



# **Oriental Spirit Automation Equipment Co., Ltd**

**Focus      Professional      Research**

**Specializing in manufacturing PCB automation equipment**

We continue to pursue innovation in product and design, and are recognized and supported by the industry, the company maintains a modest attitude, a positive spirit of development, and common development with PCB industry.



## **Oriental Spirit Automation Equipment Co., Ltd**

**Dynasty Electronics Equipment Co., Ltd. was established in 1995 in Hong Kong, operating PCB consumables and imported equipment business.**

**In 2006, I set up the drilling processing business in Liaobu, Dongguan, and mainly helped customers to provide high-quality drilling processing services with Hitachi drilling RIGS.**

**For business expansion, east god automation equipment co., LTD., was established in 2013, professional manufacturing PCB automation equipment, and set up their own brand "automate", east god automation also for domestic high-tech companies, we constantly pursue quality and design innovation, and get the industry recognition and support, the company remain modest attitude, positive development spirit, and PCB industry common development.**

**Dynasty and Oriental Spirit have an experienced professional team, good corporate culture, and more than 20 years of experience in the industry. In the future, we hope to continue to make progress, provide better products and services, trust mutual trust and win-win with PCB industry and customers, and create another peak.**



# Oriental Spirit Automation Equipment Co., Ltd



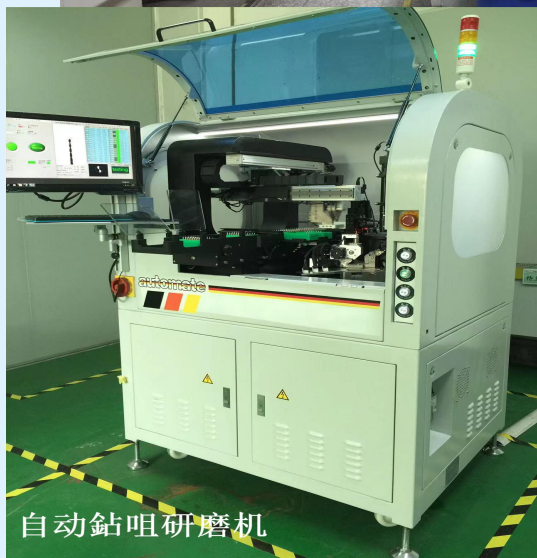


Oriental Spirit Automation Equipment Co., Ltd

## Drilling Workshop



自动孔位分析机



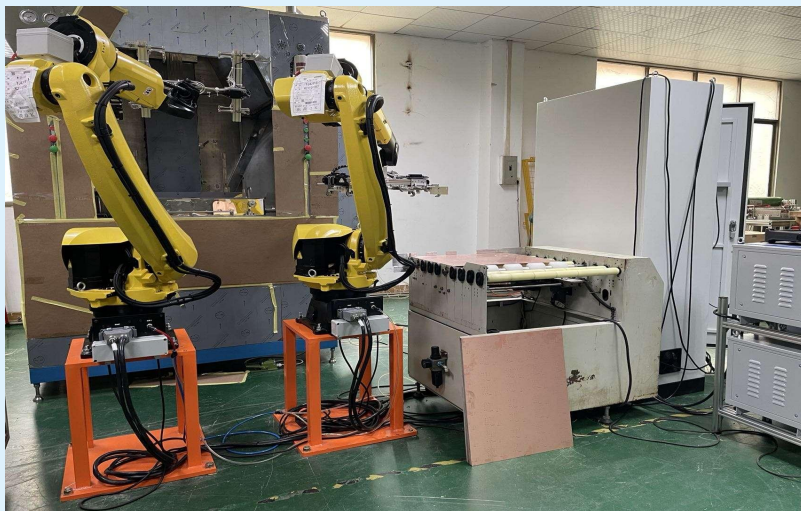
自动钻头研磨机





# 东神自动化设备有限公司

## Production Workshop





## Oriental Spirit Automation Equipment Co., Ltd

### product presentation

### ACS-760D Auto cut sheet laminator



Item		Content
Operational altitude		950±50mm
Subplate dimensions	length	250~760mm
	width	250~760mm
	thickness	0.10~3.2mm
	Plate spacing	≥ 50mm
Dry film dimensions	Membrane width	250~760mm
	Film thickness	15~76 um
	Membrane diameter	D MAX: 160mm
Feed section	Structure	Host body mobile
	Feed-roller diameter	Φ31.5mm, P=76mm
	Whole material device	Bilateral at the same time, two sections of speed whole material
Pressure film segment	Institution	Host body mobile
	Hot pressure wheel	Φ 78.6mmX940mm, power 1.5KW in two groups of four sets
	Transporting velocity	1~4M / min, adjustable, man-machine directly set the speed
	Speed representation	Show the m / min
	Hot pressure wheel temperature	Room temperature at 120° C
	Temperature is indicated	Temperature indication: ° C
	Temperature control	Fuji temperature control, man-machine directly set the temperature, S.S. R drive
	control method	Intelligent man-machine interface operation mode
	Hot press wheel pressure	An AIR air pressure of 25 KG / cm2
	Sucker	Five-segment operation width setting
	Blowing machine	2.2KW (3HP), 380V, 30, 50HZ
	Range of the vacuum suction cup	10 " ~13" , 14"~17" ,18 " ~21 " , 22 " ~25" , 26"~30
Laminae membranacea	Before dew copper	1.0~49.9mm
	After dew copper	1.0~12.9mm
	Dew the copper error	±1.0mm
	Plate-edge error	±1.0mm
	No material inspection device	Non-contact early warning device
Outlet section	Structure	Host body mobile



## Oriental Spirit Automation Equipment Co., Ltd

### Product Presentation

#### Double-sided automatic film tearing machine



Machine name:	Double-sided automatic film tearing machine
Machine model:	AT-ZDSM-R780
Outline dimension:	2050 (L) *1900(W)*1850(H)
Production board size:	Max:650mm(W)*750mm(L) 300mm(W)*350mm(L)
Plate thickness:	0.3mm-3.2mm
Ripping efficiency:	8 tablets / min (625mm * 730mm) 9 tablets / min (280mm * 320mm)
Failing rate of tear film:	3 %
Temporary storage capacity:	Five pieces
Transporting velocity:	0~10 M/min
Measuring ability:	Up and down each has a multipoint precision measuring membrane sensor
Rated total power (kW)	220 V. 3KW
Work gas source	5-8kgf/cm <sup>2</sup>
Operational altitude:	1000 ± 50mm
Machine material:	SUS304 No embroidered steel + hardened aluminum treatment
Detectability:	≥50X150mm
Loss:	≤0.2‰
Optical resistance film sealing hole:	Do not break the hole
On-line:	Can be connected with the plate casting machine and development machine



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## Product Presentation Solde leveling robot



## The protocol includes all components of the following parameters

1. 20 grid temporary storage rack	Temporary storage machine
2. Center positioning machine	Board automatic positioning machine
3. The manipulator fixture	Mechanical hand fixture
4. Six-axis robot (Fanuco manipulator)	Robot (load of 25 KG)
	teach pendant
	Up and down feeding system of tin spraying manipulator
5. System development	Software development of tin-spraying machine
6. Robot son	45 # Steel
7. Robot control box	Iron + paint
8. Robot protective net	Robot dedicated
9. Robot protective clothing	Anti-corrosion protective clothing for robot
10. Production	And 4-5 tablets per minute
11. Size of the processing substrate	Maximum of 20 "X24"
12. Base plate thickness	1 - 3.2mm
13. Power specifications	50 HZ / 3 phase / 380V / 5KW
Gas consumption	5-6KG
15. Tin spray plate drop rate	2 / 1000 pieces (plate warping within 10mm, opening accuracy within 2mm error, PCB board side above 5mm)
* No tin spray matching mechanical parts *	





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## Product Presentation

### Paper-separated receiving/unloading machine



Item	Content
Machine name:	Paper separated receiving/ unloading machine
Machine model:	AT-FPL520/AT-522(Double layer)
Outline dimension:	2250 (long) X1250 (W) X2070 (H) mm
Operational altitude:	1100 ± 30MM (adjustable)
Maximum plate size:	650*610MM
Minimum plate size:	300*300MM
Separate paper size:	620 * 540MM / 650 * 550MM (white paper)
Plate thickness:	0.075-3.2MM
Production efficiency:	8-10 panel/min
Working power supply:	AC 380V 50Hz
Work gas source:	0.6mpa 250n/min
Equipment features:	The paper table adopts servo module, the paper arm adopts suction nozzle frame size 735 * 635MM paper taking and the closing plate arm adopts module operation mode
Use accessories:	Fixed cart



## Oriental Spirit Automation Equipment Co., Ltd

### Product Presentation

#### Large Angle receiver / plate machine



Machine name:	Large Angle receiver / plate machine
Machine model:	AT-UL760
Body frame:	304, with stainless steel
Host size:	L1300*W1300*H2100 mm
Size of plate material:	Min:300*300mm 760*760mm
Plate thickness:	0.05--3.2 mm
Operational altitude:	900- -1000 mm (adjustable)
Production efficiency:	8--10Panel/Min
Transporting velocity:	0- -10 m / Min (adjustable)
Working power supply:	AC 380V 50Hz
Work gas source:	6--8 kg/cm2

#### Characteristic

The L frame is designed at a special large Angle to reduce the extrusion of each process sheet in the inner layer.

PLC and man-machine interface control, intelligent operation connection system.

With 16 basin plate and shake plate function, to prevent overlapping plate and each basin can be adjusted separately.

Can be equipped with oil pressure type cart and L-shaped plate frame.

**automate**



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## Product Presentation

### Inclined receiving / plate machine



Machine name:	Inclined vertical plate receiver (increased)
Machine model:	AT-R-452-L
Host size:	L1760*W1160*H1130 mm
Size of plate material:	760*760mm
Plate thickness:	0.6-3.2 mm
Operational altitude:	900--1000 mm
Production efficiency:	6--8Panel/Min
Working power supply:	AC 220V 50Hz (300W)
Work gas source:	6--8kg/cm <sup>2</sup>
Machine net weight:	150KG

#### Random configuration

cart:	one set
L frame:	two sets



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## Product Presentation

### 20 Grid temporary storage machine



Machine name:	20 Grid temporary storage machine
Machine model:	AT-S-330
Number of temporary storage boards:	20 Pieces
Host size:	L830*W1150*H1800 mm
Size of plate material:	Min:250*250mm 640*730mm
Plate thickness:	0.05--3.2 mm
Operational altitude:	900- -1000 mm (adjustable)
Production efficiency:	8--12 Panel/Min
Rack material:	SUS304 No rust class
Working power supply:	AC 380V 50Hz (260W)
Work gas source:	4--6kg/cm2

**automate**



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## Product Presentation

### Solar plate flip machine



Machine name:	Solar plate flip machine
Machine model:	AT-R-20
plate number:	40 cells (can temporarily store 20PCB board)
Host size:	L1600*W1340*H1600 mm
Plate size:	Min:250*250mm Max:635*635 mm
Thickness of slab:	0.1--3.2 mm
Operation height:	900-1000mm (Adjustable)
Production efficiency:	8--12 Panel/Min
Travelling speed:	0-10 m / min (adjustable)
Working power supply:	AC 380V 50Hz (200W)
Working air source:	6--8 kg/cm2



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## Product Presentation

### Carwler Type Turning Machine



model	AT-R-7100 Carwler Type Turning
Equipment size (mm)	L1690mm*W900mm*H1045mm
Operation Height (mm)	950mm+/-30mm
Operation Width (mm)	800mm
Transfer speed (M / Min)	1~10M / Min speed is adjustable
Power consumption (KW)	Single-phase AC220V 0.3KW
Gas consumption (NL)	NA
Maximum plate size (mm)	730mm*630mm
Minimum plate size (mm)	300mm*250mm
Applicable Thickness (mm)	0.6~3.2mm
Number of board load	And 50- - 100 tablets
Standard production rate (Pcs / Min)	8Pcs/Min
Weight of equipment KG	220KG



## Oriental Spirit Automation Equipment Co., Ltd

### Product Presentation X-RAY Inspection machine



Item	Product Parameter
Imaging manufacturer	Watec-11*15(japan)
Finish size	Minimum: 200 * 300 maximum: 800 * 800 (table open can be larger)
Thickness of slab	6mm OR 12 Oz
Pipe voltage range	0-50KV
Resolution ratio	15lp/mm
Pipe current range	0-1mA
Tube power	50W
ZOOM magnification	20X
CCD Focus	Fixed
X-ray leakage	≤0.5usv/hr
Temperature control monitoring and protection device	Installed
Delay to disconnect the protection device	Installed
The X-ray substrate checks the trigger device	Installed
Weight	210KG
Take like a way	CCD
Image processing	ROI Three-point/four-point/edge,ROI circle
Duge inspection	Four-pane view,Four-grid print and save
Image preservation function	Installed
Measurement function	Installed
Source	1φAC220V,50/60Hz
Consumed power	500W
The operation system	windows 7
Detection mode	Manual
CPU	Intel I5
Monitor	20 Inches
Size	860*760*1600 mm



# Oriental Spirit Automation Equipment Co., Ltd

## Product Presentation

**AT-HYTC-1200 (after drilling)**  
**AT-HYTC-2400 (finished product)**



Machine model:	AT-HYTC-1200/2400
outline dimension:	3500 (long) X1200 (W) X1550 (H) mm
Check the number of holes:	6,000,000 wells
detection mode:	A CIS scan of the 1,200 DPI
Size of plate measuring:	80x120mm - 650*510mm
repeatability precision:	± 15um (above 0.15mm)
Measurable aperture range:	Above 0.1 mm
Plate thickness:	0.3-10MM
detection efficiency:	4m/min,8m/min,12m/min,16m/min
focalization:	Software autofocus
Light source adjustment:	Software manual adjustment
working power supply:	AC 220V/5A 1.5KVA
Work gas source:	5kgf/cm <sup>2</sup> (0.5MPa)
Detectable defect type:	Large hole, small hole, porous, few holes, groove hole length, width and angle, round hole debris, special hole debris, groove hole k debris, plate shape outline

### feature

The PCB may allow for ± 30° placement

The ore check for BGA holes shows high stability

Detectable hole quality (small tin and copper slag can also be detected)

According to the demand of the collocation of the receiving plate machine

Physical board or CAM data can be used as the basis for comparison

Powerful format conversion function, can perfectly display the correct circle

The coverage area, cover hole and cover diameter can be set arbitrarily

With the finished board learning function, greatly reduce the proportion of misjudgment

Graph and values are displayed in the same picture, convenient for comparison and use

It can be matched with the offline maintenance system to improve the movement rate of the machine

According to the demand, the single line, double line and six line can be selected for detection at the same time





Oriental Spirit Automation Equipment Co., Ltd

### Our customers

**KB**

建滔化工集团  
Kingboard Chemical Holdings Ltd.



**KINWONG**  
景旺电子

**KS**  
JS-KINGSUN  
金顺科技



科惠集團



PCB專業製造



榮信(香港)電路板有限公司  
江門榮信電路板有限公司  
(建滔集團成員)



黄石永兴隆电子有限公司  
Huangshi Wing Hing Lung Electronics Co., Ltd.

**TTM Technologies**  
Time-To-Market Interconnect Solutions

**RHUI** 榮暉集團  
RONGHUI GROUP



**pal** PROCESS AUTOMATION  
INTERNATIONAL LIMITED  
亞洲電鍍器材有限公司

**BYJ**

**H TSA**

**TRULY** 信利  
信利光电股份有限公司

Thanks !