



EVO PCB

Optimum results in ultra-fine cleaning
of electronic assemblies

Ultra-fine cleaning in electronics production

The cleaning systems of the EVO PCB series are compact single-chamber systems for ultra-fine cleaning of electronic assemblies and components.

This generation of cleaning systems combines highly efficient Miele industrial machines with our proprietary MATTHES Recycling System (MRS) to create a precise and cost-effective overall solution.

Permanent, fully automatic measurement, control and re-dosing of cleaning media guarantee maximum process reliability and quality



Illustration with option waste water lifting unit

Reproducible cleaning quality

Especially for high-quality assemblies in the medical, automotive, defence and aerospace industries, optimum cleaning results are absolutely essential to avoid rejects in production and malfunctions in use.

The thorough removal of flux residues, resins and other production residues on printed circuit boards serves as ideal preparation for subsequent processes such as bonding, coating or lacquering.

Optimal cleaning of misprints (misprints) helps you to save valuable resources and costs.

With the precision cleaning systems of the EVO PCB series, you are perfectly prepared for the constantly growing demands which the cleaning of assembled and unassembled PCBs brings with it.



Key features

Capacity

(euro cards 100 × 160 mm): 76 pieces with standard upper and lower basket 0500 (37 pieces) / U500 (39 pieces)

Due to their more compact design, the cleaning machines of the EVO PCB series can be optimally integrated into existing process environments.

PerfectTouchControl

Chemical-resistant glass surface of the operating and programming unit

PerfectSpeedSensor- Spray arm monitoring

Reliable cleaning performance by monitoring the spray arm speed

PerfectFlow

Media and temperature independent ultrasonic dosing volume control, reproducible cleaning quality through precise dosing of all media

PerfectPureSensor

Integrated conductivity measuring module for monitoring the final rinse phase

PerfectHepaDrying

Optimum drying results, free from unwanted particles and suspended matter from the room air

TOP feature of the EVO PCB PREMIUM

PerfectLiveControl powered by



Digital real-time concentration measurement, live monitoring and automatic re-dosing in the media inlet. Process-related fluctuations which lead to a reduction in the concentration of the cleaning bath are compensated fully automatically. Water and cleaning concentrate are supplied in real time and ensure optimum process reliability.



TOP-Option of the EVO PCB PREMIUM

Trace & Connect

Traceability

Recording and storage of the following process data:
Assignment of PCBs to the washing cycle via batch number (hand scanner optional)
Cleaning machine (type and serial number)
Machine location
Selected cleaning programme
Date / time of programme start
Concentration of the cleaning agent (EVO PCB PREMIUM)
Tank temperature
Pump pressure
Conductivity measurement of the rinsing phase
Error messages
Programme Ok (Yes / No)
Date / time programme end
Sensors and control system expandable via CAN bus

Connectivity

Integration into existing company network via LAN/WAN possible (router optional)
Monitoring of the cleaning process / status query
Access to traceability log file
Remote diagnosis

Additional Features

- Steam vapour condenser (free of exhaust air)
- Complete stainless steel piping of the MRS module (Matthes Recycling System)
- Drawer for 4 × 5 l canister
- Sensor system for automatic basket/trolley detection
- Programme Failure Protection
- 2 redundant sensors for temperature control and monitoring
- Miele Waterproof System to protect against leakage damage
- Remote serviceable



Medium canister



PerfectSpeedSensor Spray arm monitoring



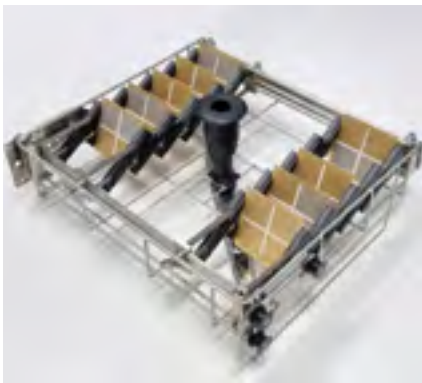
Trolley detection

Features

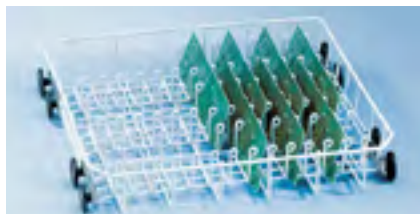


EVO VARIO basket system

Precision-milled parts made of stainless steel and ESD conductive HDPE plastic, chemical resistant, abrasion and cut-resistant, guide rails infinitely adjustable horizontally, PCB holder made of ESD plastic for PCBs up to 4.0 mm thickness, basket with rollers made of ESD plastic



EVO Standard basket system

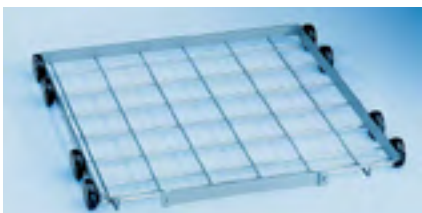


Upper basket 0500

Lower basket U500

Upper basket empty 0188

More Features



Lower basket empty U874

DI water cartridge

Carriage with rotating basket

Customised holders can be manufactured.

Technische Daten

EVO PCB PRO

EVO PCB PREMIUM

Ultra-fine cleaning systems for assemblies (unassembled and assembled printed circuit boards), misprints (misprinted circuit boards)

Technology Matthes	Matthes EVOLUTION
Cleaning capacity per process	(euro cards 100 × 160 mm): 76 pieces with standard upper and lower basket (37 + 39 pieces)
Tank capacity 1	60 litres
Tank capacity 2	– (fresh water system for reproducible rinsing results)
Power supply	3PH 400V 32A CEE 50 Hz PE/N
Power consumption	4 kW
Control system	Eaton SPS with 10,5" Touch-Display / Miele Profitronic+
Heat output tank 1	3 kW Control range 0-80 °C
Drying unit	blower 0,3 kW / heating coil 2,3 kW / air capacity 55 m3/h
Hepa filter class	H14 - Separation efficiency (according to DIN EN 1822) 99.995 %
Filter system washing tank	coarse filter with 250 filter cartridge / fine filter with 50 filter cartridge
Supply connection 1 (Tap water)	3/4"
Supply connection 2 (DI water)	3/4"
Supply connection 3 (compressed air)	5 bar 0,2 NL control pressure
Drain connection (rinsing medium)	DN 50
Exhaust air connection	Steam condenser
Machine dimensions	W 1.565 mm × D 735 mm × H 1.460 mm (with signal lamp 1.700 mm)
Installation dimensions with base tray	W 1.990 mm × D 800 mm × H 1.462 mm (with signal lamp 1.702 mm)
Operating noise EN ISO 3746	< 65 dB(A)
Tare weight	440 kg

INDUSTRIAL PARTS CLEANING FROM THE EXPERTS

MATTHES has been firmly established on the market as an innovation-driven supplier of systems and process equipment for industrial parts cleaning for more than 50 years. We offer you solutions in the field of industrial cleaning systems that are precisely tailored to your individual process chain. In everything we do for you, the focus is on safety and economic efficiency. Under the umbrella of the EVOLUTION series, we at MATTHES bundle our innovative engineering services around the topics of PCB cleaning, stencil cleaning systems and the cleaning of solder frames, wafers and co.

In the spirit of evolution, our engineers, developers and consultants design special solutions that are optimally adapted to the needs of your respective processes. For more information, please visit www.evolution-cleaning.com. or simply give us a call. We will be happy to answer your questions and present the detailed advantages of the new Evolution generation in a personal meeting.

CONTACT US

PHONE: 021 04 / 2 33 70-0

evolution@matthes-maschinen.de

www.evolution-cleaning.com



MATTHES Maschinen-Industrietechnik GmbH

Bollenhöhe 5 · 40822 Mettmann

www.matthes-maschinen.de