

# PSB 500 V70

**Fully automatic PCB and stencil cleaning system** with vertical technology for high demands in ultra fine cleaning of DCB, PCB and hybrids (HDI, SiP) from contaminations such as fluxes, rosin, resin, copper, Cu oxide and aggressive solder-support substances.

**Part No. 0905500-PSB-V70**

## Vertical PCB cleaning system



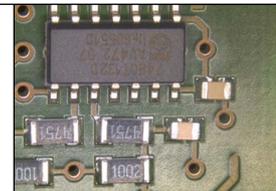
### The situation

Thorough Cleaning of PCB as well as hybrids (HDI, SiP) and screens / stencils is an inevitable process step in the production chain. De-fluxing, de-oxidizing and passivating are essential processes before wire bonding the assembled components. The requirements to fulfill such complex cleaning tasks in shortest cycle times, demand a technical configuration which catches the sensitive cleaning goods as close as possible.

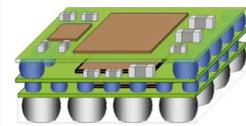
The vertical assembly of the spray rotors as well as the loading in the Duplex wash cart of the **kolb** PSB500 V70 exactly meet those requirements. Due to the vertically operating rotor system the PSB500 V70 is perfectly suitable to clean also screens and stencils.

### The advantages of PSB500 V70

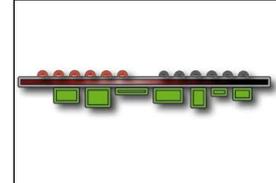
- Three circuits in a two tank combi system).
- Vertical 4 fold asynchronous spray rotor system.
- Capacity up to 2 frames 660 x 560 mms (36 eurocards or 2 screens).
- Comfortable push-one-button operation.
- Autom. monitoring of ionic residues contamination and gauging of rinse water quality.
- Fully automatic 4step process: cleaning, insing (tap water), DI-water rinsing (with variable DI-water processing), compression® drying.
- VA Duplex wash cart, 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.
- 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.
- DI-/VE water mixing and blending unit as an option.
- Automatic re-dosing from 25l detergent and 5l additive container as an option.
- Spare space for resin cartridge to be integrated into the system 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 1.6 qm floor space required.
- All safety relevant devices are standard features in the basic system configuration.



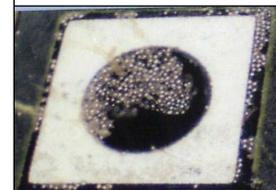
PCB



Hybrid (HDI, SiP)



Misprint



Misprint

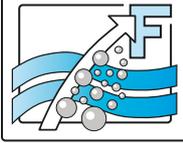


M-TeCK stencil

**Applications**

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# PSB500 V70 vertical PCB cleaning system

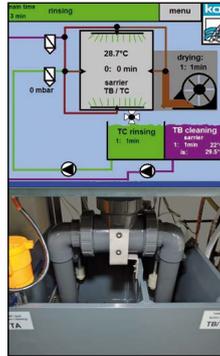
**Process chamber**



**Operator panel**



**2-tank system**



**Maintenance**



**Monitoring**



## Function

**Loading:** The PCB panels or eurocards are placed into the Duplex wash cart. After the loading the hatch will be closed and automatically safety locked at start. All relevant data of the fully automatic 4step process cycle with vertical close up spray power is displayed on the touch screen monitor.

## System control / configuration

The PSB500 V70 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 PSB500 V70 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.

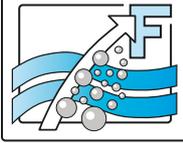
**Standard equipment:** Compression® drying, Duplex wash cart, heater tank A, variable DI-processing unit, X-Power pump unit, water exchange / pump out for tank B / C.

**Options / accessories:** Exhaust unit, Re-dosage (detergent & additive), MediumWipe®, status light (3- or 5-fold), automatic rotor run control, XL-Power pump unit, fine filter tank A, reservoir, MB- / DI-cartridge, PLC data and scanner unit, insulation.

**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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# PSB500 V70 vertical PCB cleaning system

**Duplex cart**



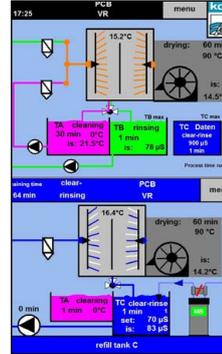
**Re-dosage**



**DI processing**



**ClosedLoop**



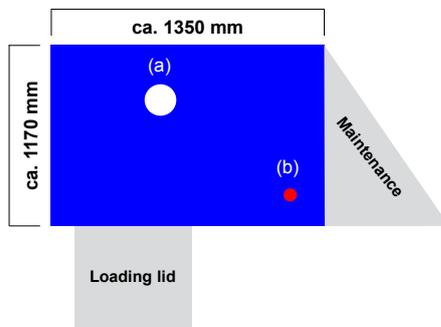
**PLC computer**



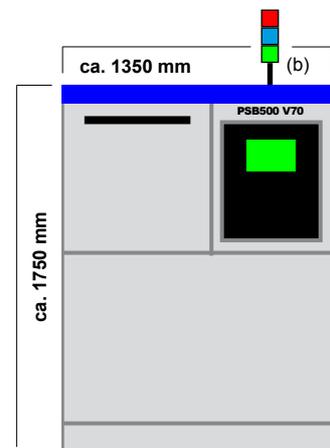
**Technical data**

Process chamber dimensions	:	W 700 • D 710 • H 720 mm
Capacity	:	2 frames 660 x 560 mms (36 eurocards or 2 stencils)
Power supply	:	400 V AC 16 A CEE / 3Ph / 50 or 60 Hz
Power consumption / control system	:	approx. 4.1 kW / PLC (EATON)
Ambient Temperature (min./max.)	:	approx. 20°C / 40°C
Tank contents cleaning	:	Tank A: approx. 55 l
Tank contents rinsing incl. saving step	:	Tank B / C: approx. 25 - 35 l
Exhaust connection (prov. by customer)	:	160 mm Ø > 200 to 300m <sup>3</sup> per hour
Connection water supply (tap water)	:	3/8", hose connection 14 mm (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 by customer or bridging to tap water)
Connection rinse water drain	:	3/4", hose connect. 25 mm with integrated pump out system
Noise	:	74 dB (A)
Weight	:	500 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.

