

What's right for you

As a manufacturer of both a flexible and rigid warm edge spacer system, Thermoseal Group is able to offer an informed and unbiased opinion as to whether to go flexible or rigid, says group managing director, Gwain Paterson

Let's start with a flexible solution. This is an ideal solution for smaller fabricators and window installers who can absorb higher material costs and want to set up to produce their own IG units, or for those producing curved units. The equipment set-up to manufacture up to 500 units with a small team within a small factory space is relatively cheap. Our flexible spacer is supplied in reels, so is great for those who don't have the means to store or transport five metre lengths of spacer bar. Then when you look at the product itself, a flexible warm edge spacer solution offers a smooth finish which is sometimes preferred aesthetically. It is also pre-desiccated and so doesn't require corner keys and connectors which makes it a traditionally cheaper option. The fact that it's pre-desiccated gives you the security of knowing that there is a pre-calculated volume of desiccant in the spacer to ensure the lifetime of your units.

It is worth noting that the higher price of this product is caused by a shortage of silicone raw material. For manufacturers such as ourselves who have supply agreements in place, we still have an uninterrupted supply of the raw material, but there is a significant effect on the price which has and will continue to cause rising prices throughout the supply chain. The inflated price of flexible spacer means that this is now a costly option. Industry experts have suggested that prices will remain high until at least 2019.

Moving onto rigid tube spacer systems, the majority of the UK and European IG producers use this type of system as there is very little investment required to substitute aluminium spacer for a more thermally efficient plastic. For the cut-and-corner-key finish, you'll find that the latest high speed saws and the array of colour-matched bespoke fittings available ensure that the corner finish and



any multi-pane window bars and accessories are flush-fitting. However, if you don't like the cut-and-corner-key finish, then you'll find a variety of manufacturers who produce a high volume of units and have invested in the equipment to bend rigid plastic spacers. Over recent years, the price of rigid warm edge spacer systems has reduced, so that rigid spacer is now the cheapest means of production.

Other advantages of a tube system are that it offers a more rigid attachment for Georgian bar and internal multipane window components. The rigid tube solution also has the advantage of a dual seal finish as IG producers predominantly apply a primary and secondary sealant to the product to extend the path of moisture and gases in and out of the unit which can help prolong its life. Having said this, there is a flexible dual seal solution available that can also offer this quality assurance.

Ultimately, if you are comparing two warm edge spacer systems with similar thermal performance from a reliable supplier who can offer a consistent quality product which is tested and proven to achieve EN1279 standard, as well as meeting the requirements for ISO 10077 calculations for energy efficiency and WER simulations; then the solution really is down to the facilities you have and the investment you can make. It should then be stripped back to the basics of preferred aesthetics and ultimately the best price. □

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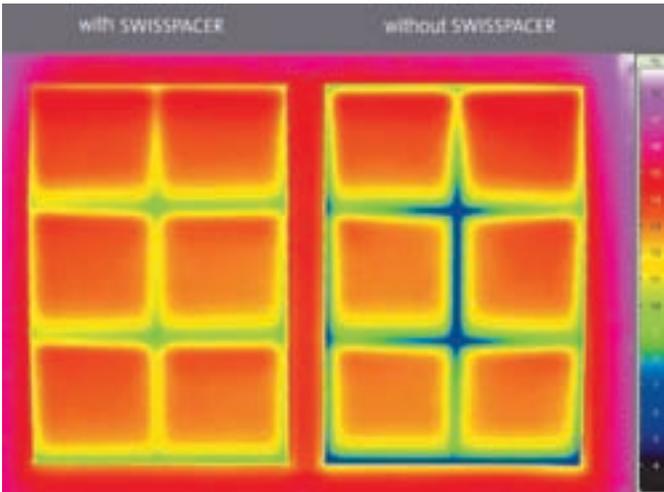
Closer to Passivhaus

The UK Energy Research Centre recently revealed that more efficient use of energy in UK households could save as much power as could be generated by six nuclear reactors, removing £7.5bn in energy costs, writes John Cooper, commercial director, Swisspacer UK

Households could save up to £270 a year on bills and enjoy warmer homes, better air quality and better health as a result.¹

Windows, doors and domestic appliances have had to become much more energy efficient, but there's still some way to go. Homeowners have got the message too. They expect products they buy to be energy efficient, saving them money over the lifetime of the product. They check the energy rating label before looking at other aspects of the product. The glazing industry has caught up, moving from A to A+ and A++ rated windows and the 'early adopters' are embracing triple glazing. At every stage of this journey, warm edge spacer bars play a crucial role – but we can go further.

Triple glazing has been widely adopted across Europe: in Germany and Austria, it has a market share of over 60%. However, some have doubted its suitability for the UK, even though we have the 'leakiest' homes in Europe. Many window systems were not originally designed for it, so they weren't efficient and looked ugly. But now window systems have caught up. There are lots to choose from, and brand-new systems such as Deceuninck, Residence Collection and Epwin's Optima are designed for an energy-efficient world. They look fantastic, double or triple glazing.



But energy efficiency goes beyond triple glazing. Building to the Passivhaus standard is the next step. This is the fastest growing energy performance standard in the world. It aims to dramatically reduce the need for space heating and cooling, and typically cuts energy use and CO2 emissions by a factor of 10.

New research proves benefits outweigh costs. Recent research by the Passivhaus Institute in Darmstadt – the independent research organisation which has played a crucial role in the development of the Passivhaus concept – proves the positive impact of warm edge spacer



Swisspacer UK commercial director, John Cooper

bars like Swisspacer on a building's energy efficiency. For the first time, the Passivhaus Institute looked at the impact of both aluminium and warm edge spacer bars and the overall energy requirements of buildings in different climates.

Using warm edge spacer bars instead of aluminium in a triple glazed window saves homeowners an average of 8.6% on energy bills in cool/moderate climates such as the UK and Ireland. That's the equivalent of 180kg less CO2 per household every year. The research proves warm edge spacer bars such as Swisspacer make a tangible difference to energy performance. It concludes that the amount saved by homeowners on energy bills significantly outweighs the slightly higher costs of manufacturing units with warm edge spacers.

The Passivhaus database of certified components lists Swisspacer in 70% of windows, 86% of windows with fixed glazing and 97% of curtain wall systems. In fact, Swisspacer Ultimate was the first warm edge spacer bar to gain Passivhaus accreditation.

Passivhaus is the next step in energy efficiency for the market. We know Europe is already there, and it is a familiar standard for Grand Designs self-builders and niche developers. With the cost of energy on the rise, it's only a matter of time before homeowners embrace it and demand it too. □

www.theguardian.com/environment/2017/sep/06/better-energy-efficiency-measures-could-cut-uk-costs-by-75bn