

## **10 Questions to Ask Before Buying a High-Efficiency Furnace** *by Saskatchewan Office of Energy Conservation*

Thinking of buying a high-efficiency furnace? The following points respond to 10 questions consumers should ask as they shop for a new, efficient heating system.

### **1. How do I know if a furnace is really energy efficient?**

Look for furnaces with efficiencies of at least 94%. The best bet is to choose a furnace with an EnergyStar® label, which indicates the model is among the most efficient in its class.

### **2. What size of furnace will I need?**

Most forced air furnaces in Canadian homes are dramatically over-sized. High-efficiency furnaces should be sized 30-40% larger than the calculated heating requirements of the home, but no more. To estimate the size of furnace that your house requires, visit the following Canada Mortgage and Housing website: [www.cmhc.ca/en/burema/gesein/abhose/ce\\_048.cfm](http://www.cmhc.ca/en/burema/gesein/abhose/ce_048.cfm).

### **3. Does the furnace have a two-stage or multi-stage burner?**

Efficient furnaces with two-stage or multi-stage burners burn fuel at different rates. Low-fire settings, which are more efficient, provide enough heat to keep the house warm in most weather. In very cold weather, or when additional heating capacity is required to recover from night set back temperatures within a reasonable time, these furnaces will automatically shift to the high-fire setting to provide added warmth.

### **4. What size and type of furnace fan motor should I buy?**

One detail that is often overlooked when purchasing a high-efficiency furnace is the amount of electricity that the furnace blower fan motor will use. If it is over-sized, it could end up costing more to operate than necessary. This is especially true when the furnace fan is used with a central air-conditioning system or to continuously circulate air in the home. Ask your supplier to confirm that the motor is sized for heating, or heating and air conditioning; that it is sized to properly for the ducting; and that it will deliver heat evenly to all rooms. A DC variable speed motor is the most efficient type. Although DC motors usually cost \$500 to \$800 more than alternatives, they save money in the long run.

### **5. What is the best brand or model of furnace?**

The *Consumers' Directory of Certified Efficiency Ratings for Heating and Water Heating Equipment* compares various furnace models. It can be found on the Internet at <http://gamanet.org>, in the consumer education, product directories section. You will need to know the brand names and model numbers of the furnaces that you are considering to look up information. In comparing brands, remember to check the total energy efficiency, including both heating fuel and electricity use.

Since many furnaces perform similarly, differences in warranty details can be a deciding factor. Read the warranty details carefully!

**6. What kind of thermostat should be installed with my new furnace?**

Consider buying a thermostat that can be programmed to perform temperature setback over night and when the house is unoccupied for more than four hours. Energy savings of approximately 3% per degree Celsius setback are possible.

**7. Will modifications to the combustion air supply be required?**

In most cases, when installing a high-efficiency furnace the combustion air supply can be significantly reduced in size, depending on other combustion appliances that are in use in the home.

**8. Will the furnace be compatible with central air conditioning?**

Furnaces used in conjunction with central air conditioning need to circulate more air than those used solely for heating in order to ensure that the cooling coils do not freeze up. It is important that anyone providing you with quotes knows in advance that you have central air.

**9. Will a condensate pump be required?**

In some cases, a small electric pump will be installed with the furnace to pump furnace condensate to your sewer. Make sure to ask if a condensate pump will be required.

**10. What else should I ask for in my quote?**

Ask your contractor to quote on:

- Removing the old furnace from your home.
- Modifications to existing ductwork, if required.
- Any modifications to the wiring to the furnace.
- Installation of vents and modifications to the chimney.
- The cost of permits and inspections.

For a detailed article on this topic go to [www.oec.ca/images/HighEfficiencyFurnaces.pdf](http://www.oec.ca/images/HighEfficiencyFurnaces.pdf) or call the OEC Hotline at 1-800-668-4636.

The Office of Energy Conservation is a resource for information on cost-effective energy conservation initiatives and practices for Saskatchewan. More information about OEC along with other energy efficient articles can be found at [www.oec.ca](http://www.oec.ca).