

## Electrical Stencil Washing Machine IE-4750PSW



### Process Flow :



### 1. Features:

Designed for water-based cleaning processes, combining cleaning, rinsing, and drying in one unit.

High-efficiency cleaning process design with high-pressure scanning spray technology to completely remove contaminants from workpieces.

Multi-functional design enabling a single unit to perform steel mesh cleaning, scraper cleaning, and misprint board cleaning.

Water-based high-efficiency drying design with built-in high-pressure fan for air-cut drying and rapid drying.

Multi-stage recycle filtration design with independent three-stage filtration systems for cleaning agents and rinse water.

PLC intelligent program control, touchscreen human-machine interface.

One-touch start, fully automatic operation.

The entire machine is made of stainless steel.

## 2. Specifications:

<b>Model</b>	<b>IE-4750PSW</b>
Applicable stencil size	750(L)*750(W)*40mm(H)
Feed direction	Feed on the right side of machine
Maximum tank capacity	50L
Spray cleaning time	5-10min. (Solder paste cleaning, cleaning times vary depending on the cleaning agent used.)
Rinsing time	2-5min. (Cleaning, cleaning times vary depending on the cleaning agent used.)
Drying time	3-8min. (Drying, drying time vary depending on the cleaning agent used.)
Power supply	3phase, 5wire, AC 380V, 50HZ, 12KW
Water inlet	3/4"
Water outlet	3/4"
Air supply	0.4-0.7Mpa, Φ12mm
Exhaust port size	Φ150mm, 1pc in top
Machine weight	230kgs
Machine size	L1120*W880*H2060mm

## 3. Structure and functions

### Machine consists of belowings:

Rack and fully enclosed outer cover	1set
Spray washing/rinsing system	1set
Air drying system	1set
Horizontal moving system/	1set
Automatic filling/drainage system	1set
Electrical control and monitoring system	1set

### Details:

Main structure	Composition	Quantity	Function
Fram and full closed housing	Frame	1set	Specifications: 40 x 40 x 2 mm square tube Material: SUS304 Process: Laser cutting, argon arc welding
	Housing	1set	Specifications: 1.5 mm stainless steel plate Material: SUS304 Process: Laser cutting, argon arc welding Activity doors are reserved around the body for convenient equipment maintenance and repair. An exhaust vent is installed at the top of the equipment to improve the

			<p>environmental quality around the cleaning room.</p> <p>Safety door function to improve the safety performance of the equipment.</p>
Spray cleaning and rinsing system	Spray chamber	1set	<p>Spec.: 2.0mm stainless steel plate Material: SUS304 Process: Laser cutting, CNC bending, argon arc welding, ensuring high-quality sealing of the tank body; The bottom features a multi-sided inclined design, with a drainage port at the bottom of the inclined surface for easy drainage; The left side of the chamber is reserved as the feed port for inserting and removing the steel mesh. The front of the cavity is fitted with a glass observation port for equipment maintenance and internal servicing.</p>
	Liquid storage tank	2sets	<p>Spec.: 2.0mm stainless steel plate Material: SUS304 Process: Laser cutting, CNC bending, argon arc welding, ensuring high-quality sealing of the tank; The bottom features a sloped design for easy drainage and tank cleaning; Cleaning/rinsing storage tank capacity: 50L Equipment operating volume: 30–45L Liquid level control: Electronic multi-level liquid level control with high/low liquid level alarms, enabling automatic liquid replenishment; a liquid level observation port is installed at the front of the equipment for real-time monitoring of the liquid level inside the tank; Heating power: 2000W Temperature control: Setting range 0-100°C; temperature probes monitor in real time, controlled by a PLC temperature control module using PID regulation to ensure process stability.</p>
	Recirculating filtration system	2sets	<p>Three-stage filtration with 50 mesh/100 mesh/1um filter cartridges. Specially designed for water-based environmentally friendly cleaning agents to</p>

			<p>increase their service life.          Filter material: SUS304.          Number of filters: 2 (1 for cleaning and 1 for rinsing).          Filter specifications: 10 inches/3 cores.</p>
	Spray mechanism	1set	<p>Function: Use a water pump to pressurise the liquid, which is then sprayed onto the workpiece through the nozzle to wash away contaminants on the workpiece, achieving the purpose of cleaning/rinsing.          Number/material of water pumps: 1/SUS304          Number/material of spray rods: 2/SUS304          Spraying method: front-to-back/vertical direction          Cleaning/rinsing spray pressure: 0.25–0.5 MPa</p>
	Fluid inlet distribution mechanism	1set	<p>Material: SUS304          Function: Realises automatic control of three different media, namely cleaning agent, rinsing water and compressed air, through pipeline valves, so that they are sprayed from the same spray bar.</p>
	Recirculation distribution mechanism	1set	<p>Material: SUS304          Function: When the equipment is running, the system valves automatically switch to return the cleaning agent/rinse water to their respective storage tanks.</p>
Drying system	Blower	1set	<p>Function: Utilises a high-pressure fan to compress air, which is then blown onto the workpiece through a wind knife nozzle to quickly remove liquids from the workpiece and achieve the purpose of drying.          Number/brand of high-pressure fans: 1/Lets</p>
	Air knife	1set	<p>The air knife is designed based on aerodynamic principles, with low resistance, high air velocity at the outlet, high drying efficiency, no dead corners, and no liquid dripping from the mesh plate surface after air drying.          Quantity/material: 2/SUS304          Installation location: front and rear of the equipment/vertical direction</p>

Mobile system		1set	<p>Function: Drives the spray bar and air knife to move horizontally back and forth to achieve scanning cleaning/rinsing/drying of the steel mesh.</p> <p>Components: Horizontal moving track, moving pair, power, position sensor, protection system.</p> <p>The moving track uses linear bearings and slide rails to ensure smooth, safe and reliable operation.</p> <p>Movement mode: Gear rack/reciprocating movement.</p> <p>Number of motors: 1.</p> <p>Protection system: Left and right limit position protection.</p>
Automatic liquid intake/discharge system	Pump	1set	Function: Power output when liquid is entering or exiting.
	Liquid in system	1set	<p>Function: Uses a pump powered by a valve to add liquid to the storage tank</p> <p>Includes: 304 piping valves and welded piping</p>
	Liquid out system	1set	<p>Function: Uses a pump as a power source through a valve to discharge liquid from the storage tank</p> <p>Includes: 304 piping valves and welded piping</p>
Control system	Circuit	1set	<p>PLC: Mitsubishi FX series products;</p> <p>Touch screen: Taiwan Weintek 7-inch touch screen</p> <p>Electrical accessories: High-quality brand products such as Zhengtai, Mingwei, and Xinling are used;</p> <p>Circuit protection: The circuit is equipped with leakage, overload, under-voltage, and short-circuit protection functions, ensuring reliable installation;</p> <p>Reasonable wiring and standardised wiring</p>
	Program	1set	<p>Process Selection: The programme design offers multiple cleaning process modes, allowing users to select the appropriate mode based on process characteristics for operation, while also providing customisation functionality; different cleaning programmes can be switched via options</p>

			<p>on the touchscreen.</p> <p>Process Monitoring: Fully automatic control and monitoring of cleaning, rinsing, drying, circulation filtration, liquid level, temperature, safety doors, etc.</p> <p>Maintenance and Troubleshooting: Audio-visual alarms for maintenance and faults, with alarm displays on the touchscreen.</p> <p>Operation Mode: One-button start, fully automatic operation.</p> <p>Access Control: Three-level login permissions managed with different passwords, specifically for operators, administrators, and manufacturers, ensuring dedicated access rights.</p> <p>Control Mode: Manual and automatic modes.</p>
--	--	--	---

### Main parts list

Part	Brand	Part	Brand
Pump	FCNP/SHIMGE	PLC	Mitsubishi
High-pressure blower	RAETTS	Electrical components	CHNT
Pneumatic components	AirTec	Screen	Weinview
Sensor	Omron	Switching power supply	MW