

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.

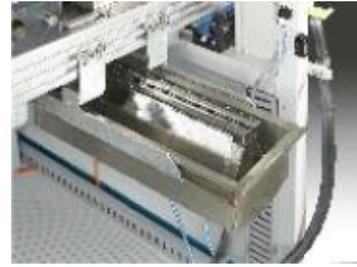
Fluxer Options



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

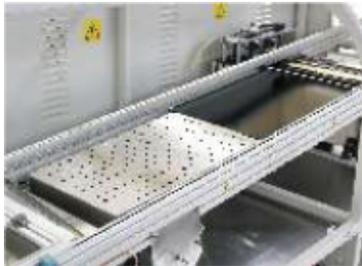


Spray Fluxer
Modular design - Spray, Control & Infeed Modules
Auto spray as per length & width of board



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

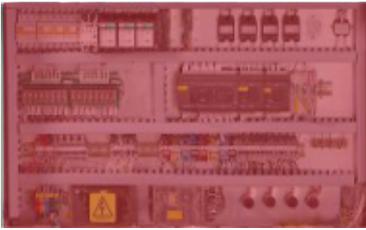


Orbital 'O-Wave' SMD Option
Patented Italian Technology and field proven over years
Fin Assembly moving in narrow elliptical orbit inside nozzle area to create orbital wave
O-Wave speed and amplitude controlled by AC Motor
Orbital turbulence of O-wave eliminates shadow areas around SMD components



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

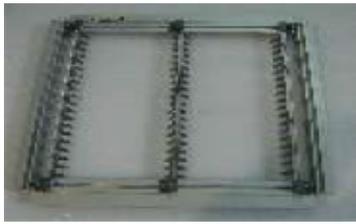


Software Features
 Wide range of functions built-in
 Weekly / Daily Timer
 Auto sON
 Auto Flux On (in Finger model) Interlocks to prevent improper operation

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

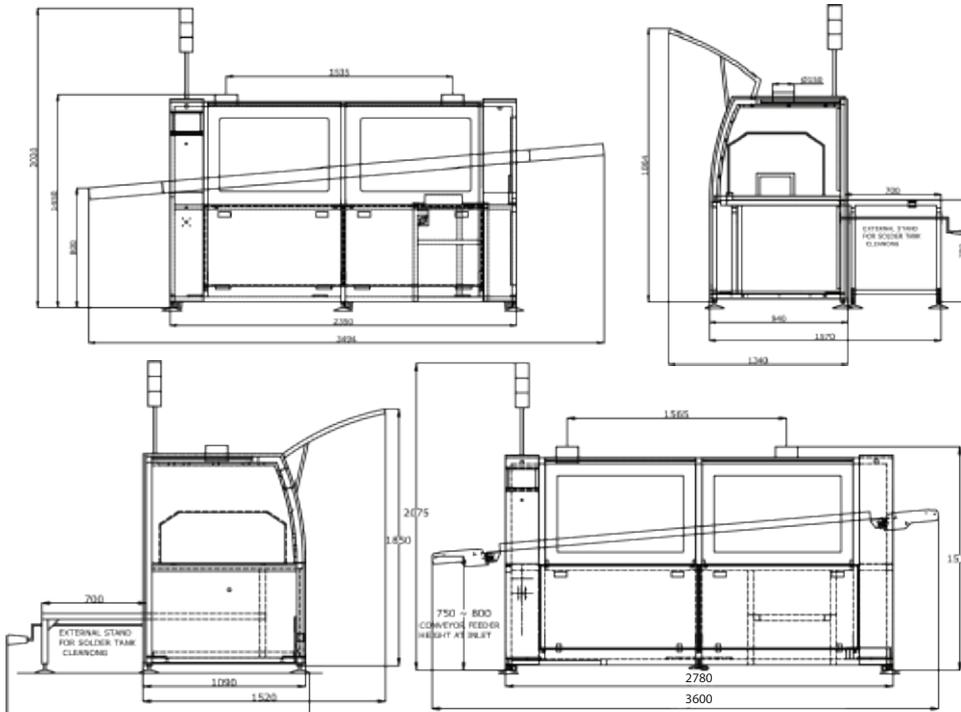
Specifications

Technical changes reserved.

Features	Stallion- cc PLC Carrier Conveyor	Stallion- fc PLC Finger Conveyor
Max PCB Size	300mm(W) x 400mm(L) 12" x 16"	Max Width 300mm
Foam Fluxer Unit	5 lit tank required external compressed air at 2 kg/cm ³ , 900 lit / min	
Spray Fluxer Unit	5 lit gravity tank and 1 lit solvent tank. Requires compressed air, at 5 kg/cm ³ 120 lit/min.	
Preheater	One IR & One Hot Air Convection, 1000 mm total length Option - Both Hot air convection 1000 mm total length	Two Hot Air convection, 1000 mm total length Option - 3 Hot Air Convection, 1000 mm total length 1200 mm total length
Soldering Unit	150 kg (lead free) / 170 kg (lead) for 0 wave pot standard 225 kg (lead free) / 255 kg (lead) for Dual wave pot (Option) 45 to 60 minutes warm up time	
Solder Pot Material	Nitrided Stainless Steel - Standard Option - Stainless Steel or Titanium	
Conveyer Speed	0 to 2 m/min / 30-200CPM	
Conveyer Angle	3, 4, 5 deg.	4 & 5 deg.
Extraction Duct	2 Extraction duct of 150mm dia on top	
Exhaust Blower	500m/ hr	500m/hr
Power Consumption		
With 150 Kg pot	11kW	16kW
With 225 Kg pot	17kW	22kW
Gross / Net Weight	700/385 kg	990/500 kg
Power Supply Voltage	415V, 3 phase, 50Hz, (Other voltage on request)	

Spray Fluxer Technical Data

Nozzle Air Consumption	Clean dry and oil free air at 4 to 6 bar. 100-120 lit/min
Spraying Width	46 lit/min at 1 bar
Spray Angle	Full cone diameter of 60 mm at spray distance of 60mm
Spray Distance	50 to 96 deg (70 deg at 1 bar)
Glider Speed	40 to 60 mm from PCBA bottom to top of nozzle
Flux Types	0 to 17 m/min at 0 to 300 mm travel stroke
Flux Solid Content (%)	Water soluble, No Clean, VOC Free
Flux Spray Pressure	Up to 36%
Conveyor Speed Limit	0 to 2.5 bar
	0 to 2 m/min Compressed Air Supply



Stallion - cc PLC Floor Plan

Stallion - fc PLC Floor Plan

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

S. No. 43/3, New Gat No. 322, Plot No. 1,
Pirangut, Tal. Mulshi, Dist. Pune - 412 115 INDIA

Manufactured by
EMS TECHNOLOGIES PVT. LTD.

Sold & Serviced by

Gat No.322, Plot No.1, At Post- Pirangut Tal- Mulshi,
Dist. PUNE 412115- India
P: +91 95955 25010 | E: contact@emsonline.com
W: www.emsonline.com

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Marketing Pvt. Ltd.