

# ARaymond<sup>RG</sup>

MORE THAN FASTENING

## BRACKETS

CUSTOM DESIGN  
MECHANICAL  
SUPPORTS



# INTERNATIONAL EXPERT IN FASTENING AND ASSEMBLY SOLUTIONS

At ARaymond we focus on engineering and innovation tailored to the demands of the automotive market. By working closely with our customers, our engineering teams are able to create the solutions which best meet their assembly challenges.

We have advanced manufacturing capabilities worldwide and manage metal transformation, plastic injection, adhesive technology and assembly in-house.

Our efficient supply chain management is a source of competitive advantage.



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## BRACKETS

CUSTOM DESIGN MECHANICAL SUPPORTS

# FASTENING, PROTECTING & REINFORCING

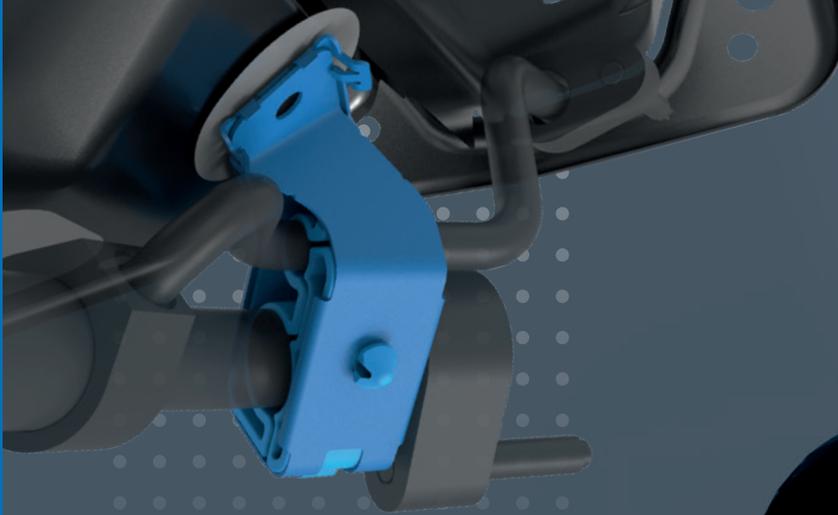
Available in plastic, spring steel, or combination assemblies, with or without metal anti-creep inserts, our brackets are high-strength, lightweight and flexible. Designed to perform in a wide variety of applications and environments.

**Weight saving**

**Vibration and noise reduction**

**Integrated functions**





## POWERTRAIN

Supporting and protecting engine compartment elements such as SCR pollution treatment systems, HVAC lines, transmission and fluid delivery systems.



Metal bracket to fix ABS cables to the damper.

Bi-material anti-vibration bracket for A/C tube holding.

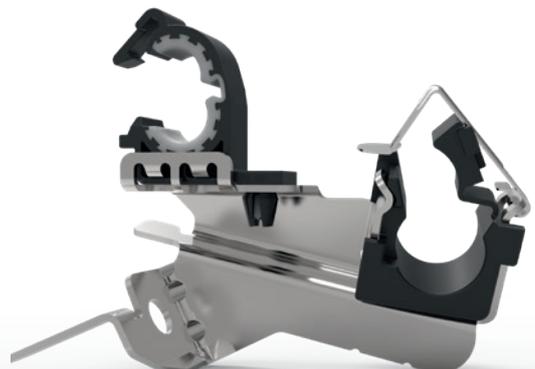
Plastic bracket with metal anti-creep inserts for radiator fixing.

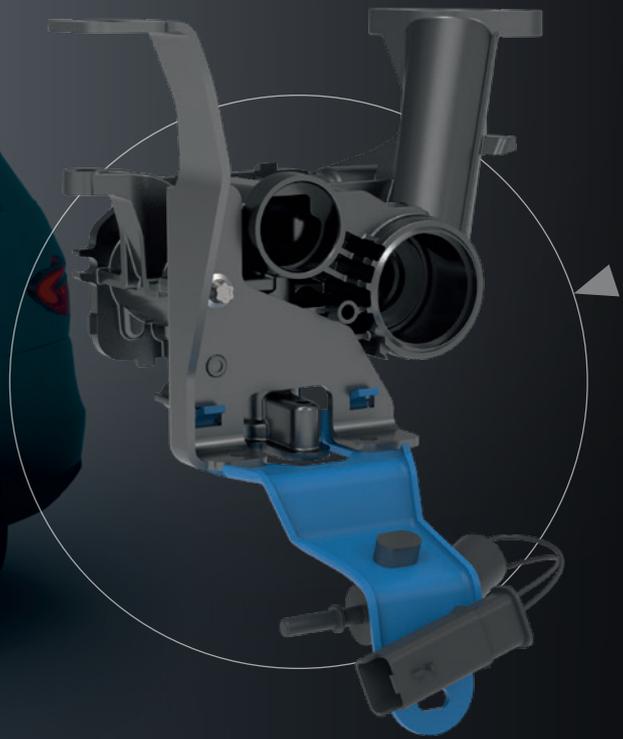
Secures the wiring particle filter sensor, guides the urea tube and fastens the camshaft position sensor.

## VIBRATION AND NOISE REDUCTION

Bi-material assembly bracket to avoid interference and mechanical friction with A/C lines, and to absorb vibration.

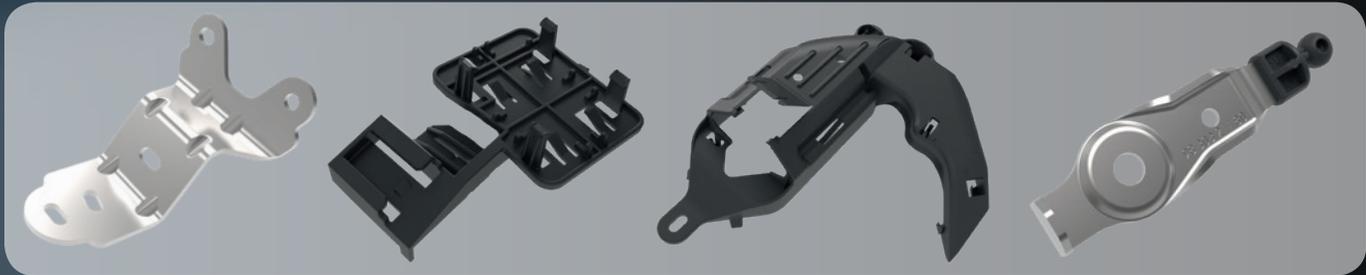
Features a robust lockable holder with an additional spring steel closure to strengthen the fastening of the pipes.





# CHASSIS

Reinforcement and fastening of pollution treatment systems, suspension & braking and tire & wheel systems.



Support for selective catalytic reduction pipes.

Bracket for the NOX control unit.

Bracket for protection of the NOX sensor.

Body height sensor rod bracket.

## ALL-IN-ONE, ANTI-RATTLE SUPPORT

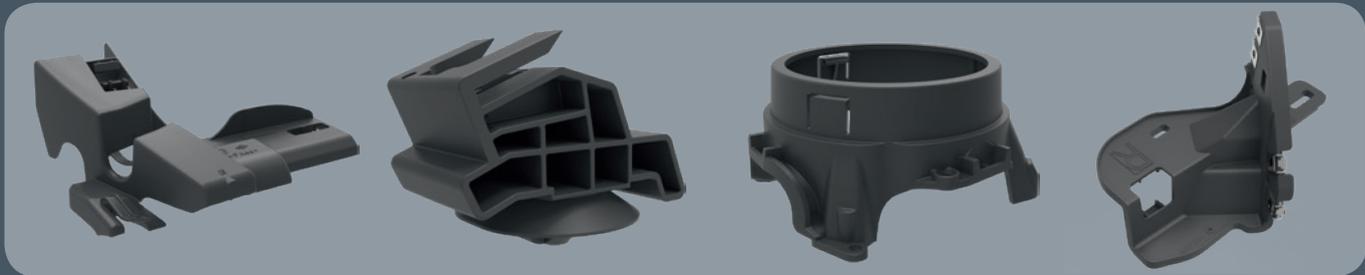
Due to the integrated features, this anti-rattle bracket allows a single assembly of all components such as the NOX control unit, the electric plug and the related cables. The compression limiters enable robust fastening points for high locking torque.





## CAR BODY

Holding and supporting lighting, interior & exterior trim, and cable routing.



Holder to join pillar, car body and airbag wiring.

Rocker panel bracket to fasten the sill protector, and to manage lower body shell expansion.

Holder for headlight lens.

Bumper-to-fender plastic bracket fastened to the BIW.



### ERGONOMIC AND MODULAR

Connector bracket enabling easy electric connection and disconnection, for safety belts and heating, to the back seats. Ensuring electric connection for any selected seat position. Designed to dampen vibration.





# ELECTRIC & MECHATRONICS

Fastening and protecting electrical distribution systems, battery, electronic control unit and infotainment equipment.



Anti-vibration fastening system for HVAC.

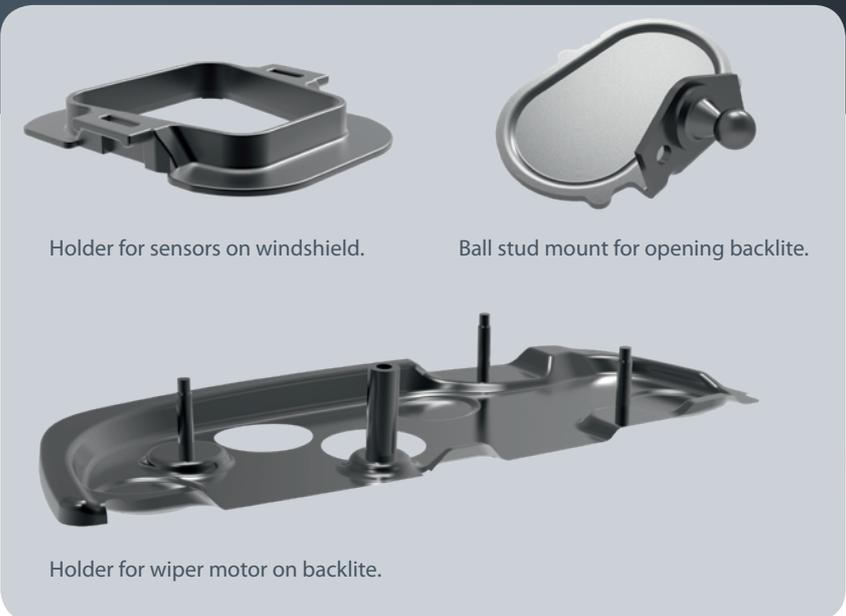
Camera support fastened to the front fascia grille.

Multi-connector support for antenna systems.

Body control module unit and relay holder.

# GLAZING

Camera and sensor brackets, opening systems and wiper plate designed for bonding assembly.



Holder for sensors on windshield.

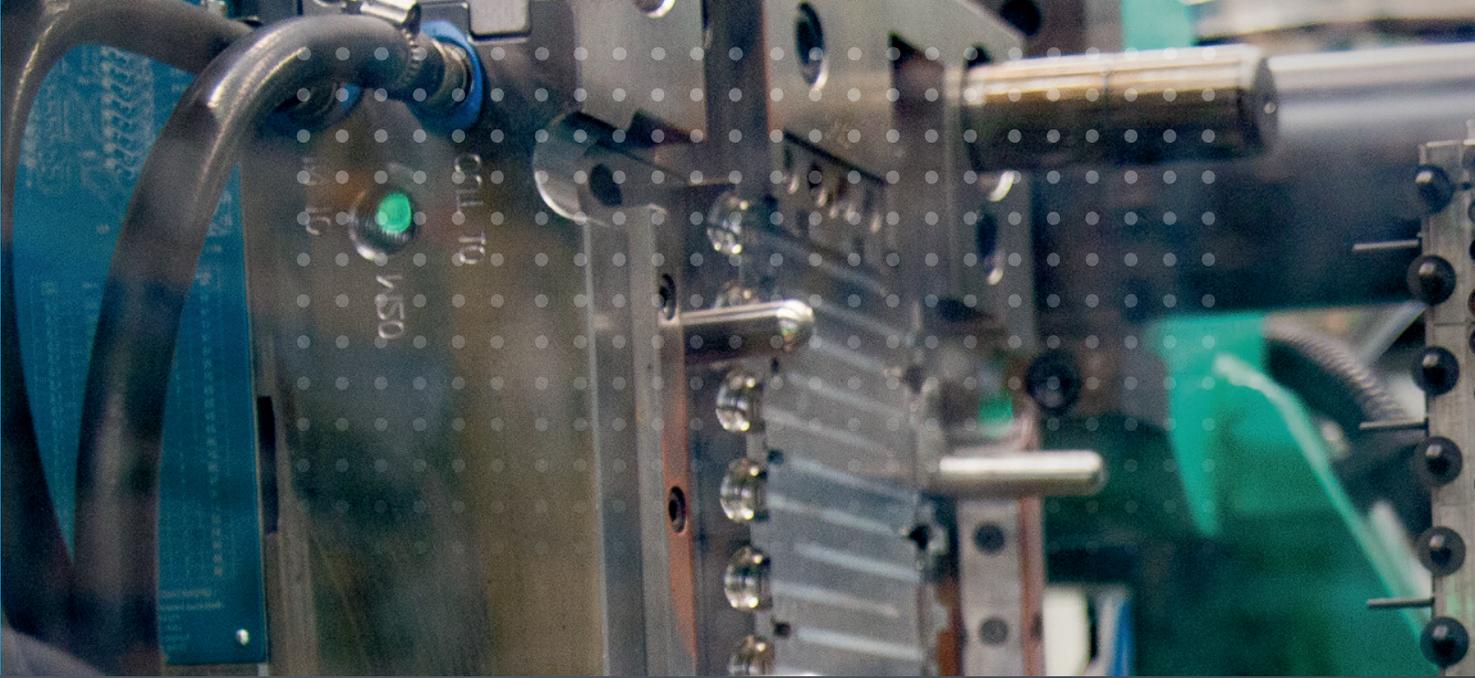
Ball stud mount for opening backlite.

Holder for wiper motor on backlite.

## MULTI-COMPONENT SUPPORT

A tailored-made multi-support bracket that enables integration of different electronic components such as cameras, sensors and lidar into the same area.





**AR-BAG™  
TECHNOLOGY FOR  
ELASTICITY  
REQUIREMENTS**

Our proprietary material was designed by ARaymond material experts to respond to elasticity requirements for applications like exterior trim parts, which must be able to withstand underbody impacts.



**PLASTIC**

Plastic can be a lightweight and high performance alternative to metal. At ARaymond we use overmolding and bi-injection (multi-material) molding processes compatible with over 300 thermoplastic materials such as polyamide, polyethylene, polyvinyl acetates, polypropylenes, and more. Our plastic brackets can have integrated features such as hose and tube holders and reinforced metal anti-creep inserts.



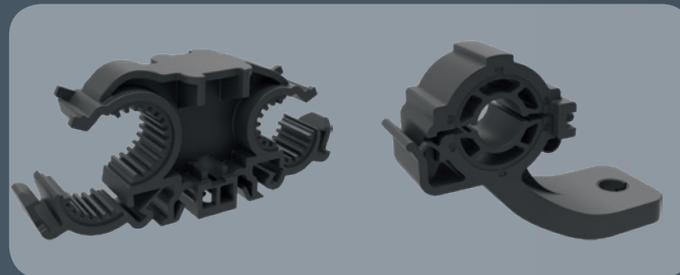
Integrated pipe and tube support.

Reinforced with metal inserts.

Integrated tube and hose holders.

**BI-INJECTED & OVERMOLDED SOLUTIONS**

Vibration can compromise structural integrity, ultimately affecting vehicle safety and reliability. The resulting noise has an enormous impact on consumers' perceptions of comfort, quality, and performance. That is why we focus on NVH and BSR in the very early stages of the design process to come up with solutions that enhance the overall perception of vehicle quality.



Anti-vibration feature for brake pipes or A/C tube fastening.



Noise & vibration reduction



## METAL

Our metal brackets include multi-purpose attachment points for relays, connectors, electronic boxes and wire harnesses. They are ideal for harsh environments and high temperature areas like the underbody, engine bay, and wheel arches. We can provide versatile, complex shapes to suit almost any packaging requirement and surface treatments to fit all vehicle environments.



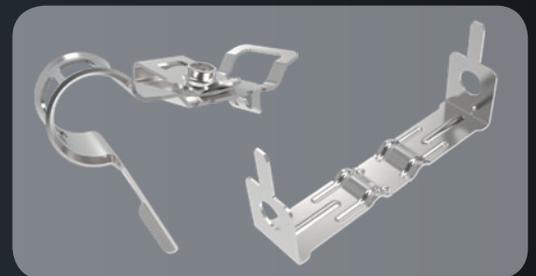
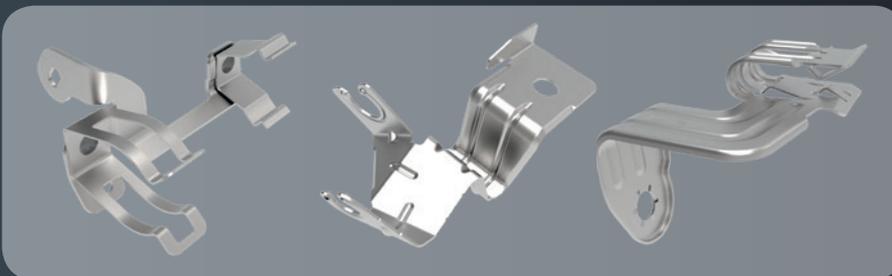
In-house heat treatment & coating capability

## SPRING STEEL

Spring steel is a lightweight, high strength and flexible material specifically suitable for ergonomic fastening.

## STAINLESS STEEL

Stainless steel is specifically adapted for harsh and / or high temperature environments, and has a high corrosion resistance.



## BI-MATERIAL ASSEMBLY SOLUTIONS

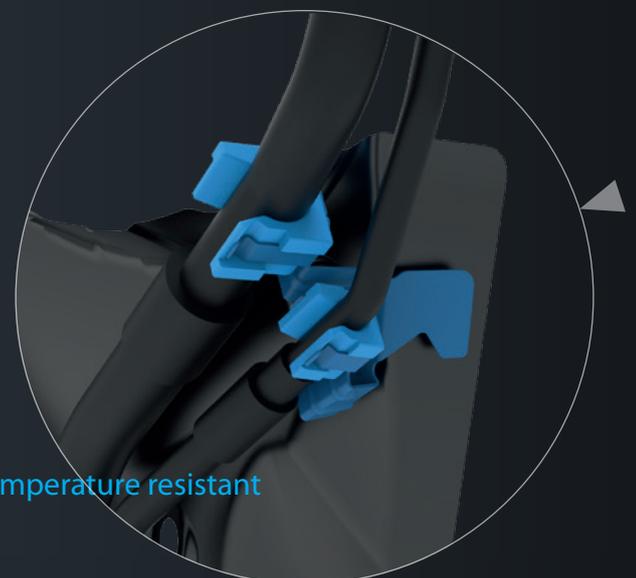
Brackets suited for high temperature requirements such as brake applications. The design is optimized combining metal and plastic, and adapted for complex fastening environments.



Anti-vibration features for pipe and tube fastening.



Robust  
High temperature resistant



## INTEGRATED FUNCTIONS

To combine functionality features, we develop brackets with integrated fastening systems such as tube, pipe or cable holders.



Manual locking system.

Variable diameter hose support.

Integrated swivel clips.

## COMPRESSION LIMITERS

Since plastic is a less creep-resistant material than metal, we insert anti-creep rings to our plastic parts. It stabilizes the screwing points and prevents plastic crushing, while ensuring a lightweight solution with high resistance. ARaymond provides a wide range of compression limiters; elastic and non-elastic, round or oblong, compatible with a variety of panel thicknesses.

**+**  
Robustness  
Tolerance management



Bracket with reinforced attachment points to fasten beam candles on the engine block.





# LIGHTWEIGHT ASSEMBLY SOLUTIONS

To strike the right balance between weight and performance, we develop solutions that reduce complexity, integrate multiple features into a single part or use alternative materials.



Optimized design with thin sheet metal and integrated features.

Lightweight, cost efficient single molded plastic bracket. Reinforced with metal anti-creep inserts.

Assembled metal bracket.

# BONDING SOLUTIONS

Bonding solutions are ideal to ease assembly of brackets on glazing. They are also suited for assembly on material difficult to weld or drill such as painted metal or composite materials. We design with the aim to ease the industrialization of bonding solutions, and above all to support operations until the last day of production.



- Personalized services
- Support throughout production cycle
- Ensure high process uptime and maximum throughput
- Reliable results

## ADHESIVE EXPERTISE Techbond®pur

Our expertise in chemistry, mechanics and electronics combined with a unique adhesive technology, allow us to offer tailor-made bonding solutions to reach your expectations. ARaymond works with a network of partners on adhesives, surface treatments and equipment, to design the best possible bonding solution for your project.



# ARAYMOND, CLOSE TO YOU EVERYWHERE



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