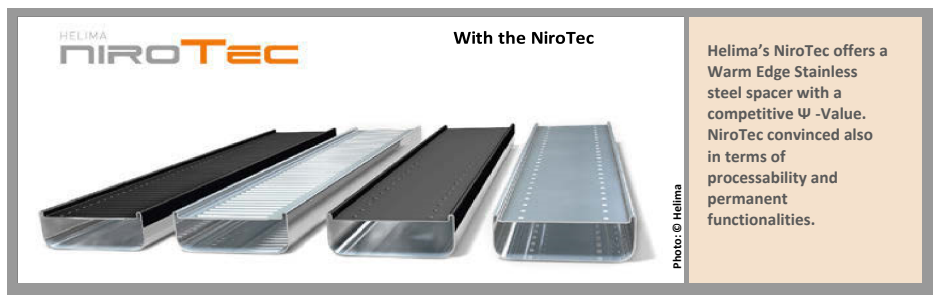


# psi value is not the key point

Which Warm Edge spacer is the right one? Bastian Breitenfellner, Managing Director at Helima, manufacturer of aluminum and stainless steel spacers, calls for greater consideration to be given to serviceability when evaluating insulating glass edge seal systems in the context of the  $\Psi$ -(psi) Olympics.



If you look at the current developments in the German insulating glass industry, you get the impression that only the  $\Psi$  value plays a role in the selection of the right spacer system for architects and window manufacturers. It describes the length-related thermal conduction at the edge seal of insulating glass. The buzzword "Psi-value Olympics" has long been doing the rounds. This focus on the insulating performance of the edge seal system means that window manufacturers have to stock different spacer systems in order to be able to meet all customer requirements. This, however, reduces the efficiency of their production processes. In the competition for the best thermal insulation, the window manufacturer's expert advice on the most suitable spacer for the respective application comes up short. By focusing solely on the  $\Psi$ -value, other equally important quality criteria of insulating glass spacers become secondary

## Holistic evaluation

Once again, it should be pointed out that although thermal improvement is the most frequently used argument in the day-to-day competition for market share, it is only one of many performance criteria that a serviceable spacer system must meet over the entire service life of a

insulating glass unit must fulfil. Consequently, further product and also processing characteristics must be included in order to evaluate spacer systems holistically. For example, the serviceability of the various categories of spacers shows considerable differences. These show that the stainless steel spacers, which have been tried and tested over decades, are the best Warm Edge products on the market in terms of serviceability in conjunction with a very good  $U_{Ww}$  value. This assessment is based on many factors which, in addition to the  $\Psi$ -value, is important for the durable and reliable functional performance of a spacer. For years, various specialist committees and working groups have been attempting to define the values for serviceability, for example, for UV resistance, thermal linear expansion, storage, diffusion tightness, etc. in new guidelines. In the process, the limit values are being extended further and further in order to maintain the marketability of plastic spacers. This is not necessary for the proven stainless steel spacers.

## IMPACT ON EUROCENT LEVEL

Just how small the effects of the differences in the  $\Psi$ -values are in the everyday life of the end customer is illustrated by the example of only 0.78 euros per month -

Comparison of various common Warm Edge spacer types with regards to kWh consumption for a single-family home with a window area of 30 square meters. Between the best (0,031) and the worst (0,051)  $\Psi$ -value is in this case a 0,34 € energy cost saving per month. Even compared to a conventional aluminum spacer the saving is 0,78 € per month – please note for the whole house and not per window.

This example clearly shows that an exclusive evaluation of spacers via the  $\Psi$ -value falls far short of the mark and virtually demands the consideration of other quality factors that are decisive for the long-term functionality of spacer systems.

## DEFINE PERFORMANCE APPROPRIATELY

The small monetary effects of the  $\Psi$ -values for the end consumer have not been sufficiently considered so far. The same applies to the expense incurred by insulating glass manufacturers as a result of the  $\Psi$ -value hysteria of recent years. In this context, stainless steel spacers have been an ideal warm edge product for decades, which fulfils all essential requirements excellently and protects the manufacturers from warranty and complaint cases in the long term. The long-term stability and functionality of insulating glass units must be a matter of concern to the industry, even beyond the warranty period usually granted. The performance parameters, in particular UV resistance and thermal linear expansion when exposed to heat, should not be generously designed but adequately defined against the background of climate change.

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