



PARTNERS FOR LIFE SCIENCES COMPANIES

Your Projects Our Solutions

OUR SHARED STRENGTH IN TECHNOLOGY FOR
MEDICAL DEVICES, DIAGNOSTICS AND PHARMA

ASEPTIC PROCESSING • COMBINATION PRODUCT SOLUTIONS • CUSTOM AUTOMATION



ATS LIFE SCIENCES

ATS Life Sciences is an industry-leading, automated manufacturing solutions provider to customers requiring CGMP compliance, performance and reliability.

Our innovative, turnkey systems address complex process, assembly, logistic and service problems for medical device, diagnostics, and pharma companies around the world.

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.

ATS Life Sciences offers end-to-end services including pre-project investigation and justification, design/build and integration, contract manufacturing, and after sales support.



COMECER

Comecer is a leading provider of innovative solutions for the pharmaceutical industry and ATMP production. Comecer equipment is made to enhance quality and safety of the pharmaceutical process in every step of the manufacturing chain. Leveraging over 45 years of experience and know-how of pharmaceutical processes, Comecer's product portfolio includes a wide range of isolation technology and custom aseptic automation.

- Containment isolators provide best-in-class containment performance for handling and processing of high potency API, with modular or customized machines.
- Aseptic isolators provide a sterile environment (ISO 5) for drug processing, with a wide range of modular configurations possible to best fit processes like sterility testing and sterile formulation, and dedicated solutions for regenerative medicine applications, including the Flexycult incubation system, for advanced therapy labs.
- Containment or aseptic isolators integrated with aseptic automation are suitable for bulk sterile API and for fill-finishing of glassware, bags and combination products.

Success stories can be found in pharmaceutical companies, cell factories and large industrial groups worldwide.

PROCESS AUTOMATION SOLUTIONS

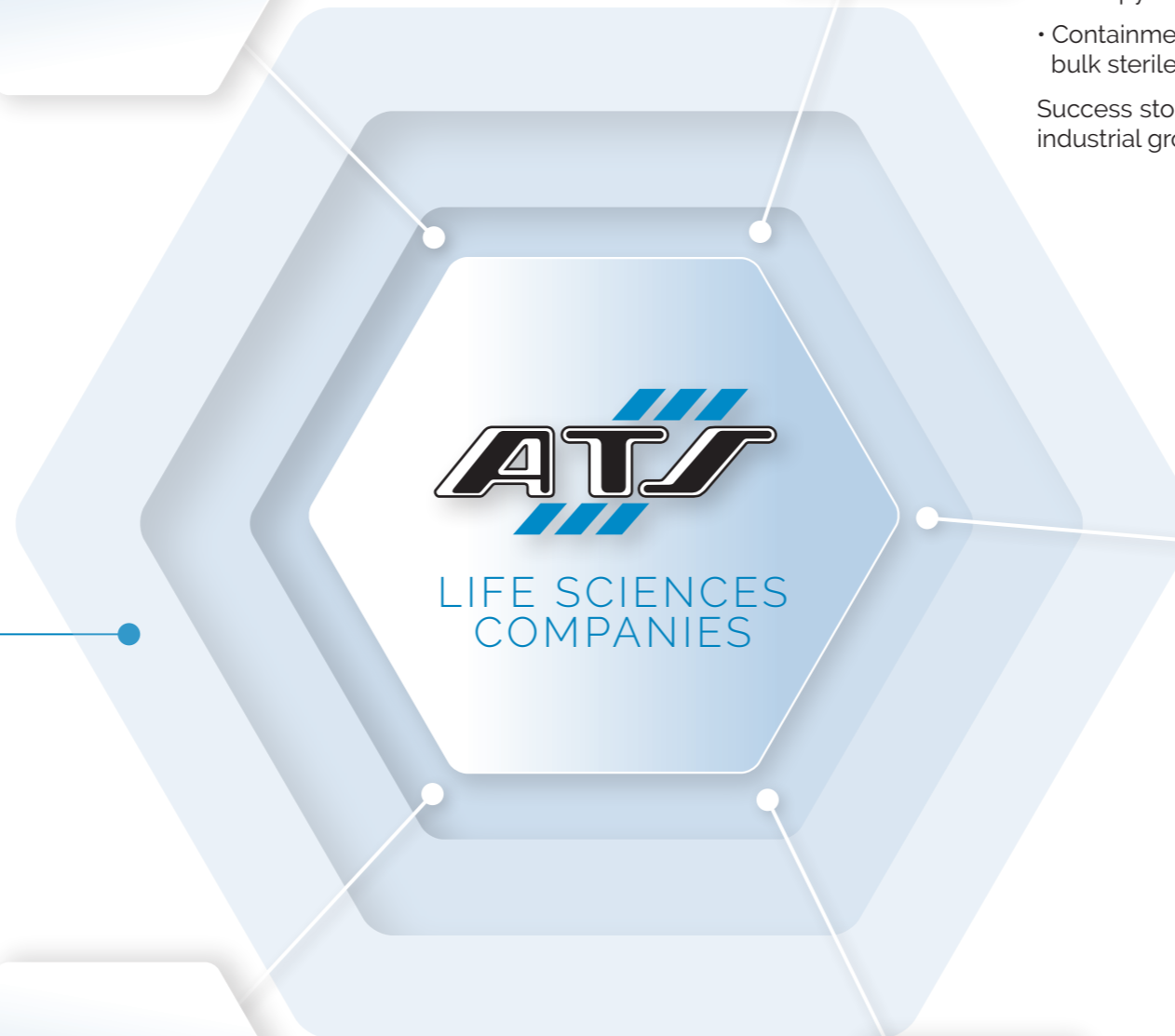
Process Automation Solutions is one of the leading independent providers of complete automation solutions for the pharmaceutical and biotech industries. PA Solutions covers the entire pharmaceutical production chain from API production to packaging.



Services include:

- Process optimization, digitalization, MES & ERP integration.
- Design and implementation of agnostic control and process control systems.
- Vertical integration of control systems with corporate process systems.
- Training, troubleshooting, enhancing, support and servicing of control systems.
- Tailor-made engineering EPCMV services.
- Controls and information management system integration.

*The combination of our people, know-how and technologies will deliver **integrated and customized solutions to pharmaceutical and biotech companies worldwide.***



BIODOT

For over 26 years, 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 area of low volume dispensing and novel applications.



IWK

IWK has been focusing on efficient, precise, and attractive packaging of pharmaceutical 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.

ATS Automation is a global, industry-leading automation solutions provider with 28 manufacturing sites and more than 5000 colleagues worldwide. Our companies in the life sciences sector design and build innovative automation solutions for the world's leading medical device, medical diagnostics and pharmaceutical manufacturers.

We provide life sciences companies with END-TO-END SERVICES for our high-quality, customized turnkey solutions by uniting the synergies and strengths of our ATS companies.

We are your ONE-STOP Partner for your next life sciences project!

ATS Life Sciences provides highly innovative customized automation and handling systems to medical device, diagnostics and pharma companies.

Comecer services pharma customers who require solutions for their containment and aseptic processing needs.

BioDot specializes in low volume (picolitre to microlitre) dispensing systems.

IWK concentrates on tube filling and cartoning.

And **Process Automation Solutions** is an independent provider of control systems and control system solutions.

WE ARE ALWAYS
THERE FOR YOU
**AT ANY STEP OF THE
AUTOMATION JOURNEY!**

Molding & forming
Palletizing
Sorting & washing

API & HPAPI processing
Aseptic formulation
Decontamination & sterilization
Cells processing

Assembling
Dispensing & manufacturing
Liquid, powder & tube filling
Feeding
Material handling
Labelling

Quality control
Visual inspection
Cartoning
Palletizing
Specialty packaging

PREPARATION

**DRUG
FORMULATION**

**MANUFACTURING
& PRIMARY
PACKAGING**

**TESTING &
SECONDARY
PACKAGING**



Our shared strength in technology for **medical devices, diagnostics** and **pharma**.

No longer independent suppliers but **partners**, our collaboration, collective experience and accumulated expertise makes us a powerhouse in life sciences automation and technology.

COMPONENT PREPARATION

Many pharma and medical technology processes begin with preparation of components.

Glass syringes, for example, generally require the forming of glass tubing into syringe bodies. Glass vials may require washing and drying. Components like safes for radiopharma or stoppers and caps for vials may require special handling for induction into isolators or containment spaces.

Product parts that are supplied in bulk must be singulated and oriented, while parts that are supplied in trays will need to be unstacked and unloaded for subsequent processing.

ATS Life Sciences and Comecer have experience with all of these scenarios and have designed, built and integrated solutions suitable for radiopharma and pharma applications.



Sorting & washing

Molding & forming

Palletizing



DRUG FORMULATION

Mitigating the risk of microbiological contamination and protecting the operator are critical considerations associated with API, HPAPI, and drug formulation. Isolators and automated processing offer solutions by creating a safe, aseptic environment that maintains separation between product and people.

Processes like mixing of different substances including excipients and active ingredients, managing living cells for R&D or production purposes, and preparing high potency products in part or in full, can be safely integrated into isolators. Manual and automated tooling installed within the isolator can improve efficiency and quality.

Together, Comecer and ATS Life Sciences have been successfully designing, building and delivering integrated isolator and automation solutions for our pharmaceutical customers.



API & HPAPI processing

Decontamination & sterilization

Cells processing

Aseptic formulation



MANUFACTURING & PRIMARY PACKAGING



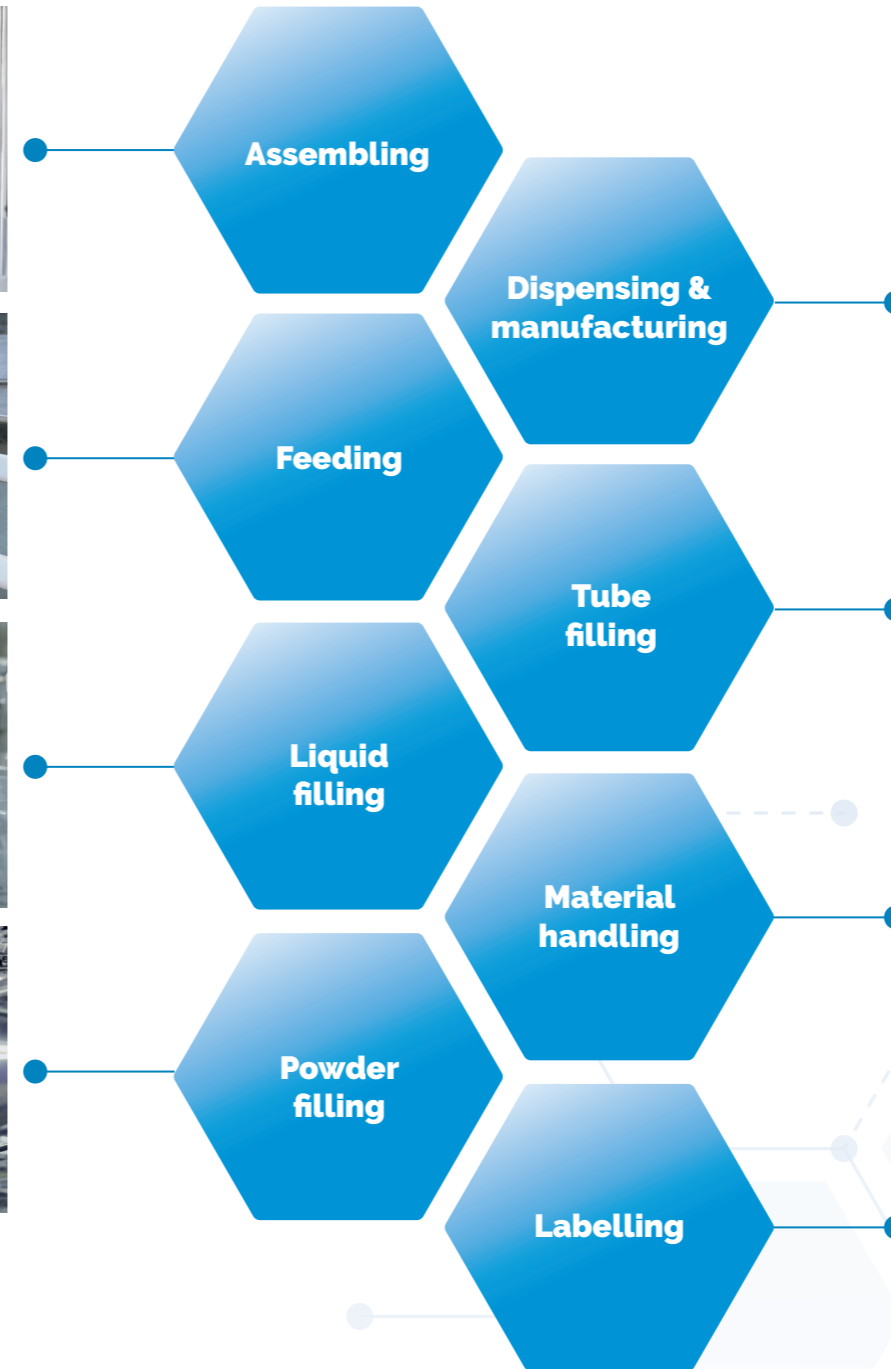
Environmental requirements for a product inform automated manufacturing design decisions.

Thus, experience and expertise in aseptic and contained environments and manufacturing automation ensure that the quality, craftsmanship, and CGMP compliance of manufacturing systems are appropriate for your product.

Life sciences products assume a variety of forms and presentations, each with a unique set of processes and requirements. Standardized solutions have limited applicability and customizations are often necessary.

ATS Life Sciences has automated and integrated many manufacturing and assembly processes including those for products with stringent environmental and sterility requirements. Comecer has an established history of designing controlled environments suitable for different ISO classification needs. BioDot has industry-leading solutions for extremely low volume dispensing. IWK offers a variety of tube filling systems suitable for a wide range of speeds and including tube feeding or cobot solutions. And Process Automation Solutions has provided many integrated control and information management systems that link production systems together with business, manufacturing, and enterprise planning systems. Collectively, these ATS companies offer a turnkey experience.

Our innovative manufacturing solutions use smart conveyance platforms with integrated tooling, synchronous and asynchronous technologies, flexible robotic systems, standard and customized products, as well as material handling devices. Whether integrated into an isolator or containment system or installed in a cleanroom, the final solution will meet your requirements and expectations.

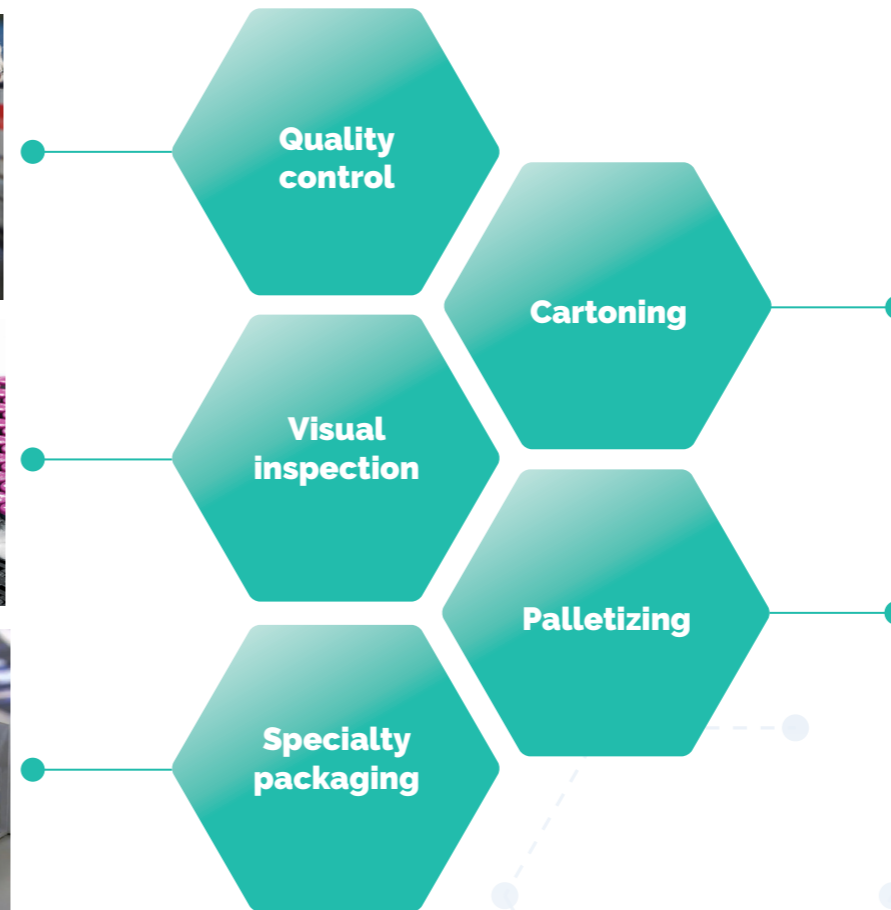


TESTING & SECONDARY PACKAGING

We incorporate in-process testing and quality control solutions into our equipment. From sensors to measurement systems, we work with you to incorporate the appropriate checks and verifications so that the operating environment, process steps, and in-process and finished product meet your requirements. With vision systems, we can perform more demanding inspections, for example text accuracy and legibility, positional accuracy, and dispense volumes, and maintain image libraries for traceability purposes. Collected data and reports can be accessed in real time and used to fine tune operations and for electronic batch record purposes. And if you need in-process or finished product samples for quality control purposes, we will include in our design the ability to safely retrieve the samples while maintaining complete traceability.

IWK offers a wide range of vertical and horizontal cartoners as well as toppers designed for pharmaceuticals, medical technologies, and cosmetics. Single packs or multipacks of the same or different product, with or without inserts, for tuck-in or glue closure are possible. Speeds as high as 800 cartons per minute are possible. Feeding systems and robotic systems are also available.

When standard cartoning solutions are inadequate, ATS Life Sciences has integrated third party equipment, like thermoformed tray machines, or purpose-built solutions for specialty packaging with our automated manufacturing systems. Final product formats like humidity-controlled packs, tubs, trays, kits, and more are a few of the packaging challenges we have solved. End-of-line solutions like case packers, labellers, and palletizers are all part of the ATS turnkey service offering.



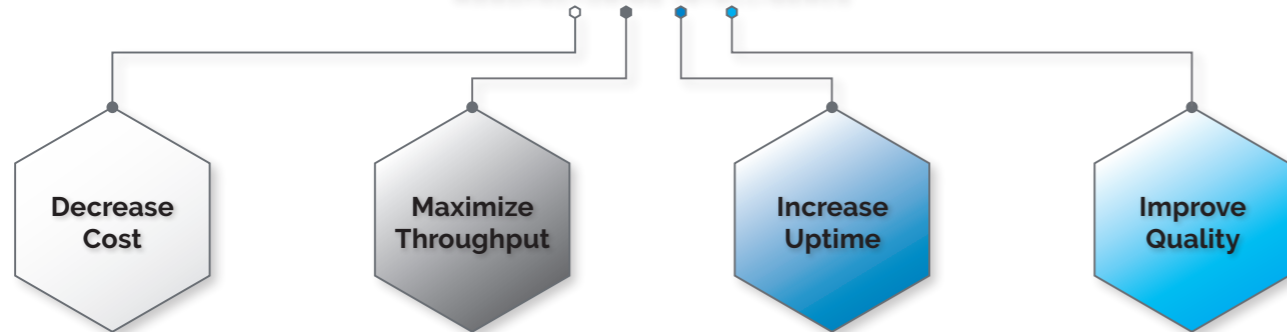
ILLUMINATE MANUFACTURING INTELLIGENCE

Illuminate™ Manufacturing Intelligence (Illuminate™ MI) is the Smart Manufacturing Platform and factory-floor management system that provides critical insight into the essential machines, lines and processes that power and propel manufacturing business.

- Enables real-time OEE intelligent manufacturing
- Enables autonomous operation
- Allows for n-tier data drill-down & management
- Connects real-time machine performance & diagnostics
- Informs of course corrects processes
- Integrates visual KPIs
- Unlocks hidden performance with video capture
- Predicts & tracks planned maintenance activities
- Enables real-time notifications & communication
- Enables insight into production outcomes before they happen
- Automates parts management & integrates statistical control
- Sustains product quality through synchronous & asynchronous processing
- Empowers data-to-decision, in minutes



illuminate™ MANUFACTURING INTELLIGENCE



- Improve equipment efficiency, yield, and lifespan through predictive maintenance.
- Respond to issues quickly and unlock hidden performance.
- Decrease cost through automated parts management and 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.
- Monitor operations anytime and anywhere from our turnkey, integrated, and secure singlepoint IIoT platform.
- Achieve continuous manufacturing improvements and production line sustainability with data-to-decision, in minutes, capability.

- Mitigate down time risk by tracking individual cycle counts on: wear parts, consumables, long lead items, or repairables.
- Proactively optimize spares provisioning and inventory.
- Be prepared with colour-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.

CONTAINMENT TECHNOLOGY

The challenge is to always design pharmaceutical equipment that is able to guarantee the proper environment classification for a correct aseptic process, and containment performance for safe handling of pharma & ATMP products.

OUR APPROACH

By owning the know-how to design and manufacture isolators and aseptic automation, Comecer is capable to fully supply integrated solutions in respect of the current GMP guidelines. Acting as a flexible system integrator, Comecer starts by identifying equipment design through a tight cooperation with customers to match and exceed process requirements. The final result is achieved using a combination of isolation technology, custom automation solution and off-the-shelf process equipment integrated in a single unit in terms of ergonomics, safety, performance and validation.



SOLUTION HIGHLIGHTS

With more than 45 years of experience and multiple applications successfully completed, Comecer's approach fosters a win-win solution. This kind of involvement in fact establishes a single interface not only for the design stage but also for the line reliability and accountability, together with a consistent approach to regulatory concerns.



ADDED VALUES OF THE ISOLATOR APPROACH



Integrity

Your product will not be exposed to a different environmental grade than "A". There are no breaks in the cleanliness chain and the integrity of your process is not put at risk.



Flexibility

An isolator where you run a disinfection cycle is a brand new device. Its re-use for a successive batch or a successive procedure is fast and reliable.



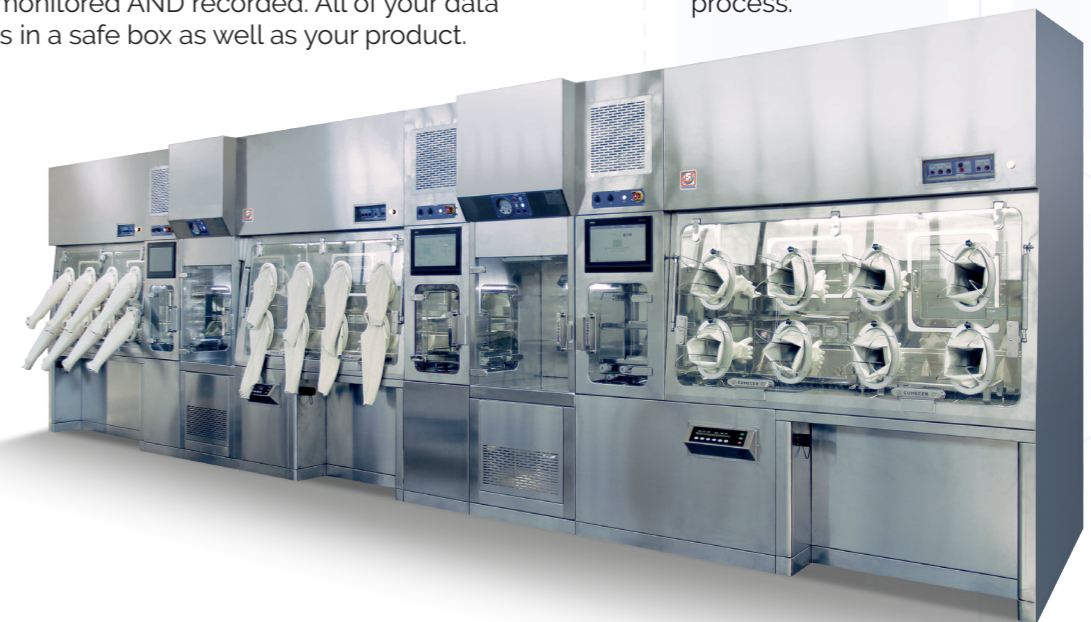
Traceability

The isolator is a fully CFR 21 Part 11 computer-controlled system, where all the environmental and process variables accounted for being used in your batch release can be easily and automatically monitored AND recorded. All of your data is in a safe box as well as your product.



Quality

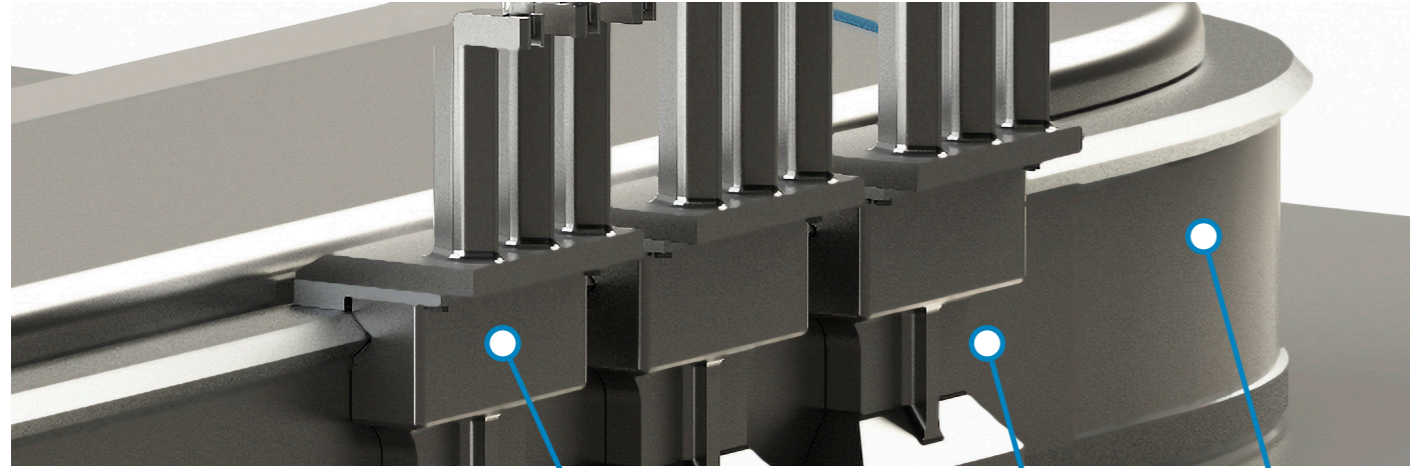
Unmanned environments grant greater cleanliness, since humans are the greatest source of contamination. The high classified space is limited and this accounts for a much better control of the environmental variables (T, RH) which can influence the stability of the process.



SUPERTRAK PHARMA™

Now in its third generation, the **SuperTrak CONVEYANCE™** platform is a linear motion based technology that allows manufacturers to achieve world-class automation through its integrated features, speed, precision, and independent shuttle control.

With the introduction of **SuperTrak PHARMA™**, pharmaceutical manufacturers will, for the first time, be able to utilize the platform as the main product mover in an aseptic environment.



Product Features

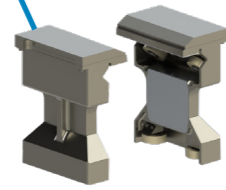
- Stainless steel construction
- ISO 5 cleanroom & IP65 rated
- Individually controlled shuttles
- No exposed lubricant
- Modular components

Popular Applications

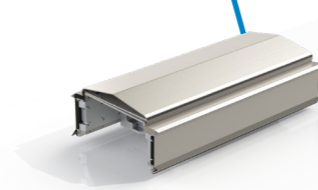
- Aseptic filling and processing
- Aseptic drug delivery devices assembly
- Aseptic wearable patch assembly
- Downstream aseptic processes like fill and finish

Customer Benefits

- Increased productivity and throughputs with new track design
- Reduced downtimes with asynchronous motions and independent shuttle control
- Controlled air flow with speed regulation
- No particulate generation or openings for microbe migration
- Anti-sloshing technology for filling applications available
- Available as a fully integrated solution with Comecor isolator



SHUTTLE



STRAIGHT MODULE



TURN MODULE

PRODUCT SPECIFICATIONS

VALUE

Materials	316L
Maximum Speed	2.5 m/s (8.2 ft/s)
Acceleration	1 g with 5 kg (11 lb) payload
Payload	5 kg (11 lb) per pallet
Stop Repeatability (Straight Section)	± 0.01 mm (0.00039 in)
Stop Repeatability (Turn)	± 0.025 mm (0.001 in)
Communication	Ethernet / IP, Profinet, Powerlink, and EtherCAT
Power Consumption	10 W / section, 150-225 W / pallet

AFTER SALES, SERVICE & SUPPORT

At ATS, we pride ourselves not only on the systems we provide to our customers but on the after sales services and support we offer. With presence in over 60 countries around the world, we are always prepared to assist.



PRE-AUTOMATION

- Manufacturing concept development and evaluation
- Simulation
- Prototyping
- Product & process development support
- Proof-of-principles studies
- Total Cost of Ownership analysis
- GMP review
- Validation



AUTOMATION

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

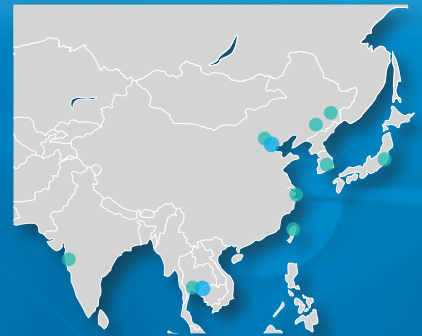
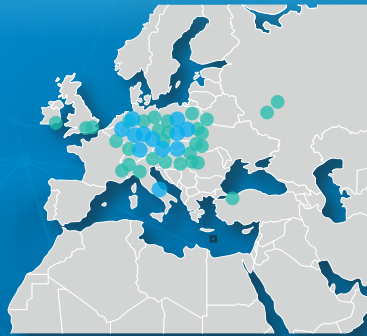


POST-AUTOMATION

- Operational support & efficiency improvement
- Predictive maintenance
- Preventive maintenance
- Service agreements
- Training & mentorship
- Spare parts
- Modification, upgrades & line relocation



LIFE SCIENCES COMPANIES



WOODBRIDGE
CAMBRIDGE
WIXOM
ROLLING MEADOWS
LEWIS CENTER
PARSIPPANY
IRVINE
HILLSBOROUGH

NEUWIED
KOBLENZ
LUDWIGSHAFEN
STUTENSEE
LUTHERSTADT WITTEMBERG
ZWICKAU
EDENBRIDGE
JOURS
ST. GEORGEN
CASTEL BOLOGNESE
INGOLSTADT
MUNICH
CHICHESTER

TIANJIN
SAMUTPRAKARN
SHANGHAI
TAIPEI
SEOUL
MUMBAI
TOKYO
BANGKOK
JAKARTA

● Manufacturing Facilities
● Offices

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