Solutions for all branches of industry

The leading platform automatica is the only trade fair in the world that covers all requirements in the value chain: From individual components to complete systems, and from turnkey applications to specific tailored services.

automatica’s exhibition sectors
Assembly and handling technology (integrated assembly solutions) • Industrial robots • Professional service robotics • Machine vision • Positioning systems • Drive technology • Sensor technology • Control system technology and industrial communication • Safety and security technology • Supply technology • Software and cloud computing • Services and service providers • Research and technology

Assembly and handling technology (Integrated assembly solutions)

Every day, quick and reliable handling, positioning and connecting turns millions of individual parts into new products. The latest assembly and handling technologies allow you to achieve maximum quality and high throughput rates while keeping unit costs low. You should also take advantage of seamless and automatic tracking. Thanks to modular designs, automated assembly lines can be adapted to new requirements quickly and flexibly.

→ More about the exhibition sector for assembly and handling

Exhibits at automatica
Assembly stations and systems, including for specific fields of application • Equipment for storage, ordering, sorting and feeding • Equipment for linking and transport • Components for linking and transportation equipment • Equipment for fastening and joining • Equipment for marking • Test systems • Basis and construction elements • Manual workplace systems • Workplace equipment • Packaging units • Surface treatment

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Industrial robots

Robots are the most flexible production element, so they play a significant role in automation. These freely programmable "all-rounders" can be used as universal "movement machines". Operating robots has become much easier and more mobile—robotics solutions have been in use in small and medium-sized enterprises for quite some time.

Equipped with innovative security technology, the "cobot" collaborates directly with humans. Above all, it relieves them of monotonous and difficult tasks. Thanks to human-robot collaboration, this machine is increasingly evolving into a "metal colleague".

More about the exhibition sector for industrial and service robotics

Exhibits at automatica

Industrial robots by type of design: gantry robots, SCARA robots, vertically articulated robots, articulated robots, parallel link robots, micro robots, special designs • Industrial robots for specific applications • Components for robot systems: jigs and fixtures, tool-changing systems, measurement systems, peripherals

Professional service robotics

Service robots provide services for or with people. They are already assisting in production and in autonomous inspections, and they help in agriculture and medicine. Robots can also be used in all the elements—i.e. on land, underwater, in the air and even in space.

Deliberately given only a partial humanoid design, service robots are accepted when they interact with people and work as colleagues. Their potential uses and applications are practically unlimited. The upcoming generation will view them as a natural addition to and part of society as we know it.

More about the exhibition sector for service robotics

URL: /about-the-fair/exhibition-sectors/overview/index.html
Exhibits at automatica
Service robots for professional applications such as field robots, cleaning, inspection, construction and demolition, logistics, medicine, safety/security, underwater, mobile robot platforms and humanoid robots • Key technologies and components for perception, navigation, manipulation and man-machine interaction

Machine vision
Machine vision lets you teach machines how to see and understand. The latest machine-vision systems are genuine multi-talents. They read codes, identify parts, operate machines, control processes and inspect quality.

Automated machine vision allows you to perform inspections and recognize trends in your production processes early. Thanks to machine vision, you can achieve efficient 100% inspection and perfect quality in the production cycle.

More about the exhibition sector for machine vision

Positioning systems
Everything in the right place: You can use positioning systems to ensure the exact placement of your workpieces or tools in machines and technical systems. There are a number of versatile models to choose from for every application.

Exhibits at automatica
Measuring systems for machine vision • Components for machine vision • Machine vision for specific applications • Embedded vision systems

Drive technology
The driving force of automation keeps things moving through the transmission of power. Innovative systems even allow you to realize complex motion sequences. You also benefit from improved energy efficiency.

Exhibits at automatica
Drive systems for bearings • Linear guides • Linear motion drive elements and systems • NC-controlled rotation and linear axes • Gears • Industrial motors, motor controls, motor protection devices • Special drives • Multiple-axes systems

Sensor technology
Sensors are an integral part of every smart production environment. With the right sensor technology, you can give your machines the ability to perceive their environment and react correctly. From a technical point of view, sensors translate non-electric measured variables into electric signals that machines can receive and process.

You receive the required data—i.e. information about distances, path length, pressure, temperature, position, strength, surface quality and much more—exactly where it is needed.

Exhibits at automatica
Proximity and position switches • Rotary encoders • Sensors for linear displacement, distance and thickness • Force torque sensors • Optoelectronic sensors • Ultrasonic sensors • RFID systems • Micro-sensors • Pneumatic measuring apparatus • Pneumatic pressure switches • Accessories

Control system technology and industrial communication
Control system technology is used to influence the behavior of technical systems. Sophisticated solutions are supposed to be realized quickly and with a high degree of functionality. Selecting the right control system technology and mastering its operation is a significant factor for the efficiency of your production operation. Devices are increasingly being equipped with embedded control functions.

In the connected communication that is part of Industry 4.0, infrastructure and digital networks are a significant prerequisite for smart control system technology.

Exhibits at automatica
Electronic controls • Mechanical controls (cam-controlled) • Pneumatic controls • CNC control systems • Freely programmable controls • Industrial PCs • Monitors • BUS systems • Bus terminals • Components for field-bus systems • Valve islands • Servo controllers • Hand-held programmers and operator terminals • CPU cards • Power supply units • Display and operating equipment • Electrical components for controls • Industrial enclosures and control cabinets • Data transmission via wireless or mobile communication • Optical data transmission • Wireless data transmission • Remote maintenance and diagnostic systems • Systems for machine-to-machine communication (M2M) • Systems for human-machine interfaces

Safety and security technology
Modern safety technology is used to protect the people in your production environment. More and more often, classic structural measures such as safety fences are being supported or even replaced by smart sensor technology. New solutions make it possible for people and machines to work together in the same workspace, for example in human-robot collaboration. This is an effective way to increase the productivity and flexibility of your operation without compromising the safety of your employees.

Exhibits at automatica
Mechanical and electro-mechanical safety devices • Safety-related control systems • Safety-related control sensor technology • Safety-related control communications technology • Safety-related control drive systems • Safety-related control software

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Supply technology

The supply of energy is elementary — whether with power, compressed air or vacuum technology. Having the right supply system at the right place influences your entire production operation, particularly when it comes to moving parts and after carrying out millions of movements quickly.

Exhibits at automatica

Carrier and hose carrier systems • Cable protection systems • Cable and tube bushings • Electrical power supply • Compressed air supply • Ventilation technology and extraction systems • Components for ventilation technology and extraction systems • Vacuum technology • Hydraulic supply

Software and cloud computing

Software is one of the strongest forces that drive innovations. Today, intelligent software has a significant influence on the functionality and productivity of machines. Industry 4.0 will change the way mechanics and software interact even more so. That is because cloud computing, big data and comprehensive security management are elementary for the smart factory of the future. In the future, software will also increasingly make it possible to expand and simplify man-machine interfaces.

Exhibits at automatica

Software for robotics, assembly and handling technology • Software for machine vision • Software for the smart factory • Cloud computing • Big data applications • Software for IT security

Services and service providers
automatica showcases all services along the entire value chain in industrial production. It is the perfect place to find professional partners for your planning as well as reliable feasibility studies, realistic simulations, specific programming and much more. Companies of every size are represented at the fair—from general contractors to system integrators and highly specialized consultants. Discover the diverse range of services and new business models.

**Exhibits at automatica**
- Engineering • Consulting • Planning • Feasibility studies • Simulations • CAD/CAM services • Optimizing existing systems • Integration into IT topologies • Programming • Robot calibration • Training courses • Maintenance • Mechanical, electrical services, etc. • Condition monitoring • Certification • Other services from management consultancies, trade associations, publishers, etc.

**Research and technology**
Robotics and automation are the focus of some radical changes. On the one hand, they are pacemakers for progress. On the other, increasing digitalization is posing major challenges to industry.

That is why research and new technologies are in greater demand than ever—from artificial intelligence and medical and biotechnology to new types of materials and exploring space.

**Exhibits at automatica. Research in the following sectors**
- Industrial automation • Industrial robotics • Service robotics • Mechanical and plant engineering • Transportation and logistics • Electrical engineering • Information transmission and communication • Microtechnology • Nanotechnology • Optical technologies • Medical technology • Energy and the environment • Materials • Physics • Fiber composite technology • Battery technology