

*Anderson*  
*HVAC Load Calculations*

for

House Craft Homes  
10523 US Highway 441  
Alachua FL 32615

Prepared By:

R. M. Walsh  
North Central Florida Air Conditioning  
P.O Box 642  
High Springs FL 32655  
386-454-4767  
Monday, July 12, 2021



## Project Report

### General Project Information

Project Title: Anderson  
 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 Central 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: Gainesville 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 Differenc e
Winter:	33	30.8	n/a	n/a	70	n/a
Summer:	92	77	51%	50%	75	52

### Check Figures

Total Building Supply CFM:	726	CFM Per Square ft.:	0.342
Square ft. of Room Area:	2,125	Square ft. Per Ton:	607
Volume (ft³):	19,906		

### Building Loads

Total Heating Required Including Ventilation Air:	35,039 Btuh	35.039 MBH
Total Sensible Gain:	20,958 Btuh	67 %
Total Latent Gain:	10,505 Btuh	33 %
Total Cooling Required Including Ventilation Air:	31,463 Btuh	2.62 Tons (Based On Sensible + Latent)
		3.50 Tons (Based On 75% Sensible Capacity)

### Notes

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.  
 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													
<b>Supply Runouts</b>													
Zone 1													
1-Master Bath	Built-In	450	750	0.01	0.1		246.3		40	43	43	2--4	
2-WIC	Built-In	450	750	0.01	0.1		153.7		13	13	13	1--4	
3-Master	Built-In	450	750	0.01	0.1		460.1		36	123	123	1--7	
4-Utility	Built-In	450	750	0.01	0.1		371.9		23	32	32	1--4	
5-Great Room	Built-In	450	750	0.01	0.1		664.1		44	116	116	2--4	
6-Bath 2	Built-In	450	750	0.01	0.1		143.4		18	25	25	2--4	
7-Bedroom 2	Built-In	450	750	0.01	0.1		457.5		39	90	90	1--6	
8-Kitchen/Dining	Built-In	450	750	0.01	0.1		660.9		62	115	115	2--4	
9-Flex	Built-In	450	750	0.01	0.1		420.4		31	37	37	1--4	
10-Pantry	Built-In	450	750	0.01	0.1		189.8		14	17	17	1--4	
11-Entry	Built-In	450	750	0.01	0.1		275.7		15	24	24	1--4	
12-Bedroom 3	Built-In	450	750	0.01	0.1		462.9		39	91	91	1--6	
<b>Other Ducts in System 1</b>													
Supply Main Trunk	Built-In	650	900	0.003	0.1		746.9		376	726	726	10x14	

## Summary

System 1

Heating Flow: 376

Cooling Flow: 726



## *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