

How Does Central Air Conditioning Really Work?

This blog dives into how a central air conditioning system cools your home, and discusses all of the important components of the system.

WEST PALM BEACH, FLORIDA, USA, May 8, 2019 /EINPresswire.com/ -- Did you know that not that long ago, only 25 years ago, only 67 percent of homes in the United States had some type of [air conditioning](#) equipment? That includes both window-mounted air conditioning units, or central air condition. That meant that roughly a third of the homes in the United States had no air conditioning other than a window fan in the home.

Nowadays, that number has jumped to about 87 percent of homes with either window air conditioning units or central air. Indeed, air conditioning has dramatically changed the way we live and work, and even where we live and work.

For example, it is not likely that the city of Las Vegas would be what it is today without air conditioning. In a recent article about the famous "sin city," a building official said that it is unheard of for new homes to be built without air conditioning. Moreover, a Las Vegas realtor noted that, in her 28-year career selling houses, she has "never seen a house that didn't have air conditioning in Las Vegas."

With the significance of air conditioning in our homes and in our offices, it might be worth it to "look under the hood" a bit and learn about how air conditioning systems work. Given that the number of window-mounted air conditioning units has decreased considerably over the last several decades we will focus on central air conditioning.

This article will, therefore, give a brief glimpse at how a central air conditioning system does its thing, and then we will cover a few frequently asked questions about central air conditioning units.

If you are in the market for air conditioning solutions in West Palm Beach, FL or you are in need of air conditioning repair, and you are not sure where to turn, then you should reach out to [Aztil](#)



Air Conditioning at 888-729-8452. We have phenomenal customer service professionals who are ready to answer all of your questions, and schedule a consultation with a specialist who can do an assessment of your home so that you get the air conditioning system that is right for you.

The Science Behind a Central Air Conditioning System

When cool air is blowing out of your air vents, you might jump to the conclusion that the goal of air conditioning in general is to push cold air into your home. While cool air is being circulated through your home, the real science behind central air is not so much that cool air is being pushed into your house, but rather that warm air is being pulled out of the house, leaving only cool air to circulate.

Therefore, the real goal of any air conditioning system, and certainly a central air conditioning system, is to remove the warm, humid air from your house.

The Components of a Central Air Conditioning System

Typically, a central air conditioning unit is composed of an indoor and an outdoor unit. Also, the system consists of air ducts and registers. We will discuss each of the components.

1. Ducts

With a split cooling system, you will have what are called supply ducts and return ducts. As you would expect, supply ducts run through your home and distribute cool air from the air handler (the indoor air conditioning unit) into the rooms in your house.

Return ducts, by contrast, carry the warm air back to the air handler to be filtered and cooled again. When your ducts are the appropriate size, the ducts circulate and deliver the conditioned air evenly and quietly throughout the home.

2. Register

Each room in your house needs at least two grills. One grill is connected to the supply duct, and one is connected to the return. Those grills are called registers.

Normally, supply registers should be on or near the ceiling, and return registers should go near or on the floor.

3. Air Handler



The indoor unit – the air handler – is normally located in a closet or basement. It is near your furnace. The unit has a coil box with an “evaporator.” That evaporator allows for the cooling fluid (a refrigerant) inside a coil to evaporate and absorb heat. Once the heat is absorbed from inside your house, nothing but cool air remains to be circulated throughout the house.

4. The Compressor

The outside unit is normally at the rear or side of your house and it contains the compressor. This outside unit is what takes the warm air from your home and disperses it outside.

So, the heat absorbed from your home in the air handler is transferred to the refrigerant and then pumped to the outdoor unit. During that process, the air passes through the compressor.

The compressor’s job is to move the refrigerant throughout the system, because you keep reusing the refrigerant to cool the house. What happens is the refrigerant is compressed to a high pressure, moves to the outdoor condenser coil, and then the fan moves air over the condenser coil to cool the air. In so doing, the warm air in your house is pushed out, and refrigerant is pumped back indoors to repeat the process again.

How Long Does a Central Air Conditioning Unit Last?

Typically, the equipment warranty will be 10 years. If maintained properly, it is possible to have a central air conditioning system function for about 15 years before needing to replace it.

When Do You Know You Should Replace a Central Air Conditioning System?

If an expensive component, like an evaporator coil or condenser fails, then it is probably time for new equipment both inside and out. Replacing just one without the other is not recommended because it may impede efficient performance.

Air Conditioning Experts in West Palm Beach, FL Can Do the Install

If you need a repair, a tune up, or a whole new system, we welcome you to [contact us](#) at Aztil Air Conditioning. We are the experts in air conditioning in West Palm Beach, FL and the surrounding region. Contact us at 888-729-8452, or fill out our online contact form. Let us make sure you get the best possible air conditioning system in West Palm Beach, FL.

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