Submittal

Prepared For:

Date: February 09, 2024

Job Name:
Voces Del La Frontera

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

Product Summary

Qty	Product
1	6- 25 Ton PKGD Precedent Unitary Rooftops

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

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

Product performance and submittal data is valid for a period of 6 months from the date of submittal generation. If six months or more has elapsed between submittal generation and equipment release, the product performance and submittal data will need to be verified. It is the customer's responsibility to obtain such verification.

Table of Contents

Tag Data - 6- 25 Ton PKGD Precedent Unitary Rooftops (Qty: 1)

Item	Tag(s)	Qty	Description	Model Number
A1	PREC-1	1	6- 25 Ton PKGD Precedent Unitary Rooftop	YHJ150A3S0L**D400C0A101A00000000 00000000

Product Data - 6- 25 Ton PKGD Precedent Unitary Rooftops
Item: A1 Qty: 1 Tag(s): PREC-1

DX Cooling / Gas Heat
High Efficiency
R-410A
12.5 Ton
208-230/60/3
Symbio 700
Low Gas Heat
Economizer, DB with Barometric Relief
Multiple Zone Variable Air Volume with Standard Motor
Through the Base Electric and Gas
Unpowered 20A Convenience Outlet
Advanced Controls and BACnet BAS
Symbio 700 XM-30 Expansion Module
Return Air Smoke Detector
14" Full Perimeter Knockdown Curb (Field Installed)
Power exhaust (Field Installed)
CO2 duct mounted (Field Installed)
None

Performance Data - 6- 25 Ton PKGD Precedent Unitary Rooftops

Tags	PREC-1
Cooling Entering Dry Bulb (F)	80.00
Cooling Entering Wet Bulb (F)	67.00
Summer Ambient (F)	95.00
Entering Dry Bulb (in HGRH) (F)	73.00
Entering Wet Bulb (in HGRH) (F)	64.00
Ambient (In HGRH) (F)	75.00
Heating Entering Air Temperature (F)	60.00
Design Airflow (cfm)	4600
Airflow Application	Downflow
Design ESP (in H2O)	1.200
Fan Pressurized (in H2O)	2.438
Total SP (in H2O)	1.939
Elevation (ft)	0.00
Gross Total Capacity (MBh)	152.62
Gross Sensible Capacity (MBh)	113.82
Gross Latent Capacity (MBh)	38.80
Net Total Capacity (MBh)	144.47
Net Sensible Capacity (MBh)	105.66
Net Sensible Heat Ratio (%)	73.00
Coil LAT DB (F)	57.07
Coil LAT WB (F)	56.20
Cooling Leaving Unit Dry Bulb (F)	59.52
Cooling Leaving Unit WB (F)	57.18
Fan Motor Heat (MBh)	1.30
Dew Point Temperature (F)	55.66
Refrigerant charge (HFC-410A) - Ckt 1 (lb)	11.4
Saturated Discharge Temperature (F)	122.28
Saturated Suction Temperature (F)	50.13
Heat Static Pressure Adj (in H2O)	0.368
Component SP Add (in H2O)	0.371
Max Available ESP (in H2O)	1.261
Supply Motor Horsepower (hp)	4.600
Supply Operating Horsepower (hp)	3.110
Supply RPM (rpm)	1663
Compressor Power (kW)	11.13
System Power (kW)	14.63
EER @ AHRI (EER)	10.4
IEER @ AHRI (EER)	15.8
MCA (A)	71.00
MOP (A)	90.00
Compressor 1 RLA (A)	28.40
Compressor 2 RLA (A)	14.10
Condenser Fan FLA (A)	4.30
Evaporator Fan FLA (A)	11.00
Heating Input Capacity (MBh)	150.00
Output Heating Capacity (MBh)	121.50
Heating Leaving Air Temperature (F)	83.98
Heating Temperature Rise (F)	23.98
Height (ft)	4.24
Width (ft)	5.26
Length (ft)	8.30
Approx Installed Weight (lb)	1535.0
Corner weight A (lb)	442.0
Corner Weight B (lb)	448.0
Corner Weight C (lb)	313.0

Tags	PREC-1
Corner Weight D (lb)	310.0
Center of Gravity - Length (ft)	4.17
Center of Gravity - Width (ft)	2.17
Ducted Discharge - 63 Hz (dB)	85
Ducted Discharge - 125 Hz (dB)	91
Ducted Discharge - 250 Hz (dB)	82
Ducted Discharge - 500 Hz (dB)	75
Ducted Discharge - 1 kHz (dB)	71
Ducted Discharge - 2 kHz (dB)	68
Ducted Discharge - 4 kHz (dB)	68
Ducted Discharge - 8 kHz (dB)	68
Ducted Inlet - 63 Hz (dB)	83
Ducted Inlet - 125 Hz (dB)	85
Ducted Inlet - 250 Hz (dB)	80
Ducted Inlet - 500 Hz (dB)	82
Ducted Inlet - 1 kHz (dB)	79
Ducted Inlet - 2 kHz (dB)	75
Ducted Inlet - 4 kHz (dB)	72
Ducted Inlet - 8 kHz (dB)	70
Outdoor Noise - 63 Hz (dB)	89
Outdoor Noise - 125 Hz (dB)	92
Outdoor Noise - 250 Hz (dB)	93
Outdoor Noise - 500 Hz (dB)	94
Outdoor Noise - 1 kHz (dB)	92
Outdoor Noise - 2 kHz (dB)	88
Outdoor Noise - 4 kHz (dB)	86
Outdoor Noise - 8 kHz (dB)	80
Acoustic Footnote 1	Ducted Discharge and Ducted Inlet Sound in accordance with AHRI 260-2017
Acoustic Footnote 2	Outdoor Sound in accordance with AHRI 370-2015
Heat pump heating ambient temperature (F)	47.00
Heat pump heating ambient relative humid (%)	70.00
Supply Fan Count (Number)	1.00

Mechanical Specifications - 6- 25 Ton PKGD Precedent Unitary Rooftops
Item: A1 Qty: 1 Tag(s): PREC-1

General
- Packaged rooftop units cooling, heating capacities, and efficiencies are AHRI Certified within scope of AHRI Standard 210-240 for 6 to 25 Tons and ANSIZ21.47 and 10 CFR Part 431 pertaining to Commercial Warm Air Furnaces (all gas heating units).
-Convertible airflow.
-Symbio controls operating range is from 0-125.0 F from factory; if designing for cooling mode operation below 40.0 F ambient temp, add low ambient kit to assure continuous and reliable operation.
-Factory assembled, internally wired, fully charged with R-410A, and 100 percent run tested to check cooling operation, fan and blower rotation, and control sequence before leaving the factory.
-Colored and numbered wiring internal to the unit for simplified identification.
-Units cULus listed and labeled, classified in accordance for Central Cooling Air Conditioners.

Casing
-Zinc coated, heavy gauge, galvanized steel.
-Weather resistant pre-painted metal with galvanized substrate.
-Meets ASTM B117, 672 hour salt spray test.
-Removable single side maintenance access panels.
-Lifting handles in maintenance access panels (can be removed and reinstalled by removing fasteners while providing a water and air tight seal).
-Exposed vertical panels and top covers in the indoor air section insulated with a cleanable foil-faced, fire-retardant permanent, odorless glass fiber material.
-Base pan shall have no penetrations within the perimeter of the curb other than the raised 1 inch high downflow supply/return openings to provide an added water integrity precaution, if the condensate drain backs up.
-Base of the unit insulated with 1/8 inch, foil-faced, closed-cell insulation.
-Unit base provisions for forklift and/or crane lifting on three sides of unit.

Hail Guards
-Provides condenser coil protection.

Powered or Unpowered Convenience Outlet
-Powered GFCI, 120V/15A, 2 plug, convenience outlet or unpowered GFCI, 120V/20A, 2 plug, convenience outlet.
-When convenience outlet is powered, a service receptacle disconnect will be available.
-Convenience outlet is powered from the line side of the disconnect or circuit breaker, and therefore will not be affected by the position of the disconnect or circuit breaker.
-Available to order when through-the-base electrical with disconnect switch or circuit breaker option is ordered.

Microchannel Coils
-Optimal heat transfer performance due to flat, streamlined tubes with small ports, and metallurgical tube-to-fin bond.
-Reduce system refrigerant charge by up to 50% leading to better compressor reliability.
-Compact all-aluminum microchannel coils reduce the unit weight.
-Recyclable all aluminum coils All aluminium construction minimizes galvanic corrosion.
-Strong aluminum brazed structure provides better fin protection.
-Flat streamlined tubes more dust resistant and easy to clean.
-Coils leak tested at the factory to ensure the pressure integrity.

Compressors
-All units have direct-drive, hermetic, scroll type compressors with centrifugal type oil pumps.
-Suction gas-cooled motor with voltage utilization range of plus or minus 10 percent of unit nameplate voltage.
-Internal overloads standard with scroll compressors.
-All units have dual compressors.
-Three stages of cooling available on 6 to 17.5 tons units and four stages of cooling available on 20 and 25 tons units.

Filters
Two inch standard filters shall be factory supplied on all units.

Frostat
-Utilized as a safety device.
-Opens to prevent freezing temperatures on evaporator coil.

-Temperature will need to rise to 50°F before closing.
-Utilized in low airflow or high outside air applications (cooling only).

Gas Heating Section
-The heating section shall have a progressive tubular heat exchanger with corrosion-resistant aluminized steel tubes and burners as standard on all models.
-Stainless steel heat exchanger with 409 stainless steel tubes and 439 stainless steel burners shall be optional.
-Induced draft combustion blower shall be used to pull the combustion products through the firing tubes.
-Heater shall use a direct spark ignition (DSI) system.
-On initial call for heat, the combustion blower shall purge the heat exchanger for 20 seconds before ignition.
-After three unsuccessful ignition attempts, entire heating system shall be locked out until manually reset at the thermostat/zone sensor.
-Units shall be suitable for use with natural gas or propane (field-installed kit).

Heat Exchanger
-Compact cabinet features a tubular heat exchanger in low, medium and high heat capacities.
-Corrosion-resistant aluminized steel tubes and burners are standard on all models.
-Induced draft blower to pull the gas mixture through the burner tubes.
-Direct spark ignition and a flame sensor as a safety device to validate the flame.

Indoor Fan
- Direct drive plenum fan design - 6 to 25 tons units.
- Plenum fan design - backward-curved fan wheel along with an external rotor direct drive variable speed indoor motor.
- Supply fan speed adjustments can be made using the Symbio 700 or Mobile App.
- Motors are thermally protected.
- Variable speed direct drive motors are high efficiency - 6 to 25 tons.

Powered Exhaust
-Available for 6 to 25 ton units.
-Shall provide exhaust of return air, when using an economizer.
-Maintain better building pressurization.

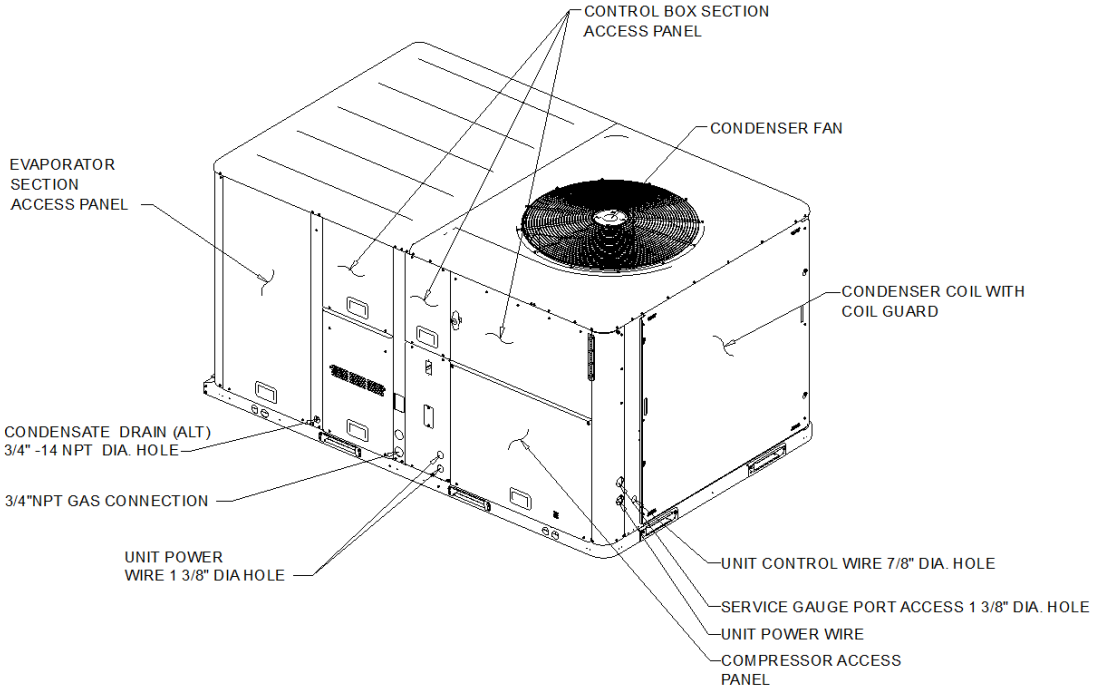
Roof Curb
-Designed to mate with the unit?s downflow supply and return.
-Provide support and a water tight installation when installed properly.
-Shall allow field-fabricated rectangular supply/return ductwork to be connected directly to the curb.
-Curb shall be shipped knocked down for field assembly.
-Shall include wood nailer strips.

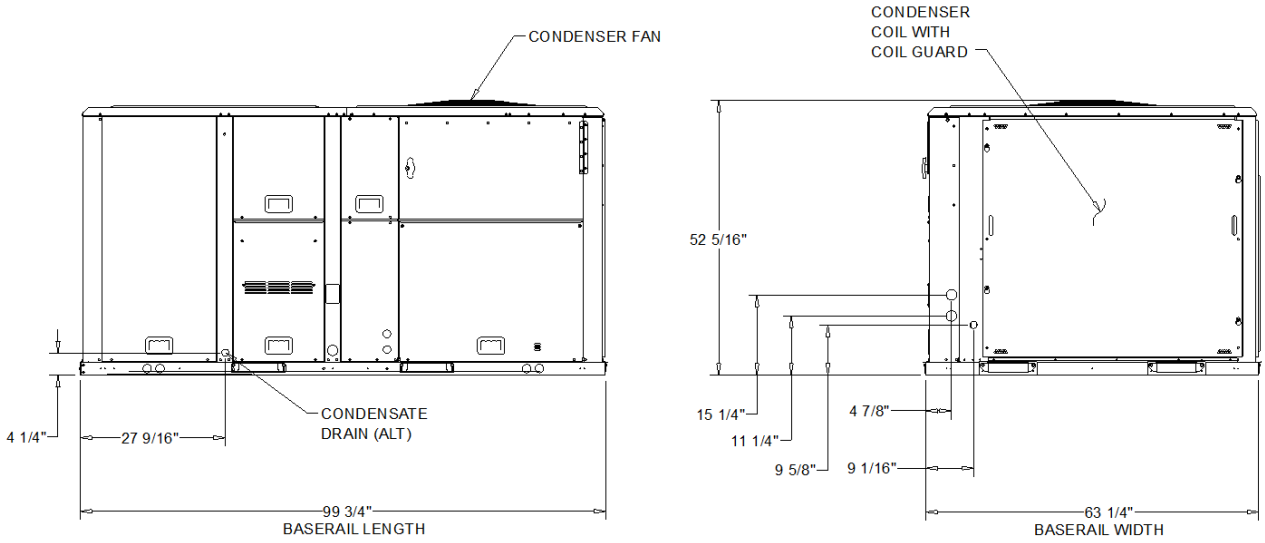
Economizer (Standard)
-Available with or without barometric relief.
-Fully modulating 0-100 percent motor and dampers, minimum position setting, preset linkage, wiring harness with plug, spring return actuator and fixed dry bulb control.
-Barometric relief shall provide a pressure operated damper that shall be gravity closing.
-Barometric relief shall prohibit entrance of outside air during the equipment ?off? cycle.
-Optional solid state or differential enthalpy control.
-Arrives in shipping position and shall be moved to the operating position by the installing contractor.

Reference or Comparative Enthalpy
-Reference enthalpy used to measure and communicate outdoor humidity.
-Unit receives and uses information to provide improved comfort cooling while using the economizer.
-Comparative enthalpy measures and communicates humidity for both outdoor and return air conditions, and return air temperature.
-Unit receives and uses information to maximize use of economizer cooling, and to provide maximum occupant comfort control.
-Reference or comparative enthalpy available when a factory or field installed downflow economizer ordered.

Dimensional Drawings - 6- 25 Ton PKGD Precedent Unitary Rooftops
Item: A1 Qty: 1 Tag(s): PREC-1

NOTES:
1. THRU -THE -BASE ELECTRICAL IS NOT STANDARD ON ALL UNITS.
2. VERIFY WEIGHT, CONNECTION, AND ALL DIMENSION WITH INSTALLER DOCUMENTS BEFORE INSTALLATION

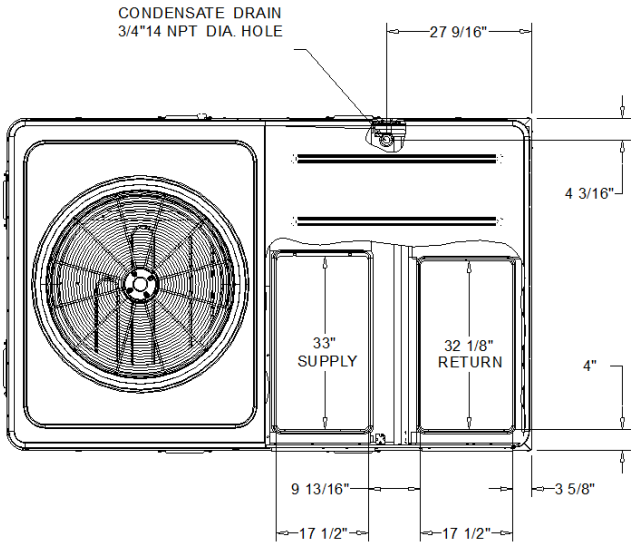




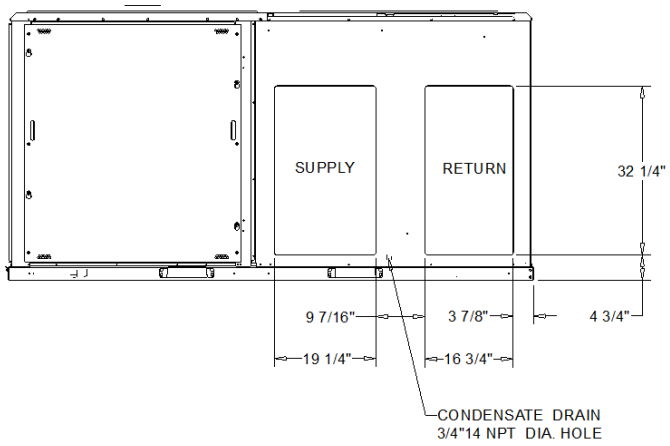
DX COOLING / GAS HEAT HIGH EFFICIENCY

DIMENSION DRAWING

Dimensional Drawings - 6- 25 Ton PKGD Precedent Unitary Rooftops
Item: A1 Qty: 1 Tag(s): PREC-1



PLAN VIEW OF DOWNFLOW OPENINGS



HORIZONTAL AIR FLOW OPENING

DX COOLING / GAS HEAT HIGH EFFICIENCY

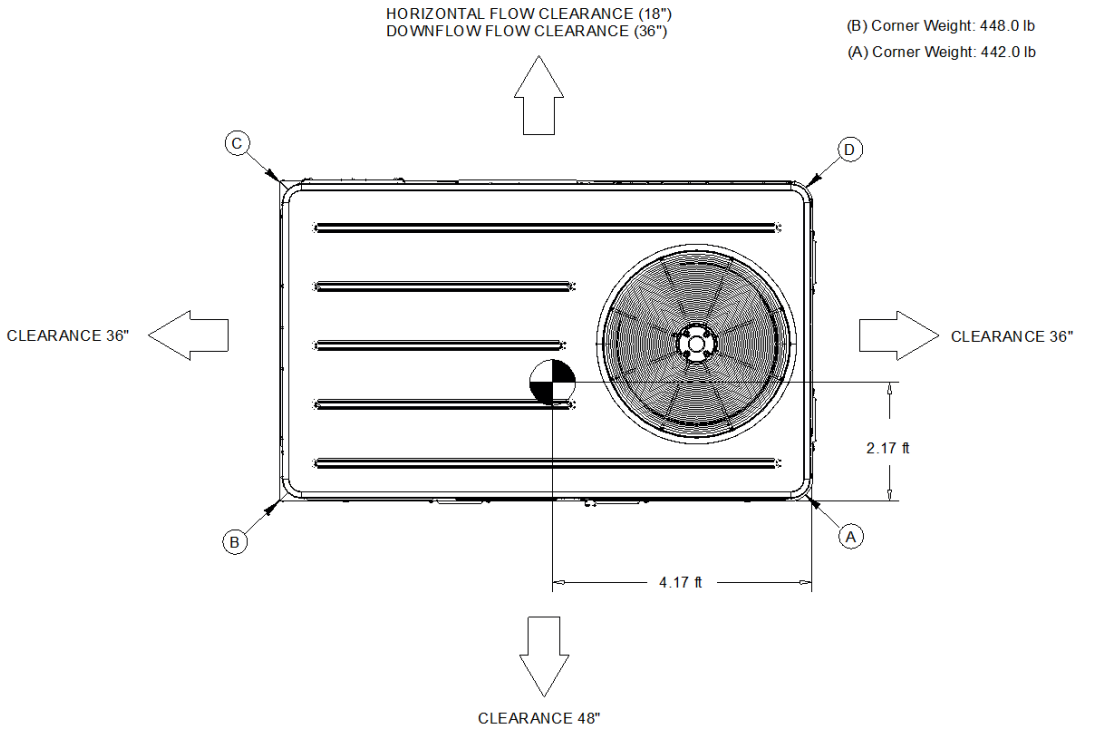
DIMENSION DRAWING

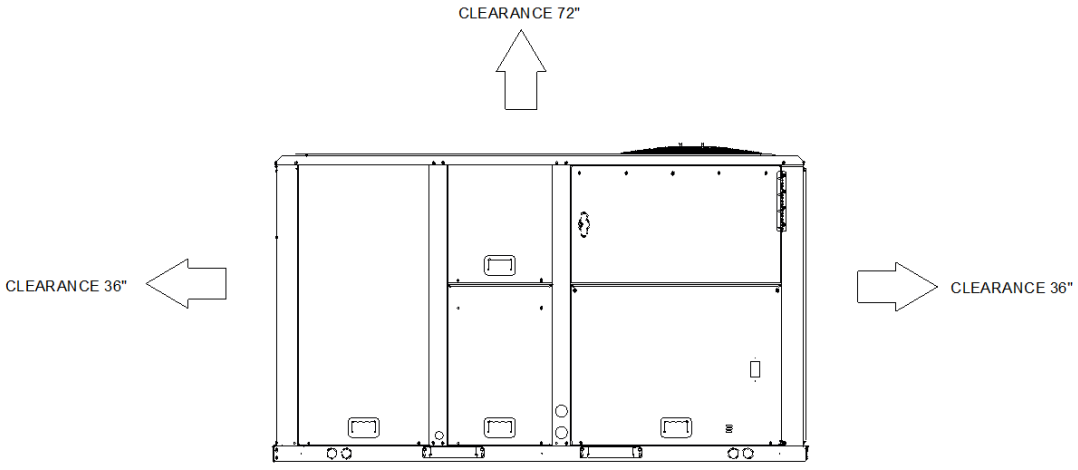
Weight, Clearance & Rigging - 6- 25 Ton PKGD Precedent Unitary Rooftops
Item: A1 Qty: 1 Tag(s): PREC-1

NOTES:
1. APPROX. INSTALLED WEIGHT INCLUDES ALL SELECTED OPTIONS AND ACCESSORIES.
2. CORNER WEIGHTS ARE FOR BASE UNIT ONLY AND DO NOT INCLUDE OPTIONS OR ACCESSORIES.
3. WEIGHT INCLUDES BOTH FACTORY AND FIELD INSTALLED ACCESSORY.

Approximate Installed Weight: 1,535.0 lb

(B) Corner Weight: 448.0 lb	(C) Corner Weight: 313.0 lb
(A) Corner Weight: 442.0 lb	(D) Corner Weight: 310.0 lb

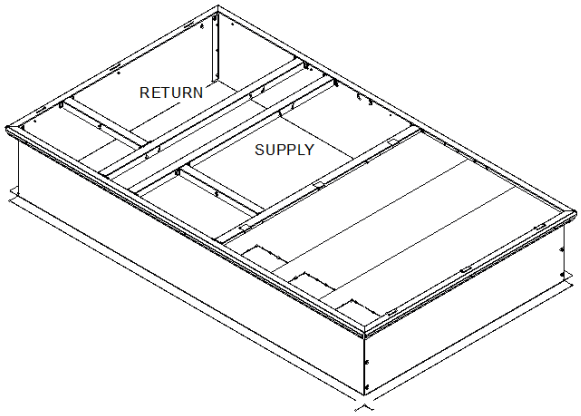


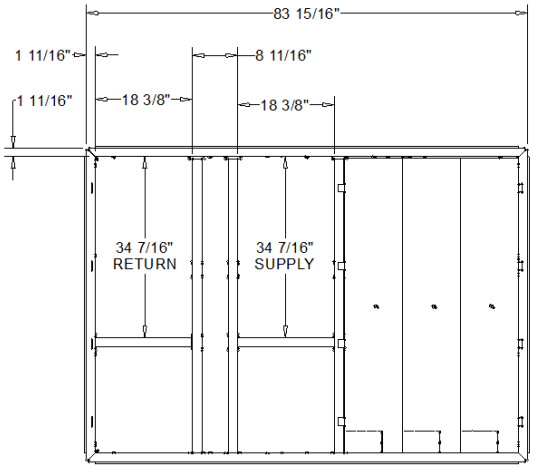


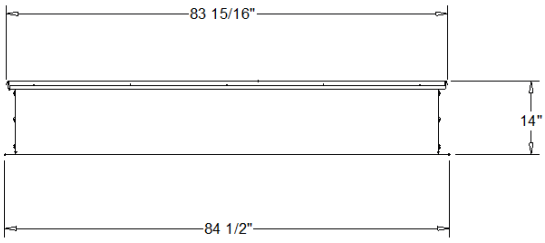
DX COOLING / GAS HEAT HIGH EFFICIENCY

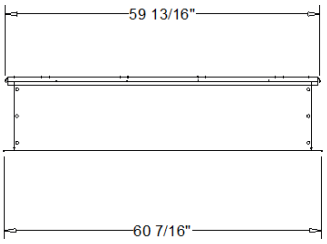
WEIGHTS AND CLEARANCES

Accessory - 6- 25 Ton PKGD Precedent Unitary Rooftops
Item: A1 Qty: 1 Tag(s): PREC-1





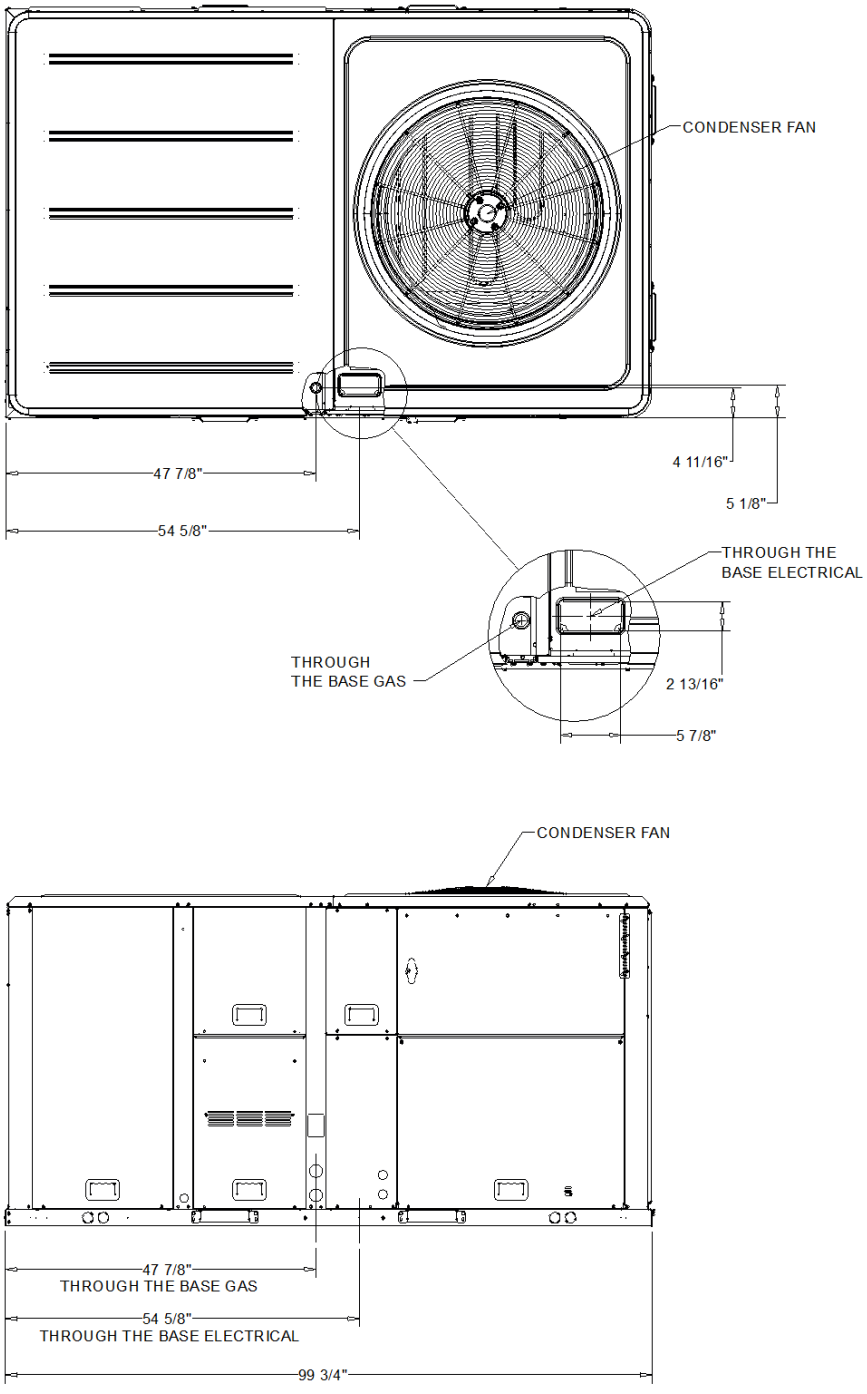




ROOF CURB (FIELD ACCESSORY)

DX COOLING / GAS HEAT HIGH EFFICIENCY

Accessory - 6- 25 Ton PKGD Precedent Unitary Rooftops
Item: A1 Qty: 1 Tag(s): PREC-1



THROUGH-THE-BASE ELECTRICAL AND GAS (OPTION)

DX COOLING / GAS HEAT HIGH EFFICIENCY

Accessory - 6- 25 Ton PKGD Precedent Unitary Rooftops
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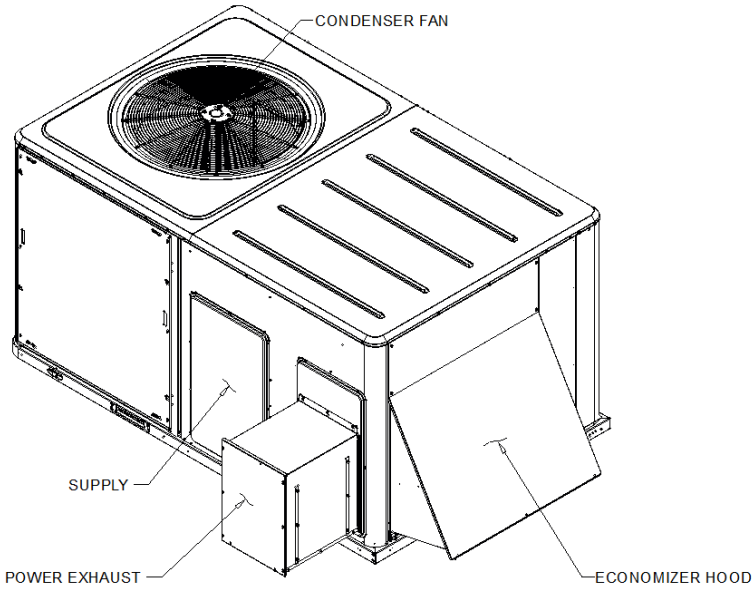

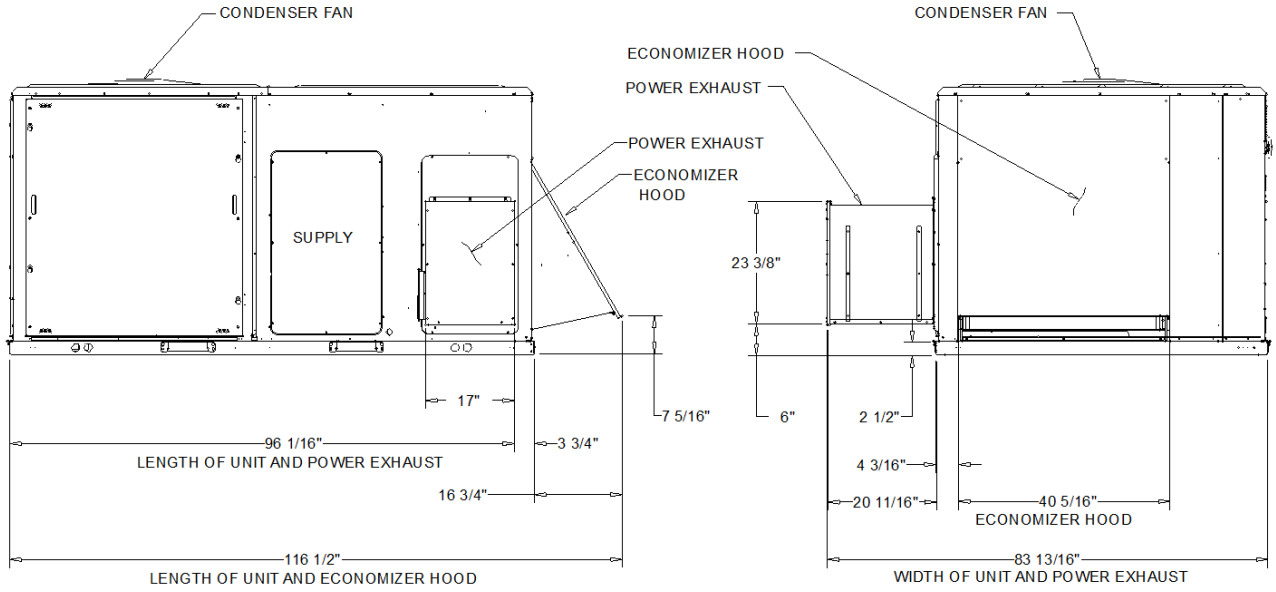

POWERED EXHAUST AND AIR DAMPER(S) (FIELD ACCESSORY)

DX COOLING / GAS HEAT HIGH EFFICIENCY

Field Wiring - 6- 25 Ton PKGD Precedent Unitary Rooftops
Item: A1 Qty: 1 Tag(s): PREC-1

NOTES:
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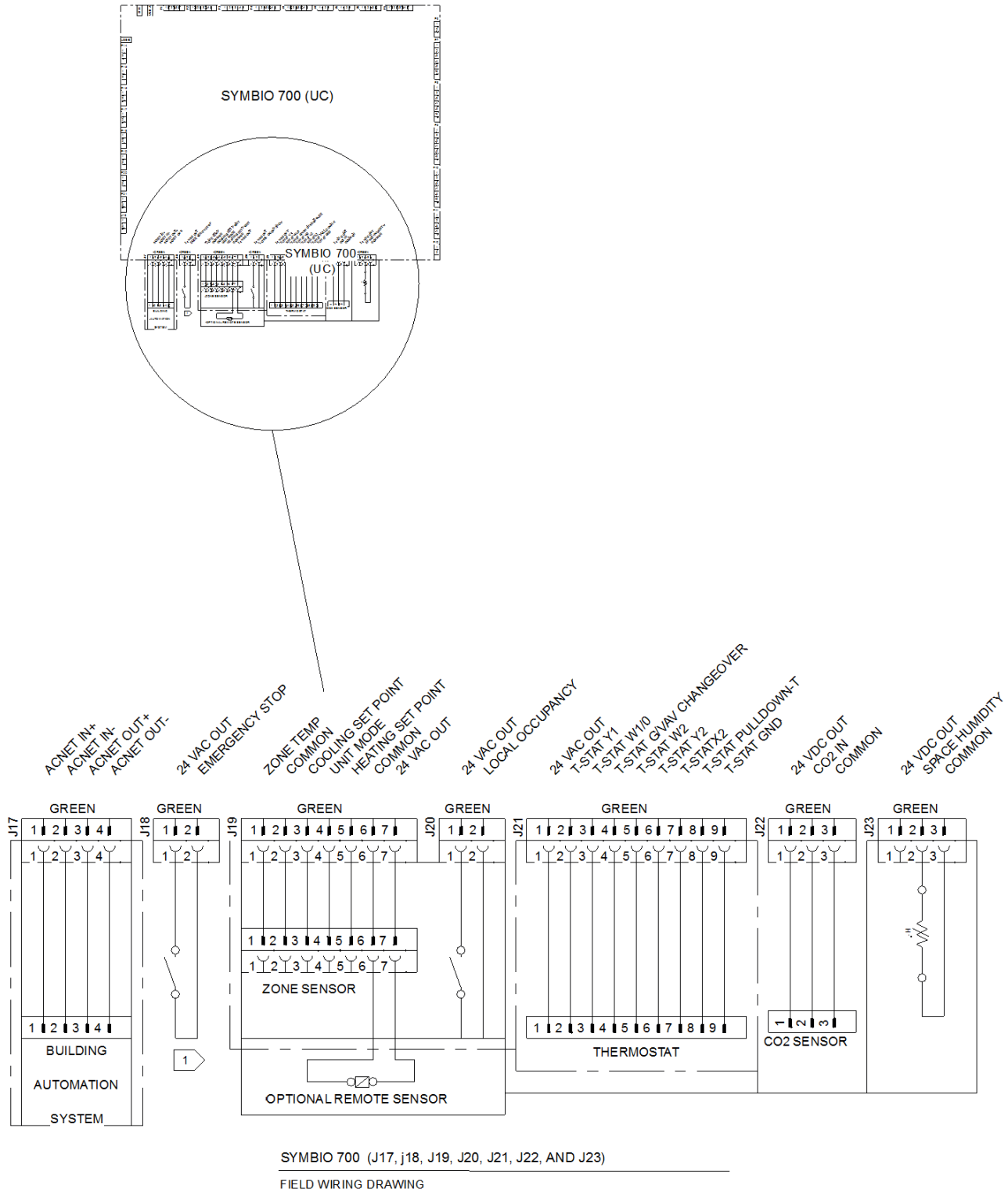

SYMBIO 700 (J17, j18, J19, J20, J21, J22, AND J23)

FIELD WIRING DRAWING

Field Wiring - 6- 25 Ton PKGD Precedent Unitary Rooftops
Item: A1 Qty: 1 Tag(s): PREC-1

NOTES:
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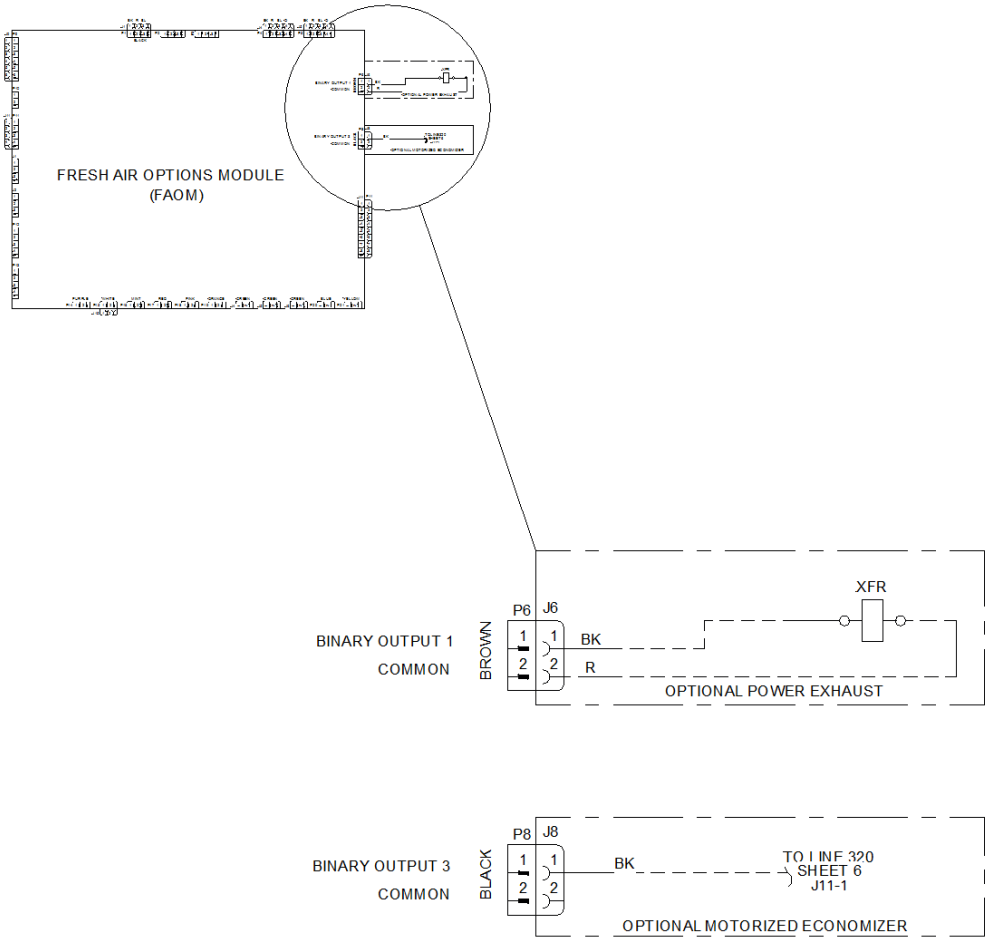

OPTIONAL POWER EXHAUST WITH MOTORIZED ECONOMIZER (J6 and J8)

FIELD WIRING DRAWING (INDOOR OPTION MODULE)

Field Installed Options - Part/Order Number Summary
This is a report to help you locate field installed options that arrive at the jobsite. This report provides part or order numbers for each field installed option, and references it to a specific product tag. It is NOT intended as a bill of material for the job.

Product Family - 6- 25 Ton PKGD Precedent Unitary Rooftops

Item	Tag(s)	Qty	Description	Model Number
A1	PREC-1	1	6- 25 Ton PKGD Precedent Unitary Rooftop	YHJ150A3S0L**D400C0A1 01A0000000000000000

Field Installed Option Description	Part/Ordering Number
14" Full Perimeter Knockdown Curb	FIACURB403A
Power exhaust	FIAPWRX302A
CO2 duct mounted	FIACO2K002A