



## How to improve...

## ... sound and heat insulation by using SWISSPACER AIR

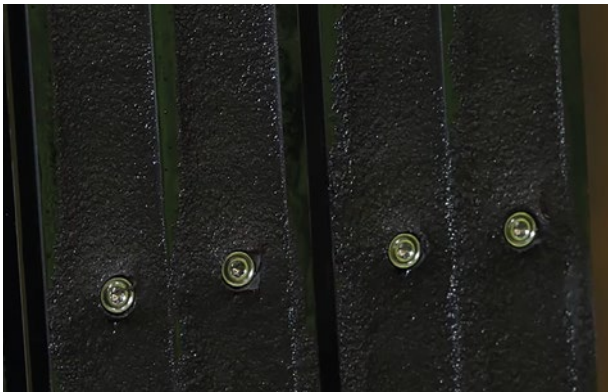
VEKA and  
SWISSPACER  
figured out further  
advantages when  
using the innovati-  
ve component for  
window constructi-  
ons

**I**f pressure differences occur in the insulating glass in windows due to temperature differences or differences in altitude between the place of manufacturing and the point of use, the SWISSPACER AIR steps in to equalise the pressure. Together with Veka, Swisspacer has been able to expand the possible advantages of the innovative component: sound insulation and heat insulation can be improved by using SWISSPACER AIR. Its use can lead to very large spaces between the panes of glass, without the risk of damage caused by climatic loads. This results in new possibilities for system configurations.



The PVC profile system VEKA ARTLINE 82 can hold insulation glass that is up to 60 mm thick and is therefore particularly suitable for new applications with SWISSPACER AIR, without compromising the performance of the windows and the comfort of those inside.

Thus, large window doors with built-in blinds with pressure-equalised quadruple glazing were successfully tested at VEKA for their resistance to driving rain, wind loads and different climates. Furthermore, the sound reduction indexes of different pressure-equalised triple and quadruple glazing units were tested and evaluated at the Rosenheim Institute for Window Technology.



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## The benefits in window manufacturing



**- 20% perceived noise**  
**+ 3 dB Sound reduction**

Sound insulation is among the most important requirements for windows. This is where VEKA sees massive added value when using the SWISSPACER AIR: thanks to the increased space between the panes, the noise perceived in the building can be reduced by approximately 20% – with an otherwise equivalent glass construction. The sound reduction index of the insulating glass is improved by up to 3 dB.

A larger cavity between the panes with the SWISSPACER AIR has further benefits for window manufacturers. With constant sound and thermal insulation, the use of thinner glass is possible, which leads to a lower weight, which in turn is easier on the window fittings and makes them easier to use. In other cases, the costly sound-insulating interlayer in the laminated safety glass can be dispensed with. For example, a fabricator has more options for how to optimally implement customer requirements. Besides this, also the  $U_g$  value of IGUs benefits from bigger cavities that lead to better heat insulation.

CLIMATOP ONE / ECLAZ ONE / SKN / XTREME  
Heat transition coefficient –  $U_g$ -value ( $W/m^2k$ ) according to EN 673-4/2011

cavity (mm)	2 x 8	2 x 10	2 x 12	2 x 14	2 x 15	2 x 16	2 x 18	2 x 20	2 x 24
cavity air	1,2	1,0	0,9	0,8	0,7	0,7	0,6	0,6	0,6

Low-e coatings pos. 2 + 5 / Emissivity 0,01 / Vertical installation

