



Project Summary Entire House

Job: J-8405 C-1309
Date: Apr 19, 2022
By: FD

Project Information

For: Keen/Parks Residence
Columbia, FL

Notes:

Design Information

Weather: Gainesville Regional, 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	44 gr/lb

Heating Summary

Structure	14657 Btuh
Ducts	2406 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	17063 Btuh

Sensible Cooling Equipment Load Sizing

Structure	13802 Btuh
Ducts	3668 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	17470 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

Latent Cooling Equipment Load Sizing

Structure	1835 Btuh
Ducts	785 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Equipment latent load	2620 Btuh

	Heating	Cooling
Area (ft²)	1110	1110
Volume (ft³)	10865	10865
Air changes/hour	0.45	0.23
Equiv. A/VF (cfm)	81	42

Equipment Total Load (Sen+Lat)	20090 Btuh
Req. total capacity at 0.80 SHR	1.8 ton

Heating Equipment Summary

Make	Rheem
Trade	RHEEM
Model	RP1424AJ1NA
AHRI ref	7489174
Efficiency	8.2 HSPF
Heating input	22800 Btuh @ 47°F
Heating output	
Temperature rise	26 °F
Actual air flow	793 cfm
Air flow factor	0.046 cfm/Btuh
Static pressure	0.53 in H2O
Space thermostat	
Capacity balance point = 28 °F	

Cooling Equipment Summary

Make	Rheem
Trade	RHEEM
Cond	RP1424AJ1NA
Coil	RH1T2417STANJA
AHRI ref	7489174
Efficiency	11.5 EER, 14 SEER
Sensible cooling	19040 Btuh
Latent cooling	4760 Btuh
Total cooling	23800 Btuh
Actual air flow	793 cfm
Air flow factor	0.045 cfm/Btuh
Static pressure	0.53 in H2O
Load sensible heat ratio	0.87

Backup:
Input = 5 kW, Output = 17344 Btuh, 100 AFUE

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



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Manual S Compliance Report

Entire House

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Cooling Equipment

Design Conditions

Outdoor design DB:	92.2°F	Sensible gain:	17470	Btuh	Entering coil DB:	77.6°F
Outdoor design WB:	75.8°F	Latent gain:	2620	Btuh	Entering coil WB:	63.7°F
Indoor design DB:	75.0°F	Total gain:	20090	Btuh		
Indoor RH:	50%	Estimated airflow:	793	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Rheem	Model:	RP1424AJ1NA+RH1T2417STANJA
Actual airflow:	793	cfm	
Sensible capacity:	18800	Btuh	108% of load
Latent capacity:	3529	Btuh	135% of load
Total capacity:	22329	Btuh	111% of load SHR: 84%

Heating Equipment

Design Conditions

Outdoor design DB:	33.2°F	Heat loss:	17063	Btuh	Entering coil DB:	68.8°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Rheem	Model:	RP1424AJ1NA+RH1T2417STANJA
Actual airflow:	793	cfm	
Output capacity:	17785	Btuh	104% of load
Supplemental heat required:	0	Btuh	
Capacity balance:	28	°F	
Economic balance:	-99	°F	

Backup equipment type:	Elec strip		
Manufacturer:		Model:	
Actual airflow:	793	cfm	
Output capacity:	5.1	kW	102% of load Temp. rise: 50 °F

Meets all requirements of ACCA Manual S.



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