

**YOUR MEDTECH PROJECTS
OUR PROVEN AUTOMATION SOLUTIONS**



MEDICAL DEVICES · COMBINATION PRODUCTS · DIAGNOSTICS

LET US HELP TRANSFORM YOUR MANUFACTURING OPERATIONS THROUGH INNOVATIVE AND HIGH-QUALITY TECHNOLOGY AND AUTOMATION SOLUTIONS

Few industries are as challenging as life sciences. The demand for **faster, more efficient production** of medical devices must be balanced with the requirements for **safety and quality control** whether in **niche production or large cleanroom facilities**. Manufacturing processes can be highly complex and **compliance with regulatory requirements** can be challenging. As product teams adjust to increases in demand, changes in product portfolio, new product launches, and shifting business priorities, the selection of appropriate partners with subject matter expertise has never been more important.

ATS is a leading global automation solutions provider with over 40 years of experience in a variety of industries including medical devices and medtech. **Our products and services support the entire manufacturing process from material intake to finished and packaged product.** Whether you require a customized system, a standard piece of equipment, or a fully integrated production line, our life sciences group of companies is here to support you.

Let's talk about your project management, design/build, integration, validation, training, and post-project requirements. We are your **Partner for Life™**.

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|--------------------------|-----------------------------|----------------------------|
| INHALERS | IV SETS | GLUCOSE TEST STRIPS |
| MEDICAL WEARABLES | PREFILLED SYRINGES | LAB AUTOMATION |
| CONTACT LENSES | TUBE SETS | GLUCOSE METERS |
| NEEDLE SETS | SUTURES | STENTS |
| AUTOINJECTORS | DIAGNOSTIC CASSETTES | POINT OF CARE TESTS |
| CATHETERS | AUTOMATED PHARMACY | CARTRIDGES |

TURNKEY SOLUTIONS FOR PRODUCT LIFE CYCLE MANAGEMENT

	PLANNING	REALIZATION	MANUFACTURING
PRE-AUTOMATION SERVICES	Total Cost of Ownership Modelling	CGMP Manufacturing Operations Expertise	Work Instructions Development
SYSTEMS DESIGN ENGINEERING	Proof of Principle Testing Design for Assembly and Manufacturability Simulation User Requirements Development	Requirements Training Specification Development	Improvements and Enhancements
AUTOMATED EQUIPMENT, INTEGRATION, DATA MANAGEMENT	Design UDI and Serialization	Build and Integrate Installation Commissioning and Qualification Engineering Turnover Documents	OEE Performance Monitoring, Reporting and Improvements Multi-Machine Repetitive Building (REM)
SERVICE AND SUPPORT	Automation Readiness Assessment	Training	Embedded Support Preventive Maintenance Service Bundles

WALKING WITH YOU ON YOUR AUTOMATION JOURNEY

Your production project does not start the day you decide to invest in manufacturing systems, nor does it end once the newly acquired system is installed. At ATS, we want to support you **from R&D to product retirement**.

PRE-AUTOMATION

Before you finalize your new product design or investment proposal, work with our pre-automation team to explore design options that can improve manufacturability, the automated manufacturing options available to you, the cost of implementing and 'owning' a particular solution, and more.

- Manufacturing concept development and evaluation
- Simulation
- Prototyping
- Product and process development support
- Proof of principles studies
- Total Cost of Ownership (TCO) analysis
- CGMP review
- Validation

AUTOMATION

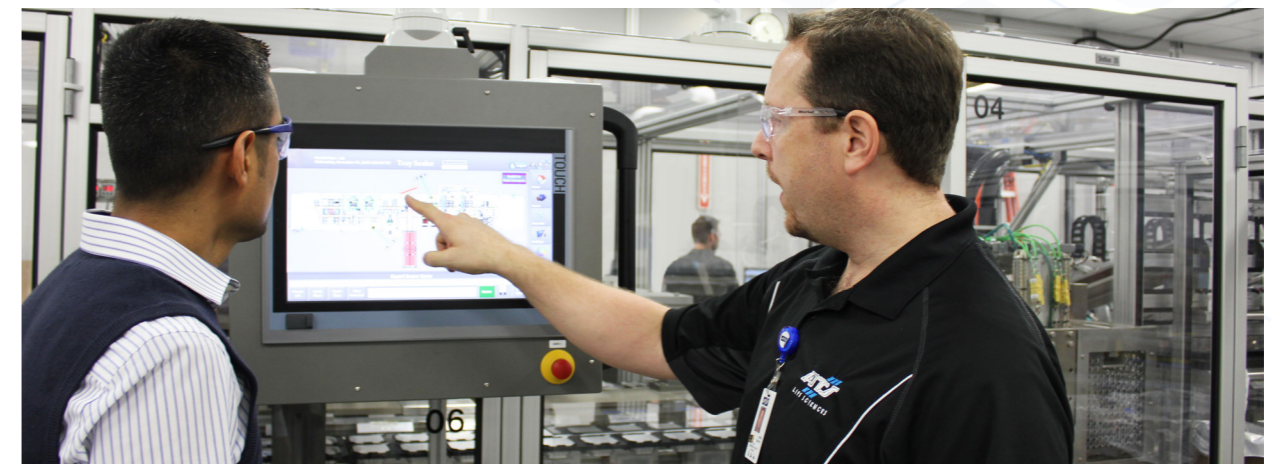
From design/build to commissioning and validation, our teams will work with you to deliver a successful project. We will partner and collaborate with your team, soliciting your input, suggesting alternatives, training your staff, and more, to ensure the end result is more than a machine, it is a solution.

- Design – Mechanical & Electrical, and Software
- Automation products
- Integration
- Inspection and testing
- Commission and qualification
- Repetitive Equipment Manufacturing (REM)
- Data acquisition and MES

POST AUTOMATION

Our design for maintenance culture, machine builder DNA and data-centric approach gives us a comprehensive understanding of the operation and maintenance of automated manufacturing systems and equipment. This reduces diagnostic effort and repair time, and allows us to prioritize actions to help optimize ROI for our customers.

- Comprehensive lifecycle services portfolio
- Large, multidisciplinary work force
- ISO-certified service centers in Europe and North America
- Highly refined processes for testing and optimizing complex automaton systems
- Global footprint



SELECTING THE APPROPRIATE AUTOMATION PLATFORM

When selecting a platform for the automated assembly of your product, there are many factors to consider including throughput, complexity and processing time for each assembly step, floor space, staff skill level, future flexibility and scalability, environment, etc. Dials, conveyors, linear movers and more, offer different benefits depending on the critical factors identified.

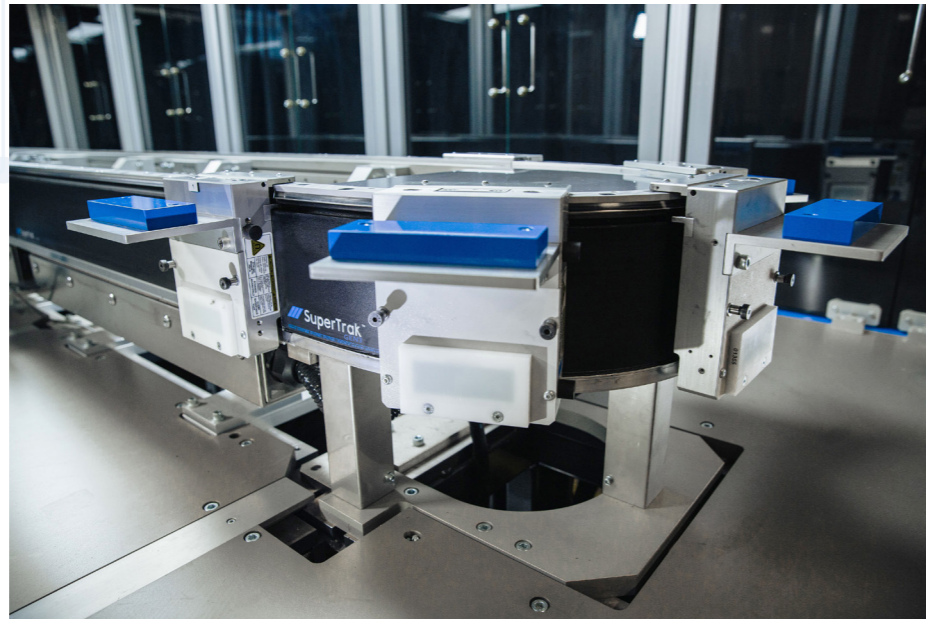
ATS' SuperTrak CONVEYANCE™ platform is a high performance, reliable linear motion solution that offers modularity, speed, precision, and smaller footprint as a result of reduced tooling and station redundancies. It can grow with you as you move from development to validation and into production, and as demand for your product grows.

SUPERTRAK GEN3™

Ideally suited for high-speed applications with a required high degree of accuracy in placement and processing. Adjustable acceleration and deceleration. 1m track modules with various turn options.

SUPERTRAK MICRO™

A high speed, low weight linear mover that facilitates multiple track manufacturing. This functionality and capability is ideal for rework or decision-based processing. Track to track switching at full speed for sort and divert purposes, 660mm track modules with dual sided shuttle systems, and light payload of 1.5-3kg.



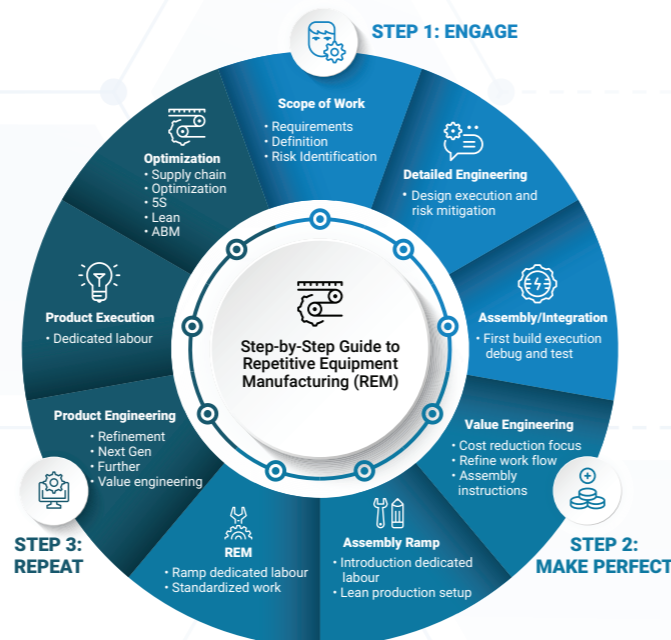
ATS SuperTrak GEN3™

CAN CONTRACT MANUFACTURING ADDRESS YOUR SUPPLY CHAIN CHALLENGES?

Complex automated systems like lab automation and diagnostic equipment are manufactured in quantities of hundreds per year—not sufficient quantities to justify fully automated assembly or conventional contract manufacturing, and generally requiring higher skilled labour. So, what do you do?

ATS Repetitive Equipment Manufacturing's team (or REM), specializes in the contract manufacturing of lower volume, higher complexity products. We work with you to apply lean methodologies, process flow optimizations, value engineering, supply chain cost reductions, and other strategies to help you meet your demand forecast efficiently. Your low risk, high return on investment engagement with REM will yield:

- Increased Velocity = Reduced Time to Market
- Just-in-time Delivery = Enhanced Working Capital
- Design for Manufacturing (DFM) = Lower Cost of Ownership
- Repeatability = Reliable Quality and Functionality



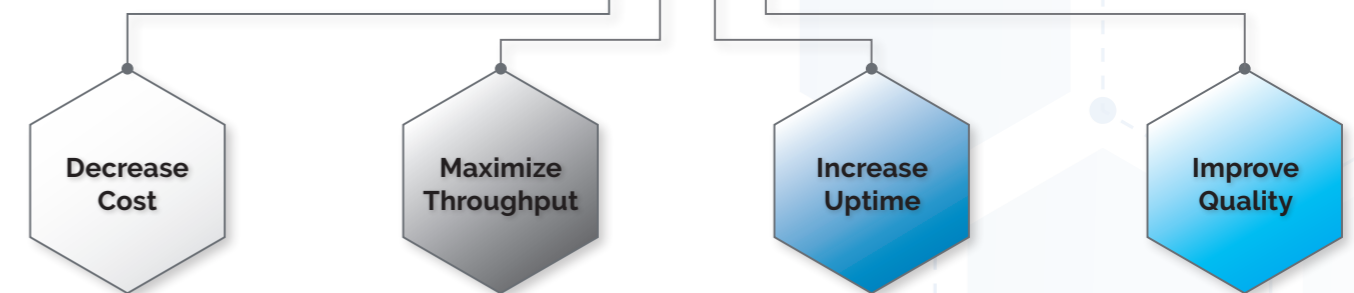
GETTING THE MOST OUT OF YOUR MANUFACTURING DATA

In a world of Big Data, the challenge isn't how to collect machine performance, operation, and condition data, and product quality data. It is how best to make the data **available and friendly for use**. The **insights** from the data can decrease operational expenses, maximize throughput, increase uptime, avoid costly downtime, and improve quality.

Illuminate™ Manufacturing Intelligence is ATS' smart manufacturing system that makes sense of the data generated by your essential machines, lines and processes that power and propel your manufacturing operations. It connects your entire team to the production floor in real time to enable informed and timely intervention and decision. It makes your data accessible.



illuminate™ MANUFACTURING INTELLIGENCE



- Improve equipment efficiency, yield, and lifespan through predictive maintenance
- Respond to issues quickly and unlock hidden performance
- Decrease cost through integrated statistical process control provisioning
- Keep the operational team informed and engaged to drive greater operational efficiency through real-time notifications

- Capture real-time OEE intelligence across lines, machines and locations for performance diagnostics and troubleshooting
- Identify production trends for top-down, bottom-up continuous improvement
- Achieve continuous manufacturing improvements and production line sustainability with data to decision in minutes

- Mitigate down time risk by tracking individual cycle counts on: wear parts, consumables, long-lead items or repairables
- Be prepared with color-coded early warning reminders and alerts
- Capture maintenance log reports or repair events to support: future failure analysis, equipment performance improvements, and continuous enhancement of the work management system

- Sustain product quality through synchronous and asynchronous processing
- Gain visual insight with live stream video of production root cause analysis, and troubleshooting issues
- Increase control and communication with integrated visual KPIs
- Facilitate visual machine learning on parts and product quality control inspection - decreasing hours of operator visual monitoring, performance fatigue, and quality faults

THINKING ABOUT ASSEMBLY DIFFERENTLY



For years, automated assembly has been approached from the perspective of product-specific manufacturing lines. Some degree of product variation could be accommodated but beyond that, a new machine would be required. But what if there was an alternative game in town?

ATS' Symphoni™ is an innovative, high-performance digital manufacturing platform constructed of standard plug-and-play building blocks, self-contained modules with ATS' SuperTrak GEN3™ as the linear motion conveyance for parts transfer and standard software control. Fully digital, the Symphoni Operating System allows infinite configurability of motions, each precisely synchronized with other motions to achieve robust and repeatable processing of one or more products. Once set, machine speeds can be indexed higher or lower; critical process times are preserved, and non-value-added movement eliminated.



Symphoni systems are standard assets configured with product-specific touch tooling. They are rapidly deployed, easily reconfigured, and manage variants with quick, economical tooling changeovers and product manufacturing recipe selection. Productivity is maximized, risk minimized.

Highly customized 'one-offs' are a thing of the past. With a Symphoni solution, you experience both high utilization and maximum total effective equipment performance with a smaller footprint.

- Variable speed capable up to 800 ppm
- Electronic Cam ("e-cam") pick and place motion
- Scalable from pilot to full production
- Robotic stroke rate of up to 200 per minute
- CNC-like tooling and programming changes
- 50% smaller in size and 90% less tooling*

*May not apply to all machine builds.

DELIVERING THE COMBINED EXPERTISE OF



ATS Life Sciences is an industry-leading, manufacturing automation provider to customers requiring CGMP compliance, performance, and reliability. Our innovative, turnkey systems address complex process, assembly, logistic and service problems. We have a world-class team, and an enviable portfolio of standardized and custom products, smart conveyance platforms, synchronous and asynchronous technologies, robotic solutions, and material handling systems.

Symphoni™ is a digital assembly automation technology featuring an unmatched combination of speed, versatility, and precision delivering business value in a scalable, modular platform. Symphoni™ combines these features in robust plug-and-play modules equipped with high-performance hardware and standard Symphoni™ OS software. Symphoni™ operates with astonishing speed and efficiency, eliminating non-value-added delays while carefully respecting essential process time.

SuperTrak CONVEYANCE™ platforms act as the foundation for world-leading automation processes offering higher availability, increased throughput, and improved quality. A linear motion-based technology, SuperTrak CONVEYANCE™ fundamentally changes the way you build and design automation. Individually controlled shuttles allow you to increase your throughput without an increased footprint, resulting in smaller footprint, less complex, and more adaptable systems.

Since 1986, **PA Solutions** has grown to be one of the leading providers of control systems and control systems solutions for the pharmaceutical and biotech industries. PA Solutions covers the entire production chain from API production to packaging. Key services include the design of control and process control systems, engineering of instrumentation control systems for process plants (EPCM), and the vertical integration of these systems into the overall corporate process systems.

Higher complexity, multiple components, and lower volume products are generally not attractive for fully automated assembly. But neither are they suitable for high volume contract manufacturing organizations, or CMOs. ATS **Repetitive Equipment Manufacturing (REM)** provides scaled contract manufacturing services, working with you to apply lean methodologies, process flow optimizations, value engineering, supply chain cost reductions and other strategies so you meet your demand forecast efficiently. Talk to us about our REM operation and how we can help you achieve faster delivery, lower design and build costs, high repeatability, and reliable quality and functionality.

IWK has been focusing on efficient, precise, and attractive packaging of life sciences and cosmetic products for more than 125 years. Our portfolio includes systems for tube feeding and filling, cartoning, collating, sorting, and handling. We also offer cobot systems for depalletizing and feeding needs. For pharmaceuticals, customers can rely on technical capabilities, resource capacity, high-performance reliability, and quality solutions.

Since 1994, **BioDot** has been specializing in the development, manufacturing and customization of precision, high-throughput, low volume, fluid dispensing systems for point-of-care diagnostics, clinical diagnostics, and other life sciences. Our portfolio of ultra-low (picolitre) to low volume (nanolitre to microlitre) dispensing systems are used in research, development and commercialization of lateral flow tests, flow-through tests, microfluidic devices, biosensors, immunoblots, and microarrays. We hold over 26 patents in the areas of low-volume dispensing and novel applications.

Choosing ATS is choosing a **Partner for Life™**. From **project conceptualization to product maturity**, we can offer you an end-to-end partnership with the right mix of expertise. The combination of our know-how and technologies with your application will deliver **integrated and customized solutions** for life sciences companies worldwide.

TRANSFORMATIVE AUTOMATED ASSEMBLY SOLUTIONS FOR MEDICAL TECHNOLOGY

Don't see your product? Have a unique or standard product? Get in touch to discover what automated assembly solutions may be available to you. Connect with ATS or reach out directly to a specialist partner to begin the conversation.



[ATSLIFESCIENCES.COM](https://www.atslifesciences.com)

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