

Panasonic

WhisperComfort™ VENTILATION FAN SpotERV

FV-04VE1 Two 4" Ducts



Panasonic WhisperComfort Spot Energy Recovery Ventilator (ERV) offers a revolutionary way to provide balanced ventilation. Affordable and easy to install, WhisperComfort is energy efficient and provides fresh ventilated air while maintaining Indoor Air Quality (IAQ).

- Spot balanced ventilation
- Low-rate continuous run ideal for multi-family dwellings
- Ideal for new air tight homes built to meet energy efficiency standards
- UL listed for ceiling or wall mount installation
- Exchange capillary core recovers heat, energy and moisture
- Balances air pressure inside the house

FEATURES

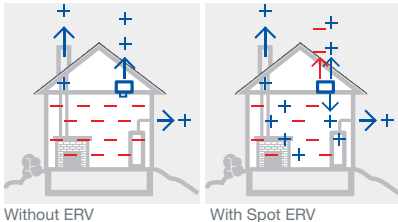
Balanced Ventilation

Tightly built homes and buildings utilizing exhaust only fans can create negative pressure. WhisperComfort solves this by supplying air to replace exhausted air, helping to balance air pressure within the home.

Panasonic WhisperComfort Spot ERV uses two 4 inch ducts – one to exhaust stale air and the other to supply fresh air from outdoors. Its low, continuous run ensures volatile organic compounds (VOC's) are vented out and replaced with fresh air.

WhisperComfort does not require connection to the Central HVAC or the addition of a condensation line. This 'Spot' ERV feature allows it to be installed in many places throughout the home to meet comfort, health and IAQ needs.

Tight Home Air Pressure



Exchange Capillary Core

Indoor and outdoor air passes through Panasonic's patented capillary core technology designed to transfer heat energy and moisture. This process tempers supply air while transferring moisture.

Motor Technology

Panasonic uses a single AC condenser motor to run two highly efficient blower wheels. The motor is totally enclosed to ensure long-life and continuous quiet operation.

Filters

Two filters clean exhaust and supply air before passing through the ERV core, extending the life of the core.

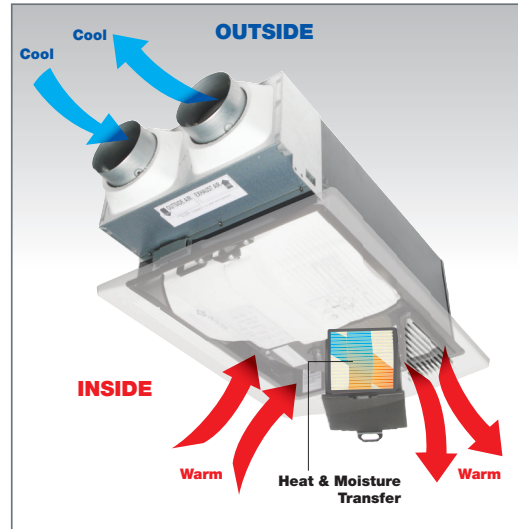
Grille Design

The contemporary, low profile grille design incorporates spring clips for easy removal.

Spot ERV

WhisperComfort is a ceiling or wall-mount Energy Recovery Ventilator (ERV) that is ideal for a single large, open space room or for multistory homes' hallways. Two or even three WhisperComfort ERV's may be installed, often at a cost lower than a traditional

Spot ERV Technology



whole building ERV that requires connecting to the Central HVAC System.

Ideal for: Home Office / Game Rooms / Family Rooms / Bonus Rooms

This is an affordable way to add ERV to a specific room or a new addition.

Whole House ERV

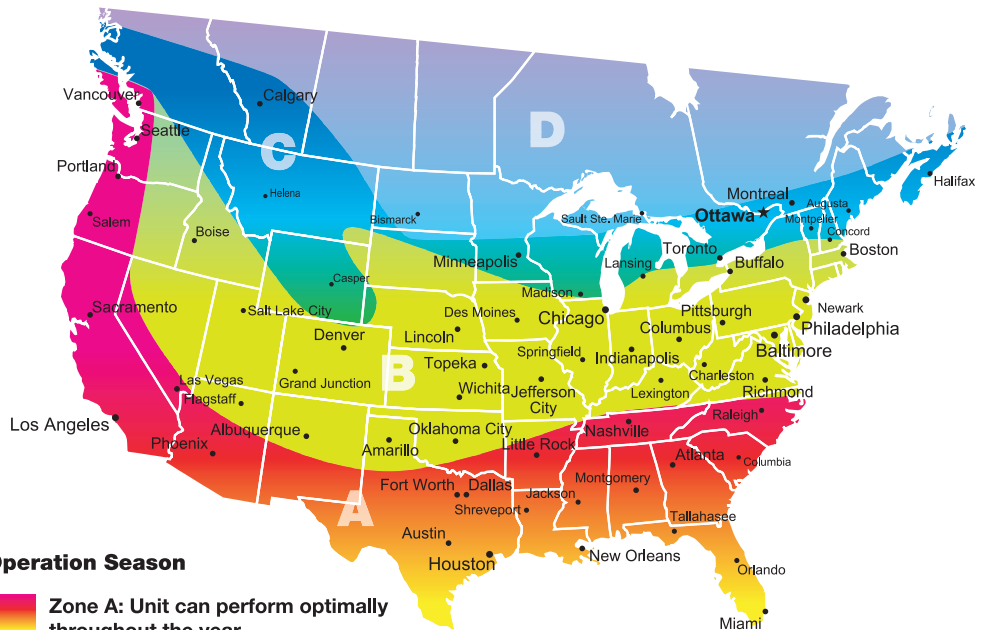
WhisperComfort is also suitable to meet whole house ventilation requirements under ASHRAE 62.2. WhisperComfort is an ideal choice when partnered with mini-splits or VRF Heat Pumps for fresh, balanced air with energy recovery which makes it a very affordable, cost-effective IAQ solution. The sizing charts on the next page provide a guideline for number of bedrooms and square feet. Additionally, two or even three WhisperComfort ERV's may be installed, often at a cost lower than a traditional whole house ERV.

Ideal for: Condominiums / Apartments / Housing Authority properties / Hotels / Studio apartments

ASHRAE 62.2 2010 Standard

The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) set a standard for whole house ventilation, requiring that continuous mechanical ventilation be 7.5 CFM per bedroom (master bedroom X 2) plus 1 CFM per 100 square feet, with none not to exceed 1.0. ASHRAE 62.2-2013 requires a ventilation rate of 7.5 CFM per person plus 3 CFM per 100 square feet. Please check with your local code to determine which ventilation standard you should follow. Panasonic WhisperComfort ERV is an affordable, efficient way to meet the ASHRAE 62.2 standard.

Recommended Zones Map



Operation Season

- Zone A: Unit can perform optimally throughout the year.**
- Zone B: Unit can perform optimally March through November.***
- Zone C: Unit can perform optimally April through November.****
- Zone D: Panasonic does not recommend this unit due to extremely cold year-round weather.**

Note: This map is based on average temperature readings over 10 years from 60 major cities in North America. Actual performance may vary depending on annual temperature differences and varying altitudes. Visit www.ashrae.org/technology/page/1330 for the climate zone map adopted by ASHRAE.

*Alternates as balanced or exhaust only Dec-Feb when temperature is above or below freezing.
 **Alternates as balanced or exhaust only Dec-March when temperature is above or below freezing.

SIZING

Spot Ventilation

| Ventilation Capacity Requirements (CSA-F326) | | | |
|---|----------------|---------------------|-------------|
| 10 CFM | Single Bedroom | Living room | Family room |
| 20 CFM | Master Bedroom | Large Basement room | |

Need to choose 10/20 CFM mode when installing.

Sizing example 1 (based on ASHRAE 62.2):

TWO BEDROOMS at 1600 SQ. FT.

| | |
|--------------------------------|---------|
| Master Bedroom (7.5 CFM x 2) = | 15 CFM |
| Second Bedroom = | 7.5 CFM |
| 1600 SQ. FT. x .01 = | 16 CFM |

Total 38.5 CFM

Use WhisperComfort set at 40 CFM

Whole House Ventilation (IAQ)

| ASHRAE 62.2 2010 | | | |
|------------------|-------------|-------------|-------------|
| | 1 Bedroom | 2 Bedrooms | 3 Bedrooms |
| 20 CFM | 500 sq ft. | N/A | N/A |
| 40 CFM | 2500 sq ft. | 1750 sq ft. | 1000 sq ft. |

Need to choose 20/40 CFM mode when installing.

Sizing example 2 (based on ASHRAE 62.2):

FOUR BEDROOMS at 2200 SQ. FT.

| | |
|-----------------------------------|----------|
| Master Bedroom (7.5 CFM x 2) = | 15 CFM |
| Other 3 Bedrooms (7.5 CFM each) = | 22.5 CFM |
| 2200 SQ. FT. x .01 = | 22 CFM |

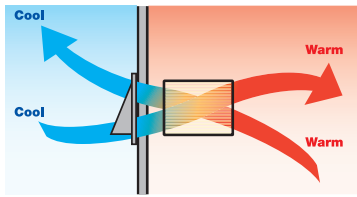
Total 59.5 CFM

Use 2 WhisperComfort or 1 WhisperComfort and 1 WhisperGreen®*

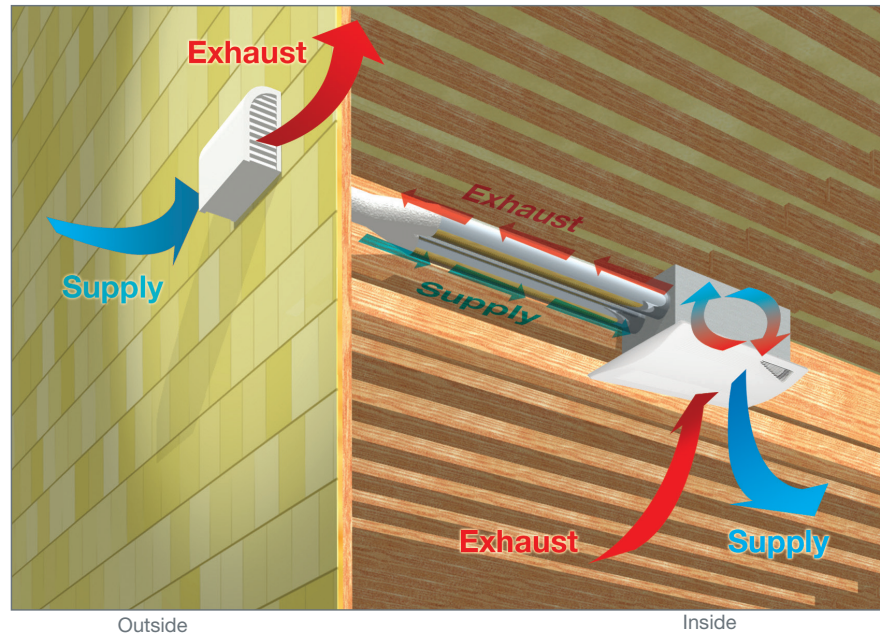
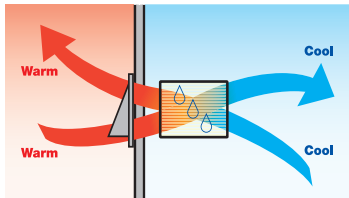
* WhisperGreen® are Panasonic exhaust fans with variable speed DC motor and built-in controls. Ideal for both bathroom intermittent ventilation and whole house continuous run ventilation.

Balanced Ventilation With Spot ERV

WINTER



SUMMER



OPERATION

Settings

WhisperComfort has two 2-speed CFM settings

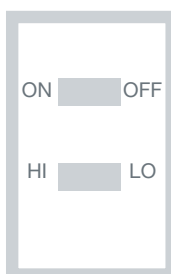
| | High | Low |
|------------|--------|-----------------------|
| Setting 1. | 20 CFM | 10 CFM |
| Setting 2. | 40 CFM | 20 CFM factory preset |

The factory setting is 40/20 CFM. To change to optional 20/10 CFM setting, move the plug connector located in the junction box to the 20 CFM side of receptacle. This step must be completed prior to installation.

Switches

WhisperComfort operates in an on/off and high/low mode. When the switch is turned off, the unit does not operate. When the switch is turned on, the unit will operate at the high or low mode. A duplex switch, designed for a single gang box, may be selected for switch operation. Switch labels are provided for convenience to attach to the selected switches.

Panasonic offers the FV-WCSW21-W/A(White/Almond) 2 function switch as part of the WhisperControl product line. This commercial grade on/off multiswitch can be used with the ERV, includes a designer wall plate and carries a 2-year limited warranty. This switch is sold separately.

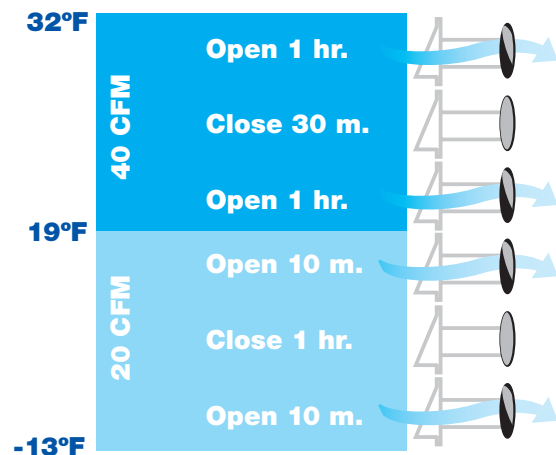


Switch sold separately.

Frost Prevention Mode

WhisperComfort incorporates built-in frost prevention technology to avoid core freeze up.

- Above 32°F both exhaust and supply are fully functional
- From 32°F to 20°F the mechanical damper on the supply air closes for 30 minutes, then opens 1 hour at the set high/low mode. The cycle repeats itself to avoid core freeze up. (Exhaust only 30 minutes per 90-minute cycle)
- Below 20°F the mechanical damper on the supply air remains closed for 1 hour and opens 10 minutes at low mode. After 10 minutes the cycle will repeat or change if the temperature has risen above 20°F. (Exhaust only 60 minutes per 80-minute cycle)



INSTALLATION

Mounting

WhisperComfort is UL listed for ceiling or wall mount installation. It measures 14" wide and fits between joists 16" on center. Adjustable brackets and screws are provided to secure the unit to the joist on 4 corners.

Wiring

Power consumption is 23 Watts at 40 CFM with a power rating of 120/60 V/Hz. Bring house power to the unit junction box and use 3 wires to connect the 2 switches.

Duct

Insulated 4" duct is recommended. For cold climates, this will help avoid condensation build up. And for warm climates, this will help

reduce heat transfer to supply air.

In order to reduce unnecessary airflow resistance, duct should be stretched straight and braced to avoid sagging. Assure that all duct connections are completely secured with duct tape and/or duct mastic material.

Termination/Supply Device

The supply device will need to have the back draft damper removed and replaced with a screen to prevent insects and small animals from nesting.

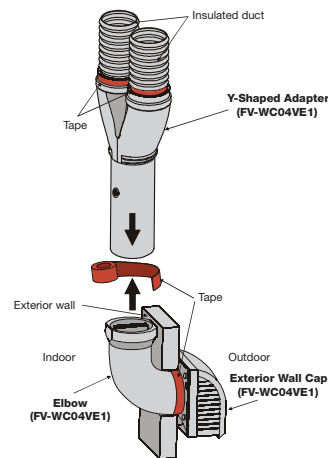
The termination and supply devices should be placed a minimum of 3-feet apart. If placed closer than 3-feet, then the angle of each device should be mounted at 45-degrees in opposite directions.

OPTIONAL ACCESSORIES

Exterior Wall Cap

Unlike previous installations where two wall caps were required, WhisperComfort's FV-WC04VE1 polypropylene wall cap accessory with styrofoam adaptor conveniently allows both exhaust (from the right) and supply (from the left) airflow through a 5.5"-5.75" hole in the building envelope. The dividers inside the bottom portion of the unique Y shape chamber and the new wall cap help prevent cross contamination.

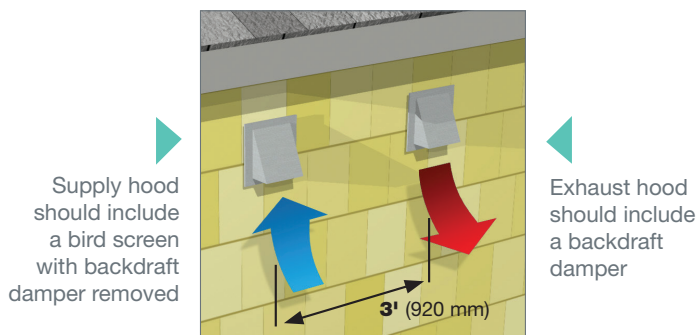
To achieve optimum performance and air flow momentum, allow a 2-3 foot straight run of flex duct out of the unit before the first 90 degree bend. If you connect the ERV unit directly to the Y shaped adaptor of the exterior wall cap, you can skip this step.



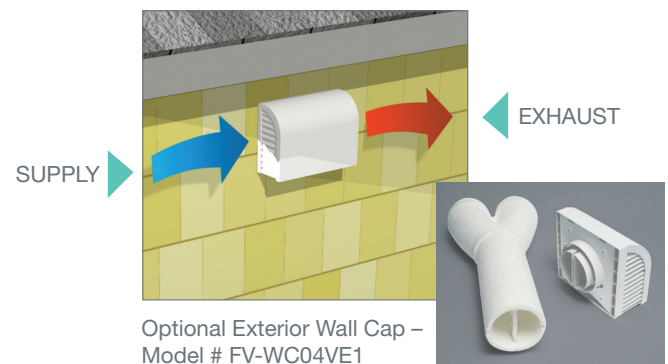
Elbow

Whisper Comfort's FV-EB04VE1 styrofoam elbow accessory connects to the Y shaped adapter of the exterior wall cap to help simplify wall installation. The elbow also features double chambers for exhaust and supply air to help prevent cross contamination.

Typical Wall Cap Installation



Alternative Panasonic Solution



MAINTENANCE (Cleaning)

Maintenance instructions can be found in the Operating Manual.

Grille

Follow the Operating Manual to remove the grille from the unit. Next, remove the filter from the inside louver of the grille. Never use gasoline, benzene, thinner or any other chemicals when cleaning the grille or ERV unit. Do not wash grille in a dishwasher which may cause it to deform. Instead, use light dish soap.



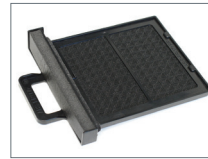
Grille

Exchange Capillary Core

Whisper Comfort's unique core is made from a paper-like material and should never be washed or submerged in water. To clean, vacuum with a soft brush attachment. To clean, use vacuum suction with a soft brush attachment. Do not use a vacuum to blow air through the ERV core as that may damage the core.

Filters

WhisperComfort has two air filters. One filter is located on the inside louver of the grille. The second filter is located in the unit held by a bracket with a handle. Pull the handle to remove the filter bracket and remove the filter from the bracket. Both filters should be vacuumed with a soft brush attachment.



Supply Air Filter



Exhaust Air Filter



Exchange Capillary Core

PRODUCT

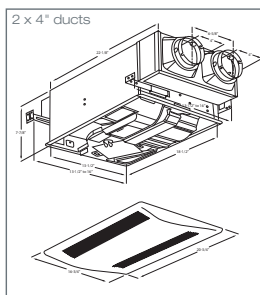
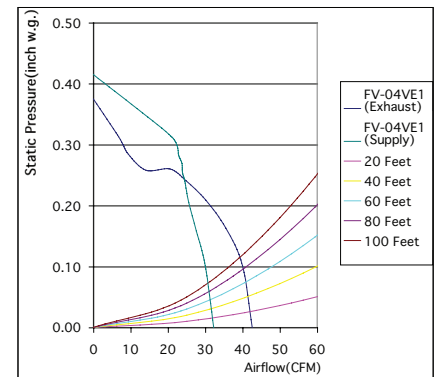
- Rust-proof paint treatment on galvanized housing
- Thermal fuse protection
- Meets Washington State Ventilation and Indoor Air Quality code and ASHRAE 62.2 - 2010
- 3 Year Warranty

| Specifications | | FV-04VE1 | | |
|---------------------------------|---------------------------------|---------------|--------|--------|
| | | 40 CFM | 20 CFM | 10 CFM |
| Characteristics | Static pressure in inches w. g. | 0.1 | 0.1 | 0.1 |
| | Air Volume Exhaust (CFM) | 40 | 20 | 10 |
| | Air Volume Supply (CFM) | 30 | 20 | 10 |
| | Noise (sones) | 0.8 | <0.3 | N/A |
| | Power Consumption (Watts) | 23 | 21 | 17 |
| | Speed | 1479 | 1292 | 1095 |
| | Current | 0.15 | 0.10 | 0.09 |
| | Power Rating (V/Hz) | 120/60 | | |
| Specifications | Motor Type | Condenser | | |
| | Type of Motor Bearing | Ball | | |
| | Thermal Fuse Protection | Yes | | |
| | Blower Wheel Type | 2 x Sirocco | | |
| Apparent Sensible Effectiveness | Heating (%) 32 °F (0°C) | 66% at 30 CFM | | |
| Total Recovery Efficiency | Cooling (%) 95 °F (35°C) | 36% at 29 CFM | | |

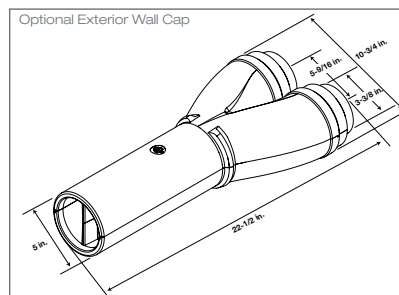
Note: CFM and sones are tested and certified in accordance with HVI testing standards. Energy efficiency is tested in accordance with CSA-C439 standard.

N/A=not applicable
w.g.=water gauge
S.P.=static pressure

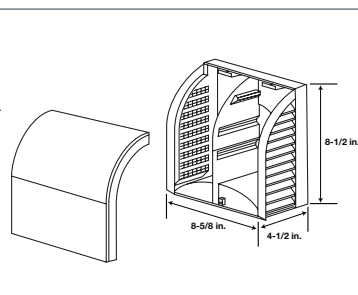
FV-04VE1 40/20 CFM or 20/10 CFM Two 4" ducts



FV-04VE1



FV-WC04VE1



FV-EB04VE1



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