

Project Information

For: Khomich Residence
Lake City, FL

Notes:


Design Information

Weather: Gainesville Rgnl, FL, US

Winter Design Conditions

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

Summer Design Conditions

Outside db	93 °F
Inside db	75 °F
Design TD	18 °F
Daily range	M
Relative humidity	50 %
Moisture difference	46 gr/lb

Heating Summary

Structure	46054 Btuh
Ducts	10213 Btuh
Central vent (0 cfm) (none)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	56267 Btuh

Sensible Cooling Equipment Load Sizing

Structure	36095 Btuh
Ducts	12619 Btuh
Central vent (0 cfm) (none)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	48713 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	1 (Average)

Latent Cooling Equipment Load Sizing

Structure	2705 Btuh
Ducts	2540 Btuh
Central vent (0 cfm) (none)	0 Btuh
Equipment latent load	5244 Btuh

	Heating	Cooling
Area (ft²)	3657	3657
Volume (ft³)	40227	40227
Air changes/hour	0.26	0.13
Equiv. AVF (cfm)	173	87

Equipment Total Load (Sen+Lat)	53957 Btuh
Req. total capacity at 0.80 SHR	5.1 ton

Heating Equipment Summary

Make	
Trade	
Model	
AHRI ref	
Efficiency	80 AFUE
Heating input	0 Btuh
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	2074 cfm
Air flow factor	0.037 cfm/Btuh
Static pressure	0 in H2O
Space thermostat	

Cooling Equipment Summary

Make	
Trade	
Cond	
Coil	
AHRI ref	
Efficiency	0 SEER
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	2074 cfm
Air flow factor	0.043 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0.90

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

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Heating Summary

Structure	16183 Btuh
Ducts	5257 Btuh
Central vent (0 cfm) (none)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	21439 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	1 (Average)

	Heating	Cooling
Area (ft²)	1342	1342
Volume (ft³)	16104	16104
Air changes/hour	0.26	0.13
Equiv. AVF (cfm)	70	35

Heating Equipment Summary

Make	
Trade	
Model	
AHRI ref	
Efficiency	80 AFUE
Heating input	0 Btuh
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	896 cfm
Air flow factor	0.042 cfm/Btuh
Static pressure	0 in H2O
Space thermostat	

Summer Design Conditions

Outside db	93 °F
Inside db	75 °F
Design TD	18 °F
Daily range	M
Relative humidity	50 %
Moisture difference	46 gr/lb

Sensible Cooling Equipment Load Sizing

Structure	15036 Btuh
Ducts	7021 Btuh
Central vent (0 cfm) (none)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	22057 Btuh

Latent Cooling Equipment Load Sizing

Structure	2291 Btuh
Ducts	1410 Btuh
Central vent (0 cfm) (none)	0 Btuh
Equipment latent load	3701 Btuh

Equipment Total Load (Sen+Lat)	25758 Btuh
Req. total capacity at 0.75 SHR	2.5 ton

Cooling Equipment Summary

Make	
Trade	
Cond	
Coil	
AHRI ref	
Efficiency	0 SEER
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	896 cfm
Air flow factor	0.041 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0.86

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Summer Design Conditions

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Design TD	18 °F
Daily range	M
Relative humidity	50 %
Moisture difference	46 gr/lb

Heating Summary

Structure	16385 Btuh
Ducts	4750 Btuh
Central vent (0 cfm) (none)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	21135 Btuh

Sensible Cooling Equipment Load Sizing

Structure	16007 Btuh
Ducts	6315 Btuh
Central vent (0 cfm) (none)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	22322 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	1 (Average)

Latent Cooling Equipment Load Sizing

Structure	2185 Btuh
Ducts	1250 Btuh
Central vent (0 cfm) (none)	0 Btuh
Equipment latent load	3435 Btuh

	Heating	Cooling
Area (ft²)	1040	1040
Volume (ft³)	13208	13208
Air changes/hour	0.46	0.23
Equiv. AVF (cfm)	101	51

Equipment Total Load (Sen+Lat)	25757 Btuh
Req. total capacity at 0.75 SHR	2.5 ton

Heating Equipment Summary

Make	
Trade	
Model	
AHRI ref	
Efficiency	80 AFUE
Heating input	0 Btuh
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	920 cfm
Air flow factor	0.044 cfm/Btuh
Static pressure	0 in H2O
Space thermostat	

Cooling Equipment Summary

Make	
Trade	
Cond	
Coil	
AHRI ref	
Efficiency	0 SEER
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	920 cfm
Air flow factor	0.041 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0.87

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