

# MiniSWASH

AUTOMATIC CLEANING SYSTEM FOR STENCILS AND PCBA



MiniSWASH I  
MiniSWASH II (open loop)

MiniSWASH II  
(closed loop)

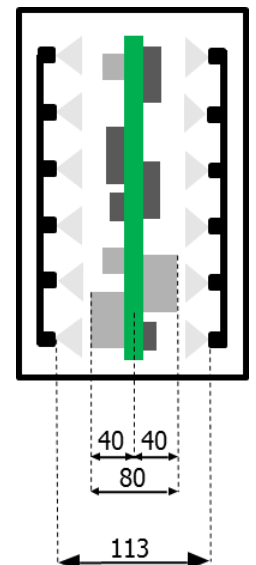


MiniSWASH III  
(closed loop)



## Usable dimension of chamber (mm)

Standard max. thickness  
PCB + components:  
One side 40 mm + other  
side 40 mm (see  
drawing)  
Other material size on  
request.



## Machine types

MiniSWASH I	Wash + Drying
MiniSWASH II	Wash (Heat to 60 °C) + Rinse (Tap water or DI water) + Drying
MiniSWASH III	Wash (Heat to 60 °C) + Double Rinse (2x 25 L Carbon, 25 L Mixbed) + Drying

## Process data

Usable space (mm): WxLxH - W-left/right, L-front/rear, H-height	820 x 80 x 740 mm
Typical consumption of cleaning agent w/o load (per one cycle)	0.1 liter
Stencils capacity/ dimension	1 pc / 29" (32" on request)
Stencils typical total cycle time	15 - 30 min
Stencils typical quantity per hour	2 - 4 pcs
Stencils typical consumption / cycle (cleaning agent)	0.15 – 0.2 liter
PCB defluxing and Misprints - max usable area at the disposal	0.50 m <sup>2</sup>
Max load in 3U-160 eurocards (100x160mm) per one cycle	24 pcs
PCBA + Misprints 3U-160 eurocards (100x160mm) typical total cycle time	30 - 60 min
PCBA + Misprints 3U-160 eurocards (100x160mm) typical quantity per hour	24 - 48 pcs
PCBA + Misprints typical consumption / cycle (depends on PCB shape and pollution)	0.15 – 0.3 liter

*Typical consumption and typical time are based on values from the field, however cannot be guaranteed because of other factor influence*

## Technological data

<b>Standard</b>	<b>Not possible</b>	<b>I</b>	<b>II (open loop)</b>	<b>II (closed loop)</b>	<b>III</b>
Number of cleaning phases		2	3	3	3
Washing heating		max. 60 °C	max. 60 °C	max. 60 °C	max. 60 °C
Rinsing		N	Tap water	DI water	DI water
Drying		max. 90 °C	max. 90 °C	max. 90 °C	max. 90 °C
Mechanical filtration (Cleaning)		20 µm, 5 µm	20 µm, 5 µm	20 µm, 5 µm	20 µm, 5 µm
Mechanical filtration (Rinsing)		N	5 µm	5 µm, 1 µm	5 µm, 1 µm
Chemical filtration (1 <sup>st</sup> . Rinse loop)		N	N	Activated carbon, Mixbed	Activated carbon, Mixbed
Washing tank volume max/min		62/34 l	62/34 l	62/34 l	62/34 l
Rinsing tank volume max/min		N	32,5/22 l	39/22 l	39/22 l
Pressure on the nozzles with new filters (Cleaning)		2.9 bar	2.9 bar	2.9 bar	2.9 bar
Flow with new filters (Cleaning)		50 l/min	50 l/min	50 l/min	50 l/min
Pressure on the nozzles with new filters (Rinsing)		N	2.9 bar	1.7 bar	1.7 bar
Flow with new filters (Rinsing)		N	50 l/min	40 l/min	40 l/min

Speed of rotary arms (motor drive)	12-15 n/min
Number of installed nozzles	52 (= 22+4+22+4)

*Note: Approximate values of pressure and flow are stated. The real values can be a bit different depending on the tolerances of used components. These differences have no effect on cleaning process.*

## Technical parameters

	MiniSWASH I	MiniSWASH II open loop	MiniSWASH II closed loop	MiniSWASH III
Machine dimensions W x L x H mm W-left/right, L-front/rear	1600 x 800 x 1200 height 1600 with exhaust ventilator or signal tower			1600 x 1400 x 1200 height 1600 with exhaust ventilator or signal tower
Dimensions of Filtration unit (mm)	-	-	400 x 600 x 1200	-
Machine weight (without liquid)	220 kg	250 kg	250 kg	450 kg
Weight of Filtration unit (without liquid)	-	-	100 kg	-
Maximum power input	5,5-9,6 kVA	10,6-11 kVA	10,6-11 kVA	10,6-11 kVA
Machine noise level	L <sub>Aeq</sub> < 70 dB			

## Connection

### Electric mains:

- Power supply voltage: 3x 230/ 400 V, 50 Hz  
3x 220/380 V, 60 Hz (option)  
3x 120/208 V, 60 Hz (option)
- Protection: 3x 20 A
- Connection: 3, N + PE (five-wire plug 32 A)

### Pressure air:

- Pressure: 0.6-0.8 MPa
- Connection (pos. 3):  $\varnothing$  8 mm (SMC)

Note: Pressure air consumption < 1 l/min

### Exhaustion:

- Under-pressure 50-80 Pa (it corresponds to 5-8 mm of water column)
- Connection: inner  $\varnothing$  100 mm (machine top)

### Tap water – II type, open loop only

- Pressure: min. 0.2-5 bar
- Connection: Inlet (pos. 1): G3/4" (internal thread); Overflow (pos. 2): Tube PP  $\varnothing$  40x3,7

## Necessary working space

### The following service and maintenance area is required:

From the front side of the machine - minimally 0.8 m area for machine operation

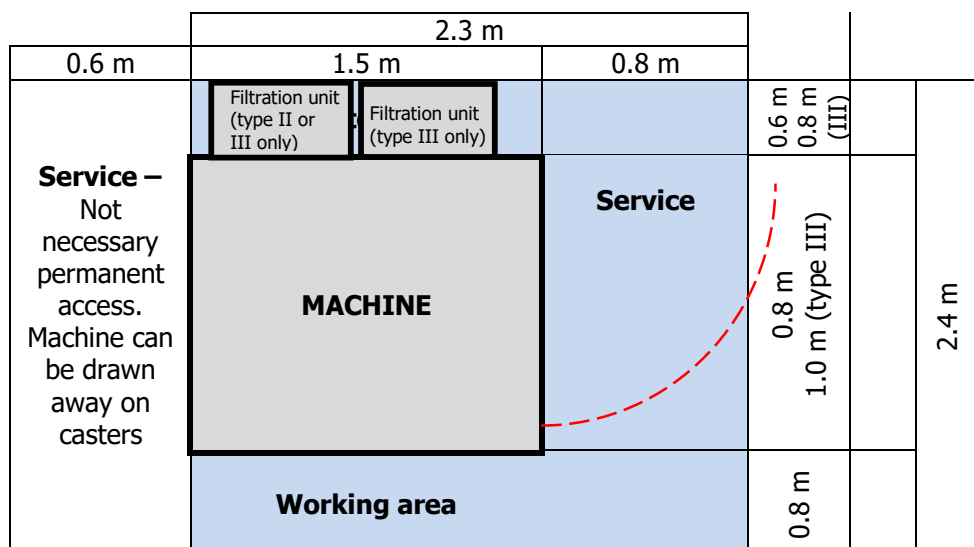
The machine rear part - min. 0.6 m area for machine maintenance and service (access to decanter, filtration unit)

From the right side - min. 0.8 m area for machine service – access space into the switchboard

From the left side - 0.6 m not necessary permanent access, machine can be drawn away on casters

Over the machine - 1 m space for door opening, inserting washed objects.

Top view:

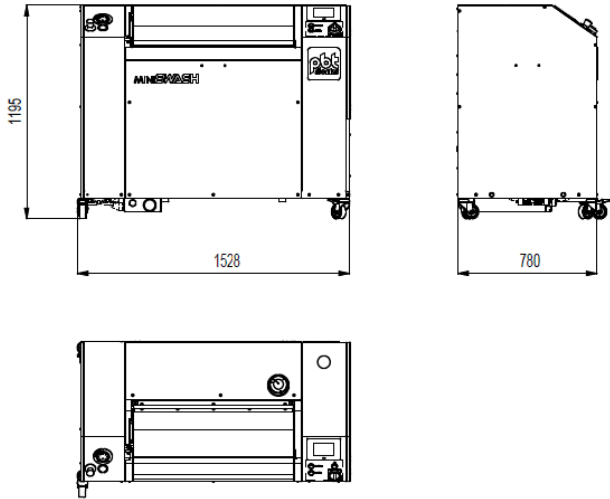


## Dimensions

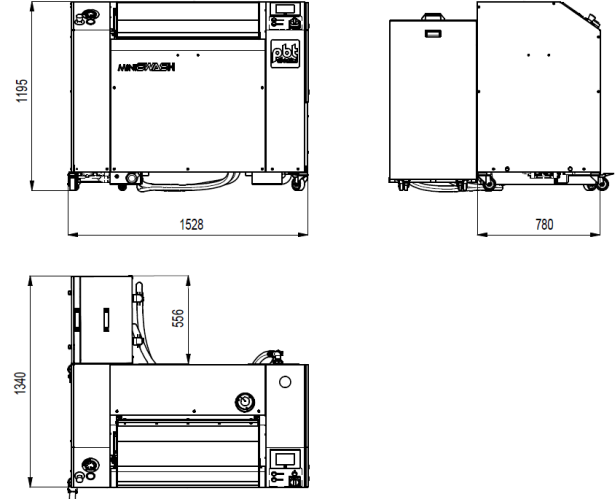
Machine height with the signal tower is about 345 mm higher, it is 1 540 mm.

Machine height with the exhaust ventilator is about 365 mm higher, it is 1 560 mm.

### MiniSWASH I



### MiniSWASH II



### MiniSWASH III

