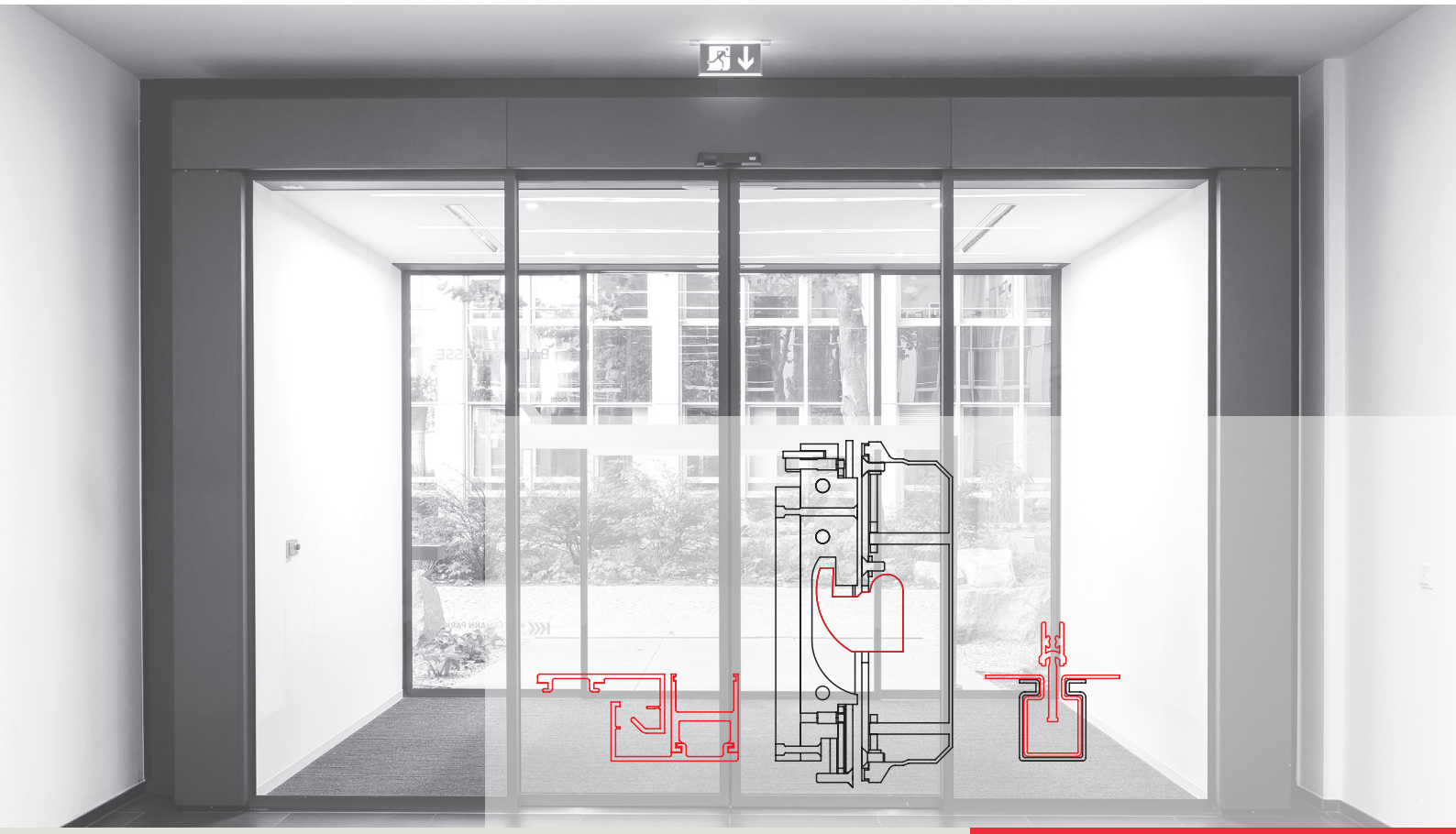
dormakaba



ST FLEX SECURE
FST FLEX SECURE

Sliding door
with intruder protection

Security and convenience intelligently combined

A high level of security is essential for public buildings. However, also many shop owners are aware of the importance of preventive vandalism and burglary protection.

This is where dormakaba's new ST FLEX and FST FLEX SECURE comes into play, as this system unites the convenience of an automatic door with effective burglary and vandalism protection. Furthermore, the elegant, automatic sliding door solution provides facility operators with a high level of security.

SECURE stands for maximum protection
Despite its elegant design, dormakaba's ST FLEX and FST FLEX SECURE sliding door system provides maximum and at the same time invisible intruder and vandalism protection according to VDS (Association of German Property Insurers) resistance class WK2/RC2.

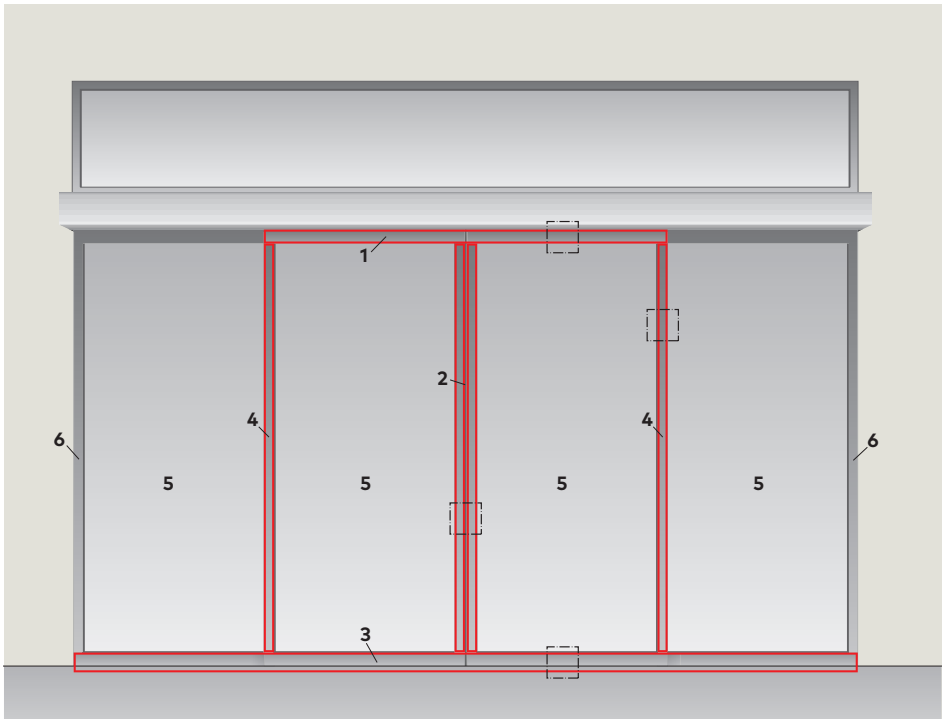
Your benefit: Compared to similar security systems, there are no visible barriers so that your display windows remain as transparent and inviting as ever without any negative effect on their advertising space characteristics.

Technical details of ST FLEX SECURE at a glance
- A continuous floor guide rail at the bottom of the door and an operator-integrated anti-tamper protection avoid that the door is levered out
- Four-point hook locking device with automatic locking action at the main closing edge and lateral door profiles
- Special burglary-protection glazing is adhered to the door profile with the aid of a special adhesive

Furthermore, the door may be equipped with any product from the comprehensive range of accessories for our standard sliding door systems.
If requested, ST FLEX and FST FLEX SECURE may be fitted with DIN 18650 and EN 16005 compliant safety equipment – depending on the prevailing structural conditions and risk assessment.

Features and benefits
- Prefabricated door panels
- Flexible system: may be combined with ES 200 and ES 200-2D
- The automatic sliding door is tested from European Standard ENV 1627 to 1630
- Glazing tested to DIN EN 356, resistance class P4A:
  - Security double-glazing (22 mm LSG)
  - Mono safety glazing (10 mm LSG)

Security-relevant components



1 dormakaba operator-integrated protection against levering-out over the full passage width
2 dormakaba SECURE 4-point locking device
3 dormakaba SECURE floor guide over the full door width
4 Continuous interlocking profiles at the secondary closing edge
5 Burglary-resistant laminated safety glass (resistance class WK2) P4A (10 mm) or laminated safety glass P4A (22 mm) adhered to the frame with special adhesive
6 Special anchoring to meet the requirements of resistance class WK2/RC2 (1. anchoring 270 mm from upper edge of operator – then every 400 mm)

[ ] See page 9 for corresponding cross sections.

Evidence of performance
Burglar resistance

Expert statement
10-001167-PR02 dated 18. October 2011
(GAS01-C01-05-en-01)

Translation of Expert Statement 10-001167-PR02 dated 6 October 2011

Client	**DORMA GmbH + Co. KG** DORMA Platz 1 58256 Ennepetal Germany
Product	Burglar resistant sliding door system, WK2 (RC2)
Designation	ST FLEX SECURE / FST FLEX SECURE
Clear opening dimensions (W x H)	different (see type list)
(Frame) Material	Aluminium, DORMA profile system ST FLEX DORMA operator profiles ES200
Attack side	External face
Type of opening	Two leaf / single leaf sliding, with / without glazed side panels, with / without glazed top light 1 -/ 2 - / 3-part
Glazing	DIN EN 356 Klasse P4A
Hardware	Multipoint lock Fuhr Type 3 pivoted bold lock with 4 pivoted bolts as per DIN 18251 Class 4; Profile cylinder as per DIN 18252 P2BZ; continuous strike plate; continuous coupling rim ST FLEX; continuous disengagement protection in drive; continuous DORMA floor guide track
Installation	As per installation instructions from company DORMA GmbH + Co. KG

Burglar resistance

Resistance Class RC 2*)

*) on the basis of the mentioned test reports and the complementary, change-related specifications

ift Rosenheim
18. October 2011

Robert Krippahl, Dipl.-Ing. (FH)
Deputy Head of Testing Department
Building Components

Jens Pickelmann
Operating Testing Officer
Mechanics

Basis

DIN EN 1627 : 2011
Windows, doors, shutters ¬ - Burglar resistance - Requirements and classification

DIN EN 1628 : 2011

DIN EN 1629 : 2011

DIN EN 1630 : 2011

Test report 10-001154-PB01-C01-05-de-01 dated 20 December 2010

Result protocol 10-001209-PR01 (EP01-C01-05-de-01) dated 06 July 2011

Result protocol 10-001209-PR02 (EP01-C01-05-de-01) dated 06 July 2011

Design sheets
Annex 1, pp 1 to 13
Annex 2, pp 1 to 36

Validity

Testing for burglar resistance does not allow any statement to be made on any further characteristics regarding performance and quality of the construction submitted.

Validity of the expert statement expires with expiry of any one of the above items referred to as basis (standards or test reports).

Notes on publication

The **ift** Guidance Sheet "Conditions and Guidance for the Use of **ift** Test Reports" applies.

The cover sheet including the type list can be used as an abstract.

Contents

The expert statement comprises a total of 56 pages

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BLZ 711 500 00

Notified Body Nr.: 0757
Anerkannte PÜZ-Stelle: BAY 18
DAP-PL-0808.99
DAP-ZE-2288.00
TGA-ZM-16-93-00
TGA-ZM-16-93-60

Expert statement
10-001167-PR02-(GAS01-CO1-05-de-01) dated 18. October 2011
Client: DORMA GmbH + Co. KG, 58256 Ennepetal, Germany

Type list

No.	Tested type	Design variants approved by expert statement	Evidence / reports requirements
1.	Single-panel and double-panel siding door systems with glazed side screens and fanlight	Single-panel and double-panel sliding door systems available: with and without side screens with and without fanlight (glazed in one-piece / two-part / 3-part version)	**Test report** 10-001154-PB01-C01-05-de-01 dated 20 December 2010 **Result protocol** 10-001209-PR01 (EP01-C01-05-de-01) and 10-001209-PR02 (EP01-C01-05-de-01) dated 06 July 2011 **Expert statement** 10-001167-PR02 dated 18 October 2011
2.	Single-panel and double-panel sliding door systems with P4A double-glazing, a thickness of 20 mm and single-glazing	Use of P4A double-glazing with a thickness of 22 mm P4A single-glazing with a thickness of 10 mm	**Test report** 10-001154-PB01-C01-05-de-01 dated 20 December 2010 **Result protocol** 10-001209-PR01 (EP01-C01-05-de-01) and 10-001209-PR02 (EP01-C01-05-de-01) dated 06 July 2011 **Expert statement** 10-001167-PR02 dated 18 October 2011
3.	Single-panel and double-panel sliding door systems with a clear passage width of 2500 mm x 3000 mm or 700 mm x 2800 mm	Single-panel and double-panel sliding door systems with various clear opening dimensions: Double-panel version: Width 800 mm – 3000 mm Height 2100 mm – 3100 mm Single-panel version: Width 700 mm – 3000 mm Height 2100 mm – 3100 mm FST-Türen (double-panel and single-panel version): Width 900 mm – 3000 mm Height 2100 mm – 3100 mm	**Test report** 10-001154-PB01-C01-05-de-01 dated 20 December 2010 **Result protocol** 10-001209-PR01 (EP01-C01-05-de-01) and 10-001209-PR02 (EP01-C01-05-de-01) dated 06 July 2011 **Expert statement** 10-001167-PR02 dated 18 October 2011
4.	Single-panel and double-panel sliding door systems with glazed side screens for mounting at solid surrounding walls	Single-panel and double-panel sliding door systems with and without side screens for mounting in mullion and transom construction tested as a burglar-resistant component to resistance class WK2 or higher with location of profiles/screws in the mullion res. transom area	**Test report** 10-001154-PB01-C01-05-de-01 dated 20 December 2010 **Result protocol** 10-001209-PR01 (EP01-C01-05-de-01) and 10-001209-PR02 (EP01-C01-05-de-01) dated 06 July 2011

Please note: The stipulated dimensions are only applicable for burglar resistance tests.

Preparation of adjacent walls by others		**ST FLEX SECURE**	**FST FLEX SECURE***
The adjacent walls must have the following properties to meet the requirements of resistance class WK2/RC2:			
Masonry to DIN 1053-1	– Nominal thickness – Crushing resistance of brickwork – Mortar group	≥ 115 mm ≥ 12 II	
Steel concrete to DIN 1045	– Nominal thickness – Strength class	≥ 100 mm B15	

Door parameters		**ST FLEX SECURE**	**FST FLEX SECURE**
Double-panel sliding door	– Clear passage width (LW) – Clear passage height (LH) – Door panel weight	1.000 – 3.000 mm 2.100 – 3.100 mm max. 2 x 160 kg	1.000 – 3.000 mm 2.100 – 3.100 mm max. 2 x 130 kg
Single-panel sliding door	– Clear passage width (LW) – Clear passage height (LH) – Door panel weight	700 – 3.000 mm 2.100 – 3.100 mm max. 1 x 200 kg	900 – 1.800 mm 2.100 – 3.100 mm max. 1 x 150 kg

Please note: The available system dimensions (especially the clear passage height LH and the clear passage width LW) depend on the type of glazing, the door-panel weight, the size of the panels (height in relation to width) and effects like for example draughts within the building.
Our friendly dormakaba sales staff will be pleased to give advice and will gladly help you find the suitable door solution for your requirements.

The approved escape route function is not available in the operating states "Off" or "Locked".

Versions		**ST FLEX SECURE**	**FST FLEX SECURE**
Profile systems	Universal profile system with security glazing to DIN EN 356 category P4A	●	●
	Universal profile system with security double-glazing	O	O
	With side screens	O	O
	Combined sensors to DIN 18650 and EN 16005	●	●
	Continuous floor-integrated guide rail The floor guide rail is always required and has to be provided by others!	●	●
Elevation height and depth of operator 150 mm x 180 mm		●	●
Fanlight in one-piece / two-part / 3-part version		O	O
ST FLEX safety screen		O	O

Basic module (BM)		**ST FLEX SECURE**	**FST FLEX SECURE**
Modular design		●	●
Microprocessor-controlled function programs	– Off – Automatic – Permanent Open – Partial Open – Exit Only – Night-/Bank Function	●	●
Automatic reversing		●	●
Ready for connection of	dormakaba SECURE locking device	●	●
	Light curtains	●	●
Adjustment of all basic parameters via integrated display and keys		●	●
24 V output for external accessories		●	●
Read-out error log with error codes		●	●
DCW® bus connection (Protocol **D**ORMA **C**onnect and **W**ork)		●	●
Emergency power supply via rechargeable battery pack		O	–

● standard O optional – no

Additional equipment	**ST FLEX SECURE**	**FST FLEX SECURE**
Manual lock release for dormakaba SECURE locking devices with 42/32 profile cylinder by others.	●	●
Light barriers	O	O
Rechargeable battery pack (emergency opening/closing)	O	●
Coupling module for connection to EIB or LON building management systems	O	O
Function module (FM) – 3 door status contacts – Safeguarding of main closing edge & secondary closing edges – Panic closing (Observe corresponding regulations!) – Bell contact – Airlock control – Synchronous operation	O	O
DIN 18650 and EN 16005 function module The DIN 18650 and EN 16005 function module provides tested monitoring of the secondary closing edges for compliance with the German Industrial Standard DIN 18650 and EN 16005	O	O

Technical operator data	**ST FLEX SECURE**	**FST FLEX SECURE**
dormakaba SECURE locking device	●	●
Suitable for application in emergency exits and escape routes	–	
Height	150 mm	150 mm
Overall depth	180 mm	180 mm
Max. opening and closing force 150 N	●	●
Opening speed (incremental setting)	10 – 70 cm/s	10 – 70 cm/s
Closing speed (incremental setting)	10 – 50 cm/s	10 – 50 cm/s
Hold-open time	0 – 180 s	0 – 180 s
Supply voltage, frequency	230 V, 50/60 Hz	230 V, 50/60 Hz
Power consumption	250 W	250 W
Class of protection	IP 20	IP 20
Admissible temperature	- 20 – + 60 °C	- 20 – + 60 °C
Admissible humidity (relative)	max. 93 % (non condensing)	max. 93 % (non condensing)
Tested according to Low Voltage Directive and EMC guidelines	●	●
Manufactured to ISO 9001	●	●

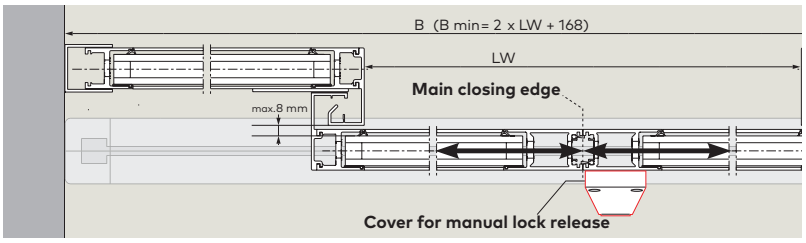
● standard O optional – no

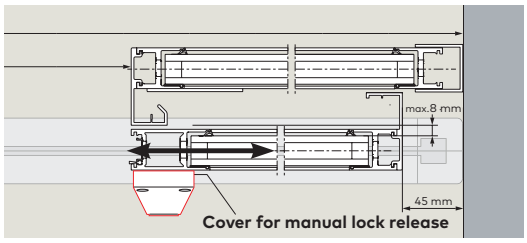
Horizontal sections

Door is closed

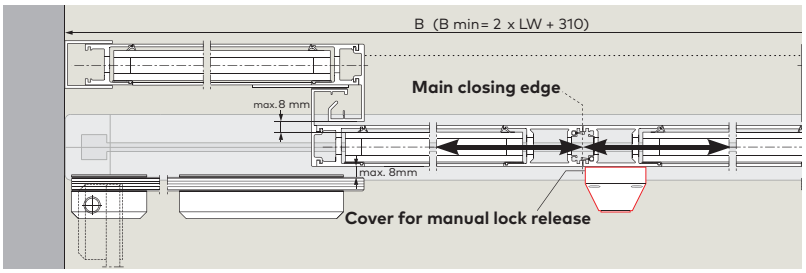
Door is open

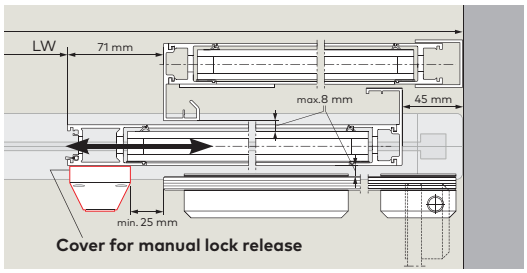
Corridor-mounted double-panel systems with side screens



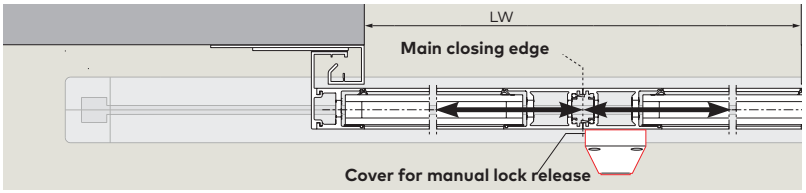


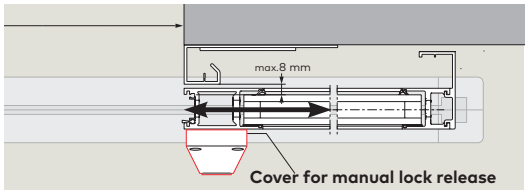
Corridor-mounted double-panel systems with side screens – security screens on the inside



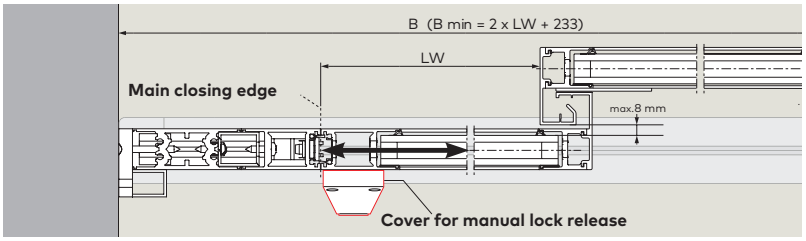


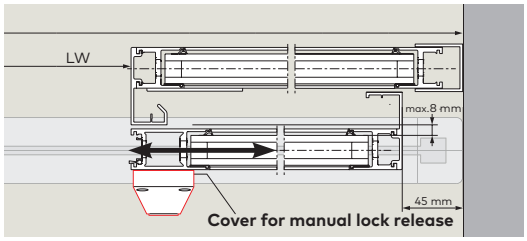
Lintel-mounted double-panel systems with side screens



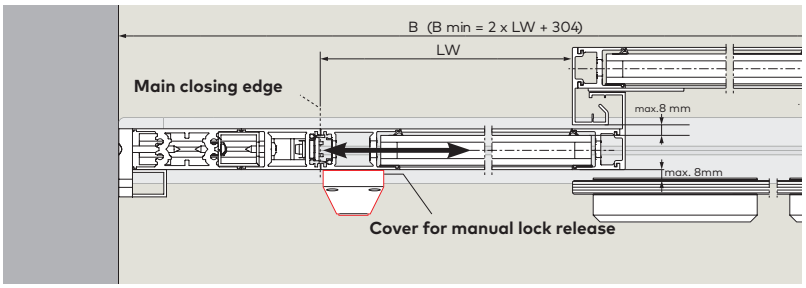


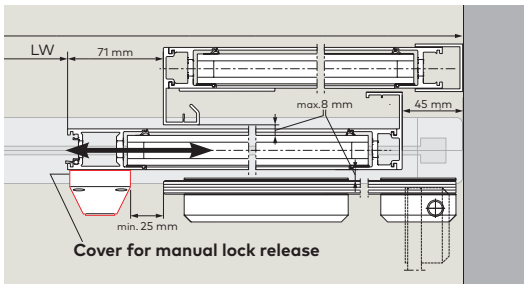
Corridor-mounted single-panel systems with side screens (wall connection, opening to the left/right)



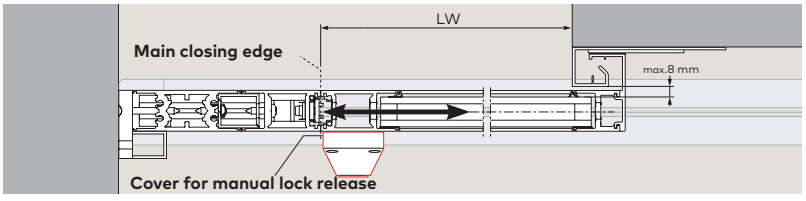


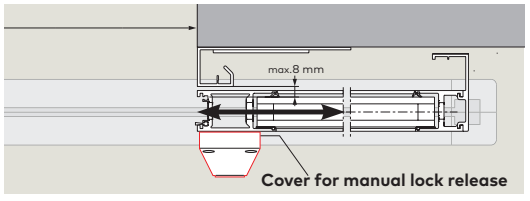
Corridor-mounted single-panel systems with side screens – security screens on the inside (wall connection, opening to the left/right)





Lintel-mounted single-panel systems with side screens (wall connection, opening to the left/right)

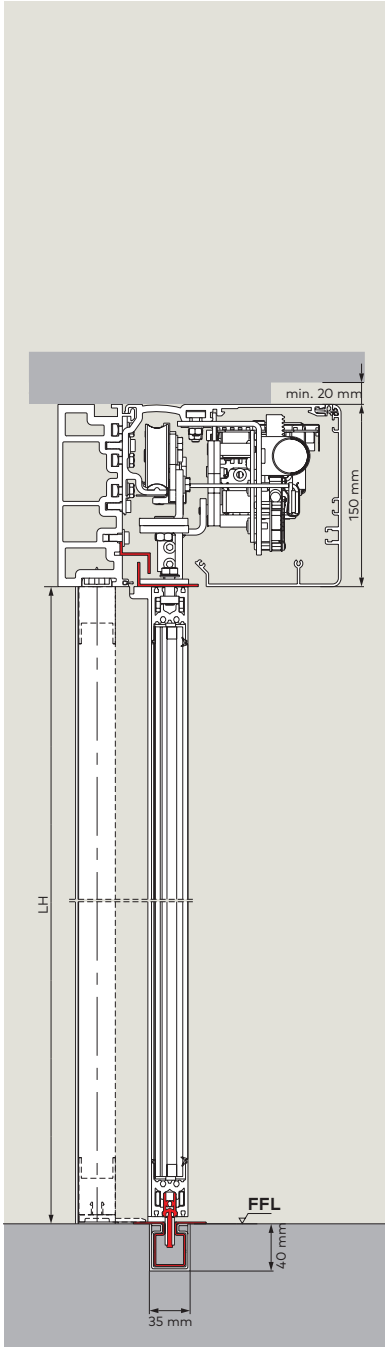




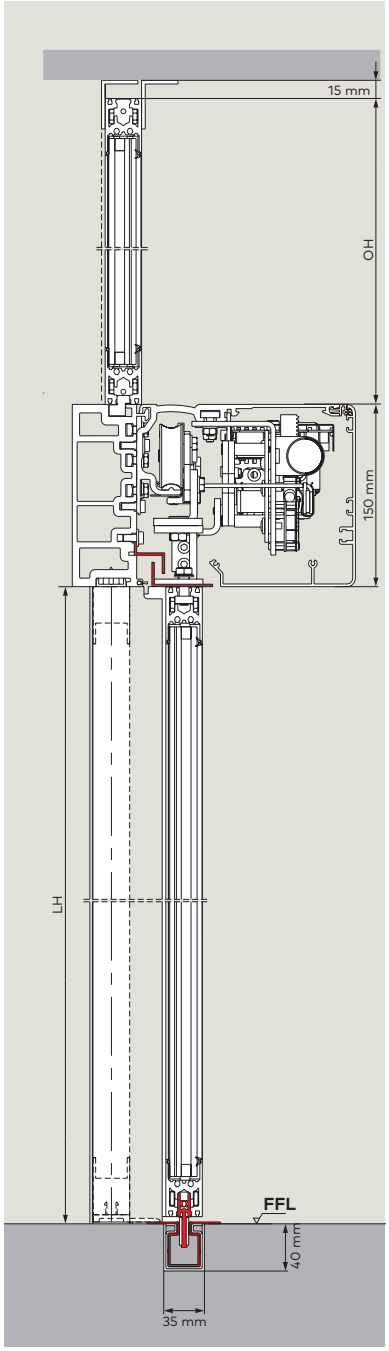
LW = Clear passage width **B** = System width

Vertical sections

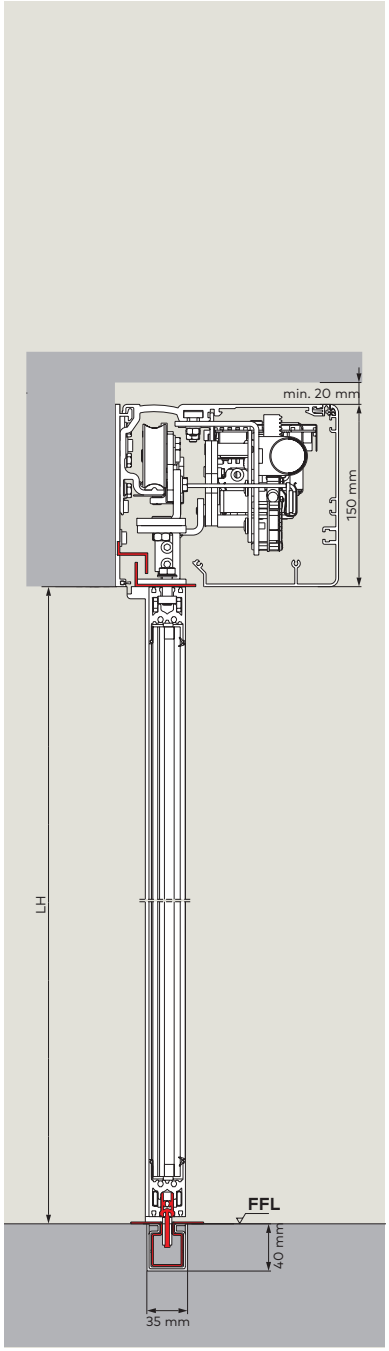
Corridor-mounted systems with floor-integrated guide rail



Corridor-mounted systems with floor-integrated guide rail and fanlight



Lintel-mounted systems for connection to façade (by others) with floor-integrated guide rail

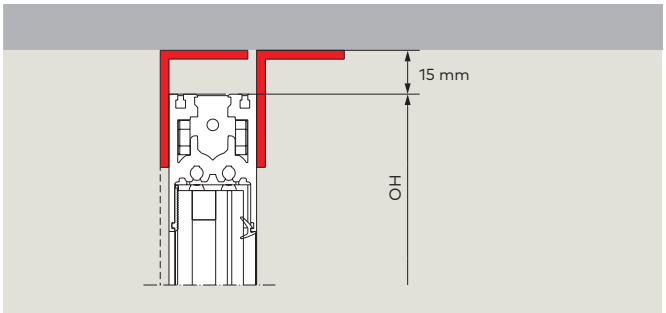


OH	Fanlight height
LH	Clear passage height
B	Clear passage width
LW	Clear passage width
FFL	Finished floor level

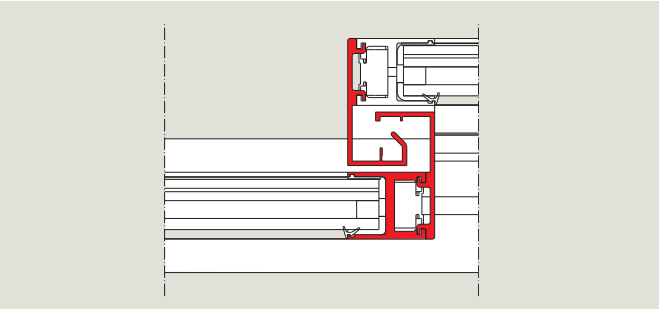
Please note: Please visit our website www.dormakaba.com, where you can download detailed descriptions of our current product range.

Detailed cross sections

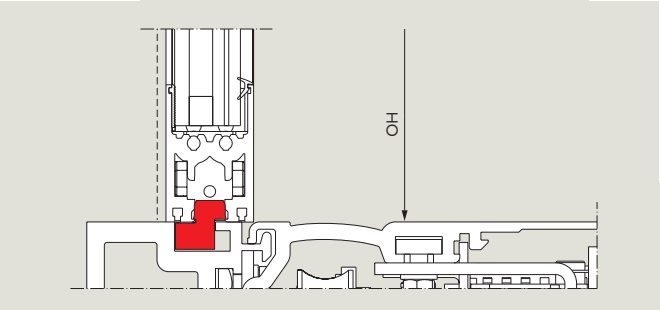
Ceiling connection of fanlight



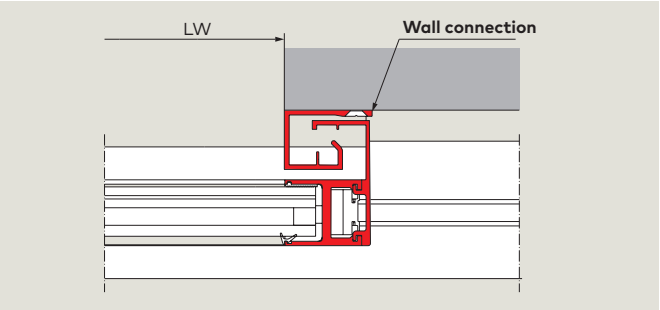
Unlocking of sliding panel



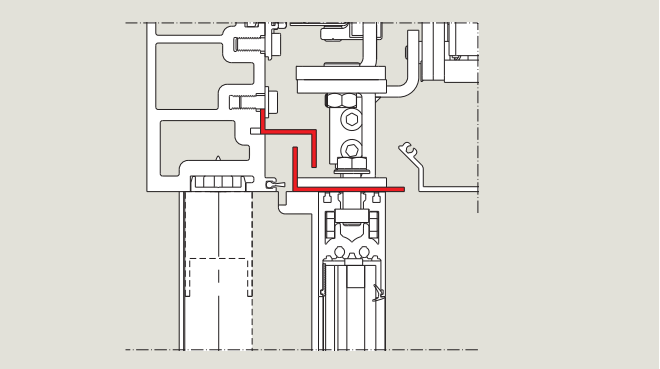
Connection of fanlight to operator



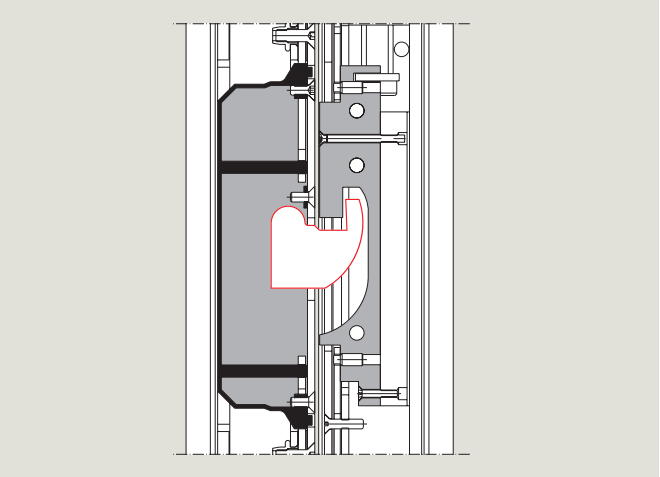
Wall connection



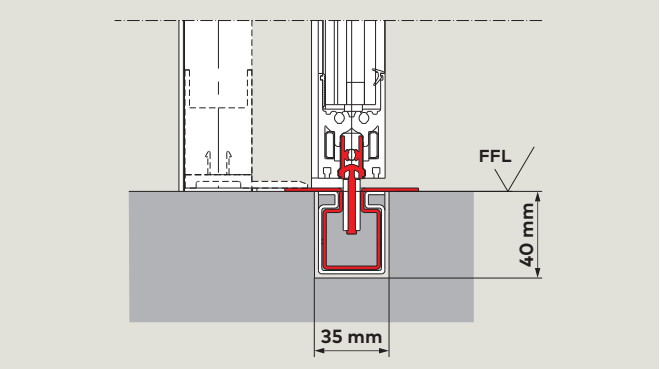
Security feature inside operator



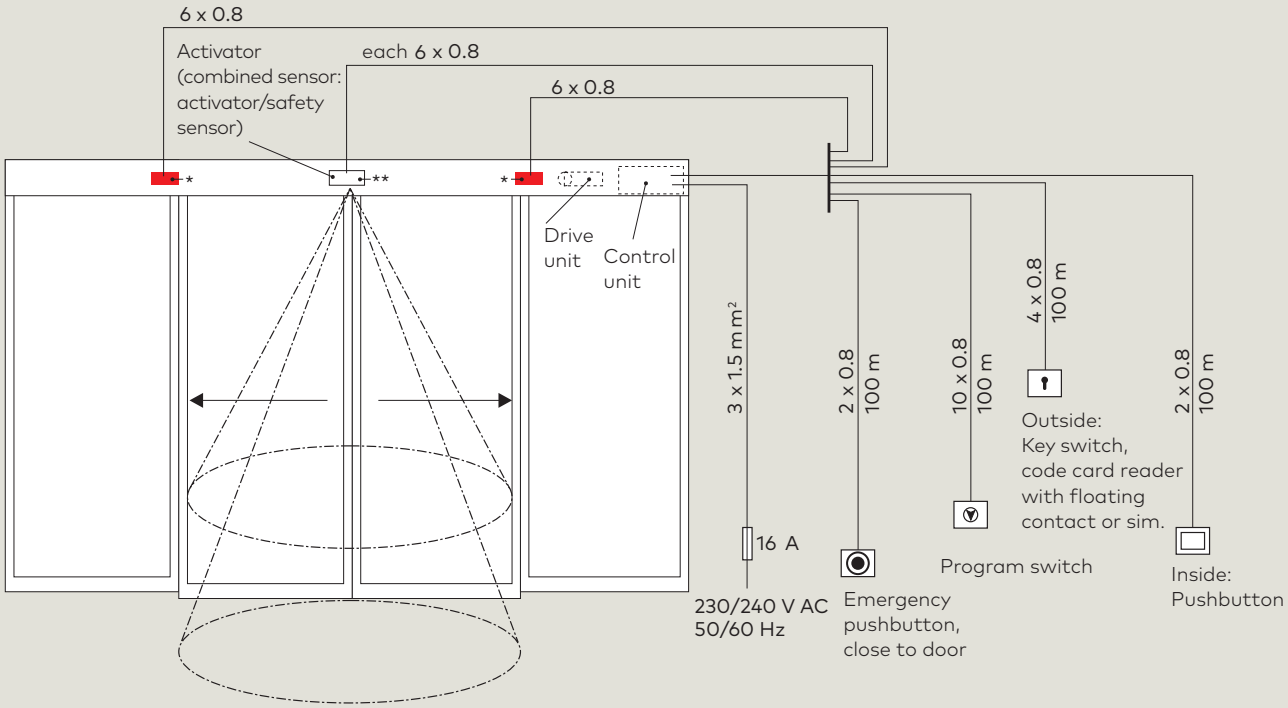
Main closing edge – door is closed



Floor guide

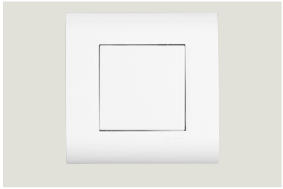


Connections



* Safety sensors to monitor the secondary closing edges in accordance with DIN 18650 and EN 16005
**Safety sensors to monitor the main closing edge in accordance with DIN 18650 and EN 16005

Switches

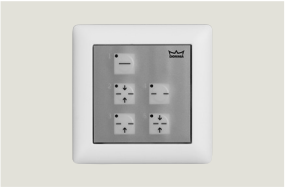
	Designation	Specification	Installation system	Order No.
	**On/Off switch**	White, aluminium, flush-mounting, 80 x 80 mm	Gira S-Color	19135403150
	**Radar switch**	„MAGIC SWITCH", proximity-type radar switch responds to movement, for flush-mounting, 80 x 80 mm		05076831332

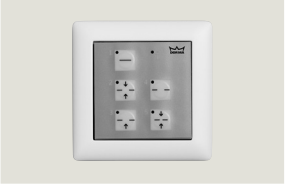
Program switches

A program switch from dormakaba's broad range of accessories allows the automatic door system to meet individual requirements and provides easy handling.
The corresponding 3-position program switches are available in various designs and suitable for all kinds of applications.

They offer various options, from a mechanical to a full-electronic version, alternatively also lockable via profile half-cylinder or in a full-electronic way via code.

- Up to 5 different functions:
  Off, Automatic, Exit Only, Partial Open, Permanent Open
- Electronic program switches in System 55 design to meet the highest aesthetical demands

For sliding door operators	Designation	Specification	Installation system	Order No.
	**PG-S1**	5-position, aluminium, white, flush-mounted version, 80 x 80 x 40 mm	Gira S-Color	19135401150
	**PG-S2**	5-position, lockable, aluminium, white, flush-mounted version, 80 x 80 x 40 mm	Gira S-Color	19135602150
	**EPS-S**	Full-electronic program switch in System 55 design, 5-position, lockable via code or additional TL-ST S55 key switch, membrane keypad aluminium-coloured, white, flush-mounted version, 80 x 80 mm	System 55	16556901150

For sliding door operators in emergency exits and escape routes (FST)	Designation	Specification	Installation system	Order No.
	**PG-FST1**	5-position, lockable, aluminium, white, flush-mounted version, 80 x 80 mm	Gira S-Color	19135603150
	**EPS-FST**	Full-electronic program switch in System 55 design, 5-position, lockable via code or additional TL-ST S55 key switch, membrane keypad, aluminium-coloured, white, flush-mounted version, 80 x 80 mm	System 55	16556801150

Pushbutton

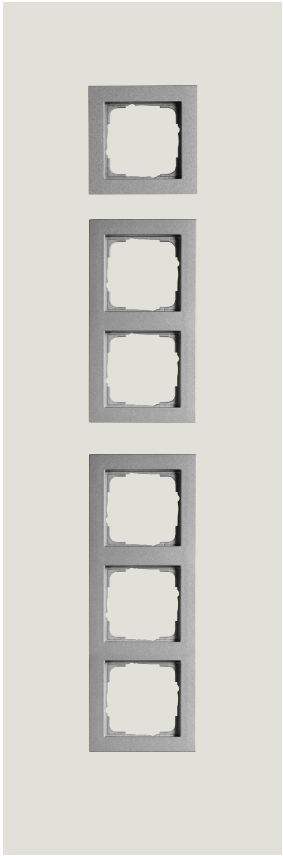
Palm pushbutton	Designation	Specification	Installation system	Order No.
		Single-pole changeover contact, single-type frame, white, flush-mounted version	System 55	19144701170

Key switches	Designation	Specification	Order No.
	**KT 3-1**	1 NO contact with profile half-cylinder, may be replaced for any profile half-cylinder of a master key system, key only retractable in neutral position, aluminium, metal, 75 x 75 x 60 mm	
	KT 3-1 UP	flush-mounted version	05054531332
	KT 3-1 AP	surface-mounted version	05054631332
	**KT 8**	Lettering "Auf, Zu" (German for "Open/Closed"), 2 NO contacts, with profile half-cylinder, may be replaced for any profile half-cylinder of a master key system, key only retractable in neutral position, aluminium, metal, 75 x 75 x 60 mm	
	KT 8 UP	flush-mounted version	05054831332
	KT 8 AP	surface-mounted version	05054931332

Emergency pushbuttons

	Designation	Specification	Installation system	Order No.
	**NAT**	Designed to interrupt the automatic movement of the door, emergency pushbutton (function: Emergency Off) for automatic door operators, manufactured to ZH 1/494 or BGR 232, DIN 18650 and EN 16005, red knob with yellow centre insert, max. load current: 10 A at 230 V AC		
	NAT 1	NO contact: 1, NC contact: 1, white frame, flush-mounted version, 80 x 80 mm	System 55	90400025
	**NAT 2** no picture	Function "Emergency Opening" with green knob, NO contact: 1, NC contact: 1, max. load current: 10 A at 230 V AC, white frame, flush-mounted version, 80 x 80 mm	System 55	90400035
	NAT 4	NO contact: 1, NC contact: 1, surface-mounted version, 68 x 68 mm		05027031332
	**TL-N S55**	Highly-illuminated emergency pushbutton environment with visual locking status indication, optical and acoustic alarm via yellow flashlight and integrated alarm siren, sabotage-proof, behind glass, **not including frame** NO contact: 1, NC contact: 1, max. load current: 1 A at 24 V DC, flush-mounted version, 80 x 80 mm	System 55	56330500

Trims and boxes for surface-mounted pushbuttons and switches



Designation	Specification	Dimensions in mm (W x H x D)	Installation system	Order No.
System 55	Cover frame (Programm STA)			
FR-S55 1	Single-type trim, Standard 55, white	80.7 x 80.7	System 55	56391110
FR-S55 2	Double-type trim, Standard 55, white	151.8 x 80.7	System 55	56391210
FR-S55 3	Triple-type trim, Standard 55, white	223.3 x 80.7	System 55	56391310
FR-E2W 1	Single-type trim, E2 55, white	80.8 x 80.8	System 55	56392110
FR-E2W 2	Double-type trim, E2 55, white	151.9 x 80.8	System 55	56392210
FR-E2W 3	Triple-type trim, E2 55, white	223.4 x 80.8	System 55	56392310
FR-E2S 1	Single-type trim, E2 55, silver	80.8 x 80.8	System 55	56392101
FR-E2S 2	Double-type trim, E2 55, silver	151.9 x 80.8	System 55	56392201
FR-E2S 3	Triple-type trim, E2 55, silver	223.4 x 80.8	System 55	56392301
FR-E2A 1	Single-type trim, E2 55, anthracite	80.8 x 80.8	System 55	56392115
FR-E2A 2	Double-type trim, E2 55, anthracite	151.9 x 80.8	System 55	56392215
FR-E2A 3	Triple-type trim, E2 55, anthracite	223.4 x 80.8	System 55	56392315

Please see STA price list for further trims and versions.

The complete solution

Automatic entrance systems require careful specification and installation to ensure safety and reliability in use. Commencing with a risk assessment survey, dormakaba will advise at all stages of design and installation so the correct methods of operation and user safety protection are adopted.

Risk Assessment

All automatic doors must be specified and installed following appropriate safety standards requiring risk assessment prior to installation and periodically during the life of the product. dormakaba are experienced with safety specification and can provide further details on request.

Professional and impartial advice from staff assessed and accredited by ADSA (Automatic Door Suppliers Association):

- Site surveys, escape routes, impaired user access.
- Risk assessment reports
- Consultation with leading safety bodies and equipment manufacturers.
- CPD delivery to specifiers and professional organisations

Protection

Automatic doors installed in the UK are subject to the highest safety demands in accordance with EN 16005:2012. To meet these requirements consideration must be given to the use of barriers, self-monitoring sensors and other protective devices. These are mandatory for each door and uniquely specific to its location.

Advanced, standards-compliant technologies for all door types:

- Compact sensors with microwave Doppler technology for motion detection
- Combination sensors with active infrared technology for simultaneous motion and passageway protection
- Active infrared motion detectors based on the triangulation principle for protection of users or obstructions located in the door panel travel path
- Laser sensors with precision monitoring and extended field of view over the door face
- Barriers, fingerguards and appropriate signage for increased risk users, children or failsafe situations

Activation

dormakaba automatic doors are designed and tested to meet a wide range of building entrance styles and user requirements. Access to the building can be controlled through a number of methods from simple switches and keylocks to intelligent access control readers.

Wide choice of access methods from dormakaba:

- Radar approach sensors, opening integrated with emergency escape systems
- Manual pushbuttons with high visibility and ease of use for disabled users.
- Access control readers using simple access fobs or fully integrated with a monitored access control system

Maintenance

Automatic doors must be maintained and periodically assessed to be safety compliant. dormakaba have the UK's largest service network of trained engineers experienced on all types of door system both dormakaba and from other manufacturers.

Qualified service engineers assessed and accredited by ADSA:

- Scheduled maintenance visits and emergency callout.
- Risk assessment reports
- Trained and accredited service engineers with national coverage and logistic support

For further advice on dormakaba products and accessories please contact:

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