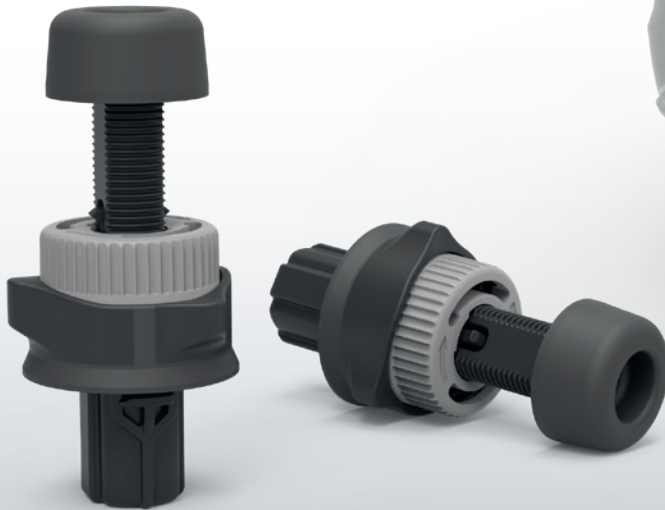


PRODUCT INFORMATION

# SELF-ADJUSTABLE CLOSURE BUMPER

Assembly time reduction  
for a perfect fit and finish adjustment



ARaymond<sup>®</sup>   
MORE THAN FASTENING

# ARAYMOND, CLOSE TO YOU EVERYWHERE



1 center of expertise

11 engineering centers

26 manufacturing sites in  
25 countries

6,800 employees

More than 150 years of experience

## OVERVIEW

Application .....	p.4
Environment .....	p.5
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# APPLICATION

A PERFECT FIT AND  
FINISH ADJUSTMENT  
PROTECTS THE TAILGATE  
FROM CLOSURE VIBRATIONS



# ENVIRONMENT

The self-adjustable bumper is mounted into the tailgate and adjusted to the vehicle geometry and tolerances at the OEM assembly line.

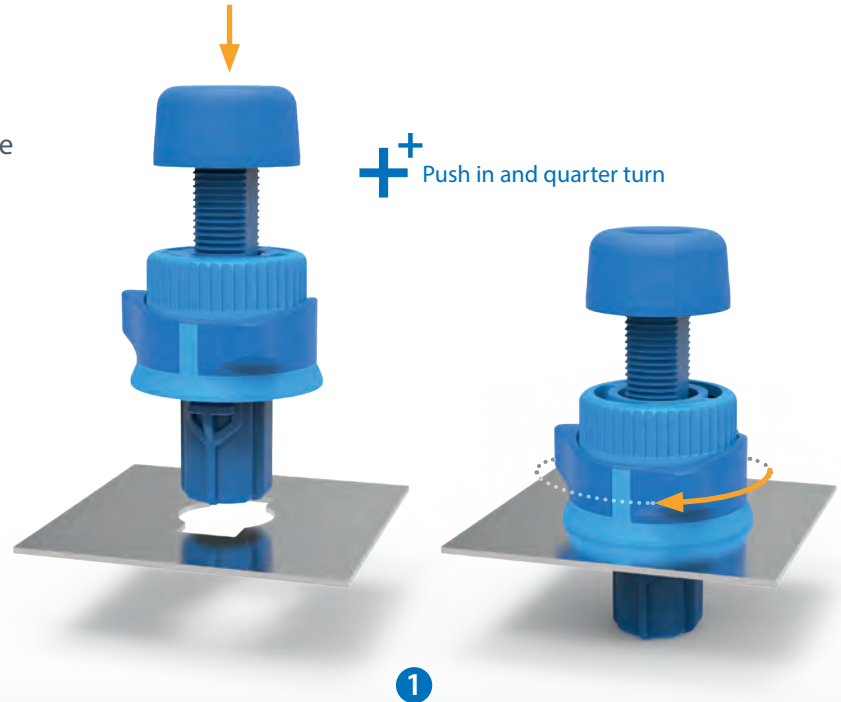
No additional counter-stops needed which reduce the number of parts, operations, and tolerance adjustments. 

Bumper.....  
Tailgate.....

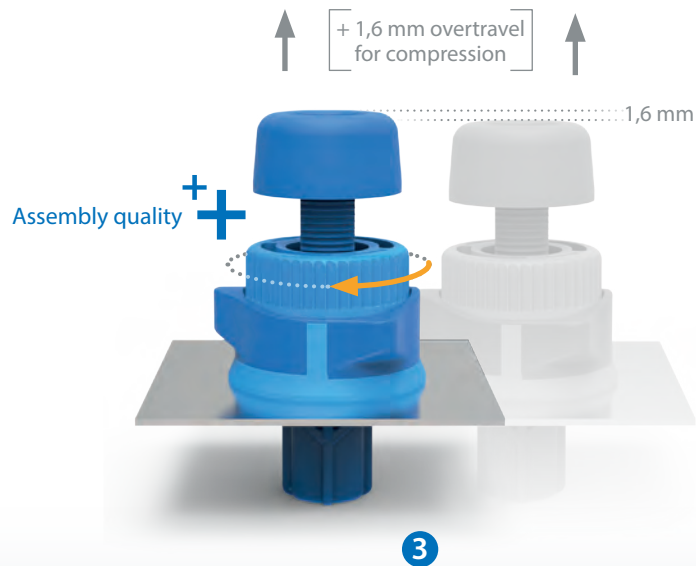
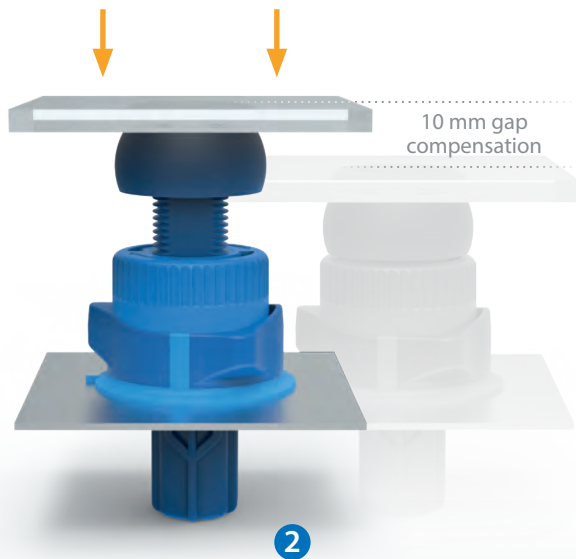


# ASSEMBLY TIME REDUCTION

- **Easy assembly and secure locking**  
by quarter turn without tool
- **Auto-adjusting height** of two bumpers  
in one closure by **simple pressure** of the tailgate  
for a perfect fit and finish adjustment  
in only one operation
- **Secure locking** of the height  
and **automatic compression** adjustment  
by a simple quarter turn of the ring



**+** **+**  
Fast and accurate



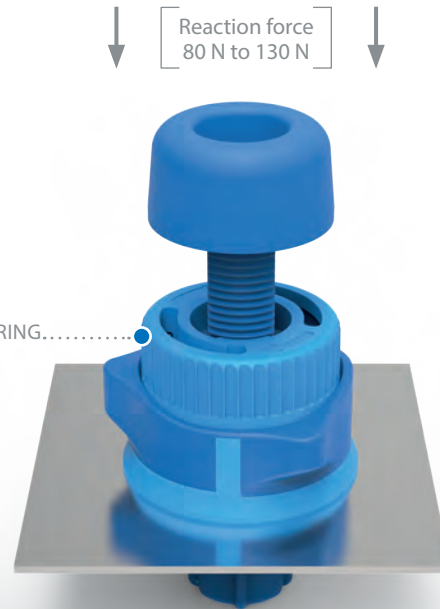
# IMPROVED PASSENGER COMFORT

- Absorbs **shocks** and **vibrations**
- Reduces **noise** propagation
- Ensures **watertightness**
- Better perceived **quality** and **durability** – Can withstand **30,000 open/close cycles** over the lifetime of a vehicle

Auto-adjusted compression,  
high quality bumper (EPDM),  
double seal.



LOCKING RING.....

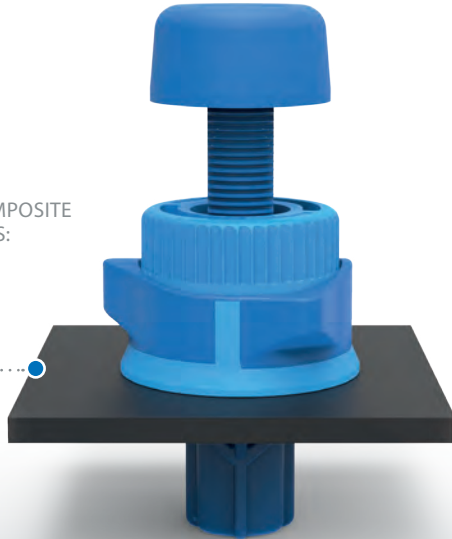




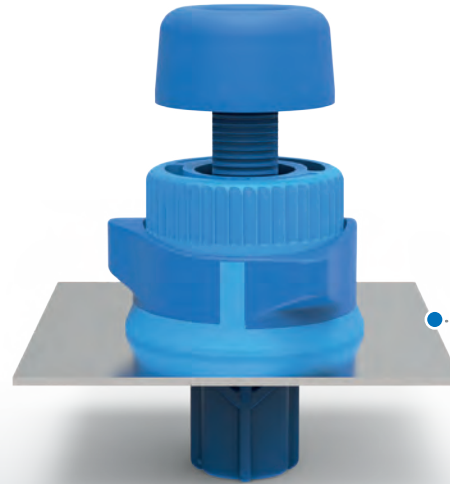
# FLEXIBILITY OF ASSEMBLY

- Can be used for **different panel thicknesses** allowing a wide flexibility of assembly

PLASTIC COMPOSITE  
THICKNESSES:  
2,5 to 3 mm



METAL SHEET  
THICKNESSES:  
0,67 to 0,97 mm



# TECHNICAL SPECIFICATIONS

## Installation efforts and performance

**F1:** mounting force by 1/4 turn - 2 N m

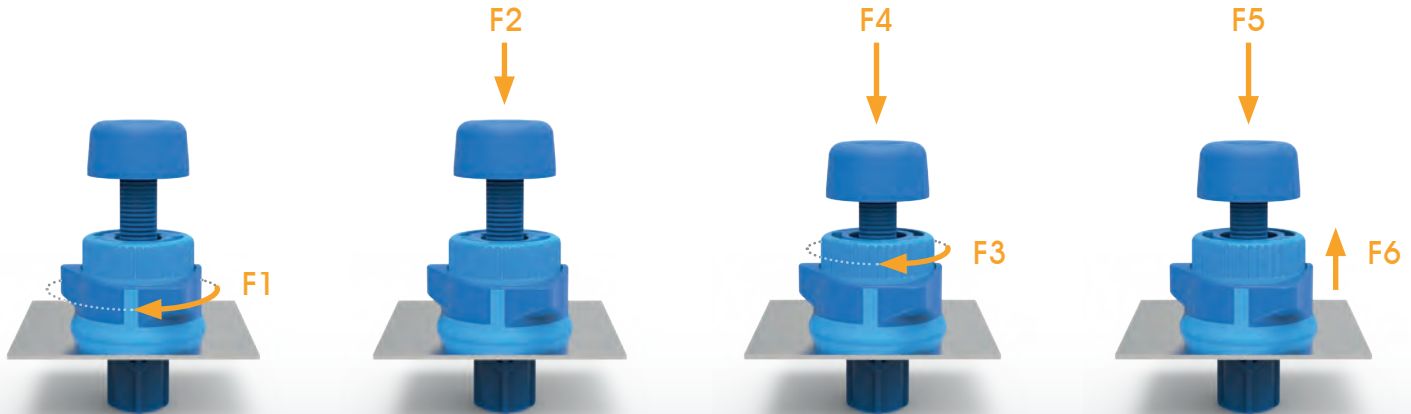
**F2:** adjusting force of the bumper height - 10 N (+/- 5 N)

**F3:** locking force by 1/4 turn - 2 N m

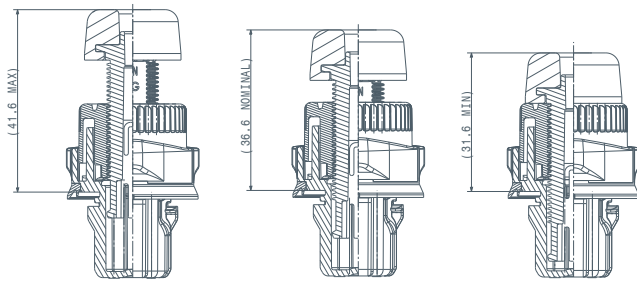
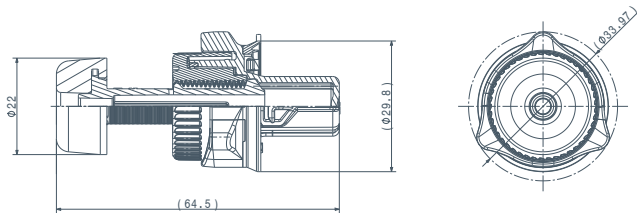
**F4:** reaction force after locking the ring  
in normal use condition - 80 to 130 N

**F5:** max compression force - 1500 N

**F6:** pull-out force - Up to 150 N



## Dimensions

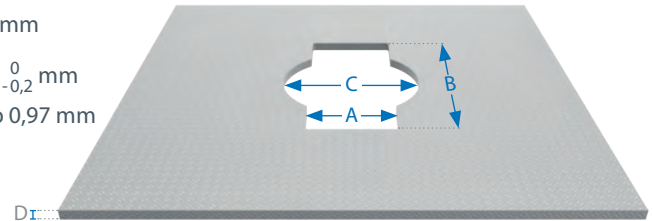


LOCKED HEIGHT

## Interface

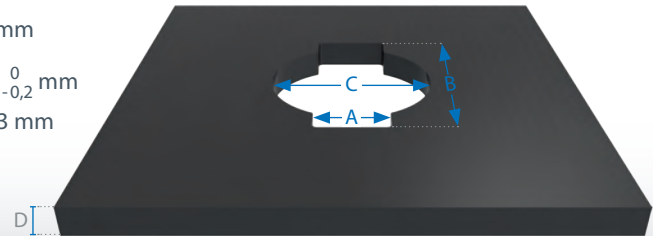
### METAL

- A:  $9,5 \begin{smallmatrix} 0 \\ -0,2 \end{smallmatrix}$  mm
- B:  $22 \begin{smallmatrix} 0 \\ -0,2 \end{smallmatrix}$  mm
- C:  $\varnothing 15,4 \begin{smallmatrix} 0 \\ -0,2 \end{smallmatrix}$  mm
- D: 0,67 to 0,97 mm



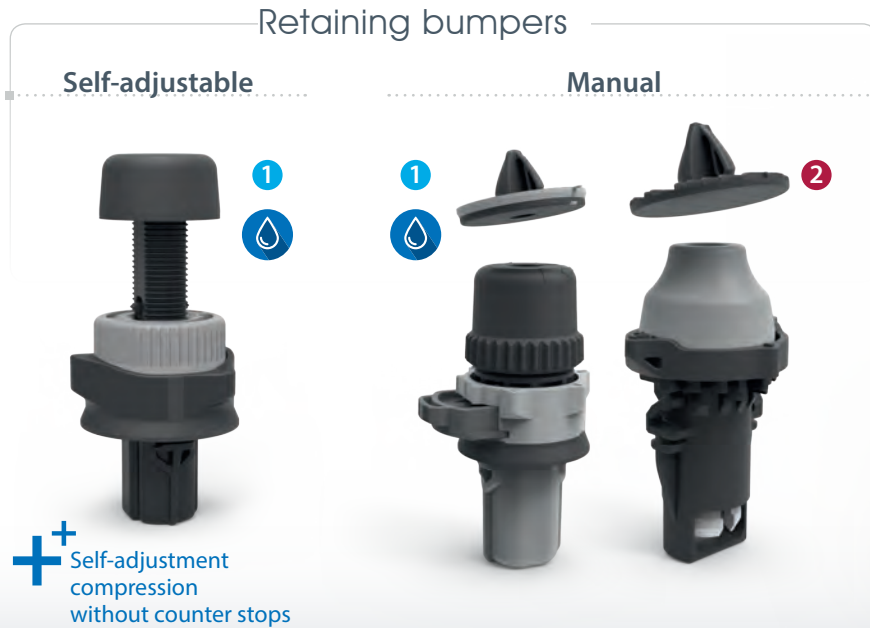
### PLASTIC

- A:  $8 \begin{smallmatrix} 0 \\ -0,2 \end{smallmatrix}$  mm
- B:  $22 \begin{smallmatrix} 0 \\ -0,2 \end{smallmatrix}$  mm
- C:  $\varnothing 17,8 \begin{smallmatrix} 0 \\ -0,2 \end{smallmatrix}$  mm
- D: 2,5 to 3 mm



# A FULL RANGE OF SOLUTIONS FOR CLOSURE SYSTEMS

Retaining bumpers  
Provide tension in the closure assembly to prevent movement and noise while vehicle is in operation. They allow damping of the closure system during slamming.



## Overstroke bumpers

Complementary to the retaining bumpers to avoid contact between the closure panel and the body during repeated slamming.



1 TAILGATE

2 HOOD

3 FUEL TRAP

WATERTIGHT

## Overstroke bumpers

### Self-adjustable



### Fixed



## Ejector bumper

### Fixed



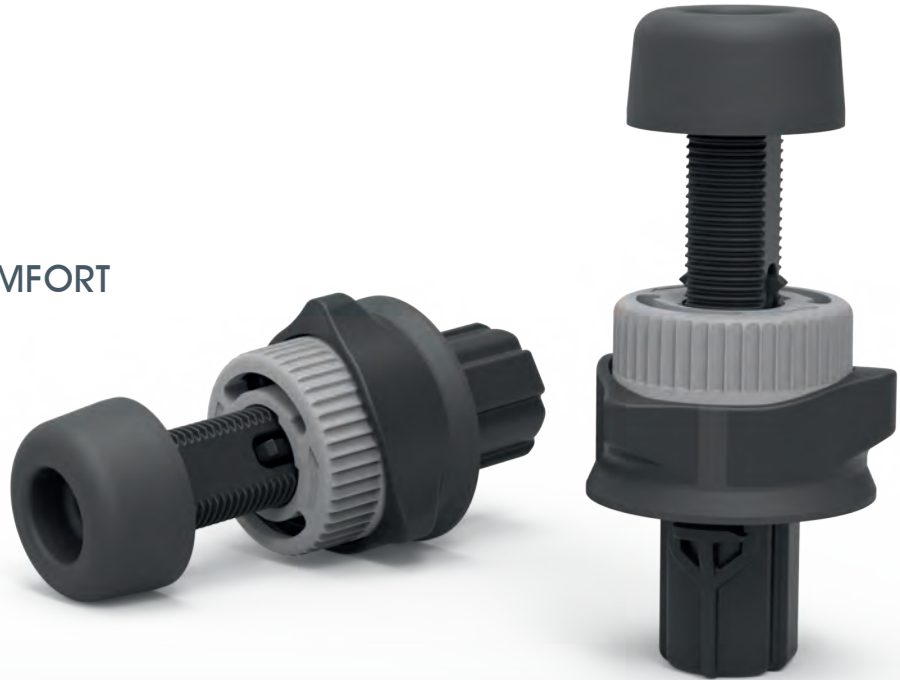
+  
2-in-1  
ejector and  
overstroke bumper

# KEY ADVANTAGES

ASSEMBLY TIME REDUCTION

IMPROVED PASSENGER COMFORT

FLEXIBILITY OF ASSEMBLY



# YOUR CONTACTS WORLDWIDE

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