



PIA AUTOMATION

EXCELLENCE AT EVERY STAGE OF THE PRODUCTION PROCESS

HEALTHCARE

Uncompromising commitment to excellence is the key to the fulfillment of the highest expectations in the areas of patient safety and quality. Here, we have proved that PIA production methods can deliver the highest levels of product safety.



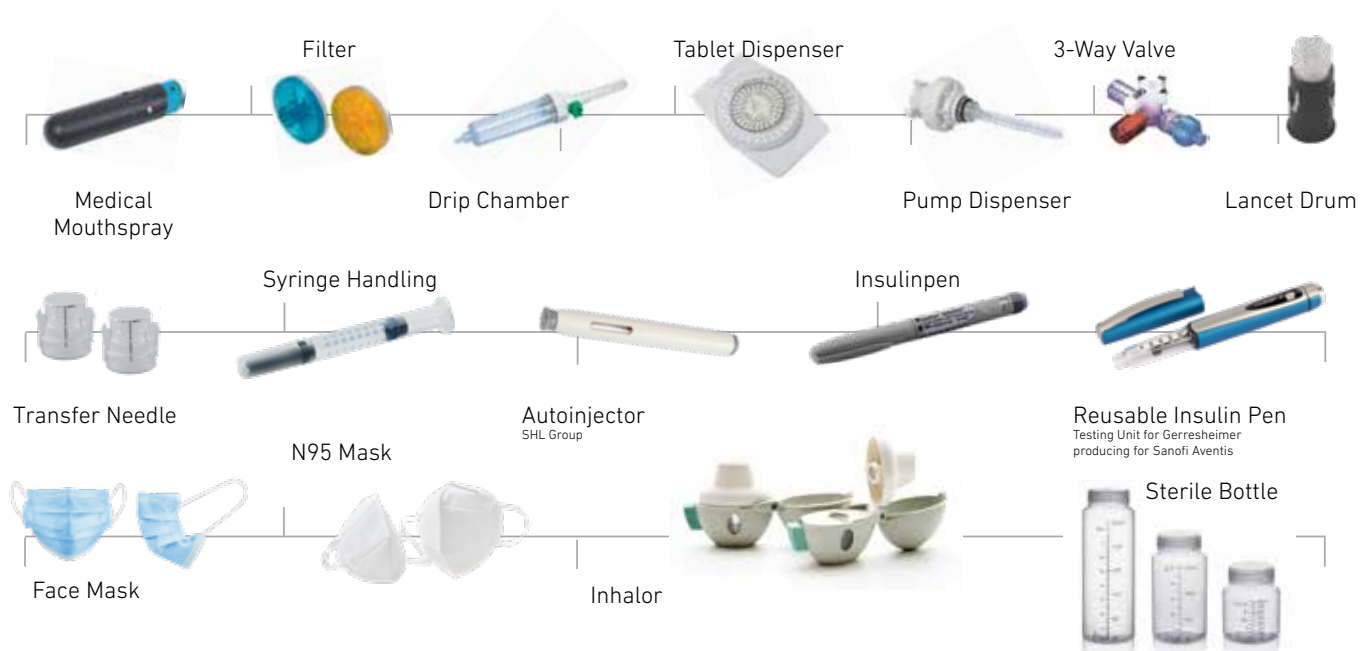


ONLY ABSOLUTE QUALITY COUNTS HEALTHCARE

Demographic dynamics in society call for ongoing new medical and pharmaceutical technologies and products. For more than 50 years, PIA Automation has been a reliable partner and system vendor in the field of cost-optimized assembly of complex components.

PIA Automation develops and manufactures versatile, technically and economically mature assembly automation systems – among them rotary indexing systems, linear transfer systems, customized systems and robot cells. Future-oriented complete solutions from PIA Automation are valued as the benchmark for specific assembly tasks in the medical and pharmaceutical industry. We support our customers with manual workstations for clinical trials or proof of principles, with semiautomatic production lines for small lots or fully automated systems for serial production. A high degree of standardization, in connection with proven in-house knowhow in qualification and documentation, enables PIA Automation to realize short time-to-market cycles when compared to competitive systems.

Together with our customers we develop testing concepts in order to design devices which are safe in functionality and handling. PIA Automation's design-for-automation principle achieves decisive cost advantages in regard to return on investment. Thus, partnering with PIA Automation already begins in the early stages of a design. Because sustainability is our objective!



INNOVATIVE PRODUCT LINE FOR MEDICAL SYSTEMS

MEDITEC® - ASSEMBLY CELLS

PIA Automation's meditec® assembly cells combine the advantages of pre-assembled cells - namely high availability and short delivery times - with options for customizing and upgrading according to customer demands without neglecting GMP requirements. The cells are scalable in size and design and are suitable for manual workstations, semiautomatic machines or fully automated assembly systems with highly dynamic transport systems. For optimum space utilization within the cell and cleaning ease electric and pneumatic components can be placed below the base plate. By the optional use of controlled inlet and outlet openings or ventilation boxes the cell can be equipped with laminar flow.



MEDITEC® - DRIVE SYSTEMS

To transport components between single processes PIA Automation uses workpiece carrier systems, rotary indexing tables and highly dynamic and flexible linear direct drive systems. The drive systems themselves and the interaction with further PIA meditec® solutions provide a cost-effective assembly system for different cycle times perfectly usable in GMP regulated environments.



MEDITEC® - PICK&PLACE HANDLING

To handle components according to GMP PIA Automation uses handling systems developed inhouse or conventional systems qualified for medical applications. The handlings are designed to avoid movements above components. Process and component specific movements above parts will be covered accordingly ruling out contamination of parts. Closed surfaces and low dead-space design provide cleaning ease. meditec® pick&place handlings can be equipped with servo drives, cam drives or pneumatic cylinders according to task and cycle time.



MEDITEC® - HMI/SCADA SOFTWARE

Software validation and compliance with international rules (e.g. FDA CFR Part 11) play an important role in medical technology. Therefore PIA Automation counts on well-proven and standardized software products which meet all requirements and can be adjusted according to customer demands. The innovative user interface offers an intuitive operation and allows a quick overview of various relevant machine and process data.



- ✓ Audit Trail
- ✓ Electronic Signature
- ✓ User Authentication
- ✓ Login Controls
- ✓ Batch Report
- ✓ Data Security



PIA AUTOMATION

YOUR PARTNER IN PRODUCT DESIGN

PHASE I

Support with concept development from PIA Automation's perspective

Result:

Feedback
Preliminary definition
Proof of Principles for Phase II

PHASE II

Support with design, creating manufacturing concepts, necessary proof of principles

Result:

Manufacturing concepts (HV draft, LV final)
Completed PoP

PHASE III

Creation and qualification of LV production systems

Result:

Qualified production systems for creating devices for design verification

PHASE IV

Creation and qualification for manufacturing systems for serial production

Result:

Qualified systems for serial production

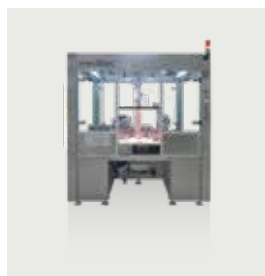
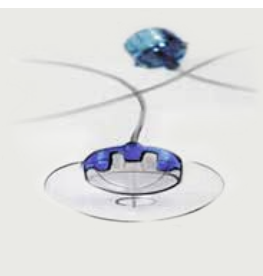
PHASE V

Production support for ongoing production e.g.

- Optimization
- Service
- Maintenance

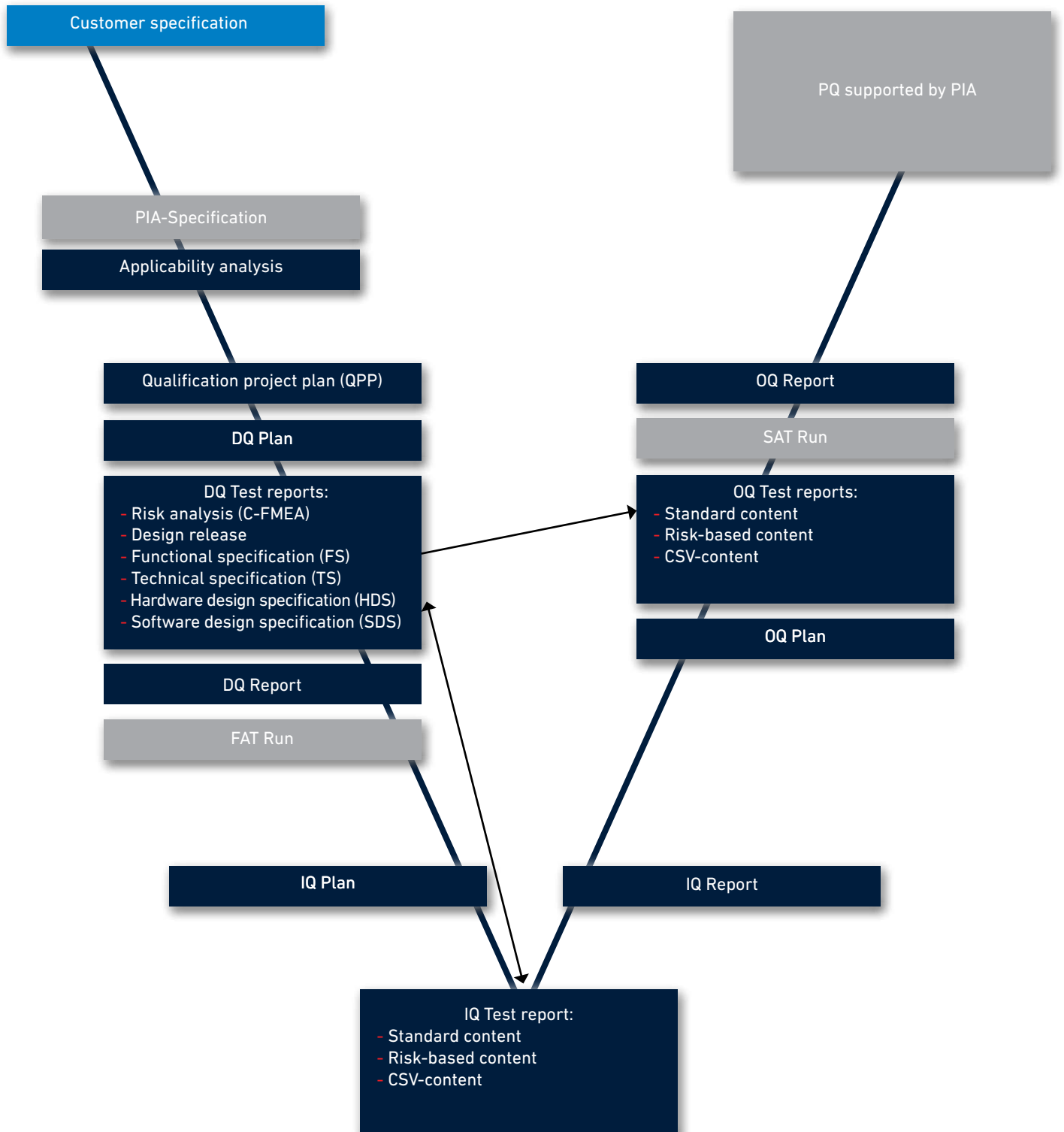
Result:

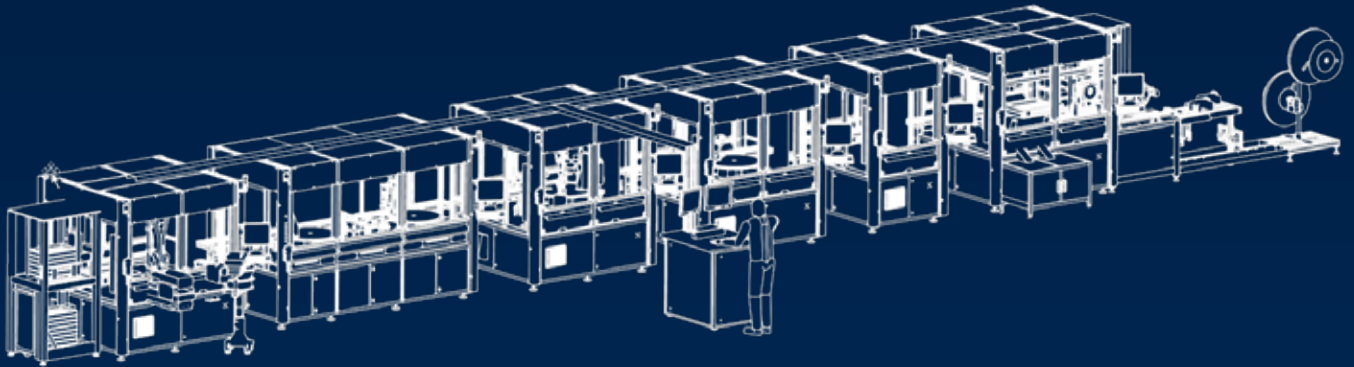
Efficient ramp-up phase with higher output



OUR SERVICES

QUALIFICATION AND VALIDATION PROCESS





TECHNOLOGIES AND PROCESSES

THE APPROPRIATE TECHNOLOGY FOR EVERY REQUIREMENT

FEEDING

- Continuous conveyors
- Bowl feeders
- Palletizers
- Vibratory feeders
- Timing belt systems
- Vibration plates
- Separators

MOUNTING AND DOSING

- Greasing
- Filling
- Flanging
- Snap fit
- Pressing
- Casting
- Glueing
- Crimping
- Curing (UV, ovens)
- Cutting
- Screwing
- Welding

CHECKING

- Camera inspection
- Image analysis
- Leak and low test
- Ultrasonic test
- Borne noise test
- Electrical test
- Torque measurement
- Circumferential backlash measurement
- Force measurement
- Displacement
- Timekeeping
- Resistivity

MARKING

- Labeling
- Laser marking
- Embossing
- Pad printing
- Ink jet printing
- Digital printing
- Engraving
- Scribing

PACKING

- Palletizing
- Packing in blister
- Packing in tray
- Packing in nitrogen atmosphere

SPECIAL MEDICAL PROCESSES

- precision filter stamping
- heat sealing
- liquid media dispensing
- siliconization
- separating, placing and glueing needles and tubes
- ultraviolet curing
- ultraviolet sterilizing
- ultrasonic welding
- laser welding
- assembling springs and membranes
- product marking
- leak testing
- flow testing
- electrical testing
- functional testing
- optical testing





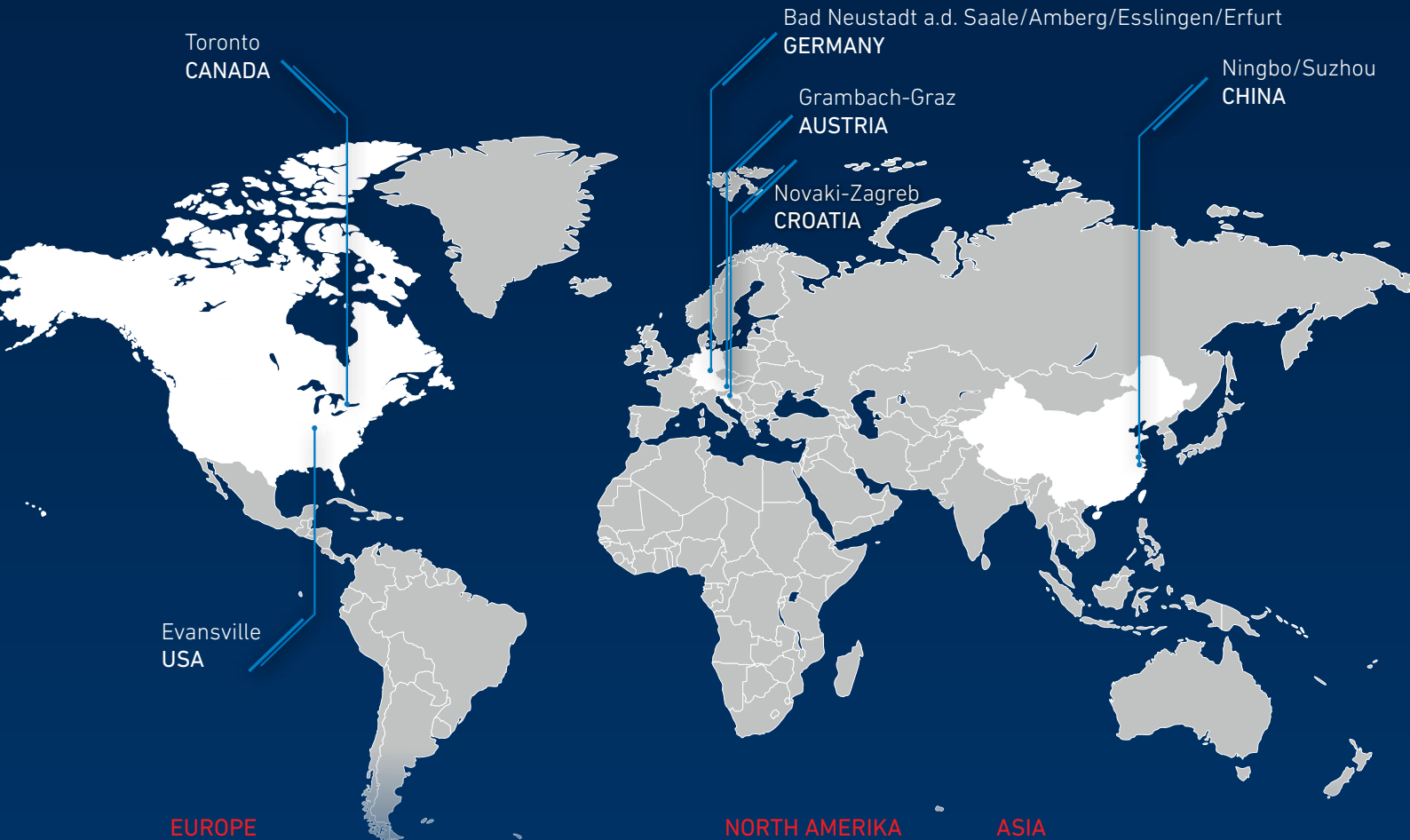
CUSTOMER SERVICE

OUR SERVICE ENSURES MAXIMUM AVAILABILITY



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WE AUTOMATE YOUR MEDICAL WORLD



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