

Project Information

For: O'neal,Jones Remodel
1198 NW Scenic Lake Drive, Lake City, FL 32055

Notes:

Design Information

Weather: Gainesville, FL, US

Winter Design Conditions

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

Ventilation Method MJ8

Heating Summary

Structure 33858 Btuh
Ducts (R-6.0) 19113 Btuh
Central vent (0 cfm) 0 Btuh

Humidification 0 Btuh
Piping 0 Btuh
Equipment load 52971 Btuh

Infiltration

Method Simplified
Construction quality Average
Fireplaces 1 (Average)

	Heating	Cooling
Area (ft ²)	4097	4097
Volume (ft ³)	40973	40973
Air changes/hour	0.31	0.15
Equiv. AVF (cfm)	211	102

Heating Equipment Summary

Make Trane
Trade TRANE
Model (2) 4TWR6036N1
AHRI ref 209068076

Efficiency 7.8 HSPF2
Heating input
Heating output 68800 Btuh @ 47°F
Temperature rise 26 °F
Actual air flow 2440 cfm
Air flow factor 0.046 cfm/Btuh
Static pressure 0.53 in H2O
Space thermostat
Capacity balance point = 43 °F

Backup:
Input = 12 kW, Output = 41083 Btuh, 100 AFUE

Summer Design Conditions

Outside db 92 °F
Inside db 75 °F
Design TD 17 °F
Daily range M
Relative humidity 50 %
Moisture difference 43 gr/lb

Sensible Cooling Equipment Load Sizing

Structure 34778 Btuh
Ducts (R-6.0) 21335 Btuh
Central vent (0 cfm) 0 Btuh

Blower 0 Btuh

Use manufacturer's data n
Rate/swing multiplier 0.97
Equipment sensible load 54655 Btuh

Latent Cooling Equipment Load Sizing

Structure 4014 Btuh
Ducts 4970 Btuh
Central vent (0 cfm) 0 Btuh

Equipment latent load 8984 Btuh

Equipment Total Load (Sen+Lat) 63639 Btuh
Req. total capacity at 0.70 SHR 6.5 ton

Cooling Equipment Summary

Make Trane
Trade TRANE
Cond (2) 4TWR6036N1
Coil (2) TEM6A0C36H31++TDR
AHRI ref 209068076
Efficiency 16 EER2
Sensible cooling 51240 Btuh
Latent cooling 21960 Btuh
Total cooling 73200 Btuh
Actual air flow 2440 cfm
Air flow factor 0.043 cfm/Btuh
Static pressure 0.53 in H2O
Load sensible heat ratio 0.86

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

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Cooling Equipment

Design Conditions

Outdoor design DB:	92.4°F	Sensible gain:	56114	Btuh	Entering coil DB:	77.9°F
Outdoor design WB:	75.8°F	Latent gain:	8984	Btuh	Entering coil WB:	63.9°F
Indoor design DB:	75.0°F	Total gain:	65098	Btuh		
Indoor RH:	50%	Estimated airflow:	2440	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Trane	Model:	(2) 4TWR6036N1+(2) TEM6A0C36H31++TDR
Actual airflow:	2440	cfm	
Sensible capacity:	51240	Btuh	91% of load
Latent capacity:	21960	Btuh	244% of load
Total capacity:	73200	Btuh	112% of load SHR: 70%

Heating Equipment

Design Conditions

Outdoor design DB:	33.3°F	Heat loss:	52971	Btuh	Entering coil DB:	68.3°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Trane	Model:	(2) 4TWR6036N1+(2) TEM6A0C36H31++TDR
Actual airflow:	2440	cfm	
Output capacity:	68800	Btuh	130% of load
Supplemental heat required:	0	Btuh	
			Capacity balance: 43 °F
			Economic balance: -99 °F

Backup equipment type:	Elec strip		
Manufacturer:		Model:	
Actual airflow:	2440	cfm	
Output capacity:	12.0	kW	78% of load Temp. rise: 50 °F

Meets all requirements of ACCA Manual S.