

Project Information

For: FRED PERRY RESIDENCE
 Lake City, FL

Notes:

Design Information

Weather: Jacksonville Intl, FL, US

Winter Design Conditions

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

Summer Design Conditions

Outside db 93 °F
 Inside db 75 °F
 Design TD 18 °F
 Daily range M
 Relative humidity 50 %
 Moisture difference 50 gr/lb

Heating Summary

Structure 27934 Btuh
 Ducts 6338 Btuh
 Central vent (0 cfm)
 (none) 0 Btuh
 Humidification 0 Btuh
 Piping 0 Btuh
 Equipment load 34272 Btuh

Sensible Cooling Equipment Load Sizing

Structure 25718 Btuh
 Ducts 9245 Btuh
 Central vent (0 cfm)
 (none) 0 Btuh
 Blower 0 Btuh
 Use manufacturer's data n
 Rate/swing multiplier 0.98
 Equipment sensible load 34159 Btuh

Infiltration

Method Simplified
 Construction quality Average
 Fireplaces 0

Latent Cooling Equipment Load Sizing

Structure 3210 Btuh
 Ducts 2157 Btuh
 Central vent (0 cfm)
 (none) 0 Btuh
 Equipment latent load 5367 Btuh

	Heating	Cooling
Area (ft²)	2266	2266
Volume (ft³)	24485	24485
Air changes/hour	0.32	0.16
Equiv. AVF (cfm)	131	65

Equipment Total Load (Sen+Lat) 39526 Btuh
 Req. total capacity at 0.80 SHR 3.6 ton

Heating Equipment Summary

Make Trane
 Trade TRANE
 Model 4TWR4048G1
 AHRI ref 8908430

Efficiency 8.5 HSPF
 Heating input
 Heating output 46500 Btuh @ 47°F
 Temperature rise 27 °F
 Actual air flow 1550 cfm
 Air flow factor 0.045 cfm/Btuh
 Static pressure 0.53 in H2O
 Space thermostat
 Capacity balance point = 25 °F

Backup:
 Input = 9 kW, Output = 31810 Btuh, 100 AFUE

Cooling Equipment Summary

Make Trane
 Trade TRANE
 Cond 4TWR4048G1
 Coil TEM4A0C48S41
 AHRI ref 8908430

Efficiency 11.5 EER, 14 SEER
 Sensible cooling 37200 Btuh
 Latent cooling 9300 Btuh
 Total cooling 46500 Btuh
 Actual air flow 1550 cfm
 Air flow factor 0.044 cfm/Btuh
 Static pressure 0.53 in H2O
 Load sensible heat ratio 0.87

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

Project Information

For: FRED PERRY RESIDENCE
Lake City, FL

Cooling Equipment

Design Conditions

Outdoor design DB:	92.7°F	Sensible gain:	34963	Btuh	Entering coil DB:	78.0°F
Outdoor design WB:	76.9°F	Latent gain:	5367	Btuh	Entering coil WB:	64.0°F
Indoor design DB:	75.0°F	Total gain:	40330	Btuh		
Indoor RH:	50%	Estimated airflow:	1550	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Trane	Model:	4TWR4048G1+TEM4A0C48S41		
Actual airflow:	1550	cfm			
Sensible capacity:	37200	Btuh	106%	of load	
Latent capacity:	9300	Btuh	173%	of load	
Total capacity:	46500	Btuh	115%	of load	SHR: 80%

Heating Equipment

Design Conditions

Outdoor design DB:	32.8°F	Heat loss:	34272	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:	4TWR4048G1+TEM4A0C48S41		
Actual airflow:	1550	cfm			
Output capacity:	46500	Btuh	136%	of load	Capacity balance: 25 °F
Supplemental heat required:	0	Btuh			Economic balance: -99 °F

Backup equipment type:	Elec strip				
Manufacturer:		Model:			
Actual airflow:	1550	cfm			
Output capacity:	9.3	kW	93%	of load	Temp. rise: 50 °F

Meets all requirements of ACCA Manual S.