



# The difference between a high-volume low-speed fan and residential fan

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**Posted by Sarah Villane on May 15, 2020**

Before purchasing a ceiling fan it's important to understand the different types of ceiling fans you should use in your home or your business. How do you know which type of ceiling fan is right for your space?

The two main types of ceiling fans are high-volume low-speed (HVLS) and residential fans.

## HVLS Fans

HVLS fans are large ceiling fans greater than 7ft in diameter and move a high volume of air at a low speed around 8 mph. Originally designed for large spaces like warehouses and factories, HVLS fans have improved due to advancements in technology and can now be found in a wide variety of industrial, commercial and even residential spaces.



In comparison, residential fans are smaller in size and are high-velocity ceiling fans that create small turbulent air streams. They are mostly used in homes to provide cooling comfort in bedrooms, living rooms, dining rooms and more.

Let's look at the key differences and benefits between HVLS and residential fans to help you determine the right fan for your space.

When comparing which fan type will meet your particular needs, the major differences to consider between HVLS and residential fans are size, speed, and the direction of airflow.

### **Size**

Typically, HVLS fans can be as small as 7ft to as large as 24ft in diameter and can cover an area of over 20,000 square feet. They are frequently used to cool spaces with more than 40,000 square feet and are an ideal solution for warehouses with open bays and frequent air exchange. HVLS fans require a minimum clearance of 10 ft to ensure adequate space.

Residential fans range in blade span and can be anywhere from 3ft to 6ft in diameter. They are generally used in smaller spaces, but the size and ceiling height of your space will determine the exact size of fan you will need.

### **Speed**

HVLS fans spin at a relatively low speed compared to residential fans. HVLS fans can reach a maximum speed of 200 RPM (revolutions per minute) and a minimum speed

of 71 RPM. While a residential fan spins at a higher speed up to 230 RPM.

## Airflow

Airflow is the biggest differentiator between residential and HVLS fans.

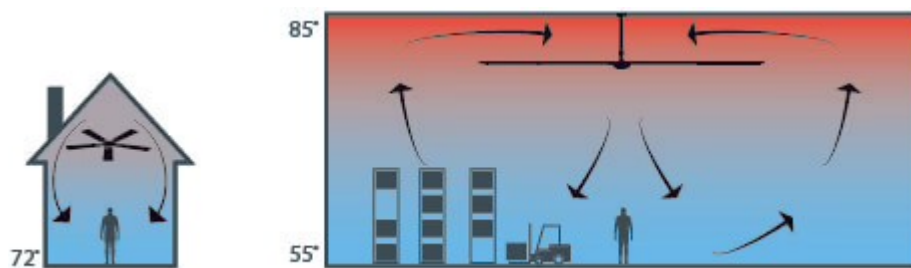
HVLS fans move more air providing complete air circulation throughout large, high ceiling spaces due to their long blades. They produce air columns that move towards the floor and are then pushed outward in a 360-degree direction throughout the workspace. The airflow created feels like a natural breeze, making it feel 10 to 12 degrees cooler.

In contrast, residential ceiling fans move air quickly and at a high speed in a concentrated downward motion. They also create a wind-chill effect making it feel 8 to 10 degrees cooler in a room.

The measurement to consider when comparing airflow is cubic feet per minute (CFM). This indicates the volume of air moving through the fan each minute.

Residential fans can produce around 29,000 CFM with a 1-hp motor, whereas a HVLS fan can produce around 140,000 CFM with the same 1-hp motor. This comparison demonstrates how a single HVLS fan can replace several fans of similar total horsepower.

The higher a fan's CFM number, the higher the fan's volume or capacity. The higher the volume, the better the performance.



When purchasing your next ceiling fan for your home or business be sure to keep in mind the key factors outlined in this blog. Hunter has more than 100 years of experience and offers a wide variety of fans to fit any space. We design reliable and innovative ceiling fans engineered for optimal comfort for any environment.



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