

## ABOUT SAM COMPANY



SHENZHEN SAM ELECTRONIC EQUIPMENT CO.,LTD was founded in 2005, A professional company specializing in R&D, manufacturing Precision SMT Cleaning Equipments , Waste-water Treatment Equipment ,Laser PCB Depaneling Equipment,SMT Semiconductor Peripheral Equipment.We will continuously develop new and refined products and technology to achieve world-class manufacturing level for meet the demands of high-end customers.

With 12 years development ,SAM's technical strength and excellent service to win the trust and support of customers. Our products was won SMT China Innovatiom achievement at three consecutive years, Also our R&D Automatic Cleaning machine, PCB In-line cleaning machine, Waste water treatment system and PCB Depaneling machine was get the patent certification.



Since 2005

35 employees work permanently to satisfy customers reque:

3000m2 company facility

ISO 9001 and ISO 14001 conform



Patent certification

SMT China Innovatiom achievement



Complete manufacturing and assembly plant



Yearly Shanghai /Shenzhen NEPCON Exhibition meet old/new customer

## SAM CLEANING MACHINE OVERVIEW

| SM-5600   | SM-8800   | SM-7500   | SM-8150   | SM-8160  | SM-8100   | SM-8400N  | SM-600  |
|---|---|---|---|--|---|---|---|
|  |  |  |  |  |  |  |  |

### Application Suitability :

|  |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|
| Metal stencils from paste and glue                         |   |   | ✓ | ✓ | ✓ | ✓ |   |   |
| Plastic stencils from glue                                 |   |   | ✓ | ✓ | ✓ | ✓ |   |   |
| Misprints from paste and glue                              | ✓ | ✓ | ✓ | ✓ |   |   |   |   |
| PCB Assembly and Hybrid Substrates defluxing               | ✓ | ✓ | ✓ | ✓ |   |   |   |   |
| Solder pallets from the wave solder process                | ✓ |   | ✓ |   |   |   | ✓ |   |
| Various parts (Mechanical, optical ,Lead-frames and Wafer) |   | ✓ |   |   |   |   | ✓ |   |
| Squeegee   |   |   | ✓ | ✓ |   |   |   | ✓ |

### Process Data :

|   | Max effective space :L*W*H(mm)  | 600*650*600 |            | 740*740*40 | 740*740*40  | 882*182*850 | 740*740*40 | 1000*1000*480 | 600*200 |
|---|---|-------------|------------|------------|-------------|-------------|------------|---------------|---------|
| Stencil                                     | Stencil capacity /Dimension   |             |            | 1 pcs /29" | 1 pcs /29"  | 1 pcs /29"  | 1 pcs /29" |               |         |
|   | Typical total cycle time  |             |            | 15-20min   | 15-20min    | 10-15min    | 5-10min    |               |         |
|   | Typical consumption/Cycle (Clean agent)-liters                        |             |            | 0.06-0.1 L | 0.06-0.15 L | 0.04-0.08 L | 0.12 L     |               |         |
| PCBA+Misprint                               | PCB Defluxing and misprints -max effective area at the disposal       | 2.5m2       | 0.72m2/min | 0.6M2      | 0.6M2       | 0.6M2       |            |               |         |
|   | Standard max thickness PCB+components                                 | 40mm        | 80mm       | 40mm       | 40mm        | 40mm        |            |               |         |
|   | Max Load in 3U -160 Eurocards (100*160mm)                             | 70-150pcs   | 40pcs/min  | 28pcs      | 28pcs       | 28pcs       |            |               |         |
|   | Typical total cycle time  | 30-50min    | 5min       | 15-25min   | 15-25min    | 15-25min    |            |               |         |
|   | Typical consumption/Cycle (depends on PCB shape and pollution)-liters | 0.2-0.3 L   | 7-8 L      | 0.2-0.3 L  | 0.25-0.3 L  | 0.1-0.2 L   |            |               |         |
| Solder pallets -available space (mm)        |   | 600*650*600 |            | 740*740*40 |             |             |            | 1000*1000*480 |         |
| Typical total cycle time for solder pallets |   | 30-50min    |            | 20-30min   |             |             |            | 20-30min      |         |
| Squeegee capacity/Cycle                     |   |             |            | 4pcs       | 4pcs        |             |            |               | 6pcs    |

### Technical Data :

|                              |                |                |                |                  |               |              |                |               |
|------------------------------|----------------|----------------|----------------|------------------|---------------|--------------|----------------|---------------|
| Cleaning agent volume        | 55L            | 180L           | 45L            | 50L              | 30L           | 40L          | 60L            | 60L           |
| Max cleaning temperature     | 60℃            | 60℃            | 60℃            | 60℃              | 60℃           | room         | 50℃            | 50℃           |
| Max Rinsing temperature      | 45℃            | 50℃            | 60℃            | 60℃              | 60℃           |              | 50℃            | 50℃           |
| Max Drying temperature       | 70℃            | 100℃           | 80℃            | 80℃              | 80℃           | room         | 80℃            | 80℃           |
| Machine Dimension L*W*H (mm) | 1670*1100*1900 | 6700*1650*1700 | 1700*1400*1900 | 1160* 1600* 1920 | 1300*850*2100 | 980*700*1730 | 2000*1400*1500 | 1400*900*1300 |
| Machine Weight               | 500KG          | 3800KG         | 500KG          | 500KG            | 350KG         | 250KG        | 400KG-450KG    | 250KG         |

# STENCIL CLEAN---SM-8100



## PNEUMATIC STENCIL CLEANING SYSTEM



### APPLICATION

- SMT Metal stencil for remove solder paste and residual
- Plastic stencil for remove gule

### UNIQUE FEATURES

- Completely pneumatic operating without fire risk
- Stainless steel chamber , reliability and durable
- With cleaning and drying process
- Special air exhaust design can reduce clean solvent consumption
- Compresseed air drying system
- Chanagable modular design to ensure easy maintenance
- Double clean tank avaiable (option)
- Easy maintanence

### CONTROL SYSTEM

- Operation panel Control
- Cleaning and drying time adjustable

## CLEAN PROCESS

| Step    | Spray Cleaning | Drying         |
|---------|----------------|----------------|
| Solvent | IPA /Alcohols  | Compressed air |

## PROCESS DIAGRAM



## CLEAN ROOM



## ULTRASONIC +SPRAY IN AIR STENCIL CLEANING SYSTEM

### APPLICATION

- High precision metal stencils

### UNIQUE FEATURES

Touch-based ultrasonic combination with spray cleaning method

Auto add & drain cleaner system

Stainless steel filter ,more durable

4 clean process , all process totally separated

LED Panel light detection

Compressed air wind shear nozzle drying

Low clean agent consumption

### CONTROL SYSTEM

PLC Control Touchscreen

Temperature ,cycle time and conductivity controlled

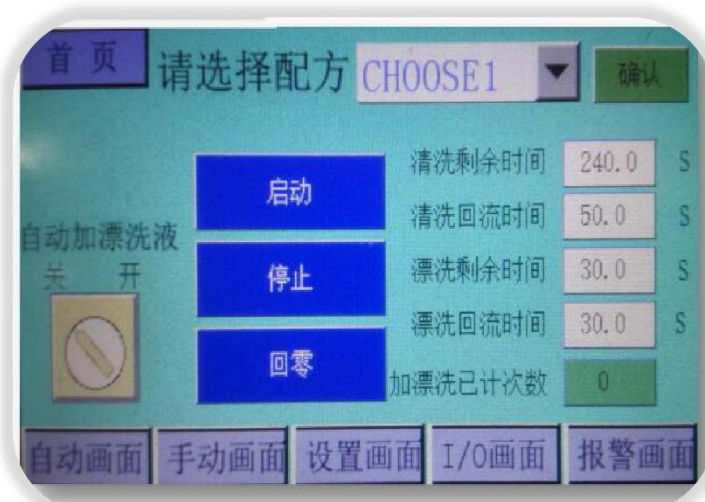
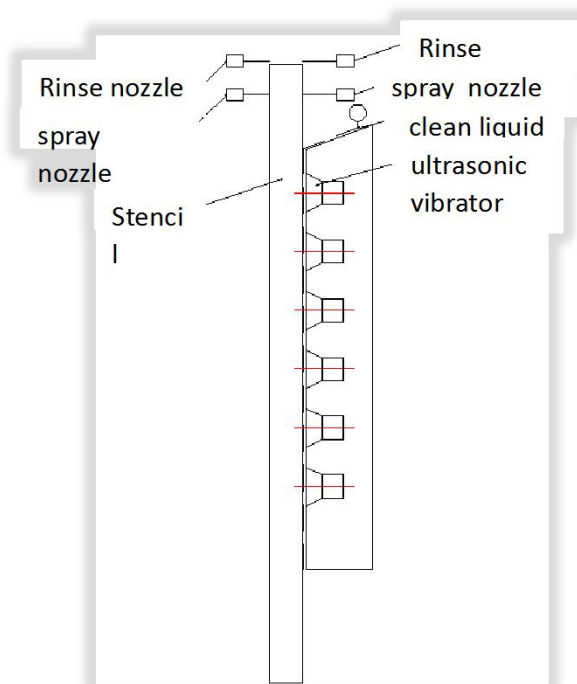


## CLEAN PROCESS

| Step    | Spray Cleaning | Ultrasonic Cleaning | Rinsing   | Drying         |
|---------|----------------|---------------------|-----------|----------------|
| Solvent | Water-based    | Water-based         | Tap Water | Compressed air |

## WORKING PRINCIPLE

## CONTROL TOUCHSCREEN



# SUPER SWASH---SM-8150



## HIGH PRESSURE SPRAY CLEANING SYSTEM



### APPLICATION

- SMT/SOP stencil and print glue fixtures Cleaning
- Misprint and low volume PCBA Cleaning
- SMT Printer squeegee Cleaning

### UNIQUE FEATURES

- Double liquid tank, equipped with heating system
- Stepper motor control spray lance reciprocating spraying, can choose spraying area
- With counting function ,automatic count stencil cleaning number and recycle times
- Clean pressure adjustable , wide visual window
- Resistivity monitoring rinse water , ensure cleanliness
- Low clean solvent consumption , compressed air recovery residual liquid
- Stainless steel chamber and filter , Durable and corrosion resistance
- Automatic drainage system, convenient management and maintenance

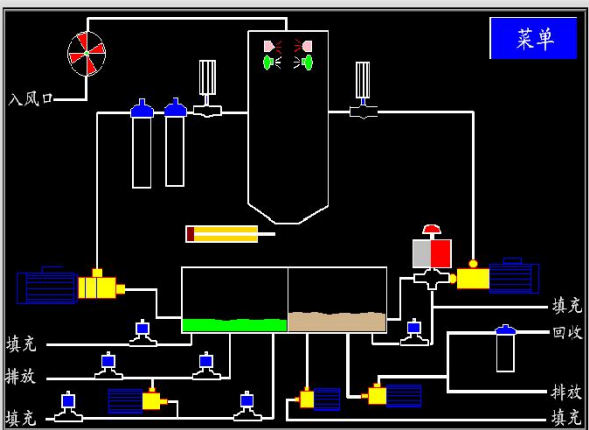
### CONTROL SYSTEM

- PLC Control Touchscreen 5"
- Temperature ,cycle time and conductivity controlled

## CLEAN PROCESS

| Step    | Spray Cleaning | Chemical isolation | Rinsing                             | Drying  |
|---------|----------------|--------------------|-------------------------------------|---------|
| Solvent | Water-based    |                    | Tap /DI-Water<br>(closed/open loop) | Hot-air |

## PROCESS DISGRAM



## WIDE VISUAL WINDOW





# SUPER SWASH---SM-7500



## HIGH PRESSURE SPRAY CLEANING SYSTEM

### APPLICATION

- SMT/SOP stencil and print glue fixtures Cleaning
- Misprint and low volume PCBA Cleaning
- SMT Printer squeegee Cleaning

### UNIQUE FEATURES

- Intergated with cleaning ,rinsing and drying process
- Spray chamber adpoted "Nano surface treatment " technology ,cavity won't residual clean solvent , reduce consumption
- Easy process optimization due to glass door
- Efficient air knife for drip-off and fast drying
- DI Water reclaom plant is intergrated,equip with plasma activated carbon filter
- Easy maintanence

### CONTROL SYSTEM

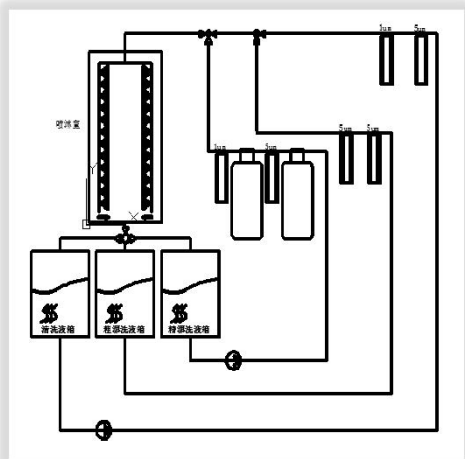
- WIN 7 based ,PLC Control Touchscreen ,LAN connection
- Complete process traceability available
- Barcode reader for product identification (Option)
- Clean solvent concentration measuring (Option)
- Machine event logging
- Week program for automatic start up /shut down
- Remote support
- Intuitive control system
- Three levels password protection



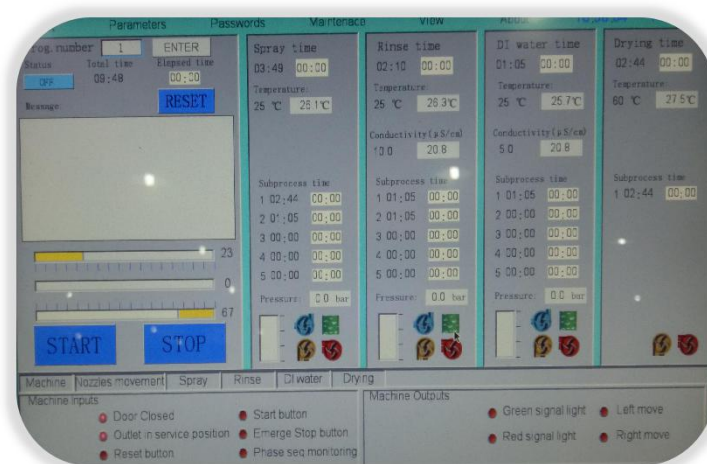
## CLEAN PROCESS

| Step    | Spray Cleaning | Chemical isolation | Rinsing                             | Drying  |
|---------|----------------|--------------------|-------------------------------------|---------|
| Solvent | Water-based    |                    | Tap /DI-Water<br>(closed/open loop) | Hot-air |

## PROCESS DIAGRAM



## CONTROL TOUCHSCREEN



# SOLDER PALLET CLEAN---SM-8400N



## AUTOMATIC HIGH PRESSURE SPRAY CLEANING SYSTEM

### APPLICATION

- High volume Wave Solder pallets cleaning
- Reflow solder tray & Condenser cleaning
- Mechanical parts cleaning

### UNIQUE FEATURES

- With Clean and rinse solvent real-time circulation filtration system
- Adjustable spray pressure , 720 degree rotation clean basket without clean blind
- Stainless steel filter cleanable
- Auto add & drain clean solvent
- Easy setting and operation
- Low clean solvent consumption , low noise
- High clean capacity , saving labor cost

### CONTROL SYSTEM

- PLC control Touchscreen 5"
- Temperature ,Cleaning and drying time controlled
- Setting and monitoring of all process parameters
- Password protection



## CLEAN PROCESS

| Step    | Spray Cleaning | Spray Rinsing         | Drying                   | Drying  |
|---------|----------------|-----------------------|--------------------------|---------|
| Solvent | Water-based    | Tap water or DI-Water | High pressure wind-shear | Hot-air |

## ROTATION CLEAN BASKET



## CONTROL TOUCHSCREEN



# SQUEEGEE CLEAN---SM-600



## SPRAY IN AIR SQUEEGEE CLEANING SYSTEM



### APPLICATION

SMT Squeegee Cleaning

### UNIQUE FEATURES

- Innovative design , rotation ultrasonic combination with spray clean
- Equip with pneumatic pump , auto add and drain clean solvent
- Inching holder , easy load unload squeegee
- Install with solder paste reclaim bags
- Stainless steel chamber and filter , Durable and corrosion resistance
- Easy setting & operation
- Easy maintenance

### CONTROL SYSTEM

- PLC Control touchsreen
- Temperature ,cycle time and conductivity controlled

## CLEAN PROCESS

| Step    | Spray Cleaning | Ultrasonic Immerse Cleaning | Ultrasonic Immerse Rinsing | Drying   |
|---------|----------------|-----------------------------|----------------------------|----------|
| Solvent | Water-based    | Water-based                 | Tap water/DI-Water         | Hot -air |

## SOLDER PASTE RELAIM DEVICE



## CONTROL TOUCHSCREEN





# COMPACLEAN---SM-5600



## HIGH PRESSURE /HIGH VOLUME CLEANING SYSTEM

### APPLICATION

- High capacity & low process cost PCBA cleaning
- High volume misprint PCB Cleaning
- Solder pallet cleaning

### UNIQUE FEATURES

- Fixed nozzle system
- Basket oscillation
- Uniform covering of cleaned area
- All processes totally separated
- Closed DI Water loops available
- 4 step process ,each splitted to 5 substeps
- Easy Maintenance

### CONTROL SYSTEM

- PLC control Touchscreen or WIN 7 Based ,LAN connection
- Complete process traceability available
- Barcode reader for product identification(Optional)
- Cleaner concentration measuring(Optional)
- Machine event logging
- Week program for automatic start-up/shut down
- Remote support
- Intuitive control system
- Adaptive rinsing cycle time control
- Three levels password protection



## OPTIONAL CONFIGURATION

|            | Spray Cleaning | 1 Rinsing    | 2 Rinsing | Drying  | Recommended use               |
|------------|----------------|--------------|-----------|---------|-------------------------------|
| SM-5600I   | Water-based    | -            | -         | Hot air | Various parts                 |
| SM-5600IR  | Water-based    | Tap water    | -         | Hot air | Solder pallets ,Various parts |
| SM-5600II  | Water-based    | -            | DI-Water  | Hot air | Misprint PCB                  |
| SM-5600IIR | Water-based    | Tap water    | DI-Water  | Hot air | PCB Assembly ,Misprint PCB    |
| SM-5600III | Water-based    | Pre DI-water | DI-Water  | Hot air | PCB Assembly,Misprint PCB     |

# IN-LINE CLEANING SYSTEM---SM-8800



## HIGH CAPACITY CLEANING SYSTEM

### APPLICATION

- Highest capacity & low process cost PCBA cleaning
- High volume misprint PCB Cleaning

### UNIQUE FEATURES

In-line complete cleaning ,rinsing and drying process .

Excellent clean effect to remove Water-soluble flux, organic and inorganic pollutants

Stainless steel body with good reliability

Wind shearing water section+hot-air circulation drying section

Option spray cleaning knife for better clean effect

Low equipment investment cost

UPS standby power supply system

### CONTROL SYSTEM

10 inch PC control ,Chinese/English operation interface

Capacity counting system and off pcb sensor system

Rinse water resistivity water quality monitoring system

Chemical filtration system

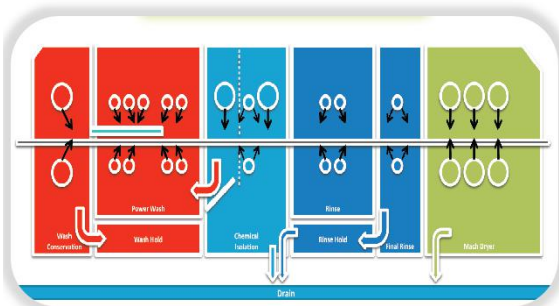
PID temperature control system



## OPTIONAL CONFIGURATION

PCB Load→Pre-clean→cleaning→Chemical isolation→Rinse I →Rinse II →RinseIII→Spray→  
wind sharing water I →Wind sharing water II →Hot air circulation dry→ Unload

## PROCESS DIAGRAM



## CLEAN SECTION

