### The HB Advantage

- HB has a long tradition of providing quality equipment and service
- Best in the industry warranty 5 years for the heaters, blowers and solder pot 2 on all other parts
- Lifetime free software upgrades
- Lifetime free training at any HB factory
- More standard features than any other oven available in the market

Model	HM-350/450
Dimension (L*W*H) mm	4430*1620*1710
Operation power consumption	12kw;3P5W,380V /220 V , 50/60HZ 63A
Control system	PLC+Computer
Spray system	
Transmission method	Stepping motor
Flux Flow Meter	Standard
FLUX supply	Automatic
Preheating system	
Preheating method	Hot air / IR tube
Preheating zones	Length :1800mm(Room temperature –250°C)
Warmingup time	15 minutes (setting 150°C)
Conveyor system	
PCB Width range (mm)	HM350:60mm—350mm;HM450:60mm—350mm
PCB Conveyor direction	L to R/ R to L (optional )
PCB Conveyor height (mm)	750+/- 20
Conveyor speed (mm/ min )	0-2000
Available components height (mm)	Top :120mm ( 160mm Optional )Down: 15 mm
Rail width control	Motorized Auto
Conveyor angle	4°—7°
Solder pot system	
Solder pot material	Titanium Alloy(Standard)
Wave height adjust	Digital control
Solder pot capability	HM-350 (Lead free ) : 480kg;HM-450(Lead free ): 550kg
Solder pot temperature	300°C
Cooling system	Forced air / air chiller
Optional accessories	Center support;U-sonic Ultrasonic spray; Top heating/UPS Protection/Nitrogen system/Feeder Knife



# HM series

## of Lead free Wave soldering system







## HM series of Lead free Wave soldering system



Heavy Duty, High-Temperature Pumps and Motors

Dual, high-performance, high-temperature motors pump the molten solder through a titanium-alloy recirculating system and wave nozzles that are specially designed to minimize solder oxidation. Both motors include transducer-controlled flow adjustment to ensure precise wave height and uniformity.



#### **Main Features**

- Dual wave standard and High throughput and reliable, defect-free performance
- High capacity of solder pot
- Built-inside flux spraying system
- Forced convection hot air pre-heating zone
- Full titanium alloy conveyor finger for lead free
- Friendly HMI for ISO management
- Low cost of ownership
- Comprehensive warranty
- Nitrogen system (Optional)
- Center support system (Optional)
- PC control adjustments (Optional)



#### Built-in Spraying flux system . Standard

A self-cleaning nozzle and pressure tank flux delivery system are included. The flux supply and flux flow-meter are also as the standard configuration in the system which allows to save the flux-consumption and make guaranty of spraying uniformly.



Forced convection hot air pre-heating zone

There is a three-zone, high-capacity, forced hot air convection preheater with independent zone temperature controls to allow precise thermal profiling for proper flux activation and optimal solder wetting as assemblies enter the wave module. Each one-piece preheat module is designed to be interchangeable and easy drop-down removal, promoting the ultimate in process flexibility.

Micro air circulation design in the machine is to realize the more uniform heating effect. You can also control the speed motor of convection at preheating.



## HM series of Lead free Wave soldering system

# Titanium Finger Conveyor Includes Motorized Width Adjustment

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Titanium Finger Conveyor Includes Motorized Width Adjustment

Motorized conveyor width adjustment, from 50-350 mm (450mm), is standard on all HM Wave Soldering Systems, dramatically reducing setup time and eliminating operator inconsistency. Other conveyor widths are available: 300 mm,450 mm.

An aluminum-alloy pin-type conveyor input mechanism feeds the dual-titanium-finger conveyor which includes a built-in finger cleaner, closedloop speed control and overload protection.



Conveyor angle is adjustable from  $4^{\circ}$  -  $7^{\circ}$  and nominal speed setting is variable from 0.5 - 2.2 m/min (20" - 87"/min) for maximized throughput.



An optional center PCB support rail can be added to maintain planarity and to prevent sagging of oversize boards through the wave module.

A special recycle liquid brush finger cleaner and inlet conveyor are provided as standard. Easily removable titanium fingers make maintenance simple

### Friendly HMI for ISO management



This system includes user-friendly control software that provides a graphical representation of all system components, zone temperature settings, actual temperatures, and belt-speed. Security password protection prevents unauthorized changes ;Pre-program the weekly operating schedule is available

### **Standard equipment**

- Main conveyor
- Solder pot roll-out/in and up/down system
- Pre-heating system
- Solder pot system
- Built-in flux spraying system
- Finger cleaning system
- Inlet feeder
- Forced air cooling system
- Air exhaust
- Signal tower

#### **Optional:**

- Center support system
- Top IR pre-heating
- U-Sonic Ultrasonic Spraying
- Auto Width-adjustment unit
- UPS
- Full Nitrogen system



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