

# PSB 700 V50 TWIN

**Fully automatic system for cleaning screens and stencils** from paste and conductive materials. In concurrence with special detergents the two tank system is perfectly suitable for the hybrids and solar cell manufacturing industry.

**Part No. 0905700-PSB-V50**

## Stencil cleaning system

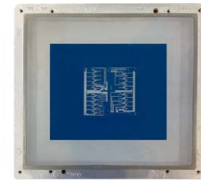


### The situation

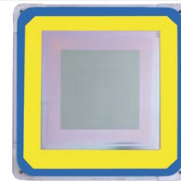
Perfect cleaning of screens and stencils is prerequisite for reproducible quality and thereby an ideal all over process. Cleaning quality in hybrid or in solar cell manufacturing is crucial for the economic efficiency in production and is a decisive factor concerning the energy efficiency of the ready produced solar cells. especially The **kolb** PSB700 V50 TWIN therefore offers a widest possible process window and, due to the double load option, reduces cycle time by half.

### The advantages of PSB700 V50 TWIN

- Capacity: 2 screens / stencils 520 x 520 mms (20,5" x 20,5") or 560 x 490 mms (22" x 19").
- Short cycle time (approx. 7 mins.) depending on detergent and contamination.
- Comfortable push-one-button operation.
- Fully automatic 4step process: cleaning, MediumWipe®, rinsing, compression® drying.
- Two tank combi system with two separate circuits.
- ClosedLoop reprocessing of cleaning and rinsing fluids as standard feature.
- VA Duplex wash cart with two fixtures.
- Vertical four stage rotor system.
- 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.
- Fine filter system 10µm for the cleaning process.
- Water-free operation possible: Due to the separate double tank configuration the system can operate with suitable cleaning / rinsing detergents for rinsing.
- 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.
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- **Certified for solar cell production.**



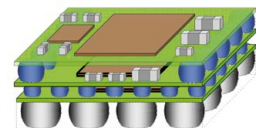
Screens



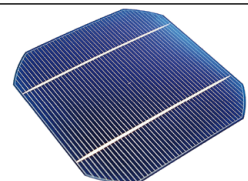
M-TeCK stencils



Screen stencils



Hybrids

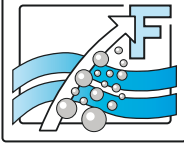


Solar cells

**Applications**

**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)

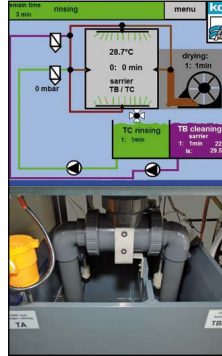


# PSB700 V50 stencil cleaning system

**Process chamber**



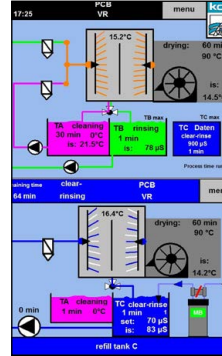
**Two tank system**



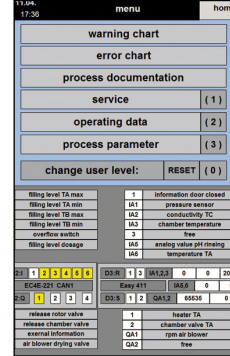
**Operator panel**



**ClosedLoop**



**Monitoring**



## Function

**Loading:** The stencils are positioned in the fixture. After the loading the hatch will be closed and automatically safety locked at start. All relevant data of the fully automatic 4step process cycle is displayed on the touch screen monitor.

## System control / configuration

PS700 V50 TWIN will be controlled by a PLC. Setting and monitoring will be entered/read out via the color touch screen (industry-PC with Windows CE). 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. Conductive materials
3. Misprints

## Maintenance

During the development of the PSB700 V50 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.

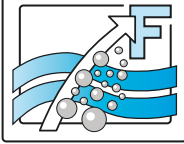
**Standard equipment:** Compression® drying, Duplex wash cart, fine filter tank A, X-Power pump unit,

**Options / accessories:** Exhaust unit, Re-dosage (detergent & additive), MediumWipe®, status light (3- or 5-fold), automatic rotor run control, water exchange / pump out for tank B / C, variable DI-processing unit, heater tank A, XL-Power pump unit, reservoir, MB/DI cartridge, PLC data and scanner unit, insulation, 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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 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)



# PSB700 V50 stencil cleaning system

**PLC computer**



**Re-dosage**



**Maintenance**



**Reservoir**



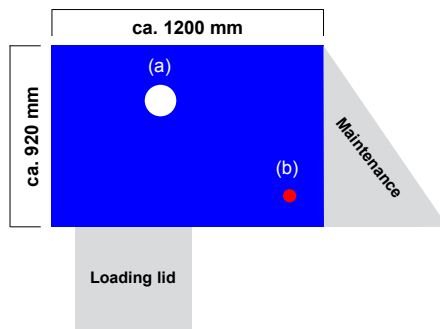
**Exhaust unit**



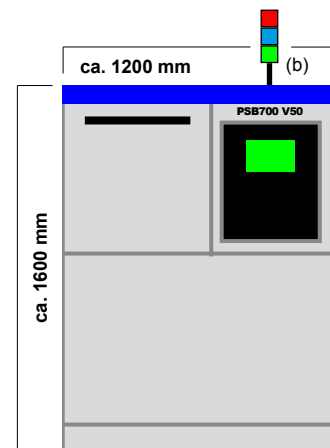
**Technical data**

|   |   |  |
|---|---|--|
| Process chamber dimension               | : | W 540 • D 590 • H 570 mms  |
| Capacity                                | : | 2 screens / stencils 520 x 520 mms (20,5" x 20,5") or 560 x 490 mms (22" x 19")  |
| 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 mms Ø > 200 to 300m <sup>3</sup> per hour  |
| Connection water supply (Tap water)     | : | 3/8", hose connection 14 mm (by cutomers: 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 customers or bridging to tap water)   |
| Connection rinse water drain            | : | 3/4", hose connect. 25 mms with integrated pump out system   |
| Noise                                   | : | 74 dB (A)  |
| Weight                                  | : | 370 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.

