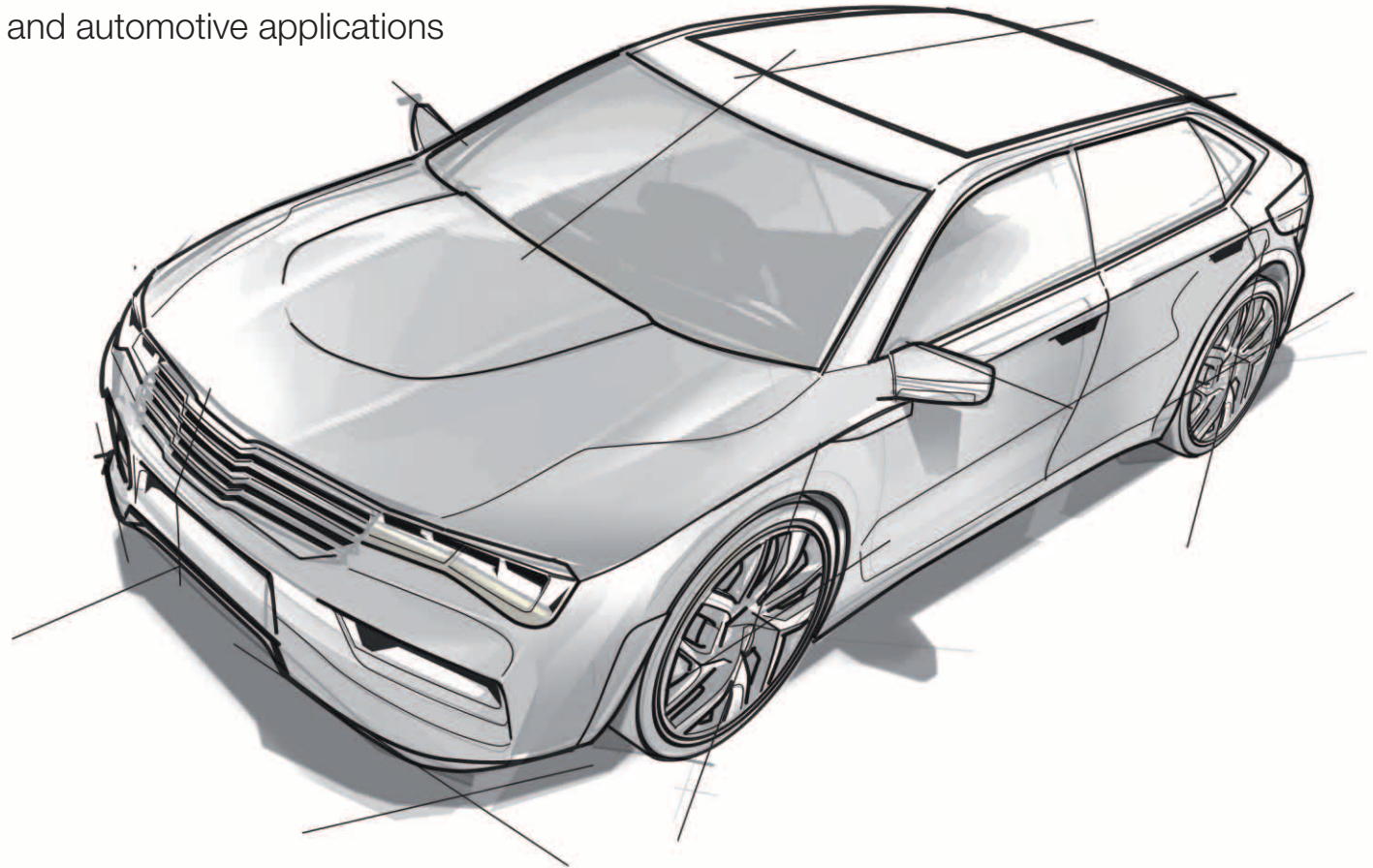


BÖLLHOFF

RIVQUICK®

Break stem rivet and automotive applications



Böllhoff, your joining technology expert in automotive engineering

The automotive industry is crucial for advancing transportation, not just in terms of moving from one place to another, but also in ensuring safety and efficiency. As cars have evolved over time, the techniques and materials used in their assembly have also seen significant transformations.

In today's era of vehicles, elements such as durability, ease of assembly, and cost-effectiveness are just as vital as the vehicle's performance. Innovation is of the essence. For many years, we have been supporting the automotive sector, providing unique solutions to enhance the assembly and reliability of vehicles.

Simplicity

Reliability

Performance



Table of contents

Introduction and features	4
Operating principle and installation	6
RIVQUICK® - Benefits	8
RIVQUICK® - Applications	9
Tailgate	10
Air and heating systems	11
Bumper	12
Door	14
Braking system & Body in white	15
Safety system	16
Seats	17
Powertools	18
InfoPoint	19



Our InfoPoint provides additional information in the form of further videos at the end of this brochure.

RIVQUICK® joining solutions are simple, economic and robust. This proven technology enables permanent connections of thin parts and offers the benefit of blind installation when access is only possible from one side.

RIVQUICK® blind rivets are designed for fast and effortless assembly, thereby increasing productivity. Moreover, they do not require any particular operator qualification, making their use accessible across a wide range of industries.

The use of RIVQUICK® blind rivets can be an excellent alternative to welding or screwed joints in certain cases, particularly when disassembly is not necessary. In addition, unlike welding, they do not generate heat or harmful fumes, making the process safer and more eco-friendly. RIVQUICK® rivets provide exceptional resistance to corrosion and vibrations, which affords them increased durability and reliability, even under extreme conditions.

For maximum flexibility, the RIVQUICK® range is available in a variety of sizes, materials, and finishes, in order to meet the specifications of each project.

RIVQUICK® assembly solutions not only contribute to improving efficiency and profitability but also guarantee the safety and durability of assemblies.





Multi-material

The multi-material function allows the assembly of different materials such as metal and plastic. This function provides great flexibility in the assembly of different parts with different thicknesses and characteristics.



High-strength and vibration resistance

High strength rivets allow a strong and durable fastening between the assembled parts. This function is particularly suitable for applications requiring high mechanical performance and vibration resistance.



Spacer

Spacer rivets ensure precise and uniform spacing between components, thereby guaranteeing optimal alignment. Thanks to their ability to mitigate vibrations and facilitate installation, as well as their role in evenly distributing loads, spacers maximize the durability and performance of mechanical systems.



Thin sheet

Pealed and slotted rivets allow efficient assembly of thin thicknesses without deformation or damage. These rivets are particularly suitable for the assembly of thin sheets that cannot be welded or fragile plastic parts.



Sealing

The sealing function ensures a watertight seal between the assembled parts, preventing the infiltration of fluids or moisture.

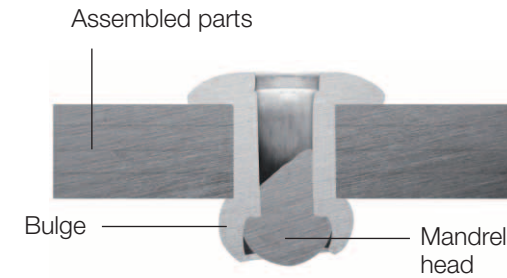
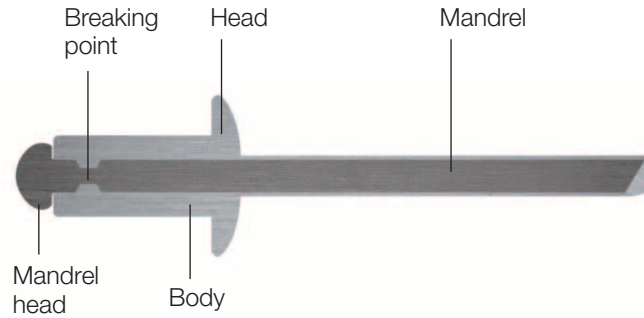


Pivot and rotation

The pivot function allows pivotable assembly between two parts, offering great flexibility in assembly. This function is particularly useful for applications requiring rotational or tilting movements

The break stem rivet

Standard break stem rivets are produced from durable materials and are made up of 2 components: **the body** and **the mandrel**.

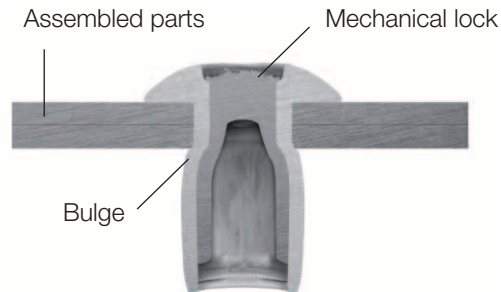


During setting, the body distorts and mandrel breaks.

Structural rivets offering higher mechanical characteristics and functions are also available.

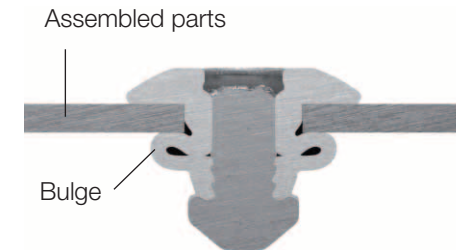
RIVQUICK® Varibolt

Vibration resistance (locking)



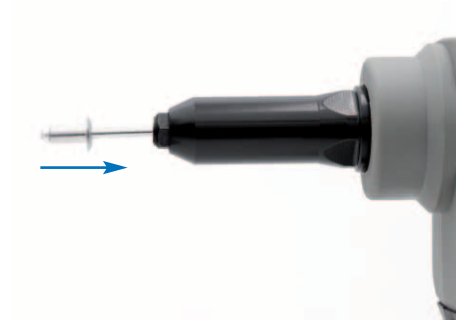
RIVQUICK® Varibulb

Uniform distribution of the grip forces



Installation sequence

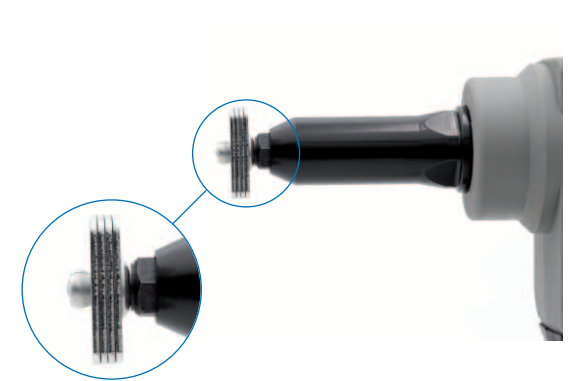
1 Place the rivet in the nose of the tool.



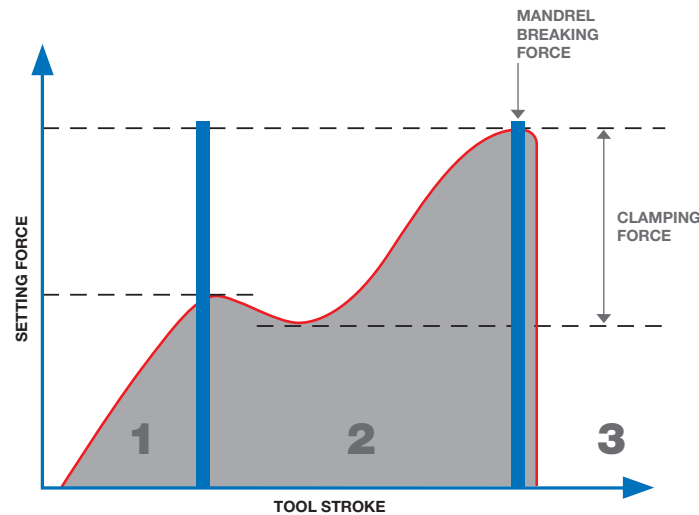
2 Place the rivet in the parts to be joined with all components in contact with each other.



3 The rivet is set and the broken mandrel is ejected.



Setting curve



Initially, the rivet is placed in the tool, then inserted into the hole to start the setting cycle. This process involves three phases:

- 1- The nose of the tool locks the rivet mandrel, distorting its body for its prestressing.
- 2- This deformation expands the rivet's bulge until it lies flat against the joined element.
- 3- Finally, the increase in clamping force due to the movement of the mandrel leads to its shearing, thus marking the completion of the cycle.



Ease of Installation

Rivets can be installed quickly and easily, often using simple hand or pneumatic tools. There's no need for special skills or qualifications to install rivets, simplifying the assembly process.



Strength

Rivets create robust and durable joints. They offer excellent tensile and shear resistance, making them suitable for a wide range of structural applications.



Permanent assembly

Once installed, rivets provide a permanent assembly, ideal for situations where disassembly isn't anticipated or desired.



Absence of heat

Unlike welding, rivet installation doesn't generate heat. This means there's no risk of heat distortion or heat-related damage to assembly materials.



Blind installation

Rivets can be installed 'blind', meaning when access is only possible from one side of the assembly. This makes them particularly useful for complex or hard-to-reach assemblies.



Reliability

Rivets are designed to resist corrosion, vibrations, and other environmental forces, making them a reliable choice for various applications.



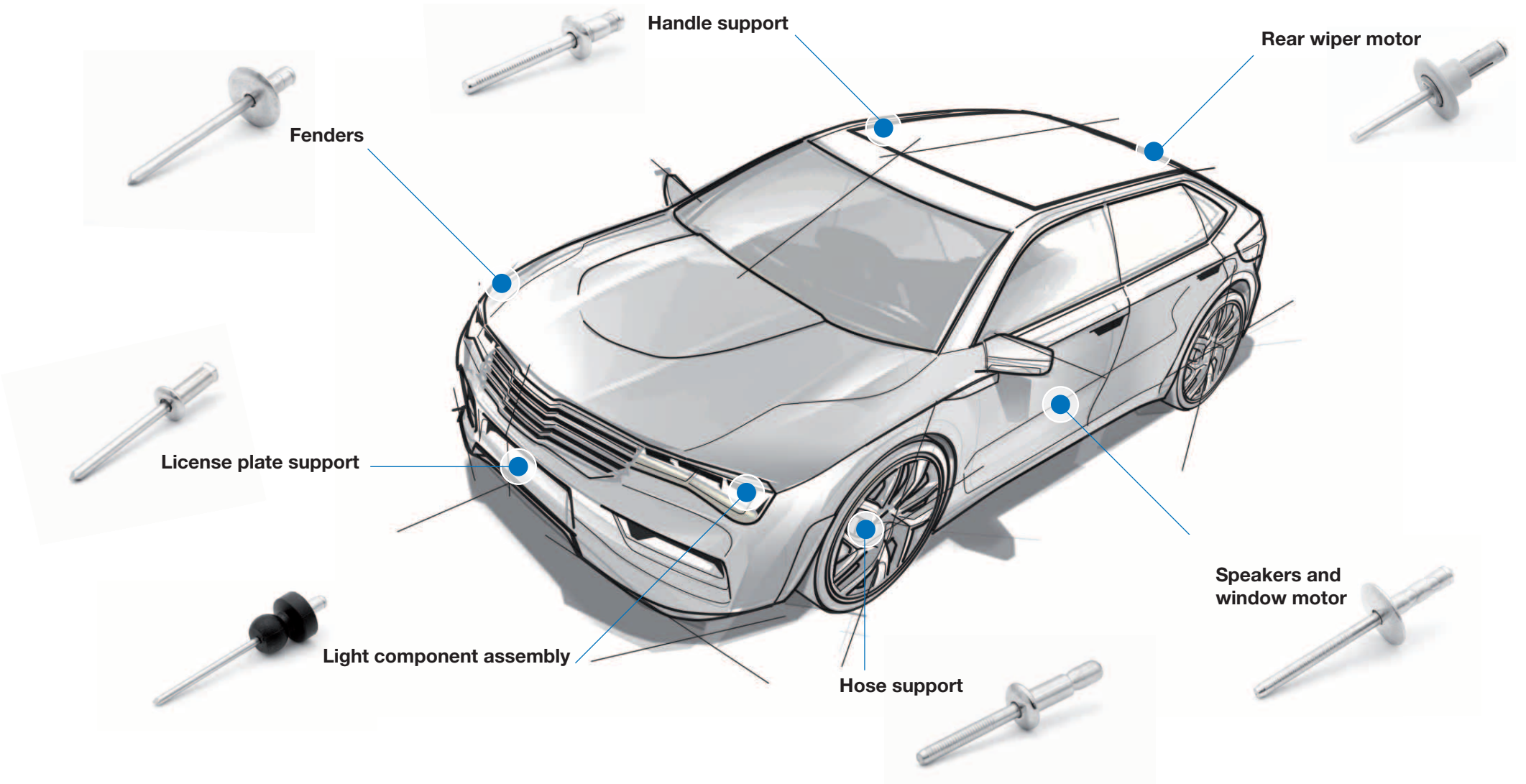
Flexibility

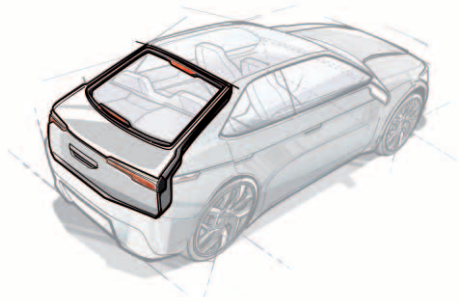
Rivets are available in a wide variety of materials, sizes, and styles, making them suitable for a broad range of applications and assembly requirements.



Efficiency

Due to their ease of installation and flexibility, rivets can often make the assembly process more efficient in terms of time and cost.





Tailgate lock

Support plate that allows the central locking of the tailgate to be fixed.

■ Varigrip rivet



Wiper motor

Tailgate-mounted rear wiper motor.

■ Slotted rivet



Benefits

- Wide grip range.
- Rationalisation of the references to keep in stock.
- Different materials and head types available.

Benefits

- Various flexible materials such as plastic.
- Provides a large bearing surface for effective distribution of assembly forces.
- Accommodates misalignments and large holes.
- Doesn't produce radial stress on thin or fragile materials.
- Uses a silent block to ensure a flexible connection between two elements.



Air intake

Air intake for the passengers and the driver.

■ **Slotted rivet**



Benefits

- Compatible with multiple flexible materials, such as plastic.
- Features a very large bearing surface ensuring optimal distribution of joining forces.
- Finished with a black coating that needs no further finishing operations.

Air exchanger

Air exchanger system facilitates the exchange of indoor and outdoor air.

■ **Large head rivet**



Benefits

- Better load distribution thanks to the large head rivet.
- Reduction of risks of deformation or cracking of the assembled materials.



Licence plate support

Plate holder that allows the license plate to be fixed.

■ Peel rivet



Benefits

- Ideal for joining plastic and fragile materials.
- Offers a significant tolerance for drill hole diameters.
- No damage to the surface of the parts being connected.

Lower trim

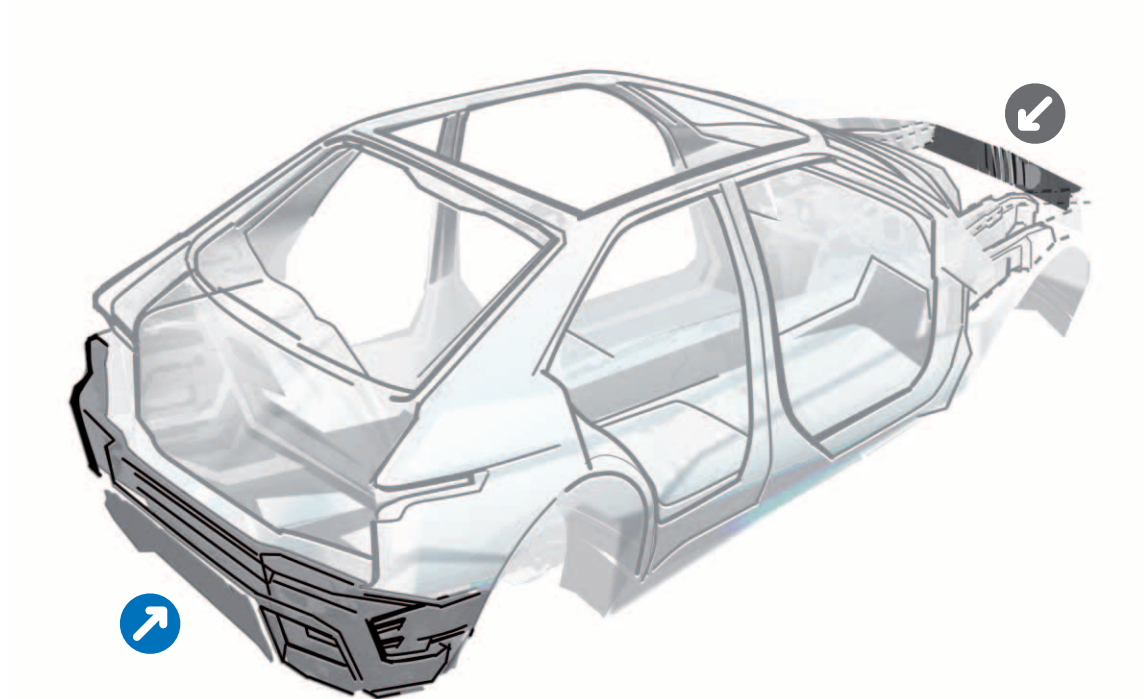
Lower trim attached beneath the front bumper.

■ Slotted rivet



Benefits

- Suitable for joining different materials such as plastic.
- Provides a large bearing surface for good distribution of the joining forces.



Bumper

Attachment of the bumper to the body in white.

■ Slotted rivet



Benefits

- Provides a large bearing surface for good distribution of the joining forces.
- Accommodates misalignments and large holes.

Lower trim

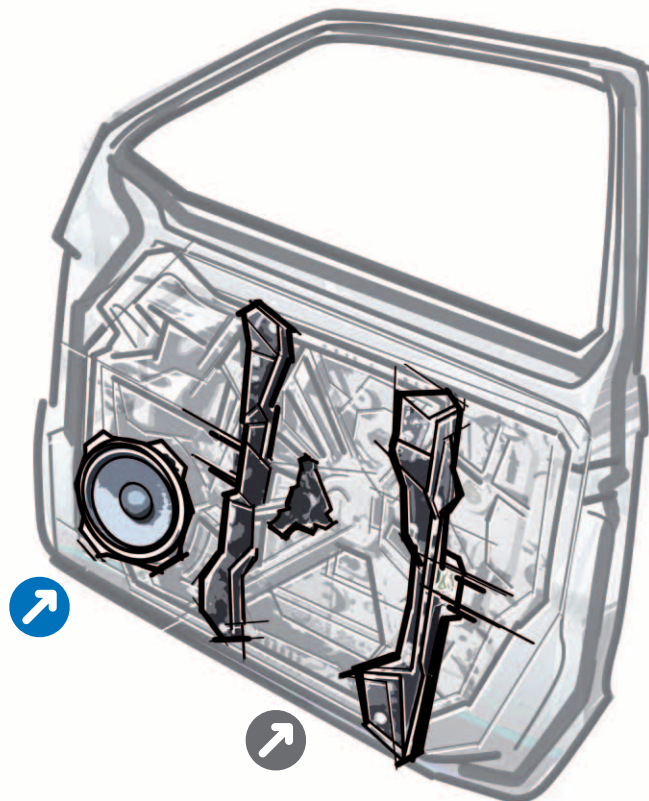
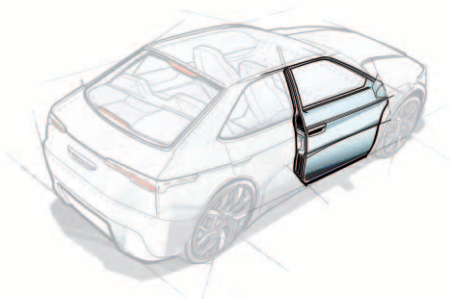
Lower trim attached beneath the front bumper.

■ Large head rivet



Benefits

- The large head facilitates better distribution of the load over a large area.
- Reduction of risks of deformation or cracking of the assembled materials.



Speaker

Speaker attached to the door panel

■ Varibulb rivet



Benefits

- Sturdy and vibration resistant assembly.
- High shear strength.
- Good distribution of the joining forces, making it possible to join thin metal sheets.

Window mechanism

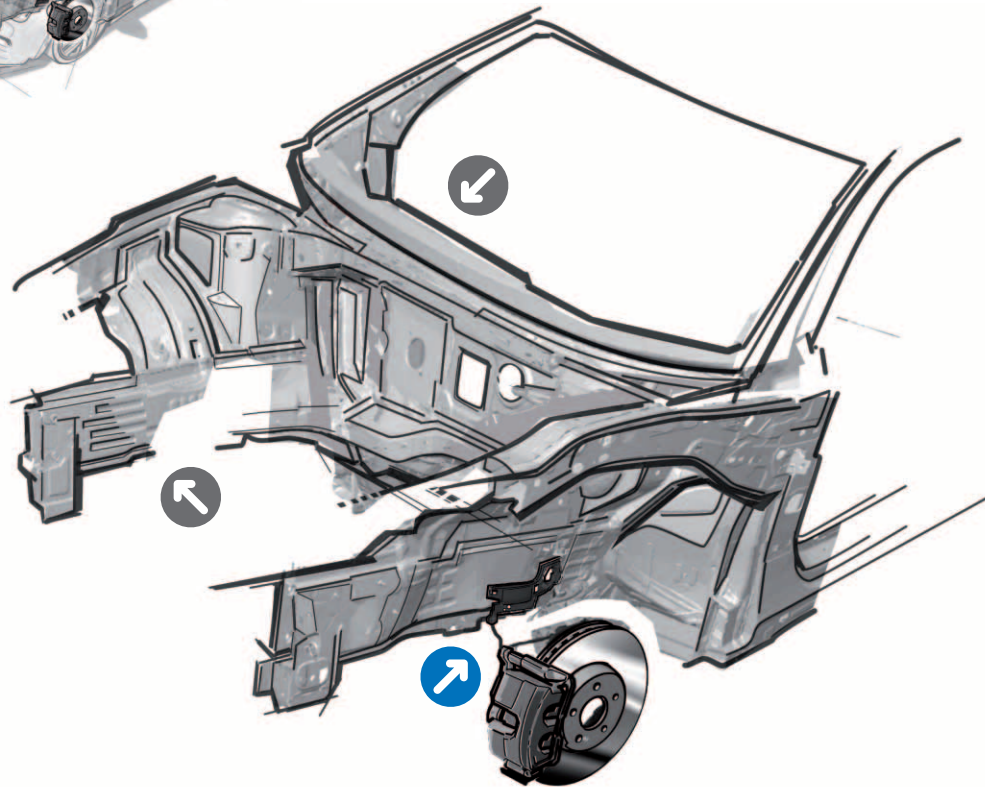
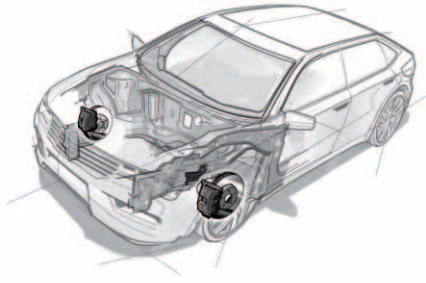
Window motor attached to the door panel

■ Varigrip rivet



Benefits

- Wide grip range.
- Rationalisation of the references to keep in stock.
- Different materials and head types available.



Braking hose support

Hose support used to secure the brake hoses in the wheel well.

■ Varibolt rivet



Benefits

- High mechanical resistance.
- Mechanical lock.
- Watertightness.

Body in white

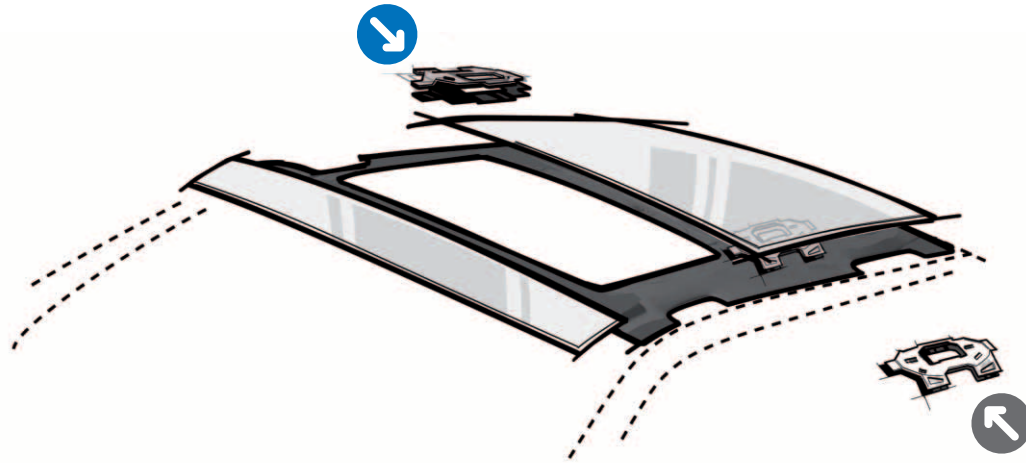
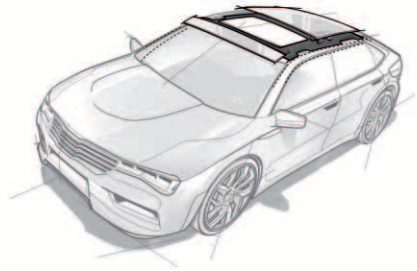
Body in white application found on the car's chassis.

■ Varibolt rivet



Benefits

- High clamping force, has the ability to bring sheets into contact.
- Offers a large grip range for a wider operating spectrum.
- Delivers high mechanical strength and vibration resistance.
- Mechanical locking.
- Watertightness.



Handle

Handle support ensures the attachment of the handles to the roof liner.

■ Varibulb rivet



Benefits

- Sturdy and vibration resistant assembly.
- High shear strength.
- Good distribution of the joining forces, making it possible to join thin metal sheets.

Air bags

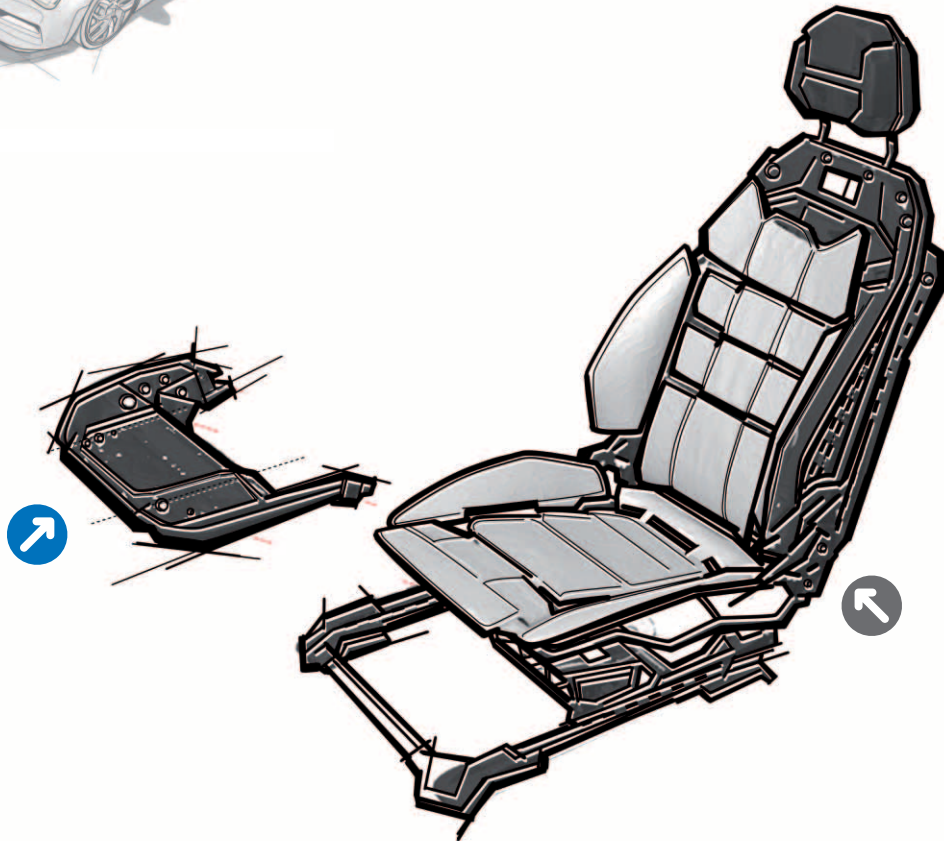
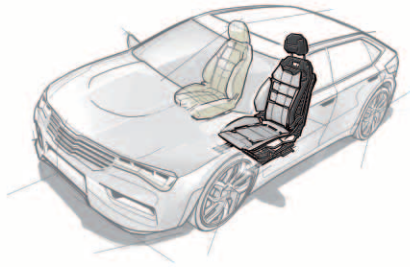
Support for side airbags attached to the body in white.

■ Large head rivet



Benefits

- Large head provides improved load distribution across a more extensive surface.
- Minimizing potential deformation or cracking of the materials being joined.



Seat structure

Inner side cover support on the seat.

■ **Varigrip rivet**



Benefits

- Wide grip range.
- Rationalisation of the references to keep in stock.
- Different materials and head types available.

Seat mechanism

Recliner release strap attachment

■ **Special rivet**



Benefits

- Ensures stability.
- Allows a degree of freedom.
- Enables a rotation when subjected to certain forces or movements.

RIVQUICK® T1



	Rivet diameter							
	2.4	3.0	3.2	4.0	4.8	5.0	6.0	6.4
Aluminium	■	■	■	■				
Steel	■	■	■					
Stainless steel	■	■	■					

- **Tool stroke:** 15 mm
- **Setting force:** 4 200 N at 5 bar
- Vacuum mandrel collection
- 1/4 turn removable mandrel collector

1300 g **226 019** 01000

RIVQUICK® T2



	Rivet diameter							
	2.4	3.0	3.2	4.0	4.8	5.0	6.0	6.4
Aluminium	■	■	■	■	■	■	■	
Steel	■	■	■	■	■	■		
Stainless steel	■	■	■	■	■	■		

- **Tool stroke:** 18 mm
- **Setting force:** 9 000 N at 5 bar
- Vacuum mandrel collection
- 1/4 turn removable mandrel collector

1600 g **226 020** 01000

Recommended for RIVQUICK® Varibulb and RIVQUICK® Varibolt Ø 4.8 mm.
To set RIVQUICK® Varibolt, a specific locking nose piece is recommended.

RIVQUICK® T3



	Rivet diameter							
	2.4	3.0	3.2	4.0	4.8	5.0	6.0	6.4
Aluminium					■	■	■	■
Steel					■	■	■	■
Stainless steel					■	■	■	■

- **Tool stroke:** 25 mm
- **Setting force:** 14 000 N at 5 bar
- Vacuum mandrel collection
- 1/4 turn removable mandrel collector

1900 g **226 021** 01000

Recommended for RIVQUICK® Varibulb and RIVQUICK® Varibolt Ø 6.4 mm.
To set RIVQUICK® Varibolt, a specific locking nose piece is recommended.

RIVQUICK® T4



	Rivet diameter							
	2.4	3.0	3.2	4.0	4.8	5.0	6.0	6.4
Aluminium					■	■	■	■
Steel					■	■	■	■
Stainless steel					■	■	■	■

- **Tool stroke:** 19 mm
- **Setting force:** 20 000 N at 5 bar
- Vacuum mandrel collection
- 1/4 turn removable mandrel collector

2000 g **226 022** 01000

Recommended for RIVQUICK® Varibulb and RIVQUICK® Varilock Ø 6.4 mm

▶ Videos

Fastener videos



RIVQUICK® Standard
Standard blind rivet setting process

<https://www.boellhoff.com/video/setting-process>



RIVQUICK® Varigrip
Multigrip breakstem rivets

<https://www.boellhoff.com/video/varigrip>



RIVQUICK® Slotted rivets
For automotive industry

<https://www.boellhoff.com/video/slotted-rivet>



RIVQUICK® Varibulb
High-strength blind rivets

<https://www.boellhoff.com/video/varibulb>



RIVQUICK® Varibolt
Multigrip structural breakstem rivets

<https://www.boellhoff.com/video/varibolt>

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Passion for successful joining.

Böllhoff Group

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