



MANUAL SLIDING WALL SYSTEM – GEZE MSW  
VERSATILITY, DESIGN AND FUNCTIONALITY



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## GEZE manual sliding wall systems (MSW)

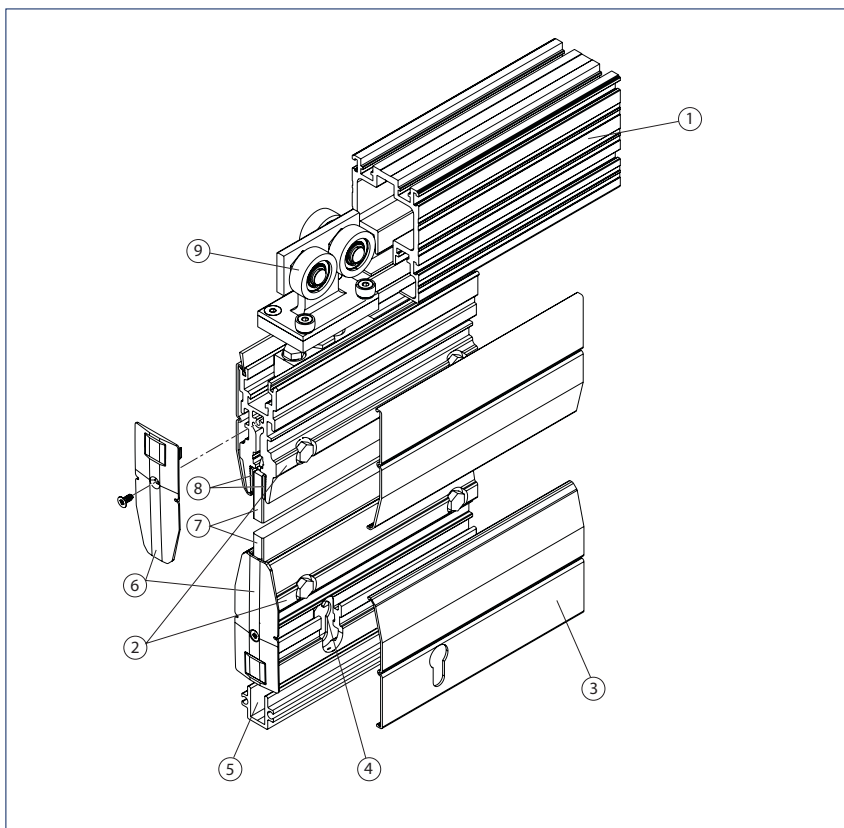
MSW open, divide and partition rooms and flexibly adapt them to their respective use. The modular structure enables all different types of system elements to be used with different functions. Fixed horizontal leaf elements can be used with the GEZE TS 550 NV floor-mounted door closer as a double-action door, as a swing door with floor bearing, as a single-action door with external pivot bearing or as a fixed panel, horizontally moving leaf elements on the other hand can be used as a sliding door and sliding swing door. Thanks to a user-friendly mechanical lock, it takes only two steps to convert a closed sliding door into a fully functioning swing door. It is the perfect solution if the MSW glass frontage, for example, of shops or cafés, are not to be completely opened during the cold season. GEZE provides additional design options with its different design lines: GEZE MSW Classicline, Pureline and Protectline. Different surfaces and colours can also be implemented to individual wishes.

The GEZE curve technology and constantly guided roller carriage ensure excellent running characteristics and quiet operation, even for large leaves. They minimize the effort required to slide the glass elements. The guided curve technology provides a high degree of sliding comfort especially for moving into the stacking area.

Laminated safety glass (VSG) made of toughened safety glass (ESG) satisfies our growing need for security. It provides increased protection against burglary and minimizes the risk of injuries. The special laminated glass glued fixing prevents the heavy VSG panes from slipping out of the carrier and clamping profile. No additional glass or profile preparation is required.

The intelligent locking devices also contribute to the simple handling of the MSW system: the combination of floor locking devices, which are inserted between two sliding elements and are not visible when the glass leaves are closed, and special front floor locking devices for a sliding panel adjacent to a wall or door, means that only one profile cylinder is required in an installation.

### MSW system setup

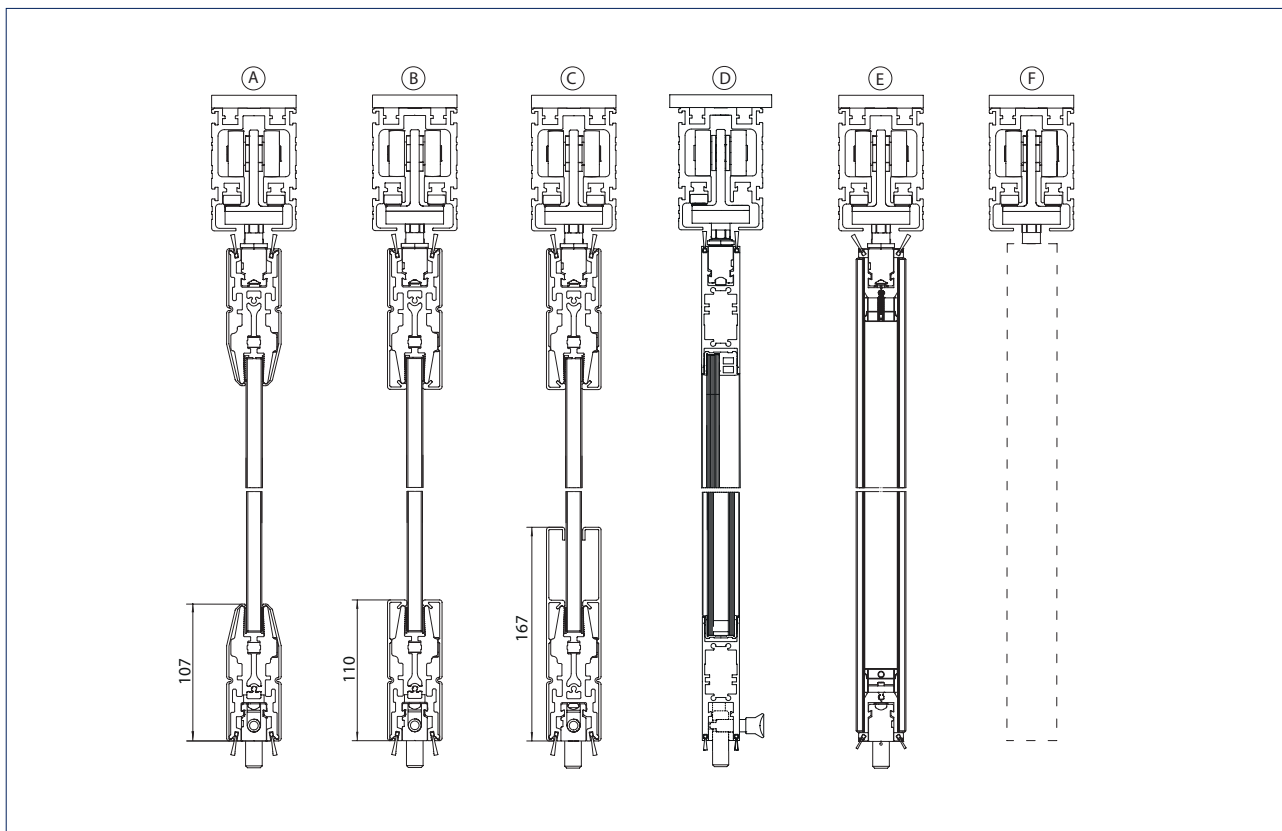


- 1 = Double track
  - 2 = Bearing and clamping profile
  - 3 = Carrier profile used here: Classicline with profile cylinder rebate
  - 4 = Floor lock (for profile cylinder)
  - 5 = Guide rail (optional)
  - 6 = Cover cap, roller carrier and clamping profile
  - 7 = Glass: ESG 10 or 12 mm, VSG (2xESG) 10 or 12 mm
  - 8 = Clamp insert
  - 9 = Roller carriage used here: Double carriage with supporting roller up to max. of 150 kg
- ESG= Toughened safety glass  
VSG= Laminated safety glass

Overview table for manual sliding wall systems (MSW)

	Classicline, Pureline, Protectline	IGG	Fine-framed panels	On-site leaves
<b>Dimensions</b>				
System height (max.)	4120 mm	3620 mm	3120 mm	4120 mm
System width (max.)	unlimited with corresponding stacking area layout			
<b>Door types</b>				
Sliding door	•	•	•	•
Swing door	•	•	•	•
Sliding swing door	•	-	•	-
Fixed panel	•	•	•	•
Self-locking framed sliding requirement door	•	-	-	-
<b>Stacking area</b>				
90° stacking area	•	•	•	•
Parallel stacking area	•	•	•	•
Individual stacking area	•	•	•	•
<b>Installation location</b>	Interior, protected exterior area			

System overview



- A = Classicline
- B = Pureline
- C = Protectline
- D = Fine-framed panels (mono-glass at the top, ISO glass at the bottom)
- E = IGG - integrated all-glass system
- F = On-site leaves

## MSW SmartGuide

### Technology for MSW systems without swing door end panel

All manual sliding wall systems from GEZE can be opened and closed quickly and conveniently using the SmartGuide roller carriage. The switching of the guide side on the roller carriage results in completely new possibilities for designing the system course. All the leaves, including the first leaf, can be moved and arranged in the stacking area. Stacking areas with a disengagement possibility and multiple successively arranged stacking areas can be implemented, even in the case of systems without swing door end panel. This permits optimum flexibility and the complete opening of e.g. shop fronts. The modularity of the track system allows exact fitting solutions to be created for every environment. The systems stand out through straightforward installation, simple operation and high sliding convenience, even with tall elements. Thanks to the MSW configuration tool, MSW systems can be planned quickly and easily in a wide range of variants. Intelligent MSW solutions from GEZE create visual transparency and width and thus achieve generous, modern architecture.

### MSW SmartGuide



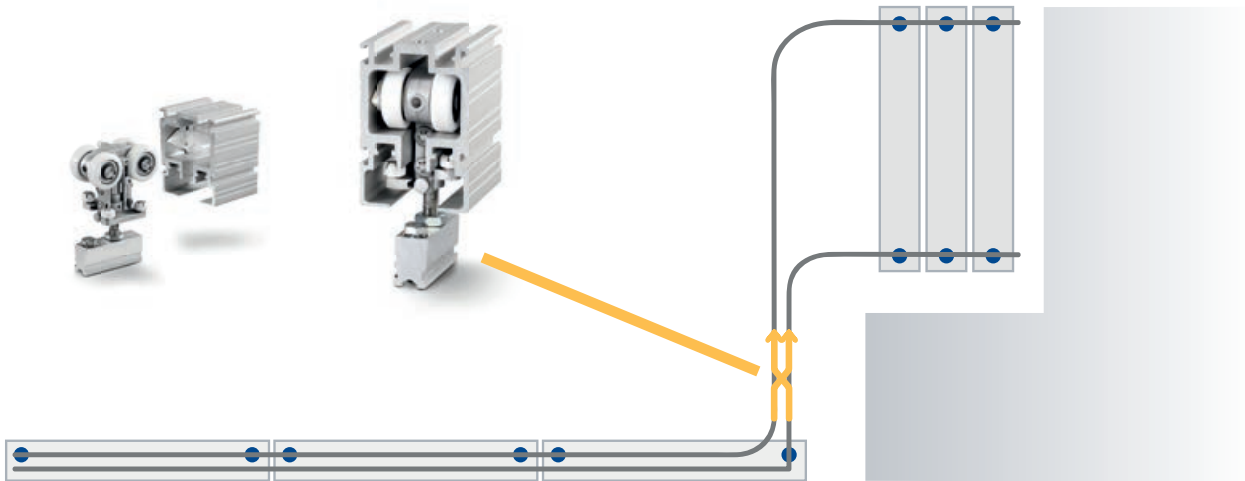
Installation situation (Photo: GEZE GmbH)



Installation situation (Photo: GEZE GmbH)

## MSW SmartGuide roller carriage

The SmartGuide roller carriage allows all the leaves to run in the required direction. The switching of the guide side is integrated into the roller carriage, the impulse is provided by a release device in the track. When operating the system, the switching process remains almost unnoticed. Since the SmartGuide roller carriage is compatible with all MSW leaf versions from GEZE, one single track system is all that is required. Stacking areas with a disengagement possibility and multiple successively arranged stacking areas can be implemented even in the case of systems without swing door end panel. All SmartGuide roller carriages can bear up to 150 kg leaf weight.



Switching of the SmartGuide roller carriage

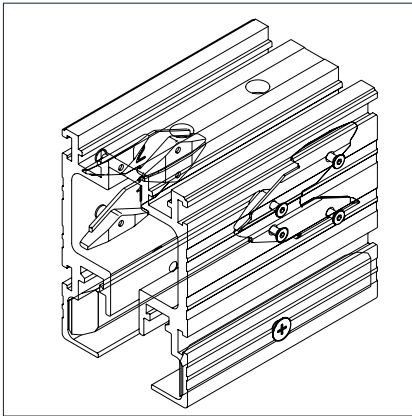


Pin at the top switches in direction of movement to the left

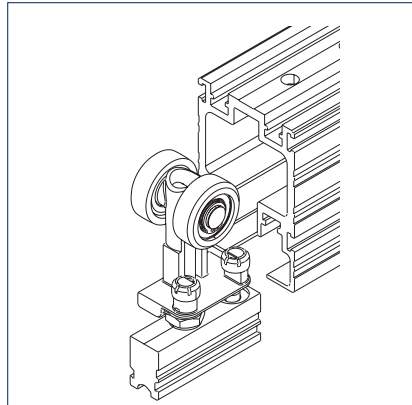


Pin at the bottom switches in direction of movement to the right

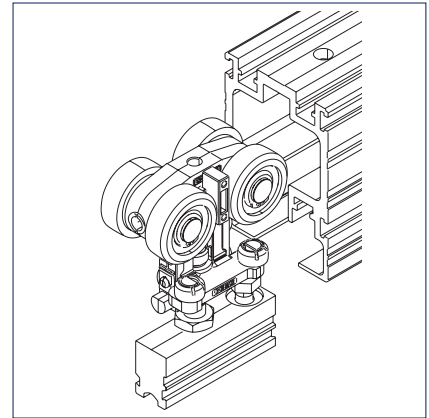
## MSW SmartGuide components



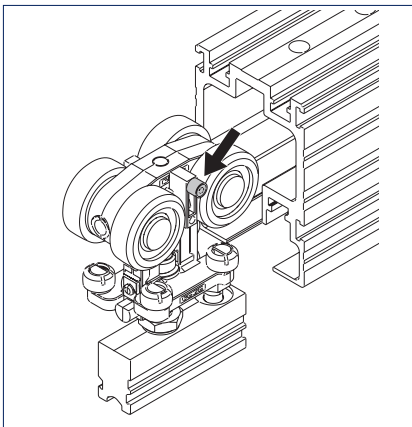
SmartGuide triggering unit



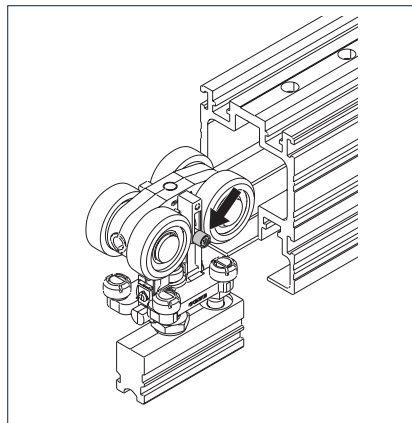
Single roller carriage type 0 (does not switch)



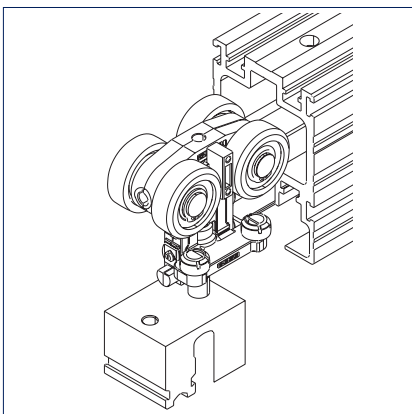
Double roller carriage type 0 (does not switch)



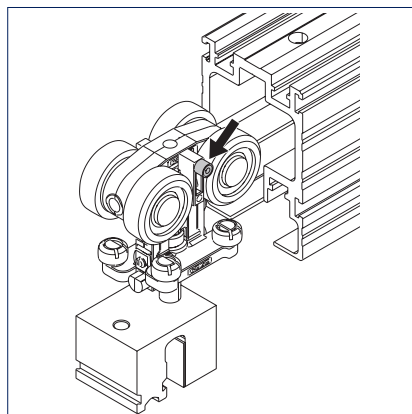
SmartGuide roller carriage type 1 (pin at the top)



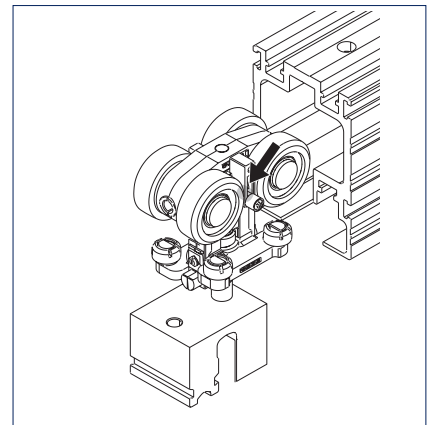
SmartGuide roller carriage type 2 (pin at the bottom)



SmartGuide roller carriage type 0A (with offset, no pin)



SmartGuide roller carriage type 1A (with offset, pin at the top)

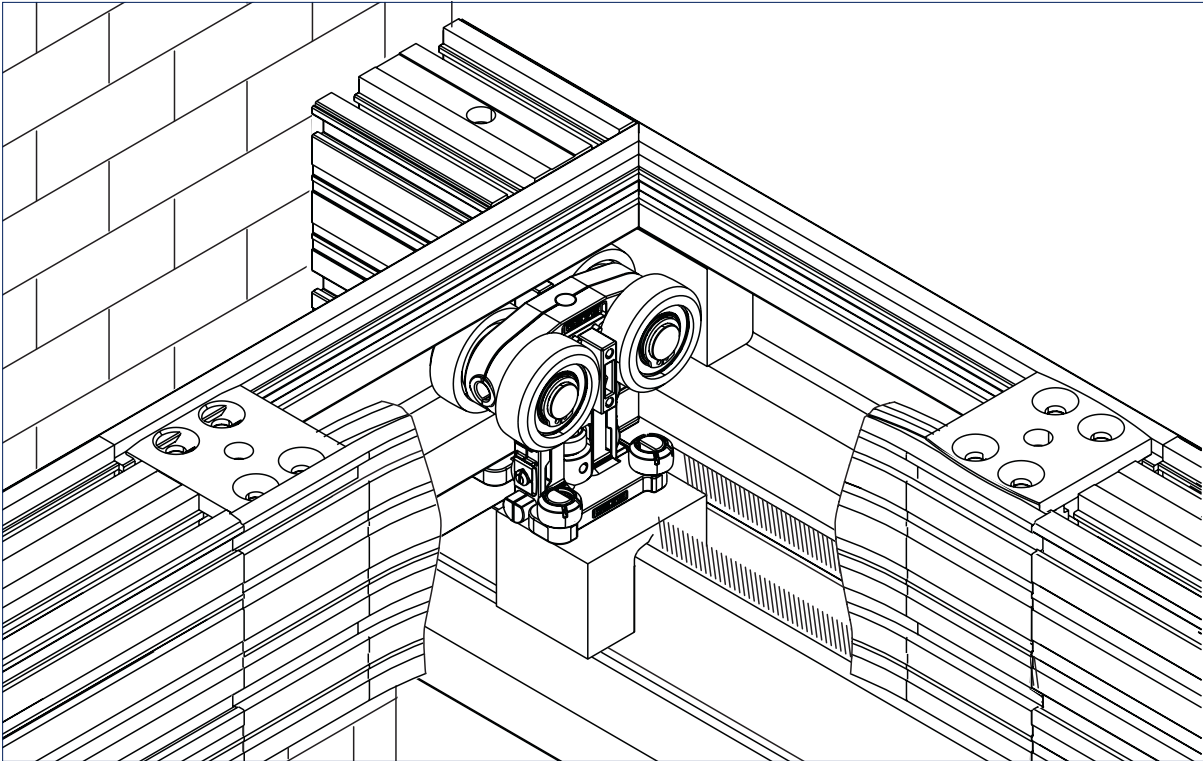


SmartGuide roller carriage type 2A (with offset, pin at the bottom)



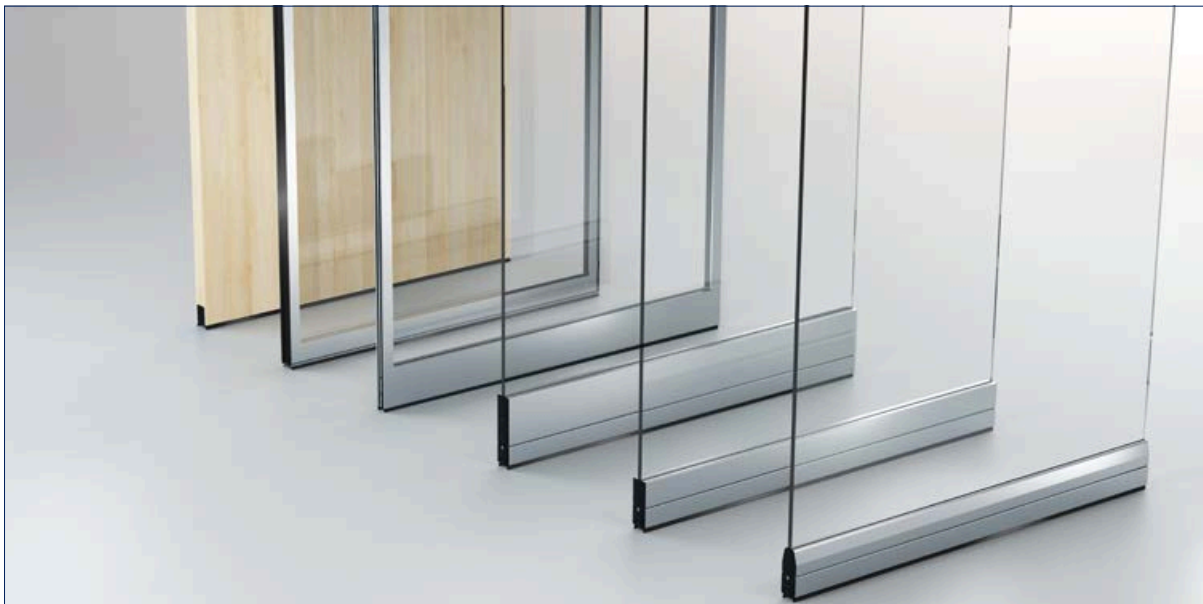
### Installation situation SmartGuide roller carriage with offset

SmartGuide roller carriages with offset (type 01, 1A, 2A) are required on the first leaf so that the roller carriage can be positioned in the track facing the rear



### Area of application

The MSW SmartGuide technology works with all MSW leaf versions. The permissible dimensions and leaf weights are fully retained even with the SmartGuide technology. The switchable roller carriages are always designed as double carriages.



From right: MSW Classicline, Pureline, Protectline, fine-framed, IGG and on-site leaves

# GEZE MSW

## GEZE MSW Classicline, Pureline and Protectline

### Suitable appearance in every environment

The door elements of the manual sliding wall are clamped at the top and bottom across the entire element width in the carrier and clamping profiles. GEZE provides three design lines for these profiles: Classicline, Pureline and Protectline. GEZE MSW Classicline profiles approach the glass at a slight angle and have a profile height of only 107 mm. GEZE MSW Pureline profiles can be combined with existing installations outstandingly well and have a modern angular design. GEZE MSW Protectline profiles provide increased protection against glass damage caused, for example, by cleaning machines and are therefore particularly suitable for airports and railway stations. All carrier and clamping profiles do not require any drillholes in the glass. This enables large compensation of tolerances. The covers can be clipped on when the installation work is finished. In this way, the surfaces are protected against damage and scratches during installation. The cover plates are interchangeable. Different surfaces and colours are available to choose from, for perfect harmony with the building architecture.

### MSW Classicline



Multimedia House, Frederikberg, Denmark (Photo: Morten Bak)

### Application range

- Shopping centres and shop entrances
- Railway stations and airports
- Hotels and gastronomy
- Night-time partition for banks
- Conference rooms



Classicline

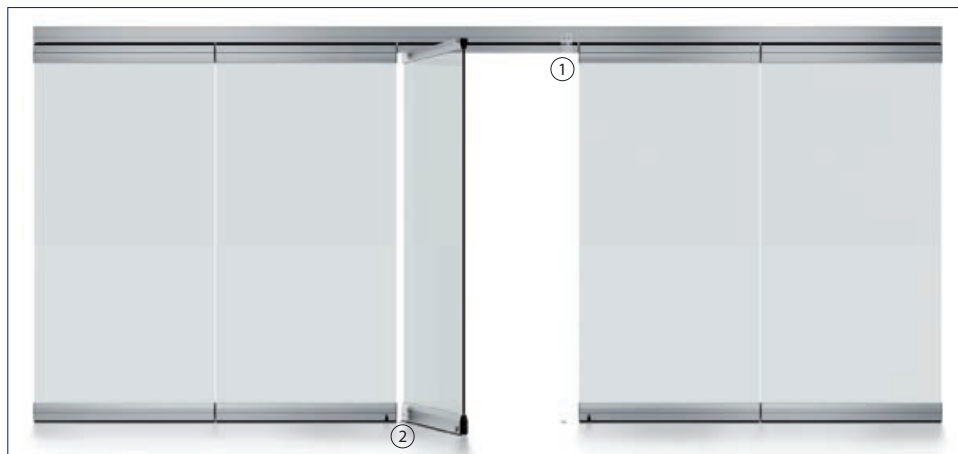


Pureline



Protectline

**Sliding swing door**



Using the sliding swing door in two steps

- 1 = Locking mechanism
- 2 = Operating lever

**Portal framed door**



Deutsche Bank, Leonberg, Germany (Photo: Lazaros Filoglou)

**Technical data GEZE manual sliding wall systems Classicline, Pureline, Protectline**

	Sliding door	Swing door / double-action door / single-action door	Sliding single-action door	Sliding double-action door	Fixed panel
Door height / system height (max.)	4000 / 4120 mm	4000 / 4120 mm	3500 / 3620 mm	3500 / 3620 mm	4000 / 4120 mm
Door width (min./ max.)	700 / 1500 mm	700 / 1500 mm	800 - 850 mm***/ 1100 mm	700 / 1100 mm	1500 mm
Door closer	-	TS 550 NV / TS 3000 V / without door closer	TS 3000 V / Boxer / without door closer	without / TS 520 / without door closer	-
Door weight (max.)	150 kg	150 kg	120 kg	120 kg	150 kg
Glass	ESG* and VSG** made of ESG, each 10 mm and 12 mm				

\* ESG: Toughened safety glass

\*\* VSG: Laminated safety glass

\*\*\* 800 mm for TS 3000 V / 850 mm for Boxer

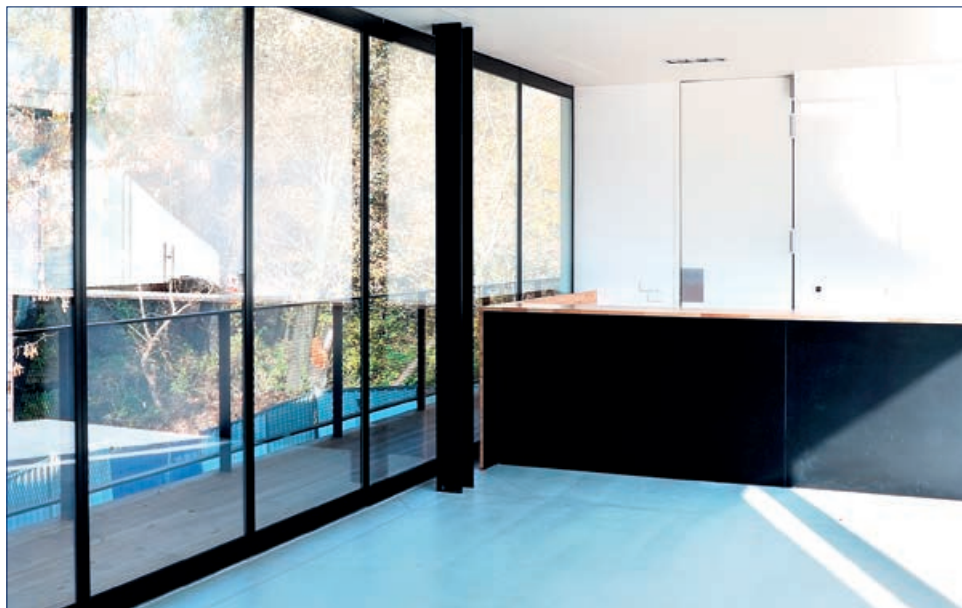
# GEZE MSW

## GEZE MSW with fine-framed leaves

### Improved energy balance by using insulation glass without limiting facade transparency

The use of insulation glass that does not cause any significant visual restriction is only possible by using the slimline frame technology of the manual sliding wall system with its fine-framed leaves. The demand for energy-efficient solutions is becoming increasingly important in shop construction also. However, in this application range in particular, improved energy efficiency must not entail any significant reduction in the transparency of the facade. This is enabled by the minimal vertical profile width of only 30 mm. Manual sliding wall systems with fine-framed leaves are therefore ideal for use in shop construction. An additional advantage is the significantly more pleasant room climate in the vicinity of the partition wall. Silicon and brush seals fitted on both sides reduce draughts around the edges of the leaves.

### MSW with fine-framed leaves



Public building, Warsaw, Poland (Photo: Lukasz Janicki)

### Application range

- Shopping centres and shop entrances
- Railway stations and airports
- Hotels and gastronomy
- Night-time partition for banks

### Technical data GEZE manual sliding wall system with fine-framed leaves

	Sliding door	Swing door / double-action door / single-action door	Sliding single-action door	Sliding double-action door	Fixed panel
Door height / system height (max.)	3000 / 3120 mm				
Door width (min./ max.)	700 / 1500 mm	700 / 1500 mm	850 / 1100 mm	700 / 1100 mm	500 / 1500 mm
Door closer	-	TS 550 NV	TS 3000 V / Boxer	TS 550 NV	-
Door weight (max.)	125 kg				
Glass	Insulation glass 22 mm / mono-glass 10 mm, each made of ESG* or VSG*				

\* ESG: Toughened safety glass

\*\* VSG: Laminated safety glass

## GEZE MSW with IGG

### MSW with integrated all-glass systems - room partitioning systems with perspective

As an integrated all-glass system (IGG) the MSW is perfect in design terms. MSW with IGG integrate the profiles and fitting system between the panes of glass so that they are not visible – and with no visible or attached parts on the surface of the glass. To this end, the inside of the pane is printed at the edge of the glass, the fitting technology visually disappears behind it. Manual sliding walls with IGG create continuous aesthetics and enable a great deal of design freedom. MSW with GEZE IGG provide multi-faceted solutions for high-quality architecture.

#### MSW with IGG



Cafe Luitpold Munich, Germany (Photo: Robert Sprang)

#### Application range

- Shopping centres and shop entrances
- Railway stations and airports
- Hotels and gastronomy
- Conference rooms

#### Technical data GEZE MSW IGG

	Sliding door	Swing door / double-action door / single-action door	Fixed panel
Door height / system height (max.)	3500 / 3620 mm		
Door width (min./max.)	700 / 1500 mm	700 / 1250 mm	700 / 1500 mm
Door closer	-	TS 550 NV / without door closer	-
Door weight (max.)	150 kg		
Glass	2 x 6 mm ESG*, 2 x 8 mm ESG* from 3000 mm door height, with edge enamelling		
*ESG: Toughened safety glass			

## GEZE MSW with on-site leaves

As an alternative to glass leaves, leaves made of wood, aluminium or plastic can be used with GEZE's MSW system. With the GEZE set for on-site leaves, the customer can combine their own door leaves with the GEZE MSW track system. The track system, locks and fittings are supplied by GEZE. These can be used by customers to easily and conveniently implement their own customized solutions.

### MSW with on-site leaves



Public building, Warsaw, Poland (photo: Lukasz Janicki)

### Application range

- Individual space solutions
- Project-specific partitioning wall solutions
- Innovative space concepts

### GEZE manual sliding wall system with on-site leaves

	Sliding door	Swing door / double-action door / single-action door	Fixed panel
Door height / system height (max.)	4000 / 4113 mm		
Door width (min./max.)	700 / 1500 mm		
Door closer	-	TS 550 NV / without door closer	-
Door weight (max.)	150 kg		

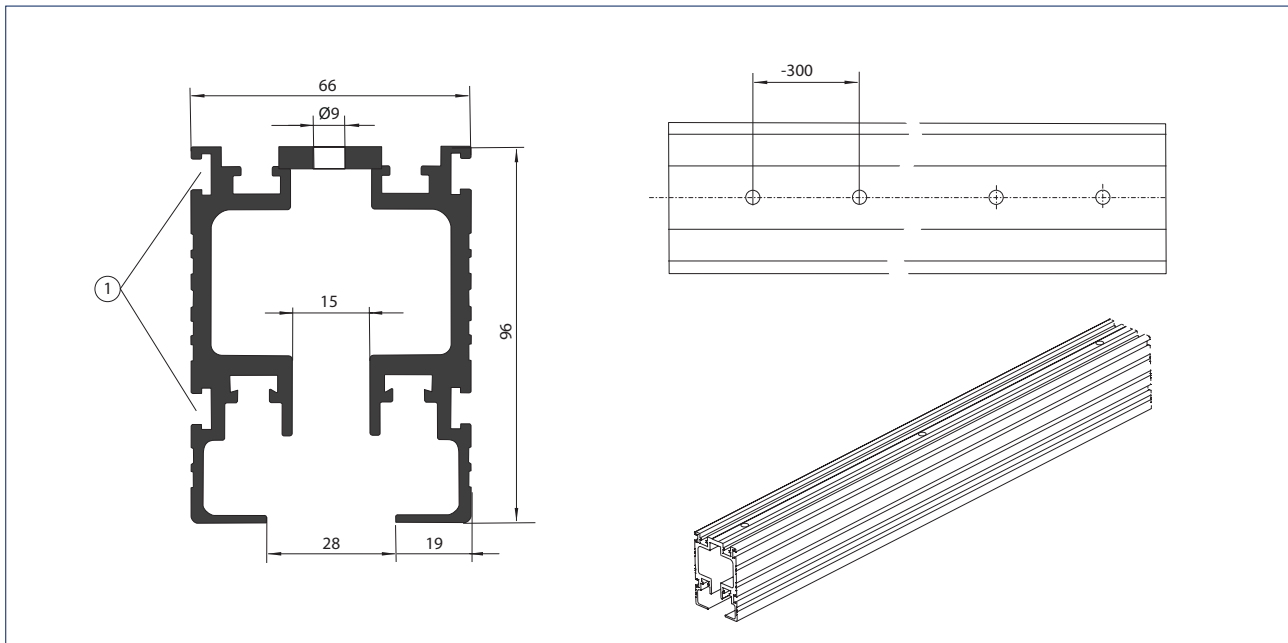
## Components

### Tracks incl. stacking area

#### Straight tracks

The basic element of the manual sliding wall system is the straight track that is always implemented as a double track.

- Application: Passage area
- Cross-section: 66 mm x 96 mm (width x height)
- Maximum length: 6100 mm or cut to size



Drilling dimensions of the double track

1 = T-groove for connection of the suspended ceiling using sliding blocks

The drilling dimension of 300 mm corresponds to the structural requirements of the MSW system. If the construction connections require more fixing points, additional holes can be made retrospectively on site. The double track in the stacking area has closer drillhole spaces.

# GEZE MSW

## Sliding blocks

These are pushed into the T-groove of the straight track, e.g. for mounting on-site facings.

## Curves and curved tracks

Radius: 150 mm

Bends for changes in direction by 15°, 30°, 45°, 60°, 75°, 90° and individual angles

## Coupling pieces

These establish the connection between individual track elements (for all combinations of straight and curved tracks)

- 1 coupling piece for connecting single track (use in open stacking area only)
- 2 coupling pieces for double track connection

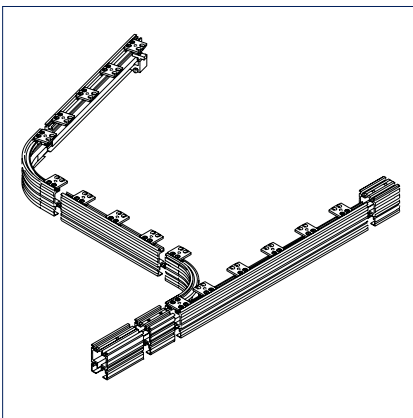


Sliding block



Coupling piece

## Stacking area



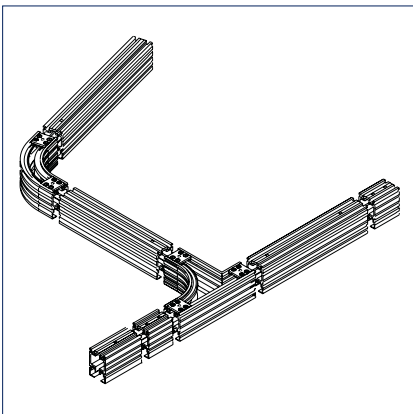
Open stacking area



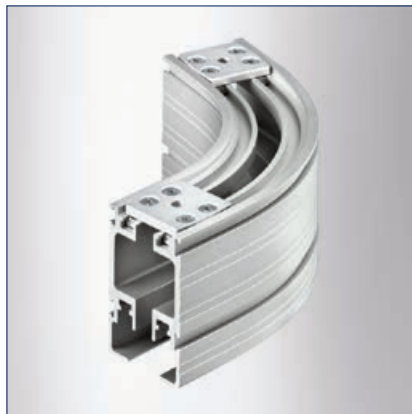
Open stacking area for tracks, single tracks, inside curves



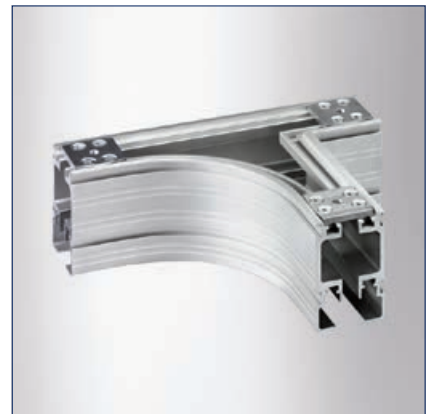
Open stacking area for tracks, single tracks, outside curves



Concealed stacking area



Curves and curved tracks

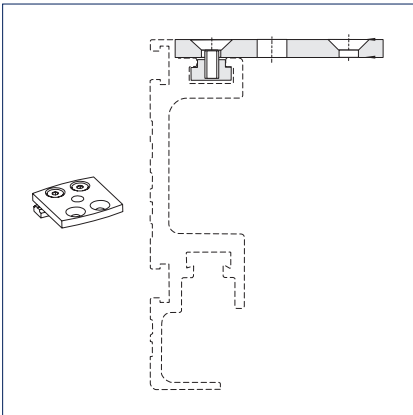


Concealed stacking area track, right branch

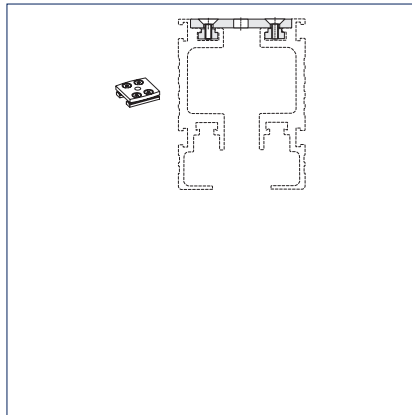


### Suspension brackets

Suspension brackets are required to install the stacking area on the ceiling or substructure. The suspension brackets are mounted at a max. distance of 140 mm to each other. Different suspension brackets are used depending on the stacking area layout.



Suspension bracket for single track



Suspension brackets for 2x single track



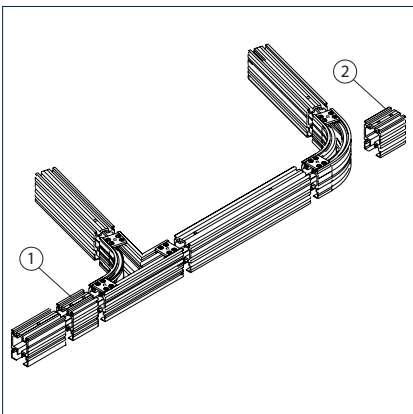
Suspension bracket for single track



Suspension brackets for 2x single track

### Inspection pieces

The inspection piece has a fixed length of 100 mm. The door elements are hung into the track in the area of the inspection piece. By dismantling the inspection piece, individual door elements can be quickly and easily removed and re-installed (e.g. when replacing carriages, glass panes). The inspection piece is fastened only with coupling pieces. An inspection piece must be included, especially if the door elements cannot be hung in at the end of the stacking area due to a lack of space. The inspection piece is normally installed before the branching of the stacking area.



- 1 = Inspection piece
- 2 = Inspection piece for holding the pivot bearing of the fixed swing door

### Cover plate for double track

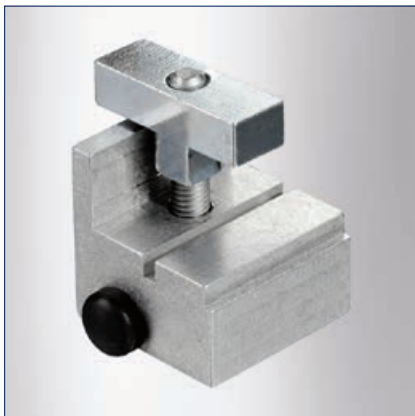
The cover plate for the double track acts as the end piece of the covered tracks at the end of the stacking area.



Cover plate for double track

### Track buffer

Track buffers are dampened stops with free adjustment option. Installation at the end of the stacking area is necessary for technical reasons.



For the open stacking area (single track)



For the concealed stacking area (double track)

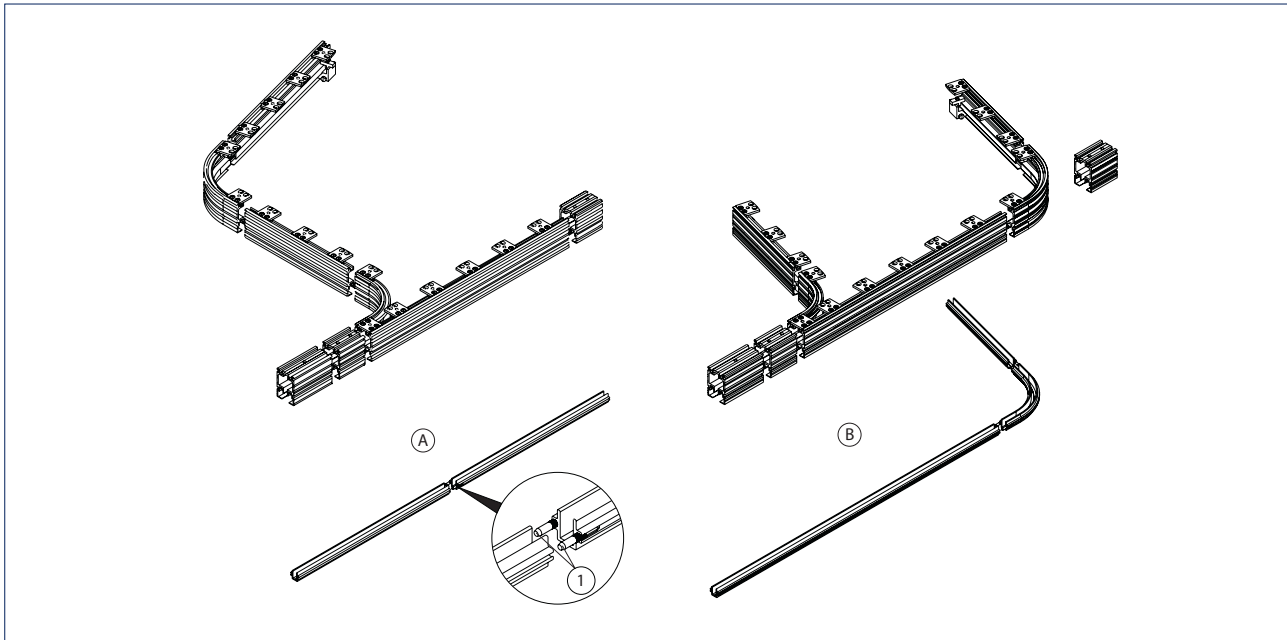


For systems with two stacking areas

## Components

### Floor guides (optional)

The optional floor guide increases sliding comfort and prevents the doors from swinging while they are being pushed. The guide rails of the floor guide are installed in a floor recess and run parallel to the ceiling rail. Accordingly, straight and curved guide rails are also available. One guide element is mounted per sliding door at one side. A floor guide cannot be used in systems with sliding requirement doors.



A = Straight floor guide

B = Curved floor guide for directional changes by 15°, 30°, 45°, 60°, 75°, 90° and individual angles

1 = The guide rails are interconnected by means of grooved pins.

#### Advantages of systems with floor guide

- Controlled sliding movement
- Easy handling and small effort
- Fast opening and closing of the sliding wall
- Sliding doors with floor guide do not have to be additionally locked (exception: end leaves)
- No uncontrolled swinging if doors are unlocked, swaying movements of the doors are prevented
- A floor guide is recommended for outdoor installation and for high doors

#### Advantages of systems without floor guide

- No continuous floor preparation required for integration of the guide rails
- Flooring does not have to be interrupted (appearance)
- Less planning and installation work required for the complete system

## Components

### Bolts and locks

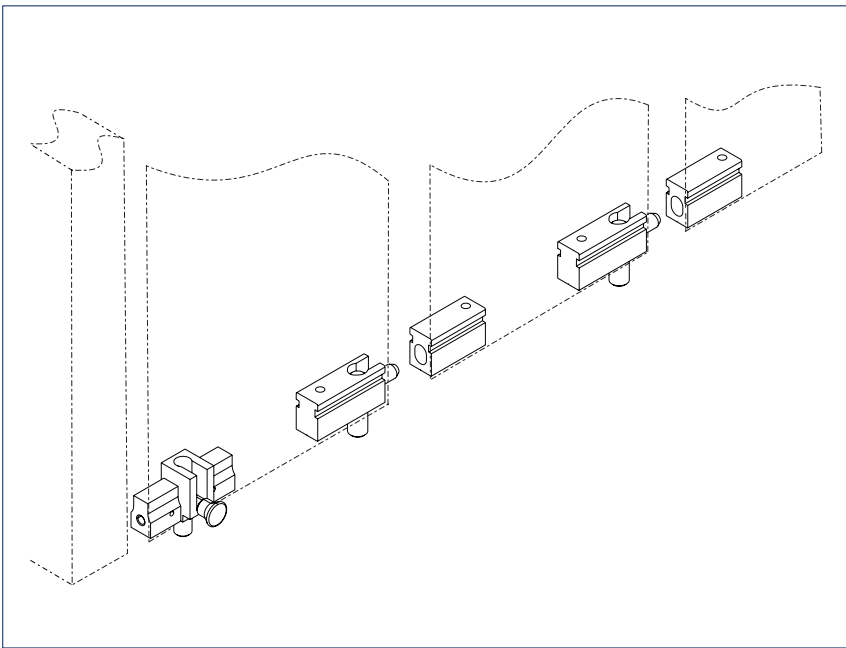
GEZE offers two different types of floor locking devices. The end-face floor-level lock is used to lock adjacent sliding doors. It is locked in the floor and in the adjacent doors. The end-face floor locking device is completely integrated in the profile and is therefore not visible from the outside or inside. The front floor locking device is used for sliding doors that abut against walls or doors as well as door elements, positioned at angles (polygonal).



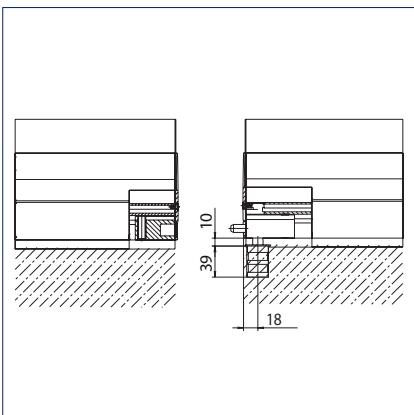
End-face floor-locking device



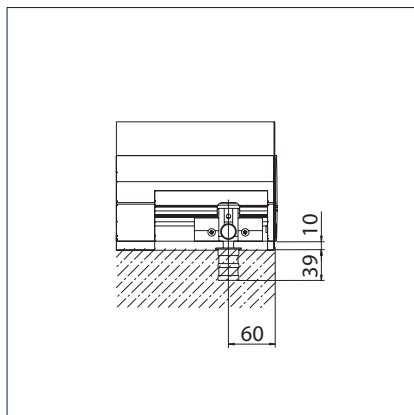
Front floor-locking device



Layout example for floor-locking devices



Position of floor-locking device



Position of front floor-locking device

Locks and bolts with different versions and functions are available to ensure complete convenience and security for doors. All the locks and locking elements can only be accessed from the inside of the sliding wall system. The lock must also be accessible from the outside at at least one door element (swing door) to enable opening and closing, especially when opening and closing a shop. The lock is locked into the floor in a floor socket with spring cover.

In detail, the following lock variants are available:



Single bolt security lock in the standard package for profile cylinder



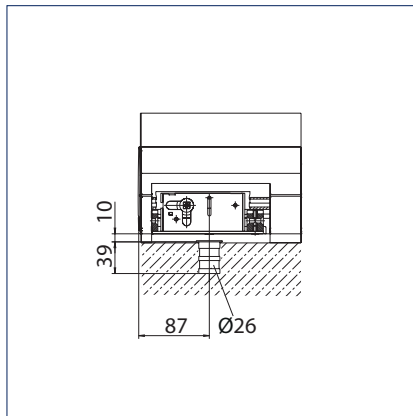
Square



Guide pin



Square and guide pin



Position of floor lock



Thumbturn with spindle (size 8)



Thumbturn with spindle (size 8) and buffer



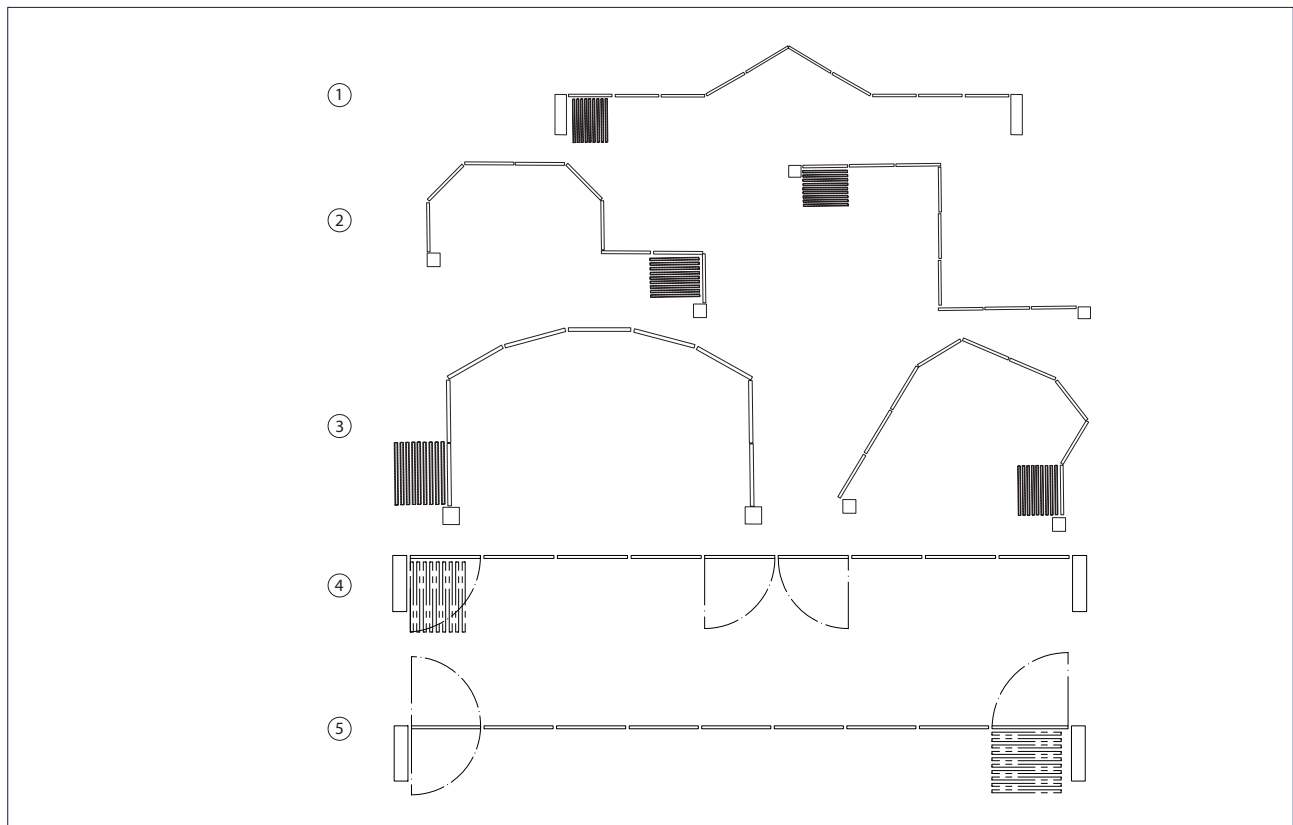
Floor bushing with dust cap for floor lock

## Layouts of the MSW system

Thanks to the modular range structure of the GEZE MSW manual sliding wall system a wide range of variations is possible. The following layouts can be implemented:

- Straight layout of the elements in one plane
- Changes in direction through standard arcs with angles of 15°, 30°, 45°, 60°, 75° and 90°
- Combination of several angles in both directions into bends and curves, polygonal or continuously curved\*
- Freely designed systems through use of special radii and special curves

\*The continuous curve refers to the track profile.



Examples of system layouts

- 1 = Straight glass wall with directional change
- 2 = Curve layout with variable angle positions
- 3 = Free forms from wall to wall thanks to polygon layout
- 4 = Straight glass wall with 2 sliding swing doors (here sliding single-action door)
- 5 = Straight glass wall with 1 sliding swing door (here sliding double-action door)

## Installation situation and stacking area layout

The sliding elements are accommodated in the stacking area while the sliding wall system is open. The size, layout and number of door elements have to be known in order to determine the stacking area required. The stacking area is always located inside the building or room.

### Stacking area layout

The stacking area layout depends on the installation situation and is possible in the following variants:

- Crosswise to the plane of the sliding wall (90° layout)
- Parallel to the plane of the sliding wall
- Special stacking area with variable position of the elements in the stacked position

### Stacking area positioning

- Stacking niche
- Wooden or lightweight construction facing
- Separate
- Stacking area remains completely open

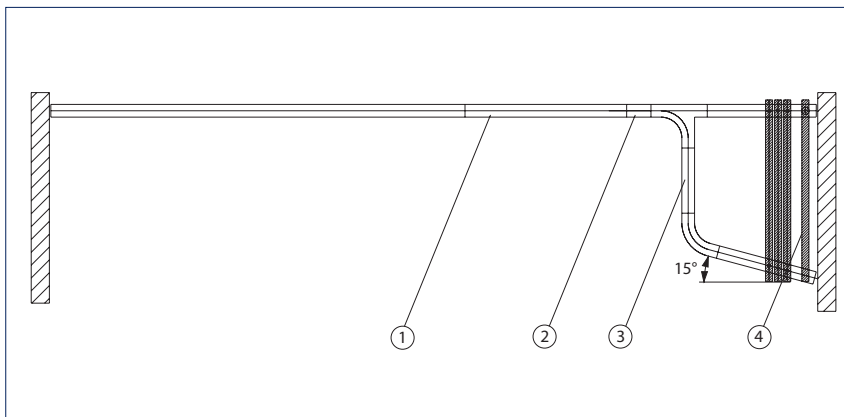
The large number of closely spaced leaves in the stacking area results in very high loads per unit area.

### Stacking area layout: 90°

In a 90° layout the elements in the stacked position are positioned at right angles to the run of the sliding wall. The 90° layout of the stacking area is suitable for systems of up to approx. 10 sliding doors. Depending on the width of the doors, this results in a total system length of approx. 8–15 m. One advantage of this arrangement is that the stacked elements protrude less far into the opening area of the sliding wall and therefore do not significantly reduce the passage clearance.

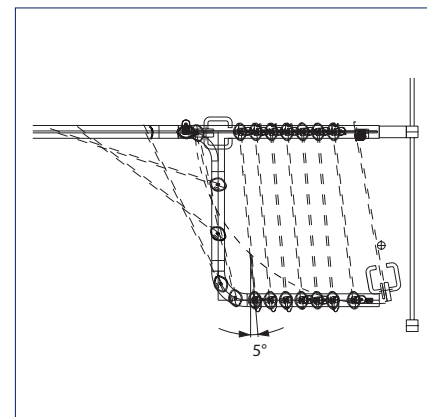
Greater sliding comfort is achieved by positioning the inner stacking area rail at an angle of 15°.

At MSW with GGS the handling comfort is ensured by the 5° slanted position of the leaves.



Stacking area layout 90°, illustration shows concealed park position

- 1 = Straight tracks
- 2 = Inspection piece
- 3 = Stacking area layout 90°
- 4 = Swing door

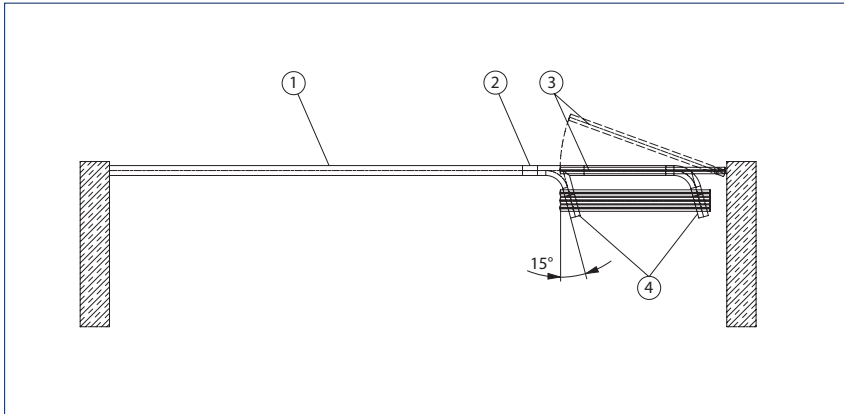


Stacking area layout 90° manual sliding wall system with GGS

# GEZE MSW

## Stacking area layout: parallel

In a parallel layout the elements in the stacked position are positioned in the same plane as the sliding wall. The parallel layout is used in particular when the system is to be kept flat overall. The number of door elements is virtually unlimited, so that almost any system width is possible (note the max. ceiling load!). An advantage is that the stacked elements of smaller systems protrude less into the interior. Greater handling comfort is achieved by positioning the stacking area rails at an angle of 15°.

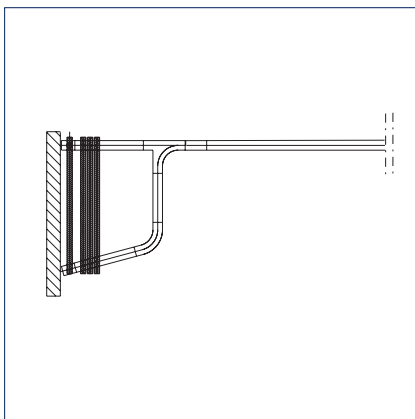


Stacking area layout parallel, illustration: concealed park position

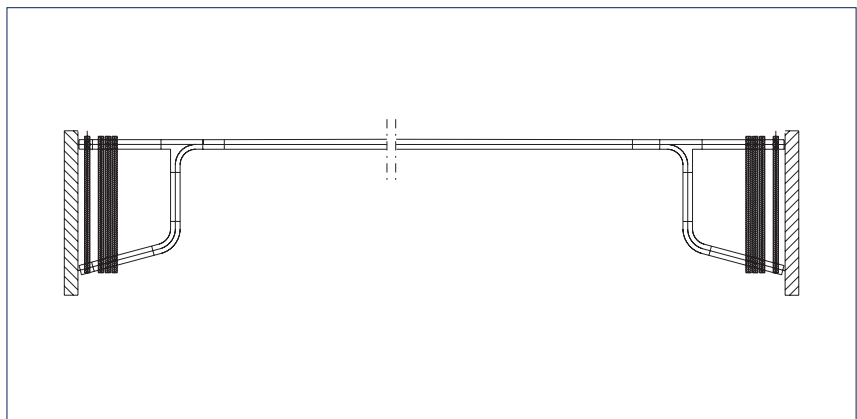
- 1 = Straight rail
- 2 = Inspection piece
- 3 = Swing door
- 4 = Stacking area parallel layout

## Stacking area layout

Depending on the number of door elements and the structural circumstances, the stacking area can be planned on one side or both sides. If the door elements are divided between two stacking areas, a different layout is also possible.



Stacking area on one side



Stacking area on both sides



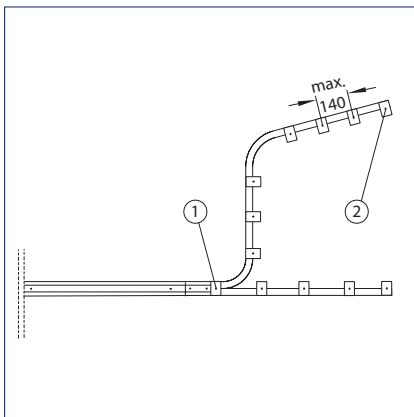
## Stacking area layout

### Open stacking area (uncovered)

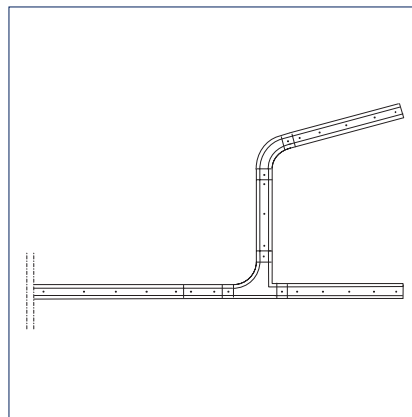
If the stacking area is open, the track elements are only closed on one side in the stacking area, this means that the internal geometry of the track is visible from the other side. The roller carriages are then also visible. This design is sufficient for the function and technique of a sliding wall system on moving the door elements into the stacking area. The double track must be used outside the stacking area.

### Concealed stacking area (covered)

Sliding wall systems with concealed stacking areas are primarily used for visually attractive overall solutions. They are also suitable for tying in a suspended ceiling, which has to have adequately large maintenance hatches. With a concealed stacking area the track elements are arranged symmetrically and completely closed. In the concealed version the fundamental structure of the basic elements outside the stacking area (double track, track double bend) is also continued in the stacking area. The roller carriages are not visible.



Open stacking area (uncovered)



Concealed stacking area (covered)

- 1 = Suspension bracket for 2x single track
- 2 = Suspension bracket for single track distance max. 140 mm

## Ceiling situation and installation preparation

The sliding wall system can be mounted directly on the ceiling or on a substructure available on site. The evenness tolerance must be 2 mm. Unevenness up to approx. 20 mm thick can be leveled out using shims. Suspended ceilings can be hung in the side groove along the whole length of the track with the help of the sliding blocks.

### Notes:

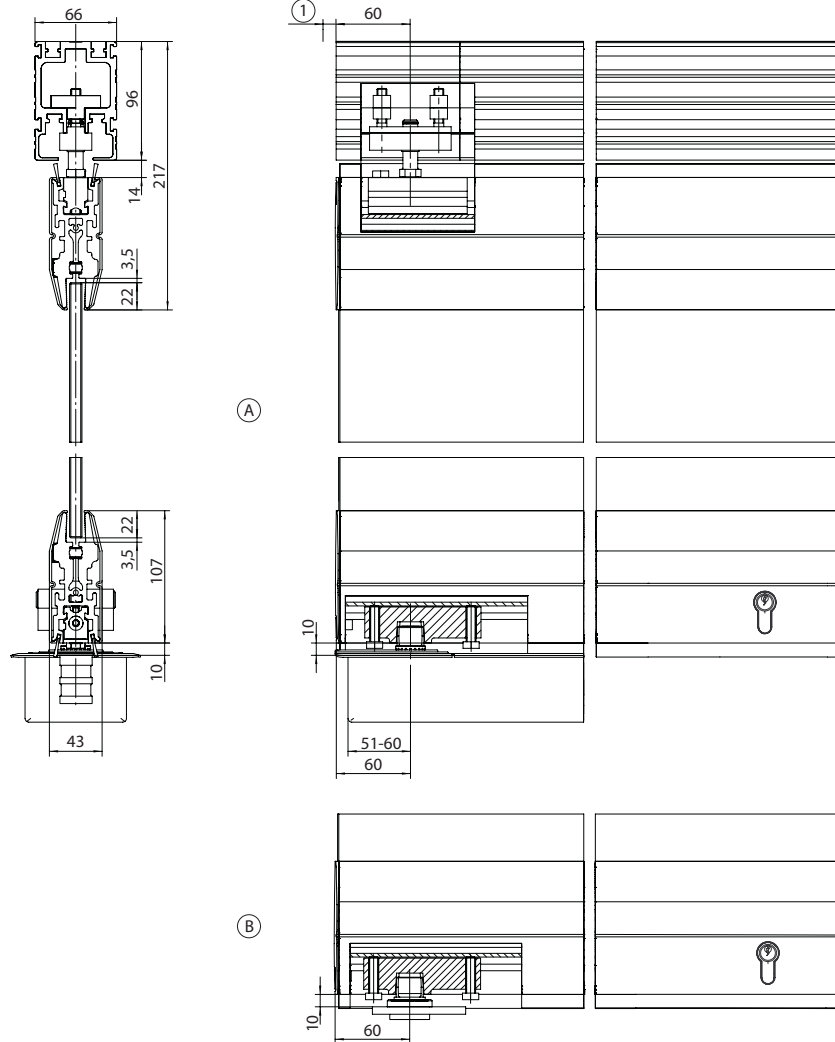
The substructure for the ceiling connection is not part of the scope of the offer and delivery of the GEZE GmbH and has to be planned technically and made available by the customer. The ceiling and installation situation must be known in detail for the technical project planning, because this determines the height of the sliding elements and therefore the glass dimensions.

The total weight of all sliding panels in the stacking area is divided between two short pieces of track.

An order drawing can be made available for the design and production of the on-site substructure.

## Door types

### Double-action door (detailed representation)

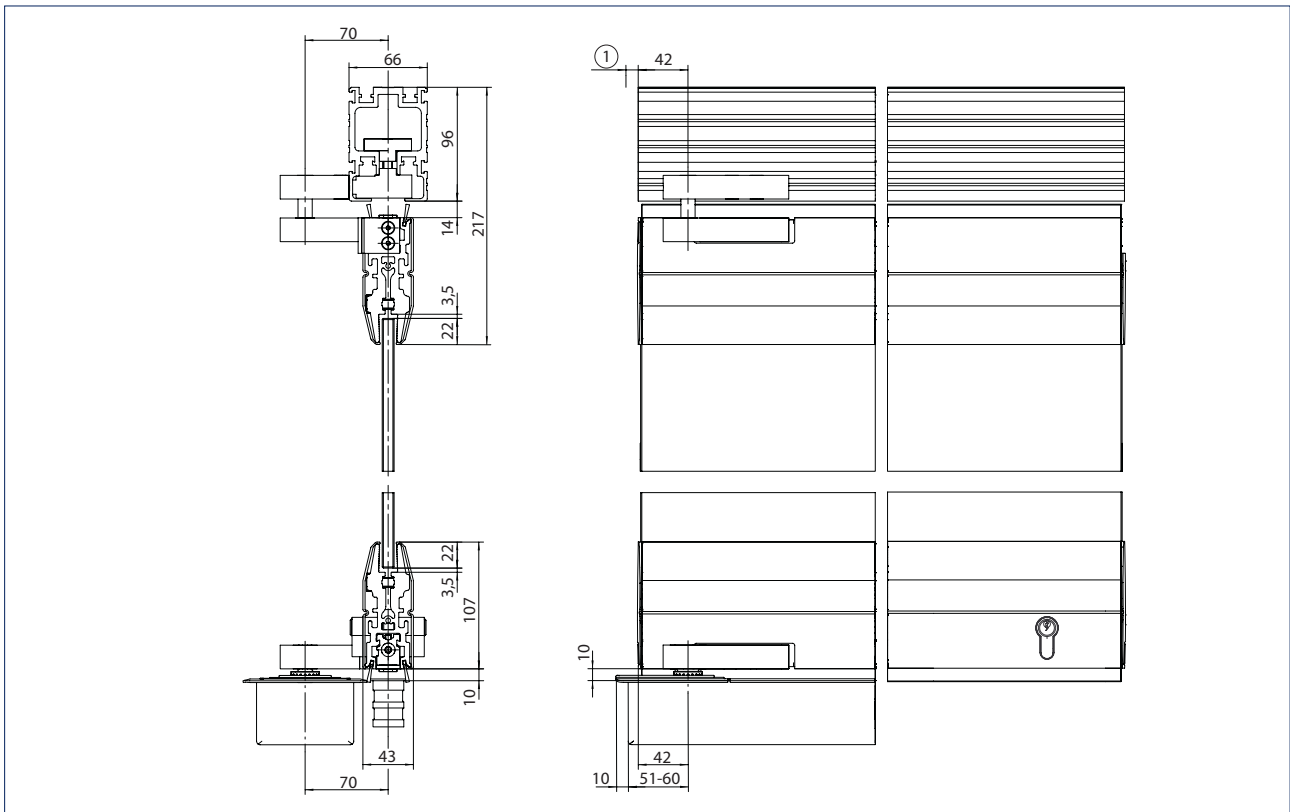


A = Double-action door

B = Swing door

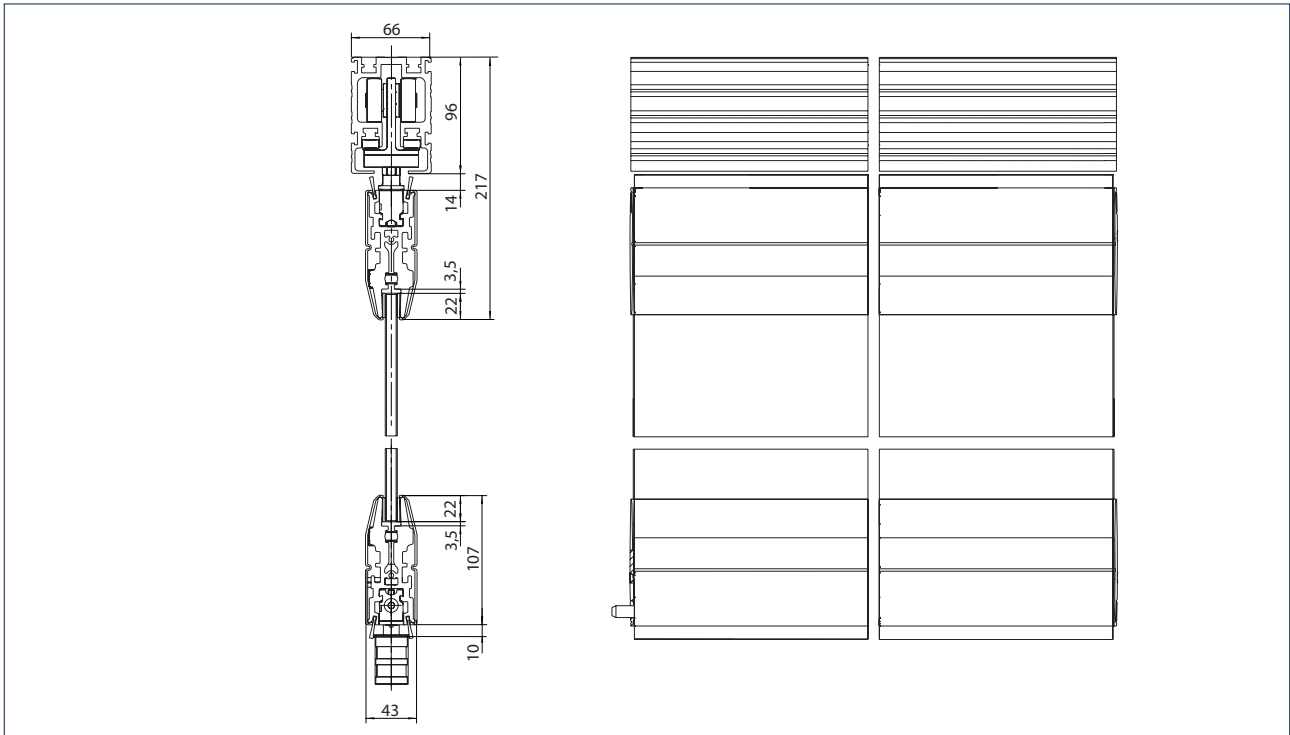
1 = 10 mm gap

## Single-action door

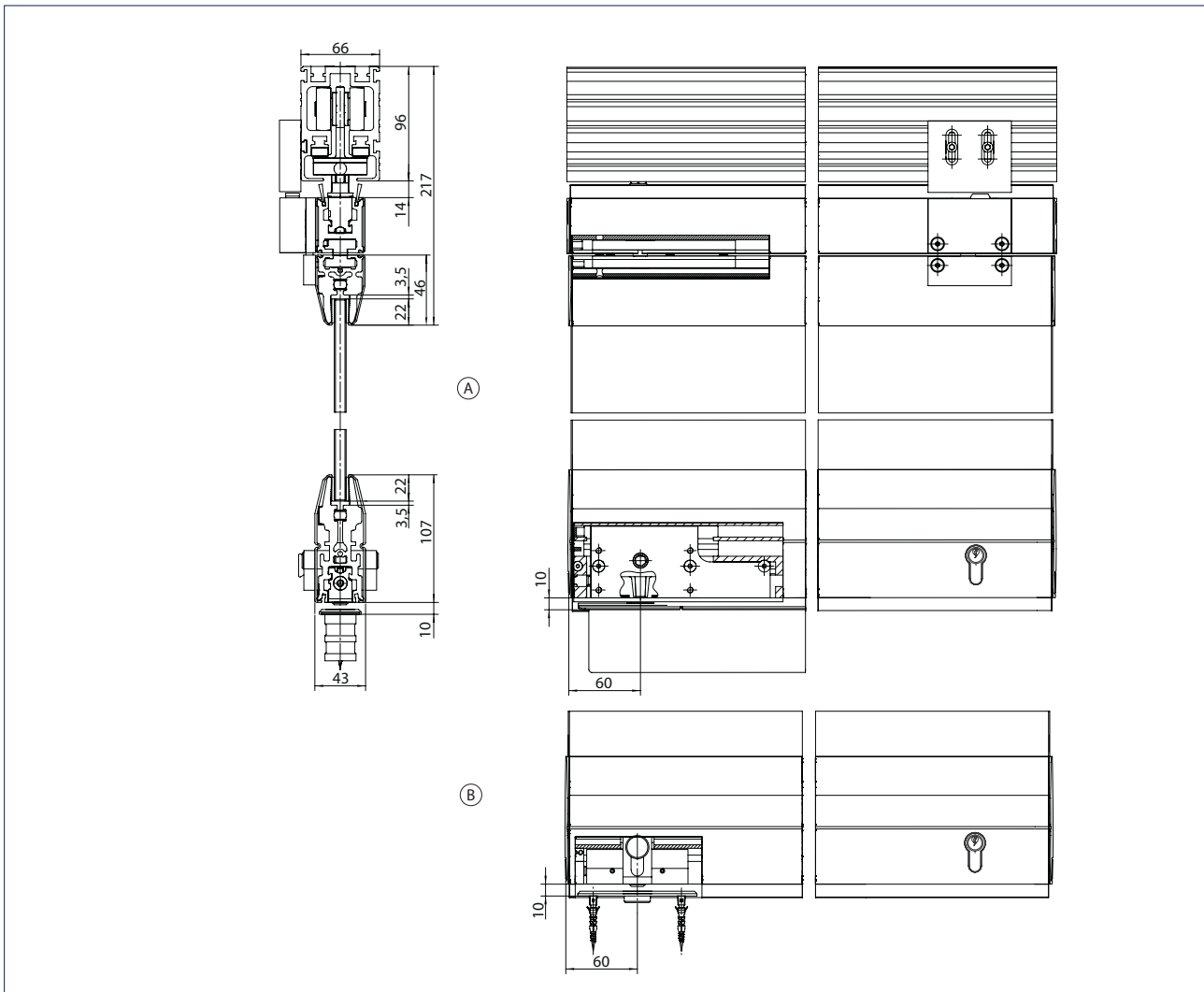


1 = 10 mm gap

## Sliding door

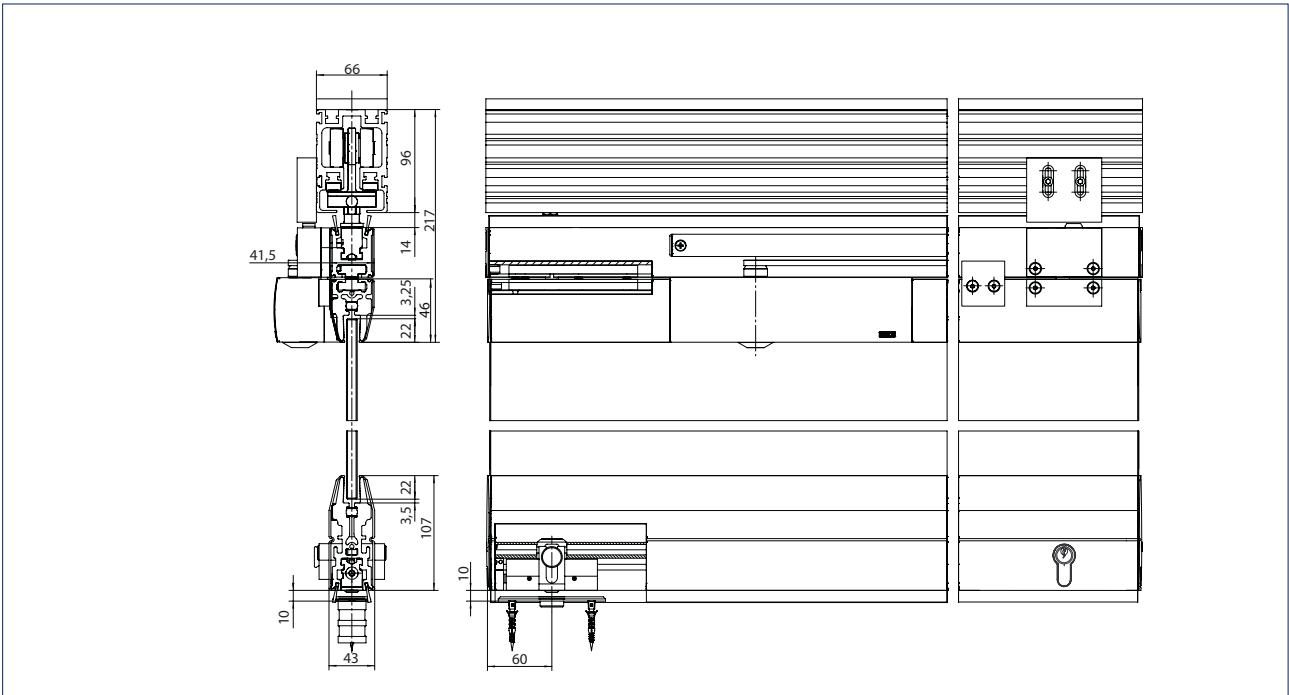


## Sliding double-action door and sliding swing door

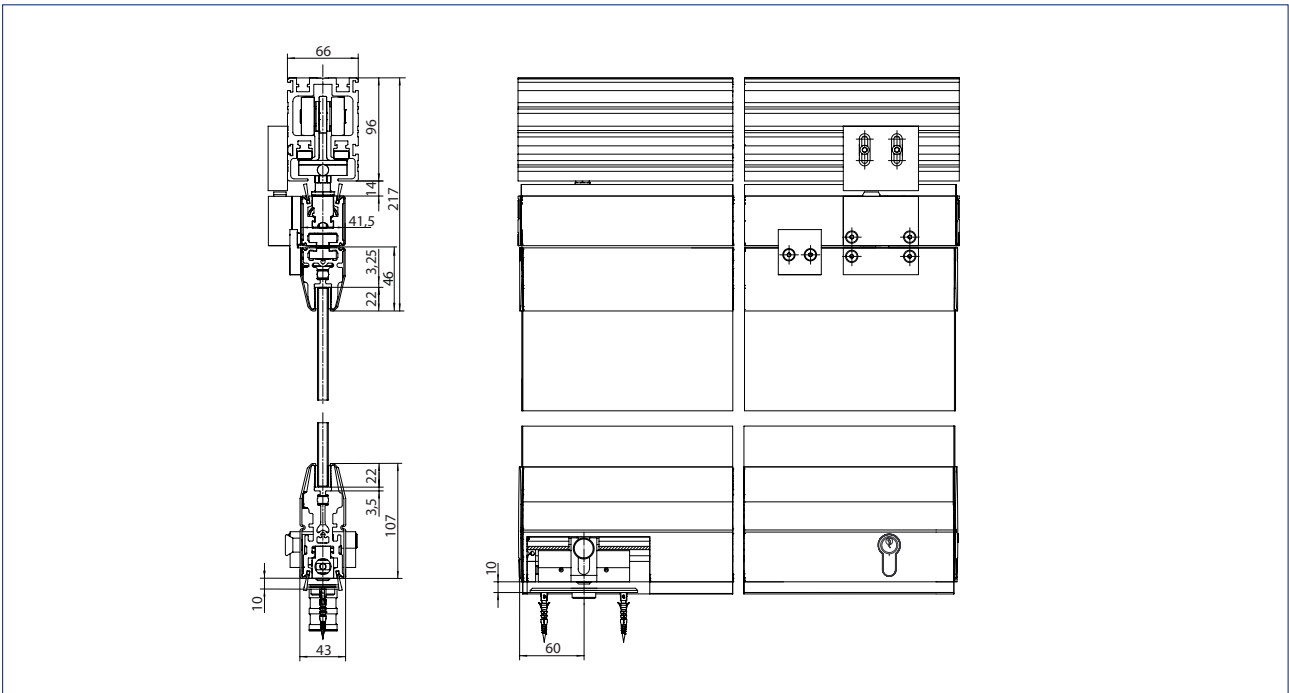


- A = Sliding double-action door with floor spring and coupling mechanism  
 B = Sliding swing door

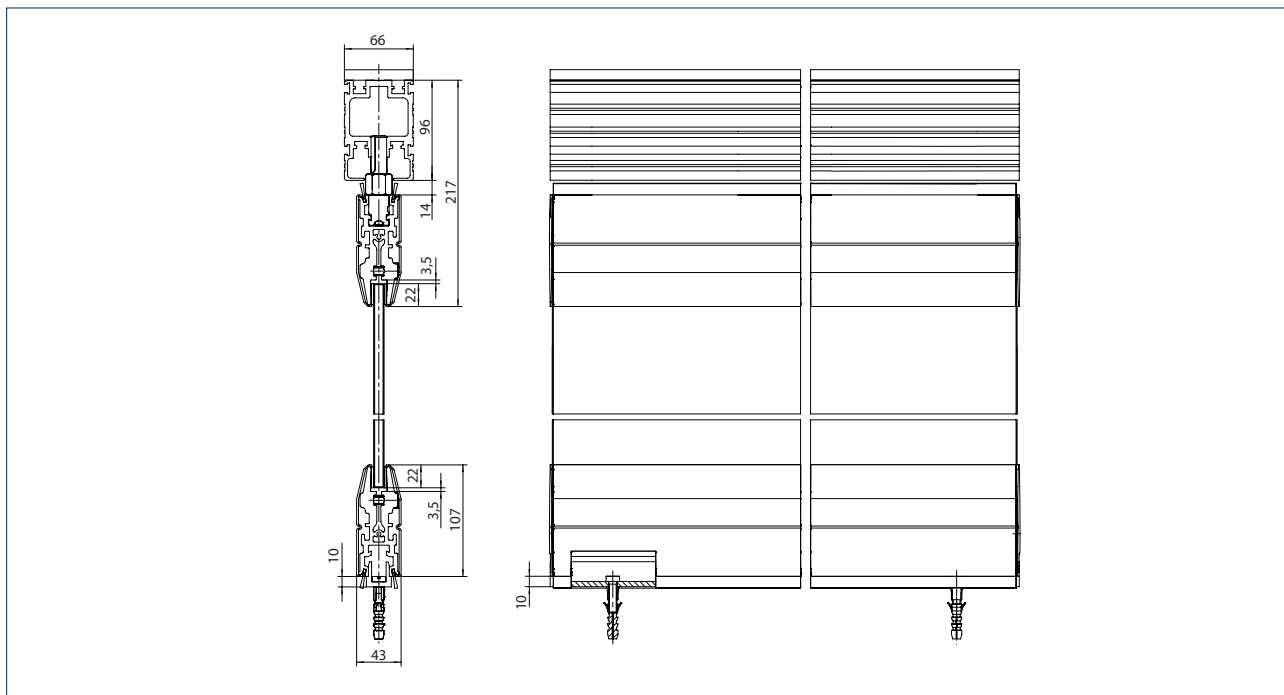
## Sliding single-action door with TS 3000 V



## Sliding single-action door with Boxer



## Fixed panel



## Calculations

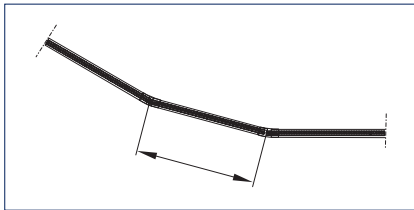
### Requirements

The following requirements must be fulfilled in order for the MSW system to be calculated:

- The configuration of the sliding wall system with the location of the stacking area has been decided and the required system length is known.
- The clear dimension (overall width) is known
- The stacking area has been determined (90° or parallel; left or right-hand position)

### Curved system or with angle

If curves are installed to form angles (15°, 30°, 45°, etc.) the end position of the sliding elements must always be located in the middle of a curve. Otherwise an offset results. Accordingly, the width of the sliding element is decisive.



Width of sliding element

## Calculations

### Number of door elements

Elements with different widths can be used in order to adapt the sliding wall system to the situation on site. A minimum distance between the roller carriages must be maintained.

### Specifying the system length:

System length = clear dimension - min. 10 mm gap

#### Formula: 90°

Number of door elements = system length mm / width of door elements (max. 1500 mm)

#### Formula: Parallel

Number of door elements = (system length mm - 100) / width of door elements (max. 1500 mm)

Notes:

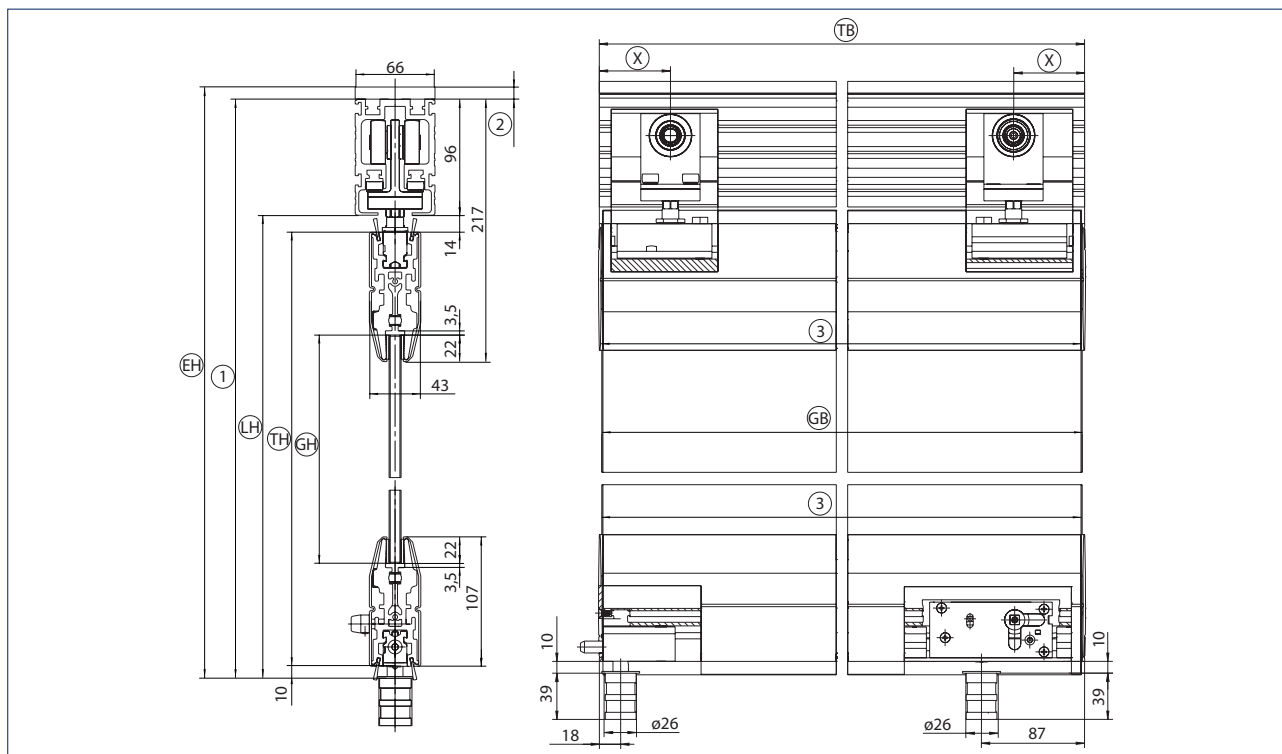
The number of doors must be rounded up.

In the case of a parallel stacking area layout a stationary swing door is usually 100 mm wider than a sliding door.



## Calculations

### Door height and door weight



Calculating the door height and door weight

EH = Installation height

GB = Glass width

GH = Glass height

LH = Clear height

TB = Sliding door width

TH = Door height

X = Variable dimension  $X_{max} = TB / 3$  (depending on the type of stacking area and position of the door or carriage) and additionally  $X_{max} = 167$  mm for sliding single-action door with Boxer on the hinge side

1 = System height

2 = Space adjustment (on site)

3 = Length of carrier clamping profile =  $TB - 6$

#### Door height formulas:

Door height = system height - 120 mm

#### Door weight formula, with 10 mm glass:

Door weight = door width x door height x 31 kg/m<sup>2</sup>

#### Door weight formula, with 12 mm glass:

Door weight = door width x door height x 36 kg/m<sup>2</sup>

#### IGG door weight formula, with 2 x 6 mm ESG:

Door weight = door width x door height x 34 kg/m<sup>2</sup>

Note:

The fittings are already taken into account in the calculations.

#### Calculation of glass dimensions:

Glass height = Door height - 170 mm

Glass width = sliding door width - 4 mm (or -7 mm for sliding fixed leaves)

Notes:

The glass edges are ground and polished all round.

GEZE recommendation: „Heat soak test“ for ESG.

## Calculations

### Door width

#### Specifying the system length

System length = clear dimension - min. 10 mm gap

#### Formula: 90°

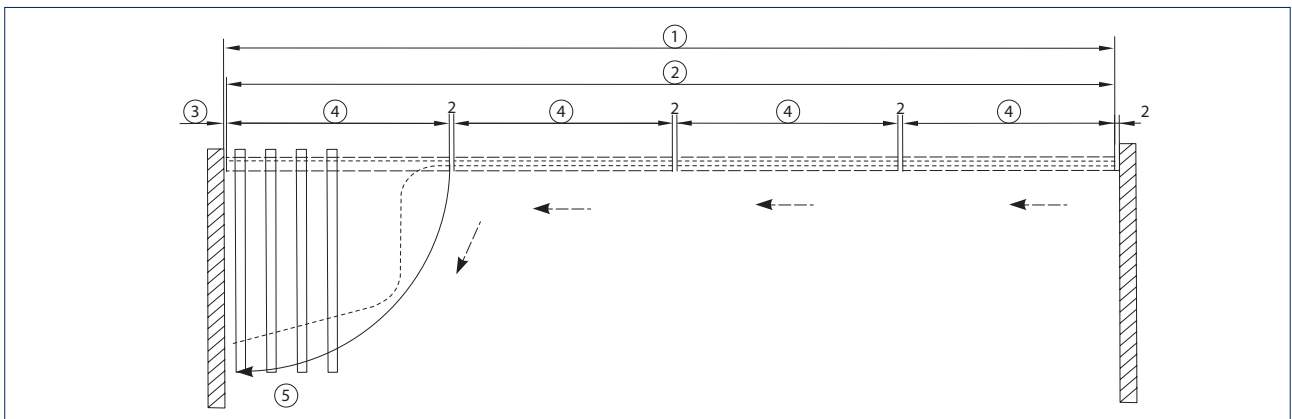
Door width = (system length in mm - number of doors x 2 mm) / number of doors

#### Formula: Parallel

Door width = (system length in mm - number of doors x 2 mm - 100 mm) / number of doors

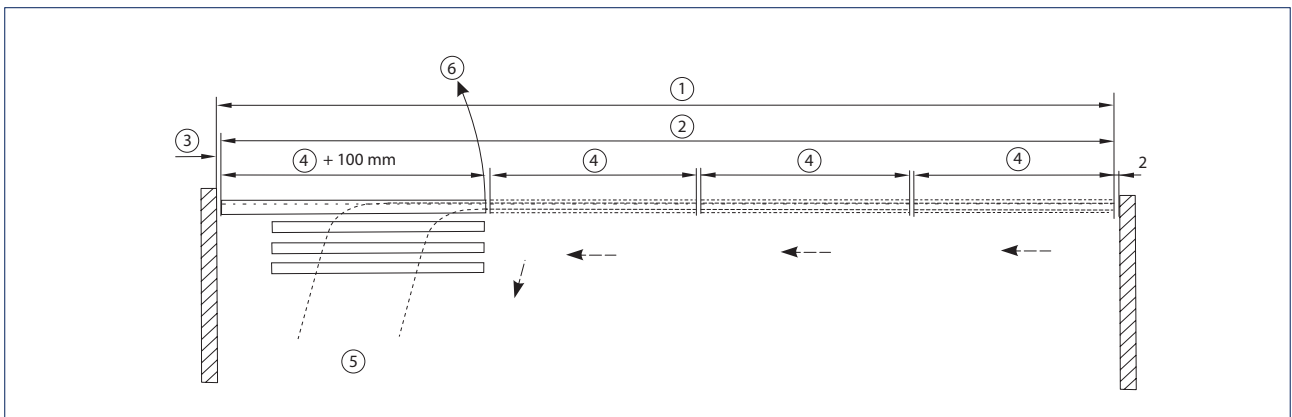
Note:

In the case of a parallel stacking area, a stationary swing door is usually 100 mm wider than a sliding door.



Calculating the stacking area 90° to the sliding axis

- 1 = Clear dimension
- 2 = System length
- 3 = Gap = 10 mm
- 4 = Door width
- 5 = Total number of doors



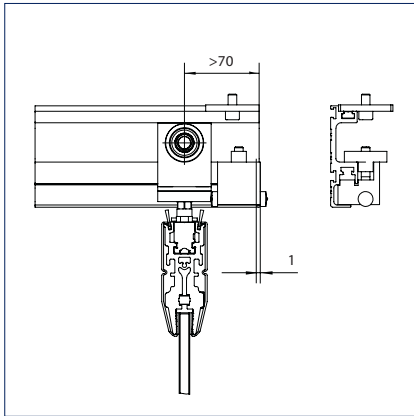
Calculating the stacking area parallel to the sliding axis

- 1 = Clear dimension
- 2 = System length
- 3 = Gap = 10 mm
- 4 = Door width
- 5 = Total number of doors
- 6 = Swing door

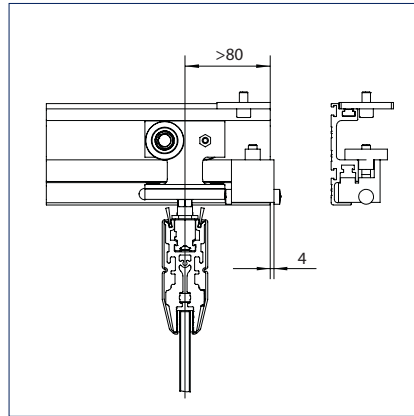
Project planning information

Buffer dimensions

Minimum dimension for buffer stop in the stacking area (end of track to suspension point)

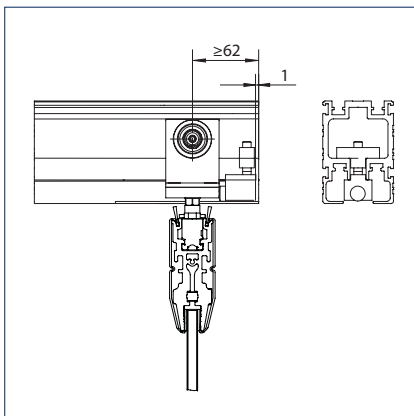


Buffer single track

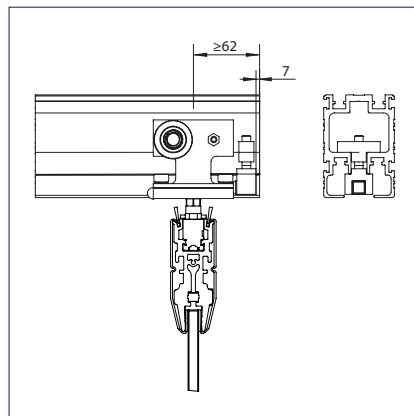


Buffer single track

Minimum dimension for buffer stop at the end of the wall (end of track to suspension point)

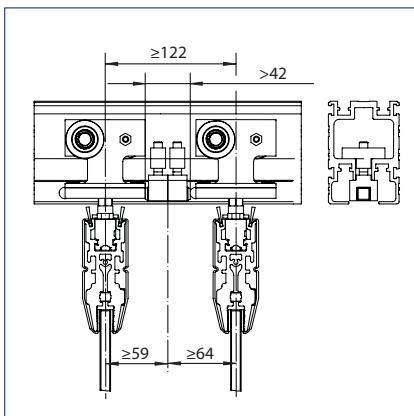


Manual sliding wall system buffer dimensions double track



Buffer compact

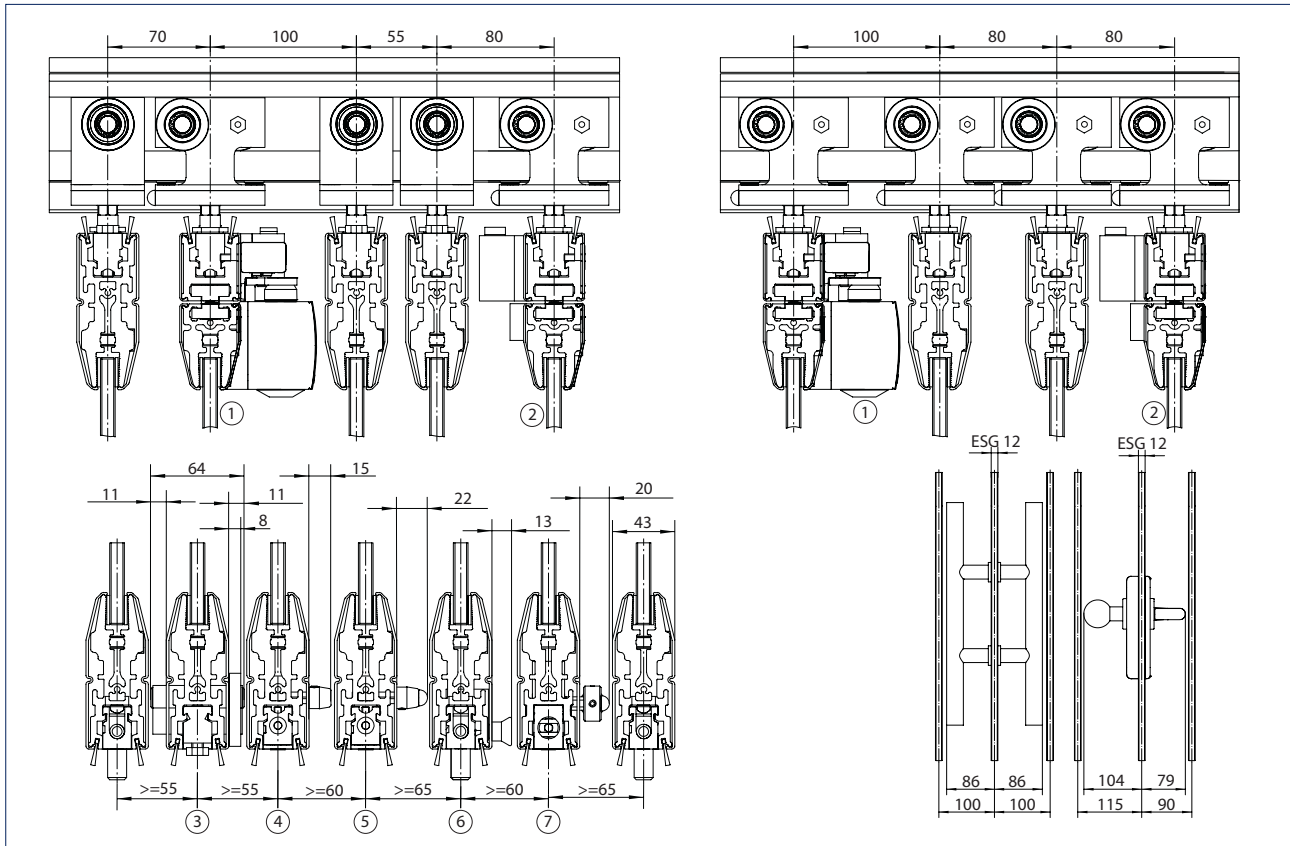
Minimum dimension for buffer stop between two coupled systems



Buffer compact

## Project planning information

### Running carriage spacings in the stacking area

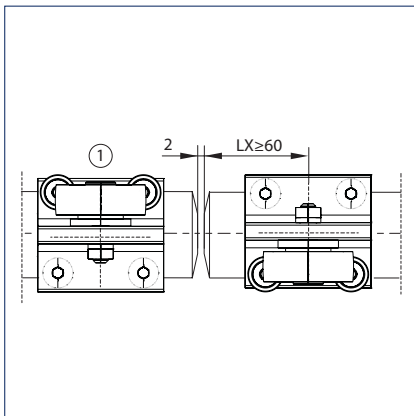


Gaps between running carriages

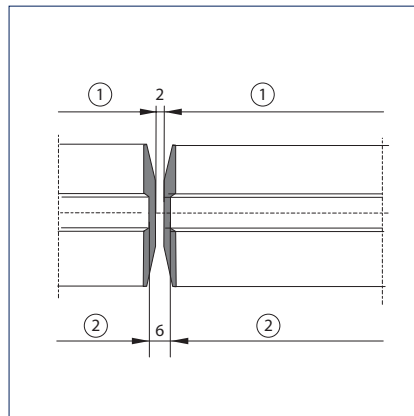
- 1 = Sliding single-action door (SAT) with TS 3000 V
- 2 = Sliding single-action door (SAT) with Boxer and sliding double-action door (SPT)
- 3 = Profile cylinder (30/30), adhesive rosette 8 mm
- 4 = Lock with spindle (thumbturn)
- 5 = Lock with spindle (thumbturn with buffer)
- 6 = Front floor-locking device (latching lever)
- 7 = Coupling mechanism (operating lever, optional)

## Project planning information

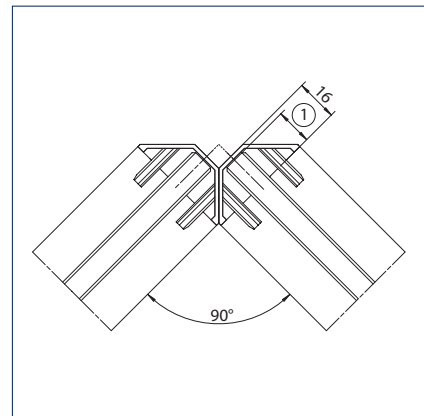
### Horizontal sections



Transition from one sliding door or swing door to the next sliding door  
 1 = Suspension point



1 = Sliding door width  
 2 = Glass width = Sliding door width - 4 mm (or -7 mm for sliding fixed leaves)



Directional change > 15°  
 1 = Glass projection = 14 mm

If the cover cap is used for directional changes > 15°, the widths of the carrier and clamping profiles and of the cover profiles change.

- One sided: Length of carrier and clamping profile = Sliding door width - 19 mm
- Two sided: Length of carrier and clamping profile = Sliding door width - 32 mm

## Project planning

### 90° stacking area

Example of „single track“ uncovered stacking area  
 Solution: MSW standard stacking area 90°

#### 1. Specify the number of doors and determine the door width

See „Calculations for number of door elements“ section

The design of the space situation depends on the configuration.

#### 2. Double track (here inspection piece)

The inspection piece holds the pivot bearing of a fixed swing door.

#### 3. Position the swing door or double-action door

#### 4. Determine the thickness of the door package in the stacking area

Example: 4 doors

Note:

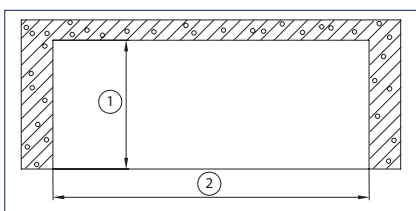
If a handle is to be mounted on a swing door or double-action door, the distance to the sliding door must be adjusted.

#### 5. Determine the length of the single track in the stacking area

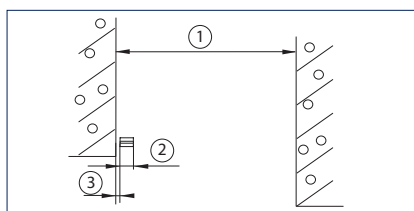
- Position the running line of the carrier roller axis on sliding door 1 (75°).
- Note: The „horizontal“ distance between the 1st and 2nd door is always 80 mm. The „horizontal“ distance between the following doors is 55 mm for single carriages and 80 mm for double carriages. The distance may be larger, depending on the use of fittings, pull handles, or similar (see „Running carriage spacings in the stacking area“ section)
- Maintain a minimum distance of 80 mm from the beginning of the track to the carrier roller axis at sliding door 1.
- Position the running line at least up to the outer edge of sliding door 3
- Determine the length of the single tracks
- 

#### 6. Add inspection piece

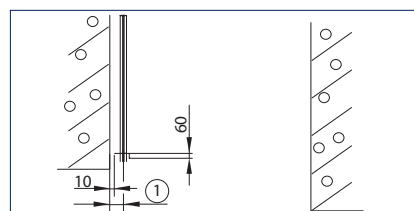
#### 7. Determine the length of the double track



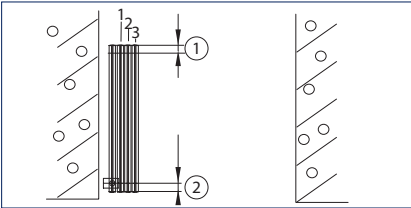
1. Local situation  
 1 = Clear height  
 2 = Clear width (clear dimension)



2. Double track (here inspection piece)  
 1 = Clear width (clear dimension)  
 2 = Inspection piece 100 mm  
 3 = Wall distance and tolerance = 10 mm

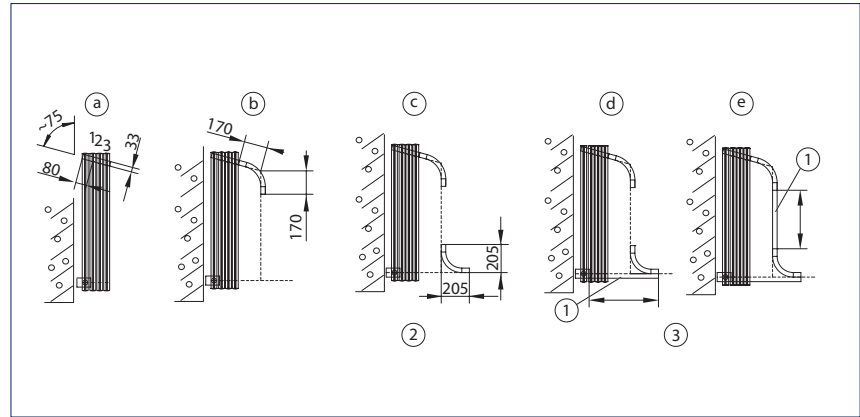


3. Position the swing door or double-action door  
 1 = Distance of the pivot point of the door from the wall = 70 mm



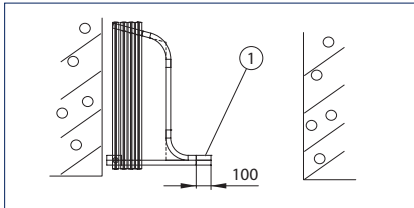
4. Determine the thickness of the door package in the stacking area

- 1 = Distance door/axis carrier roller to sliding door 1 = 60 mm; adapt to all further sliding doors during installation
- 2 = Distance of the door/axis carrier roller = 60 mm



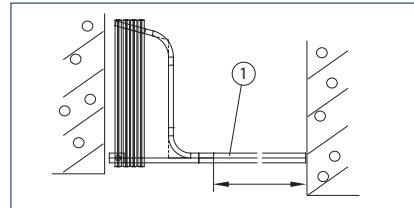
5. Determine the length of the single tracks in the stacking area

- 1 = Single track
- 2 = 90° inside curve
- 3 = Single track made to measure



6. Add inspection piece

- 1 = Inspection piece



7. Determine the length of the double track

- 1 = Length of the double track



Pavillon Lapidarij Novigrad, Istra, Croatia (Photo: Robert Les)

# GEZE MSW

## Calculations

### 90° stacking area

Spacing of the single carriages = 55 mm

Spacing of the double carriages = 80 mm

Notes:

The calculation of the stacking area applies to the covered and the uncovered version.

Take into consideration any pull handles, differing distances of sliding requirement doors, etc.

Dimensions A, B, C and D, see confirmation of order.

$$A = (PR - 24) / \cos 15^\circ$$

$$B = TB - 518 - (\sin 15^\circ \times A)$$

$$C = \cos 15^\circ \times A + 332$$

$$D = C - 310 \text{ (only for covered stacking area)}$$

Check dimensions:

$$A_{\max} = (TB - 320) / \cos 15^\circ$$

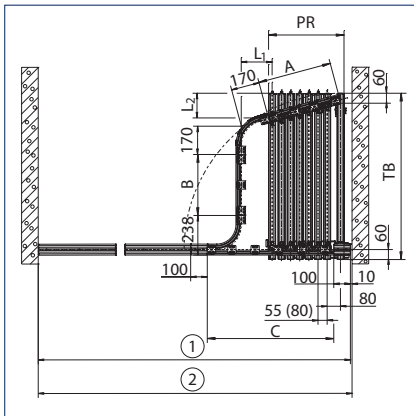
$$L1 = C - PR - 122$$

$$L2 = \text{Door width} - B - 485$$

Conditions:

$$A_{\max} > A \text{ and } L_1 > L_2$$

If these two conditions are not fulfilled, the number of sliding doors has to be reduced and the door widths increased.



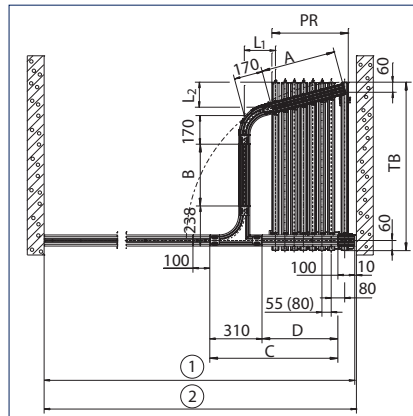
Park position 90° uncovered

PR = Door package

TB = Sliding door width

1 = System length (clear dimension - 10)

2 = Clear dimension



Stacking area 90° covered

PR = Door package

TB = Sliding door width

1 = System length (clear dimension - 10)

2 = Clear dimension



## Project planning

### Parallel stacking area

#### 1. Specifying the number of doors

See „Calculations for number of door elements“ section

Note:

A swing door or double-action door is always 100 mm longer than a sliding door.

#### 2. Positioning the swing door or double-action door

#### 3. Determine the thickness of the door package in the stacking area

Example: 4 doors

Note:

If a handle is to be mounted to a swing door or double-action door, adapt the distance to the sliding door.

#### 4. Positioning the sliding door package

Distance of sliding doors 1, 2 and 3 with single carriage 55 mm, with double carriage 80 mm (see „Running carriage spacings in the stacking area“).

#### 5. Determine the track length in the stacking area

Position 75° reference line through the carrier roller axis at sliding door 3 or 1.

The intersection of the track centre line and the 75° reference line is the outside positioning point for the 75° single track curve.

#### 6. Connect the single track and 75° single track curve

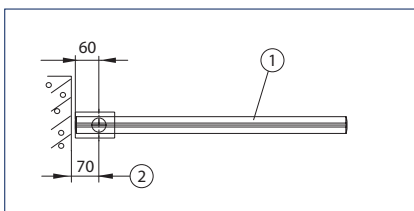
- Position the single track at the 75° single track curve.
- Determine the length
- Carrier roller axis to end of track = 80 mm
- The lengths of the single tracks are identical

#### 7. Determine the length of the single track

- Position the single track at the 75° single track curve.
- Determine the length
- Carrier roller axis up to end of track = 80 mm, differences possible due to running buffer
- The lengths of the single tracks are identical

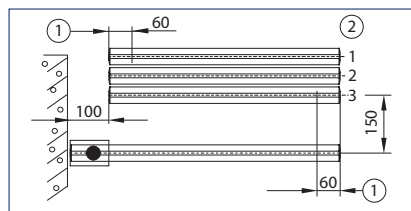
#### 8. Add inspection piece

#### 9. Determine the length of the double track



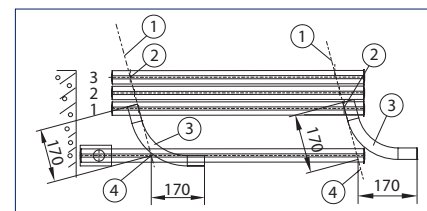
2. Position the swing door or double-action door

- 1 = Swing door or double-action door
- 2 = Distance of the pivot point of the door from the wall (70 mm)



4. Position the sliding door package

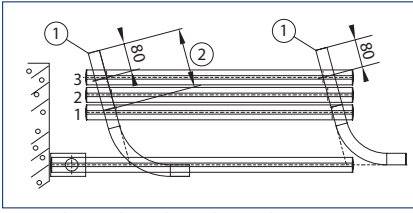
- 1 = Distance of the carrier roller axis to the beginning of the sliding door 1
- 2 = Sliding door package



5. Determine the track length in the stacking area

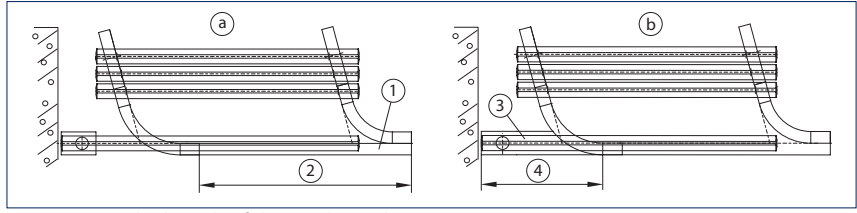
- 1 = Auxiliary 75° line
- 2 = Carrier roller axis (60 mm to leaf outer edge)
- 3 = Single track curve 75°
- 4 = Intersection

# GEZE MSW



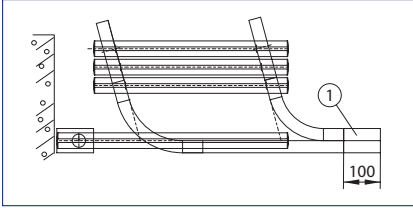
6. Single track and single track curve 75°

- 1 = Single track
- 2 = Determining the length



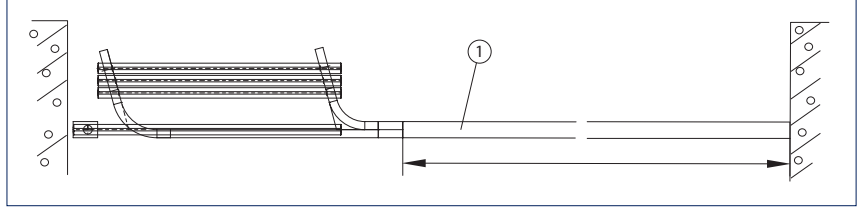
7. Determine the length of the single track

- 1 = Single track
- 2 = Length of single track
- 3 = Adapter (optionally instead of inspection piece)
- 4 = Length of adapter (max. 555 mm)



8. Add inspection piece

- 1 = Inspection piece



9. Determine the length of the double track

- 1 = Double track



Hotel Formentor, Mallorca, Spain (Photo: Pau Esculies)

## Calculations

### Parallel stacking area

Spacing of the single carriages = 55 mm

Spacing of the double carriages = 80 mm

Notes:

The calculation of the stacking area applies to the covered and the uncovered version.

Take into account any pull handles, different distances of sliding requirement doors, etc.

For dimensions W, X and Y, see order confirmation.

$$X = ((PR - 35) / (\cos 15^\circ)) - 170$$

$$Y = TB - 80 - (\tan 15^\circ \times (PR - 43))$$

$$W = Y - 310 \text{ (only for covered stacking area)}$$

Check dimension:

$$L_{3\max.} = TB / 3$$

$$L_3 = 60 + \tan 15^\circ \times (PR - 193)$$

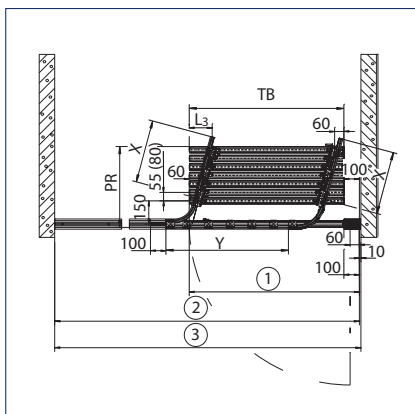
Condition:

$$L_{3\max.} > L_3$$

If this condition is not fulfilled, the number of sliding doors must be reduced and the door widths increased.

### Individual stacking areas

The planning instructions and calculation formulas do not apply to individual stacking areas. It is advisable to let GEZE plan individual stacking areas. Only experienced users are advised to carry out their own planning.



Parallel stacking area uncovered

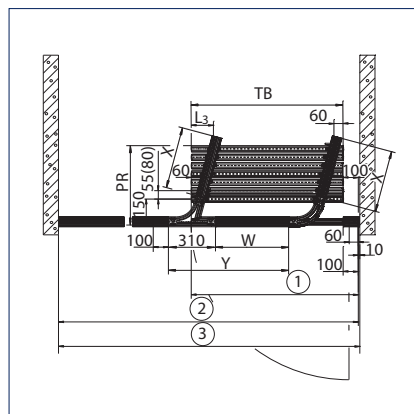
PR = Door package

TB = Sliding door width

1 = TB + 100 (swing door width)

2 = System length

3 = Clear dimension



Parallel stacking area uncovered

PR = Door package

TB = Sliding door width

1 = TB + 100 (swing door width)

2 = System length (clear dimension - 10)

3 = Clear dimension

## References



Fashion store Modepark Röther, Villingen, Germany (Photo: GEZE GmbH)



Friends of frozen yogurt, Rhine-Ruhr Center Mülheim, Germany (Photo: GEZE GmbH)

# POTENTIAL APPLICATIONS OF GEZE PRODUCTS



Bank Volksbank Ludwigsburg, Germany (Photo: Lazaros Filoglou)



Multimedia House, Frederiksberg, Denmark (Photo: Morten Bak)

You will find more product information in the relevant brochures, see ID numbers.

## Door technology

01	Overhead door closers ID 091593, ID 091594
02	Hold-open systems ID 091593, ID 091594
03	Integrated door closers ID 091609
04	Floor springs ID 091607
05	Sliding door gear systems and linear guides ID 123605, ID 008770, ID 000586

## Automatic door systems

06	Swing doors ID 144785
07	Sliding, telescopic and folding doors ID 143639
08	Circular and semi-circular sliding doors ID 135772
09	Revolving doors ID 132050
10	Actuation devices and sensors ID 142655

## Smoke and heat extraction and window technology

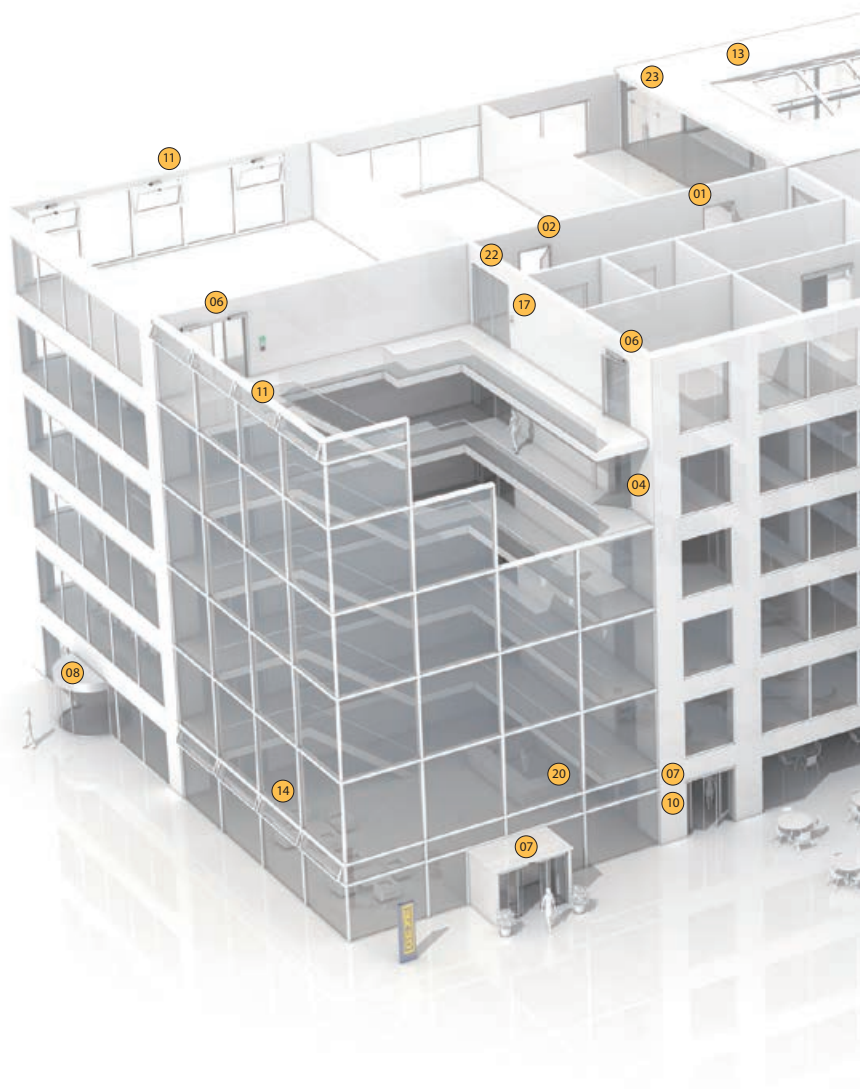
11	Fanlight opening systems ID 127787
12	Electric opening and locking systems ID 154851
13	Electrical spindle and linear drives ID 154851
14	Electric chain drives ID 154851
15	Smoke and heat extraction systems ID 154851

## Safety technology

16	Emergency exit systems ID 132408
17	Access control systems ID 132158
18	Panic locks ID 132848
19	Electric strikes ID 148666
20	Building management system ID 132408

## Glass systems

21	Manual sliding wall systems (MSW) ID 104377
22	Integrated all-glass systems (IGG) ID 104366
23	GEZE Patch fittings mono glass systems ID 122521



# POTENTIAL APPLICATIONS OF GEZE PRODUCTS



## Door technology

The functionality, superior performance and reliability of GEZE door closers are impressive. A common design across the range, the ability to use them on all common door leaf widths and weights, and the fact that they can be individually adjusted makes their selection simple. They are continually being improved and enhanced with up-to-date features. For example, the requirements of fire protection and accessibility are fulfilled with a door closer system.

## Automatic door systems

GEZE automatic door systems open up a huge variety of options in door design. The latest, innovative high-performance drive technology, safety, ease of accessibility and first class universal drive design set them apart. GEZE offers complete solutions for individual requirements. A dedicated division is responsible for the development and construction of individual special designs.

## Smoke and heat extraction and window technology

GEZE smoke and heat extraction systems and ventilation technology provide complete systems solutions combining the many requirements of different types of windows. We supply a full range from energy efficient drive systems to natural ventilation and complete solutions for supplying and extracting air, also as certified SHEVs.

## Safety technology

GEZE safety technology sets the standards where preventative fire protection, access control and anti-theft security in emergency exits are concerned. For each of these objectives GEZE offers tailored solutions, which combine the individual safety requirements in one intelligent system and close doors and windows in case of danger in a coordinated manner.

## Building systems

In GEZE's Building Management System GEZE door, window and safety products can be integrated in to the security and control systems of the building. A central control and visualisation system monitors various automation components in the building and offers security through many different networking capabilities.

## Glass systems

GEZE glass systems stand for open and transparent interior design. They can either blend discreetly into the architecture of the building or stand out as an accentuated feature. GEZE offers a wide variety of technologies for functional, reliable and aesthetic sliding wall or sliding door systems providing security with lots of design scope.

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