



Noise

The human ear's response to sound level is roughly logarithmic (based on powers of 10), and the dB scale reflects that fact. An increase of 3dB doubles the sound intensity but a 10dB increase is required before a sound is perceived to be twice as loud.

Therefore a small increase in decibels represents a large increase in intensity. For example - 10dB is 10 times more intense than 1dB, while 20dB is 100 times more intense than 1dB. The sound intensity multiplies by 10 with every 10dB increase. Following is a list of dB readings from various sources to act as a non-scientific point of reference:

130dB - Jack Hammer (at 5ft)

120dB - Rock Concert / Pain threshold

110dB - Riveter or a Heavy Truck at 50ft

90dB - Heavy Traffic (at 5ft)

70dB - Department Store or a Noisy Office

50dB - Light Traffic

30dB - Quiet Auditorium

20dB - Faint Whisper (at 5ft)

10dB - Soundproof room / anechoic chamber

There are a number of factors that can contribute to the relative noisiness of a fan. In terms of raw numbers our fans are tested in free air (zero static pressure) with the noise sensor positioned one meter from the outlet side of the fan. There are several factors that could affect the noise characteristics of your fan and make it seem louder than it is... or needs to be:

1. Inadequate venting can increase the noise produced by a fan. The efficiency of the fan is degraded by having to overcome a pressure differential. It decreases the effectiveness of the impeller, causes noise (dB) to increase and causes Airflow (CFM) to drop. Increasing the vent area to 1.5x the fan venturi (the big hole in the middle) should alleviate the noise if this is the problem.
2. Airflow obstructions can also increase fan noise. If there is an obstacle such as a PC board or light ballast within an inch or two of the fan inlet or outlet and directly in the airstream this can cause a localized increase (between the impeller and the obstruction) in static pressure. The effect is the same as if there was inadequate venting generally and can cause an increase in noise.
3. Vibration can cause fan noise to increase. Often this is due to loose mounting screws. Other times it is caused by the fan being mounted on a thin metal, laminate or wooden surface. The fan will vibrate against the surface and the surface can act like a sound board, amplifying otherwise soft noise. This problem can often be solved by adding plastic or rubber grommets between the fan and mounting surface and which are commonly available at most home improvement stores.
4. Rattles, hums, squeals or clicking are usually balance or bearing issues. If your fan is a few years old and has been run more or less continuously the bearings may simply be worn out. If your fan has been running for less than 12 months and you experience any of these problems you should arrange for a replacement from the place where you purchased it (assuming that the unit has not been mishandled in some way). We guarantee our products against defects in materials and workmanship for 1 year from date of purchase.