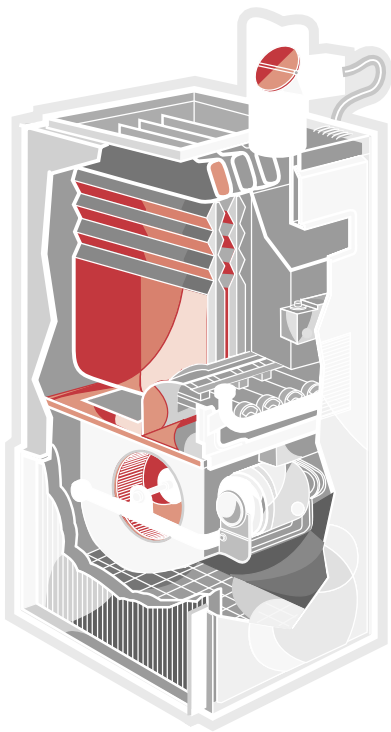




# Choose the Right Condensing Gas Furnace



**C**ondensing gas furnaces are the most energy-efficient furnaces available on the market today. They are an ideal choice as a new or replacement furnace for virtually any home serviced by natural gas. Here is why:

- Condensing gas furnaces have an annual fuel utilization efficiency (AFUE) of between 90 and 97 percent, compared with AFUEs of about 60 percent for old furnaces and of 78 to 84 percent for standard efficiency units. (AFUE is the yardstick for rating furnace efficiency.)
- Because of their increased efficiency, condensing gas furnaces use 33 to 38 percent less energy than old models and 10 percent less energy than a standard efficiency model. This helps conserve Canada's natural resources and reduces harmful environmental emissions that contribute to climate change, urban smog and other air pollution problems.
- Any extra cost associated with purchasing a high-efficiency condensing gas furnace will be quickly recovered through energy-cost savings. For example, a homeowner with annual gas costs of \$800 for space heating with an old gas furnace could save \$300 a year by switching to a condensing gas furnace with an AFUE of 96 percent.
- Some high-efficiency furnaces deliver even greater energy savings by using a variable-speed, direct-drive electronically commutating motor to run the air circulation fan. In homes where the fan is run continuously or for extended periods, such a motor can significantly reduce electricity consumption while providing better heat distribution.



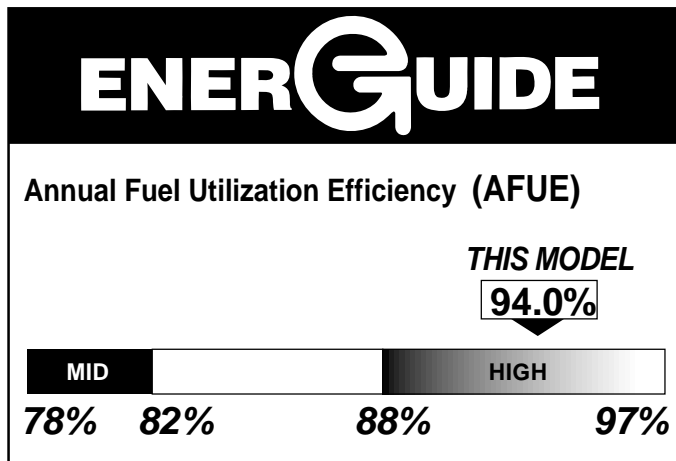
- Condensing gas furnaces are available in a range of sizes and can be installed in the same location as an existing furnace that is being replaced, by the same technicians, using the same ductwork.

### How can you tell the level of efficiency of a gas furnace?

Look for the EnerGuide label

To determine the efficiency level of a gas furnace, check its EnerGuide rating on the back page of the manufacturer's brochure – the higher the rating, the more efficient the model. Check where the EnerGuide rating is situated on the scale to see if the furnace you are buying is in the high-efficiency zone.

#### EnerGuide Rating



Even better, just look for the ENERGY STAR®. The symbol can be found on the furnace, on the packaging or in promotional or educational literature.

Only the top energy performers are eligible to use the ENERGY STAR symbol – residential gas furnaces must have an AFUE rating of 90 or higher to qualify. You may see the ENERGY STAR symbol displayed in various ways.



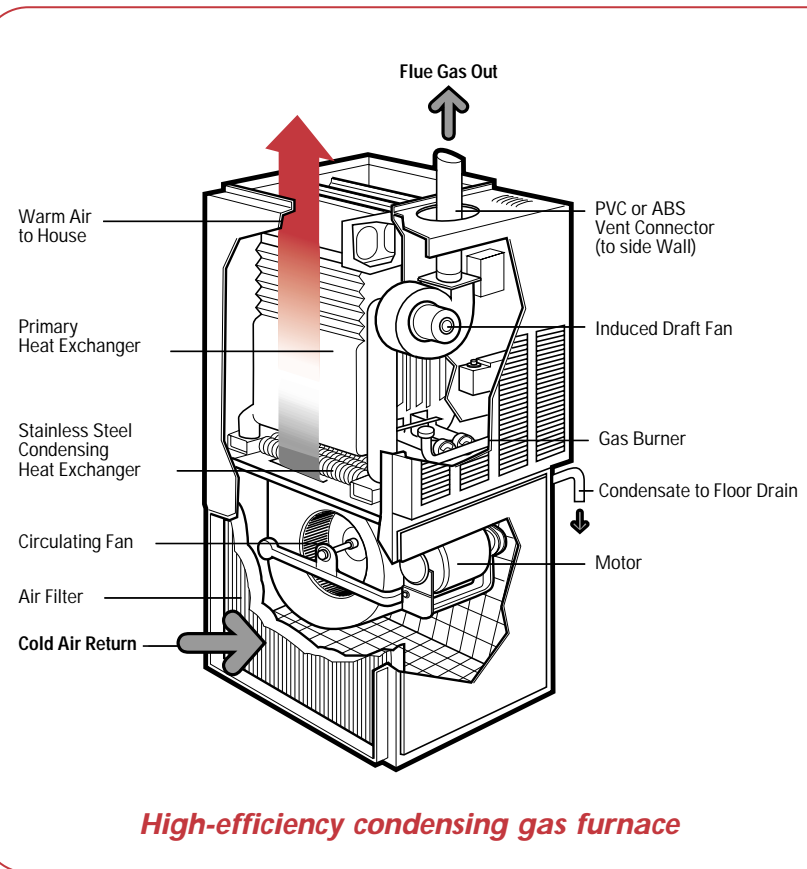
If you decide to purchase a high-efficiency furnace, you should also consider installing a programmable thermostat that will allow you to preset household temperatures for specific times of the day and night. As a general rule, you will save 2 percent on your heating bill for every 1°C you turn down the thermostat overnight. ENERGY STAR qualified programmable thermostats offer you the ability to separate weekday and weekend programs, each with up to four customized temperature settings, thereby maximizing your energy savings.

### If your furnace is old and will need replacing in a few years — why wait?

The savings in a new high-efficiency condensing gas furnace may be the best investment you can make. The technology for high-efficiency furnaces has been available for many years and is well proven. In 2001, one out of every two gas furnaces sold in Canada (over 100 000) were high-efficiency condensing gas furnaces. They are fast becoming standard equipment in new homes. Upgrading from an old furnace to a high-efficiency gas furnace not only increases the resale value of an existing home, but can also reduce the greenhouse gas emissions caused by the use of fossil fuels. The Government of Canada has issued a challenge to all Canadians to reduce greenhouse gas emissions. Choosing an energy-efficient condensing gas furnace is one way to meet that challenge.

### *Facts at a glance*

- *Ensure the AFUE is between 90 and 97 percent*
- *Look for the ENERGY STAR symbol*
- *Use an ENERGY STAR qualified programmable thermostat*
- *Determine the right size of furnace for your home*



### How the technology works

In a furnace, combustion gases generated by the burner pass across a heat exchanger and release heat before being exhausted to the outdoors through a chimney. High-efficiency furnaces use additional heat exchange surfaces made of corrosion-resistant materials to cool and condense the combustion gases (causing them to liquefy), thus releasing more heat for the home. The small amount of waste water produced by this process is piped to a floor drain.

This condensing process has another important benefit – it reduces the temperature of the flue gases to the point where they can be vented through a PVC or ABS plastic pipe out a side wall of the house. This eliminates the need for a chimney, which is a major source of heat loss in homes with old furnaces.

### Talk to a professional

Before making a purchase decision, ask a certified heating contractor to determine the right size of furnace for your home, taking into account recent technology developments, the heat loss and heat gain characteristics of your house, and other factors. An EnerGuide for Houses evaluation can help you identify possible measures to improve the overall energy performance of your home before you finally decide on the size of the unit.

### Need more information?

Visit our Web sites at [energystar.gc.ca](http://energystar.gc.ca) or [oee.nrcan.gc.ca/equipment](http://oee.nrcan.gc.ca/equipment).

For information about the energy, economic and environmental benefits of condensing gas furnaces, consult Natural Resources Canada's Office of Energy Efficiency's publication, *Heating with Gas*. You can view it on-line at [oee.nrcan.gc.ca/publications/infosource](http://oee.nrcan.gc.ca/publications/infosource) or order your free copy by calling 1 800 387-2000 (995-2943 in the National Capital Region area) or by writing to

Energy Publications  
Office of Energy Efficiency  
Natural Resources Canada  
c/o S.J.D.S.  
Ottawa ON K1A 1L3

For information about the EnerGuide for Houses evaluation, consult the Office of Energy Efficiency's Web site at [oee.nrcan.gc.ca/houses](http://oee.nrcan.gc.ca/houses).

*Leading Canadians to Energy Efficiency at Home, at Work and on the Road*

The Office of Energy Efficiency of Natural Resources Canada strengthens and expands Canada's commitment to energy efficiency in order to help address the challenges of climate change.

# Canada

*Aussi disponible en français sous le titre : Le choix d'un générateur d'air chaud à condensation alimenté au gaz*

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