

SINGLE PACKAGED HEAT PUMP (SPHP) CERTIFIED DRAWING

DWG. NO.
 Submittal Template SPHP
 REV. - 01

PROJECT		DATE	3/9/21	BY	JL	REVISIONS
PURCHASER		P.O. #		QTY	DATE	DESCRIPTION
ARCHITECT		SHIP DATE	ACCESS PANEL			
ENGINEER			WALL PLENUM			
HVAC CONTR.			LOUVER			
GEN. CONTR.			CHASSIS			

DESIGNATION	MODEL NUMBER	QTY	ACCESS PANEL		WALL PLENUM		LOUVER		ELECTRIC HEAT		DIGITAL THERMOSTAT					
			STD	SPCL	STD	SPCL	STD	SPCL			YES	NO	YES	NO	YES	NO
TOTAL																

UNIT SPECIFICATIONS+

GENERAL NOTES:

- 1: WALL PLENUM IS #18 GAUGE GALVANIZED STEEL.
- 2: WALL PLENUM DEPTH TO BE SPECIFIED BY CONTRACTOR.
- 3: WALL PLENUM OPENING TO BE 1.125" LARGER THAN CHASSIS

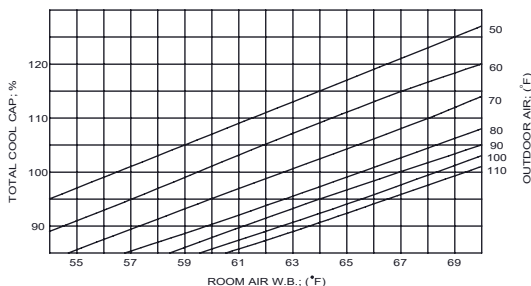
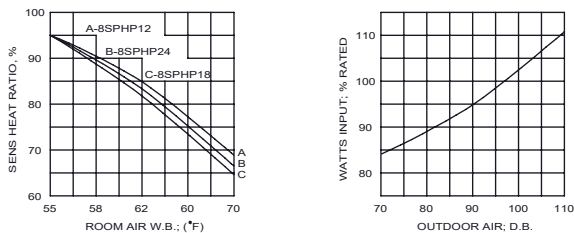
SERIES MODEL #	8SPHP12	8SPHP18	8SPHP24	8SPHP30	8SPHP36
COOLING CAPACITY*	11,500	16,800	24,000	27,500	32,500
SENSIBLE CAPACITY	8,630	12,600	18,000	22,500	24,900
EER	13.0	11.0	11.0	11.0	11.0
COOLING WATTS	884	1,527	2,182	2,500	2,955
COOLING AMP	4.3	7.3	10.4	12.0	14.2
HEATING CAPACITY**	11,400	15,200	19,000	24,000	27,500
HEATING COP	3.5	3.3	3.3	3.3	3.3
HEATING WATTS	955	1,350	1,687	2,130	2,441
HEATING AMP	4.6	6.5	8.1	10.2	11.7
ELECTRIC HEAT	3.5 5.0	5.0 7.5	5.0 7.5	5.0 7.5	5.0 7.5
VOLTAGE	208	208	208	208	208
INDOOR CFM	400	600	800	1,000	1,200
MAX. ESP (INDOOR)	0.3"	0.3"	0.3"	0.3"	0.3"
MCA (WITHOUT ELECTRIC HEAT)	10.8	13.3	21.1	23.8	29.4
MAX FUSE (WITHOUT ELECTRIC HEAT)	15	20	30	30	40
MCA (WITH ELECTRIC HEAT)	22.5 27.8	28.7 47.4	28.9 47.8	29.5 48.3	33.3 48.3
MAX FUSE (WITH ELECTRIC HEAT)	25 30	30 50	30 50	30 50	40 50
CHASSIS WEIGHT	180	180	310	320	320

CUSTOM NOTES:

- 1: DISCONNECT SWITCH
- 2: WALL MOUNTED DIGITAL THERMOSTAT
- 3: DRAWING SHOWS OPTIONAL FRESH AIR MODULE, NORMALLY NOT INCLUDED

PERFORMANCE DATA

COOLING CAPACITY CORRECTION FACTORS

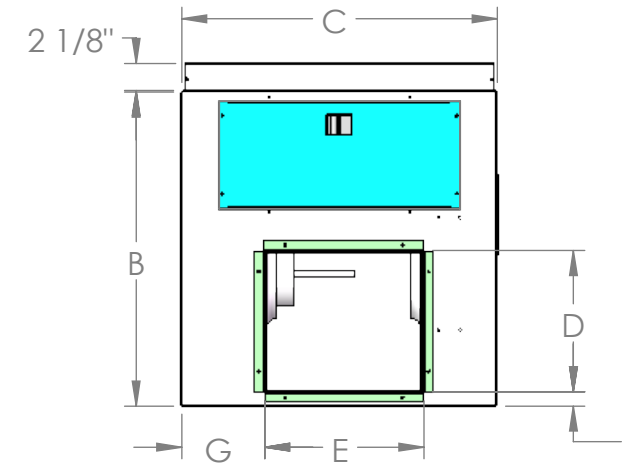


SPECIFICATION NOTES:

- 1: * = BTUH @ 95°F. DB/75 °F. WB OUTDOORS; 80 °F. DB/67 °F. DB INDOORS.
- 2: ** = BTUH @ 47°F. DB/43 °F. WB OUTDOORS; 70 °F. DB/60 °F. DB INDOORS.
- 3: FOR CAPACITIES AT CONDITIONS OTHER THAN THOSE SHOWN IN NOTES 1-2 ABOVE USE GRAPHICS BELOW.

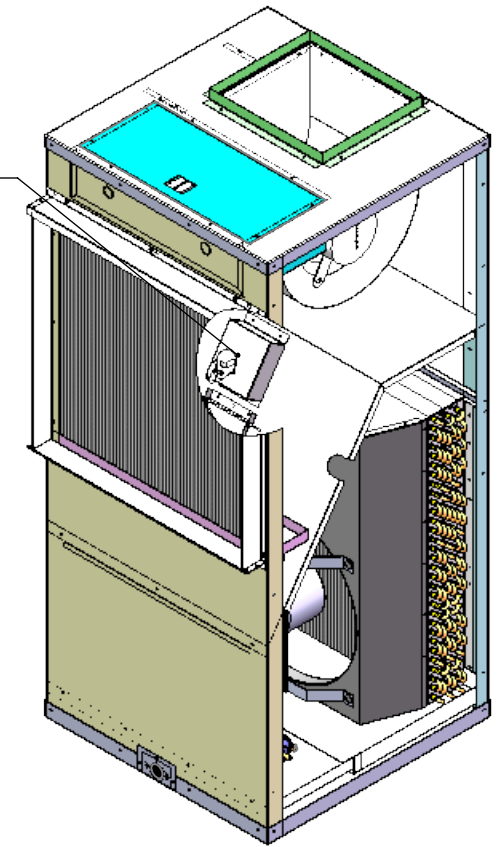
REVISIONS			
REV.	DESCRIPTION	BY	DATE

UNIT SIZE	A	B	C	D	E	F	G	H	J
12	47	23	23	8 1/2	9 1/2	2 1/4	8 1/4	20 1/2	11 1/2
18	47	23	23	8 1/2	9 1/2	2 1/4	8 1/4	22 1/2	9 1/2
24/30/36	64	26	28	10 5/8	9 1/2	2 1/4	8	32 1/2	10 1/4

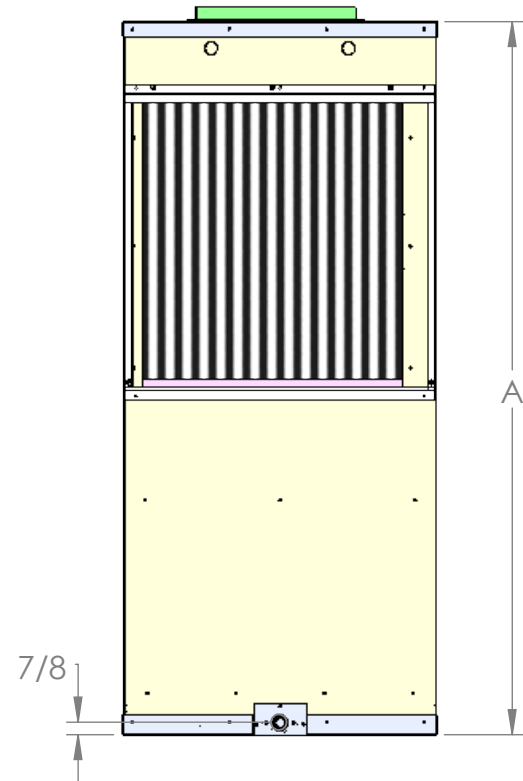


TOP VIEW

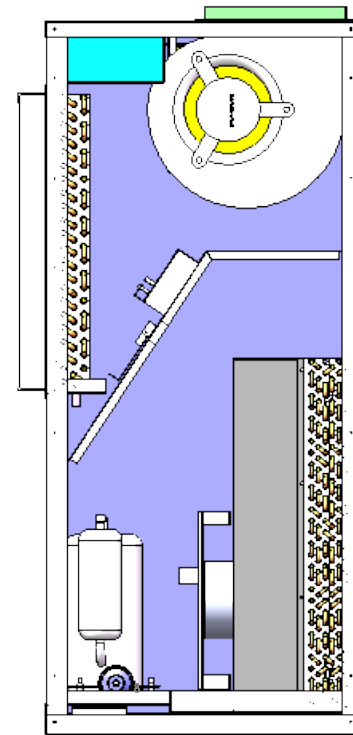
FRESH AIR MODULE (OPTIONAL)



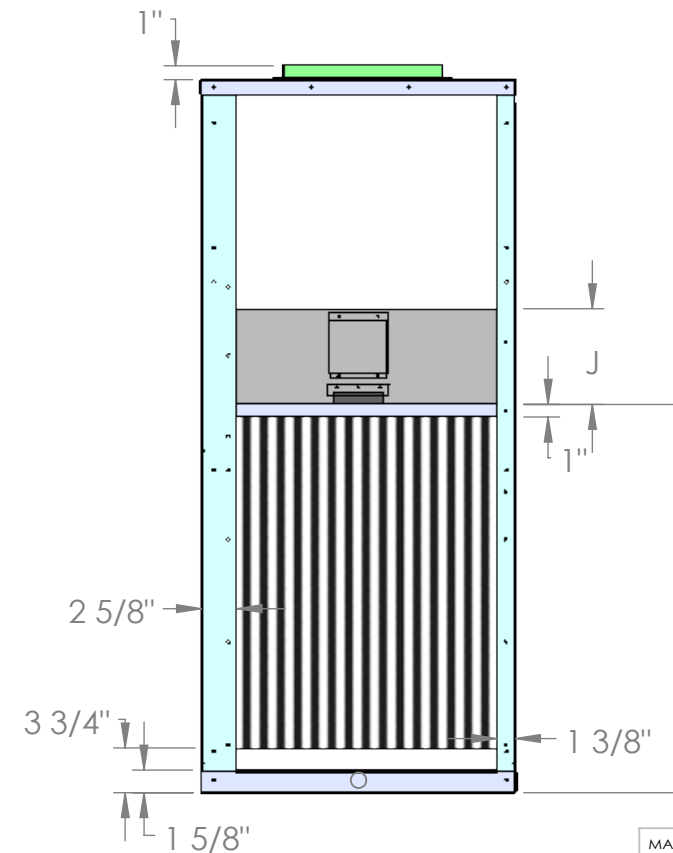
ISOMETRIC VIEW



FRONT VIEW



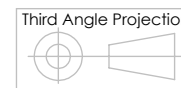
RIGHT VIEW



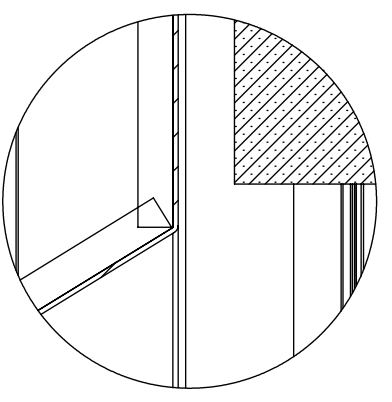
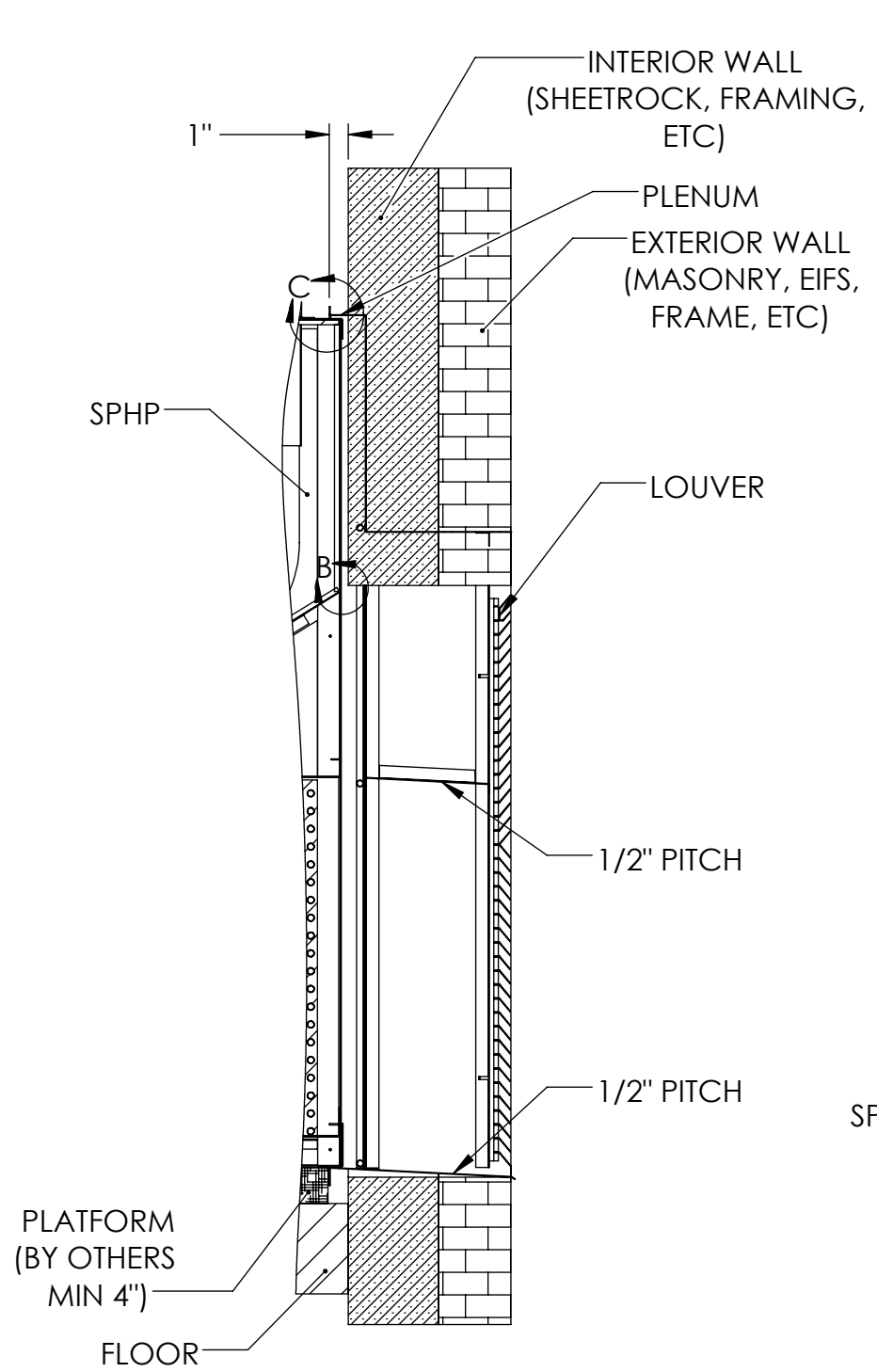
REAR VIEW

MATERIAL:	ICE-AIR LLC. 80 HARTFORD AVENUE MOUNT VERNON, NY 10553			
WEIGHT (LBS): 103144.030				
FINISH: N/A	TITLE: SPHP NEW DESIGN	MODEL BY: VP	DATE: 07/20/18	DWG. NO.
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES		DRAWING BY: JL	DATE: 6/20/21	SAB-10287
TOLERANCES: FRACTIONAL ± 1/32 ANGULAR: MACH ± ° BEND ± 1° TWO PLACE DECIMAL ± .03 THREE PLACE DECIMAL ± .015	SIZE B	SCALE: NONE DO NOT SCALE DRAWING	SHEET 1 OF 1	REV

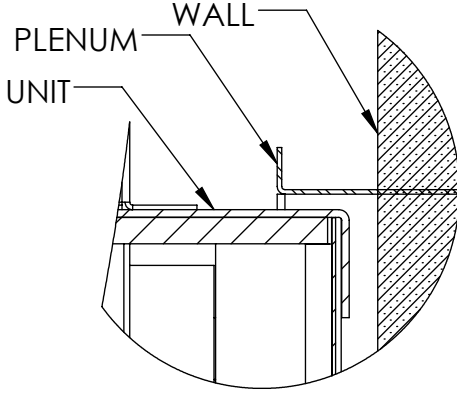
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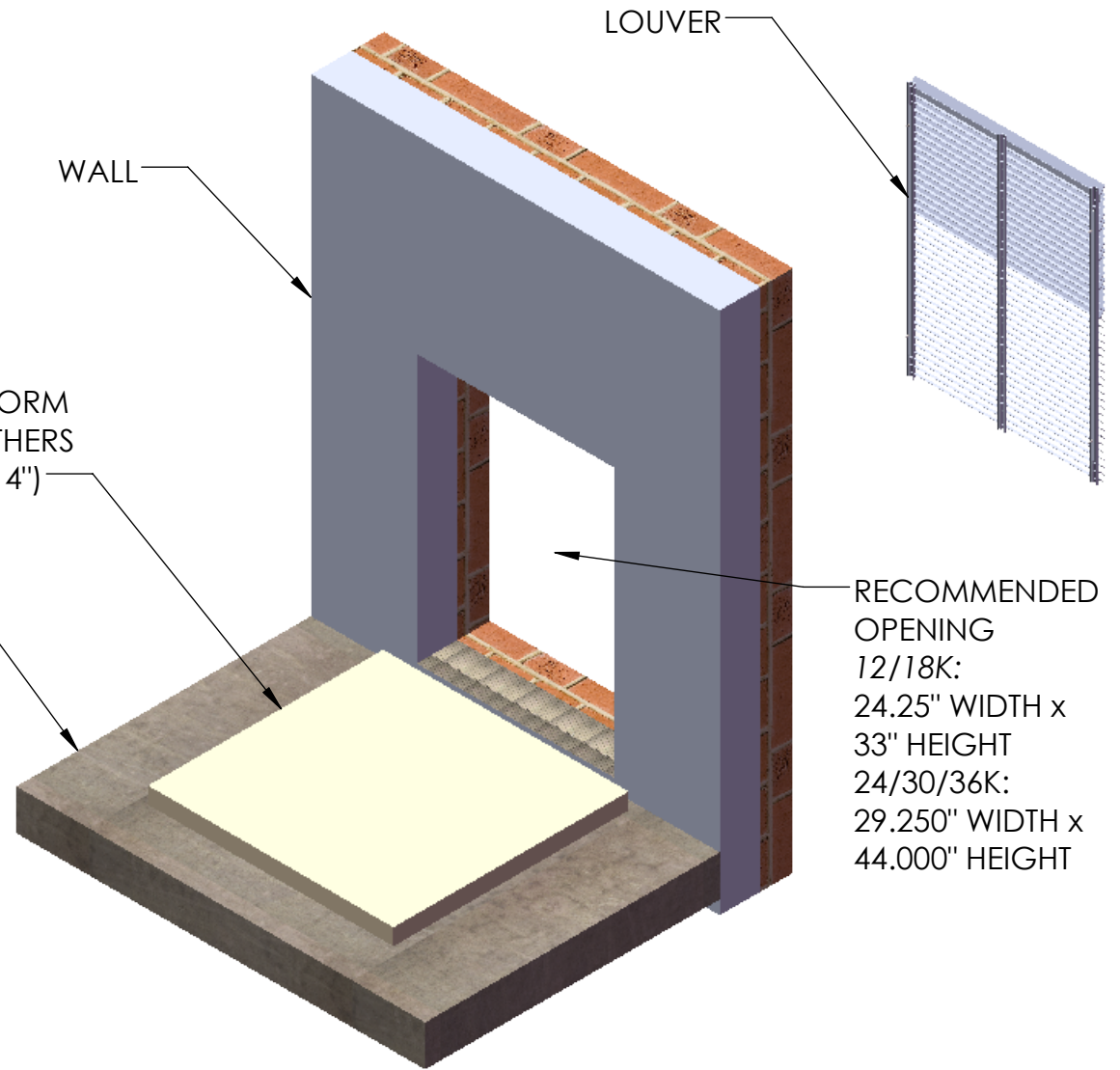
REVISIONS			
REV.	DESCRIPTION	BY	DATE



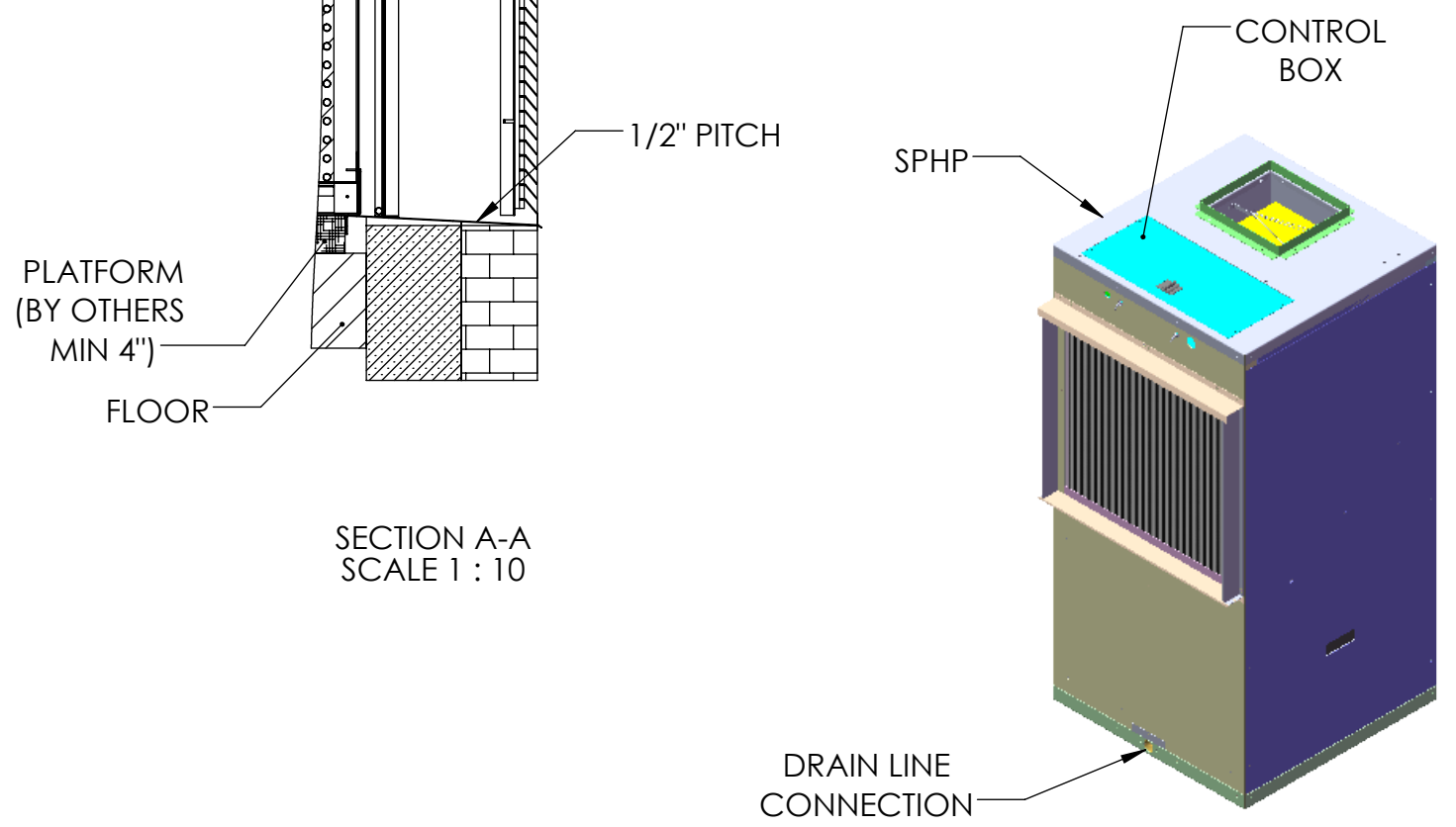
DETAIL B
SCALE 1 : 1.5



DETAIL C
SCALE 1 : 2



RECOMMENDED OPENING
 12/18K:
 24.25" WIDTH x
 33" HEIGHT
 24/30/36K:
 29.250" WIDTH x
 44.000" HEIGHT

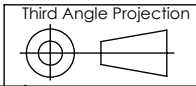


DRAIN LINE CONNECTION

NOTE.
 LOUVER CAN BE INSTALLED AFTER WALL SLEEVE.

MATERIAL:	ICE-AIR LLC. 80 HARTFORD AVENUE MOUNT VERNON, NY 10553		
WEIGHT (LBS): 1423.40			
FINISH: N/A	TITLE: SPHP NEW DESIGN STRAIGHT UNIT LAYOUT FOR THRU WALL SLEEVE		
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: 06/20/19	DWG. NO.
	DRAWING BY: -	DATE: -	CH UNIT
SIZE B	SCALE: NONE DO NOT SCALE DRAWING	SHEET 1 OF 1	REV

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PRODUCT SPECIFICATIONS
SINGLE PACKAGED HEAT PUMP (SPHP)

ICE AIR HI SPEC™ UNITS
'SPHP' 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 32.625" high x 23.625" wide or 43.50" high x 28.625" 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 ½" 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 (Optional): 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 Permanent Split Capacitor (PSC) motors or Electronically Commutated (EC) motors (single motor units are not acceptable), motorized outside fresh air damper, (optional) remote mounted thermostats and (optional) a non-fused disconnect. Provide throwaway filter with each unit.
- 5a. Refrigeration System: Sealed refrigerant system to consist of 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. (Optional) Electric heating element will automatically energize (manual activation switch available).
- 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 PSC motor or 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 PSC motor or 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 manual 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.