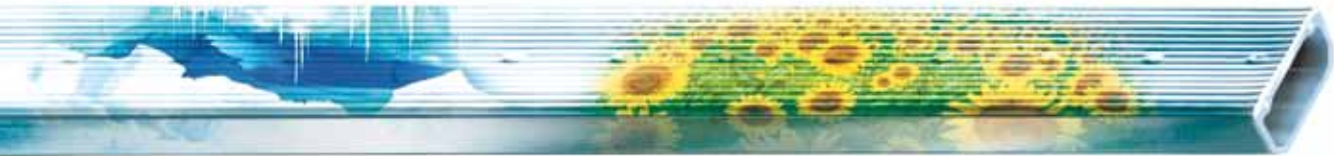




www.thermix.de

*The more intelligent way to insulate: Thermix[®] TX.N[®] plus –
“Warm edge” spacers for insulating glass*

Thermix[®] TX.N[®] plus – this is “warm edge”



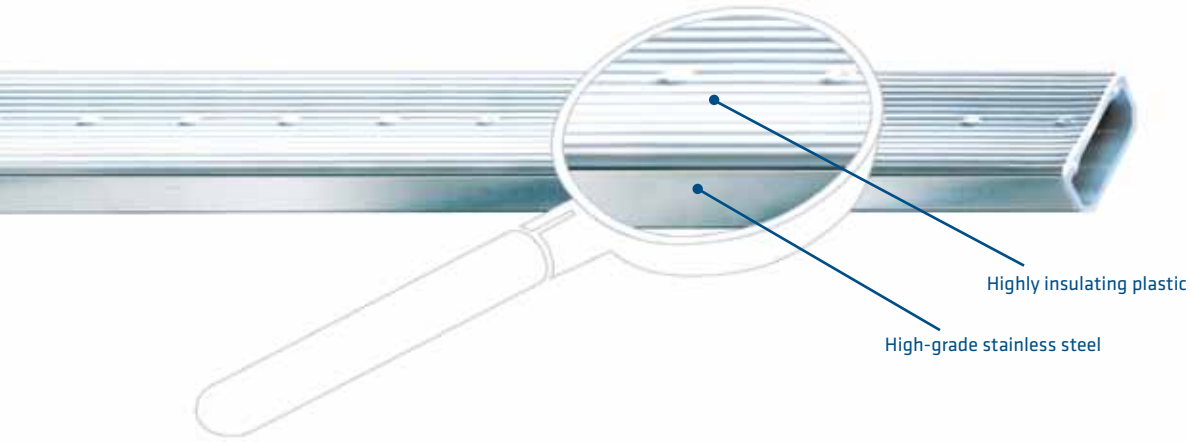
Thermix® TX.N® plus – our best “warm edge” ever

Thermix® “warm edge” spacers are world wide synonymous with the effective prevention of thermal bridges in windows, meaning significant cuts in energy and fuel bills and a sustainable improvement to any room climate. Our products are the culmination of almost two decades of development, production and application experience in the field of spacers made from high performance plastics. And they reflect the concentrated engineering expertise and passionate attention to detail of our highly skilled workforce.

Advantages you profit from:

- Outstanding form stability
- Reduced overbending angle
- Higher bending and processing speed
- Excellent productivity and efficiency
- Optimum corner formation

Thermix[®] TX.N[®] plus – simply the best



The combination of a high-grade stainless steel alloy and highly insulating plastic ensures that the respective material characteristics are optimally used. This results in best insulating values.

Outstanding insulation at the glass edge
due to *Thermix® TX.N® plus* spacers



It's all a matter of the Psi value


$$U_w = \frac{A_g \cdot U_g + A_f \cdot U_f + l_g \cdot \psi_g}{A_g + A_f}$$

Representative Psi values for Thermix® TX.N® plus

Frame profile	Metal with thermal break	Plastic	Wood	Wood-metal
Double insulating glass 4/16/4 $\frac{W}{m^2K}$ $U_g = 1.1 \frac{W}{m^2K}$	0.051 $\frac{W}{mK}$	0.041 $\frac{W}{mK}$	0.041 $\frac{W}{mK}$	0.044 $\frac{W}{mK}$
Triple insulating glass 4/12/4/12/4 $U_g = 0.7 \frac{W}{m^2K}$	0.045 $\frac{W}{mK}$	0.038 $\frac{W}{mK}$	0.039 $\frac{W}{mK}$	0.042 $\frac{W}{mK}$



The technical values have been determined according to the ift directive WA-08/1 "Thermally improved spacers – part 1: determination of representative psi-values of window frame profiles". In respect of the Psi value for Thermix® TX.N® plus spacers, please also note the Expert Report no. 12-001712-PR03 by the ift Rosenheim.

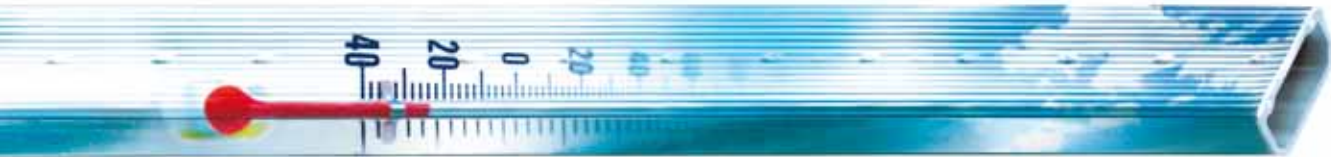
Thermix[®] TX.N[®] plus – processing the simple way



For the manufacture of insulating glass *Thermix® TX.N® plus* spacers can be processed by using conventional methods – no matter if you produce frames with corner keys or bent frames.

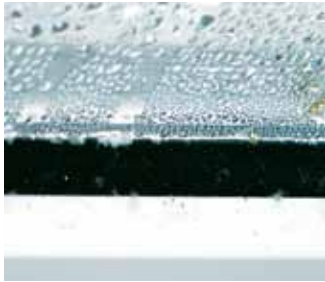


Thermix[®] TX.N[®] plus spacers considerably reduce the problem of condensation



In comparison to conventional aluminium spacers, *Thermix*[®] *TX.N*[®] *plus* spacers considerably minimize the thermal bridge at the glass edge.

Temperatures on the room side are much higher (“warm edge”) – precious heat energy stays inside the room. The risk of condensation and mould formation is minimized. *Thermix*[®] *TX.N*[®] *plus* spacers contribute to a healthy room climate.



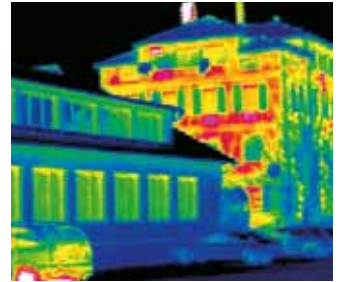
Higher risk of condensation and mould formation due to conventional aluminium spacers



Better room climate with *Thermix*[®] *TX.N*[®] *plus* “warm edge” spacers



Windows with “cold edge”



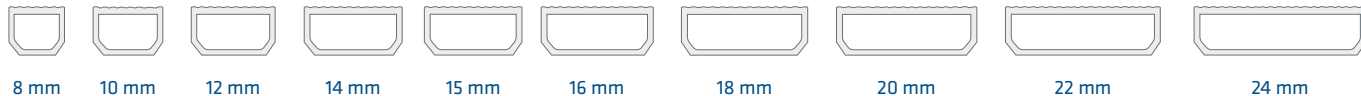
Windows with “warm edge”

Photo: ebök Planung und Entwicklung GmbH,
www.eboek.de

Thermix® TX.N® plus – the wide range



Thermix® TX.N® plus spacers are available in the standard colours black and light grey as well as in a range of additional special colours. The range of Thermix® TX.N® plus spacers currently includes profiles in the widths 8, 10, 12, 14, 15, 16, 18 and 20 mm. The widths 22 mm and 24 mm are available in the long-established Thermix® TX.N® quality.



Thermix® muntin bars

All Thermix® muntin bars are available in matching colours for *Thermix® TX.N® plus* spacers.

Thermix® muntin bars are rectangular hollow chamber profiles, which makes them significantly more easy and safe to work with than a duplex solution made of spacer profiles.



21,4 x 11,4 mm



25,4 x 11,4 mm



31,4 x 11,4 mm



21,4 x 9,4 mm



31,4 x 9,4 mm



A perfect match – accessories
for *Thermix® TX.N® plus* spacers
and Thermix® muntin bars

Thermix® TX.N® plus – advantages at a glance



- Higher surface temperatures at the edge of the glass on the room side (“warm edge”)
- Virtually no danger of condensation formation leading to damage and mould, which can be a health risk
- More favourable isothermal flow in windows and facades due to a thermal break at the edge bond of the glazing
- Considerably better values of the thermal transmission coefficients Ψ and U_w
- Active environmental protection: Less heating losses reduce CO₂ emissions
- Attractive design
- Can be built into all standard insulating glass products
- Approved according to valid insulating glass standard EN 1279 Part 2, 3 and 6



Thermix® TX.N® plus spacers – versatile and cost-effective

Ensinger GmbH
Ravensburg Branch Office
Mooswiesen 13
88214 Ravensburg
Germany

Tel. +49 (0) 751 354 52 0
Fax +49 (0) 751 354 52 22
E-Mail info@thermix.de
Internet www.thermix.de

10/12 BP 1182

