Made for life

Aluminium windows, façades and doors

WICONA®
TECHNOLOGY FOR IDEAS

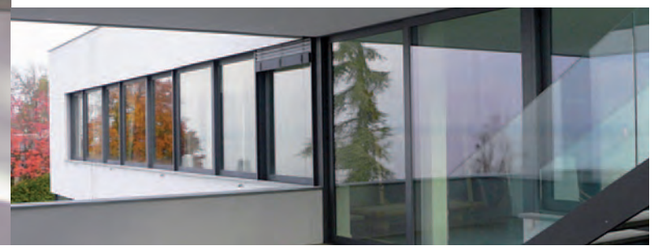
Technology for ideas

Technology for ideas

Windows, doors and façades are investments for the future. There are many aspects to be weighed up when deciding upon the right product and the right material: custom-designed options; service and maintenance costs; lifespan; thermal insulation and soundproofing; environmental protection; comfort; function and, of course, cost.

In this context, WICONA's aluminium construction products offer an optimum combination and fully meet your personal requirements. And from a financial point of view, they definitely hold their own in comparison to investments in materials requiring a slightly higher investment. According to research undertaken at the Technical University of Vienna, aluminium construction products often represent the most cost efficient solution, due to their virtually unlimited lifetime, low service and maintenance costs, possible energy savings and high value retention properties.

Place your trust in one of the leading brands as well as the skilled planning, production, installation and maintenance of your own metal construction firm. That’s what we call ‘technology for ideas’.



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Made for life

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Aluminium is a high-tech material for future-oriented constructions. Those who opt for windows, doors or glazed façades certainly have a good eye for sophisticated aesthetics. This material, however, is also convincing because of its basic properties.

- Stability: aluminium profiles have a high degree of integral rigidity in combination with slimline contours and make it possible to install large-sized glazed surfaces with panoramic light entry.
- Durability: this material is completely immune to weathering; the colour and surface remain unchanged for decades.
- Easy to maintain: construction and façade elements made from aluminium require minimum maintenance and can be quickly and easily cleaned.

WICONA products leave nothing to chance: even all of the functional components such as fittings and handles are subjected to intensive and costly testing procedures. Test certificates from the RAL Quality Assurance Association or from the Institute of Window Technology (ift Rosenheim) provide proof of these high quality standards.

sustainable

high quality

future oriented

Maximum energy efficiency

Maximum energy efficiency

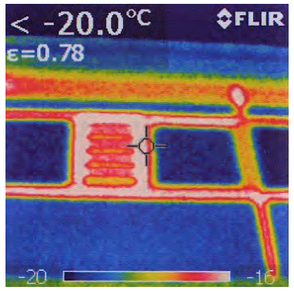
New aluminium windows exceed the requirements of EnEV (Energy Savings Decree) and considerably improve the energy efficiency of a building: due to an effective thermal separation within the profile construction and high-quality glazing, drafts, cold radiation and condensation formation have finally become things of the past.

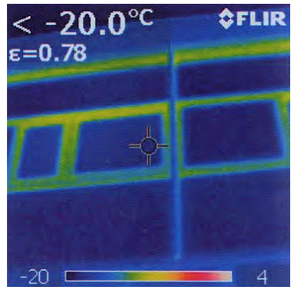
In addition, with larger glazed surfaces, solar radiation produces more energy to passively heat the building.

Images of buildings taken with a thermal imaging camera, shown here using the example of a pre- and post-renovation with new window façades, visibly demonstrate the potential energy savings.

The definitive variable for the energetic calculation of window and façade constructions is the U-value (U_f for the window frames, U_g for the glazing, U_w for the entire window element). The U-value is the measure of thermal penetration via a construction element and is given in W/m²K.

The lower the U-value, the better, as less heat is conducted via the construction element. With a U_w-value of less than 0.8 W/m²K, WICONA products even meet the requirements for passive housing.





energy saving

suitable for passive houses

intelligent

Security invisibly integrated

Security invisibly integrated

House burglaries are on the rise in nearly every part of Europe, whereby the perpetrators target the vulnerable parts of a house such as windows, patio- or front doors. From a technical point of view, effective preventive measures are no problem at all.

WICONA products are already equipped with a basic level of protection. Depending upon the security needs and the location of the building, the security provisions on windows and doors can be adapted to suit any desired security level at very little effort and cost – and can also be upgraded at a later date.

The security level is measured in terms of resistance classes 1 to 3 (WK or RC). In protection class 2, which is recommended by the police, windows and doors must resist burglary attempts using heavy tools for up to 16 minutes (after which nearly every burglar will tend to give up).

Fire protection functions are also fulfilled through special detailed technical measures during the frame's construction. None of these high security standards compromise the aesthetic appeal of aluminium components – nothing can be seen from the outside and the typical appearance of the building or façade is retained.

secure

unobtrusive

individual

Protected against any storm

Protected against any storm

Throughout the world, we are experiencing more violent weather conditions and severe thunderstorms with enormous amounts of rain falling in extremely short periods. Windows, façades and doors need to be able to withstand these forces and remain permanently watertight.

To this end, all WICONA construction elements are put through their paces in elaborate testing procedures in order to ensure airtightness and resistance against wind loads, even with large glass surfaces. The testing stations see them subjected to extremely adverse conditions that simulate hurricanes: gale force 11, which corresponds to wind speeds of over 110 km/h, with precipitation in excess of 130 l per square metre per hour. As a result of such tests, WICONA products are regularly certified for the highest resistance classes.

Being weatherproof also means that the construction elements retain their paint coating and structural integrity, even under extreme thermal fluctuations, from the powerful summer sun to icy winter storms. In order to meet all of these requirements, these elements are designed to withstand temperatures ranging from -40°C to 120°C.

In addition to aluminium's stability properties, an optimal interaction of seals, fittings, accessories and drainage holes is ensured – a result of the holistic approach that is adopted for all WICONA product-development processes.

watertight

resistant

durable

The realisation of individual dream homes

Turning ideas into buildings

The façade design of a building reflects the demands of its residents and users. The surfaces of the aluminium components can be individualised in terms of colour and structure using special processes like anodisation and powder coating, depending upon the relevant field of application, the architect's ideas and the customer's preferences. In this respect, there are no limits in terms of variety and customised effects.

Other stylistic elements such as profile contours, panels, fillings and glass in different variations set additional sophisticated design accents.

Narrow viewing widths for façades and windows give the building a light and transparent appearance, whereby the sunlight can be regulated using appropriate shading and control systems. Furthermore, aluminium harmonises well with other materials, which is ideal for building renovation projects aimed at improving energy efficiency.

- individual
- delicately sophisticated
- flexible

Monte Rosa Hut, Zermatt

Ecological responsibility: we're onto it. Come and join us!

Ecological responsibility: we're onto it. Come and join us!

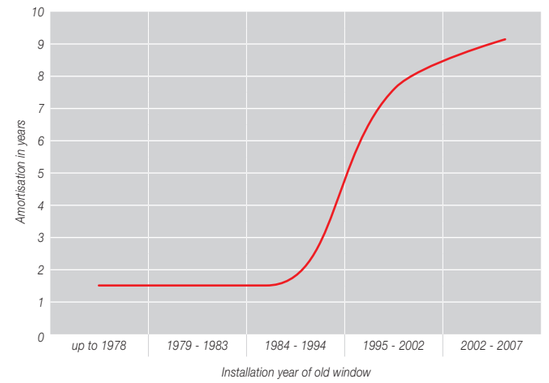
From raw materials to recycling: aluminium is an ideal material for a maximum level of sustainability. The proportion of renewable energy sources, especially hydro-electric power, used in WICONA's production process is about two thirds.

Due to the high quality of aluminium, the utilisation period of the products is virtually unlimited – without any need for repainting or post-installation treatment. In these times of holistic construction considerations, easy maintenance and longevity are important factors of sustainability.

And when the windows need to be replaced after many years, the profiles will not end up as hazardous waste, but will provide a valuable recycling source. Up to 100% of aluminium can be recycled, whereby only 5% of the original energy consumption is required for recycling.

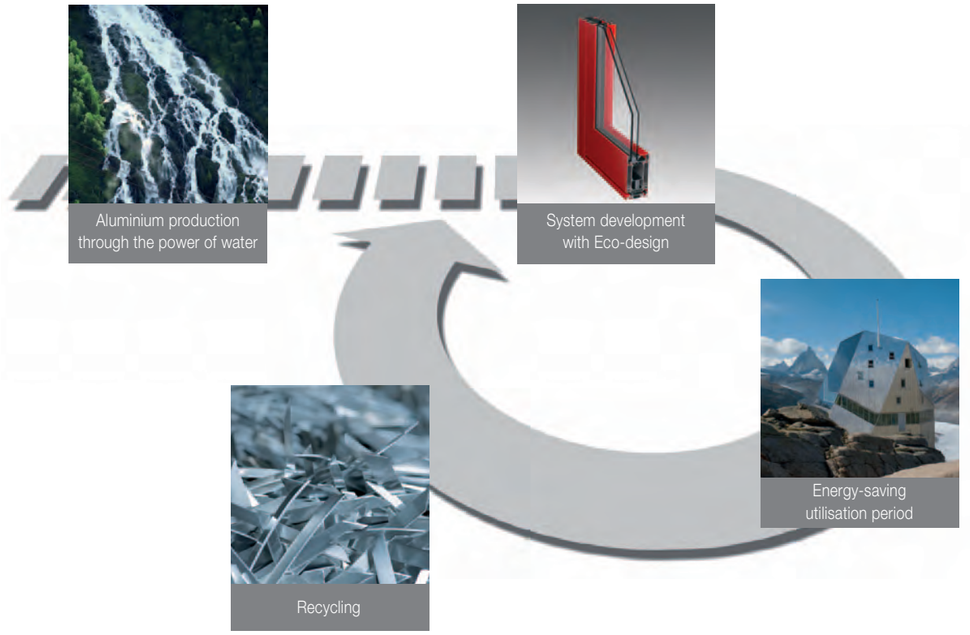
Therefore, for the most part, aluminium is not "consumed" but "utilised" and then used again and again as window construction material in the "cradle-to-cradle" recycling process (making new products from old).

Renovation with WICLINE windows, U_w = 1,0 W/m²K with thermally insulated triple glazing amortisation when replacing an old aluminium window

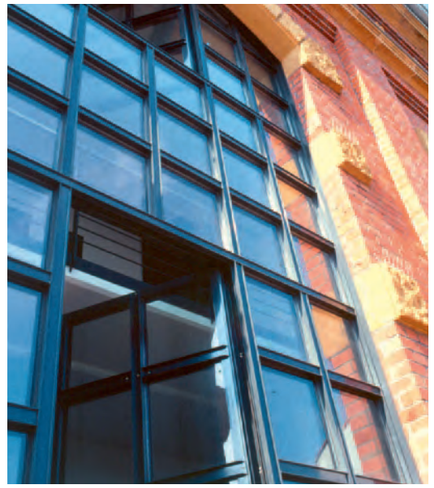


Positive CO_2 balance after just a few short years

If you replace the windows in existing buildings with aluminium windows, you will already start to reduce your CO_2 output within a few years. If, for example, windows with insulation values typical of the decade between 1984 and 1994 are replaced by modern windows, then the environmental stresses resulting from the replacement will have already been amortised within 1.5 years. This calculation includes all areas and processes that generate CO_2, such as the recycling of the old windows, production, transportation, installation and the utilisation period of the new window. This means that you will start reducing your CO_2 output after just two years.



Functional design: windows



Functional design: windows

WICLINE windows are the prevalent stylistic tools of sophisticated architecture in terms of technology and design. In addition to the opening and ventilation functions, the central aspects of any window are things like security, thermal protection and soundproofing.

In all of the WICLINE product ranges, these can be combined with a high degree of design variability and implementation options to suit every taste and every application – both in new constructions and renovation projects.

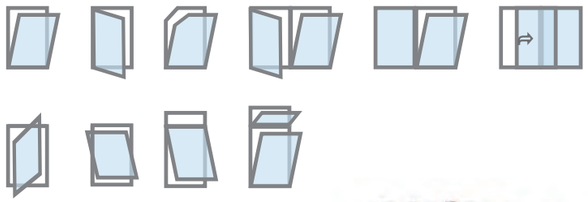
Other solutions are available, in addition to traditional opening types such as single pane swivel and tilt or double pane French casement windows, with sliding function, horizontal/vertical pivot or top-hung functionality. The current trend is for floor-to-ceiling and large surface windows for lots of sunlight and transparency within the building. As lockable French windows, these can also be installed with a flush-fitted threshold for unobstructed access to patios or balconies.

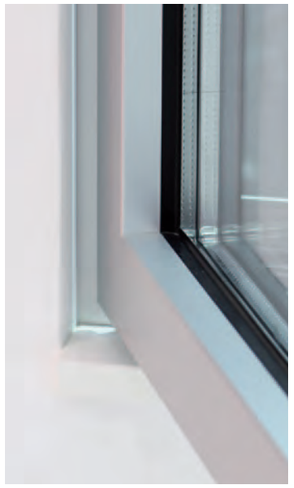
The profile construction and glazing can be combined with the high-quality WICSTAR fittings systems, depending on the customer's preference. Concealed hinges, which show nothing but the handle, are particularly aesthetically pleasing. The thermal insulation properties can be incrementally adjusted up to passive house quality with U_w-values lower than 0.8 W/m²K.

aesthetic

functional

efficient





Opening up spaces: folding and sliding elements

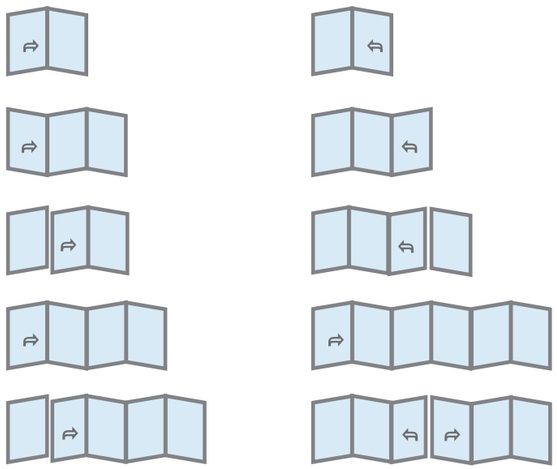
Opening up spaces: folding and sliding elements

"Back to nature" – all it takes is a quick twist of the hand and, with WICSLIDE's folding and sliding systems, living spaces, seminar or conference rooms will open out into the garden or patio. Extremely light and quiet: qualities that are ensured by high-quality fittings and robust guide rails with easy glide properties.

As with all WICONA product ranges, there are various options available here too – double or triple track, with sliding, lifting/sliding or folding/sliding functionality, which can be combined with fixed panels.

WICSLIDE life-slide elements, even when closed, also bring lots of daylight into the rooms due to their large panel dimensions (up to 3.24 m wide and 3.40 m high) and narrow profiles. In terms of thermal protection, the highest standards apply – depending upon the construction details, it is possible to achieve U_w values of less than 1.1 W/m²K.

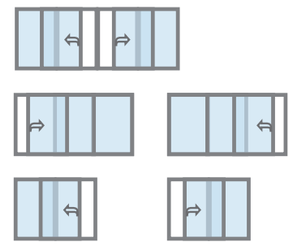
WICSLIDE folding/sliding elements completely open up a room and "park" the panels on the side. With up to 7 panels in one element, each up to 2.50 m high and 1.10 m wide, you can bring nature directly into your home.



light

quiet

flexible



Doors: a designer piece as well as a functional element

Doors: a designer piece as well as a functional element

WICONA doors are real multi-function construction elements and really are the house's "calling card". All of the advantages of aluminium come to the fore in this context – an attractive surface finish, high-tech designer handles, combinations with skylights and side windows, infills with glazing elements in various designs or panels, ambilateral panel covering or with other filling options: WICSTYLE doors meet the highest visual demands.

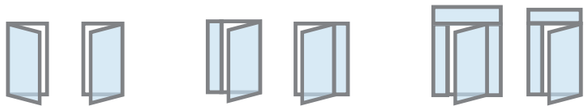
The same goes, however, for the technology. The tried and tested profile constructions make for excellent thermal protection properties up to passivehouse level, as well as effective soundproofing. The high-quality fittings have been open and closed several hundred thousand times during durability testing that simulates a lifetime of several decades, which they passed with flying colours.

WICSTYLE doors always give a feeling of solidity and security. Their technological properties drive burglars to despair. They put up massive resistance, thus protecting you and your valuables with technical characteristics tailored to meet your specific requirements.

attractive

secure

individual



Shaping ideas: glass façades and glass extensions

Shaping ideas: glass façades and glass extensions

WICTEC glass façade technology is an overall concept of modern-day architecture that reconciles the elements of heat storage, air conditioning, and light provision as well as protective shell and designer element within a single façade design. In addition to this high level of functionality, the entire building is characterised by a coherent façade appearance.

WICTEC constructions more than meet this requirement in every way possible. The basis for this is the modular construction of the façade and the high degree of integration capability: glass extensions or conservatories become accentuated components of the building shell and can be tailored to meet any individual customer requirement through a plethora of profile construction variants, as well as glass and solar shading elements.

Additional functions such as thermal protection or intruder protection can easily be added without changing the overall look of the building façade.

delicately sophisticated

transparent

timeless

Spiegel Verlag, Hamburg

Know-how transfer: object solutions for your home

adidas, Herzogenaurach

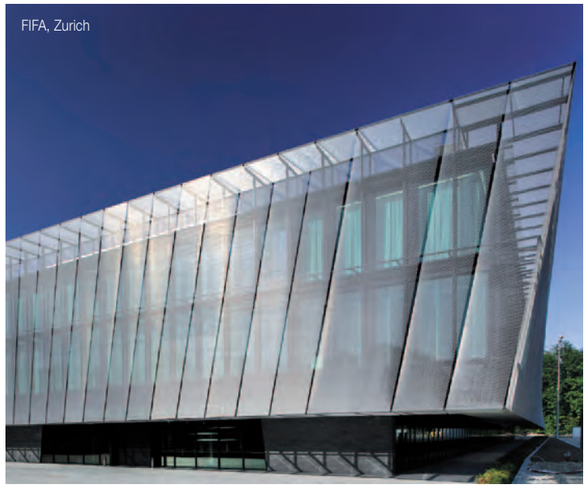
Know-how transfer: object solutions for your home

WICONA – the brand trusted by architects, investors and builders all over the world, when it comes to meeting the highest demands of architectural projects.

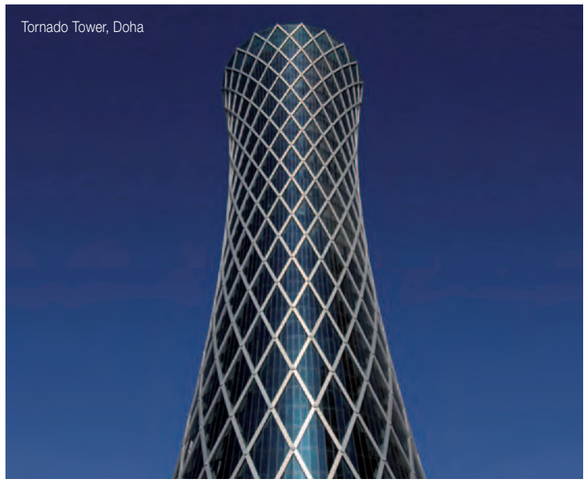
Well-known companies, such as Spiegel Verlag in Hamburg or adidas in its "World of Sports" are making an unmistakable impression with WICONA's façade solutions. For the Tornado Tower in Doha, Qatar, at over 200 m high, it was necessary to harmonise the demands of extreme climate and weathering conditions with an unusual architectural design. At a height of over 2,800 m, the Monte Rosa Hut on the Gorner Glacier in Switzerland almost achieves energy independence, enabled through the high thermal insulation of the WICONA aluminium windows and façades. The new Indian Antarctic research station in the south polar region provides fire protection and an unobstructed view of the polar landscape through WICONA windows and glazed façades.

WICONA's experiences and know-how, gathered on the basis of such extreme requirements, are transferred directly into our domestic building products. Innovations originating in the field of major projects are therefore continuously expanding the functionality, performance characteristics and application limits of our construction system ranges. Intensive research and testing is being conducted into new materials and intelligent technologies and, once tried and tested, are transferred into our product ranges.

Your new windows, doors and façades are therefore state of the art from a technological point of view and are a good investment for the future.



FIFA, Zurich

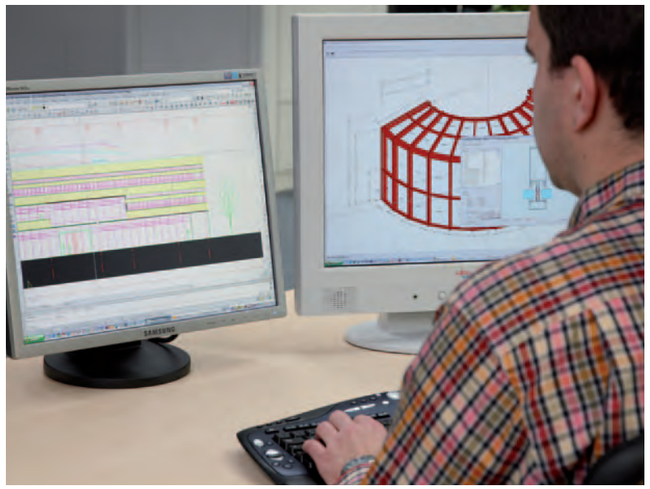


Tornado Tower, Doha

The brand for the most demanding buildings, anywhere in the world.

Zeppelin University, Friedrichshafen

Partnership and skills for your ideas: your specialist metal construction company



Partnership and skills for your ideas: your specialist metal construction firm

High-quality materials such as the WICONA aluminium systems are the best basis for sophisticated, vivid and visually attractive architecture.

But it is only due to the high level of technical know-how of your partners in the metal construction trade that your ideas can be transformed into constructed reality. Craftsmanship – this term can be taken literally, as their metal working operations cover the entire spectrum, from traditional solutions to high-quality custom production with a unique character.

You too can benefit from this knowledge, experience and consultation abilities, which will accompany your project right from its inception. You can easily assure yourself of the performance capacity of "your" metal working firm at our exhibitions and on the basis of various reference buildings.

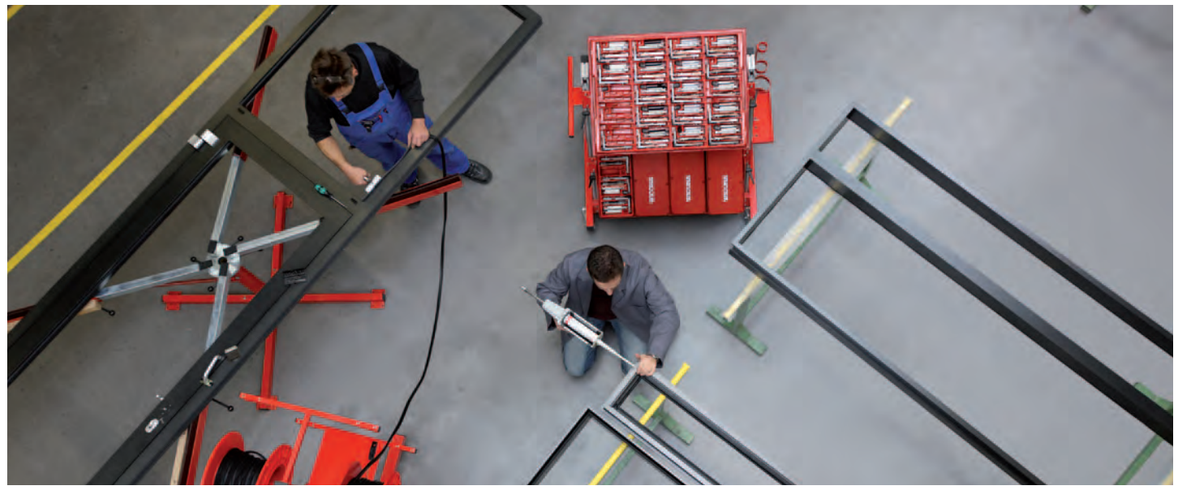
Not only will our skilled professionals accompany you throughout the construction project, they will also be happy to provide you with post-completion and maintenance services. Together with the strong WICONA brand, a functional performance team will therefore be created, whose aim it will be to meet your requirements and expectations as best as possible.

That's what we call 'technology for ideas'.

based on partnership

competent

reliable



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Partnership and skills for your ideas

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