air–lux®

No compromises.

One highlight after another. Since 2004.

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air-lux technology

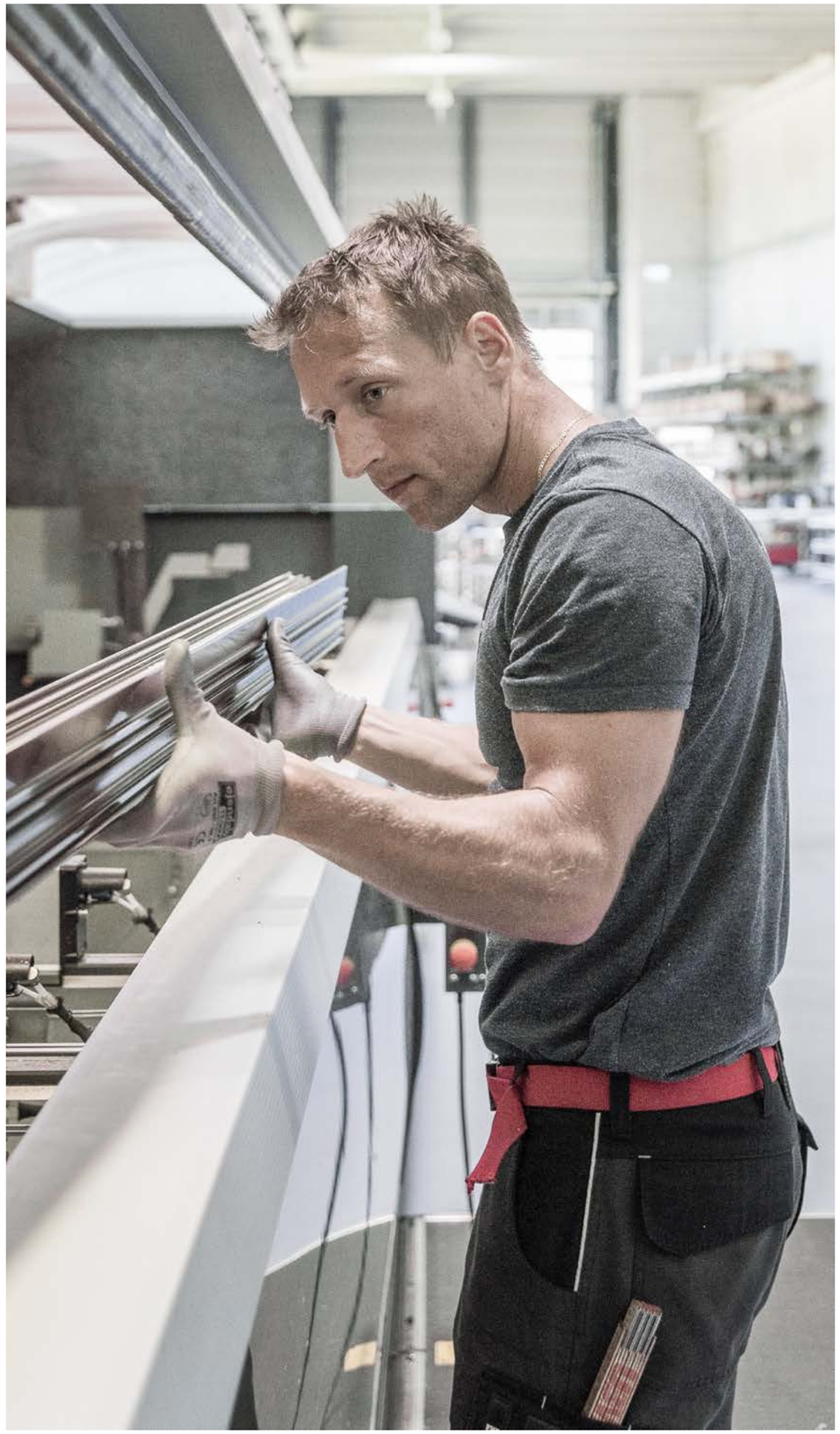
air-lux is the sliding-window facade system that convincingly combines creativity, technology and Swiss precision craftsmanship. No compromises.

No compro-mises.

Creativity, technology and craftsmanship

air-lux is the floor-to-ceiling glass facade system with large sliding windows and a patented seal concept that sets the standard – aesthetically, technologically and functionally.

Whether it's a high-rise, private villa or special solution, air-lux allows builders and architects to realise their creative vision. Without compromise. air-lux guarantees expertise, creative solutions and professional service in every phase of the project – in Switzerland and around the world. You are welcome to see for yourself. Visit our production facility in Engelburg to discover why air-lux has been installed more than 5,000 times all around the world. Until then, this brochure can give you a first glimpse.



Sliding window facades.

More than just a sliding window

Developed in 2004 by Swiss metal construction and glass facade specialist Krapf AG, air-lux exemplifies uncompromising quality. Whether destined for use in a private home in the countryside or a high-rise in the city centre, with air-lux we offer customised solutions from a single source – from planning to production and installation. Our system enables architects, facade planners, general contractors and property owners to create groundbreaking buildings with glass facades.

air-lux is both high-tech and crafted – we use state-of-the-art machinery and hand craftsmanship in our factory halls to process steel, chromium steel, architectural bronze and aluminium with the highest precision. With air-lux, we guarantee uncompromising quality. It's the reason why we produce in Switzerland, why we have our own in-house development department and why we train our planners and metal builders ourselves.

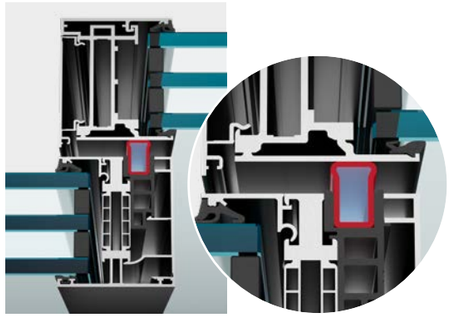
Architect: mlzd, Biel

Invisible. But 100% impermeable.

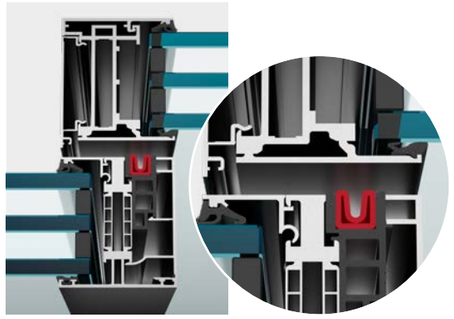
Patented air-assisted sealing system

With the patented, air-assisted sealing system, air-lux sliding windows guarantee outstanding construction qualities. When closed, the perimeter ring seal ensures 100 % impermeability against heavy rain, wind and noise.

In contrast to systems with sealing lips or brushes, this invisible, nearly maintenance-free air-lux technology enables consistent performance of the air seal without signs of wear. This leads to very low maintenance costs and an improved ROI (return on investment).



Active seal
By pressing the button, air is introduced into the frame and the seal is pumped up. The seal presses against the sliding profile and closes the gap between the slider and the fixed frame to create a perfect seal.



Inactive seal
The button is pressed a second time to open the unit. The air leaves the unit and the seal retracts to its original concave profile.

Seal active – 100 % sealed

Optimum quality by sealing with air
The air-lux sliding window system offers exceptional functionality and quality paired with top marks in impermeability and security tests.

Air permeability
Classification to EN 12207:
1999-11
Class 4

Driving rain impermeability
Classification according to EN 12208:
1999-11
Class E1500

Noise insulation
Up to 43 dB depending on element size and choice of glass

Wind load
Classification according to EN 12210:
1999–11 / AC: 2002-80
Class C4/B4
1600 Pa, max. 2400 Pa

Thermal insulation
Classification according to EN 10077-1
0.8 W / m² K, Ug 0.6 W / m² K
Classification according to EN 10077-1
0.75 W / m² K, Ug 0.5 W / m² K

Burglary protection
Break-in resistance class RC 3
Window height up to 3 m

Bullet-proof
Special designs
up to resistance class BR4-NS

Private homes

We want to enable builders and architects to make their visions a reality – without compromising on functionality. That’s why we set standards with air-lux in terms of function, security and flexibility – for maximum architectural freedom.

Architectural freedom.

Individual, flexible design

Whether the aim is clean and reduced or striking and exclusive, air-lux gives builders and architects practically unlimited design freedom to create groundbreaking architecture with glass facades.

air-lux can be matched individually to any property, integrating into the building envelope sill-free – for frameless window facades of unique dimensions. Whether horizontal, diagonal or around-the-corner, the sliding panels and the opening and tilting options can be tailored to individual wishes and ideas.

The air-lux system can also accommodate standard windows, balcony windows, entry doors and tilt-and-turn windows – including mullion-transom facades. Thanks to the consistent profiling, the combination of elements is visually imperceptible.

Architect: Silvia Gmür Reto Gmür Architekten, Basel

↑ Architect: Frieri Architekten, Lucerne
→ Architect: wild bär heule architekten ag, Zurich

↑ Architect: Christian Kerez, Zurich
→ Architect: wild bär heule architekten ag, Zurich

↑ Architect: Werner Sobek, Stuttgart

↑ Architect: Ernest Jenner, Sausheim
→ Architect: Peter Kunz Architektur, Winterthur

High-rises

High-rise facades require the highest standards of impermeability and structural strength. The air-lux sealing concept is impressive here as well and provides an outstanding ROI due to its nearly maintenance-free technology – for high-rise highlights that set standards around the world.

High-rise high-lights.

Optimal value and maximum quality of life on every floor

With denser construction, residential buildings are becoming higher, which in turn places greater demands on the facade. The higher the building, the higher the wind loads and the more important the impermeability of the windows. Until now, sliding units have been used only very rarely in high-rises, as the sealing has caused problems due to the lack of contact pressure of the seal. With the patented air seal, air-lux sliding windows provide the best impermeability values and maximum quality of life on every floor. Moreover, due to their central locations, high-rises are generally exposed to higher noise levels.

The air-lux seal achieves 100 % closure, guaranteeing optimal noise protection. Another air-lux advantage: the flushness with the floor and the exterior position of the sliding windows increase the usable area – an undeniable benefit in every respect.

Architect: Dibelius Architekten, Hamburg

An exceptional example of architecture with air-lux is the 40 metre, 12 storey high-rise at Buckhauserstrasse 34–36 in Zurich. The floor-to-ceiling air-lux windows are installed in the exposed concrete facade like picture frames. The sliding windows run outside the building. With these windows, architect Piet Eckert wanted to create a repetitive pattern that would change organically when the windows were opened – a challenge that we were delighted to undertake.

GERMAN DESIGN AWARD WINNER 2018

↑ Architect: E2A/Piet Eckert und Wim Eckert Architekten, Zurich
← Architect: Philipp Brühwiler, Zug

↑ Architect: CSL Partner Architekten, Zug
→ Architect: Philipp Brühwiler, Zug

Special solutions

The air-lux system can be adapted flexibly to any property. To give builders and architects maximum design freedom, we also offer unique special solutions – for example, our sunken windows.

Descending fronts

‘Sink’ up to 25 m² of window surface area into the floor.

Big is best – and this is particularly true for descending fronts. The larger the achievable descending front, the more impressive the effect when open. The entire width of the descending front can be opened with an electric drive unit, ‘disappearing’ into the floor without a sound. As with the other air-lux windows, the maximum area of the insulated glass is 25 m². Descending fronts also feature the unique air-seal system from air-lux, providing 100 % impermeability against heavy rain, wind and noise.

Descending fronts in a range of opening positions

Pivoting doors.

Fascinating solutions for foyers

‘Big is best’ is equally true for air-lux pivoting doors, which we produce for dimensions of up to 15 m². The larger the pivoting door, the more impressive the effect when open. As an alternative to conventional hinged doors, pivoting doors with a central or lateral rotational axis are perfect for foyers with large openings. Two inflatable air-lux seals guarantee 100 % impermeability here as well.

From glass and special wood to architectural bronze or stone – we can finish the door panels with a wide range of materials and surfaces. The core is always our high quality, thermally insulated aluminium profile clad with the chosen material.

Pivoting door when open

Options

From shading systems to exclusive materials, air-lux sliding windows can be customised with a wide range of different options. And of course air-lux can also be equipped for RC 3, with alarm glass or bullet-proof safety glass – to be on the safe side.

On the safe side.

air-lux safe for reliable protection of people and property

The air-lux safe configuration with additional components, multipoint locking and laminated safety glass ensures the greatest protection against burglary – up to resistance class RC 3. Security can be increased again with alarm glass or bullet-proof safety glazing (special bullet-proof variants up to resistance class BR4-NS). Furthermore, electronic components for monitoring the closing position and locking of the sliding windows make it possible to control and supervise the sliding windows through the building management technology (alarm system, home automation system, etc.) – including with mobile devices, such as smartphones or tablets. If desired, our technicians can integrate air-lux into surveillance systems and building technology systems in collaboration with electrical planners and security officers. All safety measures remain invisible and change neither the profile nor the glass surface.

Architect: Silvia Gmür Reto Gmür Architekten, Basel

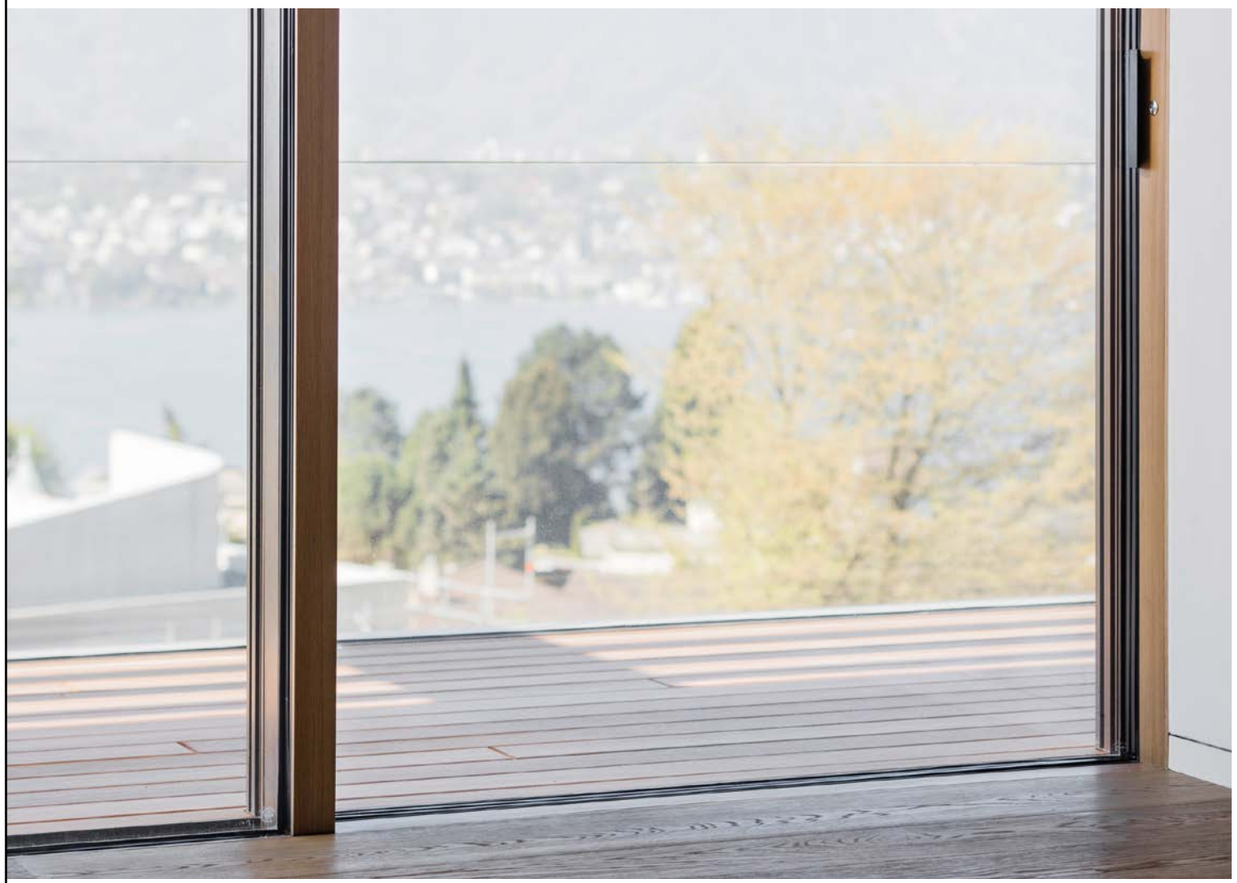
Burglary protection
Break-in resistance class RC 3
Window height up to 3 m

Bullet-proof
Special designs
up to resistance class BR4-NS

Exclusive individual-ism.

air-lux connect: innovative use of exquisite materials

Beyond the conventional anodised aluminium and powder-coated surfaces, we have also developed air-lux connect. Unique to the field of sliding window facade construction, this fusion of materials combines an aluminium core with elegant wood in the interior and/or solid bronze on the exterior. air-lux connect offers an unprecedented degree of design freedom: the large-scale aluminium sliding windows combine with 16 types of wood in interior areas. The feel, appearance and surface can be determined individually for wood, aluminium and bronze. The result: architecture with a unique character – with all the technical and structural virtues of the air-lux base version in aluminium.



air-lux connect, wood
(Interior view)

air-lux connect, bronze
(Exterior view)

Maxi-mum quality of life.

Control via tablet or smartphone

Optimal ease-of-operation and quality of life are standard with air-lux. (1) The sliding windows are operated through a button with an integrated LED in the window frame. (2) Opening and closure of the sliding windows can be done manually or automatically, smoothly and quietly – without exertion. (3) Eliminating sills, the base valve raises and lowers automatically when the window is closed again. And of course the functions can also be controlled through the building's control systems or via mobile devices such as smartphones and tablets. In exterior areas, entry options such as key switches, codes, fingerprints and badges are all possible. In the event of a power failure, the elements can be operated manually and close automatically.

On request, we can also handle the planning, preparation and installation of sun protection systems, slot ventilation and insect protection screens for optimal quality of life. For more privacy, darkening systems can be installed on the interior side.

(1) Button

(2) Integrated drive

(3) Base valve

Service and warranty

With air-lux, Krapf AG offers 100% Swiss quality from a single source. This applies equally to the production and installation of the system and our 24/7 support and after-sales services. In other words: everything that comes from Engelburg is well conceived and professionally executed.

Well conceived, professionally executed.

With air-lux, we combine our metal and facade construction expertise with creativity, technology and craftsmanship – for exceptional projects with glass facades. Not to mention professional service in every phase of the project.

1. Consultation

Whether you come to us with a simple job or a visionary idea, we will support you and your plans with technical acumen and experience.

In order to ensure planning security, we also determine reliable cost estimates early on for your projects.

2. Planning

As a professional project planner with years of experience, we provide our wealth of knowledge of construction, materials, structural engineering and structural physics requirements from as early as the planning phase. This allows us to work together to develop and implement designs that are perfectly optimised for production and assembly, and which impress through their aesthetics and construction.

3. Production

Ambitious metal structures, in particular with glass, demand a high degree of production precision. Thanks to our highly trained, state-of-the-art machinery and efficient infrastructure, we guarantee top-class quality.

4. Installation

Precise, on-time installation at the construction site is our best calling card. The professional coordination and communication with the tradesmen involved is just as important as the quality of our own work. Only when operations on site work with the required level of care can uncompromisingly good results be achieved.

5. Service

We place value on a complete service and fully satisfied clients. The supply of spare parts, the maintenance and servicing of components to retain function and value, and additional services are therefore all included in our outstanding range of services.

100 % quality.
10-year warranty.
1 partner.

Quality Swiss product

air-lux stands for unparalleled Swiss manufacturing precision and everything from development to installation is planned and executed in-house in Engelburg. All fittings, such as the load and guide rollers, locking levers and closures, are constructed of high-grade stainless steel. The maintenance-free ball bearings are double-sealed and the track is made of special round steel.

For all configurations, we offer a 10-year warranty on the frame, closures, seal and function. If any problems occur, our 24-hour standby service is available to provide the required assistance.

Swiss made

Page 9
Gurtenpavillon, Bern
Architect: mlzd, Biel
Photo: Alexander Jaquemet, Erlach

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Residence, Ticino
Architect: Silvia Gmür Reto Gmür Architekten, Basel
Photo: Hélène Binet, London

Page 16
Private home, Switzerland
Architect: Frieri Architekten, Lucerne
Photo: Valentin Jeck, Stäfa

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Private home, Zurich
Architect: wild bär heule architekten ag, Zurich
Photo: Roger Frei, Zurich

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Private home, Zurich
Architect: Christian Kerez, Zurich
Photo: Christian Kerez, Zurich

Page 19
Private home, central Switzerland
Architect: wild bär heule architekten ag, Zurich
Photo: Roger Frei, Zurich

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Private residence, Germany
Architect: Werner Sobek, Stuttgart
Photo: Zooey Braun, Stuttgart

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Villa, north-western Switzerland
Architect: Ernest Jenner, Sausheim
Photo: Daniel Ammann, Herisau

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Apartment buildings, Zurich
Architect: Peter Kunz Architektur, Winterthur
Photo: Dominic Marc Wehrli, Regensdorf

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‘Schwarzwald’ high-rises, Shanghai, China
Architect: Dibelius Architekten, Hamburg
Photo: Orville Architecture, Shanghai

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B125 high-rise, Zug
Architect: Philipp Brühwiler, Zug
Photo: Valentin Jeck, Stäfa

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Diakonie Bethanien, Buckhauserstrasse 36, Zurich
Architect: E2A / Piet Eckert und Wim Eckert Architekten, Zurich
Photo: Daniel Ammann, Herisau

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One-One high-rise, Zug
Architect: CSL Partner Architekten, Zug
Photo: Valentin Jeck, Stäfa

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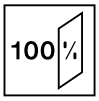
Waldheimstrasse, Zug
Architect: Philipp Brühwiler, Zug
Photo: Philipp Brühwiler, Zug

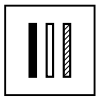
air-lux:
no compromises

Swiss made

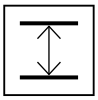


100 % impermeable thanks to a patented inflatable sealing system

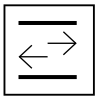
Frameless sliding casement windows up to 25 m² and 1500 kg



Surfaces made of aluminium, wood and bronze



Floor-to-ceiling installation



Optimal running characteristics/smoothness

High security thanks to top-notch burglary protection

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A product from

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