

Electric Auto cleaning machine



Model: SK-900

Clean solder paste
stencil;
Clean red glue stencil;
Clean misprinted PCB;
Clean soldered PCBA.

26 April, 2018

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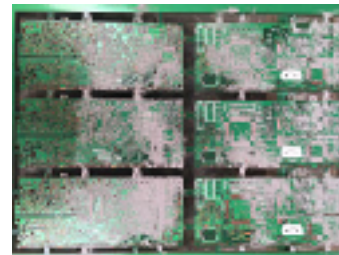
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Introduction

SK-900 is the electric auto cleaning machine for solder paste stencil, red glue stencil and misprinted PCB. Cleaning (by spraying hot aqueous agent), rinsing (by spraying hot DI water), drying (by blowing hot air) functions are integrated in stainless housing at compact size. It not only have excellent cleaning quality and efficiency, but also it is user and environment friendly.



Solder paste stencil PCBA



Misprinted PCB



Squeegees

Features

- Compact design integrated cleaning, rinsing and drying functions;
- Safe for operation:
 - ✓ Non-flammable aqueous agent for cleaning and DI water for rinsing;
 - ✓ Dual nested design assures no fluid leakage from cleaning chamber;
 - ✓ Dual safety latches enable immediate stop when either latch is open;
- High cleaning effectiveness
 - ✓ Electric pump enables stronger spraying pressure;
 - ✓ Heater is equipped in cleaning agent tank and rinsing agent tank for efficient cleaning;
 - ✓ Four fixed vertical spraying bar with 10 nozzles each for cleaning and rinsing, four air blades for drying;
 - ✓ Nozzles are symmetrically located to balance the cleaning pressure on stencil;
 - ✓ Stencil is carried forwards and backwards during cleaning and rinsing to eliminate shadow area;

- Conductivity meter monitors water resistance in real time;
 - ✓ Close loop mode: DI water is cyclically used for rinsing and should be discharged when resistance reading is low.
 - ✓ Open loop mode: Connect to DI water generator and always use fresh DI water to rinse PCB or stencil. It achieves the perfect cleaning.
- Low cycle time;
- Low fluid consumption
- ✓ Fluid runs cyclically in piping with filter;
- ✓ Use compressed air to clear the fluid in piping and make it flow back to the reservoir before the machine goes to next process;

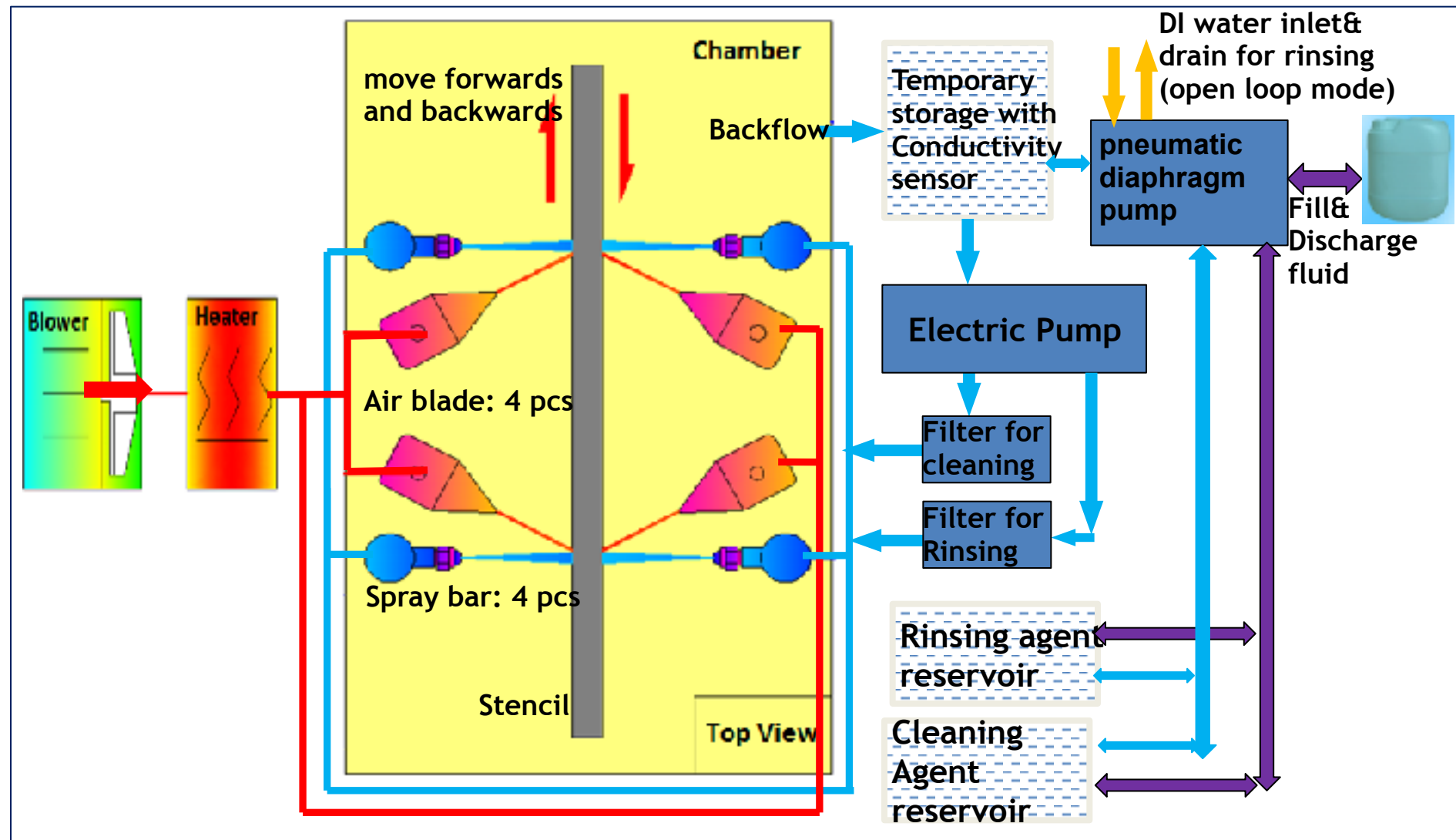
Features

- User friendly
 - ✓ Touch screen interface, parameters are editable, e.g. temperature & time for cleaning, rinsing and drying, conductivity threshold;
 - ✓ Glass window visualized cleaning process;
 - ✓ Operator can use machine pump to fill new fluid into the reservoir or discharge used fluid out of machine;
 - ✓ Buzzer reminds when full cycle completes;
 - ✓ Conductivity meter flashes when resistance goes out of specification;
 - ✓ Triple-color light indicates machine status;
 - ✓ Fluid reservoir level is monitored with float switch sensor;
 - ✓ Pressure gage is equipment to indicate fluid pressure;
 - ✓ Wheels are equipped for in-house movement on flat floor;
 - ✓ Bolt feet assure machine body to be stable when running.

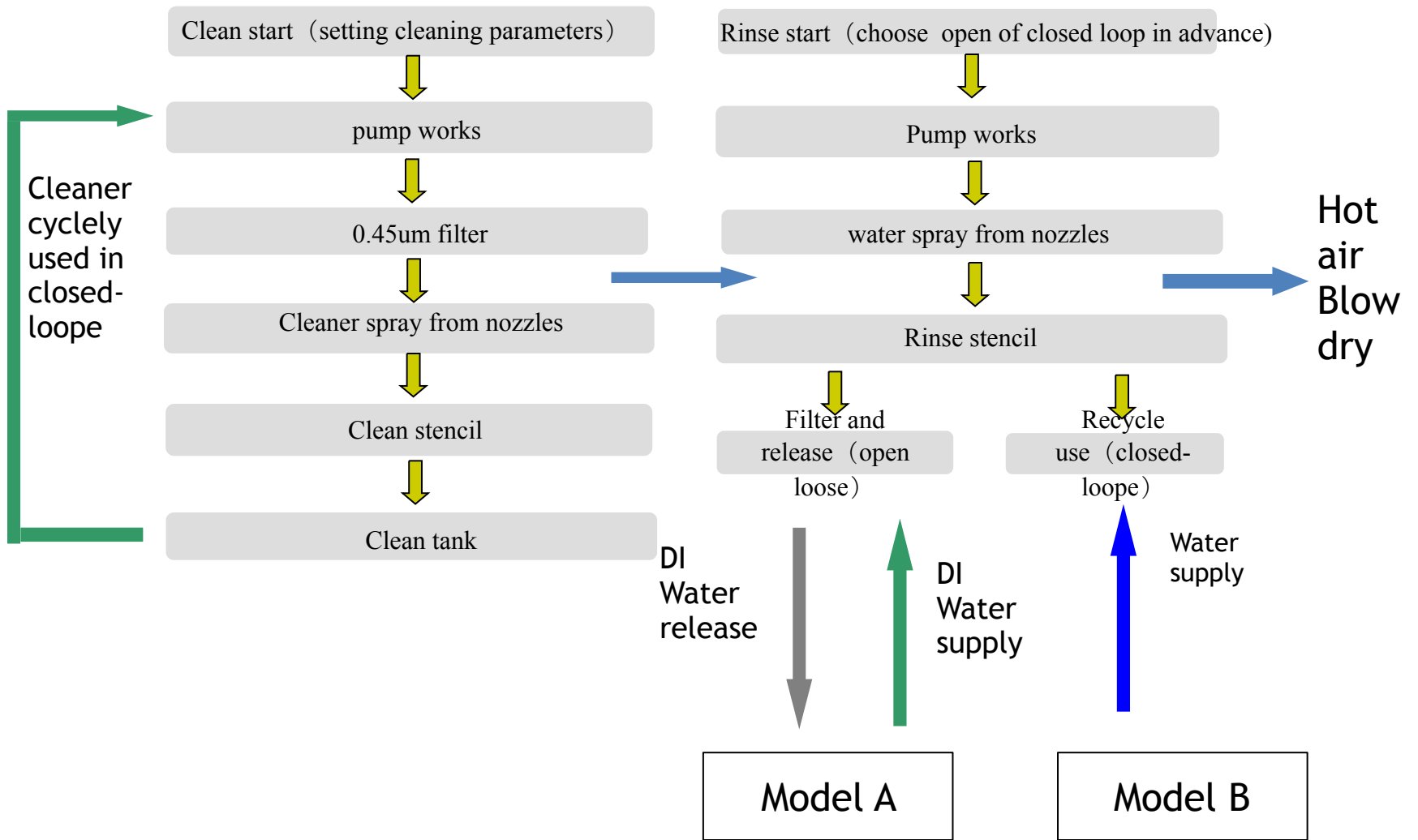
No.	Item	Specification
1	Stencil size	900mm(L) ×750mm(W) × 40mm(H) or smaller
2	Cleaning agent	aqueous agent for cleaning, DI or tap water for rinsing
3	Capacity of tank	50L max. X 2 pcs (for cleaning and rinsing respectively)
4	Way of cleaning	4 fixed spraying bars, stencil moves forwards and backwards by motor
5	Way of rinsing	Share 4 fixed spraying bards, spray DI water, stencil moves forwards and backwards by motors
6	Way of drying	4 hot air blades, blowing hot air
7	Recommended cleaning time	2~5 minutes
8	Time between cleaning and rinsing	1 minute
9	Recommended rinsing time	2~5 minutes
10	Recommended drying time	3~5 minutes
11	Estimated full cycle time	8~16 minutes
12	<u>Conductivity meter</u>	0~18 Mega ohms (sensor installed in cleaning chamber, display the resistance of cleaning and rinsing agent in real time)
13	Heating capability for fluid	room temperature to 60°C for cleaning and rinsing agent
14	Heating capability for drying	room temperature to 110°C for drying hot air

No.	Item	Specification
15	Noise	less than 64 dB
16	Filter	0.45µm for cleaning, 0.45 µm for DI water
17	DI water supply (open loop mode)	30~60 L/min (if not work in cyclic mode), ≤0.4mpa
18	DI water supply (close loop mode)	N/A. DI water is running in cyclic pipe system. Discharge used water when conductivity is out of specification.
19	Spraying electric pump	4HP stainless steel multiple stage centrifugal pump
20	Hot air blower	5.5 HP high pressure blower
21	Power of cleaning agent heater	9KW
22	Power of rinsing agent heater	9KW
23	Power of heater for drying	9KW
24	Total power	about 33KW, 3~6KW at average when working continuously
25	Exhaust hose size	Φ123mm
26	Power inlet	380VAC, 3 Phase, 50HZ , 90A
27	Air supply	0.45~0.7Mpa
28	Weight	600KG
29	Dimension	1300mm(L) ×1600mm(W) × 1950mm(H)

Cleaning principle



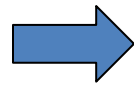
SK-900 flow chart



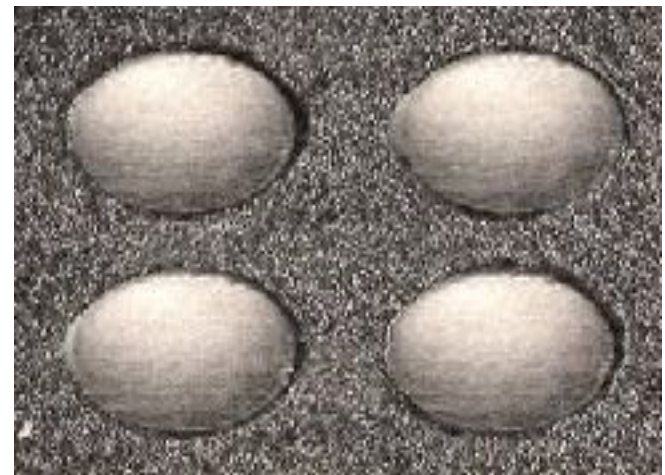
Snapshot of machine interior



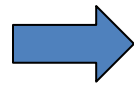
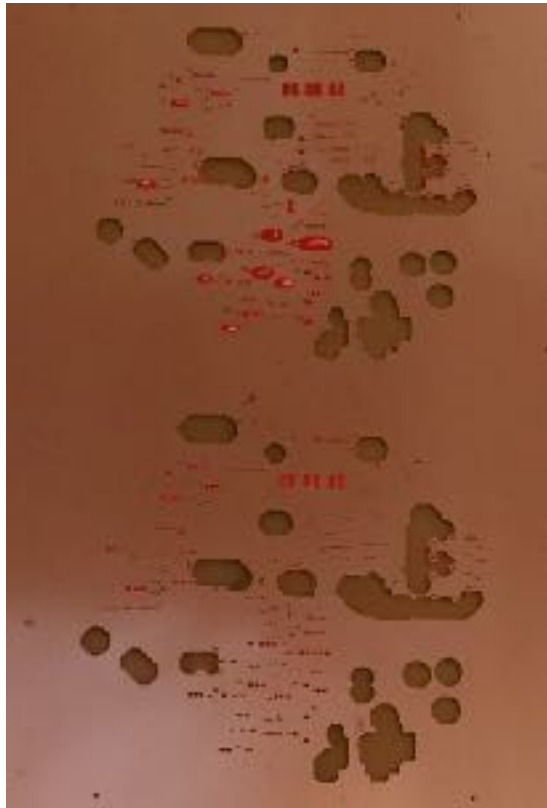
Before cleaning



After cleaning



Before cleaning



After cleaning





- It is to convert to tap water to DI water at 250 L/min flow rate with greater 10MΩ/cm resistivity.
- It is optional for electric cleaning machine;
- Continuously supply fresh DI water for electric cleaning machine to rinse stencil, PCB, or PCBA;
- Used when cleaning machine runs in open loop mode;
- Mainly composed of pre-treating, RO anti-permeating and mixed bed system;
- Benefit: save cost on buying DI water.

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