



## SIMPLY THE WIDEST FOLDING DOOR

—  
FFT FLEX Green. Maximum clear opening  
widths and best thermal separation.

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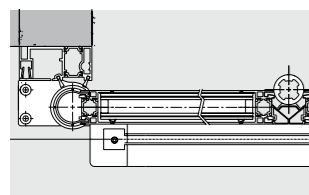
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# MAXIMUM CLEAR OPENING WIDTH OF 2.4 METERS IN TIGHT SPACES

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FFT FLEX Green. Simply the widest folding door on the market. Offering the best thermal separation.



The FFT FLEX Green folding door shows just how much you can get out of a small space.

**Convincing benefits:**

- Maximum space gain with opening width of up to 2.4 meters
- Excellent thermal separation

- Enhanced wind load resistance
- Very quiet, dynamic operating system
- Suitable for installation in emergency escape routes to EN 16005



**GERMAN DESIGN AWARD SPECIAL 2016**

**DORMA Service**

Offering a comprehensive maintenance and repair service, DORMA can help with the enduring functional integrity and safety of your door sets long-term.



Service Hotline  
0800 212 380



# THE ONLY FOLDING DOOR WITH MAXIMUM ESCAPE ROUTE WIDTHS

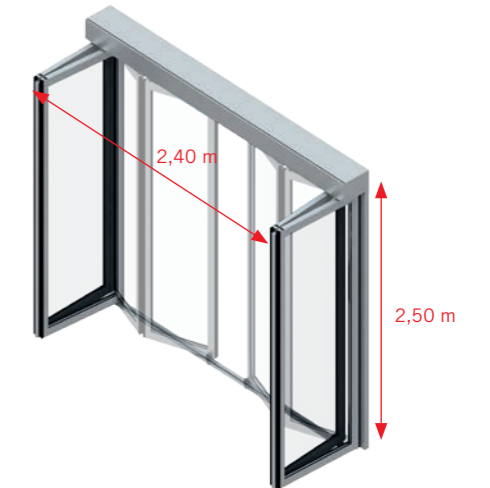
FFT FLEX Green. Maximum opening within tight structural widths. And certified for escape routes.

Wherever tight spaces need to be opened up for wide access, that's where the FFT FLEX Green folding door comes into its own. It offers a particularly suitable solution where a small structural width has to be utilized to the full for as wide an opening width as possible. This then enables maximum emergency escape widths.

## A viable option for emergency exits and escape routes

With their proven DualDrive technology, our folding doors offer a persuasive and operationally dependable solution for emergency exits and escape routes.

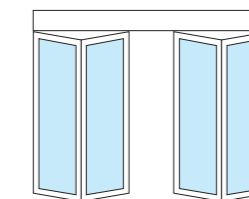
- Reliable opening and closing of the door thanks to integrated backup battery module
- Emergency exit security even in the case of a power failure
- Safeguarded functionality with self-monitoring sensors



## Convincing benefits

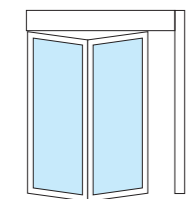
- Very small space requirement when folded open – to the side, to the front and to the rear
- Suitable for both external doors and internal doors in narrow passageways
- Ideal for barrier-free access points in public buildings
- Particularly suitable for emergency exits and escape routes

During their opening cycle, the door panels are simultaneously folded and rotated to the side under automatic control



Bi-parting opening door set

The two panel pairs are opened in synchronization by a bi-parting folding motion that takes them to the side, creating a maximum opening width of up to 2.4 meters.



Unilateral opening door set

For smaller applications, the FFT FLEX Green folding door consisting of just one pair of panels provides for maximum opening width of up to 1.2 meters.

# FROM FOLDING DOOR TO ENERGY SAVER

FFT FLEX Green folding door. Efficient thermal separation.

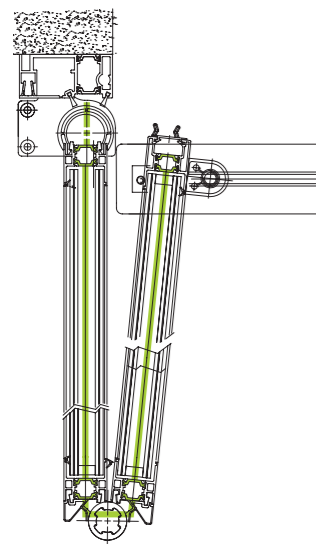
Whether it's cold or hot outside, the FFT FLEX Green folding door offers excellent thermal separation efficiency with very good thermal transmittance values ( $U_D$  Values). Combined with high-quality insulation glass, they create an outstanding thermal

barrier at the structural opening. To ensure the best possible planning of an energy-efficient building, we support our customers with the certified computation of their specific thermal transmittance value.

**Convincing benefits:**

- Sustainable, reliable and energy-saving system
- Very low thermal transmittance values ( $U_D$  Values) from 1.7 to max. 2.4 (also known as heat transfer coefficient)
- Individual  $U_D$  Value certificates for each FFT FLEX Green door system
- Tested quality with approval
- Glass panes with rugged but elegant frames

Thermal separation pattern



Thermal separation



# QUIETER. MORE DYNAMIC. MORE RESISTANT TO WIND LOADS.

FFT FLEX Green folding door. With an operator system full of useful functions.

The folding door features an innovative, intelligent drive system offering improved operating smoothness, increased dynamic response and enhanced resistance to wind loads.

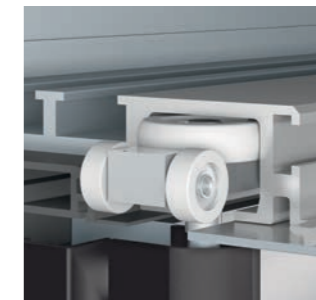
**More performance, less wear**

The operator transmits its power without toothed belts for significant gains in dynamic response and silent efficiency. The door set thus opens and closes particularly quickly, yet also quietly and with less wear.

**Low wind susceptibility**

External doors are frequently exposed to wind loads. As the wind acts directly against the door panels, it can adversely affect operating behavior during both the closing and opening cycles. The new, intelligent operator of the

FFT FLEX Green system detects wind loads\* and compensates for them accordingly. The operating parameters are dynamically modified according to requirements in order to adapt to the prevailing weather situation.



**Smooth, quiet operation**

Through the use of a carrier borne by five rollers, even very large panels will open and close quietly and smoothly.

**Certified user safety and performance characteristics to EN 16361**

- Shock resistance
- Resistance to driving rain
- Resistance to wind load
- Thermal transmittance value
- Air permeability
- Resistance to impact

\*depending on door size, up to Beaufort Force 8



# THE EQUIPMENT FEATURES

Comparison between standard and emergency escape doors.

Door type	FFT FLEX Green (Standard)	FFT FLEX Green – DualDrive (Emergency escape)
<b>Operator unit</b>	<b>ES 200 FFT</b>	<b>ES 200-2D FFT</b>
<b>Door parameters</b>		
Single-panel folding door	– Clear opening width (LW) <sup>1</sup> – Max. panel pair weight	800 – 1200 mm 1 x 90 kg
Double panel folding door	– Clear opening width (LW) <sup>1</sup> – Max. panel pair weight	900 – 2400 mm 2 x 90 kg
Clear passage height <sup>1</sup>		2100 – 2500 mm
<b>Technical data</b>		
Suitable for use in emergency exits and escape routes	-	•
Opening and closing force (max. 150 N)	•	•
Opening speed (incremental adjustment)	10 – 75 cm/s	10 – 75 cm/s
Closing speed (incremental adjustment)	10 – 50 cm/s	10 – 50 cm/s
Hold-open time	0 – 180 s	0 – 180 s
Installed load, frequency	230 V, 50/60 Hz	230 V, 50/60 Hz
Power consumption	250 W	250 W
Type of protection	IP 20	IP 20
Temperature range	- 20 – + 60 °C	- 20 – + 60 °C
Permissible humidity (relative)	Max. 93% (non-condensing)	Max. 93% (non-condensing)
<b>Basic module</b>		
Modular design	•	•
Microprocessor control	•	•
Functional programs	– Off – Automatic – Permanent-open – Partial-open – Exit only – Night-bank control	•
Automatic reversing	•	•
Connection for bi-stable electromechanical locking device	•	•
Connection for presence sensor (both sides)	•	•
Equipment according to EN 16005	•	•
Adjustment of all basic parameters via integrated display and keypad	•	•
Parameter configuration by PDA	•	•
Emergency opening / emergency closing (if battery pack installed)	• / •	• / - (Battery pack as standard)

Door type	FFT FLEX Green (Standard)	FFT FLEX Green – DualDrive (Emergency escape)
<b>Operator unit</b>	<b>ES 200 FFT</b>	<b>ES 200-2D FFT</b>
<b>Basic Module</b>		
Emergency rechargeable battery (if battery pack installed)	•	-
Synchronous bi-parting	•	•
24 V output for external loads	•	•
Retrievable fault log memory with error codes	•	•
DCW® bus connection (DORMA Connect and Work protocol)	•	•
<b>Function module</b>		
Door status contact (3 x)	○	○
Safeguarding of main and secondary closing edge/s	○	-
<b>Options</b>		
Electromechanical bolt locking device	○	○
Manual lock release for electromechanical locking device	○	○
Manual center hook lock	○	○
Manual floor locks (only for doors without floor rail)	○	○
Light curtains	○	○
Rechargeable battery pack (emergency opening /closing)	○	○
Panic closing function (Observe regulations!)	○	-
Bell contact	○	○
Air lock control	○	○
<b>Function module to DIN 18650 and EN 16005</b>		
Monitored secondary closing edge sensors <sup>2</sup>	○	○
Manual lock release for electromechanical locking device	○	○
Light curtains	○	○

• standard    ○ optional    - no    <sup>1</sup>Different values on request    <sup>2</sup>Enable tested monitoring of the secondary closing edges

The system components of the DORMA sensor portfolio.



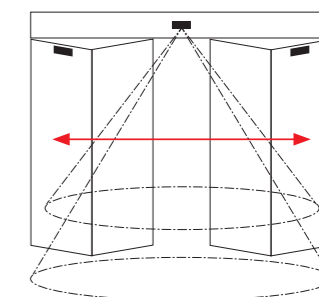
Advanced sensor technology based on an intelligent system aligned to providing appropriate components for all kinds of individual requirements.

Automatic doors are subject to the highest safety demands in accordance with EN 16005. In order to meet these, self-monitoring sensors are mandatory.

**Convincing benefits:**

- Advanced, standards-compliant technologies:
  - Compact sensors with microwave Doppler technology for pulse generation

- Combination sensors with active infrared technology for simultaneous pulse generation and passage protection
- Active infrared motion detectors based on the triangulation principle for protection of users or obstructions located in the panel travel path
- Single-source planning, maintenance and support

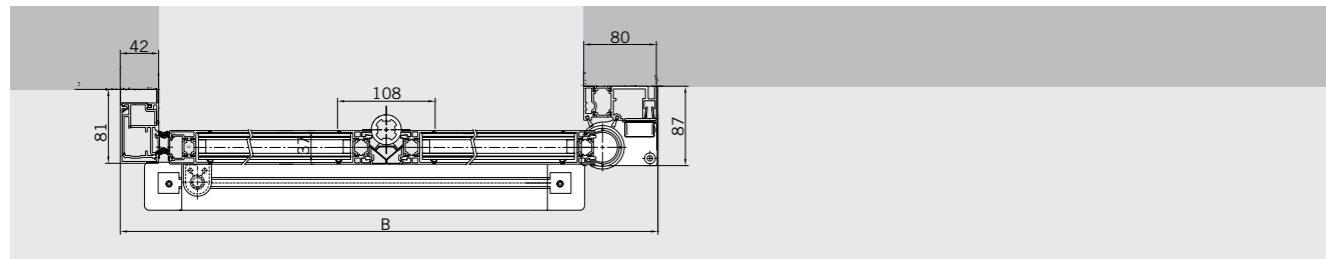


Moving sensors optional. Not suitable for use in emergency escape routes.

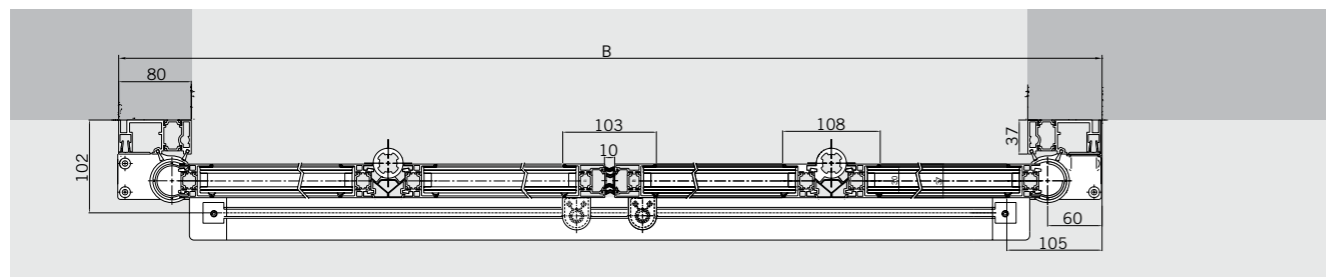
# THE TECHNICAL DETAILS

FFT FLEX Green. For exceptional thermal separation.

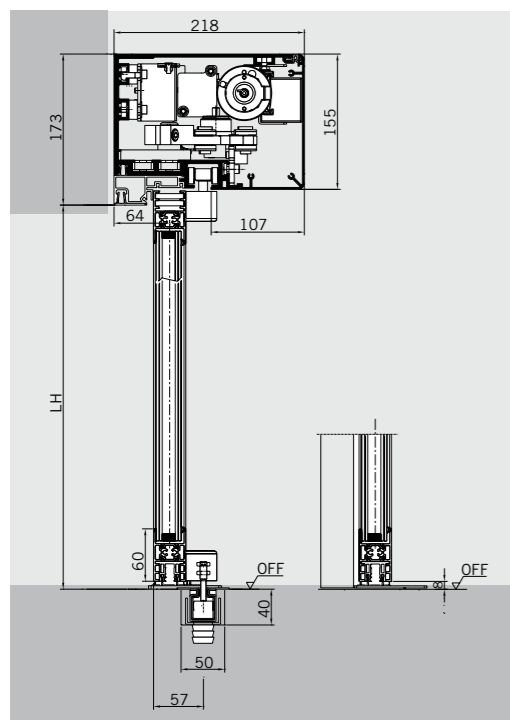
## Wall fixing arrangement



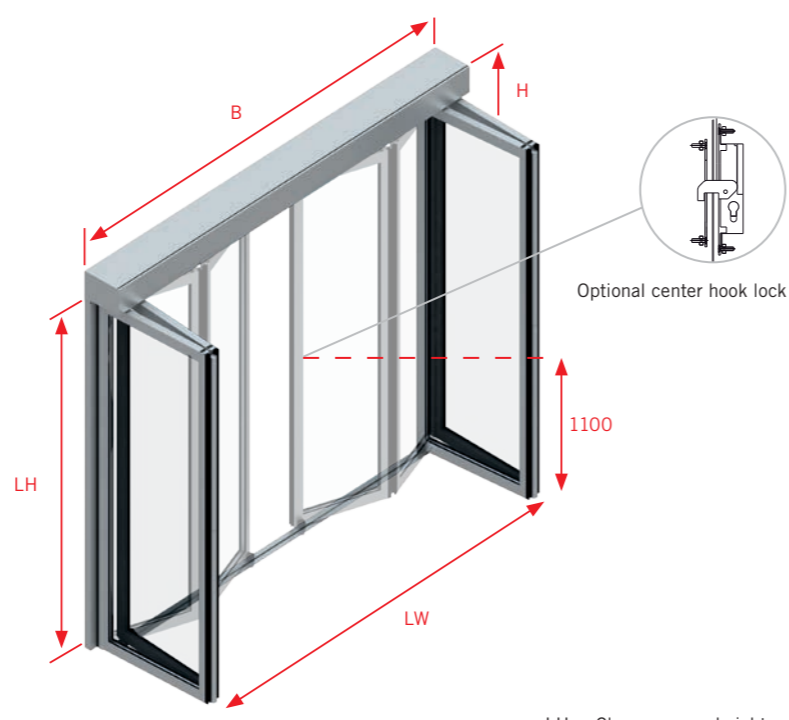
Unilateral opening door set:  $B = LW + 188$



Bi-parting door set:  $B = LW + 280$

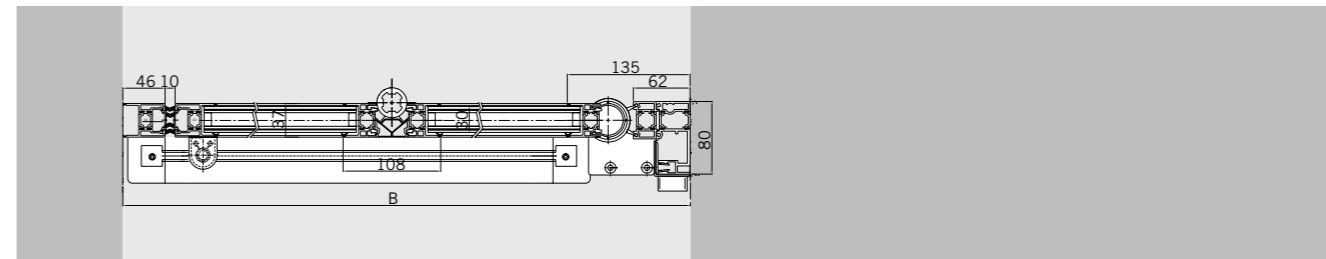


Installation with floor guide track always recommended for  $LW > 1500$  mm and unilateral opening

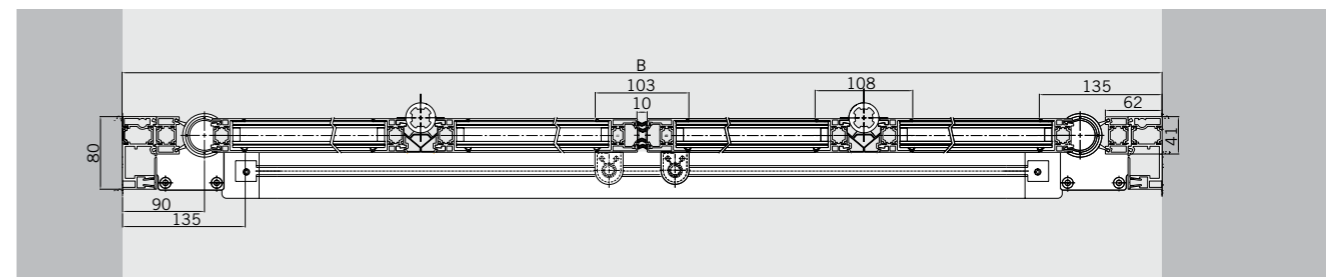


LH = Clear passage height  
 LW = Clear opening width  
 B = Total width  
 H = Total height

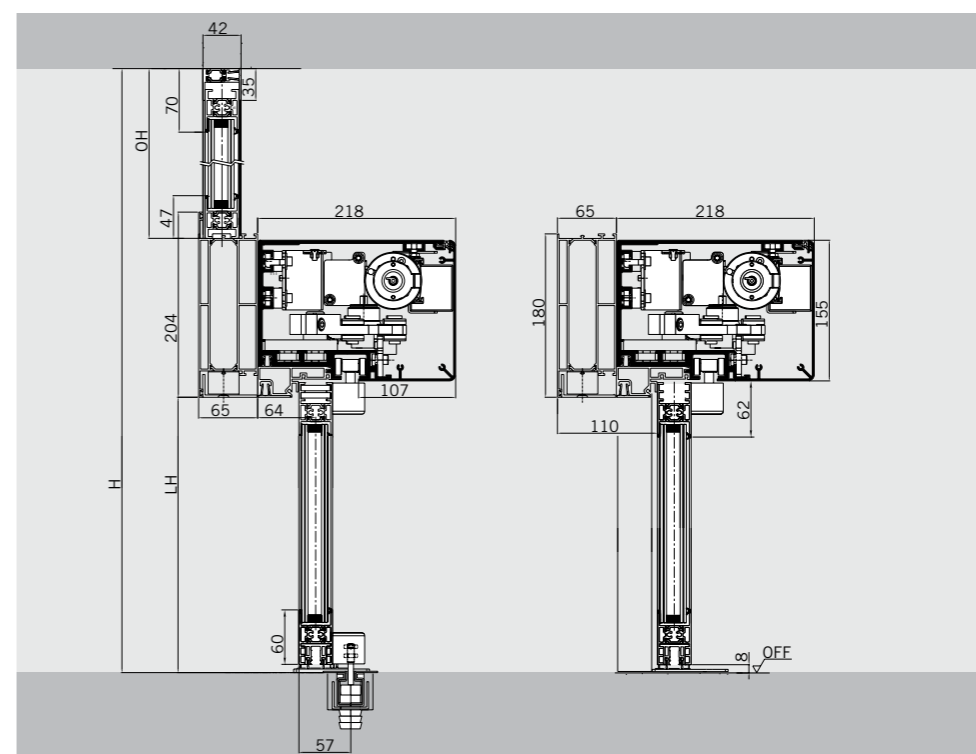
## Passageway or corridor installation



Unilateral opening door set:  $B = LW + 219$



Bi-parting door set:  $B = LW + 334$



Installation with floor guide track always recommended for  $LW > 1500$  mm and unilateral opening



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