

INSTALLATION

Mounting

WhisperComfort measures 14 inches wide and fits between joists 16" on center. Brackets and screws are provided to secure the unit to the joists 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 wire to connect the 2 switches.

Duct

Insulated 4" duct is recommended. For cold climates, insulated duct running through a cold attic will help avoid condensation build up. And for warm climates, insulated duct

running through a hot attic will help reduce heat transfer to supply air.

In all cases, 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 zip ties or duct straps and sealed with duct tape and/or duct mastic material.

Elbows

Rule number one is to avoid elbows and bends whenever possible. However, the fact is that many installations may require at least one elbow. There are two precautions to take when installing elbows to achieve optimum performance.

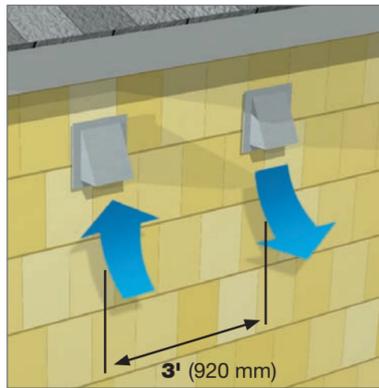
First, allow a 2 – 3 foot straight run out of the unit before the first elbow. This allows for air flow momentum before passing through the first elbow. An installation that has a 90-degree elbow immediately after the exhaust port will cause air to back flow into the unit. This will reduce fan performance and may increase noise.

Second, use a long radius angle (not a tight short radius) to help ensure optimum airflow and minimum airflow noise.

Termination/Supply Device

The exhaust termination device (roof cap or wall hood) may have a back draft damper. 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.



SUPPLY hood with bird screen, no backdraft flap(s)

EXHAUST hood with backdraft flap(s)

MAINTENANCE (Cleaning)

Maintenance instructions can be found in the Operating Manual.

Grille

The grille can be washed with light dish soap. Follow the Operating Manual and 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 in dishwasher, which may be too hot and cause grille to deform. Use light dish soap in the sink.

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

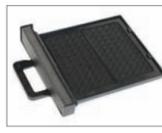
to remove the filter bracket and remove the filter from the bracket. Both filters should be vacuumed with a soft brush attachment.

Exchange Capillary Core

Panasonic technology is at the core of WhisperComfort's efficiency. This unique core is made from a plastic-like material and should never be washed or submerged in water. To clean, vacuum with a soft brush attachment.



Grille



Supply Air Filter



Exhaust Air Filter



Exchange Capillary Core

ADDITIONAL BENEFITS

- Totally enclosed motor for long life –rated for continuous run
- Rust-proof paint treatment on galvanized housing
- Mechanical supply air damper employed
- Dual setting air volume for 40/20 or 20/10 CFM
- Supply and exhausted air filters employed
- One motor operates two fan wheels
- Uses two 4-inch ducts
- New high efficiency energy recovery core
- Contemporary designed removable grille
- Suitable for renovation
- Easy installation (and no drain line required)
- Thermal fuse protection
- Meets Washington State Ventilation and Indoor Air Quality code and ASHRAE 62.2-2007

WhisperComfort (40/20 or 20/10 setting)		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 (RPM)	1479	1292	1095
	Current	0.15	0.10	0.09
Specifications	Power Rating (V/Hz)	120/60		
	Motor Type	Condenser		
	Type of Motor Bearing	Ball		
	Thermal Fuse Protection	Yes		
Apparent Sensible Effectiveness	Heating (%) 32 °F (0°C)	66% at 30 CFM		
	Cooling (%) 95 °F (35°C)	36% at 29 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.

Panasonic Home & Environment Company Unit of Panasonic Consumer Electronics Company

Headquarters

Panasonic Home & Environment Company
One Panasonic Way
Secaucus, NJ 07094

www.panasonic.com/building
ventfans@us.panasonic.com

Customer Service

Panasonic Home & Environment Company
1707 North Randall Road, 1D-12
Elgin, IL 60123

For Order Information:

PHONE: 866-292-7299; FAX: 888-553-0723

For Customer Call Center:

PHONE: 866-292-7292



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Panasonic ideas for life



WhisperComfort™ SpotERV

VENTILATION FAN

Bringing fresh-air ventilation into your home

Panasonic WhisperComfort Spot Energy Recovery Ventilator (ERV) offers a revolutionary way to provide balanced ventilation with a ceiling insert ERV. 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
- Provides fresh air from outside while exhausting stale air and filtering out dust and indoor air pollutants
- 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



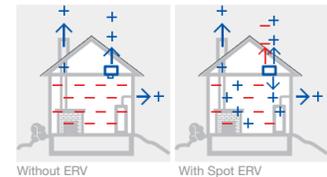
FEATURES

Balanced Ventilation

Tightly built homes and buildings minimize passive air leaks. An exhaust-only fan may 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 rate, continuous run ensures chemicals such as volatile organic compounds (VOC's) and other pollutants from cleaning fluids and building materials are vented out and replaced with fresh air.

Tight Home Air Pressure



Exchange Capillary Core

Indoor and outdoor air passes through Panasonic's 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.

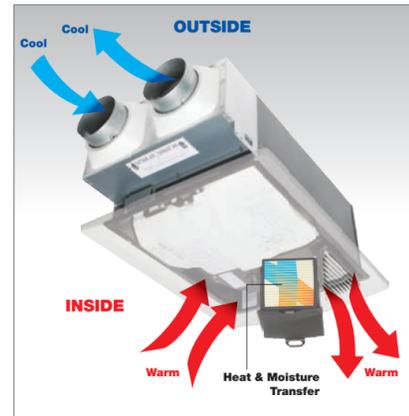
Grille Design

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

Spot ERV

WhisperComfort is a ceiling insert spot ERV ideal for a

Spot ERV Technology



single room. The unit provides a low rate of continuous air exchange. Fresh air is supplied 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

Whole House ERV

WhisperComfort may also be suitable to meet whole house ventilations 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 level not to exceed 1.0. Panasonic WhisperComfort ERV is an affordable, efficient way to meet this ventilation standard.

Recommended Zones Map



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.
*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

Panasonic's recommended zone 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.

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

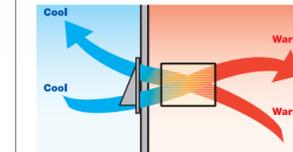
Total 59.5 CFM

Use 2 WhisperComfort or 1 WhisperComfort and 1 WhisperGreen*

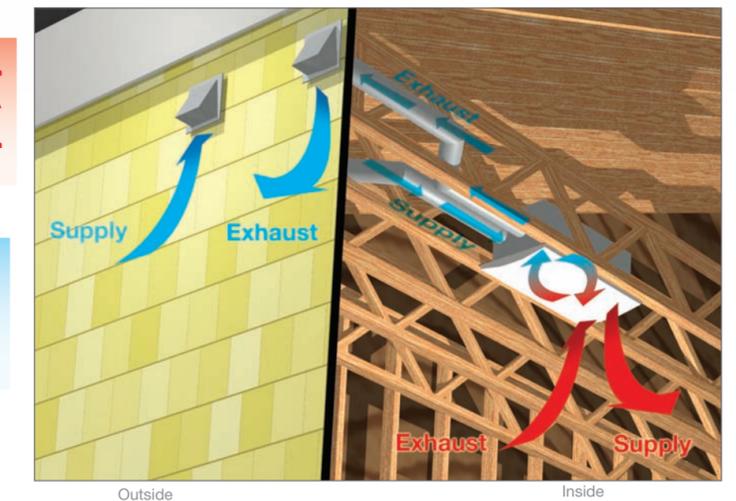
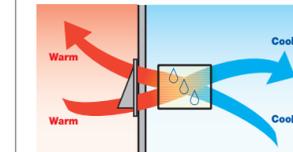
* WhisperGreen is a line of exhaust fans with variable speed DC motor and built-in controls, ideal for both bathroom intermittent ventilation and whole house continuous run ventilation.

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 switch is turned off, the unit does not operate. When 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 prevent exchange 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)

