

WhisperFit-Warm™ VENTILATION FAN



FV-07VFH3 70 CFM

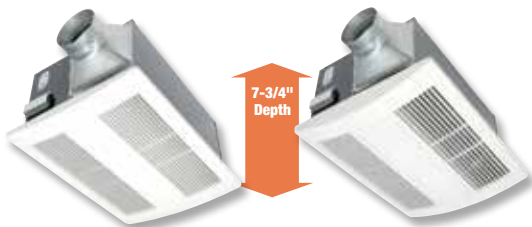


WhisperFit-Warm Key Benefits:

- Ideal for remodeling and simple installation in small bathrooms
- Low profile housing design fits in 2 x 6 construction
- Aerodynamic fan design delivers whisper-quiet operation
- 1 minute warm-up quickly heats up a cold room
- Detachable filter removes dust and is easy to clean
- 1300W temperature regulating PTC* heater ensures safety and reliability
- 4" duct

*PTC (Positive Temperature Coefficient) heating elements are small ceramic stones with self-limiting temperature characteristics. PTC stones have fast heating response times and level out once a pre-defined temperature is reached.

WhisperWarm™ VENTILATION FAN



FV-11VH2 110 CFM 4" Duct

FV-11VHL2 110 CFM 4" Duct



WhisperWarm Key Benefits:

- Durable 1400W stainless steel sheathed heating element
- Totally enclosed condenser motor for long life — rated 30,000 hours continuous run
- Thermal fuse protection on motor and 3-level safety device for heater
- Quick 1 minute warm-up
- Minimum 20 Amp dedicated circuit required
- For optimum performance, install heater no more than 8 feet from floor to ceiling
- Fits in 2 x 8 construction



INCLUDES: (2) 18W Panasonic CFL/3500 Kelvin/ High CRI/1200 Lumens each/ENERGY STAR® qualified/10,000 hours rated average life/equivalent to 100W incandescent lamp/electronic ballast for flicker-free operation/plus 4W night-light

WhisperCeiling™ VENTILATION FAN



FV-20VQ3 190 CFM 6" Duct

FV-30VQ3 290 CFM 6" Duct

FV-40VQ4 390 CFM 6" Duct



WhisperCeiling Key Benefits:

- Quiet, yet powerful, large volume exhaust fans ideal for light commercial applications
- UL listed for tub/shower enclosure when used with a GFCI protected circuit
- Can be used to comply with ASHRAE 62.2, LEED, IAP, California Title 24 and WA Ventilation Code

Specialty Fans

WhisperFit-Warm™
VENTILATION FAN

| WhisperFit-Warm Characteristics | FV-07VFH3 | |
|------------------------------------|-----------|--------|
| Static pressure in inches w. g. | 0.1 | 0.25 |
| Air Volume (CFM) | 70 | 59 |
| Noise (sones) | 1.5 | 2.2 |
| Power Consumption (Watts) | 26.2 | 26.1 |
| Energy Efficiency (CFMs/Watt) | 2.7 | 2.3 |
| Speed | 1135 | 1305 |
| Current | 0.17 | 0.17 |
| Power Rating (V/Hz) | 120/60 | 120/60 |

WhisperWarm™
VENTILATION FAN

| WhisperWarm Characteristics | FV-11VH2 | | FV-11VHL2 | |
|---------------------------------|----------|------|-----------|------|
| Static pressure in inches w. g. | 0.1 | 0.25 | 0.1 | 0.25 |
| Air Volume (CFM) | 110 | 89 | 110 | 89 |
| Noise (sones) | 0.6 | 1.0 | 0.7 | 1.0 |
| Power Consumption (Watts) | 30.7 | 30.5 | 30.6 | 30.5 |
| Energy Efficiency (CFMs/Watt) | 3.6 | 2.9 | 3.6 | 2.9 |
| Speed | 778 | 935 | 812 | 956 |
| Current | 0.25 | 0.25 | 0.25 | 0.25 |
| Power Rating (V/Hz) | 120/60 | | 120/60 | |

WhisperCeiling™
VENTILATION FAN

| WhisperCeiling Characteristics | FV-20VQ3 | | FV-30VQ3 | | FV-40VQ4 | |
|-----------------------------------|----------|------|----------|------|----------|-------|
| Static pressure in inches w. g. | 0.1 | 0.25 | 0.1 | 0.25 | 0.1 | 0.25 |
| Air Volume (CFM) | 190 | 145 | 290 | 257 | 390 | 356 |
| Noise (sones) | 0.8 | 1.4 | 2 | N/A | 3 | 3 |
| Power Consumption (Watts) | 43.7 | 42.9 | 64 | 62 | 111.4 | 109.6 |
| Energy Efficiency (CFMs/Watt) | 4.6 | 3.6 | 4.5 | 4.1 | 3.5 | 3.3 |
| Speed | 761 | 949 | 877 | 990 | 793 | 874 |
| Current | 0.34 | 0.33 | 0.53 | 0.52 | 0.99 | 0.98 |
| Power Rating (V/Hz) | 120/60 | | 120/60 | | 120/60 | |

WhisperWall™
VENTILATION FAN

| WhisperWall Characteristics | FV-08WQ1 | |
|---------------------------------|----------|--|
| Static pressure in inches w. g. | 0.03 | |
| Air Volume (CFM) | 70 | |
| Noise (sones) | 1.1 | |
| Power Consumption (Watts) | 18.0 | |
| Energy Efficiency (CFMs/Watt) | 4.3 | |
| Speed | 660 | |
| Current | 0.20 | |
| Power Rating (V/Hz) | 120/60 | |

WhisperComfort™
VENTILATION FAN

| WhisperComfort Characteristics | FV-04VE1 | | |
|-----------------------------------|----------|--------|--------|
| | 40 CFM | 20 CFM | 10 CFM |
| 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 | | |

WhisperLine™
VENTILATION FAN

| WhisperLine Characteristics | FV-10NLF1 | | | FV-20NLF1 | | | FV-30NLF1 | | | FV-40NLF1 | | |
|--------------------------------|-----------|------|------|-----------|------|------|-----------|------|------|-----------|-----|-----|
| Static pressure in inches w.g. | 0.2 | 0.3 | 0.4 | 0.2 | 0.3 | 0.4 | 0.2 | 0.3 | 0.4 | 0.2 | 0.3 | 0.4 |
| Air Volume (CFM) | 120 | 105 | 82 | 240 | 225 | 200 | 340 | 322 | 302 | 440 | 421 | 407 |
| Power Consumption (Watts) | 36.2 | 35.0 | 33.5 | 55.5 | 53.5 | 51.1 | 95.2 | 93.5 | 91.5 | 136 | 132 | 130 |
| Energy Efficiency (CFMs/Watt) | 3.5 | | | 4.1 | | | 3.2 | | | 3.2 | | |
| Speed | 1590 | | | 1260 | | | 1337 | | | 1150 | | |
| Current | 0.31 | | | 0.46 | | | 0.86 | | | 1.10 | | |
| Power Rating (V/Hz) | 120/60 | | | 120/60 | | | 120/60 | | | 120/60 | | |

| WhisperLine Installation Kits | | | | | |
|-------------------------------|-------------------------------|--------------|------------------|-------|---------------|
| Model No. | Description | Inlet Grille | Backdraft Damper | Clamp | Y-Adaptor |
| FV-NLF04G | 4" Inlet Grille + Metal Plate | 1 (4") | - | - | - |
| FV-NLF06G | 6" Inlet Grille + Metal Plate | 1 (6") | - | - | - |
| PC-NLF04S | 4" Single Inlet Kit | 1 (4") | 1 (4") | 6 | - |
| PC-NLF06S | 6" Single Inlet Kit | 1 (6") | 1 (6") | 6 | - |
| PC-NLF04D | 4" Double Inlet Kit | 2 (4") | 2 (4") | 12 | 1 (4"- 4"x 2) |
| PC-NLF06D | 6" Double Inlet Kit | 2 (6") | 2 (6") | 12 | 1 (6"- 6"x 2) |
| PC-NLF64D | 6"-4" Double Inlet Kit | 2 (4") | 2 (4") | 12 | 1 (6"- 4"x 2) |
| PC-NLF86Y | 8"-6" Y-Adaptor | - | - | - | 1 (8"- 6"x 2) |

Sizing

Information and Instructions

Fan Selection Guide

1. What is the size of the bathroom?
 - a. Need 1 CFM (cubic foot per minute) per square foot
 - b. Length x Width = CFM
(length) x (width) = (Total CFM needed)
 - c. Example: 8 ft length x 10 ft wide = 80 CFM is needed to properly ventilate the bathroom
2. What features are needed/wanted?
Fan only? Light? Heat? Variable speed? Motion? Humidity? Time delay?
3. What type of construction is available?
Truss size is necessary if it is smaller than 2 x 8 construction so the selected fan housing size will fit the installation.
 - a. 2 x 8 construction – can use any fan combination
 - b. 2 x 6 construction – can use fan combinations that fit 2 x 6 or 2 x 4 construction
 - c. 2 x 4 construction – can use fan combinations that fit 2 x 4 construction
4. Now that you know the CFM needed, the features wanted and the construction size, you are ready to find your fan combination.

Equivalent Duct Length (EDL)

The Equivalent Duct Length Table (Figure B) shows you how to calculate the equivalent straight duct length in order to overcome static pressure. The EDL chart helps ensure fan performs as expected under the airflow resistance caused by the listed components.

A ventilating fan's performance is plotted on a graph called a performance curve. The performance curve shows airflow in cubic feet per minute (CFM) along the horizontal axis and static pressure (resistance) along the vertical axis. Figure A shows how a performance curve works. The fan with a "Closed Duct" has high-static pressure and no airflow; and the fan with "No Duct" has low static pressure and high airflow. In reality, an installed fan will be somewhere in between these two points.

Sizing and Selecting a Ceiling Mounted Fan:

Proper sizing requires that you determine the needed CFM, the square footage of the room or home, and the length and type of duct.

Example: Sizing for an 8 x 10 x 8 ceiling bathroom using 12 ft long, 4 in diameter aluminum flex duct, 1 elbow, 1 wall cap.

Step 1: Determine application

Bathroom = 1 CFM/square foot

Step 2: Calculate the area to be ventilated in square feet.

Assuming an 8 ft ceiling: room length x width = area in square feet

8 ft x 10 ft = 80 sq ft

Step 3: Calculate your required CFM

1 CFM x 80 sq ft = 80 CFM

Step 4: Use the Equivalent Duct Length chart above to calculate duct run.

4a. 12 ft aluminum flex duct x 1.25 = 15 ft

4b. One elbow = 15 ft EDL

4c. One wall cap = 30 ft EDL

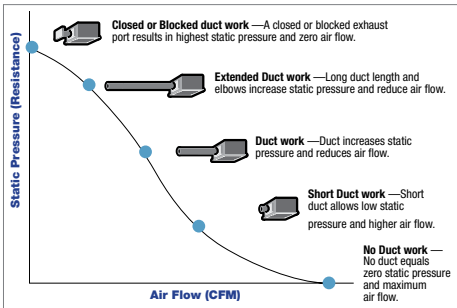
15 ft + 15 ft + 30 ft = 60 ft EDL

This is the equivalent duct length (or resistance) the fan must overcome to move air through the duct to the outside.

Step 5: Review models in catalog pages to find a model with desired features. Features may include light fixture, heater or low-profile housing.

Note: Check with your local building inspector to confirm that these methods are accepted in your area.

FIG. A



| Equivalent Duct Length | | | | | |
|------------------------|----------------|------------------------------|--------------------|--------------------|--------------------|
| | | Duct Diameter | | | |
| | | 3" | 4" | 6" | 8" |
| Duct | Smooth Metal | Same as measured duct length | | | |
| Material | Flex Aluminum | 1.25 x duct length | 1.25 x duct length | 1.5 x duct length | 1.5 x duct length |
| | Insulated Flex | 1.5 x duct length | 1.5 x duct length | 1.75 x duct length | 1.75 x duct length |
| Terminal | Wall Cap | 30 ft | 30 ft | 40 ft | 40 ft |
| Device | Roof Jack | 30 ft | 30 ft | 40 ft | 40 ft |
| Elbow | Adjustable | 15 ft | 15 ft | 20 ft | 20 ft |

FIG. B