

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name 1308053
 Street 453 Long Leaf Dr
 City, State, Zip Lake City, FL,
 Owner Roper Res
 Design Location FL, Gainesville

Builder Name Woodman Park Builders
 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 (ft²)	2620
Conditioned floor area below grade (ft²)	0
7 Windows(560 2 sqft)	Description Area
a U-Factor	Dbl, U=0 35 560 17 ft²
SHGC	SHGC=0 35
b U-Factor	N/A ft²
SHGC	
c U-Factor	N/A ft²
SHGC	
d U-Factor	N/A ft²
SHGC	
Area Weighted Average Overhang Depth	1 500 ft
Area Weighted Average SHGC	0 350
8 Floor Types (2620 0 sqft)	Insulation Area
a Slab-On-Grade Edge Insulation	R=0 0 2620 00 ft²
b N/A	R= ft²
c N/A	R= ft²

9 Wall Types(2780 0 sqft)	Insulation Area
a Face Brick - Wood, Exterior	R=13 0 2460 00 ft²
b Frame - Wood, Adjacent	R=13 0 320 00 ft²
c N/A	R= ft²
d N/A	R= ft²
10 Ceiling Types (2620 0 sqft)	Insulation Area
a Under Attic (Vented)	R=30 0 2620 00 ft²
b N/A	R= ft²
c N/A	R= ft²
11 Ducts	R ft²
a Sup Attic, Ret Attic, AH Main	6 524
12 Cooling systems	kBtu/hr Efficiency
a Central Unit	60 0 SEER 14 00
13 Heating systems	kBtu/hr Efficiency
a Electric Heat Pump	60 0 HSPF 7 90
14 Hot water systems	
a Electric	Cap 40 gallons
	EF 0 940
b Conservation features	
None	
15 Credits	Pstat

Glass/Floor Area 0 214

Total Proposed Modified Loads 42 29
 Total Standard Reference Loads 52 57

PASS

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

PREPARED BY
 DATE.

ELIAN P. GANSON
 2013-08-21

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code

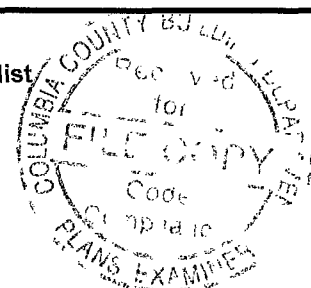
OWNER/AGENT.
 DATE:

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	1308053	Bedrooms	3	Address Type	Street Address							
Building Type	User	Conditioned Area	2620	Lot #								
Owner	Roper Res	Total Stories	1	Block/SubDivision								
# of Units	1	Worst Case	Yes	PlatBook								
Builder Name	Woodman Park Builders	Rotate Angle	270	Street	453 Long Leaf Dr							
Permit Office		Cross Ventilation		County	Columbia							
Jurisdiction		Whole House Fan		City, State, Zip	Lake City , 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	2620	26200								
SPACES												
	Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated	
	1	Main	2620	26200	Yes	8	3	1	Yes	Yes	Yes	
FLOORS												
✓	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet		
_____	1	Slab-On-Grade Edge Insulatio	Main	278 ft	0	2620 ft²	---	0	0 3	0 7		
ROOF												
✓	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor	SA Tested	Emitt	Emitt Tested	Deck Insul	Pitch (deg)
_____	1	Hip	Composition shingles	3276 ft²	0 ft²	Dark	0 96	No	0 9	No	0	36 9
ATTIC												
✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC					
_____	1	Full attic	Vented	300	2620 ft²	N	N					
CEILING												
✓	#	Ceiling Type	Space	R-Value	Area	Framing Frac	Truss Type					
_____	1	Under Attic (Vented)	Main	30	2620 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	61		10		610 ft²	0	0	0.75	0
	2	E=>N	Exterior	Face Brick - Wood	Main	13	68		10		680 ft²	0	0	0.75	0
	3	S=>E	Exterior	Face Brick - Wood	Main	13	39		10		390 ft²	0	0	0.75	0
	4	W=>S	Exterior	Face Brick - Wood	Main	13	78		10		780 ft²	0	0	0.75	0
	5	S=>E	Garage	Frame - Wood	Main	13	32		10		320 ft²		0.23	0.75	0

DOORS											
✓	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
	1	N=>W	Insulated	Main	None	0.400000	4		6	8	26.66666
	2	W=>S	Insulated	Main	None	0.400000	4		6	8	17.77777
	3	S=>E	Insulated	Main	None	0.400000	4		6	8	20 ft²
	4	S=>E	Insulated	Main	None	0.400000	4		6	8	20 ft²
	5	S=>E	Wood	Main	None	0.400000	4		6	8	23.33333

WINDOWS													
Orientation shown is the entered orientation (=>) changed to Worst Case													
✓	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Area	Overhang Depth	Separation	Int Shade	Screening
	1	N=>W	1	Metal	Low-E Double	Yes	0.35	0.35	216 ft²	1 ft 6 in	1 ft 0 in	None	None
	2	N=>W	1	Metal	Low-E Double	Yes	0.35	0.35	53.33333	1 ft 6 in	1 ft 0 in	None	None
	3	N=>W	1	Metal	Low-E Double	Yes	0.35	0.35	24 ft²	1 ft 6 in	1 ft 0 in	None	None
	4	E=>N	2	Metal	Low-E Double	Yes	0.35	0.35	36 ft²	1 ft 6 in	1 ft 0 in	None	None
	5	E=>N	2	Metal	Low-E Double	Yes	0.35	0.35	7.5 ft²	1 ft 6 in	1 ft 0 in	None	None
	6	S=>E	3	Metal	Low-E Double	Yes	0.35	0.35	56 ft²	1 ft 6 in	1 ft 0 in	None	None
	7	S=>E	3	Metal	Low-E Double	Yes	0.35	0.35	13.33333	1 ft 6 in	1 ft 0 in	None	None
	8	S=>E	3	Metal	Low-E Double	Yes	0.35	0.35	5 ft²	1 ft 6 in	1 ft 0 in	None	None
	9	S=>E	3	Metal	Low-E Double	Yes	0.35	0.35	35 ft²	1 ft 6 in	1 ft 0 in	None	None
	10	W=>S	4	Metal	Low-E Double	Yes	0.35	0.35	24 ft²	1 ft 6 in	1 ft 0 in	None	None
	11	W=>S	4	Metal	Low-E Double	Yes	0.35	0.35	54 ft²	1 ft 6 in	1 ft 0 in	None	None
	12	W=>S	4	Metal	Low-E Double	Yes	0.35	0.35	36 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	594.964 ft²	594.964 ft²	63 ft	10 ft	1

INFILTRATION								
#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Best Guess	0.000699	4810.6	264.09	496.67	0.5389	11.016

HEATING SYSTEM													
✓	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts						
✓	1	Electric Heat Pump	None	HSPF 7.9	60 kBtu/hr	1	sys#1						

COOLING SYSTEM									
✓	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
✓	1	Central Unit	None	SEER 14	60 kBtu/hr	1800 cfm	0.75	1	sys#1

HOT WATER SYSTEM									
✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
✓	1	Electric	None	Garage	0.94	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	
		Location	R-Value	Area	Location	Area								
✓	1	Attic	6	524 ft²	Attic	131 ft²	Default	Leakage	Main	(Default)	(Default) %		1	1

TEMPERATURES														
Programable Thermostat Y							Ceiling Fans							
Cooling	Heating	Venting	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

Thermostat Schedule	HERS 2006 Reference	Hours											
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

Florida Code Compliance Checklist

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

ADDRESS 453 Long Leaf Dr.
Lake City, 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

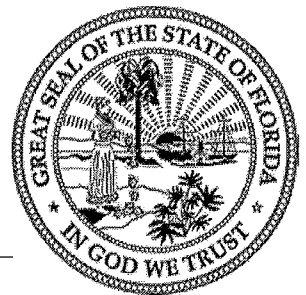
453 Long Leaf Dr., Lake City, FL,

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	2460 00 ft ²
3 Number of units, if multiple family	1	b Frame - Wood, Adjacent	R=13 0	320 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)	2620	10 Ceiling Types	Insulation	Area
7 Windows**	Description	a Under Attic (Vented)	R=30 0	2620 00 ft ²
a U-Factor	Dbl, U=0 35	b N/A	R=	ft ²
SHGC	SHGC=0 35	c N/A	R=	ft ²
b U-Factor	N/A	11 Ducts		R ft ²
SHGC		a Sup Attic, Ret Attic, AH Main	6	524
c U-Factor	N/A	12 Cooling systems	kBtu/hr	Efficiency
SHGC		a Central Unit	60 0	SEER 14 00
d U-Factor	N/A	13 Heating systems	kBtu/hr	Efficiency
SHGC		a Electric Heat Pump	60 0	HSPF 7 90
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 94
8 Floor Types	Insulation	b Conservation features		
a Slab-On-Grade Edge Insulation	R=0 0	None		
b N/A	R=	15 Credits		Pstat
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 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

Roper Res
453 Long Leaf Dr
Lake City, FL

Project Title:
1308053

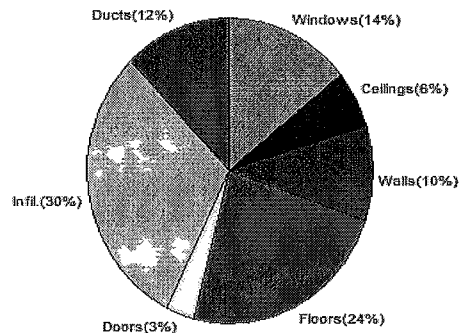
2013-08-21

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		Total cooling load calculation	
Submitted heating capacity	% of calc Btuh	Submitted cooling capacity	% of calc Btuh
Total (Electric Heat Pump)	118.3 60000	Sensible (SHR = 0.75)	101.6 45000
Heat Pump + Auxiliary(0.0kW)	118.3 60000	Latent	110.3 15000
		Total (Electric Heat Pump)	103.7 60000

WINTER CALCULATIONS

Winter Heating Load (for 2620 sqft)

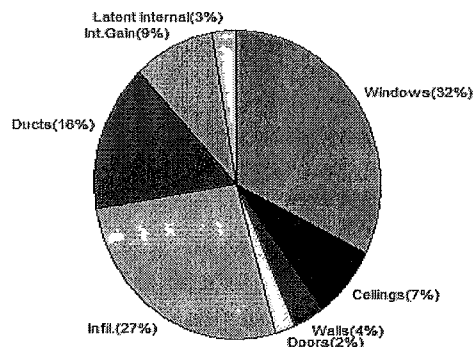
Load component		Load	
Window total	560 sqft	7254 Btuh	
Wall total	2112 sqft	5169 Btuh	
Door total	108 sqft	1595 Btuh	
Ceiling total	2620 sqft	3087 Btuh	
Floor total	2620 sqft	12137 Btuh	
Infiltration	377 cfm	15254 Btuh	
Duct loss		6201 Btuh	
Subtotal		50698 Btuh	
Ventilation	0 cfm	0 Btuh	
TOTAL HEAT LOSS		50698 Btuh	



SUMMER CALCULATIONS

Summer Cooling Load (for 2620 sqft)

Load component		Load	
Window total	560 sqft	18714 Btuh	
Wall total	2112 sqft	2029 Btuh	
Door total	108 sqft	1207 Btuh	
Ceiling total	2620 sqft	4339 Btuh	
Floor total		0 Btuh	
Infiltration	282 cfm	5256 Btuh	
Internal gain		5340 Btuh	
Duct gain		7394 Btuh	
Sens Ventilation	0 cfm	0 Btuh	
Blower Load		0 Btuh	
Total sensible gain		44280 Btuh	
Latent gain(ducts)		1682 Btuh	
Latent gain(infiltration)		10322 Btuh	
Latent gain(ventilation)		0 Btuh	
Latent gain(internal/occupants/other)		1600 Btuh	
Total latent gain		13603 Btuh	
TOTAL HEAT GAIN		57884 Btuh	



8th Edition

EnergyGauge® System Sizing

PREPARED BY

DATE

EVAN B. BANSLEY
2013-08-21

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Roper Res.
453 Long Leaf Dr.
Lake City, FL

Project Title
1308053
Building Type User

2013-08-21

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 37.0 F (MJ8 99%)

This calculation is for Worst Case. The house has been rotated 90 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	E	216.0		12.9	2797 Btuh
2	2, NFRC 0.35	Metal	0.35	E	53.3		12.9	691 Btuh
3	2, NFRC 0.35	Metal	0.35	E	24.0		12.9	311 Btuh
4	2, NFRC 0.35	Metal	0.35	S	36.0		12.9	466 Btuh
5	2, NFRC 0.35	Metal	0.35	S	7.5		12.9	97 Btuh
6	2, NFRC 0.35	Metal	0.35	W	56.0		12.9	725 Btuh
7	2, NFRC 0.35	Metal	0.35	W	13.3		12.9	173 Btuh
8	2, NFRC 0.35	Metal	0.35	W	5.0		12.9	65 Btuh
9	2, NFRC 0.35	Metal	0.35	W	35.0		12.9	453 Btuh
10	2, NFRC 0.35	Metal	0.35	N	24.0		12.9	311 Btuh
11	2, NFRC 0.35	Metal	0.35	N	54.0		12.9	699 Btuh
12	2, NFRC 0.35	Metal	0.35	N	36.0		12.9	466 Btuh
Window Total					560.2(sqft)			7254 Btuh
Walls	Type	Ornt	Ueff	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Face Br - Wood	- Ext	(0.063)	13.0/0.0	290		2.32	673 Btuh
2	Face Br - Wood	- Ext	(0.063)	13.0/0.0	637		2.32	1477 Btuh
3	Face Br - Wood	- Ext	(0.063)	13.0/0.0	261		2.32	605 Btuh
4	Face Br - Wood	- Ext	(0.063)	13.0/0.0	648		2.32	1505 Btuh
5	Frame - Wood	- Adj	(0.089)	13.0/0.0	277		3.28	909 Btuh
Wall Total					2112(sqft)			5169 Btuh
Doors	Type	Storm	Ueff		Area	X	HTM=	Load
1	Insulated - Exterior,	n	(0.400)		27		14.8	395 Btuh
2	Insulated - Exterior,	n	(0.400)		18		14.8	263 Btuh
3	Insulated - Garage,	n	(0.400)		20		14.8	296 Btuh
4	Insulated - Exterior,	n	(0.400)		20		14.8	296 Btuh
5	Wood - Garage,	n	(0.400)		23		14.8	345 Btuh
Door Total					108(sqft)			1595 Btuh
Ceilings	Type/Color/Surface		Ueff	R-Value	Area	X	HTM=	Load
1	Vented Attic/D/Shing		(0.032)	30.0/0.0	2620		1.2	3087 Btuh
Ceiling Total					2620(sqft)			3087 Btuh
Floors	Type		Ueff	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	278.0 ft(perim)		43.7	12137 Btuh
Floor Total					2620 sqft			12137 Btuh
Envelope Subtotal								29243 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=		
	Natural		0.86	26200	1.00	376.6		15254 Btuh
Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.139)							6201 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Roper Res.
453 Long Leaf Dr
Lake City, FL

Project Title:
1308053
Building Type: User

2013-08-21

All Zones	Sensible Subtotal All Zones	50698 Btuh
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WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sensible Heat Loss Total Heat Loss	50698 Btuh 0 Btuh 50698 Btuh
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EQUIPMENT

1. Electric Heat Pump	#	60000 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

Roper Res
453 Long Leaf Dr.
Lake City, FL

Project Title:
1308053

2013-08-21

Reference City: Gainesville, FL Temperature Difference 17 OF(MJ8 99%) Humidity difference: 54gr
This calculation is for Worst Case. The house has been rotated 90 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	E	1.5ft	1.0ft	216.0	8.8	207.2	13	40	8341 Btuh
2	2 NFRC	0.35	0.35	No	No	E	1.5ft	1.0ft	53.3	2.0	51.4	13	40	2065 Btuh
3	2 NFRC	0.35	0.35	No	No	E	1.5ft	1.0ft	24.0	2.9	21.1	13	40	875 Btuh
4	2 NFRC	0.35	0.35	No	No	S	1.5ft	1.0ft	36.0	36.0	0.0	13	16	479 Btuh
5	2 NFRC	0.35	0.35	No	No	S	1.5ft	1.0ft	7.5	7.5	0.0	13	16	100 Btuh
6	2 NFRC	0.35	0.35	No	No	W	1.5ft	1.0ft	56.0	2.0	54.0	13	40	2171 Btuh
7	2 NFRC	0.35	0.35	No	No	W	1.5ft	1.0ft	13.3	0.5	12.8	13	40	516 Btuh
8	2 NFRC	0.35	0.35	No	No	W	1.5ft	1.0ft	5.0	1.2	3.8	13	40	166 Btuh
9	2 NFRC	0.35	0.35	No	No	W	1.5ft	1.0ft	35.0	1.2	33.8	13	40	1357 Btuh
10	2 NFRC	0.35	0.35	No	No	N	1.5ft	1.0ft	24.0	0.0	24.0	13	13	319 Btuh
11	2 NFRC	0.35	0.35	No	No	N	1.5ft	1.0ft	54.0	0.0	54.0	13	13	719 Btuh
12	2 NFRC	0.35	0.35	No	No	N	1.5ft	1.0ft	36.0	0.0	36.0	13	13	479 Btuh
Excursion														1126 Btuh
Window Total									560 (sqft)					18714 Btuh
Walls	Type	U-Value		R-Value		Area(sqft)		HTM		Load				
				Cav/Sheath										
1	Face Brick - Wood - Ext	0.06		13.0/0.0		290.0		0.9		255 Btuh				
2	Face Brick - Wood - Ext	0.06		13.0/0.0		636.5		0.9		559 Btuh				
3	Face Brick - Wood - Ext	0.06		13.0/0.0		260.7		0.9		229 Btuh				
4	Face Brick - Wood - Ext	0.06		13.0/0.0		648.2		0.9		569 Btuh				
5	Frame - Wood - Adj	0.09		13.0/0.0		276.7		1.5		417 Btuh				
Wall Total						2112 (sqft)					2029 Btuh			
Doors	Type	Area (sqft)		HTM		Load								
1	Insulated - Exterior	26.7		11.2		299 Btuh								
2	Insulated - Exterior	17.8		11.2		199 Btuh								
3	Insulated - Garage	20.0		11.2		224 Btuh								
4	Insulated - Exterior	20.0		11.2		224 Btuh								
5	Wood - Garage	23.3		11.2		261 Btuh								
Door Total		108 (sqft)			1207 Btuh									
Ceilings	Type/Color/Surface	U-Value		R-Value		Area(sqft)		HTM		Load				
1	Vented Attic/DarkShingle	0.032		30.0/0.0		2620.0		1.66		4339 Btuh				
Ceiling Total						2620 (sqft)			4339 Btuh					
Floors	Type	R-Value		Size		HTM		Load						
1	Slab On Grade	0.0		2620 (ft-perimeter)		0.0		0 Btuh						
Floor Total						2620.0 (sqft)			0 Btuh					
Envelope Subtotal											26290 Btuh			

Manual J Summer Calculations

Residential Load - Component Details (continued)

Roper Res
453 Long Leaf Dr
Lake City, FL

Project Title:
1308053

Climate FL_GAINESVILLE_REGIONAL_A

2013-08-21

Infiltration	Type Natural	Average ACH 0.65	Volume(cuft) 26200	Wall Ratio 1	CFM= 282.4	Load 5256 Btuh
Internal gain		Occupants 8	Btuh/occupant X 230	Appliance +	3500	Load 5340 Btuh
	Sensible Envelope Load					36886 Btuh
Duct load	Average sealed, Supply(R6 0-Attic), Return(R6 0-Attic) (DGM of 0.200)					7394 Btuh
	Sensible Load All Zones					44280 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Roper Res
453 Long Leaf Dr
Lake City, FL

Project Title:
1308053

Climate FL_GAINESVILLE_REGIONAL_A

2013-08-21

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	36886 Btuh
	Sensible Duct Load	7394 Btuh
	Total Sensible Zone Loads	44280 Btuh
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	44280 Btuh
	Latent infiltration gain (for 54 gr humidity difference)	10322 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1682 Btuh
	Latent occupant gain (8 0 people @ 200 Btuh per person)	1600 Btuh
	Latent other gain	0 Btuh
	Latent total gain	13603 Btuh
	TOTAL GAIN	57884 Btuh

EQUIPMENT

1 Central Unit	#	60000 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