OPEN
AUTOMATIONS
SOLUTIONS

BREAKOUT DOORS

Official Partner GEZE

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Introduction to Breakout doors

For solutions with heightened safety requirements breakout doors offer the ultimate in versatile security. These 1 or 2-leaf door systems feature a swing fitting allowing the leaves to pivot open and are ideal for emergency exits.

GEZE Slimdrive SL-BO(BI)

Fields of Application

Designed for the use on escape routes, the sliding door system GEZE slimdrive SL-BO/ -BI is installed wherever safety is the first priority.

- Office buildings
- Public buildings
- Chemists premises
- Banks
- Hotels and restaurants
- Administration buildings Hospitals
- Old-peoples homes and homes for disabled persons
- Airports and stations
- Automobile salesrooms
- Industrial facilities
- Draught-proof systems

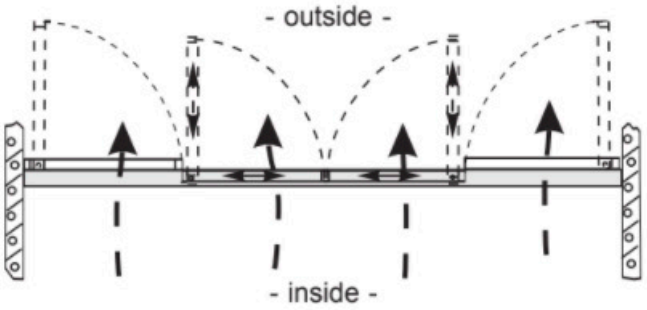
Due to the low installation height especially suited for

- Integration in post-rail structures
- Renovation
- Reconstruction
- Retrofitting to existing facades

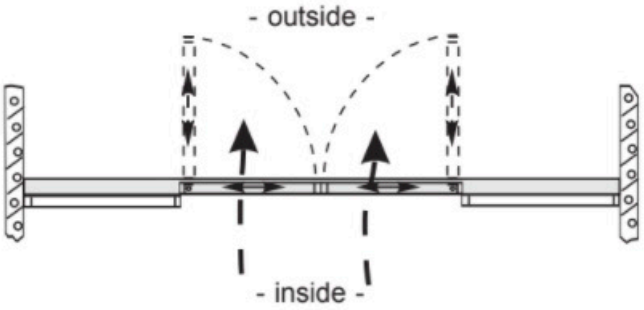
Product features

Slimdrive SL-BO / SL-BO (BI)

Type-tested sliding door system with swing-out fittings.
Admitted for use on escape routes.



SL-Break-Out



SL-Break-Out (Break-In)

In different designs:

- SL-Break-Out: emergency opening in escape direction towards opposite side of drive, drive mounted at the inside
- SL-Break-In: emergency opening in escape direction towards opposite side of drive, drive mounted at the inside

Leaves swing out in escape direction, force adjustable up to 220 N

Single-leaf and double-leaf design

- With swing-out side elements
  SL-BO
- With fixed side elements*
  SL-BO
- Without side elements *
  SL-BO or SL-BO (BI)

The low installation height of Slimdrive SL, in combination with the optional structural component Break-Out / Break-In

- Makes the drive disappear behind the facade, thus pointing out aesthetics and transparency
- Allows for max. passage heights
- Allows easy retrofitting to existing window and facade profiles
- Requires no increased pelmet depth or double profiles

* Systems SL-Break-Out with fixed side elements or without side elements are conditionally admitted for the use on escape routes. An approval by the building authorities is required for the use of such systems in escape routes in principle.

System description

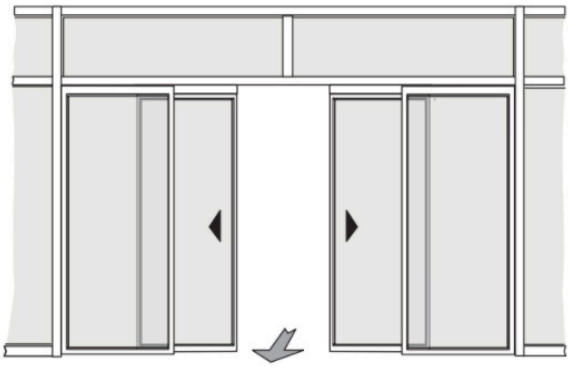
Slimdrive SL-BO

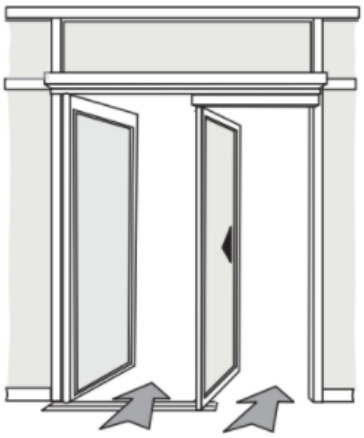
Type-tested sliding door system with swing-out fittings

- Admitted for the use on escape routes
- Suitable for internal and external doors, either transom mounted or with free support
- System of all-aluminum construction

System with swing-out side panels:

View form outside, standard operation (Swing-out side panels)



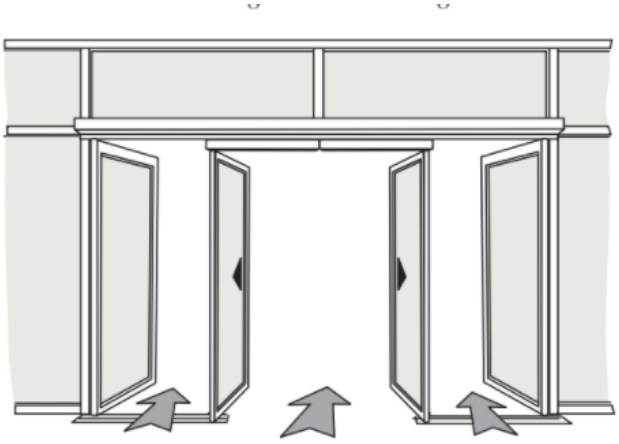


Slimdrive SL-BO: View from inside, escape situation right-hand closing

- Single-leaf, left-hand or right-hand closing
- With or without fanlight

Slimdrive SL-BO: View from inside, escape situation

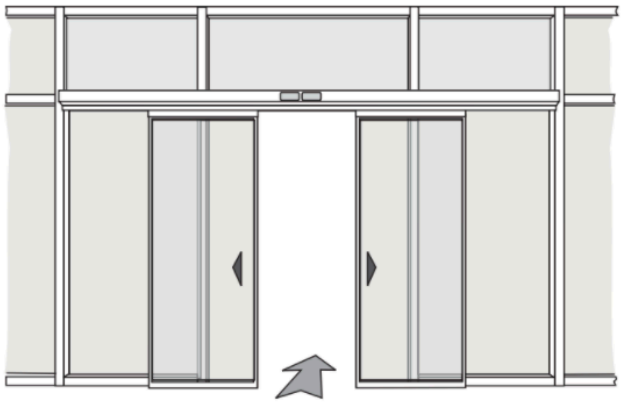
- Double-leaf
- With or without fanlight



System description

Slimdrive SL-BO

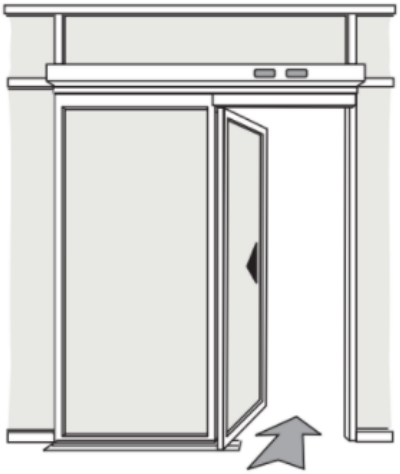
System with fixed side panels. *

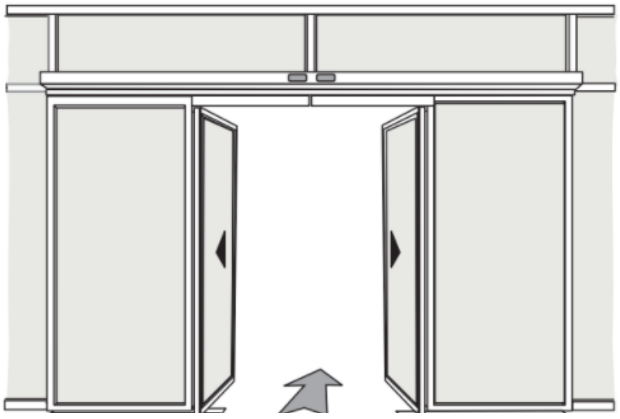


View form inside, standard operation (fixed side panels)

Slimdrive SL-BO: View from inside, escape situation right-hand closing

- Single-leaf left-hand closing or right-hand closing
- With or without fanlight





Slimdrive SL-BO: View from inside, escape situation

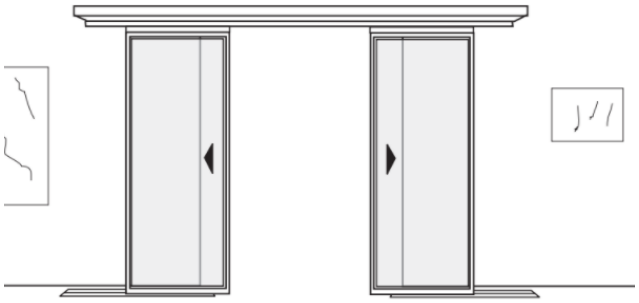
- Double-leaf
- With or without fanlight

* Systems SL-Break-Out with fixed side elements or without side elements are conditionally admitted for use on escape routes. An approval by the building authorities is required for the use of such systems on escape routes in principle.

System description

Slimdrive SL-BO

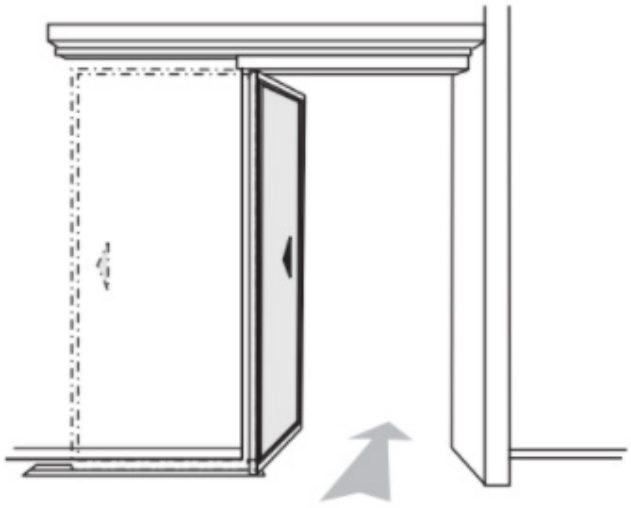
System with Slimdrive SL-BO, without side panels*

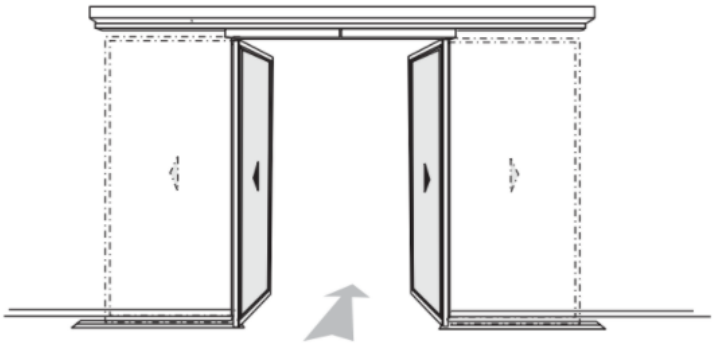


View from inside, standard operation (without side panels)

Slimdrive SL-Break-Out (BO)
View of escape situation, right-hand closing

- Single-leaf left-hand closing or right-hand closing
- With or without fanlight





Slimdrive SL-Break-Out (BO)
View of escape situation

- Double-leaf
- With or without fanlight

* Systems SL-Break-Out with fixed side elements or without side elements are conditionally admitted for use on escape routes. An approval by the building authorities is required for the use of such systems on escape routes in principle.

System description

Slimdrive SL-BO(BI)

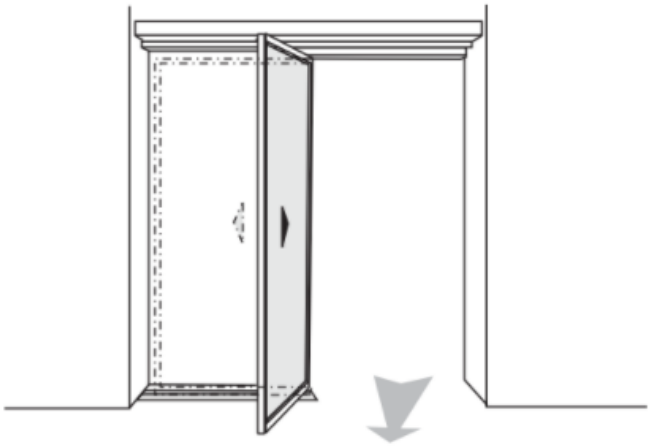
The sliding leaves of the Break-Out systems Slimdrive SL-BO featuring fixed or no side panels can only be swung out when the doors are closed.

The sliding leaves of the Break-In systems Slimdrive SL-BO(BI), however, can be swung out regardless of the actual position of the sliding doors.

Slimdrive SL-BO(BI) can only be delivered without side panels. The system is suitable for use on escape routes without reservation.

System Slimdrive SL-BO(BI), drive mounted in escape direction at the outside: the cover is lockable.

Thus the cover cannot be removed by unauthorised persons.
The drive must be mounted outdoors in a weather-proof manner.

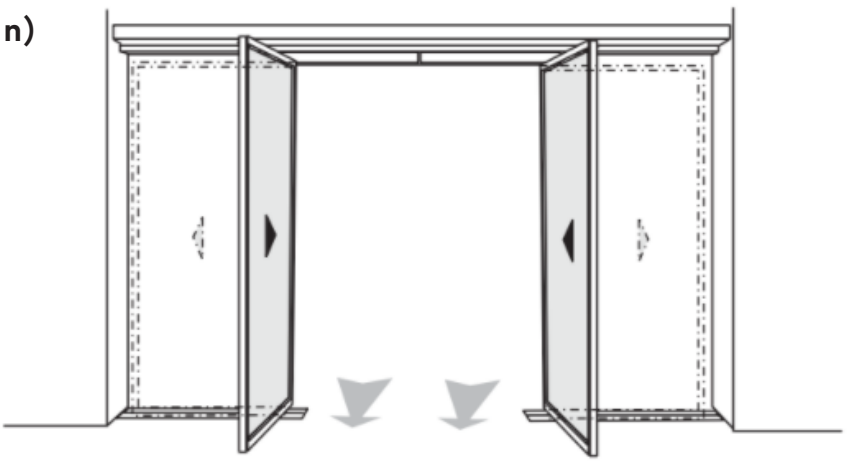


Slimdrive SL-Break-Out (Break-In)
View of escape situation, right-hand closing system

- Sing-leaf left-hand or right-hand closing,
- With or without fanlight

Slimdrive SL-Break-Out (Break-In)
View of escape situation

- Double-leaf,
- With or without fanlight



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System description

Slimdrive SL-BO(BI)

Types of door leaves

- All glass doors of ESG or insulating glass finely framed

Dimensions / weights

Dimensions / weights	
Door leaf weight	
Single leaf	up to 100kgs
Double-leaf	up to 2 × 100 kgs
Opening width	
Single-leaf:	900 - 1400 mm
Doubt-leaf:	1000 - 2500 mm
Door leaf height:	max. 2500 mm
Opening speed	up to 0.7 m/s
Closing speed	max. 0.4 m/s

Drive

- Low-wear high-capacity DC-motor
- Extremely quiet-running, enclosed running gear
- Power transmission via toothed belts; deflection pulleys in precision bearings
- Leaf weight distributed to track profile via 2x 4 rollers
- Slimdrive SL-BO: Drive mounted inside
- Slimdrive SL-BO: Drive mounted outside, cover lockable

System description

Slimdrive SL-BO(BI)

Control

- Micro-controller, self-learning
- Permanent position determination of door leaves by means of contactless distance measuring system
- Determination of door leaf weight by means of acceleration meter
- Adjustable hold-open time (max. 60 sec.)
- Winter - position: reduced, individually adjustable opening width (for system slimdrive SL-BO with swing-out side elements and slimdrive SL-BO(BI) only)
- Connection of burglar alarm with potential-free contact
- Automatic error detection
- Acoustic signal in the case of error
- Error display at programme switch
- Opening and closing speed individually adjustable
- Automatic adaption of opening time to number of persons entering or leaving the building

Approach monitor elements

- All known actuation devices can be fitted, e.g.:
  - Radar movement detector for temperature-independent
  - Pushbutton
  - Coded card reader, key-operated switch etc
- Systems with fixed or without side elements: redundant radar movement detector in escape direction

Options (examples)

- Link to fire alarm system
- Electromagnetic locking to secure the door leaves against pushing open

Safety functions

Slimdrive SL-BO / SL-BO(BI)

- The door is opened automatically by the power pack in the case of failure or power outage
- Sliding leaves swing out in escape direction
- Swing-out side elements, depending on system
- Closing force limitations < 150N
- Swing-out force adjustable to max. 220 N
- Light barrier fuse acc. To ZH 1/494 with self-control (2-channel light barrier)
- Automatic reversing function, if obstacle is encountered during closing movement of the door
- Drive is switched off during swing-out function of the sliding leaves or the side elements
- Integrated main switch
- Emergency unlocking function (optional)

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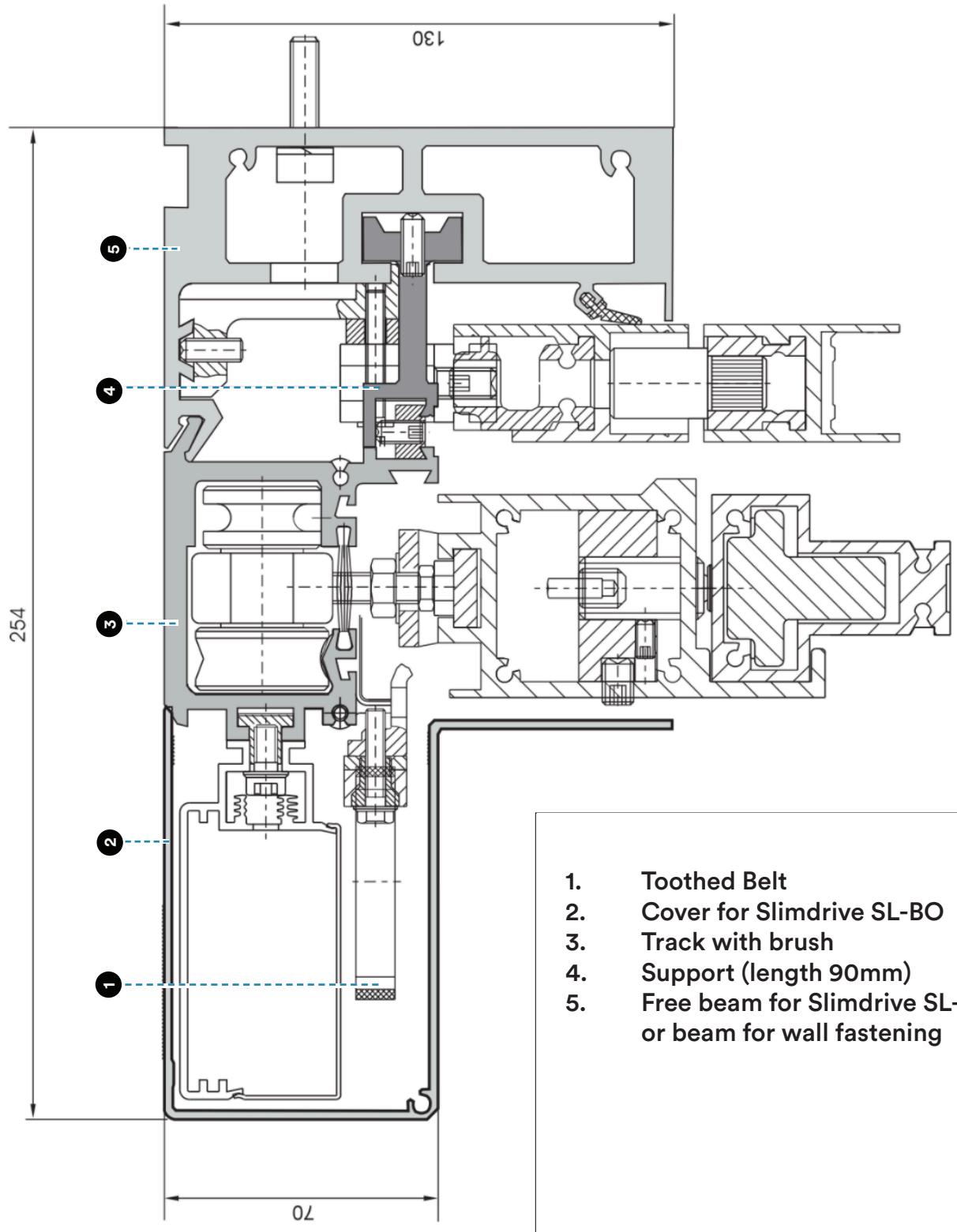
Building components and profiles

Modular construction system in aluminum construction



1. Toothed Belt
2. Cover for Slimdrive SL-BO
3. Track with brush
4. Support (length 90mm)
5. Free beam for Slimdrive SL-BO or beam for wall fastening

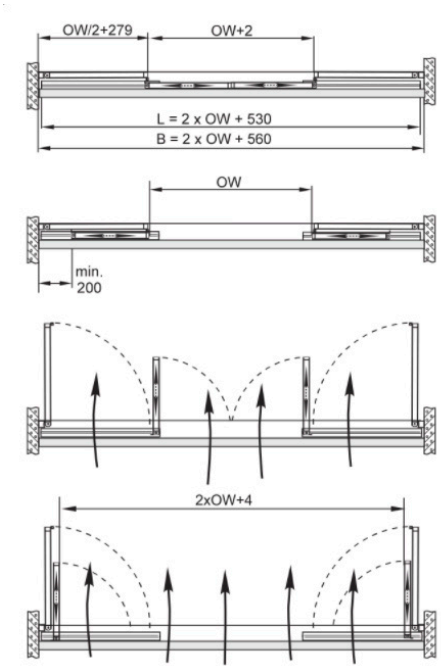
Installation Variants

Slimdrive SL-BO

Key	OW = Opening width B = Struct. dimensions of system (max. overall length) L = Length of continuous floor rail

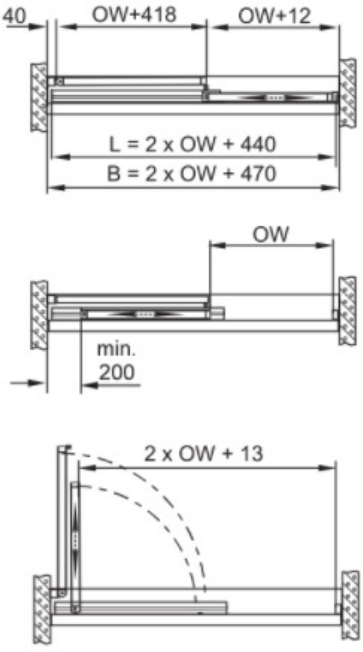
Swing-out side panels, double-leaf Slimdrive SL-BO

- Standard operation, closed
- Standard operation, open
  (The required safety margin of 200 mm each is included in the dimensions)
- Escape situation, door leaf swung out in position Break-Out
- Escape situation with max. inner width
  (Sliding leaves can be pushed open in escape direction independent of the actual door position)



Swing-out side panels, single-leaf Slimdrive SL-BO

- Standard operation, closed
- Standard operation, open
  (the required safety margin of 200 mm each is included in the dimensions)
- Escape situation with max. inner width
  (sliding leaves can be pushed open in escape direction independent of the actual door position)



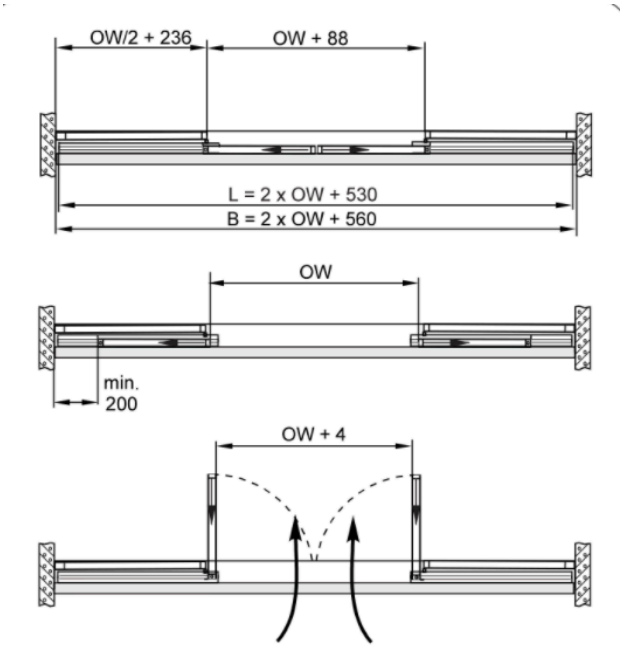
Installation Variants

Slimdrive SL-BO

Key	OW = Opening width B = Struct. dimensions of system (max. overall length) L = Length of continuous floor rail

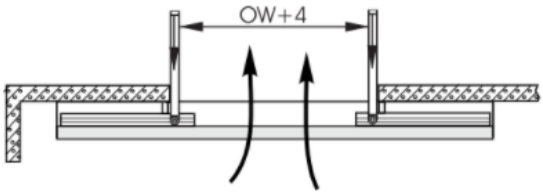
Fixed side panels, Slimdrive SL-BO

- Standard operation, closed
- Standard operation, open
  (the required safety margin of 200 mm each is included in the dimensions)
- Escape situation, “Break-Out” sliding leaves swing out
  (Sliding leaves can be swung out in closed position only)



Without side panels

- Escape situation Slimdrive SL-BO sliding leaf swung out
  (sliding leaves can be swung out in closed position only)



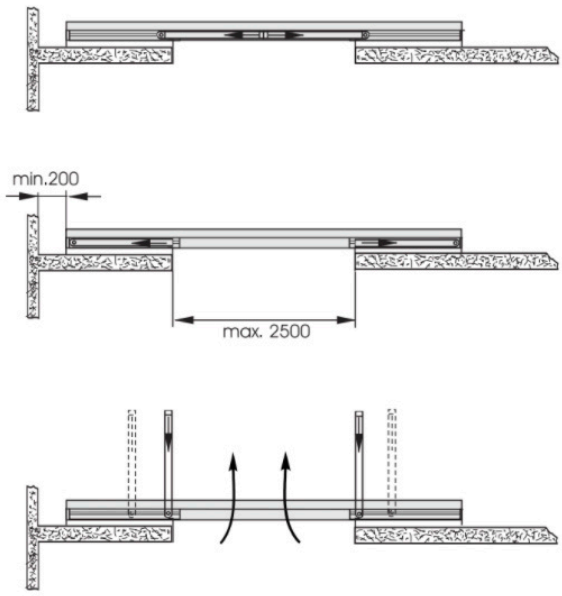
Installation Variants

Slimdrive SL-BO(BI)

Key	OW = Opening width B = Struct. dimensions of system (max. overall length) L = Length of continuous floor rail

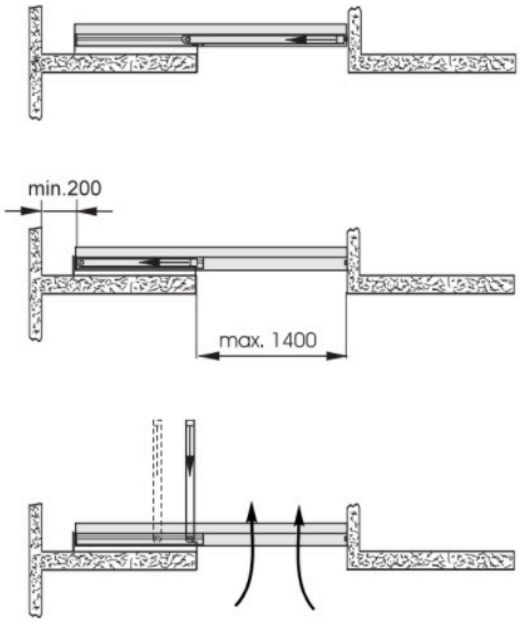
Without side panels, double-leaf Slimdrive SL-BO(BI)

- Standard operation, closed
- Standard operation, open
  (mind the required safety margin of 200 mm)
- Escape situation, “Break In” Sliding leaf swung out
  (sliding leaves can be pushed open in escape direction independent of the actual door position)



Without side panels, single-leaf Slimdrive SL-BO(BI)

- Standard operation, closed
- Standard operation, open
  (the required safety margin of 200 mm)
- Escape situation, “Break In” Sliding leaf swung out
  (sliding leaves can be pushed open in escape direction independent of the actual door position)



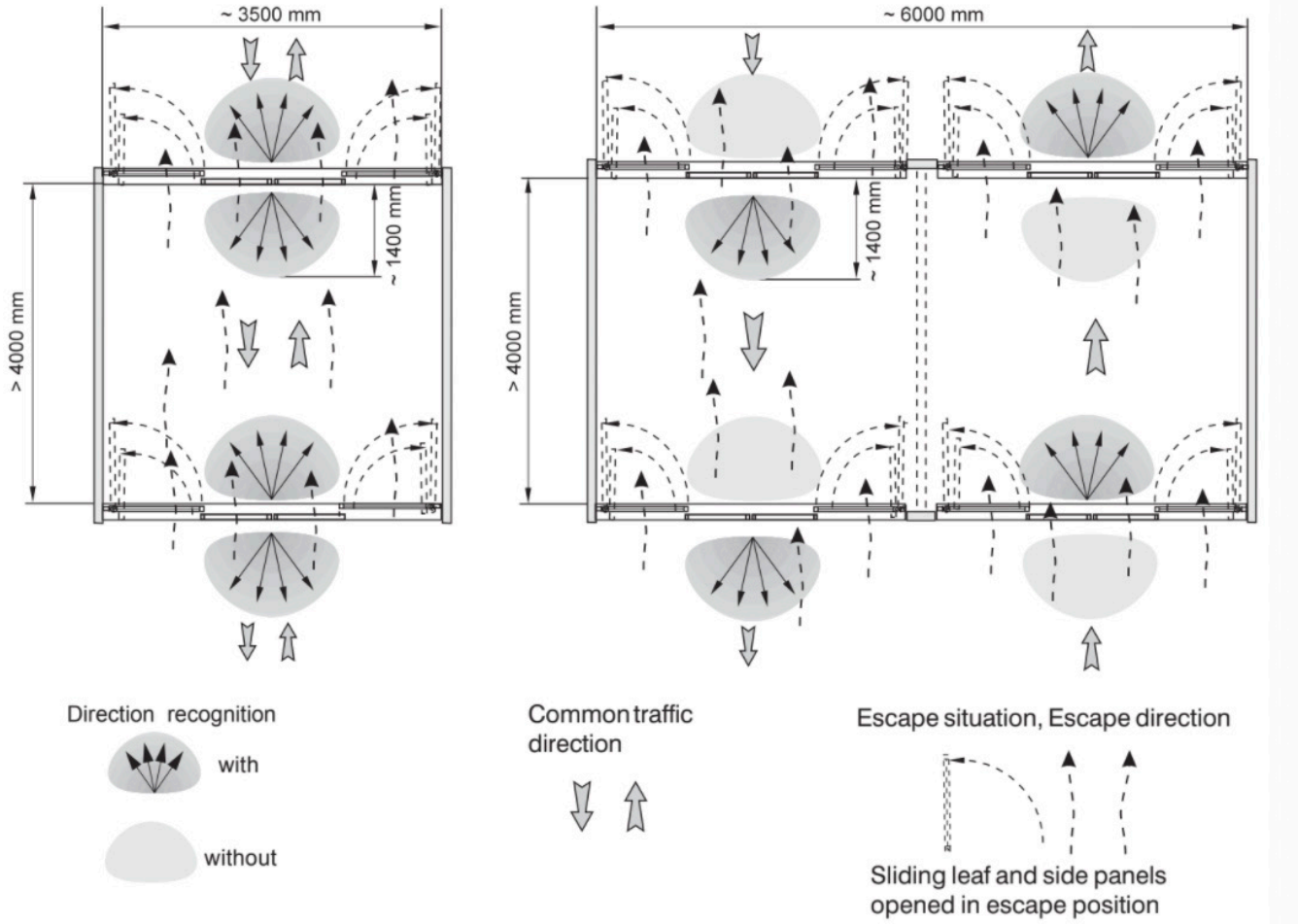
Draught-proof Systems

Draught-proof systems are used to avoid draught and to reduce the heat exchange. Only one door should be open.

Direction-recognizing radar movement detectors only trigger the door if persons move towards the door. Therefore the door closes earlier as soon as the person has entered.

The sliding door is mounted in such a way that the leaves can be swung out in escape direction. For that reason, also draught-proof systems with two traffic directions (right example) can be fully used in escape direction.

Examples for possible combinations Slimdrive SL-BO:



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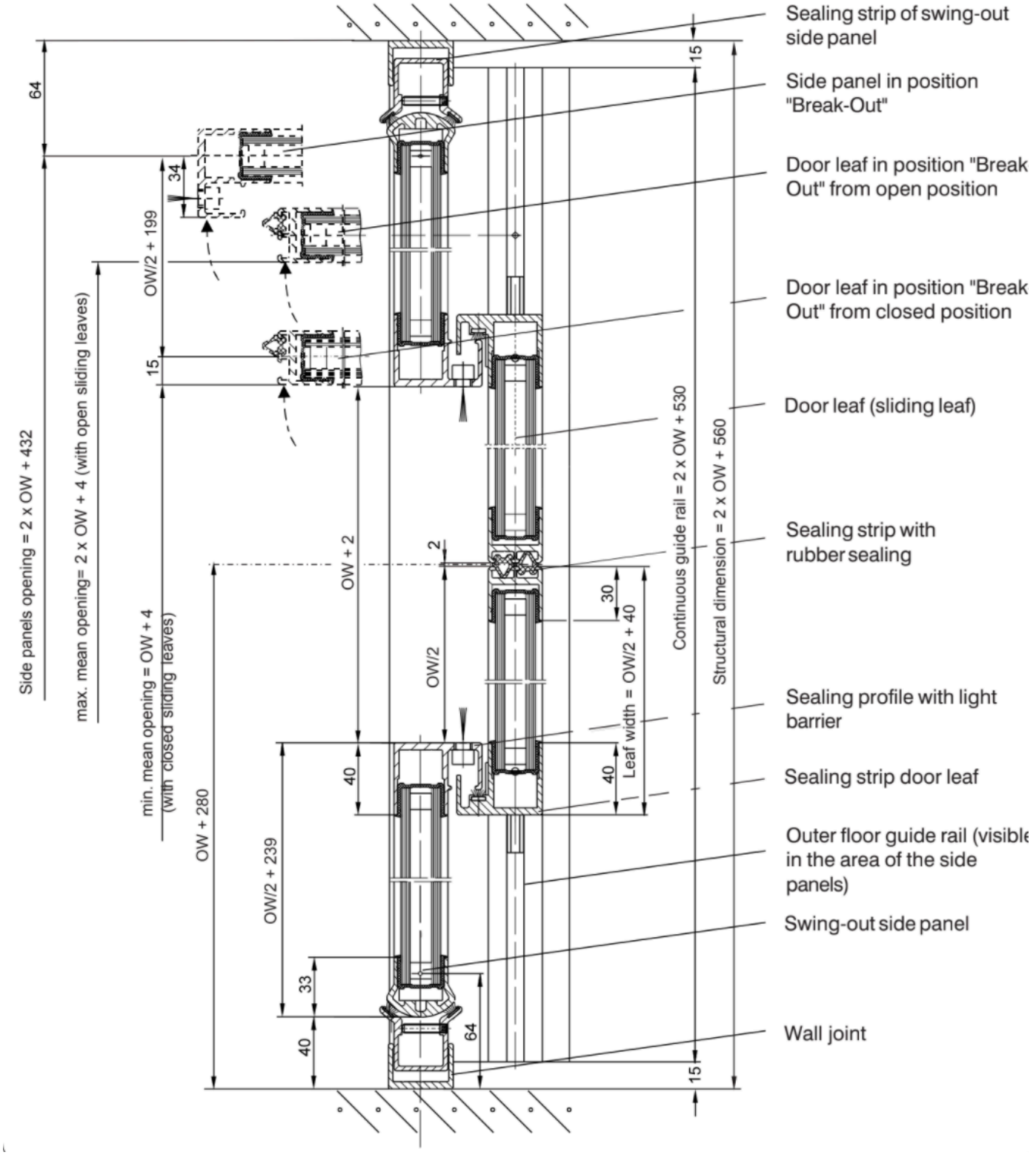
Horizontal Sections

Slimdrive SL-BO fitted between walls

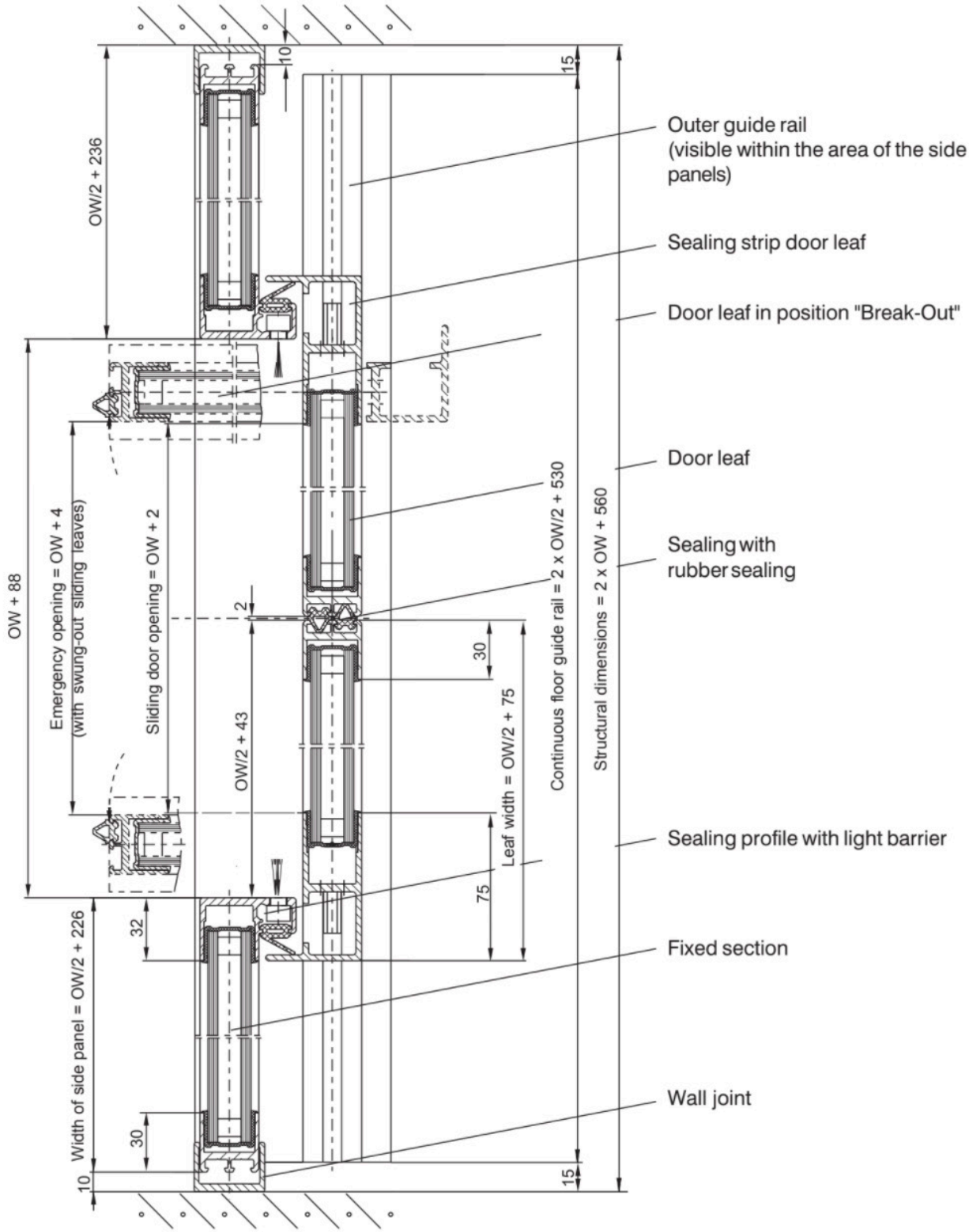
System with swing-out side panels



Horizontal Sections

Slimdrive SL-BO fitted between walls

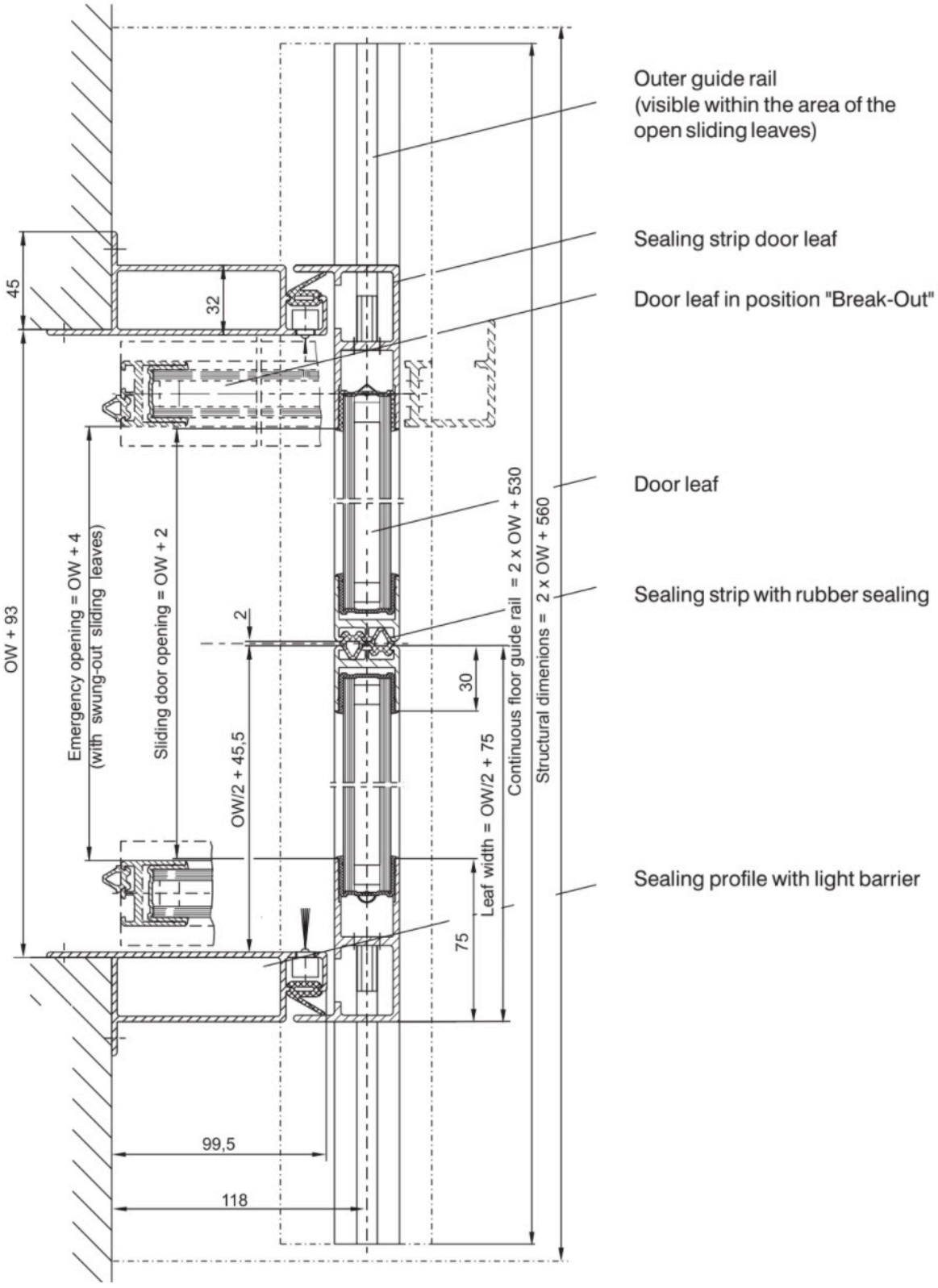
System with fixed side panels



Horizontal Sections

Slimdrive SL-BO for transom mounting

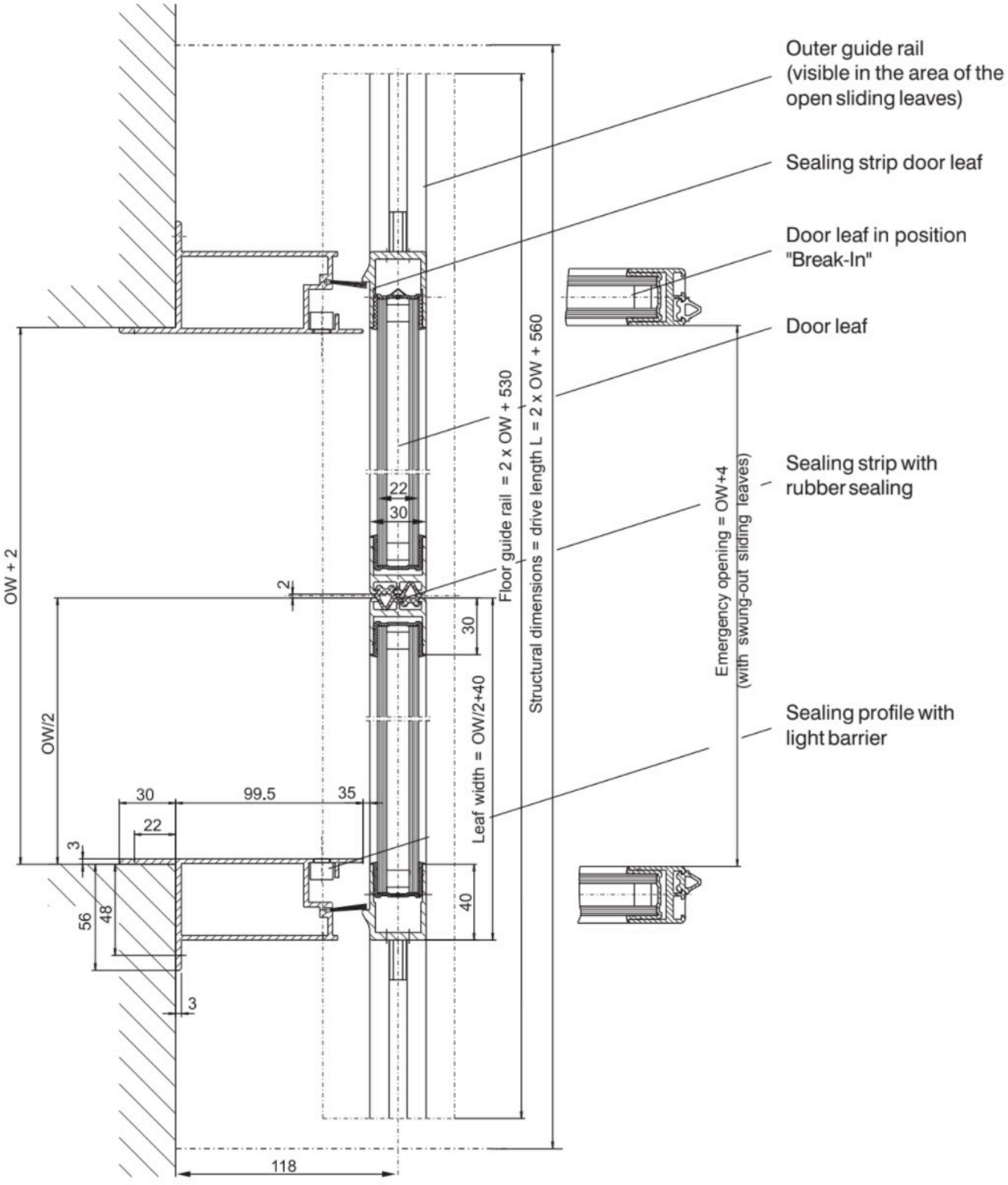
System without side panels



Horizontal Sections

Slimdrive SL-BO(BI) cantilever beam

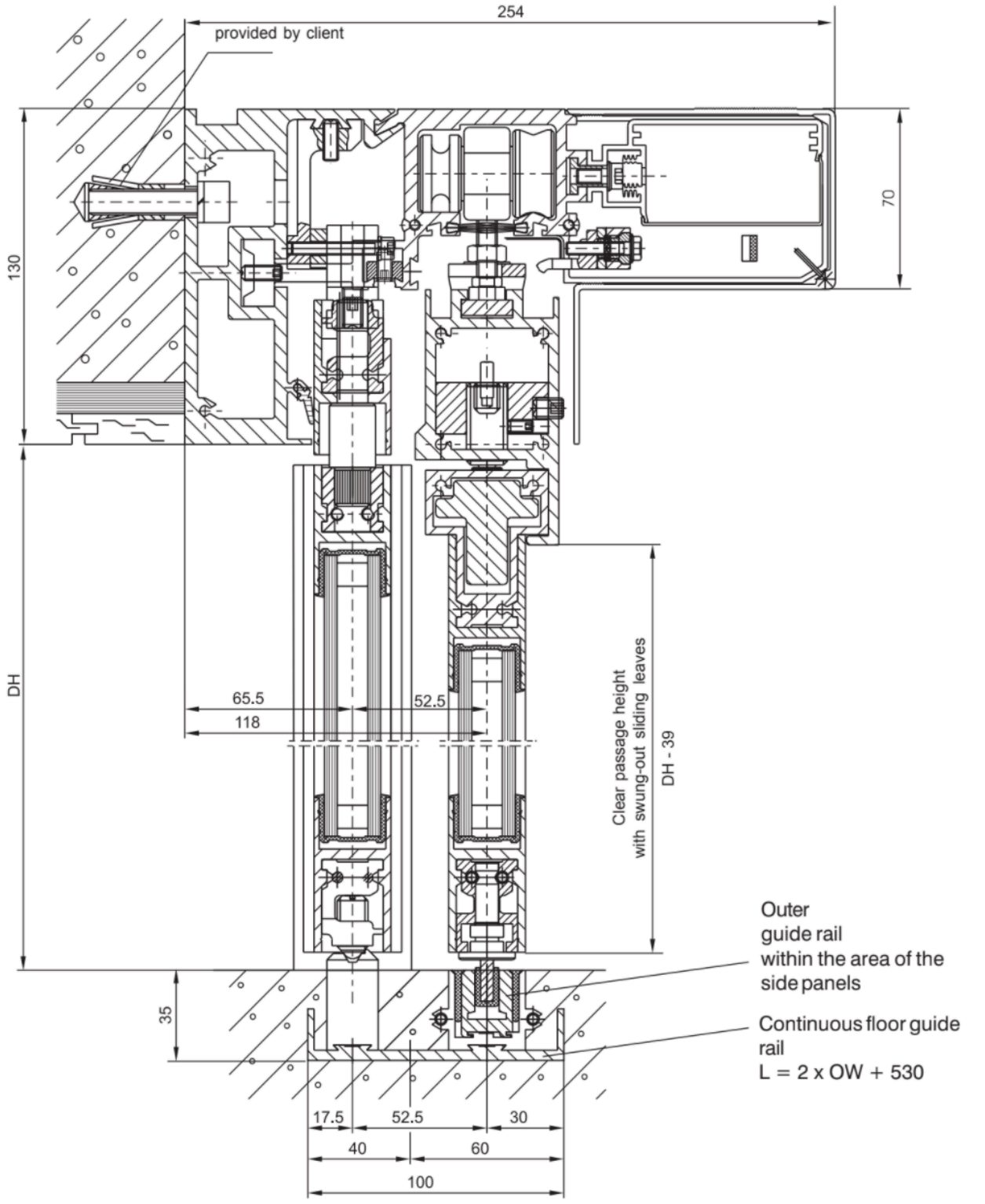
System without side elements



Slimdrive SL-BO: Vertical Sections

Wall fastening

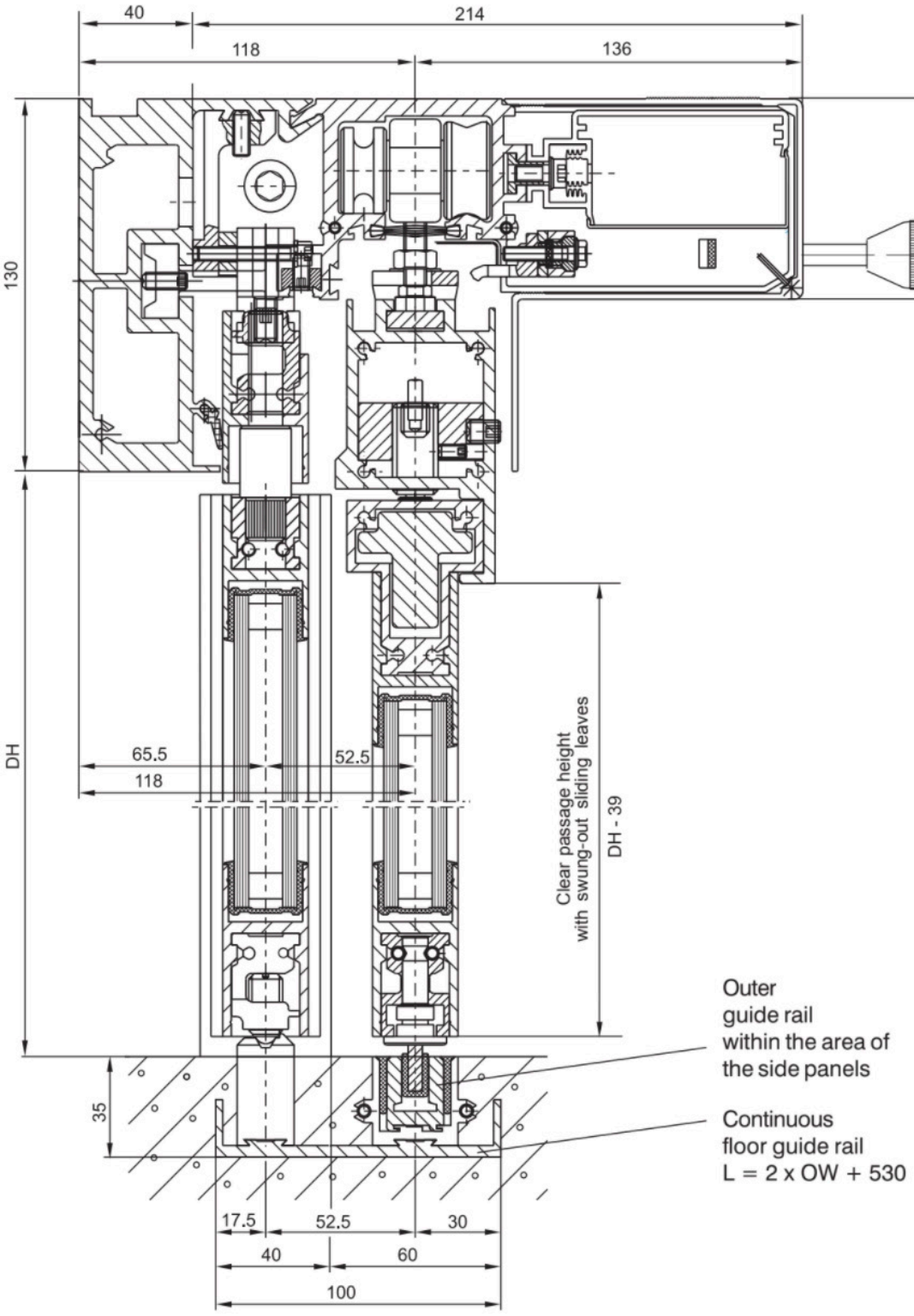
System with swing-out side panels



Slimdrive SL-BO: Vertical Sections

Slimdrive SL-BO with cantilever beam

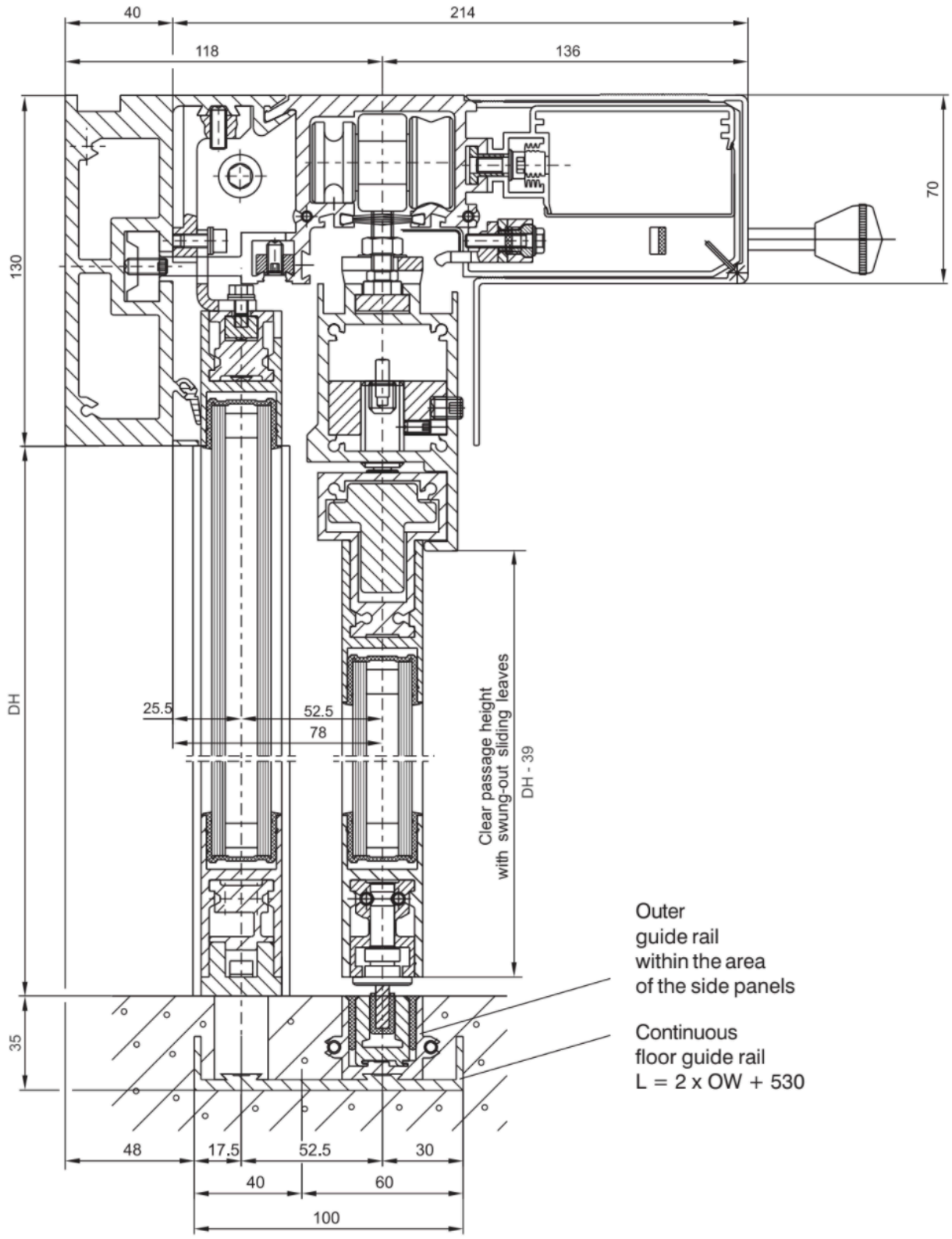
System with swing-out side panels



Slimdrive SL-BO: Vertical Sections

Slimdrive SL-BO with cantilever beam

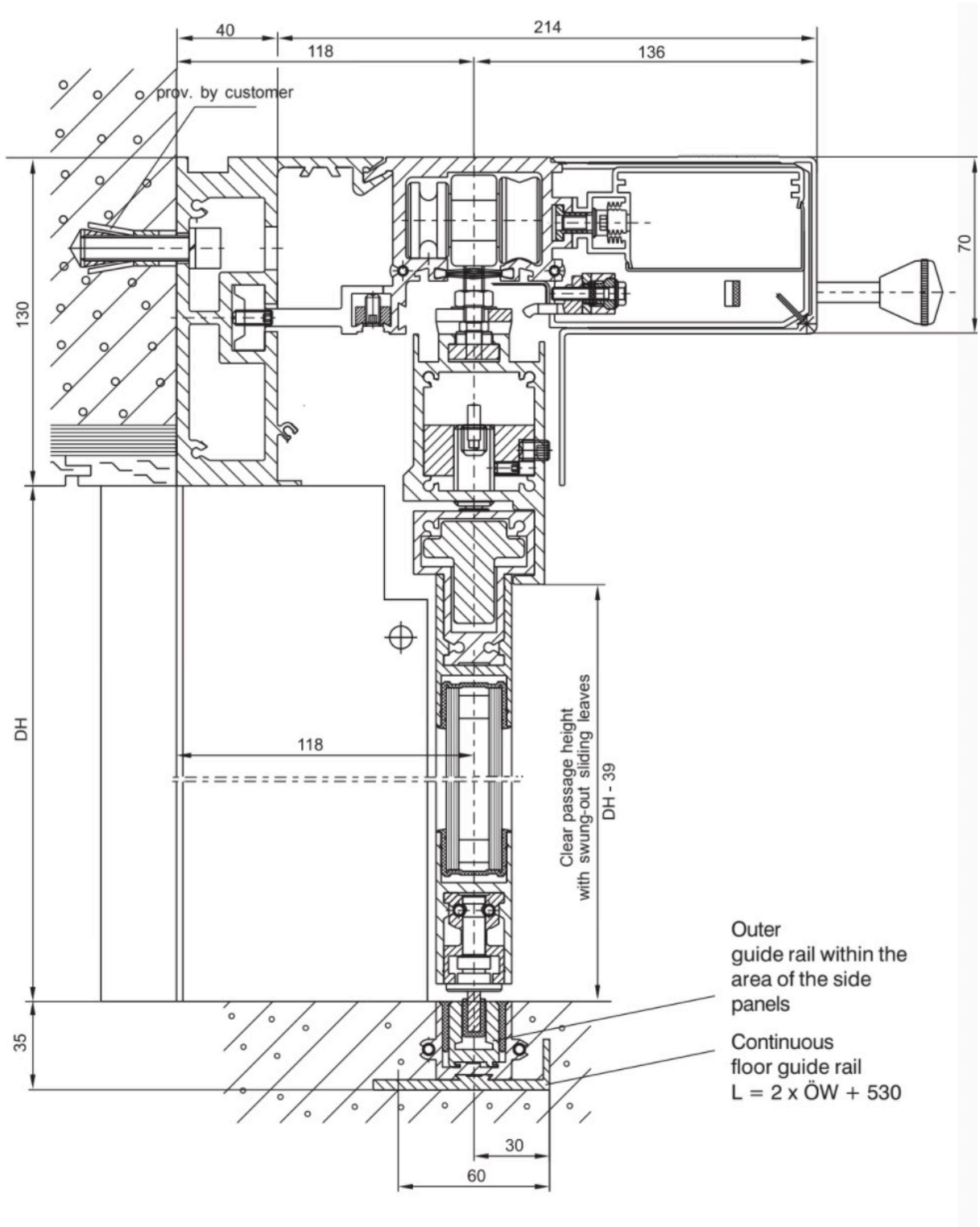
System with fixed side panels



Slimdrive SL-BO: Vertical Sections

Slimdrive SL-BO, wall fitted

System without side panels



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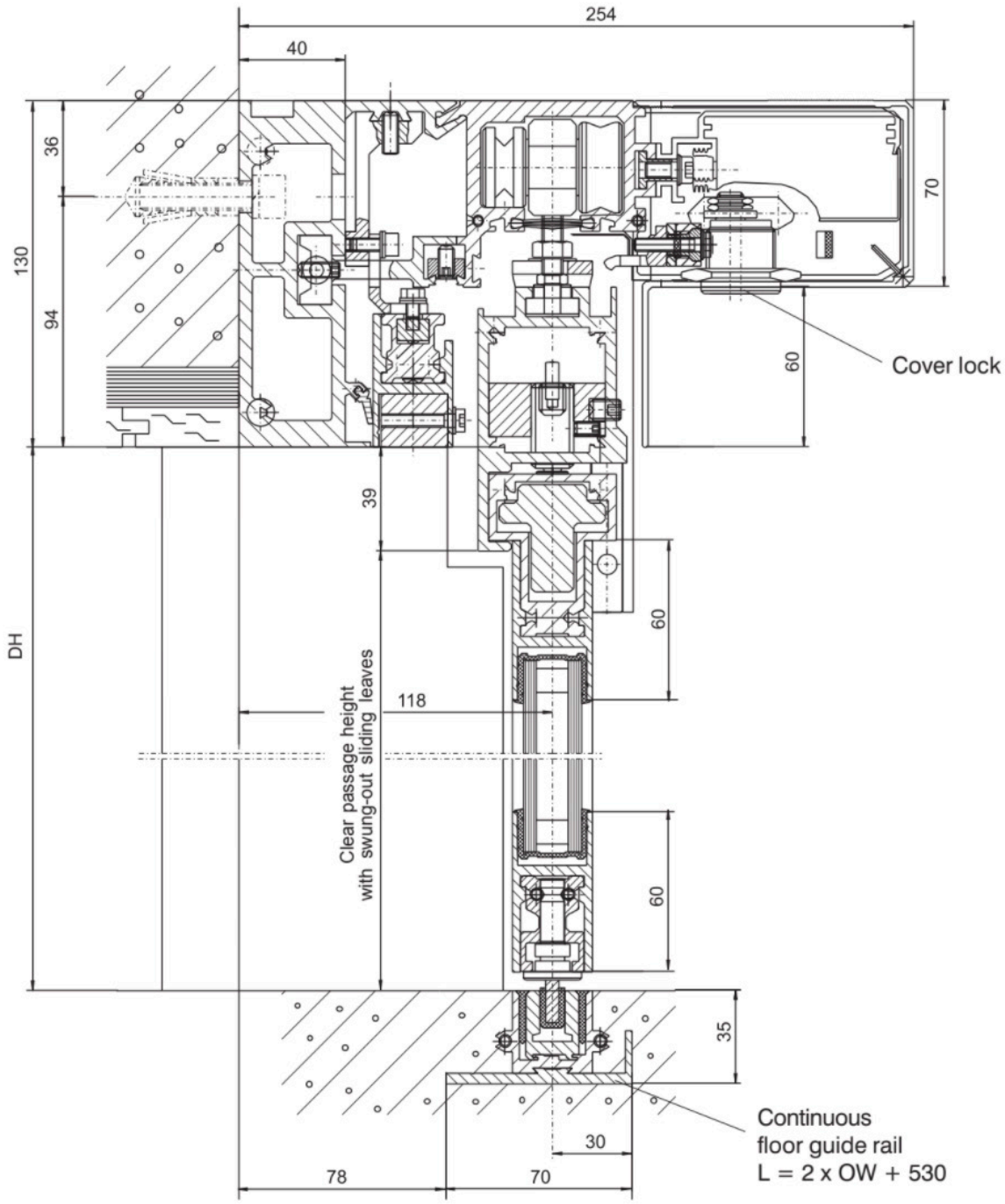
Slimdrive SL-BO(BI): Vertical Sections

Wall fastening

System without side panels

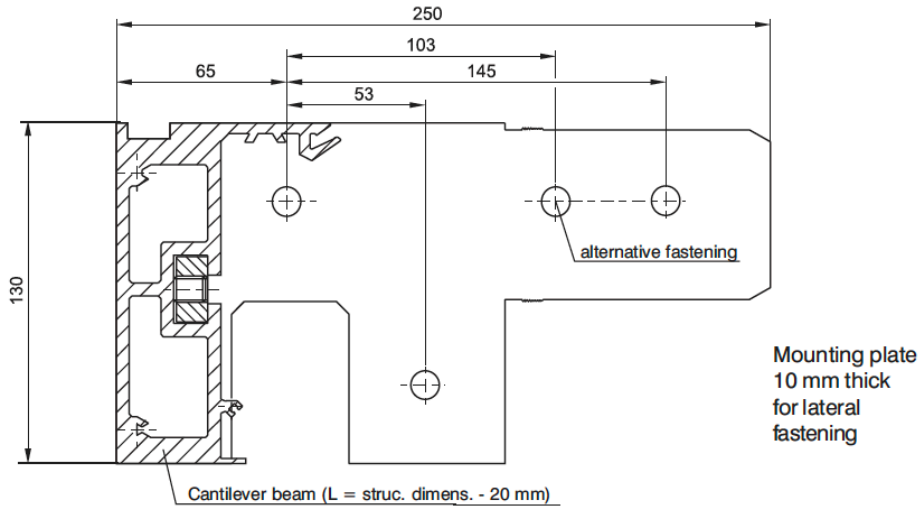


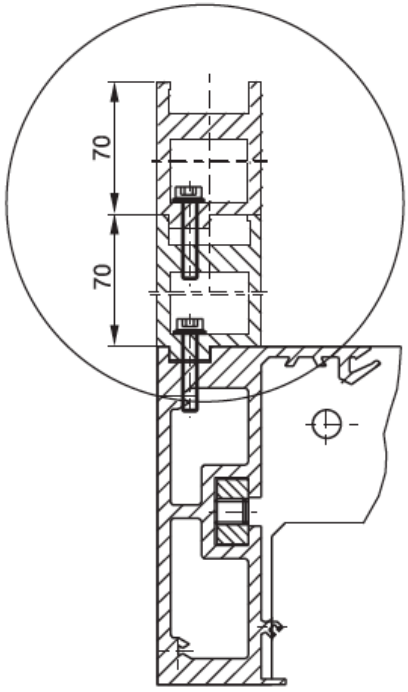
Cantilevered fastening

Besides transom mounting, all systems can also be mounted to facades such as post-rail facades or as cantilevered version. If the opening width exceeds 1800 mm, the cantilever beam is reinforced.

Cantilever beam

- For opening width up to 1800 mm (without cantilever reinforcement)





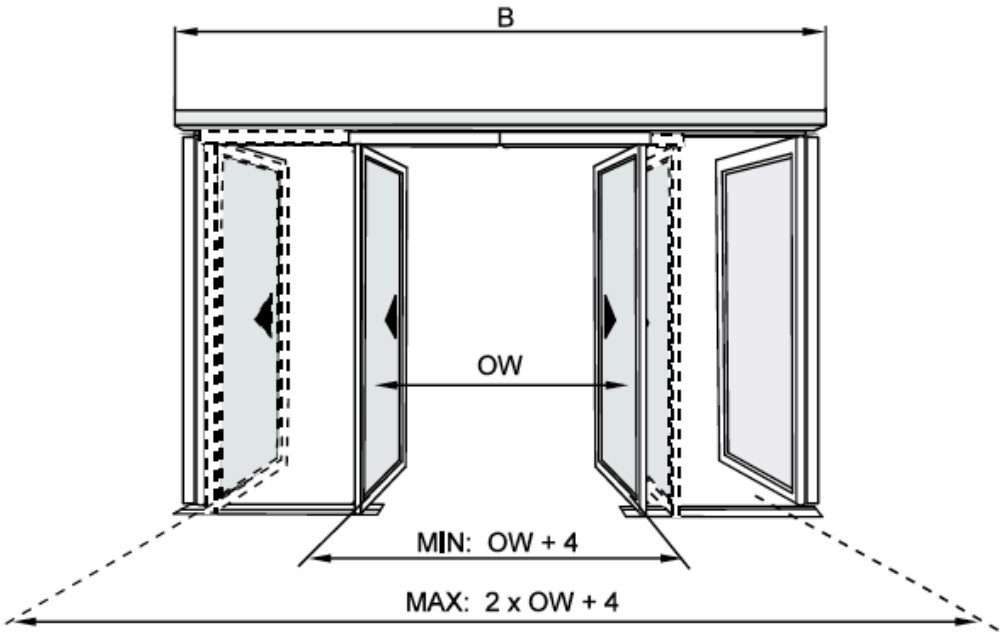
Cantilever beam with reinforcement

- For opening widths 1800 up to 2200 mm: with 1 reinforcing profile
- For opening widths 2200 up to 2500 mm: with 2 reinforcing profiles

Calculation of Overall Length of Total System

Key	B = Overall length of total system [mm] OW = Opening width

Overall length	
With swing out side panels (inc. safety gap 200 mm)	
Single-leaf	B = 2 x OW + 470 [mm]
Double-leaf	B = 2 x OW + 560 [mm]
With fixed side panels (inc. safety gap 200 mm)	
Single-leaf	B = 2 x OW + 470 [mm]
Double-leaf	B = 2 x OW + 560 [mm]
Without side panels	
Single-leaf	B = 2 x OW + 470 [mm]
Double-leaf	B = 2 x OW + 560 [mm]

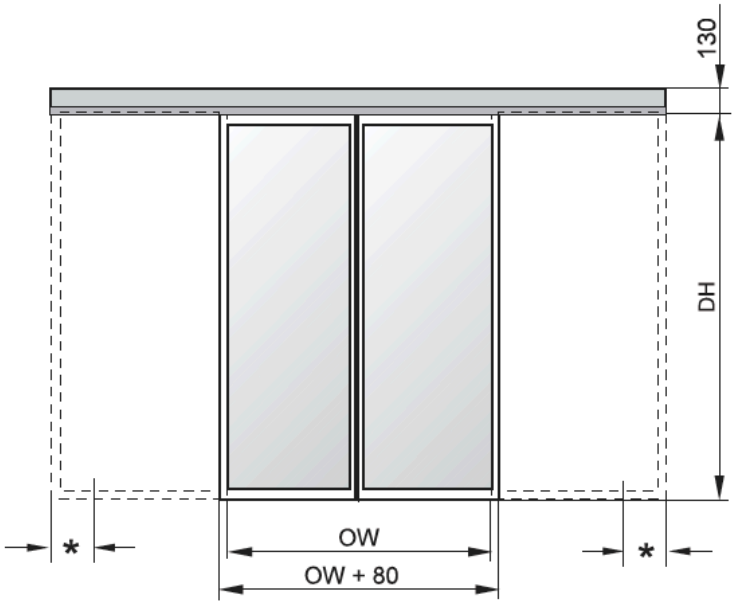


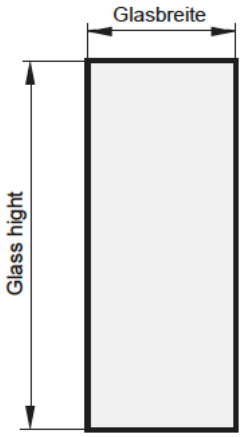
Calculation of Glass Dimensions

Frame profile with insulating glass fittings

Key	
	B = Overall length of total system [mm] DH = Passage height OW = Opening width * = Safety gap of 200 mm included

Sliding leaf	
All systems	
Single-leaf glass width = OW	Glass height = DH - 132 [mm]
Double-leaf glass width = OW / 2	Glass height = DH - 132 [mm]
Side Panels	
With swing-out side panels	
Single-leaf glass width = OW + 375 [mm]	Glass height = DH - 95 [mm]
Double-leaf glass width = OW / 2 + 196 [mm]*	Glass height = DH - 95 [mm]
With fixed side panels	
Single-leaf glass width = OW + 373 [mm]*	Glass height = DH - 37 [mm]
Double-leaf glass width = OW / 2 + 194 [mm]*	Glass height = DH - 37 [mm]





Description of Functionality

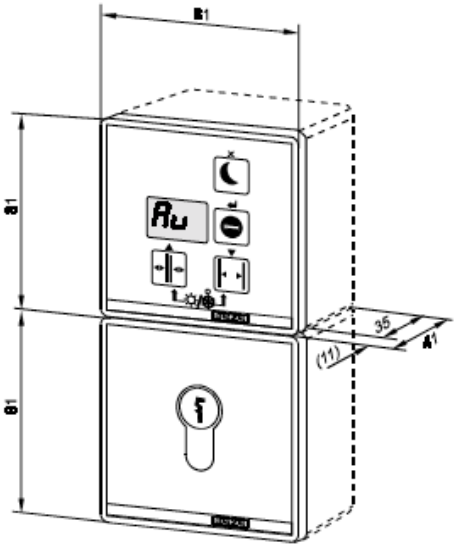
Display programme switch and key-operated switch

A programme switch with display and flush-mounted or surface-mounted membrane keyboard can be used for Slimdrive SL-BO(BI). In addition to this, a key- operated switch against unauthorized reversing is prescribed.

The operating mode of the door is selected via the display programme switch (see below).

Error indications can be polled at the display programme switch.

Adjustment and Service are also possible.



The function of the sliding door can be adjusted via the programme switch:

Buttons		
	Permanently open:	The door opens to position OPEN and remains open. Movement detectors or opening pushbuttons are not active.
	Night (option):	The movement detectors are inactive, the door closes and is secured by locking of the door leaves to prevent the door from being pushed open by force.
	Shop closing time:	The door opens and closes only, if someone stepping out of the door. The exterior movement detector is not active, the interior movement detector is active.
	Automatic operation-summer: Light barriers provide safety during the operation of the leaves.	The door opens as soon as the door is triggered via movement detectors or pushbuttons and closes again in accordance with a pre-set time.
	Key-operated switch:	Light barriers provide safety during the operation of the leaves. The programme switch can be adjusted with key-operated switch being operated.

Description of Functionality

Display programme switch and key-operated switch

Opening width:

- Full opening width: The door has its max. Opening width when opened or when set to its permanently open position.

System with swing-out side elements:

- The opening width can be increased by nearly double by swinging out the sliding leaf and the side elements.
- Reduced opening width - ‘Winter position’: (only available with Slimdrive SL-BO with swing-out side panels and Slimdrive SL-BO(BI))

Full opening width: The door has its max. Opening width when opened or when set to its permanently open position.

The door opens only part of its max. opening width. As a result, in winter heat exchange between the heated interior of the building and the cold air outside can be reduced.

The reduced opening width can be infinitely varied by manually positioning the door while the system is in learning

Hold-open time:

The length of time the moving leaf remains open until the next closing action is performed. This time can be freely set between 0 and 60 seconds.

Power failure:

In the event of a power failure, the door moves to its OPEN or CLOSED position (depending on the setting) and remains at the desired position.

Technical characteristics / specification

Mains power supply:

230 V AC + 6% - 10% at 50 Hz or 60Hz

Energy consumption: max. 150 VA

Conforms with CE - regulations

Description of Functionality

Display programme switch and key-operated switch

Basic types of activation

- Radar movement detectors detect all objects moving within the radar field. All movements within the detection area cause a reflection which is transferred as door opening impulse.
- Active infrared movement detectors detect persons and objects in accordance with the reflection principle of short-wave infrared radiation. This allows to exactly adjust the detection area. In addition to persons and animals, supermarket trollies or hospital beds, too, trigger the door-opening impulse.
- Passive infrared movement detectors react to heat radiation, connected with movement and are therefore suited to detect persons. Supermarket trollies, e.g., cannot be detected due to the missing heat radiation.
- Pushbutton, key-operated switch, etc.
- Remote controls.

Locking of door, leaving / entering the building

How to pass the locked door?
The programme switch is set to night-setting.
The door is closed and mechanically locked.

- Leaving the room:
  Operate the manual unlocking button, the door opens -and closes and locks automatically after you have left the room.
- Entering the room:
  The door can be opened with a key-operated switch or any other electronic switch. The door is unlocked and opens. After you have left the room, the door closes and locks again.
- Now you can select the desired operation mode at the programme switch.

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Contact Us:

1300 12 OPEN
info@oasa.com.au
www.oasa.com.au