

HALCYON HERALD



THE POWER TO CALM THE WIND™

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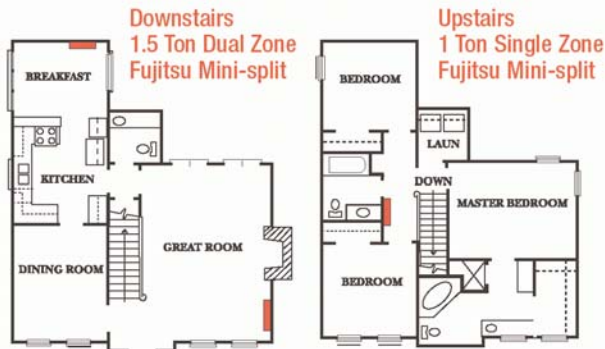
Simply contact Karen Mahon at 212-388-1400, fax 212-388-1490 or email kmahon@dba-pr.com with a short description of the project's scope and your contact information.

Why choose a mini-split vs. central air?

Did you know that Fujitsu mini-split air conditioning and heat pumps could be used for cooling or heating entire homes? We've been doing it successfully for many years throughout the world. Our ductless systems will provide the whole-house cooling (or heating) effect of central air, with the added flexibility of room air conditioners. The many benefits of the mini-split principle will soon challenge the reign of the central air in U.S. homes. After all, ductless systems are already the fastest growing segment of the HVAC industry in America.

So what is the principle of mini-splits? Well, in HVAC-101 we all learned that hot air rises and cold air falls. The job of an air conditioner is not to add cold, but to remove heat. And since mini-splits are mounted high on the wall, where the warm air concentrates, the heat exchange is much more efficient with mini-splits than with central air, where the return grill may be far away from the warm air. Furthermore, since mini-splits have no ducts, they avoid the energy losses associated with ductwork of central forced air systems. While distribution energy losses in conventional central-air systems have been estimated, distribution losses for ductless systems are about 1 - 5%. This allows the mini-split unit to shoot 45-degree air right into the room or space. Then, cold-air molecules will slowly gravitate down to the floor and other areas of the house. The automatic motion of the louvers further enhances the distribution of the air.

By strategically installing indoor units through the house as shown at the right, there is no need to have a unit in every room in order to obtain the whole-house cooling or heating effect. Installing transfer grills on non-bearing walls and undercutting doors by inches will create optimal air-flow



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Duct Cooling Losses

- How much are you losing? Why is a Fujitsu Mini-Split better?

Central air conditioning systems require a network of round or rectangular tubes located within your walls, floors and ceiling to move cooled air throughout the various rooms of your home. This labyrinth of sheet metal, fiberglass board, or flexible plastic and wire composite tubing greatly impacts the cost and effectiveness of conditioning the air in your home. Ductwork systems also impact your health, as they are a haven for mold production and a means of distributing polluted indoor air throughout your home.

“Typical duct systems lose 25 to 40 percent of the heating or cooling energy put out by the central furnace, heat pump or air conditioner.”

- U.S. Department of Energy -

Central air systems use a furnace or air handler with a single fan to force cooled air into the supply ducts leading to the rooms. This fan generates air movement yards and yards away from the intended cooling or heating location. Air is then returned to the source to be re-heated or cooled through yards and yards of return ducts. The best central air systems provide at least one supply and return register to each room. To save on installation costs, most homes have one or two centrally located return-registers in common areas such as hallways or no returns duct system; such design shortcuts often result in lower efficiency and higher heating and cooling costs.

Typical duct systems lose 25 to 40 percent of the heating or cooling energy put out by the central furnace, heat pump or air conditioner. Homes with ducts in a protected area such as a basement may lose somewhat less than this, while some other types of systems (such as attic ducts in hot, humid climates) often lose more.

The compressor and fans in your air conditioning system requires electricity to operate in order to

produce cold air. And we all know electricity costs you money.

Ductwork wastes energy in three ways

- 1.) Energy lost cooling duct capacity**
- 2.) Energy lost through conduction**
- 3.) Energy lost to leakage**

The cubic area contained in all the ductwork in your home is the equivalent of cooling an additional small room added to your home.

Some of your energy expense is wasted on conduction. Duct systems lose energy because much of the cold air inside the duct is spent to cool the duct walls, which in turn cools the hot air surrounding the ducts.

Imagine much of your energy dollar goes to cool the walls of yards and yards of ductwork throughout your home. That is energy dollars you spent to cool a surface you don't benefit from. Then the cool duct continues to lose energy by cooling the air surrounding the ducts.

Imagine much of your energy dollar goes to cool the walls of yards and yards of ductwork throughout your home. That is energy dollars you spent to cool a surface you don't benefit from. Then the cool duct continues to lose energy by cooling the air surrounding the duct. Ducts are inside your walls, floors and ceilings; again you are paying to cool an area that you do not occupy. If the ducts are in an attic or crawl space that is as hot as or hotter than the outdoors, cooling is dramatically reduced as the load of the surrounding space is never satisfied. Leaky ducts affect your energy costs on both the supply and return ducts in your home.

Air will naturally move from an area of high pressure to an area of low pressure. Air is supplied to the room at a pressure higher than the room pressure. If there are leaks in the supply ducts, this pressure will force cool air into the wall cavity and attic space of your home wasting energy. When the fan shuts off, the duct again becomes warm and needs to be cooled again.

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Duct Cooling Losses

- How much are you losing?


- Why is a Fujitsu Mini-Split better?

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In order for the air in your home to return to the source for cooling, it requires that the return ducts be a pressure lower than the room pressure so air will exit the room. If there are leaks in the return ducts, this external pressure will force warm wall cavity or attic space air into the return ducts making the air to be cooled that much warmer wasting energy.

Leakage in the return duct system can be hazardous to your health. Dirt dust and air pollutants can be introduced into the system by leaking return ducts. Even without leaks, household dust suspended in slow moving air settle out of the air and accumulate in both supply and return ductwork.

This energy loss can be demonstrated by the rise in the temperature of the air that is delivered to your room. The temperature of air at its source, the a-coil in your furnace or air handler is about 45 degrees. When air exits the supply register in your room it can be as high as 68 to 72 degrees. The difference in temperature represents the energy lost.

Fujitsu Ductless Mini-split Air Conditioners require no ductwork so there is no cooling loss or energy loss associated with ductwork. Fujitsu systems have less than a 5% loss in capacity between the outdoor unit and indoor unit, similar to that associated with the cooling loss in the refrigerant lines of central air systems because the refrigerant lines are insulated. Mini-splits introduce colder 40-45 degree air into the space which is one of the reasons why a mini-split will cool off a room quicker than a central air system. And with our new IAQ models we include an electronic air cleaner that improves room air quality. 

Why choose a mini-split vs. central air?

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throughout the home. Electrical savings as a consequence of better zone-control is one of the major benefits of using mini-splits as a primary source of cooling or heating.

Ease of installation and lower cost (and higher profit) make Fujitsu ductless systems a contractor's dream. Throughout our sales/ technical training and our advertising in professional publications, we show not only the ease of installation of our units but also the economical advantages for contractors (and consumer alike) to install Fujitsu mini-splits vs. central air. While it takes only one day for two men to install two to three mini-splits in a typical home, it takes three times as much time to install a central a/c, including ductwork. The contractor also enjoys much better profits margins with less work and, therefore, allowing the wholesaler to sell more units as well.

	CENTRAL A/C	FUJITSU MINI-SPLITS
INSTALLATION	48 Man hours; 2-Men, 3-Days	16 Man hours; 2-Men, 1-Day
DUCTWORK	Flex duct installation	No ducts to install
UPSTAIRS	1.5 Ton Unit and air handler	1 Ton Mini-split system
DOWNSTAIRS	1.5 Ton Unit and air handler	1.5 Ton Dual zone mini-split
TOTAL	Retail: \$7,800 Profit: \$2,350 $\$2,350/48 = \48.96	Retail: \$5,000 Profit: \$1,600 $\$1,600/16 = \100.00

Our ductless systems are carefully designed and manufactured to be as quiet and reliable as they can be. Unlike central-air equipment manufacturers, we at Fujitsu pay special attention to every detail in order to keep mechanical and wind noise to the minimum level possible. All major components such as the fan motor, the fan blower-wheel, the louvers, and all the electrical parts and outdoor components have been designed to be as quiet and reliable as current technology allows. Our R&D department works diligently to constantly improve our designs. While you may be awakening at night by the noise of your central air, you hardly be able to hear a Halcyon unit run.

So there you have it. Watch out Central Air, here comes the Mini-Split! 

New Solution Partner - Adsil

New Fujitsu Marketing Partner **MicroGuard®** HVAC/R protective treatments are designed for use on heating and air conditioning equipment; coils, fins, tubes, fans and even oxidized cabinets. These products can be installed on units before installation or on previously installed field units with equal success. **MicroGuard®** HVAC/R protective treatments retard corrosion on the non-ferrous metal fins and tubes, thus, extending the life of the equipment asset and helping to maintain good air flow efficiencies. This fact has been substantiated by numerous salt chamber tests using AST B-117. Coated aluminum fin stock was subjected to well in excess of 3,000 hours in the salt spray chamber and showed no consequential degradation, due to corrosion.


Further, testing by both independent third party sources and by numerous internal studies has shown that HVAC/R Units coated with **MicroGuard®** protective treatments will operate more efficiently and can save up to 15% or more in energy costs. Results can vary and periodic cleaning of the coils and fins will contribute to maintaining the efficient operation of the unit. This coating has resulted in 40% less cleaning times for HVAC maintenance crews.



This coating can be applied on site, at the distributor's facility or in a factory setting. For an onsite coating the approximate distributor



cost is \$60 to \$90 a ton. Applications done in a factory setting near the shipping point run \$20 to \$35 a ton, plus freight out.

Current coating facilities are in Jacksonville, FL and Miami, FL with sites scheduled to open by September in Los Angeles, Houston, New Orleans and Norfolk. There is a nationwide network of independent applicators that can be located by calling (800) 445-8239. 



ADVERTISING

Look for Fujitsu ads in upcoming issued of the following publications



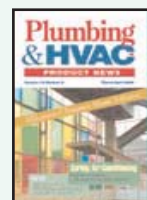
The News
July 19, Aug. 16



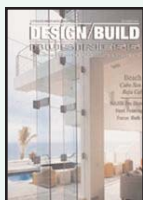
Contracting Business
August



HPAC Canada
July, August



Plumbing & HVAC
July, August



Design Build
July



Engineered Systems
July



Supply House Times
July, August