

# SAPA WINDOW 1086

HIGH INSULATED WINDOW TO PASSIVE HOUSE LEVEL



**sapa:**

By  Hydro

# SAPA WINDOW 1086/SX/PX

/ FLERA UTFÖRANDEN GER VALFRIHET

SAPA Window 1086 has a strong design based on 86 mm deep profiles. It is insulated with 42 mm glass-fibre-reinforced polyamide strips and meets the highest classes of airtightness and watertightness, and has a very low U-value.

To maximize energy performance it can be fitted with special insulation strips to meet super-insulated (SX) specification or Passive House (PX) specification.

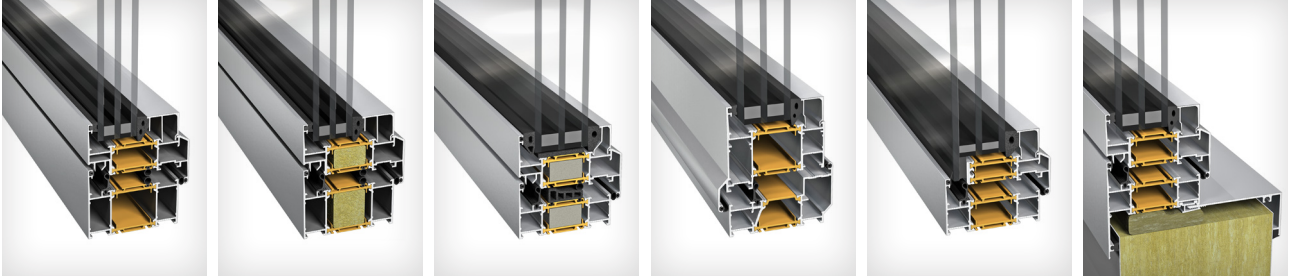
Our aluminium windows combine good durability, minimal maintenance and long life.

Available as fixed or inward-opening window with optional concealed hinges.

Fixed windows and glazed elements are designated as 3086.

- 1086, 1086 SX and 1086 PX. Inward-opening windows. High insulated window to Passive House level.
- 1086 outward-opening window. Often used for fresh air ventilation, smoke ventilation and emergency exits.
- 1086 block window has a stepped glazing unit that conceals the sash from the outside, giving the window a larger glazed area.
- 1086 for sandwich panel wall has a frame designed for efficient installation in panel wall structures made from sheet metal and insulation. The frame has the rebate towards the outside of the wall and is secured with concealed fittings from the inside. The inside is finished with special aluminium profiles. Door 2086 is also available with a custom profile.





1086	1086 SX	1086 PX	1086	1086 block window	1086 panel wall
<b>inward-opening</b>	<b>inward-opening</b>	<b>inward-opening</b>	<b>outward-opening</b>	<b>inward-opening</b>	<b>inward-opening</b>
<i>Side-hung</i>	<i>Side-hung</i>	<i>Side-hung</i>	<i>Side-hung</i>	<i>Side-hung</i>	<i>Side-hung</i>
<i>Bottom-hung</i>	<i>Bottom-hung</i>	<i>Bottom-hung</i>	<i>Bottom-hung</i>	<i>Bottom-hung</i>	<i>Bottom-hung</i>
<i>Top-hung</i>	<i>Top-hung</i>	<i>Top-hung</i>	<i>Top-hung</i>	<i>Top-hung</i>	<i>Top-hung</i>
<i>Tilt and turn</i>	<i>Tilt and turn</i>	<i>Tilt and turn</i>	-	<i>Tilt and turn</i>	<i>Tilt and turn</i>
<i>Fixed window/ element</i>	<i>Fixed window/ element</i>	<i>Fixed window/ element</i>	<i>Fixed window/ element</i>	<i>Fixed window/ element</i>	<i>Fixed window/ element</i>



### MINIMIZE THE CO<sub>2</sub> FOOTPRINT

SAPA's products are made of aluminum with a low carbon footprint. At present, our entire product range consists of the Hydro CIRCAL alloys, made from recycled aluminum from post-consumer scrap and Hydro REDUXA, aluminum made from renewable energy.

Read more about this at [www.sapa.lt](http://www.sapa.lt)

PERFORMANCE	Window inward-opening			French window inward.	Window outward.	French window outward.
	1086, 1086 SX	1086 PX	1086 block window	1086, 1086 SX	1086	1086
<i>Sapa Window</i>	1086, 1086 SX	1086 PX	1086 block window	1086, 1086 SX	1086	1086
<i>Glass thickness</i>	20-64 mm	35-55 mm	22-49 mm	20-64 mm	20-64 mm	20-64 mm
<i>Profile depth</i>	86 mm					
<i>Frame outer dim.</i>	For frame outer dimensions for different variants, see website					
<i>Water tightness</i>	Class 9A according to EN 12208					
<i>Air permeability</i>	Class 4 according to EN 12207					
<i>Burglar resistant</i>	Class RC2 according to EN 1627	-	-	Class RC2 acc. to EN 1627	-	-
<i>Sash weight, max.</i>	30/40/50/100/130 kg		50/100 kg	100/130 kg	100 kg	100 kg
<i>Fitting</i>	Side-hung, bottom-hung, top-hung or tilt-and-turn			Side-hung	Side-hung, top-hung or tilt-and-turn	Side-hung
<i>Variants</i>	Single-glazed window/element combined with opening and fixed windows. Meeting stile window.		Single-glazed window/element with opening and fixed windows.	Single door, with or without top light and side light. Meeting stile door.	Single-glazed window/element with opening and fixed windows.	Single door, with or without top light and side light.

## U-VALUES, EXEMPLE

U-values glass ( $U_g$ ) in W/m <sup>2</sup> K	0,50	0,60	0,70	0,80	0,90	1,0
<b>Window 1230 x 1480 mm, U-values in W/m<sup>2</sup>K</b>						
1086 fixed	0,90	0,93	1,0	1,1	1,2	1,3
1086 inward-opening	1,1	1,1	1,2	1,3	1,4	1,4
1086 outward-opening	1,1	1,2	1,2	1,3	1,4	1,5
1086 SX fixed	0,73	0,81	0,88	0,96	1,0	1,1
1086 SX inward-opening	0,90	0,96	1,0	1,1	1,2	1,2
1086 PX fixed	0,71	0,79				
1086 PX inward-opening	0,80					
1086 Block window, inward-opening	1,0	1,1	1,2	1,2	1,3	1,4
<b>French window 1000 x 2100 mm, U-values in W/m<sup>2</sup>K</b>						
1086 inward-opening	1,1	1,2	1,3	1,3	1,4	1,5
1086 outward-opening	1,1	1,2	1,3	1,3	1,4	1,5
1086 SX inward-opening	0,89	0,97	1,0	1,1	1,2	1,3

**Requirements:** Table gives U-values for the complete window ( $U_w$ ) in W/m<sup>2</sup>K (incl. profiles/glass /spacer bars) according to EN 10077-1. The glass is separated by warm edge spacer bars. Profile section for opening windows (100 mm). Profile section for fixed window, see relevant detail.

## SOUND

Important factors in the acoustic insulation of a building against external noise are the construction of the outer wall, the acoustic insulation of the windows and any fresh air vents and the design of seals, etc.

By using 1086 SX with its high level of airtightness, combined with the right choice of glazing, it is possible to achieve the required standard of acoustic

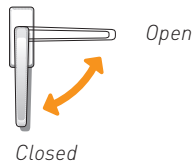
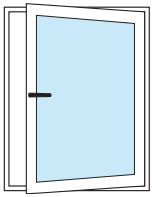
insulation. Window 1086 SX has a sound reduction index of up to RW 46 dB according to EN ISO 1040-2. Choosing the right glass requires an analysis to find out what type of sound is perceived as disturbing.

Examples of sound reduction measured in dB with different types of glazing			
SAPA Window 1086 SX, inward-opening, 1230 x 1480 mm			
Glass $R_w$ [C; C <sub>tr</sub> ]	Base value	Highway and rail traffic	Street traffic
	$R_w$	$R_w + C$	$R_w + C_{tr}$
Glass T4-16-4-16-4. NSG Pilkington, 32 [-1; -5]	33	32	28
Glass T6-16-4-16-8,8. NSG Pilkington, 42 [-2; -7]	41	39	34
Glass TS 50/51. SGG Emmaboda Glas, 50 [-2; -6]	45	44	40
SAPA Window 1086 SX, fixed, 1230 x 1480 mm			
Glass T4-16-4-16-4. NSG Pilkington, 32 [-1; -5]	32	30	26
Glass T6-16-4-16-8,8. NSG Pilkington, 42 [-2; -7]	42	40	36
Glass TS 50/51. SGG Emmaboda Glas, 50 [-2; -6]	46	44	39

**Requirements:** Table is based on tests carried out by SP Technical Research Institute of Sweden (dimension 1230 x 1480 mm) according to EN ISO 10140-2 and EN ISO 717-1.



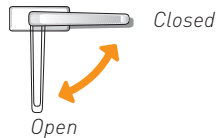
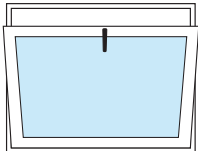
## FITTING GUIDE WINDOWS



### Side-hung inward-opening window\*

Closing fitting	Visible or concealed hinges
Handle	16126 16131 Lockable Sapa 16439** Sapa 16439 with child safety latch 16441** Sapa 16438 Lockable**

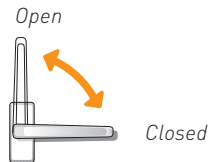
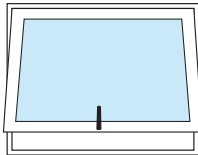
\*Concealed hinges are available for 1086/1086 SX



### Bottom-hung inward-opening window\*

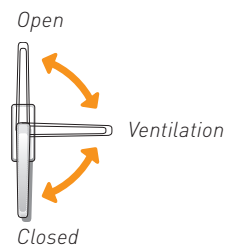
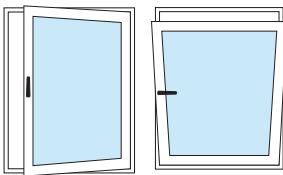
Closing fitting	Visible or concealed hinges
Handle	16126 16131 Lockable Sapa 16439** Sapa 16439 with child safety latch 16441** Sapa 16438 Lockable**

\*Concealed hinges are available for 1086/1086 SX



### Top-hung inward-opening window

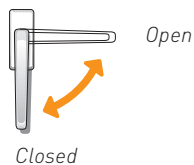
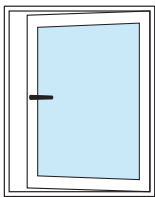
Closing fitting	Visible or concealed hinges
Handle	16126 16131 Lockable Sapa 16439** Sapa 16439 with child safety latch 16441** Sapa 16438 Lockable**



### Tilt-and-turn inward-opening window\*

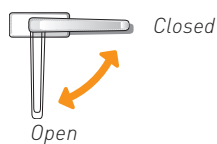
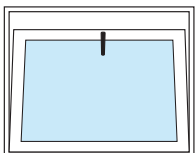
Closing fitting	Visible or concealed hinges
Handle	16126 16131 Lockable Sapa 16439 Sapa 16439 with child safety latch 16441** Sapa 16438 Lockable

\*Concealed hinges are available for 1086/1086 SX



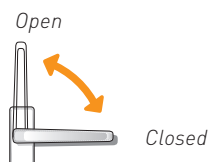
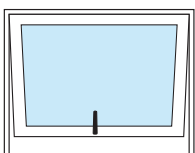
### Side-hung outward-opening window

Closing fitting	Fix espagnolette
Handle	Sapa 16434 and 16435 Sapa 16434 and 16435 with child safety latch 16440 Sapa 16436 and 16437 Lockable.



### Bottom-hung outward-opening window

Closing fitting	Fix espagnolette
Handle	Sapa 16435 Sapa 16435 with child safety latch 16440 Sapa 16437 Lockable

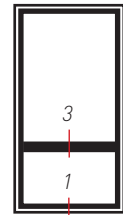
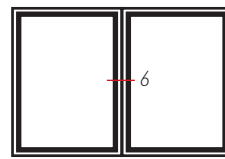
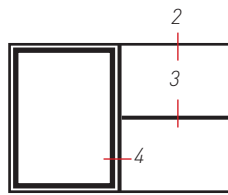
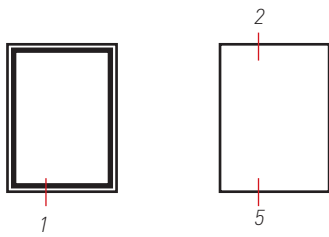


### Top-hung outward-opening window

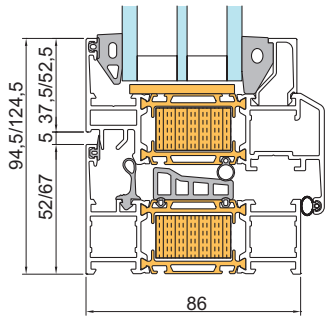
Closing fitting	Fix espagnolette
Handle	Sapa 16434 Sapa 16434 with child safety latch 16440 Sapa 16436 Lockable

\*\* Not available for 1086 block window

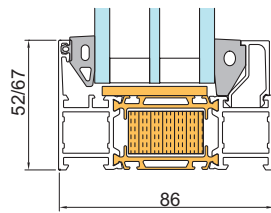
# DRAWINGS 1086, 1086 SX AND 1086 PX, INWARD-OPENING



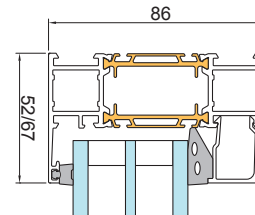
French window, inward-opening



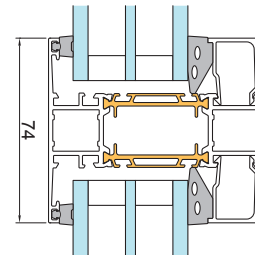
1 - Inward-opening window, frame/sash 1086 PX



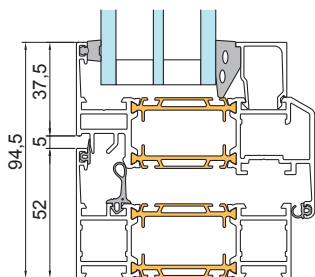
5 - Fixed window, frame 1086 PX



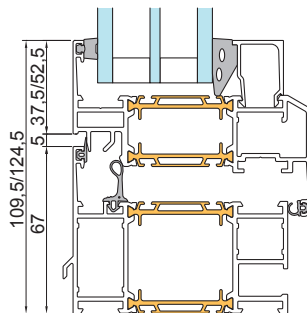
2 - Fixed window, frame 1086



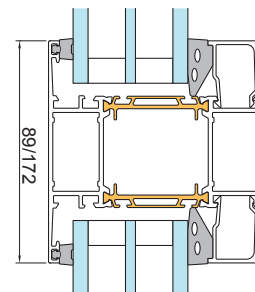
3 - Horizontal glazing bars 1086



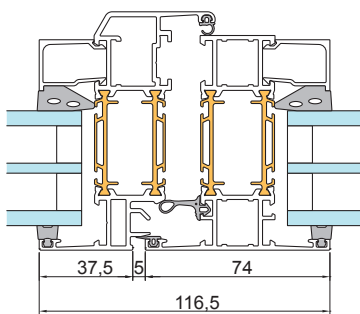
1 - Inward-opening window, frame/sash 1086



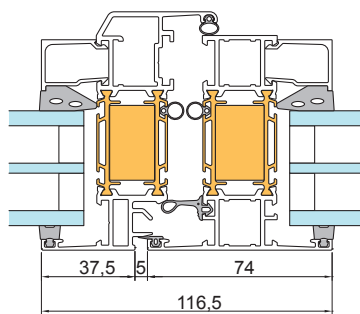
1 - Inward-opening window/ French window, frame/sash 1086



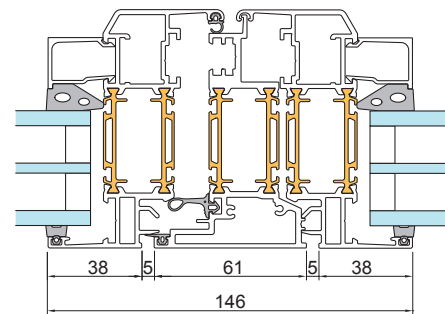
3 - Horizontal glazing bars 1086



4 - Inward-opening window, frame/sash 1086

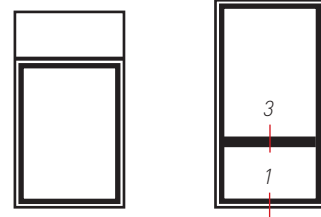
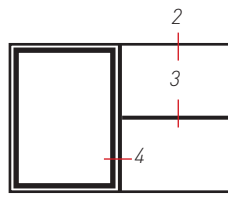
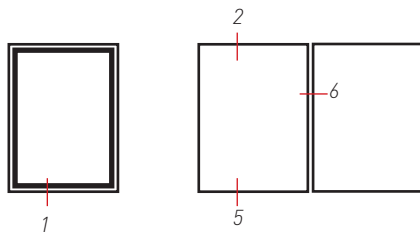


4 - Inward-opening window, frame/sash 1086 SX

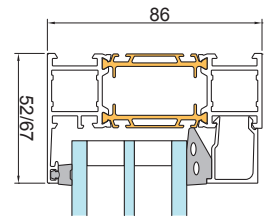


6 - Meeting stile window sash/sash 1086

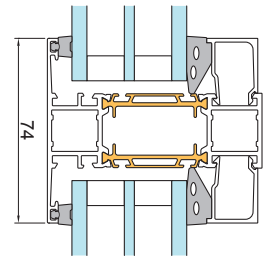
**DRAWINGS 1086, 1086 SX AND 1086 PX, OUTWARD-OPENING**



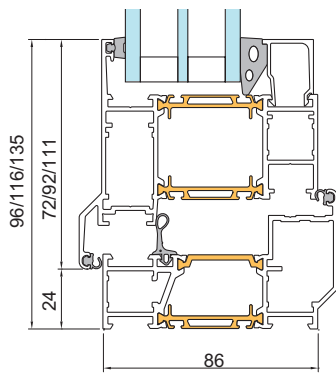
*French window, outward-opening*



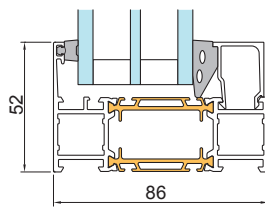
*2 - Fixed window, frame 1086*



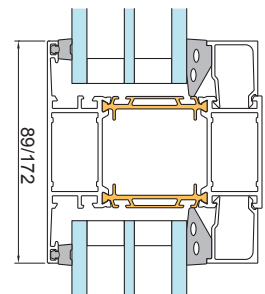
*3 - Horizontal glazing bars 1086*



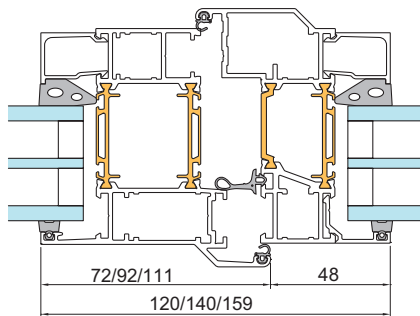
*1 - Outward-opening window/French window, frame/sash 1086*



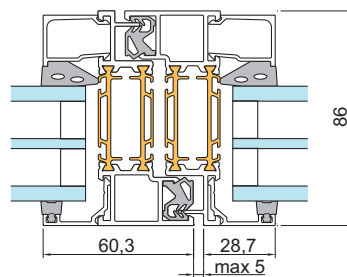
*5 - Fixed window, frame 1086*



*3 - Horizontal glazing bars 1086*



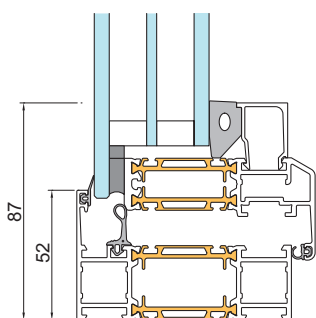
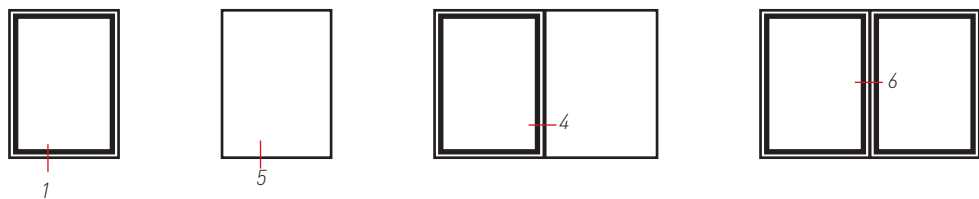
*4 - Outward-opening window, frame/sash 1086*



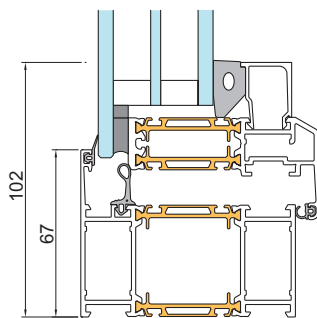
*6 - Fixed window dividing profile 1086*



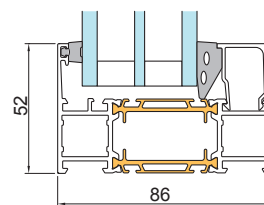
# DRAWINGS 1086 BLOCK WINDOW, INWARD OPENING



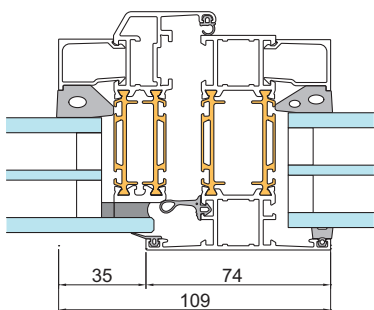
1 - Inward-opening window, frame/sash 1086



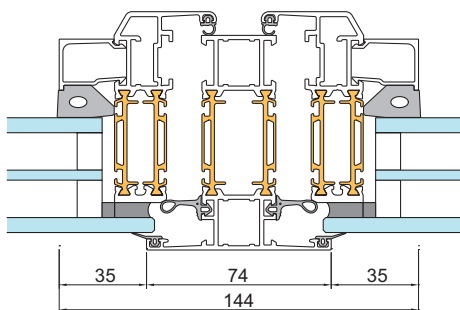
1 - Inward-opening window, frame/sash 1086



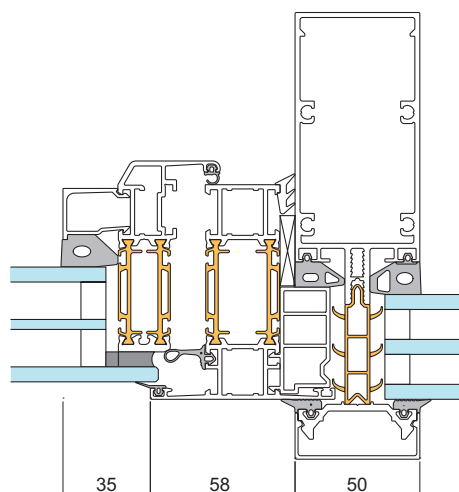
5 - Fixed window, frame 1086



4 - Inward-opening window, frame/sash 1086



6 - Window 1086



1086 Block window in facade 4150 SX





# SAPA WINDOW 1086 VINTAGE

/ RETRO DESIGN MEETS MODERN PERFORMANCE

*SAPA Window 1086 Vintage is a highly insulated aluminium window in a vintage style that harmonises well with older buildings, including protected buildings. Despite its retro look, the window system meets modern standards of quality and thermal insulation. The slender frame and sash profiles create an elegant look that also lets in maximum light.*

*SAPA Window 1086 Vintage is based on the popular Thermo 86 design with 86 mm deep aluminium profiles. These are insulated with 42 mm glass-fibre-reinforced polyamide strips and meet the highest classes of airtightness and watertightness, with a very low U-value. This rustic-style aluminium window combines good durability, minimal maintenance and long life.*

*It can be specified in fixed or inward-opening configurations with the option of concealed hinges, or as a block window with stepped glazing that conceals the frames from the outside, creating a larger exterior glazed area.*

*Windows can be fitted with glazing bars, and sashes can be bent into circular or semi-circular shapes.*





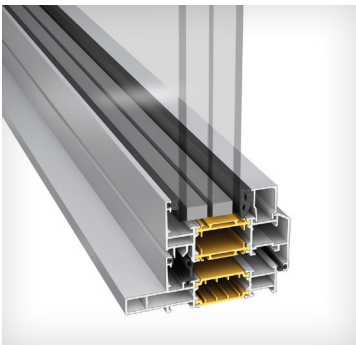
The visual separation of the frame and sash gives this window a distinctive appearance.



Shadows and highlights in the frame profiles add variety and detail to the exterior.



The result is a minimalist look combined with high-performance construction.



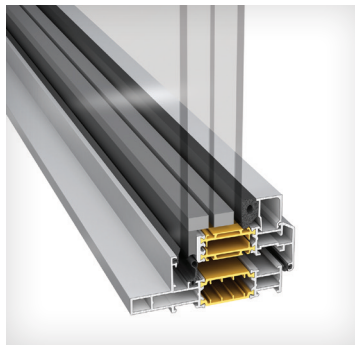
**1086 Vintage Standard  
inward-opening**

Side-hung

Bottom-hung

Top-hung

Tilt-and-turn



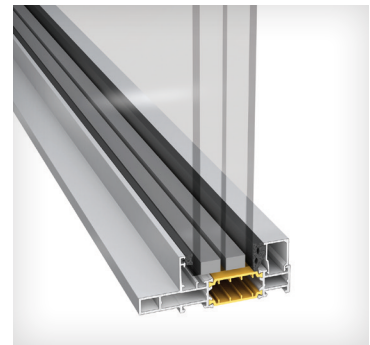
**1086 Vintage block window  
inward-opening**

Side-hung

Bottom-hung

Top-hung

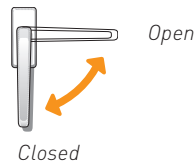
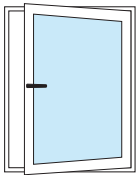
Tilt-and-turn



**1086 Vintage  
fixed window/glazing element**

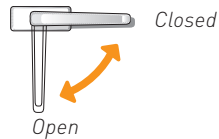
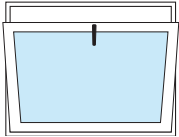
PERFORMANCE	SAPA Vintage inward-opening	
SAPA Vintage window	1086	1086 block window
Glazing thickness	20-64 mm	22-49 mm
Profile depth	86 mm	
Frame outer dimensions	Frame outer dimensions for different versions, see website	
Watertightness	Class 9A according to EN 12208	
Air permeability	Class 4 according to EN 12207	
Burglar-resistant	Class RC2 according to EN 1627	-
Max. sash weight	130 kg	100 kg
Hinge type	Side-hung, top-hung, bottom-hung or tilt-and-turn	
Specifications	Single window / glazing unit combined with opening and fixed window.	Single window / glazing unit combined with opening and fixed window.

## HINGE GUIDE FOR WINDOWS



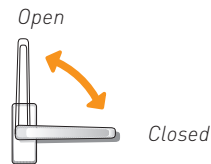
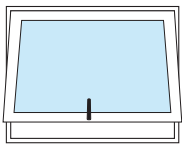
### Side-hung inward-opening window

Closing hardware	Visible or concealed hinges
Handle	16126 16131 Lockable Sapa S 16439 TBT* Sapa S 16439 TBT with child safety lock S 16441* Sapa S 16438 TBT Lockable *



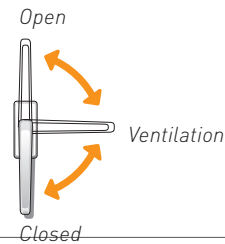
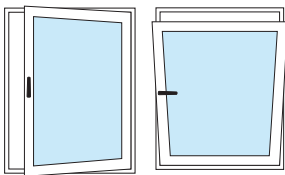
### Bottom-hung inward-opening window

Closing hardware	Visible or concealed hinges
Handle	16126 16131 Lockable Sapa S 16439 TBT* Sapa S 16439 TBT with child safety lock S 16441* Sapa S 16438 TBT Lockable *



### Top-hung inward-opening window

Closing hardware	Visible or concealed hinges
Handle	16126 16131 Lockable Sapa S 16439 TBT* Sapa S 16439 TBT with child safety lock S 16441* Sapa S 16438 TBT Lockable *



### Tilt-and-turn inward-opening window

Closing hardware	Visible or concealed hinges
Handle	16126 16131 Lockable Sapa S 16439 TBT* Sapa S 16439 TBT with child safety lock S 16441* Sapa S 16438 TBT Lockable *

\* not 1086 Vintage block window



SAPA 1086 Vintage, fixed window



SAPA 1086 Vintage, window standard



SAPA 1086 Vintage, Block window

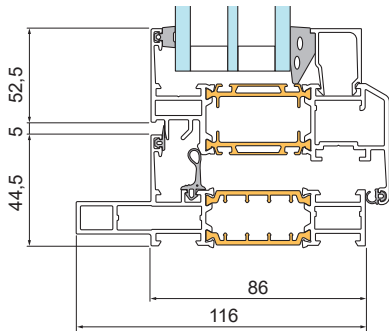
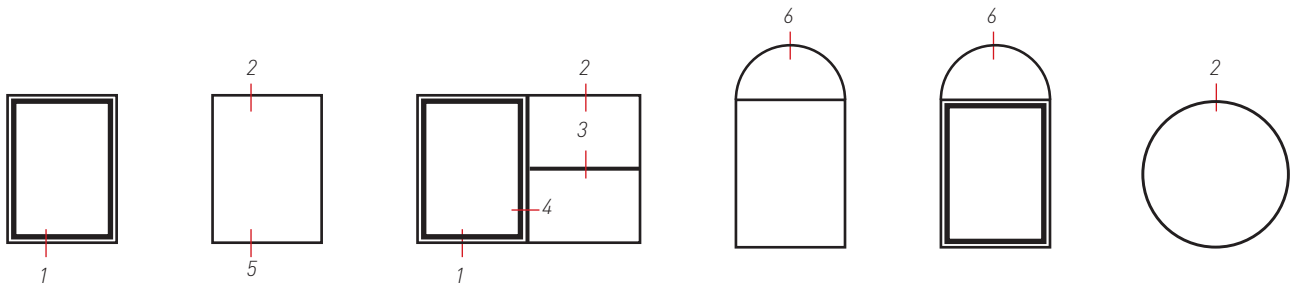
### U-value, example 1086 VINTAGE

U-value glazing ( $U_g$ ) in W/m <sup>2</sup> K	0,50	0,60	0,70	0,80	0,90	1,0
Window 1230 x 1480 mm, U-value in W/m <sup>2</sup> K						
1086 fixed	0,90	0,93	1,0	1,1	1,2	1,3
1086 inward-opening	1,1	1,1	1,2	1,3	1,4	1,4
1086 block window inward-opening	1,0	1,1	1,2	1,2	1,3	1,4

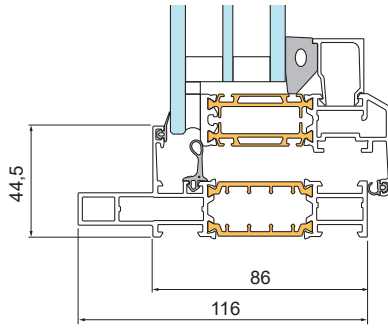
**Conditions:** Table gives U value for complete window (UW) in W/m<sup>2</sup>K (incl. profile / glass / edge zone) according to EN 10077-1. Glazing has a warm-edge spacer.

Profile section of opening window (100 mm). Profile section of fixed window, see relevant detail.

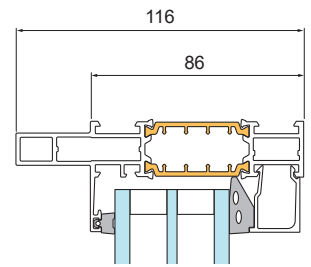
**DRAWINGS 1086 VINTAGE AND 1086 VINTAGE BLOCK WINDOW**



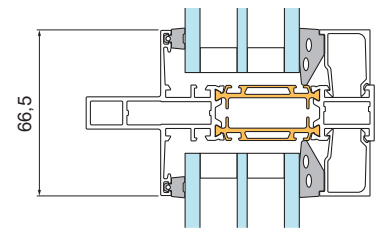
1 - Inward-opening window, frame/sash 1086 Vintage



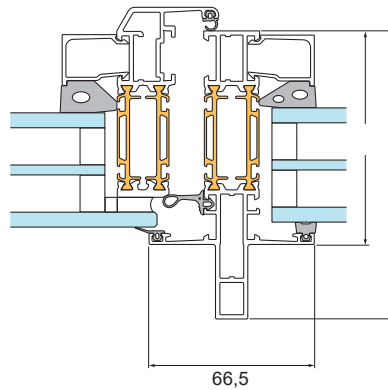
1 - Inward-opening window, frame/sash 1086 Vintage block window



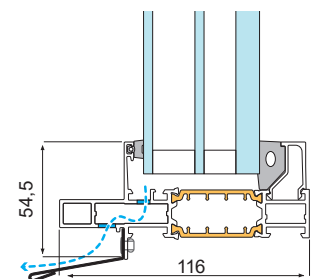
2 - Fixed window, frame 1086 Vintage



3 - Horizontal glazing bars 1086 Vintage



4 - Inward-opening window, frame/sash 1086 Vintage block window



5 - Fixed window, frame 1086 Vintage

Profile adapted for plate connection

# SAPA 1086 SCREEN WINDOW

/ WINDOWS WITH FRAME SPECIALLY DEVELOPED FOR INTEGRATED SCREEN

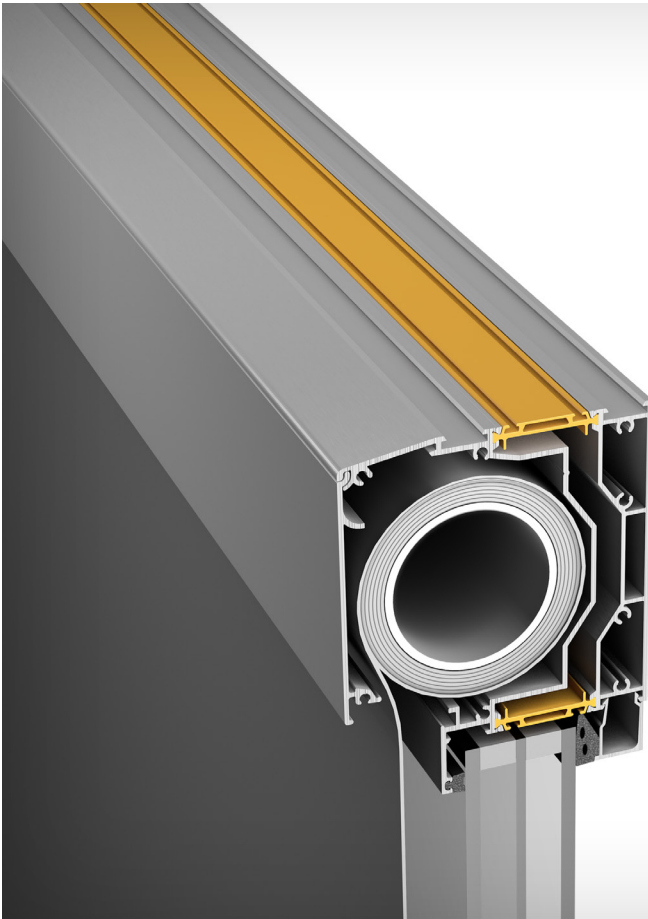
SAPA in collaboration with Hunter Douglas offers an integrated screen solution that gives a slim and fine impression. A solution where the screen roller is mounted hidden in the frame. SAPA 1086 Screen is based on our 86 system, a stable construction with 86 mm deep profiles. It is basic insulated with 42 mm fiberglass-reinforced polyamide strips and can withstand the highest classes of air and rain tightness as well as a very low U-value. For optimal energy performance, it can be supplemented with unique insulating bars. SAPA 1086 Screen has rebate for glass 20-56 (64) mm.

- To withstand the wind load the screen will be guided in vertical guide profiles.
  - Single window, meeting windows or as an element combining opening and a fixed window
  - Hinges. Hidden or visual
- 
- Special developed frame for installation of the screen.



Special developed frame for installation of the screen.





**1086 Screen window**

**inward-opening**

*Side-hung*

*Bottom-hung*

*Top-hung*

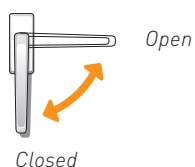
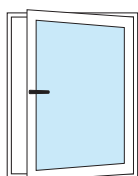
*Tilt-and-turn*

**Fixed window**

PERFORMANCE	
SAPA 1086 Screen window	1086 Screen window inward-opening
Glazing thickness	20-64 mm
Profile depth	86 mm
Frame outer dimensions	Frame outer dimensions for different versions, see website
Watertightness	Class 9A according to EN 12208
Air permeability	Class 4 according to EN 12207
Resistance to wind load	Class C3 according to EN 12210.
Burglar-resistant	Class RC2 according to EN 1627. Fixed windows: burglar resistance class RC3.
Max. sash weight	200 kg
Hinge type	Side-hung, top-hung, bottom-hung or tilt-and-turn



## HINGE GUIDE FOR WINDOWS

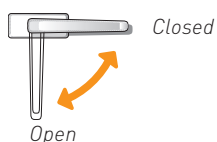
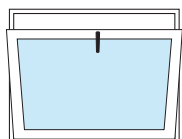


Open

Closed

### Side-hung inward-opening window

Closing hardware	Visible or concealed hinges
Handle	16126 16131 Lockable Sapa S 16439 TBT Sapa S 16439 TBT with child safety lock S 16441* Sapa S 16438 TBT Lockable

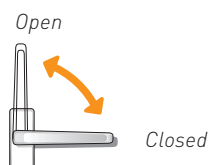
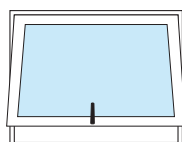


Closed

Open

### Bottom-hung inward-opening window

Closing hardware	Visible or concealed hinges
Handle	16126 16131 Lockable Sapa S 16439 TBT Sapa S 16439 TBT with child safety lock S 16441* Sapa S 16438 TBT Lockable

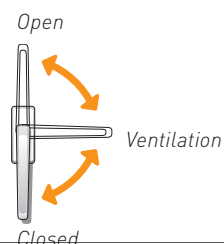
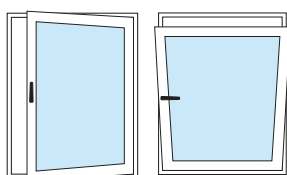


Open

Closed

### Top-hung inward-opening window

Closing hardware	Visible or concealed hinges
Handle	16126 16131 Lockable Sapa S 16439 TBT Sapa S 16439 TBT with child safety lock S 16441* Sapa S 16438 TBT Lockable



Open

Ventilation

Closed

### Tilt-and-turn inward-opening window

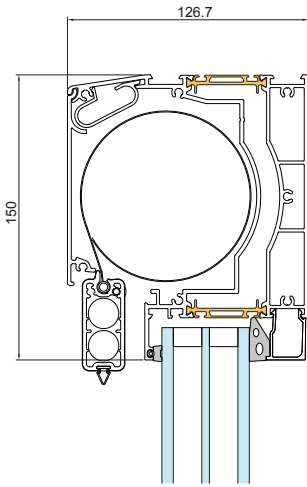
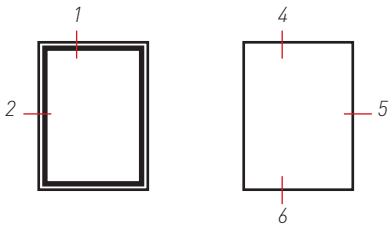
Closing hardware	Visible or concealed hinges
Handle	16126 16131 Lockable Sapa S 16439 TBT Sapa S 16439 TBT with child safety lock S 16441* Sapa S 16438 TBT Lockable

## U-value, example 1086 SCREEN

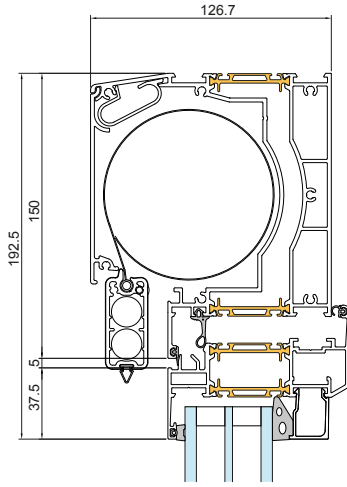
U-value glazing ( $U_g$ ) in W/m <sup>2</sup> K	0,50
<b>Window 1230 x 1480 mm, U-value in W/m<sup>2</sup>K</b>	
1086 inward opening	1,1
1086 inward opening with with insulating bars	0,90

**Conditions:** Table gives U value for complete window (UW) in W/m<sup>2</sup>K (incl. profile / glass / edge zone) according to EN 10077-1. Glazing has a warm-edge spacer. Profile section of opening window (100 mm). Profile section of fixed window, see relevant detail.

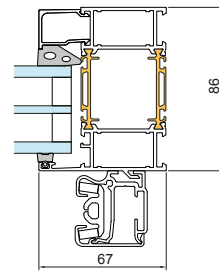
**DRAWINGS WINDOW 1086 SCREEN FIXED AND INWARD-OPENING STANDARD**



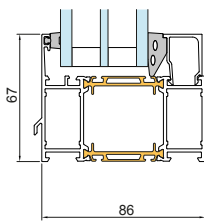
4 - Fixed window, frame  
1086 Sreen Standard



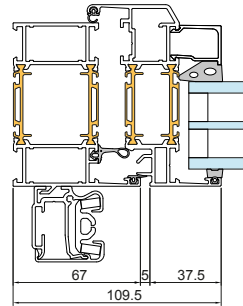
1 - Inward-opening window, frame/sash  
1086 Sreen Standard



5 - Fixed window, frame  
1086 Sreen Standard



6 - Fixed window, frame  
1086 Sreen Standard



2 - Inward-opening window, frame/sash  
1086 Sreen Standard

**sapa:**

By  **Hydro**

## Hydro Building Systems, Region Nordic, Baltic & Poland

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