

Residential System Sizing Calculation

Summary

Project Title:
Boorman

, FL

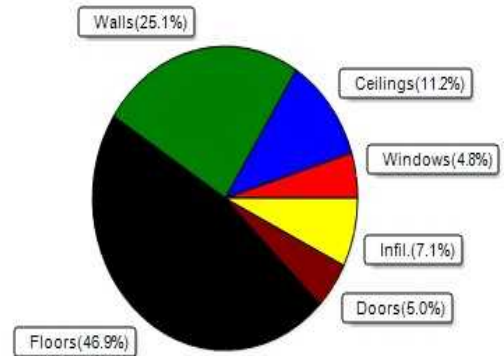
5/19/2026

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	14834	Btuh	Total cooling load calculation	11601	Btuh
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	161.8	24000	Sensible (SHR = 0.75)	184.1	18000
Heat Pump + Auxiliary(0.0kW)	161.8	24000	Latent	329.3	6000
			Total (Electric Heat Pump)	206.9	24000

WINTER CALCULATIONS

Winter Heating Load (for 1217 sqft)

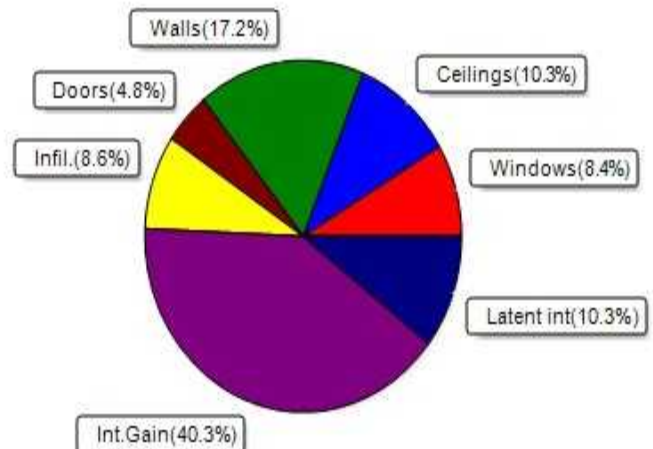
Load component	Load
Window total 81 sqft	713 Btuh
Wall total 1205 sqft	3725 Btuh
Door total 40 sqft	736 Btuh
Ceiling total 1217 sqft	1655 Btuh
Floor total 1217 sqft	6953 Btuh
Infiltration 24 cfm	1053 Btuh
Duct loss	0 Btuh
Subtotal	14834 Btuh
Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
TOTAL HEAT LOSS	14834 Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1217 sqft)

Load component	Load
Window total 81 sqft	979 Btuh
Wall total 1205 sqft	1993 Btuh
Door total 40 sqft	552 Btuh
Ceiling total 1217 sqft	1200 Btuh
Floor total	0 Btuh
Infiltration 18 cfm	375 Btuh
Internal gain	4680 Btuh
Duct gain	0 Btuh
Sens.Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
Blower Load	0 Btuh
Total sensible gain	9779 Btuh
Latent gain(ducts)	0 Btuh
Latent gain(infiltration)	622 Btuh
Latent gain(ventilation)	0 Btuh
Latent gain(internal/occupants/other)	1200 Btuh
Total latent gain	1822 Btuh
TOTAL HEAT GAIN	11601 Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: 5-19-26

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Project Title:
Boorman

, FL

5/19/2026

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	0.33, 0.22	No	No	N		7.3ft.	16.5f	12.0	0.0	12.0	11	11	133	Btuh		
2	2 NFRC	0.33, 0.22	No	No	N		7.3ft.	16.5f	9.0	0.0	9.0	11	11	100	Btuh		
3	2 NFRC	0.33, 0.22	No	No	S		3.3ft.	13.5f	60.0	60.0	0.0	11	14	667	Btuh		
	Excursion													78	Btuh		
	Window Total								81 (sqft)					979	Btuh		
Walls	Type					U-Value		R-Value		Area(sqft)		HTM		Load			
								Cav/Sheath									
1	Frame - Wood - Ext					0.077		19.0/0.0		397.0		1.65		657 Btuh			
2	Frame - Wood - Ext					0.077		19.0/0.0		225.0		1.65		372 Btuh			
3	Frame - Wood - Ext					0.077		19.0/0.0		358.0		1.65		592 Btuh			
4	Frame - Wood - Ext					0.077		19.0/0.0		225.0		1.65		372 Btuh			
	Wall Total								1205 (sqft)					1993	Btuh		
Doors	Type									Area (sqft)		HTM		Load			
1	Insulated - Exterior									20.0		13.8		276 Btuh			
2	Insulated - Exterior									20.0		13.8		276 Btuh			
	Door Total								40 (sqft)					552	Btuh		
Ceilings	Type/Color/Surface					U-Value		R-Value		Area(sqft)		HTM		Load			
1	SnglAsmb no airsp/DarkMetal					0.034		30.0/0.0		1217.0		0.99		1200 Btuh			
	Ceiling Total								1217 (sqft)					1200	Btuh		
Floors	Type							R-Value		Size		HTM		Load			
1	Slab On Grade							0.0		1217 (ft-perimeter)		0.0		0 Btuh			
	Floor Total								1217.0 (sqft)					0	Btuh		
	Envelope Subtotal:													4724 Btuh			
Infiltration	Type					Average ACH		Volume(cuft)		Wall Ratio		CFM=		Load			
	Natural					0.10		10953		1		18.0		375 Btuh			
Internal gain						Occupants		Btuh/occupant				Appliance		Load			
								X 230		+		3300		4680 Btuh			
	Sensible Envelope Load:													9779 Btuh			
Duct load	Extremelysealed, Supply(R6.0-Condi),Return(R6.0-Condi)													(DGM of 0.000)		0 Btuh	
	Sensible Load All Zones													9779 Btuh			

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
Boorman

, FL

5/19/2026

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	9779 Btuh
	Sensible Duct Load	0 Btuh
	Total Sensible Zone Loads	9779 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Blower	0 Btuh
	Total sensible gain	9779 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	622 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	0 Btuh
	Latent occupant gain (6.0 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	1822 Btuh
	TOTAL GAIN	11601 Btuh

EQUIPMENT

1. Central Unit	#	24000 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:
Boorman
Building Type: User

, FL

5/19/2026

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	Panes/Type	Frame	U	Orientation	Area(sqft)	X	HTM=	Load
1	2, NFRC 0.33	Vinyl	0.22	N	12.0		8.8	106 Btuh
2	2, NFRC 0.33	Vinyl	0.22	N	9.0		8.8	79 Btuh
3	2, NFRC 0.33	Vinyl	0.22	S	60.0		8.8	528 Btuh
	Window Total				81.0(sqft)			713 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Wood	- Ext	(0.077)	19.0/0.0	397		3.09	1227 Btuh
2	Frame - Wood	- Ext	(0.077)	19.0/0.0	225		3.09	695 Btuh
3	Frame - Wood	- Ext	(0.077)	19.0/0.0	358		3.09	1107 Btuh
4	Frame - Wood	- Ext	(0.077)	19.0/0.0	225		3.09	695 Btuh
	Wall Total				1205(sqft)			3725 Btuh
Doors	Type	Storm	Ueff.		Area	X	HTM=	Load
1	Insulated - Exterior, n		(0.460)		20		18.4	368 Btuh
2	Insulated - Exterior, n		(0.460)		20		18.4	368 Btuh
	Door Total				40(sqft)			736Btuh
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area	X	HTM=	Load
1	Single as/D/Metal		(0.034)	30.0/0.0	1217		1.4	1655 Btuh
	Ceiling Total				1217(sqft)			1655Btuh
Floors	Type		Ueff.	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	147.3 ft(perim.)		47.2	6953 Btuh
	Floor Total				1217 sqft			6953 Btuh
	Envelope Subtotal:							13781 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=		
	Natural		0.13	10953	1.00	24.0		1053 Btuh
Duct load	Extremely sealed, R6.0, Supply(Con), Return(Con)						(DLM of 0.000)	0 Btuh
All Zones	Sensible Subtotal All Zones							14834 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

, FL

Project Title:
Boorman
Building Type: User

5/19/2026

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	14834 Btuh
	Ventilation Sens. Heat Loss (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Total Heat Loss	14834 Btuh

EQUIPMENT

1. Electric Heat Pump	#	24000 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