

Curtain wall solutions



»» Why WICONA?

Because as a successful aluminium systems company based in Germany, WICONA has more than 60 years' experience – experience from which you can benefit on a daily basis. Not only are we able to fulfil the role of a reliable and cooperative supplier, but you can also enjoy the

advantages of a strong, technologically advanced brand that has enjoyed long-term success in the market. At WICONA, every detail counts: from efficient planning and processing and rapid delivery right through to active sales support. That's why WICONA!



What does WICTEC mean for metal construction?

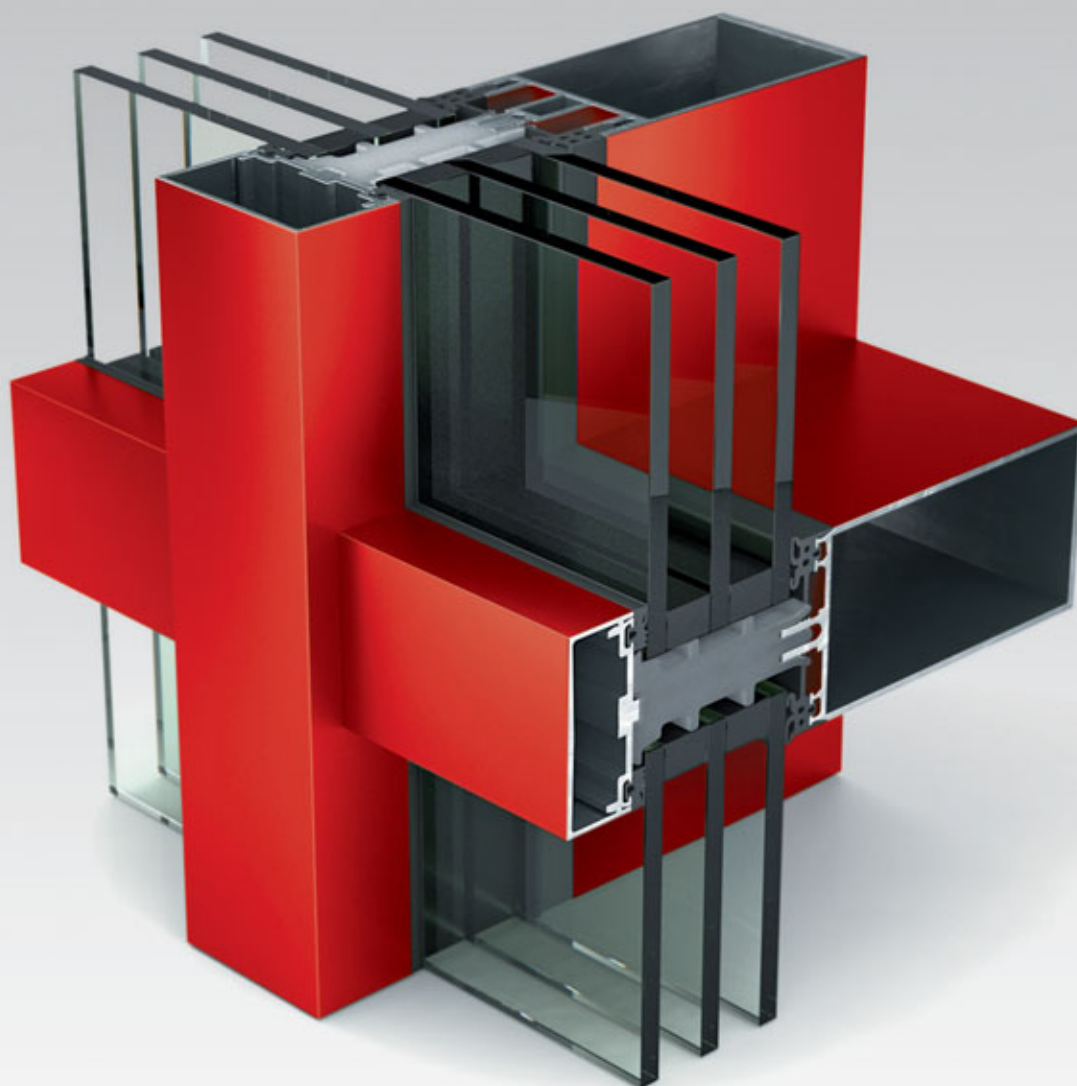
WICTEC makes façade technology fascinating – for you as the construction experts just as much as for your customers. It encompasses an overall concept of modern-day architecture that reconciles the elements of heat store, air conditioning, light provider, sun screen, fire and noise protection and design within one single construction. With WICTEC you can be sure to meet these multifunctional

requirements. And it makes no difference whether your project is the little baker’s shop round the corner or a sophisticated company headquarter located in a major city. It is you who can use WICTEC façades to set new highlights within the urban landscape, and turn architectural ideas into built reality.

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» Experiencing innovative façade technology





Performance

- Always the suitable solution due to a wide range of series (stick, unitised, structural glazing, double façades)
- Functional safety due to several cascading drainage levels
- Functions like burglar and bullet resistance and fire protection are feasible with minimum additions
- Multiple certificates, e.g. first aluminium passive house curtain wall certified by the ift window institute

Flexibility

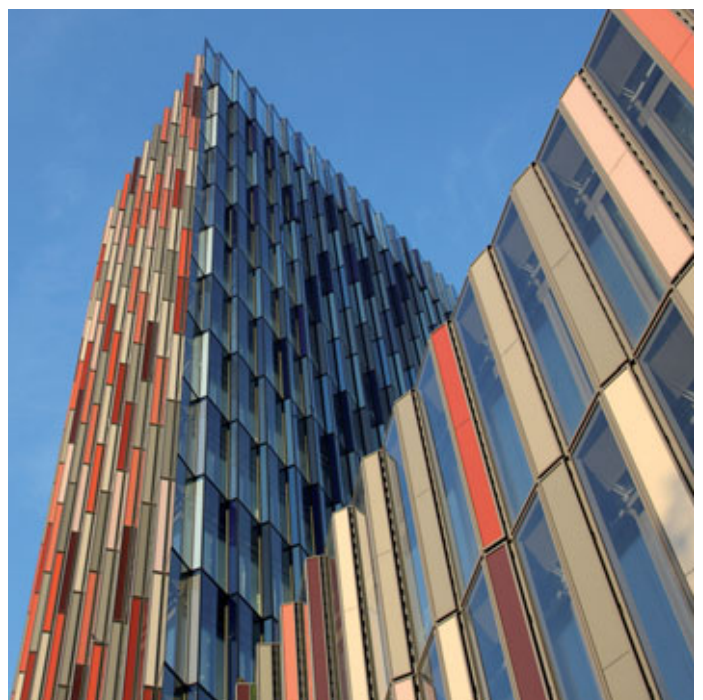
- Based on the WICONA Unisys principle:
High level of process security, cost and time savings, simple production, fewer tools required due to use of standardised components
- Several system widths for any requirement
- Cost-effective adaptation to structural needs and optimised use of materials due to large profile range

Efficiency

- Simplified transom mullion connection – with or without connector parts
- WICTEC AN modular attachment system
- Highest possible process reliability in planning, production and assembly

Perfect complements Integrated opening elements

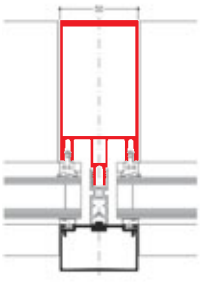
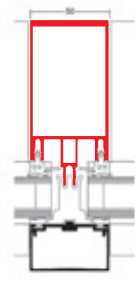
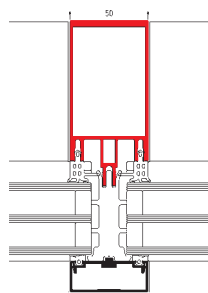
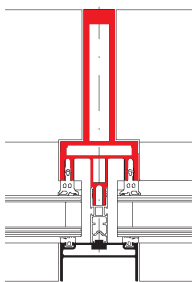
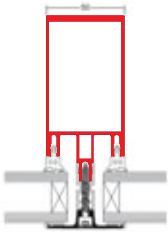
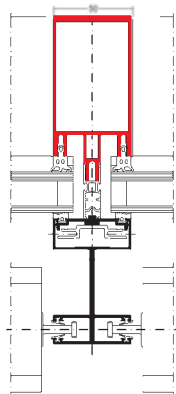
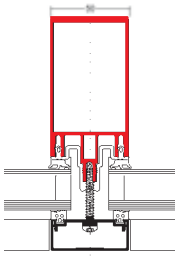
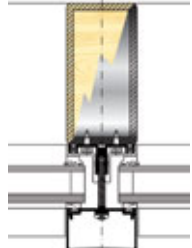
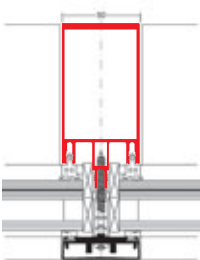
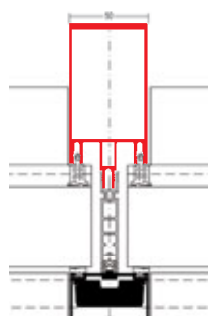
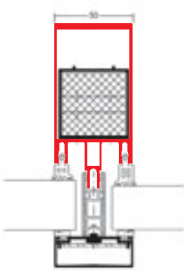
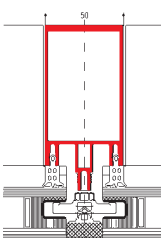
- Turn, tilt-turn, tilt and parallel sliding / tilt windows
- Skylight windows
- Parallel and top-hung outward opening windows
- Vertical and horizontal pivot windows
- Ventilation flap
- Door series WICSTYLE 65 evo, WICSTYLE 75 evo and WICSTYLE 88 inward and outward opening, single or double action doors
- WICSLIDE lifting sliding and lifting folding doors
- Automatic sliding door WICSTYLE 65ED
- NSHE units for vertical and sloped application



» One system for all requirements

Quality, freedom in design, reliability of processes and simplicity of fabrication form the tangible benefits of WICONA aluminium curtain walling. Whatever the requirements may be, WICTEC profiles coupled with your own specialist expertise make it possible to provide the individual, tailor-made solution. Our products are always simple to install. The reason: The WICONA Unisys principle also applies to our range of curtain walls. WICONA Unisys is a modular

concept used in the design of all WICONA systems. When creating a façade, you are able to make use of the same processing steps, accessories, gaskets, sealants and tools. It is very simple to upgrade the façade with burglar or bullet resistance or fire protection. This means, that overall WICONA constructions offer maximum flexibility, are more cost-effective, safer and quicker to install.

<p>WICTEC 50</p>	<p>WICTEC 50HI High-insulation curtain wall</p>	<p>WICTEC 50 Certified passive house curtain wall</p>	<p>WICTEC 50 Industry design curtain wall</p>
			
<p>WICTEC 50 Integrated pressure profiles</p>	<p>WICTEC 50 Integrated sun shade</p>	<p>WICTEC 50E Mullion / mullion curtain wall</p>	<p>WICTEC 50A Add-on construction for steel and wood</p>
			
<p>WICTEC 50EH Burglar resistance</p>	<p>WICTEC 50DH Bullet resistance</p>	<p>WICTEC 50FP Fire protection curtain wall</p>	<p>WICTEC 50SG Structural glazing</p>
			



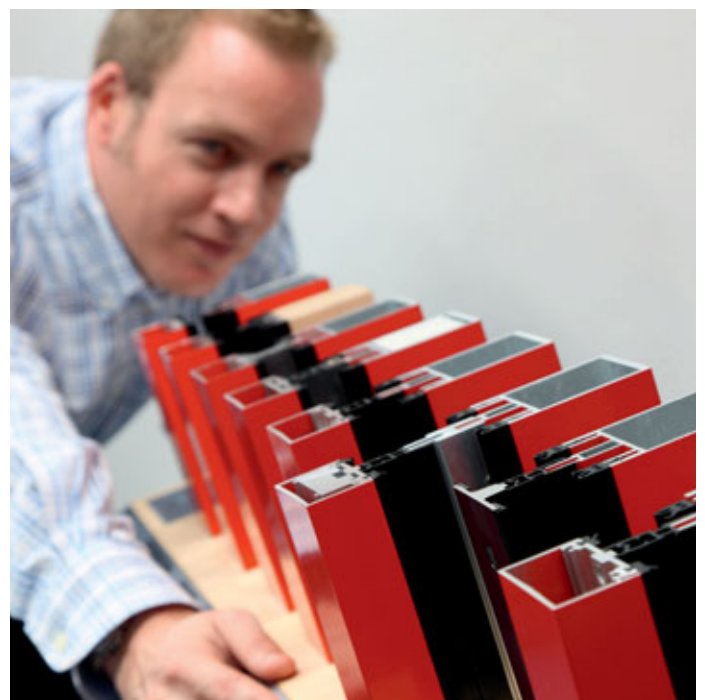
Example for the WICONA Unisys technology:

Efficient fabrication with innovative transom connector technology:

- New patented connectors
- Only one connector for all standard applications
- Single or paired application for individual adjustment to infill weights or profile dimensions
- Improved processing reliability due to glue injection for posterior transom fixation
- Simplified and reliable load transmission for infills up to 560 kg
- Defined joint distances for perfect design, with or without sealing sleeve

Your benefits

- Reliability of processes due to the use of the same components, processing steps and tools
- Time savings due to faster information, training and production
- Cost savings due to reduced number of parts and less stock keeping
- Consistent availability of goods



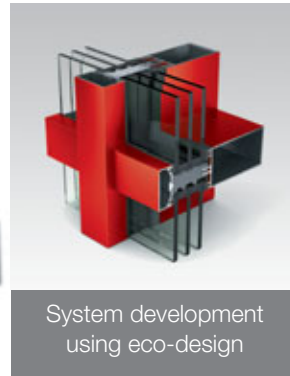
» Environmental responsibility during the entire lifecycle

Here at WICONA, we target the sustainability of buildings not only through thermal insulation, but also consider energy efficiency and climate protection during the entire lifecycle of the aluminium building material. Our philosophy is the

careful management of natural resources, starting with the aluminium production using 68 % of the energy from hydro power, up to recycling processes following the "cradle to cradle" philosophy.



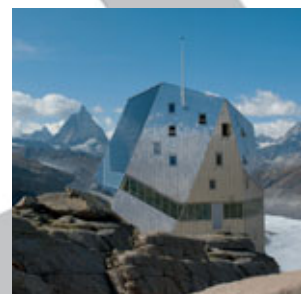
Aluminium production with hydro power



System development using eco-design



Recycling



Energy-saving application

Saving energy effectively

- The intelligent system design of WICTEC 50 assures U_f values up to $0.74 \text{ W/(m}^2\text{K)}$.
- Efficient thermal insulation, in spite of its filigree design means maximum energy-saving and optimised solar energy usage.
- Triple glazing up to 63 mm is possible and can be upgraded after years.

Certified maximum performance

WICTEC 50HI is the first aluminium curtain wall system which was certified as a passive house suitable component by the ift (institute for window technology) in Rosenheim.

Building certification made easy

Its CO₂-saving aluminium production, thermal insulation and durability make WICTEC ideal for all buildings that shall be certified according to an eco-table, e.g. DGNB, BREEAM, LEED or HQE. The WICTOP Genius metal construction software provides a module for the generation of an EPD (Environmental Product Declaration).

Your benefits

- The demands by the architect or the builder's requirements can easily be met
- Easy to obtain building certification with EPD (Environmental Product Declaration) for the WICONA components in the WICTOP Genius software
- Exemplary durability: tomorrow's standards are already met today, changes and upgrades can be implemented at any time



<p>Nachweis Passivhaustauglichkeit von Komponenten für Vorhangfassaden</p> <p>Prüfbericht 432 43255/1</p>		
Auftraggeber	<p>Hydro Building Systems GmbH Buildtec Söflinger Str. 70 89077 Ulm</p>	
Produkt	<p>Posten-Riegel-Fassade WICTEC 50HI</p>	<p>Verwendungshinweise Dieser Prüfbericht dient zum Nachweis der Leistungseigenschaften gemäß oben genannter Richtlinie. Die Werte / Klassen der weiteren Leistungseigenschaften beziehen sich jeweils auf den in den Einzelschritten beschriebenen Gegenstand und den im zugehörigen ift-Produktpass definierten Anwendungsbereich. Für die Anwendung der Leistungseigenschaften gelten die nationalen baurechtlichen Bestimmungen.</p>
Bezeichnung	<p>Posten - Riegelfassade passivhaustauglich</p>	<p>Gültigkeit Die genannten Daten und Ergebnisse beziehen sich ausschließlich auf den geprüften und beschriebenen Gegenstand. Die Prüfung der genannten Leistungseigenschaften ermöglicht keine Aussage über</p>
Rahmenseite	<p>Aluminiumprofile mit thermischer Trennung Leistungseigenschaften: Wärmedurchgang, Behaglichkeit, Temperaturfaktor (Hygiene) ³⁾ (nach ift - Richtlinie WA 15/1: 2010-02)</p> <p>$U_{i,FW} = 0,70 \text{ W/(m}^2 \cdot \text{K)} \leq 0,70 \text{ W/(m}^2 \cdot \text{K)}$ (bezogen auf die Abmessung 1200 mm x 3000 mm, einer Verglasung mit $U_g = 0,7 \text{ W/(m}^2 \cdot \text{K)}$, einem Thermix TXN - Absenkhalter, einem Panesit mit $U_p = 0,24 \text{ W/(m}^2 \cdot \text{K)}$ und der im Prüfbericht angegebenen Aufteilung)</p> <p>$U_{i,FW,eff} \leq 0,85 \text{ W/(m}^2 \cdot \text{K)}$ (ist erfüllt für die für die Wandsysteme: o Monolithisches Mauerwerk mit Wärmelimitverbundsystem o Betonschalungssinne mit verlagerter Schalung)</p> <p>$U_{i,FW} = 1,0 \text{ W/(m}^2 \cdot \text{K)}$ (mit Berücksichtigung des Einflusses der Verschraubungen)</p> <p>$\psi_2 = 0,051 \text{ W/(m} \cdot \text{K)} \leq 0,060 \text{ W/(m} \cdot \text{K)}$ mit Thermix TXN $\psi_2 = 0,039 \text{ W/(m} \cdot \text{K)} \leq 0,040 \text{ W/(m} \cdot \text{K)}$</p> <p>$f_{R,25,0,13} \geq 0,73$ erfüllt für die oben genannten Anschlussbildungen</p>	

» Versatility and flexibility

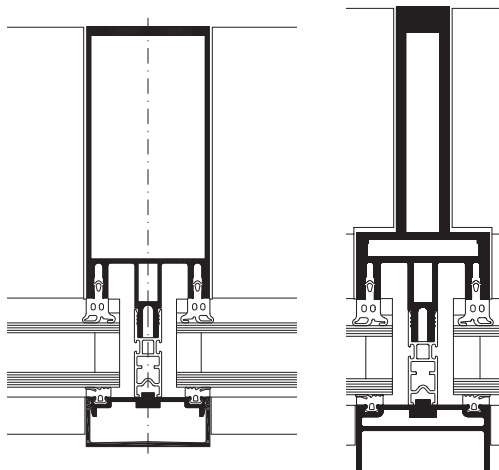
WICTEC stick system curtain walls are the flexible, tried-and-tested solutions among WICONA's range of façade systems. The wide range of profiles and the extensive equipment options guarantee optimum creative freedom. The state-of-the-art technology ensures the highest level of process security, from the planning stage through to completion.

With narrow face widths of 50 and 60 mm, the system construction lends façades a particularly filigree appearance. Additional functions for security and maximum thermal insulation may be included simply and inexpensively, without compromising on aesthetics.





WICTEC 50 is the basic version of the stick system curtain wall, with an extra-narrow face width of 50 mm, inside and outside. The unique flexibility is demonstrated by the various system variants and enhancement options, all of which are feasible with minor additions to the system and without compromising on appearance.



**System test results / CE product pass
in accordance with DIN EN 13830**

Air permeability:	Class AE
Watertightness:	RE 1200
Resistance to wind load:	2000/-3200 Pa, security 3000/-4800 Pa
Sound insulation:	R_w (C;Ctr) = 47 (-1;-4) dB
Impact resistance:	Class E5 / I5
Burglar resistance:	RC1N, RC2N, RC2, RC3
Bullet resistance:	FB4
Quality assurance:	Certified according to ISO 9001:2008



Technical performance:

- System width: 50 mm
- Profile depth: 50 mm to 260 mm
- Thermal insulation: U_f value up to 1.2 W/(m²K)
- Infill thickness: 3 mm to 63 mm
- Glass weight: up to 5.6 kN
- Polygon façade: up to 45° (per side = 90° angle)
- Roof pitch: up to 10°

System technology:

- Ideal for vertical and polygon façades, sloped glazing and spatial structures
- Individual design thanks to a wide range of profile geometries for the structural and glazing profiles
- Alternative: Industrial design for technical look of steel profiles
- Reliable glass load transmission (up to 5.6 kN), with adapted transom-joint technology
- Overlapping and secure drainage at the cross point, without mechanical mullion processing, ensures tried-and-tested impermeability
- Filigree look without any change in appearance to the inner mullion and transom gaskets
- Broad selection of profiles enables economic adaptation to structural requirements, with the additional option of internal reinforcement
- Glazing from outside with visible or concealed screws
- Extensive solutions for structure junctions and conservatories

Additional options in identical design and technical set-up:

- Passive house curtain wall
- SG-design (integrated pressure profile)
- Structural glazing curtain wall
- Add-on curtain wall for steel and wood
- Integrated sun protection
- Fire protection curtain wall

WICTEC 50 and WICTEC 60
Stick system curtain wall – options

1 | WICTEC 50HI High insulation curtain wall

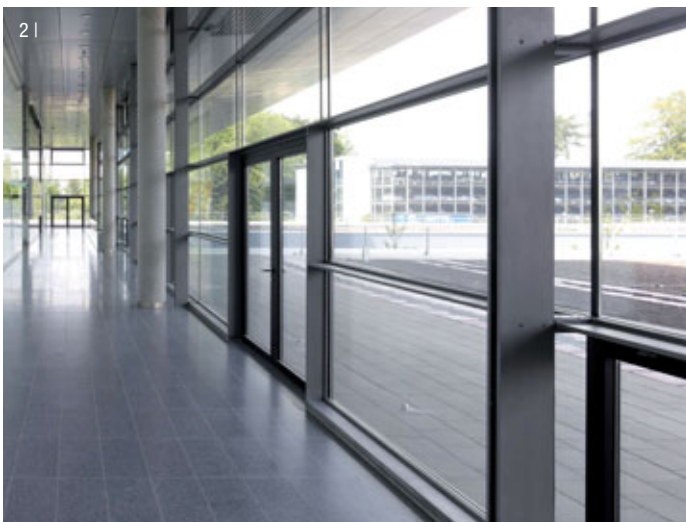
- ift-certified as passive house curtain wall with infill thickness 46 mm
- Thermal insulation: U_f value until $0.75 \text{ W}/(\text{m}^2\text{K})$, U_w below $0.8 \text{ W}/(\text{m}^2\text{K})$
- Simplified upgrade to the system WICTEC 50 by additional insulation parts made of elastomers
- Polygonal constructions possible
- Burglar resistance until class WK2

2 | WICTEC 50 Industry design façade

- Profiles in technical shape
- Slim profile shapes
- Steel design for curtain walls in historical or slim look

3 | WICTEC 50 Integrated pressure profile

- Face width of the pressure profiles 51 mm or 43 mm, surface-mounted or flush
- A simple construction with structural glazing design
- Replaces the silicone joints of the SSG façade:
no maintenance, no approvals, no third-party monitoring required



**WICTEC 50 and WICTEC 60
Stick system curtain wall – options**

4 | WICTEC 50 Integrated sun shade

- Guide rails for sun protection are integrated into the external cover profiles of WICTEC 50
- The subsequent installation of fastening screws into the mullions is no longer necessary, nor is any additional or subsequent drilling necessary at the construction site
- The sun shades resist high wind speeds of up to 25 m/s

5 | WICTEC 50A Add-on construction

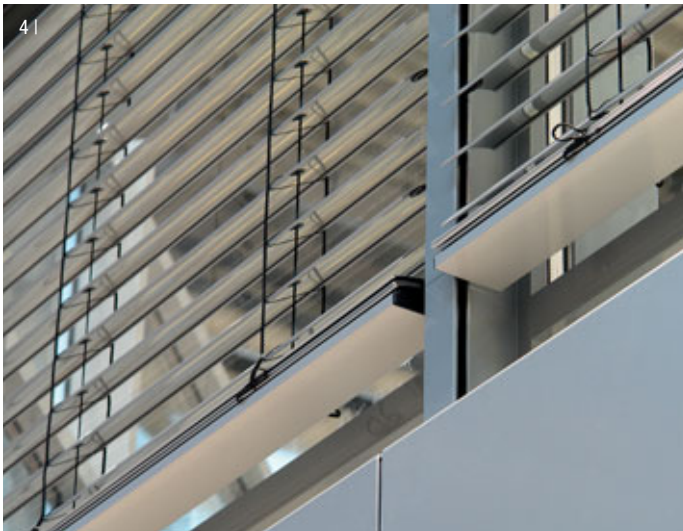
- For steel and wood structures
- Overlapping by means of vertical and horizontal, single-piece overarching EPDM gaskets
- Installation is simplicity itself using bolt gun technology for steel substructures from 4 mm wall thickness

6 | WICTEC 50 Mullion / mullion

- Mullions and transoms of the same geometry – notching therefore not necessary
- Overlapping via vertical and horizontal single-piece sealing profile

7 | WICTEC 60

- For curtain walls with increased technical and structural requirements
- System width 60 mm, profile depth 70 mm to 170 mm



» Predictable efficiency

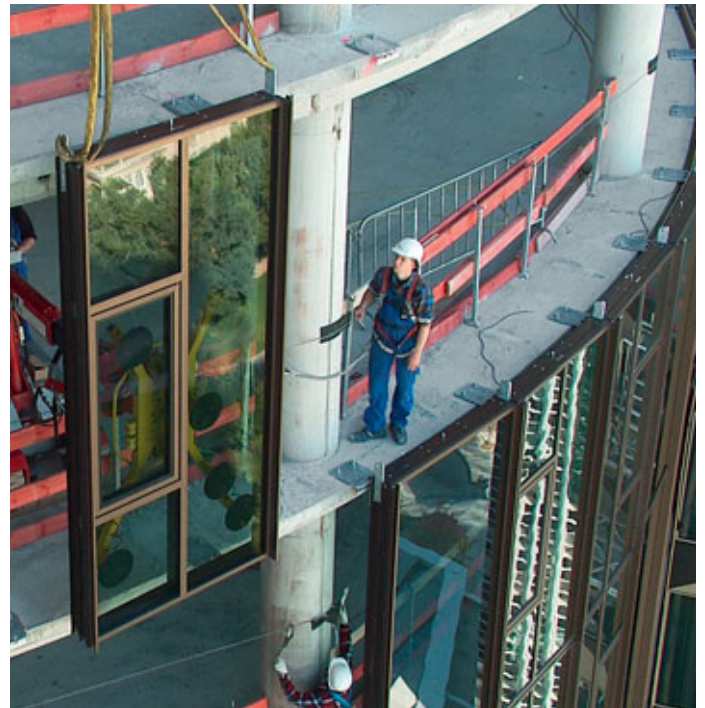
Today, most building projects are subject to intense time pressure. When it comes to meeting demanding deadlines, WICONA unitised curtain walls provide a solution: production and installation can be scheduled precisely. The unitised

curtain wall series WICTEC 50EL and WICTEC EL60 fuse many years of professional expertise and experience from a multitude of projects for your application in buildings of any size.

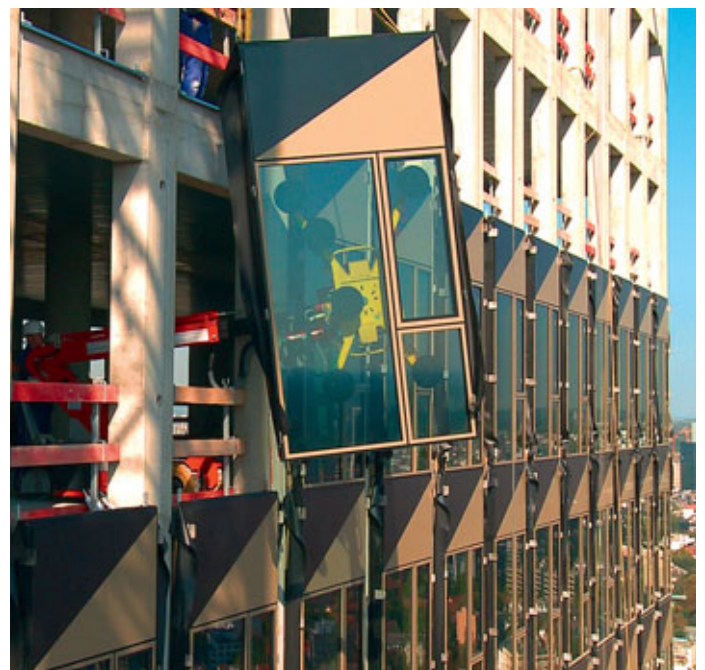




Experience the assembly of the TOWER185 unitised curtain wall in our film: simply scan the QR code with your smartphone or click in your wicona website (e.g. www.wicona.de, unitised curtain wall)



The individual curtain wall units that form the construction can be pre-fabricated in your workshop under controlled conditions and fitted with glazing and parapets. Even accessories such as sun shades and glare shields or light systems can be installed in the workshop, irrespective of the weather conditions outside. Once on site, the pre-fabricated units are inserted into pre-arranged façade anchors. The installation can take place without scaffolding. This pre-fabrication ensures a consistent high quality product, facilitates the logistical arrangements and the management on site and leads to a faster completion of the building.

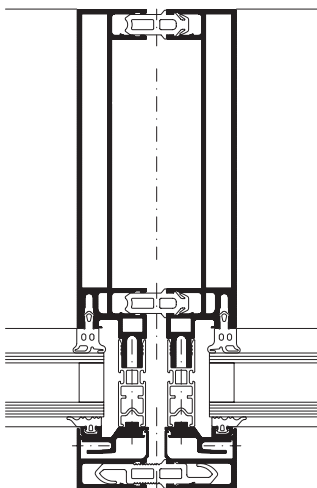


WICTEC 50EL



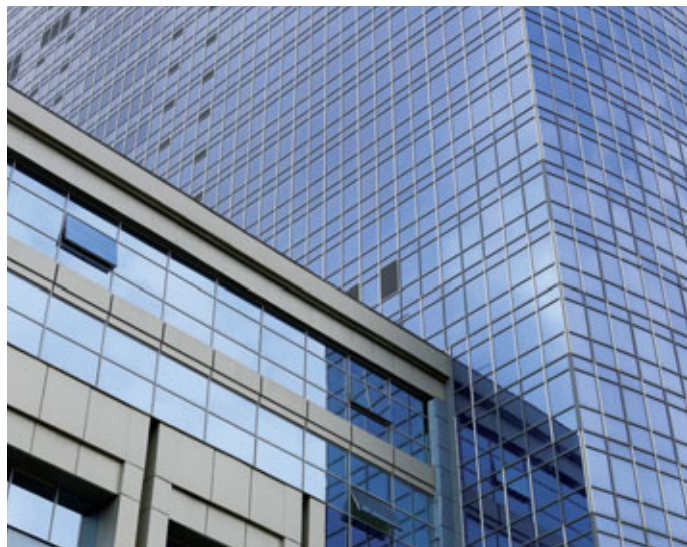
WICTEC 50EL is a unitised version of the WICTEC 50 stick system. This range combines the advantages of the stick system structure with the assembly benefits of unitised curtain walling, with an extremely narrow sight line of only 50 or 65 mm.

The exterior profiles with mitre joints on the outside achieve a particularly elegant appearance with a "picture frame effect". Particularly where there are stringent requirements pertaining to thermal insulation, WICTEC 50 EL offers the appropriate solution.



**System test results / CE product pass
in accordance with DIN EN 13830**

Air permeability:	Class AE
Watertightness:	RE 1200
Resistance to wind load:	2000 / -3200 Pa, security 3000 / -4800 Pa
Impact resistance:	Class E5 / I5
Quality assurance:	Certified according to ISO 9001:2008

**Technical performance:**

System width:	50 mm for undivided frames 65 mm for divided frames
Profile depth:	195 mm to 213 mm, depending on the infill 130 mm inner profile elevation
Thermal insulation:	U_f up to 1.4 W/(m ² K) at horizontal bar U_f up to 1.5 W/(m ² K) at vertical bar
Infill thickness:	up to 44 mm
Unit sizes:	(w x h) up to 3000 mm x 3500 mm, up to 1500 mm width without mid posts

System technology:

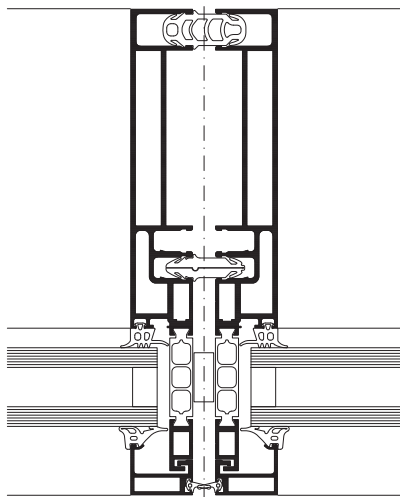
- WICTEC 50EL is a basic unitised system and can be adapted individually to meet specific project requirements
- Production of the complete units in the workshops, avoiding any weather influence and thus assuring a constantly high product quality
- Fast, efficient and projectable assembly on site
- Aluminium profiles using mullion-transom technology, with insulating profile that provides a high level of thermal insulation
- Narrow sight lines for maximum transparency
- Mullions and transoms have the same profile depth
- Efficient thermal protection up to $U_f = 1.4$ W/(m²K)
- Reliable corner connection with system brackets
- Easy installation on the construction site, with special system anchors



WICTEC EL60



WICTEC EL60 is the slim version within the unitised curtain wall systems, with especially reduced sight lines of just 60 mm both inside and outside. The exterior glazing profiles with mitre joints achieve a particularly elegant appearance with a “picture frame effect”. As a result of optimised thermal insulation, the system leads the way with outstanding U_{cw} values of up to 0.9 W/(m²K).



Technical performance:

- System width: 60 mm
- Profile depth: 198 mm
- Thermal insulation: U_i for support and bar profiles up to 1.6 W/(m²K)
 U_i for frame combinations up to 1.8 W/(m²K)
 U_{cw} up to 0.9 W/(m²K)
- Infill thickness: Up to 36 mm as standard system, above on request
- Unit sizes: (w x h) up to 2800 mm x 3500 mm, up to 1500 mm width without mid posts

System technology:

- WICTEC EL60 is a basic unitised system and can be adapted individually to meet specific project requirement
- Production of the complete units in the workshops, avoiding any weather influence and thus assuring a constantly high product quality
- Fast, efficient and projectable assembly on site
- Aluminium composite profiles with excellent thermal insulation, from quality-assured and monitored production
- Slim sight lines of only 60 mm, with divided and undivided profiles
- Mullions and transoms have the same profile depth
- Reliable corner connection with corner brackets
- On the construction site, the units are easily installed in the façade anchors from the system range

System test results / CE product pass in accordance with DIN EN 13830

Air permeability:	Class AE
Watertightness:	RE 1200
Resistance to wind load:	2000 / -3200 Pa, security 3000 / -4800 Pa
Impact resistance:	Class E5 / I5
Quality assurance:	Certified according to ISO 9001:2008



»» Splendid views

Façades made entirely of glass have a firm place in contemporary architecture and create impressive building elevations. Using WICONA systems, extremely delicate outside structures which only have narrow joints can be created. Opening elements and insulating glazing can be incorporated. Based on an innovative mechanical fixing, WICTEC 50SG

opens up a new, simpler possibility for the construction of façades made entirely from glass. Designed as a traditional stick system curtain wall, the insulating glazing is retained between the panes. Although its appearance is identical to that of a traditional SSG façade, this technology is faster, simpler and more economical to realize.

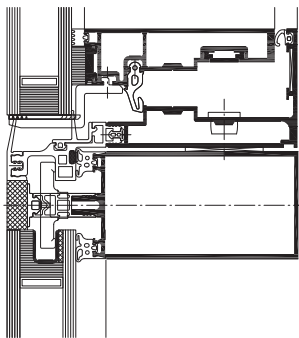


WICTEC 50SG

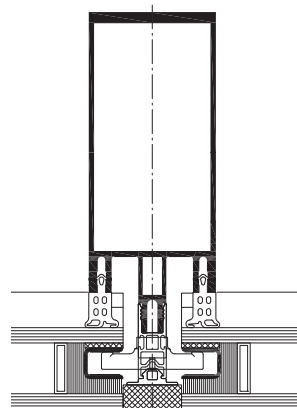


A characteristic feature of WICTEC 50SG structural glazing curtain wall is the flush design with slim silicone joints between the glass panes. The system offers all-glass technology both for vertical curtain walls and sloped roof glazing. Based on the standard WICTEC 50 stick system these options can be realised with simplified and economic processing and assembly, while assuring a high quality level.

The WICLINE 90SG all-glass integrated opening sash pursues the homogeneous full glass design with Italian style or parallel outward opening function.



WICTEC 50SG with integration sash
WICLINE 90SG



WICTEC 50SG

Technical performance:

System width: Internal aluminium profiles 50 mm
External silicone joint 23 mm
Thermal insulation: U_i up to 1.5 W/(m²K)
Infill thickness: up to 40 mm

System technology:

- ETA (European Technical Approval) granted
- Outstanding appearance
- Basic structure is the WICTEC 50 curtain wall, with identical profile and gasket technology
- Easy assembly of the glazing on site, without supplementary tools
- Simple and straightforward installation thanks to a special patented fastener
- Execution also possible in combination with cover profiles in various contours
- The ideal complement: integrated sash WICLINE 90SG in all-glass technology with Italian style or parallel outward opening function

System test results / CE product pass in accordance with DIN EN 13830

Air permeability:	Class AE
Watertightness:	RE 750
Resistance to wind load:	2000 Pa, security +/-3000 Pa
Impact resistance:	Class E5 / I5
Approval:	ETA (European Technical Approval)
Quality assurance:	Certified according to ISO 9001:2008



»» Attractive security

One of the primary functions of a façade is to protect the people and valuables inside. That is why burglar resistance, bullet resistance and fire protection form an integral part of the technical development of WICONA curtain walling. Starting at a basic level, you can create an all-round safety and security package for your customer that is appropriate

to the location of the building, the potential risk, and the individual wishes of the customer, without influencing the visual appearance of the façades.

To allow you to upgrade the basic construction to the desired level of security, we have implemented the WICONA Unisys principle consistently across the entire range.



**WICTEC 50 and WICTEC 60
Burglar and bullet resistance**

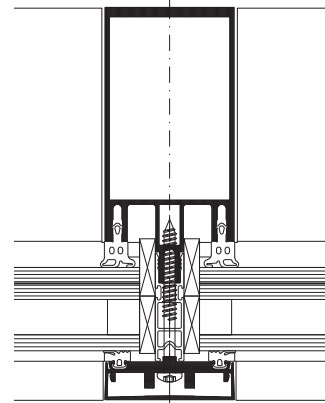
Standardised components with the same basic construction and the same profiles enable you to meet any security requirements in any building, economically and quickly – the visual appearance will always remain identical.

WICTEC 50 and WICTEC 60 Burglar resistance

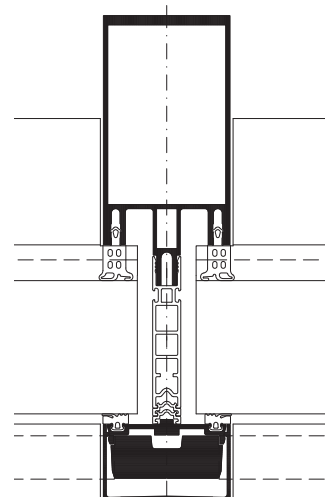
- Resistance classes from RC1 to RC3 in accordance with ENV 1627 by few additional measures like security features in the mullion and transom profile and in the pressure profiles
- Based on WICTEC 50 / 60 standard curtain wall
- The same processing benefits as standard stick systems
- Glazing compliant with EN 356
- WICLINE 65 / 75 evo windows and WICSTYLE 65 / 75 evo doors for integration available in the same resistance class

WICTEC 50 and WICTEC 60 Bullet resistance

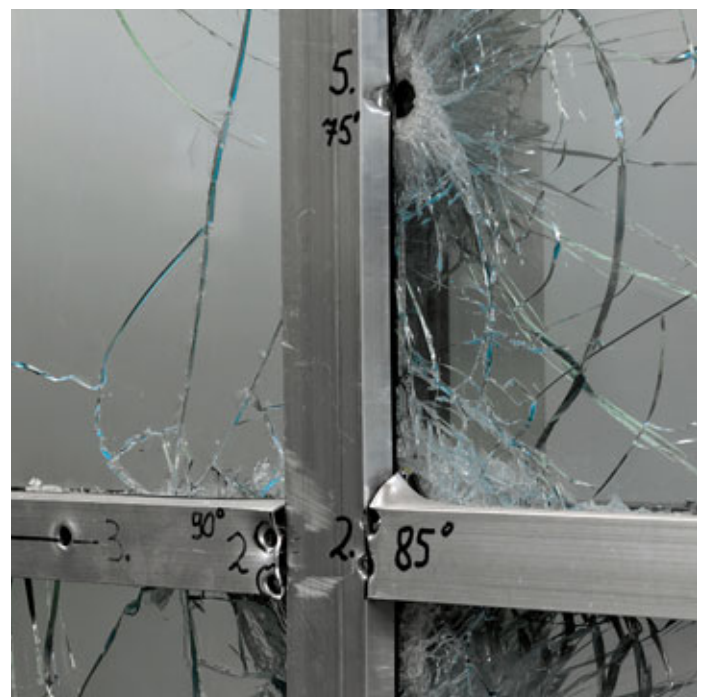
- Bullet resistance class FB4 in accordance with EN 1522
- Based on WICTEC 50 / 60 standard curtain wall with additional profiles
- Offers the same processing benefits as the standard WICTEC 50 / 60 façade
- WICLINE 65 / 75 evo windows and WICSTYLE 65 / 75 evo doors for integration available in the same resistance class



Burglar resistance class RC2



Bullet resistance class FB4



WICTEC 50FP / WICTEC 60FP fire protection curtain walls

Fire protection

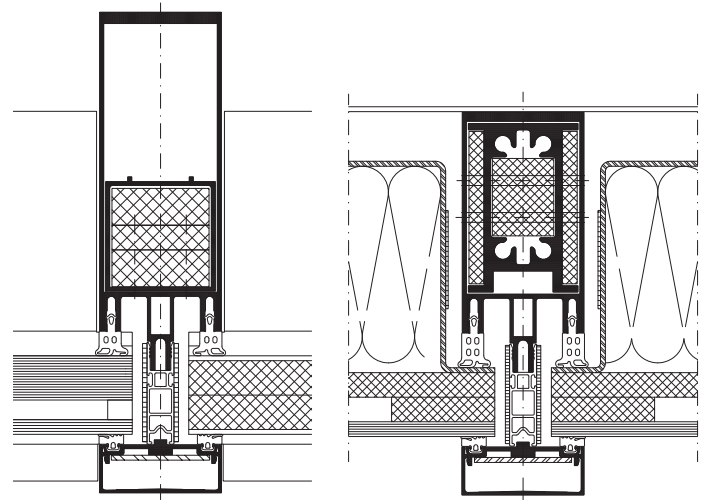
No matter whether staircases, extensions, hallways or glazed roofs – with WICTEC FP all types of façade and architectural concepts can be adapted and produced in accordance with the necessary protection requirements. WICTEC FP is fully compatible with the WICTEC 50 and WICTEC 60 standard curtain walls, which means that fire protection can come to form a harmonic part of any tailor made façade solution.



Fire protection

Further details

- Fire resistance class G30 / F30
- Slim sight lines: 50 mm and 60 mm
- Infill: Glass or panel
- Can also be combined with WICLINE FP fire protection windows and WICSTYLE FP fire protection doors
- Overhead glazing possible
- Suitable for indoor and outdoor use
- Maximum unit height / floor to floor 5000 mm
- Length of fire protection façade unlimited
- Polygonal façade up to $\pm 5^\circ$ per mullion side with standard pressure profile
- Fire protection in mullion and transom profiles possible simply by limited additional measures



WICTEC 50FP

WICTEC W90

WICTEC W90 Fire protection panel

Parapet panels of fire resistance class W90 are incorporated into the façade if it is necessary to prevent fire from spreading from storey to storey. The WICTEC W90 fire protection parapet panels can be incorporated into WICTEC 50 and WICTEC 60 curtain walls systems. The external surface of these is made up of glass or aluminium.

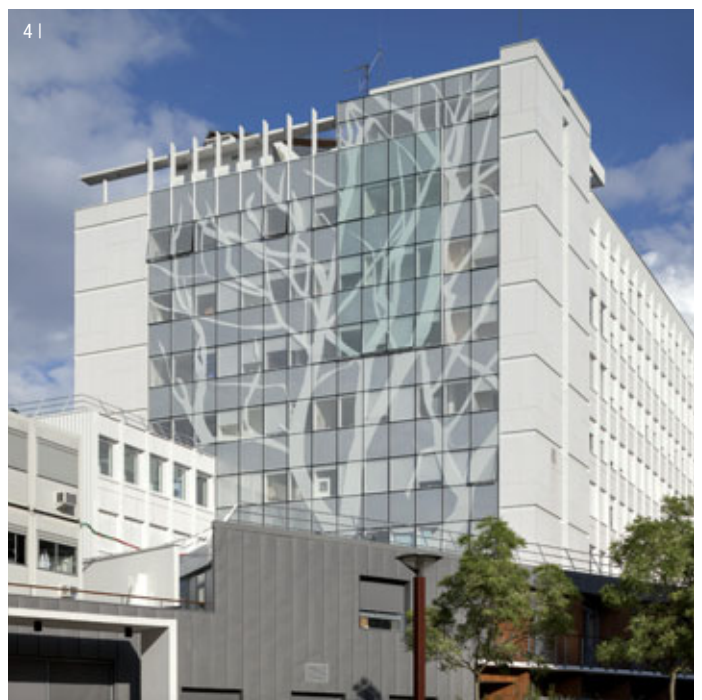
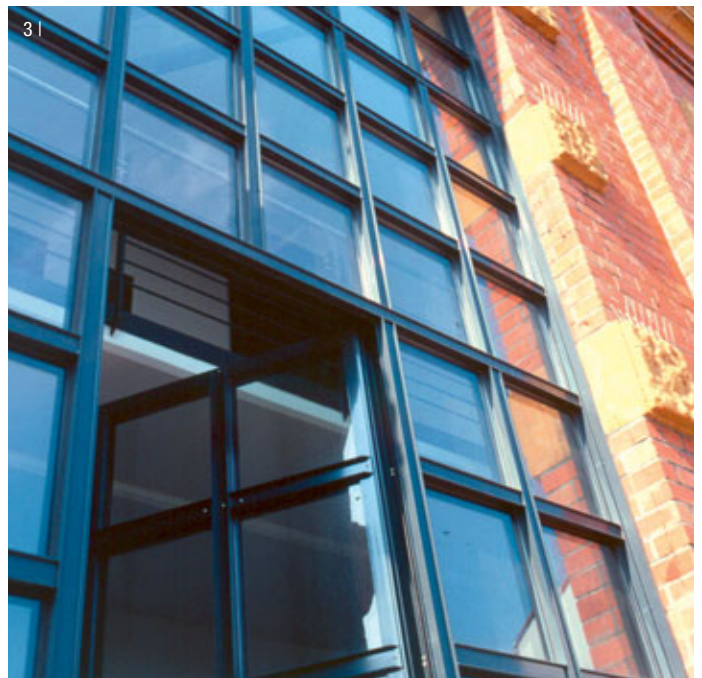


» Refurbishments – upgrading for the future

Adding to a building's value through renovation is an increasingly important factor in a building's design. The intelligent use of an integrated approach makes for more functional, attractive and energy-efficient spaces. WICONA systems

provide the best conditions for achieving this: thermally optimised systems that call for no design compromises and offer the right solution for any renovation project, thanks to the extensive range of possible applications.





WICTEC Curtain wall systems for refurbishments:

- Special profile shapes make it possible to align facades with existing requirements, particularly for the renovation of historic buildings. By way of example, WICTEC 50 stick curtain walls with industry contours in the form of steel T-profiles, IPE profiles or steel U-profiles.
- Individual adjustment of thermal insulation to meet today's requirements and those of the future, for targeted and calculable energy efficiency. This can be seen in the WICTEC 50 curtain wall systems which make incremental adjustments to the insulation quality up to Passivhaus level, which is upgradeable years later.
- Modular units with additional functions included building technology systems such as solar protection, ventilation or lighting control, especially when newly incorporating such technical device into existing buildings. Examples are TEmotion intelligent facades and double skin facades.
- Unitised installation of window and curtain walling "during ongoing operation".
- Diverse solutions for insulated and ventilated facades, installation of rear ventilation, design adjustments, incorporation of ventilation technology.

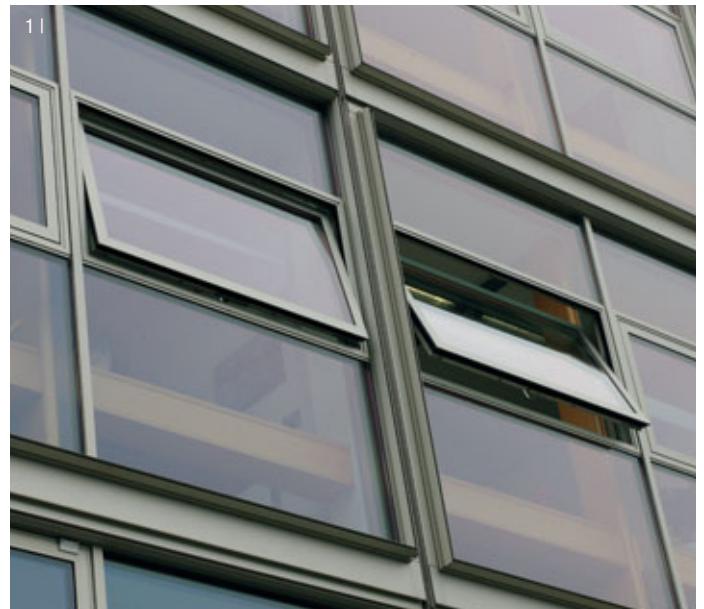
1 | EADS Bremen
 2 | National library Bukarest
 3 | Loftliving, Augsburg
 4 | L'Hôpital de Sèvres

» Versatile function all inclusive

The ideal combination: WICTEC stick system curtain walls with aluminium integration sashes of the series WICLINE evo. The versatile systems with outstanding performance in the technical features offer individual solutions on most advanced technical and design level, paired with a comprehensive choice of additional functions. The flexibility and wide range offered by the WICTEC curtain wall systems are perfectly matched by the individuality with which opening sashes from the WICTEC and WICLINE ranges can be integrated into glass facades and skylights. Precise coordination

of thermal insulation, narrow sight lines of profiles with special insertion frames, freedom to choose from an extremely wide range of opening types – with WICONA systems you will find the right solutions whatever your requirements. Besides the homogeneous integration of the opening sashes into the building skin the WICONA window range stands out with its high functionality. The opening can be inward and outward, the operation can be manual or motorized. Various system options allow for the individual and gradual adaptation of the entire curtain wall to specific thermal values.





Possible options:

1 | WICLINE 65 evo / WICLINE 75 evo

Inward opening:

- Turn / turn-tilt / tilt sash
- Concealed sash
- Burglar resistance

Outward opening:

- Top-hung / side-hung sash
- Italian window
- Pivot window

2 | WICLINE 90SG all-glass sash

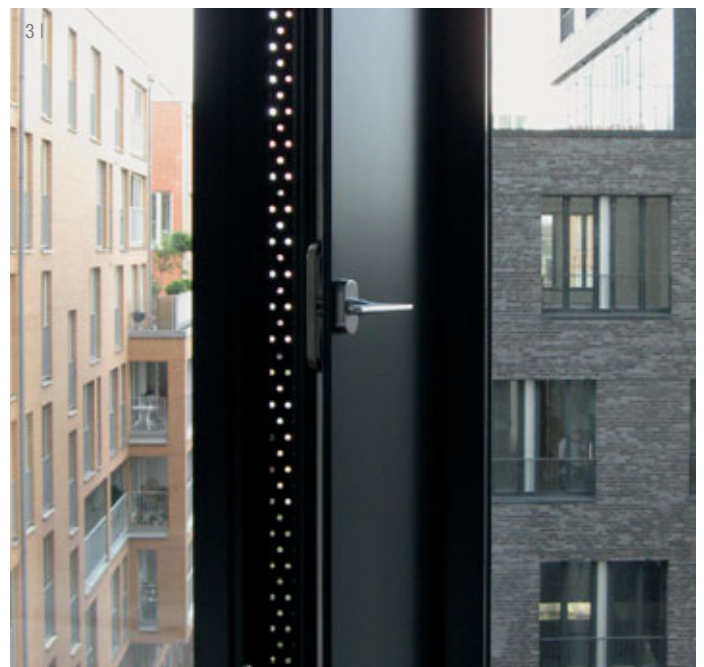
- Italian window
- Parallel outward opening sash

3 | WICLINE evo ventilation flap

- Turn sash with thermally broken aluminium profile

4 | WICTEC sky light sash

- For motorised or manual operation

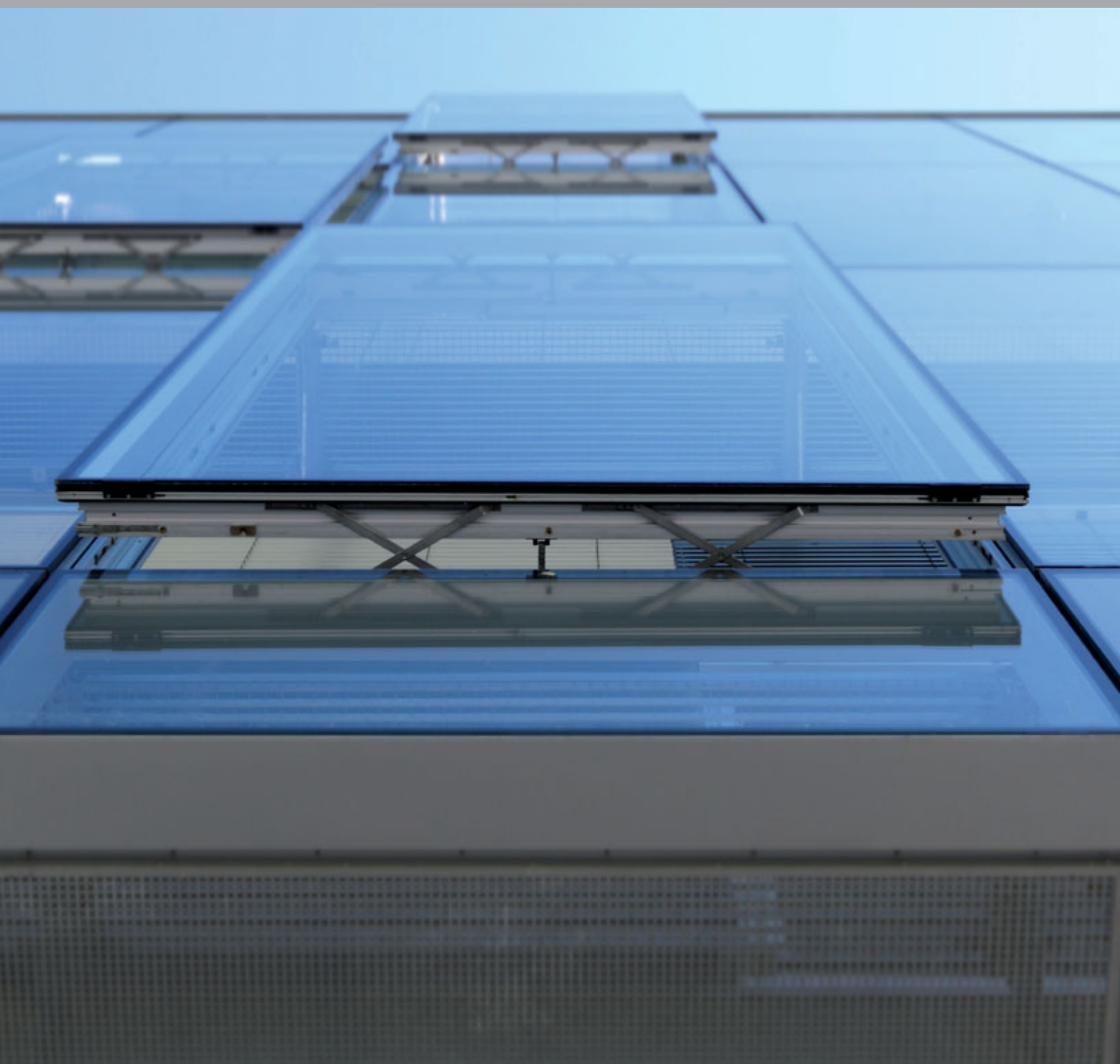


» Good ideas – consequently pursued

It is our aim that as a WICONA partner, you are able to distinguish yourself very clearly in the market and will therefore achieve greater success than your competitors. That is why we are continually working to develop our products and why our innovations are setting new standards within the sector. That is what we call: Technology for ideas.

We consider the technical requirements of the future as our core challenge. Aspects such as thermal insulation, energy efficiency and sustainable building all form key considera-

tions within our current developments and will do so to an increasing extent in the future. It is our wish to offer you the very best solutions that will enable you to provide your customers with the perfect solution for their requirements. The field of aluminium profile systems for façades in particular is one area in which the WICONA brand is playing a leading role. Our pioneering spirit has resulted in solutions that have set new standards in terms of ecology, design, flexibility, thermal protection and sound proofing. And we will continue to progress along that road – with you by our side.



WICTEC DuoWall



Double façades – twice the protection

Duowall is a façade concept that opens up new approaches based on WICONA systems. Today's building market is determined as much by ecological standards as by technical-functional, aesthetic and economic criteria. Holistic system solutions which combine a high level of technology, ecology, design and visions are required. The basic concept of a second, non-insulated layer of glass in front of an internal heat-insulated façade with opening sashes can be achieved with various combinations of WICONA systems. The individual form is tailored to the specific building in each case. You can rely on the WICONA team to support you throughout your project, with the benefit of our long and comprehensive experience and know-how.

TEmotion – The intelligent façade concept

TEmotion is an intelligent façade concept that has been developed by WICONA incorporating active and self-sustaining building technology. The façade reacts to changes in outdoor and indoor conditions, such as light or temperature, and therefore makes a significant contribution to improving the energy efficiency of the building envelope and reducing the operating costs. TEemotion not only incorporates technical components, but also includes the relevant sensors and control systems. The individual elements can therefore adjust automatically to the changing situations within and outside the building. The intelligent façade controls the integrated ventilation, air-conditioning and heating technology, adjusts the sun protection and prevents the interior from overheating.

At the same time, an adaptive light control system ensures dazzle-free, indirect natural daylight at the level required for the user. By automatically opening sashes it allows the building to be "flushed" with fresh air at night, considerably reducing the costs of cooling it actively. In contrast to conventional façades, using TEemotion saves 40 to 50 per cent of the primary energy otherwise used for heating, cooling, ventilation and illumination. The fact that energy savings of that level can also be achieved in existing buildings is demonstrated by the intelligent façade system such as the one that has been installed at the WICONA training centre in Bellenberg.



» Directing daylight

WICSOLAIRE represents a comprehensive solution when it comes to providing external solar protection. As the system allows positioning of the slats at different angles and with different spacing, the sunshading can be adjusted perfectly to the building. This individual adjustability not only improves the

energy balance of the building, but also increases the users' comfort; the full scope of visual contact with the surroundings of the building can be preserved despite the protective shading. Alongside conventional surface treatment versions, the flexible system can also be fitted with photovoltaic elements.



- Small blades
- Large blades
- Integrated photovoltaics

Intelligent climate concepts

Modern architecture with extended glazed building skins offer increased energy gains from daylight, but require an external light control that aligns energy savings, user comfort and economy. WICSOLAIRE sunshading systems guide daylight into the building and thus reduce the need for artificial light. They control the energy and heat input by solar radiation and reduce the need for air conditioning. The visual contact with the exterior remains and improves the sensation of comfort. As a passive technology WICSOLAIRE can be adapted in diverse options to the individual requirements and the architectural style of the building.

In combination with the WICONA window and curtain wall systems a consistent solution is achieved. The blades can be oriented horizontally or vertically at different angles. The assembly can be made in a horizontal, sloped or vertical fixture. As an option the blades can be equipped with integrated photovoltaic captors, offering an optimal orientation toward the sun for maximum efficiency.



- 1 | University, Sigmaringen
Glück + Partner, Stuttgart
Heinrich Würfel Metallbau, Sontra
- 2 | Horizontal blades, application above the façade
- 3 | Vertical rotating blades, motorised
- 4 | Integrated photovoltaics

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