

THERMAL MASS COOLING

Reality talk – what do many people do when they come home after work and it's really hot inside their home, but the outside temperature has nicely cooled down? Instead of turning on their A/C, many people open up their windows and allow a nice cross breeze to enter their home, which not only feels good, but also cools the home down.

Tech talk – The "passive" cross breeze described above becomes an "active" breeze for QuietCool homeowners, and this is the key to thermal mass cooling.

Passive breezes within a home will eventually cool the ambient air to a comfortable level, but will not move enough air to cool the mass within the home.

When correctly sized for any size home, a QuietCool system will fully exchange the entire air volume of a home 15-22 times per hour, or about one full air exchange every 3 to 4 minutes

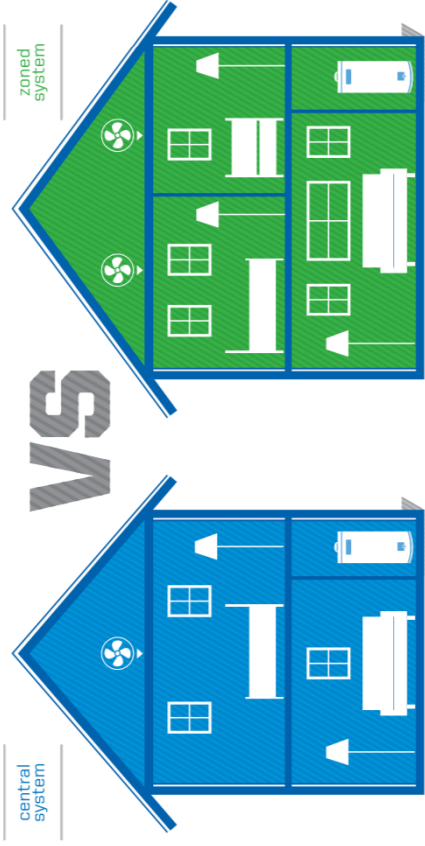
The "active" breeze that is created by a QuietCool system is how QuietCool "works." Mass "cooling" results because the QuietCool system is removing stale hot air and replacing it with fresh cool air; all

this occurring at a high rate of speed and volume, 15-22 times per hour.

Therefore, instead of recycling hot, stale ambient air through a closed-loop air conditioning system, the QuietCool system is exchanging hot, stale ambient air with fresh, cool outside air, though an open-loop whole house ventilation system... and at a fraction of the cost of running an air conditioner.

A "cool mass" home does not reheat as much or as quickly as a "hot mass" home. Within a day or two of installing a QuietCool system, homeowners are amazed when they come home after work... it was 90 - 100 ++ degrees outside, and they walk into a home that is... not 90 degrees, but maybe 74, 76 or 78 degrees.

The reason is because the mass of the home has been cooled by the QuietCool system, and thus did not reheat as rapidly throughout the day as a typical home would. The initial reaction from new QuietCool owners is one of amazement and is the reason why so many QuietCool sales are made through referrals.



CENTRAL VS. ZONED SYSTEMS

A centrally installed system is a single fan system that is installed in a central location in the home, as the name implies. A single fan system would typically be installed at the midpoint of a single story home, or at the top of the stairs in a two-story home.

A single QuietCool system will nicely ventilate an entire home, but lacks the individual room control that a zoned system offers. This is what we call a "basic" system.

For the earlier 2000 square foot home example, a Classic or Energy Saver 6400 is a perfect single-fan system that provides the "best" ventilation based on the 3:1 CFM:sq.ft. ratio.

For the same example home, a "good" to "better" single-fan system could be a Classic or Energy Saver 4700 which provides just under 2.5:1 CFM:sq.ft. ratio.

A multi-fan zoned system gives the homeowner maximum control over their ventilation and cooling

needs. This is what we call an "advanced" or "superior" system, depending on the line of fans chosen.

All zoned fans can be turned on simultaneously when the entire home needs to be cooled, but a zoned system allows individual bedroom control, for example, and thus zoned systems need to be sized for the zones.

When sizing a zoned system, the combined CFM of all zoned units needs to add up to the total CFM requirements.

As you recall from our previous section "Selecting a System", our sizing requirements are as follows:

A "good" zoned system would comprise two or more fans whose total CFM = 4000 CFM or more.

A "better" zoned system would comprise two or more fans whose total CFM = 5000 CFM or more.

A "best" zoned system would comprise two or more fans whose total CFM = 6000 CFM or more.