Automatic Sliding
Partition System

DORMA HSW-EM

The partition system that opens up a world of possibilities

When rooms need to be subdivided dependent upon varying requirements or at certain times of the day, if exterior frontages need to be wide open during fine weather yet otherwise closed tight, and where intermediate walls are required from time to time – the DORMA HSW-EM Automatic Sliding Partition System is the perfect answer.

Unmatched flexibility
Made up of individual moving panels, the DORMA HSW-EM system can be adapted to almost any conceivable layout and architectural design. The sliding panels are available in various versions and can be supplied in virtually any required finish. The parking/stacking areas for accommodating the sliding panels when the system is open can be arranged in accordance with local requirements and design considerations to ensure that they take up the minimum amount of space. Moreover, pre-installed manual systems can be retro-fitted for automatic operation at any time.

Wide range of functions
Apart from the automatic opening and closing of the sliding panels, the programmable processor control system also allows the DORMA HSW-EM automatic sliding partition to perform a variable partial opening, or allow personnel access when the partition is closed. Needless to say, the sliding panels can also be moved easily and safely by hand, e.g. when cleaning the floor. Once the drive system has been switched on, they are automatically positioned in the right sequence. Panel weights range up to 250 kg, and there is no minimum panel weight.

Features and benefits

- Easy pushbutton-controlled opening and closing action
- Fast opening and closing cycles
- Panel weights up to 250 kg
- Configurations tailored to the layout and architectural requirements of the application
- High reliability and functional dependability thanks to individual sliding panel drive units
- Minimal drive unit and track rail heights
- Space-saving stacking of the sliding panels when the partition is opened, with a choice of stacking arrangements
- Sliding panels of various styles and models, with individually designed panels also available
- Panel position monitoring
- Automatic stoppage on contact with an obstruction
- Automatic locking of the closed sliding panels
- Sliding panels can also be manually moved
- Infinitely variable partial opening
- Personnel partial opening when the partition is closed
- Personnel access possible with partition closed

Contents Page

Room dividers

When used as room dividers, the DORMA HSW-EM system can be equipped with the following:

- Toughened glass sliding panels, each provided with two top and two bottom MANET single-point fixings
- Toughened glass sliding panels with full-width glazing rails top and bottom
- Straight glass sliding panels with SECURTEC fine frame system
- Curved glass sliding panels with SECURTEC fine frame system

Exterior frontages with enhanced thermal insulation

The HSW-EM/IsoComfort version ensures a high level of insulation and associated comfort when the sliding frontage is closed. This glass sliding panel system comprises:

- Frames of thermal break external and internal profiles with fully automatic double seal top and bottom
- Panels of double glazing or specialised glazing.

In addition, a telescopic side element ensures that the IsoComfort sliding panels can be tightly pushed together once closed, with the lateral seals interlocking for total gap – and thus draught – exclusion. (Under preparation).

Partitions with sound-proofing properties

The HSW-EM/IsoComfort with its thermal break aluminium profiles and fully automatic double seal top and bottom, plus telescopic side element is also ideal as a sound-insulating partition.

Fitted in the frames is a double-skin chipboard infill or similar and, on both faces, an individual cladding of glass, metal or wood. (Under preparation).

Technical data	HSW-EM
Drive depth	140 mm
Drive height	165 mm
Max. length of unit	40 m
Max. number of sliding panels	40
Max. opening width	40 m
Combination of several systems	○
Panel width	600–1500 mm
Recommended max. system height	3,5 m
Max. panel weight, HSW-EM 180	180 kg
Max. panel weight, HSW-EM 250	250 kg
Minimum weight	–
Minimum radius for curved configurations	1,5 m
Radius for directional changes	150 mm
Hold-open time, personnel opening	0–60 s
Travel speed	80–150 mm/s
Creep speed	50–80 mm/s
Force limitation, adjustable	0–150 N
One panel width clearance between travelling panels	●
Reduced distance between travelling panels	○
Parameter adjustability	●
Standby power consumption	20 W
Max. power consumption (20 panels)	400 W
Average power consumption	30 W/h
Electro-mechanical locking	●
Manual unlocking, internal	●
Manual unlocking, external	○
Type approved (TÜV)	●
Tested for compliance with low voltage directive	●

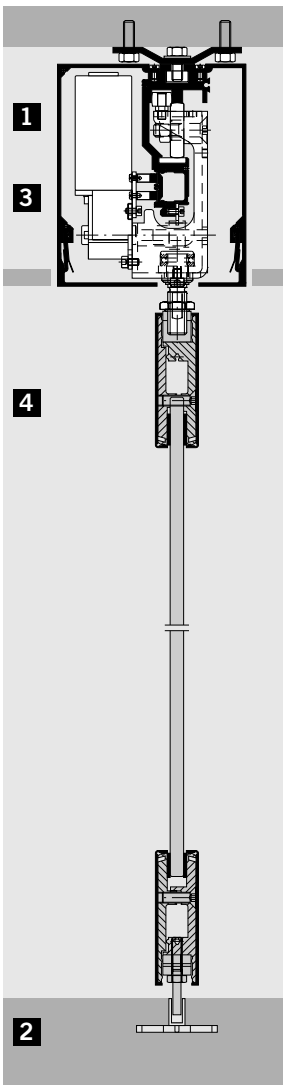
Control functions	
Program switch functions	
Open – Stop – Closed	●
Partial opening	●
Personnel opening	●
Key switch for personnel access	○
Emergency power module	○
Floating contact	○
Airlock control	○
Lock status signalling	●
Programmable processor control	●
Mains fuse rating	10 A
Power supply data	230 V, 50 Hz
External power supply	24 V DC/2 A
Degree of protection	IP 20

● standard ○ option ■ alternative

Stacking arrangement	
Visible stacking section	■
Stacking in adjacent room	■
Automatic flap of stacking room	○
Second stacking section	○
Stacking at centre of run	○
Stacking with partition-to-wall connection	○

Sliding panel design	
Unframed toughened glass with MANET single-point fixings, straight	■
Unframed toughened glass with MANET single-point fixings, curved	■
Unframed toughened glass with glazing rails, straight	■
SECURTEC fine frame, straight	■
SECURTEC fine frame, curved	■

Drive type	
Automatic	■
Manual, prepared for automatic operation	■



System design

Essentially, the DORMA HSW-EM automatic sliding partition system designed for applications as a room divider comprises the following:

1 Track for attaching to the ceiling or wall with bi-polar busbar system and cover
- HSW-EM 180: Track rail of anodised aluminium; plastic rollers
- HSW-EM 250: Track rail of chromium nickel steel and hardened steel rollers

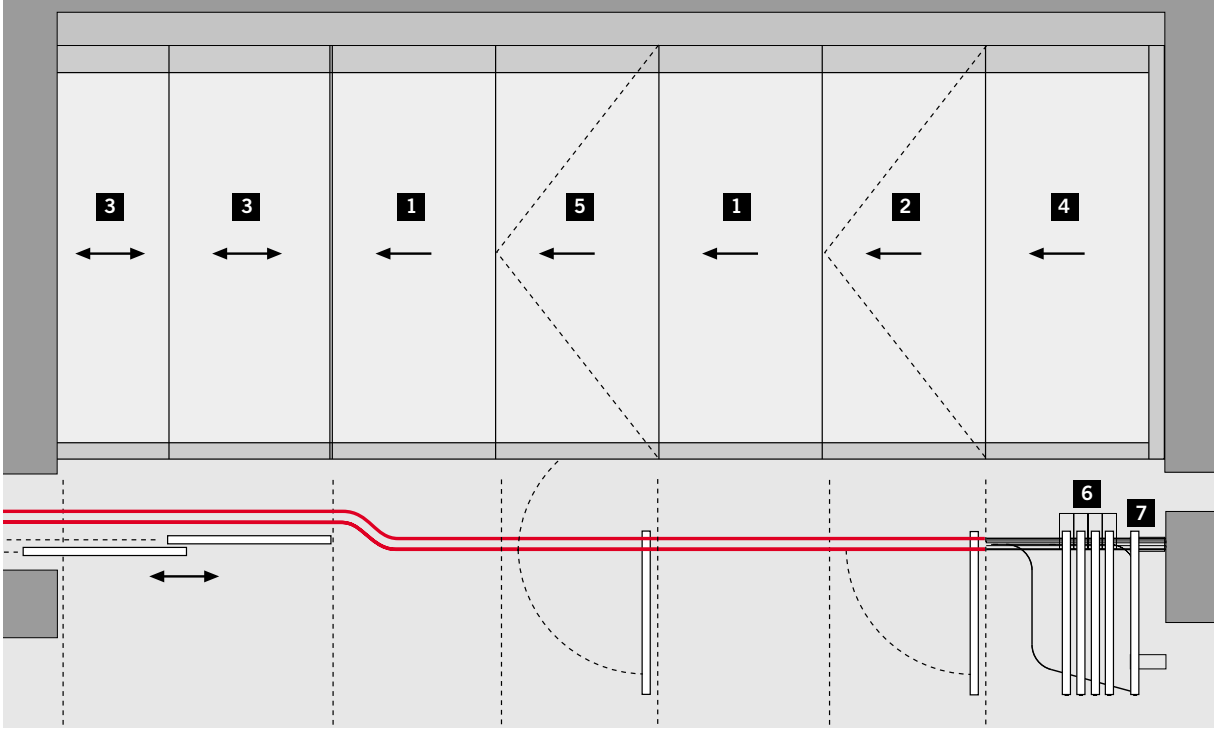
2 Guide rails recessed in the floor

3 Rollers with carriers and drive motor for each sliding panel

4 Sliding panels of toughened glass, with MANET single-point fixings or SECURTEC fine framing

Stacking track of tailored design and project-specific arrangement.

Arrangement options



Equipment

1 Toughened glass or framed glass sliding panels

2 Manual or automatic swing door permanently installed

Options

3 Automatic sliding door system as random access door with automatic opening and closing (example above: the uni-lateral telescopic sliding door system DORMA TST).

4 Fixed side screen

5 Automatic sliding panel with manual single action or double action door

6 Stacking area

7 Last panel as contact panel to the wall

Basic layouts

8 Straight-line configuration

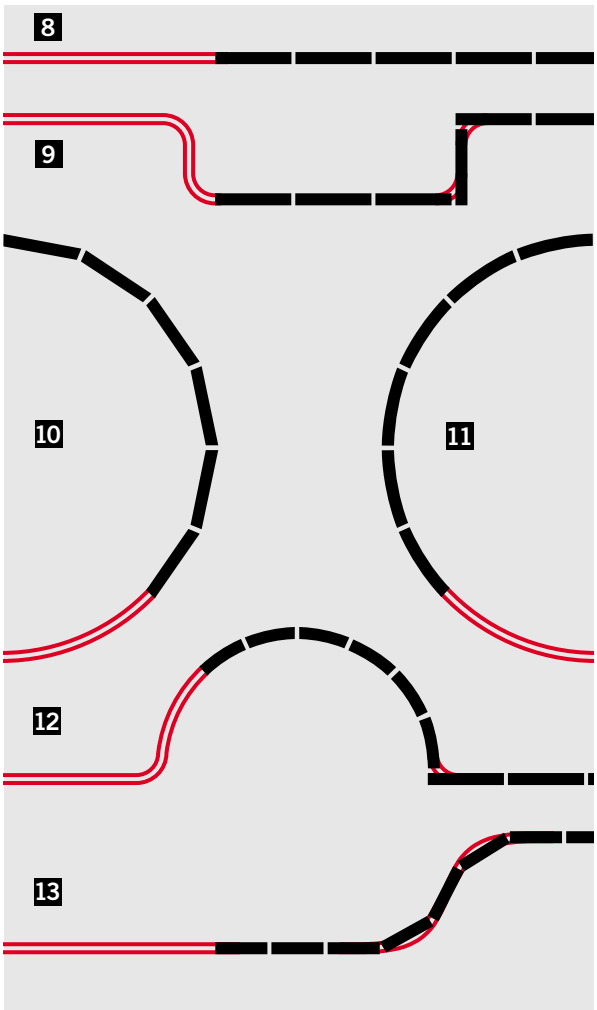
9 Corner bypass configuration

10 Curved sliding partition with straight panels

11 Curved sliding partition with curved panels

12 Semi-circular projecting configuration with straight and curved sliding panels

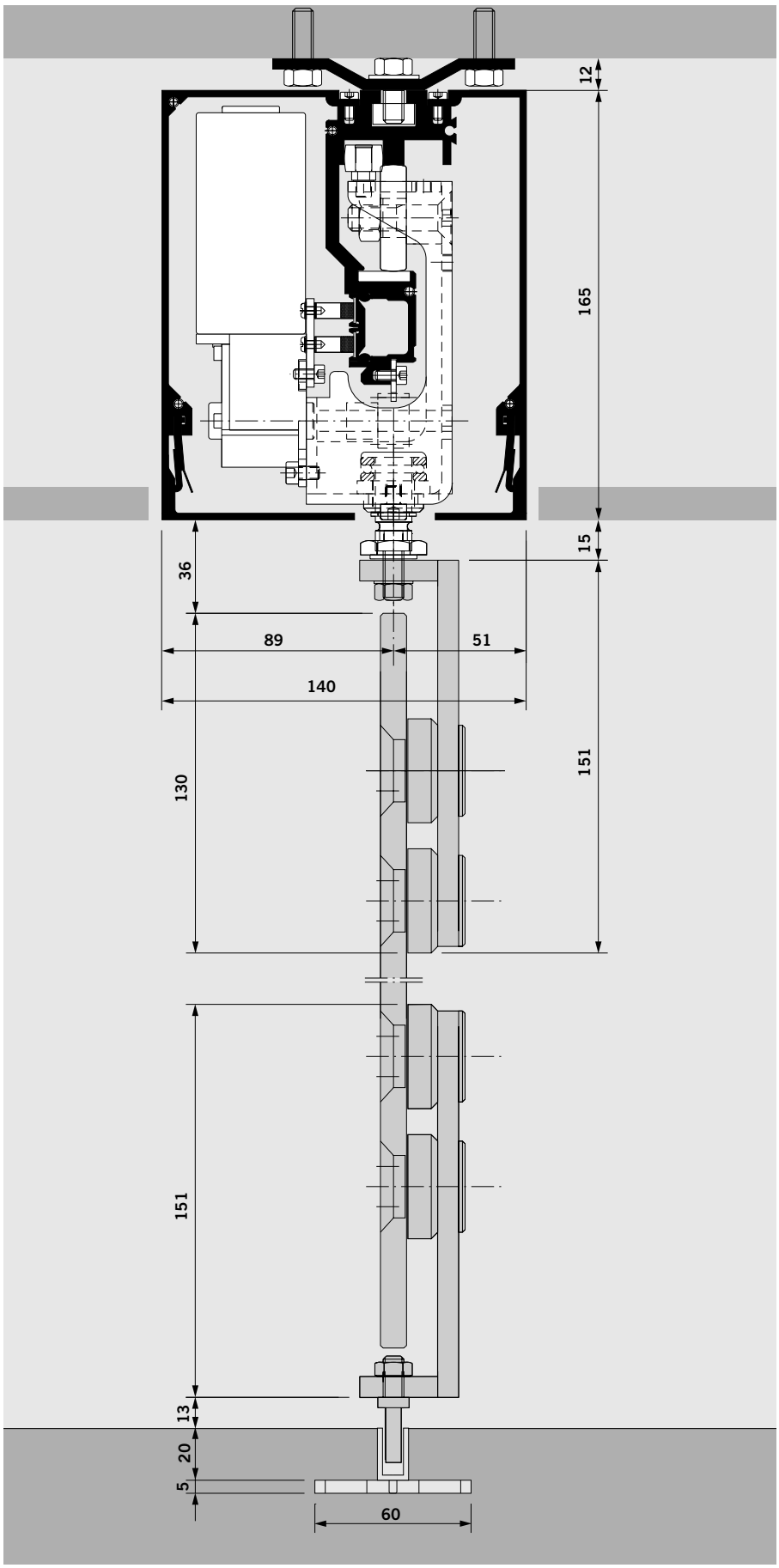
13 Partial “S” configuration with straight panels



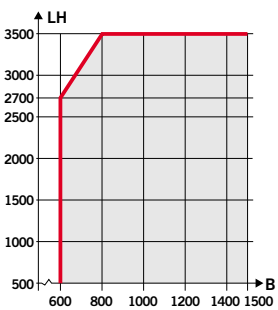
Room divider with MANET single-point fixings

Features

- Weightless appearance thanks to elegant single-point fixings of stainless steel arranged top and bottom
- Panels of single-pane toughened glass (ESG), 10 or 12 mm thick
- Straight or curved panels
- Complete range of components matching the single-point fixings for mounting glass elements to walls, floors, ceilings and other glass elements



Calculating width B
as a function of clear passage height LH



DORMA HSW-EM with MANET
single-point fixings:
The elegant room divider
solution as applied in a bank.

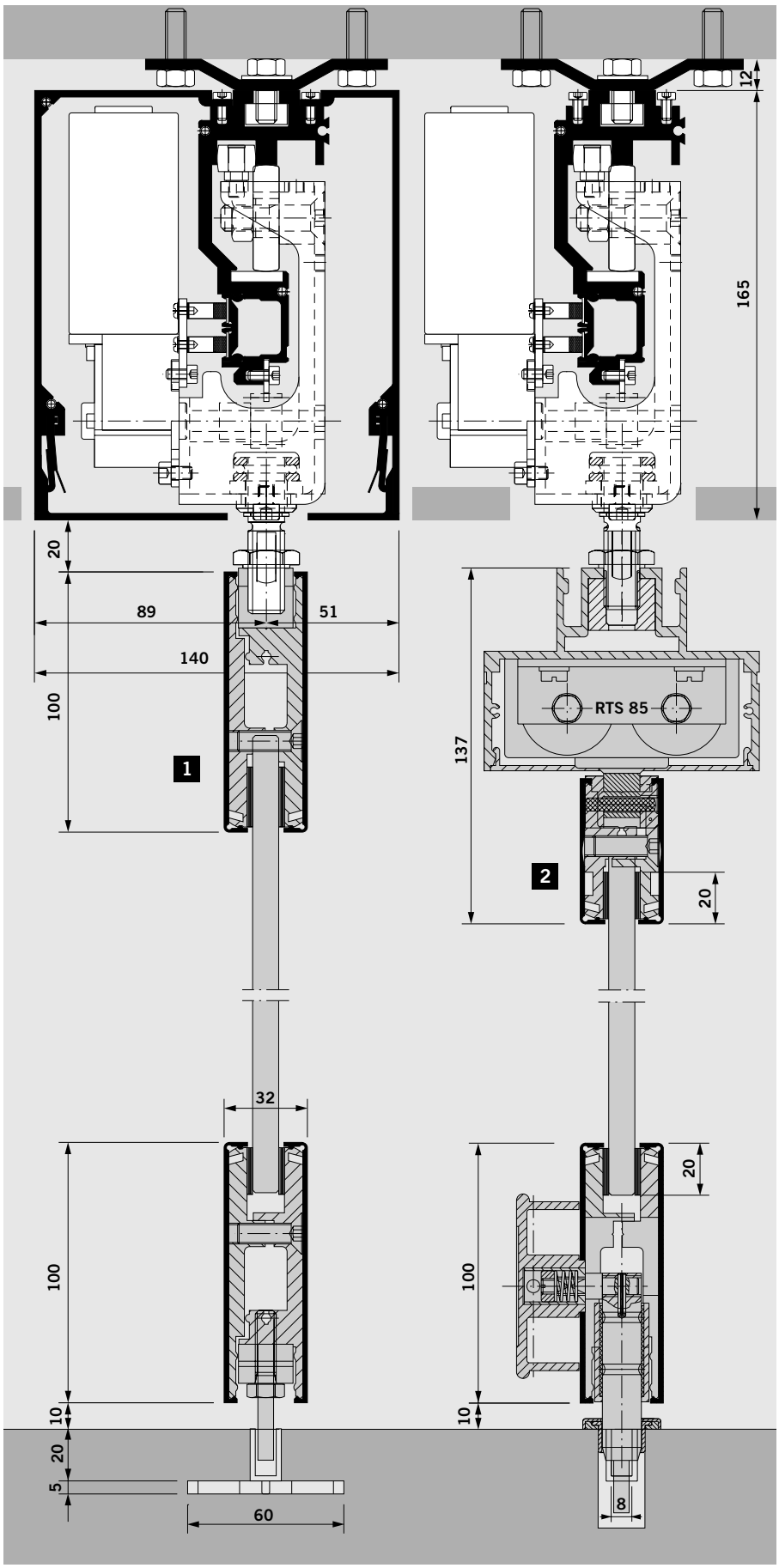
Room divider with glazing rails

Features

- Attractive all-glass design thanks to exposed lateral glass edges
- Glazing rails top and bottom emphasise the horizontal lines of the partition
- Clip-on covers of aluminium of different anodised finishes, stainless steel or brass
- Panels of single pane toughened glass (ESG), 10 or 12 mm thick

1 Sliding panel

2 Automatic sliding panel with manual single action or double action swing door



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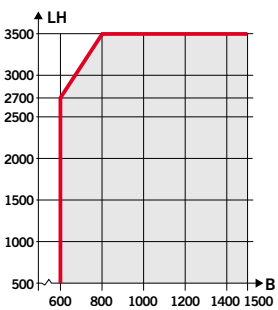
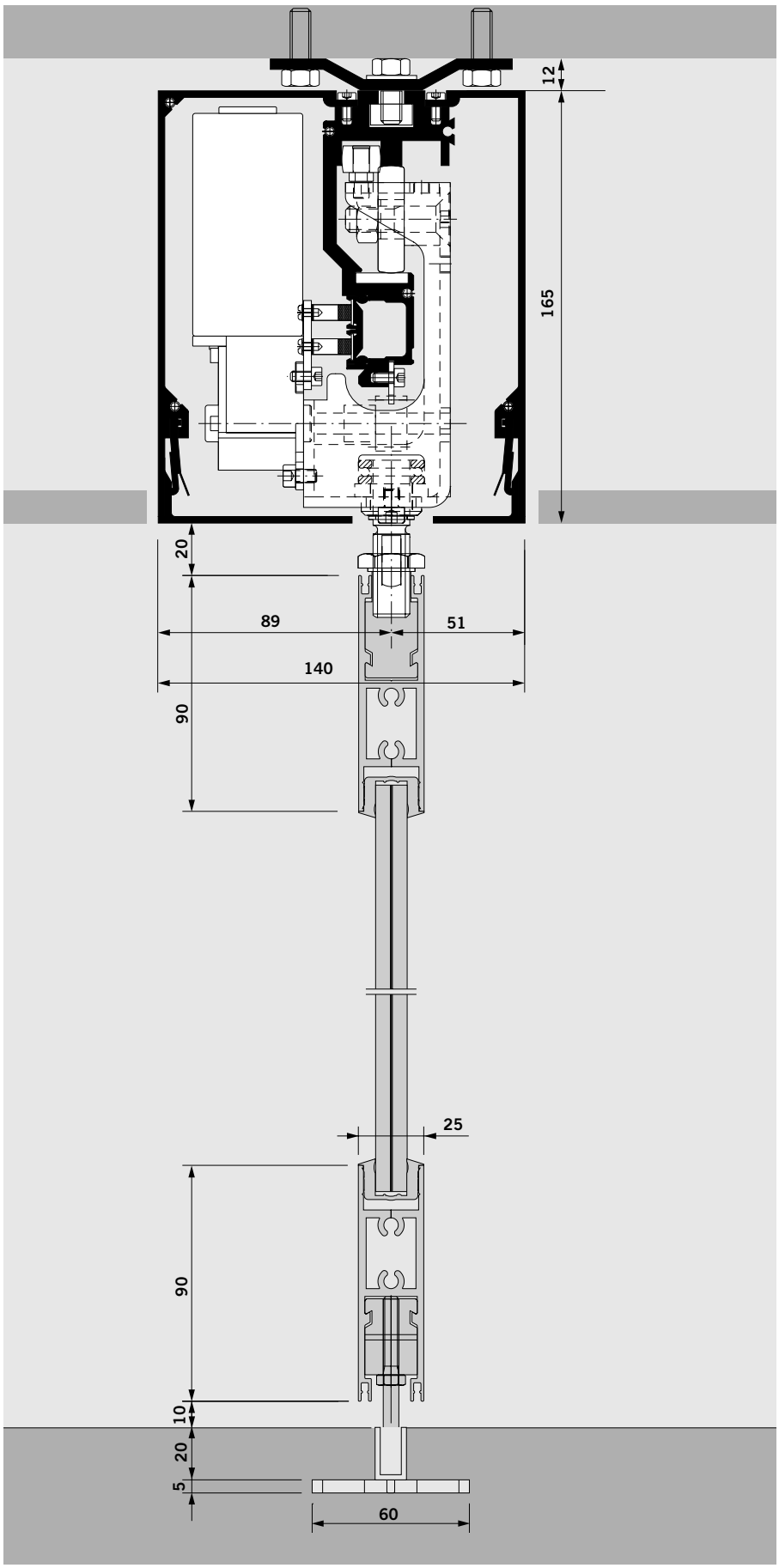


Glazing rails – the proven profile system for HSW-EM room dividers

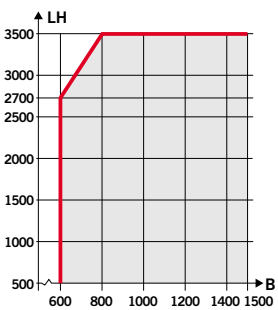
Room dividers with SECURTEC fine framing

Features

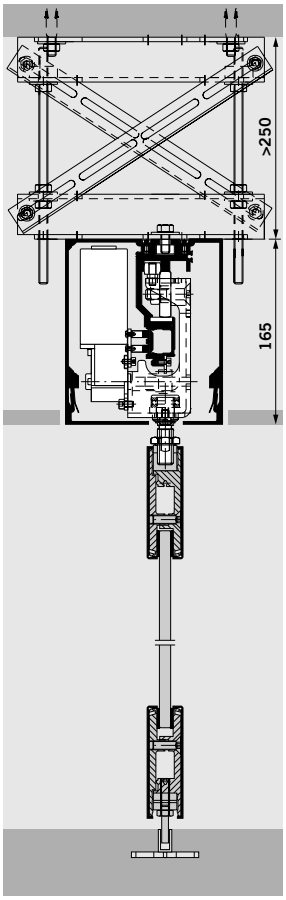
- Attractive wide-area glazing enhanced by slender framing
- High stability and torsional rigidity
- Panels of single-pane toughened (ESG) or laminated (VSG) safety glass, 10 or 12 mm thick, specialised glass, or double glazing up to max. 18 mm
- Also available with curved panels and glazing
- High level of security thanks to interlocking profiles



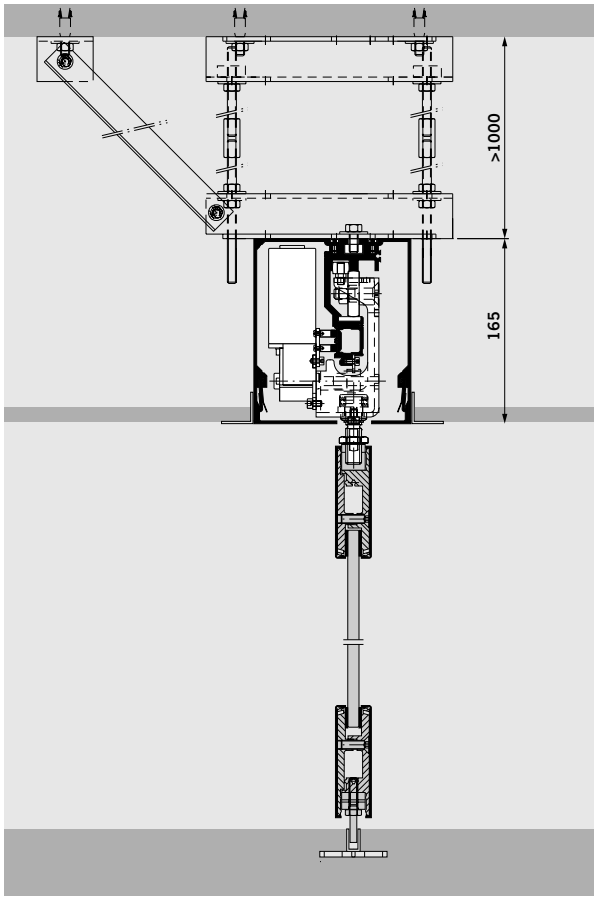
Calculating width B
as a function of clear passage height LH



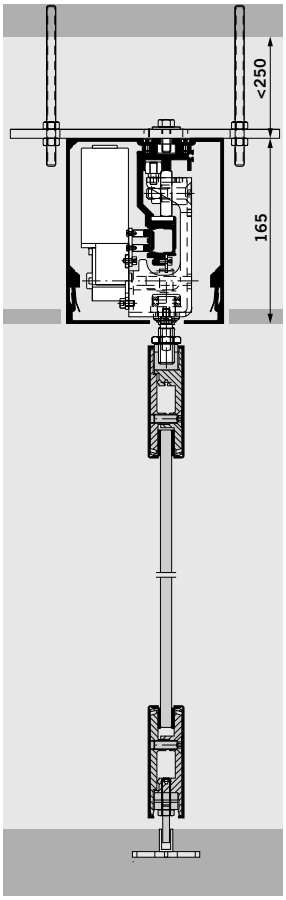
SECURTEC fine framing – elegant HSW-EM room divider systems with slender all-round profiles



Installation with intermediate steel suspension structure for height adjustment in combination with suspended/ false ceiling (standard)

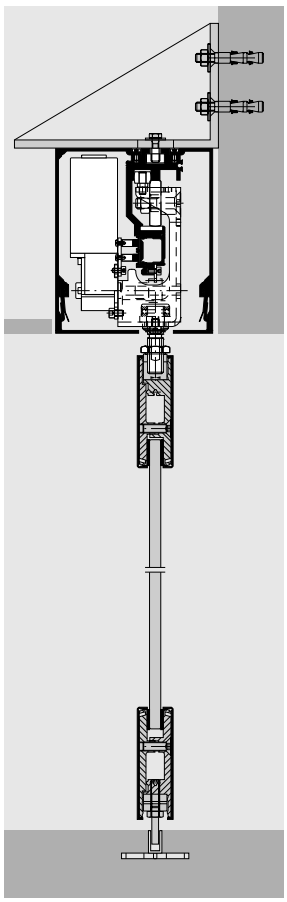


Installation with intermediate steel suspension structure for height adjustment in combination with suspended/ false ceiling of depths greater than 1 m (standard); with angle brackets for supporting the ceiling

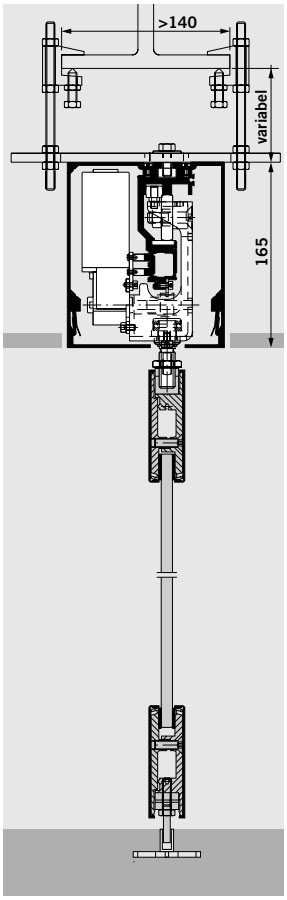


Ceiling installation with fixing to steel plate assembly provided by others

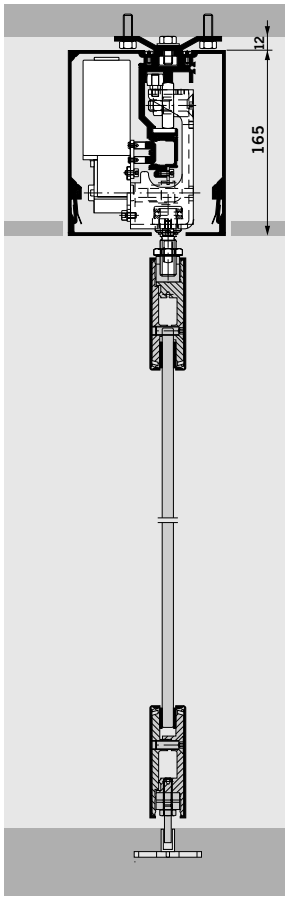
View from below: Track and drive assembly integrated in the suspended ceiling



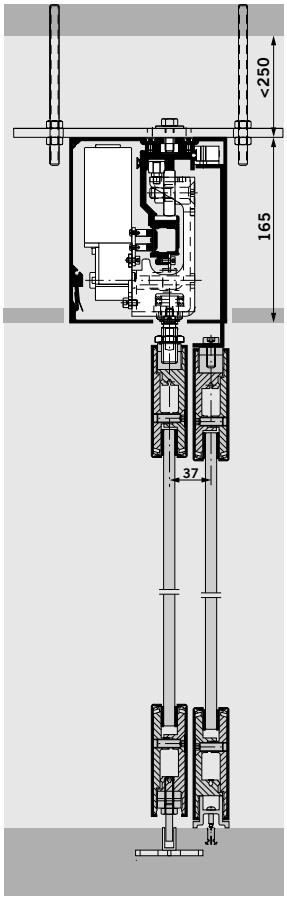
Lintel-flush installation with wall angle bracket



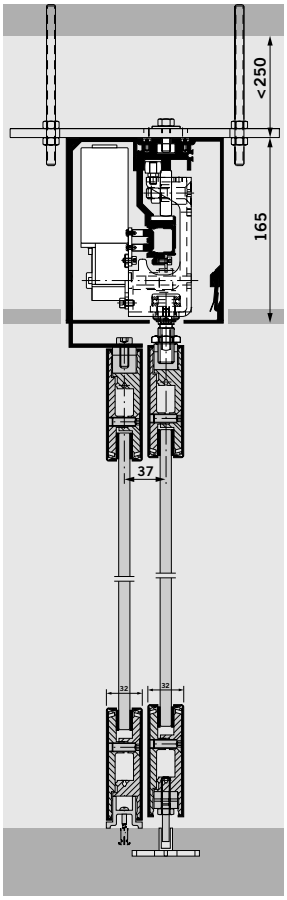
Ceiling installation with fixing to steel girder by others



Installation below prefabricated upper floor with tack and drive assembly cover (mounting surface must be perfectly level)

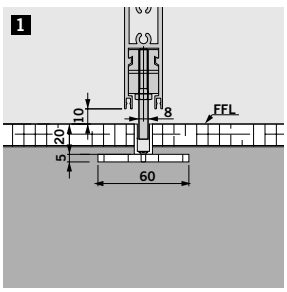


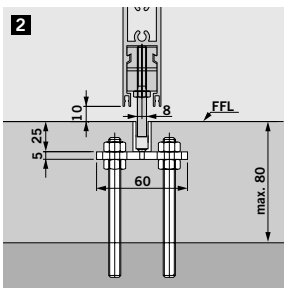
Ceiling installation with fixing to steel plate assembly by others, with fixed side screen on opposite drive side

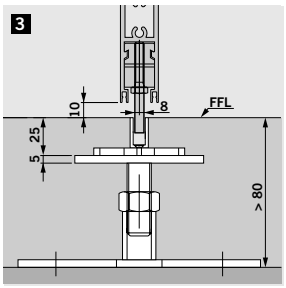


Ceiling installation with fixing to steel plate assembly by others, with fixed side screen on drive side

Floor rail







1 Floor rail recessed in prefab floor

2 Floor rail with support arrangement for fixing to unfinished floor

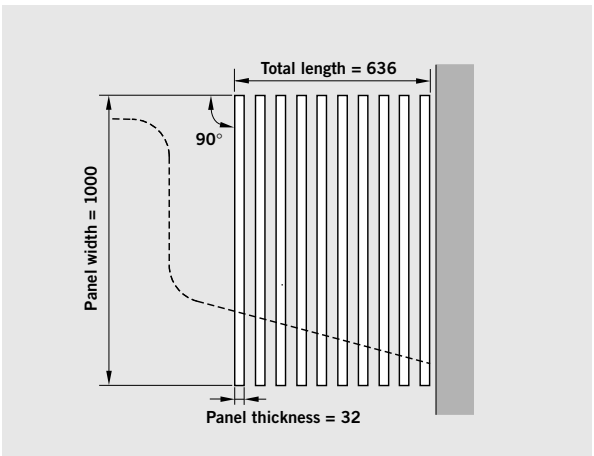
3 Floor rail with height-adjustable support arrangement for fixing to unfinished floor

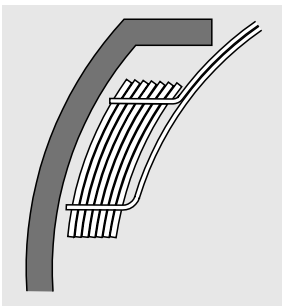
Space requirement examples

Stacking can be performed at virtually any point in the layout, e.g. in a corner, behind a projection or in the visible area of a niche. The size of the stacking area is governed by the system design as well as the width and number of sliding panels. It also depends on whether the sliding panels are to be stacked in parallel, at right angles or diagonal to the direction of travel.

Space requirement example

10 sliding panels at right angles to the direction of travel

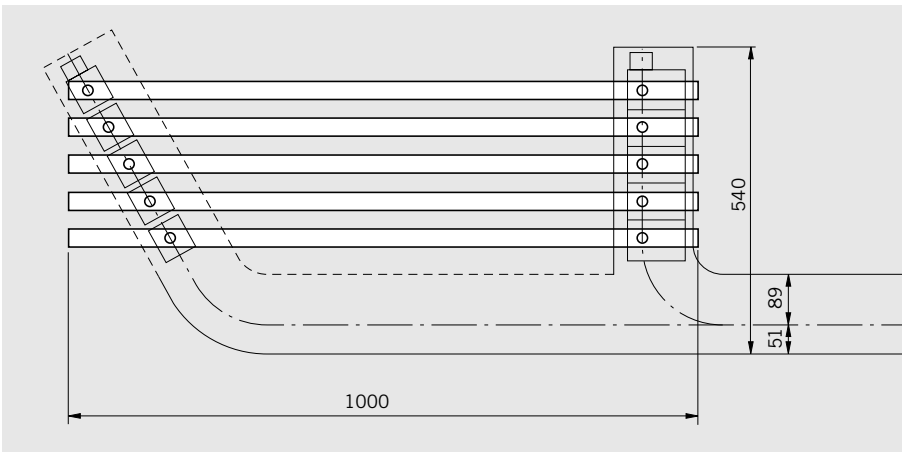


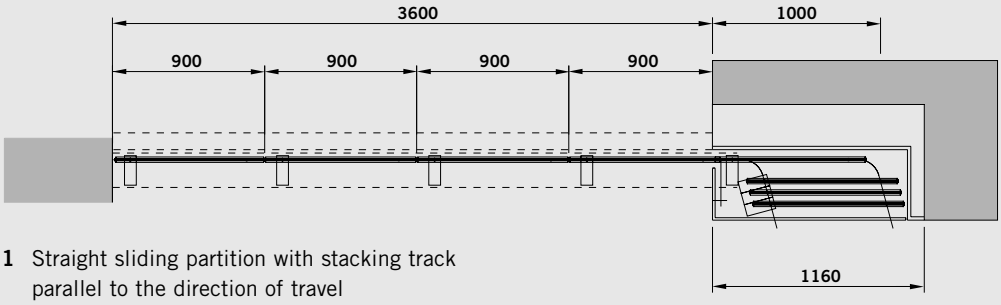


Stacking example with curved sliding panels

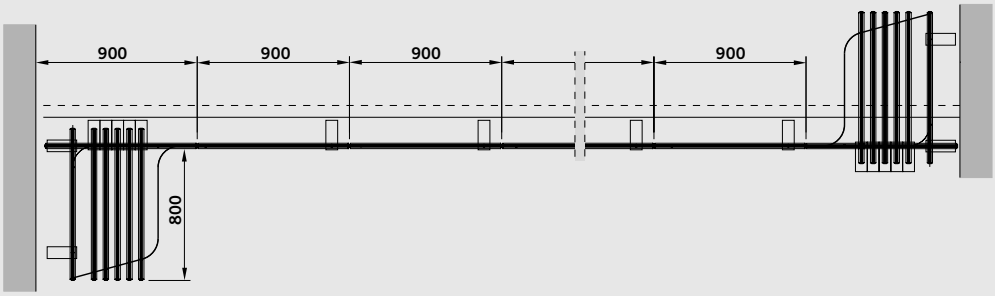
Stacking section detail

5 sliding panels

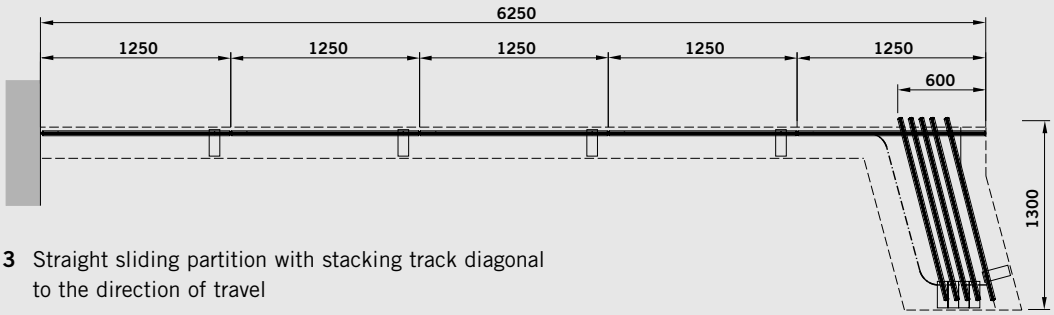




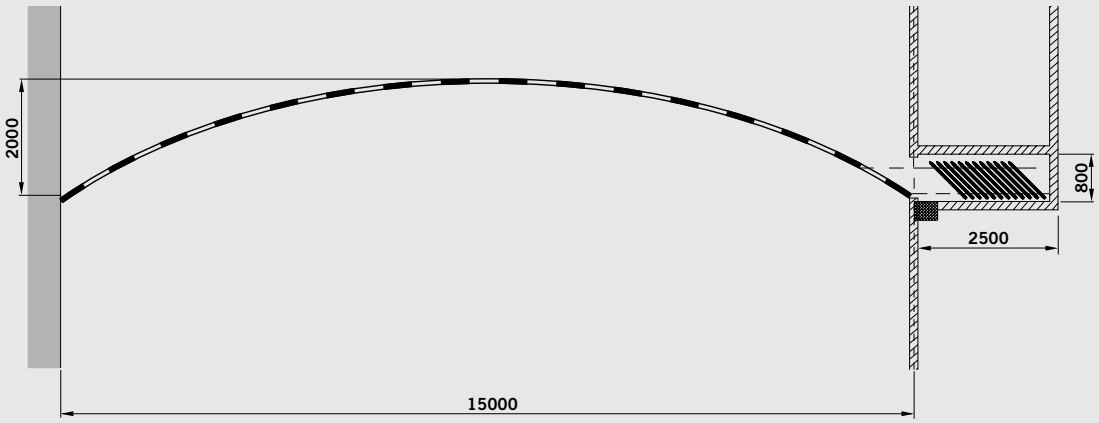
1 Straight sliding partition with stacking track parallel to the direction of travel



2 Straight sliding partition with two stacking tracks at right angles to the direction of travel, and partition-to-wall connection



3 Straight sliding partition with stacking track diagonal to the direction of travel

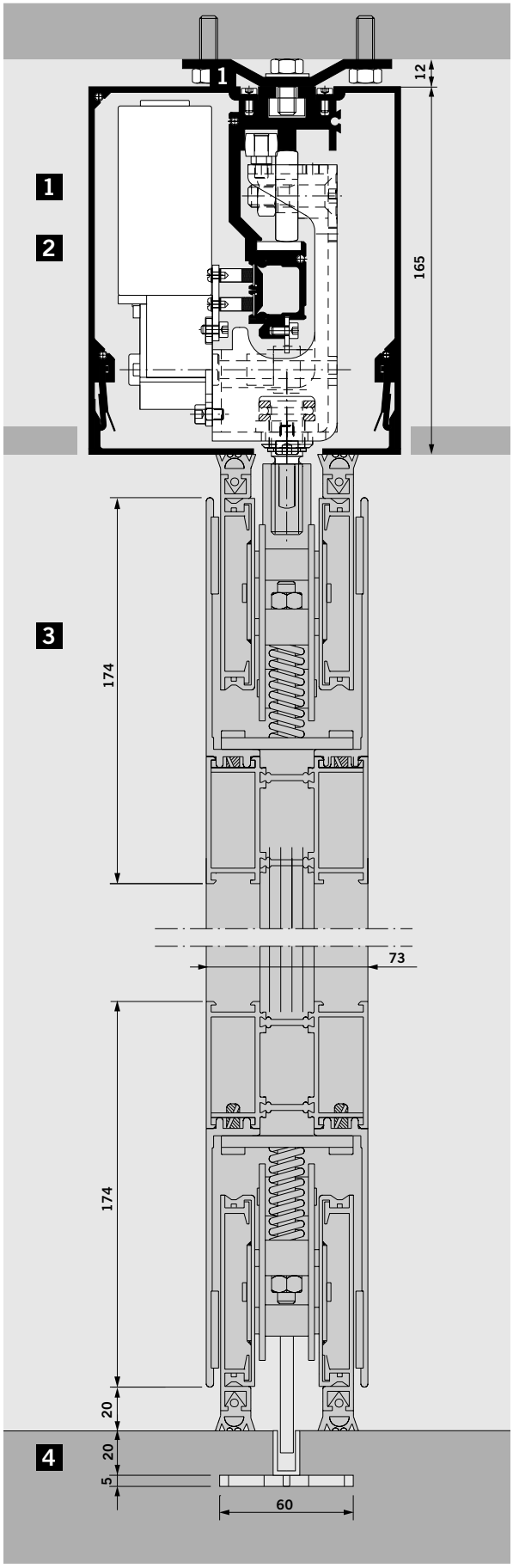


4 Curved sliding partition with stacking track parallel to the direction of travel

Completely sealed

DORMA HSW-EM/IsoComfort automatic sliding partitions satisfy the very highest heat and noise insulation requirements when closed. Refined technology unmatched in terms of both scope and performance, ensures that the sealed system offers maximum integrity – between each individual sliding panel, at the ceiling and floor and, not least, between the outer sliding panels and the adjacent walls or façade elements.

In addition, the sliding panel frames comprise fully thermally isolated external and internal profiles. In conjunction with corresponding glazing systems, DORMA HSW-EM/IsoComfort automatic sliding partitions used as external frontages offer high thermal insulation values as well as ensuring a comfortable temperature in close proximity to the glazed surface.
(Under preparation)



System design

Essentially, the DORMA HSW-EM/IsoComfort system comprises the following:

1. Track for attaching to the ceiling or wall with bipolar busbar system and cover
2. Rollers with carriers and drive motor for each sliding panel
3. Sliding panels with double seals top and bottom
4. Guide rails recessed in the floor
5. Telescopic side element for connecting the sliding panels as they are pushed together on closure (not illustrated)

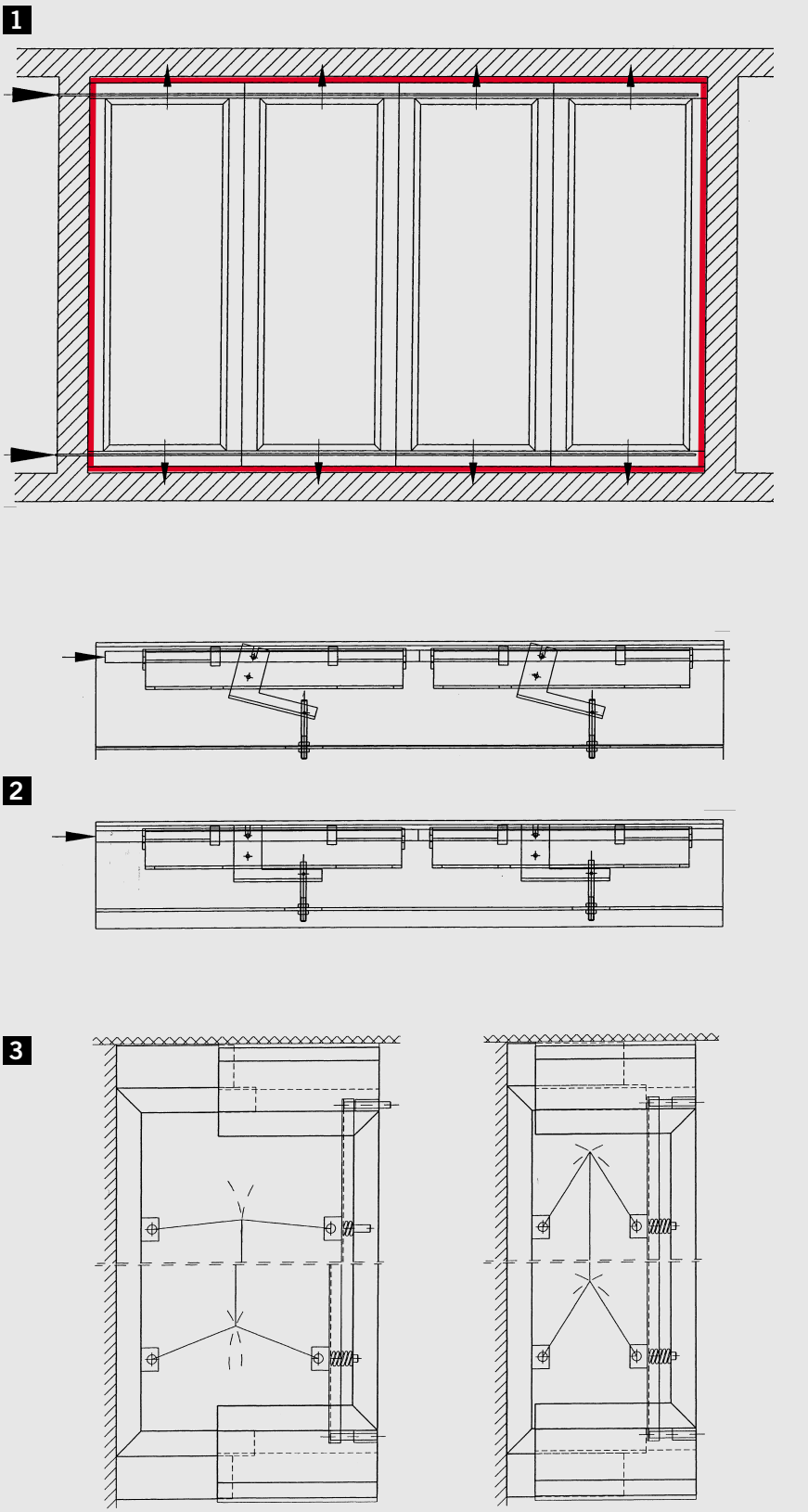
Optimum sealing

With the aid of an all-round telescopic system, effective thermal sealing is obtained by means of two mutually compatible arrangements:

Side seals
The telescopic side element ensures that the sliding panels can be firmly pushed together, enabling the side seals to interlock. This eliminates all gaps ensuring effective inter-panel draught exclusion. The outer seals on the last sliding panels in line are likewise pressed against the adjacent wall or façade elements.

Sealing top and bottom
Actuated by the telescopic element extends vertically on closure of the partition, a system of rods and levers causes double seals top and bottom to push out of the sliding panel frame and press against the ceiling and floor. The sealing elements are provided with springs to compensate for unevenness in the mating surface.

Functional principle of the DORMA HSW-EM 250 IsoComfort



1 Functional principle of the top and bottom sealing system

2 Extended and retracted double seal top and bottom

3 Extended and retracted telescopic element

Sound-proofing partitions with sandwich boards or individual panel infills of glass, metal, wood or similar

Features
Exceptional sound insulation properties thanks to:

- Frames of high-quality insulating materials, plus sound-insulating profiles
- Fully automatic double seal top and bottom
- Interlocking side seals that leave no gaps
- Sandwich boards offering excellent sound insulation values

(Under preparation)

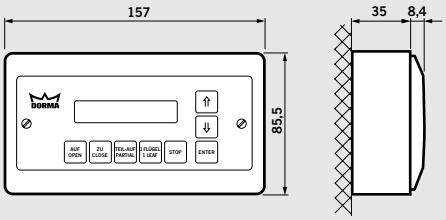
Control unit with display for programming and operation

Function keys:

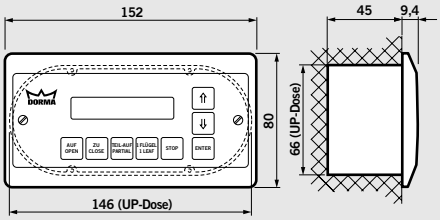
– OPEN	Partition opens
– CLOSE	Partition closes
– PARTIAL OPEN	A selected number of panels move to the stacking position
– 1 PANEL	Last panel travels to stacking position
– STOP	Partition stops

– ENTER	Entry/ confirmation key
– ⇧	Previous line
– ⇩	Next line

Surface-mounted



Concealed



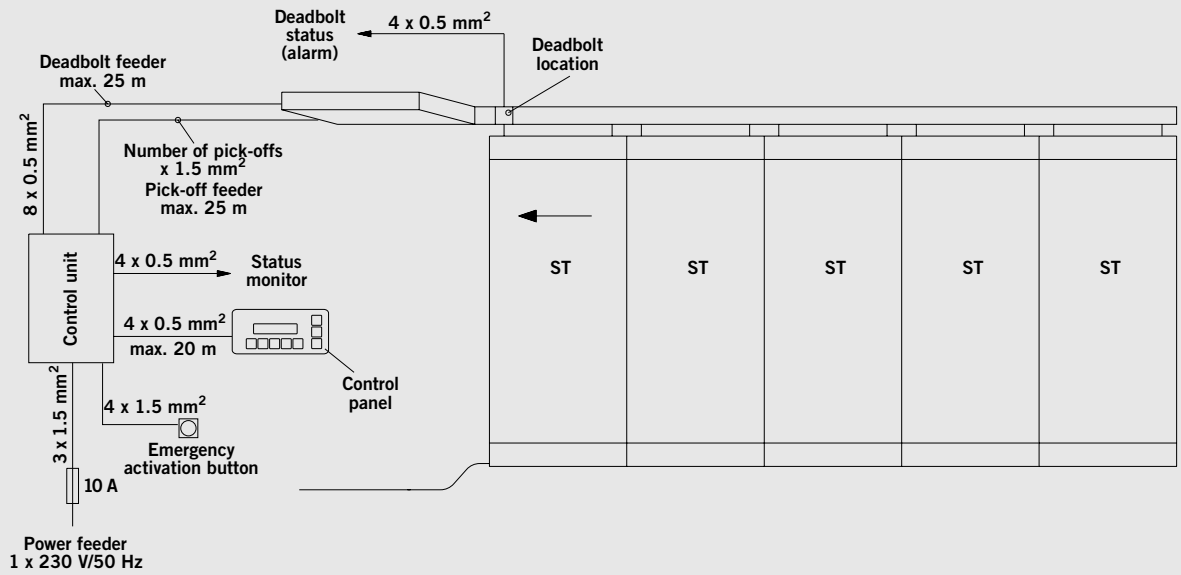
Enclosure/Control box

- Sheet steel, black galvanised finish
- Dimensions: W 380/ H 300/D 210 mm
- Power supply via device box
- Easy to remove cover
- Standard dimensions
- Good screening (EMC)
- Fixing with 4 screws, 6 mm dia.
- Cable entry through the bottom

Transformer

- Ring core transformer 230 V AC/2 x 17 V AC
- Current rating 13.9 A
- Power rating 240 VA
- Compact unit, 150 mm dia. x 55 mm
- Encapsulated design
- Minimum stray magnetic field
- Good electro-magnetic compatibility

Wiring diagram



Specification text

DORMA HSW-EM automatic horizontal sliding partition with individually driven, electronically controlled sliding panels and unlimited length of unit. Equipped with overhead track rail and floor guide rail. Power transmission via toothed belt arranged in the track rail. Last panel with mechanical locking. Lock status signalling. Power supply via bipolar busbar system. Obstruction detection feature. System stops on contact with an obstruction, maximum collision force 150 N.
Travel speed adjustable between 80 and 150 mm/s.
End position approach at reduced (creep) speed. Sliding panels can be moved by hand. Automatic mode can be activated from any position. Sliding panels, stacking and personnel opening can be actuated from program switch. Panel weights up to 250 kg. Processor control with parameter adjustability for actuation, control and monitoring of the operational sequence, and also monitoring of the sliding panel positions. Control panel with display for performing the functions: Open, Stop and Close, and also the personnel and partial opening functions. Operational status indicator. Diagnostics function.
Personnel opening with automatic closing function.
Hold-open time adjustable up to 60 s.
Manufactured in accordance with the guidelines for power-operated windows, doors and gates, ZH 1/494, German accident prevention (UVV) and engineering (VDE) specifications, latest edition in each case; type-approved by the German TÜV technical supervisory authority; tested and approved in accordance with the European Low Voltage Directive.

Sliding partition system to be designed as:
( ) Interior room divider
( ) Heat-insulating external frontage, type IsoComfort with double glazing
( ) Sound-proofed partition, type IsoComfort, with panel infill

For interior room dividers:
( ) MANET single-point fixings and 10 mm toughened safety glass (ESG)
( ) MANET single-point fixings and 12 mm toughened safety glass (ESG)
( ) Glazing rails with 10 mm toughened safety glass (ESG)
( ) Glazing rails with 12 mm toughened safety glass (ESG)
( ) SECURTEC fine framing with 10 mm toughened safety glass (ESG)
( ) SECURTEC fine framing with 12 mm toughened safety glass (ESG)
( ) SECURTEC fine framing with 10 mm laminated safety glass (VSG)
( ) SECURTEC fine framing with 12 mm laminated safety glass (VSG)

Side connections:
( ) Without accessible side connection
( ) Fixed side screen
( ) DORMA ST sliding door (unilateral)
( ) DORMA TST telescopic sliding door (unilateral)
( ) Swing door with DORMA ED 200 operator
( ) Manual swing door with DORMA BTS 75 V floor spring
( ) Combination of several HSW partitions

Stacking system:
( ) With one stacking track
( ) With two stacking tracks

Stacking track design:
( ) Stacking track parallel to direction of travel (standard)
( ) Stacking track at right angles to direction of travel (standard)
( ) Partition-to-wall connection, parallel
( ) Partition-to-wall connection at 90°

Distance to stacking track:
( ) No distance
( ) With distance ... mm

Drive unit type:
( ) Automatic
( ) Manual, prepared for automatic mode

Drive unit installation:
( ) Suspended ceiling installation up to 1 m
( ) Suspended ceiling installation over 1 m
( ) Wall mounting
( ) Direct mounting
( ) Direct mounting on support arrangement by others

Lateral cover for track rail:
( ) With cover
( ) With cover for installation in suspended ceiling
( ) Without cover

Dimensions:
– Clear overall width B ..... mm
– Overall height H ..... mm
– Clear passage height LH ..... mm
– Number of panels .....

Emergency unlocking:
( ) Without emergency unlocking
( ) With flush mounted emergency unlocking device
( ) With surface mounted emergency unlocking device

Options:
( ) Connection to external safety systems
( ) Pushbutton operation from inside
( ) Key switch operation from outside
( ) Lockable emergency unlocking device
( ) Emergency power module for operation of partition in the event of a power failure
( ) Specialised glazing with patterns, etched motifs or similar

Colour of aluminium alloy components:
( ) Silver, E6/CO anodised
( ) Dark brown, E6/C34 anodised
( ) RAL .....
( ) Special colour .....

Make:
DORMA HSW-EM

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