

# 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

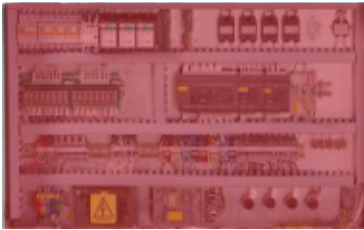
Patented Italian Technology and field proven over years  
Fin Assembly moving in narrow elliptical orbit inside nozzle area to create orbital wave  
O-Wave speed and amplitude controlled by AC Motor  
Orbital turbulence of O-wave eliminates shadow areas around SMD components



### 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



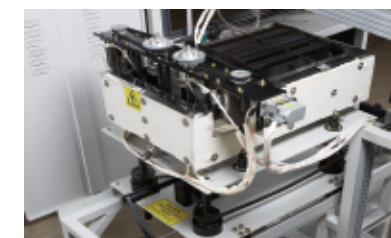
**Finger Cleaning**  
Brush cleaning of fingers with solvent pumped from recirculating tank  
Stainless steel tank for solvent with level indicator for easy refilling



**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 Solder Paste Dispenser (SPD) showing four views: front, side, and two perspective views. Dimensions are provided in millimeters.

- Front View (Top Left):** Shows the main body with a width of 3600mm and a height of 2075mm. The top section has a width of 1535mm. The base has a width of 3020mm. A vertical dimension of 1535mm is shown on the left side.
- Side View (Top Right):** Shows the side profile with a height of 1854mm. The base has a width of 1870mm. A vertical dimension of 1363mm is shown on the left side. A label indicates "EXTERNAL STAND FOR SOLDER TANK CLEANING" with a width of 700mm.
- Perspective View (Bottom Left):** Shows the front-left perspective with a height of 1850mm. The base has a width of 1520mm. A label indicates "EXTERNAL STAND FOR SOLDER TANK CLEANING" with a width of 700mm.
- Perspective View (Bottom Right):** Shows the front-right perspective with a height of 2075mm. The base has a width of 3600mm. The top section has a width of 1565mm. A label indicates "750 ~ 800 CONVEYOR FEEDER HEIGHT AT DUST" with a width of 2780mm.

### Stallion - cc PLC Floor Plan

### Stallion - fc PLC Floor Plan

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



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