

BATCH-INLINE CLEANING SYSTEM

For service modules and SMT- assemblies

The KLN BATCH-INLINE cleaning system is based on many years of experience with Inline Cleaning systems for the electronics production and unites, for the first time, the technological advantages of Inline cleaning with low space requirement of a Batch system. By far, most of the Inline cleaning systems in Germany for the large-scale production “Automotives” and “alternative energy” come from company KLN.

This system was developed to make the efficient Inline cleaning technology available now also for customers with smaller budgets and throughputs.



Advantages of the KLN Batch-Inline process:

- Two-chamber system permits throughput of up to 4m²/h (Simultaneous cleaning and drying)
- Modular design. Base version is growing with your throughputs. Can be upgraded to “Comfort” and “Comfort plus” versions.
- 100% reproducibility by uniform control of all parts by the homogeneous spray field of the nozzle bars
- Process and result assurance (0% shadowing)
- All components in stainless steel. Low-maintenance, robust, long-lasting.
- Consumption costs optimization by geometry of the process chamber
- Horizontal goods control avoids typical “draining edges”
- Energy-efficient, quick drying by separate chamber
- Goods carriers possible to be designed customized.

This system is optimized and released for the application of water-based cleaning media of the company ZESTRON.

Set-up:

- Process visualization by means of HMI / Operator Panel
- Preparation for ZESTRON EYE for the automatic concentration management
- Rinsing open or with completely closed circulation
- Cleaning track for washing frame approx. 890 mm wide
- Cleaning temperatures of 40-80°C according to parts requirement
- High-quality filtration for optimum processing of the cleaning and rinsing media
- Nozzle bars with high-pressure flat jet nozzles and pressure regulation
- Automation level according to design in 3 steps – Basic, Comfort, Comfort plus
- External dimensions L 2100 x B 1700 x H 2000mm

The system is made modular, can be extended and will grow with your requirements:

1. Design “Basic”

Initial model

- Manual supply and removal of the goods carriers
- Suitable for laboratory operation / prototypes up to small series
- Operating panel with Operator-Panel TFT display with keys and touch operation
- Can be extended to designs “Comfort” and “Comfort plus”

2. Design “Comfort”

Design “Basic” with the following additional functions:

- Automatic pressure control and balancing according to filter state for constant results
- Automatic monitoring of the filter loading
- Variable process control by adjustable speed
- Can be extended to designs “Comfort plus”

3. Design “Comfort plus”

Design “Comfort” with the following additional functions:

- Discharge of the ultra-pure water production by the second storage tank for rinsing water with cascade overflow
- Integration ZESTRON EYE with fully automatic cleaner management (dosage / concentration)
- System can be scaled for increasing production figures with:
 - Option 1: Partial automation by supply and discharge station (e.g., roller conveyer)
 - Option 2: Full automation (loading and unloading) for multi-hour, autonomous operation (e.g., with paternoster hopper or integration in system available with the customer)

Option 1:
Each in inlet and
outlet

Option 2:
Each in inlet and
outlet

