

Comfort...  
where you need it,  
when you need it



## Ductless Mini-Split Systems



*Comfort-Caire*<sup>®</sup>  
by HEAT CONTROLLER, INC.

# Comfort... it's what we're all about

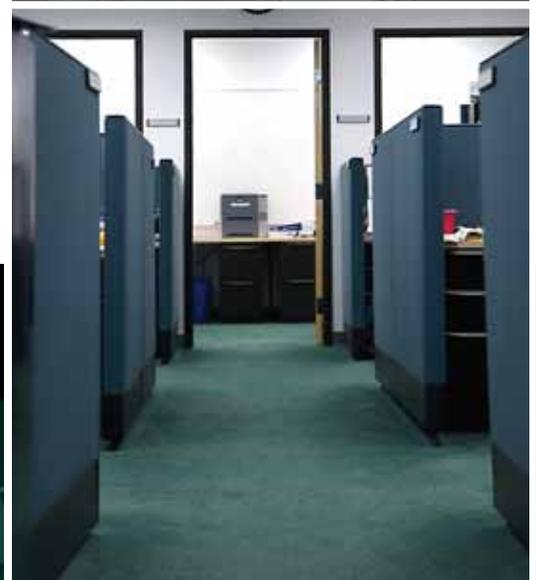
At Comfort-Aire, we're in the business of making you comfortable, whether at home, work, school, or at play. We offer a broad product selection for both residential and commercial use. Products that are efficient, effective and designed to add value.

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 our 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*®



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*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!*

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# Comfort-Cire®

## 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, refrigerant, and condensate drain 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 of 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, three or four rooms (or one large space) feature a single condenser that handles two, three or four 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 20.0, 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, condensate drain 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, potentially decreasing electricity usage when compared to traditional systems

**Attractive Appearance**—High wall models feature a low profile indoor unit in a neutral 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 airborne contaminants is a high quality filtration system, and that's just what you get with all ductless mini-splits from Comfort-Aire .

In fact, our "V" Series inverter units are equipped with triple filtration:

- Ionizer—removes microscopic particles from the air
- Active carbon and dust filter—removes dust, smoke, and pollen
- Air freshening filter—helps freshen the air

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.

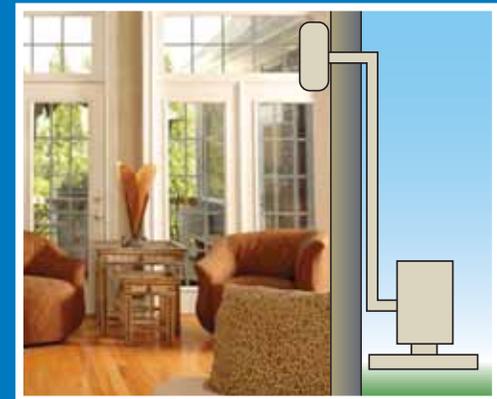
## Heat Pump Models

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 (yes, 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-split heat pumps 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 20.0 SEER
- Extra heating capacity 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 your new space with a mini-split—and save the cost of installing ductwork.*

# Multi-Zone Flexibility



When you need to condition more than one space, it's not necessary to install separate systems. You can choose multi-zone models that let you cool and heat multiple rooms, and with our InverterFlex models, you can mix and match 2, 3 or 4 air handlers to best match your room requirements. 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.

InverterFlex units make zoning practical and economical. No complicated systems and controls are required to cool and 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



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 82' (depending on model) from the condenser, so you can place the condenser in the best location for your landscaping.

nursing homes, classrooms, anywhere individual comfort control is preferred.

The multi-zone design is also ideal for large spaces. One or more InverterFlex 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 décor.

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

Capacities for InverterFlex 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 one 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 20.0!

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 federal minimum is 7.7; 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.



## Mini-Split Systems

See complete descriptions and specifications beginning on page 11.



### V Series

Single Zone Heat Pumps  
9,000 - 24,000 BTUH  
Inverter Technology



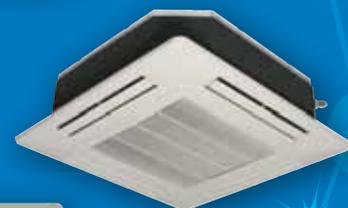
### S Series

Single Zone  
Cooling only and Heat Pumps  
9,000 - 24,000 BTUH



### V Series

InverterFlex Heat Pumps  
Dual, Tri and Quad Zone  
18,000 - 36,000 BTUH



### 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	Turbo Mode	Sleep Mode	24 Hour Timer	Auto Louver Swing	Louver Setting	Multi-Stage Filtration	Auto Restart	Low Ambient Op.	Wireless Remote	Self-Diagnostics	Ionizer
<b>"S" Series</b> Single Zone	SMA09SC-0	13.0	-	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	-
	SMA12SC-0	13.0	-	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	-
	SMA18SC-1	13.0	-	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	-
	SMA24SC-1	13.0	-	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	-
	SMH09SC-0	13.0	7.8	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	-
	SMH12SC-0	13.0	7.8	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	-
	SMH18SC-1	13.0	7.8	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	-
	SMH24SC-1	13.0	7.8	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	-
<b>"V" Series</b> Single Zone with Inverter Technology 	VMH09SC-1	19.0	9.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	VMH12SC-1	20.0	9.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	VMH18SC-1	17.0	8.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	VMH24SC-1	17.0	8.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>"V" Series</b> Multi-Zone with Inverter Technology	VMH18DC-1	16.0	7.7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	VMH27TC-1	16.0	7.7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	VMH36QC-1	15.2	7.7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>"D" Series</b> Ceiling Cassette	DMC24CA-1	13.0	-	✓	✓	-	✓	✓	✓	✓	✓	-	✓	✓	-
	DMC36CA-1	13.0	-	✓	✓	-	✓	✓	✓	✓	✓	-	✓	✓	-

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



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.

# 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 in our "V" Series helps improve indoor air quality: an active carbon and dust filter removes pollen, dust and smoke; an ionizer removes microscopic particles from the air, and a freshening filter helps freshen 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

All high wall mini-splits can operate when the outside temperature is as low as 5° 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
- **Turbo Mode**—To quickly bring the room to the desired temperature, the fan operates at super high speed until the setting is reached
- **Heat Mode**—For heat pumps, the condenser extracts heat from outside air for economical comfort
- **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.



*Comfort-Aire*®

# '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" or less into the room, depending on the model. For installation flexibility, the indoor section can be located up to 82 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. All models feature three fan speeds.

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

Ambient operating temperature: cooling 5° to 109.4° F, heating 19.4° to 75.2° F.



Indoor Unit

9,000 to  
24,000  
BTUH



Outdoor Unit



*Includes a fully featured  
wireless remote*

## Features

- **Whisper Quiet**—High tech fan in the indoor unit delivers balanced air flow
- **Temperature Compensation**—Indoor unit adjusts automatically as needed to eliminate stratification between ceiling and floor temperatures
- **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
  - Turbo mode
- **Auto Operation**—Automatically adjusts to maintain a constant temperature/humidity level
- **Air Filtration**—An air filter helps trap dust, pollen, and other particles in the air; this permanent filter is designed to be washed on a regular basis and re-installed
- **Auto Restart**—Reverts to the last setting following a power failure
- **Low Ambient Operation**—Crankcase heater allows operation to 5° F (cooling)
- **Defrost**—On heat pump models



*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.*

# 'S' Series

## 13 SEER Single Zone Ductless Mini-Split Systems

	Cooling Only				Heat Pump Models			
FEATURES	SMA09SC-0	SMA12SC-0	SMA18SC-1	SMA24SC-1	SMH09SC-0	SMH12SC-0	SMH18SC-1	SMH24SC-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 Capacity (BTUH)	9,000	12,000	16,200/ 18,000	21,600/ 23,000	9,000	12,000	16,200/ 18,000	21,600/ 23,000
Cooling Amps	7.3	10.0	6.8/6.8	8.8/8.8	7.3	10.0	6.8/6.8	8.8/8.8
Dehumidify (Pts/Hr.)	2.1	2.5	3.8	5.3	2.1	2.5	3.8	5.3
Heating Capacity (BTUH)	N/A	N/A	N/A	N/A	10,000	12,500	16,200/ 18,000	21,600/ 23,000
Heating Amps	N/A	N/A	N/A	N/A	7.6	10.0	7.0/7.0	8.8/8.8
HSPF	N/A	N/A	N/A	N/A	7.8	7.8	7.8	7.8
<b>INDOOR UNIT</b>								
Air flow (CFM)	342/271/218	471/412/371	618/589/547	795/688/624	341/271/218	500/430/394	618/589/547	795/688/624
Fan Speeds (C/H/F)	3-/3	3-/3	3-/3	3-/3	3/3/3	3/3/3	3/3/3	3/3/3
<b>AIR DIRECTION</b>								
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
<b>INDICATOR LAMPS</b>								
ON/OFF	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
24 Hr Timer/Sleep Mode	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Defrost	N/A	N/A	N/A	N/A	Standard	Standard	Standard	Standard
Temperature Setting	Remote Temperature Set Range 62° F to 88° F				Remote Temperature Set Range 62° F to 88° F			
<b>INDOOR UNIT DIMENSIONS</b>								
Width (inches)	31 <sup>1</sup> / <sub>8</sub>	36 <sup>1</sup> / <sub>4</sub>	42 <sup>1</sup> / <sub>2</sub>	49 <sup>3</sup> / <sub>16</sub>	31 <sup>1</sup> / <sub>8</sub>	36 <sup>1</sup> / <sub>4</sub>	42 <sup>1</sup> / <sub>2</sub>	49 <sup>3</sup> / <sub>16</sub>
Height (inches)	10 <sup>7</sup> / <sub>16</sub>	11 <sup>1</sup> / <sub>2</sub>	13	12 <sup>13</sup> / <sub>16</sub>	10 <sup>7</sup> / <sub>16</sub>	11 <sup>1</sup> / <sub>2</sub>	13	12 <sup>13</sup> / <sub>16</sub>
Depth (inches)	7 <sup>1</sup> / <sub>16</sub>	8 <sup>7</sup> / <sub>8</sub>	9	9 <sup>1</sup> / <sub>16</sub>	7 <sup>1</sup> / <sub>16</sub>	8 <sup>7</sup> / <sub>8</sub>	9	9 <sup>1</sup> / <sub>16</sub>
Net Wt/Shipping Wt (lbs)	16.5/19.8	28.7/33.0	33.0/46.3	39.7/55.1	16.5/19.8	28.7/33.0	33.0/46.3	39.7/55.1
<b>OUTDOOR UNIT DIMENSIONS</b>								
Width (inches)	30 <sup>11</sup> / <sub>16</sub>	29 <sup>15</sup> / <sub>16</sub>	33 <sup>1</sup> / <sub>4</sub>	35 <sup>1</sup> / <sub>4</sub>	30 <sup>11</sup> / <sub>16</sub>	29 <sup>15</sup> / <sub>16</sub>	33 <sup>1</sup> / <sub>4</sub>	35 <sup>1</sup> / <sub>4</sub>
Height (inches)	21 <sup>5</sup> / <sub>8</sub>	23 <sup>1</sup> / <sub>4</sub>	27 <sup>3</sup> / <sub>8</sub>	33 <sup>7</sup> / <sub>8</sub>	21 <sup>5</sup> / <sub>8</sub>	23 <sup>1</sup> / <sub>4</sub>	27 <sup>3</sup> / <sub>8</sub>	33 <sup>7</sup> / <sub>8</sub>
Depth (inches)	9 <sup>7</sup> / <sub>8</sub>	11 <sup>1</sup> / <sub>4</sub>	13 <sup>3</sup> / <sub>16</sub>	13	9 <sup>7</sup> / <sub>8</sub>	11 <sup>1</sup> / <sub>4</sub>	13 <sup>3</sup> / <sub>16</sub>	13
Net Wt/Shipping Wt (lbs.)	70.5/77.1	79.3/86.0	116.9/125.7	141.1/150.0	68.3/74.9	83.8/90.4	116.9/125.7	143.3/152.1
<b>ELECTRICAL DATA OUTDOOR UNIT*</b>								
Main Power Connection	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit
Max. Circuit Ampacity	13.6	17.2	12.7	16.5	13.6	17.2	12.7	16.5
Max. Fuse/HACR Circuit Breaker	15A	20A	15A	20A	15A	20A	15A	20A
Recommended Indoor/Outdoor Connecting Cable Type (SJOW)	18AWG 4 conductor 300V or heavier	18AWG 4 conductor 300V or heavier	Line Voltage per NEC*	Line Voltage per NEC*	18AWG 4 conductor 300V or heavier	18AWG 4 conductor 300V or heavier	Line Voltage per NEC*	Line Voltage per NEC*
<b>LINE SETS O.D. (inch) / REFRIGERANT</b>								
Refrigerant	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
Liquid (flare) (inch)	1/4	1/4	1/4	3/8	1/4	1/4	1/4	3/8
Suction (flare) (inch)	3/8	1/2	1/2	5/8	3/8	1/2	1/2	5/8
Max. Line Set Length <sup>1</sup>	65.5 feet	65.5 feet	82 feet	82 feet	65.5 feet	65.5 feet	82 feet	82 feet
Max. Outdoor Elevation <sup>2</sup>	26 feet	26 feet	32.8 feet	32.8 feet	25.6 feet	25.6 feet	32.8 feet	32.8 feet

### Warranty—5 years on compressor, 1 year on parts

(Some limitations apply; see printed warranty for details.)

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

<sup>1</sup> Min. 15 ft. line set recommended.

<sup>2</sup> Oil trap should be installed every 16.5 to 23 feet (5-7m).

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



# "V" Series

## Inverter technology in a wide range of capacities

Comfort and energy efficiency combine in these attractive wall mount mini-splits. Rated as high as 20 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 low frequency 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 24,000 BTUH models deliver big capacity with exceptional efficiency. The inverter technology automatically matches the power delivered with the load requirements for precise temperature control.

### Low Ambient Operation

The low ambient feature allows cooling when outdoor temperature falls below freezing—great for temperature/humidity sensitive environments. Additionally, a factory installed crankcase heater keeps compressor oil warm and reduces heat loss to ambient air.

Low Ambient Operation: cooling 5° – 122° F, heating 5° – 93.2° F.



Indoor Unit

208-230V

9,000 to  
24,000  
BTUH



9,000, 12,000 and  
18,000 BTUH Models



Outdoor Unit

## 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
  - Sleep mode
  - 24-hour timer
  - Turbo mode
  - Auto sleep mode
- **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 ionizer to remove microscope particles, active carbon and dust filter, and freshening filter for improved indoor air quality
- **Low Ambient Operation**—Cooling mode functions even when the outdoor temperature reaches 5° F
- **Defrost Control**—Automatically removes any frost accumulation on the coil
- **Auto Restart**—Reverts to the last setting following a power failure



# 'V' Series

## Single Zone Ductless Mini-Split Systems with Inverter Technology

	Heat Pump Models			
FEATURES	VMH09SC-1**	VMH12SC-1**	VMH18SC-1**	VMH24SC-1
Power Supply	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60
Cooling Capacity (BTUH)	9,000	12,000	17,500	23,000
<b>SEER</b>	19	20	17	17
Cooling Amps	3.5	4.7	6.7	9.7
Dehumidification (Pts/Hr.)	2.3	2.5	3.6	4.7
Heating Capacity (BTUH)	10,000	12,500	18,000	24,000
Heating Amps	3.8	5.4	6.3	9.5
HSPF	9.0	9.5	8.5	9.0
<b>INDOOR UNIT</b>				
Air flow (CFM)	400/318/288	430/341/312	624/589/506	736/677/589
Fan Speeds (Hi/Med/Lo)	3	3	3	3
<b>AIR DIRECTION</b>				
Vertical Modulating	Remote	Remote	Remote	Remote
Horizontal (left/right)	Manual	Manual	Manual	Manual
Random Swing	Standard	Standard	Standard	Standard
<b>INDICATOR LAMPS</b>				
ON/OFF	Yes	Yes	Yes	Yes
24 Hr. Timer/Sleep Mode	Yes	Yes	Yes	Yes
Defrost or Hot Start	Yes	Yes	Yes	Yes
Temperature Setting	On Remote: 62° F – 86° F temperature setting range			
<b>INDOOR UNIT DIMENSIONS</b>				
Width (inches)	33 <sup>1</sup> / <sub>4</sub>	33 <sup>1</sup> / <sub>4</sub>	42 <sup>1</sup> / <sub>2</sub>	42 <sup>1</sup> / <sub>2</sub>
Height (inches)	11 <sup>1</sup> / <sub>4</sub>	11 <sup>1</sup> / <sub>4</sub>	12 <sup>5</sup> / <sub>8</sub>	12 <sup>5</sup> / <sub>8</sub>
Depth (inches)	6 <sup>1</sup> / <sub>2</sub>	6 <sup>1</sup> / <sub>2</sub>	7 <sup>7</sup> / <sub>8</sub>	7 <sup>7</sup> / <sub>8</sub>
Net Wt/Shipping Wt (lbs)	19.8/24.3	19.8/24.3	31.9/44.0	31.9/44.0
<b>OUTDOOR UNIT DIMENSIONS</b>				
Width (inches)	29 <sup>15</sup> / <sub>16</sub>	29 <sup>15</sup> / <sub>16</sub>	33 <sup>1</sup> / <sub>4</sub>	35 <sup>1</sup> / <sub>4</sub>
Height (inches)	23 <sup>1</sup> / <sub>4</sub>	23 <sup>1</sup> / <sub>4</sub>	27 <sup>3</sup> / <sub>8</sub>	33 <sup>7</sup> / <sub>8</sub>
Depth (inches)	11 <sup>1</sup> / <sub>4</sub>	11 <sup>1</sup> / <sub>4</sub>	13 <sup>3</sup> / <sub>16</sub>	13
Net Wt/Shipping Wt (lbs.)	83.8/90.4	86.0/92.6	110.2/119.0	136.7/147.7
<b>ELECTRICAL DATA OUTDOOR UNIT*</b>				
Main Power Connection	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit
Max. Circuit Ampacity	9	9.5	15	13.5
Max. Fuse/HACR Circuit Breaker	15	15	15	15
Recommended Indoor/Outdoor Connecting Cables Type (SJOW)	Line Voltage per NEC*	Line Voltage per NEC*	Line Voltage per NEC*	Line Voltage per NEC*
<b>LINE SETS O.D. (inch) / REFRIGERANT</b>				
Refrigerant	R-410A	R-410A	R-410A	R-410A
Liquid Connection (flare) (inch)	1/4	1/4	1/4	3/8
Suction Connection (flare) (inch)	3/8	1/2	1/2	5/8
Maximum Line Set Length <sup>1</sup>	65 feet	65 feet	82 feet	82 feet
Maximum Elevation (outdoor) <sup>2</sup>	26 feet	26 feet	32.8 feet	32.8 feet

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

\*\*Energy Star compliant models.

<sup>1</sup> Min. 15 ft. line set recommended.

<sup>2</sup> Oil trap should be installed every 16.5 to 23 feet (5-7m).

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

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



# 'V' Series

## InverterFlex™ Systems

Our InverterFlex multi-zone units let you condition two, three or four rooms—or one large space—with just one outdoor unit. The contractor can design a system that best meets the load requirements of each room being conditioned because indoor air handlers can be mixed and matched.

A single outdoor condenser is sized for multiple indoor air handlers. These 9,000 and 12,000 BTUH indoor units can be mixed, up to the point that their combined capacity reaches the total system capacity—see the chart on the following page.

InverterFlex models incorporate all the advantages of inverter technology. The compressor speed is variable, depending on the load demand. Most of the time the unit runs at low RPMs, saving energy while maintaining comfort, but ramping up to higher RPMs when needed. Temperature fluctuations and compressor on/off cycling are eliminated, and indoor air quality is enhanced because air is constantly being pulled through the filters and dehumidified.

True zone control is possible because each air handler operates independently. InverterFlex systems are also great for larger spaces such as fellowship halls and commons areas: install one or more units for quiet, efficient, easily controlled comfort.

*Includes one fully featured wireless remote per indoor unit.*



### Dual Zone 18,000 to 24,000 BTUH



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

### Tri/Quad-Zone 27,000 to 36,000 BTUH



Cool and heat three or four rooms/separate areas. Includes three or four air handlers and one wireless remote for each air handler.

## Features

- **Zone Control**—Each air handler is independently controlled, 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 plus:
  - Sleep mode
  - 24-hour timer
  - Turbo mode
- **Low Ambient Operation**—cooling 5° – 122° F, heating 5° – 93.2° F
- **Auto Operation**—Automatically selects the mode required to maintain a constant temperature/humidity level
- **Multi-Stage Filtration**—Includes ionizer to remove microscope particles, active carbon and dust filter, and freshening filter for improved indoor air quality
- **Auto Restart**—Reverts to the last setting following a power failure



Mix and match indoor units up to the maximum BTUHs for each system. The chart on the right shows the various combinations. Note that outdoor and indoor units are ordered separately; "A" indicates outdoor unit, "B" indicates indoor unit.

For instance, to order a 33,000 BTUH tri-zone, you'll specify one A-VMH36QC, two B-VMH12FC, and one B-VMH09FC.

Outdoor Units			
FEATURES	A-VMH18DC-1	A-VMH27TC-1	A-VMH36QC-1
Power Supply	208/230-1-60	208/230-1-60	208/230-1-60
System Cooling Capacity (BTUH)	18,000	27,000	36,000
SEER	16.0	16.0	15.2
Cooling Amps	7.5	11.0	15.0
System Heating Capacity (BTUH)	19,000	28,000	38,000
Heating Amps	7.6	11.2	15.2
HSPF	7.7	7.7	7.7
OUTDOOR UNIT DIMENSIONS			
Width (inches)	33 <sup>1</sup> / <sub>4</sub>	33 <sup>1</sup> / <sub>4</sub>	39
Height (inches)	27 <sup>3</sup> / <sub>8</sub>	27 <sup>3</sup> / <sub>8</sub>	37
Depth (inches)	13 <sup>3</sup> / <sub>16</sub>	13 <sup>3</sup> / <sub>16</sub>	13
Net Wt/Shipping Wt (lbs.)	117.9/125.7	125.7/133.4	189.6/198.4
ELECTRICAL DATA OUTDOOR UNIT*			
Main Power Connection	Outdoor Unit	Outdoor Unit	Outdoor Unit
Min. Circuit Ampacity	10.5	16.0	15.4
Max. Fuse/HACR Circuit Breaker	15	20	20
Recommended Indoor/Outdoor Connecting Cable (SJOW)	Line Voltage per NEC*	Line Voltage per NEC*	Line Voltage per NEC*
LINE SETS O.D. (inch) / REFRIGERANT			
Refrigerant	R-410A	R-410A	R-410A
Liquid (flare) (inch)	1/4	1/4	1/4
Suction (flare) (inch)	3/8	3/8	1/2
Maximum Line Set Length <sup>1</sup>	65.6 feet	65.6 feet	65.6 feet
Maximum Elevation (outdoor) <sup>2</sup>	25 feet	25 feet	25 feet

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

<sup>1</sup> Min. 15 ft. line set recommended

<sup>2</sup> Oil trap should be installed every 16.5 to 23 feet (5-7m).

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

Ambient Operating Temperature: 5° - 122° F (cooling); 5° - 93.2° F (heating)

## 'V' Series InverterFlex Multi-Zone Ductless Mini-Split HeatPumps

InverterFlex Outdoor/Indoor Combinations			
OUTDOOR UNIT	ZONES	INDOOR UNITS	TOTAL BTUH
A-VMH18DC-1	Dual	9K + 9K	18,000
A-VMH27TC-1	Dual	9K + 12K	21,000
	Dual	12K + 12K	24,000
A-VMH36QC-1	Tri	9K + 9K + 9K	27,000
	Tri	9K + 9K + 12K	30,000
	Tri	9K + 12K + 12K	33,000
	Tri	12K + 12K + 12K	36,000
A-VMH36QC-1	Quad	9K + 9K + 9K + 9K	36,000

\* 9K = Model No. B-VMH09FC-1, 12K = Model No. B-VMH12FC-1

Indoor Units		
FEATURES	B-VMH09FC-1	B-VMH12FC-1
INDOOR UNIT		
Cooling Capacity BTUH	9,000	12,000
Heating Capacity BTUH	10,000	13,000
Air flow (CFM)	335/283/206	412/306/247
Dehumidification (Pts/Hr)	2.3	2.5
Fan Speeds	3	3
AIR DIRECTION		
Vertical Adjustment	Manual	Manual
Horizontal Modulating	Yes	Yes
Random Swing	Yes	Yes
INDICATOR LAMPS		
ON/OFF	Yes	Yes
24 Hr. Timer/Sleep Mode	Yes	Yes
Defrost	Yes	Yes
Temperature Setting	On Remote: 62° F – 88° F	
INDOOR UNIT DIMENSIONS		
Width (inches)	31 <sup>5</sup> / <sub>16</sub>	33 <sup>1</sup> / <sub>4</sub>
Height (inches)	10 <sup>5</sup> / <sub>8</sub>	11 <sup>1</sup> / <sub>4</sub>
Depth (inches)	6 <sup>1</sup> / <sub>4</sub>	6 <sup>1</sup> / <sub>4</sub>
Net Wt/Shipping Wt (lbs)	22/26.5	22/26.5

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



# 'D' Series

## Ceiling Cassette Systems

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

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



24,000 BTUH

36,000 BTUH

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
<b>Indoor Unit</b>		
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
<b>Electrical Data Outdoor Unit*</b>		
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*
<b>Indoor Unit Chassis Dimensions</b>		
Width (inches)*	33 1/8	33 1/8
Height (inches)	8 29/32	8 29/32
Depth (inches)*	33 1/8	33 1/8
Shipping Wt (lbs)	70	70
<b>Outdoor Unit Dimensions</b>		
Width (inches)	34 5/16	35 13/32
Height (inches)	31 1/2	8 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.



*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 limited 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 limited warranty. (Some limitations 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 and GeoSmart Financing Programs give you the credit you need for a system, installation and any related equipment—with no long wait and no credit hassle. Program 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 is available. Talk to your Comfort-Aire dealer about the advantages of one of these financing programs.

#### 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 is 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*<sup>®</sup>  
by HEAT CONTROLLER, INC.

1900 Wellworth Ave., Jackson, MI 49203

[www.heatcontroller.com](http://www.heatcontroller.com)

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