

# Spring break device

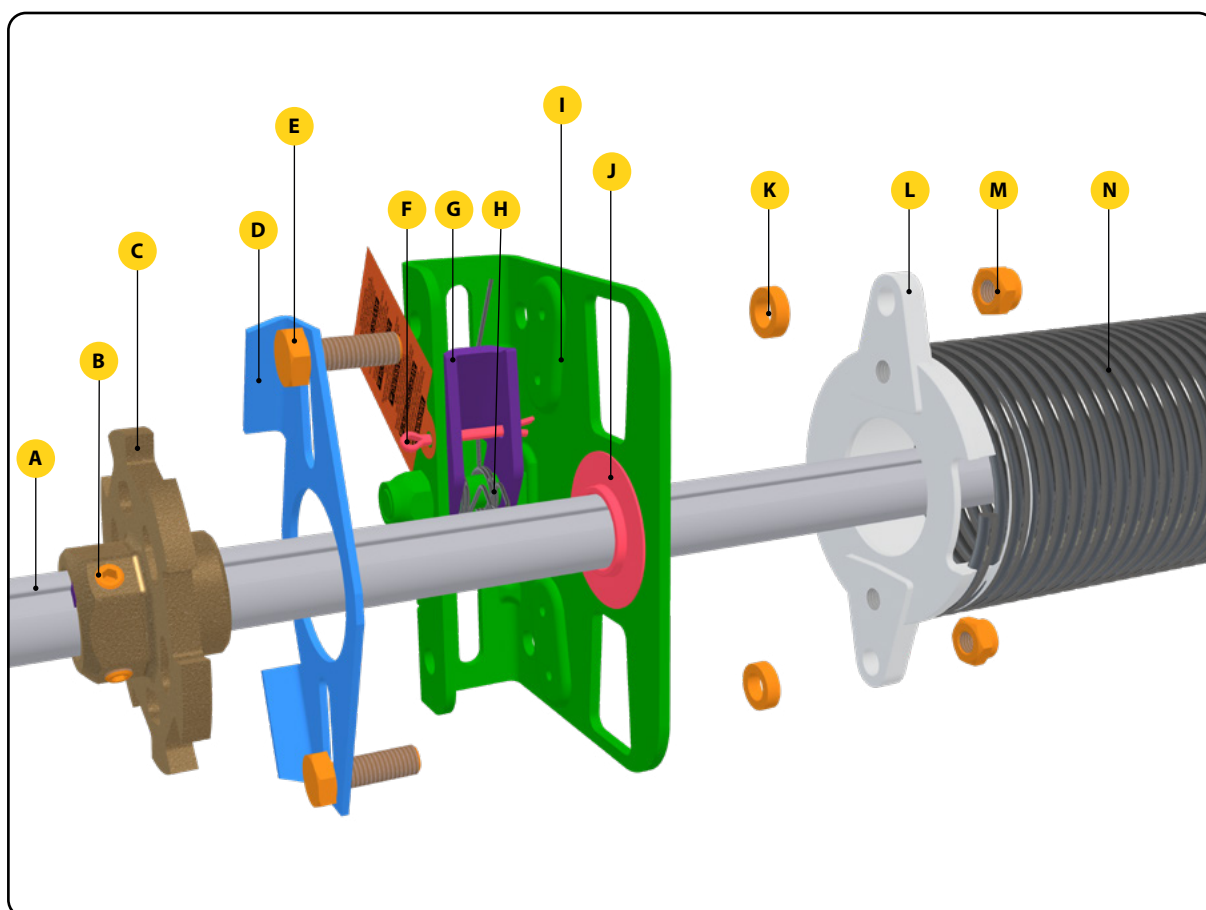
25449 25549 299540 299541

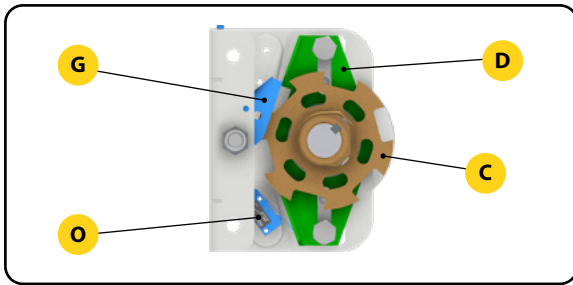
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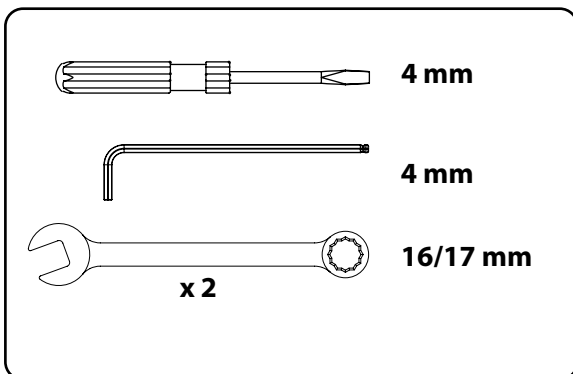
## 1. Overview

	Description
<b>A</b>	Shaft
<b>B</b>	Set screws (M8 x 10)
<b>C</b>	Blocking wheel
<b>D</b>	Blocking plate
<b>E</b>	Bolt (M10 x 30)
<b>F</b>	Safety lock
<b>G</b>	Blocking pawl
<b>H</b>	Safety spring
<b>I</b>	Base plate
<b>J</b>	Bearing
<b>K</b>	Spacer
<b>L</b>	Spring plug
<b>M</b>	Nut (M10)
<b>N</b>	Torsion spring
<b>O</b>	Micro switch





## 2. Tools



## 3. Operation

### IMPORTANT:

Tensioned springs carry a high tension. Therefore always be very careful, especially when adjusting. Always use well maintained tensioning rods (12025) of the right size. Ensure that the mounting place for the spring break protection is structurally strong enough to attach the spring break protection and to absorb the force of any cable break!

Persons and animals can be hit by falling parts from the wall or ceiling which can lead to severe injuries or even death!

- Check the stability of the mounting wall.
- Only use approved fasteners to mount the spring break device.

When the torsion spring (N) is tensioned, the blocking plate (D) turns slightly. This will cause the bent tab of the blocking plate (D) to block the blocking pawl (G). The blocking wheel (C) fitted to the shaft with key can now rotate freely.

When a spring breaks, spring tension is removed, so the blocking plate (D) can rotate back. The force of the spring (H) will cause the blocking pawl (G) to push the blocking plate (D) away and engage with the teeth of the blocking wheel (C), preventing the door panel from falling. The blocking plate (D) being rotated back now triggers the micro switch (O), stopping the electric drive.

## 4. Scope of application

Spring break protection devices 25449 and 25549 are used in industrial sectional doors that are operated either manually, using a chain or electrically. They can be used within a temperature range of -20 °C to +50 °C.

- Type 25449 and 299540/299541 are used in sectional doors with a 1" (25.4mm) shaft with key way.
- Type 25549 is used in sectional doors with a 1 ¼" (31.75mm) shaft with key way.
- Spring heads to be fitted: 50mm spring head up to 152mm spring head

When using a certain cable drum, the **minimum number** of spring break protection devices per door may be **calculated as follows**:

$$\frac{M_{\max}}{0,5 \times d \times g} = D$$

M <sub>max</sub>	Maximum torque (210 Nm)
d	Drum diameter (m)
g	Gravity (9,81 m/s <sup>2</sup> )
D	Door panel weight (kg)

- D is the weight that determines if one or more spring break devices are needed.
- The maximum torque per spring break protection is 210 Nm.
- The drum diameter is measured at the unwind point of the cable when the door is closed!
- One spring break protection is installed for each torsion spring.

**⚠ The maximum specified weight for the cable drum may never be exceeded!**

### Example:

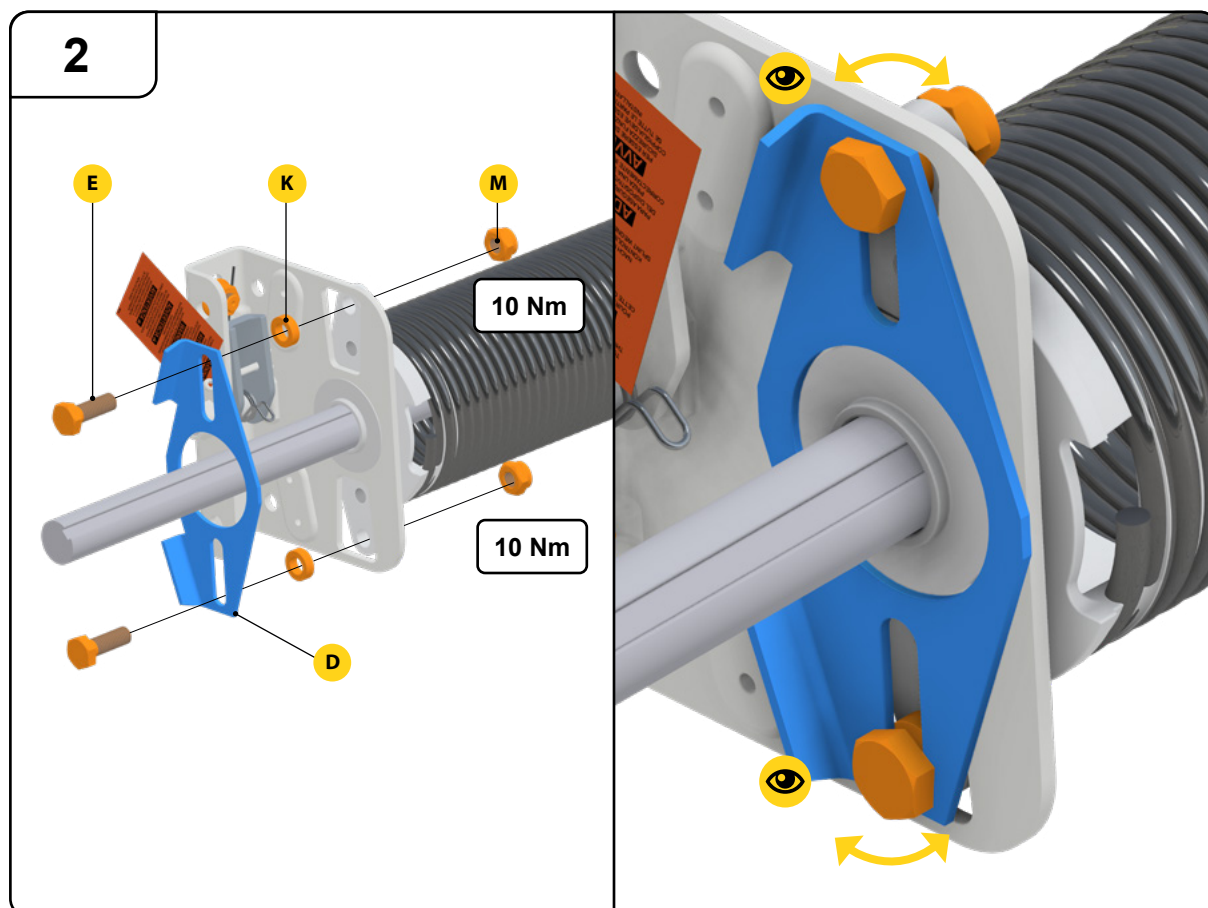
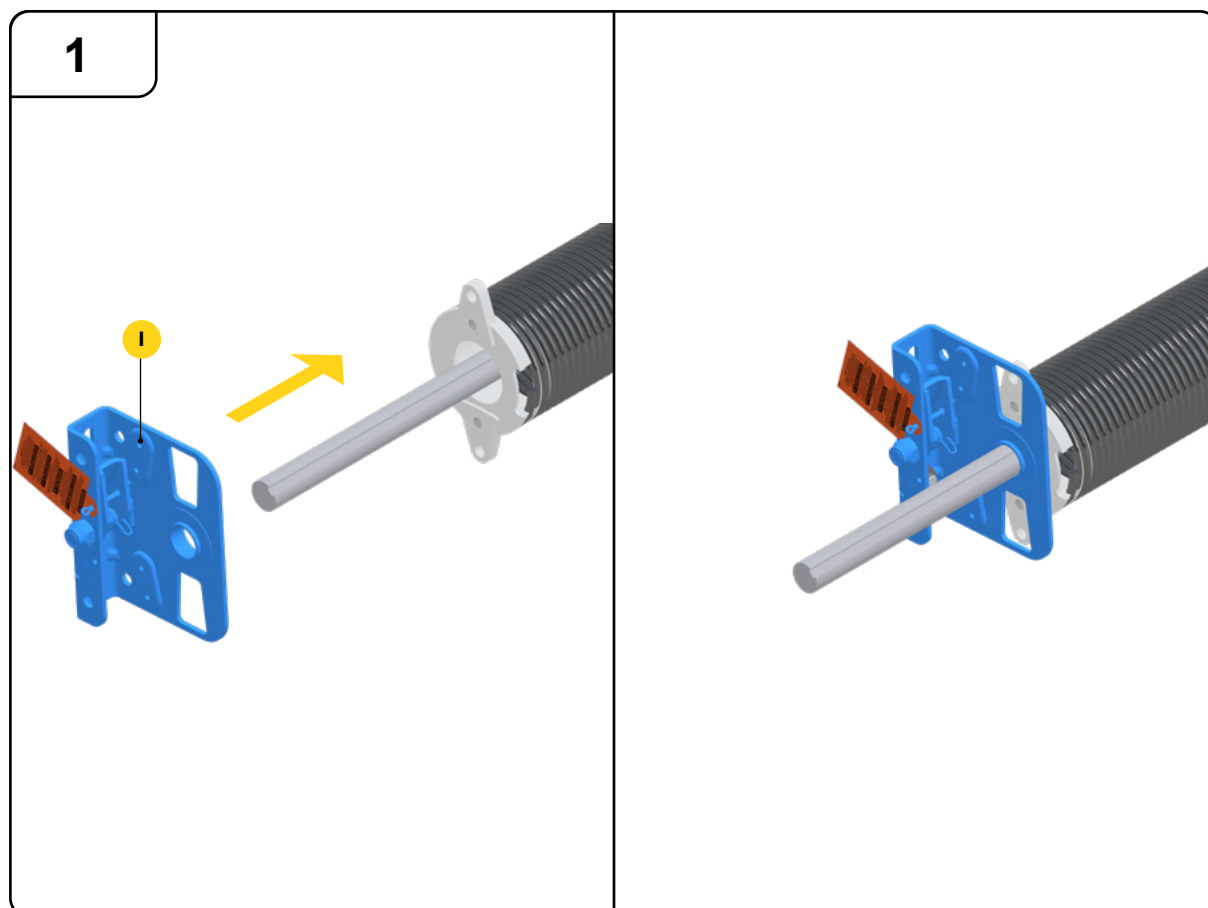
Cable drum 110020 (M134-5500) has a diameter of **138,2 mm**

$$\frac{210}{0,5 \times 0,1382 \times 9,81} = 303,9$$

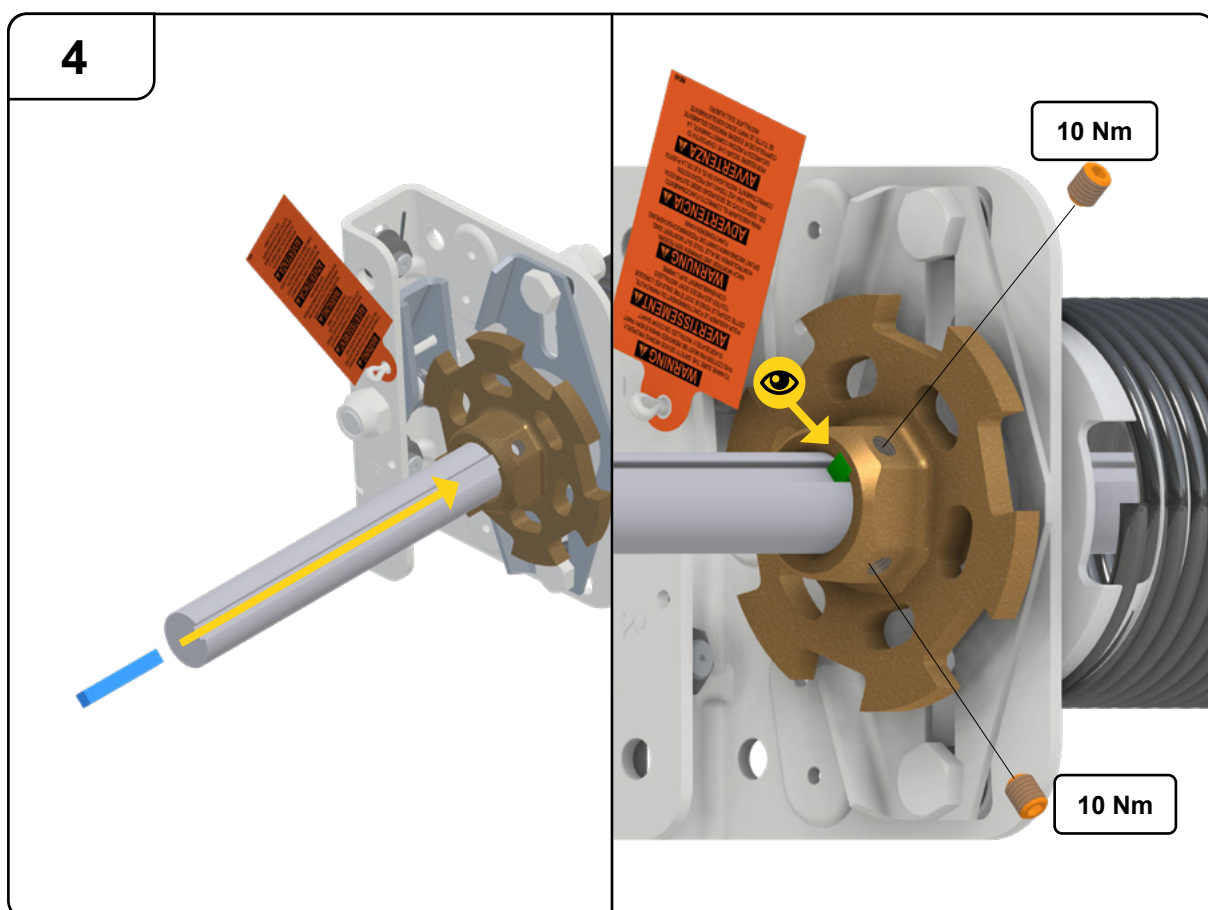
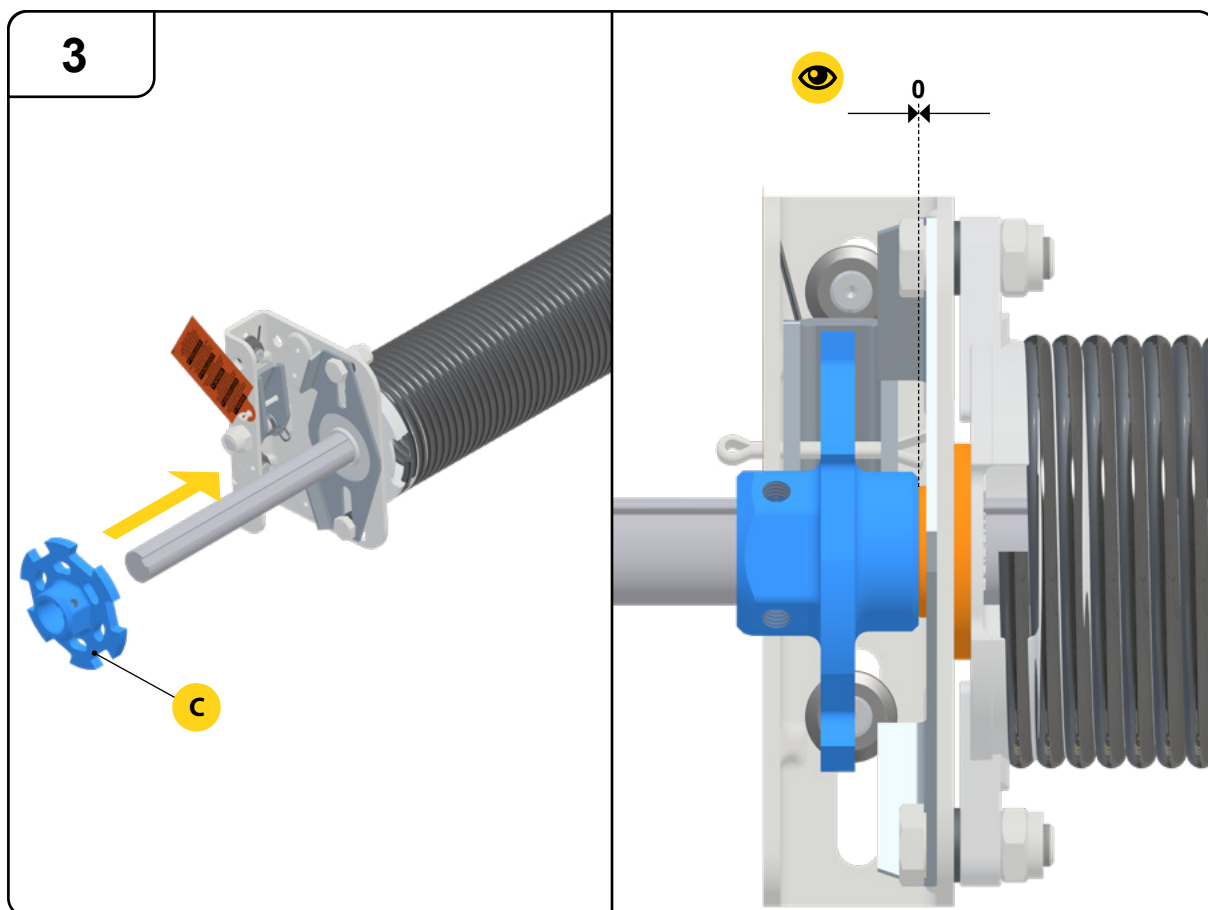
So for cable drum 110020:

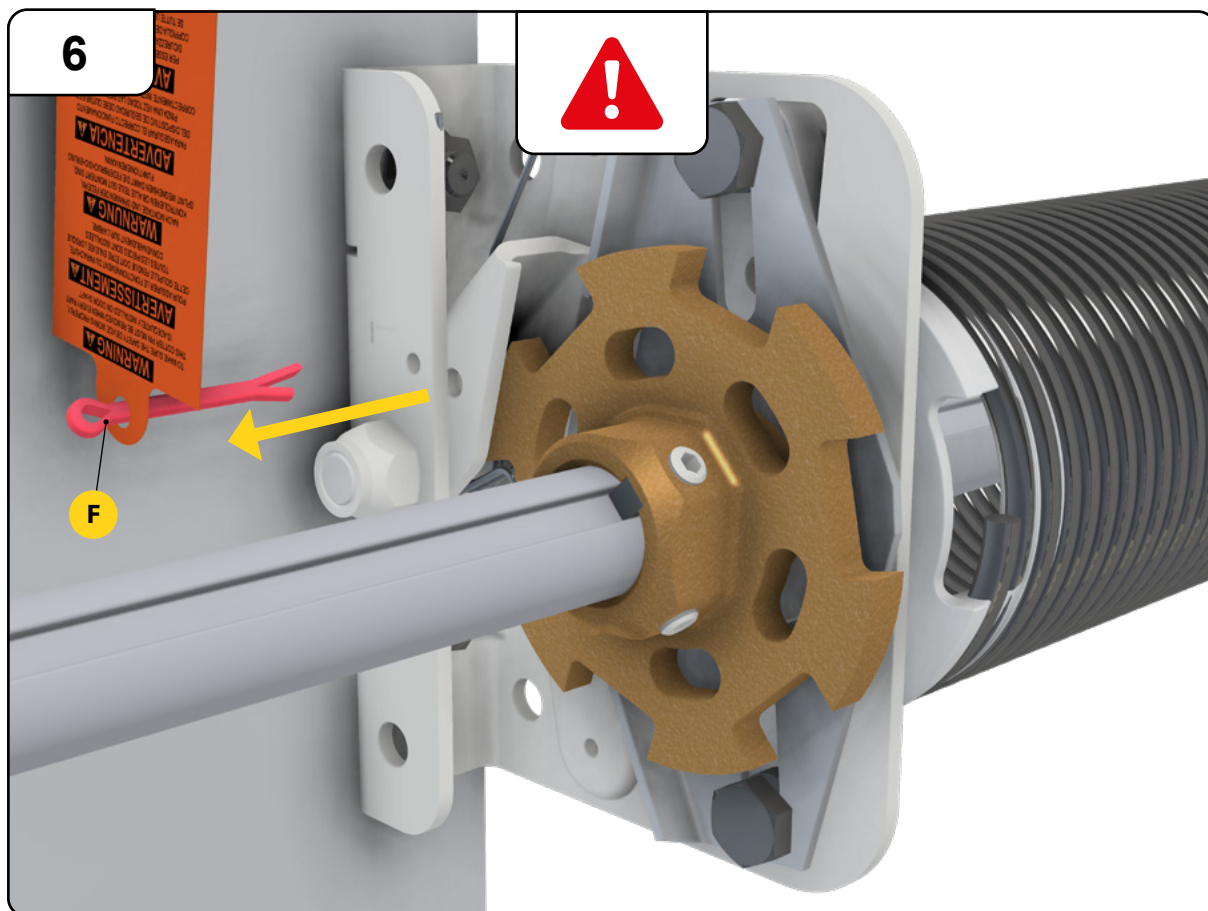
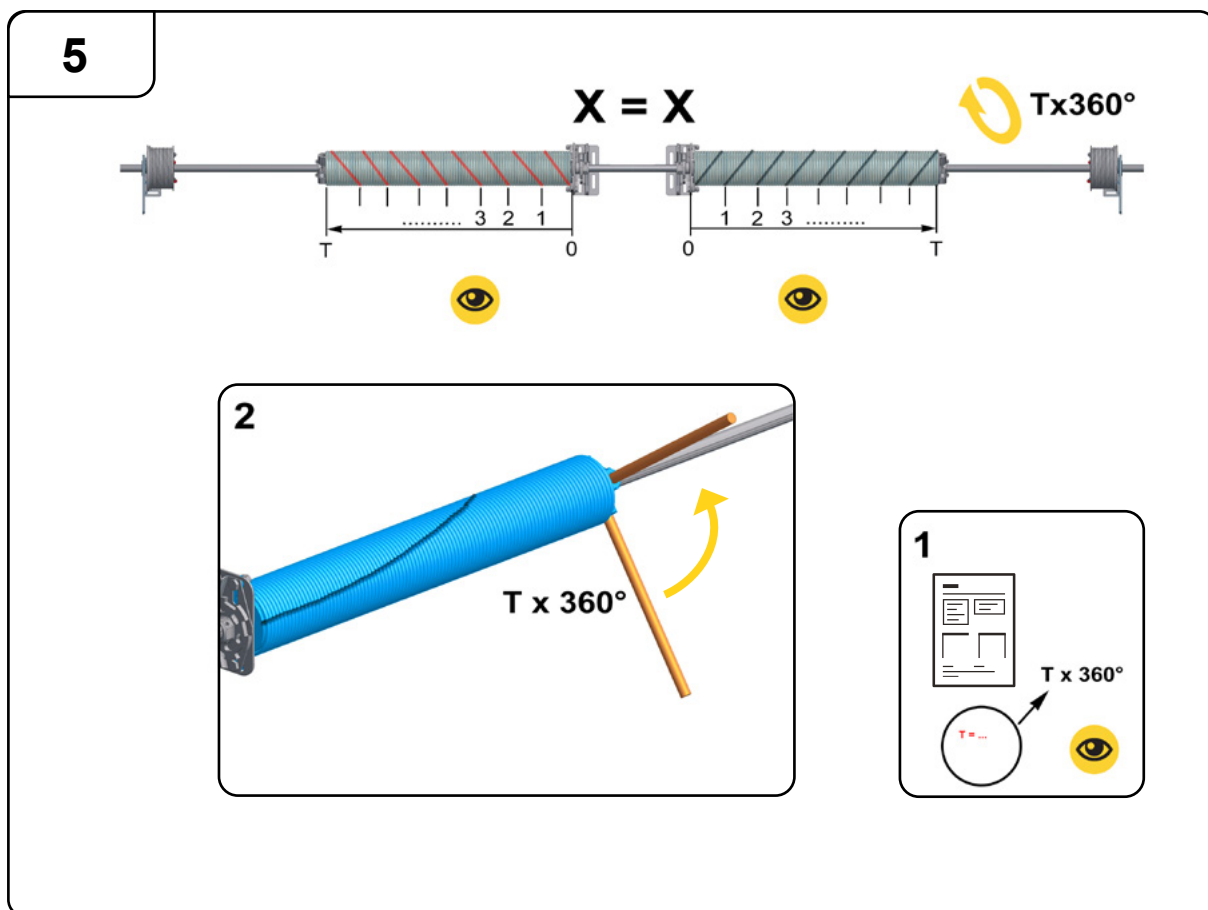
D	# spring break devices
≤ 303,9	1
> 303,9	≥ 2

## 5. Installation







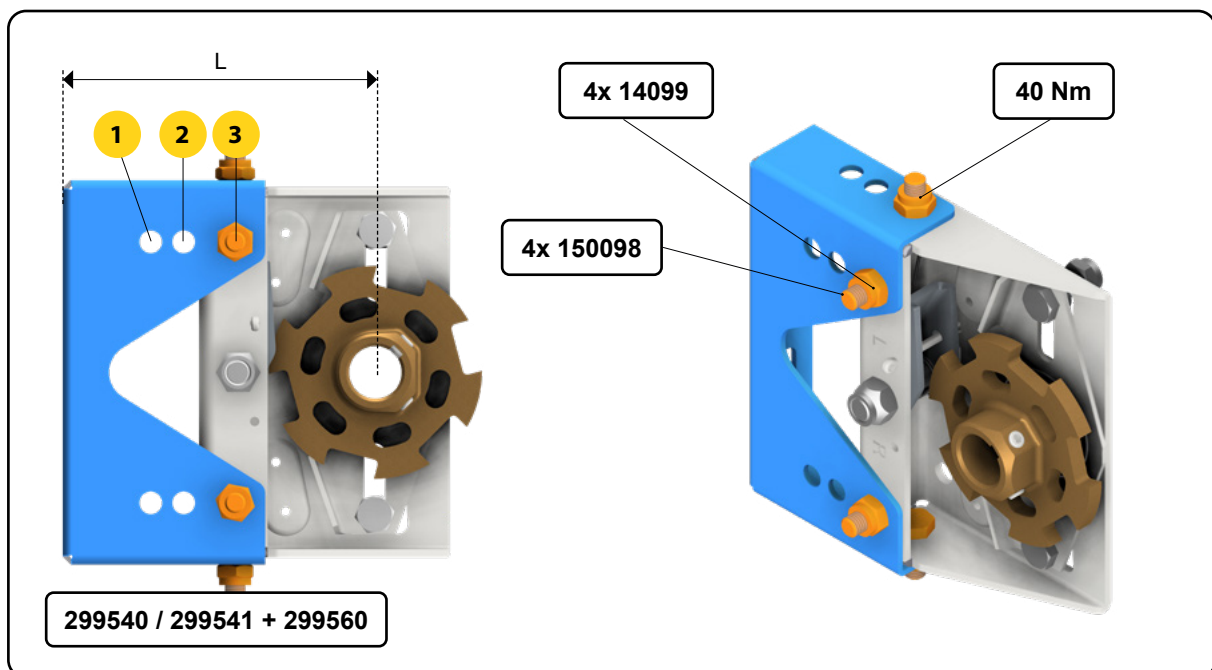
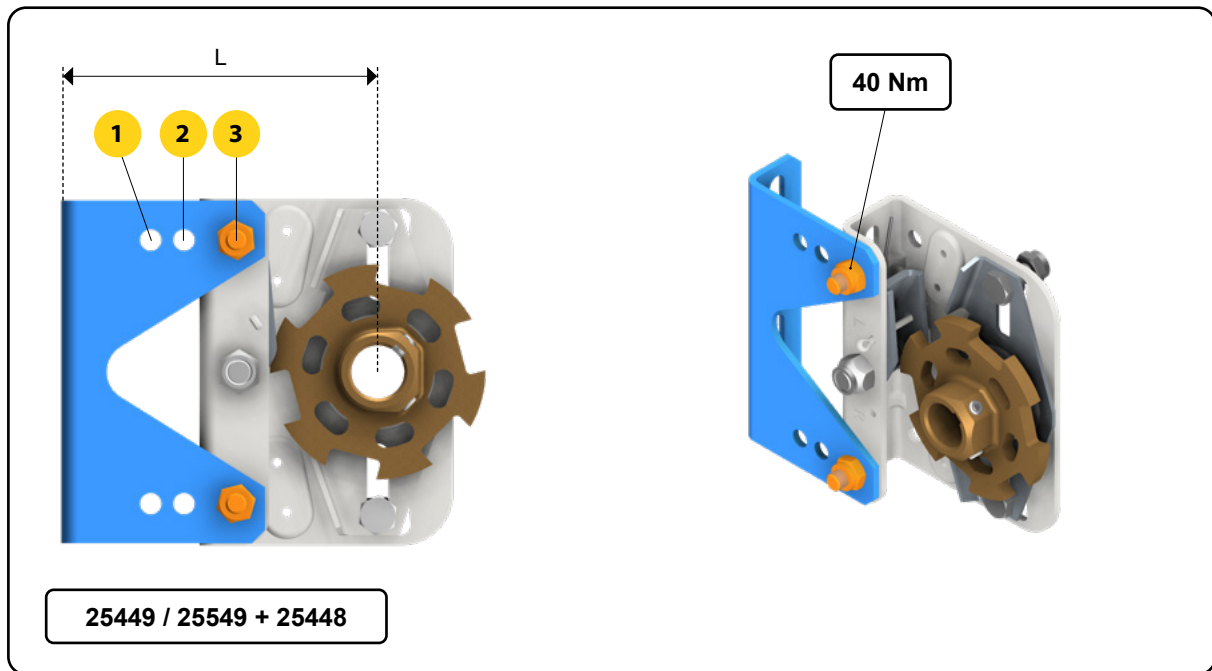


## 6. Optional extras

### 6.1. Offset plate item 25448 and 299560

L (mm)	Offset plate
86	-
111	1
127	2
152	3

Use spacer plate 25448 and 299560 to achieve the correct offset .







## 7. Replacing (after a broken spring)

Torsion springs and spring break protection devices may only be replaced by qualified personnel.

- Secure the door panel using struts to prevent further falling of the door panel.
- Remove the broken torsion spring with spring break protection and offset plate (if fitted).
- Fit the replacement torsion spring with spring break protection in accordance with the installation instructions.

## 8. Maintenance

This safety feature must be checked at least once a year. This check must be carried out by qualified personnel.

### Checklist:

- Remove dirt
- Check whether the force of the spring against the blocking pawl is sufficient, by depressing the blocking pawl.

If this does not return to its original position, the spring break protection should be replaced. Repeat this check five times.

- Check all bolts and nuts for tightness.

## 9. Supplier

DOCO International b.v.  
Nusterweg 96  
6130 AK Sittard (NL)  
Tel.: +31 (0)46-4200666  
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## 10. Terms and conditions of supply

A copy of these terms and conditions may be requested by contacting us. We will send it free of charge.

[illegible]



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