

Automatic sliding doors

EN Safety analysis

187393-01

GEZE

In accordance with the Machinery Directive 2006/42/EC a risk assessment must be carried out taking the doors' user group into consideration. The safety requirements for automatic door systems are stipulated in DIN 18650 and EN 16005.

The safety analysis (risk assessment)

- takes the required protective measures into account when the machine is placed on the market,
- has to be carried out before initial commissioning at the latest,
- is the "safety-related profile" of the door system,
- specifies how possible dangers can be excluded or reduced at the door system taking the concrete installation situation and user group into consideration,
- points out possible residual risks.

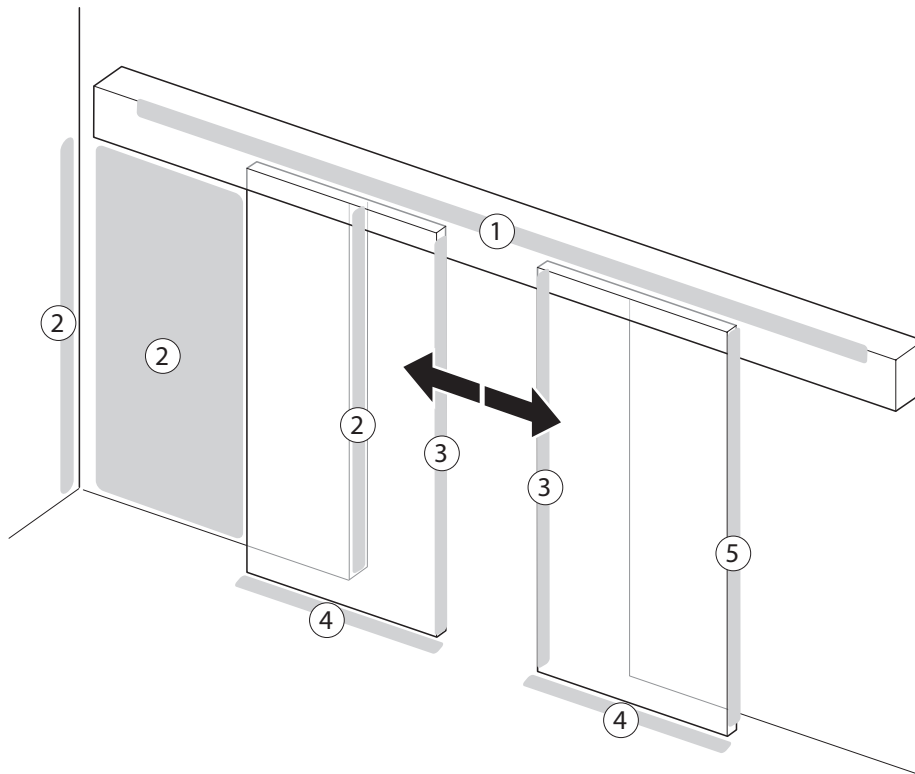
Generally speaking, the avoidance of danger zones is to be preferred over the securing of hazard areas. If a deviation from this risk assessment is established during commissioning of the door system, appropriate measures must be taken to guarantee safe operation of the door system.



The installer of a door system

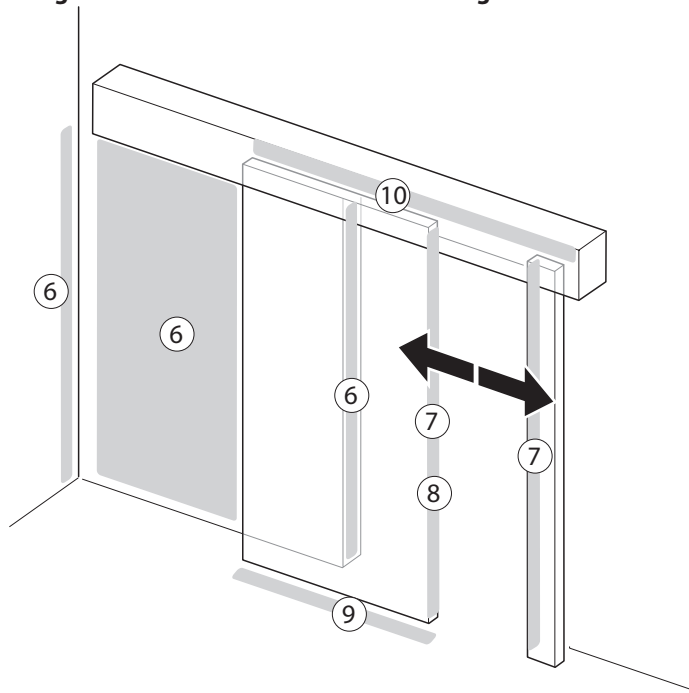
- is obliged to carry out a safety analysis (risk assessment) in accordance with DIN 18650 and EN 16005 and to document this,
- must issue an EC Declaration of Conformity and attach the CE marking in a clearly visible place on the door system.

Danger zones on a 2-leaf automatic sliding door



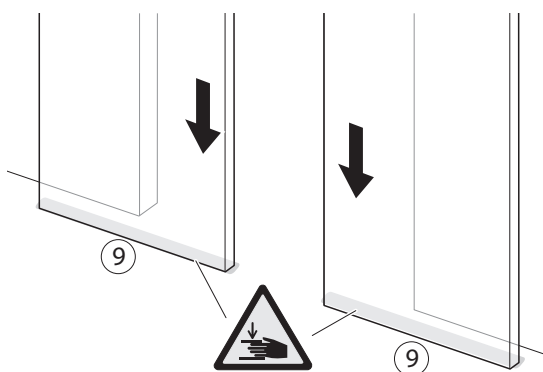
No.	Danger zone
1	Danger zone between door leaf and drive
2	Danger zone between secondary closing edge and wall
3	Danger zone between the main closing edges
4	Danger zone between door leaf and floor
5	Danger zone at the secondary closing edge

Danger zones on a 1-leaf automatic sliding door

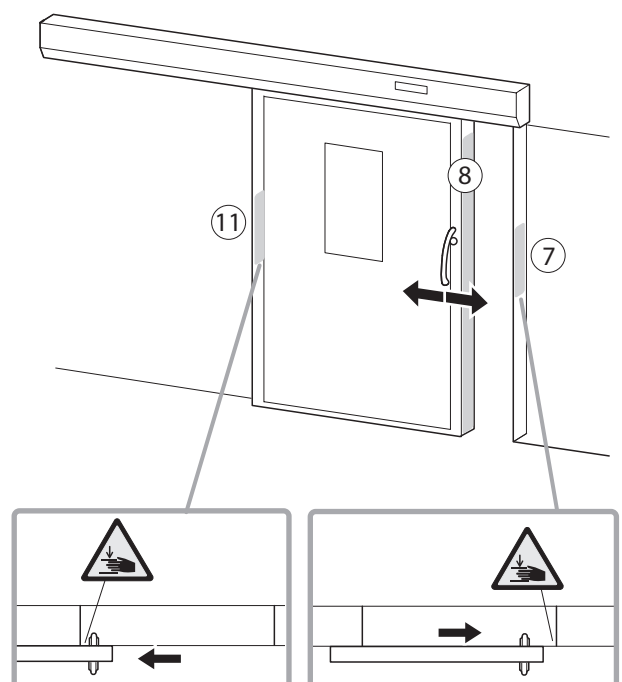


No.	Danger zone
6	Danger zone between secondary closing edge and wall
7	Danger zone between closing edge and post
8	Danger zone at the main closing edges
9	Danger zone between door leaf and floor
10	Danger zone between door leaf and drive
11	Danger zone on the door leaf

Additional danger zones on an automatic sliding door with lowerable door leaves



Additional danger zones on an automatic sliding door with moving door pull handles



Door data			
Offer number	_____	Order number	_____
Object	_____	Serial no.	_____
Address	_____	Installation site	_____
	_____	Position in building, door number, designation	_____
Door and drive type	_____		
Passage height	_____ mm	Opening width	_____ mm
Radius (only for Slimdrive SC)	_____ mm	Leaf weight (per leaf)	_____ kg
		Number of door leaves	<input type="checkbox"/> 1-leaf <input type="checkbox"/> 2-leaf <input type="checkbox"/> 4-leaf

Presence of people particularly in need of protection is to be expected: yes no

Special building conditions (e.g. obstacle in front of the door leaf)

have not been taken into account, since no details are available

were taken into account in accordance with the following details:

Safety analysis prepared by	
Company	_____ Telephone _____
Name	_____ Fax _____
Street	_____ Email _____
Postcode / City	_____

Client	
Company	_____ Telephone _____
Name	_____ Fax _____
Street	_____ Email _____
Postcode / City	_____

Mark at least one box per section with a cross!

Protection

Closing movement

Danger of crushing and impact
 1-leaf: between leaf and surroundings
 from 2-leaf: between the leaves



- Closing safety sensor
- Light curtain, on both sides
- _____

Low-energy Closing force (max. 67 N) _____ N

Closing speed _____ cm/s

Danger zone not secured (protective measures not sufficient)

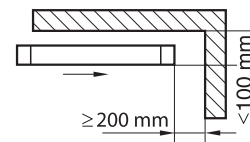
Opening run

Danger of crushing and impact
 between leaf and surroundings

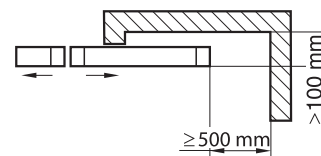


Safe distances

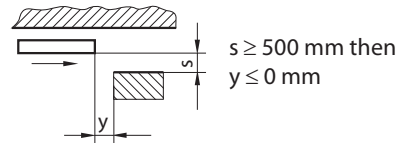
No danger of crushing for the head area



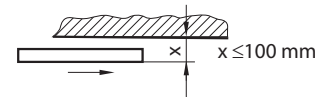
No danger of crushing for the body



No danger of crushing for the body



No danger of impact



Protective leaf¹

Opening safety sensor²

Light curtain

Safety leaf

¹ Only for linear sliding doors (not telescope doors) with door leaves made of fine-frame ISO glass

² With FR doors only limited protection of opening by sensors possible

Mark at least one box per section with a cross!

Protection

Opening run

Low-energy

Opening force (max. 67 N) _____ N

Danger of crushing and impact
between leaf and surroundings

Opening speed _____ cm/s

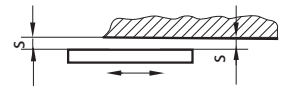
Danger zone not secured (protective measures not sufficient)

Danger of being drawn in
between leaf and surroundings

Safe distances kept?

yes

no



$s \leq 8 \text{ mm}$
or $25 \text{ mm} < s \leq 30 \text{ mm}$

Protective leaf¹

Opening safety sensor²

Light curtain

Danger zone not secured (protective measures not sufficient)

¹ Only for linear sliding doors (not telescope doors) with door leaves made of fine-frame ISO glass

² With FR doors only limited protection of opening by sensors possible

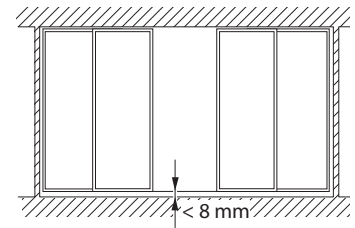
Mark at least one box per section with a cross!

Protection

Opening and closing movement

Danger of being drawn in
Between leaf and floor

- Safe distances kept?
- yes
 - no

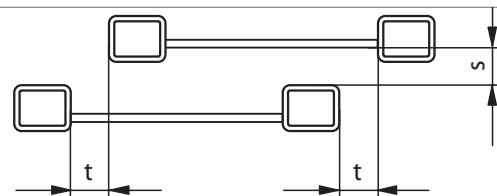


- Sensor strip
- _____
- Danger zone not secured (protective measures not sufficient)

Danger of shearing

- No shearing points

- Safe distances



with $s \leq 8 \text{ mm}$: $t = 0 \text{ mm}$
with $s > 8 \text{ mm}$: $t \geq 25 \text{ mm}$

- Protective leaf¹
- Safety sensor²
- Light curtain
- _____
- Danger zone not secured (protective measures not sufficient)

¹ Only for linear sliding doors (not telescope doors) with door leaves made of fine-frame ISO glass

² Can only be used to a limited extent – residual risk!

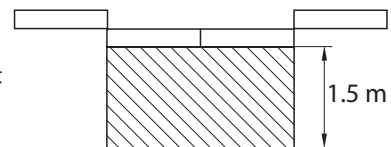
Mark at least one box per section with a cross!

Protection

- | | |
|-------------------------------------|--|
| Danger of cuts | <input type="checkbox"/> Safety glass (toughened safety glass, laminated safety glass)
<input type="checkbox"/> _____ |
| Danger of stumbling | <input type="checkbox"/> Floor guide slots ≤ 20 mm wide
<input type="checkbox"/> Floor guide and thresholds ≤ 12 mm high and ramp-shaped
<input type="checkbox"/> No obstacles in the passage
<input type="checkbox"/> _____
<input type="checkbox"/> Danger zone not secured (protective measures not sufficient) |
| Danger of collision with glass door | <input type="checkbox"/> Marking of the glass (sticker etc.)
<input type="checkbox"/> _____ |

Escape and rescue route door

- | | |
|--|---|
| Danger through insufficient opening width | <input type="checkbox"/> Escape door width is not known, opening width exceeds _____ mm
<input type="checkbox"/> Reduced opening width _____ mm
<input type="checkbox"/> Building authority proof of the minimum opening width _____ mm |
| Danger through non-detection of escaping persons | Movement detector in exiting direction depending on installation situation
<input type="checkbox"/> 1 detector in direction of emergency exit
<input type="checkbox"/> 2 detectors in direction of emergency exit |



Residual risks, special functions, change of use, other agreements

Indications of existing residual risks

no yes

- Unauthorised locking of the door
- Steps or stairs directly near the door
- Danger during cleaning of the protective leaf/safety leaf
- Danger of being locked in at interlocking door and vestibule systems
- Danger of impact, crushing and shearing through emergency lock: door closes without safety features
- Danger of shearing for floor lock with protective leaf
- Danger of crushing and shearing with door pull handles
- Danger of crushing during lowering of the door

- _____
- _____
- _____
- _____

Final evaluation of the system

- The protective measures named are sufficient. The system meets the requirements as per DIN 18650 / EN 16005.
- The protective measures named are **not** sufficient. The system does **not** meet the requirements as per DIN 18650/EN 16005. Therefore it must not be put into operation since there are significant dangers for the user.

Change in use / other agreements

Place, date

Name of author of the safety analysis in block letters

Signature of author of the safety analysis

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