DIY ductless minisplit

Ductless-minisplit heat pumps are high-efficiency air conditioners and heaters that include an outdoor compressor and an indoor fan unit that's typically mounted on a wall. They are usually sized and installed by professionals, partly because of the calculations of heat gain and loss that are required to choose the right unit and partly because the components are connected by separate electrical, condensate, and refrigerant lines that may be difficult for a nonpro to handle.

Friedrich, however, has launched a ductless minisplit designed for installation by a homeowner with only modest mechanical skills and no professional HVAC training. Friedrich, based in San Antonio, Texas, hopes its Breeze ductless minisplits will help homeowners skirt those problems and do the work themselves. The company says the units are available on the East Coast and soon to be distributed nationally.

HVAC professionals normally run Manual J calculations before choosing a specific piece of equipment to make sure its output matches the heating and cooling loads in a particular space. But Friedrich is offering only two models of the Breeze: one for spaces up to 500 sq. ft. and another for spaces up to 1600 sq. ft.

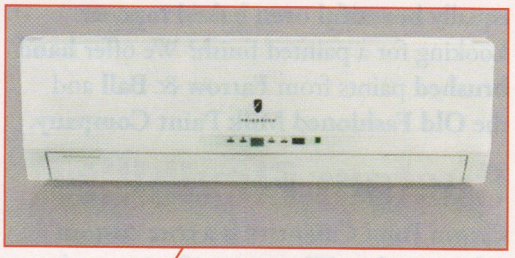
The company says that its inverter-equipped motors, the same technology used by pioneers such as Fujitsu and Mitsubishi, help the units reach their set point quickly and maintain it more efficiently than conventional equipment.

The only other decision installers will have to make is whether to run the modular connecting line through a 3-in. hole in the wall behind the fan unit, or through an accessory that sits in the bottom of a window opening. Through-the-wall installations are hidden when installation is complete.

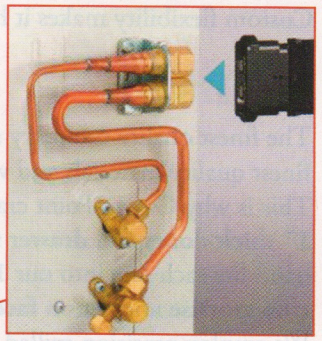
The connecting line comes with a quick-connect fitting that can be snapped into place without tools. The compressor also has snap-in electrical connectors.

The smaller of the two units has a maximum cooling output of 12,000 Btu, puts out 7000 Btu of heat at 17°F (11,000 Btu at 47°F), and runs on 115v. The larger unit has a maximum cooling output of 24,000 Btu, puts out 14,200 Btu at 17°F (22,000 Btu at 47°F) and requires 230v. The units range from about $2000 to $2500.

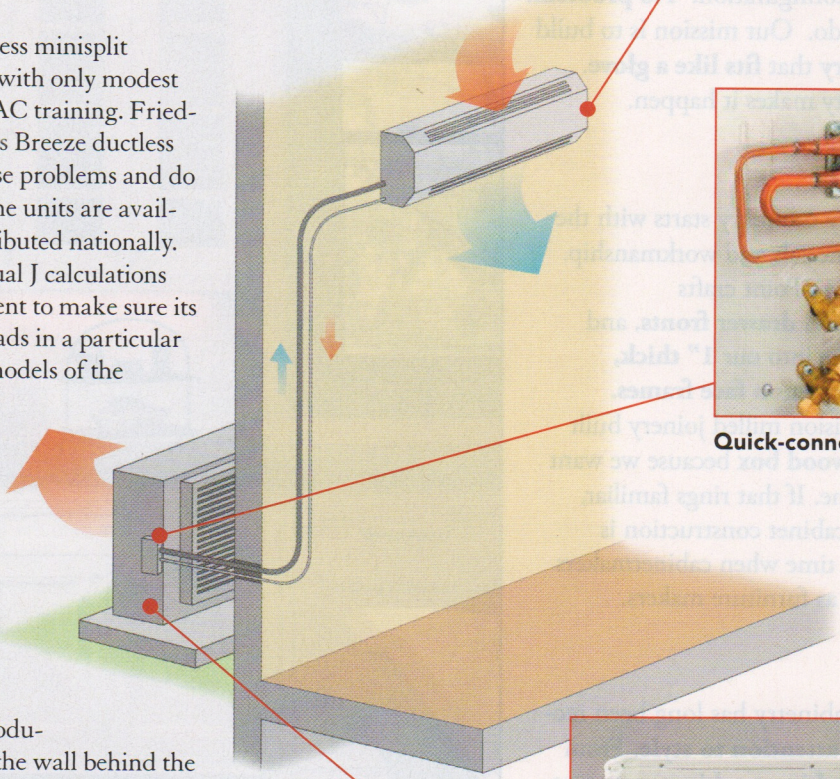
Scott Gibson, contributing writer

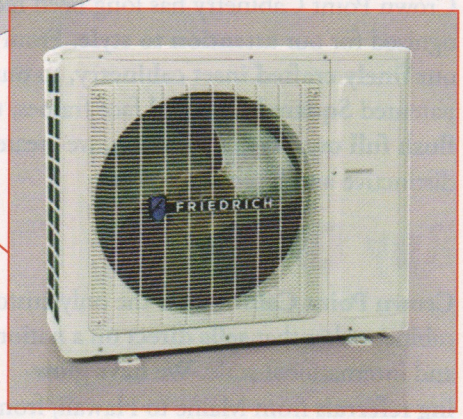


Indoor fan unit



Quick-connect fitting





Outdoor compressor unit

Photos: courtesy of Friedrich. Drawing: Dan Thornton.