



Load Short Form Entire House

Job:
Date: Aug 08, 2019
By:

Project Information

For: mike&Brenda Hartzog, harvey builders
100 SW Oak Glen, Fort white, FL 32028

Design Information

	Htg	Clg	Infiltration	Simplified
Outside db (°F)	33	92	Method	Semi-tight
Inside db (°F)	70	75	Construction quality	
Design TD (°F)	37	17	Fireplaces	
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	10	47		

0

HEATING EQUIPMENT

Make Carrier
Trade CARRIER
Model CH14NB04800G0A0
AHRI ref 9162789

Efficiency 8.2 HSPF
Heating input
Heating output 45500 Btuh @ 47°F
Temperature rise 27 °F
Actual air flow 1533 cfm
Air flow factor 0.042 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 28 °F

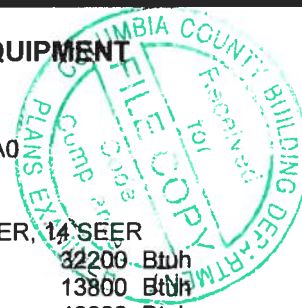
Backup:

Input = 0 kW, Output = 0 Btuh, 100 AFUE

COOLING EQUIPMENT

Make Carrier
Trade CARRIER
Cond CH14NB04800G0A0
Coil FB4CNP048L
AHRI ref 9162789

Efficiency 11.5 EER, 14 SEER
Sensible cooling 32200 Btuh
Latent cooling 13800 Btuh
Total cooling 46000 Btuh
Actual air flow 1533 cfm
Air flow factor 0.045 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.87



ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Bedroom 3	306	5324	3280	226	147
Bedroom 4	298	5616	3627	238	163
Bath 2	60	322	250	14	11
WIC 3	42	0	0	0	0
Bedroom 2	196	3245	3203	138	144
Foyer/dining	226	4130	3982	175	179
Kitchen/dining	797	7691	10670	327	479
Hallway	55	0	0	0	0
Master bedroom	292	2856	3423	121	154
Laundry	88	1345	1569	57	70
Pantry	53	0	0	0	0
Hallway 2	83	0	0	0	0
Master bath	164	1535	1612	65	72
Master wic	115	2860	981	121	44

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



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Master toilet		27	1186	1531	50	69
Entire House	d	2803	36108	34128	1533	1533
Other equip loads			0	0		
Equip. @ 0.97 RSM				33104		
Latent cooling				5149		
TOTALS		2803	36108	38253	1533	1533

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Project Summary Entire House

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Notes:

Design Information

Weather: Gainesville Regional AP, FL, US

Winter Design Conditions

Outside db	33 °F
Inside db	70 °F
Design TD	37 °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	25865 Btuh
Ducts	10243 Btuh
Central vent (0 cfm) (none)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	36108 Btuh

Sensible Cooling Equipment Load Sizing

Structure	21346 Btuh
Ducts	12782 Btuh
Central vent (0 cfm) (none)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	33104 Btuh

Infiltration

Method	Simplified
Construction quality	Semi-tight
Fireplaces	0

	Heating	Cooling
Area (ft²)	2803	2803
Volume (ft³)	22422	22422
Air changes/hour	0.22	0.11
Equiv. AVF (cfm)	82	41

Latent Cooling Equipment Load Sizing

Structure	2317 Btuh
Ducts	2832 Btuh
Central vent (0 cfm) (none)	0 Btuh
Equipment latent load	5149 Btuh

Equipment Total Load (Sen+Lat)	38253 Btuh
Req. total capacity at 0.70 SHR	3.9 ton

Heating Equipment Summary

Make	Carrier
Trade	CARRIER
Model	CH14NB04800G0A0
AHRI ref	9162789
Efficiency	8.2 HSPF
Heating input	
Heating output	45500 Btuh @ 47°F
Temperature rise	27 °F
Actual air flow	1533 cfm
Air flow factor	0.042 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	
Capacity balance point = 28 °F	

Backup:
Input = 0 kW, Output = 0 Btuh, 100 AFUE

Cooling Equipment Summary

Make	Carrier
Trade	CARRIER
Cond	CH14NB04800G0A0
Coil	FB4CNP048L
AHRI ref	9162789
Efficiency	11.5 EER, 14 SEER
Sensible cooling	32200 Btuh
Latent cooling	13800 Btuh
Total cooling	46000 Btuh
Actual air flow	1533 cfm
Air flow factor	0.045 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.87

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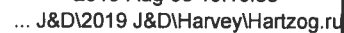


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Duct System Summary

Entire House

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For: mike&Brenda Hartzog, harvey builders
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	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	0.386 / 0.114 in H2O	0.386 / 0.114 in H2O
Lowest friction rate	0.117 in/100ft	0.117 in/100ft
Actual air flow	1533 cfm	1533 cfm
Total effective length (TEL)	428 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 2	h 322	14	11	0.138	4.0	0x 0	VIFx	70.7	210.0	st4
Bedroom 2	c 3203	138	144	0.117	7.0	0x 0	VIFx	75.6	255.0	st4
Bedroom 3	h 5324	226	147	0.132	7.0	0x 0	VIFx	83.2	210.0	st4
Bedroom 4	h 5616	238	163	0.131	7.0	0x 0	VIFx	70.3	225.0	st4
Foyer/dining	c 3982	175	179	0.179	7.0	0x 0	VIFx	46.4	170.0	st2
Kitchen/dining	c 3557	109	160	0.181	7.0	0x 0	VIFx	38.5	175.0	st2
Kitchen/dining-A	c 3556	109	160	0.143	7.0	0x 0	VIFx	70.7	200.0	st4
Kitchen/dining-B	c 3556	109	160	0.127	7.0	0x 0	VIFx	69.8	235.0	st4
Laundry	c 1569	57	70	0.143	5.0	0x 0	VIFx	44.8	225.0	st2
Master bath	c 1612	65	72	0.165	5.0	0x 0	VIFx	33.9	200.0	st2
Master bedroom	c 3423	121	154	0.174	7.0	0x 0	VIFx	32.0	190.0	st2
Master toilet	c 1531	50	69	0.167	4.0	0x 0	VIFx	46.7	185.0	st2
Master wic	h 2860	121	44	0.145	4.0	0x 0	VIFx	40.7	225.0	st2

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st2	Peak AVF	1533	1533	0.117	681	18.0	18 x 18	RectFbg	st1
st4	Peak AVF	834	785	0.117	612	13.0	14 x 14	RectFbg	st3
st1	Peak AVF	1533	1533	0.117	868	18.0	0 x 0	VinIFlx	
st3	Peak AVF	834	785	0.117	780	14.0	0 x 0	VinIFlx	st2

Bold/italic values have been manually overridden

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	1533	1533	97.1	0.117	637	21.0	0x 0		VIFx	rst9

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rst9	Peak AVF	1533	1533	0.117	868	18.0	0 x 0	VinIFlx	

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