



## SYSTEM SÄLZER® Series S4 – Steel door system

Combinable protection for maximum security requirements

up to RC6	up to FB7-NS	up to EXR5	tested with explosive charges up to 500 kg and with
long pressure duration	up to EI90 (T90), C5 S <sub>200</sub> (RS)		



### Security Doors

Enabling access –  
securing protection

# Highest Security against forced entry, ballistic and blast attacks, fire and smoke

The SÄLZER series S4 is the most resilient system within the SÄLZER security door range. The series fulfil highest security requirements in forced entry resistance (up to RC6), bullet resistance (up to FB7-NS), blast resistance (pressures up to 2,730 kPa) and fire and smoke protection up to ratings T90/EI90/S200.

The series S4 is extremely resilient, durable and therefore suitable for economic continuous operation. Each door is individually planned and manufactured according to architectural, security and regional legal requirements.

## Tested and certified security



### › Forced entry resistance

According to DIN EN 1627-1630

- single door **up to RC5**
- double door **up to RC4**
- single and double door **up to RC6** (series S4 HS equipped with a robust multipoint vault locking system)
- glazed door equipped with escape way locks according to DIN 179 and panic locks according to DIN 1125 are also tested **up to RC5**.

Glazing according to DIN EN 356 **but P7B, P8B glazing are inadequate in resistance level RC5 and RC6** (please note ⚠️ remarks on forced entry resistance).



### › Bullet resistance

According to DIN EN 1522-1523

single and double door **up to FB7-NS**.

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

Further individual tests, for example with sniper rifles calibre .300 Win.Mag., 7,62 x 54R, .338 Lapua Mag. up to .50 BMG.

With special reinforcement tested according to NATO Stanag 2280 **level C5**.



### › Blast resistance

According to DIN EN 13123-2 single door **up to EXR5** (20 kg | 4 m).

Open range tests according to customised requirements with different explosive charges **such as 100 kg, 200 kg, 250 kg, 500 kg**.  
Test examples: single door reflected pressure **up to 2,750 kPa**, double door **up to 880 kPa**.

Sector specific tests e.g. for the petrochemical industry, double door glazed door, peak pressure  **$p_{max} = 93 \text{ kPa}$**  and positive pressure duration  **$t_{total} = 4.5 \text{ sec}$** .

Glazing according to SÄLZER specification.

#### Classified:

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



### › Fire resistant

Classified according DIN EN 13501-2, single and double glazed door up to **EI90 (T90)**, tested on both door faces.

Tested according British Standard BS 476 Part 22, **120 min.** (actual 150 min. tested).

A variety of design variants are also available for outdoor use.



### › Smoke resistant

Classified according DIN EN 13501-2: **C5 S<sub>200</sub>, C5 S<sub>a</sub> (RS)**.

## Further design variants for special applications

- › S4 Z forced entry and break out cell door, tested on both door faces up to RC4, vandalism and suicide protection.
- › S4 W strong room door, tested according DIN EN 1141 class 0 + 1.
- › S4 HS high security door, tested up the RC6.

The S4 series offers a comprehensive security concept, many tested design variants, different kind of protection and security classes are available. Due to the large number of possible combinations available, therefore we recommend solutions for individual requirements should always be requested from SÄLZER.

### Remarks on forced entry resistance

#### **P7B and P8B glazing are inadequate for RC5 and RC6 forced entry protection.**

The standard for forced entry resistance requires the comprehensive testing also for glazing in resistant classes RC5 and RC6: "For building products in resistance classes 5 and 6 according to DIN EN 1627:2011, the glass<sup>1</sup> itself as well as the glazing<sup>1</sup> and the infill connection system must be attacked ..." This means that the glazing<sup>1</sup> 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 RC5 and RC6. 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 RC5 and RC6. The complete element including the glazing and all components meets these high requirements.**

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

## 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 14351-1 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 E2700, 2.700 Pa.



#### **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 and  
glazing.

$U_D = 2,2 \text{ W/m}^2\text{K}$ .



#### **Sound insulation**

ISO 140-3

Depending on the type of door and  
glazing up to  $R_w$  50 dB.



#### **Life cycle test**

Suitable for frequently used  
entrances and exits.

According to EN 1191  
200.000 cycles.

## Performance at a glance

- › **Variably combinable protection** against forced entry, bullets, explosions, fire and smoke up to the highest security classes (up to RC6 | up to FB7-NS | up to EXR5 | tested with up to 500 kg explosive charge | up to EI90 (T90), C5 S<sub>200</sub> (RS)).
- › **Tested as a complete element** including glazing, hardware and wall connections in various configurations.
- › **Door leaf construction:** depending on the security level, the door leaf thickness is between 72 mm and 165 mm. The door leaf consists of an internal extremely torsion-resistant and patented construction of thick-walled profiles, which allow the integration of all security reinforcements and inserts and stiffen the door leaf under extreme stress. In addition the door leaf is secured with 1.5 mm thick galvanized steel-claddings on both sides. **All security components inside the door leaf are firmly connected with the whole construction.** In the lock area, additional reinforcement plates are welded on to stabilize the lock.
- › **Door rebate:** standard version 3-sided circumferential, alternative version 4-sided circumferential. Depending on the security requirement the door rebate thickness is between 10 - 30 mm. This thickness prevents break in attempts with typical burglary tools as well as attacking the locking points with large, electrically operated tools.
- › **Floor seal:** retractable floor seal, individually designed thresholds (also available for bullet resistant design).
- › **Door frames** standard version: corner frame. The door frame consists of roll-formed galvanized steel. In the frame profile is a groove for the circumferential sealing profile and another slot for the fixing of flush-fitted strike plates and, if necessary, for the electrical fitting components. All security-relevant machined openings, e.g. for the lock, magnetic or bolt contacts, security bolts, electric strike, in the frame are correspondingly reinforced and on the wall side covered by steel boxes.  
**Alternative door frames:** block frame and various edge and counter frames.
- › **Door hinges** consist of roll-formed 6 mm thick, 3-part steel components, connected by double ball bearing and hardened hinge bolts. The hinge pin is screwed in a concealed position to prevent removal. The hinges are designed for high **swing door weights of up to 1,000 kg, for sliding doors the permissible weight is up to 5,000 kg.** In the area of the hinges the frame is reinforced with thick-walled angle steel profiles to transfer the weight of the leaf via the frame into the wall construction.
- › Depending on the security level, **additional security bolts** are installed in the rebate of the hinge side to prevent lever out attempts. They serve also as counter-pressure bearing to prevent lateral displacement of the door leaf.
- › **Fillings:** glazing, louver, grilles.
- › **Installation** of deal trays, door viewers in various design variations.
- › **Tested with a wide range of locking systems:** mechanical, electromechanical or motorized locks, single or multiple locking, self-locking systems and also high security robust multipoint vault locking system. The doors can also be automated using drive systems.
- › Steel doors Series S4 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 RC5<sup>2</sup>.
- › **Tested as inward or outward opening door versions**, opening angle up to 180°.
- › **Access control:** by using appropriate hardware systems the doors can be controlled by access control systems such as card readers, transponders, biometrics etc.
- › **Electronic monitoring components** such as magnetic devices or door latch sensors can be invisibly integrated.

<sup>2</sup>This special glazing with polycarbonate layers (from RC2) withstand attacks with hammers or pointed objects and cannot be pierced. This special feature guarantees reliable protection against forced entry despite anti-panic fittings up to class RC5. The same problem also exists with forced entry resistant doors, which have ventilation louver and anti-panic fittings. SÄLZER also offers a reliable special solution for these.

## Custom-made design

The SÄLZER steel door series S4 can be designed individually according to the requirements of the customer.

### Design examples



#### Proofed door construction

Single and double door opaque or with glazing, louvers (with different ventilation cross sections) or grilles in various sizes and shapes etc.. Available with opaque and glazed top and side panels, deal trays or door viewer. Almost every size is possible.

#### □ ○ Surface diversity △

**The profile surfaces can be inside and outside individually adapted according to the design of the building.** Standard surface: galvanized and ready for finishing on site. Optional surfaces: painted as well as over clad with timber, stainless steel, stone, bronze and other claddings.

Series S4 steel doors are combinable with all door and facade systems within SYSTEM SÄLZER®.

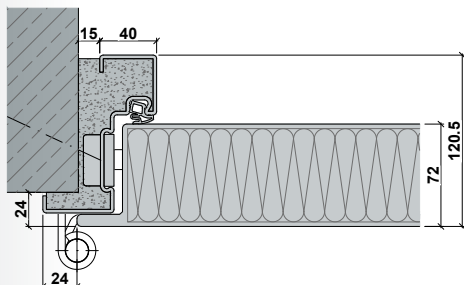


## Series S4 security doors – application examples

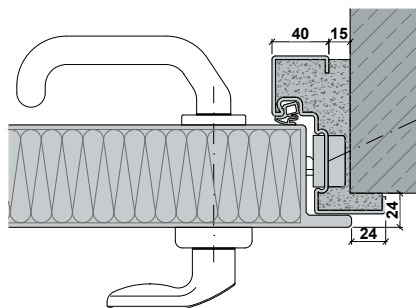


## Examples of horizontal section

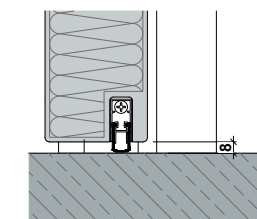
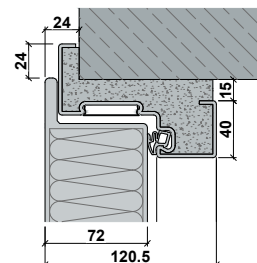
S4 LS door (standard) – inward and outward opening  
forced entry resistant up to RC4, bullet resistant up to FB4-NS, blast resistant



› **Horizontal section A - A**  
(wall connection - hinge side)

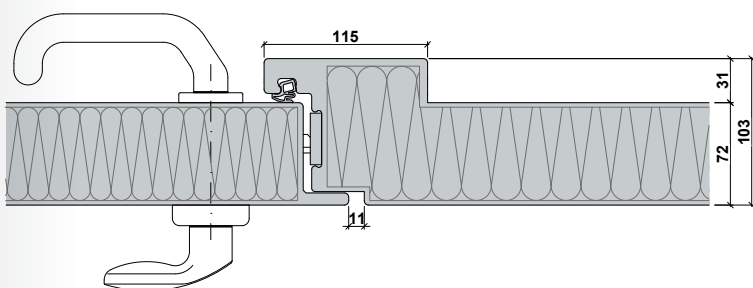


› **Horizontal section B - B**  
(wall connection - lock side)



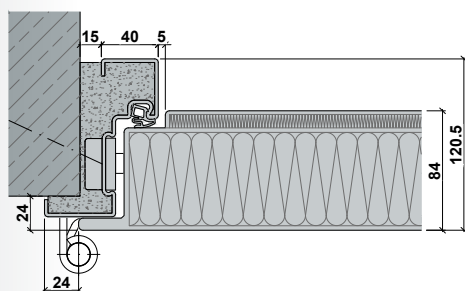
› **Vertical section D - D**  
Vertical section with continuous floor  
(not bullet-resistant) and automatic  
bottom seal.

Further design variations in the  
SÄLZER architectural catalogue.

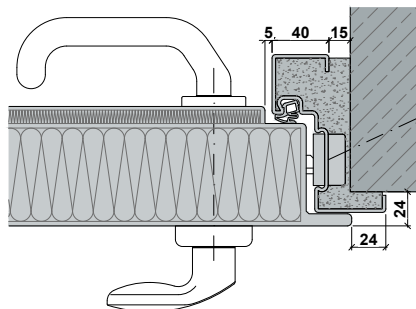


› **Horizontal section C - C**  
(medium stop collar - double door)

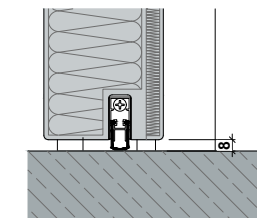
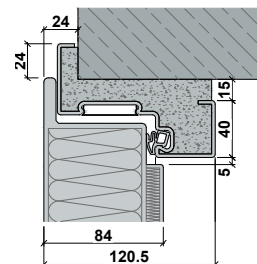
S4 door fire resistant T30/EI30 – inward and outward opening  
forced entry resistant up to RC4, bullet resistant up to FB4-NS, blast resistant



› **Horizontal section A - A**  
(wall connection - hinge side)

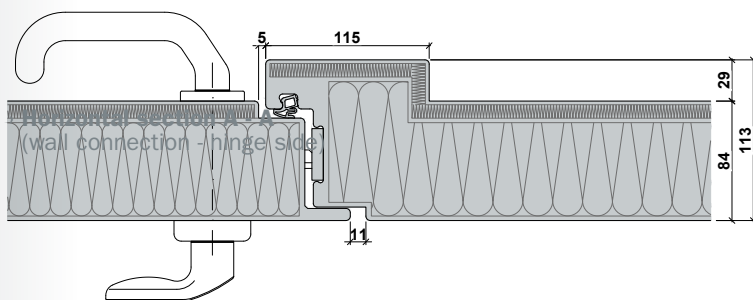


› **Horizontal section B - B**  
(wall connection - lock side)



› **Vertical section D - D**  
Vertical section with continuous floor  
(not bullet-resistant) and automatic  
bottom seal.

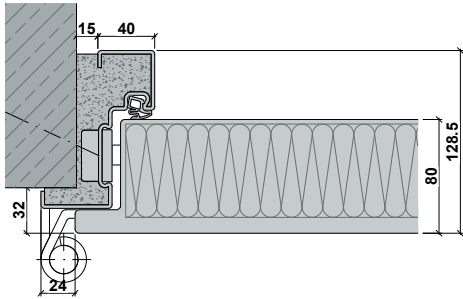
Further design variations in the  
SÄLZER architectural catalogue.



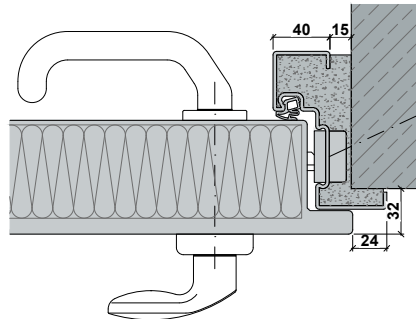
› **Horizontal section C - C**  
(medium stop collar - double door)



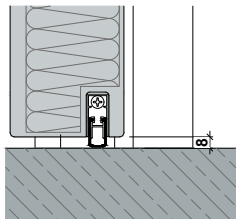
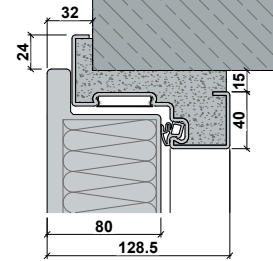
S4 door (standard) – inward and outward opening  
forced entry resistant up to RC4, bullet resistant up to FB7-NS, blast resistant



› **Horizontal section A - A**  
(wall connection - hinge side)

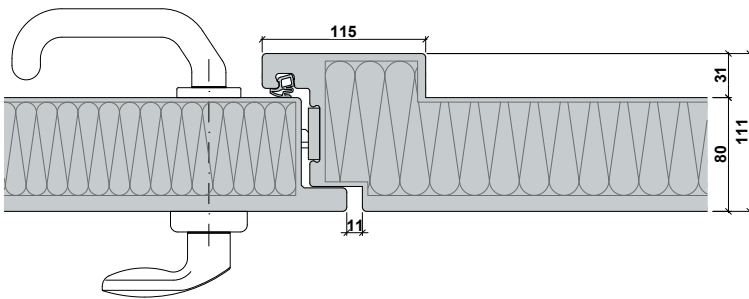


› **Horizontal section B - B**  
(wall connection - lock side)



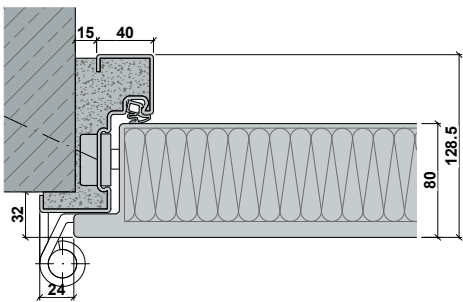
› **Vertical section D - D**  
Vertical section with continuous floor  
(not bullet-resistant) and automatic  
bottom seal.

Further design variations in the  
SÄLZER architectural catalogue.

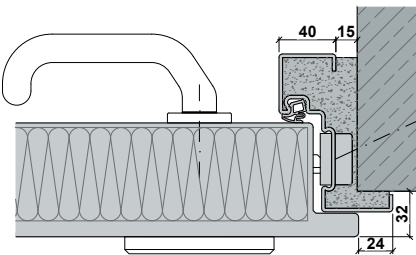


› **Horizontal section C - C**  
(medium stop collar - double door)

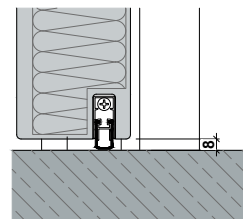
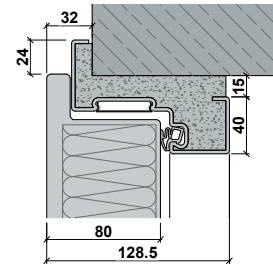
S4 door (standard) – inward and outward opening  
forced entry resistant up to RC5, bullet resistant up to FB7-NS, blast resistant



› **Horizontal section A - A**  
(wall connection - hinge side)



› **Horizontal section B - B**  
(wall connection - lock side)

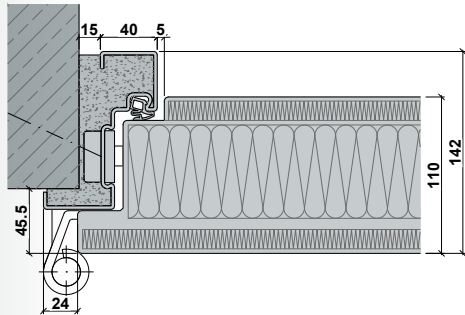


› **Vertical section C - C**  
Vertical section with continuous floor  
(not bullet-resistant) and automatic  
bottom seal.

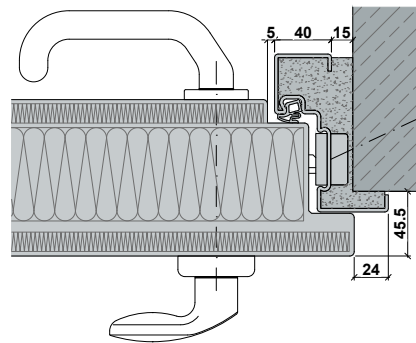
Further design variations in the  
SÄLZER architectural catalogue.



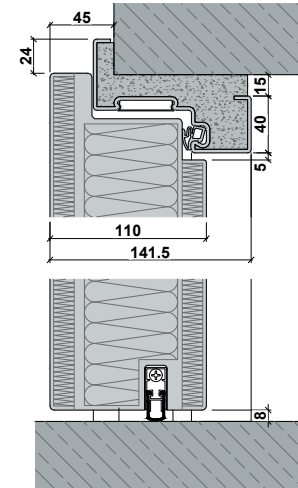
S4 door fire resistant T90 / EI90 – inward and outward opening  
forced entry resistant up to RC4, bullet resistant up to FB7-NS, blast resistant



› **Horizontal section A - A**  
(wall connection - hinge side)

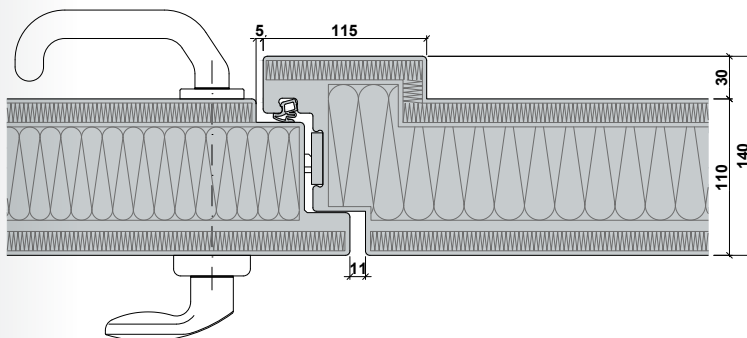


› **Horizontal section B - B**  
(wall connection - lock side)



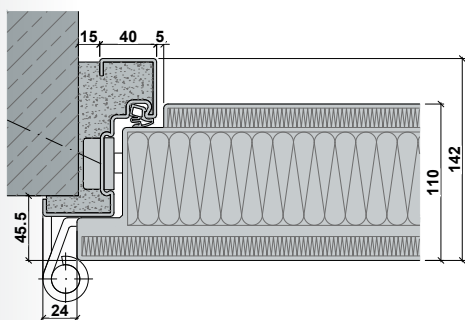
› **Vertical section D - D**  
Vertical section with continuous floor  
(not bullet-resistant) and automatic  
bottom seal.

Further design variations in the  
SÄLZER architectural catalogue.

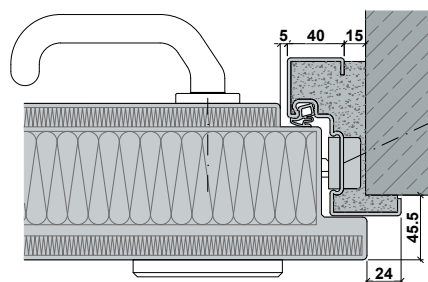


› **Horizontal section C - C**  
(medium stop collar - double door)

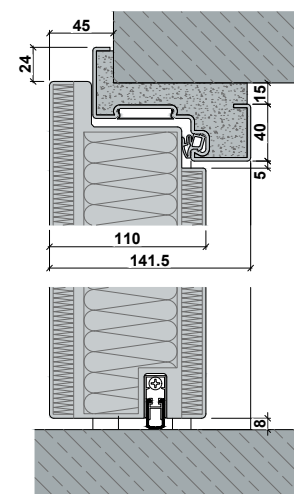
S4 door fire resistant T90 / EI90 – inward and outward opening  
forced entry resistant up to RC5, bullet resistant up to FB7-NS, blast resistant



› **Horizontal section A - A**  
(wall connection - hinge side)



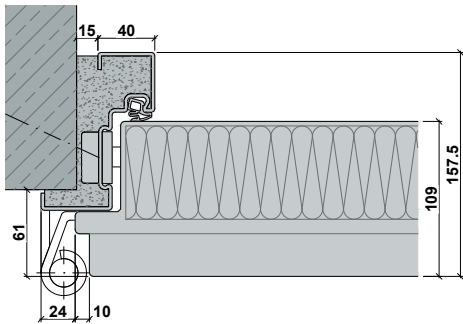
› **Horizontal section B - B**  
(wall connection - lock side)



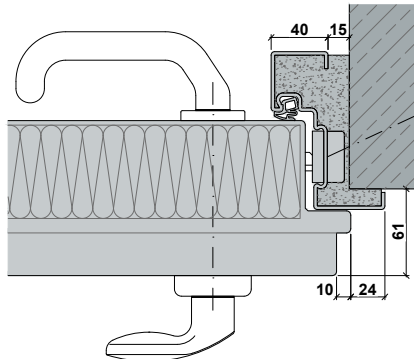
› **Vertical section C - C**  
Vertical section with continuous floor  
(not bullet-resistant) and automatic  
bottom seal.

Further design variations in the  
SÄLZER architectural catalogue.

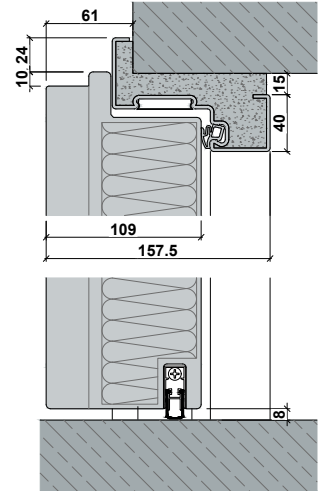
S4 door blast resistant up to EXR 5 – outward opening  
 forced entry resistant up to RC5, bullet resistant up to FB7-NS, blast resistant



› **Horizontal section A - A**  
 (wall connection - hinge side)



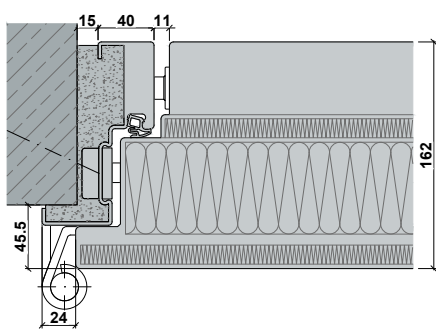
› **Horizontal section B - B**  
 (wall connection - lock side)



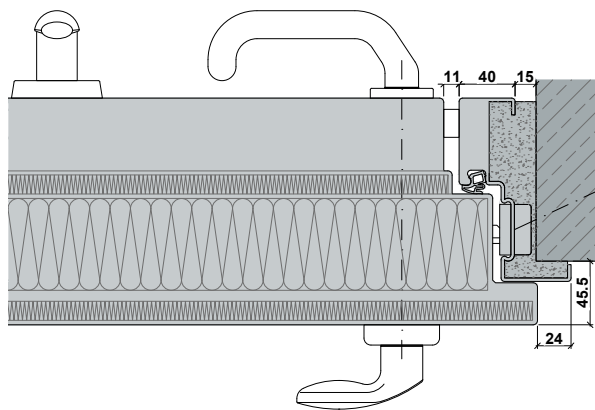
› **Vertical section D - D**  
 Vertical section with continuous floor (not bullet-resistant) and automatic bottom seal.

Further design variations in the SÄLZER architectural catalogue.

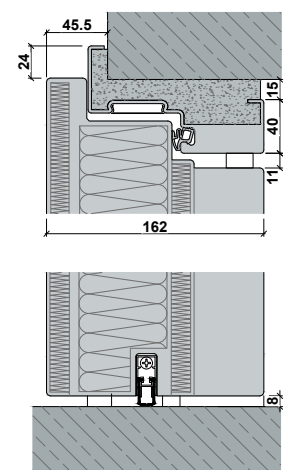
S4 HS door – outward opening  
 forced entry resistant up to RC6, bullet resistant up to FB7-NS, blast resistant



› **Horizontal section A - A**  
 (wall connection - hinge side)



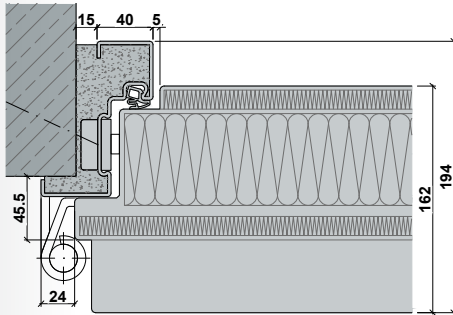
› **Horizontal section B - B**  
 (wall connection - lock side)



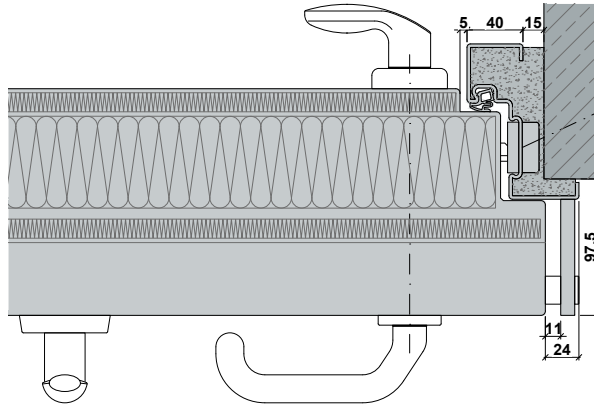
› **Vertical section D - D**  
 Vertical section with continuous floor (not bullet-resistant) and automatic bottom seal.

Further design variations in the SÄLZER architectural catalogue.

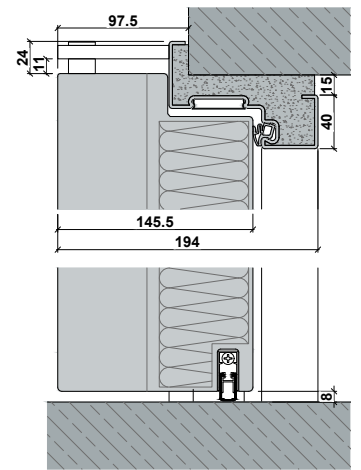
S4 HS door – inward opening  
forced entry resistant up to RC6, bullet resistant up to FB7-NS, blast resistant



› **Horizontal section A - A**  
(wall connection - hinge side)



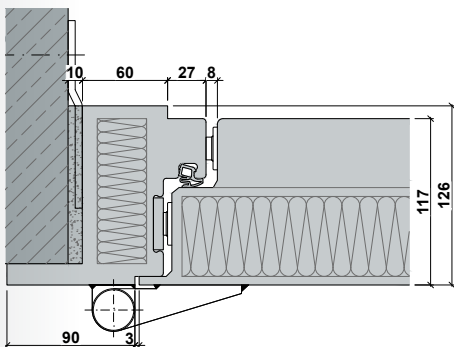
› **Horizontal section B - B**  
(wall connection - lock side)



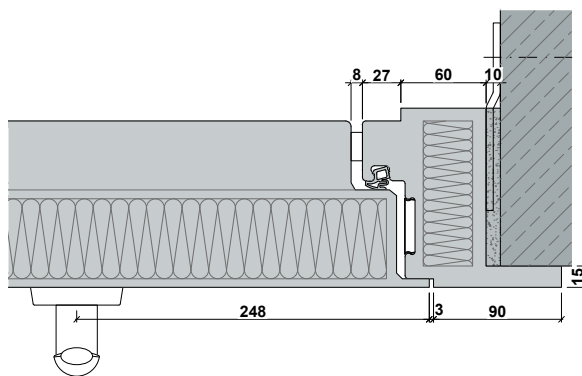
› **Vertical section D - D**  
Vertical section with continuous floor  
(not bullet-resistant) and automatic  
bottom seal.

Further design variations in the  
SÄLZER architectural catalogue.

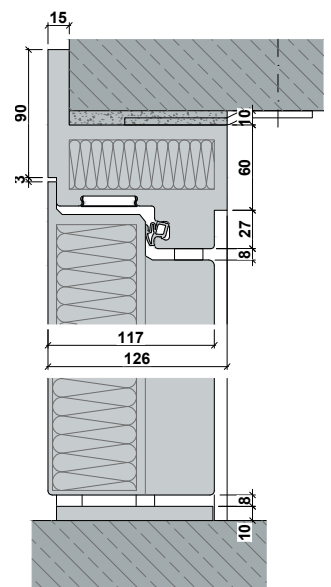
S4W-HS door – outward opening  
forced entry resistant up to RC6, blast resistant



› **Horizontal section A - A**  
(wall connection - hinge side)



› **Horizontal section B - B**  
(wall connection - lock side)



› **Vertical section D - D**  
Vertical section with continuous floor  
(not bullet-resistant) and automatic  
bottom seal.

Further design variations in the  
SÄLZER architectural catalogue.

# SYSTEM SÄLZER® – Systemized security



## › SYSTEM SÄLZER® – The security system for windows, doors and facades

Owned by the third generation of the SÄLZER family and with over 130 employees, SÄLZER GmbH in Marburg develops and sells concepts that protect against forced entry, bullets, explosions, fire and smoke. In addition to windows, doors and facades in the highest security and resistance classes, the company also supplies gates, barriers, grilles, retractable bollards for perimeter security, as well as guard houses. SÄLZER supports public authorities and private building owners in Germany and worldwide with a wide range of products that can be networked and combined at all security levels. Our customers benefit from individual consultation and planning meetings as well as digital planning support in the form of AutoCAD files and specification texts.

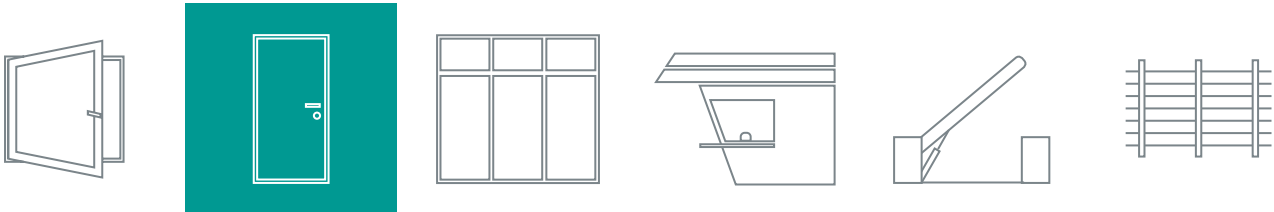
For more information visit [www.saelzer-security.com](http://www.saelzer-security.com)

## SCHÜCO

### › Schüco – System solutions for windows, doors and facades

Based in Bielefeld, the Schüco Group develops and sells system solutions for windows, doors and façades. With 5650 employees worldwide, the company strives to be the industry leader in terms of technology and service today and in the future. In addition to innovative products for residential and commercial buildings, the building envelope specialist offers consultation and digital solutions for all phases of a building project – from the initial idea through to design, fabrication and installation. 12,000 fabricators, developers, architects and investors around the world work together with Schüco. The company is active in more than 80 countries and achieved a turnover of 1.750 billion euros in 2019.

For more information visit [www.schueco.com](http://www.schueco.com)



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