



SYSTEM SÄLZER® Series S2es – Aluminium door system

Combinable protection for maximum security requirements

up to RC 5 up to FB7-NS up to EXR2 and tested with explosive charges up to 500 kg



Security Doors

Enabling access –
securing protection



Highest Security in aluminium

Uncompromisingly high security levels combined with the frame material aluminium defined the development targets of the SÄLZER Series S2es. We achieved this goal by combining profiles of narrow face widths and higher depths with special inner reinforcements. They are strong and resistant enough to carry the high loads of expansive triple safety insulation glass units with highest thermal insulation levels. Custom developed door fittings as well as proven and tested component connections are designed to smoothly move and carry heavy element and door loads on a long-term low-maintenance basis.

The SÄLZER security doors can be individually designed as inward or outward opening element, as single or double door with side and top panels.

Even in the fully glazed version, the door system has withstood the massive attacks with electrical tools, such as angle grinders and drills, in the forced entry resistance class RC 5 (explanation see below).

Tested and certified security



› Forced entry resistance

According to DIN EN 1627-1630:

- single door up to RC 5
- double door up to RC 5

Glazing according to DIN EN 356
but P7B, P8B glazing are inadequate in resistance level RC 5 and RC 6
(please note ⚠ remarks on forced entry resistance).

Tested: inward opening and outward opening door.



› Bullet resistance

According to DIN EN 1522-1523
up to FB7-NS.

Glazing according to **DIN EN 1063 up to BR7-NS.**

Tested: inward opening and outward opening door.



› Blast resistance

According to DIN EN 13123
up to EXR2.

Tests according to customised requirements with different explosive charges such as **100 kg or 500 kg.**
Reflected pressure: single door up to 790 kPa and double door up to 357,5 kPa.

Glazing according to SÄLZER specification.

Classified:

GSA 2 (Protection Level, „Very High“),
ISO B (Hazard-Rating, „No Hazard“).



Remarks on forced entry resistance

P7B and P8B glazing are inadequate for RC 5 and RC 6 forced entry protection.

The standard for forced entry resistance requires the comprehensive testing also for glazing in resistant classes RC 5 and RC 6: "For building products in resistance classes 5 and 6 according to DIN EN 1627:2011, the glass¹ itself as well as the glazing¹ and the infill connection system must be attacked ..." This means that the glazing¹ has to be tested with the same set of tools as the complete element, e.g. jig saw, angle grinder, drill. But P7B and P8B glazing are only tested with axe blows, these glazing would not withstand the attacks with tools used in class RC 5 and RC 6. Therefore the glazing has to be replaced by highest-quality glazing which can reliably withstand attacks with these tools.

Advantage: SYSTEM SÄLZER® offers an integrated solution in RC 5 and RC 6. The complete element including the glazing and all components meets these high requirements.

¹This applies to all glazing which are bigger than 400 x 250mm (rectangle), 150 x 660 mm (rectangle), or 400 x 300mm (ellipse), or 350mm Ø (circle).

Performance at a glance

- › **Variably combinable protection** against forced entry, bullets and explosions.
- › **Tested as a complete element** including glazing, hardware and wall connection in various design configurations.
- › **The security components are invisibly integrated into the profile.**
The SÄLZER profile systems have been specially developed for combinable security requirements.
- › **The profile face widths and depths** are the same irrespective of the selected security combination and security level. This ensures a uniform appearance within a building, even with a graduated security concept.
- › **Use of glass thickness up to 97 mm possible (e. g. bullet-resistant triple insulating glass up to BR7-NS)** with internally flush glazing beads.
- › **No visible fixings to the glazing beads are required,** due to the profile geometry and the stable design (patent).
- › **The glazing is designed to be pressure and impact resistant without the requirement of bonding** into either fixed or moving frames. This ensures natural glazing rebate ventilation, controlled water flow and, if necessary, simple glass replacement.
- › **Tested with a wide range of locking systems:** mechanical, electromechanical or motorized locks, single or multiple locking, self-locking systems. The doors can also be automated using drive systems.
- › **Aluminum doors Series S2es** are also tested with emergency exit locks according to EN 179 and panic exit locks according to EN 1125 up to forced entry resistant level RC 5.²
- › **A continuous interlocking profile at the lock side** blocks levering attempts at the lock, additionally the door system is stabilised by this profile.
- › **A two-part continuous security profile at the hinge side** blocks attempts to lever out the door, additionally the door system is stabilised by this profile.
- › **3-dimensionally adjustable hinges** permits door leaf weights up to 400 kg, up to 800 kg leaf weight with floor pivot bearing.
- › **Access control:** By using appropriate hardware systems the doors can be controlled via access control systems such as card readers, transponders, fingerprints etc.
- › **Electronic monitoring components** such as magnetic devices or door latch sensors can be invisibly integrated.

Aluminium doors of the Series S2es are combinable with all windows and facade systems within SYSTEM SÄLZER®.

² Specially developed glazing with polycarbonate layers is used from RC 2. This special glazing can withstand attacks with a hammer or pointed objects and can't be pierced. Additionally the handle and the panic bar are designed and protected in such a way that no manipulation from the attack side is possible even through punctual attack on the panels or glazing. The panic function can't be triggered by forced entry attacks.



Building physics according to DIN EN 14351-1

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



Resistance against wind load

According to DIN EN 12210
Depending on the type of door
up to class C5, 2.000 Pa.



Water tightness

According to DIN EN 12208
Depending on the type of door
up to class E750.



Air permeability

According to DIN EN 12207
Depending on the type of door
up to level 4, 600 Pa.



Impact resistance

According to DIN EN 13049
Depending on the type of door
up to level 5.



Thermal insulation

According to DIN EN ISO 10077-2
Depending on the type of door
 $U_D = 1,7 - 1,9 \text{ W/m}^2\text{K}$
(double glazing).

$U_D = 1,5 - 1,8 \text{ W/m}^2\text{K}$
(triple glazing).



Sound insulation

ISO 140-3
Depending on the type of door
up to R_w 47 dB.



Life cycle test

Suitable for frequently used
entrances and exits.
Level 6: 200.000 cycles with
400 kg leaf weight.

Level 7: 500.000 cycles with
350 kg leaf weight.

For higher door leaf weights up
to 800 kg floor pivot bearings are
used.

Custom-made design

The SÄLZER aluminium profile system permits individually designed construction according to client requirements. The planner, architect and building receive their tailor-made security door which also satisfy the most exacting demands in terms of design, comfort and functionality.

Design examples, inward and outward opening

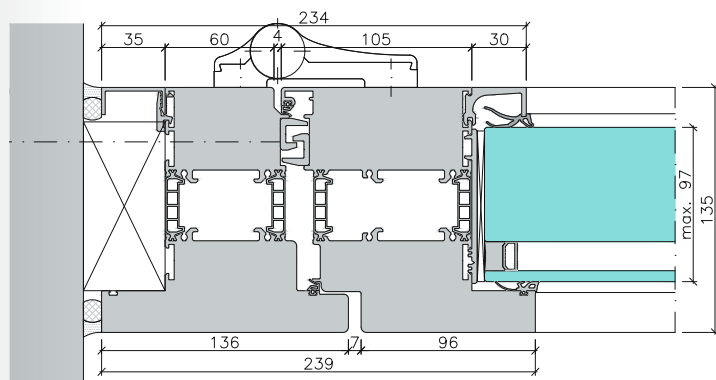


Surface diversity

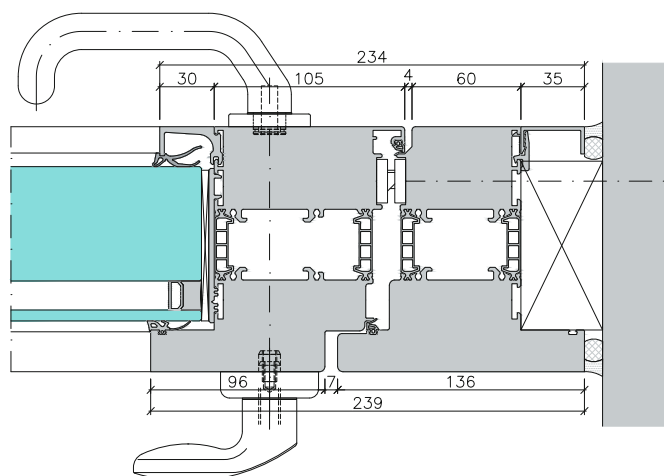
The profile surfaces can be individually adapted inside and outside to the design of the building. Powder-coated, anodised surfaces as well as over clad with timber, stainless steel, stone, bronze and other options.

Examples of horizontal section

Door inward opening

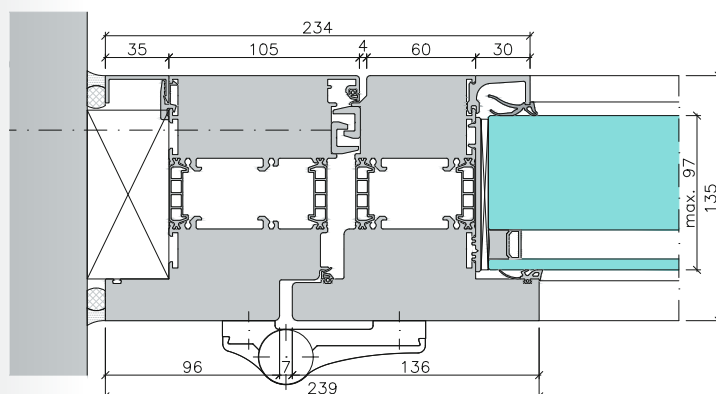


› **Horizontal section A - A**
(Wall connection - hinge side)
- inward opening -

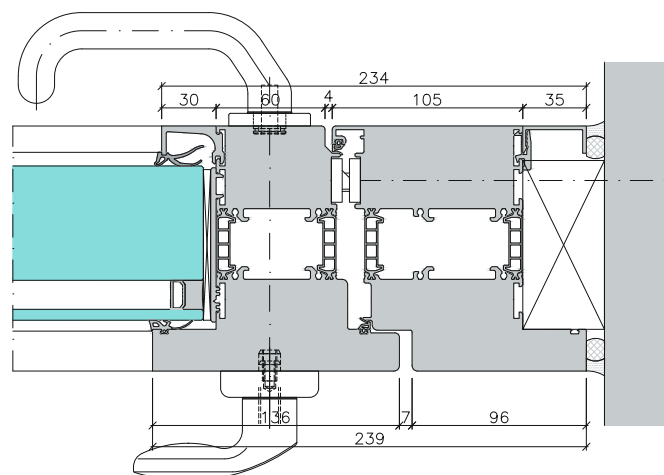


› **Horizontal section B - B**
(Wall connection - lock side)
- inward opening -

Door outward opening



› **Horizontal section A - A**
(Wall connection - hinge side)
- outward opening -



› **Horizontal section B - B**
(Wall connection - lock side)
- outward opening -



Profile depth and profile face width

› Profile depth:

Door frame, mullion, transom	135 mm
Door leaf profile, flush mounted	135 mm

› Infill thickness

up to 97 mm

› Profile face width (standard)

Door frame, outward opening	96 mm
Door frame, inward opening	136 mm
Integrated door frame, outward opening	6 mm
Integrated door frame, inward opening	46 mm
Mullion, transom	100 mm
Door leaf profile, outward opening	136 mm
Door leaf profile, inward opening	96 mm
Door sill, below	178 mm

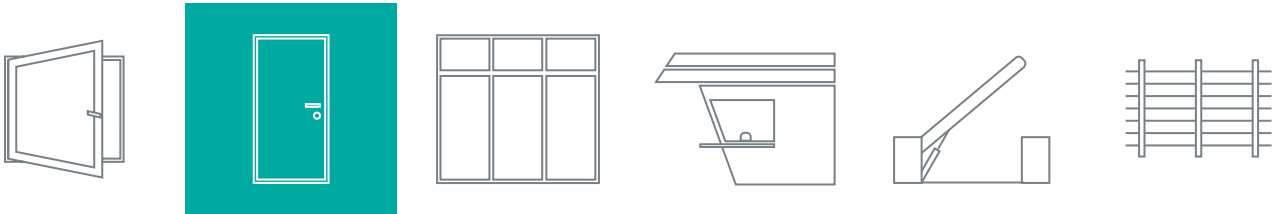
SYSTEM SÄLZER® – Systemized security



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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