

**TRANE****Load Short Form****Entire House****DL Williams Heating & Cooling LLC License
CAC1816913**

Job: 1

Date:

By:

Plan: 1

456 SE Ermine St, Lake City, FL 32025 Phone: 386-754-1987 Fax: 386-243-8480 Email: Dwilliams@williamscooling.com Web: dlwilliamsheatingandcooling.com

Project InformationFor: Elizabeth Kohn, Plumb Level Construction
Columbia County, Lake City, FL**Design Information**

	Htg	Clg	Infiltration	Simplified
Outside db (°F)	33	92	Method	Tight
Inside db (°F)	68	75	Construction quality	0
Design TD (°F)	35	17	Fireplaces	
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	8	47		

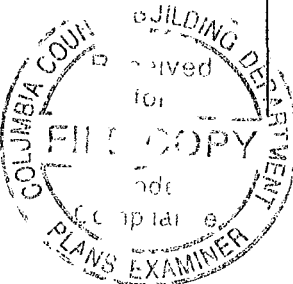
HEATING EQUIPMENT

Make Generic
Trade
Model SEER 13.0, HSPF 7.7
AHRI ref
Efficiency 7.7 HSPF
Heating input
Heating output 23881 Btuh @ 47°F
Temperature rise 22 °F
Actual air flow 1000 cfm
Air flow factor 0.056 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat

COOLING EQUIPMENT

Make Generic
Trade
Cond SEER 13.0, HSPF 7.7
Coil
AHRI ref
Efficiency 11.6 EER, 13 SEER
Sensible cooling 16800 Btuh
Latent cooling 7200 Btuh
Total cooling 24000 Btuh
Actual air flow 1000 cfm
Air flow factor 0.053 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.84

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
br2	120	2529	2017	142	107
bath	45	470	180	26	10
br3	120	2525	1780	142	95
living	360	3197	5170	179	275
kitchen	190	2502	4711	140	251
mbed	224	3613	2728	203	145
wic	30	45	70	3	4
pantry	30	528	161	30	9
mbath	116	2037	1147	114	61
utility	28	369	819	21	44
ah	12	0	0	0	0

*Bold/italic values have been manually overridden*

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

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Entire House	1275	17816	18783	1000	1000
Other equip loads		0	0		
Equip. @ 0.97 RSM			18219		
Latent cooling			3563		
TOTALS	1275	17816	21782	1000	1000

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Project Summary

Entire House

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Project Information

For: Elizabeth Kohn, Plumb Level Construction
Columbia County, Lake City, FL

Notes.

Design Information

Weather: Gainesville Regional AP, FL, US

Winter Design Conditions

Outside db	33 °F
Inside db	68 °F
Design TD	35 °F

Summer Design Conditions

Outside db	92 °F
Inside db	75 °F
Design TD	17 °F
Daily range	M
Relative humidity	50 %
Moisture difference	47 gr/lb

Heating Summary

Structure	13058 Btuh
Ducts	4758 Btuh
Central vent (0 cfm)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	17816 Btuh

Sensible Cooling Equipment Load Sizing

Structure	12727 Btuh
Ducts	6056 Btuh
Central vent (0 cfm)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	18219 Btuh

Infiltration

Method	Simplified
Construction quality	Tight
Fireplaces	0

	Heating	Cooling
Area (ft²)	1275	1275
Volume (ft³)	10200	10200
Air changes/hour	0.16	0.08
Equiv. AVF (cfm)	27	14

Latent Cooling Equipment Load Sizing

Structure	2236 Btuh
Ducts	1327 Btuh
Central vent (0 cfm)	0 Btuh
Equipment latent load	3563 Btuh
Equipment total load	21782 Btuh
Req. total capacity at 0.70 SHR	2.2 ton

Heating Equipment Summary

Make	Generic
Trade	
Model	SEER 13.0, HSPF 7.7
AHRI ref	
Efficiency	7.7 HSPF
Heating input	
Heating output	23881 Btuh @ 47°F
Temperature rise	22 °F
Actual air flow	1000 cfm
Air flow factor	0.056 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	

Cooling Equipment Summary

Make	Generic
Trade	
Cond	SEER 13.0, HSPF 7.7
Coil	
AHRI ref	
Efficiency	11.6 EER, 13 SEER
Sensible cooling	16800 Btuh
Latent cooling	7200 Btuh
Total cooling	24000 Btuh
Actual air flow	1000 cfm
Air flow factor	0.053 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.84

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**TRANE**

Duct System Summary

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Project Information

For: Elizabeth Kohn, Plumb Level Construction
Columbia County, Lake City, FL

	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	0.39 / 0.11 in H2O	0.39 / 0.11 in H2O
Lowest friction rate	0.131 in/100ft	0.131 in/100ft
Actual air flow	1000 cfm	1000 cfm
Total effective length (TEL)	381 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	h 470	26	10	0.265	4.0	0x0	VIFx	7.0	140.0	st1
br2	h 2529	142	107	0.361	6.0	0x0	VIFx	8.0	100.0	st1
br3	h 2525	142	95	0.171	6.0	0x0	ShMt	12.4	215.0	st1
kitchen	c 2356	70	125	0.200	7.0	0x0	VIFx	20.0	175.0	st2
kitchen-A	c 2356	70	125	0.265	6.0	0x0	VIFx	7.0	140.0	st2
living	c 2585	90	138	0.199	7.0	0x0	VIFx	21.0	175.0	st2
living-A	c 2585	90	138	0.263	7.0	0x0	VIFx	8.0	140.0	st2
mbath	h 2037	114	61	0.131	7.0	0x0	VIFx	32.1	265.0	st2A
mbed	h 3613	203	145	0.132	10.0	0x0	VIFx	30.0	265.0	st2A
pantry	h 528	30	9	0.150	4.0	0x0	VIFx	29.0	230.0	st2A
utility	c 819	21	44	0.398	4.0	0x0	VIFx	3.0	95.0	st2A
wic	c 70	3	4	0.153	4.0	0x0	VIFx	25.0	230.0	st2A

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	310	212	0.171	888	8.0	0 x 0	ShtMetl	st2
st2A	Peak AVF	349	219	0.131	791	9.0	0 x 0	ShtMetl	
st2	Peak AVF	669	745	0.131	697	14.0	0 x 0	ShtMetl	

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Return Branch Detail Table

Name	Grill 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	1000	1000	84.0	0.131	633	13.0	5-3.25x14	5-10x46	SJSp	

