Sorto
HVAC Load Calculations

for

House Craft Homes
10523 US Highway 441
Alachua Fl 32615

Prepared By:

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P.O Box 642
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386-454-4767
Monday, July 12, 2021

Rhvac is an ACCA approved Manual J, D and S computer program.
Calculations are performed per ACCA Manual J 8th Edition, Version 2, and ACCA Manual D.

Project Report

General Project Information

Project Title:	Sorto
Project Date:	Friday, May 07, 2021
Project Comment:	Edit the file AUTOLOAD.RHV so that it contains your company name, weather data, and any other information you would like to have in each new project that you start.
Client Name:	House Craft Homes
Client Address:	10523 US Highway 441
Client City:	Alachua Fl 32615
Client Phone:	386-462-5323
Client Fax:	888-769-0105
Client E-Mail Address:	housecraftinvoices@gmail.com
Company Name:	North Centeral Florida Air Conditioning
Company Representative:	R. M. Walsh
Company Address:	P.O Box 642
Company City:	High Springs Fl 32655
Company Phone:	386-454-4767
Company Fax:	386-454-4854
Company Comment:	

Design Data

Reference City:		Gainsville AP, Florida
Building Orientation:		Front door faces South
Daily Temperature Range:		Medium
Latitude:	29	Degrees
Elevation:	152	ft.
Altitude Factor:	0.995	

	Outdoor Dry Bulb	Outdoor Wet Bulb	Outdoor Rel.Hum	Indoor Rel.Hum	Indoor Dry Bulb	Grains Difference
Winter:	33	30.8	n/a	n/a	70	n/a
Summer:	92	77	51%	50%	75	52

Check Figures

Total Building Supply CFM:	483	CFM Per Square ft.:	0.423
Square ft. of Room Area:	1,142	Square ft. Per Ton:	372
Volume (ft³):	10,525		

Building Loads

Total Heating Required Including Ventilation Air:	23,579 Btuh	23.579	MBH
Total Sensible Gain:	16,063 Btuh	64	%
Total Latent Gain:	9,200 Btuh	36	%
Total Cooling Required Including Ventilation Air:	25,262 Btuh	2.11	Tons (Based On Sensible + Latent)
		3.07	Tons (Based On 75% Sensible Capacity)

Notes

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Calculations are performed per ACCA Manual J 8th Edition, Version 2, and ACCA Manual D.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads according to the manufacturer's performance data at your design conditions.

Duct Size Preview

Room or Duct Name	Source	Minimum Velocity	Maximum Velocity	Rough. Factor	Design L/100	SP Loss	Duct Velocity	Duct Length	Htg Flow	Clg Flow	Act. Flow	Duct Size	Reg Size
System 1													
Supply Runouts													
Zone 1													
1-Master Bath	Built-In	450	750	0.01	0.1		194.3		22	17	17	1--4	
2-WIC	Built-In	450	750	0.01	0.1		30.1		1	3	3	1--4	
3-Master	Built-In	450	750	0.01	0.1		531.8		40	104	104	1--6	
4-Utility	Built-In	450	750	0.01	0.1		210.4		14	18	18	1--4	
5-Great Room	Built-In	450	750	0.01	0.1		617.3		38	84	84	1--5	
6-Bath 1	Built-In	450	750	0.01	0.1		77.6		7	7	7	1--4	
7-Bedroom 2	Built-In	450	750	0.01	0.1		616.4		38	84	84	1--5	
8-Kitchen/Dining	Built-In	450	750	0.01	0.1		500.8		31	87	87	2--4	
9-Bedroom 3	Built-In	450	750	0.01	0.1		576.2		33	79	79	1--5	
Other Ducts in System 1													
Supply Main Trunk	Built-In	650	900	0.003	0.1		710.2		225	483	483	7x14	

Summary

System 1

Heating Flow: 225

Cooling Flow: 483

Equipment Data - System 1 - Main Floor

Cooling

System Type:	Air Source Heat Pump
Outdoor Model:	DZ14SN0361A*
Indoor Model:	ARUF37D14A*
Tradename:	DAIKIN
Outdoor Manufacturer:	DAIKIN MANUFACTURING COMPANY, L.P.
Description:	Air Source Heat Pump
AHRI Reference No.:	7998865
Capacity:	34,400
Efficiency:	14 SEER

Heating

System Type:	Air Source Heat Pump
Model:	DZ14SN0361A*
Tradename:	DAIKIN
Manufacturer:	DAIKIN MANUFACTURING COMPANY, L.P.
Description:	Air Source Heat Pump
Capacity:	32,800
Efficiency:	8.2 HSPF