

HEATING & COOLING

In Multi-Generational Homes, Some Like It Hot—But Some Not

Family Handyman

The solution? Fujitsu General's energy-efficient Mini-split technology, which lets everyone from grandma to youngsters control the temperature in their rooms—no ducts required.



As multi-generation households become more prevalent, finding a home temperature that's comfortable for everyone—from an aging grandparent to a young child and everyone in between—can get, well, complicated. It almost makes handling disputes over what to make for dinner or which movie to watch on family night seem easy by comparison.

But it doesn't have to be that way, thanks to the Halcyon™ Mini-split cooling and heating systems from Fujitsu General. Ductless mini-split technology enables everyone in your household to control the temperature of their individual rooms—think of it as indoor climate change on-demand. And as a bonus, it can significantly reduce your utility bills, too.



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Fujitsu mini-splits deliver infinite comfort in any environment.

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Here's how it works: An outdoor condenser/compressor unit pumps refrigerant through a thin copper tube and directly into an unobtrusive, individual air-handling unit (also known as an evaporator). Available in different styles, these evaporator units—discreetly mounted on walls, in ceilings or even on floors—convert the refrigerant into cold air and gently blow it throughout the room.

Here's where the individual control comes into play, as a thermostat in each room allows everyone to set a temperature to their liking. It's almost like having an individual heating and air-conditioning unit in every room, but without the obtrusive and noisy equipment you'd expect from such a set-up. And in case you're wondering, just one outdoor compressor/condenser has enough capacity to power mini-split air-handlers in up to five different rooms.

The short, direct path that cool air takes from air-handlers to rooms is dramatically different than a conventional forced-air heating and air-conditioning system—and the primary reason why the mini-split system cuts energy costs. Consider this: In a typical air-conditioning system, the cooled or heated air travels through a maze of ductwork to reach individual rooms. Along the way, experts estimate that more than 30 percent of it leaks through poorly sealed joints in long runs of ductwork.

In effect, you pay handsomely to heat and cool uninhabitable spaces where long runs of ductwork run through basements, attics, walls, crawlspaces and the like. By comparison, the insulated refrigerant lines used in ductless mini-split systems suffer less than a 5-percent energy loss during their short route from the condenser/compressor to the evaporators.



In fact, mini-split technology is so energy efficient it can slash your utility bills by up to 24 percent. So if your average annual utility bill totals \$4,200, for example, that results in about \$1,000 in annual savings. Ka-ching! (Please note, however, that savings will vary, depending on the square-footage of your home and the efficiency of its existing heating and cooling equipment.)

Speaking of energy savings, mini-split systems also empower you to turn off air conditioning and heat in little-used or vacant rooms, which reduces energy expenses even further. So you can choose to heat or cool only rooms that actually are occupied. (Did you know that dining rooms, kitchens, living rooms and bedrooms are left unoccupied at least 40 percent of the time in most households?) And it doesn't take long to warm up a room; wall-mounted indoor units can reach a set temperature in as little as 10 minutes.

Technically speaking, [Fujitsu](#) General mini-split systems are up to 2.35 times more efficient than the federal government's minimum standard; as such, they're Energy Star-qualified. Moreover, mini-splits earn a score as high as 33 in the federal government's Seasonal Energy Efficiency Ratio (SEER) ratings, a measure of cooling efficiency. (You already knew that, right?) The government's minimum SEER rating is 13, and the higher the rating, the more efficient the unit.



Have you always wanted air-conditioning but live in a home with no ductwork? No problem—the ductless mini-split technology is the perfect application for older homes heated by a traditional boiler and radiators. No need to tear into walls, ceilings and closets to snake ductwork throughout a house; all the air-handling units require for installation is a 3- to 4-inch-diameter hole in a ceiling or an outside wall. It's just that simple.

Concerned about noise? Worry no more—whisper-quiet mini-split air-handlers run as low as 21 decibels and the outdoor units rank as low as 47 decibels. To put that in perspective, the humming noise from a refrigerator is about 40 decibels!

We've talked a lot about air conditioning, but [Fujitsu](#) mini-split systems actually are heat pumps that can efficiently heat your home, too. In fact, an extra-low temperature model is engineered to operate in temperatures as low as -15 degrees.



As for ease of operation, mini-split systems offer high-end technology that's literally at your fingertips. With a remote control, you can switch into either heating or cooling mode with a mere push of a button, as well as control temperatures in various rooms. Or with an Internet connection, you can operate the system remotely via a smart phone, tablet or computer—or even through smart-speaker, voice-recognition technology.

As you already may know from personal experience, conflicts about heating and cooling preferences are more likely to occur nowadays than ever before. Why? A record one in five households is now considered a multi-generational home, as Baby Boomers' children *and* Boomers' aging parents all move back home, spurred by a variety of socioeconomic factors. Sociologists even have a name for these two trends: the "boomerang" and "reverse boomerang" effects.



Furthermore, it's a scientific fact that everyone has different temperature comfort levels, depending on a variety of physical and psychological factors. For example, studies show that women prefer warmer temperatures because their bodies produce less heat, and older people are more sensitive to cold temperatures as their metabolic rates decrease with aging.

But with mini-split technology, finding a comfort level doesn't have to be a contentious, daily free-for-all. Instead, everyone gets to control the temperature of their small corner of your home, creating climate-control harmony. So instead of arm-wrestling over who gets to set the thermostat, you and your family can concentrate on more important things—like what movie to watch or what to make for dinner. Learn more about Fujitsu products at constantcomfort.com.

[Next, learn what is a reasonable temperature for a house in winter?](#)

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