

**sapa:**

**buildingsystem**

ARCHITECTURAL ALUMINIUM SOLUTIONS



Avantis 70 HV

Windows and Doors

**Sapa Building System**



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 in Avantis 70 HV.
- » Preformed poly-ethane foams to improve the  $U_f$  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:  $U_f = 2,1 \text{ W/m}^2\text{K} - 2,6 \text{ W/m}^2\text{K}$
- » Avantis 70 HV I:  $U_f = 2,1 \text{ W/m}^2\text{K} - 2,4 \text{ W/m}^2\text{K}$
- » Avantis 70 HV SI:  $U_f = 1,7 \text{ W/m}^2\text{K} - 2,2 \text{ W/m}^2\text{K}$
- » Avantis 70 HV SHI:  $U_f = 1,2 \text{ W/m}^2\text{K} - 1,9 \text{ W/m}^2\text{K}$

## Environment

- » All profiles are easily cleaned.
- » Aluminium does not rust, rot or tear and the shape will not deform.
- » Aluminium is a "green" product: it can be recycled infinitely without quality loss.

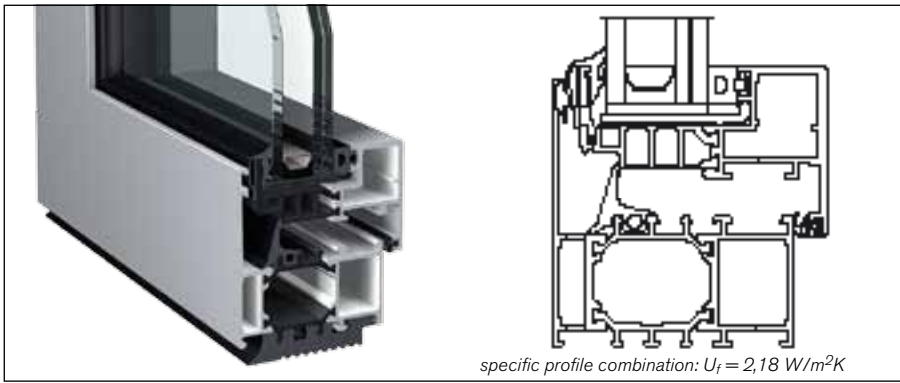
## Security

- » 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.

## Design

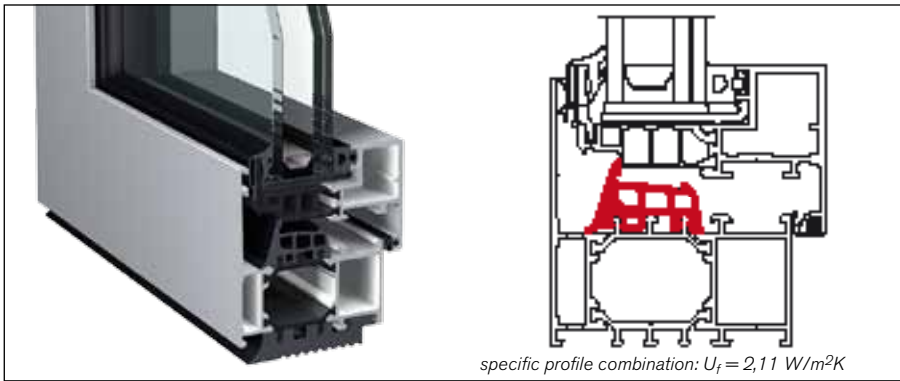
- » This advanced system offers the slimmest sightline currently available on the market.
- » Avantis 70 HV is compatible within its profile and hardware range, as well as other Sapa Building System products such as our curtain wall and conservatory systems.
- » Same sightline for opening and fixed windows.
- » 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.





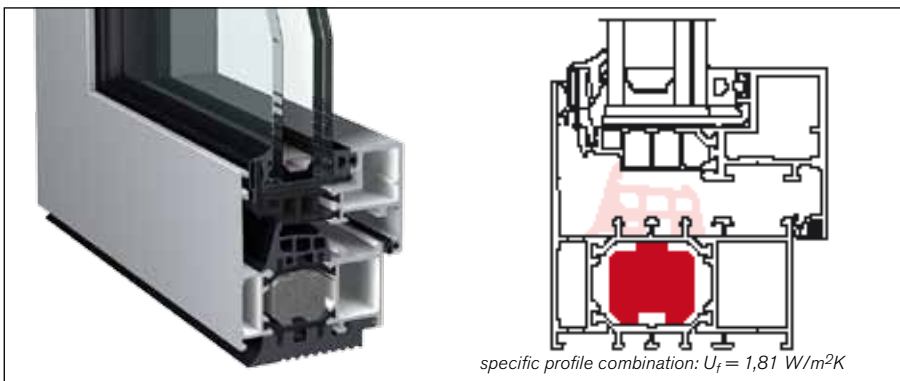
### Avantis 70 HV Basic

- »  $U_f = 2,1 \text{ W/m}^2\text{K} - 2,6 \text{ W/m}^2\text{K}$



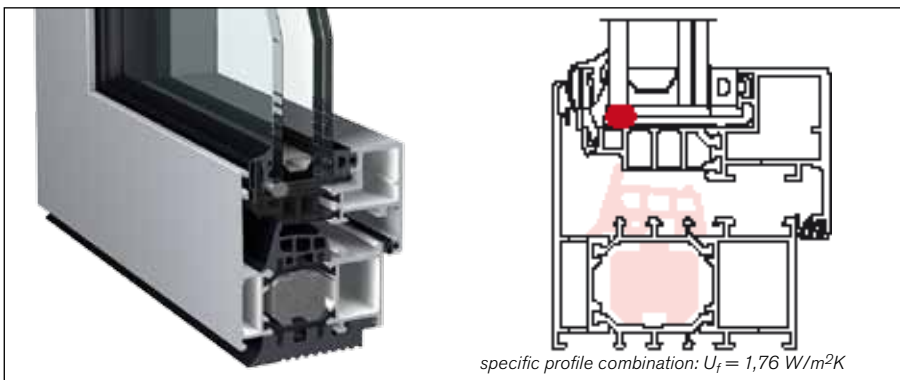
### Avantis 70 HV I

- »  $U_f = 2,1 \text{ W/m}^2\text{K} - 2,4 \text{ W/m}^2\text{K}$
- » Improved thermal central gasket



### Avantis 70 HV SI

- »  $U_f = 1,7 \text{ W/m}^2\text{K} - 2,2 \text{ W/m}^2\text{K}$
- » Improved thermal central gasket
- » PE insert in frame profile (concept Foam-Power®)



### Avantis 70 HV SHI

- »  $U_f = 1,2 \text{ W/m}^2\text{K} - 1,9 \text{ W/m}^2\text{K}$
- » Improved thermal central gasket
- » PE insert in frame profile (concept Foam-Power®)
- » PE insert thermal improved glazing unit

Avantis 70 HV	Basic	I	SI	SHI
Sightline in mm frame + vent	82	82	82	82
$U_{\text{frame}}$	2,18	2,11	1,81	1,76
$U_{\text{window}} (U_{\text{glazing}} = 1,1)$	<b>1,68</b>	<b>1,66</b>	<b>1,81</b>	<b>1,76</b>
$U_{\text{window}} (U_{\text{glazing}} = 0,8)$	<b>1,46</b>	<b>1,44</b>	<b>1,37</b>	<b>1,35</b>

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

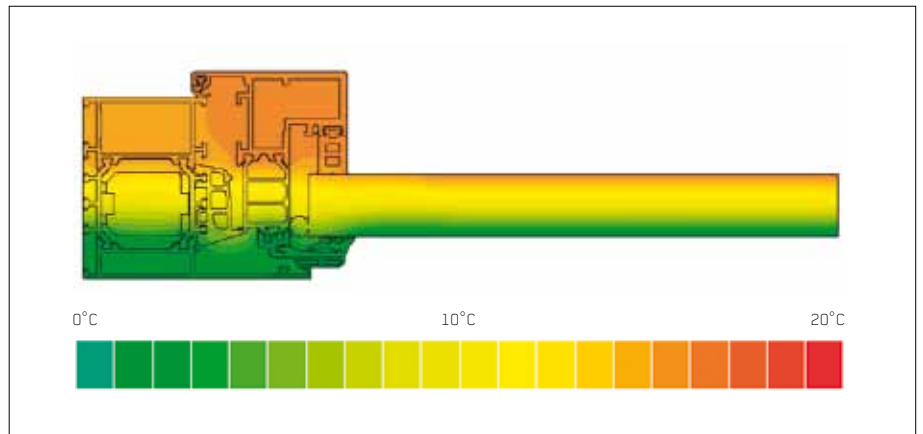
## Finishes

- » 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.



## 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.







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### Fabrication

- » Avantis 70 HV belongs to the Eurosystem range. It is complementary to other Eurosystem 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.

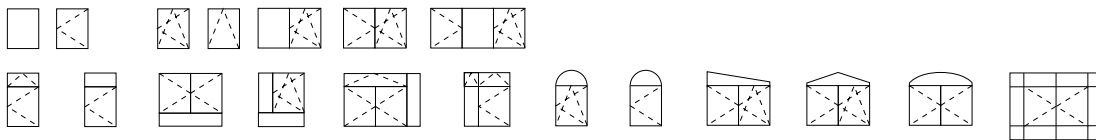
### Project support & -service

- » 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.

## Applications



----- : inward opening      ——— : outward opening

## 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

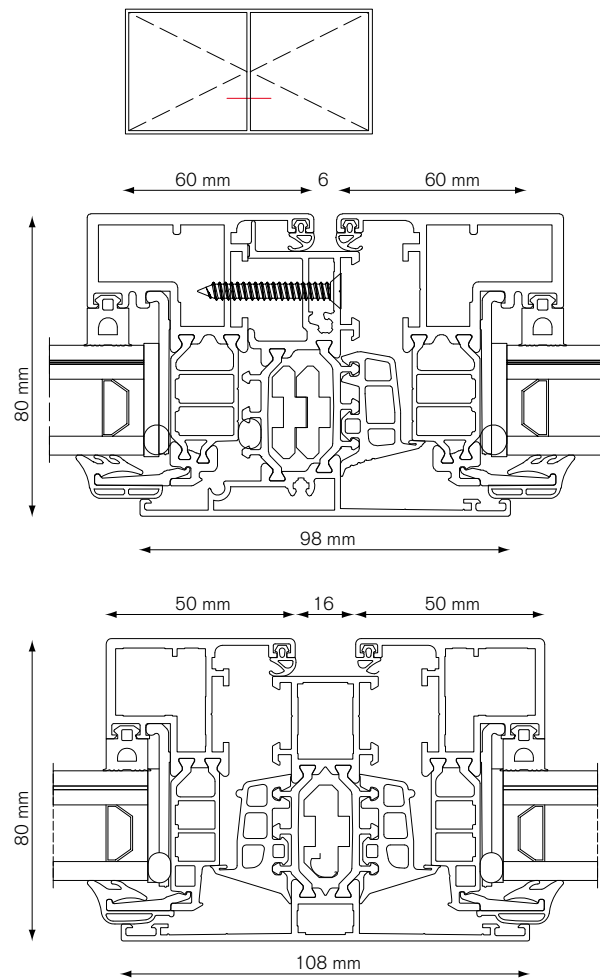
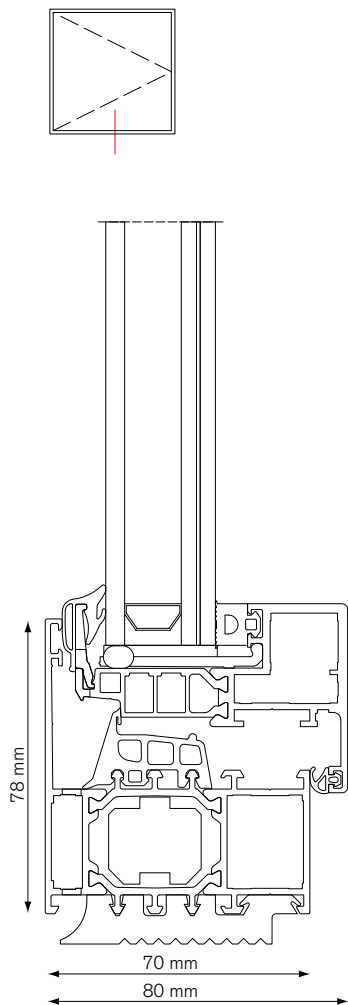
Rebate height	40 mm
Infill thickness fixed frame	16,5 - 53,5 mm
Infill thickness vent frame	15,5 - 54,5 mm
Glazing method	dry glazed with EPDM gaskets or silicon

## Performances

Thermal break	35 mm omega shaped polyamides PA 6.6 GF25		
Thermal insulation	Basic:	$U_f = 2,1 - 2,6 \text{ W/m}^2\text{K}$	EN ISO 10077-2
	I:	$U_f = 2,1 - 2,4 \text{ W/m}^2\text{K}$	EN ISO 10077-2
	SI:	$U_f = 1,7 - 2,2 \text{ W/m}^2\text{K}$	EN ISO 10077-2
	SHI:	$U_f = 1,2 - 1,9 \text{ W/m}^2\text{K}$	EN ISO 10077-2
Air permeability	4	600 Pa	EN 12207
Water tightness	E1200	1200 Pa	EN 12208
Wind resistance, security test	C4	1600 Pa, security 2400 Pa	EN 12210

This information is only an indication. For more information, please consult your local Sapa Building System branch.

Technical drawings



**Sapa Building System**, is one of the largest suppliers of aluminium building systems in Europe and is part of the Swedish group Sapa. The core business is the development and distribution of aluminium profile systems. Sapa Building System aims for well-developed systems and project solutions offering a tangible added value to fabricators, architects, investors and home-owners.

**Windows and Doors**

**Sliding Systems**

**Curtain Walls**

**Conservatories**

**Balustrades, gates and others**

**BIPV**

Your local Sapa Building System fabricator

**Sapa Building System NV**

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