Why does one room stay hotter than the rest? Usually because the system or the ducts were sized by guesswork. This guide explains how the right size is worked out, and what to ask any contractor about it.

Guide 2
System size and ducts

The right size comes from math, not square footage.

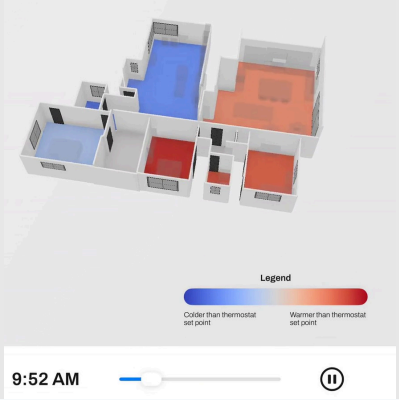
A heat load calculation (ACCA Manual J) works out how much heating and cooling each room needs. The system is sized to that number, and the ducts (Manual D) are sized so every room gets its share.

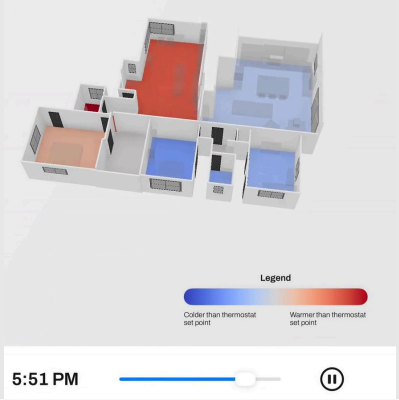
What the calculation looks at

- Each room's size and ceiling height
- Windows: size, direction and glass type
- Insulation, air leaks and how the house is built
- **Too big:** short cycles, uneven rooms, less humidity removed
- **Too small:** runs nonstop, falls behind on extreme days

Why ducts matter as much

- **Undersized duct:** the room starves for air, even with the right unit
- **Long runs and tight bends** lose airflow before the far rooms
- **No return path:** doors and hallways choke the airflow
- **Leaky ducts** in an attic or crawlspace waste what you pay for
- **Warning sign:** one room always hotter or colder than the rest





Same house, morning and evening. Red rooms run warmer than the thermostat, blue rooms cooler. The warm rooms change through the day, so one number for the whole house can't keep every room comfortable.

> *The other contractors didn't ask anything beyond square footage.*
>
> SARAH K. · GOOGLE REVIEW

ASK ANY CONTRACTOR

1. Did you do a room-by-room Manual J calculation? Can I see it?
2. How did you size the ducts for each room?
3. Are you keeping my old ducts? Why or why not?

HOW WE DO IT

- ✓ 3D scan of every room during the estimate visit
- ✓ Manual J load for each room, not one number for the house
- ✓ Manual D duct design, and we'll show you the numbers

Want to see the numbers for your home?

Call us and we'll show you what a room-by-room calculation looks like.

(747) 298-8580

Calls answered 24/7

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