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TRANE

Load Short Form

Entire House

DL Williams Heating & Cooling L.L.C.

Job: 1
 Date: Apr 18, 2022
 By: DL Williams Heating & C...

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: williamscoolingllc@gmail.com

Project Information

For: Betty & Perry Sauls Residence, Trent Giebeig Construction
 Lake City, FL 32024

Design Information

	Htg	Clg	Infiltration	
Outside db (°F)	33	92	Method	Simplified
Inside db (°F)	68	75	Construction quality	Average
Design TD (°F)	35	17	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	8	44		

HEATING EQUIPMENT

Make Generic
 Trade
 Model SEER 14.0, HSPF 8.1
 AHRI ref

Efficiency 8.1 HSPF
 Heating input
 Heating output 28710 Btuh @ 47°F
 Temperature rise 27 °F
 Actual air flow 962 cfm
 Air flow factor 0.038 cfm/Btuh
 Static pressure 0.50 in H2O
 Space thermostat
 Capacity balance point = 28 °F

Backup:

Input = 7 kW, Output = 24842 Btuh, 100 AFUE

COOLING EQUIPMENT

Make Generic
 Trade
 Cond SEER 14.0, HSPF

Coil
 AHRI ref
 Efficiency 12.2 EER, 14 SEER
 Sensible cooling 8656 Btuh
 Latent cooling 28853 Btuh
 Total cooling 962 cfm
 Actual air flow 0.045 cfm/Btuh
 Air flow factor 0.50 in H2O
 Static pressure 0.84
 Load sensible heat ratio



ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
br2	231	4753	2773	180	125
bath	60	776	679	29	31
br3	219	4312	2461	163	111
hall	30	0	0	0	0
great	441	4203	5058	159	227
dining	180	2265	1611	86	72
kit	173	1734	3120	66	140
mbed	270	4785	3320	181	149
utility	128	2252	1856	85	83
mbath	131	194	336	7	15
wic	69	107	185	4	8
ah	20	0	0	0	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



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Entire House	1952	25382	21398	962	962
Other equip loads		0	0		
Equip. @ 0.97 RSM			20799		
Latent cooling			4093		
TOTALS	1952	25382	24892	962	962

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**TRANE**

Duct System Summary

Entire House

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Lake City, FL 32024

	Heating	Cooling
External static pressure	0.50 in H2O	0.50 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.50 in H2O	0.50 in H2O
Supply / return available pressure	0.324 / 0.176 in H2O	0.324 / 0.176 in H2O
Lowest friction rate	0.152 in/100ft	0.152 in/100ft
Actual air flow	962 cfm	962 cfm
Total effective length (TEL)	328 ft	

Supply Branch Detail Table

Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
bath	c 679	29	31	0.162	4.0	0x0	VIFx	40.0	160.0	st1A
br2	h 4753	180	125	0.169	8.0	0x0	VIFx	47.0	145.0	st1B
br3	h 4312	163	111	0.152	8.0	0x0	VIFx	43.0	170.0	st1A
dining	h 2265	86	72	0.171	6.0	0x0	VIFx	30.0	160.0	st1
great	c 2529	80	114	0.172	7.0	0x0	VIFx	19.0	170.0	st1
great-A	c 2529	80	114	0.180	7.0	0x0	VIFx	30.0	150.0	st1
kit	c 3120	66	140	0.163	7.0	0x0	VIFx	19.0	180.0	st1
mbath	c 336	7	15	0.321	4.0	0x0	VIFx	6.1	95.0	
mbed	h 4785	181	149	0.162	8.0	0x0	VIFx	15.1	185.0	st1
utility	h 2252	85	83	0.327	5.0	0x0	VIFx	4.1	95.0	
wic	c 185	4	8	0.327	4.0	0x0	VIFx	4.1	95.0	

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st1	Peak AVF	865	855	0.152	809	14.0	0 x 0	ShtMetl	
st1B	Peak AVF	180	125	0.169	330	10.0	0 x 0	ShtMetl	st1A
st1A	Peak AVF	373	266	0.152	684	10.0	0 x 0	ShtMetl	st1

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Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb1	0x0	962	962	115.3	0.152	689	16.0	0x 0		VIFx	rt1

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rt1	Peak AVF	962	962	0.152	689	16.0	0 x 0	VinIFlx	