Comfort...

where you need it, when you need it

Ductless Mini-Split Systems

Comfort-Aire®
by HEAT CONTROLLER, INC.

Comfort… it's what we're all about

At Comfort-Aire, we're in the business of making you comfortable, whether at home, work, school, or at play. We offer a broad product selection for both residential and commercial use. Products that are efficient, effective and designed to add value.

We've been in the comfort business since our founding in 1933, and our roots go back even further. We can trace our beginnings to the Wingert Furnace Co. which began building coal, gas and oil furnaces in 1907. We moved to new headquarters in Jackson, Michigan, in 1955, and this facility has been expanded several times—most recently in 2006—to accommodate our growth.

Comfort-Aire is known throughout the heating and air conditioning industry for efficient, reliable products and in-season availability. Whether for heating or cooling, these products meet or exceed industry standards for energy efficiency. The line is constantly being updated to add the features and new technology that customers demand.

Ductless mini-split systems are one of our fastest growing product groups, and there are many reasons for this increasing popularity—but overall, the key is flexibility. They allow air conditioning (and heating with heat pump models) to be added quickly, conveniently and economically—often in locations where installing such comfort systems didn't seem possible or practical.

Read on to find out how a ductless mini-split system can make you comfortable, and do it efficiently and economically.

Comfort-Aire®

Table of Contents

This guide to ductless mini-splits is designed to explain how units work, the advantages they bring, and to show you the entire Comfort-Aire line. With single zone, multi-zone, and ceiling cassette models, there's a mini-split in the size and type you need to add comfort to just about any location!

Ductless Mini-Splits

The Comfort Solution

Ductless mini-split systems are a great solution to a wide variety of installation challenges, giving contractors the ability to put air conditioning (and heat with heat pump models) in locations that previously seemed impossible. They're ideal when installing ductwork is difficult, prohibitively expensive, or simply impractical. Both residential and commercial structures, new construction and existing buildings are candidates for mini-splits.

Basically a mini-split does away with the need for ductwork. Like a regular split system A/C or heat pump, the condenser is located outdoors; one or more air handlers are placed indoors. The two are connected by electrical and refrigerant lines that run through a small hole in an exterior wall, generally 3" in diameter or less.

In addition to eliminating the need for ducting, one of the other big advantages to mini-split systems is true zone control. The air handler is dedicated to the room being conditioned and is controlled by a wireless remote. That room can be kept at a temperature and humidity level different from the rest of the house or building.

Multi-zone systems for two or three rooms (or one large space) feature a single condenser that handles two or three air handlers. Each air handler is independently controlled, with its own remote and electronics-based climate controls to regulate temperature and humidity levels, as well as air flow. Units in a bedroom and a home office, for instance, can be programmed for different hours of operation with the 24-hour timer, or two classrooms situated side by side can be set at different temperatures.

Mini-split systems have the flexibility to fit virtually anywhere and with SEER ratings up to 19.1, they're also economical to operate.

Where can you use a mini-split?

Common applications include:

- Historic homes (the aesthetics of the exterior are maintained)
- Homes with hydronic heat
- Residential additions such as a sunroom or bedroom
- Vacation homes and cabins
- Schools (individual classroom control)
- Church sanctuaries and fellowship halls
- Nursing homes and hospitals
- Restaurants
- Remote offices such as those inside a warehouse or factory
- Utility transfer stations
- Arena sky boxes
- Computer rooms (temperature/humidity can be different than the rest of the building)
- ATMs and office lobbies

There's more to comfort than just temperature…

Advantages of a ductless mini-split system

Quiet Operation—The operational sound of the compressor and fan is kept outside with the condensing unit and the indoor air handler is designed to be exceptionally quiet

Easy Installation—All it takes to connect the outdoor condenser and the indoor air handler is a hole about 3" in diameter to run refrigerant lines and electrical wires between the two components

Efficiency—Units are designed to be energy efficient with high SEER ratings that meet or exceed government mandated standards; and only the room or area being used is conditioned

Attractive Appearance—High wall models feature a low profile indoor unit in a stone white color that blends with any décor; ceiling cassettes also come in a neutral color that virtually disappears in ceiling installations

Security—With a room air conditioner, there's always the worry that access to the home can be gained through the window where the unit is mounted; that worry is eliminated with a ductless system

Consistent Comfort—Electronic climate controls regulate operation to maintain a preset temperature level; random swing air flow (on most units) continually adjusts the fan speed and air direction for a gentle, breeze-like effect

Simple Operation—One fully featured remote is included for each indoor air handler, making it simple to select the mode, set the temperature and the timer, and change the airflow direction

Mini-Splits and Indoor Air Quality

According to the EPA, the air inside our homes is often more polluted than outside air. What's needed to protect yourself from air-borne contaminants is a high quality filtration system, and that's just what you get with ductless mini-splits from Comfort-Aire.

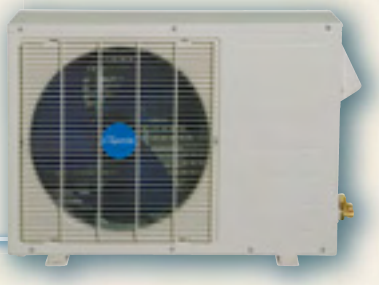
Triple filtration to improve indoor air quality is an integral part of the mini-split design:

- Electrostatic filter—removes smoke, dust and pollen
- Deodorizing filter—freshens the air
- Anti-fungal filter—prevents the growth of bacteria and mold

Additionally, the units can be operated in the dehumidification mode without cooling or heating. This removes excess humidity from the indoor air, one of the keys to preventing the growth of mold, mildew and other contaminants.

How does a **mini-split** work?

Indoor Air Handler



Outdoor Condenser

Cooling without Ductwork

A ductless mini-split air conditioner works the same way central air conditioning does with one big difference—there's no ductwork.

Both the central system and the mini-split can be classified as split systems because they consist of an outdoor condensing unit and an indoor air handler. With a central A/C system, the indoor components include a cooling coil and an air handler (the furnace's blower or a separate air handler) that circulates the conditioned air throughout the structure by way of the ductwork.

The mini-split indoor unit functions as both the indoor coil and the air handler, delivering conditioned air directly into a single room without sending it through any ductwork.

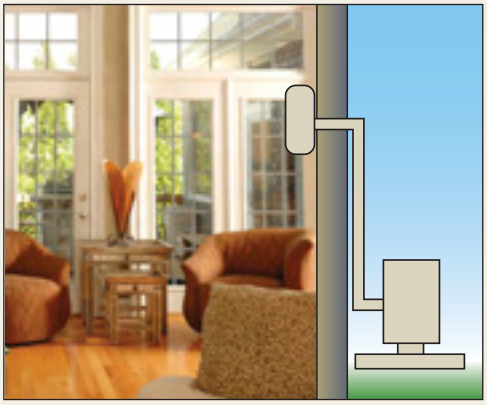
Heat Pump Models

A heat pump mini-split operates in basically the same manner, but adds heating capability. In the summer it transfers heat from inside the home to the outdoors. A reversing valve makes it possible for the unit to reverse this procedure during cold weather, absorbing heat from the outdoors and transferring it indoors (there is warm air outside, even when it's below freezing).

Heat Gain/Loss

One of the advantages this "ductless" operation provides is efficiency. In a central system, the cooler air absorbs heat as it travels through the ductwork. The longer the duct run, the greater the temperature gain. In winter, heat can also be lost as the conditioned air travels through the ducts.

Don't forget that it takes air pressure to move the conditioned air through the ducting system and that involves some noise from the fan and the actual movement of air. A mini-split system, however, is ultra-quiet because it doesn't have to push the air through many feet of ductwork.



This diagram shows a typical single zone installation:

- The condensing unit is installed outdoors while the air handler is mounted inside on an exterior wall. A hole approximately 3" in diameter is drilled through the wall. The lines that carry refrigerant from the air handler to the condensing unit and back run through this hole.
- An electric line runs between the two components: power is supplied by the outdoor unit so there are no cords and plugs visible on the interior. A bracket mounted to the wall supports the air handler, but is hidden by air handler.
- A drain line runs from the air handler to the outside to carry condensate away.

Inverter Technology:

Taking Comfort and Efficiency to the next level

Comfort-Aire's "V" Series ductless mini-splits maximize comfort by reducing temperature fluctuations and at the same time save an estimated 40% or more on energy consumption, compared with traditional mini-split systems.

What's different about the "V" Series? It uses state-of-the-art inverter technology.

An inverter is an electrical device that varies the frequency of the power going to the compressor. This allows the compressor to run at variable speeds so that it can precisely match the power with the demand.

A microprocessor adjusts the compressor speed by sampling the ambient air temperature in the room or space being cooled or heated. At start up, the compressor runs at high RPMs to quickly reach the desired temperature in the room. Then it slows down to a low rotation speed to maintain the temperature. However, during times of high demand such as weather extremes, or even a large gathering in the room, the compressor ramps up to a faster speed to meet the demand.

Compare this to a traditional system which cools by running the compressor until the setpoint is reached and then turns off. This on-off cycling results in temperature fluctuations that affect comfort, and also adds to wear and tear of the components.

Temperature isn't the only contributor to comfort: humidity is critical. Dehumidification, especially during hot, muggy weather, is an integral component of cooling. When the compressor in a traditional system cycles off, dehumidification also stops. With an inverter system, excess moisture in the air is removed all the time because the unit runs constantly, although mostly at "economy" speed.

Advantages of Inverter Technology

- Reaches the desired temperature quickly
- Provides precise temperature control and continuous dehumidification (cooling mode)
- Extends component life by eliminating on-off cycling
- Operates exceptionally quietly because the DC compressor runs mostly at low speed, which also reduces any vibration and associated noise
- Saves energy by matching the compressor speed to the demand; rated at up to 19.1 SEER
- Extra heating capacity (heat pump models) even at low ambient temperatures

Ductless mini-splits can save you money when it comes to adding on to your house. If your current HVAC system is correctly sized to your existing structure, it may not have the capacity to handle the new square footage. Rather than replacing the entire system, you can cool and heat with a mini-split–and save the cost of installing ductwork in your new space.

Multi-Zone Flexibility

When you need to condition more than one space, it's not necessary to install separate systems. You can choose dual zone or tri-zone models that let you cool and/or heat multiple rooms (depending on the system you choose). Each system uses one outdoor condensing unit tied to multiple indoor units, and each of the indoor units is independently controlled to meet specific comfort requirements.

You can see how one outdoor condenser is used in conjunction with multiple indoor air handlers in a single structure. Air handlers can be installed up to 50' from the condenser, so you can place the condenser in the best location for your landscaping.

Dual and tri-zone units make zoning practical and economical. No complicated systems and controls are required to cool and/or heat individual rooms. Setting the desired comfort level is a snap, using the wireless remote that comes with each indoor air handler.

This makes them ideal not just for residential use, but also for nursing homes, classrooms, anywhere individual comfort control is preferred.

The multi-zone design is also ideal for large spaces. One or more dual or tri-zone systems can be effective (and quiet) for a church sanctuary or fellowship hall, school commons area, even a warehouse setting, for example. As with all mini-splits, there's minimal disruption for installation and the sleek indoor units blend into the decor.

As for operating costs, the units themselves are efficient, but you may choose to heat/cool only the room or space being used, saving even more on utility bills.

Capacities for the dual and tri-zone models range from 18,000 BTUH to 36,000 BTUH, with indoor air handlers sized from 9,000 to 12,000 BTUH per zone.

A ductless mini-split can contribute to a better night's rest by making your bedroom more comfortable. You can control the temperature and humidity levels separately from the rest of the home and select Sleep Mode, if you choose. For most people, body temperature drops as they sleep so the room setting that was comfortable at bedtime is too cool by early morning. The Sleep Mode automatically adjusts the temperature during the night so you don't wake up looking for a blanket or have to get up to change the thermostat.

Energy efficient and environmentally sound

All Comfort-Aire ductless mini-splits come charged with R-410A, an environmentally friendly refrigerant.

Why is this important? Because R-410A doesn't contribute to depletion of the earth's vital ozone layer.

The ozone layer is located in the stratosphere, providing a protective barrier against the sun's harmful ultraviolet rays which can cause skin cancer and cataracts in people. UV rays can also affect animals and crop yields.

In the past, most refrigerants were compounds that contained chlorine—chlorofluorocarbons or hydrochlorofluorocarbons. You don't have to remember these long names, but you should be aware that when these kinds of refrigerants are released to the atmosphere, the chlorine molecule combines with some of the ozone's oxygen molecules, destroying ozone at a faster rate than it can be replenished.

Soon all CFC and HCF refrigerants used around the world will be replaced by non-ozone depleting types such as the R-410A that's already in use in all our mini-split models.

What do we mean by 'Energy Efficient'?

In recent years, heating and cooling manufacturers have made significant advances in the efficiency of their systems in terms of energy usage. This is an especially important purchase consideration as fuel prices continue to rise.

Cooling efficiency is measured by a Seasonal Energy Efficiency Ratio (SEER) rating. The higher the number, the more efficient the equipment. All Comfort-Aire systems meet or exceed the federally mandated 13.0 SEER rating, and some are rated as high as 19.1!

For heat pump models, efficiency is shown by a Heating Season Performance Factor (HSPF). This is an estimate calculated by dividing the seasonal heating output by the seasonal power consumption in watts. The most efficient heat pumps have an HSPF between 8 and 10. Our units are rated as high as 9.5 in the 'V' series.

All heating and cooling equipment comes with an Energy Guide label which shows the estimated energy usage—you can use these labels to compare equipment efficiency. Your dealer can help you determine which system is best for you, taking into account a number of factors including the average number of yearly cooling and heating days in your area of the country, in addition to your individual needs.

Comfort-Aire®

Mini-Split Systems

See complete descriptions and specifications beginning on page 11.

V Series
Single Zone
9,000-30,000 BTUH
Inverter Technology

S Series
Single Zone
9,000-24,000 BTUH

M Series
Multi-Zone
Dual Zone: 18,000-24,000 BTUH
Tri-Zone: 36,000 BTUH

All series come in cooling only and heat pump models.

D Series
Ceiling Cassette
24,000 & 36,000 BTUH

cooling only

Quick Reference Guide

Use this handy guide to check on the features of each type of unit. You can find more detail on the product pages that follow.

		SEER	HSPF	Auto Operation	Jet Cool	Sleep Mode	24 Hour Timer	Hot Start	Auto Louver Swing	Louver Setting	Multi-Stage Filtration	Auto Restart	Low Ambient Op.	Wireless Remote	Self-Diagnostics
"S" Series Single Zone	SMC09SB-0	13	-	✓	✓	✓	✓	-	✓	✓	✓	✓		✓	✓
	SMC12SB-0	13	-	✓	✓	✓	✓	-	✓	✓	✓	✓		✓	✓
	SMC18SB-1	13	-	✓	✓	✓	✓	-	✓	✓	✓	✓		✓	✓
	SMC24SB-1	13	-	✓	✓	✓	✓	-	✓	✓	✓	✓		✓	✓
	SMH09SB-0	13	7.7	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
	SMH12SB-0	13	7.7	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
	SMH18SB-1	13	7.7	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
	SMH24SB-1	13	7.7	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
"V" Series Single Zone with Inverter Technology	VMC09SB-1	19.1	-	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓
	VMC12SB-1	18.6	-	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓
	VMC18SB-1	16.0	-	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓
	VMC24SB-1	16.0	-	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓
	VMC30SB-1	16.0	-	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓
	VMH09SB-1	19.1	9.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	VMH12SB-1	18.6	9.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	VMH18SB-1	16.0	8.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	VMH24SB-1	16.0	8.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	VMH30SB-1	16.0	8.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
"M" Series Multi-Zone Dual or Tri-Zone	MMC18DA-1	13	-	✓	✓	✓	✓	-	✓	✓	✓	✓		✓	✓
	MMC24DA-1	13	-	✓	✓	✓	✓	-	✓	✓	✓	✓		✓	✓
	MMC36TA-1	13	-	✓	✓	✓	✓	-	✓	✓	✓	✓		✓	✓
	MMH18DA-1	13	7.7	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
	MMH24DA-1	13	7.7	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
	MMH36TA-1	13	7.7	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
"D" Series Ceiling Cassette	DMC24CA-1	13	-	✓	✓	-	✓	-	✓	✓	✓	✓		✓	✓
	DMC36CA-1	13	-	✓	✓	-	✓	-	✓	✓	✓	✓		✓	✓

Design, specifications and performance data subject to change without notice.

Comfort-Aire mini-splits
are packed with comfort features

Ultra-Quiet Operation
High tech multi-speed fan provides balanced air flow that's so quiet, you may not realize the unit is turned on

Attractive Appearance
The low profile of wall mount indoor units, along with sleek grille design, results in an attractive, unobtrusive installation; outdoor units can be installed close to the building

Random Swing
The unit randomly changes the louver direction for a natural breeze-like effect that is preferred by most people; this feature can be selected in most modes

Airflow Direction Control
The vertical louvers can be set for desired airflow direction

Multi-Stage Filtration
Triple filtration helps improve indoor air quality: electrostatic filter removes pollen, dust and smoke; antifungal filter prohibits the growth of bacteria and mold; deodorizing filter freshens the air

Auto Restart
The unit resumes operation when power is restored after a temporary outage, reverting to the last-used setting

24-Hour Timer
Turns the unit on and off during the day for comfort when you're home and energy savings when you're away

Low Ambient Operation
Certain models can operate when the outside temperature is as low as 0˚F without installing a separate low ambient kit

Environmentally Friendly Refrigerant
All Comfort-Aire mini-split systems use R-410A which does not contribute to depletion of the earth's vital ozone layer

Self-Diagnostics
Makes it easy to identify any operational problems

All features not available on all models: see reference guide or individual series for specific features

You can operate Comfort-Aire mini-splits in a variety of modes to suit your needs and your personal comfort level:

- **Auto Operation**—Climate controls sense the temperature in the room and turn the unit and fan on and off as needed to maintain the desired temperature
- **Cooling Mode**—Choose this mode when cooling is needed
- **Jet Cool**—To quickly bring the room to the desired temperature, the fan operates at super high speed for 30 minutes
- **Heat Mode**—For heat pumps, the condenser extracts heat from outside air for economical comfort
- **Hot Start**—Prevents the discharge of cool air at start-up of heat pumps
- **Dehumidification Mode**—The unit automatically adjusts the air flow and temperature setting according to current room conditions for comfort even in the most humid conditions
- **Auto Sleep Mode**—Because our body temperature cools down as we sleep, the unit automatically adjusts the setting for all-night comfort
- **Air Circulation**—The fan circulates air without heating or cooling and can be set at low, medium or high speed

Operation is controlled by a fully featured wireless remote. Intuitive design makes it easy to select the operational mode. For Multi-Zone units, one remote is included for each indoor unit.

Classrooms in schools and churches are ideal candidates for ductless mini-splits, especially multi-zone models. They allow each room to be individually controlled to meet specific requirements and the units can be turned off when the room is not in use for additional energy savings.

'S' Series

Single zone cooling only and heat pump models

Our "S" Series, rated at 13 SEER, offers economical zone control because only the room or area being used is conditioned. Also, no energy is used to force air through a duct system.

Since the unit is independent of any other heating or cooling system, specific comfort requirements can be set for the space. A wireless remote makes it easy to select both temperature and mode.

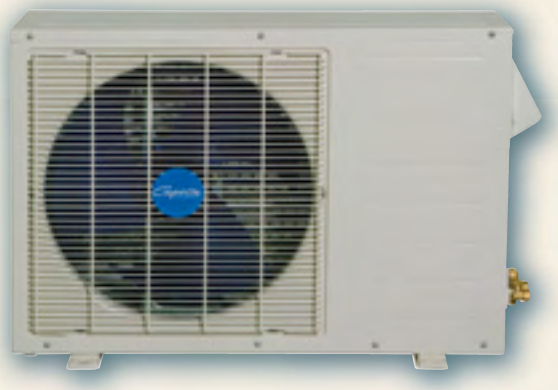
The indoor air handler features a sleek design that extends just 9" to 12" into the room, depending on the model. For installation flexibility, the indoor section can be located up to 65 feet from the outdoor section.

Not only is the air handler visually unobtrusive, it's also so quiet you'll forget it's even there. Fan speed and mode can be selected so the air flow provides the comfort needed without being disruptive. The 18,000 BTUH models feature four fan speeds; other models have three fan speeds.

Built with quality components, the system includes a three minute delay at start-up to protect the compressor from short cycling.

Indoor Unit

9,000 to 24,000 BTUH



Includes a fully featured wireless remote

Outdoor Unit

Features

- **Whisper Quiet**—High tech, cross flow fan in the indoor unit delivers balanced air flow
- **Temperature Compensation**—Indoor unit adjusts automatically as needed to eliminate temperature stratification between ceiling and floor temperature
- **Random Swing**—Continually adjusts air direction for a gentle, breeze-like effect
- **Multiple Modes**—Cooling, dehumidification only, air circulation (heating in heat pump models) plus:
  - Sleep mode
  - 24-hour timer
  - Jet Cool for fast cool-down
- **Hot Start**—On heat pump models, eliminates cool air release when unit turns on
- **Auto Operation**—Automatically adjusts to maintain a constant temperature/humidity level
- **Multi-Stage Filtration**—Triple filtration system includes electrostatic filter, antifungal filter and deodorizing filter
- **Auto Restart**—Reverts to the last setting following a power failure

Owners of historic homes will appreciate the comfort and convenience of ductless mini-splits. Adding air conditioning to older homes can be expensive and difficult, while window units destroy the exterior appearance of the home. But with a mini-split, the outdoor condenser can be located where it doesn't detract from the curb appeal, and simple conduit containing refrigerant and electrical lines is inconspicuous. Remodelers and renovators will appreciate these same qualities.

Single Zone Ductless Mini-Split Systems — 13 SEER

	Cooling Models				Heat Pump Models			
FEATURES	**SMA09SB-0**	**SMA12SB-0**	**SMA18SB-1**	**SMA24SB-1**	**SMH09SB-0**	**SMH12SB-0**	**SMH18SB-1**	**SMH24SB-1**
Power Supply	115-1-60	115-1-60	208/230-1-60	208/230-1-60	115-1-60	115-1-60	208/230-1-60	208/230-1-60
Cooling Cap. (BTUH)	9,000	12,000	18,000	24,000	9,000	12,000	18,000	24,000
Cooling Amps	7.3	10.0	6.8	8.8	7.3	10.0	6.8	8.8
Dehumidify (Pts/Hr.)	1.7	2.5	4.2	5.3	1.7	2.5	4.2	5.3
Heating Cap. (BTUH)	N/A	N/A	N/A	N/A	10,000	12,500	18,000	24,000
Heating Amps	N/A	N/A	N/A	N/A	7.6	10.0	7.7	8.8
HSPF	N/A	N/A	N/A	N/A	7.7	7.7	7.7	7.7
Air Flow (H/M/L)	341/294/247	471/430/353	677/636/600/565	795/706/642	341/294/247	471/430/353	677/636/600/565	795/706/642
Fan Speeds (C/H/F)	3 / - / 3	3 / - / 3	4 / - / 4	3 / - / 3	3 / 3 / 3	3 / 3 / 3	4 / 4 / 4	3 / 3 / 3
Air Direction (4-Way)								
Vertical Modulating	Remote	Remote	Remote	Remote	Remote	Remote	Remote	Remote
Horizontal (left/right)	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual
Random Swing	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Indicator Lamps								
ON/OFF	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
24 Hr. Timer/Sleep Mode	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Defrost or Hot Start	N/A	N/A	N/A	N/A	Standard	Standard	Standard	Standard
Temperature Setting	On Remote	On Remote	On Remote	On Remote	On Remote	On Remote	On Remote	On Remote
Indoor Unit Dimensions								
Width (inches)	31⅛	36⅜	42½	49⅜	31⅛	36⅜	42½	49⅜
Height (inches)	10 13/32	11½	13	12 13/16	10 13/32	11½	13	12 13/16
Depth (inches)	7 11/16	8⅞	8⅞	9⅛	7 11/16	8⅞	8⅞	9⅛
Net Wt/Shipping Wt (lbs)	19.8/24.3	28.7/33.1	37.5/46.3	39.7/55.1	19.8/24.3	28.7/33.1	37.5/46.3	39.7/55.1
Outdoor Unit Dimensions								
Width (inches)	30 11/16	29⅞	33 1/32	35 3/16	30 11/16	29⅞	33 1/32	35 3/16
Height (inches)	21 5/16	23 3/16	27 13/32	33⅞	21 5/16	23 3/16	27 13/32	33⅞
Depth (inches)	9 13/16	11 3/16	13 3/16	13	9 13/16	11 3/16	13 3/16	13
Shipping Wt (lbs)	70.5/77.2	79.4/86.0	116.8/125.7	149.9/159.8	72.8/79.4	83.8/90.4	119.0/127.9	151.0/160.9
Electrical Data Outdoor Unit [1]								
Main Pwr. Connection	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit
Max. Circuit Ampacity	14	18	13	18	14	18	13	18
Max. Fuse/HACR Cir. Brkr	15	20	15	20	15	20	15	20
Recommended Indoor/Outdoor Connecting Cable Type (SJOW)[2]	18-4 (300V)	18-4 (300V)	See Note 2	See Note 2	18-4 (300V)	18-4 (300V)	See Note 2	See Note 2
Line Sets O.D. (in.) / Refrigerant								
Refrigerant		R-410A				R-410A		
Liquid (Flare)	1/4	1/4	1/4	3/8	1/4	1/4	1/4	3/8
Suction (Flare)	3/8	1/2	1/2	5/8	3/8	1/2	1/2	5/8
Max. Length [3]	32.8 ft.	32.8 ft.	49.2 ft.	65.6 ft.	32.8 ft.	32.8 ft.	49.2 ft.	65.6 ft.
Max. Elevation (Outdoor)	16.4 ft.	16.4 ft.	26.25 ft.	32.8 ft.	16.4 ft.	16.4 ft.	26.25 ft.	32.8 ft.
Ambient Op. Range		65°F – 113°F (cooling)			65°F – 113°F (cooling) / 19.5°F – 113°F (heating)			

[1] Always follow local, state and national electrical codes.
[2] 9K/12K Models: The required cable connecting the indoor and outdoor units together should be rated for 300V. The actual voltage through the cable is 35V DC. 18K/24K Models: The required cable connecting the indoor and outdoor units together should be specified by local and National Electric Codes. The voltage running through the cable is 208~230V AC.
[3] 25' min. is recommended.

Warranty—5 years on compressor, 1 year on parts
(Some limitations apply; see printed warranty for details.)

'V' Series

Inverter technology in a wide range of capacities

Inverter

208-230V

9,000 to 30,000 BTUH

Cooling and heat pump models in all sizes

Outdoor Unit

ENERGY STAR

9,000 BTUH Models

Comfort and energy efficiency combine in these attractive wall mount mini-splits. Rated as high as 19.1 SEER, they include all the advantages of advanced inverter technology.

You'll find that your room reaches the preset temperature quickly and that the temperature is constant, without the variations that occur in other types with on-off cycling. Because the units run at "economy" speed most of the time, energy usage is kept to a minimum. However, during weather extremes (or when you have a room full of people), the compressor ramps up automatically to maintain the comfort level.

"V" Series units are exceptionally quiet. Heavy duty compressors in the condensers are not just efficient, but they also reduce noise and vibration. Inside, the balanced fan circulates large volumes of air at minimal noise levels.

Applications

Single zone models are especially suited to one room residential installations such as bedrooms, sunrooms, additions and workshops. For large spaces up to 1550 square feet such as offices, conference rooms, common areas, etc., the 30,000 BTUH models deliver big capacity with exceptional efficiency. With our Multi-Power System, two compressors operate individually or in tandem to closely match the load for greatest efficiency.

Features

- **Attractive Cabinet**—Indoor units feature a slim profile with rounded corners and sleek grilles with a subtle metallic look panel
- **Multiple Modes**—Cooling, dehumidification only, and heating in heat pump models
  - Sleep mode
  - 24-hour timer
  - Jet cool
  - Auto sleep mode
  - Hot start (heat pump models)
- **Random Swing**—Continually adjusts fan speed and air direction for a gentle, breeze-like effect that's preferred by most people
- **Remote Control**—Makes it easy to program and operate the unit
- **Multi-Stage Filtration**—Includes electrostatic filter, antifungal filter and deodorizing filter for improved indoor air quality
- **Low Ambient Operation**—Cooling mode functions even when the outdoor temperature reaches 0° F
- **Defrost Control**—Removes any frost accumulation on the coil of heat pumps
- **Auto Restart**—Reverts to the last setting following a power failure

Low Ambient Operation

Cooling only models can be used in applications where outside air temperatures are very low and the indoor space, such as a server room, still requires A/C.

- Operation at rated capacity from 0-110°F outdoor air temperature
- Operation with decreased capacity from 110-120°F outdoor air temperature

Heat pump models deliver superior heating performance compared to non-inverter mini-splits, providing more heat at lower temperatures.

- Operation at rated capacity from 23-75°F outdoor air temperature
- Operation with decreased capacity from 14-23°F outdoor air temperature

Single Zone Ductless Mini-Split Systems

	Cooling Models					Heat Pump Models				
FEATURES	**VMC09SB-1***	**VMC12SB-1**	**VMC18SB-1**	**VMC24SB-1**	**VMC30SB-1**	**VMH09SB-1***	**VMH12SB-1**	**VMH18SB-1**	**VMH24SB-1**	**VMH30SB-1**
Power Supply	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60
Cooling Cap. (BTUH)	9,200	12,000	18,000	24,000	26,400/27,000	8,950/9,200	11,700/12,000	17,500/18,000	23,400/24,000	26,400/27,000
SEER	19.1	18.6	16.0	16.0	16.0	19.1	18.6	16.0	16.0	16.0
Cooling Amps	3.5/3.2	5.5/5.0	8.0/7.3	12.1/11.0	13.6/12.5	3.5/3.2	5.5/5.0	8.0/7.3	12.1/11.0	13.6/12.5
Dehumidify (Pts/Hr.)	3.2	3.2	4.4	5.7	7.2	3.2	3.2	4.4	5.7	7.2
Heating Cap. (BTUH)	N/A	N/A	N/A	N/A	N/A	11,700/12,000	15,100/15,500	20,200/20,700	26,600/27,300	28,300/29,000
Heating Amps	N/A	N/A	N/A	N/A	N/A	4.6/4.2	6.5/5.9	9.1/8.3	14.0/13.0	14.0/12.7
HSPF	N/A	N/A	N/A	N/A	N/A	9.5	9.5	8.2	8.2	8.0
Indoor Unit										
Air Flow (CFM)	300	335	494	565	710	300	335	494	565	710
Fan Speeds	4	4	4	4	4	4	4	4	4	4
Air Direction (4-Way)										
Vertical Modulating	Manual	Manual	Remote	Remote	Remote	Manual	Manual	Remote	Remote	Remote
Horizontal (left/right)	Manual	Manual	Remote	Remote	Remote	Manual	Manual	Remote	Remote	Remote
Random Swing	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Indicator Lamps										
ON/OFF	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
24 Hr. Timer/Sleep Mode	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Defrost or Hot Start	N/A	N/A	N/A	N/A	N/A	Standard	Standard	Standard	Standard	Standard
Temperature Setting	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Indoor Unit Dimensions										
Width (inches)	35¼	35¼	43	43	47⅜	35¼	35¼	43	43	47⅜
Height (inches)	11⅛	11⅛	11⅘	11⅘	13⅜	11⅛	11⅛	11⅘	11⅘	13⅜
Depth (inches)	6½	6½	7	7	8 1/16	6½	6½	7	7	8 1/16
Net Wt/Shipping Wt (lbs)	17.6/19.8	17.6/19.8	28.7/30.9	28.7/30.9	30.8/35.3	17.6/19.8	17.6/19.8	28.7/30.9	28.7/30.9	30.8/35.3
Outdoor Unit Dimensions										
Width (inches)	30⅓	30⅓	34⅓	34⅓	34¼	30⅓	30⅓	34⅓	34⅓	34¼
Height (inches)	21⅓	21⅓	25⅘	31½	31½	21⅓	21⅓	25⅘	31½	31½
Depth (inches)	9⅜	9⅜	12⅜	12⅜	12⅜	9⅜	9⅜	12⅜	12⅜	12⅜
Net Wt/Shipping Wt (lbs)	77.2/81.6	77.2/81.6	101.4/105.8	145.5/149.9	169.6/181.6	77.2/81.6	77.2/81.6	101.4/105.8	145.5/149.9	169.6/181.6
Electrical Data Outdoor Unit**										
Main Pwr. Connection	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit
Max. Circuit Ampacity	8.2	9.9	12.4	16.7	17	8.2	9.9	12.4	16.7	17
Max. Fuse/HACR Cir. Brkr	15	15	20	25	30	15	15	20	25	30
Recommended Indoor/ Outdoor Connecting Cable Type (SJOW)	Line Voltage Per NEC**	Line Voltage Per NEC**	Line Voltage Per NEC**	Line Voltage Per NEC**	Line Voltage Per NEC**	Line Voltage Per NEC**	Line Voltage Per NEC**	Line Voltage Per NEC**	Line Voltage Per NEC**	Line Voltage Per NEC**
Line Sets O.D. (in.) / Refrigerant										
Refrigerant			R-410A					R-410A		
Liquid (Flare)	1/4	1/4	1/4	3/8	1/4	1/4	1/4	1/4	3/8	1/4
Suction (Flare)	3/8	3/8	1/2	5/8	5/8	3/8	3/8	1/2	5/8	5/8
Max. Length	49 ft.	49 ft.	49 ft.	98 ft.	98 ft.	49 ft.	49 ft.	49 ft.	98 ft.	98 ft.
Max. Elevation (Outdoor)[1]	25 ft.	25 ft.	49 ft	49 ft.	25 ft.	25 ft.	25 ft.	49 ft.	49 ft.	25 ft.

* Energy Star® compliant

**Always follow local, state and national electrical codes. Main power connection is 208/230V.

[1] Oil Trap should be installed every 16.5 ft–23.0 ft (5–7 m)

Warranty—6 years on compressor, 2 years on parts
(Some limitations apply; see printed warranty for details.)

Design, specifications and performance data subject to change without notice.

‘M’ Series
Multi-Zone Systems

Our Multi-Zone units let you condition two or three rooms—or one large space—with just one outdoor unit. Individual air handlers are independently controlled with a wireless remote and include all the advantages of our ductless mini-split line.

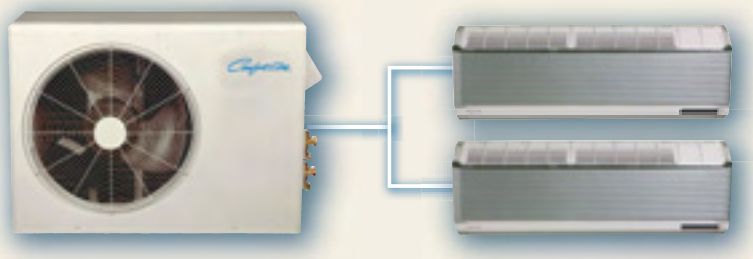
A single outdoor condenser is sized for multiple indoor air handlers. Each condenser is equipped with two compressors that adjust to changing needs. With a light load, just one compressor will run; when the load increases, both compressors kick in to deliver maximum comfort at optimal efficiency.

Units provide true zone control for either two or three rooms, depending on the model selected. Each air handler operates independently and comes with its own wireless remote. Units are also great for larger spaces such as fellowship halls and commons areas—install one or more Multi-Zone units for quiet, easily controlled comfort.

In addition to the general installation advantages of mini-splits, electrical hook-ups are simplified with main power coming from the condensing unit. Condensers can be situated up to 50 feet from the indoor units, giving you options for selecting the best location for the installation.

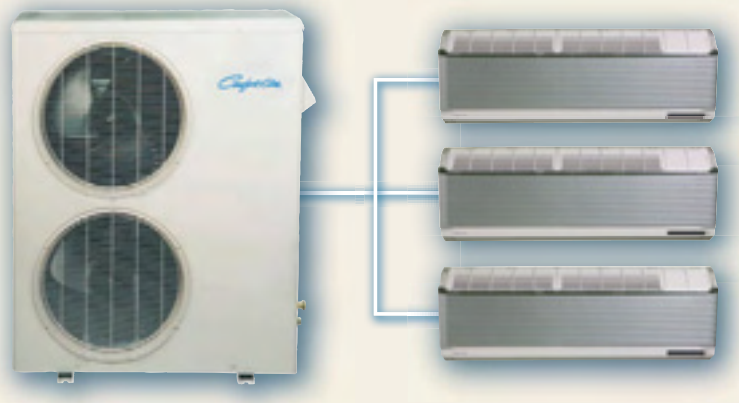
Includes one fully featured wireless remote per indoor unit.

Dual Zone 18,000 to 24,000 BTUH



Cool or heat two rooms or separate areas. Includes two indoor air handlers and two wireless remotes, one for each air handler.

Tri-Zone 36,000 BTUH



Cool or heat three rooms or separate areas. Includes three indoor air handlers and three wireless remotes, one for each air handler.

Features

- **Zone Control**—Each air handler is independently controlled, so each unit can be set for individual preferences or turned off when the room isn’t being used
- **Random Swing**—Continually adjusts air direction for a gentle, breeze-like effect preferred by most people
- **Multiple Modes**—Cooling, dehumidification only, air circulation (heating in heat pump models) plus:
  - Sleep mode
  - 24-hour timer
  - Jet Cool for fast cool down
- **Hot Start**—On heat pump models, eliminates cool air release when unit turns on
- **Auto Operation**—Automatically selects the mode required to maintain a constant temperature/humidity level
- **Multi-Stage Filtration**—Triple filtration includes electrostatic filter, antifungal filter and deodorizing filter
- **Auto Restart**—Reverts to the last setting following a power failure

Dual Zone Mini-Splits					Tri-Zone Mini-Splits	
	Cooling Only		Heat Pump		Cooling Only	Heat Pump
FEATURES	**MMC18DA-1**	**MMC24DA-1**	**MMH18DA-1**	**MMH24DA-1**	**MMC36TA-1**	**MMH36TA-1**
Power Supply	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60
System Cooling Cap. (BTUH)	18,000/18,000	23,600/24,000	18,000/18,000	23,600/24,000	35,200/36,000	35,200/36,000
Cooling Cap./Zone (BTUH)	9,000/9,000	11,800/12,000	9,000/9,000	11,800/12,000	11,730/12,000	11,730/12,000
SEER	13.0	13.0	13.0	13.0	13.0	13.0
Cooling Amps	9.2 /8.8	12.5/11.4	9.2 /8.8	12.5/11.4	18.8/18.2	18.8/18.2
Dehumidify (Pts/Hr.) per zone	2.3	2.5	2.3	2.5	2.5	2.5
System Heating Cap. (BTUH)	N/A	N/A	18,000	24,000	N/A	36,000
Heating Cap./Zone (BTUH)	N/A	N/A	9,000	12,000	N/A	12,000
Heating Amps	N/A	N/A	8.8/8.6	12.3 /11.1	N/A	18.6 /17.9
HSPF	N/A	N/A	7.7	7.7	N/A	7.7
Indoor Unit						
Air Flow (CFM H/M/L)	289 / 271 / 254	332 / 314 / 296	289 / 271 / 254	332 / 314 / 296	332 / 314 / 296	332 / 314 / 296
Fan Speeds (C/H/F)	4 / - / 3	4 / - / 3	4 / 3 / 3	4 / 3 / 3	4 / - / 3	4 / 3 / 3
Air Direction (4-Way)						
Vertical Modulating	Remote	Remote	Remote	Remote	Remote	Remote
Horizontal (left/right)	Manual	Manual	Manual	Manual	Manual	Manual
Random Swing	Standard	Standard	Standard	Standard	Standard	Standard
Indicator Lamps						
ON/OFF	Standard	Standard	Standard	Standard	Standard	Standard
24 Hr. Timer/Sleep Mode	Standard	Standard	Standard	Standard	Standard	Standard
Defrost or Hot Start	N/A	N/A	Standard	Standard	N/A	Standard
Temperature Setting	Standard	Standard	Standard	Standard	Standard	Standard
Indoor Unit Dimensions						
Width (inches)	33	35 3/16	33	35 3/16	35 3/16	35 3/16
Height (inches)	10 5/8	11 1/8	10 5/8	11 1/8	11 1/8	11 1/8
Depth (inches)	6	6 1/2	6	6 1/2	6 1/2	6 1/2
Net Wt/Shipping Wt (lbs)	15.4/18.1	20.5/24	15.4/18.1	20.5/24	20.5/24	20.5/24
Outdoor Unit Dimensions						
Width (inches)	34 5/16	34 5/16	34 5/16	34 5/16	34 5/16	34 5/16
Height (inches)	25 13/16	31 13/16	25 13/16	31 13/16	40 11/16	40 11/16
Depth (inches)	12 5/8	12 5/8	12 5/8	12 5/8	12 5/8	12 5/8
Net Wt/Shipping Wt (lbs)	125.7/134.7	141.1/151.9	125.7/134.7	141.1/151.9	185.2/201.5	185.2/201.5
Electrical Data Outdoor Unit*						
Main Pwr. Connection	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit
Min. Circuit Ampacity	15	20	15	20	30	30
Max Fuse /HACR Cir. Breaker	20	25	20	25	40	40
Recommended Indoor/Outdoor Connecting Cable Type (SJOW)	Line Voltage Per NEC*	Line Voltage Per NEC*	Line Voltage Per NEC*	Line Voltage Per NEC*	Line Voltage Per NEC*	Line Voltage Per NEC*
Line Sets O.D. (in.) / Refrigerant						
Refrigerant		R-410A			R-410A	
Liquid (Flare)	1/4	1/4	1/4	1/4	1/4	1/4
Suction (Flare)	3/8	3/8	3/8	3/8	3/8	3/8
Max. Length	50 ft.	50 ft.	50 ft.	50 ft.	50 ft.	50 ft.
Max. Elevation (Outdoor)	25 ft.	25 ft.	25 ft.	25 ft.	25 ft.	25 ft.

*Always follow local, state and national electrical codes. Main power connection is 208/230V.

Warranty—5 years on compressor, 1 years on parts
(Some limitations apply; see printed warranty for details.)

‘D’ Series

Ceiling Cassette Systems

208-230V/60/1

24,000 BTUH

36,000 BTUH

Our indoor cooling only units fit flush in the ceiling with an attractive panel incorporating airflow louvers. A small light display on the indoor unit shows operation and if the timer is in use, plus signals when the filter needs changing.

A full featured wireless remote and a wired wall remote to control operation and program the unit are both included.

To optimize comfort and minimize energy consumption, a multi-stage compressor system in the 36,000 BTUH unit uses two compressors that operate individually or in tandem to closely match the load for greatest efficiency.

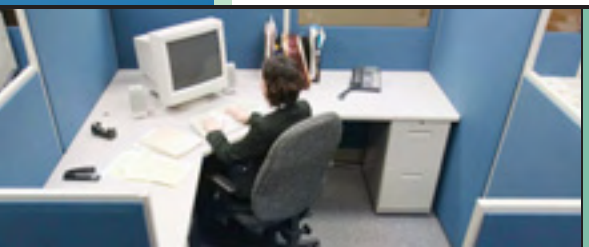
Features

- **Multiple Modes for Comfort**—Cooling, fan only, dehumidification only, auto sleep modes
- **Auto Operation**—Fan speed and temperature are automatically adjusted according to the actual temperature of the room
- **Timer Modes**—Can be programmed for daily, weekly and holiday operation for energy savings when the room is not being used
- **Swirl Mode**—Controls the louvers to reduce temperature stratification; louver swing delivers uniform comfort
- **Plasma Air Purifying Filter**—High tech filter improves indoor air quality; unit also includes a washable air filter
- **Auto Restart**—Reverts to last programmed setting after a power failure
- **Self-Diagnostics**—Indicates when maintenance is required

	Cooling Only	
FEATURES	**DMC24CA-1**	**DMC36CA-1**
Power Supply	208/230-1-60	208/230-1-60
Cooling Cap. (BTUH)	23,500/24,000	33,500/34,000
SEER	13.0	13.0
Dehumidify (Pts/Hr.)	6.3	7.8
Indoor Unit		
Air Flow (CFM) H/M/L	650/600/550	850/800/750
Fan Speeds (Cool/Fan)	3 / 3	3 / 3
Air Direction–Four Way	Standard	Standard
24 Hr. Timer/Sleep Mode	Standard	Standard
Defrost Control	Standard	Standard
Electrical Data Outdoor Unit*		
Main Pwr. Connection	Outdoor Unit	Outdoor Unit
Min. Circuit Ampacity	16.8	24.3
Max. Fuse/HACR Cir Brkr.	25	40
Indoor/Outdoor Connection	Line Voltage Per NEC*	Line Voltage Per NEC*
Indoor Unit Chassis Dimensions		
Width (inches)*	33⅛	33⅛
Height (inches)	8 29/32	8 29/32
Depth (inches)*	33⅛	33⅛
Shipping Wt (lbs)	70	70
Outdoor Unit Dimensions		
Width (inches)	34 5/16	35 13/32
Height (inches)	31½	45 29/32
Depth (inches)	12 19/32	14 19/32
Shipping Wt. (lbs)	175	210

*Always follow local, state and national electrical codes. Main power connection is 208/230V.

Warranty—5 years on compressor, 1 year on parts
(Some limitations apply; see printed warranty for details.)



Offices are ideal locations for ceiling cassettes...the overhead location allows conditioned air to reach cubicles and work areas within a single space. Units can be programmed on a weekly basis for comfort during working hours and energy savings in the evenings or on weekends.

Ready to buy?
Here are some things to consider:

When you buy Comfort-Aire products, you're purchasing the peace of mind that comes from dealing with a company that has a long track record of success. We have a well-deserved reputation not only for quality products, but also for standing behind those products with excellent warranty and support programs. We have technicians available to handle telephone inquiries about operation, installation and maintenance. Our web site is another resource: owners' manuals can be downloaded and your installer can access technical information and service manuals.

Warranty Coverage

Comfort-Aire stands behind its mini-splits with some of the strongest warranties in the industry. All our ductless mini-split systems are covered by a five year warranty on the compressor and one year on other parts, and our "V" Series is covered by a 6 year compressor, 2 year parts warranty. (Some restrictions apply, see our web site for full warranty details).

Consumer Financing Program

Your Comfort-Aire dealer makes it easy for you to purchase a ductless mini-split system for residential use. Our KwikComfort Financing Program gives you the credit you need for a system, installation and any related equipment—with no long wait and no credit hassle. KwikComfort representatives are available by phone seven days a week and, in most cases, they can give you an answer within minutes. There's no annual fee and a variety of payment options are available. Talk to your Comfort-Aire dealer about the advantages of KwikComfort Financing.

Extended Service Agreements

We stand behind our products with exceptionally strong warranties, but as with any product containing mechanical and electronic components, service is sometimes needed. Our AssurancePlus program gives you an extra measure of protection that extends beyond the standard warranty coverage. It protects you against unexpected problems that require service and/or replacement parts. AssurancePlus extended service agreements allow you to extend coverage beyond the original warranty, and there are a variety of plans to choose from, offering parts and labor coverage, parts only or labor only. Your Comfort-Aire dealer has all the details on the AssurancePlus program.

Talk to your Comfort-Aire dealer about the advantages of ductless mini-split systems and if one is right for your location and situation. He should also make an on-site inspection to measure and evaluate the space so that your system is sized correctly.

Comfort-Aire®

Comfort-Aire offers a full line of ductless mini-split systems that are quality constructed and energy efficient to keep your family comfortable throughout the year. With single zone, multi-zone, and ceiling cassette models, there's a system in the size and type you need to add comfort to just about any location. All our mini-splits are backed by strong warranty coverage and after-sales support. Your dealer can give you recommendations on which models best suit your needs and lifestyle.

Comfort-Aire®
by HEAT CONTROLLER, INC.

1900 Wellworth Ave., Jackson, MI 49203
www.heatcontroller.com

Design, specifications, materials and performance data subject to change without notice.

RP 12M 011/08

HC-MSC-D