

2022-02-25

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	30221 Btuh	Total cooling load calculation	27724 Btuh
Submitted heating capacity	% of calc Btuh	Submitted cooling capacity	% of calc Btuh
Total (Electric Heat Pump)	109.2 33000	Sensible (SHR = 0.75)	108.5 24750
Heat Pump + Auxiliary(0.0kW)	109.2 33000	Latent	167.7 8250
		Total (Electric Heat Pump)	119.0 33000

WINTER CALCULATIONS

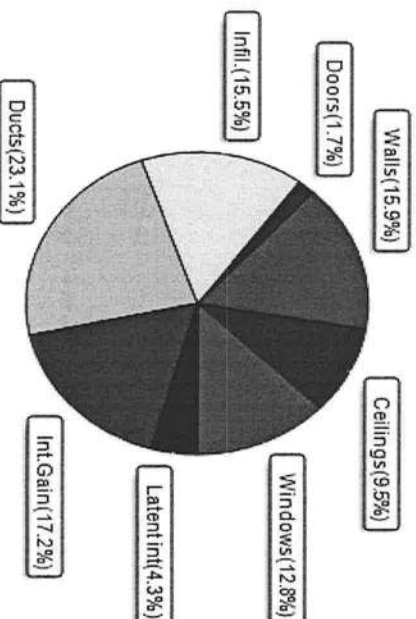
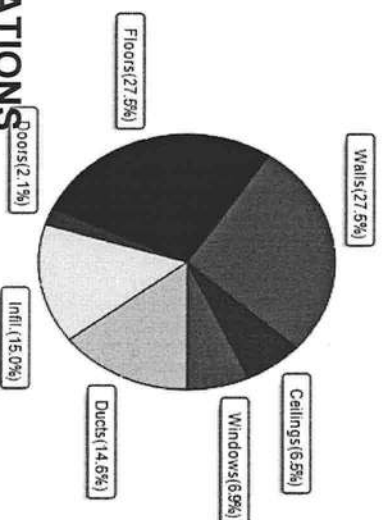
Winter Heating Load (for 1789 sqft)

Load component		Load
Window total	162 sqft	2080 Btuh
Wall total	1502 sqft	8313 Btuh
Door total	40 sqft	640 Btuh
Ceiling total	1907 sqft	1953 Btuh
Floor total	1789 sqft	8307 Btuh
Infiltration	103 cfm	4524 Btuh
Duct loss		4404 Btuh
Subtotal		30221 Btuh
Ventilation	0 cfm	0 Btuh
TOTAL HEAT LOSS		30221 Btuh

SUMMER CALCULATIONS

Summer Cooling Load (for 1789 sqft)

Load component		Load
Window total	162 sqft	3546 Btuh
Wall total	1502 sqft	4398 Btuh
Door total	40 sqft	480 Btuh
Ceiling total	1907 sqft	2636 Btuh
Floor total		0 Btuh
Infiltration	77 cfm	1612 Btuh
Internal gain		4780 Btuh
Duct gain		5353 Btuh
Sens. Ventilation	0 cfm	0 Btuh
Blower Load		0 Btuh
Total sensible gain		22804 Btuh
Latent gain(ducts)		1046 Btuh
Latent gain(infiltration)		2674 Btuh
Latent gain(ventilation)		0 Btuh
Latent gain(internal/occupants/other)		1200 Btuh
Total latent gain		4920 Btuh
TOTAL HEAT GAIN		27724 Btuh



Paul Scott
227 NE Carnation Pl
Lake City, FL

Project Title:
220229 Scott
Building Type: User

2022-02-25

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 0.22	Metal	0.32	N	17.5		12.8	224 Btuh
2	2, NFRC 0.22	Metal	0.32	N	9.0		12.8	115 Btuh
3	2, NFRC 0.22	Metal	0.32	N	13.3		12.8	171 Btuh
4	2, NFRC 0.22	Metal	0.32	N	30.0		12.8	384 Btuh
5	2, NFRC 0.22	Metal	0.32	N	15.0		12.8	192 Btuh
6	2, NFRC 0.22	Metal	0.32	S	15.0		12.8	192 Btuh
7	2, NFRC 0.22	Metal	0.32	S	26.7		12.8	341 Btuh
8	2, NFRC 0.22	Metal	0.32	S	30.0		12.8	384 Btuh
9	2, NFRC 0.22	Metal	0.32	S	6.0		12.8	77 Btuh
	Window Total				162.5(sqft)			2080 Btuh
Walls	Type	Omt.	Ueff.	R-Value (Cav/Sh)	Area X		HTM=	Load
1	Face Br - Block	- Ext	(0.307)	0.0/0.0	224		12.27	2748 Btuh
2	Face Br - Block	- Ext	(0.307)	0.0/0.0	112		12.27	1374 Btuh
3	Face Br - Block	- Ext	(0.307)	0.0/0.0	64		12.27	785 Btuh
4	Frame - Wood	- Ext	(0.077)	19.0/0.0	172		3.09	531 Btuh
5	Frame - Wood	- Ext	(0.077)	19.0/0.0	34		3.09	105 Btuh
6	Frame - Wood	- Ext	(0.077)	19.0/0.0	95		3.09	293 Btuh
7	Frame - Wood	- Adj	(0.077)	19.0/0.0	268		3.09	828 Btuh
8	Frame - Wood	- Ext	(0.077)	19.0/0.0	81		3.09	251 Btuh
9	Frame - Wood	- Ext	(0.077)	19.0/0.0	74		3.09	229 Btuh
10	Frame - Wood	- Ext	(0.077)	19.0/0.0	90		3.09	279 Btuh
11	Frame - Wood	- Ext	(0.077)	19.0/0.0	288		3.09	890 Btuh
	Wall Total				1502(sqft)			8313 Btuh
Doors	Type	Storm	Ueff.		Area X		HTM=	Load
1	Insulated - Exterior, n		(0.400)		7		16.0	107 Btuh
2	Insulated - Garage, n		(0.400)		20		16.0	320 Btuh
3	Insulated - Exterior, n		(0.400)		13		16.0	213 Btuh
	Door Total				40(sqft)			640Btuh
Ceilings	Type/Color/Surface	Ueff.		R-Value	Area X		HTM=	Load
1	Vented Attic/D/Shing	(0.025)		38.0/0.0	1843		1.0	1871 Btuh
2	Knee Wall/D/Shing	(0.032)		30.0/0.0	64		1.3	82 Btuh
	Ceiling Total				1907(sqft)			1953Btuh
Floors	Type	Ueff.		R-Value	Size X		HTM=	Load
1	Slab On Grade	(1.180)		0.0	176.0 ft(perim.)		47.2	8307 Btuh
	Floor Total				1789 sqft			8307 Btuh
	Envelope Subtotal:							21293 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio		CEM=	

Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.171)	4404 Btuh
All Zones	Sensible Subtotal All Zones	30221 Btuh

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sensible Heat Loss Total Heat Loss	30221 Btuh 0 Btuh 30221 Btuh
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EQUIPMENT

1. Electric Heat Pump	#	33000 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 - (Manual Heat Transfer Multiplier)



Paul Scott
227 NE Carnation Pl
Lake City, FL

Project Title:
220229 Scott

2022-02-25

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
1	Panes SHGC U InSh IS Omt	Len Hgt	Gross Shaded Unshaded	Shaded Unshaded	
1	2 NFRC 0.22 0.32 No	N 1.5ft 2.0ft	17.5 0.0 17.5	11 27	478 Btuh
2	2 NFRC 0.22 0.32 No	N 1.5ft 2.0ft	9.0 0.0 9.0	11 27	246 Btuh
3	2 NFRC 0.22 0.32 No	N 9.5ft 1.0ft	13.3 13.3 0.0	11 27	143 Btuh
4	2 NFRC 0.22 0.32 No	N 9.5ft 1.0ft	30.0 30.0 0.0	11 27	321 Btuh
5	2 NFRC 0.22 0.32 No	N 1.5ft 2.0ft	15.0 0.0 15.0	11 27	409 Btuh
6	2 NFRC 0.22 0.32 No	N 1.5ft 2.0ft	15.0 0.0 15.0	11 27	409 Btuh
7	2 NFRC 0.22 0.32 No	S 9.5ft 1.0ft	26.7 26.7 0.0	11 27	286 Btuh
8	2 NFRC 0.22 0.32 No	S 9.5ft 1.0ft	30.0 30.0 0.0	11 27	321 Btuh
9	2 NFRC 0.22 0.32 No	S 1.5ft 2.0ft	6.0 0.0 6.0	11 27	164 Btuh
Excursion			6.0	11	770 Btuh
Window Total			162 (sqft)		3546 Btuh
Walls	Type	U-Value R-Value	Area(sqft)	HTM	Load
Cav/Sheath					
1	Face Brick - Block - Ext	0.31 0.0/0.0	224.0	6.6	1470 Btuh
2	Face Brick - Block - Ext	0.31 0.0/0.0	112.0	6.6	735 Btuh
3	Face Brick - Block - Ext	0.31 0.0/0.0	64.0	6.6	420 Btuh
4	Frame - Wood - Ext	0.08 19.0/0.0	171.8	1.7	284 Btuh
5	Frame - Wood - Ext	0.08 19.0/0.0	34.0	1.7	56 Btuh
6	Frame - Wood - Ext	0.08 19.0/0.0	94.7	1.7	157 Btuh
7	Frame - Wood - Adj	0.08 19.0/0.0	268.0	1.5	393 Btuh
8	Frame - Wood - Ext	0.08 19.0/0.0	81.3	1.7	134 Btuh
9	Frame - Wood - Ext	0.08 19.0/0.0	74.1	1.7	123 Btuh
10	Frame - Wood - Ext	0.08 19.0/0.0	90.3	1.7	149 Btuh
11	Frame - Wood - Ext	0.08 19.0/0.0	288.0	1.7	476 Btuh
Wall Total			1502 (sqft)		4398 Btuh
Doors	Type	Area (sqft)	HTM	Load	
1	Insulated - Exterior	6.7	12.0	80 Btuh	
2	Insulated - Garage	20.0	12.0	240 Btuh	
3	Insulated - Exterior	13.3	12.0	160 Btuh	
Door Total			40 (sqft)		480 Btuh
Ceilings	Type/Color/Surface	U-Value R-Value	Area(sqft)	HTM	Load
1	Vented Attic/DarkShingle	0.025 38.0/0.0	1843.0	1.37	2526 Btuh
2	Knee Wall/DarkShingle	0.032 30.0/0.0	64.0	1.72	110 Btuh
Ceiling Total			1907 (sqft)		2636 Btuh
Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	1789 (ft-perimeter)	0.0	0 Btuh
Floor Total			1789.0 (sqft)		0 Btuh
Envelope Subtotal:					11060 Btuh

Paul Scott
227 NE Carnation Pl
Lake City, FL

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
220229 Scott

2022-02-25

Infiltration	Type	Average ACH	Volume(cuft)	Wall Ratio	CFM=	Load
	Natural	0.20	23257	1	77.5	1612 Btuh
Internal gain		Occupants	Btuh/occupant		Appliance	Load
		6	X 230	+	3400	4780 Btuh
	Sensible Envelope Load:					
Duct load	Average sealed, Supply(R6,0-Attic), Return(R6,0-Attic) (DGM of 0.307)					5353 Btuh
	Sensible Load All Zones					22804 Btuh

2022-02-25

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	17451 Btuh
	Sensible Duct Load	5353 Btuh
	Total Sensible Zone Loads	22804 Btuh
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	22804 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	2674 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1046 Btuh
	Latent occupant gain (6.0 people @ 200 Btuh per person)	1200 Btuh
Latent other gain		0 Btuh
Latent total gain		4920 Btuh
TOTAL GAIN		27724 Btuh

EQUIPMENT

1. Central Unit	#	33000 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(H))
(Orit - compass orientation)



Version 8