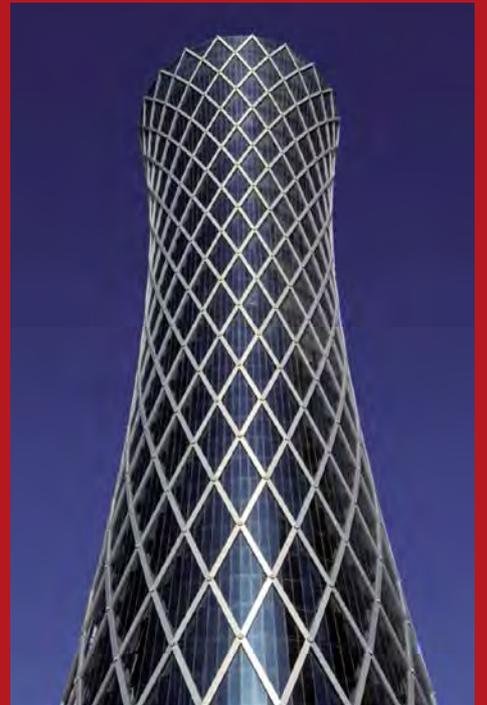


Shaping the future



FENSTERTEK

WICONA[®]
TECHNOLOGY FOR IDEAS

» Technology for ideas

Planning and building call for creativity and freedom of design. Ideas are turned into real buildings. With our know-how, high-tech products and perfect service in aluminium

profile systems, we support this process in collaboration with you from the first sketch to the final implementation. WICONA.



Ideas Turned into reality	4
Bharati research station, Antarctic	6
KfW Bank, Frankfurt (D)	8
M.-G.-Lichtwer High School, Wurzen (D)	10
Curtain wall systems Expression of ideas	12
Stick curtain walling	14
Safety systems	18
Unitised curtain wall	20
Double skin façades	22
Structural glazing curtain wall	24
Intelligent façades	26
Window systems Conferring character	28
Punched hole windows ribbon windows	30
Hybrid windows coupled windows	32
Integrated sashes	34
Window options fittings	36
Design options	38
Door systems Meeting with style	40
Hinged doors	42
Door options	44
Safety doors	46
Automatic sliding doors	48
Sliding systems Opening spaces	50
Sliding system options	52
Solar shading systems Controlling daylight	54
Safety systems Protection all-inclusive	56
Project solutions Unique in design and technology	58
Environmental responsibility Sustainable building	60
Online service	66
Systems overview	68
WICONA in the world	71



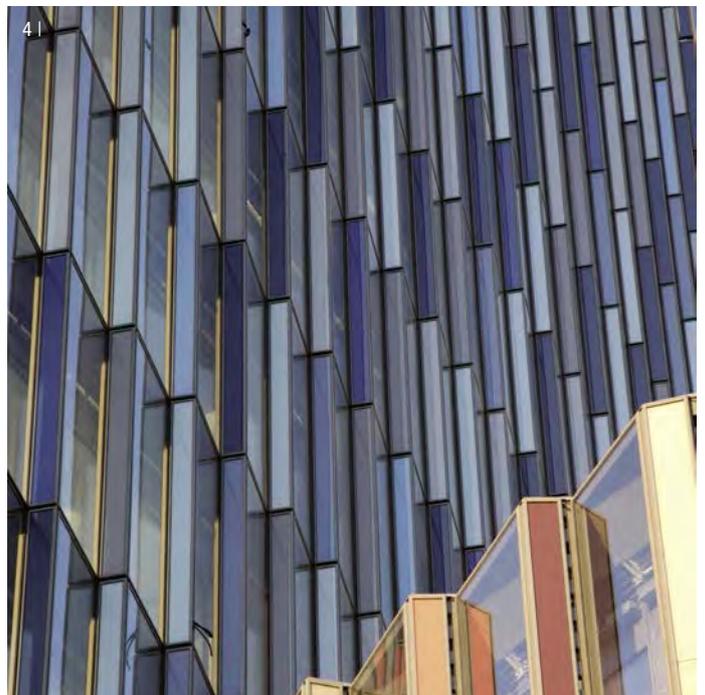
» Each and every day,
architecture should
enhance people's lives



Ideas become built reality

One of the most challenging tasks in shaping our future is the creation of buildings which comply at the same time with ambitious architectural design and environmental responsibility. This requires concepts which protect natural resources, offer a superior user comfort, and respect the living and working health and safety requirements. And on top of this they have to be economically attractive. Hydro Building Systems identified these needs many years ago and adjusted its product development and service offer accordingly. As an aluminium system supplier we can supply you with the skills which are required to turn your ideas into built reality – at the same time respecting economic aspects. A multitude of buildings certified with green building labels like DGNB, Leed, Passive House or Minergie are exemplary for the creative, constructive and successful cooperation between investor, architect, fabricator and WICONA. All over the world.

We are looking forward to your ideas!



- 1 | adidas, Herzogenaurach (D)
Bespoke solution turn/tilt window
with all-glass technology
- 2 | Bharat research station
The first WICONA building in the Antarctic
- 3 | M.-G.-Lichtwer Gymnasium, Wurzen (D)
Renovation leading to a reduction of
energy consumption of 60 %
- 4 | KfW Westarkade, Frankfurt (D)
The best highrise building of the world
is also one of the most ecological ones.

» BHARATI

Bharati Research Station On Roald Amundsen's traces

 NCAOR, Goa (India)
 IMS Ingenieurgesellschaft, Hamburg (D)
 bof Architekten, Hamburg (D)
 Käfer Construction, Bremen (D)
 Lenderoth GmbH, Bremen (D)



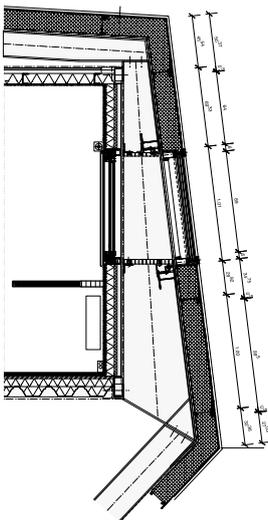
The Indian government's idea was to set up a research station in the Antarctic.

The architect's idea was to align the safety aspects and the extreme structural requirements given to the building envelope, with a panoramic view out onto the Polar region.

The engineering firm's idea was to build the station using over 130 prefabricated containers and add an extra outer envelope, whilst meeting the tight assembly deadline. The solutions for windows, curtain walls and doors were given by the WICONA technology for high insulation stick systems and fire protection openings.

The extreme weather conditions in the South Pole region dictated the development details and façade construction. Enormous

demands were placed on the material owing to the thermal and mechanical loads caused by blizzards bringing extremely heavy snowfalls, wind speeds of up to 270 km/h and temperatures of $-40\text{ }^{\circ}\text{C}$ and below. The glass façade features a specially modified mullion-transom construction and triple-insulated glass units with a 15° incline on the north-south side. The WICTEC 50 HI and WICLINE 75 WICONA systems (high-insulated versions) formed the basis. With this structure, the façade attains a U_{cw} value of $0.8\text{ W}/(\text{m}^2\text{K})$. Due to the construction with pre-assembled units the façade was flexibly adapted to the required modular concept of the structure. Fire protection was a primary concern when designing the container's internal elements. Fire-protection

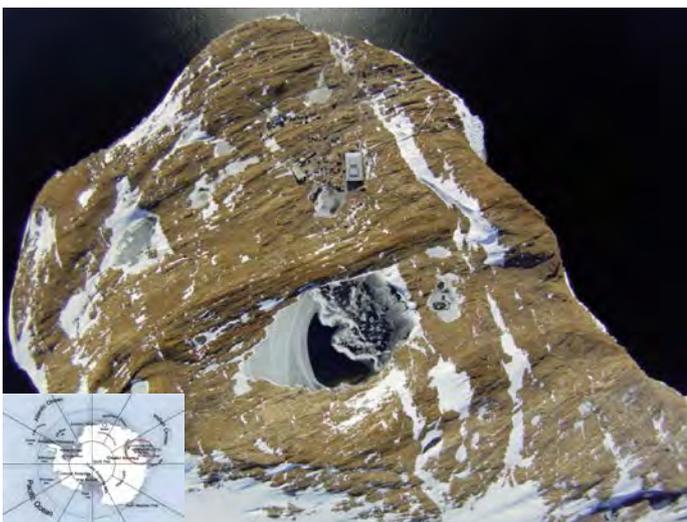




doors (T30) and punched hole windows (F30) with turning sashes based on the WICLINE 75 and WICSTYLE 77 WICONA systems (fire-protected versions) provided the appropriate solution from the range's portfolio. The Bharati Research Station demonstrates admirably how close team work among all those involved with construction ensures that ideas become reality – even under the most arduous conditions. The combination of standard systems, specifically modified applications and individually tested fire protection structures illustrates the flexibility and individuality of WICONA's technological solutions for exceptional ideas.



6
7





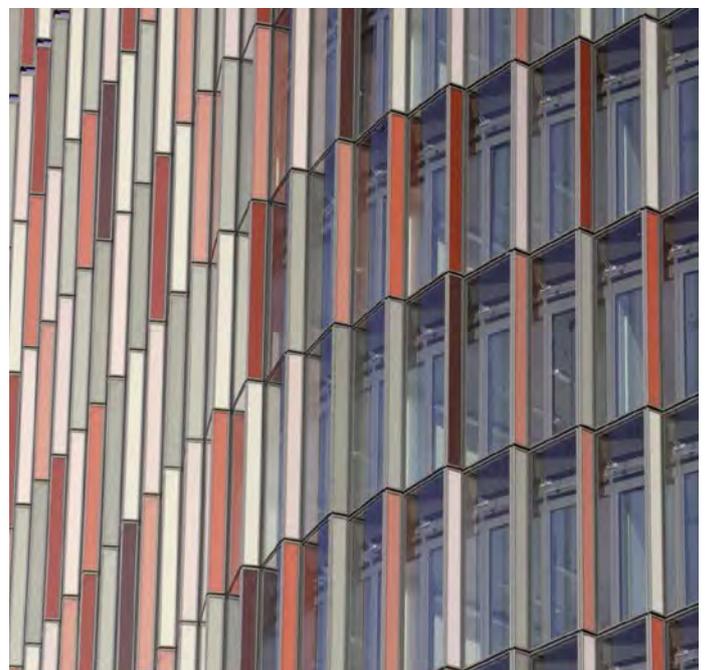
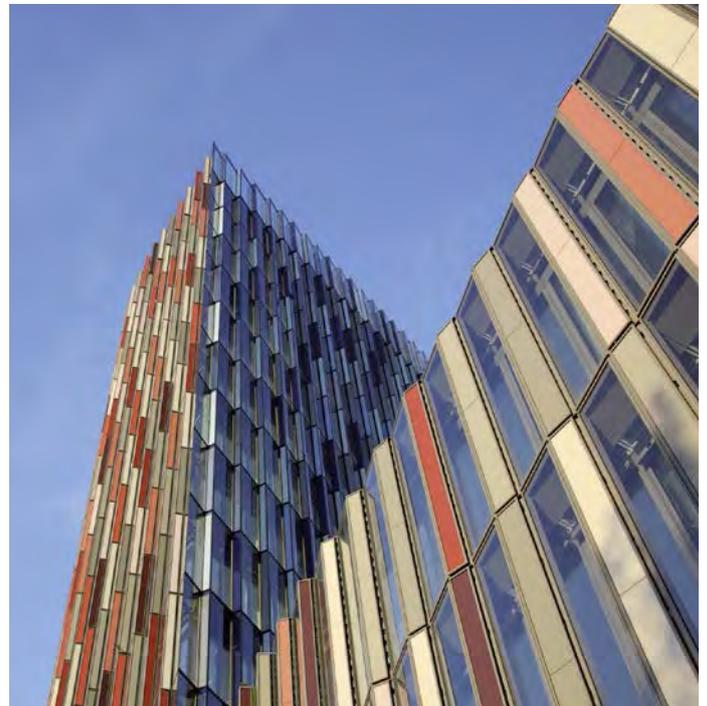
📍 Sauerbruch Hutton, Berlin (D)
FKN, Neuenstein

The best tall building in the world*

The stunning new headquarters building for KfW Bank in Frankfurt, which features extensive use of WICONA unitised curtain walling, has won a major global architectural award. *The prestigious accolade for the World's Best Tall Building has been awarded to the KfW project by the Council for Tall Buildings and Urban Habitat (CTBUH) – the leading international authority on the design, construction and development of tall buildings. The KfW scheme was designed by architects Sauerbruch Hutton to combine form, colour and sustainability. With a primary energy consumption of just 98 kWh/m², it is also one of the world's most sustainable office buildings.

The building, known as Westarkade, provides office space for 700 staff and a conference centre. Its base is a curved four-storey podium connected to the bank's adjacent buildings on several levels. A 10-storey tower rises above the podium in a 'flowing' form that responds to the prevailing wind direction and orientation of the sun, maximising natural day light. The scheme's most distinctive feature is its bespoke double skin façade with

» KfW Bank



WICONA's aluminium unitised curtain walling, comprising an innovative horizontal ring ventilation in the cavity between the two layers, by automatically opening exterior ventilation flaps.

The envelope consists of an encircling 'sawtooth-shaped cavity' which encloses automated blinds to reduce solar gain and control glare. The exterior is defined by a skin of fixed tempered glass panels and colourful ventilation 'flaps' in red, blue and green, helping to create a striking aesthetic. The internal façade has alternating opening and fixed glazed units.

This dynamic façade makes use of variable pressures around the building, allowing natural ventilation all year round and for the occupiers to open the windows on the inner skin whilst avoiding both draughts and heat loss. Commenting on the award, Peter Murray, one of the CTBUH judges, said, 'The streamlined form of the building integrates itself into its surrounding context, whilst simultaneously standing out through the playful use of colour. Whereas many buildings use colour as a way to mask an otherwise unremarkable building, here it contributes an additional rich layer to what is already a remarkable building.'

Energetic renovation during school

» High school

The idea: to reduce the heating cost by 60 % by exchanging the curtain wall under ongoing school operation. The technology: passive house level curtain wall and window systems from WICONA featuring an efficient assembly technology. The result: All expectations exceeded.

In Summer 1996 the M.-G.-Lichtwer High School in Wurzen/ Germany was inaugurated, receiving much acknowledgement for its concept and implementation. The concept of urban development received a counterpoint with floating boxes based on pillars, with an individually designed style. But already after few years defects in the wood-based curtain walling and windows

 Kühn + Kewitz, Wurzen (D)
Metallbau Grünewald, Gronau

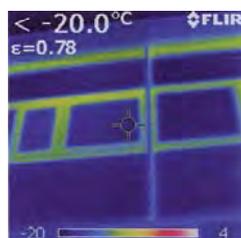
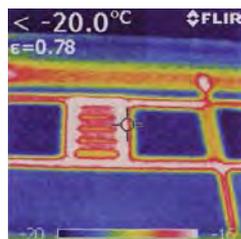


renovation

became apparent, causing the need for refurbishment. The first objective in this process was the reduction of heating cost. WICONA products offered the most convenient features: systems with performing thermal insulation, with a flexible design to suit the existing architecture. This was combined with an extended longevity and a virtual freedom of maintenance, due to the outstanding technical features of aluminium in high WICONA quality. This fact received a special attention after the experience with the wood-based products.

The new aluminium curtain walling features a span width above 3 m and integrated windows with high insulation technology, leading to a total U_{cw} value of 1.2 W/(m²K).

A further challenge was the need to execute the renovation during ongoing operation of the high school. To achieve this, three classrooms were refurbished at a time. The effects of the substantially improved thermal insulation became immediately apparent: in the meantime the students and staff also benefit from the 'climate change' in the summer season. Due to the improved thermal insulation and triple glazing the façade construction does not heat up as much as before. Thermal imaging shows the improvement by comparing the same areas before and after the façade exchange: the heating costs could be reduced by more than 60 % – an overall success for the project.



» Curtain walling | Expression of ideas

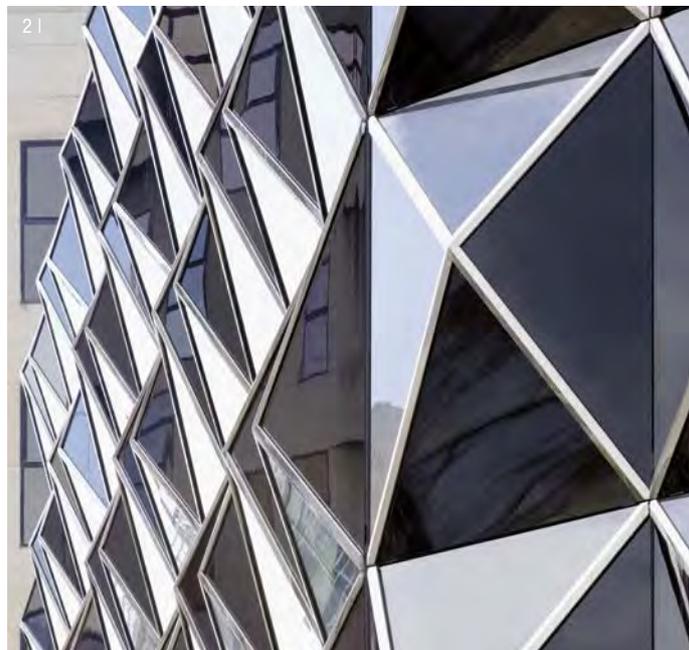


Stick curtain wall
Safety systems
Unitised curtain wall
Double skin façades
Structural glazing curtain wall
Intelligent multifunctional façades

WICTEC is an overall concept of modern-day architecture that reconciles the elements of heat storage, air conditioning, light provision and fire and noise protection within a single façade design.

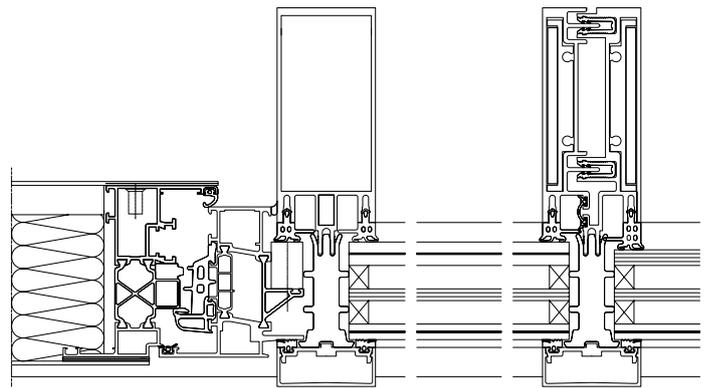
With the WICTEC curtain wall system, your creativity and ability to find the best solution are virtually limitless. You can select, design and produce all conceivable applications up to the highest quality standards and in line with your personal requirements.

Owing to the system's great diversity and compatibility with the comprehensive WICONA window, door and sliding systems, you have extremely flexible façade technology at your disposal. From the draft to detailed planning and completion, the standard system applications make sure that your individual requirements are fully met. And if that is not enough, we can provide you with bespoke solutions.



- 1 | The Cube, Birmingham (GB)
Make, London
Haga Metallbau, Hofheim
- 2 | Edificio Romancos, Madrid (E)
Angel Serrano Ceballos, Madrid
IHI Industrias Grafer, Madrid
- 3 | Scuola Internazionale di Torino (I)
Baetto Battiato Bianco, Torino
Cometal Srl, Torino
- 4 | Le Cube Orange, Lyon (F)
Jacob + MacFarlane, Paris
Entraxe, Saint Laurent d'Agny

WICTEC 50
WICTEC 60



 Dachser head office, Kempten (D)
Passive house approved curtain wall with integrated ventilation sashes
Dachser Immobilien, Kempten / DS-Plan, Stuttgart
Dodel Metallbau, Ulm



Stick curtain wall

Slimline all-rounder

WICTEC stick curtain walling is the flexible, tried-and-tested versatile solution among WICONA's range of façade systems. The great diversity of profiles and the extensive range of features offer you both maximum design freedom and the highest process safety from planning to completion. With slim sight lines of 50 and 60 mm, this system achieves a particularly delicate façade design. Additional functions for safety and maximum heat insulation with U_{cw} values to below $0.8 \text{ W}/(\text{m}^2\text{K})$ can be met at very small additional expense without influencing the appearance. The system meets the requirements for passive houses and is the first aluminium façade system certified by the ift institute in Rosenheim.

WICTEC 50 and 60 are available as aluminium construction or as add-on system for wood or steel substructures. A comprehensive range of insert options for various opening types allow extensive design individuality. The system can easily be upgraded with features such as fire protection, burglar or bullet resistance – without changing the visible appearance of the façade.

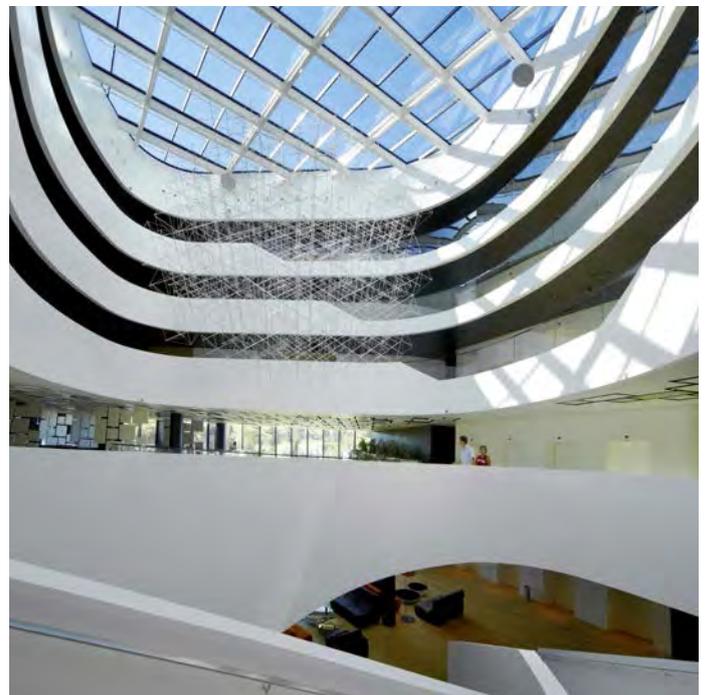


14
15

Taj Mall, Amman (JOR)



LONE hotel, Rovinj (HR)



**Slimline all-rounders |
Stick curtain wall options**

WICTEC 50 and WICTEC 60 are the basic versions of the stick curtain walling with a very fine sight line of 50 or 60 mm internally and externally. The unique flexibility of the façade range is demonstrated by the system variants and enhancement options, all of which are feasible with minor additions to the system and without compromising appearance.

Adaptations with safety functions such as fire protection, burglar resistance or bullet resistance can be implemented easily on the basis of the standard execution and combined with this. With minimum additional measures you achieve a maximum of your design options.

1 | Passive house curtain wall

- For certified Passive House buildings like the first sports arena in Scandinavia
- Infill thickness 46 mm to 51 mm
- Thermal insulation: $U_f = 0.74 \text{ W}/(\text{m}^2\text{K})$, $U_w = 0.8 \text{ W}/(\text{m}^2\text{K})$
- Extension to WICTEC 50 with elastomer foam insert
- Polygonal façades possible
- Burglar resistance until class WK2



Stick curtain walls

2 | Industry design

- Profiles with a technical structure
- Slender general design
- Reproduction of steel T-profiles or IPE beams

3 | SG design with integrated pressure profiles

- Façade aesthetics similar to structural glazing – economic, efficient, without silicon joints and glass retainers
- Profile width only 43 mm or 51 mm, with overlap over the glass or flush with processed glass edge
- Simplified construction with design similar to structural glazing SG
- No maintenance of bonding and sealing, no technical approval necessary

4 | Integrated solar protection

- Guide rails for solar shading incorporated into external cover profiles
- No posterior assembly of connections bolts, no fabrication steps on the building site required
- Safe operation of solar shading with wind speeds up to 25 m/s

5 | Add-on construction

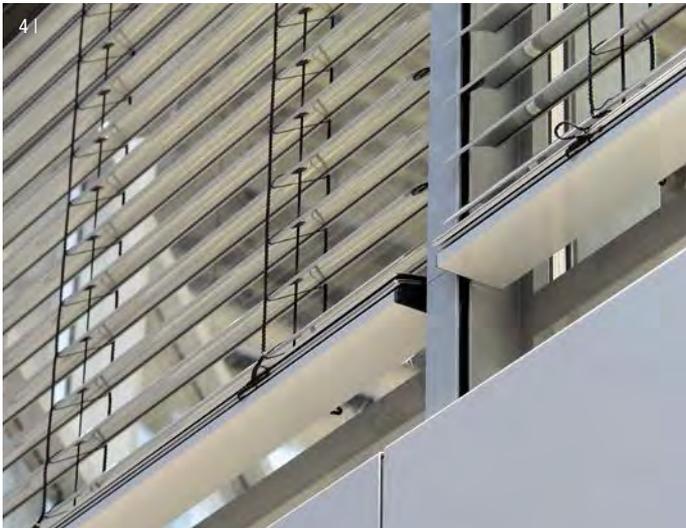
- Direct glazing on supporting structures made from wood or steel
- Overlapping EPDM gaskets ensure a reliable tightness
- Easy assembly on steel profiles with a special bolt technology

6 | WICTEC 50 mullion / mullion

- Mullion and transom in the same depth and geometry
- No notching required
- Overlapping vertical and horizontal EPDM gaskets ensure perfect tightness

7 | WICTEC 60

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



Safety technology for curtain walls:
Fire protection
Burglar resistance
Bullet resistance

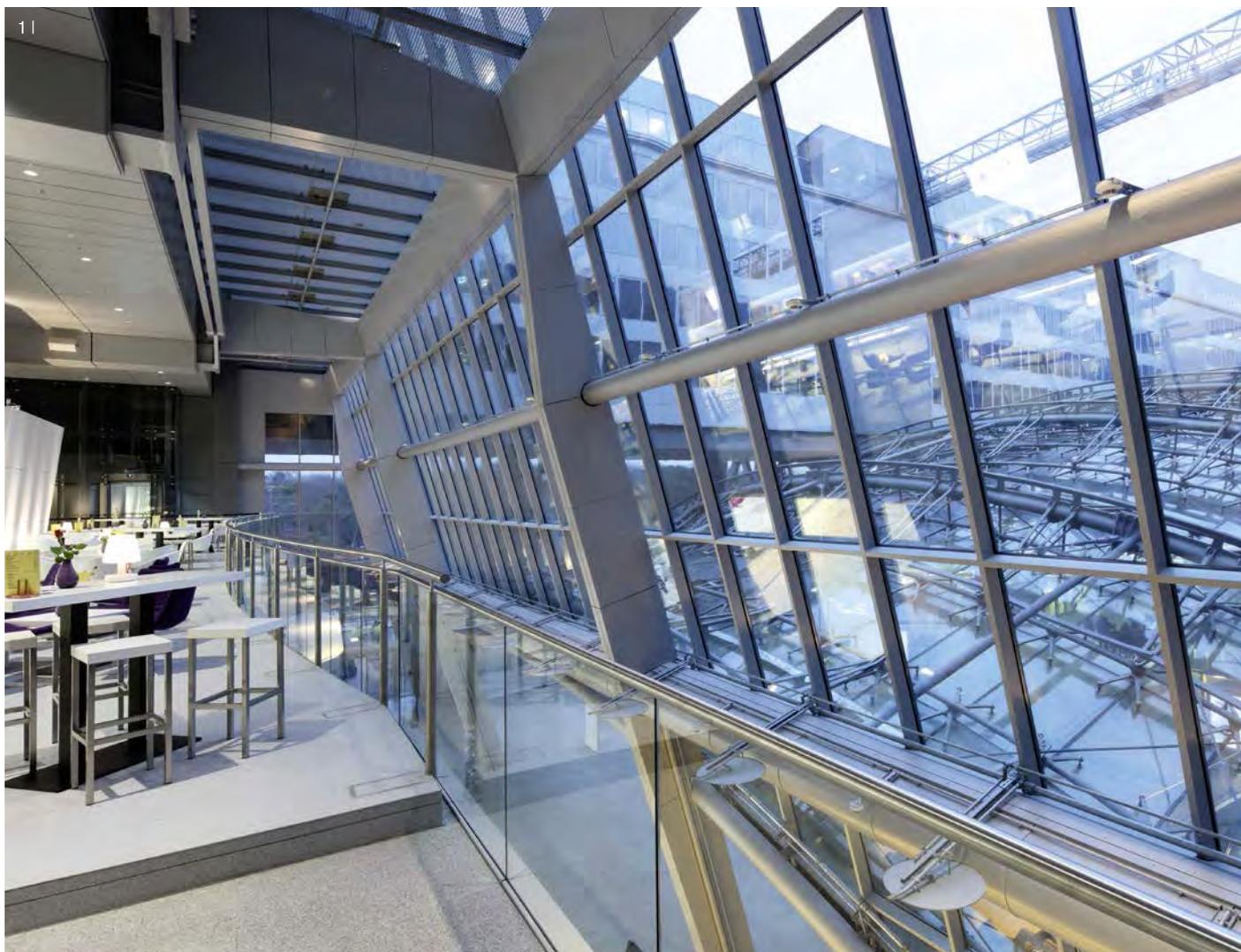
Safety – all-inclusive protection

Personal security and building protection need a solution approach which can be accomplished with aluminium systems in a wholistic and coherent way. This is achieved by the WICONA series for curtain walling, windows and doors.

Based on standardised system components, with identical basic technology, each of these applications can be executed in safety technology, in combination with other additional functions. You can combine standard applications with fire protection, burglar resistance or bullet resistance for a congruent design in your architectural concept.

1 + 2 | Fire protection*

- 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



* Safety regulations may vary depending on the country. Please ask your national WICONA sales office for the national product availability.

**WICTEC 50 and WICTEC 60
Optional safety solutions**

3 | 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
- WICLINE 65 / 75 evo windows and WICSTYLE 65 / 75 evo doors for integration available in the same resistance class

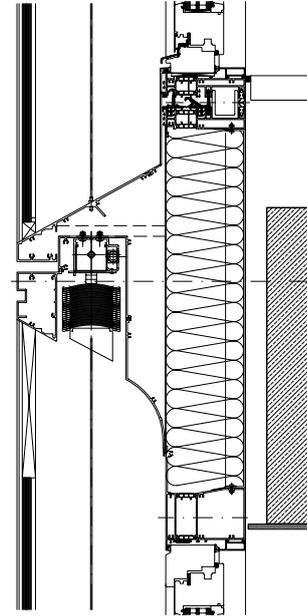
4 | Bullet resistance

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



WICTEC 50EL
WICTEC EL60

Ericus-Spitze (publishing house), Hamburg (D)
Henning Larsen, Kopenhagen (DK)
Schindler Fenster- und Fassadenbau, Roding



Unitised curtain wall

Plan with efficiency

Today, most construction projects are subject to intense time pressure. With appropriate planning, the WICTEC unitised curtain walling systems enable extremely straightforward processing, by means of serial production and pre-assembly of the individual units. This pre-assembly process is completely unaffected by weather conditions. This permits rapid and economical implementation for buildings of any size, whilst simultaneously enabling creative diversity and a delicate appearance.

Repeating unit frames enable rational planning and processing. The integration of additional components such as opening sashes, building technology components, panels, cladding or solar protection is easily possible. Time and cost savings are achieved through just-in-time delivery and assembly of pre-fabricated units (without scaffolding).

Furthermore, it is particularly in renovation projects that these systems offer great advantages, thanks to improvement of energy efficiency during building use. You can rely on the WICONA team to support you throughout your project, with the benefit of their long and comprehensive experience and skills.

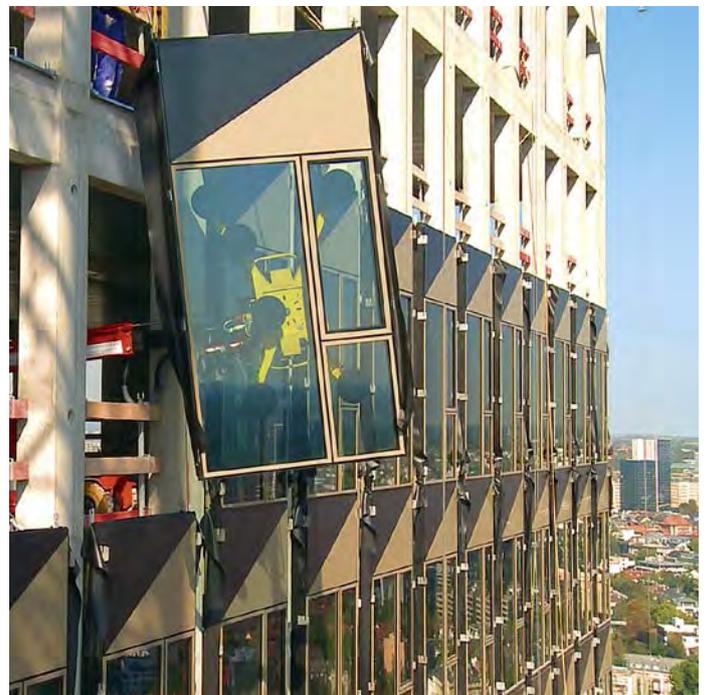


20
21

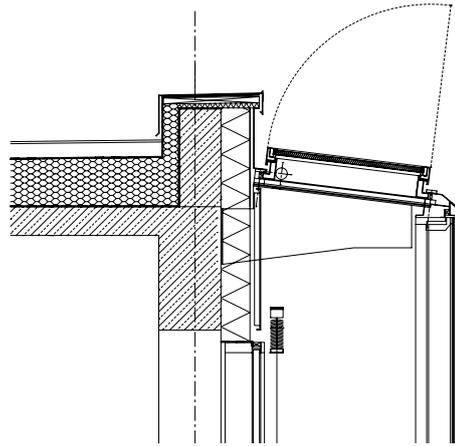


Experience the assembly of the TOWER185 unitised curtain wall in our film: simply scan the QR code with your smartphone or click in your wicona website (e.g. www.wicona.de, unitised curtain wall)

Tower185, Frankfurt (D)



WICTEC DuoWall



Zeppelin University Friedrichshafen (D)
Fritz Hack, Friedrichshafen
Metallbau Schneider, Ravensburg



Double skin façade

Twice the protection

DuoWall is a façade concept that opens up new approaches based on WICONA systems. Today's construction industry 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 vision are required.

To put it simply: WICONA double skin façade solutions. 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 layout is tailored to the specific building in each case.

WICTEC DuoWall double skin façades provide the best possible heat insulation and make optimal use of solar energy gains. In addition, they offer effective sound-proofing – even when windows are open. Auxiliary technology, ventilation systems, sun protection or other functional elements can be integrated easily.

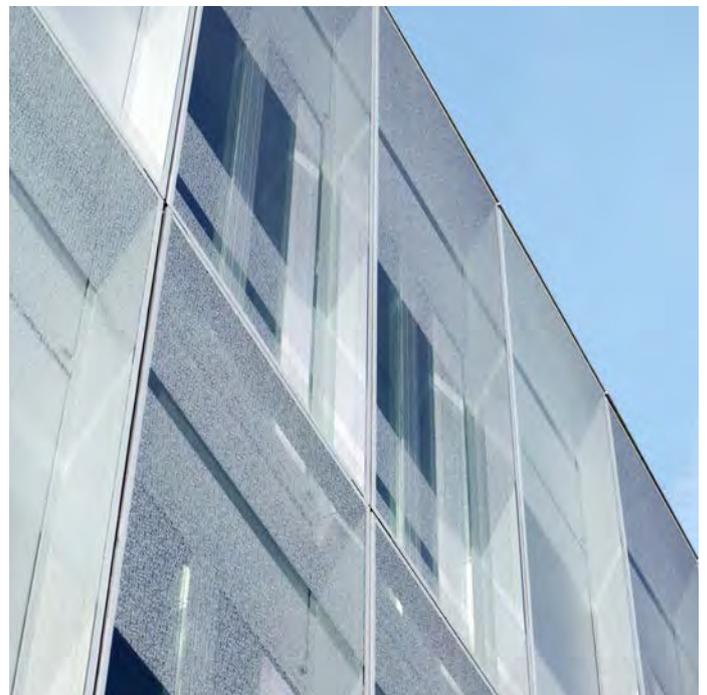
You can rely on the WICONA team to support you throughout your project, with the benefit of their long-standing and comprehensive experience and skills.



CMA DGM headquarter, Beirut (RL)

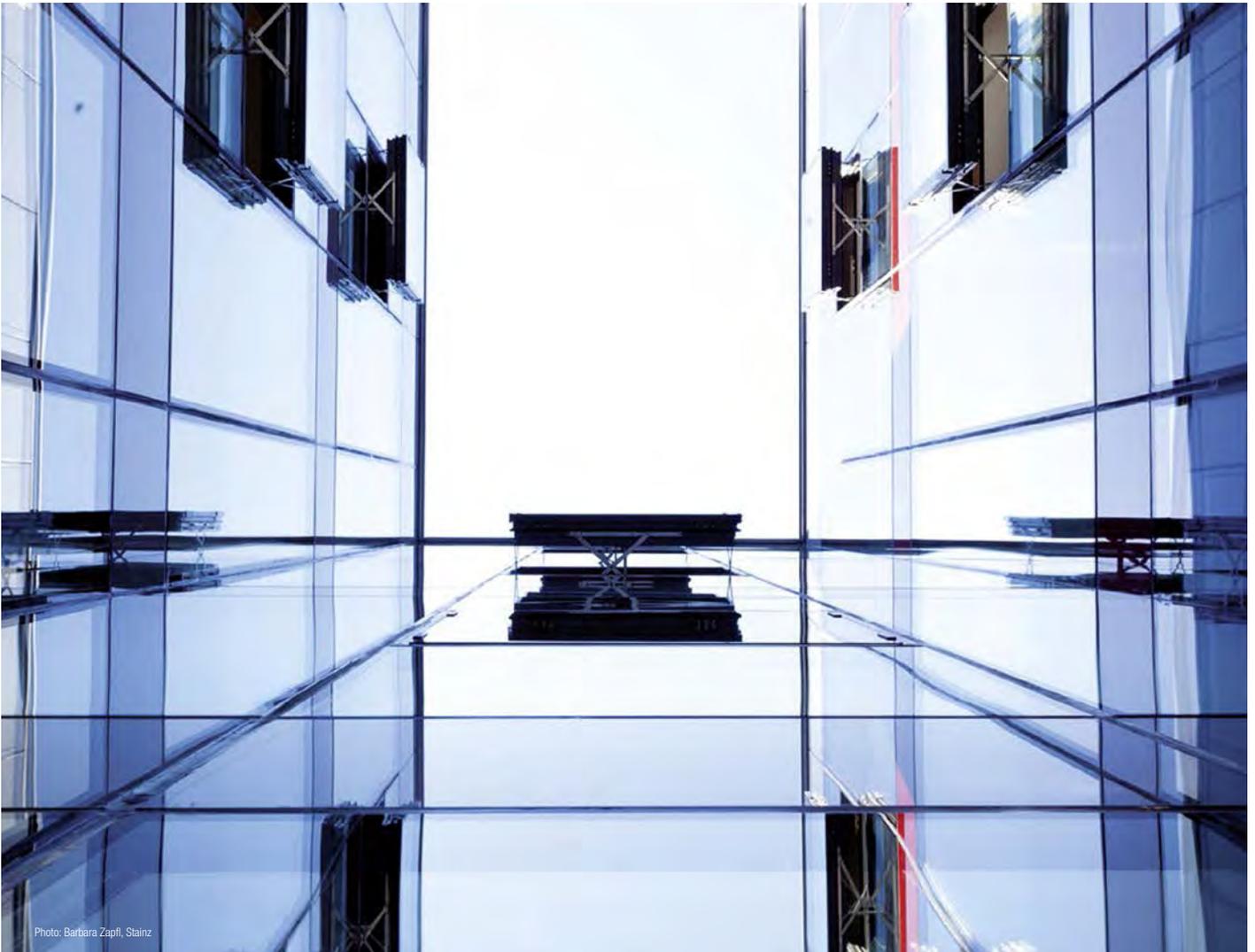
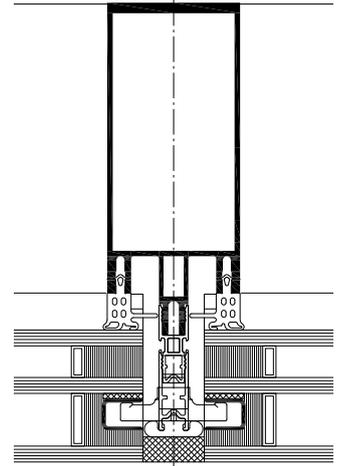
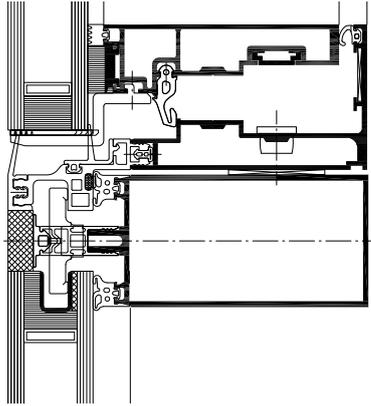


Beatson Institute, Glasgow (UK)



WICTEC 50SG

SSI Schäfer Peem, Graz (A)
DI Michael Kolitsch, Graz
Lierzer GmbH, Dobl



Structural glazing curtain wall

Shining views

Façades made entirely of glass have a firm place in contemporary architecture and create impressive building elevations. Using WICONA systems, outside elevations become extremely fine with narrow joints avoiding visible glazing beads. Based on the WICTEC stick façade, these versions can be created to the most demanding technical specifications, simply and economically. You can integrate opening sashes in SG technology, underlining the slim design.

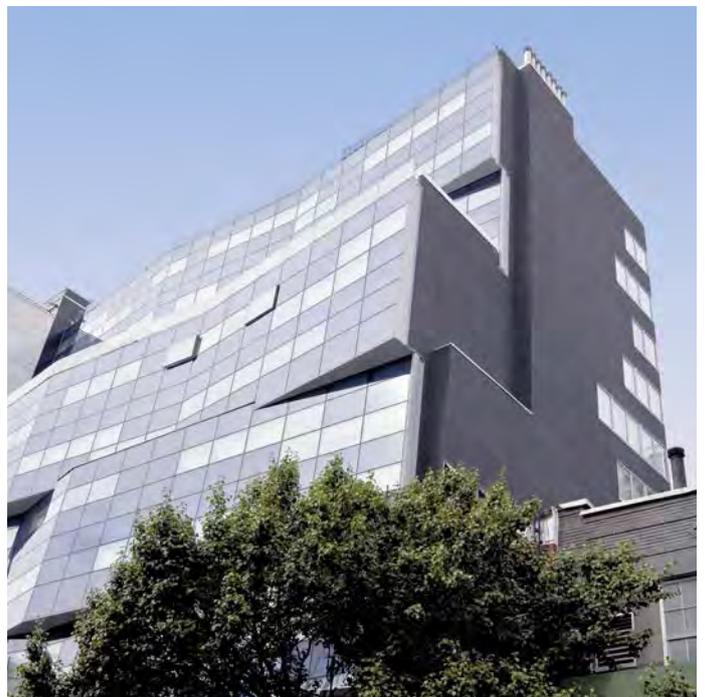
The delicate appearance between the individual glazed units is characteristic of WICTEC 50SG. The system offers structural glazing technology with insulating glass or other special glass and can be inserted in façades as well as in glass roofs.

24
25

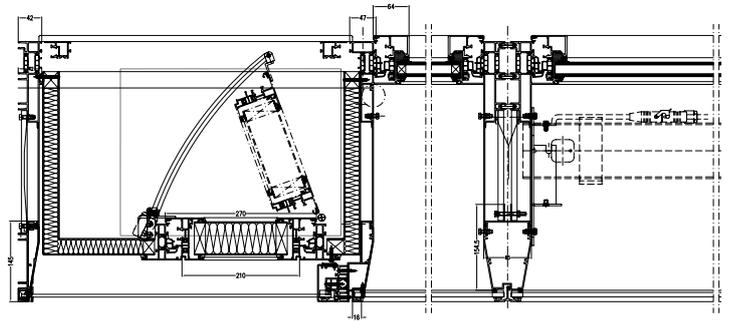
L'Oréal, Karlsruhe (D)



Chelsea Modern, New York (USA)



TEmotion



WICONA Technology Centre,
Bellenberg (D)



Intelligent multifunctional façade

Façade technology of the future

TEmotion is an intelligent façade concept with integrated active and self-sustaining heating, cooling and ventilation technology. The façade unit 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.

TEmotion controls the integrated ventilation, air-conditioning and heating technology, adjusts the sun protection to the prevailing conditions and prevents the interior from overheating. At the same time, by means of adaptable light control, it ensures glare-free, indirect natural daylight.

In contrast to conventional façades, TEmotion saves 40 to 50 per cent of the primary energy otherwise used for heating, cooling, ventilation and illumination. Very interesting for renovations: as all the building installations are integrated in the façade units, the construction measures are limited to the area of the façade. The dimensions and layout of the individual components can be adjusted to suit any building plan.

By means of automatically opening ventilation flaps, it allows the building to be ‘flushed’ with fresh air at night, which considerably reduces the costs of cooling it. Active use of solar energy is possible through integration of photovoltaic units.



To supervise the efficiency of the technology, a renovation building equipped with TEmotion has been equipped with a monitoring system for energy gains and consumption. The results can be followed live on the WICONA website (e.g. www.wicona.de/environment).

26
27



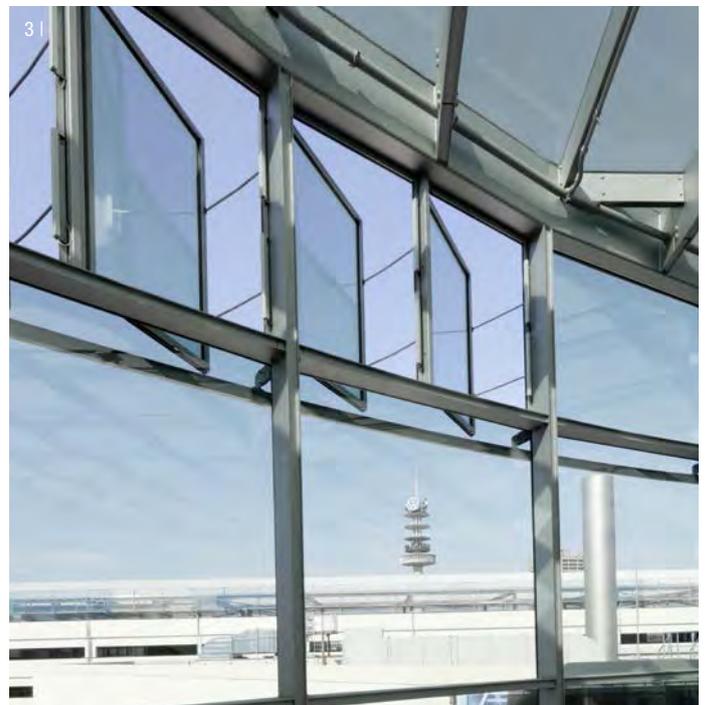
» Windows | Conferring character



**Punched hole windows | Ribbon windows
Hybrid windows | Coupled windows
Integrated sashes**

Every building is unique. Individually designed windows are a key part of any special architectural concept, determining the aesthetic of the entire façade and setting the character of the building. The WICLINE series provides the best means of producing complex yet attractive window designs that offer a high level of functionality and precise dimensioning. The WICLINE range includes multi-level concepts for security and for both thermal and sound insulation, whilst WICSTAR offers a high-quality range of fittings. The extensive system variety offers a wide range of options for inward and outward opening, as well as various design versions. A comprehensive range of profile contours provides you with a solution for any design requirements. For superior technical need you can rely on hybrid or coupled window technology.

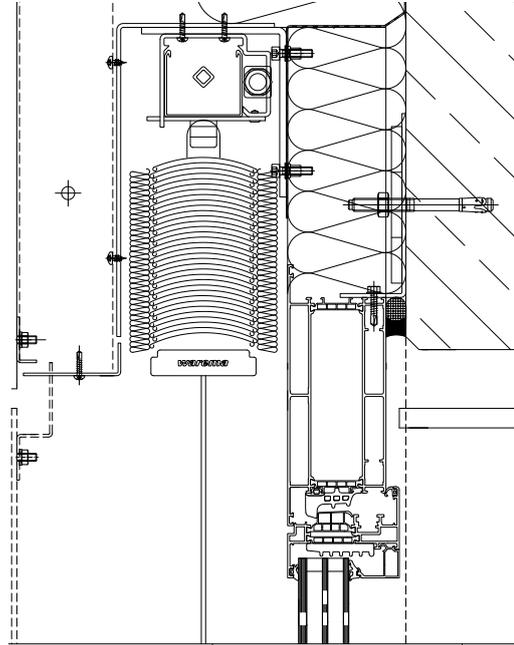
To be able to fulfil all requirements for sophisticated architecture out of only one base system technology – this is technology for your ideas.



- 1 | Spirig Pharma, Egerkingen (CH)
BFB, Egerkingen
Marbet Metallbau, Gunzgen
- 2 | City Tower, Bolzano (I)
Roberto Nikoli, Bolzano
Intercom, Cittadella
- 3 | Shopping mall, Hannover (D)
a.t.f., Frankfurt
Bug-Alutech, Dornbirn (A)
- 4 | Holmenkollen ski jump, Oslo (N)
Okaw Arkitekter, Oslo
Flex-CC-Glass AS, Barkaker

WICLINE 65 evo
WICLINE 75 evo

✦ WICONA headquarter, Ulm
Mühlich, Fink & Partner, Ulm
Dodel Metallbau, Ulm



Punched hole window | ribbon window

Function in design

The classic use of aluminium windows is the high-quality execution of punched hole or ribbon windows for apartment blocks or offices, industrial and commercial structures. In new buildings, WICONA window series allow durable and energy-efficient solutions to be planned and executed from the outset. They offer a suitable concept for renovation projects with special profile geometries such as Classic design or Industry design. Thanks to the great variety, numerous shapes and types of opening, WICLINE windows can be specifically tailored to the individual building and the wishes of the customer. This also applies, for example, for additional functions such as improved sound insulation, burglar and bullet resistance – simple to integrate without influencing the appearance of the façade.

The range goes from a non-insulated option for internal applications to systems with U_w values of 0.75 W/(m²K). WICLINE 75 evo achieves passive house level, without supplementary adaptations. In Switzerland it is the first metal window which has achieved the highest classification Minergie P.

It is not just in the WICONA profile systems that functionality, quality and design go hand in hand, but also in the fittings. WICSTAR with the unique DPS (Direct Positioning System) impresses with its light-weight, slim design, highest quality for long-term safe operation and extremely easy and convenient adjustment.

Concealed fittings for sash weights up to 160 kg, visible fittings up to 200 kg, visible turn fittings up to 300 kg and sash sizes up to (w x h): 1700 mm x 2500 mm give you access to a maximum of freedom in building design.



30
31

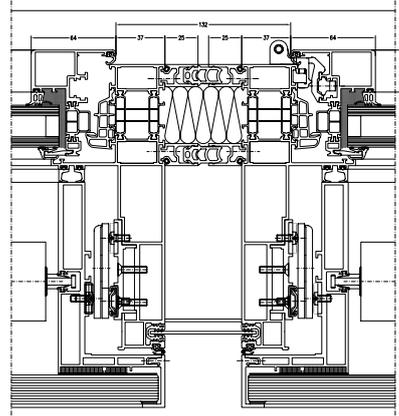
Design and functionality: visible hinges in any colour or concealed fittings

ZEN Resort, Vortungen (N): parallel slide tilt window



WICLINE 125
WICLINE 215

 Beluga Shipping GmbH, Bremen (D)
Haslob Kruse & Partner Architekten, Bremen
Heinrich Würfel Metallbau, Sontra



Hybrid windows | coupled windows

Combined comfort

The hybrid window technology of WICLINE 215 is the innovation in WICONA coupled windows. It combines an interior inward opening sash with an exterior parallel outward opening sash. Already with standard glazing, it offers increased sound insulation. Values of 39 to 57 dB can be reached according to the type of glazing. Even with the window open, WICLINE 215 effectively reduces the noise level from the outside. The integrated sun protection is effective with a reduced depth and is protected against dirt and weathering at any time. In addition to a pleasant indoor temperature, it also noticeably optimises energy consumption.

Depending on the type of glazing, the hybrid technology offers high energy efficiency with U_w values down to $0.65 \text{ W}/(\text{m}^2\text{K})$. The tilt-turn casements and the external parallel outward opening casements are individually adjustable independently of one another and enable adequate ventilation of the interior. This creates a noticeably comfortable indoor temperature and lowers energy consumption.

In the WICLINE 125 composite structures, an internal window is combined with an additional sash in front of it. In this way, the protective function and the level of comfort are significantly increased. Optimise sound insulation, maximise energy savings through increased heat insulation up to $U_w = 0.9 \text{ W}/(\text{m}^2\text{K})$, the greatest possible ease of use, efficient and weather protected integration of sun protection systems: WICLINE 125 coupled windows can satisfy even the most varied requirements with ease.



32
33

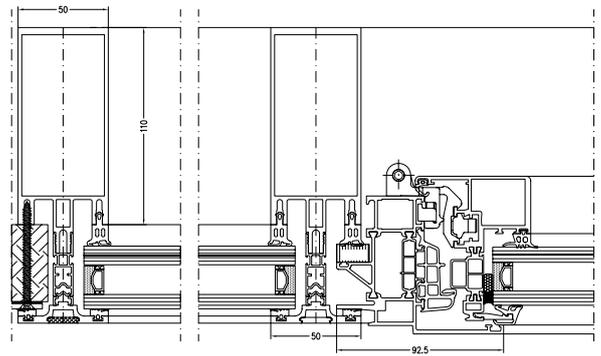
WICLINE 215 with turn sash and parallel outward opening sash

WICLINE 125 with integrated sun protection



WICLINE 65 evo
WICLINE 75 evo
WICLINE 90SG
WICTEC 50 sky light vent

 Steckelhörn / Cogiton, Hamburg (D)
J. Mayer H., Berlin
Rupert App, Leutkirch



Integrated sashes

Synergy at work

The flexibility and wide range offered by the WICTEC façade systems are perfectly matched by the individuality with which opening units from the WICTEC and WICLINE ranges can be integrated into glass façades and glass roofs. Precise coordination of thermal insulation up to the highest performance, slim profile sight lines 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 their homogenous integration in the surrounding curtain wall all sky light structure the WICONA insertion sashes extend your choice of opening types: inward or outward opening in various applications, manual or motorised operation, and options for a stepwise adaptation to the required thermal insulation values.

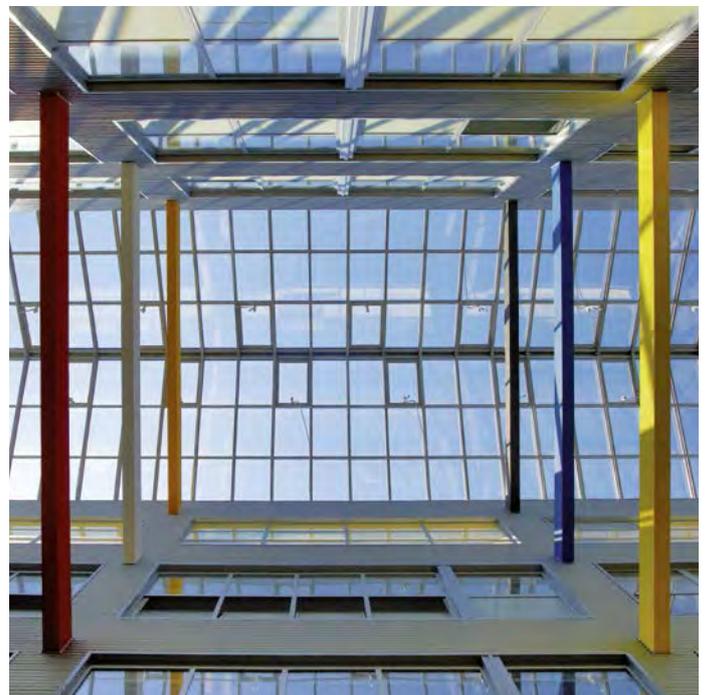


34
35

Leibniz Rechenzentrum, Garching (D)



Poljoprivredni Fakultet, Osijek (HR)



Window options | fittings

Opening types

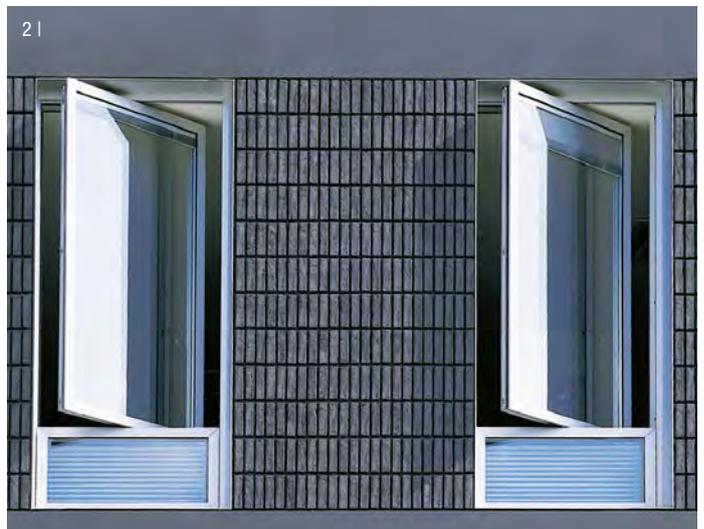
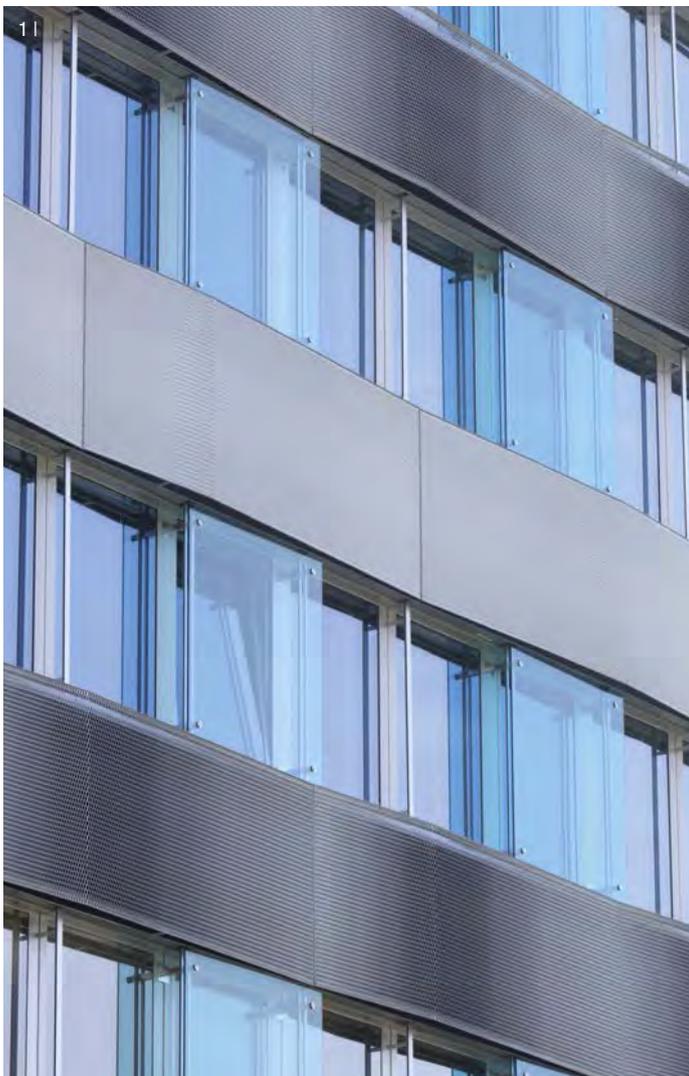
The WICSTAR fittings keep all types of opening in motion in the WICLINE window range. They are available as visible or concealed options to meet all design requirements. With a large number of types of opening and the choice of manual or motor operated sashes, WICONA covers almost all conceivable areas of application with the WICLINE window series and WICSTAR fittings.

1 | Turn / turn-tilt / tilt windows / fanlights

With 65 mm or 75 mm profile depth, WICLINE evo features the highest thermal insulation properties and structural characteristics. With its superior technical performance this aluminium window is attuned to all architectural requirements of the future.

2 | Pivot windows (vertical / horizontal)

A classic opening type becomes again a state-of-the-art product with WICONA technology: The horizontal and the vertical pivot windows based on the aluminium window system WICLINE evo



Window options

offer improved thermal insulation, have achieved high classifications in CE-testing each, and with their option of visible or concealed fittings they are a real visual highlight for any punched or façade integrated window.

3 | Tilt-slide window

In this space saving opening version the sash can be tilted or slid away to the side with ease. High operation comfort, versatile ventilation positioning without disturbing sash and the elevated technical performance values are characteristic for this opening type of the WICLINE evo aluminium window system.

4 | Top-hung / side-hung / Italian style windows

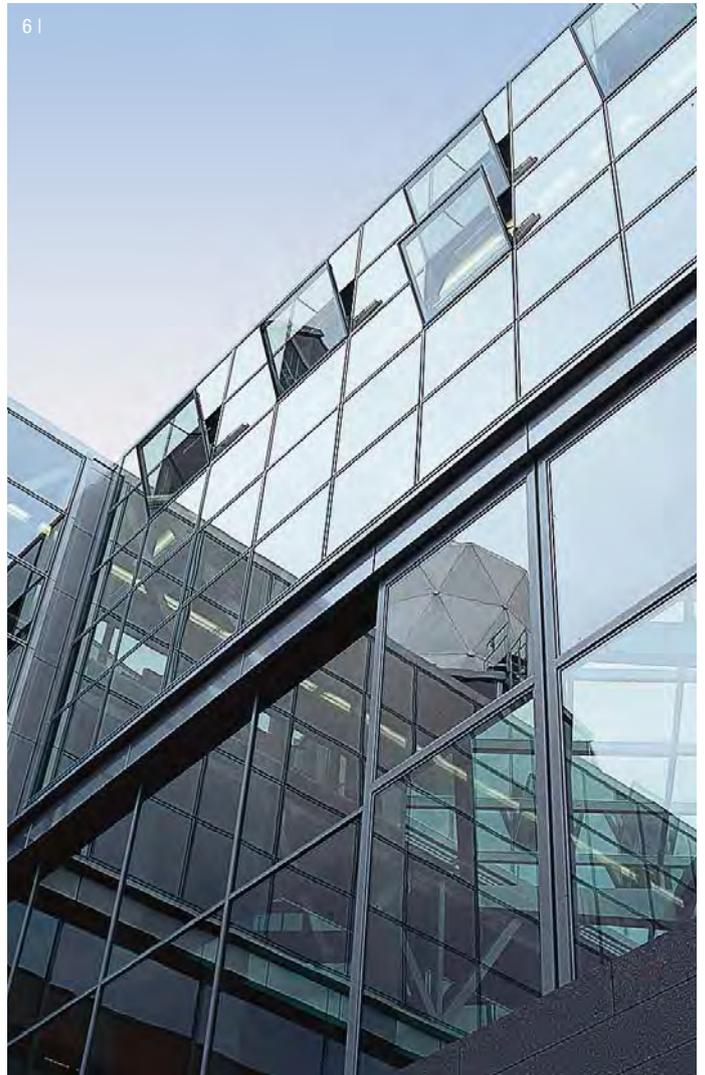
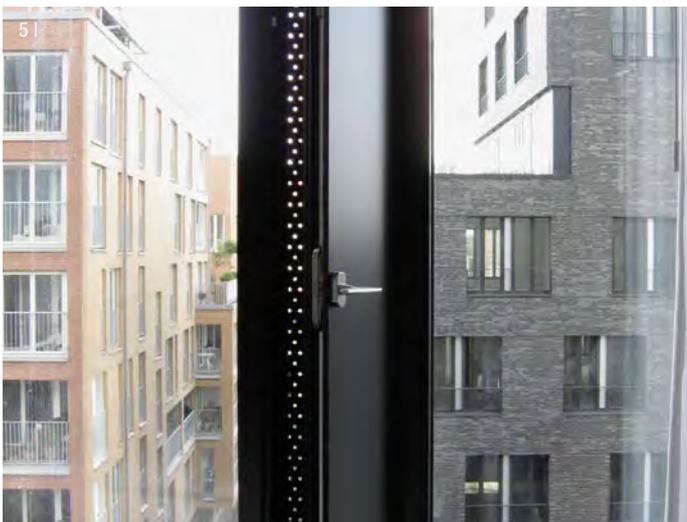
The outward opening function frequently offers substantial benefits: efficient ventilation, no disturbing sash in the room, manual or motorised operation. With its very large sash formats and optimised functions WICLINE evo features in this option a more than interesting alternative for architecture.

5 | Ventilation flap

With a thermally insulated aluminium turn sash for integration into stick façades, the WICLINE evo ventilation flap meets the frequent requirement for a manually or motor operated ventilation, adapted for perfect visual integration into the curtain wall.

6 | Smoke windows (NSHEVS)

Several window types with approval for curtain wall and skylight for a wide range of applications.

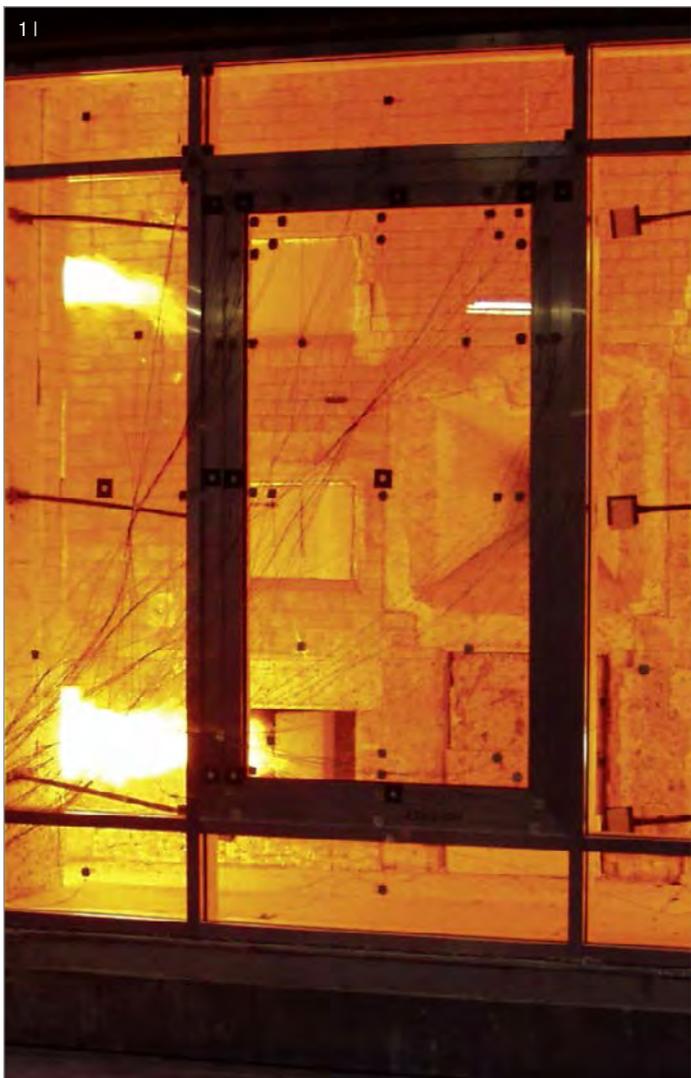


Fire protection window

1 + 2 | WICLINE 75FP fire protection window*

This special function window completes the WICONA fire protection portfolio. The design is based 100 % on the WICLINE window series and, apart from special inserts in the profiles and fittings in accordance with national regulations, does not change in the design from the standard application.

The fire protection sash can be applied as punched hole window, as window with surrounding, as fixed glazing or integrated in a WICTEC 50FP fire protection stick curtain wall.



* Safety regulations may vary depending on the country. Please ask you national WICONA sales office for the national product availability.

**Fire protection window
Design options**

WICLINE evo design options

Based on the unique WICONA Unisys technology with a wide range of different profile contours the WICLINE evo windows in both construction depths, 65 mm and 75 mm, can easily be adapted to individual design requirements. The performances, functions and opening types remain on the highest technical level.

3 | Concealed sash

Extremely slim frame for maximum light transmission and panoramic views. Very good U_w values due to optimised frame-glass ratio.

4 | Classic design

Bevelled profile contours and overlapping sashes offer a design which suits especially to residential properties.

5 | Integration sash

The ideal extension for all stick system or unitised curtain walls, available as standard or concealed sash.

6 | Barrier free threshold

Ideal for large format window doors: A barrier free and thermally insulated threshold can be executed in sashes with a size up to 1.3 m x 2.5 m (inward opening) and 1.1 m x 2.25 m (outward opening).



» Doors | Meeting with style



Hinged doors
Safety doors
Automatic sliding doors

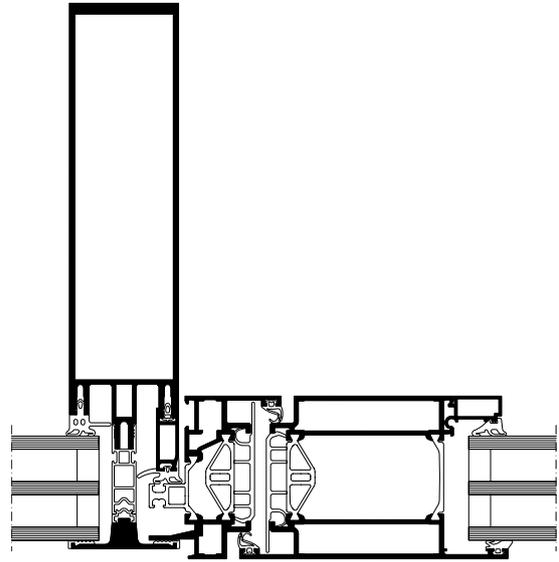
They say first impressions last – and in the case of homes and offices that applies especially to the entrance door, the building's 'calling card'. There can hardly be any other component of a structure that has to reconcile so many different criteria. Whether it is the door to a private house, a large entrance to an administrative building or a hotel, a fire protection door or emergency exit in a school, or a simple functional door for a factory: the technically-mature WICSTYLE profile systems, with their multitude of opening types, versions and expansion options enable you to realise tailor-made door solutions for any situation.



- 1 | Inova Haus, Ulm (D)
Nething Generalplaner, Neu-Ulm
Vogg Metallbau, Bibertal
- 2 | Södra Tennis Arena (S)
Doors for certified Passive House
- 3 | Vocational school, Heidenheim (D)
Spreen Architekten, München
Metallbau Dodel, Ulm / Gergeni, Heidenheim
- 4 | Private house

WICSTYLE 65 evo
WICSTYLE 75 evo
WICSTYLE 50N/65N
WICSTYLE 88

 Congress Centrum, Heidenheim (D)
Ed. Züblin, Stuttgart
Gergeni Metallbau, Heidenheim



Hinged doors

Function, design and performance

The all-rounder among the door systems offers you complete versatility for an extensive range of requirements. The perfectly tailored WICSTYLE profile systems and fittings offer you a level of flexibility that means you can satisfy both the functional requirements of public buildings and the aesthetic expectations of private clients equally. Many options enable you to create a first physical meeting point to a building according to the individually requested style and function:

Single or double sash doors, inward or outward opening, optionally with additional functions like swing doors, panic, fire resistance or finger protection, visual integration in any building and façade structure, compatibility with the WICLINE window series, individual design with in-fills up to 200 kg weight, versatile adaptation of the thermal insulation down to passive house level, an innovative integration of the lock in the thermal break zone and special covers for the fitting groove: all this turns WICSTYLE evo into a perfect symbiosis of performance and design.

You see: our technology is just waiting for your ideas.



Abendakademie, Mannheim



Door options

1 | Hinged door

With 65 mm or 75 mm profile depth, WICSTYLE evo puts itself ahead in terms of thermal insulation and physical features. Its outstanding technical performance and application range make it the ideal door solution for all current and future requirements in architecture, both in new buildings and in renovations.

2 | Leaf overlapping infills

A very homogeneous door design without any joints or gaps can be achieved with leaf overlapping infills. This option also allows for thermal insulation values until $U_g = 0.7 \text{ W}/(\text{m}^2\text{K})$.



Door options

3 | Classic design

Bevelled profile contours and overlapping sashes are characteristic for the aluminium door series WICSTYLE evo in Classic Design. This design underlines a style which is often requested for residential architecture. Ideal for new building and for energetic renovations alike.

4 | Finger protection door

Save operation through efficient prevention of squeezing or shearing risks on the hinge side, combined with the technical performance of the WICSTYLE aluminium door systems: WICSTYLE 65 evo and WICSTYLE 75 evo finger protection doors offer a maximum of advantages in one solution.

5 | Double action door

The WICSTYLE 65 evo serie offers two profile options for single and double sash doors with double action fitting. Both versions are based on the standard door serie and can perfectly be combined with it.

6 | All-glass door

All-glass doors create maximum transparency in a building. WICSTYLE all-glass doors are based on the standard serie WICSTYLE 65 evo, with many identical parts, and thus offer optimal compatibility with other door solutions within the building.



Safety door technology

Personal security and building protection need a solution approach which can be accomplished with aluminium systems in a holistic and compatible way. This is achieved by the WICONA series for windows, curtain walling and doors. Each of which can be executed in safety technology, in combination with other additional functions.

The requirements for the safety criteria in burglar resistance, bullet resistance and smoke control are achieved with the standard construction simply by addition of minor adaptations. The fire protection doors are adapted to the design of the standard series, so that a consistent door design in the entire building, including all special safety function, can be realised.

1 | Escape route and panic*

- According to DIN EN 179 (escape route) / DIN EN 1125 (Panic design)
- Can be implemented with various WICONA door systems, creating a uniform door design throughout the building
- Option of single or double-leaf design



* Safety regulations may vary depending on the country. Please ask your national WICONA sales office for the national product availability.

Safety door technology

- May be combined with RC 1 and RC 2 burglar resistance
- May be designed with fire protection in class T30 and T60 and with smoke protection

2 | Burglar resistance

- In accordance with DIN EN 1627
- Design in three module depths: WICSTYLE 65, WICSTYLE 75 and WICSTYLE 88 mm
- Easy upgrade with additional locks to the desired level of security and protection (e.g. RC 1 – RC 3)
- Can be combined with bullet resistance class FB4 in accordance with DIN EN 1522

3 | Bullet resistance

- The new window series WICLINE 65 evo and WICLINE 75 evo have been tested according to standard DIN EN 1522 in various profile combinations, and successfully been certified in class FB4 S and FB4 NS.
- Bullet resistance in classes FB4 S and FB4 NS can be achieved for various opening types, in punched hole applications or in ribbon windows, and combined with additional functions like burglar resistance.

4 | Smoke protection

- In accordance with DIN 18095 (WICSTYLE 65N)
- Flush door structures on both sides
- With butt hinges or screw-on hinges in aluminium or stainless steel
- Single and double-leaf, opening inwards or outwards
- Fixed and moveable side- and top-lights, option of glass-separating or adhesive bars

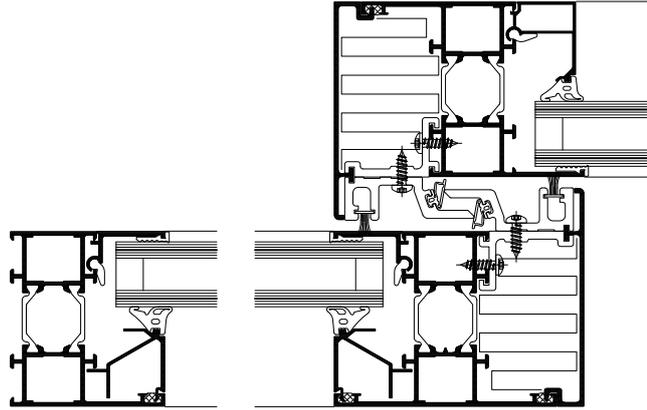
5 | Fire protection*

- Verified in accordance with DIN 4102 / DIN EN 13501-2 regulations and approved by the German Buildings Inspectorate
- In EI30 / T30 / F30 or EI60 / T60 (WICSTYLE 77FP)
- In T90 / F90 (WICSTYLE FP90)
- Compatible with WICONA standard door systems
- Extensive range of fittings for requirements such as panic functions, emergency exit locks, electric safety locks, electronic openers, revolving door drive, magnet and bolt contact



* Safety regulations may vary depending on the country. Please ask you national WICONA sales office for the national product availability.

WICSTYLE 65ED



 KABA Door Systems, Schwarzenburg (CH)



Automatic sliding doors

Saving energy with comfort

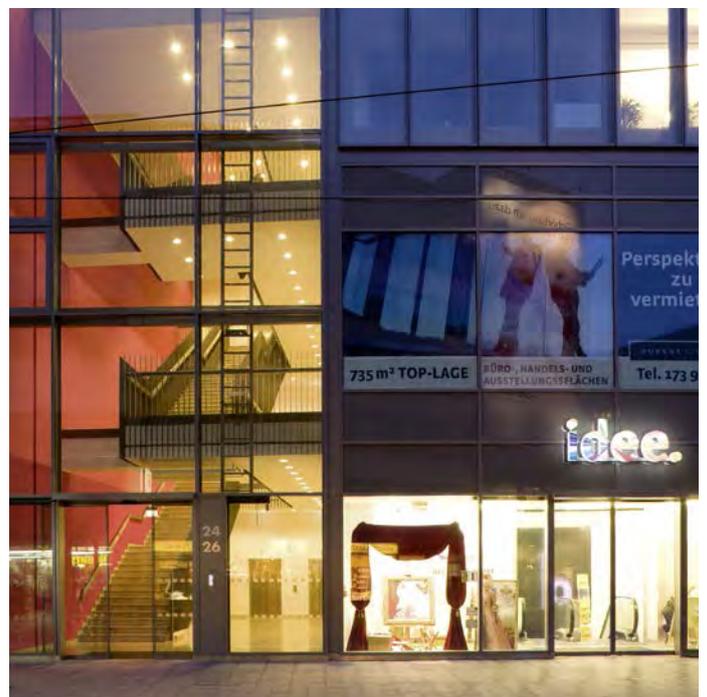
WICSTYLE 65ED, the energy-saving automatic sliding door for commercial buildings, was developed in collaboration with the Swiss global market leader Kaba-Gilgen AG, on the basis of the WICLINE 65 profile. Automatic sliding doors have short open and close cycles that have been optimised for throughput.

Therefore, when in operation they retain the largest amount of warmth within the building. A major role in energy efficiency, however, is also played by the time in which the door remains permanently shut – such as overnight. During such periods, in particular, WICSTYLE 65ED protects the building reliably against excessive energy loss, thereby making a significant contribution to improving the overall energy balance of the building. Annoying draught is efficiently avoided by multiple sealing levels and the special lock technology.

WICSTYLE 65ED combines comfort and energy efficiency with an attractive appearance due to slim sight lines, high-performance heat insulation and coordinated integration of the drive. The leaves, up to 3.0 m high, can be combined with side lights and fanlights; the whole door system can be easily integrated into a WICTEC stick façade. WICSTYLE 65ED complies with the personal safety requirements and is approved as a complete system by ift and TÜV. Upgraded types with increased burglar resistance are possible by means of an integrated multi-point locking system.



48
49



» Sliding systems | Opening spaces

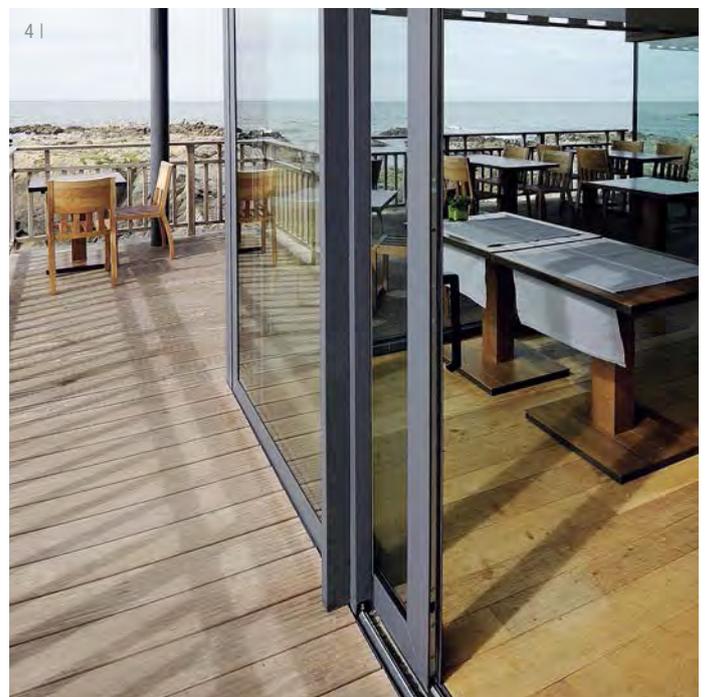


Sliding systems
Lifting sliding systems
Folding sliding systems



Simply closer to nature

Using these profile systems, you can open up large areas of living rooms, conservatories or glass extensions to the outside. WICSLIDE has the most suitable, functional solutions for all areas of application, whatever the requirements and the structural and spatial opportunities on site. Large size sash formats with slim profiles always assure fine sight lines. Robust fittings for heavy duty applications guarantee an extended life span operation. A variety of system options offer the flexible adaptation to individual thermal insulation needs. You can select from a range of sliding, lifting-sliding or folding sliding doors and windows.



- 1 | Floating Mercure, Hamburg (D)
Förster Trabitzsch Architekten, Hamburg
Hanse Metallbau, Elmenhorst / Lichtenhagen
- 2 | Villa Tønsberg, Tjøme (N)
Arkitektbygg Finn Sandmæl, Nesøya
Flex CC-Glass AS, Barkåker
- 3 | Zeppelin University, Friedrichshafen (D)
Fritz Hack, Friedrichshafen
Metallbau Schneider, Ravensburg
- 4 | Restaurant L'Océan, Le Croisic (F)
Bureau d'Achon, Nantes

WICSLIDE 65FS
WICSLIDE 160
WICSLIDE 23
WICSLIDE 26
WICSLIDE 24E | 24EN

1 | Folding /sliding door WICSLIDE 65FS

The solution for situations with only limited room for the open elements. This is for example the case in conservatories, meeting areas, conference rooms, car show rooms and hotels.

2 | Lifting /Sliding doors WICSLIDE 23 /26

Weather-resistant outdoor application or indoor-version for partitions: these series are very well suited to conservatories, swimming pools and private or commercial construction projects with large expanses of glass.

3 | Sliding doors / windows WICSLIDE 24E / 24EN

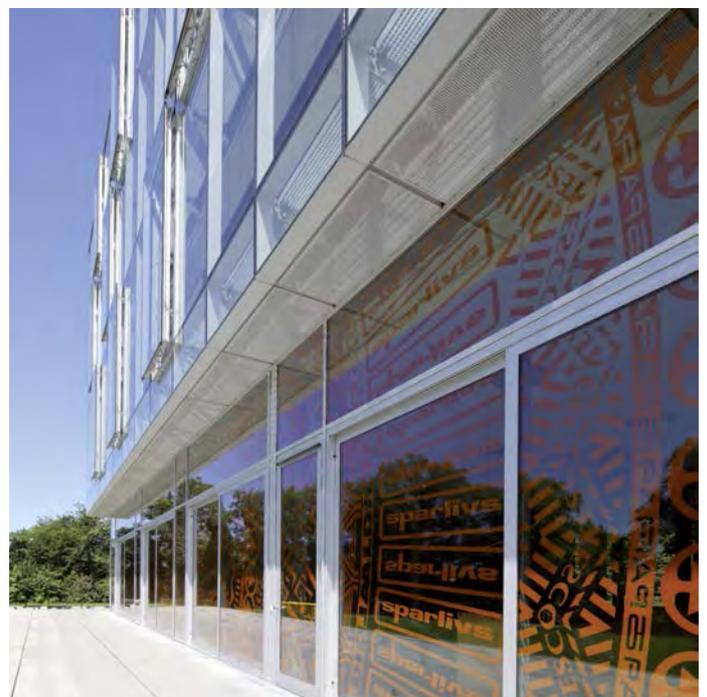
As an insulated or non-insulated frame, the system is extremely versatile. In the double or triple-track design, frames with up to six leaves and very large opening widths are possible.



Sliding system options

WICSLIDE 160

The new WICSLIDE 160 lifting sliding unit combines excellent thermal insulation with the highest functionality and design. Performing energy efficiency due to U_w values below $1.1 \text{ W}/(\text{m}^2\text{K})$, impressive leaf dimensions with weights up to 400 kg and lasting operation comfort guarantee maximum customer satisfaction. With state-of-the-art technology and innovative advantages in application WICSLIDE 160 is a high-tech product that sets new standards in comfort, weather performance and thermal insulation.



» Solar shading systems | Controlling daylight

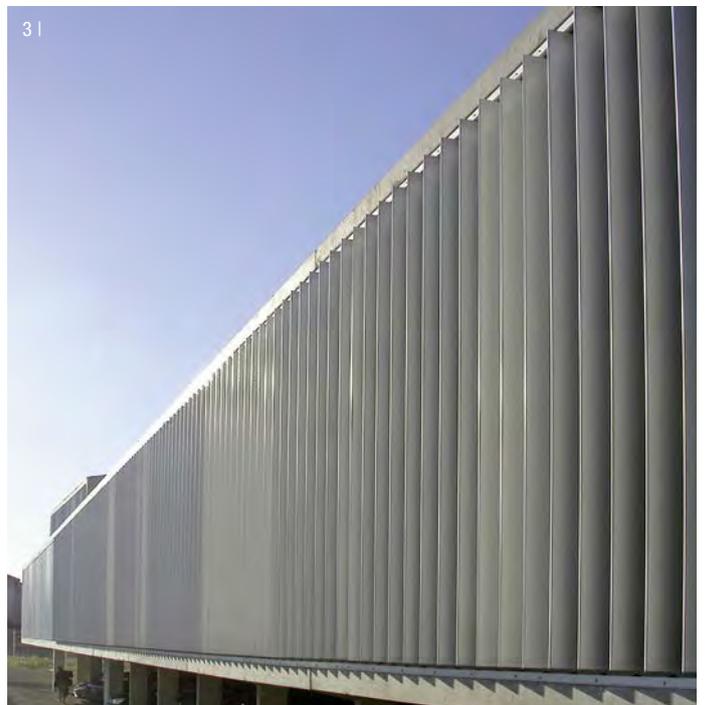


Small blades
Large blades
Integrated photovoltaics

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 solar shading 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.

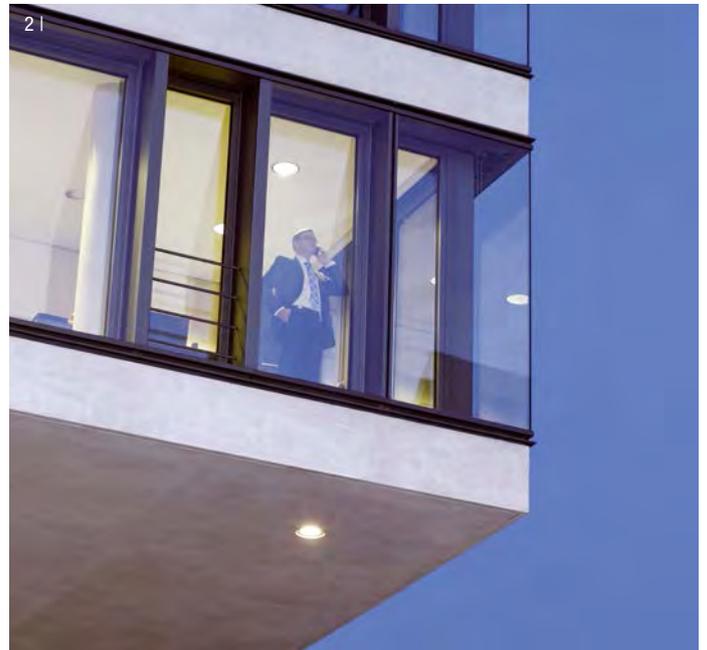
The visual contact with the exterior remains and improves the sensation of comfort. As a passive technology WICSOLAIRE can be adapted in diverse options to the individual requirements and the architectural style of the building. In combination with the WICONA window and curtain wall systems a consistent 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 photo-voltaic cells, offering an optimal orientation toward the sun for maximum efficiency.



- 1 | Horizontal large blades, motorised
- 2 | Horizontal blades, application above the façade
- 3 | Vertical rotating blades, motorised
- 4 | Integrated photovoltaics

» Protection all-inclusive



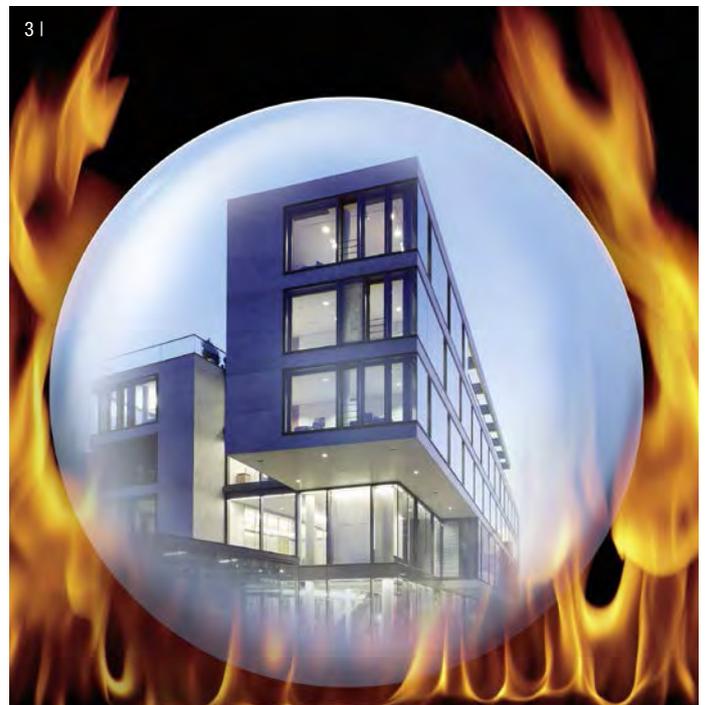


All-inclusive protection

Personal security and building protection – need a solution approach which can be accomplished with aluminium systems in a holistic and compatible way. This is achieved by the WICONA series for windows, curtain walling and doors. Each of which can be executed in safety technology, in combination with other additional functions. The requirements for the safety criteria are achieved with the standard construction simply by addition of minor adaptations.

Safety options:

- Burglar resistance: curtain walls, windows, doors, sliding elements
- Bullet resistance: curtain walls, windows, doors
- Fire protection: curtain walls, windows, doors
- Escape ways: doors
- NSHEV (Natural smoke and heat exhaust ventilation): windows for curtain wall and glass roofs



For more details please refer to the product pages or ask your WICONA sales office.



- 1 | Burglar resistance WK 1 to WK 3, RC 1 to RC 3
- 2 | Bullet resistance in class FB4
- 3 | Fire protection up to class EI30/T30, EI60/T60, T90/F90, G30/F30
- 4 | Escape ways acc. to EN 179 and EN 1125
- 5 | NSHEV in various opening types for curtain wall and glass roofs

» Unique in design and technology

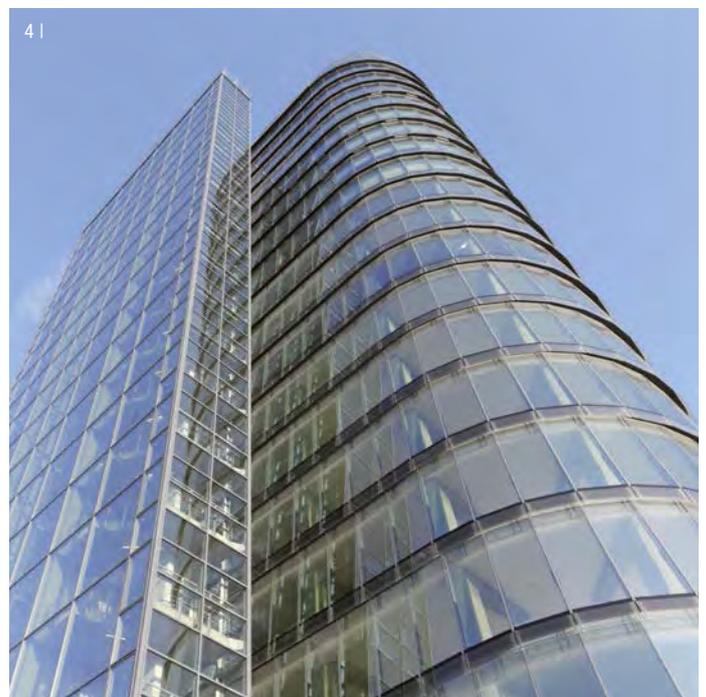
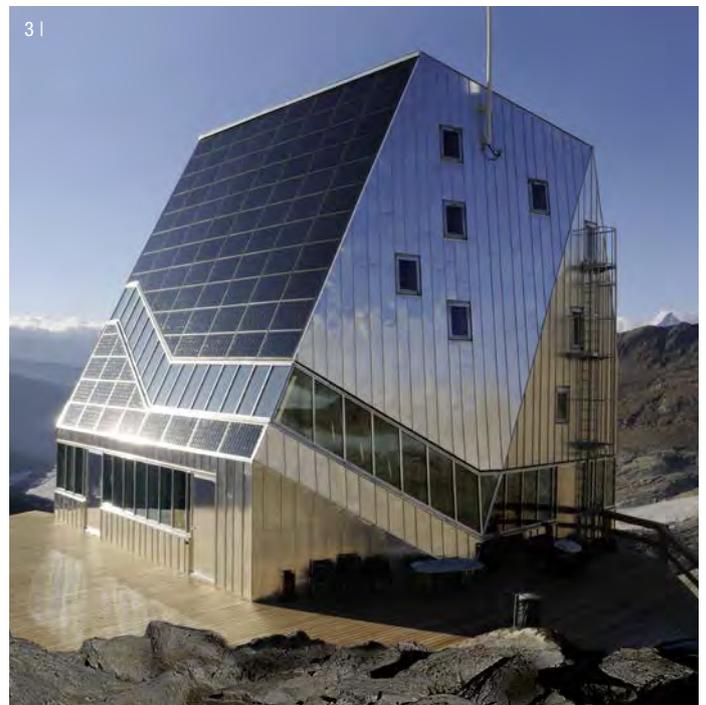


**Ideas become built reality**

WICONA is a brand that is synonymous with unique aluminium constructions that exceed all standards. Whether used in a façade to an impressive metropolitan development, as a functional door system or in windows with the aim of creating an architectural structure, each solution is individual, allowing the requirements and wishes of the customer to be met in full.

The WICONA range offers the best options for the realisation of complex design concepts, that are unique in terms of technology and aesthetics.

In the WICONA test centre these bespoke solutions can be tested in accordance with a wide range of EN standards or individual specifications, in one of Europe's most modern test centres, with possible test sample sizes of up to 10 m x 10 m. So that you can be sure that your idea can face reality.



- 1 | Tornado Tower, Doha (QT)
CICO, Qatar
Quipco, Qatar
- 2 | WICONA Test Centre, Bellenberg
Test centre for bespoke projects
- 3 | Monte Rosa Hut, Zermatt (CH)
Andrea Deplaces, Zürich
Fuxvisp, Visp
- 4 | Sign, Düsseldorf
Murphy Jahn Architekten, Berlin
FKN, Neuenstein

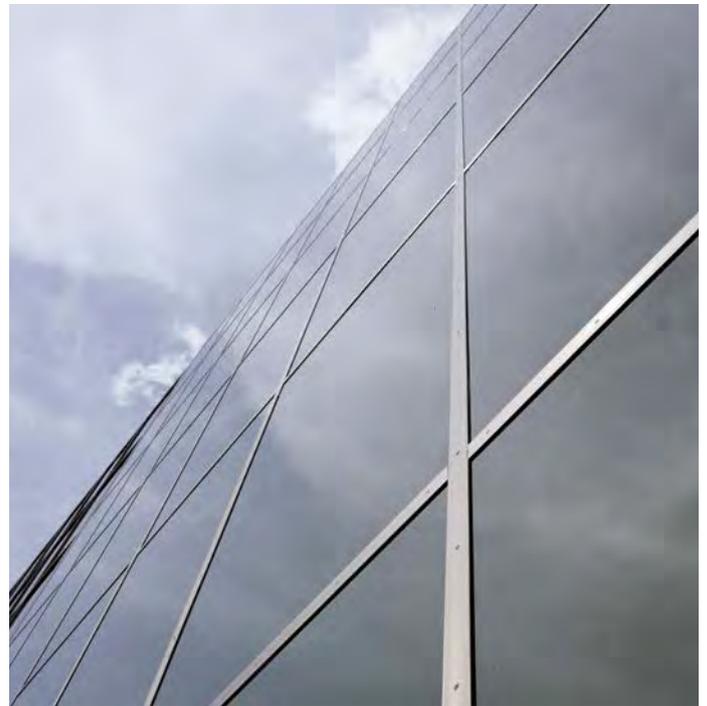
» 'Powerhouse' | Plus-energy buildings in practice



**Environmental responsibility.
We care for it – be part of it!**



The WICONA test centre demonstrates how the topic of sustainable building can be implemented in practice. The objective was to run an energy self-sufficient factory building. Over a holistic planning approach an optimum combination of façade, building service engineering and utilisation of natural resources was determined. Large-scaled window areas in the façade and the roof enable working almost without artificial light. Simultaneously there is no necessity for cooling. The need for energy for heating and artificial light arises at about 23 kWh/m²a, a value which is close to the limit value of a passive house building in residential construction. The need is covered by a photovoltaic system on the roof of the building. Furthermore the surplus obtained covers the operating energy of the test centre. Over the year the energy production is more than 100 % higher than the energy consumption of the building, making it a real power house. As a result the WICONA test centre is one of the first zero-energy factory buildings in Europe.



A special online visualisation shows day by day the real energy gains and consumption. This and further information about the WICONA test centre monitoring can be seen online under zeb-bellenberg.com

60
61



» Environmental responsibility

Building the future



Sustainability in architecture targets energy efficiency and climate protection, and allows, first and foremost, the most economical use of natural resources possible. In the future the sustainability factor of a building will increasingly become an assessment criteria for purchasers, occupiers and investors. This is expressed by the growing number of certificates for buildings, which evaluate sustainability according to set criteria. Below are some examples:

DGNB seal of quality (German Sustainable Building Council):

This requires integral planning, including the setting of sustainability goals, and takes ecological and economic factors into consideration. Hydro Building Systems is a founding member of the DGNB.

Passive House certificate:

Limits annual heating requirement to 15 kW/h per m² of living area, so that a building can be heated exclusively by passive energy sources and needs no active heating system. A U_w value of ≤ 0.8 W/(m²K) for windows and glass façades is required. The WICTEC stick system and the WICLINE 75 evo window comply with this performance.

Minergie standard (Switzerland):

The Minergie-P label for windows is awarded when a two-leaf casement window attains an insulation value of U_w = 0.8 W/(m²K). WICLINE 75 evo was the first metal window to receive the highest possible classification with the Minergie-P label.

LEED:

LEED promotes a whole-building approach to sustainability by recognising performance in location and planning, sustainable site development, water savings, energy efficiency, materials selection, indoor environmental quality, innovative strategies, and attention to priority regional issues.

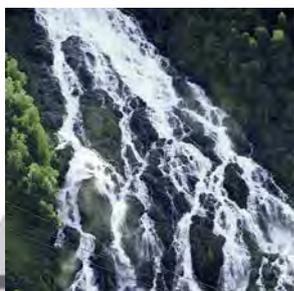
BREEAM:

Assessment and rating system for environmental performance in sustainable building design, construction and operation.

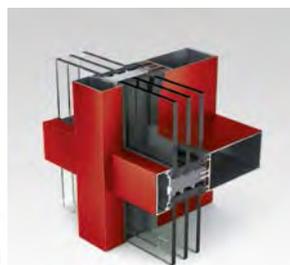


Here at WICONA, we target the sustainability of buildings not only through thermal insulation, but also consider energy efficiency and climate protection during the entire lifecycle of the aluminium building material. Our philosophy is the careful management of natural resources, starting with the aluminium production using 68 % of the energy from hydro power, up to recycling processes in our own factories.

We care for it – be part of it!



Aluminium production with hydro power



System development with eco-design



Recycling



Energy-saving application

Environmental responsibility

Aluminium is a modern material – light, strong, easily pliable, a good conductor of heat and electricity, non-magnetic, resistant to corrosion, hygienic and fully recyclable. Aluminium constructions weigh only a third of equivalent steel constructions. Aluminium is an ideal material for a maximum on sustainability:

- Aluminium is the third most abundant element on earth and is derived from bauxite
- At WICONA 68 % of the energy requirement for the aluminium production is produced by hydropower
- Aluminium has a very long lifetime: about 75 % of aluminium products ever produced are still in use today
- Just 5 % of the original energy used is needed for aluminium production from recycled materials
- Aluminium is infinitely recyclable: the recycling rate of aluminium is between 95 % and 100 % without losing quality
- Recycling of 1 tonne aluminium means: about 4 tonnes less bauxite and 9 tonnes less CO₂ emissions
- Aluminium is light: slim framing for windows and façades compared to wood, allows greater light incidence and a better usage of solar energy
- Aluminium is almost maintenance-free: no protective measures against mould, fungal infestation or corrosion, no solvents for the coating.

WICONA has the appropriate solutions

Signed and sealed: WICONA's aluminium profile constructions impressively fulfil the demanding criteria of all the above building certificates, and have therefore contributed substantially to the certification of the projects shown here. WICONA took a leading role in this field many years ago and can now draw upon decades of expertise in research and development. Thanks to this, a broad portfolio of products and services is at your fingertips, so that you too can design your building in a more sustainable and future-oriented manner.

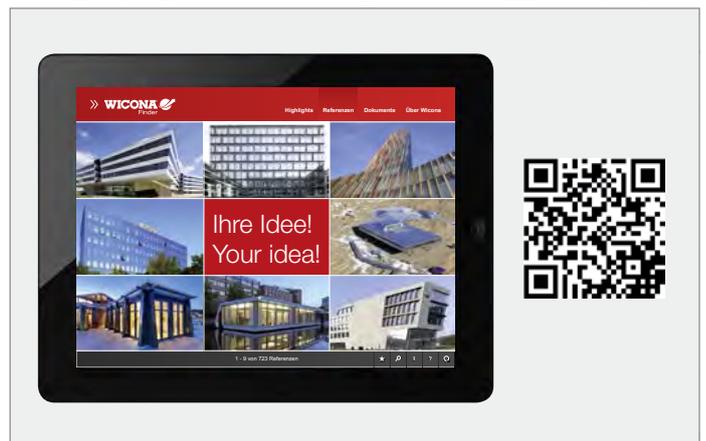
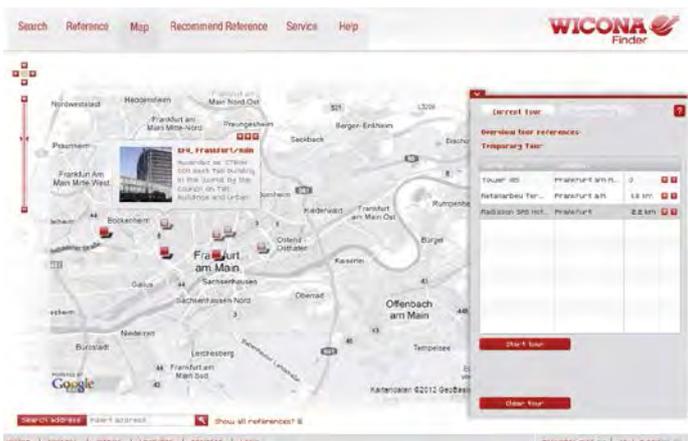
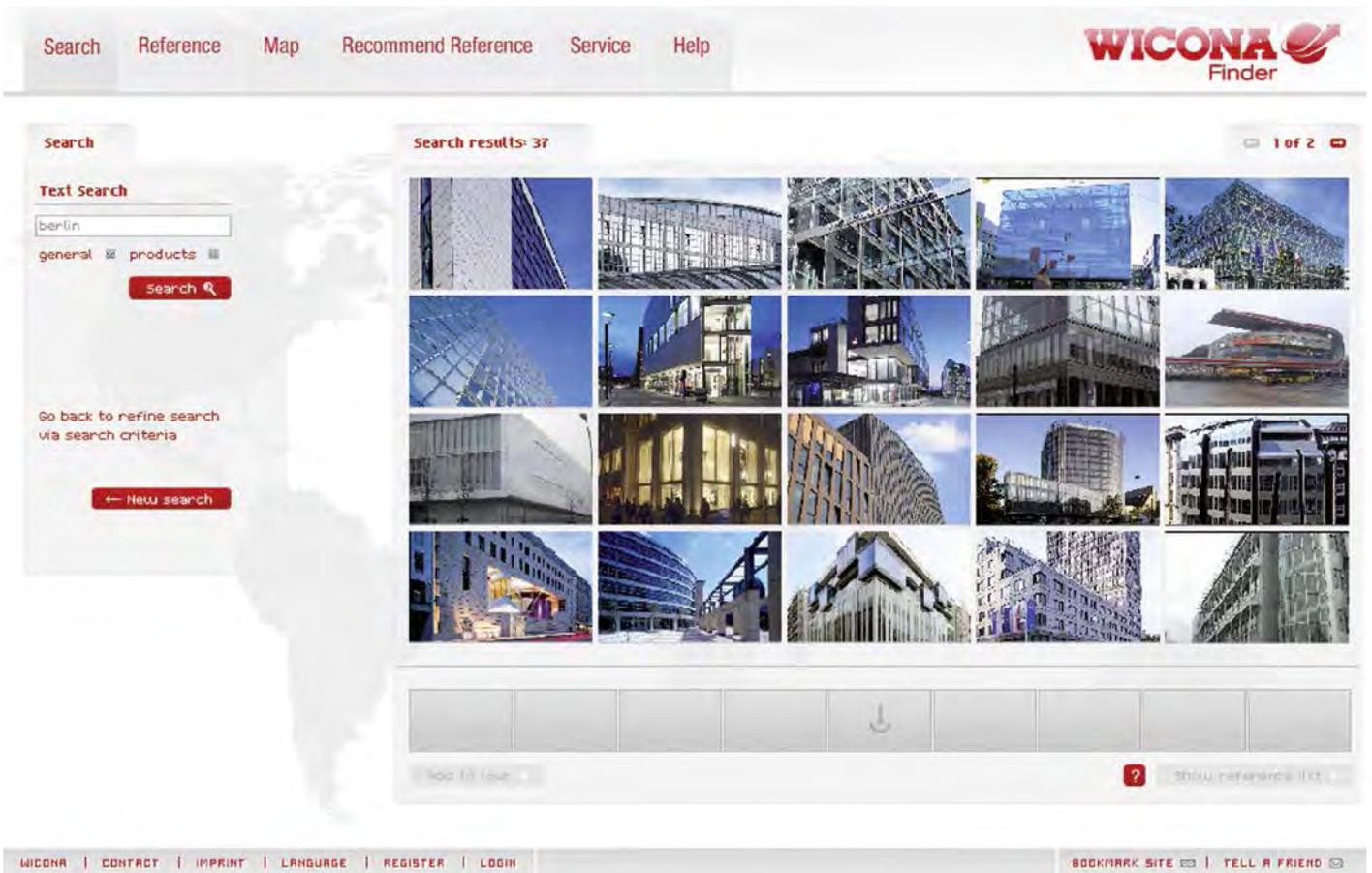


- 1 | **DEG, Cologne**
(JSK Dipl.-Ing. Architekten, Düsseldorf)
Awarded the Gold Seal of Approval by the DGNB.
Designed with a unitised WICONA double skin façade.
- 2 | **Lakeside Park, Bratislava (SK)**
Adamson Associates Architects, Toronto
BREEAM Certified. Designed with WICTEC Unitised curtain wall and WICLINE high insulation windows
- 3 | **Fire station, Heidelberg**
Kulka & Urbanietz Architekten, Cologne
Awarded the Passive House certificate from the Passive House Institute. Designed with WICTEC 50HI Passive House façades and WICLINE high insulation windows,
 $U_w \text{ total} = 0.8 \text{ W/(m}^2\text{K)}$.

» WICONA Finder | The search engine for architecture

The new internet platform with unique possibilities for architects and planners: www.wiconafinder.com. You have a specific task for a building project and want to verify your design or construction options? Here you can find examples of how similar tasks have already been implemented successfully in the real world of construction. With WICONA Finder you have straight access to detailed information about construction types, products, technical

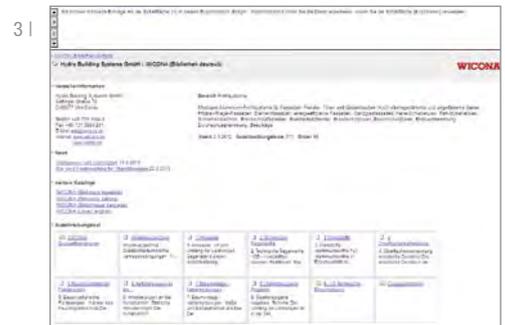
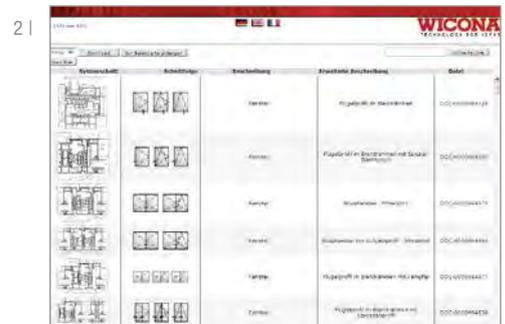
details, comprehensive documentation with pictures, section drawings and examples of application. The map function allows you to locate the references with Google maps worldwide. New references are updated constantly in all countries, so that WICONA Finder is a living 'find engine', complying to the ever changing trends in architecture.



'Technology for ideas' – also online!

Click directly into the new WICONA world on the internet. WICONA's internet site has an attractive and modern design, focusing on the benefits for you:

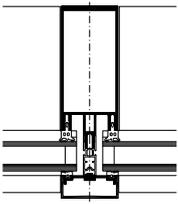
- The full range of WICONA products is displayed and documented with a wealth of detailed information, images and graphs
- All important information relating to WICONA and our products, brief and up-to-date
- A large and specialised information service for you as an architect and planner
- A clear and comprehensible user guide – you find the product information you are looking for with just a few clicks
- Rapid access to all areas specific to you under the menu header 'architects'
- A direct download of CAD drawings and application examples in .dwg and .dxf format for each product series
- An extended service via direct, usable tools, which you can find via links such as a database for tender text, for example, or software to calculate window U values



- 1 | Product presentation with details and technical information
- 2 | CAD drawings in .dwg or .dxf format for each product
- 3 | Tender text proposals in various formats
- 4 | U value calculation tool for windows

WICTEC 50 / WICTEC 60

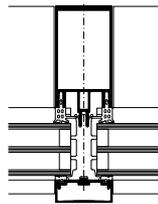
Stick curtain wall



- Sight line 50 / 60 mm
- U_i up to 1.2 W/(m²K)
- Infill thickness 3 - 63 mm
- Polygonal construction up to 90°
- Integrated solar shading (special guide rails in external cover profiles)

WICTEC 50HI

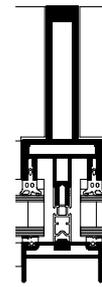
Certified passive house curtain wall



- $U_i = 0.75$ W/(m²K)
- Optimised thermal insulation
- For triple glazing from 45 mm to 51 mm
- Sight line 50 mm
- Polygonal façades / burglar resistance WK 2 possible
- Certified by the ift institute Rosenheim as passive house component

WICTEC 50

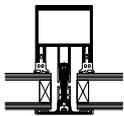
Industry design



- Profiles with technical design of steel beams
- Sight line 50 mm
- Combination with various cover profiles possible
- System technology as WICTEC 50

WICTEC 50

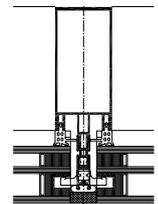
SG-Design



- Integrated pressure profiles, overlapping or flush to glass
- Profile width 43 mm or 51 mm
- No SG-approval required

WICTEC 50SG

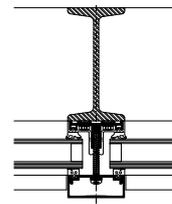
Structural Glazing



- Sight line 50 mm
- Slim line design
- For double or triple glazing
- With European Approval ETA

WICTEC 50A

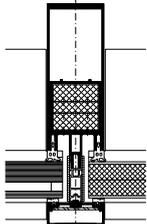
Add-on construction steel / wood



- For direct glazing on customary steel or wood profiles
- Sight line 50 mm
- For profiles from 50 mm

WICTEC 50FP / 60FP

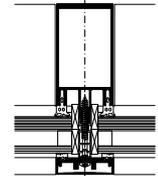
Fire protection



- Fire protection class G30 / F30
- Sight lines 50 / 60 mm
- Glass or panel up to 1.8 m x 3.0 m or 2.4 m x 1.4 m
- Sloped glazing possible up to 0°

WICTEC 50EH / 60EH

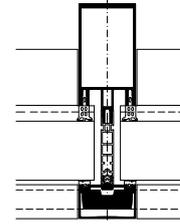
Burglar resistance



- Sight lines 50 / 60 mm
- Burglar resistance WK 1 to WK 3

WICTEC 50DH / 60DH

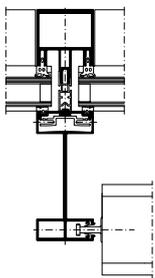
Bullet proof



- Sight lines 50 / 60 mm
- System technology of WICTEC 50 / WICTEC 60
- Bullet resistance in class FB4 with aluminium reinforcements

WICTEC 50

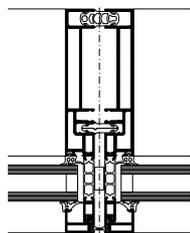
Integrated solar shading



- Guide rails and covers integrated in the pressure profile
- Sight line 50 mm
- Profiles in box- or T-shape
- Curtain wall and solar protection as an integral unit

WICTEC EL60

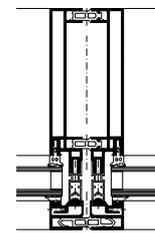
Unitised curtain wall



- Stick system technology
- U_i up to 1.6 W/(m²K)
- Sight line 60 mm
- Infill thickness up to 36 mm
- Unit size up to 2.8 m x 3.5 m

WICTEC 50EL

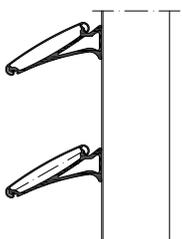
Unitised curtain wall



- Stick system technology
- U_i up to 1.4 W/(m²K)
- Sight lines 50 / 65 mm
- Infill thickness up to 44 mm
- Unit size up to 3.0 m x 3.5 m

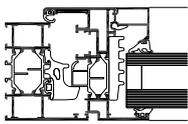
WICSOLAIRE

Solar shading



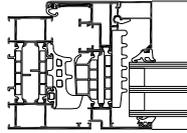
- Profile depth 100 mm to 600 mm
- Various designs
- Fixture at angles from 0° to 60°
- Application vertical, sloped or horizontal
- Integration in curtain wall or with independent structure WICSOLAIRE with photovoltaic cells
- Integration of photovoltaic units possible

WICLINE 65 evo



- U_i up to 1.3 W/(m²K), U_w below 1.0 W/(m²K)
- System depth 65 mm
- Burglar resistance RC 1 to RC 3 possible
- Bullet resistance FB4 possible

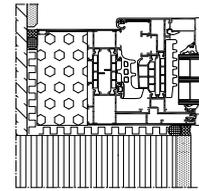
WICLINE 75 evo



- U_i up to 1.2 W/(m²K), U_w below 0.9 W/(m²K)
- System depth 75 mm
- Burglar resistance RC 1 to RC 3 possible
- Bullet resistance FB4 possible

WICLINE

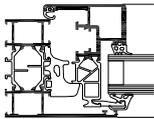
Minergie-P / Passive house



- Optimised thermal insulation, $U_w \leq 0.8$ W/(m²K)
- System depth 95 mm
- Certified Minergie-P Module (Switzerland)

WICLINE 65 / 75 evo

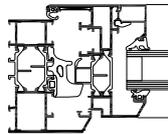
Concealed sash



- Extra-slim frames
- No sash visible from outside
- U_i up to 1.8 W/(m²K), U_w below 1.0 W/(m²K)
- System depth 75 / 85 mm

WICLINE 65 / 75 evo

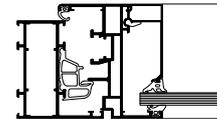
Classic design



- Bevelled profile contours with overlapping sash
- System depth 75 / 85 mm

WICLINE 65N

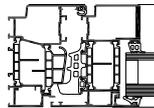
Non-insulated



- Non-insulated
- System depth 65 mm
- For interior applications

WICLINE 65 / 75 evo

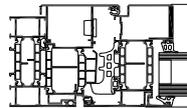
Top-hung / Side-hung window (outward)



- Punched hole window or curtain wall integration
- Sash weight up to 150 kg
- Sash dimensions up to 2.0 m x 2.0 m
- U_i up to 1.5 W/(m²K), U_w up to 0.94 W/(m²K)

WICLINE 65 / 75 evo

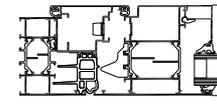
Italian window (outward)



- Punched hole window or curtain wall integration
- Concealed integrated fittings
- Sash weight up to 150 kg
- Sash dimensions up to 2.0 m x 2.2 m
- U_i up to 1.5 W/(m²K), U_w up to 1.0 W/(m²K)

WICLINE 65 / 75 evo

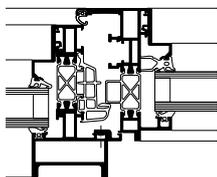
Pivot window, horizontal or vertical



- Punched hole window or curtain wall integration
- Pivot gearing integrated in the profiles or surface mounted
- Sash weight up to 150 kg (120 kg horizontal)
- Sash dimensions up to 2.4 m x 1.4 m (vertical) or 2.0 m x 2.0 m (horizontal)
- U_i up to 1.5 W/(m²K), U_w up to 1.0 W/(m²K)

WICLINE 77

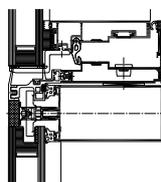
Industry design



- Steel design, ideal for renovations
- System depth 77 mm

WICLINE 90SG

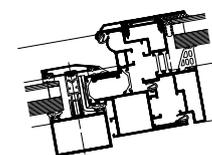
All-glass windows



- Parallel outward opening or projecting top-hung sashes in structural glazing SG Design
- System depth 90 mm
- SG design with standard glass
- Integration in stick curtain walling

WICTEC 50

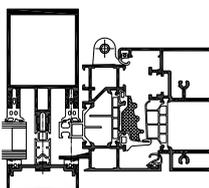
Roof light vent



- Integration sash for stick system roof lights
- Sight line 81 mm
- Opening angle up to 90°

WICLINE 75 evo

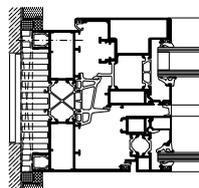
Ventilation flap



- Thermally broken, slim opening sash for manual ventilation
- Application in stick curtain wall and window constructions
- Sash width 250 mm, height up to 2250 mm

WICLINE 125

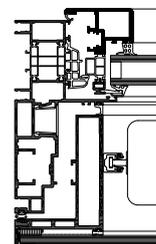
Coupled windows



- $U_w \leq 0.9$ W/(m²K)
- Coupled window with additional connected sash
- System depth 125 mm
- Sound insulation up to $R_w = 48$ dB
- Integrated sun protection

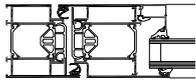
WICLINE 215

Hybrid window



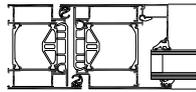
- $U_w \leq 0.7$ W/(m²K)
- Inward opening sash combined with parallel outward opening sash
- System depth 215 mm
- Sound protection up to $R_w = 57$ dB
- Integrated sun protection

WICSTYLE 65 evo



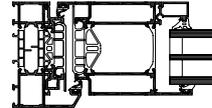
- Leaf weight up to 200 kg
- System depth 65 mm
- Burglar resistance RC 1 to RC 3 possible
- Bullet resistance FB4 possible
- Panic function possible

WICSTYLE 75 evo



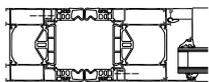
- Leaf weight up to 200 kg
- System depth 75 mm
- Burglar resistance RC 1 to RC 3 possible
- Bullet resistance FB4 possible
- Panic function possible

WICSTYLE 65 / 75 evo
Classic design



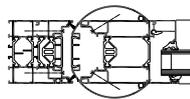
- Bevelled profile contours with overlapping sash
- System depth 75 / 85 mm

WICSTYLE 65 / 75 evo
Finger protection door



- Single or double sash, inward or outward opening
- Finger protections through special gaskets on the hinge side
- Sash weight up to 200 kg
- Sash dimensions up to 1.4 m x 2.52 m
- High tightness classifications
- U_f values up to 1.6 W/(m²K)

WICSTYLE 65 evo
Double action door



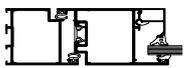
- Single or double sash, inward or outward opening
- Finger protections function also possible
- Sash weight up to 160 kg
- Sash dimensions up to 1.3 m x 2.3 m

WICSTYLE 65 evo
All-glass door



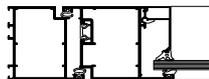
- Single or double sash, inward or outward opening
- For glass sashes with 8 mm or 10 mm glazing

WICSTYLE 50N



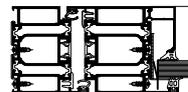
- Non-insulated
- For interior application
- System depth 50 mm

WICSTYLE 65N



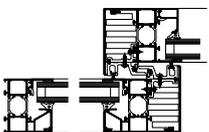
- Non-insulated
- For interior applications
- System depth 65 mm
- Smoke control function possible
- Panic function possible

WICSTYLE 77FP / 90FP
Fire protection



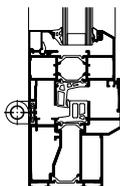
- Fire resistance class EI30 / T30, EI60 / T60, T90
- Several system depths
- Single or double sash
- Combination options with fixed glazing and fanlights
- For consistent door design with or without fire protection

WICSTYLE 65ED
Automatic sliding door



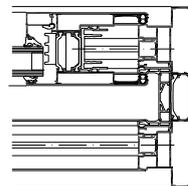
- Optimised thermal insulation, U_w up to 1.5 W/(m²K)
- Tested complete system (thermally broken profile system and drive unit)
- Identical with Kaba PSW

WICSLIDE 65FS
Folding sliding system



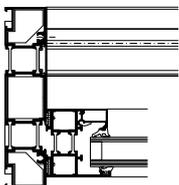
- Two to seven leafed division
- Thermal insulation, U_w until 1.3 W/(m²K)
- Leaf sizes (w x h) up to 1.10 m x 2.50 m

WICSLIDE 160
Lifting / sliding system



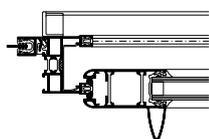
- Two-track
- System depth 160 mm
- Performing thermal insulation, U_w below 1.1 W/(m²K)
- Leaf size (w x h) up to 3.24 m x 3.40 m

WICSLIDE 23 / 26
Lifting / sliding system

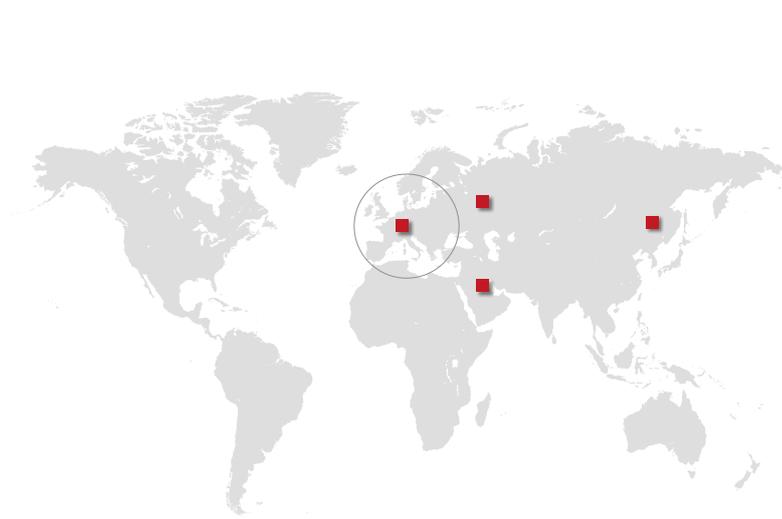


- Two- or three-track
- Optimised thermal insulation, U_w up to 1.3 W/(m²K)
- Leaf size (h x w) up to 3.50 m x 2.60 m

WICSLIDE 24E / 24EN
Sliding system



- Two- or three-track
- Optimised thermal insulation, U_w up to 1.3 W/(m²K), or non-insulated
- Leaf size (h x w) up to 1.80 m x 2.50 m



Austria

5201 Seekirchen
 ☎ +43 6212 2000
 ✉ info@wicona.at

Benelux

2260 Oevel
 ☎ +32 14 249999
 ✉ info@wicona.be
 ✉ info@wicona.nl

Czech Republic

63900 Brno
 ☎ +420 543 422030
 ✉ info@wicona.cz

Denmark

7430 Ikast
 ☎ +45 7020 2048
 ✉ info@wicona.dk

España

08195 Sant Cugat del Vallès
 Barcelona
 ☎ +34 902 222323
 ✉ info@wicona.es

Estonia / Latvia / Lithuania

11317, Tallinn
 ☎ +37 2657 6635
 ✉ info@wicona.lt

France

02200 Courmelles
 ☎ +33 3 23598200
 ✉ info@wicona.fr

94388 Bonneuil-sur-Marne Cedex
 ☎ +33 1 45138000

Germany

89077 Ulm
 ☎ +49 731 3984-0
 ✉ info@wicona.de

47051 Duisburg
 ☎ +49 203 45046-0

04315 Leipzig
 ☎ +49 341 989795-0

64646 Heppenheim
 ☎ +49 6252 6736-0

Hungary

1031 Budapest
 ☎ +36 (1) 4533457
 ✉ info@wicona.hu

Ireland

Dublin 22, Eire
 ☎ +353 1 4105766
 ✉ info@wicona.ie

Italia

20063 Cernusco sul Naviglio MI
 ☎ +39 02 924291
 ✉ info@wicona.it

Norway

0283 Oslo
 ☎ +47 22 422200
 ✉ info@wicona.no

Poland

03-828 Warszawa
 ☎ +48 22 3308170
 ✉ info@wicona.pl

Russia

123995, Москва
 ☎ +7 495 207-75-30
 ✉ info@wicona.ru

Sweden

352 45 Växjö
 ☎ +46 470 787400
 ✉ info@wicona.se

Switzerland

5506 Mägenwil
 ☎ +41 62 88741-41
 ✉ info@wicona.ch

United Kingdom

Wakefield WF5 9TG
 ☎ +44 845 6028799
 ✉ info@wicona.co.uk

Africa / Asia / America

31037 Toulouse
 ☎ +33 5 61312626
 ✉ info@wicona-int.com

China

Tongzhou District, Beijing, PRC 101102
 ☎ +8610 60595686
 ✉ info@wicona.cn

Qatar

Doha
 ☎ +974 44 912552
 ✉ info@wicona-int.com



FENSTERTEK

Fenster Tek Ltd

117 - 5718 1a Street SW
Calgary, AB T2H 0E8
403-475-6403
Info@fenstertek.com

www.wicona.com