

Residential System Sizing Calculation

Summary

Yasmanis
Lot 9 Fairway View Unit 1-A
Lake City, FL 32055

Project Title:
Lot 9 Fairway View Unit 1-A

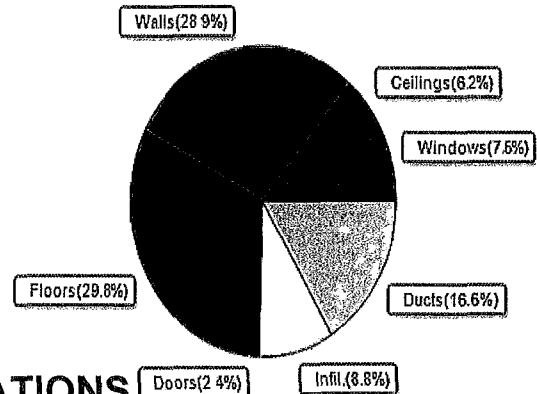
6/10/2025

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(152 ft.) Temp Range(M)			
Humidity data. Interior RH (50%) Outdoor wet bulb (79F) Humidity difference(54gr.)			
Winter design temperature(MJ8 99%/Cu)33 F		Summer design temperature(MJ8 99%/Cu)99 F	
Winter setpoint 70 F		Summer setpoint 75 F	
Winter temperature difference 37 F		Summer temperature difference 24 F	
Total heating load calculation	31686 Btuh	Total cooling load calculation	28735 Btuh
Submitted heating capacity % of calc Btuh		Submitted cooling capacity % of calc Btuh	
Total (Electric Heat Pump) 107.9 34177		Sensible (SHR = 0.75) 81.4 19398	
Heat Pump + Auxiliary(0.0kW) 107.9 34177		Latent 131.9 6466	
		Total (Electric Heat Pump) 90.0 25864	

WINTER CALCULATIONS

Winter Heating Load (for 1888 sqft)

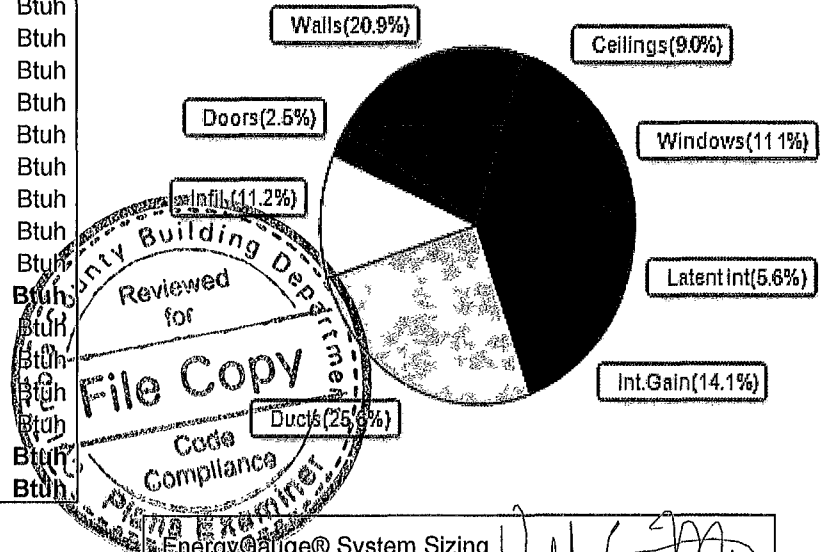
Load component		Load	
Window total	177 sqft	2363 Btuh	
Wall total	1791 sqft	9172 Btuh	
Door total	44 sqft	749 Btuh	
Ceiling total	2077 sqft	1950 Btuh	
Floor total	1888 sqft	9431 Btuh	
Infiltration	69 cfm	2775 Btuh	
Duct loss		5245 Btuh	
Subtotal		31686 Btuh	
Ventilation Ex:0 cfm, Sup:0 cfm		0 Btuh	
TOTAL HEAT LOSS		31686 Btuh	



SUMMER CALCULATIONS

Summer Cooling Load (for 1888 sqft)

Load component		Load	
Window total	177 sqft	3195 Btuh	
Wall total	1791 sqft	6017 Btuh	
Door total	44 sqft	708 Btuh	
Ceiling total	2077 sqft	2583 Btuh	
Floor total		0 Btuh	
Infiltration	51 cfm	1350 Btuh	
Internal gain		4040 Btuh	
Duct gain		5942 Btuh	
Sens. Ventilation Ex:0 cfm; Sup:0 cfm		0 Btuh	
Blower Load		0 Btuh	
Total sensible gain		23834 Btuh	
Latent gain(ducts)		1423 Btuh	
Latent gain(infiltration)		1878 Btuh	
Latent gain(ventilation)		0 Btuh	
Latent gain(internal/occupants/other)		1600 Btuh	
Total latent gain		4901 Btuh	
TOTAL HEAT GAIN		28735 Btuh	



8th Edition

EnergyGauge® System Sizing

PREPARED BY: Will C. May

DATE: 6/10/2025

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Yasmanis
Lot 9 Fairway View Unit 1-A
Lake City, FL 32055

Project Title:
Lot 9 Fairway View Unit 1-A
Building Type: User

6/10/2025

Reference City. Gainesville, FL (Defaults) Winter Temperature Difference. 37.0 °F (MJ8 99%/Cu)
Winter Setpoint. 70 °F (Required Manual J default)

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	18.0		13.3	240 Btuh
2	2, NFRC 0.25	Vinyl	0.36	S	18.0		13.3	240 Btuh
3	2, NFRC 0.25	Vinyl	0.36	S	18.0		13.3	240 Btuh
4	2, NFRC 0.25	Vinyl	0.36	E	4.7		13.3	63 Btuh
5	2, NFRC 0.25	Vinyl	0.36	E	18.0		13.3	240 Btuh
6	2, NFRC 0.25	Vinyl	0.36	N	18.0		13.3	240 Btuh
7	2, NFRC 0.25	TIM	0.36	N	48.0		13.3	639 Btuh
8	2, NFRC 0.25	Vinyl	0.36	N	12.0		13.3	160 Btuh
9	2, NFRC 0.25	Vinyl	0.36	N	4.7		13.3	63 Btuh
10	2, NFRC 0.25	Vinyl	0.36	W	18.0		13.3	240 Btuh
Window Total					177.4(sqft)			2363 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Conc Blk,Hollow - Ext	(0.147)		4.2/0.0	97		5.44	528 Btuh
2	Conc Blk,Hollow - Ext	(0.147)		4.2/0.0	51		5.44	276 Btuh
3	Conc Blk,Hollow - Ext	(0.147)		4.2/0.0	38		5.44	207 Btuh
4	Conc Blk,Hollow - Ext	(0.147)		4.2/0.0	47		5.44	254 Btuh
5	Conc Blk,Hollow - Ext	(0.147)		4.2/0.0	125		5.44	680 Btuh
6	Conc Blk,Hollow - Ext	(0.147)		4.2/0.0	410		5.44	2229 Btuh
7	Conc Blk,Hollow - Ext	(0.147)		4.2/0.0	125		5.44	681 Btuh
8	Conc Blk,Hollow - Ext	(0.147)		4.2/0.0	106		5.44	575 Btuh
9	Conc Blk,Hollow - Ext	(0.147)		4.2/0.0	127		5.44	689 Btuh
10	Conc Blk,Hollow - Ext	(0.147)		4.2/0.0	241		5.44	1312 Btuh
11	Conc Blk,Hollow - Ext	(0.147)		4.2/0.0	159		5.44	867 Btuh
12	Frame - Wood - Adj	(0.089)		13.0/0.0	180		3.28	593 Btuh
13	Frame - Wood - Adj	(0.089)		13.0/0.0	86		3.28	282 Btuh
Wall Total					1791(sqft)			9172 Btuh
Doors	Type	Storm	Ueff		Area	X	HTM=	Load
1	Insulated - Exterior, n		(0.460)		24		17.0	408 Btuh
2	Insulated - Garage, n		(0.460)		20		17.0	340 Btuh
Door Total					44(sqft)			749Btuh
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area	X	HTM=	Load
1	Flat ceil/D/Shing		(0.025)	38.0/0.0	2077		0.94	1950 Btuh
Ceiling Total					2077(sqft)			1950Btuh
Floors	Type		Ueff	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	216.0 ft(perim.)		43.7	9431 Btuh
Floor Total					1888 sqft			9431 Btuh
Envelope Subtotal.								23665 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Yasmanis
Lot 9 Fairway View Unit 1-A
Lake City, FL 32055

Project Title:
Lot 9 Fairway View Unit 1-A
Building Type: User

6/10/2025

Infiltration	Type Natural	Wholehouse ACH 0.23	Volume(cuft) 17615	Wall Ratio 1.00	CFM= 68.5	2775 Btuh
Duct load	Average sealed, R6 0, Supply(Att), Return(Att) (DLM of 0.198)					5245 Btuh
All Zones	Sensible Subtotal All Zones					31686 Btuh

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	31686 Btuh
	Ventilation Sens. Heat Loss (Ex:0 cfm, Sup:0 cfm)	0 Btuh
	Total Heat Loss	31686 Btuh

EQUIPMENT

1. Electric Heat Pump	#	34177 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

Yasmanis
Lot 9 Fairway View Unit 1-A
Lake City, FL 32055

Project Title.
Lot 9 Fairway View Unit 1-A

6/10/2025

Reference City: Gainesville, FL (Defaults)
Humidity difference: 54gr.

Temperature Difference: 24.0F(MJ8 99%/Cu)
Summer Setpoint: 75 °F (Required Manual J default)

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	18.0	18.0	0.0	14	16	250	Btuh
2	2 NFRC	0.25, 0.36	No	No	S		1.5ft	1.0ft	18.0	18.0	0.0	14	16	250	Btuh
3	2 NFRC	0.25, 0.36	No	No	S		1.5ft	1.0ft	18.0	18.0	0.0	14	16	250	Btuh
4	2 NFRC	0.25, 0.36	No	No	E		1.5ft	1.0ft	4.7	0.5	4.2	14	33	144	Btuh
5	2 NFRC	0.25, 0.36	No	No	E		1.5ft	1.0ft	18.0	0.7	17.3	14	33	576	Btuh
6	2 NFRC	0.25, 0.36	No	No	N		1.5ft	1.0ft	18.0	0.0	18.0	14	14	250	Btuh
7	2 NFRC	0.25, 0.36	No	No	N		12.5f	1.0ft	48.0	0.0	48.0	14	14	667	Btuh
8	2 NFRC	0.25, 0.36	No	No	N		12.5f	1.0ft	12.0	0.0	12.0	14	14	167	Btuh
9	2 NFRC	0.25, 0.36	No	No	N		1.5ft	1.0ft	4.7	0.0	4.7	14	14	65	Btuh
10	2 NFRC	0.25, 0.36	No	No	W		1.5ft	1.0ft	18.0	0.7	17.3	14	33	576	Btuh
Window Total									177 (sqft)					3195 Btuh	
Walls	Type						U-Value	R-Value	Area(sqft)		HTM		Load		
								Cav/Sheath							
1	Concrete Blk,Hollow- Ext						0.15	4.2/0.0	97.1		3.6		347 Btuh		
2	Concrete Blk,Hollow- Ext						0.15	4.2/0.0	50.7		3.6		181 Btuh		
3	Concrete Blk,Hollow- Ext						0.15	4.2/0.0	38.0		3.6		136 Btuh		
4	Concrete Blk,Hollow- Ext						0.15	4.2/0.0	46.7		3.6		167 Btuh		
5	Concrete Blk,Hollow- Ext						0.15	4.2/0.0	125.1		3.6		447 Btuh		
6	Concrete Blk,Hollow- Ext						0.15	4.2/0.0	409.8		3.6		1464 Btuh		
7	Concrete Blk,Hollow- Ext						0.15	4.2/0.0	125.1		3.6		447 Btuh		
8	Concrete Blk,Hollow- Ext						0.15	4.2/0.0	105.8		3.6		378 Btuh		
9	Concrete Blk,Hollow- Ext						0.15	4.2/0.0	126.7		3.6		453 Btuh		
10	Concrete Blk,Hollow- Ext						0.15	4.2/0.0	241.1		3.6		861 Btuh		
11	Concrete Blk,Hollow- Ext						0.15	4.2/0.0	159.3		3.6		569 Btuh		
12	Frame - Wood - Adj						0.09	13.0/0.0	180.4		2.1		384 Btuh		
13	Frame - Wood - Adj						0.09	13.0/0.0	85.8		2.1		183 Btuh		
Wall Total									1791 (sqft)					6017 Btuh	
Doors	Type								Area (sqft)		HTM		Load		
1	Insulated - Exterior								24.0		16.1		386 Btuh		
2	Insulated - Garage								20.0		16.1		322 Btuh		
Door Total									44 (sqft)					708 Btuh	
Ceilings	Type/Color/Surface						U-Value	R-Value	Area(sqft)		HTM		Load		
1	Vented Attic/DarkShingle/RB						0.025	38.0/0.0	2076.8		1.24		2583 Btuh		
Ceiling Total									2077 (sqft)					2583 Btuh	
Floors	Type						R-Value		Size		HTM		Load		
1	Slab On Grade						0.0		1888 (ft-perimeter)		0.0		0 Btuh		
Floor Total									1888.0 (sqft)					0 Btuh	
Envelope Subtotal:														12503 Btuh	

Manual J Summer Calculations

Residential Load - Component Details (continued)

Yasmanis
Lot 9 Fairway View Unit 1-A
Lake City, FL 32055

Project Title. Climate:FL_GAINESVILLE_REGIONAL_A
Lot 9 Fairway View Unit 1-A

6/10/2025

Infiltration	Type Natural	Average ACH 0.18	Volume(cuft) 17615	Wall Ratio 1	CFM= 51.4	Load 1350 Btuh
Internal gain		Occupants 8	Btuh/occupant X 230	Appliance +	2200	Load 4040 Btuh
					Sensible Envelope Load.	17893 Btuh
Duct load	Average sealed,Supply(R6 0-Attic), Return(R6 0-Attic)				(DGM of 0.332)	5942 Btuh
					Sensible Load All Zones	23834 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Yasmanis
Lot 9 Fairway View Unit 1-A
Lake City, FL 32055

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
Lot 9 Fairway View Unit 1-A

6/10/2025

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	17893 Btuh
	Sensible Duct Load	5942 Btuh
	Total Sensible Zone Loads	23834 Btuh
	Sensible ventilation (Ex:0 cfm; Sup 0 cfm)	0 Btuh
	Blower	0 Btuh
	Total sensible gain	23834 Btuh
	Latent infiltration gain (for 54 gr. humidity difference)	1878 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1423 Btuh
	Latent occupant gain (8.0 people @ 200 Btuh per person)	1600 Btuh
	Latent other gain	0 Btuh
	Latent total gain	4901 Btuh
	TOTAL GAIN	28735 Btuh

EQUIPMENT

1 Central Unit	#	25864 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