

Press Release

Connected on all sides

Ensinger turns 50: The plastics specialist aids energy saving in windows across the world with insulbar and Thermix

In 1966, in a garage to the south-west of Stuttgart (Germany), engineer Wilfried Ensinger began developing new methods for plastics processing. A pioneer in the development of new and optimised product solutions made from polymer materials, which depending on the application are reinforced with glass or carbon fibres, Ensinger has also played a crucial role in shaping the window construction industry.

The company grew and nowadays has 2,300 employees at 28 sites worldwide. At these sites, thermoplastic engineering plastics and high-performance plastics stable up to 300°C are compounded, extruded, processed and finished in close consultation with the customers and raw materials suppliers. This gives rise to new solutions for applications for which no other material would be suitable in this way.

Insulating profile no. 1

"Challenges often present an opportunity for creating something new", explains Jan Danger, head of the insulbar division at Ensinger. When, for example, the construction industry saw itself – in the face of rising energy costs and environmental pollution – required to reduce energy consumption in buildings, in 1977 Ensinger created the first insulating profile worldwide for thermal separation of the inner and outer shells of metal windows, doors and façades. Today, with "insulbar", Ensinger is a leading global manufacturer of insulating bars for window construction.

Thanks to its low thermal conductivity, insulbar reduces temperature losses via the metal frame and the energy requirement for cooling and heating is significantly lowered. "The customers can choose from a variety of standard profiles from us which, depending on the application, are optimised for mechanical performance, particularly efficient thermal separation, fire safety or sustainability. With Ensinger they can also develop customised insulation solutions", explains Jan Danger.

Ensinger is exhibiting:

Glasstec

20 - 23 September 2016
Düsseldorf, Germany
Hall 15, Stand G21

Veteco

25 - 28 October 2016
Madrid, Spain

Fenestration China

9 - 12 November 2016
Beijing, China

BAU

16 - 21 January 2017
Munich, Germany

insulbar insulating profiles are made of glass fibre reinforced polyamide 66. They are produced in a variety of sizes, geometries and material variants for different applications. The material has ideal characteristics for ensuring a durable quality of the assembled metal profiles. During the unique manufacturing process, the glass fibres are swirled using a special technique which guarantees the high strength of the insulbar profiles.

"Warm edge"

Since 1997, "Thermix" has been part of the portfolio of insulation products for window, door and façade construction. "As a substitute for aluminium spacers, the plastic edge bond provides the Warm Edge in multiple glazing", explains Dr. Albert Lingens, Sales Manager for Thermix at Ensinger. Through minimisation of the thermal bridge, the U value of the window system improves by about 10 to 20 percent.

Other benefits of what's known as the "Warm Edge": By minimising the thermal bridge at the outer periphery of the panes of glass, the temperature remains practically constant over the whole glass surface. This ensures a more pleasant, healthier room climate: The phenomenon of colder air dropping, which is frequently felt as an unpleasant draught, is prevented, and the risk of condensation and mould formation is minimised.

"Thermix TX.N plus" spacers are produced from high-performance plastic which has a thermal conductivity more than 700 times lower than aluminium. An integrated metallic diffusion barrier made from high-quality stainless steel ensures that the space between panes remains permanently gas-tight. The materials used are UV-resistant, fogging resistant and extremely stable. Thermix can be processed easily, efficiently and extremely cost-effectively on the insulating glass manufacturer's premises using the existing facilities for aluminium spacers.

Experienced lateral thinkers

In order to offer further added value for the customers worldwide, Ensinger combines application, process and material know-how in a unique way: A team of application engineers, developers and production specialists give advice regarding suitable product variants and provide support with setting the machines. Designs and materials can be tailored precisely to the customers' requirements.

Over 100 engineering plastics and 500 modifications are compounded at Ensinger. Thanks to the variety of materials and processing technologies available – pressure- and temperature-

regulated extrusion, profile and injection moulding, machining, pressing and sintering or direct forming – the properties and costs of a product can be individually optimised, be this in small- or large-scale production.

A broad base

Ensinger, with its broad range of expertise, is active in numerous industries worldwide. Alongside the building sector, the specialist in high-performance plastics is a sought-after development partner in machine and plant construction, in the automotive and aviation industries and in the medical technology sector. Technical solutions based on thermoplastic polymers are also widespread in the electrical and semiconductor sectors.

High-performance plastics are often used to replace other materials such as ceramics or metals – with the building products insulbar and Thermix, for example, the plastic used provides a thermal separation that is significantly superior to that of aluminium. Frequently, however, plastics actually make it possible to create new technical applications. Thus Ensinger offers the customers, with a unique production depth, diverse options for innovations.

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Photos



In 1966 engineer Wilfried Ensinger began extruding and processing polymer materials which, depending on the application, are reinforced with glass or carbon fibres.



Since 1971 Nufringen, to the south-west of Stuttgart (Germany), has been the headquarters of the Ensinger Group. Nowadays the family business is a global player with 2,300 employees at 28 sites.



Highly insulating insulbar profiles effectively minimise thermal bridges in metal window systems, making buildings more comfortable to live in and permitting considerable savings when it comes to energy, carbon emissions and heating and cooling costs.



Thermix TX.N plus spacers from Ensinger minimise the thermal bridge between the panes of multiple glazing and provide the "Warm Edge".

Pictures courtesy of: Ensinger GmbH

Photos in printable resolution: [For download](#) (click top right) or via press.info@oha-communication.com.

About insulbar

Ensinger GmbH is among the world's leading developers and producers of insulating profiles for window, door and facade construction. The profiles marketed under the brand name insulbar® create a thermal separation between the inside and outside shells of metal frames. Insulation systems using insulbar profiles achieve optimum values in terms of energy savings and cutting the cost of heating and cooling. At the same time, insulbar profiles comply with the most stringent quality standards in every respect. They have been in successful operation around the world for over 30 years. For more information, go to www.insulbar.de/en

About Thermix

Thermix spacers improve the thermal separation of insulated glass windows, doors and facades. This helps save energy and consequently heating and cooling costs as well as cutting carbon emissions. As an insulated glazing edge bond system, Thermix spacers provide a "warm edge". In addition, Thermix muntin bars produce the appearance of a genuine lattice window but with an excellent level of insulation. Both products can be simply and efficiently processed. Specially developed corner keys and straight connectors ensure well-fitting and secure connections every time. Thermix is a brand of

About Ensinger

The Ensinger group is engaged in the development, manufacture and sale of compounds, semi-finished materials, profiles and technical parts made of engineering and high-performance plastic. Ensinger makes use of a number of different manufacturing methods, in particular extrusion, machining and injection moulding. Employing a total workforce of 2,300 in 28 locations, the family firm is represented in many important industrial regions of the world with its own production plants or sales branches. For more information, go to www.ensinger-online.com

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