

EPSON®
EXCEED YOUR VISION

LIFE SCIENCES



A High Standard of Automation Solutions

The life sciences industry is about saving and making lives better. Because of this, life sciences manufacturers are held to a higher standard. At Epson, we understand the challenges you face and the manufacturing requirements you must meet for project success. That's why we work tirelessly to help ensure our automation solutions deliver the highest level of quality assurance and reliability. **Your customers accept nothing less. And neither do we.**

Reliability: Backed by nearly 40 years of industrial automation experience, you can rely on high-performance Epson solutions, engineered to deliver day-in and day-out, year after year.

Quality: Options such as integrated vision guidance for inspection, cleanroom ISO certification and washdown protection help ensure the utmost in quality control.

Epson® Automation Solutions Offer

Traceability: Our security options and optional add-on instructions help ensure production is consistent and trackable from lot to lot.

Precision: As the precision automation specialists, we understand how to achieve the high level of repeatability required by life science applications.

Speed: As you look to scale up production, we know how to help you balance the need for speed with other requirements, all while meeting exacting product specifications.

An Experienced Leader in Life Sciences Automation

Epson understands the unique manufacturing requirements of the life sciences industry. Our broad robot portfolio, integrated solutions and engineering experience combine to provide our customers with automation solutions that meet and exceed their requirements. For the past four decades, Epson has been a market leader in industrial automation for the life sciences industry. We've introduced many firsts and have earned a reputation as the precision automation specialists.

In fact, the Epson Robots Team has helped numerous leading medical, pharmaceutical and diagnostic lab companies build world-class automation systems for a wide range of uses. From pacemaker battery assembly to precision vial dispensing to syringe handling, Epson Robots are used for a broad range of mission-critical, high-performance applications.

“ For two decades, we've been using Epson robots for medical, pharmaceutical and biotech device applications. Epson's wide product selection for precision small-component assembly gives us the right product for critical applications. From surgical instrument assembly to pharmaceutical products, we know their robot performance gives us the technical edge we need to provide our customers with the best solution for the application. ”

Stephen Maund, President & CEO, Demco Automation

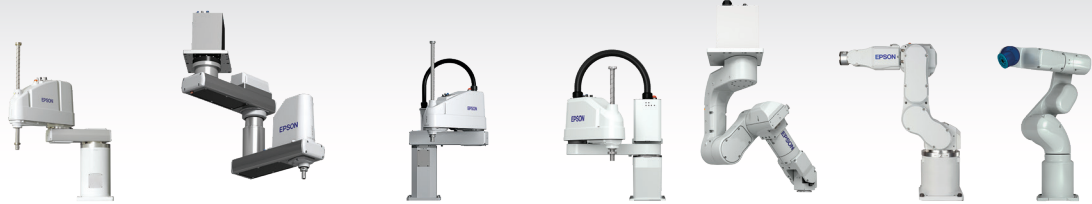


Multi-robot assembly system with (3) Epson T3 SCARA Robots for surgical instrument forming and packaging system. Courtesy of Demco Automation

The Right Robot for Your Life Sciences Application

With a lineup of over 300 models to choose from, there's an Epson robot that's just right for your life sciences application. It's just one of the reasons why we're the **#1 SCARA robot manufacturer in the world.**

The Epson Robot Lineup: What You Need, When You Need It



	SCARA				6-AXIS		
Series	G	RS	LS	T	N	C	VT
Positioning	Superior Performance, High Speed	Unique Ceiling Mount Design	High Performance, Affordable Cost	All-In-One, Ultra Low Cost	World's 1st Folding Arm Design	SlimLine Design	All-In-One, Ultra Low Cost
Models	G1, G3, G6, G10, G20	RS3, RS4	LS3-B, LS6-B, LS10-B, LS20-B	T3, T6	N2, N6	C4, C4L, C8, C8L, C8XL, C12XL	VT6L
Payload	1 - 20 kg	3 - 4 kg	3 - 20 kg	3 - 6 kg	2.5 - 6 kg	4 - 12 kg	6 kg
Reach	175 - 1000 mm	350 - 550 mm	400 - 1000 mm	400 - 600 mm	450 - 1000 mm	600 - 1400 mm	900 mm
Cleanroom	ISO 3 w/ ESD	ISO 3 w/ ESD	ISO 4		ISO 5 w/ ESD	ISO 3/4 w/ ESD	ISO 4
Washdown	IP65 (G6, G10 and G20)					IP67 (C8)	IP67

Ideal for Life Science Applications



Cleanroom: We offer an array of cleanroom and electrostatic discharge (ESD) compliant SCARA and 6-Axis robots that are ideal for work environments where controlling airborne particulates or ESD is critical.



Washdown: Choose from IP65- and IP67-rated robots to deal with dust and water infiltration concerns within laboratory and production environments.

The Epson Advantage

Epson robots offer a variety of important advantages that make them ideal for life science applications. That's why thousands of customers, from large Fortune 100 companies to small manufacturing facilities, count on Epson to help them successfully automate.

Hundreds of Models to Choose From

- Sizes ranging from 175 to 1,400 mm in reach
- Payloads up to 20 kg
- Tabletop, wall and ceiling-mount options

Innovative Epson Technology

- World's first folding arm design enhances motion and workspace efficiency
- Specialized integrated sensors help reduce vibration and increase performance

High-Performance Speeds and Extreme Precision

- Extraordinarily fast cycle times maximize parts per hour
- Repeatability down to 5 microns

Intuitive Programming Software

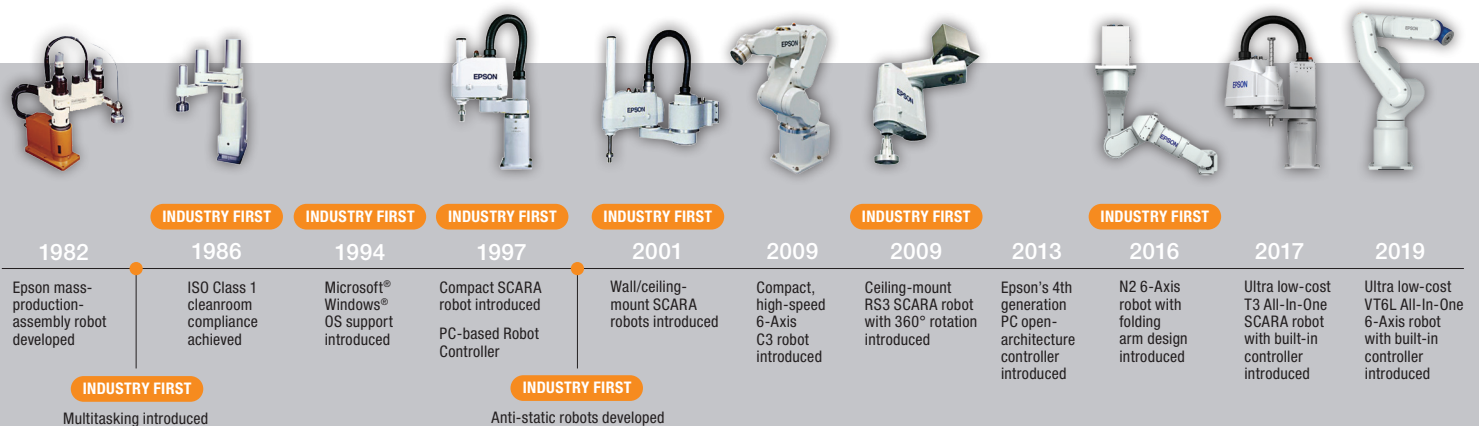
- Epson RC+ software is extremely user-friendly
- Set up is fast and easy
- Fast development time and deployment reduces time to market and increases ROI

SlimLine Design

- Saves valuable floor space and allows robots to fit where others can't
- Compact wrist pitch enables robots to access hard-to-reach places in confined spaces

Dependability You Can Count On

- We're dedicated to helping you find the best solution for your applications
- Epson robots are long-lasting and require little maintenance
- Over 100,000 robots sold worldwide

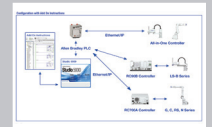


Solutions to Simplify and Enhance Life Science Automation



Epson RC+® development software offers the ultimate selection of powerful, ease-of-use features, reducing the development time for automated robot solutions. You only need to learn one development environment to program and control our full line of robots. This advanced software gives users the ability to quickly build robot automation systems. Intuitive by design, Epson RC+ software was engineered to simplify even complex applications, so you can get up and running fast.

Epson Add-On Instructions (AOI) offers easy robot integration with Allen Bradley programmable logic controllers. It provides a traceable, single point for development to help with FDA regulation compliance and assure consistent production and that no changes were made from lot to lot.



Vision Guide software features high-performance tools in an intuitive point-and-click environment. Critical for inspection applications, Vision Guide improves quality control and traceability.

IntelliFlex™ Parts Feeding System offers a point-and-click interface that helps reduce development time, making it perfect for increasing production flexibility for high-mix/low-volume products.



Epson Force Guide enables Epson robots to detect six axes of force with precision down to 0.1 N, which is ideal for use with extreme precision applications, such as medical technology and device manufacturing.

“Epson’s high-speed G6-Series SCARA robots with RC+ software enable precision processes with exceptional repeatability and reliability, delivering on Tessa’s brand promise of solving unique challenges with complex components.”

Bruce Courtney, Managing Director, Tessa Automation, formerly NuTec Tooling Systems

No Two Life Science Applications Are the Same

We have the solutions to meet your challenge.

Robotic automation is an ever-growing, ever-changing field. We are continually inspired by the many innovative applications in this field, and our robots are up to the challenge. We are able to utilize our vast expertise to create automation solutions that make a lasting difference with both current and future customers.

Life sciences is no exception.

Many key life sciences disciplines are accelerating their manufacturing processes towards automation to achieve more exacting production requirements. Epson is here to help you and your team succeed in meeting your project needs with an assortment of flexible and adaptable tools and solutions.



Medical Technology Solutions

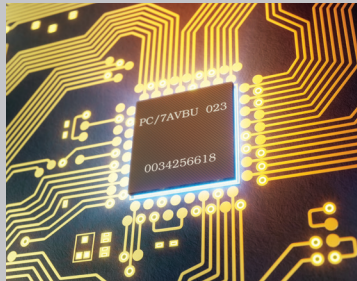
Precision manufacturing is part of Epson's DNA, going back to our roots as a robot manufacturer to meet the exacting precision requirements of our watch making division. Since that time, we have been driven to provide industry-leading solutions for the technology space, particularly the electronics and medical device industries.

Epson robots and solutions are designed from the ground up to meet the stringent quality and precision requirements of the Medical industry. They make it easy to comply with FDA standards that demand tight tolerances with consistent and traceable manufacturing. They're perfect for use in cleanroom environments and they're flexible enough to handle high-changeover/low-volume manufacturing.

The bottom line? Year after year, our medical technology customers rely on Epson as a trusted partner to meet their high demands for high-precision robot performance.

Epson Robots in Action

Challenge: A customer wanted to be able to track placement of microwires on a device before it was encapsulated. The manufacturer needed assurance there was no failure inside their devices with all introduced components.



Solution: Epson robots along with Vision Guide and Force Guide were used to assemble and inspect devices quickly and accurately.

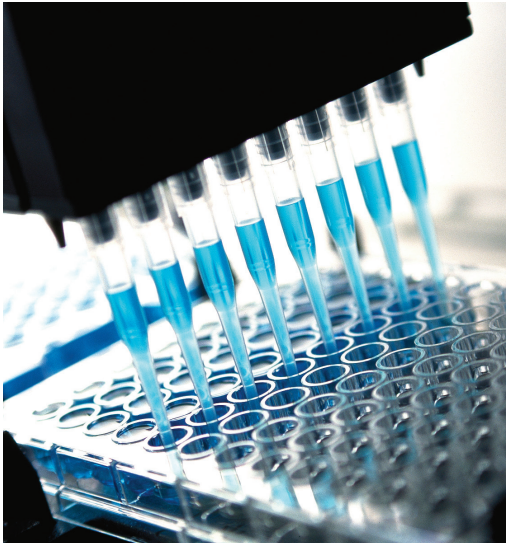
Application Examples

- Glucose monitoring systems
- Cardiac pacemaker battery assembly
- Hearing aid assembly
- Shunt assembly for chemotherapy
- X-Ray and MRI component handling and inspection
- Eye glass and contact lens assembly
- Tube laser marking for medical devices
- Medical and dental implant assembly
- Hip and knee implant finishing and inspection
- Dental instrument inspection and packaging
- N95 mask and PPE manufacturing

“Epson's partnership and support, along with their world-class product offerings, has enabled Xigent Automation/FillPRO to provide our Health and Science Sector customers with exceptional automated assembly and precision net-weight dispensing systems.”

Michael Meiring, Vice President, Xigent Automation Systems

Laboratory Sciences and Diagnostic Solutions



Consumers put a high level of trust in companies that manufacture life-saving diagnostics and equipment. Precision manufacturing is paramount to producing reliable, high-quality products. Automation with Epson robots and integrated solutions can help manufacturers scale up complicated and tedious manual processes to achieve fast, high-volume output.

Epson's RC+ development environment takes the guesswork out of automating a manual process. Whether you are telling the robot how much fluid to dispense, how vigorously to shake a test tube, or when to inspect a sample, Epson's got you covered.

When dealing with laboratory sciences and diagnostics, mistakes can't be made. **This is why automation professionals rely on Epson.**

Epson Robots in Action

Challenge: A prominent diagnostics laboratory required an efficient, low-cost pipette handling solution.

Solution: Epson robots, along with Epson integrated solutions, Vision Guide and IntelliFlex Parts Feeding System, solved the issue. Pipettes were removed from an injection molding machine and prepared for pickup with IntelliFlex. The pipettes were then manipulated for filling and packaging.

Application Examples

- Precision vial dispensing
- Test slide manufacturing
- Blood testing
- Test strip assembly
- Fluid dispensing for DNA testing
- Test tube capping
- Test tube handling and packaging
- Pipette inspection and packaging
- Test tube management and handling

“ As an automated manufacturing solutions partner to some of the world's largest global life sciences companies, we value relationships with key technology partners like Epson. Our customers require speed, flexibility and reliability in their turnkey automation solutions. Epson Robots has helped us achieve this with over 1,000 'ATS integrated' Epson robot installations all over the world. ”

Blair de Verteuil, VP Operations, Life Sciences North America, ATS Automation

Biotechnology and Pharmaceutical Solutions

Biotechnology and pharmaceutical companies are held to a high degree of scrutiny that requires high tolerances and production-quality controls. As a result, companies throughout the world rely on automation to produce these medical therapeutics.

Whether installed in a cleanroom environment to optimize product quality and manufacturing compliance, or in a packaging facility to ensure time-to-market speed, Epson robots provide customers with road-tested reliability in a wide variety of applications.



Epson Robots in Action



COVID-19 Application

Challenge: A customer needed an exceptionally reliable and repeatable automation solution for a COVID-19 syringe coating application.

Solution: Multiple Epson robots, synchronized to enhance production efficiencies, were used to precisely manipulate syringes, prepare them for inspection, apply a laser label and package.

Application Examples

- Vaccine dispensing
syringe manufacturing
- Handling of vials
and syringes
- Medicine packaging
- Prescription pill dispensing
- Package label placement
- Pill blister pack assembly
- Pharmaceutical kitting
- Controlled substance
dispensing

“Epson’s partnership with Tessa Automation represents the perfect blend of high-performance product and design expertise, which benefits OEMs requiring complete assembly applications in the health and life sciences sector.”

Bruce Courtney, Managing Director, Tessa Automation, formerly NuTec Tooling Systems

Choose Epson Robots for Your Next Life Sciences Project

With nearly 40 years helping life science companies automate, chances are good we've provided solutions for applications like yours. We are here to give you the guidance and support you need to achieve your manufacturing goals.

Experience the Epson difference. If you have an upcoming automation project, we encourage you reach out to us and discover how we can help ensure your success.

Visit www.epsonrobots.com or email info@robots.epson.com to learn more.

Epson: Helping Life Science Companies Around the World

We are experts in global deployment. With 10 regional headquarters locations, 90 company offices and 80,000 employees, we can deploy systems anywhere in the world, making Epson a perfect choice for multi-national companies.





Epson Business Solutions

Epson is a leading provider of innovative technology solutions that help businesses succeed. We partner with you to best meet your specific needs, focusing on:

- Improved productivity
- World-class customer service and support
- Cost-effective, high-quality solutions
- A commitment to the environment

Discover how Epson can help you work toward the future. www.epson.com/forbusiness

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