



ASYS
LIFE SCIENCE



Lateral Flow Device Assembly Solutions

Pharma | Diagnostics | Medical Technology | Biotechnology

Complete solutions from a single source

The fast growing market of Lateral Flow Devices (LFDs) calls for flexible assembly solutions, both low and high-speed. For decades, ASYS has been solving assembly tasks for customers in the Life Science industries. The Life Science business unit covers a wide range of automation processes and technologies to design customer-specific and regulatory compliant solutions. We have developed flexible assembly platforms specifically tailored to the

requirements of the Life Science industry. Within these platforms, we use standard modules combined with customized solutions from across our business sectors, helping us to provide process-safe and GxP-compliant assembly systems in a short time span. We deliver complete assembly lines and factory automation from a single source, therefore offering our customers holistic manufacturing solutions.



- ✓ **Over 25 years of automation**
Since 1992, customers worldwide have trusted our solutions
- ✓ **Turnkey solutions**
We develop and realize your manufacturing solution from idea to final delivery and beyond
- ✓ **Everything from one source**
Complete assembly lines and solutions from a single source



High-Speed Assembly of Rapid Tests

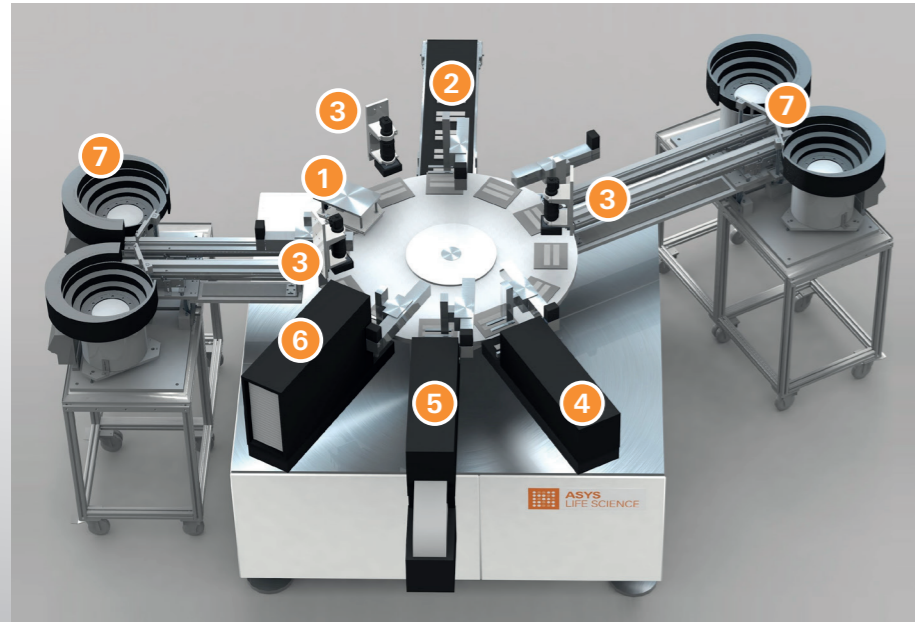
Our high-speed solution allows for the assembly of rapid tests e.g. COVID19, pregnancy, drugs or allergies at output speeds of up to 80 parts/min. These qualitative tests are based on thin-layer chromatography and immune marking of the test strip which is made of porous paper or sintered.

The compact design of our assembly system is based on a rotary table for high precision combined with short cycle times. Gripper and nest design allow fast product changeover according to the Poka Yoke principle and flexible production of product variants with different geometries.

Lateral Flow Device Assembly

The housing components can be fed to the assembly process in bulk via appropriate feeding systems or sorted via trays. The test strips are fed either as roll material or as pre-cut cards in magazines and are cut in the system. The positioning and the joining processes are controlled inline. Each individual assembly step is monitored by a

camera control for correct position, shape, and process result, and defective parts are safely separated from the process. Based on the basic layout, additional process stations can also be integrated at a later stage in order to be prepared for future requirements and product adaptations.



- 1 Housing Press
- 2 Good part outfeed and reject of bad parts
- 3 QC Camera
- 4 Strip cutting and insertion modules
- 5 Strip feeding from the reel
- 6 Strip feeding from pre cut cards
- 7 Bowl feeder for housing parts

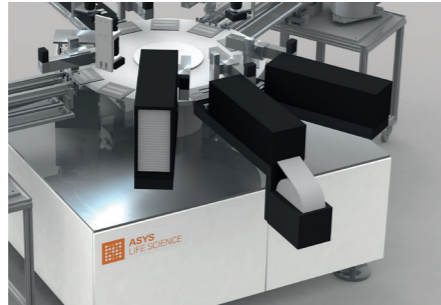
High Speed LFD Assembly – Key Features

- ✓ For different LFD specifications additional workstations can be added or changed
- ✓ Various strip cutter versions available (i.e. reel, single card, card magazine, customized)
- ✓ Optical quality control of product parts and each assembly step to guarantee maximum quality (i.e. parts positioning, defect detection, correct assembly, ...)
- ✓ Common industrial software platform
- ✓ GxP/GAMP 5 compliant
- ✓ 21 CFR 820/21 CFR Part 11
- ✓ Flexible rotary table high speed LFD assembly cell
- ✓ Output approx. 80 pcs./min. (depending on product specifications)
- ✓ Compact and space saving rotary table system
- ✓ Easily adaptable to manufacture different devices
- ✓ Flexible set-up of workstations depending on LFD specifications
- ✓ Quick and easy change-over with minimal change parts (Poka Yoke)
- ✓ In-house qualification services and support





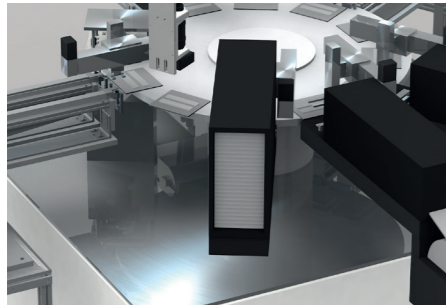
Housing Infeed Systems



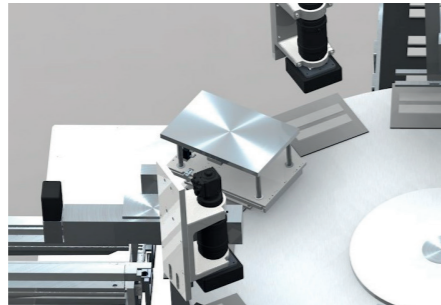
Strip Cutter



Strip Infeed – Reel



Strip Infeed – Card Magazine



Housing Press



LAMINO-Flowbox



Accessibility



Intuitive Multi-Touch User Interface



PULSE Pro Software Suite – smart alerts

Assembly Processes



Laser Marking



Labeling



Testing



Depaneling



Tray Load/Unload



Press-Fit



Feeder Solutions



Screwing



Tray Handling



Riveting



Plasma Cleaning



Dispensing/Potting



Resistance Welding



Transport



Laser Welding



Laser Cleaning



Laser Depaneling



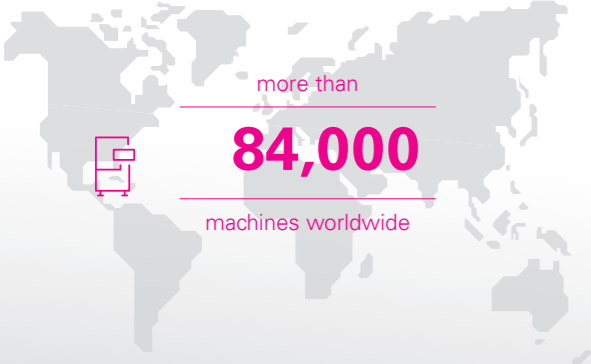
Laser Cutting



Laser Reflow Soldering

ASYS Group – Facts & Figures

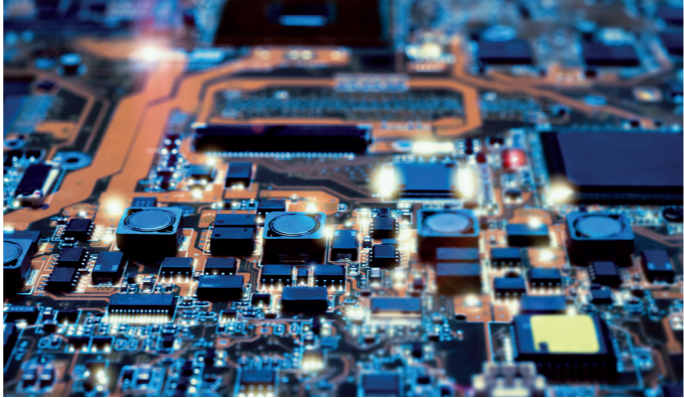
The ASYS Group is a global technology company and leading supplier of machines for the electronic, life science and energy industry. The ASYS brand guarantees the same high standards of quality and processing standards all over the world. The corporate headquarters in Dornstadt (near Ulm) coordinates activities across five continents and guarantees highest standards in quality and service.



The success of the ASYS Group is based on the qualification and personal commitment of more than 1,200 employees. Inspired and dedicated people are the key to developing and providing first-class products.

Business Areas

Business Unit
Electronics



Business Unit
Life Science



Business Unit
Energy



Strong and Fast Growing for Over 25 Years

The launch of market leading innovations has significantly contributed to the success and growth of the company. Over the past two decades ASYS has expanded steadily and has attained a leading position with new products and processes.

Our Success Factor: Dedicated People

ASYS Group has installed more than 84,000 systems worldwide. ASYS invests continuously in state-of-the-art production processes at its worldwide sites. The production space at the headquarters in Dornstadt is constantly increasing and currently amounts to more than 27,000sqm.

“German Engineering” and Manufacturing

ASYS products exemplify the prestigious “Made in Germany” trademark: precise, high quality systems and machines that are intuitive to use and offer best functionality.



German Quality Across Five Continents

Worldwide Sales and Service Centers

The Group's business activities in more than 40 countries are controlled from the company's headquarters in Dornstadt near Ulm, Germany. A broad global network with local service centers in Asia and the Americas ensures a customer-focused service support. Worldwide service teams guarantee best response and spare parts availability.



- ✓ 24 / 7 / 365 support, worldwide
- ✓ Teams consist of experienced specialists
- ✓ Experts for each product segment
- ✓ Preventive Maintenance
- ✓ Service Agreements
- ✓ Installation of new systems
- ✓ Maintenance Seminars
- ✓ On-site training upon installation

24 Hour Availability for Service and Support

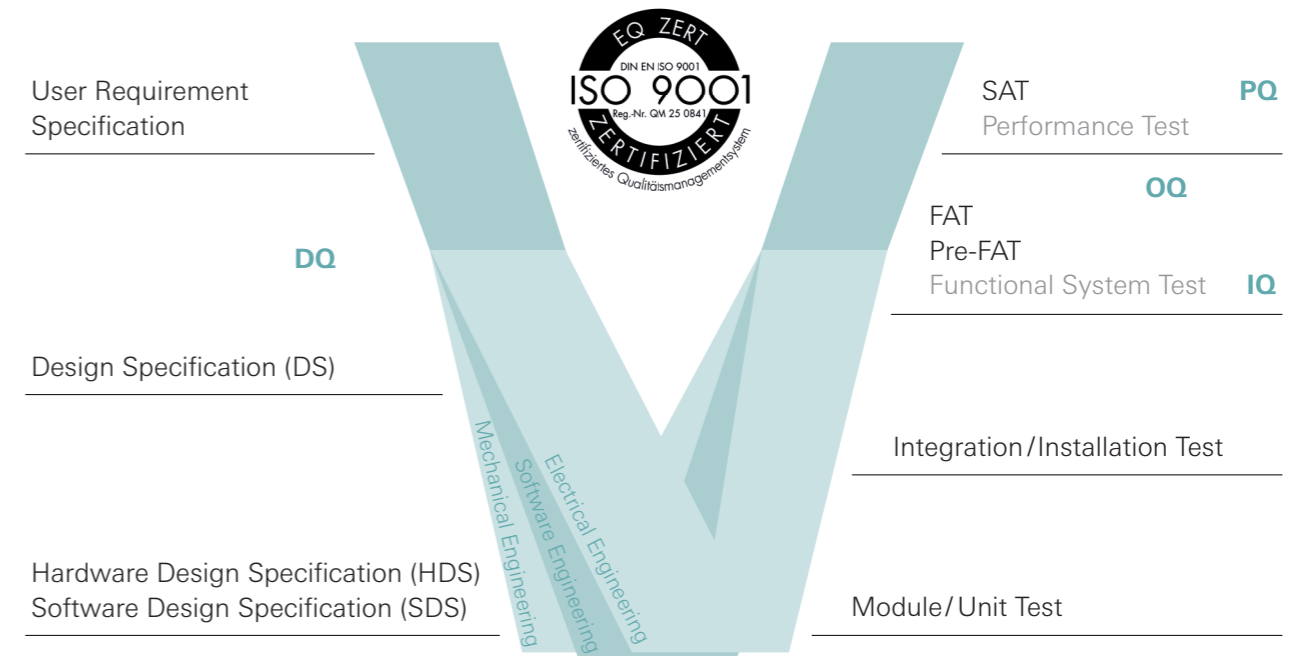
Service has a high priority at ASYS Group. More than 80 service engineers worldwide are at the service around the clock. Customer satisfaction is the ultimate goal. To achieve this, ASYS installed a systematic feature to track service calls.



Qualification Services

- ✓ Design Documents (DS, HDS, SDS)
- ✓ IQ, OQ-Documents
- ✓ Traceability Matrix, Qualification Plan
- ✓ GMP Risk Analysis workshops and documents
- ✓ Qualification Support onsite

GxP-compliant Project Management at ASYS Life Science



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Subject to change without notice. All the information listed is a general description and performance characteristics which do not always apply in the form shown in the specific application or which may change as a result of further development of the products.

Only the service descriptions agreed in the contract are binding.