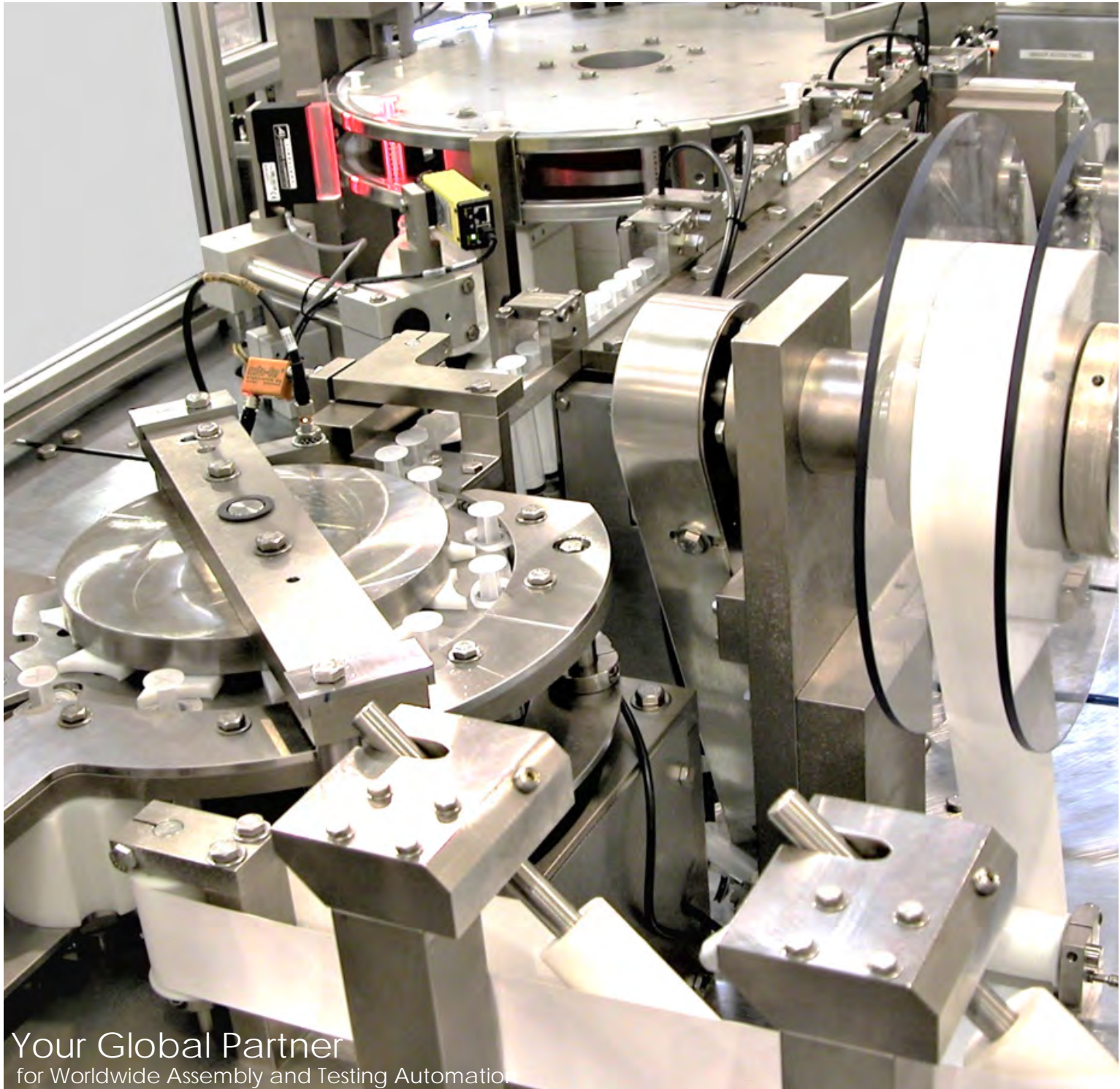


Life Science

MedTech Automation Systems



Your Global Partner
for Worldwide Assembly and Testing Automation

bbsautomation.com



100 Years of Solutions for Life Science

Project Development & Collaboration

BBS Automation has a wealth of experience designing and building automated systems for the life science industry, experience developed over 100 years. BBS has highly skilled engineers and technicians with the knowledge to design and build systems that meet the FDA and EMA requirements. Being proficient with the required regulations allows our customers a clear path for going to market.

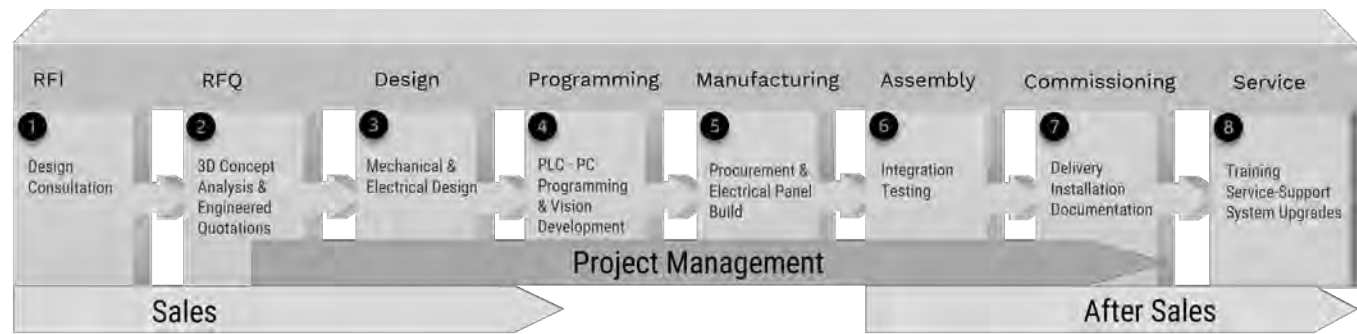
BBS has a proven track record delivering systems on-time and on-budget. With a rigorous project management process in place, your project will be completed on schedule, with transparency, and a strong adherence to quality.

BBS begins project discussions with a collaborative design consultation attended by a dedicated BBS Sales Manager and a specialized Applications Engineer. A Requirements Traceability Matrix will be reviewed to provide a clear picture of how each requirement is linked to the overall project goal.

With BBS's capabilities, medtech projects move from proof of concept to verified repeatable processes, with committed adherence to product requirements from the onset, so the agreed upon plan stays its course. BBS will provide confidence that your system will be reliable, efficient, and compliant to all regulatory requirements.

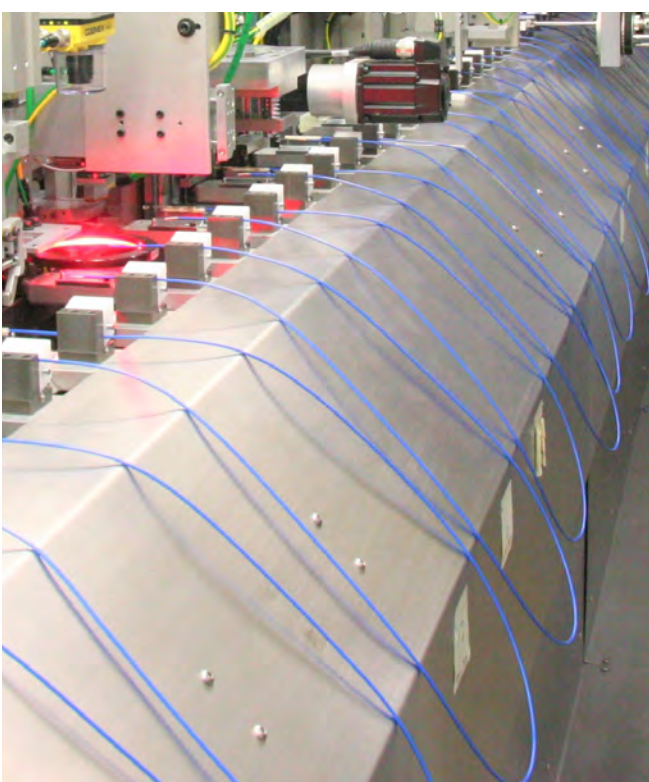
The 8 Phases


A Common Path to a Successful Project



Future-Forward Manufacturing Technologies

Design for the present while keeping future production goals on the horizon through scalable system design. BBS systems for Medtech applications can operate at an output of up to 1400ppm, but BBS partners with all size manufacturers and can install in all environments, whether systems are being integrated into a state-of-the-art clean room facility, or retrofitting legacy equipment...BBS is your partner for manufacturing.



<h3>System Platforms</h3>  <ul style="list-style-type: none">Asynchronous AssemblyContinuous MotionIndexing: Carousel, Linear, RotaryRobotic Assembly	<h3>Preparations</h3>  <ul style="list-style-type: none">De-palletizingFormingMoldingSiliconizingSortingWashing	<h3>Core Competencies</h3>  <ul style="list-style-type: none">Custom DispensingCustom feeding SolutionsDosingFillingIntegrated Assembly ProcessesMaterial HandlingVision Guided Processes
<h3>Quality Control</h3>  <ul style="list-style-type: none">APS SoftwareEBR ReportingInspectionMESOEE Performance MonitoringTestingWMS	<h3>Packaging</h3>  <ul style="list-style-type: none">Bagging/BoxingLabelingLaser MarkingPouchesSterile BarrierThermoformingTrack & Trace	<h3>Standard Systems</h3>  <ul style="list-style-type: none">AccuSpenseAGV/AMR TechnologyEamon Cam SystemGlass Barrel Inspection SystemHigh Speed Feeding SystemsPalletizers



Kahle Automation High-Speed Assembly Solutions

Kahle Automation, a BBS company, is a worldwide supplier of custom-built automation for the medical device and pharmaceutical industries, with extensive experience in glass, plastic and metal component process and assembly. Kahle is a partner providing proof of principle support, launch line production through high-speed automation, system integration, custom designs, on-site support, and full validation.

Applications

Kahle manufactures high speed automation to assemble all types of needles from standard needles at rates of **1,400ppm** to micro needles that measure only 6mm long at 480ppm. Kahle also offers a full line of machines to manufacture **Syringes, Safety Devices, IV Catheters, and Tubing Set assembly and processing.**

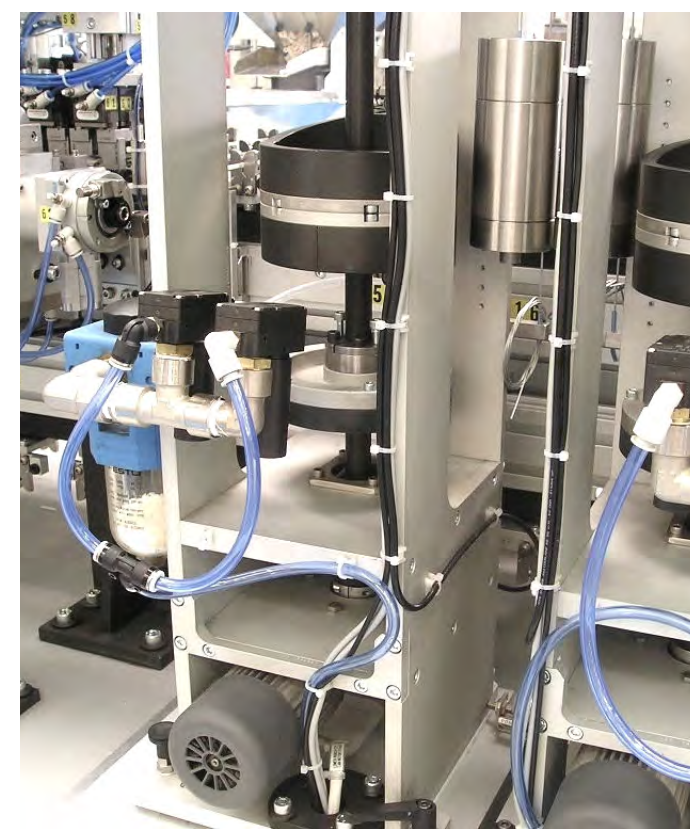
Kahle dedicates **182,500** engineering hours a year designing automation for the drug delivery and pharmaceutical manufacturing community with a comprehensive portfolio of proprietary technology to meet the unique needs of our customers.



Automation Expertise

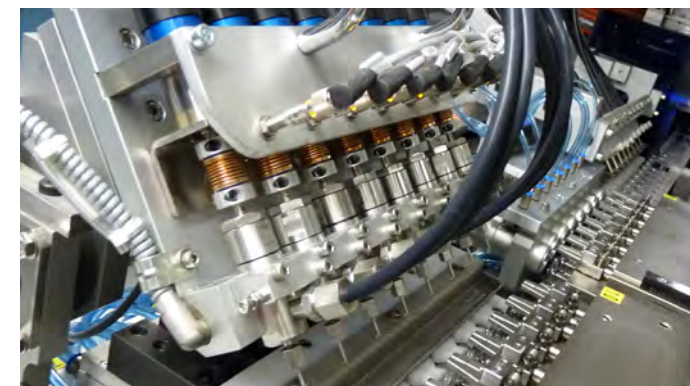
Our Solutions Don't Come in a Box

Kahle continues to advance every aspect of the design and build process by continually improving and developing new technologies. The Kahle EAMON Modular Cam Driven Station has a repeatability of $\pm 0.03\text{mm}$ accomplished without the use of linkages or mechanical leverage between the cam follower and end of arm tooling. There is a 1:1 ratio between the cam profile and the tooling motions allowing for better intuitive analysis of motion and adjustment.



AccuSpense

The AccuSpence Fluid Dispensing System allows Kahle to combine speed, accuracy, and precision to dispense fluids with a wide range of viscosities to a tolerance of ± 1 micro liter, with the minimal footprint required for high-speed automation.

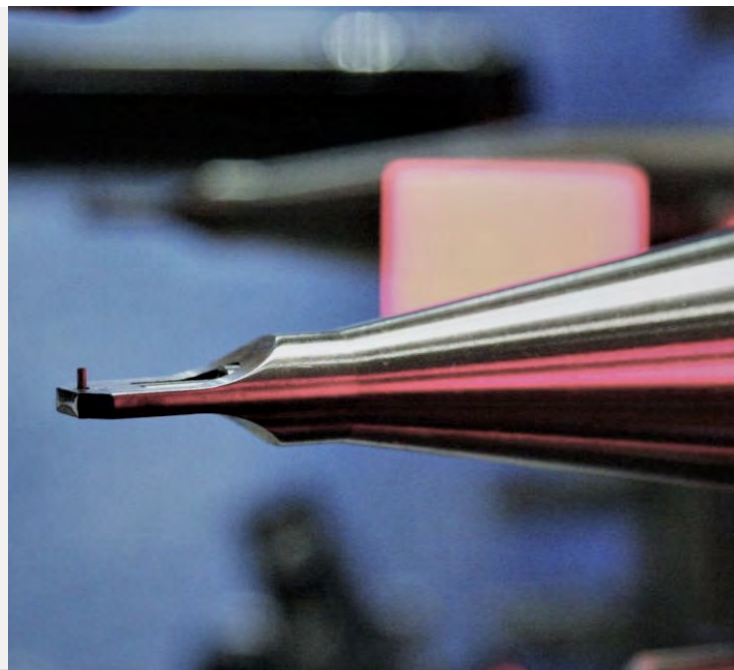


Feeding and Material Handling

Kahle understands that importance of the feeding of the components for a successful project and designs and builds all their own feeding and material handling systems to meet the component and equipment's needs simultaneously which eliminates project risk.



A sample of BBS MedTech Proficiency



GAMP 5 Made Simple



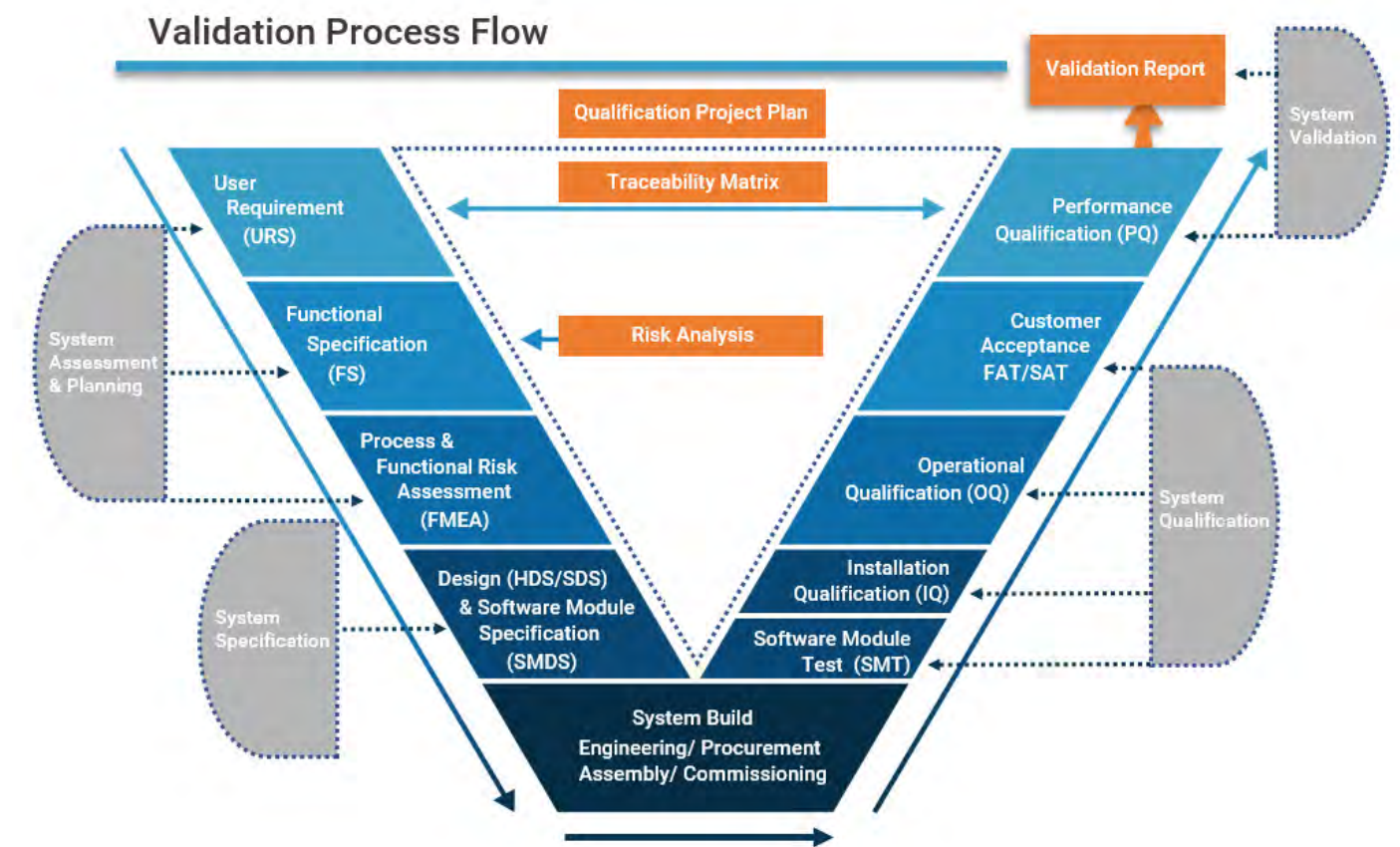
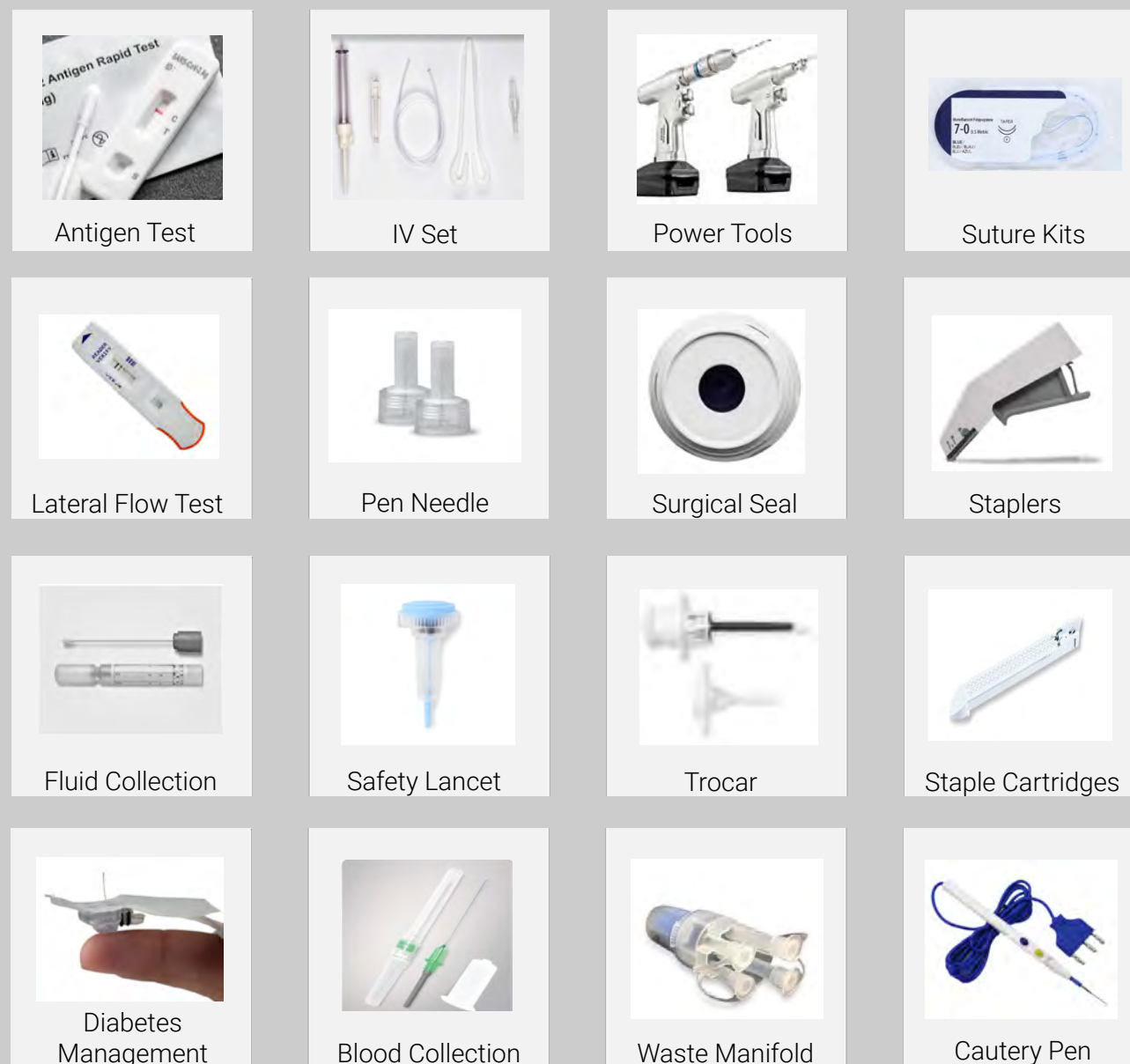
Streamline your Validation Strategy

BBS understands the importance of Validation and the Qualification of assembly processes, not only to comply with 21 CFR 820, but to prove repeatable and uniform product quality.

Validated equipment results in consistent repeatability, less rework and redesign, mitigation of rejects, faster time to market, and lower production costs. BBS will develop a qualification plan that ensures equipment is safe, and the produced product meets design specifications.

After completion of the validation process, BBS delivers a complete documentation package. This allows comprehensive control of all relevant system processes that can be submitted for approval applications to streamline the path to market.

Achieving 100% customer satisfaction is the top priority for BBS. This requires a strong dedication to not only the immediate customer, but to their customers. This dedication is essential for creating a strong reputation and long-term success; all from one source.





BBS Services- All From One Source



Consistent Quality Through Standardization

BBS is committed to quality, safety, and a responsibility to the environment. BBS is ISO certified at all manufacturing locations because quality management provides the framework for producing consistently high manufacturing standards. Through standardization, BBS ensures that the customers will receive a safe and reliable product.

BBS Manufacturing Certifications

BBS Location	ISO Certification	Clean Room Manufacturing Classification	All Other Certifications
Europe	  		  
North America			  
Kahle Italy	  		 
Asia			  

Reactive Maintenance



We offer emergency automation support and maintenance services both virtually and on-site. Reach out to learn more: [Contact US](#)

Prescriptive Maintenance



We combine Condition Monitoring information with Artificial Intelligence that will monitor a variety of data points and predicts required maintenance in real-time: [Learn More](#)

Scheduled Maintenance and Training



Regularly scheduled maintenance and training can save you money by increasing the lifetime of your automated equipment: [Learn How](#)

Equipment Retrofits



Enhance your existing equipments functionality by adding the latest engineering features or **IoT** technology solutions with BBS services: [Learn More](#)

Predictive Maintenance



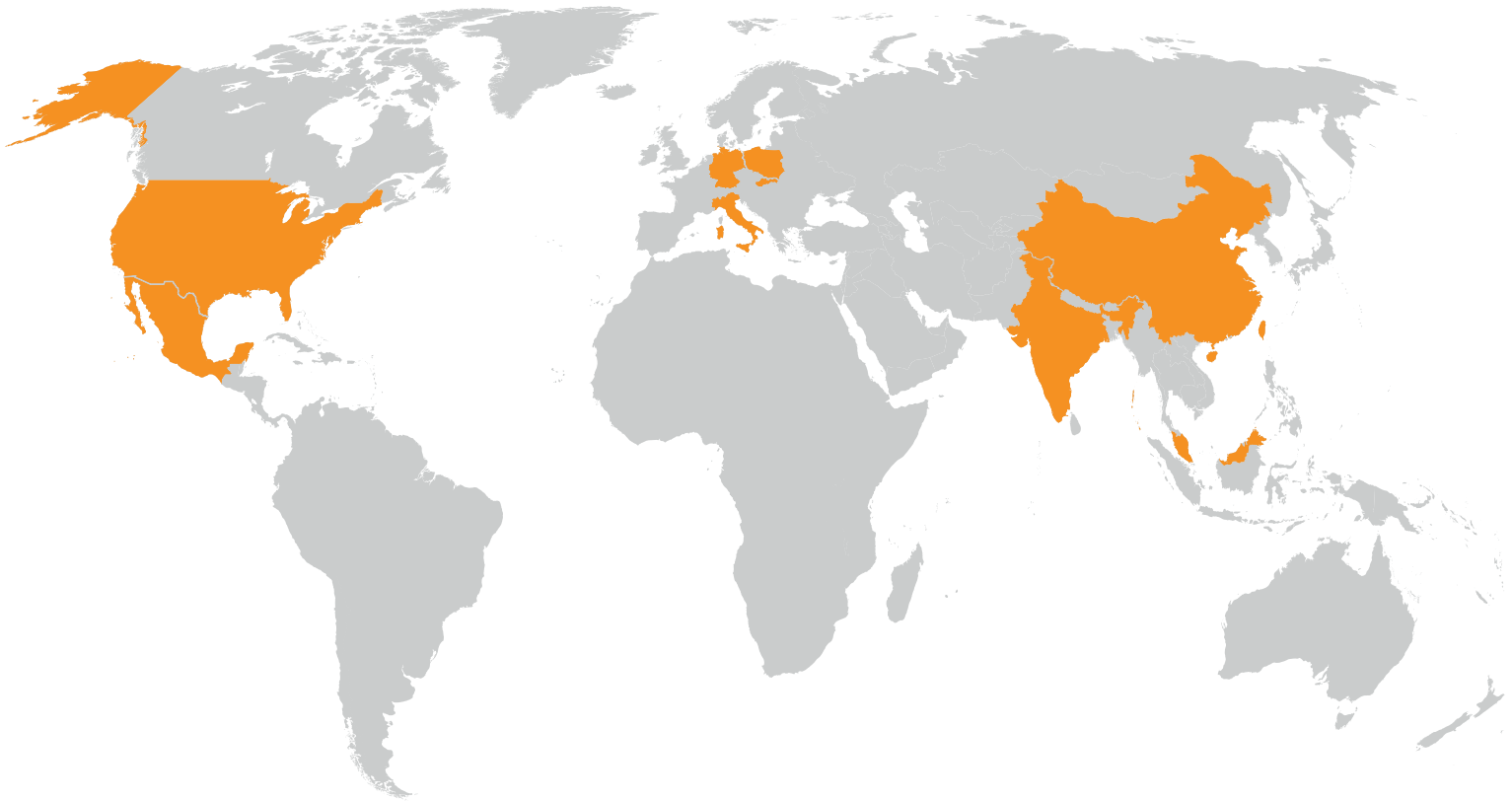
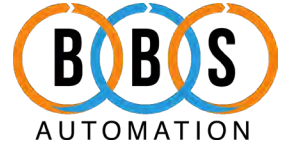
Predict and prevent, see failure before it happens with BBS services. Minimize disruption and Maximize operating efficiency with our Smart Machine solutions through ANT: [Learn More](#)

Spare Part Packages



BBS is your source for replacement and spare part services. Our global footprint allows for quick distribution to your manufacturing locations, wherever they may be: [Contact Us](#)

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