Submittal

Prepared For:
Jen Mechanical

Date: *August 6, 2019*

Job Name:
Lions Choice Edwardsville IL

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

Product Summary

Qty	Product
2	3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
2	PIVOT THERMOSTATS

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

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.

Tag Data - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop (Qty: 2)

Item	Tag(s)	Qty	Description	Model Number
A1	RTU-1	1	7.5 Ton R-410A PKGD Unitary Gas/Electri	YHC092F3RHA
A2	RTU-2	1	10 Ton R-410A PKGD Unitary Gas/Electri	YHC120F3RHA

Product Data

DX cooling, gas heat
High efficiency
208-230/60/3
Microprocessor controls
High gas heat
0-100% Low Leak Economizer with Reference Enthalpy Control and Barometric Relief
2”Filter Frame with pleated MERV 8 filters
Through the base electrical with Factory Installed Non-fused disconnect
Unpowered convenience outlet – Per Note 2 on plan page M2.0
Dehumidification-hot gas reheat
Return air smoke detector

Field Installed Accessories

14” Knock Down Roof Curb with Clips (Field Installed)
Power exhaust (Field Installed)
Trane Pivot Thermostat (Field Installed)
Humidity wall mounted sensor (Field Installed)

Performance Data - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop

Tags	RTU-1	RTU-2
Design Airflow (cfm)	3000	4000
Design ESP (in H2O)	1.000	1.000
Total Capacity (MBh)	87.86	111.94
Sensible Capacity (MBh)	68.16	94.17
EER @ AHRI Conditions (EER)	12.6	12.4
Cooling Entering DB (F)	77.00	78.70
Cooling Entering WB (F)	63.70	65.20
Evap Coil Leaving Air Temp (DB) (F)	55.96	56.90
Evap Coil Leaving Air Temp (WB) (F)	53.56	55.61
Input Heating Capacity (MBh)	200.00	250.00
Output Heating Capacity (MBh)	160.00	200.00
Indoor Motor Power (kW)	1.21	1.98
Indoor RPM (rpm)	1327	1565
MCA (A)	42.00	48.00
MOP (A)	50.00	60.00
Max. unit operating weight (lb)	1291.0	1608.0

Mechanical Specifications - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A1, A2 Qty: 2 Tag(s): RTU-1, RTU-2

General
The units shall be convertible airflow. The operating range shall be between 115°F and 0°F in cooling as standard from the factory for units with microprocessor controls. Operating range for units with electromechanical controls shall be between 115°F and 40°F. Cooling performance shall be rated in accordance with ARI testing procedures. All units shall be 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. Wiring internal to the unit shall be colored and numbered for simplified identification. Units shall be cULus listed and labeled, classified in accordance for Central Cooling Air Conditioners.

Casing
Unit casing shall be constructed of zinc coated, heavy gauge, galvanized steel. Exterior surfaces shall be cleaned, phosphatized, and finished with a weather-resistant baked enamel finish. Unit's surface shall be tested 672 hours in a salt spray test in compliance with ASTM B117. Cabinet construction shall allow for all maintenance on one side of the unit. Service panels shall have lifting handles and be removed and reinstalled by removing two fasteners while providing a water and air tight seal. All exposed vertical panels and top covers in the indoor air section shall be insulated with a cleanable foil-faced, fire-retardant permanent, odorless glass fiber material. The base of the unit shall be insulated with 1/8", foil-faced, closed-cell insulation. All insulation edges shall be either captured or sealed. The unit's base pan shall have no penetrations within the perimeter of the curb other than the raised 1 1/8" high downflow supply/return openings to provide an added water integrity precaution, if the condensate drain backs up. The base of the unit shall have provisions for forklift and crane lifting, with forklift capabilities on three sides of the unit.

Unit Top
The top cover shall be one piece construction or, where seams exist, it shall be double-hemmed and gasket-sealed. The ribbed top adds extra strength and enhances water removal from unit top.

Two-Inch Pleated Filters
2" pleated media filters shall be available on all models.

Compressors
All units shall have direct-drive, hermetic, scroll type compressors with centrifugal type oil pumps. Motor shall be suction gas-cooled and shall have a voltage utilization range of plus or minus 10 percent of unit nameplate voltage. Internal overloads shall be provided with the scroll compressors.

Dual compressors are outstanding for humidity control, light load cooling conditions and system back-up applications. Dual compressors are available on 7½-10 ton models and allow for efficient cooling utilizing 3-stages of compressor operation for all high efficiency models.

Indoor Fan
The following units shall be equipped with a direct drive plenum fan design (T/YSC120F,T/YHC074F, T/YHC092F,T/YHC102F, 120F). Plenum fan design shall include a backward-curved fan wheel along with an external rotor direct drive variable speed indoor motor. All plenum fan designs will have a variable speed adjustment potentiometer located in the control box.

3 to 5 ton units (high efficiency 3-phase with optional motor) are belt driven, FC centrifugal fans with adjustable motor sheaves. 3 to 5 ton units (standard and high efficiency 3-phase) have multispeed, direct drive motors. All 6 to 8½ ton units (standard efficiency) shall have belt drive motors with an adjustable idler-arm assembly for quick-adjustment to fan belts and motor sheaves. All motors shall be thermally protected. All 10 tons, 6 ton (074), 7½ to 8½ (high efficiency) units have variable speed direct drive motors. All indoor fan motors meet the U.S. Energy Policy Act of 1992 (EPACT).

Outdoor Fans
The outdoor fan shall be direct-drive, statically and dynamically balanced, draw-through in the vertical discharge position. The fan motor shall be permanently lubricated and shall have built-in thermal overload protection.

Evaporator and Condenser Coils
Internally finned, 5/16" copper tubes mechanically bonded to a configured aluminum plate fin shall be standard. Evaporator coils are standard for all 3 to 10 ton standard efficiency models. Microchannel condenser coils are standard for all 3 to 10 ton standard efficiency models and 4, 5, 6, 7.5, 8.5 ton high efficiency models. The microchannel type condenser coil is not offered on the 4 and 5 ton dehumidification model. Due to flat streamlined tubes with small ports, and metallurgical tube-to-fin bond, microchannel coil has better heat transfer performance. Microchannel condenser coil can reduce system refrigerant charge by up to 50% because of smaller internal volume, which leads to better

compressor reliability. Compact all-aluminum microchannel coils also help to reduce the unit weight. These all aluminum coils are recyclable. Galvanic corrosion is also minimized due to all aluminum construction. Strong aluminum brazed structure provides better fin protection. In addition, flat streamlined tubes also make microchannel coils more dust resistant and easier to clean. Coils shall be leak tested at the factory to ensure the pressure integrity. The evaporator coil and condenser coil shall be leak tested to 600 psig. The assembled unit shall be leak tested to 465 psig. The condenser coil shall have a patent pending 1+1+1 hybrid coil designed with slight gaps for ease of cleaning. A plastic, dual-sloped, removable and reversible condensate drain pan with through-the-base condensate drain is standard.

Controls
Unit shall be completely factory-wired with necessary controls and contactor pressure lugs or terminal block for power wiring. Unit shall provide an external location for mounting a fused disconnect device. A choice of microprocessor or electromechanical controls shall be available. Microprocessor controls provide for all 24V control functions. The resident control algorithms shall make all heating, cooling, and/or ventilating decisions in response to electronic signals from sensors measuring indoor and outdoor temperatures. The control algorithm maintains accurate temperature control, minimizes drift from set point, and provides better building comfort. A centralized microprocessor shall provide anti-short cycle timing and time delay between compressors to provide a higher level of machine protection. 24-volt electromechanical control circuit shall include control transformer and contactor

High Pressure Control
All units include High Pressure Cutout as standard.

Phase monitor
Phase monitor shall provide 100% protection for motors and compressors against problems caused by phase loss, phase imbalance, and phase reversal. Phase monitor is equipped with an LED that provides an ON or FAULT indicator. There are no field adjustments. The module will automatically reset from a fault condition.

Refrigerant Circuits
Each refrigerant circuit offer thermal expansion valve as standard. Service pressure ports, and refrigerant line filter driers are factory-installed as standard. An area shall be provided for replacement suction line driers.

Gas Heating Section
The heating section shall have a progressive tubular heat exchanger design using stainless steel burners and corrosion resistant steel throughout. An induced draft combustion blower shall be used to pull the combustion products through the firing tubes. The 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, the 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) and also comply with the California requirement for low NOx emissions (Gas/Electric Only).

Dehumidification
The unit shall be equipped with internally finned, 5/16" copper tubes mechanically bonded to configured aluminum plate fins. The coil shall be 2 row with a minimum of 16 fins per inch. Dehumidification shall be achieved by routing hot refrigerant gas from the discharge line of the compressor through the reheat coil.

Powered or Unpowered Convenience Outlet
This is a GFCI, 120v/15amp, 2 plug, convenience outlet, either powered or unpowered. When the convenience outlet is powered, a service receptacle disconnect will be available. The 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. This option can only be ordered when the Through the Base Electrical with either the Disconnect Switch or Circuit Breaker option is ordered.

Plenum Fan
The following unit shall be equipped with a direct drive plenum fan design (all 10 tons and 7.5-8.5 ton high efficiency units). Plenum fan design shall include a backward-curved fan wheel along with an external rotor direct drive variable speed indoor motor. All plenum fan designs will have a variable speed adjustment potentiometer located in the control box.

Through the Base Electrical Access
An electrical service entrance shall be provided allowing electrical access for both control and main power connections inside the curb and through the base of the unit. Option will allow for field installation of liquid-tight conduit and an external field-installed disconnect switch.

Through the Base Electrical with Disconnect Switch
This 3-pole, molded case, disconnect switch with provisions for through the base electrical connections are available. The disconnect switch will be installed in the unit in a water tight enclosure with access through a swinging door. Wiring will be provided from the switch to the unit high voltage terminal block. The switch will be UL/CSA agency recognized.

Note: The disconnect switch will be sized per NEC and UL guidelines but will not be used in place of unit overcurrent protection.

Supply and/or Return Air Smoke Detector
Smoke detector shall be factory installed photoelectric smoke detector mounted in the return air section (with or without the economizer or motorized damper option), AND/OR in the supply air fan compartment. The detector will be wired for continuous power whenever the unit is energized. Upon detection of smoke, the detector will shut down all unit operations. Local codes may dictate the location of detectors. Note: Due to the shipping position of the economizer or motorized damper, the return air smoke detector will not be completely factory installed. The wiring harness for the detector will be routed and tied off in the fan compartment for shipping. The smoke detector and barometric damper hood will also be installed in a shipping position in the fan compartment.

Accessory - Powered Exhaust
The powered exhaust shall provide exhaust of return air, when using an economizer, to maintain better building pressurization.

Accessory - Roof Curb
The roof curb shall be designed to mate with the unit's downflow supply and return and provide support and a water tight installation when installed properly. The roof curb design shall allow field fabricated rectangular supply/return ductwork to be connected directly to the curb. Curb design shall comply with NRCA requirements. Curb shall be shipped knocked down for field assembly and shall include wood nailer strips.

Supply, Return, and Plenum Air Smoke Detector
With this option installed, if smoke is detected, all unit operation will be shut down. Reset will be manual at the unit. In order for the supply air smoke detector or return air smoke detector to properly sense smoke in the supply air stream or the return air stream, the air velocity entering the smoke detector unit must be between 500 - 4000 feet per minute. Equipment covered in this manual will develop an airflow velocity that falls within these limits over the entire airflow range specified in the evaporator fan performance table. Supply and/or Return Smoke Detectors may not be used with the Plenum Smoke Detector.

Sequence of Operation

System Operating Modes:
The System Controller shall send the equipment controllers Occupied/Unoccupied, Morning Warm-up/Pre-cool, and Heat/Cool modes. If communication is lost, the equipment controllers shall operate using default modes and setpoints.

Night Setback:
During unoccupied mode, the system shall shut off. If the zone temperature drifts to the unoccupied heating or cooling setpoint, the system shall start up to heat or cool the zone, while the OA damper remains closed (unless economizing).

Optimal Start:
The System Controller shall automatically determine the optimal start time, such that each zone reaches its occupied setpoint just in time for scheduled occupancy.

Demand-Controlled Ventilation:
For those zones equipped with an occupancy sensor or CO2 sensor, outdoor airflow shall be reset based on occupancy status and/or measured CO2 concentration.

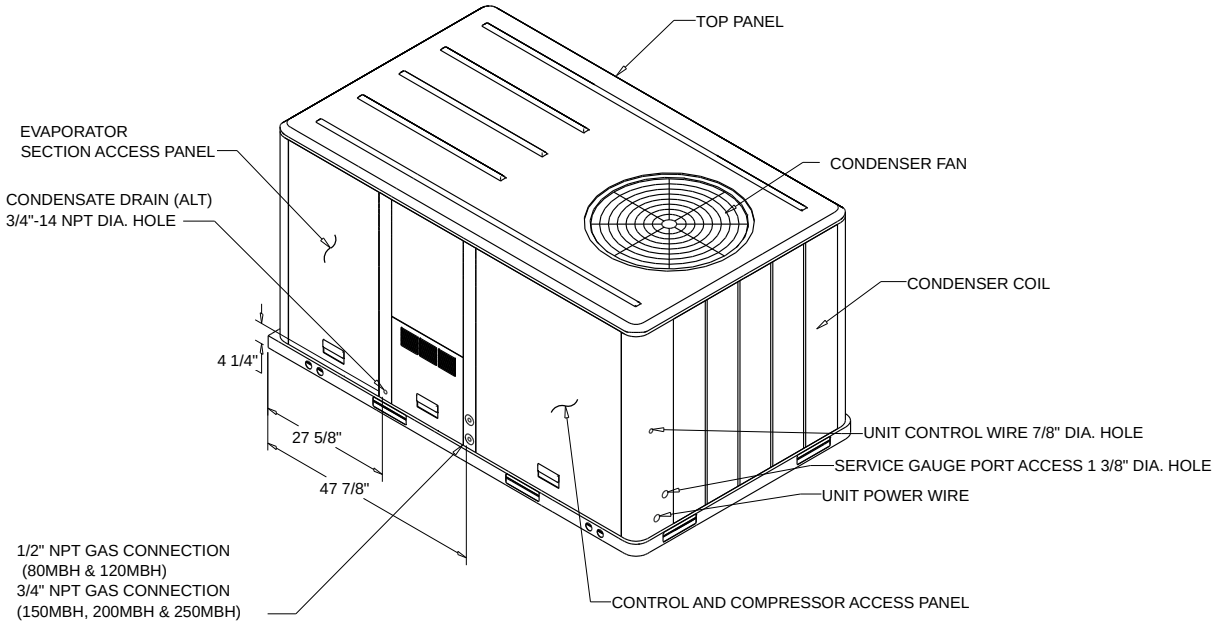
Sequence of Operation (Changeover Bypass System)

Occupied Heat/Cool:
Each VAV terminal shall use pressure-independent control, with airflow measurement, to vary primary airflow to maintain zone temperature at its occupied setpoint. The RTU shall modulate the bypass damper to maintain duct static pressure at setpoint and modulate (or cycle) compressors, modulate (or stage) heat, and/or enable airside economizing based on current zone cooling/heating demands. The OA damper shall open to bring in the required amount of ventilation.

Morning Warm-Up/Pre-Cool:
Each VAV terminal unit shall vary primary airflow to raise/lower zone temperature to its occupied setpoint. The RTU shall modulate the bypass damper to maintain duct static pressure at setpoint and modulate (or cycle) compressors or modulate (or stage) heat based on current zone cooling/heating demands. The OA damper shall remain closed, unless economizing.

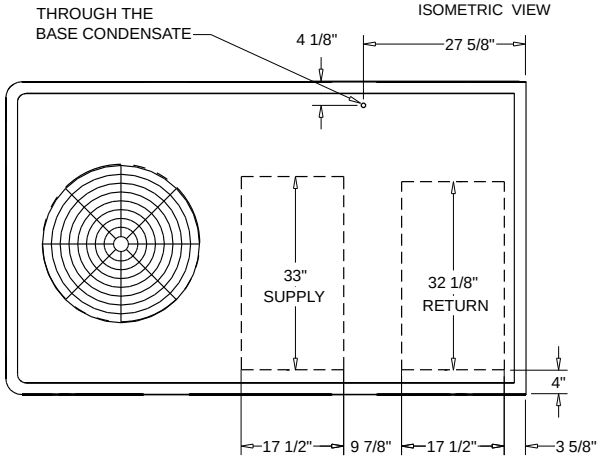
Cooling/Heating Changeover Logic:
The System Controller shall determine the overall system cooling/heating mode based on "voting" from each zone. When the majority of zones require cooling, the RTU shall operate in cooling mode and any zone that requires heating shall reduce primary airflow to minimum. When the majority of zones require heating, the RTU shall operate in heating mode and any zone that requires cooling shall reduce primary airflow to minimum.

Unit Dimensions - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A1 Qty: 1 Tag(s): RTU-1



PACKAGED GAS / ELECTRICAL

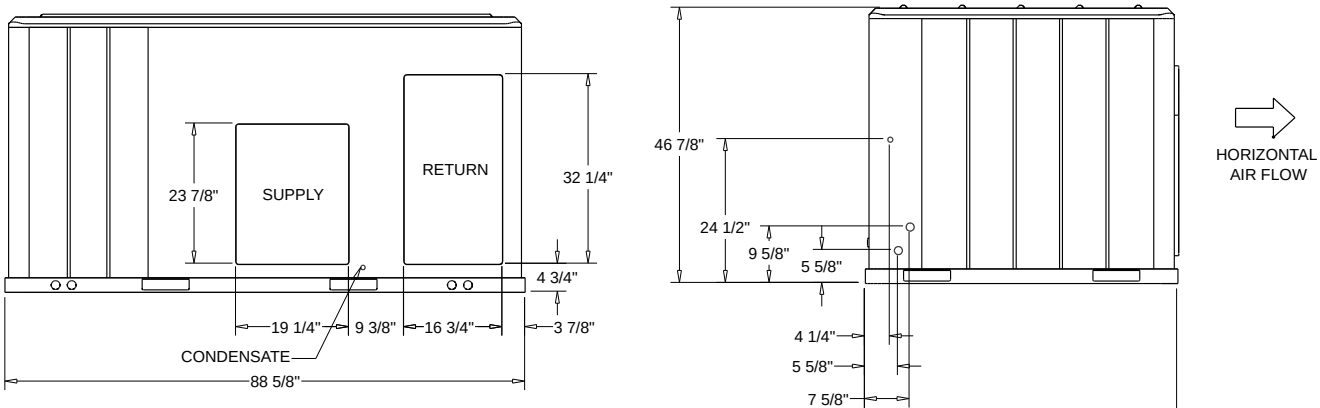
ISOMETRIC VIEW



NOTES:
1. THRU -THE -BASE ELECTRICAL IS NOT STANDARD ON ALL UNITS.
2. VERIFY ALL DIMENSIONS WITH INSTALLER DOCUMENTS BEFORE INSTALLATION.

PLAN VIEW UNIT

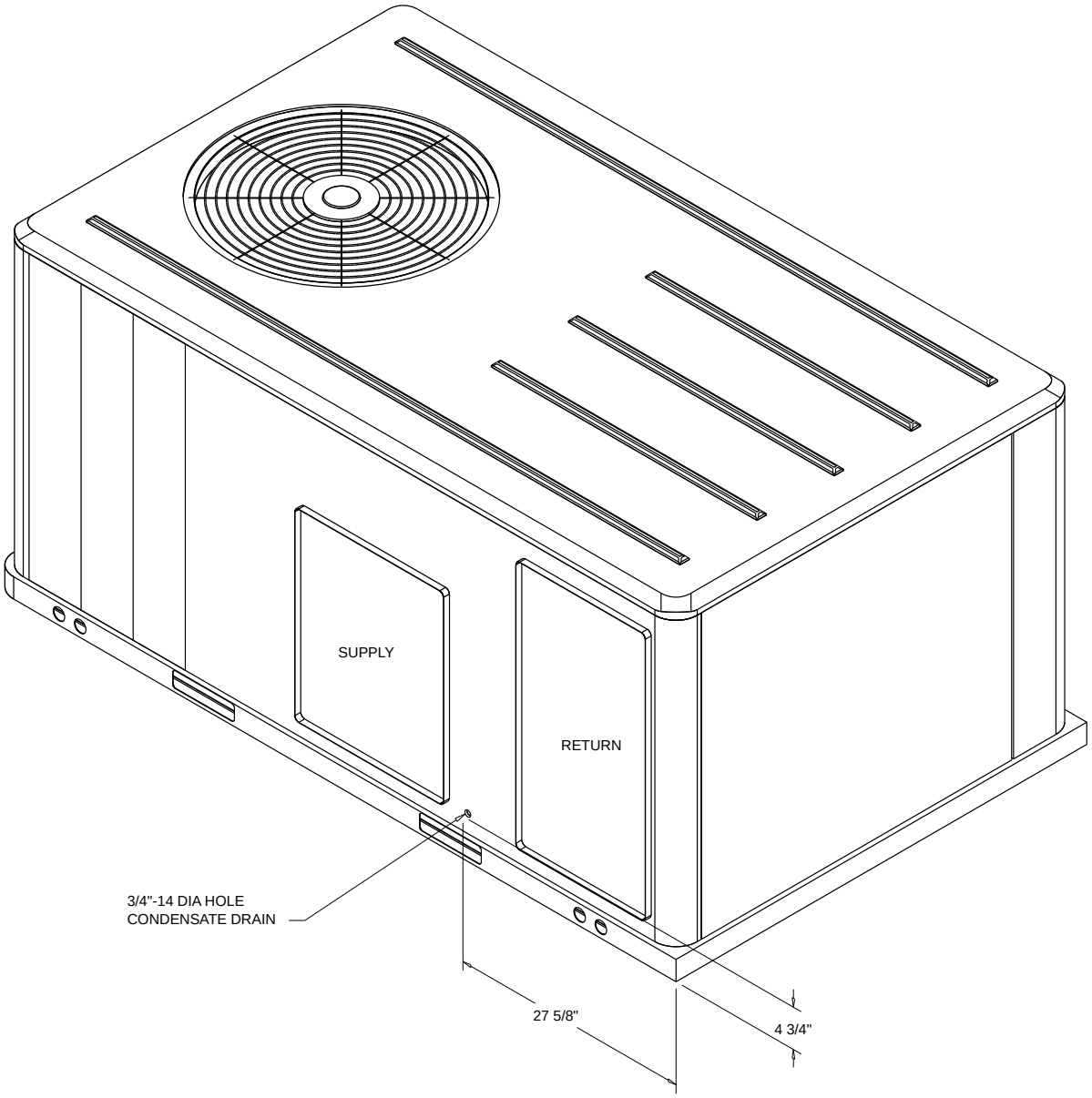
DIMENSION DRAWING



PACKAGED GAS / ELECTRICAL

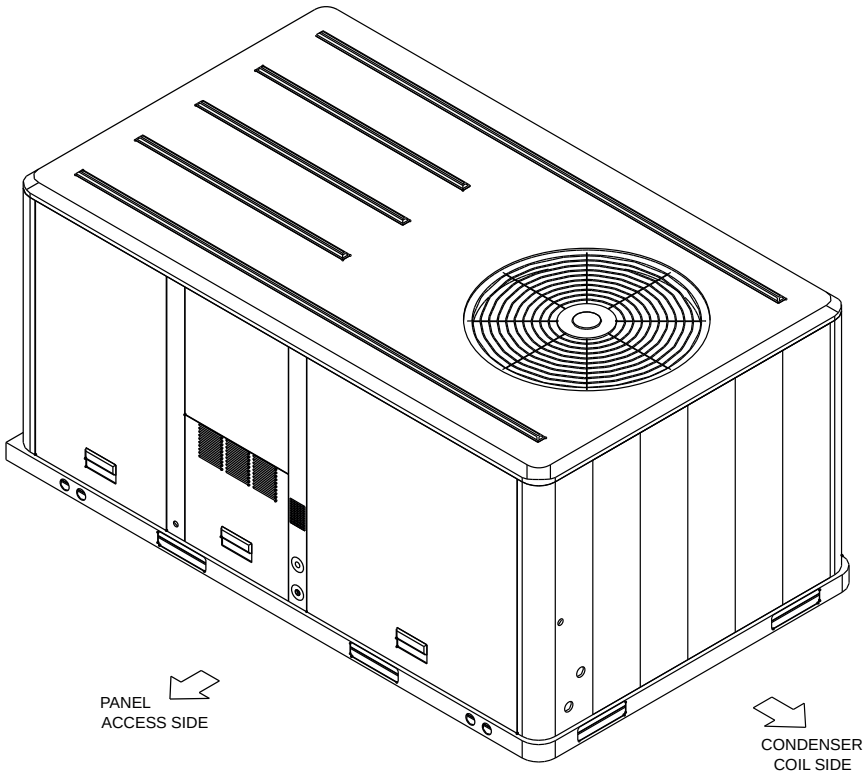
DIMENSION DRAWING

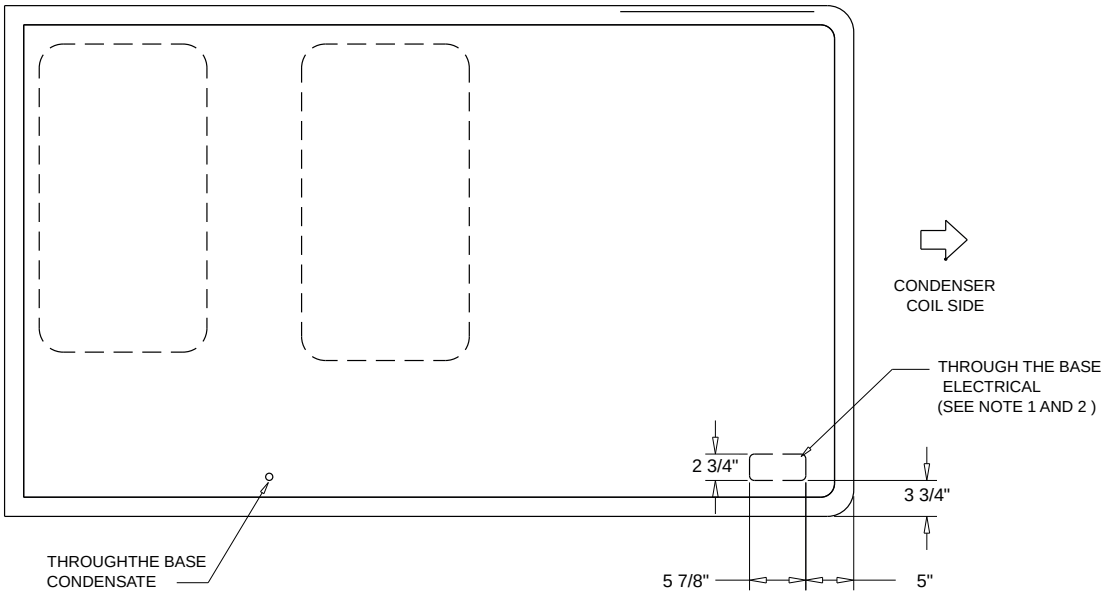
Unit Dimensions - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A1, A2 Qty: 2 Tag(s): RTU-1, RTU-2



ISOMETRIC-PACKAGED COOLING

Unit Dimensions - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A1 Qty: 1 Tag(s): RTU-1





PANEL
ACCESS SIDE

NOTES:
1. THRU -THE -BASE GAS AND ELECTRICAL IS NOT STANDARD. VERIFY OPTION IN PRODUCT DATA IN THIS DOCUMENT.
2. VERIFY WEIGHT, CONNECTION, OPTION CONFIGURATION AND ALL DIMENSION WITH INSTALLER DOCUMENTS BEFORE INSTALLATION

THRU THE BASE ELECTRICAL

PLAN / ISO VIEW DRAWING

Unit Dimensions - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A1 Qty: 1 Tag(s): RTU-1

ELECTRICAL / GENERAL DATA

GENERAL (2)(4)(6)

		Oversized Motor	
Model:	YHC092F	MCA:	N/A
Unit Operating Voltage:	187-253	MFS:	N/A
Unit Primary Voltage:	208	MCB:	N/A
Unit Secondary Voltage	230		
Unit Hertz:	60		
Unit Phase:	3		

EER

Standard Motor		Field Installed Oversized Motor	
MCA:	42.0	MCA:	N/A
MFS:	50.0	MFS:	N/A
MCB:	50.0	MCB:	N/A

HEATING PERFORMANCE

HEATING - GENERAL DATA

Heating Model:	High
Heating Input (BTU):	200,000/140,000
Heating Output (BTU):	160,000/112,000
No. Burners:	4
No. Stages	2

Gas Inlet Pressure

Natural Gas (Min/Max):	4 1/2"/14"
LP (Min/Max)	11"/14"
Gas Pipe Connection Size:	3/4"

INDOOR MOTOR

Standard Motor		Oversized Motor		Field Installed Oversized Motor	
Number:	1	Number:	N/A	Number:	N/A
Horsepower:	2.75	Horsepower:	N/A	Horsepower:	N/A
Motor Speed (RPM):	--	Motor Speed (RPM):	N/A	Motor Speed (RPM):	N/A
Phase	3	Phase	N/A	Phase	N/A
Full Load Amps:	7.3	Full Load Amps:	N/A	Full Load Amps:	N/A
Locked Rotor Amps:	--	Locked Rotor Amps:	N/A	Locked Rotor Amps:	N/A

COMPRESSOR Circuit 1/2

Number:	2
Horsepower:	4.1/2.4
Phase:	3
Rated Load Amps:	15.9/10.0
Locked Rotor Amps:	--

OUTDOOR MOTOR

Number:	1
Horsepower:	0.75
Motor Speed (RPM):	1100
Phase:	1
Full Load Amps:	4.0
Locked Rotor Amps:	--

POWER EXHAUST ACCESSORY (3)

(Field Installed Power Exhaust)

Phase:	1
Horsepower:	0.87
Motor Speed (RPM):	1075
Full Load Amps:	5.7
Locked Rotor Amps:	13.6

FILTERS

Type:	Throwaway
Furnished:	Yes
Number	4
Recommended	20"x25"x2"

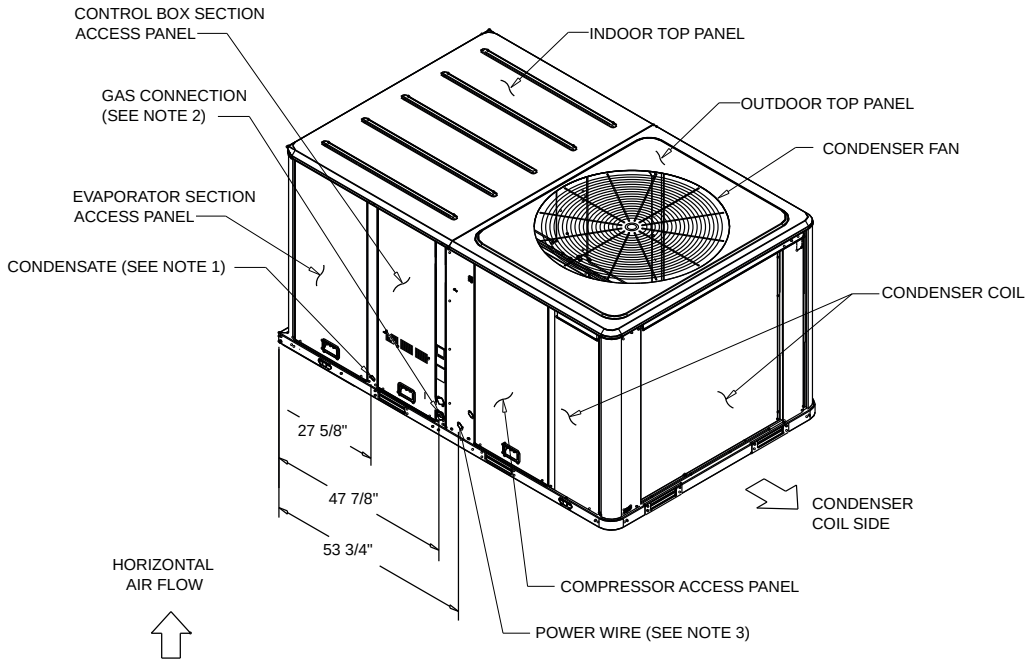
REFRIGERANT (2)

Type	R-410
Factory Charge	
Circuit #1	6.2 lb
Circuit #2	4.3 lb

NOTES:

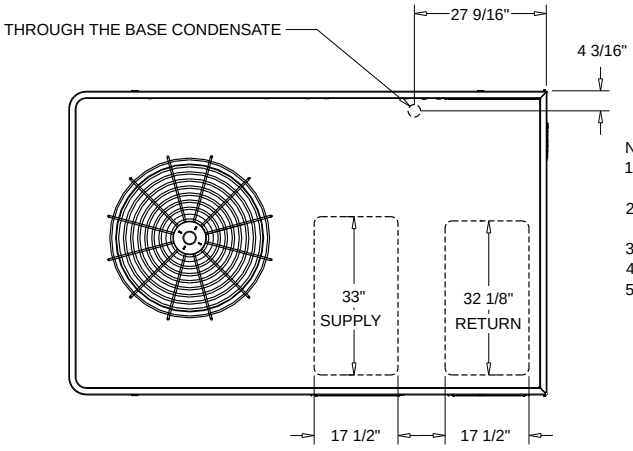
1. Maximum (HACR) Circuit Breaker sizing is for installations in the United States only.
2. Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.
3. Value does not include Power Exhaust Accessory.
4. Value includes oversized motor.
5. Value does not include Power Exhaust Accessory.
6. EER is rated at AHRI conditions and in accordance with DOE test procedures.

Unit Dimensions - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A2 Qty: 1 Tag(s): RTU-2



PACKAGED GAS / ELECTRICAL

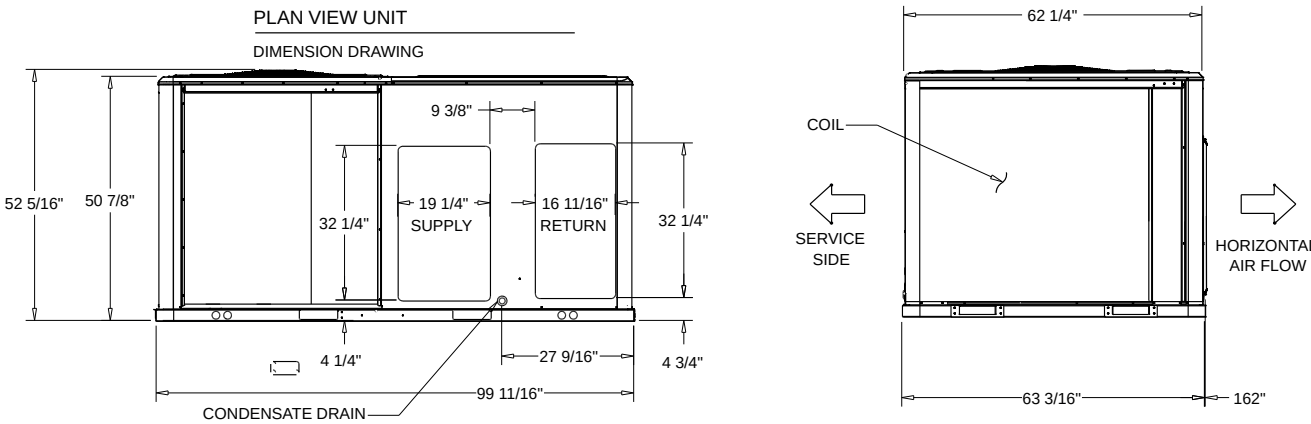
ISOMETRIC VIEW



NOTES:
1. ALTERNATE CONDENSATE DRAIN CONNECTION 3/4" - 14 NPT DIA. HOLE
2. 1/2" NPT GAS CONNECTION (80 mbh, 120 mbh) ; 3/4" NPT GAS CONNECTION (150mbh, 200mbh, 250mbh)
3. UNIT POWER WIRE 1 3/8" DIA. HOLE.
4. THRU -THE -BASE ELECTRICAL AND GAS IS NOT STANDARD ON ALL UNITS.
5. VERIFY WEIGHT, CONNECTION, AND ALL DIMENSION WITH INSTALLER DOCUMENTS BEFORE INSTALLATION

PLAN VIEW UNIT

DIMENSION DRAWING



PACKAGED GAS / ELECTRICAL

DIMENSION DRAWING

Unit Dimensions - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A2 Qty: 1 Tag(s): RTU-2

ELECTRICAL / GENERAL DATA

GENERAL (2)(4)(6)

		Oversized Motor	
Model:	YHC120F	MCA:	N/A
Unit Operating Voltage:	187-253	MFS:	N/A
Unit Primary Voltage:	208	MCB:	N/A
Unit Secondary Voltage	230		
Unit Hertz:	60		
Unit Phase:	3		

EER

Standard Motor		Field Installed Oversized Motor	
MCA:	48.0	MCA:	N/A
MFS:	60.0	MFS:	N/A
MCB:	60.0	MCB:	N/A

HEATING PERFORMANCE

HEATING - GENERAL DATA

Heating Model:	High
Heating Input (BTU):	250000 / 175000
Heating Output (BTU):	200000 / 140000
No. Burners:	5
No. Stages	2

Gas Inlet Pressure

Natural Gas (Min/Max):	4 1/2"/14"
LP (Min/Max)	10"/14"
Gas Pipe Connection Size:	3/4"

INDOOR MOTOR

Standard Motor		Oversized Motor		Field Installed Oversized Motor	
Number:	1	Number:	N/A	Number:	N/A
Horsepower:	2.75	Horsepower:	N/A	Horsepower:	N/A
Motor Speed (RPM):	--	Motor Speed (RPM):	N/A	Motor Speed (RPM):	N/A
Phase	3	Phase	N/A	Phase	N/A
Full Load Amps:	7.3	Full Load Amps:	N/A	Full Load Amps:	N/A
Locked Rotor Amps:	--	Locked Rotor Amps:	N/A	Locked Rotor Amps:	N/A

COMPRESSOR Circuit 1/2

Number:	2
Horsepower:	5.1/3.0
Phase:	3
Rated Load Amps:	19.6/13.2
Locked Rotor Amps:	--

OUTDOOR MOTOR

Number:	1
Horsepower:	0.75
Motor Speed (RPM):	1100
Phase:	3
Full Load Amps:	2.7
Locked Rotor Amps:	--

POWER EXHAUST ACCESSORY (3)

(Field Installed Power Exhaust)

Phase:	1
Horsepower:	0.87
Motor Speed (RPM):	1075
Full Load Amps:	5.7
Locked Rotor Amps:	13.6

FILTERS

Type:	Throwaway
Furnished:	Yes
Number	3 / 2
Recommended	20"x25"x2"
	20"x30"x2"

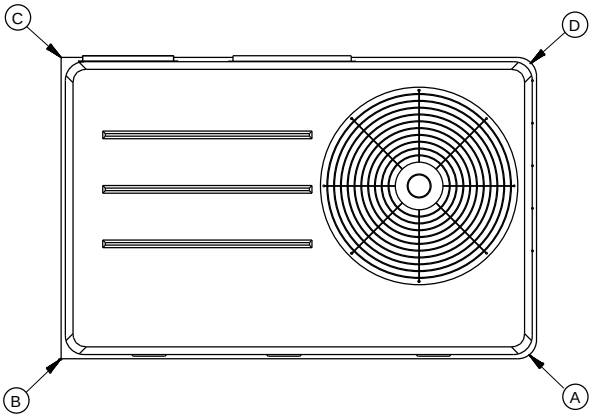
REFRIGERANT (2)

Type	R-410
Factory Charge	
Circuit #1	8.0 lb
Circuit #2	5.0 lb

NOTES:

1. Maximum (HACR) Circuit Breaker sizing is for installations in the United States only.
2. Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.
3. Value does not include Power Exhaust Accessory.
4. Value includes oversized motor.
5. Value does not include Power Exhaust Accessory.
6. EER is rated at AHRI conditions and in accordance with DOE test procedures.

Weight, Clearance & Rigging Diagram - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A1 Qty: 1 Tag(s): RTU-1



PACKAGED GAS / ELECTRICAL

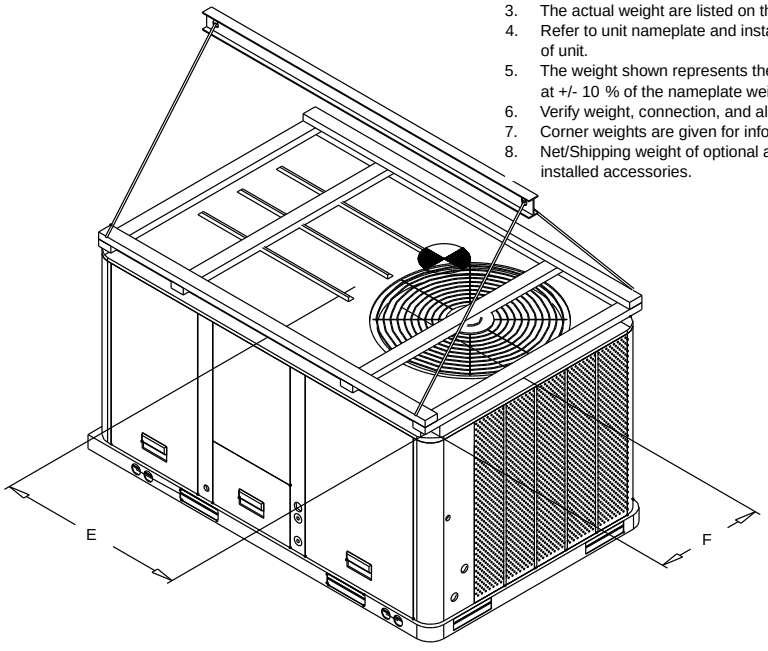
CORNER WEIGHT

INSTALLED ACCESSORIES NET WEIGHT DATA

ACCESSORY	WEIGHTS
ECONOMIZER	93.0 lb
MOTORIZED OUTSIDE AIR DAMPER	
MANUAL OUTSIDE AIR DAMPER	
BAROMETRIC RELIEF	
OVERSIZED MOTOR	
BELT DRIVE MOTOR	
POWER EXHAUST	80.0 lb
THROUGHT THE BASE ELECTRICAL/GAS (FIOPS)	13.0 lb
UNIT MOUNTED CIRCUIT BREAKER (FIOPS)	
UNIT MOUNTED DISCONNECT (FIOPS)	5.0 lb
POWERED CONVENIENCE OUTLET (FIOPS)	
HINGED DOORS (FIOPS)	
HAIL GUARD	
SMOKE DETECTOR, SUPPLY / RETURN	7.0 lb
NOVAR CONTROL	
STAINLESS STEEL HEAT EXCHANGER	
REHEAT	20.0 lb
ROOF CURB	78.0 lb

BASIC UNIT WEIGHTS		CORNER WEIGHTS				CENTER OF GRAVITIY	
SHIPPING	NET	A	340.0 lb	C	249.0 lb	(E) LENGHT	(F) WIDTH
1124.0 lb	1026.0 lb	B	233.0 lb	D	204.0 lb	41"	23"

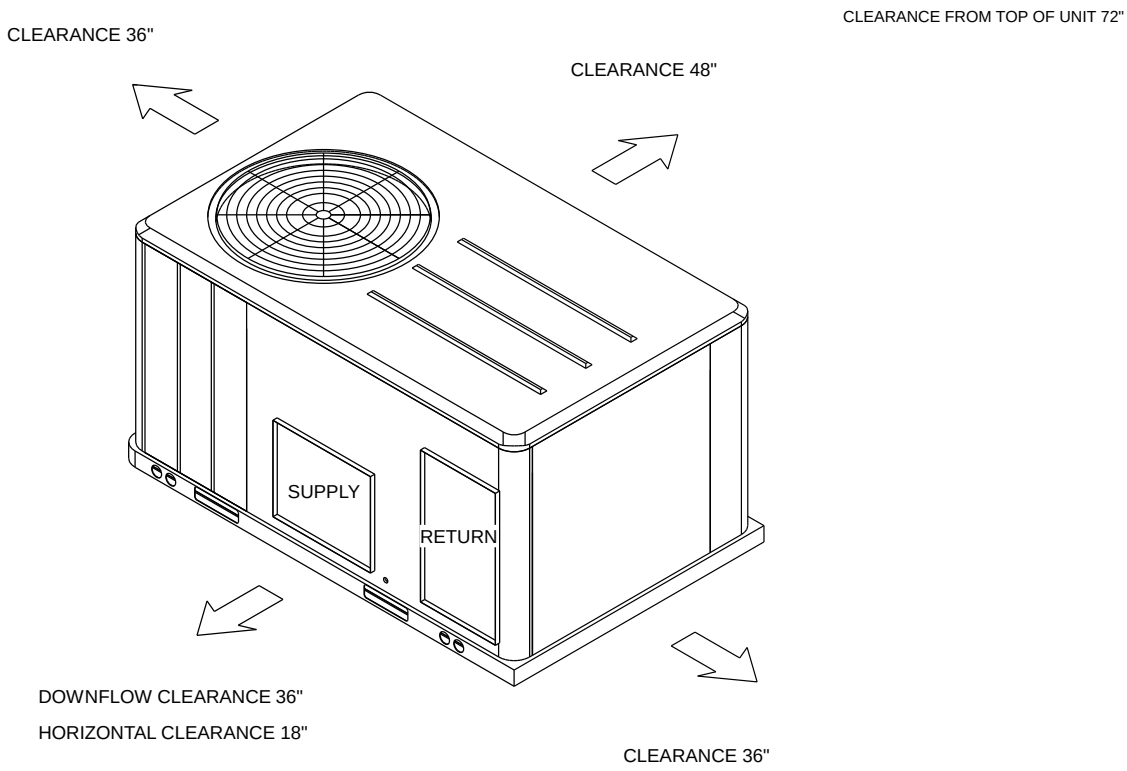
NOTE:
1. All weights are approximate.
2. Weights for options that are not list refer to Installation guide.
3. The actual weight are listed on the unit nameplate.
4. Refer to unit nameplate and installation guide for weights before scheduling transportation and installation of unit.
5. The weight shown represents the typical unit operating weight for the configuration selected. Estimated at +/- 10 % of the nameplate weight. .
6. Verify weight, connection, and all dimension with installer documents before installation.
7. Corner weights are given for information only.
8. Net/Shipping weight of optional accessories should be added to unit weight when ordering factory or field installed accessories.



PACKAGED GAS / ELECTRICAL

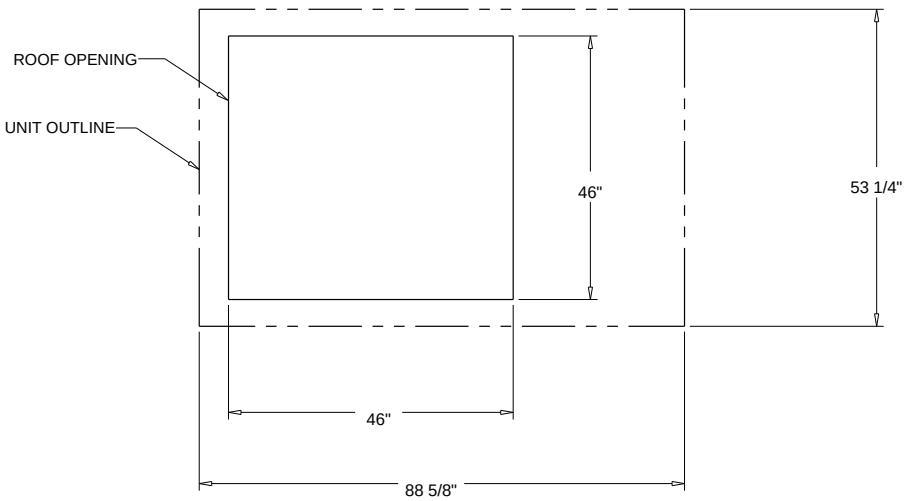
RIGGING AND CENTER OF GRAVITY

Weight, Clearance & Rigging Diagram - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A1 Qty: 1 Tag(s): RTU-1



PACKAGED GAS / ELECTRIC

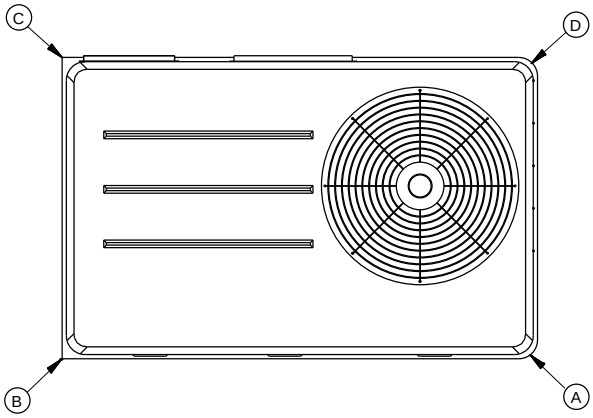
CLEARANCE



PACKAGED GAS / ELECTRIC

DOWNFLOW TYPICAL ROOF OPENING

Weight, Clearance & Rigging Diagram - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A2 Qty: 1 Tag(s): RTU-2



PACKAGED GAS / ELECTRICAL

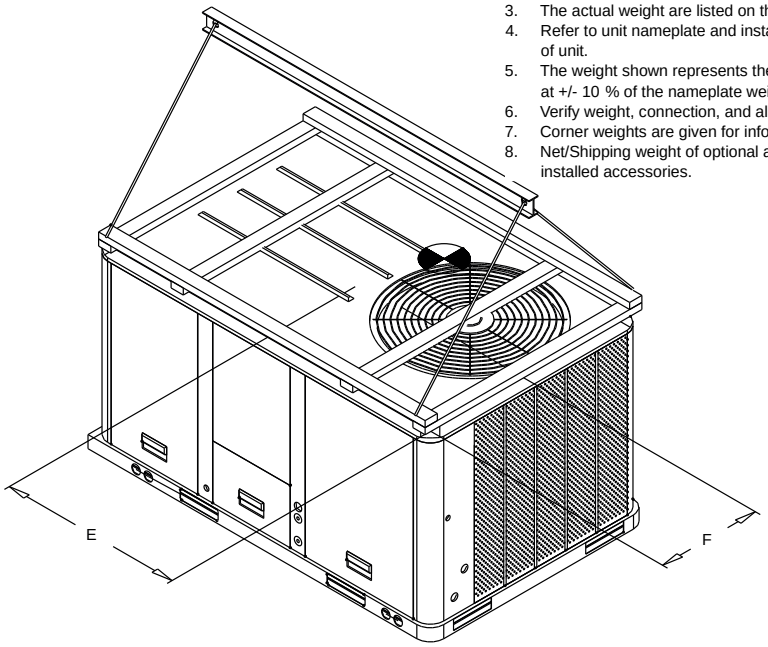
CORNER WEIGHT

INSTALLED ACCESSORIES NET WEIGHT DATA

ACCESSORY	WEIGHTS
ECONOMIZER	93.0 lb
MOTORIZED OUTSIDE AIR DAMPER	
MANUAL OUTSIDE AIR DAMPER	
BAROMETRIC RELIEF	
OVERSIZED MOTOR	
BELT DRIVE MOTOR	
POWER EXHAUST	80.0 lb
THROUGHT THE BASE ELECTRICAL/GAS (FIOPS)	13.0 lb
UNIT MOUNTED CIRCUIT BREAKER (FIOPS)	
UNIT MOUNTED DISCONNECT (FIOPS)	5.0 lb
POWERED CONVENIENCE OUTLET (FIOPS)	
HINGED DOORS (FIOPS)	
HAIL GUARD	
SMOKE DETECTOR, SUPPLY / RETURN	7.0 lb
NOVAR CONTROL	
STAINLESS STEEL HEAT EXCHANGER	
REHEAT	30.0 lb
ROOF CURB	89.0 lb

BASIC UNIT WEIGHTS		CORNER WEIGHTS				CENTER OF GRAVITIY	
SHIPPING	NET	A	356.0 lb	C	289.0 lb	(E) LENGHT	(F) WIDTH
1453.0 lb	1259.0 lb	B	371.0 lb	D	242.0 lb	54"	27"

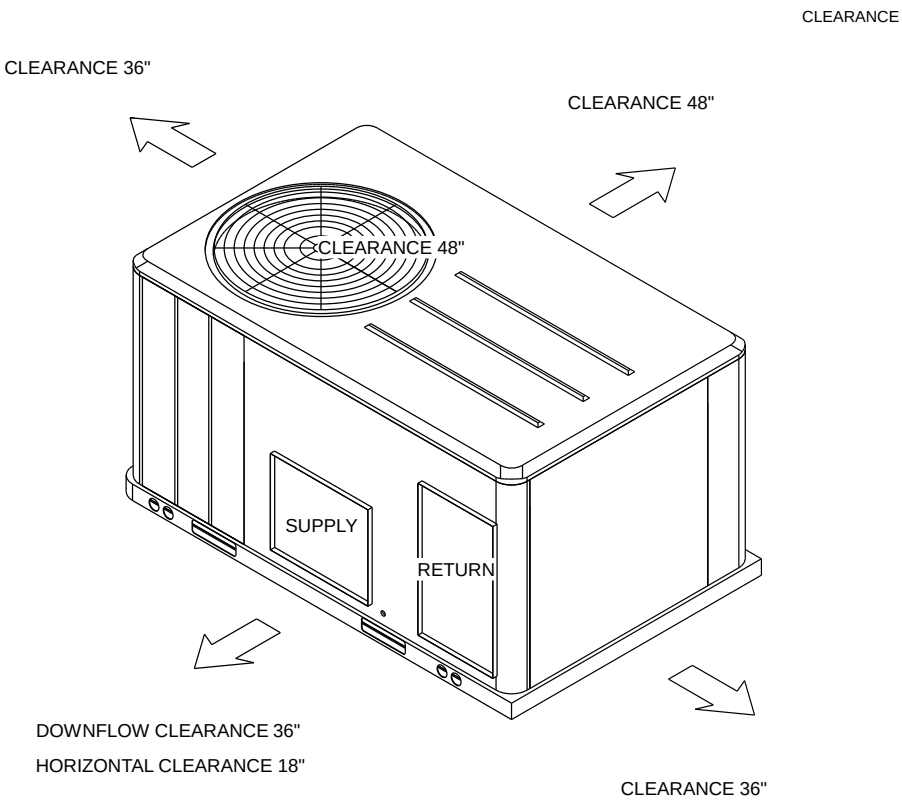
NOTE:
1. All weights are approximate.
2. Weights for options that are not list refer to Installation guide.
3. The actual weight are listed on the unit nameplate.
4. Refer to unit nameplate and installation guide for weights before scheduling transportation and installation of unit.
5. The weight shown represents the typical unit operating weight for the configuration selected. Estimated at +/- 10 % of the nameplate weight. .
6. Verify weight, connection, and all dimension with installer documents before installation.
7. Corner weights are given for information only.
8. Net/Shipping weight of optional accessories should be added to unit weight when ordering factory or field installed accessories.



PACKAGED GAS / ELECTRICAL

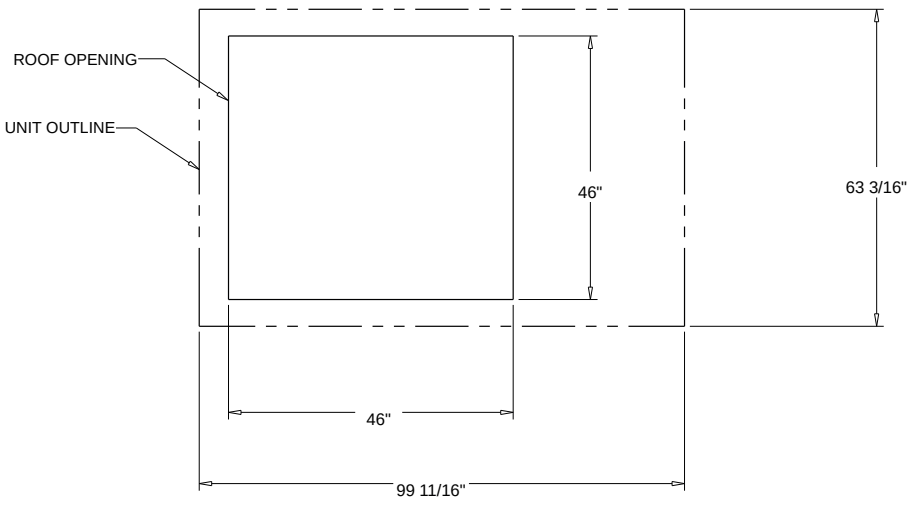
RIGGING AND CENTER OF GRAVITY

Weight, Clearance & Rigging Diagram - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A2 Qty: 1 Tag(s): RTU-2



PACKAGED GAS / ELECTRIC

CLEARANCE

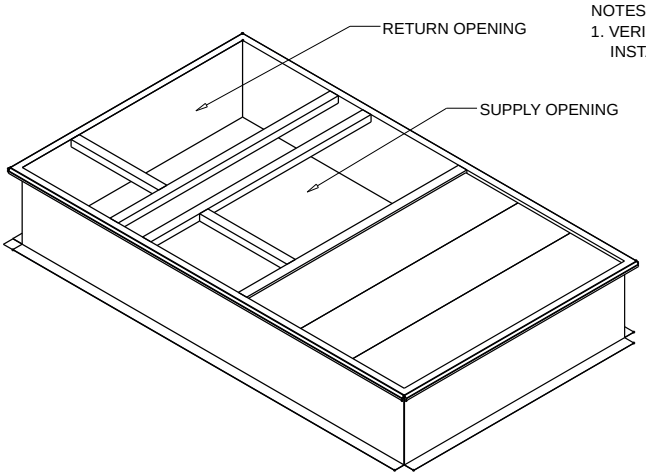


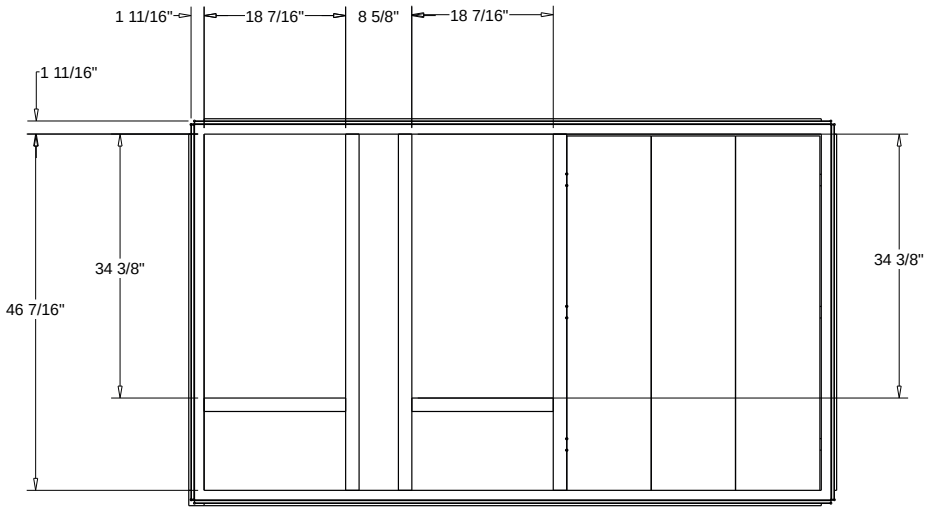
PACKAGED GAS / ELECTRIC

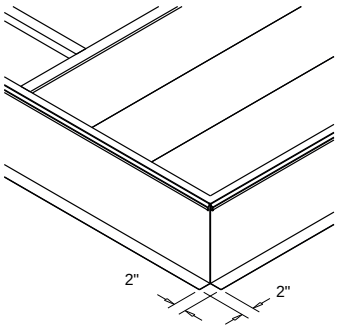
DOWNFLOW TYPICAL ROOF OPENING

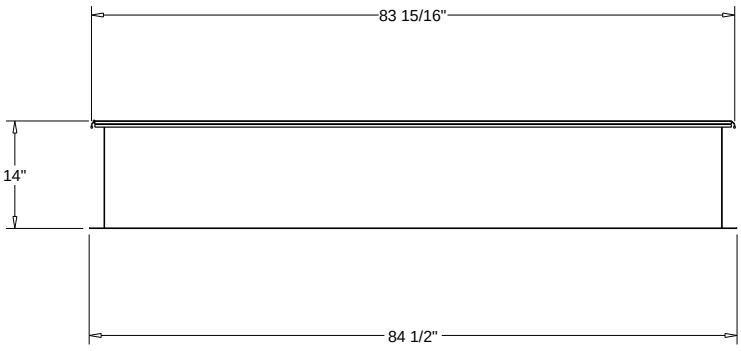
Accessory - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A1 Qty: 1 Tag(s): RTU-1

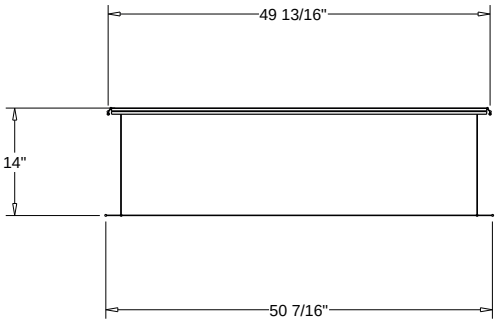
NOTES:
1. VERIFY WEIGHT, CONNECTION, AND ALL DIMENSION WITH INSTALLER DOCUMENTS BEFORE INSTALLATION









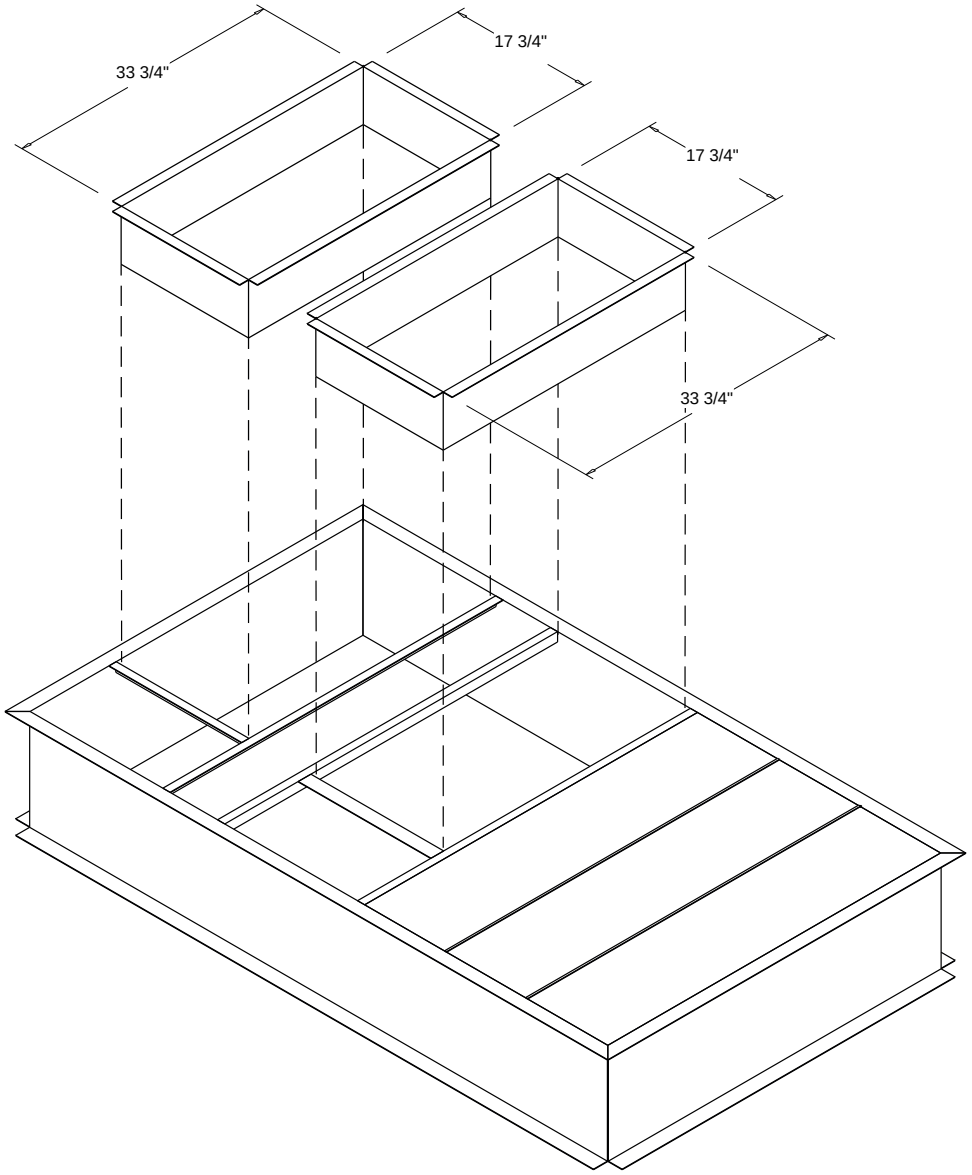


ROOF TOP CURB (BAYCURB043)

ACCESSORY

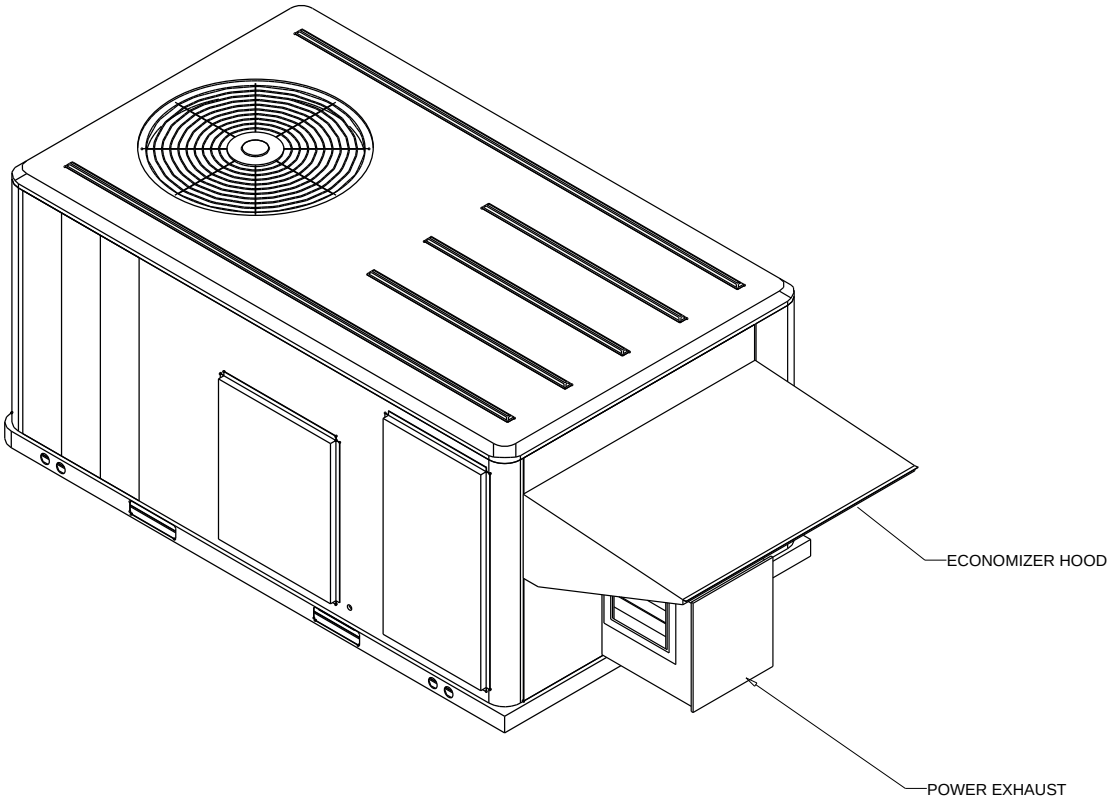
Accessory - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A1 Qty: 1 Tag(s): RTU-1

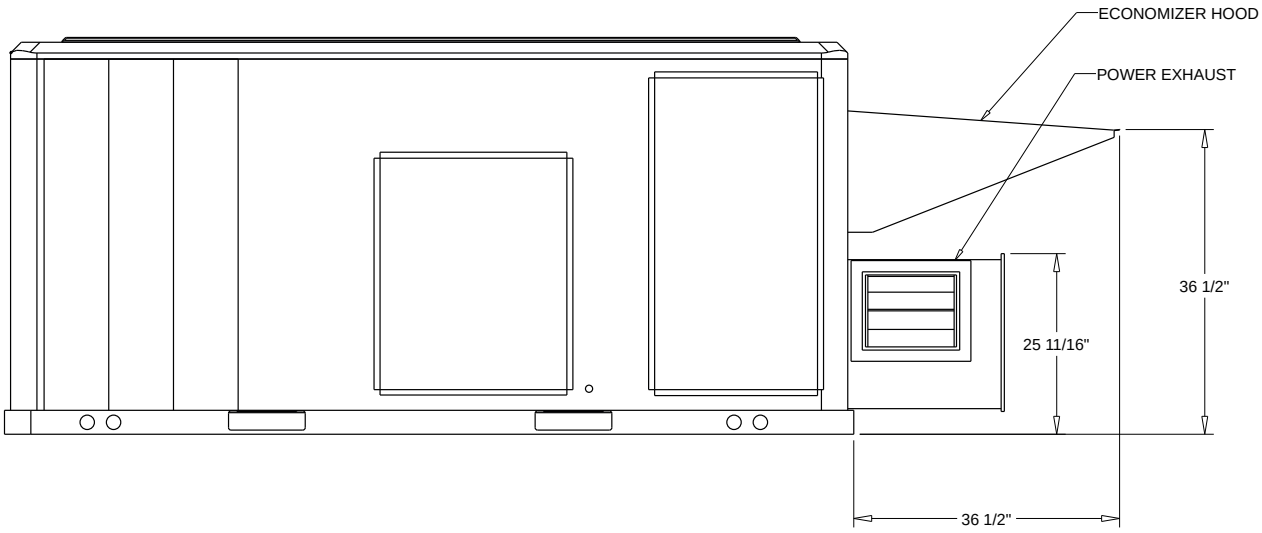
Downflow Duct Connections - Field Fabricated
All Flanges - 1 1/4"



ACCESSORY - DUCT CONNECTIONS

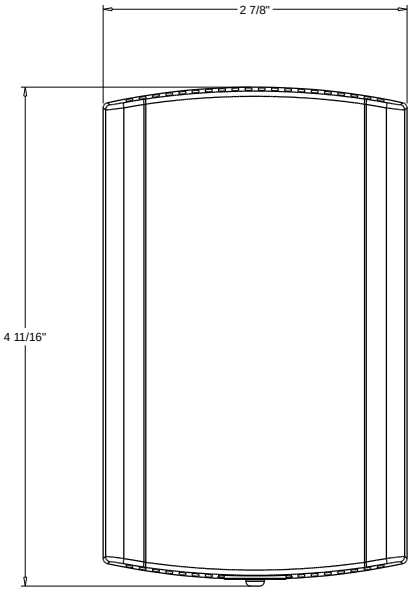
Accessory - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A1, A2 Qty: 2 Tag(s): RTU-1, RTU-2



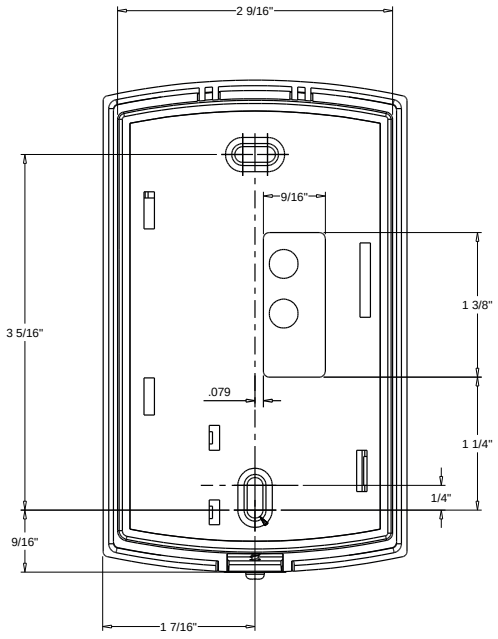


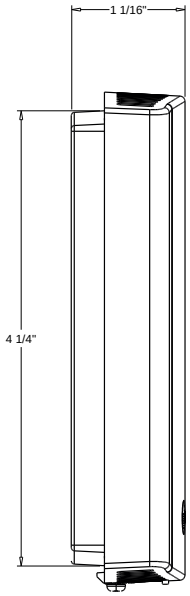
LOW LEAK ECONOMIZER HOOD WITH POWER EXHAUST
ACCESSORY

Accessory - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A1, A2 Qty: 2 Tag(s): RTU-1, RTU-2



NOTES:
1. SEE ENGINEERING SPECIFICATION FOR DETAILS.
2. VERIFY ALL DIMENSION WITH INSTALLER DOCUMENTS BEFORE INSTALLATION.

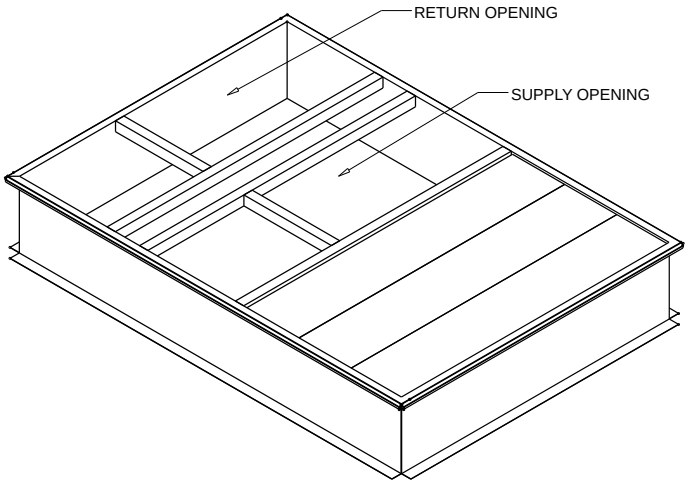




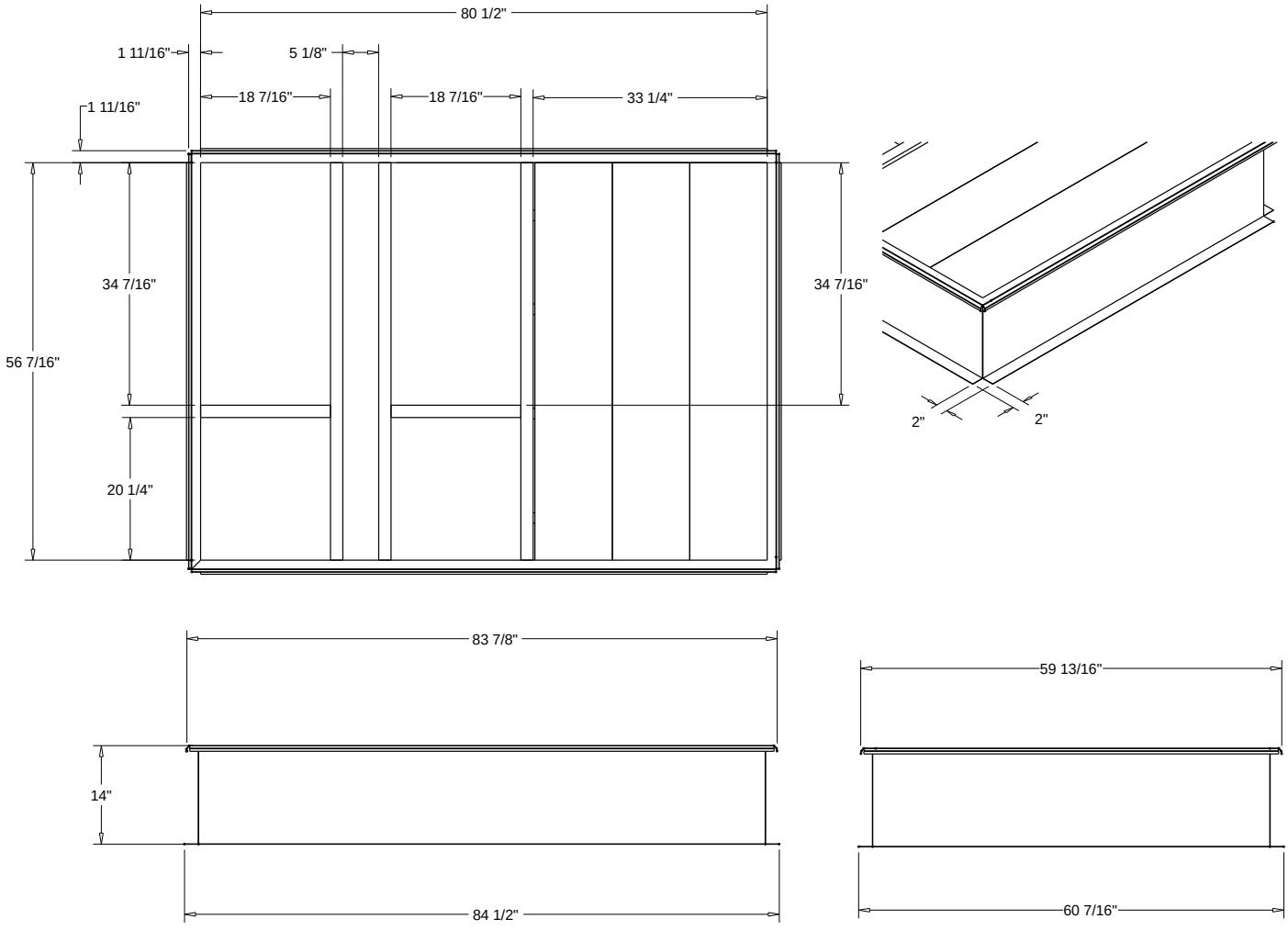
BAYSENS036A - WALL MOUNT HUMIDITY SENSOR

ACCESSORY

Accessory - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A2 Qty: 1 Tag(s): RTU-2



NOTES:
1. VERIFY WEIGHT, CONNECTION, AND ALL DIMENSION WITH INSTALLER DOCUMENTS BEFORE INSTALLATION

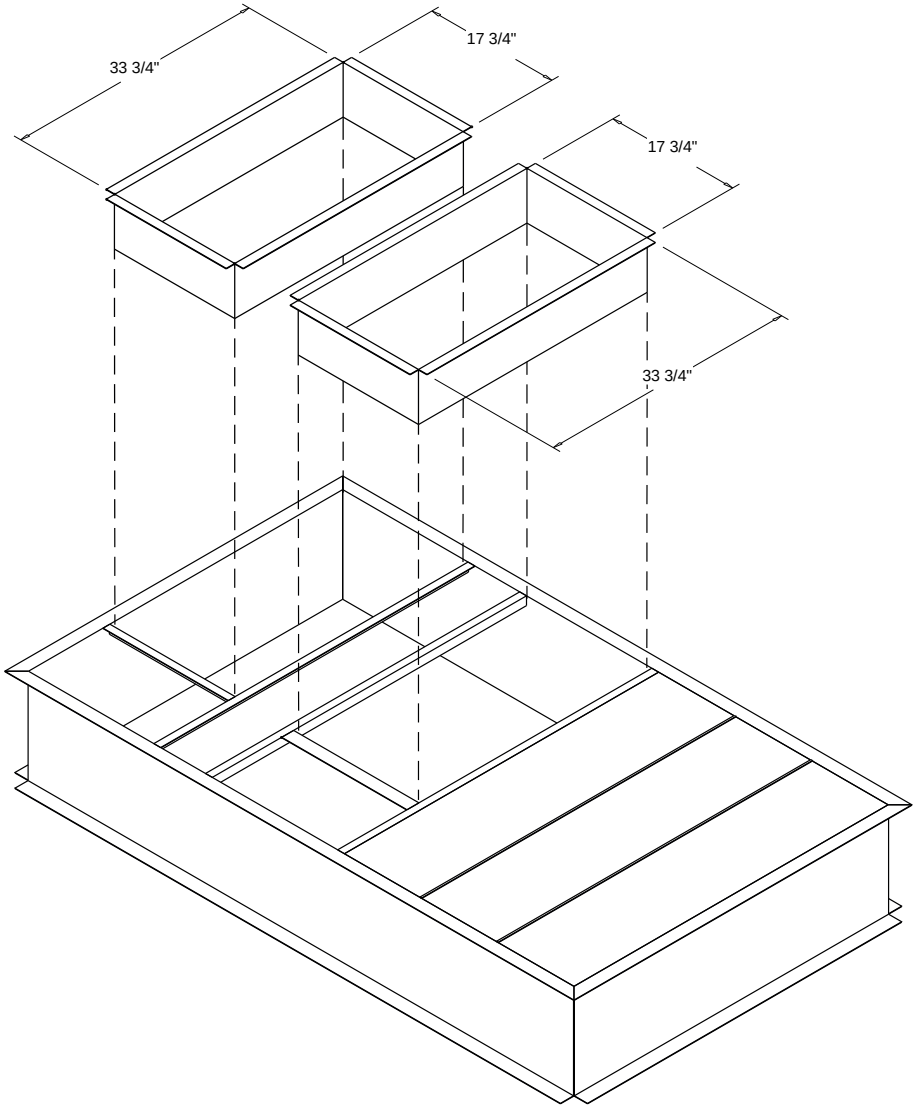


ROOF TOP CURB (BAYCURB044)

ACCESSORY

Accessory - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop
Item: A2 Qty: 1 Tag(s): RTU-2

Downflow Duct Connections - Field Fabricated
All Flanges - 1 1/4"

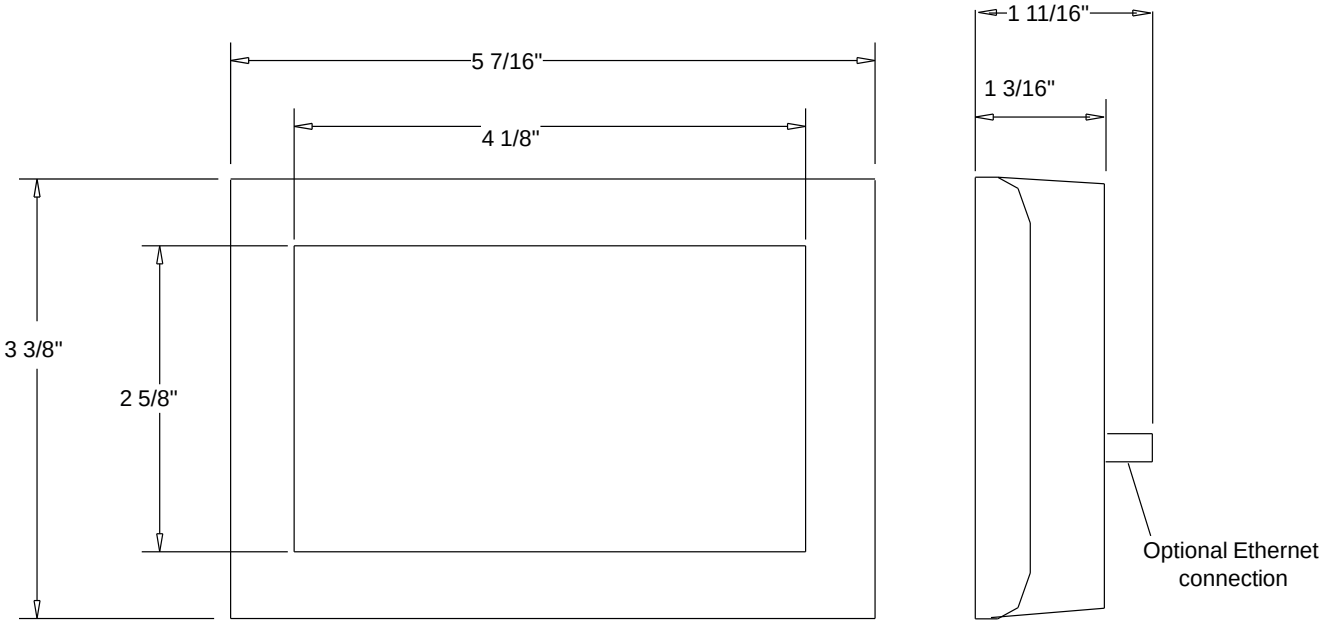


DUCT CONNECTIONS

ACCESSORY

Unit Dimensions - PIVOT THERMOSTATS
Item: B1 Qty: 2

BAYSTAT814



Trane® Pivot™ Smart Commercial Thermostat

Ordering number: BAYSTAT814

The Pivot thermostat is a color touch-screen, programmable control that is equipped with remote access. The Pivot thermostat is specifically designed for single zone constant volume commercial buildings. It has a very simple interface for occupants to adjust their thermostat. Cooling and heating control is made even easier when connected to Pivot Mobile App. Connecting to the Pivot Mobile App provides the capability to take full advantage of all benefits of the Pivot thermostat.

Features and Benefits:

Feature	Benefit
Improved service support	• Remote contractor access with status and trends • Service reminders • Analytics • Contractor information access
Meet specific business operation needs through customization	• Designed for commercial business • Customized display features on HD color touchscreen • Mange access restriction • Manage user by enable/disable per mobile device
Energy savings without sacrificing comfort	• 7 day programmable thermostat with up to 6 events per day • Optimal start based on building response and outdoor conditions
Wide coverage with one model	• Compatible with conventional 24VAC systems • Support 3H/2C conventional • 5H/2C heat pump • Humidification, dehumidification support, OA damper/economizer enable
Minimal training/intuitive use	• Single button override for after hour use • Customizable display to remove unused features • Configurable timed override logic
Efficient remote management	• Grouping for mass overrides • Schedule can be sent to multiple thermostats

Applications

HVAC system compatibility with:

-Conventional HVAC systems compatibility with 3heat/2cool dual fuel

-Heat pump systems:

– Up to 5 stages heat/2 stages cool (2 compressor plus 3 auxiliary)

-Heat pump switchover valve:

-Selectable with cool or heat

-Remote indoor sensor

-Remote outdoor sensor

-Two outputs for dehumidification, humidification or ventilation

	Description
Touch Screen Display	4.15” x 2.65” (4.3” diagonal)
Configurations	• Heat/cool • Dual fuel • Heat only • Cooling only • Heat pump
Maximum Number of Stages	Conventional: Three heat/two cool Heat pump: Two compressors, three auxiliary heat
Storage/Operating Temperatures	-40°F to 175°F, 5% to 95% RH non-condensing
Input Power	24 Vac
Power Consumption	3 VA typical, 7 VA maximum
Wire Usage	18 AWG
System Modes	• Auto • Heating • Cooling • Off
Fan Modes	• Auto • On
Auxiliary Heat Lockout	32°F to 70°F
Compressor Heat Lockout	5°F to 70°F
Cooling Setpoint Temperature Range	60°F to 99°F, 1°F resolution
Heating Setpoint Temperature Range	55°F to 99°F, 1°F resolution
Indoor Temperature Display Range	-40°F to 122°F
Outdoor Temperature Display Range	-40°F to 140°F
Indoor Humidity Display Range	0% to 100%, 1% resolution
Minimum Cycle Off Time Display	• Compressor; 5 minutes • Indoor Heat; 1 minute
Mobile App operating system	Android and IOS
Warranty	5-year material

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 - 3-10 Ton R-410A PKGD Unitary Gas/Electric Rooftop

Item	Tag(s)	Qty	Description	Model Number
A1	RTU-1	1	7.5 Ton R-410A PKGD Unitary Gas/Electri	YHC092F3RHA--M0B0A1A0B0A0000000000000000

Field Installed Option Description	Part/Ordering Number
Roof curb	BAYCURB043A
Power exhaust	BAYPWRX026A
Humidity wall mounted sensor	BAYSENS036A

Item	Tag(s)	Qty	Description	Model Number
A2	RTU-2	1	10 Ton R-410A PKGD Unitary Gas/Electri	YHC120F3RHA--M0B0A1A0B0A0000000000000000

Field Installed Option Description	Part/Ordering Number
Roof curb	BAYCURB044A
Power exhaust	BAYPWRX026A
Humidity wall mounted sensor	BAYSENS036A