

PSB 600 v90

Fully automatic high end high XXL DCB and PCB cleaning system with vertical technology for highest demands in process safe 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. 0905600-PSB-V90

High end XXL DCB cleaner



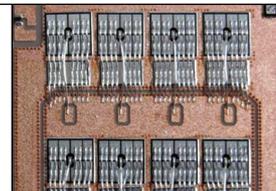
The situation

Thorough cleaning of DCBs, PCBs as well as hybrids 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.

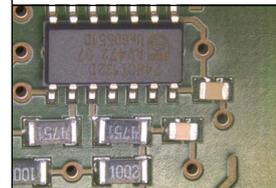
The vertical assembly of the spray rotors as well as the loading into the insertion slot of the kolb PSB600 V90 exactly meet those requirements. Due to the vertically operating rotor system the PSB600 V90 is perfectly suitable to clean also assembled PCBs mounted in washing frames.

The advantages of PSB600 V70

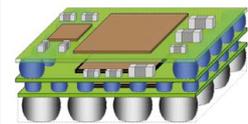
- Three tank system with three separate circuits (low running costs).
- Short cycle times due to placing the cleaning goods close to the spray rotors.
- Vertical eightfold asynchronous spray rotor system.
- Capacity up to 64 DCB panels 5" x 7" or 100 eurocards in washing frames.
- Fully automatic 5step process: cleaning, MediumWipe®, rinsing (tap water), DI-water rinsing (with variable DI-water processing), compression® drying.
- ESD-safe with grounding connection for the operator.
- Autom. monitoring of ionic residues contamination and gauging of rinse water quality.
- ClosedLoop reprocessing of cleaning and rinsing fluids as standard feature.
- Comfortable push-one-button operation.
- Exchange for rinse water tank B & tank C and pump out unit as standard features.
- 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 as an option.
- Heater in tank A, tank B, and tank C as standard in the basic configuration.
- Four stage fine filter system 10µm.
- 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 3 m² floor space required.
- All safety relevant devices are standard features in the basic system configuration.



DCBs



PCBs



Hybrids (HDI, SiP)

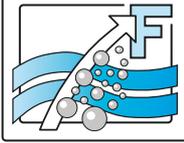


Misprints

Applications

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PSB600 V90 high end XXL DCB cleaner

Process chamber



Operator panel



Maintenance



3 tank system



Monitoring

warning chart	
error chart	
process documentation	
service	(1)
operating data	(2)
process parameter	(3)
change user level:	RESET (0)
Ring level TA max	1 Information door closed
Ring level TA min	IA1 pressure sensor
Ring level TB max	IA2 conductivity TC
Ring level TB min	IA3 chamber temperature
overflow switch	3 free
Ring level coverage	IA5 analog value pH rinsing
	IA6 temperature TA
DI 1	DI 2
DI 3	DI 4
DI 5	DI 6
DI 7	DI 8
DI 9	DI 10
DI 11	DI 12
DI 13	DI 14
DI 15	DI 16
DI 17	DI 18
DI 19	DI 20
DI 21	DI 22
DI 23	DI 24
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DI 93	DI 94
DI 95	DI 96
DI 97	DI 98
DI 99	DI 100

Function

Loading: The DCB panels or eurocards are placed into the insert slots. After the loading the sliding lock door will be automatically closed. All relevant data of the fully automatic 5step process cycle with vertical close up spray power is displayed on the touch screen monitor.

System control / configuration

The PSB600 V90 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 V90 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, heater tank A, tank B & tank C, fine filter tank A, B and C, auto DI-processing unit, DCB-Power pump unit, water exchange / pump out for tank B and tank C

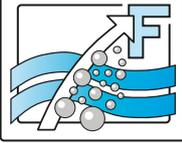
Options / accessories: Exhaust unit, Re-dosage (detergent & additive), MediumWipe®, status light (3- or 5-fold), descaling unit, automatic rotor run control, reservoir, MB / DI cartridge, PLC data and scanner unit, insulation, individual washing frames for slot insertion..

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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Traceability



Re-dosage



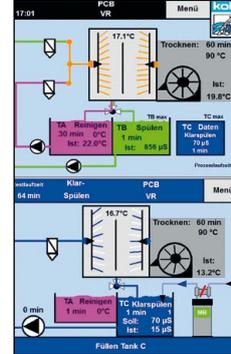
DI processing



Reservoir



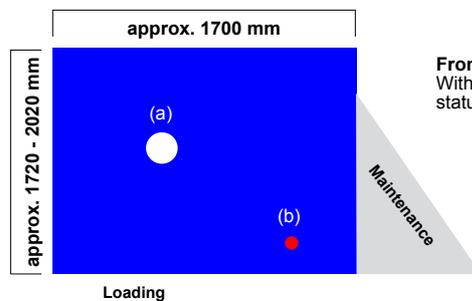
ClosedLoop



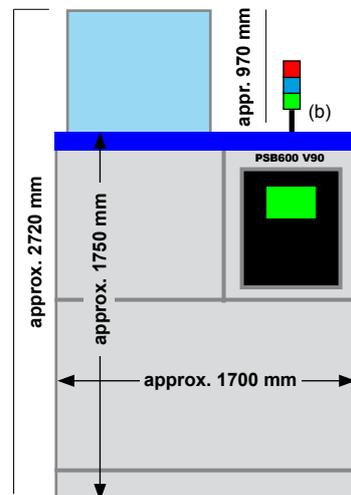
Technical data

Process chamber / slots	:	W 77 - 110 (x 4) • D 900 • H 800 mm
Capacity	:	56 - 64 DCB panels 5" x 7" or 100 eurocards
Power supply	:	400 V AC 32 A CEE / 3Ph / 50 or 60 Hz
Power consumption / control system	:	approx. 12, 5 kW / PLC (EATON)
Tank contents clean, rinse incl. saving step	:	Tank A, B, C each approx. 100 - 125 l
Exhaust connection (prov. by customer)	:	160 mm Ø > 200 to 300m ³ per hour
Connection water supply tap water on-site required	:	3/8", hose connection 14 mm (by customer: inlet water quality, < 350 µS conductance value (< 10° dH) or option descaling unit), about 45°C, 150 - 300 l / h
Connection water supply (DI- /VE-water) on-site required	:	3/8" hose connection 14 mm (DI-net or bridging to tap water), ca. 45°C, 150 - 300 l / h, < 10 µS
Connection rinse water drain	:	3/4" hose connect. 25 mm with integrated pump out system
Ambient Temperature (min. / max.)	:	approx. 20°C / 35°C
Noise	:	73 dB (A), 70 dB (A) with option insulation
Weight	:	960 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.

