



SME 5500 Pallet Cleaning machine

Efficient, Clean, Cost-Effective - The One-Stop Solution for SMT Fixture Maintenance, A Paradigm Shift from Manual Cleaning to Automated High-Throughput Batch Processing

The Hidden Costs of "One-by-One" Cleaning

- **High Labor Costs:** Cleaning a single pallet takes about 10 minutes, and the task is repetitive and monotonous.
- **Inconsistent Quality:** Cleaning results vary by operator, making standardization difficult.



Fixture Damage: Harsh scrubbing causes scratches on fixture surfaces, shortening the lifespan of expensive tools.

Production Bottlenecks: Maintenance speed cannot keep up with the production rhythm.



Redefining Cleaning

- ◆ Automated Batch
- ◆ Processing
- ◆ Standardized



Batch Processing

Handles 20–40 fixtures in a single cycle

Fully Automated Process

One-key operation for "Wash + Rinse + Dry"

Zero Damage

Non-contact spray cleaning protects fixture surfaces.

Efficiency & Throughput



- **Massive Capacity**

Equipped with a 1450+mm diameter rotating cleaning basket, designed for high throughput.

- **Rapid Cycle**

The complete process takes only 30–40 minutes.

- **Ready-to-Use**

Fixtures are "production-ready" after drying and can go straight back to the line, eliminating waiting times.

- **Labor Liberation**

Efficiency is multiplied compared to manual labor, freeing up skilled workers for higher-value tasks.

360° Quality Assurance

- **720° Coverage Technology**

Top, bottom, and front high-pressure spray rods + basket rotation = Zero blind spots.

- **Consistency Guaranteed**

PLC automated control eliminates human variables, ensuring every batch has the exact same cleanliness.

- **Deep Cleaning**

Effectively removes flux residue, oil, and solder paste balls, even on complex wave soldering pallets or reflow coolers.



Rotating Basket Mechanism:

Constant rotation exposes every surface to the high-pressure spray.

Spray-in-Air Technology:

Multiple spray rods from the top, bottom, and front create a high-pressure liquid curtain.

High-Pressure Pumps:

Delivers up to 6kg/cm² of pressure to strip away even the toughest residues.

Process Control & Drying

- Powerful Drying System**

3.7KW high-pressure blower combined with 9KW air heaters uses air knife technology to ensure parts are 100% dry.

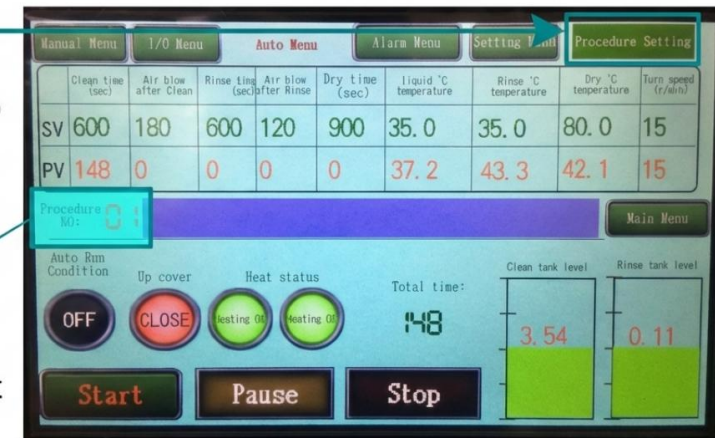
- Flexible Programming**

Mitsubishi PLC system supports storage of up to 10 cleaning profiles.

- Custom Settings**

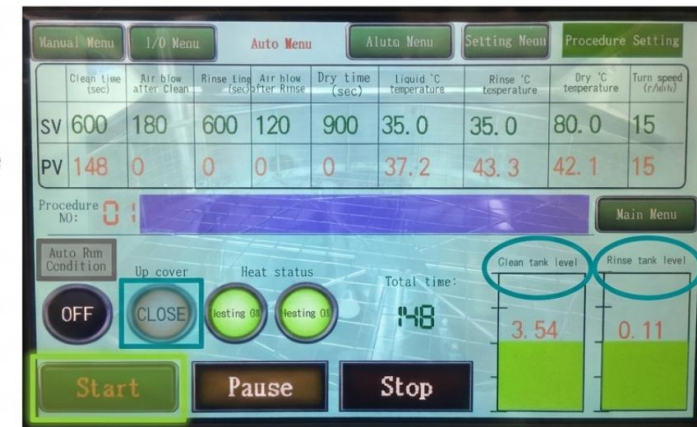
flexibly switch parameters based on contamination levels (e.g., heavy oil on coolers vs. light flux on pallets).

- Save & Exit:** After entering all values, click the "Main Menu" button to save and return to the operation screen.
- Select Procedure:** On the Auto Menu, click the "Procedure NO" field and select the number you just programmed (e.g., 01).



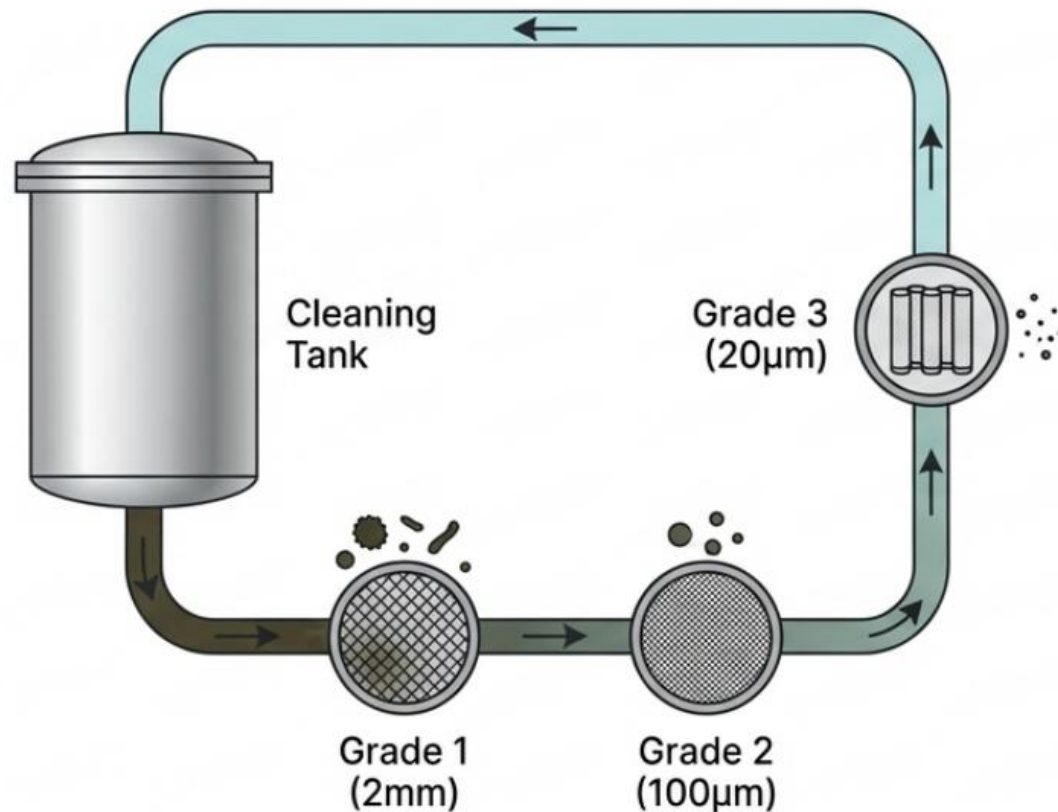
Before you press Start, verify:

- ✓ **Status Verified:** "Auto Run Condition" is set.
- ✓ **Tanks Full:** Clean and Rinse tank levels are just sufficient (not "L" or Low).
- ✓ **Door Secure:** The "Up cover" indicator CLOSE.
- ✓ **Load Pallets:** Your fixtures are loaded securely in the basket.



Process Control & Drying

Air Blow Recovery & Closed-Loop Filtration



- **Chemical Savings**

Unique "Air Blow" feature strips expensive chemical liquid back into the tank after cleaning, significantly reducing consumption.

- **3-Stage Filtration System**

Grade 1: 2mm Coarse Filter (Protects Pump)

Grade 2: 100 µ m Mesh (Filters Particles)

Grade 3: 20 µ m Precision Filter (Filters Flux/Solder Balls)

- **Maintenance Cycle**

Filter replacement cycle is typically 15–30 days.

- **Water Recycling**

Rinse water is filtered and recirculated, reducing discharge.

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Durability & Configuration



- **Chemical Savings**

Machine body, pipes, pumps, and tanks are all made of SUS304 stainless steel, resistant to acid/alkali corrosion for long life.



Top-Tier Global Components

Control System: Mitsubishi PLC & Touch Screen

Electric Components: Schneider Contactors & Relays /

Power Unit: Omron

Pneumatic Components: ARO Diaphragm Pump

Process Control & Drying



- **Load-and-Go**

One-key start requires no complex training for operators

- **Safety Interlock**

Door sensors immediately stop the machine if the cover is opened, protecting personnel.

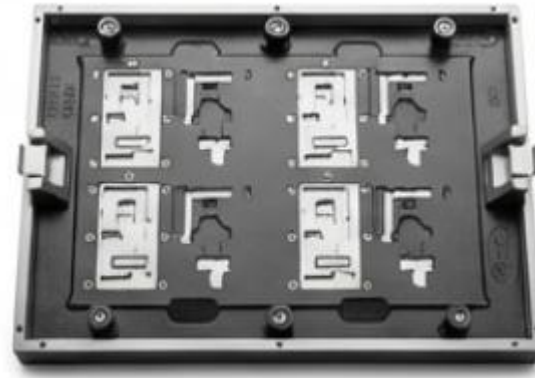
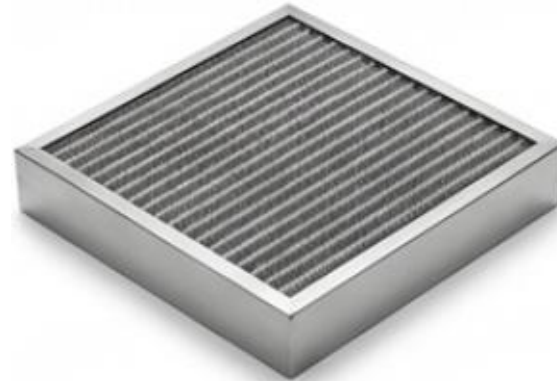
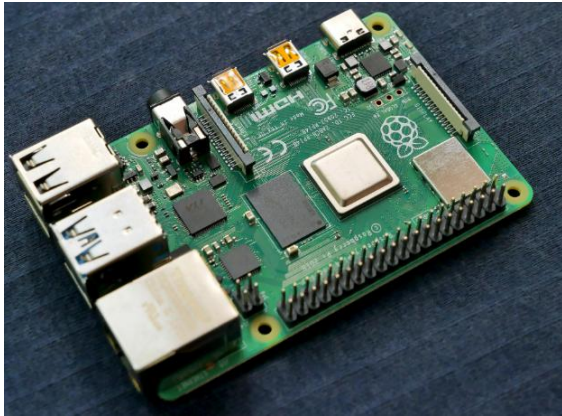
- **Fire Safety Design**

Designed specifically for water-based cleaning liquids, eliminating the risk of flammable solvents.

- **Smart Alarms**

Automatic alarms and shutdown protection for low liquid levels or abnormal pressure.

Applications & Installation



- **Wide Range of Applications**

Wave Soldering Pallets

Reflow Oven Coolers & Filters

SMT Fixtures / SMT

Condensers, Claws, Chains, and Stencils

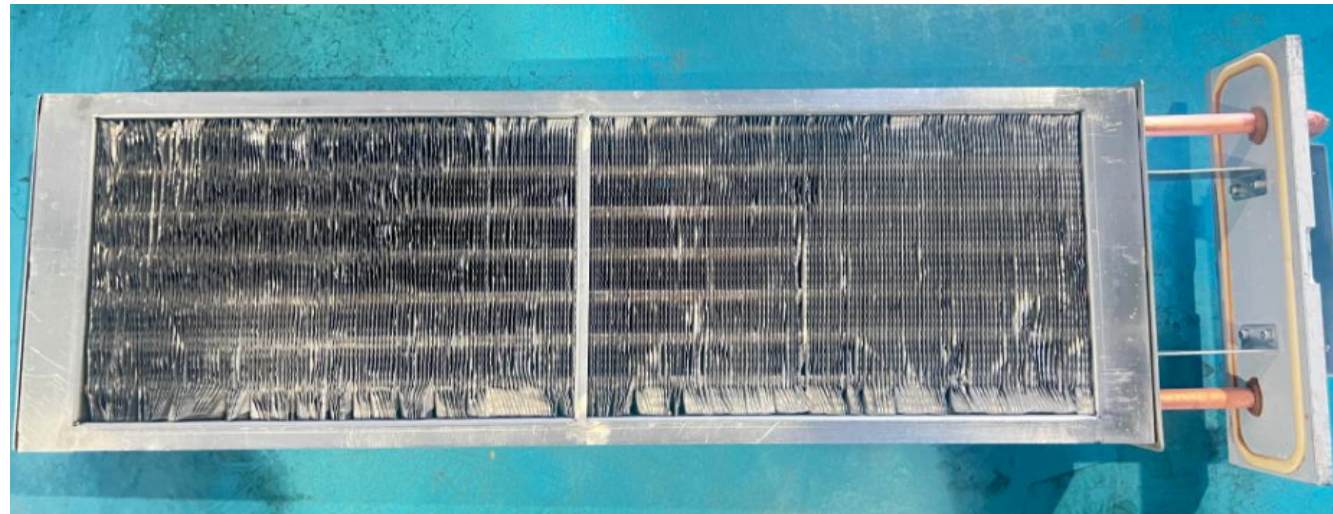
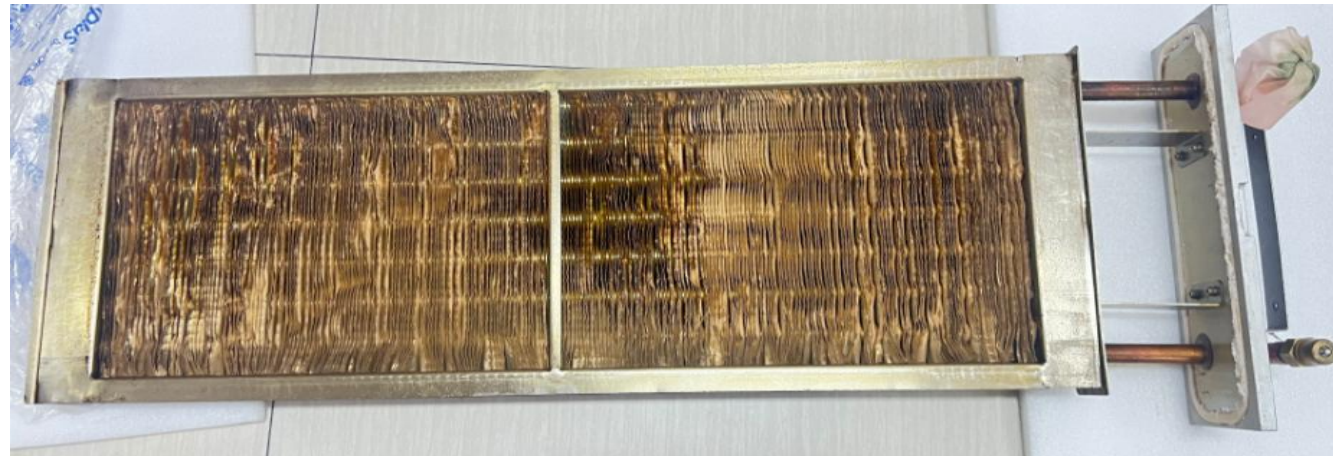
- **Installation Requirements**

Power: 3-Phase 380V, 63A

Air Source: 0.5-0.7 Mpa Compressed Air

Water Source: Tap water inlet and drainage pipes

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Before and After Comparison of Cleaning

Summary & ROI: Why Choose SME-5500?

Save Money

Reduces labor costs, minimizes chemical consumption, and extends fixture life—delivering immediate cost savings and long-term financial efficiency.



Peace of Mind

Automated processes ensure consistent product quality and operational safety, eliminating variability and enhancing trust in output reliability.

High Efficiency

Eliminates production maintenance bottlenecks, streamlining workflows to enhance throughput and reduce downtime for sustained productivity.

Technical Specifications

No.	Item	Specification	Notes
1	Cleaning Tank Dimensions	Ø1450 × H200 mm	Effective cleaning depth: 450 mm
2	Cleaning Solution Tank Capacity	90 L	Cleaning solution
3	Rinse Water Tank Capacity	90 L	DI water
4	Cleaning Method	Top, bottom and front spray cleaning	
5	Drying Method	Compressed air blow-off and hot air drying	
6	Cleaning Filtration System	Stage 1: 2 mm filter (pump protection) Stage 2: 100 µ m filter (solid particle removal) Stage 3: 20 µ m filter (fine particle filtration)	
7	Rinsing Filtration System	Stage 1: 2 mm filter (pump protection) Stage 2: 100 µ m filter (solid particle removal)	
8	Cleaning Cycle Time	5 - 20 min	
9	Rinsing Cycle Time	1 - 2 min	
10	Drying Cycle Time	10 - 20 min	
11	Cleaning / Rinsing Pump Power	3 kW	
12	Air Blower Power	4 kW	
13	Partition Door	Pneumatic, 1 inch	Automatic liquid filling and draining
14	Liquid Heater Power	9 kW (ambient to 90° C)	
15	Hot Air Heater Power	9 kW (ambient to 90° C)	
16	Rotary Drive Motor Power	400 W	
17	Exhaust Outlet Size	Ø120 × H30 mm	
18	Compressed Air Supply	0.5 - 0.7 MPa, 800 - 1000 L/min	
19	Power Supply	380 VAC, 3-phase, 50/60 Hz, 34 kW	Typical operating power: approx. 13 kW
20	Overall Machine Dimensions	L1980 × W2600 × H1500 mm	
21	Net Weight	850 kg	

Best After-sales service

- 7x24 Worldwide Support
- Free Installation/ Training
- 1 day lead-time (spare parts)
- 1 Month customize solution
- 1 Year free warranty service



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