

Security Windows

Letting in daylight – locking out threats





Security windows that don't look like security

In everyday building operation, windows already fulfil several important functions. They are highly insulating, manage natural daylight and ventilation and, as part of the building envelope, contribute to its architectural style. Security windows by SÄLZER provide all these basic functions according to latest standards in building physics and additionally integrate combinable security and protection against the most diverse threat scenarios.

Using our own developed profiles made of steel and aluminium, the frame constructions of SÄLZER security windows maintain the narrow profile face widths preferred in modern architecture. At the same time they offer security of the chosen rating and the stability to integrate extensive and heavy multi-functional glazing. Viewed from the outside, their security function remains concealed. Exposed to threats, however, security windows by SÄLZER guarantee tested and certified protection up to highest security standards.

From consulting to maintenance

SÄLZER accompanies its worldwide customers along each project step on the way to their individual security solution – from consulting, planning, professional production and installation to maintenance, repair and security upgrades.



Security windows by SÄLZER – security classes and ratings



› **Forced entry resistance**
up to class RC6; in tilted position up to RC3



› **Break out resistance***
up to class RC4, elements tested on both sides



› **Bullet resistance**
up to class FB7-NS



› **Blast resistance**
up to class EXR3, additionally tested with 100 kg, 200 kg and 500 kg of explosives, also with long pressure duration up to 2.000 ms (GSA2)



› **Fire and smoke protection**
according to DIN 4102 up to class F90** according to DIN EN 13501-2 up to class EI90**



› **Frame materials**
steel and aluminium

*There are no specific testing regulations for break out resistant products. SÄLZER therefore tests both sides of their products according to the regulations for forced entry resistance as stated in DIN EN 1627-1630.

** Approval in individual cases, based on positive test reports.



Highest security standards – tested, certified and individually designed

Security is the uncompromising core requirement of all SÄLZER products. Not only the product itself is defined by differentiated protective aims, but also each single process step from initial design to the assembly on site.

Aiming at designing the best possible security products, our experienced employees have thoroughly studied the specific demands of different groups of customers. Decades of project execution have taught us precisely to apply the right products and strategies to achieve your individual security targets – whether in protecting private residences, court houses, embassies, military property or security-sensitive industrial facilities.

The security of all SÄLZER products is documented by certificates from accredited testing institutes, complemented by continuous internal and external quality controls. SÄLZER complies with the following recognized industrial standards:

- › Certified quality according to ISO 9001
- › External quality control by (amongst others) PFB Rosenheim
- › ECOSYS Certification: Occupational security BS OHSAS.18001 / environmental protection ISO 14001
- › Registered at the association for the pre-qualification of building companies e.V., Reg.-No. 011.080020

SÄLZER security windows - features and benefits

- › Combinable with all products of the SYSTEM SÄLZER® (façades, doors, gates, guard houses etc.)
- › Combined protection against forced entry, bullets and blasts
- › Uniform appearance of the window regardless of the security level
- › Freedom of design, various window types are tested and certified
- › Aesthetic design
- › Optimal thermal insulation
- › Retrofitting security e.g. with secondary window systems
- › High mechanical load and durability
- › Extensive supplementary equipment, such as glass breakage detector, magnetic contact or louvre



Customized and designed security - modern, elegant, historical or strictly functional

After the protective targets and security classes have been determined, the design of your individual SÄLZER security window will be further defined by the style of the building and your design wishes. Security properties remain as defined, while the look of the security windows may be adapted to the design of a listed building, to the tough environment of an industrial facility, detention facility or military property. It may also take on the more elegant design of expansive light openings in the façades of representative buildings such as embassies, administration buildings and private residences.

The outer appearance and functionality of your SÄLZER security windows are defined by five different design criteria:

› **Stylistic individuality**

SÄLZER offers designs for all purposes and building styles – for modern as well as for listed buildings.

› **Functional variety**

Apart from fixed elements SÄLZER has also tested a great variety of openable window variations: single- and multiple-field windows, windows with turn-, tilt-, turn-tilt hardware, outward or inward opening windows, sliding elements and French casement windows as well as windows with top and side lights or arched windows.

› **Consistent concept**

SYSTEM SÄLZER® guarantees for consistency in design. Windows are available both as single elements and as integrated elements for SÄLZER security façades.

› **Individual surface designs**

Color coated or anodized profiles; all kinds of claddings in stainless steel, stone, bronze and many different types of wood, also meeting the strict requirements of the regulations for listed buildings.

› **Narrow face widths**

Despite highest security levels the profile face widths of the window casements remain as narrow as 35mm (Series S6es); elegant design with invisibly fixed glazing beads.



» Security in any case! «





Reliable security – tested and certified

Forced entry, bullet and blast resistance or protection against fire and smoke – each of these vital security functions is connected with clearly defined national and international standards, testing standards and requirements of special building regulations. In order to design, build and offer reliable security products for the building security market, SÄLZER meets these requirements in each and every detail.

By multi-certification of our products and the most comprehensive experience in testing and certification SÄLZER provides access to the complete scope of building security. This expertise enables us to offer you highly developed products with combined protection capabilities, in which the original design already incorporates the idea of integrated multi-functional security requirements. As a result you will get sophisticated, elegant security systems with almost invisible multi-functionality, designed and manufactured by a multi-certified security specialist.



SÄLZER security windows have been tested according to the following testing standards and regulations:

› **Forced entry resistance –
tested and certified according to:**

- DIN EN 1627-1630
- SD-STD-01.01 Rev.G

› **Bullet resistance –
tested and certified according to:**

- DIN EN 1522-1523
- VPAM APR 2006
- UL 752
- SD-STD-01.01 Rev.G
- GOST R 51112-97

› **Fire and Smoke protection –
tested and certified according to:**

- DIN EN 1363-1, 1363-2, 1634-1 in combination with DIN EN 14600 und 13501-2

› **Break out resistance –**

There are no specific testing regulations for break out resistant products. SÄLZER therefore tests both sides of their products according to the regulations for forced entry resistance as stated in DIN EN 1627-1630.

› **Blast resistance –
tested and certified according to:**

- DIN EN 13123-2 + 13124-2 (open range test)
- DIN EN 13123-1 + 13124-1 (shock tube test)
- ISO 16933, ISO 16934, DIN EN 13541 (blast resistant glazing)
- Various tests according to customer requirements e.g. with 500 kg explosives
- Tested according the requirements of the petro chemical industry (long duration pressure)
- ASTM F1642-04
- UFC 4-010-02
- GSA-TS01-2003 und ISO 16933
- NATO STANAG 2280

Individual design – standardized performance

Security windows by SÄLZER are based on our highly developed proprietary profile systems. Functional security components have been integrated inside the profiles for an elegant slim design without visible outside reinforcements. This compact, integrated form of construction enables the design of "systemized unique items" on the basis of a flexible construction kit. As a customer, you receive a high performance security window which is precisely adapted to your demands in security, design, comfort and fittings.

The planning of your security window solution starts with your individual security requirements. You can choose the security level according to your threat scenario and select the window type, design and functionality, e.g. size, glazing, opening direction in- or outside, hardware, and electrical components.

SÄLZER will plan, produce and install your individual window according to your requirements - of course always in certified security.

Design examples of SÄLZER security windows



› **Variety of tested design variations:**
fixed window, available with turn, tilt or tilt-turn window hardware, sliding element, French casement window, with top and side lights
optional: tested in tilted position up to RC3



› **Outward opening top hung or side hung window,**
optionally with electrical drive



› **Transaction window**
with transaction drawer, intercoms and further equipment



› **Window series METAS® ,**
break out resistance and prevention of suicide attempts,
available as fixed window, as tilt or tilt-turn window or as outward opening top hung or side hung window with inside perforated plate

Building physics according to DIN EN 14351-1

Besides their high security function SÄLZER security windows comply with all requirements in building physics according to DIN EN 14351 and are CE marked.



Resistance against wind load
Depending on the type of window
up to class C5



Water tightness
Depending on the type of window
up to class E1050



Air permeability
Depending on the type of window
up to level 4



Impact resistance
Depending on the type of window
up to level 5



Thermal insulation
Depending on the type of window
up to U_w 0,8 W/m²K



Sound insulation
Depending on the type of window
up to R_w 45 dB



Life cycle test
Depending on the type of window
up to class 3 | 20.000 cycles

»For detailed informations regarding the tested classes and results please visit us online
or refer to the respective specification sheets.



Security windows within SYSTEM SÄLZER® – **product overview**»



Aluminium window Series S2es

»For detailed informations please visit us online or refer to the specification sheet **aluminium window S2es**

Highest security against forced entry, ballistic and blast attacks

Security windows in aluminium featuring highest protection against forced entry (up to RC6) and bullet resistance (up to FB7-NS). High security functionality combined with narrow profiles and extensive glazing. Many tested and approved design variations for adaptation to building profile, mounting conditions and individual architectural styles. The Series S2es offers highest security even against terrorist attacks with explosives, various design variations were tested with explosive charges up to 500kg.

Security classes:



Aluminium window Series S6es

»For detailed informations please visit us online or refer to the specification sheet **aluminium window S6es**

Security and variety in design

Elegant security windows in aluminium with attractive design variations in classifications up to RC4 and FB4-NS. Numerous window casement variations with invisibly integrated security technology. Special model ranges for forced entry resistance (up to RC3) even in tilted window position. The security is the same, whether exact replica of historical elements, windows for robust use in industrial and military buildings or elegant designs for embassies or private homes.

Security classes:





Steel frame window SECUFIRE®

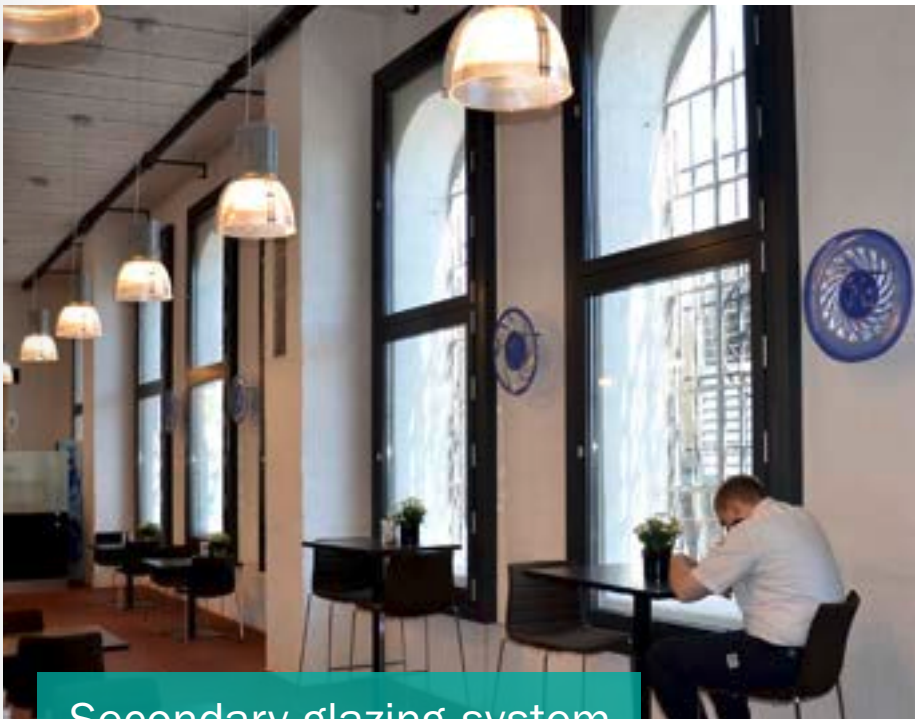
»For detailed informations please visit us online or refer to the specification sheet **steel frame window SECUFIRE®**

Multiple tests against various threats

Security windows in steel tube frame construction for elegant, slim elements with expansive glazing. Multiple functional combinations of forced entry/break out resistance (up to RC4), bullet resistance (up to FB4-NS), blast resistance as well as fire and smoke protection.

To comply with all customer requirements concerning security and design the Series SECUFIRE® is available in four different types.

Security classes:



Secondary glazing system

»For detailed informations please visit us online or refer to the specification sheet **secondary glazing system**

Retrofitting security concept

Highest protection including forced entry, bullet and blast resistance without need to exchange regular windows. Secondary windows mounted in front of existing windows and thus increasing the security standard of the building.

The secondary glazing system can alternatively be installed in the reveal or in a steel subframe, inside or outside. Even windows for buildings under preservation order can be designed according to this design requirements.

Security classes:





Security windows within SYSTEM SÄLZER® – **product overview**»



Cell window METAS®

»For detailed informations please visit us online or refer to the specification sheet **cell window METAS®**

Security without grills

Aluminum security window especially developed for the demands of the police, prisons and forensic clinics. Security windows offering both-way protection against forced entry (RC4), break out attempts from inside (RC3) and against ballistic attacks (FB4-NS).

Security classes:



Transaction windows/entry ports

»For detailed informations please visit us online or refer to the specification sheet **transaction windows/entry ports**

Highest security against forced entry, bullets and explosions

Complete, ready-to-install window elements for counter terminals in numerous designs, materials and security classes. Individually adaptable in design and ratings to the most diverse reception areas, e.g. in embassies, court houses, banks, police stations and prisons as well as in industrial facilities and other types of special purpose buildings with sensible areas. Depending on the requirements, two systems are available:

- › **Transaction windows** as a complete unit
- › customized **security entrance areas**

Security classes:



International requirements – global references

Security is a matter of trust. SÄLZER therefore treats information on the customized security concepts and product solutions of their customers with utmost discretion. Deliberately not including specific details like project names, individual threat scenarios, security classes and building locations, we refer to the projects listed below as a selection of our worldwide references. All projects mentioned have been executed according to standards and regulations valid on site and in the home country as well as to customer specific requirements in design, function and comfort.

- › **Building security for embassies and administration buildings of international organizations:** security windows, doors and integral security concepts for diplomatic representation buildings in foreign countries for the states of Germany, USA, Great Britain, Turkey, New Zealand as well as for the UN.
- › **Project specific special security solutions:** Visa security cash points/bank counters; mobile and stationary guard houses in modular container design, fully equipped with e.g. x-ray machines; fully armoured outer building shells (façades, windows, doors, skylight constructions); bullet resistant and blast resistant partition walls for temporary building security.
- › **Private residences:** multi-functional security windows, -doors and -façades that comply with modern building physics and the building owners' personal protective goals; elements with expansive glazing; individualized profile surfaces in color and material; multiple shapes, designs and fitting variations.
- › **Industrial security solutions:** e.g. special security door systems for refinery plants in the Middle East; blast resistant control stations for petrochemical production plants.
- › **Special products and security concepts for the police, detention facilities and military properties:** security windows and doors for detention rooms featuring forced entry/outbreak resistance, anti-vandalism and anti-self-injury functions; entry ports with airlocks and vehicle lock for prisons; panic rooms for private clients and international organizations operating in crisis regions; security barriers for military properties for example in Afghanistan.

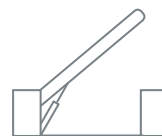
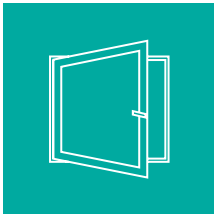
SYSTEM SÄLZER® – Systemized security



For more than 50 years, SÄLZER GmbH, based in Marburg, has specialized in innovative high-security solutions, which have been sold and distributed worldwide to more than 90 countries. Our team of over 130 specialists design and produce high-security windows, doors, facades, and guard houses to meet the unique functional and aesthetic needs of our customers. Multi-certified and comprehensively tested, the SÄLZER System assures combined protection against forced entry, break out, bullets, explosion, fire, and smoke. Each security solution is individually developed to the highest security and resistance classes to meet the respective protection requirements. Public, industrial, and residential building owners worldwide benefit from a wide range of networkable and combinable products of all security levels.

In 2018, SÄLZER became “Part of Schüco”. Based in Bielefeld, the Schüco Group develops and sells system solutions for windows, doors and facades.

For more information, visit: www.saelzer-security.com and www.schueco.com



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