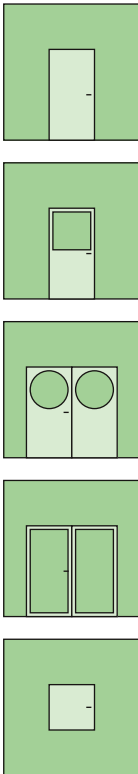


Technical information



System Schröders TSN-3 / TSN-4

CE-labeled fire resistant steel doorsets

El₂60-S_a-C5 acc. to EN 16034, 1-lf. (TSN-1) and 2-lf. (TSN-2)

- optional with fire-resistant glazing
- optional in combination as **smoke control door**
S_a / S₂₀₀ 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_W (C.C_{tr}) = 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

EI₂60 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 $\geq 1,2 \text{ W}/(\text{m}^2\text{K})$ 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)

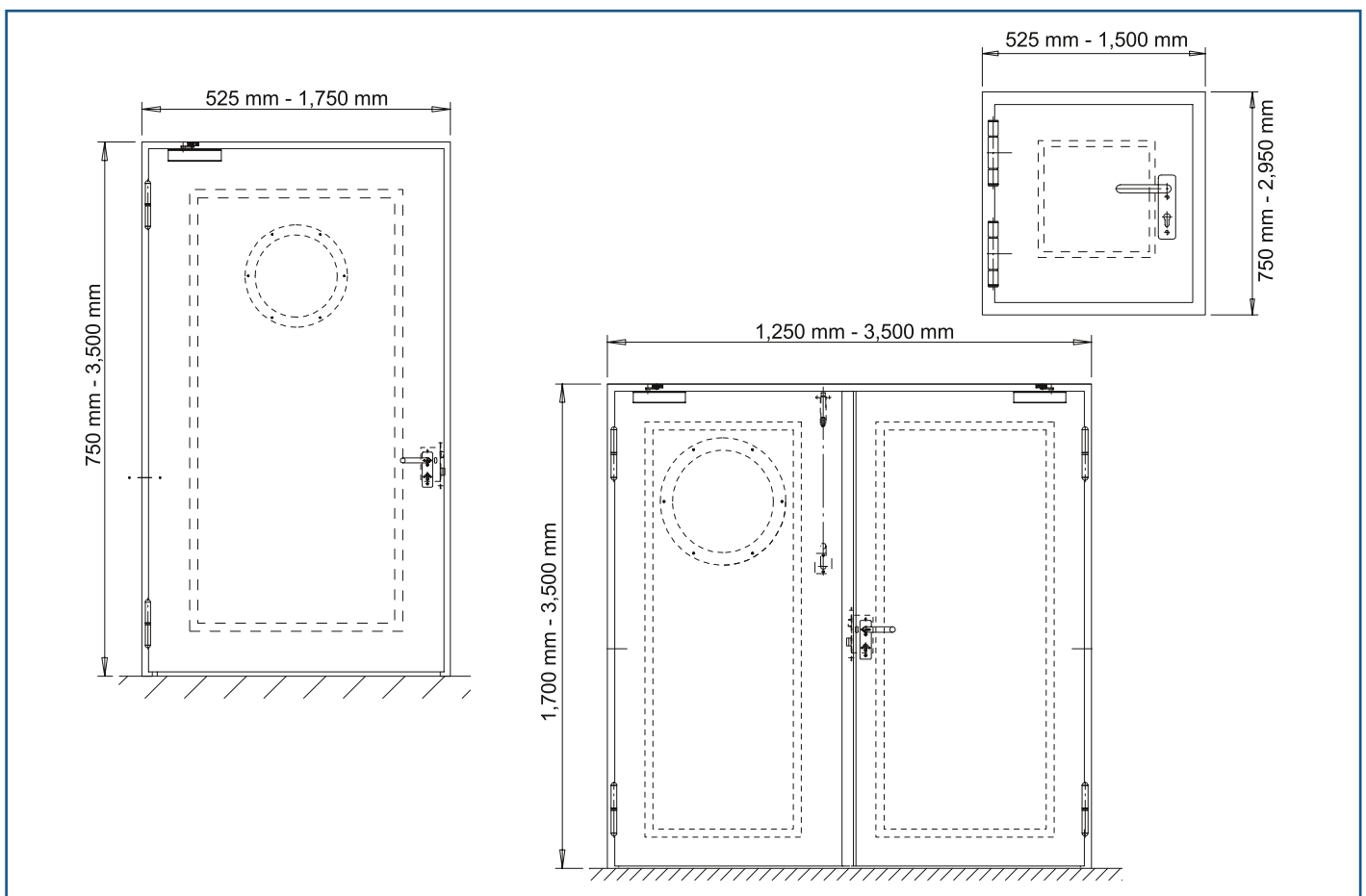
acc. to DIN EN 16034 hold-open device
acc. to DIN EN 14637
acc. to DIN EN 14351-1 proven for doors
in escape and rescue routes

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 1,750 mm
height	from	750 mm	bis 3,500 mm

Dimensions double-leaf (shell dimension)

width	from	1,250 mm	bis 3,500 mm
height	from	1,700 mm	bis 3,500 mm

Dimensions flap (shell dimension)

width	from	525 mm	bis 1,500 mm
height	from	750 mm	bis 2,950 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. 980 mm x 2,180 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. F30 (thk ≥ 100 mm)

in encased steel columns min. F30 (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

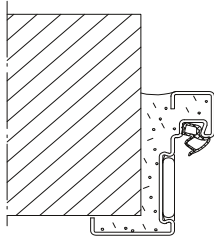
(magnetic contact, bolt contact, e-opener...)

door in stainless steel

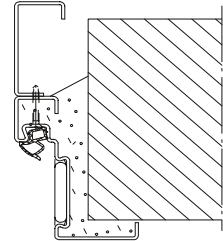
Installation variants

Installation in

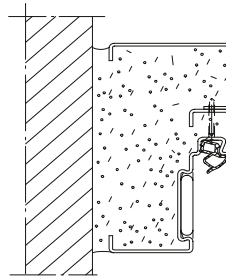
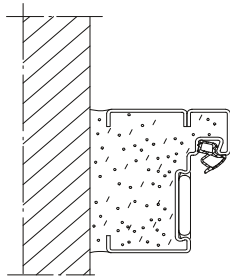
masonry /
concrete



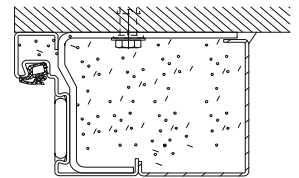
corner frame
corner frame with
supplementary frame



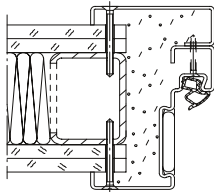
masonry /
concrete



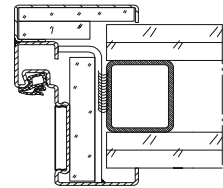
block frame
corner frame with
supplementary frame



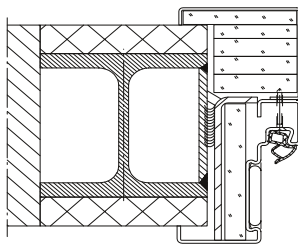
flexible walls



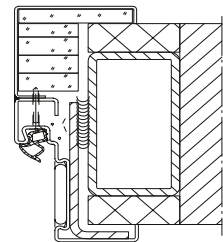
enclosing frame
corner frame with
supplementary frame



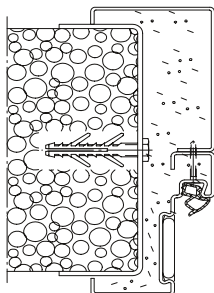
steel columns /
steel supports



enclosing frame
corner frame with
supplementary frame



aerated concrete



enclosing frame
corner frame with
supplementary frame

