

WICONA[®]
TECHNIK FÜR IDEEN



For buildings with character

» WICLINE

ALUMINIUM WINDOW

» WICLINE

For buildings with character

Creativity. Freedom. That's how design concepts take shape. With our specialist knowledge, our high-performance aluminium solutions and our first-class service, we support the construction process from the very first sketch to handing over the building. The purpose of a window is to let in light and air, to provide daylight and ventilation. But does this opening have other functions?

Each building is unique. Its exterior is a fundamental part of its architectural character. The façade and its openings form the main features: their rhythm and character are the expression of the architectural concept. Rectangular, circular or pointed arch shapes, wide, tall, elongated, arched, colourful, discreet, numerous, symmetrical ...

The possibilities are almost endless.



Whatever the architectural line, the range of WICLINE aluminium windows will offer the right answer to all design questions. Personal safety is also ensured because the WICLINE series offers models with burglar resistance, bullet resistance and fire protection.

Enabling all contemporary architectural concepts to be implemented by developing suitable technology, that is our mission: "Technology for ideas".

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» Applications

The decisive criteria

more flexible

- All system variants have many special options and opening variants based on a series technology
- Two fitting variants (surface-mounted and concealed hinges) with the same processing steps
- Large sash formats and sash weights

more visually attractive

- Anodisable band pages and handles offer extended design flexibility
- Design variants such as classic design, concealed sash, large sash formats and special profiles can be easily implemented
- Thin, delicate constructions

more production-friendly

- Consistent concept for punching with WICPRO multi punches or hand punches.
- WICONA Unisys: The same components for all ranges of both windows and doors
- Components developed with installers for optimised production processes

faster

- Patented corner connection technology with single-side adhesive injection
- Unique fittings installation with DPS (Direct Positioning System)
- All profiles can be punched

more variable

- A central seal with three installation types: “Frame before roller”, with shaped corners or as a frame
- Large selection of profiles for all applications
- Easy subsequent retrofitting (e.g. glazing, opening function, burglar resistance)

more process reliability

- Fewer components and processing steps resulting in greater certainty in processing
- Reliable and certain calculation, U value calculation, construction and work preparation with the WICTOP software
- Higher pre-fabrication level for fittings

more environmentally responsible

- Aluminium is almost entirely recyclable
- WICONA has obtained Bronze Cradle to Cradle (C2C) certification. This applies to the WICLINE 75 / 65 window ranges, the WICSTYLE 75 / 65 and WICSTYLE 77FP door ranges and the WICTEC 50 façade
- Up to 68% of the energy used for producing the aluminium for WICONA profiles comes from water power
- Development with Eco design: e.g. higher insulation and static values for a lower proportion of material

WICLINE – at a glance



All elements have been tested and approved for their application by our development team. So you can rely on the guaranteed performance of WICLINE windows.



Burglar resistance and bullet resistance



Optimised manufacturing process



Availability of all configurations



Top performance



» WICLINE – Window systems overview

	WICLINE 115 AFS	WICLINE 95	WICLINE 75 TOP	WICLINE 75 evo / 65 evo	WICLINE 65N
Concealed sash		page 16	page 24	page 30	
Fixed	-	•	•	•	-
Turn-tilt	-	V / C	V / C	V / C	-
Tilt before turn	-	V / C	V / C	V / C	-
Turn	-	V / C	V / C	V / C	-
Casement	-	-	V / C	V / C	-
Tilt	-	V / C	V / C	V / C	-
Skylight	-	-	V	V	-
Visible sash	page 12		page 22	page 28	page 52
Fixed	•	-	•	•	•
Tilt-turn	V / C	-	V / C	V / C	V / C
Tip before turn	V / C	-	V / C	V / C	V / C
Inward turning	V / C	-	V / C	V / C	V / C
Ventilation flap	-	-	on demand	V / C	-
Outward turning	-	-	-	V	V
Inward casement	-	-	V / C	V / C	-
Outward casement	-	-	-	V	-
Tilt	V / C	-	V / C	V / C	V / C
Parallel slide-tilt (with/without forced control)	-	-	-	V	-
Vertical pivot	-	-	-	V	-
Horizontal pivot	-	-	-	V	-
Top hung	-	-	-	V	-
Sunken/top hung	-	-	-	C	-
Slanting/arched	-	-	V / C	V / C	-
Skylight	-	-	V / C	V / C	-
French window, inward-opening	-	-	-	V	-
- 1 sash, no barrier	-	-	-	V	-
- 2 sashes, no barrier	-	-	-	V	-
French window, outward opening	-	-	-	V	-
- 1 sash, no barrier	-	-	-	V	-
- 2 sashes, no barrier	-	-	-	V	-

V = Visible fitting

C = Concealed fitting

	WICLINE 115 AFS	WICLINE 95	WICLINE 75 TOP	WICLINE 75 evo / 65 evo	WICLINE 65N
Safety and security of people and property					
Burglar resistance	-	RC 3	RC 3	RC 3	-
Bullet resistance	-	-	FB 4	FB 4	-
Fire protection / Smoke protection (RS)	-	-	-	EI 30	-
High-performance building physics and user-friendliness					
Thermal insulation W/(m²K)	0.95 - 1.3	0.68 - 0.91	0.79 - 1.3	1.4 - 1.9 (65) 1.2 - 1.8 (75)	-
Soundproofing (dB)	50	46	47	46 / 47	-
Accessibility	-	-	•	•	-
Operating forces	CL 1	CL 1	CL 1	CL 1	CL 1
Test cycles	20000	20000	20000	20000	20000
Design and appearance					
Panel					
Maximum dimensions/sash (w x h)	1300x2250	1400x1800	1600x2500	1600x2500	1300x1700
Top performance					
Air permeability	CL 4	CL 4	CL 4	CL 4	CL 4
Driving rain resistance	E 1200	E 1050	E 1050	E 1050	E 1050
Ability to withstand wind load	C5 / B5	C5 / B5	C5 / B5	C5 / B5	C5 / B5
Infill thickness (mm)	10 - 58	50	60	50 / 60	50
Weight per leaf (kg)	200	200	200	200	100

» Guaranteed performance

Certified, high-quality equipment

Each building is unique. And each window must fulfil very particular usage requirements. WICLINE windows from WICONA are developed to satisfy this need. High flexibility in equipment enables optimal adaptation of the windows to any building situation.

All functional components are integral components of the WICLINE product range. All elements are developed and tested in order to meet WICONA's high performance and quality standards.

- All profile adaptations can be punched by the WICPRO multi punch and hand punch models
- Patented corner connection with guided adhesive distribution and single-side injection
- Efficient fittings installation with DPS (Direct Positioning System)
- High volume central seal with three installation variants



Cradle to Cradle (C2C)

WICONA has obtained the Bronze Cradle to Cradle (C2C) certificate for the window ranges WICLINE 75/65, awarded by Cradle to Cradle Products Innovation Institute, a non-profit organisation based in San Francisco (USA). The certification procedure guides designers and manufacturers through a process of continuous product optimisation in a direction towards a combination of sophisticated aesthetics, technical quality and the highest ecological standards. To achieve one of the five certification levels (from Basic to Platinum), a product must meet the minimum requirements for the corresponding level in all five categories: materials, material cycle, renewable energy and climate, water and social responsibility. <http://www.c2ccertified.org>



Opening limiter

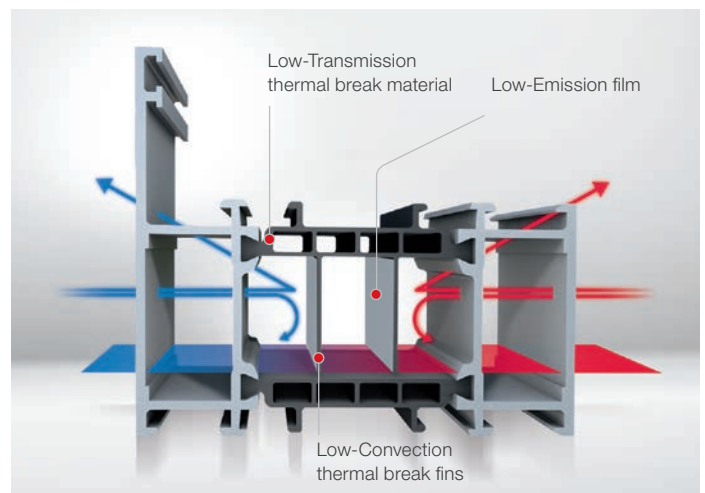
WICONA's new modular opening limiter adds to the window range and offers a large number of possibilities – from protecting against damage to the sash, fitting parts or the soffit to limiting the opening range for protection against unintended access. The modular opening limiter is characterised by end position latching and, depending on the model, adjustable brake, adjustable opening range and lock for complete opening of the sash for maintenance and cleaning. From mid-2017, WICONA is introducing a further opening limiter which enables WICLINE windows to be infinitely adjustably fixed in any desired turn position.



Energy efficiency redefined – ETC Intelligence[®]

ETC Intelligence[®] makes conventional insulation inserts superfluous. This exclusive technology enables first-class performance using an intelligent material mix in the composite zone of the system. The proprietary ETC Intelligence[®] technology consists of three unique components:

- **Low-Emission** film reflects the radiated heat effectively
- **Low-Transmission** thermal break material reduces heat conduction in the section
- **Low-Convection** thermal break fins minimise heat losses through convection



Streamlined manufacturing

WICLINE stands for maximum efficiency, process safety and reliable results. Many years of practical experience form the basis of this high standard.

Innovative technology with high effectiveness in practice due to the following features:

- Simple logistics and reduced inventory through the use of common components (WICONA Unisys)
- Simple planning, ordering and amendments to orders until just before installation
- High levels of process safety as a result of common fabrication steps
- Short production times due to streamlined procedures

These competitive advantages have not happened by chance: that's why we develop, test and supply all of the tools and accessories for installation according to the high quality standard that you know from WICONA.

In detail, this means:

- efficient and durable WICONA multi-stamp concept for each range, including instructions for use in accordance with health and safety regulations
- high-quality, reliable and customised small tools
- proven maintenance products, which make your installation accessories a long-term investment

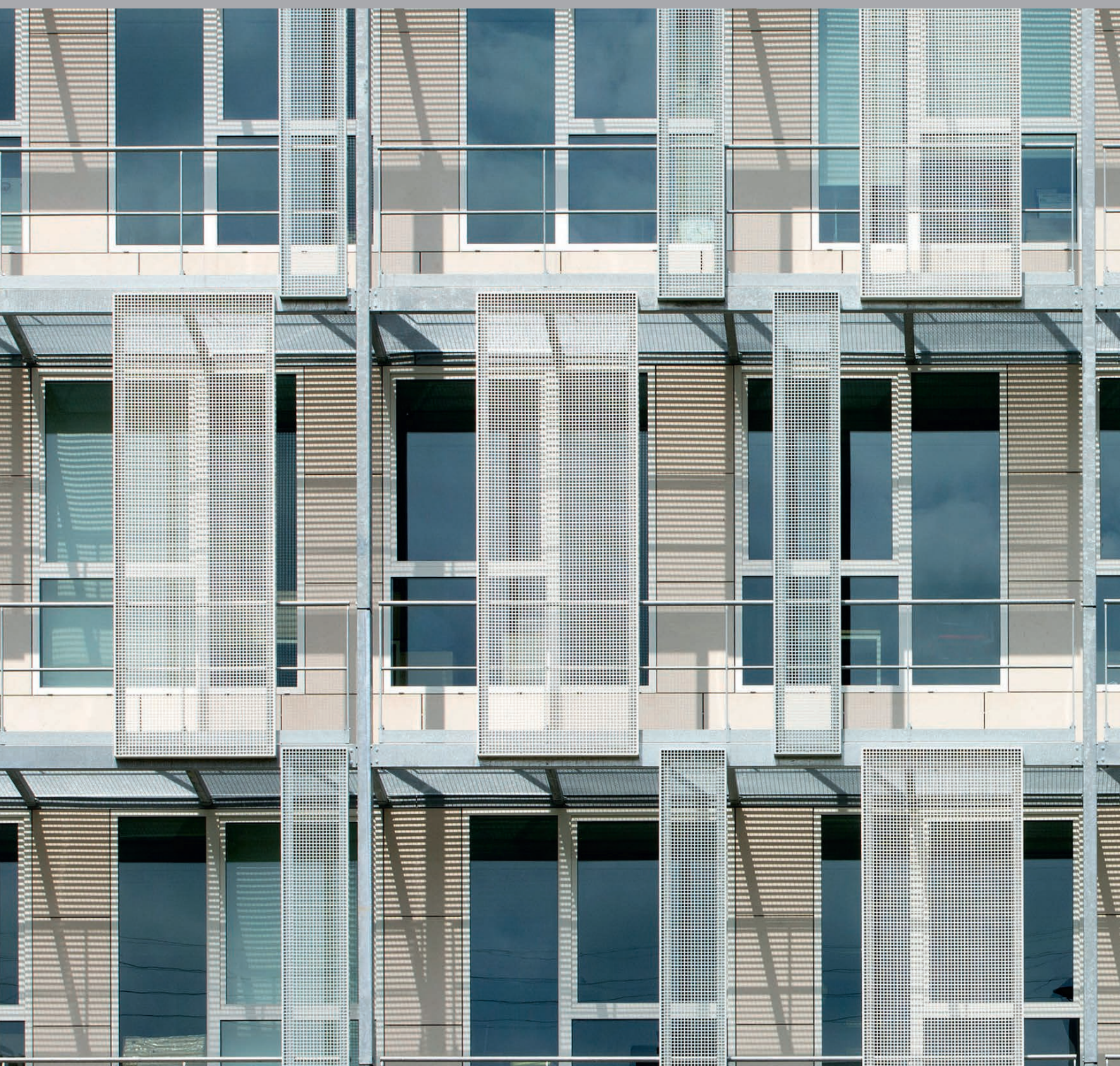


» WICLINE

Premium-quality solutions

The various designs of the aluminium windows and doors from the WICLINE range meet all architectural challenges, in particular with respect to the dimensions, and at the same time meet the highest technical requirements. The WICLINE range offers a comprehensive and harmonious palette of premium-quality solutions. In order to be able to provide a perfectly tailored response to the various different requirements,

many solutions are available: WICLINE 115 AFS, WICLINE 95, WICLINE 75 TOP, WICLINE 75 evo/65 evo and WICLINE 65N. The choice conforms to the desired performance: by producing various types of components, our specialist partners in metal and façade construction also meet demanding customer requirements.



Each of these solutions uses the same technological basis, 100% tested and proven. The WICONA aluminium profile ranges are fully compatible with each other. All are manufactured according to the same efficient, uniform and optimised production process. This results in the highest process reliability – thanks to these installation products, which are an

integral component of the concept and ensure a perfect, predictable result on site.

Developing the technologies that ensure the best performance in all configurations, that is our mission: “Technology for ideas”.



» WICLINE 115 AFS

Composite window system

Developed for advanced buildings

Composite windows are perfectly adapted for the health sector: hospitals, clinics, care homes for the elderly, laboratories, medical research centers and all other buildings where hygiene and patient comfort are key attributes.

The new aluminium window WICLINE 115 AFS is the perfect answer to the specific needs of the health sectors' buildings: low air permeability, high sound insulation, high thermal performance, total light control and flat surfaces for better hygiene.

WICLINE 115 AFS aluminium composite windows is also perfectly suited to the specific demands of hotels where the comfort of guests is key. Whilst travelling the world, everybody seeks to relax in the comfort of a hotel room: quiet at any time, dark when rest is needed and with a comfortable and stable room temperature.



Integrated sun protection system – aesthetic appeal

WICONA's composite window system offers a fast and reliable "plug and play" installation of a motorised sun protection system between the outer and inner sashes. Sheltered against weather and wind, the sun protection system can be used regardless of weather conditions – without compromising the window's aesthetic appeal.

As a result of its optimised profile geometry, WICLINE 115 AFS offers concealed blind installation. With the blinds closed, only the slats are visible. Header and bottom rail are fully integrated into the frame, resulting in a uniform appearance – both internally and externally – which also minimizes daylight penetration from the sides.

WICLINE 115 AFS is available with two sash options. Developers and building owners can specify a sash with integral sun protection from WICONA to maximise performance and reliability. Alternatively, there is a sash with a universal zone for sun protection which allows the use of a variety of sun protection products readily available in the market in order to cater for specific client demands.

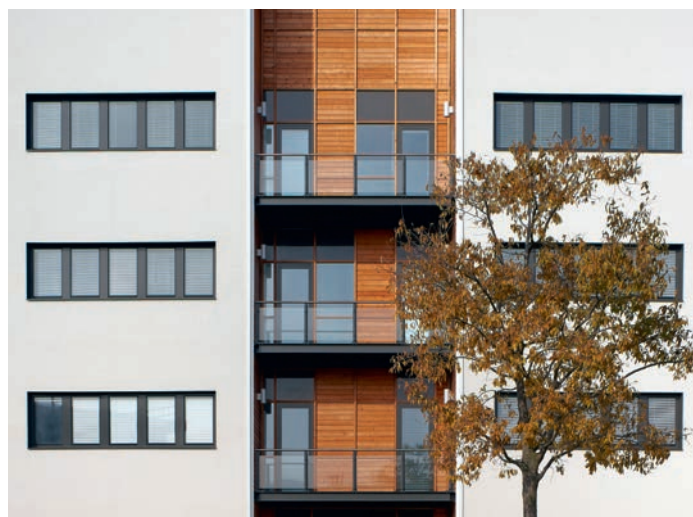
The external sash can be opened independently for maintenance and cleaning of the blind system.




Highest energy efficiency


Due to the ETC Intelligence® thermal break zone and its innovative and intelligent mix of materials, WICLINE 115 AFS achieves outstanding thermal performance up to passive house level – without the need for conventional foam insulation inserts.

WICLINE 115 AFS achieves U_w values below $0.80 \text{ W}/(\text{m}^2\text{K})$ with a 115-mm frame depth and a sleek sight line of only 125 mm, a unit size of 1,230 mm x 1,480 mm and U_g value of $0.60 \text{ W}/(\text{m}^2\text{K})$ at $0.031 \text{ W}/(\text{mK})$ psi.



 **Optimized sound insulation**

 **Pressure compensation of the cavity**

 **Concealed blind system**

 **Highest comfort**

» WICLINE 115 AFS

The solution for the highest demands

A perforated glazing bead with a concealed stainless steel filter is integrated at the top of the outer sash – a genuine innovation by WICONA which significantly increases the window's features in terms of protection and comfort.

The integrated perforated glazing bead with concealed stainless steel filter offers protection against dirt and insects and allows for compensation of the pressure between the air within the cavity and the outside air. This not only avoids the cavity overheating but also significantly reduces the build-up of humidity within the cavity, which helps prevent condensation.

Based on various research trials, conducted under real-life conditions in different climatic zones, the WICLINE 115 AFS new composite window system was successfully tested and optimised particularly with regard to condensation performance.

The result is impressive: condensation is reduced to a minimum – officially certified by CSTB institute in France (Centre Scientifique et Technique du Bâtiment).

Not only is the condensation risk minimised in the WICLINE 115 AFS, the seals in the coupled window intermediate space are also implemented in anti-fogging quality. Normal seals can have outgassing, in particular under the influence of heat, and leave behind a visible film on the glass surfaces in the intermediate space in the coupled window. The seals in the intermediate space in the WICLINE 115 AFS were developed with anti-fogging technology to minimise outgassing and the risk of a film forming on the glass.

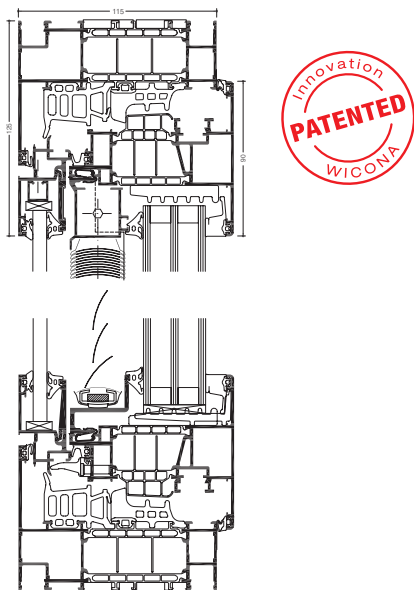
This is the difference between traditional composite window systems and the new WICLINE 115 AFS.





With the new WICLINE 115 AFS coupled window system, WICONA offers architects, planners and metal workers the solution for demanding projects with particularly high requirements for heat, sound and sun protection – the optimal choice for both new builds and modernisations.

In the WICLINE 115 AFS coupled window system, an inner window level is combined with an additional sash in front. A cavity is formed in the region between the window sashes. This improves the heat insulation and noise protection – without any additional measures.



System test results / CE product pass in accordance with DIN EN 14351-1:2010-08

Description	Standard	Class
Thermal insulation U_f	EN ISO 10077-2	1.1 – 1.3 W/(m ² K)
Thermal insulation U_w	EN ISO 10077-1	below 0.80 W/(m ² K)*
Sound insulation R_w (C;C _{tr})	EN ISO 717-1	up to 50 (-1;-4) dB
Air tightness	EN 12207	4
Water tightness	EN 12208	up to E1200
Wind tightness	EN 12210	up to C5/B5
Mechanical durability	EN 13115	up to 4
Durability repeat opening	EN 12400	up to 3

* at a window size of 1230 mm x 1480 mm and $U_g = 0.6$ W/(m²K), psi = 0.031 W/(mK)



Technical performance

Profile technology:

- Profile depth: 115 mm
- Construction depth: 125 or 135 mm
- Infill thickness up to 48 mm (58 mm) and up to 100 mm with fixed glazing
- Pressure compensation of the cavity
- Optimised condensation performance within the cavity, officially confirmed by CSTB Institute in France (Centre Scientifique et Technique du Bâtiment)
- Concealed blind system which is protected against weather conditions and dirt, no daylight penetration on the sides
- Highest operating comfort
- Easy installation, maintenance and cleaning due to independently operable outer sash
- Optional sash with universal zone for sun protection

Profile sightlines:

- Frame profiles from 84 mm up to 94 mm
- Transom profile from 128 mm up to 158 mm
- Sash profile 35 mm

Thermal performance:

- U_w values below 0.80 W/(m²K) with a 115-mm frame depth and a sleek sight line of only 125 mm, a unit size of 1,230 mm x 1,480 mm and U_g value of 0.60 W/(m²K) at 0.031 W/(mK) psi

Sound insulation:

- Up to 50 dB (Sound insulation glazing inside, single glazing outside)
- Up to 43 dB (Insulated glazing inside, single glazing outside)

Hardware:

- High quality concealed hardware with DPS (Direct Positioning System). Components can be installed in any order. Sash weights for:
 - concealed hinges up to 160 kg
 - surface-mounted hinges up to 200 kg
- Sash weight up to 200 kg
- Sash sizes (w x h): up to 1200 mm x 2500 mm

Opening types:

- Turn, turn-tilt, tilt, tilt-first, fixed field

» WICLINE 95

Efficient in every way



The WICLINE 95 aluminium window system

WICLINE 95 offers architects, planners and metal workers excellent energy efficiency and the greatest possible flexibility in the planning and implementation process.

As one of the first window systems without conventional insulation inserts, WICLINE 95 meets the strict criteria of the renowned Dr. Feist Passive House Institute and is classified as particularly energy efficient – with a slim module depth of 95 mm and a sleek sight line of only 125 mm. The U values of the new WICONA window system can be adapted to the project and application, to reduce costs and save time.

WICLINE 95 is particularly suitable for projects with the highest architectural and energy-saving requirements, for example, in the renovation of existing buildings or new builds in the highend residential sector.

Passive house certification for the highest demands

WICLINE 95 achieves U_w or U_f values of $0.80 \text{ W}/(\text{m}^2\text{K})^*$ at 95-mm frame depth and sight line of 125 mm – confirmed by the Passive House Institute Dr. Feist.

Therefore, the new WICONA window system is one of the most advanced certified aluminium frame components. What sets WICLINE 95 apart from other windows systems is that the outstanding thermal performance is achieved for most applications without conventional insulation inserts.

With this innovative approach, WICONA proves once more its innovative leadership among aluminium system houses and this allows architects the maximum flexibility in realisation. As a WICONA partner you will benefit from this – effective, sustainable, durable.

*1230 x 1480 mm (w x h) window, triple glazing with plastic spacers

WICLINE 95 – perfect for distinctive requirements

Adjustable U-values for optimum customisation

With WICLINE 95, architects will be choosing a window system, the U levels of which can be set specifically to the requirements of their relevant project. In this way, only the costs incurred to meet the relevant specified levels are necessary, because the use of materials and planning time can be adapted accordingly.

The individual components of the window system, for example, in the area of thermal performance, are designed in a modular fashion, and can therefore be adapted to distinct requirements based on the project or application. Depending on the actual target U levels, certain elements are planned in or reduced. This adaptation is done without significant effect on other aspects of planning the relevant window system. WICONA Partners can therefore save time, expense and costs in the planning and implementation process.

Flexible production from a finely honed modular principle

Fabricators also enjoy maximum flexibility in the design of the actual window system, as WICLINE 95 benefits from the intelligent WICONA Unisys approach: in this innovative window system, components of the established product ranges WICLINE 65 and WICLINE 75 are predominantly used.

Furthermore, the main insulator can be easily installed using a simple clip technique, while the fittings can be attached in any order with the Direct Positioning System (DPS).

For installers, this means considerable cost savings due to lower investment and storage costs and faster, simpler installation.

WICLINE 95 – Efficiency with ETC Intelligence®

ETC Intelligence® makes conventional insulation inserts superfluous. This exclusive technology allows first-class performance levels due to an intelligent material mix in the thermal break zone of the system. The protected ETC Intelligence® technology consists of three unique components:

- **Low-Emission** film reflects the radiated heat effectively
- **Low-Transmission** thermal break material reduces heat conduction in the section
- **Low-Convection** thermal break fins minimise heat losses through convection

Benefit from one of the first aluminium window systems without conventional insulation inserts, that achieves a passive house certification of class pHB.



Certified by Passive House Institute Dr. Feist



Adaptive U -values save costs and expense



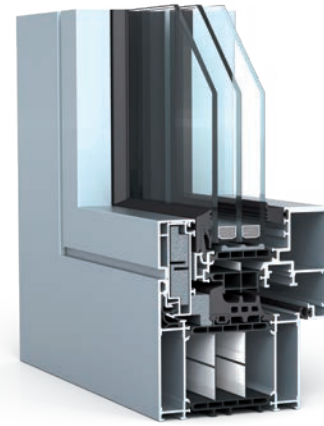
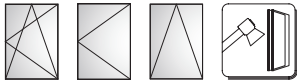
Maximum flexibility in planning and implementation



Maximum energy efficiency with a sleek sight line of 125 mm

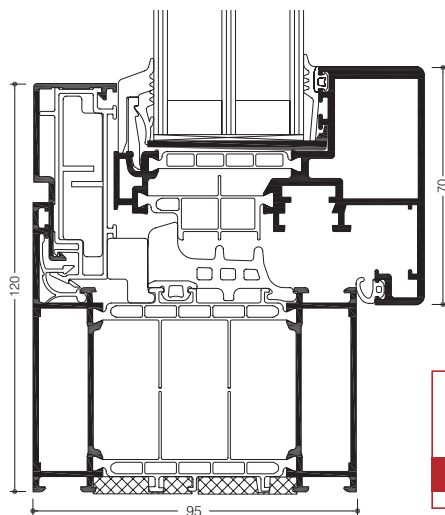
» WICLINE 95
Passive house certified modular principle





WICLINE 95 meets the high requirements of Dr Feist's Passive House Institute in Darmstadt and, thanks to its modular principle, offers the maximum possible flexibility in planning projects.

The Thermoframe insulator in WICLINE 95 sits in the interior of the window and can be finished as a sash frame by the processor and mounted conveniently using the intelligent clips technology. This enables the U_f value of the window to be adjusted variably.



System tests / CE-marked product passport according to DIN EN 14351-1:2006+A1:2010

Air permeability:	Class 4
Waterproofing against driving rain :	E900
Resistance to wind load:	Class C5/B5
Soundproofing:	$R_w (C;C_{tr}) = 47 (-1;-4)$ dB
Operating forces:	Class 1
Load capacity of safety precautions:	Fulfilled
Mechanical strength:	Class 4
Continuous operation:	Class 3 (20 000 cycles)
Corrosion resistance of fittings:	Class 5
Burglar resistance:	RC1N, RC2N, RC2, RC3
Quality management:	Certified to DIN EN ISO 9001:2008

Technical capabilities:

Profile technology:

- Highly thermally insulated multi-chamber system with ETC Intelligence® thermal break 'zone', passive house certified to efficiency class phB.
- Patented corner and butt joint technology for high rigidity of components
- Infill thicknesses up to 55 mm

Thermal insulation:

- U_f values 0.68 to 0.91 W/(m²K) for fixed glazed units with external sight lines from 65 to 180 mm
- U_f values 0.75 to 0.88 W/(m²K) for sash-frame combinations with external sight lines from 105 to 260 mm
- Passive house efficiency class phB, U_w and $U_f = 0.80$ W/(m²K) with sight lines of only 125 mm and 95 mm sash-frame installation depth

Sealing concept:

- Large volume central seal in three variants:
 - Circumference installation without corner butts
 - With formed corners, no adhesive processing of butts
 - Corner vulcanised frames

Hardware:

- Concealed single handed operated fittings, optionally with:
 - overlaid hinges, coated or anodized in all colours
 - concealed hinges with integrated end position damping, opening angle max. 105°
- Sash weights:
 - concealed hinges: up to 160 kg
 - Visible hinges: up to 160 kg
- Sash sizes (w x h): up to 1300 mm x 2250 mm,
- Optionally with opening limiter

System combinations:

- Fully integratable into WICTEC façades using integration sash frames.

» WICLINE 75 TOP
Turn Ideas into Reality



Plan and design without compromise

The WICLINE 75 TOP aluminium window system

Sleek, attractive design or first-class energy efficiency? With WICLINE 75 TOP architects, planners and fabricators no longer have to decide, as WICONA has combined both aspects into a single outstanding aluminium window system. This allows façade designs that are demanding in terms of energy and architectural performance to become a reality.

WICLINE 75 TOP is a high thermal insulation window system with optimum performance, dependable workmanship and performance data to passive house standard – combined with the sleek look associated with a 75-mm window system.

Be the first to benefit from genuine innovation

Once again, WICONA proves its innovative leadership by being one of the first European aluminium system houses to introduce a window system combining a slim module depth of 75 mm with U_w levels below 0.80 W/(m²K)*.

TOP – three letters are decisive:

T	= High Thermal insulation
O	= Optimum performance and workmanship
P	= Passive house standard

Thus, WICLINE 75 TOP is one of the first aluminium window system with a module depth of only 75 mm and thermal performance to passive house standard. WICONA partners benefit from this technological advance with the greatest possible freedom of design when planning demanding window constructions – without having to reduce energy efficiency.

* 1230 x 1480 mm (W x H) window, triple glazing with plastic spacers

WICLINE 75 TOP – the first window system with ETC Intelligence®

Energy efficiency redefined:

Due to the patented ETC Intelligence® thermal break zone, window applications can be achieved with a frame depth of only 75 mm to passive house standard. Conventional insulation inserts are no longer needed for most applications.

Rather, the outstanding energy efficiency is achieved by an innovative and intelligent mix of materials in the thermal break zone of the system.

ETC Intelligence® – a unique innovation:

- Low-**E**mission film reflects the radiated heat effectively
- Low-**T**ransmission thermal break material reduces heat conduction in the section
- Low-**C**onvection thermal break fins minimise heat losses through convection

With this technology, the outstanding thermal performance that used to be the reserve of systems with a module depth of 90 mm is now possible for 75-mm window systems too.

Benefit from the outstanding aluminium window system with 75-mm module depth and U_w -values to passive house standard – without conventional insulating inserts.



Sleek and flexible system profile



Unique thermal insulation performance at 75-mm module depth



Greatest possible design freedom



Highly amenable to working and excellent quality

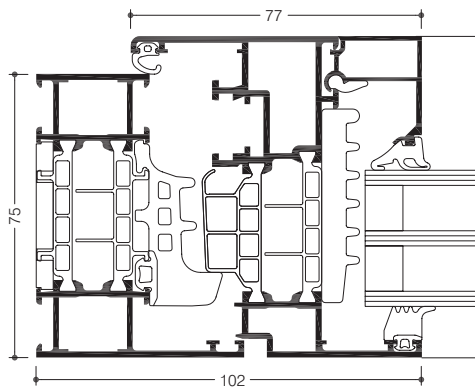
» WICLINE 75 TOP

Due to the proven form with a 75 mm construction depth, the WICONA window system can be used without changes in the planning and production process. Due to the clever mix of materials that, for example, makes conventional insulation inserts superfluous, valuable resources can be saved both in purchasing and in installation.





WICLINE 75 TOP is an exceptionally reliable and production-friendly window system for projects with demanding energy-saving and architectural requirements.



System tests / CE-marked product passport according to DIN EN 14351-1:2006+A1:2010

Air permeability:	Class 4
Watertightness:	E900
Resistance to wind load:	Class C5/B5
Acoustic performance:	$R_w (C; C_{tr}) = 47 (-1; -4)$ dB
Operating forces:	Class 1
Load capacity of safety precautions:	Fulfilled
Mechanical strength	Class 4
Continuous operation:	Class 3 (20 000 cycles)
Corrosion resistance of fittings:	Class 5
Burglar resistance:	RC1N, RC2N, RC2, RC3
Bullet resistance:	FB4 S, FB4 NS (depending on profile combinations)
Quality management:	Certified to DIN EN ISO 9001:2008

Technical capabilities:

Profile technology:

- Highly thermally insulated multi-chamber system with ETC Intelligence® thermal break zone, which implements window designs with only 75 mm frame depth to passive house standards.
- Patented corner and butt joint technology for high rigidity of components
- Infill thicknesses up to 65 mm

Thermal insulation:

- U_f values 0.79 to 1.3 W/(m²K) for fixed glazed units with external sight lines from 48 to 155 mm
- U_f values 1.0 to 1.2 W/(m²K) for sash-frame combinations with external sight lines from 74 to 142 mm
- U_w values less than 0.80 W/(m²K)

Sealing concept:

- Large-volume central seal in three variants:
 - Linear gasket insertion without corner butts
 - With formed corners, no sealing of joints
 - Corner vulcanised frames

Hardware:

- Concealed single-handed operated fittings, optionally with:
 - face-fixed, coated or anodised in all colours
 - concealed hinges with integrated end position damping, opening angle max. 105°
- Sash weights:
 - concealed hinges: up to 160 kg
 - Visible hinges: up to 200 kg
 - On request: up to 300 kg
- Sash sizes (w x h): up to 1700 mm x 2500 mm, Skylights up to 2500 mm x 1700 mm
- Optionally with opening restrictor

Additional designs:

- Concealed sash, infill thicknesses up to 50 mm
- Integration frame for mullion/transom curtain walling
- Skylight with manual lever, crank handle or motor

System combinations:

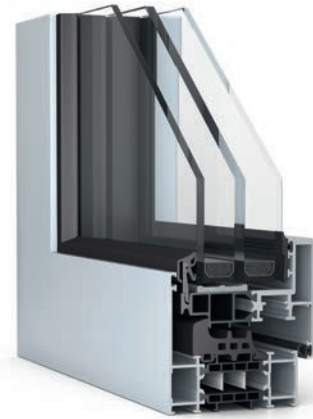
- WICLINE 75 TOP windows can be combined with WICLINE 75 evo windows, WICSTYLE 75 evo doors and using integration sash-frames, with current WICTEC curtain walling

» WICLINE 75 TOP Concealed sash

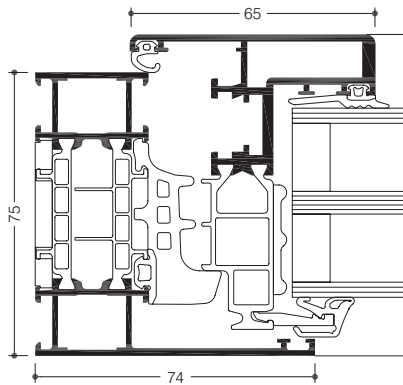
In the concealed sash variant of the WICLINE 75 TOP aluminium window system the glass is held directly in the insulation web by a special glass strip.

This results in extremely narrow visible frames and at the same time very good insulation values and gap-free frame views from the exterior.





The improved ratio between the frame and glazing enables excellent U_w values up to the passive house level and lets in an increased amount of light with panorama view.



System tests / CE-marked product passport according to DIN EN 14351-1:2006+A1:2010

Air permeability:	Class 4
Watertightness:	E900
Resistance to wind load:	Class C5/B5
Acoustic performance:	$R_w (C; C_{tr}) = 46 (-1; -4)$ dB
Operating forces:	Class 1
Load capacity of safety precautions:	Fulfilled
Mechanical strength:	Class 4
Continuous operation:	Class 3 (20 000 cycles)
Corrosion resistance of fittings:	Class 5
Burglar resistance:	RC1N, RC2N, RC2, RC3
Quality management:	Certified to DIN EN ISO 9001:2008

Technical capabilities:

Profile technology:

- Highly thermally insulated multi-chamber system with ETC Intelligence® thermal break zone, which implements window designs with only 75 mm frame depth to passive house standard.
- Patented corner and butt joint technology for high rigidity of components
- Infill thicknesses up to 50 mm

Thermal insulation:

- U_f values 0.97 to 1.3 W/(m²K) for fixed glazed units with external sight lines from 48 to 155 mm
- U_f values up to 1.2 W/(m²K) for sash-frame combinations with external sight lines from 74 to 142 mm
- U_w values less than 0.80 W/(m²K)

Sealing concept:

- Large-volume central seal in three variants:
 - Linear seal without corner joints
 - With formed corners, no adhesive processing of butts
 - Corner vulcanised frames

Hardware:

- Concealed single-handed operated fittings, optionally with:
 - surface mounted hinges, coated or anodised in all colours
 - concealed hinges with integrated end position damping, opening angle max. 105°
- Sash weights:
 - concealed hinges: up to 130 kg
 - Visible hinges: up to 130 kg
- Sash sizes (w x h): up to 1300 mm x 2250 mm
- Optionally with opening limiter

System combinations:

- WICLINE 75 TOP windows can be combined with WICLINE 75 evo windows, and using integration sash-frames, with current WICTEC curtain walling

» WICLINE 75 evo / 65 evo

For individual requirements

The reference technology for aluminium windows

Increasing the energy efficiency of buildings is one of the core technical demands across the world. Nowadays, buildings can be built which produce more energy than they use: buildings with a positive energy balance!

The shell of the building plays a key role in this performance, and very early co-operation between the groups involved in the energy efficiency (architects, planning offices, manufacturers, processors) is crucial for achieving a result which meets the demands.

The aluminium windows and French windows from the WICLINE evo range with a system depth of 65 and 75 mm were developed to meet this challenge thanks to their exceptional heat insulation and the numerous possibilities for use.

With the highest performance characteristics, this window system is ideally suited to all future architectural demands. In Switzerland, WICLINE 75 evo was the first metal window to be certified as a Minergie-P module.

When developing this range, WICONA consciously decided on an evolution rather than a revolution. This means every component is analysed in co-operation with customers and partners and optimised for use in practice.

The result:

- Higher financial returns
- Reliable manufacturing process for a guaranteed performance
- Simpler and faster manufacture

WICONA partners and their customers benefit from this.



Environmental responsibility

As one of the first system housings, WICONA was already equipping window, door and façade profiles with heat insulation composed of recycled polyamide in 2015. The heat insulation serves to thermally separate the profile constructions and consist of up to 100 % recycled material. This significantly improves the ecological balance of the system – without reducing the quality and without increasing the price for WICONA customers.

The variety of polyamide recycled materials are evaluated in an upcycling process so that the material characteristics are directly comparable to new material. Polymer blends or mixed recycled materials are not used. With this product, the use of fossil fuels is reduced by 89 %, the CO₂ output is reduced by 84 % and water consumption is reduced by 32 %.

This decision has a direct impact on the environmental footprint of WICONA windows, since this offers a crucial advantage if conformity certification is required for compliance with standards for ecological building such as with the LEED or DGNB labels, Minergie-P, BBC and HQE.

In comparison to a window in which no recycled polyamide is used, the environmental balance of a WICLINE 75 evo window is improved by 10 %: This result is certified by the Environmental Product Declaration (EPD). The WICTOP Genius software package for thermal calculations and simulations lets you generate environmental product declarations.

WICONA has obtained the Bronze Cradle to Cradle (C2C) certificate for the window ranges WICLINE 75 / 65, awarded by Cradle to Cradle (C2C) Products Innovation Institute, a non-profit organisation based in San Francisco (USA).



Solutions for all situations

- All designs, whether with concealed or visible sashes, are based on the WICONA Unisys principle and can be integrated perfectly into the WICTEC 50 façades.
- 2 fittings options (concealed and visible), which use the same manufacturing planning

Innovation for more process profitability

- Patented corner angle system which enables adhesive to be injected in a single operation
- Fast fittings installation using the unique DPS system (Direct Positioning System)




An offering which covers all possible implementations and is available with a system depth of 65 and 75 mm; with numerous options which allow a true customisation to the specific requirements of any site.

 **Appealing appearance**

 **Optimised production process**

 **Offering coordinated to eco-labelling.**

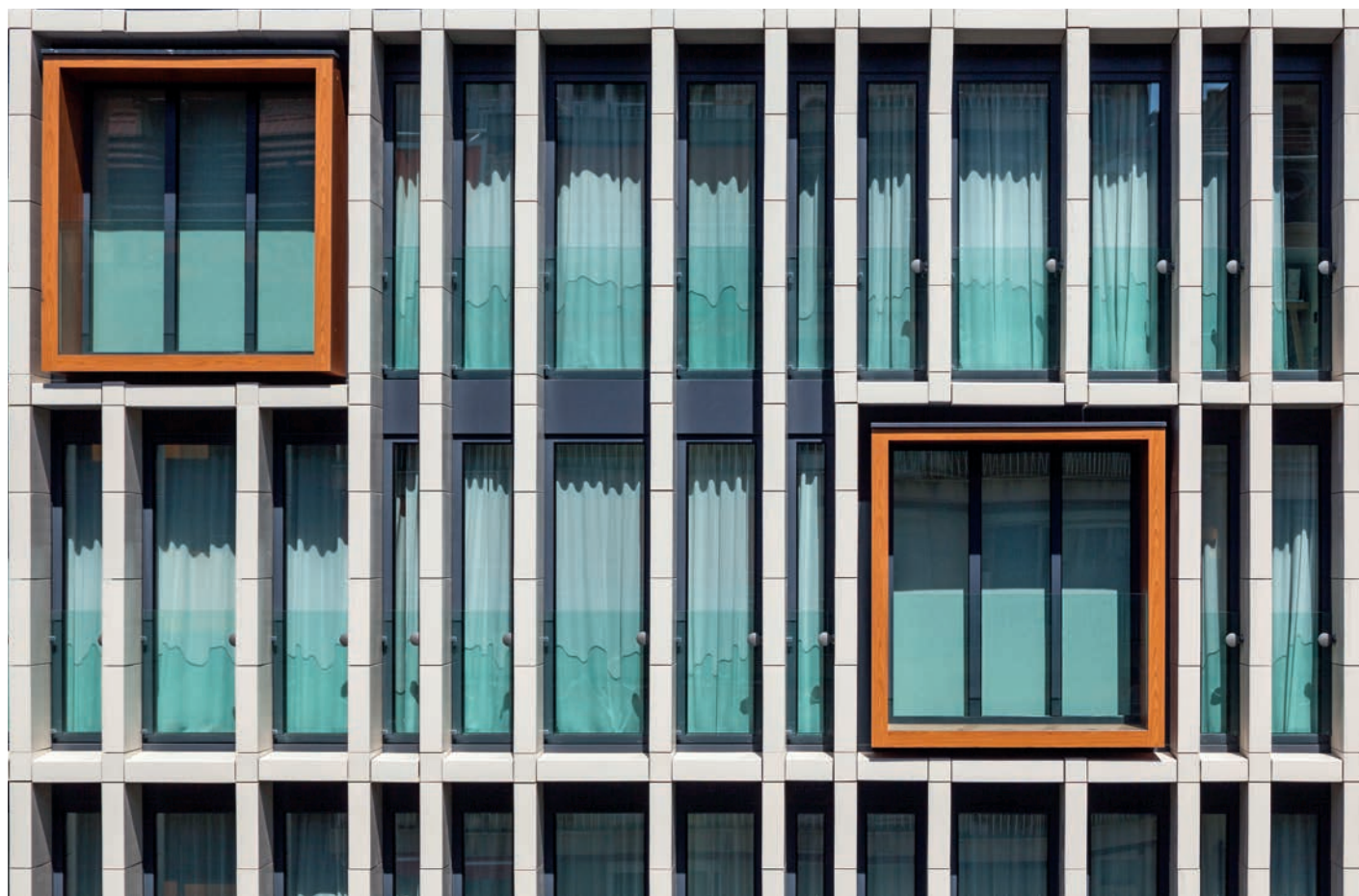
 **Environmental product declaration available via WICTOP**

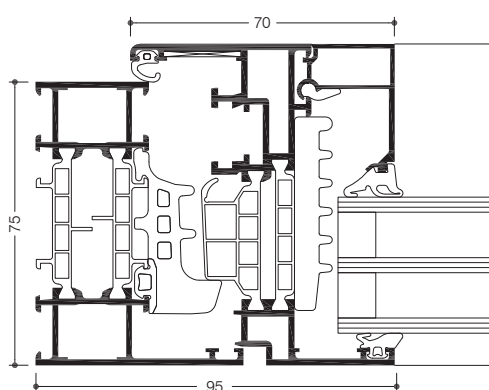
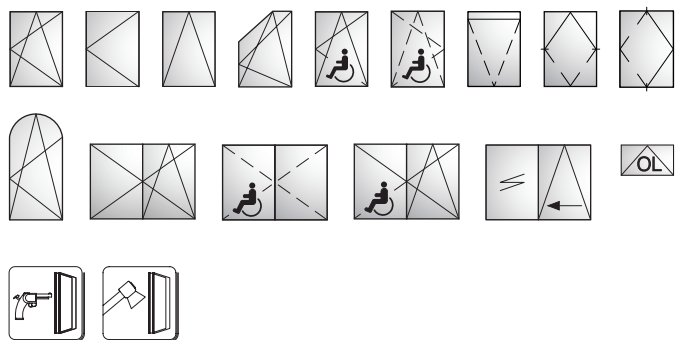


» WICLINE 75 evo / 65 evo Visible sash

With a 75 mm system depth, WICLINE 75 evo integrates excellent heat insulation characteristics and building features. With the highest performance characteristics, this aluminium window is ideally suited to all future architectural demands. In Switzerland, WICLINE 75 evo was the first metal window to be certified as a Minergie-P module.

With a 65 mm system depth, the system already meets the high requirements for heat and sound insulation. So WICLINE 65 evo offers a particularly favourable price to performance ratio. The highly developed technology and the comprehensive profile programme make WICLINE 65 evo windows the perfect all-rounder with a versatile spectrum of uses.




System test results / CE product pass in accordance with DIN EN 14351-1:2006+A1:2010

Air permeability:	Class 4
Watertightness:	E900
Resistance to wind load:	Class C5 / B5
Acoustic performance:	$R_w (C; C_{tr}) = 47 (-1; -4) \text{ dB}$
Operating forces:	Class 1
Load bearing capacity of safety devices:	Fulfilled
Mechanical strength:	Class 4
Repeated opening / closing:	Class 3 (20 000 cycles)
Corrosion resistance of the fittings:	Class 5
Burglar resistance:	RC1N, RC2N, RC2, RC3
Bullet resistance:	FB4 S, FB4 NS (depending on the profile combination)
Quality assurance:	Certified according to ISO 9001:2008
Environmental management:	Certified according to ISO 14001

Technical performance:
Profile technology:

- High insulation multi-chamber system in symmetric design, quality assured thermal insulator connection
- Patented corner and butt joint connection technology for high rigidity of frames and sashes
- Infill thickness up to 69 mm (up to 59 mm for WICLINE 65 evo)

Thermal insulation:

- U_f values WICLINE 75 evo: until $1.2 \text{ W}/(\text{m}^2\text{K})$
- U_f values WICLINE 65 evo: until $1.4 \text{ W}/(\text{m}^2\text{K})$
- U_w values WICLINE 75 evo: until $0.87 \text{ W}/(\text{m}^2\text{K})$ for sashes, until $0.72 \text{ W}/(\text{m}^2\text{K})$ for fixed glazing, with triple glazing
- U_w values WICLINE 65 evo: until $0.93 \text{ W}/(\text{m}^2\text{K})$ with triple glazing
- Certified as Minergie-P module $U_w 0.8 \text{ W}/(\text{m}^2\text{K})$

Sealing concept:

- Voluminous centre gasket with three installation methods:
 - Circumferential centre gasket, no joints in the corner areas
 - Formed corners, avoiding adhesive in the joints
 - Corner vulcanised frames

Hardware:

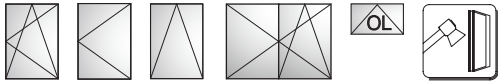
- Heavy duty system fittings with:
 - Visible hinges, powder coating or anodisation in all colours
 - Concealed hinges with integrated end position damping, opening angle max. 105°
- Sash weight:
 - Concealed hinges: up to 160 kg
 - Visible hinges: up to 200 kg
 - On demand: up to 300 kg
- Sash sizes (w x h): 1700 mm x 2500 mm, fanlight 2500 mm x 1700 mm
- Optionally with opening limiter

Additional designs:

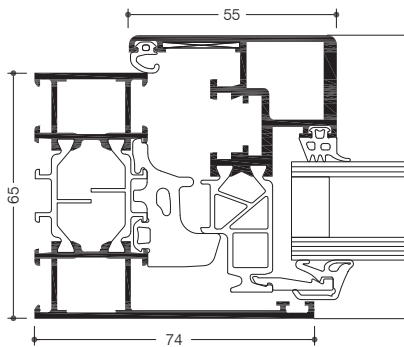
- Concealed sash
- Classic design
- Integration frame for stick façades
- Fanlight with hand lever, cranked rod or motor
- Pivot window, horizontal or vertical
- Parallel sliding window, with or without force operation
- Italian style window
- Top-hung window
- Window doors with barrier free threshold, single or double casement door, inward and outward opening

**Compatible with the door series
WICSTYLE 65 evo and WICSTYLE 75 evo**

» WICLINE 75 evo / 65 evo Concealed sash



The option "Concealed Sash" in the aluminium window system WICLINE evo features a special glazing bead fixed directly in the thermal break zone. As a result the system achieves an extremely slim frame elevation, superior thermal insulation values and a groove-free profile design from outside. The improved ratio between frame and glazing surfaces leads to very good U_w values, increased light transmissions and panoramic views.



System test results / CE product pass in accordance with DIN EN 14351-1:2006+A1:2010

Air permeability:	Class 4
Watertightness:	E1200
Resistance to wind load:	Class C5 / B5
Operating forces:	Class 1
Load bearing capacity of safety devices:	Fulfilled
Mechanical strength:	Class 4
Repeated opening / closing:	Class 2 (10 000 cycles)
Impact resistance:	Class 3
Corrosion resistance of the fittings:	Class 5
Burglar resistance:	RC1N, RC2N, RC2, RC3
Quality assurance:	Certified according to ISO 9001:2008
Environmental management:	Certified according to ISO 14001



Technical performance:

Profile technology:

- High insulation multi-chamber system in symmetric design, quality assured thermal insulator connection
- Patented corner and butt joint connection technology for high rigidity of frames and sashes
- Infill thickness up to 42 mm
- Optionally with integration frame for stick curtain walls

Thermal insulation:

- U_f values: until 1,5 W/(m²K)
- U_w values: until 0.94 W/(m²K) with triple glazing

Sealing concept:

- Voluminous centre gasket with three installation methods:
 - Circumferential centre gasket, no joints in the corner areas
 - Formed corners, avoiding adhesive in the joints
 - Corner vulcanised frames

Hardware:

- Heavy duty system fittings with:
 - Visible hinges, powder coating or anodisation in all colours
 - Concealed hinges with integrated end position damping, opening angle max. 105°
- Sash weight:
 - up to 130 kg
- Sash sizes (w x h): 1400 mm x 2250 mm
- Optionally with opening limiter in various executions

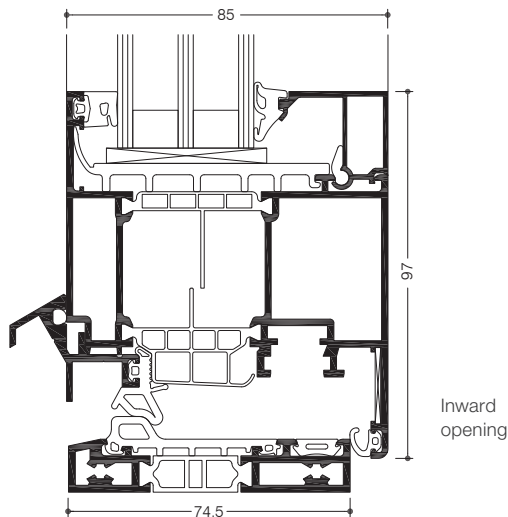
Additional designs in concealed sash design:

- Integration frame for stick façades
- Fanlight
- Burglar resistance (see system tests)

» WICLINE 75 evo / 65 evo French door, barrier free



With extended sash formats, single or double casement option and barrier free threshold this aluminium window door with inward or outward opening offers new freedom in architectural design. Superior technical performance and exemplary thermal insulation set new standards.



System test results / CE product pass in accordance with DIN EN 14351-1:2006+A1:2010

	Inward opening	Outward opening
Air permeability:	Class 4	Class 4
Watertightness:	Single sash: 9A Double sash: 7A	7A
Resistance to wind load:	Until Class C5/B5	Class C3 / B3
Operating forces:	Class 1	Class 1
Mechanical strength:	Class 4	Class 4
Corrosion resistance of the fittings:	Class 5	
Repeated opening / closing:	Class 2 (10 000 cycles)	Class 2 (10 000 cycles)
Quality assurance:	Certified according to ISO 9001:2008	
Environmental management:	Certified according to ISO 14001	



Technical performance:

Profile technology:

- High insulation multi-chamber system in symmetric design, quality assured thermal insulator connection
- Patented corner and butt joint connection technology for high rigidity of frames and sashes
- Infill thickness up to 69 mm
- Barrier free threshold, thermally insulated

Thermal insulation:

- U_f values: until 1,3 W/(m²K)

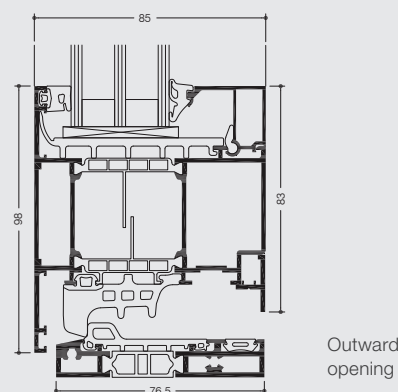
Sealing concept:

- Voluminous centre gasket with three installation methods:
 - Circumferential centre gasket, avoiding joints in the corner areas
 - Formed corners, avoiding adhesive in the joints
 - Corner vulcanised frames on 3 sides

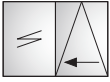
Hardware:

- Alternatively inward or outward opening
- Single or double sash option
- Inward opening option with heavy duty system fittings, with visible hinges, powder coating or anodisation in various colours.
- Sash weight:
 - Up to 130 kg
- Sash sizes (w x h):
 - Inward opening: up to 1400 mm x 2500 mm
 - Outward opening: up to 1300 mm x 2250 mm
- Optionally with opening limiter in various executions

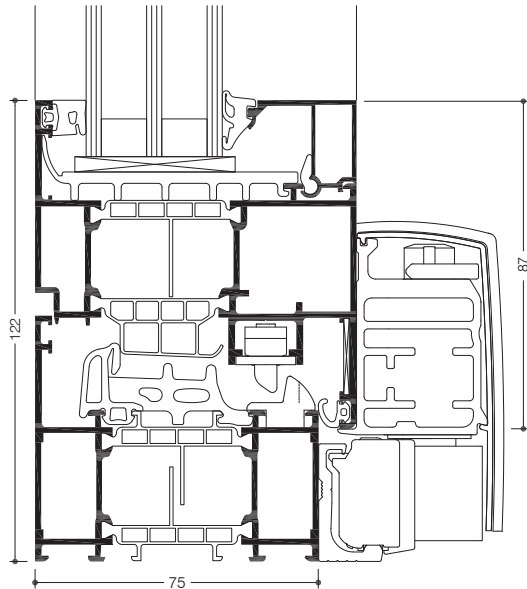
Compatible with the door series WICSTYLE 65 evo and WICSTYLE 75 evo



» WICLINE 75 evo / 65 evo 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 the sash and the elevated technical performance values are characteristic for this opening type of the WICLINE evo aluminium window system.



Technical performance:

Profile technology:

- High insulation multi-chamber system in symmetric design, quality assured thermal insulator connection
- Patented corner and butt joint connection technology for high rigidity of frames and sashes
- Infill thickness up to 69 mm

Thermal insulation:

- U_f values: until 1.2 W/(m²K)

Sealing concept:

- Voluminous centre gasket in corner vulcanised frames

Hardware:

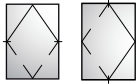
- Tilt slide fittings, optionally
 - without force operation
 - with force operation (wfo)
- Sash weight:
 - Up to 160 kg
 - Up to 200 kg (wfo)
- Sash sizes (w x h):
 - Up to 1685 mm x 2500 mm
 - Up to 2000 mm x 2700 mm (wfo)

Compatible with the door series
WICSTYLE 65 evo and WICSTYLE 75 evo

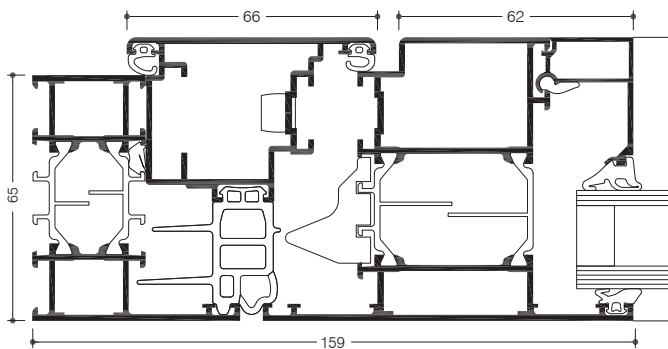
System test results / CE product pass in accordance with DIN EN 14351-1:2006+A1:2010

Air permeability:	Class 4
Watertightness:	E750
Resistance to wind load:	Class C5 / B5
Operating forces:	Class 1
Mechanical strength:	Class 4
Repeated opening / closing:	Class 2 (10000 cycles)
Quality assurance:	Certified according to ISO 9001:2008
Environmental management:	Certified according to ISO 14001

» WICLINE 75 evo / 65 evo
Integration pivot sash,
horizontal or vertical



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 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 façade integration.



System test results / CE product pass in accordance with DIN EN 14351-1:2006+A1:2010

	Horizontal	Vertical
Air permeability:	Class 4	Class 4
Watertightness:	E750	4A
Resistance to wind load:	Class C5 / B5	Class C5 / B5
Operating forces:	Class 1	Class 1
Mechanical strength:	Class 4	Class 4
Repeated opening / closing:	Class 2 (10 000 cycles)	Class 2 (10 000 cycles)
Quality assurance:	Certified according to ISO 9001:2008	
Environmental management:	Certified according to ISO 14001	



Technical performance:

Profile technology:

- High insulation multi-chamber system in symmetric design, quality assured thermal insulator connection
- Patented corner and butt joint connection technology for high rigidity of frames and sashes
- Infill thickness up to 69 mm
- Optionally with frame for punched hole application

Thermal insulation:

- U_f values: until 1.5 W/(m²K)
- U_w values: until 1.0 W/(m²K) with triple glazing

Sealing concept:

- Special multi-chamber centre gasket with fins for superior tightness and improved thermal insulation

Hardware:

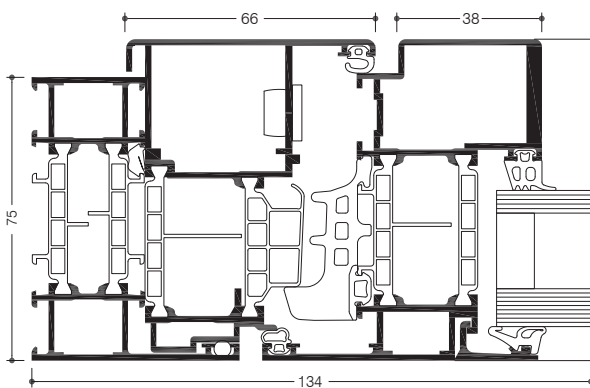
- Horizontal or vertical pivot fittings, optionally with
 - visible bearings or
 - concealed bearings
- Sash weight:
 - Horizontal: up to 150 kg
 - Vertical: up to 120 kg
- Sash sizes (w x h):
 - Horizontal: up to 2400 mm x 1400 mm
 - Vertical: up to 2000 mm x 2000 mm



» WICLINE 75 evo / 65 evo Integration sash, outward opening, Italian sash



An elegant appearance combined with efficient ventilation are the characteristics of the aluminium system WICLINE evo in its Italian opening version. Concealed friction stays ensure an outward opening also for large size sashes, with a secure opening fixation in any position. Special frame profiles for curtain wall integration as well as a large selection of friction stay sizes guarantee maximum versatility of the system.



Technical performance:

Profile technology:

- High insulation multi-chamber system in symmetric design, quality assured thermal insulator connection
- Patented corner and butt joint connection technology for high rigidity of frames and sashes
- Infill thickness up to 69 mm
- Optionally with frame for punched hole application

Thermal insulation:

- U_f values: until 1.5 W/(m²K)
- U_w values: until 1.0 W/(m²K) with triple glazing

Sealing concept:

- Voluminous centre gasket with formed corners

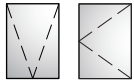
Hardware:

- Concealed integrated friction stay fittings, with vertical adjustment
- Operation either manual or motorised
- Sash weight: until 150 kg
- Sash sizes (w x h): until 2000 mm x 2200 mm

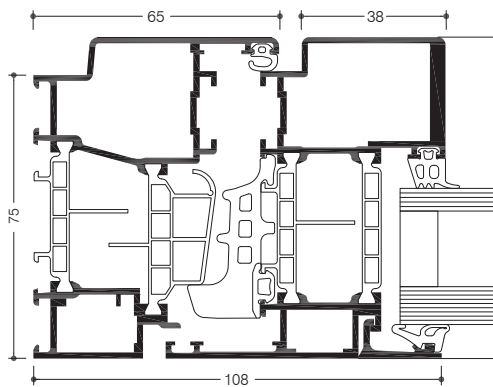
System test results / CE product pass in accordance with DIN EN 14351-1:2006+A1:2010

Air permeability:	Class 4
Watertightness:	E1200
Resistance to wind load:	Class C5 / B5
Operating forces:	Class 1
Mechanical strength:	Class 4
Repeated opening / closing:	Class 2 (10 000 cycles)
Impact resistance:	Class 3
Quality assurance:	Certified according to ISO 9001:2008
Environmental management:	Certified according to ISO 14001

» WICLINE 75 evo / 65 evo Top hung / Turn window, outward opening



A sash opening towards the outside offers many substantial advantages like effective ventilation, the choice between manual and motorised operation, and avoids a disturbing sash towards the inside. With very big possible sash dimensions and optimised functionality WICLINE evo offers an interesting alternative opening type for architecture.



Technical performance:

Profile technology:

- High insulation multi-chamber system in symmetric design, quality assured thermal insulator connection
- Patented corner and butt joint connection technology for high rigidity of frames and sashes
- Infill thickness up to 69 mm
- Optionally with frame for punched hole application

Thermal insulation:

- U_f values until 1.5 W/(m²K)
- U_w values until 0.94 W/(m²K)

Sealing concept:

- Special multi-chamber centre gasket with fins for superior tightness and improved thermal insulation

Hardware:

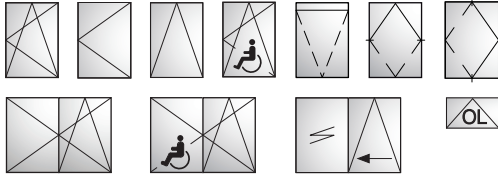
- Externally applied turn hinges, optionally with
 - top fixation for top-hung opening
 - lateral fixation for side-hung opening
- Operation either manual or motorised
- Sash weight until 150 kg
- Sash sizes (w x h): until 2000 mm x 2000 mm

System test results / CE product pass in accordance with DIN EN 14351-1:2006+A1:2010

Air permeability:	Class 4
Watertightness:	E1200
Resistance to wind load:	Class C5 / B5
Operating forces:	Class 1
Load bearing capacity of safety devices:	Fulfilled
Mechanical strength:	Class 4
Repeated opening / closing:	Class 2 (10 000 cycles)
Impact resistance:	Class 3
Quality assurance:	Certified according to ISO 9001:2008
Environmental management:	Certified according to ISO 14001



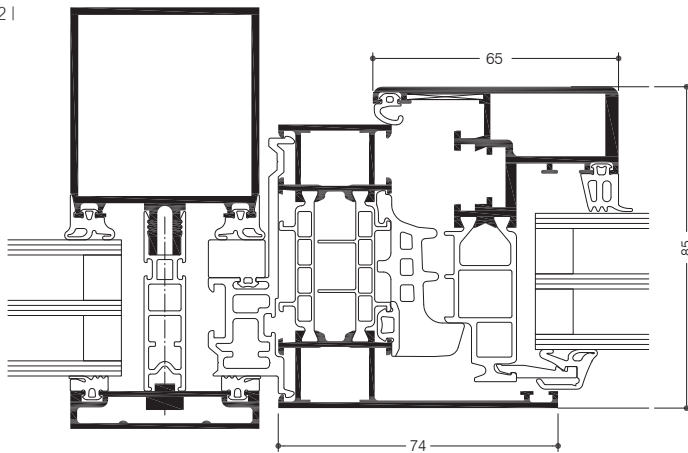
» WICLINE 75 evo / 65 evo Integration sash



The ideal combination: WICTEC stick system curtain walls with integrated opening sashes from the WICLINE window series.

The versatile systems with extended performances offer individual solutions on the highest technical and design level, adaptable with a large selection of additional functions.

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- 1 | Example standard sash
2 | Example concealed sash

System test results / CE product pass in accordance with DIN EN 14351-1:2006+A1:2010 and DIN EN 13830

See classification of the WICLINE window series and the WICTEC curtain wall series.



Technical performance:

Profile technology:

- High insulation multi-chamber system in symmetric design, quality assured thermal insulator connection
- Patented corner and butt joint connection technology for high rigidity of frames and sashes
- Infill thickness up to 69 mm

Thermal insulation:

- See values of the respective window and door series

Inward opening options:

- Turn / turn-tilt / tilt window
- Concealed sash
- Horizontal pivot window
- Vertical pivot window
- Burglar resistance

Hardware:

- Heavy duty system fittings with:
 - visible hinges, powder coating or anodisation in all colours
 - concealed hinges with integrated end position damping, opening angle max. 105°
- Sash weight:
 - Concealed turn-tilt hinges: up to 160 kg
 - Visible turn-tilt hinges: up to 200 kg
 - Turn hinges (on demand): up to 300 kg
- Sash sizes (w x h): 1700 mm x 2500 mm
- Optionally with opening limiter in various executions

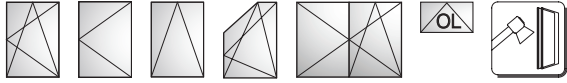
Outward opening options:

- Top-hung window
- Side-hung window
- Italian window

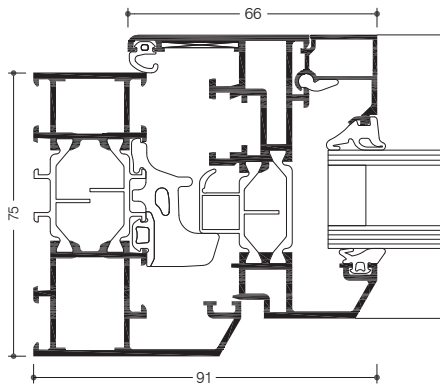
Hardware:

- Visible hinges top-hung or side-hung
- Concealed hinges Italian style window
- Sash weight: up to 150 kg
- Sash sizes (w x h): up to 2000 mm x 2000 mm

» WICLINE 75 evo / 65 evo 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 build and energetic renovations alike.



System test results / CE product pass in accordance with DIN EN 14351-1:2006+A1:2010

Air permeability:	Class 4
Watertightness:	E900
Resistance to wind load:	Class C5/B5
Acoustic performance:	$R_w(C; C_{tr}) = 47 (-1; -4)$ dB
Operating forces:	Class 1
Load bearing capacity of safety devices:	Fulfilled
Mechanical strength:	Class 4
Repeated opening / closing:	Class 3 (20 000 cycles)
Corrosion resistance of the fittings:	Class 5
Burglar resistance:	RC1N, RC2N, RC2, RC3
Quality assurance:	Certified according to ISO 9001:2008
Environmental management:	Certified according to ISO 14001



Technical performance:

Profile technology:

- High insulation multi-chamber system in symmetric design, quality assured thermal insulator connection, with 30° bevelled glazing rebates
- Patented corner and butt joint connection technology for high rigidity of frames and sashes
- Infill thickness up to 59 mm

Thermal insulation:

- U_f values: until 1.5 W/(m²K)
- U_w values: until 0.84 W/(m²K) with triple glazing

Sealing concept:

- Voluminous centre gasket with three installation methods:
 - Circumferential centre gasket, avoiding joints in the corner areas
 - Formed corners, avoiding adhesive in the joints
 - Corner vulcanised frames

Hardware:

- Heavy duty system fittings with:
 - visible hinges, powder coating or anodisation in all colours
 - concealed hinges with integrated end position damping, opening angle max. 105°
- Sash weight:
 - Visible hinges: up to 100 kg
 - Concealed hinges: up to 100 kg
- Sash sizes (w x h): 1300 mm x 1700 mm
- Optionally with opening limiter in various executions

Additional options in classic design:

- Flush sash in classic design
- Overlapping sash and frame in classic design
- Fixed glazing
- Double casement window
- Crossbar profiles and glazing bars
- Integration frame for stick façades
- Fanlight
- Burglar resistance (see system tests)

Compatible with the door series WICSTYLE 65 evo and WICSTYLE 75 evo in Classic Design

»» Tailor-made safety and security solutions

Perfect functionality without compromise – that is what WICONA safety windows stand for. Burglar resistance and bullet resistance, fire and smoke protection – WICONA brand aluminium profile systems are exactly matched to the statutory requirements and meet the valid standard specifications. The combination of constructive solutions with the highest product quality and intelligent innovation promises the best

possible customer benefit with the highest levels of security. The modular design of the WICLINE window range also offers tailored configurations in the area of safety technology for every building situation and every level of demand. Can be easily combined with WICTEC façade systems and WICSTYLE door systems.



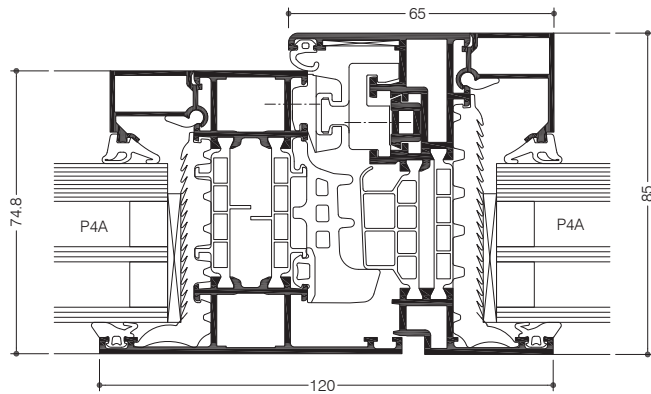


» WICLINE Window systems, burglar resistance

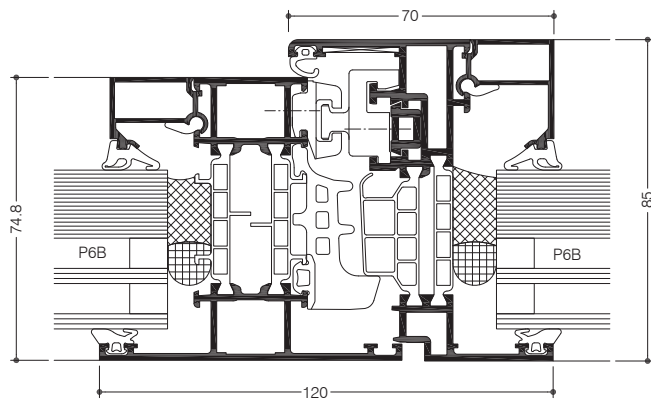
Personal security and building protection – for your building you need a solution approach which can be accomplished with aluminium systems in a wholistic and compatible way. This is achieved by the WICONA series for windows, curtain walls and doors. Each of them can offer burglar resistance, in combination with other additional functions.

The various levels of resistance classes can be achieved with all WICLINE window series without visual alterations of the constructions, with only a minimum of additional measures on the basis of the standard design.





WICLINE 75 evo RC2



WICLINE 75 evo RC3

System test results / CE product pass in accordance with DIN EN 14351-1:2006+A1:2010

See classification of the respective WICLINE window series.



Technical performance:

Burglar resistance according to EN 1627:

- The currently valid standard for burglar resistance, EN 1627, has come into effect in European countries in 2011 and 2012. It replaced former national standards. The classifications have been modified to classes RC1N to RC3, which are not identical with the former classes WK1 to WK3.

Test results of the WICONA window series:

- The new WICLINE 65 evo and WICLINE 75 evo series with several variations have been tested according to the new standard EN 1627. They can easily be specified and implemented without any additional measurement according to this new standard.

Burglar resistance according to EN 1627 resp. DIN 1627 / classifications:

WICLINE 65 evo / 75 evo Turn / Turn-tilt / Tilt / Tilt-first / Double casement	RC1N, RC2N, RC2, RC3
WICLINE 65 evo / 75 evo Fanlight	RC1N, RC2N, RC2, RC3
WICLINE 65 evo / 75 evo Concealed sash	RC1N, RC2N, RC2, RC3
WICLINE 65 evo / 75 evo Classic design	RC1N, RC2N, RC2, RC3
WICLINE 95 Turn/ Turn-tilt/ Tilt/ Tilt-first/ Fanlight	RC1N, RC2N, RC2, RC3

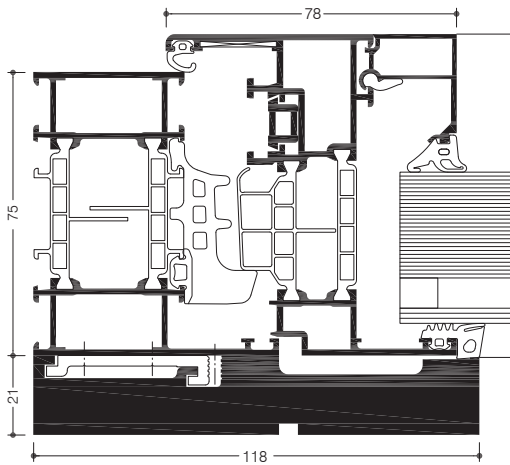
» WICLINE
Window systems, bullet resistance





Personal security and building protection – for your building you need a solution approach which can be accomplished with aluminium systems in a wholistic and compatible way. This is achieved by the WICONA series for windows, curtain walls and doors. Each of them can provide bullet resistance, in combination with other additional functions.

The requirements for bullet resistance are achieved with various WICLINE window profile combinations, simply by addition of the standard construction with a special aluminium planking.



System test results/CE product pass in accordance with DIN EN 14351-1:2006+A1:2010

See classification of the respective WICLINE window series.



Technical performance:

Bullet resistance according to EN 1522

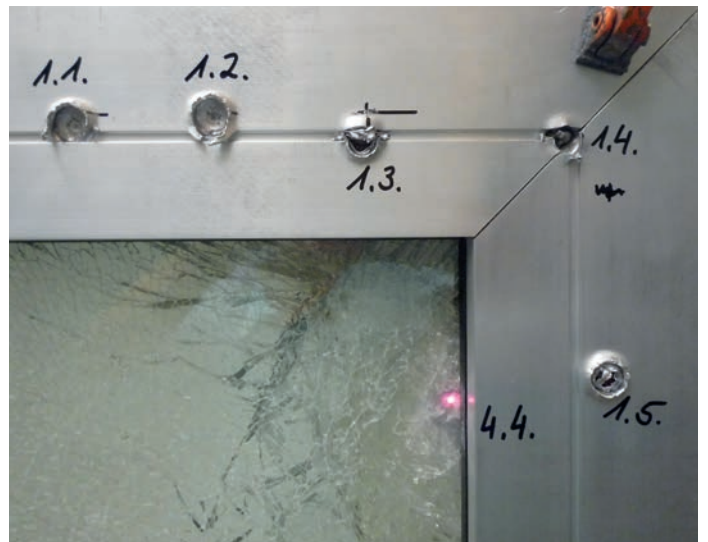
- The bullet resistance requirements for windows are regulated Europe wide in the standard EN 1522. The new window series WICLINE 65 evo and WICLINE 75 evo have been tested according to this standard in various profile combinations, and successfully been certified in class FB4 S and FB4 NS.
- Bullet resistance in classes FB4 S and FB4 NS can be achieved for various opening types, in punched hole applications or in ribbon windows.
- Bullet resistance can be combined with burglar resistance in the classes RC1N, RC2N, RC2, RC3 according to EN 1627.

Possible combinations with other WICONA product series in bullet resistance in class FB4:

- Doors WICSTYLE 65 evo/WICSTYLE 75 evo
- Stick curtain walls WICTEC 50

Bullet resistance according to EN 1522/classifications:

WICLINE 65 evo/75 evo Turn/Turn-tilt/Tilt/ Tilt-first/Double casement	FB4 S/FB4 NS
WICLINE 65 evo/75 evo Fanlight	FB4 S/FB4 NS

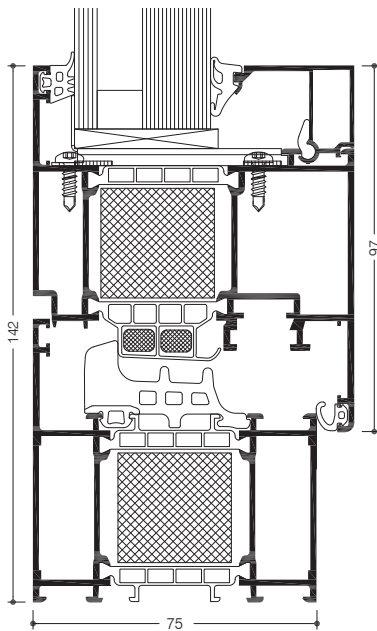


» WICLINE 75FP
Fire protection window





With the new WICLINE 75FP fire protection window series, the WICONA fire protection programme is completed. The construction is 100 % based on a WICLINE 75 standard design and cannot be visually differentiated from this design. The self-closing openable fire protection glazing can be implemented as punch windows, windows with surrounds or integrated in a WICTEC 50FP fire protection stick curtain wall.



System test results / CE product pass in accordance with DIN EN 14351-1:2006+A1:2010

Air permeability:	Class 4
Watertightness:	E750
Resistance to wind load:	Class C4 / B4
Operating forces:	Class 2
Load bearing capacity of safety devices:	Fulfilled
Mechanical strength:	Class 4
Repeated opening / closing:	Class 2 (10 000 cycles)
Impact resistance:	Class 3
Quality assurance:	Certified according to ISO 9001:2008
Environmental management:	Certified according to ISO 14001

Technical performance:

Profile technology:

- National technical approval: please contact the WICONA sales office
- Tested according to the standard DIN EN 1634
- Execution in fire protection classes EI30 or EW30
- Patented corner and butt joint connection technology for high rigidity of frames and sashes
- Infill thickness up to 49 mm
- Optionally with integration frame for stick curtain walls WICTEC 50FP

Thermal insulation:

- U_f values: until 1.3 W/(m²K)

Sealing concept:

- Voluminous centre gasket with three installation methods:
 - Circumferential centre gasket, avoiding joints in the corner areas
 - Formed corners, avoiding adhesive in the joints
 - Corner vulcanised frames

Hardware:

- Heavy duty system fittings, with concealed hinges, integrated end position damping, opening angle max. 105°
- Sash weight:
 - up to 160 kg
- Sash sizes (w x h): 1300 mm x 2300 mm



» The proven series for
special requirements



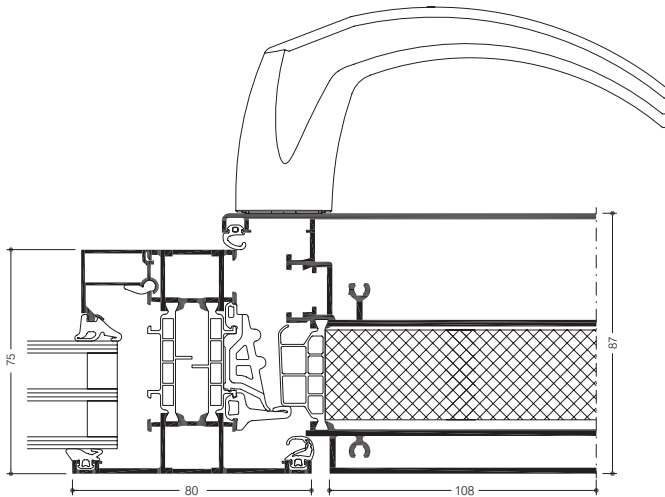


» WICLINE 75 evo Ventilation flap

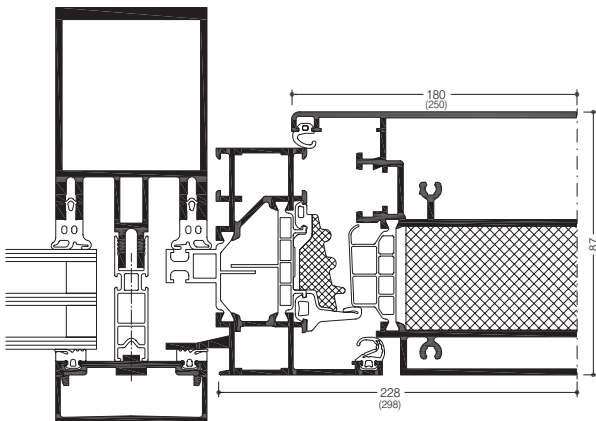
With a one-piece highly insulated aluminium sash, WICONA enables a current façade design with narrow and high ventilation elements alongside generous fixed glazing.

WICLINE thereby unites current design with natural ventilation – flexible, user-friendly and economical.





WICLINE 75 evo Ventilation flap 180 with window frame



WICLINE 75 evo Ventilation flap 250 with tensioning frame for facades

System test results / CE product pass in accordance with DIN EN 14351-1:2006+A1:2010

Air permeability:	Class 4
Watertightness:	Class 9A
Resistance to wind load:	Class C5 / B5
Sound insulation:	Until 42 dB
Burglar resistance:	RC1N, RC2N, RC2



Technical performance:

Highlights:

- Sash widths from 170 to 330 mm, Standard dimensions 180 and 250 mm
- Max. sash sizes (w x h): 180 mm x 3000 mm or 250 mm x 3000 mm
- Fast and economical adjustment of the sash width in the object
- Narrowest possible shadow gap between sash and frame - only 6 mm as in standard WICONA windows
- 3 m sash height including burglar resistance up to RC2
- Simple and efficient processing exclusively with 90° cutting saw or notch cuts
- Comprehensive system testing according to DIN 14351-1 verifies the high quality of the system technology

Thermal insulation:

- U_f value up to 1.2 W/(m²K)

Hardware:

- High quality system fittings with Direct Positioning System (DPS). Components can be assembled in any order, optionally:
 - Surface-mounted hinges, colour coated or anodised
 - Concealed hinges with integrated end-position stops
- Sash weights: 80 kg
- Optionally with opening limiter
- Burglar resistance RC1N, RC2N and RC2

Concealed motor integration:

- 90° opening allowing for maximum ventilation
- Low-maintenance and tamper-proof
- Adjustable opening angle
- Control via ventilation switches, remote control or building management system
- Concealed emergency release
- No motor chains protruding into the opening area

Compatible with the window series WICLINE 75 and façade series WICTEC

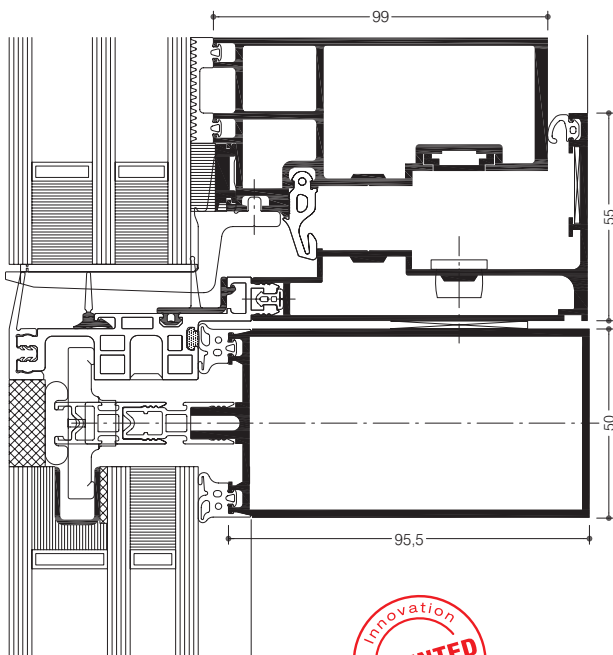
» WICLINE 90SG

Structural glazing integration sash,
Italian sash / Parallel outward opening sash

As an attractive complement for curtain walls the integration sash WICLINE 90SG provides efficient ventilation, if requested also fully automated. This all-glass window gives full options as a projecting top-hung sash or as a parallel outward opening sash and can be integrated flush with the glass panel level in WICTEC 50SG structural glazing curtain walling or in stick systems with exterior pressure profiles.

For an optimum thermal insulation WICLINE 90SG can be equipped with double or triple glazing. Using standard glass without glass step leads to an economy of cost and improved safety.





Technical performance:

Profile technology:

- All-glass sash with slim profile design for maximum transparency and finelined window structures. Construction depth 90 mm, interior width 55 mm
- ETA granted (European Technical Approval)
- Infill thickness up to 62 mm
- For double or triplex glass
- Technology without step glazing, leading to economy and simpler assembly
- Complete fittings from WICONA for manual or motor operation

Thermal insulation:

- U_f value until 1.1 W/(m²K)

Italian sash application:

- Sash weight until 180 kg
- Sash sizes (w x h): until 1500 mm x 2500 mm or until 2000 mm x 1700 mm

Parallel outward sash application:

- Sash weight until 200 kg
- Sash sizes (w x h): until 1500 mm x 3000 mm or until 2000 mm x 1500 mm

System test results / CE product pass in accordance with DIN EN 14351-1:2006+A1:2010

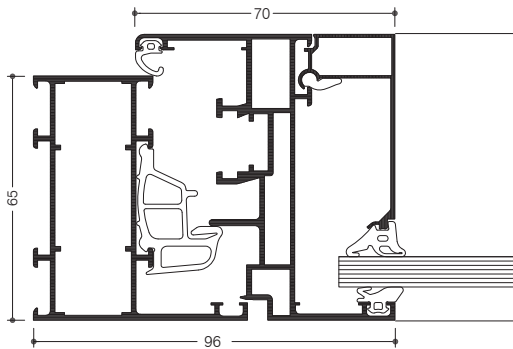
Air permeability:	Class 4
Watertightness:	E750
Resistance to wind load:	Class C4 / B4
Repeated opening / closing:	Class 2 (10000 cycles)
Impact resistance:	Class 3
Load bearing capacity of safety devices:	Fulfilled
Approval	ETA: -11/0042 (European Technical Approval)
Quality assurance:	Certified according to ISO 9001:2008
Environmental management:	Certified according to ISO 14001



» WICLINE 65N Non-insulated windows



The WICLINE 65N aluminium window is ideally suited for buildings in which specific heat protection measures are unnecessary. Ideal as well for the use as NSHEV (Natural Smoke and Heat Exhaust Ventilator).



Technical performance:

Profile technology:

- High quality aluminium profiles, without thermal break
- Patented corner and butt joint connection technology for high rigidity of frames and sashes
- Infill thickness up to 58 mm

Hardware:

- Concealed single-handed operated fittings, alternatively with:
 - Visible hinges
 - Concealed hinges
- Sash weight:
 - Up to 100 kg
- Sash sizes (w x h): 1300 mm x 1700 mm

Additional designs non-insulated:

- Window-doors / French doors
- NSHEV applications
- Burglar resistance

**Compatible with the door series
WICSTYLE 65N non-insulated**

System test results / CE product pass in accordance with DIN EN 14351-1:2006+A1:2010

Air permeability:	Class 4
Watertightness:	9A
Resistance to wind load:	Class C5 / B5
Operating forces:	Class 1
Repeated opening / closing:	Class 2 (10 000 cycles)
Burglar resistance:	WK1, WK2
Quality assurance:	Certified according to ISO 9001:2008
Environmental management:	Certified according to ISO 14001



WICLINE 215 – Hybrid window with double-façade technology
Object-specific solutions that can be individually adapted to the respective building situation.

» Let's build together the city of the future

Since 2008, says the United Nations, 50% of the world's population lives in towns and cities, some of which have grown to megalopolis proportions in just a few decades; 36 of them are now home to more than 10 million inhabitants.

In 2020, 80% of Europeans will be living in urban areas. By 2050, two-thirds (namely 70%) of those living on our planet will be city-dwellers. 2050 is only just around the corner.

That new population density presents us with a huge challenge to overcome - how can we live together successfully under such conditions? - but other factors also have a direct influence on the highly complex system we call "the city". Climate change, depletion of natural resources, starting with fossil fuels and water, decreasing availability of building land, the digital revolution, new ways of living... All represent constraints and opportunities, and force us to re-think our cities. Most importantly, we need to establish and reinvent how we relate to the city, and more than anything, how we relate to one another. How we relate to a new type of urbanism.

There is a new order, and a wealth of possible solutions. For a number of years now, many people have been imagining an intelligent,

interactive city - the "connected" or smart city - which adapts to our needs through new technologies, particularly information and communication (NICTs). Our world is like a huge experimental laboratory, with new ways of doing things and new urban development models springing up all over the place. They all point towards a resolutely more "sustainable" city, where economic, social and ecological aspects combine seamlessly around key objectives: a sensible use of resources, putting citizen-users at the heart of planning, a systemic approach to the city.

The city of tomorrow is re-envisioned in terms of "function", and offers a cross-wise, decompartmentalised view of urbanism, rather than the top-down approach. This means it is better to talk of "urbanisms" in the plural. The new city, as a real "ecosystem", needs to adapt to where it develops on the globe, as necessitated by the varying climatic conditions. The architecture itself must also fit in with those constraints, just as it needs to respond to the requirements set by the new city's new key player: the citizen-user. The arrival of new generations - led by the "Millennium generation", the famous "Generation Y" - puts collective intelligence and cross-fertilisation in the spotlight.



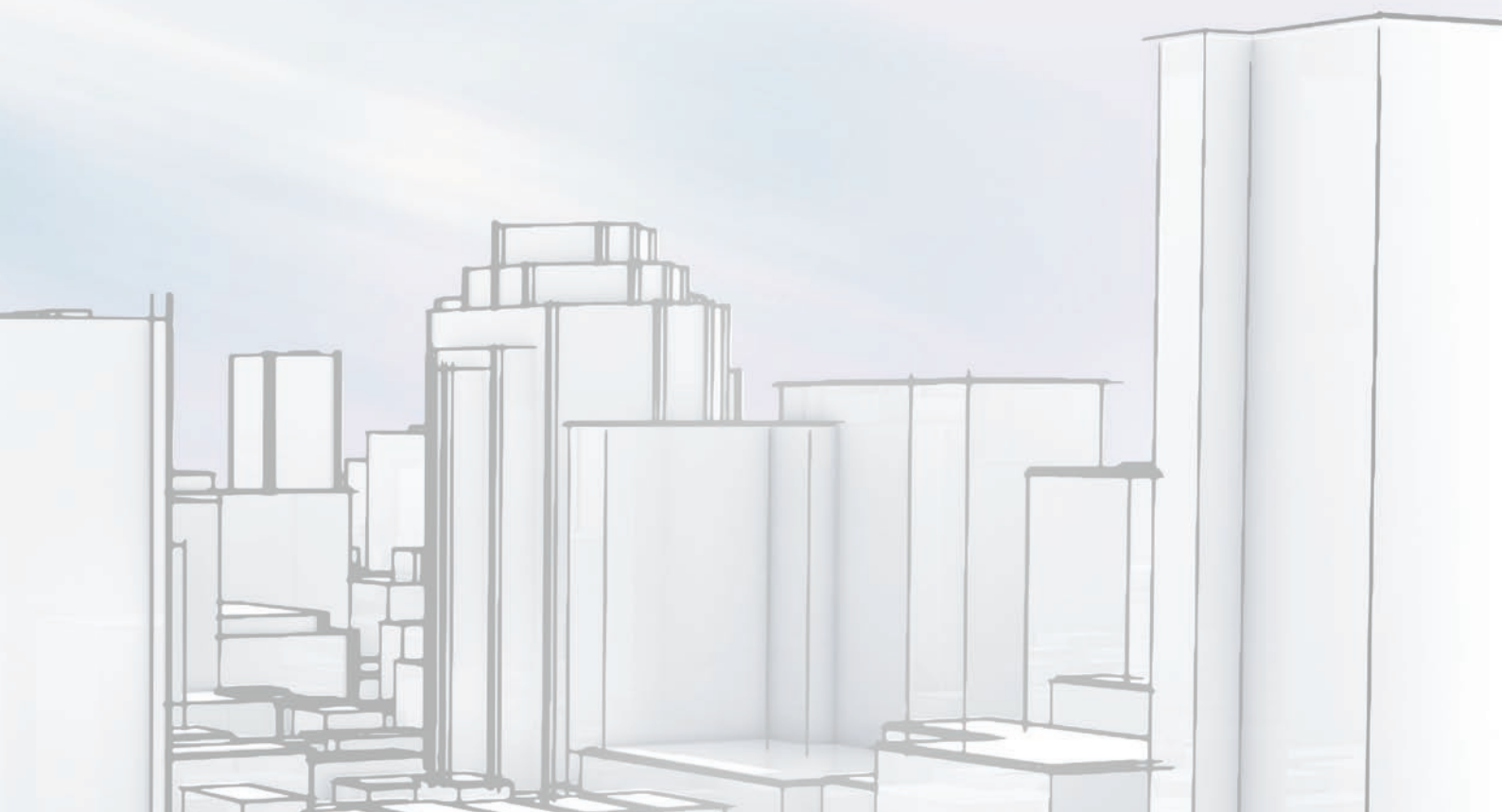
The “co” age is upon us: collaboration, cooperation, cocreation, community, underpinned by innovative forms of joint venture and city design, with all stakeholders playing their part.

Against that backdrop, what architecture will tomorrow bring? Although it seems to be generally accepted that the architecture of the future will see a balance between man-made engineering and all of nature’s science and ingenuity, the issue has swept aside all the traditional approaches to design and planning. Building Information Modelling (BIM) has already started to revolutionise the way in which buildings, infrastructure and technical networks are planned, designed, created and managed. Other emerging trends will progressively have an influence, each providing new opportunities:

the circular economy, urban agriculture, bionics, biomimetics and biomorphism, smart grids etc.

When that happens, designing the buildings of tomorrow will prove to be both a real challenge and a fascinating endeavour.

We are ready for that!



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