Frequently Asked Questions (FAQ's)

Frequently Asked Questions

Who is Delta Group?
Delta Group is the world's largest manufacturer of DC brushless fans and a leading provider of switching power supplies – a $7.1 billion global company with 31 Plant Sites, 54 R&D Centers and 106 Sales Offices worldwide and U.S. headquarters in Fremont, CA. Our company mission is “To provide innovative, clean and energy-efficient solutions for a better tomorrow” supported by a product portfolio that features a range of energy efficiency solutions including ventilation fans, small wind energy systems, solar panels, LED lighting, EV chargers, Industrial Automation products and Display Solution products. Delta's operations are ISO-9001, ISO-14001, ISO-14064, OHSAS-18001 and TS-16949 certified. Delta DC brushless fans are used in applications where precision is paramount. This includes most popular consumer products such as laptops, Ultrabooks™, desktops, tablets, gaming systems and set-top boxes.

Please visit our global website www.deltaww.com for a more comprehensive look at Delta operations, products and capabilities.

Delta Breez Series Ventilation Fans

The Delta BreezSignature Series fans are available with light options, adjustable humidity and speed controls, motion sensing capabilities and a delay timer.

The Delta BreezSlim Series fans feature a compact design and can be mounted in a ceiling or wall.

The Delta BreezGreenBuilder Series fans offer light options, humidity sensing and low speed control, and record low power consumption at 3.8 Watts. Fan only models can be installed in a ceiling or wall.

The Delta BreezSmart Series fans feature higher airflow, humidity and motion sensing along with dual speed and an LED option.

The Delta BreezRadiance is a low noise ceiling mount ventilating fan, light and heater.

BreezPro offers powerful airflow extraction for heavier applications, but with quiet operation.

What makes Delta Breez Ventilation Fans different?

All Delta Breez ventilation fans are manufactured with DC Brushless motor technology

Most Delta Breez ventilation fans are ENERGY STAR qualified*

All Delta Breez ventilation fans have soft start and lock protection functions

All Delta Breez ventilation fans are precision engineered to run continuously for a minimum 70,000 hours

All Delta Breez ventilation fans come with a 3-Year limited warranty

* Except for BreezRadiance RAD80L Fan/Light with Heater
Why is a DC brushless motor better than an AC motor? Does it require any special installation or wiring?

Delta’s DC brushless motors are much quieter and have longer lasting bearings thanks to its soft start function; no mechanical brushing means longer motor life. DC brushless motor exhaust fans use 74% less power than other leading AC motor exhaust fans which allows the Breez fans to achieve extremely low noise levels, low electrical and RF noise and pleasing low energy costs. They are smaller, have lighter weight, use less material with is smartly eco-friendly. Linear torque speed characteristics allow easy control. Electronic circuit control allows easy adjustable motor output. The Delta Breez fans have been tested to run continuously for 70,000 hours.

No special wiring is needed; there is a transformer built into the fan that automatically switches the power supply from AC to DC.

Delta’s DC brushless motor fans are installed just like any AC motor fans.

What are the benefits of a DC brushless motor?

Reliability
Delta’s DC brushless motor fans are engineered to outlast popular AC models by as much as 70 percent, reducing the need for replacement.

Less noise
Delta’s DC brushless motor fans are precision engineered for low sound, down to less than 0.3 Sones, the lowest sound rating of any exhaust fan.

Less power consumption
Delta’s DC brushless motor fans use 74% less power than popular AC motor exhaust fans.

Efficiency
Delta DC brushless motor fans are among the most efficient ventilation fans available, exceeding ENERGY STAR requirements for efficiency by as much as 800%.

All Delta Breez ventilation fans are precision engineered to run continuously for a minimum 70,000 hours.

What is Soft Start Function?
In the first 10 seconds the fan is powered on, the motor will softly and quickly control the fan speed from low to full speed. This is unlike an AC Motor, which simply jumpstarts the fan. This quiet ‘soft start’ process helps reduce the wear on motor bearings to prolong the motor bearing’s life.

What is Lock Protection Function?
This unique function allows all Delta Breez Ventilation fans to automatically power off when the impeller is locked abnormally (e.g. when a buildup of dirt and dust accumulates on the fan). The function works by repeatedly turning the fan on and off every 12 seconds to test itself. The fan will turn itself completely back on after the impedance is removed. This helps avoid the issue of an over-heated motor, and to prevent potential fire risks.
How do I determine which bath fan I need – features and size?

Bathroom Ventilation

The following are Home Ventilating Institute (HVI) guidelines for ventilating both large and smaller bathrooms using intermittent or continuous ventilation.

Small rooms:

For bathrooms up to 100 square feet in area, HVI recommends that an exhaust fan provide 1 CFM per square foot (approximately eight air changes per hour) to properly ventilate the bathroom.

Example:

- Bathroom is 8’ x 5’ (with 8’ ceilings)
  - Multiply 8 x 5 = 40 ft.
- Bathroom area is 40 ft.
- At 1 CFM per square foot the minimum recommendation is a fan rated at 40 CFM

Larger rooms:

For bathrooms above 100 square feet in area, HVI recommends a ventilation rate based on the number and type of fixtures present, according to the following table:

<table>
<thead>
<tr>
<th>Fixture</th>
<th>CFM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toilet</td>
<td>50</td>
</tr>
<tr>
<td>Shower</td>
<td>50</td>
</tr>
<tr>
<td>Bath Tub</td>
<td>50</td>
</tr>
<tr>
<td>Jetted Tub</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: Enclosed toilet rooms must have an operable window or a fan for ventilation

Example:

The bathroom is 20’ x 12’. There is a tub (without jets), a shower enclosure and an enclosed toilet.

Each fixture requires 50 CFM:

<table>
<thead>
<tr>
<th>Fixture</th>
<th>CFM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tub</td>
<td>50</td>
</tr>
<tr>
<td>Shower</td>
<td>50</td>
</tr>
<tr>
<td>Toilet</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
</tr>
</tbody>
</table>

Data source: http://www.hvi.org/publications/bathroom_ventilation.cfm
How does the Humidity Sensor function operate?

For VFB25ACH, VFB25ADH, VFB25AEH Models

Delta’s Humidity Sensing exhaust fans have two modes: Humidity Sensing Mode and Always On Mode. Flipping the wall switch off and on toggles the fan between modes. An integrated LED light indicator underneath the fan grille shows the user which mode the fan is in. Blue light means the fan is in Humidity Sensing Mode. Amber light means the fan is in Always On Mode.

In Always On Mode, the fan runs continuously at full speed. In Humidity Sensing Mode, the fan will only come on when the fan senses a humidity level of 60% RH (Relative Humidity) or above. The fan speed automatically adjusts according to the humidity level. The VFB25ACH humidity control fan curve is as follows.

How does the Humidity Sensor function operate?

Humidity tolerance is about ±10%. Long-time operation will influence the detecting precision as dust accumulates. The humidity switch may need to be adjusted.

Factory setting: low speed airflow 60 CFM, humidity 60% RH.

On very rare occasions (about 1% of the time), our fan may still run even though the homeowner feels or detects the house humidity level is lower than 60% RH.

Manufacturer recommended actions:

1. Let the fan run since it is good to keep venting the house and the electric bill is minimal (approximately less than $10 per year)
2. Turn the fan off when not in use

The possible reasons are:

1. Our sensor tolerance is +/-5% RH
2. Outdoor humidity back draft to the fan
3. Indoor temperature level

Manufacturer recommended actions:

1. Let the fan run since it is good to keep venting the house and the electric bill is minimal (approximately less than $10 per year)
2. Turn the fan off when not in use

Why does my humidity-sensing fan keep running even though the humidity level in my home is less that 60% RH?

 Applies to VFB25ACH, VFB25ADH, and VFB25AEH models only.

In cold weather conditions (winter months) when temperatures are between 35°-60°F, the humidity sensor may become more sensitive. Because of this, some customers experience their fans automatically running continuously even when the surrounding humidity level is lower than 60% RH.
Can the Breez fan motor be replaced?
All Delta Breez fans feature a precision-engineered DC brushless motor for extended reliability, thus replacing the fan motor is a rare occurrence. All Delta BreezSignature G2, BreezGreenBuilder, BreezSlim, BreezSmart and BreezRadiance series fans have a replaceable motor.

Can I keep the housing of my old fan (non Delta fan) and just replace the fan motor with Breez?
No. For proper performance, it is recommended that Delta Breez fan motors be used only with Delta Breez fan housing.

What type of light bulb(s) are used in the Fan / Light Combos? Does the packaging contain the bulb(s)?

BreezSignature:
The main light bulb is a 26W CFL with GU24 base (2-pin style). The night-light is a 4W incandescent light bulb with E12 screw base. Both lights are included in the box with the fan. Replacement light bulbs can also be purchased at most major home improvement retailers or through your local contractor or supplier.

SIG100LED has a 13W (equivalent to 60W incandescent), 2700K LED module with 2W LED night light. It is included in the box.

BreezGreenBuilder:
The main light bulb in the entire BreezGreenBuilder fan and light unit is a 26W CFL with GU24 base (pin style). The light bulb is included in the box with the fan. Replacement light bulbs can also be purchased at most major home improvement retailers or through your local contractor or supplier. The GBR80LED has an 11W (equivalent to 60W incandescent), 2700K LED module and is included in the box.

BreezRadiance:
The main light bulb is a 26W CFL with GU24 base (2-pin style).

Why is a DC brushless motor better than an AC motor? Does it require any special installation or wiring?
Delta’s DC brushless motors are more quiet, use less power, and are engineered to run longer than traditional AC motors. DC motors are precision engineered for performance. They are smaller, lighter weight and have linear torque speed characteristics which allow unique control of fan performance. All Delta Breez fans are engineered to continuously for a minimum 70,000 hours.

No special wiring is needed; there is a transformer built into the fan that automatically switches the power supply from AC to DC. Delta’s DC brushless motor fans are installed just like any AC motor fans.

Are Delta Breez fans ENERGY STAR qualified?
Yes. Most Delta Breez fans are ENERGY STAR qualified. The only exception is BreezRadiance RAD80L Fan/Light/Heater which contains a powerful 1300W heating element for warmth and comfort.

What is the purpose of the LED indicator light underneath the fan grille?
The light indicates to the user that the quiet fan is operating. If the fan has different functions available i.e. humidity sensing, low speed, motion sensing, the light will change color indicating what mode the fan is in. The light will blink if the impeller gets obstructed, telling the user that the fan is not operating properly.
What are CFM and Sones?

CFM and Sones are how bath fans are generally compared. CFM (Cubic Feet per Minute) is speed of air flow – the amount of air extracted per minute when the fan is running. The amount of CFM needed is generally related to the size of the area ventilated. Please see the sizing guidelines.

Sone level is how loud the fan is to the human ear. Doubling the sone value means doubling the noise. The average 80 CFM bath fan runs at 0.8~2.5 Sones. Delta Breez 80 CFM fans run as low as <0.3 Sones. At less than 0.3 Sones, the fan is virtually silent. This is the lowest noise rating of any exhaust fan available in the market. For reference, 1.0 Sone is about as loud as a new computer or refrigerator.

How does the Humidity Sensor function operate?

The fan runs at full speed until the user-adjustable humidity set-point is achieved, then automatically switches to the user set low speed for continuous run or off. The amber or blue color of LED indicator light underneath the grille indicates humidity sensing mode or continuous low speed mode. Please consult the Installation & Operating Instruction manual for a particular fan model for more specific information.

How does the Motion Sensor function operate?

When motion is detected, fan comes on at full speed. When user leaves the room, the fan will remain running at full speed until user-preset delay time has passed. Then the fan will automatically drop down to the pre-set low speed for continuous run or off. The green or amber color of LED indicator light underneath the grille indicates continuous low speed or full speed mode. Please consult the Installation and Operating Instruction manual for a particular fan model for more specific information.

Can I keep the housing of my old fan (non Delta fan) and just replace the fan motor with Breez?

No. For proper performance, it is recommended that Delta Breez fan motors be used only with Delta Breez fan housing.

What type of light bulb(s) are used in the Fan / Light? Does the packaging contain the bulb(s)?

BreezSignature:
The main light bulb is a 26W CFL with GU24 base (2-pin style). The night-light is a 4W incandescent light bulb with E12 screw base. Both lights are included in the box with the fan. Replacement light bulbs can also be purchased at most major home improvement retailers or through your local contractor or supplier.

SIG110LED has a 13W (equivalent to 60W incandescent), 2700K LED module with 2W LED night light. It is included in the box.

BreezGreenBuilder:
The main light bulb in the entire BreezGreenBuilder fan and light unit is a 26W CFL with GU24 base (pin style). The light bulb is included in the box with the fan. Replacement light bulbs can also be purchased at most major home improvement retailers or through your local contractor or supplier. The GBR80LED has an 11W (equivalent to 60W incandescent), 2700K LED module and is included in the box.

BreezRadiance:
The main light bulb is a 26W CFL with GU24 base (2-pin style). The bulb is included in the box with the fan.
Can I use a timer with the Delta Breez fan?

Many Delta Breez models have built-in adjustable delay timers, so no external timer is needed. External timers can be used in conjunction with single-speed models only. Because Breez fans run on much lower voltage than other market ventilation fans, please always contact Delta Breez customer service for a list of single-speed models and consult with a licensed electrician for compatibility.

A compatible timer can be used on the following models:

- **BreezSignature**
  - VFB25AC, VFB25AD, SIG80, SIG110
- **BreezSlim**:
  - VFB050B3A1, VFB070B3A1, SLM50, SLM70
- **BreezGreenBuilder**
  - VFB050C4A1, VFB080C4A1, VFB050C4L1, VFB080C4L1
  - GBR50, GBR80, GBR100, GBR50, GBR80L, GBR80LED, GBR100L
- **BreezSmart**
  - SMT130, SMT150

Timers cannot be used on the following models:

- **BreezSignature**
- **BreezSlim**:
  - VFB070B3X1
- **BreezSmart**
  - SMT130M, SMT130H, SMT150D

Do you sell switches or timers?

No. Delta does not manufacture switches or timers but these components are readily available in most major home improvement retailers or through your local contractor or supplier.

Can the Delta Breez Fan/ Fan Light be installed with insulation around it?

Yes. All Delta Breez fans are UL approved. Here is UL’s testing protocol:

For Fan/lights, UL requires 8.5 inches of insulation on all sides (including top) of the product. Insulation shall be of the loose fill type and should have a thermal resistance per inch between 3.75-3.85 R (declared by the manufacturer) when conditioned to a density of 32.04 - 40.05 kg/m^3. This scenario is equivalent to an approximate R value of R32. R40 is the max for Canadian installations.

For a fan only, there is no insulation limitation for fan without lighting except in Canada where the max value is R40.
Is it OK to exhaust into the attic?
No. The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) recommends exhausting only to the exterior of the home.

Can Delta fans be installed in a side wall?
Yes. All Delta BreezSlim models and BreezGreenBuilder fan only models are UL listed for both ceiling and wall-mount installation.

Can Delta fans be installed in a slanted ceiling?
No. Installation of any Delta fans in a slanted ceiling is not recommended.

Can Delta fans be controlled by a voltage switch (RPM control)?
No.

Can I install the Exhaust Fan / Light in the shower or tub enclosure?
Yes. Most Delta Breez Ventilation Fans are UL listed for use over the bathtub or shower when installed in a GFCI protected branch circuit, except BreezRadiance RAD80L 80 CFM Fan/Light with Heater.

Are Delta Breez fans ASHRAE 62.2-2010 compliant?
Yes. All Delta Breez fans are 62.2-2010 compliant for intermittent running. Most of the Delta Breez fan models are compliant for continuous running. Please see www.deltabreez.com, Learning Center for a complete listing.

Are Delta Breez fans UL listed and HVI certified?
Yes. All Delta Breez fans are UL listed and are HVI certified.

Do Delta Breez fans meet Title 24 requirements?
Yes. All Delta Breez fans meet current Title 24 requirements.

What is the Delta Breez Ventilation Fan Warranty?
All Delta Breez Ventilation Fans have a 3-Year limited warranty.

How do I reach technical and customer service?
Customer Service: (888) 979-9889
Customer Service Fax: (510) 226-5098
Email: breezsales@delta-corp.com