

COLUMN FOR OCTOBER 8, 2005.
HEADLINE; BUYING A NEW FURNACE

Q; Our Heating Service Company told that our gas furnace, which is nearly 30 years old, should be replaced. We wonder if they are just trying to sell us a new furnace, what should we look for in a new one?

A: With the regulations in Ontario that govern heating and air conditioning companies, known as the Technical Standards and Safety Authority (TSSA), most technicians are more careful today. I would ask the reason why they recommend this. If the furnace has a gas issue or the heat exchanger is defective, it should be shut down by law. I spoke to the reader directly and found that their technician advised them the age deterioration of the overall furnace is suspect and the heat exchanger is very rusted. He is likely making a good call here before the winter heating season starts.

The first thing to do is have at least three companies give you a quote on a new furnace and have them put in writing. Do not be surprised if there are differences in the prices. Now take the information you have and contact a heating company that will do a heat loss calculation. You can expect to pay upwards to 300.00 for this service. Another suggestion is to have your local EnerGuide Inspector complete an EnerGuide for Homes review. This will also tell you where you can save money by improvements in insulation, caulking and possibly larger changes like windows for example. I also have a home calculation method you can use; if you e-mail me I will send you a copy.

Our reader is located in Belleville Ontario and has natural gas piped into the home. Choosing a gas furnace makes the most sense here. If you currently have electric heat I would stay with this for now. Given the major increases of oil and gas vs the presently locked in price for electricity in Ontario, electric heat this winter will likely be a good buy. Oil furnaces have dramatically improved over the past ten years. Improvements in the burners are the largest reason. Due to regulations a new oil furnace now requires a stainless steel liner due to the condensation in the oil exhaust gases. The majority of homes in urban areas are heated with natural gas and these furnaces have greatly improved since the mid 80's. Conventional Gas furnaces have been phased out and you now have a choice of either mid-efficiency or high-efficiency models.

Furnaces are rated in BTU. This stands for British Thermal Units. This is calculated by arriving at how much energy is needed to raise the temperature of water by one degree. A newer bungalow or a semi-detached home may need a furnace of 45-60,000 BTU where a larger home may need a 100,000 BTU furnace. This is where the heat loss calculation can help. There is a considerable price difference in the two designs. A high efficiency furnace can cost upwards to a 1000.00 more than a mid-efficiency model. For a number of years when the cost of natural gas and the furnace efficiency were calculated it did not make a high unit that cost efficient. It would take a considerable number of years to recover the initial outlay and there are mid-efficiency units that are only 5-8% less efficient than some high-e units. With the price increases in natural gas and oil coming this winter, this gap is closing. The other factor is the chimney. If you have an older unlined brick or masonry chimney you will be required to install a metal liner. This can add upwards to a 1000.00 to your quote and sometimes makes the high efficiency furnace a better buy.

The most difficult is deciding upon which furnace to buy. There is almost no comparative data available from independent sources. A reasonably good gas furnace has an average life span of 25 years. Generally speaking the longer the heat exchanger warranty the better the furnace. Pick one installed by a reputable heating company and do your homework here. Ask neighbours and friends, if you know any tradesmen in another construction skill, you would be surprised how well the "network" reputation gets around. If your home was inspected, contact your home inspector. One final tip, look into a high efficiency DC fan motor for your new furnace, especially if you have an HRV or like to run your fan for circulation. Regular furnace fans use a lot of electricity, where as a DC fan will use the equivalent of a 100-watt light bulb on low speed.

The answer to last weeks question was C) a float finish is a type of concrete floor finish. Now this week's

question. What is a jalousie window? Is it A) a fixed window in a heritage bay window. B) a shutter-like overlapping glass window C) a single hung window with a fixed interior storm sash. The answer in next week's column.

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