

System Sizing Calculation

Summary

Project Title:
The Woods (Pavilion)

, FL

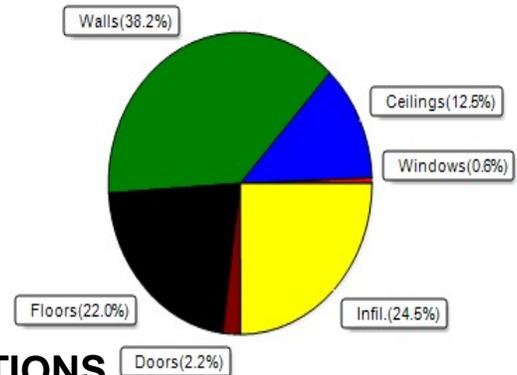
2/26/2026

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(100 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	60195	Btuh	Total cooling load calculation	138145	Btuh
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	199.4	120000	Sensible (SHR = 0.78)	110.1	93600
Heat Pump + Auxiliary(0.0kW)	199.4	120000	Latent	49.7	26400
			Total (Electric Heat Pump)	86.9	120000

WINTER CALCULATIONS

Winter Heating Load (for 4000 sqft)

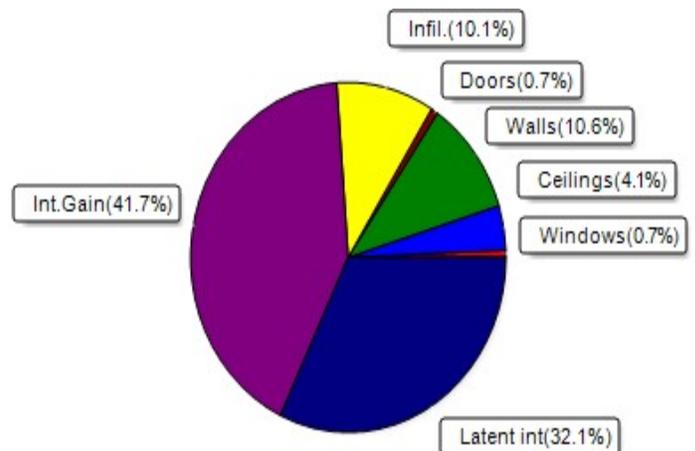
Load component	Load	
Window total	36 sqft	374 Btuh
Wall total	5121 sqft	22990 Btuh
Door total	72 sqft	1325 Btuh
Ceiling total	4000 sqft	7519 Btuh
Floor total	See detail report	13216 Btuh
Infiltration	337 cfm	14772 Btuh
Duct loss		0 Btuh
Subtotal		60195 Btuh
Ventilation	Ex:0 cfm; Sup:0 cfm	0 Btuh
TOTAL HEAT LOSS		60195 Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 4000 sqft)

Load component	Load	
Window total	36 sqft	902 Btuh
Wall total	5121 sqft	14656 Btuh
Door total	72 sqft	994 Btuh
Ceiling total	4000 sqft	5639 Btuh
Floor total		0 Btuh
Infiltration	253 cfm	5262 Btuh
Internal gain		57560 Btuh
Duct gain		0 Btuh
Sens. Ventilation	Ex:0 cfm; Sup:0 cfm	0 Btuh
Blower Load		0 Btuh
Total sensible gain		85013 Btuh
Latent gain(ducts)		0 Btuh
Latent gain(infiltration)		8732 Btuh
Latent gain(ventilation)		0 Btuh
Latent gain(internal/occupants/other)		44400 Btuh
Total latent gain		53132 Btuh
TOTAL HEAT GAIN		138145 Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: _____ 2-26-26

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Project Title:
The Woods (Pavilion)

, FL

2/26/2026

Reference City: Gainesville, FL (Defaults)
Humidity difference: 51gr.

Temperature Difference: 19.0F(TMY3 99%)
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	0.20, 0.26	No	No	W	1.5ft	1.3ft	24.0	0.0	24.0	9	24	581	Btuh	
2	2 NFRC	0.20, 0.26	No	No	E	1.5ft	1.3ft	12.0	0.0	12.0	9	24	291	Btuh	
	Excursion A														
	Window Total									36 (sqft)				902 Btuh	
Walls	Type	U-Value	R-Value	Area(sqft)		HTM		Load							
				Cav/Sheath											
1	Frame - Steel - Ext	0.11	13.0/0.0	560.0		2.9		1603 Btuh							
2	Frame - Steel - Ext	0.11	13.0/0.0	480.0		2.9		1374 Btuh							
3	Frame - Steel - Ext	0.11	13.0/0.0	560.0		2.9		1603 Btuh							
4	Frame - Steel - Ext	0.11	13.0/0.0	187.0		2.9		535 Btuh							
5	Frame - Steel - Ext	0.11	13.0/0.0	450.0		2.9		1288 Btuh							
6	Frame - Steel - Ext	0.11	13.0/0.0	2200.0		2.9		6296 Btuh							
7	Frame - Steel - Ext	0.11	13.0/0.0	684.0		2.9		1958 Btuh							
	Wall Total							5121 (sqft)		14656 Btuh					
Doors	Type	Area (sqft)	HTM		Load										
1	Insulated - Exterior	48.0	13.8		662 Btuh										
2	Insulated - Exterior	24.0	13.8		331 Btuh										
	Door Total		72 (sqft)		994 Btuh										
Ceilings	Type/Color/Surface	U-Value	R-Value	Area(sqft)	HTM		Load								
1	SnglAsmb no airsp/DarkMetal	0.047	21.0/0.0	4000.0	1.41		5639 Btuh								
	Ceiling Total			4000 (sqft)			5639 Btuh								
Floors	Type	R-Value	Size	HTM		Load									
1	Slab On Grade	0.0	3254 (ft-perimeter)	0.0		0 Btuh									
2	Slab On Grade	0.0	360 (ft-perimeter)	0.0		0 Btuh									
3	Slab On Grade	0.0	386 (ft-perimeter)	0.0		0 Btuh									
	Floor Total			4000.0 (sqft)			0 Btuh								
Envelope Subtotal:												22190 Btuh			
Infiltration	Type	Average ACH	Volume(cuft)	Wall Ratio	CFM=	Load									
	Natural	0.20	76000	1	252.6	5262 Btuh									
Internal gain	Occupants	Btuh/occupant	Appliance	Load											
	222	X 230	+	6500	57560 Btuh										
Sensible Envelope Load:												85013 Btuh			
Duct load	Extremely sealed, Supply(R6.0-Condi), Return(R6.0-Condi) (DGM of 0.000)										0 Btuh				
Sensible Load All Zones												85013 Btuh			

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
The Woods (Pavilion)

, FL

2/26/2026

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	85013 Btuh
	Sensible Duct Load	0 Btuh
	Total Sensible Zone Loads	85013 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Blower	0 Btuh
	Total sensible gain	85013 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	8732 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	0 Btuh
	Latent occupant gain (222.0 people @ 200 Btuh per person)	44400 Btuh
	Latent other gain	0 Btuh
	Latent total gain	53132 Btuh
TOTAL GAIN	138145 Btuh	

EQUIPMENT

1. Central Unit	Multiple #Multiple	120000 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

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Project Title:
The Woods (Pavilion)
Building Type: User

, FL

2/26/2026

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 40.0 °F (TMY3 99%)
Winter Setpoint: 70 °F (Required Manual J default)

Component Loads for Whole House								
Window	Panels/Type	Frame	U	Orientation	Area(sqft)	X	HTM=	Load
1	2, NFRC 0.20	Vinyl	0.26	W	24.0		10.4	250 Btuh
2	2, NFRC 0.20	Vinyl	0.26	E	12.0		10.4	125 Btuh
	Window Total					36.0(sqft)		374 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Steel	- Ext	(0.112)	13.0/0.0	560		4.49	2514 Btuh
2	Frame - Steel	- Ext	(0.112)	13.0/0.0	480		4.49	2155 Btuh
3	Frame - Steel	- Ext	(0.112)	13.0/0.0	560		4.49	2514 Btuh
4	Frame - Steel	- Ext	(0.112)	13.0/0.0	187		4.49	840 Btuh
5	Frame - Steel	- Ext	(0.112)	13.0/0.0	450		4.49	2020 Btuh
6	Frame - Steel	- Ext	(0.112)	13.0/0.0	2200		4.49	9877 Btuh
7	Frame - Steel	- Ext	(0.112)	13.0/0.0	684		4.49	3071 Btuh
	Wall Total					5121(sqft)		22990 Btuh
Doors	Type	Storm	Ueff.	R-Value	Area	X	HTM=	Load
1	Insulated - Exterior,	n	(0.460)		48		18.4	883 Btuh
2	Insulated - Exterior,	n	(0.460)		24		18.4	442 Btuh
	Door Total					72(sqft)		1325Btuh
Ceilings	Type/Color/Surface	Ueff.	R-Value	Area	X	HTM=	Load	
1	Single as/D/Metal	(0.047)	21.0/0.0	4000		1.9	7519 Btuh	
	Ceiling Total					4000(sqft)		7519Btuh
Floors	Type	Ueff.	R-Value	Size	X	HTM=	Load	
1	Slab On Grade	(1.180)	0.0	204.0 ft(perim.)		47.2	9629 Btuh	
2	Slab On Grade	(1.180)	0.0	30.0 ft(perim.)		47.2	1416 Btuh	
3	Slab On Grade	(1.180)	0.0	46.0 ft(perim.)		47.2	2171 Btuh	
	Floor Total					4000 sqft		13216 Btuh
Envelope Subtotal:								45424 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=	Load	
	Natural		0.27	76000	1.00	336.8	14772 Btuh	
Duct load	Extremely sealed, R6.0, Supply(Con), Return(Con) (DLM of 0.000)						0 Btuh	
All Zones	Sensible Subtotal All Zones						60196 Btuh	

Manual J Winter Calculations

Residential Load - Component Details (continued)

Project Title:
The Woods (Pavilion)
Building Type: User

, FL

2/26/2026

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sens. Heat Loss (Ex:0 cfm; Sup:0 cfm) Total Heat Loss	60195 Btuh 0 Btuh 60195 Btuh
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EQUIPMENT

1. Electric Heat Pump	Multiple #Multiple	120000 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