GreenHome INSTITUTE

Central gas furnace

Powered by natural gas, central furnaces are connected to a duct system which distributes the hot air throughout the house.

Room (through-the-wall) gas furnace

Powered by natural gas, these furnaces are not typically connected to a duct system. They generally heat the room they are in and occasionally, one or two surrounding rooms.

Propane (LPG) furnace

Powered by propane gas, a central furnace is connected to a duct system which distributes the hot air throughout the house.

Oil furnace

Powered by fuel oil, a central furnace is connected to a duct system which distributes the hot air throughout the house.

Electric furnace

Powered by electricity, a central furnace is connected to a duct system which distributes the hot air throughout the house.

Electric heat pump

Provides heating in the winter and cooling in the summer by absorbing and transferring heat between the inside air and the

outside air. A central heat pump is connected to a duct system which distributes the conditioned air throughout the house, while a minisplit (aka ductless) system may consist of several units throughout the house with no ductwork. If electric heat pump is selected for Heating System it will automatically be selected for Cooling System, and vice versa.

Minisplit (ductless) heat pump

A heat pump system typically consisting of 1 to 3 wall/ceiling units (diffusers) connected by refrigerant lines to a central outside compressor. The system does not require ducts, although some systems are ducted. Minisplit systems are usually found in new high efficiency homes, additions, and as energy efficient retrofits for homes without existing ducts.

Electric baseboard heater

Electric resistance convectors located along the baseboards in each room produce radiant heat. Typically each room has its own thermostat.

Gas boiler

Natural gas is used to heat water, which is pumped through pipes to radiators throughout the house (aka hydronic heat system), including radiant floor systems. A boiler system can be combined with the domestic hot water system to provide potable hot water in addition to space heating.

Oil boiler

Fuel oil is used to heat water, which is pumped through pipes to radiators throughout the house (aka hydronic heat system) including radiant floor systems. A boiler system can be combined with the domestic hot water system to provide potable hot water in addition to space heating.

Ground coupled heat pump

Ground coupled heat pump (aka: ground source or geothermal heat pump) provides heating in the winter and cooling in the summer by absorbing and transferring heat between the inside air and the underground. It may be connected to a duct system or a hydronic system for distribution of the heat throughout the house.

Wood Stove and Pellet Stove

The efficiencies for these two wood burning systems are assumed (60% and 78% respectively) so you will not need to enter efficiency values for them. The systems are also assumed to be either non-ducted or to have ducts that are within the envelope, so you will not need to provide duct information unless there is central air conditioning as well. If the wood heating system in the house is used as supplemental heat, enter two heating systems and enter the *Percent of conditioned floor area served by the system* based on the amount of heat provided by the wood fueled system. For example, if the house has both a propane furnace and wood heat, and the wood is used approximately 40 percent of the time, then the propane system would serve 60% of the conditioned floor area and the wood heat would serve 40%. Or, if wood heat serves part of the house and a different fuel heats another part of the house, the percentage of the areas served by each system should be based on the percentage of each area's square footage.

If the system installed is not listed here, choose the most appropriate system and assign the proper efficiency in the *Efficiency value* field.