VADEMECUM

OF ARCHITECTURAL ALUMINIUM SYSTEMS

yawal.com

YAWAL
ALUMINIUM + ARCHITECTURE

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3 DECADES OF DEVELOPMENT

Yawal SA is one of the leading suppliers of architectonic systems of aluminium profiles for building and residential buildings construction in Poland. The company owes its position to the founding vision of Edmund Mzyk, the experience of over 30 years of working in the construction and architecture sector in Europe and a wide range of innovative solutions. The company's mission has always been to design and offer comprehensive system solutions at a global level that ensure comfort of life and safety of use. Currently, the company is managed in the second generation of owners by Edmund Mzyk's daughter – Karolina Mzyk-Callias.

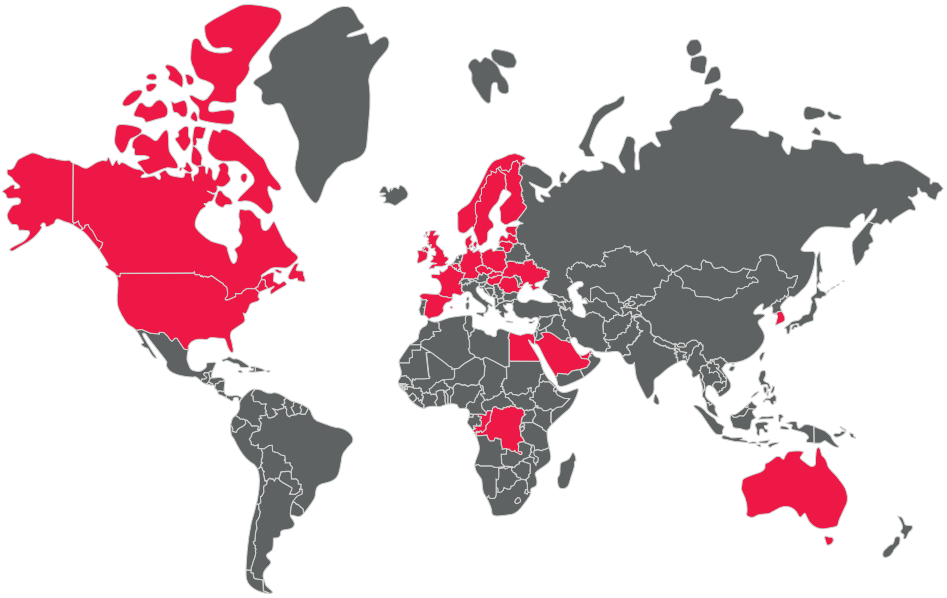
One of the competitive advantages of the company is the concentration of the entire production process in one Capital Group, a part of which are such companies as: Yawal SA, Yawal USA, Final SA and Akrivea Sp. z o. o. All companies have Polish capital, and their activities focus on the processing of aluminium and its products of the best world quality for many industries, including modern construction.

We have been cooperating very closely with architects, general contractors, manufacturers of window joinery and investors invariably for thirty years. It is the exchange of experiences that allows the company to adapt to the rapidly changing market conditions in the world.

Our guiding principle is customer centricity. The client is placed in the centre of our activities, and decisions we make are based on their needs.

Currently, Yawal Group employs nearly 800 qualified employees. Our products are available in about 20 countries around the world. According to the adopted strategy for the future, our activities are focused around the client, employee, environmental protection and development through innovation.

Business scope



SOLUTIONS TAILORED TO EXPECTATIONS

The variety of forms and originality are the features of the architecture of the second and third decade of the 21st century. This effect is achieved, among others, thanks to the use of various materials, the play of light and the creativity of architectural designs. However, we would not have achieved such spectacular results without appropriate technology. During over thirty years of business activity, Yawal SA, cooperating with architects and contractors, has developed customized, unique construction solutions, which make buildings based on the company's systems effective and extremely eye-catching. As a flexible and agile company, we are open to the implementation of customized projects. This type of cooperation between the system supplier and the manufacturer is the most valuable, as only in such cases the solutions are tailored to the needs of customers and product users. Customer is the most important for us, and aluminium is our passion.

PRODUCTION AND LOGISTICS

To ensure top quality of our products, we continuously modernise and enlarge the machine park. At present Yawal has four presses for pressing aluminium profiles and one of the most state-of-the-art powder varnishing shops in in the country, with vertical system of profiles suspension and transport. We attach great importance to on-time deliveries and top quality of customer service. To improve our logistics and make it more efficient, we have built a modern high-stock warehouse. We also maintain inventory of standard profiles, which additionally shortens the lead time. Our Customer Service is available to all our customers and partners to support them with professional experience and assistance.

PRODUCTS

Yawal systems have many applications. They may be used to build façades, sliding structures, doors, windows, roofs and skylights.

A team of top designers of our company continuously work on innovative solutions, with improved parameters, thus allowing architects and investors to create more complex and impressive projects. Our systems of aluminium profiles represent modern technologies, that increase energy efficiency, decrease maintenance costs and, last but not least, decrease the assembly time. Full product range of profiles, fittings and accessories, including available colours, is presented in the official Yawal price list.

We make sure at the Yawal company that our products meet even the most sophisticated customer requirements. We see a great potential in modern residential projects, where there is greater importance placed on the amount of light in the rooms. We wish our products to create a friendly, comfortable, and at the same functional environment that creates an optimistic and thus healthier living space.

QUALITY AND ECOLOGY

Our commitment to environment does not end at production. We want to actively contribute to creating a sustainable future through our cooperation with various organizations and initiatives around the world.

The objective of our company is to continuously improve the quality of our products, however without a negative effect on the environment. We create quality to satisfy our customers and ourselves. In line with our principle, Yawal products are manufactured in environment friendly conditions. We achieve this goal by using appropriate materials and controlling consecutive stages of production and distribution. The prove our care for the environment is our new investment. We have installed a safe spraying installation for chemical processing of aluminium using chrome-free preparations. Please note that aluminium is 100% recyclable material.

The company is a partner of UN Global Compact. For a long time, Yawal Group has been heading towards environmental neutrality, which is why the company joined the Climate Positive programme which is part of the Global Compact. The Climate Positive programme supports the implementation of the UN Sustainable Development Goals, such as; clean and accessible energy, innovative industry and infrastructure or activities related to climate. Current vision of Yawal covers the next 30 years of sustainable development of the company. It is an expression of respect for 33 years of heritage.

SUSTAINABLE DEVELOPMENT
IN YAWAL GROUP

CERTIFICATES

At Yawal, each stage of aluminium processing is monitored and recorded, ensuring optimal protection against corrosion and adhesion of paint coatings.

Our basic instruments to achieve the objectives of high quality and ecological approach are the implemented management systems. The first one is the Quality Management System complying with ISO 9001:2015 standards, confirmed with a certificate issued by BSI for: designing, production and distribution of aluminium profiles and architectural aluminium systems for building industry, and corresponding technical assistance. The full scope is presented below: Designing, production and distribution of aluminium profiles and architectural aluminium systems for building industry, and corresponding technical assistance. Powder coating. Completion of photovoltaic systems based on the production of Yawal aluminium profiles and third-party suppliers of other components of the BIPV (Building Integrated Photovoltaics) installation.

The second instrument to support the management process is the Environmental Management System ISO 14001:2004, confirmed with a certificate issued by a certification entity BSI. Yawal meets all legal requirements specified by those certificates, maintains a policy of rational utilisation of utilities, materials and raw materials, and uses effective devices to minimise negative impact on the environment. As far as the powder varnishing of aluminium is concerned, Yawal obtained a Qualicoat licence, including Seaside, of the Association for Quality Control in the Lacquering, Painting and Coating Industry.

BUSINESS PARTNERS

Cooperation with architects and designers enhances creating unique construction solutions. Our technical department assists our customers in finding the best solutions in application of aluminium systems. With our Coordinators' help we transform the architects' ideas into interesting designs that fit into an intended budget. Top quality of products and customer service is our most important priority. Our products are constantly improved, based on our partners' knowledge that we gather and integrate into our systems. The objective here is not only to sell the product, but also to offer great technical support that would allow to quickly fins solutions to new challenges. We want to create safe and beautiful world with our partners.

Customer assistance includes:

- designing and technical advice, technical assistance by our specialists both in the field and at Yawal premises,
- trainings on technical solutions, calculations and material bills for customers (carried out at our premises or individually, at our customers' premises in Poland),
- technical assistance for the offer software YAWAL CONSTRUCTOR, YAWAL PRO,
- static and strength calculations and valuations for projects,
- designing complicated aluminium structures and technical supervision.

YAWAL TRAININGS

We organize cycles of off-site and on-line technical and product training, including in the field of software. Trainings are intended for all companies dealing with designing and assembly of aluminium systems, companies interested in production quality improvement and designers working with Yawal systems. The goal is to improve the quality of customer service and production efficiency. We act out of concern for the satisfaction of our clients and partners, and our main goal is to jointly create a safe and comfortable environment for residents. We have a mission, values and purpose that are an integral part of our company.

CUSTOMER PANEL AND KNOWLEDGE

The Internet Customer Panel is direct access to knowledge and a connection to our ordering system. The Panel is available in the menu in the Manufacturer tab, the data is fully protected and available after prior registration and user authorization. In addition, you may find the Knowledge Panel on our website. It is the place where we have gathered the most important information about our products. You may find there system catalogues, price lists, software, certificates, CAD/Revit library, manuals, and marketing and information materials.

Check our Customer Panel.
Register now!

TOOLING

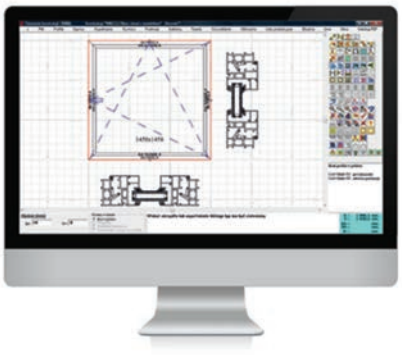
Yawal SA aims at providing the customers a state-of-the-art manufacturing base that ensures high quality and efficiency at the same time. The machine park and tooling we offer can significantly speed up the production of windows, door and façades.

The advantages of our multi-press machines:

- operational safety,
- high operation rate,
- user-friendly operation,
- high quality of holes and undercuts.

SOFTWARE

In order to make creating aluminium constructions easier for our customers, Yawal offers dedicated computer software to support the entire production process of aluminium constructions manufacturers. YAWAL CONSTRUCTOR is a specialist software to prepare offers quickly, generate material bills, creating production lists and cutting lists. It also allows for exporting the skeletons of created structures to CAD type software ant to export data to Excel. The company also cooperates with UNI-LINK and Orgadata in the integration of software with CNC machines.



Yawal Constructor
a window to design structures

YAWAL SYSTEMS

TM 102 HI

WINDOW AND DOOR SYSTEM WITH THERMAL INSULATION

perfect thermal insulation properties

TM 102HI – SYSTEM FEATURES

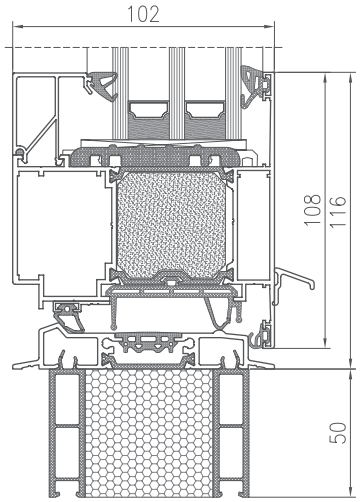
- excellent level of energy efficiency Uf = from 0,45 W/m²K and very high water tightness thanks to the use of an innovative design of the central gasket,
- excellent level of sound insulation confirmed by tests,
- mfromern design of latch profiles in combination with new gaskets - the possibility of obtaining one plane on the aluminium-gasket line,
- possibility of manufacturing glazing reversible profile,
- possibility of creating structures with large surfaces,
- possibility of making balcony door with low threshold and all-glass corner,
- additional windproof insulation thanks to the use of a gasket at the joint of the glazing bead of the profile,
- enables the production of modern doors, ensuring excellent thermal insulation
- possibility of using full range of fittings available on the market: surface fittings, hidden fittings, PVC groove fittings, spindle handles of any shape, stainless steel handles.

See the product on the website

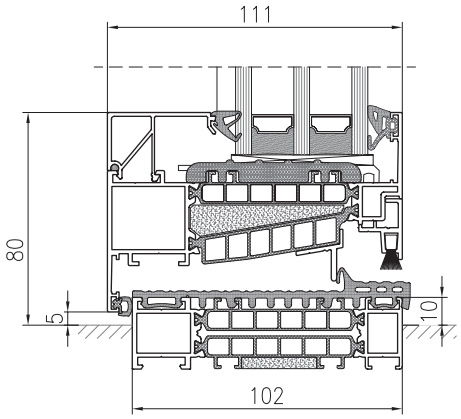
cool, temperate climate
phB
CERTIFIED COMPONENT
Passive House Institute

Picture: Office Building at Za bramką Street, Poznań
Design: Ultra Architects
Aluminium manufacturer: JB System Jacek Broniarz

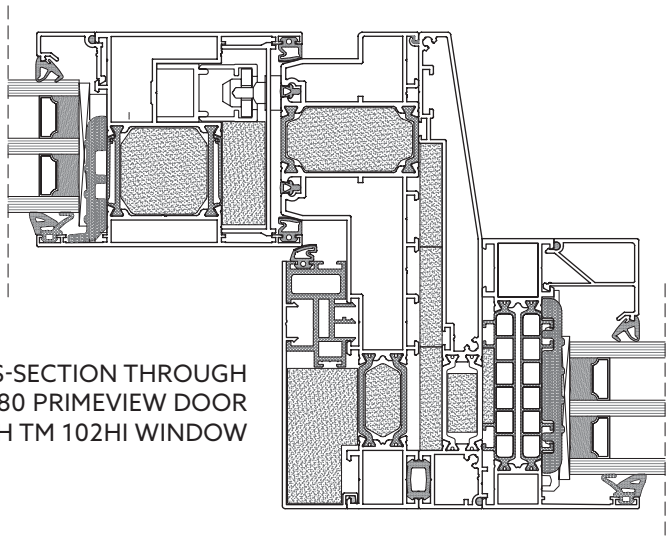
CROSS SECTION THROUGH TM 102HI DOOR WITH WARM FOUNDATION BEAM



CROSS-SECTION THROUGH TM 102HI WINDOW WITH LOW THRESHOLD



CROSS-SECTION THROUGH DP 180 PRIMEVIEW DOOR WITH TM 102HI WINDOW



TECHNICAL PARAMETERS – TM 102HI

		WINDOWS	DOORS
ENERGY	Thermal insulation EN 10077-2	Uw from 0,58 W/m²K	Uw from 0,7 W/m²K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 39 ÷ 48 dB	Rw = 39 ÷ 48 dB
	Air permeability EN 12207	Class 4	Class 4
	Water tightness EN 12208	E1800	E750
SAFETY	Wind load resistance EN 12210	Class C5/B5	Class C5/B5
	Anti-theft protection EN 1627	RC2	RC2

TECHNICAL PROPERTIES – TM 102HI

	WINDOWS	DOORS
Frame structural depth	102 mm	102 mm
Sash/leaf structural depth	111,4 mm	102 mm
Infill thickness	35 ÷ 72 mm	35 ÷ 72 mm
Maximum sash/leaf dimensions L x H	1600 x 3000 mm	1400 x 3000 mm/
Maximum sash/leaf weight	180 kg	250 kg
Structure type	fixed, turn, tilt, turn and tilt window	single-leaf, double-leaf doors, doors with transom window and sidelights

TM
102
HI

PANEL DOOR SYSTEM

Prestige

better thermals

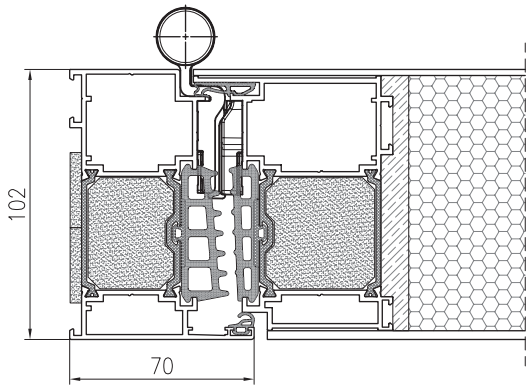
TM 102HI PRESTIGE – SYSTEM FEATURES

- ensures insulation at the level of Uf from 0,5 W/m²K, which makes it perfect for passive houses,
- allows full freedom in constructing exclusive entrance doors, regardless of configuration,
- versions with a single-sided and double-sided panel are available,
- mfromern multi-component central gasket between the frame and the leaf,
- allows the use of a linear drainage solution,
- the system is quick and easy to assemble,
- possibility of using panels with all possible designs, with decorative designs of stainless steel and with decorative cuts,
- the system has dedicated hardware solution.

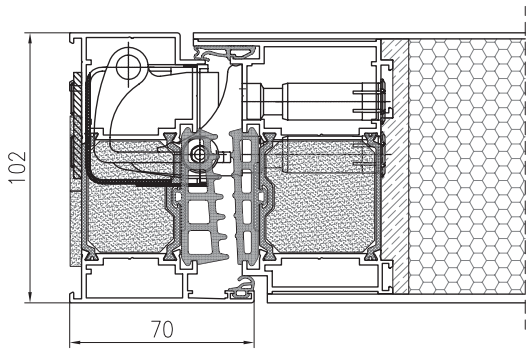
See the product and panel door folder on the website

Picture: Private house
Design: MRZEWA Architects, Łódź,
Aluminium manufacturer: Zimny Sp. z o.o., Łódź

CROSS SECTION THROUGH TM 102HI
PRESTIGE DOOR – ROLLER HINGES



CROSS SECTION THROUGH TM 102HI
PRESTIGE DOOR – HIDDEN HINGES



TECHNICAL PARAMETERS – TM 102HI PRESTIGE		
ENERGY	Thermal insulation EN 10077-2	Uw from 0,8 W/m²K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 34 dB
	Air permeability EN 12207	Class 4
	Water tightness EN 12208	7A
SAFETY	Wind load resistance EN 12210	Class C5/B5
	Anti-theft protection EN 1627	RC2

TECHNICAL PROPERTIES – TM 102HI PRESTIGE	
Frame structural depth	102 mm
Leaf structural depth	102 mm
Infill thickness	50 ÷ 102 mm
Maximum dimensions L x H	1300 x 3000 mm/2600 x 3000 mm
Maximum leaf weight	250 kg
Structure type	single-leaf doors, double-leaf door, door with transom windows and sidelights

TM
77N

WINDOW AND DOOR SYSTEM
WITH THERMAL INSULATION

energy efficiency and economy

TM 77N – SYSTEM FEATURES

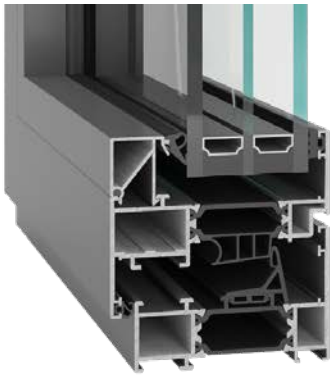
- the possibility to choose from three thermal variants, tailored to the individual energy needs of the building,
- reduction of prefabrication time by 20%, thanks to the new sealing system, which significantly enhances production efficiency,
- a 20% reduction in prefabrication time, thanks to the new sealing system, which significantly enhances production efficiency,
- high energy efficiency achieved through excellent thermal parameters,
- the use of eco-friendly seals providing better thermal protection and reducing environmental impact,
- the option to equip with automation and access control systems, compatible with Smart Home systems, enabling remote control, e.g., via smartphones or voice assistants.

See the product
on the website

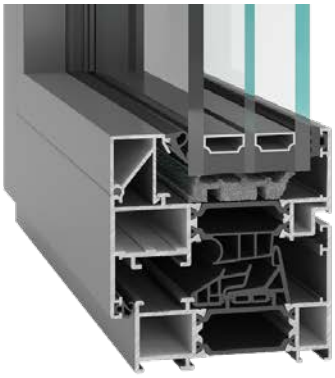
Picture: Officer, Gdynia
Design: arch. Jacek Droszcz, Studio Architektoniczne KWADRAT
Aluminium manufacturer: Aluminium Plus
General contractor: ALLCON BUDOWNICTWO

TM 77N WINDOWS AND DOORS ARE AVAILABLE IN 3 THERMAL VARIANTS:

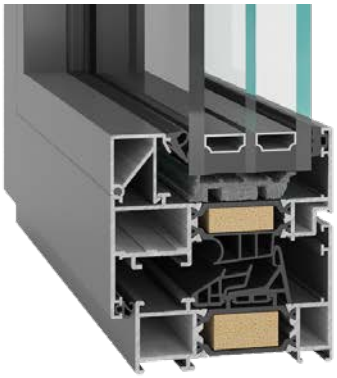
TM 77N ST



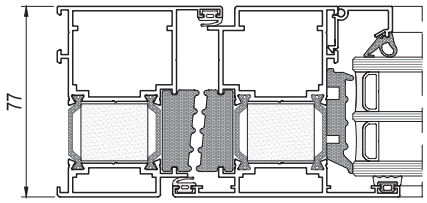
TM 77N I



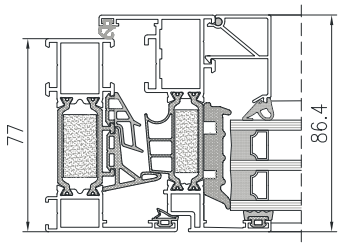
TM 77N HI+



CROSS SECTION OF
TM 77N HI+ OUTWARD OPENING DOORS



SECTION THROUGH
WINDOW TM 77N HI+



TECHNICAL PARAMETERS – TM 77N

		WINDOWS	DOORS
ENERGY	Thermal insulation EN 10077-2	Uw from 0,62 W/m²K	Ud from 0,8 W/m²K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = up to 49 dB	Rw = 36 ÷ 45 dB
	Air permeability EN 12207	Class 4	Class 4
	Water tightness EN 12208	E1950	E900
SAFETY	Wind load resistance EN 12210	Class C5	Class C5/B5
	Anti-theft protection EN 1627	RC2	RC3

TECHNICAL PROPERTIES – TM 77N

	WINDOWS	DOORS
Frame structural depth	77 mm	77 mm
Sash/leaf structural depth	86,4 mm	77 mm
Infill thickness	21 ÷ 70 mm	21 ÷ 61 mm
Maximum sash/leaf dimensions L x H	1600 x 3000 mm	1400 x 3000 mm/ 2400 x 2900 mm
Maximum sash/leaf weight	300 kg	250 kg
Structure type	walls, fixed, tilt, turn, tilt-and-turn, turn-and-tilt windows	single-leaf, double-leaf doors, doors with transom window and sidelights

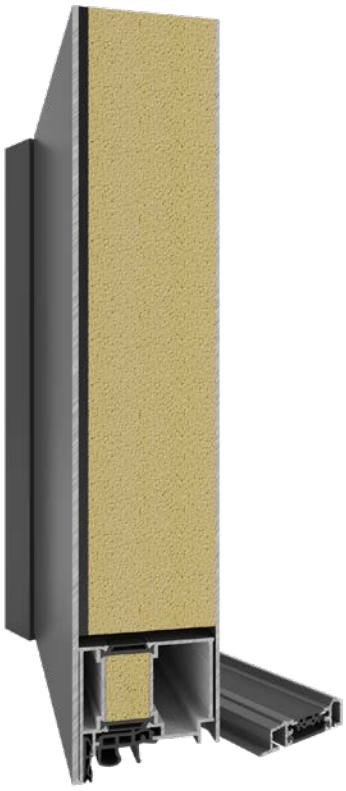
TM 77N PANEL DOOR SYSTEM

Prestige

aesthetics and modernity

TM 77N PRESTIGE – SYSTEM FEATURES

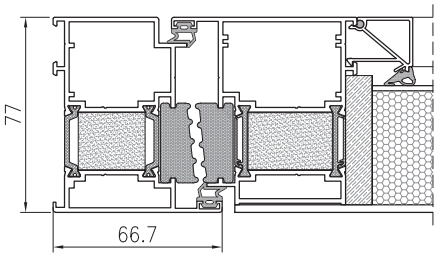
- the possibility to choose from three thermal variants, tailored to the individual energy needs of the building,
- excellent aesthetics of the system due to hidden hinges, the product is available in various options:
  – with single – faced panel,
  – with double – faced panel,
- possibility of choice between type of insulation or central gasket,
- quick and easy assembly,
- possibility of using panels with all possible designs, with decorative designs of stainless steel and with decorative cuts,
- high thermal insulation properties,
- great selection of colours – RAL palette, structural colours and wooden-like colours,
- possibility of opening the door in various ways: standard key, application, fingerprint,
- possibility of creating high structures using innovative solutions.



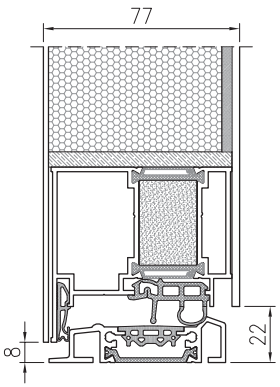
See the product and panel door folder on the website

Picture: Examples of the system use

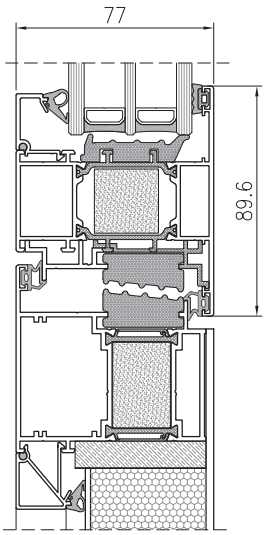
CROSS SECTION THROUGH
TM 77N HI+ PRESTIGE DOOR



CROSS SECTION OF TM 77N HI+ PRESTIGE
DOOR WITH TRANSOM WINDOW



CROSS SECTION THROUGH
TM 77N HI+ PRESTIGE DOOR



TECHNICAL PARAMETERS – TM 77N PRESTIGE		
ENERGY	Thermal insulation EN 10077-2	Uw from 0,9 W/m²K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 33 dB
	Air permeability EN 12207	Class 4
	Water tightness EN 12208	7A
SAFETY	Wind load resistance EN 12210	Class C5/B5
	Anti-theft protection EN 1627	RC2, RC3

TECHNICAL PROPERTIES – TM 77N PRESTIGE	
Frame structural depth	77 mm
Sash/leaf structural depth	77 mm
Infill thickness	30 ÷ 77 mm
Maximum dimensions L x H	1300 x 3000 mm/ 2400 x 2800 mm
Maximum leaf weight	250 kg
Structure type	single-leaf, double-leaf doors, doors with transom window and sidelights

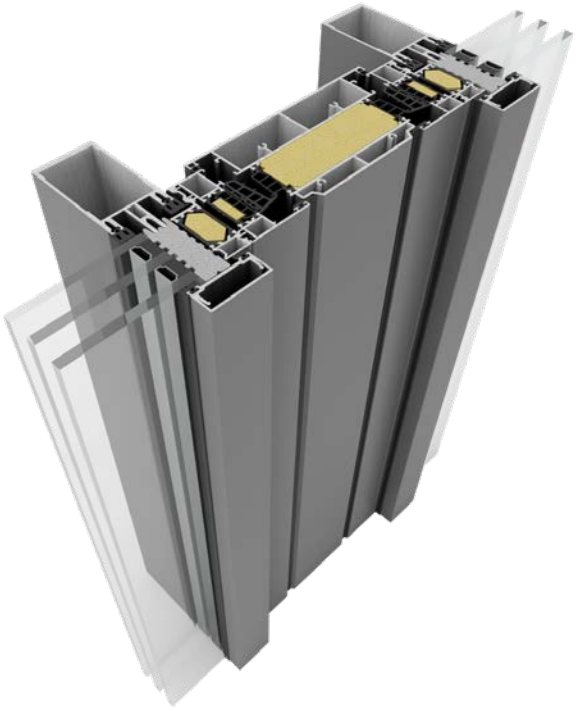
TM
77HI
VENT WINDOW

Vent

free air circulation

TM 77HI VENT – SYSTEM FEATURES

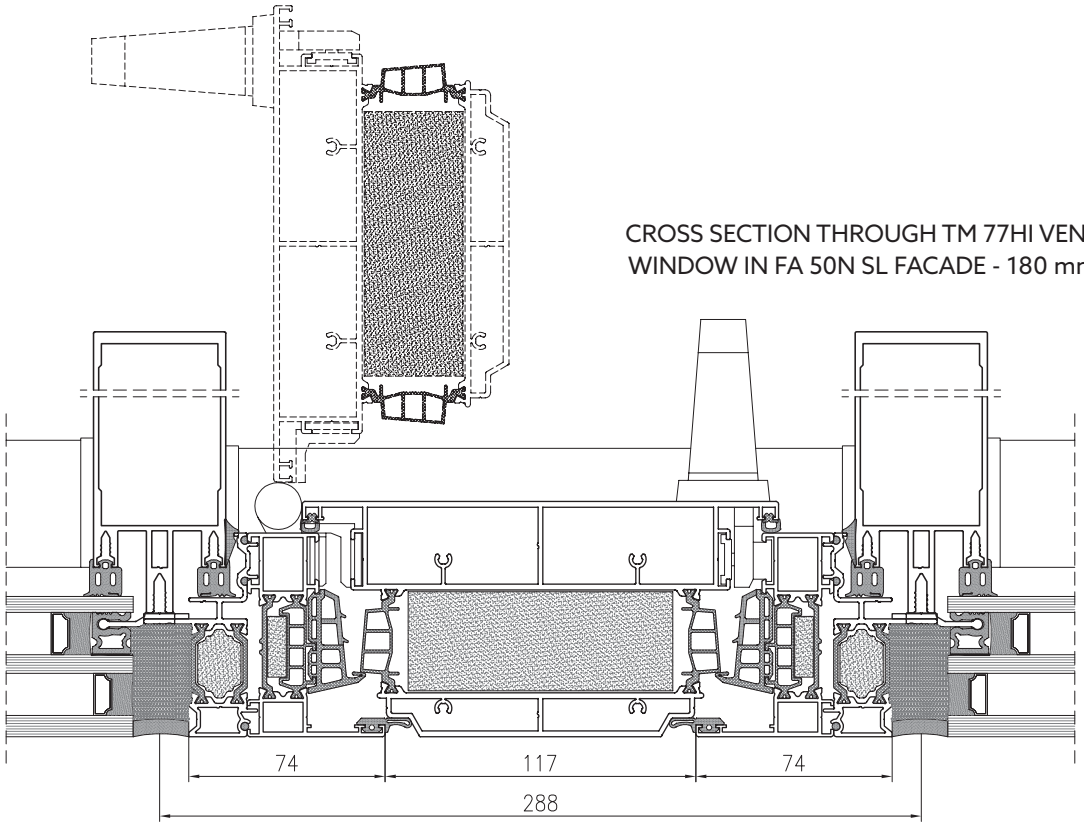
- possibility of installing into FA 50N and FA 50N SL façades,
- the use of a standard frame and gasket in the system structure,
- sealing made of PIR,
- system allows you to adhere the glass, which increases safety and aesthetics,
- possibility of creating window structures up to 3 m high,
- safe and efficient room ventilation system,
- possibility of combination with other Yawal systems.



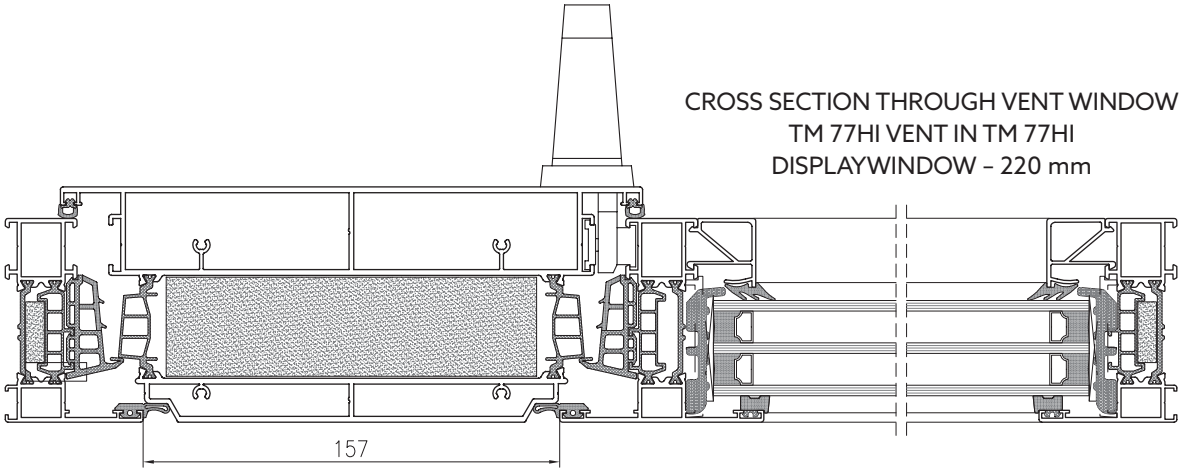
See the product
on the website

Picture: Office Building WAVE, Gdańsk
Design: Medusa Group Sp. z o.o. Sp.k., Bytom
Aluminium manufacturer: POKO-AL Sp. z o.o. Sp.k, Gdańsk

CROSS SECTION THROUGH TM 77HI VENT WINDOW IN FA 50N SL FACADE - 180 mm



CROSS SECTION THROUGH VENT WINDOW TM 77HI VENT IN TM 77HI DISPLAYWINDOW – 220 mm



TECHNICAL PARAMETERS – TM 77HI VENT

ENERGY	Thermal insulation EN 10077-2	Uw from 0,9 W/m²K
COMFORT	Air permeability EN 12207	Class 4
	Water tightness EN 12208	E1500
SAFETY	Wind load resistance EN 12210	Class C5/B5

TECHNICAL PROPERTIES – TM 77HI VENT

Frame structural depth	77 mm
Sash/leaf structural depth	88,9 mm
Maximum dimensions L x H	180 x 3000 mm, 220 x 3000 mm
Structure type	turn vent window

TM
62HI

WINDOW AND DOOR SYSTEM
WITH THERMAL INSULATION

good thermal insulation

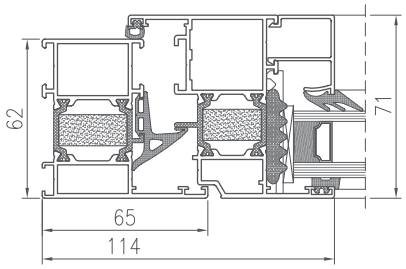
TM 62HI – SYSTEM FEATURES

- savings on energy that translate to the building heating costs reduction,
- possibility of manufacturing windows, doors and display windows with improved anti-theft properties,
- the system allows profiles bending, which gives greater flexibility in design and assembly.

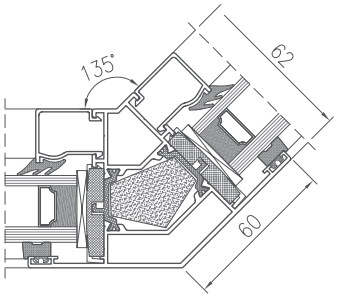
See the product
on the website

Picture: Residential Estate Galeria Park, Warsaw
Design: KAPS Architects, Warsaw
Aluminium manufacturer: MBB, Toruń

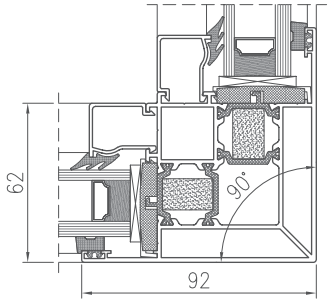
CROSS SECTION THROUGH
TM 62HI WINDOW



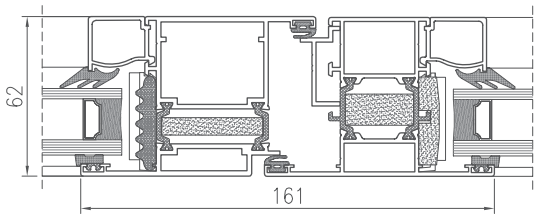
CROSS SECTION – CORNER
CONNECTION 135° TM 62HI



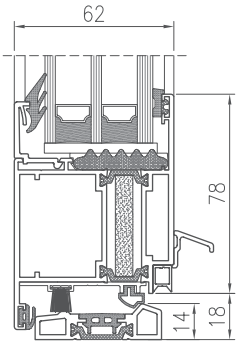
CROSS SECTION – CORNER
CONNECTION 90° TM 62HI



CROSS SECTION THROUGH
TM 62HI DOOR WITH SIDELIGHT



CROSS SECTION THROUGH
TM 62HI DOOR



TECHNICAL PARAMETERS – TM 62HI

		WINDOWS	DOORS
ENERGY	Thermal insulation EN 10077-2	Uw from 0,8 W/m²K	Uw from 1,2 W/m²K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 35 ÷ 42 dB	Rw = 35 ÷ 44 dB
	Air permeability EN 12207	Class 4	Class 2
	Water tightness EN 12208	E1050	3A
SAFETY	Wind load resistance EN 12210	–	Class C5/B5
	Anti-theft protection EN 1627	RC2, RC3	RC2, RC3

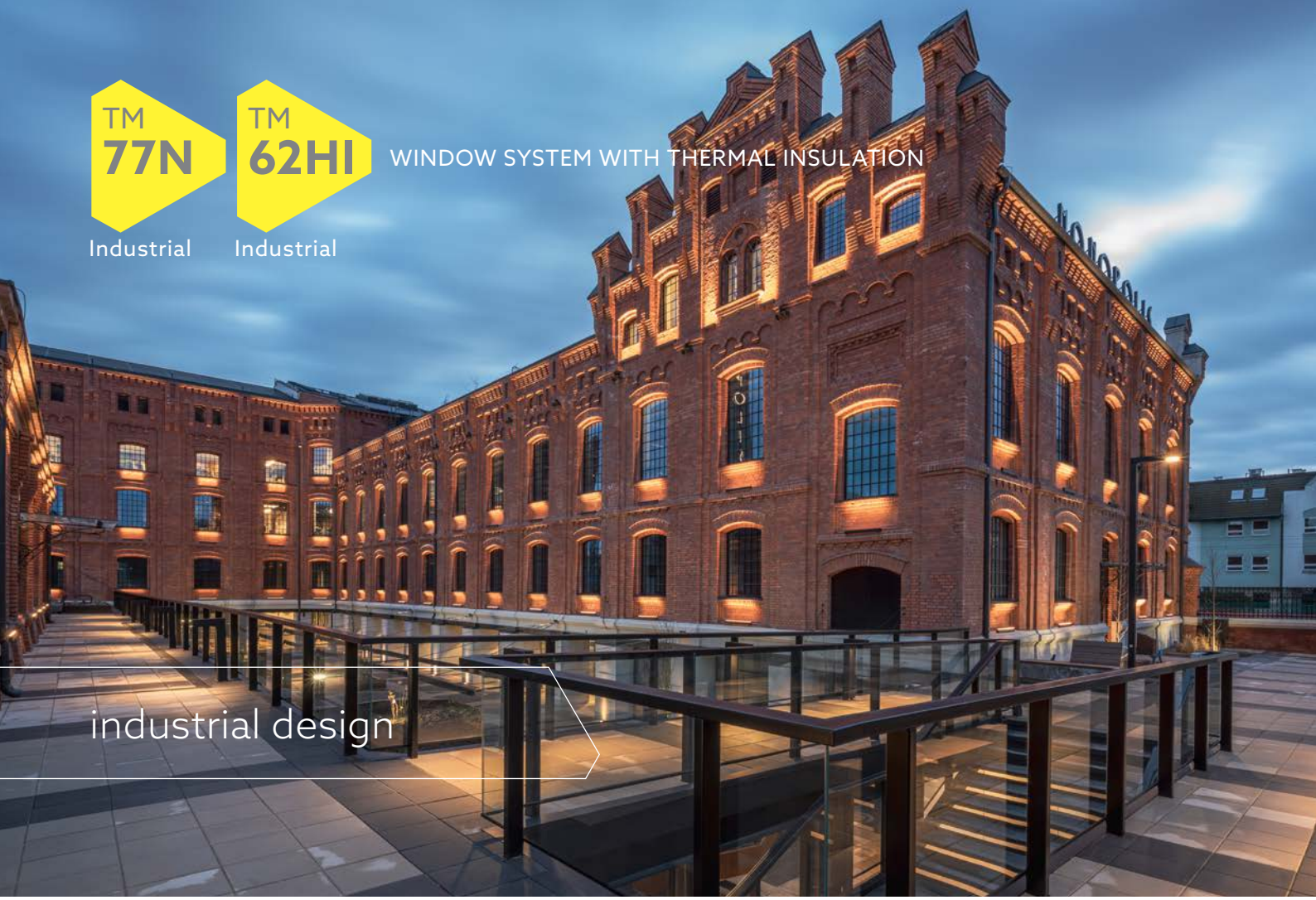
TECHNICAL PROPERTIES – TM 62HI

	WINDOWS	DOORS
Frame structural depth	62 mm	62 mm
Sash/leaf structural depth	71,4 mm	62 mm
Infill thickness	6 ÷ 54 mm	6 ÷ 54 mm
Maximum sash/leaf dimensions L x H	1300 x 2600 mm	1300 x 2600 mm/ 2400 x 2600 mm
Maximum sash/leaf weight	180 kg	180 kg
Structure type	fixed, turn, tilt, turn and tilt window	single-leaf, double-leaf doors, doors with transom window and sidelights

TM 77N Industrial

TM 62HI Industrial

WINDOW SYSTEM WITH THERMAL INSULATION



industrial design

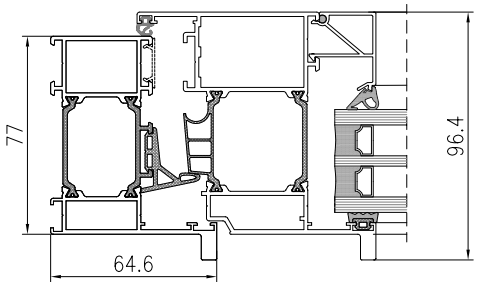
TM 77N/62HI INDUSTRIAL – SYSTEM FEATURES

- excellent values of heat transfer coefficient,
- effective water draining system,
- aesthetics ensured due to narrow window frame visible from the outside,
- possibility of creating modern window structures in various arrangements,
- perfect substitution of old steel windows in modernised industrial facilities, lofts and tenement houses. They allow for maintaining the industrial character of the building and meeting the requirements of modern architecture at the same time,
- possibility of connecting with all YAWAL systems, particularly intended for connection with TM 62HI and TM 77N systems.

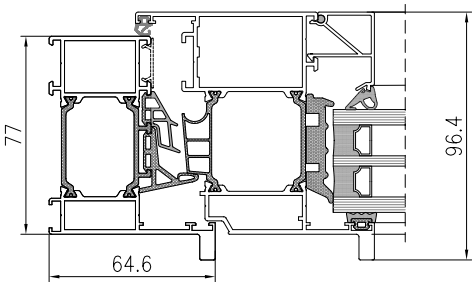
See the product on the website

Picture: Monopolis, Łódź
Design: Grupa 5 Architekci Sp. z o.o., Warsaw
Aluminium manufacturer: OLI Sp. z o.o., Piotrków Trybunalski

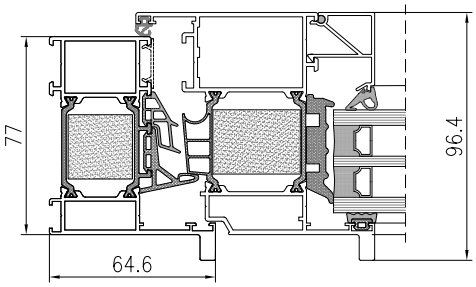
CROSS SECTION THROUGH
TM 77N ST INDUSTRIAL WINDOW



CROSS SECTION THROUGH
TM 77N I INDUSTRIAL WINDOW



CROSS SECTION THROUGH
TM 77N HI+ INDUSTRIAL WINDOW



TECHNICAL PARAMETERS – INDUSTRIAL

	TM 77N INDUSTRIAL	TM 62HI INDUSTRIAL
Thermal insulation EN 10077-2	Uw from 0,62 W/m²K	Uw from 0,8 W/m²K
Acoustic insulation EN ISO 140-3	Rw = up to 49 dB	Rw = 35 ÷ 42 dB
Air permeability EN 12207	Class 4	Class 4
Water tightness EN 12208	E1950	E1050
Wind load resistance EN 12210	Class C5	–
Anti-theft protection EN 1627	RC2, RC3, RC4	RC2, RC3

TECHNICAL PROPERTIES – INDUSTRIAL

	TM 77N INDUSTRIAL	TM 62HI INDUSTRIAL
Frame structural depth	77 mm	62 mm
Sash/leaf structural depth	86,4 mm	71,4 mm
Infill thickness	21 ÷ 70 mm	6 ÷ 54 mm
Maximum dimensions L x H	1600 x 3000 mm	1300 x 2600 mm
Maximum sash/leaf weight	300 kg	180 kg
Structure type	walls, fixed, tilt, turn, tilt-and-turn, turn-and-tilt windows	fixed, turn, tilt, turn and tilt window

TM 77N US

TM 62HI US

WINDOW SYSTEM WITH THERMAL INSULATION

hidden sash effect

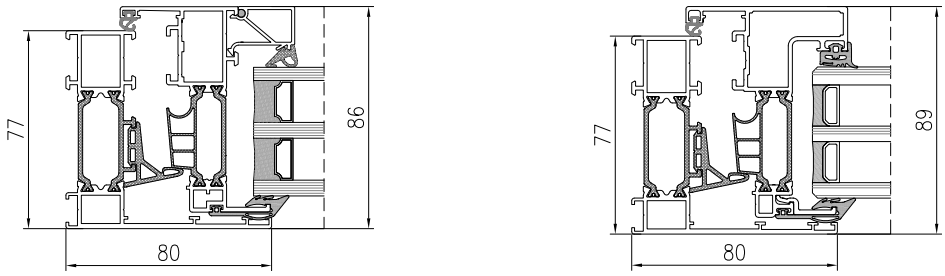
TM 77N/62HI US – SYSTEM FEATURES

- possibility of obtaining the minimalism of the sash on the outside by hiding it in the frame,
- innovative design makes it possible to achieve construction simplicity,
- excellent values of heat transfer coefficient,
- an alternative to fixed glazing by obtaining the fix effect while maintaining the turn function,
- it is possible to connect it with all YAWAL systems.

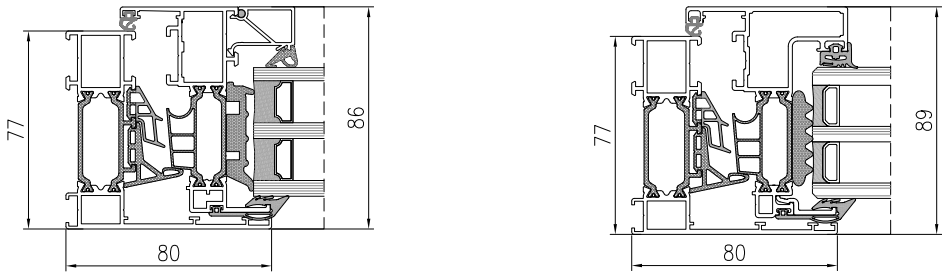
See the product on the website

Picture: Polish-Japanese Academy of Information Technology in Warsaw
Design: Chmielewski Skała Architects
Aluminium manufacturer: Alures Sp. z o.o.

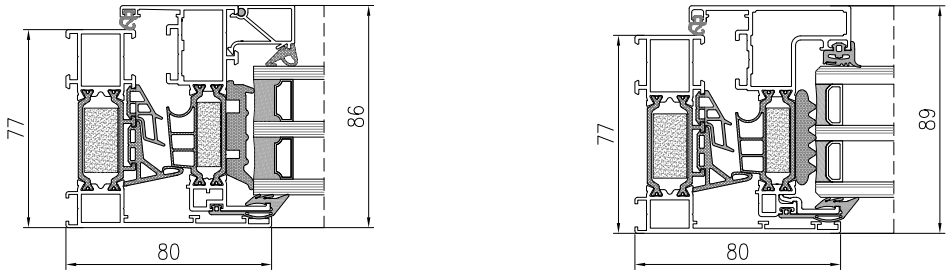
CROSS-SECTION THROUGH TM 77N ST WINDOW WITH A HIDDEN SASH



CROSS-SECTION THROUGH TM 77N I WINDOW WITH A HIDDEN SASH



CROSS-SECTION THROUGH TM 77N HI+ WINDOW WITH A HIDDEN SASH



TECHNICAL PARAMETERS – US

	TM 77HI US	TM 62HI US
Thermal insulation EN 10077-2	Uw from 0,7 W/m²K	Uw from 0,9 W/m²K
Air permeability EN 12207	Class 4	Class 4
Water tightness EN 12208	E1050	E1050
Wind load resistance EN 12210	Class C5/B5	–
Anti-theft protection EN 1627	RC2, RC3, RC4	RC2, RC3

TECHNICAL PROPERTIES – US

	TM 77HI US	TM 62HI US
Frame structural depth	77 mm	62 mm
Sash/leaf structural depth	79,9 mm	74,9 mm
Infill thickness	24 ÷ 67 mm	24 ÷ 52 mm
Maximum dimensions L x H	1300 x 2700 mm	1300 x 2400 mm
Maximum sash/leaf weight	150 kg	150 kg
Structure type	fixed, turn, tilt, turn and tilt window	fixed, turn, tilt, turn and tilt window

TM 77HI Outward

TM 62HI Outward

WINDOW SYSTEM WITH THERMAL INSULATION

outward opening windows

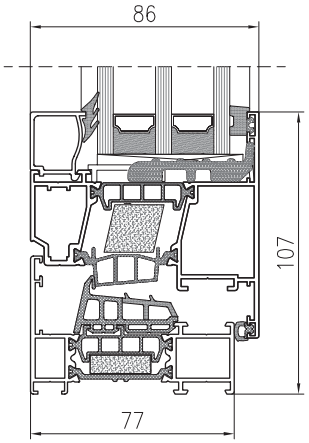
TM 77HI/62HI OUTWARD – SYSTEM FEATURES

- outward opening windows do not take up space inside the room,
- possibility of adapting the system to the expected level of thermal insulation,
- excellent tightness of the structure,
- an export product that meets the requirements of the Scandinavian and British markets,
- possibility of creating modern window structures in various arrangements,
- possibility of connecting with all YAWAL systems.

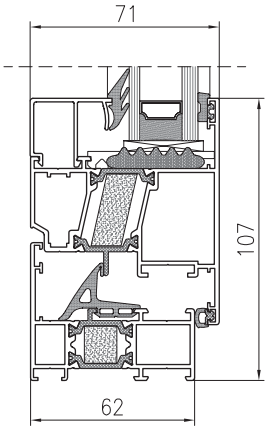
See the product on the website

Picture: Primary School no. 3, Ruda Śląska
Design: Salwator & Architekci and VERSO Group
Aluminium manufacturer: Domkat Sp. z o.o

CROSS SECTION THROUGH
TM 77HI OUTWARD WINDOW



CROSS SECTION THROUGH
TM 62HI OUTWARD WINDOW



TECHNICAL PARAMETERS – OUTWARD

	TM 77HI OUTWARD	TM 62HI OUTWARD
Thermal insulation EN 10077-2	Uw from 0,66 W/m²K	Uw from 0,8 W/m²K
Acoustic insulation EN ISO 140-3	Rw = 39 ÷ 48 dB	Rw = 35 ÷ 42 dB
Air permeability EN 12207	Class 4	Class 4
Water tightness EN 12208	E1200	E1200
Wind load resistance EN 12210	Class C5/B5	–

TECHNICAL PROPERTIES – OUTWARD

	TM 77HI OUTWARD	TM 62HI OUTWARD
Frame structural depth	77 mm	62 mm
Sash/leaf structural depth	86,4 mm	71,4 mm
Infill thickness	19 ÷ 67 mm	6 ÷ 54 mm
Maximum dimensions L x H	1600 x 3000 mm	1300 x 2600 mm
Maximum sash/leaf weight	150 kg	150 kg
Structure type	fixed, turn, tilt, turn and tilt window	fixed, turn, tilt, turn and tilt window

TM 77N
Automatic door

TM 62HI
Automatic door

DOOR SYSTEM
WITH THERMAL INSULATION

comfort and aesthetics

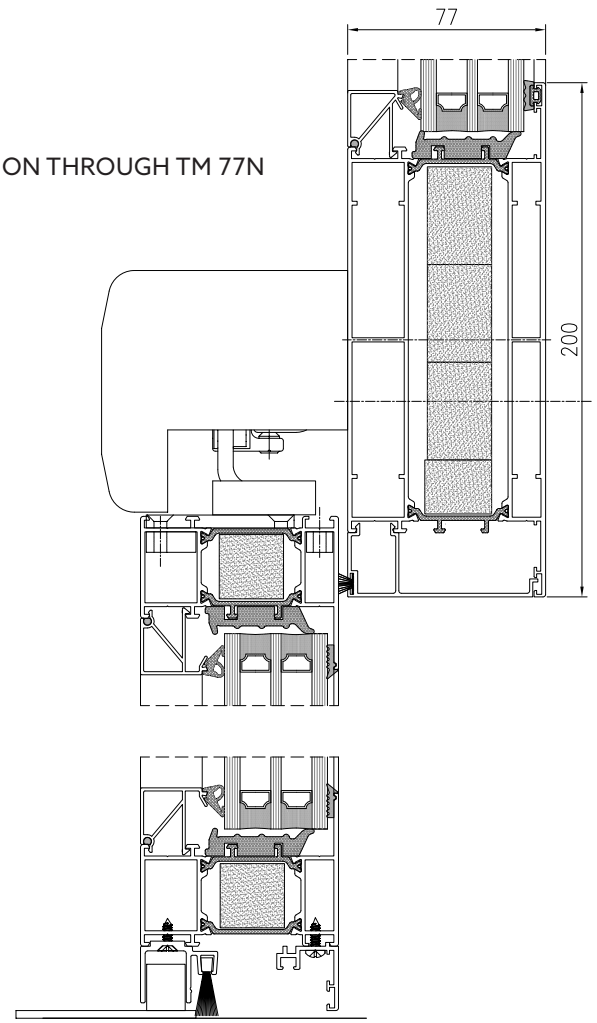
AUTOMATIC DOOR – SYSTEM FEATURES

- the system complies with the new EN 16005:2013 standard for doors with drives,
- easy installation in the FA 50N façade,
- possibility of dividing the leaf with a crossbar,
- possibility of mounting various types of drives to control the door.

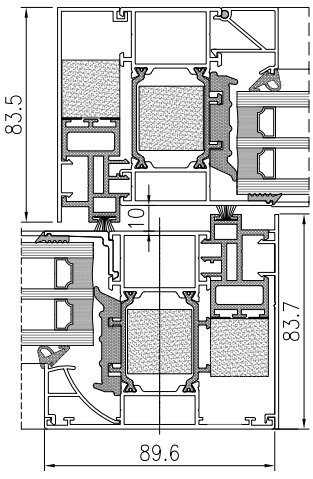
See the product on the website

Picture: Collegium Paderevianum II of the Jagiellonian University, Cracow
Design: Bończa Studio, Wieliczka
Aluminium manufacturer: Hossa Sp. z o.o., Katowice and Eurobud Grupa, Bystrowice

CROSS SECTION THROUGH TM 77N



CROSS SECTION THROUGH DOOR LIMITER AT THE JOINT WITH THE WALL OF TM 77N PROFILE



TM
82W
HI

WINDOWS SYSTEM
GLAZED INSIDE

large-dimension glazing

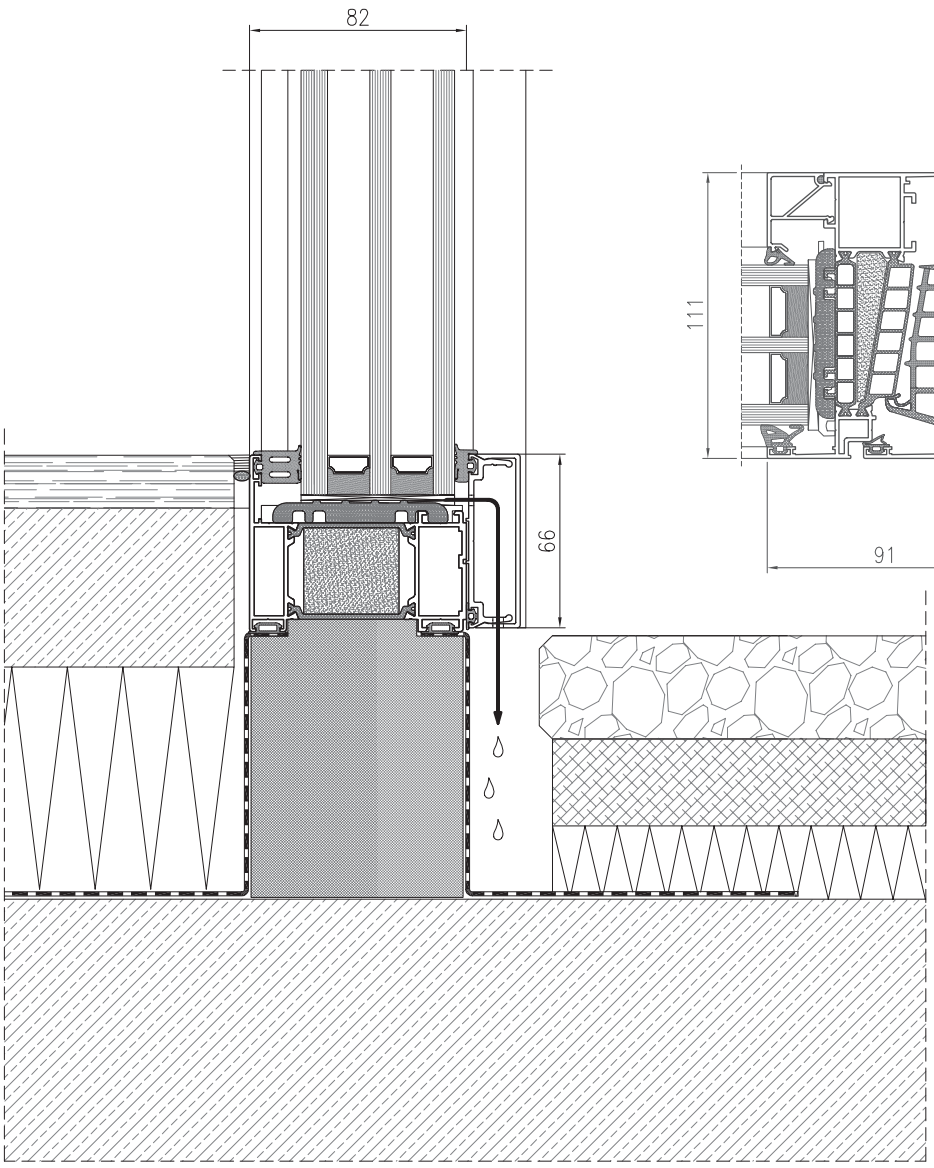
TM 82W HI – SYSTEM FEATURES

- facilitates the installation of large glazing, without the need to bring them inside the room,
- excellent thermal insulation of the solution,
- by designing clips and strips from the outside similar to FA 50N the structure visually resembles a mullion and transom façade,
- system installation of windows and doors, including panel doors,
- mullion is systemically prepared for the application of steel reinforcements to obtain better static parameters,
- window structure - the weight of the glass pane is transferred perpendicularly to the profile, no transom twisting effect,
- minimum number of new elements in the system and the possibility of using well-known and popular gaskets and connectors from other systems allows for the optimization of stock levels,
- unique design with no direct equivalent on the market.

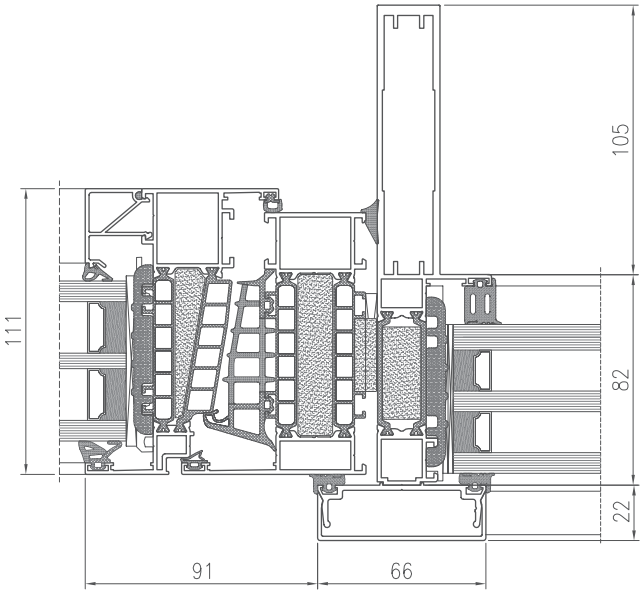
See the product
on the website

Picture: Private house
Design: MRZEWA Architects, Łódź,
Aluminium manufacturer: Zimny Sp. z o.o., Łódź

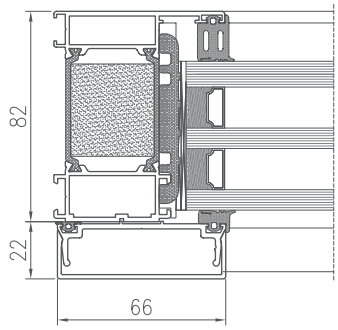
CROSS SECTION THROUGH
TM 82W HI WINDOW



CROSS SECTION THROUGH TM 102HI
WINDOW WITH FIXED TM 82W HI MULLION



CROSS SECTION THROUGH
TM 82W HI FRAME



TECHNICAL PARAMETERS – TM 82W HI		
ENERGY	Thermal insulation EN 10077-2	Uw from 0,5 W/m²K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 39 ÷ 48 dB
	Air permeability EN 12207	Class 4
	Water tightness EN 12208	E900
SAFETY	Wind load resistance EN 12210	Class C5/B5

TECHNICAL PROPERTIES – TM 82W HI	
Frame structural depth	102 mm
Sash/leaf structural depth	111,4 mm
Infill thickness	35 ÷ 69 mm
Maximum dimensions L x H	5000 x 4700 mm
Maximum sash/leaf weight	500 kg
Structure type	fixed window

MV

LARGE-SIZE SLIDING
DOOR SYSTEM

freedom of space designing

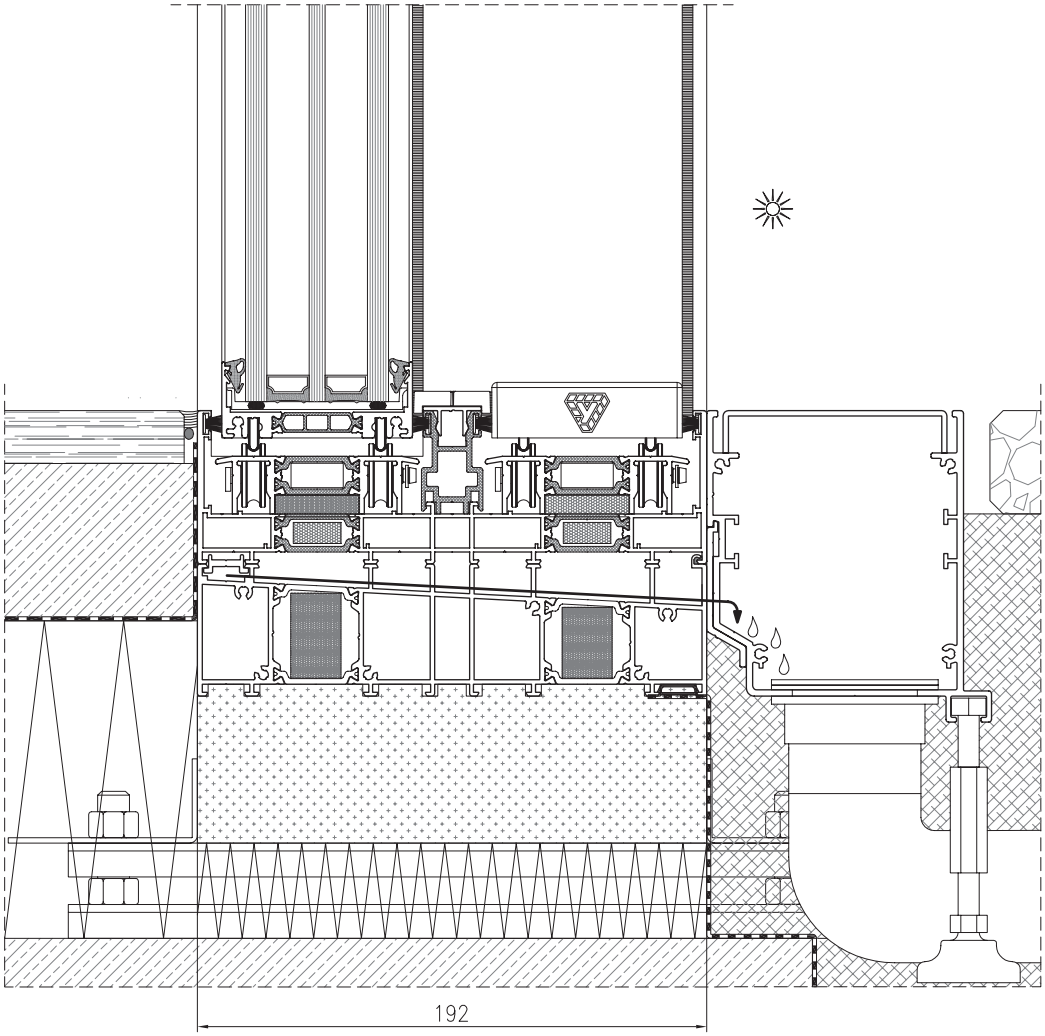
MOREVIEW – SYSTEM FEATURES

- unlimited access to sunlight – transparency up to 98%,
- independent Moreview system structures can be connected at an angle of 90°,
- a static mullion allows for the construction of a series of fixed glazing, which can additionally be joined at any angle thanks to the use of an all-glass corner,
- manual or automatic control, the mechanism controlling the opening process, depending on the needs, can be hidden or mounted outside the structure,
- possibility of glazing from the outside,
- linear drainage integrated with the frame,
- possibility of constructing doors with max. height up to 4 m and max. sliding leaf weight up to 1200 kg,
- possibility of servicing the carriage set without having to remove the heavy leaves.

See the product
on the website

Picture: Examples of the system use.

CROSS SECTION THROUGH TWO-RAIL MOREVIEW DOOR



TECHNICAL PARAMETERS – MOREVIEW		
ENERGY	Thermal insulation EN 10077-2	Uw from 0,7 W/m^{2}K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 42 dB
	Air permeability EN 12207	Class 4
	Water tightness EN 12208	Class 8A
SAFETY	Wind load resistance EN 12210	Class C4
	Anti-theft protection EN 1627	RC2

TECHNICAL PARAMETERS – MOREVIEW	
Frame structural depth	90 mm, 192 mm, 294 mm
Leaf structural depth	72 mm
Infill thickness	31 ÷ 36 mm and 50 ÷ 60 mm
Maximum dimensions L x H	leaf 4000 x 4000 mm
Maximum weight of manual leaf	400 kg
Maximum weight of automatic leaf	1200 kg
Maximum weight of fixed part	1200 kg
Structure type / leaves diagram	Diagrams: A, C, D, F, G, K, Galendage, 90° corners

ASYMMETRICAL CORNERS

New solution of the Moreview system allows for systemic connection of various window frames at an angle of 90° along with maintaining the level of glazing perfectly with the floor line.

Thanks to glazing resulting from the use of fixed windows, we can make the most of natural light and warmth. This will have a positive effect not only on our comfort of living, but will also reduce the costs of using the house.

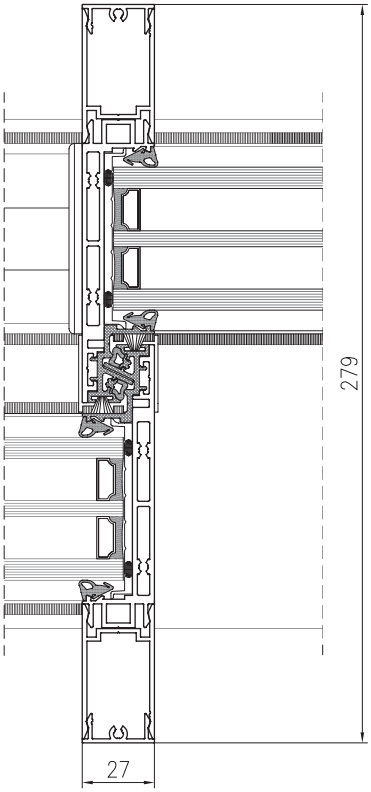
FIXED GLAZING IN MOREVIEW STYLE

The Moreview system has been enriched with a new solution which makes it possible to design fixed gazing. Single frame, which was used up till now, has been modernized by adding a detachable fin facilitating the installation of a glazed units. This procedure allows us to manufacture single-sash fixed windows and corners composed of two fixed elements.

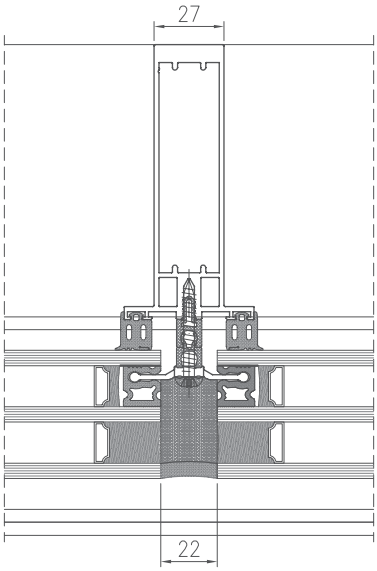
The solution is compatible with standard frames without separated fins, which is especially important in structures broken multiple times at various angles.

Picture: Examples of the system use..

CROSS-SECTION THROUGH
MOREVIEW LEAVES CONNECTION



CROSS SECTION THROUGH
MOREVIEW MULLION



AUTOMATION OF THE MOREVIEW CONTROL PROCESS

Within the MV system, two solutions are available for automating the sash sliding process:

→ PREMIUM solution. The automatics is completely hidden in the Moreview frame, so the user does not see any structural element. The maximum weight of the moving sash is 1200 kg. The solution allows the control of leaves in virtually all configurations including corners and multi-leaf arrangements. The operator has a safety function including an overload system that stops the leaf on an obstacle and ensures that the leaf can be opened and closed in the event of a temporary power failure. The solution can be controlled by remote control, touch screen panel or android.

→ A surface-mounted solution in which the operator bar is attached to the MV top frame from the inside. Nevertheless, the solution is characterised by elegance and minimalism. The user sees only a small inspection bar for service access. The maximum weight of the moving leaf is 700 kg. The surface-mounted solution is available in two variants: automatic sliding of one leaf or two leaves that slide sideways. It is possible to install the automation on an already installed MV structure.

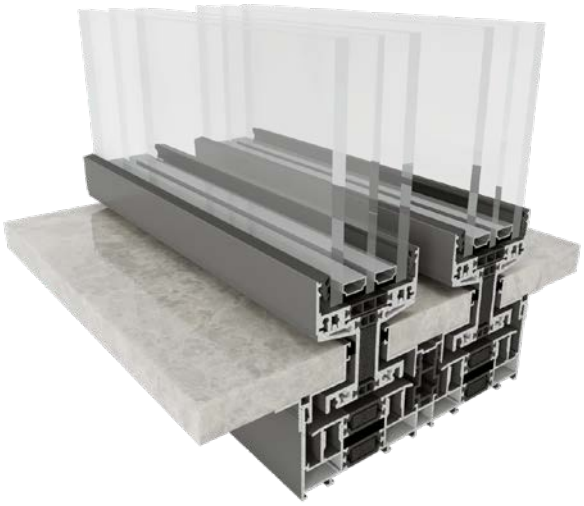
MOREVIEW CONTROL FROM YOUR SMARTPHONE

OTHER SOLUTIONS IN THE MOREVIEW SYSTEM

- New sealing elements for even greater tightness requirements.
- New aluminium base for single rail with an inclined edge to facilitate condensate removal.

MOREVIEW CLASS S – SYSTEM FEATURES

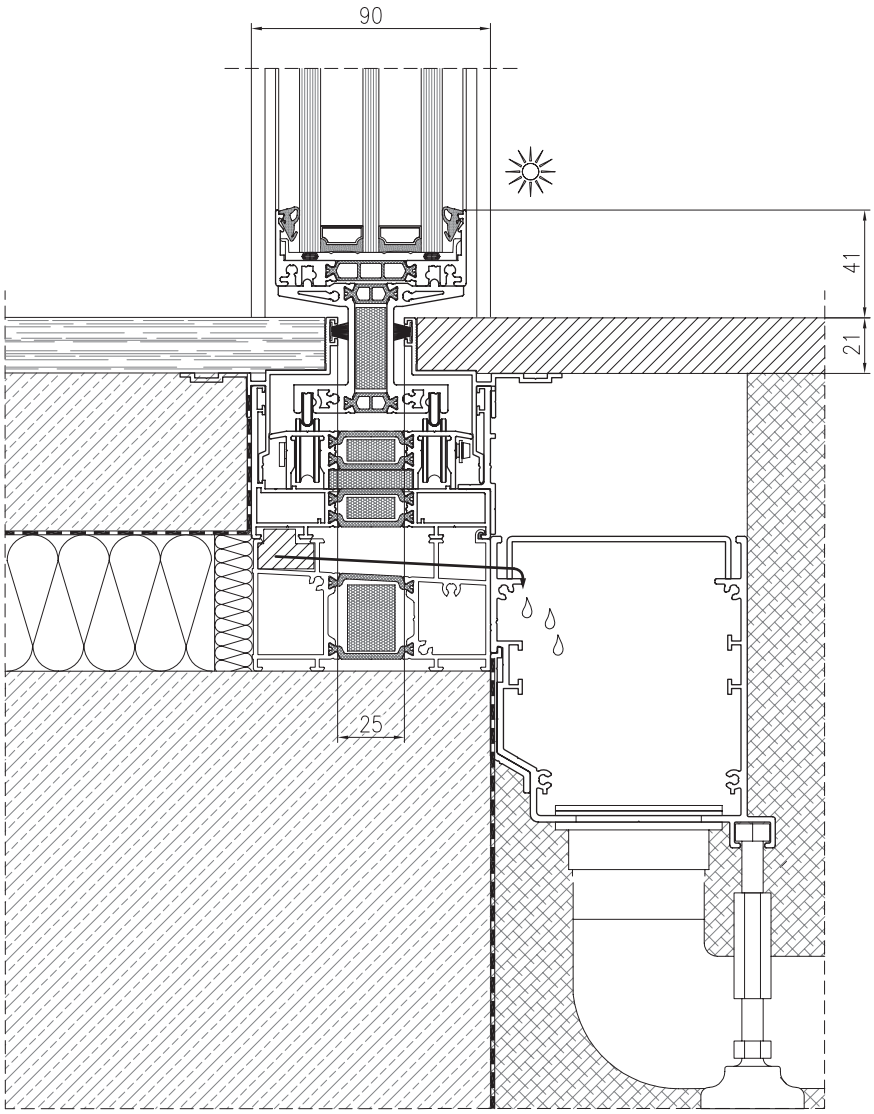
- comfort of use and cleaning,
- lightness in moving the leaves,
- an innovative solution for demanding customers,
- no thermal bridge - aluminium I-section with a thermal spacer ensures no condensation and prevents possible freezing at the threshold level,
- a very wide range of arrangement possibilities,
- possibility of automatic opening, which allows to increase the weight of the leaf up to 1200 kg (up to 400 kg with manual opening),
- the bottom frame and guide rails are recessed into the floor, making them completely invisible.
- the system is characterised by an aesthetically appealing narrow gap of only 25 mm.
- possibility of combination with other Yawal systems.



See the product on the website

Picture: Examples of the system use.

CROSS-SECTION THROUGH
THE SLOTTED SOLUTION



SLOTTED SOLUTIONS

MOREVIEW CLASS S is an ultra-modern solution that allows for almost complete elimination of the boundary between the inside and the outside. All structure elements are hidden under the floor. The user only sees narrow "gaps" This solution enables virtually unlimited possibilities of arranging the floor at the contact point of the house interior and the external surroundings, e.g. terrace.

DP
180
OVERHEAD SLIDING DOOR SYSTEM
Primeview

excellent thermal insulation properties

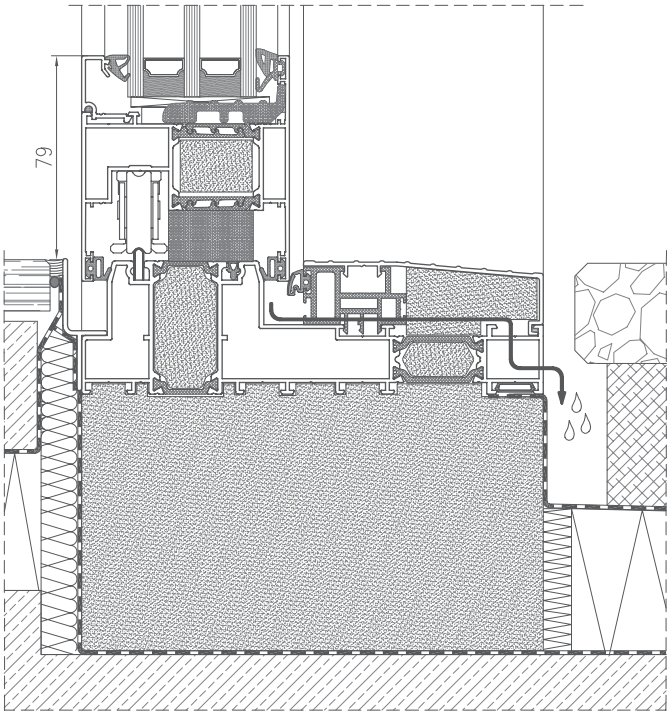
DP 180 PRIMEVIEW – SYSTEM FEATURES

- possibility of making the structure with a narrow mullion in RC2 class,
- possibility of manufacturing doors of very large dimensions,
- possibility of manufacturing all-glass corner at an angle of 90˚and a movable mullion,
- possibility of manufacturing doors with integrated threshold – no architectural barriers,
- divided thermal separators increasing resistance to thermal deformation of the leaf,
- possibility of installing automatic doors opening/closing system,
- micro ventilation in the standard variant,
- possibility of infill assembly from the outside,
- possibility of joining of glass panes without sash bars,
- linear drainage solution,
- possibility of using pleated mosquito nets in the monorail frame.

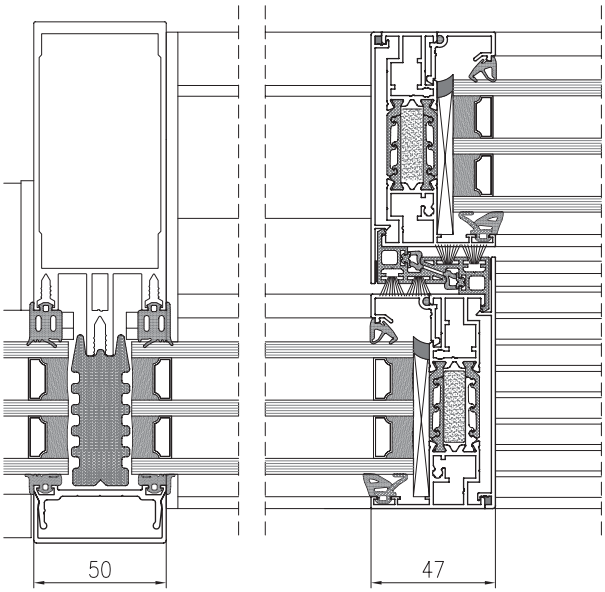
See the product
on the website

Picture: Private house
Aluminium manufacturer: Zimny Sp. z o.o., Łódź

CROSS SECTION THROUGH
DP 180 PRIMEVIEW DOOR, SLIM VERSION



CROSS SECTION THROUGH DP 180
PRIMEVIEW WITH FACADE



TECHNICAL PARAMETERS – DP 180 PRIMEVIEW

		STANDARD	SLIM
ENERGY	Thermal insulation EN 10077-2	Uw from 0,7 W/m²K	Uw from 0,7 W/m²K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 47 dB	–
	Air permeability EN 12207	Class 4	Class 4
	Water tightness EN 12208	E1350	Class 9A
SAFETY	Wind load resistance EN 12210	Class C3	Class C4
	Anti-theft protection EN 1627	RC2	–

TECHNICAL PARAMETERS – DP 180 PRIMEVIEW

	STANDARD	SLIM
Frame structural depth	180 mm with the extension possibility	180 mm with the extension possibility
Leaf structural depth	81 mm	81 mm
Infill thickness	29 ÷ 63 mm	29 ÷ 63 mm
Maximum dimensions L x H	leaf 3300 x 3300 mm	leaf 3230 x 2900 mm
Maximum weight of manual leaf	440 kg	440 kg
Maximum weight of automatic leaf	440 kg	440 kg
Maximum weight of fixed part	1200 kg	1200 kg
Structure type / leaves diagrams	Diagrams: A, C, D, F, G, K, Galendage, 90° corners	Diagrams: A,C, D, G, K

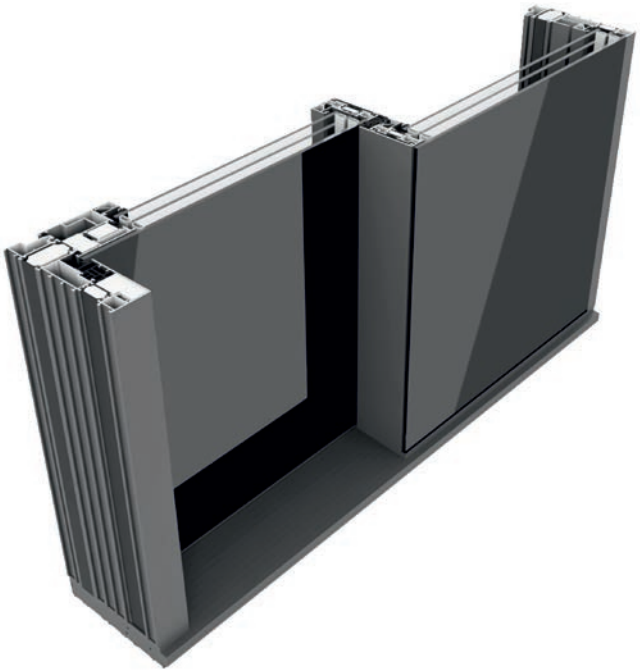
DP
180
OVERHEAD SLIDING DOORS SYSTEM

Primeview

excellent thermal insulation properties

DP 180 PRIMEVIEW GLASS – SYSTEM FEATURES

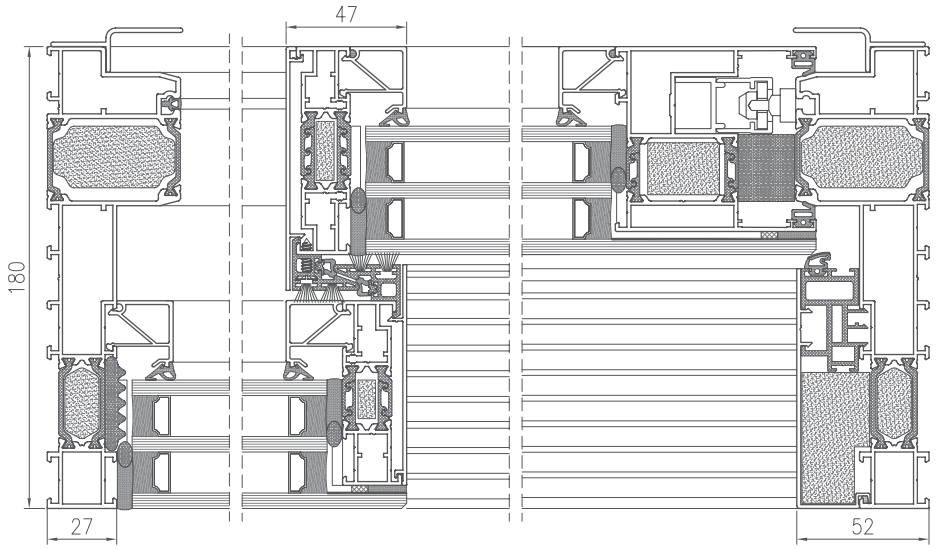
- a spectacular solution which completely eliminates the visibility of aluminium elements on the outside of the structure by adhered glass,
- enhanced natural light thanks to wide and large glazing surfaces,
- possibility of glazing from the outside with the possibility of hiding the door frame in the floor, ceiling and insulation layer,
- compatible with other systems in the Yawal offer.



See the product on the website

Picture: Examples of the system use.

CROSS SECTION THROUGH
DP 180 PRIMEVIEW GLASS DOOR

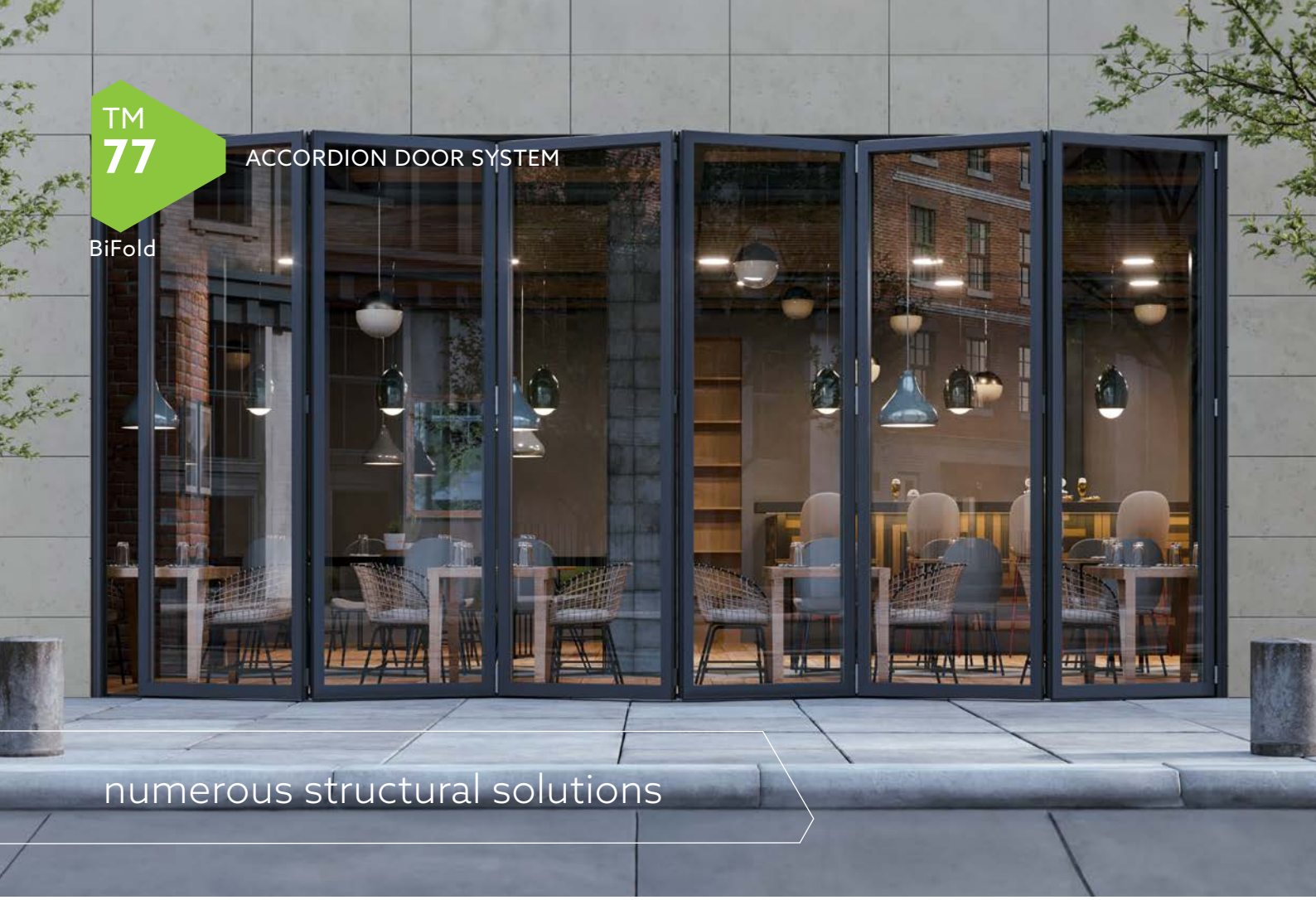


TECHNICAL PARAMETERS – DP 180 GLASS		
ENERGY	Thermal insulation EN 10077-2	Uw from 0,7 W/m²K
COMFORT	Air permeability EN 12207	Class 4
	Water tightness EN 12208	E1650
SAFETY	Wind load resistance EN 12210	C4
	Anti-theft protection EN 1627	RC2

TECHNICAL PARAMETERS – DP 180 GLASS	
Frame structural depth	180 mm with the extension possibility
Leaf structural depth	81 mm
Infill thickness	27 ÷ 71 mm
Maximum dimensions L x H	leaf 3210 x 3300 mm
Maximum weight of manual leaf	440 kg
Maximum weight of automatic leaf	440 kg
Maximum weight of fixed part	1200 kg
Structure type / leaves diagram	Diagrams: A, C, G

TM
77
BiFold

ACCORDION DOOR SYSTEM



numerous structural solutions

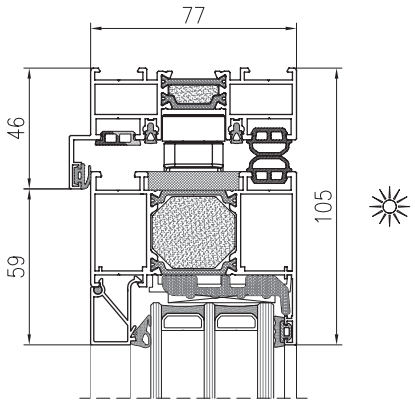
TM 77 BIFOLD – SYSTEM FEATURES

- large permitted dimensions and a wide span allowing the construction of doors with a leaf height of up to 3500 mm, a width of 1200 mm and a leaf weight of up to 120 kg,
- high thermal insulation properties and energy savings,
- solid structure based on reliable accordion fittings that retain their properties and efficiency for many years,
- available variant with increased thermal insulation thanks to the use of additional thermal inserts around the perimeter,
- versatility of configuration solutions with the use of multi-leaf compositions, even and odd, opening inward and outward of the building,
- additional compensation profiles giving the possibility of adjusting and increasing the clear opening,
- compatibility with TM 77HI window and door system and analogous connection of profiles

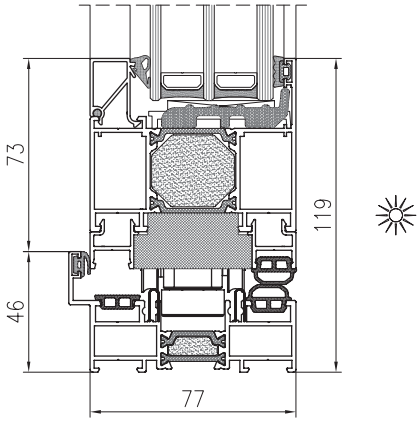
See the product
on the website

Picture: Examples of the system use.

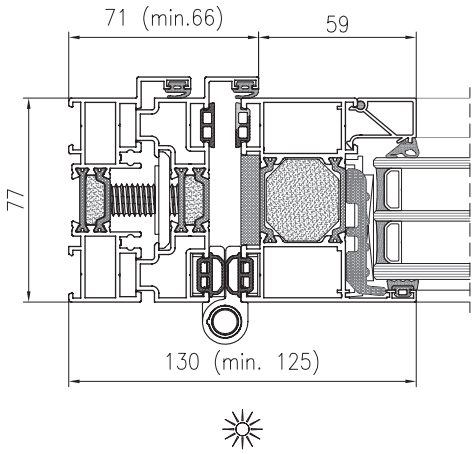
CROSS SECTION THROUGH
TM 77 BIFOLD DOOR



CROSS SECTION THROUGH
TM 77 BIFOLD DOOR



CROSS SECTION THROUGH
TM 77 BIFOLD DOOR



TECHNICAL PARAMETERS – TM 77 BIFOLD		
ENERGY	Thermal insulation EN 10077-2	Uw from 0,95 W/m²K
COMFORT	Air permeability EN 12207	Class 4
	Water tightness EN 12208	Class 9A
SAFETY	Wind load resistance EN 12210	Class C4

TECHNICAL PARAMETERS – TM 77 BIFOLD	
Frame structural depth	77 mm
Leaf structural depth	77 mm
Infill thickness	21 ÷ 61 mm
Maximum dimensions L x H	1200 x 3500 mm (minimum width 600 mm)
Maximum weight of manual leaf	120 kg
Structure type / leaves diagrams	220, 220+, 330, 321, 321+, 440, 431, 422, 550, 550+, 541, 660, 651, 651+

DP SLIDE

OVERHEAD SLIDING DOOR SYSTEM

economy

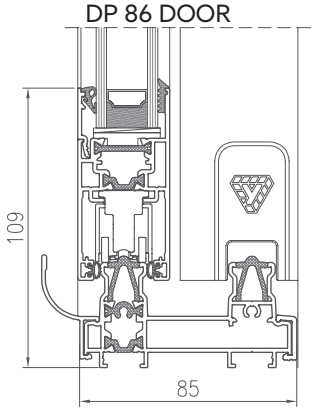
DP SLIDE – SYSTEM FEATURES

- simple and quick frame prefabrication thanks to cutting the door frame profiles at 90°,
- possibility of quick assembly and disassembly of the leaf thanks to the leaf profiles cut at 45 and connected with screwed connectors,
- easy glazing allowing simple replacement of glass in the event of breakage,
- patented solution of the drainage element that simplifies the drainage system of the structure and at the same time increases its efficiency,
- the only system of this class available on the market which enables manufacture of overhead sliding structures,
- the solution of the so called "narrow mullion" in DP 100 and DP 86 versions,
- 50 mm extension to facilitate the installation of the roller shutter box,
- possibility of combining the DP Slide structure with side transom windows,
- minimalistic appearance of the vertical profiles of the door frame,
- profiles allowing the so-called renovation assembly consisting in installation of the structure on the old frame masked with aluminium sections.

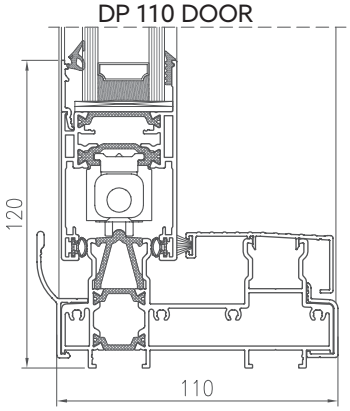
See the product on the website

Picture: Private house
Aluminium manufacturer: Zimny Sp. z o.o., Łódź

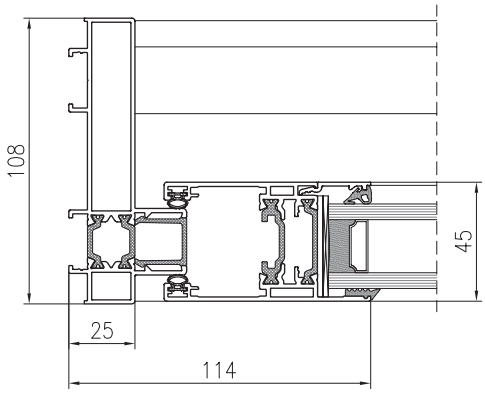
CROSS SECTION THROUGH DP 86 DOOR



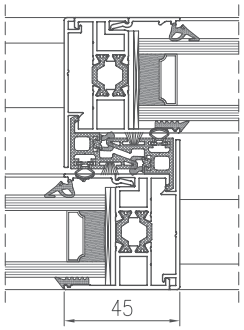
CROSS SECTION THROUGH DP 110 DOOR



CROSS SECTION THROUGH DP 110 DOOR



CROSS SECTION THROUGH NARROW DP 110 MULLION



TECHNICAL PARAMETERS – DP SLIDE

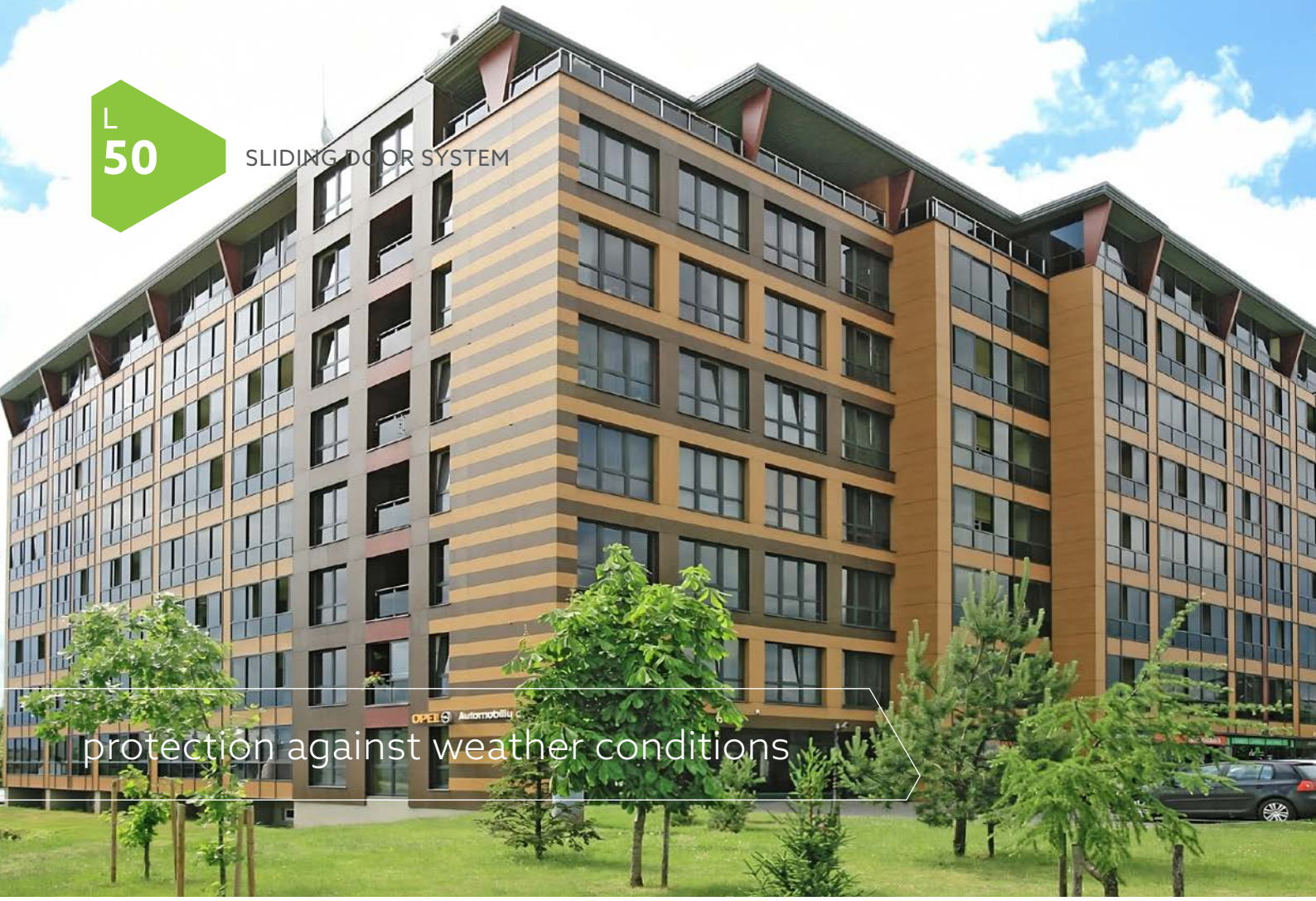
		DP 86	DP 110
ENERGY	Thermal insulation EN 10077-2	Uw from 1,5 W/m²K	Uw from 1,3 W/m²K
COMFORT	Air permeability EN 12207	Class 4	Class 4
	Water tightness EN 12208	Class 9A	Class 9A
SAFETY	Wind load resistance EN 12210	Class C4	Class C4

TECHNICAL PARAMETERS – DP SLIDE

	DP 86	DP 110
Frame structural depth	86 mm, 131 mm	108 mm, 167 mm
Sash structural depth	35,8 mm	45 mm
Infill thickness	15 ÷ 24 mm	24 ÷ 33 mm
Maximum dimensions L x H	1500 x 2400 mm	1800 x 2800 mm
Maximum weight of manual leaf	120 kg	200 kg
Structure type / leaves diagram	Diagrams: A, C, D, K, F	Diagrams: A, C, D, K, F

L
50

SLIDING DOOR SYSTEM



protection against weather conditions

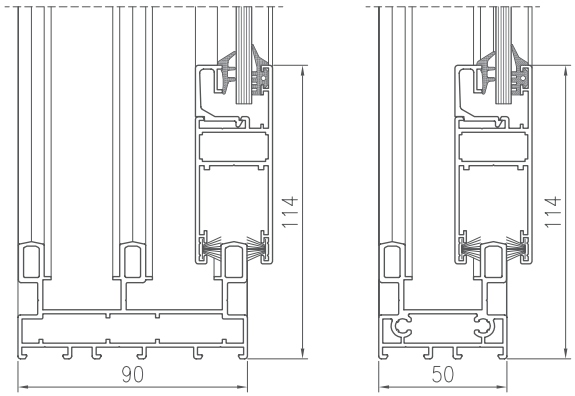
L 50 – SYSTEM FEATURES

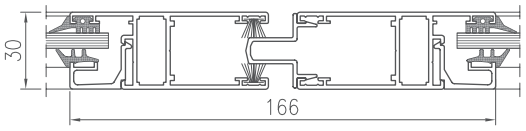
- increased safety and comfort of residents,
- reduction of noise coming to the rooms from the outside,
- protection against weather conditions,
- possibility of using various types of infill,
- possibility of constructing multiple door frames,
- possibility of designing and manufacturing glazed sliding segments for balconies and loggias (L 50B) and sliding segments for partition walls (L 50S),
- L 50 system with glazed partition walls is inflammable and has been classified as a fire-retardant structure (NRO),
- possibility of connecting with all YAWAL systems.

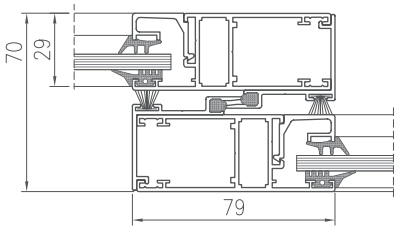
See the product on the website

Picture: Residential building, Kowno
Aluminium manufacturer: UAB „Alseka"

CROSS SECTION THROUGH
L 50 SLIDING LEAVES







TECHNICAL PARAMETERS – L 50		
ENERGY	Thermal insulation EN 10077-2	system without thermal insulation
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 22 dB
SAFETY	Wind load resistance EN 12210	NRO

TECHNICAL PARAMETERS – L 50	
Structural depth of a double-track frame	50 mm
Structural depth of a triple-track frame	89,5 mm
Leaf structural depth	30 mm
Infill thickness	4 ÷ 16 mm
Maximum dimensions L x H	window 1300 x 1650 mm door 1300 x 2800 mm
Maximum weight of manual leaf	130 kg
Structure type / leaves diagram	Diagrams: D, F

TM
77N
EI 30

FIRE PROTECTION WINDOW SYSTEM

excellent thermal conditions and safety

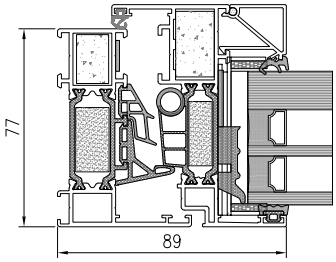
TM 77N EI 30 – SYSTEM FEATURES

- an excellent thermal properties thanks to a three-chamber structure with the EPS insert in the middle and the GKF insert from the outside,
- an extend range of fire-proof glass panes which can be used, starting at frameless glass panes to double-chamber units,
- possibility of using fittings in class RC2 and RC3,
- possibility of constructing opening windows with transom windows and sidelights,
- the system connects two functionalities: an excellent thermal insulation and fire resistance at the EI 30 level,
- integrated window trickle vents - only* in the Yawal's offer,
- possibility of combination with other Yawal systems,
- possibility of selecting glass manufacturer: Vetrotech Saint-Gobain, Bohamet.

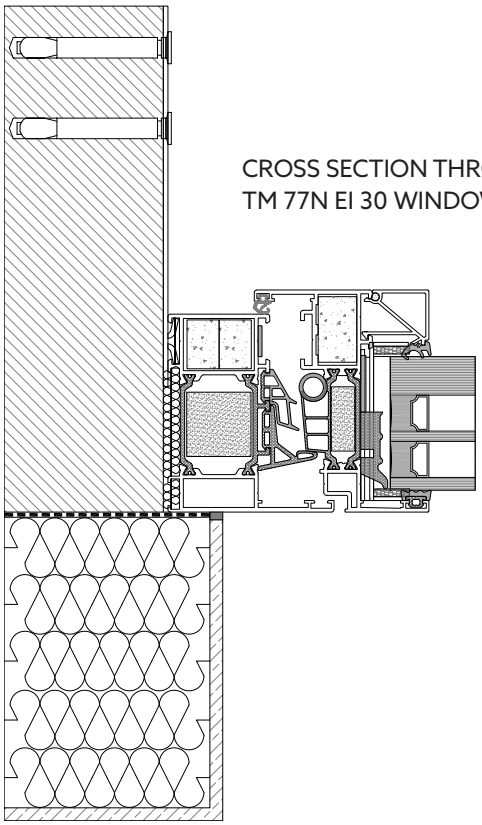
See the product
on the website

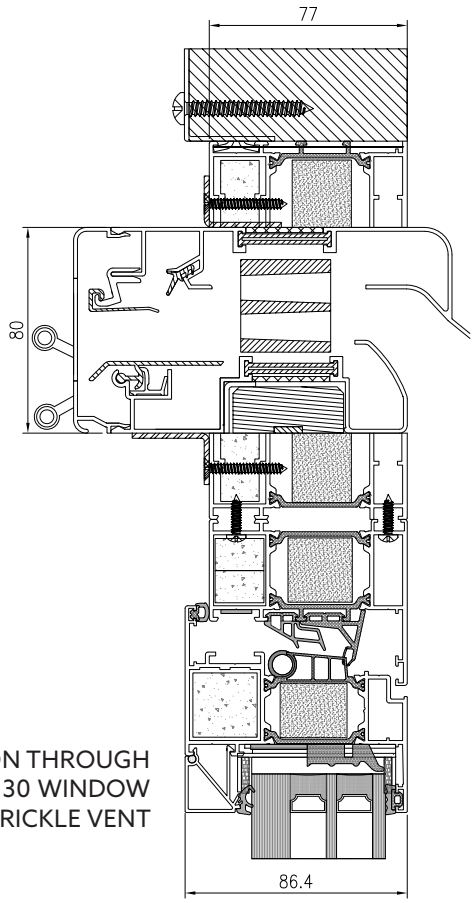
Picture: WITOSA POINT, Warsaw
Design: 4am Architects, Warszawa
Aluminium manufacturer: ROBDAR S.C. Dariusz i Robert Paduch, Jazgrzew

CROSS SECTION THROUGH
TM 77N EI 30 WINDOW



CROSS SECTION THROUGH
TM 77N EI 30 WINDOW





CROSS-SECTION THROUGH
TM 77N EI 30 WINDOW
WITH WINDOW TRICKLE VENT

TECHNICAL PARAMETERS – TM 77N EI 30		
ENERGY	Thermal insulation EN 10077-2	Uw from 0,822 W/m^{2}K
COMFORT	Acoustic insulation EN ISO 140-3	from 39 ÷ 48 dB
	Air permeability EN 12207	Class 4
	Water tightness EN 12208	Class E 1650 Pa
SAFETY	Wind load resistance EN 12210	Class C5/B5
	Fire resistance EN 13501-2	EI 30

TECHNICAL PROPERTIES – TM 77N EI 30	
Frame structural depth	77 mm
Sash structural depth	86,4 mm
Infill thickness	61 mm
Maximum dimensions L x H	1570 x 2450 mm

TM
77N
EI

FIRE PROTECTION DOOR SYSTEM

excellent thermal insulation and safety

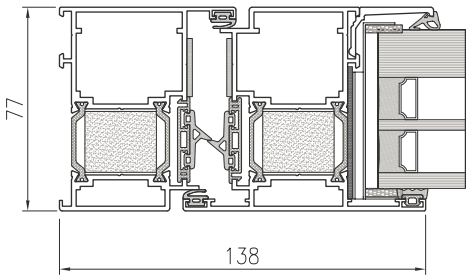
TM 77N EI – SYSTEM FEATURES

- excellent thermal insulation combined with fire protection in classes EI 30 and EI 60,
- new clips (prestige) with new gaskets,
- one type of ceramic gasket available in white or black,
- glazing plates to allow installation without undercutting the clips,
- possibility to use a three-point anti-panic lock with counter-cashing device, averse and reverse electric strikers, semi-automatic locking of the passive leaf,
- choice of expanding gasket between three manufacturers,
- door can be installed in the FA 50N EI facade,
- possibility of selecting glass manufacturer: Vetrotech Saint-Gobain, Bohamet, Polfam, Bojar, AGC.

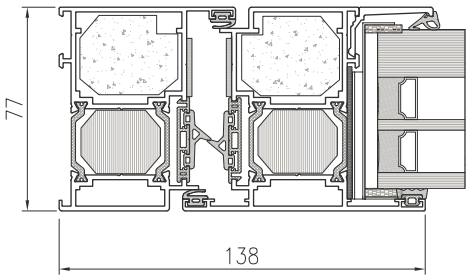
See the product on the website

Picture: Examples of the system use.

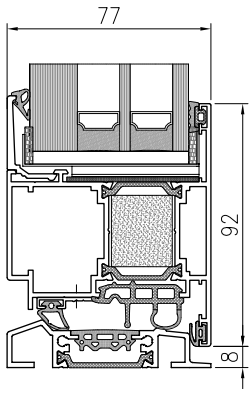
SECTION THROUGH A SINGLE LEAF DOOR TM 77N EI 30



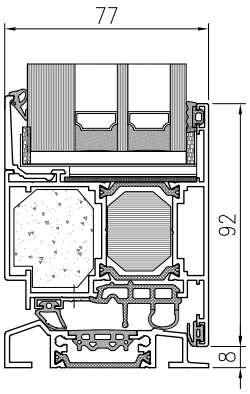
SECTION THROUGH A SINGLE LEAF DOOR TM 77N EI 60

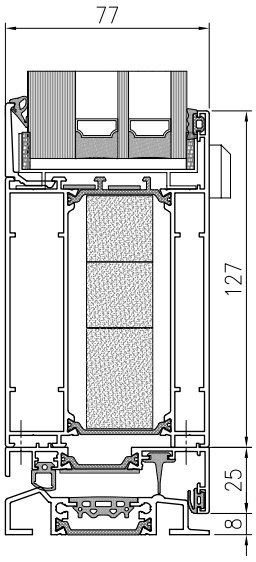


BOTTOM REBATE TM 77N EI 30

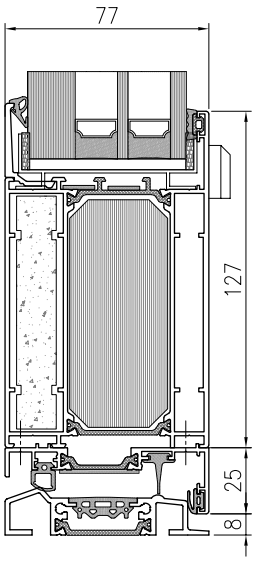


BOTTOM REBATE TM 77N EI 60





BOTTOM REBATE TM 77N EI 30



BOTTOM REBATE TM 77N EI 60

TECHNICAL PARAMETERS – TM 77N EI		
ENERGY	Thermal insulation EN 10077-2	Ud from 1,2 W/m²K
COMFORT	Air permeability EN 12207	Class 4
	Water tightness EN 12208	Class E1200
SAFETY	Wind load resistance EN 12210	Class C4/B4
	Fire resistance EN 13501-2	EI 30, EI 60

TECHNICAL PROPERTIES – TM 77N EI	
Frame structural depth	77 mm
Sash structural depth	77 mm
Infill thickness	from 61 mm
Maximum dimensions L x H	2500 x 2600 mm

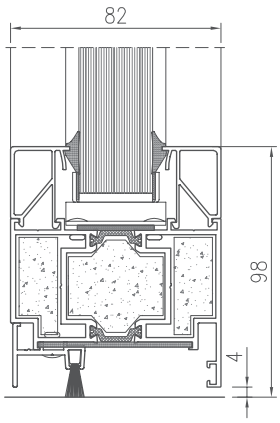
TM 75EI – SYSTEM FEATURES

- the system allows the construction of fire protection walls and doors of fire resistance class from EI 30 to EI 60,that may be used as indoors and outdoors partitions,
- symmetrical structure of profiles,
- system classified as smoke proof in classes Sa and S200,
- materials classified as NRO (fire retardants),
- large selection of construction solutions: from partition walls, display windows, to single-leaf and double-leaf doors (available with transom window or sidelights),
- infills with glazed pane unit and double-chamber panes,
- a wide selection of fire protection glass panes manufacturers,
- new insulation infills that improve heat transfer coefficient,
- certification possible based on the National Technical Assessment and standard,
- possibility of selecting glass manufacturer: AGC, Bohamet, Vetrotech Saint-Gobain, Reglas, Pilkington, Promat,
- infills possible in two variants (warm and cold).

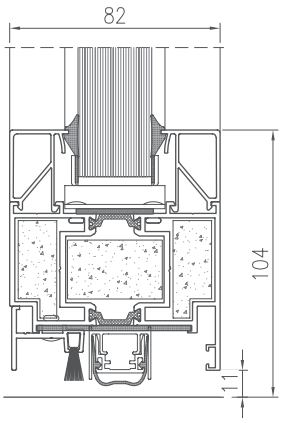
See the product
on the website

Picture: Małopolska Garden of Arts, Cracow
Design: Ingarden & Ewy Architekci, Cracow
Aluminium manufacturer: Arton Sp. z o.o., Częstochowa

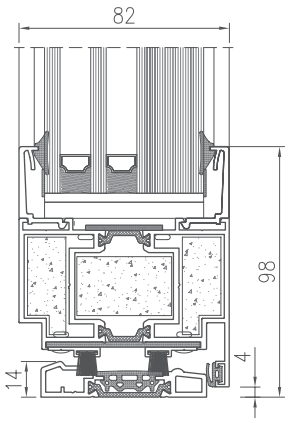
CROSS SECTION THROUGH INTERNAL TM 75EI 60 DOOR



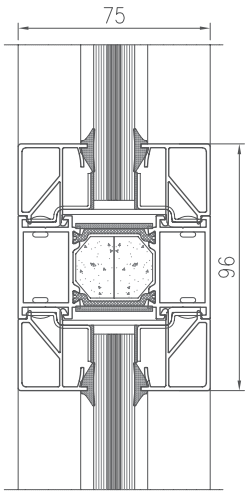
CROSS SECTION THROUGH INTERNAL TM 75EI 60 DOOR – DROP-DOWN SEAL



CROSS SECTION THROUGH EXTERNAL TM 75EI 60 DOOR



CROSS-SECTION THROUGH TM 75EI 30 MULLION



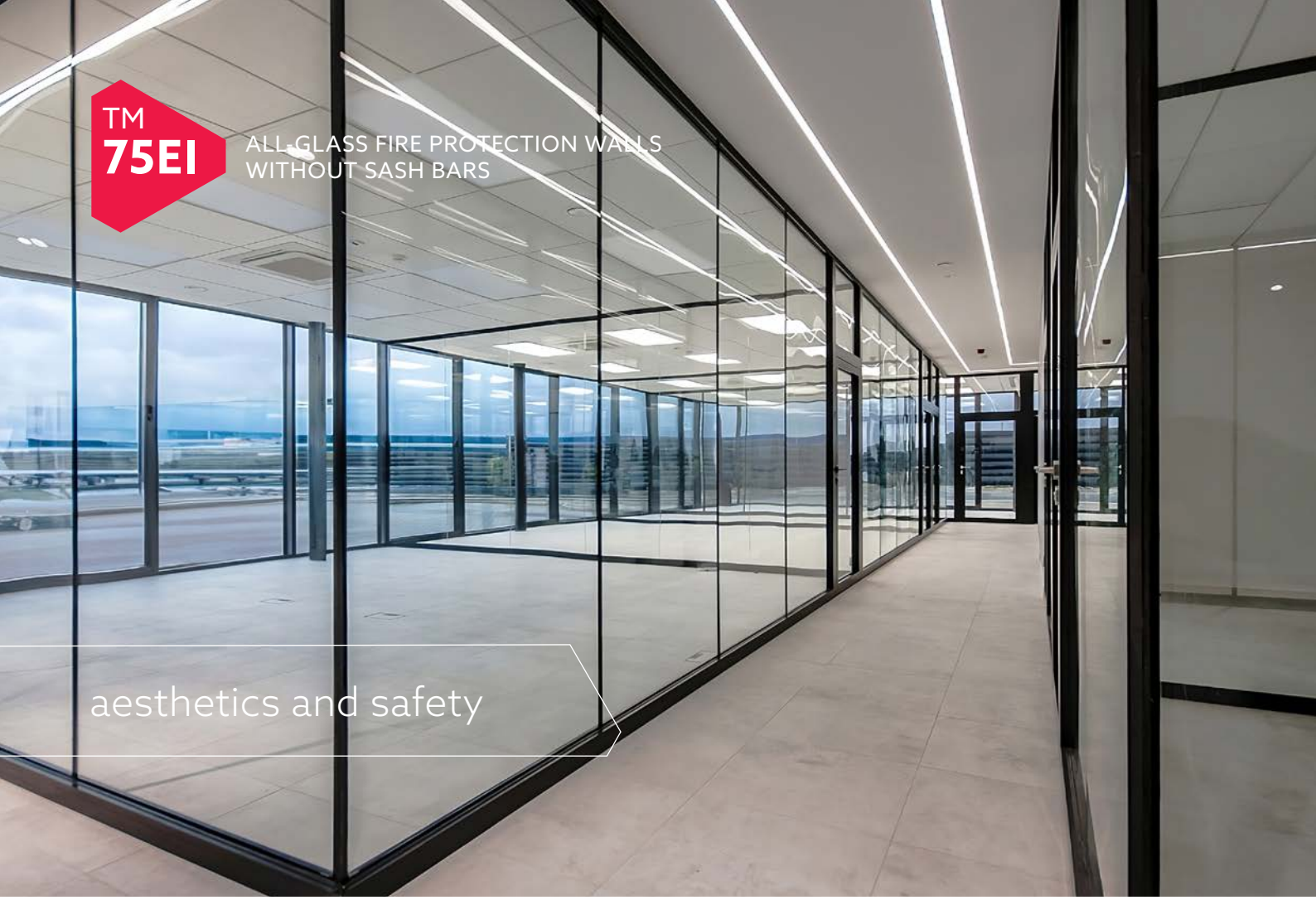
TECHNICAL PARAMETERS – TM 75EI

		INTERNAL DOORS	EXTERNAL DOORS
ENERGY	Thermal insulation EN 10077-2	Uf from 2,0 W/m²K	Uf from 2,0 W/m²K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 30 ÷ 40	Rw = 30 ÷ 40
	Air permeability EN 12207	Class 2	Class 4
	Water tightness EN 12208	–	Class 8A
SAFETY	Wind load resistance EN 12210	Class C1	Class C2/B2
	Fire resistance EN 13501-2	EI 30, EI 60	EI 30, EI 60
	Resistance to cyclic opening/ closing EN 16034	Class C5	Class C5
	Static torsion EN 1192	Class 4 (350N)	Class 4 (350N)
	Impact resistance to soft and heavy body EN 1192	Class 4 (180J)	Class 4 (180J)
	Impact resistance to hard body EN 1192	Class 4 (8J)	Class 4 (8J)

TECHNICAL PROPERTIES – TM 75EI

	DOORS	WALLS
Frame structural depth	74,8 mm / 82 mm	74,8 mm / 82 mm
Leaf structural depth	74,8 mm / 82 mm	74,8 mm / 82 mm
Maximum dimensions L x H – single-leaf fire protection doors	1350 x 2990 mm or 1570 x 2710 mm	without limit x 5000 or 4950 mm
Maximum dimensions L x H – double-leaf fire protection doors	2600 x 3050 mm or 2900 x 2875 mm	without limit x 5000 or 4950 mm
Maximum dimensions L x H – single-leaf smoke proof fire protection doors	1400 x 2600 mm	–
Maximum dimensions L x H – double-leaf smoke proof fire protection doors	2600 x 2600 mm	–

acc. to the NATIONAL TECHNICAL ASSESSMENT ITB-KOT-2021/1942 ver. 1



TM
75EI

ALL-GLASS FIRE PROTECTION WALLS
WITHOUT SASH BARS

aesthetics and safety

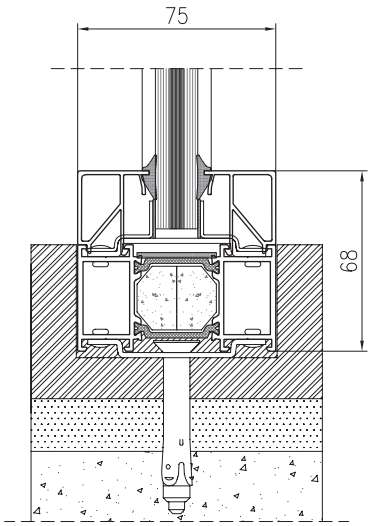
TM 75EI – SYSTEM FEATURES

- TM 75EI system allows the construction of all-glass fire protection walls without sash bars (without visible vertical profiles between glass panes),
- profile separating glass sheets is invisible (only profile around the structure is visible),
- possibility of constructing walls up to 3000 mm,
- possibility of assembly of TM 75EI system with fire resistance class EI 30 and EI 60,
- possibility of selecting glass manufacturer EI 30 and EI 60: Vetrotech, SAINT-GOBAIN and AGC and EI 30 Bohamet.

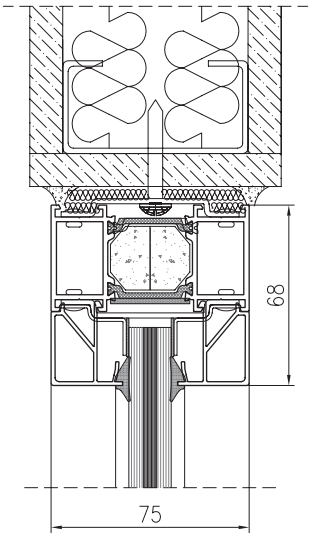
See the product
on the website

Picture: Office building VIA CON, Rydzyna near Leszna
Design: Designing studio INSPIRE Ewa Gbiorczyk, Dąbcze
Aluminium manufacturer: BUMET-GREKOR LESZNO Sp. z o.o., Leszno

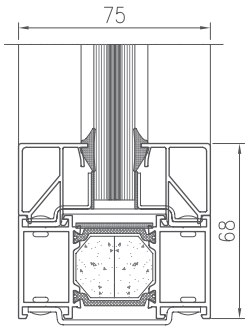
CROSS SECTION THROUGH
TM 75EI WINDOW



CROSS SECTION THROUGH
TM 75EI WINDOW



CROSS SECTION THROUGH
INTERNAL TM 75EI 30 WALL



TECHNICAL PARAMETERS – TM 75EI

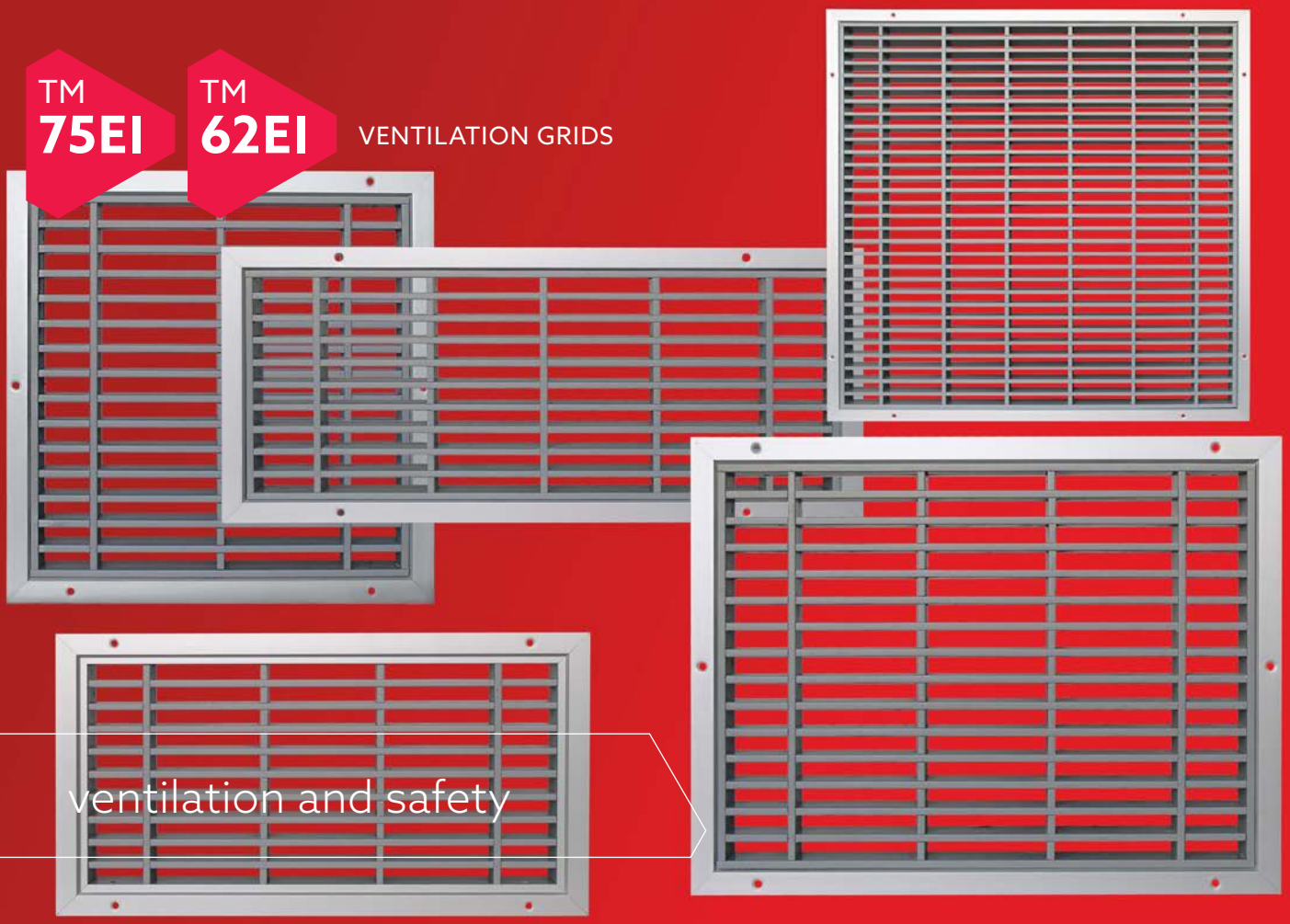
		INTERNAL WALLS	EXTERNAL WALLS
COMFORT	Air permeability EN 12152	–	Class A4
	Water tightness EN 12154	–	R7
SAFETY	Impact resistance to soft body	IVc	I3/E3 and heavy body EN 14019

TECHNICAL PROPERTIES – TM 75EI

Maximum height of internal and external walls – profiles fire protection wall	5000 mm (EI 30), 4950 mm (EI 60)
Maximum height of internal and external walls - ściana całoszklana ppoż.	3000 mm (EI 30),

acc. to the NATIONAL TECHNICAL ASSESSMENT ITB-KOT-2021/1942 ver. 1

TM 75EI TM 62EI VENTILATION GRIDS



ventilation and safety

VENTILATION GRIDS – SYSTEM FEATURES

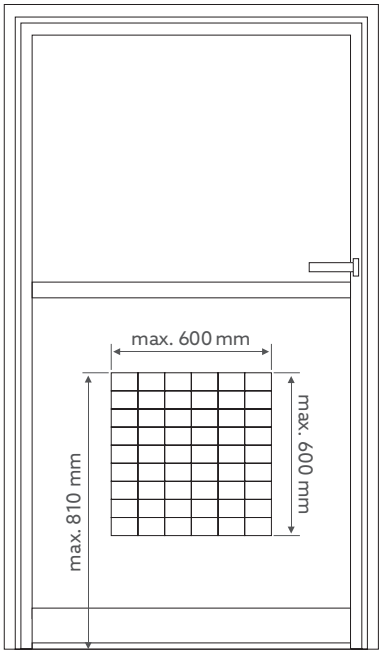
- two-sided ventilation grids with clearance are dedicated to use in fire protection doors with fire resistance 30 or 60 minutes,
- filled with thermally expanding composite, swelling in 120 degrees creating tight and non-flammable barrier,
- they also provide good ventilation of rooms and protection against fire and smoke,
- grids are available in various dimensions and with various flow rates,
- they may be used in public utility buildings,
- Yawal is the only* system provider that offers this solution based on the National Technical Assessments.

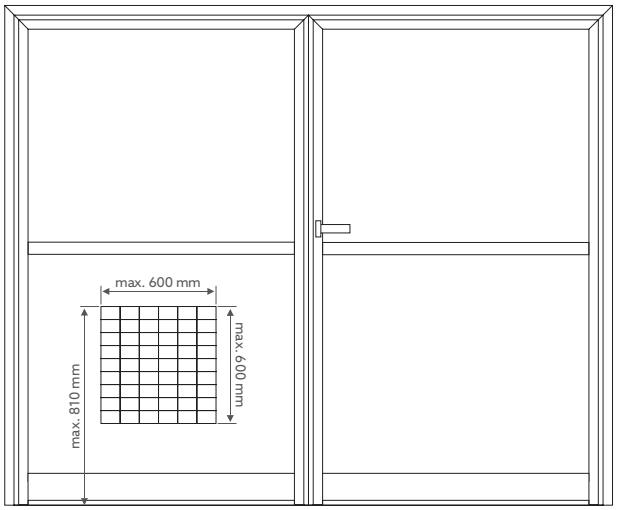
See the product on the website

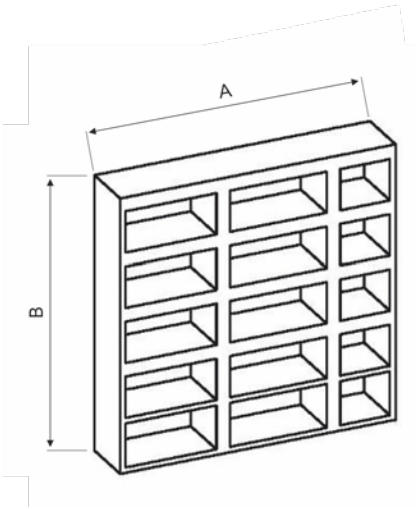
ASSEMBLY METHOD

The grid is equipped with flange for easy assembly. Additionally, there are tapered holes for transit screws, so the grids are firmly fixed. Grids are delivered as a set with back frame and screws.

Grids are anodised in F1 colour. On demand the grid may be coated (powder coating) with high-quality corrosion-resistant paint (RAL palette).







DIMENSIONS OF VENTILATION GRIDS

NO. OF ELEMENT	A	B	NO. OF ELEMENT	A	B
610.2020.0	200	200	**610.5075.0**	500	75
610.3020.0	300	200	**610.5020.0**	500	200
610.3030.0	300	300	**610.5030.0**	500	300
610.4020.0	400	200	**610.5060.0**	500	600
610.4030.0	400	300	**610.6040.0**	600	400
610.4576.0	450	76	**610.6060.0**	600	600

TECHNICAL PARAMETERS – VENTILATION GRIDS

SAFETY	Fire resistance	from EI 30 to EI 60

TECHNICAL PARAMETERS – VENTILATION GRIDS

Grid dimensions	Min. – 200 x 200 mm Max. – 600 x 600 mm

TM
62EI

SYSTEM OF FIRE PROTECTION
WALLS AND DOORS

economic fire protection system

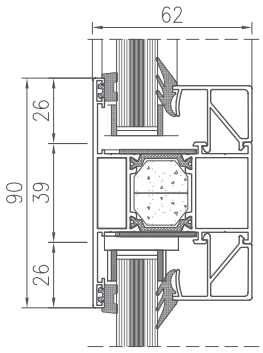
TM 62EI – SYSTEM FEATURES

- wide range of application as indoor fire protection partitions based on the National Technical Assessment,
- materials classified as NRO (fire retardants),
- possibility of selecting glass manufacturer: Bohamet, Vetrotech Saint-Gobain, Reglas, Glastrosch AG Fireswiss.

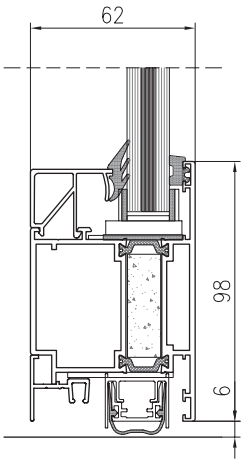
See the product
on the website

Picture: Residential Estate Galeria Park, Warsaw
Design: KAPS Architects, Warsaw
Aluminium manufacturer: MBB Bernaciak Marek, Toruń

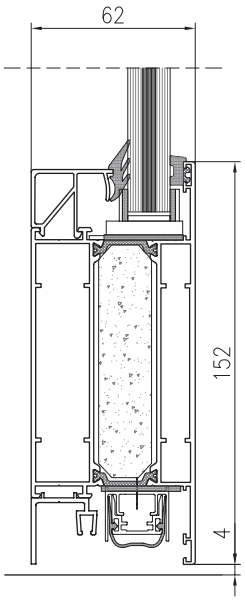
CROSS-SECTION THROUGH TM 62EI MULLION



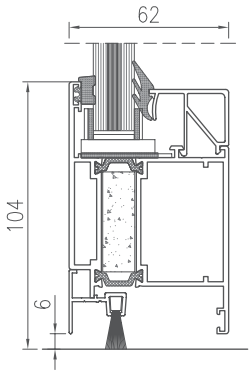
CROSS SECTION THROUGH TM 62EI S30 WINDOW



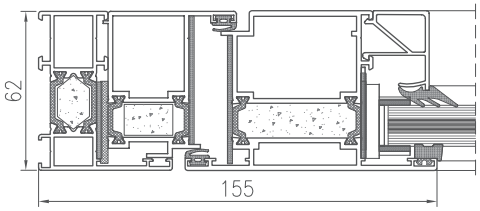
CROSS SECTION THROUGH TM 62EI S30 WINDOW



CROSS SECTION THROUGH TM 62EI – THRESHOLDLESS SOLUTION



CROSS SECTION THROUGH TM 62EI DOOR



TECHNICAL PARAMETERS – TM 62EI

		WALLS	DOORS
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 30 ÷ 40 dB	Rw = 30 ÷ 40 dB
	Air permeability EN 12207	Class 4	Class 2
	Water tightness EN 12208	Class RE 750 (750 Pa)	Class 5A
SAFETY	Wind load resistance EN 12210	–	Class C1 (400 Pa)
	Fire resistance EN 13501-2	Class EI 30	Class EI 30
	Resistance to cyclic opening/ closing EN 16034	–	Class 5
	Classification in terms of fire resistance EN 13501-2	Sa S200	Sa S200
	Impact resistance to soft, heavy and hard body EN 1192	Class 3	Class 3

TECHNICAL PROPERTIES – TM 62EI

	DOORS	WALLS
Structural depth	62 mm	62 mm
Infill thickness	15 ÷ 36 mm	15 ÷ 36 mm
Maximum dimensions L x H – fire protection single-leaf door	500 x 1360 mm x 1360 x 2590 mm	–
Maximum dimensions L x H – fire protection double-leaf door	1000 x 2307 mm x 2307 x 2590 mm	–
Maximum height of fire protection wall	–	3000 mm

acc. to the NATIONAL TECHNICAL ASSESSMENT ITB-KOT-2022/2180 ver. 1

TM
90EI

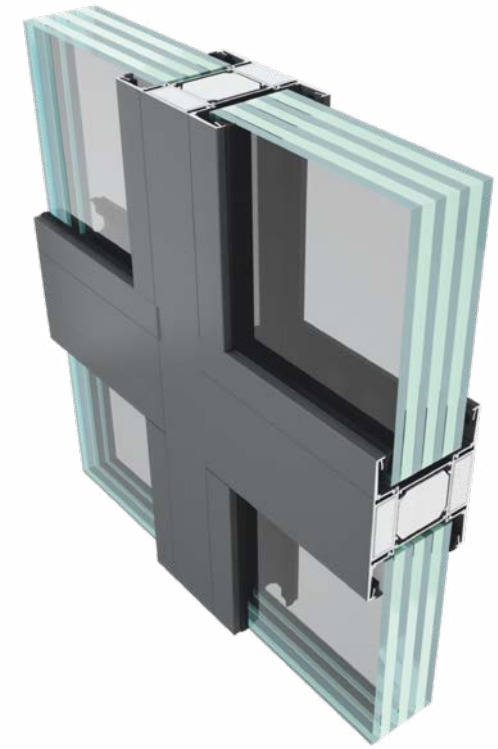
YAWAL FIRE BLOCK 120 TM 90EI FIRE PROTECTION WALLS

Fire Block 120

long-lasting fire protection

TM 90EI – SYSTEM FEATURES

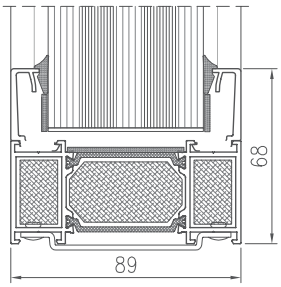
- wide range of application as indoors and outdoors partitions,
- materials classified as NRO (fire retardants),
- possibility of installing TM 75EI doors in the wall,
- possibility of using non-transparent infills of large dimensions.
- YAWAL FIRE BLOCK 120 TM 90 EI allows for manufacturing a wide selection of fire protection partitions with fire resistance class EI 120.
- It is compatible with TM 75 EI system,
- TM 90EI system meets the requirements of the National Technical Assessment ITB-KOT-2021/2010 ed.1,
- possibility of selecting glass manufacturer: Bohamet, Vetrotech Saint-Gobain.



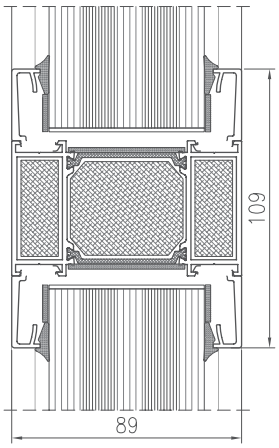
See the product
on the website

Picture: Neophilology - Silesian University, Sosnowiec
Design: Architectonic Office Taczewski, Katowice
Aluminium manufacturer: ACARI Sp. z o.o., Kraków

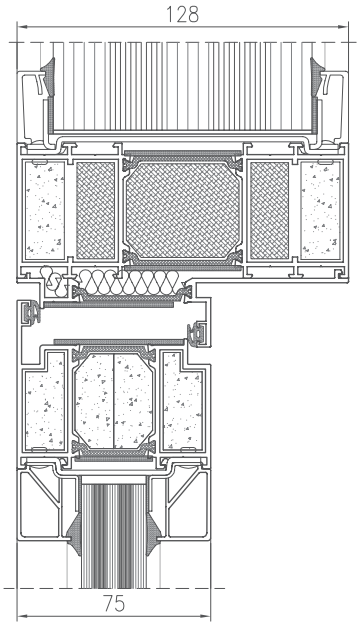
CROSS SECTION THROUGH TM 90EI 120 FIRE BLOCK WALL



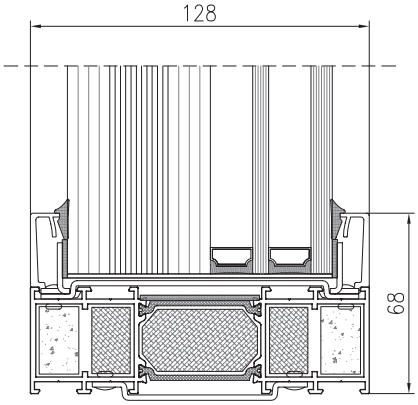
CROSS SECTION THROUGH TM 90EI 120 WINDOW



CROSS SECTION THROUGH CONNECTION OF TM 90EI 120 FIRE BLOCK WALL WITH TM 75EI SYSTEM DOOR



CROSS SECTION THROUGH TM 90EI 120 WINDOW



TECHNICAL PARAMETERS – TM 90EI

		INTERNAL AND EXTERNAL WALLS
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 43 dB
	Air permeability EN 12207	Class A4
	Water tightness EN 12208	Class R7
SAFETY	Fire resistance EN 13501-2	Class 120
	Impact resistance to soft, heavy body	IVc wg EAD 210005-00-0505

TECHNICAL PROPERTIES – TM 90EI

	FIXED WINDOWS
Structural depth	88,8 / 120 mm
Infill thickness	50 ÷ 100 mm
Maximum height of fire protection wall	3948 mm

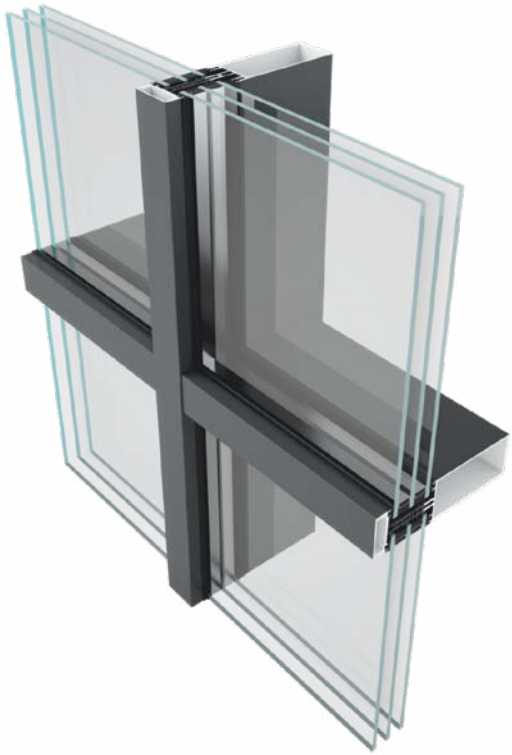
acc. to the NATIONAL TECHNICAL ASSESSMENT ITB-KOT-2021/2010 ver. 1

FA
50N
FACADE SYSTEM

complex solutions

FA 50N – SYSTEM FEATURES

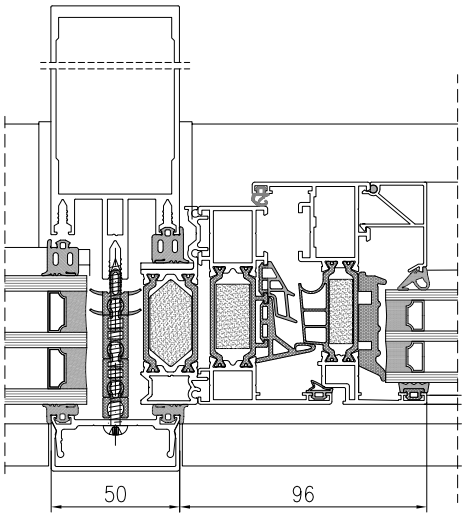
- allows for creating constructions of various shapes and dimensions, in accordance with the architect's vision,
- complies with valid standards concerning water tightness, thermal insulation and fire resistance,
- wide variety of masking strips allows for diversified final appearance of curtain walls,
- possibility of bending profiles,
- possibility of creating many varieties with diversified parameters,,
- possibility of using photovoltaic cells,
- thanks to a wide range of solutions included in the system, it is possible to freely shape the façade in terms of geometric and colour. The product has also been tested in one of the European research institutes,
- FA 50N system is classified as one of best curtain wall system available on the market, considering thermal and acoustic insulation, water tightness and wind load resistance.



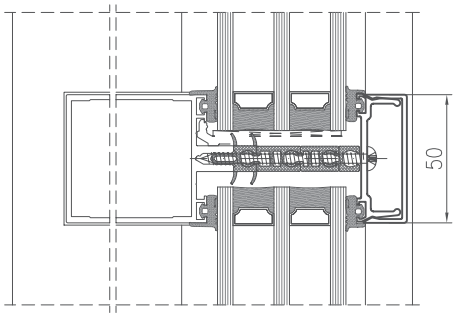
See the product
on the website

Pictures: CELEBRO, Warsaw
Design: Kuryłowicz & Associates Sp z o.o., Warsaw,
Aluminium manufacturer: Alures Sp. z o.o., Boguchwała

CROSS SECTION THROUGH
FA 50N MULLION WITH TM 77N WINDOW



CROSS SECTION THROUGH
FA 50N TRANSOM



TECHNICAL PARAMETERS – FA 50N		
ENERGY	Thermal insulation EN 10077-2	Uf = 1,14 ÷ 1,88 W/m²K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 35 ÷ 53 dB
	Air permeability EN 12207	AE 1650
	Water tightness EN 12208	RE 2850
SAFETY	Wind load resistance EN 12210	2400 Pa
	Anti-theft protection EN 1627	RC2, RC3
	Impact resistance EN 14019	I5, E5

TECHNICAL PROPERTIES – FA 50N	
Minimum visible width (view from inside)	50 mm
Minimum visible width (view with outside)	50 mm
Minimum mullion depth	34 mm
Maximum mullion depth	350 mm
Glazing thickness	6 ÷ 64 mm
Maximum weight of fixed part	1400 kg
Glazing method	Glazing with pressure element

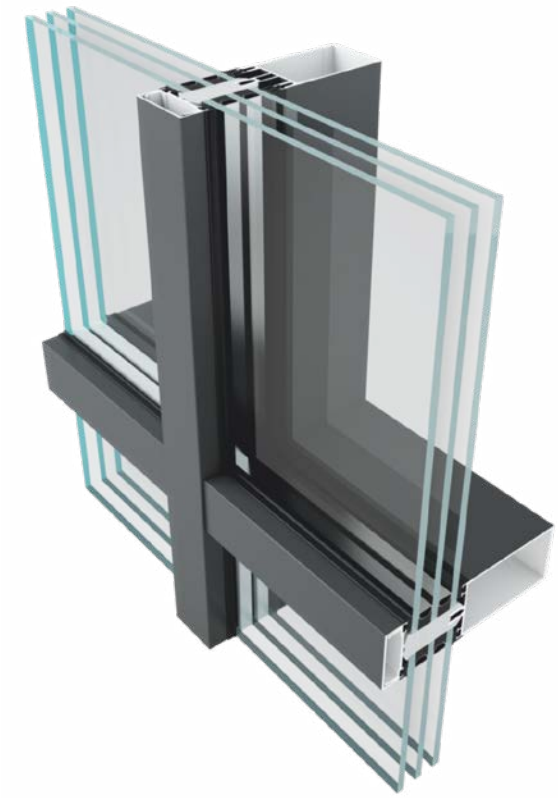
FA
50N
HI

FACADE SYSTEM

high thermal insulation properties

FA 50N HI – SYSTEM FEATURES

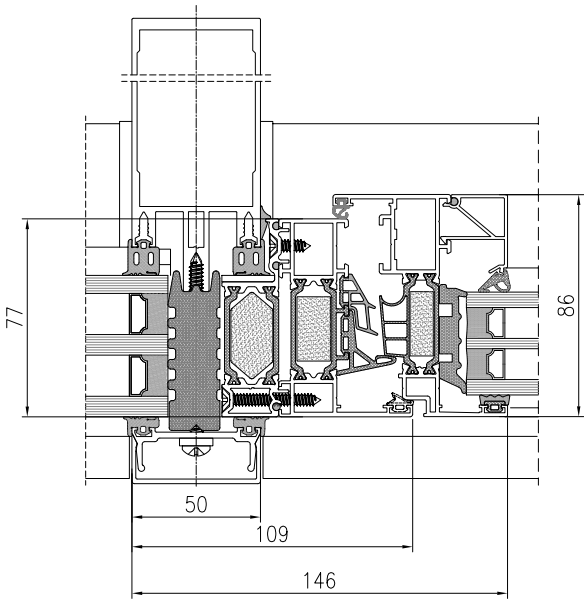
- possibility of creating constructions of various shapes (turns, bends, polygonal shapes),
- complies with all thermal, acoustic and water tightness requirements,
- wide variety of masking strips allows for diversified final appearance of curtain walls,
- possibility of bending profiles, which makes it possible to create a variety of shapes and structure configuration adjusted to individual design requirements,
- thanks to excellent thermal insulation, the system contributes to the reduction of heating costs in the building by minimizing heat losses and ensuring energy efficiency,
- the solution has one of best parameters amongst this class of products on the market,
- possibility of connecting with all YAWAL systems.



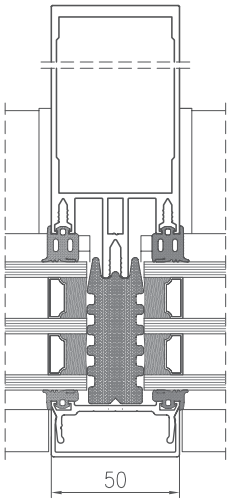
See the product
on the website

Pictures: HTM Research and Development Centre, Gliwice
Design: ZALEWSKI ARCHITECTURE GROUP KRZYSZTOF ZALEWSKI, Gliwice
Aluminium manufacturer: APS-SYSTEM, Częstochowa

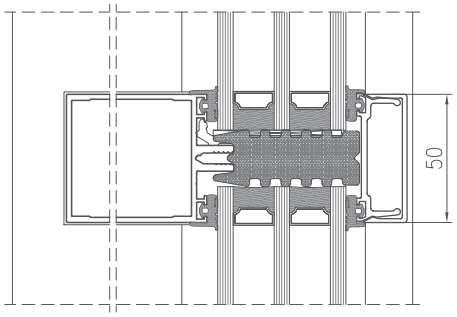
CROSS SECTION THROUGH
FA 50N HI MULLION WITH TM 77N WINDOW



CROSS SECTION THROUGH
FA 50N HI MULLION



CROSS SECTION THROUGH
FA 50N HI TRANSOM



TECHNICAL PARAMETERS – FA 50N HI		
ENERGY	Thermal insulation EN 10077-2	Uf = 0,65 ÷ 1,20 W/m²K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 35 ÷ 53 dB
	Air permeability EN 12207	AE 1650
	Water tightness EN 12208	RE 2850
SAFETY	Wind load resistance EN 12210	2400 Pa
	Anti-theft protection EN 1627	RC2, RC3
	Impact resistance EN 14019	I5, E5

TECHNICAL PROPERTIES – FA 50N HI	
Minimum visible width (view from inside)	50 mm
Minimum visible width (view with outside)	20 mm
Minimum mullion depth	34 mm
Maximum mullion depth	350 mm
Glazing thickness	25 ÷ 64 mm
Maximum weight of fixed part	1400 kg
Glazing method	Glazing with pressure element

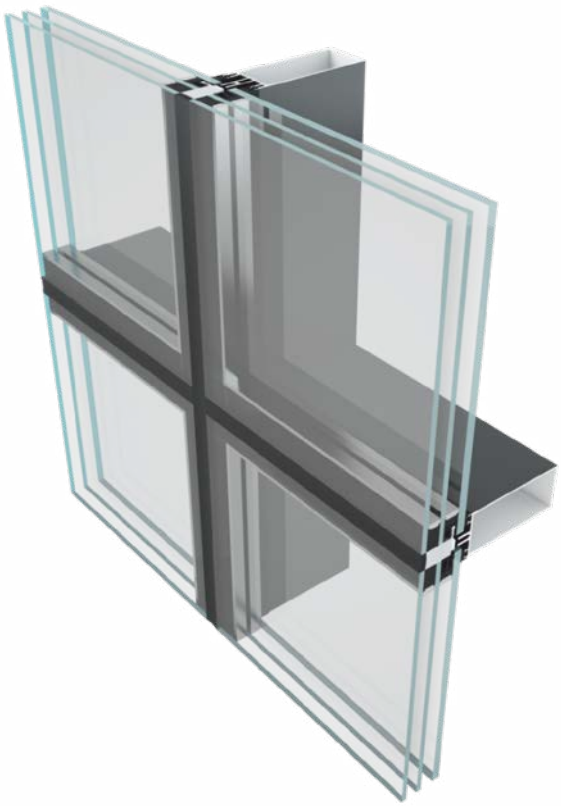
FA
50N
SL

FACADE SYSTEM

high tightness

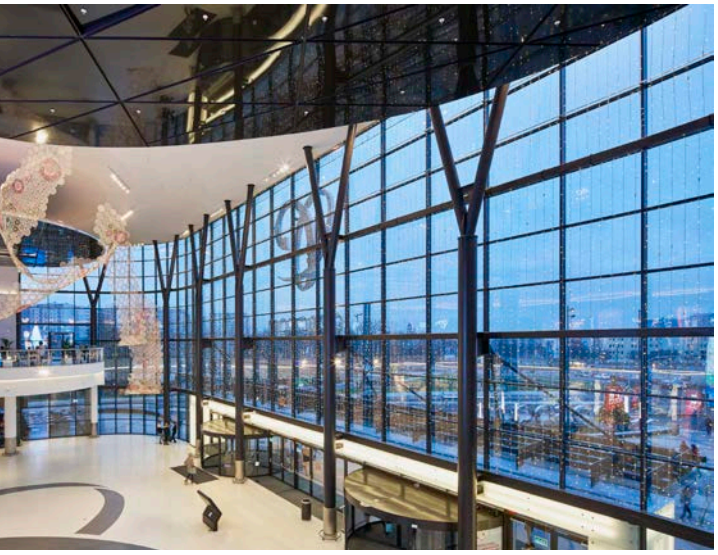
FA 50N SL – SYSTEM FEATURES

- glass façade without external slats,
- possibility of creating constructions of various shapes (turns, bends, polygonal shapes),
- possibility of bending profiles,
- excellent tightness and aesthetic appearance,
- quick and easy assembly,
- possibility of installing tilt or parallel sliding windows next to each other, the windows are opened independently,
- possibility of connecting with all YAWAL systems.

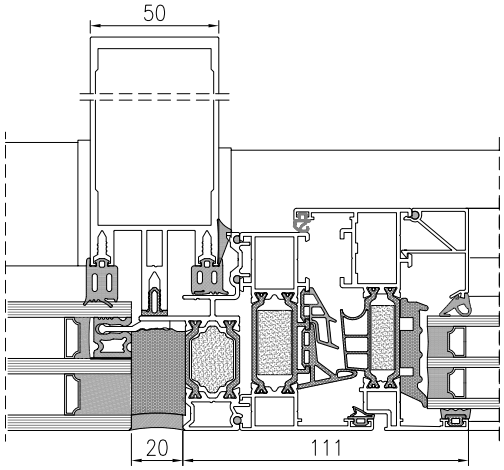


See the product
on the website

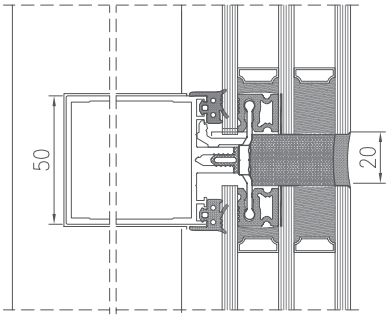
Pictures: POSNANIA, Poznań
Design: B.E.G. INGENIERIE Polska Sp. z o.o.; Blue Architektura Sp. z o.o.; RTKL UK Ltd; WB PROJEKT,
Aluminium manufacturer: DEFOR S.A.



CROSS SECTION THROUGH FA 50N SL MULLION WITH TM 77N WINDOW



CROSS SECTION THROUGH FA 50N SL TRANSOM

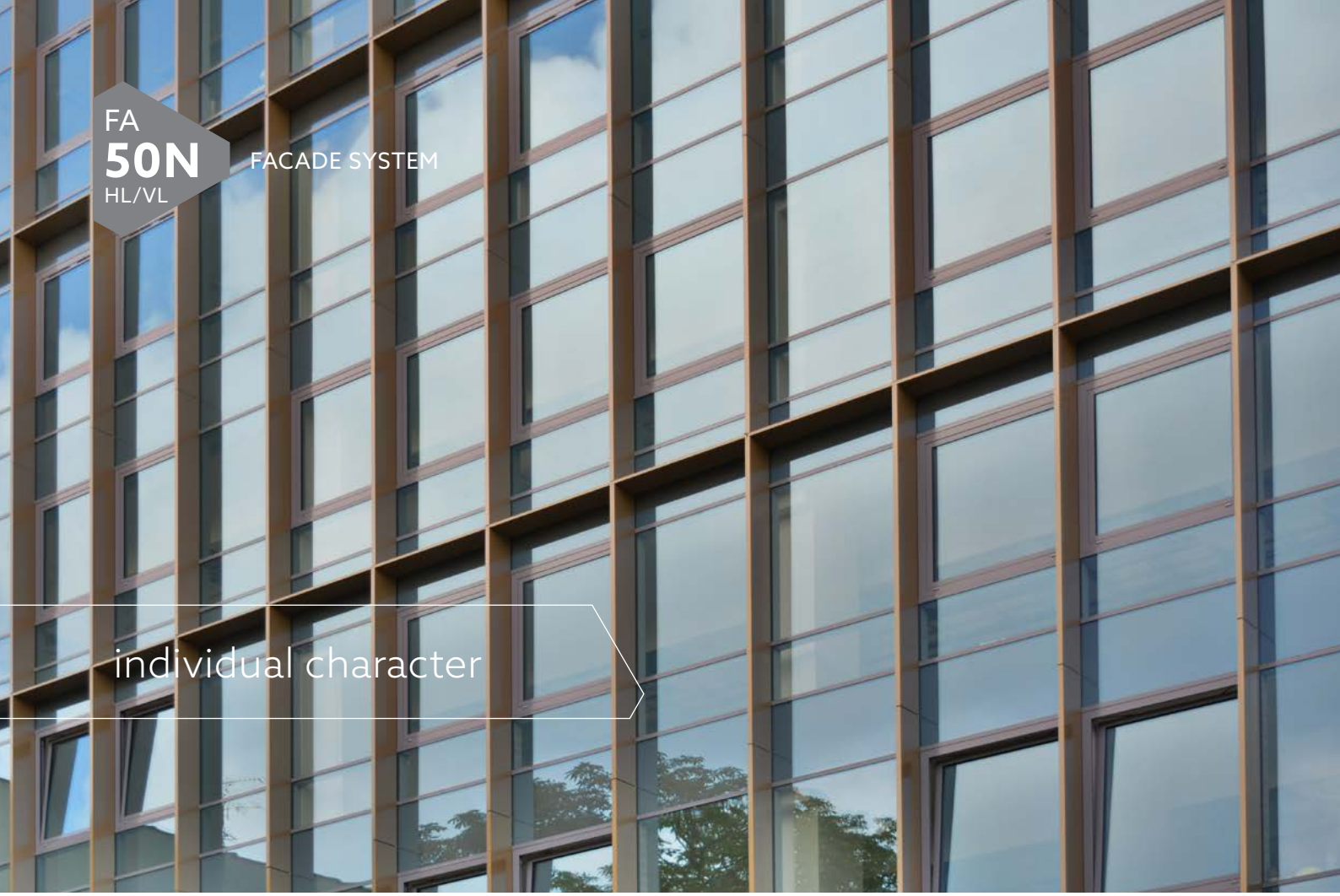


TECHNICAL PARAMETERS – FA 50N SL		
ENERGY	Thermal insulation EN 10077-2	Uf = 0,9 ÷ 1,92 W/m^{2}K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 34 ÷ 53 dB
	Air permeability EN 12207	AE 1650
	Water tightness EN 12208	RE 2850
SAFETY	Wind load resistance EN 12210	2400 Pa
	Anti-theft protection EN 1627	RC2, RC3
	Impact resistance EN 14019	I5, E5

TECHNICAL PROPERTIES – FA 50N SL	
Minimum visible width (view from inside)	50 mm
Minimum visible width (view with outside)	50 mm
Minimum mullion depth	42 mm
Maximum mullion depth	350 mm
Glazing thickness	6 ÷ 64 mm
Maximum weight of fixed part	1400 kg
Glazing method	Glazing with invisible mechanical fixing element and silicone joint

FA
50N
HL/VL

FACADE SYSTEM



individual character

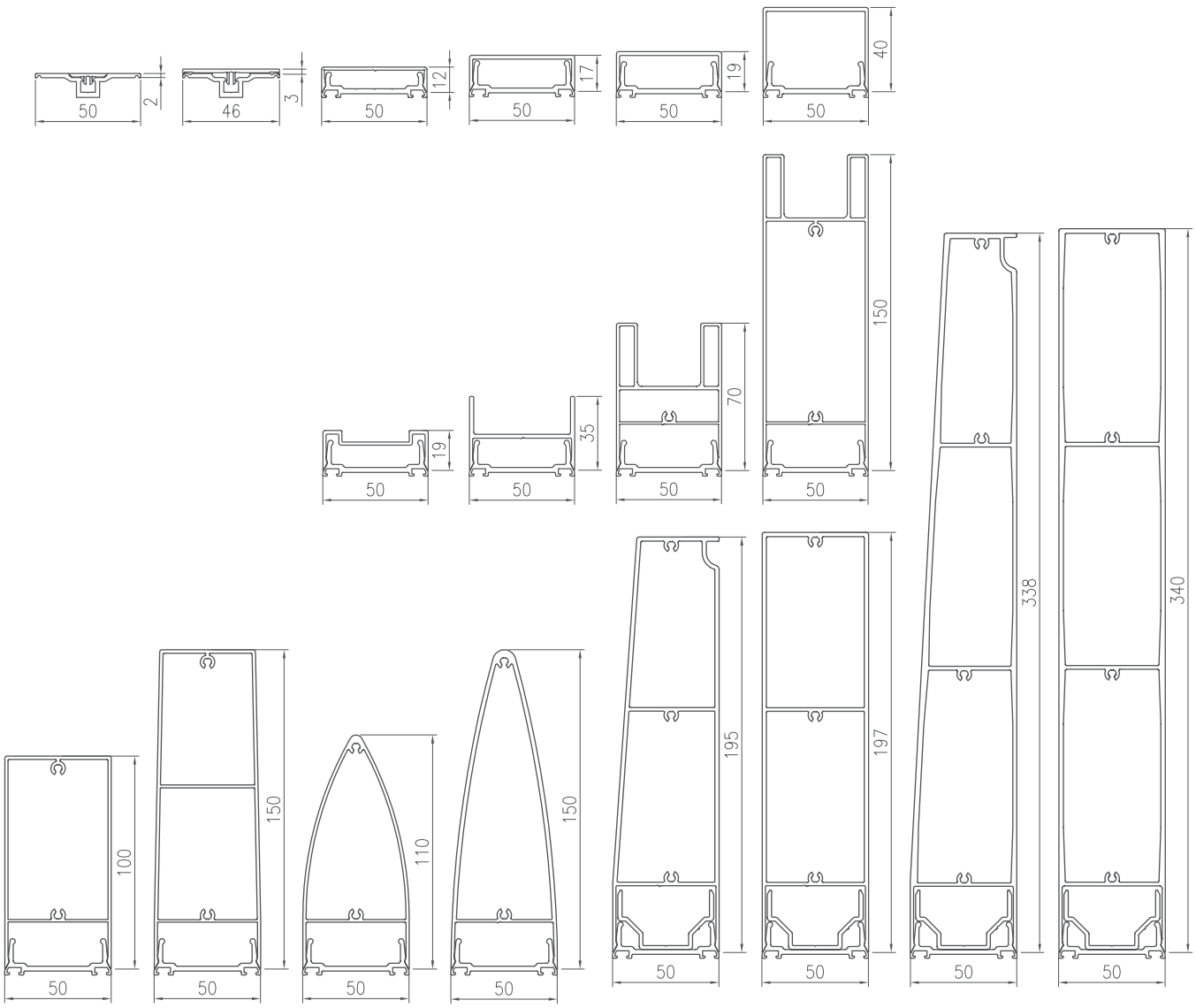
FA 50N HL/VL – SYSTEM FEATURES

- possibility of creating visually attractive structures,
- high parameters of water tightness and wind load resistance,
- visual effect of emphasising horizontal and vertical division lines,
- possibility of using tilt windows that do not interfere with façade appearance,
- possibility of connecting with all YAWAL systems.

See the product
on the website

Picture: University of Economics, Wrocław
Design: ARCHIMEDIA Architects and Engineers,
Aluminium manufacturer: Trasko-Inwest Sp. z o.o.

MASKING STRIP



TECHNICAL PARAMETERS – FA 50N HL/VL		
ENERGY	Thermal insulation EN 10077-2	Uf = 0,65 ÷ 1,20 W/m²K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 35 ÷ 53 dB
	Air permeability EN 12207	AE 1650
	Water tightness EN 12208	RE 2850
SAFETY	Wind load resistance EN 12210	2400 Pa
	Anti-theft protection EN 1627	RC2, RC3
	Impact resistance EN 14019	I5, E5

TECHNICAL PROPERTIES – FA 50N HL/VL	
Minimum visible width (view from inside)	50 mm
Minimum visible width (view with outside)	50 mm
Minimum mullion depth	34 mm
Maximum mullion depth	350 mm
Glazing thickness	6 ÷ 64 mm
Glazing method	Glazing with pressure element

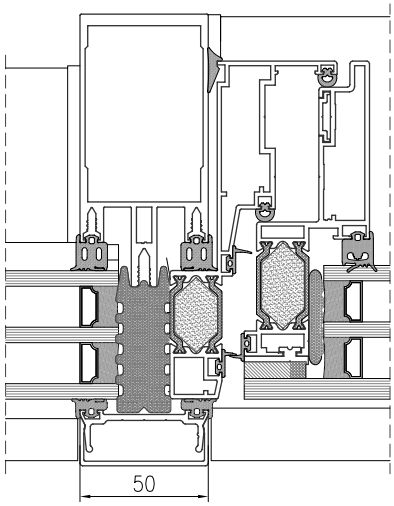
FA 50N SW – SYSTEM FEATURES

- visual effect of an even surface affects positively influencing aesthetics of the building,
- compatible with „intelligent house" concept,
- possibility of efficient ventilation without interrupting the homogeneous appearance of the façade due to using sliding windows,
- possibility of natural ventilation, uniform inlet and outlet of air,
- no draught and reduction of energy costs,
- possibility of installing automatic opening/closing actuators.

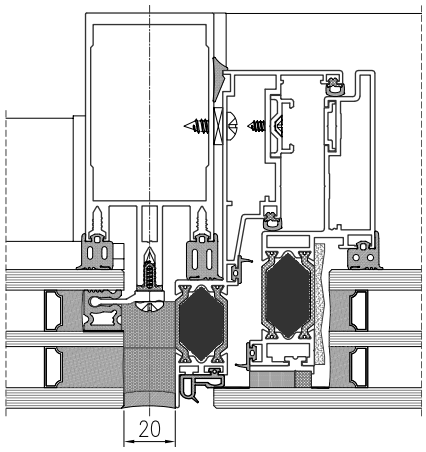
See the product
on the website

Pictures: Łużycka Plus, Gdynia
Design: Aedas CE, Warsaw
Aluminium manufacturer: Al-Bud Sp. z o.o., Wołomin

CROSS SECTION THROUGH FA 50N HI MULLION WITH FA 50N SW WINDOW



CROSS SECTION THROUGH FA 50N SL MULLION WITH FA 50N SW WINDOW



TECHNICAL PARAMETERS – FA 50N SW

		parallel sliding	tilt at the bottom
ENERGY	Thermal insulation EN 10077-2	Uf from 1,3 W/m^{2}K	Uf from 1,3 W/m^{2}K
COMFORT	Air permeability EN 12207	Class 4	Class 3
	Water tightness EN 12208	E1500 (1500 Pa)	E2100 (2100 Pa)
SAFETY	Wind load resistance EN 12210	1600 Pa	1600 Pa
	Impact resistance EN 14019	Class 5	Class 4

TECHNICAL PROPERTIES – FA 50N SW

	parallel sliding	tilt at the bottom
Glazing thickness	46 ÷ 58 mm	46 ÷ 58 mm
Glazing method	Glazing with invisible fixing element Glazing with structural bonding	Glazing with invisible fixing element Glazing with structural bonding
Maximum weight	220 kg	180 kg
Maximum dimension (width x height)	2000 x 3000 mm	1700 x 2650 mm/ 2650 x 1700mm

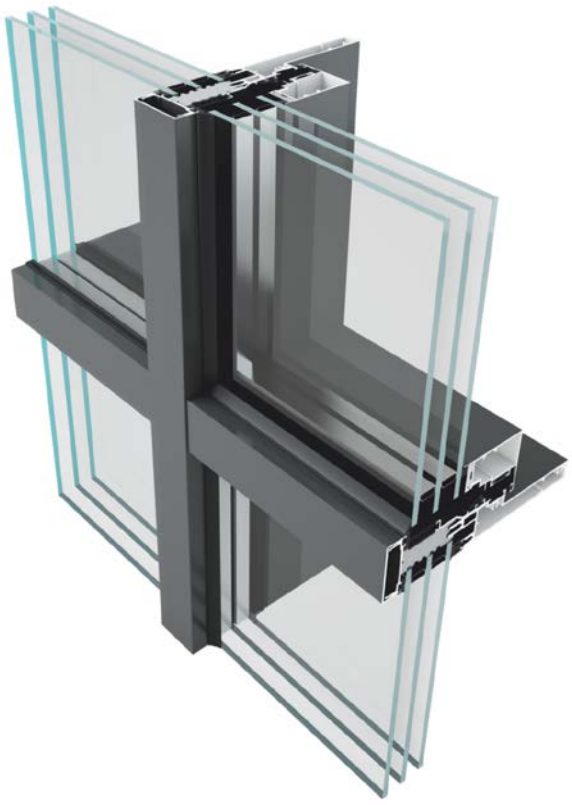
FA
50N
INV

FACADE SYSTEM

hidden sash effect

FA 50N INV – SYSTEM FEATURES

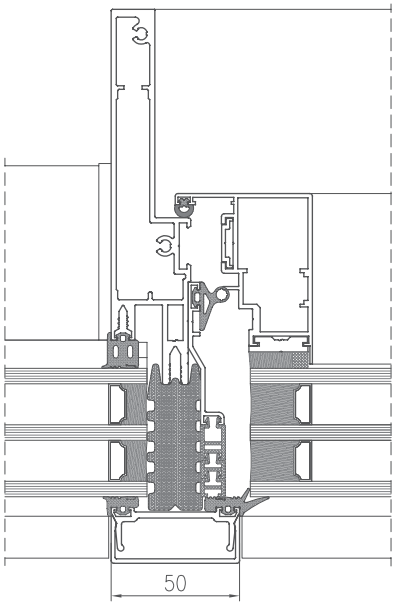
- possibility of glazing with single-chamber and double chamber units,
- a hidden sash effect from the outside of curtain wall,
- high thermal insulation properties,
- possibility of assembly in any type of Yawal's mullion-transom façades,
- the system allows constructing inward opening windows, curtain wall with turn and tilt, tilt and turn, turn or tilt function
- possibility of connecting with all YAWAL systems.



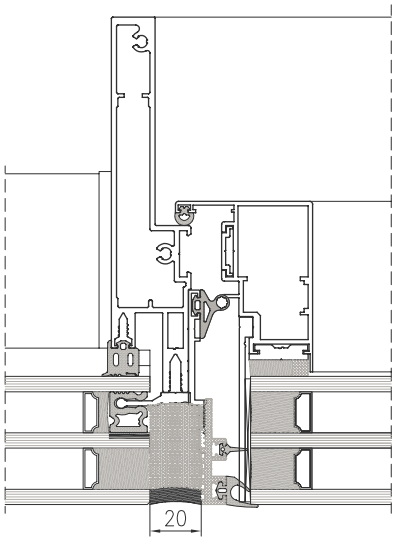
See the product
on the website

Pictures: OFF Piotrkowska Center, Łódź
Design: Architectonic Office NOW Biuro Architektoniczne Sp. z o.o.,
Aluminium manufacturer: OLI Sp. z o.o.

CROSS SECTION THROUGH FA 50N HI MULLION WITH FA 50N INV WINDOW



CROSS SECTION THROUGH FA 50N SL MULLION WITH FA 50N INV WINDOW



TECHNICAL PARAMETERS – FA 50N INV		
ENERGY	Thermal insulation EN 10077-2	Uf = 0,67 ÷ 1,95 W/m^{2}K
COMFORT	Air permeability EN 12207	Class 4
	Water tightness EN 12208	E1650
SAFETY	Wind load resistance EN 12210	1600 Pa
	Impact resistance EN 14019	Class 4/Class 5

TECHNICAL PROPERTIES – FA 50N INV	
Minimum visible width (view from inside)	50 mm
Minimum visible width (view with outside)	10 ÷ 81,4 mm
Minimum mullion depth	120 mm
Maximum mullion depth	186,3 mm
Glazing thickness	28 ÷ 58 mm
Glazing method	Glazing with pressure element Glazing with invisible mechanical fixing element and silicone joint Glazing with structural adhesive (windows)lepidlom (okná)
Opening elements	structural sash: turn and tilt, tilt and turn, turn, tilt
Maximum weight of turn and tilt, tilt and turn, turn sash	150 kg
Maximum height of turn and tilt, tilt and turn, turn sash	2700 mm
Maximum weight of tilt sash	120 kg
Maximum height of tilt sash	2200 mm

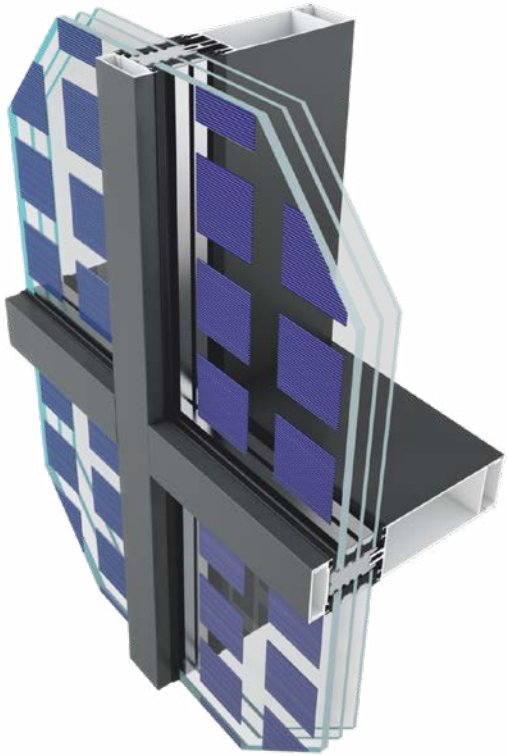
FA
50N
PV

FACADE SYSTEM

energy efficiency

FA 50N PV – SYSTEM FEATURES

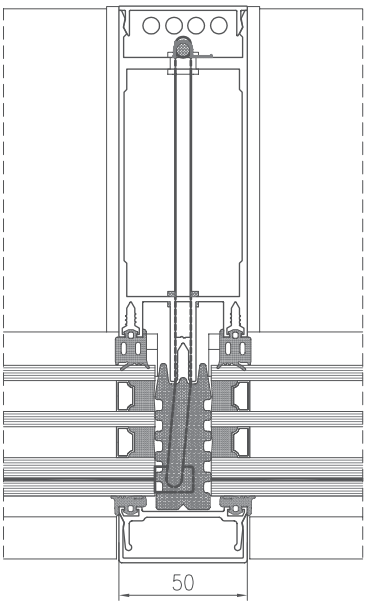
- possibility of constructing curtain walls with fire resistance in classes from EI 30 to EI 60.
- invisible cabling,
- excellent thermal insulation,
- energy efficiency is ensured by excellent thermal insulation and the possibility of using photovoltaic cells,
- allows the creation of light curtain walls, roofing and other spatial structures using glass equipped with photovoltaic cells,
- possibility of covering the cable chamber with a special set of mullions, transoms and plugs, and the use of a special glass construction for obtaining electricity,
- possibility of assembly with any of Yawal façade systems.



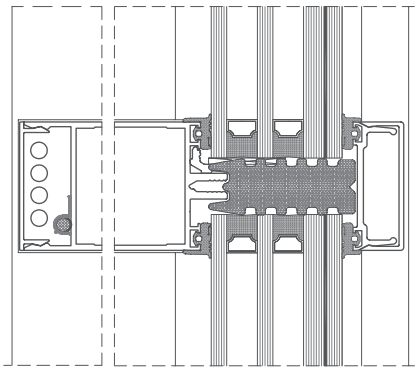
See the product
on the website

Picture: BMZ POLAND Sp. z o.o., Gliwice
Design: BAUREN Renke Piotr
Aluminium manufacturer: SBL-Żelbet Sp. z o.o.

CROSS SECTION THROUGH
FA 50N PV MULLIONM – POSSIBILITY
TO LEAD ELECTRIC CABLES



CROSS SECTION THROUGH
FA 50N PV TRANSOM



TECHNICAL PARAMETERS – FA 50N PV		
ENERGY	Thermal insulation EN 10077-2	Uf = 0,65 ÷ 1,92 W/m^{2}K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 34 ÷ 53 dB
	Air permeability EN 12207	AE 1650
	Water tightness EN 12208	RE 2850
SAFETY	Wind load resistance EN 12210	2400 Pa
	Impact resistance EN 14019	I5, E5

TECHNICAL PROPERTIES – FA 50N PV	
Minimum visible width (view from inside)	50 mm
Minimum visible width (view with outside)	50 mm
Maximum mullion depth	146,3 mm
Maximum mullion depth	146,3 mm
Glazing thickness	6 ÷ 64 mm
Glazing method	Glazing with pressure element Glazing with invisible mechanical fixing element and silicone joint

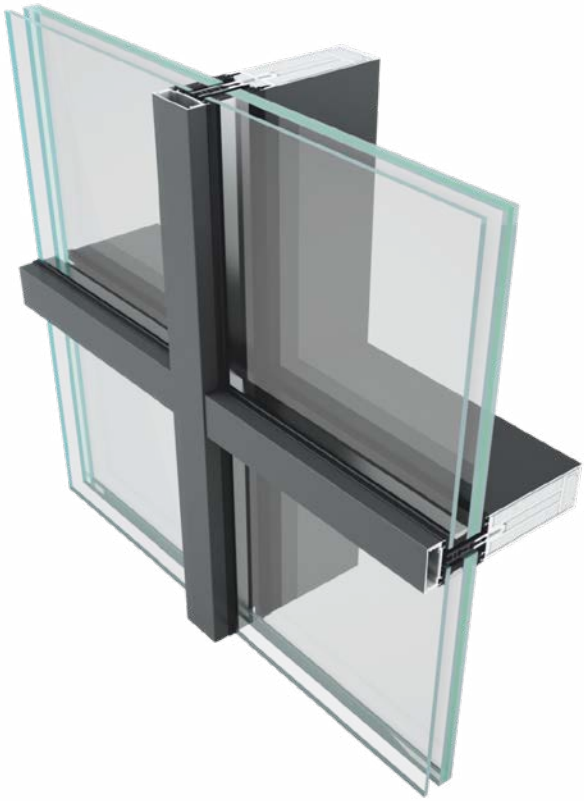
FA
50N
EI

MULLION AND TRANSOM FIRE PROTECTION FACADE

fire protection system

FA 50N EI – SYSTEM FEATURES

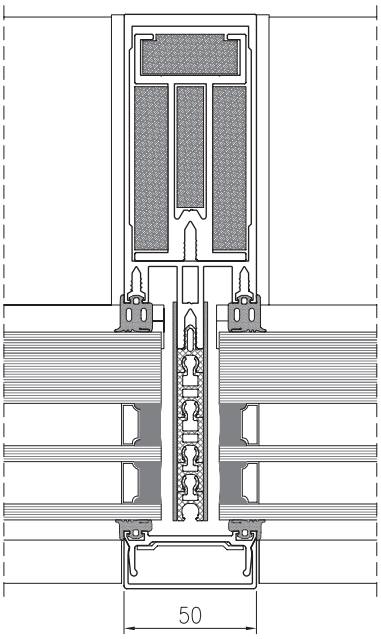
- possibility of creating curtain walls with various surface refractions,
- complies with stringent fire protection standards,
- possibility of combining with fire protection systems Yawal TM 75EI and external doors TM 77N EI,
- possibility of selecting glass manufacturer: AGC, Bohamet, Vetrotech Saint-Gobain, Pilkington, Polflam.



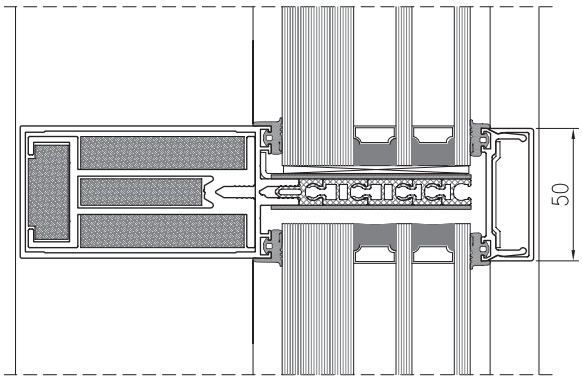
See the product on the website

Pictures: Termy Tarnowskie, Tarnowo Podgórne
Design: Archas Design Maciej Zuber
Aluminium manufacturer: USP Maciej Gajdziński, Poznań

CROSS SECTION THROUGH
FA 50N EI60 MULLION



CROSS SECTION THROUGH
FA 50N EI60 TRANSOM



TECHNICAL PARAMETERS – FA 50N EI		
ENERGY	Thermal insulation EN 10077-2	Uf = from 2,0 W/m^{2}K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 35 ÷ 53 dB
	Air permeability EN 12207	AE 1650
	Water tightness EN 12208	RE 2850
SAFETY	Wind load resistance EN 12210	2400 Pa
	Anti-theft protection EN 1627	RC2, RC3
	Impact resistance EN 14019	I5, E5
	Fire resistance	EI 30, EI 60

TECHNICAL PROPERTIES – FA 50N EI	
Minimum visible width (view from inside)	50 mm
Minimum visible width (view with outside)	50 mm
Minimum mullion depth	106,3 mm
Maximum mullion depth	288,3 mm
Glazing thickness	16 ÷ 80 mm
Glazing method	Glazing with pressure element

FA
50N
EI SL

FACADE SYSTEM

complex solutions

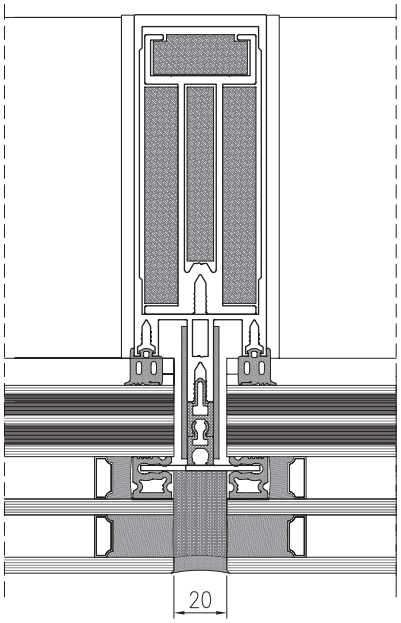
FA 50N EI SL – SYSTEM FEATURES

- possibility of maintaining the aesthetics of the façade without any visible deviation from FA 50N SL system without fire resistance,
- the system allows the construction of suspended or filling walls with fire resistance class EI 60,
- the system allows the construction of both flat and broken walls,
- possibility of installing fire protection doors in the façade,
- possibility of selecting glass manufacturer: AGC, Bohamet, Vetrotech Saint-Gobain, Pilkington, Polflam.

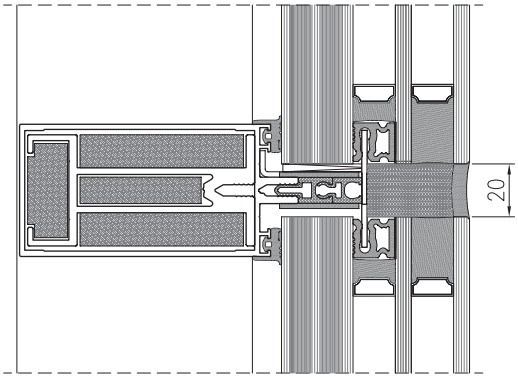
See the product on the website

Pictures: Temida Office, Poznań
Design: Archikwadrat Sp. z o.o., Poznań
Aluminium manufacturer: Lindhorst Sp. z o.o. Spółka Komandytowa, Poznań

CROSS SECTION THROUGH
FA 50N SL EI60 MULLION



CROSS SECTION THROUGH
FA 50N SL EI60 TRANSOM



TECHNICAL PARAMETERS – FA 50N EI SL		
ENERGY	Thermal insulation EN 10077-2	Uf = from 1,54 W/m^{2}K
COMFORT	Acoustic insulation EN ISO 140-3	Rw = 34 ÷ 53 dB
	Air permeability EN 12207	AE 1650
	Water tightness EN 12208	RE 2850
SAFETY	Wind load resistance EN 12210	2400 Pa
	Anti-theft protection EN 1627	RC2, RC3
	Impact resistance EN 14019	I4, E4
	Fire resistance	EI 60

TECHNICAL PROPERTIES – FA 50N EI SL	
Minimum visible width (view from inside)	50 mm
Minimum visible width (view with outside)	50 mm
Minimum mullion depth	106,3 mm
Maximum mullion depth	288,3 mm
Glazing thickness	14 ÷ 74 mm
Glazing method	Glazing with invisible mechanical fixing element and silicone joint

PBI
50N

WINDOW AND DOOR SYSTEM
WITHOUT THERMAL INSULATION

great selection of profiles

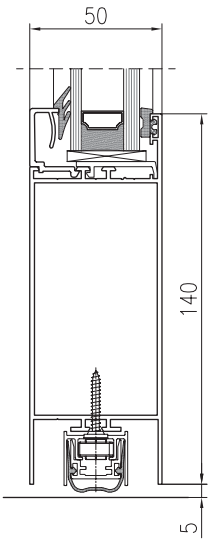
PBI 50N – SYSTEM FEATURES

- the system can be used to construct partitions and other internal constructions, such as: swing doors, service windows, non-supporting partition walls, display windows and boxes that do not require thermal insulation,
- possibility of creating large-dimensioned constructions due to wide selection of profiles (including reinforced mullions),
- possibility of constructing outwards and inwards opening doors, all-glass, single-leaf and double-leaf doors,
- possibility of manufacturing smoke-proof constructions,
- possibility of creating swing doors and service windows,
- possibility of creating arched constructions,
- possibility of setting the walls at any angle,
- possibility of creating all-glass structures,
- profile depth (50 mm) makes it one of the most durable on the market,
- it is possible to connect it with all YAWAL systems.

See the product
on the website

Picture: PGE Turów Arena in Zgorzelec
Design: Archimedia, Poznań
Aluminium manufacturer: APS System Sp. j., Częstochowa

CROSS SECTION THROUGH PBI 50N DOOR



TECHNICAL PARAMETERS – PBI 50N

SAFETY	Operation force EN 12046	Class 2
	Mechanical life EN 12400	Class 5
	Smoke proofness EN 13501-2	Class Sa S200
	Static torsion EN 1192	Class 3 (300 N)
	Static load EN 1192	Class 3 (800N)
	Impact resistance to soft and heavy body EN 11992	Class 3 (120 J)
	Impact resistance to hard body EN 11992	Class 3 (5 J)
	Flame spreading EN 11992	Class 3 (5 J)

TECHNICAL PROPERTIES – PBI 50N

		Service window	Doors of window profiles	Swing door	Standard door	Top-hung door
Structural thickness of frame	50 mm	50 mm	50 mm	50 mm	50 mm	50 mm
Leaf structural thickness	57 mm	21,8/45,5 mm	57 mm	50 mm	50 mm	50 mm
Glazing bead height	20/22 mm	20 mm	20/22 mm	20/22 mm	20/22 mm	20/22 mm
Infill thickness	6 ÷ 43 mm	4 ÷ 6,4 mm	4 ÷ 43 mm	4 ÷ 43 mm	4 ÷ 43 mm	6 ÷ 34 mm
Maximum dimensions L x H – internal doors single-leaf	500 ÷ 1400 mm x 500 ÷ 2500 mm					
Maximum dimensions L x H – double-leaf internal doors	1000 ÷ 2400 mm x 500 ÷ 2500 mm					

PBI
50N

WINDOW SYSTEM
WITHOUT THERMAL INSULATION

Service window

comfort and aesthetics

PBI 50N SERVICE WINDOW - SYSTEM FEATURES

We would like to recommend you the modern aluminium joinery of PBI 50N system allowing designing of internal constructions that do not require thermal insulation.

The system is intended for constructing light walls and internal partitions characterised by great aesthetic and performance. Use of advanced technology and high-quality materials makes the product be characterised by durability, stability and high mechanical resistance.

See the product
on the website

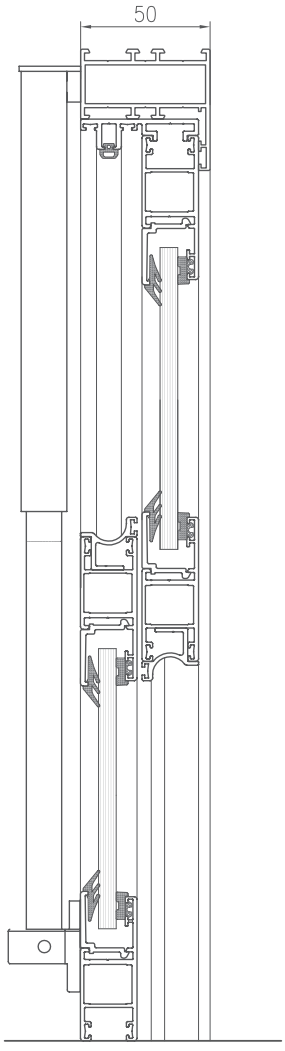
Picture: Examples of the system use

As part of the PBI 50N system, we offer you one of our additional solutions – service window. A perfect complement to the architecture of industrial facilities, public buildings and residential buildings. The presented window type can be slid in horizontal and vertical plane.

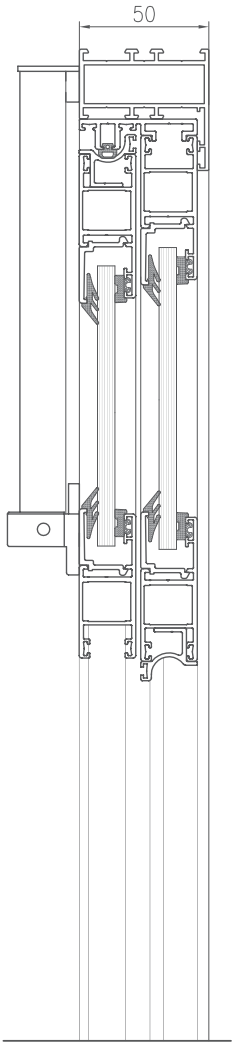
The aesthetic value of the construction is emphasised by the high quality of surface finish, as the profiles are additionally subject to anodising or powder coating process. Modern and minimalistic form of the system and great selection of colours – RAL palette, structural colours and wood-like colours - allow creating individual solutions suitable for any type of architecture. Similarly to other constructions, this system is compatible with other YAWAL system.

The system has a Technical Approval no. AT-15-6924/2012 and certificates, all to guarantee full satisfaction of use.

CROSS SECTION THROUGH A CLOSE
PBI 50N SERVICE WINDOW



CROSS SECTION THROUGH AN OPEN
PBI 50N SERVICE WINDOW



TECHNICAL PARAMETERS – PBI 50N SERVICE WINDOW	
Frame structural depth	50 mm
Sash structural thickness	21,8 mm
Infill thickness	4 ÷ 6,4 mm
Movable sash weight – for sash without counterweight	max. 8 kg

modern design

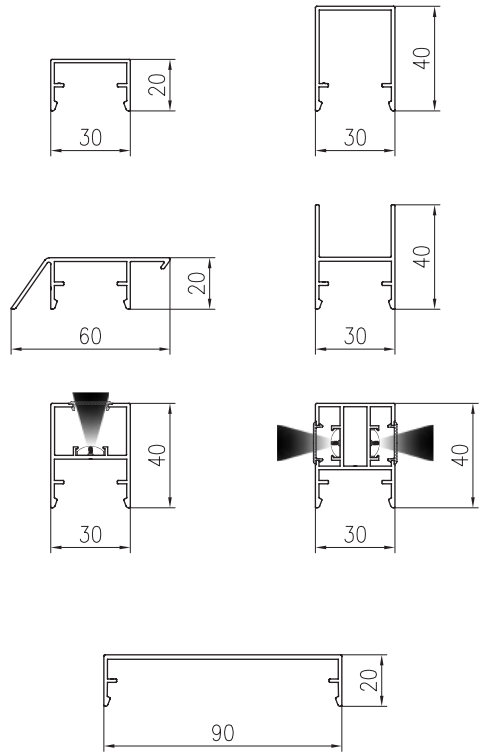
VERTILINE – SYSTEM FEATURES

- possibility of assembly on the façade of the building or inside the rooms gives flexibility in the use of the system,
- unlimited colour and decorative possibilities, allowing adjustment to individual preferences and architectural style,
- the system ensures visual consistency on the façades, creating a modern design and a harmonious appearance of the building,
- aluminium slats are durable and resistant, which translates into long-term use and resistance to weather conditions,
- it does not require repainting, which reduces costs of maintenance,
- the system is safe and ecological, meeting the requirements for construction safety and environmental protection.

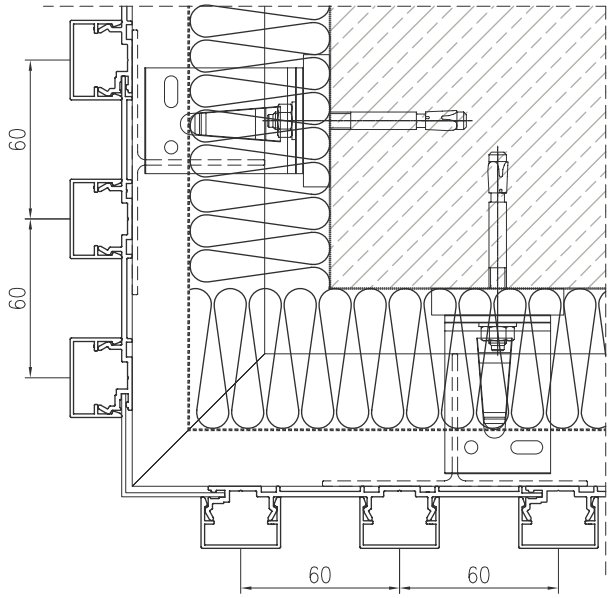
See the product on the website

Picture: Examples of the system use

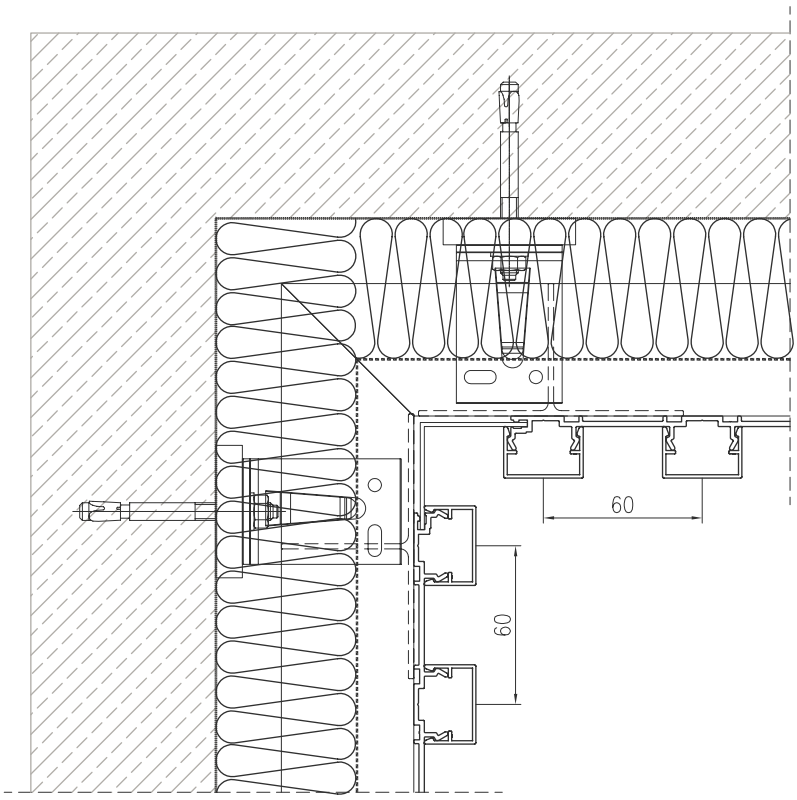
CROSS SECTION THROUGH MASKING CLIPS OF THE VERTILINE SYSTEM



CROSS SECTION THROUGH VERTILINE CLADDING



CROSS SECTION THROUGH VERTILINE CLADDING



PF 40 PORTFENETR SYSTEM

safety without compromise

PF 40 – SYSTEM FEATURES

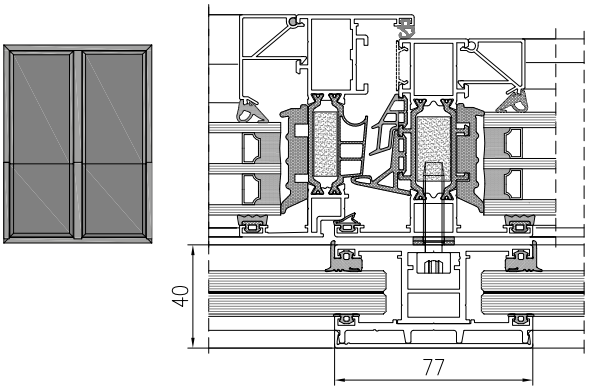
- allows the construction of modern external balustrades, which are installed as protection for high opening windows, such as French balconies,
- PF 40 structures are an interesting architectural element that adds to the attractiveness of the building façade,
- strong and durable profiles which ensure maximum level of safety,
- compatibility with all window and door systems with thermal insulation in the Yawal system,
- ensures easy installation to the systems frame based on TM,
- masking clip of the fixing screw ensures aesthetic of the structure,
- filling with glass panes VSG/ESG 66.2, 88.2, 1010.2,
- possibility of manufacturing structures without the upper safety strip, which creates a modern appearance,
- can be used both in single-leaf and double-leaf structures,
- increases building acoustic insulation.

See the product on the website

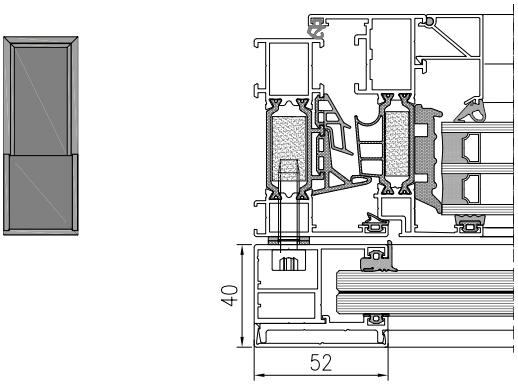
Picture: Examples of the system use

Yawal constructors paid special attention to aesthetic finish of the system. They designed special masking clip, thanks to which the installation screws are hidden, and the whole railing looks very elegant. This solution is not available in products offered by competitive companies. Moreover, the masking clip is made in the same way as the façade clip, which shortens the time of assembly and disassembly of the structure making it easier.

CROSS SECTION THROUGH PF40 BALUSTRADE
FIXING TO THE WINDOW MULLION



CROSS SECTION THROUGH PF40 BALUSTRADE
FIXING TO THE WINDOW FRAME



The Yawal Portfenetr PF 40 system is mounted to the window frame. Thanks to use of special crosspiece, it is possible to construct the railing on both single- and double-leaf structures. The solution is installed to the frame on vertical profiles in the "H" version, and on vertical profiles and a horizontal profile in the "U" version. The base profiles and pressure strips of the system are sold in a version with drilled assembly openings, which facilitates prefabrication and assembly, thus lowers costs.

aesthetics and functionality

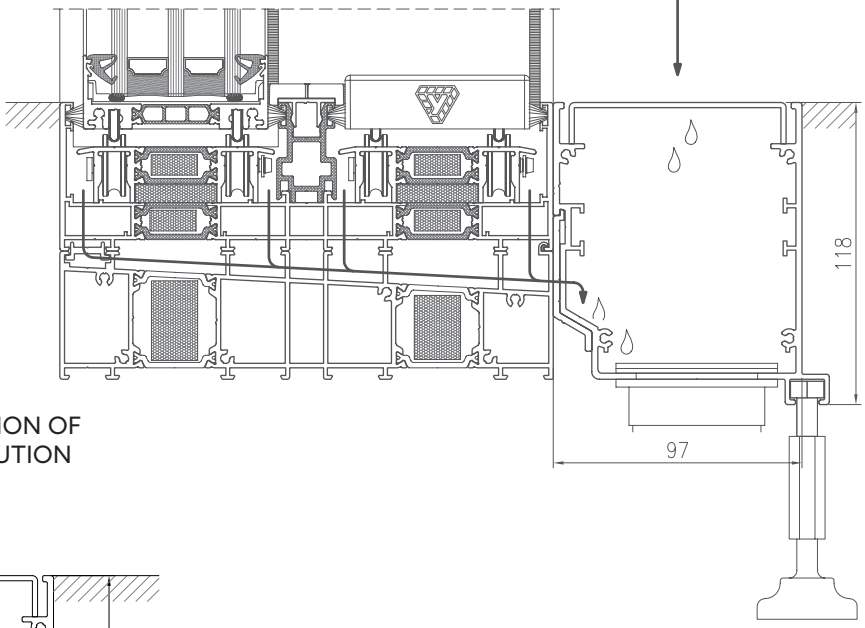
LINEAR DRAINAGE - SYSTEM FEATURES

- the system enables the installation of a gutter at the floor level, which promotes effective drainage of condensate,
- Yawal linear drainage is equipped with specially designed connectors that facilitate rainwater gutter bending at any angle,
- linear drainage can be integrated with the frame for additional durability and stability,
- solution compatible with the Yawal systems: Moreview, DP 180, TM 102HI PRESTIGE, TM 102HI, TM 77N,
- connectors that facilitate gutter shaping in any way,
- saves time required to prefabricate the profiles,
- gravitational outflow of condensate thanks to inclined wall of the bottom widening,
- aesthetic perforated INOX metal sheet.

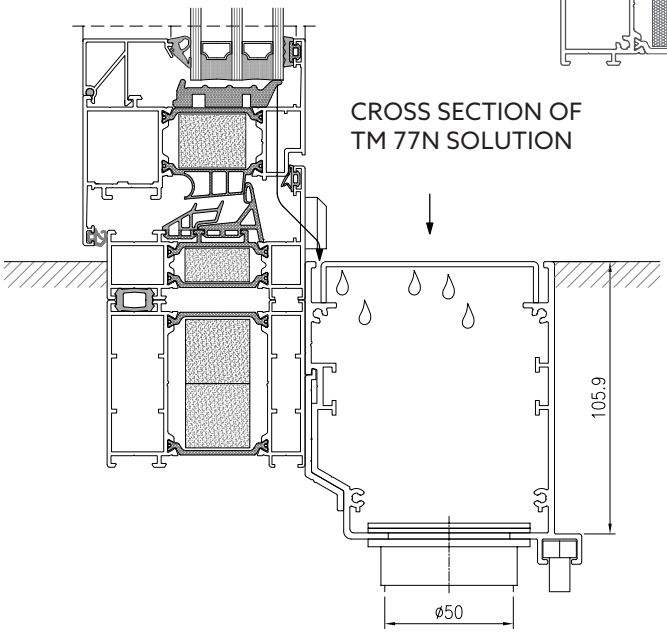
See the product
on the website

Picture: Examples of the system use

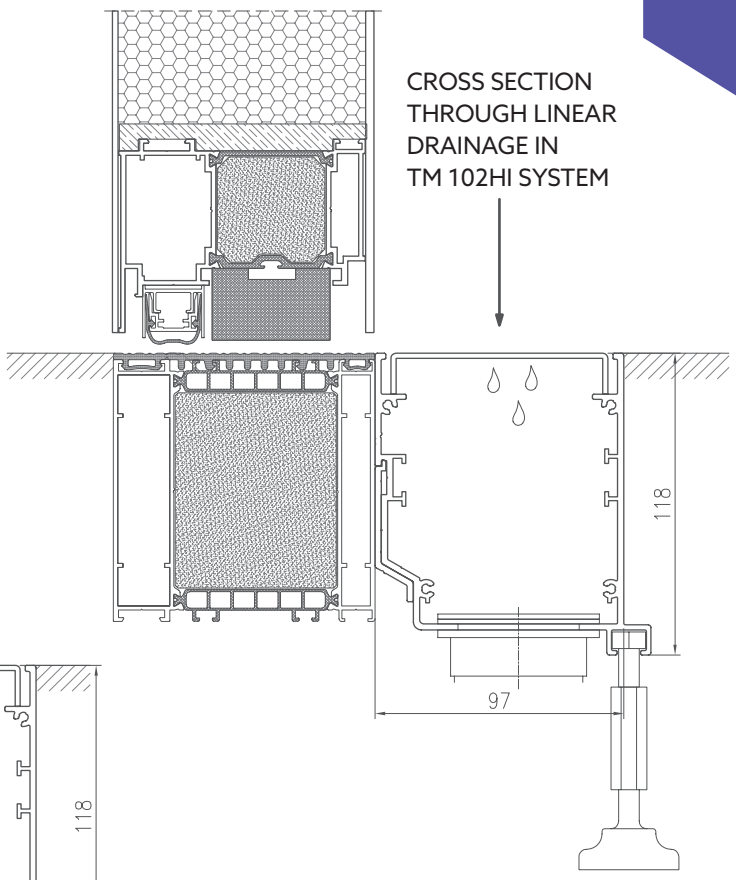
CROSS-SECTION THROUGH THE LINEAR DRAINAGE IN THE MOREVIEW SYSTEM

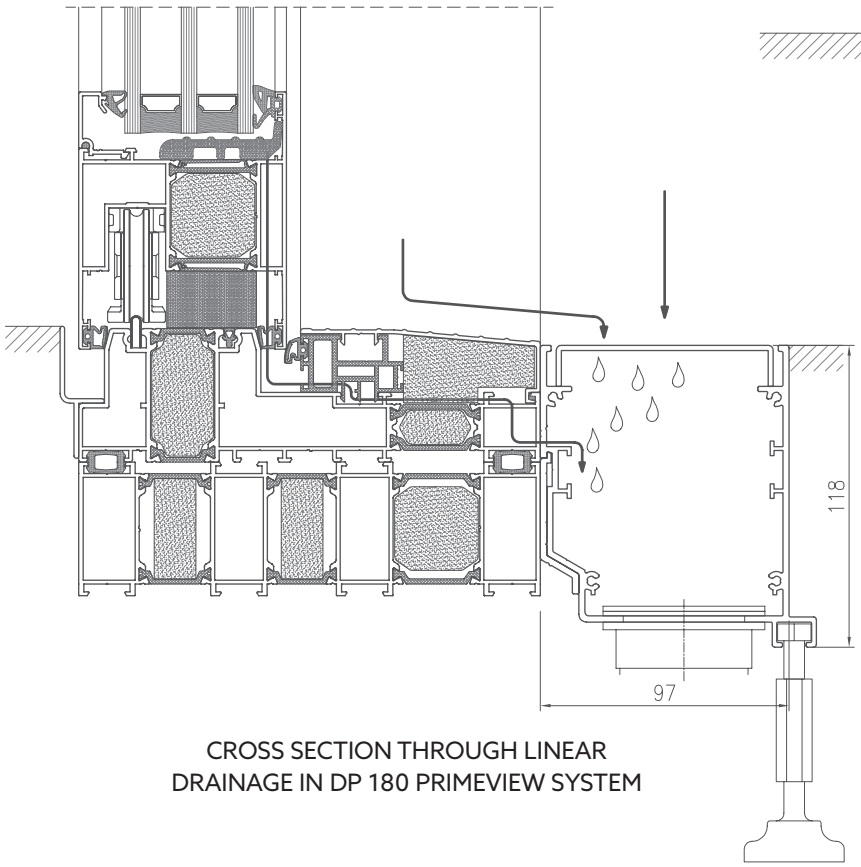


CROSS SECTION OF TM 77N SOLUTION



CROSS SECTION THROUGH LINEAR DRAINAGE IN TM 102HI SYSTEM





CROSS SECTION THROUGH LINEAR DRAINAGE IN DP 180 PRIMEVIEW SYSTEM

complex sun protection

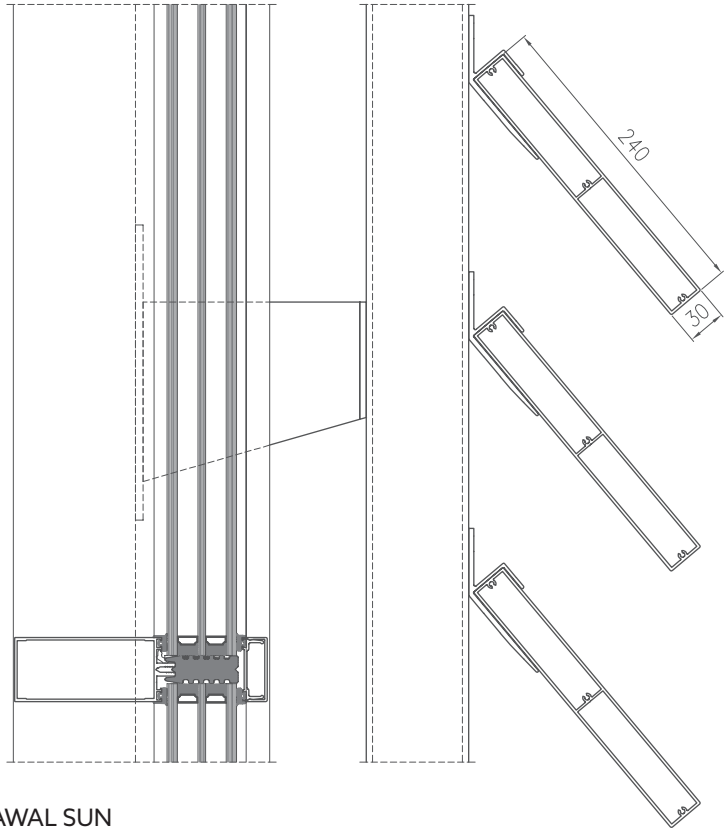
YAWAL SUN PROTECTION – SYSTEM FEATURES

- possibility of automatic control,
- product is available in several variants,
- brise soleils (fixed and movable) and façade shutters,
- complex anti-solar protection of a building,
- enriching building structure with brise soleils,
- increased comfort of work for persons inside the building due to reflecting and diffusing of light entering the building,
- air conditioning costs reduction,
- possibility of connecting with all YAWAL systems.

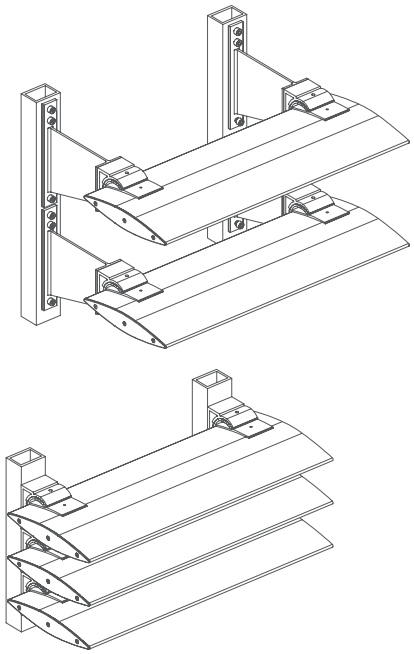
See the product on the website

Picture: Mediateka – City Library, Sosnowiec
Design: Designing Studio AiM Arkadiusz Miśkiewicz, Katowice,
Aluminium manufacturer: APS-System, Częstochowa

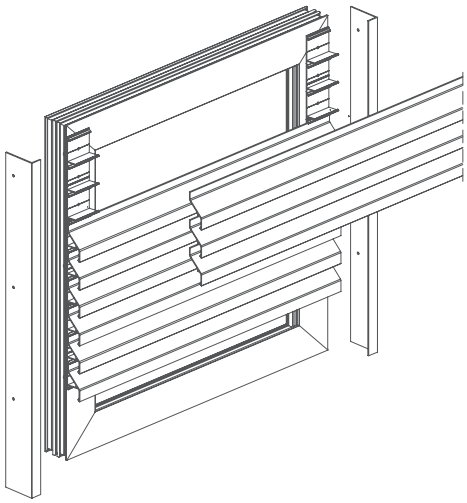
YAWAL SUN PROTECTION – CROSS SECTION THROUGH RECTANGULAR SLATS



MOUNTING DIAGRAM OF YAWAL SUN PROTECTION FIXED SHUTTERS



MOUNTING DIAGRAM OF FACADE SHUTTERS YAWAL SUN PROTECTION



TECHNICAL PARAMETERS – YAWAL SUN PROTECTION

SAFETY	Wind load resistance EN 13659	Class 6

TECHNICAL PROPERTIES – YAWAL SUN PROTECTION

	FIXED BRISE SOLEILS	MOVABLE BRISE SOLEILS	BLINDS
Shape of protection	elliptic / rectangular	elliptic	"z" - shaped
Protection dimensions	100, 150, 200, 240, 300 mm	100, 150, 200, 240, 300 mm	50, 60, 66, 76, 80, 86 mm
Assembly angle	0°, 9°, 15°, 18°, 27°, 30°, 36°, 45°	premenlivý	konštantný

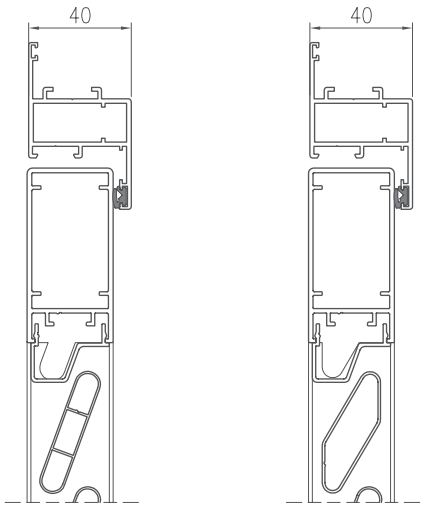
ECLIPSE 33 – SYSTEM FEATURES

- modern design,
- periodical maintenance of external surface is not necessary,
- durable colours, easy to clean,
- high durability, no atmospheric corrosion,
- great selection of colours – RAL palette, structural colours, wood-like veneer,
- quick and easy assembly,
- more economic alternative for wooden shutters,
- possibility of connecting with all YAWAL systems.

See the product on the website

Pictures: Private house

VERTICAL SECTIONS THROUGH SHUTTERS WITH FIXED SLATS



TECHNICAL PROPERTIES – ECLIPSE 33

	SHUTTERS WITH FIXED LOUVRES	PANEL SHUTTERS
Maximum dimensions of a single sash	900 x 2400	900 x 2400
Shutter thickness	40 mm	30 mm
Visible frame width	68 mm	18 mm
Infill thickness	27 mm	27 mm
Assembly method	To the frame, to the wall	To the wall

FA 50N RW

Smoke vents

YAWAL SMOKE VENT SYSTEMS WITH ACTUATORS

unattended control

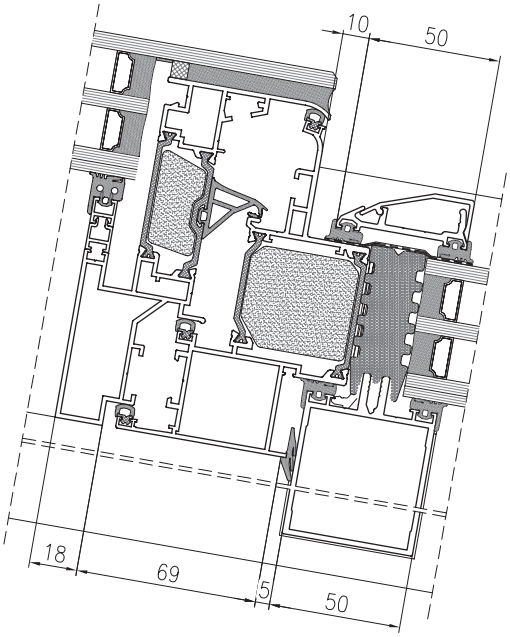
SMOKE VENTS – SYSTEM FEATURES

- possibility of using chain, pin or arm actuators, driven pneumatically or electrically,
- possibility of using single actuators or actuators synchronised in tandem arrangement,
- the system increases fire safety by increasing and facilitating fire fighting operations,
- great variety and high functionality of applied solutions,
- possibility of connecting with all YAWAL systems.

See the product on the website

Picture: City Library, Oświęcim
Design: Susuł & Strama Architects
Aluminium manufacturer: Hossa Sp. z o.o., Katowice

CROSS SECTION THROUGH
FA 50N RW WINDOW



TECHNICAL PARAMETERS – SMOKE VENTS

		Smoke vent ESCO NRWG	Smoke vent GEZE NRWG
SAFETY	Reliability PN-EN 12101-2	Re 1000	Re 1000
	Operation in low temperature PN-EN 12101-2	T(00)	T(-05)
	Operation under wind load WL 1000 PN-EN 12101-2	WL 1100	WL 1100
	Resistance to high temperature B 300 PN-EN 12101-2	B 300	B 300
	Reaction to fire PN-EN 13501-1	F	E

TECHNICAL PROPERTIES – SMOKE VENTS

	Smoke vent ESCO NRWG	Smoke vent GEZE NRWG
Aluminium profiles system	FA 50N RW	FA 50N RW
Maximum roof window sash dimensions	1500 x 2500 mm	1500 x 2500 mm
Maximum sash weight	190 kg	200 kg

SYSTEM FOR PVC FITTINGS – SYSTEM FEATURES

In production of windows in systems TM 62HI, TM 102HI, TM 77N it is possible to use fittings dedicated for PCV windows production.

- universal solution that allows for using fittings dedicated to PCV systems,
- possibility of using specialist solutions developed for building industry,
- free selection of surface handles.

Pictures: Residential Estate InCity, Warsaw
Design: Grupa 5 Architekci, Warsaw,
Aluminium manufacturer: MBB, Toruń

RC – ANTI-THEFT SYSTEMS

ANTI-THEFT CLASS – FACADE SYSTEMS					
	FA 50N	FA 50N EI	FA 50N HI	FA 50N HL	FA 50N PV
RC2	x	x	x	x	x
RC3	x	x	x	x	x

ANTI-THEFT CLASS – WINDOW AND DOOR SYSTEMS								
	TM 62HI window	TM 62HI door	TM 77N window	TM 77N door	TM 102HI window	TM 75EI fixed windows	TM 75EI door	TM 77EI window
RC2	x	x	x	x	x	x	x	x
RC3	x	x	–	x		x	x	x

Picture: Library of the Naval Academy, Gdynia
Design: WAPA Krzysztof Kozłowski / Design and Construction Company Ekobud S.C. Ewa i Remigiusz Owczarek,
Aluminium manufacturer: Alprof Sp. z o.o., Gdańsk

SEASIDE APPROVAL

Yawal has the Seaside certificate as standard, as the pre-treatment of aluminium plays a key role in the production process. It ensures long-term protection against corrosion and ensures optimal paint adhesion. Each stage of chemical processing of aluminium is inspected on each shift and the results are recorded.

One of the important elements of the mentioned treatment is aluminium etching. This allows the removal of the layer of oxides responsible for corrosion, but also gives the surface porosity, which increases the adhesion of powder paints. Standard technical requirements of the Qualicoat label indicate an etching degree of at least 1.0 g/m^2. Requirements for Seaside additionally assume that aluminium is degreased and etched to a degree of at least 2.0 g/m^2.

QUALICOAT
SEASIDE

QUALICOAT LABEL

Qualicoat guarantees a proven set of procedures that ensure the achievement of the best quality protective coatings compliant with the highest standards. As part of the Qualicoat label, Yawal undergoes detailed inspections twice a year. The inspections cover the compliance of the entire production process (chemical treatment, drying temperatures, heat curing conditions), finished products (gloss, coating thickness, appearance) and test panels. The quality label also requires acid salt spray tests and a filiform corrosion test on finished products.

CORROSION CLASS

Corrosion classes according to the PN-EN ISO 12944-2:2001 standard apply only to steel and corrosive environments are defined only in reference to steel. There is no equivalent standard for aluminium. The resistance of the paint system to a specific class of environmental corrosivity is determined based on the time the sample withstood in a neutral salt spray chamber (NSS). The NSS test is too mild for aluminium, so aluminium samples are tested in an acid salt spray test (AASS). The results of testing steel in NSS and aluminium in AASS are incomparable, thus it is impossible to assign aluminium products to corrosion classes for steel.

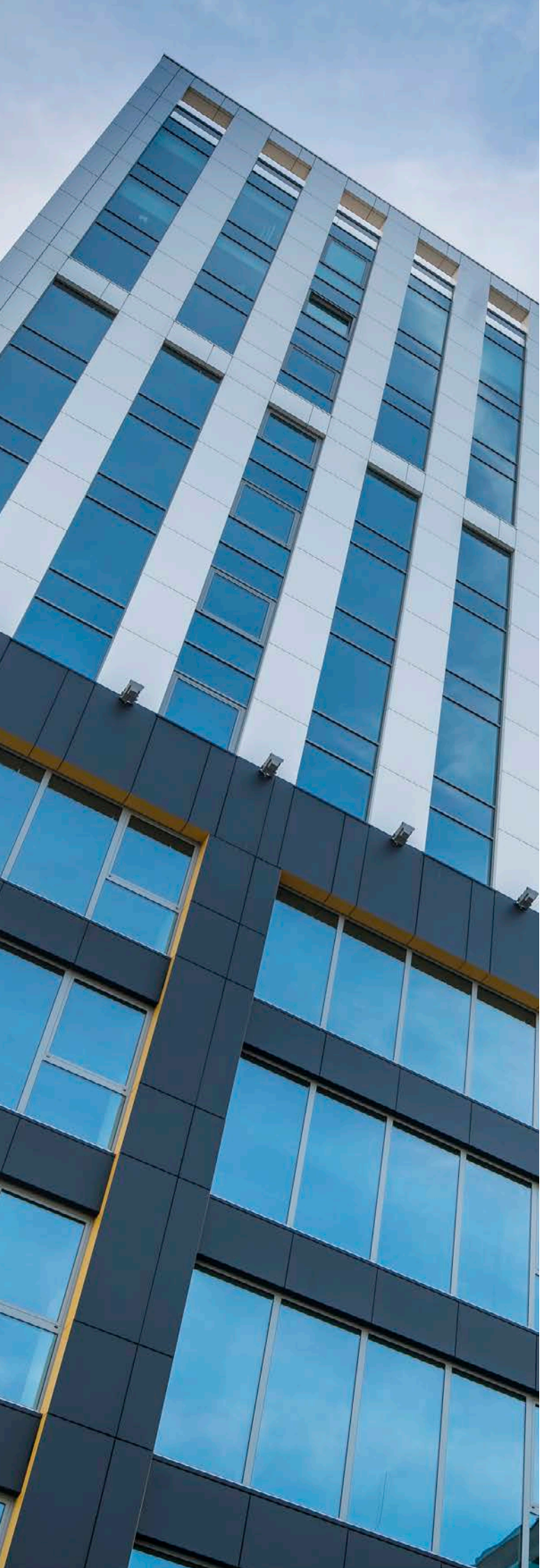
However, to meet the expectations of the market, we accept orders for painting aluminium profiles for which the requirements of corrosion resistance corresponding to class C4 and C5 will be met, according to the following technological process: chemical treatment with the Seaside certificate with a chromium-free conversion coating, application of anti-corrosion powder paint appropriate for a double-coat system, using the electrostatic method and its polymerization, application of top powder paint in RAL, NCS or other colours, using the electrostatic method and its polymerization.

YAWAL COLOUR SCHEME

All products based on Yawal systems can be performed in any RAL colours. A full colour scheme is available from Technical and Commercial Consultants. You can see the wood-like, standard and anodizing colours by scanning the below QR code.

See the Yawal color chart





System leaflets

Catalogue of reference buildings

Catalogue Yawal for house

Moreview folder

DP 180 Primeview folder

Knowledge Panel

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Aluminium manufacturer: Aluminium Plus
General contractor: ALLCON BUDOWNICTWO
Photographer: Tomek Kurek

Download the Vademecum

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