

Aurotek®

A Complete Solution from One Source

AUO SERIES

Semi-Automatic PCB Separator

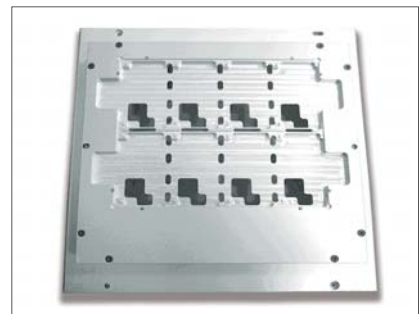
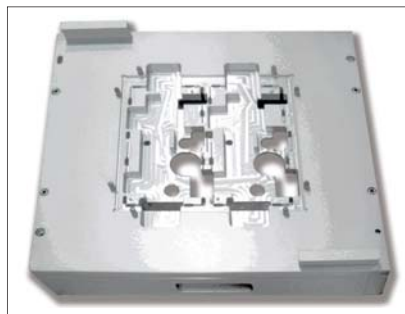


➔ The semi-automatic (offline) PCB Separator is the best solutions to fit the mass production in SMT line.

Dual working table enhances the production efficiency. Standard 2 machine models are applicable for different PCB sizes (330*350mm, 450*520mm).

At same time Aurotek provides customize options to meet the specific demand of PCB production.

Friendly interface, accurate PCB depaneling along with dual working table brings you more productive production experience.



Efficient
Accurate
Speedy
Yield Increasing

AUO 3000 / 4000 SERIES

www.aurotek.com.tw

SPECIFICATION

MODEL NO	AUO 3000 / 3000C	AUO 4000 / 4000C
WORKING AREA	X:330mm Y:350mm	X:450mm Y:520mm
Working Table	2	
PCB Thickness	0.8 ~ 3.0 mm	
PCB Component Height (Max.)	Upward: 15 mm / Downward: 45 mm	
Motion Control	4 Axes with Panasonic AC Servo Motors	
Moving Speed	Standard: X, Y=1,000 mm/s; Z=750 mm/s Maximum: X, Y=1, 200 mm/s; Z=750 mm/s	
Cutting Speed	0~100 mm/s	
Cutting Accuracy	±80 µm	
Positioning Repeatability	±10 µm	
Cutting Modes	Linear, Circular, U-Curve, Arc, L-Curve	
Standard Bits	Ø 1.0 mm, Ø 1.2 mm, Ø 1.6 mm, Ø 2.0 mm	
Operating System	Windows 7	
Pneumatic Pressure	0.5/0.6 Mpa (5/6 Bar)	
Working Height	890 ~ 940 mm	
Dimensions (W*D*H)	1565*1110*1462 mm + Signal Light 561 mm	1789*1400*1435 mm + Signal Light 561 mm
Net Weight (Approx.)	460 KGS	620 KGS
Vacuum Cleaner	3HP or 5HP	
Standard Spindle	Standard: 4026, 265W, (Max.) 58,000 rpm, Torque: 4.5 Ncm Option 1: 4025DC-T, 470W, (Max.) 30,000 rpm, Torque: 15 Ncm Option 2: AP 008-ESD, 500W, (Max.) 80,000 rpm, Torque: 8.4 Ncm	
Standard Monitor	19" LCD Monitor	
Power Supply	3 Phase AC220 V±5% 50 Hz/60 Hz, 4.0 kw	

Efficient

- A. High horsepower industrial dust-collectors
- B. Small dust-collecting duct designed for upward or downward dust extraction systems
- C. Duct is close to the milling area, removing dust at once while depaneling

Accurate

- A. KURODA high precision ball screw
 - B. Panasonic servo motor
 - C. Sycotec spindle
 - D. Advantech industrial computer
 - E. Aurotek motion control card
 - F. Aurotek Vision System
- We guarantee: Cpk>=1.33
Positioning Repeatability ±10 µm
Cutting Accuracy ±80 µm

Speedy

- A. High-speed axis modules reaches up to (max.) 1200 mm/s
- B. Maximum cutting speed 100mm/s
- C. 2 parallel processing tables. Maximize production throughput while minimizes idle time
- D. Customized fixture and tools. Production changeover can be done in just a few seconds

Yield Increasing

Easy to use is a MUST.
We design machines for:

- A. Manageability
- B. Usability
- C. Safety
- D. Traceability

FEATURES

Useability	CCD Camera System	Manageability	Real-Time Production Info	
	Cutting Route Simulation		Spindle & Bit Lifespan Management	
	Cutting Route Optimization		User Account Management	
	Bit-sectioning for Multiple Usage (0~9 Times)		System Backup Software	
	Offline Programming Software *		Bit Diameter Detection *	
	Spindle Rpm Digital Adjustment*		Specific Fixture Identification*	
	Inlet Conveyor Width Auto-Adjustment *		Safety	Bit Sliding & Breaking Detection
	Output Flat Belt Conveyor *			Fiducial Mark Alignment
	Rotatable Carrier *			Air Ionizer System
	Specific Fixture *			PCB Bow & Twist Checking*
Universal Loading/unloading system with Nozzle Module	CE Approval*			
Specific Nozzle Pad *	Traceability	Sliding Doors*		
		Production Traceability		
		Automatic Barcode(DMX) Reader*		
		MES Integration (by TCP/IP Socket) *		
		UPS system for IPC*		

* SOME OPTIONS CAN'T BE APPLIED TO SOME MODELS TOGETHER, PLEASE CONTACT US FOR FURTHER CONFIRMATION.

Date	Time	L Product Name	R Product Name	Total Qty	Cycle Time(sec)
2018/9/7	09:22:51	Test-L	Test-R	251	6.14
2018/9/7	09:23:56	Test-L	Test-R	251	6.14
2018/9/7	09:25:38	Test-L	Test-R	251	6.14
2018/9/7	09:55:41	Test-L	Test-R	251	6.14
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2018/9/7	10:41:28	Test-L	Test-R	251	6.14
2018/9/7	10:56:48	Test-L	Test-R	251	6.14
2018/9/7	13:22:58	Test-L	Test-R	251	6.14
2018/9/7	13:23:00	Test-L	Test-R	251	6.14
2018/9/7	13:23:03	Test-L	Test-R	251	6.14
2018/9/7	13:23:04	Test-L	Test-R	251	6.14
2018/9/7	13:23:05	Test-L	Test-R	251	6.14
2018/9/7	13:23:06	Test-L	Test-R	251	6.14
2018/9/7	13:23:19	Test-L	Test-R	251	6.14

Production Traceability

No.	Ord	Start Point X	Start Point Y	Pass1 Point X	Pass1 Point Y	Pass2 Point X	Pass2 Point Y	End Point X	End Point Y
1	L:LINE	817.73	323.55					755.63	285.16
2	L:LINE	305.51	197.75					363.25	320.90
3	L:LINE	889.01	109.06					879.44	243.58
4									
5									

Cutting Route Optimization



Bit Sliding & Breaking Detection

BT Functions

Auto Bit Change Options: Left Auto Bitchange, Right Auto Bitchange, Left Auto Search, Right Auto Search

Measuring Bit Diameter Options: Check Bit Diameter With Proj [Auto]

inspection tolerances: Upper 0.05 Lower -0.09

Spindle speed: Speed 1 (2.01 <= Bit Dia) 39000 rev, Speed 2 (1.00 <= Bit Dia < 2.01) 40000 rev, Speed 3 (0.01 <= Bit Dia < 1.00) 50000 rev, Current Speed 40000 rev, Voltage 0.00 v

Spindle & Bit Lifespan Management

VACUUM CLEANER

YSF vacuum cleaner is designed for PCB Separator Series to collect the dust & scrap generated by router. High horse power motor & high efficiency fan to ensure the suction with excellent efficiency.

MODEL NO.	YSF-V553	YSF-V553 ZETA	YSF-V605
Dimensions (WxDxH)	665x635x1610 mm	780x780x1000 mm	780x665x1900 mm
Weight	195 KGS	170 KGS	230 KGS
Power supply	3 phase 50 Hz / 60 Hz 220 V		
	2.2 kw		3.7 kw
Motor power	3 HP		5HP
Inlet wind speed	26 m/sec	27 m/sec	28 m/sec
Inlet wind capacity	28 m ³ /min	26m ³ /min	40 m ³ /min
Inlet wind pressure	300 mm -Ag	180 mm-Ag	300 mm -Ag
Inlet Diameter	150 mm	125 mm	150 mm
Outlet Diameter	203 mm	150 mm	203 mm



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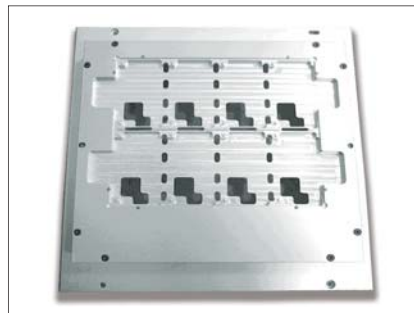
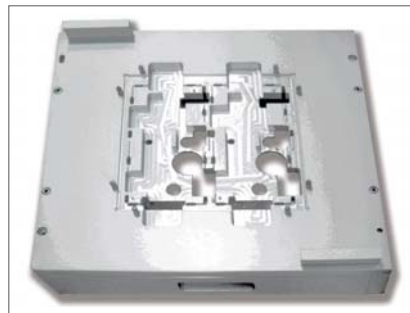
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AUO系列 半自動(離線式)PCB分板設備



- ➔ 和椿AUO離線式PCB分板設備提供乾淨·精準·快速·人性化界面的解決方案。雙工作臺配置提升生產效率，並可依據實際的PCB板大小選擇適合的機器尺寸。多項的選配功能可依客人的實際需求打造專屬的設備。



Efficient
Accurate
Speedy
Yield Increasing

AUO 3000 / 4000 SERIES

產品規格

型號	AUO 3000 / 3000C	AUO 4000 / 4000C
工作檯尺寸	X:330 mm Y:350 mm	X:450 mm Y:520 mm
工作檯數量	2	
適用PCB板厚	0.8 ~ 3.0 mm	
PCB零件高度 (最大)	上: 15 mm; 下: 45 mm	
軸向運動控制	4軸 Panasonic AC 伺服電機	
驅動速度	額定: X, Y=1,000 mm/s; Z=750 mm/s 最大: X, Y=1,200 mm/s; Z=750 mm/s	
切割速度 (範圍)	0~100 mm/s	
切割精度	±80 μm	
重複定位精度	±10 μm	
切割模式	直線, L形, U形, 弧形, 圓形	
標準銑刀規格	Ø 1.0 mm, Ø 1.2 mm, Ø 1.6 mm, Ø 2.0 mm	
電腦作業系統	Windows 7	
供給氣壓	0.5/0.6 Mpa (5/6 Bar)	
工作高度 (範圍)	890 ~ 940 mm	
設備尺寸 (W*D*H)	1565*1110*1462 mm + Signal Light 561 mm	1789*1400*1435 mm + Signal Light 561 mm
機台淨重 (約)	460 KGS	620 KGS
集塵系統	3HP 或 5HP	
切割主軸	標準: 4026, 265W, (Max.) 58,000 rpm, Torque: 4.5 Ncm 選配1: 4025DC-T, 470W, (Max.) 30,000 rpm, Torque: 15 Ncm 選配2: AP 008-ESD, 500W, (Max.) 80,000 rpm, Torque: 8.4 Ncm	
標準顯示器	19吋 LCD 螢幕	
電源供應	3 Phase AC220 V±5% 50 Hz/60 Hz, 4.0 kw	

高效率 Efficient

- A. 高馬力的工業集塵機
- B. 上集塵/下集塵系統搭配極小化的集塵口
- C. 貼近加工部·加工時可立即且有效清除粉塵

精準 Accurate

- A. KURODA高精準螺桿
- B. Panasonic伺服電機
- C. Sycotec主軸
- D. 研華工業電腦
- E. 和椿運動控制卡
- F. 和椿視覺系統

我們保證:
Cpk>=1.33
重複定位精度 ±10 μm
切割精度 ±80 μm

快速 Speedy

- A. 搭載高速軸控模組·驅動速度最快速(最大) 1200 mm/s
- B. 切割速度最快每秒100mm
- C. 雙工作檯可極大化生產量·幾乎沒有閒置時間
- D. 客製化治具及工具·輕鬆快速完成換線作業

良率提高 Yield Increasing

操作簡單是我們設備
的特色·一機擁有:

- A. 生產管理性
- B. 易用性
- C. 安全性
- D. 生產資料可溯性

產品特色

易用性	10倍工業相機切割路徑教導	管理性	即時生產資訊
	生產(切割路徑)模擬		主軸&銑刀使用壽命管理
	切割路徑優化		使用者權限管理
	銑刀分段使用 (0~9 次)		系統回復備份軟體
	離線切割路徑編程軟體 *	安全性	銑刀直徑偵測*
	主軸轉速數位調整*		專用治具辨識系統 *
	萬用治具/ 專用治具 *		斷滑刀感測系統
生產可溯性		基準點定位	
		安全光柵	
		靜電消除器	
		PCB 板翹感測系統	
		符合CE 安全認證 *	
		安全拉門設計*	
		生產歷程記錄	
		自動/手動條碼(DMX) 閱讀器 *	
		生產執行系統資訊整合 (透過TCP/IP 通訊) *	
		設備電腦不斷電系統 *	

備註: * 選配功能如需互相搭配, 需和和椿科技進行技術討論

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2018/9/7	13:23:01	Test-L	Test-R	251	6.14
2018/9/7	13:23:03	Test-L	Test-R	251	6.14
2018/9/7	13:23:04	Test-L	Test-R	251	6.14
2018/9/7	13:23:05	Test-L	Test-R	251	6.14
2018/9/7	13:23:06	Test-L	Test-R	251	6.14
2018/9/7	13:23:19	Test-L	Test-R	251	6.14

生產歷程記錄

No.	Cmd	Start Point X	Start Point Y	Pass1 Point X	Pass1 Point Y	Pass2 Point X	Pass2 Point Y	End Point X	End Point Y
1	L:INX	617.73	323.55					755.63	285.16
2	L:INX	305.51	197.75					363.25	320.90
3	L:INX	889.01	109.06					879.44	243.58
4									
5									

切割路徑優化



斷滑刀感測系統

Auto Bit Change Options

- Left Auto Bitchange
- Right Auto Bitchange
- Left Auto Search
- Right Auto Search

Measuring Bit Diameter Options

- Check Bit Diameter With Prg [Inv]

Inspection tolerances

Upper: 0.05 Lower: -0.09

Spindle speed

- Speed 1 (2.01 <= Bit Dia) 39000 rev.
- Speed 2 (1.00 <= Bit Dia < 2.01) 40000 rev.
- Speed 3 (0.01 <= Bit Dia < 1.00) 50000 rev.
- Current Speed 40000 rev.
- Voltage 0.00 v

Bit Check Options

- Check Bit Break
- Check Bit Slide
- Slide Check Offset 0.01 mm
- Check Bit Life
- Add Additional Check Before Cut

主軸&銑刀使用壽命管理

工業用集塵設備

YSF 系列集塵器是專門用來收集 PCB 切割機切割過程中的粉塵、碎片。內部使用高馬力電機及高效率風扇，集塵效率高，並可使切割中之粉塵附著產品情況減少到最低。

型號	YSF-V553	YSF-V553 ZETA	YSF-V605
尺寸 (寬 x 深 x 高)	665x635x1610 mm	780x780x1000 mm	780x665x1900 mm
重量	195 KGS	170 KGS	230 KGS
電源供應	3 phase 50 Hz / 60 Hz 220 V		
	2.2 kw		3.7 kw
馬達	3 HP		5HP
進風入口風速	26 m/sec	27 m/sec	28 m/sec
進風量	28 m ³ /min	26m ³ /min	40 m ³ /min
進風入口風壓	300 mm-Ag	180 mm-Ag	300 mm-Ag
進風口直徑	150 mm	125 mm	150 mm
出風口直徑	203 mm	150 mm	203 mm



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