

COLUMN FOR AUGUST 6, 2005.

HEADLINE; UNDERSTANDING WINDOWS

Q; We are considering new windows for our home; it is about 40 years old. We added insulation to the attic and are considering new vinyl siding but we would like to do the windows first, any suggestions what to look for?

A; At one point not that long ago buying windows was easy, they were aluminium or wood, they were double glazed which meant they had two pieces of glass that were not insulated and they leaked, mostly heat, but often water around the frames. Today windows are assembled using a number of different materials that by experience have shown to be the most compatible for our environment. Vinyl framed windows have made great strides over the past few years. It is even possible to get them painted from the factory, the days of strictly white vinyl windows is gone. Solid wood frames clad in metal is popular in the higher end windows. All windows today use insulated glass or thermo panes as they are known. This means they have two layers of glass that are formed together using various materials to form a spacer between the glass. Depending upon the manufacturer they may use varied materials here. Aluminium was the most common and is still in use today. We know however that this metal frame conducts heat and more manufacturers are going to plastics to stop the condensation that is know to happen to these thermal units. There are two main features that you will see in most of today's windows. Argon Gas is injected to displace the air that is present between the layers of glass. This gas offers more insulation value than dry air and is used to increase the R factor in new windows. The other common feature is called Low E. This is the short form for Low Emissivity and it refers to the ability of the glass to reduce heat loss. This feature is actually a clear coating that is applied to the glass. This coating can, depending upon the window, lower the heat loss by upwards of 30-40% per window area. It will also make a dramatic effect on the sunlight damage to your furniture and carpets. Some Low-E windows advertise reductions of 60-75% in UV ray invasion. The catch here is this feature can add upwards to 20% of the cost of the window vs. a standard thermo pane. If you cannot afford these features in all windows, try to at least do your northern exposure, as this is your greatest heat loss. There are a number of different kinds of window styles available. Sliders, Awning, Single hung, Double Hung and Casement with some use of fixed windows in larger installations. I admit to a preference here, casement windows seal the best. This crank style allows the sash portion of the window to be locked tight against weather-stripping on the frame. Some Awning style function the same way too.

All windows are manufactured to some standards, generally the basics as set out by the Window Manufacturers Association. The Canadian Standards Association and in the USA, the National Fenestration Rating Council do independent ratings on windows to test for wind, rain penetration, quality of materials and assembly. Log on to csa-international.org or nffc.org to view their current standards and testing.

The majority of windows today are considerably better built than they were ten years ago. The largest area of concern is the installation, was it done professionally? I often see where incorrectly sealed or poorly fitted windows lead to moisture decay in the frame and in some cases, outright water invasion. This commonly goes on undetected for years. Generally I see the window openings in a renovation job cleared to the old framing. The new window is set in using the sealing flange, pump in the spray foam, trim out and walk away. This is far from the best method. There are a number of window flashing kits now on the market and I recommend our reader give these a good look. Some of these supply a metal and self- adhesive watertight membrane as part of the installation kit. Use of the newer polyurethane caulking is also recommended. You would be surprised how often most home inspectors find water damage around windows, especially in the corners. One program that crossed

my desk recently is the Window Wise Certification for Installers. This program trains installers and offers a certification. They state that they do random checks on finished installation and offer a list of windows that they recognize as acceptable. They recognize the CSA A440 standard and their own certification covers window assembly, features and overall design. Go to windowwise.com for further information.

One final tip for our reader, he mentioned considering vinyl siding. Recently a sample of an insulated foam liner that goes behind standard vinyl siding arrived at my office. This may be worth a look, once I have more info I will include in a future column.

Now the answer to last week's question. What is angle bead? The answer was B) a small moulding placed on an external plaster angle. Now this week's question. What are girths? Are they A) blocking fitted between framework for alignment. B) A type of decorative base used for built-up gingerbread mouldings C) a method separating different levels of foundation footings. The answer in next week's column.

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