

Project Information

For: Randy McCrae
Columbia County

Notes:

Design Information

Weather: Gainesville Regional AP, FL, US

Winter Design Conditions

Outside db 33 °F
Inside db 70 °F
Design TD 37 °F

Summer Design Conditions

Outside db 92 °F
Inside db 75 °F
Design TD 17 °F
Daily range M
Relative humidity 50 %
Moisture difference 47 gr/lb

Heating Summary

Structure 15261 Btuh
Ducts 5519 Btuh
Central vent (0 cfm)
(none) 0 Btuh
Humidification 0 Btuh
Piping 0 Btuh
Equipment load 20780 Btuh

Sensible Cooling Equipment Load Sizing

Structure 22530 Btuh
Ducts 5076 Btuh
Central vent (0 cfm)
(none) 0 Btuh
Blower 0 Btuh
Use manufacturer's data n
Rate/swing multiplier 0.97
Equipment sensible load 26778 Btuh

Infiltration

Method Simplified
Construction quality Average
Fireplaces 0

Latent Cooling Equipment Load Sizing

Structure 2213 Btuh
Ducts 1394 Btuh
Central vent (0 cfm)
(none) 0 Btuh
Equipment latent load 3608 Btuh

	Heating	Cooling
Area (ft²)	1740	1740
Volume (ft³)	13228	13228
Air changes/hour	0.38	0.20
Equiv. AVF (cfm)	84	44

Equipment Total Load (Sen+Lat) 30386 Btuh
Req. total capacity at 0.70 SHR 3.2 ton

Heating Equipment Summary

Make Rheem
Trade RHEEM
Model RP1436AJ1NA
AHRI ref 7489178
Efficiency 9 HSPF
Heating input
Heating output 34800 Btuh @ 47°F
Temperature rise 27 °F
Actual air flow 1173 cfm
Air flow factor 0.056 cfm/Btuh
Static pressure 0.53 in H2O
Space thermostat
Capacity balance point = 19 °F
Backup:
Input = 6 kW, Output = 19386 Btuh, 100 AFUE

Cooling Equipment Summary

Make Rheem
Trade RHEEM
Cond RP1436AJ1NA
Coil RH1T3617STANJA
AHRI ref 7489178
Efficiency 11.5 EER, 14 SEER
Sensible cooling 24640 Btuh
Latent cooling 10560 Btuh
Total cooling 35200 Btuh
Actual air flow 1173 cfm
Air flow factor 0.042 cfm/Btuh
Static pressure 0.53 in H2O
Load sensible heat ratio 0.88

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Project InformationFor: Randy McCrae
Columbia County**Cooling Equipment****Design Conditions**

Outdoor design DB:	92.0°F	Sensible gain:	27606	Btuh	Entering coil DB:	76.2°F
Outdoor design WB:	76.3°F	Latent gain:	3608	Btuh	Entering coil WB:	63.2°F
Indoor design DB:	75.0°F	Total gain:	31214	Btuh		
Indoor RH:	50%	Estimated airflow:	1173	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	SplitASHP		
Manufacturer:	Rheem	Model:	RP1436AJ1NA+RH1T3617STANJA
Actual airflow:	1173	cfm	
Sensible capacity:	24640	Btuh	89% of load
Latent capacity:	10560	Btuh	293% of load
Total capacity:	35200	Btuh	113% of load SHR: 70%

Heating Equipment**Design Conditions**

Outdoor design DB:	33.4°F	Heat loss:	20780	Btuh	Entering coil DB:	69.0°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	SplitASHP		
Manufacturer:	Rheem	Model:	RP1436AJ1NA+RH1T3617STANJA
Actual airflow:	1173	cfm	
Output capacity:	34800	Btuh	167% of load
Supplemental heat required:	0	Btuh	
			Capacity balance: 19 °F
			Economic balance: -99 °F

Backup equipment type:	Elec strip		
Manufacturer:		Model:	
Actual airflow:	1173	cfm	
Output capacity:	5.7	kW	93% of load Temp. rise: 50 °F

Meets all requirements of ACCA Manual S.