



SRH-K934

Stencil Cleaning Machine Solution

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1. Structural features

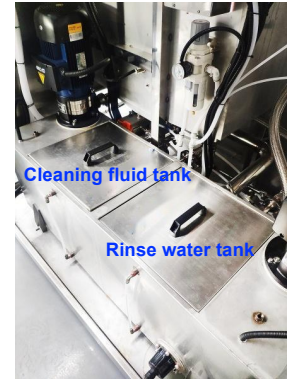
Overall



Four-level filtration system



Liquid storage tank



Drying system



It adopts a unique way of moving the screen plate up and down, eight spray rods in all directions, four spray rods for cleaning and four for rinsing, and a dual four-air knife air cutting and drying design; Integrated cleaning, rinsing, and drying, four-level filtration, and real-time monitoring ensure the cleanliness of the cleaning screen.

1. Structural features

Cleaning area

The cleaning liquid storage tank is used to recover and store the cleaning liquid, and performs 4-level filtration, heating and monitoring, and liquid level monitoring of the cleaning liquid.

Cleaning water pump: 2.2KW (1 unit), 4 spray arms, 40 nozzles;

Liquid storage tank volume: >60L (1 piece);

Filtration device: stainless steel filter 1mm (1 piece), filter baffle 100 mesh (1 piece), liquid tank filter bag: 10UM (1 piece) clean pleated filter core 0.45UM (3 pieces);

Heating power: 6KW (1 piece), heating temperature: room temperature--70°C (adjustable);

Liquid level protection: low position, middle position, stop position, over limit position;

Spray pressure: 0.1-0.6Mpa (adjustable)

Rinse area

The rinsing storage tank is used to recover the stored water, and performs 4-level filtration, heating and monitoring, and liquid level monitoring of the rinsing water.

Rinse water pump: 2.2KW (1) 4 spray arms, 40 nozzles;

Rinsing water tank volume: >60L (1 piece);

Rinse water tank heating power: 6KW (1 piece); heating temperature: room temperature - 70°C (adjustable);

Filtration device: stainless steel filter 1mm (1 piece), filter baffle 100 mesh (1 piece), liquid tank filter bag: 10UM (1 piece), cleaning pleated filter core 0.45UM (3 pieces);

Liquid level protection: low position, middle position, stop position, over limit position;

Spray pressure: 0.1-0.6Mpa (adjustable)

Drying area

The drying section is used to thoroughly dry the product and perform heating, wind cutting + heating and temperature monitoring of the air.

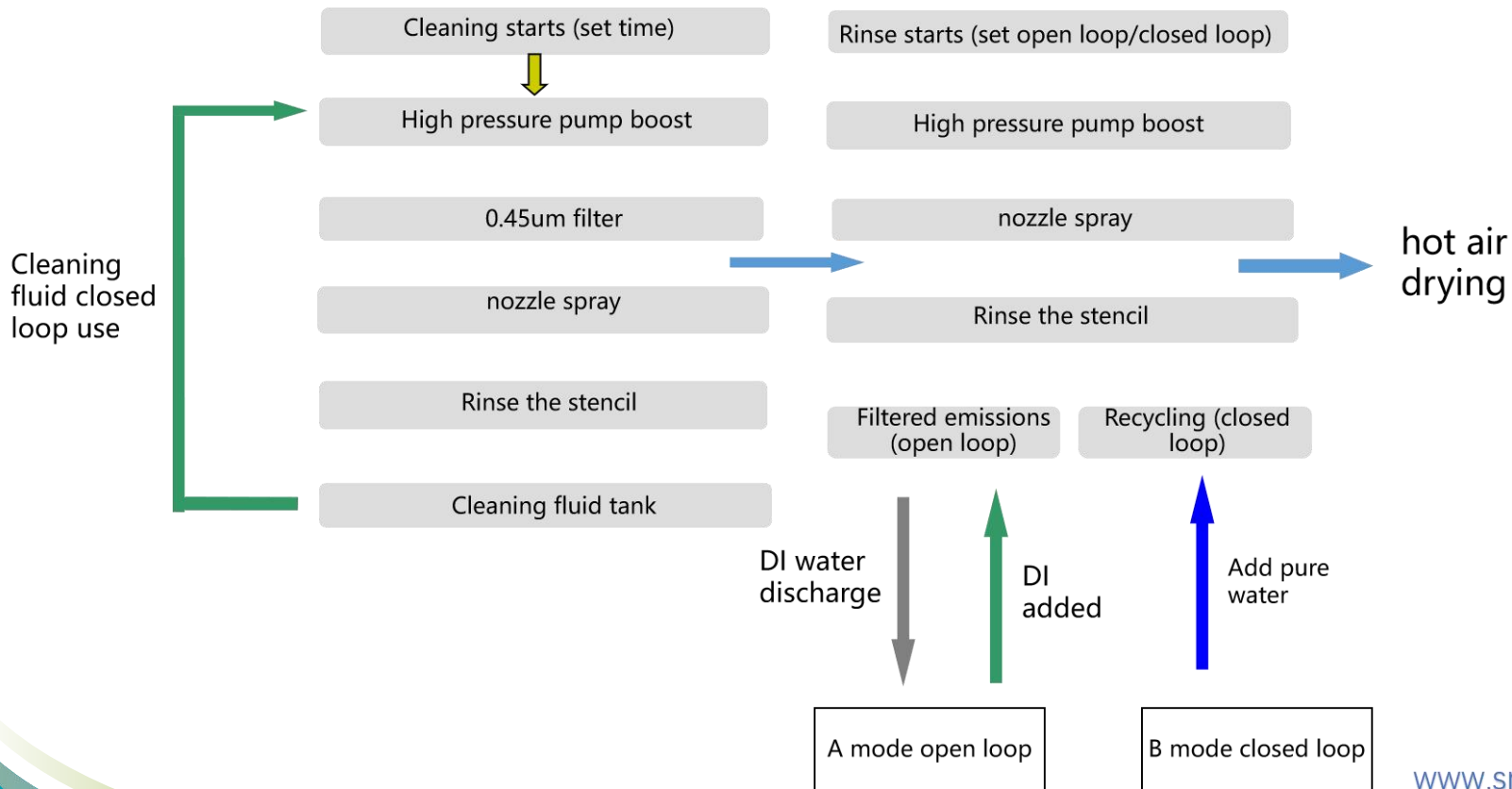
Air knife fan: 5KW (1 piece), stainless steel heating pipe: 5.5KW (1 piece), 4 air cutting air knives, heating temperature: room temperature--60°C (adjustable);

Stencil up and down Running device

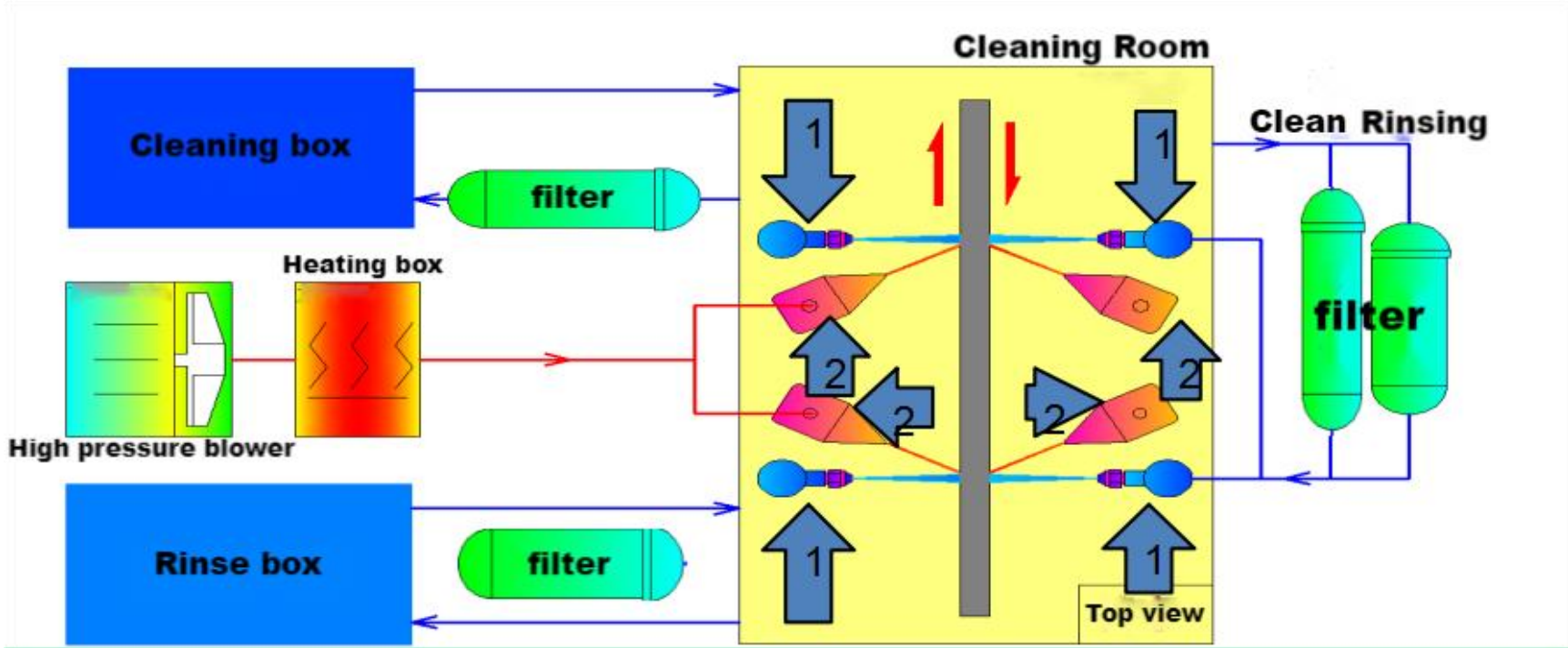
The operating device rotates smoothly by a stepper motor, stepper driver, and encoder;

Stepper motor: 1 set Stepper driver: 400W (1 piece), 1 encoder;

2. Crafts-Flow chart



2. Crafts-Machine internal flow chart



2. Crafts-Question&Ask

Customer A question: What are the advantages of spray cleaning and ultrasonic cleaning?

Advantages of spray cleaning:

1. The sprayed cleaning fluid or water is filtered through four levels and then onto the cleaning product to ensure that the cleaning object will not cause secondary contamination when cleaning;
2. The cleaned pollutants will not settle at the bottom of the tank, but are basically in the filter bag or filter element, and the filtration accuracy can reach 0.22UM;
3. Spray cleaning ability is higher than ultrasonic wave, its efficiency is fast, strong cleaning ability and high efficiency;
4. The degree of spray automation is high. It can automatically switch between rinsing and drying in one spray chamber. It occupies less space and has low equipment cost;

Customer B questions: Will the tension on the stencil be damaged, and will the sealant be washed off?

Because the cleaning is symmetrical spraying by the spray arm, the cleaning power on both sides is basically the same, so the tension of the stencil will not be damaged. The sealing glue is related to the compatibility of the cleaning fluid, and the glue will generally not be washed away;

Customer C question: How to deal with cleaning fluid and rinsing water?

1. In the case of closed-loop rinsing, there is generally no waste water discharge. When the rinsing water needs to be replaced, it can be mixed with the cleaning liquid for cleaning. The cleaning liquid will be consumed appropriately for each wash. If it is not enough, just add it. There is no need to replace it all, cleaning fluid, so zero emissions can be achieved;
2. If wastewater is generated, our company can also sign a recycling and treatment agreement, which can be officially accessed online and traceable.

Customer D question: How long does a cycle of cleaning, rinsing and drying take? How many nets can be washed at one time?

1. Cleaning time: 2-3min;
2. Rinsing time: 1min, drying time: 3-4min; waiting time for reflux and residual liquid blowing: 0.5-1min;
3. One cycle time is: 5-7min;
4. Cleaning area: 736(L) × 736mm(W) × 40mm(H)
5. Clean one screen at a time;

Customer E question: How much cleaning fluid is consumed for one cleaning cycle? How much will the concentration drop?

According to the data verified by our company, the liquid consumption in one cycle of cleaning is about 150ml-200ml. Calculated based on the cleaning loss of 20L of liquid per barrel, each additional liquid can be cleaned about 60 times;

Customer F question: Machine maintenance consumables and lifespan?

Cleaning liquid recycling filter element: can clean the residual flux about 50 times, and needs to be replaced one piece each time.
 Bleaching water discharge filter element: can clean the residual flux about 150 times, and needs to be replaced one piece each time.
 Air precision filter: According to the indoor air environment, replace it about once every three months;
 Clean the spray room filter, equipment surface, and liquid tank once a month; manual

3. Inspection of cleaning results



According to the IPC-J-STD-001 standard, the third-level standard for flux residue is $<40\mu\text{g}/\text{cm}^2$, the third-level standard for ionic pollutant content is $\leq 1.5 \text{ (NaCl)} \mu\text{g}/\text{cm}^2$, and the extraction resistivity is $>2 \times 10^6 \Omega \cdot \text{cm}$

4. Parameter

Content	Parameter
Effective cleaning size	750mm(L) × 750mm(W) × 40mm(H)
Cleaning size range setting	50—750mm
Dimension	1700mm(L) × 1200mm(W) × 2000mm(H)
Weight	750KG
Power/air source	Three-phase five-wire system, 380V/18Kw (rated power)/0.45Mpa-0.7Mpa
Tank capacity	> 80L*2pcs
Spray tank dilution tank heater power	9 KW
Cleaning time	0~99 Minutes (adjustable)
Cleaning temperature (liquid)	Normal temperature ~70°C (adjustable)
Rinse time	1 minute/time (1-59 times/adjustable)
Rinse temperature (DI water)	Normal temperature ~70°C (adjustable)
Drying time	0~99 Minutes (adjustable)

5. Application

SRH-K934 is applied for:

SRH-K934 stencil cleaning machine is a fourth-generation stencil cleaning machine specially designed for the "Water-Based" process: Complete the cleaning, rinsing, and drying processes fully automatically.

(Using a unique double eight-spray arm cleaning and rinsing design, a double four-air knife air cutting and drying design, and online filtration for cleaning and rinsing to ensure cleanliness)

Application: Cleaning of SMT steel stencil, copper stencil, glue mesh, printing glue fixture, PCB misprinted board and PCBA. It can effectively clean the residual solder paste, red glue and other contaminants on the surface and hole wall after printing;

Steel stencil



1

Copper stencil



2

PCB/PCBA



3

Printing squeegee type



4

6. Advantage-Advantages of use

Save costs

01

(1) The stencil is manually cleaned with a dust-free cloth and alcohol solvent cleaning solution. The efficiency is extremely low, averaging 30-40 PCS/H, and multiple people need to be arranged for cleaning;
 (2) The consumption of cleaning fluid is large;

High equipment efficiency

02

(1) We clean 1 PCS each time, each cleaning time: 2-3min; rinsing time: 30-60S, air-cut drying time: 3-4min;
 (2) The equipment can be started with one button. One person can operate at least 5 pieces of equipment. In addition, a variety of products can be cleaned: such as scrapers, PCB misprinting boards, etc.

Environmental friendly

03

(1) The original cleaning process uses alcohol-based volatile solvents, which pollute the air and are flammable and unsafe. The cleaning fluid used in this equipment is water-based, non-volatile and has no flash point process for cleaning;

Quality guaranteed

04

(1) Manual scrubbing for many times may cause scratches on the stencil tension and products. The cleaning is largely incomplete because it is determined by the scrubbing process, and there are also manual fatigue periods and emotional periods;

SRH-K934 stencil cleaning machine greatly improves the entire cleaning process, making it higher quality, safer and more environmentally friendly.

6. Advantage-Structural advantages

A. Cost efficiency

1. After cleaning, blow out the remaining liquid from the pipeline, blow out the remaining liquid from the product, and blow out the remaining liquid from the spray chamber. And wait for the cleaning fluid to return, collect and recycle it, saving cleaning fluid;
2. Cleaning and rinsing are completed independently from the liquid tank-filtration system-water pump-spray arm nozzle. Open, greatly reducing the mixed liquid, the whole process takes about 5-7 minutes;
3. The cleaning area can be set according to the size of the stencil to reduce cleaning consumption and waste;

B. Safety design

1. The cleaning liquid tank, original liquid tank, and spray liquid tank are designed with liquid level sensing overflow alarms;
2. The front door is designed to be protected by a photoelectric sensor when it is opened. When the equipment is being cleaned, if the front door is not closed properly, cleaning will stop and prevent liquid or water from spraying out;
3. The air source, DI water inlet and heating system all have PLC monitoring and alarm systems. Designed with double protection to ensure that any failure will not damage the equipment;

SRH-K934
Steel mesh cleaning machine
More cost-effective,
More professional and focused

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