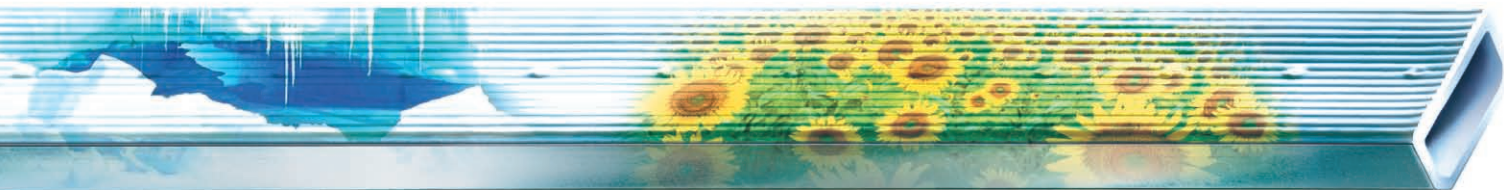


The more intelligent way to insulate Thermix® TX.N® – **Warm edge** spacers for insulating glass

- 
1. frame ✓
2. glass ✓
3. spacer ?

www.thermix-txn.com

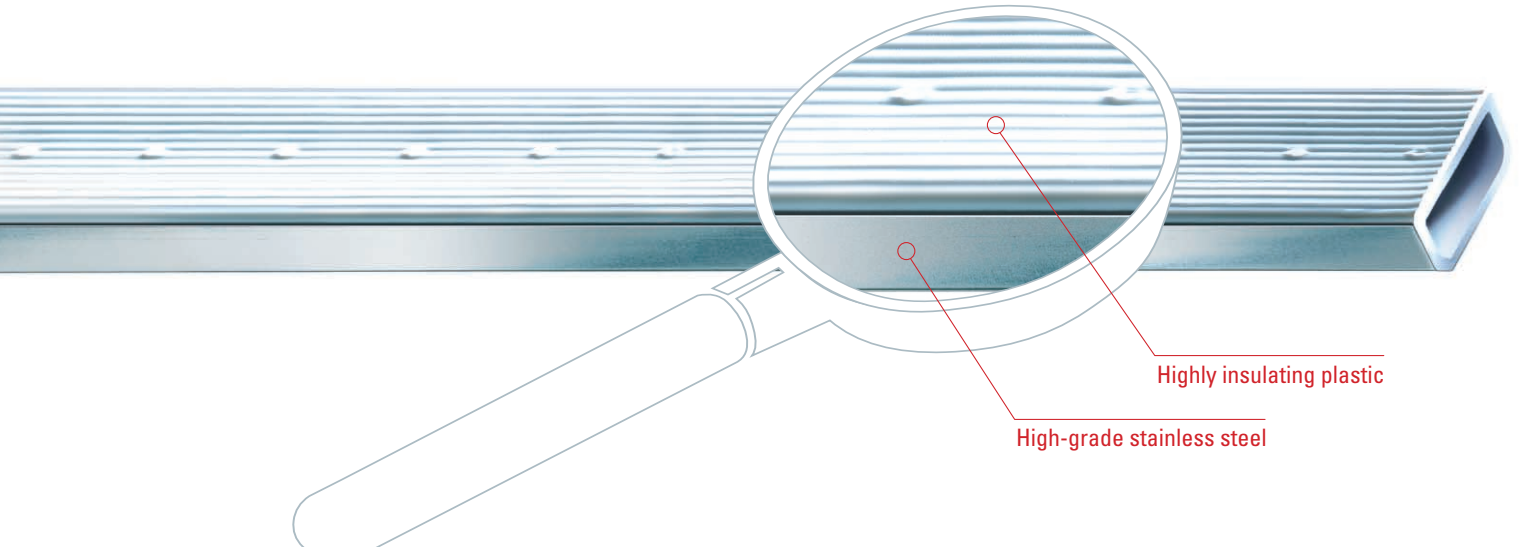
Thermix® TX.N® – this is “warm edge”



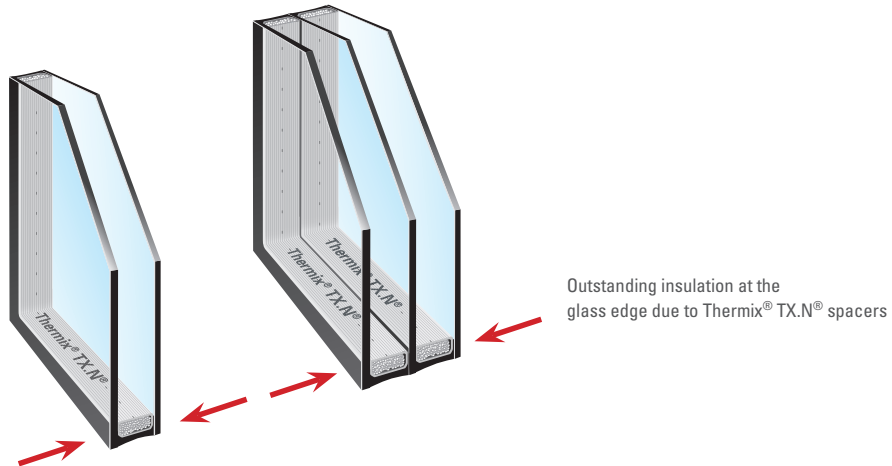
More than 15 years of experience in the development, production and application of spacers and more than 40 years of experience with high performance plastics has been put into the Thermix® TX.N® product range.

With Thermix® TX.N® spacers you achieve a considerable energy saving and a distinct improvement of the interior room climate in an economical and intelligent way.

Thermix® TX.N® – only the best of everything



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



It's all a matter of the Ψ -value

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

Representative Ψ -values for Thermix® TX.N®

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

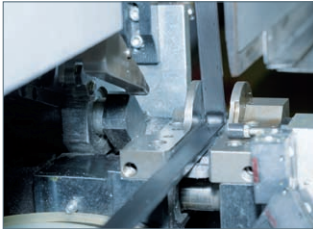
The technical values have been determined according to the ift directive WA-08/1 "Thermally improved spacers – part 1: determination of representative psi-values of window frame profiles".



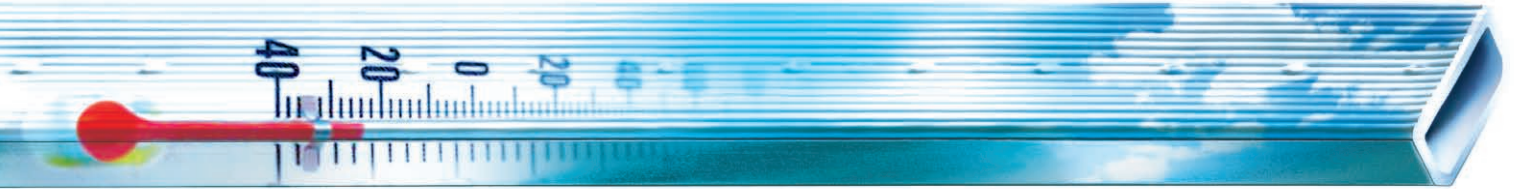
Thermix® TX.N® – processing the simple way



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



**Thermix® TX.N® spacers considerably reduce
the problem of condensation**



In comparison to conventional aluminium spacers, Thermix® TX.N® 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® spacers contribute to a healthy room climate.



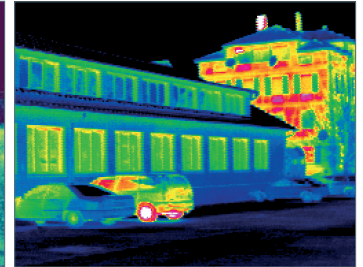
Higher risk of condensation and mould formation due to conventional aluminium spacers



Better room climate with Thermix® TX.N® “warm-edge” spacers



Windows with “cold edge”



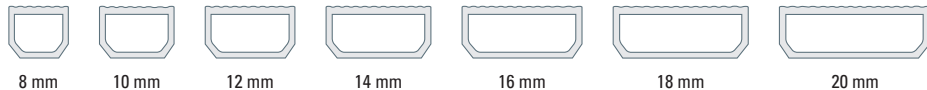
Windows with “warm edge”

Thermix® TX.N® – the extensive product range



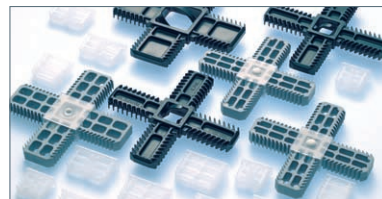
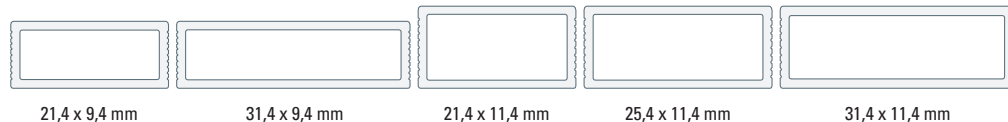
Thermix® TX.N® spacers are available in the standard colours light grey and black.

The range of Thermix® TX.N® spacers currently offered comprises of the profile widths 8, 10, 12, 14, 16, 18 and 20 mm.



All Thermix® muntin bars are available in light grey and black to match the Thermix® TX.N® spacers.

As rectangular hollow chambers Thermix® muntin bars can be processed significantly easier and safer than a duplex solution of two spacer profiles.



A perfect match - accessories for Thermix® TX.N® spacers and Thermix® muntin bars

Thermix® TX.N® – advantages at a glance

- 
- 1. frame ✓
 - 2. glass ✓
 - 3. spacer ✓

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

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





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