

The new
PSB 600 H50/H50 HT

Fully automatic high end PCB cleaning system for process safe ultra fine cleaning of PCB, Hybrids (HDI, SiP) and misprints from reflow flux residues, rosin, resin, copper, oxide and aggressive soldering support substances - now with PolyPower (from 12/2014).

Part No. 0905600-PSB-H50 / H50-HT

High end PCB cleaning system

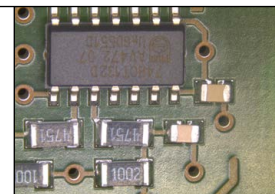


The situation

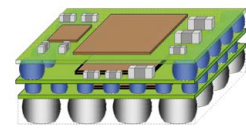
Cleaning of PCB is not only a necessary prerequisite for reliable varnishing and embedding and thus consequently for climatic safety / leaking current safety. It also helps to eliminate mistakes and thereby preserve the value of misprinted boards and to ensure the optical quality of electronic components. **kolb** PSB600 H50 is a compact batch cleaner for exactly for those requirements. Additionally the system allows very short cycle times and low running costs due to the parallel working three tank configuration with its three separate circuits. With this system the initially complex process of PCB cleaning has been developed into a fully controllable and easy to operate process. The system version PSB600 H50 HT is designed for high temperature cleaning and rinsing up to 80° Celsius.

The advantages of PSB600 H50

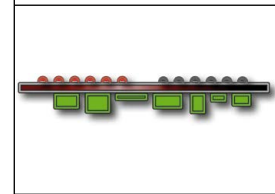
- Short cycle times and low running costs.
- Capacity up to 176 (2.8 m²) eurocards in up to two variable VA baskets.
- Synchronously operating three tank system with three separate circuits.
- PolyPower pump-nozzles configuration (up to three times more pressure power and up to 30% less cycle time). Comfortable push-one-button operation.
- Autom. monitoring of ionic residues contamination and gauging of rinse water quality.
- Fully automatic 5step process: cleaning, MediumWipe®, rinsing (tap water), DI-water rinsing (with variable DI-water processing), drying with VMH®*- turbo hot air.
- Horizontal asynchronous spray rotor system (no spray shadows).
- VA baskets, ESD-safe with grounding connection for the operator.
- Permanent rotor run control as an option.
- Process and service intervals PLC controlled.
- Event issuing and software control via touch screen.
- PLC data recording and importing by scanner possible.
- Heater in Tank A (cleaning circuit) as a standard feature.
- Fine filter system 10µm for the cleaning circuit.
- ClosedLoop reprocessing of cleaning and rinsing fluids as standard feature.
- Exchange for rinse water tank B & tank C and pump out unit as standard features.
- Automatic re-dosing from 25 l detergent and 5 l additive container as an option.
- Made of stainless steel, process sections are made of electrolysis resistant elements.
- Installation close to the production line possible: no special protection required.
- Extremely compact: only 90 x 120 cm floor space required (≈ size of an euro pallet).
- All safety relevant devices are standard features in the basic system configuration.



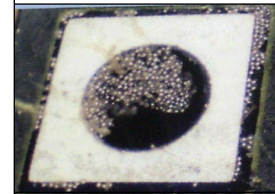
PCBs



Hybrids / HDI / SiP



Misprints



Misprint



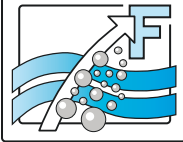
Varnished PCBs

Applications

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* Venturi-Mixed-Hot Air / All rights for changes reserved that lead to technical improvement.



PSB600 H50 high end PCB cleaner

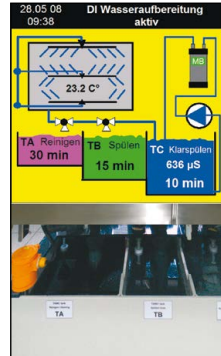
Process chamber



Operator panel



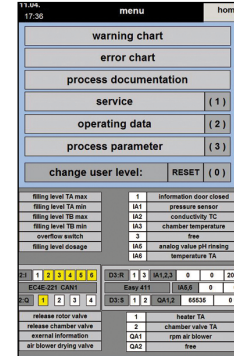
3-tank system



Maintenance



Monitoring



Function

Loading: The PCB boards are placed into the VA-cleaning basket of the PSB600 H50. A variable number of different dividers can be freely inserted into the cleaning basket. As an option the upper basket with an integrated center spray rotor and tube connections to the machine can be offered which doubles the loading capacity of the PSB600 H50. After the loading the hatch will be closed and automatically locked at start. All relevant data of the fully automatic 5step process cycle is displayed on the touch screen monitor.

System control / configuration

The PSB600 H50 is controlled by a PLC. Setting and monitoring will be entered / read out via the color touchscreen (industry-PC with Windows CE). The applicable cycle times and parameters are freely adjustable in the PLC. After being configured once, the system runs only with the use of one button (Start / Stop). The 3-stage program selector switch on the operator panel allows different cleaning program presets. Up to 99 further programs can be configured and selected using the touchscreen. The control system provides a recall function for all event messages from PLC memory.

Process parameters

The cycle time depends on the degree and nature of contamination, the thickness of such contamination, the cleaning detergent, possible water pockets that influence drying as well as process parameters.

Maintenance

During the development of the PSB600 H50 special care was taken to ensure a comfortable and easy handling for the operator and the maintenance personnel. The system has a service access with a door at the right hand side. In this service area there are the pump-out set, the optional re-dosage unit (detergent container of 25 l), additive container of 5 l). Furthermore there is space for an optional resin cartridge for DI-water processing. Easily accessible behind the cover door are likewise the tanks for manual filling and servicing. The tank levels will be controlled automatically by the PLC which will indicate min-level or max-level with a respective warning. This PLC likewise controls pressure values of the fine filtration as well as the service and the maintenance cycles.

Standard equipment: Hot air drying, lower cleaning basket (compl.), heater tank A, auto DI-processing unit, fine filter tank A, X-PolyPower pump unit, water exchange / pump out for Tank B / Tank C.

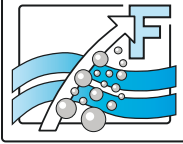
Options / accessories: Exhaust unit, Re-dosage (detergent & additive), upper cleaning basket (compl.), MediumWipe®, status light (3- or 5-fold), automatic rotor run control, XL-PolyPower pump unit, automatic water change for cleaning circuit (only HT version), reservoir, MB / DI cartridge, PLC data and scanner unit, various carriers.

Please note: The cleaning system may only be operated with detergents and other raw materials and supplies certified by the manufacturer!

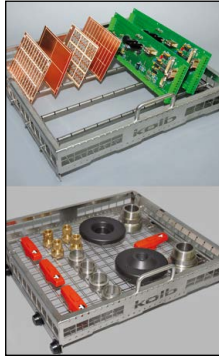
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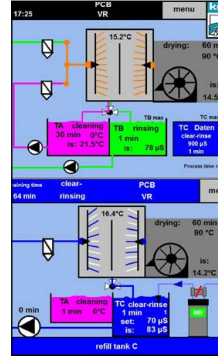
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PSB600 H50 high end PCB cleaner

VA baskets

Re-dosage

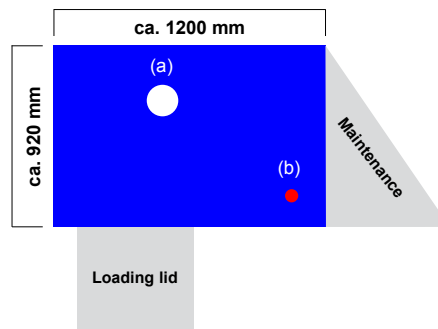
DI processing

ClosedLoop

PLC computer

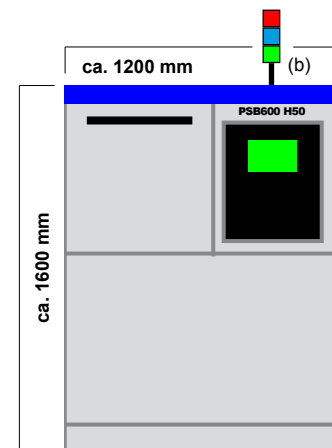
Technical data

Process chamber dimension	:	W 540 • D 590 • H 570 mm
Capacity	:	176 (2.8 m ²) eurocards or up to two baskets for smaller parts
Use of lower basket only	:	W 450 • D 475 • H 520 mm
Use of lower and upper basket	:	W 450 • D 475 • H 225 mm
Power supply	:	400 V AC 16 A CEE / 3Ph / 50 or 60 Hz
Power consumption / control system	:	approx. 3.8 kW / PLC (EATON)
Tank contents cleaning, rinsing incl. saving step	:	Tank A: approx. 55 l, Tank B / C: 15 - 25 l up to approx. 35
Temperature load tank A (cleaning circuit)	:	up to 55°C (basic system), up to 80°C (HT-system)
Compressed air connection - optional	:	6-8 bar (100 l / min.) for MediumWipe® process
Exhaust connection (prov. by customer)	:	160 mm Ø > 200 to 300m ³ per hour
Connection water supply (tap water)	:	3/8", hose connection 14 mm (prov. by customer: inlet water quality < 350 µS conductance value (< 10° dH) or option descaling unit)
Connection water supply (DI- / VE-water)	:	3/8", hose connection 14 mm (DI net prov. by customer or bridging to tap water)
Connection rinse water drain	:	3/4", hose connect. 25 mm with integrated pump out system
Ambient Temperature (min. / max.)	:	approx. 20°C / 40°C
Noise	:	63 dB (A)
Weight	:	350 kg

Top view:
Max. space required
(a) = Exhaust (160 mm)
(b) = Status light



Front view:
With optional status light (b)


Certifications:

This system in its basic version was certified for its energy and watersaving processing, for easy operability and for the standard integration of comprehensive safety features.

