



Manual S Compliance Report

Entire House

E-Calcs Plus, Inc

Job: Thune - 361 SE Sunset ...
Date: Oct 31, 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: Thune - 361 SE Sunset Glen
361 SE Sunset Glen, High Springs, FL 32643

Cooling Equipment

Design Conditions

Outdoor design DB:	91.9°F	Sensible gain:	17960 Btuh	Entering coil DB:	76.9°F
Outdoor design WB:	76.2°F	Latent gain:	2674 Btuh	Entering coil WB:	63.5°F
Indoor design DB:	75.0°F	Total gain:	20634 Btuh		
Indoor RH:	50%	Estimated airflow:	787 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Carrier	Model:	25SCA524AC0300+FJ4DNXB24L
Actual airflow:	787 cfm		
Sensible capacity:	19429 Btuh	108% of load	
Latent capacity:	3427 Btuh	128% of load	
Total capacity:	22856 Btuh	111% of load	SHR: 85%

Heating Equipment

Design Conditions

Outdoor design DB:	33.0°F	Heat loss:	15001 Btuh	Entering coil DB:	68.8°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Carrier	Model:	25SCA524AC0300+FJ4DNXB24L
Actual airflow:	787 cfm		
Output capacity:	19307 Btuh	129% of load	
Supplemental heat required:	0 Btuh		
		Capacity balance:	22 °F
		Economic balance:	-0k °F

Backup equipment type:	Elec strip		
Manufacturer:	Carrier	Model:	AFUE 100
Actual airflow:	787 cfm		
Output capacity:	5.0 kW	114% of load	Temp. rise: 16 °F

Meets all requirements of ACCA Manual S.



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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	10816 Btuh
Ducts	4185 Btuh
Central vent (0 cfm) (none)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	15001 Btuh

Sensible Cooling Equipment Load Sizing

Structure	13307 Btuh
Ducts	4653 Btuh
Central vent (0 cfm) (none)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	17960 Btuh

Infiltration

Method	Simplified
Construction quality	Semi-tight
Fireplaces	0

Latent Cooling Equipment Load Sizing

Structure	1541 Btuh
Ducts	1133 Btuh
Central vent (0 cfm) (none)	0 Btuh
Equipment latent load	2674 Btuh

	Heating	Cooling
Area (ft ²)	973	973
Volume (ft ³)	8757	8757
Air changes/hour	0.31	0.16
Equiv. AVF (cfm)	45	23

Equipment Total Load (Sen+Lat)	20634 Btuh
Req. total capacity at 0.77 SHR	1.9 ton

Heating Equipment Summary

Make	Carrier
Trade	COMFORT 15 SEER2 HP
Model	25SCA524AC0300
AHRI ref	210998515
Efficiency	7.5 HSPF2
Heating input	
Heating output	23600 Btuh @ 47°F
Temperature rise	27 °F
Actual air flow	787 cfm
Air flow factor	0.052 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	
Capacity balance point = 22 °F	
Backup: Carrier AFUE 100	
Input = 5 kW, Output = 17061 Btuh, 100 AFUE	

Cooling Equipment Summary

Make	Carrier
Trade	COMFORT 15 SEER2 HP
Cond	25SCA524AC0300
Coil	FJ4DNXB24L
AHRI ref	210998515
Efficiency	12.5 EER2, 15.2 SEER2
Sensible cooling	18172 Btuh
Latent cooling	5428 Btuh
Total cooling	23600 Btuh
Actual air flow	787 cfm
Air flow factor	0.044 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.87

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 25SCA524AC0300
AHRI ref 210998515
Efficiency 7.5 HSPF2
Heating input
Heating output 23600 Btuh @ 47°F
Temperature rise 27 °F
Actual air flow 787 cfm
Air flow factor 0.052 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 22 °F

Backup: Carrier AFUE 100

Input = 5 kW, Output = 17061 Btuh, 100 AFUE

COOLING EQUIPMENT

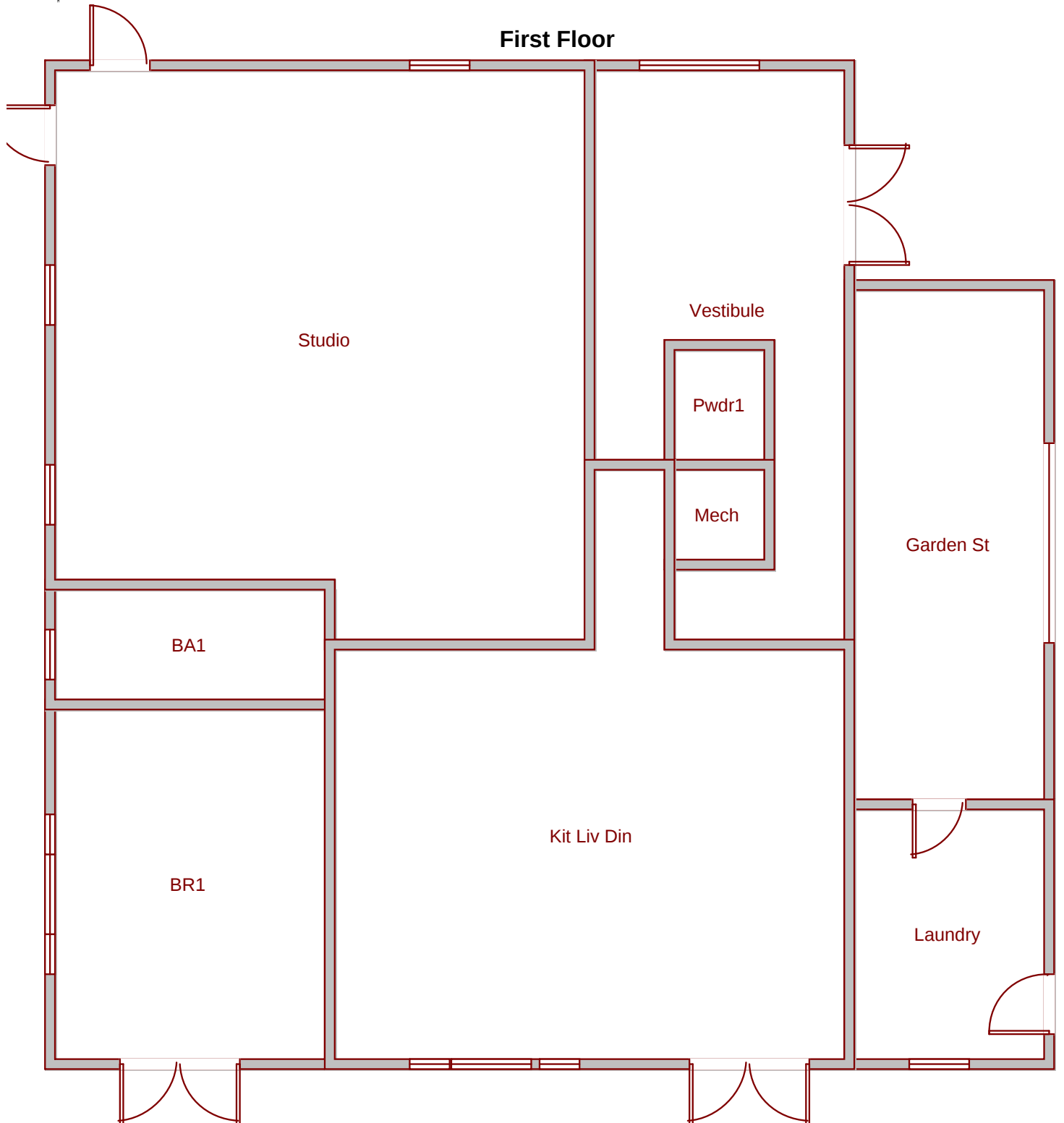
Make Carrier
Trade COMFORT 15 SEER2 HP
Cond 25SCA524AC0300
Coil FJ4DNXB24L
AHRI ref 210998515
Efficiency 12.5 EER2, 15.2 SEER2
Sensible cooling 18172 Btuh
Latent cooling 5428 Btuh
Total cooling 23600 Btuh
Actual air flow 787 cfm
Air flow factor 0.044 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.87

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
BR1	252	6016	5306	316	233
BA1	84	1070	455	56	20
Mech	25	41	57	2	2
Kit Liv Din	582	7825	12074	411	529
Pwdr1	30	49	68	3	3
Entire House	p 973	15001	17960	787	787
Other equip loads		0	0		
Equip. @ 1.00 RSM			17960		
Latent cooling			2674		
TOTALS	973	15001	20634	787	787

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First Floor



Job #: Thune - 361 SE Sunset Glen
Performed by E-Calcs Plus, Inc for:

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High Springs, FL 32643

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Scale: 1 : 83

Page 1
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