

ALU WINDOWS



WIŚNIEWSKI

GATES | WINDOWS | DOORS | FENCES

FUTURO MB-79N

The MB-79N window is a modern solution in the field of aluminium systems, combining aesthetics with high energy efficiency.

THERMAL INSULATION

The U_w heat transfer coefficient is 0.79 W/m²K.

DESIGN

The MB-79N is characterized by universal design, but also offers a broad range of colours that allow you to match its appearance to your preferred style.

THINK ABOUT THE FUTURE - PRODUCTS FOR THERMAL EFFICIENCY IMPROVEMENT

An investment in an energy-efficient door from WIŚNIEWSKI does not only save you money, but also helps you protect the natural environment.



FUTURO MB-79N



WINDOW CHARACTERISTICS

- A three-chamber window and door system with improved thermal insulation
- Opening frame depth: 70 [mm]
- The standard leaf depth is 79 [mm]
- A broad selection of sections, enabling the design of modern, highly functional windows, doors, and fixed windows
- Innovative insulation materials and double sealing guarantee perfect tightness
- Versatile solution for public utility buildings and residential construction
- Thermal insulation of the reference RU window with the dimensions of 1.23 [m] x 1.48 [m] $U_w = 0.79 \text{ W/ m}^2\text{K}$ with a triple-glazed unit $U_g = 0.5 \text{ W/ m}^2\text{K}$
- Available colours: RAL structure, film coatings

STANDARD ACCESSORIES

Siegenia TITAN AF hardware:

- KoPiBo movable anti-burglary bolts (mushroom cams) with automatic height adjustment.
- Striker plate with a lift roller (inliner) in the lower corner.
- Two anti-burglary striker plates as standard, increasing tightness and making it difficult to force the leaf open.
- A mishandling device.
- Stay locking support and anti-slam device.

ADDITIONAL FEATURES

Windows equipped with the Siegenia TITAN AF hardware include the following elements:

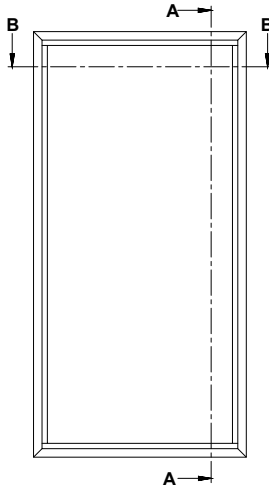
- KoPiBo movable, rotary anti-burglary bolts (mushroom cams) – provide high durability, precise fit, and automatic adjustment of the height of the mushroom cams, which enables smooth operation with frame elements, regardless of the temperature-induced changes in window dimensions.
- Striker plate with a lift roller (inliner) – located in the lower corner of the frame, it facilitates placing the leaf into the frame, acting as a lifter.
- Two anti-burglary striker plates – work with the rotary bolts, increase window tightness, and make it difficult for a burglar to force the leaf open thanks to the presence of a metal orifice. All the TITAN AF striker plates are steel.
- A mishandling device – prevents the handle from being turned when the window is open or ajar.
- Stay locking support and anti-slam device – facilitates the closing of wide leaves and prevents the tilted leaf from slamming shut in the event of a draught.
- Optionally: for a standard leaf – concealed hardware – all the hardware components are concealed in the window rebate, which improves aesthetics and makes it easier to maintain cleanliness. The load capacity of the concealed hinges is 130 kg.



CROSS-SECTIONS AND VIEWS

FUTURO MB-79N – fixed glazing

As seen from the inside

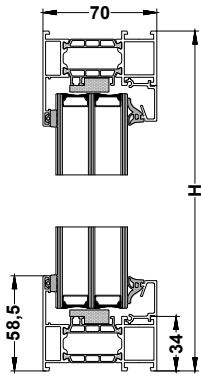


Descriptive dimensions:

- S skrz- leaf width,
- So - opening width,
- S - window ordering width,
- Ho - opening height,
- H - window ordering height,
- Hp - understructure height

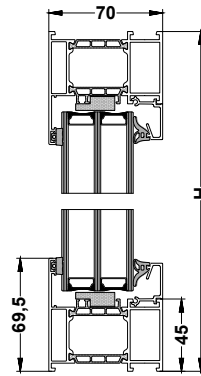
Cross-sections

Vertical cross-section
Standard frame



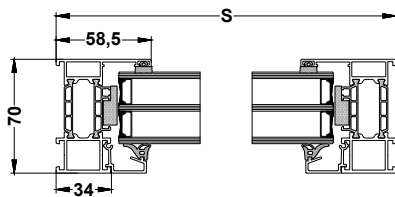
K520011 frame

Vertical cross-section
High frame

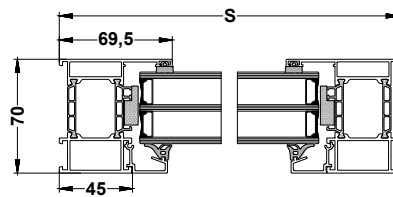


K520012 frame

Horizontal cross-section
Narrow frame



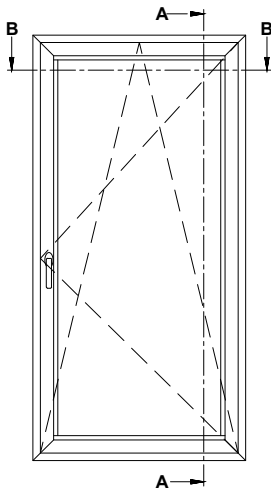
Horizontal cross-section
Standard frame





FUTURO MB-79N - tilt and turn single-leaf window

As seen from the inside

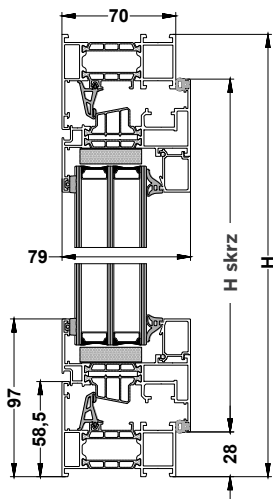


Descriptive dimensions:

- S skrz- leaf width,
- So - opening width,
- S - window ordering width,
- Ho - opening height,
- H - window ordering height,
- Hp - understructure height

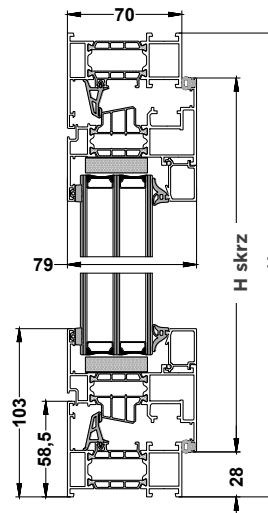
Cross-sections

Vertical cross-section
Narrow frame + standard leaf (narrow)



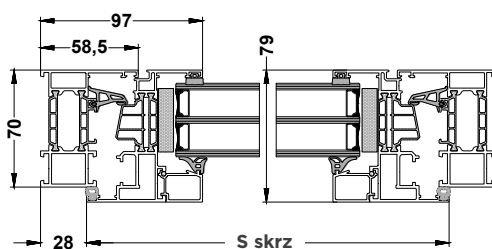
K520011 frame + K520111 leaf

Vertical cross-section
Narrow frame + intermediate leaf



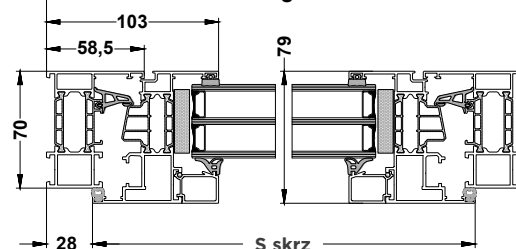
K520011 frame + K520112 leaf

Horizontal cross-section
Narrow frame + standard leaf (narrow)



K520011 frame + K520111 leaf

Horizontal cross-section
Narrow frame + intermediate leaf

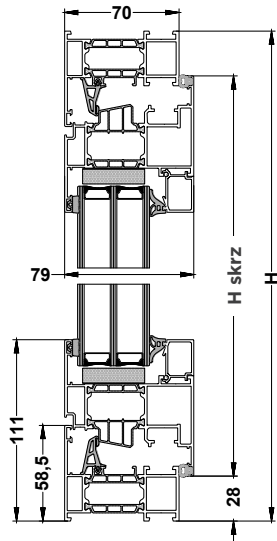


K520011 frame + K520112 leaf



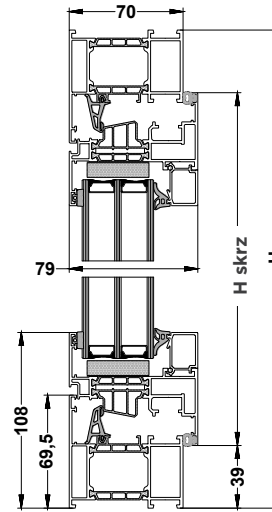
Cross-sections

Vertical cross-section
Narrow frame + wide leaf



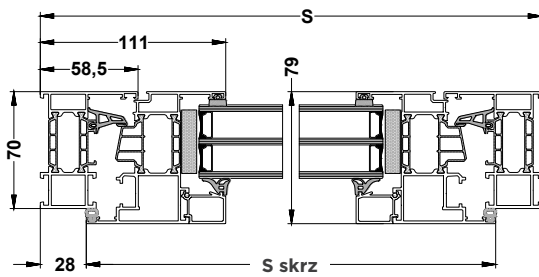
K520011 frame + K520113 leaf

Vertical cross-section
Standard frame + standard leaf (narrow)



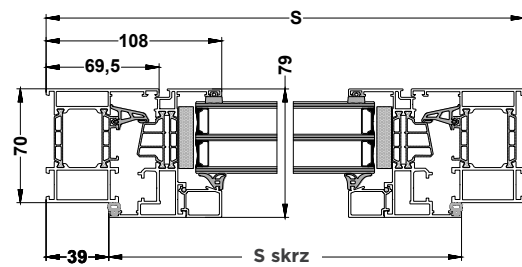
K520012 frame + K520111 leaf

Horizontal cross-section
Narrow frame + wide leaf



K520011 frame + K520113 leaf

Horizontal cross-section
Standard frame + standard leaf (narrow)

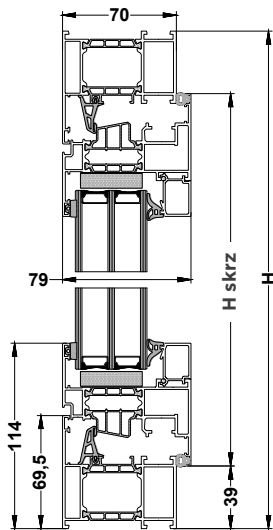


K520012 frame + K520111 leaf



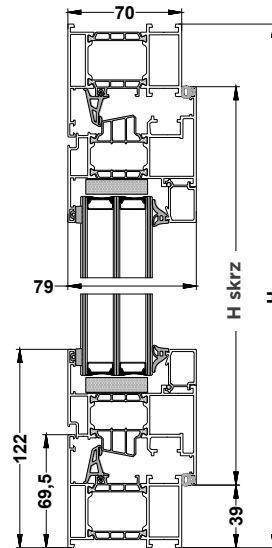
Cross-sections

Vertical cross-section
Standard frame + intermediate leaf



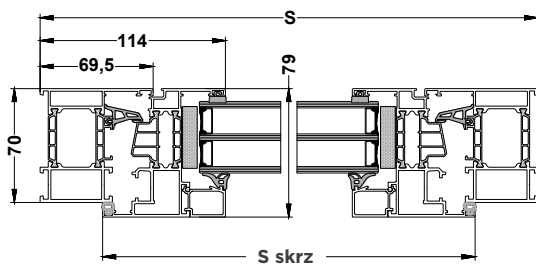
K520012 frame + K520112 leaf

Vertical cross-section
Standard frame + wide leaf



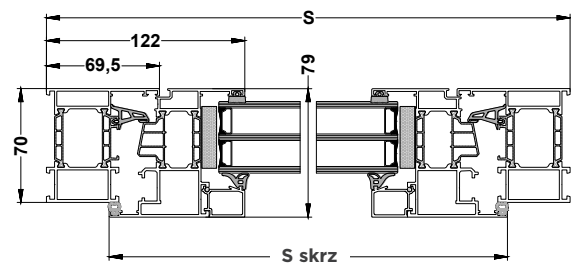
K520012 frame + K520113 leaf

Horizontal cross-section
High frame + intermediate leaf



K520012 frame + K520112 leaf

Horizontal cross-section
High frame + wide leaf

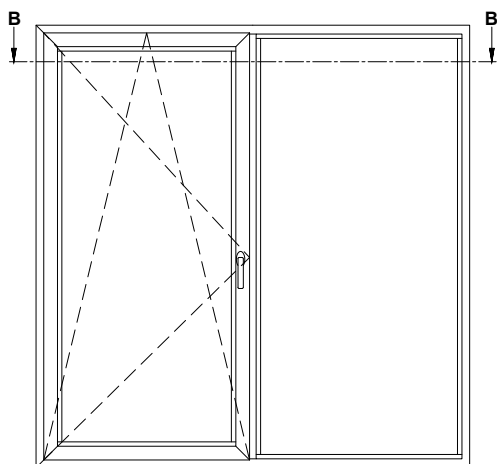


K520012 frame + K520113 leaf



FUTURO MB-79N - single-leaf window + fix

As seen from the inside

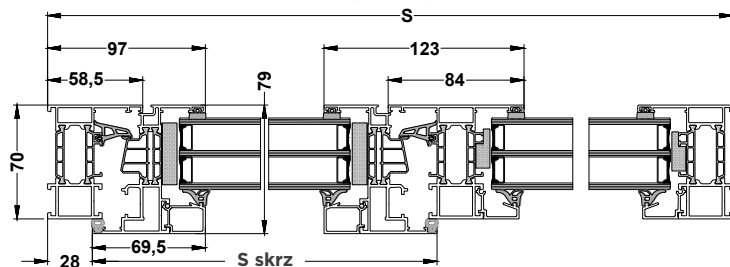


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- Hp - understructure height

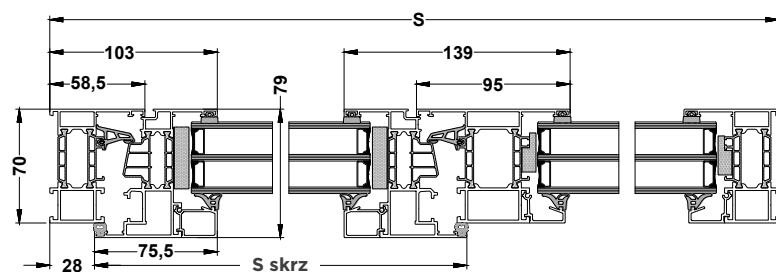
Cross-sections

Horizontal cross-section
Narrow frame + standard leaf (narrow)



K520011 frame + K520111 leaf + K520051 mullion + FIX

Horizontal cross-section
Narrow frame + intermediate leaf

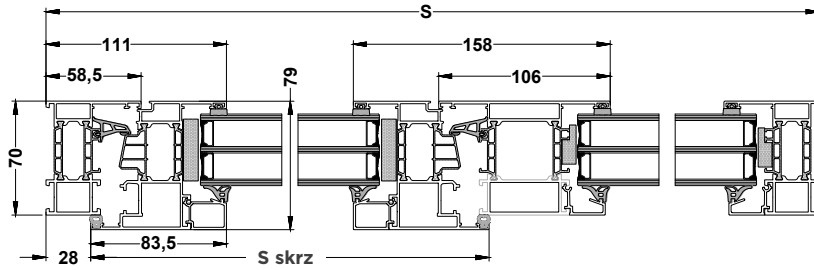


K520011 frame + K520112 leaf + K520052 mullion + FIX



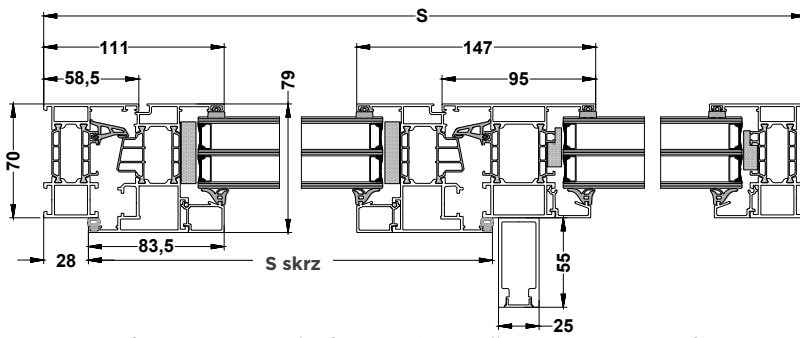
Cross-sections

Horizontal cross-section
Narrow frame + wide leaf



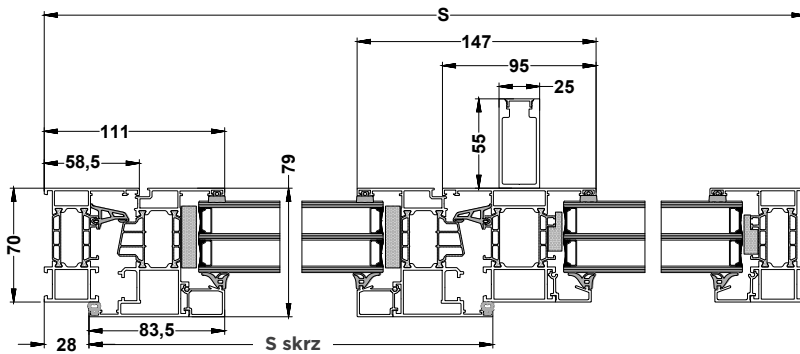
K520011 frame + K520113 leaf + K520053 mullion + FIX

Horizontal cross-section
Narrow frame + wide leaf



K520011 frame + K520113 leaf + K520052 mullion + K433872 reinforcement on the inside

Horizontal cross-section
Narrow frame + wide leaf

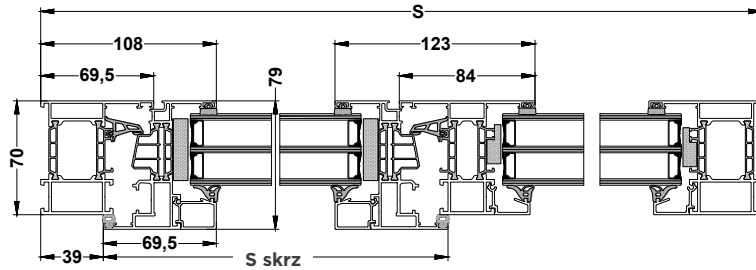


K520011 frame + K520113 leaf + K520052 mullion + K433872 reinforcement on the outside



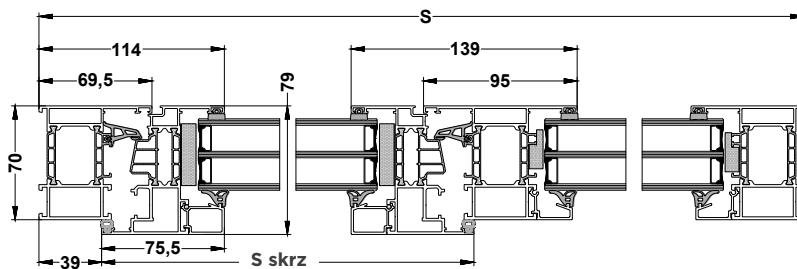
Cross-sections

Horizontal cross-section
Standard frame + standard leaf (narrow)



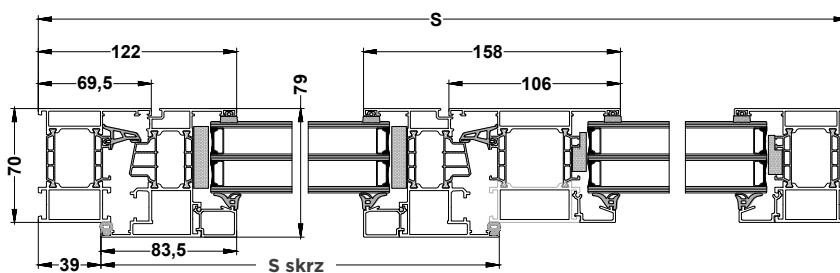
K520012 frame + K520111 leaf + K520051 mullion + FIX

Horizontal cross-section
Standard frame + intermediate leaf



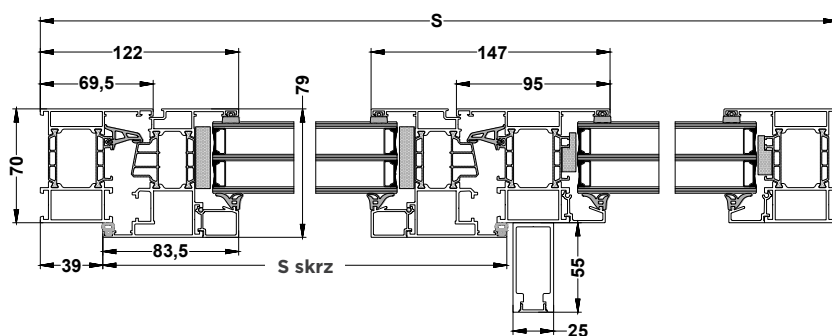
K520012 frame + K520112 leaf + K520052 mullion + FIX

Horizontal cross-section
Standard frame + wide leaf



K520012 frame + K520113 leaf + K520053 mullion + FIX

Horizontal cross-section
Standard frame + wide leaf

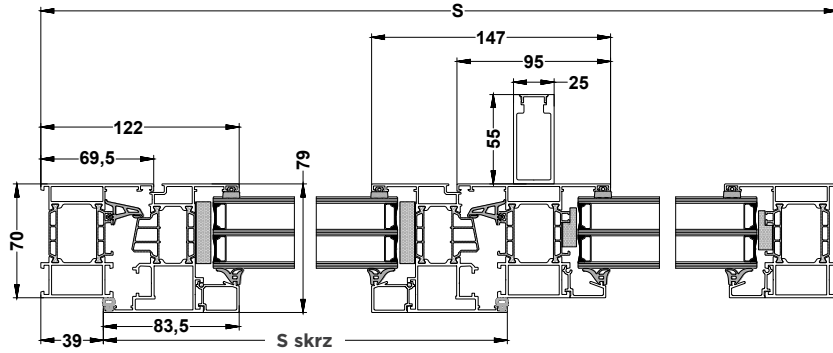


K520012 frame + K520113 leaf + K520052 mullion + K433872 reinforcement on the inside



Cross-sections

Horizontal cross-section
Standard frame + standard leaf (narrow)

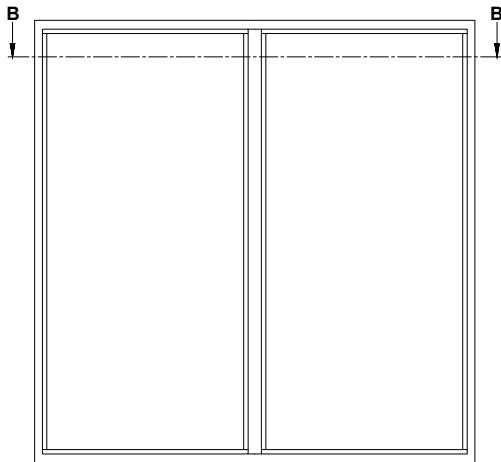


K520012 frame + K520113 leaf + K520052 mullion + K433872 reinforcement on the outside



FUTURO MB-79N - FIX fixed window

As seen from the inside

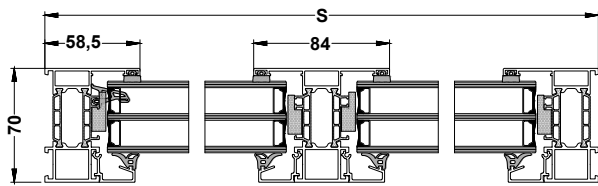


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- Hp - understructure height

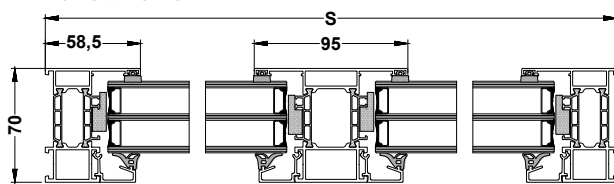
Cross-sections

Horizontal cross-section
Narrow frame



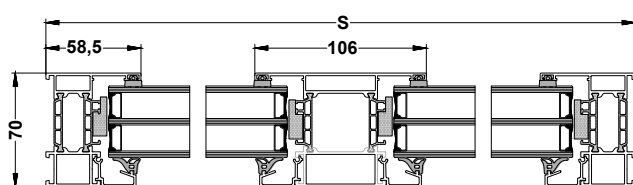
K52 0011 frame + K52 0051 mullion

Horizontal cross-section
Narrow frame



K52 0011 frame + K52 0052 mullion

Horizontal cross-section
Narrow frame

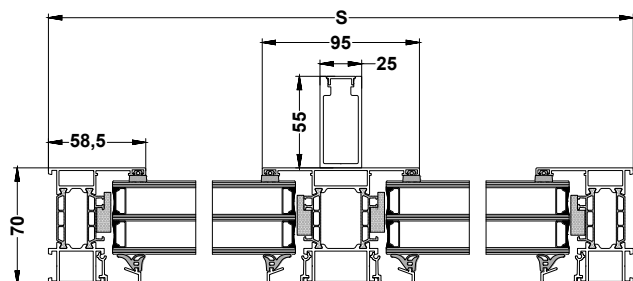


K52 0011 frame + K52 0053 mullion



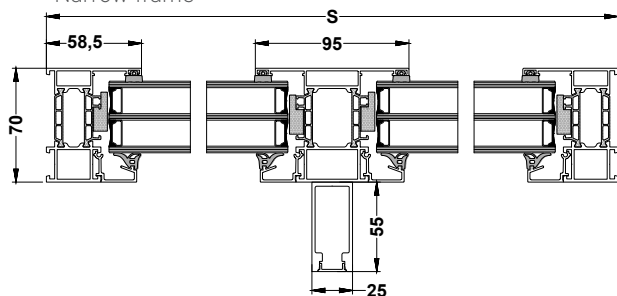
Cross-sections

Horizontal cross-section
Narrow frame



K52 0011 frame + K52 0052 mullion + K43 3872 reinforcement on the outside

Horizontal cross-section
Narrow frame

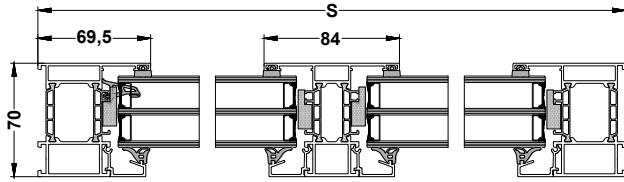


K52 0011 frame + K52 0052 mullion + K43 3872 reinforcement on the inside



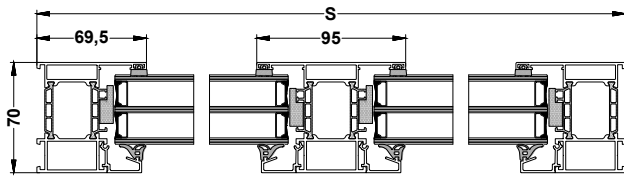
Cross-sections

Horizontal cross-section
Standard frame



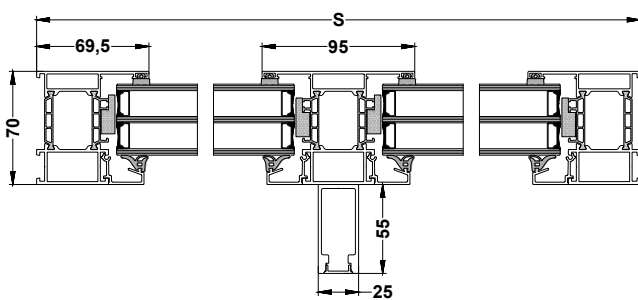
K520012 frame + K520051 mullion

Horizontal cross-section
Standard frame



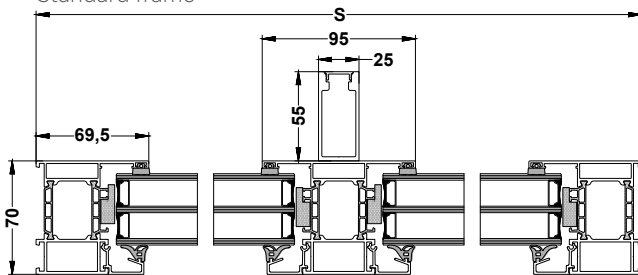
K520012 frame + K520052 mullion

Horizontal cross-section
Standard frame



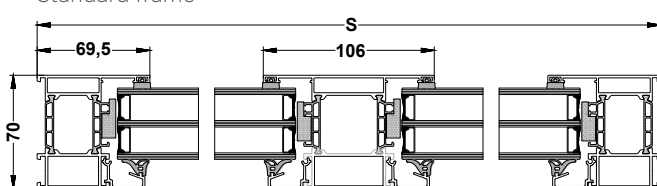
K520012 frame + K520052 mullion + K433872 on the inside

Horizontal cross-section
Standard frame



K520012 frame + K520052 mullion + K433872 on the outside

Horizontal cross-section
Standard frame

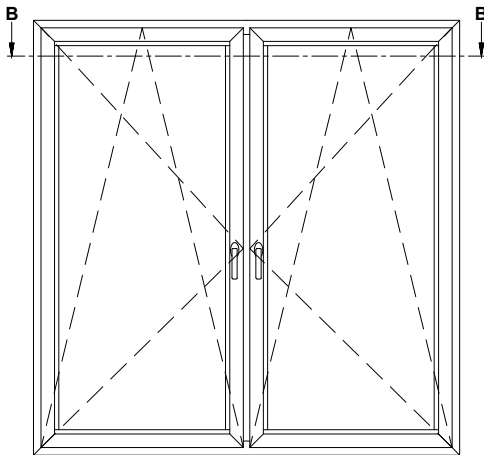


K520012 frame + K520053 mullion



FUTURO MB-79N - double-leaf window with a fixed mullion

As seen from the inside

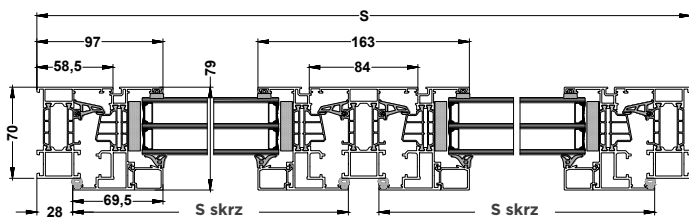


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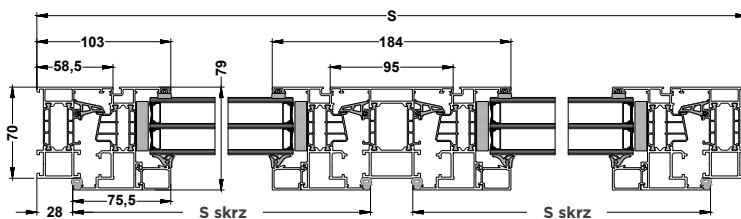
Cross-sections

Horizontal cross-section
Narrow frame + standard leaf (narrow)



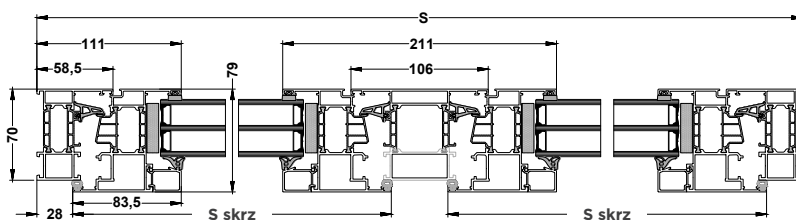
K52 0011 frame + K52 0111 leaf + K52 0051 mullion

Horizontal cross-section
Narrow frame + standard leaf (narrow)



K52 0011 frame + K52 0112 leaf + K52 0052 mullion

Horizontal cross-section
Narrow frame + standard leaf (narrow)

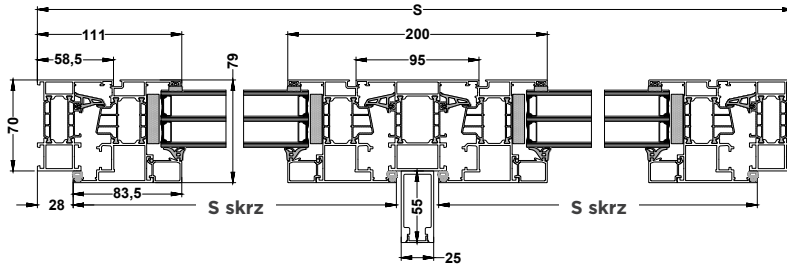


K52 0011 frame + K52 0113 leaf + K52 0053 mullion



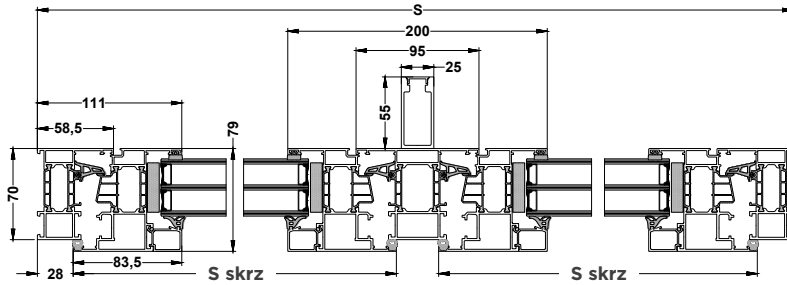
Cross-sections

Horizontal cross-section
Low frame + wide leaf



K520011 frame, K520113 leaf, K520053 mullion + K433872 reinforcement on the inside

Horizontal cross-section
Low frame + wide leaf

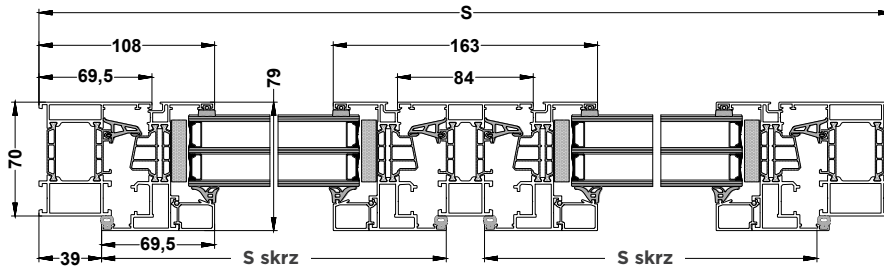


K520011 frame, K520113 leaf, K520053 mullion + K433872 reinforcement on the outside



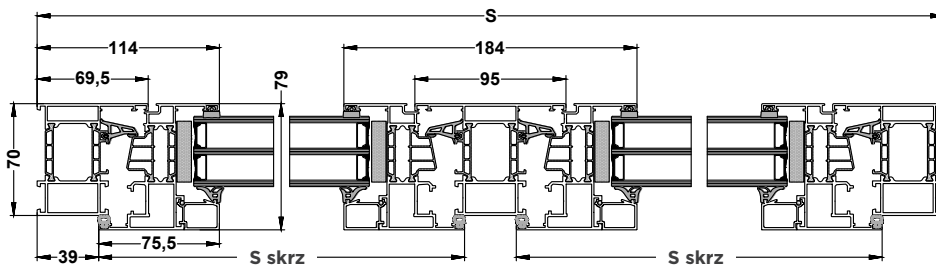
Cross-sections

Horizontal cross-section
Standard frame + standard leaf (narrow)



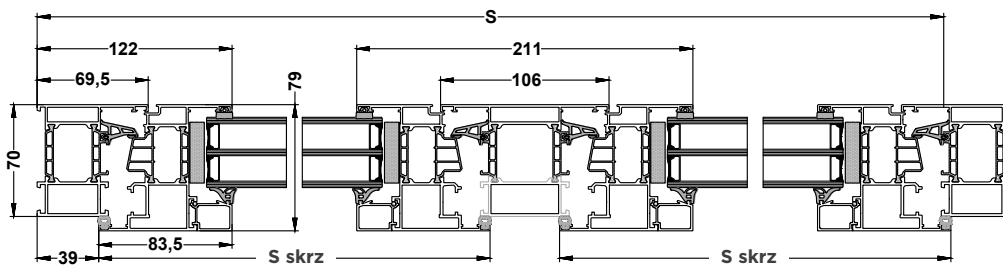
K520012 frame, K520111 leaf, K520051 mullion

Horizontal cross-section
Standard frame + narrow leaf



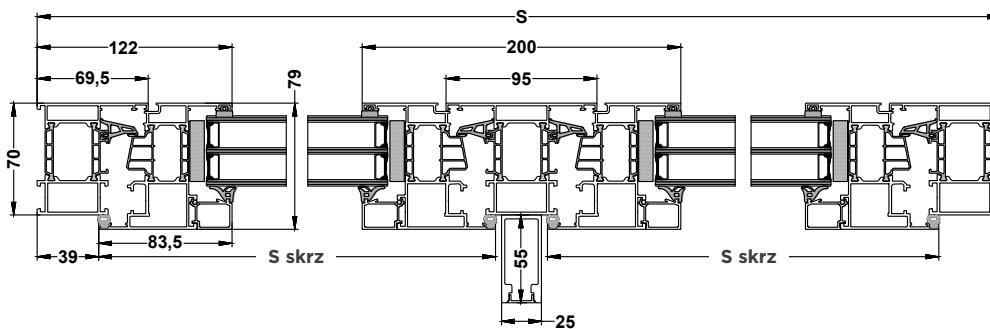
K520012 frame, K520111 leaf, K520052 mullion

Horizontal cross-section
Standard frame + wide leaf



K520012 frame, K520113 leaf, K520053 mullion

Horizontal cross-section
Standard frame + wide leaf

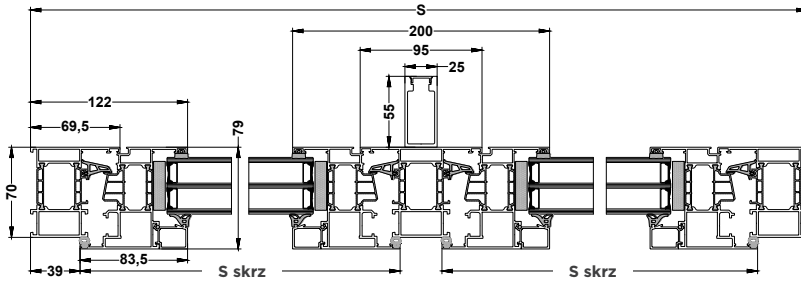


K520012 frame, K520113 leaf, K520053 mullion + K433872 reinforcement on the inside



Cross-sections

Horizontal cross-section
Standard frame + wide leaf

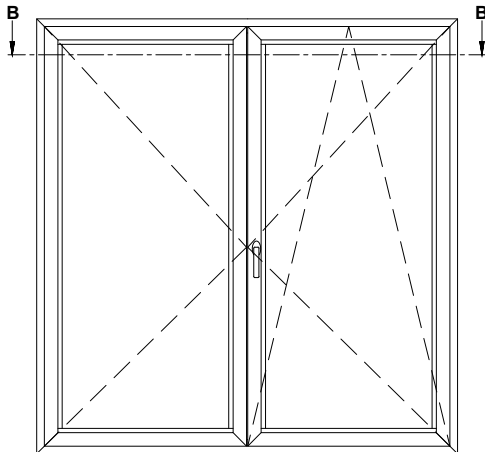


K520012 frame, K520113 leaf, K520053 mullion + K433872 reinforcement on the outside



FUTURO MB-79N - double-leaf window with a movable mullion

As seen from the inside

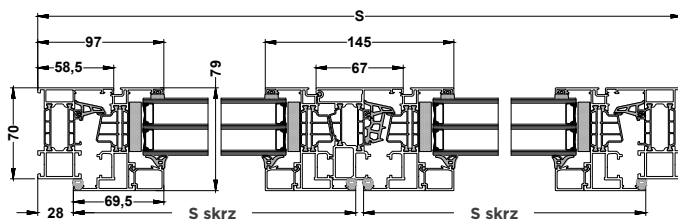


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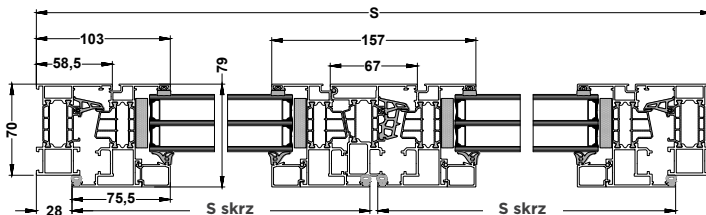
Cross-sections

Horizontal cross-section
Narrow frame + standard leaf (narrow)



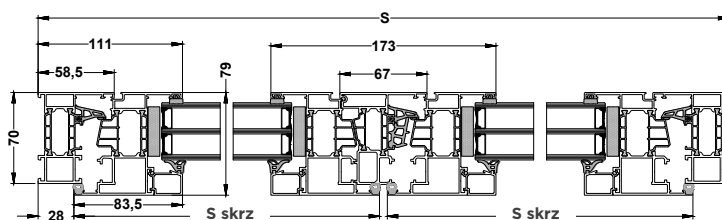
K520011 frame, K520111 leaf, movable mullion

Horizontal cross-section
Narrow frame + intermediate leaf



K520011 frame, K520112 leaf, movable mullion

Horizontal cross-section
Narrow frame + wide leaf

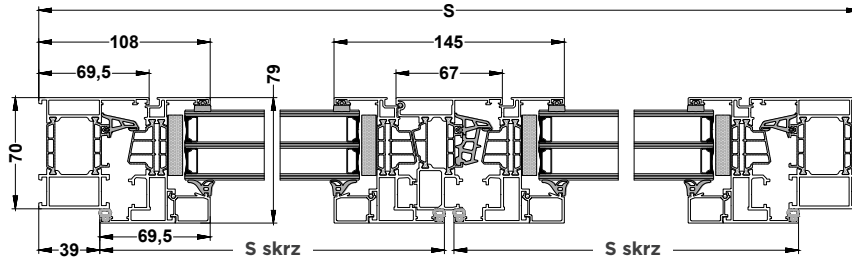


K520011 frame, K520113 leaf, movable mullion



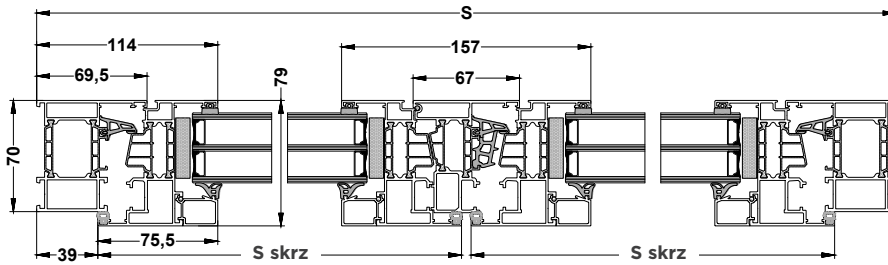
Cross-sections

Horizontal cross-section
Standard frame + standard leaf (narrow)



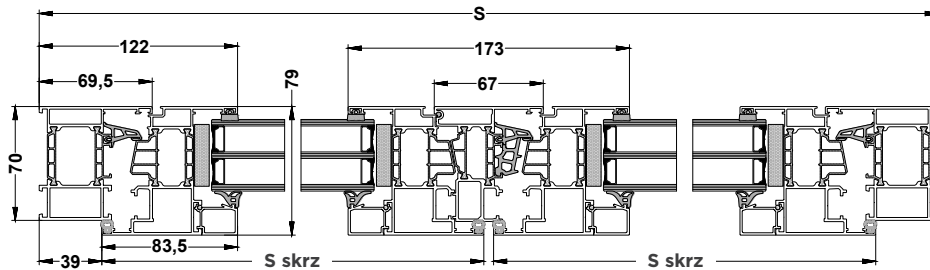
K520012 frame, K520111 leaf, movable mullion

Horizontal cross-section
Standard frame + intermediate leaf



K520012 frame, K520112 leaf, movable mullion

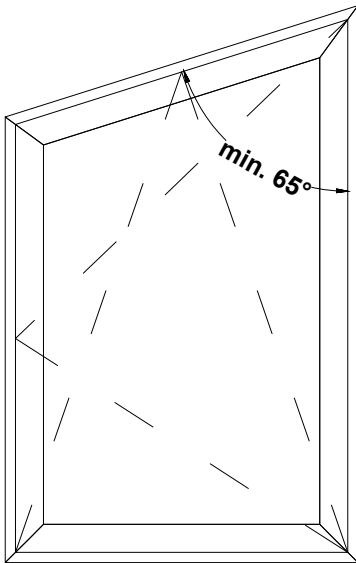
Horizontal cross-section
Standard frame + wide leaf



K520012 frame, K520113 leaf, movable mullion



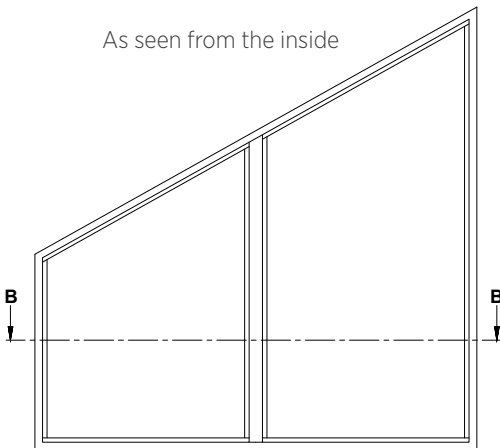
FUTURO MB-79N
- non-standard shapes



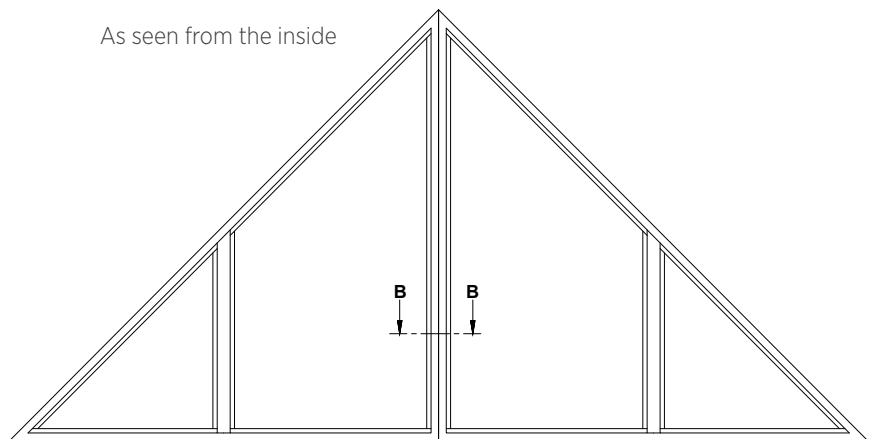
The cross-sections below present expansion joints marked. Expansion joints are used when there are logistics limitations, non-standard structures or widths exceeding 6,000 mm.

In the case of openable trapezoid structures, the minimum angle is 65°, as shown in the picture.

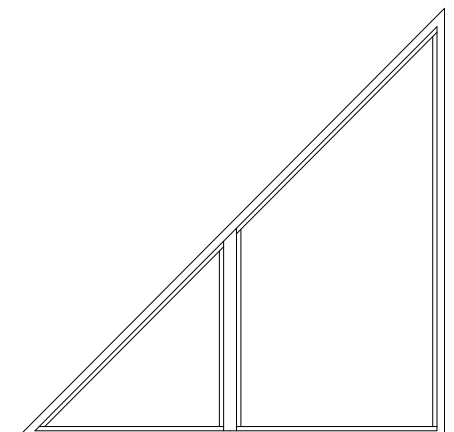
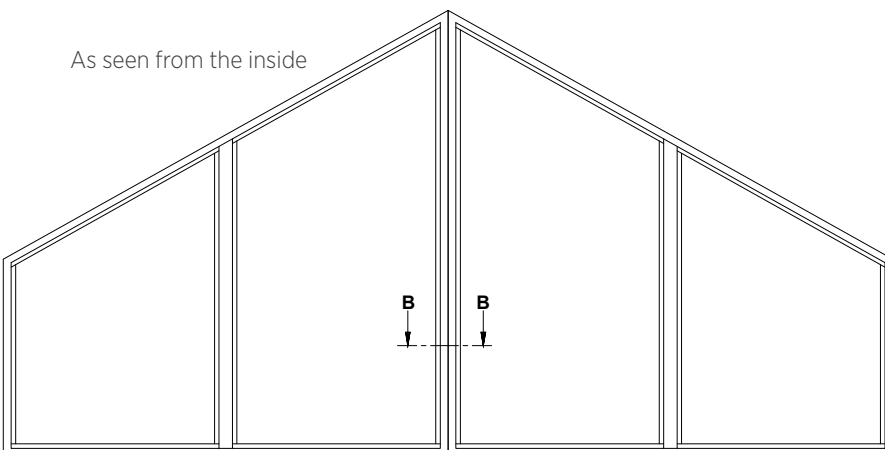
As seen from the inside

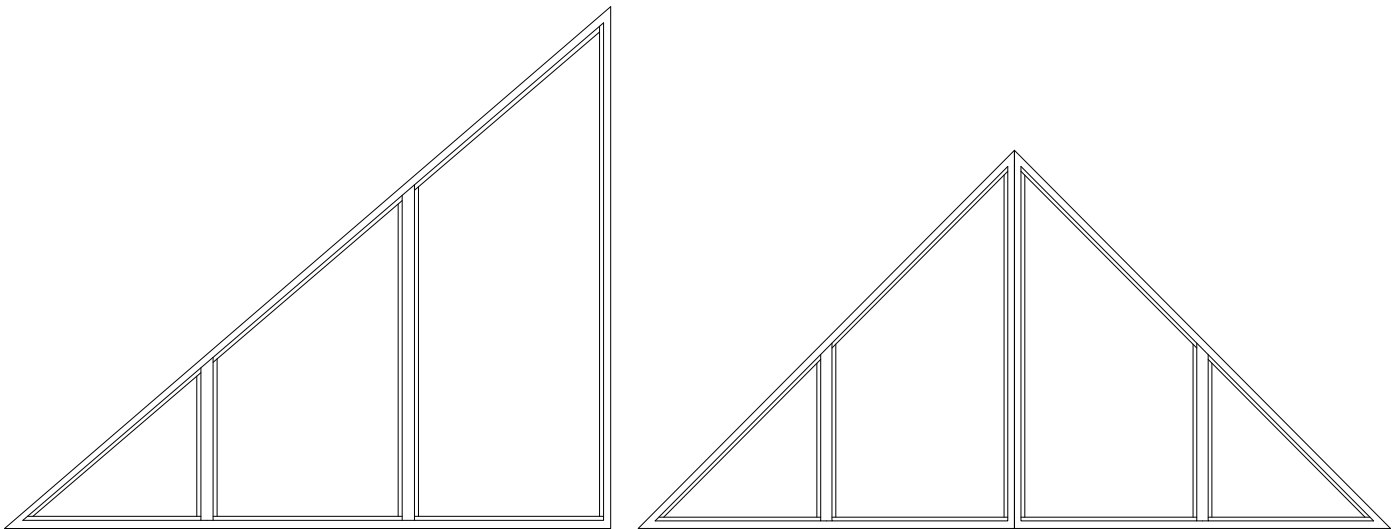


As seen from the inside



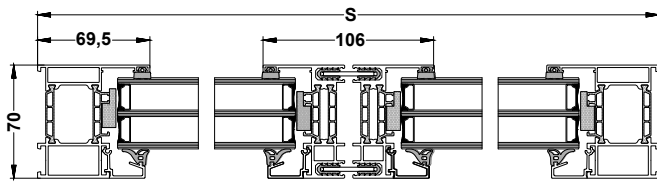
As seen from the inside





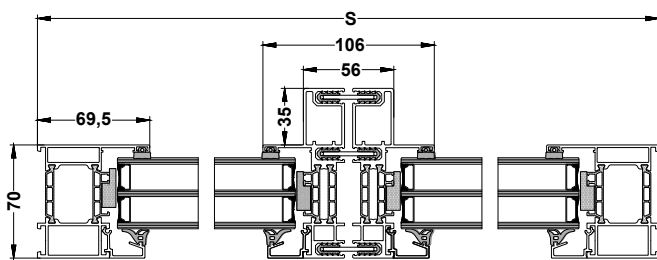
Cross-sections

Horizontal cross-section
Standard frame



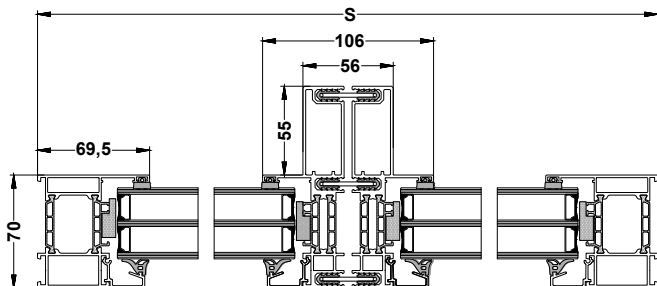
K520012 frame, K520033 expansion joint

Horizontal cross-section
Standard frame



K520012 frame, K520040 expansion joint

Horizontal cross-section
Standard frame



K520012 frame, K520041 expansion joint

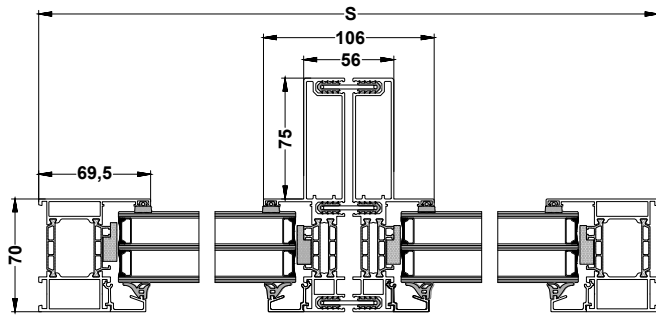
Descriptive dimensions:

- S skrz- leaf width,
- So - opening width,
- S - window ordering width,
- Ho - opening height,
- H - window ordering height,
- Hp - understructure height



Cross-sections

Horizontal cross-section
Standard frame



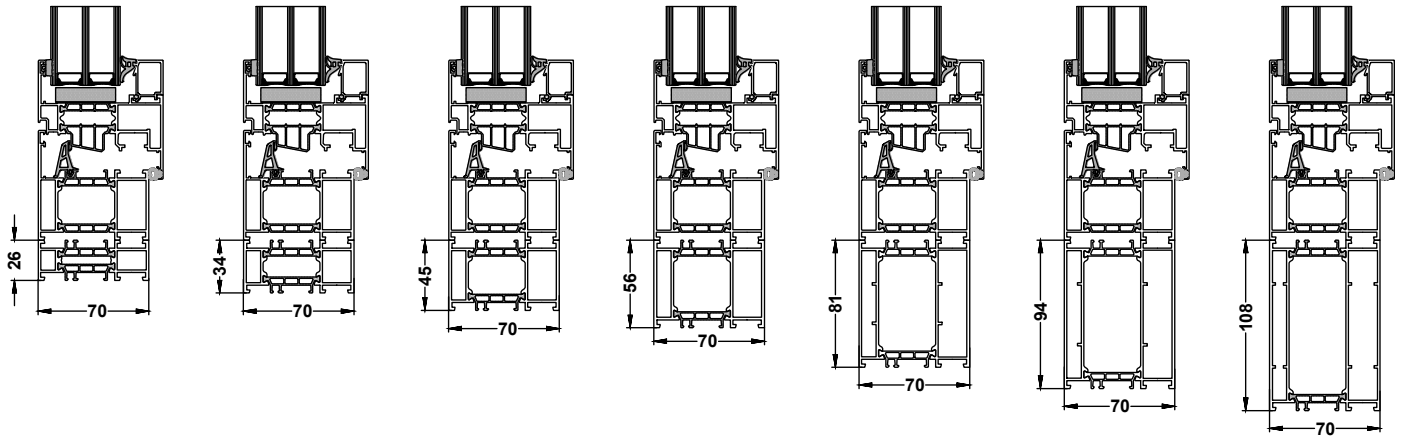
K520012 frame, K520042 expansion joint



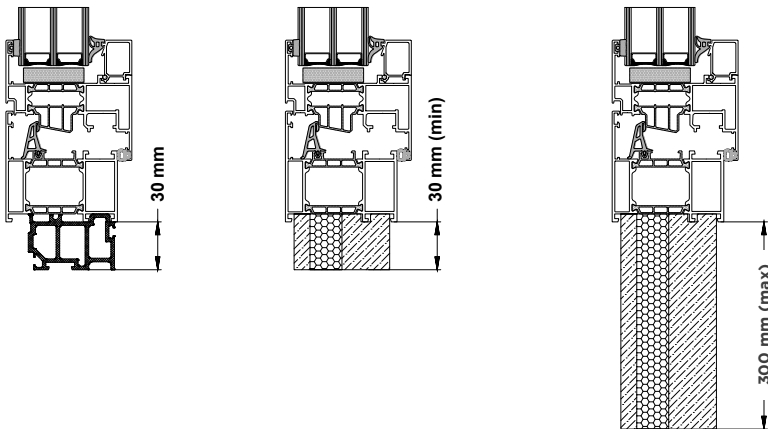
CROSS-SECTIONS OF CONNECTORS AND WIDENINGS

MB-79N ALU widenings

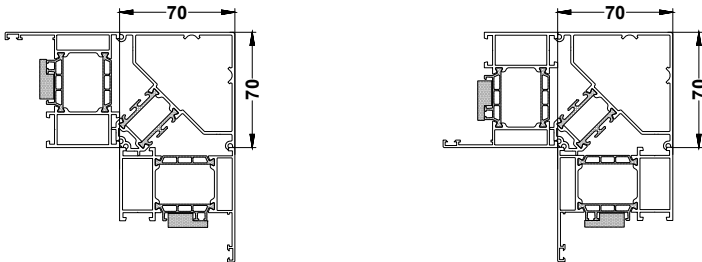
K52 0200 25.5 [mm], K52 0201 33.5 [mm], K52 0202 44.5 [mm], K52 0203 55.5 [mm], K52 0206 80.5 [mm], K52 0207 94 [mm], K52 0204 108 [mm]



8G00338 undersill strip, understructure 30-300 mm (max)

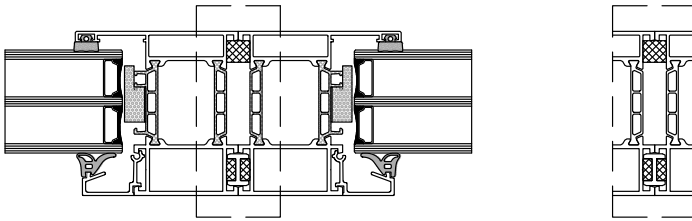


90° K52 0027 connector (external and internal connection)

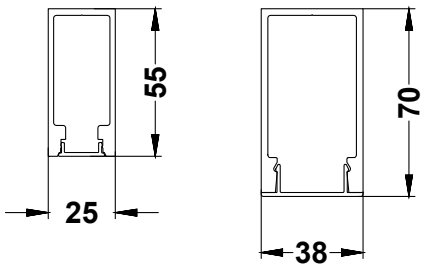




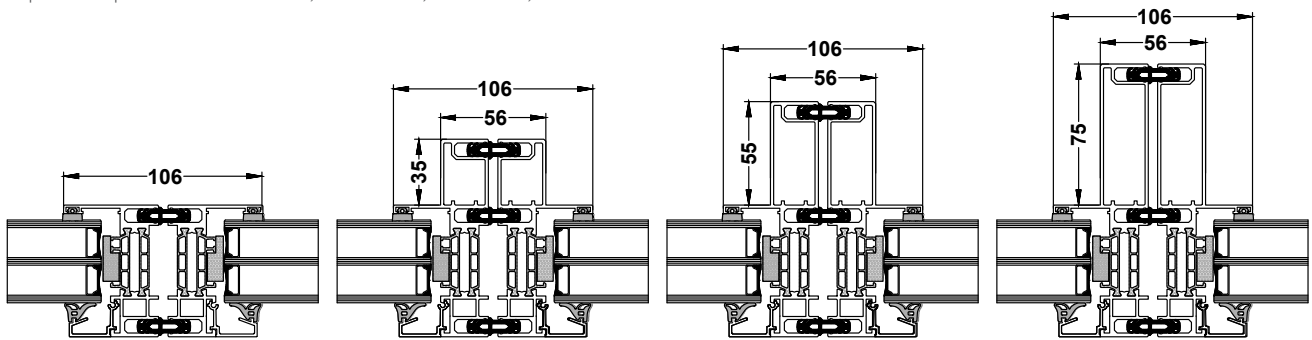
K41 7837 connector - for the MB-79N/MB-79N connection



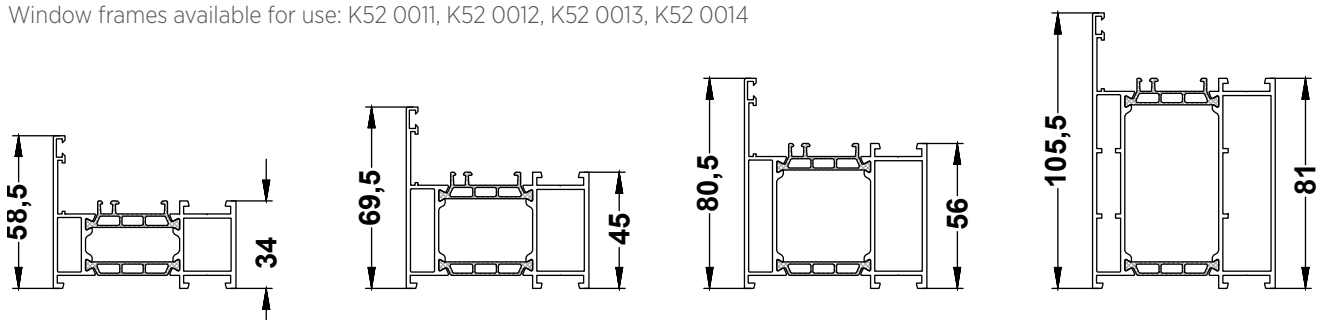
MB-79N K41 3923, K43 3872 transom/mullion vertical reinforcements



Expansion profiles - K52 0033, K52 0040, K52 0041, K52 0042



Window frames available for use: K52 0011, K52 0012, K52 0013, K52 0014





SYSTEM LIMITATIONS

Structural and system limitations for MB-79N windows

		Turn, Tilt and turn single-leaf windows/balconies		Turn, Tilt and turn multi-leaf windows/balconies with a fixed mullion		Double-leaf windows/balconies with a moving post		Tilt-only (hopper/awning) windows		
Maximum surface area of the leaf	Narrow leaf	1.6 [m ²]								1.6 [m ²]
	Standard leaf	2.5 [m ²]								2.2 [m ²]
	Wide leaf	3 [m ²]								2.4 [m ²]
Maximum width of the leaf	Narrow leaf	900 [mm]								1,800 [mm]
	Standard leaf	1,100 [mm]								1,945 [mm]
	Wide leaf	1,245 [mm]	1,545 [mm]	1,245 [mm]	1,245 [mm]	1,245 [mm]	1,245 [mm]	1,945 [mm]		
Maximum height of the leaf	Narrow leaf	1,800 [mm]								900 [mm]
	Standard leaf	2,200 [mm]								1,100 [mm]
	Wide leaf	2,495 [mm]	1,945 [mm]	2,495 [mm]	2,495 [mm]	2,495 [mm]	2,495 [mm]	1,245 [mm]		
Maximum surface area of the window structure in a single frame		3.31 [m ²]	2.56 [m ²]	6.5 [m ²]	6.6 [m ²]	3 [m ²]				
Maximum width of the structure		1,300 [mm]	1,600 [mm]	2,600 [mm]	2,550 [mm]	2,300 [mm]				
Maximum height of the structure		2,550 [mm]	2,000 [mm]	2,550 [mm]		1,300 [mm]				
Maximum total weight of the leaf with a glass and Siegenia hardware		120 [kg] / 130 [kg]								80 [kg]
Leaf width to height ratio		>1:3								>5:1

Maximum frame dimensions

	FIX fixed window	FIX fixed window (vertical mullion)	FIX fixed window (vertical mullion x2)	Fixed window FIX + Tilt and turn	Window Tilt and turn + FIX + Tilt and turn
Maximum surface area of the window structure in a single frame	10.9 [m ²]	16.8 [m ²]		15.3 [m ²]	16.8 [m ²]
Maximum width of the structure	3,900 [mm]	6,000 [mm]		5,200 [mm]	6,000 [mm]
Maximum height of the structure	2,800 [mm]			2,550 [mm]	
Maximum division of the FIX window	3,900 [kg]				
Maximum weight of the glass	500 [kg]				

Hardware types and ranges of application

Hardware type	Leaf weight	S skrzurface
Siegenia - TITAN AF standard hinges	≤120 kg	3 [m ²]
Siegenia - TITAN AF AX 24+ concealed hinges	≤130 kg	3 [m ²]



ACCESSORIES

Windows equipped with Siegenia TITAN AF hardware

KoPiBo movable, rotary anti-burglary bolts (mushroom cams)

– provide high durability, precise fit, and automatic adjustment of the height of the mushroom cams, which enables smooth operation with frame elements, regardless of the temperature-induced changes in window dimensions



Striker plate with a lift roller (inliner)

– located in the lower corner frame, it facilitates placing the leaf into the frame, acting as a lifter.

Two anti-burglary striker plates as standard

– work with the rotary bolts, increase window tightness, and make it difficult for a burglar to force the leaf open thanks to the presence of a metal orifice. All the TITAN AF striker plates are steel.

Mishandling device

– prevents the handle from being turned when the window is open or ajar.

Stay locking support and anti-slam device

– facilitates the closing of wide leaves and prevents the tilted leaf from slamming shut in the event of a draught.

Concealed hardware

– all the hardware components are concealed in the window rebate, which improves aesthetics and makes it easier to maintain cleanliness. The load capacity of the concealed hinges is 130 kg.





AVAILABLE COLOURS

Standard colours (mat structure)

HI ANTHRACITE	HI COMFORT GREY	HI MODERN GRAPHITE	HI WARM STONE	Quartz	Modern Black (RAL 9005)
Modern Pearl (RAL 1013)	Modern White (RAL 9010)	RAL 3000	RAL 5003	RAL 5004	RAL 6005
RAL 6009	RAL 6012	RAL 7006	RAL 7016 Silk	RAL 7021	RAL 7024
RAL 7026	RAL 7035	RAL 7037	RAL 7043	RAL 7047	RAL 8011
RAL 8014	RAL 9001	RAL 9016	Cast Iron		

Colours

Modern Black (RAL 9005) mat structure - (colour similar to Black Ulti-Matt PVC)*
7016 SILK - (colour similar to Dark Grey Silk PVC)*

***PLEASE NOTE! - suggested matching, the final choice depends on the customer's preferences**



Special colours (mat structure)

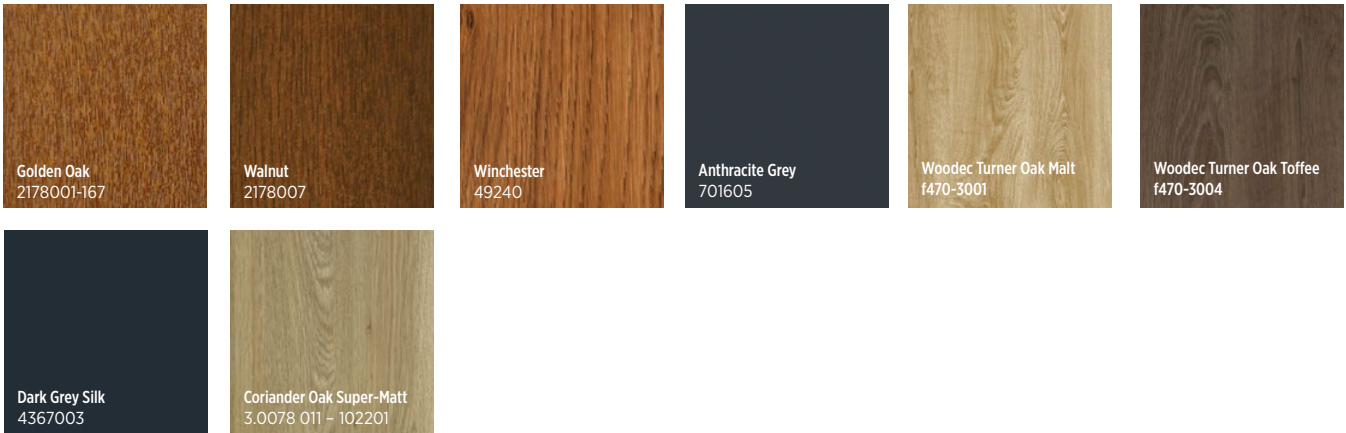


Special RAL (mat structure) colours

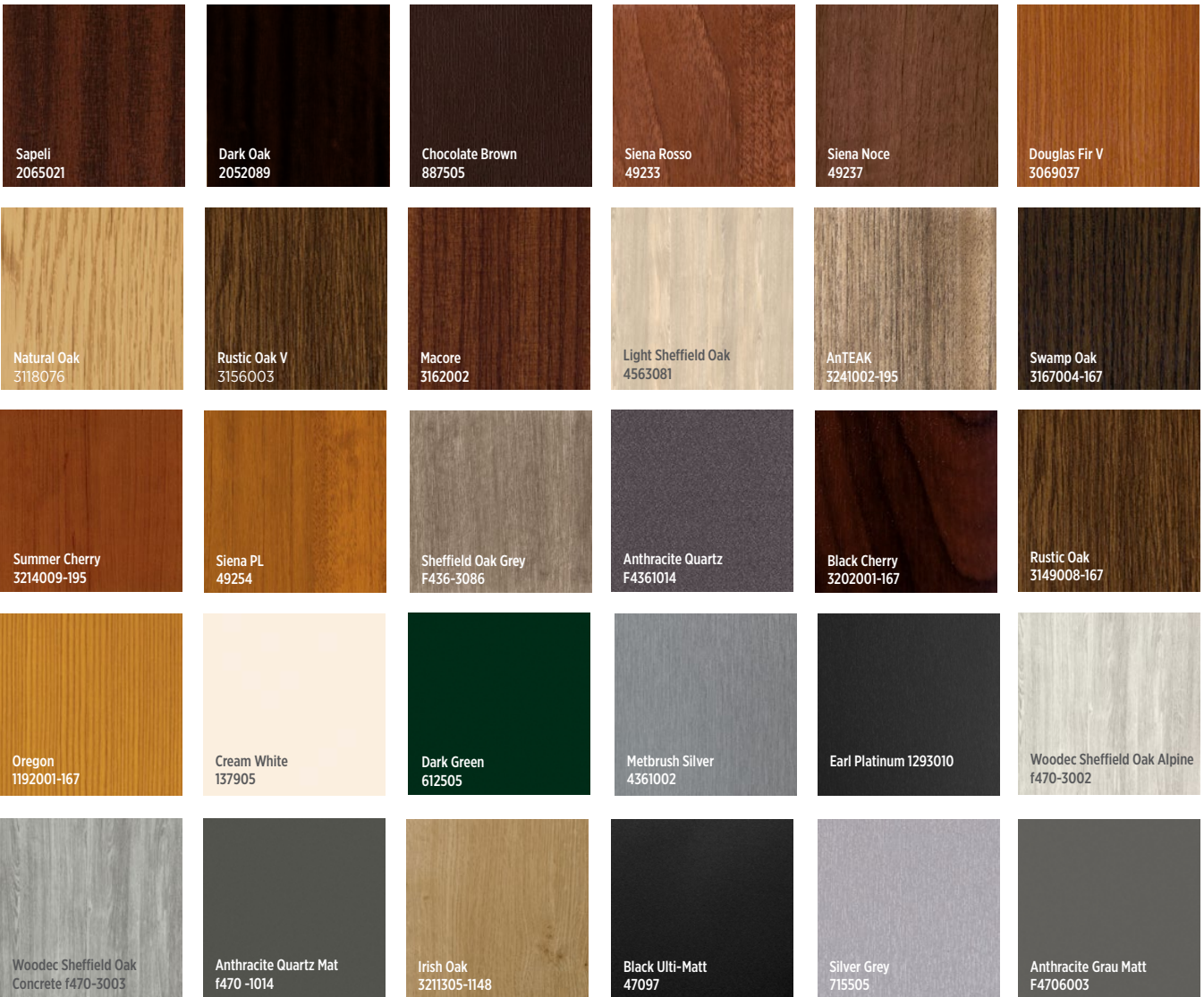
RAL 1001, RAL 1003, RAL 1015, RAL 1016, RAL 1018, RAL 1019, RAL 1021, RAL 1023, RAL 1028, RAL 1032, RAL 2000, RAL 2001, RAL 2002, RAL 2003, RAL 2004, RAL 2008, RAL 2009, RAL 2010, RAL 2011, RAL 3001, RAL 3002, RAL 3003, RAL 3004, RAL 3005, RAL 3007, RAL 3009, RAL 3011, RAL 3012, RAL 3013, RAL 3016, RAL 3018, RAL 3020, RAL 3031, RAL 4004, RAL 4005, RAL 4006, RAL 4007, RAL 4008, RAL 4010, RAL 5000, RAL 5001, RAL 5002, RAL 5005, RAL 5007, RAL 5010, RAL 5011, RAL 5012, RAL 5013, RAL 5014, RAL 5015, RAL 5017, RAL 5018, RAL 5021, RAL 5022, RAL 5023, RAL 5024, RAL 6001, RAL 6003, RAL 6004, RAL 6007, RAL 6008, RAL 6011, RAL 6014, RAL 6015, RAL 6016, RAL 6017, RAL 6018, RAL 6019, RAL 6021, RAL 6022, RAL 6027, RAL 6029, RAL 6033, RAL 6034, RAL 7000, RAL 7001, RAL 7002, RAL 7003, RAL 7004, RAL 7005, RAL 7008, RAL 7009, RAL 7010, RAL 7011, RAL 7012, RAL 7015, RAL 7022, RAL 7023, RAL 7030, RAL 7031, RAL 7032, RAL 7033, RAL 7034, RAL 7036, RAL 7037, RAL 7038, RAL 7039, RAL 7040, RAL 7042, RAL 7044, RAL 7045, RAL 7046, RAL 8000, RAL 8001, RAL 8002, RAL 8003, RAL 8004, RAL 8007, RAL 8008, RAL 8011, RAL 8012, RAL 8015, RAL 8016, RAL 8017, RAL 8019, RAL 8022, RAL 8023, RAL 8025, RAL 8028, RAL 9002, RAL 9003, RAL 9004, RAL 9005, RAL 9010, RAL 9011, RAL 9017, RAL 9018



Film coatings – standard colours



Film coatings – non-standard colours





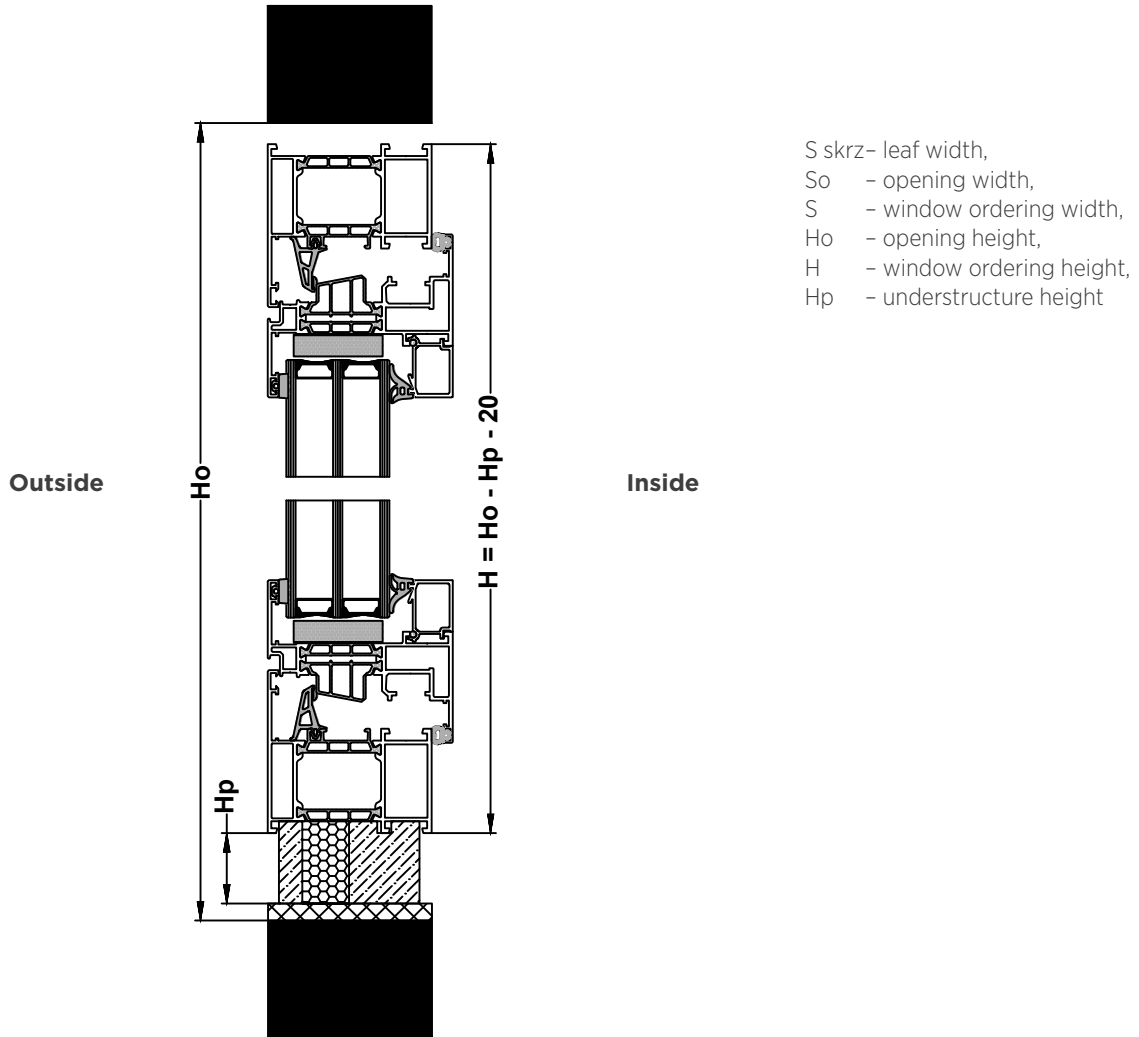
Film coating colour	Primer colour	Standard hinge cover colour	Standard handle colour
Golden Oak 2178001-167	RAL 8003 Clay Brown	F4	F4
Walnut 2178007	RAL 8011 Walnut Brown	F9	F9
Winchester 49240	RAL 8001 Brown-Orange	F1	F1
Anthracite Grey 701605	RAL 7016 Grey Anthracite	F1	F1
Woodec Turner Oak Malt f470-3001	RAL 1001 Beige	F1	F1
Woodec Turner Oak Toffee f470-3004	RAL 8028 Clay Brown	F1	F1
Dark Grey Silk 4367003	RAL 7016 Grey Anthracite	F1	F1
Coriander Oak Super-Matt 3.0078 011 - 102201	RAL 1001 Beige	F1	F1
Sapeli 2065021	RAL 8017 Chocolate Brown	F4	F4
Dark Oak 2052089	RAL 8017 Chocolate Brown	F1	F1
Chocolate Brown 887505	RAL 8019 Chocolate Brown	black	Black Mat 9005
Siena Rosso 49233	RAL 8011 Walnut Brown	F1	F1
Siena Noce 49237	RAL 8028 Chocolate Brown	F1	F1
Douglas Fir V 3069037	RAL 8003 Clay Brown	F1	F1
Natural Oak 3118076	RAL 1001 Beige	F1	F1
Rustic oak V 3156003	RAL 8028	F1	F1
Macore 3162002	RAL 8002 Signal Brown	F1	F1
Light Sheffield Oak 4563081	RAL 1019 Beige-Grey	F1	F1
AnTEAK 3241002-195	RAL 1019 Beige-Grey	F1	F1
Swamp Oak 3167004-167	RAL 8019 Brown-Grey	Black	Black Mat 9005
Summer Cherry 3214009-195	RAL 8002 Signal Brown	F1	F1
Siena PL 49254	RAL 8024 Brown-Beige	F1	F1
Sheffield Oak Grey F436-3086	RAL 7006	F1	F1
Anthracite Quartz F4361014	DB703 mat	F1	F1
Black Cherry 3202001-167	RAL 8002 Signal Brown	F1	F1
Rustic Oak 3149008-167	RAL 8028	F1	F1
Oregon 1192001-167	RAL 8001	F1	F1
Cream White 137905	RAL 9001 Cream	F1	F1
Dark Green 612505	RAL 6009 Fir Green	F1	F1
Metbrush Silver 4361002	RAL 9006 White Aluminium	F1	F1
Earl Platinum 1293010	RAL 7016 Grey Anthracite	F1	F1
Woodec Sheffield Oak Alpine f470-3002	RAL 7044 Silk Grey	F1	F1
Woodec Sheffield Oak Concrete f470-3003	RAL 7037 Steel Grey	F1	F1
Anthracite Quartz Mat f470 -1014	DB703 mat	F1	F1
Irish Oak 3211305-1148	RAL 8001 Brown-Ochre	F1	F1
Black Ulti-Matt 47097	RAL 9005 Jet Black	Black	Black Mat 9005
Silver grey 715505	RAL 7040 Dark Grey	F1	F1
Anthracite Grey Mat F4706003	RAL 7016	F1	F1



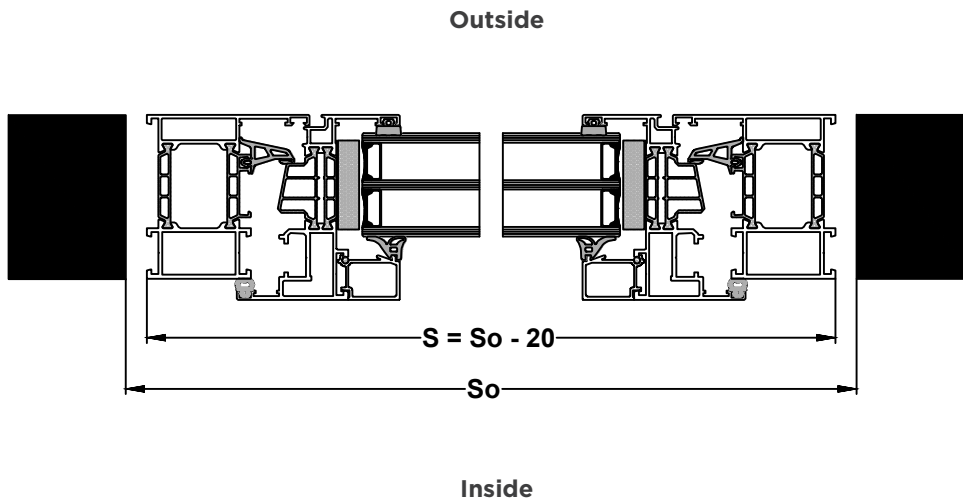
DIMENSIONING

Installation in the opening

Vertical cross-section

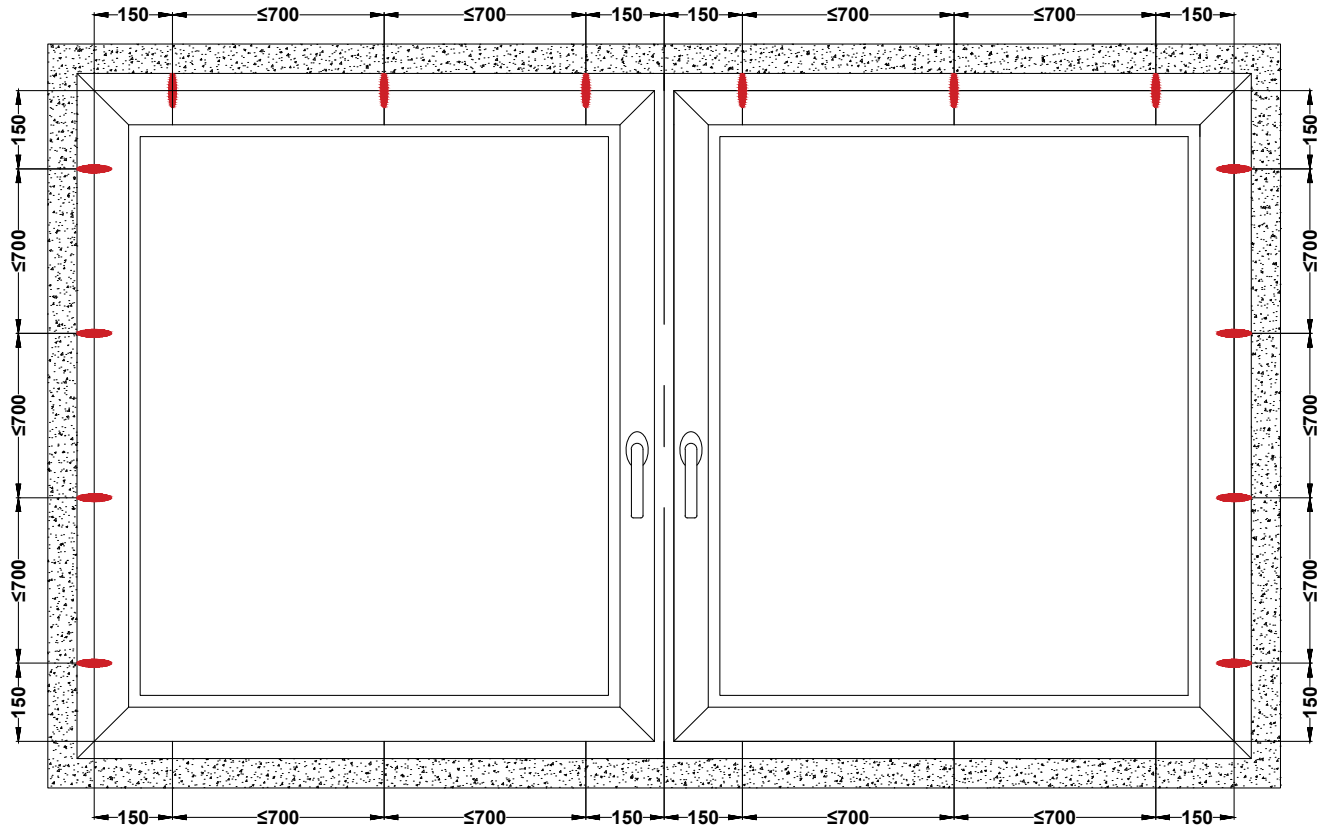


Horizontal cross-section





Spacing of anchors / dowels - STANDARD windows



GLASS PANES

When using glass 4 [mm] thick - the maximum side length can be 2,440 [mm] (maximum side ratio 1:8), maximum surface up to 3.35 [m²]. 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 reflective coatings on the increase of the temperature inside the glazing 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 with reference to the thinner glass.

In accordance with the regulations of the Polish 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]).

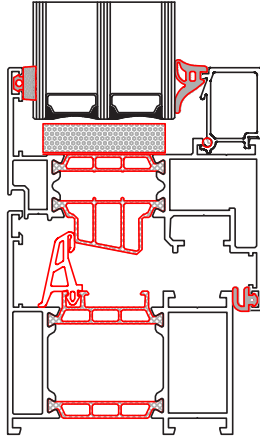
WARM EDGE

Available in the following colours for the ALU window range:
Light Grey 7035, Grey 7040, Black 9005, Light Brown 8003, Brown 8016, White 9016.

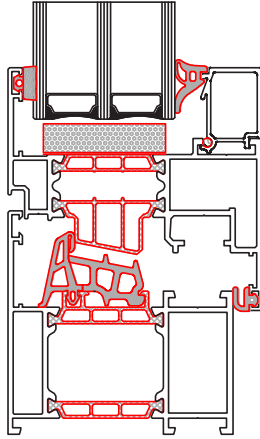


THERMAL VARIANTS

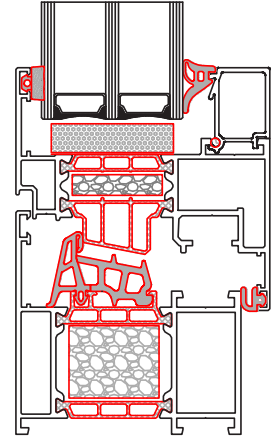
FUTURO MB-79N E



FUTURO MB-79N ST



FUTURO MB-79N SI



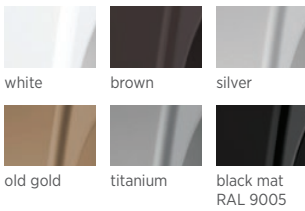
WINDOW HANDLES

BASIC



BASIC

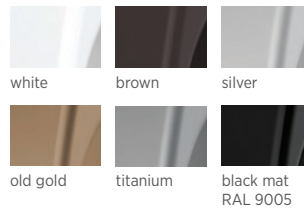
available colours:



BASIC K

with a key lock

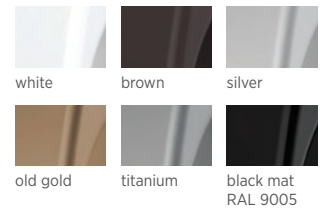
available colours:



BASIC P

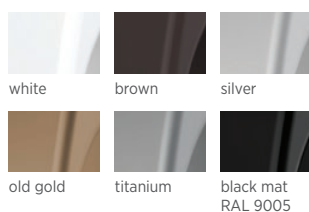
with a locking button

available colours:



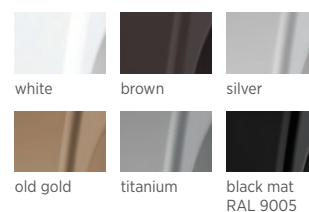
BASIC double-sided balcony

available colours:



BASIC double-sided flat for roller shutter

available colours:



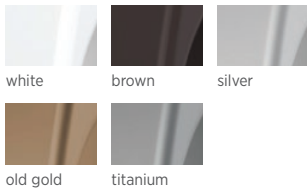


ROUND



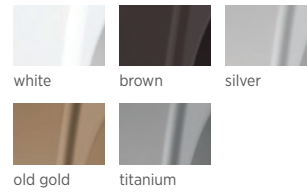
ROUND

available colours:



ROUND K
with a key lock

available colours:

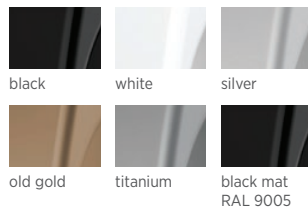


CUBE



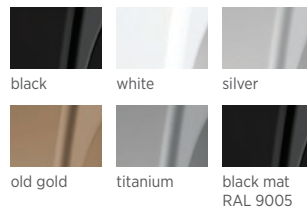
CUBE

available colours:



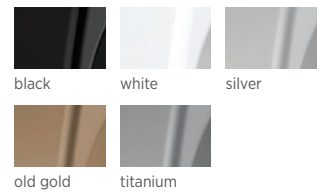
CUBE K
with a key lock

available colours:



CUBE P
with a locking button

available colours:

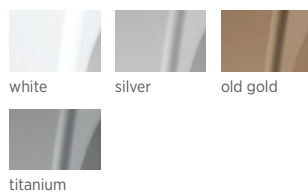


HOPPE



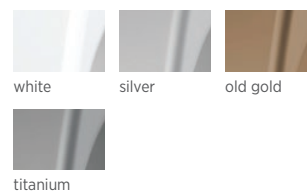
Secustic Luxembourg

available colours:



Secustic Luxembourg
with a key lock

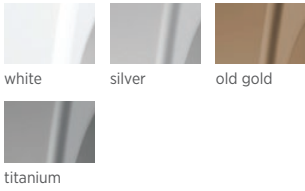
available colours:





Atlanta

available colours:



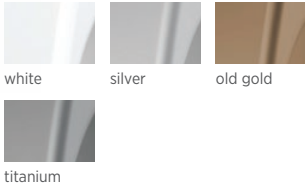
Atlanta
with a key lock

available colours:



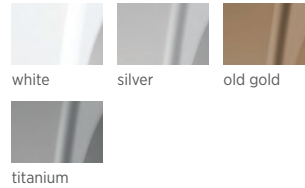
Toulon

available colours:



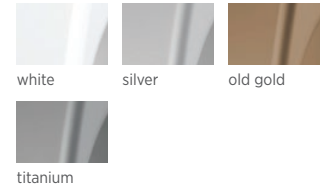
Toulon
with a key lock

available colours:



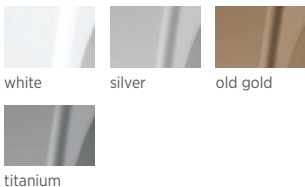
Toulon
with a locking button

available colours:



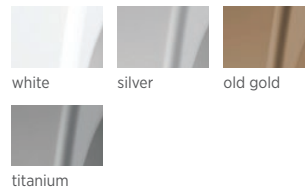
Tokyo

available colours:



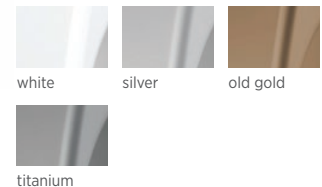
Tokyo
with a key lock

available colours:



Tokyo
with a locking button

available colours:







Window type	FUTURO MB-79N
Number of chambers in the frame	3 chambers
Profile thickness	70 mm frame and 79 mm leaf
Infill thickness	max 62 mm / fix 53 mm
Gaskets around the circumference	3
Structural reinforcement	not applicable
Standard glazing unit	two-chamber 4/18/4/18/4 Ug=0.5 W/m ² k
Hardware	Siegenia Titan AF circumferential (perimeter) hardware
Handle	aluminium
Also available in class	---
Widening	optional

**WIŚNIEWSKI**

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