



Manual S Compliance Report

Entire House

E-Calcs Plus, Inc

Job: SFH - Lot 1 - 695 SW Chu...
Date: Feb 17, 2023
By: E-Calcs Plus, Inc

Serving all of Florida Phone: 833.322.5271 Email: eric@ecalcsplus.com Web: www.ecalcsplus.com License: HERS Rater ID# 0757810

Project Information

For: SFH - Lot 1 - 695 SW Church Ave
695 SE Church Ave, Lake City, FL 32025

Cooling Equipment

Design Conditions

Outdoor design DB:	91.9°F	Sensible gain:	21203 Btuh	Entering coil DB:	77.0°F
Outdoor design WB:	76.2°F	Latent gain:	3344 Btuh	Entering coil WB:	63.6°F
Indoor design DB:	75.0°F	Total gain:	24546 Btuh		
Indoor RH:	50%	Estimated airflow:	947 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Carrier	Model:	25SCA530AC0300+FJ4DNXB30L
Actual airflow:	947 cfm		
Sensible capacity:	23338 Btuh	110% of load	
Latent capacity:	4313 Btuh	129% of load	
Total capacity:	27651 Btuh	113% of load	SHR: 84%

Heating Equipment

Design Conditions

Outdoor design DB:	33.0°F	Heat loss:	23687 Btuh	Entering coil DB:	68.7°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Carrier	Model:	25SCA530AC0300+FJ4DNXB30L
Actual airflow:	947 cfm		
Output capacity:	23203 Btuh	98% of load	Capacity balance: 29 °F
Supplemental heat required:	484 Btuh		Economic balance: -48 °F

Backup equipment type:	Elec strip		
Manufacturer:	Carrier	Model:	AFUE 100
Actual airflow:	947 cfm		
Output capacity:	7.5 kW	108% of load	Temp. rise: 24 °F

Meets all requirements of ACCA Manual S.



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Project Summary

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Notes:

Design Information

Weather: Gainesville Rgnl, 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	47 gr/lb

Heating Summary

Structure	18269 Btuh
Ducts	5419 Btuh
Central vent (0 cfm) (none)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	23687 Btuh

Sensible Cooling Equipment Load Sizing

Structure	15186 Btuh
Ducts	6017 Btuh
Central vent (0 cfm) (none)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	21203 Btuh

Infiltration

Method	Simplified
Construction quality	Semi-tight
Fireplaces	0

Latent Cooling Equipment Load Sizing

Structure	1875 Btuh
Ducts	1468 Btuh
Central vent (0 cfm) (none)	0 Btuh
Equipment latent load	3344 Btuh

	Heating	Cooling
Area (ft ²)	1367	1367
Volume (ft ³)	12713	12713
Air changes/hour	0.31	0.16
Equiv. AVF (cfm)	66	34

Equipment Total Load (Sen+Lat)	24546 Btuh
Req. total capacity at 0.75 SHR	2.4 ton

Heating Equipment Summary

Make	Carrier
Trade	COMFORT 15 SEER2 HP
Model	25SCA530AC0300
AHRI ref	209690259
Efficiency	7.5 HSPF2
Heating input	
Heating output	28600 Btuh @ 47°F
Temperature rise	28 °F
Actual air flow	947 cfm
Air flow factor	0.040 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	
Capacity balance point = 29 °F	
Backup: Carrier AFUE 100	
Input = 8 kW, Output = 25591 Btuh, 100 AFUE	

Cooling Equipment Summary

Make	Carrier
Trade	COMFORT 15 SEER2 HP
Cond	25SCA530AC0300
Coil	FJ4DNXB30L
AHRI ref	209690259
Efficiency	12.0 EER2,14.3 SEER2
Sensible cooling	21300 Btuh
Latent cooling	7100 Btuh
Total cooling	28400 Btuh
Actual air flow	947 cfm
Air flow factor	0.045 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.86

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



Load Short Form

Entire House

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Design Information

	Htg	Clg	Infiltration	
Outside db (°F)	33	92	Method	Simplified
Inside db (°F)	70	75	Construction quality	Semi-tight
Design TD (°F)	37	17	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	33	47		

HEATING EQUIPMENT

Make Carrier
Trade COMFORT 15 SEER2 HP
Model 25SCA530AC0300
AHRI ref 209690259
Efficiency 7.5 HSPF2
Heating input
Heating output 28600 Btuh @ 47°F
Temperature rise 28 °F
Actual air flow 947 cfm
Air flow factor 0.040 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 29 °F

Backup: Carrier AFUE 100

Input = 8 kW, Output = 25591 Btuh, 100 AFUE

COOLING EQUIPMENT

Make Carrier
Trade COMFORT 15 SEER2 HP
Cond 25SCA530AC0300
Coil FJ4DNXB30L
AHRI ref 209690259
Efficiency 12.0 EER2, 14.3 SEER2
Sensible cooling 21300 Btuh
Latent cooling 7100 Btuh
Total cooling 28400 Btuh
Actual air flow 947 cfm
Air flow factor 0.045 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.86

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
MBR	180	3994	3204	160	143
MBA	116	2959	1615	118	72
MTlt	28	954	361	38	16
BR2	141	1969	1659	79	74
MWIC	63	97	143	4	6
BR3	148	3341	1904	134	85
Lndry	73	1672	1283	67	57
Kit Liv Din	573	8633	10932	345	488
BA2	45	69	102	3	5

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Entire House	p	1367	23687	21203	947	947
Other equip loads			0	0		
Equip. @ 1.00 RSM				21203		
Latent cooling				3344		
TOTALS		1367	23687	24546	947	947

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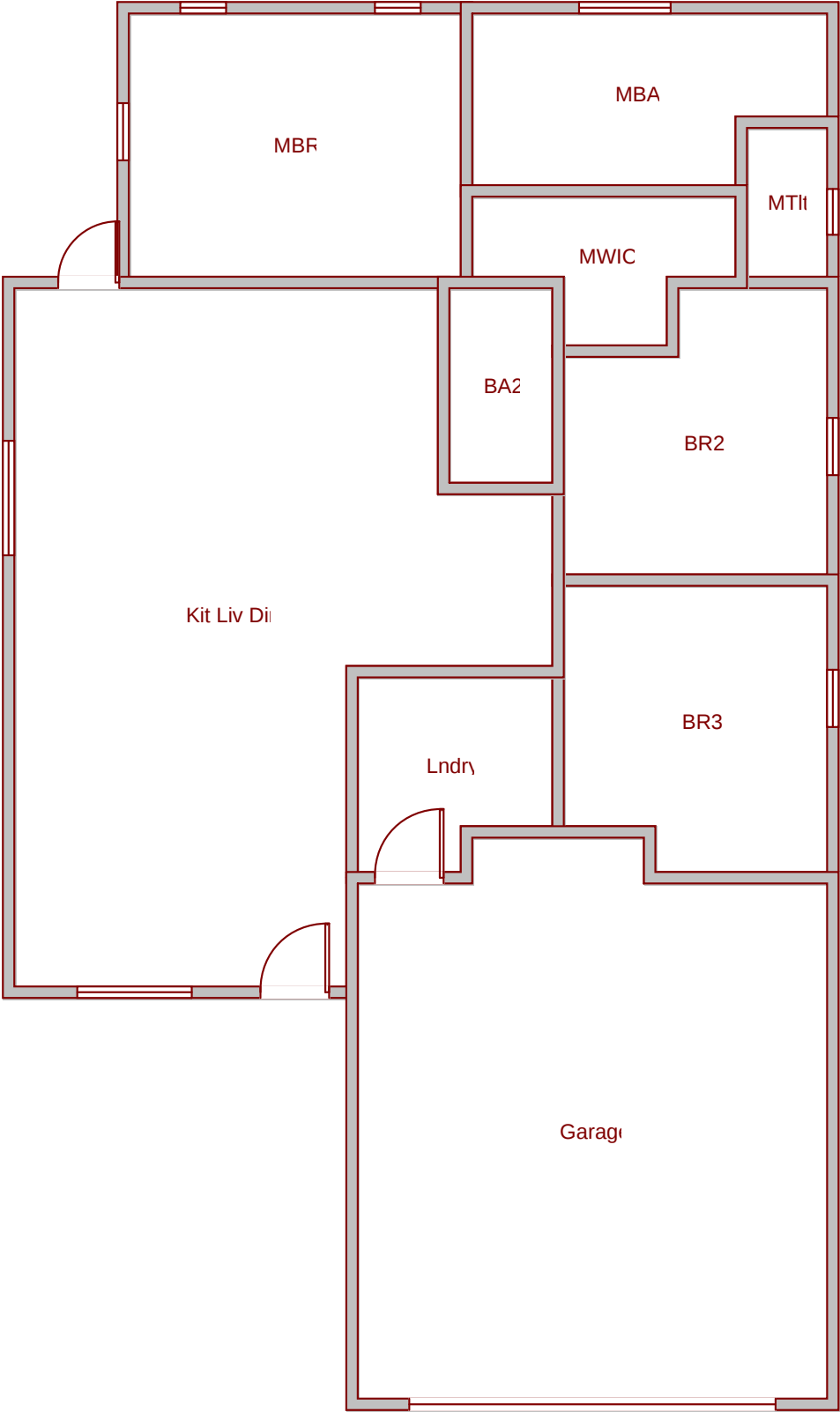
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First Floor



Job #: SFH - Lot 1 - 695 SW Church Ave
Performed by E-Calcs Plus, Inc for:

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695 SE Church Ave
Lake City, FL 32025

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