

Project Information

For: PARRISH RESIDENCE
157 SE SHADY WAY, LULU, 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 15855 Btuh
Ducts 4344 Btuh
Central vent (0 cfm)
(none) 0 Btuh
Humidification 0 Btuh
Piping 0 Btuh
Equipment load 20199 Btuh

Sensible Cooling Equipment Load Sizing

Structure 21159 Btuh
Ducts 6455 Btuh
Central vent (0 cfm)
(none) 0 Btuh
Blower 0 Btuh
Use manufacturer's data n
Rate/swing multiplier 0.97
Equipment sensible load 26841 Btuh

Infiltration

Method Simplified
Construction quality Average
Fireplaces 0

Latent Cooling Equipment Load Sizing

Structure 2438 Btuh
Ducts 1350 Btuh
Central vent (0 cfm)
(none) 0 Btuh
Equipment latent load 3788 Btuh

	Heating	Cooling
Area (ft²)	1814	1814
Volume (ft³)	14550	14550
Air changes/hour	0.38	0.20
Equiv. AVF (cfm)	92	49

Equipment Total Load (Sen+Lat) 30629 Btuh
Req. total capacity at 0.80 SHR 2.8 ton

Heating Equipment Summary

Make Trane
Trade TRANE
Model 4TWR4036N1
AHRI ref 209842226

Efficiency 7.5 HSPF2
Heating input 32600 Btuh @ 47°F
Heating output 26 °F
Temperature rise 1153 cfm
Actual air flow 0.057 cfm/Btuh
Air flow factor 0.53 in H2O
Static pressure
Space thermostat
Capacity balance point = 20 °F

Backup:
Input = 7 kW, Output = 23269 Btuh, 100 AFUE

Cooling Equipment Summary

Make Trane
Trade TRANE
Cond 4TWR4036N1
Coil TEM4B0C37M31++TDR
AHRI ref 209842226

Efficiency 11.7 EER2, 14.3 SEER2
Sensible cooling 27680 Btuh
Latent cooling 6920 Btuh
Total cooling 34600 Btuh
Actual air flow 1153 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.

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Cooling Equipment

Design Conditions

Outdoor design DB:	92.2°F	Sensible gain:	27614	Btuh	Entering coil DB:	77.9°F
Outdoor design WB:	75.8°F	Latent gain:	3788	Btuh	Entering coil WB:	63.9°F
Indoor design DB:	75.0°F	Total gain:	31402	Btuh		
Indoor RH:	50%	Estimated airflow:	1153	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Trane	Model:	4TWR4036N1+TEM4B0C37M31++TDR		
Actual airflow:	1153	cfm			
Sensible capacity:	27680	Btuh	100%	of load	
Latent capacity:	6920	Btuh	183%	of load	
Total capacity:	34600	Btuh	110%	of load	SHR: 80%

Heating Equipment

Design Conditions

Outdoor design DB:	33.2°F	Heat loss:	20199	Btuh	Entering coil DB:	68.6°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Trane	Model:	4TWR4036N1+TEM4B0C37M31++TDR		
Actual airflow:	1153	cfm			
Output capacity:	32600	Btuh	161%	of load	Capacity balance: 20 °F
Supplemental heat required:	0	Btuh			Economic balance: -99 °F

Backup equipment type:	Elec strip				
Manufacturer:		Model:			
Actual airflow:	1153	cfm			
Output capacity:	6.8	kW	115%	of load	Temp. rise: 50 °F

Meets all requirements of ACCA Manual S.