

VRF SINGLE PACKAGED AIR CONDITIONER (SPAC) CERTIFIED DRAWING

DWG. NO. **VRF SPAC E-Heat Submittal**
REV. -

PROJECT	DATE	10/9/19	BY	JL	REVISIONS	
PURCHASER	P.O. #	QTY	DATE	BY	DESCRIPTION	
ARCHITECT	SHIP DATE					
ENGINEER		SLEEVES				
HVAC CONTR.		ENCLOSURE				
GEN. CONTR.		CHASSIS				
DESIGNATION	MODEL NUMBER	QTY				
A						
B						
C						
TOTAL						

UNIT SPECIFICATIONS+

SERIES MODEL #	8SPHP12-VF	8SPHP18-VF	8SPHP24-VF
COOLING CAPACITY (RATED)*	11,500	17,700	22,600
EER (RATED)	13.0	12.0	11.5
COOLING CAPACITY (MIN. - MAX)	9,700 - 15,700	10,500 - 19,500	13,900 - 25,600
COOLING WATTS	881	1,475	1,965
COOLING AMPERAGE	4.2	7.1	9.4
HEATING CAPACITY (RATED)**	11,400	16,800	19,000
COP (RATED)	3.5	3.3	3.3
HEATING CAPACITY (MIN - MAX)	7,600 - 14,500	11,500 - 19,200	15,100 - 25,900
ELECTRIC HEATING MAX. (KW)***	3.5	3.5	3.5
VOLTAGE	208	208	208
HEATING WATTS	918	1,491	1,686
HEATING AMPERAGE	4.4	7.2	8.1
MCA (NO ELECTRIC HEAT)	9.75	14.8	18.8
MOP (NO ELECTRIC HEAT)	15	20	20

GENERAL NOTES:

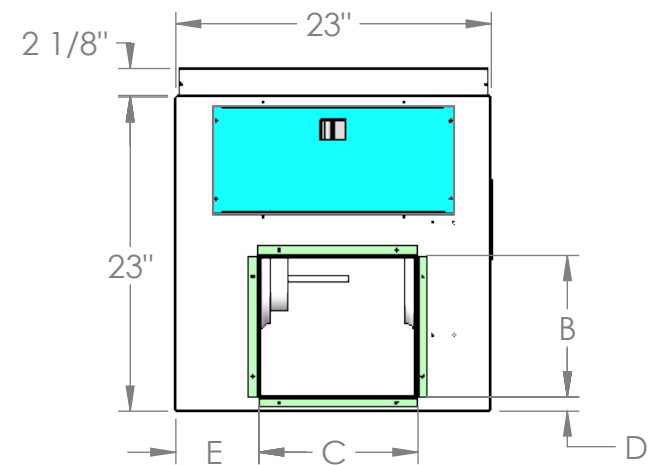
1: NEW CONSTRUCTION USE ONLY.

SPECIFICATION NOTES:

- 1: * = BTUH @ 80°F DB/67°F WB INDOORS;
95°F DB/75°F WB OUTDOORS.
- 2: ** = BTUH @ 47°F DB/43°F WB INDOORS;
70°F DB/60°F WB OUTDOORS.
- 3: *** = OPTIONAL ELECTRIC HEAT.

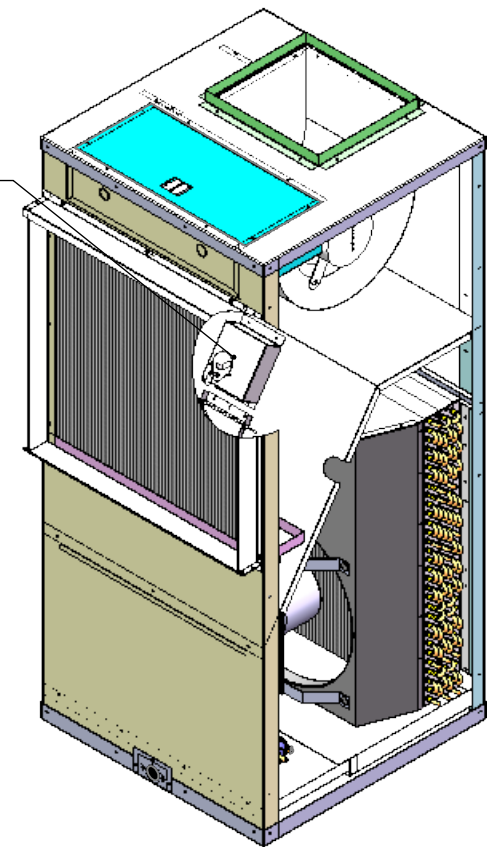
REVISIONS			
REV.	DESCRIPTION	BY	DATE

UNIT SIZE	A	B	C	D	E	F	G
12,18, 24	47	8 1/2	9 1/2	2 1/4	8 1/4	22 3/4	9 1/4

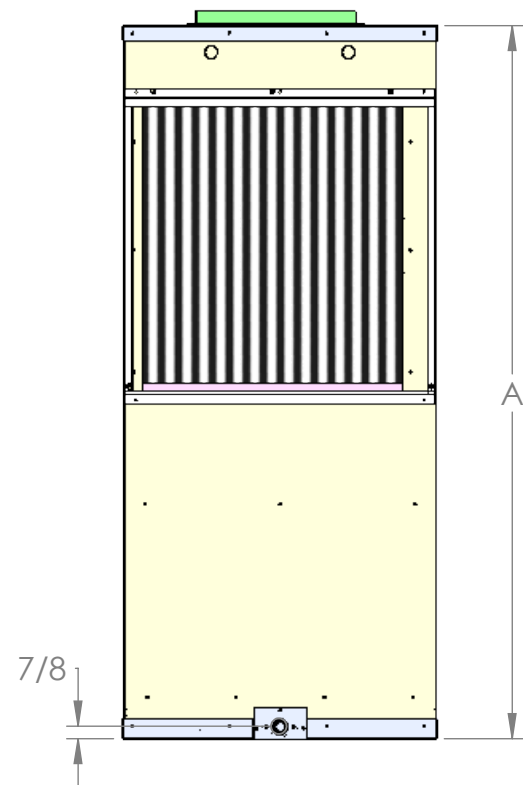


TOP VIEW

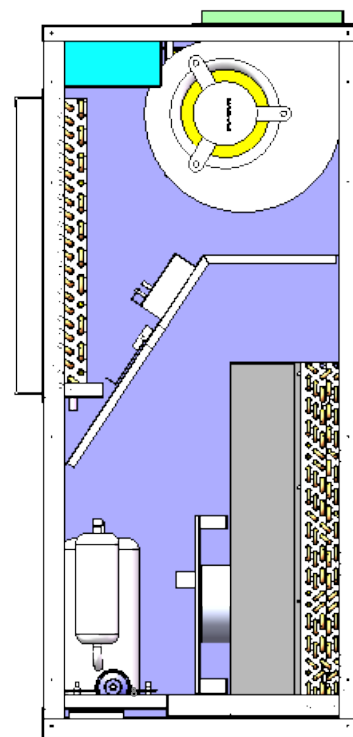
FRESH AIR MODULE (OPTIONAL)



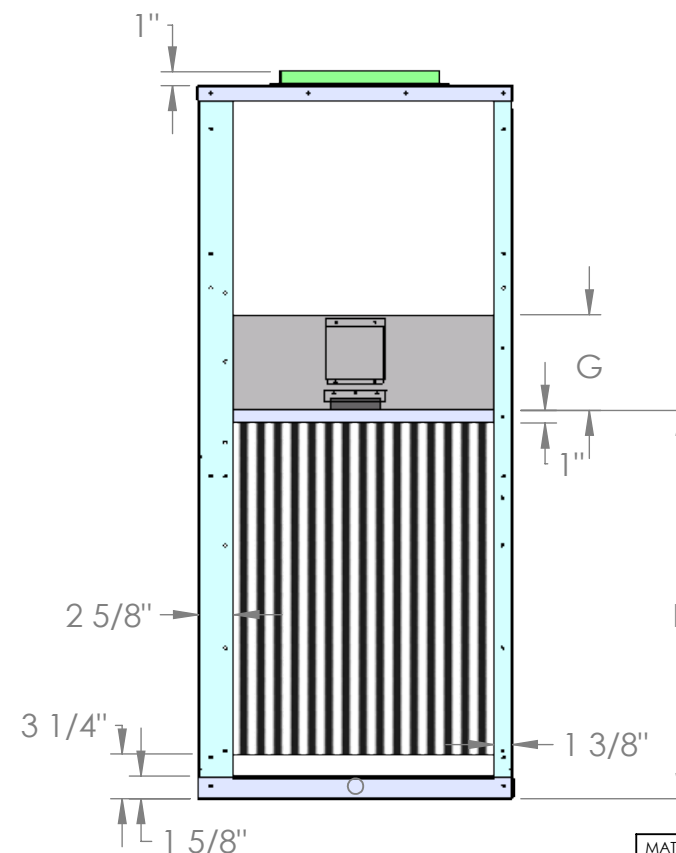
ISOMETRIC VIEW



FRONT VIEW



RIGHT VIEW

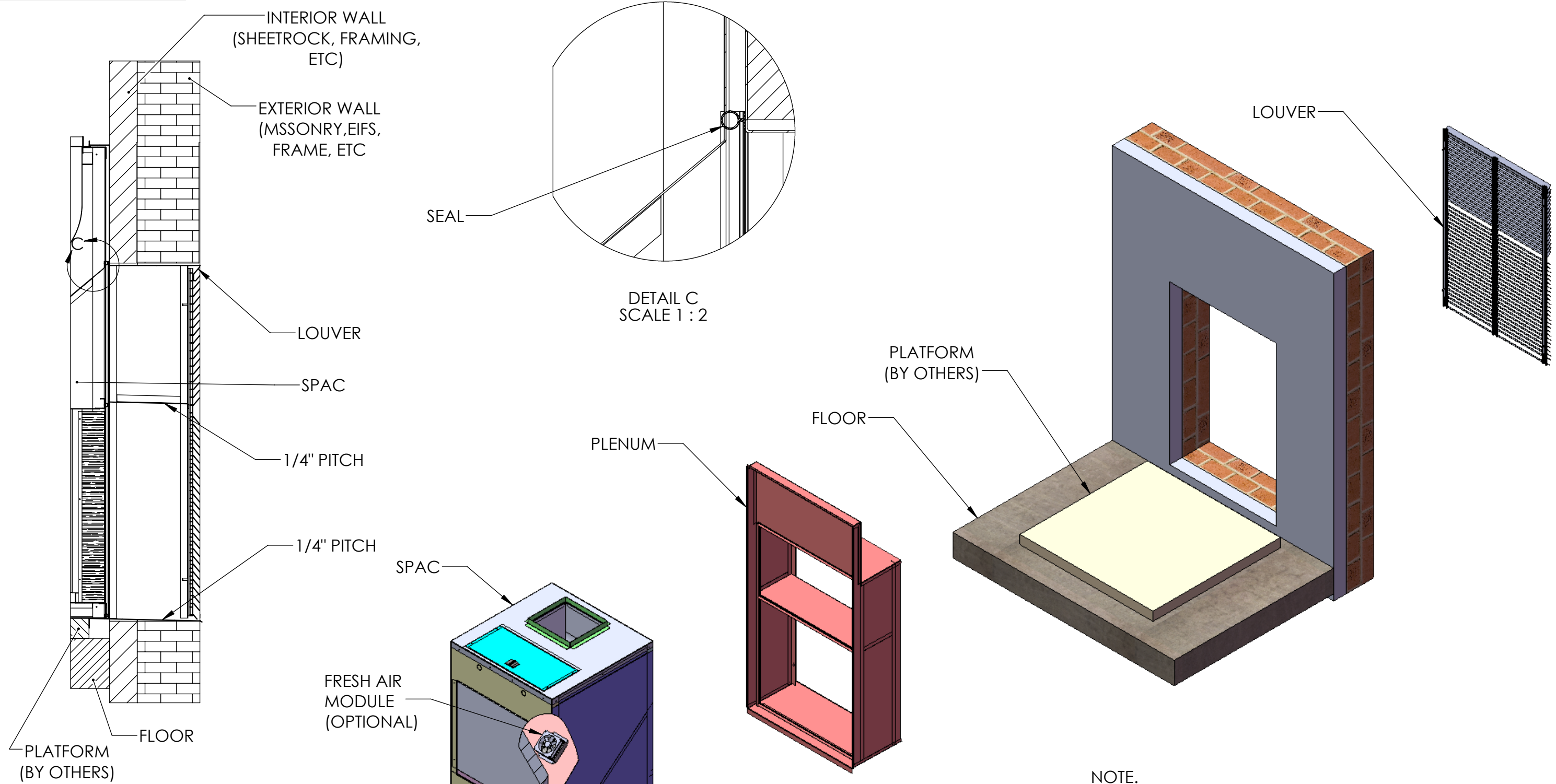


REAR VIEW

MATERIAL:	ICE-AIR LLC. 80 HARTFORD AVENUE MOUNT VERNON, NY 10553		
WEIGHT (LBS): 103144.030			
FINISH: N/A	TITLE: SPAC NEW DESIGN		
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/32 ANGULAR: MACH ± ° BEND ± 1° TWO PLACE DECIMAL ± .03 THREE PLACE DECIMAL ± .015	MODEL BY: VP	DATE: 07/20/18	DWG. NO.
	DRAWING BY: -	DATE: -	SAB-10287
	SIZE B	SCALE: NONE DO NOT SCALE DRAWING	REV
		SHEET 1 OF 1	

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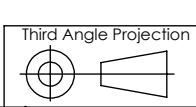
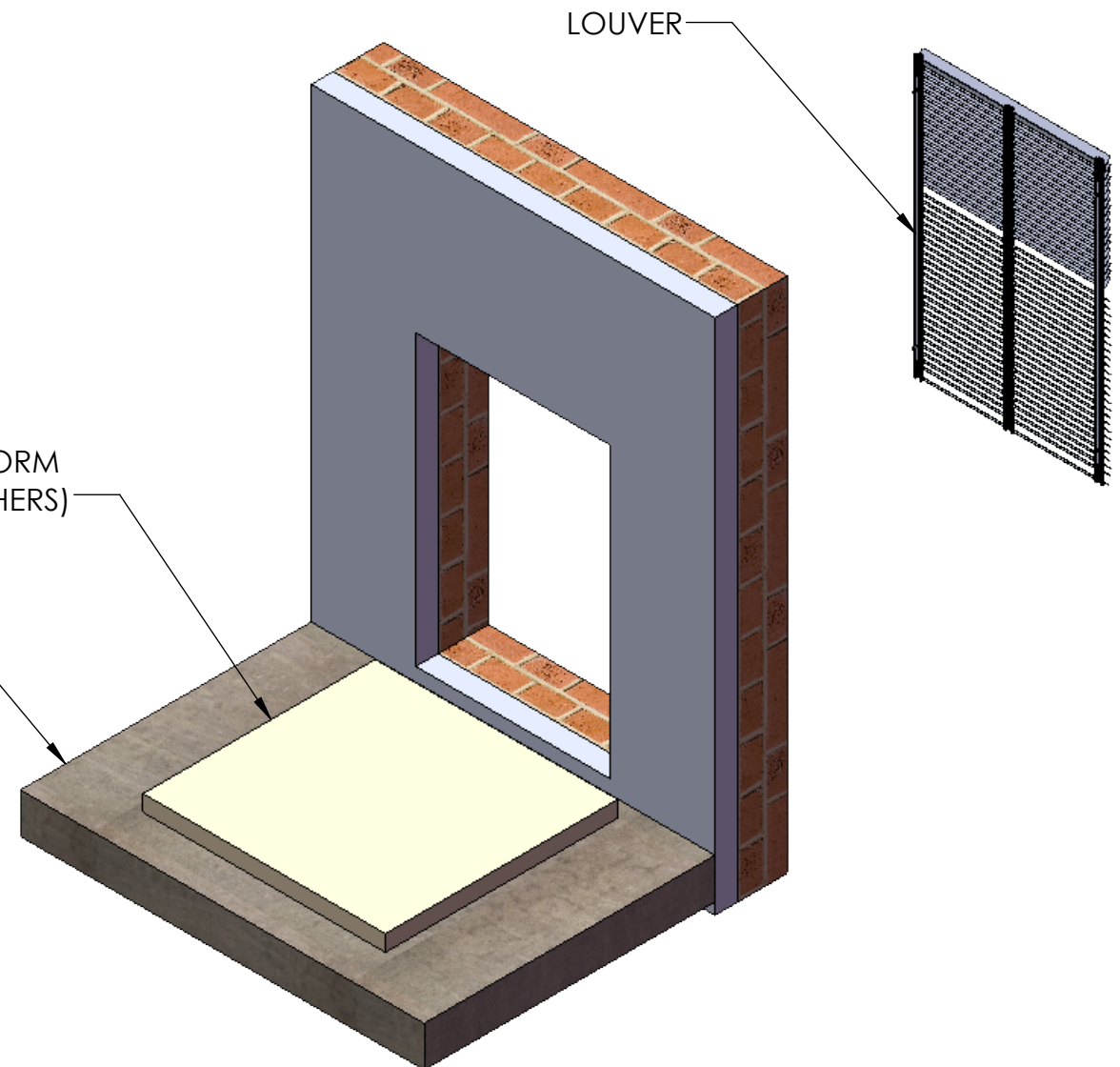
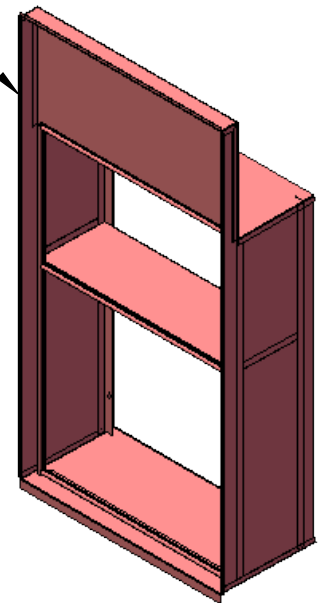
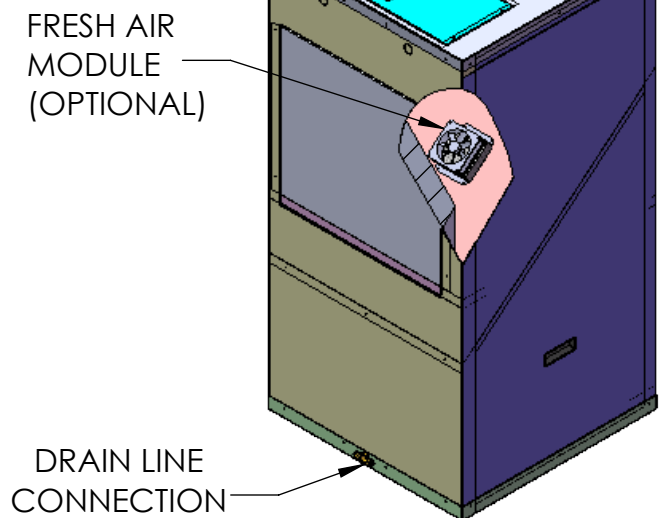
REVISIONS			
REV.	DESCRIPTION	BY	DATE



VERTICAL SECTION
SCALE 1 : 10

DETAIL C
SCALE 1 : 2

NOTE.
PLENUM DEPTH DETERMINED BY WALL THICKNESS.



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MATERIAL:	ICE-AIR LLC. 80 HARTFORD AVENUE MOUNT VERNON, NY 10553		
WEIGHT (LBS): 1327.37			
FINISH: N/A	TITLE: SPAC NEW CONSTRUCTION DESIGN LAYOUT		
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/32 ANGULAR: MACH ± ° BEND ± 1° TWO PLACE DECIMAL ± .03 THREE PLACE DECIMAL ± .015	MODEL BY: VP	DATE: 07/27/18	DWG. NO.
	DRAWING BY: -	DATE: -	SAB-10305-01
SIZE B	SCALE: NONE DO NOT SCALE DRAWING	SHEET 2 OF 2	REV

PRODUCT SPECIFICATIONS
SINGLE PACKAGED AIR CONDITIONER (SPHP)

ICE AIR HI SPEC™ UNITS
'SPAC' SERIES UNITS

1. Equipment: Provide "SPHP" Series Single Packaged Heat pump (SPHP), as manufactured by Ice Air, LLC.
2. Components: Heat Pump to consist of wall plenum, exterior louver, cooling/heating chassis and front panel. Units to operate at 208 / 230-volt, single phase, 60 hertz circuits.
3. Wall Plenum: Wall plenum exterior dimensions to be 47 ^{3/4}" high x 23^{3/4}" wide to comply with US DOE requirements for new construction SPACs. Smaller dimension wall plenums are not acceptable under DOE regulations. Wall plenum to be factory fabricated of 18 gauge galvanized steel and to be shipped with a mechanically-attached temporary coated cardboard filler panel at the exterior for weather protection. Cardboard filler panel to be removed prior to chassis and louver installation. Wall plenum to have built-in pitch of at least 1/4" and to be fabricated with an angled rain lip for proper drainage to the exterior of the building. Wall plenums for masonry locations to be factory fabricated to match the full wall depth at each location; wall plenums with field-installed extension pieces are not acceptable.
4. Louvers: Exterior louver to be horizontal, extruded aluminum blade-type construction with clear anodized (painted Duranar) finish. Louver to be supplied with stainless steel fastening hardware and must be capable of being installed from within the wall plenum, supplied for all through wall locations
5. Chassis: Cooling chassis to be a self-contained, assembly consisting of a sealed refrigerant system, evaporator and condenser sections with separate Electronically Commutated (EC) motors (single motor units are not acceptable), motorized outside fresh air damper, wired for remote mounted thermostats and a non-fused disconnect. Provide a permanent, washable mesh filter with each unit.
- 5a. Refrigeration System: Sealed refrigerant system to consist of variable speed high efficiency rotary compressor, copper tube / aluminum fin evaporator and condenser coils, refrigeration metering device consisting of a capillary tube expansion system, a reversing valve and interconnecting tubing. System to be factory charged and sealed and capable of operating in the cooling mode to an outdoor ambient temperature of 35 °F. All units to be manufactured with R410A Green refrigerant; units containing R22 or R407C refrigerant are not acceptable.

- 5b. Heat Pump System: Heat Pump operation using reverse heating cycle. System to be factory charged and sealed and capable of operating in the heating mode to an outdoor ambient temperature of 38 °F. Electric heating element will automatically energize (manual activation switch available). All units to be manufactured with R410A Green refrigerant; units containing R22 or R407C refrigerant are not acceptable.
- 5c. Evaporator Section: Evaporator motor and blower wheel to be mounted behind the evaporator coil. Blower wheel to be fabricated from aluminum and to be directly driven by a multi-speed EC motor with built-in thermal overload protector. Evaporator section to contain an integral stamped and powder coated steel drain pan, draining into one 3/4" O.D. drain hose.
- 5d. Condenser Section: Condenser section to contain a separate EC motor and plastic or metal propeller fan with an integral slinger ring. Condenser motor to cycle with compressor and to run during the cooling and heating cycle.
- 5e. Condensate Disposal: Condensate to drain from the indoor base pan into the lower galvanized steel condenser base pan through one 3/4" O.D. drain hose. Condensate disposal to be accomplished by the entrainment of water particles in the condenser air stream and evaporation upon the hot condenser coil. Building condensate drain lines may be required.
- 5f. Chassis Sheet Metal: Chassis sheet metal parts to be manufactured entirely of 18 gauge and 20 gauge galvanized steel. Chassis base pan to be powder coated inside and out to prevent corrosion of sheet metal pan. Chassis will slide into the wall plenum interior flanges and creates a positive weather seal using crushable pressure-sensitive foam tape, thereby preventing air and water infiltration. Chassis seal must be an integral part of unit construction, use of attached sealing angles or channels is not acceptable.
- 5g. Unit Controls (Optional): Unit controls to include a wall-mounted digital controller with integral electronic thermostat. Controller to be seven-day programmable type. Interior room temperature, and Freezestat to be mounted on the evaporator coil only (condenser mounted freezestats are unacceptable) to provide true temperature readings.
- 5h. Outside Air: Provide motorized outside air damper with chassis mounted actuator. Optional motorized damper could also be supplied by special request.
- 5i. Electric Heating Element (Optional): Electric heaters to include overheating protection heating elements with self-limiting temperature features.
6. Front access panel (Optional): Front access panel to be fabricated from 20 gauge galvanized steel. Panel to be finished in (Antique White) (Arctic White) baked powder coat finish. Front access panel to mount to closet jam.

7. Warranty and Code Compliance: Unit to be guaranteed free of defects in material and workmanship for one year from date of delivery. Units to be ETL listed for safety in the United States and Canada, to have New York City MEA and BEC approvals, to be in compliance with all local, state and federal energy efficiency and building codes and to be tested in accordance with current ARI standards.