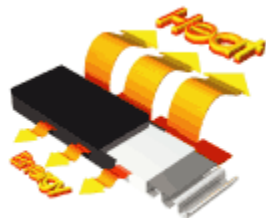


# Warm Edge Spacer Technology

The layers of glazing in an insulating unit must be held apart at the appropriate distance by spacers. Because of its excellent structural properties, window manufacturers started using aluminum spacers in the 1960's and 1970's. Unfortunately, aluminum is an excellent conductor of heat and the aluminum spacer used in most standard edge systems represented a significant thermal "short circuit" at the edge of the insulating glass unit (IGU), which reduces the benefits of improved glazings. In addition to the increased heat loss, the colder edge is more prone to condensation.

All windows manufactured by Jantek Industries utilize DuraSeal™ the latest warm edge spacer technology that reduces thermal conductivity while improving surface and corner appearance over other insulating glass spacers. Our innovative warm edge spacer system saves energy by insulating the frame and edge of the insulated glass unit making the unit much less conductive around the perimeter.



Duraseal™

Warm edge spacers have become increasingly important as manufacturers switch from conventional double glazing to higher-performance glazing. For purposes of determining the overall window U-factor, the edge spacer has an effect that extends beyond the physical size of the spacer to a band about 2-1/2 inches (64 mm) wide. The contribution of this 2-1/2-inch-wide "glass edge" to the total window U-factor depends on the size of the window. Glass edge effects are more important for smaller windows, which have a proportionately larger glass edge area. For a typical residential-size window (3 by 4 feet/0.8 by 1.2 meters), changing from a standard aluminum edge to a good-quality warm edge will reduce the overall window U-factor by approximately .02 Btu/hr-sq ft-°F.

A more significant benefit may be the rise in interior surface temperature at the bottom edge of the window, which is most subject to condensation. With an outside temperature of 0°F, a thermally improved spacer could result in temperature increases of 6-8°F (3-4°C) at the window sightline--or 4-6°F (2-4°C) at a point one inch in from the sightline, which is an important improvement. As new highly insulating multiple layer windows are developed, the improved edge spacer becomes an even more important element.