

Industrial Assembly Solutions

Your partner for innovative joining





The world is shifting away from fossil fuels and carbon emissions, towards smart grids and electric vehicles. These changes create a need for automotive manufacturers to look for suppliers with innovative joining solutions that enable lightweight design and electromobility.

Welcome to

Atlas Copco Industrial Assembly Solutions

Within a division at Atlas Copco, we combine the full spectrum of innovative joining solutions under one roof.

This includes adhesive bonding, sealing and sound dampening technology of our SCA product line, Henrob self-piercing rivets and riveting systems, and flow drill fastening technique from our K-Flow product line.

No matter what the customer challenge is, we always look at the big picture of our customers' processes.

We work at your side to develop tailor-made solutions that meet the highest standards concerning productivity, quality and sustainability. We want to be an extension of your innovation team.

Today, with a large global network of sales and service experts in the field, and innovation centers in major countries, we can help. We bring people, technologies, innovations and competence together.

One partner for joining



Flow drill fastening

Our K-Flow product line offers a one-shot process that achieves reliable and reversible joints even when you only have single-sided access.



Self-pierce riveting

Our Henrob product line offers high-quality rivets and riveting systems for fast and cold joining of various materials and multiple layers.



Adhesive dispensing

Our SCA product line offers high-quality manual and automated dispensing systems that increase productivity and quality even in demanding environments.

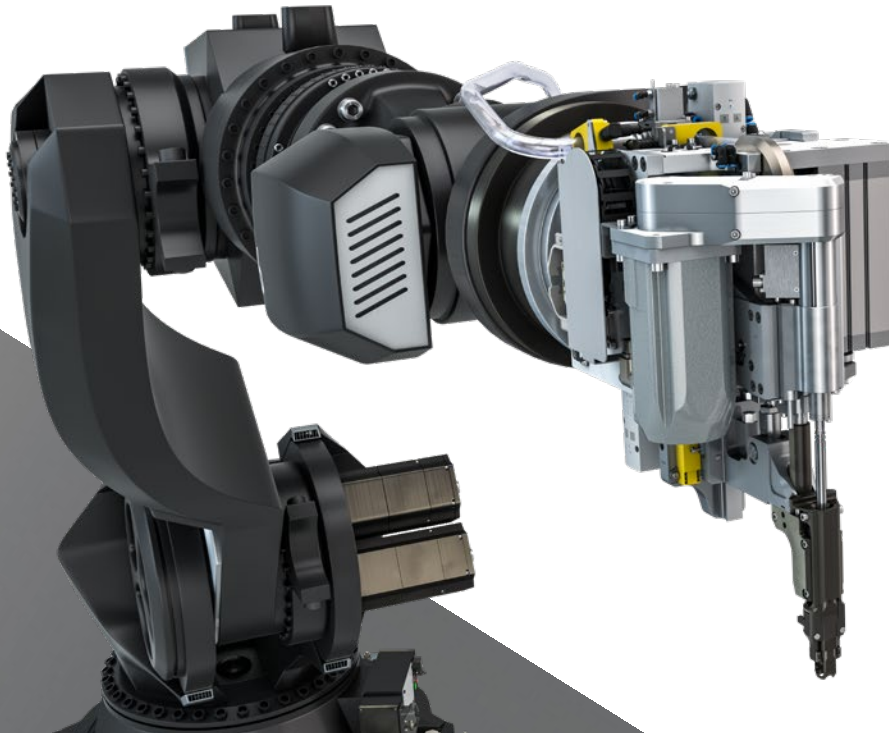


Flow drill fastening

K-Flow product line

Up to
900

Flow drill fasteners
in a car

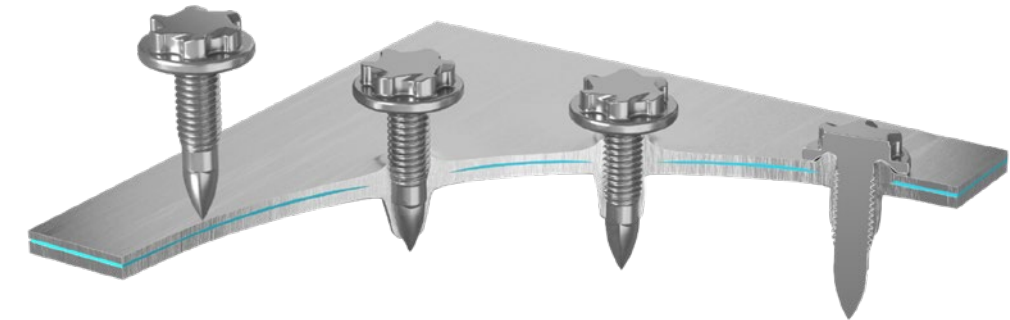


Multi-material joining with single-sided access

Car body designs are getting more sophisticated to lower CO₂ emissions and increase crash performance. This leads to more complex manufacturing processes. Multiple materials with different strength properties need to be joined, like high-strength steels, aluminum, magnesium, carbon or plastics. At the same time, limited accessibility and short cycle times within the manufacturing process are a challenge.

Flow drill fastening has answers to these challenges. This technology offers multi-material joining with single-sided access, using fasteners as both drilling and joining elements. The fastener is rotated at high speed with pressure to warm up the material. This allows the fastener to push through the material stack, forming the thread in the process – an efficient and flexible joining method. The high-quality system solutions of our K-Flow product line are designed for precise operation in tough manufacturing environments.

The joining process



1. Positioning

The fastener is positioned on the workpiece and rotated at high speed. This heats up the material

2. Penetration

With high rotation speed and high force, the fastener is pushed through the material layers.

3. Thread forming

With reduced speed and process force, the fastener forms a thread without cutting.

4. Tightening

The fastener is tightened with the required final torque.

Self-pierce riveting

Henrob product line

Up to
2500

Rivets in a car



High joint integrity – fatigue resistant

The increasing use of coated, lightweight and high-strength materials, such as aluminum and high-strength steel, has led industries to re-examine traditional methods of assembling components.

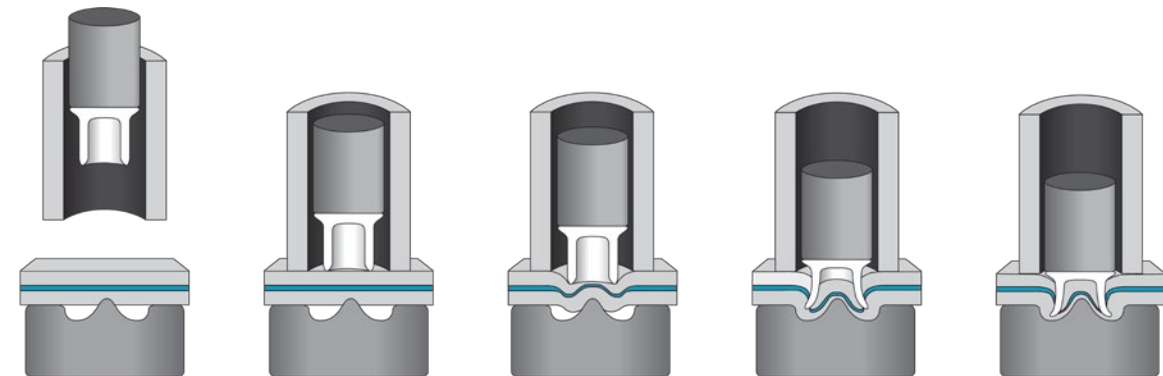
Self-pierce riveting from our Henrob product line is the modern, flexible joining solution that meets the demanding requirements of cutting-edge industries.

With Atlas Copco equipment and rivets, the self-pierce riveting process combines high joint integrity with rapid assembly time.

The Henrob product line ensures a reliable and flexible production with multi-rivet feeding, fulfilling high quality demands while reducing cycle times and maintenance efforts. We are also the world's largest rivet

supplier with over 4.5 billion produced rivets per year. To make sure your joint fulfills all the requirements, we offer you a comprehensive innovation partnership. Our technical experts evaluate not only the chosen rivet and die but also the material combination for suitability – a complete joint development process specific to your production application.

The joining process



1. Starting condition

2. Material clamped

3. Rivet penetration

4. Rivet insertion

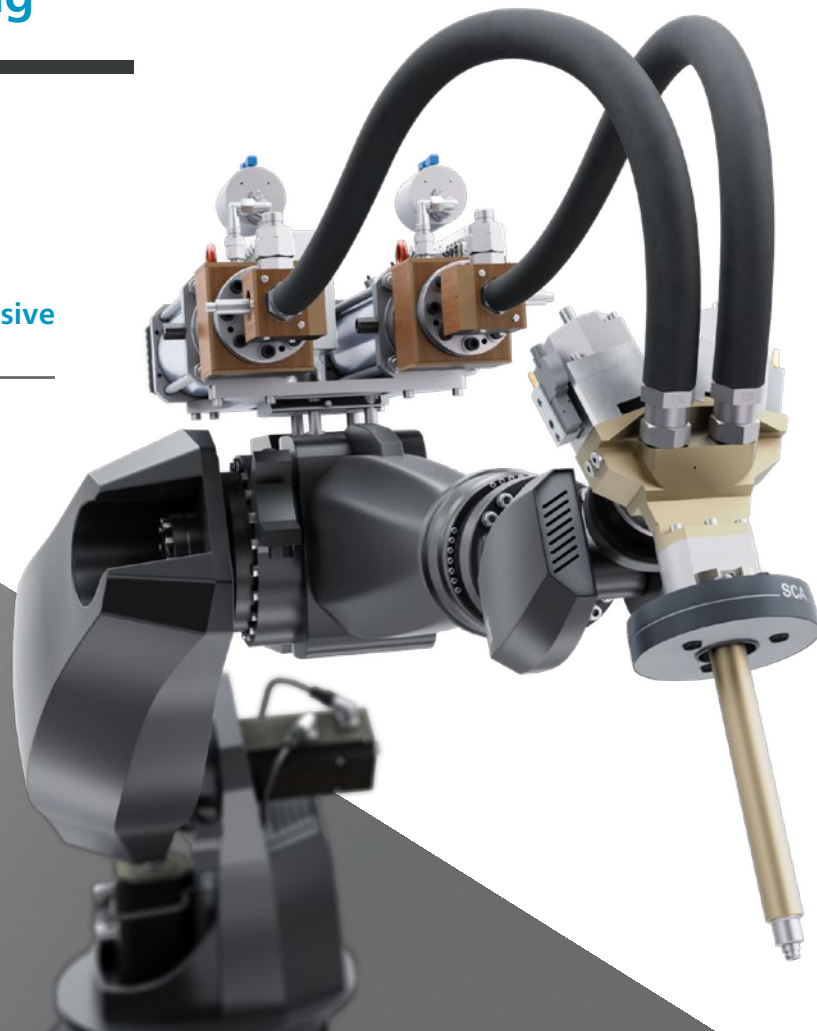
5. Insertion complete

Adhesive dispensing

SCA product line

Up to
180

Meters of adhesive
in a car



Automated dispensing systems that increase your productivity

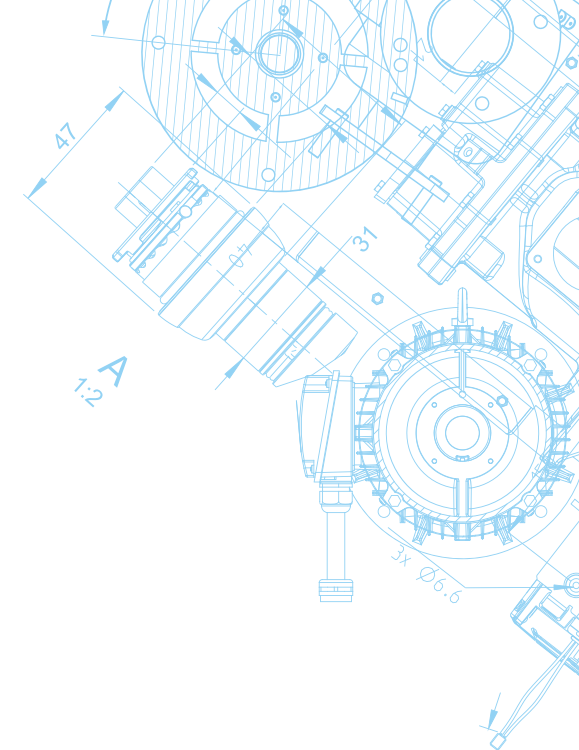
Structural and dynamic strength, corrosion resistance, thermal conductivity and hybrid joining – bonding, sealing and insulating become more important in car body and battery manufacturing. With the SCA product line, Atlas Copco provides complete application solutions, from the material supply to application control and even customized nozzles.

We focus on automated dispensing systems and application processes that enable a highly productive, reliable and smart manufacturing process.

Our joining experts work with you to develop the perfect solution for your specific requirements, including application and material tests before the start of production.

High quality vision systems

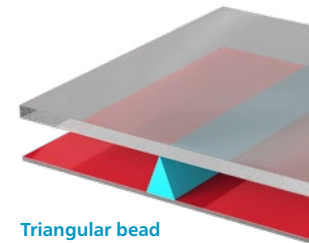
We also offer visual quality control systems that detect errors in width, continuity and position of the adhesive bead during or after the application. This not only increases your productivity level but also reduces quality costs and material waste.



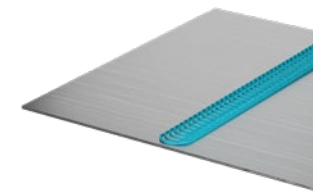
Selected application types



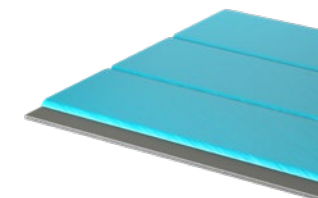
Stitch bead
Hybrid joining



Triangular bead
Glazing



Swirl
Hem flange bonding



Flat stream
Sealing, underbody protection

Our service portfolio for your joining systems

Our broad service portfolio accompanies your joining system throughout the complete lifecycle. A comprehensive training offering and dedicated expert support allow you to get the most out of your solution. With our global network of certified service

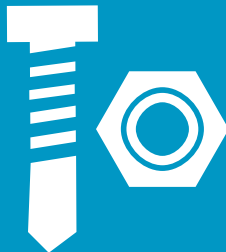
technicians, we are always close to our customers to ensure you the best performance of your system. Our tailor-made service solutions and smart services cover your needs to reduce unscheduled downtimes and maintenance cost.



Installation and commissioning



Start-up support



Spare part supply



24/7 availability



Maintenance and repairs



Field service on demand



Data Driven Services



Service agreements



Consulting



Together we solve every joining challenge

At Atlas Copco we offer multiple innovative joining methods from a single source. Regardless of the individual technology – we know how to join, and we know our customers' processes.

We offer a comprehensive innovation partnership and accompany you in every step of the development process. Benefit from our extensive competence and let us help you to solve your joining challenge.

12

Innovation
Centers

500

Test trials
per year

Application development

Do you have a unique joining challenge? We will investigate, develop and evaluate suitable solutions.

Process development

Using workshops with customers and suppliers as well as test trials and simulations, we develop a complete joining process.

Joint quality analysis

Safety-critical joints are especially important for vehicles. In our joint analysis labs, comprehensive testing such as shear, peel and cross-tension tensile tests ensure robust and effective joining in all areas.

Material testing

Materials, adhesives, sealants, rivets and flow drill fasteners – a joint is a complex interaction between multiple players. We make sure that you have the perfect fit.

Technology integration

We can integrate different joining technologies to a unique solution that is ready for series production. This includes not only our core technologies but also technologies from our network partners.

Pilot production

Minimize your start-up efforts with our prototyping and pilot production offering. We install and program the entire system, run the newly developed application and check everything before you go into actual production.

Interested to
innovate with us?





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