

Residential System Sizing Calculation

Summary

Project Title:
Stanley Crawford Const. - Water Residence

, FL

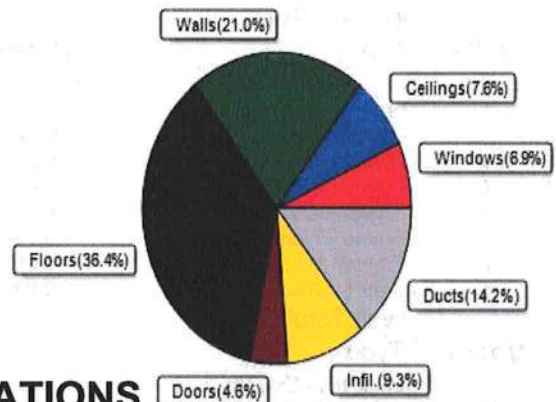
5/20/2020

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(152 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			21017	Btuh	
Submitted heating capacity	% of calc	Btuh			
Total (Electric Heat Pump)	114.2	24000			
Heat Pump + Auxiliary(0.0kW)	114.2	24000			
Total cooling load calculation			15173	Btuh	
Submitted cooling capacity	% of calc	Btuh			
Sensible (SHR = 0.85)	163.3	20400			
Latent	134.5	3600			
Total (Electric Heat Pump)			158.2	24000	

WINTER CALCULATIONS

Winter Heating Load (for 1250 sqft)

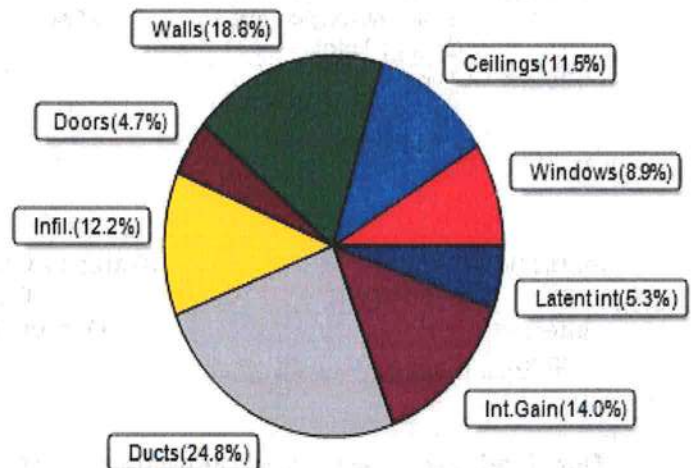
Load component			Load	
Window total	110	sqft	1452	Btuh
Wall total	1282	sqft	4421	Btuh
Door total	60	sqft	960	Btuh
Ceiling total	1250	sqft	1592	Btuh
Floor total	1250	sqft	7646	Btuh
Infiltration	45	cfm	1955	Btuh
Duct loss			2991	Btuh
Subtotal			21017	Btuh
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			21017	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1250 sqft)

Load component			Load	
Window total	110	sqft	1345	Btuh
Wall total	1282	sqft	2818	Btuh
Door total	60	sqft	720	Btuh
Ceiling total	1250	sqft	1752	Btuh
Floor total			0	Btuh
Infiltration	33	cfm	696	Btuh
Internal gain			2120	Btuh
Duct gain			3045	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			12496	Btuh
Latent gain(ducts)			721	Btuh
Latent gain(infiltration)			1156	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			800	Btuh
Total latent gain			2677	Btuh
TOTAL HEAT GAIN			15173	Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: _____

5-20-20

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
Stanley Crawford Const. - Water Residence

, FL

5/20/2020

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	9451 Btuh
	Sensible Duct Load	3045 Btuh
	Total Sensible Zone Loads	12496 Btuh
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	12496 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	1156 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	721 Btuh
	Latent occupant gain (4.0 people @ 200 Btuh per person)	800 Btuh
	Latent other gain	0 Btuh
	Latent total gain	2677 Btuh
	TOTAL GAIN	15173 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

Manual J Winter Calculations

Residential Load - Component Details (continued)

Project Title:
Stanley Crawford Const. - Water Residence
Building Type: User

, FL

5/20/2020

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	21017 Btuh
	Ventilation Sensible Heat Loss	0 Btuh
	Total Heat Loss	21017 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