

PS31

Single-chamber stencil cleaning



Fully automatic single-chamber-PowerSpray® 2Step-Process VA*-System for products up to 800 x 800 mms, 31,5" x 31,5". Cleans screen-stencils, PumpPrint stencils, misprints or four solder carriers from SMD-paste residue, flux, oil, dust, grease and many more.

Part No. 090531-PS

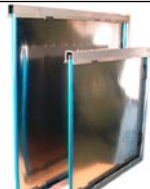
The situation

Best possible cleaning of screens / stencils (in electronics and solar cell production) as well as possible misprints today is the prerequisite for a reproducible quality in production as well as the reduction of expensive production stand-stills. The trend is the installation of highly automated, quick and cost-saving yet efficient and reliable processes that ensure high customer satisfaction. The development of kolb PS31 takes this into consideration especially for smallest applicable quantities. The use of almost odourless solvent-free* waterbased detergents ensuring a highest possible cleaning efficiency today guarantees a secure and widest possible process window. PS31 with adapted technology - a system for beginners to middle classes.

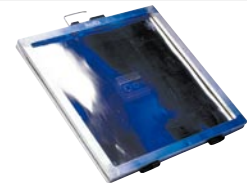
The advantages of PS31:

- Fully automatic looped 2Step process with cleaning and warm air drying - *VA (= Ventilated Air) supported.
- Fully automatic with single push button operation.
- Suitable for cleaning products up to 800 x 950 mms, 31,5" x 37,5".
- Extremely small footprint - Euro pallet size (= < 1m²).
- Versatile product fixtures for different products, e.g 40 / 36 / 30 mms.
- Interlockable space-saving and transparent airlock-door.
- No explosion protection necessary, use next to the production line is possible.
- Stainless steel made, all process sections made of electrolysis-resistant material.
- Process cycle times and maintenance monitoring PLC-controlled.
- 2-tank system with communicating detergent.
- Permanent fine filtration system 10 µm.
- PS-PowerSpray with magnetic coupled pumping unit.
- Warm air drying with *VA/supercharger (® all rights reserved).
- Closed loop. No water connection, no waste water disposal necessary.. No compressed air!
- Noise level approx. 75 dB(A).

The system has to be operated with a rinsing suitable (RS-) cleaning detergent.



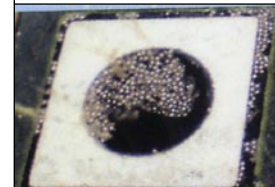
VectorGuard



Stencil



LF-Carrier



Soldering residues



Soldering residues

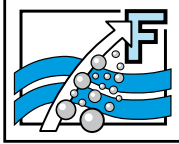
Applications

Contaminations

W. Kolb Fertigungstechnik GmbH
 Karl-Arnold-Str. 12 · D - 47877 Willich
 Further information: www.kolb-ct.com

Tel. +49 (0) 2154 9479 - 38
 Fax +49 (0) 2154 9479 - 47
 e-mail info@kolb-ct.com

*Solvent = organic hydrocarbon, under normal conditions volatile, flammable and risk of explosion.



PS31 1-chamber cascaded-tank system

Air/lock door



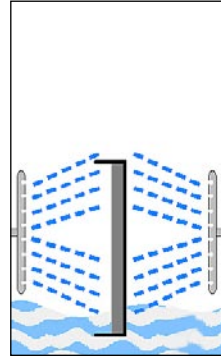
Loading



Operator desktop



Function



Maintenance



Function

The PS31 will be loaded using the space-saving airlock-door. Products / stencils to clean (stencil or solder carrier) can directly be positioned into the tailor-made product fixtures in the process chamber. Protective round bars on either side in front of the spray rotors prevent damages to the stencils in case of handling errors. After loading, the door will be closed manually and will be locked automatically after the START of the cleaning operation. The fully automatic 2Step cleaning process via the spray rotors will run in the pre-selected cycle time:

- Step 1 Cleaning
- Step 2 Drying with warm air®

The short running times (approx. 22 minutes) ensure a quick return of the products / stencils into the production process.

Additionally PS31 allows the installation close to the production area and it is thus another vital element in the value-added chain.

Attention: Cleaning only with pH-neutral TS/RS waterbased cleaning detergents qualified by the system manufacturer.

Programming / control

PS31 will be controlled by a PLC. The cycle time of the respective 2Step cleaning program is freely programmable in the PLC. For the easy selection of the suitable cleaning program there is a 3-stage selector switch integrated into the operator desktop.

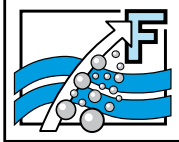
Service and maintenance

Special care was taken to ensure an easy maintenance in the shortest possible time. The tank level is easily controllable via the transparent inspection opening in the front door of the system. Filling of the tank will be through the opened air-lock door directly into the process chamber. In the maintenance and service area at the right-hand side of the system there are the filter cartridge and the integrated pump-out unit. Filter pressure will be monitored by the PLC.

For cleaning requirements with higher contamination respectively with more than 5 to 10 cleaning cycles per day, the use of a system with separate detergent and rinse water / detergent filtration (in contrast to the systems with one communicating detergent) is more economical. Taking into consideration a higher detergent consumption, the quality of cleaning and the life span, the kolb PS03 or the kolb PS07 ST in such cases are the better solution.

W. Kolb Fertigungstechnik GmbH
Karl-Arnold-Str. 12 · D - 47877 Willich
Further information: www.kolb-ct.com

Tel. +49 (0) 2154 9479 - 38
Fax +49 (0) 2154 9479 - 47
e-mail info@kolb-ct.com



PS31 1-chamber cascaded-tank system

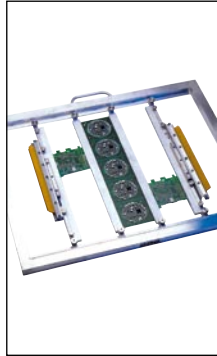
Exhaust



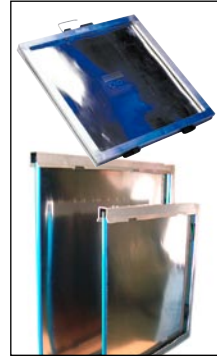
Reservoir



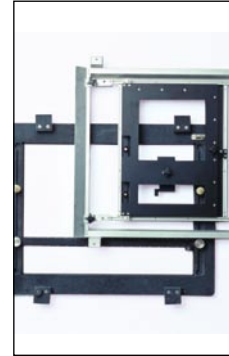
LF-carrier



Frames, Stencils



Solder carriers



Options / accessories for PS31:

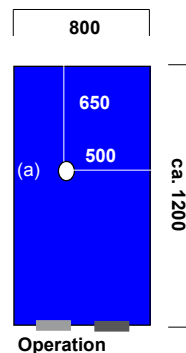
- Exhaust control with motor driven tight-closing flap valve to reduce to high extraction / too high consumption.
- Reservoir with screwed and sealed front.
- Insulation for noise reduction.
- Carriers: various sizes and configurations as per customers` requirements.

Technical data

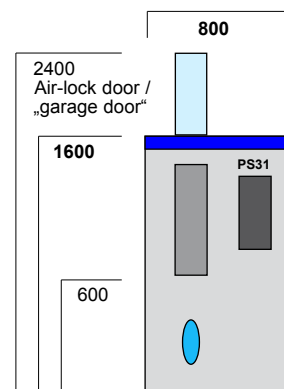
Power supply	:	400 VAC, 16 A CEE / 3Ph / L1, L2, L3, N, PE / 50 or 60 Hz
Power consumption	:	approx. 3 kW three phase current / clockwise
Programming and control	:	PLC Siemens LOGO
Ambient temperature	:	min. 20° C / max. 50° C
Noise	:	ca. 75 dB (A)
Weight	:	ca. 330 kg
Contents of the tank system	:	ca. 75 liters TS / RS pH7 neutral cleaning detergent
Option: Exhaust	:	connection w. capacity of approx. 200-300 m ³ /h necessary
Permanen tfiltration	:	10 µm

Foot print and
max. space required
for service and
maintenance (in mms)

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



Front view:
Max. space required



W. Kolb Fertigungstechnik GmbH
Karl-Arnold-Str. 12 · D - 47877 Willich
Further information: www.kolb-ct.com

Tel. +49 (0) 2154 9479 - 38
Fax +49 (0) 2154 9479 - 47
e-mail info@kolb-ct.com