PVC Windows Specifications

Passive Line ULTRA

Thanks to an innovative approach, Passive-Line ULTRA windows have, for the reference window, a revolutionary heat transfer coefficient Uw of 0.5 (W/m2K).

In this system, a technical solution based on bonding inside panes with a coefficient Ug of 0.3 (W/m2K) has been applied. Profiles have thermoplastic inserts enriched with glass fibre (Ultradur High Speed by BASF) instead of reinforcements and chambers are filled with polyurethane foam.

It is just an ideal solution for energy-efficient and passive houses.

Advantages of this product:

- Energy efficiency — a significant reduction of heating costs
- a decisively higher thermal insulating power
- a better acoustic insulation ensured by a sealed glazed unit and a triple set of gaskets
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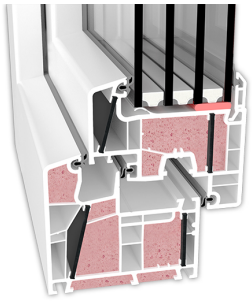
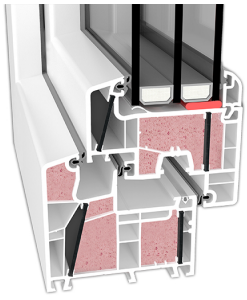
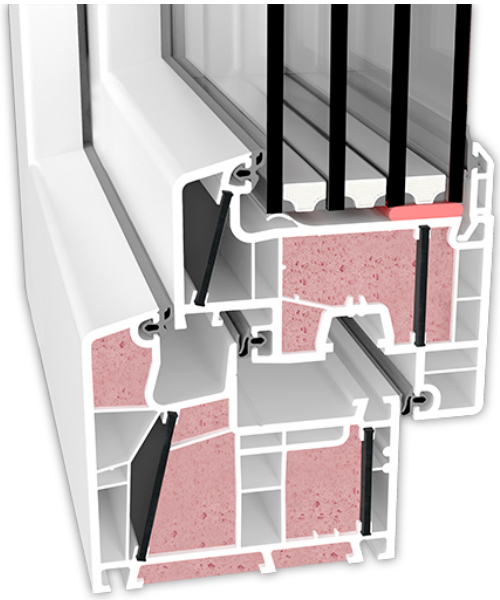
Profile	Intelligent systemic solutions are becoming a reality. Structural elements that are light-weight and with no steel reinforcements inside profiles, at the same time significantly limiting energy loss inside buildings, are the new arguments and advantages offered by the **Passive-Line Ultra** range. This concept shows a whole new direction in thinking about energy-efficiency as it is connected with eliminating steel reinforcements — used in profiles up to now — which deteriorated thermal properties of the latter. Passive-Line Ultra is a combination of the following innovative technologies: • special casements applying the bonding inside technique, • a new type of frames, developed in cooperation with BASF, using the Ultradur® High Speed plastic that replaces steel reinforcements used in conventional frames, • chambers filled with polyurethane foam. **ADVANTAGES OF BONDING INSIDE:** • a lower risk of pane cracking, absence of local tensions in glass • a higher window stability thanks to the stiffening parameters of panes • less instances of pane cracking due to faulty glazing • lager glazed surfaces — profiles are shorter by approx. 10mm • a better acoustic insulation owed to bonding the pane directly with the casement • a higher burglar resistance — impossibility of pushing the pane out of its casement, thanks to circumferential adhesive joint **4 glass option:** **3 glass option:**  
Pane	4/18Argon/4/18Argon/4TM 48mm Ug=0, 5W/m²K; g=50%; Lt=70%

Glazing bead	
Fittings	**SIEGENIA TITAN AF** • handle at mid-height • all rollers in casements: KoPiBo mushroom, rotating and self-adjusting • striker plate in every R and RU casement • RU casement fitted with a finger lift in the bottom corner, integrated with an incorrect handle position lock • RU casements: microventilation • anti-draught deadbolt in the U function in the RU casement • the RU casement fitted with air latches supported while switching from partial opening to closed position • the bottom fitting groove filled with packing
Handle	
Gaskets and packing	TPE
Reinforcement	The need of using steel reinforcements for PVC sections is completely eliminated by replacing them with thermoplastic inserts with an addition of glass fibre.
Coextrusion	present

Heat transfer coefficient

Frames	Uf = 0,7 W/m²K
Windows	Uw = 0,7 W/m²K (panes 0,5W/m²K) Uw = 0,5 W/m²K (panes 0,3W/m²K)

Standard equipment:

Additional thermal insulation of chambers with a polyurethane mixture	✓
Bonding inside	✓
Microventilation system	✓
Sealed glazing unit	4/18Argon/4/18Argon/4TM 48mm Ug=0, 5W/m²K; g=50%; Lt=70% warm edge
Fitting profile	✓
Fitting profiles sealed with foam	✓
Fittings with a	Siegenia Titan AF striker plate
Bottom part of the frame filled with a foam sealant	✓
Handle protected against mishandling	✓
Gaskets and packing	grey TPE (white windows)
Aluminium handles	✓
Assembly anchors	✓