

## Central Heating and Cooling



Central heating and cooling systems are separate things, but they are matched to work together.

### Central Cooling

The most common central cooling system is a split system, which includes an outdoor cabinet containing a condenser coil and compressor, and an indoor evaporator coil, usually installed in conjunction with your furnace or air handler. The compressor pumps a chemical called refrigerant through the system.

#### How central cooling works

Once warm air inside your home blows across the indoor evaporator coil, its heat energy transfers to the refrigerant inside the coil. That transfer, in turn, “cools” the air. The refrigerant is pumped back to the compressor where the cycle begins again. The heat absorbed by the refrigerant is moved outside your home while cooled air is blown inside. Moisture that contributes to humidity is also condensed out of the air. Your cooling system is usually combined with your central heating system because they share the same ductwork for distributing conditioned air throughout your home.

### Central Heating

Central heating systems have a primary heating appliance, such as a furnace, typically located in your basement or garage. All furnaces consist of four main components: 1) burners that deliver and burn fuel, 2) heat exchangers, 3) a blower and 4) a flue that acts as an exhaust for gaseous by-products. Depending on your situation, region and needs, you can choose from heating systems running on either gas or oil as fuel, or a hybrid packaged system that can use both fuel types.

#### How central heating works

Combustion gases are generated by the burners in your furnace and passed through a heat exchanger. Air from your home blows across the heat exchanger to be warmed. It is then blown through a system of ducts to distribute around your home. During warm seasons your heating system works with your central air conditioning. Air is cooled as it's blown over your air conditioning unit's cooling coil, often attached to the air circulating fan of the furnace, and then sent through the same air ducts throughout your home.

Your local Trane Comfort Specialist™ can help you decide which central cooling and heating system is right for you. Trane matched systems can be customized with cooling and heating units that match your situation and let you choose from a range of energy efficiency.

Source: <https://www.trane.com/residential/en/resources/hvac-basics/how-does-a-central-heating-cooling-system-work.html>