

Residential System Sizing Calculation

Summary

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Project Title:
Widergren Residence

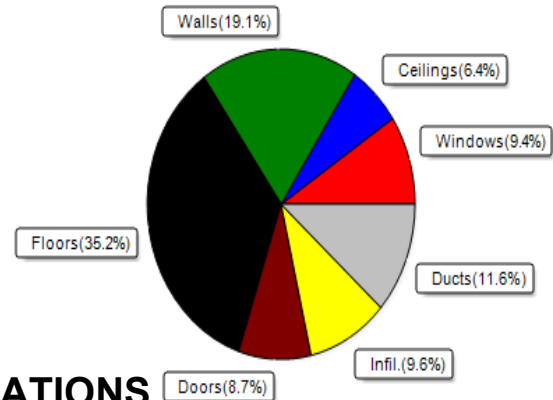
11/21/2022

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		30649 Btuh	Total cooling load calculation		22128 Btuh
Submitted heating capacity		% of calc Btuh	Submitted cooling capacity		% of calc Btuh
Total (Electric Heat Pump)		107.5 32947	Sensible (SHR = 0.75)		90.2 17446
Heat Pump + Auxiliary(0.0kW)		107.5 32947	Latent		209.0 5815
			Total (Electric Heat Pump)		105.1 23261

WINTER CALCULATIONS

Winter Heating Load (for 2101 sqft)

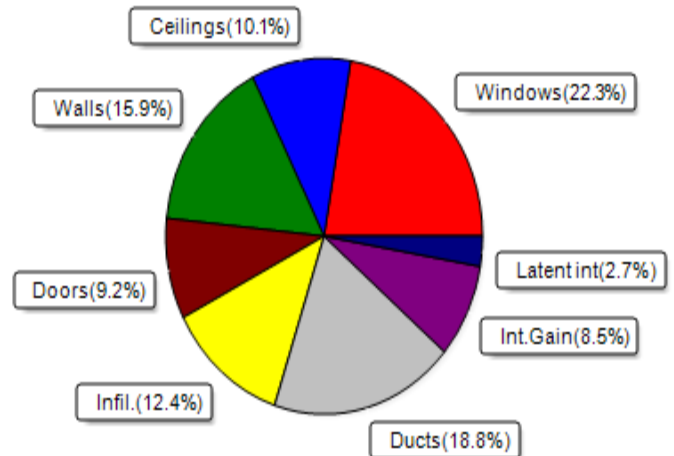
Load component	Load
Window total	194 sqft 2866 Btuh
Wall total	1779 sqft 5843 Btuh
Door total	160 sqft 2679 Btuh
Ceiling total	2101 sqft 1973 Btuh
Floor total	2101 sqft 10784 Btuh
Infiltration	72 cfm 2936 Btuh
Duct loss	3568 Btuh
Subtotal	30649 Btuh
Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
TOTAL HEAT LOSS	30649 Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 2101 sqft)

Load component	Load
Window total	194 sqft 4939 Btuh
Wall total	1779 sqft 3528 Btuh
Door total	160 sqft 2027 Btuh
Ceiling total	2101 sqft 2240 Btuh
Floor total	0 Btuh
Infiltration	54 cfm 1012 Btuh
Internal gain	1890 Btuh
Duct gain	3710 Btuh
Sens.Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
Blower Load	0 Btuh
Total sensible gain	19346 Btuh
Latent gain(ducts)	453 Btuh
Latent gain(infiltration)	1729 Btuh
Latent gain(ventilation)	0 Btuh
Latent gain(internal/occupants/other)	600 Btuh
Total latent gain	2782 Btuh
TOTAL HEAT GAIN	22128 Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: _____