



**Russell**<sup>®</sup>  
By Rheem

PROJECT NAME \_\_\_\_\_  
LOCATION \_\_\_\_\_  
ARCHITECT \_\_\_\_\_  
ENGINEER \_\_\_\_\_  
CONTRACTOR \_\_\_\_\_  
SUBMITTED BY \_\_\_\_\_ DATE \_\_\_\_\_

**UNIT SUMMARY**

Quantity						
Unit Designation						
Model No.						
Total Cooling						
Sensible Cooling						
Air Ent. Evaporator						
Air Lvg. Evaporator						
Heating Input						
Heating Output						
CFM/ESP						
EER/SEER						
Electrical						
Minimum Ampacity						
Min.-Max. Breaker						
Net Unit Weight						
Accessory						
Catalog Form Number						

**ACCESSORIES:**

**NOTES:**

**Vantix™ Line SHMVY Air Handlers**  
**Motor: Constant CFM**  
**Airflow Stages: Modulating**  
**Expansion Device: Electronic Expansion Valve (EEV)**  
**Efficiencies: 18+ SEER2**  
**Refrigerant Type: R-454B**

JOB NAME \_\_\_\_\_ LOCATION \_\_\_\_\_  
 CONTRACTOR \_\_\_\_\_ ORDER NO. \_\_\_\_\_  
 ENGINEER \_\_\_\_\_ UNIT MODEL NO. \_\_\_\_\_  
 SUBMITTED FOR  APPROVAL  RECORD COIL MODEL NO. \_\_\_\_\_  
 DATE \_\_\_\_\_ AIR HANDLER MODEL NO. \_\_\_\_\_

**UNIT DATA**

**COOLING PERFORMANCE**

EFFICIENCY .....	_____ SEER
TOTAL CAPACITY* .....	_____ MBH [kW]
SENSIBLE CAPACITY* .....	_____ MBH [kW]
OUTDOOR DESIGN TEMP.....	_____ °F [°C] DB
TEMP. OF AIR ENTERING	
EVAPORATOR COIL .....	_____ °F [°C] DB
	_____ °F [°C] WB
POWER INPUT REQUIREMENT .....	_____ kW
(*uses blower motor heat)	

**HEATING PERFORMANCE**

EFFICIENCY .....	_____ HSPF
TOTAL CAPACITY* .....	_____ MBH [kW]
OUTDOOR DESIGN TEMP.....	_____ °F [°C] DB
TEMP. OF AIR ENTERING	
EVAPORATOR COIL .....	_____ °F [°C] DB

**SUPPLY AIR BLOWER PERFORMANCE**

TOTAL AIR SUPPLY.....	_____ CFM [L/s]
TOTAL RESISTANCE EXTERNAL	
TO UNIT .....	_____ IWG
BLOWER SPEED.....	_____ RPM
POWER OUTPUT REQUIREMENT .....	_____ BHP
MOTOR RATING .....	_____ HP [W]
POWER INPUT REQUIREMENT .....	_____ kW

**ELECTRICAL DATA**

POWER SUPPLY .....	_____ Hz
TOTAL UNIT AMPACITY.....	_____ AMPS
MINIMUM WIRE SIZE .....	_____ AWG
MAXIMUM OVERCURRENT DEVICE	
FUSES/HACR BREAKER .....	_____ AMPS

**CLEARANCES**

ACCESS SIDE	24" [609.6 mm]
AIR INLETS	12" [304.8 mm]
ABOVE UNIT	60" [1524 mm]



**FEATURES**

- **Constant CFM Motor:** Truly variable speed technology allows for ultimate humidity control, quieter sound levels and contributes to year-round energy savings
- **Quietest Operation<sup>1</sup>:** Provided by Modulating operation and truly variable speed airflow technology and sturdy cabinet construction with 1.0 inch of foil faced insulation for some of the quietest sound characteristics
- **Diagnostics:** With the Contractor & EcoNet® Apps, built-in EcoNet® & Bluetooth<sup>2</sup> technology makes monitoring, troubleshooting and repairing the product easier than ever before
- **Dip Switch Free Installation Commissioning via Bluetooth Technology:** Seamless final install step without DIP switch configuration using the Contractor App
- **EcoNet® Enabled Air Handler:**
  - The latest in sensor technology and the EcoNet® monitoring system provides a new level of protection, control and energy savings
  - Allows on-the-go control and receipt of system alerts by the homeowner via the EcoNet® Smart Thermostat and EcoNet® App<sup>3</sup>
- **Aluminum Indoor Coil Design:** Are constructed of aluminum fins bonded to internally grooved aluminum tubing and are more corrosion resistant
- **Versatile 4-Way Convertible Compact Design:** Allows for upflow, downflow, horizontal left and horizontal right applications, even in the smallest of spaces
- **Rugged Steel, Compact Cabinet Construction:** Designed for added strength and versatility
- **Field-installed Auxiliary Heater Kits:** Provide exact heat for indoor comfort and include circuit breakers which meet UL and cUL requirements for service disconnect
- **Less than 2% Cabinet Air Leakage at 1-inch H<sub>2</sub>O:** When tested in accordance with ASHRAE Standard 193
- **Designing for Sustainability with Low GWP:** For 2025, the Environmental Protection Agency (EPA) has set a global warming potential (GWP) limit of 700 for refrigerant used in heating and cooling systems. This new requirement will result in a 78%<sup>4</sup> lower GWP than previous-generation refrigerants — with only minimal changes to system installation. For us, this is another step toward our continued sustainability goal of reducing greenhouse gas emissions, while still delivering an exceptional level of energy efficient, dependable comfort
- **Refrigerant Detection System<sup>5</sup>:** An integrated one-box, patented design featuring the A2L sensor and mitigation board, offering easier commissioning with a single component and simplified wiring configuration, compatibility with any 24V thermostat application and system protection by automatically pausing outdoor unit operation — if excess refrigerant is detected

<sup>1</sup>Based on manufacturer's air handler offering, and the product's airflow stages, motor type and cabinet insulation. Sound levels are also dependent on air handler location and installation.

<sup>2</sup>The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Rheem® is under license. Other trademarks and trade names are those of their respective owners.

<sup>3</sup>WiFi broadband internet connection required. Download the EcoNet® App from the App Store® or Google Play® to set up your EcoNet® Smart Thermostat. Receipt of notifications depends on home WiFi set up. Amazon, Alexa and all related logos are trademarked of Amazon.com, Inc. or its affiliates.

<sup>4</sup>When comparing the GWP of A2L refrigerants to R-410A refrigerant.

<sup>5</sup>Factory or field installed in the furnace coil or air handler and is applicable to the complete heating and cooling system featuring Low GWP refrigerant (A2L).



# SHMVY

ELECTRICAL CONNECTIONS  
MAY EXIT TOP OR EITHER SIDE

HIGH VOLTAGE CONNECTION 7/8" [22.2 mm],  
1 1/32" [27.8 mm], 1 1/2" [50 mm] DIA. KNOCKOUTS,

LOW VOLTAGE CONNECTION  
3/8" [15.9 mm] AND 7/8" [22.2 mm] KNOCKOUT

AUXILIARY DRAIN CONNECTION  
3/4" [19.1 mm] FEMALE PIPE THREAD (NPT)  
HORIZONTAL APPLICATION ONLY

PRIMARY DRAIN CONNECTION  
3/4" [19.1 mm] FEMALE PIPE THREAD (NPT)

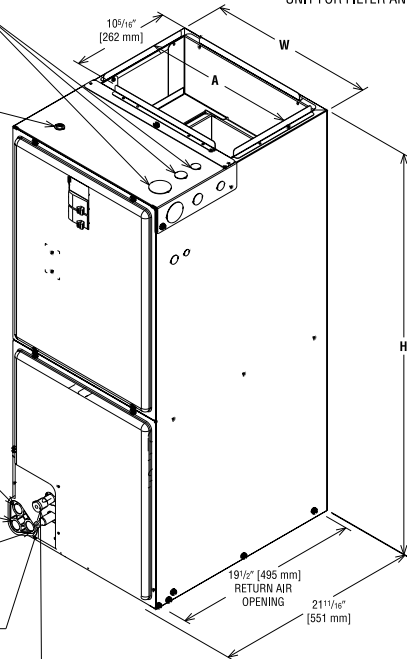
AUXILIARY DRAIN CONNECTION  
3/4" [19.1 mm] FEMALE PIPE THREAD (NPT)  
UPFLOW/DOWNFLOW APPLICATION ONLY

LIQUID LINE CONNECTION  
COPPER (SWEAT)

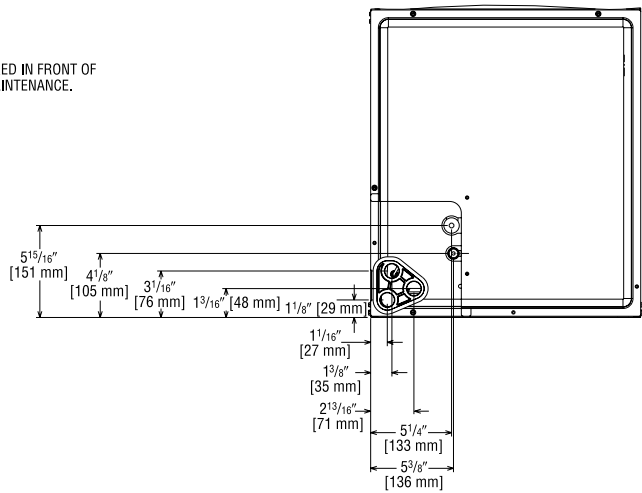
VAPOR LINE CONNECTION  
COPPER (SWEAT)

SUPPLY AIR ↑

NOTE: 24" CLEARANCE REQUIRED IN FRONT OF  
UNIT FOR FILTER AND COIL MAINTENANCE.



UPFLOW UNIT SHOWN:  
UNIT MAY BE INSTALLED UPFLOW, DOWNFLOW,  
HORIZONTAL RIGHT OR LEFT AIR SUPPLY.



HORIZONTAL ADAPTER KIT

VAPOR LINE CONNECTION

AUXILIARY HORIZONTAL  
DRAIN CONNECTION

PRIMARY DRAIN  
CONNECTION

AUXILIARY UPFLOW/DOWNFLOW  
DRAIN CONNECTION

LIQUID LINE  
CONNECTION

VERTICAL DRAIN PAN

## Unit Dimensions

Model Size SHMVY	Refrigerant Connections Sweat (In.) [mm] ID		Unit Width "W" In. [mm]	Unit Height "H" In. [mm]	Supply Duct "A" In. [mm]	Unit Weight/ Shipping Weight (Lbs.) [kg]
	Liquid	Vapor				
2417SEACN	3/8 [9.53]	3/4 [19.05]	17 1/2 [445]	42 1/2 [1080]	16 [406]	91/105 [41/48]
2421MEACN	3/8 [9.53]	3/4 [19.05]	21 [533]	42 1/2 [1080]	19 1/2 [495]	103/118 [47/54]
3621MEACA	3/8 [9.53]	7/8 [22.23]	21 [533]	50 1/2 [1282]	19 1/2 [495]	123/139 [56/63]
4821SEACA	3/8 [9.53]	7/8 [22.23]	21 [533]	57 [1448]	19 1/2 [495]	140/152 [64/69]
6021SEACA	3/8 [9.53]	7/8 [22.23]	21 [533]	57 [1448]	19 1/2 [495]	140/152 [64/69]
6024SEACN	3/8 [9.53]	7/8 [22.23]	24 1/2 [622]	55 1/2 [1410]	23 [584]	159/176 [72/80]

[ ] Designates Metric Conversions

Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.

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