

Residential System Sizing Calculation

Summary

Trent Giebeig

Project Title:
Lot 37 Crosswinds

Lake City, FL 32025

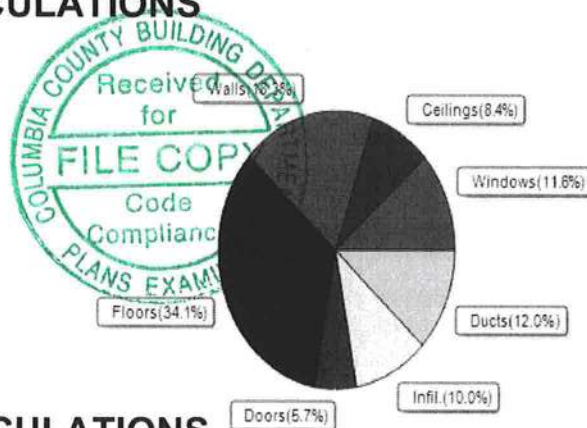
4/14/2021

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			25203	Btuh	
Total cooling load calculation			18532	Btuh	
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	103.7	26139	Sensible (SHR = 0.75)	109.5	14942
Heat Pump + Auxiliary(0.0kW)	103.7	26139	Latent	101.9	4981
			Total (Electric Heat Pump)	107.5	19923

WINTER CALCULATIONS

Winter Heating Load (for 1660 sqft)

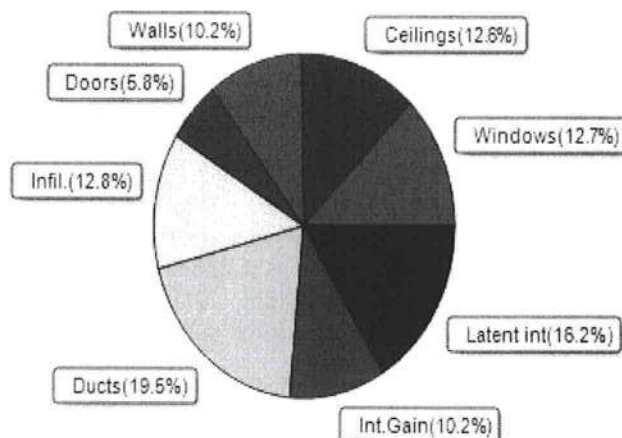
Load component			Load	
Window total	133	sqft	2926	Btuh
Wall total	1429	sqft	4616	Btuh
Door total	78	sqft	1431	Btuh
Ceiling total	1660	sqft	2115	Btuh
Floor total	1660	sqft	8590	Btuh
Infiltration	57	cfm	2508	Btuh
Duct loss			3016	Btuh
Subtotal			25203	Btuh
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			25203	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1660 sqft)

Load component			Load	
Window total	133	sqft	2356	Btuh
Wall total	1429	sqft	1890	Btuh
Door total	78	sqft	1073	Btuh
Ceiling total	1660	sqft	2326	Btuh
Floor total			0	Btuh
Infiltration	43	cfm	894	Btuh
Internal gain			1890	Btuh
Duct gain			3214	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			13643	Btuh
Latent gain(ducts)			406	Btuh
Latent gain(infiltration)			1483	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			3000	Btuh
Total latent gain			4888	Btuh
TOTAL HEAT GAIN			18532	Btuh



8th Edition

EnergyGauge® System Sizing

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