

# PS07 ST

## One chamber stencil cleaning



**Single-chamber PowerSpray cleaning system** for stencils and carriers 820 x 736 mm, 32" x 29". Cleans stencils, PumpPrint stencils, misprints, solder frames and carriers from SMD-adhesive, SMD-paste, flux, oil, dust, grease and more.

**Part No. 090507-PS**

### The situation

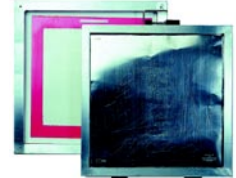
Efficient cleaning of screens / stencils (in electronics and solar cell production) is not only a pre-requisite of a reproducible quality in production but likewise a guarantee for shortest possible stand stills and subsequent customer satisfaction. According to lean personnel management the industry expects state of the art high quality systems which are nonetheless easy-to-handle, fast and guarantee process stability. The kolb PS07 incorporates all these features. With today's aqueous detergents with hardly any unpleasant odors, the system ensures highest cleaning efficiency and allows a widest possible process window.

### The advantages of PS07 ST

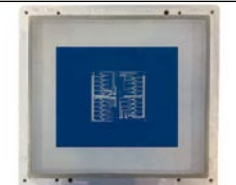
- Fully automatic 4-stage process, cleaning, MediumWipe®, rinsing and drying with high-volume sprayrotator system (all rights reserved).
- Single chamber / one-push button operation.
- Products up to 820 x 736 x 40 / 30 mm resp.
- Tailor made fixtures for goods to clean.
- Short cycle time (< 10 min.) depending on used detergent and contamination.
- Space saving door - with inspection glass into the illuminated process chamber.
- Installation close to the production possible. No special protection necessary.
- Water-free operation possible: Instead of water PS 07 ST can use a suitable cleaning / rinsing detergent for rinsing due to the separate double tank / loop system.
- Suitable for the efficient cleaning of PumpPrint-stencils.
- Made of stainless steel, process sections made of electrolysis resistant elements.
- Process and service intervals PLC-controlled and monitored.
- Double tank system with separate aggregates for each process.
- 3 -stage fine filtration 10µm both for cleaning and rinsing.
- 4 stage PowerSpray-unit with magnetic coupled pumping system and warm air drying (all rights reserved).
- Noise < 74 dB (A).

### Process cycle times

Cleaning cycle time of PS07 ST with stencils contaminated with SMD-paste is approx. 10 minutes. The cycle time of a complete process in the PS07 ST depends on the degree of contamination and the nature of the products to clean such as paste or adhesive as well as the thickness and hardness of such contamination.



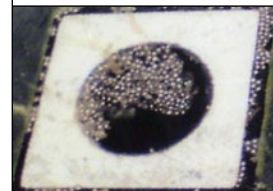
Screens / Stencils



Screens



soldering residues



Soldering residues



SMD adhesive

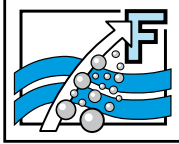
Applications

Contaminations

**Kolb Cleaning Technology GmbH**  
Karl-Arnold-Str. 12 · D - 47877 Willich  
Further information: [www.kolb-ct.com](http://www.kolb-ct.com)

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

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



## PS 07ST one-chamber PowerSpray<sup>®</sup>-system

Sliding door



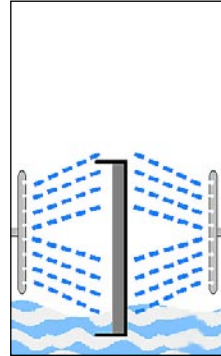
Loading



Operation



Function



Maintenance



### Function

After loading with the stencil, the retractable drawer will be pushed inwards, the hemispherical sliding door will be closed and - after the start of the process - automatically locked. The fully automatic 4-stage process will now run down with the preselected cycle times.

The process status and the applicable cycle time will be shown in the graphic display at the front side of PS07 ST. The extremely short running times ensure a quick return of the perfectly cleaned stencil to the production. Additionally PS07 ST enables an installation close to the production lines and as such it represents a vital element in the value-added-chain.

**Cleaning only with waterbased detergents certified by the manufacturer!**

### Control

PS07 ST will be controlled by a PLC. In the operator desktop there is a 3-stage program selector switch for different 4-stage cleaning programs. The applicable timings are freely adjustable in the PLC such as

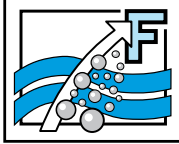
1. SMD-Paste (Printer screens)
2. SMD-adhesive (PumpPrint-stencils)
3. Misprints

### Service

During the development of PS07 ST 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 door at the left hand side. In this service area there are the fine filter units, the pump-out set, the optional dosage unit (container contents of 25 l max.) as well as the (optional) tank for the automatic dosage of an additive. Furthermore there is space for an optionally available DI-water cartridge. Easily accessible from the left hand side behind the cover door are likewise the tanks for detergent (TA) and rinse water (TB) for manual filling and servicing. The levels of both tanks are easily visible through illuminated inspection openings in the covers. The level of both tanks will be controlled automatically by the PLC which will indicate min-level or max-level with a respective warning. This PLC likewise controls the filter pressure of the fine filtration as well as the service and the maintenance cycles of PS07 ST.

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Fax +49 (0) 2154 9479 - 47  
e-mail [info@kolb-ct.com](mailto:info@kolb-ct.com)



# PS 07ST one-chamber PowerSpray<sup>®</sup>-system

**Status light**



**Dosage**



**Heating/pH/DI**



**Reservoir**



**Exhaust**



**Options / accessories PS07 ST**

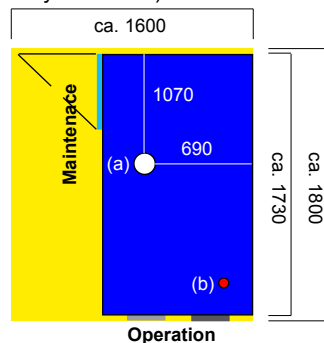
- Status light for system status monitoring from the distance.
- Exhaust control with motor driven flap valve to reduce high suction / to high consumption.
- Automatic re-dosage for rinse water tank and cleaning tank incl. dosage of necessary additives (option).
- Automatic water exchange for the rinse tank.
- pH-value control for both rinse water and cleaning tank.
- Temperature-adjustable detergent heater for the cleaning tank and for the rinse water tank.
- DI-water system for the rinse water tank. DI-cartridge integrated.
- X-power for the cleaning cycle (for PumpPrint stencils of ≥ 3 mm).
- Reservoir with screwed and sealed front and overflow switch.
- Washing frames: various dimensions upon request.

**Technical data**

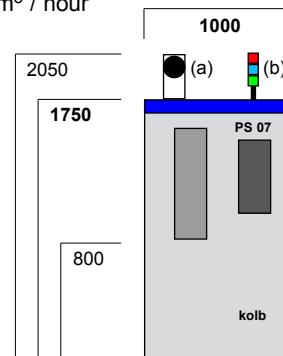
Power supply	:	400 V AC 16 A CEE / 3Ph / 50 or 60 Hz
Power consumption / control system	:	approx. 4,2 -9 kW (depending on options) / SPS / K&M
Ambient Temperature (min./max.)	:	ca. 20° C / 50° C
Noise / Weight	:	≤ 74 dB (A) / approx. 400 kg
Contents cleaning tank TA	:	approx. 75 l (detergent water mixture)
Contents rinse water tank TB	:	approx. 75 l (rinse detergent or water)
Fine filtration	:	≤ 10 µ candle filters and bottom fleeces
Max dimensions for carriers / stencils	:	820 x 736 mm, 32" x 29"
Connection water supply	:	3/8", hose connection 14 mm
Connection rinse water drain	:	3/4", hose connection 25 mm
Exhaust connection (prov. by customer)	:	160 mm Ø > 200 to 300m <sup>3</sup> / hour

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

**Top view:**  
Max. space required for loading and maintenance



**Front view:**  
With optional exhaust device 160 mm (a) and status light (b)



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