BENTEC LTD

Wave Soldering Machine iWA-450

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No.	Machine Name
1	iWA-450 Wave Solder Machine (Standard with PCB width 50-450mm, selective fluxing/3 bottom preheating convection zone 1.8meters/1top preheating zone 0.6meters/Ti solder pot/in & out trolley)
2	iWA-450L Wave Solder Machine (Standard with PCB width 0-450mm, selective fluxing/4 bottom preheating convection zone 2.4meters/1top preheating zone 0.6meters/Ti solder pot / in & out trolley)
3	iWA-600 Wave Solder Machine (Standard with PCB width 100-600mm, selective fluxing/3 bottom preheating convection zone 1.8meters/1top preheating zone 0.6meters/cast iron plated with ceramic solder pot / in & out trolley)
4	iWA-600L Wave Solder Machine (Standard with PCB width 100-600mm, selective fluxing/4 bottom preheating convection zone 1.8meters/1top preheating zone 0.6meters/cast iron plated with ceramic solder pot / in & out trolley)
	Include below items:
	Conveyor system adopts the servo motor for closed loop control system which allows a stable and accurate performance
	Uses the double buckle chain to improve the bearing ability and loading stable and allows 50kg full loading stable and allows 50kg full loading.
	Servo motor for spray flux selectively without stop board
	Modularization High efficiency pre-heater is convenience for maintenance. Ensures powerful heat and long life
	For iWA version, Include 3 bottom hot air convection with total 1.8meters and one top hot air convection for preheating zone
	For iWA-L version, Include 4 bottom hot air convection with total 2.4meters and one top hot air convection for preheating zone
	Bottom preheating blower RPM and top preheating blower RPM can be adjusted by software via transducer
	Full Ti material for solder tank, wave tunnel and wave nozzle
	Cooling System to attain the great cooling slope as required for lead-free
	Conveyor angle can easily be adjusted manually.
	Win 10 OS with Intellectronics Design, English Language on-screen is most convenient for operating.
	Power supply:3P, 220VAC 50/60HZ
	Highlight feature included as previous generation machine:
2.1	Auto flux feeding system by SMC pump
2.2	Uses the double buckle chain to improve the bearing ability and loading stable and allows 50kg full loading stable and allows 50kg full loading.
2.3	All drawer design for preheating zones, each preheating zone can be taken out from front of machine easily
2.4	Last top preheating zone with forced convection (standard included)
2.5	Bottom group preheating & top group preheating's blower controlled by transducer via Software, can quickly change the program without change temperature but with wind speed
2.6	Titanium alloy solder pot for 450mm solder pot, cast iron plated ceramic for 600mm solder pot
2.7	Solder pot equipped with trolley. When customer chooses another solder pot & trolley, it's easy to change
2.8	All temperature control channel with independent protection temperature controller, so to avoid overheating issue caused by software or PLC crash.
2.9	Equip with exhausting fan at both fluxing & soldering section
	Highlight features added as standard in new generation iWA machine:
3.1	One week timer start melting solder function
	Set in software for one week timer about when to start to melt solder.
3.2	Pre-Warming machine function
	One button in software and machine will start preparation gradually. From melting solder----when nearly melting it will start preheating----auto clean fluxer nozzle & check flux level etc. When all it done, it will tell ready to start production. Save operator's time and job.
3.3	Pre-STOP machine function
	One button in software and machine will start pre-stop gradually. It will stop heating at solder pot & motor----stop heater at preheating first----until preheat temperature lower then stop blowers----auto clean flux nozzle etc. Then it will tell ready to stop. So, to grantee machine is in right stop process without damage of parts, increase machine's lifetime.
3.4	Selective fluxing function.
	Use board's picture or carrier's picture as background, set spray nozzle's on/off time in motion path. Save flux consumption and reduce waste of flux.
3.5	Fluxer nozzle auto cleaning function
	One switch to change flux & IPA source to fluxer nozzle, and spray flux out at piping & nozzle when machine stop.
3.6	Preheating idle function
	When auto production, preheating zone's blowers will be in working RPM when board passing and in Idle RPM when no board passing. For saving energy.
3.7	Consumption statistics
	Flx-Statistics
	Flux consumption statistics daily / monthly
	Sod-Statistics
	Solder consumption statistics daily / monthly
	Gen-Enegstatis
	Machine power consumption statistics daily / monthly
3.8	Covy-Angle
	Conveyor angles show in software, easy for engineer to know what soldering angle it is at.

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	Options:
	Conveyor
Covy-Barco1	Trace each board's process status
	Barcode reader to get board serial number, collecting machine's actual status and bond with barcode
Covy-Barco2	Auto choose program according to barcode
	when pass mixing type boards with different fluxing path & preheating profile.
Covy-Barco1&2	Include both "Covy-Barco1" and "Covy-Barco2"
Covy-CBS	Central board support
Covy-Autowidth	Auto conveyor width adjustment
	Fluxing
Flx-exhaustAlarm	exhausting flow alarm above flux section. Software checking.
Flx-FlowQuantiMon	Flux flow quantity monitoring
	Monitoring each board's flux usage. Can pre-judge fluxer nozzle clog, can also generate flux consumption graphic (note: if there are two fluxer, it will need two this option)
Flx-2ndFluxer	Extra fluxer nozzle for 2nd type flux
	Customer will be able to change from flux A to flux B, without wire & tube connection. It includes flux nozzle, flux tank, flux adding pump etc.
	Preheating
Pre-heatermoni	Heater condition checking. (per preheating zone)
	Preheater is monitored, warning before heater fails. (please note this is for one preheating zone's cost only, for iWA machine it's 4 sets required, for iWA machine it's 5 sets required)
Pre-extZoneCov	Add extra top preheating zone with convection. (per extra top zone)
Pre-extZoneIR	Add extra top preheating zone with IR (per extra top zone)
	Soldering
Sod-heater Moni	Heater condition checking (per machine)
	Solder pot heaters are monitored, prejudge before heater get dead. Include upper layer & bottom layer, monitoring individually. 2 groups.
Sod-exhaust Alarm	exhausting flow alarm above soldering section. Software checking.
Sod-ASBF	Auto solder bar feeding system
	When solder pot is in low level, it will auto add solder bar to solder pot.
Sod-2nd pot	Extra solder pot for leaded solder with trolley (Sod-Long Trolley)
	Customer will be able to change from lead free & leaded freely. It's included Stainless steel solder pot, SUS wave tunnel, SUS wave nozzle, SUS impeller, SUS shaft, two wave motors, solder pot trolley, solder pot heats, solder pot power & signal connector.
Sod-prewarm system	Install pre-warm electrical box at 2nd pot trolley
	With temperature controller in electrical box, it will be able to prewarm solder pot outside machine to 200c degree or temperature required.
Sod-2nd pot(LF)	Extra solder pot for lead free solder with trolley (Sod-Long Trolley)
Sod-2nd pot(Leaded)	Extra solder pot for leaded solder with trolley (Sod-Long Trolley)
Sod-Trolley	One set of below trolley can be chosen for standard machine with free charge
Sod-Short Trolley	Short trolley for solder pot to go out of machine halfway, only for solder pot cleaning purpose
Sod-Long Trolley	Long trolley for solder pot to go out of machine totally, for solder pot exchanging purpose
Sod-N2-Nozzledirect	Diffusion N2 tubes installed close to wave nozzle for directly protection .
	Can also choose to use N2 in "economy way" or "always on". When "economy way", it will supply N2 only when board passing soldering section. When "always on", it will always supply N2.
Sod-N2-Tunnel	(For L version machine only) Tunnel type N2 protection system cover last preheating zone and solder pot, it's include below items:
Sod-N2-Tunnel-1	Change the last bottom preheating zone and top preheating to IR
Sod-N2-Tunnel-2	Add tunnel type design for last preheating zone/solder pot
Sod-N2-Tunnel-3	N2 input from last preheating zone till solder pot
Sod-O2ANALYZER	To check N2 concentration in solder tank (only available for "solder-N2-Tunnel")
Sof-N2Pur	Supplied N2 purity monitoring in machine
Sof-N2FlowMon	Supplied N2 flow monitoring in machine
Sod-DBAK	Debridging Air Knife (not available when choose "Sod-N2-Tunnel")
Gen-tras	Transformer for 3phase 220v or 3phase 480v
	Inspection
AOI-PreSolder	Auto inspection camera when PCB is at entrance conveyor of wave solder (not for iWA600 and 600L)
	To check through hole components' wrong position insertion, wrong polarity insertion, miss insertion etc. If problem happen, stop board at conveyor and alarm, avoid it go into machine for soldering.