

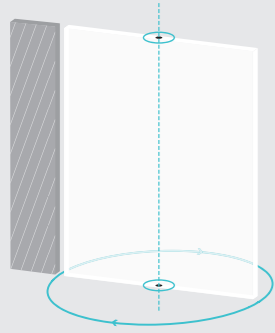
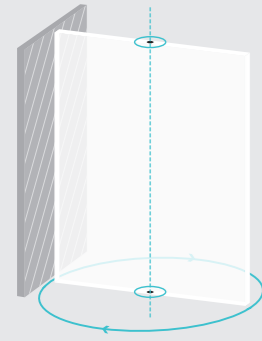
# SYSTEM 3

hidden perfection

FritsJurgens®

## SYSTEM 3 APPLICATIONS

System 3 is the perfect solution for  
360° rotating doors:



Choose the pivot door system that  
meets all your needs. Please see our  
complete line of products on page 10  
and 11.

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## WHERE TO BUY

Please visit [fritsjurgens.com](http://fritsjurgens.com) to find the contact details of partners and dealers in your area.







## HIDDEN PERFECTION SYSTEM 3

A pivot door is a symbol of hidden perfection. No visible frame hinges, but an invisible vertical axis which allows the door to open both inwardly and outwardly.

Every FritsJurgens® pivot hinge system is fully-mortised into the top and bottom of the door—perfect in terms of functionality and appearance. System 3 provides heavy-duty closer function for 360° rotating doors and is perfect for space partitioning applications.



## SYSTEM 3 PERFECTION ALL AROUND



FritsJurgens® System 3 has an extensive arsenal of functions: rotation, closing and hold positions. System 3 can turn through 360° and is characterised by a hold position at every quarter of a circle.

Thanks to the patented bearing configuration of the System 3 pivot, relatively little force is required to get the door moving. The upper and bottom cam are working in the opposite direction. Therefore the force on the mid cam is nil. This creates a perfectly balanced system suitable for high-traffic use.





## SYSTEM 3

# DESIGNED TO STAND THE TEST OF TIME

The System 3 hinge is virtually indestructible. Built from high performance materials, the system is maintenance-free. Our rigorous testing has shown that even after 1 million cycles (similar to 136 years of daily use) System 3 still behaves flawlessly.

System 3 packs the highest corrosion resistance (according to the standard EN 1154, class 4). Even the most diverse conditions do not affect the operation of this system. Thanks to a very compact housing and a cam made of duplex stainless steel, the System 3 has considerable power. This is a system truly designed for the ages: invisible, built-to-last and maintenance-free.

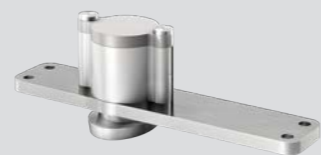
# FRITSJURGENS® OVERVIEW SYSTEMS

The FritsJurgens® pivot door range consists of three systems. System One is the most compact system: the hinge acts as a revolving point.

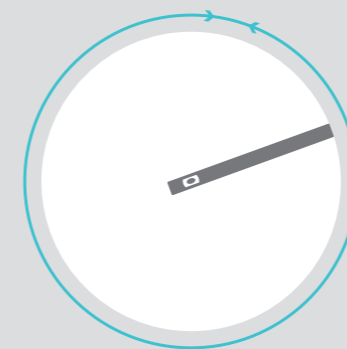
System 3 has three functions: rotation, closing and hold positions. System 3 can turn through 360° and is characterized by a hold position at every quarter of a circle.

The System M adds a new dimension to the pivot door by creating the ultimate smoothness: total control over the movement of the door.

## SYSTEM ONE

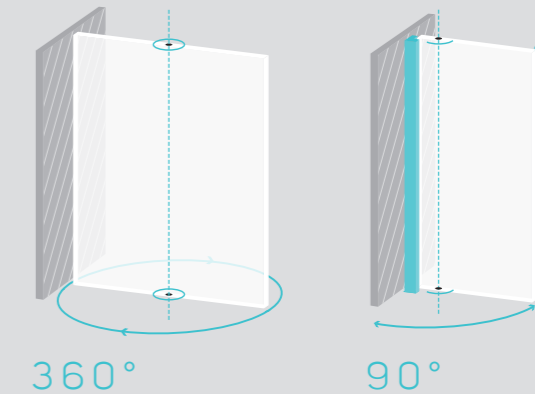


### MOVEMENT

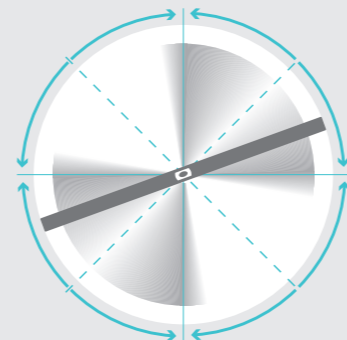


- Rotates 360°
- No hold positions or closing function

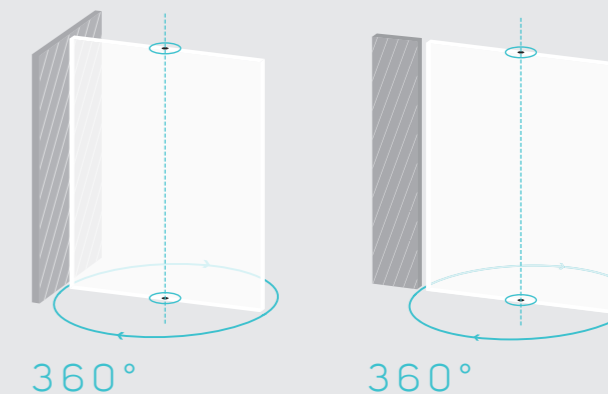
### POSITIONING



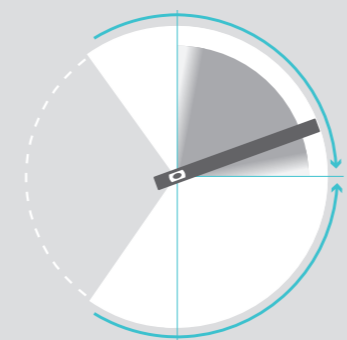
## SYSTEM 3



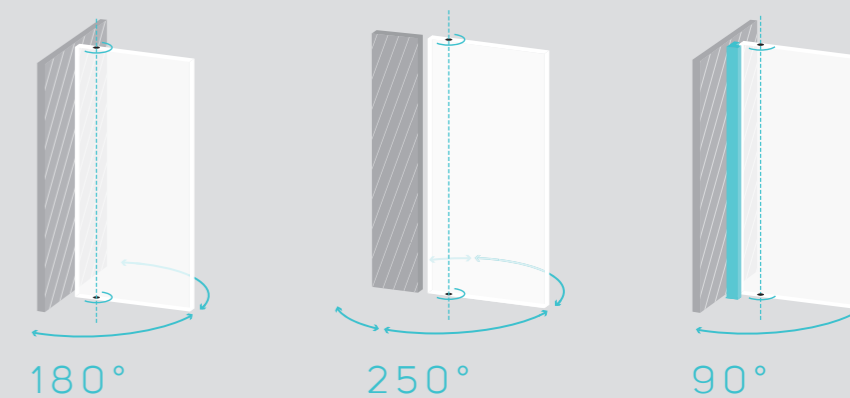
- Rotates 360°
- Hold positions at 0°, 90°, 180° and 270°
- Self-opening - The door automatically moves from each 45° angle in both directions to the next hold position
- Self-closing - The door comes to rest in the desired hold position after a few movements



## SYSTEM M



- Hold positions at 0°, 90° and -90°
- Self-closing from -125° and 125° - After opening, the door returns smoothly to the 0° position. The door can be manually set to the hold position 90° or -90°.
- Adjustable closing damping (soft close)
- Adjustable hydraulic backcheck





# FRITSJURGENS® SYSTEM 3

## NO STRUCTURAL ELEMENTS

System 3 is fully-mortised into the top and bottom of the door: no structural elements in floor and ceiling.

## LOAD-BEARING CAPACITY: UP TO 500 KG

System 3 can support large and heavy doors up to max 500 kg thanks to high performance and corrosion resistant materials like duplex stainless steel and anodized aluminium.

## MINIMUM DOOR THICKNESS: 40MM

The thickness of System 3 is only 34 mm.

## MAINTENANCE - FREE

Built from materials of the highest quality, the system is maintenance-free.

## FOR NEW AND RETROFIT SITUATIONS

The floorplate fasteners only need to mortise 8mm in the floor, which means System 3 can also be combined with underfloor heating.

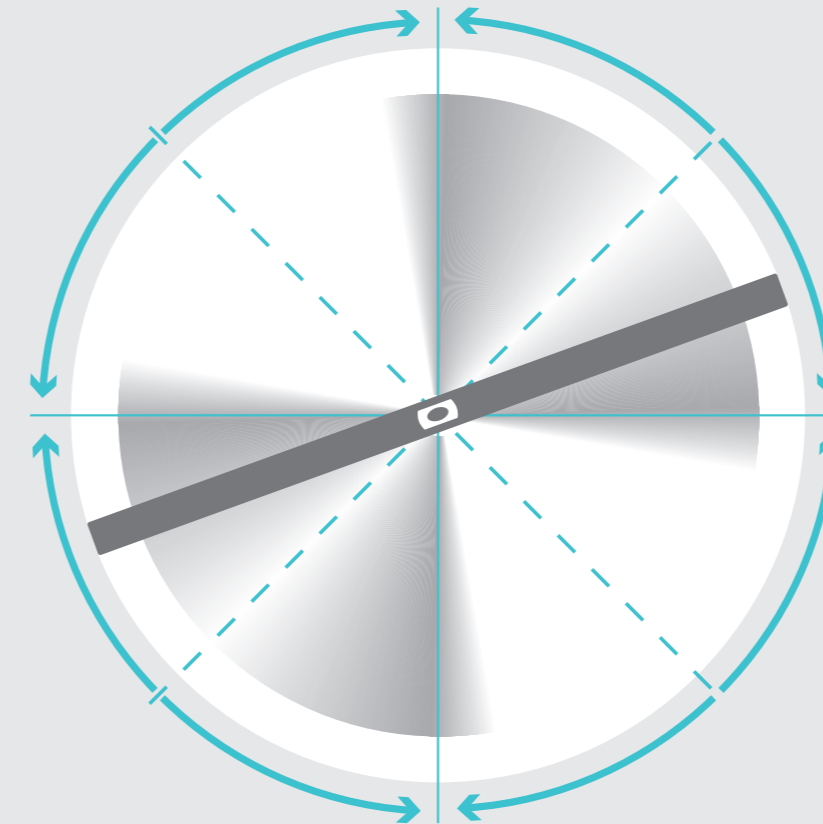
## EASILY-ADJUSTABLE

The innovative design of our hinge systems means the gap between the door and jamb can be adjusted with the door fully-loaded.

## SUITABLE FOR ALL TYPES OF DOORS

Ideal for large, heavy and tall timber, steel, framed glass and massive clad doors. Perfect for interior and exterior doors, in both residential and commercial environments.

# SYSTEM 3 FOR 360° ROTATING DOORS



## ROTATES 360°

The door rotates 360° in both directions.

## HOLD POSITIONS AT 0°, 90°, 180° AND 270°

The door has a hold position at every 90°.

## SELF-OPENING

The door automatically moves from each 45° angle in both directions to the next hold position.

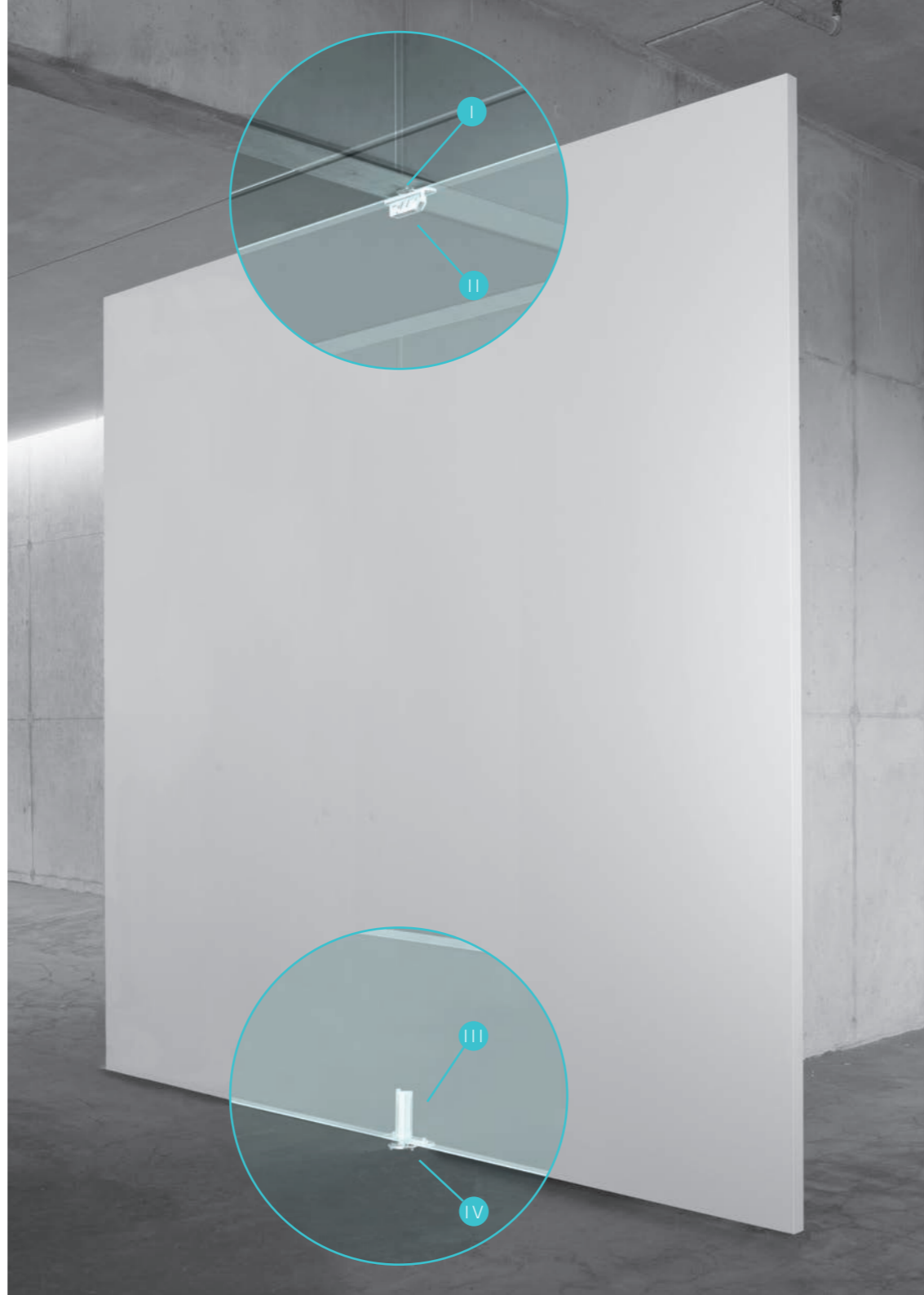
## SELF-CLOSING

The door comes to rest in the desired hold position.

## NO STRUCTURAL ELEMENTS IN FLOOR AND CEILING

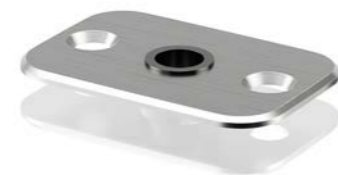
The FritsJurgens® pivot door system is unique in that there are no structural elements in the floor and the ceiling. The pivot hinges are fully mortised into the top and bottom of the door, so that only floor and ceiling plates need to be installed. A virtually invisible system.

System 3 is combined with the high-performance top pivot of FritsJurgens®, completed by small ceiling and floor plates.



## SYSTEM 3 COMPONENTS

### I CEILING PLATE



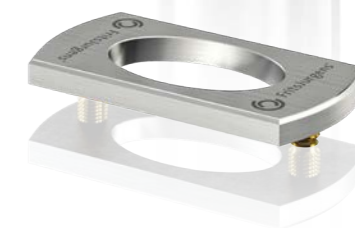
### II TOP PIVOT



### III SYSTEM 3



### IV FLOORPLATE







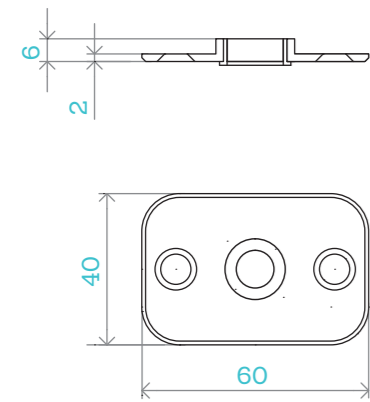
SYSTEM 3

# TECHNICAL DOCUMENTATION

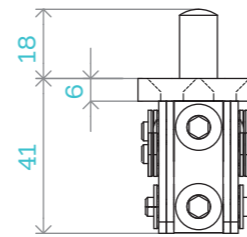
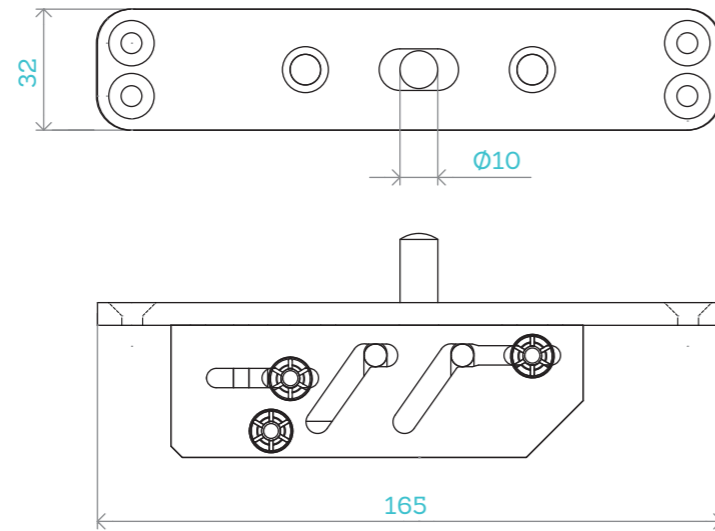


# SYSTEM 3 TECHNICAL DRAWINGS

CEILING PLATE

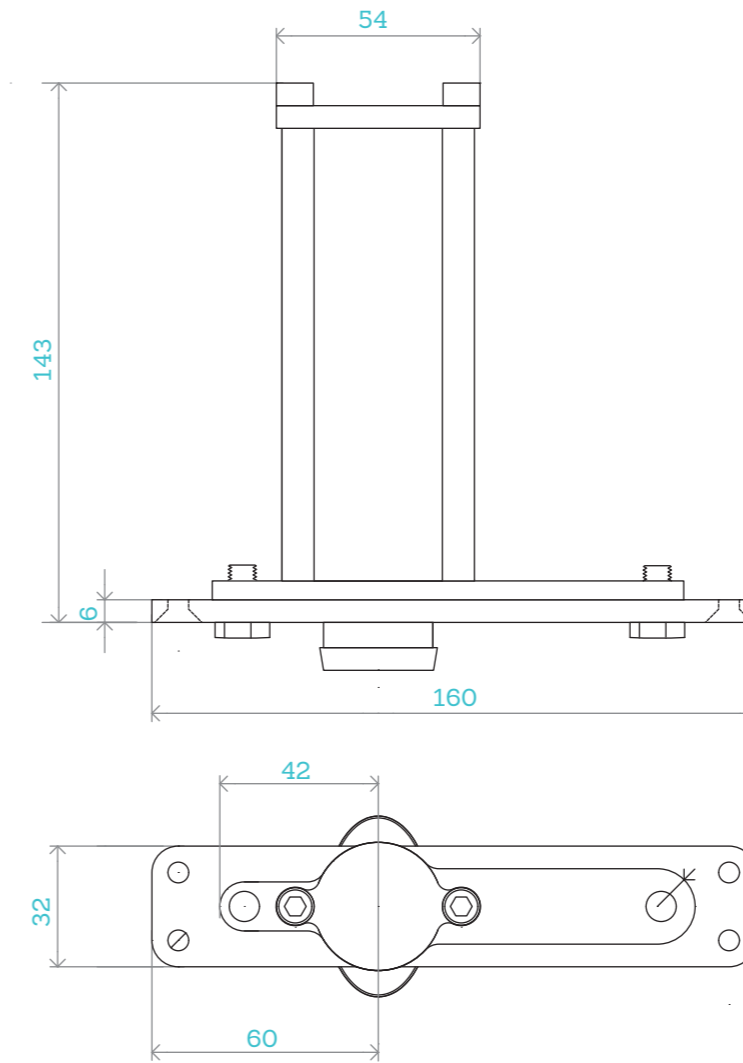


TOP PIVOT



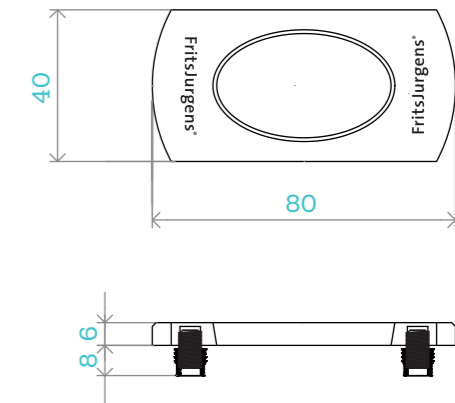
Note: When mounting in the door, use the milling drawing (page 20).

SYSTEM 3



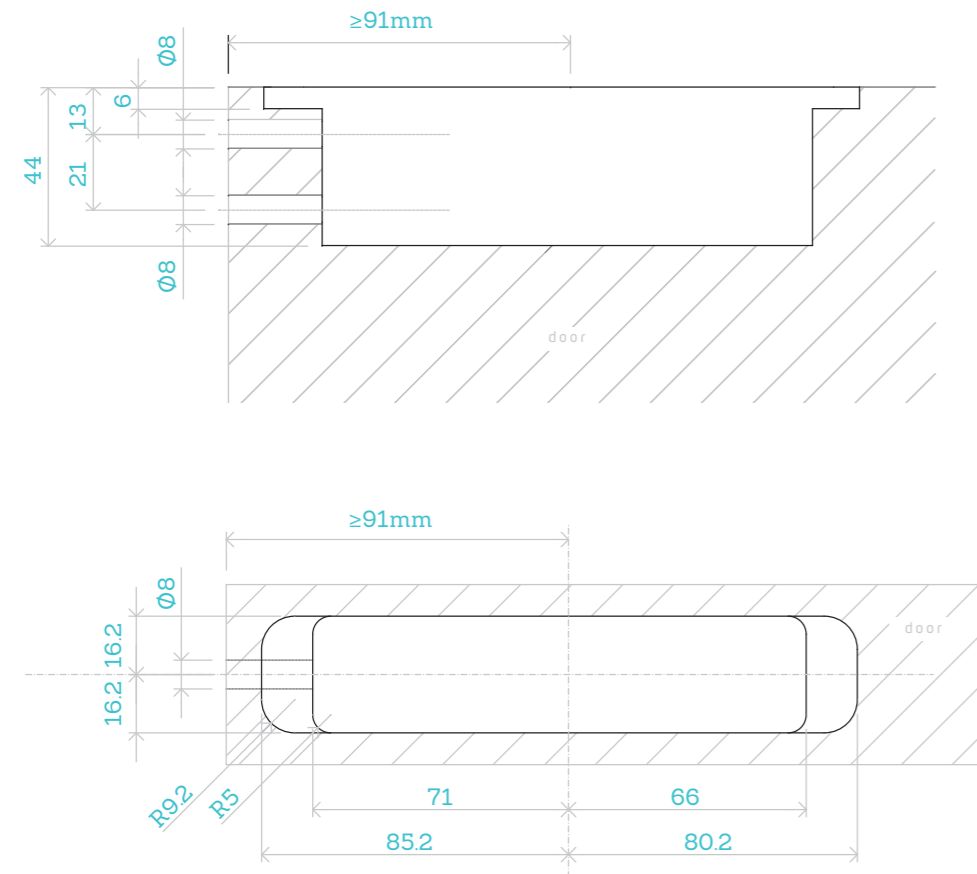
Note: When mounting in the door, use the milling drawing (page 20).

FLOORPLATE

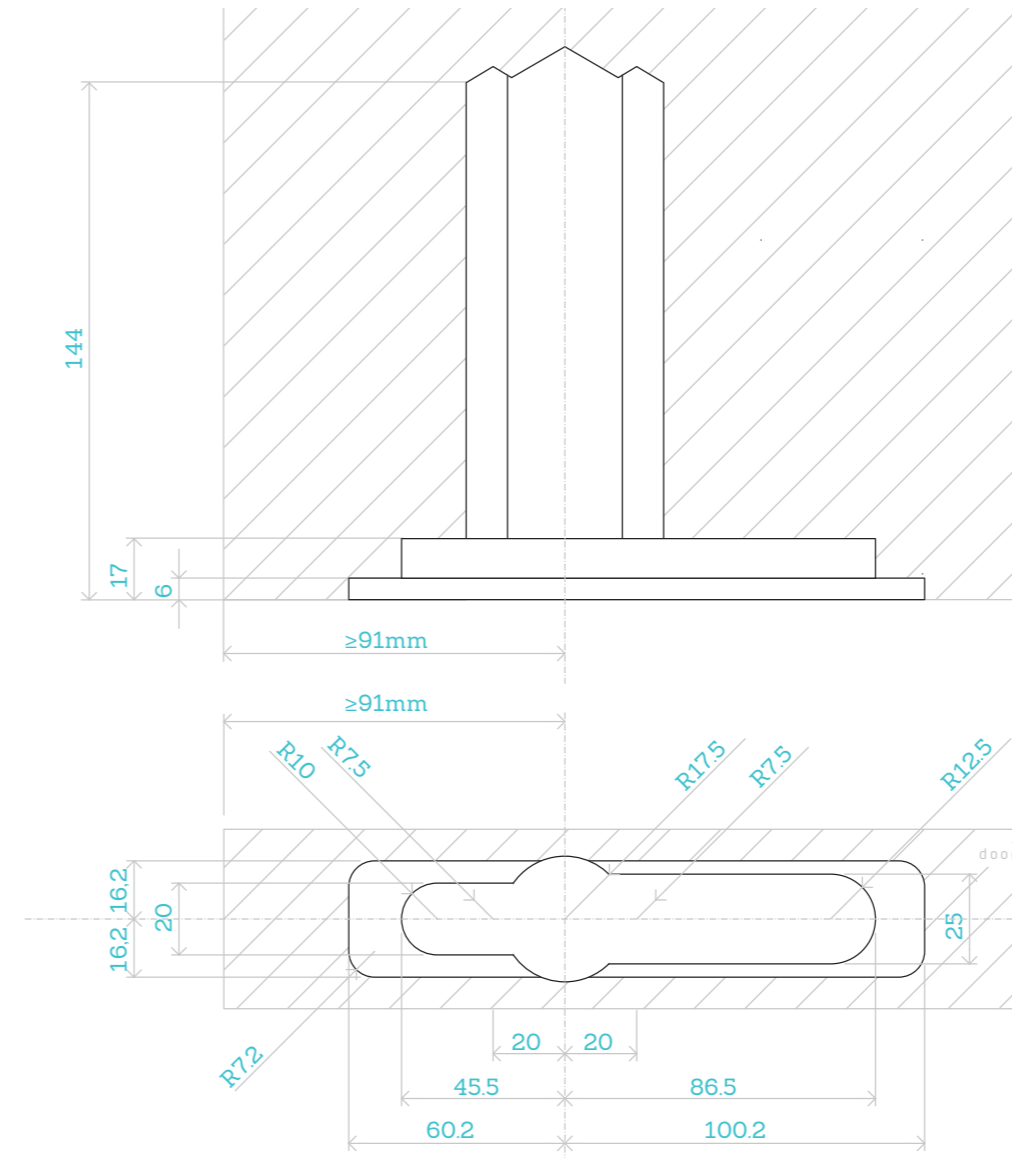


# SYSTEM 3 MILLING DRAWINGS

TOP PIVOT



SYSTEM 3





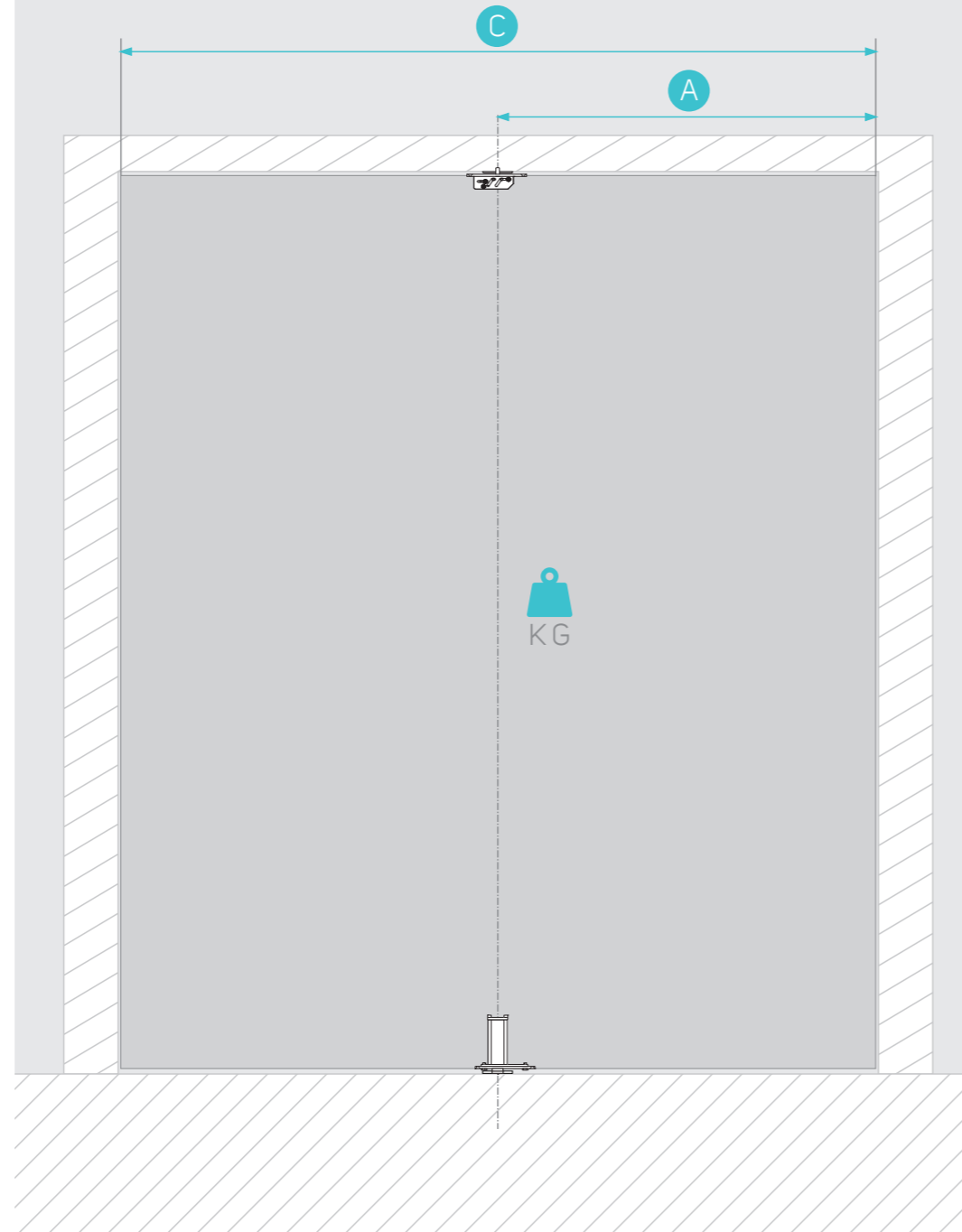
# SYSTEM 3 TYPE SELECTOR

To ensure the pivot hinge provides you the appropriate door movement, FritsJurgens® has made System 3 available in four models, each tuned to the weight and the width of the door. There are no limits to the height of the door.

For the optimum operation of the pivot door in case of particularly high doors and / or pressure differences in the building, select the next heavier System 3 variant, to ensure the closing force.

If you require a system for a pivot door that does not appear here, do not hesitate to contact us. FritsJurgens® has an on-site testing facility which enables us to determine which of our systems is suitable for your specific situation.

- Step 1: Determine C - width of the door
- Step 2: Determine A - distance of rotation point to the latch side of the door
- Step 3: Determine KG - weight of the door
- Step 4: Determine which system is suitable for your door



## EXAMPLE

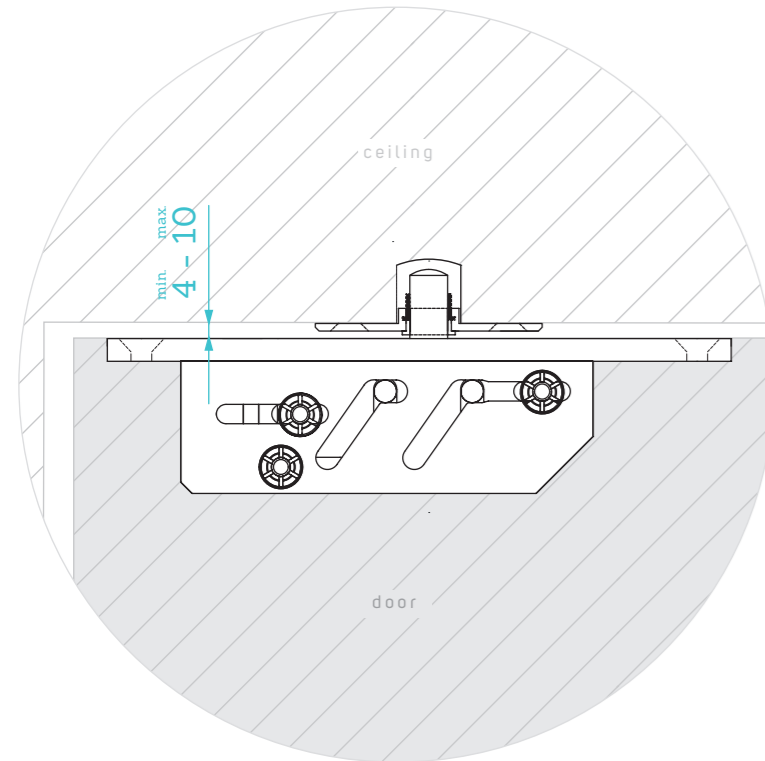
Door specifications: Door width 2400 mm, Door height 3200 mm, Weight 165 kg.

1	Check the door width C	2400 mm
2	Determine distance to pivot point A (C: 2400 mm : 2)	1200 mm
3	Cross reference the weight KG	165 kg
!	For this door you would specify model	<b>9024</b>

350	9024	9024	9024	9024	9024	9028	9028	9028										
300-349	9024	9024	9024	9024	9024	9024	9028	9028										
250-299	9020	9020	9020	9020	9024	9024	9024	9024	9028	9028	9028							
200-249	9016	9016	9020	9020	9024	9024	9024	9024	9028	9028	9028	9028	9028					
190-199	9016	9016	9020	9020	9024	9024	9024	9024	9028	9028	9028	9028	9028					
180-189	9016	9016	9020	9020	9024	9024	9024	9024	9028	9028	9028	9028	9028	9028	9028			
170-179	9016	9016	9020	9020	9024	9024	9024	9024	9028	9028	9028	9028	9028	9028	9028	9028		
160-169	9016	9016	9016	9016	9020	9020	9024	<b>9024</b>	9028	9028	9028	9028	9028	9028	9028	9028		
150-159	9016	9016	9016	9016	9020	9020	9024	9024	9028	9028	9028	9028	9028	9028	9028	9028		
140-149	9016	9016	9016	9016	9020	9020	9024	9024	9028	9028	9028	9028	9028	9028	9028	9028		
130-139	9016	9016	9016	9016	9020	9020	9024	9024	9028	9028	9028	9028	9028	9028	9028	9028		
120-129	9016	9016	9016	9016	9020	9020	9024	9024	9028	9028	9028	9028	9028	9028	9028	9028		
110-119	9016	9016	9016	9016	9020	9020	9024	9024	9028	9028	9028	9028	9028	9028	9028	9028		
100-109	9016	9016	9016	9016	9020	9020	9024	9024	9028	9028	9028	9028	9028	9028	9028	9028		
90-99	9016	9016	9016	9016	9020	9020	9024	9024	9028	9028	9028	9028	9028	9028	9028	9028		
80-89	9016	9016	9016	9016	9020	9020	9024	9024	9028	9028	9028	9028	9028	9028	9028	9028		
70-79	9016	9016	9016	9016	9020	9020	9024	9024	9028	9028	9028	9028	9028	9028	9028	9028		
60-69	9016	9016	9016	9016	9020	9020	9024	9024	9028	9028	9028	9028	9028	9028	9028	9028		
50-59	9016	9016	9016	9016	9020	9020	9024	9024	9028	9028	9028	9028	9028	9028	9028	9028		
40-49	9016	9016	9016	9016	9020	9020	9024	9024	9028	9028	9028	9028	9028	9028	9028	9028		
min	500	600	700	800	900	1000	1100	<b>1200</b>	1300	1400	1500	1600	1700	1800	1900			
max	599	699	799	899	999	1099	1199	<b>1299</b>	1399	1499	1599	1699	1799	1899				

# SYSTEM 3 GAPS AROUND THE DOOR

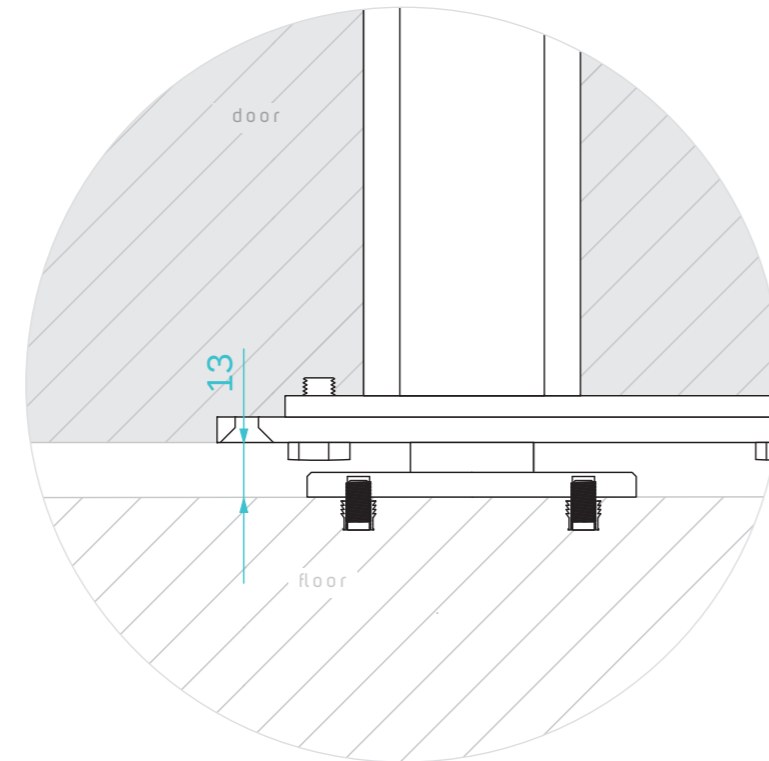
## TOP PIVOT



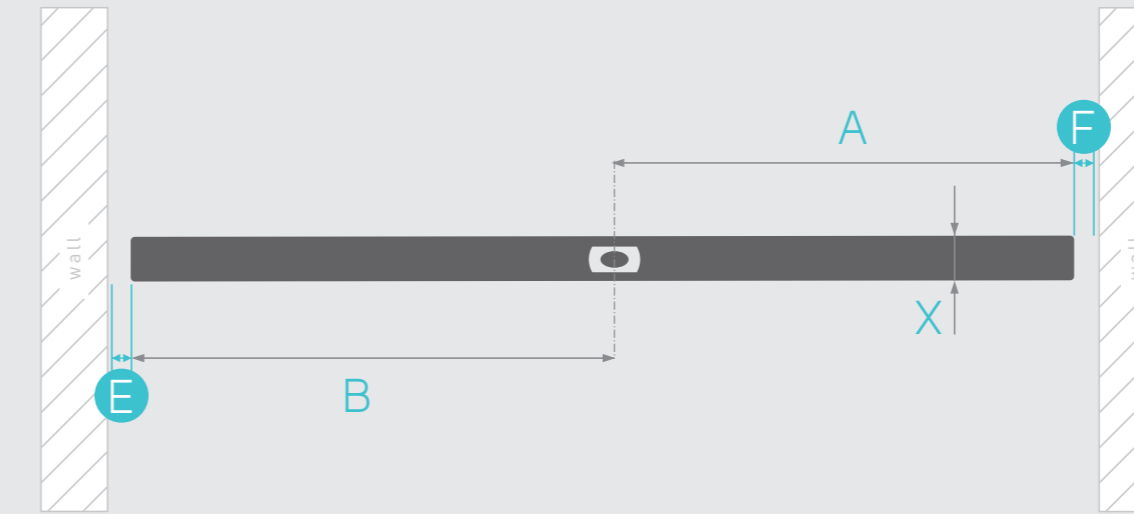
System 3 is designed to be virtually invisible. In addition, the system allows for minimal gaps all around the door. The minimum installation dimensions are 4mm at the top (ceiling) and 13mm at the bottom (floor).

The minimum vertical dimensions for installation depends on the thickness (X) and the width of the door in relation to the positioning of the hinge (A and B).

## SYSTEM 3



# GAP CALCULATION



## EXAMPLE

X	Door thickness	40
A	Distance of rotation point to latch side of the door	1000
B	Distance pivot point to beginning door	1000
E*	Minimum gap between door and wall	2.2
F*	Minimum gap between door and wall	2.2

E*	B	X						
		40	50	60	70	80	90	100
500		2.4	2.6	2.9	3.2	3.6	4	4.5
1000		2.2	2.3	2.5	2.6	2.8	3	3.3
1500		2.1	2.2	2.3	2.4	2.5	2.7	2.8
2000		2.1	2.2	2.2	2.3	2.4	2.5	2.6

F*	A	X						
		40	50	60	70	80	90	100
500		2.4	2.6	2.9	3.2	3.6	4	4.5
1000		2.2	2.3	2.5	2.6	2.8	3	3.3
1500		2.1	2.2	2.3	2.4	2.5	2.7	2.8
2000		2.1	2.2	2.2	2.3	2.4	2.5	2.6

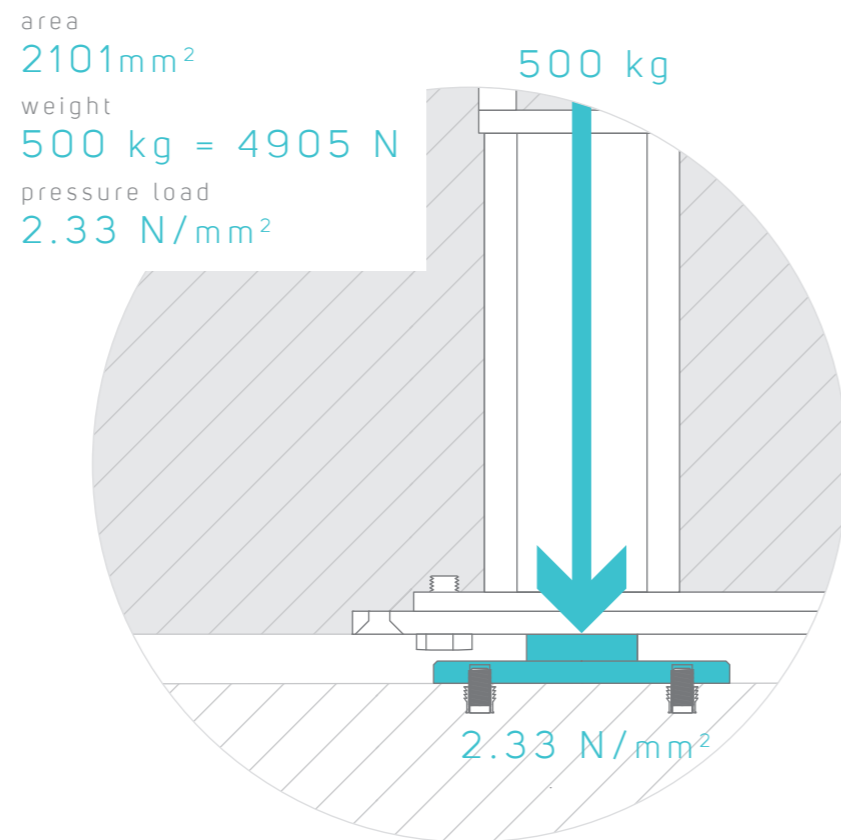
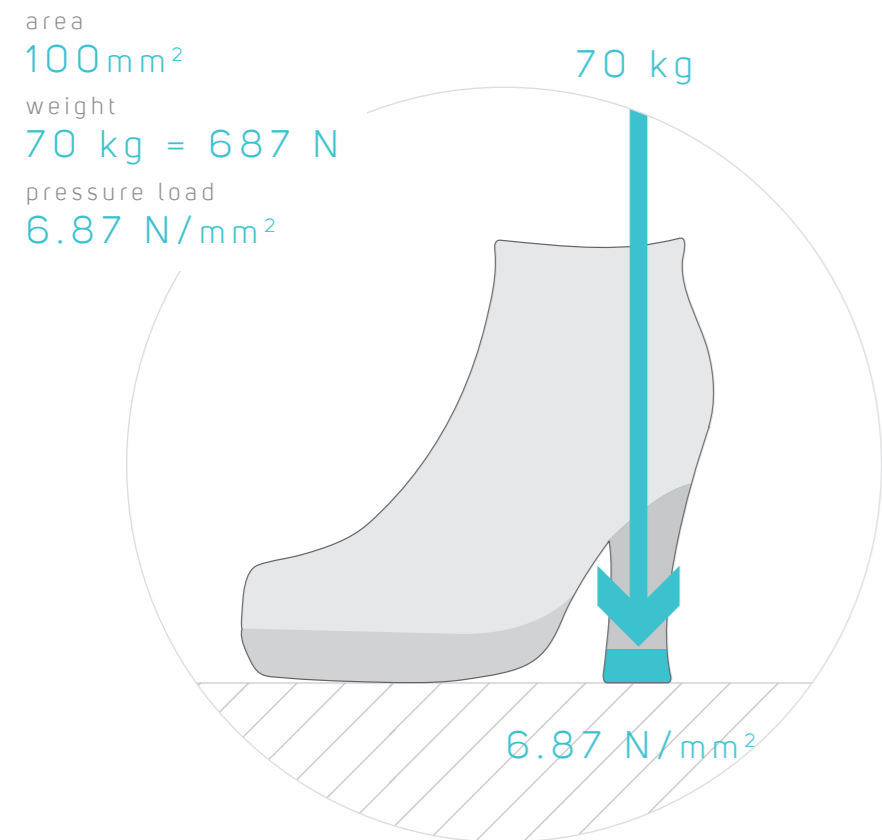
\* There is no need to add extra space for installing. The outcome for E and F includes a 2mm tolerance.



# SYSTEM 3 PRESSURE LOAD

The Fritsjurgens® pivot door is fastened on a floorplate of 40 x 80mm and produces a pressure load (Fw) of 2.33 N/mm<sup>2</sup> with a door of 500 kg.

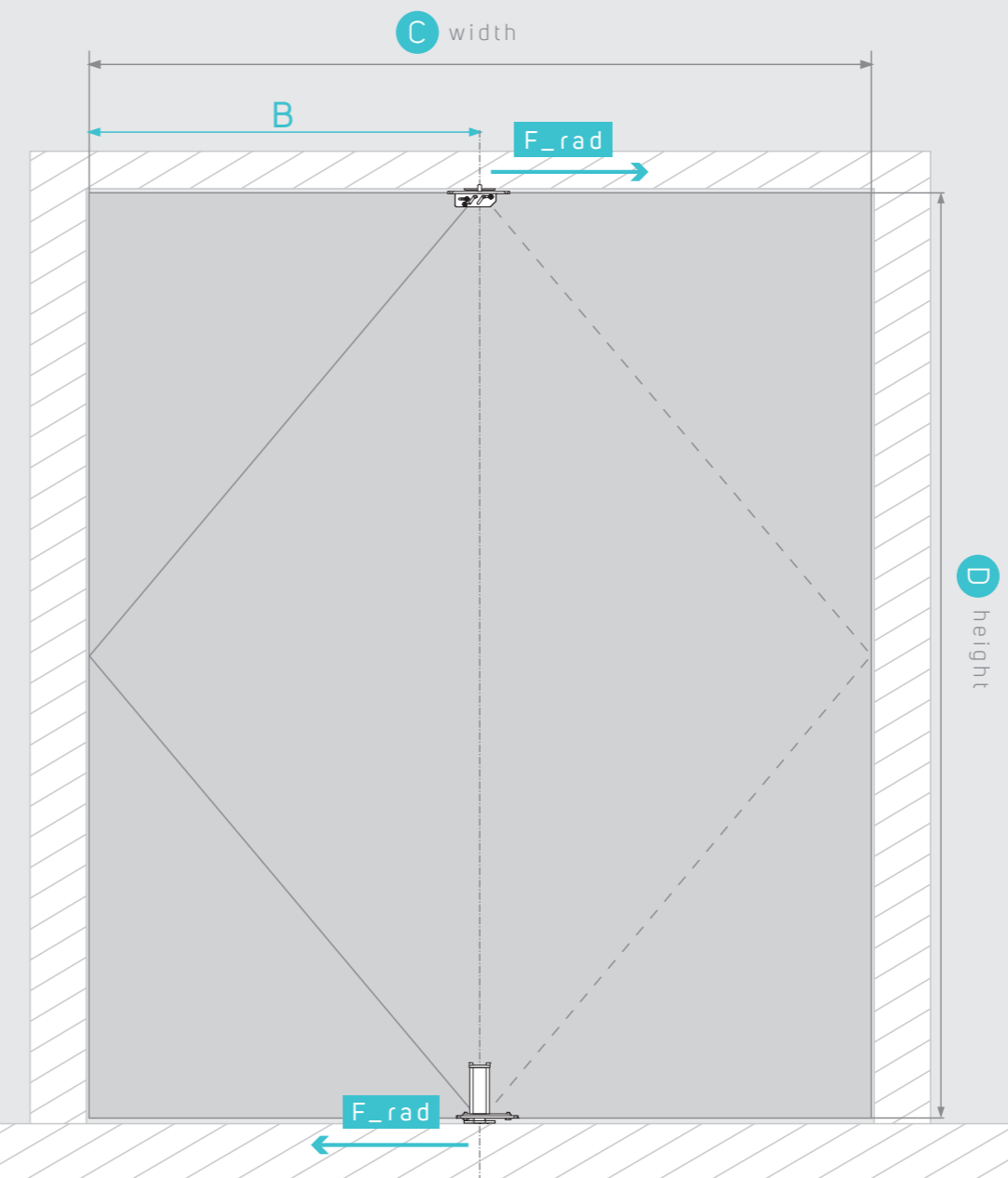
As a reference: a woman of circa 70 kg wearing high heels produces a pressure load (Fw) of 6.87 N/mm<sup>2</sup>. For application on your floor we refer to the specifications of the floor manufacturer.







## LATERAL FORCE



$$B = 1/2 \text{ width door}$$

At 1/2 door width  $F_{rad}$  has 0 N in all situations of height  $D$  - width  $C$ . The door is completely balanced because System 3 is placed in the middle. As a result, there is no extra lateral force on the floor and ceiling.

$$9.8 \text{ N} = 1 \text{ kg}$$

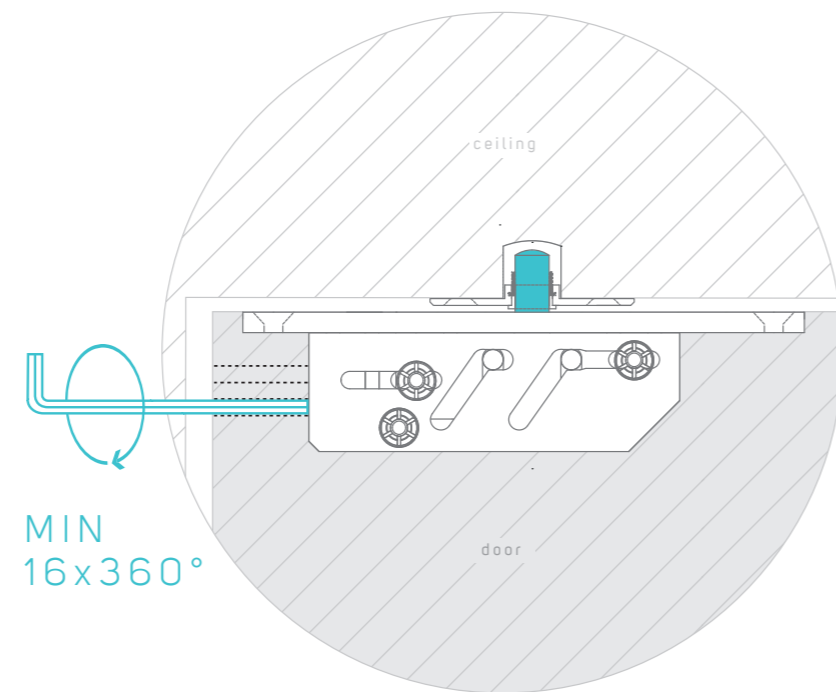


# SYSTEM 3 SETTING TOP PIVOT

## MOUNTING TOP PIVOT

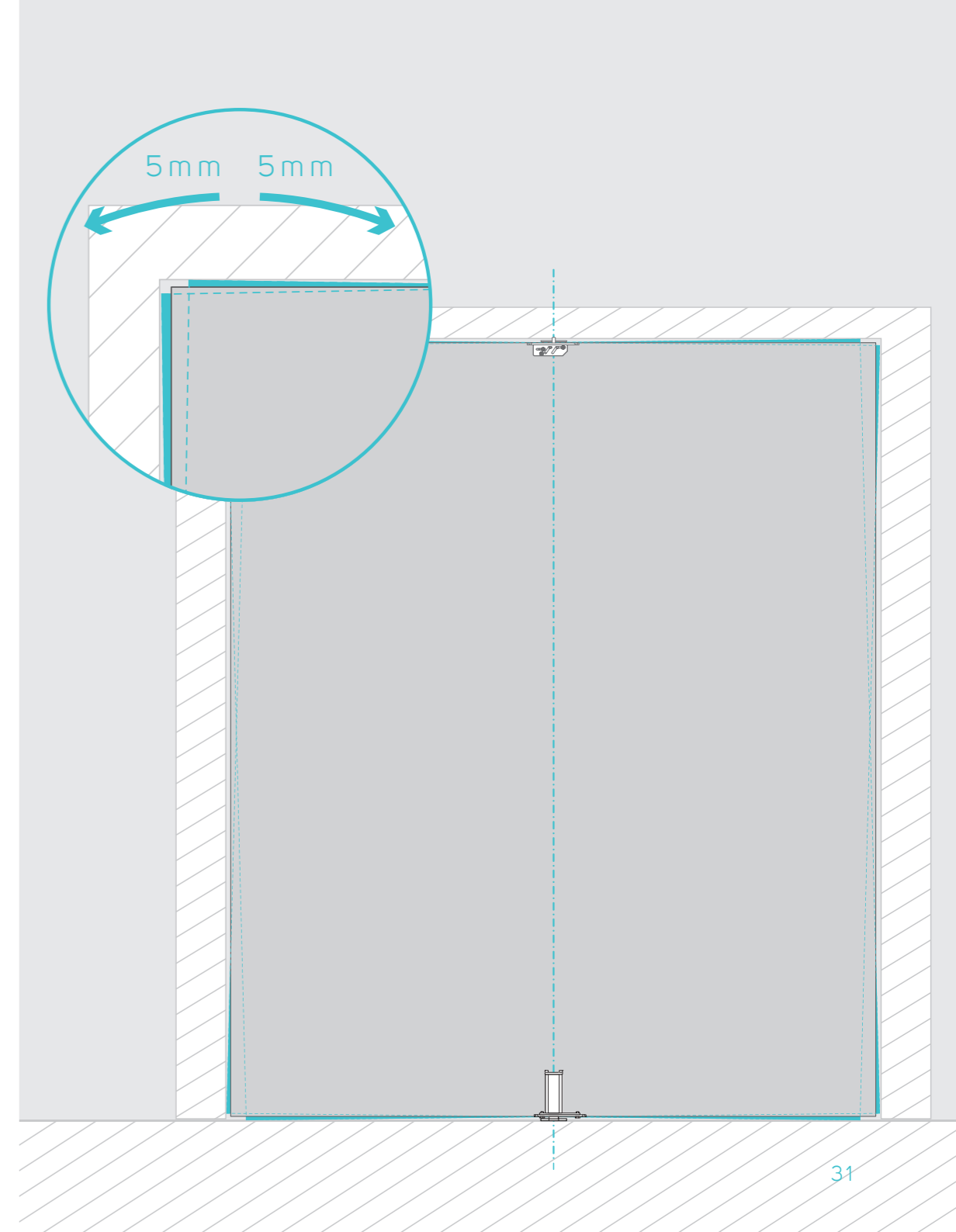
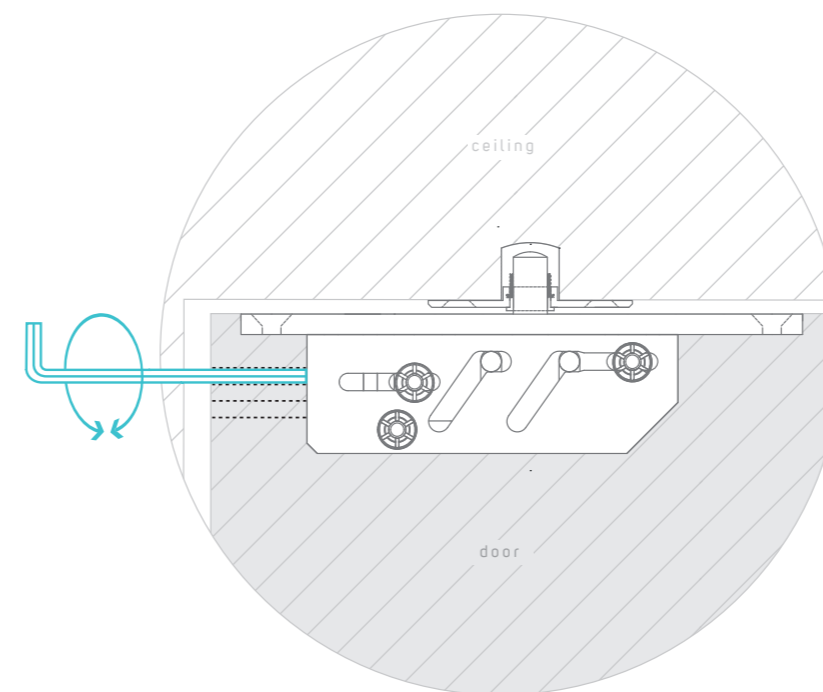
The top pivot can be set using a 5mm hex key in the bottom hole. To the right: assembly. To the left: disassembly.

Important: to ensure that the door is secured properly, a minimum of 16 rotations of 360° are required.



## SETTING THE GAP

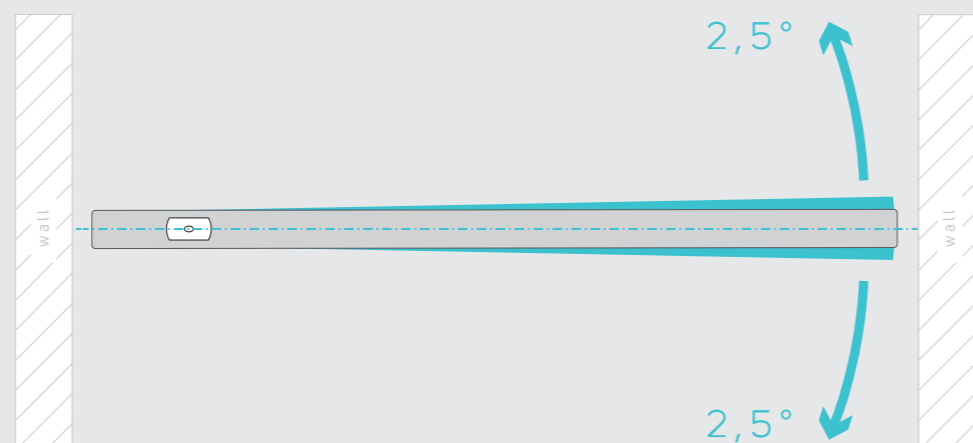
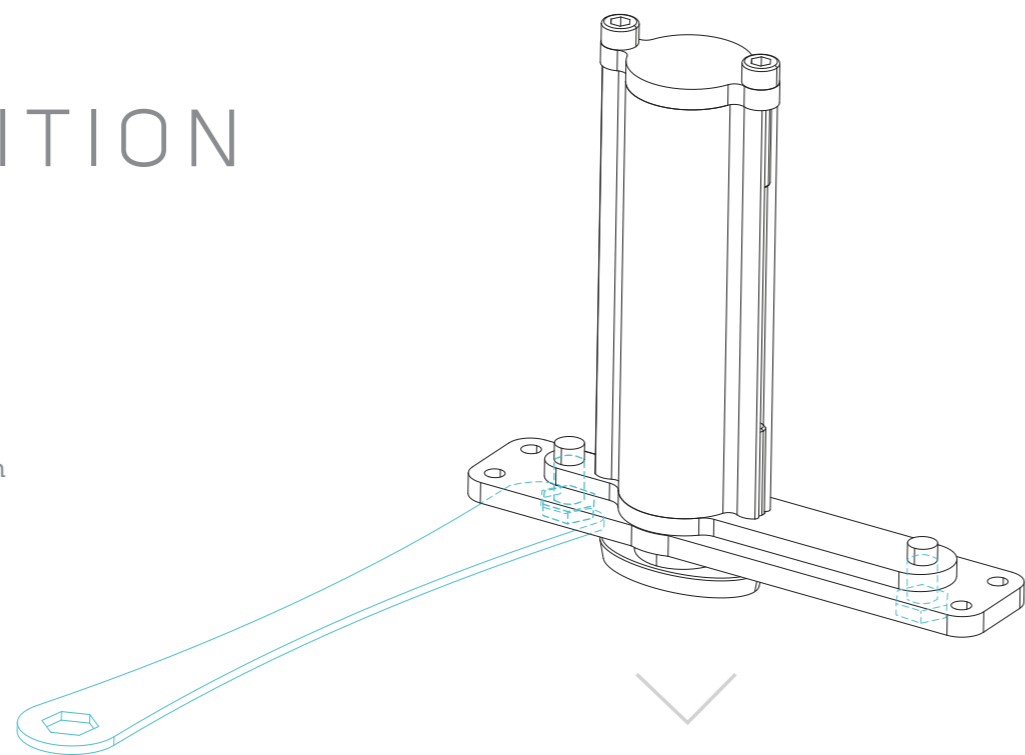
Gaps around the door can be adjusted using a 5mm hex key in the top hole.



# SYSTEM 3 SETTING THE RADIAL POSITION

The radial position can be set using the supplied adjustment spanner.

Important: loosen the 2 screws before setting the radial position. Do not forget to turn them back on afterwards.





# FRITSJURGENS® SYSTEMS FEATURES

FritsJurgens® provides systems for multiple applications:

- Single, double-acting and 360° rotating doors
- With or without hold positions
- Adjustable closing speed of the door (soft close and back check)

FritsJurgens® offers the perfect solution for any pivot door.

## FRITSJURGENS® SYSTEMS

- No structural elements in the floor or ceiling
- Quick and simple to install
- Maintenance-free
- For new construction and retrofit situations
- Easily-adjustable

## FRITSJURGENS® APPLICATION AREAS

- Timber, steel and aluminium doors
- Massive clad custom doors
- Steel and timber framed glass doors
- Single and double-acting pivot doors
- Interior and exterior doors
- Commercial and residential



SYSTEM ONE



SYSTEM 3



SYSTEM M

Rotation	360°	360°	-125° to 125°
System dimensions	160 x 34 x 39 mm	160 x 34 x 143 mm	294,8 x 32 x 99,6 mm
System weight	0,335 kg	0,75 kg	2,6 kg
Hold positions at every 90°	X	✓	X
Hold positions at 90° and -90°	X	X	✓
Self-opening	X	✓	X
Self-closing	X	✓	✓
Adjustable closing damping (soft-close)	X	X	✓
Adjustable hydraulic backcheck	X	X	✓
Suitable for single action doors	✓	X	✓
Suitable for double action doors	✓	✓	✓
Minimal number of movements tested	1.000.000	1.000.000	1.000.000
Minimum door thickness	40mm	40mm	40mm
Load-bearing capacity (up to)	500 kg	500 kg	500 kg
Maximum weight at latch force	NA	350 kg (According to schedule Type selector)	300 kg (See the datasheet of System M)

# FritsJurgens®

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