



# be comfortable

## The Inside Story

When It Comes to Window Performance,  
the Differences Are Clear

A sunny breakfast nook, a great picture window or a soaring skylight. These are just a few of the design flourishes that can make an ordinary home extraordinary ... and they all share one thing in common: their ability to brighten your living spaces with abundant, beautiful and natural sunlight.

Whether you're building a new home or renovating an existing one, your choice of windows represents one of the most important decisions you'll make ... and not just for their looks, but for their ability to save energy (and save you money) as well.

That's why, when it comes to shopping for windows, it helps to know the inside story.

## A Look Inside Your Windows

Windows are made from several parts, but the heart of any window is the insulating glass (I.G.) unit. This component is composed of two (or three) panes of glass separated by a spacer that holds the panes together, creating an insulating air space. This air space, which is usually filled with air or argon gas, functions as a thermal barrier. In the winter, this insulating barrier keeps the heat inside your home from escaping to the outdoors.



The performance of the spacer in the I.G. unit is critical because it helps determine the energy efficiency of your window as well as its longevity.

It is also the reason that you should always insist that your new or replacement windows feature the Intercept "Warm-Edge" Spacer System by PPG.

### The Benefits of Intercept "Warm-Edge" Spacer

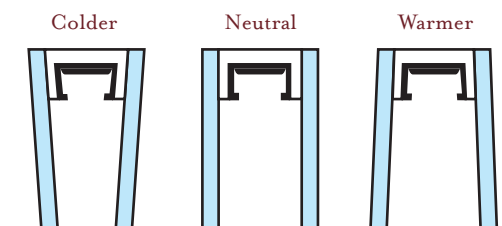
Since PPG introduced Intercept "Warm-Edge" Spacers in 1992, they've become, by far, the industry's most trusted and proven spacer system. In fact, the Intercept Spacer System is now at work on more than 600 million windows in North America, a number that far outpaces any other window spacer technology.

When you consider the advantages of the Intercept Spacer System, it's easy to see why it's so popular among homeowners and window manufacturers.

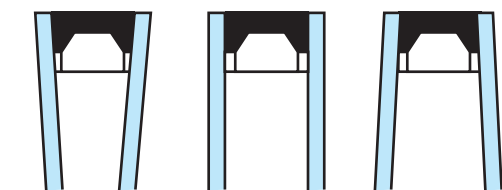
One major reason for the effectiveness of the Intercept Spacer System is the simplicity of its design. The Intercept spacer features a unique U-channel design that creates a powerful thermal barrier that reduces the amount of heat loss conducted through the window and more effectively retains the insulating argon gas so critical to your window's performance.

Another major advantage of the U-channel design is its flexibility. Under normal weather conditions, I.G. units expand and contract according to temperature changes. In ordinary I.G. designs, the sealant that holds the components together absorbs the stress of the continuous expansion and contraction. This eventually causes the sealant to fail and allows the insulating argon gas to escape.

With the Intercept system, the U-shaped metal spacer expands and contracts instead. This enhances the stability of the sealant and allows the I.G. unit to maintain its insulating integrity.



Intercept spacers flex during temperature changes.



With ordinary aluminum spacers, the sealant flexes which can impair insulating capabilities.

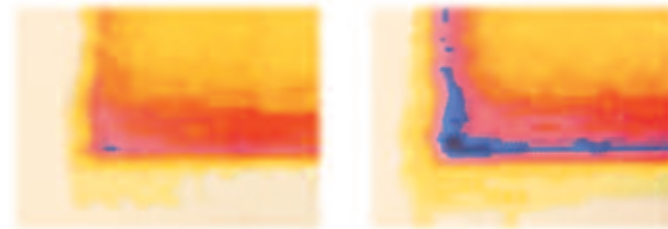
## They Look Good. You Feel Good.

### Select PPG Glass with Confidence

You can be comfortable with your choice of PPG residential glass. PPG has been at the forefront of residential glass technology and innovation since 1883 and has continued to pioneer many of the glass technologies you'll find in some of the world's best windows.

Contact your window dealer or call 1-888-PPG-GLAS (1-888-774-4527) for a list of window manufacturers that use Intercept "Warm-Edge" Spacers by PPG. More information for homeowners and construction professionals is available on our web site, [www.ppgglass.com](http://www.ppgglass.com).

The Intercept Spacer System helps keep your glass warmer in the winter. Want proof? Simply compare the two images below. The first is a thermograph or "heat picture" of an I.G. unit manufactured with the Intercept Spacer System and the second is an I.G. unit made with a popular spacer system.



The thermograph on the left shows the superior insulating capabilities of the Intercept "Warm-Edge" technology. The ordinary window on the right shows the transmittance of cold air, as indicated by the blue color.



Intercept "Warm-Edge" technology also reduces condensation problems around the perimeter of your window. The Intercept window (left) shows no condensation, unlike the ordinary window on the right.

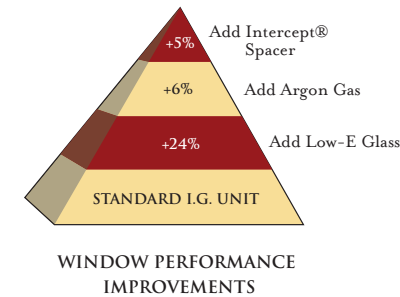
#### CONDITIONS

- Cold side temperature = 0°F
- Room side temperature = 72°F
- Room side relative humidity = 25%

### Intercept Spacers Add Up to Big Energy Savings

Energy costs are rising, and fast! That means bigger winter heating bills and summer cooling bills. That's why it pays to insist on windows made with Intercept spacers, which can help improve the energy efficiency of your windows by 30% or more.

As you can see from the illustration, the use of Intercept spacers alone enhances the energy performance of your windows by 5%, but there are other options available to make your windows even better.



For instance, using Low-E (low-emissivity) glass can improve your windows' winter and summer energy performance by as much as 24%. Low-E glasses — such as Solarban® 70XL, Solarban® 60, Sungate® 500 and Sungate® 100 glasses — from PPG are specially coated to retain your winter furnace heat and to filter out the sun's summer heat. Low-E glass also helps protect your furniture fabrics by reducing the amount of ultraviolet light entering the home through your windows.

The air trapped between the panes of glass in a double-glazed window also serves as an insulator. However, replacing air with gases such as argon and krypton, which are much better insulators, can boost the energy efficiency of your windows by as much as 6%.

#### There is No Substitute

When it comes to selecting windows for your home, demand the quality and performance you deserve by looking for windows featuring Intercept "Warm-Edge" Spacers.



It's What to Look for in a Window™



PPG customers use our products to manufacture Energy Star-qualified windows, doors and skylights.

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INSULATING GLASS  
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Since 1883

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