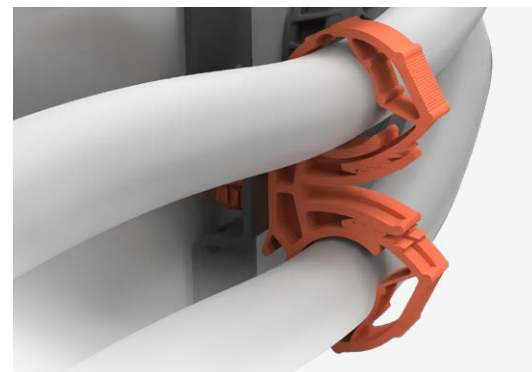
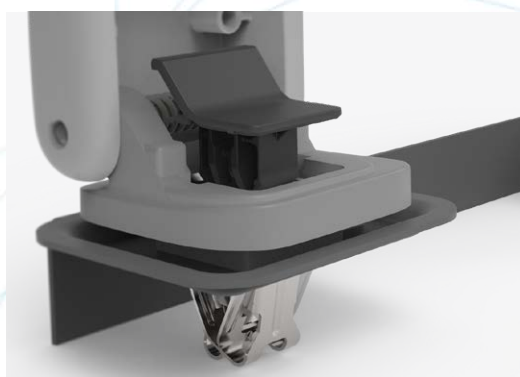
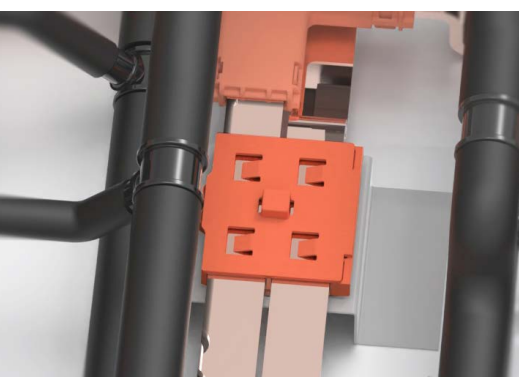




INNOVATION EXCELLENCE AND BEST-IN-CLASS ASSEMBLY & FLUID HANDLING SOLUTIONS



International expert in assembly and fluid handling solutions

We believe in the power of assembly solutions to solve complex assembly and integration challenges.

Our smart designs improve ergonomics, save space, simplify disassembly and maintenance, and allow for late customization in production line processes to increase efficiency.

We specialize in creating safe, solid, and durable solutions optimized to simplify system architecture, improve passenger comfort, and enhance perceived vehicle quality.





■ CLIPPING SYSTEMS

Cable & tube fasteners.....	p.6
Panel & trim fasteners.....	p.10
Threaded fasteners & retainers.....	p.14

■ QUICK CONNECTORS

Flagship Quick Connectors.....	p.16
Thermal management solutions	p.17

■ CLEANING SOLUTIONS

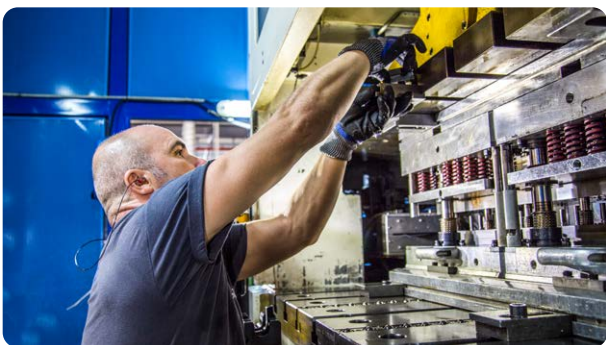
Washer systems.....	p.18
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INDUSTRIAL EXCELLENCE & CUSTOMER COLLABORATION

For over 155 years, ARaymond has built a strong reputation for quality by partnering with customers to design innovative automotive fastening and assembly components and systems.

We manage every step of the product development cycle in-house, ensuring quality, cost, and on-time delivery from our nearby plants.



METAL TRANSFORMATION

We master all major metal transformation processes (cutting, bending, stamping) in-house.

We personally handle all stages from design and production to surface finishing and quality control at our own plants.



PLASTIC INJECTION

We use over-molding and bi-injection (multi-material molding processes) compatible with over 300 thermoplastic materials. You can count on us for on-time delivery of high-volume plastic part orders. ARaymond plants are equipped with presses up to 1,000 tons and can produce up to 200 million units per year of a given part.



ASSEMBLY

Our manufacturing plants are equipped to handle manual, semi-automated, cycle-time optimized automated assembly, and motion assembly with throughput of up to 24,000 parts per hour.



TUBE EXTRUSION

For the European market, we design and manufacture extruded, thermoformed, beaded, or braided tubes and coils for various applications such as braking systems, cooling circuits, and air suspensions.

CLIPPING SYSTEMS

CABLE & TUBE FASTENERS

Our solutions manage easily all tubes and cables such as continuous tubes, bundles of tubes or cables, corrugated hoses, and more.

Compatible with all common mounting strategies: round, oval, oblong, and square holes, blind holes, studs and edges.

They are **available in several designs** for a wide range of diameters, and panel thicknesses and can manage multi-housings.

BUSBAR HOLDERS

Vibration damping and solid guiding

- Slim busbar holders for mechanical assembly to the pack or modules.
- Customizable to any packaging situation.
- Easy assembly and disassembly for optimized production efficiency and maintenance.



CABLE STRAPS

- Wire harness diameters from 0.5 to +40 mm.
- Swivel components increase flexibility for multidirectional mounting.
- Double cable straps allow to manage more than one bundle.
- Lightweight straps cover all wire harness diameters up to 25 mm, reducing waste and costs, and optimizing shipping and logistics.



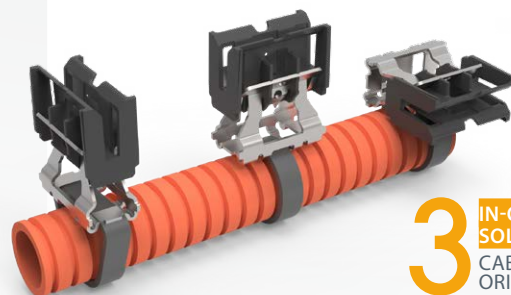
Electric
wire
harness

Bi-injected seals
for watertightness

NEXT GENERATION EDGE FASTENERS

Edge biter fastening reimagined

- Eliminates scratch lines, greatly reducing corrosion concern on metal.
- Allows for side-to-side positioning before engagement.
- Avoids contamination caused by scratching.



3 IN-ONE
SOLUTION
CABLE STRAP
ORIENTATIONS

Weight saving
 Temperature resistant
 Vibration & noise reduction
 Watertightness
 Modularity

TUBE HOLDERS & CABLE CLIPS

- Plastic and lightweight spring steel combinations.
- Broad range of options: live hinges, locking and adjustable lids.
- Metal parts for high-temperature environments.

Can be combined with **spring steel insert** to improve retention.

Spacers manage brake, and electrical routing throughout vehicle.

Bi-injected materials absorb vibrations and reduce noise.

Electric wire harness & fluid lines management

Corrugated hose clips

are specifically designed to prevent the hose from sliding along the wire bundles.

Bonded plastic flange for tailor-made anchor point.

ROBUST CLIPS FOR HIGH VOLTAGE CABLES

- Fully serviceable due to robust cable latch feature.
- Integrated anti vibration feature against Buzz, Squeak and Rattle.



MODULAR SOLUTIONS

- Pre-assembled swivel clips range offers different fixing solutions and cable locking systems.
- Multiple fixing combinations and single or multiple cable housings available.



BONDED PLASTIC FLANGE + MODULAR SWIVEL CLIPS

Ideal for aluminium cooling plates, battery trays, battery covers, and similar surfaces.

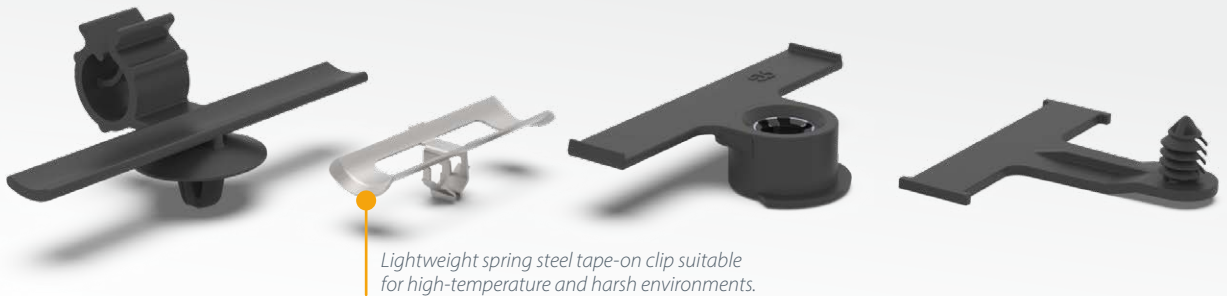


Male and female parts can be combined to **create custom fasteners**.

TAPE-ON CLIPS

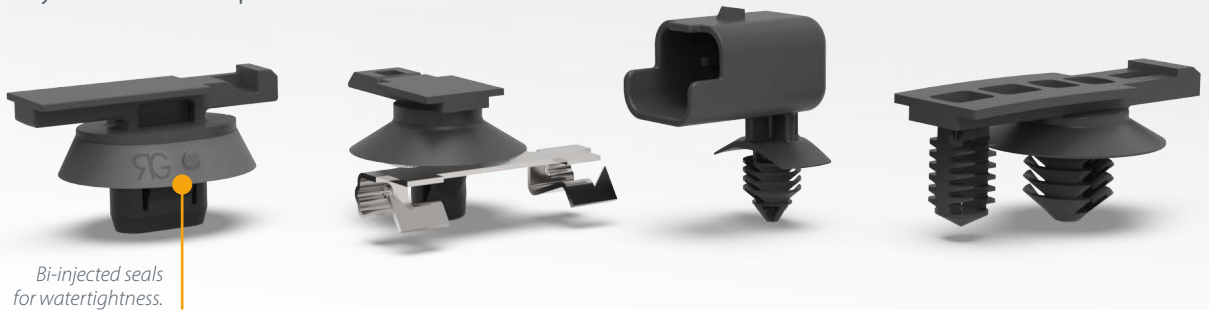
- Available with or without offsets and wire housings.
- Good control of wire harness over tape feature length.

Electric
wire
harness



CONNECTOR HOLDERS & PROTECTOR CAPS

- Protecting, covering, and mounting connectors.
- Available for any circuits unused at point of manufacture.



FUSE BOXES & RELAY HOLDERS

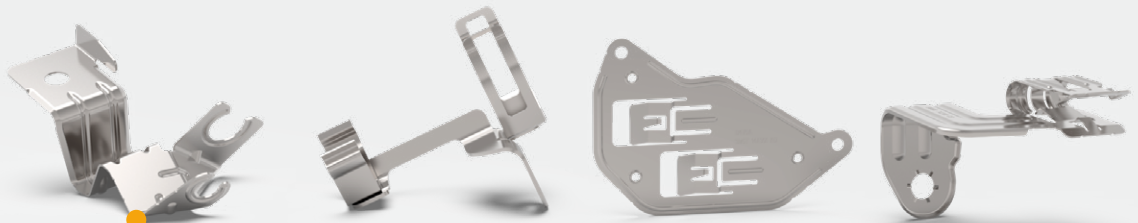
- Metal inserts, overmolded or assembled, provide secure and reliable fastening to vehicle.
- High quality laser marking process for identification of serviceable content.



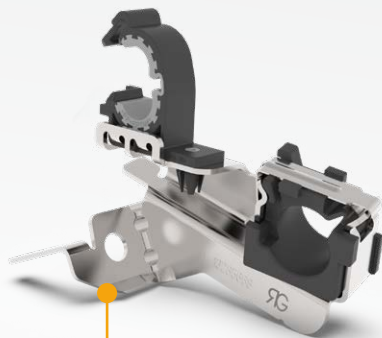
BRACKETS

- Suit almost any packaging requirement and surface treatments.
- Spring steel is a lightweight, high strength and yet flexible material specifically suitable for ergonomic fastening.

Electric wire
harness
& fluid line
management



Metal brackets for robust, temperature-resistant assembly.



Vibration can be reduced through product design or by applying plastic materials.

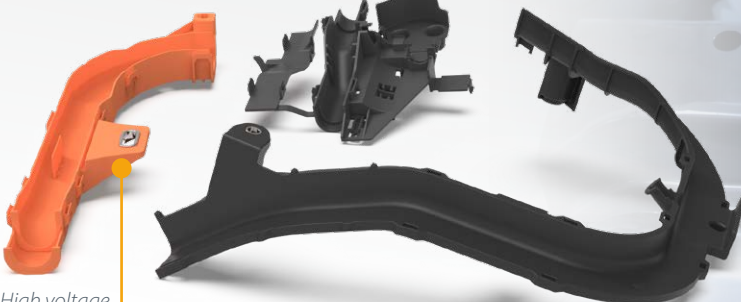
WEIGHT SAVING BRACKET

- Lightweight and cost efficient plastic solution; single molded bracket and clip.
- Reinforced with metal anti-creep inserts.



CABLE CHANNELS

- Made from injection-molded plastic components with or without metal inserts.
- Robust performance throughout the vehicle's lifetime.
- Optimized number of fixing points.
- Repeatable assembly with quick and easy mounting.



High voltage
applications



PANEL & TRIM FASTENERS

All-in-one parts eliminating the need for multiple fasteners and complex assembly operations.

Screwless and easy to assemble, our fasteners accommodate most panel orientations and sizes.

Increased passenger safety

Serviceability

Compact packaging

Watertightness

Vibration & noise reduction

SNAP CLIPS

- Time saving assembly solutions.
- Embedded fasteners.
- Ergonomic push-in force.
- Easy serviceability.
- Without tools or screws.
- Invisible once mounted.

Prevents vibration over the car's lifetime, enhancing consumers' quality perception.

Versatile headliner fasteners with panel locking features for sun visor, upper console, grab handle and sunglass pocket assembly.

Pre-assembled on a supporting component.

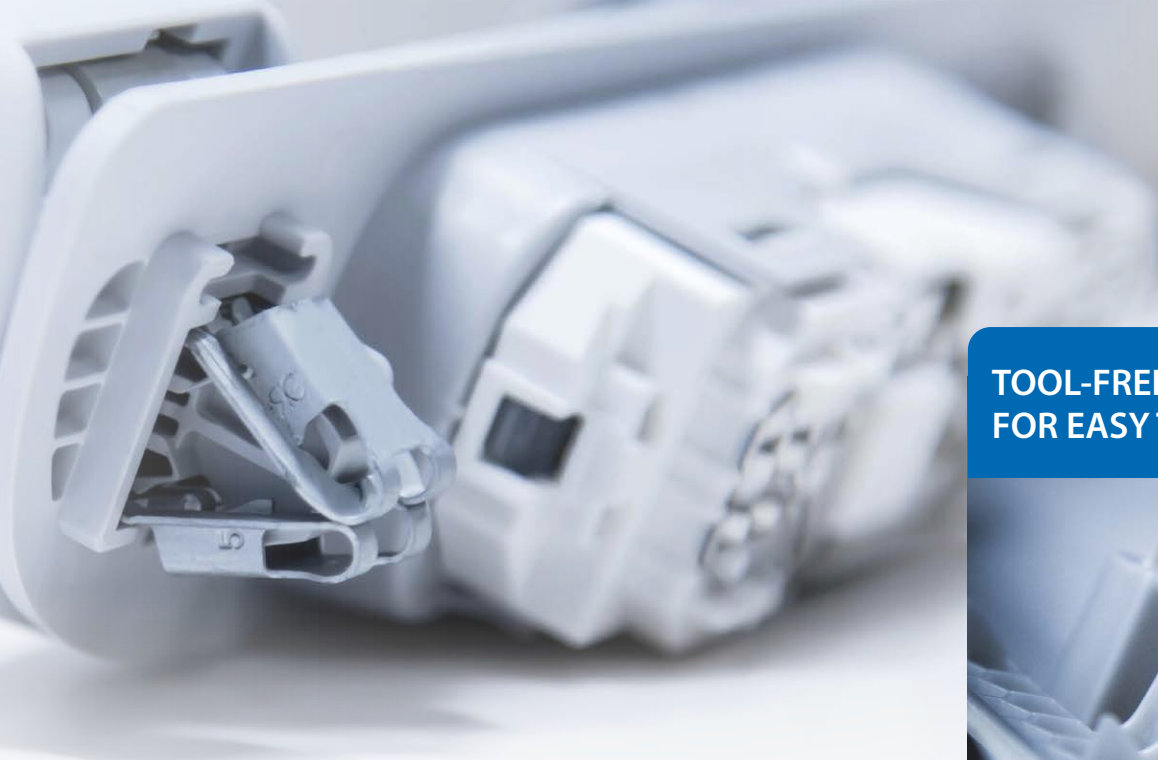
Pre-assembled on a projected component.

High retention force, ideal for front grill assembly.

Small packaging for tight environment (IPCC).

Headliner
& pillar trim

Instrument
panel
& central
console

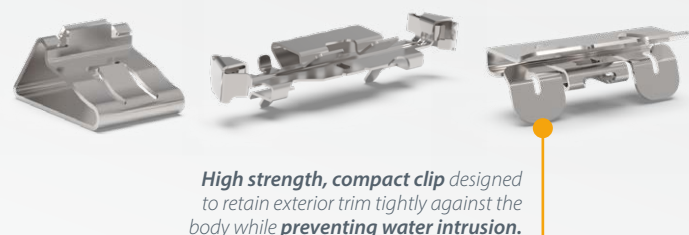
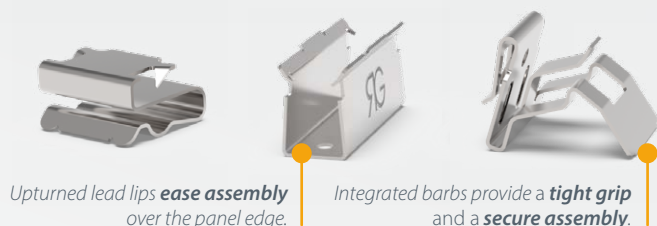


TOOL-FREE DISASSEMBLY FOR EASY TRIM SERVICEABILITY



EDGE PANEL CLIPS

- Multi-functional: metal-to-metal or metal-to-plastic.
- Fast and easy manual mounting.
- Designed for parallel, non-parallel and perpendicular panels.



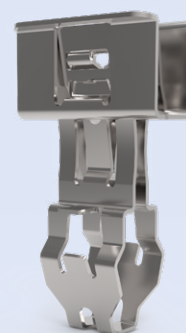
BONDED TRIM FASTENER FOR SIDE GLASS

Compact and high performance fastener for small bonded surfaces, providing an invisible fastening system.



2-STAGE PANEL TRIM RETAINER

- Fits any A, B, or C pillar.
- A tool-free blind disassembly process facilitates trim replacement after a crash, without access cover.
- Two-component assembly produced on a fully-automated assembly line with camera quality inspection.

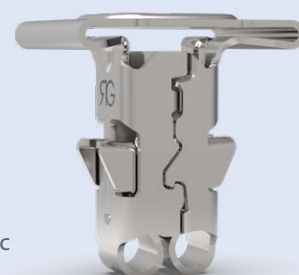


Car
body

WHEN FASTENING SOLUTIONS BRING MORE SAFETY

AIRBAG CLIP

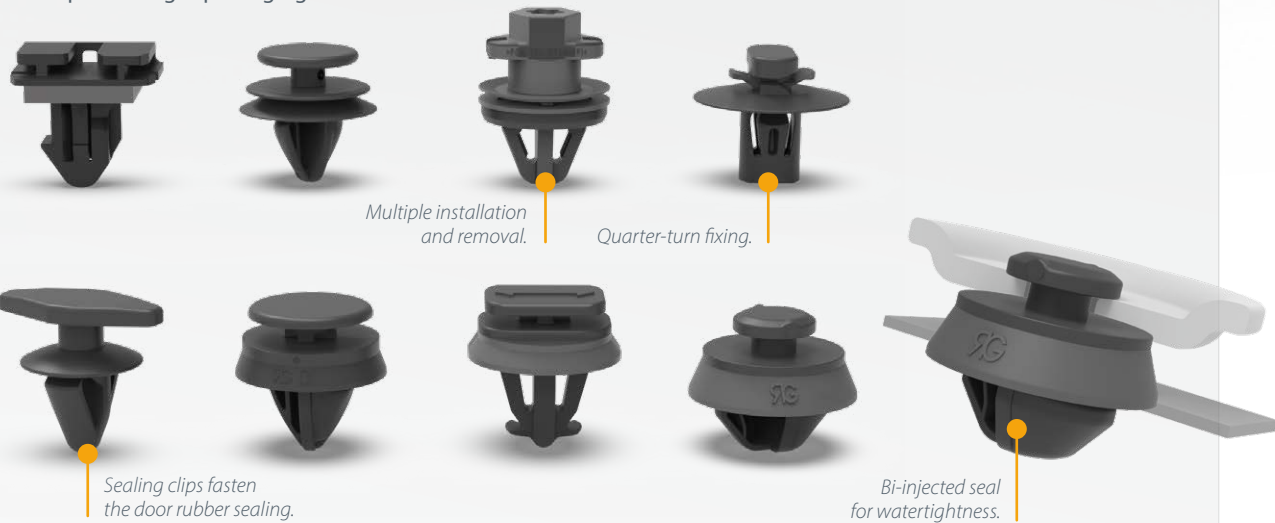
- Very low assembly force.
- High retention performance.
- Different packaging thickness possible.
- Simple disassembly with standard pliers.
- Serviceability, 5 times without plastic deformation.



PANEL CLIPS

- Easy to install and serviceable.
- Audible click to check the assembly.
- Compact for tight packaging environment.

Inside door systems, appliqué & decorative moldings



Fastened on the door trim.

Fastened on the door.



INVISIBLE SIDE CRASH DOOR FASTENER

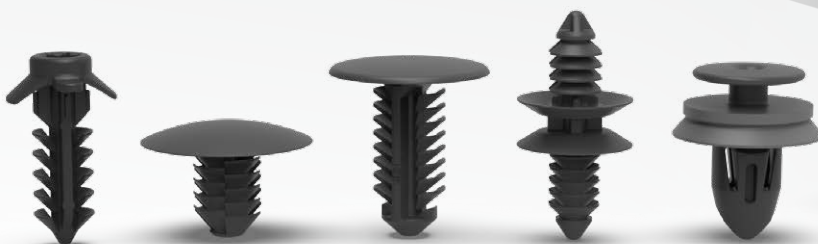
Two-component screwless panel retainer

- Vertical and lateral tolerance management.
- High quality sealing.
- Easy manual and screwless assembly by clipping.
- Easy disassembly by simple pushrelease for serviceability.



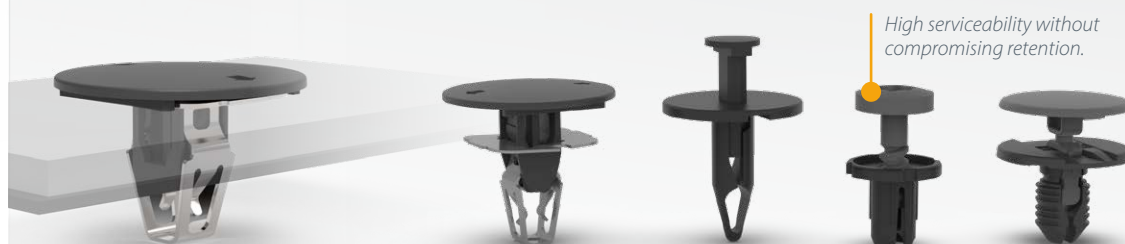
PUSH PINS

- Easy manual assembly and quick installation.
- Available with barbed feature which easily digs into the panel with minimal force.
- Can be grained and color matched for class A surface.



PUSH RIVETS

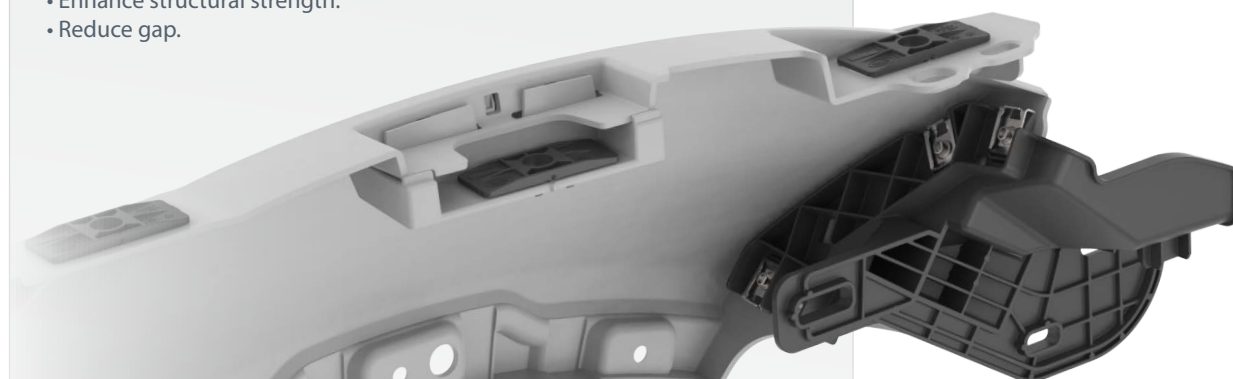
- Simply push through or turn the screw to lock and the expansion leg provides a secure joint.
- Can be painted and compatible with surface treatment for aesthetic solutions.
- Easy manual assembly.



Rear closures,
fenders, wheel
arch liners,
rocker panels
& mudguards

BRACKETS

- Enhance structural strength.
- Reduce gap.

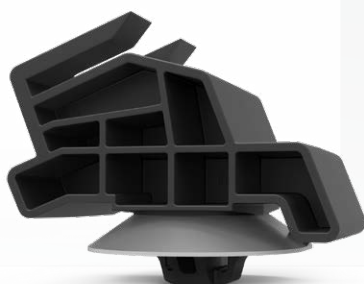


Car body

VIBRATION & NOISE REDUCTION

Bi-injected rocker panel bracket

- Bi-injection sealing reduces noise transfer to the passenger compartment.
- Flexible, allows lower-body-shell expansion.



BONDED CLIPS FOR GREATER DESIGN FLEXIBILITY

High strength and aesthetic solution that is ready-to-assemble and invisible for a perfect A-surface.



THREADED FASTENERS & RETAINERS

Our solutions **accommodate most panel orientations, sizes and thicknesses.**

They are suitable for both metric or self-tapping and PT thread screws.

Anti-creep

Tolerance management

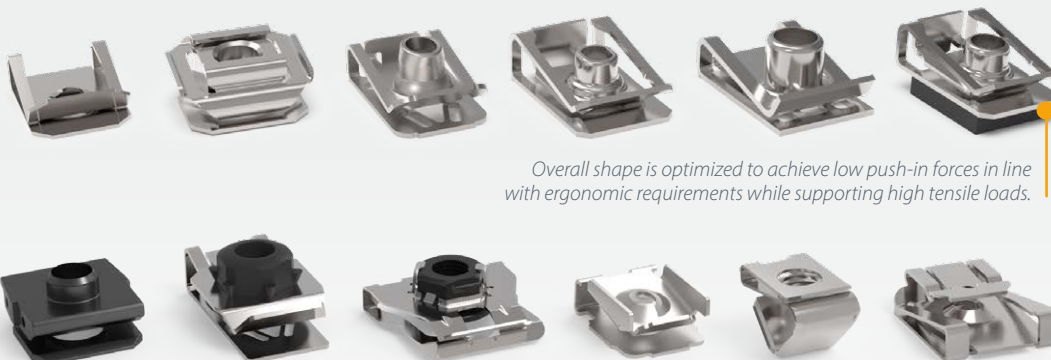
Vibration absorption

Watertightness

Robust

PANEL EDGE NUTS

- Self-retaining ring securing the pre-mounting and speeding up the assembly.
- Integrated guide flaps allow automated assembly processes.
- Electrically insulated nuts and watertight nuts are also available.
- Metric and non metric.
- Anti-creep mechanism.
- Prevailing torque.



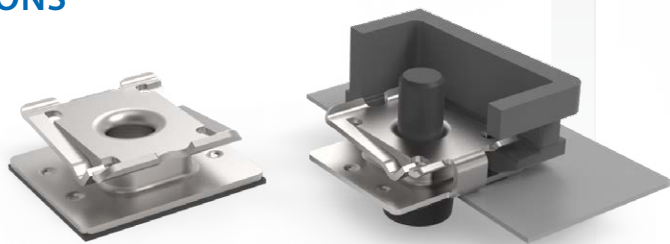
Overall shape is optimized to achieve low push-in forces in line with ergonomic requirements while supporting high tensile loads.

Car body,
chassis
& powertrain

ROBUST AND FLEXIBLE SOLUTIONS

Sliding snap-on nut

- Robust screw-in assembly with the flexibility of an embedded anti-creep ring for tolerance management.
- Watertightness ensured with foam.
- Sliding before tightening for good positioning.
- Allowing linear sliding movement after assembly.



EXPANSION AND PUSH-IN NUTS

- Fast and vibration-resistant assembly for blind and center-panel locations where only one side is accessible.
- Easy to snap in, self-retained by spring legs.
- Plastic for corrosion-resistance.
- Metric and non metric.

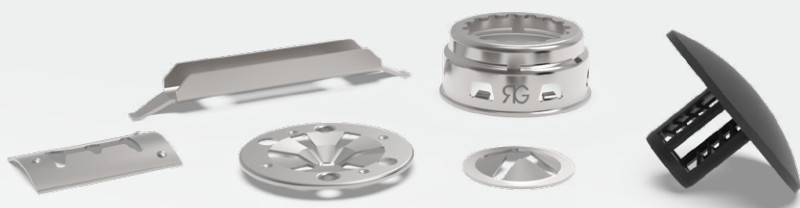
Interior
trim



SHAFT RETAINERS

PUSH-ON STUDS RETAINERS

- For threaded or smooth studs.
- Compact design.



LIGHTWEIGHT 2-IN-1 SOLUTION

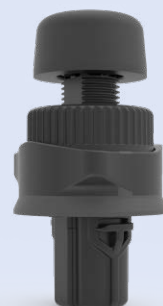
- Lightweight 2-in-1 strain relief plate that can reduce tailgate hinge weight by 75%.
- Distributes load and avoids composite creep.



SELF-ADJUSTABLE GAP COMPENSATION TAILGATE BUMPER



- Time-saving assembly process.
- Easy, quick and accurate calibration process.
- Auto-adjusting height.
- Watertight, prevent gaps, vibrations & noise.
- Screwless locking by quarter-turn.



PROTECTING & FINISHING

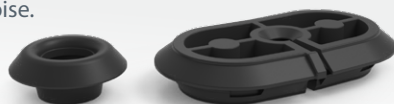
METAL ANTI-CREEPING RINGS

Transmit the locking torque of the screw while preventing plastic creeping, thus stabilizing the attachment.



GROMMETS

- Reducing vibration and associated noise.
- High quality sealing.



PLUGS

- Water evacuation feature available.
- Easy serviceability.
- Tight seal.



MODULAR CONNECTING ROD

- Transmits wheel movement to the car body for smart adaptive front lights.
- Low push-in force and high pull-out force.
- Automatic gap and wear compensation.
- Clean assembly process: no grease needed.

Customizable axis and orientation.



QUICK CONNECTORS FOR AUTOMOTIVE FLUID LINES

ARaymond Quick Connectors bring reliable and efficient assembly solutions for automotive fluid lines.

Using Quick Connectors shortens assembly cycle time and increases reliability, while requiring no tool to disconnect for easier serviceability.

FLAGSHIP QUICK CONNECTORS

SELFY® QC

Smart, Simple, Secure

The Selfy® Quick Connector offers the advantage of a visual, audible, and mechanical confirmation of connection: the locker latches automatically once the end piece is fully engaged.



1- AND 2-BUTTON QCs

Wide range of easy to use SAE Quick Connectors

Diameters ranging from 6.30-1/4" to 28.50-1 1/8" and compliant with SAE J2044 standard. Compatible with a wide range of applications.



Secure connections

Ergonomics

Time, space & weight savings



INTEGRATED FUNCTIONS



TEMPERATURE SENSORS

We produce temperature sensors, ready to be integrated in our wide range of Quick Connectors.

VALVES

Optimal flow control thanks to our integrated valves, such as one-way and shut-off, in our wide range of Quick Connectors.



Assembled
into one of our QCs

Fully integrated
into one of our QCs

BONDING ON COOLING PLATES

PLASTIC END-PIECE FLEX-TO-BOND

Our proven bonding solution offers design flexibility and space savings by eliminating costly brazing/welding.



THERMAL MANAGEMENT SOLUTIONS

Electric and hybrid vehicles have greater demand in terms of performance, fast charging, and safety. This creates requirements for more effective and more complex Thermal Management systems. **Our dedicated Quick Connectors enable easy, fast, and secure assembly of coolant lines.**

COMPACT QC

- Diameters from NW6 to NW14.
- Space saving, flow efficient.
- Robust.



Wide
range of
connector
options

VDA LOW PUSH QC

- Low insertion effort.
- Optional assembly verifier with QR code.
- Diameters from NW6 to NW32.



CLEANING SOLUTIONS

WASHER SYSTEMS

ARaymond has over 30 years of experience designing and producing in-house cleaning system components.

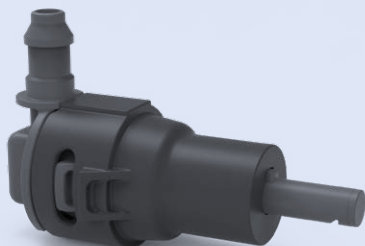
Our team works closely with customers to create value by improving assembly time, optimizing fluid usage efficiency, and ensuring impeccable cleaning of windshields, lamps, LIDAR, ADAS sensors, and camera lenses. Our nozzles have integrated functions such as non-return valves, seals, and heating.



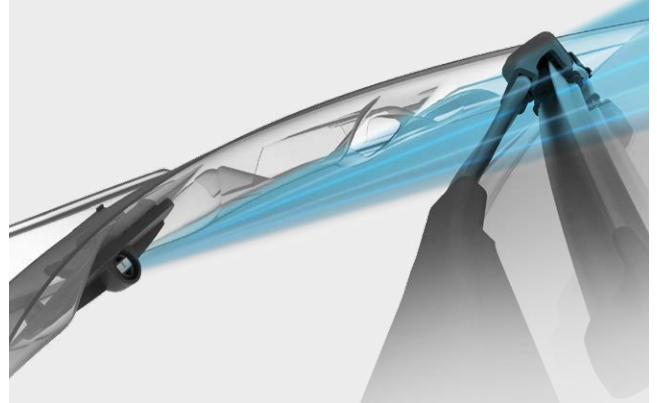
TELESCOPE NOZZLE FOR CAMERA & SENSOR CLEANING



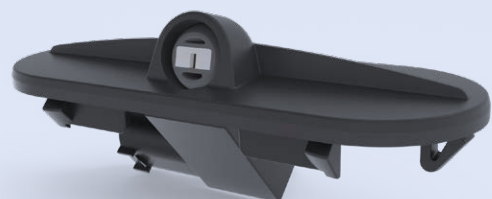
- Spray operates in end position.
- Integrated non-return valve.
- Spray operates in end position only.



WINDSHIELD FRONT NOZZLE



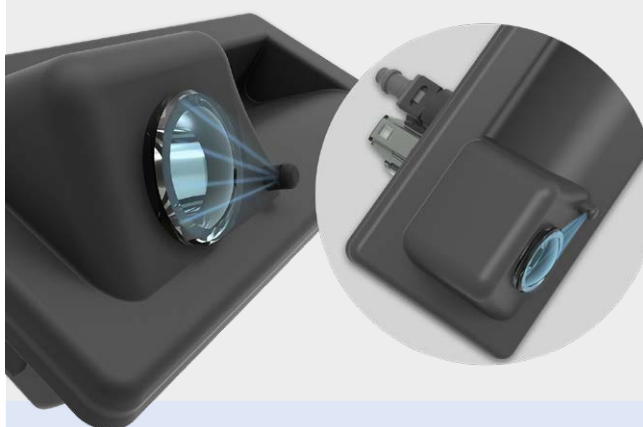
- Lightweight nozzles designed to be integrated with sealing in a tight packaging space.
- They can be heated and equipped with an oscillating spray pattern to ensure maximum cleaning performance at any vehicle speed.





NOZZLES & JUMPER TUBES ASSEMBLY

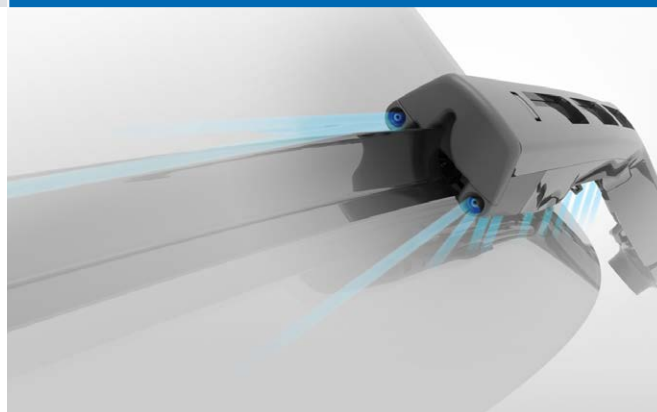
HIGH-PRECISION ADAS CAMERA & SENSOR CLEANING



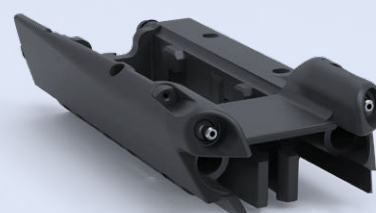
- A compact, flexible, easy-to-integrate camera and sensor cleaning solution that can fit into even the most complex architectures.
- Ultra-low-profile nozzles for a precision jet.
- Optional space savers like integrated non-return valves.



EXPANDED WINDSHIELD CLEANING FOR ADAS FRONT CAMERA



- Innovative ADAS camera cleaning solution that integrate the nozzle directly into the washer arm for optimal cleaning.
- Water is sprayed precisely for optimal cleaning and water consumption even at high speeds, and standard wiper blades can be used.



ARAYMOND, AROUND THE WORLD



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