



Manual S Compliance Report

Entire House

E-Calcs Plus, Inc

Job: SFH - 183 SW Blue Jay Ct
Date: Dec 08, 2021
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 - 183 SW Blue Jay Ct, Flynn Construction
183 SW Blue Jay Ct, Fort White, FL 32038

Cooling Equipment

Design Conditions

Outdoor design DB:	91.9°F	Sensible gain:	15293 Btuh	Entering coil DB:	76.4°F
Outdoor design WB:	76.2°F	Latent gain:	4560 Btuh	Entering coil WB:	64.1°F
Indoor design DB:	75.0°F	Total gain:	19853 Btuh		
Indoor RH:	50%	Estimated airflow:	700 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Carrier	Model:	25HBC524AP0300+FX4DNF025L
Actual airflow:	700 cfm		
Sensible capacity:	17279 Btuh	113% of load	
Latent capacity:	5148 Btuh	113% of load	
Total capacity:	22426 Btuh	113% of load	SHR: 77%

Heating Equipment

Design Conditions

Outdoor design DB:	33.0°F	Heat loss:	25263 Btuh	Entering coil DB:	67.2°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Carrier	Model:	25HBC524AP0300+FX4DNF025L
Actual airflow:	700 cfm		
Output capacity:	18954 Btuh	75% of load	Capacity balance: 35 °F
Supplemental heat required:	6309 Btuh		Economic balance: -50 °F

Backup equipment type:	Elec strip		
Manufacturer:	Carrier	Model:	AFUE 100
Actual airflow:	700 cfm		
Output capacity:	7.5 kW	101% of load	Temp. rise: 26 °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	20453 Btuh
Ducts	2942 Btuh
Central vent (46 cfm)	1868 Btuh
Outside air	
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	25263 Btuh

Sensible Cooling Equipment Load Sizing

Structure	12478 Btuh
Ducts	1963 Btuh
Central vent (46 cfm)	853 Btuh
Outside air	
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	15293 Btuh

Infiltration

Method	Simplified
Construction quality	Semi-tight
Fireplaces	0

Latent Cooling Equipment Load Sizing

Structure	1757 Btuh
Ducts	1338 Btuh
Central vent (46 cfm)	1464 Btuh
Outside air	
Equipment latent load	4560 Btuh

	Heating	Cooling
Area (ft ²)	1617	1617
Volume (ft ³)	12936	12936
Air changes/hour	0.26	0.14
Equiv. AVF (cfm)	56	30

Equipment Total Load (Sen+Lat)	19853 Btuh
Req. total capacity at 0.75 SHR	1.7 ton

Heating Equipment Summary

Make	Carrier
Trade	CARRIER
Model	25HBC524AP0300
AHRI ref	204837229
Efficiency	8.5 HSPF
Heating input	
Heating output	24000 Btuh @ 47°F
Temperature rise	31 °F
Actual air flow	700 cfm
Air flow factor	0.030 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	
Capacity balance point = 35 °F	
Backup: Carrier AFUE 100	
Input = 8 kW, Output = 25591 Btuh, 100 AFUE	

Cooling Equipment Summary

Make	Carrier
Trade	CARRIER
Cond	25HBC524AP0300
Coil	FX4DNF025L
AHRI ref	204837229
Efficiency	12.5 EER, 15 SEER
Sensible cooling	18000 Btuh
Latent cooling	6000 Btuh
Total cooling	24000 Btuh
Actual air flow	700 cfm
Air flow factor	0.048 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.77

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



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...e Jay CtSFH - 183 SW Blue Jay Ct 1.27.2022.rup Calc = MJ8 Front Door faces: W

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Load Short Form

Entire House

E-Calcs Plus, Inc

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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 CARRIER
Model 25HBC524AP0300
AHRI ref 204837229

Efficiency 8.5 HSPF
Heating input
Heating output 24000 Btuh @ 47°F
Temperature rise 31 °F
Actual air flow 700 cfm
Air flow factor 0.030 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 35 °F

Backup: Carrier AFUE 100
Input = 8 kW, Output = 25591 Btuh, 100 AFUE

COOLING EQUIPMENT

Make Carrier
Trade CARRIER
Cond 25HBC524AP0300
Coil FX4DNF025L
AHRI ref 204837229

Efficiency 12.5 EER, 15 SEER
Sensible cooling 18000 Btuh
Latent cooling 6000 Btuh
Total cooling 24000 Btuh
Actual air flow 700 cfm
Air flow factor 0.048 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.77

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
BR 2	207	4471	2330	134	113
BA	72	701	222	21	11
BR 3	232	2063	1211	62	59
M BA	98	1444	629	43	30
M WIC	45	108	78	3	4
M BR	240	4384	2680	131	130
Kit Liv Din	723	10224	7291	306	353

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Entire House	p	1617	23395	14440	700	700
Other equip loads			1868	853		
Equip. @ 1.00 RSM				15293		
Latent cooling				4560		
TOTALS		1617	25263	19853	700	700

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Building Analysis

Entire House

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Design Conditions

Location:

Gainesville Rgnl, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:

Dry bulb (°F)
Daily range (°F)
Wet bulb (°F)
Wind speed (mph)

Heating

33
-
-
15.0

Cooling

92
18 (M)
76
7.5

Indoor:

Indoor temperature (°F)
Design TD (°F)
Relative humidity (%)
Moisture difference (gr/lb)

Heating

70
37
50
32.8

Cooling

75
17
50
46.9

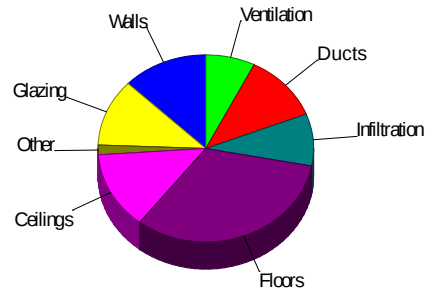
Infiltration:

Method
Construction quality
Fireplaces

Simplified
Semi-tight
0

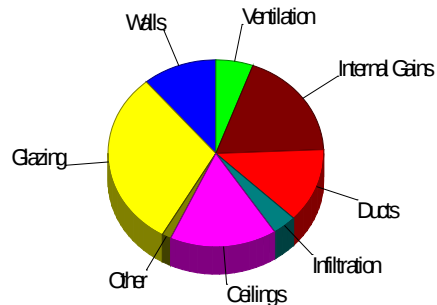
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	2.6	3232	12.8
Glazing	12.2	2938	11.6
Doors	22.2	421	1.7
Ceilings	2.1	3385	13.4
Floors	5.1	8208	32.5
Infiltration	1.7	2268	9.0
Ducts		2942	11.6
Piping		0	0
Humidification		0	0
Ventilation		1868	7.4
Adjustments		0	0
Total		25263	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.4	1707	11.2
Glazing	19.5	4672	30.6
Doors	11.2	212	1.4
Ceilings	1.5	2458	16.1
Floors	0	0	0
Infiltration	0.4	558	3.6
Ducts		1963	12.8
Ventilation		853	5.6
Internal gains		2870	18.8
Blower		0	0
Adjustments		0	0
Total		15293	100.0

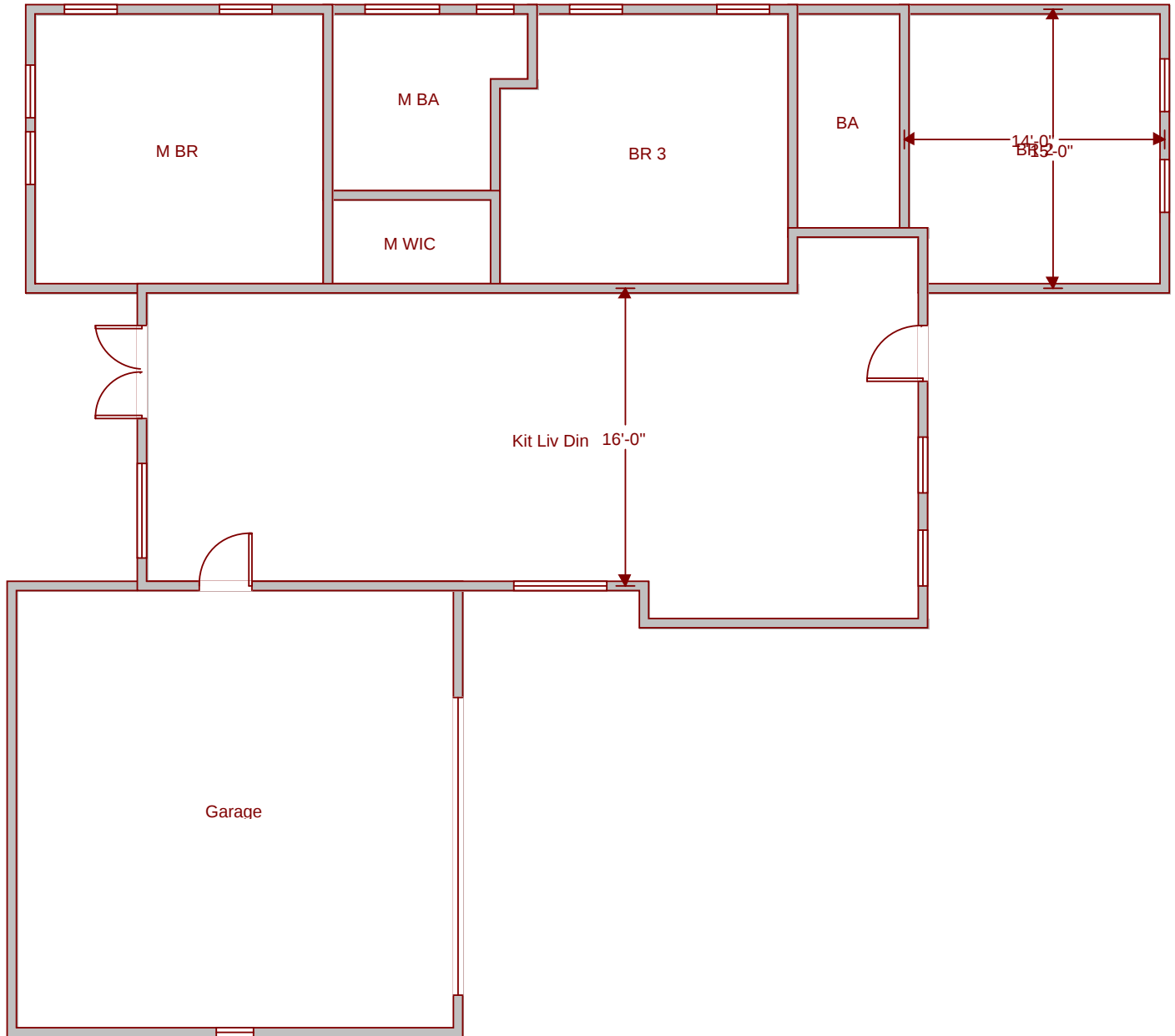


Latent Cooling Load = 4560 Btuh
Overall U-value = 0.224 Btuh/ft²-°F

Data entries checked.



First Floor



Job #: SFH - 183 SW Blue Jay Ct
Performed by E-Calcs Plus, Inc for:

SFH - 183 SW Blue Jay Ct
183 SW Blue Jay Ct
Fort White, FL 32038

E-Calcs Plus, Inc

Serving all of Florida

Phone: 833.322.5271
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