

# Heating

## The Home's Largest Energy User



percent AFUE (efficient) furnace, only 65 cents worth of heat goes into your home. The other 35 cents is lost up your furnace flue or chimney. New ENERGY STAR gas furnaces have AFUE efficiency ratings as high as 97 percent. That is enough of an efficiency improvement to cut your space heating costs by more than 30 percent! The most efficient ENERGY STAR furnaces use a

secondary heat exchanger to extract still more heat out of the hot gases that use to be lost outdoors up the chimney. The secondary heat exchanger also cools the exhaust gases so they can be

vented horizontally through plastic pipes out the wall of your home.

High efficiency ENERGY STAR furnaces save energy by drawing combustion air from outside instead of heated air from inside the house. There is exhaust gas condensation that creates water from high efficiency furnaces that must be pumped out or drained to an approved location. Ask your contractor for furnace efficiency options and a recommended model.

### HOW ABOUT A REBATE?

Puget Sound Energy is offering a \$250 rebate to consumers who replace their existing gas furnace, convert to gas, or build a new home using an efficient ENERGY STAR furnace. Ask your heating contractor for the rebate details.

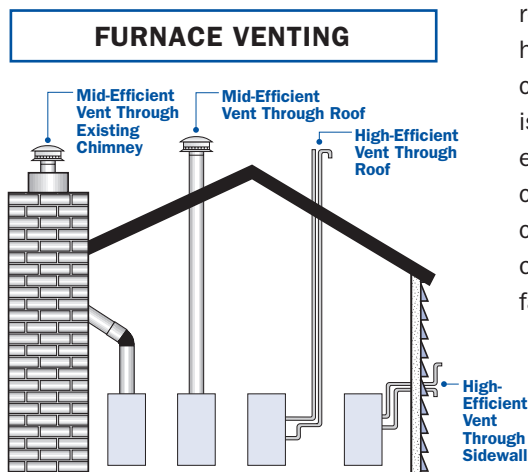
### ENERGY CODE REQUIREMENTS

Furnaces with 80 percent AFUE are required by code and cost less than high efficiency furnaces, but they cost more to operate. One advantage is they can be installed using the existing furnace vent. Your heating contractor or Puget Sound Energy can help you calculate the payback of a higher efficiency furnace. Your family's lifestyle, home size and the lower operating costs of an ENERGY STAR furnace can pay for itself in a few years-sooner with a \$250 rebate!

The comfort of you and your family depends on the quality of your home's heating system. If you have an older gas furnace you can get more heat for your money by upgrading to a more efficient model. If you do not have gas now, consider switching-gas is lower in cost than other fuel types.

### LOOK FOR ENERGY STAR® AND SAVE

A natural gas forced air furnace with warm air distributed through ducts is the most common form of central heating. Many older furnaces have Annual Fuel Utilization Efficiency (AFUE) ratings as low as 65 percent. AFUE is the way efficiency is measured in heating equipment. Think of buying one dollar worth of energy and using it in a 65



C O N T R A C T O R   R E F E R R A L   S E R V I C E



## NEW ADVANCED FURNACE FEATURES

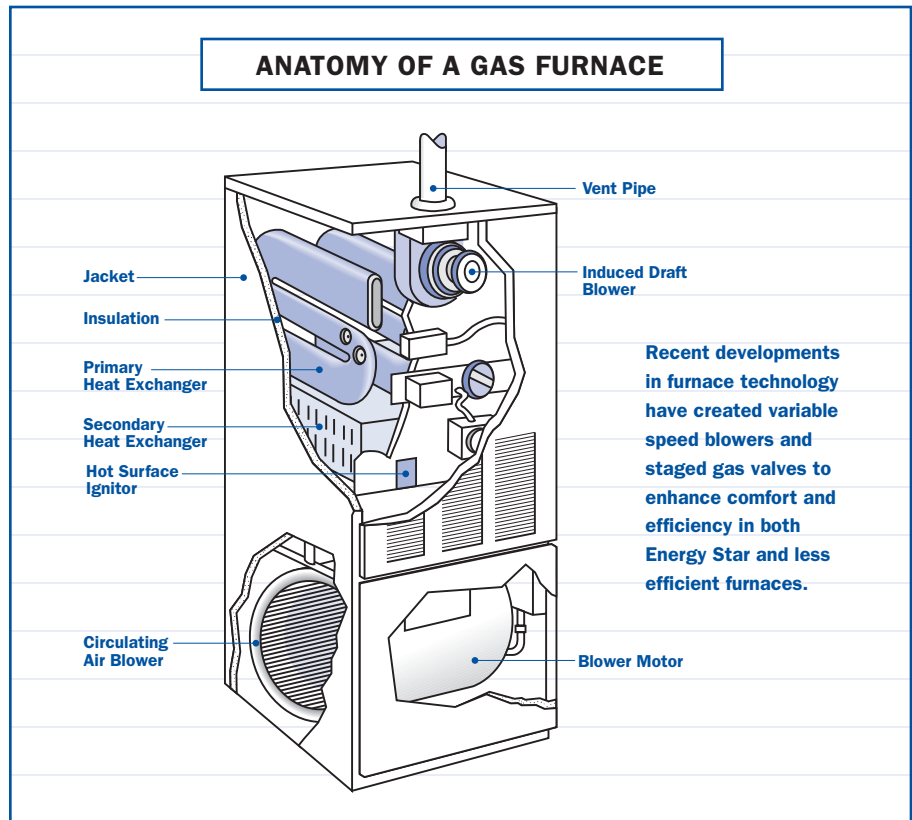
Recent developments in furnace technology have created variable speed blowers and staged gas valves to enhance comfort and efficiency in both ENERGY STAR and less efficient furnaces. Furnaces with these features start out on low fan speed and a low heat output setting for comfortable and efficient heating when the weather is mild. If the desired inside temperature is not reached quickly then the fan and burner increases to produce more heat faster.

## SPACE AND WATER HEATING “COMBO SYSTEMS”

A combo system starts with an efficient gas water heater that provides the energy source for both space and domestic water heating. When space heating is needed a pump circulates hot water from the water heater to an air handler coil (connected to ductwork), individual fan coil units installed in the wall of each room, or pipes in the floor or ceiling to radiate heat evenly. Combination systems can provide abundant hot water and minimize gas piping and venting since only one is needed compared to if you installed two separate pieces of equipment.

## GAS BOILERS

Gas Boilers, also called “hydronic” systems, heat water and circulate it to baseboard units, radiators, or use a series of pipes in the floor or ceiling to radiate heat evenly. Hydronic systems offer quiet operation, even heat, and a high comfort level in your home. However, they are usually more expensive to install than forced-air systems. You will need a separate forced air system for air filtration and air conditioning. High efficiency boilers reaching AFUE of plus 90 percent are commonly available.



## FIND THE “ZONE”

One thing to think about, especially if you have a large home, is creating heating “zones.” With proper zoning, you may be able to save on your annual energy costs and dramatically improve comfort. There are a number of ways to zone heating systems:

- Hydronic heating systems: install thermostatically controlled valves that allow hot water to flow only to the rooms that need heat.
- Forced-air systems: install thermostatically controlled dampers in the supply ducts.
- Install more than one furnace or boiler, each serving a specific area of the home.

## PROPER SIZING AND DUCTWORK

The system you choose should be large enough to keep you comfortable, but

not so large that it wastes energy and compromises comfort. A qualified heating contractor will size the furnace heating output by performing a heatloss calculation for your home. They should also check the delivery system throughout your home. Supply and return air ducts must be sized properly. A system that’s too big or too small won’t be efficient and won’t keep you comfortable. Often, ductwork develops leaks or may have fallen from supports. Ductwork should be checked thoroughly, repaired and sealed, and insulated if it is located in an unheated area.

## REFERRALS

For referrals to heating contractors near you, please call us at **1-800-562-1482 (option 2)** or visit our website at [www.contractorreferralservice.com](http://www.contractorreferralservice.com)