

System Fx
System Fx Slim

Technical documentation
Functionalities and specifics



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Overview

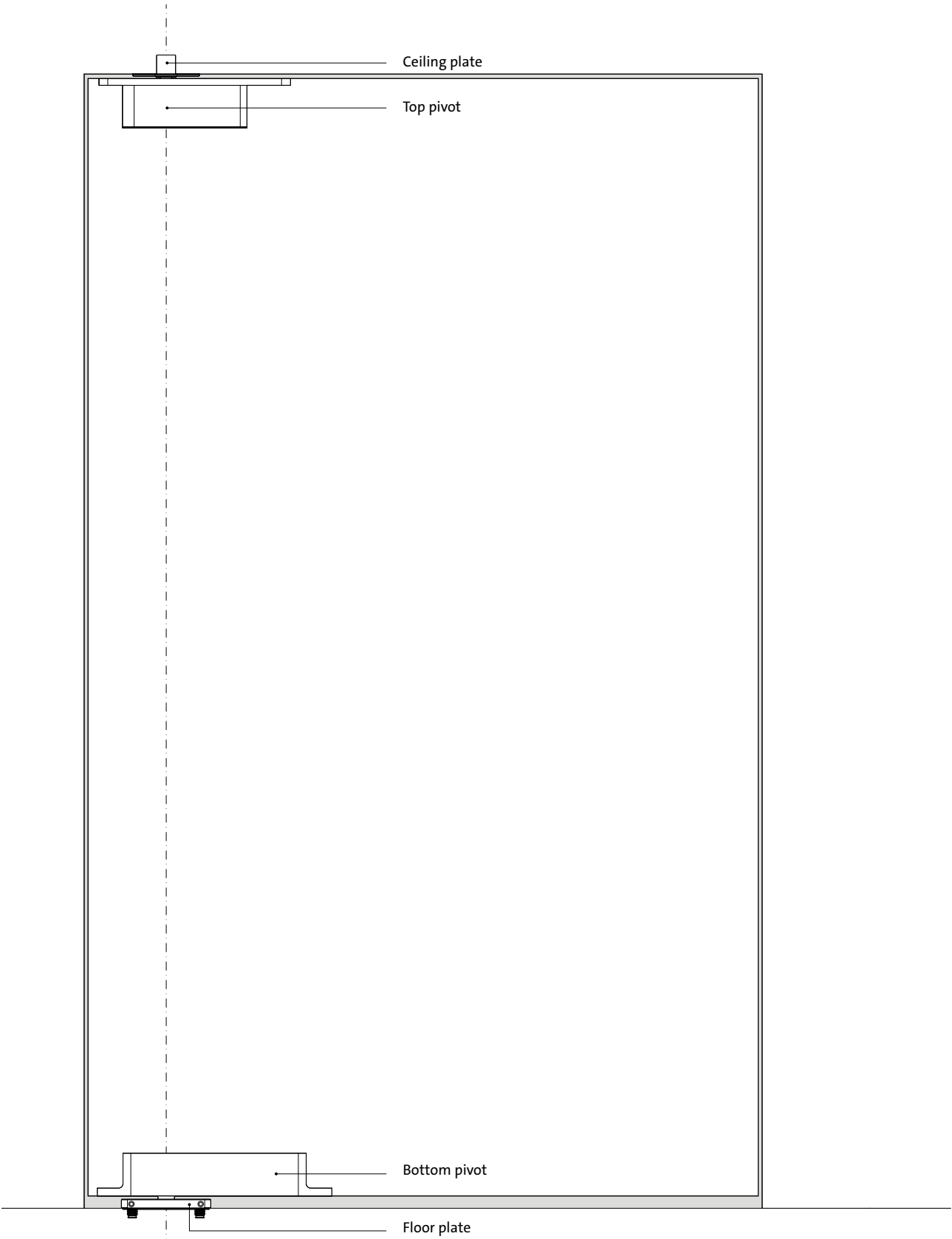
System Fx is a free-swing pivot system with hold positions at every 90°, without self-closing functionality. Always control the door manually throughout its full movement.

For every System Fx application, we advise fitting a clear, visible handle to the door.

The range consists of two versions: System Fx and System Fx Slim. System Fx Slim is designed for minimal profile doors and is installed with ProfileFit.

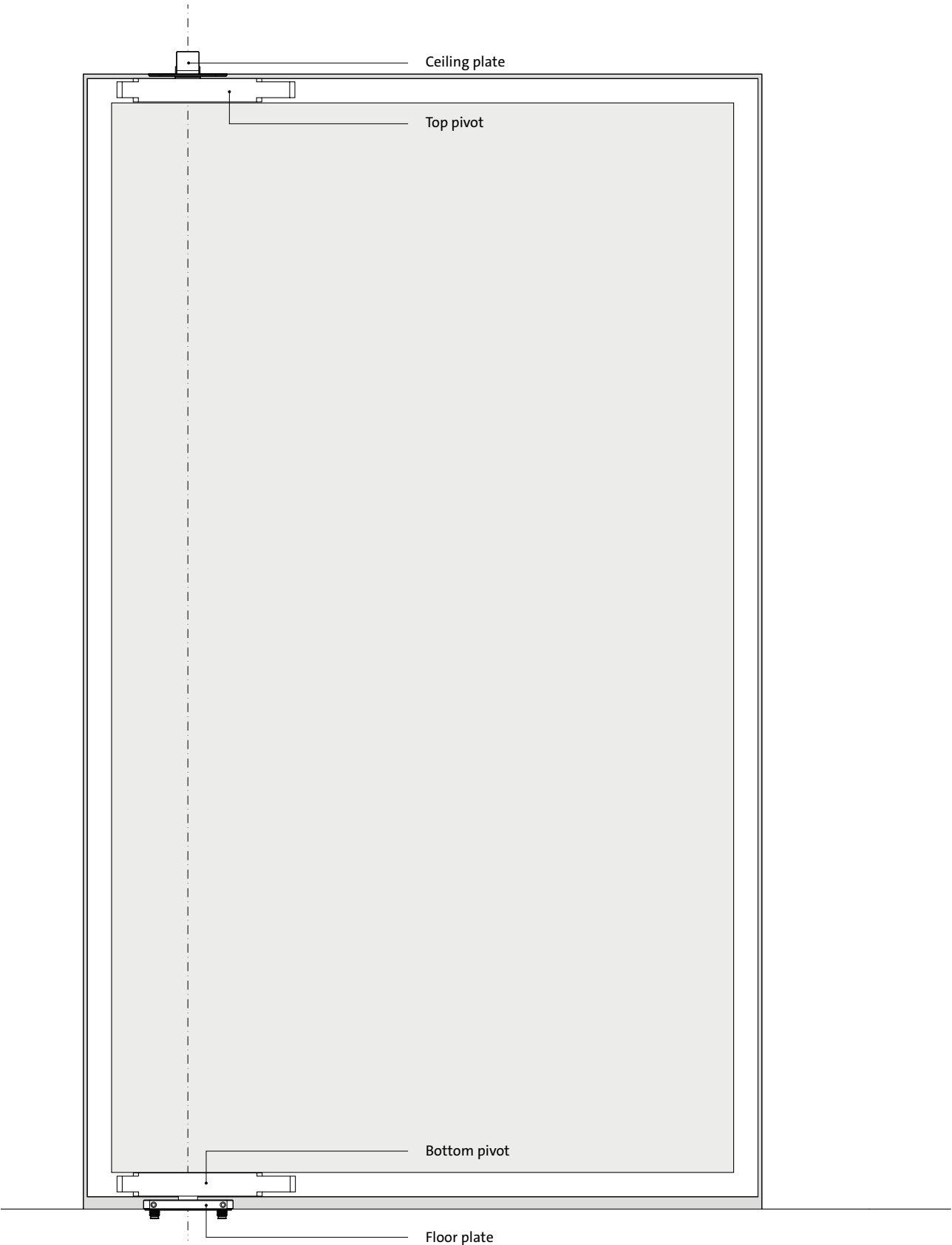
System Fx Components

Our systems always consist of the following components:



System Fx Slim Components

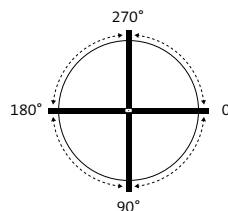
Our systems always consist of the following components:



Functions

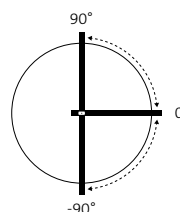
Rotation	Revolving: 360° Double-acting: 180° Single-acting: 90°
Hold positions	Revolving: 0°, 90°, 180° and 270° Double-acting: 90°, -90° and 0° Single-acting: 90° and 0°
Free swing	Yes
Self-closing	No
Holding torque	Gentle, Firm or Strong

Rotation



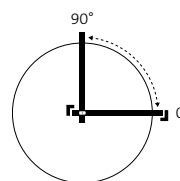
Revolving

Revolving means that the pivot door can rotate a full 360°, with hold positions at 0°, 90°, 180°, and 270°.



Double-acting

Double-acting means that the pivot door can be opened towards both sides, with a hold position at 90° at either side.



Single-acting

Single-acting means that the pivot door can only be opened towards a single side. This is enforced by an external stop such as the door frame.

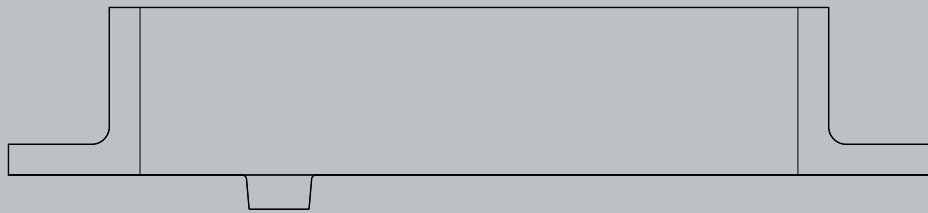
Working principle

System Fx is a manual pivot system. The door swings freely and can be placed in a hold position at 0°, 90°, 180° and 270°. Within 10° either side of a hold position, the door is slightly pulled towards it. The door needs manual operation throughout its movement; System Fx is not self-closing. Because the door is operated by hand and held by its holding torque, fit a clear, visible handle to the door so it can be moved comfortably, including out of its hold positions.

How firmly the door is held is set by the holding torque: Gentle, Firm or Strong. See the holding torque table per product.

System Fx

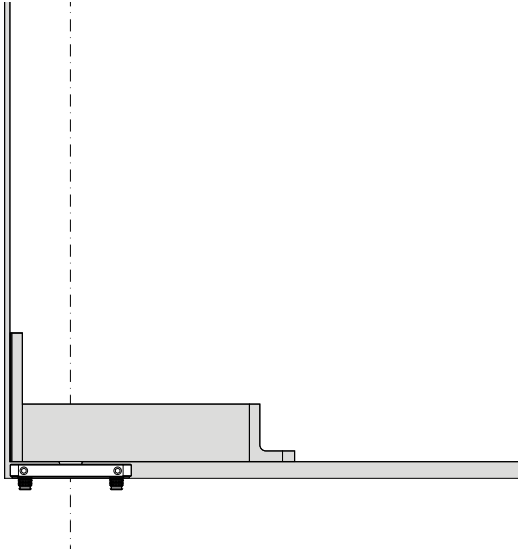
Free-swing pivot system with hold positions



Bottom pivots

It all hinges on the bottom pivot. Our bottom pivots are easily applicable to the side as well as to the middle of the door.

Variants

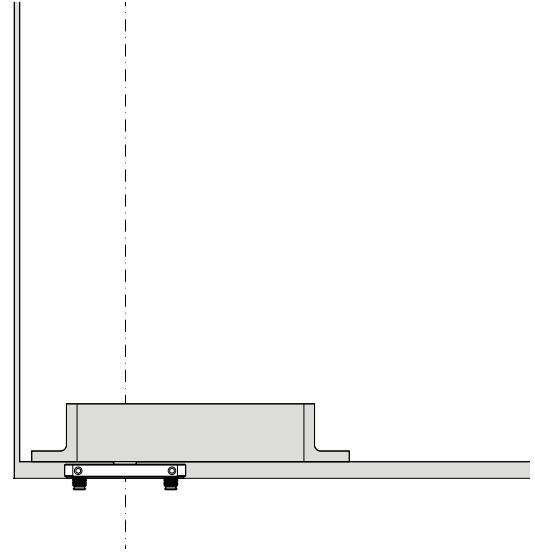


System Fx – 40 mm Class G

Pivot position	Fixed at 40 mm
Dimensions	188 × 32 × 85 mm
Operating principle	Mechanical
Material	Stainless steel and anodised aluminium
Cover plate	Stainless steel Black
Holding torque in combination with distance to far edge of the door	Gentle (Class G1): Up to 1099 mm Firm (Class G2): 1100 to 1799 mm

Compatible with

Top pivots	Top pivot 40 mm Class G For all classes
Floor plates	Floor plate squared Floor plate round Floor plate Flush squared Floor plate Flush rounded



System Fx – 70 mm Class G

Pivot position	From 70 mm to middle
Dimensions	210 × 32 × 38 mm
Operating principle	Mechanical
Material	Stainless steel and anodised aluminium
Holding torque in combination with distance to far edge of the door	Gentle (Class G1): Up to 1099 mm Firm (Class G2): 1100 to 1799 mm Strong (Class G3): 1800 to 2499 mm

Compatible with

Top pivots	Top pivot 70 mm Class G For all classes Top pivot Reversed For all classes
Floor plates	Floor plate squared Floor plate round Floor plate Flush squared Floor plate Flush rounded

* Depending on door width, see System Fx weight classes table.

Find out more about [top pivots](#) or [floor plates](#).

Holding torque

Opening force

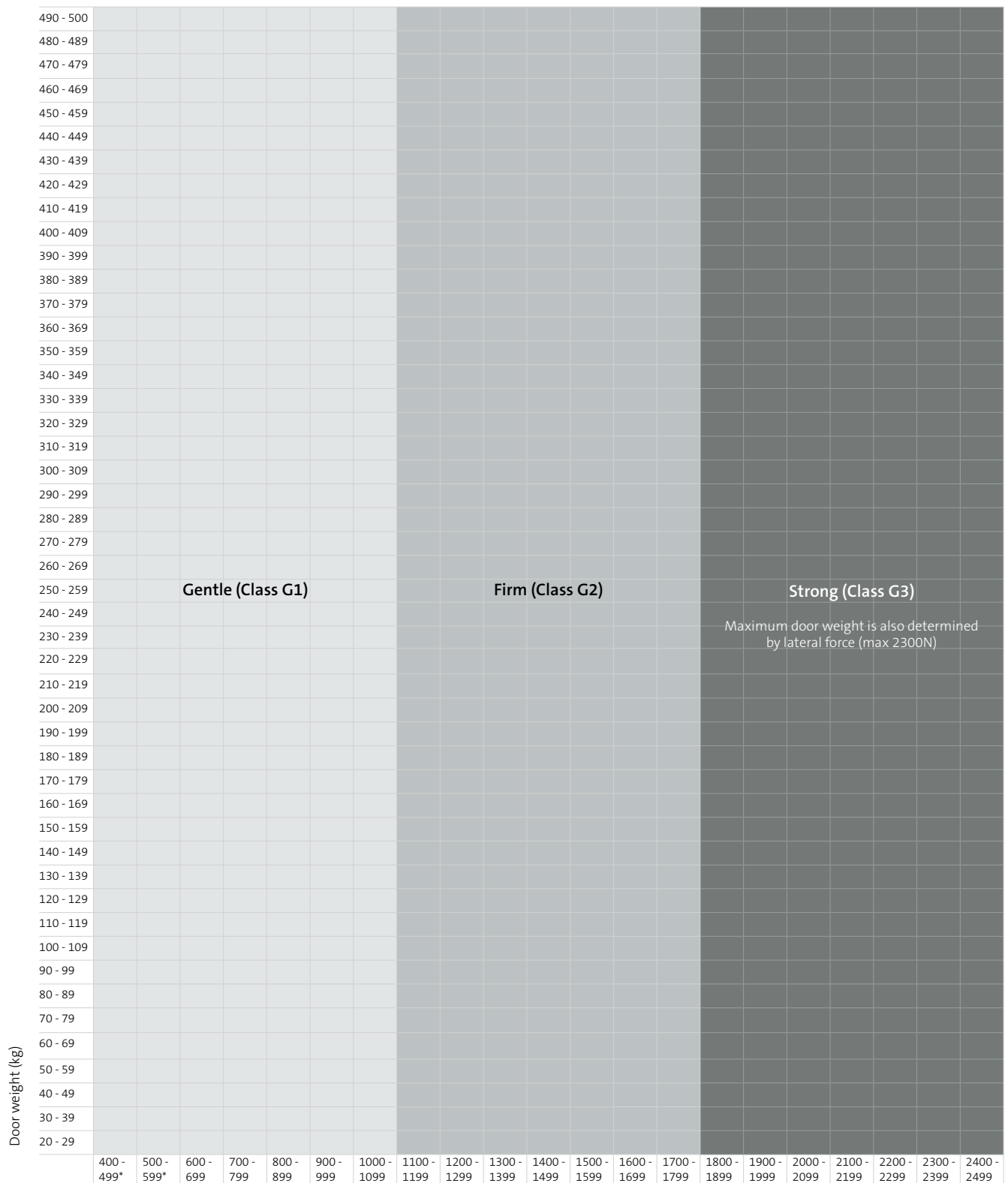
The opening force is the hand force needed to move the door out of a hold position. It follows from the holding torque and the distance from the pivot point to the far edge of the door: for the same holding torque, the narrower the door, the higher the opening force, because the lever is shorter. If the opening force becomes too high, the door is hard to operate. EN 12217 gives a guideline maximum opening force of 25 N for class 3 doors (around 30 N is common in practice). Matching the holding torque to the door width keeps the opening force within a comfortable range.

Recommended holding torque

System Fx is available in three holding torques. The recommended choice follows from the distance of the pivot point to the far edge of the door, shown in the chart on the next page. Door weight is secondary and is also shown here.

Holding torque	Distance of pivot point to far edge
Gentle (Class G1)	Up to 1099 mm
Firm (Class G2)	1100 to 1799 mm
Strong (Class G3)	1800 to 2499 mm

Holding torque



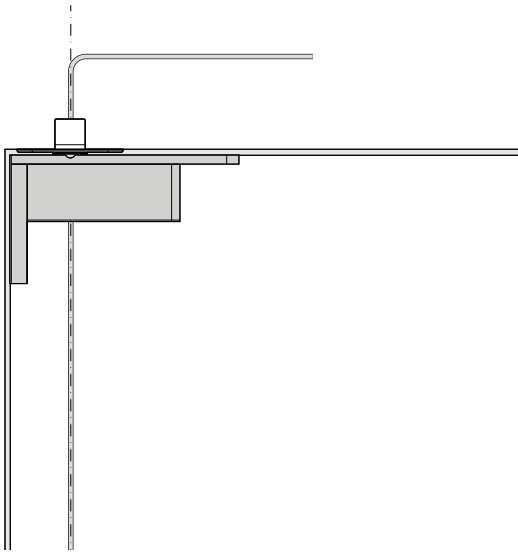
Distance of pivot point to the far edge of the door (mm)

* Opening force >30N

Top pivots

The top pivot anchors the pivot door between the floor and the ceiling.

Variants

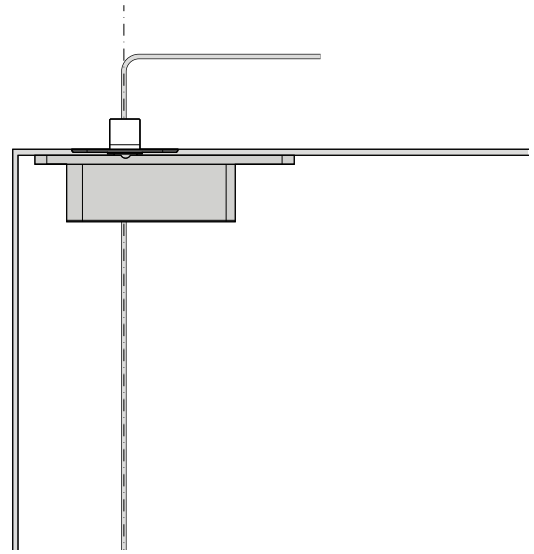


Top pivot – 40 mm Class G

Pivot position	Fixed at 40 mm
Cable entry	Ø7.5 mm
Pin diameter	Ø15 mm
Dimensions	151.5 × 32 × 85 mm
Material	Stainless steel and anodised aluminium
Cover plate	● Stainless steel ● Black

Compatible with

Bottom pivots	System Fx – All classes
Ceiling plates	Ceiling plate – Class G



Top pivot – 70 mm Class G

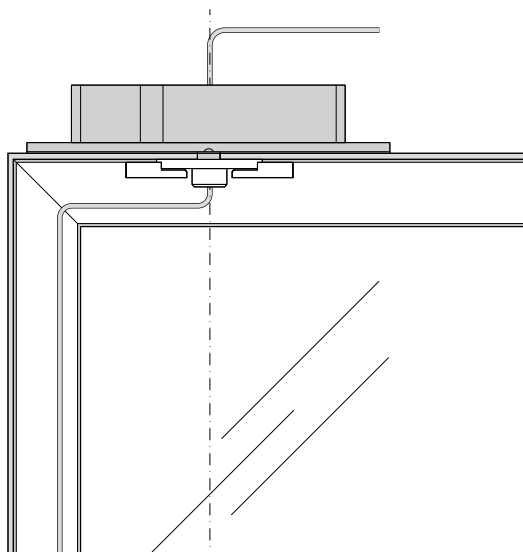
Pivot position	From 70 mm to middle
Cable entry	Ø7.5 mm
Pin diameter	Ø15 mm
Dimensions	171.5 × 32 × 44 mm
Material	Stainless steel and anodised aluminium

Compatible with

Bottom pivots	System Fx – All classes
Ceiling plates	Ceiling plate – Class G

Find out more about [ceiling plates](#).

Installation in the head jamb



Top pivot – Reversed

Class G

Pivot position	From 130 mm to middle
Cable entry	Ø7.5 mm
Pin diameter	Ø15 mm
Dimensions	240 × 32 × 45 mm
Adjustment	From the side of the door: 5 mm to the left and 5 mm to the right
Material	Stainless steel and anodised aluminium
Cover plate	● Stainless steel ● Black ● White

Compatible with

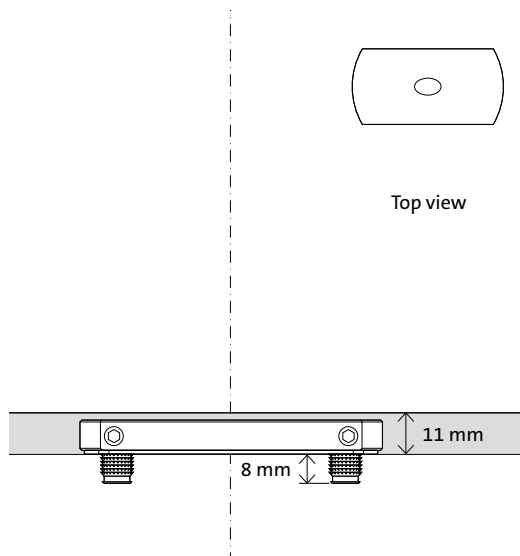
Bottom pivots	System Fx 70 mm All classes
Ceiling plates	Receiver

Find out more about [ceiling plates](#).

Floor plates

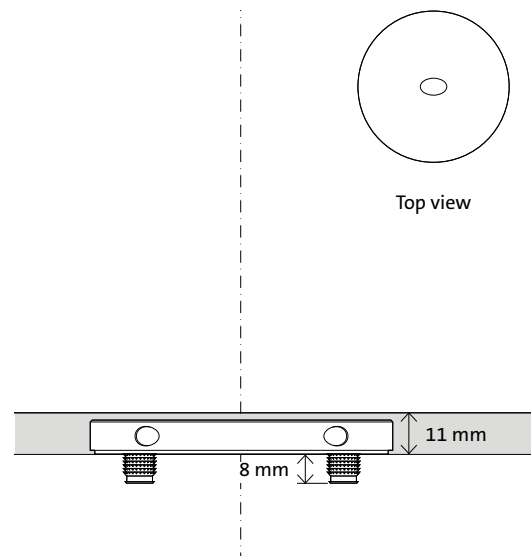
Our floor plates support the door at the bottom. They are either surface mounted with only short pins anchoring into the floor or recessed in the sill. Their compact design makes installation a lot easier, and they combine perfectly with pre-installed underfloor heating.

Installation on the floor



Floor plate squared – Radially adjustable

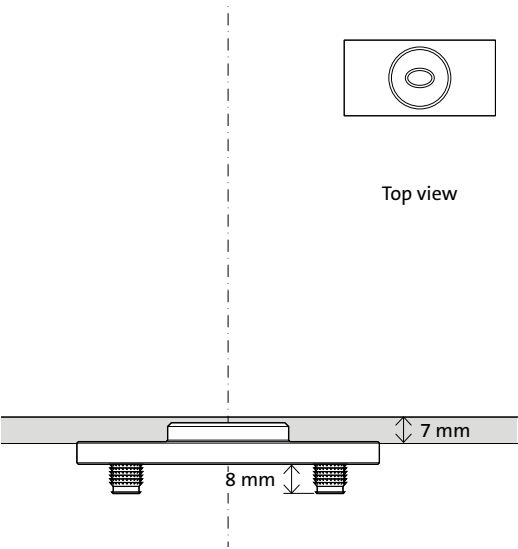
Mounting pins	Two or four 8 mm pins for optimal stability between two floor types. Or two 30 mm pins for mounting on layered floor materials.
Undercut	11 mm
Adjustability	Radial: +2.5° to -2.5°
Dimensions	80 × 40 × 9 mm
Material	Stainless steel
Available colours	Stainless steel Black



Floor plate round – Radially adjustable

Mounting pins	Four 8 mm pins
Undercut	11 mm
Adjustability	Radial: +2.5° to -2.5°
Dimensions	Ø80 × 9 mm
Material	Stainless steel
Available colours	Stainless steel Black

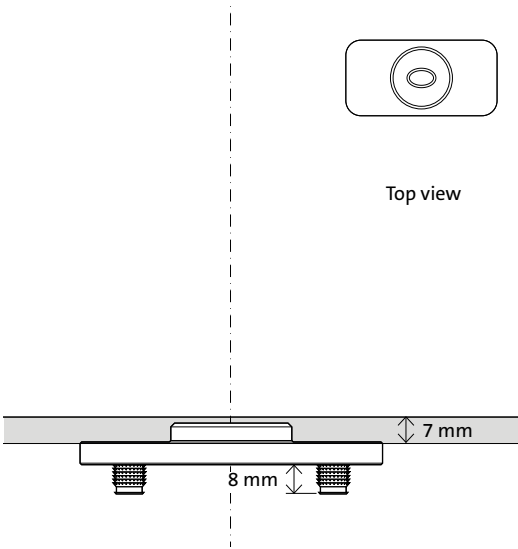
Sunk into the sill



Floor plate Flush squared – Non-adjustable

Floor plate Flush squared offers the possibility to recess your floor plate in the door frame. If you plan to use drop seals to prevent draught or as a seal for an exterior pivot door, a floor plate Flush is the floor plate you need.

Mounting pins	Four 8 mm pins
Undercut	7 mm
Adjustability	No
Dimensions	80 × 40 × 11 mm
Material	Stainless steel
Available colours	● Stainless steel



Floor plate Flush rounded – Non-adjustable

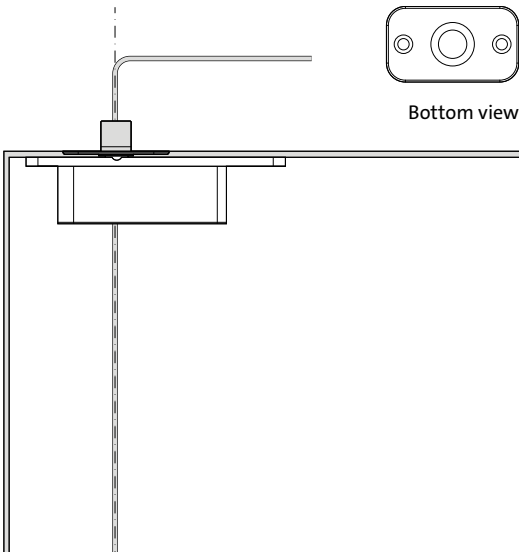
Floor plate Flush rounded offers the possibility to recess your floor plate in the door frame. If you plan to use drop seals to prevent draught or as a seal for an exterior pivot door, a floor plate Flush is the floor plate you need.

Mounting pins	Four 8 mm pins
Undercut	7 mm
Adjustability	No
Dimensions	80 × 40 × 11 mm
Material	Stainless steel
Available colours	● Stainless steel

Ceiling plate and Receiver

Our ceiling plates and Receiver pair with the top pivots. The ceiling plates can be combined with all our top pivots, except for the top pivot Reversed. The top pivot Reversed pairs best with the Receiver to mount in the door.

Ceiling plate



Ceiling plate

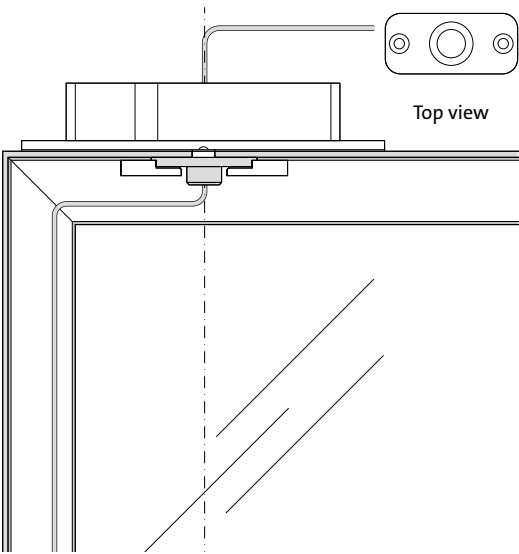
Class G

Pin diameter	Ø15 mm
Dimensions	70 × 40 × 23 mm
Material	Stainless steel
Available colours	Stainless steel Black

Compatible with

Top pivots	Top pivot – 40 mm Class G Top pivot – 70 mm Class G
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Receiver



Receiver

Pin diameter	Ø15 mm
Dimensions	70 × 32 × 18 mm
Material	Stainless steel
Available colours	Stainless steel

Compatible with

Top pivots	Top pivot – Reversed
Accessories	Adapters

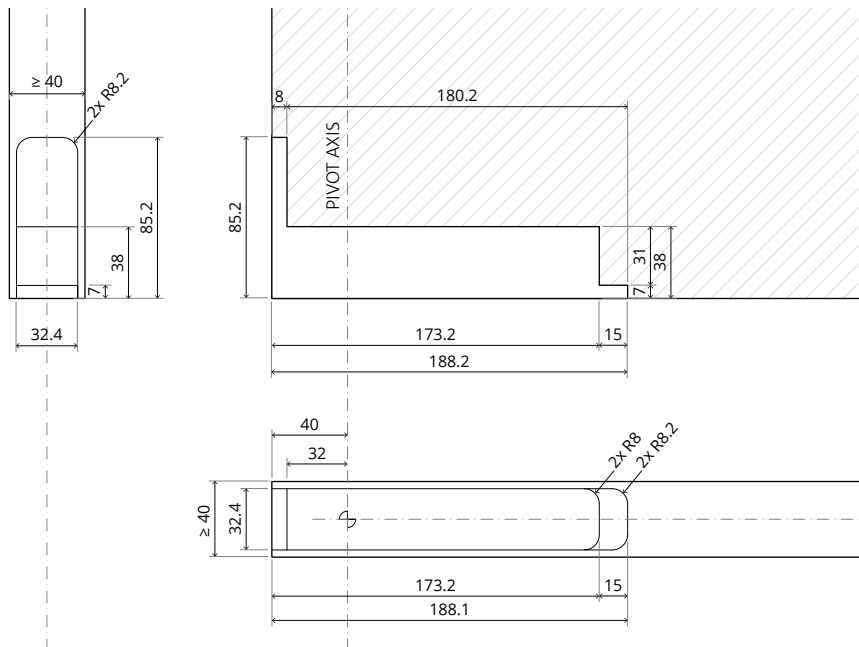
Milling and components

We tried to keep our milling procedure as simple as our designs. By following the step-by-step instructions, preparing a door to fit our components should be easy as one two three. Keep in mind that the space for milling is always larger than the system itself.

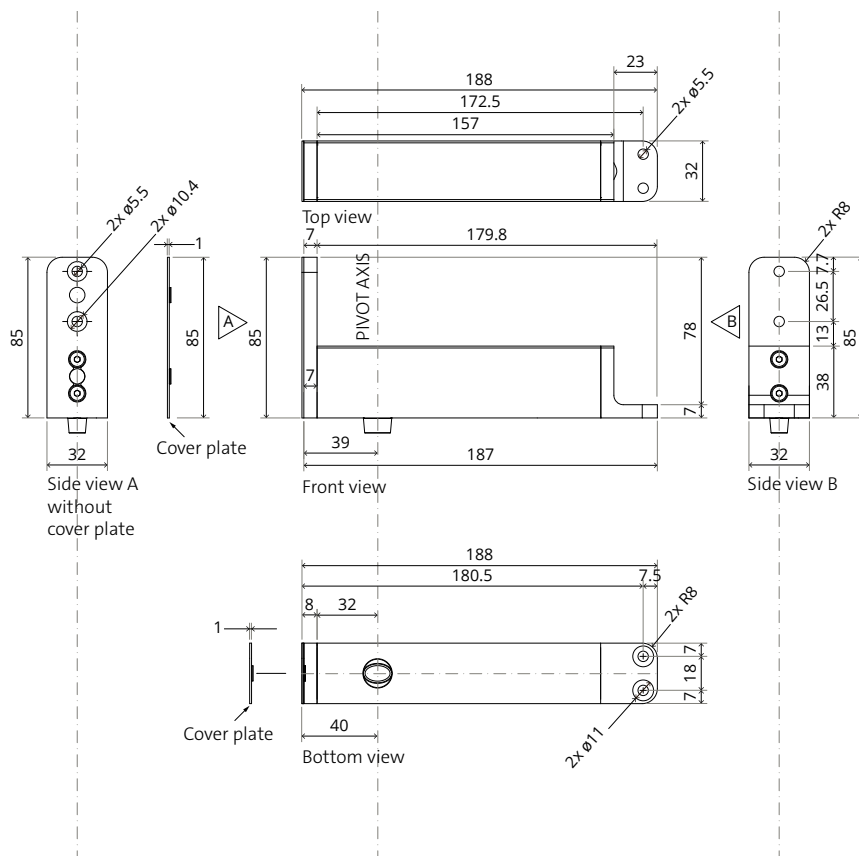
System Fx – 40 mm

Milling – preparing the door

Pivot point = fixed 40 mm

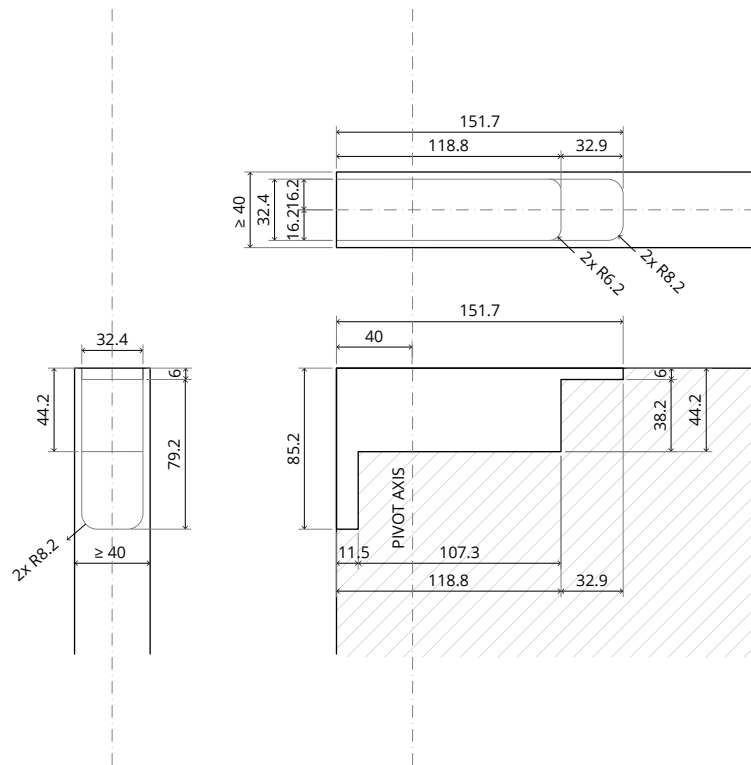


Components

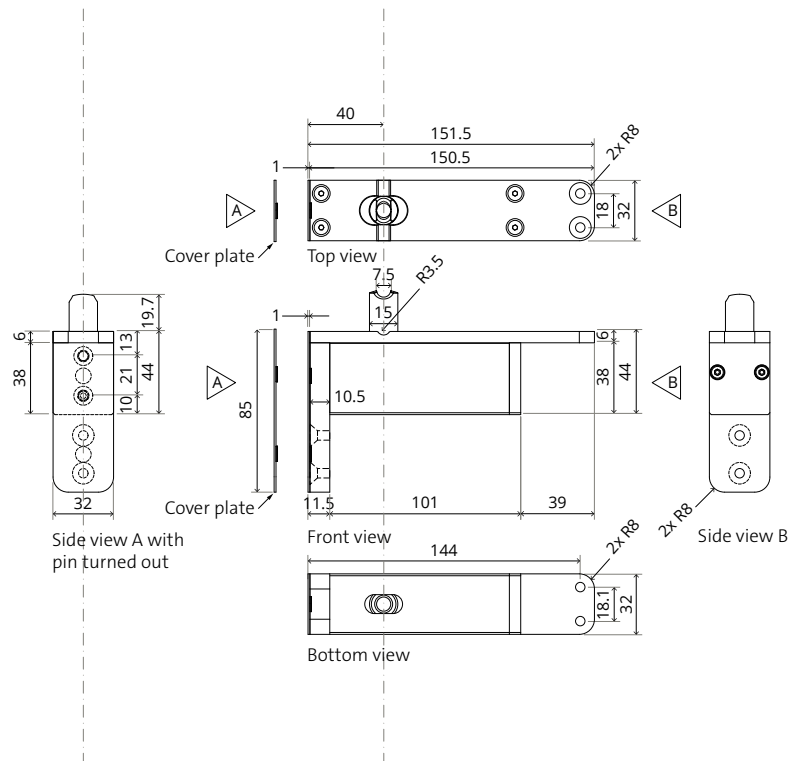


Top pivot – 40 mm Class G

Milling – preparing the door

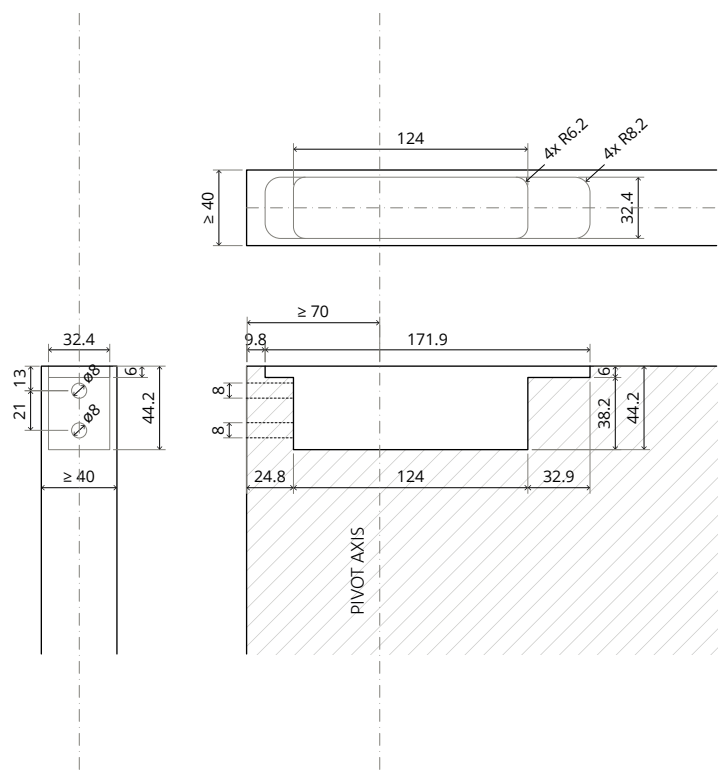


Components

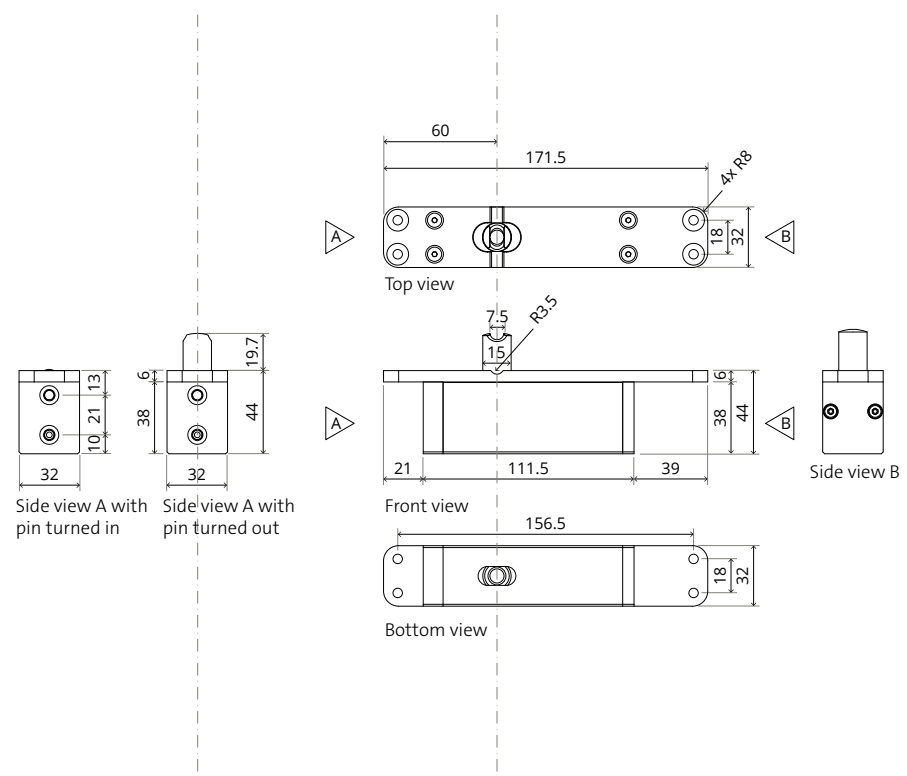


Top pivot – 70 mm Class G

Milling – preparing the door

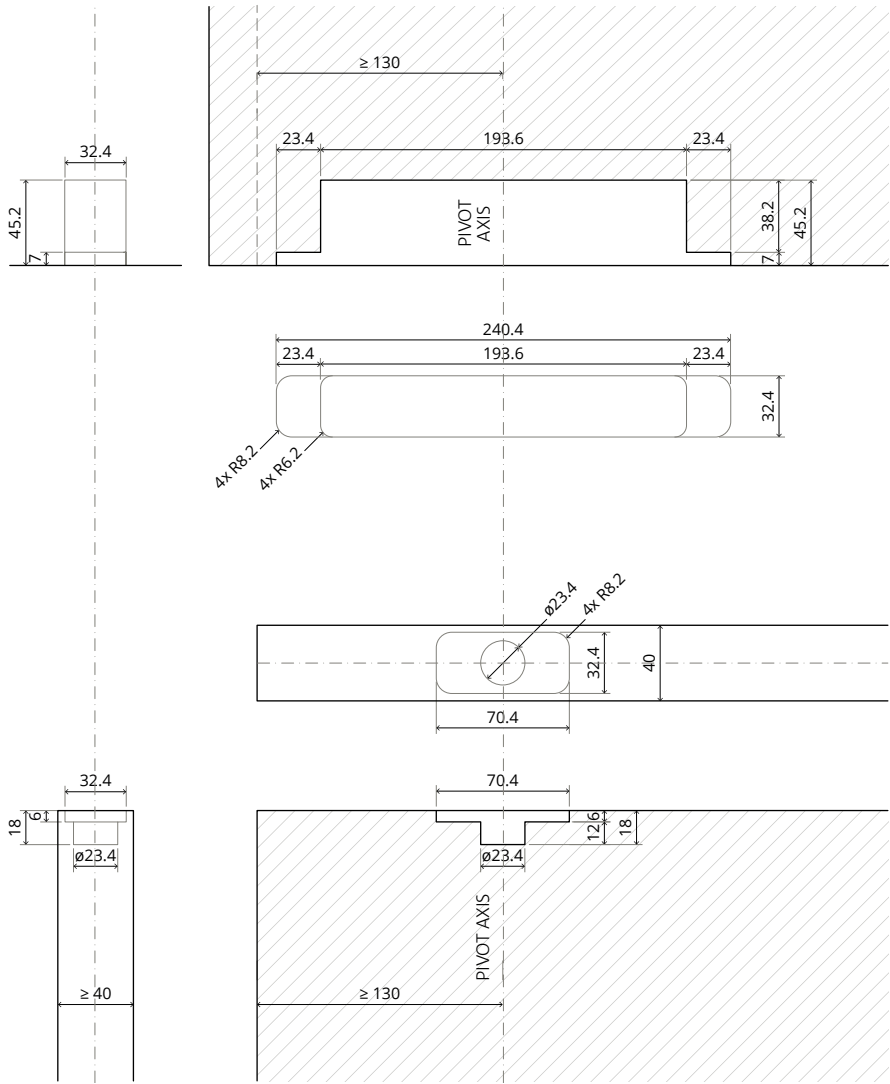


Components

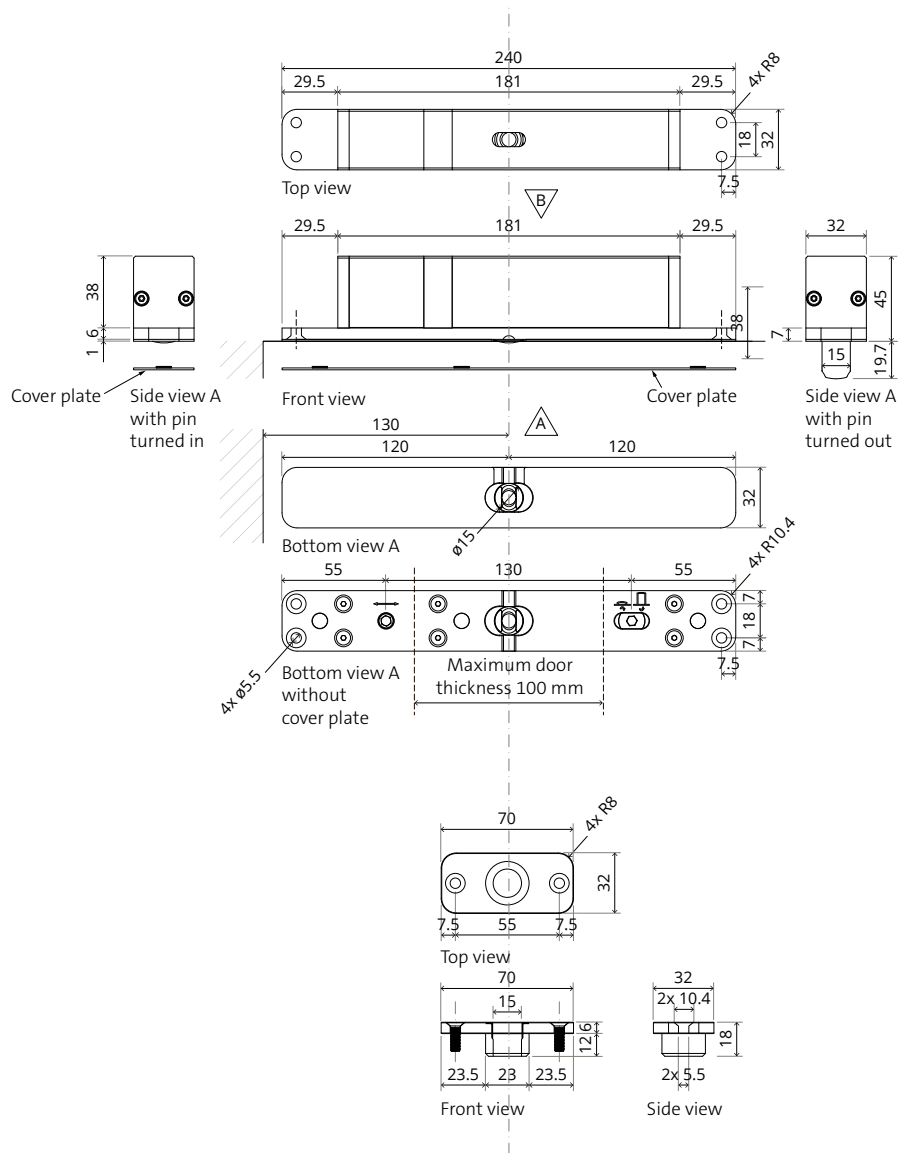


Top pivot – Reversed

Milling – preparing the door and ceiling/head jamb



Components



System Fx Slim

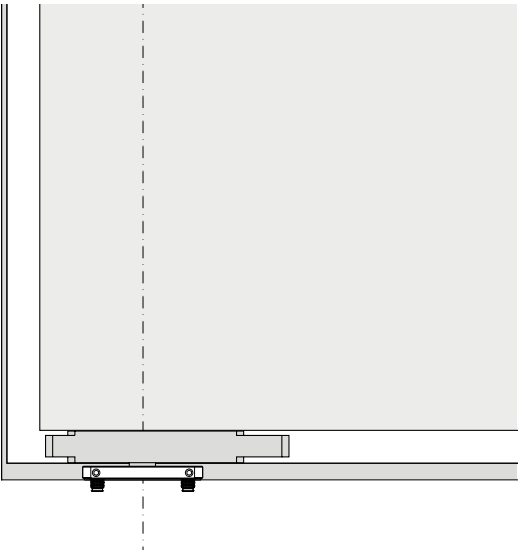
Slim pivot system for minimal profile doors



Bottom pivot

It all hinges on the bottom pivot. System Fx Slim is the bottom pivot for minimal profile doors, mounted with ProfileFit.

Variants



System Fx Slim Class C

Weight capacity	Up to 209 kg
Holding torque	Gentle
Pivot position	From 70 mm to middle
Dimensions	137 × 32 × 18 mm
Profile	Minimally 40 × 20 mm with a profile thickness of 2 mm
Operating principle	Mechanical
Material	Stainless steel and anodised aluminum

Compatible with	
Top pivot	Top pivot Slim
Floor plate	Floor plate squared

Holding torque

Opening force

The opening force is the hand force needed to move the door out of a hold position. It follows from the holding torque and the distance from the pivot point to the far edge of the door: for the same holding torque, the narrower the door, the higher the opening force, because the lever is shorter. If the opening force becomes too high, the door is hard to operate.

EN 12217 gives a guideline maximum opening force of 25 N for class 3 doors (around 30 N is common in practice).

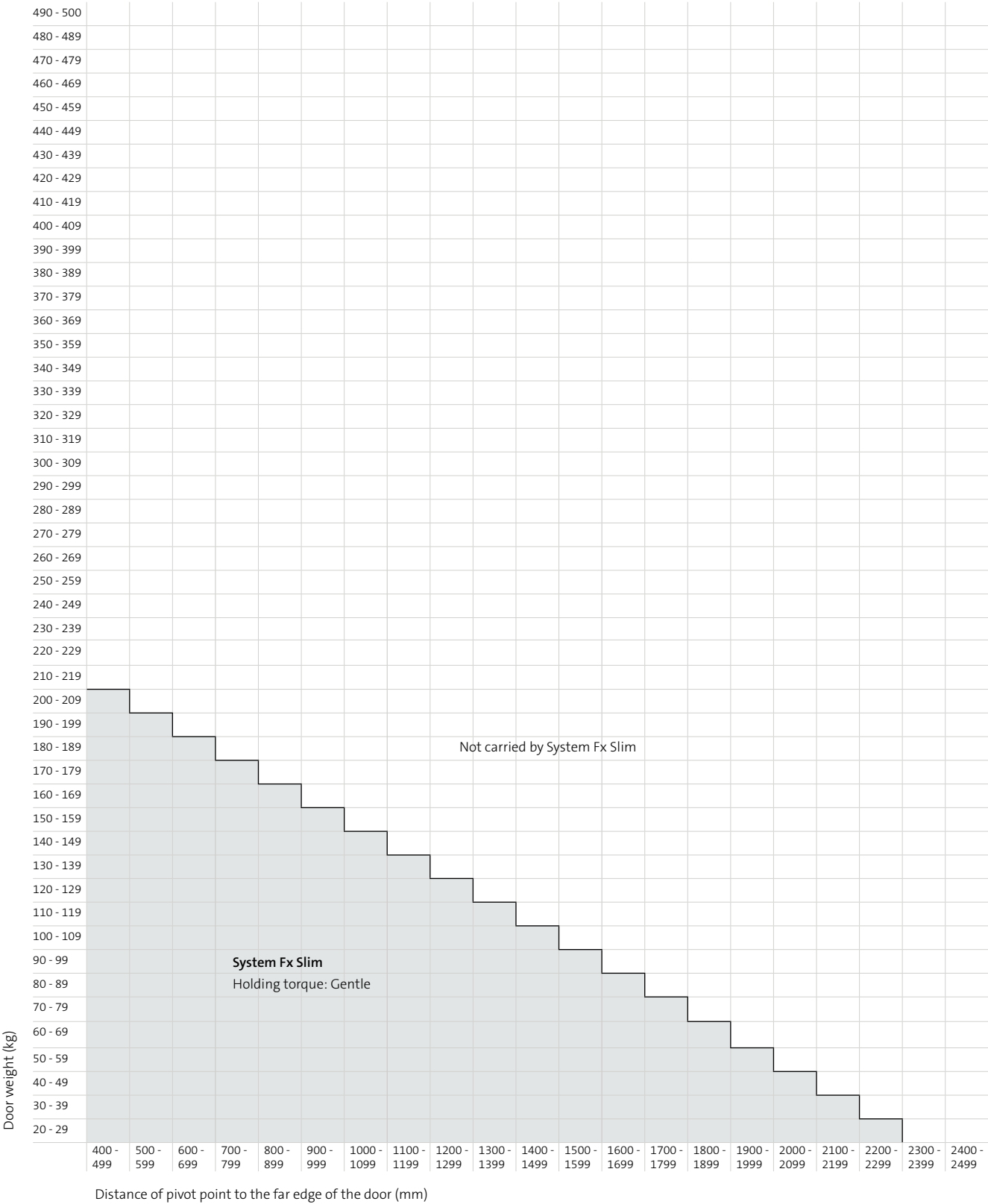
Matching the holding torque to the door width keeps the opening force within a comfortable range.

System Fx Slim

System Fx Slim uses a single holding torque, Gentle, for doors up to 209 kg, as shown in the chart on the next page.

Holding torque	Door weight
Gentle	Doors up to 209 kg

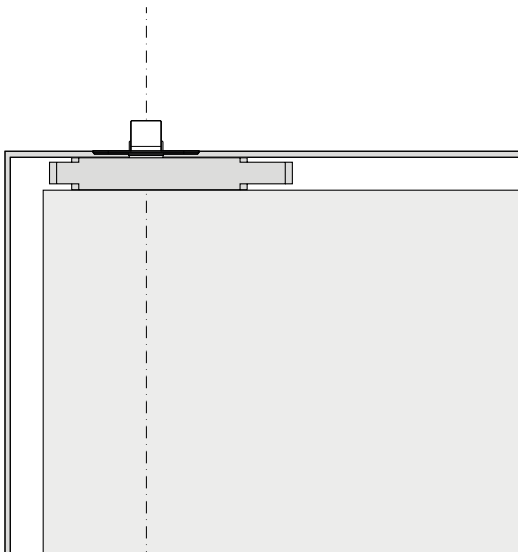
Holding torque



Top pivot

The top pivot anchors the pivot door between the floor and the ceiling.

Variants



Top pivot Slim

Weight capacity	Up to 209 kg
Pivot position	From 70 mm to middle
Cable entry	–
Pin diameter	Ø15 mm
Pin length	19.5 mm (telescopic)
Dimensions	137 × 32 × 18 mm
Profile	Minimally 40 × 20 mm with a profile thickness of 2 mm
Operating principle	Mechanical
Material	Stainless steel and anodised aluminium

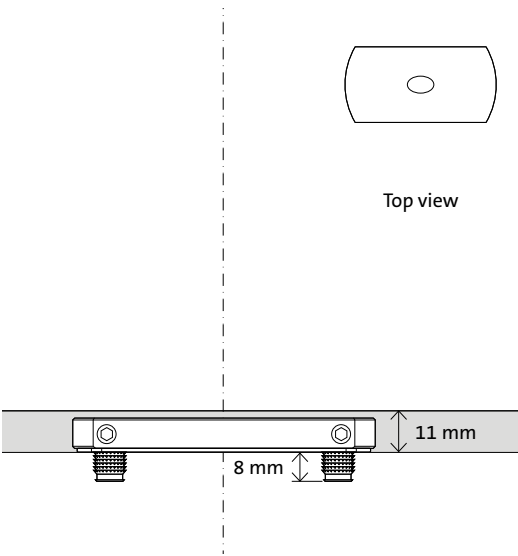
Compatible with

Bottom pivot	System Fx Slim
Ceiling plate	Ceiling plate – Class G

Floor plate

The floor plate supports the door at the bottom.
Its compact design makes installation easier.

Installation on the floor



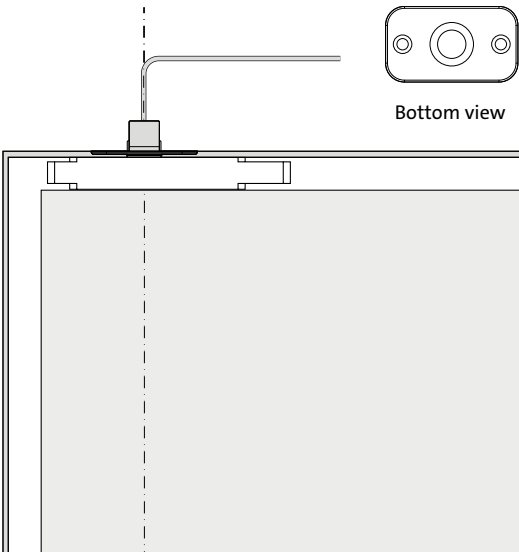
Floor plate squared – Radially adjustable

Mounting pins	Two or four 8 mm pins for optimal stability between two floor types. Or two 30 mm pins for mounting on layered floor materials.
Undercut	11 mm
Adjustability	Radial: +2.5° to -2.5°
Dimensions	80 × 40 × 9 mm
Material	Stainless steel
Available colours	Stainless steel Black

Ceiling plate

The ceiling plate pairs with the top pivot in the ceiling.

Ceiling plate



Ceiling plate

Class G

Pin diameter	Ø15 mm
Dimensions	70 × 40 × 23 mm
Material	Stainless steel
Available colours	Stainless steel Black

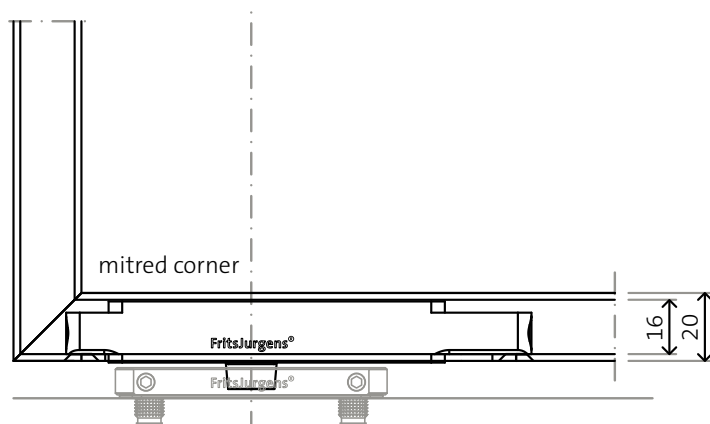
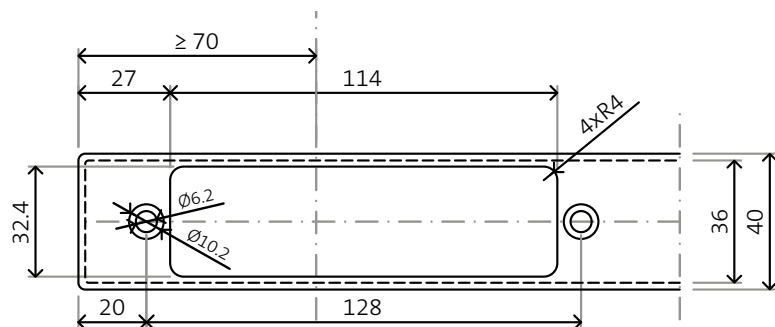
Compatible with

Top pivots	Top pivot Slim
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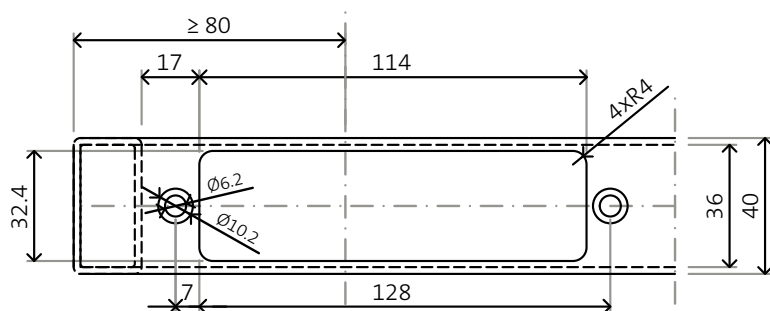
Profile preparation

Preparing the profile to fit System Fx Slim.

Profile preparation

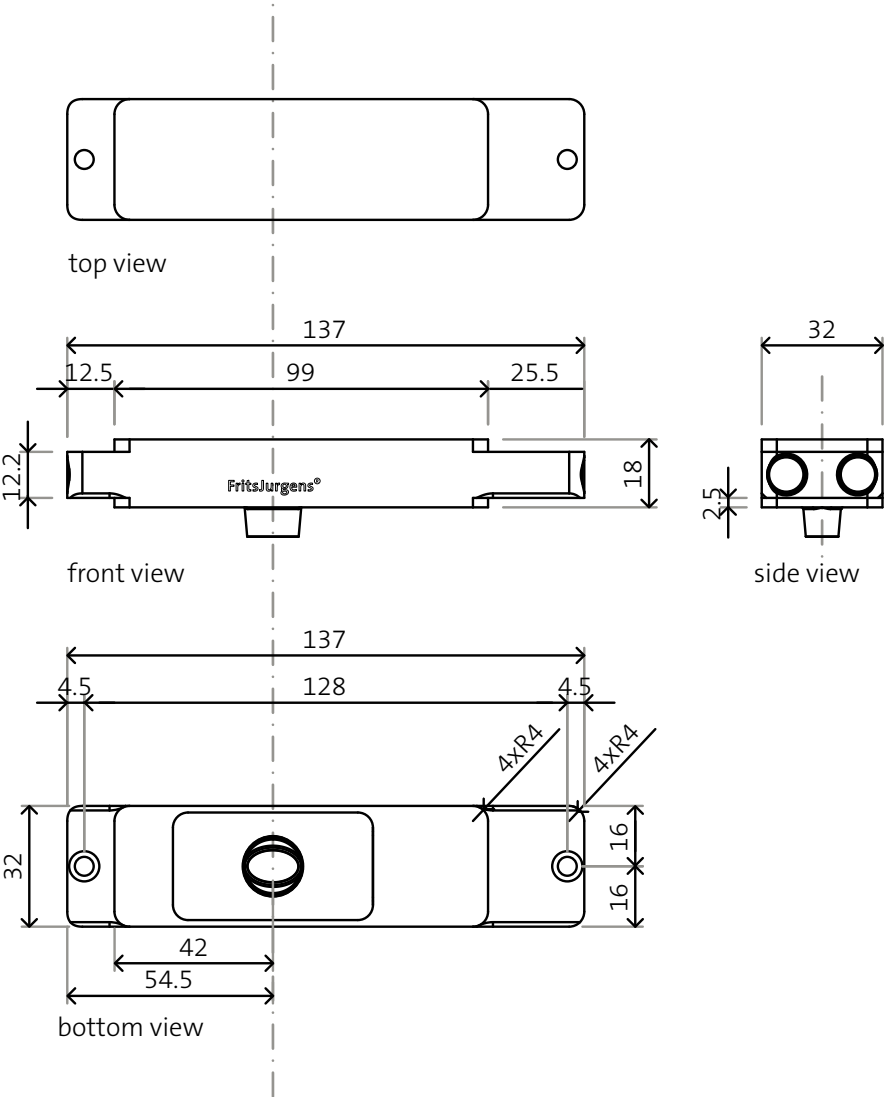


 For profile with mitred corner



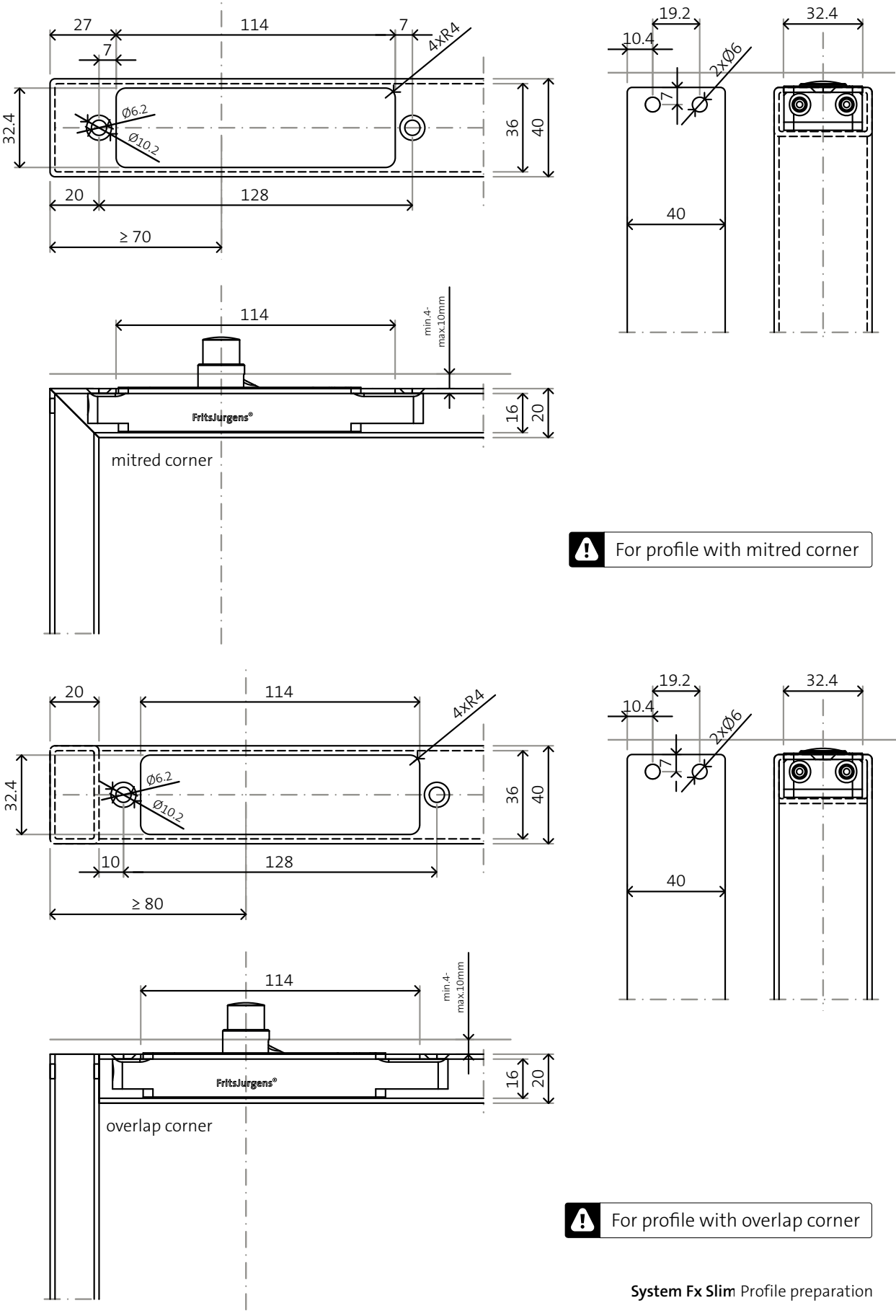
 For profile with overlap corner

Components

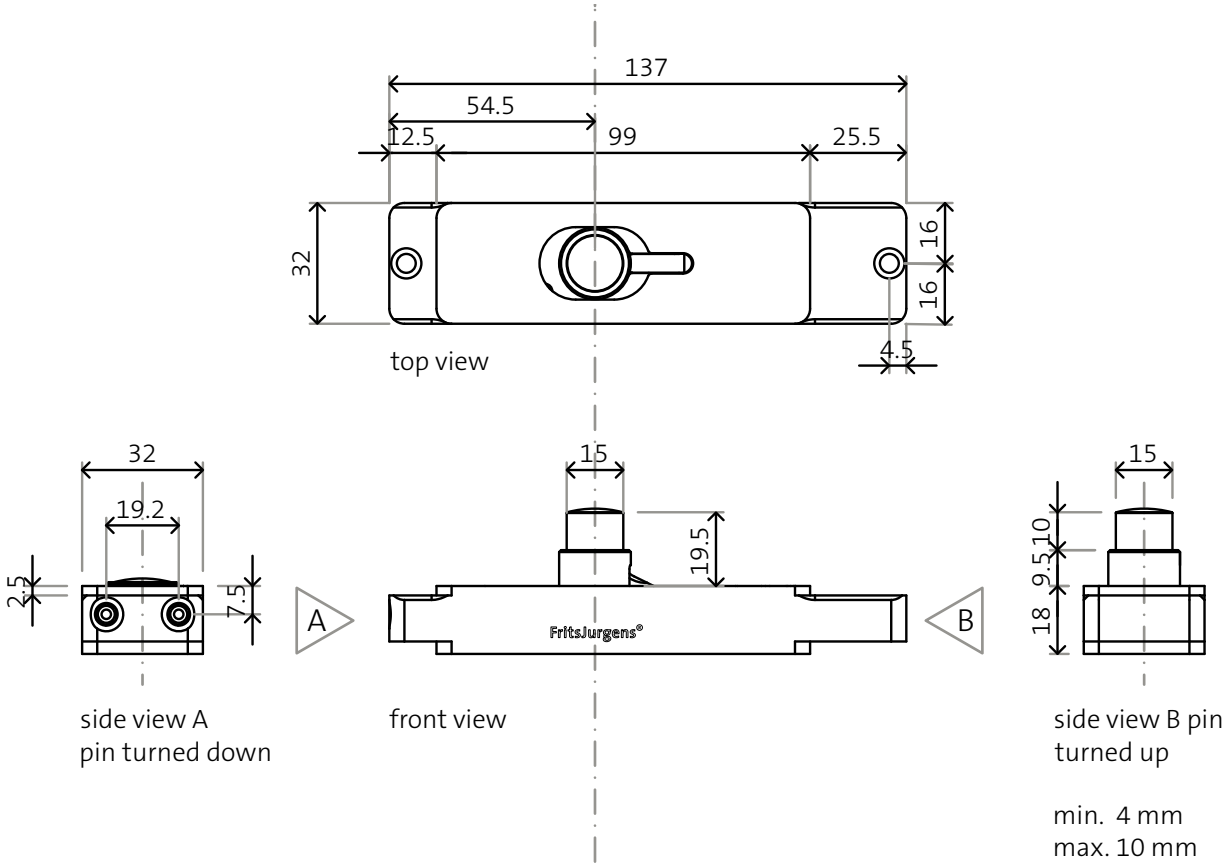


Top pivot Slim

Profile preparation

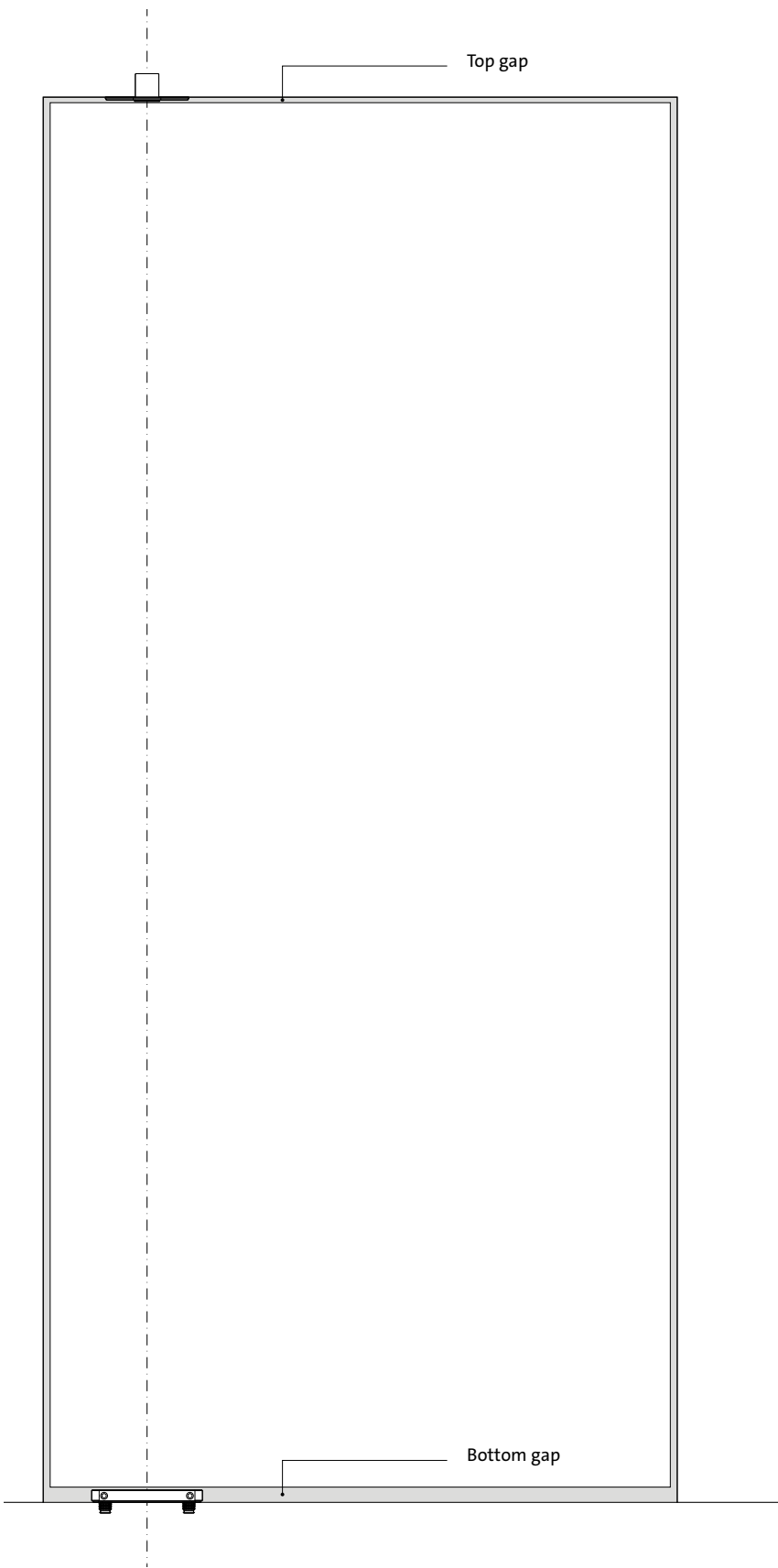


Components



Technical checklist

Top and bottom gap



Top gap

The distance between ceiling and top of the door should be 4–10 mm*.

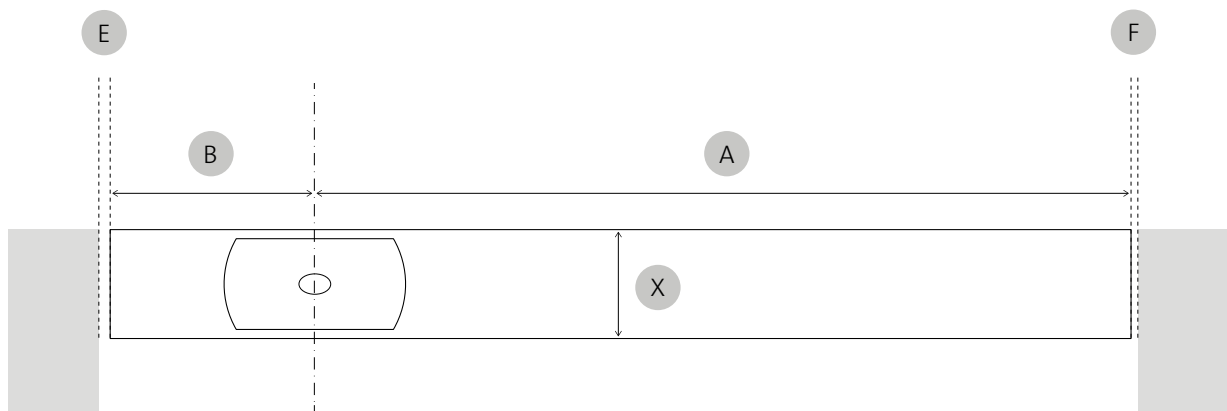
* In all situations, beware of sagging.

Bottom gap

The opening between the bottom of the door and the floor depends on the floor plates that are used.

Floor plate squared	11 mm
Floor plate round	11 mm
Floor plate Flush rounded	7 mm
Floor plate Flush squared	7 mm

Side gaps



- X Door thickness
- B Distance of pivot point to the near edge of the door
- A Distance of pivot point to the far edge of the door
- E Minimum gap left
- F Minimum gap right

The minimum gap at the side of the door depends on the thickness and the width of the door in relation to the position of the pivot point.

The outcome on left and right will be different when you use the System Fx for side placement. The calculation is made based on the radius of the door when turning. The smaller the radius (the pivoting side) and the thicker the door, the bigger the required gap between door and wall or frame. For middle placement, the gaps on both sides (E and F) are equal.

Calculate the required gap dimensions with our Gap Calculator:
www.fritsjurgens.com/gap-calculator.

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