3 cfm/ft^2 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.

Filters

Mixing sections shall be provided with a filter rack as indicated in the Product Data and As-Built sections of the submittal.

2-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.

COIL SECTION WITH FACTORY INSTALLED COIL

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 not certified by AHRI. 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 connections are constructed of cast iron with female connections, steel block with female connections or steel pipe with male connections. Type P or TT coil connections do not extend out of unit casing. All other water coil types have connections that extend out beyond unit casing.

Tubes are 1/2" [13mm] OD 0.016" [0.406mm] or 5/8" [16mm] OD 0.020" [0.508 mm] thick copper.

ACCESS/INSPECTION 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.*

On units supplied with plenum fans, expanded metal door guard(s) shall be supplied on the access door(s) to the fan and those downstream access door(s) where unintended access to the plenum fan could occur. Door guard is intended to deter unauthorized entry and incidental contact with rotating components. *Refer to the Product Data section for fans with access door guard(s).*

Starter/VFD shall be mounted externally in a NEMA Type 1 enclosure on the supply fan section. An external disconnect shall be mounted through-the-door to the starter/VFD to disconnect full power from starter/VFD.

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.

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 provide 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.

DISCHARGE PLENUM SECTION

Plenums shall be provided to efficiently turn air and provide sound attenuation. Discharge plenum opening types and sizes shall be scaled to meet engineering requirements. The vertical discharge plenum height may be scaled to accommodate the appropriate discharge duct height.

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.

Indoor units shall be shipped on an integral base frame (variable from the standard 2.5" to 8" height) for the purpose of mounting units to a housekeeping pad and providing additional height to properly trap condensate from the unit. The integral base frame may be used for ceiling suspension, external isolation, or as a housekeeping pad. Indoor sizes 3 to 30 will also be shipped with a shipping skid designed for forklift transport. Refer to the unit As-Built or Product Data section of the submittal for the base frame height of each unit.

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.

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

TRANE

Job Name	UNE Alumni Hall
User Name	(B16)Daniel Broderick
Address	Portland ME

Performance Climate Changer	AHU-1
Quantity	1
Job Comments	

Unit level options Module Position: 0

Actual airflow	4650 cfm	Shipping split type	Factory splits
Unit elevation	0.00 ft	Door handle type - unit level	Multiple composite handles/latches
Unit size	10	Circuit number 1	Supply fan motor(s)
Integral base frame	6in. Integral base frame	FLA circuit 1	15.70 A
UL listed unit	UL listed unit	Fuse size circuit 1	45.00 A
High voltage location	Left	MCA circuit 1	27.50 A
Length	170.875 in	MOP circuit 1	49.50 A
Width	61.500 in	Supply fan motor horsepower	5 HP
Installed weight	2009.1 lb	Marine LED lights in unit	No marine LED lights in unit
Rigging weight	1932.2 lb	Paint	Unpainted/field painted outdoor

Controls and VFD/starter Module Position: 0

Factory controls package	No factory mount	Total number of control points	0 control points
Automatic Selection	No auto selection	NEMA SF	VFD
Controller mounting	No mount	VFD/Starter location supply fan	External mounting
Controller type	No controller	Fan wheel balance SF	Inverter balance with SGR
LCD screen	No LCD	NEMA RF/EF	No NEMA
Design sequence - controls	H	VFD/Starter location ret/exh fan	No mounting
Prepackaged solution option used	PPS common configuration not used		

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.

1

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

Air mixing section

Module Position: 1

Section type	Air mixing section	Filter condition	Mid-life
Unit size	10	Filter airflow	4650 cfm
Mixing section type	with filter	Opening 1 back - airflow	4650 cfm
Filter frame	2"	Opening 1 front - airflow	4650 cfm
Filter type 1 - run set	Pleated media - MERV 8	Opening 1 top - airflow	4650 cfm
Side access door location	Left	Opening 1 back total pressure drop	0.244 in H2O
Back opening type	Opposed blade damper	Opening 1 top total pressure drop	0.244 in H2O
Back air path	Entering	Greatest entry PD	0.244 in H2O
Back air path type	Outside	Opening 1 back - area	4.16 sq ft
Back inlet type	Ducted	Opening 1 back - face velocity	1119 ft/min
Front opening type	Full face opening	Opening 1 back - pressure drop	0.244 in H2O
Front air path	Leaving	Opening 1 front - area	12.48 sq ft
Top opening type	Opposed blade damper	Opening 1 top - area	4.16 sq ft
Top air path	Entering	Opening 1 top - face velocity	1119 ft/min
Top air path type	Return	Opening 1 top - pressure drop	0.244 in H2O
Top inlet type	Ducted	Filter area	13.89 sq ft
Bottom opening type	No opening	Filter face velocity	335 ft/min
Right side opening type	No opening	Filter pressure drop	0.586 in H2O
Left side opening type	No opening	Side access door	Yes
Design sequence	G	Total mixing section pressure drop	0.830 in H2O
Actuator	No		

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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.

2

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

Coil section

Module Position: 2

Coil se [4]-1

Section type	Horizontal coil	Fluid type	Propylene glycol
Unit size	10	Coil fluid percentage	30.00 %
Section size	Medium	Coil type	UW
Coil application	Cooling coil	Rows	6
Changeover coil	No	Fin type	Delta flo E (energy efficient)
System type	Chilled water	Fin material	Aluminum fins
Coil supply/cabinet side	Left	Tube diameter	1/2in. tube diameter (12.7 mm)
Coil casing	Galvanized	Tube mat/wall thickness	.016" (0.406mm) copper tubes
Coil height	Unit coil height	Turbulators	Yes
Extended drain and vent	Holes only	Corrosion resistant coating	None
Drain pan	Stainless steel	Coil face velocity	466 ft/min
Drain connection location	Left	Air pressure drop	0.543 in H2O
Design sequence	E	J trap dimension	1.831 in
Apply AHRI ranges	No	H trap dimension	3.662 in
Coil performance airflow	4650 cfm	Leaving fluid temperature	57.00 F
Coil elevation	0.00 ft	Fluid pressure drop	5.88 ft H2O
Entering dry bulb	80.00 F	Fluid volume	6.64 gal
Entering wet bulb	63.80 F	Fluid velocity	2.05 ft/s
Leaving dry bulb	53.40 F	Coil face area	9.98 sq ft
Leaving wet bulb	53.05 F	Coil rigging weight	173.3 lb
Sensible capacity	135.79 MBh	Coil installed weight	235.3 lb
Total capacity	146.23 MBh	Coil section pressure drop	0.543 in H2O
Nominal fin spacing	133 Per Foot	Section length	14.000 in
Entering fluid temperature	45.00 F	Section weight	355.7 lb
Fluid temperature rise	12.00 F	Side access door	No
Standard fluid flow rate	26.36 gpm	UV light	No
Coil fouling factor	0.00000 hr-sq ft-deg F/Btu		

Access section

Module Position: 3

Section type	Access/blank/turning	Back opening	Full Face
Unit size	10	Design sequence	B
Section size	Medium	Section length	14.000 in
Side access door location	Left	Section weight	97.4 lb
Door swing direction	Outward swing	Side access door	Yes
Front opening	Full Face		

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.

3

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

Coil section — Module Position: 4

Coil se [2]-1

Section type	Horizontal coil	Coil type	5W
Unit size	10	Rows	1
Section size	Small	Fin type	Prima flo H (Hi efficient)
Coil application	Heating coil	Fin material	Aluminum fins
Changeover coil	No	Tube diameter	5/8in. tube diameter (15.875 mm)
System type	Hot water	Tube mat/wall thickness	.020" (0.508mm) copper tubes
Coil supply/cabinet side	Left	Turbulators	Yes
Coil casing	Galvanized	Corrosion resistant coating	None
Coil height	Unit coil height	Coil face velocity	506 ft/min
Extended drain and vent	Holes only	Air pressure drop	0.124 in H2O
Drain pan	Galvanized	J trap dimension	1.893 in
Drain connection location	Left	H trap dimension	3.786 in
Design sequence	E	Leaving fluid temperature	140.00 F
Apply AHRI ranges	No	Fluid pressure drop	1.07 ft H2O
Coil performance airflow	4650 cfm	Fluid volume	1.80 gal
Coil elevation	0.00 ft	Fluid velocity	1.30 ft/s
Entering dry bulb	40.00 F	Total cap top or single coil	201.72 MBh
Leaving dry bulb	80.00 F	Coil face area	9.19 sq ft
Total capacity	201.72 MBh	Coil rigging weight	57.0 lb
Nominal fin spacing	135 Per Foot	Coil installed weight	72.0 lb
Entering fluid temperature	180.00 F	Coil section pressure drop	0.124 in H2O
Fluid temperature drop	40.00 F	Section length	10.000 in
Standard fluid flow rate	10.60 gpm	Section weight	172.2 lb
Coil fouling factor	0.00025 hr-sq ft-deg F/Btu	Side access door	No
Fluid type	Propylene glycol	UV light	No
Coil fluid percentage	30.00 %		

Access section — Module Position: 5

Section type	Access/blank/turning	Back opening	Full Face
Unit size	10	Design sequence	B
Section size	Medium	Section length	14.000 in
Side access door location	Left	Section weight	107.1 lb
Door swing direction	Outward swing	Side access door	Yes
Front opening	Full Face		

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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.

4

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

Fan section — Module Position: 6

Fan sec [6]-1			
Section type	Fan	Minimum temperature	40.00 F
Fan application	Supply fan	Design temperature	70.00 F
Unit size	10	Fan size and type	18.25in. direct-drive plenum, 80% width
Inlet location	Back inlet	Total brake horsepower	3.946 hp
Fan orientation	Plenum fan	Total brake horsepower at min temp	4.183 hp
Fan discharge	Front top	Total static pressure	3.364 in H2O
Side access door location	Left	Speed	2297 rpm
Drive location	Left side drive	Fan module pressure drop	1.772 in H2O
Design sequence	K1	Section length	46.750 in
Motor horsepower per fan	5 hp	Section weight	695.5 lb
Motor class	NEMA premium compliant ODP	Static pressure origin	Program calculated
Motor voltage	200-208/3	Side access door	Yes
Cycle	60 cycles/sec	Fan type	Plenum
Drive service factor	Direct drive	Direct drive fan blades	Twelve
Motor RPM	1800	Fan quantity	1.00 Each
Fan airflow	4650 cfm	Motor hertz	78.00 Hz
Overall ESP	1.750 in H2O	Motor interface options	VFD
Unit entering ESP	0.875 in H2O	Fan wheel balance	Inverter balance with SGR
Unit discharge ESP	0.875 in H2O	Direct drive fan	1007.60 Each
Elevation	0.00 ft	Motor slip	1.00 %

Discharge plenum — Module Position: 7

Section type	Discharge plenum	Discharge 1 front - area	2.67 sq ft
Unit size	10	Discharge 1 front - pressure drop	0.095 in H2O
Mounting location and type	Horizontal standard length	Front total pressure drop	0.095 in H2O
Perforated panels	No	Discharge 1 top - area	0.75 sq ft
Front discharge type	Sizeable rectangular opening	Discharge 1 top - pressure drop	0.003 in H2O
Top discharge type	Sizeable rectangular opening	Top total pressure drop	0.003 in H2O
Top air path	Leaving	Bottom total pressure drop	0.000 in H2O
Front air path	Leaving	Right total pressure drop	0.000 in H2O
Design sequence	B	Left total pressure drop	0.000 in H2O
Discharge 1 front - airflow	4650 cfm	Section length	36.000 in
Discharge 1 top - airflow	250 cfm	Section weight	254.1 lb
Back total pressure drop	0.000 in H2O	Plenum length	36.000 in

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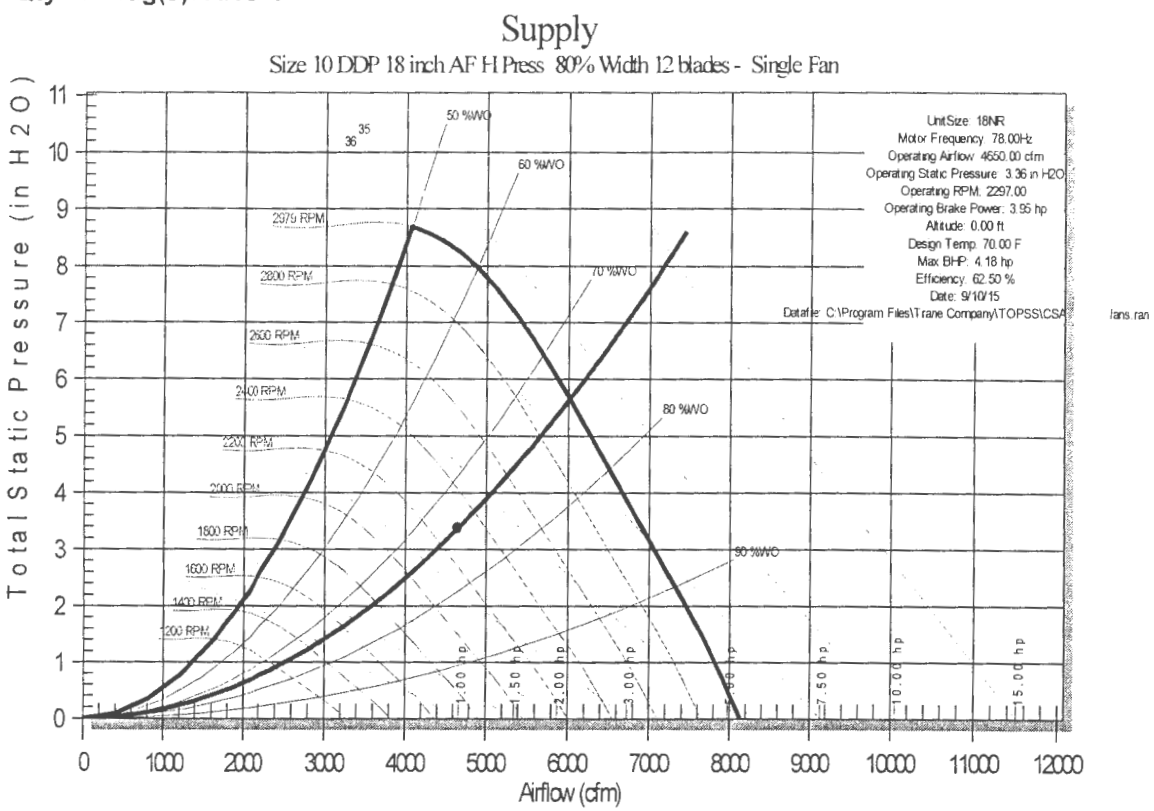
All weights and dimensions are approximate. Certified prints on request.

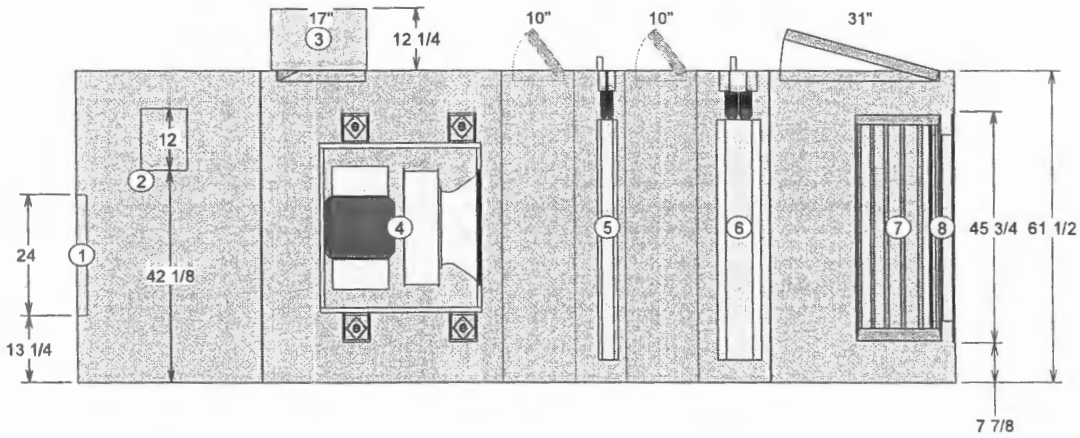
5

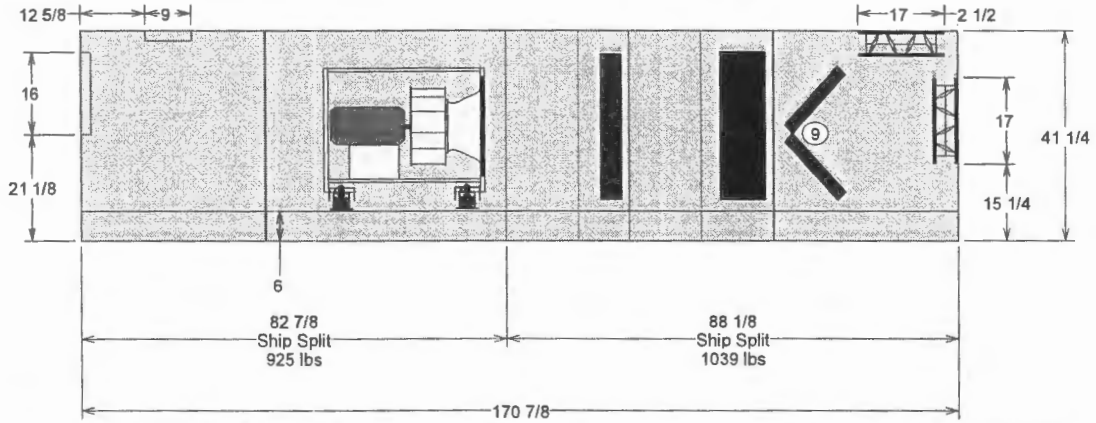
Fan Curve - Performance Climate Changer
Item: A1 Qty: 1 Tag(s): AHU-1



Size 10 DDP 18 inch AF H Press 80% Width 12 blades

	63Hz	125Hz	250Hz	500Hz	1 kHz	2 kHz	4 kHz	8 kHz
Casing	85	79	74	76	75	62	53	47
Return	69	66	67	70	64	66	61	51
Supply Top	90	80	78	84	75	73	70	66
Supply Front	82	77	75	82	75	72	70	66
Outdoor	70	71	67	72	66	69	65	56





1 Opening front
16.000 x 24.000
2 Opening top
9.000 x 12.000
3 External VFD LH
4 Plenum fan - 18.25in. direct-drive plenum, 80% width Supply fan 5 hp 200-208/3
5 Heating coil - 1 Coil type 5W
6 Cooling coil - 6 Coil type UW
7 Damper top-opposed blade
17.000 x 45.750
8 Damper back-opposed blade
17.000 x 45.750
9 Angled filters -

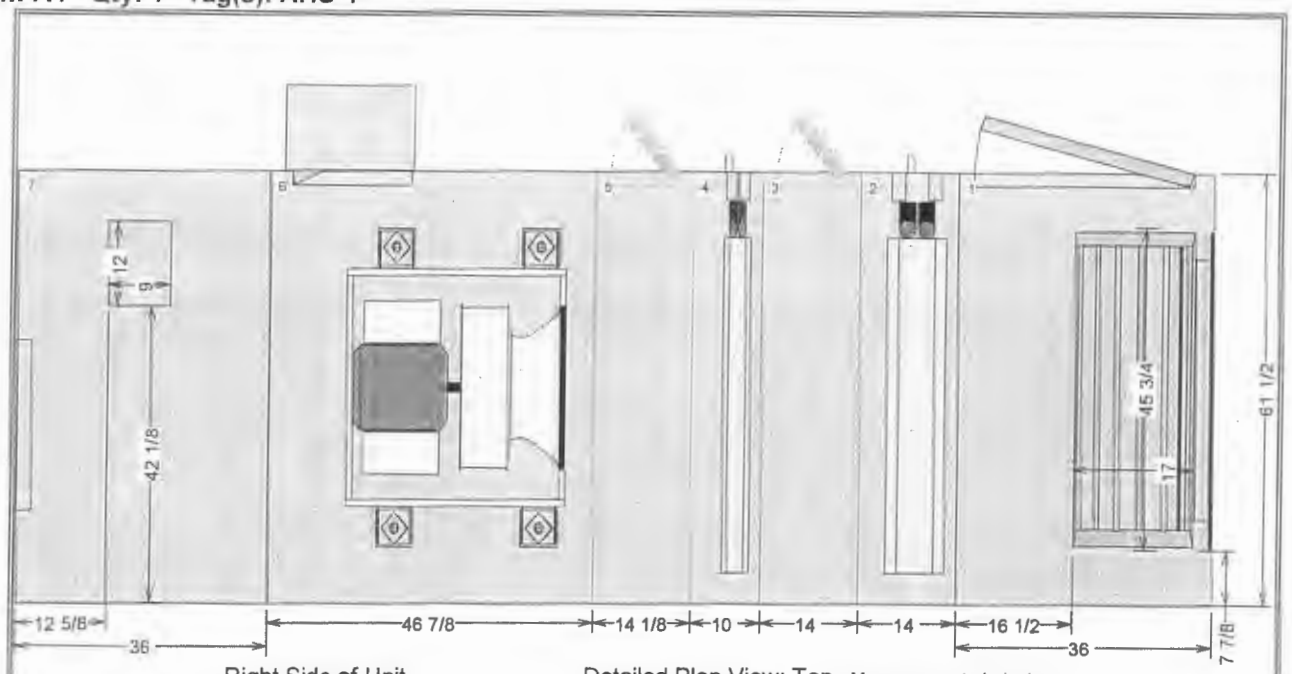
Doors
17 width x 31 height
10 width x 31 height
31 width x 31 height

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

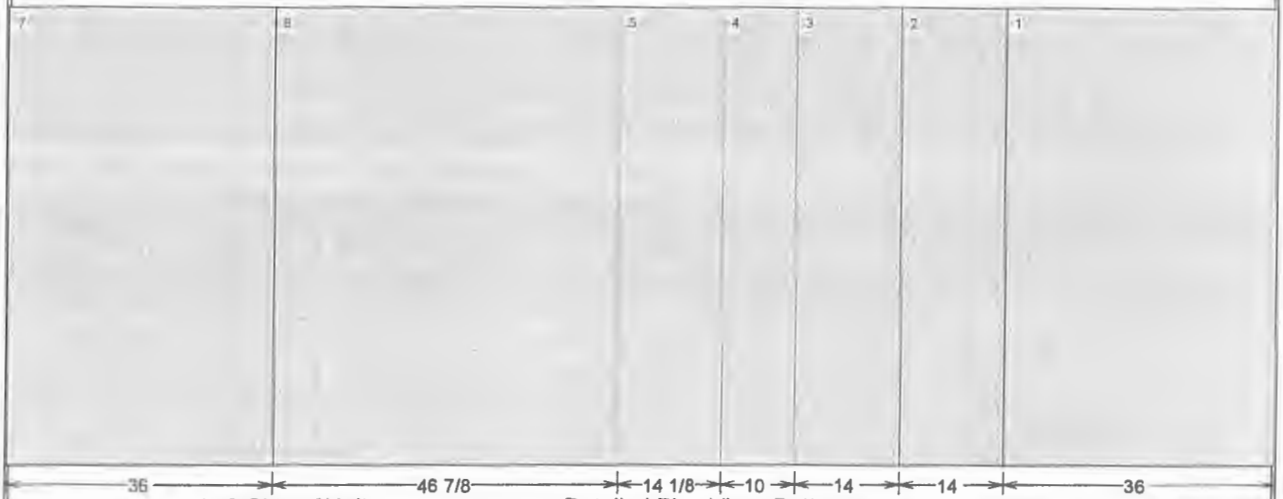
Unit size: 10	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 4650 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight: 1932.1 lb/ 2009.1 lb	

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



Right Side of Unit

Detailed Plan View: Top - Measurements in inches



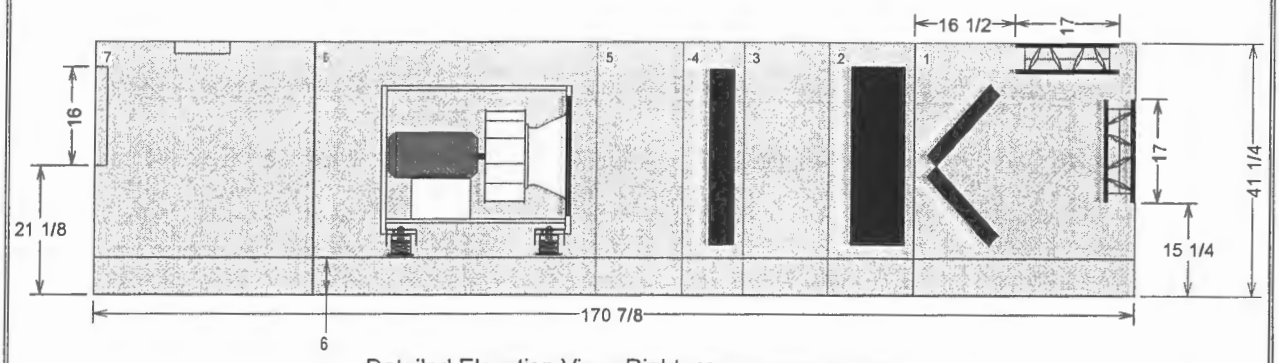
Left Side of Unit

Detailed Plan View: Bottom - Measurements in inches

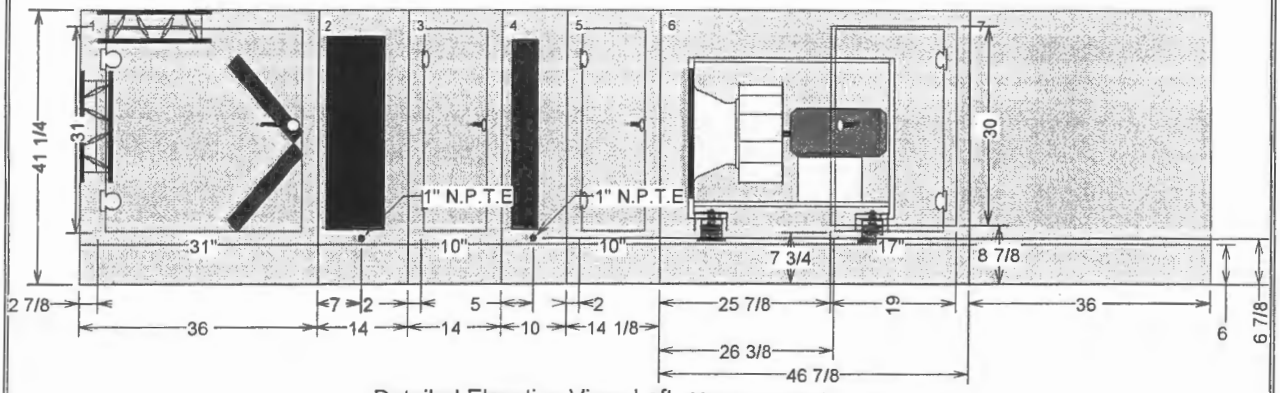
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 10	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE Performance Climate Changer
Product group: Indoor unit	Actual airflow: 4650 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Shipping/Installed Weight: 1932.1 lb/ 2009.1 lb	

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



Detailed Elevation View: Right - Measurements in inches



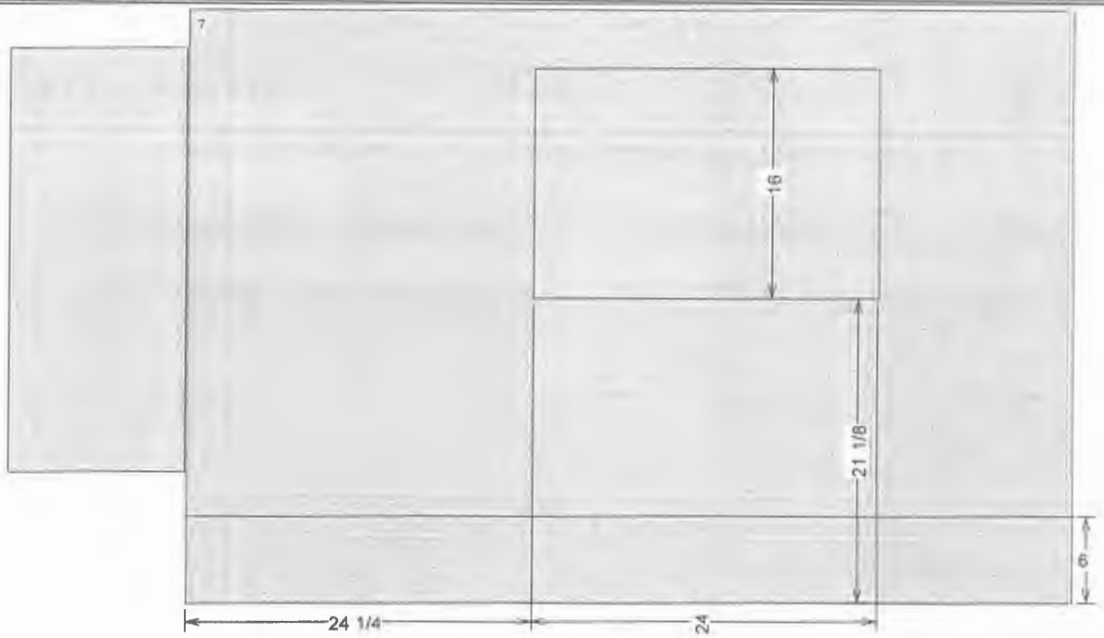
Detailed Elevation View: Left - Measurements in inches

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

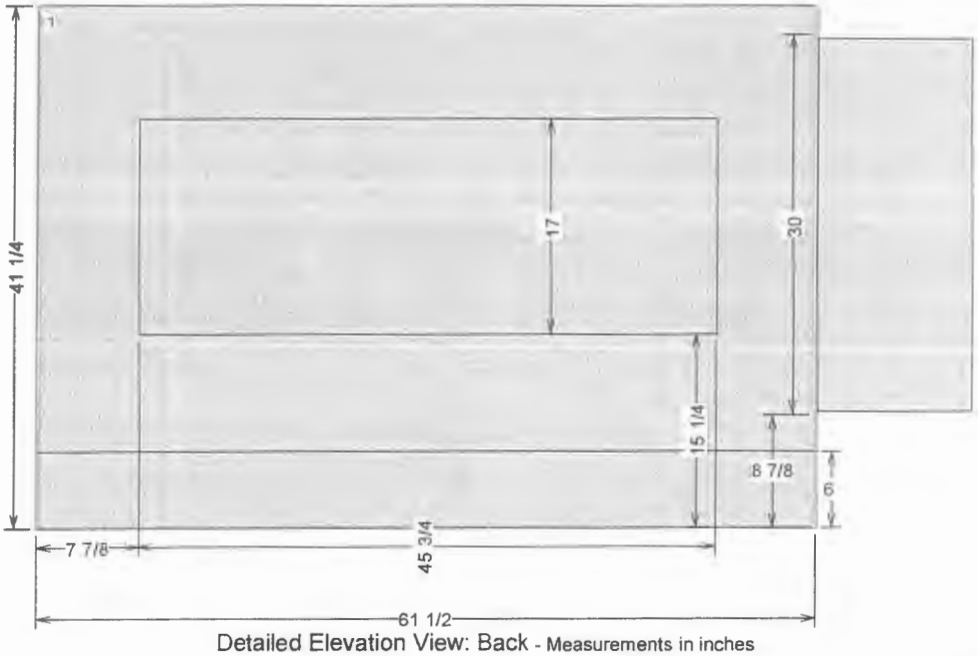
Unit size: 10	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 4650 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight 1932.1 lb/ 2009.1 lb	

As-Built - Performance Climate Changer

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



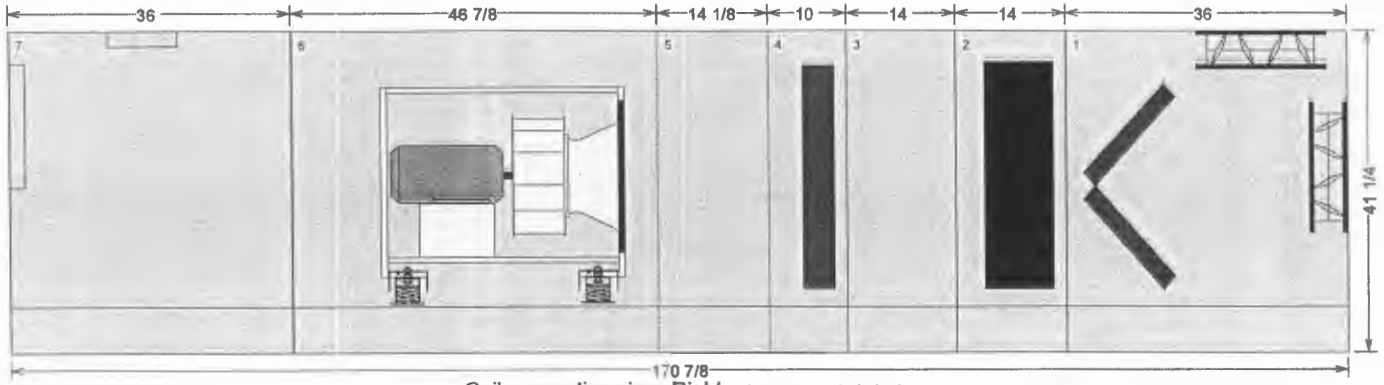
Detailed Elevation View: Front - Measurements in inches



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: 10	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE® Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 4650 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight: 1932.1 lb/ 2009.1 lb	

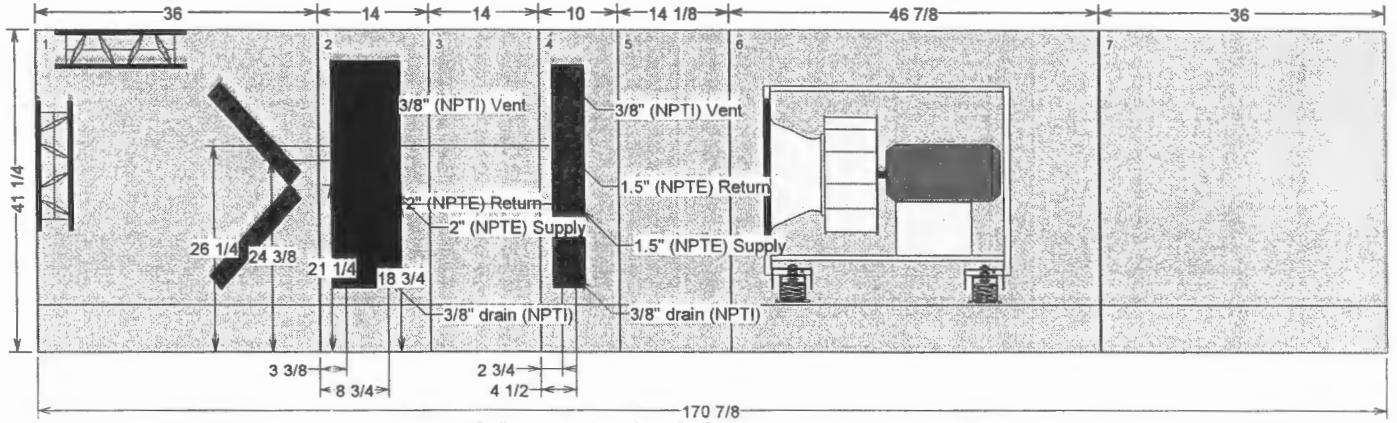


Coil connection view: Right - Measurements in inches

NPTI : 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: 10	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 4650 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight: 1932.1 lb/ 2009.1 lb	



Coil connection view: Left - Measurements in inches

NPTI : 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: 10	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 4650 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight: 1932.1 lb/ 2009.1 lb	

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

Job Name	UNE Alumni Hall
User Name	(B16)Daniel Broderick
Address	Portland ME

Performance Climate Changer	AHU-2
Quantity	1
Job Comments	

Unit level options — Module Position: 0

Actual airflow	1500 cfm	Shipping split type	Factory splits
Unit elevation	0.00 ft	Door handle type - unit level	Multiple composite handles/latches
Unit size	4	Circuit number 1	Supply fan motor(s)
Integral base frame	6in. integral base frame	FLA circuit 1	5.10 A
UL listed unit	UL listed unit	Fuse size circuit 1	15.00 A
High voltage location	Right	MCA circuit 1	8.60 A
Length	161.125 in	MOP circuit 1	15.30 A
Width	44.000 in	Supply fan motor horsepower	1.5 HP
Installed weight	1364.1 lb	Marine LED lights in unit	No marine LED lights in unit
Rigging weight	1316.9 lb	Paint	Unpainted/field painted outdoor

Controls and VFD/starter — Module Position: 0

Factory controls package	No factory mount	Total number of control points	0 control points
Automatic Selection	No auto selection	NEMA SF	VFD
Controller mounting	No mount	VFD/Starter location supply fan	External mounting
Controller type	No controller	Fan wheel balance SF	Inverter balance with SGR
LCD screen	No LCD	NEMA RF/EF	No NEMA
Design sequence - controls	H	VFD/Starter location ret/exh fan	No mounting
Prepackaged solution option used	PPS common configuration not used		

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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.

1

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

Air mixing section

Module Position: 1

Section type	Air mixing section	Filter condition	Mid-life
Unit size	4	Filter airflow	1500 cfm
Mixing section type	with filter	Opening 1 back - airflow	1500 cfm
Filter frame	2"	Opening 1 front - airflow	1500 cfm
Filter type 1 - run set	Pleated media - MERV 8	Opening 1 top - airflow	1500 cfm
Side access door location	Right	Opening 1 back total pressure drop	0.192 in H2O
Back opening type	Opposed blade damper	Opening 1 top total pressure drop	0.192 in H2O
Back air path	Entering	Greatest entry PD	0.192 in H2O
Back air path type	Outside	Opening 1 back - area	1.87 sq ft
Back inlet type	Ducted	Opening 1 back - face velocity	801 ft/min
Front opening type	Full face opening	Opening 1 back - pressure drop	0.192 in H2O
Front air path	Leaving	Opening 1 front - area	6.25 sq ft
Top opening type	Opposed blade damper	Opening 1 top - area	1.87 sq ft
Top air path	Entering	Opening 1 top - face velocity	801 ft/min
Top air path type	Return	Opening 1 top - pressure drop	0.192 in H2O
Top inlet type	Ducted	Filter area	8.89 sq ft
Bottom opening type	No opening	Filter face velocity	169 ft/min
Right side opening type	No opening	Filter pressure drop	0.529 in H2O
Left side opening type	No opening	Side access door	Yes
Design sequence	G	Total mixing section pressure drop	0.721 in H2O
Actuator	No		

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2

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

Coil section

Module Position: 2

Coil se [4]-1

Section type	Horizontal coil	Fluid type	Propylene glycol
Unit size	4	Coil fluid percentage	30.00 %
Section size	Medium	Coil type	UW
Coil application	Cooling coil	Rows	8
Changeover coil	No	Fin type	Delta flo E (energy efficient)
System type	Chilled water	Fin material	Aluminum fins
Coil supply/cabinet side	Right	Tube diameter	1/2in. tube diameter (12.7 mm)
Coil casing	Galvanized	Tube mat/wall thickness	.016" (0.406mm) copper tubes
Coil height	Unit coil height	Turbulators	Yes
Extended drain and vent	Holes only	Corrosion resistant coating	None
Drain pan	Stainless steel	Coil face velocity	332 ft/min
Drain connection location	Right	Air pressure drop	0.441 in H2O
Design sequence	E	J trap dimension	1.692 in
Apply AHRI ranges	No	H trap dimension	3.383 in
Coil performance airflow	1500 cfm	Leaving fluid temperature	57.00 F
Coil elevation	0.00 ft	Fluid pressure drop	1.90 ft H2O
Entering dry bulb	78.50 F	Fluid volume	3.91 gal
Entering wet bulb	65.50 F	Fluid velocity	1.13 ft/s
Leaving dry bulb	53.40 F	Coil face area	4.51 sq ft
Leaving wet bulb	53.30 F	Coil rigging weight	104.0 lb
Sensible capacity	41.45 MBh	Coil installed weight	140.6 lb
Total capacity	54.92 MBh	Coil section pressure drop	0.441 in H2O
Nominal fin spacing	116 Per Foot	Section length	14.000 in
Entering fluid temperature	45.00 F	Section weight	233.0 lb
Fluid temperature rise	12.00 F	Side access door	No
Standard fluid flow rate	9.90 gpm	UV light	No
Coil fouling factor	0.00000 hr-sq ft-deg F/Btu		

Access section

Module Position: 3

Section type	Access/blank/turning	Back opening	Full Face
Unit size	4	Design sequence	B
Section size	Medium	Section length	14.000 in
Side access door location	Right	Section weight	78.4 lb
Door swing direction	Outward swing	Side access door	Yes
Front opening	Full Face		

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3

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

Coil section — Module Position: 4

Coil se (2)-1

Section type	Horizontal coil	Coil type	UW
Unit size	4	Rows	2
Section size	Small	Fin type	Delta flo E (energy efficient)
Coil application	Heating coil	Fin material	Aluminum fins
Changeover coil	No	Tube diameter	1/2in. tube diameter (12.7 mm)
System type	Hot water	Tube mat'l/wall thickness	.016" (0.406mm) copper tubes
Coil supply/cabinet side	Right	Turbulators	Yes
Coil casing	Galvanized	Corrosion resistant coating	None
Coil height	Unit coil height	Coil face velocity	332 ft/min
Extended drain and vent	Holes only	Air pressure drop	0.067 in H2O
Drain pan	Galvanized	J trap dimension	1.725 in
Drain connection location	Right	H trap dimension	3.451 in
Design sequence	E	Leaving fluid temperature	140.00 F
Apply AHRI ranges	No	Fluid pressure drop	0.43 ft H2O
Coil performance airflow	1500 cfm	Fluid volume	1.27 gal
Coil elevation	0.00 ft	Fluid velocity	0.44 ft/s
Entering dry bulb	45.00 F	Total cap top or single coil	73.20 MBh
Leaving dry bulb	90.00 F	Coil face area	4.51 sq ft
Total capacity	73.20 MBh	Coil rigging weight	36.7 lb
Nominal fin spacing	77 Per Foot	Coil installed weight	49.3 lb
Entering fluid temperature	180.00 F	Coil section pressure drop	0.067 in H2O
Fluid temperature drop	40.00 F	Section length	10.000 in
Standard fluid flow rate	3.85 gpm	Section weight	132.4 lb
Coil fouling factor	0.00025 hr-sq ft-deg F/Btu	Side access door	No
Fluid type	Propylene glycol	UV light	No
Coil fluid percentage	30.00 %		

Access section — Module Position: 5

Section type	Access/blank/turning	Back opening	Full Face
Unit size	4	Design sequence	B
Section size	Medium	Section length	14.000 in
Side access door location	Right	Section weight	85.4 lb
Door swing direction	Outward swing	Side access door	Yes
Front opening	Full Face		

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4

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

Fan section

Module Position: 6

Fan sec [6]-1			
Section type	Fan	Minimum temperature	40.00 F
Fan application	Supply fan	Design temperature	70.00 F
Unit size	4	Fan size and type	12.25in. direct-drive plenum, 80% width
Inlet location	Back inlet	Total brake horsepower	1.126 hp
Fan orientation	Plenum fan	Total brake horsepower at min temp	1.193 hp
Fan discharge	Front top	Total static pressure	2.769 in H2O
Side access door location	Right	Speed	2897 rpm
Drive location	Right side drive	Fan module pressure drop	1.509 in H2O
Design sequence	K1	Section length	41.000 in
Motor horsepower per fan	1.5 hp	Section weight	429.0 lb
Motor class	NEMA premium compliant ODP	Static pressure origin	Program calculated
Motor voltage	200-208/3	Side access door	Yes
Cycle	60 cycles/sec	Fan type	Plenum
Drive service factor	Direct drive	Direct drive fan blades	Twelve
Motor RPM	1800	Fan quantity	1.00 Each
Fan airflow	1500 cfm	Motor hertz	98.00 Hz
Overall ESP	1.500 in H2O	Motor interface options	VFD
Unit entering ESP	0.750 in H2O	Fan wheel balance	Inverter balance with SGR
Unit discharge ESP	0.750 in H2O	Direct drive fan	780.30 Each
Elevation	0.00 ft	Motor slip	1.00 %

Discharge plenum

Module Position: 7

Section type	Discharge plenum	Front total pressure drop	0.000 in H2O
Unit size	4	Discharge 1 top - area	1.53 sq ft
Mounting location and type	Horizontal standard length	Discharge 1 top - pressure drop	0.030 in H2O
Perforated panels	No	Top total pressure drop	0.030 in H2O
Top discharge type	Sizeable rectangular opening	Bottom total pressure drop	0.000 in H2O
Top air path	Leaving	Right total pressure drop	0.000 in H2O
Design sequence	B	Left total pressure drop	0.000 in H2O
Discharge 1 front - airflow	1500 cfm	Section length	34.000 in
Discharge 1 top - airflow	1500 cfm	Section weight	180.7 lb
Discharge 1 bottom - airflow	1500 cfm	Plenum length	34.000 in
Back total pressure drop	0.000 in H2O		

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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.

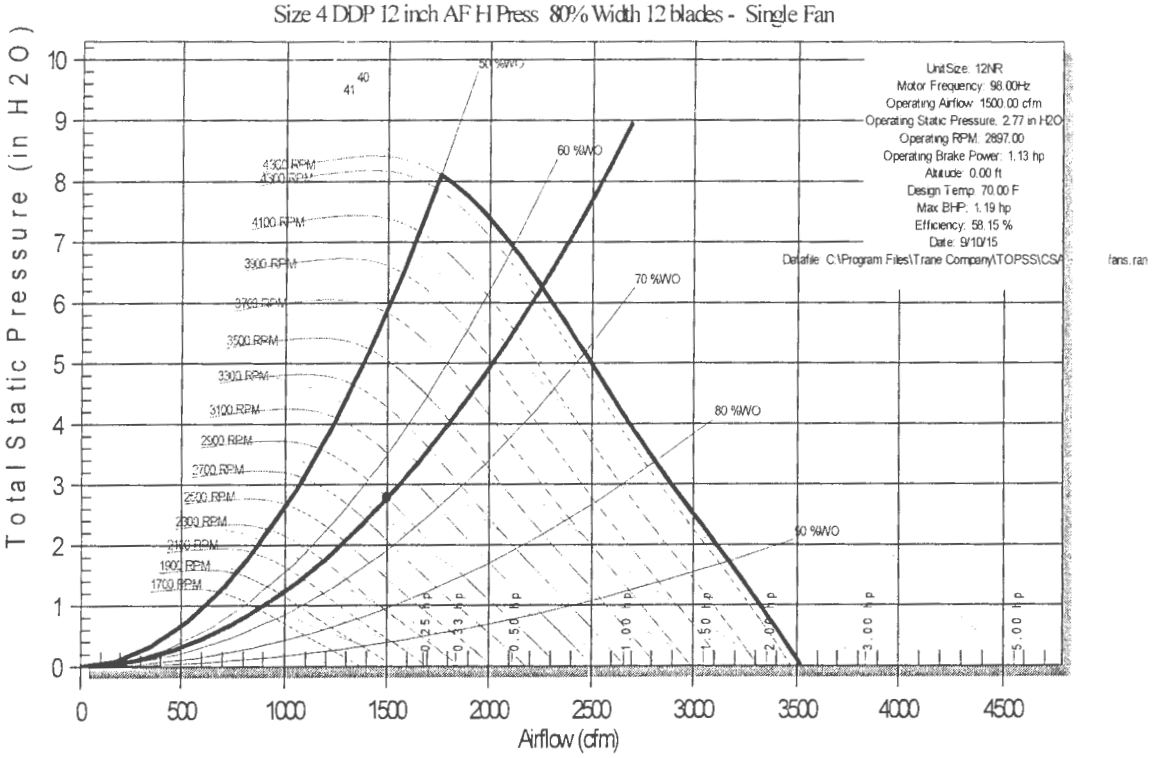
All weights and dimensions are approximate. Certified prints on request.

5

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

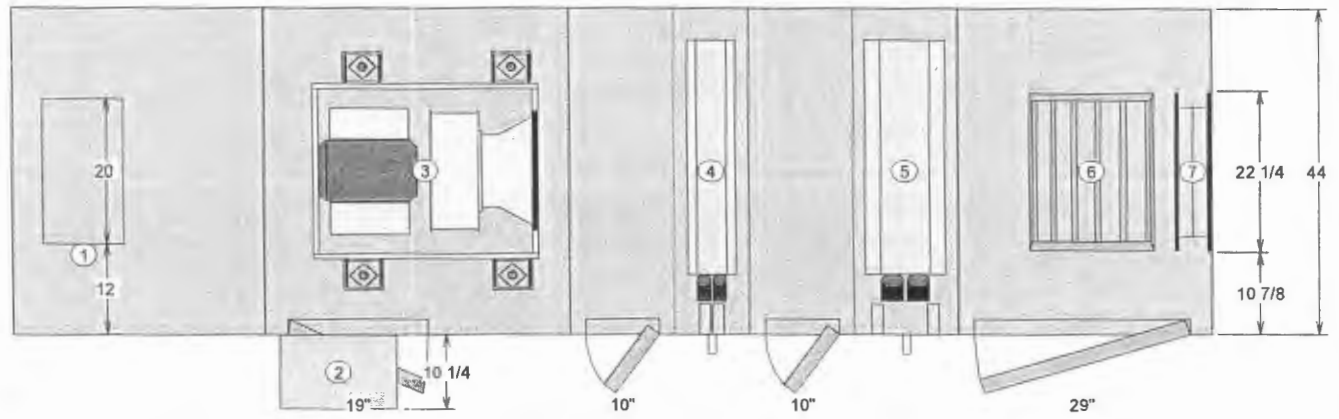
Supply

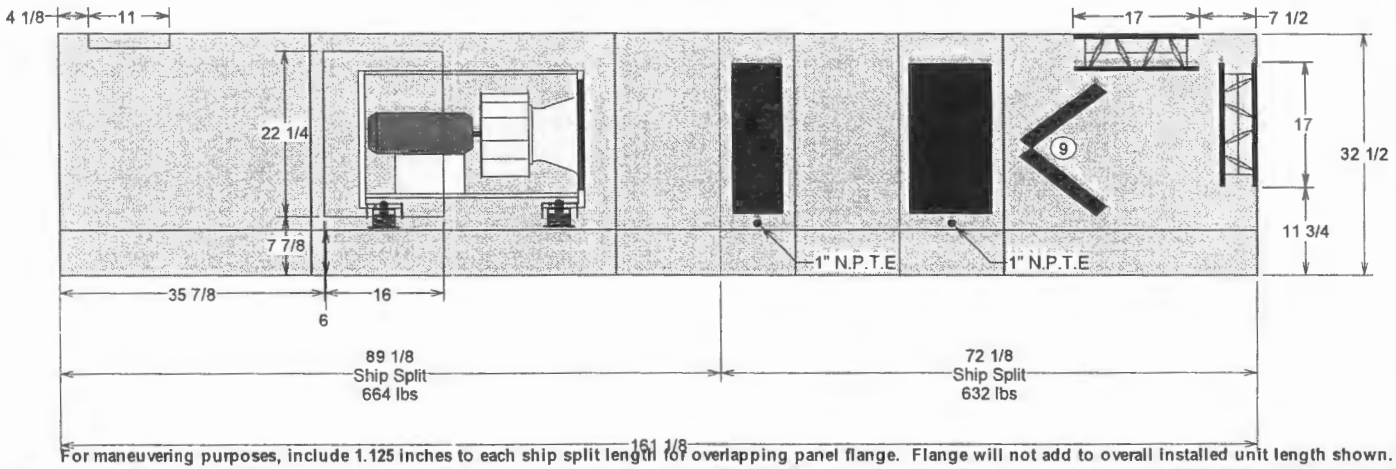
Size 4 DDP 12 inch AF H Press 80% Width 12 blades - Single Fan



Size 4 DDP 12 inch AF H Press 80% Width 12 blades

	63Hz	125Hz	250Hz	500Hz	1 kHz	2 kHz	4 kHz	8 kHz
Casing	72	72	67	70	71	61	54	48
Return	68	64	65	62	60	58	55	43
Supply Top	74	77	69	77	73	73	71	67
Outdoor	69	68	65	64	62	61	59	48





1 Opening top
11.000 x 20.000
2 External VFD RH
3 Plenum fan - 12.25in. direct-drive plenum, 80% width Supply fan 1.5 hp 200-208/3
4 Heating coil - 2 Coil type UW
5 Cooling coil - 8 Coil type UW
6 Damper top-opposed blade
17.000 x 22.250
7 Damper back-opposed blade
17.000 x 22.250
8 1" N.P.T.E
9 Angled filters -

Doors
19 width x 22 height
10 width x 22 height
29 width x 22 height

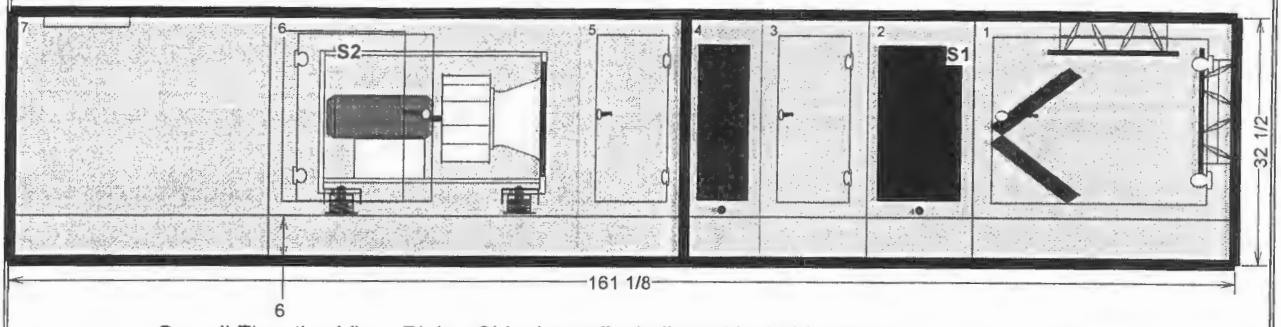
For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length shown.

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

Unit size: 4	Job Name:	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 1500 cfm	Proposal Number:
Integral base frame: 6in. integral base frame		
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight: 1316.9 lb/ 1364.1 lb

TRANE
Performance Climate Changer
Air Handlers

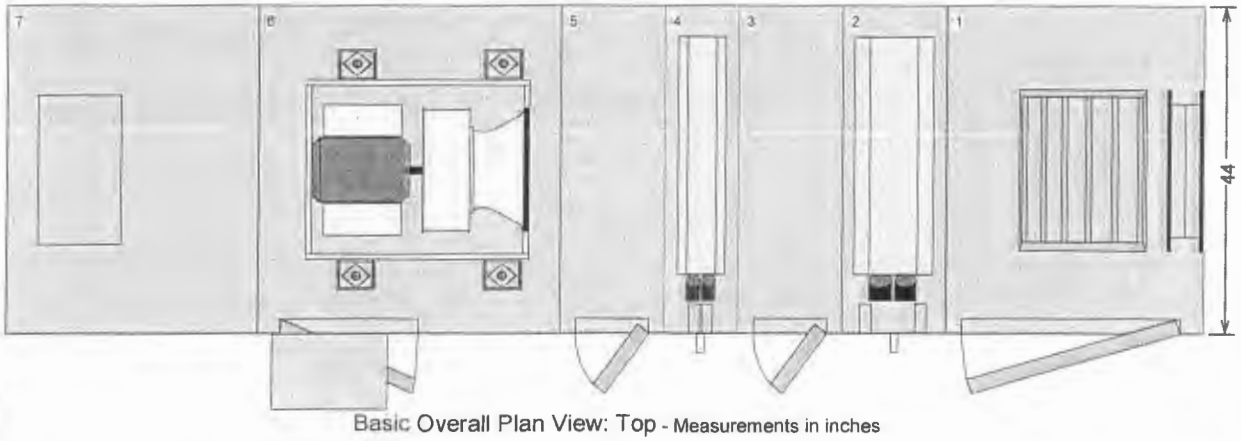
As-Built - Performance Climate Changer
Item: A2 Qty: 1 Tag(s): AHU-2



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 sh

Pos #	Module	Length	Weight
1	Air mixing section	34	225.20
2	Coil section	14	233.02
3	Access section	14	78.42
4	Coil section	10 1/8	132.41
5	Access section	14 1/8	85.38
6	Fan section	41	428.96
7	Discharge plenum	34	180.70
	Installed Unit Weight		1364.08 lbs

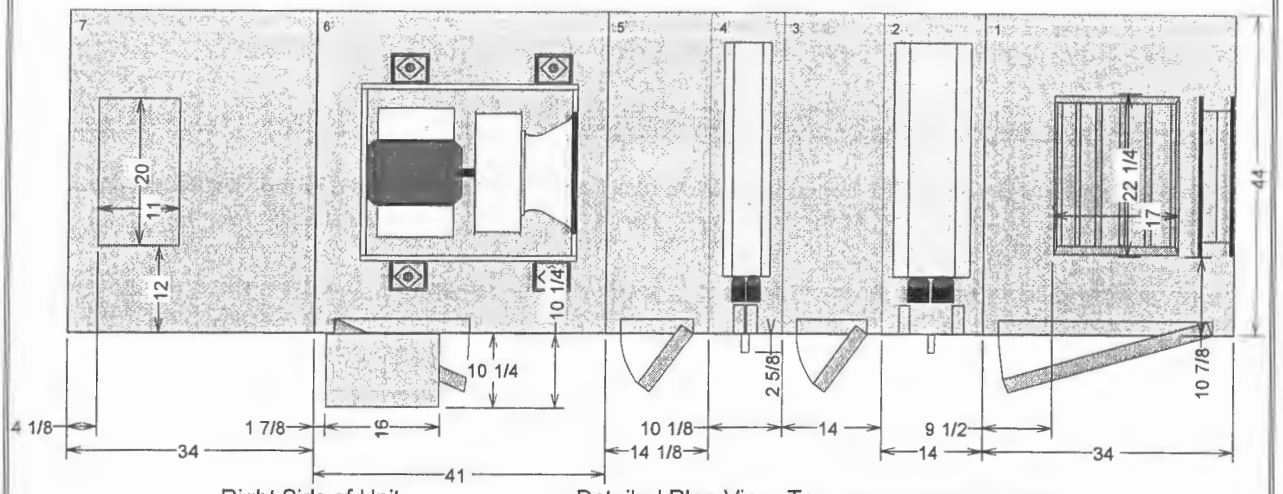


Basic Overall Plan View: Top - Measurements in inches

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

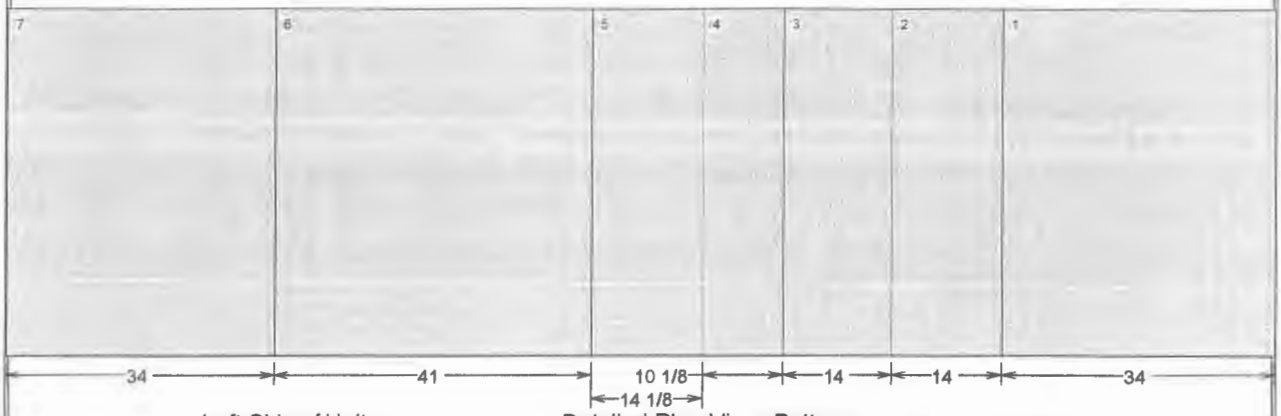
Unit size: 4	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 1500 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight: 1316.9 lb/ 1364.1 lb	

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



Right Side of Unit

Detailed Plan View: Top - Measurements in inches



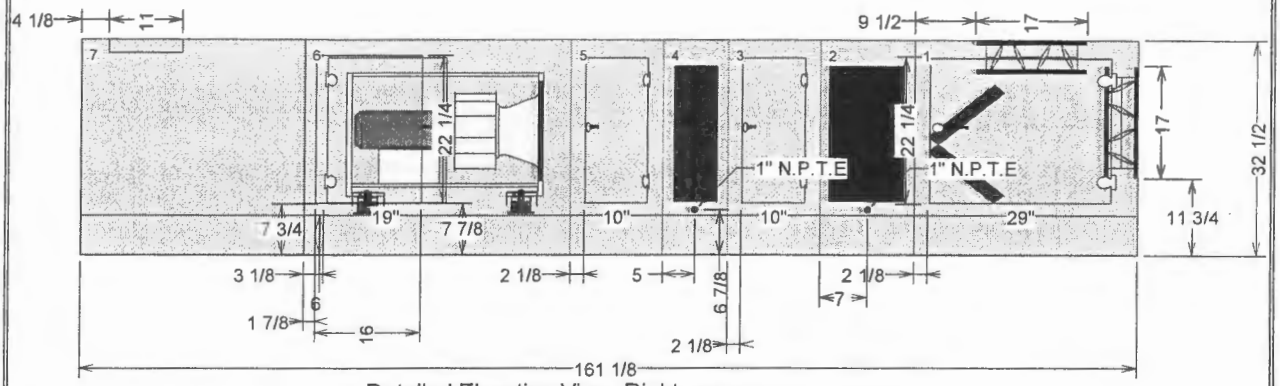
Left Side of Unit

Detailed Plan View: Bottom - Measurements in inches

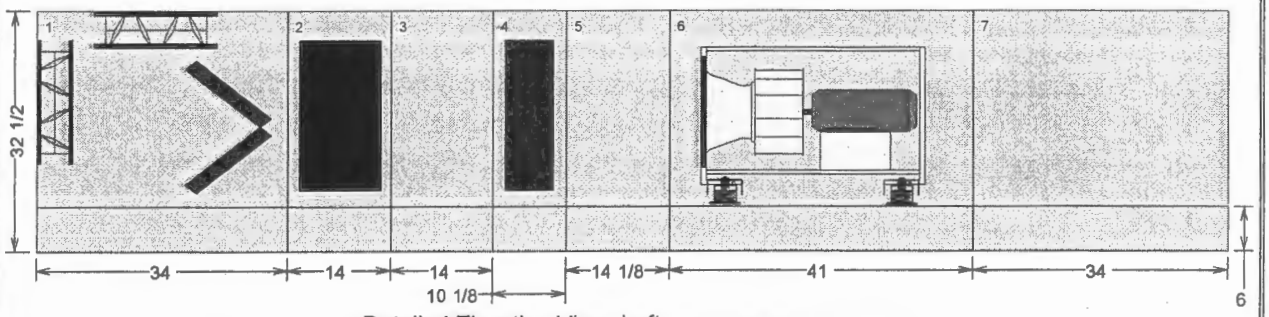
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 4	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE Performance Climate Changer
Product group: Indoor unit	Actual airflow: 1500 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight: 1316.9 lb/ 1364.1 lb	

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



Detailed Elevation View: Right - Measurements in inches

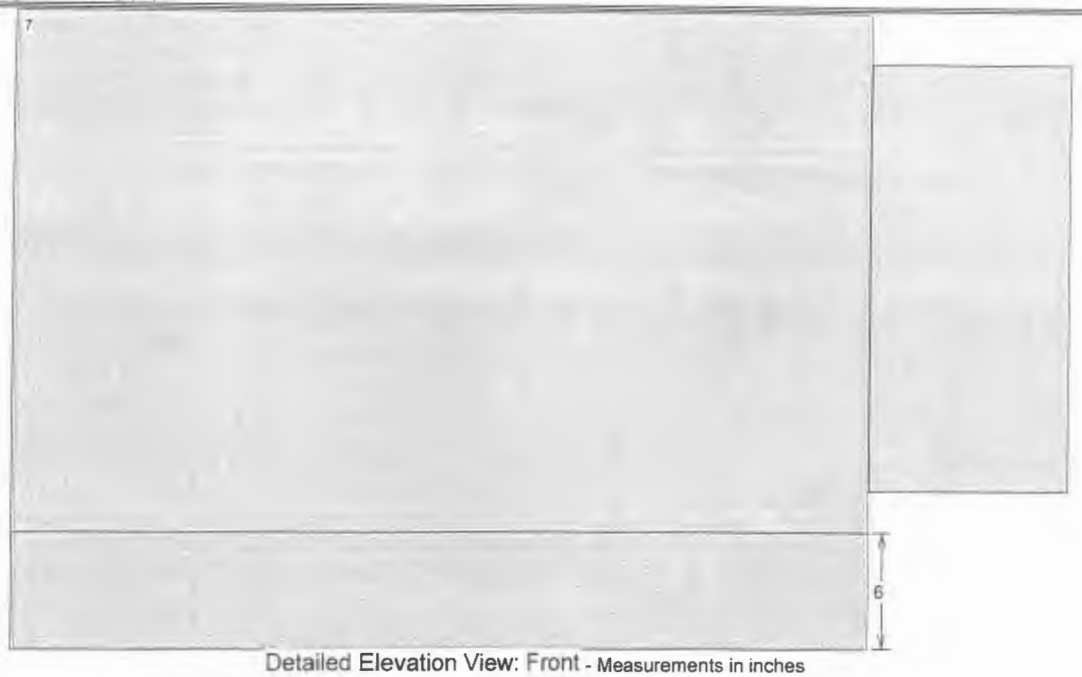


Detailed Elevation View: Left - Measurements in inches

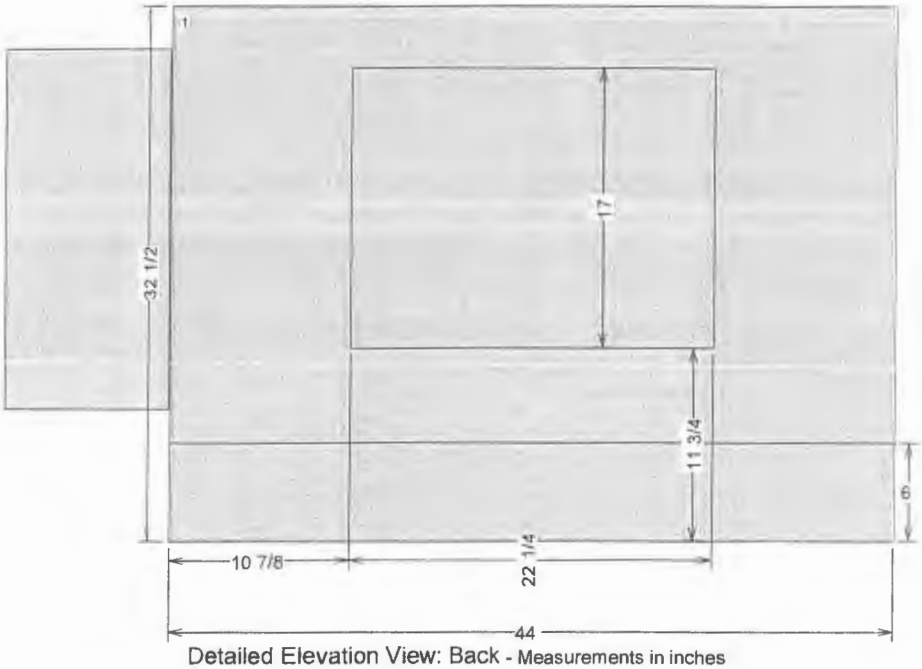
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 4	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 1500 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight: 1316.9 lb/ 1364.1 lb	

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



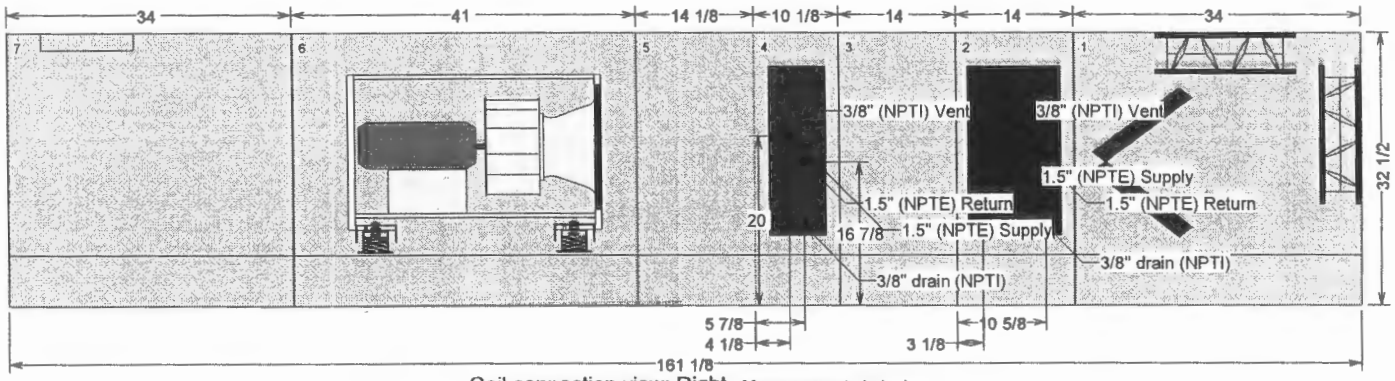
Detailed Elevation View: Front - Measurements in inches



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: 4	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE® Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 1500 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight: 1316.9 lb/ 1364.1 lb	

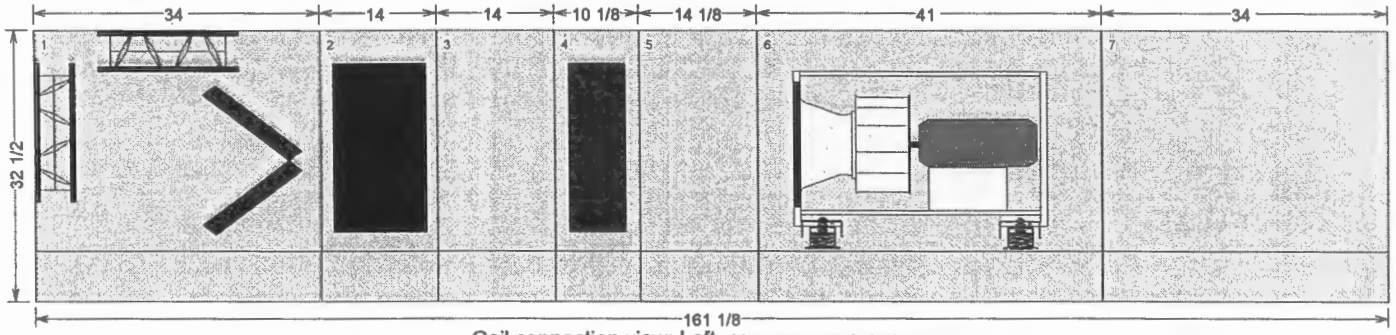


Coil connection view: Right - Measurements in inches

NPTI : 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: 4	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 1500 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight: 1316.9 lb/ 1364.1 lb	



Coil connection view: Left - Measurements in inches

NPTI : 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. 4	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE® Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 1500 cfm	Proposal Number:	
Integral base frame: 6in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight: 1316.9 lb/ 1364.1 lb	

Performance Data - Performance Climate Changer
Item: A3 Qty: 1 Tag(s): AHU-3

TRANE

Job Name	UNE Alumni Hall
User Name	(B16)Daniel Broderick
Address	Portland ME

Performance Climate Changer	AHU-3
Quantity	1
Job Comments	

Unit level options — Module Position: 0

Actual airflow	2200 cfm	Shipping split type	Factory splits
Unit elevation	0.00 ft	Door handle type - unit level	Multiple composite handles/latches
Unit size	4	Circuit number 1	Supply fan motor(s)
Integral base frame	2.5in. integral base frame	FLA circuit 1	7.80 A
UL listed unit	UL listed unit	Fuse size circuit 1	20.00 A
High voltage location	Left	MCA circuit 1	12.00 A
Length	161.125 in	MOP circuit 1	21.60 A
Width	44.000 in	Supply fan motor horsepower	3 HP
Installed weight	1381.5 lb	Marine LED lights in unit	No marine LED lights in unit
Rigging weight	1334.0 lb	Paint	Unpainted/field painted outdoor

Controls and VFD/starter — Module Position: 0

Factory controls package	No factory mount	Total number of control points	0 control points
Automatic Selection	No auto selection	NEMA SF	VFD
Controller mounting	No mount	VFD/Starter location supply fan	External mounting
Controller type	No controller	Fan wheel balance SF	Inverter balance with SGR
LCD screen	No LCD	NEMA RF/EF	No NEMA
Design sequence - controls	H	VFD/Starter location ret/exh fan	No mounting
Prepackaged solution option used	BPS common configuration not used		

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.

1

Performance Data - Performance Climate Changer
Item: A3 Qty: 1 Tag(s): AHU-3

Air mixing section

Module Position: 1

Section type	Air mixing section	Actuator	No
Unit size	4	Filter condition	Mid-life
Mixing section type	with filter	Filter airflow	2200 cfm
Filter frame	2"	Opening 1 back - airflow	2200 cfm
Filter type 1 - run set	Pleated media - MERV 8	Opening 1 front - airflow	2200 cfm
Side access door location	Left	Opening 1 top - airflow	2200 cfm
Back opening type	Opposed blade damper	Opening 1 back total pressure drop	0.413 in H2O
Back air path	Entering	Opening 1 top total pressure drop	0.413 in H2O
Back air path type	Return	Greatest entry PD	0.413 in H2O
Back inlet type	Ducted	Opening 1 back - area	1.87 sq ft
Front opening type	Full face opening	Opening 1 back - face velocity	1176 ft/min
Front air path	Leaving	Opening 1 back - pressure drop	0.413 in H2O
Top opening type	Opposed blade damper	Opening 1 front - area	6.25 sq ft
Top air path	Entering	Opening 1 top - area	1.87 sq ft
Top air path type	Return	Opening 1 top - face velocity	1176 ft/min
Top inlet type	Ducted	Opening 1 top - pressure drop	0.413 in H2O
Bottom opening type	No opening	Filter area	8.89 sq ft
Right side opening type	No opening	Filter face velocity	247 ft/min
Left side opening type	No opening	Filter pressure drop	0.555 in H2O
Extra set of filter type 1	1 extra set	Side access door	Yes
Design sequence	G	Total mixing section pressure drop	0.969 in H2O

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2

Performance Data - Performance Climate Changer
Item: A3 Qty: 1 Tag(s): AHU-3

Coil section

Module Position: 2

Coil se [4]-1			
Section type	Horizontal coil	Fluid type	Propylene glycol
Unit size	4	Coil fluid percentage	30.00 %
Section size	Medium	Coil type	UW
Coil application	Cooling coil	Rows	8
Changeover coil	No	Fin type	Delta fin E (energy efficient)
System type	Chilled water	Fin material	Aluminum fins
Coil supply/cabinet side	Left	Tube diameter	1/2in. tube diameter (12.7 mm)
Coil casing	Galvanized	Tube mat/wall thickness	.016" (0.406mm) copper tubes
Coil height	Unit coil height	Turbulators	Yes
Extended drain and vent	Holes only	Corrosion resistant coating	None
Drain pan	Stainless steel	Coil face velocity	487 ft/min
Drain connection location	Left	Air pressure drop	0.988 in H2O
Design sequence	E	J trap dimension	2.101 in
Apply AHRI ranges	No	H trap dimension	4.201 in
Coil performance airflow	2200 cfm	Leaving fluid temperature	57.00 F
Coil elevation	0.00 ft	Fluid pressure drop	4.64 ft H2O
Entering dry bulb	80.00 F	Fluid volume	3.91 gal
Entering wet bulb	67.00 F	Fluid velocity	1.90 ft/s
Leaving dry bulb	53.40 F	Coil face area	4.51 sq ft
Leaving wet bulb	53.30 F	Coil rigging weight	114.4 lb
Sensible capacity	64.51 MBh	Coil installed weight	151.3 lb
Total capacity	92.08 MBh	Coil section pressure drop	0.988 in H2O
Nominal fin spacing	157 Per Foot	Section length	14.000 in
Entering fluid temperature	45.00 F	Section weight	239.3 lb
Fluid temperature rise	12.00 F	Side access door	No
Standard fluid flow rate	16.60 gpm	UV light	No
Coil fouling factor	0.00000 hr-sq ft-deg F/Btu		

Access section

Module Position: 3

Section type	Access/blank/turning	Back opening	Full Face
Unit size	4	Design sequence	B
Section size	Medium	Section length	14.000 in
Side access door location	Left	Section weight	74.0 lb
Door swing direction	Outward swing	Side access door	Yes
Front opening	Full Face		

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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.

3

Performance Data - Performance Climate Changer
Item: A3 Qty: 1 Tag(s): AHU-3

Coil section

Module Position: 4

Coil se [2]-1

Section type	Horizontal coil	Coil type	UW
Unit size	4	Rows	2
Section size	Small	Fin type	Delta flo H (Hi efficient)
Coil application	Heating coil	Fin material	Aluminum fins
Changeover coil	No	Tube diameter	1/2in. tube diameter (12.7 mm)
System type	Hot water	Tube matl/wall thickness	.016" (0.406mm) copper tubes
Coil supply/cabinet side	Left	Turbulators	Yes
Coil casing	Galvanized	Corrosion resistant coating	None
Coil height	Unit coil height	Coil face velocity	487 ft/min
Extended drain and vent	Holes only	Air pressure drop	0.155 in H2O
Drain pan	Galvanized	J trap dimension	2.178 in
Drain connection location	Left	H trap dimension	4.356 in
Design sequence	E	Leaving fluid temperature	140.00 F
Apply AHRI ranges	No	Fluid pressure drop	0.54 ft H2O
Coil performance airflow	2200 cfm	Fluid volume	1.27 gal
Coil elevation	0.00 ft	Fluid velocity	0.64 ft/s
Entering dry bulb	45.00 F	Total cap top or single coil	107.37 MBh
Leaving dry bulb	90.00 F	Coil face area	4.51 sq ft
Total capacity	107.37 MBh	Coil rigging weight	40.1 lb
Nominal fin spacing	98 Per Foot	Coil installed weight	50.7 lb
Entering fluid temperature	180.00 F	Coil section pressure drop	0.155 in H2O
Fluid temperature drop	40.00 F	Section length	10.000 in
Standard fluid flow rate	5.64 gpm	Section weight	123.7 lb
Coil fouling factor	0.00025 hr-sq ft-deg F/Btu	Side access door	No
Fluid type	Propylene glycol	UV light	No
Coil fluid percentage	30.00 %		

Access section

Module Position: 5

Section type	Access/blank/turning	Back opening	Full Face
Unit size	4	Design sequence	B
Section size	Medium	Section length	14.000 in
Side access door location	Left	Section weight	74.9 lb
Door swing direction	Outward swing	Side access door	Yes
Front opening	Full Face		

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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.

4

Performance Data - Performance Climate Changer
Item: A3 Qty: 1 Tag(s): AHU-3

Fan section

Module Position: 6

Fan sec [6]-1

Section type	Fan	Minimum temperature	40.00 F
Fan application	Supply fan	Design temperature	70.00 F
Unit size	4	Fan size and type	12.25in. direct-drive plenum, 80% width
Inlet location	Back inlet	Total brake horsepower	2.424 hp
Fan orientation	Plenum fan	Total brake horsepower at min temp	2.670 hp
Fan discharge	Front top	Total static pressure	3.796 in H2O
Side access door location	Left	Speed	3894 rpm
Drive location	Left side drive	Fan module pressure drop	1.619 in H2O
Design sequence	K1	Section length	41.000 in
Motor horsepower per fan	3 hp	Section weight	500.0 lb
Motor class	NEMA premium compliant ODP	Static pressure origin	Program calculated
Motor voltage	200-208/3	Side access door	Yes
Cycle	60 cycles/sec	Fan type	Plenum
Drive service factor	Direct drive	Direct drive fan blades	Nine
Motor RPM	3600	Fan quantity	1.00 Each
Fan airflow	2200 cfm	Motor hertz	66.00 Hz
Overall ESP	1.600 in H2O	Motor interface options	VFD
Unit entering ESP	0.800 in H2O	Fan wheel balance	Inverter balance with SGR
Unit discharge ESP	0.800 in H2O	Direct drive fan	814.96 Each
Elevation	0.00 ft	Motor slip	1.00 %

Discharge plenum

Module Position: 7

Section type	Discharge plenum	Discharge 1 front - pressure drop	0.065 in H2O
Unit size	4	Front total pressure drop	0.065 in H2O
Mounting location and type	Horizontal standard length	Top total pressure drop	0.000 in H2O
Perforated panels	No	Bottom total pressure drop	0.000 in H2O
Front discharge type	Sizeable rectangular opening	Discharge 1 right - area	1.25 sq ft
Front air path	Leaving	Discharge 1 right - pressure drop	0.016 in H2O
Design sequence	B	Right total pressure drop	0.016 in H2O
Discharge 1 front - airflow	2200 cfm	Left total pressure drop	0.000 in H2O
Discharge 1 right - airflow	900 cfm	Section length	34.000 in
Back total pressure drop	0.000 in H2O	Section weight	163.0 lb
Discharge 1 front - area	1.53 sq ft	Plenum length	34.000 in

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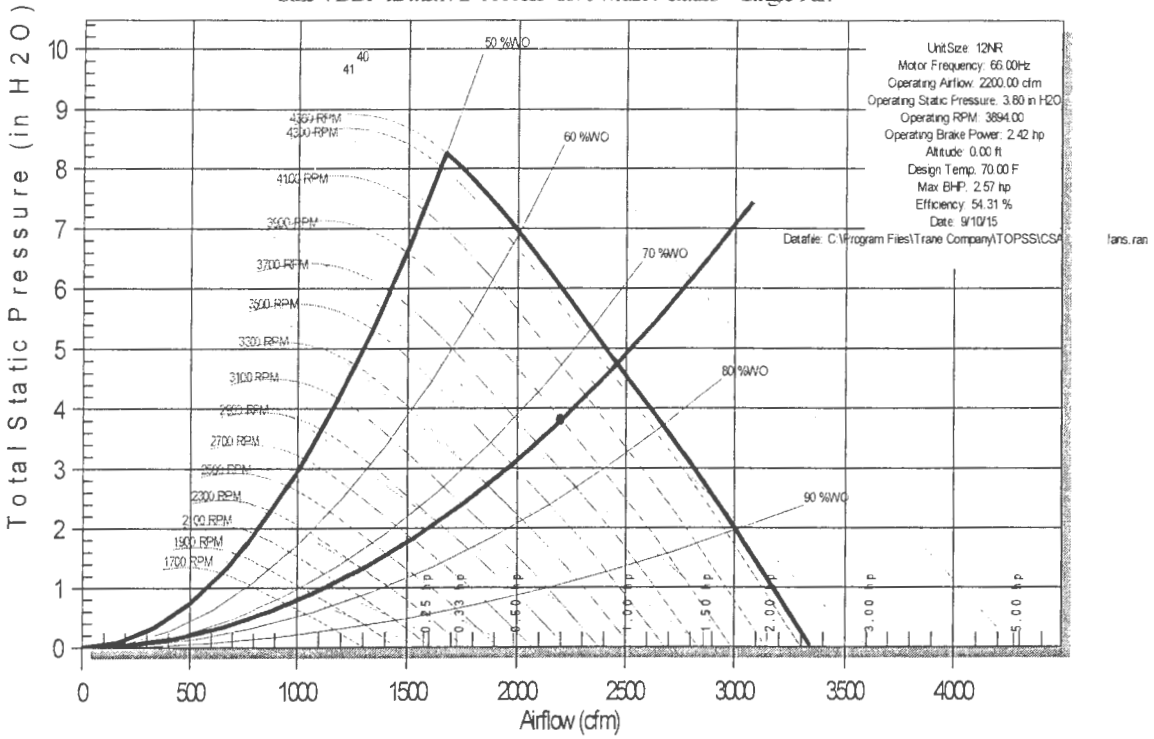
All weights and dimensions are approximate. Certified prints on request.

6

Fan Curve - Performance Climate Changer
Item: A3 Qty: 1 Tag(s): AHU-3

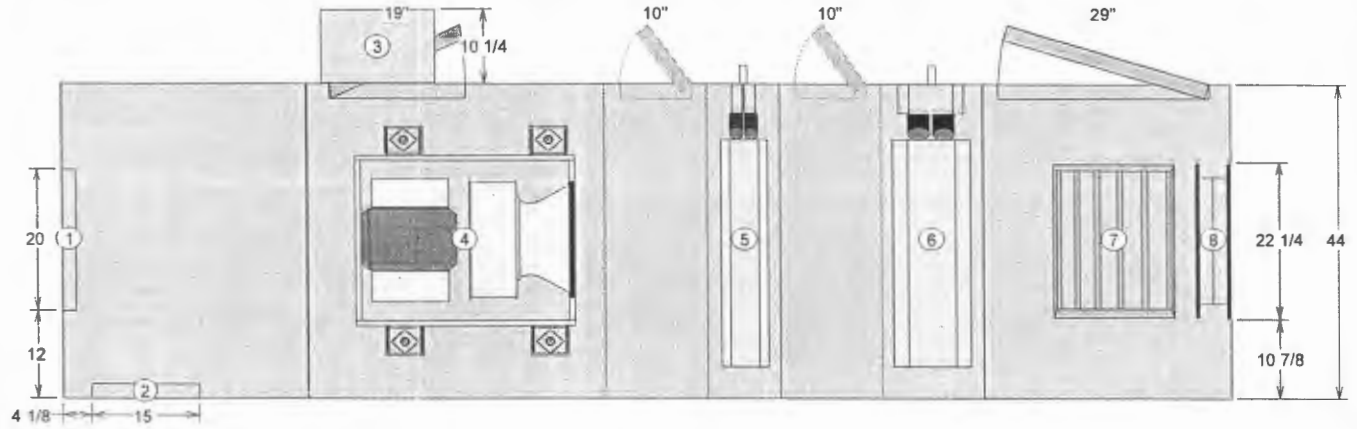
Supply

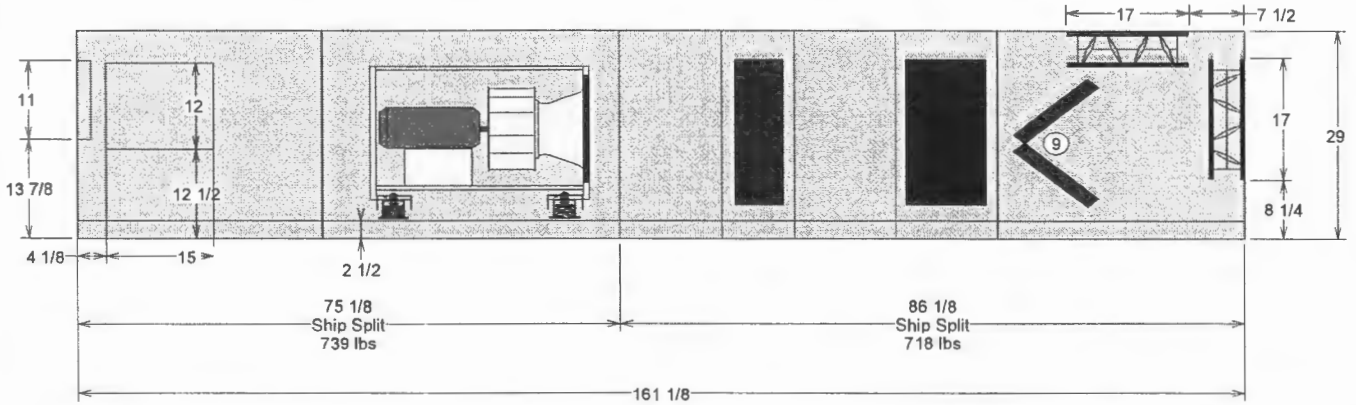
Size 4 DDP 12 inch AF H Press 80% Width 9 blades - Single Fan



Size 4 DDP 12 inch AF H Press 80% Width 9 blades

	63Hz	125Hz	250Hz	500Hz	1 kHz	2 kHz	4 kHz	8 kHz
Casing	76	76	72	77	76	68	63	58
Return	76	73	71	81	70	69	65	59
Supply Side	83	81	69	73	65	62	60	63
Supply Front	76	79	67	72	65	63	61	64





1 Opening front
11.000 x 20.000
2 Opening right
12.000 x 15.000
3 External VFD LH
4 Plenum fan - 12.25in. direct-drive plenum, 80% width Supply fan 3 hp 200-208/3
5 Heating coil - 2 Coil type UW
6 Cooling coil - 8 Coil type UW
7 Damper top-opposed blade
17.000 x 22.250
8 Damper back-opposed blade
17.000 x 22.250
9 Angled filters -

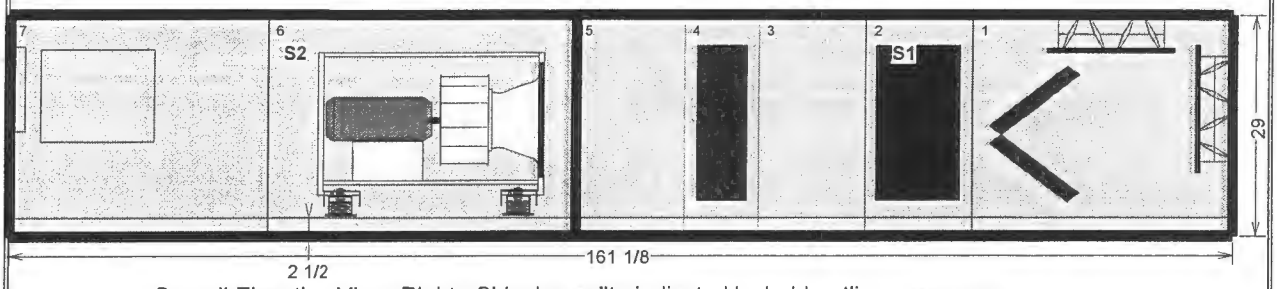
Doors
19 width x 22 height
10 width x 22 height
29 width x 22 height

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: 4	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 2200 cfm	Proposal Number:	
Integral base frame: 2.5in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight: 1410.0 lb/ 1457.5 lb	

As-Built - Performance Climate Changer
Item: A3 Qty: 1 Tag(s): AHU-3

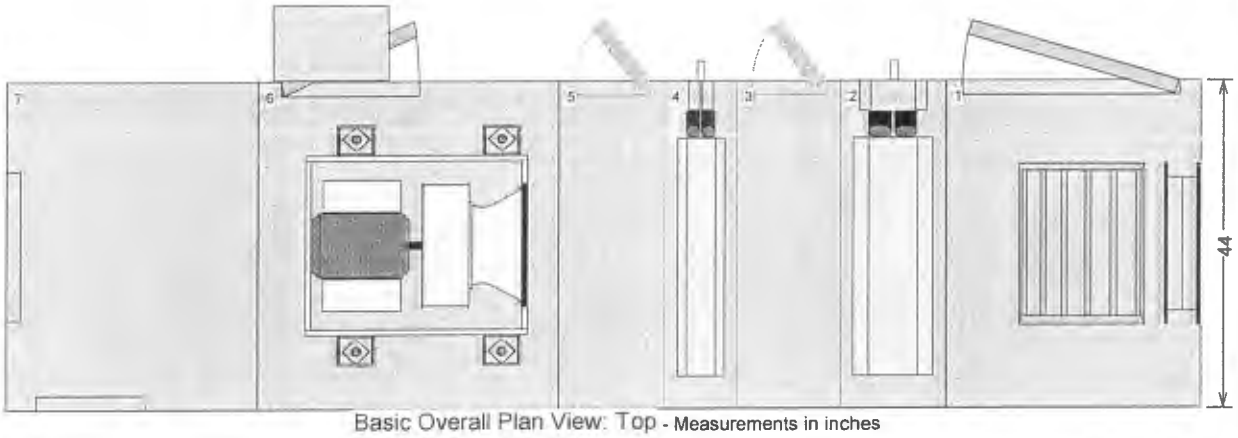


Overall Elevation View: Right - Shipping splits indicated by bold outline. - Measurements in inches

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 sh

Pos #	Module	Length	Weight
1	Air mixing section	34	207.50
2	Coil section	14	239.30
3	Access section	14	74.00
4	Coil section	10	123.70
5	Access section	14 1/8	74.00
6	Fan section	41 1/8	541.00
7	Discharge plenum	34	198.00

Installed Unit Weight 1457.50 lbs

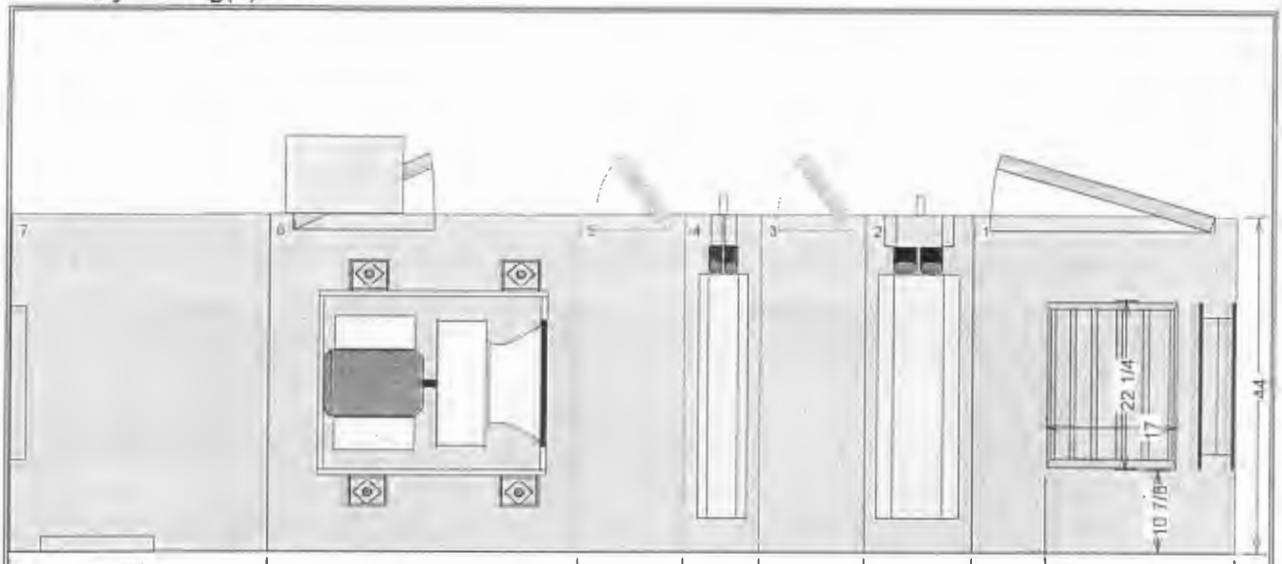


Basic Overall Plan View: Top - Measurements in inches

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

Unit size: 4	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE® Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 2200 cfm	Proposal Number:	
Integral base frame 2.5in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight: 1410.0 lb/ 1457.5 lb	

As-Built - Performance Climate Changer
Item: A3 Qty: 1 Tag(s): AHU-3



Right Side of Unit

Detailed Plan View: Top - Measurements in inches

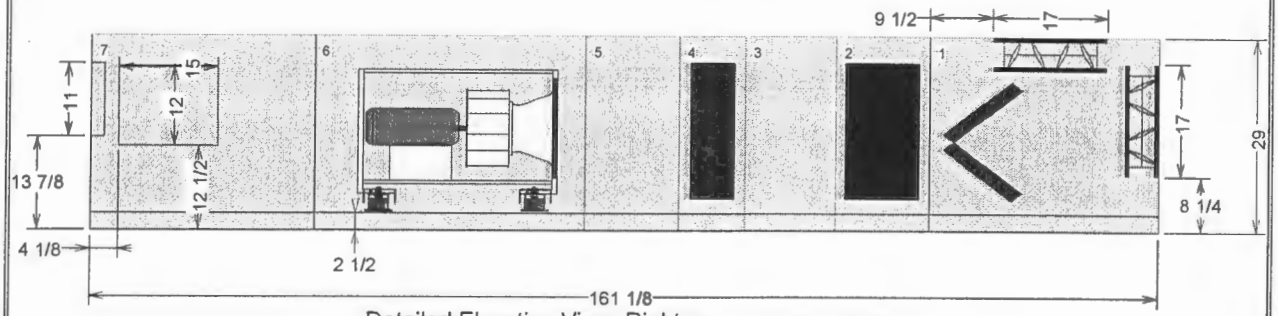
Left Side of Unit

Detailed Plan View: Bottom - Measurements in inches

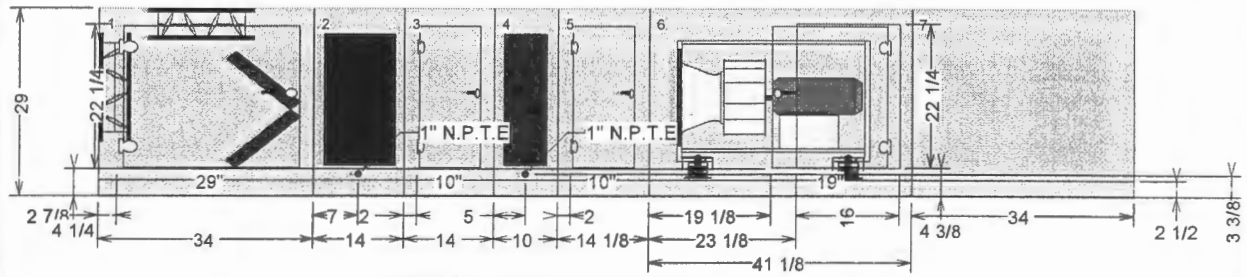
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 4	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE Performance Climate Changer
Product group: Indoor unit	Actual airflow: 2200 cfm	Proposal Number:	
Integral base frame: 2.5in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Shipping/Installed Weight: 1410.0 lb/ 1457.5 lb	

As-Built - Performance Climate Changer
Item: A3 Qty: 1 Tag(s): AHU-3



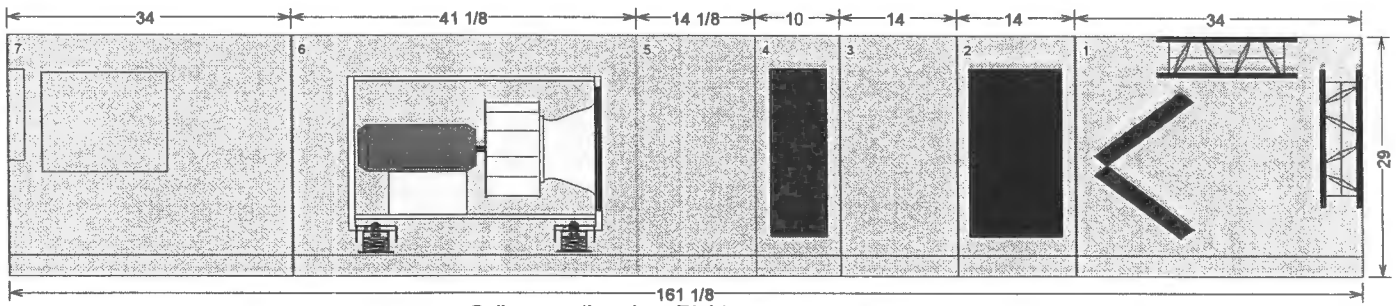
Detailed Elevation View: Right - Measurements in inches



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: 4	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE® Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 2200 cfm	Proposal Number:	
Integral base frame: 2.5in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight 1410.0 lb/ 1457.5 lb	

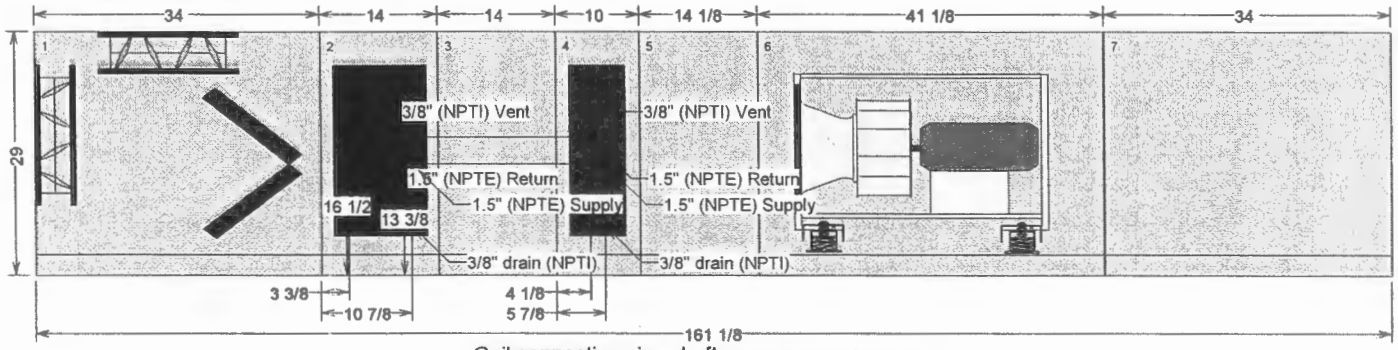


Coil connection view: Right - Measurements in inches

NPTI : 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: 4	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 2200 cfm	Proposal Number:	
Integral base frame: 2.5in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight: 1410.0 lb/ 1457.5 lb	



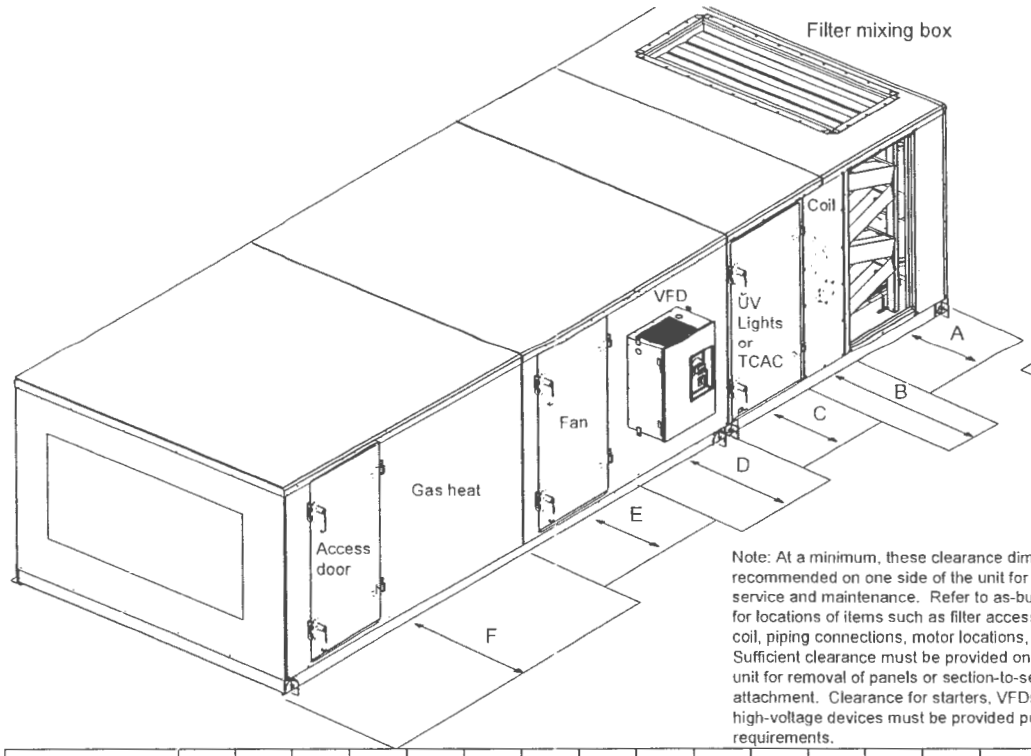
Coil connection view: Left - Measurements in inches

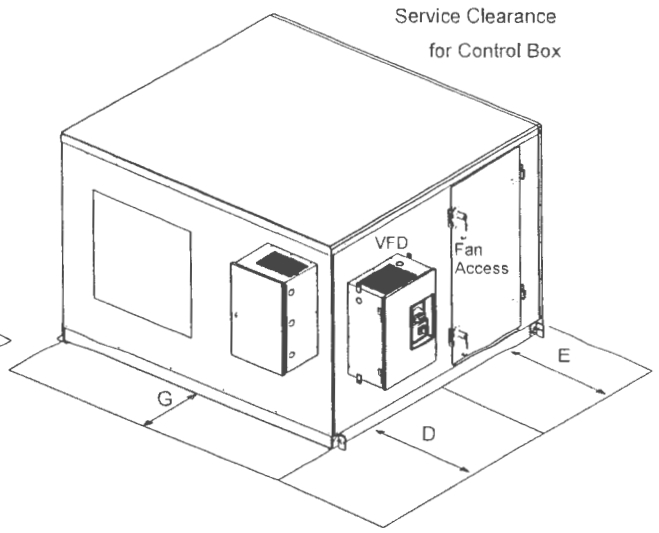
NPTI : National Pipe Thread Internal Connection
NPTE : National Pipe Thread External Connection

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

Unit size: 4	Job Name:	Unit Casing: 2in Double Wall Foam	TRANE Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 2200 cfm	Proposal Number:	
Integral base frame: 2.5in. integral base frame			
Paint: Unpainted/field painted outdoor	Sales Office:	Rigging/Installed Weight: 1410.0 lb/ 1457.5 lb	

EXAMPLE UNIT - NOT CONFIGURED AS SELECTED.

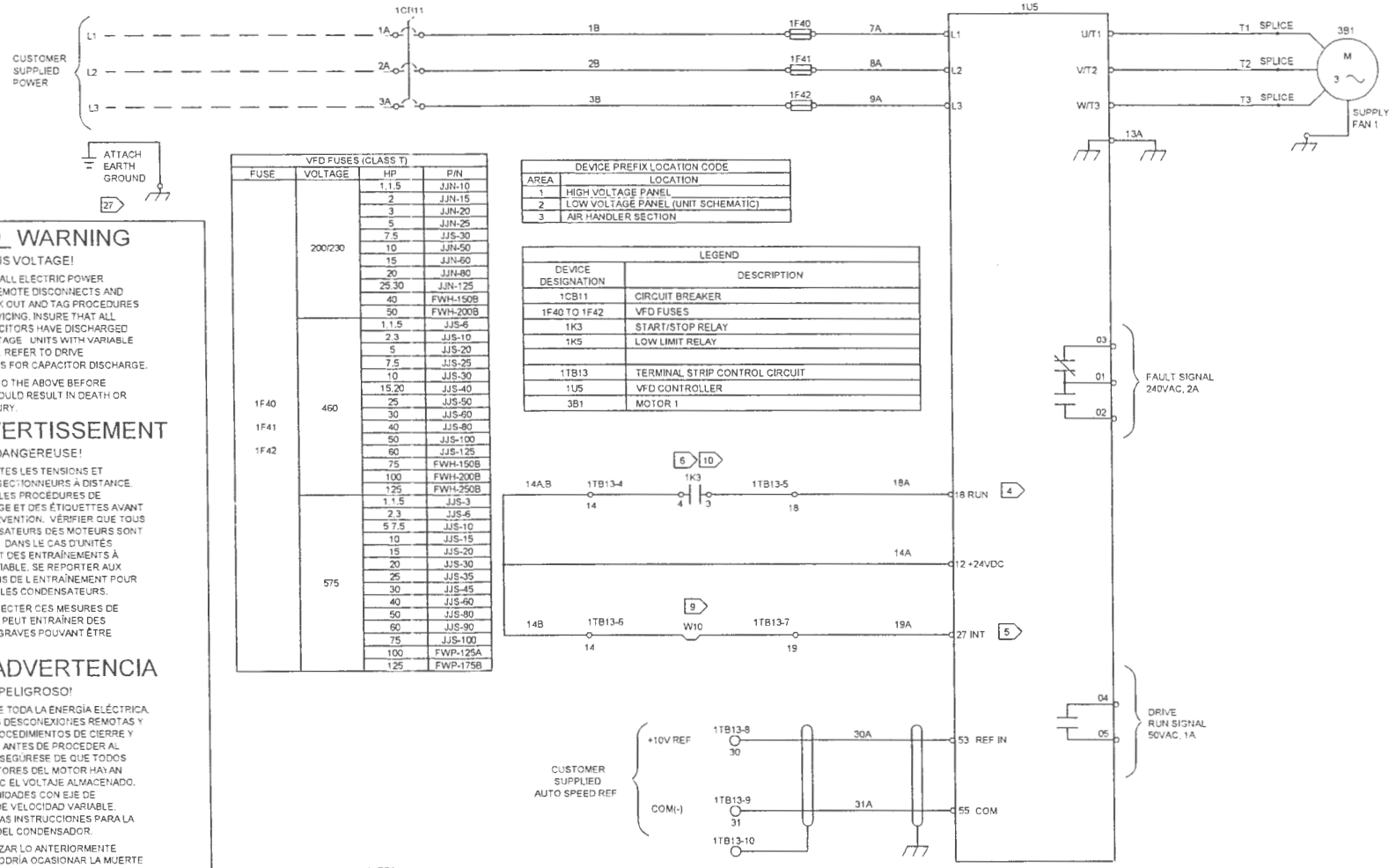




Note: At a minimum, these clearance dimensions are recommended on one side of the unit for regular service and maintenance. Refer to as-built submittal for locations of items such as filter access doors, coil, piping connections, motor locations, etc. Sufficient clearance must be provided on all sides 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.

Component	All Sizes
G (control box HV or LV > 18 pt or UC600 controller)	36
G (control box LV 18 pt or less)	13

Component	3	4	6	8	10	12	14	17	21	21 TALL	25	25 TALL	30	30 TALL	35	35 TALL	40	40 TALL	50	50 TALL	57	57 TALL	66	80	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	52	56	58	58
B (coil, humidifier)	48	59	59	66	77	82	87	87	95	77	95	77	109	87	115	96	128	96	141	110	141	110	156	156	170	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	52	56	58	58
C (TCAC)	43	59	59	63	75	81	83	83	58	75	58	75	83	83	75	59	83	83	83	83	83	83	83	83	75	83
D (External Starter, VFD, LV box or Overload box)	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
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
E (fan)	48	48	48	48	51	54	58	61	60	51	66	51	66	58	66	60	70	60	77	66	77	66	93	93	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	N/A	156	N/A	156	N/A	170	179	180	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	N/A	138	N/A	138	N/A	153	153	167	194



VFD FUSES (CLASS T)			
FUSE	VOLTAGE	HP	P/N
1F40 1F41 1F42	200/230	1,1.5	JJN-10
		2	JJN-15
		3	JJN-20
		5	JJN-25
		7.5	JJS-30
		10	JJN-50
		15	JJN-60
		20	JJN-80
		25,30	JJN-125
		40	FWH-150B
		50	FWH-200B
	460	1,1.5	JJS-6
		2,3	JJS-10
		5	JJS-20
		7.5	JJS-25
		10	JJS-30
		15,20	JJS-40
		25	JJS-50
		30	JJS-60
		40	JJS-80
		50	JJS-100
		60	JJS-125
		75	FWH-150B
		100	FWH-200B
		125	FWH-250B
	575	1,1.5	JJS-3
		2,3	JJS-6
		5,7.5	JJS-10
		10	JJS-15
		15	JJS-20
		20	JJS-30
		25	JJS-35
		30	JJS-45
		40	JJS-60
		50	JJS-80
		60	JJS-90
		75	JJS-100
		100	FWP-125A
		125	FWP-175B

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

LEGEND	
DEVICE DESIGNATION	DESCRIPTION
1CB11	CIRCUIT BREAKER
1F40 TO 1F42	VFD FUSES
1K3	START/STOP RELAY
1K5	LOW LIMIT RELAY
1TB13	TERMINAL STRIP CONTROL CIRCUIT
1U5	VFD CONTROLLER
3B1	MOTOR 1

⚠ WARNING

HAZARDOUS VOLTAGE!

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

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

⚠ AVERTISSEMENT

TENSION DANGEREUSE!

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

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

⚠ ADVERTENCIA

¡VOLTAJE PELIGROSO!

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

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

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.

NOTES:

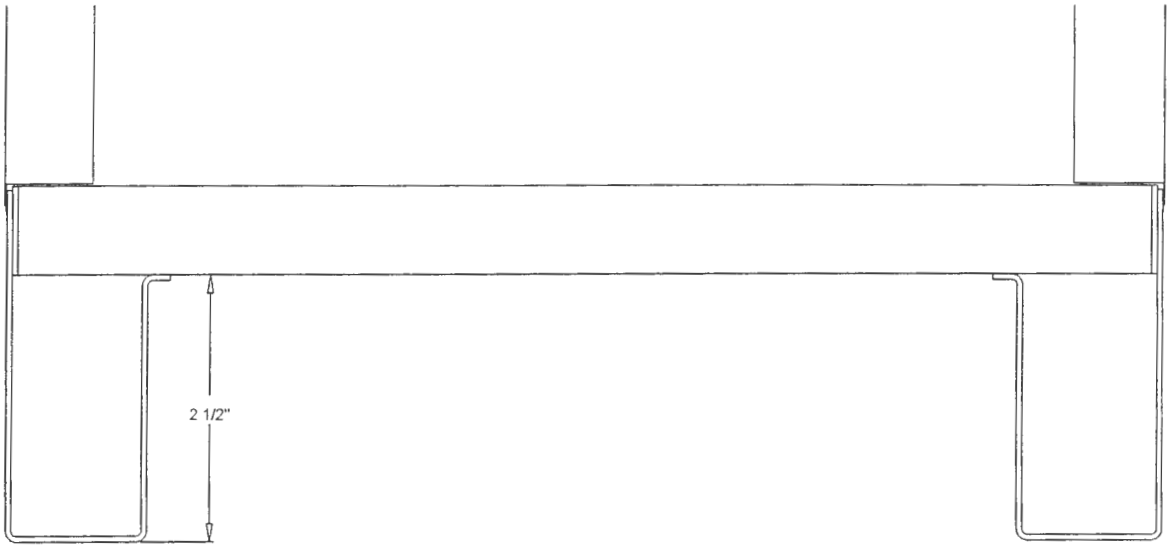
1. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. PHANTOM LINES INDICATE CONTROL OPTION. REF. CONTROL PANEL SCHEMATIC FOR SPECIFIC DETAIL.
2. ALL FIELD WIRING MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC), STATE AND LOCAL REQUIREMENTS. OTHER COUNTRIES APPLICABLE NATIONAL AND/OR LOCAL REQUIREMENTS SHALL APPLY. FIELD CONDUCTORS SHALL HAVE INSULATION RATINGNOT LESS THAN 600V COPPER CONDUCTORS ONLY.
3. 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.

4. PROGRAM TERMINAL 18 AS RUN.
5. PROGRAM TERMINAL 27 INV. COASTING STOP.
6. CLOSES TO RUN AUTO MODE OR BYPASS AUTO FOR OPTION VFD OR STARTER.
9. REMOVE JUMPER AND INSTALL FIELD SAFETY INTERLOCK.
10. FIELD SUPPLIED CONTACTS.
27. ATTACH GROUND OR EQUIPMENT GROUND.

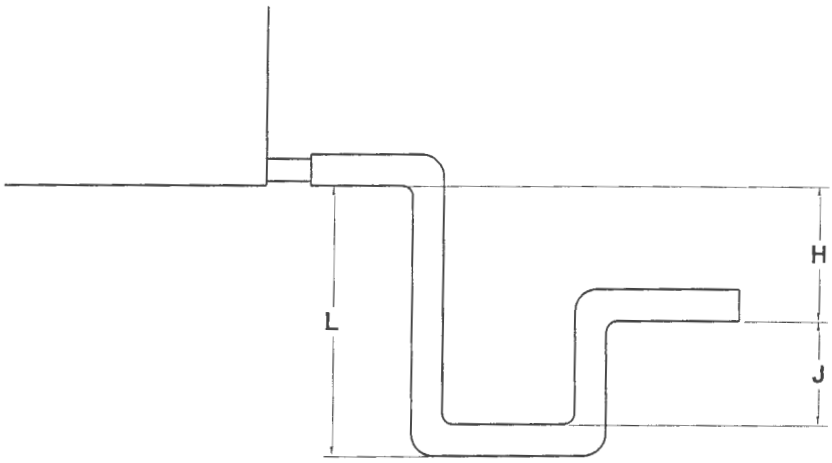
10136

Accessory - Performance Climate Changer
Item: A3 Qty: 1 Tag(s): AHU-3

Base Detail



Accessory - Performance Climate Changer
Trap Schedule
Item: A1 - A3 Qty: 3 Tag(s): AHU-1, AHU-2, AHU-3



Drain pan trapping for section under negative pressure

L = H + J + pipe diameter where:
H = 1 inch for each inch of negative pressure (loaded filters) plus 1 inch
J = ½ **H**

Drain pan trapping for section under positive pressure

L = H + J + pipe diameter where:
H = 1/2 inch (minimum)
J = ½ inch plus the unit positive static pressure at coil discharge (loaded filters)

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)	
AHU-1[2]	Unit size 10	0.875	0.875	Coil section [2]	3.662	1.831	6.494	6.000
AHU-2[2]	Unit size 4	0.750	0.750	Coil section [2]	3.383	1.692	6.075	6.000
AHU-3[2]	Unit size 4	0.800	0.800	Coil section [2]	4.201	2.100	7.301	2.500

[1] To ensure proper condensate trapping the field installed housekeeping pad height is the responsibility of the contractor.
[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 - A3 Qty: 3 Tag(s): AHU-1, AHU-2, AHU-3

Unit Tag(s)	Unit Size	Filter Location	Filter Arrangement	Filter Depth	Filter Type	MERV Rating	Filter Quantity	Filter Size
AHU-1	Unit size 10	Air mixing section [1]	-	2in. filter frame	Pleated media - run set	MERV 8	4	20in.x25in.
AHU-2	Unit size 4	Air mixing section [1]	-	2in. filter frame	Pleated media - run set	MERV 8	4	16in.x20in.
AHU-3	Unit size 4	Air mixing section [1]	-	2in. filter frame	Pleated media - run set	MERV 8	4	16in.x20in.

Field Wiring - Performance Climate Changer
MCA MOP Schedule
Item: A1 - A3 Qty: 3 Tag(s): AHU-1, AHU-2, AHU-3

Unit Tag(s)	Circuit	Circuit Description	Voltage/Phase/Hz	MCA (A)	MOP (A)
AHU-1	1	Supply fan motor(s)	200-208/3/60	27.50	45.00
AHU-2	1	Supply fan motor(s)	200-208/3/60	8.50	15.00
AHU-3	1	Supply fan motor(s)	200-208/3/60	12.00	20.00