

Residential System Sizing Calculation

Summary

Project Title:
Lay Residence

Lake City, FL 32055

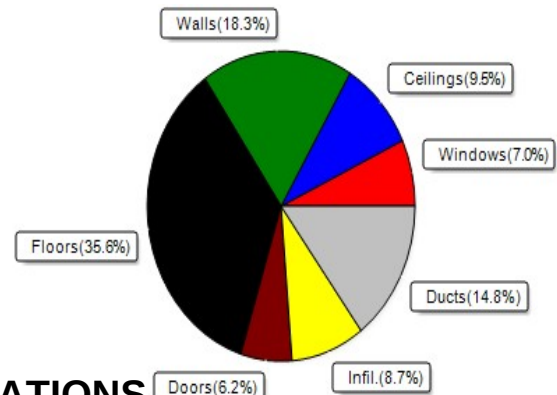
4/30/2024

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	42880 Btuh	Total cooling load calculation	26575 Btuh
Submitted heating capacity	% of calc Btuh	Submitted cooling capacity	% of calc Btuh
Total (Electric Heat Pump)	100.0 42880	Sensible (SHR = 0.85)	102.9 22589
Heat Pump + Auxiliary(0.0kW)	100.0 42880	Latent	86.0 3986
		Total (Electric Heat Pump)	100.0 26575

WINTER CALCULATIONS

Winter Heating Load (for 2984 sqft)

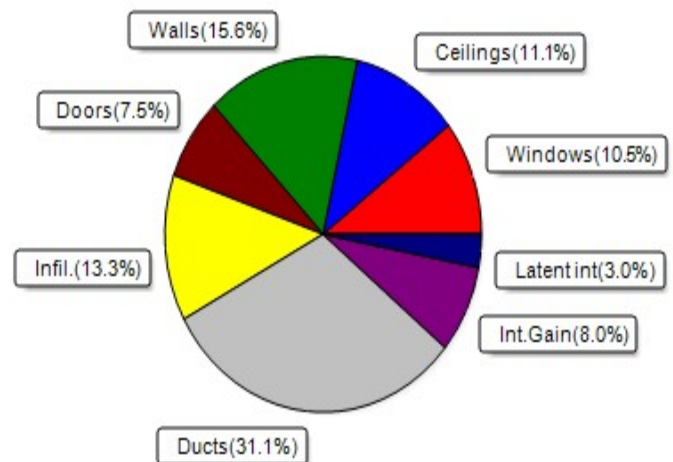
Load component		Load	
Window total	249 sqft	2988	Btuh
Wall total	2537 sqft	7842	Btuh
Door total	144 sqft	2650	Btuh
Ceiling total	2984 sqft	4058	Btuh
Floor total	2984 sqft	15246	Btuh
Infiltration	85 cfm	3733	Btuh
Duct loss		6364	Btuh
Subtotal		42880	Btuh
Ventilation Ex:0 cfm; Sup:0 cfm		0	Btuh
TOTAL HEAT LOSS		42880	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 2984 sqft)

Load component		Load	
Window total	249 sqft	2784	Btuh
Wall total	2537 sqft	4142	Btuh
Door total	144 sqft	1987	Btuh
Ceiling total	2984 sqft	2942	Btuh
Floor total		0	Btuh
Infiltration	64 cfm	1330	Btuh
Internal gain		2120	Btuh
Duct gain		6636	Btuh
Sens.Ventilation Ex:0 cfm; Sup:0 cfm		0	Btuh
Blower Load		0	Btuh
Total sensible gain		21942	Btuh
Latent gain(ducts)		1627	Btuh
Latent gain(infiltration)		2207	Btuh
Latent gain(ventilation)		0	Btuh
Latent gain(internal/occupants/other)		800	Btuh
Total latent gain		4633	Btuh
TOTAL HEAT GAIN		26575	Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: _____