

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: 179 SW Greenwood Terr
 Street: 179 SW Greenwood Terrace
 City, State, Zip: Ft White, FL,
 Owner: N/A
 Design Location: FL, Gainesville

Builder Name:
 Permit Office: Columbia County
 Permit Number:
 Jurisdiction:
 County: Columbia (Florida Climate Zone 2)

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	4
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft²)	1550
Conditioned floor area below grade (ft²)	0
7. Windows (165.0 sqft.)	Description Area
a. U-Factor:	DbI, U=0.36 165.00 ft²
SHGC:	SHGC=0.25
b. U-Factor:	N/A ft²
SHGC:	
c. U-Factor:	N/A ft²
SHGC:	
Area Weighted Average Overhang Depth:	3.439 ft.
Area Weighted Average SHGC:	0.250
8. Skylights	Area
c. U-Factor (AVG):	N/A ft²
SHGC (AVG):	N/A
9. Floor Types (1550.0 sqft.)	Insulation Area
a. Slab-On-Grade Edge Insulation	R=0.0 1550.00 ft²
b. N/A	R= ft²
c. N/A	R= ft²

10. Wall Types (1575.0 sqft.)	Insulation Area
a. Frame - Wood, Exterior	R=13.0 1374.00 ft²
b. Frame - Wood, Adjacent	R=13.0 201.00 ft²
c. N/A	R= ft²
d. N/A	R= ft²
11. Ceiling Types (1628.0 sqft.)	Insulation Area
a. Under Attic (Vented)	R=38.0 1628.00 ft²
b. N/A	R= ft²
c. N/A	R= ft²
12. Ducts	R ft²
a. Sup: Attic, Ret: Attic, AH: Main	6 387.5
13. Cooling systems	kBtu/hr Efficiency
a. Central Unit	17.7 SEER:14.00
14. Heating systems	kBtu/hr Efficiency
a. Electric Heat Pump	25.2 HSPF:8.20
15. Hot water systems	
a. Electric	Cap: 40 gallons
	EF: 0.920
b. Conservation features	
None	
16. Credits	CV, Pstat

Glass/Floor Area: 0.106 Total Proposed Modified Loads: 42.83
 Total Baseline Loads: 43.20

PASS

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

PREPARED BY: W. C. [Signature]
 DATE: 8 / 2 / 2022

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: _____

- 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.
- Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires an envelope leakage test report with envelope leakage no greater than 5.00 ACH50 (R402.4.1.2).

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	179 SW Greenwood Terr	Bedrooms:	4	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1550	Lot #	
Owner Name:	N/A	Total Stories:	1	Block/Subdivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:		Rotate Angle:	0	Street:	179 SW Greenwood Ter
Permit Office:	Columbia County	Cross Ventilation:	Yes	County:	Columbia
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Ft White , FL ,
Family Type:	Detached				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

✓	Design Location	TMY Site	Design Temp		Int Design Temp		Heating	Design	Daily Temp
			97.5 %	2.5 %	Winter	Summer	Degree Days	Moisture	Range
_____	FL, Gainesville	FL_GAINESVILLE_REGI	32	92	70	75	1305.5	51	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	1550	13950

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1550	13950	Yes	4	4	1	Yes	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulation	Main	183 ft	0	1550 ft²	----	0	0	1

ROOF

✓	#	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Hip	Composition shingles	1863 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	Partial cathedral ceili	Vented	300	1550 ft²	Y	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	38	Double Batt	1628 ft²	0.11	Wood

INPUT SUMMARY CHECKLIST REPORT

WALLS

✓	#	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
___	1	S	Exterior	Frame - Wood	Main	13	28	2	9		253.5 ft²		0.23	0.75	0
___	2	E	Exterior	Frame - Wood	Main	13	29	4	9		264.0 ft²		0.23	0.75	0
___	3	N	Exterior	Frame - Wood	Main	13	13	0	9		117.0 ft²		0.23	0.75	0
___	4	N	Exterior	Frame - Wood	Main	13	13	2	9		118.5 ft²		0.23	0.75	0
___	5	E	Exterior	Frame - Wood	Main	13	8	0	9		72.0 ft²		0.23	0.75	0
___	6	N	Exterior	Frame - Wood	Main	13	12	0	9		108.0 ft²		0.23	0.75	0
___	7	W	Exterior	Frame - Wood	Main	13	8		9		72.0 ft²		0.23	0.75	0
___	8	N	Exterior	Frame - Wood	Main	13	12	8	9		114.0 ft²		0.23	0.75	0
___	9	W	Exterior	Frame - Wood	Main	13	28	4	9		255.0 ft²		0.23	0.75	0
___	10	S	Garage	Frame - Wood	Main	13	22	4	9		201.0 ft²		0.23	0.75	0

DOORS

✓	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
___	1	S	Insulated	Main	None	.46	3		6	8	20 ft²
___	2	S	Insulated	Main	None	.46	3		6	8	20 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

✓	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Depth	Overhang Separation	Int Shade	Screening
___	1	S	1	Vinyl	Low-E Double	Yes	0.36	0.25	N	60.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___	2	E	2	Vinyl	Low-E Double	Yes	0.36	0.25	N	4.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___	3	N	3	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___	4	N	4	TIM	Low-E Double	Yes	0.36	0.25	N	40.0 ft²	9 ft 6 in	1 ft 0 in	None	None
___	5	N	6	Vinyl	Low-E Double	Yes	0.36	0.25	N	12.0 ft²	1 ft 6 in	1 ft 0 in	Drapes/blinds	None
___	6	N	8	Vinyl	Low-E Double	Yes	0.36	0.25	N	30.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___	7	W	9	Vinyl	Low-E Double	Yes	0.36	0.25	N	4.0 ft²	1 ft 6 in	1 ft 0 in	None	None

GARAGE

✓	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
___	1	468.458889 ft²	468.458889 ft²	62.667 ft	9 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000286	1162.5	63.78	119.74	.1027	5

INPUT SUMMARY CHECKLIST REPORT

HEATING SYSTEM														
☒	#	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts						
_____	1	Electric Heat Pump/	None	Single	HSPF:8.2	25.24 kBtu/hr	1	sys#1						
COOLING SYSTEM														
☒	#	System Type	Subtype	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts				
_____	1	Central Unit/	None	Single	SEER: 14	17.67 kBtu/hr	540 cfm	0.7	1	sys#1				
HOT WATER SYSTEM														
☒	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation					
_____	1	Electric	None	Garage	0.92	40 gal	30 gal	120 deg	None					
SOLAR HOT WATER SYSTEM														
☒	FSEC Cert #	Company Name	System Model#	Collector Model#	Collector Area	Storage Volume	FEF							
_____	None	None			ft²									
DUCTS														
☒	#	---- Supply ---- Location	R-Value	Area	---- Return ---- Location	Area	Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat	Cool
_____	1	Attic	6	387.5 ft²	Attic	77.5 ft²	Default Leakage	Main	(Default) c	(Default) c			1	1
TEMPERATURES														
Programable Thermostat: Y					Ceiling Fans:									
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	78	78	78	78	78	78	78	78	80	80	80	80	
	PM	80	80	78	78	78	78	78	78	78	78	78	78	
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	78	78	78	78	
	PM	78	78	78	78	78	78	78	78	78	78	78	78	
Heating (WD)	AM	66	66	66	66	66	68	68	68	68	68	68	68	
	PM	68	68	68	68	68	68	68	68	68	68	68	66	
Heating (WEH)	AM	66	66	66	66	66	68	68	68	68	68	68	68	
	PM	68	68	68	68	68	68	68	68	68	68	68	66	
MECHANICAL VENTILATION														
Type	Supply CFM	Exhaust CFM	Fan Watts	HRV	Heating System	Run Time	Cooling System							
Runtime Vent	20	0		0	1 - Electric Heat Pump	%	1 - Central Unit							
MASS														
Mass Type	Area	Thickness	Furniture Fraction	Space										
Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.3	1st Floor										
Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.3	2nd Floor										

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 99

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

179 SW Greenwood Terrace, Ft White, FL,

1. New construction or existing	New (From Plans)	10. Wall Type and Insulation	Insulation	Area
2. Single family or multiple family	Detached	a. Frame - Wood, Exterior	R=13.0	1374.00 ft²
3. Number of units, if multiple family	1	b. Frame - Wood, Adjacent	R=13.0	201.00 ft²
4. Number of Bedrooms	4	c. N/A	R=	ft²
5. Is this a worst case?	No	d. N/A	R=	ft²
6. Conditioned floor area (ft²)	1550	11. Ceiling Type and insulation level	Insulation	Area
7. Windows**	Description	a. Under Attic (Vented)	R=38.0	1628.00 ft²
a. U-Factor:	Dbl, U=0.36	b. N/A	R=	ft²
SHGC:	SHGC=0.25	c. N/A	R=	ft²
b. U-Factor:	N/A	12. Ducts, location & insulation level	R	ft²
SHGC:		a. Sup: Attic, Ret: Attic, AH: Main	6	387.5
c. U-Factor:	N/A	13. Cooling systems	kBtu/hr	Efficiency
SHGC:		a. Central Unit	17.7	SEER:14.00
d. U-Factor:	N/A	14. Heating systems	kBtu/hr	Efficiency
SHGC:		a. Electric Heat Pump	25.2	HSPF:8.20
Area Weighted Average Overhang Depth:	3.439 ft.	15. Hot water systems		
Area Weighted Average SHGC:	0.250	a. Electric	Cap: 40 gallons	
8. Skylights	Description		EF: 0.92	
a. U-Factor(AVG):	N/A	b. Conservation features		
SHGC(AVG):	N/A	None		
9. Floor Types	Insulation	Credits (Performance method)	CV, Pstat	
a. Slab-On-Grade Edge Insulation	R=0.0			
b. N/A	R=			
c. N/A	R=			

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: _____ City/FL Zip: _____



*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: 179 SW Greenwood Terrace	
City: Ft White	State: FL
Zip:	
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	
$\frac{\text{CFM}(50)}{\text{Building Volume}} \times 60 \div \frac{13950}{\text{ACH}(50)} =$ 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>(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
179 SW Greenwood Terrace
Ft White, FL

Project Title:
179 SW Greenwood Terr

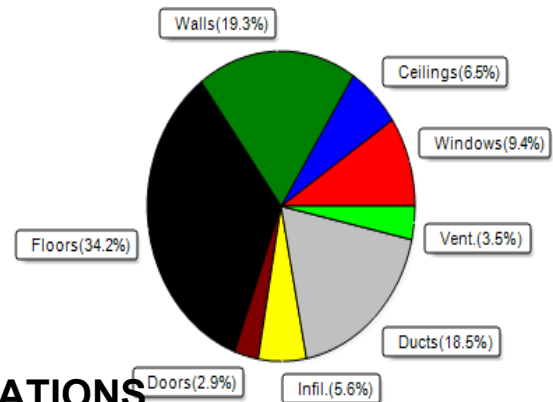
8/2/2022

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	25242 Btuh	Total cooling load calculation	17675 Btuh
Submitted heating capacity	% of calc Btuh	Submitted cooling capacity	% of calc Btuh
Total (Electric Heat Pump)	100.0 25242	Sensible (SHR = 0.70)	86.7 12372
Heat Pump + Auxiliary(0.0kW)	100.0 25242	Latent	156.0 5302
		Total (Electric Heat Pump)	100.0 17675

WINTER CALCULATIONS

Winter Heating Load (for 1550 sqft)

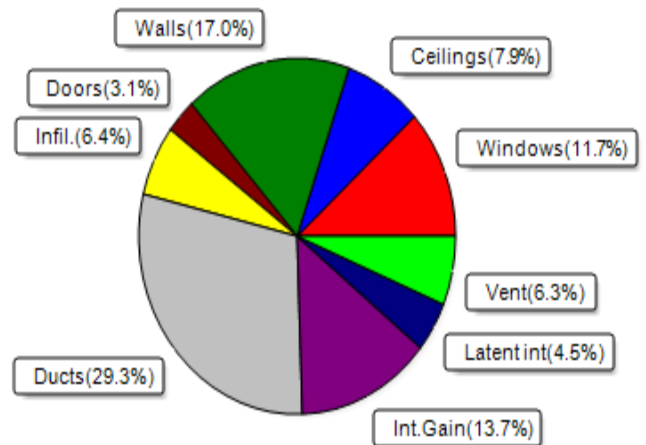
Load component		Load	
Window total	165 sqft	2376	Btuh
Wall total	1370 sqft	4864	Btuh
Door total	40 sqft	736	Btuh
Ceiling total	1628 sqft	1653	Btuh
Floor total	1550 sqft	8638	Btuh
Infiltration	33 cfm	1425	Btuh
Duct loss		4674	Btuh
Subtotal		24366	Btuh
Ventilation	20 cfm	876	Btuh
TOTAL HEAT LOSS		25242	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1550 sqft)

Load component		Load	
Window total	165 sqft	2077	Btuh
Wall total	1370 sqft	2996	Btuh
Door total	40 sqft	552	Btuh
Ceiling total	1628 sqft	1405	Btuh
Floor total		0	Btuh
Infiltration	21 cfm	427	Btuh
Internal gain		2420	Btuh
Duct gain		3984	Btuh
Sens. Ventilation	20 cfm	416	Btuh
Blower Load		0	Btuh
Total sensible gain		14276	Btuh
Latent gain(ducts)		1200	Btuh
Latent gain(infiltration)		708	Btuh
Latent gain(ventilation)		690	Btuh
Latent gain(internal/occupants/other)		800	Btuh
Total latent gain		3399	Btuh
TOTAL HEAT GAIN		17675	Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: 8 / 2 / 2022

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

N/A
179 SW Greenwood Terrace
Ft White, FL

Project Title:
179 SW Greenwood Terr
Building Type: User

8/2/2022

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 40.0 F (TMY3 99%)

Component Loads for Whole House								
Window	Panes/Type	Frame	U	Orientation	Area(sqft)	X	HTM=	Load
1	2, NFRC 0.25	Vinyl	0.36	S	60.0		14.4	864 Btuh
2	2, NFRC 0.25	Vinyl	0.36	E	4.0		14.4	58 Btuh
3	2, NFRC 0.25	Vinyl	0.36	N	15.0		14.4	216 Btuh
4	2, NFRC 0.25	TIM	0.36	N	40.0		14.4	576 Btuh
5	2, NFRC 0.25	Vinyl	0.36	N	12.0		14.4	173 Btuh
6	2, NFRC 0.25	Vinyl	0.36	N	30.0		14.4	432 Btuh
7	2, NFRC 0.25	Vinyl	0.36	W	4.0		14.4	58 Btuh
Window Total					165.0(sqft)			2376 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	174		3.55	616 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	260		3.55	923 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	102		3.55	362 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	79		3.55	279 Btuh
5	Frame - Wood	- Ext	(0.089)	13.0/0.0	72		3.55	256 Btuh
6	Frame - Wood	- Ext	(0.089)	13.0/0.0	96		3.55	341 Btuh
7	Frame - Wood	- Ext	(0.089)	13.0/0.0	72		3.55	256 Btuh
8	Frame - Wood	- Ext	(0.089)	13.0/0.0	84		3.55	298 Btuh
9	Frame - Wood	- Ext	(0.089)	13.0/0.0	251		3.55	891 Btuh
10	Frame - Wood	- Adj	(0.089)	13.0/0.0	181		3.55	643 Btuh
Wall Total					1370(sqft)			4864 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	Vented Attic/L/Shing		(0.025)	38.0/0.0	1628		1.0	1653 Btuh
Ceiling Total					1628(sqft)			1653Btuh
Floors	Type		Ueff.	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	183.0 ft(perim.)		47.2	8638 Btuh
Floor Total					1550 sqft			8638 Btuh
Envelope Subtotal:								18266 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=		Load
Natural(Adjusted for ventilation)			0.16	13950	1.00	32.6		1425 Btuh
Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.237)							4674 Btuh
All Zones	Sensible Subtotal All Zones							24366 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

N/A
179 SW Greenwood Terrace
Ft White, FL

Project Title:
179 SW Greenwood Terr
Building Type: User

8/2/2022

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	24366 Btuh
	Ventilation Sensible Heat Loss	876 Btuh
	Total Heat Loss	25242 Btuh

EQUIPMENT

1. Electric Heat Pump	#	25242 Btuh
-----------------------	---	------------

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
179 SW Greenwood Terrace
Ft White, FL

Project Title:
179 SW Greenwood Terr

8/2/2022

Reference City: Gainesville, FL

Temperature Difference: 19.0F(TMY3 99%) Humidity difference: 51gr.

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	S		1.5ft.	1.0ft.	60.0	60.0	0.0	12	14	726	Btuh
2	2 NFRC	0.25, 0.36	No	No	E		1.5ft.	1.0ft.	4.0	1.0	3.0	12	31	105	Btuh
3	2 NFRC	0.25, 0.36	No	No	N		1.5ft.	1.0ft.	15.0	0.0	15.0	12	12	181	Btuh
4	2 NFRC	0.25, 0.36	No	No	N		9.5ft.	1.0ft.	40.0	0.0	40.0	12	12	484	Btuh
5	2 NFRC	0.25, 0.36	B-L	No	N		1.5ft.	1.0ft.	12.0	0.0	12.0	9	9	112	Btuh
6	2 NFRC	0.25, 0.36	No	No	N		1.5ft.	1.0ft.	30.0	0.0	30.0	12	12	363	Btuh
7	2 NFRC	0.25, 0.36	No	No	W		1.5ft.	1.0ft.	4.0	1.0	3.0	12	31	105	Btuh
	Window Total								165 (sqft)					2077 Btuh	
Walls	Type	U-Value		R-Value		Area(sqft)		HTM		Load					
1	Frame - Wood - Ext						0.09	13.0/0.0		173.5		2.3		393	Btuh
2	Frame - Wood - Ext						0.09	13.0/0.0		260.0		2.3		588	Btuh
3	Frame - Wood - Ext						0.09	13.0/0.0		102.0		2.3		231	Btuh
4	Frame - Wood - Ext						0.09	13.0/0.0		78.5		2.3		178	Btuh
5	Frame - Wood - Ext						0.09	13.0/0.0		72.0		2.3		163	Btuh
6	Frame - Wood - Ext						0.09	13.0/0.0		96.0		2.3		217	Btuh
7	Frame - Wood - Ext						0.09	13.0/0.0		72.0		2.3		163	Btuh
8	Frame - Wood - Ext						0.09	13.0/0.0		84.0		2.3		190	Btuh
9	Frame - Wood - Ext						0.09	13.0/0.0		251.0		2.3		568	Btuh
10	Frame - Wood - Adj						0.09	13.0/0.0		181.0		1.7		305	Btuh
	Wall Total								1370 (sqft)					2996 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/Light/Shingle/RB		0.025		38.0/0.0		1628.0		0.86		1405 Btuh				
	Ceiling Total				1628 (sqft)				1405 Btuh						
Floors	Type	R-Value		Size		HTM		Load							
1	Slab On Grade		0.0		1550 (ft-perimeter)		0.0		0 Btuh						
	Floor Total		1550.0 (sqft)				0 Btuh								
	Envelope Subtotal:											7030 Btuh			
Infiltration	Type	Average ACH		Volume(cuft)		Wall Ratio		CFM=		Load					
	Natural(Adjusted for ventilation)		0.09		13950		1		20.5		427 Btuh				
Internal gain	Occupants		Btuh/occupant		Appliance		Load								
		4	X	230	+	1500		2420 Btuh							
	Sensible Envelope Load:											9877 Btuh			
Duct load	Average sealed,Supply(R6.0-Attic), Return(R6.0-Attic)		(DGM of 0.403)		Load										
	Sensible Load All Zones											13860 Btuh			

Manual J Summer Calculations

Residential Load - Component Details (continued)

N/A
179 SW Greenwood Terrace
Ft White, FL

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
179 SW Greenwood Terr

8/2/2022

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	9877 Btuh
	Sensible Duct Load	3984 Btuh
	Total Sensible Zone Loads	13860 Btuh
	Sensible ventilation	416 Btuh
	Blower	0 Btuh
	Total sensible gain	14276 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	708 Btuh
	Latent ventilation gain	690 Btuh
	Latent duct gain	1200 Btuh
	Latent occupant gain (4.0 people @ 200 Btuh per person)	800 Btuh
	Latent other gain	0 Btuh
	Latent total gain	3399 Btuh
	TOTAL GAIN	17675 Btuh

EQUIPMENT

1. Central Unit	#	17675 Btuh
-----------------	---	------------

*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