There's a lot more to glass than meets the eye

The average homeowner will often overlook the potential benefits of today's glass technology and sometimes the sales person just doesn't want to complicate the order - so don't miss your opportunity to improve the quality of your home environment.

With the right glass option, you can significantly increase the comfort and functionality of your home. This infographic summarizes the growing list of available and developing glass options being offered by commercial and residential window manufacturers.

Note: although some options may only be available for commercial applications, they are slowly becoming available for residential use as well. No such thing as silly questions - be sure to shop around.

Energy cost reduction



• LoE (Low-E) glass - Low emissivity or Low-E glass is a special type of glass designed to reduce the amount of radiant heat that passes through the glass. It effectively reflects heat back to its sources to keep a home cooler in the summer and warmer in winter.

LoE-366 which has a slight tint to it is typically used in the Ottawa area. Other levels of performance are available to provide flexibility in comfort choices.

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• Visible Transmittance (VT) - is the amount of light (expressed as number between 0 and 1) able to pass through a material without being reflected or absorbed.

High transmittance glass (larger unit of measurement) allows more light in and may help reduce the cost of electrical lighting, whereas glass with low transmittance may result in a slight increased in energy cost for lighting.

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Protection from the sun

• **Glass tints** - factory-tinted glass contains dyes and pigments that are mixed into the glass during manufacturing. These additives darken the colour of the glass and prevent some visible and ultraviolet light from passing through the window.

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• LoE (Low-E) glass - Low-E windows can reduce UV rays that enter the home to help reduce fading on furniture, window treatments and flooring. With the right configuration, it can also limit the amount of light coming in, thus making a room more pleasant to be in.

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• Electrochromic glass - dynamically changes varying levels of tint in response to the sun brightness to provide unobstructed outdoor views and enhanced occupant comfort. These products provide exceptional control of daylight, glare and energy use without the need for traditional solutions, like blinds, shades or low-e glass.



Home security

- Glazing (glass panes) the more panes of glass in a window, the more difficult it is to break for the purposes of forced entry into a home. Dual pane is now the standard set by most manufactures, but triple and quadruple is also available from some manufacturers.

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• Laminated glass - made by bonding one or two layers of glass with a layer of resin, commonly polyvinyl butyral (PVB). Produces a compact glass that holds in place rather than shattering when hit - very difficult for burglars to get through.

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• **Tempered glass** - about 5 times stronger than regular glass, the manufacturing process involves heating, high-pressure, and chemical treatment procedures that toughens the glass - very difficult and loud to break.

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Home privacy

• Obscure Glass - Obscure glass is a textured glass that

is used for light diffusion or decorative effects.

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- Frosted Glass Frosted glass the ability to reduce visibility through the glass and is distinguished by its white opaque frosting.
- Interior Blinds mini blinds have been incorporated between pane in glass for years - typically for patio doors, but some (very few) manufacturers also put them in windows.

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• Noise Reduction - Although its just not possible in today's technology to create a totally soundproof glass window, there are several ways manufacturers can help reduce noise from coming into or out of the home. Ask about noise reduction through laminated glass, triple pane glass, dissimilar glass panes.



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Window maintenance

- The hardness of glass With the introduction of lead (about 10%) and other substances in the mixture for glass (hard glass). Hard glass will not scratch easily whereas pure glass (soft glass) will. Note: the lead in glass is not considered dangerous, as it will not leach.
- Glass is ageless Although glass will get dirty, it won't degrade or stain through sun exposure, chemicals or other surrounding environmental effects. Even dirt is not an issue with the self-cleaning glass option a special coating that stops dirt particles from sticking to the glass dirt can easily be washed away by rain or a garden hose.

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• Reduced condensation - to avoid seasonal staining that results from condensation, try get the most insulated glass units as possible - thicker glass, multi glazes and the most efficient gas fills will help, but even the best insulated windows can produce some condensation.

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Want to know more

Buying windows can be as easy, or as complicated as you want. It's up to you as a homeowner to ensure that you purchase durability that will will maximize comfort, security and cost-saving energy efficiency. It's well worth doing a little homework and asking lots of questions. Keep in mind, depending on your desired outcome, each room in your home may require a different solution.

For more information, please talk to one of our window associates. Give us a call or send us a request through our contact page, we'd love to talk to you.

Visit our showroom: 6270 Perth St., Richmond (Ottawa)



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