

sapa:

Avantis 70 HV

Aluminium windows with hidden vent





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Avantis 70 HV is a high performance thermally broken three-chamber system with a building depth of 70 mm. The Avantis 70 HV largely surpasses the recent thermal insulation standards and is a comprehensive solution for projects that require the slimmest sightline but higher thermal performance.



Energy saving on modular basis

- Avantis 70 HV profiles have 3 chambers, coupled with 35 mm omega shaped, glass fibre reinforced polyamide strips, which reduce thermal conduction. The result is that Avantis 70 HV achieves a high thermal performance level and improved total insulation, leading to lower total energy consumption, a positive benefit to the environment.
- The system accommodates glazing up to 54 mm, the infill thickness can start from 16 mm.
- Inward opening vents have a central gasket for enhanced thermal and acoustic performance.
- All standard shade and ventilation systems can easily be integrated.
- Preformed poly-ethane foams to improve the Uf-value.
- Alternate use of the modular plug in insulation steps ensures the achievement of the desired thermal performance.

Modular thermal performances

Avantis 70 HV Basic	2,10 W/m ² K - 2,60 W/m ² K
Avantis 70 HV I	2,10 W/m ² K - 2,40 W/m ² K
Avantis 70 HV SI	1,70 W/m ² K - 2,20 W/m ² K
Avantis 70 HV SHI	1,20 W/m ² K - 1,90 W/m ² K



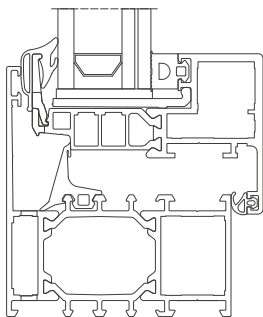
Architect: BSARC sarl

Design

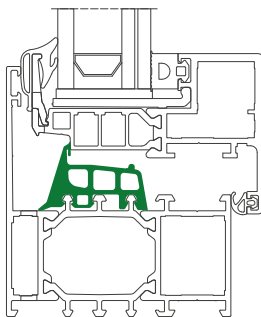
- This advanced system offers the slimmest sightline currently available on the market.
- Avantis 70 HV is compatible within its profile and hardware range, as well as other Sapa Building System products such as our curtain wall and conservatory systems.
- Same sightline for opening and fixed windows.
- Hidden drainage in combination with a suitable support gasket, making cover caps unnecessary.
- Standard invisible hardware.
- Choose from a wide range of glazing gaskets and glazing beads according to the proposed thermal performances.
- Different profile combinations of frames and vent profiles with insertion possibility for finishing profiles and window fixings.
- A comprehensive range of supplementary finishing profiles allows the fenestration to be integrated perfectly into the building.
- Vent, frame and transom profiles are available in a range of dimensions to meet the needs of stability and design requirements.
- A wide choice of hinges, handles and hardware finalise your specific needs.

Avantis 70 HV.

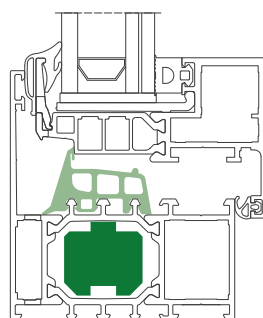
Modular thermicity.



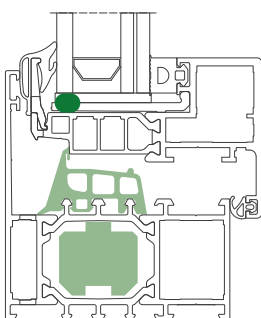
Basic: $U_f = 2,18 \text{ W/m}^2\text{K}$



Insulated: $U_f = 2,11 \text{ W/m}^2\text{K}$



Super Insulated: $U_f = 1,81 \text{ W/m}^2\text{K}$



Super High Insulated: $U_f = 1,76 \text{ W/m}^2\text{K}$

Avantis 70 HV Basic

- $U_f = 2,10 \text{ W/m}^2\text{K} - 2,60 \text{ W/m}^2\text{K}$

Avantis 70 HV I

- $U_f = 2,10 \text{ W/m}^2\text{K} - 2,40 \text{ W/m}^2\text{K}$
- Improved thermal central gasket

Avantis 70 HV SI

- $U_f = 1,70 \text{ W/m}^2\text{K} - 2,20 \text{ W/m}^2\text{K}$
- Improved thermal central gasket
- PE inserts in frame profile (concept FoamPower®)

Avantis 70 HV SHI

- $U_f = 1,20 \text{ W/m}^2\text{K} - 1,90 \text{ W/m}^2\text{K}$
- Improved thermal central gasket
- PE inserts in frame profile (concept FoamPower®)
- PE insert thermal improved glazing unit

Avantis 70 HV	Basic	I	SI	SHI
sightline frame + vent (in mm)	82	82	82	82
U_{frame}	2,18	2,11	1,81	1,76
$U_{\text{window}} (U_{\text{glazing}} = 1,1)$	1,47	1,45	1,41	1,40
$U_{\text{window}} (U_{\text{glazing}} = 0,8)$	1,23	1,21	1,17	1,16
$U_{\text{window}} (U_{\text{glazing}} = 0,5)$	0,99	0,97	0,93	0,92

Maximum U_w value based on a window surface of $1,6 \text{ m}^2$



Performance

- Avantis 70 HV includes several weather barriers by means of specially designed gaskets, a large decompression chamber and internal drainage to assure perfect weather resistance.
- The Avantis 70 HV series offers the possibility of triple glazing, meaning that the system delivers excellent sound insulation on top of the thermal benefits.
- Effective water evacuation is ensured via punched drainage holes.
- Special finishes profiles provide additional building drainage.
- Acoustic performance is greatly enhanced with multiple gaskets.

Fabrication

- Avantis 70 HV is complementary to other Avantis series and results in modularity between systems, allowing fabricators to offer maximum service without increasing stock levels.
- The Euronut groove accommodates all standard hardware.
- Central gasket for small and for large windows
- Frame / vent are joined by crimp cleats, cleats for eccentrics or cleats for conical pegs
- Self tightening stainless steel leveling tie
- Punching tools specifically designed for the Eurosystem series, ensure fast and accurate assembly.
- Sapa Building System offers its hardware SapaLogic, an open concept for automation, to fabricators who have a CNC machining center.

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Project support & -service

- Sapa Building System's experienced Project Team will advise you on the best product solutions.
- We can help you with pricing, strength calculations, building connections, thermal simulations, etc.
- Specific project solutions can be developed.
- Samples, catalogues, technical specifications and digital drawings are available.

SapaLogic is a user-friendly calculation program for fast, efficient and complete calculation of windows, doors, structures, curtain walls and conservatories. SapaLogic is very much complete but modular still: the different versions can be adapted to your company's needs.

SapaThermic is detailed thermal simulation software for doors, windows, sliding systems and curtain walls. It can either be linked to SapaLogic or act as a stand-alone version.

Finishes

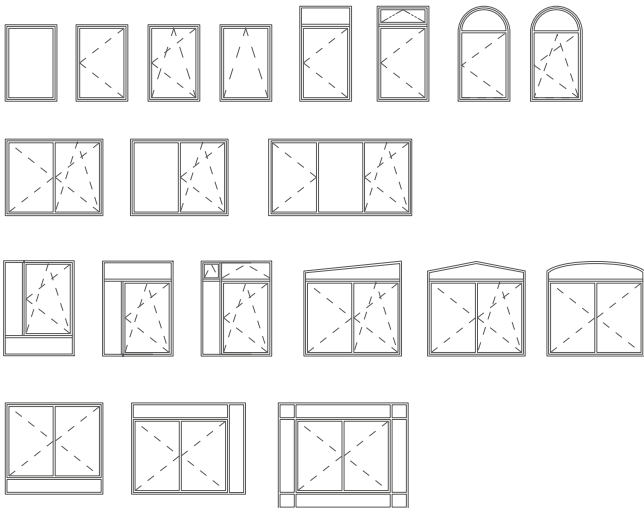
- Over 400 powder coated paint colors in matt, glass or satin.
- Unique wood effect, textured and textured metallic ranges are available.
- Anodised finish is also an option.
- Accessories can be supplied in corresponding colors to match the profiles.
- The polyamide thermal break allows bi-color finishes. As a result, the exterior building requirements do not infringe the interior design requests.
- Our surface finishes meet the highest standards of Qualicoat or Qualanod.



Architect: ARCHI 2000

Avantis 70 HV.

Inward opening windows



Architect: Atelier Architecture BENG

Security

- The combination of safety glass and special hardware such as multipoint locking ensures high resistance against forced entry. Internal tubular glazing beads prevent unclipping from the outside.
- A wide range of locking and non-locking handles are integrated into the system.

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Characteristics.

Dimensions

Min. sightline fixed frame	68 mm
Min. sightline transom	108 mm
Profile depth frame / building depth	70 mm
Profile depth vent	80 mm
Max. window (width x height)	1200 x 2100 mm

Glazing

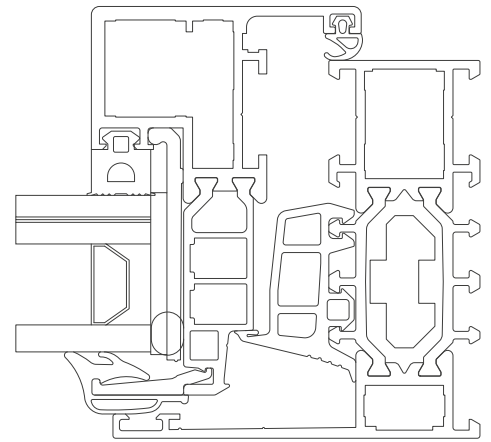
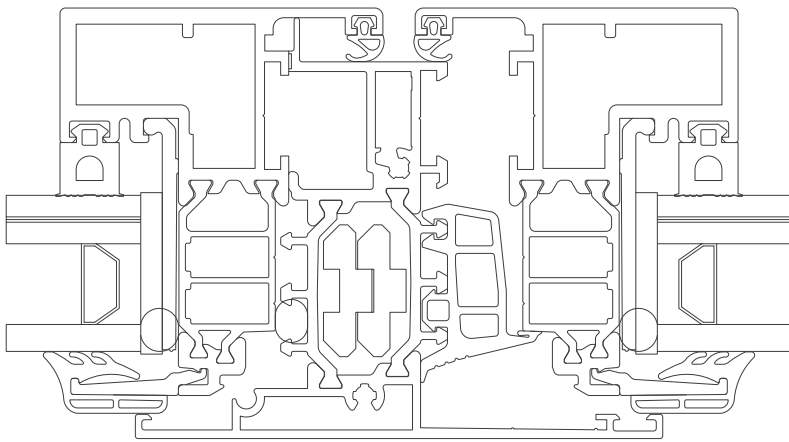
Rebate height	40 mm
Infill thickness fixed frame	16,5 - 53,5 mm
Infill thickness vent frame	15,5 - 54,5 mm
Glazing method	dry glazed with EPDM gaskets or silicon

Performances

Thermal break	35 mm omega shaped polyamides PA6.6 GF25	
Thermal insulation - Super High Insulated	$U_f = 1,2 - 1,9 \text{ W/m}^2\text{K}$	EN ISO 10077-2
Thermal insulation - Super Insulated	$U_f = 1,7 - 2,2 \text{ W/m}^2\text{K}$	EN ISO 10077-2
Thermal insulation - Insulated	$U_f = 2,1 - 2,4 \text{ W/m}^2\text{K}$	EN ISO 10077-2
Thermal insulation Basic	$U_f = 2,1 - 2,6 \text{ W/m}^2\text{K}$	EN ISO 10077-2
Air permeability	4	EN 12207
Watertightness	E1200A	EN 12208
Windresistance, securitytest	C4	EN 12210
Impact resistance	Class 3	EN 13049

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Technical sections.



Architect: Ontwerp bureau Gino Debruyne & Architecten

sapa:

Sapa offers architects, specifiers, metal fabricators, investors and home-owners worldwide an extensive range of innovative, reliable and aesthetically pleasing aluminium systems for curtain walling, doors, windows and building integrated photovoltaics. Sapa is one of the largest suppliers of aluminium building systems in Europe and is part of the global aluminium company Hydro.

Windows, Doors, Sliding Systems, Curtain Walls, Conservatories, Balustrades, Gates, Solar Shading and BIPV

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