



PROCURAL

aluminium systems



ALUMINIUM SYSTEMS

Product brochure | 2025

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Technical assessment

- ITB (Poland)
- Łukasiewicz Research Network (Poland)
- PZH (Poland)
- PASSIVHAUS INSTITUT (Germany)
- IFT ROSENHEIM (Germany)
- QUALICOAT (Switzerland)
- UBAtc (Belgium)
- IRcCOS (Italy)
- GIORDANO (Italy)
- CSTB (France)



Potential of PROCURAL

Technical Department

responsible for R&D, manufacturing technology and technical support for joinery manufacturers

Research & Development Department

designs, develops and tests new solutions to fulfil the needs of aluminium joinery manufacturers and future users

Project Management Department

cooperates with design studios and supports architects

Production Department

equipped with modern, automated coating lines, thermal break assembly lines and profile bending machinery

Quality Control Department

guarantees the highest quality of manufactured systems

Sales Department

provides customer care for the large network of our Customers – joinery manufacturers

Logistics Department

coordinates our transport fleet and takes care of on-time deliveries in Poland and abroad

Acquisitions Department

responsible for dealing with suppliers and stock replenishment

High-bay Warehouses

among the largest in the industry



PROCURAL

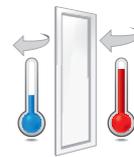
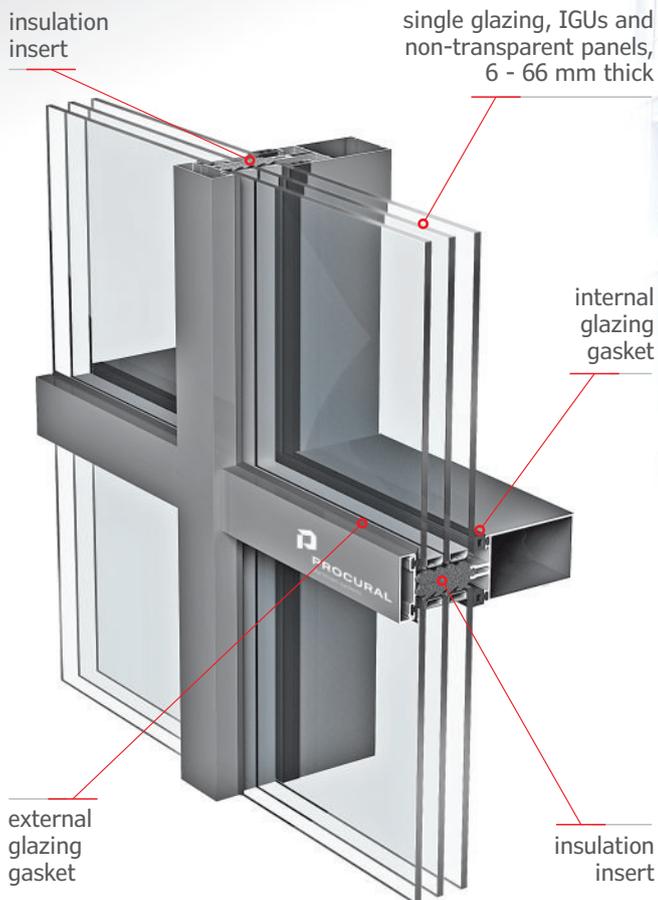
aluminium systems

PROCURAL (formerly Ponzio Polska) is a manufacturer of modern aluminium profile systems for the construction industry used in the manufacturing of windows, doors, curtain walls, winter gardens, sunscreens, as well as in specialised solutions of various types, including fire-resistant, burglar-proof and bullet-proof structures. Innovative system solutions applied to multi-purpose buildings meet the stringent requirements of energy efficiency, comfort and security.

PROCURAL products form the landscape of modern architecture in Europe and in many countries around the world. We cooperate with investors, architects and manufacturers of aluminium joinery, and we provide assistance to individual investors and general contractors. Highly qualified staff are available at every stage of cooperation. Starting from the design - providing technical support, through sales support during the implementation of the project, to the timely delivery of the ordered goods provided by our modern logistics centre.

Thanks to several decades of experience, the company has developed a strong position on the market and is among the largest suppliers of aluminium systems in the world.



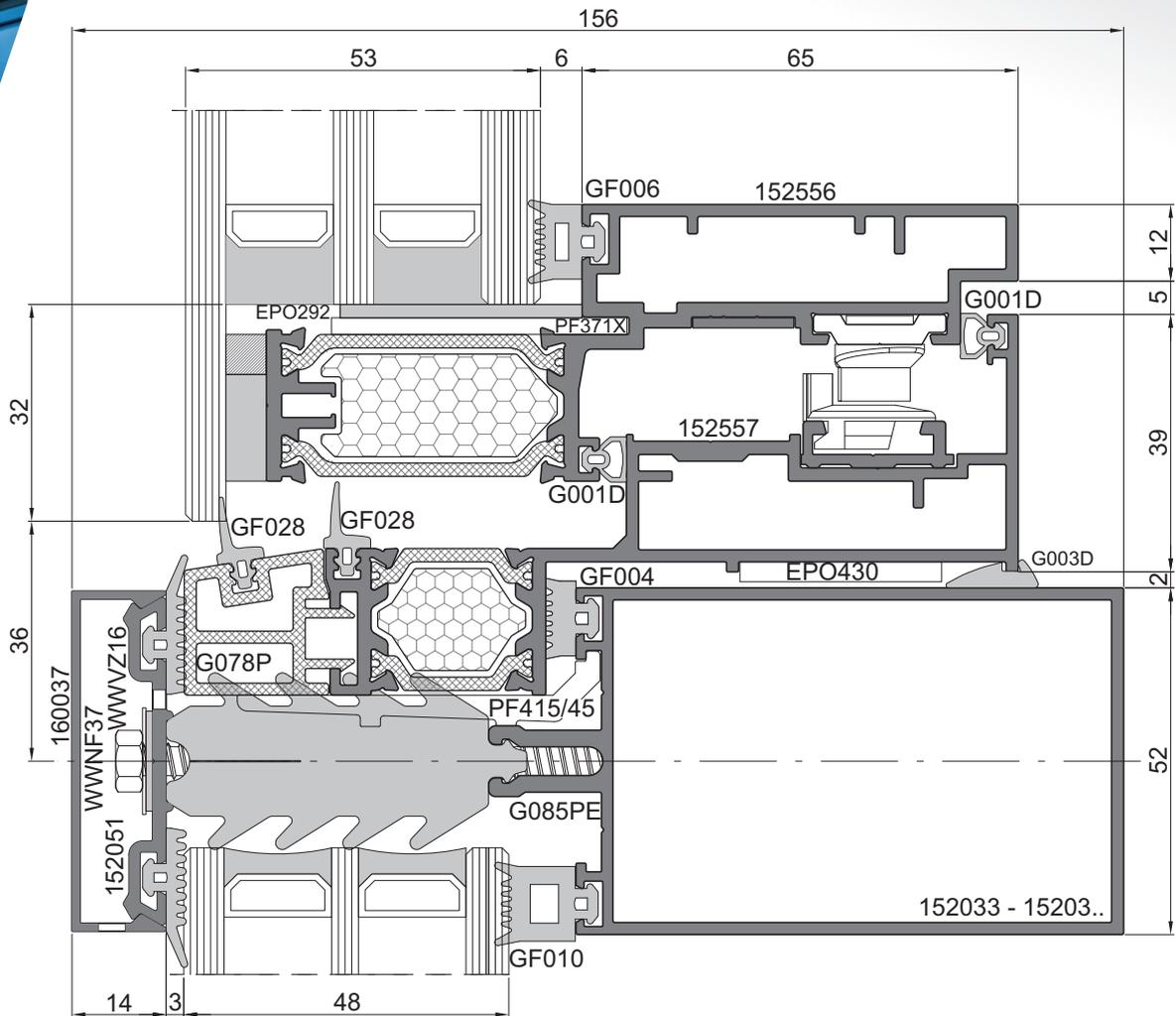


$$U_{cw} = 0.62 \text{ W}/(\text{m}^2\text{K})$$

*reference construction dimensions: L 1200 x H 2500 mm
 $U_g = 0.5 \text{ W}/\text{m}^2\text{K}$, triple glazing

A high thermal performance mullion-transom system designed for the construction of curtain walls, roofs, rooflights with improved thermal characteristics

- ▀ high thermal insulation, sound reduction, watertightness and resistance to wind load performance values
- ▀ the PF152HI PASSIVE variant is certified by the Passivhaus Institut in Darmstadt (pH class)
- ▀ solutions for steel and wooden subconstructions
- ▀ fire-resistant spandrel solutions available (EI60 class)
- ▀ external cover profile width - 51 mm
- ▀ wide range of possible geometrical designs and colours
- ▀ several types of external decorative elements available
- ▀ "horizontal" or "vertical" line constructions
- ▀ profile bending possible
- ▀ PROCURAL system windows may be used as filling
- ▀ maximum filling weight 1000 kg
- ▀ interconnected with other PROCURAL systems



TECHNICAL PARAMETERS

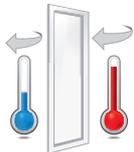
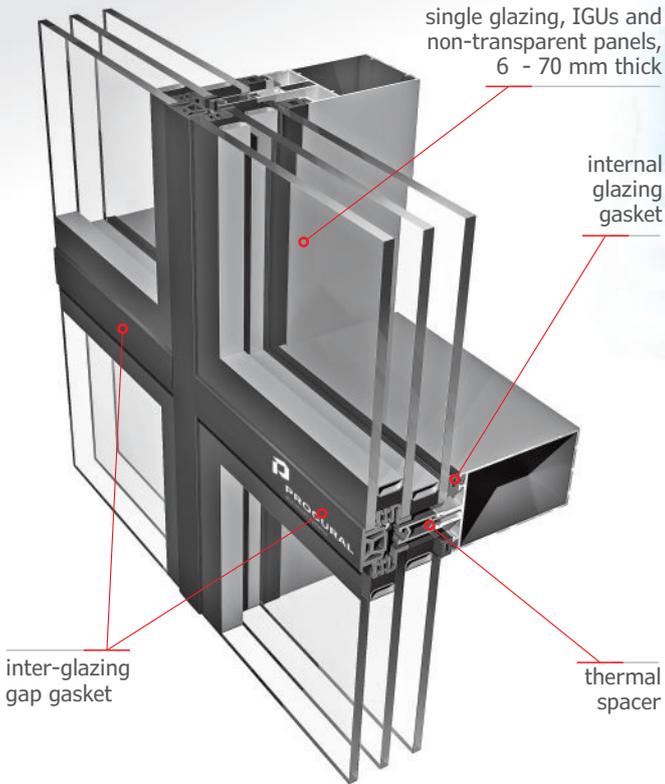
Filling thickness	6 - 66 mm for curtain walls, 24 - 60 mm for windows
Mullion and transom width	52 mm
Thermal insulation	U_f from 1.0 W/(m ² K) U_{cw}/U_w from 0.62 W/(m ² K)
Air permeability	class AE 2400
Watertightness	class RE 2700 (2700 Pa)
Sound reduction	$R_w = 41$ dB
Resistance to impact	class E5/I5
Resistance to wind load	class 2400 Pa, safety test: E 3600 Pa
Resistance to burglary	class RC2, RC3 in acc. with PN-EN 1627
Filling fixing method	using pressure plates and cover profiles

Certification

type testing in acc. with EN 13830, certified by the Passivhaus Institut in Darmstadt

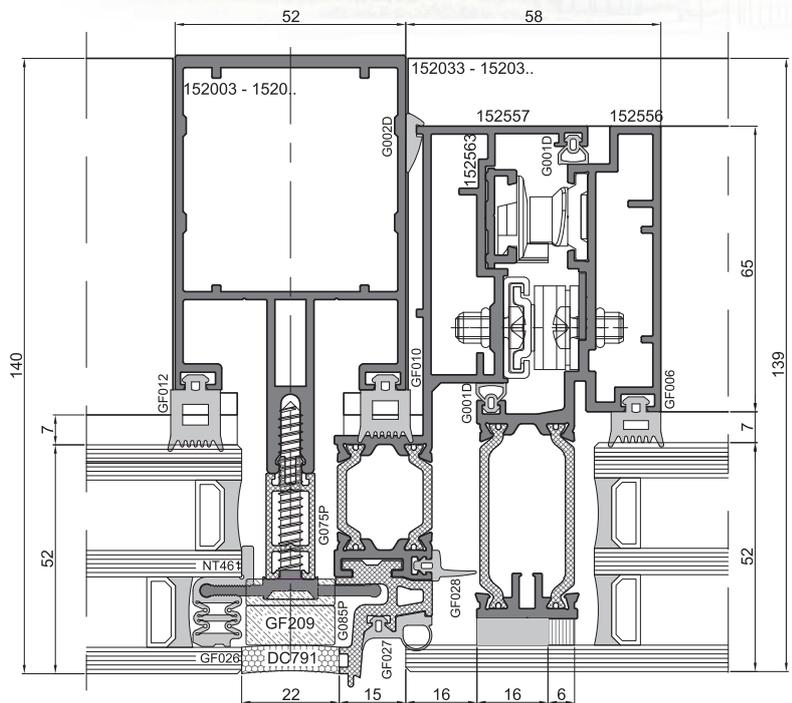
PROCURAL formerly Ponzio Polska PF152ESG

CURTAIN WALL SYSTEMS



$$U_{CW} = 0.64 \text{ W}/(\text{m}^2\text{K})$$

*reference construction dimensions: L 1200 x H 2500 mm
 $U_g = 0.5 \text{ W}/(\text{m}^2\text{K})$, triple glazing



A system designed for the construction of curtain walls and other spatial structures

- the external surface is a flat glazed surface, divided with vertical and horizontal lines – 22 mm wide (using weather-proof silicone) or 28 mm wide (using system glazing gaskets)
- shares the mullion-transom load bearing structure of the PROCURAL PF152 curtain wall system, including a wide selection of profiles
- PROCURAL system windows may be used as filling
- independently opening awning windows placed alongside each other possible
- triple glazing may be used (up to 70 mm thick)
- profile bending possible

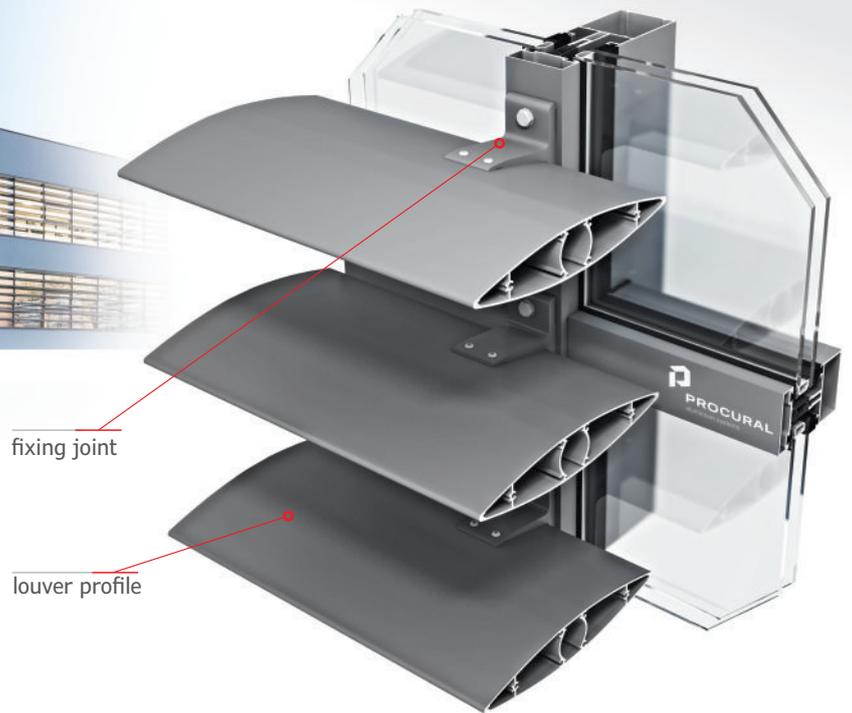
TECHNICAL PARAMETERS

Filling thickness	curtain wall: 6 - 70 mm window: 24 - 60 mm
Thermal insulation	U_f from 1,3 W/(m ² K) U_{CW}/U_w from 0,64 W/(m ² K)
Air permeability	class AE 1200
Watertightness	class RE 2550 (2550 Pa)
Resistance to impact	class E5/I5
Resistance to wind load	class 2400 Pa safety test: E3600 Pa

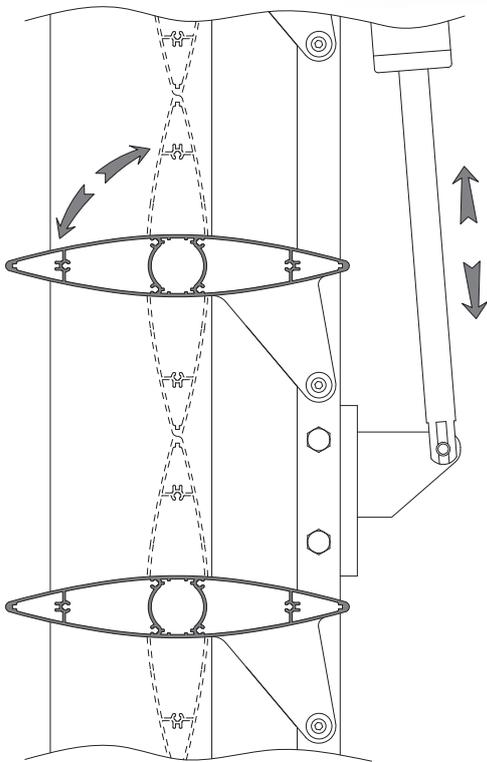
Certification

type testing in acc. with EN 13830

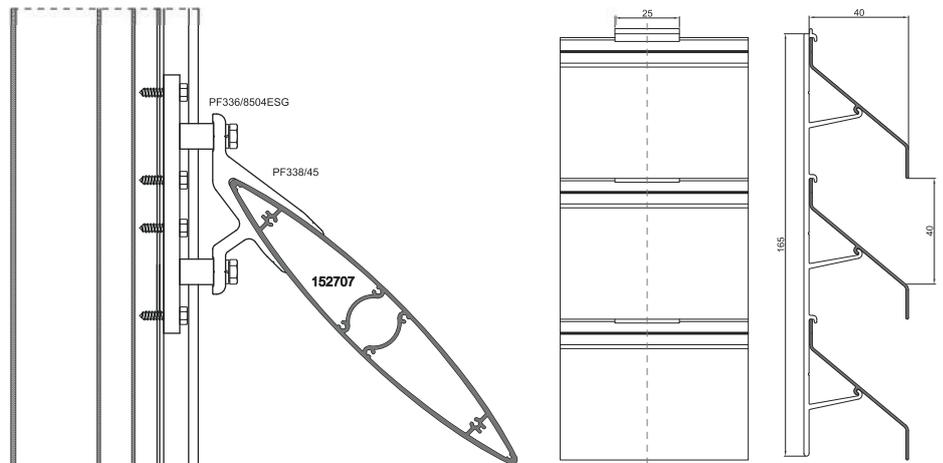
CURTAIN WALL SYSTEMS



Movable louvers

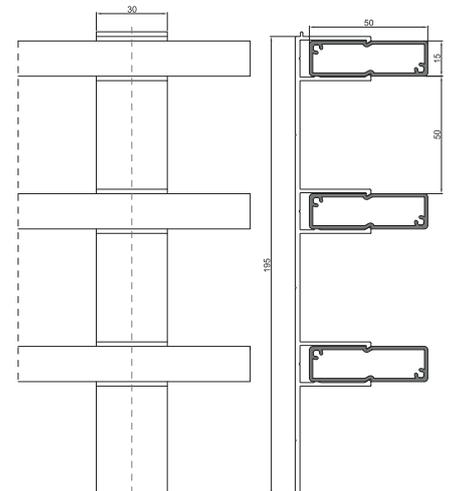


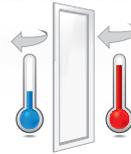
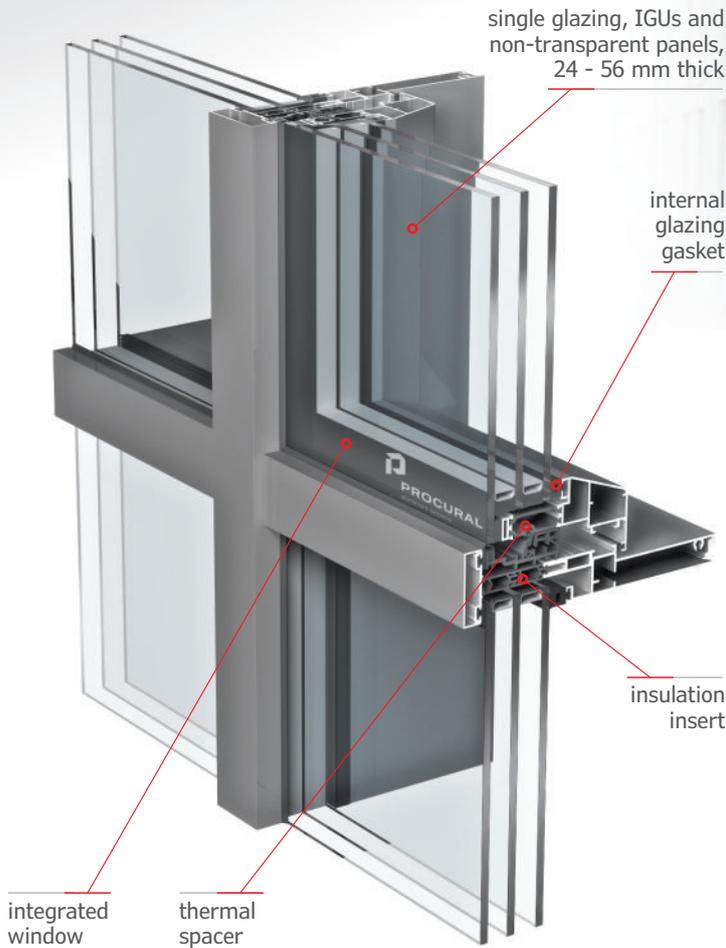
Fixed louvers



A modern solution for protecting buildings from excessive sunlight

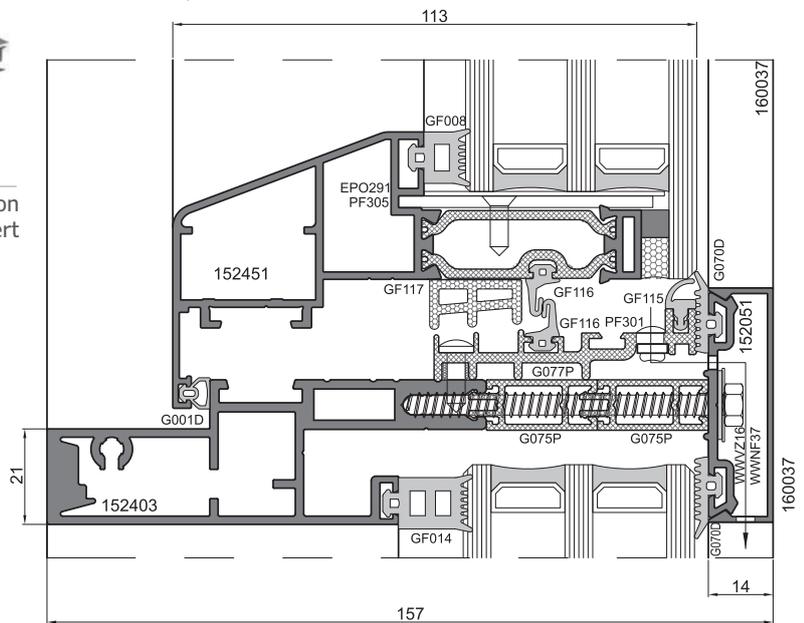
- louvers are recommended for use in conjunction with large glazed constructions in order to reduce sunlight exposure of interior spaces
- the system includes: 100 - 400 mm aerofoil blade profiles, 20, 40 and 80 mm "Z" shaped profiles and rectangular profiles
- louvers mounted to walls, curtain walls as well as windows
- joints for mounting profiles at 15°, 30° and 45° degrees relative to the horizontal plane
- movable louver variant - automatically controlled position





$$U_{cw} = 0.91 \text{ W}/(\text{m}^2\text{K})$$

*reference construction dimensions: L 1200 x H 2500 mm
 $U_g = 0.5 \text{ W}/(\text{m}^2\text{K})$, triple glazing



A system designed for the construction of curtain walls with concealed inward opening windows.

- ▶ a PROCURAL PF152/PF152ESG variant with seamless, inward opening windows
- ▶ the frame and sash construction is not visible from the outside
- ▶ flat constructions possible
- ▶ several possible window-frame connection solutions:
 - standard PF152 cover profile
 - gasket or silicone joint - same as in PF152ESG
- ▶ high thermal insulation and sound reduction performance due to ABS thermal spacers and EPDM cavity gaskets

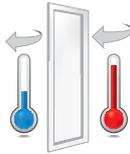
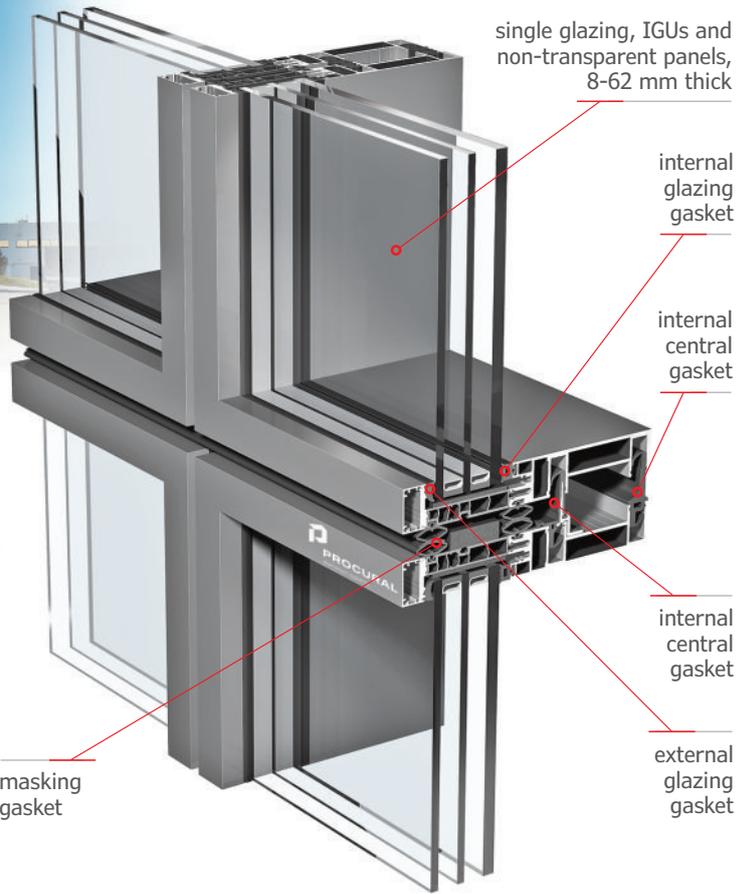
TECHNICAL PARAMETERS

Filling thickness	24 - 56 mm
Sash depth	77 mm lub 101 mm
Mullion and transom depth	76 mm, 100 mm, 124 mm
Mullion and transom width	21 mm
Thermal insulation	U_f from $2.1 \text{ W}/(\text{m}^2\text{K})$ U_{cw}/U_w from $0.91 \text{ W}/(\text{m}^2\text{K})$
Air permeability	class 4
Watertightness	class E 1200 (1200 Pa)
Resistance to impact	class 5 (casements and fixed panels) class 4 (turn-tilt sashes)
Resistance to wind load	class C4 (1600Pa) safety test: +/- 2400Pa

Certification

type testing in acc. with EN 14351-1+A2

CURTAIN WALL SYSTEMS



$$U_{cw} = 0.70 \text{ W}/(\text{m}^2\text{K})$$

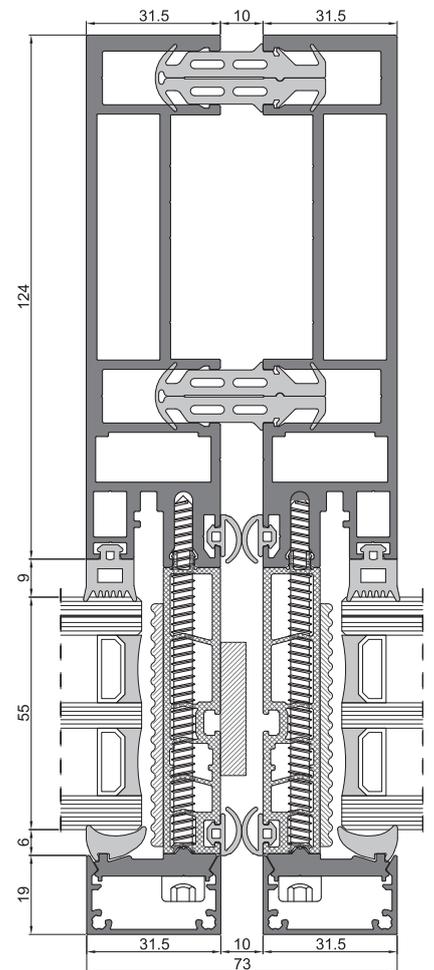
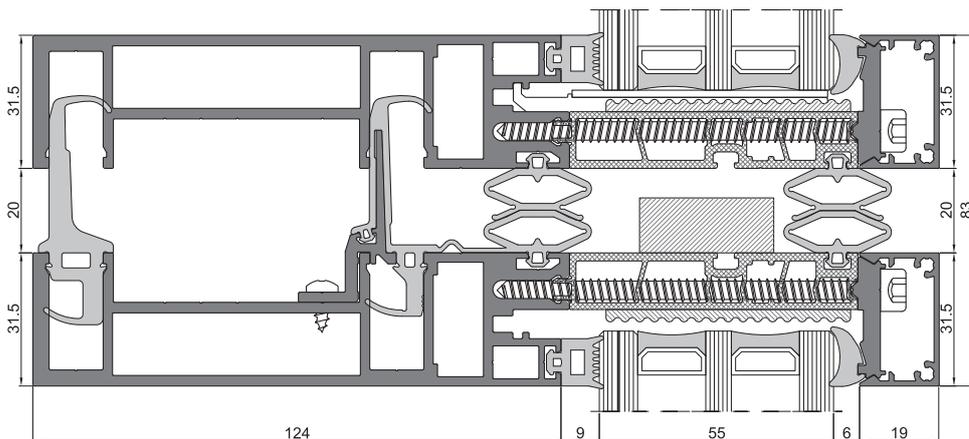
*reference construction dimensions: L 1200 x H 2500 mm,
 $U_g = 0.5 \text{ W}/\text{m}^2\text{K}$, triple glazing

A system designed for the construction of curtain walls consisting of prefabricated units mounted to the load-bearing structure of the building

- elements prefabricated in the workshop - high precision
- no scaffolding required for curtain wall installation
- shortened on-site installation time
- interconnected with other PROCURAL systems
- can compensate for curtain wall movement: +/- 10 mm (vertical), +/- 5 mm (horizontal)

TECHNICAL PARAMETERS

Filling thickness	8 - 62 mm
Frame depth	up to 274 mm (depending on statics calculations)
Frame width	31.5 mm
Transom width	73 mm
Maximum unit weight	350 kg
Maximum unit dimensions	B 1900 mm, H 3700 mm
Thermal insulation	U_f from 1.70 W/(m ² K) U_{cw}/U_w from 0.70 W/(m ² K)

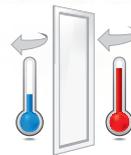
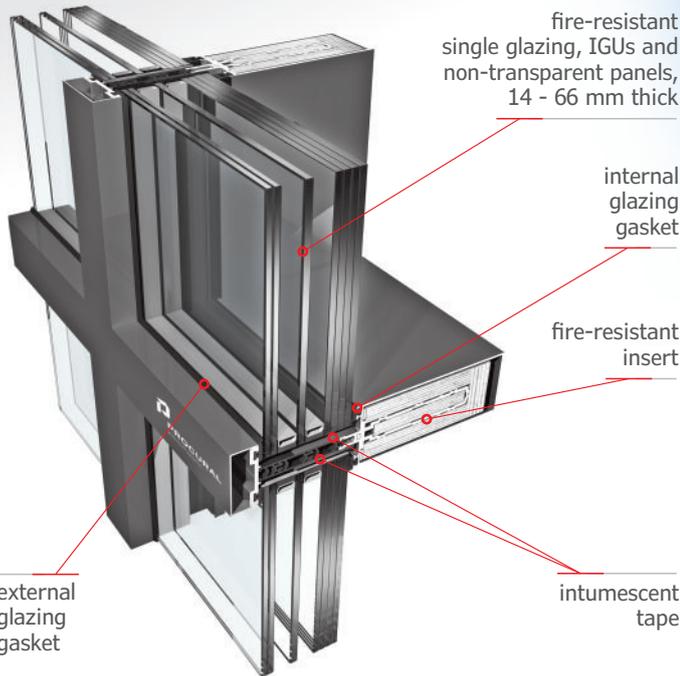


PROCURAL formerly Ponzio Polska

PF152EI

EI30, EI60

CURTAIN WALL SYSTEMS

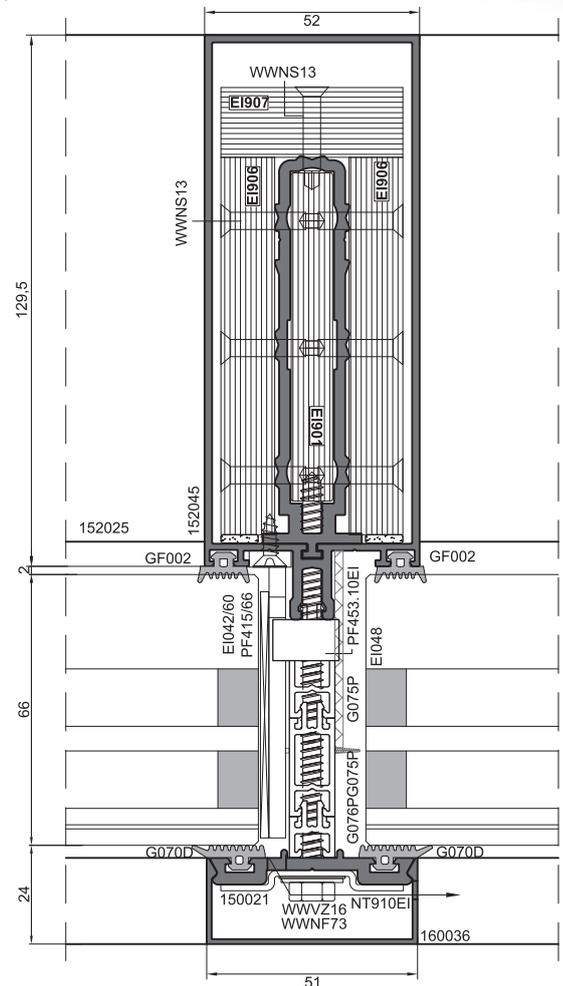


$$U_{cw} = 0.78 \text{ W}/(\text{m}^2\text{K})$$

*reference construction dimensions: L 1200 x H 2500 mm
 $U_g = 0.5 \text{ W}/(\text{m}^2\text{K})$, triple glazing

A fire-resistant variant of the PF152 curtain wall system, classified EI30 and EI60.

- EI30 or EI60 classified curtain wall system designed using fire-resistant inserts, internal reinforcing profiles and dedicated mullion-transom connections
- fillings mounted using pressure slats or semi-structurally, using discrete mounting points and structural sealing (ESG variant)
- various cover plates available
- fire-resistant curtain walls with the possibility of making spandrels
- angular connections up to +/- 7.5° per side (filling rotated about the mullion) and multiplanar curtain walls using non-transparent corner solutions (two mullions + flashing per each angular connection) possible
- inclined curtain walls up to +/-10° possible
- PE78EI fire-resistant windows and doors may be used as filling



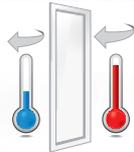
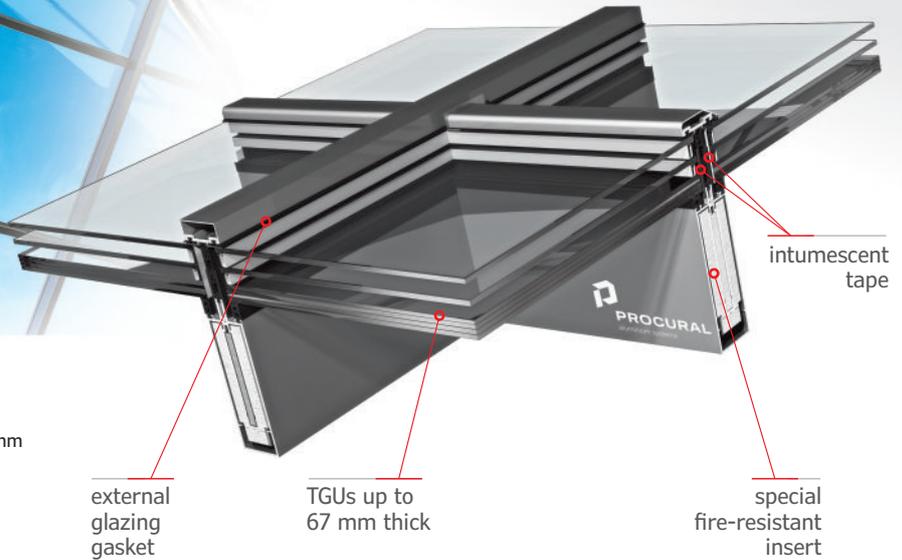
TECHNICAL PARAMETERS

Filling thickness	14 - 66 mm
Mullion depth	85 - 196 mm
Transom depth	91 - 201 mm
Mullion and transom width	52 mm
Thermal insulation	U_f from 1.7 W/(m ² K) U_{cw}/U_w from 0.78 W/(m ² K)
Air permeability	class AE 2100
Watertightness	(standard) class RE 2100 (ESG) class RE 2700
Classification	EI30, EI60

Certification

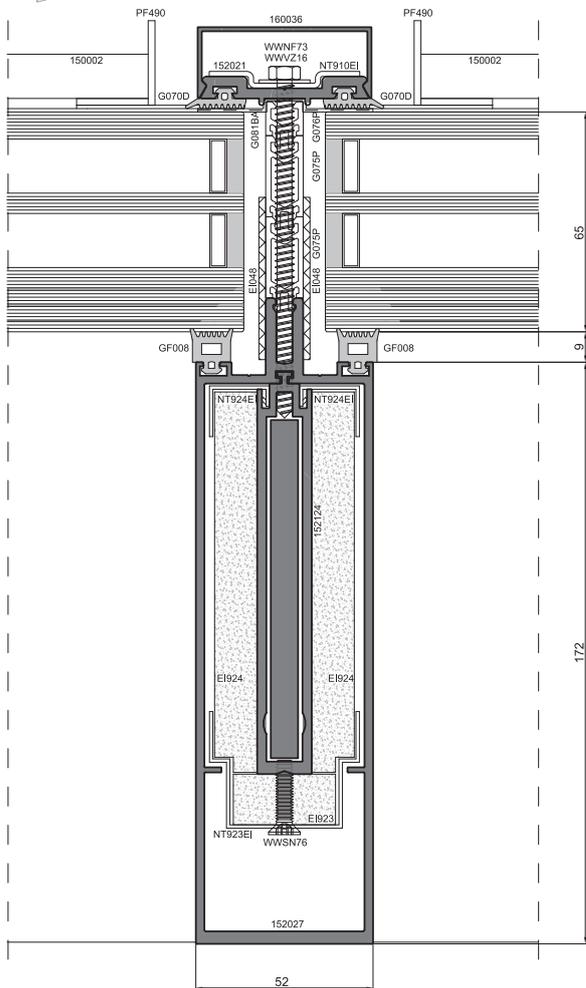
1. Type testing classification for the standard variant: 03-01561/19/R126NZE - EN
2. Type testing classification for the ESG variant: - EN
3. Walls and roof coverings fire spreading assessment: 01561/16/R83NZZ
4. Full and part configuration curtain walling fire resistance classification: 01561/23/R183NZZ

CURTAIN WALL SYSTEMS



$$U_{cw} = 1.1 \text{ W}/(\text{m}^2\text{K})$$

*reference construction dimensions: L 3000 x H 4300 mm
 $U_g = 0,7 \text{ W}/(\text{m}^2\text{K})$, triple glazing



A variant of the PF152 curtain wall system designed for the construction of rooflights resistant to internal fire REI30/RE45 in acc. with EN 13501-2

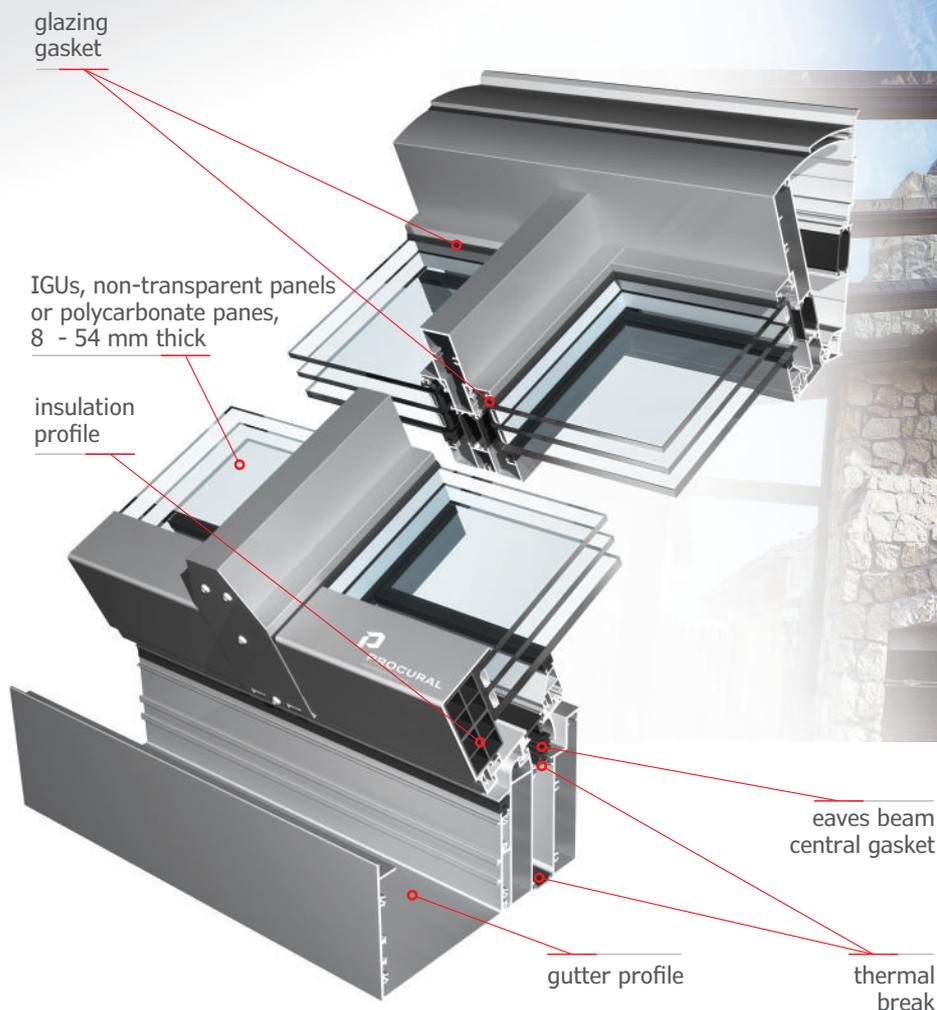
- 5° - 80° roof slopes available (0° - 80° for internal constructions)
- a variable load (e.g. snow load) of 0.24 kN/m² was simulated during the test
- maximum glazing size 900x2000 mm or 988x1500 mm
- triangular and trapezoid glazing shapes possible
- no limit to roof width, the size of the roof is only limited by maximum rafter and purlin stress
- TGUs up to 67 mm thick may be used
- glazed roof may be connected with a PROCURAL PF152EI fire-resistant curtain wall

TECHNICAL PARAMETERS

Filling thickness	do 67 mm
Mullion depth	85 - 196 mm
Transom depth	91 - 201 mm
Mullion and transom width	52 mm
Thermal insulation	U_f from 1.9 W/(m ² K) U_{cw}/U_w from 1.1 W/(m ² K) <small>(for $U_g=0.7 \text{ W}/\text{m}^2\text{K}$ and structure dims. 3.0 x 4.3 m)</small>
Air permeability	class AE 1200
Watertightness	class RE 1350
Classification	REI30/RE45

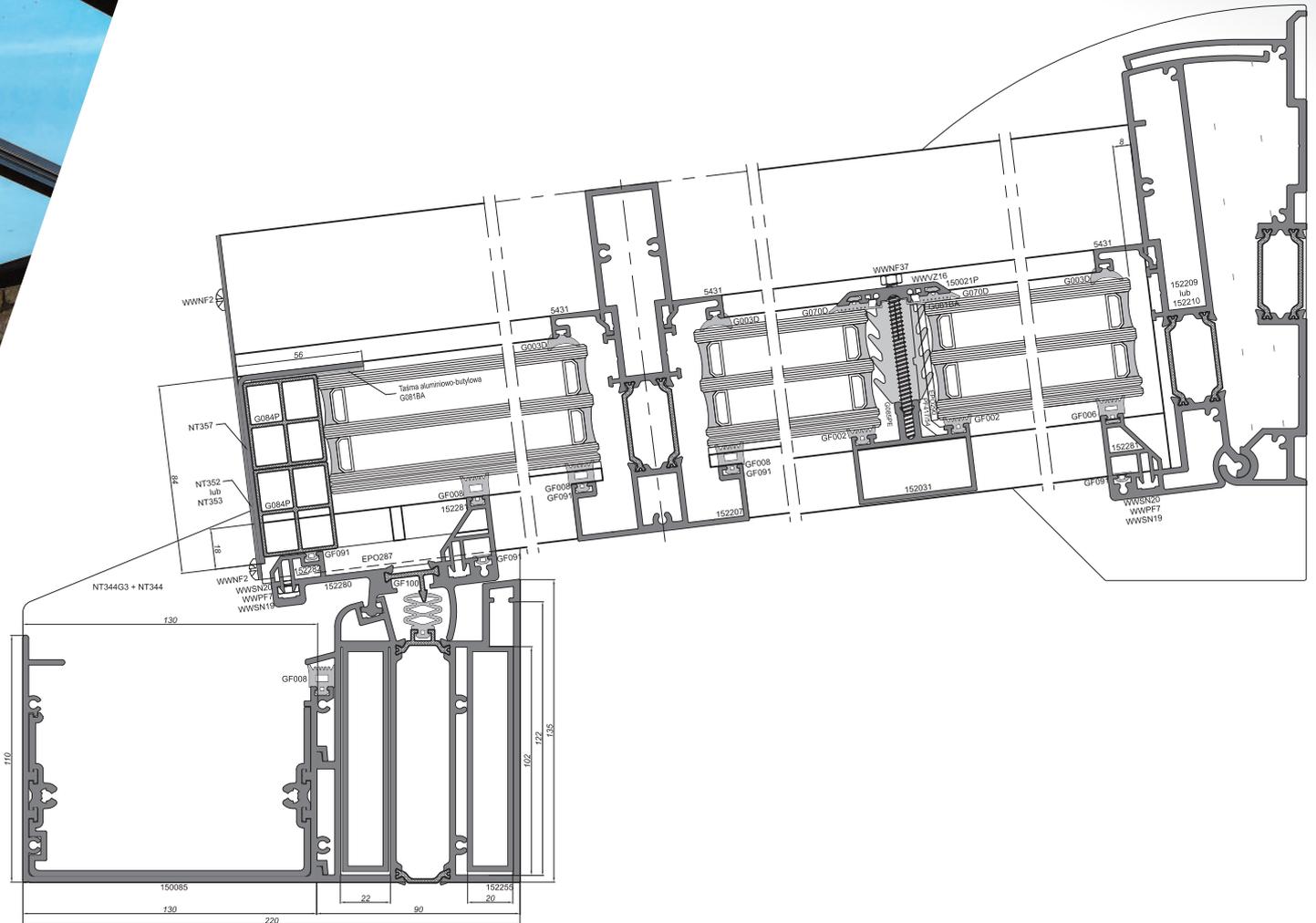
Certification

1. Durability and functionality properties, weathertightness and safety of use technical assessment of the glazed roof covering kit: 01561/18/R110NZE
2. Walls and roof coverings fire spreading assessment: 01561/16/R83NZN
3. ITB technical decision 01561/24/R193NZN and ITB fire resistance classification 01561/24/R144NZN
4. Fire resistance classification in acc. with EN 13501-2: 1577.1/17/Z00NZN



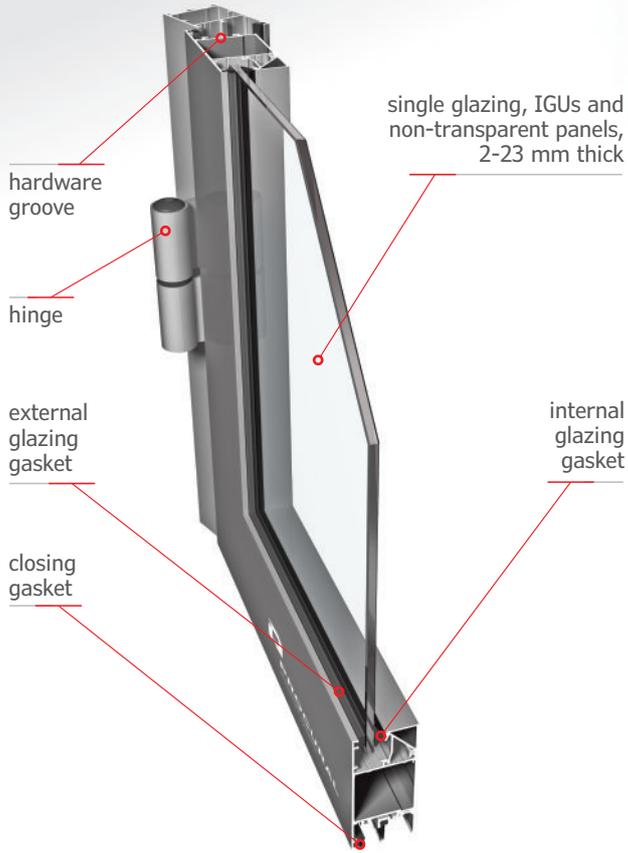
A system designed for the construction of winter gardens and other spatial structures.

- ▀ roof slope construction consisting of PF152 system profiles or PF152WG reverse rafter profiles
- ▀ roof structure placed on curtain wall mullions, door-and-window system profiles or reinforced PF152WG mullions
- ▀ the rafter system enables the use of standard glazing beads from door-and-window systems
- ▀ identical rafter-transom connections as in PF152 curtain walls
- ▀ roof slopes mounted using a hinge joint on the wall beams and system joints on the eaves beam (includes a gutter profile)
- ▀ interconnected with other PROCURAL systems
- ▀ roof slopes of 7° - 45° available
- ▀ very easy prefabrication
- ▀ PROKAL 3D (KKP) design software available



TECHNICAL PARAMETERS

Filling thickness	8 - 54 mm
Type of filling	IGUs, non-transparent panels, polycarbonate panes
Rafter width	76 / 111 mm
Roof slope angle	7° - 45°



A non-insulated aluminium profile system designed for the manufacturing of internal constructions: glazed partitions and single and double doors.

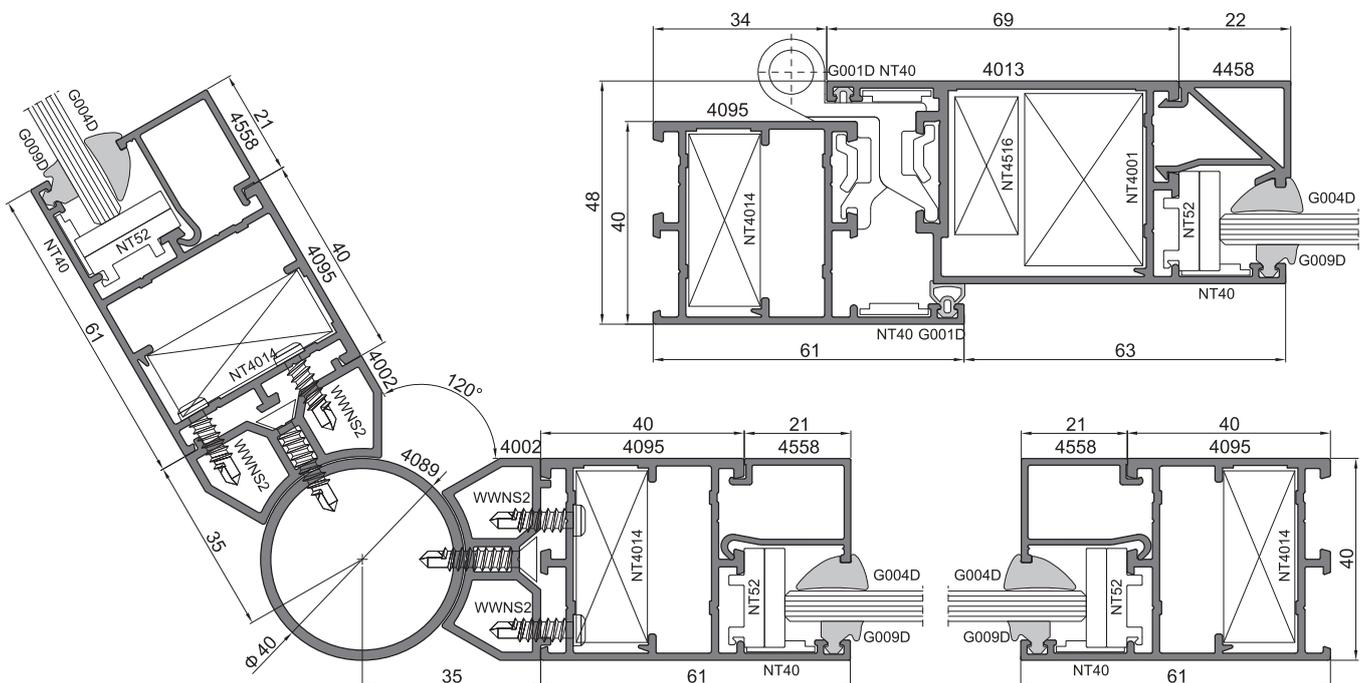
- ▀ manual and automatic sliding doors and angled partitions available
- ▀ Euro hardware groove - wide range of available accessories
- ▀ mortise hinges available - easier installation and lower costs
- ▀ wide choice of possible door leaves - with or without kickplate, with or without threshold
- ▀ screwed and crimped joints available

TECHNICAL PARAMETERS

Filling thickness	2 - 23 mm
Profile depth	40 mm
Type of filling	single glazing, IGUs and non-transparent panels

Certification

type testing in acc. with EN 14351-2

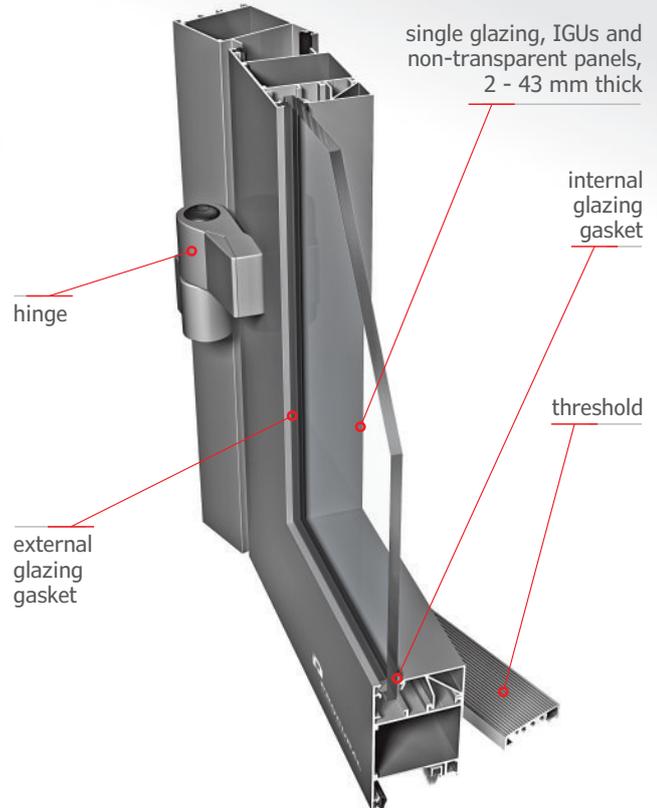


INTERNAL WINDOWS AND DOORS



A non-insulated aluminium profile system designed for the manufacturing of internal constructions: glazed partitions, windows and doors.

- central hardware groove in door profiles
- window sashes with PVC hardware groove available
- wide range of available hardware
- wide range of possible constructions: coplanar doors, doors with a central hardware groove, glass doors, smoke control doors, manual and automatic sliding doors, swing doors, windows and glazed partitions
- window sashes flush with the frame on the outside
- wide choice of possible door leaves - with or without kickplate, with or without threshold
- screwed and crimped joints available

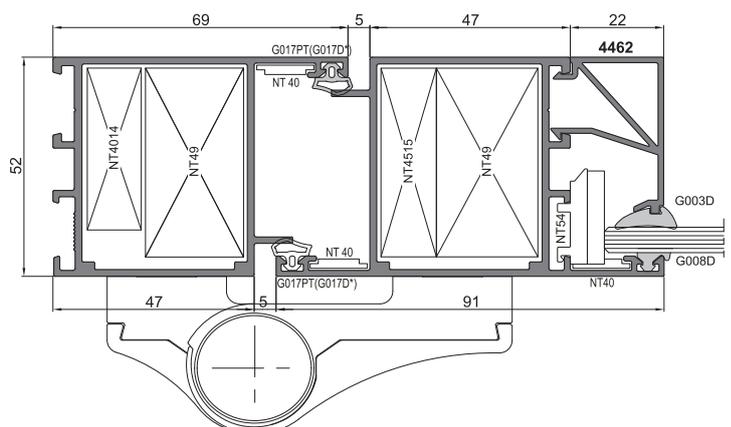
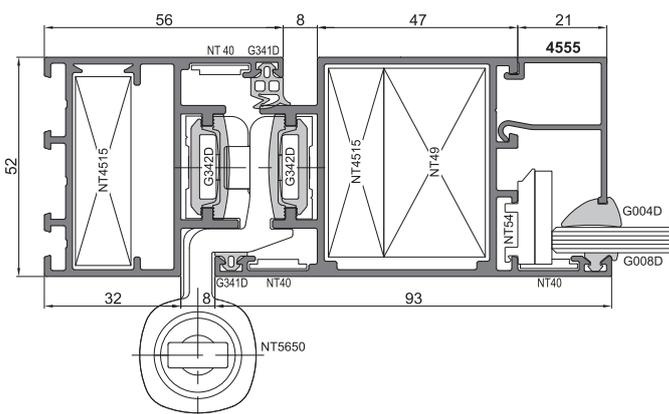
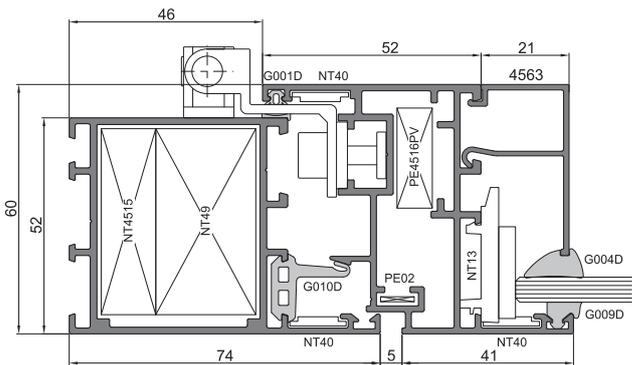


TECHNICAL PARAMETERS

Filling thickness	doors and partitions: 2 - 35 mm windows: 2 - 43 mm
Frame depth	52 mm
Sash depth	window - 60 mm, door - 52 mm
Type of filling	single glazing, IGUs and non-transparent panels
Air permeability	class 2
Smoke control	class S _a and S ₂₀₀ in acc. with EN 13501-2

Certification

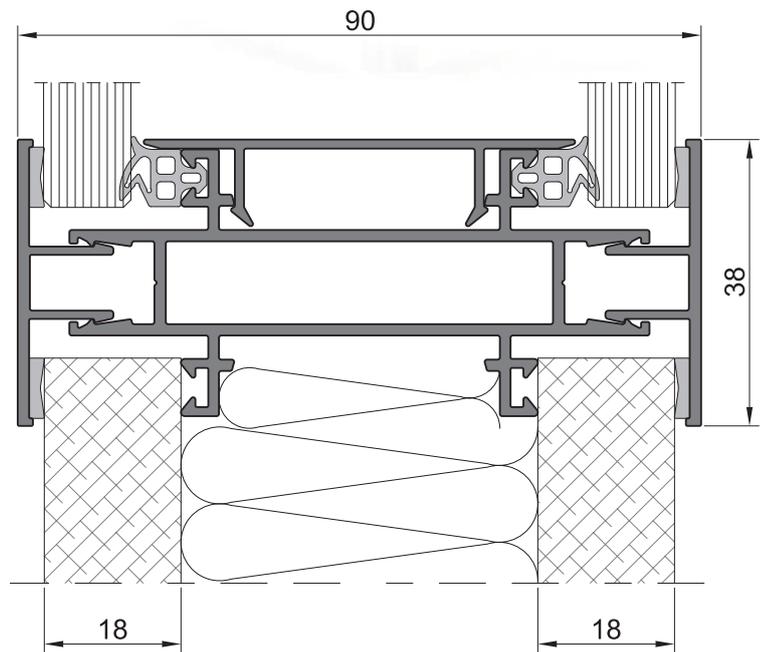
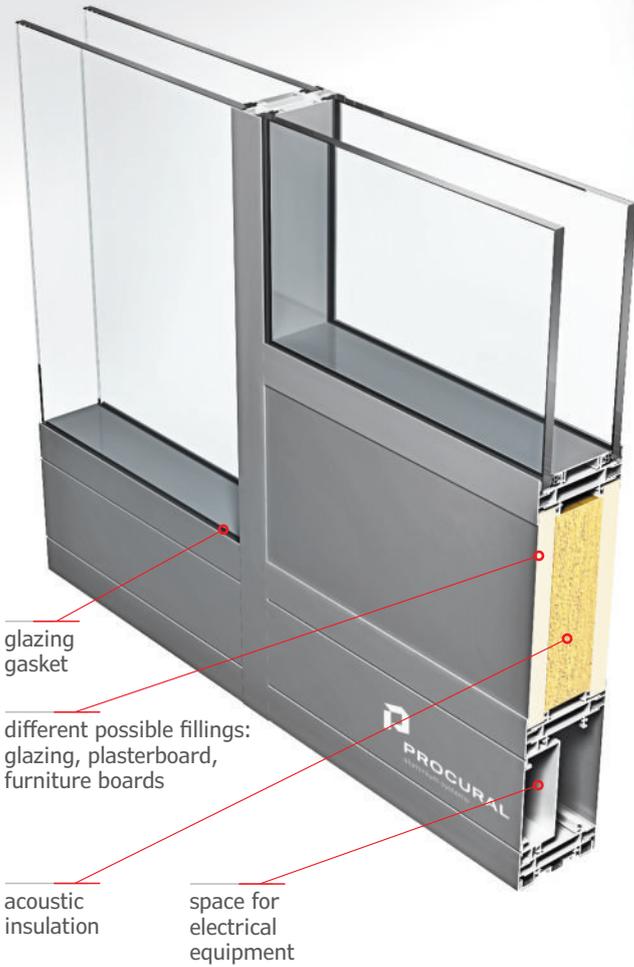
National Technical Assessment ITB-KOT-2018/0621



OF90

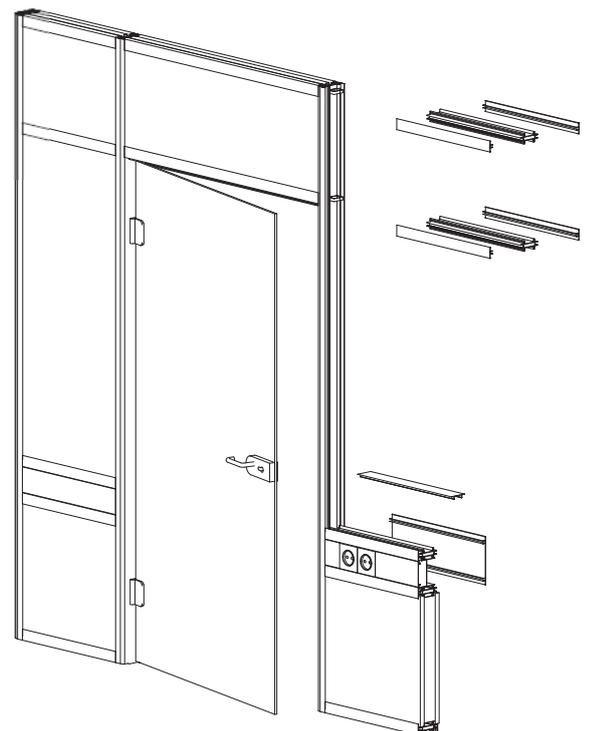
OFFICE PARTITIONS

INTERNAL WINDOWS AND DOORS



An internal partition system with improved sound reduction characteristics designed for the construction of partitions in modern office spaces

- visually light constructions with good sound reduction performance
- profile dimensions: pressure plate width - 38 mm, construction depth - 80 or 90 mm
- fillings: glazing or non-transparent panels 3 - 18 mm thick (fixed using pressure plates and glazing gaskets)
- a wide variety of possible constructions, tailored for the customer's needs
- angles available 90° - 270°
- integrated electrical and office equipment mounting
- internal blinds may be installed with glass fillings
- key features: economical solutions, quick prefabrication, easy installation
- very high sound reuction R_w up to 52 dB
(R depends on the chosen finishing variant and other parameters included in the test report)

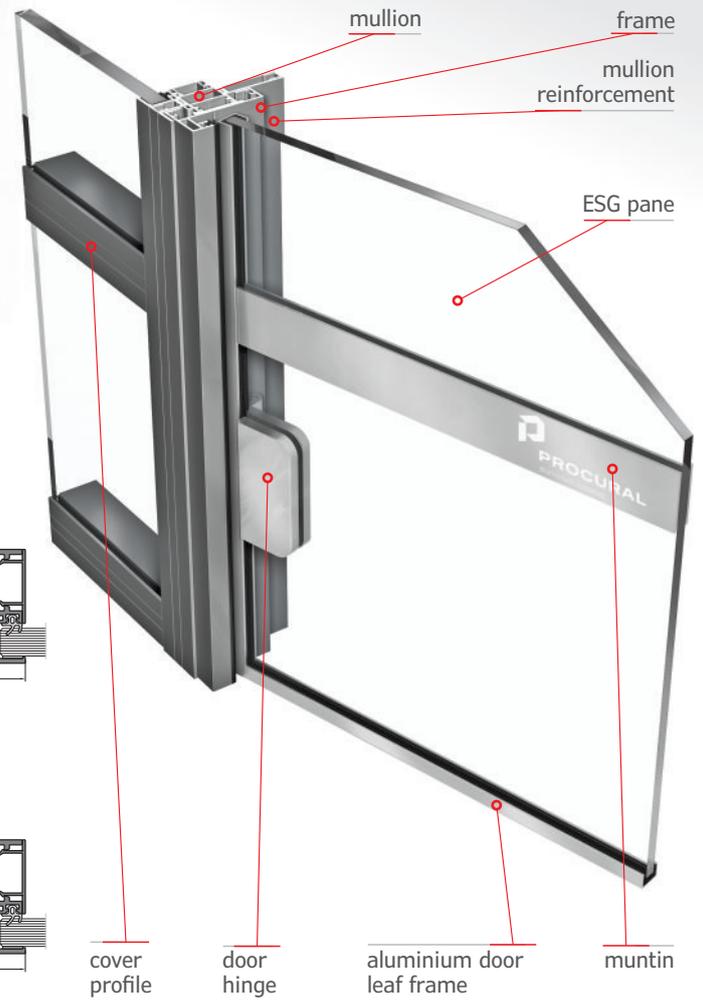


formerly
Ponizio Polska

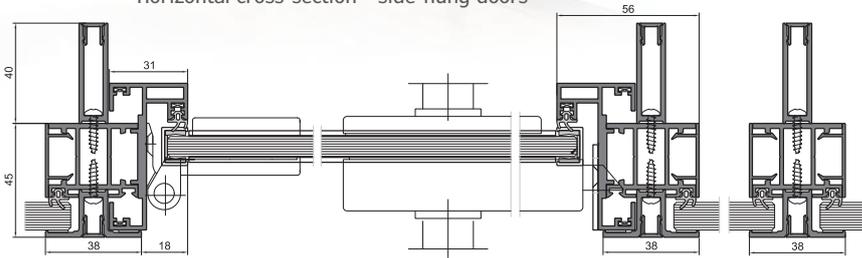
PROCURAL OF90IW

LOFT PARTITIONS

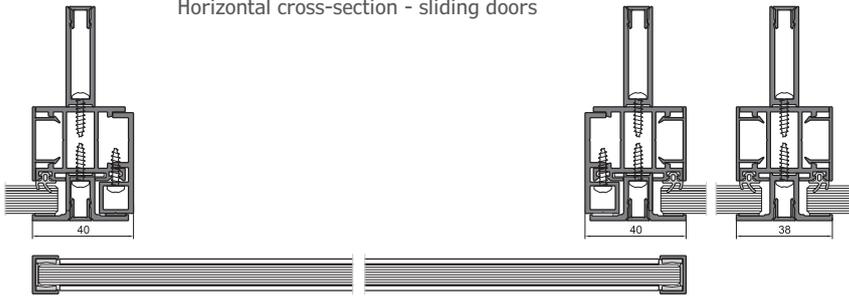
INTERNAL WINDOWS AND DOORS



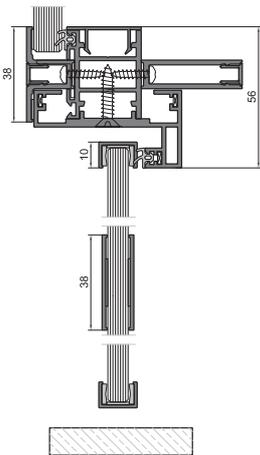
Horizontal cross-section - side-hung doors



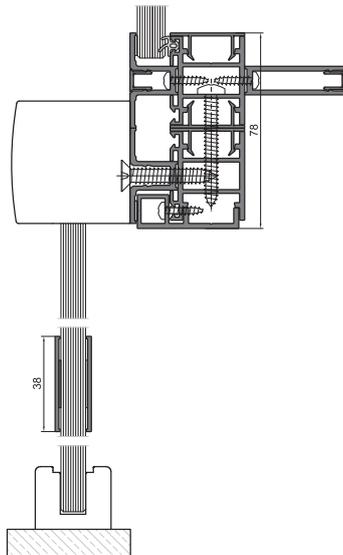
Horizontal cross-section - sliding doors



Vertical cross-section - side-hung doors

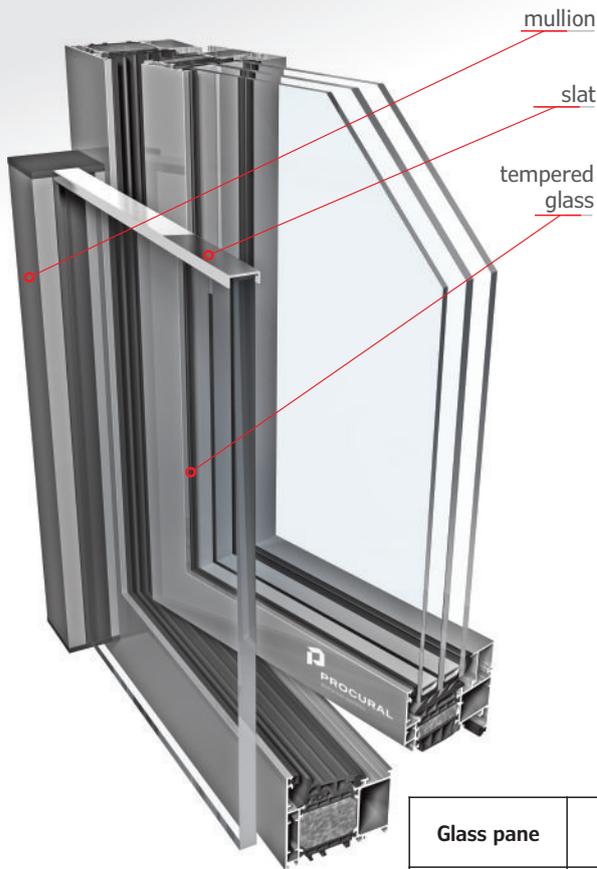


Vertical cross-section - sliding doors



A perfect solution for office and living spaces

- tall partitions with narrow profiles (mullions and transoms only 38 mm wide)
- narrow muntins and rectangular reinforcements contribute to the unique design, reinforcing the loft styling of interiors
- side-hung and sliding doors available, both with all-glass leaves and leaves with narrow aluminium frames
- easy installation and connectability with the PROCURAL OF90 system featuring improved sound reduction allows creating versatile joinery depending on sound reduction requirements
- complete solutions, high quality and user comfort are the features of this system
- the full range of RAL colours and the possibility to anodise profiles means that the system features an interesting design and many possible applications in residential and public spaces



PROCURAL FB51 juliet balcony kit designed for mounting on Ponzio aluminium window and curtain wall systems

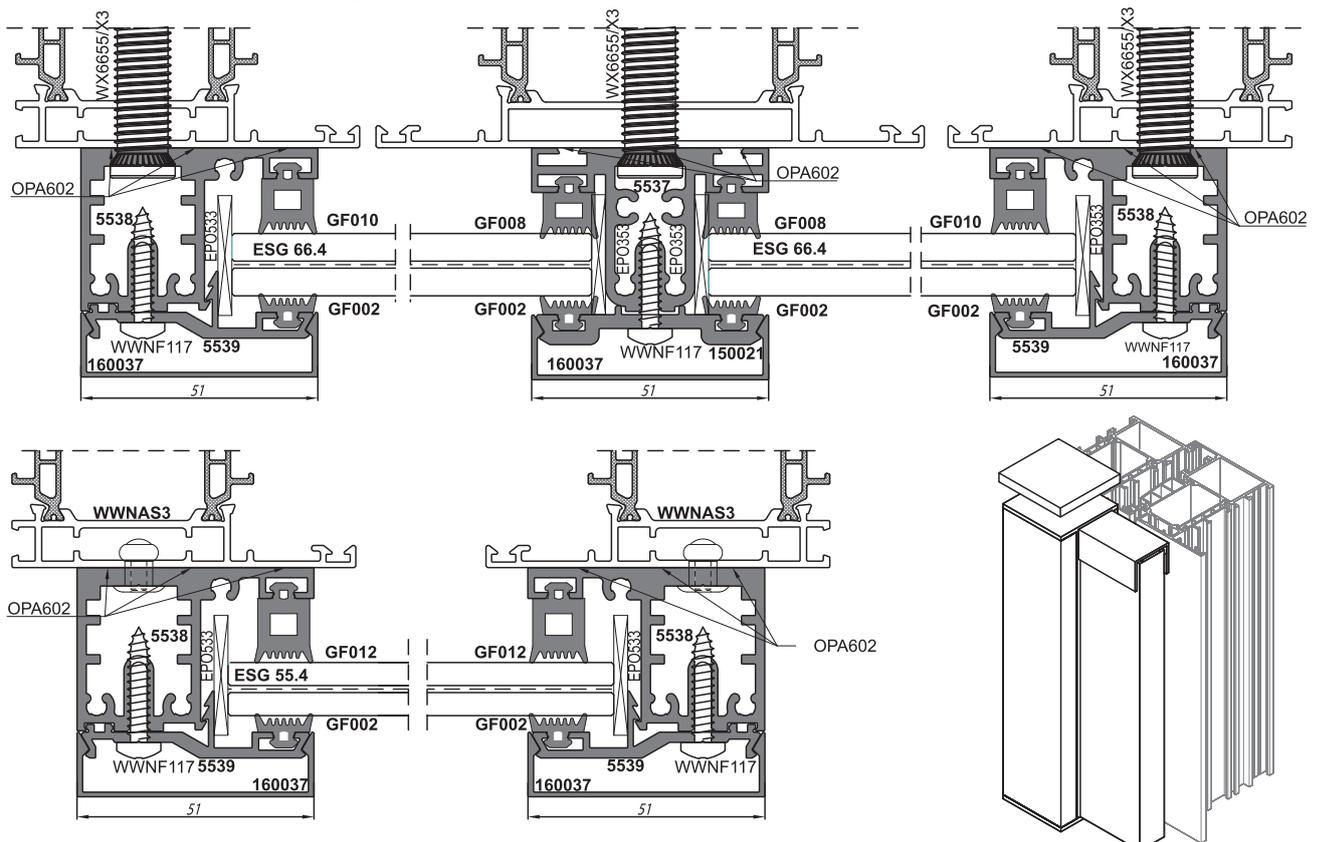
- may be used as barriers guarding against falling out, mounted on "French" windows in window sets and curtain walls
- light, easy to assemble and universal; single and double span structures available
- National Technical Assessment ITB-KOT-2020/1428, 1st edition
- wide range of available laminated and tempered glazing: ESG55.4, ESG66.4, ESG88.4, ESG1010.4, to be chosen* in accordance with the required height and width of the glass pane; the dimensions must be in the following range:
 - width: 500-2000 mm,
 - height: 1000-1350 mm
- may be mounted to select PVC profiles with steel inserts

* Based on information contained in the National Technical Assessment ITB-KOT-2020/1428, 1st edition and the Research Paper 01561/19/R121NZE - "Technical opinion regarding the assessment of durability and functional characteristics of PROCURAL FB51 glass parapets (mounted on French balcony windows) intended for installation on PROCURAL aluminium windows and curtain walls"

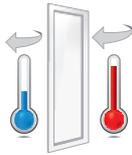
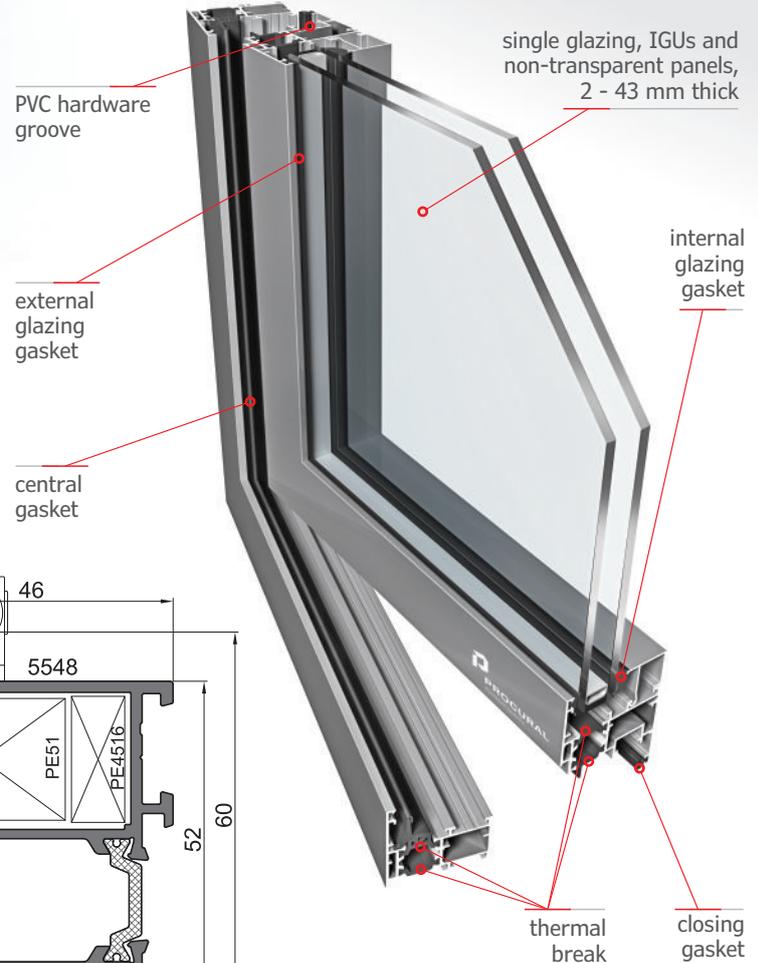
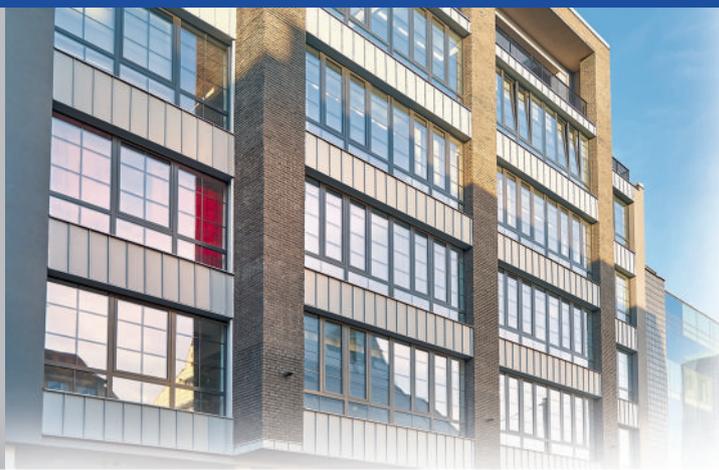
Glazing and approved dimensions

Glass pane	Min glazing width [mm]	Min glazing height [mm]	Max glazing width [mm]	Max glazing height [mm]
ESG 55.4	500	1000	1000	1350
ESG 66.4	500	1000	1350	1350
ESG 88.4	500	1000	1700	1350
ESG 1010.4	500	1000	2000	1350

* for mounting to PVC profiles, minimum glazing height is 900 mm

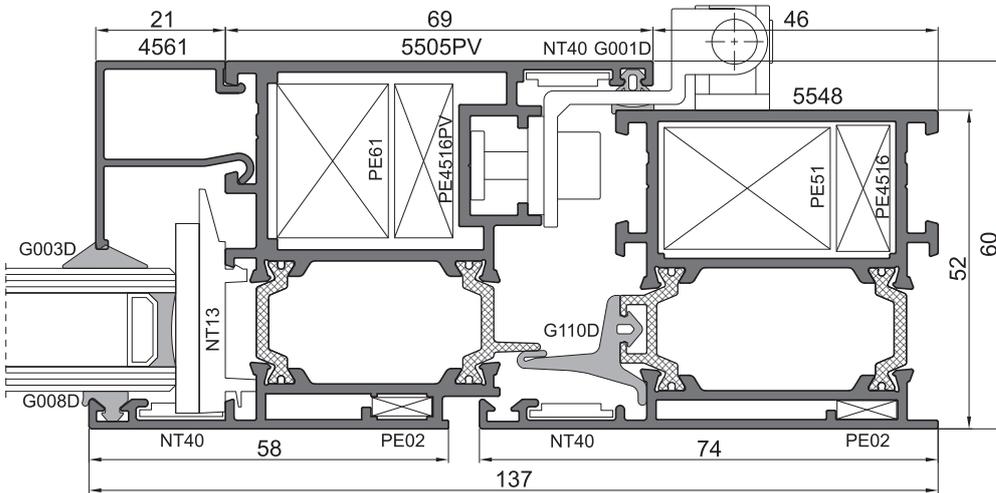


EXTERNAL WINDOWS AND DOORS



$$U_w = 1.3 \text{ W}/(\text{m}^2\text{K})$$

*reference construction dimensions: L 1230 x H 1480 mm
 $U_g = 0.6 \text{ W}/(\text{m}^2\text{K})$, triple glazing



An economic insulated aluminium profile system designed for the construction of external doors with thermal breaks

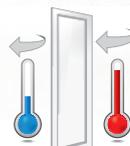
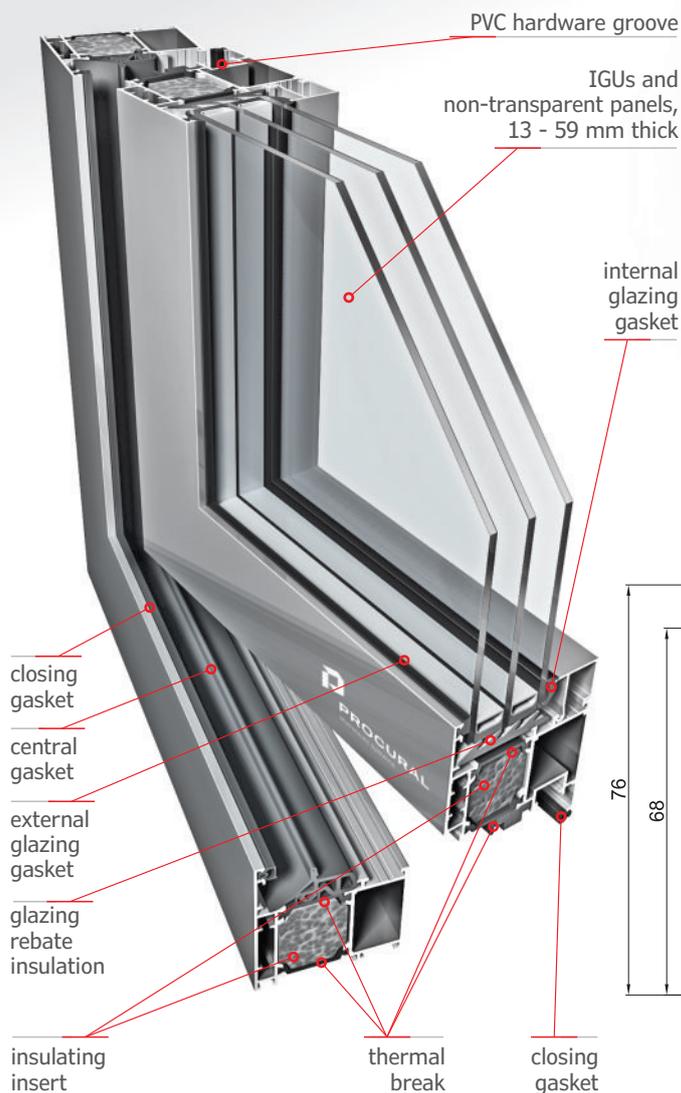
- Euro hardware groove and hardware groove used in PVC and wood windows
- large-dimension constructions possible
- interconnected with other PROCURAL systems
- profile bending available
- screwed and crimped corner connections available
- sash and frame profiles flush on the outside
- door structures tested in acc. with the EN 14351-1+A2 standard
- automatic sliding doors possible

TECHNICAL PARAMETERS

Filling thickness	frame/leaf 2-35 mm sash 10-43 mm
Frame depth	52 mm
Sash depth	window - 60 mm, door - 52 mm
Air permeability	window and door - class 4 (highest)
Watertightness	door - class E750 (750 Pa) window - class E1350 (1350 Pa)
Type of filling	single glazing, IGUs and non-transparent panels
Thermal insulation	U_f from 2.1 W/(m ² K)

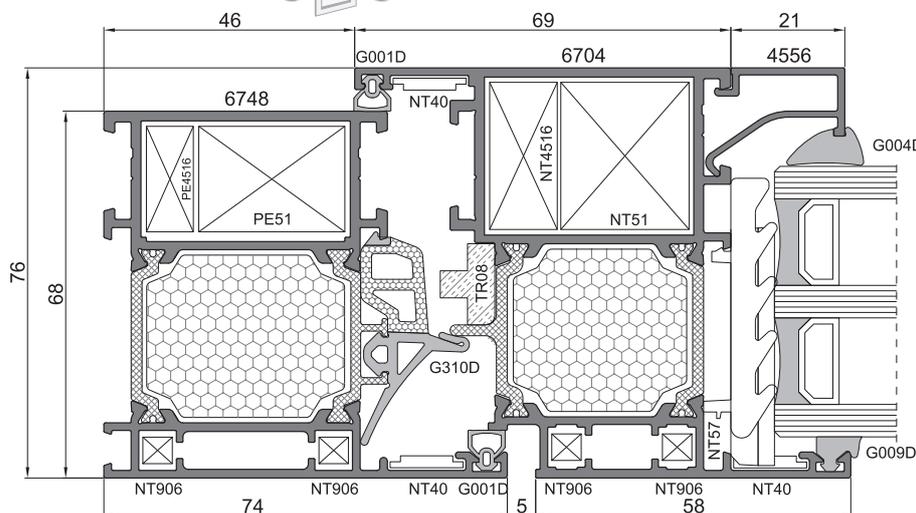
Certification

type testing in acc. with EN 14351-1 + A2



$$U_w = 0.84 \text{ W}/(\text{m}^2\text{K})$$

*reference construction dimensions: L 1480 x H 2180 mm
 $U_g = 0.5 \text{ W}/(\text{m}^2\text{K})$, triple glazing



An insulated, three-cavity profile system featuring very good thermal performance

- Euro hardware groove and hardware groove used in PVC and wood windows
- high thermal performance due to the optimised 32 mm thermal break and central gaskets (mono- or bi-component)
- easy installation of a wide range of hardware
- the three-cavity design of profiles ensures good mechanical durability, thus enabling large constructions
- window sashes flush with the frame on the outside
- profile bending available
- wide variety of corner joint solutions
- wide variety of possible constructions: turn-tilt, outward opening, concealed sash, pivoting etc.
- different thermal insulation variants with different insulation inserts: PE68+, PE68HI

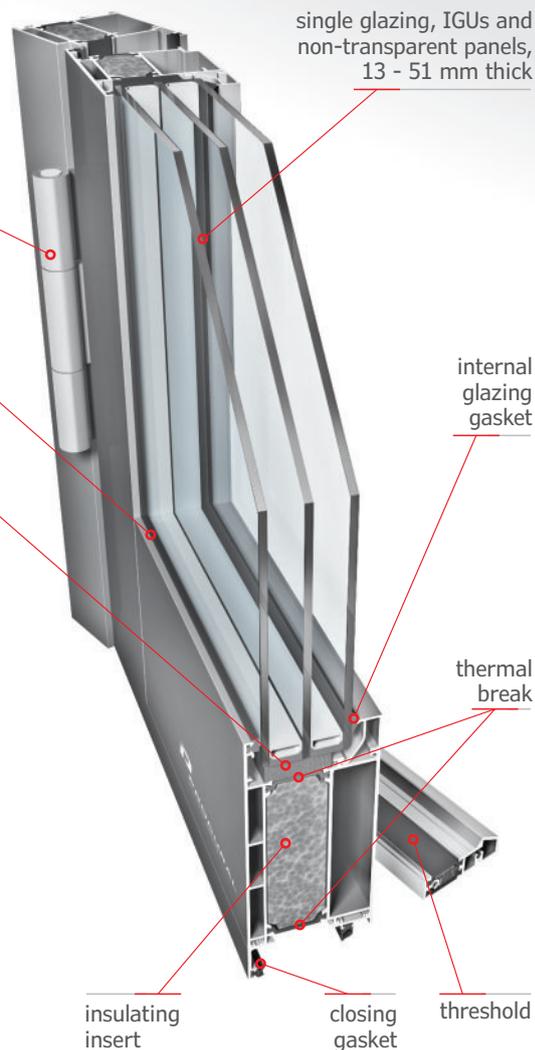
TECHNICAL PARAMETERS

Filling thickness	frame: 13 - 51 mm sash: 21 - 59 mm
Frame depth	68 mm
Sash depth	76 mm
Maximum sash dimensions	L 1550 x H 2200 mm L 1200 x H 2400 mm, L 1100 x H 2700 mm
Maximum sash weight	200 kg
Air permeability	class 4 (highest)
Watertightness	class E1650 (1650 Pa)
Thermal insulation	PE68: U_f from 1.8 $\text{W}/(\text{m}^2\text{K})$, U_w from 0.93 $\text{W}/(\text{m}^2\text{K})$ PE68HI: U_f from 1.4 $\text{W}/(\text{m}^2\text{K})$, U_w from 0.84 $\text{W}/(\text{m}^2\text{K})$
Resistance to wind load	class C5* (* page 48)
Resistance to burglary	class RC2, RC3 in acc. with EN 1627

Certification

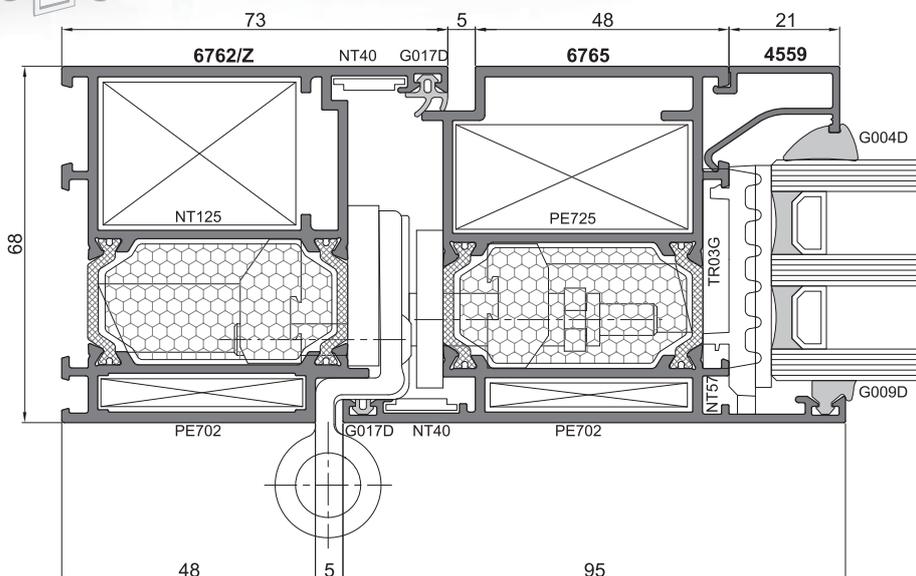
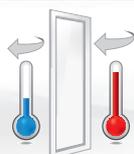
type testing in acc. with EN 14351-1 + A2

EXTERNAL DOORS



$$U_d = 1.06 \text{ W}/(\text{m}^2\text{K})$$

*reference construction dimensions: L 1230 x H 2180 mm
 $U_g = 0.5 \text{ W}/(\text{m}^2\text{K})$, triple glazing



TECHNICAL PARAMETERS

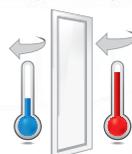
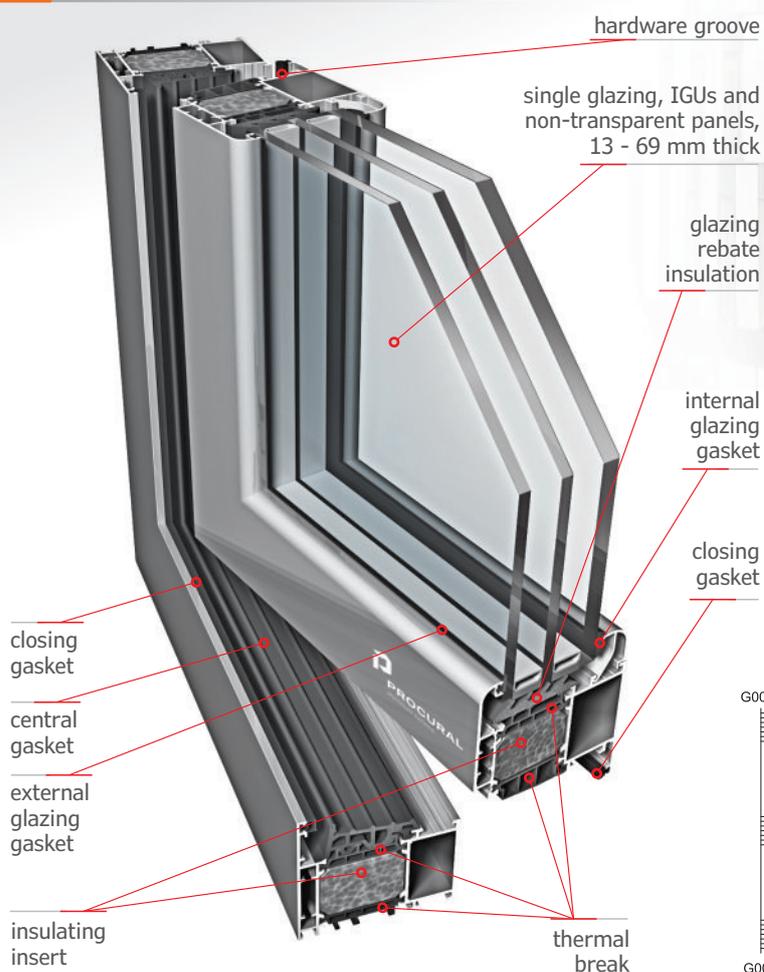
Filling thickness	sash: 13 - 51 mm
Frame and leaf depth	68 mm
Maximum leaf dimensions	L 1350 x H 2500 mm
Maximum leaf weight	over 200 kg
Air permeability	class 3
Watertightness	class 8A
Thermal insulation	PE68: U_f from 2.1 $\text{W}/(\text{m}^2\text{K})$, U_d from 1.13 $\text{W}/(\text{m}^2\text{K})$ PE68HI: U_f from 1.8 $\text{W}/(\text{m}^2\text{K})$, U_d from 1.06 $\text{W}/(\text{m}^2\text{K})$
Resistance to wind load	class C2/B3* (* page 48)
Resistance to burglary	class RC2, RC3 in acc. with EN 1627

An insulated, three-cavity profile system designed for the construction of doors

- coplanar construction (frame-leaf gap - 18 mm)
- Euro groove glazing beads
- profiled 24 mm thermal breaks
- doors easily incorporated in window sets due to special modifier profiles
- DGUs and TGUs up to 51 mm thick can be used
- door leafs flush with the frame
- large-dimension constructions possible
- wide variety of corner joint solutions
- profile bending available
- wide range of available hardware
- different thermal insulation variants with different insulation inserts: PE68, PE68+, PE68HI

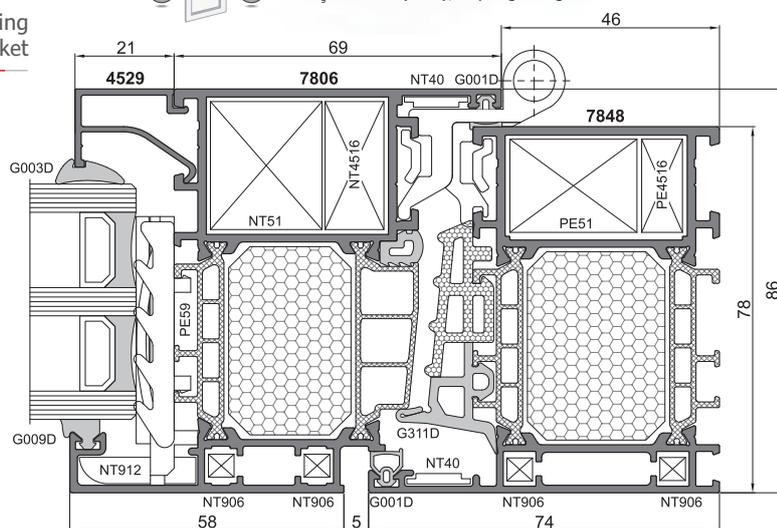
Certification

type testing in acc. with EN 14351-1 + A1



$$U_w = 0.74 \text{ W}/(\text{m}^2\text{K})$$

*reference construction dimensions: L 1480 x H 2180 mm
 $U_g = 0.5 \text{ W}/(\text{m}^2\text{K})$, triple glazing



An insulated, three-cavity profile system designed for the construction of windows with very high thermal insulation requirements

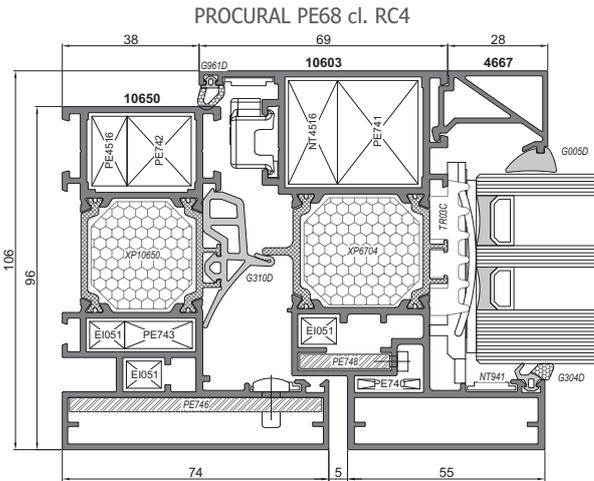
- Euro hardware groove and hardware groove used in PVC and wood windows
- high thermal performance due to the multi-cavity 42 mm thermal break and bi-component central gasket
- large-dimension constructions possible
- wide range of available hardware
- window sashes flush with the frame on the outside
- different thermal insulation variants with different insulation inserts: PE78N, PE78N+, PE78NHI+
- wide variety of possible constructions: turn-tilt, outward opening, concealed sash etc.

TECHNICAL PARAMETERS

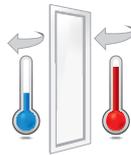
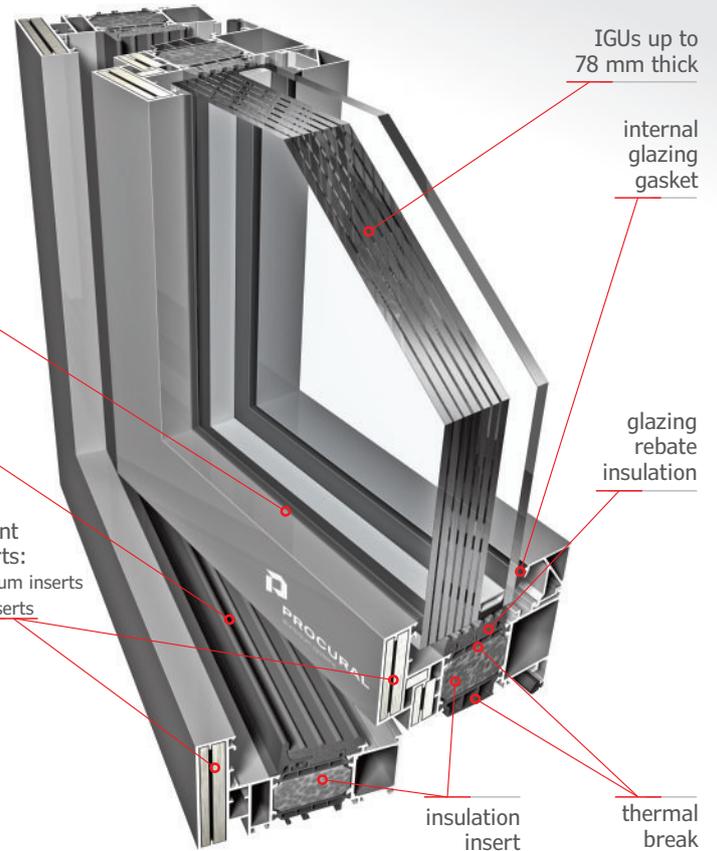
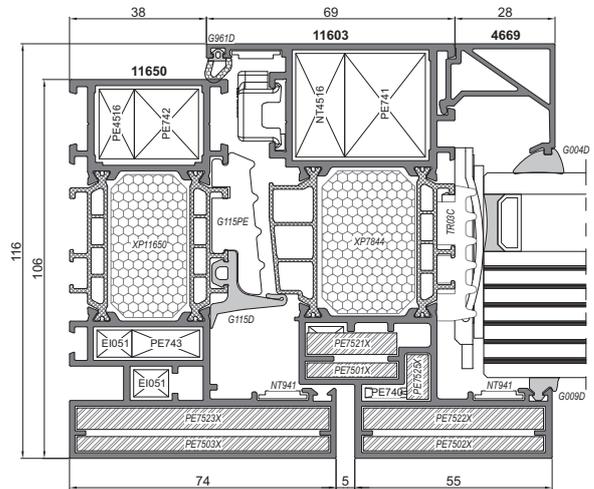
Filling thickness	frame: 13-61 mm sash: 13-69 mm
Frame depth	78 mm
Sash depth	86 mm
Maximum sash dimensions	L 1700 x H 2200 mm L 1300 x H 3000 mm
Maximum sash weight	200 kg
Air permeability	class 4 (highest)
Watertightness	class E1650 (1650 Pa)
Thermal insulation	PE78N: U_f from 1,7 $\text{W}/(\text{m}^2\text{K})$, U_w from 0,88 $\text{W}/(\text{m}^2\text{K})$ PE78NHI: U_f from 0,9 $\text{W}/(\text{m}^2\text{K})$, U_w from 0,74 $\text{W}/(\text{m}^2\text{K})$
Resistance to wind load	class C5* (* page 48)
Resistance to burglary	class RC2, RC3 in acc. with EN 1627

Certification

type testing in acc. with EN 14351-1 + A2



PROCURAL PE78N cl. 4 and FB4 or FB6



$$U_w = 0.76 \text{ W}/(\text{m}^2\text{K})$$

*reference construction dimensions: L 1480 x H 2180 mm
 $U_f = 0.5 \text{ W}/(\text{m}^2\text{K})$, triple glazing

TECHNICAL PARAMETERS

Filling thickness and type	up to 78 mm
Frame depth	PE68 - 96 mm, PE78N - 106 mm
Sash depth	PE68 - 106 mm, PE78N - 116 mm
Thermal break width	PE68 - 32 mm PE78N - 42 mm
Maximum sash dimensions	L 1400 x H 2200 mm
Maximum sash weight	170 kg
Air permeability	class 4 (highest)
Watertightness	class E1500 (1500 Pa)
Thermal insulation	U_f from 0.96 W/(m ² K) U_w from 0.76 W/(m ² K)
Resistance to wind load	class C5* (* page 48)
Resistance to burglary	klasa RC4 wg PN-EN 1627
Bulletproof	class FB4, FB6 in acc. with EN 1522

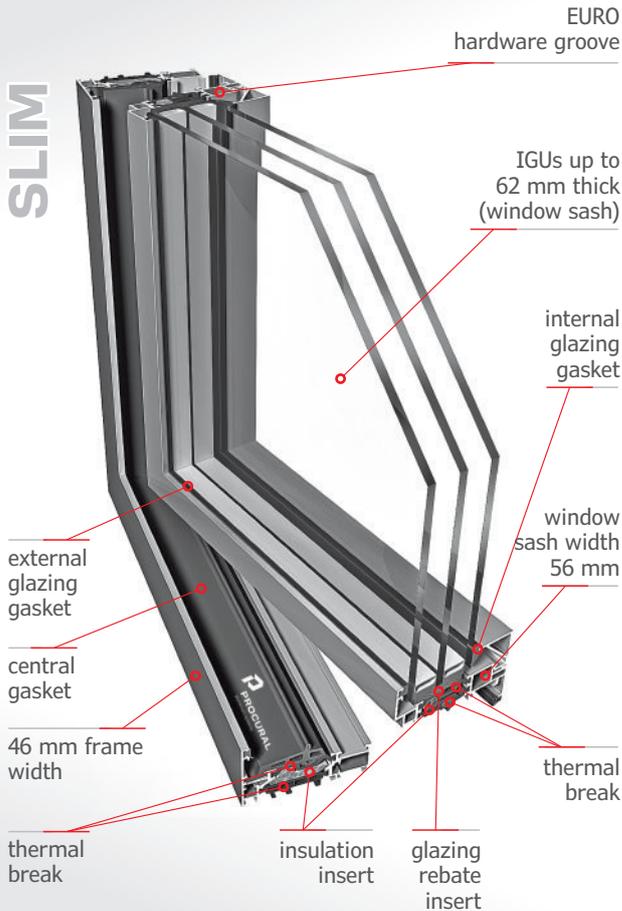
Certification

type testing in acc. with EN 14351-1 + A2

A system designed for the construction of RC4 antiburglary glazed partitions and windows FB4 and FB6 bulletproof windows (PE78N)

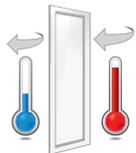
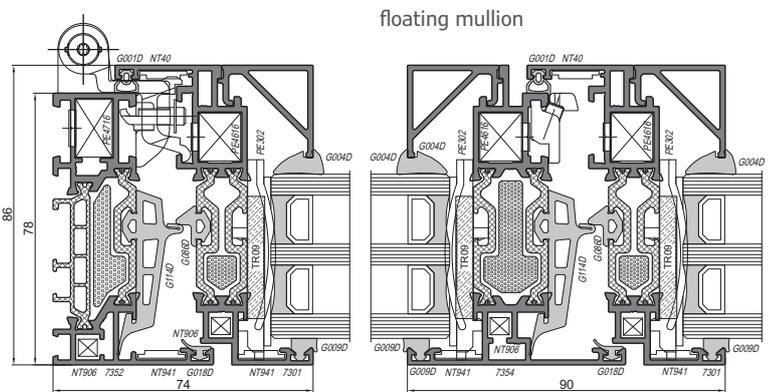
- several features preventing and hindering breal-ins, extending the time to breach:
 - reinforced profile construction
 - reinforced glazing beads
 - handle with key
 - handle and hardware drives secured against drilling
- 10 mm rebate allows the use of reinforced hardware
- antiburglary bars and roller shutters not needed
- glazing range up to 78 mm allows the use of IGUs containing secure glass, cl. P6B or better
- easier and quicker assembly due to IGUs not being glued to profiles
- high thermal insulation
- outward appearance identical as non-burglary-rated windows, improving overall building aesthetics
- PE78N FB4 bulletproof windows secured in the external cavity from the attack side with aluminium flat bars (simpler, lighter solution)
- PE78N FB6 bulletproof windows secured with steel flat bars

SLIM



An insulated profile system with the Euro hardware groove

- the narrow PE78N SLIM and PE78N SLIM INDUSTRIAL profiles were designed with modern interiors with large glazings in mind
- 90 mm wide floating mullion perfectly complements the system
- PE78N SLIM window sashes flush with the frame on the outside
- PE78N SLIM INDUSTRIAL windows perfect for tall loft spaces due to industrial design of profiles
- different thermal insulation variants with different insulation inserts: PE78N, PE78N+, PE78NHI
- 39 mm thermal break provides good thermal parameters



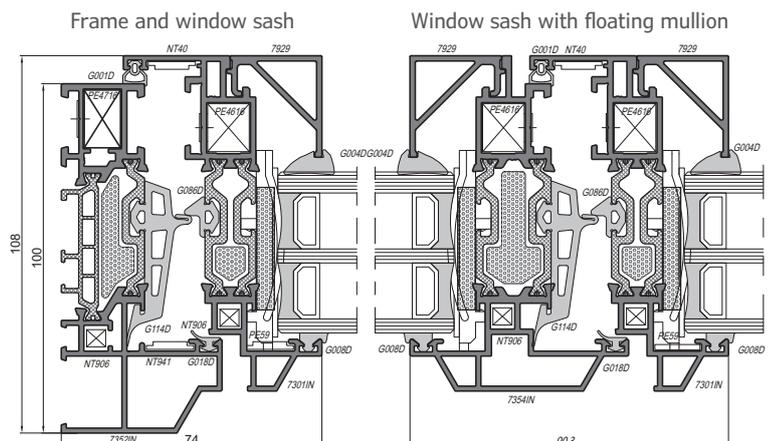
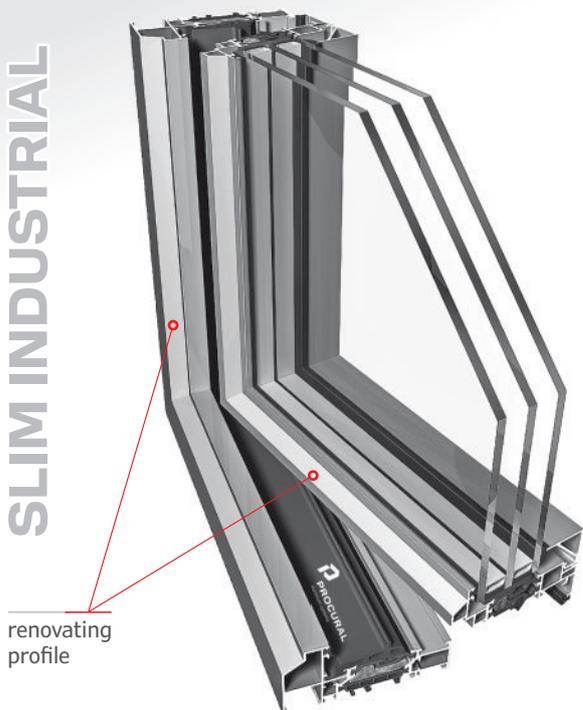
$U_w = 0.80 \text{ W}/(\text{m}^2\text{K})$

*reference construction dimensions: L 1480 x H 2180 mm
 $U_g = 0.5 \text{ W}/(\text{m}^2\text{K})$, triple glazing

TECHNICAL PARAMETERS

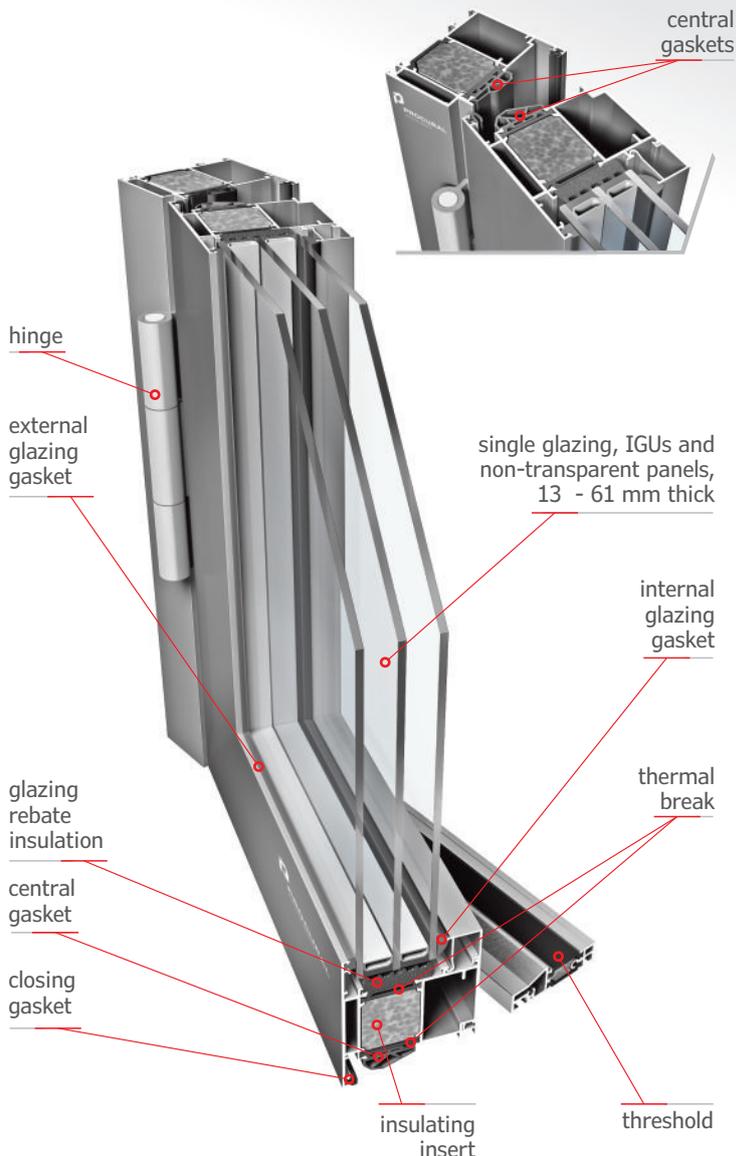
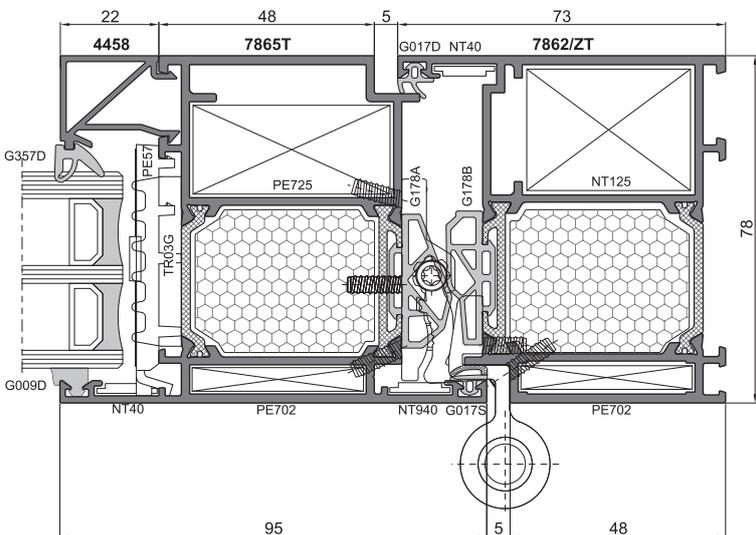
Filling thickness	frame: 13 - 61 mm, sash: 26 - 62 mm
Frame depth	slim: 78 mm, slim industrial: 100 mm
Sash depth	slim: 86 mm, slim industrial: 96 mm
Maximum sash dimensions	L 1000 x H 3000 mm L 1500 x H 1700 mm
Maximum sash weight	180 kg
Air permeability	class 4 (highest)
Watertightness	class E1500 (1500 Pa)
Thermal insulation	U_f from 1.4 $\text{W}/(\text{m}^2\text{K})$ U_w from 0.80 $\text{W}/(\text{m}^2\text{K})$
Resistance to wind load	class C5/B5* (* page 48)
Certification	type testing in acc. with EN 14351-1+A2

SLIM INDUSTRIAL



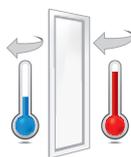
TECHNICAL PARAMETERS

Filling thickness	leaf: 13 - 61 mm
Frame and leaf depth	78 mm
Maximum leaf dimensions	L 1400 x H 3000 mm
Maximum leaf weight	over 200 kg
Air permeability	class 4 (highest)
Watertightness	1050Pa
Thermal insulation	PE78N: U_f od 2.10 W/(m ² K), U_d from 1.10 W/(m ² K) PE78NHI: U_f od 1.40 W/(m ² K), U_d from 0.89 W/(m ² K)
Resistance to wind load	class C5* (* page 48)
Resistance to burglary	class RC2, RC3 n acc. with EN 1627
Certification	type testing in acc. with EN 14351-1 + A2



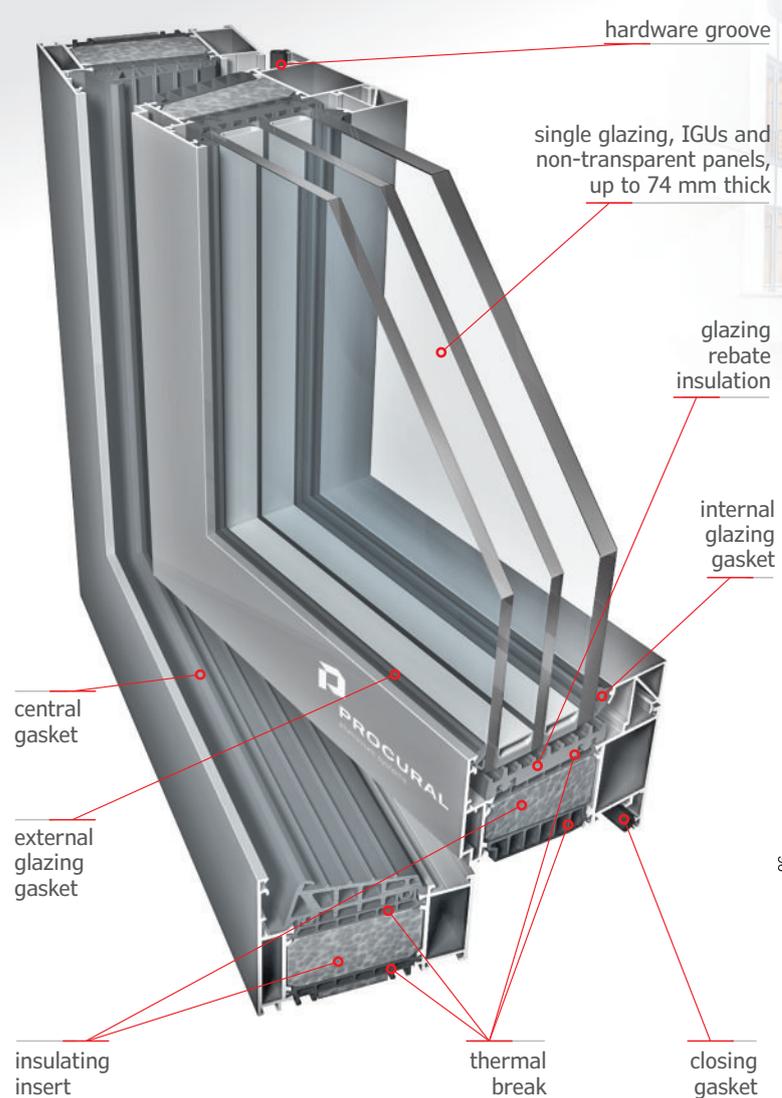
An insulated, three-cavity profile system designed for the construction of doors

- coplanar construction (frame-leaf gap - 18 mm)
- Euro groove glazing beads
- profiled 34 mm thermal breaks
- door leaves flush with the frame
- large-dimension constructions possible
- wide variety of corner joint solutions
- wide range of available hardware
- the addition of central sealing results in improved U_f values
- doors easily incorporated in window sets due to special modifier profiles
- different thermal insulation variants with different insulation inserts: PE78N, PE78N+, PE78NHI
- gasket mounted on a bespoke thermal break (available also in anti-bimetal versions)
- special corners for gaskets - easier installation and improved corner sealing
- external closing gasket with a wide range of movement compensates for prefabrication and assembly errors
- doors easily incorporated in window sets due to special modifier profiles

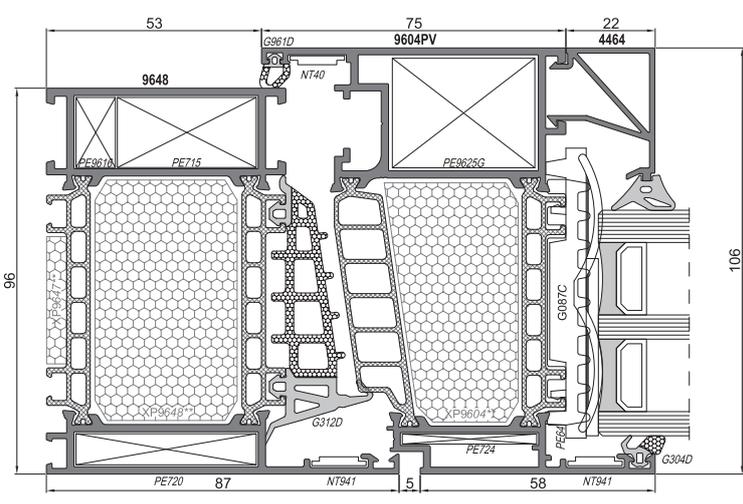


$U_w = 0.89 \text{ W}/(\text{m}^2\text{K})$

*reference construction dimensions: L 1230 x H 2180 mm
 $U_g = 0.5 \text{ W}/(\text{m}^2\text{K})$, triple glazing



$U_w = 0.66 \text{ W}/(\text{m}^2\text{K})$
 *reference construction dimensions: L 1480 x H 2180 mm
 $U_g = 0.5 \text{ W}/(\text{m}^2\text{K})$, triple glazing



An insulated, three-cavity profile system meeting the most stringent thermal insulation requirements

- ▶ Euro hardware groove and hardware groove used in PVC and wood windows
- ▶ designed for constructions used in energy-efficient and passive buildings ($U_w < 0.8 \text{ W}/(\text{m}^2\text{K})$)
- ▶ high thermal insulation due to the multi-cavity 62 mm thermal breaks and bi-component central gaskets
- ▶ large-dimension constructions possible
- ▶ window sashes flush with the frame on the outside
- ▶ wide variety of corner joint solutions
- ▶ 22 mm and 28 mm high glazing beads

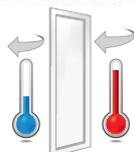
TECHNICAL PARAMETERS

Filling thickness	frame: 39 - 62 mm sash: 39 - 74 mm
Frame depth	96 mm
Sash depth	106 mm
Maximum sash dimensions	L 1700 x H 2300 mm L 1400 x H 2800 mm
Maximum sash weight	200 kg
Air permeability	class 4 (highest)
Watertightness	class E1950 (1950 Pa)
Thermal insulation	U_f from $0.82 \text{ W}/(\text{m}^2\text{K})$ U_w from $0.66 \text{ W}/(\text{m}^2\text{K})$
Resistance to wind load	class C5* (* page 48)
Resistance to burglary	class RC2, RC3 in acc. with EN 1627

Certification

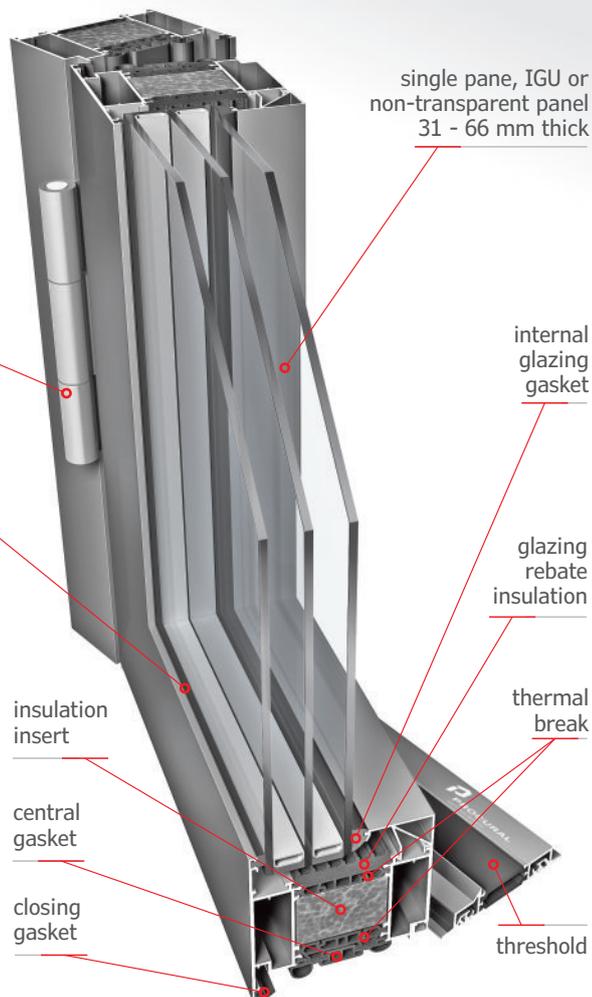
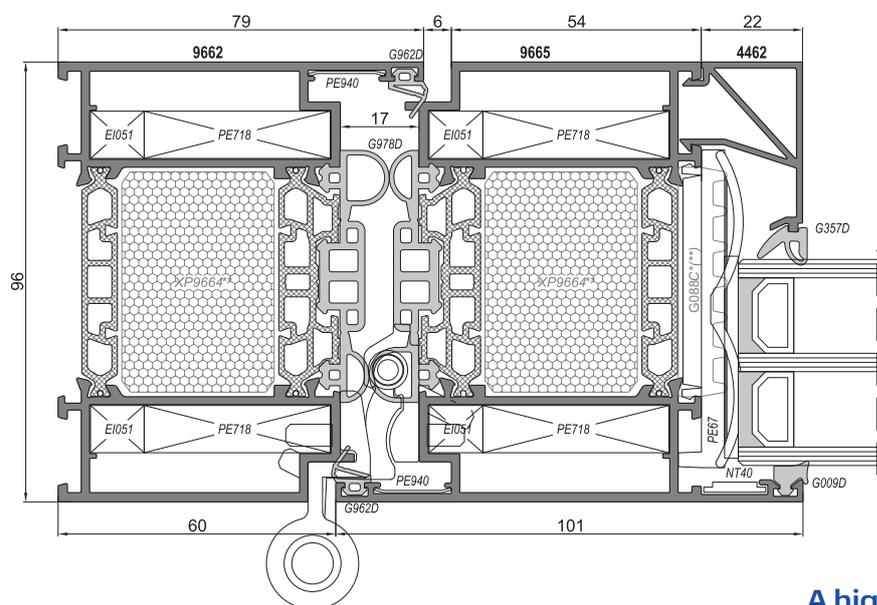
type testing in acc. with EN 14351-1 + A2

EXTERNAL DOORS



$$U_d = 0.80 \text{ W}/(\text{m}^2\text{K})$$

*reference construction dimensions: L 1230 x H 2180 mm
 $U_g = 0.5 \text{ W}/(\text{m}^2\text{K})$, triple glazing



TECHNICAL PARAMETERS

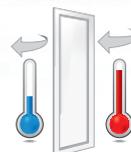
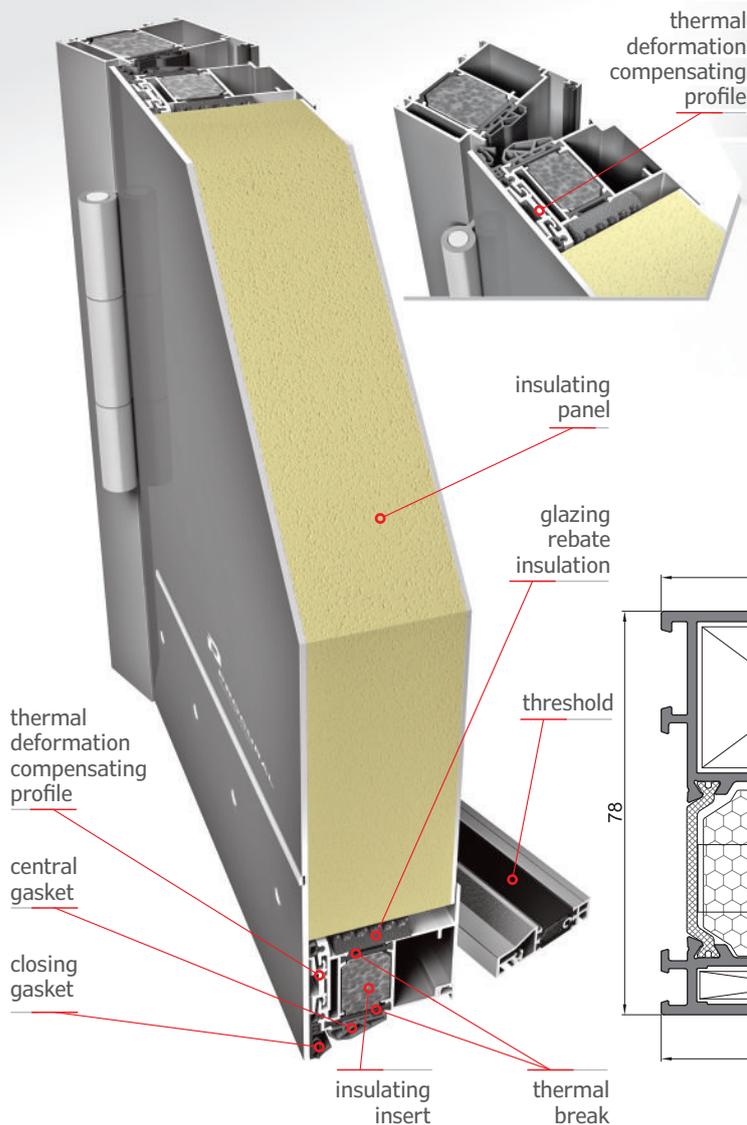
Filling thickness	sash: 31 - 66 mm
Frame and leaf depth	96 mm
Maximum sash dimensions	L 1400 x H 2500 mm
Maximum sash weight	over 200 kg
Air permeability	class 4 (highest) in acc. with EN 12207
Watertightness	class E750 in acc. with EN 12208
Thermal insulation	U_f from 1.20 $\text{W}/(\text{m}^2\text{K})$ U_d from 0.80 $\text{W}/(\text{m}^2\text{K})$
Resistance to wind load	class C2/B2* (* page 48)
Resistance to burglary	class RC2 in acc. with EN 1627

Certification

type testing in acc. with EN 14351-1 + A2

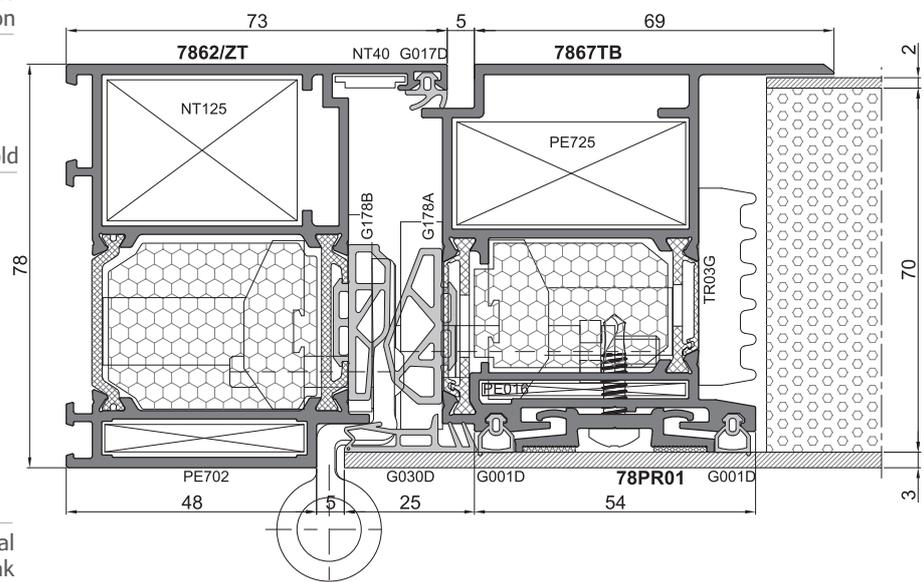
A high thermal insulation system with symmetric profiles, designed for the construction of doors

- coplanar door system with a 18 mm rebate gap
- one frame for inward and outward opening doors
- bespoke 50 mm wide thermal breaks provide very high thermal insulation, U_f from 1,2 $\text{W}/(\text{m}^2\text{K})$
- IFT ROSENHEIM test reports confirm very good technical parameters of this system
- central gasket improves thermal insulation and tightness
- door leafs flush with the frame
- large dimension constructions available
- wide range of corner joints
- closing gasket with wide range of movement allowing for prefabrication and assembly errors
- concealed leaf drainage available



$$U_d = 0.82 \text{ W}/(\text{m}^2\text{K})$$

*reference construction dimensions: L 1230 x H 2180 mm
 $U_p = 0.44 \text{ W}/(\text{m}^2\text{K})$, insulating panel



A variant of the PE78NHI system designed for the construction of panel doors - constructions with flush visible surfaces

- greatly improved thermal performance due to the floating panel mounted on the outer surfaces of three-cavity profiles
- reduced leaf deflection resulting from temperature changes
- system featuring additional central gaskets providing even better technical parameters
- different thermal insulation variants with different insulation inserts: PE78N+, PE78NHI
- large-dimension constructions available
- profiled thermal breaks
- door leaves flush with frame
- doors easily incorporated in window sets due to special modifier profiles
- wide variety of corner joint solutions

TECHNICAL PARAMETERS

Filling thickness	panel: 75 or 78 mm
Frame and leaf depth	78 mm
Maximum leaf dimensions	L 1400 x H 2500 mm
Maximum leaf weight	over 200 kg
Air permeability	class 3
Watertightness	9A
Thermal insulation	U_f from 1.70 W/(m ² K) U_d from 0.82 W/(m ² K)
Resistance to wind load	class C2/B3* (* page 48)
Resistance to burglary	class RC2 in acc. with EN 1627

Certification

type testing in acc. with EN 14351-1 + A2

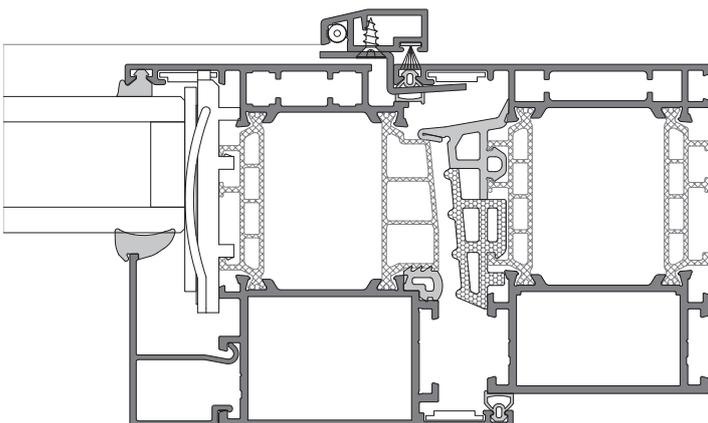
MOSQUITO NETS



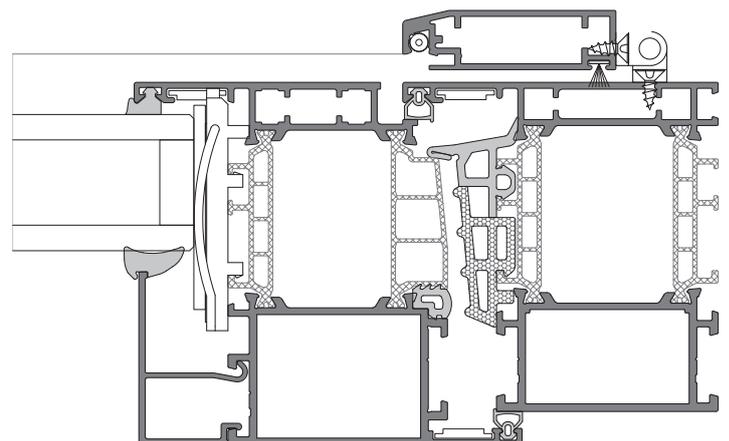
The PROCURAL MOS mosquito net system is the best possible protection against insects

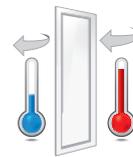
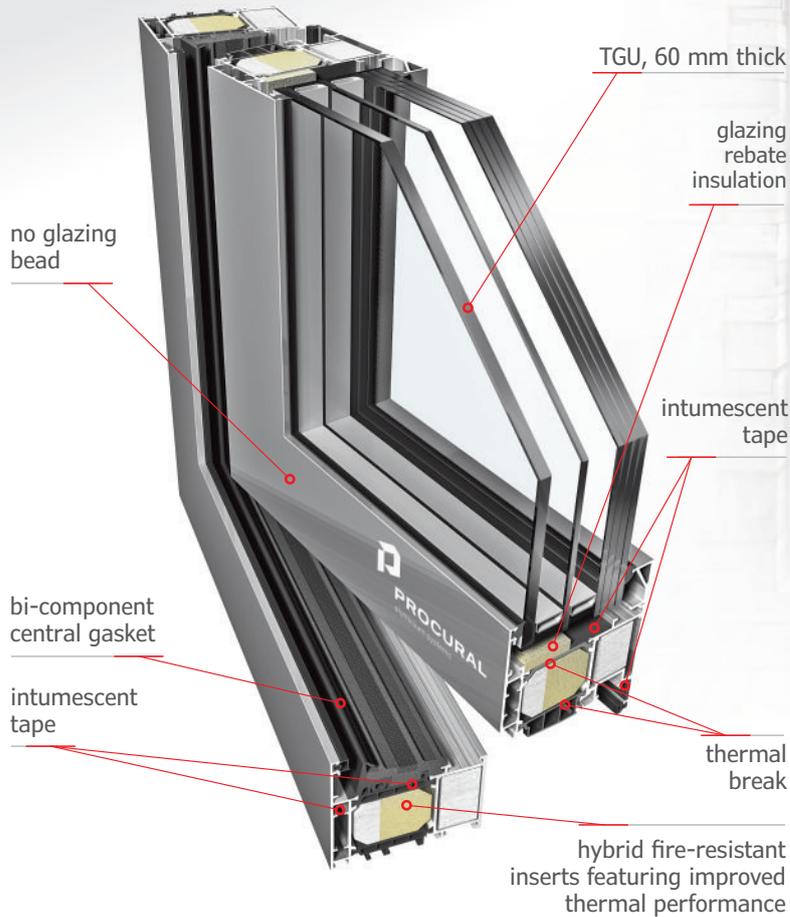
- ▀ system dedicated for PE78N and PE68 windows
- ▀ fixed and opening mosquito nets available
- ▀ fixed - mounted to a window frame using catches, opening - with hinges installed on the frame
- ▀ unobstructed daylight access
- ▀ easy installation
- ▀ gray and black nets available
- ▀ frame colours match window finishes
- ▀ fixed mosquito net dimensions: $L \leq 2000 \times H \leq 2000$ mm with max. area ≤ 2.25 m²
- ▀ opening mosquito net dimensions: $L \leq 1200 \times H \leq 2200$ mm with max. area ≤ 2.4 m²

Horizontal cross-section - fixed mosquito net



Horizontal cross-section - opening mosquito net



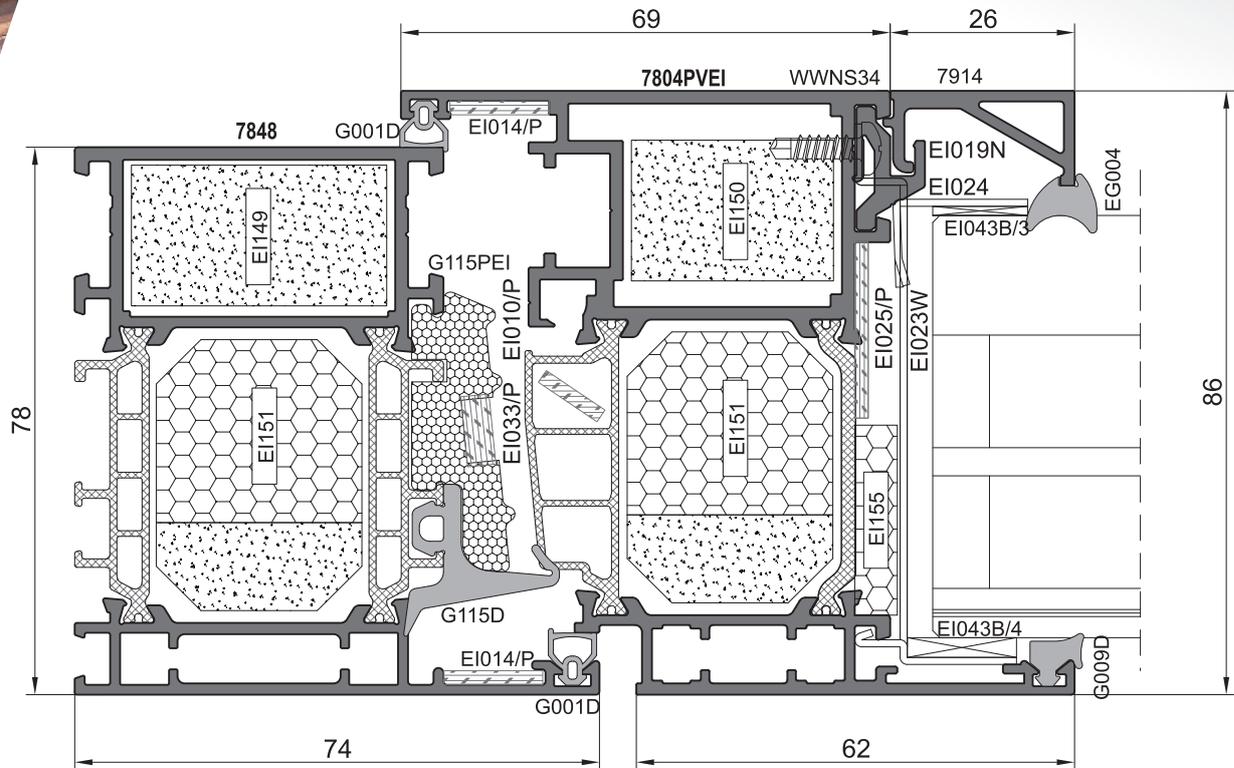


$$U_w = 0.9 \text{ W}/(\text{m}^2\text{K})$$

*reference construction dimensions: L 1230 x H 1480 mm
 $U_g = 0.5 \text{ W}/(\text{m}^2\text{K})$, triple glazing

An insulated, three-cavity profile system featuring very good thermal performance designed for the construction of fire-resistant windows

- ▀ hybrid hardware (perimeter hardware + self-locking hardware + door closer)
- ▀ turn window with bicomponent fire-resistant inserts featuring improved thermal performance and EI30 fire resistance
- ▀ interconnected with other PROCURAL systems



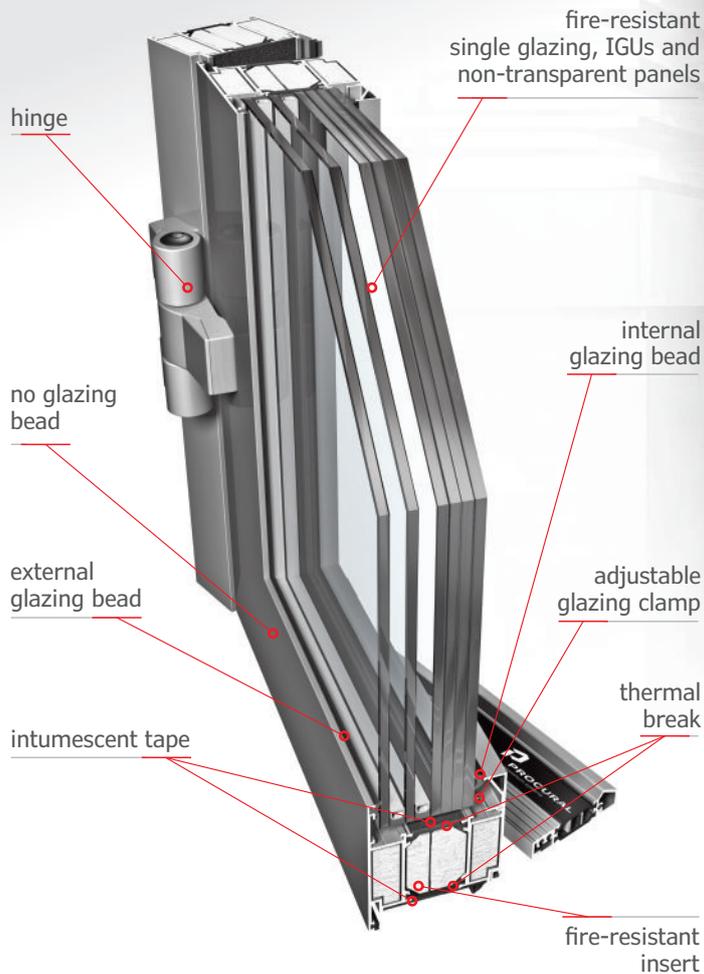
TECHNICAL PARAMETERS

Filling thickness	60 mm
Frame depth	78 mm
Sash depth	86 mm
Type of filling	TGU with AGC fire-resistant glass pane
Maximum sash dimensions	L 1300 x H 2500 mm
Maximum sash weight	200 kg
Air permeability	class 4
Watertightness	class E1050
Thermal insulation	$U_f = 1.3 \text{ W}/(\text{m}^2\text{K})$, $U_w = 0.9 \text{ W}/(\text{m}^2\text{K})$
Resistance to wind load	class C5
Fire resistance classification	EI30

Certification

Window classification reports certified in acc. with EN 16034 and EN 14351-1+A2 (external products)

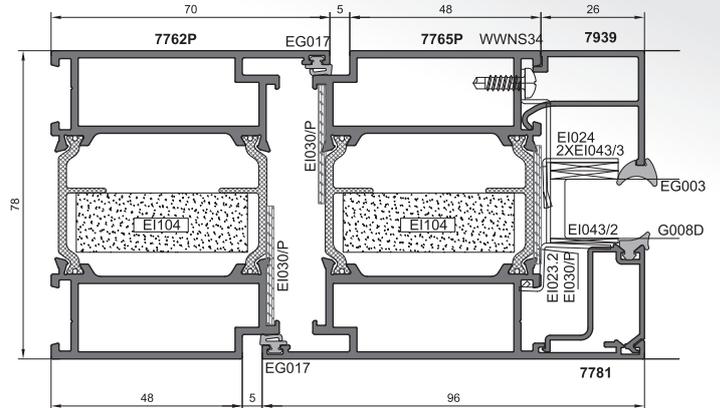
Fire-resistance classification for PROCURAL PE78EI (formerly PONZIO PE78EI) glazed partitions, doors and windows by PROCURAL Sp. z o.o. no 01561/24/R197/NZP/ENG



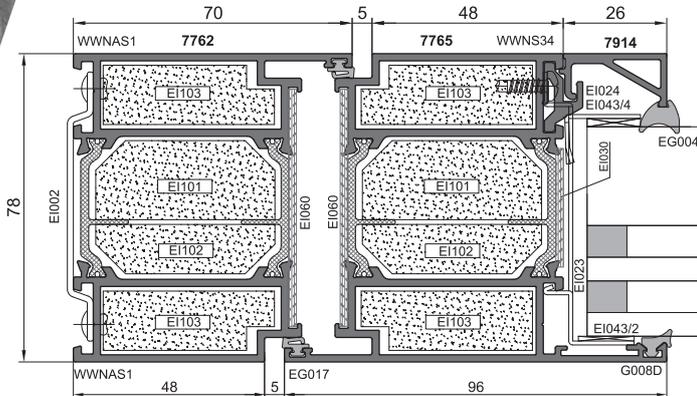
An insulated profile system designed for the construction of internal and external fire-resistant joinery

- ▀ profiles with fire-resistant inserts providing fire resistance, class EI15 to EI120
- ▀ EI15 to EI90 single and double turning doors, EI15 to EI120 glazed partitions and EI30 or EI60 butt-joint glazed partitions possible
- ▀ doors with maximum leaf dimensions of 1.4x2.5 m, with overlights up to 4 m high, with a wide range of threshold solutions (standard threshold, drop seal or no threshold), glazed or with non-transparent panels
- ▀ smoke control doors with or without fire resistance characteristics
- ▀ escape route doors, RC2N, RC2 and RC3 burglar resistant doors, air intake doors and automatic doors possible
- ▀ glazed partitions up to 4m high, butt-joint glazed partitions up to 3.73m high
- ▀ Design Line system variant, with one set of glazing beads:
 - simplified accessory installation
 - shorter prefabrication and assembly time compared to double-glazing-bead solutions (elegant, nearly flush surface on the glazing bead side)
- ▀ arched constructions possible
- ▀ interconnected with other PROCURAL systems

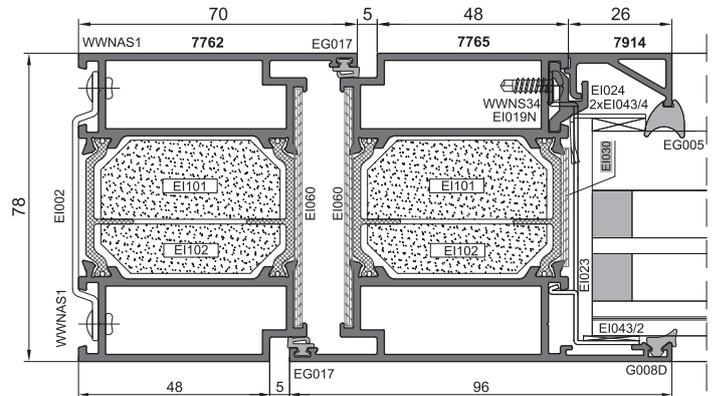
Class EI30 Design Line, economy version



Class EI60 Design Line



Class EI30 Design Line



TECHNICAL PARAMETERS

Filling thickness

14 - 62 mm (52 - 73 mm for class EI 120)

Frame and leaf depth

78mm (89mm for EI120 constructions)

Type of filling

fire-resistant single glazing, IGUs: EN1279-1, EN 1279-5
non-transparent panels:
in acc. with the Technical Approval or the National Technical Assessment

Gaskets

EPDM, in acc. with EN 12365-1

Smoke control

class S_a and S₂₀₀ in acc. with EN 13501-2

Sound reduction

with fire-resistant IGU 44.2Aku/16Ar/25mm:
for doors: R_{A1} - 40 dB, R_{A2} - 40 dB, R_w - 42 dB
with fire-resistant 17mm single glass pane
for doors: R_{A1} - 35 dB, R_{A2} - 35 dB, R_w - 37 dB
for partitions: R_{A1} - 40 dB, R_{A2} - 38 dB, R_w - 41 dB

Fire resistance classification

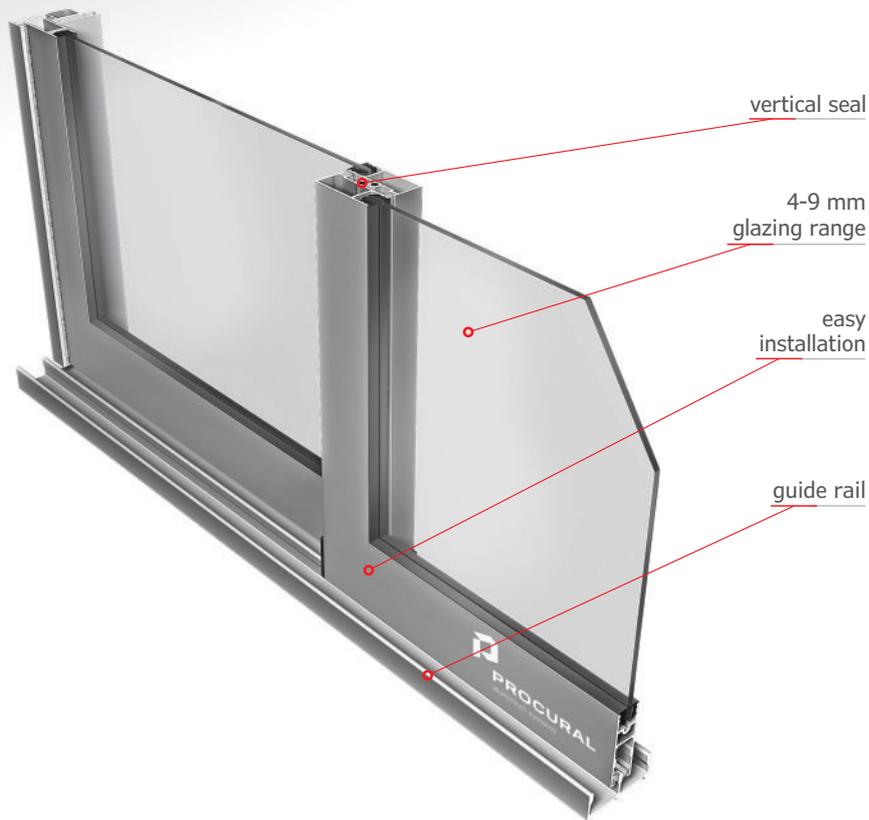
EI15, EW30, EI30, EI45, EI60, EI90, EI120

Certification

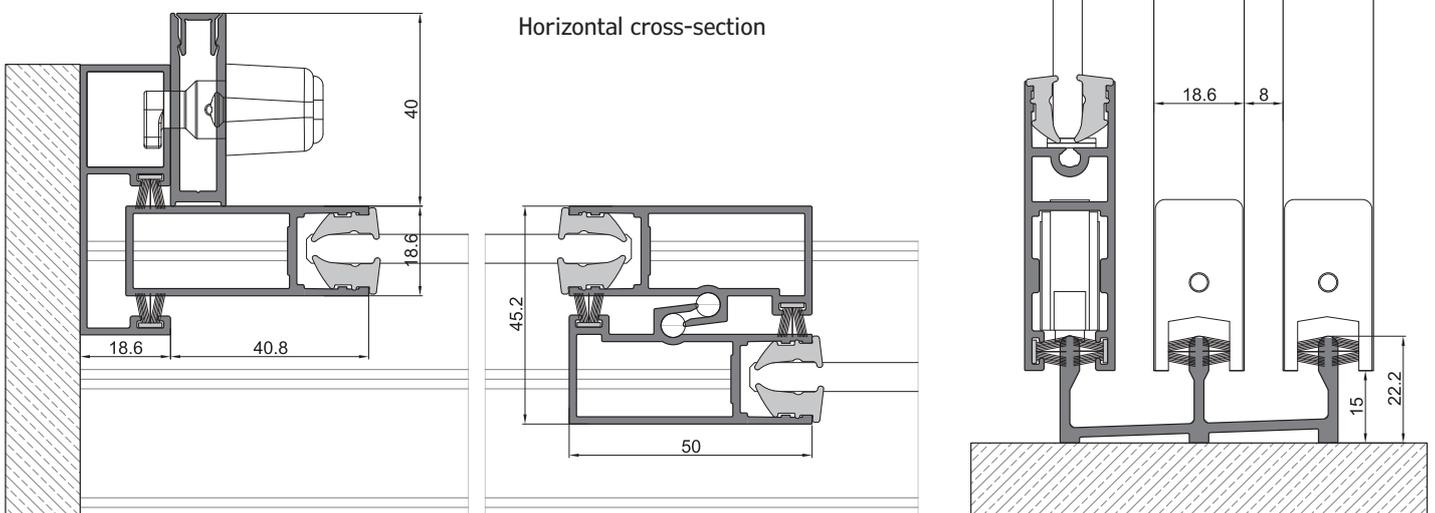
Door classification reports certified in acc. with EN 16034 and EN 14351-1+A2 (external products) or EN 14351-2 (internal products)

National Technical Assessment

- ITB-KOT-2017/0351 ed 5 – „Wewnętrzne drzwi przeciwpożarowe i/lub dymoszczelne oraz zestaw wyrobów do wykonywania przeciwpożarowych ścian wewnętrznych i zewnętrznych systemu PONZIO PE78EI z kształtowników aluminiowych z przekładką termiczną” (PONZIO PE78EI internal fire-resistant and/or smoke control doors, and internal and external fire-resistant partition kit using aluminium profiles with thermal breaks)
- ITB-KOT-2018/0529 ed 2 – „Zestaw wyrobów do wykonywania przeciwpożarowych ścian wewnętrznych całoszklanych systemu PONZIO PE78EI z kształtowników aluminiowych z przekładką termiczną” (PONZIO PE78EI internal fire-resistant full-glass partition kit using aluminium profiles with thermal breaks)

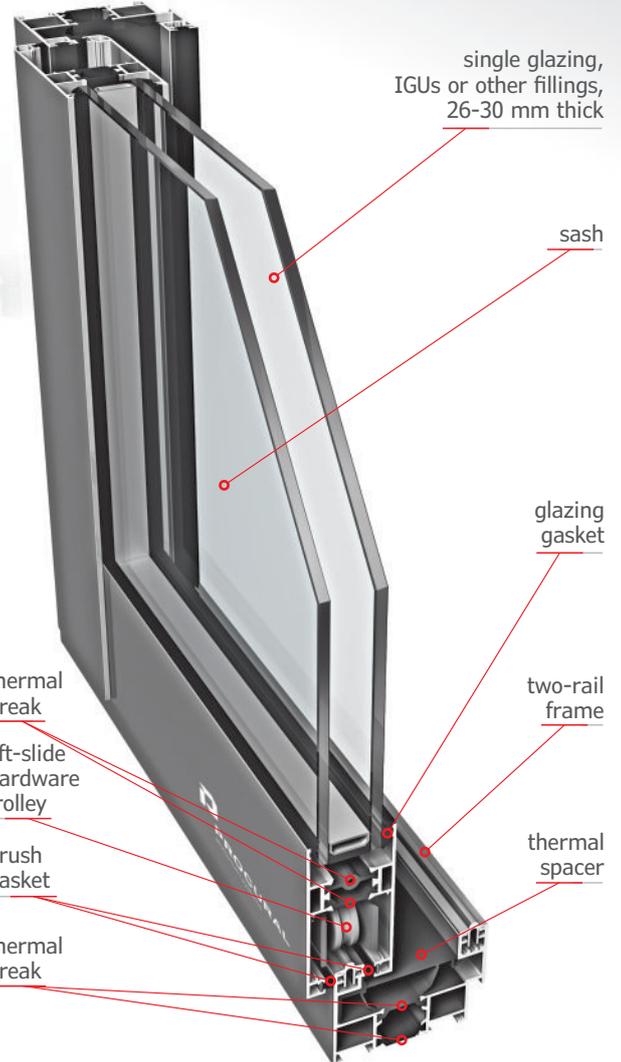


Vertical cross-section



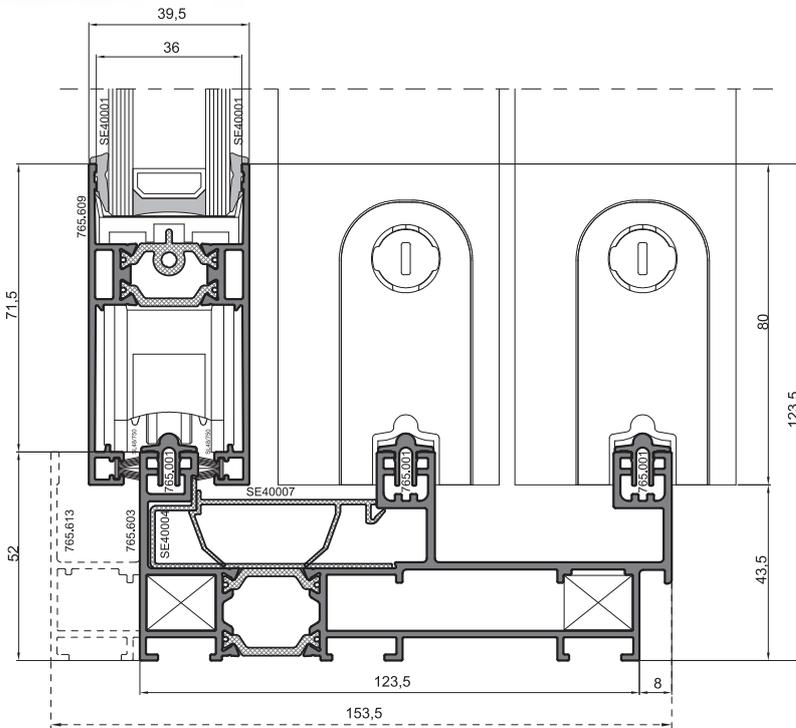
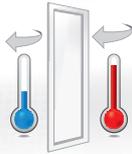
A sliding segment balcony enclosure system designed for the construction of light, transparent weather covers

- offers protection against gusts of wind and driving rain while allowing proper ventilation
- 2, 3, 4, 5 rail sliding system
- bottom rail installed on parapet guardrails or walls, top rail mounted to the ceiling slab
- segments sliding both ways, each on its own rail
- enclosure secured against opening due to e.g. wind
- easy segment installation



$U_w = 1.50 \text{ W}/(\text{m}^2\text{K})$

*reference construction dimensions: L 2400 x H 2400 mm
 $U_g = 1.0 \text{ W}/(\text{m}^2\text{K})$, double glazing



TECHNICAL PARAMETERS

Filling thickness	26 - 30 mm
Sash depth	46 mm
Frame depth	73/95.5 mm two-rail frame 131.5/153.5 mm three-rail frame
Maximum sash dimensions	L 2000 x H 3000 mm
Maximum sash weight	220 kg
Air permeability	class 4 (highest)
Watertightness	class 7A (300 Pa)
Thermal insulation	U_f from 3.10 $\text{W}/(\text{m}^2\text{K})$ U_w from 1.50 $\text{W}/(\text{m}^2\text{K})$ ($U_g = 1.0$)
Resistance to wind load	class C3/B3* (* page 48)

An insulated aluminium profile system designed for the construction of sliding windows and spatial constructions such as balcony and loggia structures

- ▀ 37 mm width of central mullion - slender yet rigid constructions
- ▀ PROCURAL system hardware
- ▀ glazing and brush gaskets
- ▀ interconnected with other PROCURAL systems
- ▀ vertical sliding pass-through windows available using dedicated hardware
- ▀ concealed sliding door solution

Certification

- ▀ type testing in acc. with EN 14351-1 + A1

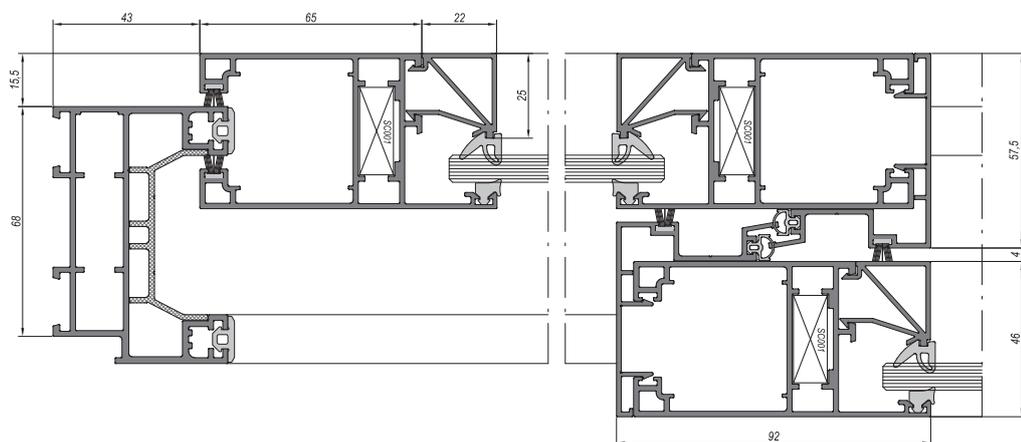
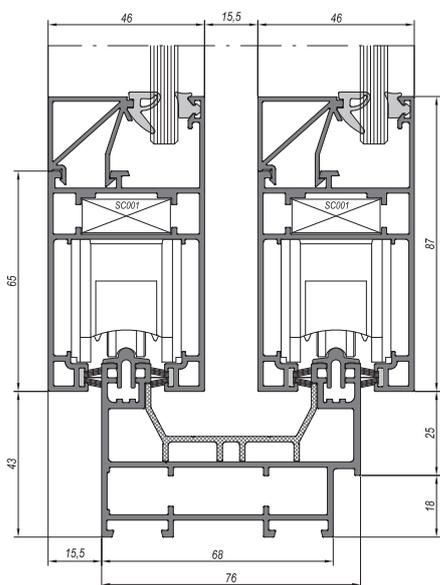


An uninsulated system designed for the construction of sliding doors, windows and glazed elements for internal and external constructions, such as various types of sliding partitions, balcony and loggia enclosures

- ▀ replacing SL600
- ▀ both system variants using the same accessories and hardware as SL600TT EVO
- ▀ interconnected with PROCURAL PE68
- ▀ working using the SL600TT EVO punch press
- ▀ pass-through/vertical sliding windows possible

TECHNICAL PARAMETERS

Filling thickness	6 - 28 mm
Sash depth	46 mm
Frame depth	76 mm
Maximum sash dimensions	L 2000 x H 3000 mm
Maximum sash weight	220 kg



SLIDING DOORS AND WINDOWS

NEW

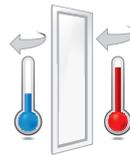
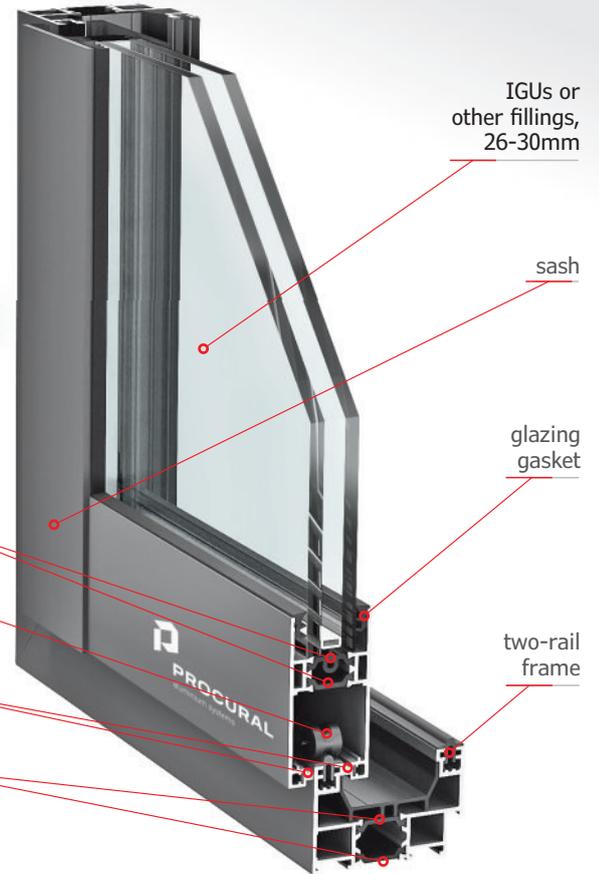


An insulated system designed for the construction of sliding windows and glazed elements for external constructions, such as balcony and loggia enclosures

- replacing SL600TT EVO
- 35 mm minimum central mullion width - slim and rigid structures
- both system variants using the same accessories and hardware as SL600TT EVO
- interconnected with PROCURAL PE68
- working using the SL600TT EVO punch press
- pass-through/vertical sliding windows possible

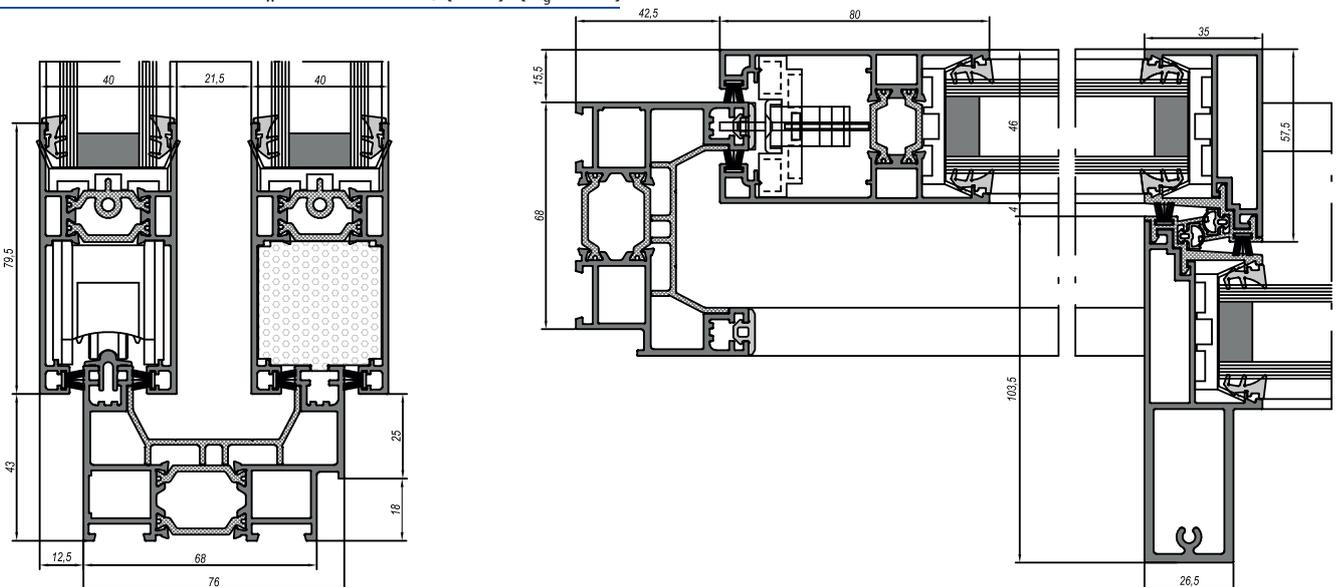
TECHNICAL PARAMETERS

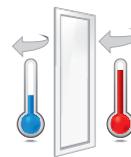
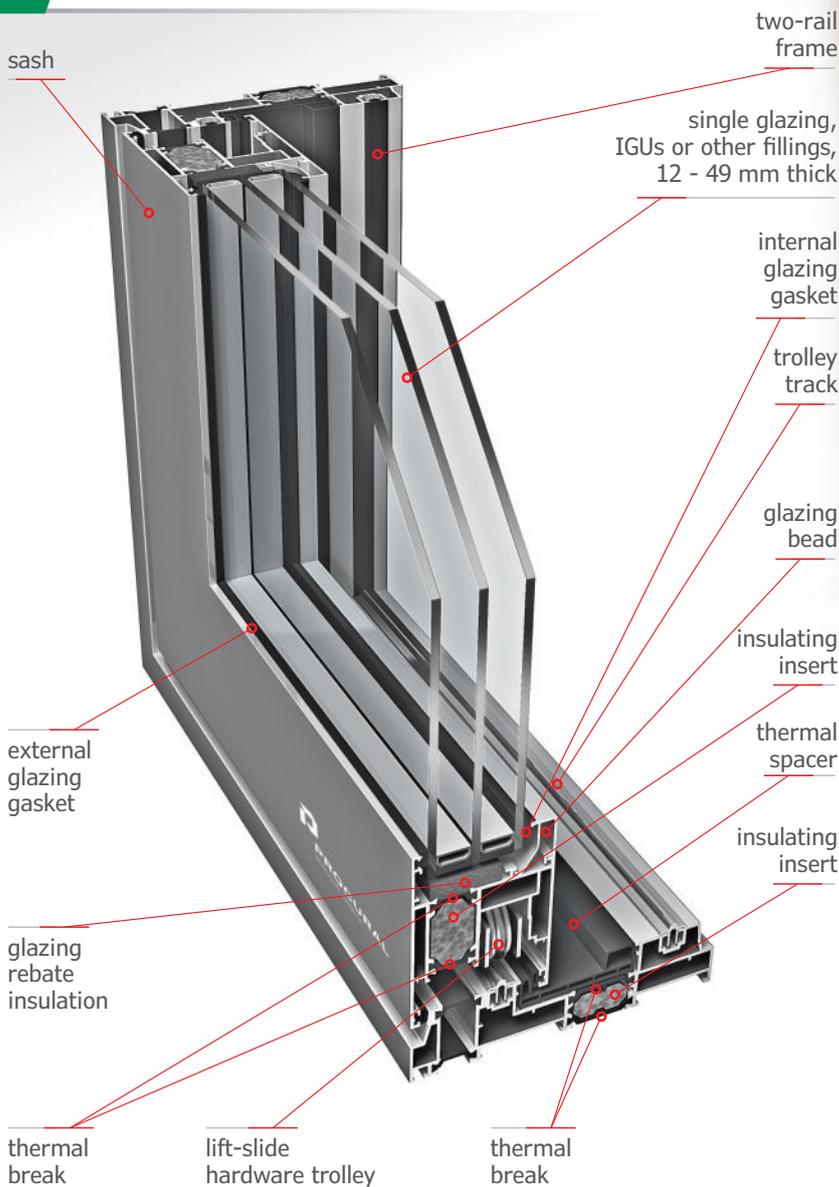
Filling thickness	26 - 30 mm
Sash depth	46 mm
Frame depth	76 mm
Maximum sash dimensions	L 2000 x H 3000 mm
Maximum sash weight	220 kg
Thermal insulation	U_f from 3.10 W/(m ² K) U_w from 1.50 W/(m ² K) ($U_g = 1.0$)



$$U_w = 1.50 \text{ W/(m}^2\text{K)}$$

*reference construction dimensions: L 2400 x H 2400 mm
 $U_g = 1.0 \text{ W/(m}^2\text{K)}$, double glazing



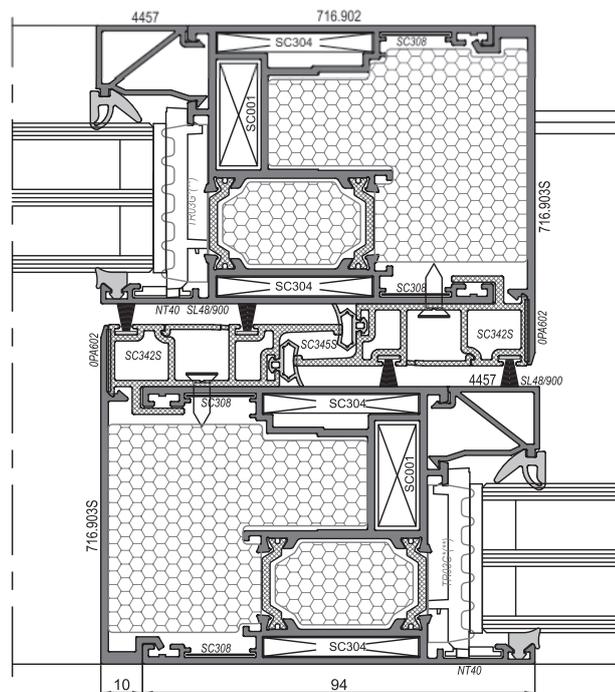
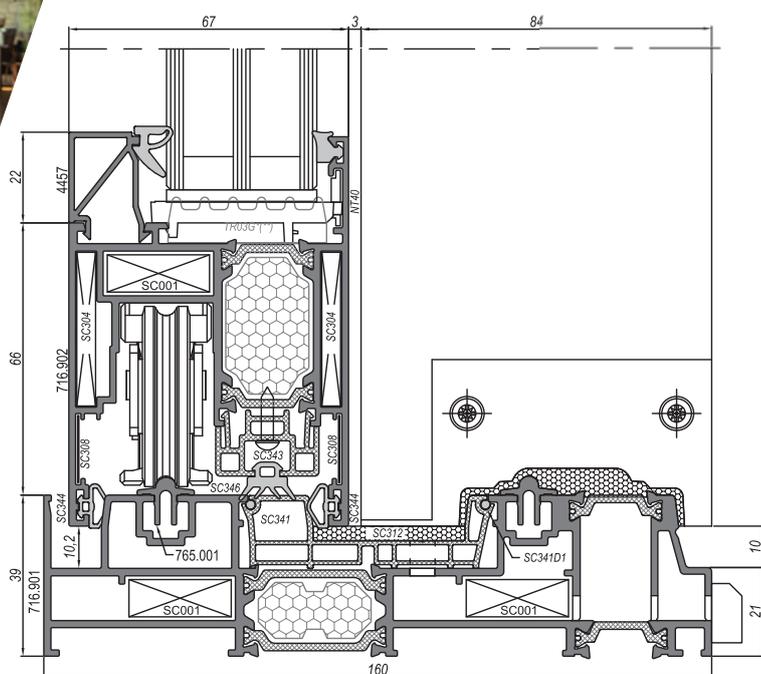


$$U_w = 1.0 \text{ W}/(\text{m}^2\text{K})$$

*reference construction dimensions: L 2400 x H 2400 mm
 $U_g = 0.5 \text{ W}/(\text{m}^2\text{K})$, triple glazing

An insulated aluminium profile system designed for the construction of external lift-slide joinery

- ▀ large-dimension constructions with up to 8 sashes possible
- ▀ high resistance to weather conditions
- ▀ automatic drives available
- ▀ corner floating mullion solution
- ▀ low threshold available
- ▀ different thermal insulation variants with different insulation inserts: SL1600TT, SL1600TT+, SL1600TTHI, SL1600TTSHI
- ▀ PLUS version: U_f frame heat transfer coefficient as low as $2.1 \text{ W}/(\text{m}^2\text{K})$
- ▀ HI versionL: U_f frame heat transfer coefficient as low as $1.8 \text{ W}/(\text{m}^2\text{K})$
- ▀ „SLIM” variant available - narrow central mullion (width: 51 mm)
- ▀ sliding stabilisers- used in every sliding sash- reduces gasket friction during sash operation at high wind loads

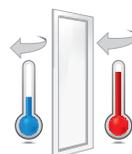
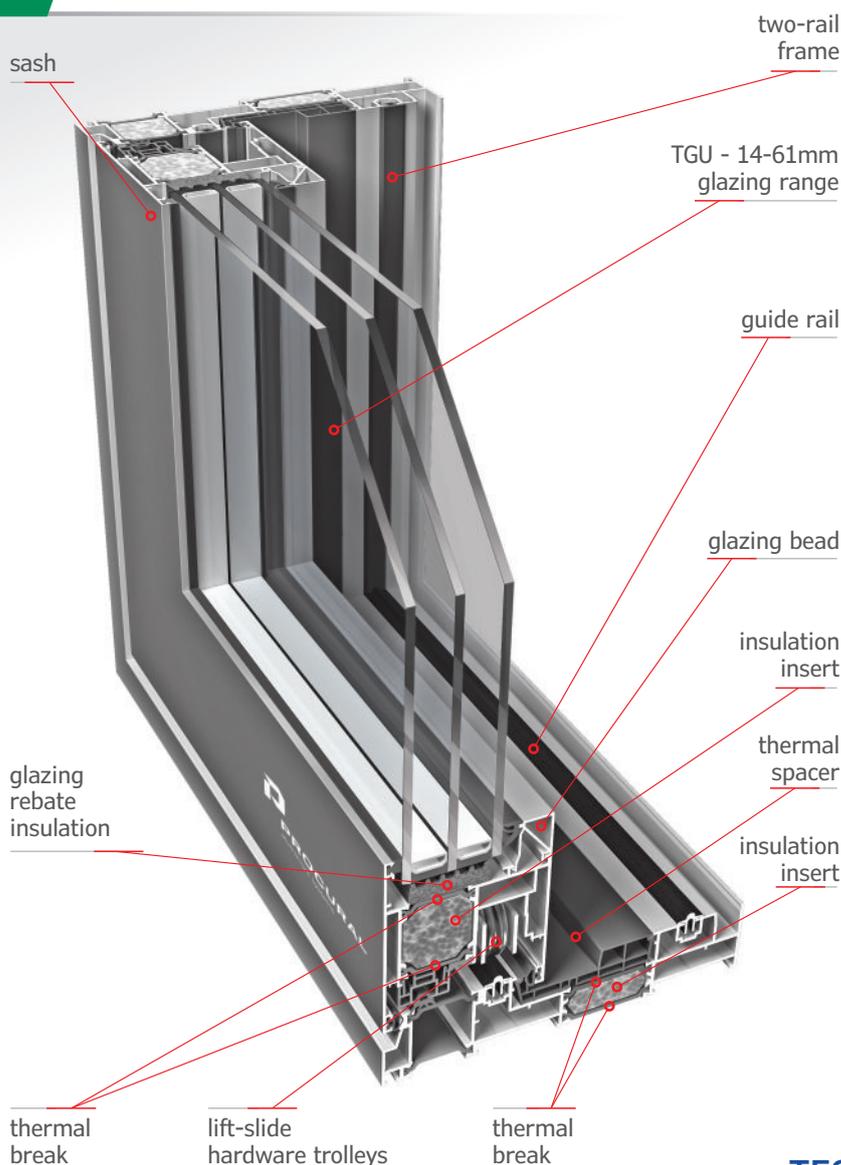


TECHNICAL PARAMETERS

Filling thickness	12-49 mm
Sash depth	67 mm
Frame depth	160/154 mm two-rail frame 247/241 mm three-rail frame
Maximum sash dimensions	L 3300 x H 3000 mm, L 2300 x H 3500 mm
Maximum sash weight	400 kg / 600 kg* *(G-U hardware using the LIFT-UNIT)
Air permeability	class 4 (highest)
Watertightness	class 9A (600 Pa) E750 (750 Pa) with linear drainage
Resistance to wind load	class C3/B5* (* page 48)
Resistance to burglary	class RC2 in acc. with EN 1627
Thermal insulation	SL1600TT: U_f from 2.3 W/(m ² K), U_w from 1.1 W/(m ² K) SL1600TTHI: U_f from 1.8 W/(m ² K), U_w from 1.0 W/(m ² K)

Certification

type testing in acc. with EN 14351-1 + A2



$$U_w = 0.9 \text{ W}/(\text{m}^2\text{K})$$

*reference construction dimensions: L 2400 x H 2400 mm
 $U_g = 0.5 \text{ W}/(\text{m}^2\text{K})$, triple glazing

Thermally insulated lift-slide system

- wider thermal breaks, deeper sashes and a glazing range up to 61 mm resulting in improved thermal parameters $U_w < 0.9 \text{ W}/(\text{m}^2\text{K})$
- thermal variants: SL1800TT, SL1800TT+, SL1800TTHI, SL1800TTSI
- large sash dimensions
- large dimension structures, up to 6 sashes
- very good weathertightness
- covers the internal track in structures with a glazed corner
- sliding stabilisers- used in every sliding sash- reduces gasket friction during sash operation at high wind loads

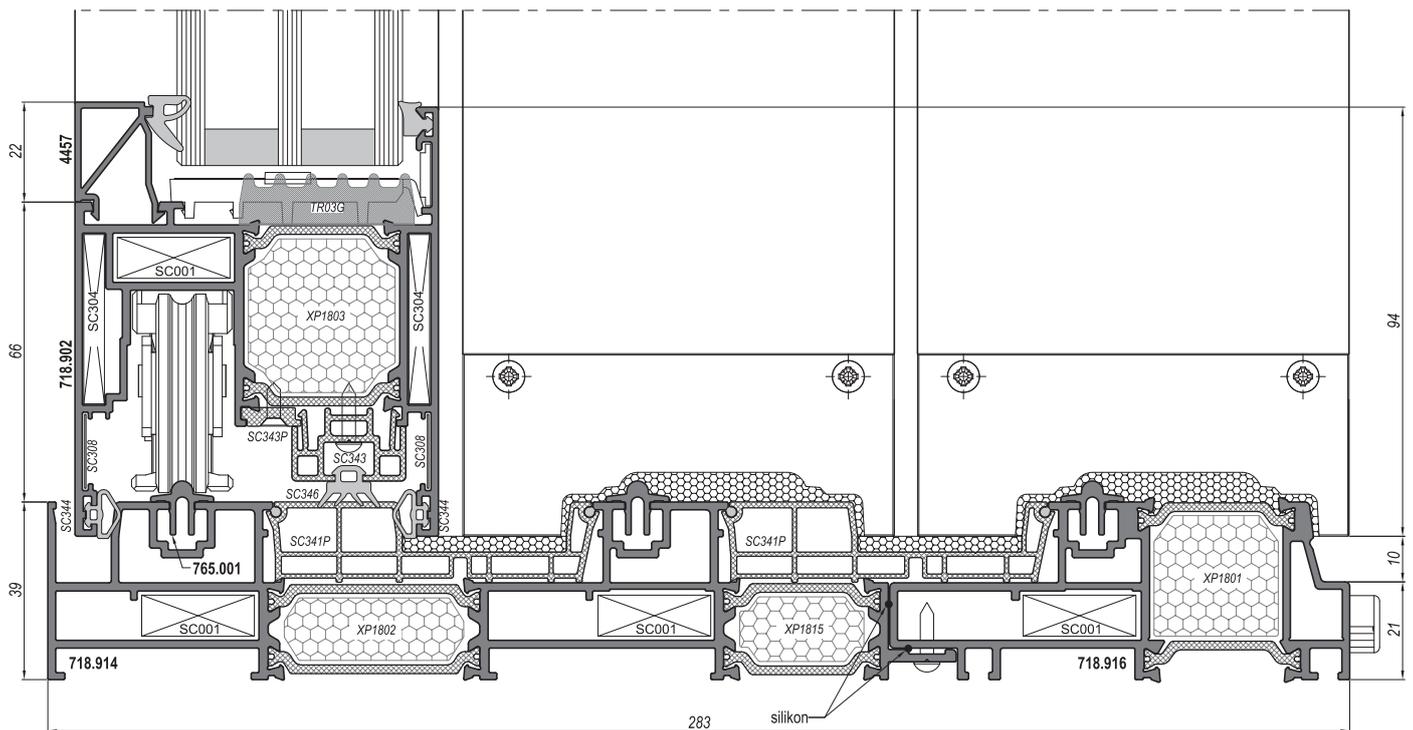
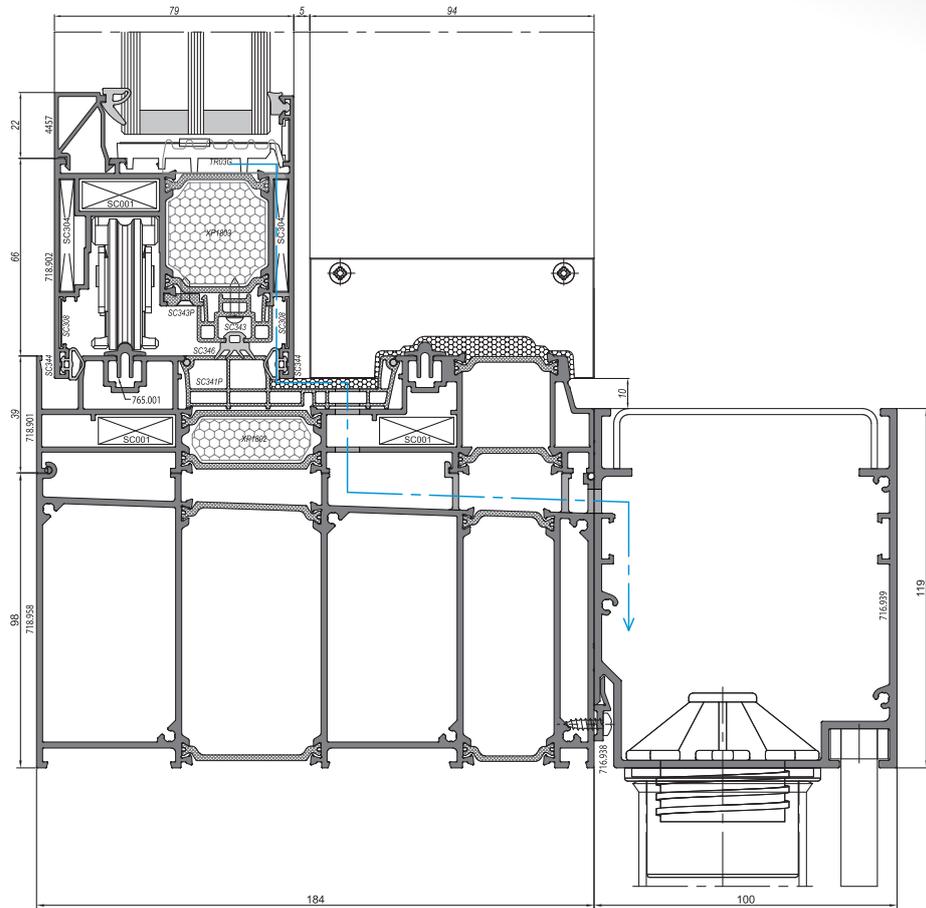
TECHNICAL PARAMETERS

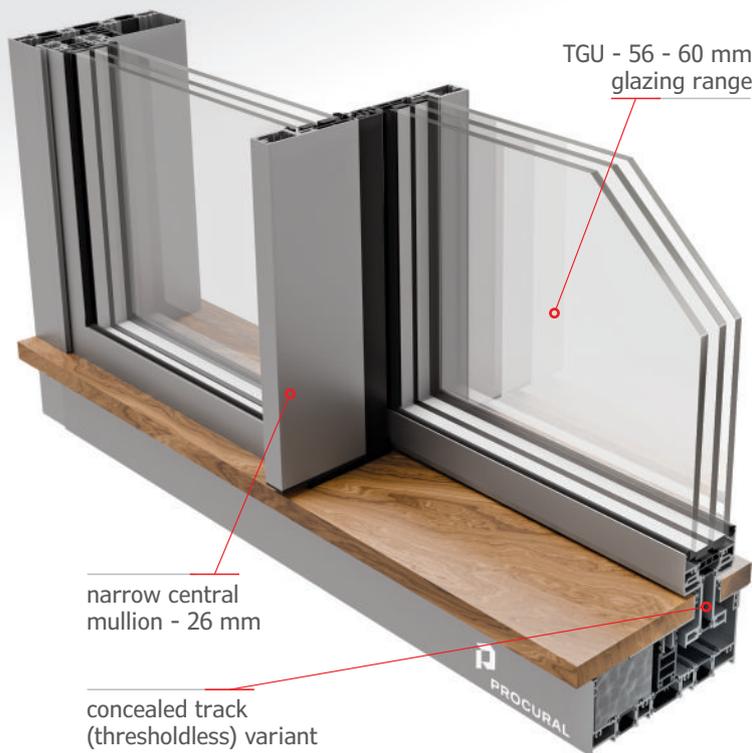
Filling thickness	14 - 61 mm
Sash depth	79 mm
Frame depth	184/178 mm - two-rail frame 283/277 mm - three-rail frame
Maximum sash dimensions	L 3300 x H 3000 mm or L 2300 x H 3500 mm
Maximum sash weight	400 kg / 600 kg* *(G-U hardware using the LIFT-UNIT)
Air permeability	class 4 (highest)
Watertightness	class E900 (900 Pa)
Resistance to wind load	class C4/B4* (* page 48)
Thermal insulation	U_f from 1.3 $\text{W}/(\text{m}^2\text{K})$ U_w from 0.9 $\text{W}/(\text{m}^2\text{K})$ ($U_g = 0.5 \text{ W}/(\text{m}^2\text{K})$)

Certification

type testing in acc. with EN 14351-1 + A2

linear drainage





A sliding door system designed for the construction of external joinery

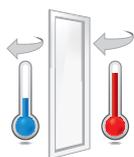
- ▀ minimalist structure design
- ▀ 3 rows of thermal breaks ensuring very good thermal insulation
- ▀ automatic drive available
- ▀ multipoint locking available
- ▀ visible width of sash profile - 10 mm
- ▀ concealed track (thresholdless) variant – allows smooth passage without barriers

Certification

type testing in acc. with EN 14351-1 + A2

TECHNICAL PARAMETERS

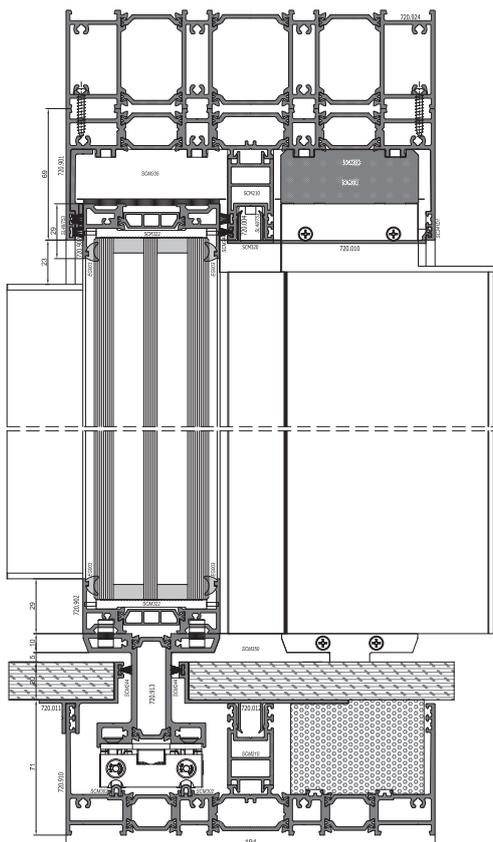
Filling thickness	56 - 60 mm
Sash depth	72 mm
Frame depth	194 mm
Central mullion width	26 mm
Maximum sash dimensions	L 4000 or H 4000 mm
Minimum sash dimensions	L 800 x H 2000 mm
Maximum sash weight	manual: 500 kg with drive: 700 kg / 1200 kg*
	*(Liberda drive, not applicable to concealed track variant)
Air permeability	class 4 (highest)
Watertightness	class E900 (900 Pa) with linear drainage
Resistance to wind load	class C2/B3* (* page 48)
Thermal insulation	U_f from 1.96 W/(m ² K) U_w from 0.89 W/(m ² K)



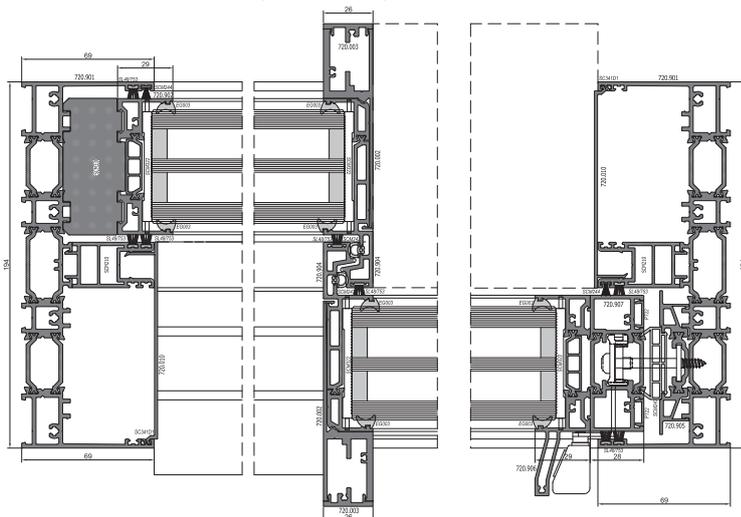
$U_w = 0.89 \text{ W}/(\text{m}^2\text{K})$

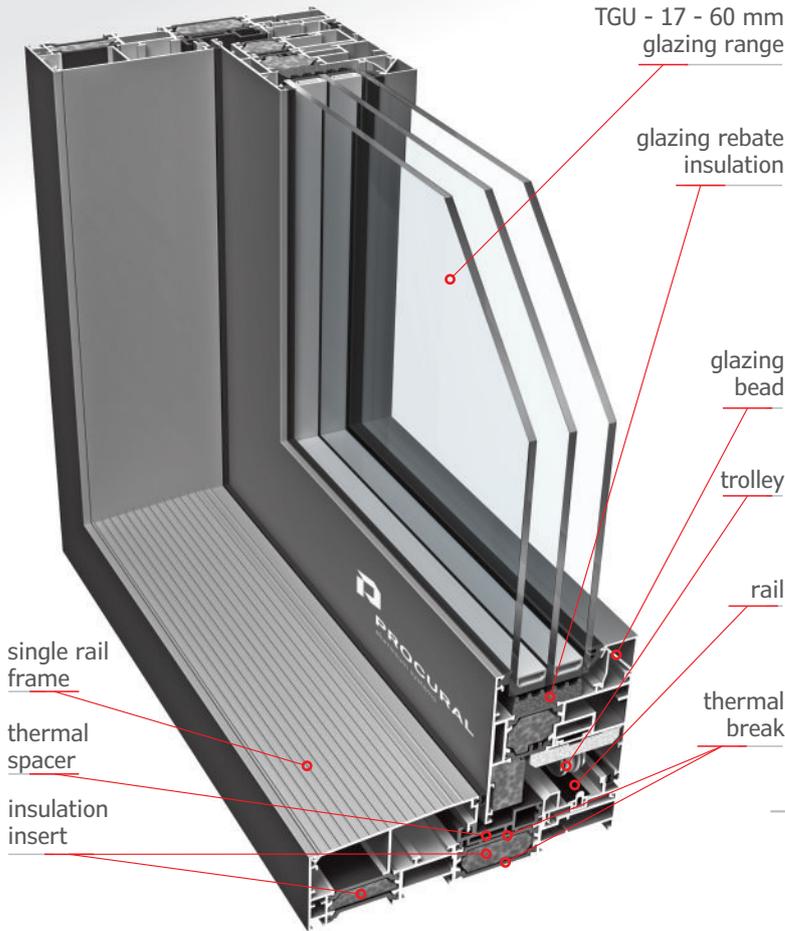
*reference construction dimensions: L 2400 x H 2400 mm
 $U_g = 0.5 \text{ W}/(\text{m}^2\text{K})$, triple glazing

Concealed track (thresholdless) variant - vertical section



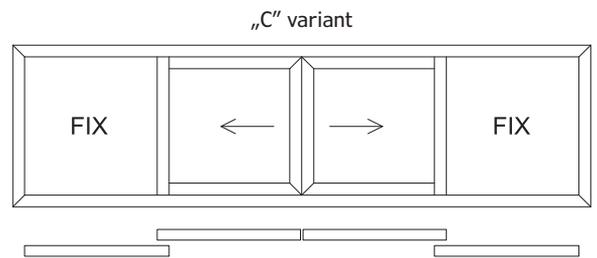
Concealed track (thresholdless) variant - horizontal section





A sliding system with insulated profiles designed for the construction of external joinery.

- closing similar to window systems - high resistance to weather conditions
- no friction between sashes due to 8 mm opening gap
- profile depth: 78 mm for sashes, 172 mm for frames
- "A" (one sliding sash, fixed glazing in frame) and "C" (two sliding sashes, fixed glazing in frame) variants available



Certification

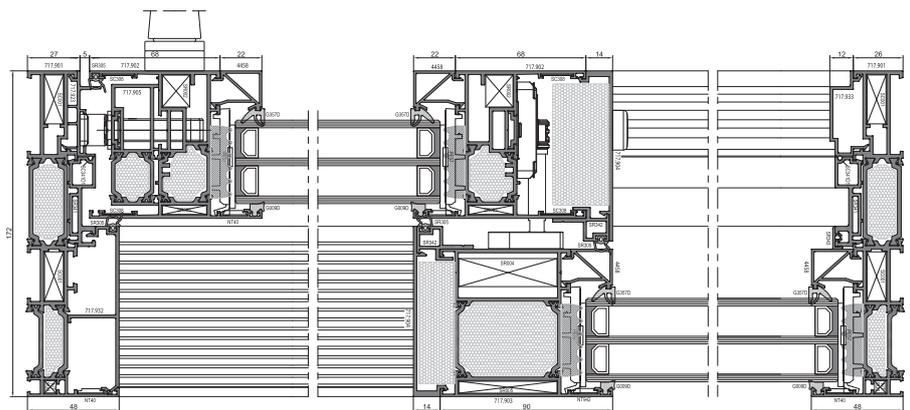
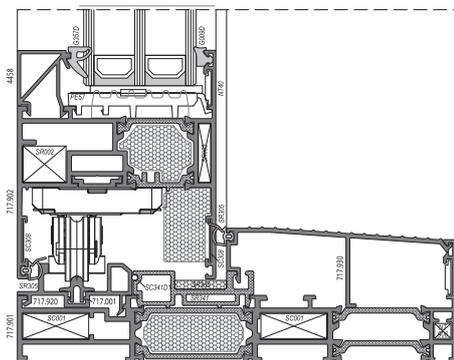
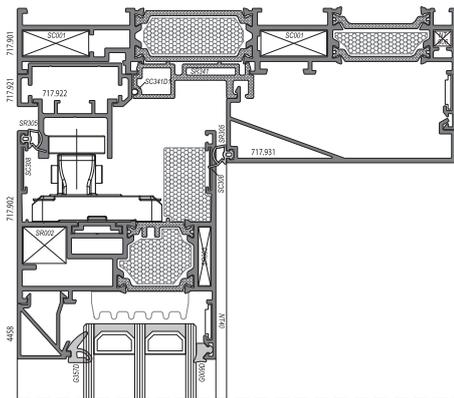
type testing in acc. with EN 14351-1 + A2

TECHNICAL PARAMETERS

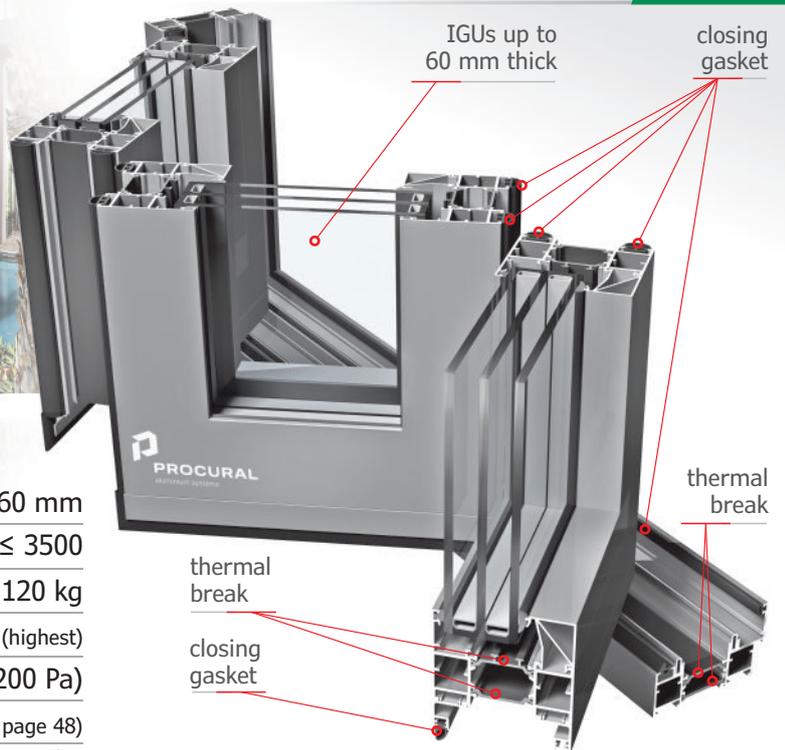
Filling thickness	17 - 60 mm
Sash depth	78 mm
Frame depth	172 mm for single rail
Maximum sash dimensions	L 3000 x H 2900 mm or L 2300 x H 3400 mm
Maximum sash weight	200/400 kg
Air permeability	class 4 (highest)
Watertightness	class E1050 (1050 Pa) with linear drainage
Resistance to wind load	class C4/B4* (* page 48)
Thermal insulation	U_f from 1.5 W/(m ² K) U_w from 0.88 W/(m ² K)

$U_w = 0.88 \text{ W/(m}^2\text{K)}$

*reference construction dimensions: L 2400 x H 2400 mm
 $U_g = 0.5 \text{ W/(m}^2\text{K)}$, triple glazing



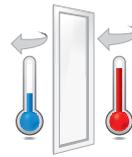
FOLDING WINDOWS AND DOORS



TECHNICAL PARAMETERS

Filling thickness	22 - 60 mm
Maximum sash dimensions	L ≤ 1200 mm or H ≤ 3500
Maximum sash weight	120 kg
Air permeability	class 4 (highest)
Watertightness	E1200 (1200 Pa)
Resistance to wind load	class C3/B3* (* page 48)
Thermal insulation	U _f from 1.7 W/(m ² K), U _w from 1.0 W/(m ² K)

A perfect solution for houses, restaurants and cafes where internal and external spaces are seamlessly blended together



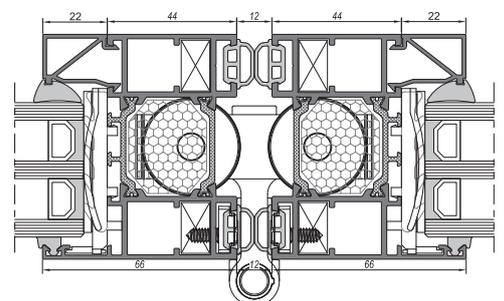
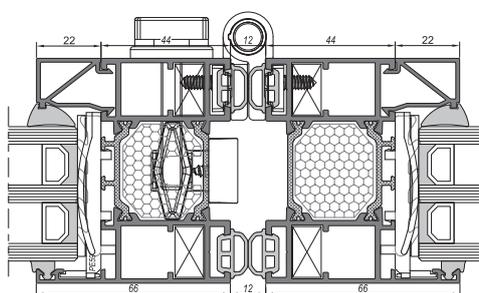
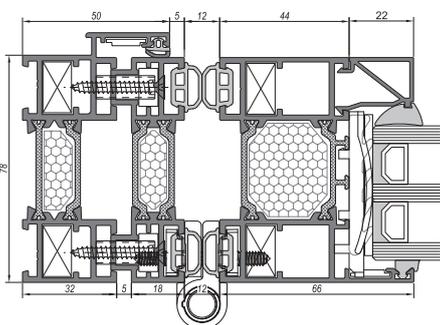
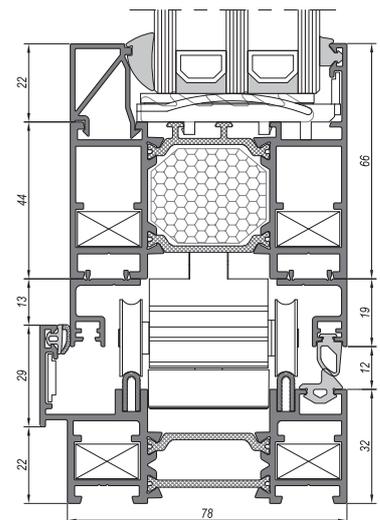
$$U_w = 1.0 \text{ W/(m}^2\text{K)}$$

*reference construction dimensions: L 2400 x H 2400 mm
U_g = 0.5 W/(m²K), triple glazing

Certification

type testing in acc. with EN 14351-1 + A2

- ▶ multiple sash structures available, both inward and outward opening
- ▶ the three-cavity design of profiles ensures good mechanical durability, enabling large constructions
- ▶ high thermal insulation due to same width 34 mm thermal breaks in frame and sash profiles
- ▶ special hardware ensuring end user comfort
- ▶ wide glazing range (22 - 60 mm) enables the use of traditional as well as more specialised glazing units
- ▶ wide range of available threshold solutions
- ▶ interconnected with other PROCURAL systems PE78N
- ▶ additional compensating profile:
 - negates any imperfection in manufacturing and installation
 - allows adjusting and reduces stresses regardless of weather conditions
 - 0-5 mm adjustment range
 - suggested for very wide joinery



ADDITIONAL INFORMATION

The extensive range of PROCURAL products offers a wide variety of interconnected solutions which have been designed to constitute a coherent and compatible system

Technical solutions

A wide range of solutions optimised with regard to quality, static durability, weather resistance, fire resistance and energy efficiency in prefabrication and installation and in everyday use due to good thermal performance.

Modern technologies and designs consistent with the latest architectural trends ensure durable, large-dimension constructions with large glazings and high comfort of use.

Efficient water drainage and ventilation solutions are guaranteed to function properly in even difficult weather conditions in different locations around the world.

Decades of experience in designing aluminium systems and our own R&D facilities allow short development times of bespoke solutions for the most demanding investors.

Aluminium profiles

EN AW-6060 in acc. with EN 573-3, T66 temper in acc. with EN 515 and fulfilling the requirements of EN 12020-1

Gaskets

EPDM synthetic rubber in acc. with EN 12365-1 and TPE in acc. with DIN 16941R3

Hardware and accessories

system elements and the best brands available on the market: ASSA ABLOY, AXA, BIRA, dormakaba, Dr. Hahn, ECO Schulte, esco, Fapim, FUHR, GEZE, G-U, ISEO, MASTER, NEMEF, Roto, SIEGENIA, Sobinco, STAC, WALA, WILKA, WINKHAUS, SAVIO, SECURISTYLE and many more

Fillings

single glazing, IGUs with any type of glass and non-transparent panels

Surface treatment

- polyester powder coating in acc. with Qualicoat available in all RAL colours; anodising and with wood-like appearance; anodizing in acc. with Qualanod in natural aluminium and coloured; wood-effect coating
- polyester powder coating fulfills high anti-corrosion requirements

Thermal insulation

Determined analytically in FEM calculations as well as through testing; individual frame heat transfer coefficients (U_f/U_o) for certain profile combinations as well as heat transfer coefficients for full constructions ($U_w/U_d/U_{cw}$) in acc. with EN ISO 10077-2 / EN ISO 12631

Resistance to wind load

- deflection for: B = 1/200, C = 1/300
- pressure for: 2 = 800 Pa, 3 = 1200 Pa, 4 = 1600 Pa, 5 = 2000 Pa

Certification

- type testing in acc. with EN 14351-1 and EN 14351-2 for window and door systems
- type testing in acc. with EN 13830 for curtain wall systems
- ITB National Technical Assessments



PROCURAL offers dedicated software supporting the drawing, quotation and prefabrication processes for aluminium joinery. The software is regularly modified and updated to reflect the changes and improvements done in PROCURAL systems.

PROKAL

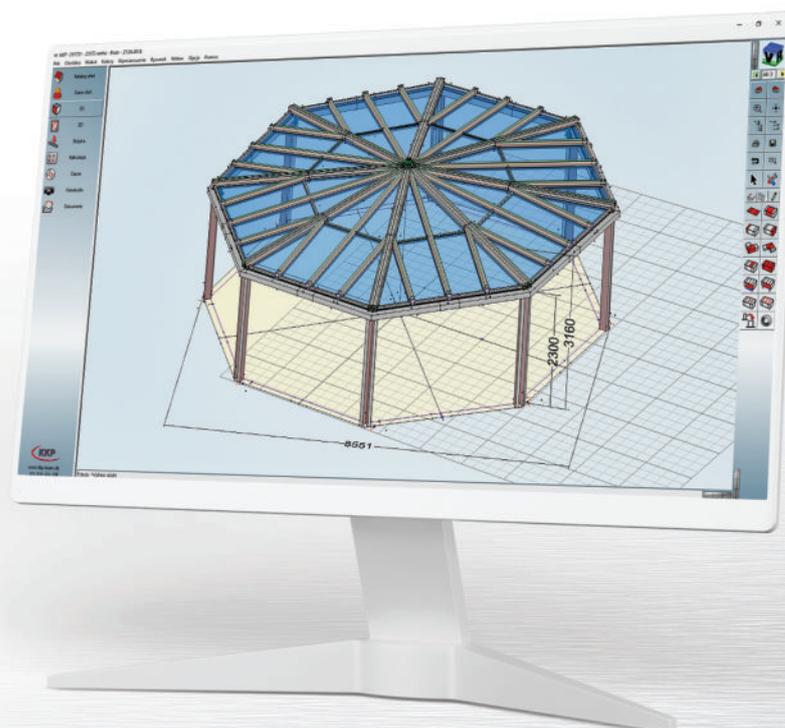
Based on the popular LiczOkno program used by aluminium joinery manufacturers, this is an advanced version dedicated for PROCURAL products. Allows the design of complex window, door and curtain wall constructions and aids in profile selection with statics calculations.

LogiKal

This program is delivered by OrgaData, a renowned company specialising in joinery manufacturing support software. LogiKal performs many necessary calculations, manages orders and prepares production plans. If the customer changes any dimension of the ordered product, each modification is stored in the order history. The program automatically creates construction cross-sections and is compatible with almost every type of CNC saw and machining centre available on the market.

PROKAL3D

Software delivered by KKP Soft-Ing Team. This program supports the 3D design process of winter gardens manufactured from PF152WG profiles. It generates clear cutting lists which indicate the position of each profile in the construction. Statical analysis of the construction is performed and possible alternative load-bearing elements are indicated. The program can also create visualisations of end-products using an imported background image.





PROCURAL
aluminium systems

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