

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name 1307054
 Street 511 Rolling Meadows Glen
 City, State, Zip Fort White, FL,
 Owner Kirchenstiner, Robert
 Design Location FL, Gainesville

Builder Name Edgley Construction
 Permit Office
 Permit Number
 Jurisdiction

1 New construction or existing	New (From Plans)
2 Single family or multiple family	Single-family
3 Number of units, if multiple family	1
4 Number of Bedrooms	3
5 Is this a worst case?	Yes
6 Conditioned floor area above grade (ft ²)	2275
Conditioned floor area below grade (ft ²)	0
7 Windows(375 2 sqft)	Description Area
a U-Factor	Dbl, U=0 35 375 17 ft ²
SHGC	SHGC=0 35
b U-Factor	N/A ft ²
SHGC	
c U-Factor	N/A ft ²
SHGC	
d U-Factor	N/A ft ²
SHGC	
Area Weighted Average Overhang Depth	1 500 ft
Area Weighted Average SHGC	0 350
8 Floor Types (2275 0 sqft)	Insulation Area
a Slab-On-Grade Edge Insulation	R=0 0 2275 00 ft ²
b N/A	R= ft ²
c N/A	R= ft ²

9 Wall Types(2287 8 sqft)	Insulation Area
a Face Brick - Wood, Exterior	R=13 0 1864 80 ft ²
b Frame - Wood, Adjacent	R=13 0 423 00 ft ²
c N/A	R= ft ²
d N/A	R= ft ²
10 Ceiling Types (2275 0 sqft)	Insulation Area
a Under Attic (Vented)	R=30 0 2275 00 ft ²
b N/A	R= ft ²
c N/A	R= ft ²
11 Ducts	R ft ²
a Sup Attic, Ret Attic, AH Main	6 455
12 Cooling systems	kBtu/hr Efficiency
a Central Unit	55 0 SEER 13 00
13 Heating systems	kBtu/hr Efficiency
a Electric Heat Pump	55 0 HSPF 7 70
14 Hot water systems	
a Electric	Cap 40 gallons
	EF 0 920
b Conservation features	
None	
15 Credits	Pstat

Glass/Floor Area 0 165
 Total Proposed Modified Loads 37 37
 Total Standard Reference Loads 46.44

PASS

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

PREPARED BY
 DATE 2013-08-20

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 completion of a Florida Air Barrier and Insulation Inspection Checklist

PROJECT												
Title	1307054	Bedrooms	3	Address Type	Street Address							
Building Type	User	Conditioned Area	2275	Lot #								
Owner	Kirchenstiner, Robert	Total Stories	1	Block/SubDivision								
# of Units	1	Worst Case	Yes	PlatBook								
Builder Name	Edgley Construction	Rotate Angle	270	Street	511 Rolling Meadows G							
Permit Office		Cross Ventilation		County	Columbia							
Jurisdiction		Whole House Fan		City, State, Zip	Fort White , FL ,							
Family Type	Single-family											
New/Existing	New (From Plans)											
Comment												
CLIMATE												
✓	Design Location	TMY Site	IECC Zone	Design Temp 97 5 %	2 5 %	Int Design Temp Winter	Summer	Heating Degree Days	Design Moisture	Daily Temp Range		
_____	FL, Gainesville	FL_GAINESVILLE_REGI	2	32	92	70	75	1305 5	51	Medium		
BLOCKS												
	Number	Name	Area	Volume								
	1	Block1	2275	20475								
SPACES												
	Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated	
	1	Main	2275	20475	Yes	6	3	1	Yes	Yes	Yes	
FLOORS												
✓	#	Floor Type	Space	Perimeter	R-Value	Area			Tile	Wood	Carpet	
_____	1	Slab-On-Grade Edge Insulatio	Main	255 ft	0	2275 ft²	----		0 3	0 3	0 4	
ROOF												
✓	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor	SA Tested	Emitt	Emitt Tested	Deck Insul	Pitch (deg)
_____	1	Hip	Composition shingles	2544 ft²	0 ft²	Dark	0 96	No	0 9	No	0	26 6
ATTIC												
✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC					
_____	1	Full attic	Vented	300	2275 ft²	N	N					
CEILING												
✓	#	Ceiling Type	Space	R-Value	Area	Framing Frac	Truss Type					
_____	1	Under Attic (Vented)	Main	30	2275 ft²	0 11	Wood					

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	N=>W	Exterior	Face Brick - Wood	Main	13	69	9	621 ft²	0	0	0.75	0
2	NE=>NW	Exterior	Face Brick - Wood	Main	13	4 2	9	37 79999	0	0	0.75	0
3	E=>N	Exterior	Face Brick - Wood	Main	13	51	9	459 ft²	0	0	0.75	0
4	SE=>NE	Exterior	Face Brick - Wood	Main	13	3 5	9	31 5 ft²	0	0	0.75	0
5	S=>E	Exterior	Face Brick - Wood	Main	13	43	9	387 ft²	0	0	0.75	0
6	SW=>SE	Exterior	Face Brick - Wood	Main	13	3 5	9	31 5 ft²	0	0	0.75	0
7	W=>S	Exterior	Face Brick - Wood	Main	13	33	9	297 ft²	0	0	0.75	0
8	S=>E	Garage	Frame - Wood	Main	13	47	9	423 ft²		0.23	0.75	0

DOORS

✓ #	Ornt	Door Type	Space	Storms	U-Value	Width Ft In	Height Ft In	Area
1	E=>N	Insulated	Main	None	0.400000	2	6 8	13.33333
2	N=>W	Insulated	Main	None	0.400000	2	6 8	13.33333
3	N=>W	Insulated	Main	None	0.400000	2	6 8	13.33333
4	S=>E	Insulated	Main	None	0.400000	2	6 8	33.33333
5	S=>E	Insulated	Main	None	0.400000	2	6 8	20 ft²

WINDOWS

Orientation shown is the entered orientation (=>) changed to Worst Case

✓ #	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
1	N=>W	1	Metal	Low-E Double	Yes	0.35	0.35	3 ft²	1 ft 6 in	1 ft 0 in	None	None
2	N=>W	1	Metal	Low-E Double	Yes	0.35	0.35	45 ft²	1 ft 6 in	1 ft 0 in	None	None
3	N=>W	1	Metal	Low-E Double	Yes	0.35	0.35	40 ft²	1 ft 6 in	1 ft 0 in	None	None
4	N=>W	1	Metal	Low-E Double	Yes	0.35	0.35	99.99999	1 ft 6 in	1 ft 0 in	None	None
5	E=>N	3	Metal	Low-E Double	Yes	0.35	0.35	26.66666	1 ft 6 in	1 ft 0 in	None	None
6	E=>N	3	Metal	Low-E Double	Yes	0.35	0.35	40 ft²	1 ft 6 in	1 ft 0 in	None	None
7	E=>N	3	Metal	Low-E Double	Yes	0.35	0.35	3 ft²	1 ft 6 in	1 ft 0 in	None	None
8	SE=>NE	4	Metal	Low-E Double	Yes	0.35	0.35	10 ft²	1 ft 6 in	1 ft 0 in	None	None
9	S=>E	5	Metal	Low-E Double	Yes	0.35	0.35	45 ft²	1 ft 6 in	1 ft 0 in	None	None
10	S=>E	5	Metal	Low-E Double	Yes	0.35	0.35	5.833333	1 ft 6 in	1 ft 0 in	None	None
11	S=>E	5	Metal	Low-E Double	Yes	0.35	0.35	24.66666	1 ft 6 in	1 ft 0 in	None	None
12	SW=>SE	6	Metal	Low-E Double	Yes	0.35	0.35	10 ft²	1 ft 6 in	1 ft 0 in	None	None
13	W=>S	7	Metal	Low-E Double	Yes	0.35	0.35	6 ft²	1 ft 6 in	1 ft 0 in	None	None
14	W=>S	7	Metal	Low-E Double	Yes	0.35	0.35	16 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	639 ft²	639 ft²	58 ft	9 ft	1							

INFILTRATION									
#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50	
1	Wholehouse	Best Guess	0 000699	4177 1	229 31	431 27	0 5389	12 240	

HEATING SYSTEM									
✓	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts		
✓	1	Electric Heat Pump	None	HSPF 7 7	55 kBtu/hr	1	sys#1		

COOLING SYSTEM									
✓	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
✓	1	Central Unit	None	SEER 13	55 kBtu/hr	1650 cfm	0 75	1	sys#1

HOT WATER SYSTEM									
✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
✓	1	Electric	None	Main	0 92	40 gal	60 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 ----			---- Return ----		Leakage Type	Air Handler	CFM 25	Percent Leakage	QN	RLF	HVAC # Heat Cool	
✓	1	Attic	6	455 ft²	Attic	113 75	Default Leakage	Main	(Default)	(Default) %			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		Hours											
		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	66	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	66	66

Florida Code Compliance Checklist

Florida Department of Business and Professional Regulations
Residential Whole Building Performance Method

ADDRESS 511 Rolling Meadows Glen
Fort White, FL,

PERMIT #

MANDATORY REQUIREMENTS SUMMARY - See individual code sections for full details.

COMPONENT	SECTION	SUMMARY OF REQUIREMENT(S)	CHECK
Air leakage	402.4	To be caulked, gasketed, weatherstripped or otherwise sealed. Recessed lighting IC-rated as meeting ASTM E 283. Windows and doors = 0.30 cfm/sq ft Testing or visual inspection required. Fireplaces gasketed doors & outdoor combustion air. Must complete envelope leakage report or visually verify Table 402.4.2.	
Thermostat & controls	403.1	At least one thermostat shall be provided for each separate heating and cooling system. Where forced-air furnace is primary system, programmable thermostat is required. Heat pumps with supplemental electric heat must prevent supplemental heat when compressor can meet the load.	
Ducts	403.2.2	All ducts, air handlers, filter boxes and building cavities which form the primary air containment passageways for air distribution systems shall be considered ducts or plenum chambers, shall be constructed and sealed in accordance with Section 503.2.7.2 of this code.	
	403.3.3	Building framing cavities shall not be used as supply ducts.	
Water heaters	403.4	Heat trap required for vertical pipe risers. Comply with efficiencies in Table 403.4.3.2. Provide switch or clearly marked circuit breaker (electric) or shutoff (gas). Circulating system pipes insulated to = R-2 + accessible manual OFF switch.	
Mechanical ventilation	403.5	Homes designed to operate at positive pressure or with mechanical ventilation systems shall not exceed the minimum ASHRAE 62 level. No make-up air from attics, crawlspaces, garages or outdoors adjacent to pools or spas.	
Swimming Pools & Spas	403.9	Pool pumps and pool pump motors with a total horsepower (HP) of = 1 HP shall have the capability of operating at two or more speeds. Spas and heated pools must have vapor-retardant covers or a liquid cover or other means proven to reduce heat loss except if 70% of heat from site-recovered energy. Off/timer switch required. Gas heaters minimum thermal efficiency=78% (82% after 4/16/13). Heat pump pool heaters minimum COP= 4.0.	
Cooling/heating equipment	403.6	Sizing calculation performed & attached. Minimum efficiencies per Tables 503.2.3. Equipment efficiency verification required. Special occasion cooling or heating capacity requires separate system or variable capacity system. Electric heat >10kW must be divided into two or more stages.	
Ceilings/knee walls	405.2.1	R-19 space permitting.	

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 80

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

511 Rolling Meadows Glen, Fort White, FL,

1 New construction or existing	New (From Plans)		9 Wall Types	Insulation	Area
2 Single family or multiple family	Single-family		a Face Brick - Wood, Exterior	R=13 0	1864 80 ft ²
3 Number of units, if multiple family	1		b Frame - Wood, Adjacent	R=13 0	423 00 ft ²
4 Number of Bedrooms	3		c N/A	R=	ft ²
5 Is this a worst case?	Yes		d N/A	R=	ft ²
6 Conditioned floor area (ft ²)	2275		10 Ceiling Types	Insulation	Area
7 Windows**	Description	Area	a Under Attic (Vented)	R=30 0	2275 00 ft ²
a U-Factor	Dbl, U=0 35	375 17 ft ²	b N/A	R=	ft ²
SHGC	SHGC=0 35		c N/A	R=	ft ²
b U-Factor	N/A	ft ²	11 Ducts		R ft ²
SHGC			a Sup Attic, Ret Attic, AH Main	6	455
c U-Factor	N/A	ft ²	12 Cooling systems	kBtu/hr	Efficiency
SHGC			a Central Unit	55 0	SEER 13 00
d U-Factor	N/A	ft ²	13 Heating systems	kBtu/hr	Efficiency
SHGC			a Electric Heat Pump	55 0	HSPF 7 70
Area Weighted Average Overhang Depth		1 500 ft	14 Hot water systems		Cap 40 gallons
Area Weighted Average SHGC		0 350	a Electric		EF 0 92
8 Floor Types	Insulation	Area	b Conservation features		
a Slab-On-Grade Edge Insulation	R=0 0	2275 00 ft ²	None		
b N/A	R=	ft ²	15 Credits		Pstat
c N/A	R=	ft ²			

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 EnergyGauge Rating. Contact the EnergyGauge Hotline at (321) 638-1492 or see the EnergyGauge web site at energygauge.com for information and a list of certified Raters. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commission's support staff.

**Label required by Section 303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT

Residential System Sizing Calculation

Summary

Kirchenstiner, Robert
511 Rolling Meadows Glen
Fort White, FL

Project Title.
1307054

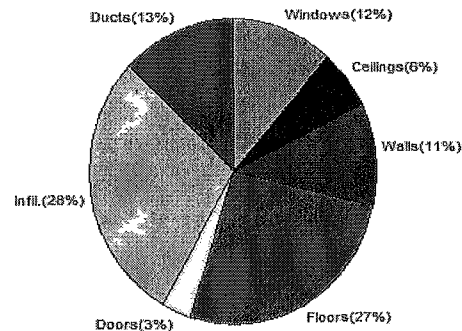
2013-08-20

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(54gr)			
Winter design temperature(MJ8 99%)	33 F	Summer design temperature(MJ8 99%)	92 F
Winter setpoint	70 F	Summer setpoint	75 F
Winter temperature difference	37 F	Summer temperature difference	17 F
Total heating load calculation	41979 Btuh	Total cooling load calculation	46031 Btuh
Submitted heating capacity	% of calc Btuh	Submitted cooling capacity	% of calc Btuh
Total (Electric Heat Pump)	131.0 55000	Sensible (SHR = 0.75)	116.7 41250
Heat Pump + Auxiliary(0.0 kW)	131.0 55000	Latent	128.5 13750
		Total (Electric Heat Pump)	119.5 55000

WINTER CALCULATIONS

Winter Heating Load (for 2275 sqft)

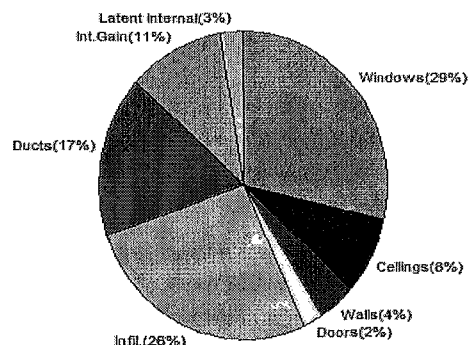
Load component		Load	
Window total	375 sqft	4858	Btuh
Wall total	1819 sqft	4611	Btuh
Door total	93 sqft	1381	Btuh
Ceiling total	2275 sqft	2681	Btuh
Floor total	2275 sqft	11133	Btuh
Infiltration	294 cfm	11921	Btuh
Duct loss		5393	Btuh
Subtotal		41979	Btuh
Ventilation	0 cfm	0	Btuh
TOTAL HEAT LOSS		41979	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 2275 sqft)

Load component		Load	
Window total	375 sqft	13178	Btuh
Wall total	1819 sqft	1852	Btuh
Door total	93 sqft	1045	Btuh
Ceiling total	2275 sqft	3768	Btuh
Floor total		0	Btuh
Infiltration	221 cfm	4108	Btuh
Internal gain		4880	Btuh
Duct gain		6503	Btuh
Sens Ventilation	0 cfm	0	Btuh
Blower Load		0	Btuh
Total sensible gain		35333	Btuh
Latent gain(ducts)		1431	Btuh
Latent gain(infiltration)		8066	Btuh
Latent gain(ventilation)		0	Btuh
Latent gain(internal/occupants/other)		1200	Btuh
Total latent gain		10698	Btuh
TOTAL HEAT GAIN		46031	Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY

DATE 2013-08-20

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Kirchenstiner, Robert
511 Rolling Meadows Glen
Fort White, FL

Project Title
1307054
Building Type User

2013-08-20

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 37.0 F (MJ8 99%)
This calculation is for Worst Case. The house has been rotated 270 degrees.

Component Loads for Whole House

Window	Panes/Type	Frame	U	Orientation	Area(sqft)	X	HTM=	Load
1	2, NFRC 0.35	Metal	0.35	W	3.0		12.9	39 Btuh
2	2, NFRC 0.35	Metal	0.35	W	45.0		12.9	583 Btuh
3	2, NFRC 0.35	Metal	0.35	W	40.0		12.9	518 Btuh
4	2, NFRC 0.35	Metal	0.35	W	100.0		12.9	1295 Btuh
5	2, NFRC 0.35	Metal	0.35	N	26.7		12.9	345 Btuh
6	2, NFRC 0.35	Metal	0.35	N	40.0		12.9	518 Btuh
7	2, NFRC 0.35	Metal	0.35	N	3.0		12.9	39 Btuh
8	2, NFRC 0.35	Metal	0.35	NE	10.0		12.9	130 Btuh
9	2, NFRC 0.35	Metal	0.35	E	45.0		12.9	583 Btuh
10	2, NFRC 0.35	Metal	0.35	E	5.8		12.9	76 Btuh
11	2, NFRC 0.35	Metal	0.35	E	24.7		12.9	319 Btuh
12	2, NFRC 0.35	Metal	0.35	SE	10.0		12.9	130 Btuh
13	2, NFRC 0.35	Metal	0.35	S	6.0		12.9	78 Btuh
14	2, NFRC 0.35	Metal	0.35	S	16.0		12.9	207 Btuh
Window Total					375.2(sqft)			4858 Btuh
Walls	Type	Ornt	Ueff	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Face Br - Wood	- Ext	(0.063)	13.0/0.0	406		2.32	943 Btuh
2	Face Br - Wood	- Ext	(0.063)	13.0/0.0	38		2.32	88 Btuh
3	Face Br - Wood	- Ext	(0.063)	13.0/0.0	376		2.32	873 Btuh
4	Face Br - Wood	- Ext	(0.063)	13.0/0.0	22		2.32	50 Btuh
5	Face Br - Wood	- Ext	(0.063)	13.0/0.0	278		2.32	646 Btuh
6	Face Br - Wood	- Ext	(0.063)	13.0/0.0	22		2.32	50 Btuh
7	Face Br - Wood	- Ext	(0.063)	13.0/0.0	275		2.32	638 Btuh
8	Frame - Wood	- Adj	(0.089)	13.0/0.0	403		3.28	1323 Btuh
Wall Total					1819(sqft)			4611 Btuh
Doors	Type	Storm	Ueff		Area	X	HTM=	Load
1	Insulated - Exterior,	n	(0.400)		13		14.8	197 Btuh
2	Insulated - Exterior,	n	(0.400)		13		14.8	197 Btuh
3	Insulated - Exterior,	n	(0.400)		13		14.8	197 Btuh
4	Insulated - Exterior,	n	(0.400)		33		14.8	493 Btuh
5	Insulated - Garage,	n	(0.400)		20		14.8	296 Btuh
Door Total					93(sqft)			1381 Btuh
Ceilings	Type/Color/Surface		Ueff	R-Value	Area	X	HTM=	Load
1	Vented Attic/D/Shing		(0.032)	30.0/0.0	2275		1.2	2681 Btuh
Ceiling Total					2275(sqft)			2681 Btuh
Floors	Type		Ueff	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	255.0 ft(perim.)		43.7	11133 Btuh
Floor Total					2275 sqft			11133 Btuh
Envelope Subtotal								24665 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Kirchenstiner, Robert
511 Rolling Meadows Glen
Fort White, FL

Project Title
1307054
Building Type User

2013-08-20

Infiltration	Type Natural	Wholehouse ACH 0.86	Volume(cuft) 20475	Wall Ratio 1.00	CFM= 294.3	11921 Btuh
Duct load	Average sealed, R6 0, Supply(Att), Return(Att) (DLM of 0.147)					5393 Btuh
All Zones	Sensible Subtotal All Zones					41979 Btuh

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sensible Heat Loss Total Heat Loss	41979 Btuh 0 Btuh 41979 Btuh
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EQUIPMENT

1 Electric Heat Pump	#	55000 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

Kirchenstiner, Robert
511 Rolling Meadows Glen
Fort White, FL

Project Title.
1307054

2013-08-20

Reference City. Gainesville, FL Temperature Difference. 17 OF(MJ8 99%) Humidity difference: 54gr.
This calculation is for Worst Case. The house has been rotated 270 degrees.

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	0.35	0.35	No	No	W	1.5ft	1.0ft	3.0	0.7	2.3	13	40	100 Btuh
2	2 NFRC	0.35	0.35	No	No	W	1.5ft	1.0ft	45.0	2.2	42.8	13	40	1728 Btuh
3	2 NFRC	0.35	0.35	No	No	W	1.5ft	1.0ft	40.0	1.5	38.5	13	40	1549 Btuh
4	2 NFRC	0.35	0.35	No	No	W	1.5ft	1.0ft	100.0	3.7	96.3	13	40	3872 Btuh
5	2 NFRC	0.35	0.35	No	No	N	1.5ft	1.0ft	26.7	0.0	26.7	13	13	355 Btuh
6	2 NFRC	0.35	0.35	No	No	N	1.5ft	1.0ft	40.0	0.0	40.0	13	13	532 Btuh
7	2 NFRC	0.35	0.35	No	No	N	1.5ft	1.0ft	3.0	0.0	3.0	13	13	40 Btuh
8	2 NFRC	0.35	0.35	No	No	NE	1.5ft	1.0ft	10.0	0.0	10.0	13	29	295 Btuh
9	2 NFRC	0.35	0.35	No	No	E	1.5ft	1.0ft	45.0	2.2	42.8	13	40	1728 Btuh
10	2 NFRC	0.35	0.35	No	No	E	1.5ft	1.0ft	5.8	1.2	4.6	13	40	199 Btuh
11	2 NFRC	0.35	0.35	No	No	E	1.5ft	1.0ft	24.7	1.0	23.7	13	40	953 Btuh
12	2 NFRC	0.35	0.35	No	No	SE	1.5ft	1.0ft	10.0	2.9	7.1	13	31	258 Btuh
13	2 NFRC	0.35	0.35	No	No	S	1.5ft	1.0ft	6.0	6.0	0.0	13	16	80 Btuh
14	2 NFRC	0.35	0.35	No	No	S	1.5ft	1.0ft	16.0	16.0	0.0	13	16	213 Btuh
	Excursion													1275 Btuh
	Window Total							375 (sqft)					13178 Btuh	
Walls	Type	U-Value		R-Value		Area(sqft)		HTM		Load				
1	Face Brick - Wood - Ext		0.06		13.0/0.0		406.3		0.9		357 Btuh			
2	Face Brick - Wood - Ext		0.06		13.0/0.0		37.8		0.9		33 Btuh			
3	Face Brick - Wood - Ext		0.06		13.0/0.0		376.0		0.9		330 Btuh			
4	Face Brick - Wood - Ext		0.06		13.0/0.0		21.5		0.9		19 Btuh			
5	Face Brick - Wood - Ext		0.06		13.0/0.0		278.2		0.9		244 Btuh			
6	Face Brick - Wood - Ext		0.06		13.0/0.0		21.5		0.9		19 Btuh			
7	Face Brick - Wood - Ext		0.06		13.0/0.0		275.0		0.9		242 Btuh			
8	Frame - Wood - Adj		0.09		13.0/0.0		403.0		1.5		608 Btuh			
	Wall Total						1819 (sqft)				1852 Btuh			
Doors	Type	Area (sqft)		HTM		Load								
1	Insulated - Exterior		13.3		11.2		149 Btuh							
2	Insulated - Exterior		13.3		11.2		149 Btuh							
3	Insulated - Exterior		13.3		11.2		149 Btuh							
4	Insulated - Exterior		33.3		11.2		373 Btuh							
5	Insulated - Garage		20.0		11.2		224 Btuh							
	Door Total						93 (sqft)				1045 Btuh			
Ceilings	Type/Color/Surface	U-Value		R-Value		Area(sqft)		HTM		Load				
1	Vented Attic/DarkShingle		0.032		30.0/0.0		2275.0		1.66		3768 Btuh			
	Ceiling Total						2275 (sqft)				3768 Btuh			
Floors	Type	R-Value		Size		HTM		Load						
1	Slab On Grade		0.0		2275 (ft-perimeter)		0.0		0 Btuh					
	Floor Total						2275.0 (sqft)				0 Btuh			
	Envelope Subtotal										19842 Btuh			

Manual J Summer Calculations

Residential Load - Component Details (continued)

Kirchenstiner, Robert
511 Rolling Meadows Glen
Fort White, FL

Project Title
1307054

Climate FL_GAINESVILLE_REGIONAL_A

2013-08-20

Infiltration	Type Natural	Average ACH 0.65	Volume(cuft) 20475	Wall Ratio 1	CFM= 220.7	Load 4108 Btuh
Internal gain		Occupants 6	Btuh/occupant X 230	Appliance +	3500	Load 4880 Btuh
	Sensible Envelope Load					28830 Btuh
Duct load	Average sealed, Supply(R6 0-Attic), Return(R6 0-Attic) (DGM of 0.226)					6503 Btuh
	Sensible Load All Zones					35333 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Kirchenstiner, Robert
511 Rolling Meadows Glen
Fort White, FL

Project Title.
1307054

Climate.FL_GAINESVILLE_REGIONAL_A

2013-08-20

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	28830 Btuh
	Sensible Duct Load	6503 Btuh
	Total Sensible Zone Loads	35333 Btuh
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	35333 Btuh
	Latent infiltration gain (for 54 gr. humidity difference)	8066 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1431 Btuh
	Latent occupant gain (60 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	10698 Btuh
	TOTAL GAIN	46031 Btuh

EQUIPMENT

1 Central Unit	#	55000 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