

Project Information

For: 348 SW Legree Terrace, Ft White, FL 32038

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 23979 Btuh
Ducts (R-6.0) 5265 Btuh
Central vent (0 cfm) 0 Btuh

Humidification 0 Btuh
Piping 0 Btuh
Equipment load 29244 Btuh

Infiltration

Method Simplified
Construction quality Average
Fireplaces 0

	Heating	Cooling
Area (ft ²)	1734	1734
Volume (ft ³)	17286	17286
Air changes/hour	0.38	0.20
Equiv. AVF (cfm)	109	58

Heating Equipment Summary

Make Trane
Trade
Model 5TWR7036A1000A
AHRI ref 216763780

Efficiency 9 HSPF2
Heating input
Heating output 32600 Btuh @ 47°F
Temperature rise 27 °F
Actual air flow 1120 cfm
Air flow factor 0.038 cfm/Btuh
Static pressure 0.53 in H2O
Space thermostat
Capacity balance point = 0 °F

Backup:
Input = 9 kW, Output = 31747 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 18301 Btuh
Ducts (R-6.0) 7356 Btuh
Central vent (0 cfm) 0 Btuh

Blower 0 Btuh

Use manufacturer's data n
Rate/swing multiplier 0.97
Equipment sensible load 24990 Btuh

Latent Cooling Equipment Load Sizing

Structure 2496 Btuh
Ducts 1516 Btuh
Central vent (0 cfm) 0 Btuh

Equipment latent load 4012 Btuh

Equipment Total Load (Sen+Lat) 29002 Btuh
Req. total capacity at 0.80 SHR 2.6 ton

Cooling Equipment Summary

Make Trane
Trade
Cond 5TWR7036A1000A
Coil 5TEM6D04AV31SA
AHRI ref 216763780
Efficiency 12.0 EER2,17.1 SEER2
Sensible cooling 26880 Btuh
Latent cooling 6720 Btuh
Total cooling 33600 Btuh
Actual air flow 1120 cfm
Air flow factor 0.044 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.

Project Information

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Cooling Equipment

Design Conditions

Outdoor design DB:	92.4°F	Sensible gain:	25657	Btuh	Entering coil DB:	78.0°F
Outdoor design WB:	75.8°F	Latent gain:	4012	Btuh	Entering coil WB:	63.9°F
Indoor design DB:	75.0°F	Total gain:	29669	Btuh		
Indoor RH:	50%	Estimated airflow:	1120	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP			
Manufacturer:	Trane	Model:	5TWR7036A1000A+5TEM6D04AV31SA	
Actual airflow:	1120	cfm		
Sensible capacity:	26880	Btuh	105% of load	
Latent capacity:	6720	Btuh	168% of load	
Total capacity:	33600	Btuh	113% of load	SHR: 80%

Heating Equipment

Design Conditions

Outdoor design DB:	33.3°F	Heat loss:	29244	Btuh	Entering coil DB:	68.5°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP			
Manufacturer:	Trane	Model:	5TWR7036A1000A+5TEM6D04AV31SA	
Actual airflow:	1120	cfm		
Output capacity:	32600	Btuh	111% of load	Capacity balance: 0 °F
Supplemental heat required:	0	Btuh		Economic balance: 0 °F

Backup equipment type:	Elec strip			
Manufacturer:		Model:		
Actual airflow:	1120	cfm		
Output capacity:	9.3	kW	109% of load	Temp. rise: 0 °F

Meets all requirements of ACCA Manual S.