



## Your benefits at a glance:



Lower thermal energy transmission



More stability



Better forming properties



Improved memory effect



Absolute traceability



Tax office, Aachen

**BORDERS ARE FALLING WORLDWIDE.  
WE HAVE BUILT A NEW ONE.**

**The new TGI® Spacers.  
Stronger. Smarter. More efficient.**

**TECHNOFORM GLASSINSULATION**

### TECHNOFORM GLASSINSULATION



Technoform Glass Insulation GmbH  
Matthäus-Merian-Strasse 6  
34253 Lohfelden  
Germany

Phone: +49 561 9583 100 | Fax: +49 561 9583 121  
info@glassinsulation.de  
www.glassinsulation.de

Version 1.07/2010

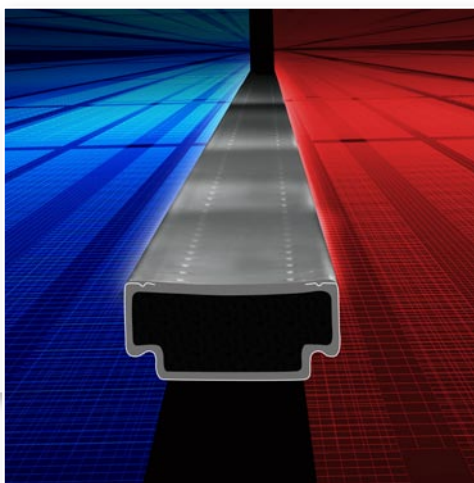


designer outlets Wolfsburg

## The new TGI® Spacers.

Their newly formulated steel ensures even better thermal insulation. Here you will find an overview of more of our latest products and the many benefits they bring.

Put your trust in the greater stability, greater efficiency and smarter properties of our new spacers.



**TGI® Spacer**

### Actual values in comparison:

Thermal specifications of our TGI® Spacers in comparison with aluminium spacers.\*

$$U_w = \frac{U_f \cdot A_f + U_g \cdot A_g + \psi \cdot l_f}{A_w}$$

$U_w$  = Thermal transmission coefficient, window

$U_f$  = Thermal transmission coefficient, frame

$U_g$  = Thermal transmission coefficient, glass

$A_g$  = Window area

$A_f$  = Frame area

$A_w$  = Glass area

$l_f$  = Length of edge, frame – glass

$\psi$  = Linear thermal coefficient, composite edge

$$T_{oi} = T_{ia} + f_{Rsi} \cdot (T_{ii} - T_{ia})$$

$T_{oi}$  = Inner surface temperature

$T_{ii}$  = Indoor air temperature +20 °C

$T_{ia}$  = Outdoor air temperature -10 °C

$f_{Rsi}$  = Temperature factor at  $R_{si} R_{si} = 0.20m^2 K/W$

## Thermal values in comparison:

compliant with Bundesverband Flachglas

Boundary conditions:  
Total window area  $A_w$ , 1,82 m<sup>2</sup>  
Frame proportion 30%  $A_f$ , 0,55 m<sup>2</sup>  
Glass proportion 70%  $A_g$ , 1,27 m<sup>2</sup>  
Edge length  $l_f$ , 4,54 m

Frame	Wooden window		uPVC window		Aluminium window		Wood/aluminium window	
Double glazing	2 IG		2 IG		2 IG		2 IG	
	Aluminium spacer	TGI® Spacer	Aluminium spacer	TGI® Spacer	Aluminium spacer	TGI® Spacer	Aluminium spacer	TGI® Spacer
$\Psi$ -Value	0,081 W/mK	0,041 W/mK	0,077 W/mK	0,041 W/mK	0,111 W/mK	0,051 W/mK	0,092 W/mK	0,045 W/mK
$U_w$ Window	1,36 W/m <sup>2</sup> K	1,26 W/m <sup>2</sup> K	1,32 W/m <sup>2</sup> K	1,23 W/m <sup>2</sup> K	1,53 W/m <sup>2</sup> K	1,38 W/m <sup>2</sup> K	1,42 W/m <sup>2</sup> K	1,30 W/m <sup>2</sup> K
Temperature factor $f_{Rsi}$	0,47	0,62	0,51	0,65	0,49	0,65	0,41	0,58
Surface temperature $T_{oi}$ at -10 °C, +20 °C	4,1 °C	8,6 °C	5,3 °C	9,5 °C	4,7 °C	9,5 °C	2,3 °C	7,4 °C

Frame	Wooden window		uPVC window		Aluminium window		Wood/aluminium window	
triple glazing	3 IG		3 IG		3 IG		3 IG	
	Aluminium spacer	TGI® Spacer	Aluminium spacer	TGI® Spacer	Aluminium spacer	TGI® Spacer	Aluminium spacer	TGI® Spacer
$\Psi$ -Value	0,086 W/mK	0,040 W/mK	0,075 W/mK	0,039 W/mK	0,111 W/mK	0,046 W/mK	0,097 W/mK	0,043 W/mK
$U_w$ Window	1,10 W/m <sup>2</sup> K	0,98 W/m <sup>2</sup> K	1,04 W/m <sup>2</sup> K	0,95 W/m <sup>2</sup> K	1,25 W/m <sup>2</sup> K	1,09 W/m <sup>2</sup> K	1,15 W/m <sup>2</sup> K	1,02 W/m <sup>2</sup> K
Temperature factor $f_{Rsi}$	0,54	0,70	0,56	0,70	0,57	0,73	0,49	0,67
Surface temperature $T_{oi}$ at -10 °C, +20 °C	6,2 °C	11,0 °C	6,8 °C	11,0 °C	7,1 °C	11,9 °C	4,7 °C	10,1 °C

\* All technical values have been determined on the basis of the standard guidelines stipulated by the 'Warme Kante' working committee of the Bundesverband Flachglas BF (National Association of Flat Glass Industries), Troisdorf.