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Residential System Sizing Calculation

Summary

Mr. Fields
Anyplace
Lake City, FL 32055

Project Title:
Trent Geibeig Lot 28 Crosswinds Sub

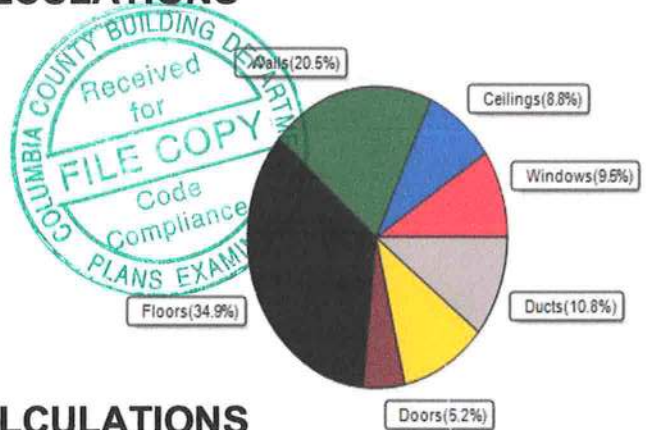
11/28/2023

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(164 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	25706 Btuh	Total cooling load calculation	16545 Btuh
Submitted heating capacity	% of calc Btuh	Submitted cooling capacity	% of calc Btuh
Total (Electric Heat Pump)	100.0 25706	Sensible (SHR = 0.75)	89.0 12409
Heat Pump + Auxiliary(0.0kW)	100.0 25706	Latent	159.2 4136
		Total (Electric Heat Pump)	100.0 16545

WINTER CALCULATIONS

Winter Heating Load (for 1770 sqft)

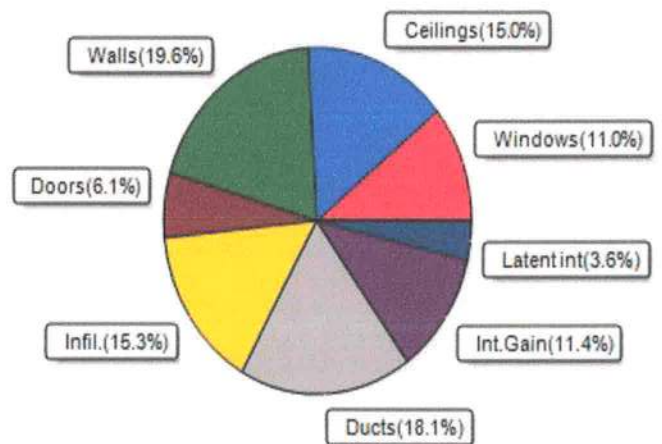
Load component	Area/Volume	Load	Unit
Window total	152 sqft	2432	Btuh
Wall total	1482 sqft	5261	Btuh
Door total	78 sqft	1335	Btuh
Ceiling total	1770 sqft	2255	Btuh
Floor total	1770 sqft	8968	Btuh
Infiltration	61 cfm	2674	Btuh
Duct loss		2782	Btuh
Subtotal		25706	Btuh
Ventilation	Ex:0 cfm; Sup:0 cfm	0	Btuh
TOTAL HEAT LOSS		25706	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1770 sqft)

Load component	Area/Volume	Load	Unit
Window total	152 sqft	1813	Btuh
Wall total	1482 sqft	3236	Btuh
Door total	78 sqft	1001	Btuh
Ceiling total	1770 sqft	2480	Btuh
Floor total		0	Btuh
Infiltration	46 cfm	952	Btuh
Internal gain		1890	Btuh
Duct gain		2573	Btuh
Sens. Ventilation	Ex:0 cfm; Sup:0 cfm	0	Btuh
Blower Load		0	Btuh
Total sensible gain		13946	Btuh
Latent gain(ducts)		418	Btuh
Latent gain(infiltration)		1580	Btuh
Latent gain(ventilation)		0	Btuh
Latent gain(internal/occupants/other)		600	Btuh
Total latent gain		2599	Btuh
TOTAL HEAT GAIN		16545	Btuh



8th Edition

EnergyGauge® System Sizing
PREPARED BY: *William H. Freeman*
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