

STENCIL CLEANER: AC-W02

Key Specifications & Features

AMS NEW PRODUCT

STENCIL CLEANER: NEW AC-W02

AMS

AUTOMATION. SMT & LEAN MANUFACTURING

Key Specifications & Information

NEW AC-W02 Control System Cleaning NEW AC-W02 Introduction Method Comparison



AUTOMATION, SMT & LEAN MANUFACTURING

NEW AC-W02

Auto Cleaner AC-W02 is an automated equipment which has capability to clean PCB boards, metal masks, & any materials that requires cleaning during SMD process. AC-W02 uses mainly air as power supply for cleaning operation instead of using electricity. This automated equipment is safe, environmental friendly and performs precision cleaning.

Increased quality of cleaning performance

Environmental friendly due to usage of air for cleaning operation

Minimal usage of cleaning solution & reduction of cleaning solution costs

Substantial cleaning time cycle & labor reduction

Minimal production of hazardous waste material

Elimination of dangers and accidents caused by chemical leakage, electric shortage, & fire.

ADVANTAGES

2-1. METAL MASK Cleaning Method Comparison



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CONVENTIONAL METHOD



- Exposure of hazardous chemicals to operators
- Environment contamination
- Poor cleaning quality
- Longer cleaning time & more labor
- More chemical waste removal needed

NEW AC-W02 METHOD



- Uniform & high quality surface cleaning
- Elimination of exposure of hazardous chemicals to operators
- Elimination of fire caused by flammable chemical leakage & electric shortage.
- Minimal loss of cleaning chemical for increased amount usage
- Easy cleaning chemical management

COMPARISON & NOTES

2-2. PCB Cleaning Method Comparison



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CONVENTIONAL METHOD



- COMPARISON & NOTES
- Exposure of hazardous chemicals to operators
- Environment contamination
- Poor cleaning quality
- Longer cleaning time & more labor
- More chemical waste removal needed

SMD SERIES CLEANING METHOD



- Stability of PCB board due to secured fastening system
- Performs cleaning of multiple PCB boards simultaneously
- Uniform & high quality surface cleaning
- Elimination of exposure of hazardous chemicals to operators
- Elimination fire caused by flammable chemical leakage & electric shortage.
- Minimal loss of cleaning chemical for increased amount usage
- Easy cleaning chemical management

2-3. Cleaning Machine Comparison



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ULTRASOUND TYPE

(Electricity Driven + Dipping Method)



COMPARISON & NOTES

- Vulnerable to frequent system failures due to long cleaning time cycle and high temperature of the machine
- Large consumption of cleaning chemicals due to application of dipping method
- High risk of electrical component failures and reduced performance due to high vibration of the machine
- High maintenance & replacement cost
- Inconsistent end results
- Frequent replacement of the cleaning chemicals.

NEW AC-W02(Air Driven + Rotation / Spray Method)





- Uniform & consistent surface cleaning
- Less cleaning chemical consumption
- Less mechanical & electrical failure
- Low maintenance cost
- Easy installation and operation
- Advantage of durability characteristic of analog system
- Less vibration and secured fastening to the material being cleaned.

3-1. NEW AC-W02 CONTROL SYSTEM OVERVIEW



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Contrast to similar machines in the market today, **AC-W02** uses air as main power supply for cleaning operation.
AC-W02 is an analog module system which replaces normal components like PLC/RELAY/SWITCH/SEN SOR/TIMER/LAMP to a more efficient and cost effective components developed by Donghwan.

AC-W02 is equipped with DOOR SENSOR/EMERGENCY STOP BUTTON/BUZZER LIGHT/DUEL DOOR ACCESS/ CYCLE COUNTER for assurance of safety of the work environment and for the operators.

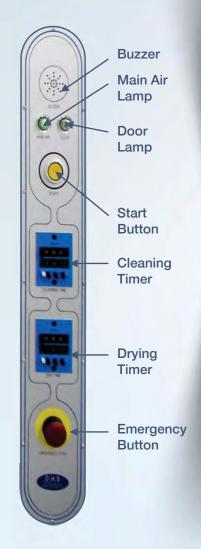
NEW AC-W02 KEY SPECIFICATIONS	
OVERALL DIMENSTION	685.5(W) × 940(L) × 1868(H)mm + 150(VENTILATION)mm
CLEANING SYSTEM	FLOW (CLEANING SOLUTION DISPERSION + AIR DISPERSION) TECHNOLOGY
FRAME DIMENSION	740mm × 740mm × 30mm (MAX.)
TANK CAPACITY	50l(MAX)
FILTERING SYSTEM	DUEL FILTERING = 1 ST . STAGE FILTER: 200 MICRON / 2 ND . STAGE FILTER:1 MICRON
VENTILATION DUCT	Φ150 / 1 EA.
MAIN STRUCTURE MATERIALS	PP PANEL(SIMONA), STEEL & ALUMINUM
WEIGHT	350kg(EXCLUDING THE CLEANING SOLUTION)
AIR SUPPLY PRESSURE	6kgf/cm² ~ 7kgf/cm² 1800ℓ/MIN ~ 2600ℓ/MAX

3-2. NEW AC-W02 CONTROL SYSTEM PROCESS



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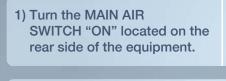








BAG FILTER



Lights will come on the MAIN AIR LAMP & DOOR LAMP





4) Close the INNER/OUTER DOOR and press START Button

- 5) Cleaning Starts
- a. CLEANING TIMER activates
- b. PUMP activates
- c. LIGHTING BAR activates (optional)

During the cleaning process cleaning solution from the RECYCLE TANK travels through in the order of, PUMP ->HOUSING FILTER ->ROTARY HEAD->NOZZLE BAR-> NOZZLE->METAL MASK-> DRAINAGE->BAG FILTER-> RECYCLE TANK. During this cleaning cycle the cleaning solution is dispersed at a speed of 50 liter/min. with rotation of 50 \sim 60 rev./min. at a pressure of 1.5 \sim 2 bar.

- 6) Drying Starts
- a. DRYING TIMER activates. (CLEANINGTIMER de-activates.)
- b. PUMP de-activates.
- c. AIR SUPPLY VALVE opens.

At this stage, NOZZLE disperses air at $4{\sim}6$ bars to dry-off and eliminate any unwanted residues on the material being cleaned.

7) Finish

a. BUZZER activates b. Lights go off

End of 1 cleaning cycle