

Project Name:

Revision:

Project Address:

Date:

Purchaser:

P.O. #:

Engineer:

Submitted by:

Mech. Contractor:

Email:

Architect:

Pages:

Equipment:

Submittal Notes:

Packaged Terminal Air Conditioner for New Construction

RSNU-HP Series

Ice Air's packaged terminal heat pumps provide reliable occupant comfort at a great value.

Commercial grade construction provides reliability and longevity unmatched in this market category. With attractive durable enclosures, and whisper quiet operation, the RSNU-HP series is the perfect solution for new construction.



Features:

- Ultra-high efficiency – EERs to 12.0
- Electric Heat output available in various outputs to meet building heating demand.
- Heat pump operation down to 38°F with a transition to electric heat below 38°F
- Advanced tangential indoor blower provides balanced air flow
- Whisper quiet sound levels
- Standard programmable digital touchpad controls
- 5/2 or 7 day programming
- Puron® R-410A Green refrigerant
- Heavy duty, commercial-grade construction throughout
- Various control options including WiFi thermostats and BMS integration



- G90 galvanized steel construction, powder-coated drain and base pans
- Furniture-grade, powder-coated cabinetry

For custom solutions, please consult factory.

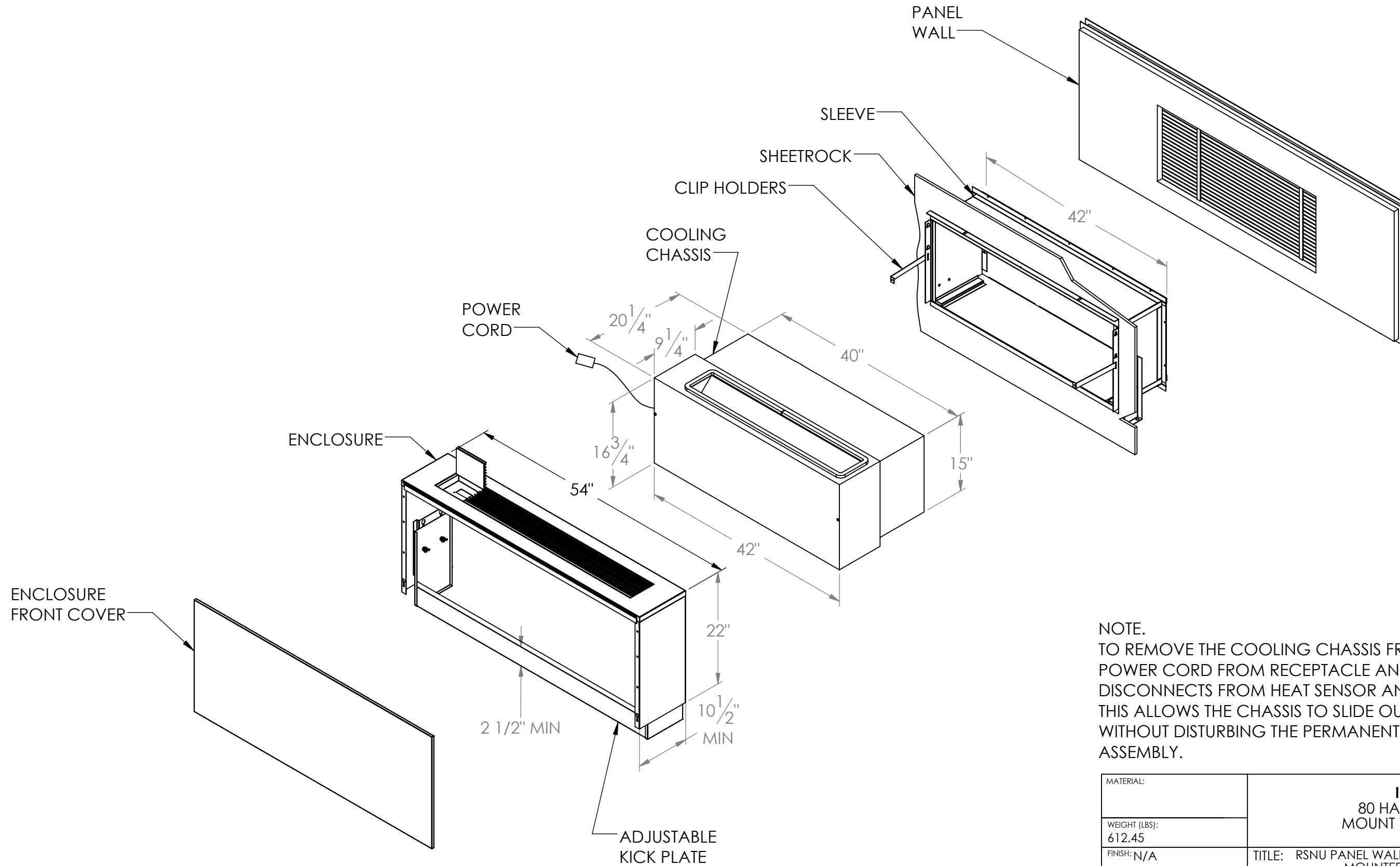
SERIES MODEL #	RSNU07			RSNU09			RSNU13			RSNU16		RSNU18	
Total Cooling Capacity (Btu/hr) ¹	7,700			9,700			12,800			14,400		16,400	
Sensible Cooling Capacity (Btu/hr) ¹	5,390			6,790			8,960			10,080		11,480	
EER ¹	12.0			12.0			11.4			10.5		10.3	
Heating Capacity (Btu/hr) ²	7,200			8,700			11,500			13,300		15,200	
COP ²	3.40			3.30			3.30			3.13		3.13	
Voltage	115	208 / 230	277	115	208 / 230	277	115	208 / 230	277	208 / 230	277	208 / 230	277
Electric Heater (kW) ³	1.5	3.0 3.5	3.0 3.5	1.5	3.0 3.5	3.0 3.5	1.5	3.0 3.5 4.3	3.0 3.5 4.3	3.0 3.5 4.3	3.0 3.5 4.3	3.0 3.5 4.3	3.0 3.5 4.3
Electric Heater (A) ³	13	14.4 16.8	10.8 12.6	13	14.4 16.8	10.8 12.6	13	14.4 16.8 20.7	10.8 12.6 15.5	14.4 16.8 20.7	10.8 12.6 15.5	14.4 16.8 20.7	10.8 12.6 15.5
Current in Cooling Operation (Amps)	5.6	3.1	2.3	7	3.9	2.9	9.8	5.4	4.1	6.6	4.9	7.7	5.7
Power in Cooling Operation (Watts)	642			808			1,123					1,592	
MCA (without Electric Heat)	7	3.9	2.9	8.8	4.9	3.6	12.3	6.8	5.1	8.3	6.1	9.6	7.1
MOCP (without Electric Heat)	15	15	15	15	15	15	20	15	15	15	15	15	15
MCA (with Electric Heat)	17.6	18.8 21.8	14.2 16.4	17.6	18.8 21.8	14.2 16.4	17.6	18.8 21.8 26.6	14.2 16.4 19.9	18.8 21.8 26.6	14.2 16.4 19.9	18.8 21.8 26.6	14.2 16.4 19.9
MOCP (with Electric Heat)	20	20 25	15 20	20	20 25	15 20	20	20 25 30	15 20 20	20 25 30	15 20 20	20 25 30	15 20 20
Airflow - High Speed (CFM)	380	380	380	380	380	380	400	400	400	450	450	540	540
Airflow - Low Speed (CFM)	300	300	300	300	300	300	350	350	350	380	380	450	450
Outside Airflow (CFM)	60			60	60	60	60	60	60	60		60	
O.A. with fan assist option (CFM)	110			110			110			110		110	
Weight (Lbs.)	130			134			134			134		137	

SPECIFICATION NOTES:

1. Cooling capacity rated @ EAT = 80/67 °F db/wb; Ambient = 95 °F db
2. Heating capacity rated @ EAT = 70/67 °F db/wb; Ambient = 47/43 °F db/wb
3. Heat pump operating disabled and electric heat enabled below 38°F (+/- 3 °F)

RSNU SLEEVE (NEW DESIGN) LAYOUT

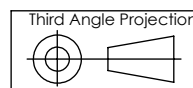
REVISIONS			
REV.	DESCRIPTION	BY	DATE



NOTE.
 TO REMOVE THE COOLING CHASSIS FROM SLEEVE, DISCONNECT POWER CORD FROM RECEPTACLE AND SEPARATE QUICK DISCONNECTS FROM HEAT SENSOR AND MOTORIZED VALE. THIS ALLOWS THE CHASSIS TO SLIDE OUT OF THE WALL SLEEVE WITHOUT DISTURBING THE PERMANENTLY INSTALLED HEATING ASSEMBLY.

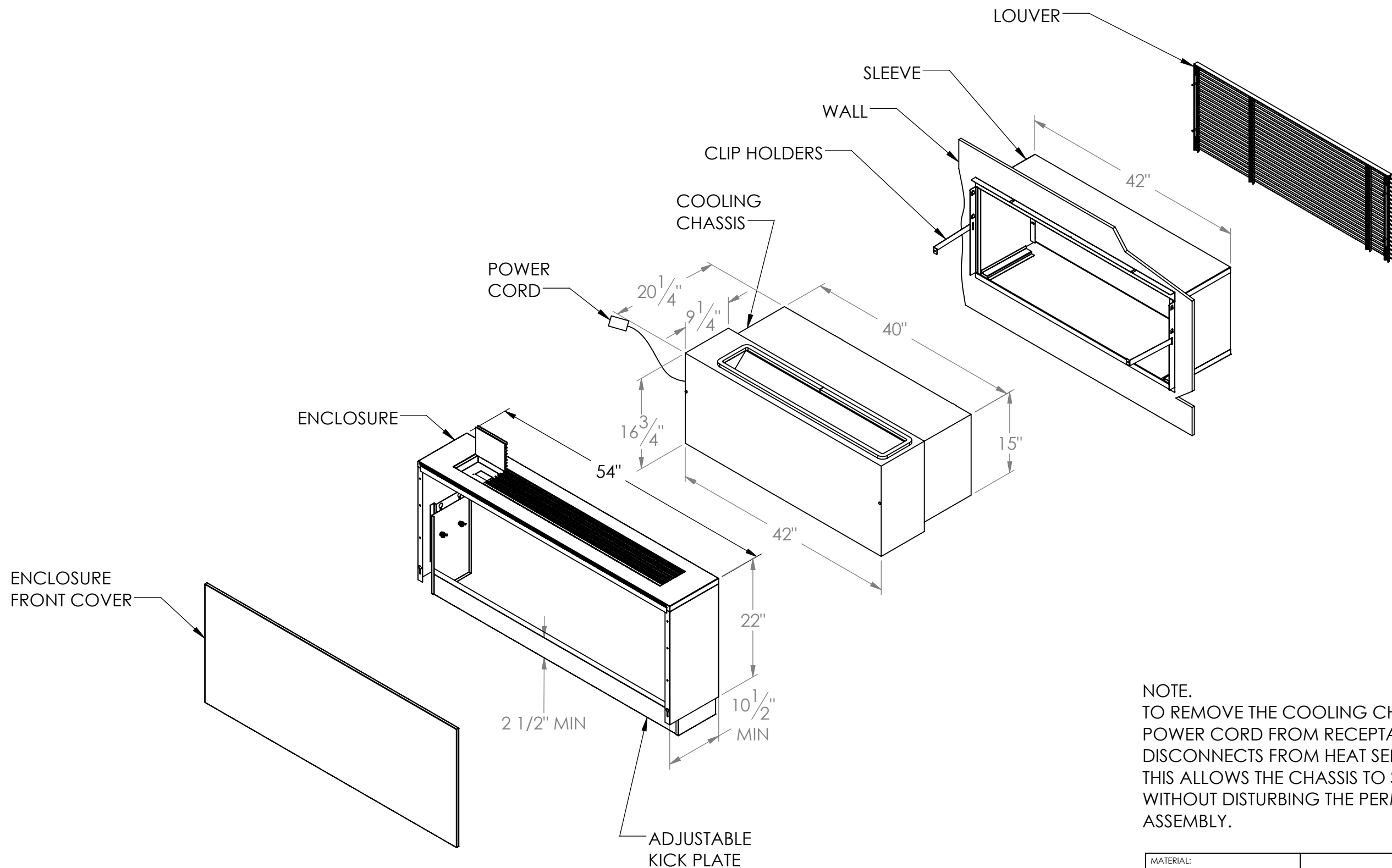
MATERIAL:	ICE-AIR LLC. 80 HARTFORD AVENUE MOUNT VERNON, NY 10553		
WEIGHT (LBS): 612.45			
FINISH: N/A	TITLE: RSNU PANEL WALL SLEEVE (NEW DESIGN), ENCLOSURE MOUNTED T-STAT, HEAT PUMP-EL.HEAT		
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/32 ANGULAR: MACH ± ° BEND ± 1° TWO PLACE DECIMAL ± .03 THREE PLACE DECIMAL ± .015	MODEL BY: VP	DATE 06/14/16	DWG. NO.
	DRAWING BY:	DATE:	RSNU SLEEVE (NEW DESIGN) LAYOUT
SIZE B	SCALE: NONE DO NOT SCALE DRAWING	SHEET 1 OF 1	REV

PROPRIETARY AND CONFIDENTIAL
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RSNU SLEEVE (NEW DESIGN) LAYOUT

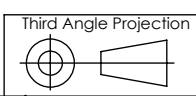
REVISIONS			
REV.	DESCRIPTION	BY	DATE



NOTE.
TO REMOVE THE COOLING CHASSIS FROM SLEEVE, DISCONNECT POWER CORD FROM RECEPTACLE AND SEPARATE QUICK DISCONNECTS FROM HEAT SENSOR AND MOTORIZED VALE. THIS ALLOWS THE CHASSIS TO SLIDE OUT OF THE WALL SLEEVE WITHOUT DISTURBING THE PERMANENTLY INSTALLED HEATING ASSEMBLY.

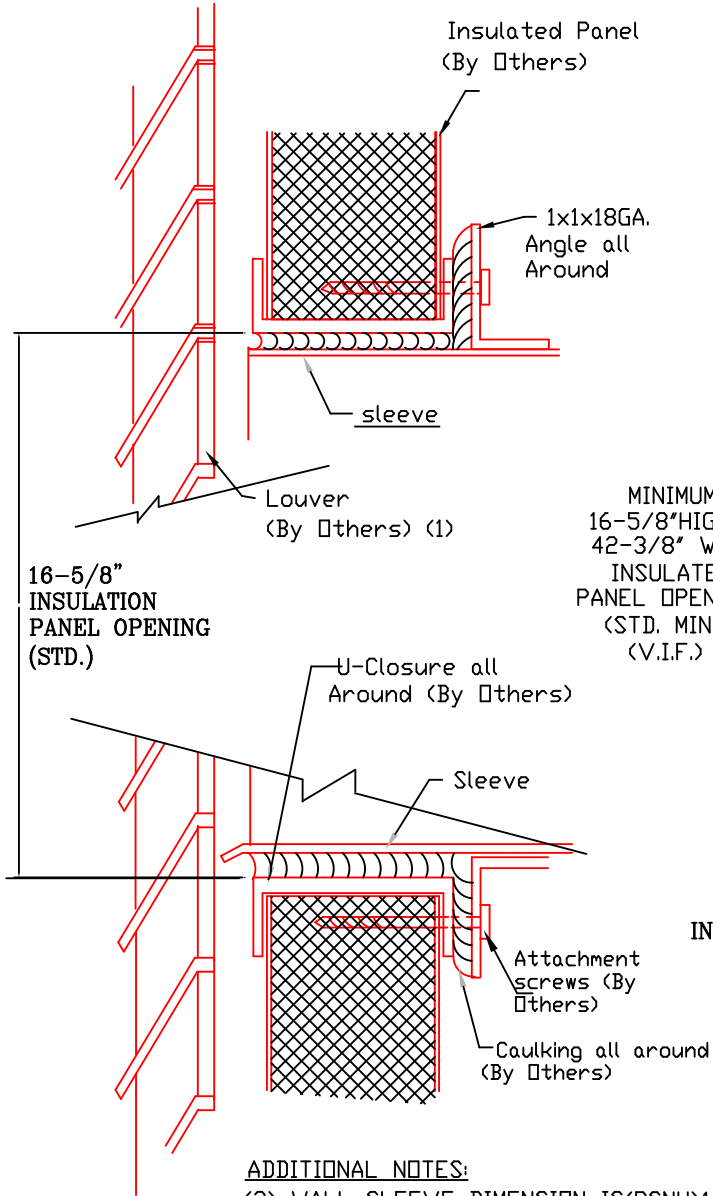
MATERIAL:	ICE-AIR LLC. 80 HARTFORD AVENUE MOUNT VERNON, NY 10553		
WEIGHT (LBS): 541.86			
FINISH: N/A	TITLE: RSNU MASONRY WALL SLEEVE (NEW DESIGN), ENCLOSURE MOUNTED T-STAT, HEAT PUMP-EL. HEAT		
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/32 ANGULAR: MACH ± ° BEND ± 1° TWO PLACE DECIMAL ± .03 THREE PLACE DECIMAL ± .015	MODEL BY: YOU	DATE: 01/01/01	DWG. NO.
	DRAWING BY:	DATE:	RSNU SLEEVE (NEW DESIGN) LAYOUT
SIZE B	SCALE: NONE DO NOT SCALE DRAWING	SHEET 1 OF 1	REV A

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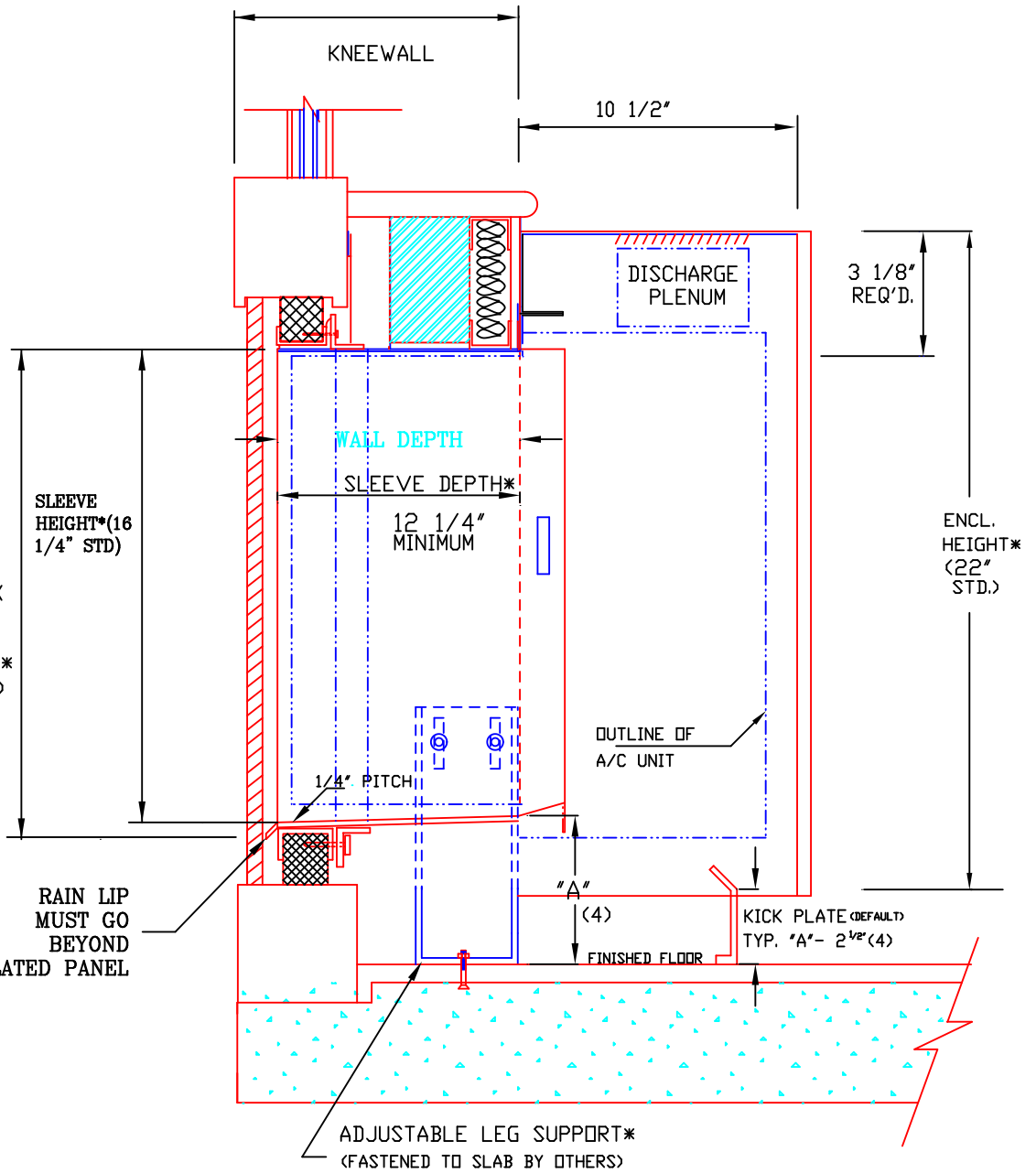


* ARCHITECT TO PROVIDE DETAILS FOR EACH FLOOR

NOTE (1):
 PROVIDED LOUVER WILL HAVE AN AREA OF
 60% MINIMUM FREE AIR

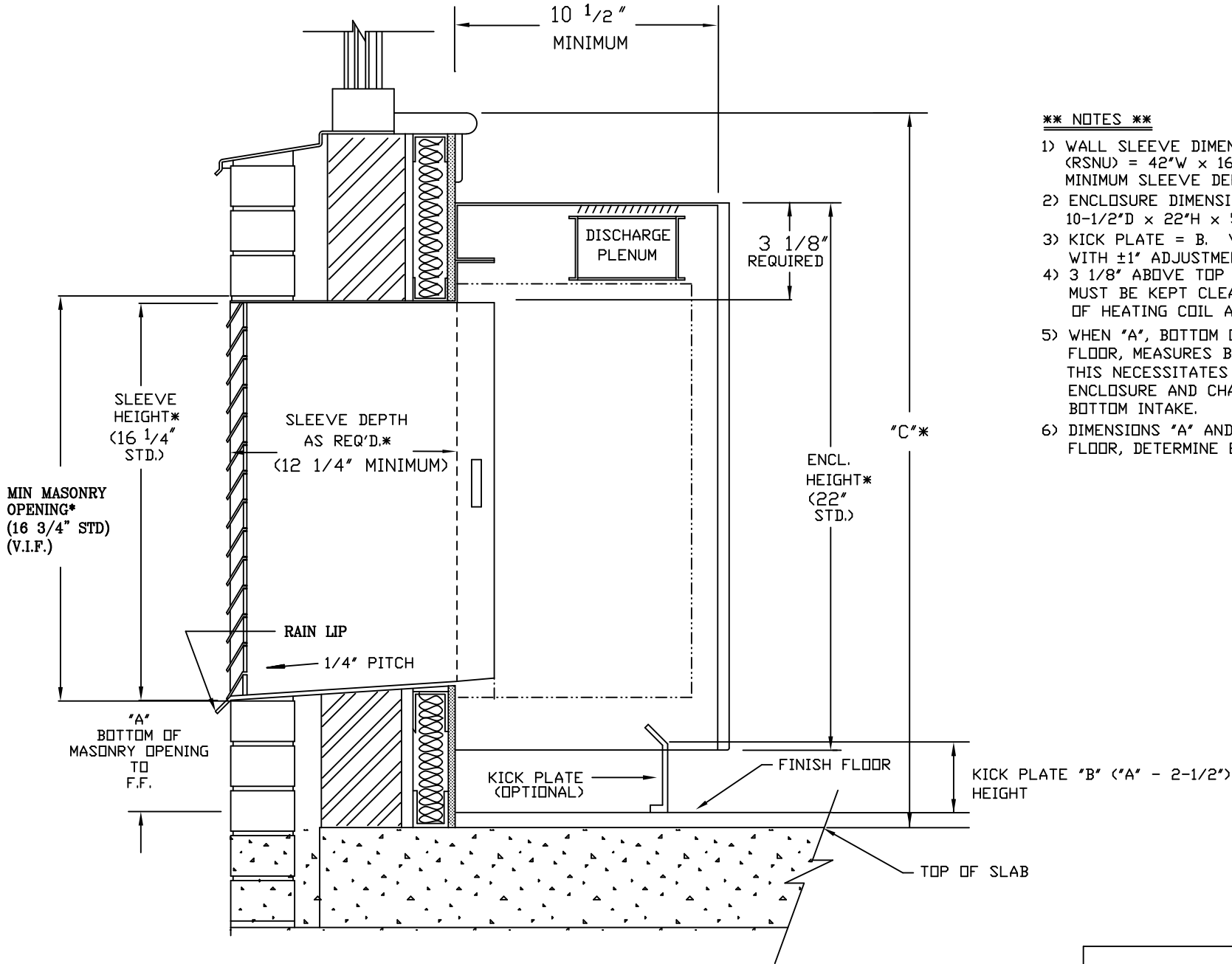


MINIMUM
 16-5/8" HIGH X
 42-3/8" WIDE
 INSULATED
 PANEL OPENING*
 (STD. MIN.) (3)
 (V.I.F.)



ADDITIONAL NOTES:
 (3) WALL SLEEVE DIMENSION IS (RSNU) 16'-1/4 H x 42' W
 (4) WHEN BOTTOM OF SLEEVE TO FINISHED FLOOR ("A")
 MEASURES BETWEEN 2^{3/4} TO 4^{1/2}.
 THIS NECESSITATES ORDERING A FRONT INTAKE
 ENCLOSURE AND CHASSIS AS OPPOSED TO A
 BOTTOM INTAKE.

NO.	REVISIONS	DATE	BY
ICE-AIR LLC.			
RSNU HEAT PUMP - EL. HEAT			
TYP. PTAC @ PANEL WALL			
SCALE	N.T.S.	DR. BY	L.R.
DATE	07/08/13	DRG. NO.	REV.

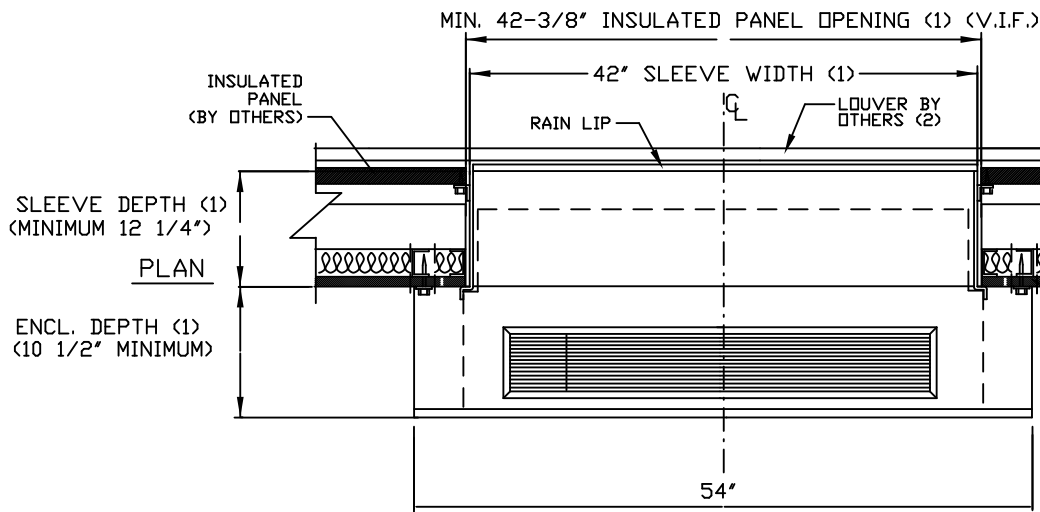


**** NOTES ****

- 1) WALL SLEEVE DIMENSION:
(RSNU) = 42"W x 16-1/4"H
MINIMUM SLEEVE DEPTH: 12-1/2"
- 2) ENCLOSURE DIMENSION: TYPICAL*
10-1/2"D x 22"H x 54"W
- 3) KICK PLATE = B. VARIES ("A" - 2 1/2")
WITH ±1" ADJUSTMENT.
- 4) 3 1/8" ABOVE TOP OF SLEEVE ON ROOMSIDE
MUST BE KEPT CLEAR FOR MOUNTING
OF HEATING COIL AND ENCLOSURE.
- 5) WHEN "A", BOTTOM OF SLEEVE TO FINISHED
FLOOR, MEASURES BETWEEN 2-3/4" TO 4-1/2,"
THIS NECESSITATES ORDERING A FRONT INTAKE
ENCLOSURE AND CHASSIS AS OPPOSED TO A
BOTTOM INTAKE.
- 6) DIMENSIONS "A" AND "C", PROVIDED FOR EACH
FLOOR, DETERMINE ENCLOSURE HEIGHT

* DETAILS TO BE PROVIDED FOR EACH FLOOR

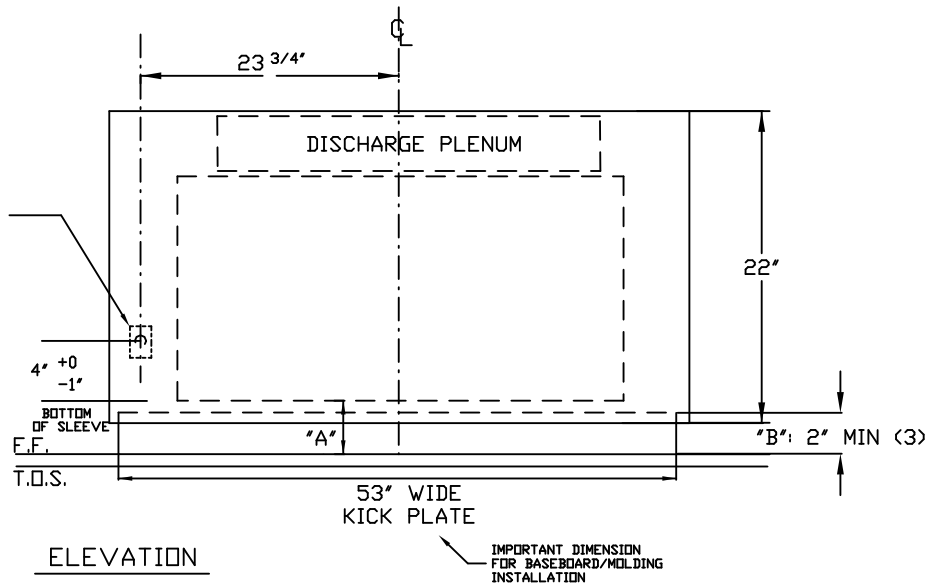
ICE-AIR LLC.				
RSNU HEAT PUMP - EL. HEAT				
TITLE TYP. PTAC @ MASONRY				
SCALE	N.T.S.	DR. BY	V.P.	DRG. NO.
DATE	07/08/13	CHK. BY		REV.



NOTES

- (1) DETAILS TO BE PROVIDED BY GC FOR EACH FLOOR
 - (2) LOUVER MUST HAVE AN AREA OF MINIMUM 60% FREE AIR FLOW
 - (3) DETAILS TO BE PROVIDED FOR EACH FLOOR
 - "A" IS BOTTOM OF SLEEVE TO FINISHED FLOOR
 - "B" IS KICK PLATE HEIGHT WITH +/- 1" ADJ.
 - "B" = "A" - 2 1/2"
- WHEN "A", BOTTOM OF SLEEVE TO FINISHED FLOOR, MEASURES BETWEEN 2-3/4" TO 4-1/2" IT IS ADVISED TO ORDER A FRONT INTAKE ENCLOSURE AND CHASSIS AS OPPOSED TO A REGULAR BOTTOM INTAKE.

PROVIDE METAL GYP. BD. STUDS FOR ENCLOSURE ATTACHMENT (53" CENTER TO CENTER)



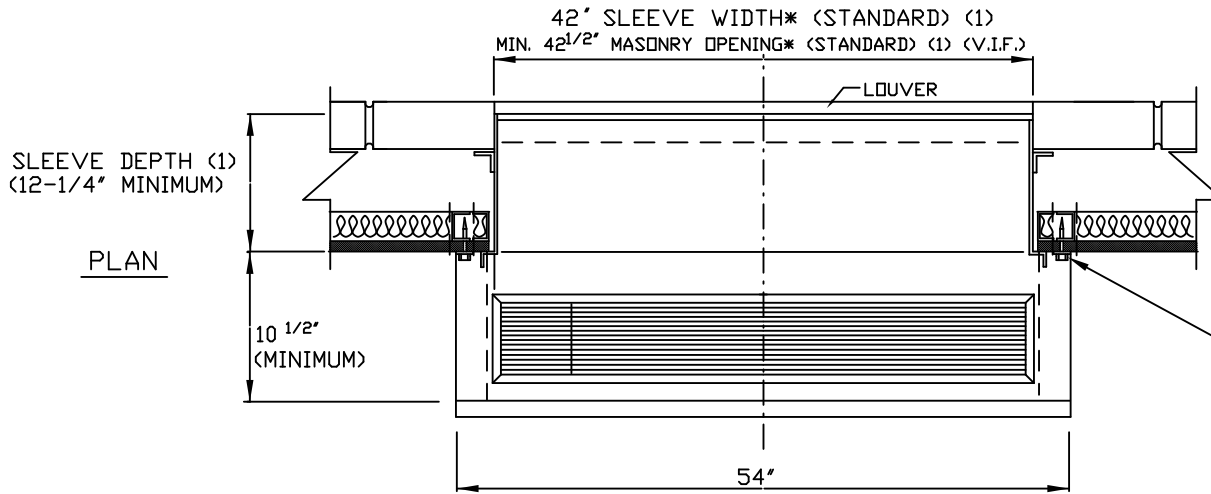
ELECTRIC OUTLET BY ELECTRICAL CONTRACTOR 115V, 15A OR 208V, 15A AS REQUIRED.

RECOMMENDED LOCATION OF ELECTRICAL OULET

INSTALL THE ELECTRICAL OUTLET WHERE THE END-USER CAN EASILY CONNECT/DISCONNECT THE POWER CORD PLUG.

NEMA 5-15	NEMA 6-15	NEMA 5-20	NEMA 6-20	NEMA 6-30
1.5 kW TO 2.5 kW	3.0 kW TO 4.0 kW	4.3 kW TO 5.0 kW		

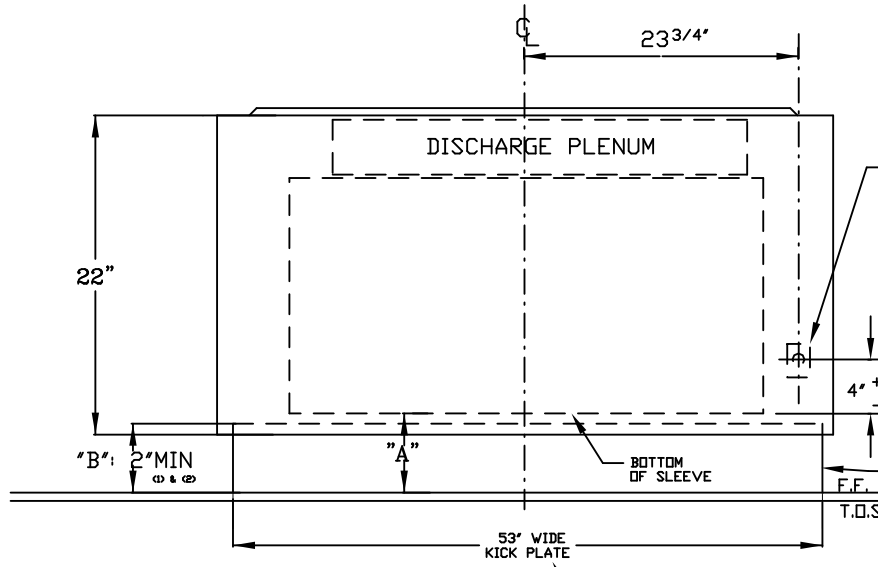
NO.	REVISIONS	DATE	BY
ICE-AIR LLC			
TITLE RSNU HEAT PUMP - EL. HEAT			
TYP. RSNU @ CURTAIN WALL			
SCALE	N.T.S.	DR. BY	V.P.
DATE	07/08/13	CHK. BY	
DRG. NO.		REV.	



NOTES

- (1) DETAILS TO BE PROVIDED BY GC FOR EACH FLOOR
- (2) PROVIDED LOUVER WILL HAVE AN AREA OF MINIMUM 60% FREE AIR FLOW
- (3) DETAILS TO BE PROVIDED FOR EACH FLOOR
 - "A" IS BOTTOM OF SLEEVE TO FINISHED FLOOR
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PROVIDE METAL GYP. BD. STUDS FOR ENCLOSURE ATTACHMENT (53" CENTER TO CENTER)



ELECTRIC OUTLET BY ELECTRICAL CONTRACTOR 115V, 15A OR 208V, 15A AS REQUIRED.

RECOMMENDED LOCATION OF ELECTRICAL OUTLET

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NEMA 5-15	NEMA 6-15	NEMA 5-20	NEMA 6-20	NEMA 6-30
1.5 kW		3.0 kW		4.3 kW
2.5 kW		4.0 kW		5.0 kW

ELEVATION

IMPORTANT DIMENSION FOR BASEBOARD/MOLDING INSTALLATION

NO.	REVISIONS	DATE	BY
ICE-AIR LLC			
RSNU HEAT PUMP - EL. HEAT			
TITLE			
TYP. PTAC @ MASONRY WALL			
SCALE	N.T.S.	DR. BY	V.P.
DATE	07/08/13	CHK. BY	
		DRG. NO.	REV.

PRODUCT SPECIFICATIONS
PACKAGED TERMINAL AIR CONDITIONER (PTAC)

ICE AIR HI SPEC™ UNITS
'RSNU' SERIES UNITS

1. Equipment: Provide "RSNU" Series Packaged Terminal Air Conditioners (PTACs), as manufactured by Ice Air, LLC.
2. Components: Air conditioner to consist of wall sleeve, exterior louver, electric heating element, cooling chassis and room enclosure. Units to operate at either 115 volt, 208 / 230 volt, or 265 or 277 volt, single phase, 60 hertz circuits.
3. Wall Sleeves: Wall sleeve exterior dimensions to be 42" wide x 16" high (RSNU Series), to comply with US DOE requirements for new construction PTACs. Wall sleeves to be insulated with neoprene type insulation on interior facings. Smaller dimension wall sleeves are not acceptable under DOE regulations. Wall sleeve 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 sleeve to have built-in pitch of at least ¼" and to be fabricated with an angled rain lip for proper drainage to the exterior of the building. Wall sleeves for masonry locations to be factory fabricated to match the full wall depth at each location; wall sleeves with field-installed extension pieces are not acceptable. Wall sleeves for panel wall locations are to be provided with optional adjustable-height support legs and galvanized steel sleeve angles to attach to the building panel wall system.
4. Louvers: Exterior louver to be horizontal, extruded aluminum blade-type construction with clear anodized or painted Duranar finish (color must be specified). Louver to be supplied with stainless steel fastening hardware and must be capable of being installed from within the wall sleeve. Louvers at panel wall locations to be supplied by others.
5. Chassis: Cooling chassis to be a self-contained, slide-in assembly consisting of a sealed refrigerant system, evaporator and condenser sections with separate PSC motors (single motor units are not acceptable), manual (optional motorized) outside fresh air damper, unit mounted controls and line cord (junction box for 265 / 277 volt applications). Provide a permanent, washable aluminum mesh filter with each unit.
- 5ai. Cooling 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, 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.

- 5a.ii. 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 until 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.
- 5b. Evaporator Section: Evaporator motor and tangential blower wheel to be mounted above the evaporator coil. Tangential blower wheel to be fabricated from aluminum and to be directly driven by a multi-speed PSC motor with built-in thermal overload protector. Evaporator section to contain an integral stamped and powder coated steel drain pan, draining into two 3/4" i.d. drain hoses (single drain units are not acceptable).
- 5c. Condenser Section: Condenser section to contain a separate PSC motor and plastic or metal propeller fan with an integral slinger ring. Condenser motor to cycle with compressor and to run during the cooling cycle only.
- 5d. Condensate Disposal: Condensate to drain from the indoor base pan into the exterior galvanized steel condenser base pan through two 3/4" i.d. drain hoses. Condensate disposal to be accomplished by the entrainment of water particles in the condenser air stream and evaporation upon the hot condenser coil. No building condensate drain lines are to be required.
- 5e. 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 to be manufactured with an outsized indoor section that mates with the wall sleeve 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, and use of attached sealing angles or channels is not acceptable.
- 5f. Unit Controls: Unit controls to include a digital controller with integral electronic thermostat. Controller to be seven-day programmable type (optional non-programmable). (Optional Manual Changeover (MCO) or remote wall mount thermostats are available). Include standard low-temperature control to activate motorized heating control valve below 45 °F. Interior room temperature, and Freezestat to be mounted on the

evaporator coil only (condenser mounted freezestats are unacceptable) to provide true temperature readings.

- 5g. Manual Outside Air: Provide manual outside air damper with chassis mounted actuator. (Optional motorized or full time motorized fresh air dampers are available).
- 5h. Electric Heating Element: Electric heaters to include overheating protection heating elements with self-limiting temperature features.
- 6. Room Enclosure (Cabinet): Room enclosure to be (flat top) (slope top) type and to be fabricated of 18 gauge galvanized paint grip furniture steel. Enclosure front cover to be fabricated from 20 gauge galvanized steel and to be removable without the use of tools. Enclosure to be finished in (Antique White) (Arctic White) baked powder coat finish. Room enclosure to mount to wall sleeve. Provide concealed flanges with clearance holes as an alternate means of enclosure attachment by fastening directly to the interior wall. Enclosure kick plate to be vertically adjustable.
- 7. Warranty and Code Compliance: Unit to be guaranteed free of defects in material and workmanship for one year from date of delivery. Provide (OPTIONAL) additional 2nd through 5th year compressor parts warranty. 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.