

CS ULTRA SPACER™



Built to Work. Built to Last

CS Ultra Spacer™



What is a Window Spacer?

Every window unit is comprised of two (and sometimes three) panes of glass separated by a spacer that holds the panes together, creating an insulating air space where a safe gas such as argon or krypton can be added to protect the home from heat loss and outside elements. The spacer is an important aspect of the window as it seals the two panes of glass together and helps control the temperature at the edges of the window.

The standard solution for insulating glass units (IGU's) has been the metal spacer dating back to the 1960's. The metal spacer was easy to manufacture and install due to its rigid nature, easy to assemble on a manufacturing line.

Technological and manufacturing advancements lead to alternative window spacer products including the development of a non thermally conductive foam spacer.

50% of the
110 million U.S. homes have
single pane windows.
Inefficient glass contributes to
up to 35% of energy wasted in
buildings and 10% of total
carbon emissions in the U.S.
annually.

Window Spacer Comparison



CS Ultra Spacer



Metal Spacer

*In cold climates,
energy-efficient, dual-pane
windows with Low E coatings
can reduce heating bills
by as much as*

34%

*over single pane
windows.*

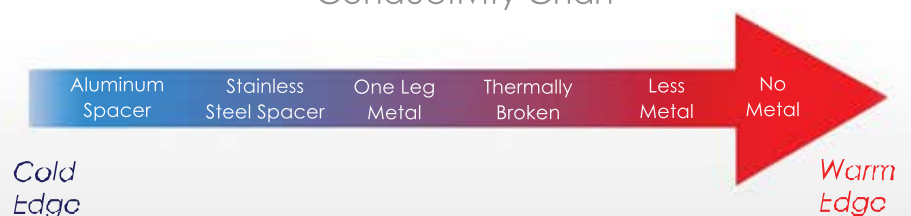


The Foam Spacer Difference...

CS Ultra Spacer - No Metal
Dura Platform - Less Metal
Intercept - One Leg Metal
Stainless Steel Box - Better
Aluminum Box - Worst

There are 5 major types of spacers (and over 20 worldwide). The majority are made using metal. The CS Ultra Spacer™ does not contain metal which creates a non thermally conductive glass edge.

Conductivity Chart



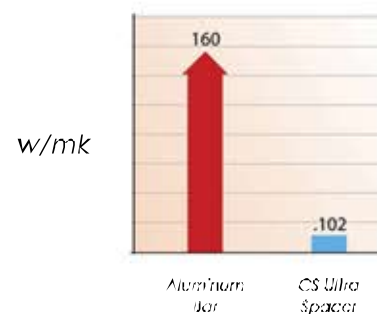
CS Ultra Spacer™



Warmer Edge = Less Condensation

A metal spacer conducts energy. This means that during hot and cold temperatures a metal spacer will become either hot or cold to the touch depending on the climate outside. This affects the overall performance of your window and is especially troublesome in colder climates.

Up to 1500 times lower thermal conduction



Aluminum
Bar



CS Ultra
Spacer™

CS Ultra Spacer™



Condensation can lead to more than bacteria and mold. It can increase the likelihood of fungi, viruses and mites that cause respiratory infections, allergies and asthma.



Full Metal

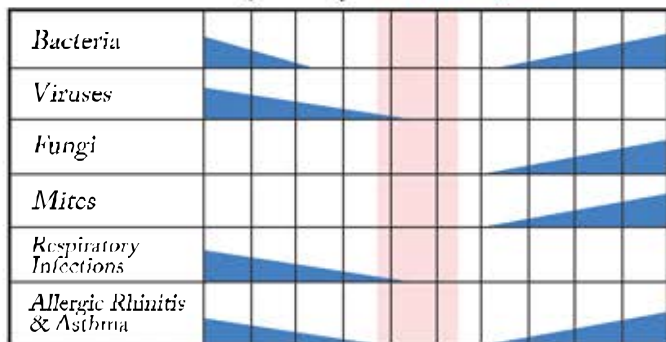
Less Metal

No-Metal
CS Ultra
Spacer™

Condensation can begin in conventional full metal spacers

The CS Ultra Spacer™ dramatically reduces condensation levels and helps maintain Health Smart humidity levels

Optimum zone-desirable humidity level to prevent mold and bacterial growth



Percent relative humidity

Inside Temperature: 20° F 21° C / Outside Temperature: 0° F -10° C
Source: Health Canada

Flexible Seal = Stronger Seal



Stress on seal
resulting in seal failure

Flexible spacer
reduces seal failure

CS Ultra Spacer™



Benefits For Your Home

Cost Savings

Windows made with CS Ultra Spacer™ technology help block inside or outside heat from passing through window systems. You will use far less energy to heat and cool your home by preventing heat transfer through your window, which in turn gives greater savings on energy bills.

Noise Reduction

CS Ultra Spacer™ technology helps keep it quiet inside; whether it is airplanes flying overhead, noisy cars passing by, or loud construction work on a Saturday morning! Metal spacers transmit far more sound compared to the CS Ultra Spacer™ due to foam spacer's patented closed cell polymer foam, which is yet another reason the CS Ultra Spacer™ is the right choice for comfort and efficiency.



In warm climates, energy-efficient, dual-pane windows with Low-E coatings can cut cooling costs by

38%

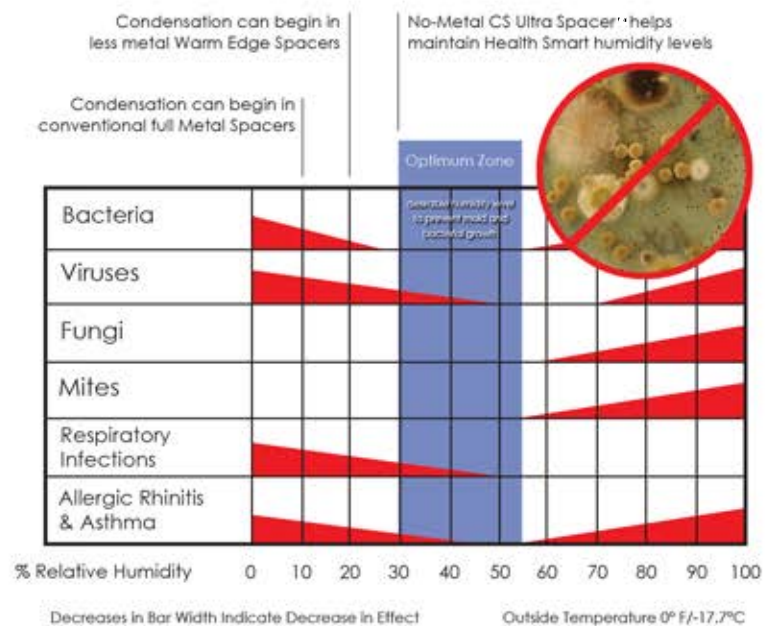


Worry-free Maintenance

CS Ultra Spacer™ technology means that your windows are more than up to the challenge when Mother Nature and the elements come knocking. There are many benefits to having a flexible foam spacer and our CS Ultra Spacer™ has a far lower likelihood of stress-cracks in the glass and a lower probability of seal-failure than a metal spacer. Climate Solutions windows will provide you with many years of worry-free maintenance, able to stand up to UV light, a wide range of temperatures and all the time avoiding the deteriorating effects of condensation.

Mold Prevention

Condensation is a problem that looks unsightly and over time will stain wood, peel paint and rot frames. Condensation can also lead to mold growth, which has been linked to childhood asthma and an increase in general respiratory illness, allergies and outbreaks of fungal disease. CS Ultra Spacer™ technology virtually eliminates condensation – and the threat of harmful mold growth around your windows.



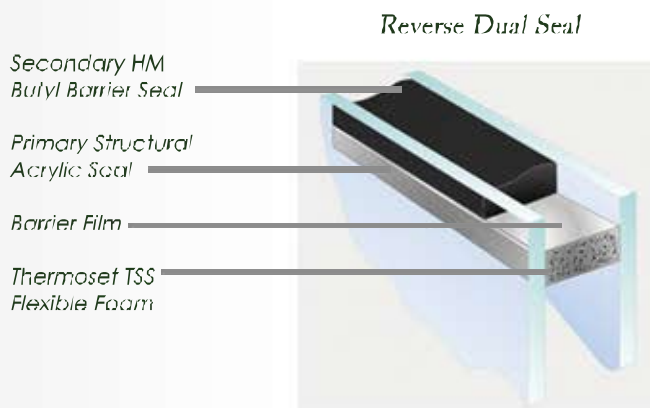


The Strength is in the Seal

TESTED DURABILITY WORLDWIDE

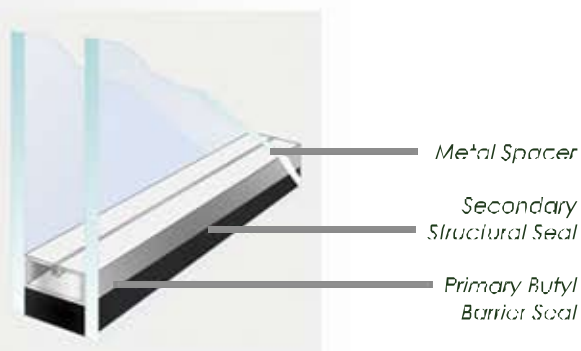
- North America - ASTM E2188, E2189, E2190
- European EN 1279
- Canadian CGSB 12.8
- ASTM E330 (120* psf positive, 155* psf negative)
- French Standard CSTB for CEKAL
- Industry type P-1 testing
- Climate Solutions is an ENERGY STAR® Partner

Traditional Metal Dual Seal vs Reverse Dual Seal



Pre-applied acrylic adhesive bonding has more than 5 times the life expectancy of single seal systems.

Traditional Metal Dual Seal



- Increased structural strength of the two different sealant systems
- More than 5 times the life expectancy of single seal systems
- Spacer is fixed to the glass from the sides and from the secondary seal to eliminate spacer creep
- Significantly improves condensation resistance