



Project Summary
MAIN FLOOR
4 SEASONS HEATING & AIR

Job:
 Date: Aug 29, 2023
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Project Information

For: BEN LEWIS - 110 Ridgewood Rd
 110 Ridgewood Rd, Pinehurst, NC 28374

Notes: HOUSE FACES - WEST - SUPERIOR WALLS IN BASEMENT, 5.5 INCHES OF OC/SF IN WALLS 7.5-10 INCHES OF OC/SF ON ROOFDECK. CUSTOMER PLAN TO ACHIEVE DUKE ENERGY HERO RATING. CURIOUS ABOUT MULTIZONE MINISPLITS

Design Information

Weather: Raleigh/Raleigh-dur, NC, US

Winter Design Conditions

Outside db 24 °F
 Inside db 70 °F
 Design TD 46 °F

Summer Design Conditions

Outside db 95 °F
 Inside db 75 °F
 Design TD 20 °F
 Daily range M
 Relative humidity 50 %
 Moisture difference 40 gr/lb

Heating Summary

Structure 18446 Btuh
 Ducts 4175 Btuh
 Central vent (0 cfm) 0 Btuh
 (none)
 Humidification 0 Btuh
 Piping 0 Btuh
 Equipment load 22621 Btuh

Sensible Cooling Equipment Load Sizing

Structure 18668 Btuh
 Ducts 2683 Btuh
 Central vent (0 cfm) 0 Btuh
 (none)
 Blower 0 Btuh
 Use manufacturer's data n
 Rate/swing multiplier 1.00
 Equipment sensible load 21308 Btuh

Infiltration

Method Simplified
 Construction quality Tight
 Fireplaces 1 (Average)

Latent Cooling Equipment Load Sizing

Structure 1338 Btuh
 Ducts 1603 Btuh
 Central vent (0 cfm) 0 Btuh
 (none)
 Equipment latent load 2941 Btuh

	Heating	Cooling
Area (ft ²)	1905	1905
Volume (ft ³)	19050	19050
Air changes/hour	0.14	0.06
Equiv. AVF (cfm)	44	20

Equipment Total Load (Sen+Lat) 24249 Btuh
 Req. total capacity at 0.70 SHR 2.5 ton

Heating Equipment Summary

Make
 Trade
 Model
 AHRI ref
 Efficiency 0 HSPF
 Heating input
 Heating output 0 Btuh @ 47°F
 Temperature rise 0 °F
 Actual air flow 1000 cfm
 Air flow factor 0.044 cfm/Btuh
 Static pressure 0.50 in H2O
 Space thermostat
 Capacity balance point = 0 °F

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 1000 cfm
 Air flow factor 0.047 cfm/Btuh
 Static pressure 0.50 in H2O
 Load sensible heat ratio 0.88

Backup:
 Input = 10 kW, Output = 33047 Btuh, 100 AFUE

Bold/italic values have been manually overridden

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