

Intelligent Cleaning Technology for Demanding Production Processes

EcoCvario

The EcoCvario combines powerful cleaning technology with high adaptability – ideal for complex requirements in industrial production. Innovative processes and intelligent control ensure maximum process reliability and energy efficiency.



In industrial manufacturing, the demands on component cleanliness and process stability are constantly increasing. As a high-performance spray-flood cleaning system with a vacuum-tight working chamber, the EcoCvario offers a reliable solution for complex cleaning tasks – regardless of industry or component geometry. Three cleaning stages, optimized media flow, and specially developed flood tanks enable flexible adaptation to individual production requirements. Innovative processes such as vacuum-based cleaning with Pulsated Pressure Cleaning (PPC) and modern communication technologies contribute to achieving high cleanliness targets and increasing energy efficiency.

- + Individually configurable:**
Flexible adaptation to different part geometries and requirements – from bulk parts to precision parts as set goods.
- + Efficient media management and flooding technology:**
Vertical, cylindrical flood tanks enable even distribution of cleaning media and effectively reduce carryover.

- + Enhanced cleaning performance:**
Pulsated Pressure Cleaning ensures reliable removal of contamination—even with complex component structures and high cleanliness requirements.
- + Energy-efficient process design:**
New heat recovery features help reduce energy consumption and operating costs.
- + High system availability:**
Robust system technology and high-quality components for stable operation.
- + Modular system concept with high flexibility:**
Numerous equipment options and loading concepts for a wide range of requirements.
- + Future-oriented communication technology:**
The integration of IO-Link enables intelligent networking and transparent process monitoring – for modern, digitized production.

FEATURES AND BENEFITS

- Flexible use of numerous aqueous immersion cleaners tailored to the cleaning task
- High capacity and performance with expansion of batch size, weight, and throughput
- Accelerated, energy-optimized cleaning process: Powerful, frequency-controlled pumps minimize unproductive downtime
- Vertical, cylindrical flood tanks with clinker bottoms, ideal for changing pressure loads during filling and emptying processes and for preventing dirt deposits
- Modular compact system design with many configuration options
- Precise positioning of the goods in front of the nozzles using a frequency converter with absolute encoder for accurate cleaning and drying of complex component geometries
- Powerful frequency-controlled flood pumps for generating turbulent media movement for optimal cleaning of chips, but also for controlled flooding of sensitive parts by reducing power.
- Full-flow filtration ensures reliable fulfillment of high cleanliness requirements
- Precision flooding possible for delicate and sensitive components
- Power-controlled ultrasonic cleaning
- Enhanced cleaning using a vacuum-based pulsed pressure cleaning process and high-pressure cleaning for stubborn contamination
- Aquaclean system (evaporator) for energy-efficient heating of the flood tanks through heat recovery and reduced water consumption
- Long service life: High-performance filter unit reliably removes particulate contaminants from the aqueous solution, rinse bath desalination for continuous treatment of the rinse baths
- Moisture measurement and monitoring in the working chamber for time- and energy-efficient component drying
- Intelligent, adjustable timer for precise heating and provision of the system
- High-quality insulation to reduce heat loss
- Simple and safe system operation: 12-inch color display with self-explanatory pictograms
- Ease of maintenance: large roller shutters for optimal and space-saving accessibility to service-relevant components

TECHNICAL DATA	
System dimensions	EcoCvario (3-tank version)
Width	approx. 3,700 mm
Depth	approx. 2,200 mm
Height	approx. 3,000 mm
Loading height	approx. 850 mm
Weight	approx. 4,000 kg
Basket data	
Standard dimensions (LxWxH)	650 x 470 x 300 mm
Can be customized to customer specifications	650 x 470 x 400 mm
Batches	
Batch weight (max.)	150 kg
Throughput depending on process sequence and required treatment time	approx. 6-7 batches/h
Connected load	
Elektrische Anschlussleistung	approx. 50-75 kW
Heating capacity of flood tank	approx. 10 kW
Aquaclean heating power (optional)	14 kW Flood tank 1 via heat recovery
Heating capacity of hot air dryer	27 kW
Vacuum pump performance	280 m³/h
Flood pump capacity	45 m³/h at 2.5 bar