



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



**CONTENTS**

GEZE manual sliding wall systems (MSW)	<b>4</b>
System setup	<b>4</b>
Overview table	<b>5</b>
System overview	<b>5</b>
<b>MSW SmartGuide</b>	<b>6</b>
Roller carriage	<b>7</b>
Components	<b>8</b>
<b>Manual sliding wall systems</b>	<b>10</b>
GEZE MSW Classicline, Pureline und Protectline	<b>10</b>
GEZE MSW with fine-framed leaves	<b>12</b>
GEZE MSW with IGG	<b>13</b>
GEZE MSW with on-site leaves	<b>14</b>
<b>Components</b>	<b>15</b>
Tracks and stacking area	<b>15</b>
Floor guides (optional)	<b>19</b>
Bolts and locks	<b>20</b>
<b>System layouts</b>	<b>22</b>
Layouts of the MSW system	<b>22</b>
Installation situation and stacking area layout	<b>23</b>
Ceiling situation and installation preparation	<b>25</b>
<b>Door types</b>	<b>26</b>
<b>Calculations</b>	<b>32</b>
Requirements	<b>32</b>
Number of door elements	<b>32</b>
Door height and door weight	<b>33</b>
Door width	<b>34</b>
<b>Project planning information</b>	<b>35</b>
Buffer dimensions	<b>35</b>
Running carriage spacings in the stacking area	<b>36</b>
Horizontal sections	<b>37</b>
<b>Project planning and calculation of stacking area</b>	<b>38</b>
90° stacking area	<b>38</b>
Parallel stacking area	<b>41</b>
References	<b>44</b>

## GEZE manual sliding wall systems (MSW)

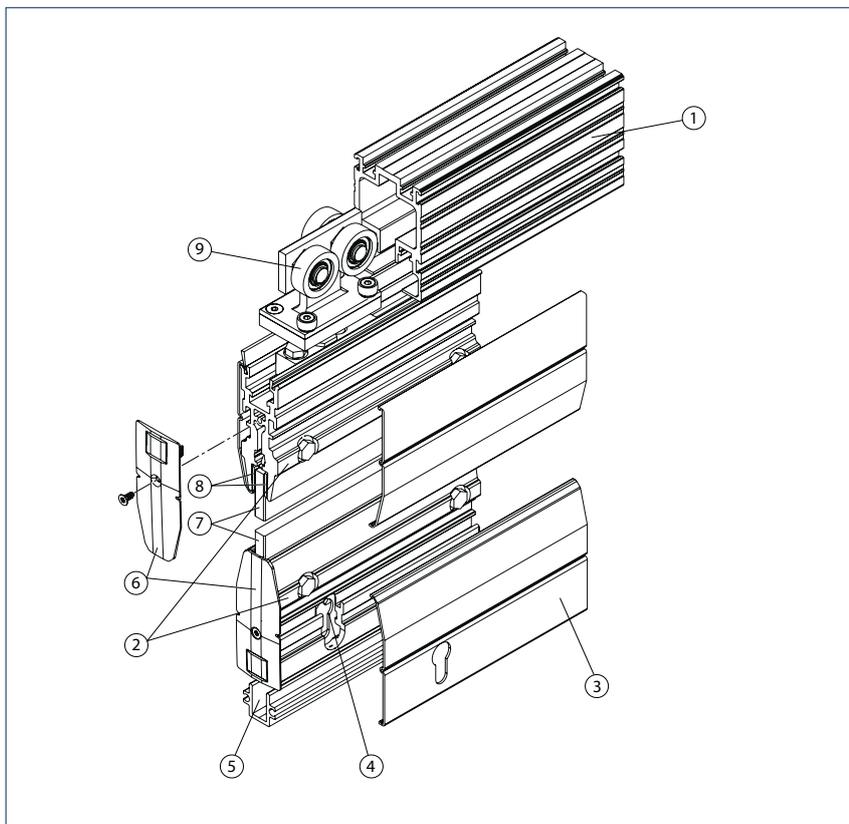
Manual sliding wall systems open up, divide and separate rooms so that they are flexibly adapted to your particular use. Their modular structure makes it possible to use a wide range of different system elements with different functions. Horizontally fixed leaf elements can be used as a double-action door with the GEZE TS 550 NV floor spring, as a swing door with floor bearing, as a single-action door with outer pivot bearing or as a fixed panel, horizontally moving elements on the other hand can be used as a sliding door and sliding swing door. A user-friendly mechanical lock turns a closed sliding door into a fully functional swing door in just two working steps. It is the perfect solution wherever the MSW glass front is not to be opened completely, in shops or cafés in the cold season for instance. GEZE offers additional design options with the different design lines GEZE MSW Classicline, Pureline and Protectline. Different finishes and colour schemes can be supplied according to individual wishes.

GEZE curve technology and constantly guided roller carriages guarantee outstanding running characteristics and low-noise operation even with large leaves. They minimise the effort required to move glass elements. The guided curve technology offers high sliding convenience particularly when moving the elements into the stacking area.

Laminated safety glass (LSG) made of toughened safety glass (ESG) meets our growing need for safety. It provides increased protection against burglary and minimises injury risks. The special LSG glueing bracket prevents heavy LSG panes slipping out of the carrier and clamping profile. Additional glass or profile processing is not necessary.

The intelligent locking systems also contribute to the simple handling of the manual sliding wall system: The combination of manual locking devices, which are used between two sliding panels and are invisible when the glass leaf is closed, and special front manual locking devices for sliding leaves next to a wall or door means that only one single Euro profile cylinder floor lock is necessary for a system.

## MSW system design principle



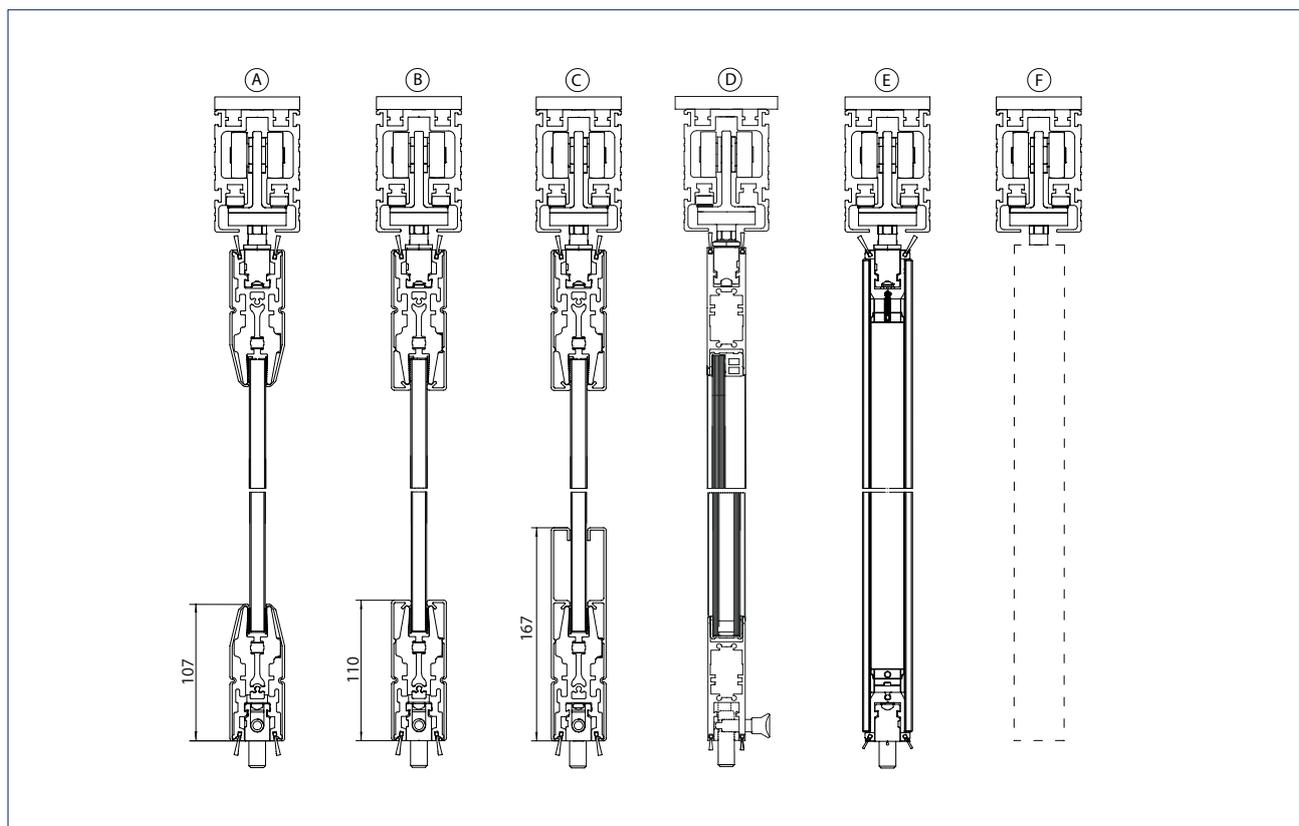
- 1 = Double track
- 2 = Carrier and clamping profile
- 3 = Cover profile here: Classicline with Euro profile cylinder recess
- 4 = Floor lock (for Euro profile cylinder)
- 5 = Guide rail (optional)
- 6 = Cover cap for carrier and clamping profile
- 7 = Glass: ESG 10 or 12 mm, LSG (2xESG) 10 or 12 mm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

ESG= Toughened safety glass  
LSG= Laminated safety glass

## Overview table for manual sliding wall systems (MSW)

	Classicline, Pureline, Protectline	IGG	Fine-framed leaves	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	•	•	•	•
<b>Stacking area</b>				
90° stacking area	•	•	•	•
Parallel stacking area	•	•	•	•
Individual stacking area	•	•	•	•
<b>Installation location</b>	Interior room, protected outdoor area			

## System overview



- A = Classicline
- B = Pureline
- C = Protectline
- D = Fine-framed leaves (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. Reversal of the guiding 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 disengagement possibility and multiple successively arranged stacking areas can be implemented, even in the case of systems without a swing door end panel. This permits optimum flexibility and the complete opening of e.g. shop fronts. The modularity of the track system allows exactly 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)

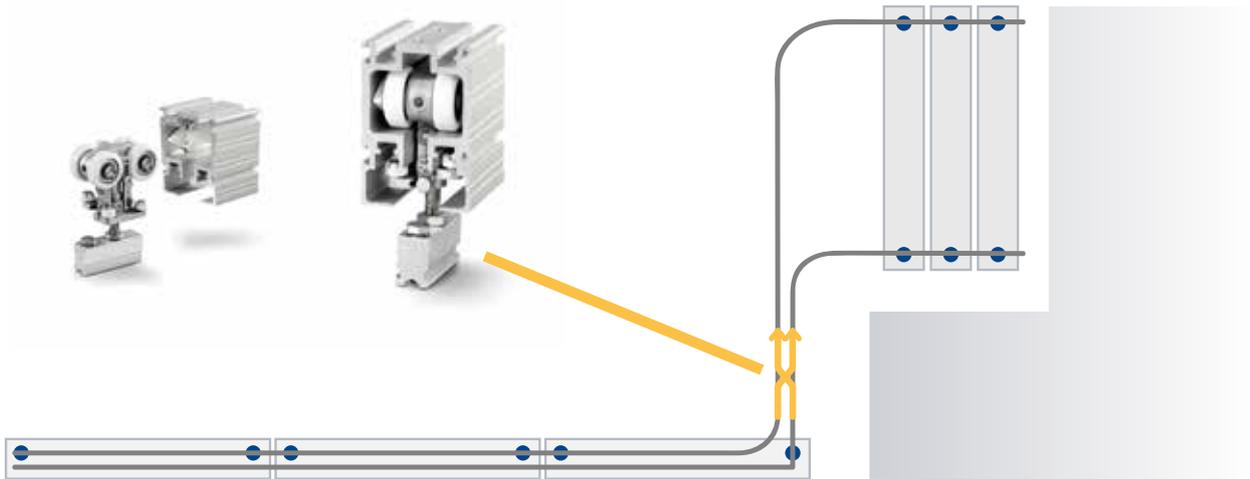
### MSW SmartGuide



Installation situation (photo: GEZE GmbH)

## MSW SmartGuide roller carriage

The SmartGuide roller carriage allows all the leaves to run in the required direction. Reversal of the guiding side is integrated into the roller carriage; the impulse is given 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 variants from GEZE, one single track system is all that is needed. Stacking areas with disengagement possibility and multiple successively arranged stacking areas can be implemented – even in the case of systems without a swing door end panel. All SmartGuide roller carriages can bear up to 150 kg leaf weight.



Reversal of the SmartGuide roller carriage

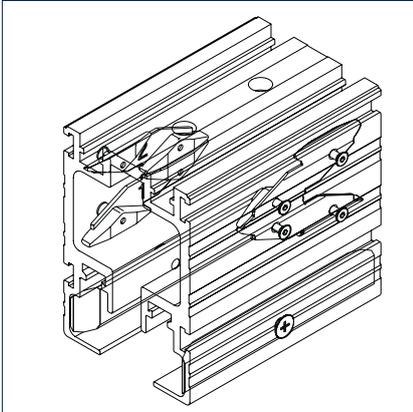


Pin at the top switches to the left in direction of movement

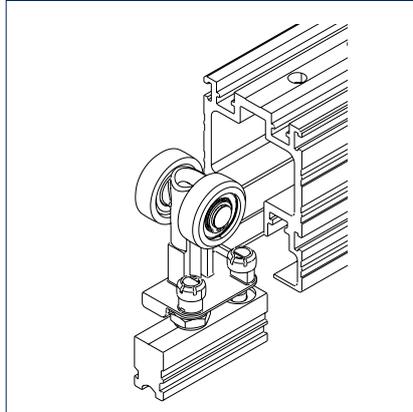


Pin at the bottom switches in direction of movement to the right

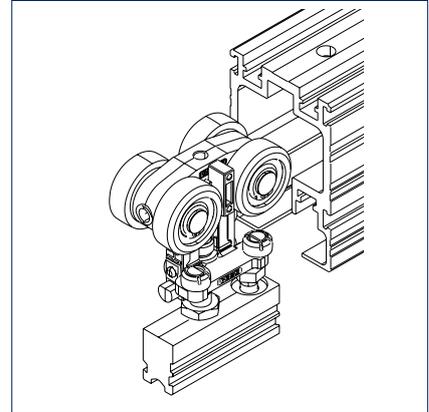
## MSW SmartGuide components



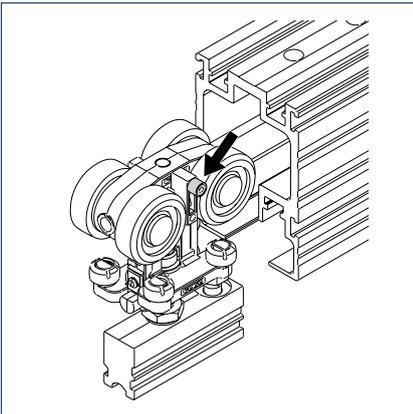
SmartGuide triggering unit



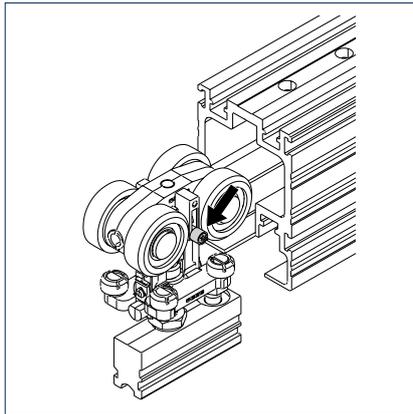
Single roller carriage type 0  
(does not reverse)



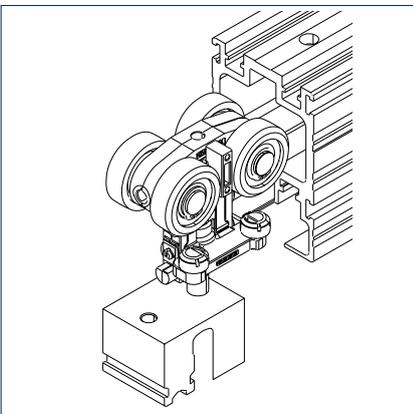
Double roller carriage type 0  
(does not reverse)



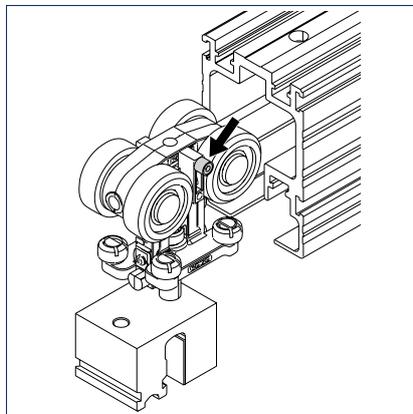
SmartGuide roller carriage type 1  
(pin at the top)



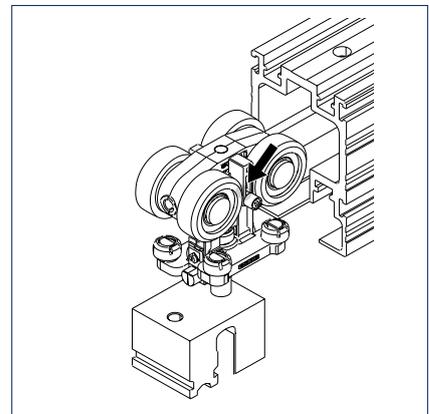
SmartGuide roller carriage type 2  
(pin at the bottom)



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



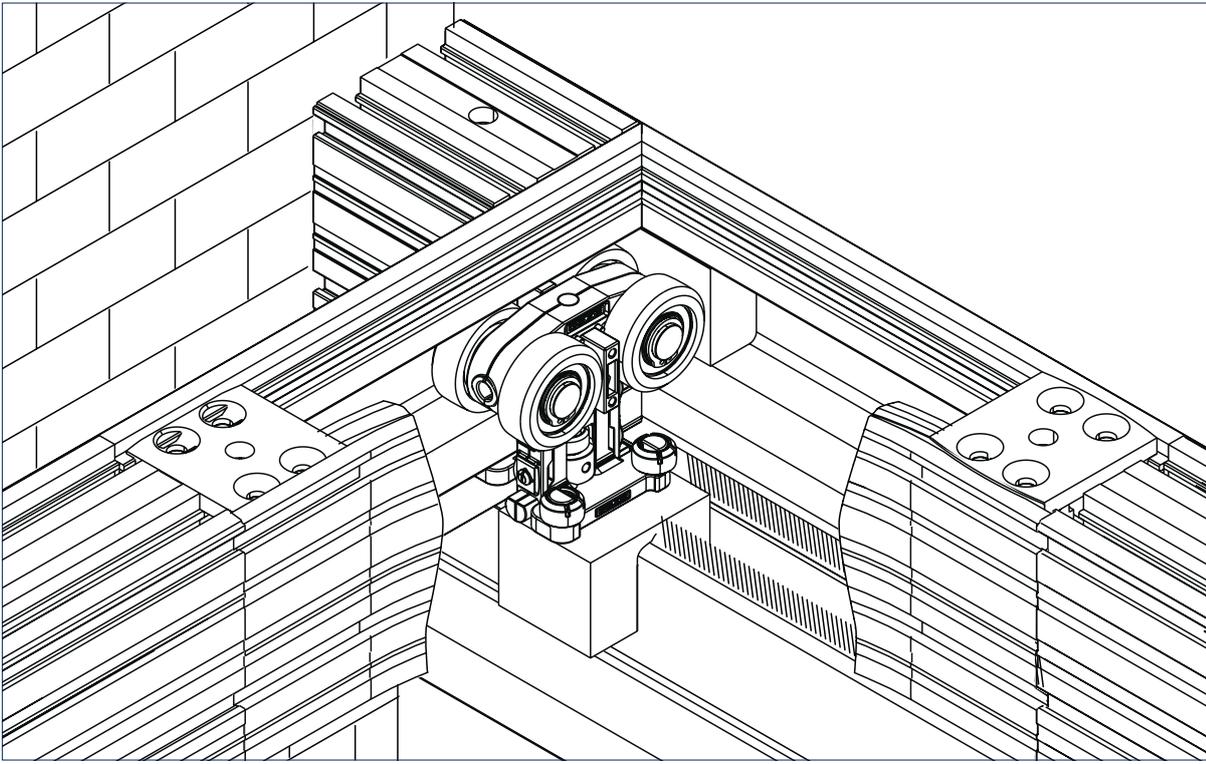
SmartGuide roller carriage type 1A  
(with spindle offset, pin at the top)



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

### Installation situation SmartGuide roller carriage with offset

SmartGuide roller carriages with spindle offset (type 0A, 1A, 2A) are needed on the first leaf so that the roller carriage can be positioned in the track facing the rear.



### Application area

The MSW SmartGuide technology works with all the 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 roller carriages.



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

## 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, Frederiksberg, Denmark (photo: Morten Bak)

### Application area

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



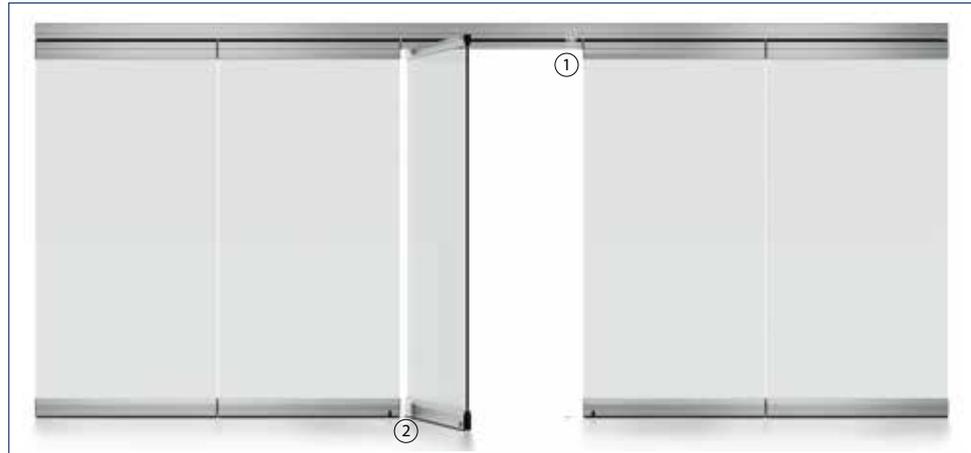
Classicline



Pureline



Protectline

**Sliding swing door**

Operation of the sliding swing door in two steps

1 = Lock

2 = Operating lever

**Sliding swing door**

Installation situation (photo: GEZE GmbH)

**Technical data GEZE MSW Classicline, Pureline, Protectline**

	<b>Sliding door</b>	<b>Swing door / double-action door / single-action door</b>	<b>Sliding swing door with pass door</b>	<b>Sliding swing door with double-action function</b>	<b>Fixed panel</b>
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 550 / without door closer	-
Door weight (max.)	150 kg	150 kg	120 kg	120 kg	150 kg
Profile thickness	42 mm				
Glass	ESG* and LSG** made of ESG, each 10 mm and 12 mm				

\* ESG: Toughened safety glass

\*\* LSG: 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 façade 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 façade. 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 area

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

Profile thickness

### Technical data GEZE MSW with fine-framed leaves

	Sliding door	Swing door / double-action door / single-action door	Sliding swing door with pass door	Sliding swing door with double-action function	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				
Profile thickness	30 mm				
Glass	Insulation glass 22 mm / mono-glass 10 mm, each made of ESG* or LSG*				

\* ESG: Toughened safety glass

\*\* LSG: 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 area

- 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		
Profile thickness	39 - 46 mm*		
Glass	2 x 6 mm ESG*, 2 x 8 mm ESG* from 3000 mm door height, with edge enamelling		

\* depends of the glass combination chosen  
 \*\* ESG: Toughened safety glass

# GEZE MSW

## 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 area

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

### GEZE MSW with on-site leaves

	Sliding door	Swing door / double-action door / single-action door	Fixed panel
Door height / system height (max.)	4000 / 4120 mm		
Door width (min./max.)	700 / 1500 mm		
Door closer	-	TS 550 NV / without door closer	-
Element thickness	up to 70 mm		
Door weight (max.)	150 kg		

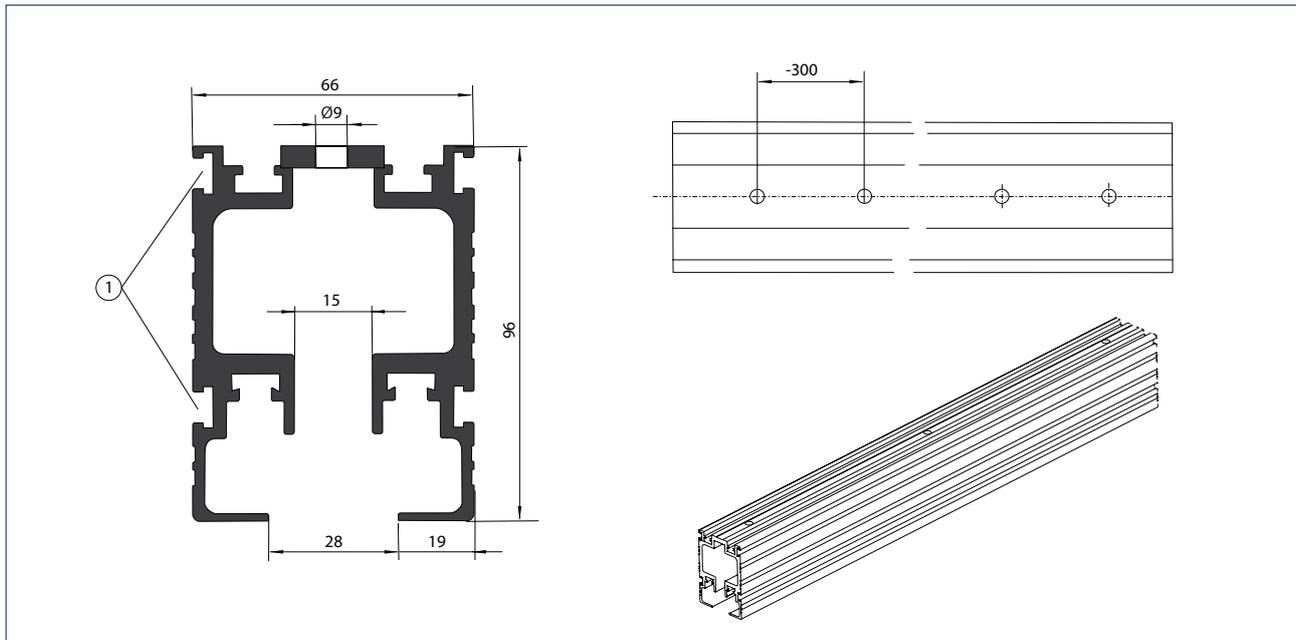
## Components

### Tracks and 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 for the double track

The drilling dimensions of 40 mm make flexible connection to the structure or on-site steel frame constructions possible. If the construction connections should make more fastening points necessary, additional drill holes can be added later. The double track in the stacking area has smaller drill hole spacing.

# GEZE MSW

## Sliding blocks

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

## Curves and curved tracks

Radius: 150 mm

Curves for changing directions by: 15°, 30°, 45°, 60°, 75°, 90° and individual angles

## Connecting units

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

- 1 piece for connection of single track (only to be used in the open stacking area)
- 2 pieces for connection of double track

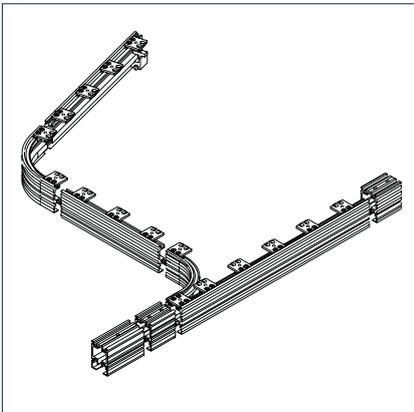


Sliding block



Connecting unit

## Stacking area



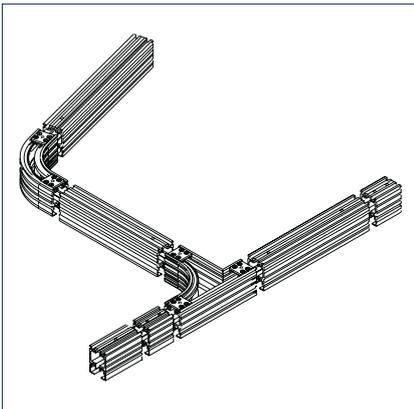
Open stacking area



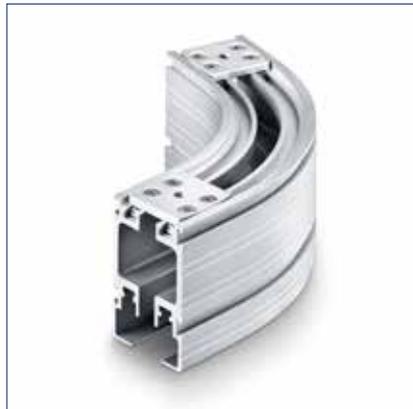
Open stacking area for tracks, single tracks, inside curves



Open stacking area for tracks, single tracks, outside curves



Concealed stacking area



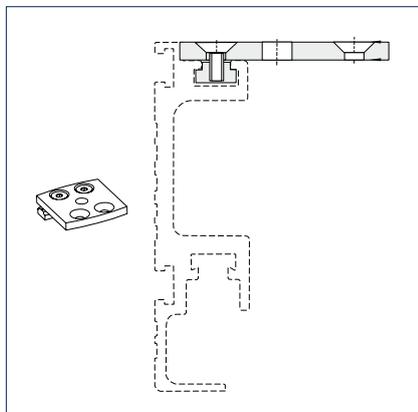
Curves and curved track



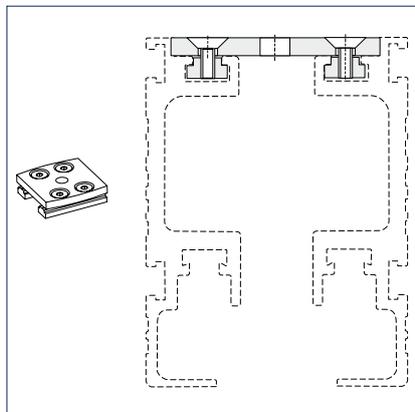
Concealed stacking area track, right branch-off

**Suspension latches**

Suspension latches are needed to fit the stacking area to the ceiling or suspending frame. The suspension latches are mounted at a max. distance of 140 mm to each other. Different suspension latches are used depending on the implementation of the stacking area.



Suspension latch for single track



Suspension latch for 2 x single track



Suspension latch for single track

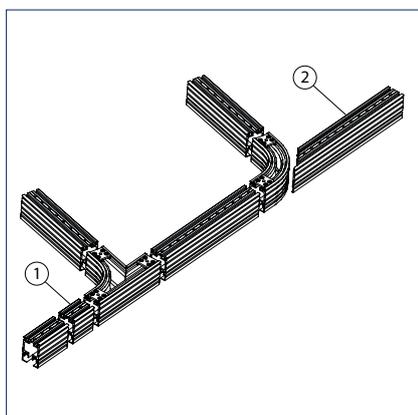


Suspension latch for 2 x single track

**Inspection pieces and adapters**

The inspection piece has a fixed length of 100 mm and is installed in front of the turn-off to the stacking area, or within the access to the stacking area. The module facilitates the fitting of the roller carriage into the track system and the partial exchange of elements when the dividing wall system is fully installed.

The adapter forms the final piece between the stacking area or the access to the stacking area and the flanking wall at the front of the system. When installing a fixed swing door end panel, it also serves to house the top pivot bearing.



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



Inspection piece



Adapter

### Cover plate for double track

The cover plate for the double track serves as the termination of the concealed tracks at the end of the stacking area.



Cover plate for double track

### Track buffer

Track buffers are dampened door stops with free adjustment possibilities. 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)

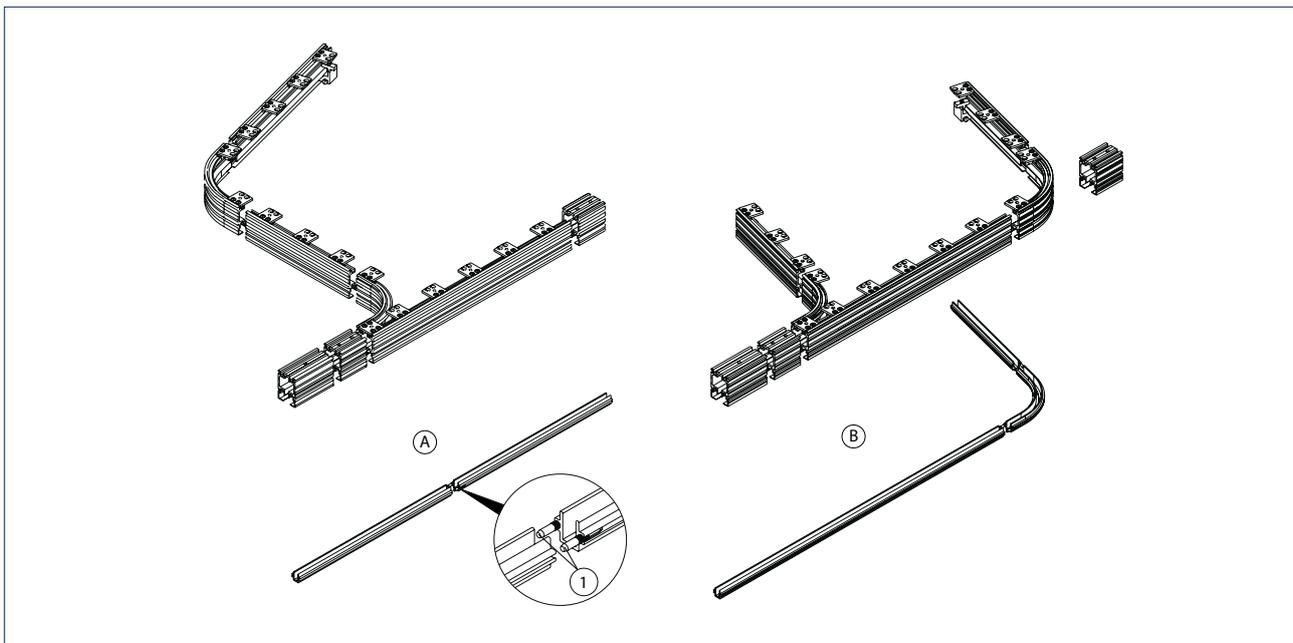


For systems with two stacking areas

## 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

# GEZE MSW

## Components

### Bolts and locks

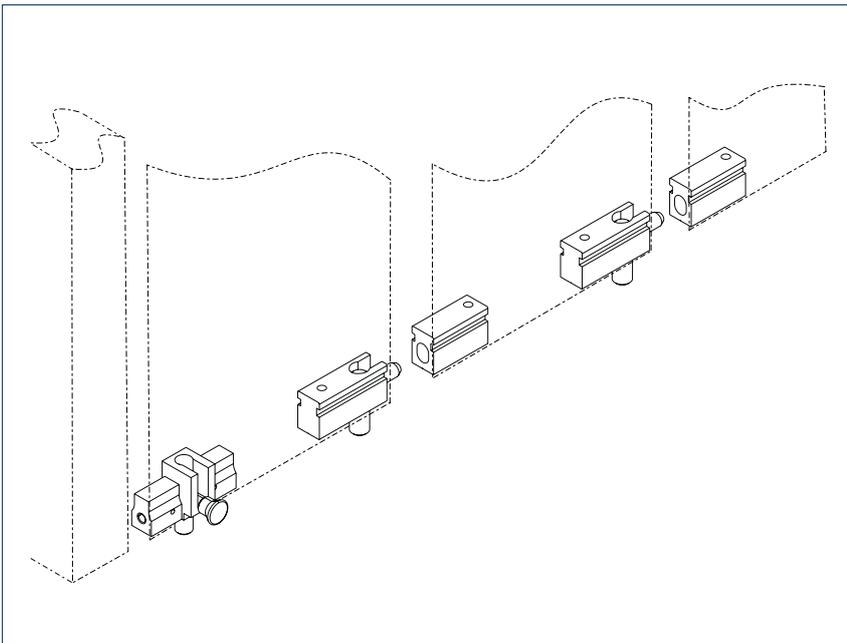
GEZE offers two different types of floor locking devices. The end-face floor-level lock is used to lock adjacent sliding doors. It is locked in the floor and in the adjacent doors. The end-face floor locking device is completely integrated in the profile and is therefore not visible from the outside 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).



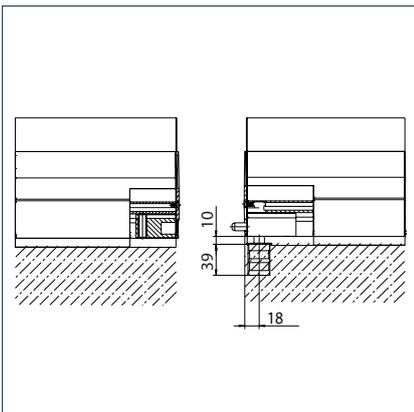
End-face manual locking device



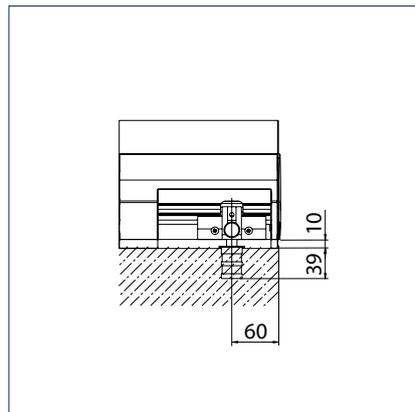
Front manual locking device



Layout example for manual locking devices



Position of manual locking device



Position of front manual 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 Euro profile cylinders



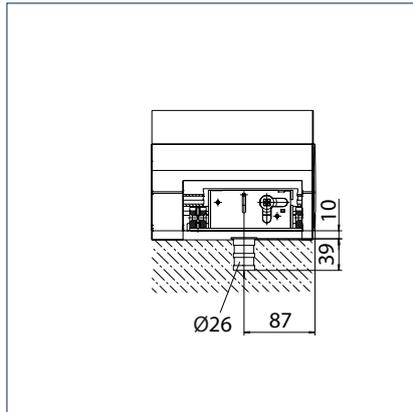
Square



Guide pin



Square and guide pin



Position of floor lock



Thumbturn with spindle (size 8)



Thumbturn with spindle (size 8) and buffer



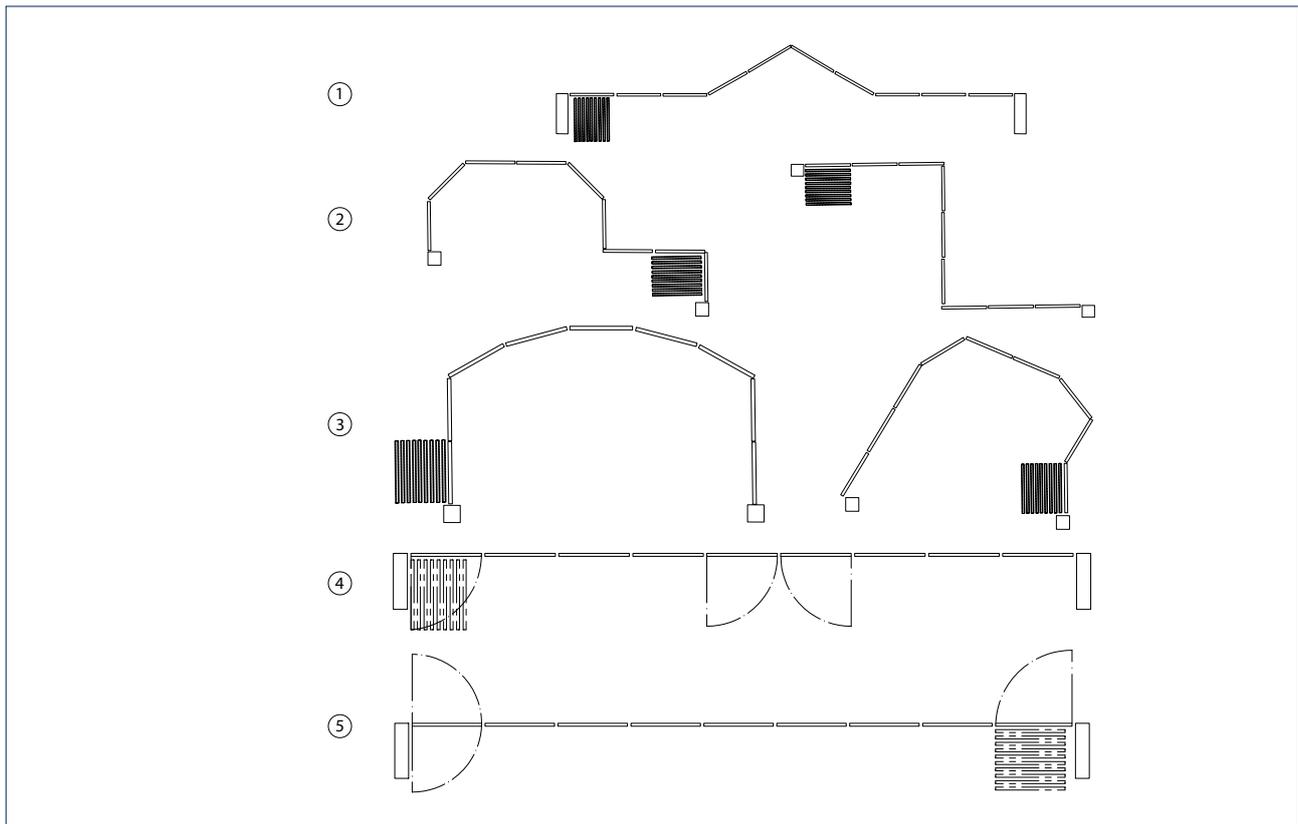
Universal floor socket with exchangeable insert for element locks

## 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 changes
- 2 = Curve layouts 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 swing door with pass door)
- 5 = Straight glass wall with 1 sliding swing door (here sliding swing door with double-action function)

## Installation situation and stacking area layout

The sliding panels are stored in the stacking area when the sliding wall system is opened. The size, layout and number of door elements have to be known in order to determine the space needed for the stacking area. The stacking area is always located on the building or room interior.

### 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 stacking position

### Stacking area positioning

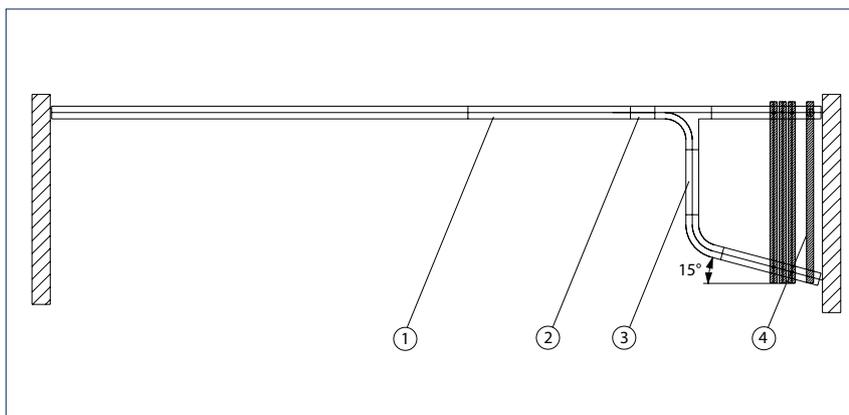
- Stacking niche
- Wooden or lightweight cladding
- Separate adjoining room
- Stacking area remains completely open

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

### Stacking area layout: 90°

In a 90° layout the elements are positioned at right angles to the course of the sliding wall when in stacking position. 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 an overall system length of approx. 8–15 m. This layout has the advantage that the stacked elements project much less into the opening range of the sliding wall system so that the passage clearance is not significantly reduced.

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

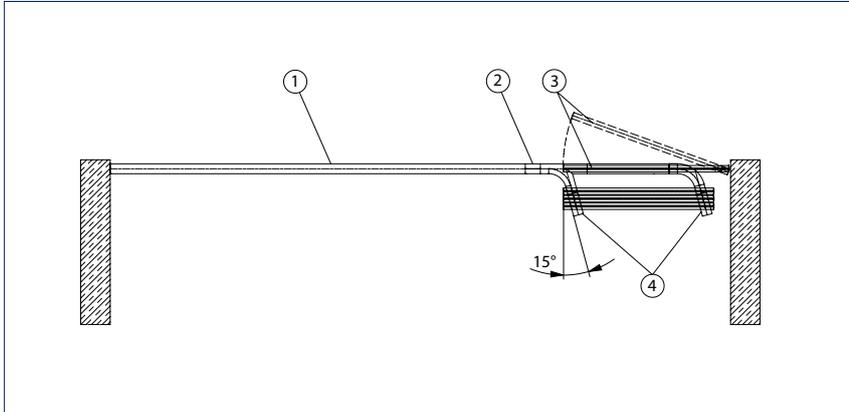


Stacking area layout 90°, illustration shows concealed stacking area

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

## Stacking area layout: parallel

In a parallel layout the elements are positioned in the same plane as the sliding wall in the stacking position. Parallel layout is used in particular when the overall system is to be kept flat. The number of door elements is nearly unlimited so that almost any system length is possible (take the max. ceiling load into account!). It is an advantage that the stacked elements project less into the interior with smaller systems. Greater handling comfort is achieved by positioning the stacking area tracks at an angle of 15°.

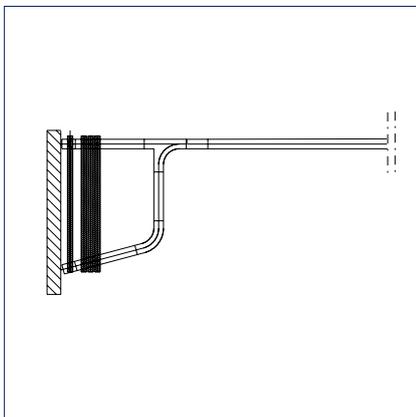


Stacking area layout parallel, illustration shows concealed stacking area

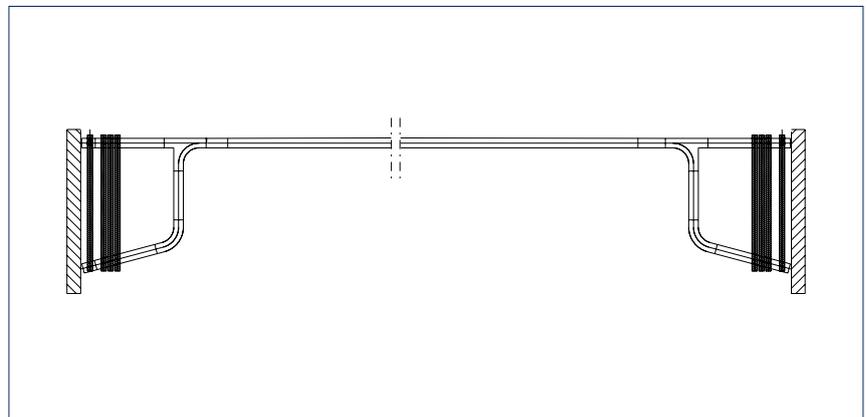
- 1 = Straight track
- 2 = Inspection piece
- 3 = Swing door
- 4 = Stacking area parallel layout

## Stacking area distribution

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



Stacking area on one side



Stacking area on both sides

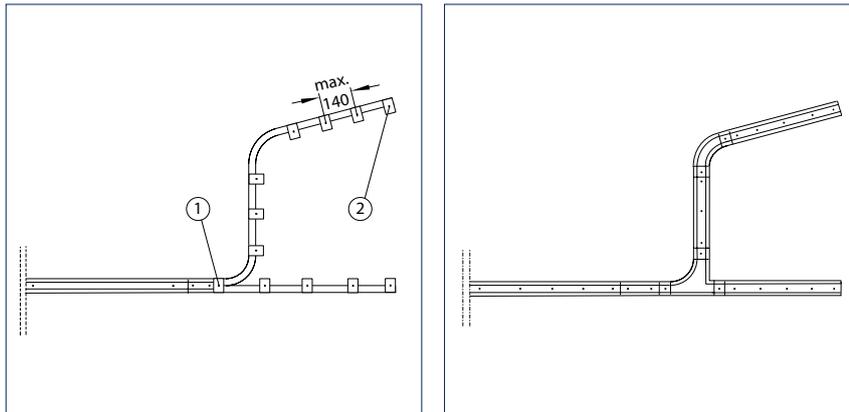
## Stacking area layout

### Stacking area with single tracks

In the case of stacking areas with single tracks, the tracks are only closed on one side, i.e. the inner geometry of the track and the roller carriage are visible in the parking area. A double track is used in the system front, however.

### Stacking area with double tracks

In the case of stacking areas with double tracks, the rail profile is closed at the top and at the side. The advantage of this version is that suspended ceilings can be contoured more easily, thus saving valuable installation time. In addition, the roller carriages are protected better from soiling e.g. dust.



Open stacking area (uncovered)

Concealed stacking area (covered)

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

## Ceiling situation and installation preparation

The sliding wall system can be fitted directly to the ceiling or to a suspending frame made available by the customer. The tolerance for evenness must be 2 mm. Unevenness can be compensated by using shims up to a thickness of approx. 20 mm.

### Notes:

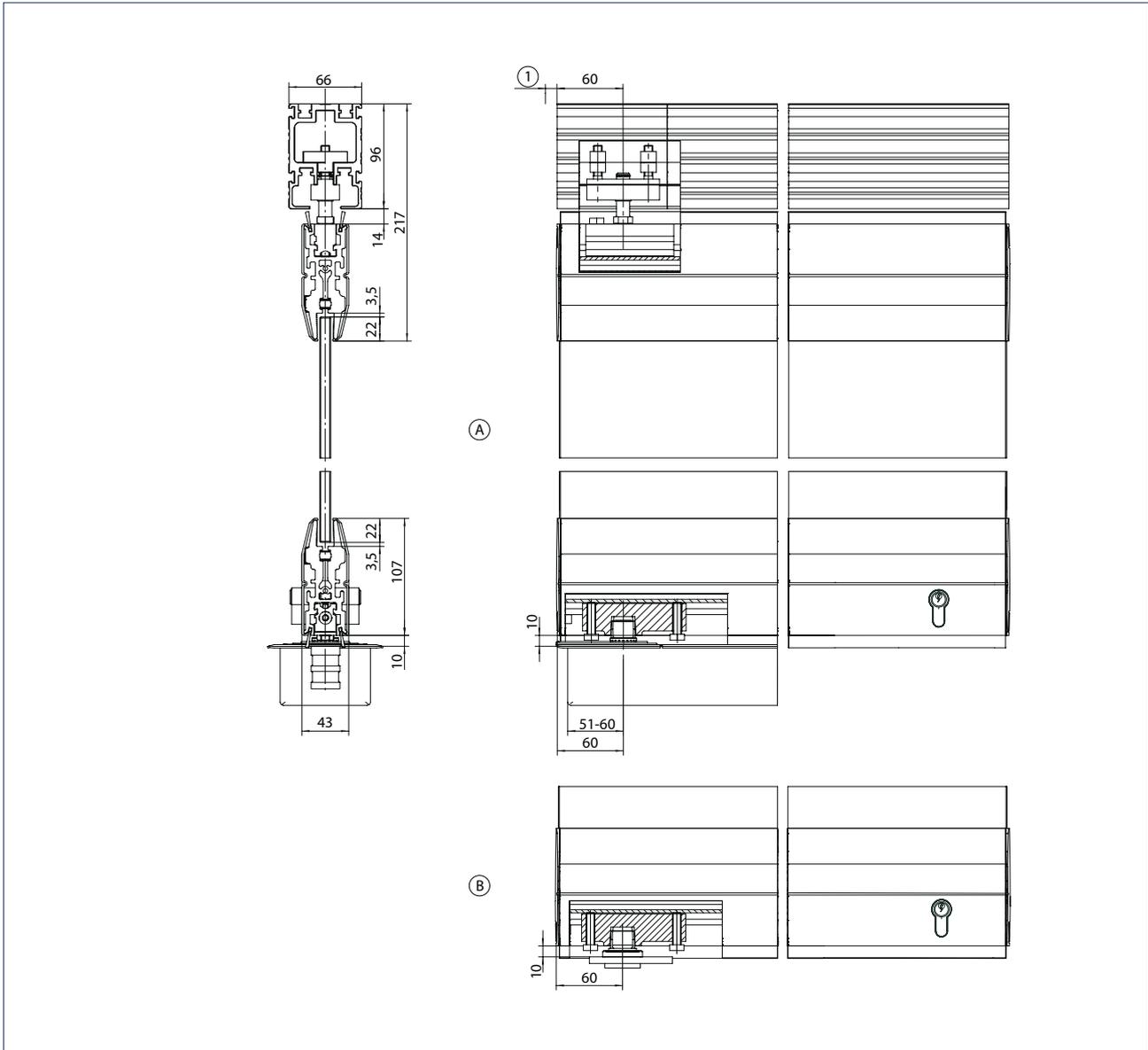
The suspending frame for the ceiling connection is not part of the scope of the offer and delivery of the GEZE GmbH and has to be planned technically and made available by the customer. For the technical design and planning, the ceiling and installation situation has to be known in detail, since this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

The total weight of all the sliding leaves in the stacking area is distributed on two short track pieces.

An order drawing can be provided for the customer's design and production of the suspending frame.

## Door types

### Double-action door (detailed representation)

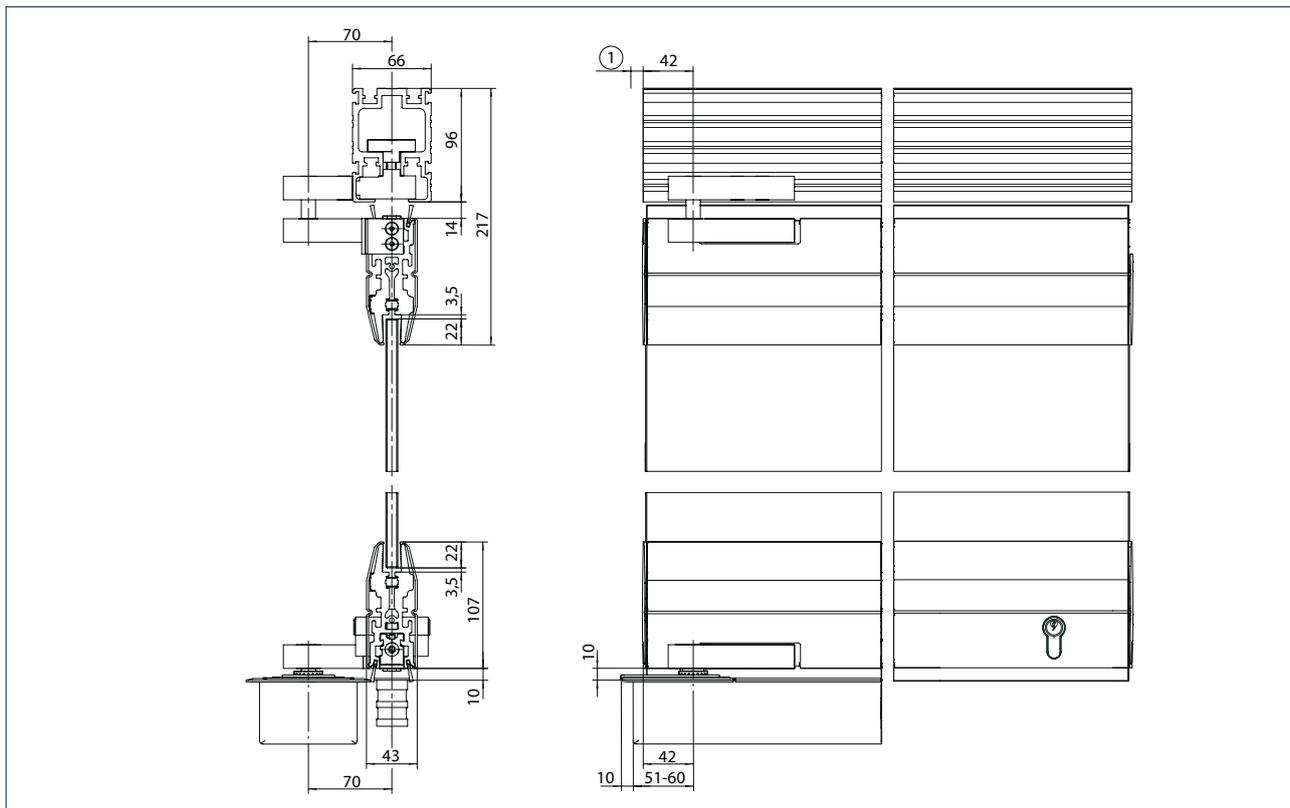


A = Double-action door

B = Swing door

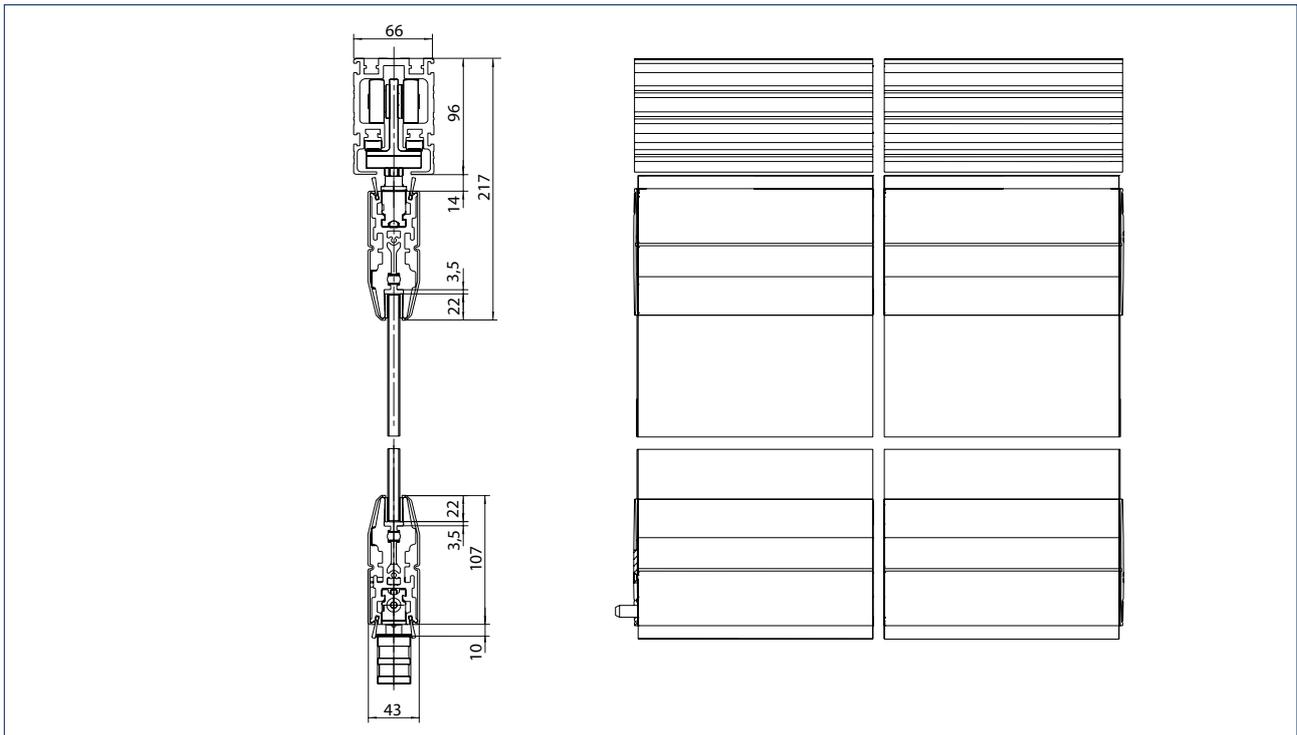
1 = 10 mm gap

Single-action door

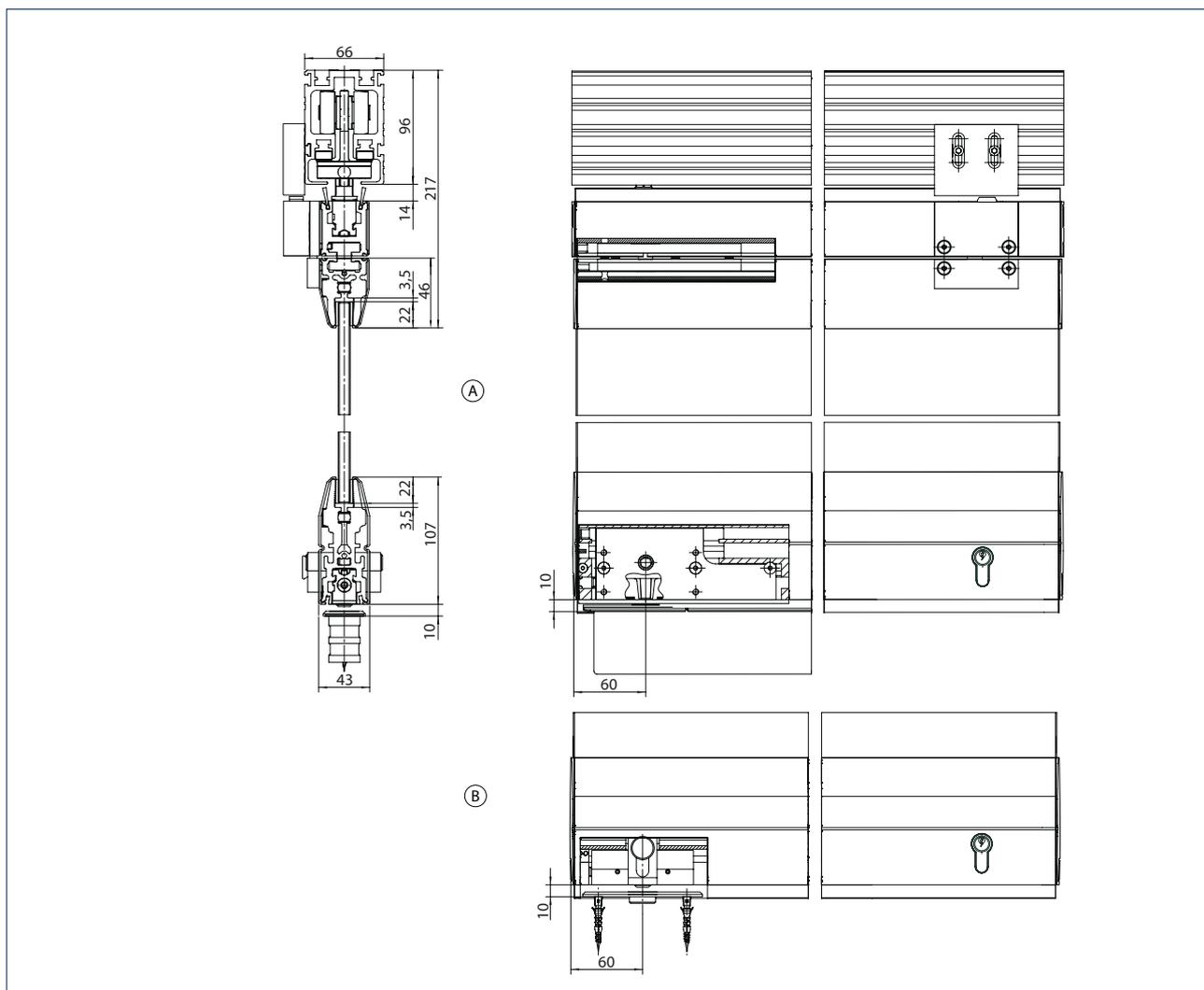


1 = 10 mm gap

## Sliding door



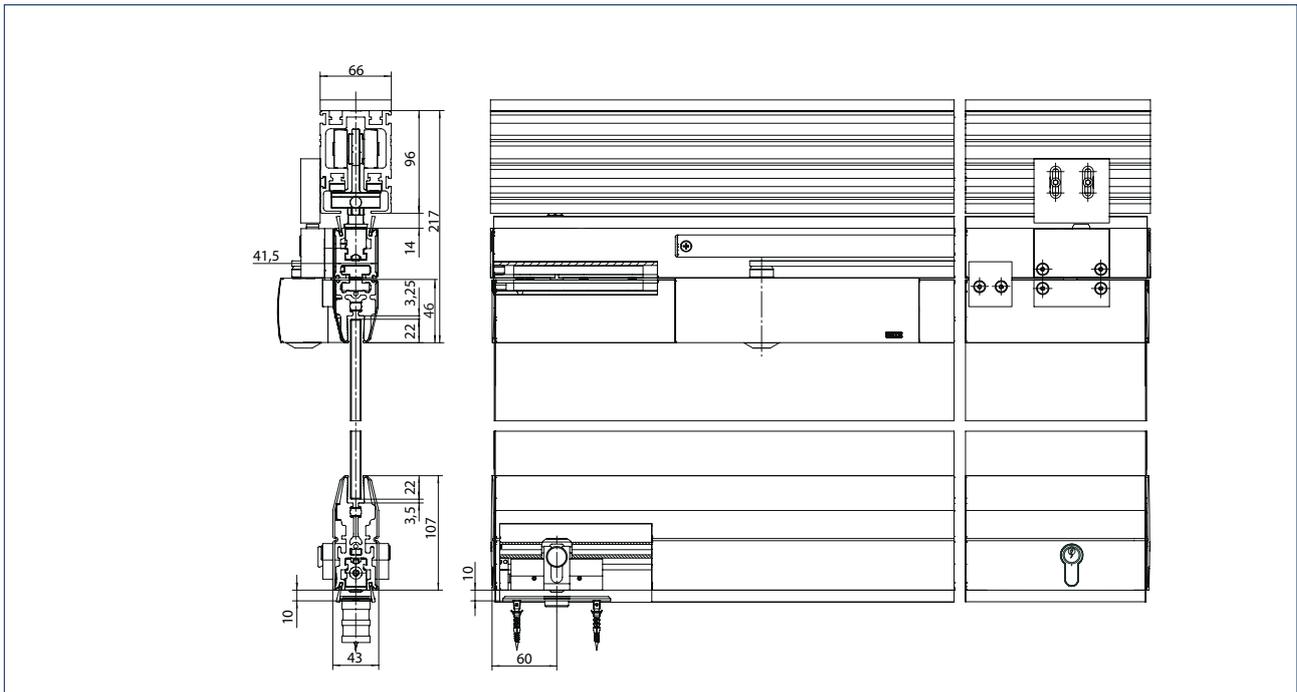
## Sliding swing door with double-action function



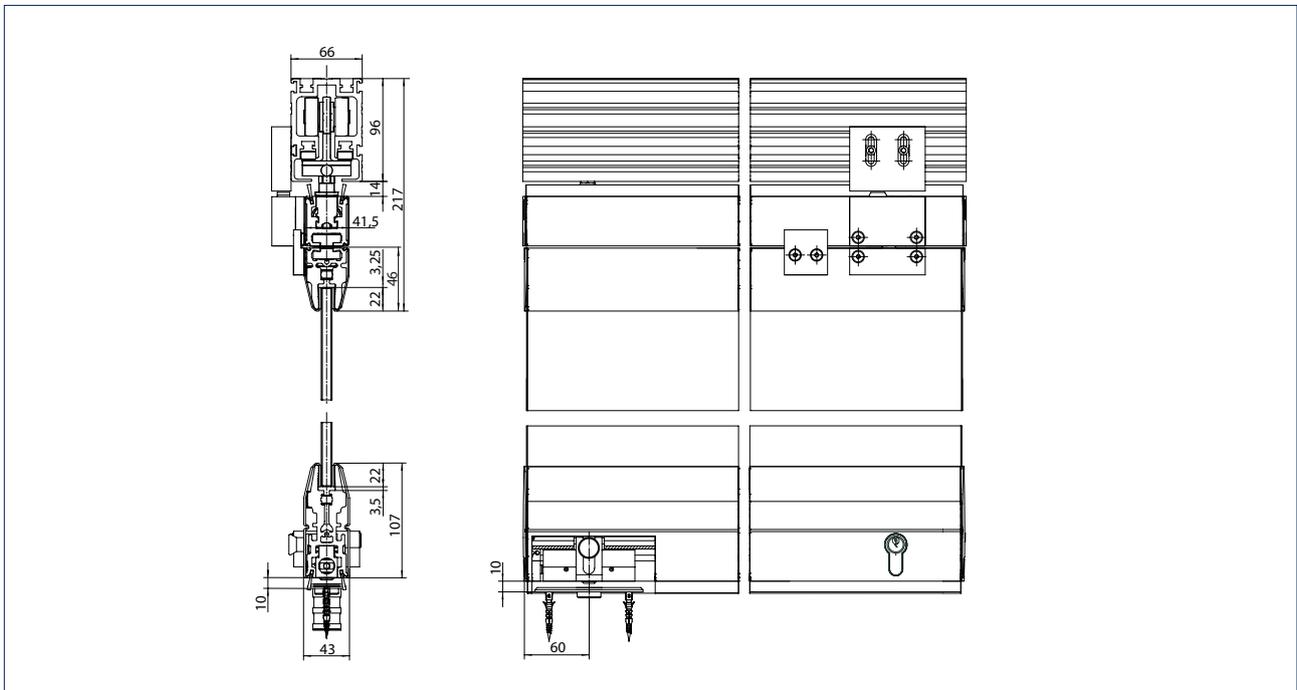
A = Sliding swing door with double-action function (with floor spring and coupling mechanism)

B = Sliding swing door with double-action function (with floor bearing)

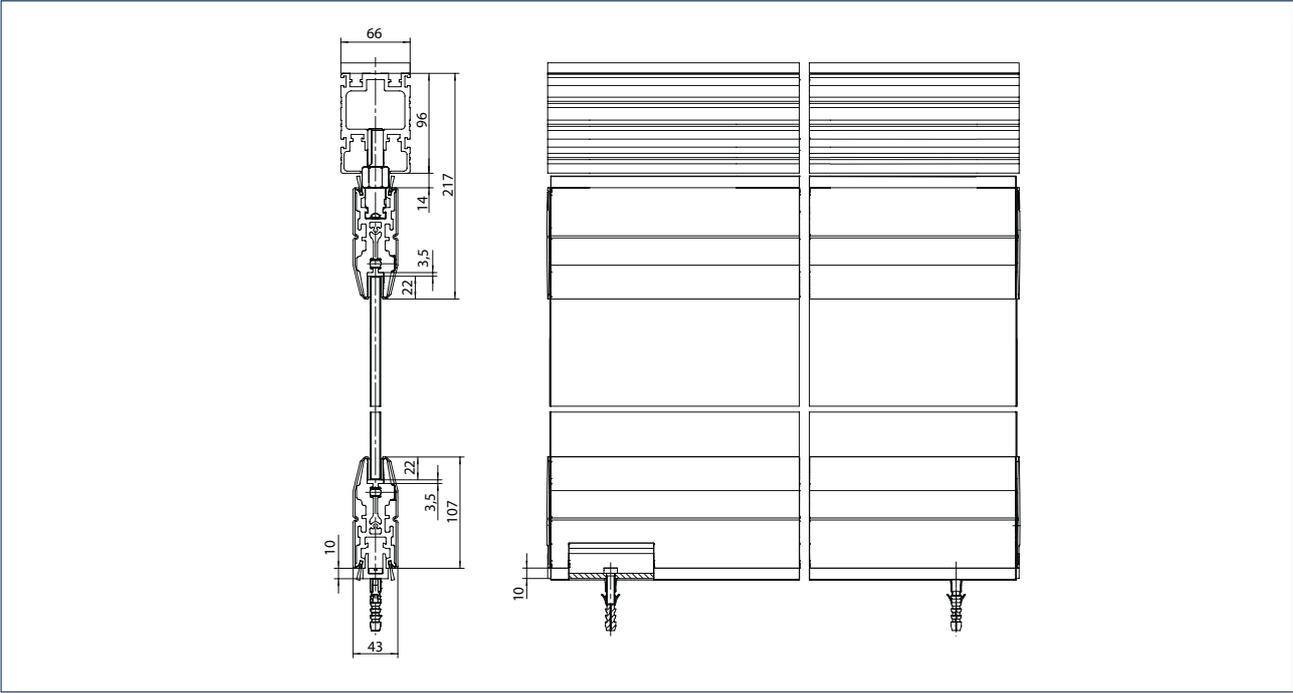
## Sliding swing door with pass door with TS 3000 V



## Sliding swing door with pass door with Boxer



Fixed panel



## Calculations

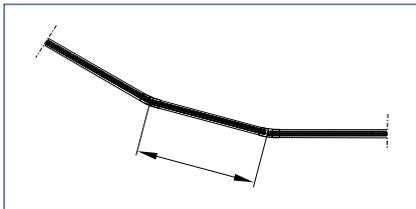
### Requirements

The following pre-requisites must be met for the manual sliding wall system to be calculated:

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

### System in curved form or with angle

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



Width of sliding element

## Calculations

### Number of door elements

Disparate element widths can be used in order to adapt the sliding wall system to the local situation. A minimum distance between the roller carriages must be observed.

### Specifying the system length:

System length = clear dimension – min. 10 mm gap

### Equation: 90°

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

### Equation: Parallel

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

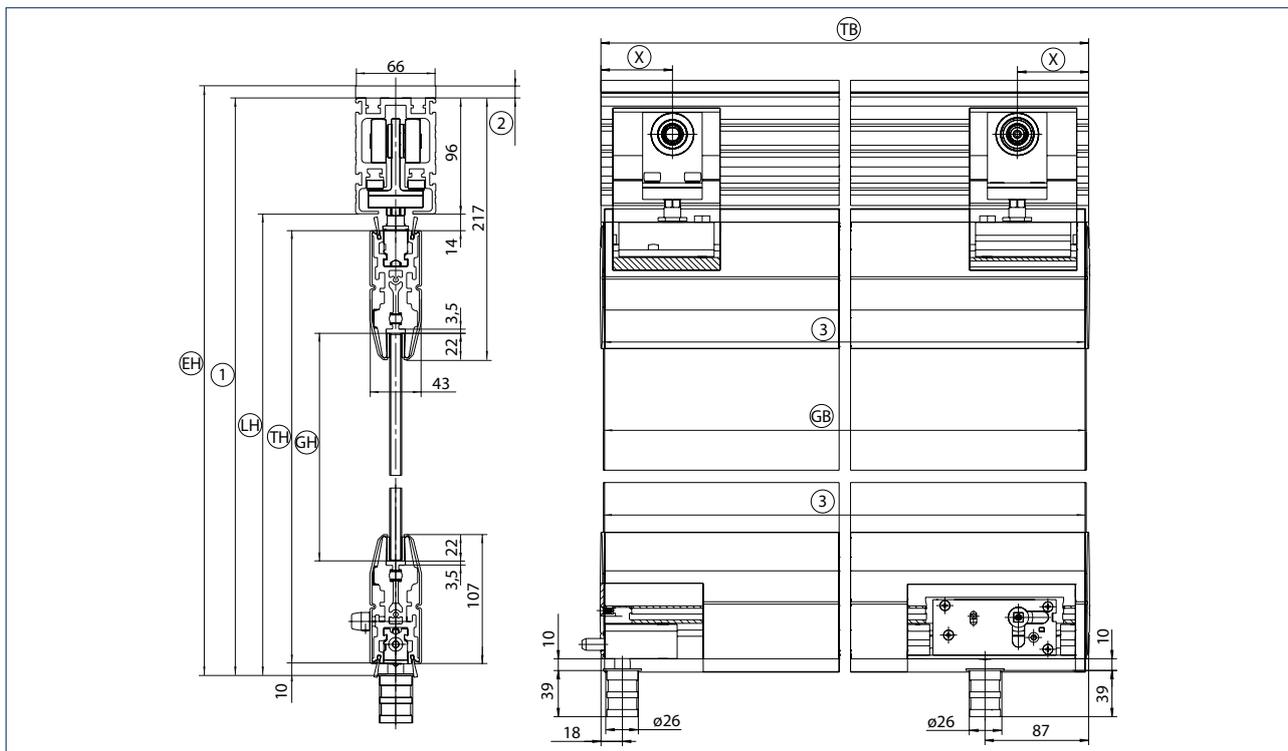
### Notes:

The number of doors must be rounded up.

In the case of parallel stacking area layout a fixed swing door is in general 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 roller carriage) and additionally  $X_{max} = 167$  mm for sliding swing door with pass door with Boxer on the hinge side

1 = System height

2 = Space adjustment (on site)

3 = Length of carrier and 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

#### Equation: 90°

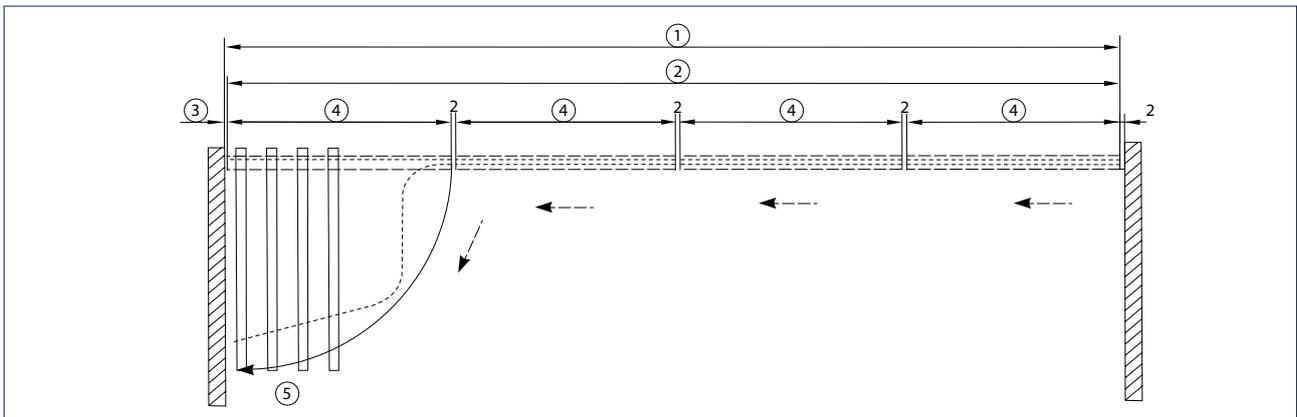
Door width = (system width mm – number of doors x 2 mm) / number of doors

#### Equation: Parallel

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

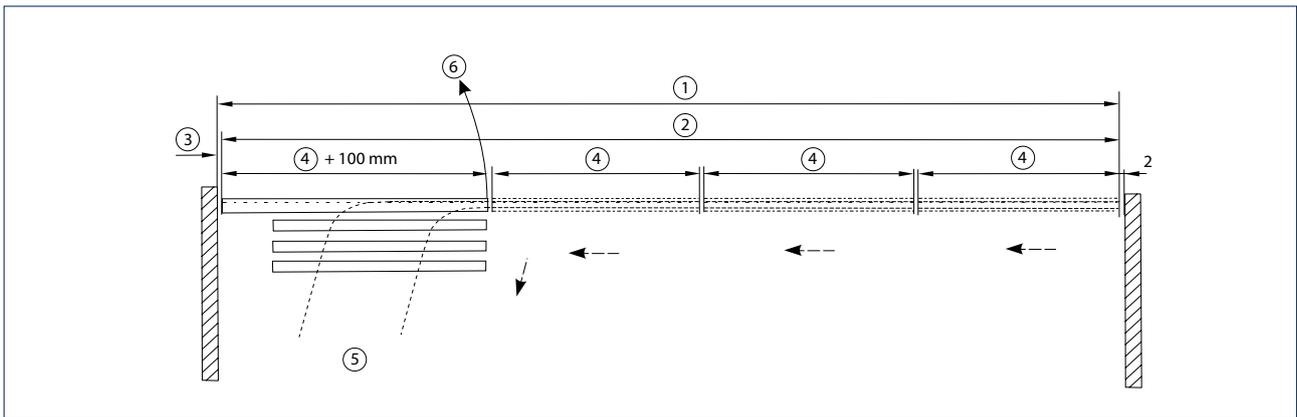
#### Note:

In the case of parallel stacking area layout a fixed swing door is in general 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



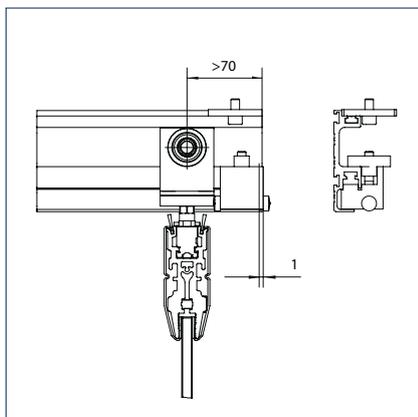
Calculating the stacking area parallel to the sliding axis

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

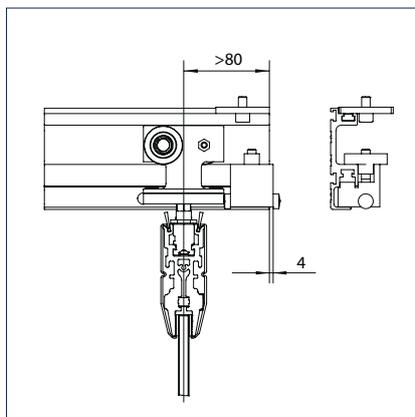
Project planning information

Buffer dimensions

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

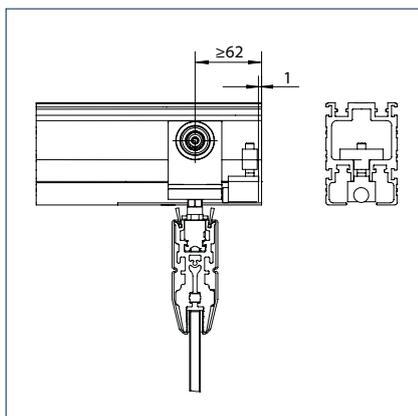


Buffer single track

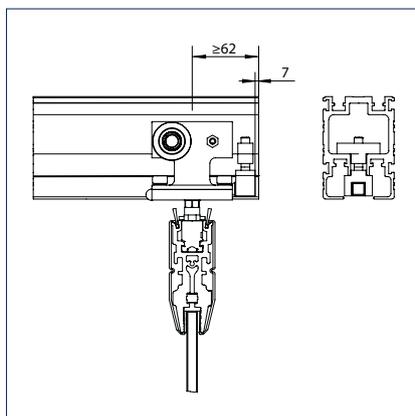


Buffer single track

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

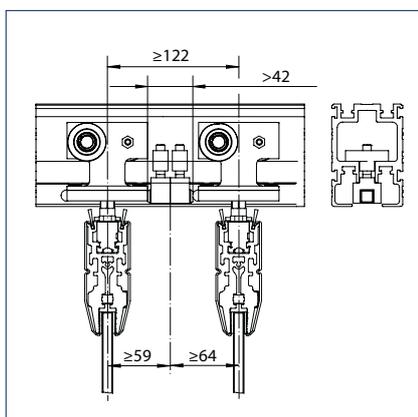


MSW buffer dimensions double track



Buffer compact

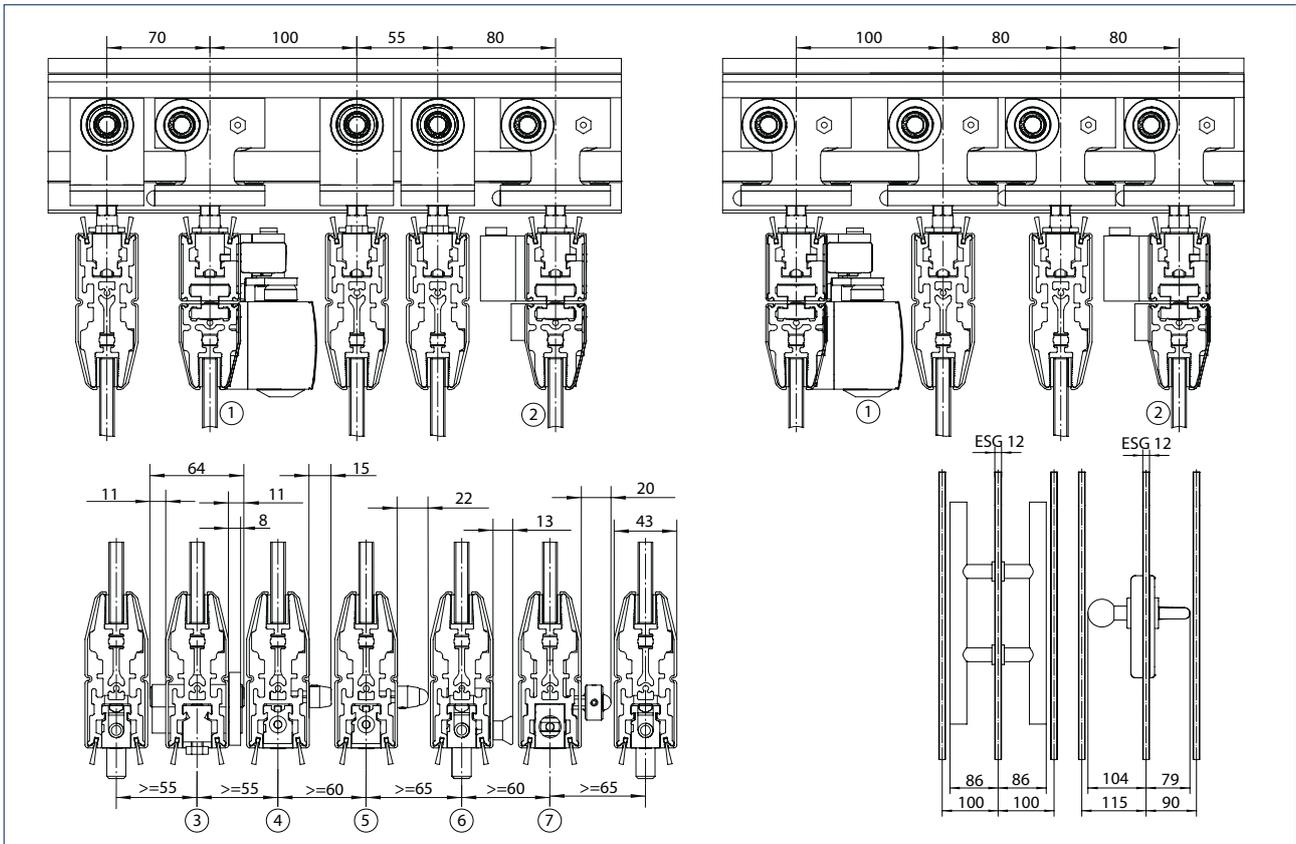
**Minimum dimension for buffer stop between two coupled systems**



Buffer compact

Project planning information

Gaps between running carriages in the stacking area

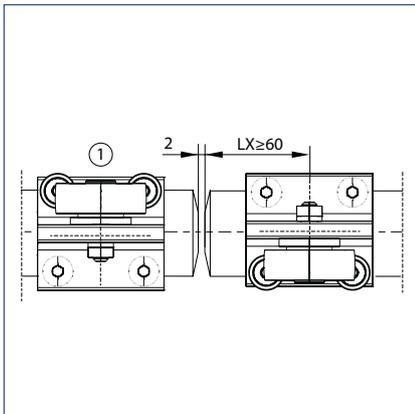


Gaps between running carriages

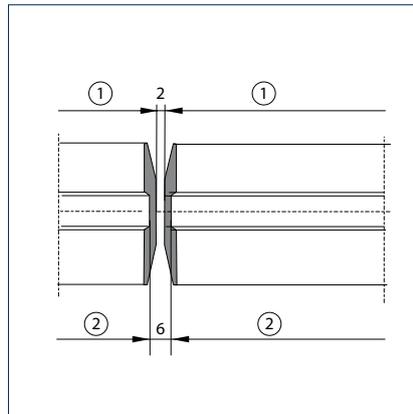
- 1 = Sliding swing door with pass door with TS 3000 V
- 2 = Sliding swing door with pass door with Boxer and sliding door with double-action function
- 3 = Euro profile cylinder (30/30), adhesive rosette 8 mm
- 4 = Lock with spindle (thumbturn)
- 5 = Lock with spindle (thumbturn with buffer)
- 6 = Front manual locking device (latching lever)
- 7 = Coupling mechanism (operating lever, optional)

## Project planning information

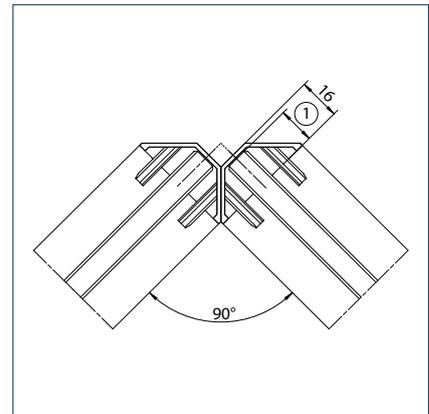
### Horizontal sections



Transition from a 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 swing door)



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

### Stacking area 90°

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:

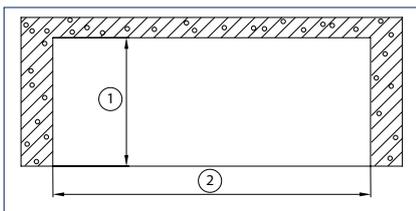
If a handle is to be mounted on a swing door or double-action door, the distance to the sliding door must be adjusted.

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

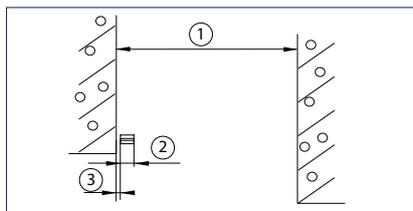
- Position the running line of the carrier roller axis on sliding door 1 (75°).
- Note: The „horizontal“ distance between the 1st and 2nd door is always 80 mm. The „horizontal“ distance between the following doors is 55 mm for single roller carriages and 80 mm for double roller carriages. The distance 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 track

#### 6. Add inspection piece

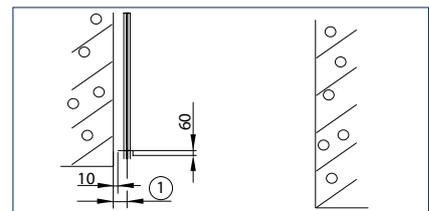
#### 7. Determine the length of the double track



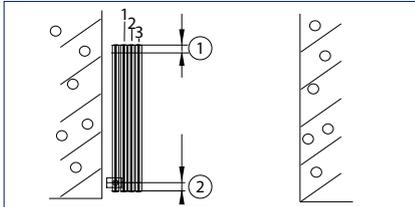
1. Local situation  
 1 = Clear height  
 2 = Clear width (clear dimension)



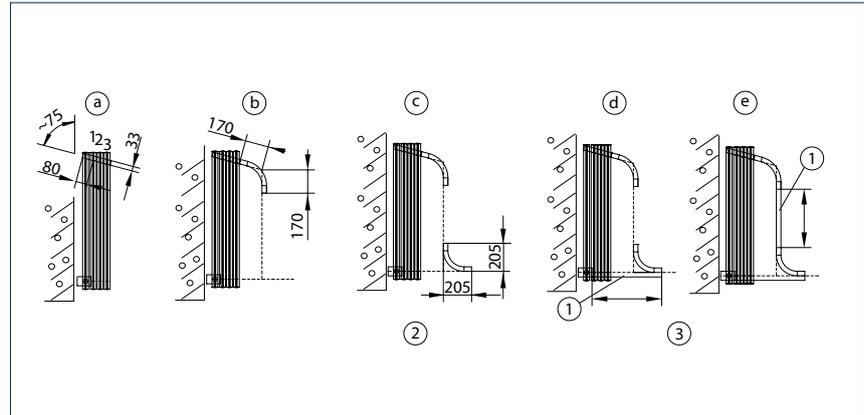
2. Double track (here inspection piece)  
 1 = Clear width (clear dimension)  
 2 = Inspection piece 100 mm  
 3 = Wall clearance and tolerance = 10 mm



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

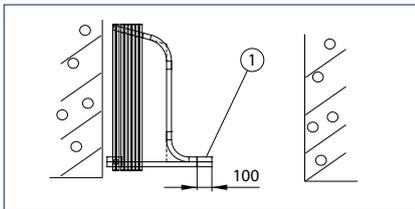


4. Determine the thickness of the door package in the stacking area
- 1 = Adapt distance door/axis carrier roller to sliding door 1 = 60 mm to all further sliding doors during installation
- 2 = Distance door/axis carrier roller = 60 mm

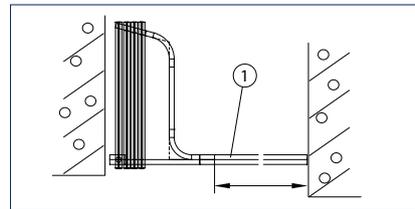


5. Determine the length of the single tracks in the stacking area

- 1 = Single track
- 2 = 90° inside curve
- 3 = Single track 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)

## Calculations

### Stacking area 90°

Distance of the single roller carriages = 55 mm  
 Distance of the double roller carriages = 80 mm

Notes:

The calculation of the stacking area applies for the covered and uncovered version.  
 Take into consideration any push-bars, differing distances of sliding swing doors etc.  
 Dimensions A, B, C and D, see confirmation of order.

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

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

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

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

Control dimensions:

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

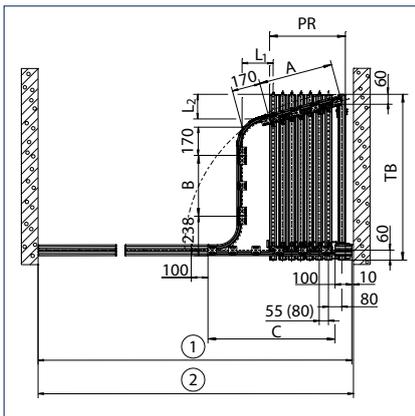
$$L1 = C - PR - 122$$

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

Conditions:

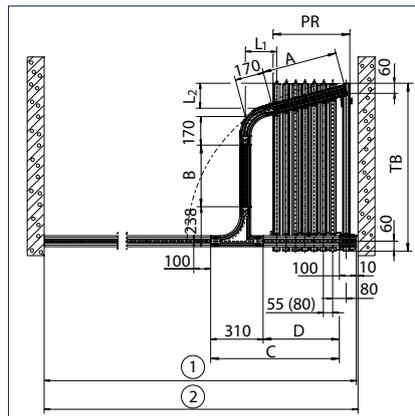
$$A_{\max} > A \text{ and } L1 > L2$$

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



Stacking area 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

### Stacking area parallel

#### 1. Specify the number of doors

See chapter „Calculations number of door elements“

Note:

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

#### 2. Position 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. Position the sliding door package

Distance of sliding doors 1, 2 and 3 with single roller carriages 55 mm, with double roller carriages 80 mm (see chapter „Gaps between running roller carriages in the stacking area“).

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

Lay an auxiliary line 75° through the carrier roller axis to sliding door 3 or 1.

The intersection of the track centre line and of the auxiliary line 75° is the position point for the single track curve 75° outer.

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

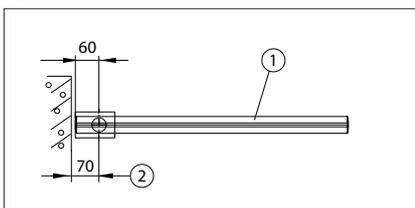
- Place single track against single track curve 75°
- Determine the length
- Roller axis to end of track = 80 mm
- The lengths of the single tracks are identical

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

- Place single track against single track curve 75°
- Determine the length
- Axis roller carriage to end of track = 80 mm, differences possible through buffer
- The lengths of the single tracks are identical

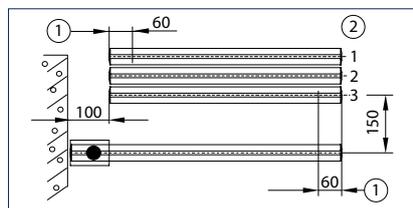
#### 8. Add inspection piece

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



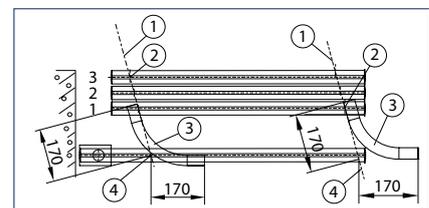
2. Position the swing door or double-action door

- 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

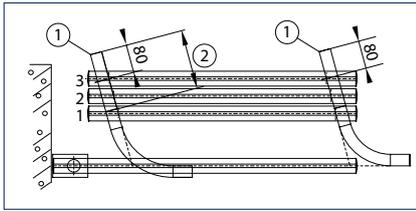
- 1 = Distance of the carrier roller axis to the beginning of the sliding door 1
- 2 = Sliding door package



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

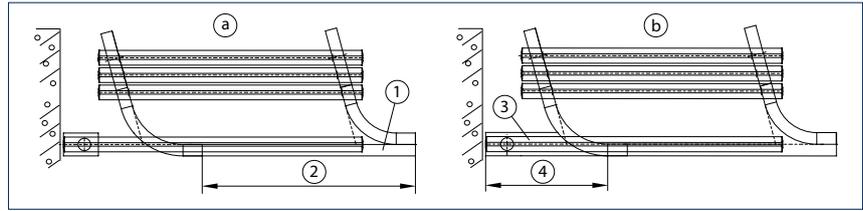
- 1 = Auxiliary line 75°
- 2 = Carrier roller axis (60 mm to leaf outer edge)
- 3 = Single track curve 75°
- 4 = Intersection

# GEZE MSW



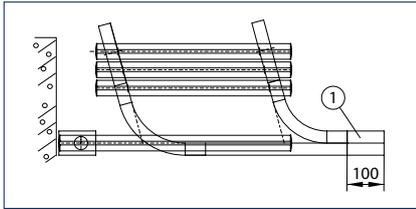
6. Single track and single track curve 75°

- 1 = Single track
- 2 = Determine the length



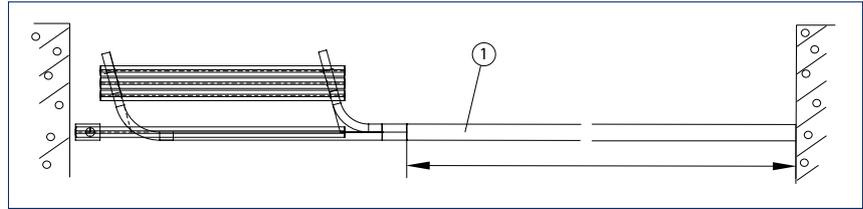
7. Determine the length of the single track

- 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, Majorca, Spain (photo: Pau Esculies)

## Calculations

### Stacking area parallel

Distance of the single roller carriages = 55 mm

Distance of the double roller carriages = 80 mm

Notes:

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

Take into consideration any grip bars, differing distances of sliding swing doors etc.

Dimensions of W, X and Y, see confirmation of order.

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

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

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

Control dimension:

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

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

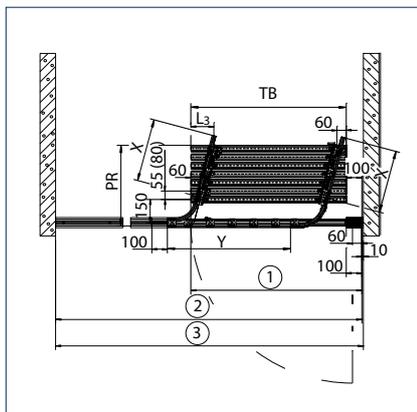
Condition:

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

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 equations do not apply for individual stacking areas. It is recommended to have the individual stacking areas planned by GEZE. We only recommend independent planning in the case of experienced users.



Stacking area parallel uncovered

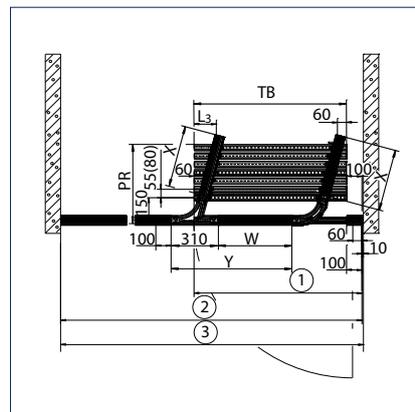
PR = Door package

TB = Sliding door width

1 = TB + 100 (swing door width)

2 = System length

3 = Clear dimension



Stacking area parallel covered

PR = Door package

TB = Sliding door width

1 = TB + 100 (swing door width)

2 = System length (clear dimension - 10)

3 = Clear dimension

## References



Modepark Röther, Villingen, Germany (photo: GEZE GmbH)



Friends of frozen Yoghurt, Rhein-Ruhr Zentrum Mülheim, Germany (photo: GEZE GmbH)



Volksbank Ludwigsburg, Germany (photo: Lazaros Filoglou)



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

# POTENTIAL APPLICATIONS OF GEZE PRODUCTS

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

<b>Door technology</b>	
<b>01</b>	Overhead door closers ID 091593, ID 091594
<b>02</b>	Hold-open systems ID 091593, ID 091594
<b>03</b>	Integrated door closers ID 091609
<b>04</b>	Floor springs and all-glass fittings ID 091607
<b>05</b>	Sliding fitting systems and linear guides ID 123605, ID 000586
<b>Automatic door systems</b>	
<b>06</b>	Swing doors ID 144785
<b>07</b>	Sliding, telescopic and folding doors ID 143639
<b>08</b>	Curved sliding doors ID 135772
<b>09</b>	Revolving doors ID 132050
<b>10</b>	Activation devices and sensors ID 142655
<b>Smoke and heat extraction and window technology</b>	
<b>11</b>	Fanlight opening systems ID 127787
<b>12</b>	Electric opening and locking systems ID 127785, ID 127789
<b>13</b>	Electrical spindle and linear drives ID 127785, ID 127789
<b>14</b>	Electric chain drives ID 127785, ID 127789
<b>15</b>	Smoke and heat extraction systems ID 127785, ID 139075
<b>Safety technology</b>	
<b>16</b>	Emergency exit systems ID 132408
<b>17</b>	Access control systems ID 132158
<b>18</b>	Panic locks ID 132848
<b>19</b>	Electric strikes ID 148666
<b>20</b>	Building management system ID 132408
<b>Glass systems</b>	
<b>21</b>	Manual sliding wall systems (MSW) ID 104377
<b>22</b>	Integrated all-glass systems (IGG) ID 104366



# POTENTIAL APPLICATIONS OF GEZE PRODUCTS




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## Door technology

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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.

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## Automatic door systems

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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.

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## Smoke and heat extraction and window technology

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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.

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## Safety technology

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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.

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## Building systems

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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.

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## Glass systems

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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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