

WICONA®

TECHNOLOGY FOR IDEAS

Shaping the future





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.



WICONA
TECHNOLOGY FOR IDEAS



why **WICONA** ?

What is WICONA's fundamental aim with products for the design of building envelopes?

Which particular properties and features predetermine WICONA as a partner for architects and planners?

Which specific support options for architects and planners can WICONA offer?

What are for WICONA the most important present and future topics for aluminium building architecture?



Arnd Brinkmann
Managing Director
Hydro Building Systems GmbH

At WICONA, the outstanding aesthetics, creative freedom and high modularity of the structural components create a harmonious complete unit. We are market leaders in the design of CO₂-neutral and energy-saving building ideas and already possess numerous first-class ratings from sustainability certificates, such as the DGNB. The WICONA brand stands for the highest level of quality, in line with the motto „German technology & engineering“. This is both what we aim for and what we measure our achievements against.

Decades of experience and high competence in the areas of building physics, material properties and construction in connection with aluminium profiles characterize our company. That know-how - especially in the field of research and development - materialize in elementary properties such as tightness, freedom of maintenance and longevity. Through a high degree of prefabrication in the workshop, we increase the precision, enhance work safety and reduce work on site.

Our support out of a broad range of services is tailored to individual needs. It is primarily our direct support on the ground where we can score, such as constructive or building physics issues in fields like statics or U-value calculations. To this end, there is a comprehensive network of WICONA experts helping, for example, in tenderings processes. Our perception of competence consists in assistance of the architect in dealing with complicated rules and regulations. We also offer tools such as the WICTIP online database which simplify and accelerate the tasks of the planner.

Energy efficiency and climate change are quite clearly our priorities. We want to extend our competitive advantage in this field even further and show on the basis of buildings using our products the huge optimization potential available - for new buildings, but even more so for older buildings. Systems such as the self-sustaining TEmotion façade is one example illustrating in which direction we think. For the implementation of this strategy, we need planners and architects who are on the same wavelength.

that is why **WICONA**



Windows



Sliding elements



Façades



Doors

Perfection of

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the building envelope



6



7



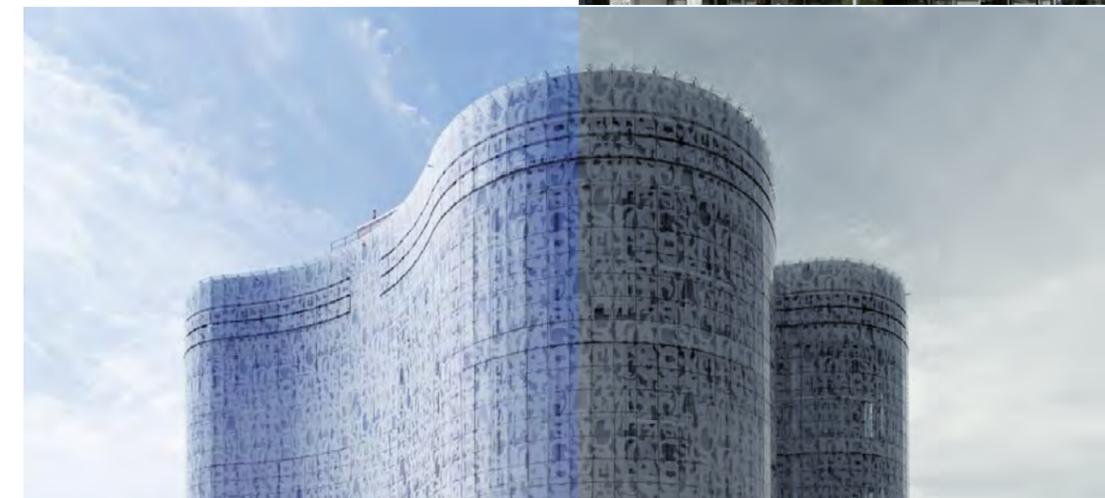
Design ideas

WICTEC[®]
Façade system

- Stick façades
- Unitized façades
- Double skin façades
- Structural glazing façades
- Window façades
- Self-sustaining façades



FAÇADE SYSTEM

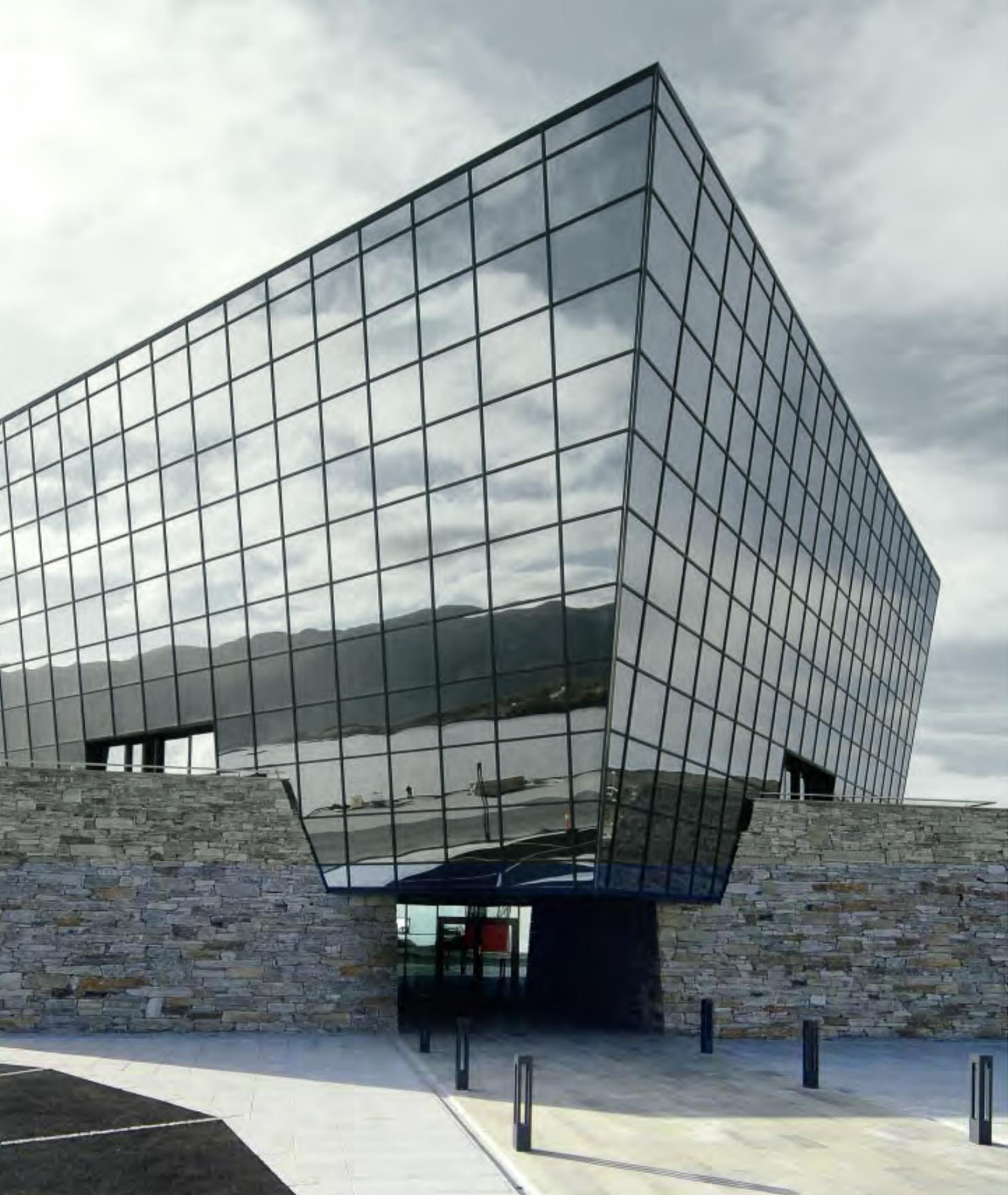


01

SpreePalais at the Dome
Berlin, Germany

Architects:
Nägele Hofmann
Tiedemann & Partner GbR
Frankfurt/Main

Metal construction:
Geerds Groß Welzin GmbH
Groß Welzin



01

Havila Shipping ASA
Fosnavåg, Norway

Architects:
Sporstøl Arkitekter AS
Fosnavåg

Metal construction:
John Holvik AS



WICTEC[®] – Slim sight lines Stick façades

WICTEC 50 WICTEC 60

WICTEC stick façades are the flexible, tried-and-tested versatile solutions 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 construction achieves a particularly delicate façade design. Additional functions for safety and maximum heat insulation with U_w -values to below $0.8 \text{ W}/(\text{m}^2\text{K})$ can be met at very small additional expense without influencing the appearance.

WICTEC 50 stick façade



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



WICTEC 50HI High insulation façade

With appropriate glazing, enables Passive House constructions, such as the Heidelberg Fire Station for example.

WICTEC 50A

Add-on construction for direct glazing on supporting structures made from wood or steel.



WICTEC 50 with SG look

With integrated pressure profiles, façade aesthetics similar to structural glazing can be achieved - economic, efficient, without silicon joints and glass retainers.



WICTEC 50 Industry contours

Slender general design by means of particular stick profiles with a technical structure which looks like steel T-profiles or IPE beams.



WICTEC 50 with integrated sun protection

Guide rails incorporated into external cover profiles optimise the interplay between façades and sun protection.



WICTEC Glazed extensions and conservatories

The ideal opportunity to create sophisticated geometries, such as in conservatories, atriums, leisure pools or spas.

WICTEC® – Slim all-rounder Stick façade variants

WICTEC 50 and WICTEC 60 are the basic versions of the stick façades 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 various system variants and enhancement options, all of which are feasible with minor additions to the system and without compromising on appearance.

Safety

Fire protection

- Fire resistance class G30 / F30
- Compatible and visually identical to WICTEC 50 and 60 standard façades
- Fillings: glass or panel
- Pane sizes:
Vertical format up to 1800 x 3000 mm,
Horizontal format up to 2400 x 1400 mm
- Use in internal and external areas
- For façades and overhead glazing



Burglar resistance

- Resistance classes of WK 1, WK 2 and WK 3 can be attained by means of slight additions
- Façade construction based on standard WICTEC 50 or 60 façade
- Visually identical to standard systems
- Glazing in accordance with DIN EN 356
- Can be combined with additional façade variants, windows and doors



Bullet resistance

- Attains bullet resistance class FB4 in accordance with DIN EN 1522
- Façade construction based on WICTEC 50 or 60
- WICLINE 65 and 77 integration windows as well as WICSTYLE 65 and 77 doors in the same bullet resistance class





01

Duravit AG
Hornberg, Germany

Architect:
Fritz Wöhrle
Freier Architekt
Hornberg

Metal construction:
Haser Metallbau GmbH
Haslach i. K.



WICTEC[®] – Plannable efficiency Unitized façades

WICTEC EL60
Unitized façade

WICTEC EL
WICTEC 50EL
WICTEC EL60

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



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



WICTEC® – Twice the protection Double skin façade



WICTEC DuoWall

DuoWall is a façade concept that opens up new approaches based on WICONA systems. Today's building trade 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.

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. 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.

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. Construction technology, sun protection or other functional elements can be integrated easily.



DOUBLE SKIN FAÇADE

WAREMA Competence Centre
Marktheidenfeld, Germany

Architect:
Jens Geisendörfer Dipl.-Ing Architekt
Wurzburg
Metal construction:
Schmelz Metallbau GmbH & Co. KG
Korbach

01



WICTEC® – Shining views Structural glazing façade

WICTEC 50SG
Structural Glazing Façade

WICTEC 50SG

Façades made entirely of glass have a firm place in contemporary architecture and create impressive building elevations. Using WICONA systems, extremely delicate outside elevations without visible glazing beads and which only have narrow joints are possible, including opening elements and insulating glazing. Based on the WICTEC stick façade, these versions can be created to the most demanding technical specifications, simply and economically.



The delicate appearance with and without silicon joints between the individual glazed elements is characteristic of WICTEC 50SG. The system offers structural glazing technology with insulating glass and can be inserted in façades as well as in glass roofs.



WICTEC® – Appearance and technology in harmony

Window façade

WICTEC FF
Window façade



WICTEC FF

WICTEC FF combines window technology with the appearance of a curtain wall in an ideal manner, using slim profile elevations of 80 mm throughout, which have an identical appearance whether fixed glazing or opening elements are used. Thermal insulation is very effective in the WICTEC window façade, similarly to the WICONA window system WICLINE 77. As openable integration elements WICLINE 77 range windows with concealed sashes as turn, turn/tilt, tilt and double vent windows are possible.

As a punch window or ribbon glazing, the aim is for the exterior design to show a window structure or, alternatively, reflect the style of a stick façade with cover profiles that can be clipped on. The glazing can be installed so as to span storeys and sections, as a cold-warm façade. This technology therefore offers an ideal solution to the renovation of buildings with ribbon glazing on parapets.

Airport Terminal 2
Hamburg, Germany

Architects:
von Gerkan, Marg und Partner Architekten
Hamburg
Metal construction:
Konrad Lindhorst Metallbau GmbH
Lindhorst Metallbau GmbH
Fertigungszentrum GmbH
Berlin



WICTEC® TEmotion – Self-sustaining multifunctional façade

TEmotion –
Integrated technology modules



TEmotion - Façade technology of the future

TEmotion is an intelligent façade concept with integrated 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. 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 dazzle-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. As all the building technology is integrated into the vertical elements, the building 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 façade elements, 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 elements. You can rely on the WICONA team to support you throughout your project, with the benefit of their comprehensive experience and skills.

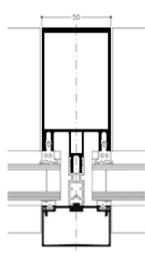
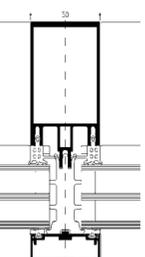
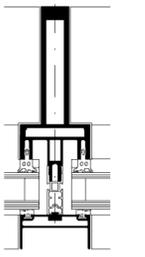
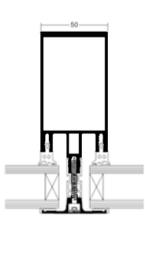
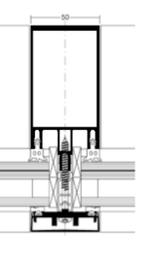
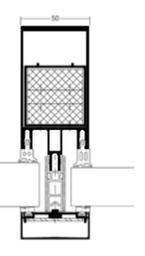
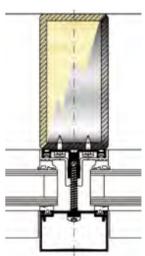
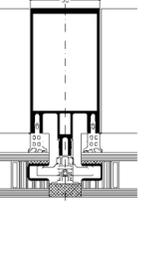
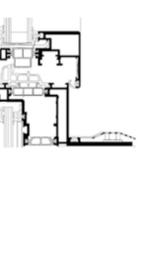
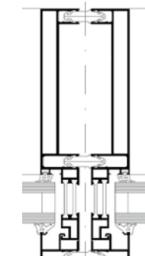
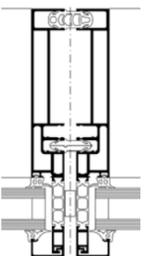
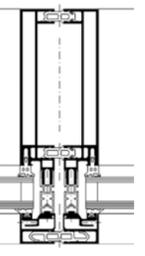


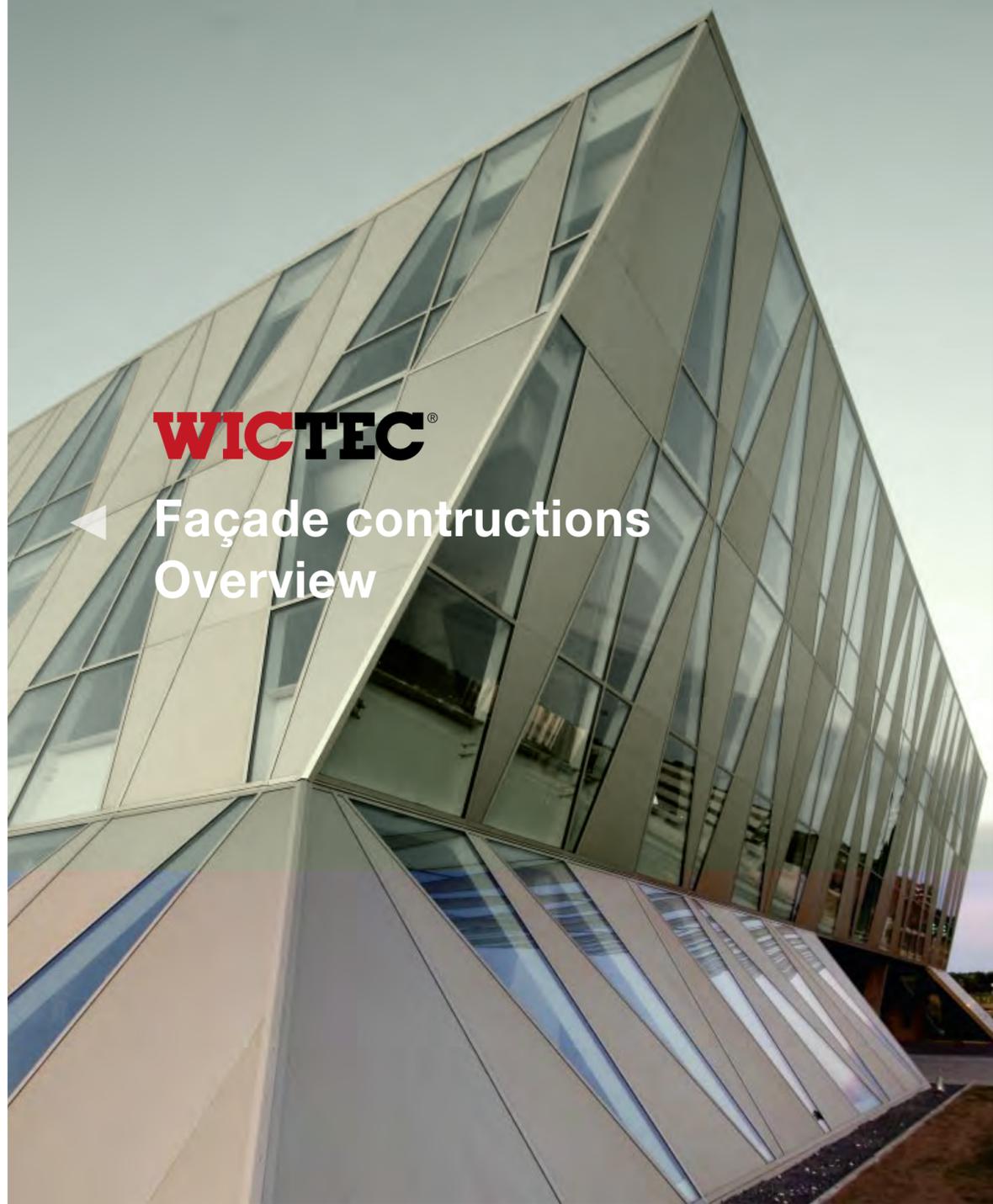
WICONA Technology Centre
Bellenberg, Germany

01

SELF-SUSTAINING FAÇADE

WICTEC® Façades

<p>WICTEC 50/ WICTEC 60 Stick façade</p>  <ul style="list-style-type: none"> - sight lines 50/60 mm - U_i up to 1.2 W/(m²K) - infill thicknesses 3 - 51 mm - Polygon façades and corners up to 90° - special pressure profile available with a concealed guide for integrated sun protection 	<p>WICTEC 50HI Passive House</p>  <ul style="list-style-type: none"> - U_i up to 0.75 W/(m²K) - optimised heat insulation - triple glazing of 45 to 51 mm - sight line 50 mm - Polygon / WK 2 burglar resistance possible 	<p>WICTEC 50 Industrial façade</p>  <ul style="list-style-type: none"> - profiles with technical structure of open steel profiles - sight line 50 mm - can be combined with various pressure profiles - system technology as in WICTEC 50
<p>WICTEC 50 SG-Design</p>  <ul style="list-style-type: none"> - integrated pressure profile, available flat on or flush with the glass - elevation width of 43 or 51 mm - no SG approval necessary 	<p>WICTEC 50EH/60EH Burglar resistance WICTEC 50DH/60DH Bullet resistance</p>  <ul style="list-style-type: none"> - sight line 50/60 mm - WK 1 burglar resistance up to WK 3 - with pressure profile reinforcement - bullet resistance class FB4 possible 	<p>WICTEC 50FP/60FP Fire protection façade</p>  <ul style="list-style-type: none"> - fire resistance class G30/F30 - sight line 50/60 mm - glass or panel up to 1.8 x 3.0 m or 2.4 x 1.4 m - overhead glazing possible
<p>WICTEC 50A Steel/wood mounted constructions</p>  <ul style="list-style-type: none"> - for wood profiles, steel tubes and open steel profiles - sight line 50 mm - width of the supporting profile from 50 mm 	<p>WICTEC 50SG Structural glazing façade</p>  <ul style="list-style-type: none"> - sight line 50 mm - extremely slim joint - infill thicknesses up to 40 mm - with silicon joints or EPDM gasket 	<p>WICTEC FF Window façade</p>  <ul style="list-style-type: none"> - sight line 80 mm fixed glazing and opening elements - cold-warm façade possible - infill thicknesses up to 59 mm - sash weight up to 130 kg
<p>WICTEC EL Unitized façade</p>  <ul style="list-style-type: none"> - sight line 60/70/90 mm - infill thicknesses up to 41 mm - unit sizes up to 4.0 x 4.0 m 	<p>WICTEC EL60 Unitized façade</p>  <ul style="list-style-type: none"> - on a stick basis - U_i up to 1.6 W/(m²K) - sight line 60 mm - infill thicknesses up to 36 mm - unit sizes up to 2.8 x 3.5 m 	<p>WICTEC 50EL Unitized façade</p>  <ul style="list-style-type: none"> - on a stick basis - U_i up to 1.4 W/(m²K) - sight line 50/60 mm - infill thicknesses up to 44 mm - unit sizes up to 3.0 x 3.0 m



WICTEC[®]

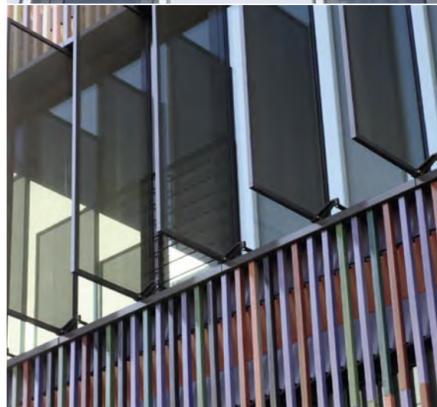
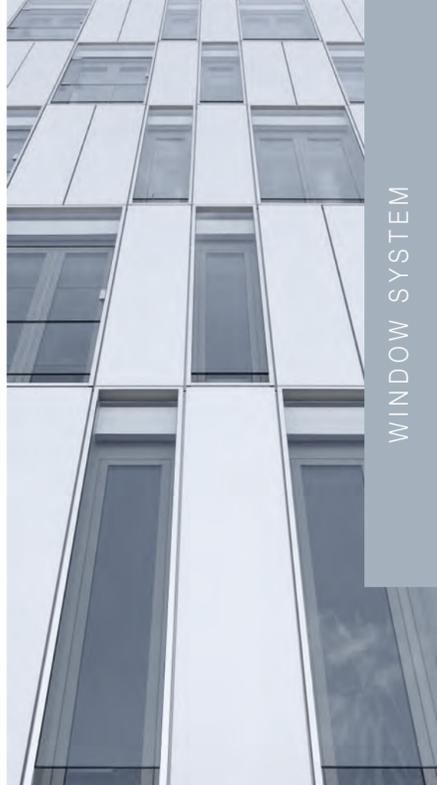
◀ Façade constructions
Overview



Conferring character

WICLINE[®]
Window system

- Punch and ribbon windows
- Coupled windows
- Insertion windows
- Window variations
- Opening types and fittings



WINDOW SYSTEM

01

NRGi Office Building
Århus, Denmark

Architects:
Schmidt Hammer Larsen A/S
Århus
Metal construction:
Marius Hansen Facader A/S
Hasselager

02

Accademia di Architettura
Mendrisio, Switzerland

Architect:
Soliman Amr & Zurkirchen Patrik
Dipl. Arch ETH/SIA
Zurich
Metal construction:
BTF Costruzioni Metalluche SA
Vezia TI



AXA Colonia AG
Cologne, Germany

Architect:
van den Valentin – Architektur
Cologne

Metal construction:
Beaujean Fassadentechnik GmbH
Aachen

02



WICLINE 77IK with industrial contours
for historical buildings

WICLINE® – Function in design

Punch & ribbon windows

WICLINE 65 / 65HI / 65N
WICLINE 77 / 77HI / 77IK
WICLINE 125

The classic use of aluminium windows is the high-quality execution of punch or ribbon windows in the construction of apartment blocks and in offices, industrial and commercial structures. In new buildings, WICONA window solutions allow durable and energy-efficient solutions to be planned and executed from the outset. WICONA systems also offer a suitable concept for renovation projects with special profile geometries. 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.

WICLINE 77
Punch / ribbon window



Almost all relevant areas of application are covered with the three profile depths of 65, 77 and 125 mm. In the face of constantly increasing energy prices and the necessary-climate protection, heat insulation is one of the most important topics when it comes to window profiles. The range includes various insulating options up to high-quality energy saving windows, with which U_w values down to 1.0 W/(m²K) can be achieved. A non-insulated profile variation is available for use inside buildings.



TOP-Window

WICLINE® – Combined comfort Coupled windows

WICLINE 125 TOP-Window

TOP-Window is the innovation in WICONA coupled windows. Already with standard glazing, it offers increased sound insulation for closed windows. Values of 39 to 57 dB can be reached according to the type of glazing. Even with the window open, TOP-Window effectively reduces the noise level from the outside. The integrated sun protection is effective with a slimline depth and is protected against dirt and weathering. In addition to a pleasant indoor temperature, it also noticeably optimises energy consumption. Depending on the type of glazing, the TOP-Window offers high energy efficiency with U_w values of 1.2 W/(m²K) to 0.65 W/(m²K). 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 pleasant indoor temperature and lowers energy consumption.

WICLINE 125
Coupled window



Those who require more protection against environmental influences, can add an extra layer: 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. Optimised sound insulation, maximised energy savings through increased heat insulation up to $U_w=0.9$ W/(m²K), 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.



Off Road Publishing
Ottobrunn, Germany

Architects:
Büro Gruber und Simon
Aschheim

Metal construction:
Gergeni Metallbau GmbH & Co.
Heidenheim



WICTEC 50
Sky lights

WICLINE® – Structure for façades Insertion windows

WICLINE 65 insertion window in the
WICTEC 50 stick façade



WICLINE 65 / 65HI / 65N
WICLINE 77 / 77HI / 77IK
WICLINE 125
WICTEC SG-Top-hung
windows
WICTEC 50 Sky lights

The flexibility and wide range offered by WICTEC façade systems are perfectly matched by the individuality with which opening elements from the WICTEC and WICLINE ranges can be integrated into glass façades and roofs. Precise coordination of heat insulation up to the highest values, slim elevations of profile geometries with special outer frames, freedom to choose from an extremely wide range of opening types – with WICLINE window ranges you will find the right solutions, whatever your requirements are.

In addition to the visually harmonious integration in available façade structures, WICONA insertion windows are characterised by their high functionality. Inwards or outwards opening can be carried out manually or by motorised operation. Various system variants enable flexible adaptation to required heat insulation criteria.

Horizontally and vertically pivoted windows

For every building the right version thanks to an extensive range of fittings.



Ventilation vents

Heat insulated aluminium turn sashes (WICLINE 77 profile) can be integrated into stick façades for manually-operated ventilation. Ideal for office and hotel buildings.

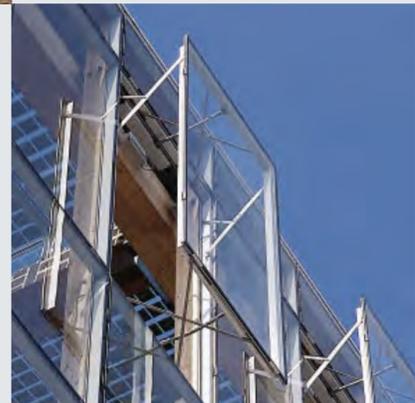
Burglar resistance / Bullet resistance

Safety aspects can be implemented easily and in various levels of protection without jeopardising the appearance with WICLINE.



Industrial contour

WICLINE 77IK creates a distinctive appearance with aluminium transom-crossbar profiles in steel design.



Special windows

If the extensive range of systems does not meet your requirements, we also develop individual special solutions.

NSHEV windows

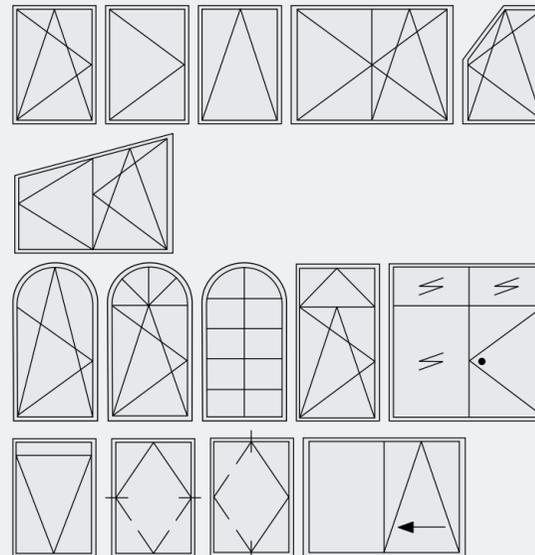
WICONA also introduces great design freedom with the NSHEVs (Natural smoke and heat exhaust ventilation systems) with an extensive range of approved window variants for façades and glass roofs.



WICLINE® – Functional diversity

Window variants / Fittings

Types of opening



WICSTAR E-TecDrive

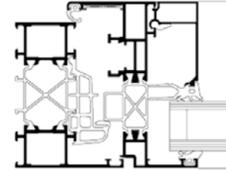
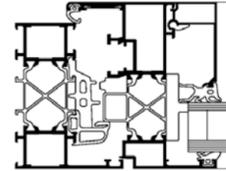
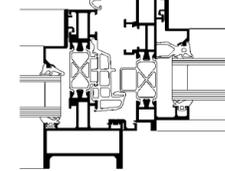
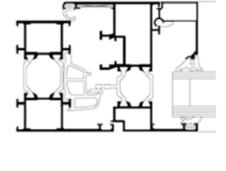
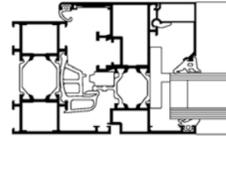
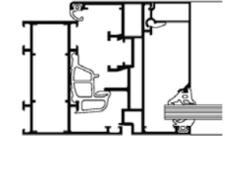
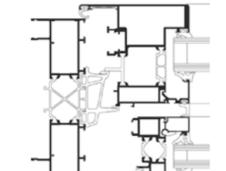
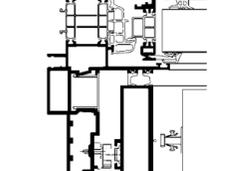
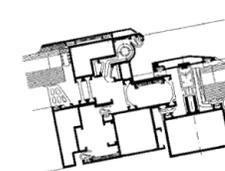
E-TecDrive is a fittings system incorporating an electronic motor, which allows tilting, locking and unlocking of windows via an inbuilt drive unit concealed in the window frame.

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 casements, WICONA covers almost all conceivable areas of application with the WICLINE window series and WICSTAR fittings. The following opening types are possible:

- Turn, turn/tilt and tilt windows
- Double vent windows
- Concealed sashes (block windows)
- Oblique/round arched windows
- Horizontally-pivoted sash windows
- Vertically-pivoted sash windows
- Top-hung windows (opening to outside)
- Top-hinged windows (opening to outside)
- Sky lights (opening to outside)
- Parallel vent windows (opening to outside)
- Parallel slide tilt doors
- French windows

WICLINE® Windows

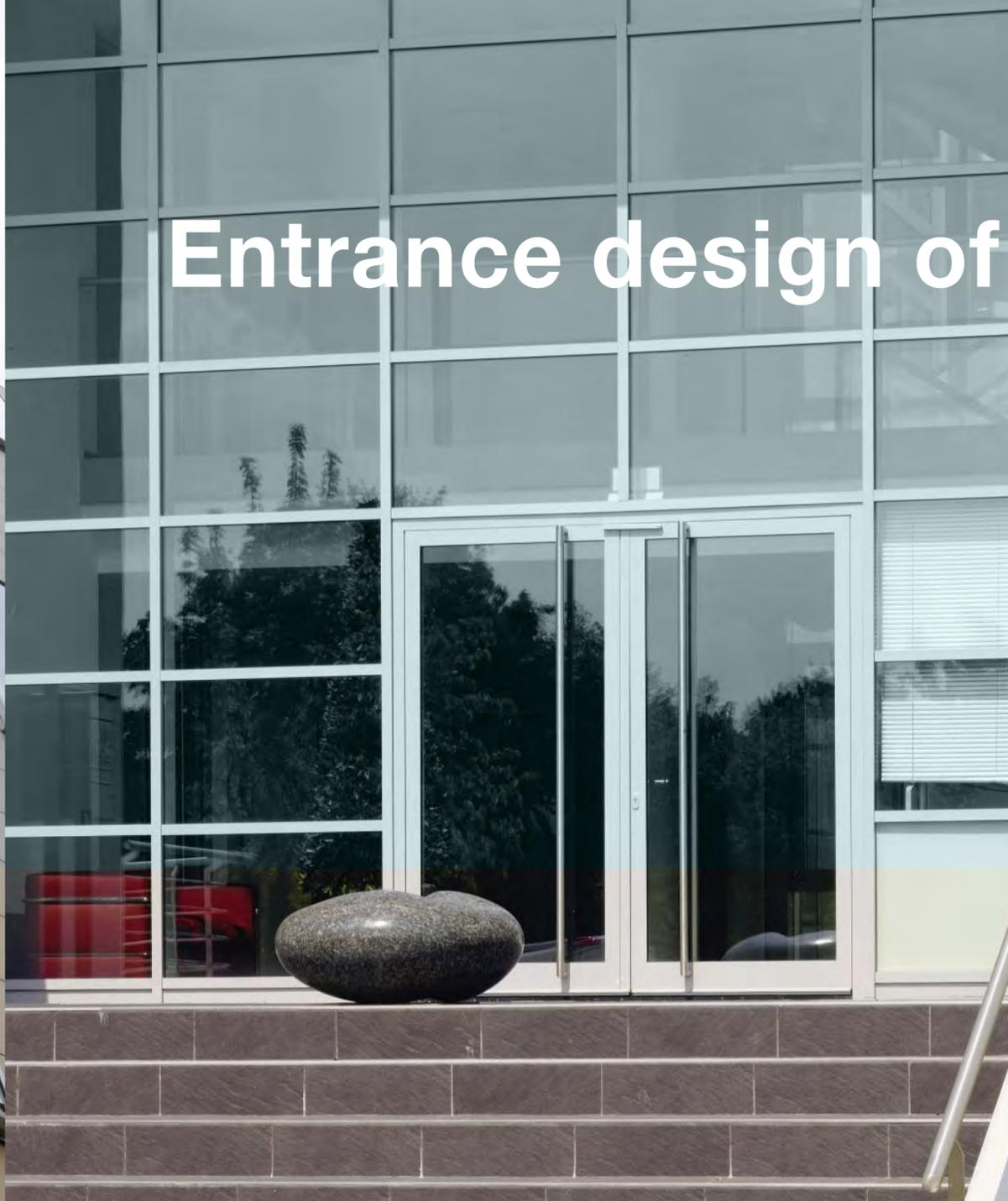
WINDOW VARIANTS

WICLINE 77 Standard	WICLINE 77HI High insulation window	WICLINE 77IK Industry contours
 <ul style="list-style-type: none"> - U_w up to 1.2 W/(m²K) - 77 mm profile depth - burglar resistance from WK 1 up to WK 3 possible - bullet resistance - FB4 possible 	 <ul style="list-style-type: none"> - optimised heat insulation, $U_w \leq 1.0$ W/(m²K) - 77 mm profile depth - variant certified as a Minergie window (Switzerland) 	 <ul style="list-style-type: none"> - steel appearance, ideal for renovation projects - 77 mm profile depth
WICLINE 65	WICLINE 65HI High insulation window	WICLINE 65N Non-insulated
 <ul style="list-style-type: none"> - U_w up to 1.3 W/(m²K) - 65 mm profile depth - burglar resistance from WK 1 up to WK 3 possible - bullet resistance FB4 possible 	 <ul style="list-style-type: none"> - optimised heat insulation - U_w up to 1.2 W/(m²K) - 65 mm profile depth 	 <ul style="list-style-type: none"> - non-insulated profile - 65 mm profile depth - for internal use
WICLINE 125	TOP-Window	WICTEC Sky light sashes
 <ul style="list-style-type: none"> - $U_w \leq 0.9$ W/(m²K) - 125 mm profile depth - sound insulation up to $R_w = \text{approx. } 48$ dB 	 <ul style="list-style-type: none"> - $U_w \leq 0.7$ W/(m²K) - 215 mm profile depth - sound insulation up to $R_w = \text{approx. } 57$ dB 	 <ul style="list-style-type: none"> - insertion window for stick glass roof - sight line 81 mm - angle of opening up to 90°



WICLINE®

◀ Window constructions
Overview



Entrance design of the highest level

WICSTYLE®

Door system

Non-insulated hinged doors

Insulated hinged doors

Safety doors

- Fire protection
- Smoke protection
- Emergency exit doors
- Burglar resistance

Automatic sliding doors



02

Old Town Palais
Munich, Germany

Architects:
Auer + Weber + Assoziierte GmbH
Dipl.-Ing. Architekten
Munich
Metal construction:
Pazdera AG
Coburg

03



WICSTYLE 50N

WICSTYLE 50N was designed specially for use inside buildings where heat insulation is not a determining factor. With a profile depth of 50 mm, extremely delicate structures are possible for internal fittings.



WICSTYLE 77

WICSTYLE 77, with a profile depth of 77 mm, with flush-fitted door profiles and providing correspondingly higher heat-insulation performance, meets one of the most important requirements of the future: energy saving through a significant reduction in heat losses.



WICSTYLE 65 / 65N

With WICSTYLE 65, you have a universal system that fulfils all the requirements made of a modern door in an attractive design and economical construction. You can choose between non-insulated and heat-insulated versions whilst retaining the same look.

WICSTYLE® – Functional element and designer piece Hinged doors



WICSTYLE 81

WICSTYLE 81 offers greater freedom of design thanks to a range of profiles which differ in style, with a profile depth of 81 mm. The round or angled shape is characteristic of the medium-contour construction. Stepped door profiles are another key feature of this door system.



WICSTYLE 88

Premium structure with front door technology to satisfy the most stringent requirements: Excellent technical values, multiple design variants and possible combinations, three gasket levels and the option of inward or outward opening, as required, are just some of their special properties.

WICSTYLE 50N WICSTYLE 65 / 65N WICSTYLE 77 WICSTYLE 81 WICSTYLE 88

They say first impressions last – and in the case of buildings that applies especially to the front 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 manufacturing building: the technically mature WICSTYLE profile ranges, with their numerous opening types, versions and expansion options, enable you to create tailor-made door solutions for any situation.

WICSTYLE 77





Safety technology doors

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
- May be combined with WK1 and WK2 burglar resistance
- May be designed with fire protection in class T30 and T60 and with smoke protection



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 EI30/T30/F30/G30 (WICSTYLE FP)
- In T90/F90 (WICSTYLE FP90)
- Compatible with WICONA standard profile systems
- Extensive fittings for requirements such as panic functions, emergency exit locks, electric safety locks, electronic openers, revolving door drive, magnet and bolt contact



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
- Can be combined with WICSTYLE 65
- Single and double-leaf, opening inwards or outwards
- Fixed and moveable side elements and overhead windows, option of glass-separating or adhesive bars



Burglar resistance

- In accordance with DIN V ENV 1627
- Design in four depths: WICSTYLE 65, 77, 81 und 88
- Upgradeable with additional locks to the desired level of security and protection (e.g. WK1 – WK 3)
- Can be combined with bullet resistance class FB4 in accordance with DIN EN 1522





KABA Door Systems
Schwarzenburg, Switzerland

03



Energy saving of up to 70%
with the automatic sliding door
tested as a complete unit.

WICSTYLE® – Save energy with comfort Automatic sliding door

WICSTYLE 65ED

The highly heat-insulated automatic sliding door WICTSYLE 65ED, which has been developed from the profile base of WICLINE 65, is your new route to energy savings. 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 with U_g -values up to $1.5 \text{ W}/(\text{m}^2\text{K})$, thereby making a significant contribution to improving the overall energy balance of the building. Undesired draughts are efficiently avoided by means of multiple sealing levels and special locking technology.

WICSTYLE 65ED



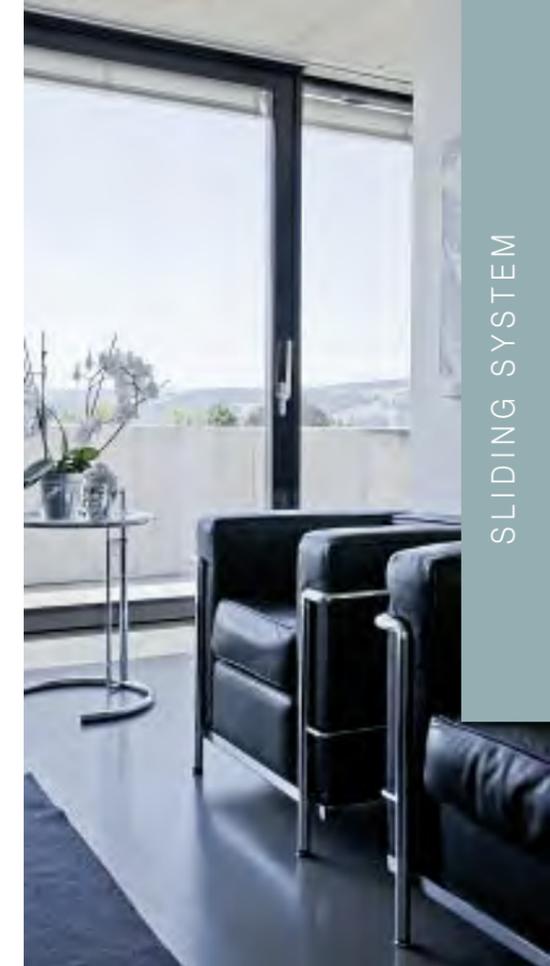
WICSTYLE 65ED combines comfort and energy efficiency with an attractive appearance due to slim sight lines, efficient heat insulation and coordinated integration of the drive. The leaves, up to 3,0 m high, can be combined with side elements and fanlights; the whole door system can be easily integrated into a WICTEC stick façade. WICSTYLE 65ED complies with the personal safety requirements set out in DIN 18650 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.



Opening spaces

WICSLIDE®
Sliding system

- Insulated sliding doors
- Non-insulated sliding doors
- Lifting / sliding doors
- Folding / sliding doors



SLIDING SYSTEM



04

Floating Mercure
Hamburg, Germany

Architects:
Förster Trabitzsch Architekten
Hamburg

Metal construction:
Hanse Metallbau GmbH & Co. KG
Elmenhorst/Lichtenhagen



WICSLIDE 65FS

WICSLIDE 65FS is the solution for tight space situations where there is only limited room for the opened elements. Due to its excellent technical values, WICSLIDE 65 FS can also be used as a direct partition, for example in meeting areas, conference rooms and hotels, as well as conservatories or car dealerships.



WICSLIDE 23

The special characteristics of WICSLIDE 23 make this sliding and lifting/sliding door a favourite for use as a partition. The construction can be executed on double and triple tracks with very high leaf weights of up to 300 kg. WICSLIDE 23 is weather-resistant for outdoor use and is very well suited to conservatories, swimming pools and construction projects with large expanses of glass. It can also be used in industrial construction.



WICSLIDE 24E / EN

WICSLIDE 24E and WICSLIDE 24EN are used as sliding windows or sliding doors. They offer many possible uses as insulated or non-insulated versions. In the double or triple-track design, structures with up to six leaves and very large opening widths are possible.

WICSLIDE 26

WICSLIDE 26 is a lifting door or lifting/sliding door which is principally used as a room partition and as facing for balconies. For these applications in particular, this range impresses as a delicate solution with a corresponding refined look.



WICSLIDE® – Simply closer to nature

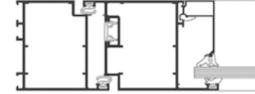
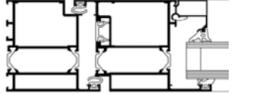
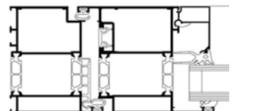
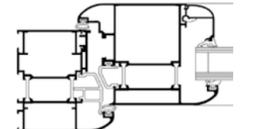
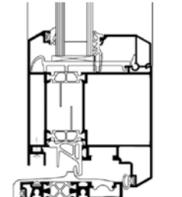
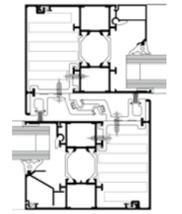
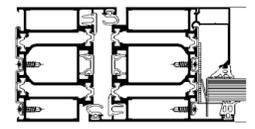
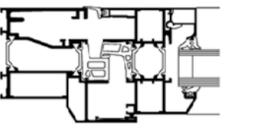
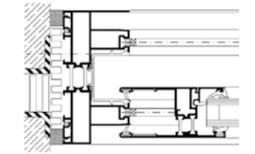
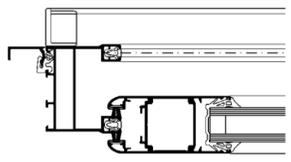
WICSLIDE 65FS WICSLIDE 23 WICSLIDE 26 WICSLIDE 24E / 24EN

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 and functional solutions for all areas of application, whatever your customer's requirements and the structural and spatial opportunities on site. Large leaf areas with compact profiles always guarantee delicate structures. Robust fittings offer long-lasting functional safety even under long-term stress. Various system versions enable flexible adaptation of the construction to specific heat insulation requirements. Upon request, lifting/sliding doors and windows, sliding doors and windows amongst others can be combined with double and triple tracks and with fixed panels in the comprehensive WICSLIDE range. Folding/sliding doors complete the WICSLIDE range.

WICSLIDE 26
Sliding element



SLIDING ELEMENTS

WICSTYLE® Doors		WICSLIDE® Sliding elements	
WICSTYLE 50N Non-insulated - for internal use - profile depth 50 mm 	WICSTYLE 65N Non-insulated - for internal use - profile depth 65 mm - can also be used as a smoke protection door 	WICSTYLE 65 - leaf weight up to 200 kg - profile depth 65 mm - burglar resistance from WK 1 up to WK 3 possible - bullet resistance FB4 possible 	
WICSTYLE 77 - leaf weight up to 200 kg - profile depth 77 mm - burglar resistance from WK 1 to WK 3 possible - bullet resistance FB4 possible 	WICSTYLE 81 - particularly appropriate for house doors - profile depth 81 mm - rounded or angled profile shape 	WICSTYLE 88 - particularly appropriate for house doors - profile depth 88 mm - rounded or angled profile shape 	
WICSTYLE 65ED Automatic sliding door - optimised heat insulation U_w up to 1.5 W/(m ² K) - tested complete system (thermally broken profile system and drive unit) - similar to Kaba PSW 	WICSTYLE FP Fire protection door - fire resistance classes EI30/T30, EI60/T60, T90 - various depths - single and double leaf can be combined with fixed panels and overhead windows - uniform elevations in buildings by using the same profile base with and without fire protection 	WICSLIDE 65FS Folding/sliding element - two to seven leaved division - heat insulated, U_w up to 1.3 W/(m ² K) - leaf size up to 2.50 x 1.1 m 	
WICSLIDE 26 Lifting/sliding element - two- or three-track - profile depth of 105 or 160 mm - heat insulated, U_w up to 1.6 W/(m ² K) - leaf dimensions (w x h) up to 2.10 x 2.45 m 	WICSLIDE 23 Lifting/sliding element - two- or three-track - optimised heat insulation U_w up to 1.3 W/(m ² K) - leaf dimensions (w x h) up to 2.60 x 3.50 m 	WICSLIDE 24E/24EN Sliding element - two- or three-track - insulated or non-insulated design - leaf dimensions (w x h) up to 1.80 x 2.50 m 	

WICSTYLE®
WICSLIDE®

Door and sliding element constructions
Overview

Unique technology and design

– Individual project solutions

WICONA – a brand which is synonymous with aluminium structures that are unique in the truest sense of the word, and which go far beyond standards. Whether used in a façade for 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.



04

Dock 4 Sandtorkai 62 Hafencity
Hamburg, Germany

Architects:
ASP Architekten Schweger + Partner
Hamburg

Metal construction:
Baumann Metallbau GmbH
Uelzen

05

Qipco Office Tower
Doha, Qatar

Architects:
JSK Dipl.-Ing. Architekten
Frankfurt/Main

General contractor:
BESIX Group
Brussels



KfW Bank Frankfurt

sauerbruch hutton, Berlin
Project solution for double skin façade in unitized construction, polygonal scaled with integrated turn sashes.



Monte Rosa Hut Zermatt

ETH Zürich, Prof. Eberle
stick system construction for photovoltaic elements, heat-insulated ribbon windows in 8 different inclinations.



Klimahaus® 8° Ost Bremerhaven

Klump Architects, Bremen
Special profiles for project-specific construction, for sheet metal covering and glass façades.



Park Postepu 21 Warszawa

APA Wojciechowski architects, Warszawa
Special profile solution for bespoke unitized façade.



Alte Baumwolle Flöha

Heat-insulated windows with special profiles in accordance with historical regulations (protection of historical monuments).



Empire Riverside Hotel Hamburg

David Chipperfield Architects, London
Bespoke unitized façade with integration of façade lining in bronze and ventilation flaps.



WICONA Test Centre Bellenberg, Test centre for façades and windows. Here we are able to test façade samples from project solutions in accordance with project-specific requirements or international regulations and standards. The building is designed as Plus-Energy production building, with façades and a glass roof of Passive House quality.

Design freedom with individual support

Project Solutions

Each project is different. The wishes of our customers are just as diverse as the options for implementation using the WICONA systems. This is where highly qualified, experienced WICONA experts step in and offer specialist advice. Together with the customer, they plan the best approach for every project, taking into account fundamental criteria such as energy efficiency, sustainability, budget, building physics and deadlines. This offer of advice throughout the project does not end when construction begins. The specialists at WICONA's project sales division also work on site to meet challenges head on.

Technology for ideas - WICONA's slogan becomes reality. Using WICONA products means you can benefit from complete freedom in your design ideas; we will develop the technology for accurate and stylish implementation. The complexity of your construction project will determine the degree of customisation.



Anything is possible: the WICONA range offers a wide spectrum of modules constructed from basic profiles that can be used to create many custom solutions. Individual profile components can be adapted or modified - to fit perfectly into the overall system. We can develop special profiles for you, in order to fulfil specific functions or design requirements. We will work together with you to build completely new constructions - unique buildings that represent the ultimate in custom project solutions.

Information and applications at the click of a mouse

At each stage of a project, specific digital information is required. Our online services and software packages, which are adjusted to these various individual requirements, offer you 24-hour, daily access to exactly the information you require for your work. Quickest access can be found at www.wicona.de/ch

WICTIP®

Technical information platform

In WICTIP, we place the entire WICONA system documentation at your fingertips in digital format. Information such as product-range lists, brochures, test certificates and planning guidance can be viewed interactively, with links to related information. Questions arising during planning or processing can be answered quickly and in detail using up-to-date information. The WICTIP download centre provides detailed drawings and examples of use in various CAD formats regardless of the browser you are using.

www.wictimip.com
www.wictimip-downloadcenter.com

WICTIP®

Tools

U value calculations for your windows can be carried out online and in the simplest manner via this platform. Additional tools for calculating data will continuously enhance this application.

www.wictimip-tools.com

WICTOP®

Construction software

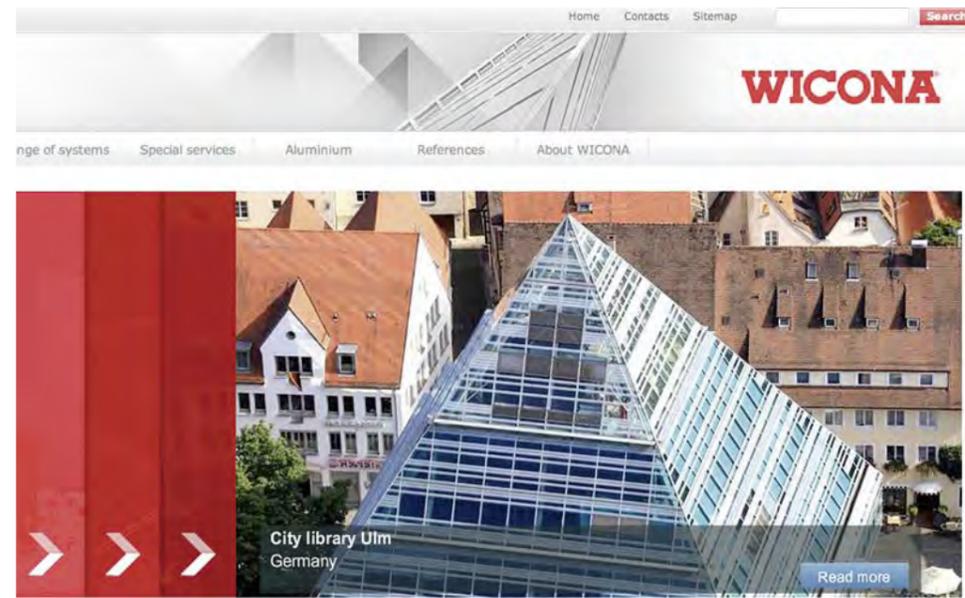
With this software, three-dimensional constructions, including calculations and technical preparation of work can be created. WICTOP offers an additional unique function within the scope of sustainability: With this function, environmental information regarding individual building envelopes is available at the touch of a button.

WICPLOT® 2.0

Construction database

In this construction software controlled by a database you will find all functions for straight-forward drawing up of architectural plans and design sections.

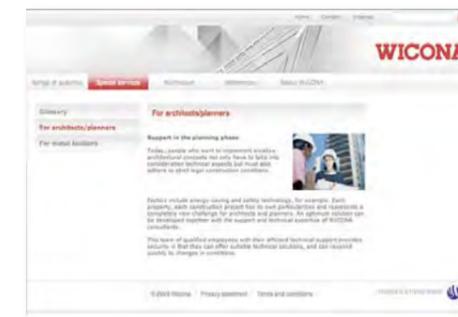
„Technology for ideas“ – also online!



Click directly into the new WICONA world on the internet: www.wicona.de. WICONA's internet site has an attractive and modern design, focussing on the benefits for you. The full range of WICONA products are displayed and documented with a wealth of detailed information, images and graphs. You can find the product information you are looking for with just a few clicks.

www.wicona.de offers

- 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 are able to find information instantly
- rapid access to all areas specific to you under the menu header „architects“
- 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.





DEG
Cologne, Germany

Architects:
JSK Dipl.-Ing. Architekten
Düsseldorf

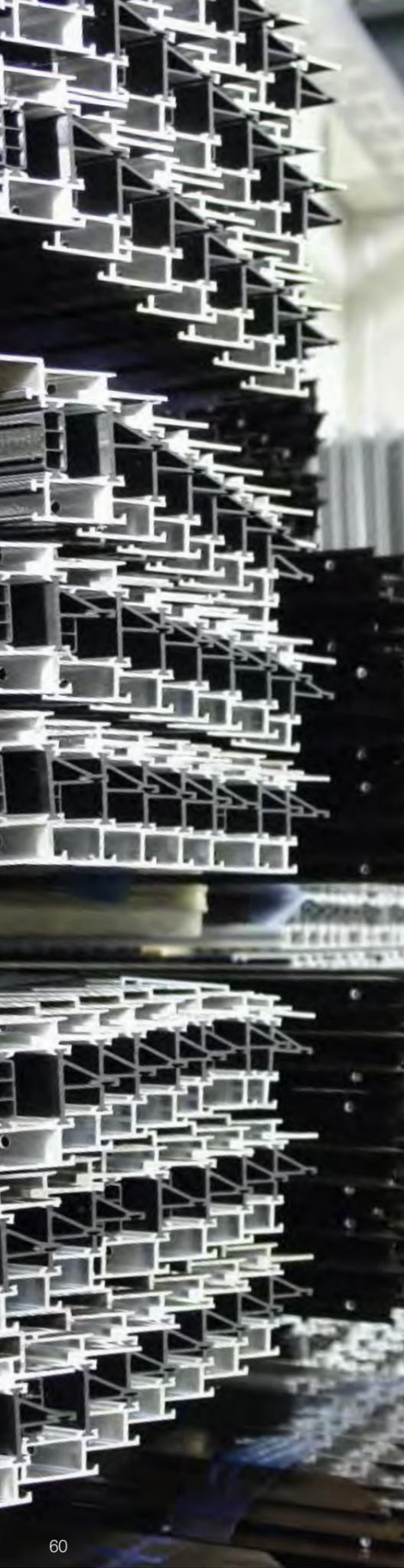
Metal construction:
SMB Stahl- und Metallbau GmbH
Gundelfingen

Sustainability – Building for 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 criterium for purchasers, lessees 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.
- **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. To this end, the Passive House Institute demands an U_w value of $\leq 0.8 \text{ W}/(\text{m}^2\text{K})$ for windows and glass façades.
- **Minergie standard (Switzerland):**
Assesses sustainability on the basis of set energy indicators for buildings, amongst other things. The Minergie label for windows, for example, is awarded when a two-leaf casement window attains an ambitious insulation value of $U_w=1.0 \text{ W}/(\text{m}^2\text{K})$. WICLINE 77 was the first metal window to receive the Minergie label.





Sustainability – Building for the future

Aluminium – the best basis for sustainable building

From raw materials to recycling: aluminium is an ideal material for a maximum level of sustainability. In recent years, the energy consumption of electrolysis has been reduced substantially in the production process. Only 5% of the original energy consumption is necessary for the production of aluminium from recycled materials. Due to its high material properties, aluminium can remain in use for a long period of time without the use of complex protective measures against weathering, corrosion or fungal infestation. And when windows need to be replaced after many years, the profiles will not end up as hazardous waste, but will provide a valuable recycling source. In the most important areas of application, the recycling rate of aluminium is between 95 and 100 per cent. Therefore, aluminium is generally not “used up”, but “used”, then reused time and again thereafter.

WICONA has the appropriate solutions

signed and sealed: WICONA's aluminium profile constructions fulfil the demanding criteria of all the before-mentioned building certificates impressively, and have therefore contributed substantially to the certification of the buildings indicated here. WICONA took on a leading role in this field many years ago and can now draw upon decades of research and development. Thanks to this, you have a broad portfolio of products and services at your fingertips, so that you too can design your building in a more sustainable and future-oriented manner. WICONA is the first profile system brand to offer a special service regarding sustainability: the Environmental Product Declaration (EPD), which covers the entire life cycle of building products, including their environmental impact. You can generate this declaration (pursuant to international standards ISO 14025 and ISO 21930) using the customer software WICTOP.



DEG, Cologne

(JSK Dipl.-Ing. Architekten, Dusseldorf)
Awarded the Gold Seal of Approval by the DGNB.
Designed with an unitized WICONA double skin façade.



Freudenberg Haushaltsprodukte KG, Weinheim

(Baurconsult Architekten, Hassfurt)
Awarded the Silver Seal of Approval by the DGNB.
Designed with WICTEC 50HI façades of Passive House quality and WICLINE 77HI high insulation windows.



Fire station, Heidelberg

(Kulka & Urbanietz Architekten, Cologne)
Awarded the Passive House certificate from the Passive House Institute.
Designed with WICTEC 50HI façades of Passive House and WICLINE 77HI high insulation windows, U_w total = 0.8 W/(m²K).



HYDRO



WICONA in the Hydro Group

WICONA belongs to the Hydro Group as a brand of Hydro Building Systems

Hydro is a global supplier of aluminium and aluminium products. Based in Norway, the company employs 23,000 people in 40 countries and has activities on all continents. Rooted in a century of experience in renewable energy production, technology development and progressive partnerships, Hydro is committed to strengthening the viability of the customers and communities we serve.

Hydro leads the way in the aluminium recycling sector, sustainability is the company's philosophy and also the most important standard in research and development. Hydro operates hydroelectric power stations in Norway, generates energy for its aluminium production and is active in developing solar technologies and applications. This results in leading positions in the growth fields of the future: Hydro leads the 2009 ranking of aluminium companies in the valuation of the Dow Jones Index for Sustainability (DJSI) – for the fourth time in succession. The company received the best grades for the reporting system for risk and crisis management, for its ethical principles, transparency, environmental policy and environmental management as well as its strategy for biological diversity and climate protection.



Hydro Building Systems supplies building systems for windows, doors, façades and glass extensions. Aluminium production and processing as well as energy production from hydroelectric power are the main pillars of the Hydro Group. Ecological concepts are therefore at the centre of all stages of production and all market areas.



Sustainable perspectives



Hydro Building Systems is a leading company in the design, development and supply of aluminium profile systems for windows, façades, doors and glazed constructions. WICONA stands for "made in Germany" quality. Experience and valuable knowledge and skills have been gleaned over more than six decades – the best basis for a successful market presence and dynamic development for the future. Intensive fundamental research, innovative system development, individual project solutions and customer-oriented project services always play a key part in this. The whole world therefore has access to high-quality aluminium technology solutions under the brand name WICONA.

WICONA®

TECHNOLOGY FOR IDEAS

Shaping the future

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