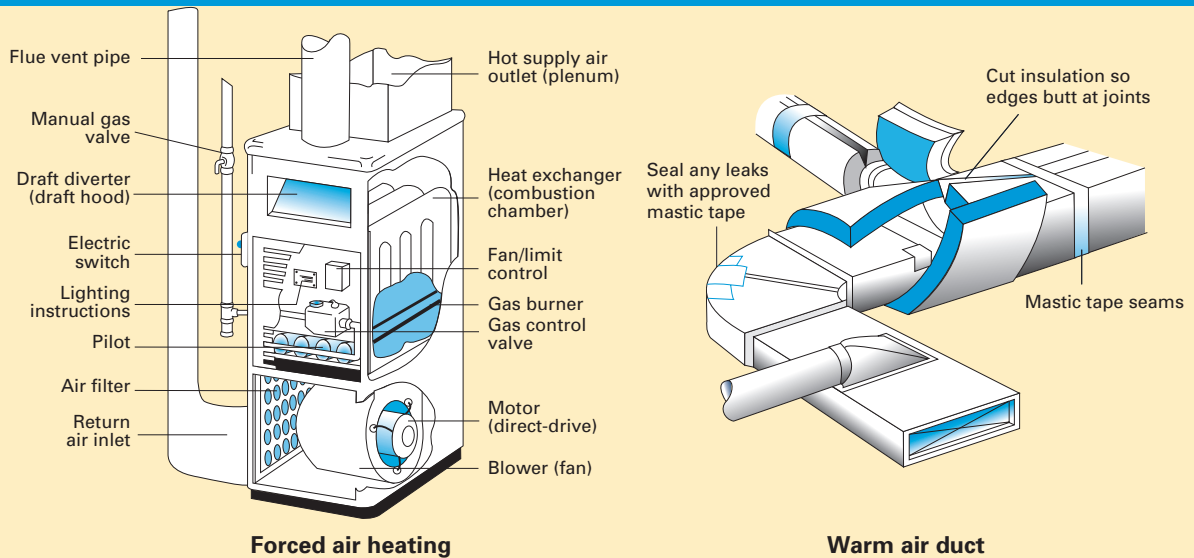


# Home heating systems



Your heating system is usually the largest energy user in your home, so choosing an energy-efficient unit is especially important. When shopping for a new gas heating system, compare efficiencies and installation costs of various models. Look for models that are “Design Certified” by CSA America to ensure safety, reliability and efficiency.

Most homes have central heating systems which generate heat at a central point and distribute it, usually by air, to each room in the house. With attractive, energy-efficient natural gas space heaters, logs and fireplaces available, many homeowners have gone to zone heating where individual heaters only heat the rooms being occupied while the central system maintains a reduced, minimal temperature throughout the house.

## Warm air heating systems (furnaces)

### Gravity

Heated air rises from the furnace through large supply ducts. Cool air returns to the furnace through cold air return ducts. The weight difference between warm and cool air keeps the air circulating.

### Forced air

Warm air is forced through supply ducts by a blower; it enters a room through registers or diffusers, then returns via a cold air duct to the furnace where it is filtered of dust and dirt particles, reheated and recirculated.

### Tips on ducts

Warm air ducts and cold air returns that pass through cold areas (such as an attic, unheated basement, crawl space, garage or unheated areas of your home) must be insulated. Before you insulate ducts, use mastic tape to repair any holes or cracks in seams.

## AFUE – Annual Fuel Utilization Efficiency

The Federal Energy Agency requires all furnaces be given an Annual Fuel Utilization Efficiency (AFUE). The AFUE tells how much heat the system extracts from the fuel it burns during a single heating season. The higher the AFUE, the more efficient the equipment. The minimum efficiency standard for new furnaces is 78 percent AFUE.

A high efficiency furnace has special features which raise the AFUE. These may include an electronic ignition, a power draft system, an improved burner, a vent damper, modulating or multiple-stage gas valves, variable speed blower motors, high efficiency heat exchangers, and secondary heat exchangers in the highest efficiency models.

