

# EMST WSM Range



EMST Stallion fc - PLC

## Wave Soldering Machines



EMST Stallion cc - PLC

Wave soldering machine range offered by EMS Technologies comes in two combinations with Finger type conveyor for high productivity and Carrier Conveyor type suitable for batch production. With over 20+ years of experience EMS Technologies has been well known brand in the SMT field

The field proven Stallion Wave Soldering Machine is now introduced in PLC version with many more enhanced features.

## Fluxer Options



### Foam Fluxer

Stainless steel tank of 5 ltrs capacity with porous candle  
External compressed air driven  
Air knife to blow off excess flux back to the tank



### Spray Fluxer

Modular design - Spray, Control & Infeed Modules  
Auto spray as per length & width of board



### Drawout Fluxer Tank

(only for finger conveyor model)  
Foam Fluxer tank is mounted on drawout sliding base  
Easy access to nozzle and porous candle for maintenance

## Preheater Options



### IR & Convection (for Carrier Models)

One IR and one Hot Air Convection Preheater  
Total Length of 1000 mm & each 5KW  
Intelligent power saving circuit between IR heater & Solder Pot



### Two Hot Air Convection Preheaters

Total Length of 1000 mm and 5KW each  
High reliable open coil heaters with blower  
Twin output impeller housing for better



### Three Hot Air Convection Preheaters

Total Length of 1200 mm and 4KW each  
Highly reliable open coil heaters with blower  
Twin output impeller housing for better efficiency

## Solder Pot Options



### 150 Kg Lead Free / 170 Kg Leaded Pot

Available in SS, Nitrided SS or Titanium  
Three Cartridge internal heaters for better efficiency  
AC pump motor with speed control for uniform & stable wave height



### Orbital 'O-Wave' SMD Option

Patented Italian Technology and field proven over years  
Fin Assembly moving in narrow elliptical orbit inside nozzle area to create orbital wave  
O-Wave speed and amplitude controlled by AC Motor  
Orbital turbulence of O-wave eliminates shadow areas around SMD components

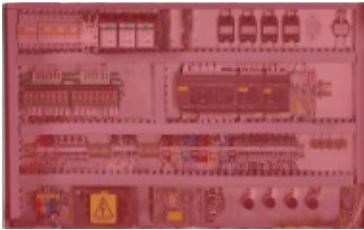


### 225 Kg Lead free / 255 Kg Leaded

#### Dual Wave Pot

Available in SS, Nitrided SS or Titanium  
Multi Jet wave for SMD soldering, covering the entire width  
AC Motor with speed control for both Main and Jet wave  
High Reliable External Plate heaters

## Control and Interface



**Overall Machine Control thru PLC**  
Independent PID control for Preheater & Solder Temperatures  
Auto / Manual / Diagnostics mode with Password Protection



**HMI**  
Touch panel for Operator Interface  
USB Port for Data Logging  
Extensive Monitoring of Alarm conditions with messages



**Software Features**  
Wide range of functions built-in  
Weekly / Daily Timer  
Auto sON  
Auto Flux On (in Finger model) Interlocks to prevent improper operation

## Carrier (Pallet) Conveyor Model Features



**Conveyor**  
Aluminum Extruded Conveyor Assembly to ensure Thermal compensation for perfect parallelism  
Carrier / Pallets of Aluminum extrusion with Titanium fingers  
AC Variable speed motor with closed loop Encoder for precise speed control



**Carrier/Pallet Options**  
Carrier with adjustable center rod with fingers for accommodating additional rows for small PCBs  
Wire type center support to avoid warping of PCB



**Conveyor Angle**  
Manual adjustment of Conveyor Angle - 3°, 4° or 5°  
Simple adjustment by shifting slots in bracket

## Finger Conveyor Model Features



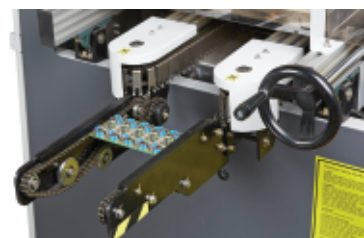
**Conveyor**  
Rigid lead screw/guide shafts for perfect parallel movement  
Titanium fingers on chain drive with back support all around for perfect alignment  
AC Variable speed motor with closed loop Encoder for precise speed control



**Conveyor Angle and Width**  
Manual adjustment of Conveyor angle - 4° & 5°  
Simple wheel adjustment of both conveyor and solder pot  
Manual conveyor width adjustment by wheel



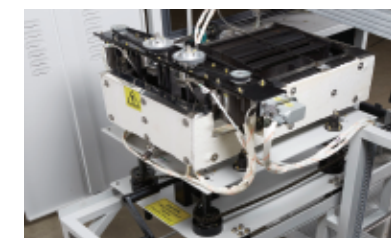
**Finger Cleaning**  
Brush cleaning of fingers with solvent pumped from recirculating tank  
Stainless steel tank for solvent with level indicator for easy refilling



**Inlet & Exit PCB Feeder**  
Chain Type inlet feeder with 3 mm pins coupled to main conveyor and running at same speed  
Chain type or simple parking type exit feeder



**Anti Warp Support**  
Wedge type support on solder pot to prevent PCB warpage.  
Wire type support also available.



**Roll out and Exchangeable solder pot (both Finger & Carrier models)**  
Solder pot can be easily rolled out for cleaning  
Exchangeable pot assembly with motors, heaters, sensor etc available for quick exchange between Lead & Lead free pot  
All connections of pot thru quick lock connectors

Technical changes reserved.

## Spray Fluxer Technical Data

Technical drawings of the SMT-1000 machine, showing four views with dimensions in millimeters (mm):

- Front View (Top Left):** Shows the machine's width and height. Dimensions include 2033 (total height), 1838 (height to top of machine), 800 (height of lower section), 1035 (width of upper section), 2380 (width of lower section), and 3600 (total width).
- Side View (Top Right):** Shows the machine's depth and height. Dimensions include 1865 (height to top of machine), 750 (height of lower section), 800 (width of lower section), 1370 (total depth), and 1380 (depth of upper section).
- Front View (Bottom Left):** Shows the machine's width and height. Dimensions include 2075 (total height), 1850 (height to top of machine), 700 (height of lower section), 1790 (width of lower section), and 1530 (width of upper section).
- Side View (Bottom Right):** Shows the machine's depth and height. Dimensions include 2075 (total height), 1850 (height to top of machine), 750 (height of lower section), 1565 (width of upper section), 2780 (width of lower section), and 3600 (total width).

Additional labels and dimensions:

- EXTERNAL STAND FOR SOLDER TANK CLEANING:** Indicated in the side and front views.
- 750 ~ 800 CONVEYOR FEEDER HEIGHT AT INLET:** Indicated in the side view.
- 700:** Dimension for the height of the external stand.
- 1530:** Dimension for the width of the upper section.
- 1790:** Dimension for the width of the lower section.
- 1850:** Dimension for the height to the top of the machine.
- 2075:** Dimension for the total height.
- 2780:** Dimension for the width of the lower section.
- 3600:** Dimension for the total width.
- 1565:** Dimension for the width of the upper section.
- 1865:** Dimension for the height to the top of the machine.
- 1370:** Dimension for the depth of the machine.
- 1380:** Dimension for the depth of the upper section.
- 1035:** Dimension for the width of the upper section.
- 2380:** Dimension for the width of the lower section.
- 800:** Dimension for the height of the lower section.
- 750:** Dimension for the height of the lower section.

### Stallion - cc PLC Floor Plan

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Owing to continuous Research and Development, specifications are subject to change without notice.

Manufactured by  
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