

# PVC WINDOWS



## WIŚNIOWSKI

GATES | WINDOWS | DOORS | FENCES

## WINDOWS PRIMO 82

**Intended use:** PVC windows are intended for residential housing, industrial buildings and public utility facilities.



### THERMAL INSULATION

The heat transfer coefficient of the entire window from 0.76 W/m<sup>2</sup>K for the PRIMO 82 windows. The values apply to window size 1,230 x 1,480 [mm].



### SAFETY

Intruders? Not in a house fitted with WIŚNIOWSKI windows. Their precision-made structure ensures burglary resistance.



### WARRANTY

WIŚNIOWSKI windows are covered by a 7-year warranty. This is just to be on the safe side, but we want you to know that you can count on us.





## PVC WINDOWS CAN BE GROUPED AS FOLLOWS:

- according to the number of leafs: single-leaf, double-leaf, three-leaf, multi-leaf,
- according to the opening method: fixed windows, turn-only (side hung; R) windows, tilt-only (awning/hopper; U) windows, tilt and turn windows (UR), turn and tilt windows (RU), tilt and slide patio door, parallel-stop-slide, lift and slide patio door.



## PRIMO 82

### WINDOW CHARACTERISTICS

- Class A 7-chamber profiles, installation depth 82 [mm]
- Non-flush with the frame – straight
- Invisible effect (seam) profile joint, multi-chamber structure ensuring high thermal and acoustic insulation
- An arrangement of three gaskets (outer, central, and inner) perfectly insulates from noise, humidity, and cold
- Fitted as standard is a two-chamber glazing unit 4/18/4/18/4  
 $Ug=0.5 \text{ W/m}^2\text{K}$  in acc. with EN 673, glazing bead 107.262, optionally a panel 24-44 [mm] thick infilled with extruded polystyrene (XPS)
- Glass units 24 [mm] to 52 [mm] thick can be used
- Reinforcement made of galvanized steel: frame 1.5 [mm] 113.025, steel box section, white leaf 1.5 [mm] 113.292, film coating 1.75 [mm] 113.294.2, extruded gasket with a profile
- Bonded gasket available in the following colours – black, grey, caramel. Dedicated for the colour of the film coating
- Profile core – two-sided film coating: caramel, brown, grey, white; single-sided film coating: white
- Sound insulation  $Rw=33(-2,-7)\text{dB}$
- Thermal insulation of the reference RU window, dimensions 1.23 [m] x 1.48 [m], RU:  $Uw = 0.76 \text{ W/m}^2\text{K}$  with a 3-pane glass unit  $Ug = 0.5 \text{ W/m}^2\text{K}$
- Burglary resistance up to RC2 class,
- The PRIMO 82 window is available: with a low threshold (PRIMO 82 with a low threshold), with an aluminium cover plate (PRIMO 82-ALU), as patio door: tilt and slide PSK (PRIMO PSK-82 also in a version with an aluminium cover), lift and slide HST (Skymotion).

## STANDARD WINDOW ACCESSORIES

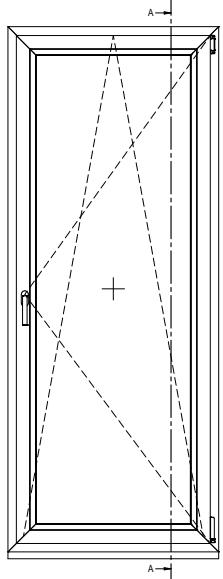
- drive gear with a lifting mishandling device and leaf lifter,
- all moving rollers i.S.,
- alloy strikers; additionally, the U, R and RU leafs feature two anti-burglary strikers,
- in RU leafs, bottom striker plate as standard,
- microventilation in scissor stay,
- surface hinges with contact pressure adjustment in three dimensions,
- anti-draught lock in RU leafs,
- aluminium handle,
- opening frame bottom hardware groove infill,
- the standard glass unit for the PRIMO 82 system is 4/18/4/18/4  $Ug=0.5 \text{ W/m}^2\text{K}$  in acc. with EN-673,
- 7-chamber transport and installation bar,
- band handles for handling windows,
- installation anchors,
- system widening 30 [mm] in white for balcony windows with a low threshold,
- transport slides,
- leaf lifter used for all leafs with widths exceeding 700 [mm].



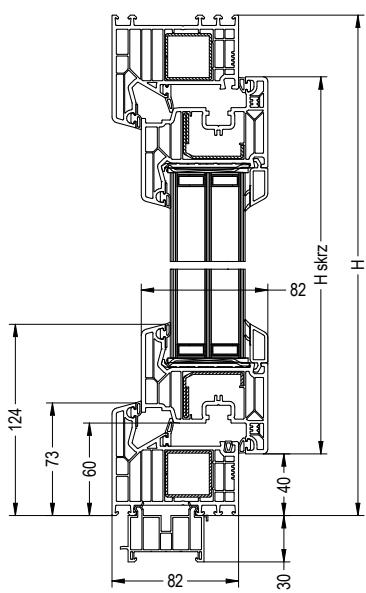
## CROSS-SECTIONS AND VIEWS

### Single-leaf, turn and tilt PRIMO 82 window, window leaf

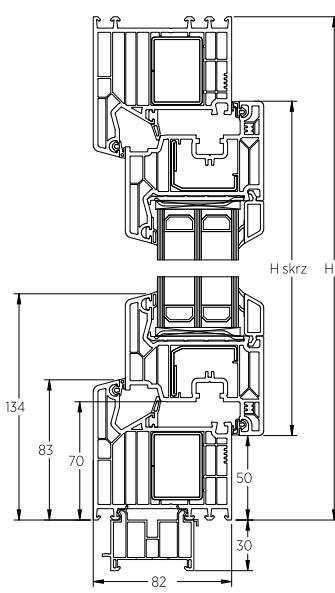
As seen from the inside



Vertical cross-section

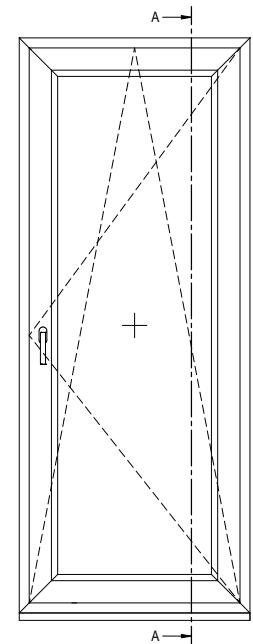


Vertical cross-section, tall frame

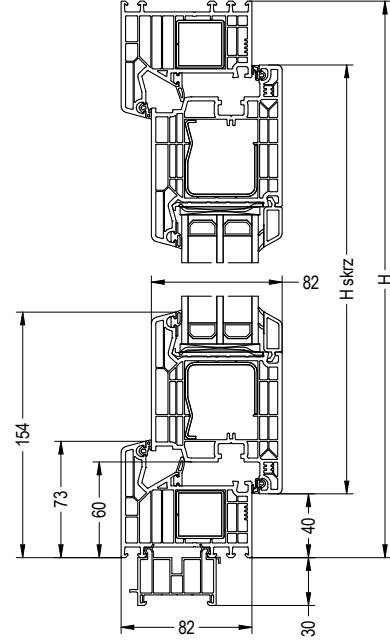


### Single-leaf, turn and tilt PRIMO 82 window, wide leaf

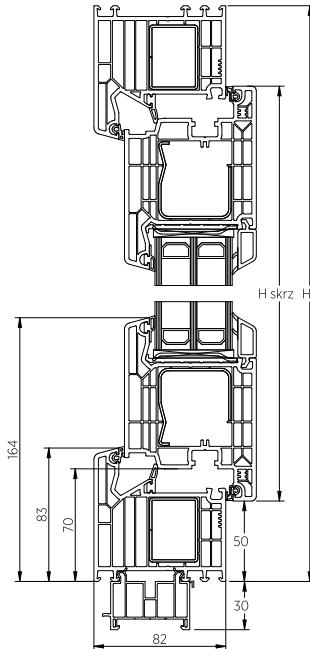
As seen from the inside



Vertical cross-section



Vertical cross-section, tall frame

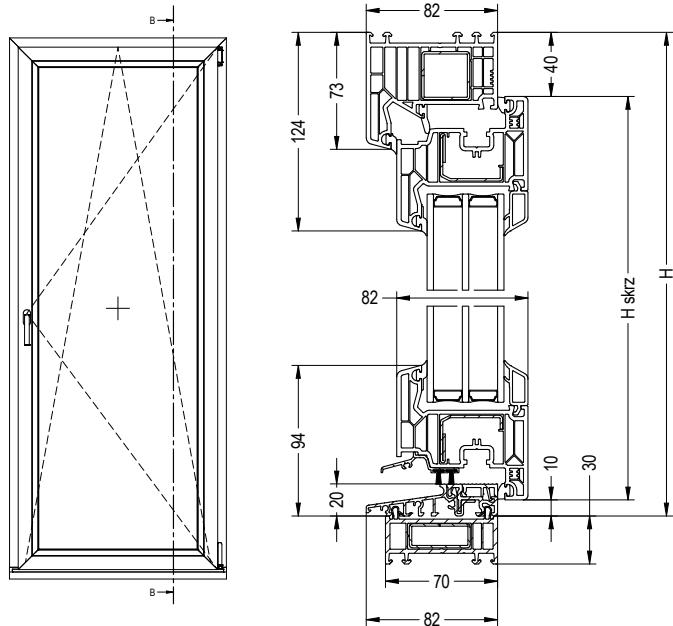




## Single-leaf turn and tilt PRIMO 82 window with a low threshold

As seen from the inside

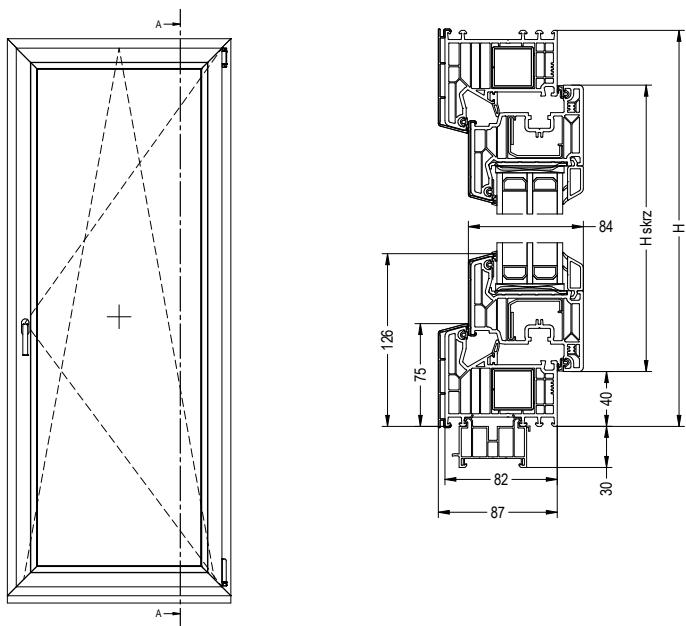
Vertical cross-section



## Single-leaf turn and tilt PRIMO 82 window with an aluminium cover plate

As seen from the inside

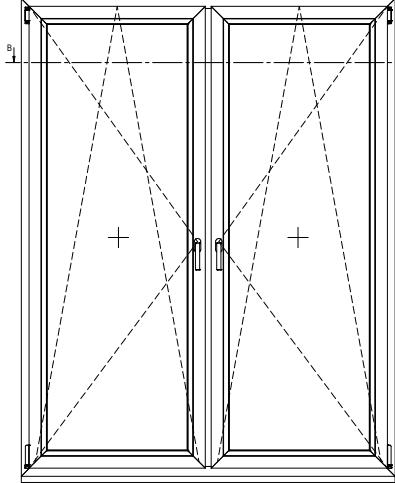
Vertical cross-section



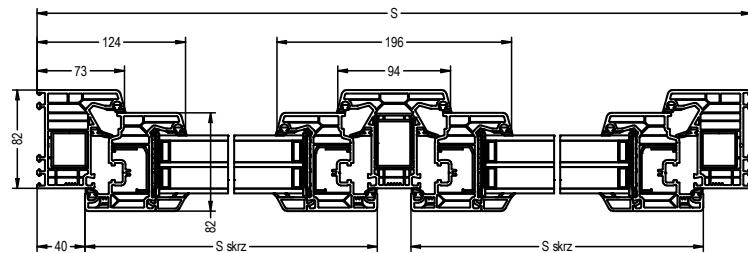


## Double-leaf PRIMO 82 window with a fixed mullion

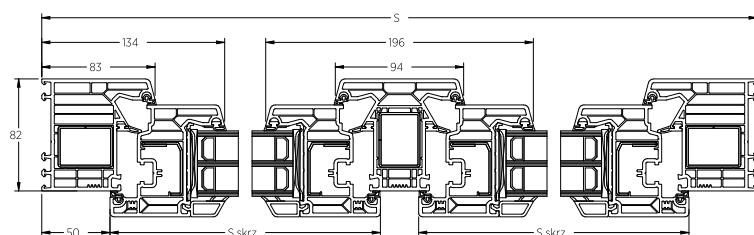
As seen from the inside



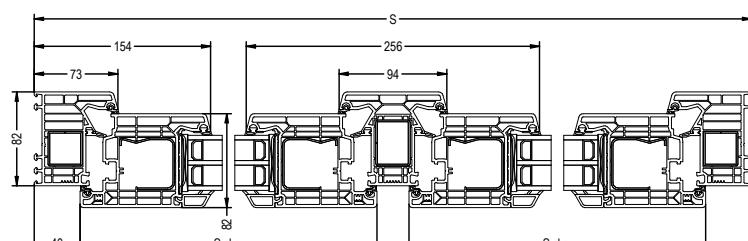
Horizontal cross-section, window leaf, standard mullion



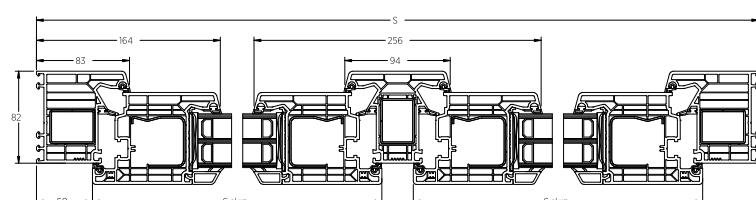
Horizontal cross-section, tall frame, window leaf, standard mullion



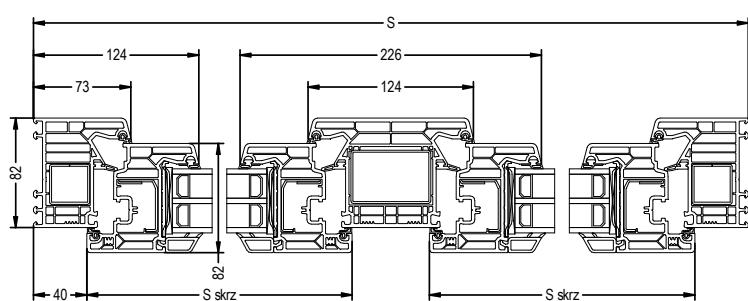
Horizontal cross-section, wide leaf, standard mullion



Horizontal cross-section, tall frame, wide leaf, standard mullion

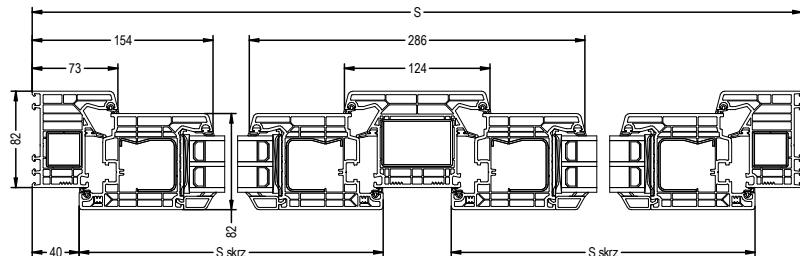


Horizontal cross-section, window leaf, wide mullion

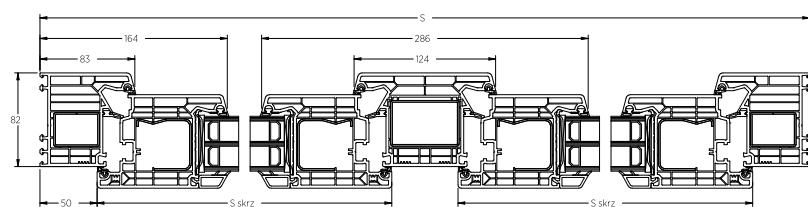




Horizontal cross-section, wide leaf, wide mullion

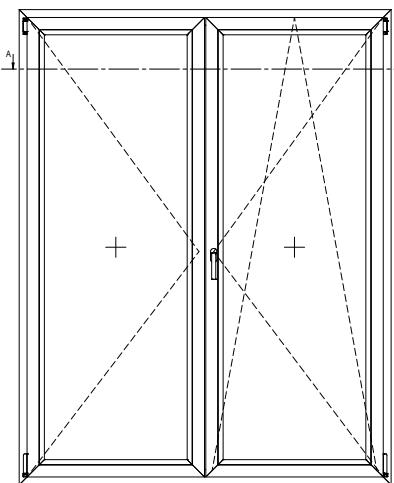


Horizontal cross-section, tall frame, wide leaf, wide mullion

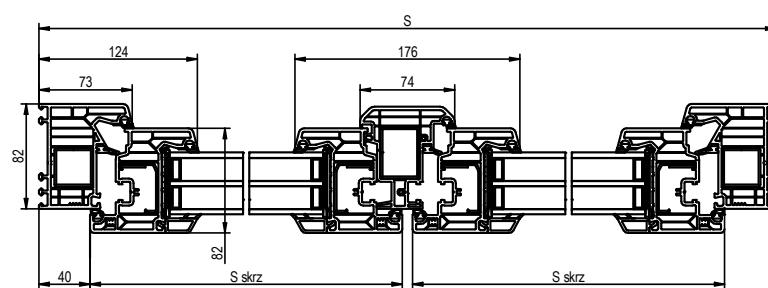


## Double-leaf PRIMO 82 window with a movable mullion

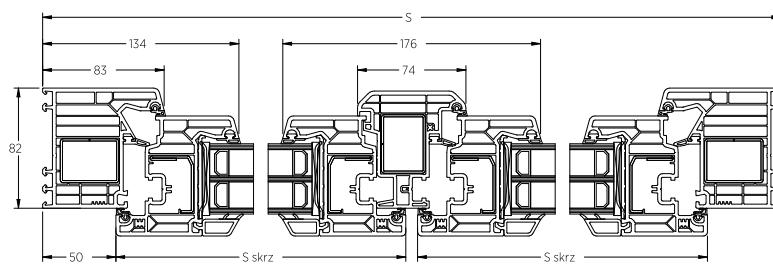
As seen from the inside



Horizontal cross-section



Horizontal cross-section, wide frame





# PRIMO PSK-82

Also available in a version with an aluminium cover plate



## PARALLEL SLIDING DOOR

Available in the PSK-S, PSK-Z, and PSK-PAS versions. The running system track is installed in the bottom section of the opening frame, which makes it visible to the user. The carriages are installed on the inner side of the sliding leaf.

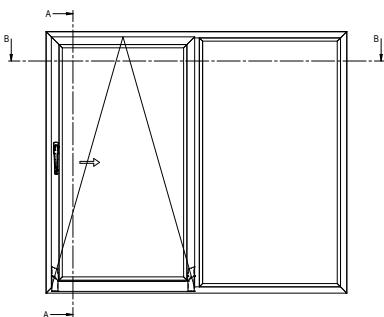
**PSK-S STANDARD VERSION** – manually operated, parallel tilt and slide door without motor support.

**PSK-Z AUTOMATIC VERSION** – automated, parallel tilt and slide door. This system features an additional control function “in the handle,” which makes it easier to tilt, slide, and close even very heavy leafs, and the integrated catch system enables easy transition between the sliding and tilting position.

**PSK-PAS PARALLEL-STOP-SLIDE VERSION** – the PSK-PAS system enables three functions: sliding, latching, and gap ventilation – parallel action gap up to 6 [mm] from the frame. The built-in damper stores energy and allows the sliding door to be easily closed shut.

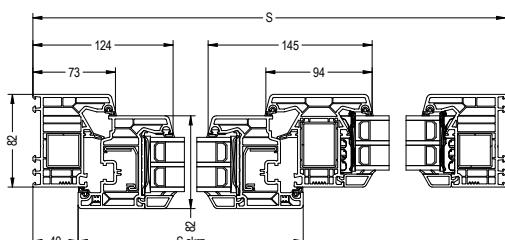
## PRIMO 82 patio window – PSK fix in the frame – Scheme A

As seen from the inside

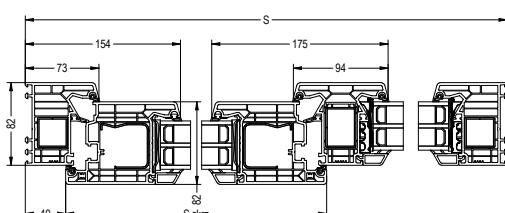


Horizontal cross-section

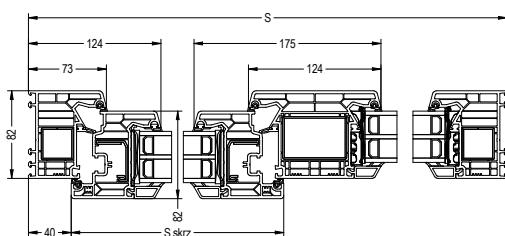
Window leaf, standard mullion



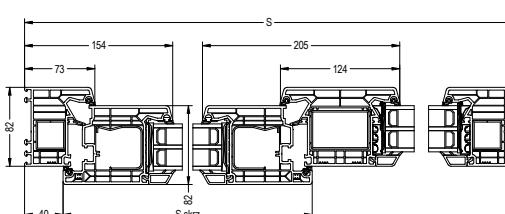
Wide leaf, standard mullion



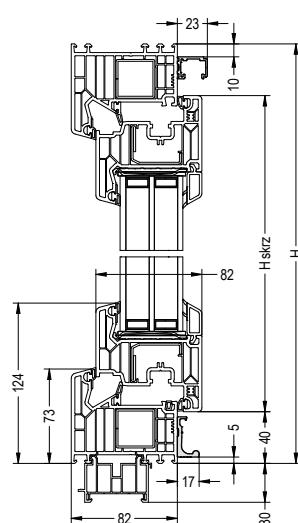
Window leaf, wide mullion



Wide leaf, wide mullion



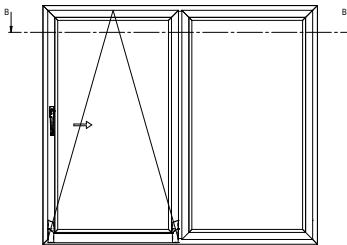
Vertical cross-section





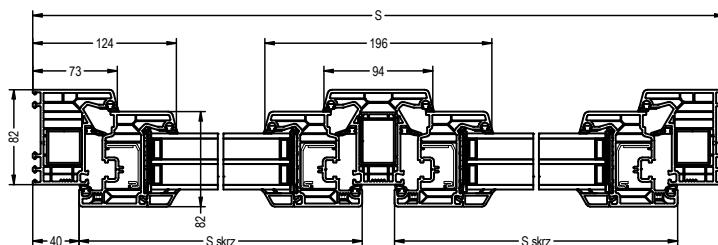
## PRIMO 82 patio window - PSK fix in the leaf - Scheme A

As seen from the inside

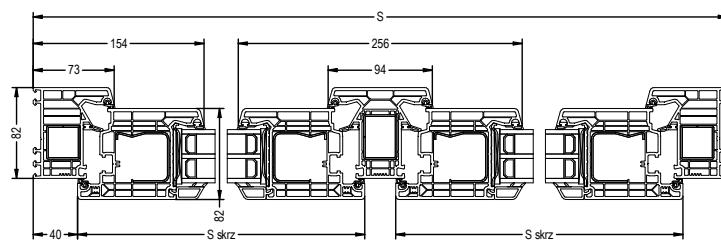


Horizontal cross-section

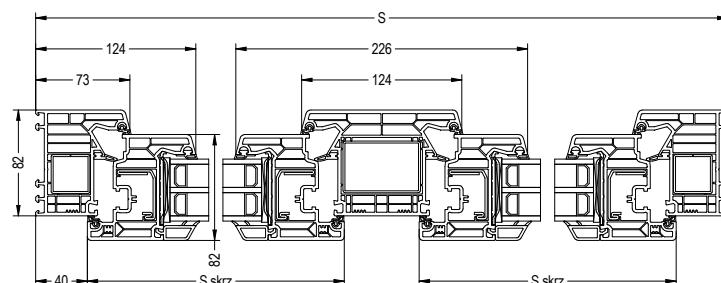
Window leaf, standard mullion



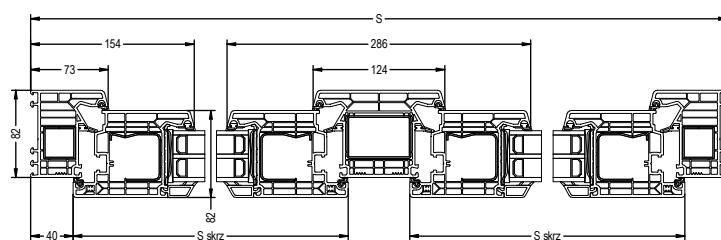
Wide leaf, standard mullion



Window leaf, wide mullion



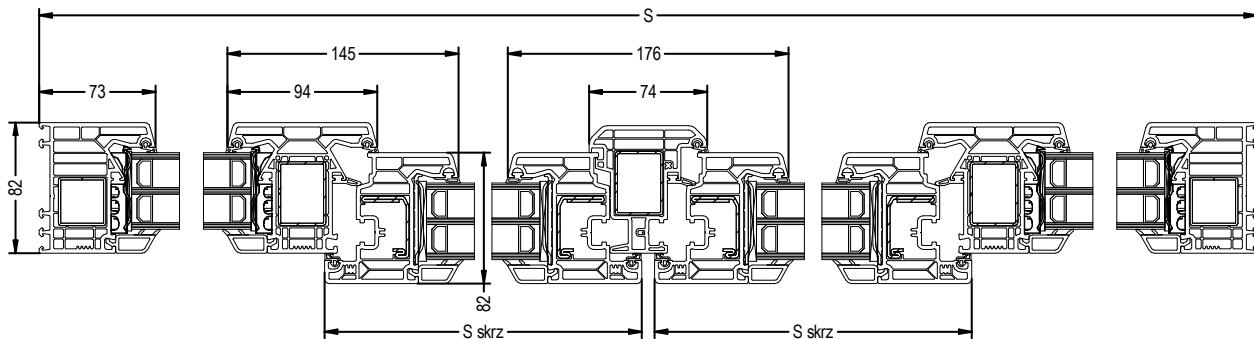
Wide leaf, wide mullion



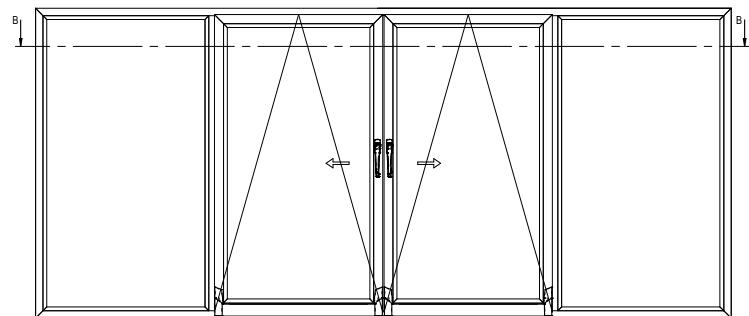


### PRIMO 82 patio window – PSK fix in the frame – Scheme C

Horizontal cross-section

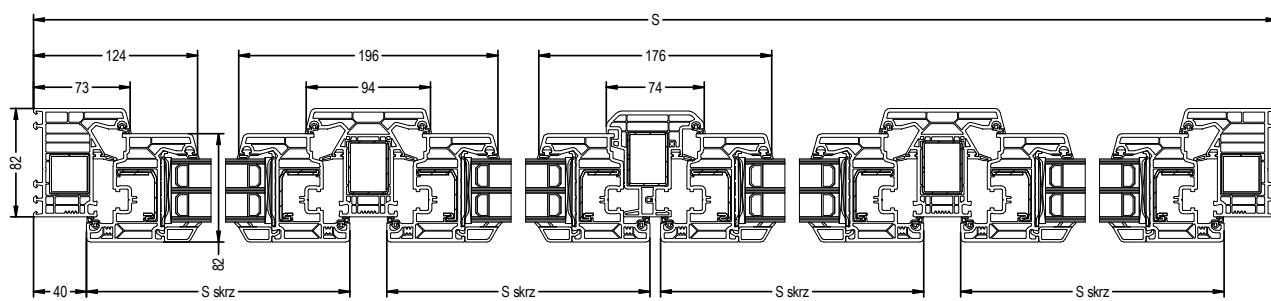


As seen from the inside

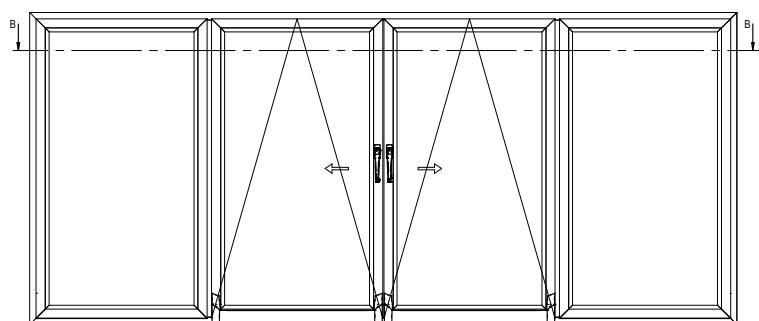


### PRIMO 82 patio window – PSK fix in the leaf – Scheme C

Horizontal cross-section



As seen from the inside





# PRIMO HST Skymotion and Skymotion Max



PRIMO HST Skymotion



PRIMO HST Skymotion Max

## LIFT AND SLIDE DOOR CHARACTERISTICS

- Class A profiles,
- Invisible effect (seam) profile joint, multi-chamber structure ensuring high thermal and acoustic insulation,
- A two-stage sealing system is used in the sliding leaf area. The arrangement of external gaskets ensures door impermeability even with loads such as strong wind and heavy rain.
- Fitted as standard with a two-chamber glazing unit 4/18/4/18/4 with a warm edge with a thickness of 48 [mm]
- $U_g = 0.5 \text{ W/m}^2\text{K}$  in acc. with EN 673,
- Glass units 24 [mm] to 52 [mm] thick can be used
- Reinforcement made of galvanized steel.
- A state-of-the-art threshold with excellent thermal insulation properties, which – thanks to its special design – provides an almost uniform surface, thereby creating a comfortable passage.
- The leaf gasket is available in the following colours: black, grey, and caramel, matched to the colour of the film coating,
- The core of the frame, leaf, and all fascia panels is only available in white.
- Pairing of two-leaf patio doors with a maximum width up to 6.0 [m] and height up to 2.7 [m]
- Available colours: white, film coatings, SPECTRAL
- Thermal insulation for a window sized 3,500x2,300 is  $U_w = 0.78 \text{ W/m}^2\text{K}$  with a 3-pane glass unit  $U_g = 0.5 \text{ W/m}^2\text{K}$

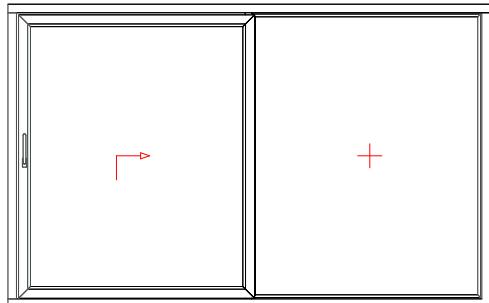
## STANDARD ACCESSORIES

- Concealed hook drive gear; during closing, steel locking hooks emerge and pull the lift and slide leaf to the frame.
- Locking hooks latch on the strikers fitted with an additional roller and enable effortless and quiet operation,
- Strikers with adjusted pressure are flush with the frame profile,
- Aluminium handle on the inside, short flush pull on the outside,
- The standard glass unit for the PRIMO HST Skymotion and Skymotion Max is 4/18/4/18/4  $U_g = 0.5 \text{ W/m}^2\text{K}$  in acc. with EN-673 with a warm edge.
- System widenings 30 [mm] in white,
- Band handles for handling windows,
- Installation anchors for fitting inside or outside the room.

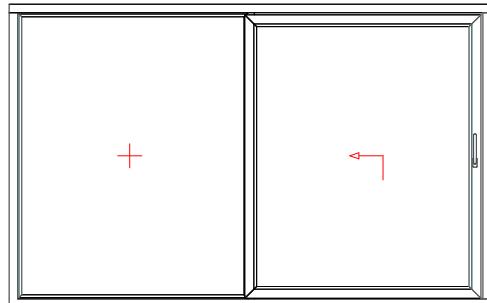


## PRIMO HST patio window - Scheme A

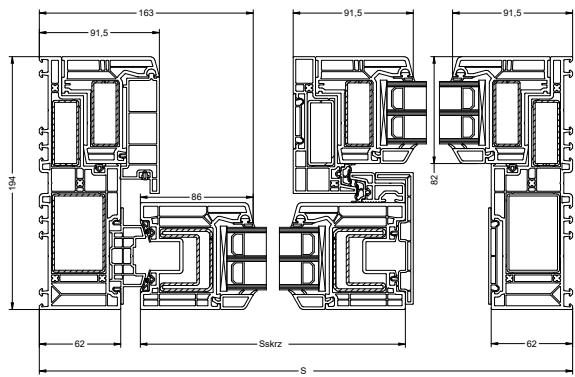
Scheme A Left



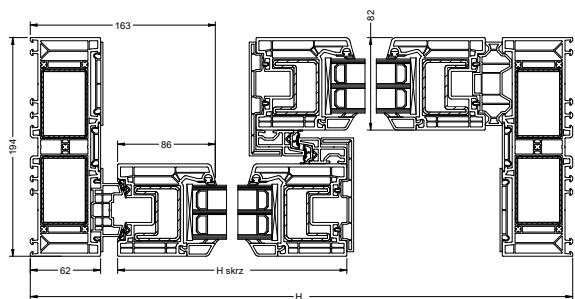
Scheme A Right



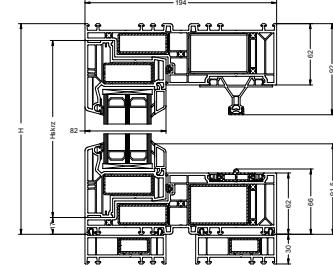
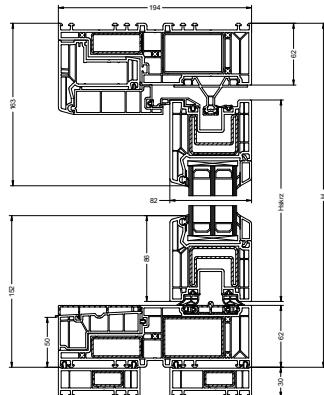
Horizontal cross-section - HST Skymotion Max



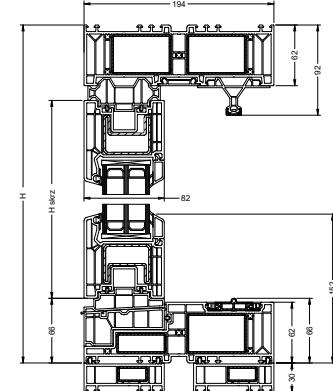
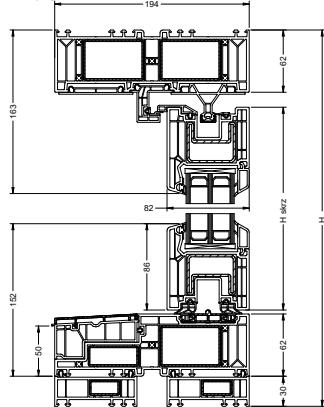
Horizontal cross-section - HST Skymotion



Vertical cross-sections - HST Skymotion Max



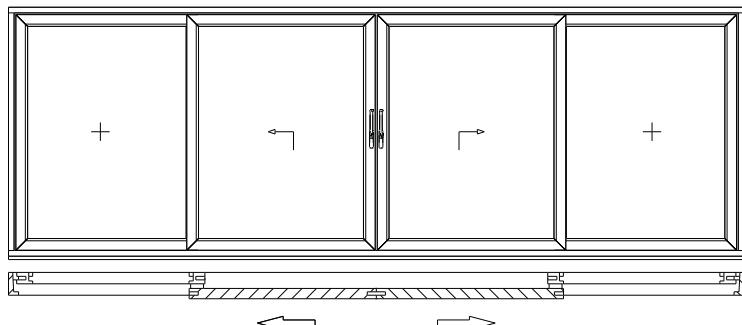
Vertical cross-sections - HST Skymotion



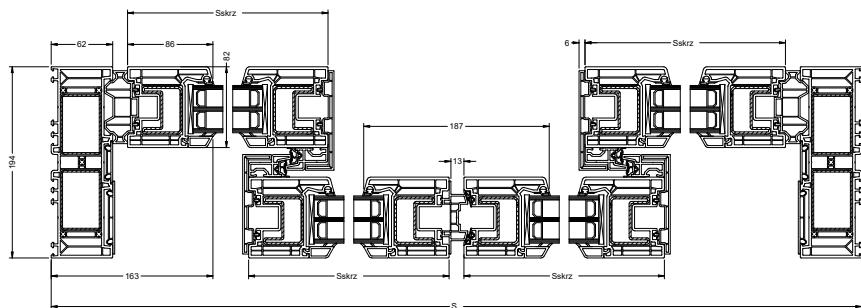


## PRIMO HST Skymotion patio window - Scheme C

Scheme C

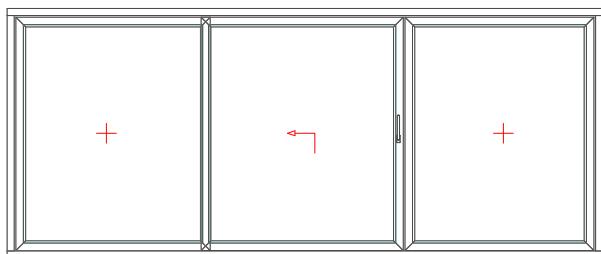


Horizontal cross-section – HST Skymotion – Scheme C

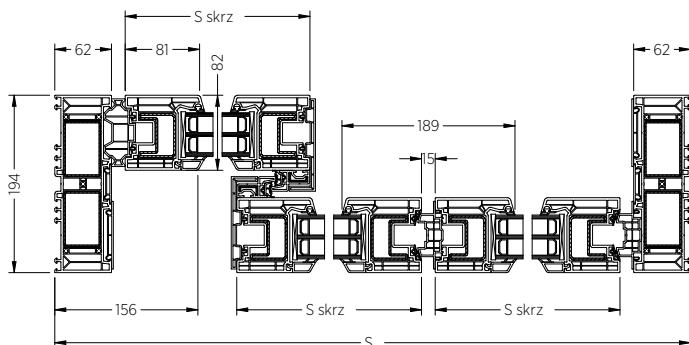


## PRIMO HST Skymotion patio window - Scheme C - variant

Scheme C

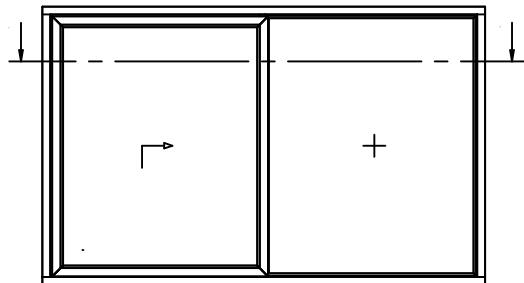


Horizontal cross-section – HST Skymotion – Scheme C – variant

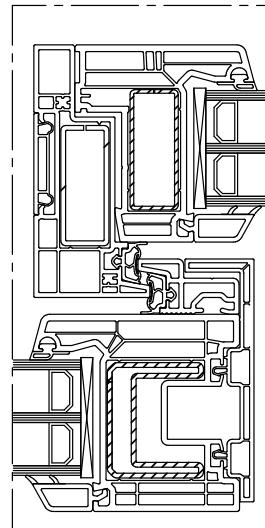
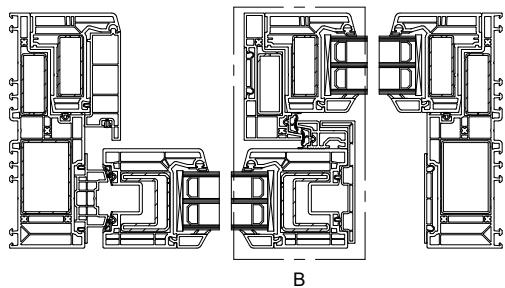




## PRIMO HST Skymotion Max patio window – Standard labyrinth connection



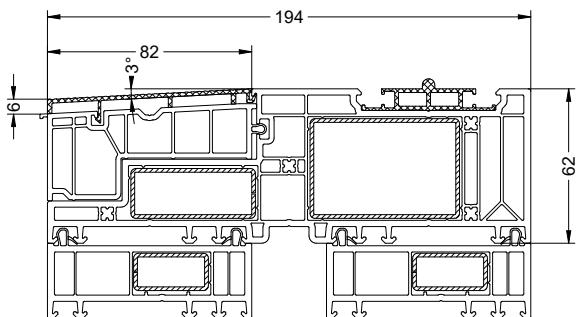
Standard version



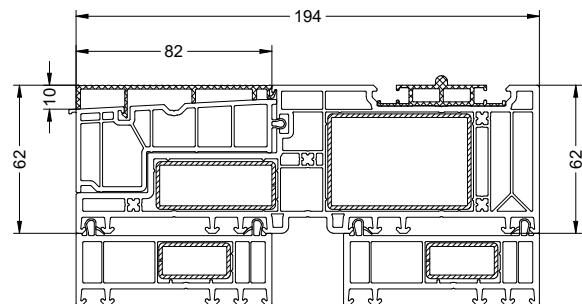
Szczegół B

## PRIMO HST Skymotion Max patio window – dimensioning

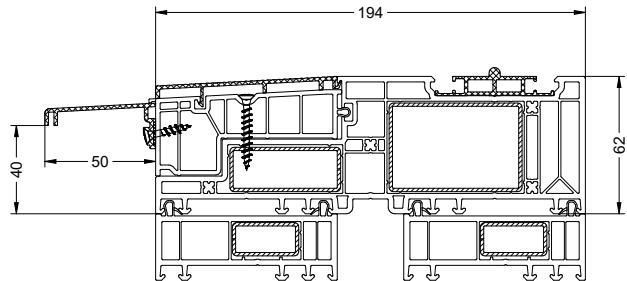
Ramp threshold with a 3° slope – standard



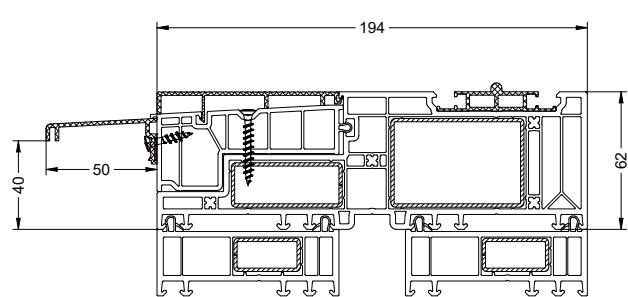
Flat threshold – option



Ramp threshold with a 3° slope and a drip rail



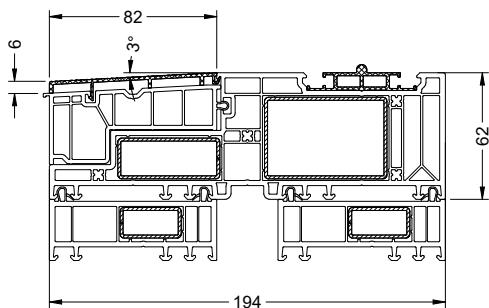
Flat threshold with a drip rail



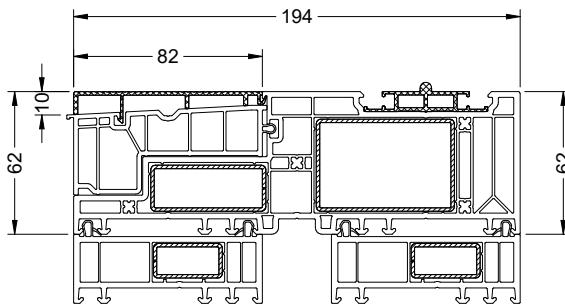


## PRIMO HST Skymotion patio window - dimensioning

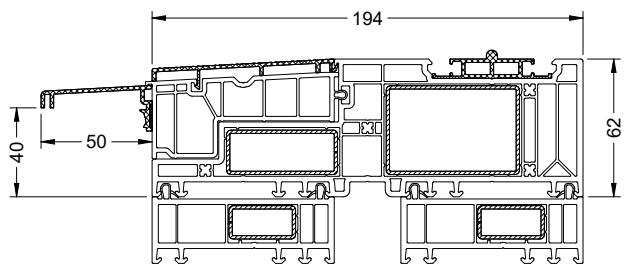
Ramp threshold with a 3° slope – standard



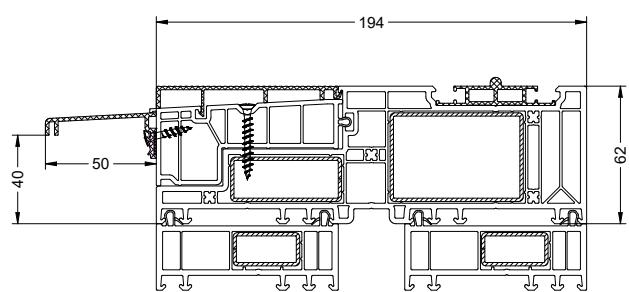
Flat threshold – option



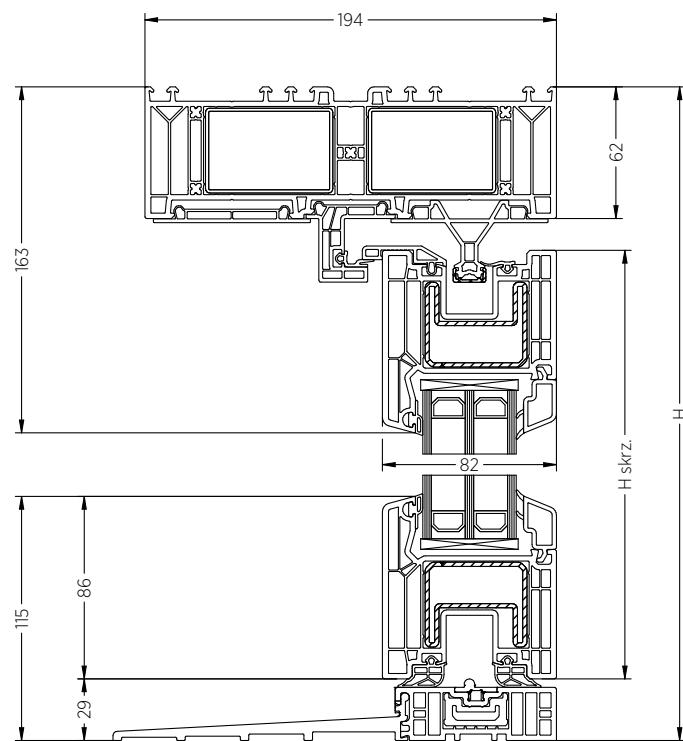
Ramp threshold with a 3° slope and a drip rail



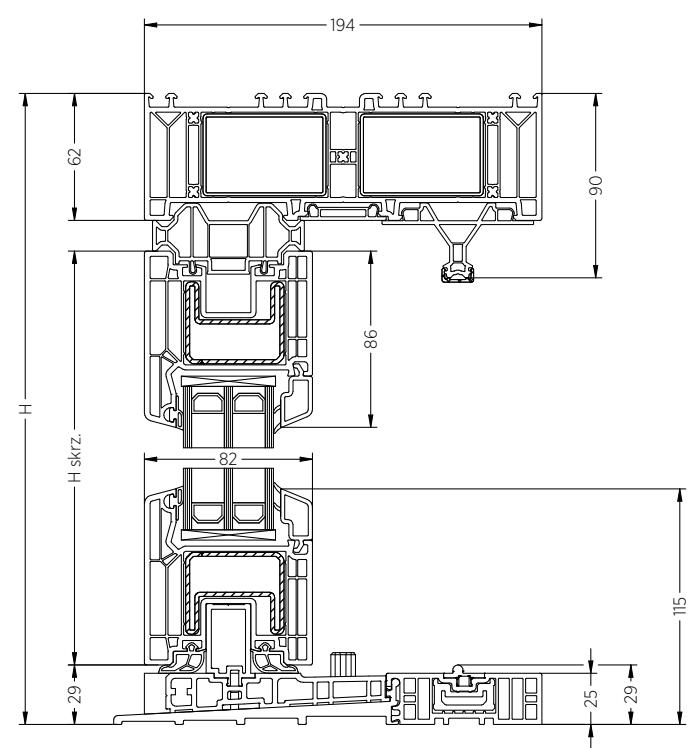
Ramp threshold with a 3° slope and a drip rail



Low threshold - active leaf



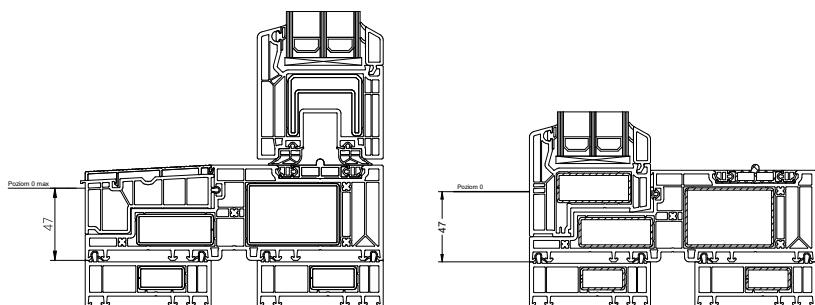
Low threshold - passive leaf



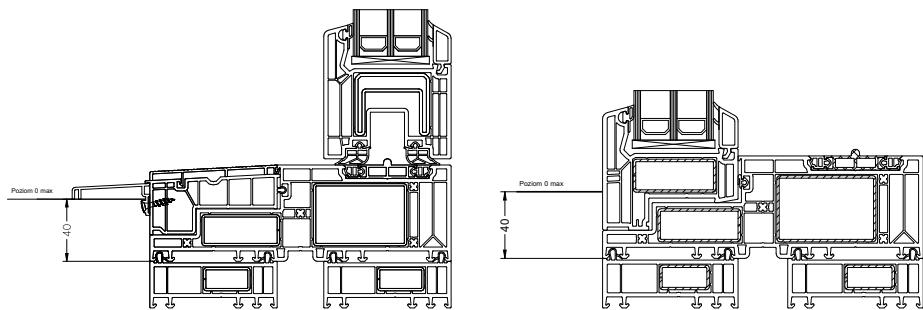


## Horizontal cross-section of the threshold for level 0 for the Skymotion Max

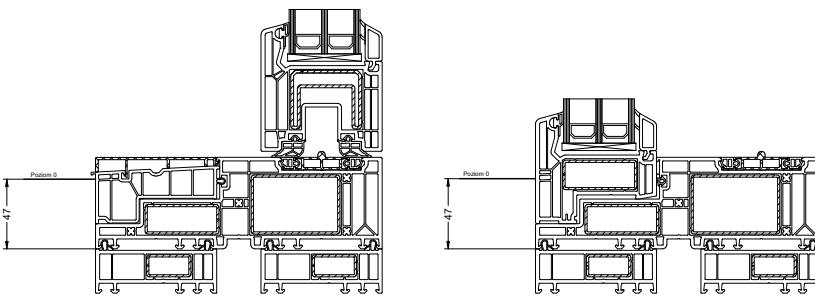
Standard threshold without a drip rail



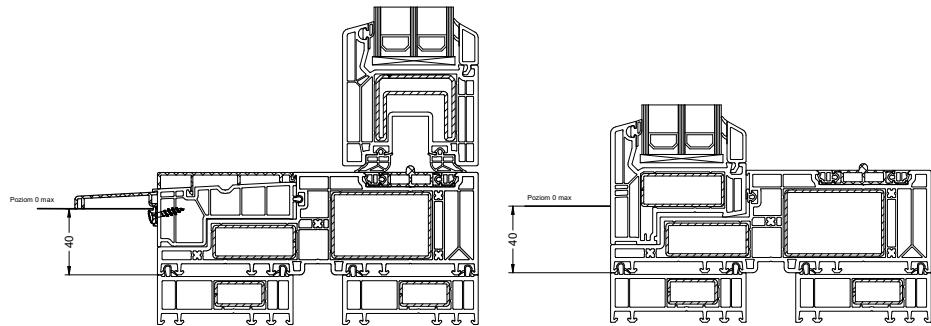
Standard threshold with a drip rail



Threshold without a drip rail



Threshold with a drip rail



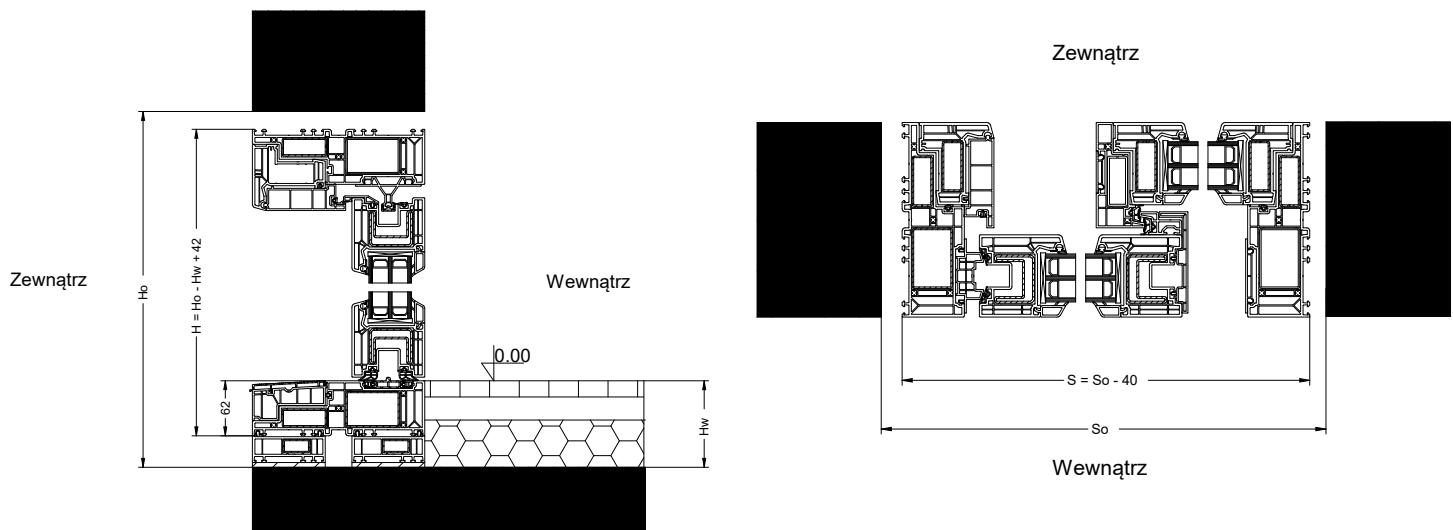


## Ordering and installation dimensions for HST structures

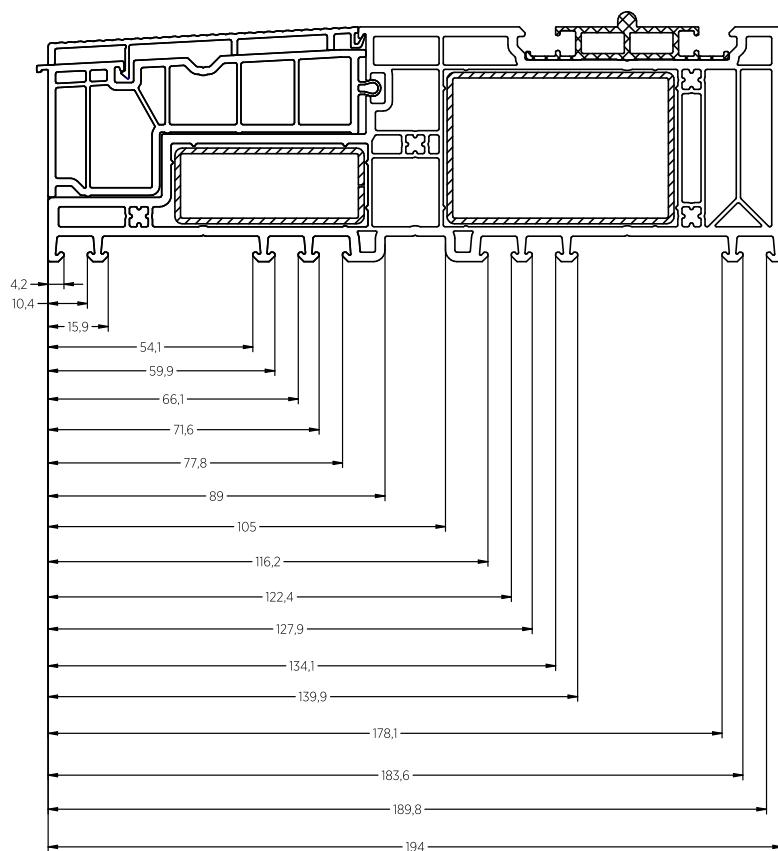
The order must include the H dimension without the 30 [mm] widenings.

Height

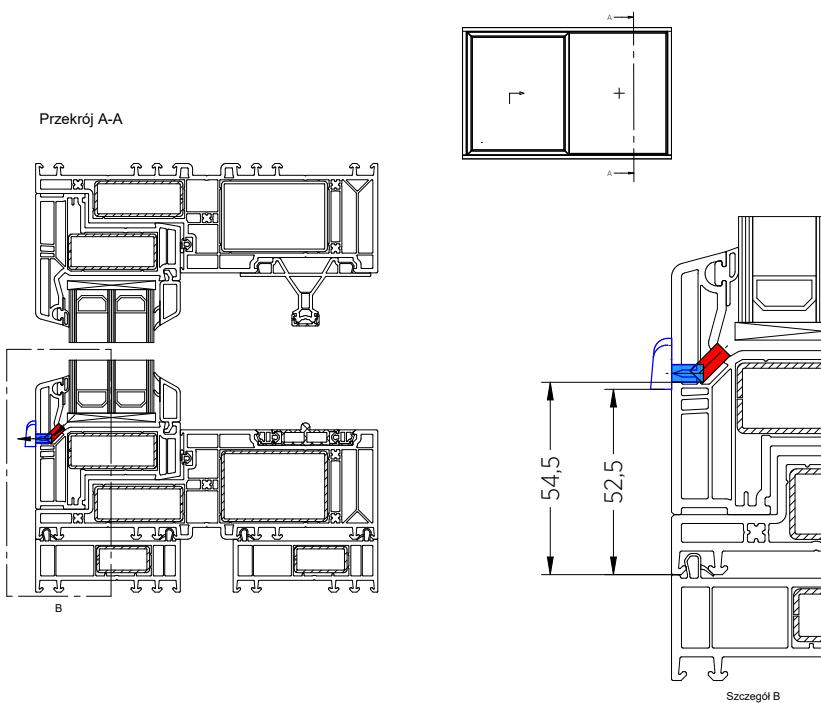
Width



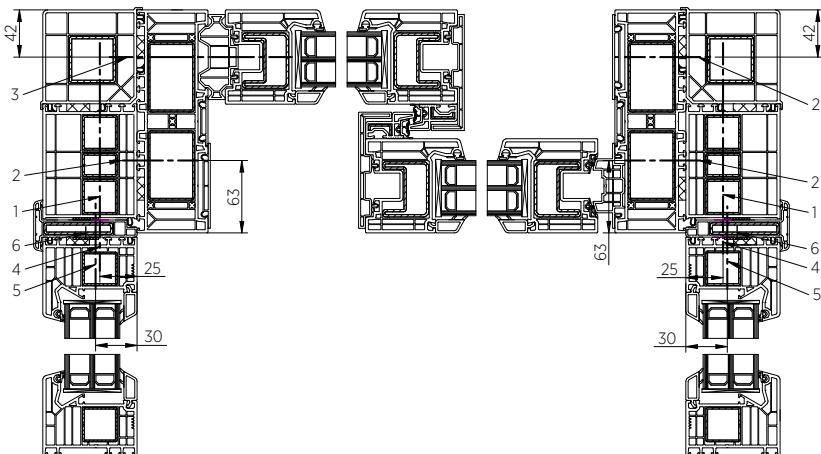
## Dimensioning for the Klinartyt understructure



## Height of the drain hole in the passive section of the Skymotion Max



## Connection of the PRIMO Skymotion with the PRIMO 82 window



The connector set does not include mounting screws.

Recommended mounting screw lengths to be used in the following order:

- 1- length: 130-152 mm
- 2- length: 80-110 mm
- 3- length: 160-190 mm
- 4- length: 40-50 mm
- 5- length: 60-90 mm
- 6- length: 8-10 mm

The installation anchor should be fixed using the screw marked with number 6 on the FIX side only.



# PRIMO SLIDE

## PARALLEL-STOP-SLIDE PATIO DOOR CHARACTERISTICS



- Class A profiles,
- Invisible effect (seam) profile joint, multi-chamber structure ensuring high thermal and acoustic insulation,
- Fitted as standard with a two-chamber glass unit 4/18/4/18/4 with a thickness of 48 [mm]  $U_g=0.5 \text{ W/m}^2\text{K}$  acc. to EN 673,
- Glass units 24 [mm] to 48 [mm] thick can be used
- Reinforcement made of galvanized steel.
- The frame gasket is available in the following colours: black, grey, and caramel, matched to the colour of the film coating,
- Frame core: White, grey, and caramel:
- Covers: White
- Leaf: white or grey RAL 7035
- Maximum width up to 4.2 [m], height up to 2.48 [m],
- Available colours: white, film coatings, SPECTRAL
- Thermal insulation for a window sized 3,500x2,300 is  $U_w=0.74 \text{ W/m}^2\text{K}$  with a 3-pane glass unit  $U_g= 0.5 \text{ W/m}^2\text{K}$

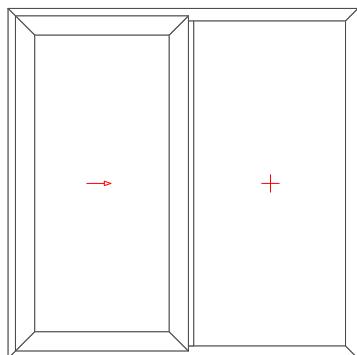
## STANDARD WINDOW ACCESSORIES

- Siegenia TITAN circumferential (perimeter) hardware with additional elements for the parallel tilt and slide movement,
- Aluminium handle on the inside,
- Standard two-chamber glass unit: 4/18/4/18/4  $U_g=0.5 \text{ W/m}^2\text{k}$  acc. to EN-673,
- System widenings 30 [mm] in white,
- Band handles for handling windows, with a steel reinforcement,
- Installation anchors for fitting inside or outside the room,
- Aluminium threshold cover

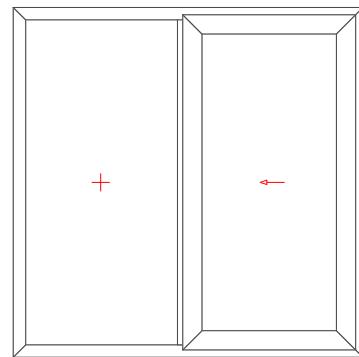


## PRIMO SLIDE patio window - Scheme A

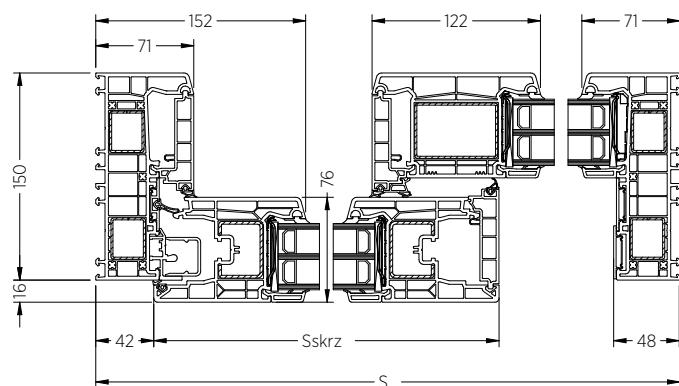
Scheme A Left



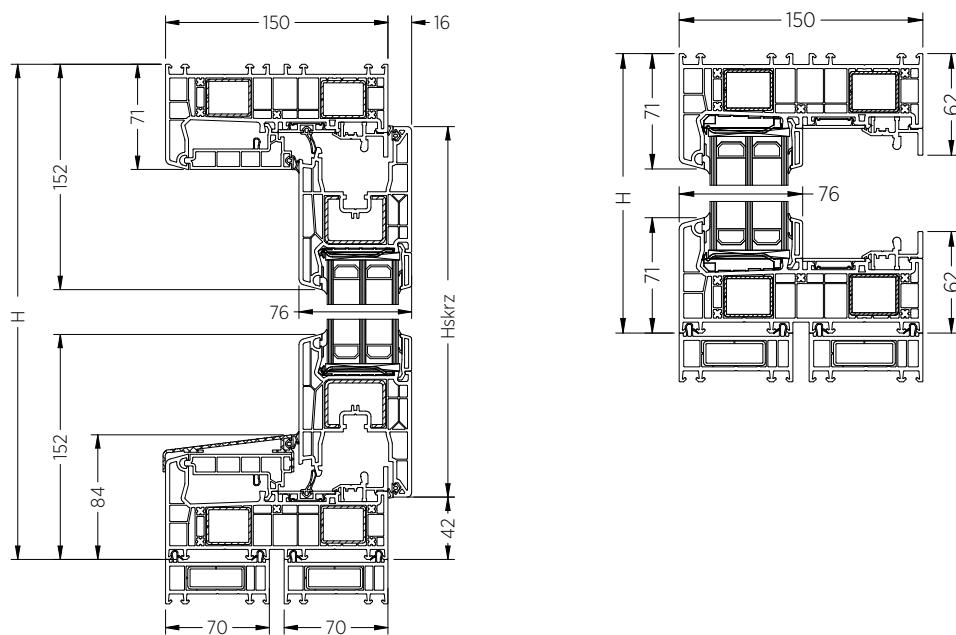
Scheme A Right



Horizontal cross-section - Primo Slide

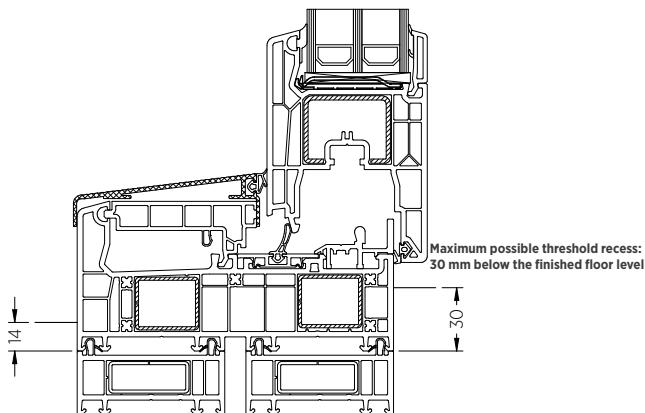


Vertical cross-sections - Primo Slide

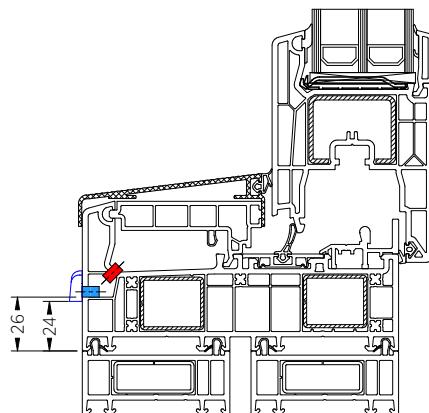




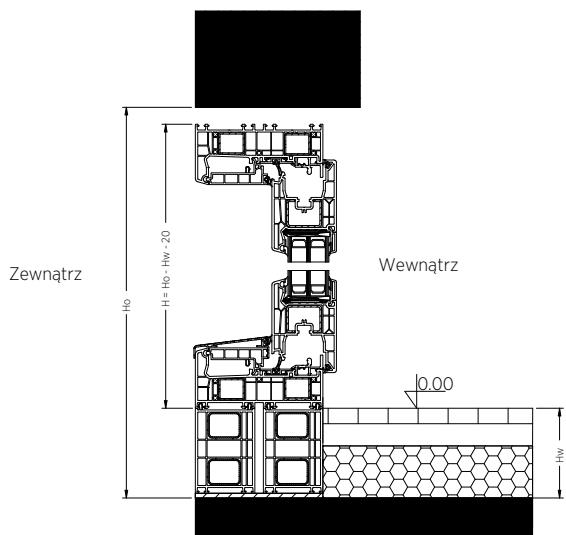
Level zero – Primo Slide



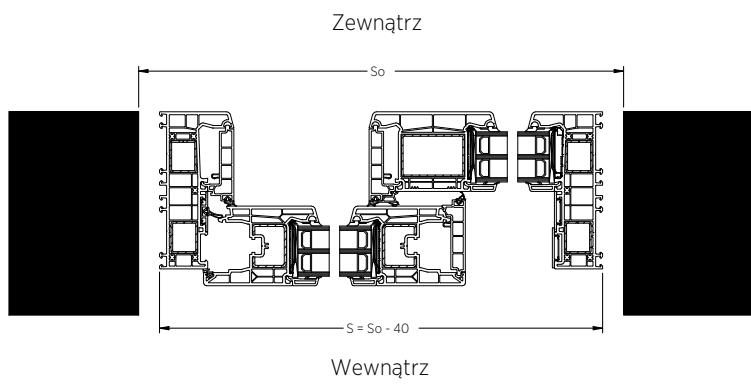
Drainage – Primo Slide



Vertical dimensioning – Primo Slide



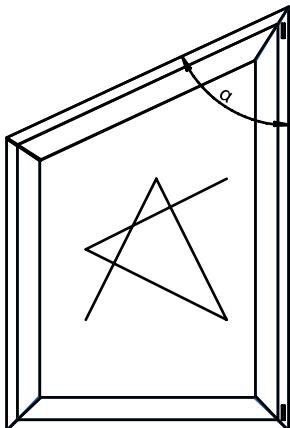
Horizontal dimensioning – Primo Slide





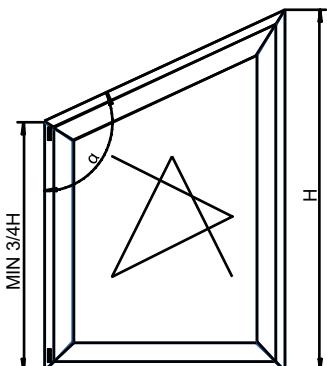
## NON-STANDARD SHAPES

For technological reasons, non-standard shaped windows are not manufactured using the V-Perfect technology. Arched windows are not available with the Spectral film coatings.



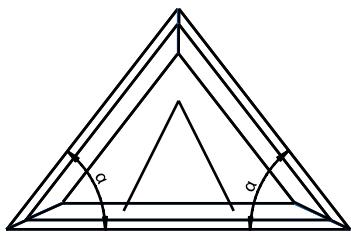
Minimum permissible angle $\alpha$ LEAF R, RU	65°
Minimum permissible angle $\alpha$ , with a groove milled in the frame, LEAF R, RU	55°
Minimum permissible angle $\alpha$ for welding profiles FIXED FRAME	30°
Minimum permissible angle $\alpha$ for welding profiles FIXED LEAF	40°

Minimum length of the welded sections of the frame/leaf for non-standard shape windows: 250 [mm]



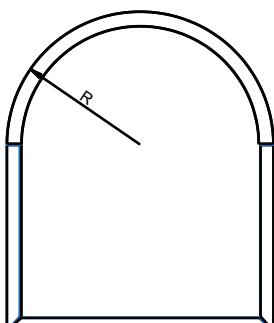
The minimum height of the shorter side is $3/4 H$ of the total window height	
Minimum permissible angle $\alpha$ LEAF R, RU	140°

Minimum length of the welded sections of the frame/leaf for non-standard shape windows: 250 [mm]

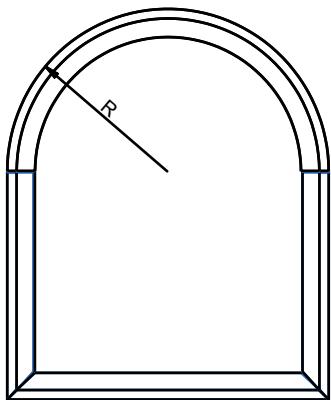


Minimum permissible angle $\alpha$ LEAF U	65°
Minimum permissible angle $\alpha$ , with a groove milled in the frame, LEAF U	55°
Minimum permissible angle $\alpha$ for welding profiles FIXED FRAME	30°
Minimum permissible angle $\alpha$ for welding profiles FIXED LEAF	40°

Minimum length of the welded sections of the frame/leaf for non-standard shape windows: 250 [mm]



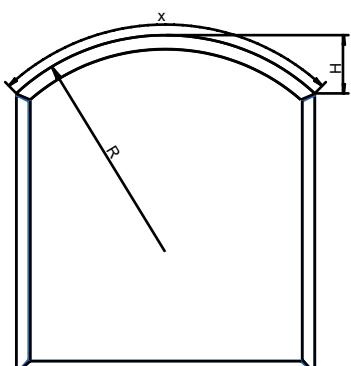
Fixed frame	
Minimum R for a semi-full arch	460 [mm]
Maximum R for a semi-full arch	1,400 [mm]



	FRAME + LEAF 103.341
Minimum R for a semi-full arch	500 [mm]
Maximum R for a semi-full arch	1,400 [mm]

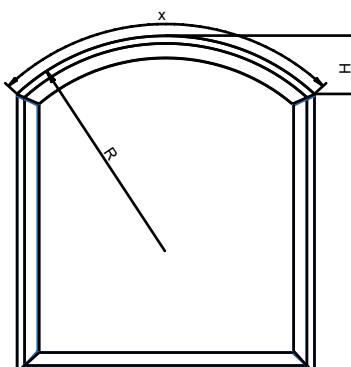
	FRAME + LEAF 103.345
Minimum R for a semi-full arch	650 [mm]
Maximum R for a semi-full arch	1,400 [mm]

Minimum length of the welded sections of the frame/leaf for non-standard shape windows: 250 [mm]



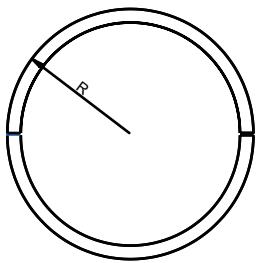
	Fixed frame
Minimum R for a section arch	460 [mm]
Maximum R for a section arch	2,900 [mm]
Maximum height H for a section arch	1,400 [mm]
Maximum length x for a section arch	3,800 [mm]

Minimum length of the welded sections of the frame/leaf for non-standard shape windows: 250 [mm]



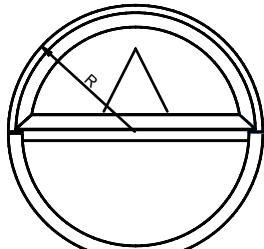
	FRAME + LEAF 103.341
Minimum R for a section arch	500 [mm]
Maximum R for a section arch	2,900 [mm]
	FRAME + LEAF 103.345
Minimum R for a section arch	650 [mm]
Maximum R for a section arch	2,900 [mm]
Maximum height H for a section arch	1,400 [mm]
Maximum length x for a section arch	3,800 [mm]

Minimum length of the welded sections of the frame/leaf for non-standard shape windows: 250 [mm]

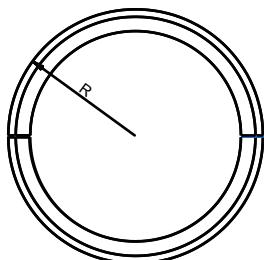


	Fixed frame
Minimum R for an arch	460 [mm]
Maximum R for an arch	1,400 [mm]

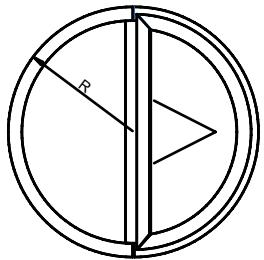
Minimum length of the welded sections of the frame/leaf for non-standard shape windows: 250 [mm]



	FRAME + LEAF 103.341
Minimum R for an arch is	500 [mm]
Maximum R for an arch is	1,400 [mm]



	FRAME + LEAF 103.345
Minimum R for an arch is	650 [mm]
Maximum R for an arch is	1,400 [mm]



Minimum length of the welded sections of the frame/leaf for non-standard shape windows: 250 [mm]



## SYSTEM LIMITATIONS

### Structural limitations for the PRIMO 82 windows

#### Maximum leaf dimensions

		Windows/balconies, single- and multi-leaf R, RU with a fixed mullion		Double-leaf windows/balconies with a movable mullion		Tilt-only (hopper/awning) windows			
		White	Colour	White	Colour	White	Colour		
Maximum surface area of the leaf	STANDARD leaf 103.341	2.25 [m <sup>2</sup> ]*				2.25 [m <sup>2</sup> ]			
	WIDE leaf 103.345	2.5 [m <sup>2</sup> ]				Not available			
Maximum width of the leaf	STANDARD leaf 103.341	1,420 [mm]		1,406 [mm]		2,400 [mm]			
	WIDE leaf 103.345	1,520 [mm]	1,420 [mm]	1,106 [mm]	1,056 [mm]	Not available			
Maximum height of the leaf	STANDARD leaf 103.341	2,420 [mm]		window: 1,920 [mm] balcony: 2,420 [mm]		1,400 [mm]			
	WIDE leaf 103.345	2,420 [mm]				Not available			
Maximum total weight of the leaf with a glass pane and MultiMatic hardware	STANDARD leaf 103.341	120 [kg]				80 [kg]			
	WIDE leaf 103.345					Not available			
Leaf width to height ratio		< 1.6				-			

#### Minimum leaf dimensions

		Leaf R and RU		Leaf U	
		Width	Height	Width	Height
Minimum dimension	STANDARD leaf 103.341	330 [mm]	480 [mm]	340 [mm]	330 [mm]
		480 [mm]	400 [mm]		

#### Maximum frame dimensions

	White	Colour
Maximum surface area of the window structure in a single frame	9.6 [m <sup>2</sup> ]	
Maximum width of the structure	4,200 [mm]	4,000 [mm]
Maximum height of the structure	4,200 [mm]	4,000 [mm]
Maximum weight of the glass	300 [kg]	

#### Minimum frame dimensions

Minimum width of the frame	330 [mm]
Minimum height of the frame	330 [mm]

\* The permissible dimensions of the window leaf can be increased with the use of a special glass insetting technology



## Structural limitations for the patio door

### Maximum PSK dimensions

	PSK scheme A		PSK scheme C Variant		PSK scheme C				
	Division								
	symmetrical	asymmetrical *	symmetrical	asymmetrical *	symmetrical	asymmetrical *			
Maximum surface area of the window	8.00 [m <sup>2</sup> ]			9.6 [m <sup>2</sup> ]					
Maximum width of the window	3,300 [mm]	4,000 [mm]*	4,000 [mm]						
Maximum height of the window	2,480 [mm]								
Maximum width of the leaf	STANDARD leaf 103.341	1,540 [mm]							
	WIDE leaf 103.345	1,760 [mm]			1,210 [mm]				
Maximum height of the leaf	2,400 [mm]								
Maximum surface area of the leaf	STANDARD leaf 103.341	2.5 [m <sup>2</sup> ]			2.25 [m <sup>2</sup> ]				
	WIDE leaf 103.345	3.8 [m <sup>2</sup> ]			2.5 [m <sup>2</sup> ]				
Leaf height to width ratio	< 2.7								

\* made on request

### Minimum PSK dimensions

	MANUAL PSK-S	PAS	AUTOMATED PSK-Z
Minimum width of the leaf	660 [mm]	790 [mm]	760 [mm]
Minimum height of the leaf	1,040 [mm]	881 [mm]	940 [mm]



### Maximum dimensions of the HST PRIMO Skymotion

	Scheme A			
	White		Colour	
	symmetrical	asymmetrical	symmetrical	asymmetrical
Maximum width of the window		6,000 [mm]		5,000 [mm]
Maximum window height		2,700 [mm]		2,600 [mm]
Maximum surface of the sliding leaf		6.0 [m <sup>2</sup> ]		6.0 [m <sup>2</sup> ]
Maximum surface of the fixed leaf	6.0 [m <sup>2</sup> ]	6.5 [m <sup>2</sup> ]	6.0 [m <sup>2</sup> ]	6.5 [m <sup>2</sup> ]
Maximum width of the leaf		3,000 [mm]		2,500 [mm]
Leaf height to width ratio			> 2.5 : 1	

	HS Skymotion 82 – Scheme C			
	White		Colour	
	symmetrical	asymmetrical	symmetrical	asymmetrical
Maximum width of the window			6,500 [mm]	
Maximum window height		2,700 [mm]		2,600 [mm]
Maximum surface of the sliding leaf		6.0 [m <sup>2</sup> ]		5.5 [m <sup>2</sup> ]
Maximum surface of the fixed leaf	6.0 [m <sup>2</sup> ]	6.5 [m <sup>2</sup> ]	5.5 [m <sup>2</sup> ]	6.0 [m <sup>2</sup> ]
Maximum width of the leaf		3,000 [mm]		2,500 [mm]
Leaf height to width ratio			> 2.5 : 1	

### Minimum dimensions of the HST PRIMO Skymotion

		Scheme A	HS Skymotion 82 – Scheme C
Minimum width of patio doors		1,800 [mm]	4,000 [mm]
Minimum height of patio doors	STANDARD	1,942 [mm]	1,942 [mm]
	with a wired contact switch	1,942 [mm]	-
	with a SECURITY 2 option	2,300 [mm]	1,942 [mm]

### Maximum dimensions of the Primo Slide

	Scheme A			
	White		Colour	
	symmetrical	asymmetrical	symmetrical	asymmetrical
Maximum width of the window		4,200 [mm]		3,500 [mm]
Maximum window height		2,480 [mm]		2,430 [mm]
Maximum surface of the window		10.5 [m <sup>2</sup> ]		8.3 [m <sup>2</sup> ]
Maximum surface of the sliding leaf		3.6 [m <sup>2</sup> ]		3.45 [m <sup>2</sup> ]
Maximum width of the leafs		1,500 [mm]		1,500 [mm]
Maximum weight of the leaf			200 kg	
Leaf height to width ratio			< 2.5 : 1	

### Minimum dimensions of the Primo Slide

Minimum height of the leaf	716 [mm]	716 [mm]
Minimum width of the leaf	890 [mm]	890 [mm]



## HARDWARE TYPES AND RANGES OF APPLICATION

Hardware type	Leaf weight	Leaf surface
Maco Multi-Matic STANDARD frame and leaf hinge	≤ 100 kg	2.4 [m <sup>2</sup> ]
Maco Multi-Matic with a low threshold frame and leaf hinge with roller cams	≤ 110 kg	3.0 [m <sup>2</sup> ]
Maco Multi-Matic frame and leaf hinge with roller cams	≤ 120 kg	3.0 [m <sup>2</sup> ]
Maco Multi-Power	≤ 150 kg	3.0 [m <sup>2</sup> ]
Maco Multi-Power with a low threshold	≤ 110 kg	3.0 [m <sup>2</sup> ]
Maco Multi-Mammut	≤ 180 kg	3.6 [m <sup>2</sup> ]

## Minimum and maximum window dimensions by burglary protection class, and maximum weight

Window type	Min. width of the leaf	Max. width of the leaf	Min. height of the leaf	Max. height of the leaf	Weight
<b>RU SECURITY 1</b>	520	1,690	470	2,640	100 kg
<b>U SECURITY 1</b>	510	2,290	390	1,140	80 kg
<b>SECURITY 1 movable mullion</b>	520	1,340	701	2,640	100 kg
<b>RU RC2</b>	520	1,690	470	2,640	100 kg
<b>U RC2</b>	510	2,290	390	1,140	80 kg
<b>Movable mullion RC2</b>	520	1,340	701	2,640	100 kg

## SECURITY WINDOW PROTECTION STANDARD, PSK, HST

Type of window/patio door	WINDOWS	WINDOWS	PSK	PRIMO HST Skymotion and Skymotion Max	WINDOWS
<b>Protection type</b>	SECURITY 1	SECURITY 2			Anti-burglary class RC2 in accordance with PN-EN 1627
<b>ACCESSORIES</b>					
<b>Type and number of strikers</b>	- Minimum 4 anti-burglary strikers  - Number of strikers depends on the leaf dimensions, in accordance with system matrices of the RC1N class hardware supplier	- All anti-burglary strikers  - Number of strikers depends on the leaf dimensions, in accordance with system matrices of the RC2 class hardware supplier	- All anti-burglary strikers  - Number of strikers depends on the leaf dimensions, in accordance with system matrices of the RC2 class hardware supplier	3 hooks for scheme A 4 bolts for Skymotion scheme C	- All anti-burglary strikers  - Number of strikers depends on the leaf dimensions, in accordance with system matrices of the RC2 class hardware supplier
<b>Anti-drill guard plate</b>	Yes	Yes	Yes	Yes	Yes
<b>Connection plate</b>	Yes	Yes	Yes	N/A	Yes
<b>Handle</b>	Any	Any	Any	Any	With a key 100 Nm
<b>Installation</b>	Anchors or dowels	Anchors or dowels	Anchors or dowels	On dowels	On dowels



<b>Glazing units</b>	In accordance with national regulations	At least one pane with the P4A resistance class in accordance with EN 356 in the glazing unit			
<b>Glass mounting</b>	Not required	Not required	Not required	Not required	Required along the circumference of the leaf
<b>Additional</b>	- Yellow restriction with a suggestion for the customer to choose a handle with a key lock	- Yellow restriction with a suggestion for the customer to choose a handle with a key lock	- Yellow restriction with a suggestion for the customer to choose a handle with a key lock	- No requirement to reinforce labyrinth profiles and fix them with screws  - Yellow restriction with a suggestion for the customer to choose a handle with a key lock	None

## COLOURS

### Available colours for PVC windows:

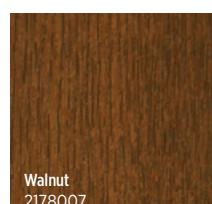
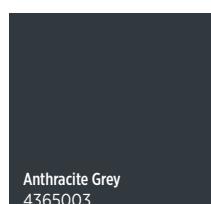
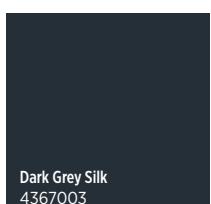
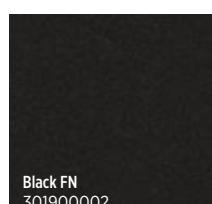
white, single-sided film coating, two-sided film coating.

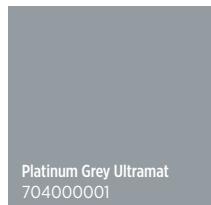
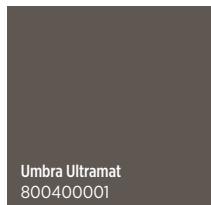
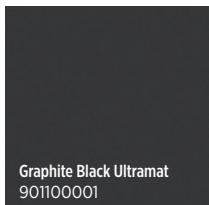
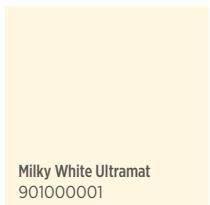
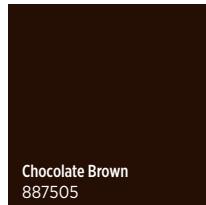
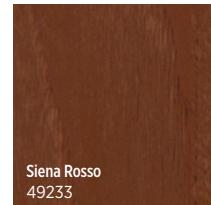
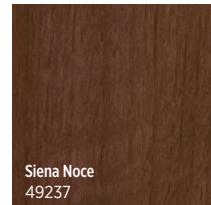
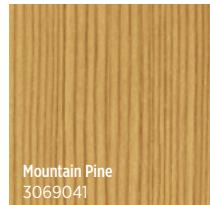
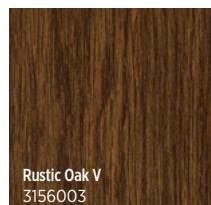
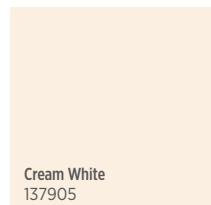
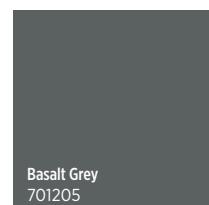
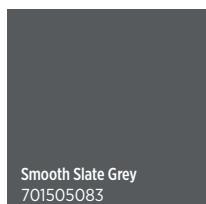
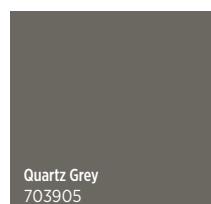
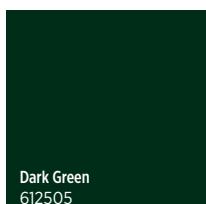
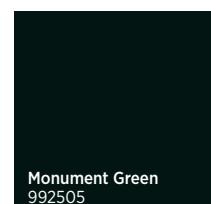
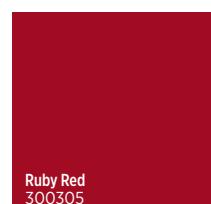
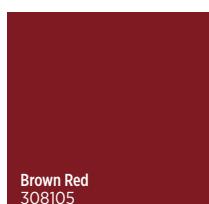
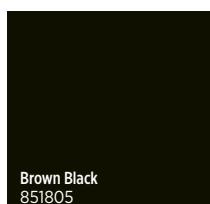
### Standard colours

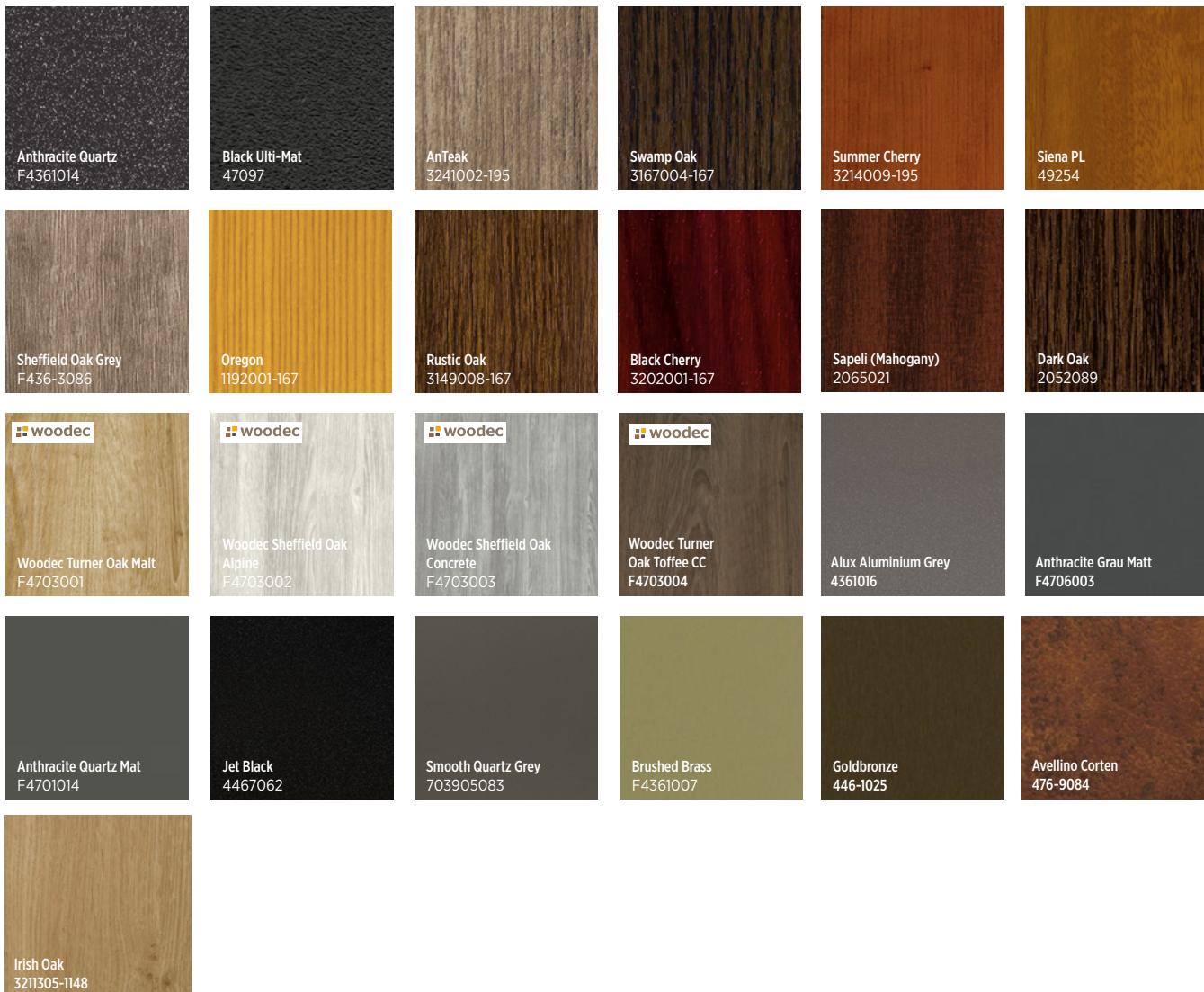


White

### Film coatings – standard colours

Golden Oak  
2178001Walnut  
2178007Winchester  
49240Anthracite Grey  
4365003Dark Grey Silk  
4367003Dark Grey FN  
701605002Silver Grey FN  
715505002Black FN  
301900002White FN  
915205002Slate Grey FN  
701505002Coriander Oak Super-Matt  
3.0078 OII-102201

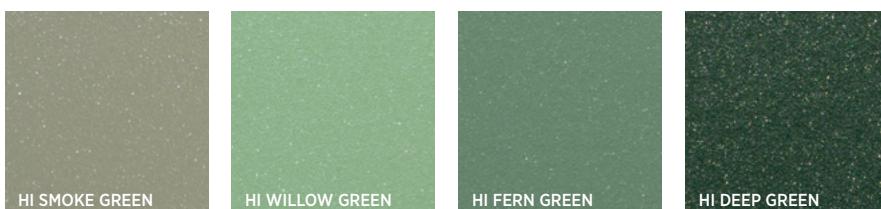
**VEKA SPECTRAL dedicated for the PRIMO 82 windows – special colours**Anthracite Ultramat  
701605001Platinum Grey Ultramat  
704000001Umbra Ultramat  
800400001Graphite Black Ultramat  
901100001Milky White Ultramat  
901000001**Film coatings – special colours**Chocolate Brown  
887505Siena Rosso  
49233Siena Noce  
49237Douglas Fir V  
3069037Douglas Fir  
3152009Mountain Pine  
3069041Oregon III  
2115008Natural Oak  
3118076Rustic Oak V  
3156003Shogun AD  
49195Shogun AF  
49198Macore  
3162002White  
915205Papyrus White  
901805Cream White  
137905Ivory  
101505Yellow  
108705Light Grey  
725105Agate Grey  
703805Silver Grey  
715505Smooth Silver Grey  
715505083Basalt Grey  
701205Smooth Basalt Grey  
701205083Slate Grey  
701505Smooth Slate Grey  
701505083Quartz Grey  
703905Brilliant Blue  
500705Cobalt Blue  
501305Steel Blue  
515005Green  
600505Dark Green  
612505Monument Green  
992505Ruby Red  
300305Brown Red  
308105Wine Red  
300505Brown Black  
851805Metbrush Aluminium  
4361001Metbrush Silver  
4361002Crown Platinum  
1293001Quartz Platinum  
1293002Earl Platinum  
1293010Sheffield Oak Light  
4563081



## HI 2.0 colours dedicated for PVC windows as well as tilt and slide PRIMO PSK patio doors with an aluminium cover plate

The Home Inclusive 2.0 collection unifies WIŚNIOWSKI garage doors, windows, doors, gates, and fences in terms of colour and design. Our range includes 16 refined colours with a 3D metallic effect.

### HIEARTH



### HISTONE



**HISTEEL****HIRUBY****Accessory selection**

No.	Film number	Name	Standard core	Gasket colour	Handle and cover colour	Balcony pull colour
1	2178001	GOLDEN OAK	caramel	caramel	F4	gold
2	2178007	WALNUT	brown	black	F4	RAL 8019
3	2052089	SWAMP OAK	brown	black	F4	RAL 8019
4	49240	WINCHESTER XA	caramel	caramel	F4	gold
5	2065021	MAHOGANY	brown	black	F4	RAL 8019
6	4365003	ANTHRACITE GREY	anthracite	black	F1	RAL 7016
7	887505	BROWN	brown	black	F4	RAL 8019
8	715505	SILVER GREY	white	black	F1	silver
9	49237	SIENA PN NOCE	brown	black	F4	RAL 8019
10	49233	SIENA PR ROSSO	caramel	caramel	F4	RAL 8019
11	3162002	MACORE	brown	black	F4	RAL 8019
12	137905	CREAM WHITE	white	black	RAL 9001	RAL 9001
13	915205	WHITE	white	black	RAL9016	RAL 9016
14	612505	DARK GREEN	white	black	F1	silver
15	701205	BASALT GREY	white	black	F1	silver
16	703905	QUARTZ GREY	white	black	F1	silver
17	3118076	Natural Oak	white	black	F4	gold
18	851805	BROWN BLACK	brown	black	F4	RAL 9005
19	715505083	SMOOTH SILVER GREY	white	black	F1	silver
20	3152009	DOUGLAS FIR SHADED	caramel	caramel	F4	gold
21	600505	GREEN	white	black	F1	silver
22	3156003	RUSTIC OAK V	brown	black	F4	RAL 8019
23	3149008	RUSTIC OAK	brown	black	F4	RAL 8019
24	3069041	MOUNTAIN PINE	caramel	caramel	F4	gold
25	703805	AGATE GREY	white	black	F1	silver
26	4367003	DARK GREY SILK	anthracite	black	F1	RAL 7016
27	4563081	LIGHT SHEFFIELD OAK	white	black	F1	RAL 9001
28	2115008	OREGON III	white	black	F4	gold
29	1192001	OREGON	white	black	F4	gold
30	4361001	BRUSHED ALUMINIUM	white	black	F1	silver
31	300305	RUBY RED	white	black	F1	silver
32	300505	WINE RED	white	black	F1	silver
33	515005	STEEL BLUE	white	black	F1	silver
34	501305	COBALT BLUE	white	black	F1	silver



<b>35</b>	725105	LIGHT GREY	white	black	F1	silver
<b>36</b>	308105	BROWN RED	white	black	F1	silver
<b>37</b>	500705	BRILLIANT BLUE	white	black	F1	silver
<b>38</b>	901805	PAPYRUS WHITE	white	grey	F1	silver
<b>39</b>	3069037	DOUGLAS FIR	caramel	caramel	F4	gold
<b>40</b>	108705	YELLOW	white	black	F1	silver
<b>41</b>	1293002	QUARTZ PLATINUM	white	black	F1	silver
<b>42</b>	1293001	CROWN PLATINUM	anthracite	black	F1	RAL 7016
<b>43</b>	701205083	SMOOTH BASALT GREY	white	black	F1	silver
<b>44</b>	1293010	EARL PLATINUM	anthracite	black	F1	RAL 7016
<b>45</b>	701505083	SMOOTH SLATE GREY	anthracite	black	F1	RAL 7016
<b>46</b>	4361002	SILVER BRUSHED ALUMINIUM	white	black	F1	silver
<b>47</b>	701505	SLATE GREY	anthracite	black	F1	RAL 7016
<b>48</b>	101505	IVORY	white	black	F1	silver
<b>49</b>	49198	SHOGUN AF	caramel	caramel	F4	gold
<b>50</b>	49195	SHOGUN AD	caramel	caramel	F4	gold
<b>51</b>	992505	MONUMENT GREEN	white	black	F1	RAL 9005
<b>52</b>	701605001	VSP ANTHRACITE ULTRAMAT	grey	black	F1	RAL 7016
<b>53</b>	800400001	VSP UMBRA ULTRAMAT	grey	black	F1	RAL 9005
<b>54</b>	901100001	VSP GRAPHITE BLACK ULTRAMAT	brown	black	F1	RAL 9005
<b>55</b>	901000001	VSP MILKY WHITE ULTRAMAT	white	black	RAL9016	RAL 9016
<b>56</b>	704000001	VSP PLATINUM GREY ULTRAMAT	anthracite	black	F1	silver
<b>57</b>	436-1014	Anthracite Quartz	anthracite	black	F1	anthracite
<b>58</b>	PX47097	Black Ulti-Mat	anthracite	black	F1	RAL 9005
<b>59</b>	3241002-195	AnTEAK	brown	black	F1	RAL 9001
<b>60</b>	3167004-167	Swamp Oak	brown	black	F4	RAL 8019
<b>61</b>	3214009-195	Summer Cherry	brown	black	F4	RAL 8019
<b>62</b>	49254-015	Siena PL	caramel	caramel	F4	gold
<b>63</b>	F 436-3086	Sheffield Oak Grey	brown	black	F1	RAL 9001
<b>64</b>	3202001	Koltex Black Cherry	brown	black	F4	RAL 8019
<b>65</b>	F 470-3001	Woodec Turner Oak Malt	caramel	caramel	F4	caramel
<b>66</b>	F 470-3002	Woodec Sheffield Oak Alpine	white	black	F1	silver
<b>67</b>	F 470-3003	Woodec Sheffield Oak Concrete	white	black	F1	silver
<b>68</b>	F 470-3004	Woodec Turner Oak Toffee	grey	black	F4	RAL8019
<b>69</b>	4467062	Jet Black	anthracite	black	F1	RAL 9005
<b>70</b>	4361016	Alux Aluminium Grey	white	black	F1	silver
<b>71</b>	4361007	Brushed Brass	white	black	F4	gold
<b>72</b>	703905083	Smooth Quartz Grey	white	black	F1	silver
<b>73</b>	F470-6003	Anthracite Grau Matt	anthracite	black	F1	RAL 7016
<b>74</b>	F470-1014	Anthracite Quartz Mat - DB703	anthracite	black	F1	RAL 7016
<b>75</b>	701605002	Dark Grey FN	anthracite	black	F1	RAL 7016
<b>76</b>	715505002	Silver Grey FN	white	black	F1	silver
<b>77</b>	301900002	Black FN	anthracite	black	F1	RAL 9005
<b>78</b>	915205002	White FN	white	black	RAL 9016	RAL 9016
<b>79</b>	701505002	Slate Grey FN	anthracite	black	F1	RAL 7016
<b>80</b>	446-1025	Goldbronze	brown	black	F3/4	gold
<b>81</b>	476-9084	Avellino Corten	brown	black	9005 MAT	RAL 9005
<b>82</b>	3.0078 011 -102201	Coriander Oak Super-Matt	brown	black	F3/4	caramel
<b>83</b>	3211305-1148	Irish Oak	brown	black	F3/4	caramel



## OPTIONAL ACCESSORIES

### Aluminium cover plates



Aluminium cover plates are available in HI and RAL colours.

#### Benefits for the customer:

- Limited effect of external factors on PVC,
- Possibility to take full advantage of combining the benefits of modern PVC window systems with the qualities of aluminium,
- Improved durability,
- Unlimited colour matching options thanks to the HI 2.0 colours for garage doors, gates, doors, and fences,
- Effortless care and maintenance.

### MULTI POWER concealed hinges



Completely hidden hardware. The concealed hinge option is available both with the low threshold and with anti-burglary windows with a maximum burglary resistance class RC2.

#### Benefits for the customer:

- additional hinge cover caps
- large opening width (up to 100°);
- integrated protection against lifting the leaf;
- minimal maintenance thanks to enhanced guides in the scissor stay;
- appealing look;
- dedicated for windows with the maximum leaf weight of 150 kg.

### TILT-FIRST – tilting before turning



This solution is aimed at locking the leaf in the tilted position after rotating the handle by 90 degrees to the horizontal position, which prevents the leaf from moving from the tilted to the open position. Only after the handle is unlocked with a key can the window be opened. This solution provides safety for children and at the same time makes it possible to ventilate the room with the window tilted.

### Opening restriction



Prevents excessive opening of the leaf and thereby prevents the leaf from hitting the wall. Opening restriction can be used both with surface hinges and the MultiPower concealed hinges. Cannot be used with a window version with the RC or SECURITY enhanced burglary resistance class.



## Turn restrictor controlled with a handle



Prevents self-acting opening and closing movement of the leaf. The turn restrictor can be used both in the R and RU window version, as well as with concealed and surface hinges.

This turn restrictor version cannot be used:

- with a low threshold,
- with RC and SECURITY classes,
- with the UR option (tilt before turn).

## Brake stay



Fixes the opening angle of the leaf in the desired position. The brake stay can only be used in the R window version, but it cannot be used with a low threshold and with the RC and SECURITY enhanced burglary resistance class window versions.

## SAFETY PIN



The Safety Pin secures each turn-only (side-hung) and turn and tilt window against leaf unhinging from the frame caused by mishandling. Located on the hinge side, the security device is integrated with the central turn and tilt locking system. The spring-loaded steel wire prevents the window leaf from falling out of the frame and effectively prevents potential accidents.

The device is recommended for windows in residential buildings, as well as in children's rooms and nursing homes; these devices should be considered standard accessories in public buildings.

## Comfort scissor stay



Problem-free operation of the window, primarily when windows are difficult to access, thanks to the handle in the bottom part of the window leaf.

The comfort scissor stay can only be used in the RU window version, it cannot be used with concealed hinges.

### Benefits for the customer:

- The window tilts and closes automatically with the use of a handle.
- Meets the requirements of elderly and disabled persons.
- Enables operation of windows which are difficult to access.
- Optional electric assistance.

## Reed switch



Surface-mounted, wired



Somfy, surface-mounted, wireless



Flush-mounted, wired



Windows can optionally be fitted with an electronic closure monitoring system. Window contacts are connected to the monitoring system which triggers an alarm when the handle is rotated or the hardware is moved in any other way. The sensors operate regardless of whether the leaf was opened to the tilted or turned position. Available in a wired version: surface-mounted, flush-mounted, and wireless Somfy.

## IntelliTAG air io reed switch

Develo windows can optionally be equipped with the IntelliTAG air io reed switch, which functions as a vibration and opening sensor.



- Primo integrated with the io technology
- A single device to monitor window status
- Break-in alert or alarm trigger functionality
- The io protocol enables real-time window status checks via the TaHoma app
- Possibility to trigger scenarios based on window status

## Balcony door catch with a pull



Balcony door catch with a pull



Balcony door catch with a pull for a roller shutter

Balcony door catch with an aluminium pull increases the functionality of balcony doors, making it possible to close them from the outside. A pull for windows with external roller shutters is available as an optional accessory.

## Hardware with the SECURITY 1, SECURITY 2, and RC2 burglary protection class



Windows with the Security 1, Security 2, and RC2 class are available with single-section and multi section models:

- turn and tilt (RU)
- tilt-only (hopper/awning) (U)
- with a movable mullion (RS)
- with a FIX in the frame (FIX-R)
- with a FIX in the leaf (FIX-S)

Available with turn-only (side hung) windows (R).

With the RC2 burglar resistance class, there are several anchor fitting options available in the following scenarios:

- single-section model FIX-R / FIX-S,
- multi-section model, where at least one section is a FIX-R / FIX-S.

With the RC2 burglar resistance class, there are several anchor/dowel fitting options available in the following scenarios:

- single-section model: turn and tilt (RU), tilt-only (U),
- model with a movable mullion (RS),
- multi-section model, where all the sections can be opened (RU, U, RS).



Optional accessories, which can be ordered with the SECURITY 1 and SECURITY 2, as well as RC2 burglar resistance class windows:

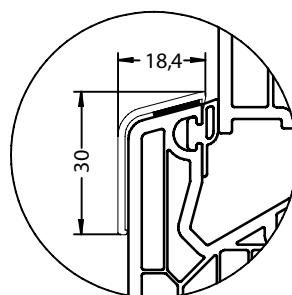
- balcony catch,
- surface hinges (MultiMatic, MultiMammut), concealed hinges (MultiPower),
- wired and wireless reed switch,
- SafetyPin.

Other optional accessories are not available with the SECURITY 1, SECURITY 2, as well as RC2 burglar resistance class windows.

The PSK tilt and slide patio door with the Security 2 class is available in the standard PSK-S version and the PSK-PAS stop-slide version in scheme A.

The HST lift and slide patio door with the Security 2 class is available in Scheme A and C.

### **Aluminium balcony threshold cover**



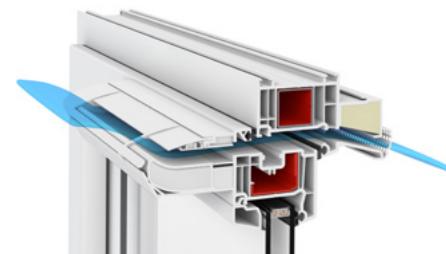
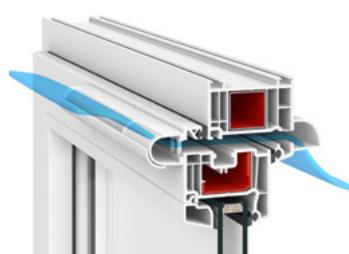
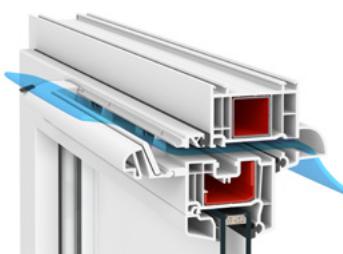
The aluminium threshold cover serves a protective function and prevents damage and scuffing of the lower part of the frame, it is especially recommended for balcony or patio exits.

### **MultiMammut hinges**



Hinges for leafs with a weight up to 180 kg for large size window models up to 3.6 m<sup>2</sup>.

### **Air inlets**



#### **Aereco EMM humidity sensitive air inlet**

Available colours: RAL 9003, RAL 8017, RAL 8001, RAL 7045, RAL 7016

#### **Aereco AMO pressure sensitive air inlet**

Available colours: RAL 9003, RAL 8017, RAL 8001, RAL 7016

#### **Aereco EXR 409 humidity sensitive air inlet**

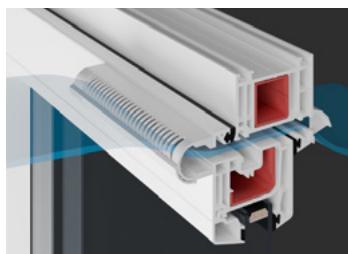
Available colours: RAL 9003, RAL 8017, RAL 8001, RAL 7045, RAL 7016



### REGEL AIR air inlet

Available colours: RAL 9003 black and grey gasket, 9005 black gasket

Parameter	[Pa]	Regel-air
Air flow at:	2	3.0 m³/h
	4	3.7 m³/h
	8	5.0 m³/h
	10	5.6 m³/h
	20	4.2 m³/h



### Aereco 2MO

Available colours: RAL 9003, RAL 8017, RAL 8001, RAL 7016



### Aeromat Mini

Available colours: RAL 9006, RAL 9016

Parameter	Air flow [m³/h]		Resistance to rainwater after installation in the window, in a zone without rain cover [Pa]	Acoustic properties Dn (C;Ctr) [dB]	
	Rated	Minimal		Air inlet open	Air inlet closed
AMO.103 kit AMO pressure sensitive air inlet Standard AB canopy	25.3	5.9	300	32 (-1;1)	33 (0;0)
EMM.707 kit EMM humidity sensitive air inlet Standard AB canopy	26.1	6.9	300	32 (-1;0)	34 (0;0)
EXR.409 kit EXR humidity sensitive air inlet AQ acoustic canopy	27	7	300	40 (0;0)	41 (-1;-1)
Aereco 2MO.102 air inlet	20.2	4.9	300	33 (-1;-1)	35 (-1;-1)
AEROMAT mini air inlet	2	11	n/a	n/a	n/a

## Glazing bars

If inner glazing bars are used, silicone discs are not provided at the glazing bar intersection.

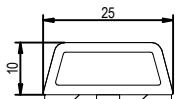
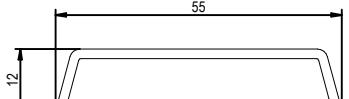
The following bars are available for the PVC window range:

- tuck-on glazing bars, INNER glazing bars (colour on both sides), INNER glazing bars (colour on one side), DUPLEX glazing bars

The “glazing bar ringing” effect can occur, which is caused by normal vibrations of the aluminium glazing bar rod during opening and closing, or even by wind gusts outside.



### Glazing bar types and colours

	Glazing bar type	Colours	Restrictions
<b>Stuck-on</b>		Glazing bars available in all colours within the standard and special colour range	* not available with the Primo 82 system use of a 12 [mm] glazing bar possible for glass unit thickness <b>48 [mm]</b> <b>and up</b>
			

For the 25 [mm] glazing bar, a 20 [mm] high duplex bar should be used.

For the 55 [mm] glazing bar, a 48 [mm] high duplex bar should be used (two 24 [mm] duplex bars combined).

Duplex bars available for frames with the thickness of:

- 14 mm (duplex bar thickness 9.5 [mm])
- 16 mm (duplex bar thickness 11.5 [mm])
- 18 mm (duplex bar thickness 13.5 [mm])

Duplex bar colours:

- Silver
- Light Grey 7035
- Grey 7040
- Black 9005
- Light Brown 8003
- Brown 8016
- White 9016

Due to colour matching, the duplex bar is not available with the Premium (Multitech G) warm edge.



## Glass panes

When using glass 4 [mm] thick – the maximum side length can be 2,440 [mm] (maximum side ratio 1:8), maximum surface area up to 3.35 [m<sup>2</sup>].

The above standard dimensional limitations apply only to clear glazing units installed vertically in locations where increased wind loads do not occur.

The limitations do not take into account the effect of heat-reflecting coatings on the increase of the temperature inside the glass units and the effect of the changes in atmospheric pressure resulting from fitting in mountainous areas.

The permissible glass sizes do not take into account the customer's detailed requirements regarding safety, wind load, etc.

When using varying thickness of glass in the glazing unit, the maximum surface is determined for the thinner glass.

In accordance with the regulations of the Building Law, safety glass should be used in the bottom section of the window up to the height of 850 [mm] (in buildings up to 25 [m] high) and 1,100 [mm] (in buildings over 25 [m]).

## Warm edge

Available in the following colours for the PVC range:

Light Grey 7035, Grey 7040, Black 9005, Light Brown 8003, Brown 8016, White 9016

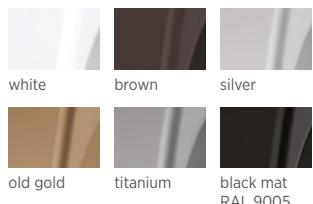
## Window handles

PVC windows are fitted with BASIC handles as standard.

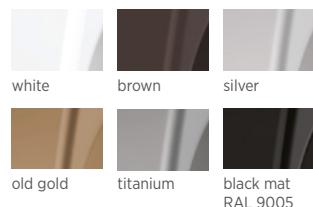
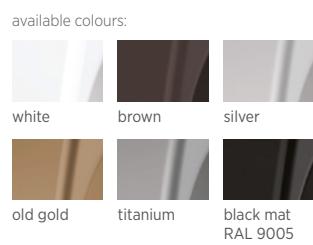
### BASIC

**BASIC**

available colours:

**BASIC K**  
with a key lock

available colours:

**BASIC P**  
with a locking button



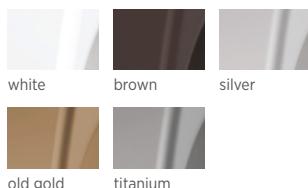
Optionally, PVC windows can be fitted with the following handles:

### ROUND



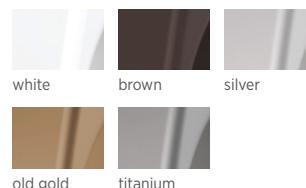
**ROUND**

available colours:



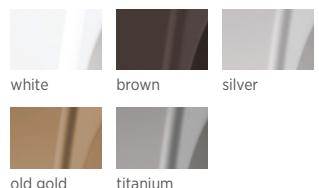
**ROUND K**  
with a key lock

available colours:



**ROUND P**  
with a locking button

available colours:

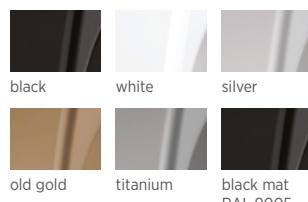


### CUBE



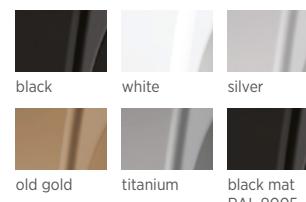
**CUBE**

available colours:



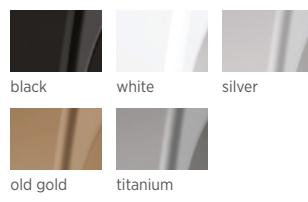
**CUBE K**  
with a key lock

available colours:



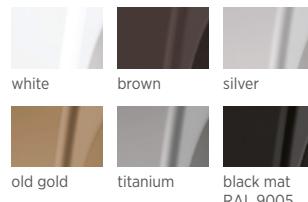
**CUBE P**  
with a locking button

available colours:



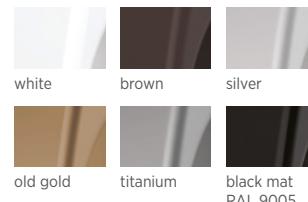
**BASIC double-sided  
balcony**

available colours:



**BASIC double-sided flat  
for roller shutter**

available colours:

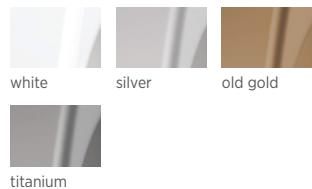




## HOPPE

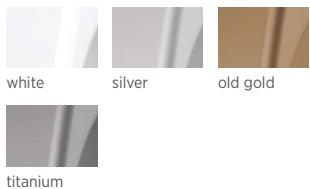
**Secustic Luxembourg**

available colours:

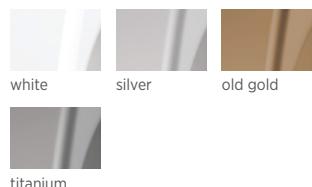
**Secustic Luxembourg**

with a key lock

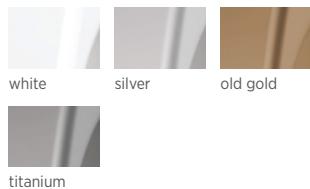
available colours:

**Secuforte Secustic Hamburg  
handle**

available colours:

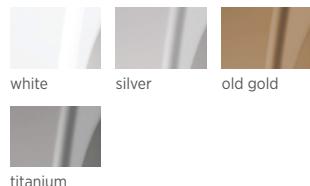
**Atlanta**

available colours:

**Atlanta**

with a key lock

available colours:





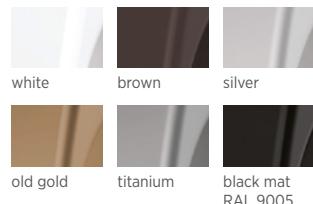
## Handles for the HST patio door

As standard, the HST patio door includes an aluminium handle with a flush pull



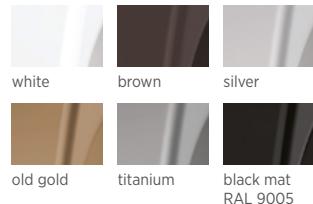
**HST handle**

available colours:



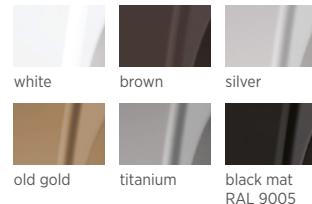
**HST handle with a lock cylinder on the inside**

available colours:



**Double-sided HST handle with a lock cylinder**

available colours:

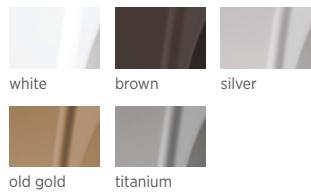


## Handles for the PSK patio door



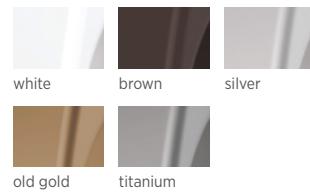
**PSK-Z**

available colours:



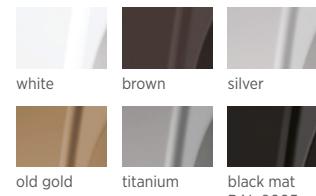
**PSK-Z with a key lock**

available colours:



**PSK-S and PSK-PAS**

available colours:

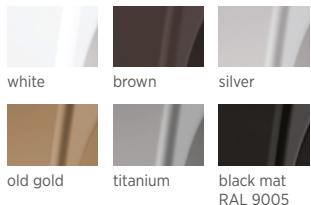


**Old gold\*** – colour with a darker hue than other handle models



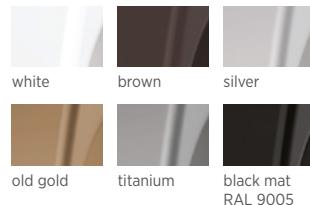
**PSK-S and PSK-PAS handle with a key lock**

available colours:



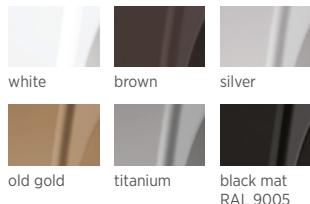
**PSK-S and PSK Pas double-sided handle**

available colours:



**PSK-S and PSK Pas double-sided handle for roller shutter**

available colours:

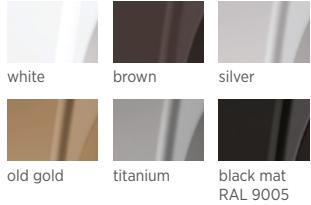


## Handles for the SLIDE patio door



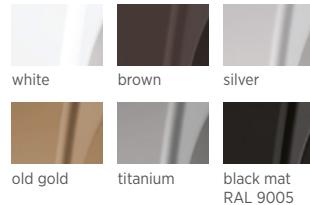
**Slide handle**

available colours:



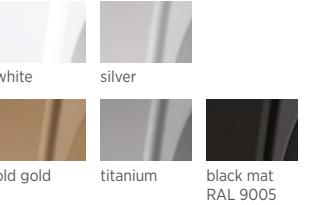
**Slide handle with a key lock**

available colours:



**Slide pull**

available colours:

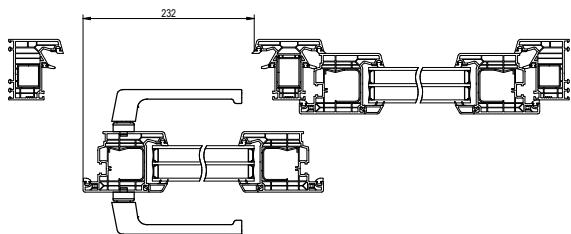




## Clear passage

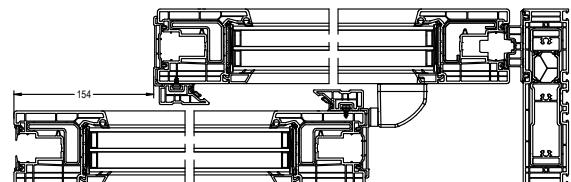
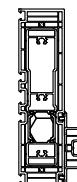
### Clear opening with a double-sided handle – PSK

In the case of a double-sided handle in the PSK with fixed glazing in the frame, we use a double-sided handle for the roller shutter and the leaf is moved fully behind the fixed glazing. However, in the case of the PSK with fixed glazing in the leaf, we use a "standard" handle and at the same time, the leaf bumper is positioned so that it decreases the clear opening passage by 232 mm.

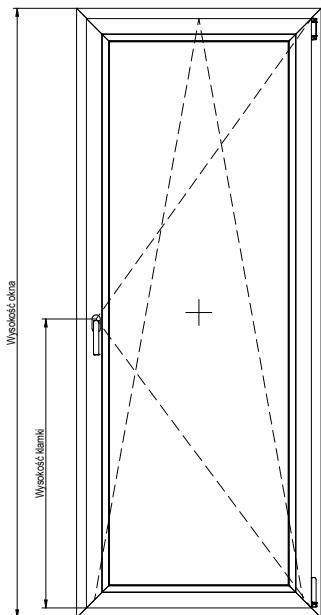


### HST clear passage

When using a double-sided handle, the clear passage decreases by about 154 mm.



## Handle heights

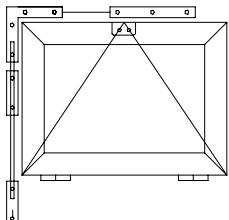
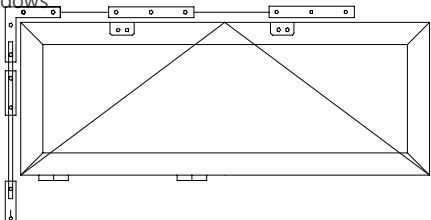


Handle height [mm]	Range of application/ height in the hardware groove		Range of application/ leaf height in the window	
	MIN. [mm]	MAX. [mm]	MIN. [mm]	MAX. [mm]
<b>145</b>	360	430	400	470
<b>210</b>	431	660	471	700
<b>320</b>	661	840	701	880
<b>420</b>	841	1,090	881	1,130
<b>520</b>	1,091	1,340	1,131	1,380
<b>620</b>	1,341	1,590	1,381	1,630
<b>720</b>	1,591	1,700	1,631	1,740
<b>1,070</b>	1,701	1,950	1,741	1,990
<b>1,070</b>	1,951	2,200	1,991	2,240
<b>1,070</b>	2,201	2,450	2,241	2,490

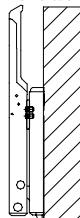


## GEZE OL90 toplight opener

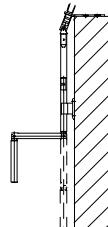
Tilt-only (hopper/awning) windows



### Methods of window opening with the GEZE OL90 hardware

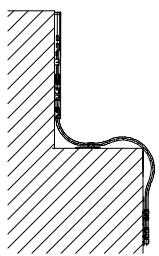


Lever

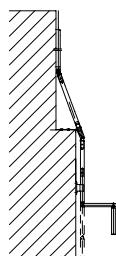


Crank

### Method of drive transmission with the GEZE OL90



Flexible transmission



Articulated joint transmission

#### With the use of:

- manual lever,
- Fz91 gear unit installed under the elastic cable.

#### With the use of:

- crank mechanisms.

## Product features

- Full opening width = 170 mm for all leaf heights,
- Adjustable opening width,
- Total leaf weight up to 80 kg,
- Min. height of the leaf 250 mm,
- Max. width of the leaf 380 mm,
- Max. width of the leaf 3,600 mm with three scissor stays,
- Little space requirement due to flat scissor stay structure,
- Release inhibitor, lockable manual lever, and scissor stays ensure added security,
- Scissor stays can be disengaged with a release button for easy window cleaning inside and outside,
- Fully pre-installed mounting groups for easier fitting,

## Areas of application

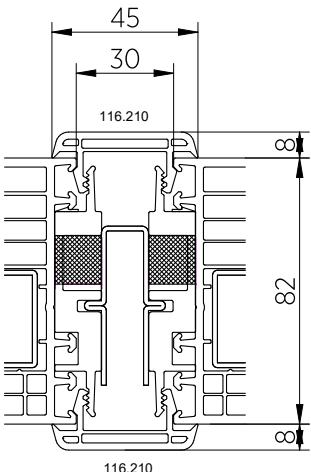
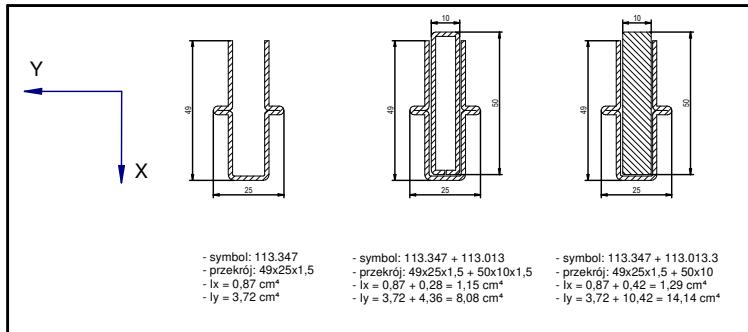
- Convenient everyday ventilation of rooms and staircases,
- Inswing windows,
- Can be used in non-standard structures, i.e. arched, triangular, round, and segment windows,
- Connecting and operating several windows with an angular drive transmission.

**Tape selection**

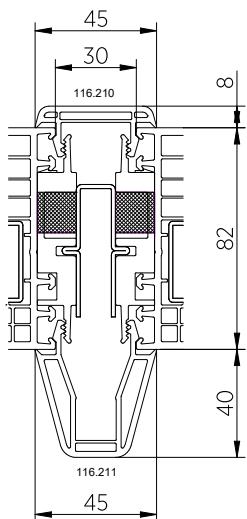
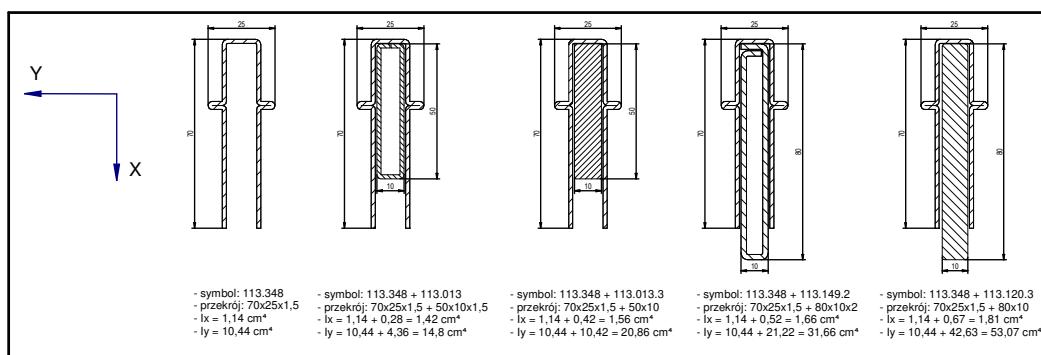
<b>System</b>	Profile type	Gap size	Selected expansion tape	Type of screw used for connection
<b>PRIMO 82</b>	116.210+116.210	14.5	*Pinta 15/4-20	-
	116.210+116.211	14.5	*Pinta 15/4-20	-
	116.216	6.7	*Pinta 10/4-20	-
	116.219	7.7	*Pinta 15/4-20	-
	116.229	6.7	*Pinta 10/4-20	-
	116.030	15.4	*Pinta 15/4-20	-
	116.217	15.4	*Pinta 15/4-20	-
	116.213+116.211	14.5	*Pinta 15/4-20	-
	116.213+116.210	14.5	*Pinta 15/4-20	-
	114.040	7.7	*Pinta 10/4-20	WKRT39x25-ZW-B-BR
	114.041	7.7	*Pinta 10/4-20	WKRT40x50-BW-B-ZR
	114.042	7.7	*Pinta 10/4-20	WKRT48x60-BW
	114.043	7.7	*Pinta 10/4-20	WKRT48x120-ZW-WL
	109.445	6.8	*Pinta 10/4-20	WKRT48x60-ZW
	109.091	6.8	*Pinta 10/4-20	WKRT48x120-ZW-WL
	109.569	6.8	*Pinta 10/4-20	WKRT60x160-PDTX-GCZ
	116.029	8.7	*Pinta 15/4-20	-
	116.210+116.212	14.5	*Pinta 15/4-20	-
	116.210 +116.212	14.5	*Pinta 15/4-20	-



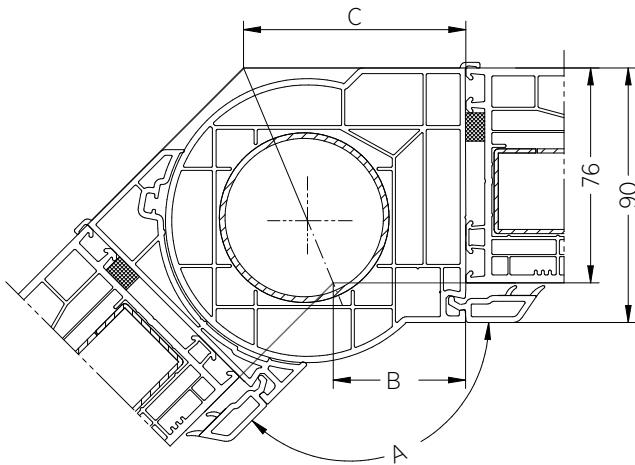
## Connectors



Connector 116.210

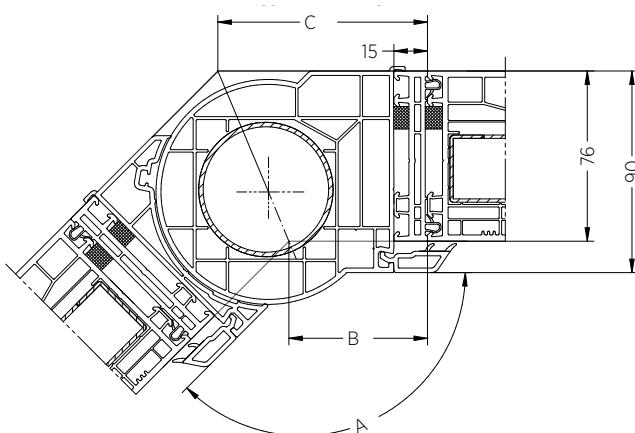


Connector 116.210+116.211



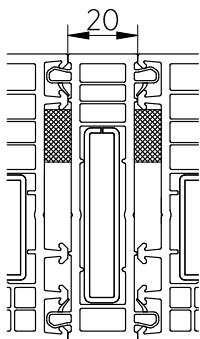
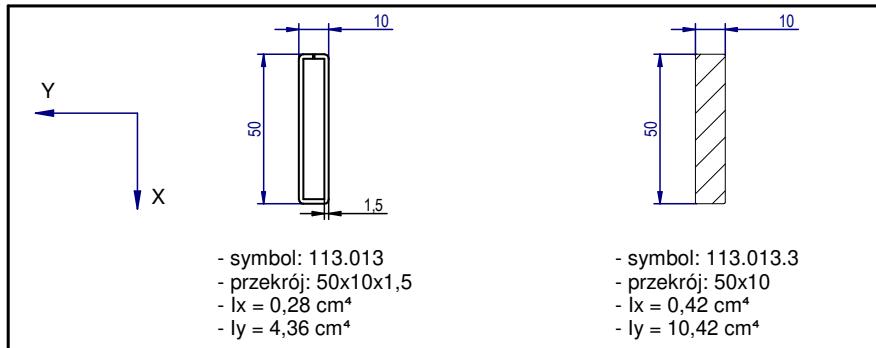
Pipe connector 116.216 + 114040 without a widening

Item	Angle A	B	C
1	90 °	34 mm	110 mm
2	95 °	35 mm	105 mm
3	100 °	37 mm	101 mm
4	105 °	39 mm	97 mm
5	110 °	40 mm	94 mm
6	115 °	42 mm	91 mm
7	120 °	44 mm	87 mm
8	125 °	45 mm	84 mm
9	130 °	46 mm	81 mm
10	135 °	47 mm	78 mm
11	140 °	48 mm	75 mm
12	145 °	49 mm	73 mm
13	150 °	50 mm	70 mm
14	155 °	51 mm	68 mm
15	160 °	52 mm	65 mm
16	165 °	53 mm	63 mm
17	170 °	54 mm	61 mm
18	175 °	55 mm	58 mm
19	180 °	56 mm	56 mm
20	185 °	57 mm	54 mm
21	190 °	58 mm	41 mm
22	195 °	59 mm	49 mm
23	200 °	60 mm	46 mm
24	205 °	61 mm	44 mm
25	210 °	62 mm	42 mm

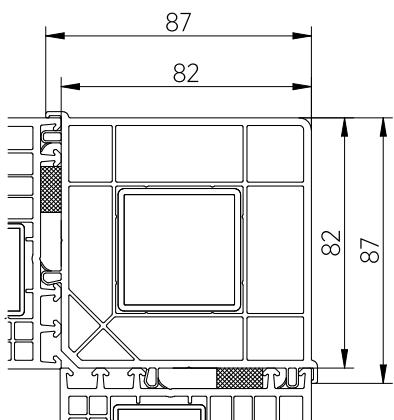


Pipe connector 116.216 + 114040 with a 15 [mm] widening

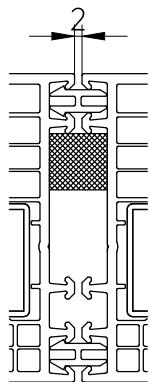
Item	Angle A	B	C
1	90 °	49 mm	125 mm
2	95 °	50 mm	120 mm
3	100 °	52 mm	116 mm
4	105 °	54 mm	112 mm
5	110 °	55 mm	109 mm
6	115 °	57 mm	106 mm
7	120 °	59 mm	102 mm
8	125 °	60 mm	99 mm
9	130 °	61 mm	96 mm
10	135 °	62 mm	93 mm
11	140 °	63 mm	80 mm
12	145 °	64 mm	73 mm
13	150 °	65 mm	70 mm
14	155 °	66 mm	88 mm
15	160 °	67 mm	80 mm
16	165 °	68 mm	78 mm
17	170 °	69 mm	76 mm
18	175 °	70 mm	73 mm
19	180 °	71 mm	71 mm
20	185 °	72 mm	69 mm
21	190 °	73 mm	66 mm
22	195 °	74 mm	64 mm
23	200 °	75 mm	61 mm
24	205 °	76 mm	59 mm
25	210 °	77 mm	57 mm



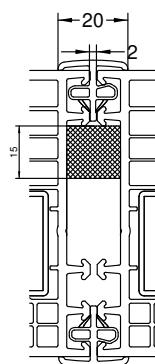
Connector 116.219



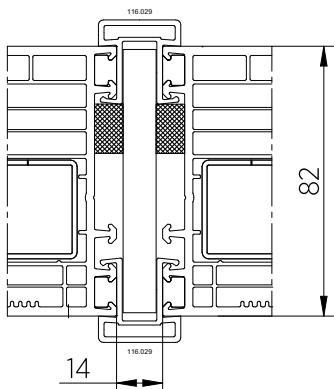
90 degree angle connector 116.229



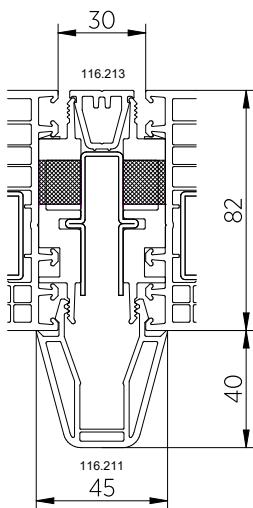
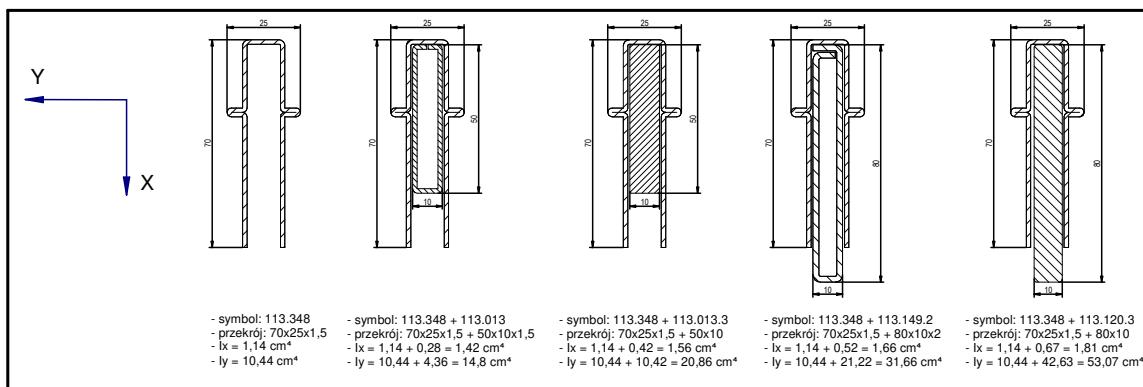
Mini connector 116.030



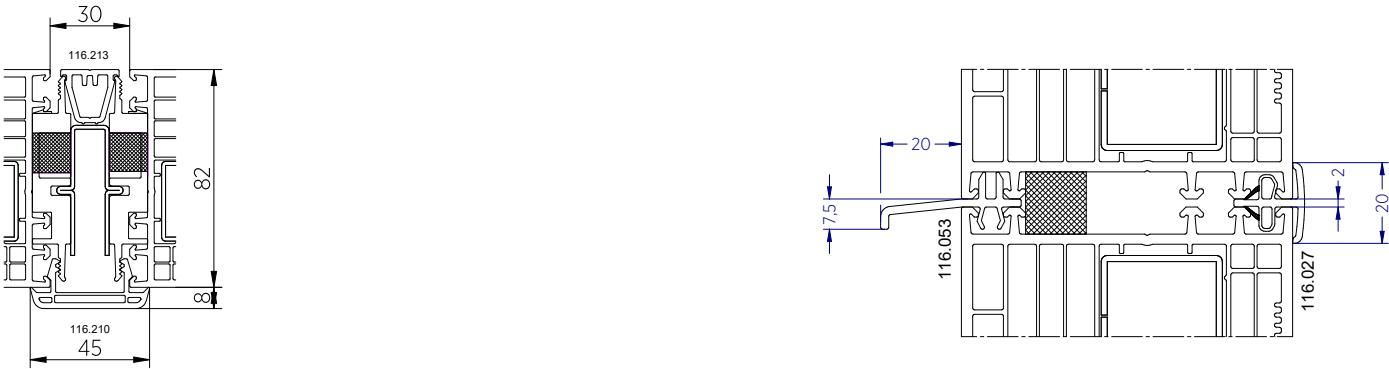
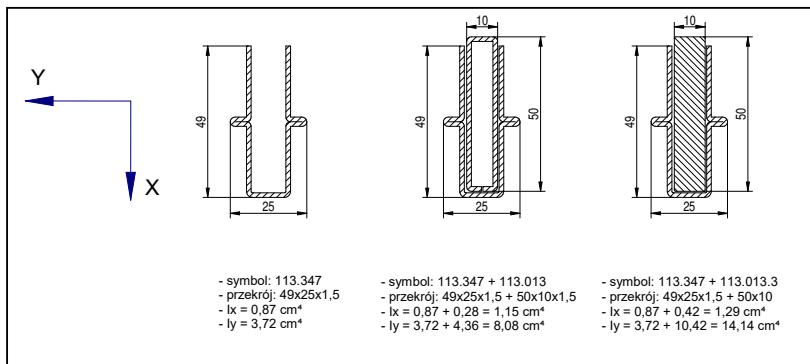
Mini connector 116.217



Connector 116.029+116.029

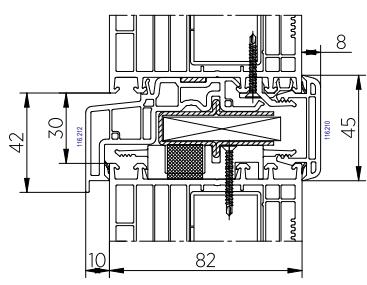
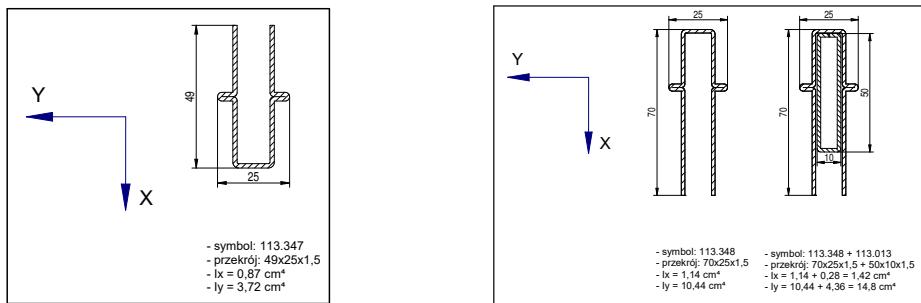


Connector 116.213+116.211

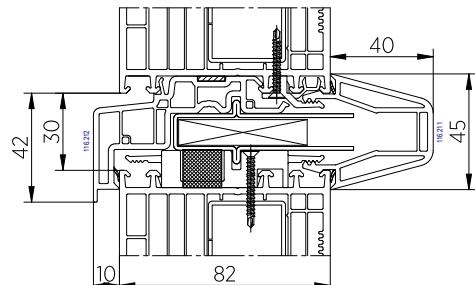


Connector 116.213+116.210

Connector 116.053

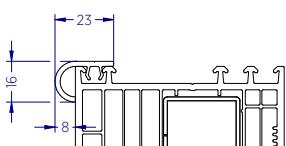


Connector 116.210+116.212

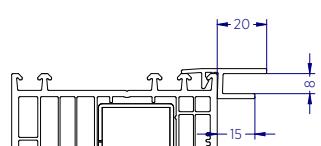


Connector 116.211+116.212

## Roller shutter box traverses



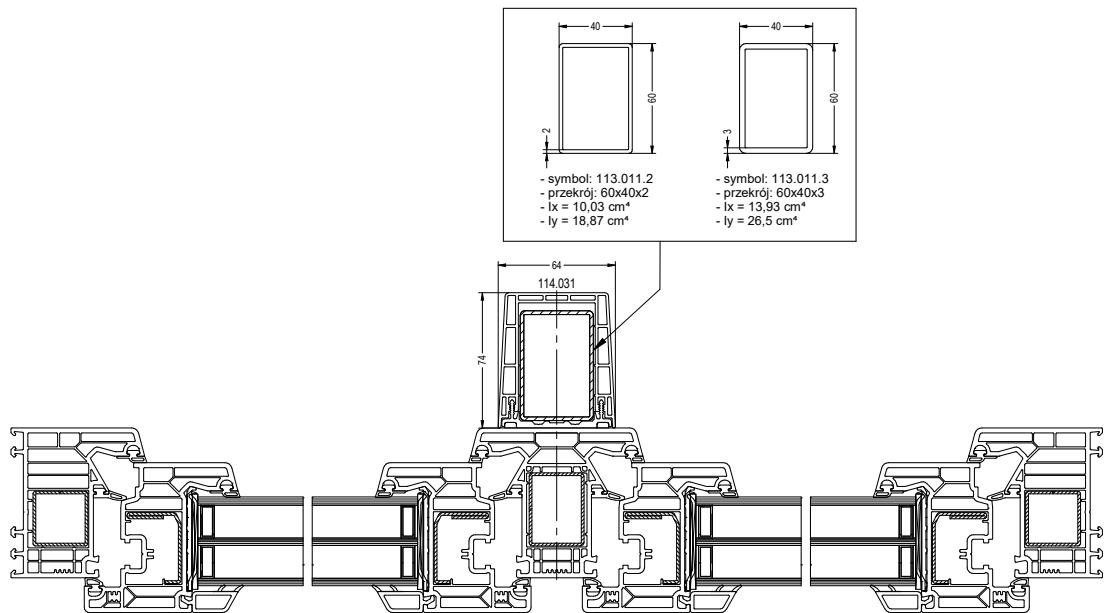
Traverse 108.100



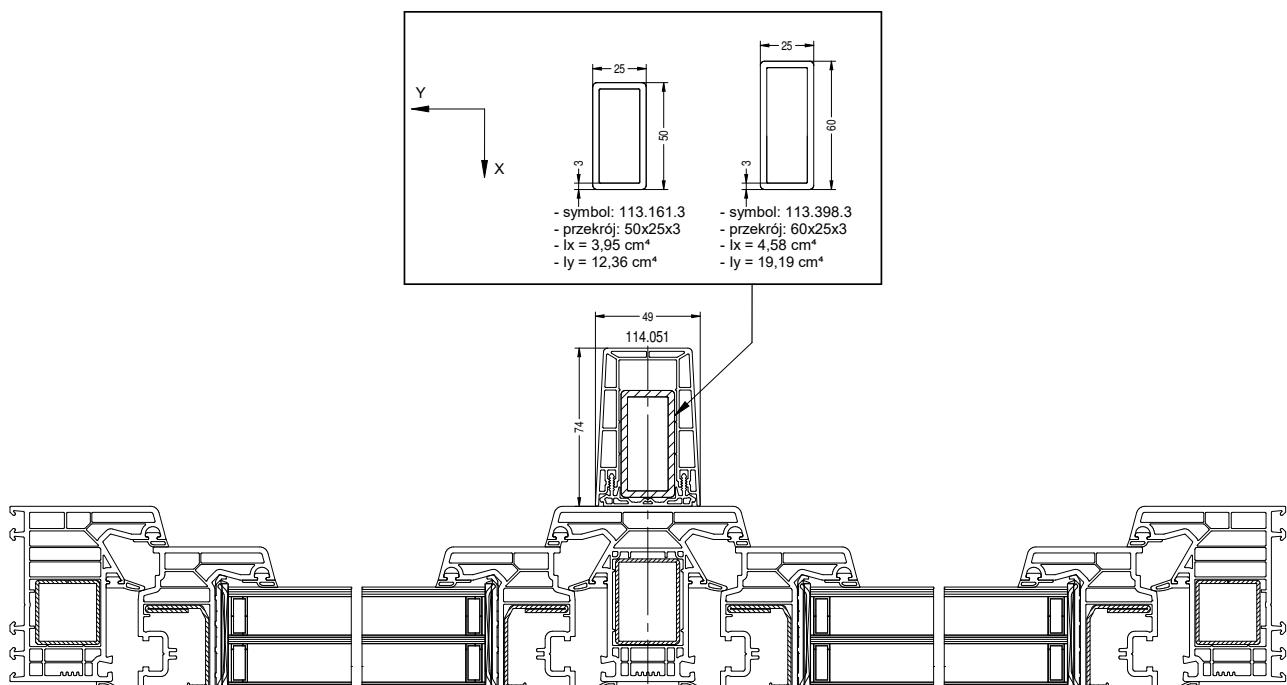
Traverse 109.286



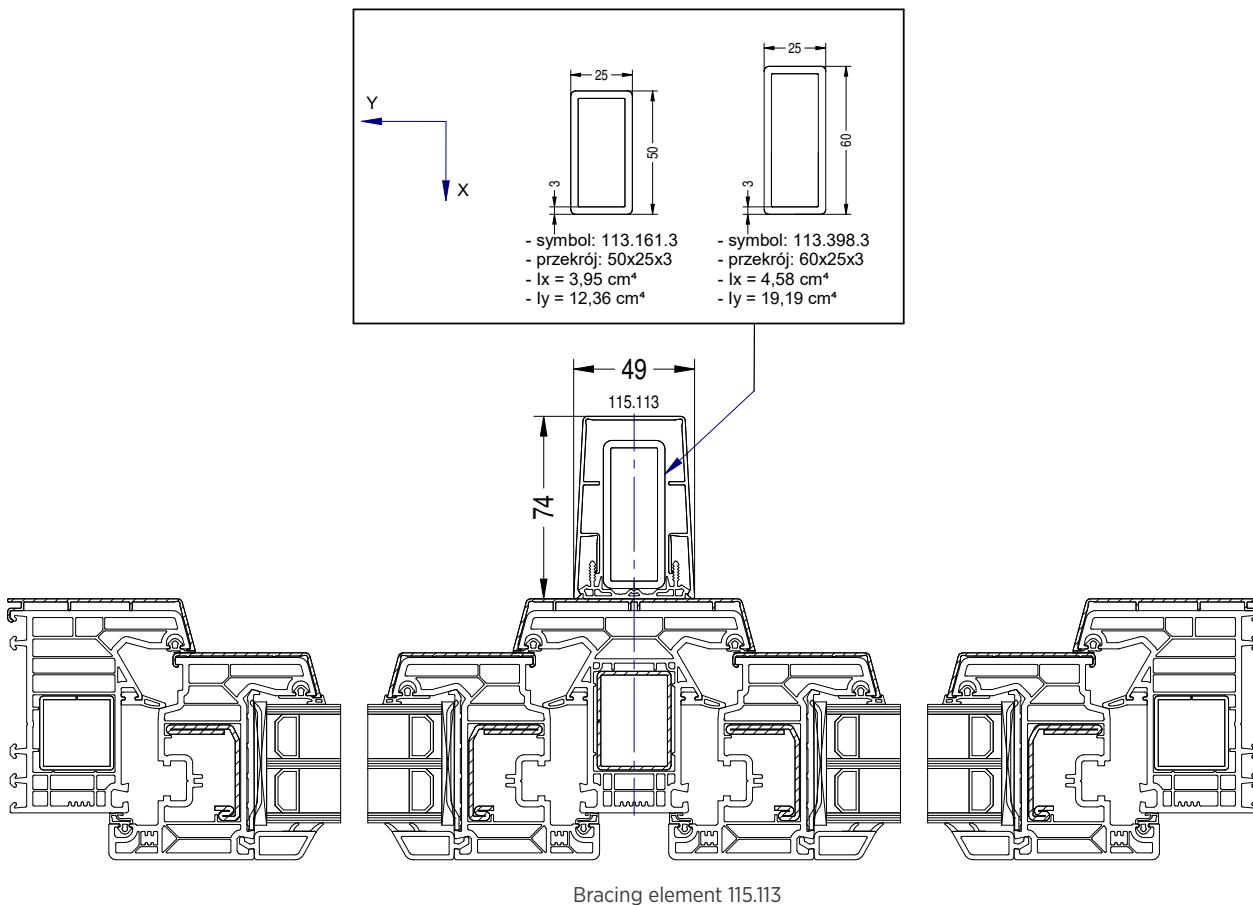
## Bracing elements



Bracing element 114.031

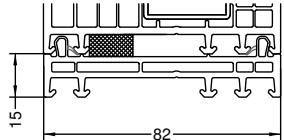


Bracing element 114.051

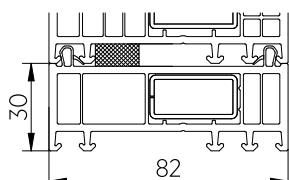


## Widenings

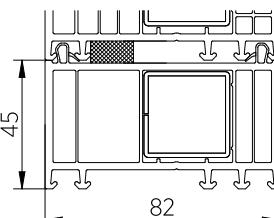
Dedicated for the PRIMO 82 windows



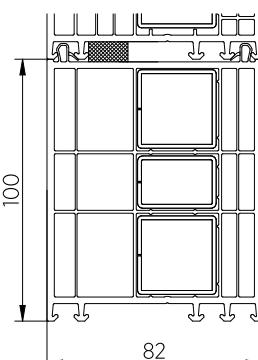
Widening 114.040



Widening 114.041

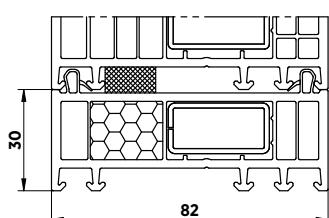


Widening 114.042

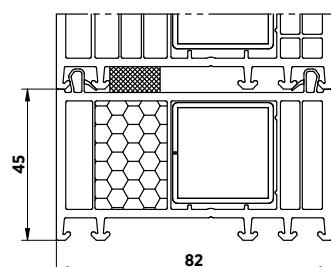


Widening 114.043

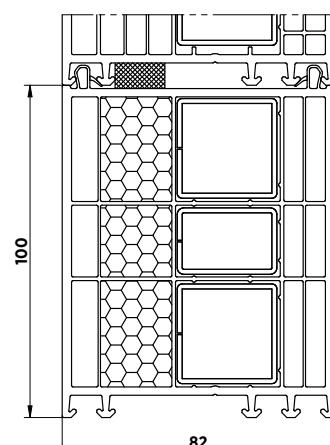
Widenings infilled with foam



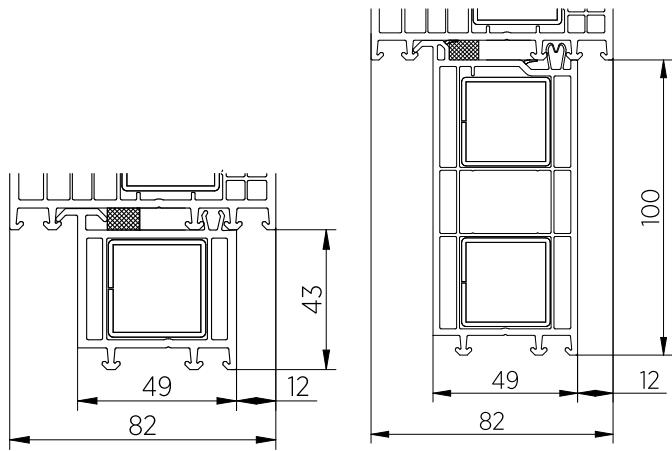
Widening 114.041 infilled with foam



Widening 114.042 infilled with foam



Widening 114.043 infilled with foam



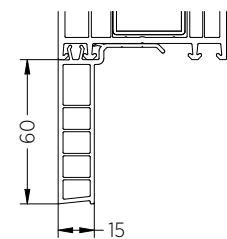
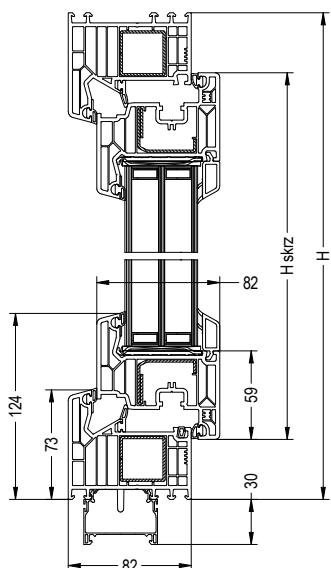
Widening 109.445

Widening 109.091

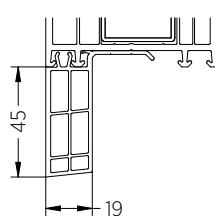
## Undersill strips

### Thermal strip

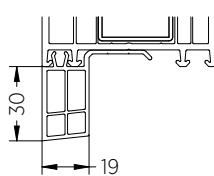
The maximum number of thermal strips is 2, whereas the maximum height of stacked thermal strips is 60 [mm].



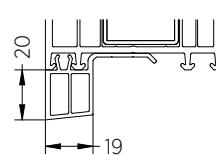
Undersill strip 60 [mm]



Undersill strip 45 [mm]

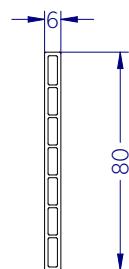


Undersill strip 30 [mm]

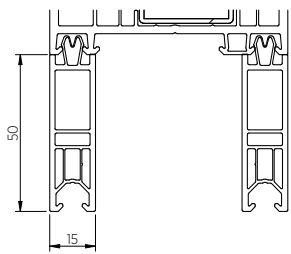


Undersill strip 20 [mm]

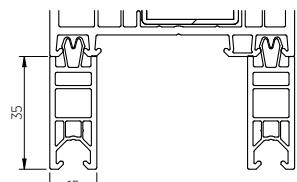
## Covering profiles



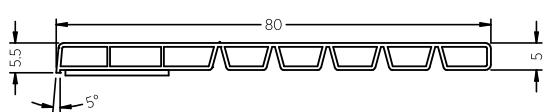
Covering profile 109.046



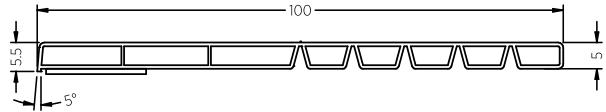
Undersill strip 50 [mm]



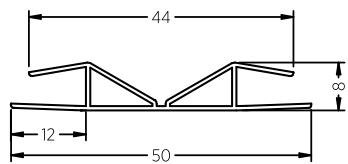
Undersill strip 35 [mm]



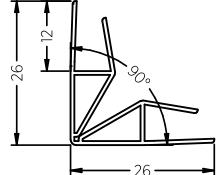
Chamber strip 80 [mm]



Chamber strip 100 [mm]

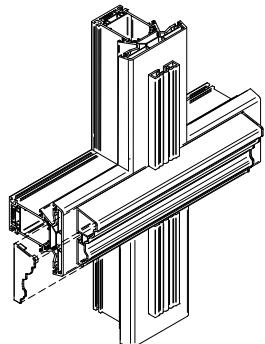


Connecting profile 50 [mm]

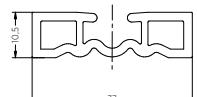


Connecting profile 50 [mm]

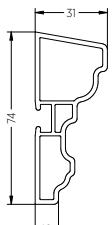
## Accessories



Isometric view



Decorative strip 146.169



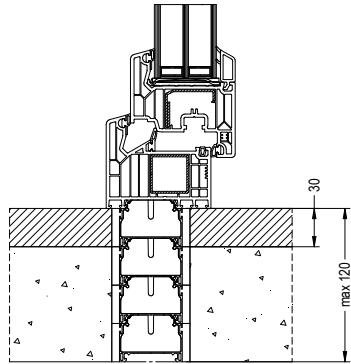
Decorative strip 146.168



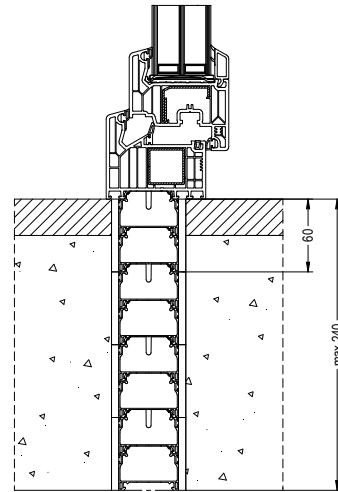
## Thermal widening

The maximum number of thermal widenings is 4, whereas the maximum height of stacked thermal widenings is:

**For thermal widenings 30 [mm] = 120 [mm]**



**For thermal widenings 60 [mm] = 240 [mm]**

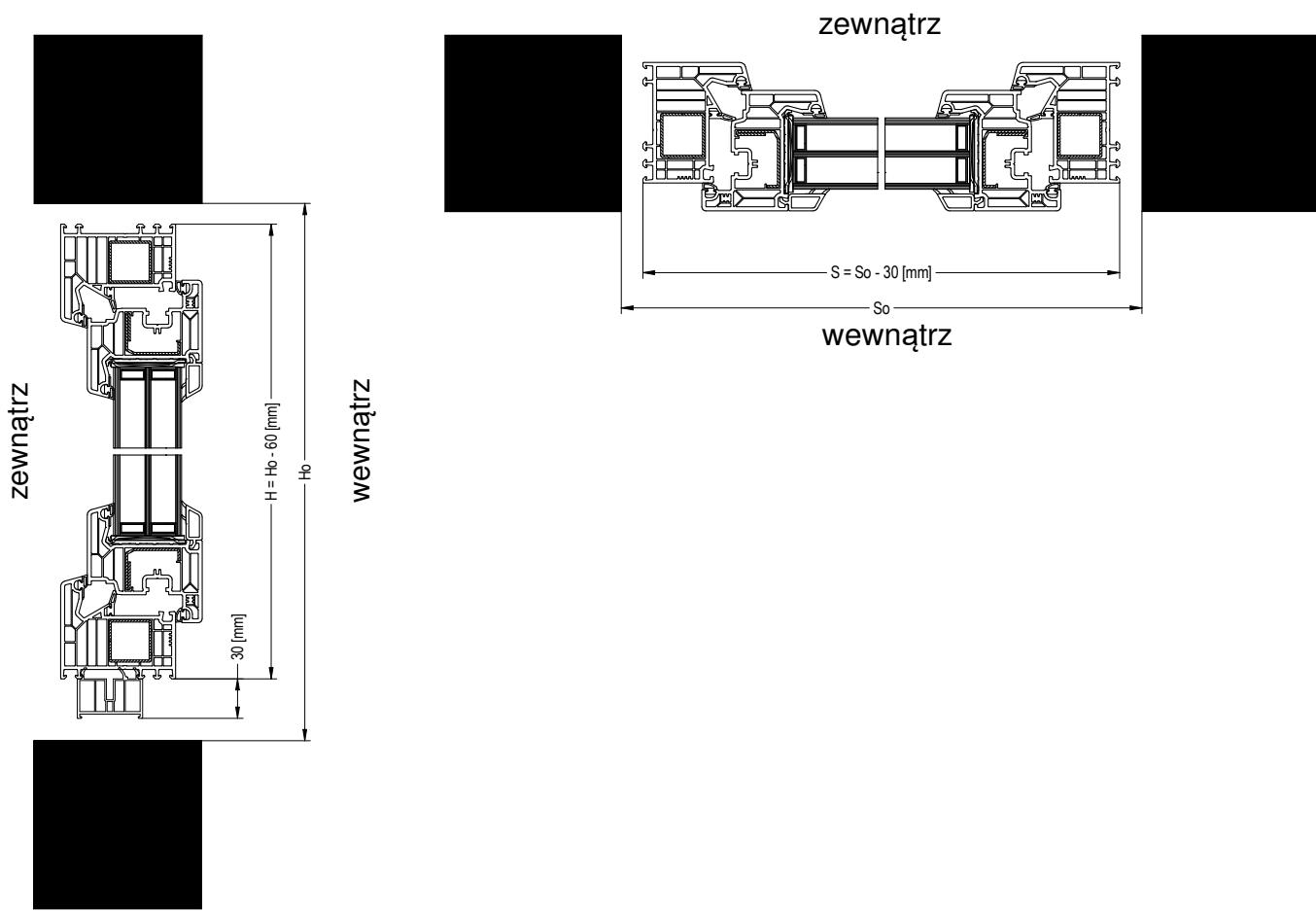


## Accessories and delivery

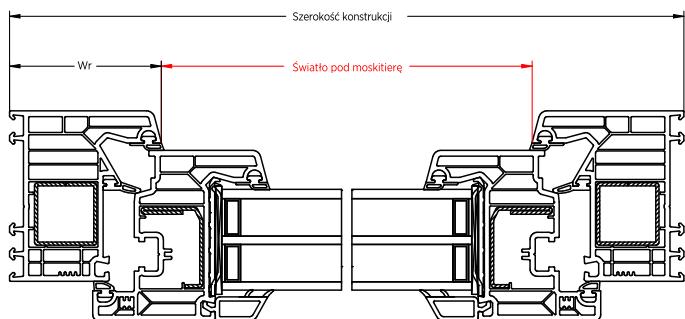
The windows are assembled and ready for fitting (optionally with opening frame holes for direct mounting and steel anchors for indirect mounting). The windows are delivered in one piece. Large windows consisting of two or more elements are disassembled into parts for shipping. The glass for the HS patio door is delivered in transport frames.

## Ordering and installation dimensions for windows and PSK

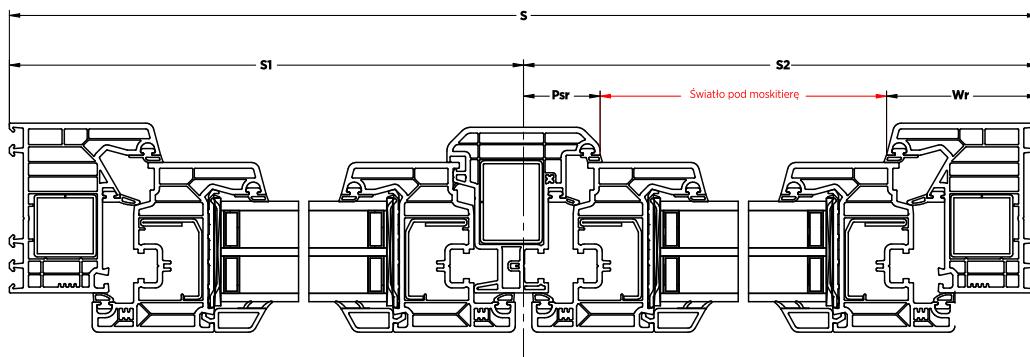
Drilling for dowels is an option and is performed in accordance with the customer's requirements. Dowel hole diameter –  $\varnothing 6$  [mm]. In the order, please provide the H dimension, without the 30 [mm] undersill strip.



## Dimensioning for mosquito screen installation



Profile system	Frame geometry	Wr frame height [mm]
<b>Softline 82</b>	101.290	73
<b>Softline 82</b>	101.291	83



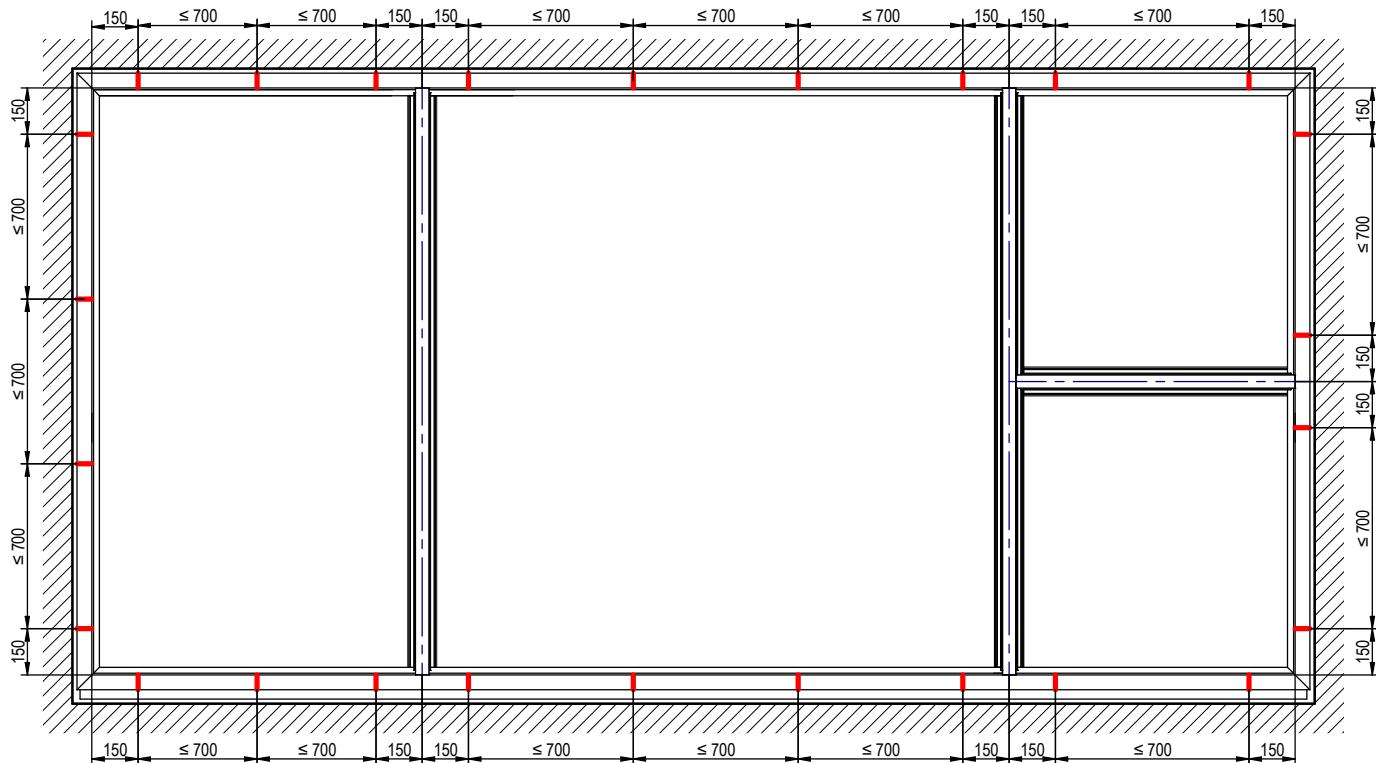
Clear opening for a mosquito screen, calculation formula: Clear opening = S2 - Wr - Psr

Profile system	Geometry of a movable mullion	Movable mullion division Psr [mm]
<b>Softline 82</b>	102.316	37

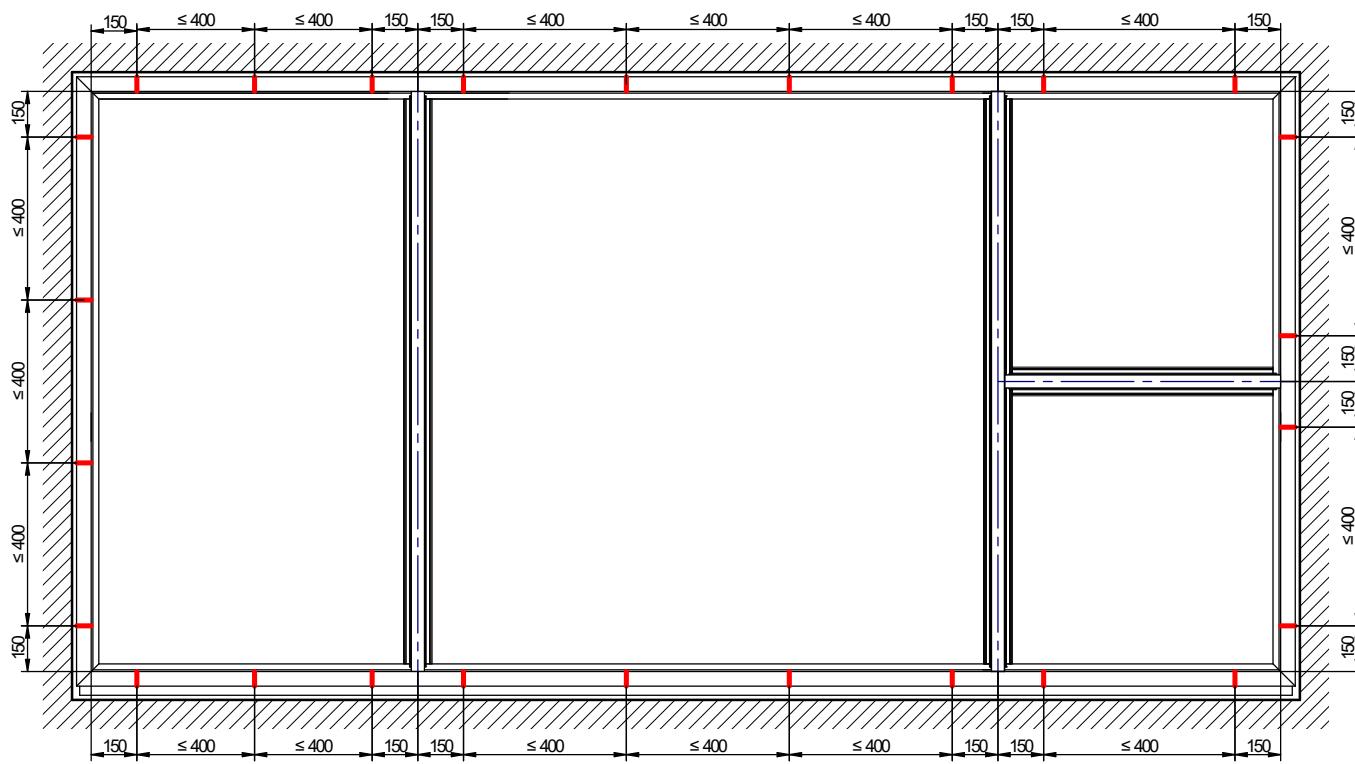
S2 – division size of the ACTIVE section of a window with a movable mullion



**Spacing of anchors / dowels – STANDARD windows, windows with the Security 1 / Security 2 burglary protection class**



**Spacing of anchors / dowels – windows in the RC2 anti-burglary class**



Marking for dowels is an option and is performed in accordance with the customer's requirements. Dowel hole diameter –  $\varnothing 6$  [mm].



## Pricing guidelines

- All the structures are presented as seen from the inside,
- Standard hardware for windows: Maco MultiMatic,
- Each structure includes a transport and installation bar,
- In window leafs, the RU function is always used for calculation. When pricing structures which are not listed in the price list, please contact the Sales Department.
- We reserve the right to estimate the final value and determine the feasibility of production of the joinery.

## Storage information

Please remember that the spring and summer seasons are accompanied by high temperatures, which exposes the joinery to increased heat when stored outdoors. As a result, the glazing beads shrink, which is normal. In order to minimize this phenomenon, we recommend storing the joinery with the inner window surface facing geographical north.







Window type	PRIMO 82	PRIMO 82-ALU	PRIMO 82 with a low threshold
Number of chambers in the frame	7	7	7
Installation depth	82 mm	87 mm	82 mm
Profile class	A	A	A
Profile core	white, caramel, brown, grey	white, caramel, brown, grey	white, caramel, brown, grey
Gaskets around the circumference	3	3	3
Structural reinforcement	steel box section in the frame	steel box section in the frame	steel box section in the frame
Standard glazing unit	two-chamber 4/18/4/18/4 Ug=0.5 W/m <sup>2</sup> K	two-chamber 4/18/4/18/4 Ug=0.5 W/m <sup>2</sup> K	two-chamber 4/18/4/18/4 Ug=0.5 W/m <sup>2</sup> K
Drive gear with a lifting mishandling device and a leaf lifter	●	●	●
Moving rollers i.S.	●	●	●
Alloy catches, two anti-burglary catches in the RU leaf	●	●	●
Microventilation in scissor stay	●	●	●
Surface hinges with pressure adjustment	●	●	●
Bottom striker plate in the RU leafs	●	●	●
Anti draught lock in RU	●	●	●
Aluminium threshold with a 30 mm widening	—	—	●
Handle	aluminium	aluminium	aluminium
Also available in class	SECURITY 1, SECURITY 2, RC2	SECURITY 1, SECURITY 2, RC2	SECURITY 1, SECURITY 2, RC2



Window type	PRIMO PSK-82	PRIMO SLIDE	PRIMO HST Skymotion\Skymotion MAX
Number of chambers in the frame	7	9	7
Profile thickness	82 mm	76 mm	82 mm
Gaskets around the circumference	3	3	2
Structural reinforcement	steel box section in the frame	frame – steel reinforcement	frame – steel reinforcement
Standard glass unit	two-chamber 4/18/4/18/4 Ug=0.5 W/m <sup>2</sup> K	two-chamber 4/18/4/18/4 Ug=0.5 W/m <sup>2</sup> K	two-chamber 4/18/4/18/4 Ug=0.5 W/m <sup>2</sup> K
Hardware	tilt and slide, parallel-stop-slide	Parallel-stop-slide	lift and slide hook drive gear
Handle	aluminium	aluminium	aluminium
Also available in class	PSK Standard and PAS – SECURITY 2 Scheme A	-	SECURITY 2
Widening 30 mm	-	●	●



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