

Residential System Sizing Calculation

Summary

Flouton

Project Title:
Norris - Flouton Project

, FL 32055

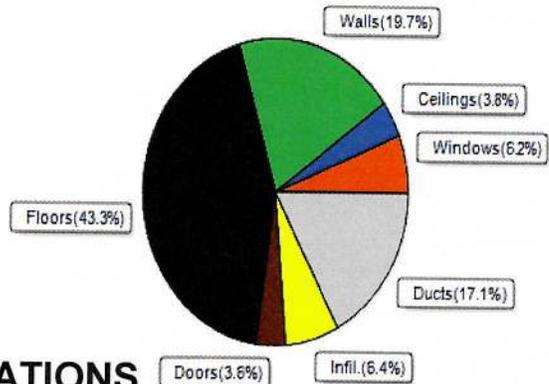
8/21/2025

Location for weather data: Gainesville, FL - Defaults: Latitude(30) Altitude(164 ft.) Temp Range(M)			
Humidity data: Interior RH (50%) Outdoor wet bulb (76F) Humidity difference(47gr.)			
Winter design temperature(MJ8 99%)	33 F	Summer design temperature(MJ8 99%)	92 F
Winter setpoint	70 F	Summer setpoint	75 F
Winter temperature difference	37 F	Summer temperature difference	17 F
Total heating load calculation	23931 Btuh	Total cooling load calculation	17579 Btuh
Submitted heating capacity	% of calc Btuh	Submitted cooling capacity	% of calc Btuh
Total (Electric Heat Pump)	200.6 48000	Sensible (SHR = 0.75)	253.6 36000
Heat Pump + Auxiliary(0.0kW)	200.6 48000	Latent	354.5 12000
		Total (Electric Heat Pump)	273.1 48000

WINTER CALCULATIONS

Winter Heating Load (for 1809 sqft)

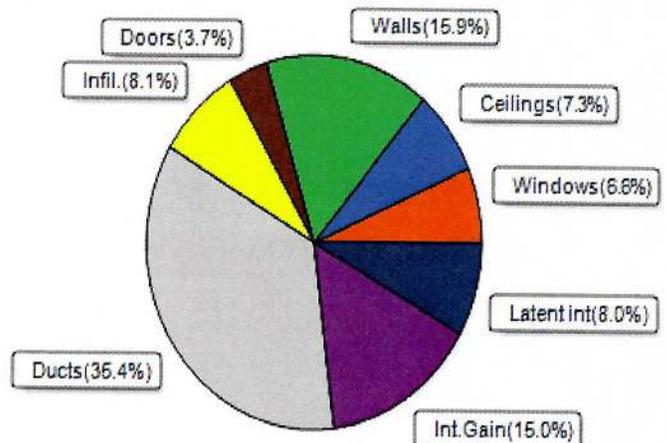
Load component			Load	
Window total	121	sqft	1473	Btuh
Wall total	1501	sqft	4712	Btuh
Door total	51	sqft	870	Btuh
Ceiling total	1809	sqft	909	Btuh
Floor total	1809	sqft	10353	Btuh
Infiltration	38	cfm	1531	Btuh
Duct loss			4083	Btuh
Subtotal			23931	Btuh
Ventilation	Ex:0 cfm; Sup:0 cfm		0	Btuh
TOTAL HEAT LOSS			23931	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1809 sqft)

Load component			Load	
Window total	121	sqft	1165	Btuh
Wall total	1501	sqft	2790	Btuh
Door total	51	sqft	658	Btuh
Ceiling total	1809	sqft	1278	Btuh
Floor total			0	Btuh
Infiltration	28	cfm	528	Btuh
Internal gain			2630	Btuh
Duct gain			5145	Btuh
Sens. Ventilation	Ex:0 cfm; Sup:0 cfm		0	Btuh
Blower Load			0	Btuh
Total sensible gain			14194	Btuh
Latent gain(ducts)			1083	Btuh
Latent gain(infiltration)			902	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			1400	Btuh
Total latent gain			3385	Btuh
TOTAL HEAT GAIN			17579	Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: *S. Bell*

DATE: *8/21/25*

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Flouton

, FL 32055

Project Title:
Norris - Flouton Project
Building Type: User

8/21/2025

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 37.0 °F (MJ8 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 0.21	Metal	0.33	N	45.0		12.2	549 Btuh	
2	2, NFRC 0.21	Metal	0.33	N	9.0		12.2	110 Btuh	
3	2, NFRC 0.21	Metal	0.33	E	4.0		12.2	49 Btuh	
4	2, NFRC 0.21	Metal	0.33	S	2.7		12.2	33 Btuh	
5	2, NFRC 0.21	Metal	0.33	S	25.0		12.2	305 Btuh	
6	2, NFRC 0.21	Metal	0.33	S	20.0		12.2	244 Btuh	
7	2, NFRC 0.21	Metal	0.33	W	15.0		12.2	183 Btuh	
	Window Total				120.7(sqft)			1473 Btuh	
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area X		HTM=	Load	
1	Frame - Wood	- Ext	(0.085)	13.0/1.0	244		3.14	765 Btuh	
2	Frame - Wood	- Ext	(0.085)	13.0/1.0	146		3.14	457 Btuh	
3	Frame - Wood	- Ext	(0.085)	13.0/1.0	172		3.14	540 Btuh	
4	Frame - Wood	- Adj	(0.085)	13.0/1.0	192		3.14	603 Btuh	
5	Frame - Wood	- Adj	(0.085)	13.0/1.0	175		3.14	550 Btuh	
6	Frame - Wood	- Ext	(0.085)	13.0/1.0	113		3.14	356 Btuh	
7	Frame - Wood	- Ext	(0.085)	13.0/1.0	122		3.14	382 Btuh	
8	Frame - Wood	- Ext	(0.085)	13.0/1.0	337		3.14	1059 Btuh	
	Wall Total				1501(sqft)			4712 Btuh	
Doors	Type	Storm	Ueff.		Area X		HTM=	Load	
1	Insulated - Exterior,	n	(0.460)		33		17.0	567 Btuh	
2	Insulated - Exterior,	n	(0.460)		18		17.0	303 Btuh	
	Door Total				51(sqft)			870Btuh	
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area X		HTM=	Load	
1	Flat ceil/D/Shing		(0.014)	38.0/38.0	1809		0.50	909 Btuh	
	Ceiling Total				1809(sqft)			909Btuh	
Floors	Type		Ueff.	R-Value	Size X		HTM=	Load	
1	Slab On Grade		(1.180)	0.0	237.1 ft(perim.)		43.7	10353 Btuh	
	Floor Total				1809 sqft			10353 Btuh	
Envelope Subtotal:								18317 Btuh	
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio		CFM=	Load	
	Natural		0.16	14472	1.00		37.8	1531 Btuh	
Duct load	Average sealed, R6.0, Supply(Att), Return(Att)						(DLM of 0.206)		4083 Btuh
All Zones	Sensible Subtotal All Zones							23931 Btuh	

Manual J Winter Calculations

Residential Load - Component Details (continued)

Flouton
 , FL 32055

Project Title:
 Norris - Flouton Project
 Building Type: User

8/21/2025

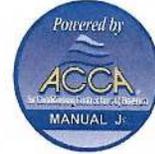
WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	23931 Btuh
	Ventilation Sens. Heat Loss (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Total Heat Loss	23931 Btuh

EQUIPMENT

1. Electric Heat Pump	#	48000 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

Manual J Summer Calculations

Residential Load - Component Details (continued)

Flouton
 , FL 32055

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
 Norris - Flouton Project

8/21/2025

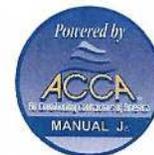
WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	9050 Btuh
	Sensible Duct Load	5145 Btuh
	Total Sensible Zone Loads	14194 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Blower	0 Btuh
	Total sensible gain	14194 Btuh
	Latent infiltration gain (for 47 gr. humidity difference)	902 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1083 Btuh
	Latent occupant gain (1.0 people @ 200 Btuh per person)	200 Btuh
	Latent other gain	1200 Btuh
	Latent total gain	3385 Btuh
	TOTAL GAIN	17579 Btuh

EQUIPMENT

1. Central Unit	#	48000 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