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Cool Your Home and Conserve Energy (and Money)

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Ductless mini-split AC systems provide more comfort than a traditional ducted system.

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Hot, sticky weather is just around the corner. If you're like me, you'll probably dial down your thermostat and rely on your home's central AC system to keep you cool, calm and collected. My strategy works great until the electric bill arrives. That's when I get a little hot under the collar. The simple truth is that running an old duct-style central AC system is expensive and wasteful. I replaced my original central AC system recently with a more energy-efficient unit. My electric bills went down, but I wish I had explored ductless mini-split systems as well because I could be saving even more energy and money now. I've since learned that ducted forced-air systems are 25 percent less energy efficient than ductless mini-split AC systems. Plus, ductless mini-split AC systems provide more comfort than a traditional ducted system. Here's how they work and how they save so much energy (and money):

Ductless mini-split systems eliminate duct air loss

The ducts in my 1980s home leak air because the joints were never sealed. So when I run my central AC, a certain portion of the chilled air leaks out the joints, cooling my basement (which is already cool) and joist and wall cavities (which don't need cooling). All those air leaks waste energy and money. That means my AC system must work harder to get enough cold air into the rest of my house. Ductless mini-split systems automatically eliminate that air/energy loss.

Ductless mini-split systems also eliminate duct cooling loss

I could hire a duct-sealing service to seal my old ducts from the inside with an aerosol coating. That would stop the air leaks, but it wouldn't stop the cooling loss. That's because every time I run my AC, I'm paying to cool the metal ductwork and all the air around the ducts. If that chilled air in my joist and wall cavities actually helped cool my house, I'd be happy. But it doesn't, so it wastes energy and money. Ductless mini-split systems eliminate duct cooling loss as well.

Ductless mini-split systems provide personalized comfort



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My home has two zones, but the zoning only allows me to control the temperature on each floor. So I wind up paying to cool rooms I don't use. Closing the air registers in those rooms doesn't save energy or money. Quite the contrary, closing air registers upsets the airflow balance, decreases cooling efficiency and lowers comfort levels. A ductless mini-split system, on the other hand, allows you to set the temperature at each unit. So you can cool some rooms on a floor and not others. I could accomplish the same room-by-room cooling with remotely controlled window units, but they're ugly, noisy and incredibly energy inefficient.

How ductless mini-split systems work



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Traditional ducted forced-air systems have a compressor or heat pump located outside the house, with electrical cable and refrigerant lines running through the wall and into the air handler or furnace. Ductless mini-split systems have the same outside components. But instead of running the refrigerant lines to a single air handler or furnace, the lines run to the individual rooms. So they eliminate the air handler fan and all duct air and cooling losses. In other words, ductless mini-split systems eliminate the "middleman" blower and ductwork and deliver the cooling directly to each room.

Fujitsu mini-split AC systems offer great features



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Several companies make ductless mini-split systems. But the Fujitsu brand offers some really nice features. You can choose a Fujitsu system with up to eight individual zones and wall-, floor- or ceiling-mounted room units. Operate each unit individually, from a central controller or from the Fujitsu FGLair app on your smartphone.

Many Fujitsu individual room units include a built-in filter to capture dust, mold spores and microorganisms, as well as a built-in ion deodorization filter to absorb odors. So they do a better job of filtering your air than most central AC systems.

To get even more energy efficiency, the Fujitsu Halcyon Hybrid Flex Inverter system varies the speed and output of the outdoor unit to match the cooling demands of one or more indoor units. That design saves up to 30 percent more energy than other types of mini-split systems.

If the AC unit in your home is old and you're considering updating, don't assume you have to replace it with the same style unit (like I did). Check out a mini-split system at [fujitsugeneral.com](https://www.fujitsugeneral.com) and contact an [Elite Contractor](#) to get a quote. It's the greenest way to cool your home.

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