



## WHAT YOU NEED TO KNOW ABOUT INSULATING GLASS

The history of Insulating Glass Units or I.G.s dates back to the 1960's when the idea of saving energy became popular. An insulating glass unit is comprised of multiple panes of glass sealed together with airspace between them. It is the airspace that gives the glass its 'insulating' properties by separating the outside pane from the inside pane.

Insulating glass units are constructed of two to three panes of glass. This glass can range in thickness from 3/32" to 1/4". Clear glass is most common; however tinted glass, Low-E glass, and combinations of all three are popular as well. The glass is then separated by a spacer. The spacer is commonly made of aluminum and filled with a desiccant to help prevent moisture from building up in the unit. Sealant is then applied to the perimeter of the unit to insure it is air tight. The sealants are traditionally a hot melt butyl or polysulfide product. Once the insulating glass unit has been fabricated and sealed it cannot be taken apart without destroying it.

All insulating glass units will fail over time. The constant expansion and contraction of the unit due to changes in temperature will cause eventual failure of the seal. When the unit is no longer sealed, or air tight, you may notice condensation between the panes. This condensation on the inside of the glass is a clear indication that the insulating glass unit is failing. Besides being unsightly, a failed or failing insulating glass unit loses its energy efficiency.

Solon Glass Center replaces around a thousand insulating glass units every year. Insulating glass replacement is usually a more cost effective method than replacing an entire window. Solon Glass Center will come to your home, measure your specific insulating glass unit, and have a new unit manufactured to the same specifications as your existing glass. Our expert technicians will disassemble your window frame, remove the old insulating glass unit and install the new insulating glass unit into your frame. Depending on the window construction, some minor touchup painting may be required after the new glass is installed.

When considering insulating glass replacement, please keep in mind the following:

- Glass manufactures are always changing the formulations of Low-E glass. As a result, perfectly matching an older, Low-E, insulating glass unit is almost impossible. Solon Glass will attempt to match your existing glass as closely as possible, but a perfect match cannot be expected.
- Insulating glass units may contain an internal grid pattern, or muntin bars. Solon Glass Center can usually match the style, color, and layout of the muntins inside your existing insulating glass units. Flat muntin bars typically measure 1/2" or 5/8" wide. Contour muntin bars typically measure 11/16" wide.
- If your existing glass is Low-E, we will quote Low-E glass. Low-E glass costs approximately 20% more than uncoated glass. Unless the existing glass is Low-E, it is usually not financially beneficial to install Low-E glass into sashes not originally equipped. The new material will not only look different than the other windows, but the energy savings will be negligible.
- Due to changes and updates in the Ohio Residential Building Code, Solon Glass may have to use tempered glass when replacing an existing insulating glass unit. Tempered glass is stronger and safer than traditional glass because it shatters into tiny pieces if it breaks. Tempered glass costs more than non-tempered units.