dormakaba

ST
TST

Automatic
Sliding Door Systems

The complete range of sliding doors combined in one system

The ES 200 operator technology sets new trends
The dormakaba Automatic sliding door range is both technologically advanced and flexible in construction. The ES 200 is a slimline unit with exceptional performance and various functions to suit your project and door type. Tested to 1,000,000 cylcles, the ES 200 is a high quality, high performing modular automatic sliding door operator unit giving reliable performance. Additional modules and options facilitate made-to-measure solutions for automatic sliding doors.

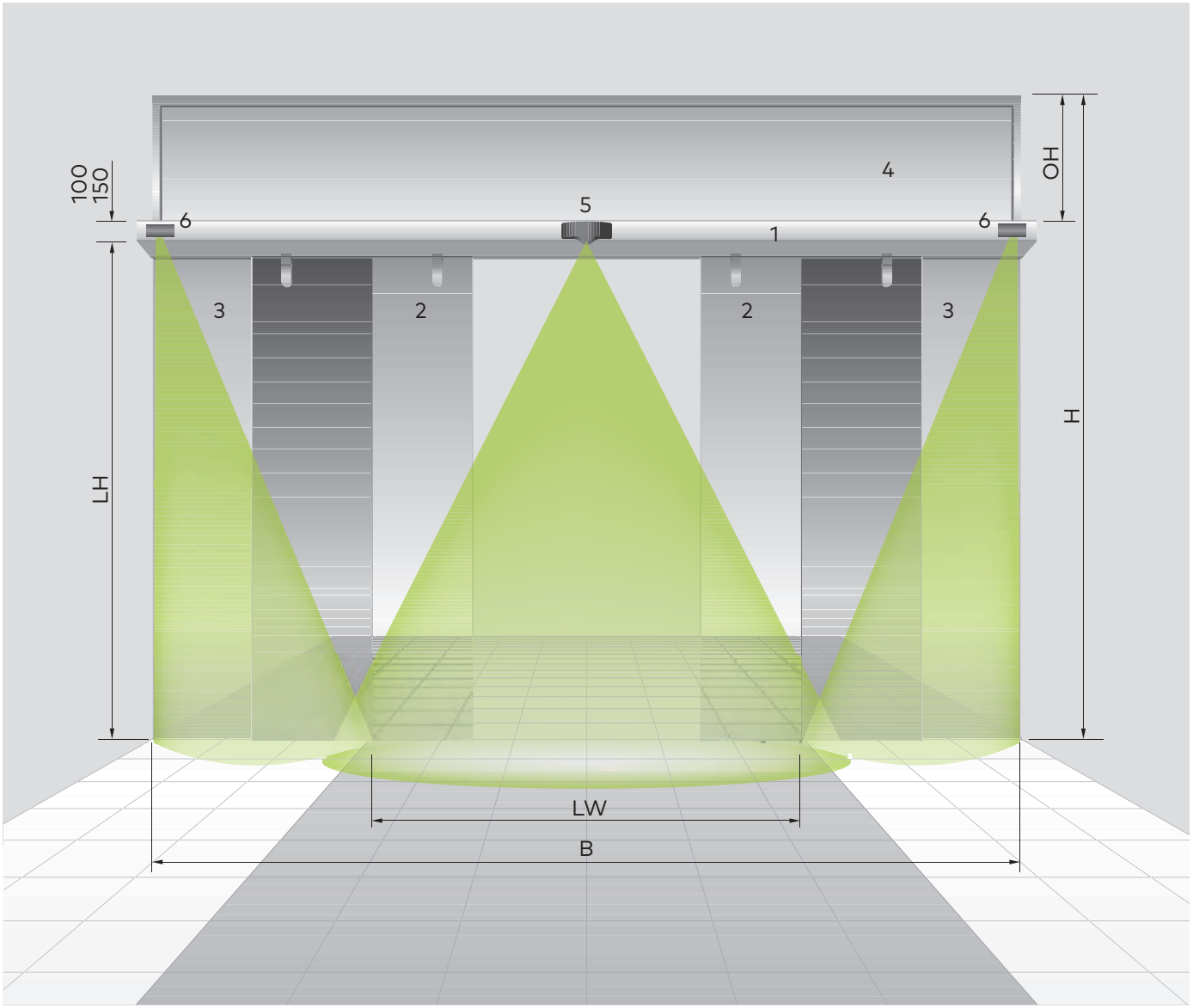
Select the door panel system for your requirements
dormakaba automatic sliding doors and telescopic sliding doors provide all applications for the individual design of your entrance area. No matter if you prefer an elegant full-glass application with a compact operator and MANET single-point fixings or a rather functional and robust frame structure, the ES 200 door system is the suitable application for your entrance. ST ES 200 systems not only meet all requirements, they also create new standards when it comes to functional range, motion paths, design, stability and heat insulation.

EN 16005
We offer our doors with EN 16005 compliant safety components as indicated on pages 18.
The required safety measures result from the respective risk analysis.

Features and benefits
- Unsurpassed performance scope
- Easily adaptable to your individual requirements
- Emergency exit and escape route doors are equipped with a redundant operator, an additional control unit for safety purposes and a self-monitoring motion detector
- Excellent cost effectiveness and reliability thanks to established components and quality-assured production
- Numerous adjustable parameters
- Various standard connection facilities
- Obstacle self-detection and automatic reversing
- Delivery of "ready for installation" systems, mounting and commissioning if desired
- Manufactured according to the latest state of technology and compliant with all regulations
- Optional: individual burglary control

Content

Sliding door components



1 Unsupported header with track rail, drive unit and control unit
2 Sliding door panel
3 Stationary side screens (these screens are not required for installation between extending wall faces or similar)
4 Fanlight or solid cover
5 Activator (e. g. motion detector) including safety sensors to monitor the passage area
6 DIN 18650 and EN 16005, sensors to monitor secondary closing edges

LW Clear passage width
LH Clear passage height
B System width
OH Height of fanlight
H System height

ST FLEX with flex fine-frame profiles

Features

- Attractive glass surfaces thanks to slender frames
- High stability and torsional rigidity
- Low damping behaviour (k-value) of frame due to double-glazing
- Excellent insulation features thanks to interlocking side seals and top and bottom seals
- Select secondary edge safety solution to meet EN 16005 from:
  - full height pocket screens
  - glazed barriers
  - presence sensors

See page 18

Important customer benefits at a glance

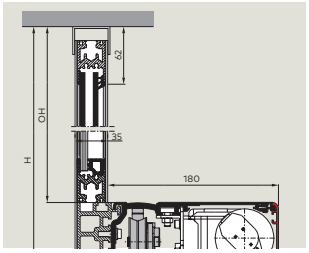
The full range of performance functions for the dormakaba ES 200 automatic sliding door operator
(tested to 1,000,000 cycle)
Installation 'project coordinated' by the dormakaba Projects Team
Installed and commissioned by dormakaba's highly skilled engineer team to meet the requirements of BS EN 16005 "Power operated pedestrian doorsets. Safety in use. Requirements and test methods"

System dimensions and max. door-panel weight

	Single-panel version*		Double-panel version	
Operator	Min. system width (B) =	Max. door-panel weight	Min. system width (B) =	Max. door-panel weight
ES 200				
without side screens	2 x LW + 70 mm	1 x 100 kg	2 x LW + 140 mm	2 x 100 kg
with side screens	2 x LW + 100 mm		2 x LW + 140 mm	

* not considering the width of the door post

ST-Flex with fanlight



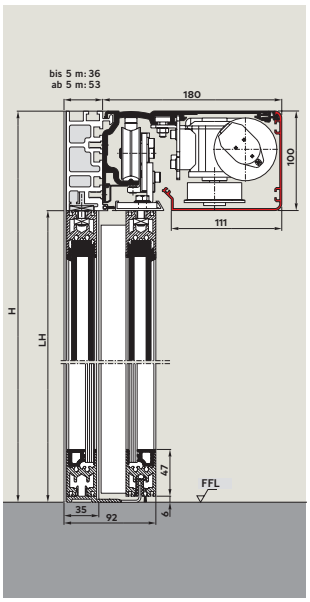
Glass panes

- Toughened safety glass
- Laminated safety glass, 8 mm
- Iso 22 double-glazing (4/14/4)
- Special glazing

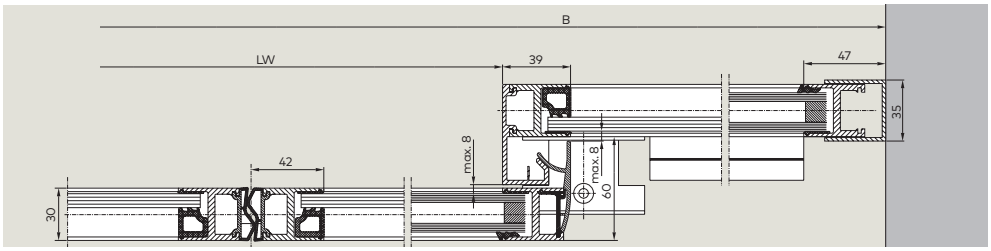
Clear passage height (LH)

Determination of clear passage height LH (mm) depending
on the clear passage width LW (mm) and the glazing:
See diagrams on pages 16

Corridor mounting with side screens, operator 100 mm



Horizontal section with side screen



ST FLEX Green, FST FLEX Green – Energy efficiency in elegant design

Features

- The slender ST FLEX Green profile system is based on the FLEX profile system and provides thermal insulation in conjunction with excellent energy-saving features.
- Elegant fine-frame design
- High stability and rigidity
- Protection against draughts via circumferential seals
- Select secondary edge safety solution to meet EN 16005 from:
  - full height pocket screens
  - glazed barriers
  - presence sensors

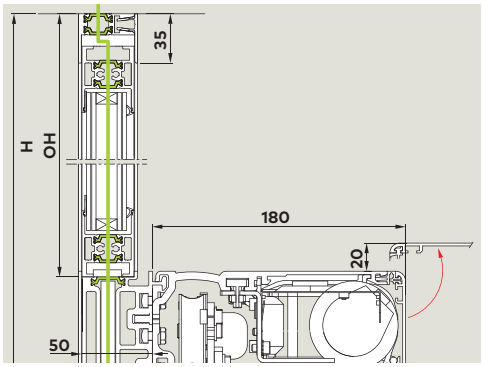
See page 18

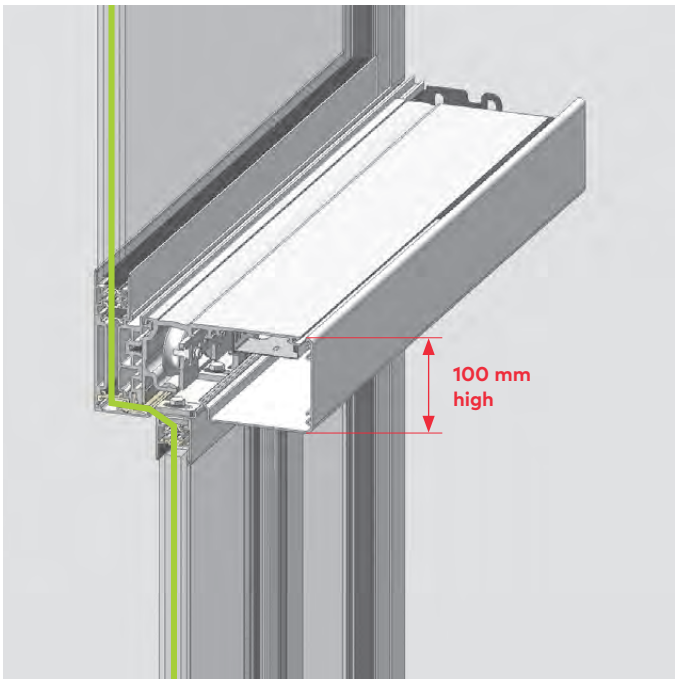
System dimensions and max. door-panel weight

	Single-panel version*		Double-panel version	
Operator	Min. system width (B) =	Max. door-panel weight	Min. system width (B) =	Max. door-panel weight
ES 200				
without side screens	2 x LW + 60 mm	1 x 200 kg	2 x LW + 120 mm	2 x 160 kg
with side screens	2 x LW + 80 mm	1 x 200 kg	2 x LW + 160 mm	2 x 160 kg

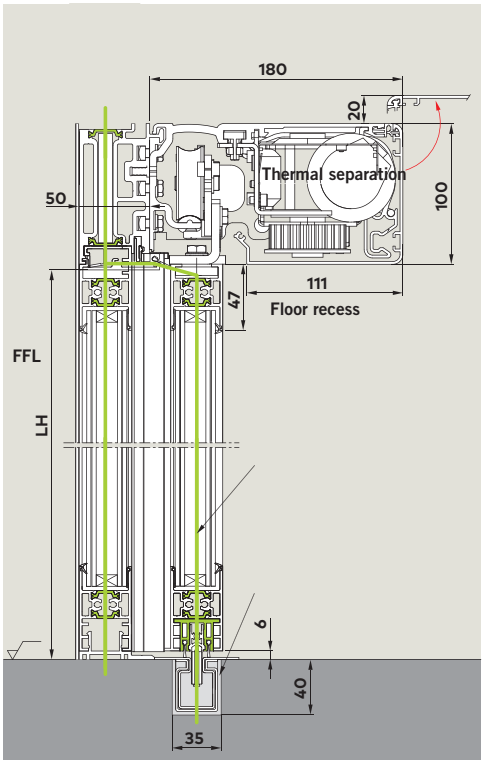
* not considering the width of the door post

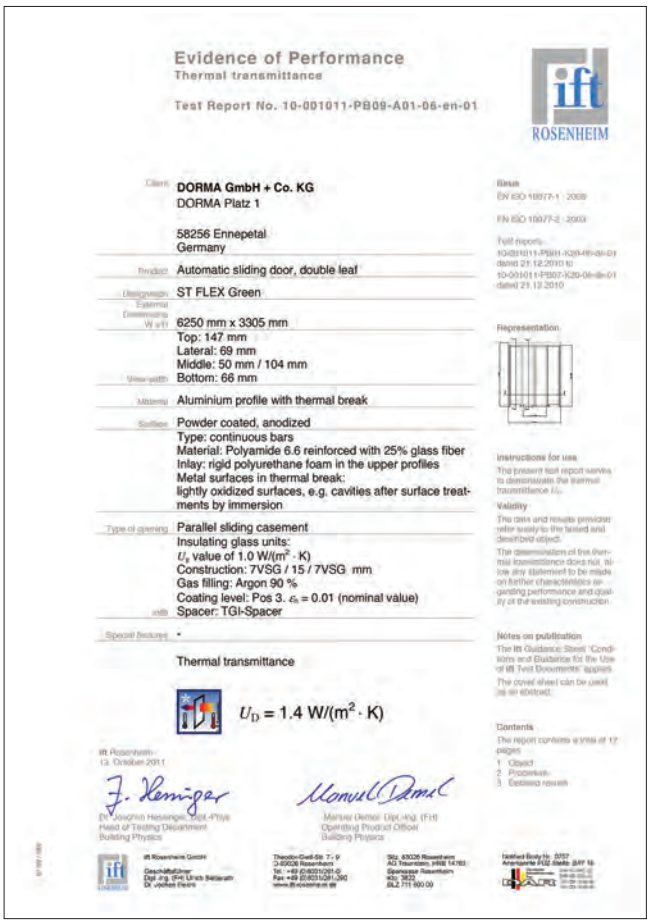
ST Flex Green with fanlight





Corridor mounting with side screens, operator 100 mm





Evidence of Performance
Thermal transmittance

Test Report No. 10-001011-PB09-A01-06-en-01

ift ROSENHEIM

DORMA GmbH + Co. KG
DORMA Platz 1

58256 Ennepetal
Germany

Automatic sliding door, double leaf

ST FLEX Green

6250 mm x 3305 mm
Top: 147 mm
Lateral: 69 mm
Middle: 50 mm / 104 mm
Bottom: 66 mm

Aluminium profile with thermal break

Powder coated, anodized
Type: continuous bars
Material: Polyamide 6.6 reinforced with 25% glass fiber
Inlay: rigid polyurethane foam in the upper profiles
Metal surfaces in thermal break:
lightly oxidized surfaces, e.g. cavities after surface treatments by immersion

Parallel sliding casement
Insulating glass units:
U_g value of 1.0 W/(m² · K)
Construction: 7VSG / 15 / 7VSG mm
Gas filling: Argon 90 %
Coating level: Pos 3. ε_n = 0.01 (nominal value)
Spacer: TGI-Spacer

Thermal transmittance

U_D = 1.4 W/(m² · K)

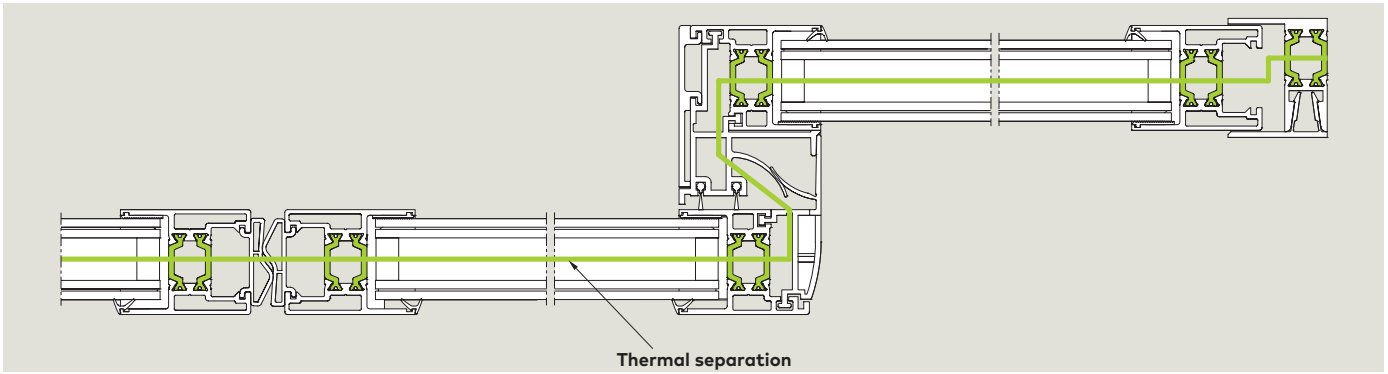
Important customer benefits at a glance

- Very low U_D-values from 1.4 to max. 1.8 (thermal transmission co-efficient)
- Tested quality with ift Rosenheim approval
- Compliant with the German energy-saving regulation (EnEV 2009)
- Sustainable, reliable and energy-saving system
- Interior and entrance doors in the same design to harmonise with the building's overall look
- Individual U_D-value certificates for each ST FLEX Green door system
- Glass panes with rugged but elegant frames
- Installation 'project coordinated' by the dormakaba Projects Team
- Installed and commissioned by dormakaba's highly skilled engineer team to meet the requirements of BS EN 16005 "Power operated pedestrian doorsets. Safety in use. Requirements and test methods"
- The full range of performance functions for the dormakaba ES 200 automatic sliding door operator (tested to 1,000,000 cycle)

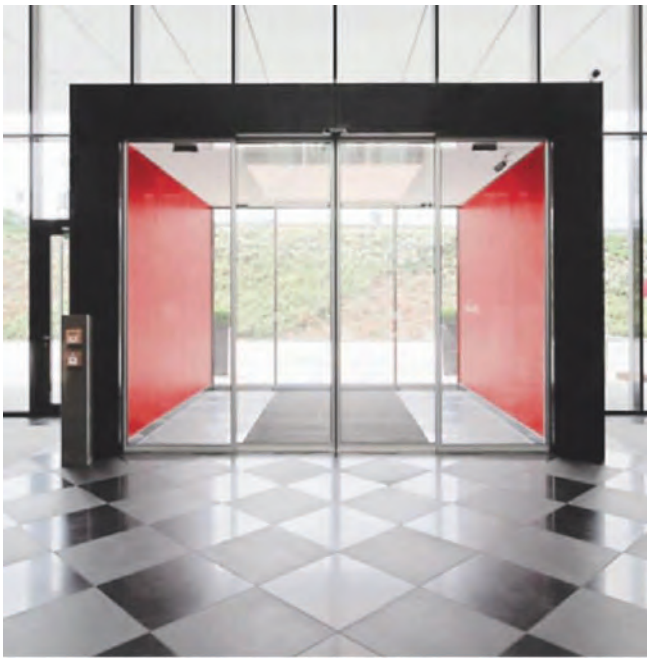
The ST FLEX Green fulfils the requirements of the latest German energy-saving regulation (EnEV 2009) and harmonises perfectly with the existing dormakaba sliding door range. Even the smallest ST FLEX Green door system meets the requirements of the German EnEV 2009, which stipulates a certain U_D-value (thermal transmission co-efficient) for complete door systems.

Horizontal section of lintel-mounted single-panel version

Double-panel version with side screen



ST FLEX Secure sliding door with anti-intruder protection



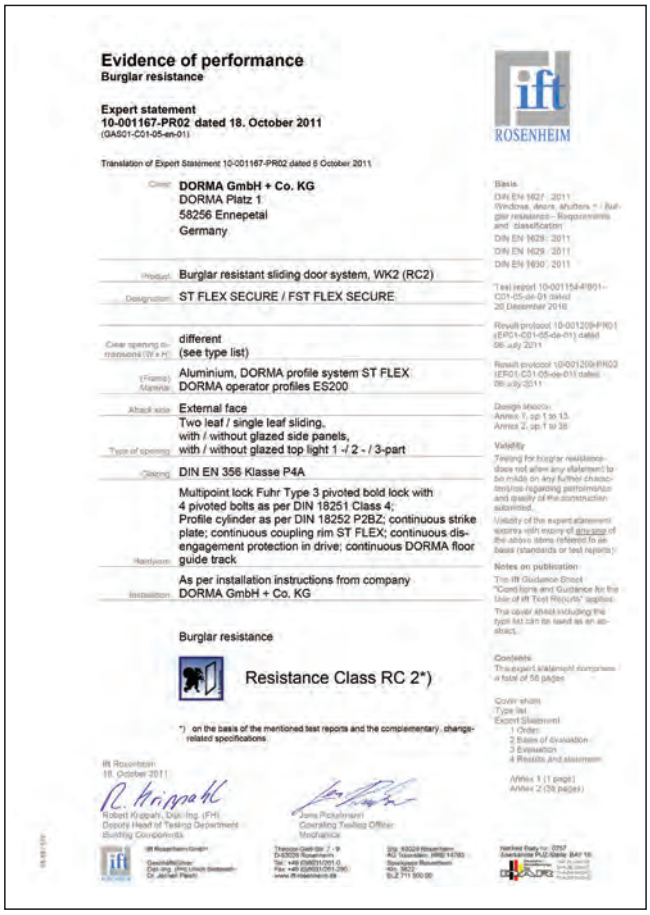
Features

- Burglar resistant fine framed automatic door system
- Tested burglar resistance RC2
- Secure 4-point locking device
- Monitored battery back-up system suitable for use on emergency escape routes
- Special burglar resistant laminated safety glass
- Select secondary edge safety solution to meet EN 16005 from:
  - full height pocket screens
  - glazed barriers
  - presence sensors

  See page 18

Important customer benefits at a glance

- Excellent intruder protection
- Appealing fine frame profiles
- Functionaility as a high usage automatic sliding door in normal use
- In contrast to similar security doorsets, there are no visible barriers. Thus, your frontage remains as transparent and inviting as ever without any negative effect on its appearance
- Installation 'project coordinated' by the dormakaba Projects Team
- Installed and commissioned by dormakabas highly skilled engineer team to meet the requirements of BS EN 16005 "Power operated pedestrian doorsets. Safety in use. Requirements and test methods"
- The full range of performance functions for the dormakaba ES 200 automatic sliding door operator (tested to 1,000,000 cycle)



Evidence of performance
Burglar resistance

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

ift ROSENHEIM

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

DORMA GmbH + Co. KG
DORMA Platz 1
58256 Ennepetal
Germany

Burglar resistant sliding door system, WK2 (RC2)

ST FLEX SECURE / FST FLEX SECURE

different
(see type list)

Aluminium, DORMA profile system ST FLEX
DORMA operator profiles ES200

External face
Two leaf / single leaf sliding,
with / without glazed side panels,
with / without glazed top light 1 -/ 2 - / 3-part

DIN EN 356 Klasse P4A

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

As per installation instructions from company DORMA GmbH + Co. KG

Burglar resistance

Resistance Class RC 2*)

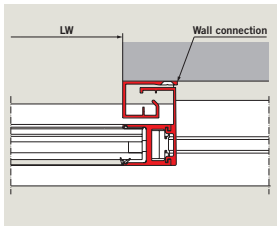
*) on the basis of the mentioned test reports and the complementary, change-related specifications

ift Rosenheim
18. October 2011

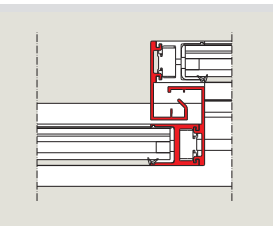
Robert Knippel, Dipl.-Ing. (FH)
Deputy Head of Testing Department
Building Components

Jens Pickelmann
Operating Testing Officer
Mechanics

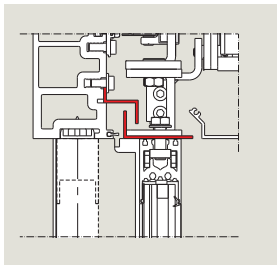
Wall connection



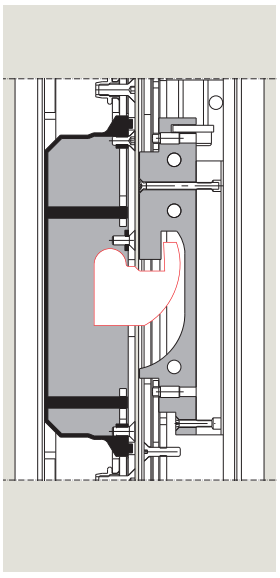
Unlocking of sliding panel



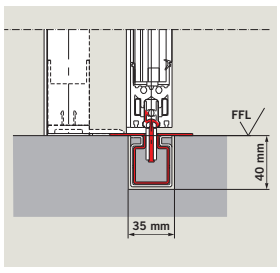
Security feature inside operator



Main closing edge



Floor guide



TST FLEX with flex fine-frame profiles

Features

- Attractive glass surfaces thanks to slender frames
- High stability and torsional rigidity
- Low damping behaviour (k-value) of frame due to ISO glazing (double-glazing)
- Excellent insulation features thanks to interlocking side seals and top and bottom seals
- Select secondary edge safety solution to meet EN 16005 from:
  - full height pocket screens
  - glazed barriers
  - presence sensors

  See page 18

Important customer benefits at a glance

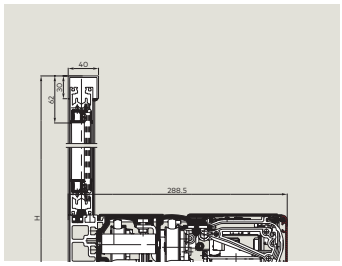
- Allows maximum opening width to be achieved thereby easing traffic flow
- Installation 'project coordinated' by the dormakaba Projects Team
- Installed and commissioned by dormakaba's highly skilled engineer team to meet the requirements of BS EN 16005 "Power operated pedestrian doorsets. Safety in use. Requirements and test methods"
- The full range of performance functions for the dormakaba ES 200 automatic sliding door operator (tested to 1,000,000 cycle)

System dimensions and max. door-panel weight

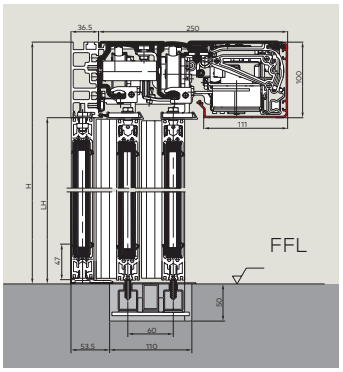
	Opening to one side*		Opening to two sides	
Operator	Min. system width (B) =	Max. door-panel weight	Min. system width (B) =	Max. door-panel weight
ES 200				
without side screens	1.5 x LW + 60 mm	2 x 75 kg	1.5 x LW + 80 mm	4 x 75 kg
with side screens	1.5 x LW + 105 mm	2 x 75 kg	1.5 x LW + 170 mm	4 x 75 kg

* not considering the width of the door post

TST FLEX with fanlight



Corridor mounting with side screens, operator 100 mm



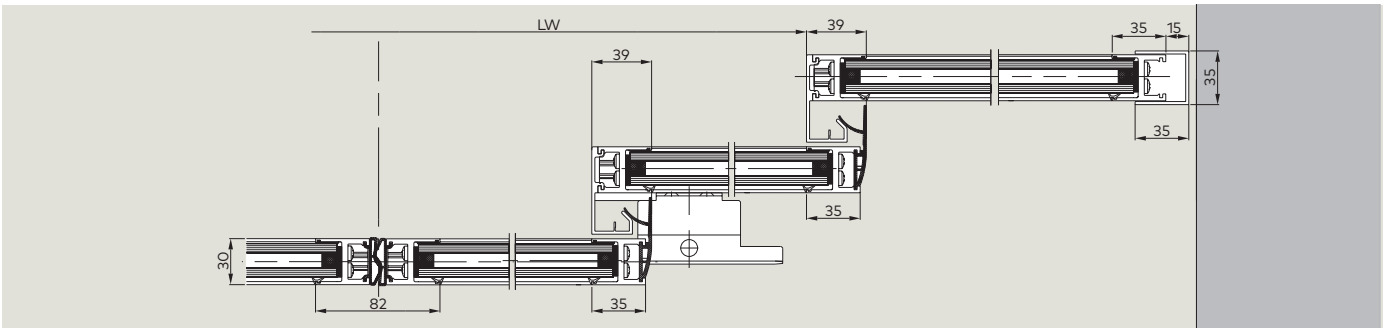
Glass panes

- Iso 22 double-glazing (4/14/4)
- Iso 22 double-glazing (6/10/6)
- Special glazing

Clear passage height (LH)

Determination of clear passage height LH (mm) depending on the clear passage width LW (mm) and the glazing: see diagrams on pages 18/19

Horizontal section with side screen



Escape route version: Please consider the prevailing country-specific regulations.

ST G with fine framed door leaves

Features

- Fine framed door leaves
- Single glazed only
- Select secondary edge safety solution to meet EN 16005 from:
  - full height pocket screens
  - glazed barriers
  - presence sensors

  See page 18

Important customer benefits at a glance

- The doormakaba ES 200 automatic sliding door operator provides both quality and assurance, having been tested to 1,000,000 cycles
- ST-G can be tailor made in the UK to suit your individual needs
- Installation 'project coordinated' by the dormakaba Projects Team
- Installed and commissioned by dormakaba's highly skilled engineer team to meet the requirements of BS EN 16005 "Power operated pedestrian doorsets. Safety in use. Requirements and test methods"

System dimensions and max. door-panel weight

	Single-panel version*		Double-panel version	
Operator	Min. system width (B) =	Max. door-panel weight	Min. system width (B) =	Max. door-panel weight
ES 200				
without side screens	2 x LW + 50 mm	1 x 200 kg	2 x LW + 100 mm	2 x 160 kg
with side screens	2 x LW + 100 mm	1 x 200 kg	2 x LW + 180 mm	2 x 160 kg

* not considering the width of the door post

Glass panes

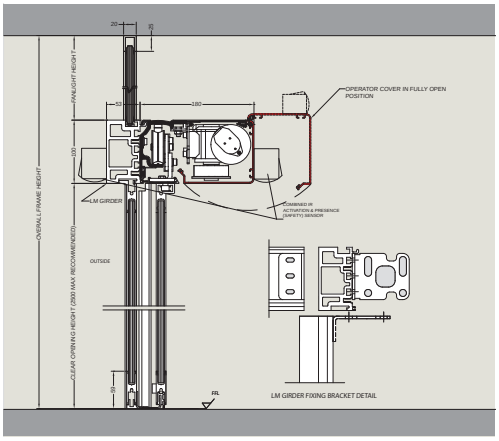
- Toughened safety glass
- Laminated safety glass, 8 mm
- Special glazing

Clear passage height (LH)

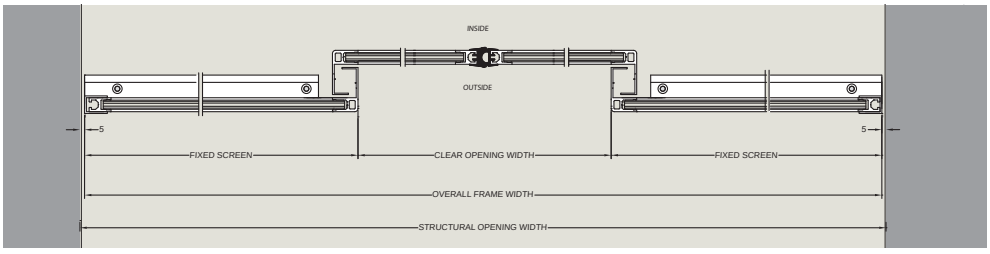
Determination of clear passage height LH (mm) depending on the clear passage width LW (mm) and the glazing:

See diagrams on page 16

Corridor mounting with side screens, operator 100



Horizontal section with side screen



ST-S with robust aluminium framing

Features
- Combined with laminated or toughened safety glass
- Select secondary edge safety solution to meet EN 16005 from:
  - full height pocket screens
  - glazed barriers
  - presence sensors

  See page 18

Important customer benefits at a glance
- Robust framing for high traffic, high usage environments
- The dormakaba ES 200 automatic sliding door operator provides both quality and assurance, having been tested to 1,000,000 cycles
- ST-S can be tailor made in the UK to suit your individual needs
- Installation 'project coordinated' by the dormakaba Projects Team
- Installed and commissioned by dormakaba's highly skilled engineer team to meet the requirements of BS EN 16005 "Power operated pedestrian doorsets. Safety in use. Requirements and test methods"

System dimensions and max. door-panel weight

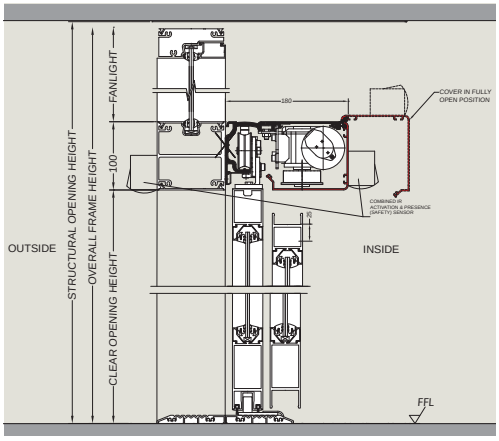
	Single-panel version*		Double-panel version	
Operator	Min. system width (B) =	Max. door-panel weight	Min. system width (B) =	Max. door-panel weight
ES 200				
without side screens	2 x LW + 50 mm	1 x 200 kg	2 x LW + 100 mm	2 x 160 kg
with side screens	2 x LW + 100 mm	1 x 200 kg	2 x LW + 180 mm	2 x 160 kg

* not considering the width of the door post

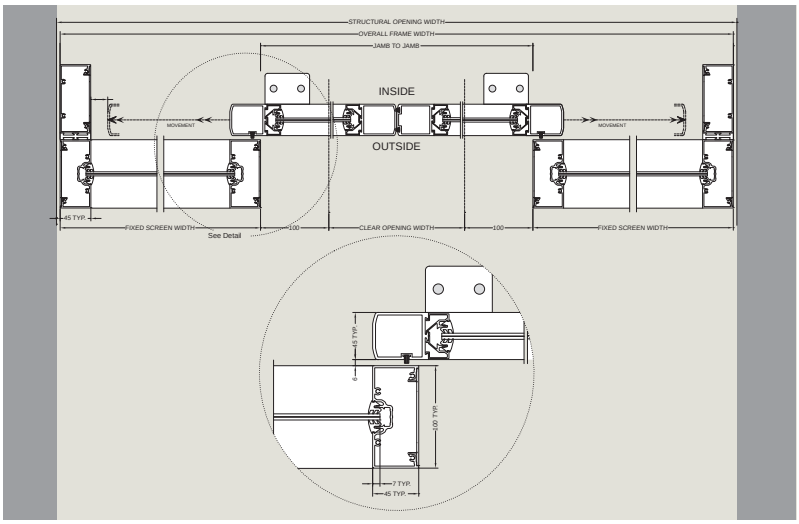
Glass panes
- Toughened safety glass
- Laminated safety glass, 8 mm
- Iso 22 double-glazing (4/14/4)
- Special glazing

Clear passage height (LH)
Determination of clear passage height LH (mm) depending on the clear passage width LW (mm) and the glazing:
See diagrams on page 16

Corridor mounting with side screens, operator 100 mm



Horizontal section with side screen



ST MANET, with MANET single-point fixings for full-glass doors

Features

- For interior doors
- Weightless design thanks to unobtrusive stainless steel single-point fixings
- Versatile component range with various fitting options for walls, floors and ceilings, and to link glass elements
- Select secondary edge safety solution to meet EN 16005 from:
  - full height pocket screens
  - glazed barriers
  - presence sensors

  See page 18

Important customer benefits at a glance

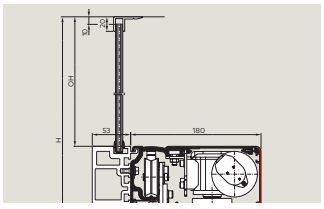
- The dormakaba ES 200 automatic sliding door operator provides both quality and assurance, having been tested to 1,000,000 cycles
- ST MANET can be tailor made in the UK to suit your individual needs
- Installation 'project coordinated' by the dormakaba Projects Team
- Installed and commissioned by dormakaba's highly skilled engineer team to meet the requirements of BS EN 16005 "Power operated pedestrian doorsets. Safety in use. Requirements and test methods"

System dimensions and max. door-panel weight

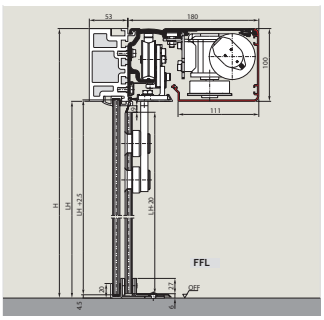
	Single-panel version*		Double-panel version	
Operator	Min. system width (B) =	Max. door-panel weight	Min. system width (B) =	Max. door-panel weight
ES 200				
without side screens	2 x LW + 70 mm	1 x 200 kg	2 x LW + 140 mm	2 x 160 kg
with side screens	2 x LW + 100 mm	1 x 200 kg	2 x LW + 140 mm	2 x 160 kg

* not considering the width of the door post

ST MANET with fanlight



Corridor mounting with side screens, operator 100 mm



Glass panes

- Toughened safety glass (TSG) 10 mm
- Special glazing

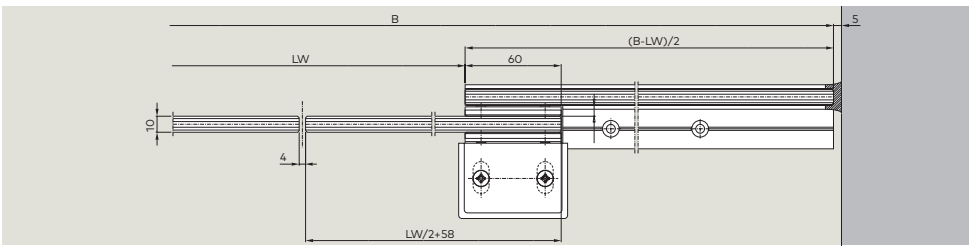
Clear passage height (LH)

Determination of clear passage height LH (mm) depending on the clear passage width LW (mm) and the glazing: see diagrams on page 16

Please consider the limited opening dimensions on application of MANET single-point fixings:

Single-panel version max.	Clear passage width (LW)	1600 mm
	Clear passage height (LH)	2500 mm
Double-panel version max.	Clear passage width (LW)	2000 mm
	Clear passage height (LH)	2500 mm

Horizontal section with side screen



ST-AP with frameless door leaves and side panels

Features

- Frameless door leaves with top and bottom rails or manet patch fittings
- Frameless door leaves with maximum visual transparency
- Select secondary edge safety solution to meet EN 16005 from:
  - full height pocket screens
  - glazed barriers
  - presence sensors

  See page 18

Important customer benefits at a glance

- The full range of performance functions for the dormakaba ES 200 automatic sliding door operator (tested to 1,000,000 cycles
- Tailored sizes and bespoke manufacture in the UK to suit your project
- Installation 'project co-ordinated' by dormakaba Projects Team
- Installed and commissioned by dormakaba's highly skilled engineer team to meet the requirements of BS EN 16005 "Power Operated Pedestrian Doorsets. Safety in Use. Requirements & Test Methods"

System dimensions and max. door-panel weight

	Single-panel version*		Double-panel version	
Operator	Min. system width (B) =	Max. door-panel weight	Min. system width (B) =	Max. door-panel weight
ES 200				
without side screens	2 x LW + 50 mm	1 x 200 kg	2 x LW + 100 mm	2 x 160 kg
with side screens	2 x LW + 100 mm	1 x 200 kg	2 x LW + 180 mm	2 x 160 kg

* not considering the width of the door post

Glass panes

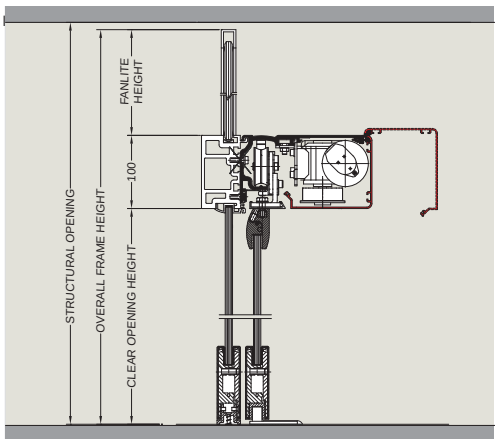
- Toughened safety glass (10/12mm)
- Special glazing

Clear passage height (LH)

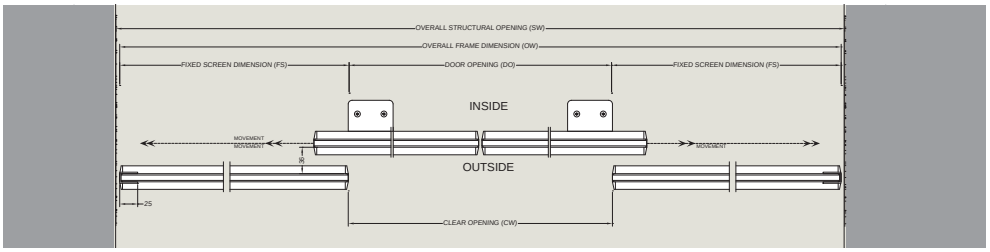
Determination of clear passage height LH (mm) depending on the clear passage width LW (mm) and the glazing:

See diagrams on page 16

Corridor mounting with side screens, operator 100



Horizontal section with side screen



Operator data ES 200

Door parameters		**ES 200**
Single-panel sliding door	– Clear passage width (LW) [1)] – Max. door-panel weight	700 – 3000 mm 1 x 200 kg
Double-panel sliding door	– Clear passage width (LW) [1)] – Max. door-panel weight	800 – 3000 mm 2 x 160 kg
Clear passage height [1)]		2100 – 3000 mm

Door parameters		**ES T 200**
Double-panel sliding door, opening to one side	– Clear passage width (LW) [1)] – Max. door-panel weight	800 – 2400 mm 2 x 75 kg
4-panel sliding door, opening to both sides	– Clear passage width (LW) [1)] – Max. door-panel weight	1400 – 4000 mm 4 x 75 kg
Clear passage height*		2100 – 3000 mm

[1)] Other dimensions on request.

Designs		**ES 200**
Profile systems	ST FLEX GREEN fine-frame profile	●
	ST FLEX SECURE fine-frame profile	●
	FLEX fine-frame profile	●
	ST-G fine-frame profile	●
	ST-S robust frame profile	●
	ST-AP frameless	●
	MANET single-point fixing max. clear passage width (LW) single-panel version = 1600 mm double-panel version = 2000 mm Not suitable for telescopic doors	●
Operator height/depth	100 mm x 180 mm	●
	150 mm x 180 mm	●
Floor-integrated guide rail		O
Surface-mounted installation without floor guide rail (consider wind load and burglary control)		●

Technical specifications	
Suitable for application in emergency exits and escape routes	●
Max. opening and closing force 150 N	●
Opening speed (incremental setting)	10 – 75 cm/s
Closing speed (incremental setting)	10 – 50 cm/s
Hold-open time	0 – 180 s
Power supply/frequency	230 V, 50/60 Hz
Power consumption	250 W
Class of protection	IP 20
Admissible temperature	-20 – +60 °C
Admissible humidity (relative)	max. 93 % (non condensing)
Tested according to Low Voltage Directive	●
Manufactured to ISO 9001	●
	●

● standard O optional - no

Basic Module (BM)		**ES 200**
Modular design		Basic Module (BM)
Microprocessor control		●
Function programs	– Off – Automatic – Permanent Open – Partial Open – Exit Only – Night-/Bank Function	●
Automatic reversing		●
Connection for electromechanical locking device (bistable)		●
Connection for safeguarding of passage area (on both sides)		●
Equipped in accordance with DIN 18650 and EN 16005		●
Adjustment of all basic parameters via integrated display and keys		●
Parametrisation via handheld		●
Emergency opening/closing (only with rechargeable battery pack)		○
Emergency operation via rechargeable battery pack (only with rechargeable battery pack)		○
Synchronous operation		●
24 V output for external accessories		●
Read-out error log with error codes		●
DCW® bus connection (Protocol **D**ormakaba **C**onnect and **W**ork)		●

Function Module (FM) - optional	
Pharmacy Function	●
Door status contact (3 x)	●
Safeguarding of main and secondary closing edge/s	○
Bell contact	●
Airlock control	●

Secondary Edge Function Module - optional	
The function module provides tested monitoring of the secondary closing edges for compliance with EN 16005	○

Additional equipment	
Electromechanical locking device (bistable)	○
Manual lock release for electromechanical locking device	○
Light curtains	○
Rechargeable battery pack (emergency opening/closing)	○
dormakaba USV emergency power supply unit (external)	○
Module for coupling to LON/LAN building control system	○

● standard ○ optional - no

Determination of door panel size

The diagrams show the dependence of the clear passage height (LH) on the clear passage width (LW).

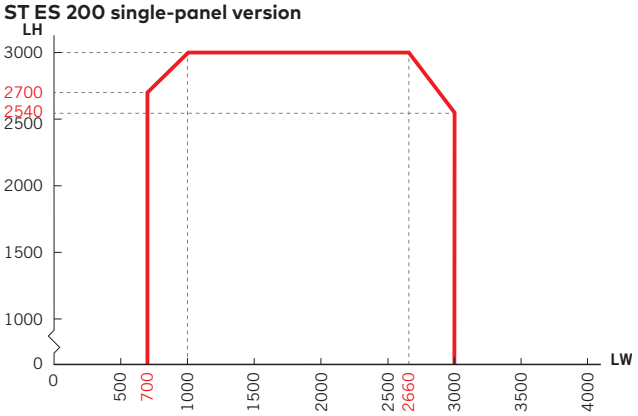
The maximum door-panel weight of the relevant operators must not be exceeded. We recommend smaller doors for areas with unfavourable wind conditions.

The charts refer to an average door panel weight of 25 kg/m2.

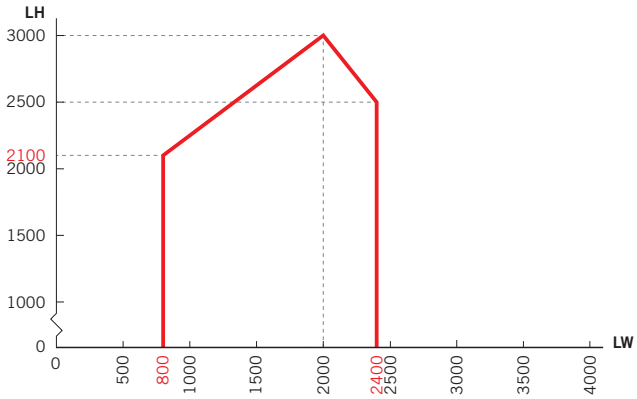
Higher clear passage heights (LH) on demand.

If using Manet fittings please refer to page 12 for specific opening dimensions.

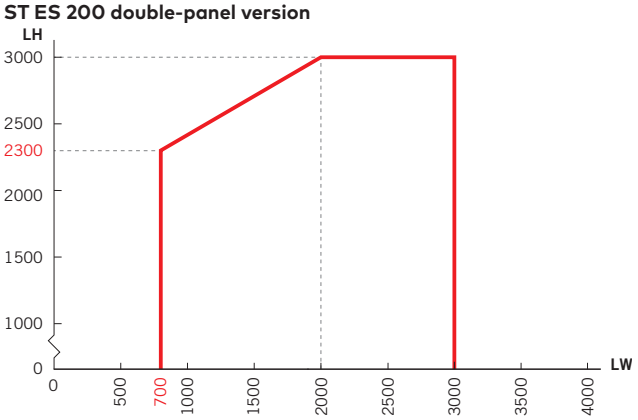
ST ES 200 single-panel version



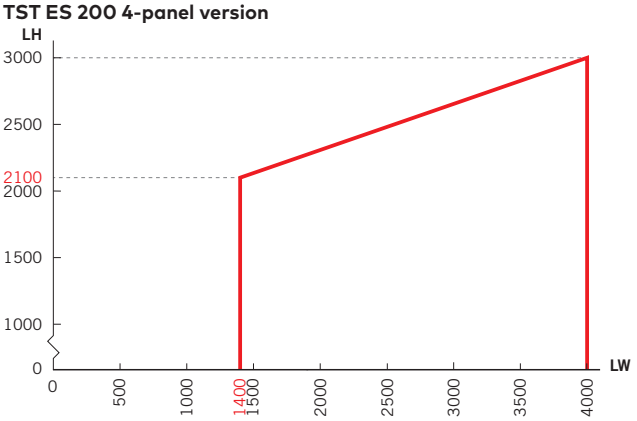
TST ES 200 double-panel version



ST ES 200 double-panel version



TST ES 200 4-panel version



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:

01462 477600