

Residential System Sizing Calculation

Summary

Project Title:
Picklo Residence

, FL

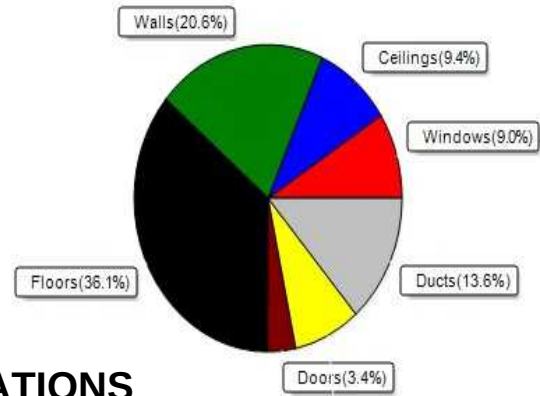
1/29/2026

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	21463 Btuh	Total cooling load calculation	21154 Btuh
Submitted heating capacity	% of calc Btuh	Submitted cooling capacity	% of calc Btuh
Total (Electric Heat Pump)	167.7 36000	Sensible (SHR = 0.75)	145.6 27000
Heat Pump + Auxiliary(0.0kW)	167.7 36000	Latent	345.6 9000
		Total (Electric Heat Pump)	170.2 36000

WINTER CALCULATIONS

Winter Heating Load (for 1577 sqft)

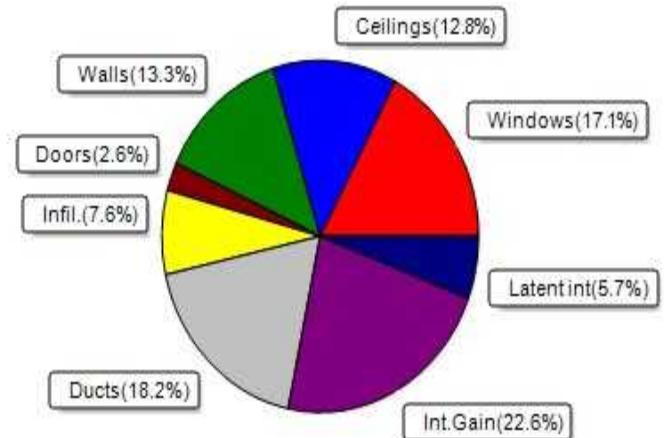
Load component	Load
Window total 186 sqft	1934 Btuh
Wall total 1247 sqft	4427 Btuh
Door total 40 sqft	736 Btuh
Ceiling total 1577 sqft	2009 Btuh
Floor total 1577 sqft	7741 Btuh
Infiltration 39 cfm	1705 Btuh
Duct loss	2911 Btuh
Subtotal	21463 Btuh
Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
TOTAL HEAT LOSS	21463 Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1577 sqft)

Load component	Load
Window total 186 sqft	3612 Btuh
Wall total 1247 sqft	2822 Btuh
Door total 40 sqft	552 Btuh
Ceiling total 1577 sqft	2712 Btuh
Floor total	0 Btuh
Infiltration 29 cfm	607 Btuh
Internal gain	4780 Btuh
Duct gain	3464 Btuh
Sens.Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
Blower Load	0 Btuh
Total sensible gain	18550 Btuh
Latent gain(ducts)	396 Btuh
Latent gain(infiltration)	1008 Btuh
Latent gain(ventilation)	0 Btuh
Latent gain(internal/occupants/other)	1200 Btuh
Total latent gain	2604 Btuh
TOTAL HEAT GAIN	21154 Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: 1-29-26

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Project Title:
Picklo Residence

, FL

1/29/2026

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	E		1.5ft	1.3ft	15.0	0.0	15.0	9	24	363	Btuh		
2	2 NFRC	0.20, 0.26	No	No	E		1.5ft	1.3ft	60.0	0.0	60.0	9	24	1453	Btuh		
3	2 NFRC	0.20, 0.26	No	No	S		9.5ft	1.3ft	60.0	60.0	0.0	9	11	549	Btuh		
4	2 NFRC	0.20, 0.26	No	No	W		1.5ft	1.3ft	45.0	0.0	45.0	9	24	1090	Btuh		
5	2 NFRC	0.20, 0.26	No	No	W		1.5ft	1.3ft	6.0	0.0	6.0	9	24	145	Btuh		
	Excursion													11	Btuh		
	Window Total								186 (sqft)					3612 Btuh			
Walls	Type						U-Value		R-Value		Area(sqft)		HTM		Load		
									Cav/Sheath								
	1	Frame - Wood - Ext						0.09		13.0/0.0		254.5		2.3		576	Btuh
	2	Frame - Wood - Ext						0.09		13.0/0.0		387.0		2.3		876	Btuh
	3	Frame - Wood - Ext						0.09		13.0/0.0		194.5		2.3		440	Btuh
	4	Frame - Wood - Ext						0.09		13.0/0.0		411.0		2.3		930	Btuh
		Wall Total										1247 (sqft)				2822	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	Vented Attic/DarkMetal						0.032		30.0/0.0		1577.0		1.72		2712	Btuh
		Ceiling Total										1577 (sqft)				2712	Btuh
Floors	Type								R-Value		Size		HTM		Load		
	1	Slab On Grade								0.0		1577 (ft-perimeter)		0.0		0	Btuh
		Floor Total										1577.0 (sqft)				0	Btuh
	Envelope Subtotal:													9699 Btuh			
Infiltration	Type						Average ACH		Volume(cuft)		Wall Ratio		CFM=		Load		
	Natural						0.12		14193		1		29.2		607 Btuh		
Internal gain							Occupants		Btuh/occupant		Appliance				Load		
							6		X 230		+		3400		4780 Btuh		
	Sensible Envelope Load:													15086 Btuh			
Duct load	Extremely sealed, Supply(R6.0-Attic), Return(R6.0-Attic) (DGM of 0.230)													3464 Btuh			
	Sensible Load All Zones													18550 Btuh			

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
Picklo Residence

, FL

1/29/2026

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	15086 Btuh
	Sensible Duct Load	3464 Btuh
	Total Sensible Zone Loads	18550 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Blower	0 Btuh
	Total sensible gain	18550 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	1008 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	396 Btuh
	Latent occupant gain (6.0 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	2604 Btuh
	TOTAL GAIN	21154 Btuh

EQUIPMENT

1. Central Unit	#	36000 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

, FL

Project Title:
Picklo Residence
Building Type: User

1/29/2026

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 0.20	Vinyl	0.26	E	15.0		10.4	156 Btuh
2	2, NFRC 0.20	Vinyl	0.26	E	60.0		10.4	624 Btuh
3	2, NFRC 0.20	Vinyl	0.26	S	60.0		10.4	624 Btuh
4	2, NFRC 0.20	Vinyl	0.26	W	45.0		10.4	468 Btuh
5	2, NFRC 0.20	Vinyl	0.26	W	6.0		10.4	62 Btuh
	Window Total				186.0(sqft)			1934 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	255		3.55	904 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	387		3.55	1374 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	195		3.55	691 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	411		3.55	1459 Btuh
	Wall Total				1247(sqft)			4427 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	Flat ceil/D/Metal		(0.032)	30.0/0.0	1577		1.3	2009 Btuh
	Ceiling Total				1577(sqft)			2009Btuh
Floors	Type		Ueff.	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	164.0 ft(perim.)		47.2	7741 Btuh
	Floor Total				1577 sqft			7741 Btuh
	Envelope Subtotal:							16847 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=		
	Natural		0.16	14193	1.00	38.9		1705 Btuh
Duct load	Extremely sealed, R6.0, Supply(Att), Return(Att)						(DLM of 0.157)	2911 Btuh
All Zones	Sensible Subtotal All Zones							21463 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

, FL

Project Title:
Picklo Residence
Building Type: User

1/29/2026

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	21463 Btuh
	Ventilation Sens. Heat Loss (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Total Heat Loss	21463 Btuh

EQUIPMENT

1. Electric Heat Pump	#	36000 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