

Ceiling Fan Buying Guide

From reducing your home's energy bills, to complementing your home's comfort, ceiling fans add function and aesthetic value to your home. Learn more about fan construction, installation, and types.



There are many benefits in incorporating a ceiling fan into your home. Ceiling fans effectively circulate air to create healthy airflow which is both energy-efficient and budget-friendly. With a variety of styles ranging from rustic to modern to traditional, a ceiling fan can be a stylish accent or a bold statement piece, adding ambiance to any room.

Ceiling Fan Construction

Ceiling fans are manufactured in an array of styles and finishes, with special functions that adjust speed and reverse airflow to complement each environment. Ceiling fans will typically consist of the fan blades, motor, light, and controls.

Fan Blades

- **Blade Shape:** From wide-set palm leaf blades, to slim, contemporary blades, the shape of the blade is more a function of design than an issue of utility. To maximize airflow, blades should neither be too wide or too narrow. Wider blades do not necessarily mean better, and may not be able to move as much air even when equipped with a large motor. Blades that are too narrow will have the same effect. We recommend speaking with a specialist to ensure the blades and motor work together properly.
- **Number of Blades:** While the choice for the number of fan blades ultimately comes down to personal preference, there is a slight difference in performance between different numbers of blades for ceiling fans. As a general rule, fans with a higher number of blades tend to be quieter, but also circulate less air. The addition of blades increases the amount of drag on a fan's motor which will slow it down. Industrial fans (such as turbines) usually display only 2 or 3 blades because it enables the blades to rotate faster which moves more air. 4-blade and 5-blades is the ideal balance between noise and efficiency in residential settings.
- **Blade Pitch:** Blade pitch refers to the angle of the blades as they move through the air. Measured in degrees against a 180 degree horizontal plane, the blade pitch measures a ceiling fan's blade tilt. The angle of the blade tilt makes a considerable difference in how much air circulates throughout a room. The recommended blade pitch for residential settings is between 12-15 degrees.
- **RPM:** RPM refers to "rotation per minute", which determines the speed at which the fan blades spin. The faster the blades rotate, the more air it will move. However, the amount of air that moves also depends on blade pitch. To

achieve the best airflow, look for ceilings fans with at least five separate speed settings ranging from low to very high.

Motor

There are two kinds of motors that will determine how powerful and energy efficient your ceiling fan will be:

- **AC Motor:** AC stands for alternating current, and is the standard motor used to current a ceiling fan. It utilizes an alternating current.
- **DC Motor:** DC stands for direct current, and is a more advanced motor designed to be up to 70% more efficient and quiet than standard motors.

Lights

Some ceiling fans are equipped with lights, or can be used in conjunction with a lighting kit to provide overhead light and optimal air circulation. There are three common styles of lighting used with ceiling fans:

- **Dome Lighting-** A light is centered at the middle of the fan which is protected by a dome shaped cover.
- **Branched Lighting-** Two or more tiny spotlights are attached to the middle of the fan.
- **Dimmer Lights-** A dimmer function can be incorporated into a fan's wall or remote control to adjust the specific light level.

Controls

There are many different options available for ceiling fan controls: pull-cord controls, wall-mounted controls, digital controls, and wireless remote controls.

Ceiling Fan Size

From mini fans to expansive ceiling spans, ceiling fans come in a wide range of blade spans to suit any space. Choosing the appropriate size ceiling fan will not only complement your space, but will optimize the efficiency of your fan.

Blade Span

The size of the ceiling fan refers to the size of the blade span. Blade span is the diameter created by the fan blades while rotating. Typically, to measure the blade span of a fan with an odd number of fan blades, measure the distance from the center of the fan to the length of one blade, and multiply by two. To measure the blade span of a fan with an even number of fan blades, measure the entire distance between opposing fan blades. The size of the room will determine the size of the fan you select. It is crucial to measure the square footage of the space you are installing your fan in to ensure that it will fit the size of your space. The following chart shows the appropriate fan size for each size room:

Blade Span	Room Size	Room Suggestions
29-36 inches	Up to 75 sq. feet	Bathrooms, kitchenettes, utility rooms
36-44 inches	76-144 sq. feet	Bedrooms, dining rooms
44-52 inches	144-225 sq. feet	Bedrooms, living rooms, kitchens
52-60 inches	25-400 sq. feet	Bedrooms, dining rooms
More than 60 inches	Over 400 sq. feet	Great rooms, outdoor spaces

Ceiling Fan Installation

No matter which mounting option you select to install your ceiling fan, it takes great care to safely and properly mount a fan onto a ceiling. Before you install any ceiling fixture, be sure an outlet box is available in the ceiling before your installation.

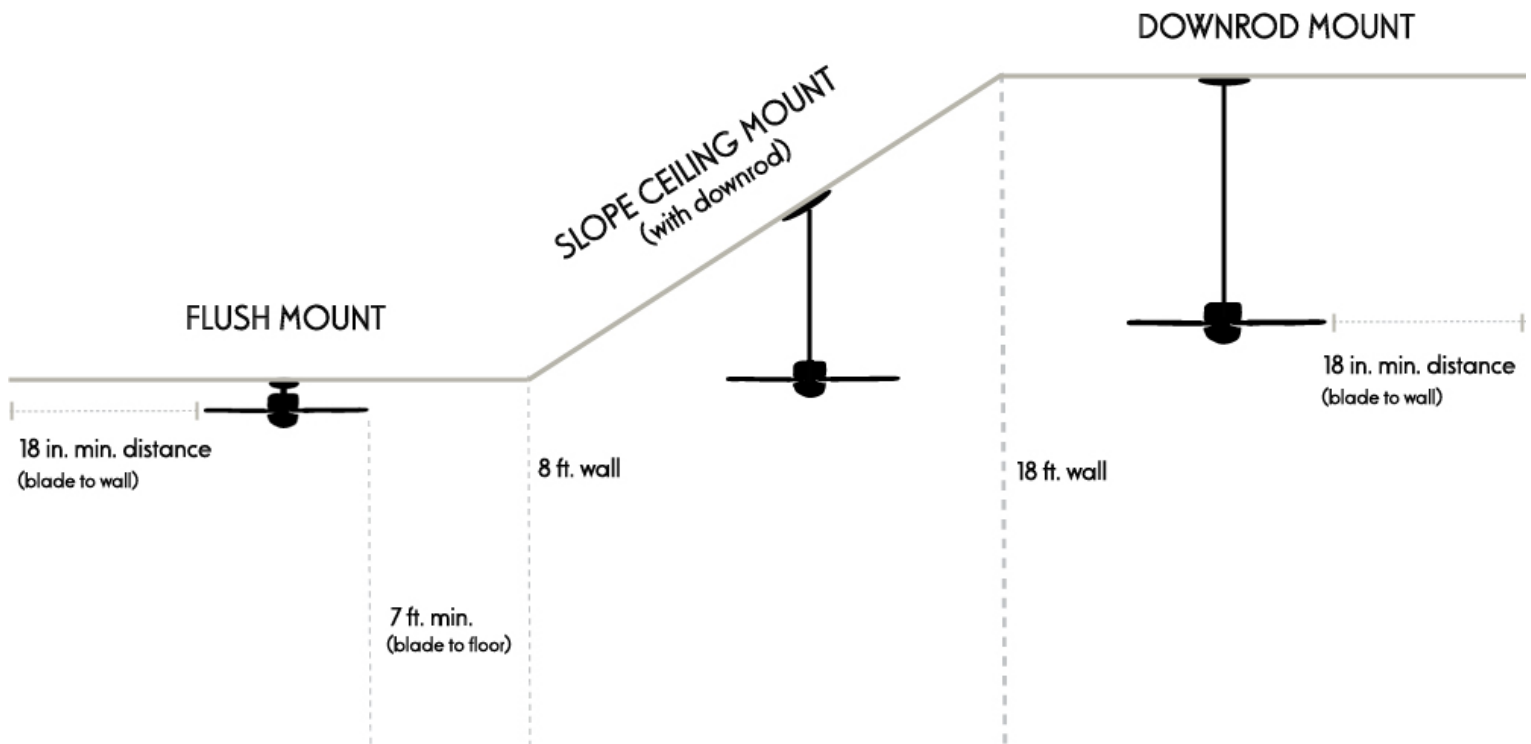
Most ceiling fans require a metal outlet box, so make sure the outlet box is constructed from metal and not plastic before beginning installation. Remember to turn off any live power from your junction box. Once it is turned off, you can begin the steps to install a ceiling fan, which loosely follow these steps:

1. Properly wire fan
2. Assemble downrod
3. Install lighting kit
4. Attach fan blades

Note: We always recommend consulting a professional electrician to ensure that your ceiling fan is properly installed.

Mounting Options

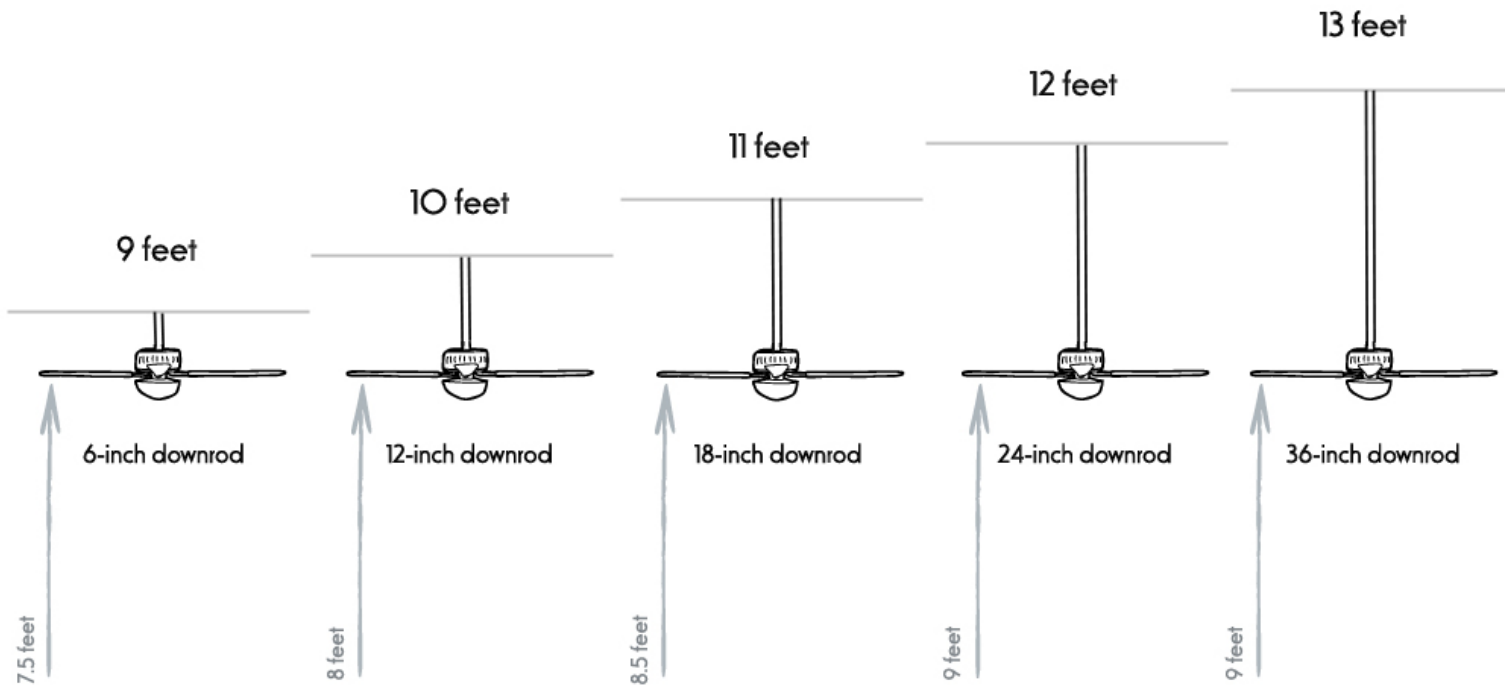
Different ceiling heights require different mounting sizes. Many ceiling fans are adaptable to multiple mounting options. Measure the height of your ceiling to determine the ideal mounting option for your space. Whether or not you're using a downrod, always leave a minimum of 7 feet between the fan and the floor. Always allow at least a minimum of 8-10 inches between the fan blades and the ceiling.



Flush Mount: Flush mounts ceiling fans are mounted flush to the ceiling, with no extra attachment. Flush mounts are ideal for rooms with low ceilings where a low profile is required.

Slope Ceiling Mount: Ceiling fans are typically meant to be installed on a flat ceiling. For sloped ceilings, such as attics, special sloped mounting adapters can be used in conjunction with your ceiling in order to properly hang a fan on ceilings with a pitch.

Downrod Mount: A downrod mount is recommended for rooms with vaulted or high ceilings that measure 8 feet or higher. Downrods help to lower a fan closer to the ground for optimal air circulation. The standard downrod length is 3 to 5 inches. Extra-tall ceilings may require a longer downrod, so make sure to check if a downrod included is the correct size needed, according to the specifications of your space. It is recommended that you allow your ceiling fan to hang 7-9 feet above the ground. The graph below shows the recommended length of a downrod for the height of your ceiling:

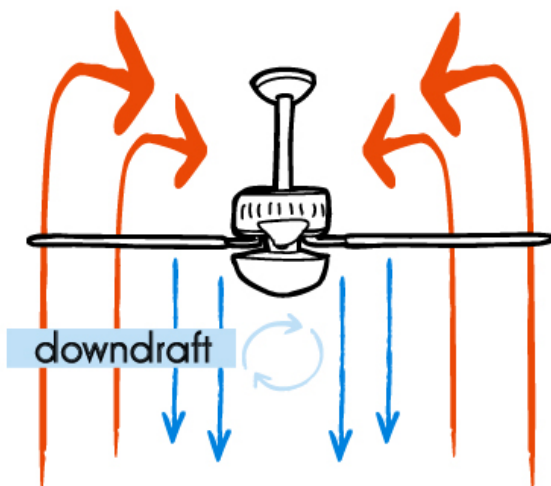


Note: If you are installing a light kit in conjunction with a ceiling fan, reduce the length of the downrod by a foot.

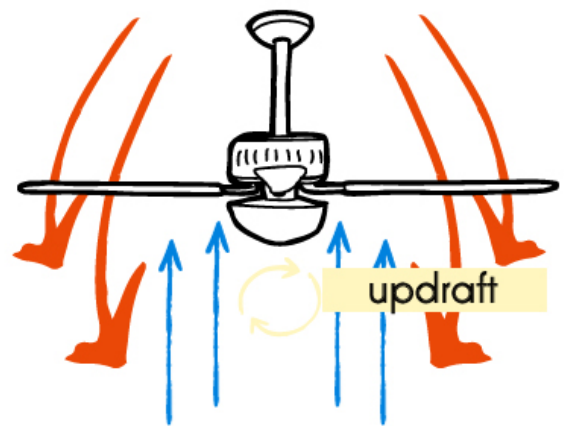
Seasonal Rotation

Since a ceiling fan's primary purpose is to circulate air in a room, the direction at which the blades spin will affect the airflow and temperature of a room. The adjustment of the direction of the blade rotation can drastically affect the comfort in a room, and can save money on AC or heating.

- Summer:** During the summer, it is ideal for air to blow directly down because it creates a wind chill effect that cools you down. The cooling wind chill effect can make a room feel up to 8 degrees cooler, and reduce the use of central or AC units. In the summer, ceiling fans should rotate counterclockwise to create a downdraft of cool air. The air evaporates perspiration effectively creating a cooling effect.
- Winter:** During the winter, pulling cool air up will make a room feel naturally warmer. Redistributing the warm air in a room will reduce heating costs as much as 15%. In the winter, ceiling fans should rotate clockwise at a low speed. The direction creates an updraft that pulls cool air up and pushes warm air down, making a room feel warmer.



SUMMER
counterclockwise



WINTER
clockwise

Ceiling Fan Ratings

Energy Star

An “Energy Star Qualified” ceiling fan has passed rigorous testing by the EPA that proves that it is highly efficient. Energy Star ceiling fans must come with a minimum 30-year motor warranty, a 2-year lighting kit warranty, and a 1-year components warranty. Investing in a ceiling fan with an Energy Star label allows you to minimize environmental waste, and offers better performance that will reduce overall utility costs. Energy Star Qualified fans are typically 20% more efficient than fans that have not been “Energy Star Qualified”.

UL Ratings

Most fixtures (ceiling lights, wall lights, outdoor lighting, and ceiling fans) sold in the United States have been tested and rated by Underwriters Laboratories (UL), an independent product safety certification organization. The UL listing indicates which environment a fixture is best suited for: dry, damp, or wet. Each location in your house is exposed to different environments which can affect the performance of your ceiling fan, so it is important to check the UL listing on a ceiling fan before purchasing. These ratings help you choose the right fan for an indoor space, a covered porch, or a semi-covered outdoor patio.

- **UL Dry:** Often noted just as “UL Listed” or “UL”, a fixture with a UL dry rating is best suited in environments that are not subject to moisture and dampness, such as indoors. It may be used in locations subject to temporary moisture or humidity, as long as there is adequate ventilation that will prevent the accumulation of moisture.
 - Dry locations include living rooms, dining rooms, bedrooms, hallways, and kitchens.
- **UL Damp:** A fixture with a UL damp rating can be exposed to some humidity or moisture, but should not be in direct contact with water. A damp location is an exterior or interior location that is periodically subject to condensation of moisture in, or adjacent to electrical components of a ceiling fan.
 - Indoor damp locations include bathrooms, utility rooms, and indoor pool areas.
 - Outdoor damp locations include covered patios and covered porches that are fully protected from water, including during storms.
- **UL Wet:** A fixture with a UL wet rating can be exposed to moisture, water, and humidity. Only fans and lighting marked “Suitable for Wet Locations” can be used in wet locations. Wet locations include both indoor and outdoor locations where water (or other liquids) may come into contact with electrical components of a fixture or ceiling fan.
 - Indoor wet locations include shower enclosures.
 - Outdoor wet locations include open-air decks and patios, uncovered porches, exterior walls, walkways, and gazebos.

Outdoor Fans v. Indoor Fans

Any fan may be installed indoors. However, outdoor fans are specially manufactured for outdoor conditions. Outdoor fans are constructed and designed with materials that can withstand temperature changes, humidity, and exposure to moisture. Look for the “UL Damp” or “UL Wet” listings to ensure that your ceiling fan has been certified for outdoor use. Outdoor ceiling fans should be at least 52 inches

Ceiling Fan Accessories

Ceiling fan accessories allow you to modify your fan to better enhance ventilation according to personal preference and space.

- **Angled ceiling adapter-** An angled ceiling adapter allows you to install a ceiling fan for sloped and slanted ceilings. The angled ceiling adapter attaches to an outlet box to help stabilize mounting from an angled surface.
- **Remote control-** A remote control allows you to adjust the comfort level of a fan without having to stand up. Digital and wireless controls can enhance the performance and flexibility of your fan, allowing you to control all of the fan’s functions: on/off status, speed, and direction of rotation.
- **Light kit-** A light kit allows you to customize your ceiling fan with the addition of an added light source. Always check

to see if your ceiling fan is compatible with a lighting kit. You can choose between LED or standard light bulbs.

- **Pull cord**- A pull chain, which is usually attached to the outlet box or motor, allows you to manually adjust a fan's speed or shut it on/off. It is also an added decorative element for your fan.

Ceiling Fan Types



Hanging Propeller

Most indoor ceiling fans feature a hanging propeller frame, which consists of fan blades (that resemble a plane's propeller) connected to a rod, which is attached to the ceiling. Hanging propeller fans are stationary and are intended to ventilate an entire room.



Directional

Directional fans can be turned at an angle to provide oriented ventilation to a specific area. Unlike hanging propeller ceiling fan models which ventilate an entire room from one location, directional fans can be used to ventilate distinct areas of a room. Oscillating fans are considered directional fans.



Rotational

A combination of a hanging propeller fan and a directional fan, rotational fans typically consist of multiple sets of blades that spin independently of each other. The sets of independent fans are connected to a hanging rod which rotates the sets of blades independently.