

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: 145 SW Christiansen Court Street: 145 SW Christiansen Court City, State, Zip: Lake City, FL, 32025 Owner: N/A Design Location: FL, Gainesville	Builder Name: Permit Office: Columbia County Permit Number: Jurisdiction: County: Columbia(Florida Climate Zone 2)
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1. New construction or existing New (From Plans) 2. Single family or multiple family Detached 3. Number of units, if multiple family 1 4. Number of Bedrooms 3 5. Is this a worst case? No 6. Conditioned floor area above grade (ft²) 1895 Conditioned floor area below grade (ft²) 0 7. Windows(215.0 sqft.) Description Area a. U-Factor: Dbl, U=0.36 215.00 ft² SHGC: SHGC=0.25 b. U-Factor: N/A ft² SHGC: c. U-Factor: N/A ft² SHGC: Area Weighted Average Overhang Depth: 3.267 ft Area Weighted Average SHGC: 0.250 8. Skylights Description Area U-Factor:(AVG) N/A N/A ft² SHGC(AVG): N/A 9. Floor Types Insulation Area a. Slab-On-Grade Edge Insulation R= 0.0 1895.00 ft² b. N/A R= ft² c. N/A R= ft²	10. Wall Types(1758.0 sqft.) Insulation Area a. Frame - Wood, Exterior R=13.0 1437.00 ft² b. Frame - Wood, Adjacent R=13.0 321.00 ft² c. N/A d. N/A 11. Ceiling Types(1989.8 sqft.) Insulation Area a. Flat ceiling under att (Vented) R=38.0 1989.80 ft² b. N/A c. N/A 12. Roof(Comp. Shingles, Vented) Deck R=0.0 2278 ft² 13. Ducts, location & insulation level R ft² a. Sup: Attic, Ret: Attic, AH: Main 6 474 b. c. 14. Cooling Systems kBtu/hr Efficiency a. Central Unit 23.9 SEER2:15.00 15. Heating Systems kBtu/hr Efficiency a. Electric Heat Pump 28.1 HSPF2:8.20 16. Hot Water Systems a. Electric Cap: 40 gallons EF: 0.920 b. Conservation features None 17. Credits CV, Pstat
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Glass/Floor Area: 0.113	Total Proposed Modified Loads: 43.65	PASS
	Total Baseline Loads: 47.69	

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code. PREPARED BY: <u>Will C. May</u> DATE: <u>7 / 26 / 2023</u> I hereby certify that this building, as designed, is in compliance with the Florida Energy Code. OWNER/AGENT: _____ DATE: _____	Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.  BUILDING OFFICIAL: _____ DATE: _____
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- Compliance requires certification by the air handler unit manufacturer that the air handler enclosure qualifies as certified factory-sealed in accordance with R403.3.2.1.
- Default duct leakage does not require a Duct Leakage Test Report.
- Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires a PERFORMANCE envelope leakage test report with envelope leakage no greater than 5.00 ACH50 (R402.4.1.2).

INPUT SUMMARY CHECKLIST REPORT

PROJECT																								
Title:	145 SW Christiansen Court				Address type:	Street Address																		
Building Type:	User		Bedrooms:	3	Lot #:	---																		
Owner:	N/A		Conditioned Area:	1895	Block/SubDivision:	---																		
Builder Home ID:			Total Stories:	1	PlatBook:	---																		
Builder Name:			Worst Case:	No	Street:	145 SW Christiansen Court																		
Permit Office:	Columbia County		Rotate Angle:	135	County:	Columbia																		
Jurisdiction:			Cross Ventilation:	Yes	City, State, Zip:	Lake City, FL, 32025																		
Family Type:	Detached		Whole House Fan:	No																				
New/Existing:	New (From Plans)		Terrain:	Suburban																				
Year Construct:	2023		Shielding:	Suburban																				
Comment:																								
CLIMATE																								
✓ Design Location	Tmy Site		Design Temp 97.5% 2.5%		Int Design Temp Winter Summer		Heating Degree Days		Design Moisture		Daily temp Range													
___ FL, Gainesville	FL_GAINESVILLE_REGIONA		32	92	70	75	1305.5	51	Medium															
BLOCKS																								
✓ Number	Name		Area		Volume																			
___ 1	Block1		1895		17055 cu ft																			
SPACES																								
✓ Number	Name		Area		Volume		Kitchen		Occupants		Bedrooms		Finished		Cooled		Heated							
___ 1	Main		1895		17055		Yes		6		3		Yes		Yes		Yes							
FLOORS (Total Exposed Area = 1895 sq.ft.)																								
✓ #	Floor Type		Space		Exposed Perim		Perimeter R-Value		Area		U-Factor		Joist R-Value		Tile		Wood		Carpet					
___ 1	Slab-On-Grade Edge Ins		Main		195.33		0		1895 ft		0.304		---		0.00		0.00		1.00					
ROOF																								
✓ #	Type		Materials		Roof Area		Gable Area		Roof Color		Rad Barr		Solar Absor.		SA Tested		Emitt Tested		Emitt Tested		Deck Insul.		Pitch (deg)	
___ 1	Hip		Composition shingles		2278 ft²		0 ft²		Medium		Y		0.96		No		0.9		No		0		33.69	
ATTIC																								
✓ #	Type		Ventilation		Vent Ratio (1 in)		Area		RBS		IRCC													
___ 1	Full attic		Vented		300		1895 ft²		Y		N													
CEILING (Total Exposed Area = 1990 sq.ft.)																								
✓ #	Ceiling Type		Space		R-Value		Ins. Type		Area		U-Factor		Framing Frac.		Truss Type									
___ 1	Flat ceiling under attic(Vented)		Main		38.0		Double Batt		1989.8ft²		0.024		0.11		Wood									

INPUT SUMMARY CHECKLIST REPORT

WALLS (Total Exposed Area = 1758 sq.ft.)																	
Note: First wall orientation below is as entered. Actual orientation is modified by the rotate angle (135 degrees) as shown in the "Project" section on page 1.																	
✓ #	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area sq.ft.	U-Factor	Sheath R-Value	Frm. Frac.	Solar Absor.	Below Grade		
___ 1	N=>SE	Exterior	Frame - Wood	Main	13.0	22.0	8	9.0	0	204.0	0.084		0.23	0.75	0 %		
___ 2	E=>SW	Exterior	Frame - Wood	Main	13.0	38.0	0	9.0	0	342.0	0.084		0.23	0.75	0 %		
___ 3	S=>NW	Exterior	Frame - Wood	Main	13.0	10.0	0	9.0	0	90.0	0.084		0.23	0.75	0 %		
___ 4	E=>SW	Exterior	Frame - Wood	Main	13.0	16.0	0	9.0	0	144.0	0.084		0.23	0.75	0 %		
___ 5	S=>NW	Exterior	Frame - Wood	Main	13.0	33.0	8	9.0	0	303.0	0.084		0.23	0.75	0 %		
___ 6	W=>NE	Exterior	Frame - Wood	Main	13.0	39.0	4	9.0	0	354.0	0.084		0.23	0.75	0 %		
___ 7	N=>SE	Garage	Frame - Wood	Main	13.0	21.0	0	9.0	0	189.0	0.084		0.23	0.75	0 %		
___ 8	W=>NE	Garage	Frame - Wood	Main	13.0	14.0	8	9.0	0	132.0	0.084		0.23	0.75	0 %		
DOORS (Total Exposed Area = 40 sq.ft.)																	
✓ #	Ornt	Adjacent To	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area						
___ 1	N=>SE	Exterior	Insulated	Main	None	0.46	3.00	0	6.00	8	20.0ft²						
___ 2	N=>SE	Garage	Insulated	Main	None	0.46	3.00	0	6.00	8	20.0ft²						
WINDOWS (Total Exposed Area = 215 sq.ft.)																	
✓ #	Ornt	Wall ID	Frame	Panes	NFRC U-Factor	SHGC	Imp	Storm	Total Area (ft²)	Same Units	Width (ft)	Height (ft)	--Overhang-- Depth (ft)	Sep. (ft)	Interior Shade	Screen	
___ 1	N=>SE	1	Vinyl	Low-E Double	Y	0.36	0.25	N	N	30.0	2	3.00	5.00	7.5	1.0	None	None
___ 2	E=>SW	2	Vinyl	Low-E Double	Y	0.36	0.25	N	N	75.0	5	3.00	5.00	1.5	1.0	None	None
___ 3	S=>NW	3	TIM	Low-E Double	Y	0.36	0.25	N	N	40.0	2	3.00	6.67	6.5	1.0	None	None
___ 4	S=>NW	5	Vinyl	Low-E Double	Y	0.36	0.25	N	N	30.0	2	3.00	5.00	1.5	1.0	None	None
___ 5	S=>NW	5	Vinyl	Low-E Double	Y	0.36	0.25	N	N	4.0	1	4.00	1.00	1.5	1.0	None	None
___ 6	W=>NE	6	Vinyl	Low-E Double	Y	0.36	0.25	N	N	6.0	1	2.00	3.00	1.5	1.0	None	None
___ 7	W=>NE	6	Vinyl	Low-E Double	Y	0.36	0.25	N	N	30.0	2	3.00	5.00	1.5	1.0	None	None
INFILTRATION																	
✓ #	Scope	Method	SLA	CFM50	ELA	EqLA	ACH	ACH50	Space(s)	Infiltration Test Volume							
___ 1	Wholehouse	Proposed ACH(50)	0.00029	1421	77.97	146.39	0.1027	5.0	All	17055 cu ft							
GARAGE																	
✓ #	Floor Area	Roof Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation												
___ 1	525 ft²	525 ft²	56 ft	9 ft	1												
MASS																	
✓ #	Mass Type	Area	Thickness	Furniture Fraction	Space												
___ 1	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Main												
HEATING SYSTEM																	
✓ #	System Type	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	----Geothermal HeatPump----	Ducts	Block									
						Entry Power Volt Current											

INPUT SUMMARY CHECKLIST REPORT

HEATING SYSTEM(Continued)

___ 1 Electric Heat Pump None/Single HSPF2: 8.20 28.1 0.00 0.00 0.00 sys#1 1

COOLING SYSTEM

✓ # System Type Subtype/Speed AHRI # Efficiency Capacity kBTu/hr Air Flow cfm SHR Duct Block
___ 1 Central Unit None/Single SEER2:15.0 23.9 720 0.70 sys#1 1

HOT WATER SYSTEM

✓ # System Type Subtype Location EF(UEF) Cap Use SetPnt Fixture Flow Pipe Ins. Pipe length
___ 1 Electric None Garage 0.92 (0.92) 40.00 gal 40 gal 120 deg Standard None 12

Recirculation System Recirc Control Type Loop length Branch length Pump power DWHR Facilities Connected Equal Flow DWHR Eff Other Credits

___ 1 No NA NA NA No NA NA NA None

DUCTS

✓ Duct # Location R-Value Area Location R-Value Area Leakage Type Air Handler CFM 25 TOT CFM 25 OUT QN RLF HVAC # Heat Cool
___ 1 Attic 6.0 474 ft² Attic 6.0 95 ft² Default Leakage Main (Default) (Default) 1 1

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans: N

Cooling ☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☒ Jun ☒ Jul ☒ Aug ☒ Sep ☐ Oct ☐ Nov ☐ Dec
Heating ☒ Jan ☒ Feb ☒ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☒ Nov ☒ Dec
Venting ☐ Jan ☐ Feb ☒ Mar ☒ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☒ Oct ☒ Nov ☐ Dec

✓ Thermostat Schedule: HERS 2006 Reference
Schedule Type 1 2 3 4 5 6 7 8 9 10 11 12

___ Cooling (WD)	AM PM	78 80	78 80	78 78	78 78	78 78	78 78	78 78	78 78	80 78	80 78	80 78	80 78
___ Cooling (WEH)	AM PM	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78
___ Heating (WD)	AM PM	66 68	66 68	66 68	66 68	66 68	68 68	68 68	68 68	68 68	68 68	68 66	68 66
___ Heating (WEH)	AM PM	66 68	66 68	66 68	66 68	66 68	68 68	68 68	68 68	68 68	68 68	68 66	68 66

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 92

The lower the EnergyPerformance Index, the more efficient the home.

145 SW Christiansen Court,Lake City,FL,32025

1. New construction or existing	New (From Plans)	10. Wall Types(1758.0 sqft.)	Insulation	Area
2. Single family or multiple family	Detached	a. Frame - Wood, Exterior	R=13.0	1437.00 ft ²
3. Number of units, if multiple family	1	b. Frame - Wood, Adjacent	R=13.0	321.00 ft ²
4. Number of Bedrooms	3	c. N/A		
5. Is this a worst case?	No	d. N/A		
6. Conditioned floor area above grade (ft ²)	1895	11. Ceiling Types(1989.8 sqft.)	Insulation	Area
Conditioned floor area below grade (ft ²)	0	a. Flat ceiling under att (Vented)	R=38.0	1989.80 ft ²
7. Windows**	Description	b. N/A		
a. U-Factor:	Dbl, U=0.36	c. N/A		
SHGC:	SHGC=0.25	12. Roof(Comp. Shingles, Vented) Deck	R=0.0	2278 ft ²
b. U-Factor:	N/A	13. Ducts, location & insulation level	R	ft ²
SHGC:		a. Sup: Attic, Ret: Attic, AH: Main	6	474
c. U-Factor:	N/A	b.		
SHGC:		c.		
Area Weighted Average Overhang Depth:	3.267 ft	14. Cooling Systems	kBtu/hr	Efficiency
Area Weighted Average SHGC:	0.250	a. Central Unit	23.9	SEER2:15.00
8. Skylights	Description	15. Heating Systems	kBtu/hr	Efficiency
U-Factor:(AVG)	N/A	a. Electric Heat Pump	28.1	HSPF2:8.20
SHGC(AVG):	N/A			
9. Floor Types	Insulation	16. Hot Water Systems		
a. Slab-On-Grade Edge Insulation	R= 0.0	a. Electric		Cap: 40 gallons
b. N/A	R=			EF: 0.920
c. N/A	R=	b. Conservation features		
				None
		17. Credits		CV, Pstat

I certify that this home has complied with the Florida Energy Efficiency Code for Building Construction through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed Code compliant features.

Builder Signature: _____ Date: _____

Address of New Home: 145 SW Christiansen Court

City/FL Zip: Lake City,FL,32025



*Note: This is not a Building Energy Rating. If your Index is below 70, your home may qualify for energy efficient mortgage (EEM) incentives if you obtain a Florida Energy Rating. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commission's support staff.

**Label required by Section R303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

Envelope Leakage Test Report (Blower Door Test)

Residential Prescriptive, Performance or ERI Method Compliance

2020 Florida Building Code, Energy Conservation, 7th Edition

Jurisdiction:	Permit #:
Job Information	
Builder:	Community: Lot: NA
Address: 145 SW Christiansen Court	
City: Lake City	State: FL Zip: 32025
Air Leakage Test Results <i>Passing results must meet either the Performance, Prescriptive, or ERI Method</i>	
☐ PRESCRIPTIVE METHOD -The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 7 air changes per hour at a pressure of 0.2 inch w.g. (50 Pascals) in Climate Zones 1 and 2.	
☒ PERFORMANCE or ERI METHOD -The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding the selected ACH(50) value, as shown on Form R405-2020 (Performance) or R406-2020 (ERI), section labeled as infiltration, sub-section ACH50. ACH(50) specified on Form R405-2020-Energy Calc (Performance) or R406-2020 (ERI): 5.000	
$\frac{\text{CFM}(50) \times 60}{\text{Building Volume}} = \text{ACH}(50)$ PASS ☐ When ACH(50) is less than 3, Mechanical Ventilation installation must be verified by building department. Method for calculating building volume: ☐ Retrieved from architectural plans ☒ Code software calculated ☐ Field measured and calculated	
R402.4.1.2 Testing. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 Pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or <i>(7) Florida Statutes</i> or individuals licensed as set forth in Section 489.105(3)(f), (g), or (i) or an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the <i>code official</i>. Testing shall be performed at any time after creation of all penetrations of the <i>building thermal envelope</i>. During testing: 1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures. 2. Dampers including exhaust, intake, makeup air, back draft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures. 3. Interior doors, if installed at the time of the test, shall be open. 4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed. 5. Heating and cooling systems, if installed at the time of the test, shall be turned off. 6. Supply and return registers, if installed at the time of the test, shall be fully open.	
Testing Company	
Company Name: _____ Phone: _____ I hereby verify that the above Air Leakage results are in accordance with the 2020 7th Edition Florida Building Code Energy Conservation requirements according to the compliance method selected above. Signature of Tester: _____ Date of Test: _____ Printed Name of Tester: _____ License/Certification #: _____ Issuing Authority: _____	

Residential System Sizing Calculation

Summary

N/A
145 SW Christiansen Court
Lake City, FL 32025

Project Title:
145 SW Christiansen Court

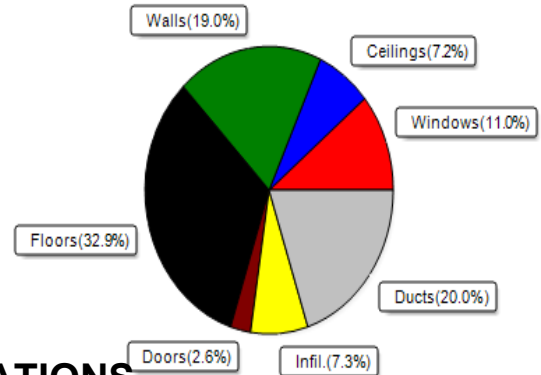
7/25/2023

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(152 ft.) Temp Range(M)			
Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(51gr.)			
Winter design temperature(TMY3 99%)	30 F	Summer design temperature(TMY3 99%)	94 F
Winter setpoint	70 F	Summer setpoint	75 F
Winter temperature difference	40 F	Summer temperature difference	19 F
Total heating load calculation	28061 Btuh	Total cooling load calculation	23895 Btuh
Submitted heating capacity	% of calc Btuh	Submitted cooling capacity	% of calc Btuh
Total (Electric Heat Pump)	100.0 28061	Sensible (SHR = 0.70)	83.5 16726
Heat Pump + Auxiliary(0.0kW)	100.0 28061	Latent	185.0 7168
		Total (Electric Heat Pump)	100.0 23895

WINTER CALCULATIONS

Winter Heating Load (for 1895 sqft)

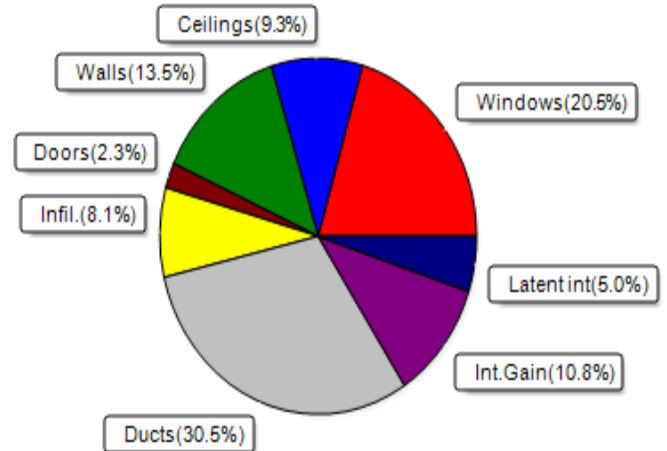
Load component	Load
Window total 215 sqft	3096 Btuh
Wall total 1503 sqft	5336 Btuh
Door total 40 sqft	736 Btuh
Ceiling total 1990 sqft	2020 Btuh
Floor total 1895 sqft	9220 Btuh
Infiltration 47 cfm	2045 Btuh
Duct loss	5608 Btuh
Subtotal	28061 Btuh
Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
TOTAL HEAT LOSS	28061 Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1895 sqft)

Load component	Load
Window total 215 sqft	4895 Btuh
Wall total 1503 sqft	3228 Btuh
Door total 40 sqft	552 Btuh
Ceiling total 1990 sqft	2222 Btuh
Floor total	0 Btuh
Infiltration 35 cfm	729 Btuh
Internal gain	2580 Btuh
Duct gain	5815 Btuh
Sens.Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
Blower Load	0 Btuh
Total sensible gain	20021 Btuh
Latent gain(ducts)	1465 Btuh
Latent gain(infiltration)	1209 Btuh
Latent gain(ventilation)	0 Btuh
Latent gain(internal/occupants/other)	1200 Btuh
Total latent gain	3874 Btuh
TOTAL HEAT GAIN	23895 Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: 7 / 26 / 2023

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

N/A
145 SW Christiansen Court
Lake City, FL 32025

Project Title:
145 SW Christiansen Court
Building Type: User

7/25/2023

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 40.0 °F (TMY3 99%)
Winter Setpoint: 70 °F (Required Manual J default)

Component Loads for Whole House								
Window	Panes/Type	Frame	U	Orientation	Area(sqft)	X	HTM=	Load
1	2, NFRC 0.25	Vinyl	0.36	N	30.0		14.4	432 Btuh
2	2, NFRC 0.25	Vinyl	0.36	E	75.0		14.4	1080 Btuh
3	2, NFRC 0.25	TIM	0.36	S	40.0		14.4	576 Btuh
4	2, NFRC 0.25	Vinyl	0.36	S	30.0		14.4	432 Btuh
5	2, NFRC 0.25	Vinyl	0.36	S	4.0		14.4	58 Btuh
6	2, NFRC 0.25	Vinyl	0.36	W	6.0		14.4	86 Btuh
7	2, NFRC 0.25	Vinyl	0.36	W	30.0		14.4	432 Btuh
Window Total					215.0(sqft)			3096 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	154		3.55	547 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	267		3.55	948 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	50		3.55	178 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	144		3.55	511 Btuh
5	Frame - Wood	- Ext	(0.089)	13.0/0.0	269		3.55	955 Btuh
6	Frame - Wood	- Ext	(0.089)	13.0/0.0	318		3.55	1129 Btuh
7	Frame - Wood	- Adj	(0.089)	13.0/0.0	169		3.55	600 Btuh
8	Frame - Wood	- Adj	(0.089)	13.0/0.0	132		3.55	469 Btuh
Wall Total					1503(sqft)			5336 Btuh
Doors	Type	Storm	Ueff.		Area	X	HTM=	Load
1	Insulated - Exterior, n		(0.460)		20		18.4	368 Btuh
2	Insulated - Garage, n		(0.460)		20		18.4	368 Btuh
Door Total					40(sqft)			736Btuh
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area	X	HTM=	Load
1	Flat ceil/M/Shing		(0.025)	38.0/0.0	1990		1.0	2020 Btuh
Ceiling Total					1990(sqft)			2020Btuh
Floors	Type		Ueff.	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	195.3 ft(perim.)		47.2	9220 Btuh
Floor Total					1895 sqft			9220 Btuh
	Envelope Subtotal:							20408 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=		
	Natural		0.16	17055	1.00	46.7		2045 Btuh
Duct load	Average sealed, R6.0, Supply(Att), Return(Att)						(DLM of 0.250)	5608 Btuh
All Zones	Sensible Subtotal All Zones							28061 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

N/A
145 SW Christiansen Court
Lake City, FL 32025

Project Title:
145 SW Christiansen Court
Building Type: User

7/25/2023

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	28061 Btuh
	Ventilation Sens. Heat Loss (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Total Heat Loss	28061 Btuh

EQUIPMENT

1. Electric Heat Pump	#	28061 Btuh
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Key: Window types - NFRC (Requires U-Factor and Shading coefficient(SHGC) of glass as numerical values)
or - Glass as 'Clear' or 'Tint' (Uses U-Factor and SHGC defaults)
U - (Window U-Factor)
HTM - (ManualJ Heat Transfer Multiplier)



Version 8

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

N/A
145 SW Christiansen Court
Lake City, FL 32025

Project Title:
145 SW Christiansen Court

7/25/2023

Reference City: Gainesville, FL (Defaults)
Humidity difference: 51gr.

Temperature Difference: 19.0F(TMY3 99%)
Summer Setpoint: 75 °F (Required Manual J default)

Component Loads for Whole House

Window	Type*						Overhang		Window Area(sqft)			HTM		Load		
	Panes	SHGC	U	InSh	IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded			
1	2 NFRC	0.25, 0.36	No	No	N		7.5ft.	1.0ft.	30.0	30.0	0.0	12	25	363	Btuh	
2	2 NFRC	0.25, 0.36	No	No	E		1.5ft.	1.0ft.	75.0	22.0	53.0	12	25	1578	Btuh	
3	2 NFRC	0.25, 0.36	No	No	S		6.5ft.	1.0ft.	40.0	0.0	40.0	12	24	946	Btuh	
4	2 NFRC	0.25, 0.36	No	No	S		1.5ft.	1.0ft.	30.0	0.0	30.0	12	24	709	Btuh	
5	2 NFRC	0.25, 0.36	No	No	S		1.5ft.	1.0ft.	4.0	0.0	4.0	12	24	95	Btuh	
6	2 NFRC	0.25, 0.36	No	No	W		1.5ft.	1.0ft.	6.0	0.0	6.0	12	24	142	Btuh	
7	2 NFRC	0.25, 0.36	No	No	W		1.5ft.	1.0ft.	30.0	0.0	30.0	12	24	709	Btuh	
	Excursion													354	Btuh	
	Window Total								215 (sqft)					4895 Btuh		
Walls	Type						U-Value		R-Value		Area(sqft)		HTM		Load	
									Cav/Sheath							
1	Frame - Wood - Ext						0.09		13.0/0.0		154.0		2.3		349 Btuh	
2	Frame - Wood - Ext						0.09		13.0/0.0		267.0		2.3		604 Btuh	
3	Frame - Wood - Ext						0.09		13.0/0.0		50.0		2.3		113 Btuh	
4	Frame - Wood - Ext						0.09		13.0/0.0		144.0		2.3		326 Btuh	
5	Frame - Wood - Ext						0.09		13.0/0.0		269.0		2.3		609 Btuh	
6	Frame - Wood - Ext						0.09		13.0/0.0		318.0		2.3		720 Btuh	
7	Frame - Wood - Adj						0.09		13.0/0.0		169.0		1.7		285 Btuh	
8	Frame - Wood - Adj						0.09		13.0/0.0		132.0		1.7		223 Btuh	
	Wall Total								1503 (sqft)					3228 Btuh		
Doors	Type								Area (sqft)		HTM		Load			
1	Insulated - Exterior								20.0		13.8		276 Btuh			
2	Insulated - Garage								20.0		13.8		276 Btuh			
	Door Total								40 (sqft)					552 Btuh		
Ceilings	Type/Color/Surface						U-Value		R-Value		Area(sqft)		HTM		Load	
1	Vented Attic/Med/Shingle/RB						0.025		38.0/0.0		1989.8		1.12		2222 Btuh	
	Ceiling Total								1990 (sqft)					2222 Btuh		
Floors	Type								R-Value		Size		HTM		Load	
1	Slab On Grade								0.0		1895 (ft-perimeter)		0.0		0 Btuh	
	Floor Total								1895.0 (sqft)					0 Btuh		
	Envelope Subtotal:													10897 Btuh		
Infiltration	Type						Average ACH		Volume(cuft)		Wall Ratio		CFM=		Load	
Natural							0.12		17055		1		35.0		729 Btuh	
Internal gain							Occupants		Btuh/occupant		Appliance		Load			
							6		X 230		+		1200		2580 Btuh	
	Sensible Envelope Load:													14206 Btuh		
Duct load	Average sealed,Supply(R6.0-Attic), Return(R6.0-Attic)										(DGM of 0.409)				5815 Btuh	
	Sensible Load All Zones													20021 Btuh		

Manual J Summer Calculations

Residential Load - Component Details (continued)

N/A
145 SW Christiansen Court
Lake City, FL 32025

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
145 SW Christiansen Court

7/25/2023

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	14206 Btuh
	Sensible Duct Load	5815 Btuh
	Total Sensible Zone Loads	20021 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Blower	0 Btuh
	Total sensible gain	20021 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	1209 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1465 Btuh
	Latent occupant gain (6.0 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	3874 Btuh
	TOTAL GAIN	23895 Btuh

EQUIPMENT

1. Central Unit	#	23895 Btuh
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*Key: Window types (Panels - Number and type of panes of glass)
(SHGC - Shading coefficient of glass as SHGC numerical value)
(U - Window U-Factor)
(InSh - Interior shading device: none(No), Blinds(B), Draperies(D) or Roller Shades(R))
- For Blinds: Assume medium color, half closed
For Draperies: Assume medium weave, half closed
For Roller shades: Assume translucent, half closed
(IS - Insect screen: none(N), Full(F) or Half(½))
(Ornt - compass orientation)



Version 8