

## Technical information

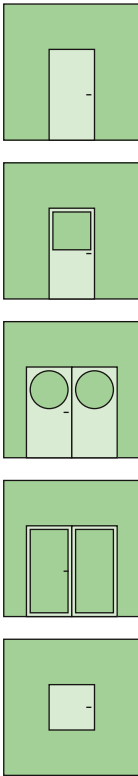


## System Schröders TSN-11 / TSN-12

CE-labeled fire resistant steel doorsets

EI<sub>2</sub>90-S<sub>a</sub>-C5 acc. to EN 16034, 1-lf. (TSN-11) and 2-lf. (TSN-12)

- optional with fire-resistant glazing
- optional in combination as **smoke control door**  
S<sub>a</sub> / S<sub>200</sub> acc. to EN 16034
- optional in combination as **burglar resistance door**  
RC1 up to RC4 acc. to EN 1627
- optional in combination as **acoustic performance door**  
up to R<sub>W</sub> (C.C<sub>tr</sub>) = 53 dB  
acc. to EN ISO 10140 / EN ISO 717-1
- optional in combination with **increased air tightness**  
up to class 4 acc. to EN 12207



## Performance characteristics

### CE-labeled

### Fire resistance

EI<sub>2</sub>90 tested acc. to EN 1634-1  
as gate acc. to DIN EN 13241-1  
as external door acc. to DIN EN 14351-1

### Thermal transmittance

UD-value  $\geq 1,5 \text{ W}/(\text{m}^2\text{K})$  acc. to EN ISO 10077-1

### Combinable with additional performance characteristics:

### Smoke control (optional)

$S_a / S_{200}$  tested acc. to EN 1634-3

### Burglar resistance (optional)

RC4, RC3, RC2 RC1,  
acc. to DIN EN 1627 ff

### Acoustic performance (optional)

up to RW (C;Ctr) = 53 (-1;-5) dB  
acc. to EN ISO 10140-1 / EN ISO 10140-2 / EN ISO 717

### Air tightness (optional)

up to class 4 acc. to EN 12207 (up to 600 Pa)

### Resistance to wind load (optional)

up to class C5 (up to 2,000 Pa) acc. to EN 12210

### Watertightness (optional)

up to class 8A acc. to EN 12208

### Resistance to positive and negative pressure (optional)

up to 5.000 Pa acc. to DIN EN 12211

### Behaviour between different climates (optional)

class 2 (d + e) acc. to EN 12219 (deflection)

### Ability to release (optional)

acc. to DIN EN 16034 hold-open device  
acc. to DIN EN 14637

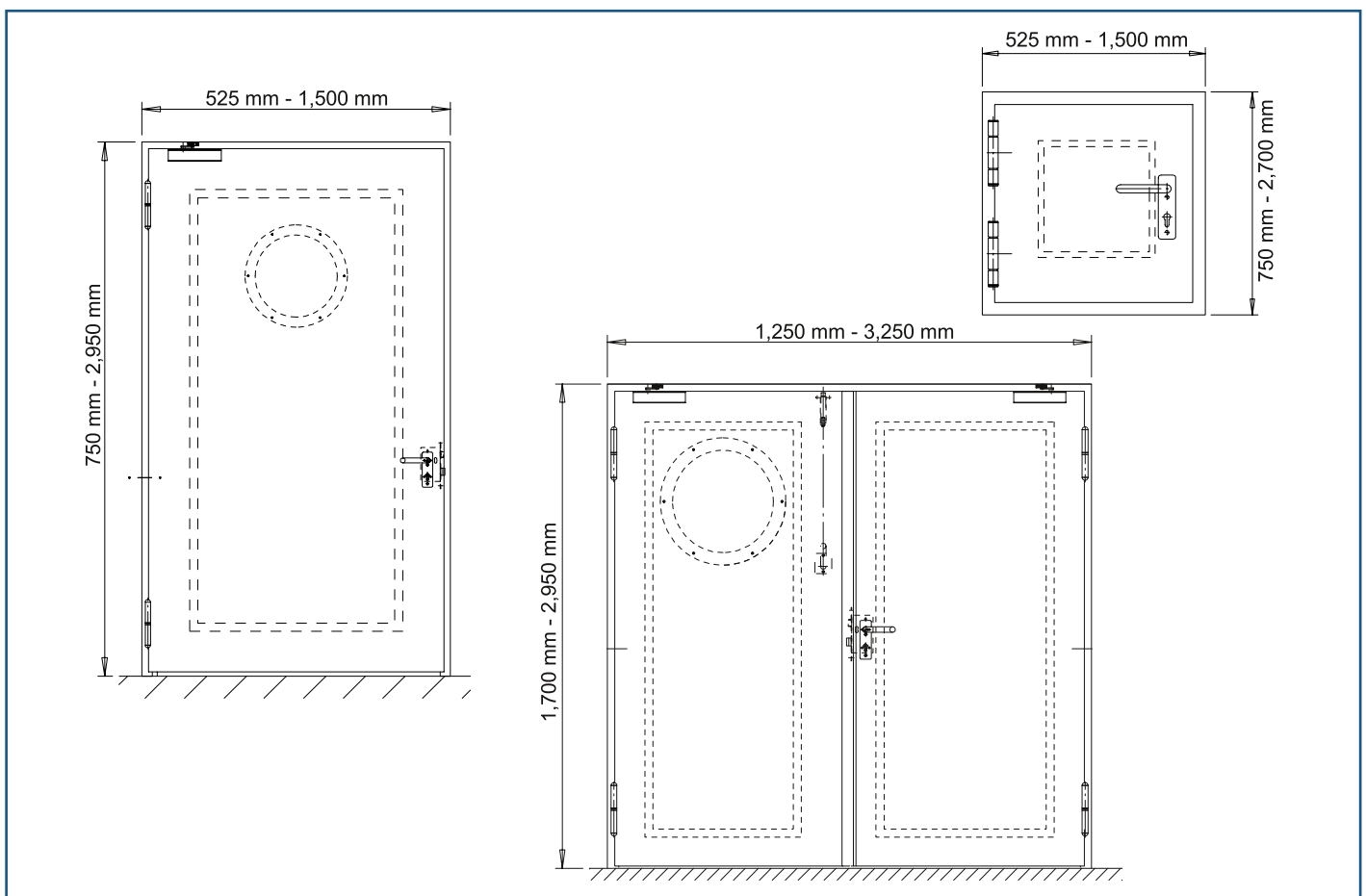
acc. to DIN EN 14351-1 proven for doors  
in escape and rescue routes

### Flush with surface (optional)

flush-mounted design FLAT

### Explosion protection (optional)

for installation in potentially explosive areas (ATEX)



## Technical data

### Dimensions single-leaf (shell dimension)

width	from	525 mm	bis 1,500 mm
height	from	750 mm	bis 2,950 mm

### Dimensions double-leaf (shell dimension)

width	from	1,250 mm	bis 3,250 mm
height	from	1,700 mm	bis 2,950 mm

### Dimensions flap (shell dimension)

width	from	525 mm	bis 1,400 mm
height	from	750 mm	bis 2,700 mm

### Door leaf

leaf thickness 68 mm to 69 mm - smooth double-walled  
 plate thickness 1.0 mm to 1.5 mm  
 thin rebate design  
 optional thick rebate design  
 optional insulation inlet full-face glued and pressed with cover plate, thus particularly plane and smooth door leaf

### Frame

framesystem "ZNG" (see installation variants)  
 with flush clipped in Thelesol® fire protection strips and elastic rubber seal  
 corner frame  
 optional enclosing frame  
 optional block frame

### Floor seal

required for smoke control, acoustic performance, air tightness  
 optional lowerable floor seal or sliding seal (patented)

### Glazing (optional)

glass dimensions and -form variable  
 (for rectangular glass inset max. 890 mm x 2,150 mm)  
 minimum frieze width: 130 mm  
 optional with port-hole (ø ca. 450 mm clear view)  
 glass inset bars with concealed screw connection (for rectangular glass inset)

### Hinges

2/3-part KO door hinges  
 with patented easy-running bearings as easy running doors or width ball bearing spacers  
 optional door hinge with 3D adjustment

### Fittings single-leaf

optional any approved handle set  
 acc. to EN 1906 resp. EN 179  
 optional panic bar handle or push bar acc. to EN 1125

### Fittings double-leaf

active leaf  
 optional any approved handle set  
 acc. to EN 1906 resp. EN 179  
 optional panic bar handle or push bar acc. to EN 1125  
 for version RC: Protective fitting ES-1 up to ES-3

### Locking single-leaf

single locking acc. to EN 12209,  
 depending on version multi-point locking  
 profile cylinder prepared (cylinder on-site)  
 dogbolts  
 optional panic locking acc. to EN 179 resp. EN 1125

### Locking double-leaf

active leaf  
 single locking according to EN 12209,  
 depending on version multi-point locking  
 profile cylinder prepared (cylinder on-site)  
 fixed leaf  
 internal snap bolt (locking upwards)  
 depending on version, with locking upwards and downwards  
 (rebate shoot bolt, shoot bolt lock)  
 dogbolts at both leaves  
 optional panic locking acc. to EN 179 resp. EN 1125

### Self-closing single-leaf

door closer acc. to DIN EN 1154  
 optional spring hinge for smaller doors / flaps

### Self-closing double-leaf

both leaves with door closer acc. to EN 1154 resp. EN 1155  
 mit closing sequence control acc. to EN 1158

### Installation

in masonry	(thk ≥ 175 mm)
in concrete	(thk ≥ 140 mm)
in aerated concrete	(thk ≥ 150 mm)
in flexible walls min. F90	(thk ≥ 100 mm)
in encased steel columns min. F90	(thk ≥ 140 mm)

optional blunt installation in soffit  
 optional installation on the wall plate

approved for installation at great heights  
 (installation not at floor level: height on one or both sides  
 > 500 mm above ground level - e.g. as manhole door/flap)  
 with lower fire and smoke seal - also thresholdless

### Label

CE-labeled for fire doors acc. to EN 16034

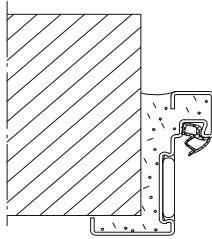
### Optional

additional security devices possible  
 (magnetic contact, bolt contact, e-opener...)  
 door in stainless steel

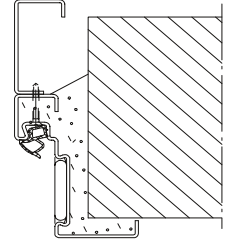
# Installation variants

## Installation in

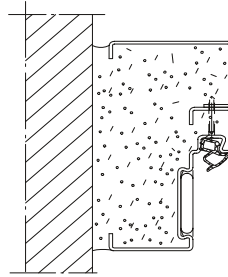
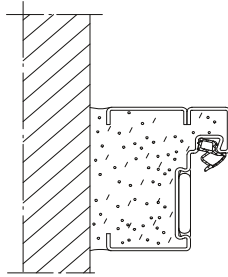
masonry /  
concrete



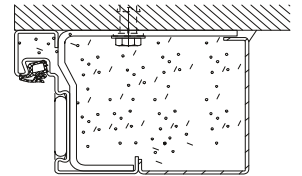
**corner frame**  
corner frame with  
supplementary frame



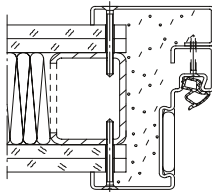
masonry /  
concrete



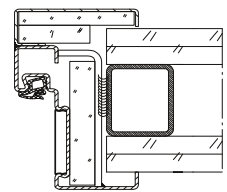
**block frame**  
corner frame with  
supplementary frame



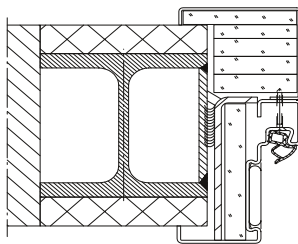
flexible walls



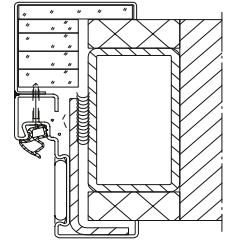
**enclosing frame**  
corner frame with  
supplementary frame



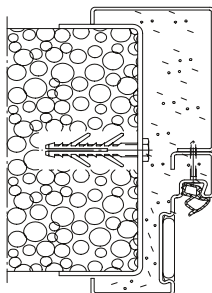
steel columns /  
steel supports



**enclosing frame**  
corner frame with  
supplementary frame



aerated concrete



**enclosing frame**  
corner frame with  
supplementary frame

