# ALU WINDOWS



WIŚNIOWSKI
GATES | WINDOWS | DOORS | FENCES

## ALUMINIUM WINDOWS
## **FUTURO 79**

The FUTURO 79 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/m$^2$K.

### DESIGN

The FUTURO 79 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 WIŚNIOWSKI does not only save you money, but also helps you protect the natural environment.



# FUTURO 79

## 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] Uw = 0.79 W/ $m^2$K with a triple-glazed unit Ug = 0.5 W/$m^2$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.

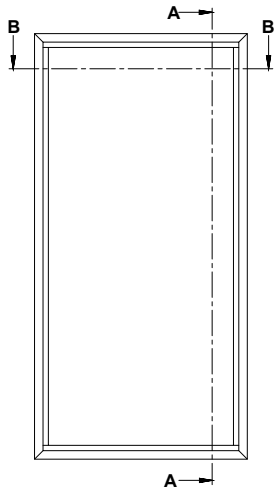
## ADDITIONAL FEATURES

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 leafs 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 79 – fixed glazing

As seen from the inside

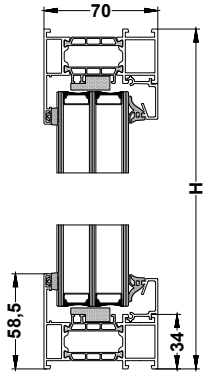



### Descriptive dimensions:

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

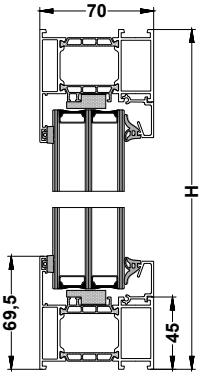
### Cross-sections

Vertical cross-section
Standard frame



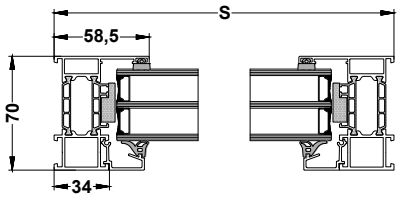

K520011 frame

Vertical cross-section
High frame

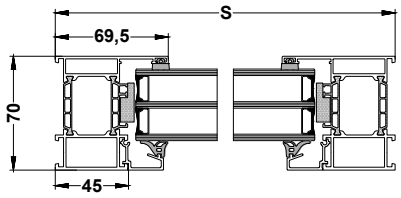



K520012 frame

Horizontal cross-section
Narrow frame

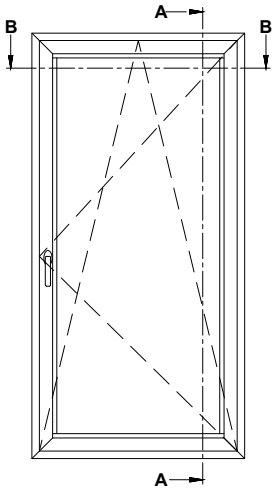



Horizontal cross-section
Standard frame



# FUTURO 79
# – tilt and turn single-leaf window

As seen from the inside

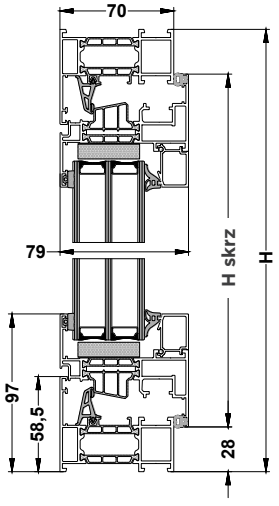



## Descriptive dimensions:

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H – window ordering height,
Hp – understructure height

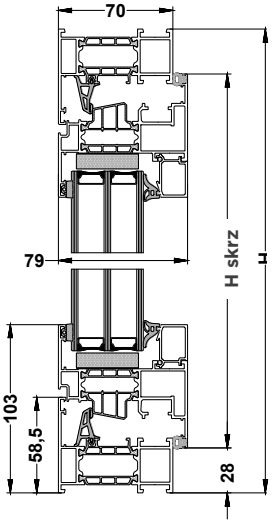
## Cross-sections

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



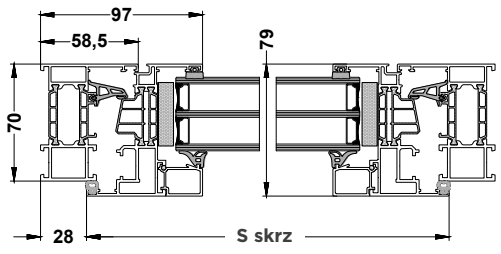

K520011 frame + K520111 leaf

Vertical cross-section
Narrow frame + intermediate leaf



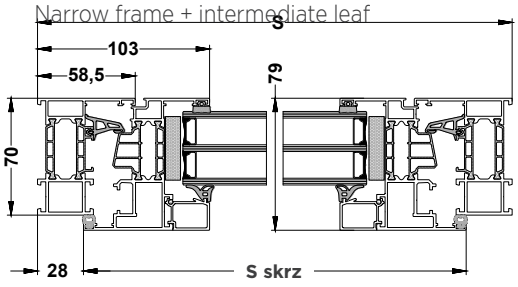

K520011 frame + K520112 leaf

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




K520011 frame + K520111 leaf

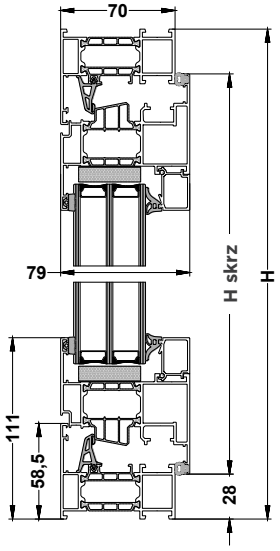
Horizontal cross-section
Narrow frame + intermediate leaf




K520011 frame + K520112 leaf

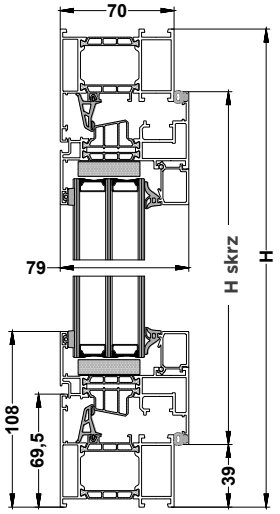
## Cross-sections

Vertical cross-section
Narrow frame + wide leaf



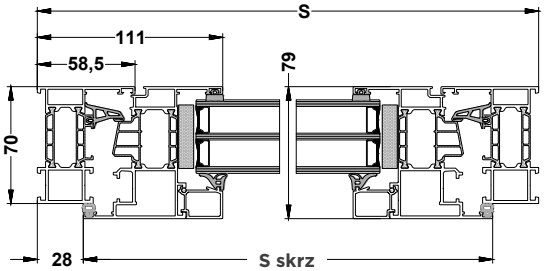

K520011 frame + K520113 leaf

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



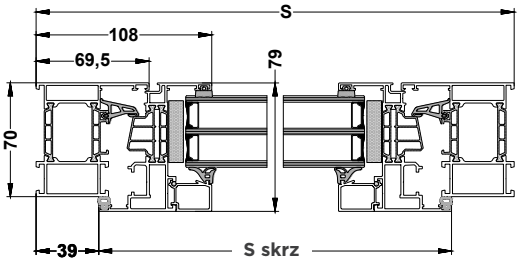

K520012 frame + K520111 leaf

Horizontal cross-section
Narrow frame + wide leaf




K520011 frame + K520113 leaf

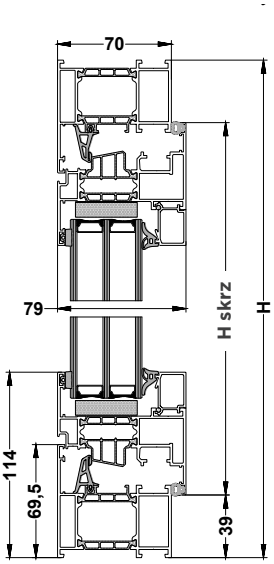
Horizontal cross-section
Standard frame + standard leaf (narrow)




K520012 frame + K520111 leaf

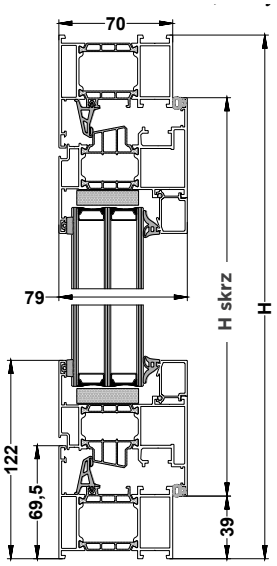
## Cross-sections

Vertical cross-section
Standard frame + intermediate leaf



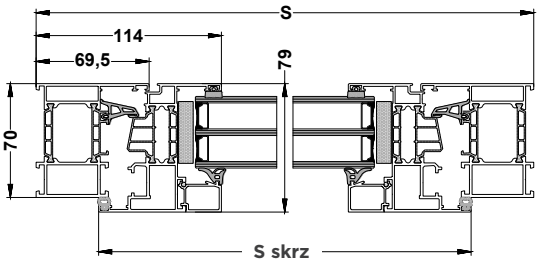

K520012 frame + K520112 leaf

Vertical cross-section
Standard frame + wide leaf



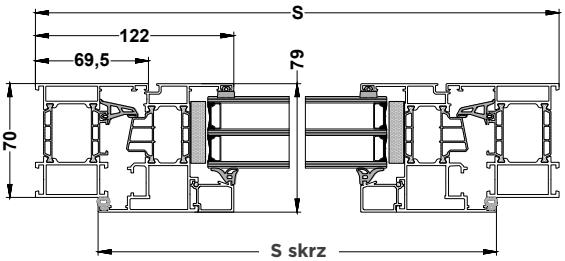

K520012 frame + K520113 leaf

Horizontal cross-section
High frame + intermediate leaf




K520012 frame + K520112 leaf

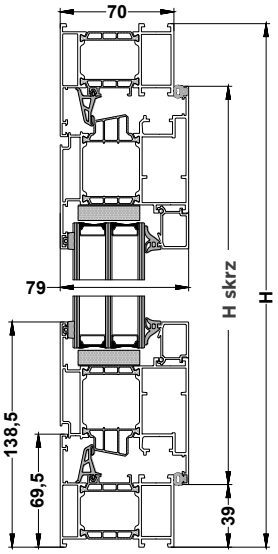
Horizontal cross-section
High frame + wide leaf




K520012 frame + K520113 leaf

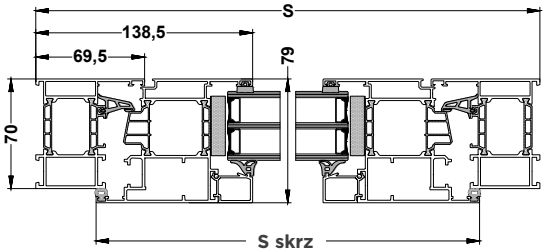
## Cross-sections

Vertical cross-section
High frame + high leaf




K520012 frame + K520114 leaf

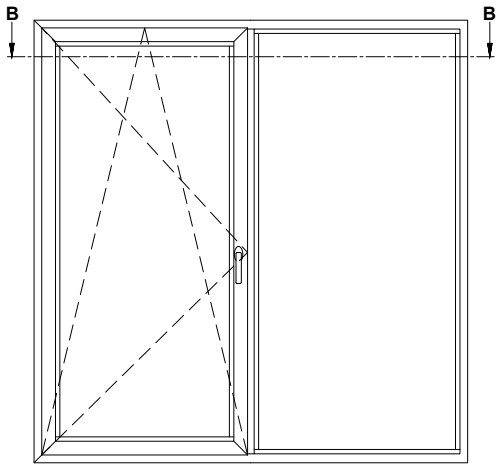
Horizontal cross-section
High frame + high leaf




K520012 frame + K520114 leaf

# FUTURO 79
# – single-leaf window + fix

As seen from the inside

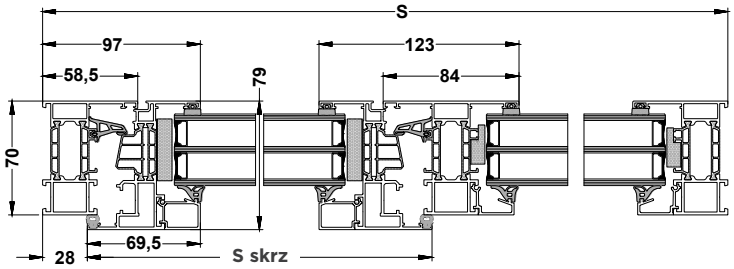



## Descriptive dimensions:

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Hp – understructure height

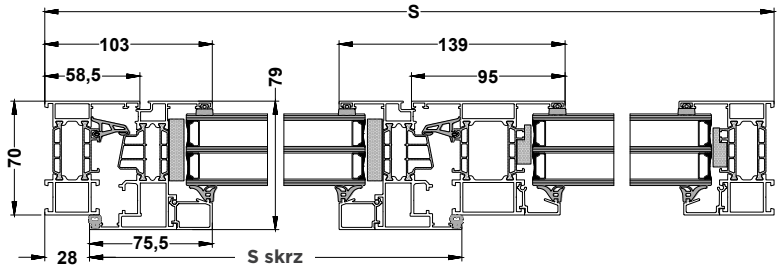
## Cross-sections

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




K520011 frame + K520111 leaf + K520051 mullion + FIX

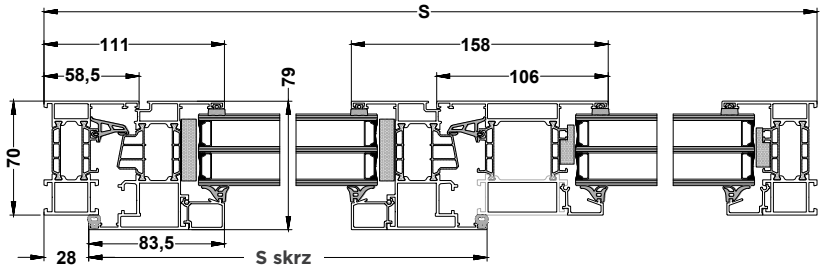
Horizontal cross-section
Narrow frame + intermediate leaf




K520011 frame + K520112 leaf + K520052 mullion + FIX

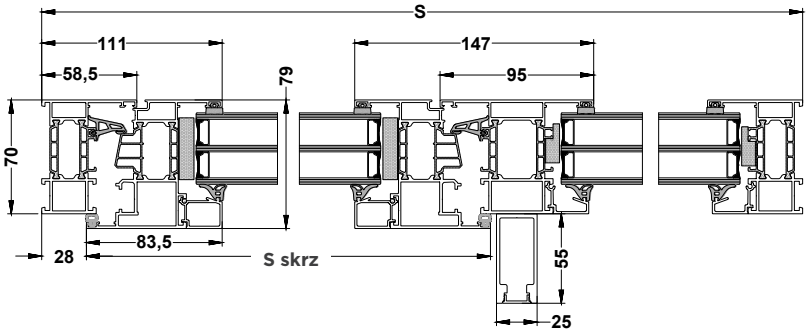
## Cross-sections

Horizontal cross-section
Narrow frame + wide leaf



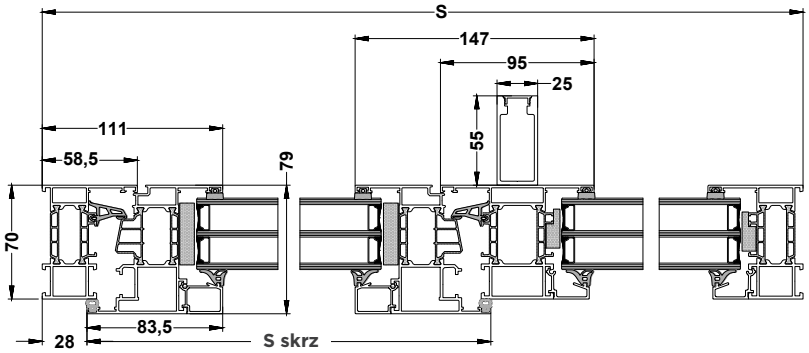

K520011 frame + K520113 leaf + K520053 mullion + FIX

Horizontal cross-section
Narrow frame + wide leaf




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

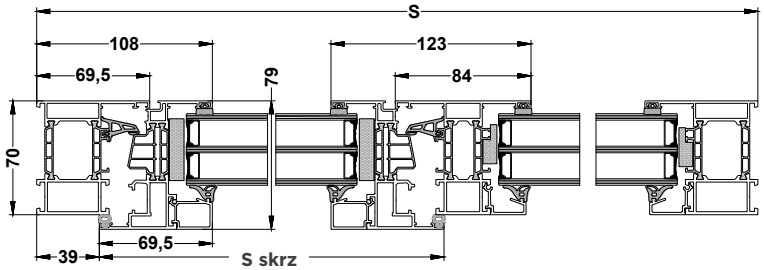
Horizontal cross-section
Narrow frame + wide leaf




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

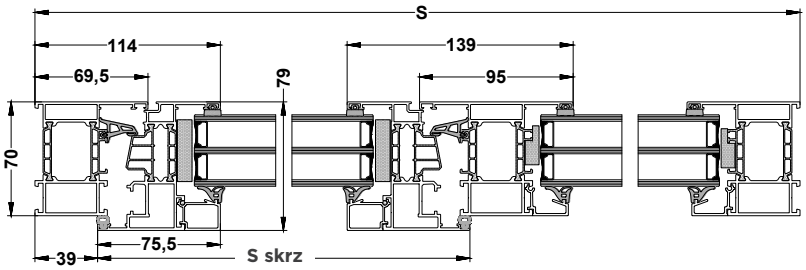
## Cross-sections

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



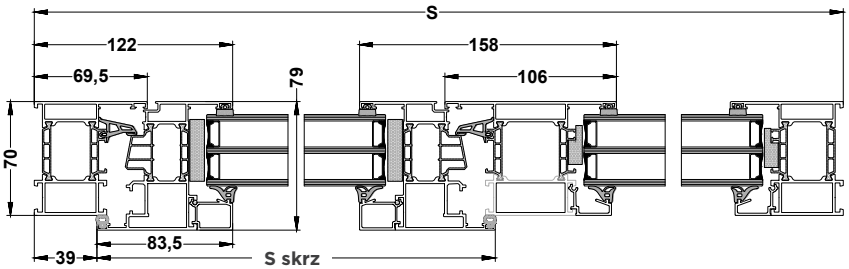

K520012 frame + K520111 leaf + K520051 mullion + FIX

Horizontal cross-section
Standard frame + intermediate leaf



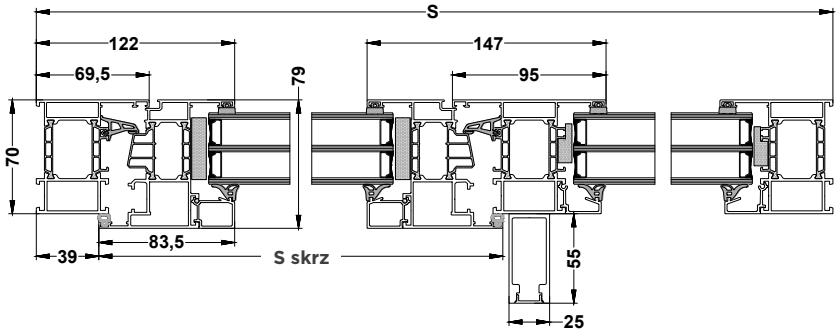

K520012 frame + K520112 leaf + K520052 mullion + FIX

Horizontal cross-section
Standard frame + wide leaf




K520012 frame + K520113 leaf + K520053 mullion + FIX

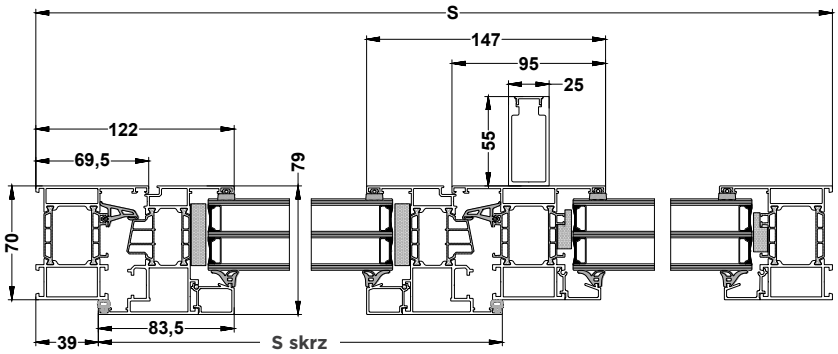
Horizontal cross-section
Standard frame + wide leaf




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

## Cross-sections

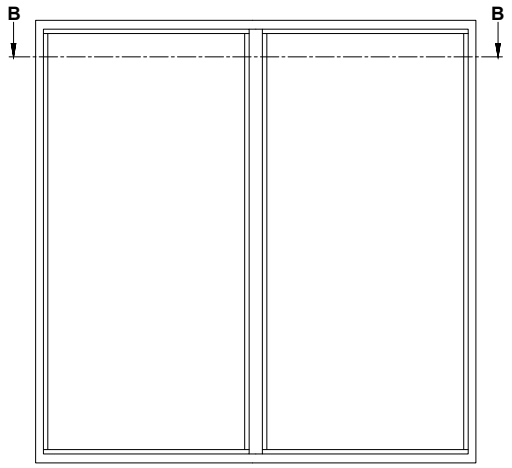
Horizontal cross-section
Standard frame + standard leaf (narrow)




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

# FUTURO 79
# – FIX fixed window

As seen from the inside

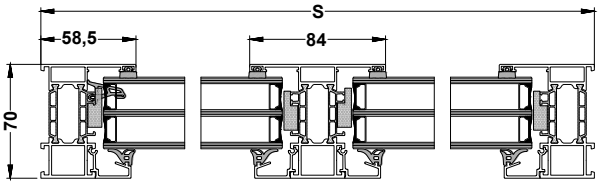



## Descriptive dimensions:

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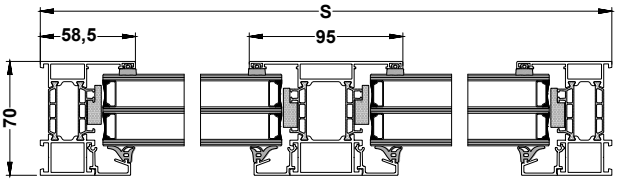
## Cross-sections

Horizontal cross-section
Narrow frame



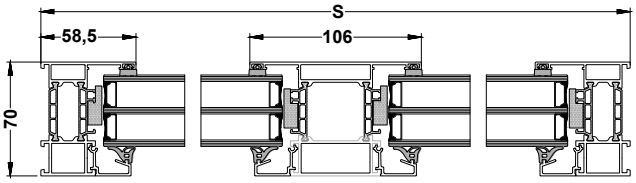

K52 0011 frame + K52 0051 mullion

Horizontal cross-section
Narrow frame




K52 0011 frame + K52 0052 mullion

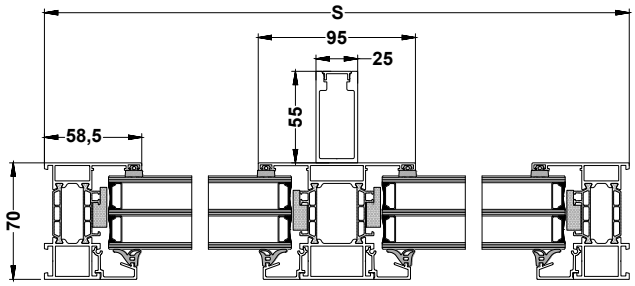
Horizontal cross-section
Narrow frame




K52 0011 frame + K52 0053 mullion

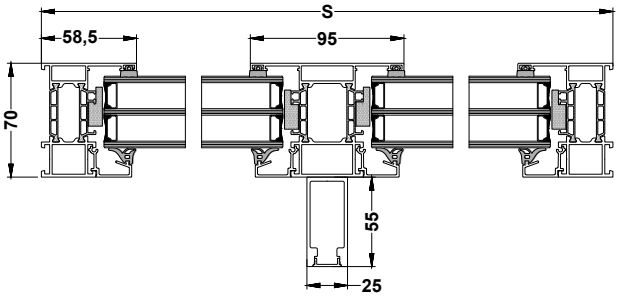
## Cross-sections

Horizontal cross-section
Narrow frame




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

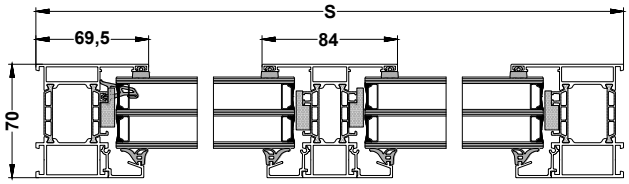
Horizontal cross-section
Narrow frame




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

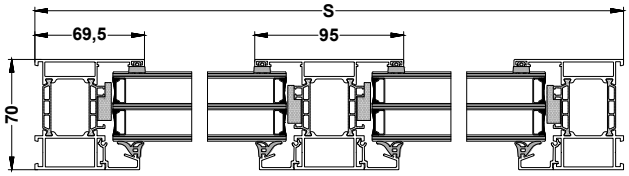
## Cross-sections

Horizontal cross-section
Standard frame



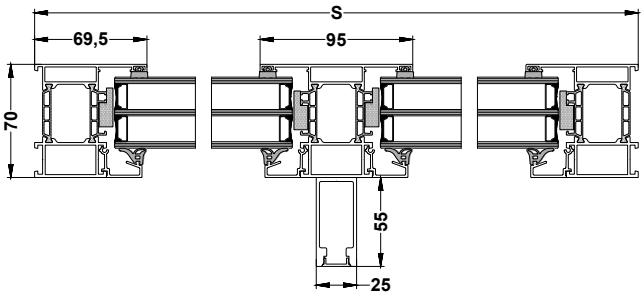

K520012 frame + K520051 mullion

Horizontal cross-section
Standard frame



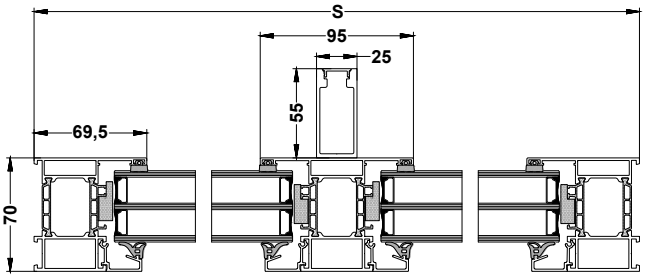

K520012 frame + K520052 mullion

Horizontal cross-section
Standard frame



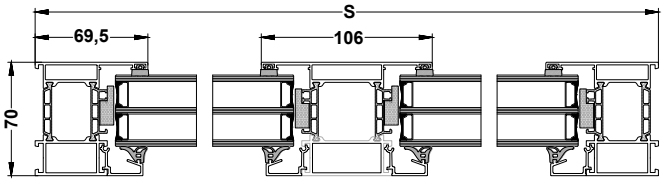

K520012 frame + K520052 mullion + K433872 on the inside

Horizontal cross-section
Standard frame




K520012 frame + K520052 mullion + K433872 on the outside

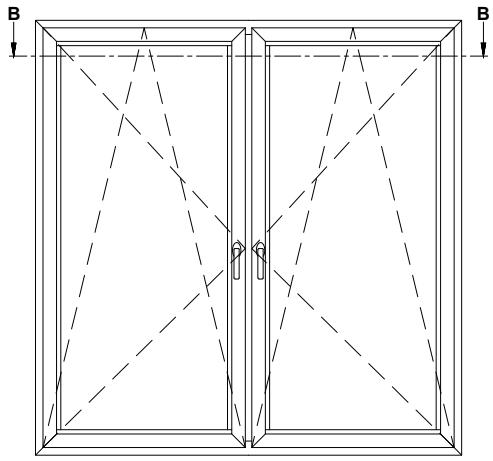
Horizontal cross-section
Standard frame




K520012 frame + K520053 mullion

# FUTURO 79
# – double-leaf window with a fixed mullion

As seen from the inside

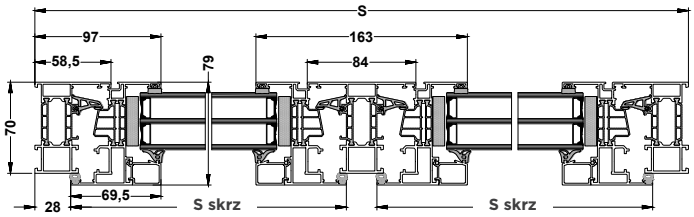



## Descriptive dimensions:

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H – window ordering height,
Hp – understructure height

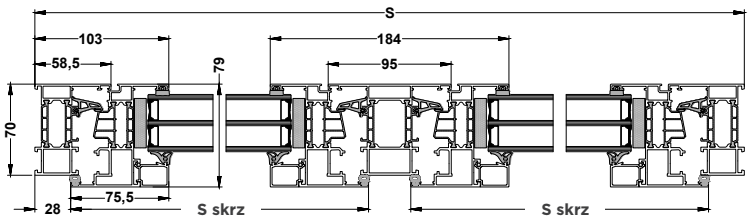
## Cross-sections

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



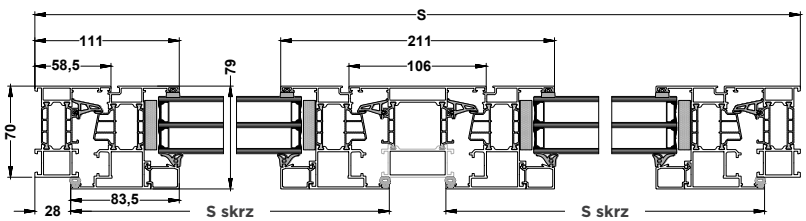

K52 0011 frame + K52 0111 leaf + K52 0051 mullion

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




K52 0011 frame + K52 0112 leaf + K52 0052 mullion

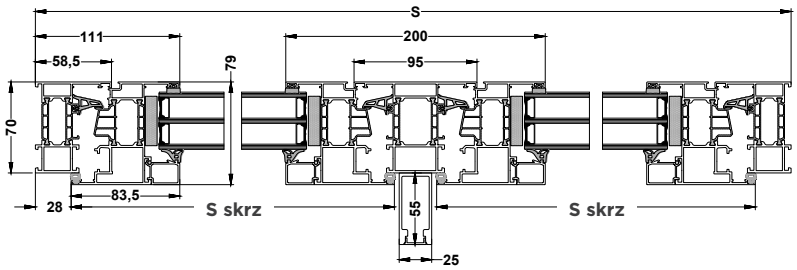
Horizontal cross-section
Narrow frame + standard leaf (narrow)




K52 0011 frame + K52 0113 leaf + K52 0053 mullion

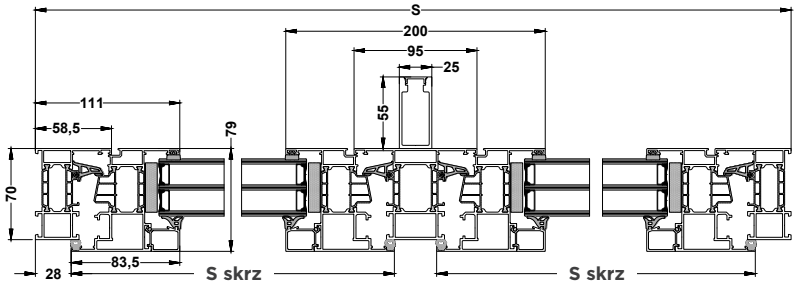
## Cross-sections

Horizontal cross-section
Low frame + wide leaf




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

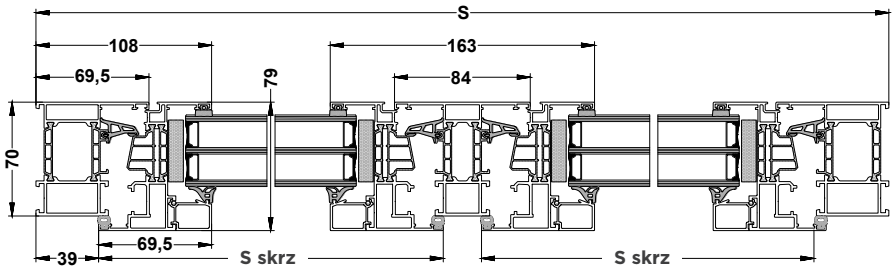
Horizontal cross-section
Low frame + wide leaf




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

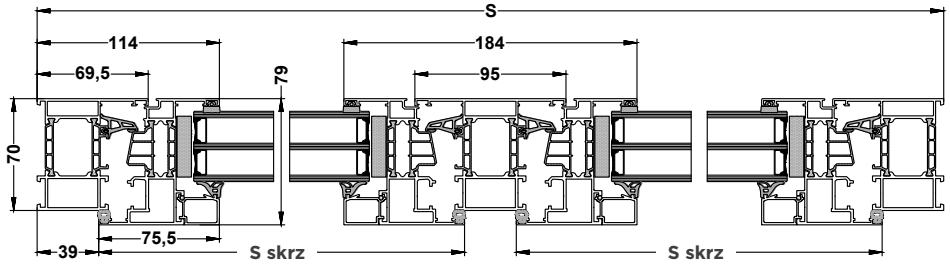
## Cross-sections

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



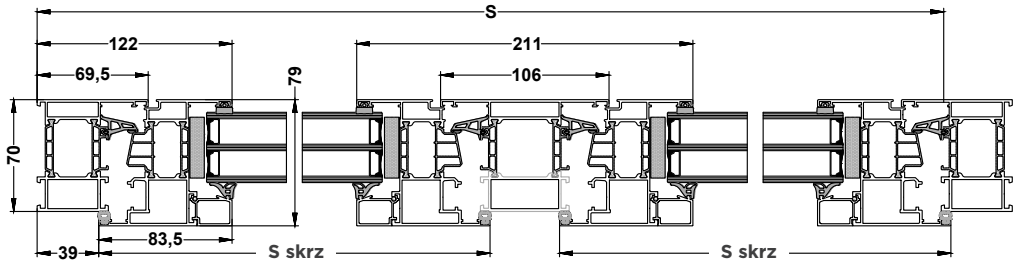

K520012 frame, K520111 leaf, K520051 mullion

Horizontal cross-section
Standard frame + narrow leaf



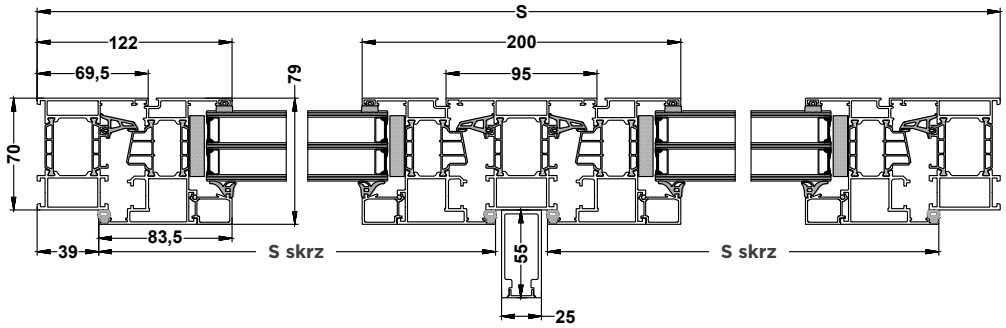

K520012 frame, K520111 leaf, K520052 mullion

Horizontal cross-section
Standard frame + wide leaf




K520012 frame, K520113 leaf, K520053 mullion

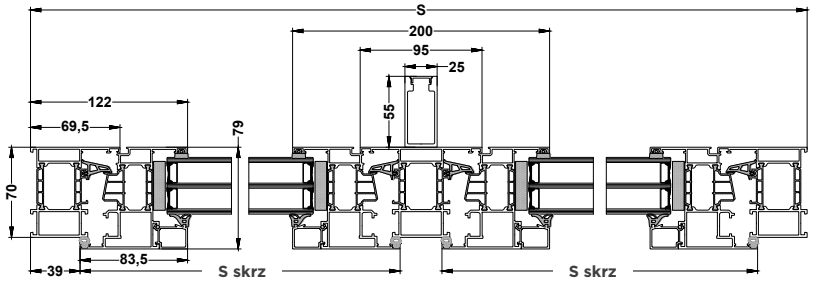
Horizontal cross-section
Standard frame + wide leaf




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

## Cross-sections

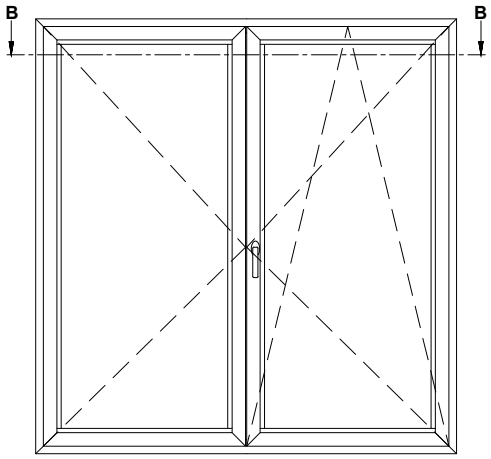
Horizontal cross-section
Standard frame + wide leaf




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

# FUTURO 79
# – double-leaf window with a movable mullion

As seen from the inside

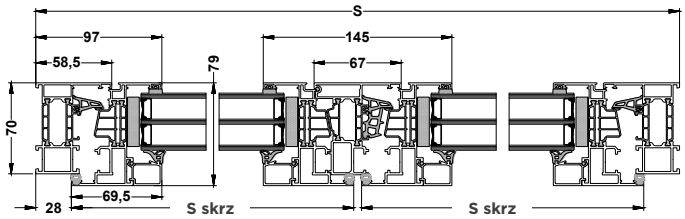



## Descriptive dimensions:

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

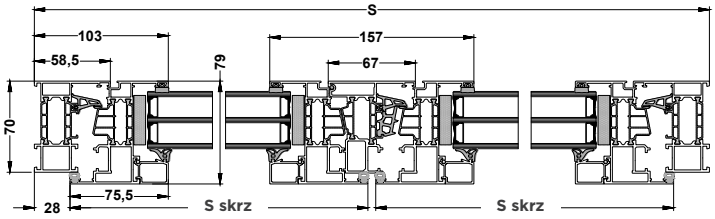
## Cross-sections

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



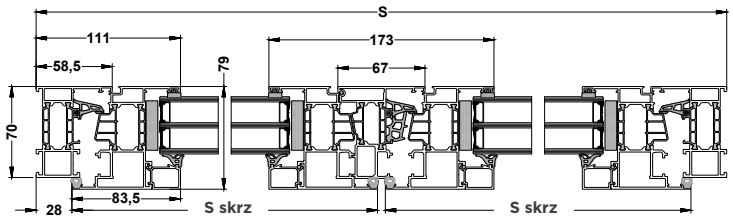

K520011 frame, K520111 leaf, movable mullion

Horizontal cross-section
Narrow frame + intermediate leaf




K520011 frame, K520112 leaf, movable mullion

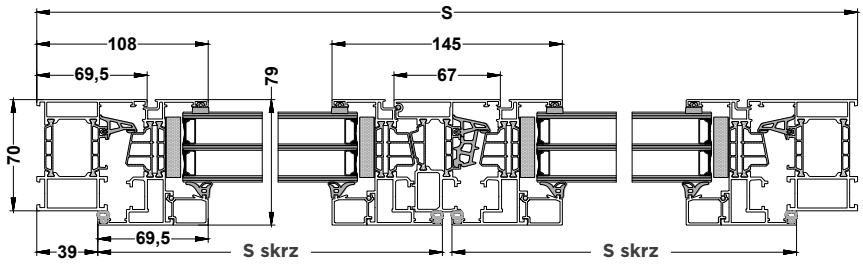
Horizontal cross-section
Narrow frame + wide leaf




K520011 frame, K520113 leaf, movable mullion

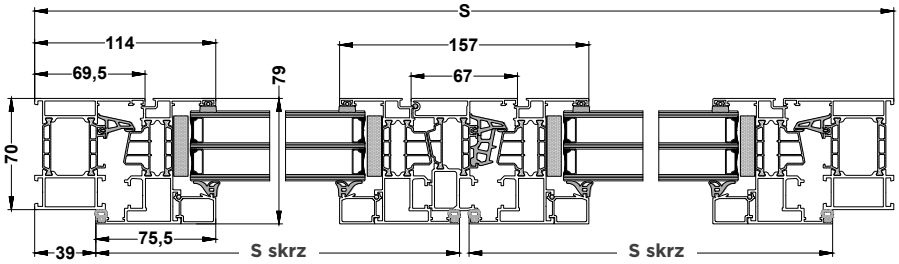
## Cross-sections

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



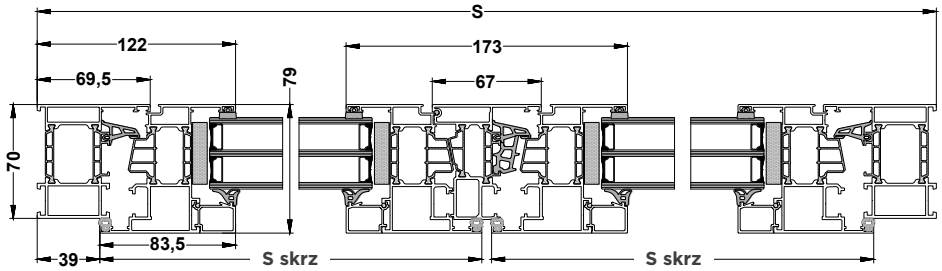

K520012 frame, K520111 leaf, movable mullion

Horizontal cross-section
Standard frame + intermediate leaf



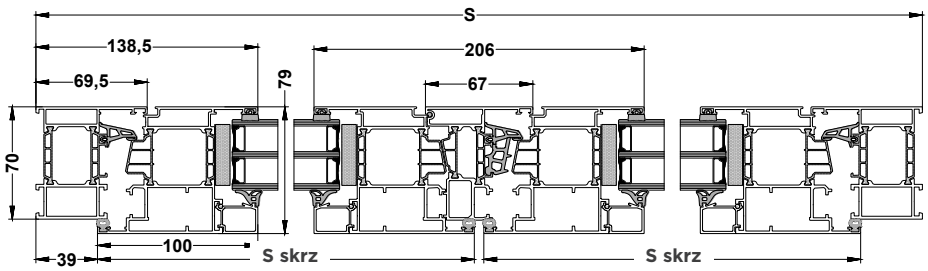

K520012 frame, K520112 leaf, movable mullion

Horizontal cross-section
Standard frame + wide leaf




K520012 frame, K520113 leaf, movable mullion

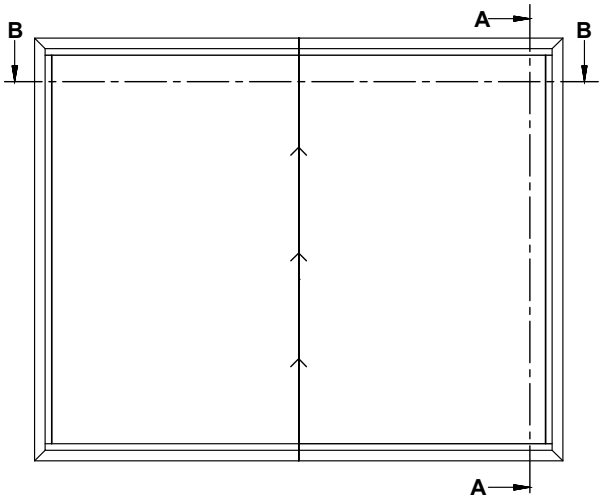
Horizontal cross-section
High frame + high leaf

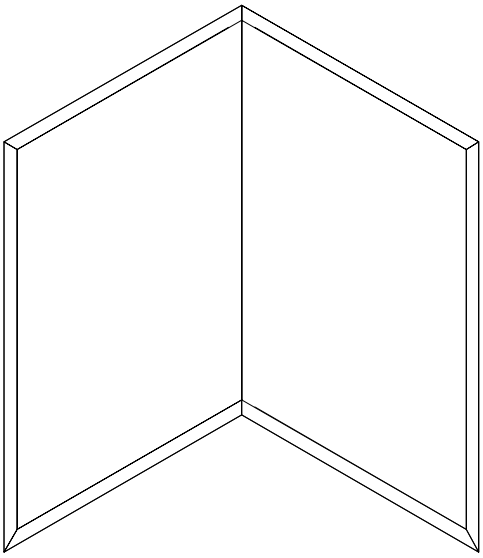



K520012 frame, K520114 leaf, movable mullion

# FUTURO 79
# – all-glass corner – STEP

As seen from the inside



**Maximum dimensions of the all-glass corner: S1 = 3,000 mm, S2 = 3,000 mm, H = 2,550 mm.**

## Dedicated glazing configurations
**for the all-glass corner are shown in the table below**

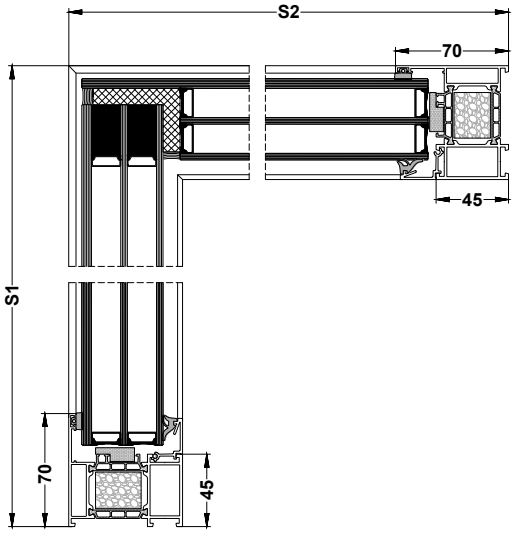
| FUTURO 79 (max. 53 mm) | Thickness [mm] | Max. side length [mm] | Max. surface area [m²] |
|---|---|---|---|
| ESG6 LE/18/4/18/4 LE Ug=0.5 | 50 | 2,400 | 3.3 |
| ESG LE/18/6/16/6 LE Ug=0.5 | 52 | 3,000 | 5 |
| ESG LE/18/6/16/6ESG LE Ug=0.5 | 52 | 3,000 | 7 |

## Descriptive dimensions:

S skrz– leaf width,
So – opening width,
S1 – window ordering width,
S2 – window ordering width,
Ho – opening height,
H – window ordering height,
Hp – understructure height

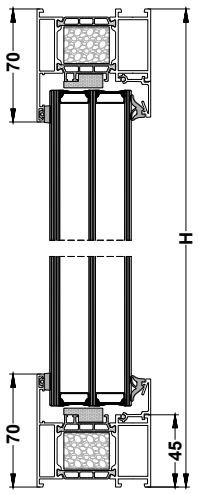
## Cross-sections

Horizontal cross-section
Standard frame



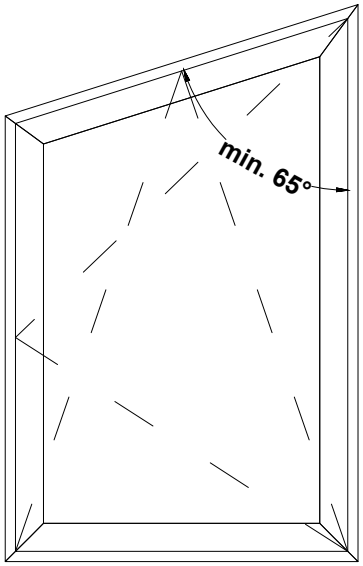

K520012 frame + STEP connection + 90°

Vertical cross-section
Standard frame



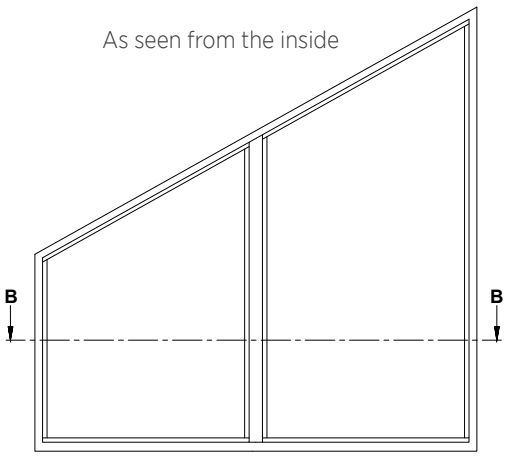

K520012 frame + STEP connection + 90°

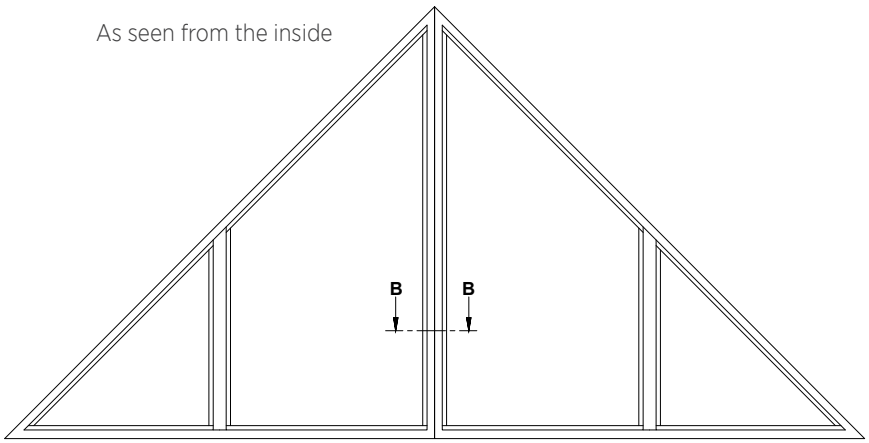
# FUTURO 79
## – non-standard shapes

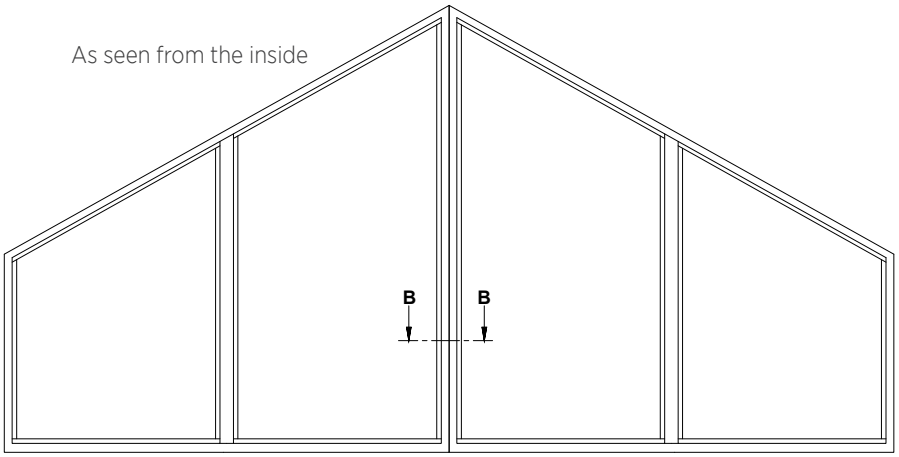


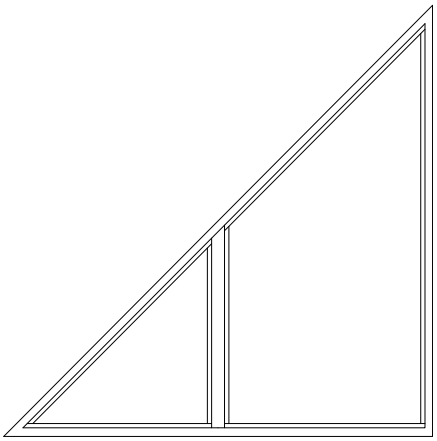

**The cross-sections below present expansion joints marked. Expansion joints are used when there are logistics limitations, non-standard structures or widths exceeding 6,000 mm.**

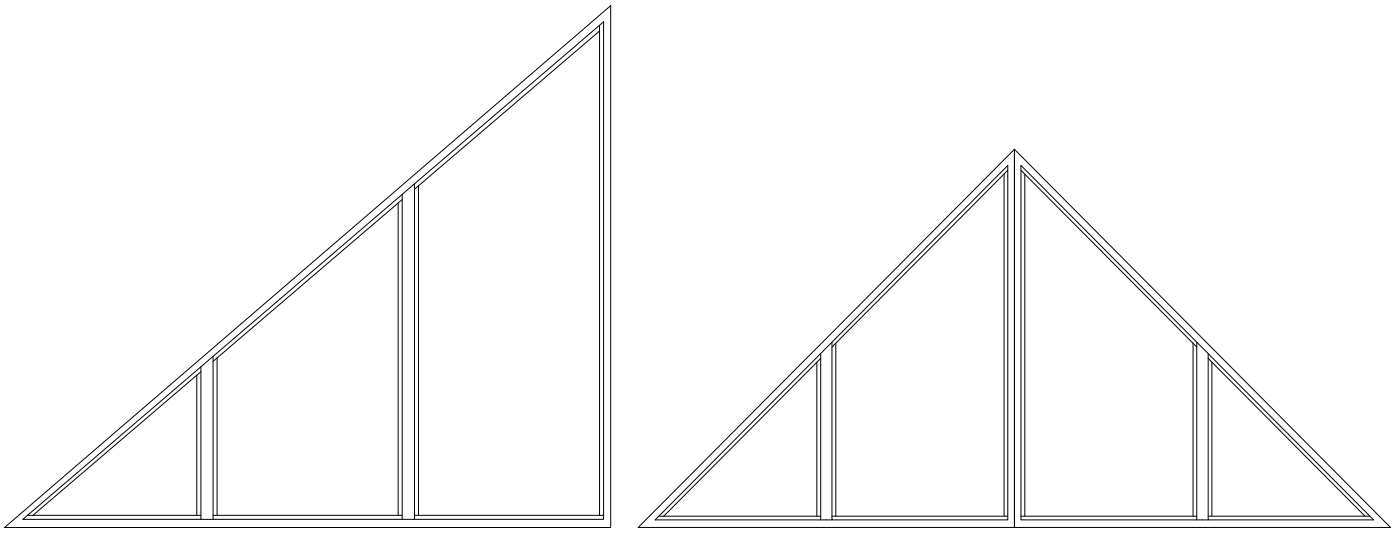
**In the case of openable trapezoid structures, the minimum angle is 65°, as shown in the picture.**



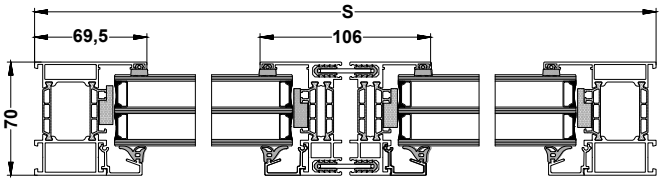





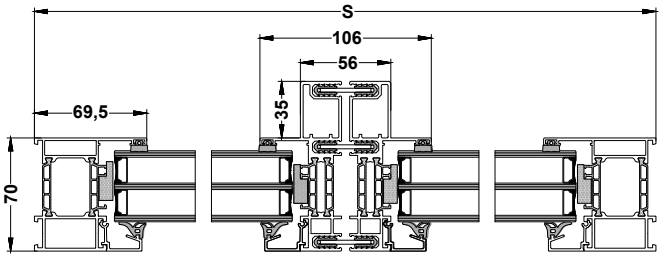
## Cross-sections

Horizontal cross-section
Standard frame



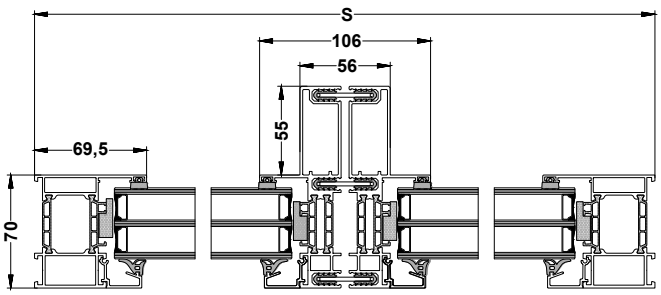

K520012 frame, K520033 expansion joint

Horizontal cross-section
Standard frame




K520012 frame, K520040 expansion joint

Horizontal cross-section
Standard frame



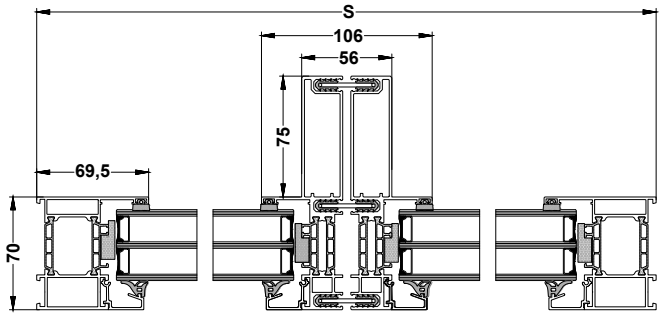

K520012 frame, K520041 expansion joint

## 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

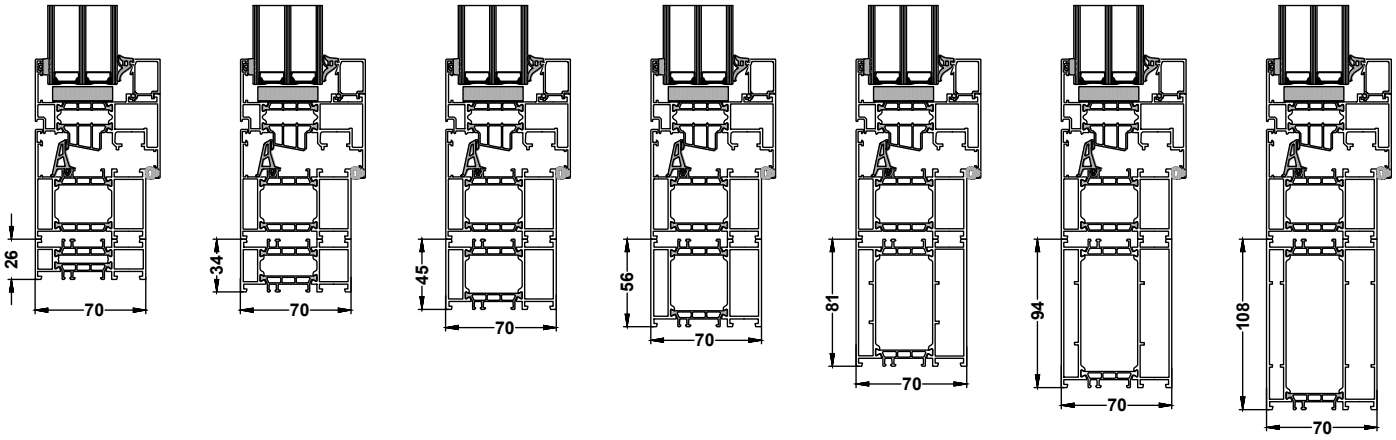
Horizontal cross-section
Standard frame



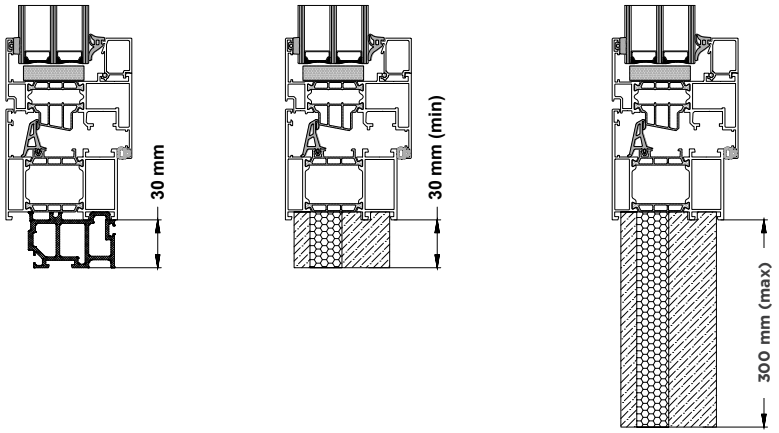

K520012 frame, K520042 expansion joint

## CROSS-SECTIONS OF CONNECTORS AND WIDENINGS

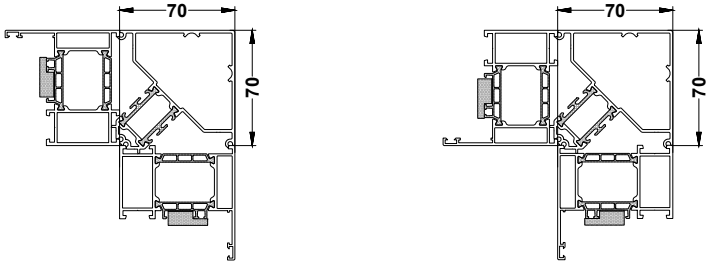
FUTURO 79 ALU widenings
K52 0200 25.5 [mm], K52 0201 33.5 [mm], K52 0202 44.5 [mm], K52 0203 55.5 [mm], K52 0206 80.5 [mm], K52 0207 94 [mm], K52 0204 108 [mm]



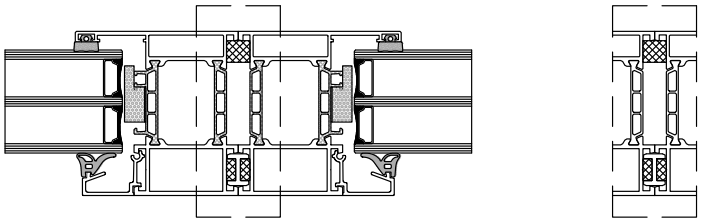

8G00338 undersill strip, understructure 30-300 mm (max)



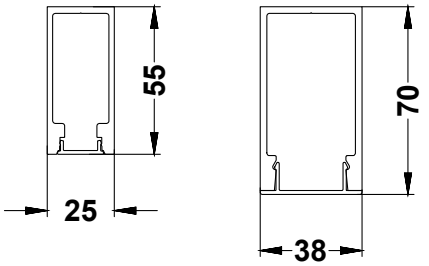

90° K52 0027 connector (external and internal connection)



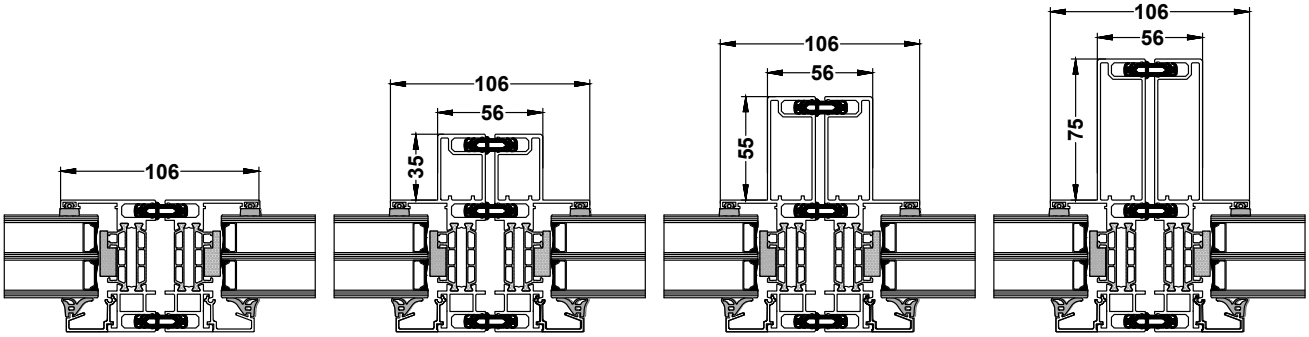
K41 7837 connector – for the FUTURO 79/FUTURO 79 connection



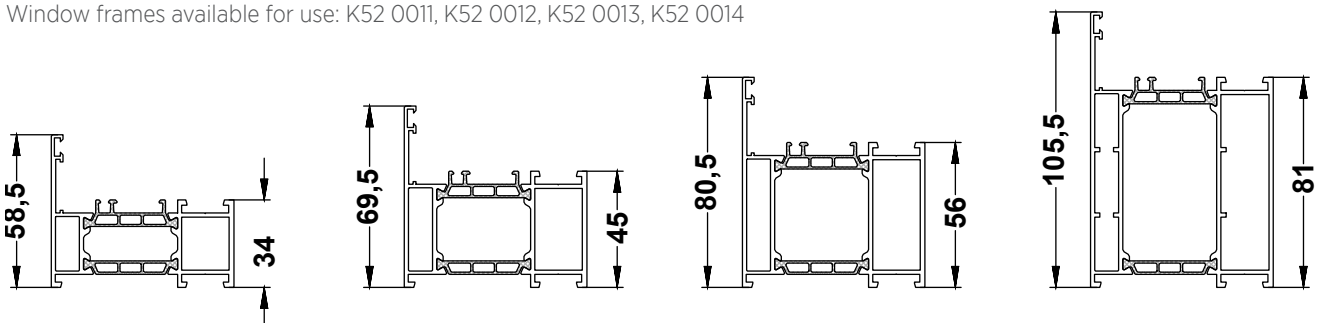
FUTURO 79 K41 3923, K43 3872 transom/mullion vertical reinforcements




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 the FUTURO 79 windows

| | | Turn, Tilt and turn single-leaf windows/balconies | | Turn, Tilt and turn multi-leaf windows/ balconies with a fixed mullion | Turn+Tilt and turn double-leaf windows/ balconies with a movable mullion | Tilt-only (hopper/awning) windows |
|---|---|---|---|---|---|---|
| **Maximum surface area of the leaf** | Narrow leaf | 1.6 [m²] | | | | 1.6 [m²] |
| | Standard leaf | 2.5 [m²] | | | | 2.2 [m²] |
| | Wide leaf | 3 [m²] | | | | 2.4 [m²] |
| | High leaf | 3.2 [m²] | | | | 2.4 [m²] |
| **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] | 1,945 [mm] |
| | High leaf | 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] | 1,245 [mm] |
| | High leaf | 2,623 [mm] | 1,945 [mm] | 2,495 [mm] | 2,623 [mm] | 1,245 [mm] |
| **Maximum surface area of the window structure in a single frame** | | 3.5 [m²] | 2.56 [m²] | 6.5 [m²] | 6.6 [m²] | 3 [m²] |
| **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** | | 2,700 [mm] | 2,000 [mm] | 2,550 [mm] | | 2,700 [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 [m²] | 16.8 [m²] | | 15.3 [m²] | 16.8 [m²] |
| **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 | Leaf surface |
|---|---|---|
| **Siegenia – TITAN AF standard hinges** | ≤120 kg | 3 [m²] |
| **Siegenia – TITAN AF AX 24+ concealed hinges** | ≤130 kg | 3 [m²] |

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 leafs 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)




### 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

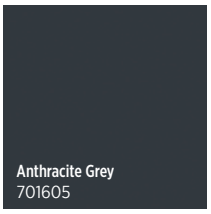
## Film coatings – standard colours







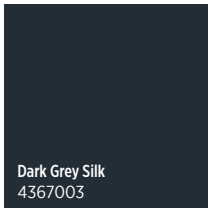


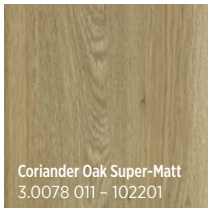





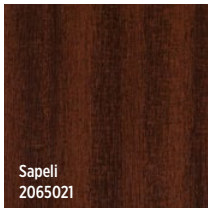


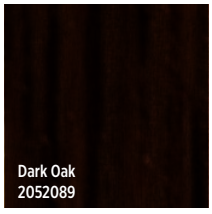


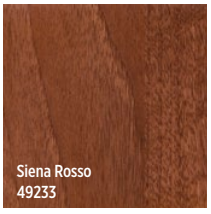

## Film coatings – non-standard colours

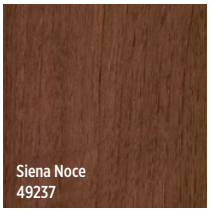




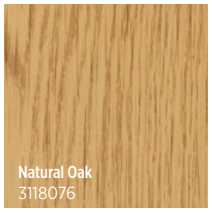


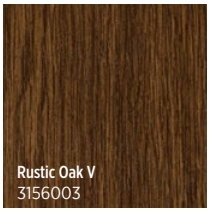


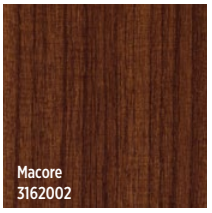



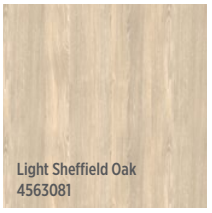


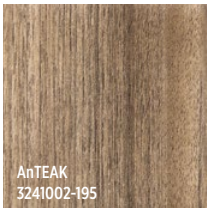


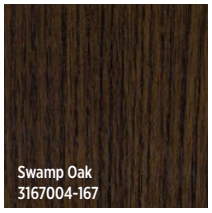


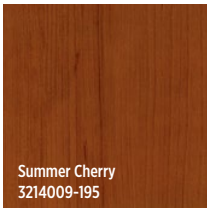



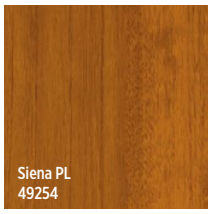



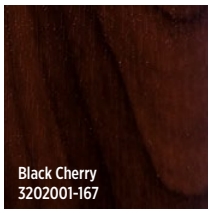





























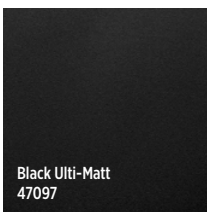














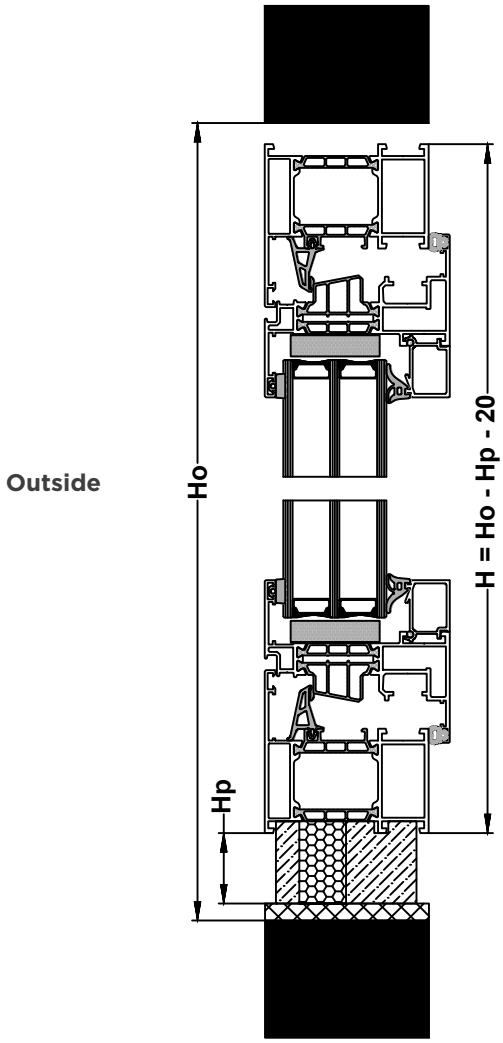


| Film coating colour | Primer colour | Standard hinge cover colour | Standard handle colour |
|---|---|---|---|
| Golden Oak 2178001-167 | RAL 8003 Clay Brown | F4 | F4 |
| Walnut 2178007 | RAL 8011 Walnut Brown | F9 | F9 |
| Winchester 49240 | RAL 8001 Brown-Orange | F1 | F1 |
| Anthracite Grey 701605 | 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

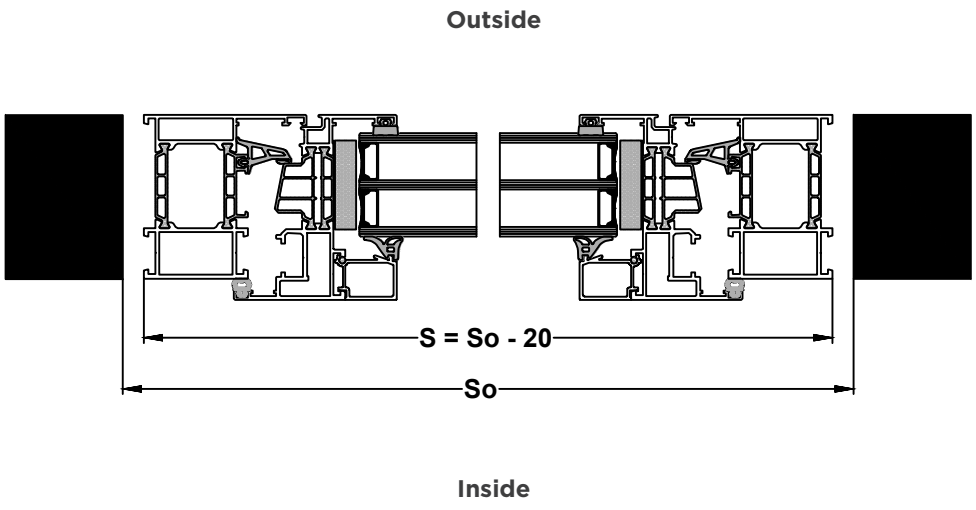
## Installation in the opening

Vertical cross-section

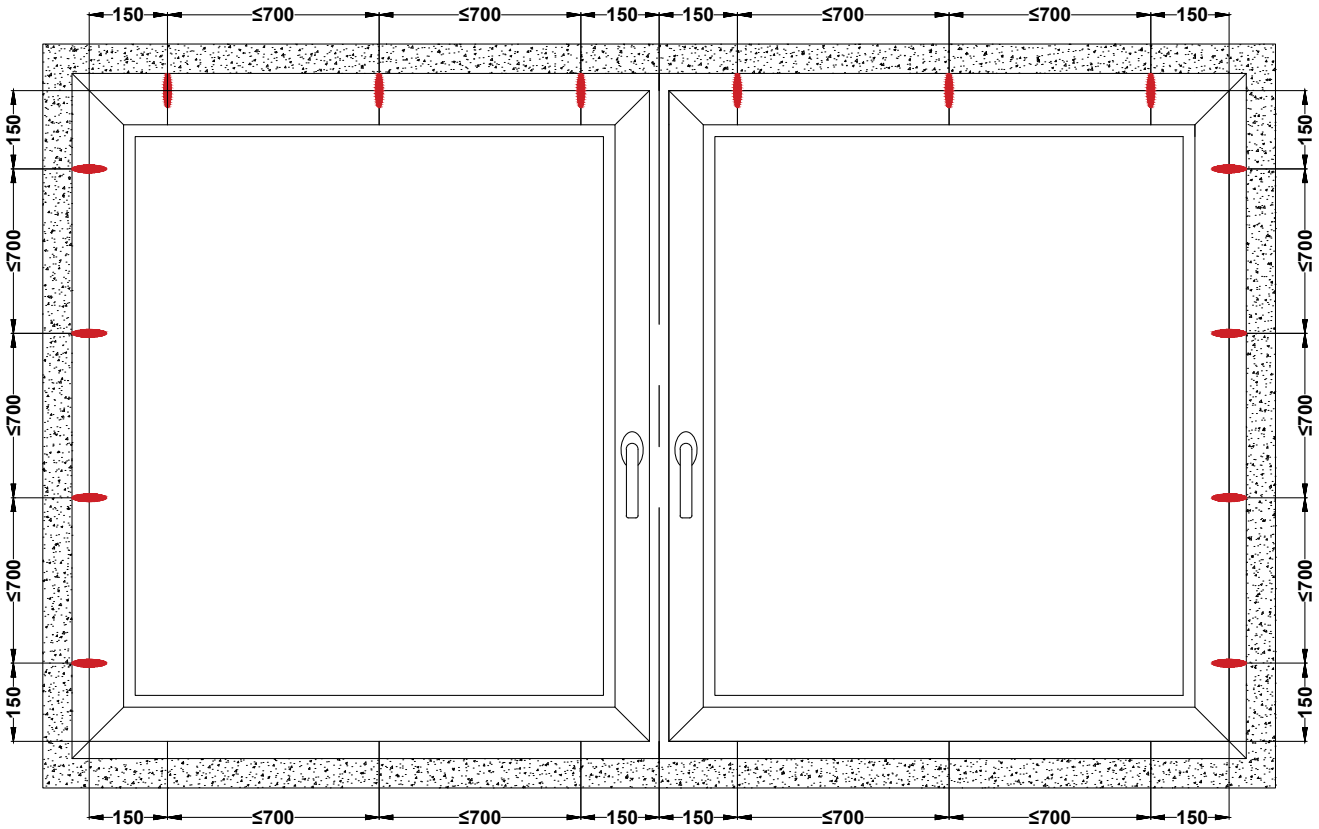



S skrz– leaf width,
So – opening width,
S – window ordering width,
Ho – opening height,
H – window ordering height,
Hp – understructure height

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.

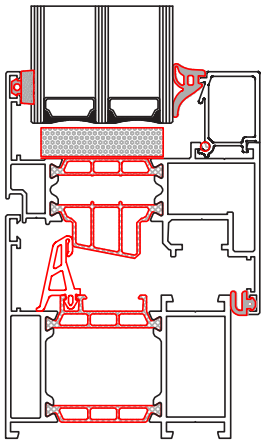
In accordance with the regulations of the Polish Building Law, safety glass should be used in the bottom section of the window up to the height of 850 [mm] (in buildings up to 25 [m] high) and 1,100 [mm] (in buildings over 25 [m]).

## WARM EDGE

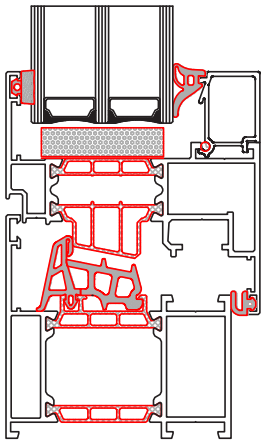
Available in the following colours for the ALU window range:
Light Grey 7035, Grey 7040, Black 9005, Light Brown 8003, Brown 8016, White 9016.

## THERMAL VARIANTS

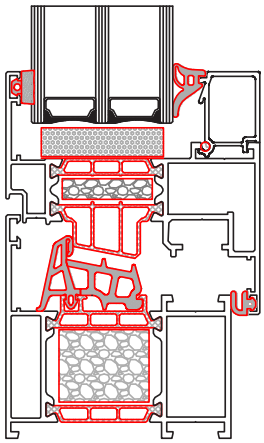
### FUTURO 79 E



### FUTURO 79 ST



### FUTURO 79 SI



## WINDOW HANDLES

### BASIC



**BASIC**

available colours:

white | brown | silver

old gold | titanium | black mat RAL 9005



**BASIC K**
with a key lock

available colours:

white | brown | silver

old gold | titanium | black mat RAL 9005



**BASIC P**
with a locking button

available colours:

white | brown | silver

old gold | titanium | black mat RAL 9005



**BASIC double-sided balcony**

available colours:

white | brown | silver

old gold | titanium | black mat RAL 9005



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

available colours:

white | brown | silver

old gold | titanium | black mat RAL 9005

## ROUND



### ROUND

available colours:

white, brown, silver, old gold, titanium



### ROUND K
with a key lock

available colours:

white, brown, silver, old gold, titanium

## CUBE



### CUBE

available colours:

black, white, silver, old gold, titanium, black mat RAL 9005



### CUBE K
with a key lock

available colours:

black, white, silver, old gold, titanium, black mat RAL 9005



### CUBE P
with a locking button

available colours:

black, white, silver, old gold, titanium

## HOPPE



### Secustic Luxembourg

available colours:

white, silver, old gold, titanium



### Secustic Luxembourg
with a key lock

available colours:

white, silver, old gold, titanium



**Atlanta**

available colours:

white | silver | old gold | titanium



**Atlanta**
with a key lock

available colours:

white | silver | old gold | titanium



**Toulon**

available colours:

white | silver | old gold | titanium



**Toulon**
with a key lock

available colours:

white | silver | old gold | titanium



**Toulon**
with a locking button

available colours:

white | silver | old gold | titanium



**Tokyo**

available colours:

white | silver | old gold | titanium



**Tokyo**
with a key lock

available colours:

white | silver | old gold | titanium



**Tokyo**
with a locking button

available colours:

white | silver | old gold | titanium



| Window type | FUTURO 79 |
|---|---|
| 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 |

WIŚNIOWSKI

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tel. +48 18 44 77 111

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