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FORM 405-10

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	1210077	Builder Name:	Bryan Zecher
Street:		Permit Office:	
City, State, Zip:	, FL ,	Permit Number:	
Owner:	Cataldo Res.	Jurisdiction:	
Design Location:	FL, Gainesville		

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)	2125
Conditioned floor area below grade (ft²)	0

7. Windows(393.3 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.35	393.33 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:		2.178 ft.
Area Weighted Average SHGC:		0.350

8. Floor Types (2125.0 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	2125.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types (2003.3 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1701.80 ft²
b. Frame - Wood, Adjacent	R=13.0	301.50 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types (2125.0 sqft.)	Insulation	Area
a. Under Attic (Vented)	R=30.0	2125.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: Main	6	425

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	59.0	SEER:15.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	59.0	HSPF:8.20

14. Hot water systems	
a. Electric	Cap: 40 gallons
	EF: 0.920
b. Conservation features	
None	
15. Credits	Pstat

Glass/Floor Area: 0.185

Total Proposed Modified Loads: 34.91

Total Standard Reference Loads: 44.39

PASS

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

PREPARED BY: EVAN BEAMSLEY

DATE: 10/29/12

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

OWNER/AGENT:

DATE: 12/31/12

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.

GREAT SEAL OF THE STATE OF FLORIDA — IN GOD WE TRUST

BUILDING OFFICIAL:

DATE:

- **Compliance requires completion of a Florida Air Barrier and Insulation Inspection Checklist**

ALACHUA COUNTY BUILDING DEPARTMENT — Received for FILE COPY — Code Compliance — PLANS EXAMINER

PROJECT

Title:	1210077	Bedrooms:	3	Address Type:	Street Address
Building Type:	User	Conditioned Area:	2125	Lot #	
Owner:	Cataldo Res.	Total Stories:	1	Block/SubDivision:	
# of Units:	1	Worst Case:	Yes	PlatBook:	
Builder Name:	Bryan Zecher	Rotate Angle:	270	Street:	
Permit Office:		Cross Ventilation:		County:	Columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	, FL ,
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

√	Design Location	TMY Site	IECC Zone	Design Temp 97.5 %	Design Temp 2.5 %	Int Design Temp Winter	Int Design Temp 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	2125	21250

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	2125	21250	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	222 ft	0	2125 ft²	----	0	0	1

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Hip	Composition shingles	2377 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	2125 ft²	N	N

CEILING

√	#	Ceiling Type	Space	R-Value	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	30	2125 ft²	0.11	Wood

WALLS

√	#	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	Width In	Height Ft	Height In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
____	1	N=>W	Exterior	Frame - Wood	Main	13	59	10	9		538.5 ft²		0.23	0.75	0
____	2	E=>N	Exterior	Frame - Wood	Main	13	41	11	9		377.25 ft²		0.23	0.75	0
____	3	S=>E	Exterior	Frame - Wood	Main	13	34	2	9		307.5 ft²		0.23	0.75	0
____	4	W=>S	Exterior	Frame - Wood	Main	13	53	2	9		478.5 ft²		0.23	0.75	0
____	5	S=>E	Garage	Frame - Wood	Main	13	33	6	9		301.5 ft²		0.23	0.75	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
_____	1	S=>E	Insulated	Main	None	0.400000	3		6	8	20 ft²
_____	2	S=>E	Insulated	Main	None	0.400000	3		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	64 ft²	1 ft 6 in	0 ft 0 in	None	None
_____	2	N=>W	1	Metal	Low-E Double	Yes	0.35	0.35	128 ft²	1 ft 6 in	0 ft 0 in	None	None
_____	3	N=>W	1	Metal	Low-E Double	Yes	0.35	0.35	36 ft²	1 ft 6 in	1 ft 0 in	None	None
_____	4	N=>W	1	Metal	Low-E Double	Yes	0.35	0.35	15 ft²	1 ft 6 in	2 ft 0 in	None	None
_____	5	E=>N	2	Metal	Low-E Double	Yes	0.35	0.35	4 ft²	1 ft 6 in	1 ft 0 in	None	None
_____	6	E=>N	2	Metal	Low-E Double	Yes	0.35	0.35	15 ft²	1 ft 6 in	2 ft 0 in	None	None
_____	7	S=>E	3	Metal	Low-E Double	Yes	0.35	0.35	36 ft²	6 ft 6 in	1 ft 0 in	None	None
_____	8	S=>E	3	Metal	Low-E Double	Yes	0.35	0.35	13.33333	6 ft 6 in	1 ft 0 in	None	None
_____	9	S=>E	3	Metal	Low-E Double	Yes	0.35	0.35	4 ft²	6 ft 6 in	1 ft 0 in	None	None
_____	10	W=>S	4	Metal	Low-E Double	Yes	0.35	0.35	8 ft²	1 ft 6 in	2 ft 0 in	None	None
_____	11	W=>S	4	Metal	Low-E Double	Yes	0.35	0.35	6 ft²	1 ft 6 in	2 ft 0 in	None	None
_____	12	W=>S	4	Metal	Low-E Double	Yes	0.35	0.35	64 ft²	1 ft 6 in	0 ft 0 in	None	None

GARAGE

√	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
_____	1	537.000053 ft²	537.000053 ft²	74 ft	9 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Best Guess	0.000699	3901.7	214.19	402.83	0.5389	11.016

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump	None	HSPF: 8.2	59 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit	None	SEER: 15	59 kBtu/hr	1770 cfm	0.75	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	Garage	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 ---- Location	R-Value	Area	---- Return ---- Location	Area	Leakage Type	Air Handler	CFM 25	Percent Leakage	QN	RLF	HVAC # Heat	HVAC # Cool
_____	1	Attic	6	425 ft²	Attic	106.25	Default Leakage	Main	(Default)	(Default) %			1	1

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cooling	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[X]	[X]	[ ]	[ ]	[ ]
Heating	[X]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Venting	[ ]	[ ]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[X]

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

FORM 405-10

Florida Code Compliance Checklist

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

ADDRESS:	PERMIT #:
, FL,	

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	403.2.2 403.3.3	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. 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* = 79

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

, , FL,

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 (ft²)		2125
7. Windows**	Description	Area
a. U-Factor: SHGC:	Dbl, U=0.35 SHGC=0.35	393.33 ft²
b. U-Factor: SHGC:	N/A	ft²
c. U-Factor: SHGC:	N/A	ft²
d. U-Factor: SHGC:	N/A	ft²
Area Weighted Average Overhang Depth:		2.178 ft.
Area Weighted Average SHGC:		0.350

8. Floor Types	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	2125.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1701.80 ft²
b. Frame - Wood, Adjacent	R=13.0	301.50 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types	Insulation	Area
a. Under Attic (Vented)	R=30.0	2125.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: Main	6	425

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	59.0	SEER:15.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	59.0	HSPF:8.20

14. Hot water systems
a. Electric — Cap: 40 gallons, EF: 0.92
b. Conservation features: None

15. Credits — 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: 10/31/12

Address of New Home: 989 SW Mendiba City/FL Zip: LC, FL 32033

*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

Cataldo Res.

, FL

Project Title:
1210077

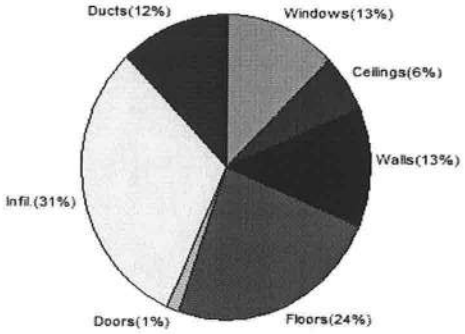
10/29/2012

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	**40398**	**Btuh**	**Total cooling load calculation**	**49355**	**Btuh**
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	146.0	59000	Sensible (SHR = 0.75)	115.1	44250
Heat Pump + Auxiliary(0.0kW)	146.0	59000	Latent	135.0	14750
			Total (Electric Heat Pump)	119.5	59000

WINTER CALCULATIONS

Winter Heating Load (for 2125 sqft)

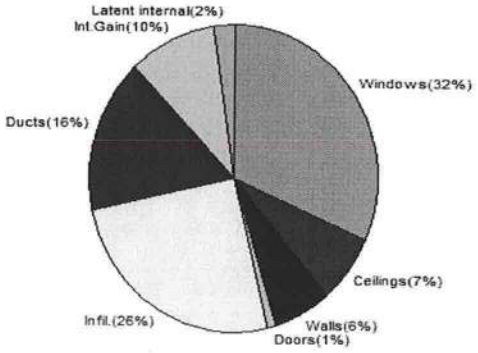
Load component			Load	
Window total	393	sqft	5094	Btuh
Wall total	1570	sqft	5156	Btuh
Door total	40	sqft	592	Btuh
Ceiling total	2125	sqft	2504	Btuh
Floor total	2125	sqft	9693	Btuh
Infiltration	305	cfm	12372	Btuh
Duct loss			4988	Btuh
Subtotal			**40398**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**40398**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 2125 sqft)

Load component			Load	
Window total	393	sqft	15565	Btuh
Wall total	1570	sqft	3112	Btuh
Door total	40	sqft	448	Btuh
Ceiling total	2125	sqft	3519	Btuh
Floor total			0	Btuh
Infiltration	229	cfm	4263	Btuh
Internal gain			4780	Btuh
Duct gain			6741	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			**38429**	**Btuh**
Latent gain(ducts)			1355	Btuh
Latent gain(infiltration)			8372	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			1200	Btuh
Total latent gain			**10927**	**Btuh**
TOTAL HEAT GAIN			**49355**	**Btuh**



Powered by ACCA MANUAL J 8th Edition

EnergyGauge® System Sizing
PREPARED BY: EVAN PETTINGELL
DATE: 10/29/12

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Cataldo Res.
, FL

Project Title:
1210077
Building Type: User

10/29/2012

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	64.0	12.9	829 Btuh
2	2, NFRC 0.35	Metal	0.35	W	128.0	12.9	1658 Btuh
3	2, NFRC 0.35	Metal	0.35	W	36.0	12.9	466 Btuh
4	2, NFRC 0.35	Metal	0.35	W	15.0	12.9	194 Btuh
5	2, NFRC 0.35	Metal	0.35	N	4.0	12.9	52 Btuh
6	2, NFRC 0.35	Metal	0.35	N	15.0	12.9	194 Btuh
7	2, NFRC 0.35	Metal	0.35	E	36.0	12.9	466 Btuh
8	2, NFRC 0.35	Metal	0.35	E	13.3	12.9	173 Btuh
9	2, NFRC 0.35	Metal	0.35	E	4.0	12.9	52 Btuh
10	2, NFRC 0.35	Metal	0.35	S	8.0	12.9	104 Btuh
11	2, NFRC 0.35	Metal	0.35	S	6.0	12.9	78 Btuh
12	2, NFRC 0.35	Metal	0.35	S	64.0	12.9	829 Btuh
	Window Total				393.3(sqft)		5094 Btuh

Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	296	3.28	970 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	358	3.28	1177 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	234	3.28	769 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	401	3.28	1315 Btuh
5	Frame - Wood	- Adj	(0.089)	13.0/0.0	282	3.28	924 Btuh
	Wall Total				1570(sqft)		5156 Btuh

Doors	Type	Storm	Ueff.	Area X	HTM=	Load
1	Insulated - Garage,	n	(0.400)	20	14.8	296 Btuh
2	Insulated - Exterior,	n	(0.400)	20	14.8	296 Btuh
	Door Total			40(sqft)		592Btuh

Ceilings	Type/Color/Surface	Ueff.	R-Value	Area X	HTM=	Load
1	Vented Attic/D/Shing	(0.032)	30.0/0.0	2125	1.2	2504 Btuh
	Ceiling Total			2125(sqft)		2504Btuh

Floors	Type	Ueff.	R-Value	Size X	HTM=	Load
1	Slab On Grade	(1.180)	0.0	222.0 ft(perim.)	43.7	9693 Btuh
	Floor Total			2125 sqft		9693 Btuh

	Envelope Subtotal:	23038 Btuh

Infiltration	Type	Wholehouse ACH	Volume(cuft)	Wall Ratio	CFM=	
	Natural	0.86	21250	1.00	305.4	12372 Btuh

Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.141)	4988 Btuh
All Zones	**Sensible Subtotal All Zones**	**40398 Btuh**

Manual J Winter Calculations

Residential Load - Component Details (continued)

Cataldo Res.
, FL

Project Title:
1210077
Building Type: User

10/29/2012

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sensible Heat Loss Total Heat Loss	40398 Btuh 0 Btuh 40398 Btuh

EQUIPMENT

1. Electric Heat Pump	#	59000 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

Cataldo Res.

Project Title:
1210077

, FL

10/29/2012

Reference City: Gainesville, FL Temperature Difference: 17.0F(MJ8 99%) Humidity difference: 54gr.
This calculation is for Worst Case. The house has been rotated 270 degrees.

Component Loads for Whole House

	Type*					Overhang		Window Area(sqft)			HTM		Load
Window	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	0.0ft	64.0	10.0	54.0	13	40	2278 Btuh
2	2 NFRC	0.35, 0.35		No	No	W	1.5ft	0.0ft	128.0	19.9	108.1	13	40	4555 Btuh
3	2 NFRC	0.35, 0.35		No	No	W	1.5ft	1.0ft	36.0	1.5	34.5	13	40	1390 Btuh
4	2 NFRC	0.35, 0.35		No	No	W	1.5ft	2.0ft	15.0	0.0	15.0	13	40	595 Btuh
5	2 NFRC	0.35, 0.35		No	No	N	1.5ft	1.0ft	4.0	0.0	4.0	13	13	53 Btuh
6	2 NFRC	0.35, 0.35		No	No	N	1.5ft	2.0ft	15.0	0.0	15.0	13	13	200 Btuh
7	2 NFRC	0.35, 0.35		No	No	E	6.5ft	1.0ft	36.0	26.4	9.6	13	40	733 Btuh
8	2 NFRC	0.35, 0.35		No	No	E	6.5ft	1.0ft	13.3	8.8	4.5	13	40	297 Btuh
9	2 NFRC	0.35, 0.35		No	No	E	6.5ft	1.0ft	4.0	4.0	0.0	13	40	53 Btuh
10	2 NFRC	0.35, 0.35		No	No	S	1.5ft	2.0ft	8.0	8.0	0.0	13	16	106 Btuh
11	2 NFRC	0.35, 0.35		No	No	S	1.5ft	2.0ft	6.0	6.0	0.0	13	16	80 Btuh
12	2 NFRC	0.35, 0.35		No	No	S	1.5ft	0.0ft	64.0	64.0	0.0	13	16	852 Btuh
	Excursion													4371 Btuh
	Window Total								393 (sqft)					15565 Btuh

Walls	Type	U-Value	R-Value Cav/Sheath	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	0.09	13.0/0.0	295.5	2.1	616 Btuh
2	Frame - Wood - Ext	0.09	13.0/0.0	358.3	2.1	747 Btuh
3	Frame - Wood - Ext	0.09	13.0/0.0	234.2	2.1	488 Btuh
4	Frame - Wood - Ext	0.09	13.0/0.0	400.5	2.1	835 Btuh
5	Frame - Wood - Adj	0.09	13.0/0.0	281.5	1.5	425 Btuh
	Wall Total			1570 (sqft)		3112 Btuh

Doors	Type	Area (sqft)	HTM	Load
1	Insulated - Garage	20.0	11.2	224 Btuh
2	Insulated - Exterior	20.0	11.2	224 Btuh
	Door Total	40 (sqft)		448 Btuh

Ceilings	Type/Color/Surface	U-Value	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/DarkShingle	0.032	30.0/0.0	2125.0	1.66	3519 Btuh
	Ceiling Total			2125 (sqft)		3519 Btuh

Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	2125 (ft-perimeter)	0.0	0 Btuh
	Floor Total		2125.0 (sqft)		0 Btuh

	Envelope Subtotal:	22644 Btuh

Infiltration	Type	Average ACH	Volume(cuft)	Wall Ratio	CFM=	Load
	Natural	0.65	21250	1	229.1	4263 Btuh

Internal gain	Occupants	Btuh/occupant		Appliance	Load
	6	X 230	+	3400	4780 Btuh

Sensible Envelope Load:	31687 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Cataldo Res.
, FL

Project Title: 1210077

Climate:FL_GAINESVILLE_REGIONAL_A

10/29/2012

Duct load	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic)	(DGM of 0.213)	6741 Btuh
		Sensible Load All Zones	**38429 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Cataldo Res.
, FL

Project Title: 1210077
Climate:FL_GAINESVILLE_REGIONAL_A

10/29/2012

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	**Sensible Envelope Load All Zones**	**31687 Btuh**
	Sensible Duct Load	6741 Btuh
	Total Sensible Zone Loads	**38429 Btuh**
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	**38429 Btuh**
	Latent infiltration gain (for 54 gr. humidity difference)	8372 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1355 Btuh
	Latent occupant gain (6.0 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	**10927 Btuh**
	TOTAL GAIN	**49355 Btuh**

EQUIPMENT

1. Central Unit	#	59000 Btuh

*Key: Window types (Panes - 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