



WhisperComfort™ VENTILATION FAN

SpotERV

FV-04VE1

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.

- Spot balanced ventilation fan with low-rate continuous run
- Easy ceiling mount installation
- Exchange capillary core recovers heat energy and moisture
- Balances air pressure inside the house
- Ideal for new air tight homes built to meet energy efficiency standards



Panasonic ideas for life





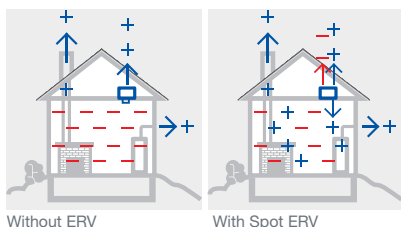
FEATURES

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.

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

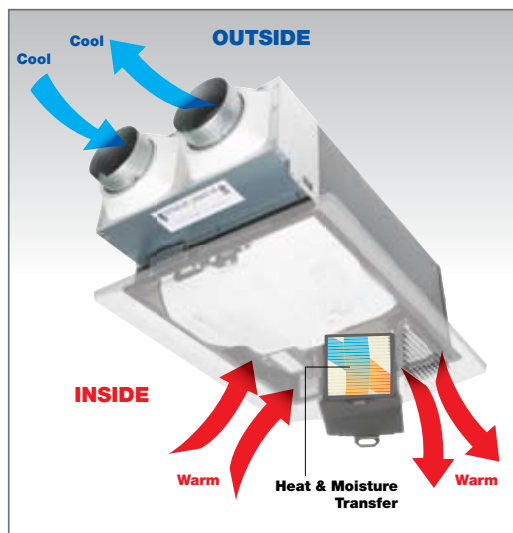
The contemporary, low profile grille design incorporates spring clips for easy removal.

Spot ERV

WhisperComfort is a ceiling insert ideal for a single room. Fresh air is supplied at a low rate while maintaining balanced air pressure. This is an affordable way to add ERV to a specific room or a new addition.

Ideal for: Home office / Game rooms / Family rooms

Spot ERV Technology



Whole House ERV

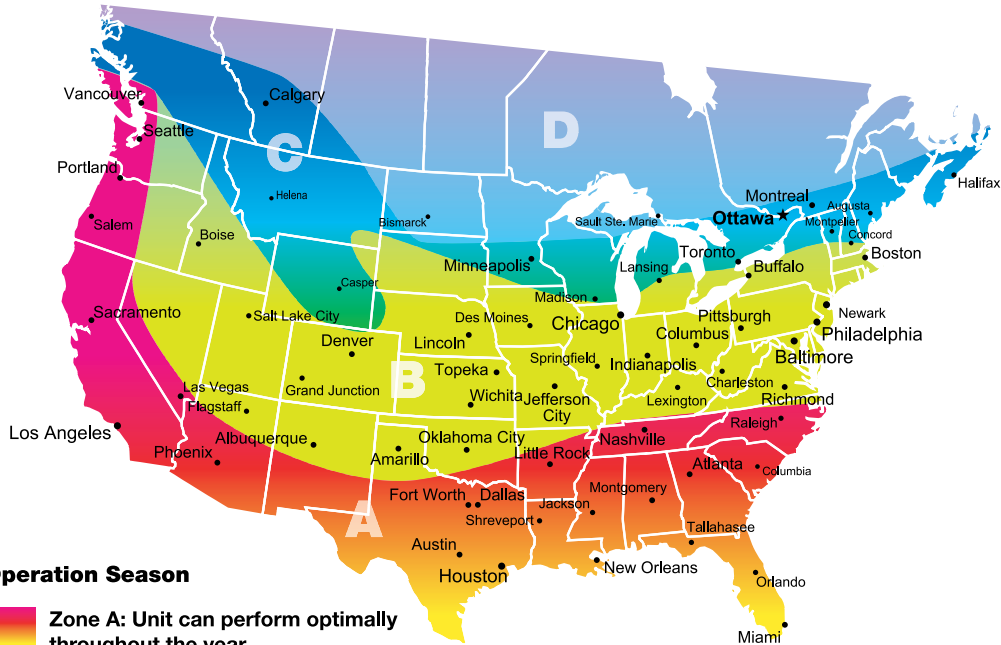
WhisperComfort is also suitable to meet whole house ventilation requirements under ASHRAE 62.2. The sizing charts on the next page provide a guideline for number of bedrooms and square feet. Additionally, two or even three WhisperComfort ERV's may be installed, often at a cost lower than a traditional whole house ERV.

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

ASHRAE 62.2 2007 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 some not to exceed 1.0. Panasonic WhisperComfort ERV is an affordable, efficient way to meet this ventilation 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 2007			
	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

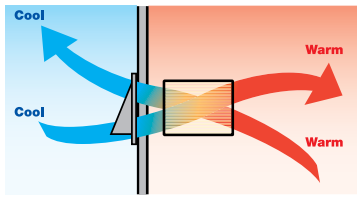
Total 59.5 CFM

Use 2 WhisperComfort or 1 WhisperComfort and 1 WhisperGreen®*

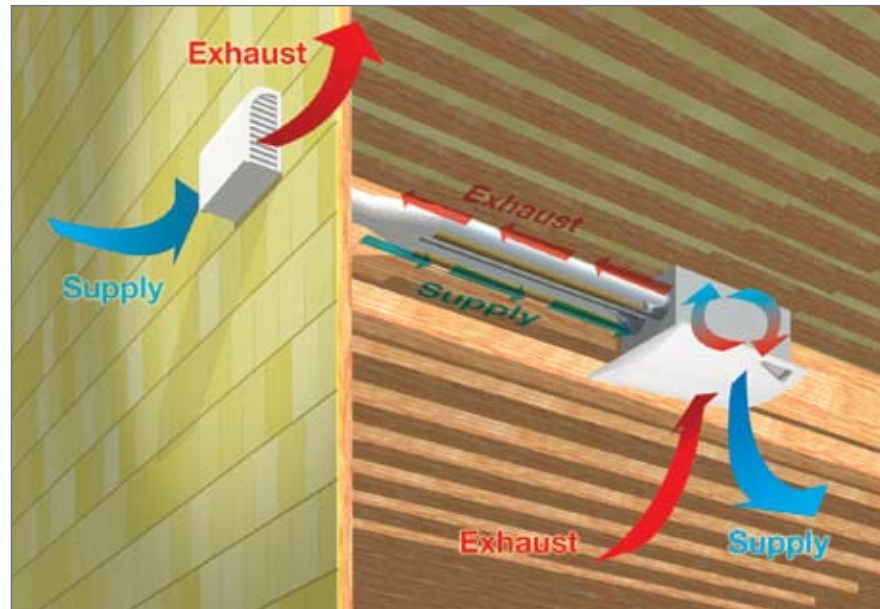
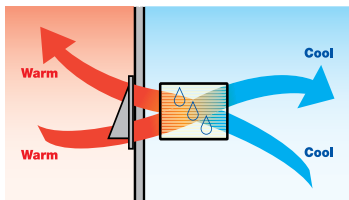
* WhisperGreen® are Panasonic exhaust fans with variable speed DC motor and built-in controls. Ideal for both bathroom intermittent ventilation and whole house continuous run ventilation.

Balanced Ventilation With Spot ERV

WINTER



SUMMER



Outside

Inside

OPERATION

Settings

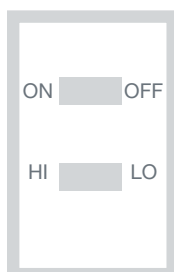
WhisperComfort has two 2-speed CFM settings

	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.

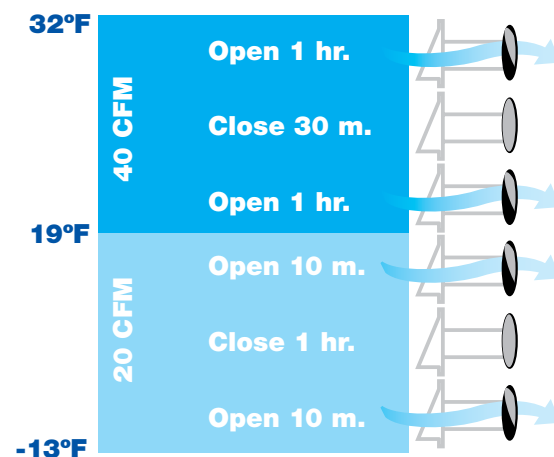


Switch is not supplied.

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 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.

Elbows

To achieve optimum performance, first, allow a 2 – 3 foot straight run out of the unit before the first elbow for air flow momentum. An installation that has a 90-degree elbow immediately after the fan exhaust port will cause air to back flow into the fan.

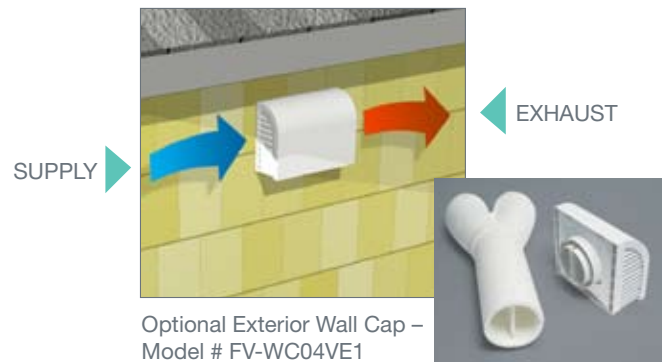
Second, use a long radius angle to help ensure optimum airflow and minimum noise.

Termination/Supply Device

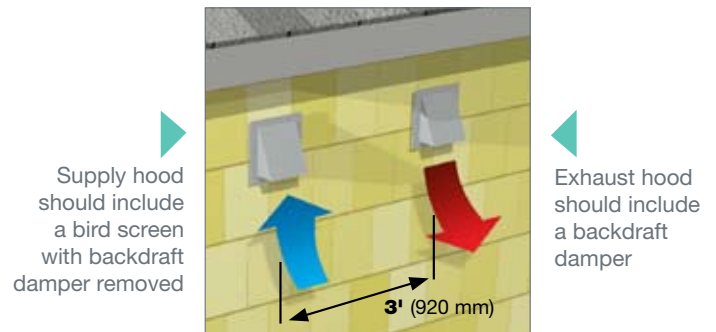
The supply device will need to have the back draft damper removed and replaced with a screen to prevent insects and small animals from nesting.

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.

Standard Wall Cap Installation



Alternative Wall Cap Installation



Optional Accessory – 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. And due to the dividers inside the bottom portion of the unique Y-shape chamber and the new wall cap, cross contamination is prevented.

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.



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

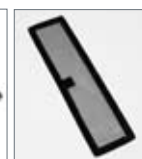
be vacuumed with a soft brush attachment.

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.



Supply Air Filter



Exhaust Air Filter



Exchange Capillary Core

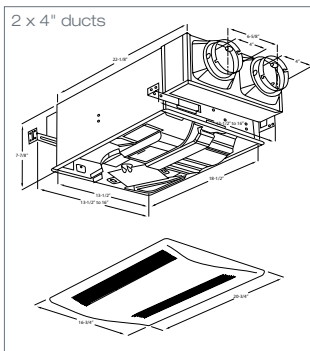
BENEFITS

- Rust-proof paint treatment on galvanized housing
- Thermal fuse protection
- Meets Washington State Ventilation and Indoor Air Quality code and ASHRAE 62.2 -2007
- 3 Year Warranty

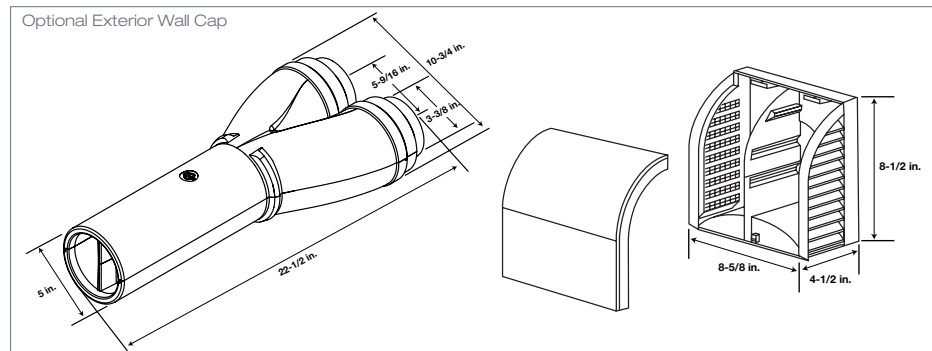
Specifications		FV-04VE1		
		40 CFM	20 CFM	10 CFM
Characteristics	Static pressure in inches w. g.	0.1	0.1	0.1
	Air Volume Exhaust (CFM)	40	20	10
	Air Volume Supply (CFM)	30	20	10
	Noise (sones)	0.8	<0.3	N/A
	Power Consumption (Watts)	23	21	17
	Speed	1479	1292	1095
	Current	0.15	0.10	0.09
	Power Rating (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		

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

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



FV-04VE1



FV-WC04VE1

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