

Residential System Sizing Calculation

Summary

Kevin Huesman
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Project Title:
Huesman Residence

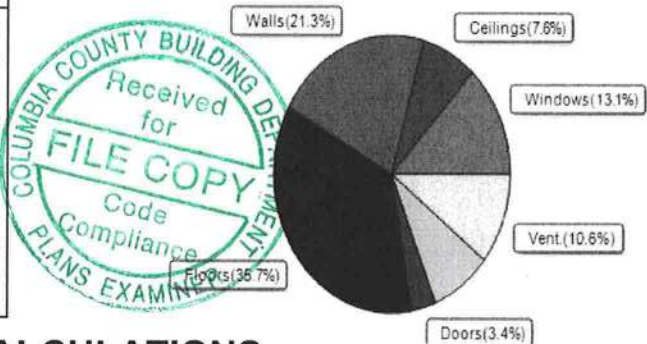
2/8/2021

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	20604 Btuh	Total cooling load calculation	14066 Btuh
Submitted heating capacity	% of calc Btuh	Submitted cooling capacity	% of calc Btuh
Total (Electric Heat Pump)	100.0 20604	Sensible (SHR = 0.75)	91.0 10530
Heat Pump + Auxiliary(0.0kW)	100.0 20604	Latent	140.5 3510
		Total (Electric Heat Pump)	99.8 14040

WINTER CALCULATIONS

Winter Heating Load (for 1260 sqft)

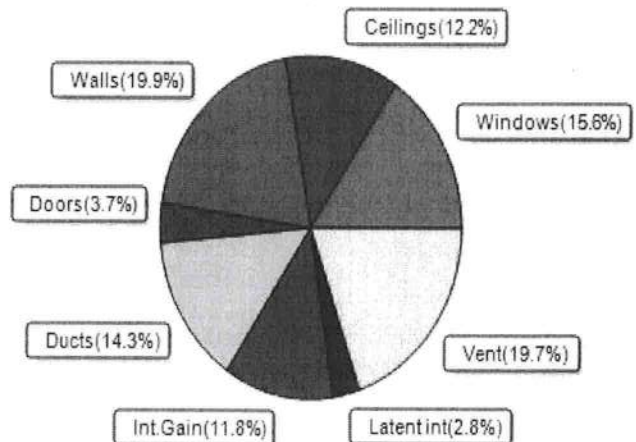
Load component		Load	
Window total	123 sqft	2706 Btuh	
Wall total	1243 sqft	4391 Btuh	
Door total	38 sqft	695 Btuh	
Ceiling total	1260 sqft	1560 Btuh	
Floor total	1260 sqft	7363 Btuh	
Infiltration	0 cfm	0 Btuh	
Duct loss		1699 Btuh	
Subtotal		18415 Btuh	
Ventilation	50 cfm	2190 Btuh	
TOTAL HEAT LOSS		20604 Btuh	



SUMMER CALCULATIONS

Summer Cooling Load (for 1260 sqft)

Load component		Load	
Window total	123 sqft	2197 Btuh	
Wall total	1243 sqft	2799 Btuh	
Door total	38 sqft	521 Btuh	
Ceiling total	1260 sqft	1716 Btuh	
Floor total		0 Btuh	
Infiltration	0 cfm	0 Btuh	
Internal gain		1660 Btuh	
Duct gain		1635 Btuh	
Sens. Ventilation	50 cfm	1040 Btuh	
Blower Load		0 Btuh	
Total sensible gain		11568 Btuh	
Latent gain(ducts)		372 Btuh	
Latent gain(infiltration)		0 Btuh	
Latent gain(ventilation)		1726 Btuh	
Latent gain(internal/occupants/other)		400 Btuh	
Total latent gain		2498 Btuh	
TOTAL HEAT GAIN		14066 Btuh	



8th Edition

EnergyGauge® System Sizing

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DATE: *2/8/21*