

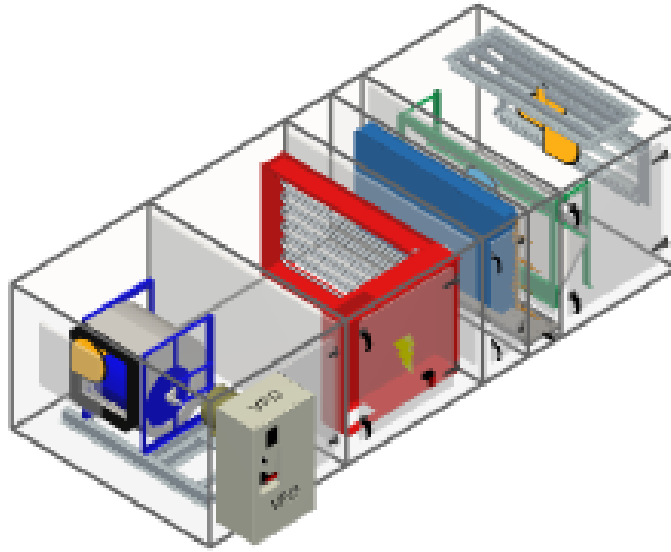
# Trane Performance Climate Changer Air Handler

## Unit Overview - ACU-1

Application	Unit Size	External Dimensions			Weight	
		Height	Width	Length	Installed	Rigging
Indoor unit	10	37.8 in	61.5 in	145.0 in	2346 lb	2346 lb
Quantity of Shipping Sections		Largest Ship Split			Heaviest Ship Split	Elevation
2 pieces		Height	Width	Length	1738 lb	0.00 ft
		37.8 in	61.5 in	85.0 in		
Supply Fan						
Airflow	4800 cfm	Total Static Pressure	2.926 in H2O			

## Construction Features

Panel	2in. foam injected R-13 with thermal break
Panel Material	All unit inner panels - galvanized
Integral Base Frame	2.5in. integral base frame
Paint	Unpainted/field painted
Agency Approval	YES



## Unit Electrical

Circuit	Voltage/Phase/Frequency	FLA	MCA	Fuse Size
Circuit number 1 Supply fan motor(s)	460/3/60	8.42 A	10.47 A	15.00 A
Circuit number 2 Electric heat 1	460/3/60	38.33 A	47.86 A	50.00 A

## Warranty

Warranty section	Extd. warranty
Labor - 1st year	1st year labor warranty

## Air mixing section - Position: 1

Openings							
Face	Path	Type	Airflow	Face Velocity	Area	Pressure Drop	Hood
Back	Return	Parallel blade damper	4800 cfm	1155 ft/min	4.16 sq ft	0.260 in H2O	
Top	Outside	Parallel blade damper	4800 cfm	1155 ft/min	4.16 sq ft	0.260 in H2O	N/A
Filter							
Type	Frame	MERV Rating	Quantity	Size	Pressure Drop		
Pleated media - MERV 8	2"	MERV 8	4.00	20in.x25in.	0.590		
Condition	Face Velocity	Airflow	Area				
Mid-life	346 ft/min	4800 cfm	13.89 sq ft				
Section Options							
Door Location	Right						



**Cooling coil section - Position: 2**

Coil Construction		Coil Performance	
<b>Model</b>	Refrigerant - UF	<b>Capacity</b>	
<b>Rows</b>	4	<b>Total</b>	144.00 MBh
<b>Tube Diameter</b>	1/2in. tube diameter (12.7 mm)	<b>Sensible</b>	111.39 MBh
<b>Tube Mat/Wall Thickness</b>	.016" (0.406 mm) copper tubes	<b>Air</b>	
<b>Fin Spacing</b>	115 Per Foot	<b>Flow</b>	4800 cfm
<b>Fin Material</b>	Aluminum fins	<b>Entering Dry Bulb</b>	80.00 F
<b>Fin Type</b>	Delta flo E (energy efficient)	<b>Entering Wet Bulb</b>	67.00 F
<b>Face Area</b>	9.98 sq ft	<b>Leaving Dry Bulb</b>	58.90 F
<b>Coil (top/single) H x L</b>	28 in. (711 mm) X 50" (1270 mm) finned length	<b>Leaving Wet Bulb</b>	57.57 F
<b>Casing</b>	Galvanized	<b>Pressure Drop</b>	0.424 in H2O
<b>Rigging Weight</b>	111.2 lb	<b>Face Velocity</b>	481 ft/min
<b>Coil Section Options</b>		<b>Refrigerant</b>	
<b>Drain Pan</b>	Stainless steel	<b>Type</b>	R-410A
<b>Drain Connection</b>	Right	<b>Liquid Temperature</b>	115.00 F
<b>Service Panel</b>	Standard panels	<b>Suction Temperature</b>	45.00 F
		<b>Circuiting Type</b>	Intertwined circuits
		<b>Capacity Circuits</b>	Full circuiting
		<b>AHRI 410 Classification</b>	
		<b>AHRI 410 Classification</b>	AHRI ACHC Certified

Note: 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](http://www.ahridirectory.org).

**Access/blank/turning section - Position: 3**

Options	
<b>Section Length</b>	14.000 in
<b>Door Location 1</b>	Right

**Heating coil section - Position: 4**

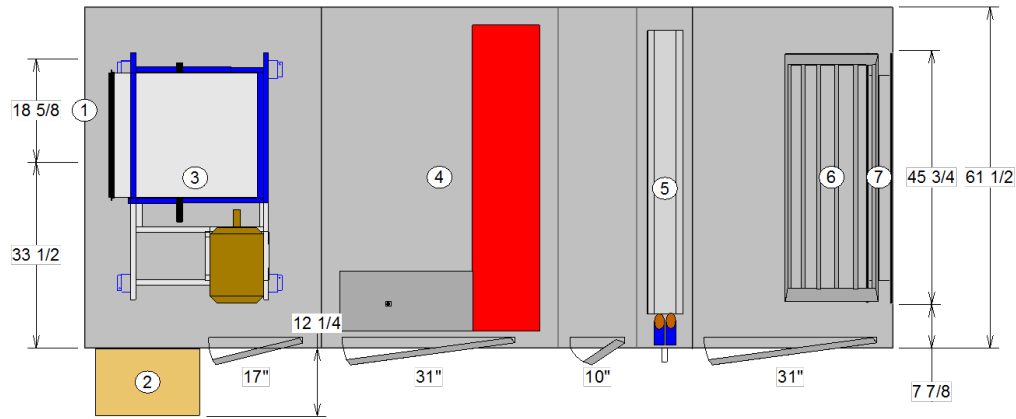
Coil Construction		Coil Performance	
<b>Model</b>	Electric heat	<b>Capacity</b>	
<b>Face Area</b>	8.52 sq ft	<b>Heating Output</b>	30.30 kW
<b>Voltage</b>	460/60/3 - draw through	<b>Air</b>	
<b>Electric Heat Control</b>	Proportional (0-10 V)	<b>Flow</b>	4800 cfm
<b>Electric Heat Stages</b>	SSR staging - draw through	<b>Entering Dry Bulb</b>	50.00 F
<b>Coil Section Options</b>		<b>Leaving Dry Bulb</b>	70.00 F
<b>Service Panel</b>	Opposite coil connection side	<b>Pressure Drop</b>	0.153 in H2O
<b>Door Location</b>	Right	<b>Face Velocity</b>	564 ft/min

**Supply fan section - Position: 5**

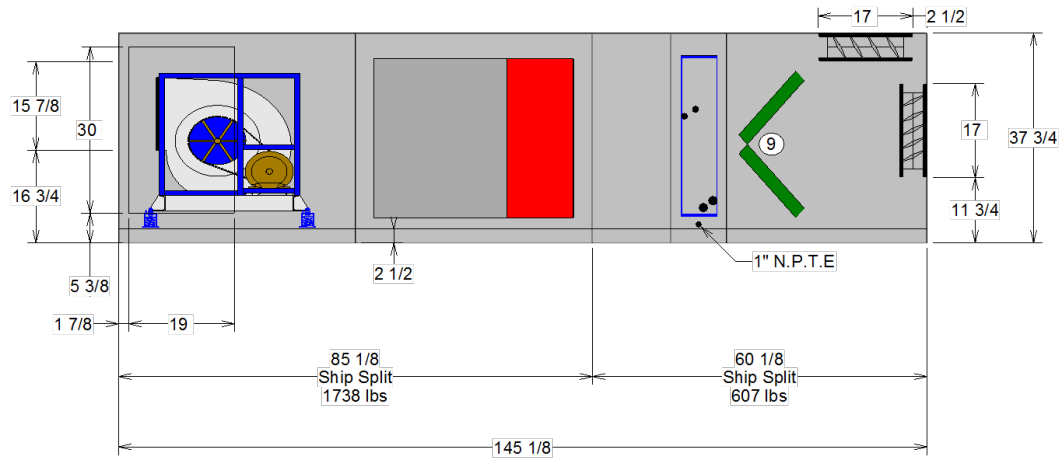
Fan Data		Motor Data	
<b>Wheel Diameter/Type/Class</b>	15in. diameter AF, M press	<b>Power / Fan</b>	5 hp
<b>Fan Quantity</b>	1	<b>Voltage</b>	460/3
<b>Discharge Location</b>	Front top	<b>Speed</b>	1800
<b>Motor Location</b>	Right side drive	<b>Class</b>	NEMA premium compliant ODP
<b>Drive Service Factor</b>	1.5 fixed drive	<b>Efficiency</b>	89.50 %
<b>Fan Performance</b>		<b>Fan Section Options</b>	
<b>Airflow</b>	4800 cfm	<b>Fan Wheel Balance</b>	Inverter balance with shaft grounding
<b>Total Static Pressure</b>	2.926 in H2O	<b>Door Location</b>	Right
<b>Total Brake Power</b>	3.819 hp		
<b>Operating Speed</b>	1942 rpm		
<b>AMCA FEG</b>	FEG85		
<b>Unit Static Efficiency</b>	57.98 %		
<b>Motor Interface Options</b>			
<b>Selection Type</b>	VFD w/ bypass		
<b>Voltage</b>	460/3		
<b>Mounting Location</b>	External mounting		
<b>VFD Frequency</b>	60.00 Hz		



<b>Pressure Drop in (in w.g.)</b>	
<b>Supply fan</b>	
Air mixing section	0.85
Coil section	0.42
Coil section	0.15
<b>Internal Static Pressure</b>	<b>1.43</b>
<b>External Static Pressure</b>	<b>1.50</b>
<b>Total Static Pressure</b>	<b>2.93</b>



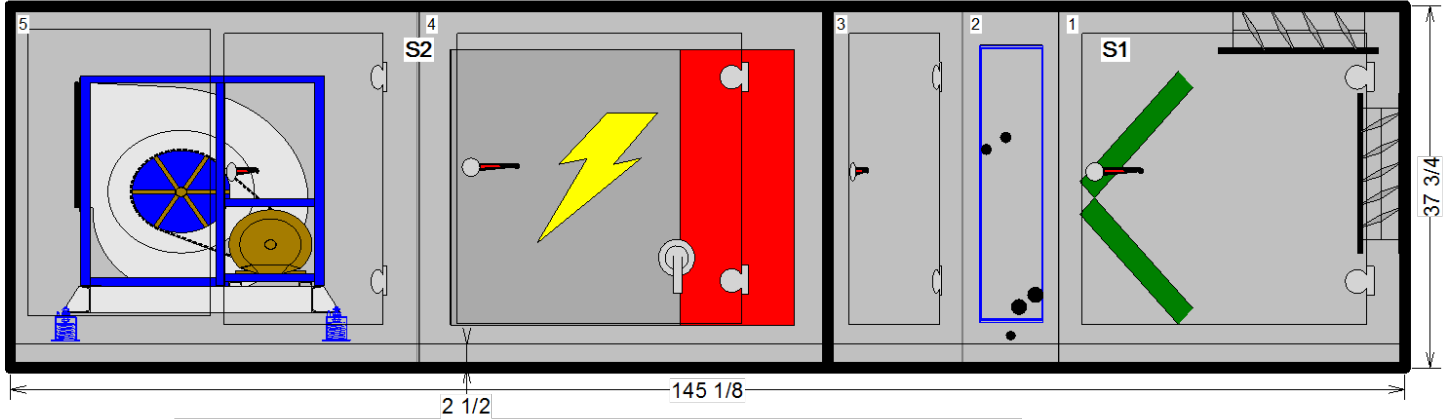
- 1 FTTP discharge opening  
15.88 x 18.63
  - 2 External VFD RH  
Housed fan - 15in.  
diameter AF, M press  
Supply fan 5 hp 460/3
  - 3 Electric heater
  - 4 Cooling coil - 4 Coil type  
UF
  - 6 Damper top-parallel blade  
45.75 x 17
  - 7 Damper back-parallel  
blade  
17 x 45.75
  - 8 1" N.P.T.E
  - 9 Angled filters -
- Doors:
- 17 width x 31 height
  - 31 width x 31 height
  - 10 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**

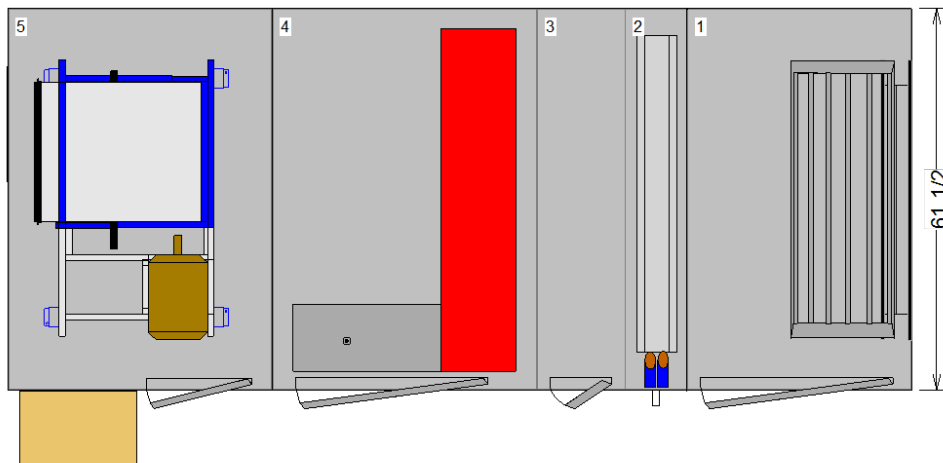
Unit size: 10	Job Name: 135 Santilli Lobby - Everett, MA	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 4800	Proposal Number:
Integral base frame: 2.5in. integral base frame	Sales Office:	Tags: ACU-1
Paint: Unpainted/field painted		Rigging weight: 2345.5 / Installed weight: 2345.5



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

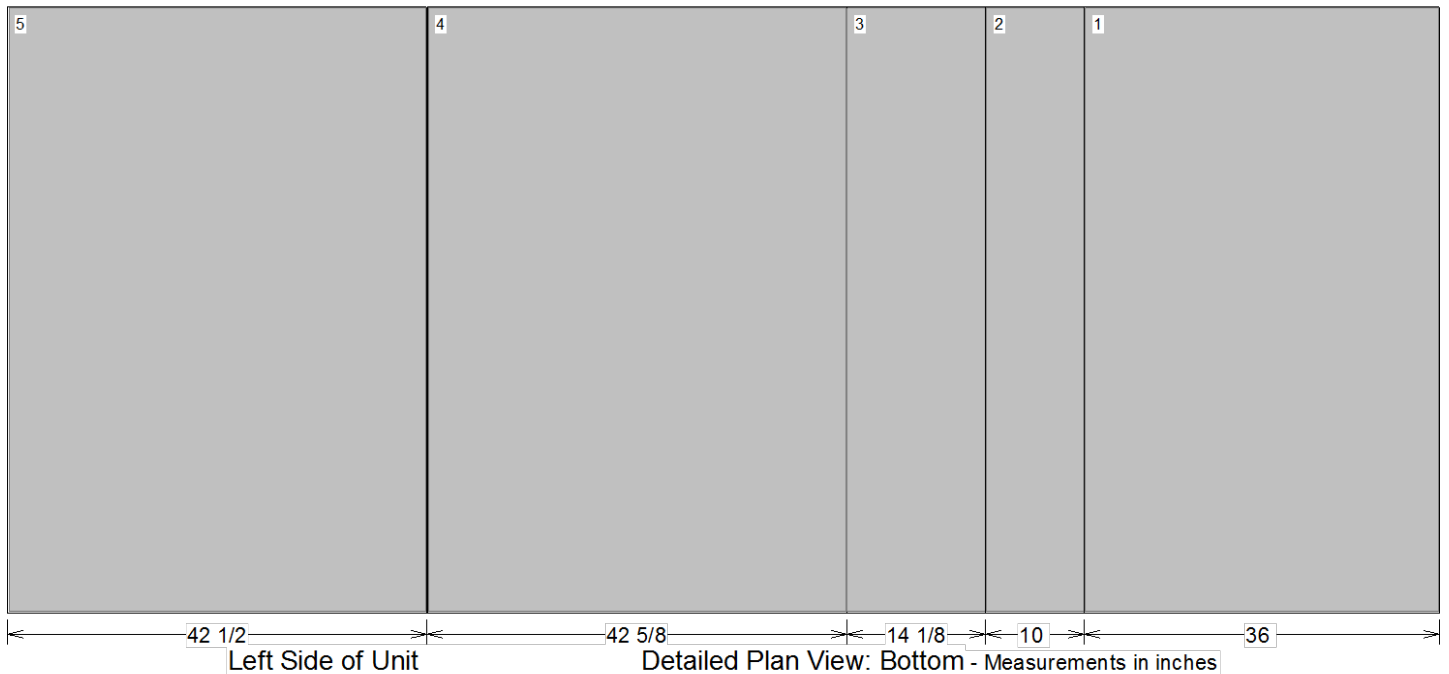
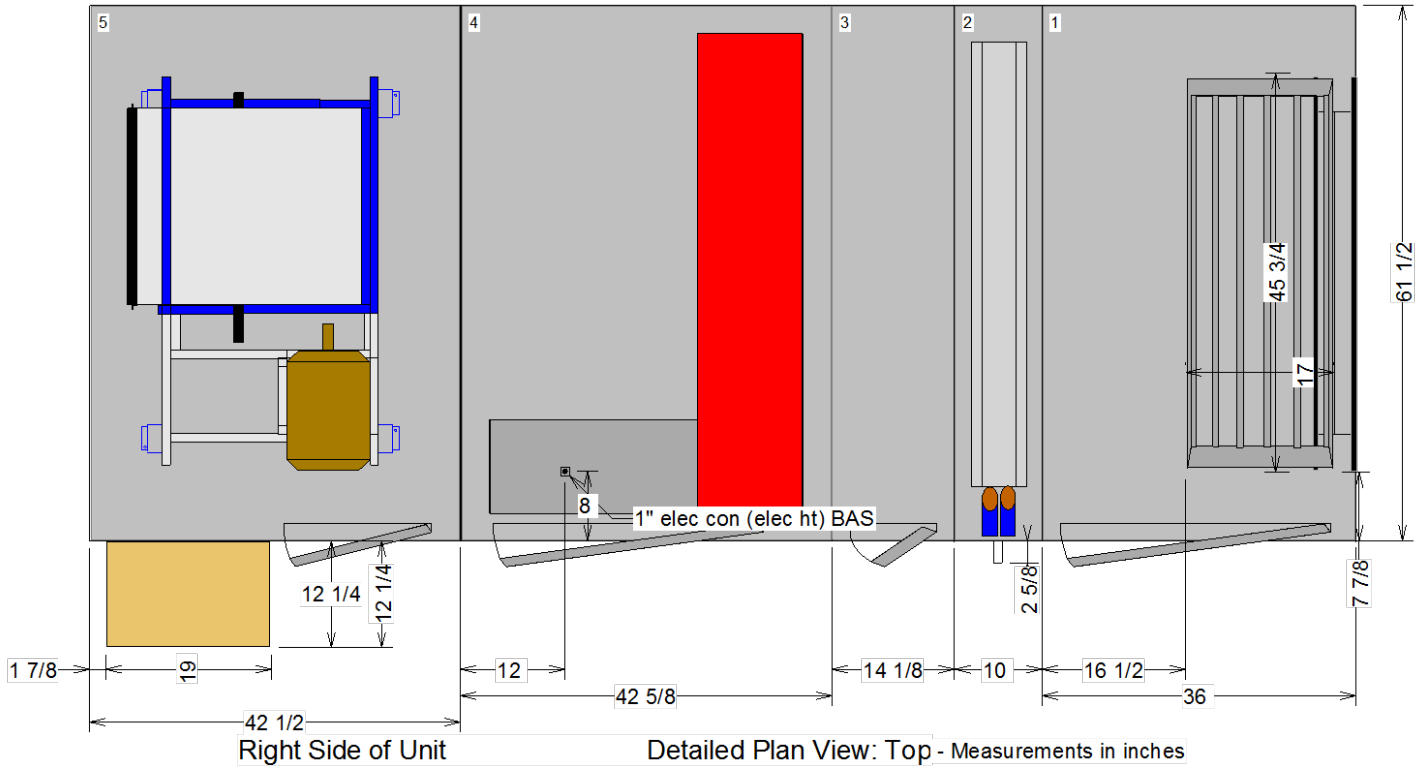
Pos #	Module	Length	Weight
1	Air mixing section	36	306.00
2	Coil section	10	208.20
3	Access section	14 1/8	93.00
4	Coil section	42 5/8	563.00
5	Fan section	42 1/2	1175.31
		Installed Unit Weight 2345.51 lbs	



Basic Overall Plan View: Top - Measurements in inches

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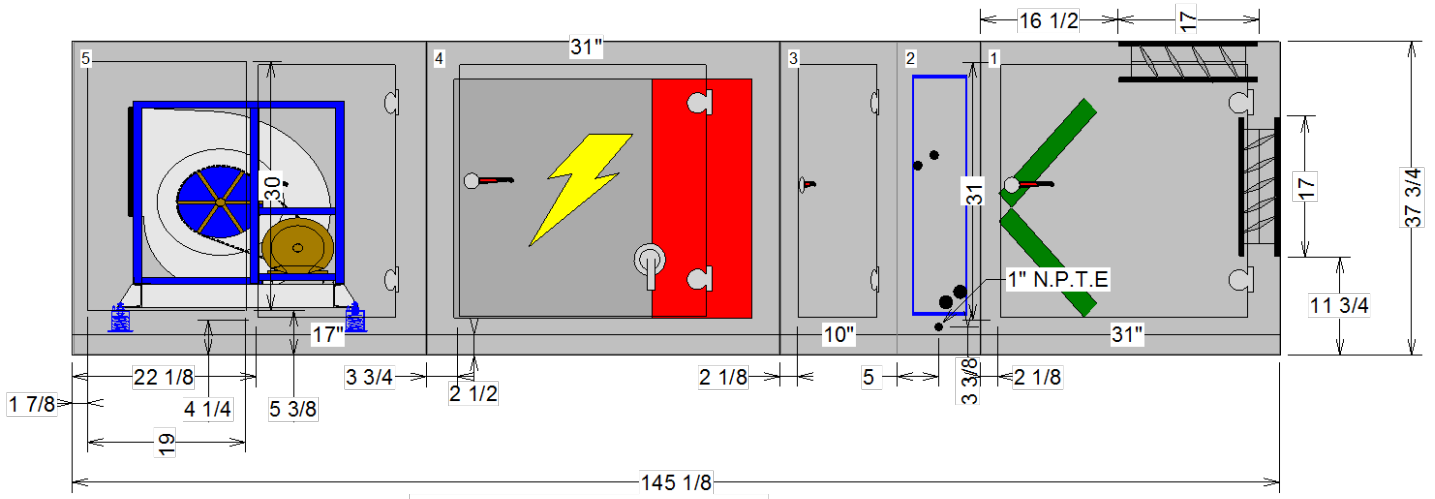
Unit size: 10	Job Name: 135 Santilli Lobby - Everett, MA	Unit Casing: 2in Double Wall Foam	 Performance Climate Changer Air Handlers
Product group: Indoor unit	Actual airflow: 4800	Proposal Number:	
Integral base frame: 2.5in. integral base frame	Sales Office:	Tags: ACU-1	
Paint: Unpainted/field painted		Rigging weight: 2345.5 / Installed weight: 2345.5	



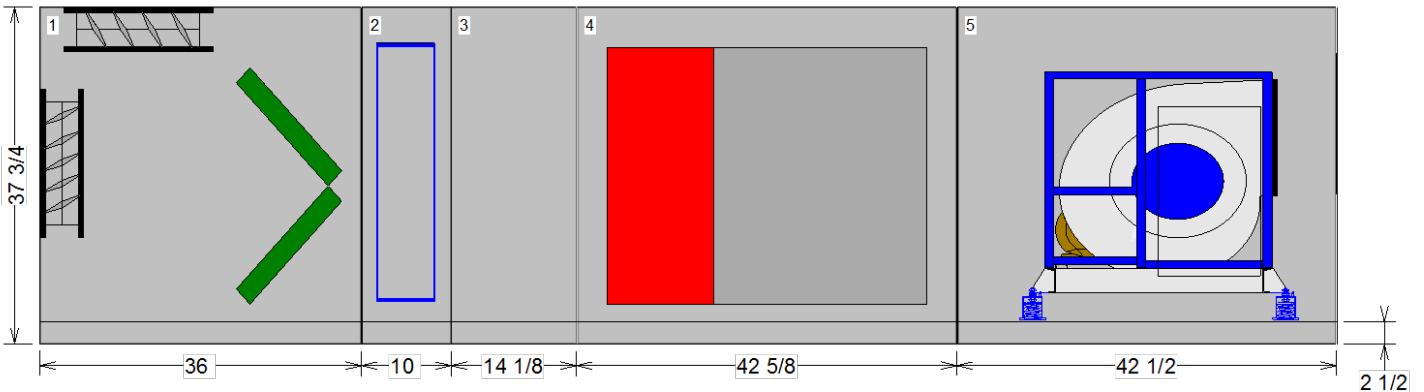
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Product group: Indoor unit	Actual airflow: 4800	Proposal Number:
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Paint: Unpainted/field painted		Rigging weight: 2345.5 / Installed weight: 2345.5





Detailed Elevation View: Right - Measurements in inches

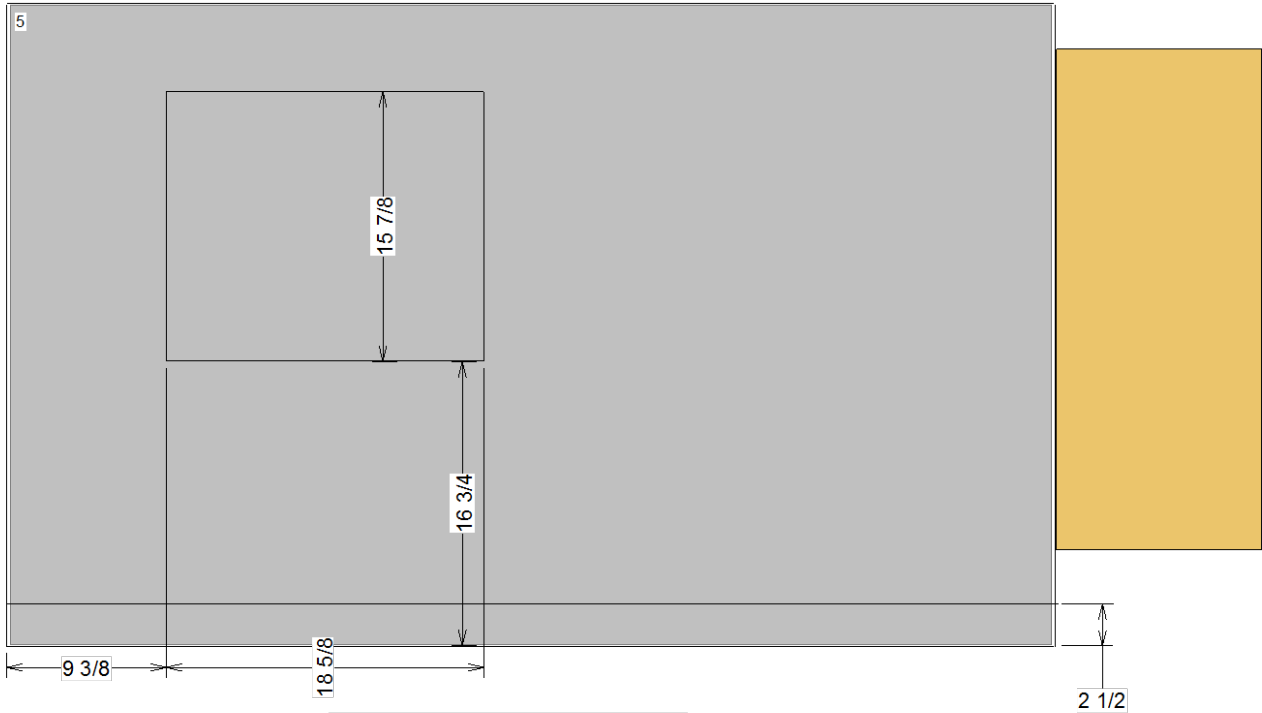


Detailed Elevation View: Left - Measurements in inches

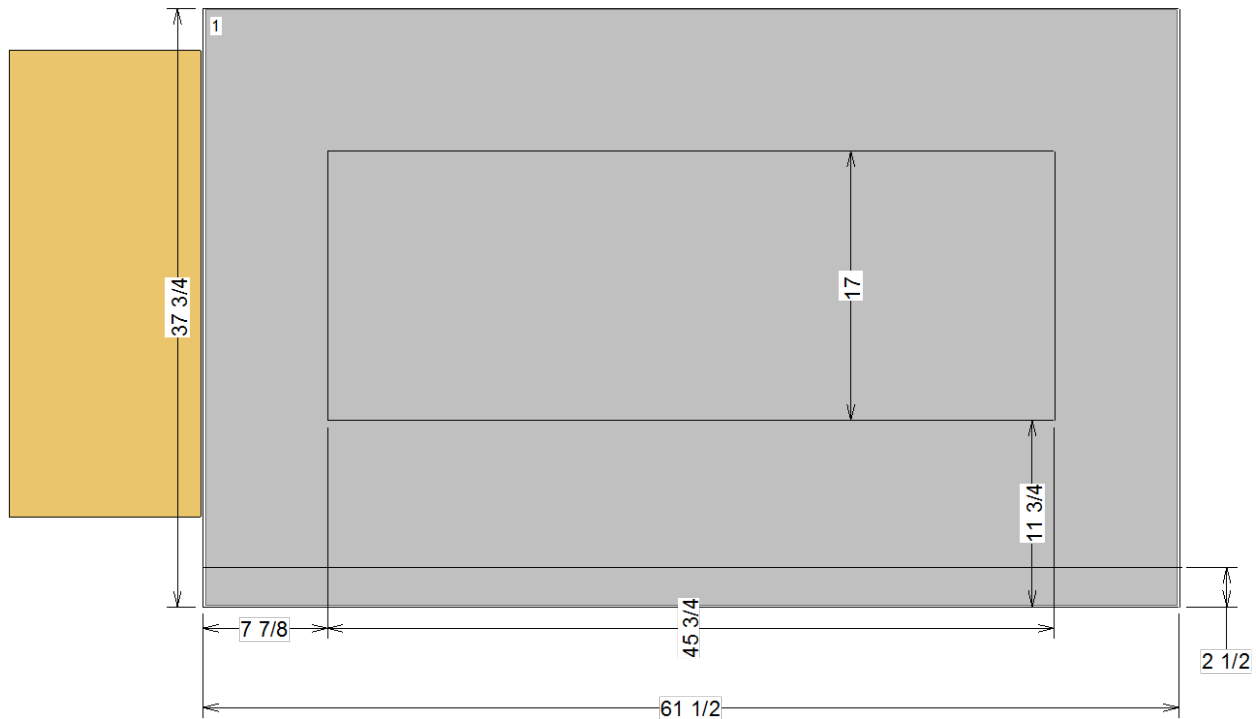
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Integral base frame: 2.5in. integral base frame	Sales Office:	Tags: ACU-1
Paint: Unpainted/field painted		Rigging weight: 2345.5 / Installed weight: 2345.5





Detailed Elevation View: Front - Measurements in inches



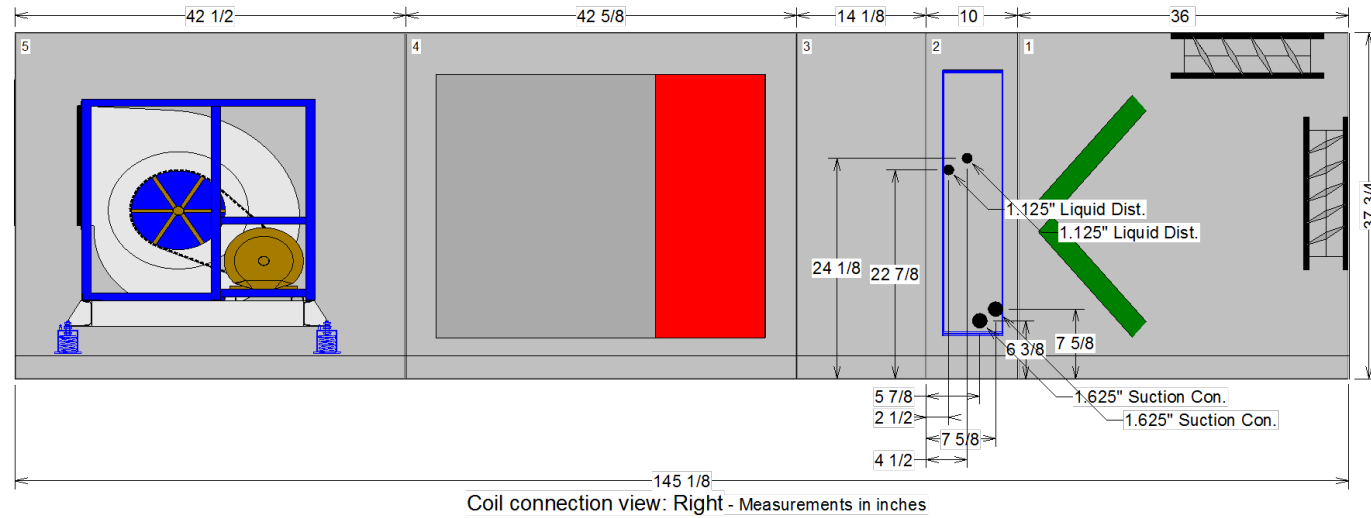
Detailed Elevation View: Back - Measurements in inches

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Product group: Indoor unit	Actual airflow: 4800	Proposal Number:
Integral base frame: 2.5in. integral base frame	Sales Office:	Tags: ACU-1
Paint: Unpainted/field painted		Rigging weight: 2345.5 / Installed weight: 2345.5



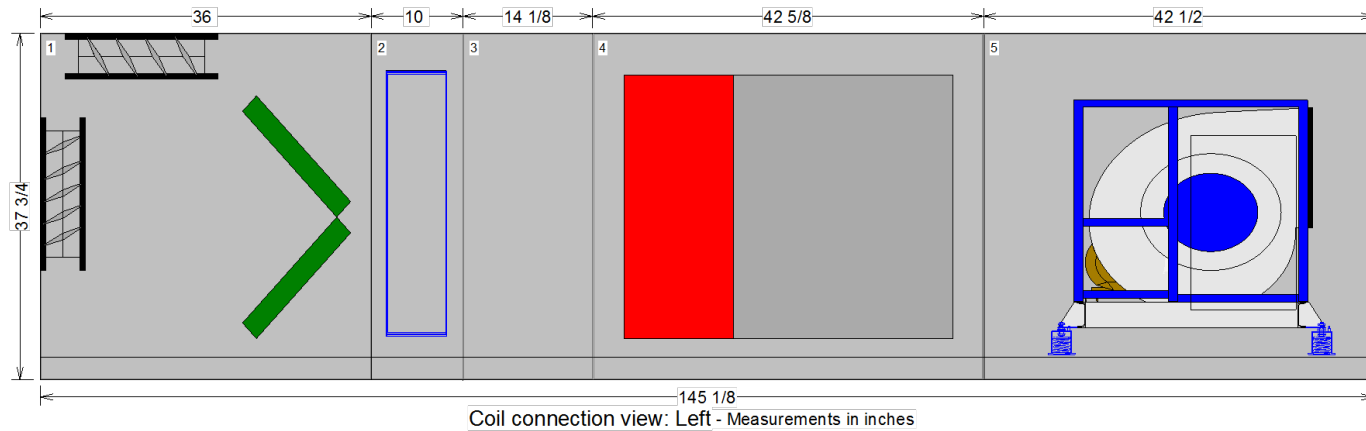




**NPTI : National Pipe Thread Internal Connection**  
**NPTE : National Pipe Thread External Connection**

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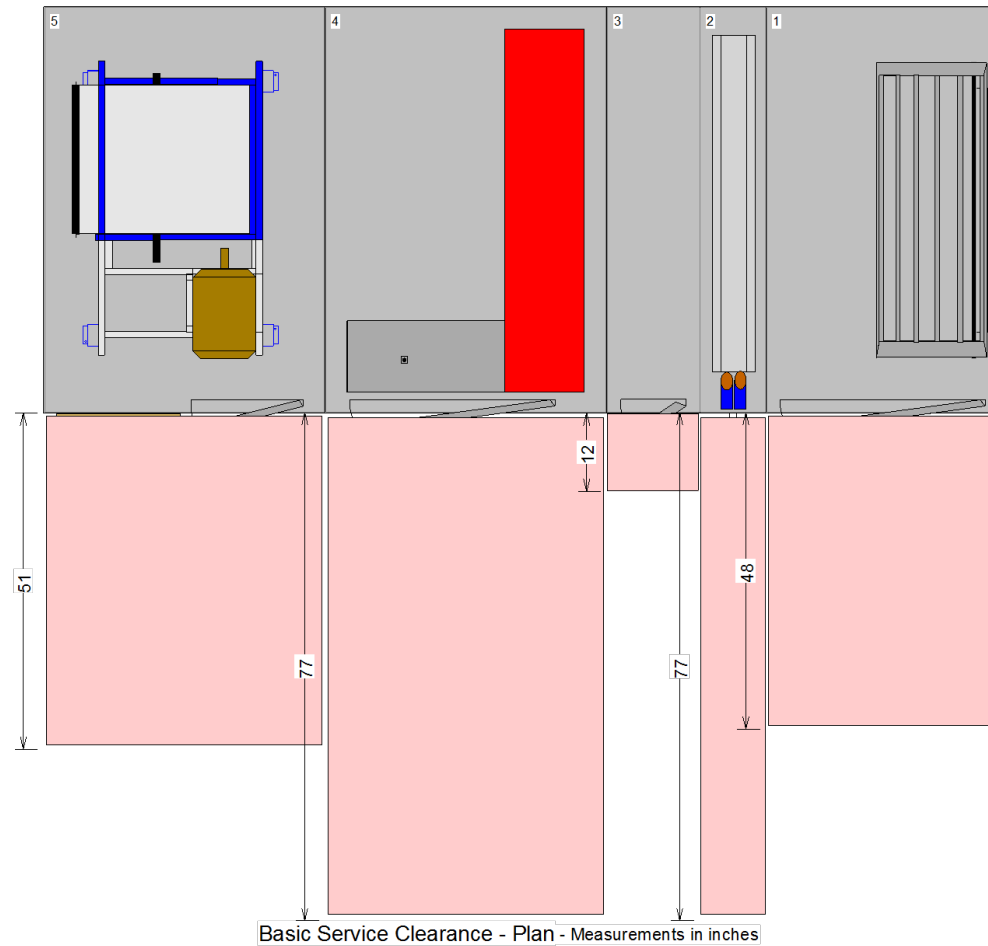
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## GENERAL

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.

Supply fans within the scope of AHRI Standard 430 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. *Refer to product data for specific fan footnote references.*

Manufacturer provided VFDs shall be certified to AHRI Standard 1210 "Performance Rating of Variable Frequency Drives" to ensure documented and reliable VFD efficiency.

## 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. If required, 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<sup>2</sup>-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 flexible 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<sup>2</sup> 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.

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The following specifications apply only to units with outside air and return air dampers, with actuators. The 5 year warranty applies only to these items.

This unit contains Economizer that meets or exceeds all mandatory requirements prescribed by Title 24, including but not limited to:

- 5 yr parts only warranty
- Successfully tested to 60,000 Actuations
- Less than 10 cfm/sq.ft. of damper leakage at 1" WG per AMCA 500L

## 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.

## Coil with Inspection

The coil section shall include an inspection section complete with a double-wall, removable door downstream of the coil 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 shall be provided with a thermal break construction of door panel and door frame.

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.

No casing penetrations supplied for hydronic drain and vents. If required, piping contractor will need to drill drain and vent penetrations using factory located features provided in coil panel.

## Refrigerant Cooling Coils

The coils shall have aluminum fins and seamless copper tubes. The fins shall have collars drawn, belled, and firmly bonded to tubes by mechanical expansion of the tubes. Suction and liquid line connections shall extend to the unit exterior. 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 450 psig and leak-tested to 300 psig air pressure under water. After testing, the inside of the coils shall be dried, all connections shall be sealed, and the coil shall be shipped with a charge of dry air.

Suction headers and liquid connections shall be constructed of copper tubing with connections penetrating unit casings to permit sweat connections to refrigerant lines. The coils shall have equalizing vertical distributors sized according to the capacities of the coils. Coils are 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](http://www.ahridirectory.org).

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

## Electric Heat:

A UL-recognized electric heater shall be factory installed in the air handler. The heater shall be an open-coil configuration with Type A wire (80% nickel and 20% chromium) derated to a maximum watt density of 35 watts per square inch. Safeties shall include three-pole, disconnecting-type contactors, airflow switches, automatic-reset functional limits, automatic-reset high-temperature limits, and manual-reset high-temperature limits. The contactors for energizing the electric heater shall be magnetic contactors. Electric heaters above 48 amps shall be fused into circuits not to exceed 48 amps as required by UL and NEC. Kilowatt output shall be selected to the nearest 0.1 kW of scheduled kilowatt. Electric heater section shall include a circuit breaker disconnect with a through-the-door interlocking handle, and shall be lockable in the OFF state. *Refer to Product Data for electric heater voltage, control type, and capacity.*

## SSR-Full Modulating Control (0-10 VDC)

The electric heater shall be factory-wired to accommodate SSR-Full Modulating control. The SSR control can receive a 0-10VDC signal from a standalone thermostat or building automation system providing full modulating control of the heater.

## 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 grounding assembly installed on the fan motor to discharge both static and induced shaft currents to ground.

## **AF FAN SECTION**

The fan type shall be provided as required for stable operation and optimum energy efficiency. The fan shall be a double-width, double-inlet, multiblade-type, airfoil (AF) fan. The fan shall be equipped with self-aligning, antifriction bearings with an L-50 life of 200,000 hours, as calculated per ANSI/AFBMA Standard 9. For any bearing requiring relubrication, the grease line shall be extended to the fan support bracket on the drive side. The fan shall be statically and dynamically balanced at the factory as a complete fan assembly (fan wheel, motor, drive, and belts). The fan shaft shall not exceed 75 percent of its first critical speed at any cataloged speed. Fan wheels shall be keyed to the fan shaft to prevent slipping. The fan shafts shall be solid steel. The fan section shall be provided with an access door on the drive side of the fan. Fan performance shall be certified as complying with AHRI Standard 430.

### **Drive Service Factor**

The drives shall be constant speed with fixed-pitch sheaves. The drives shall be selected at a minimum 50 percent larger than the motor brake horsepower (1.5 service factor).

### **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.*

### **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.

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.



### **Combination VFD / Disconnect w/ Bypass**

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) VFD/OFF/Bypass selector switch
- d) Bypass Relays
- e) Bypass Circuitry
- f) Inlet fuses to provide maximum protection against inlet short circuit
- g) Fused control transformer
- h) Manual reset overloads
- i) 120V control transformer with fusing and secondary grounding
- j) Current limited stall prevention
- k) Auto restart after momentary power loss
- l) Speed search for starting into rotating motor
- m) Anti-windmill w/DC injection before start
- n) Phase-to-phase short circuit protection
- o) Ground fault protection

A dedicated variable frequency drive transformer will be provided to power the VFD/Off/Bypass circuitry. 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.

### **Lifting Instructions**

The air handling units must be rigged, lifted, and installed in strict accordance with the Installation, Operation, and Maintenance manual (CLCH-SVX07G-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.

## Fan Details

<b>Motor Frequency</b>	60.00 Hz	<b>Altitude</b>	0.00 ft
<b>Operating Airflow</b>	4,800 cfm	<b>Design Temp.</b>	70.00 F
<b>Operating Static Pressure</b>	2.926 in H2O	<b>Max BHP</b>	4.048 hp
<b>Operating RPM</b>	1,942 rpm	<b>Efficiency</b>	57.98 %
<b>Operating Brake Power</b>	3.819 hp		

BHP adjusted 5% for approximate drive loss

## ACU-1 - Supply - Single Fan

Size 10 Horizontal Draw-Thru 15 inch AF M Press

