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INNO-BIZ Corporation
Venture Business

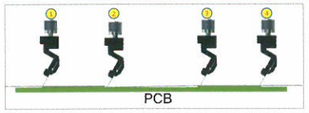
Daegu City Star Company
Promising Export Company
Leading Medium Business

HP-520SPI
HP-850SPI

Load-Cell Control

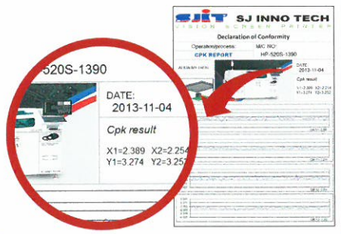
- Squeegee motion of precise pressure control technology
- Real-time Pressure Monitoring
- Difficult pressure verification method unnecessary
- Actual Load Cell Pressure Monitoring Function

Squeegee Auto Control by PCB Shape



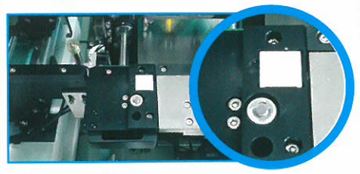
Machine CPK Measure program STD

- Machine CPK Measure (2.0 CPK@±12.5㎛, 6-Sigma)
- X, Y-axis Alignment measure
- CPK data acquire after repeated 100 times

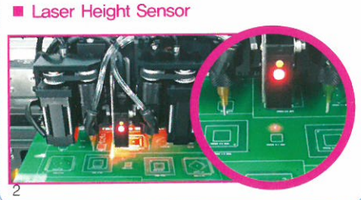


Dot Dispenser

■ Purge Area DP Nozzle Touch Sensor



■ Laser Height Sensor



New Technology
High Performance
3D VISION SCREEN PRINTER

Dual Projection Multiple Inspection with 3D Color Image

Screen Printer ⇔ SPI

Closed-Loop Control

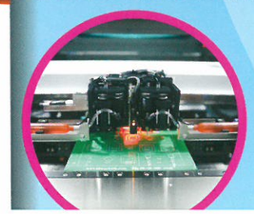
Patent registration : 10-1165747

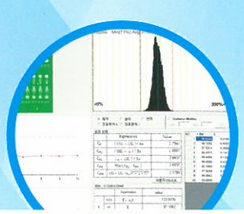
0402 chip

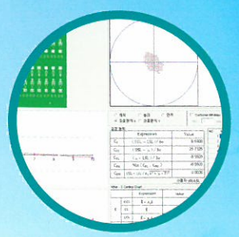
0.3 pitch QFP

Ø 0.2 MBGA

3D Inspection
Vision Screen Printer
HP-520SPI

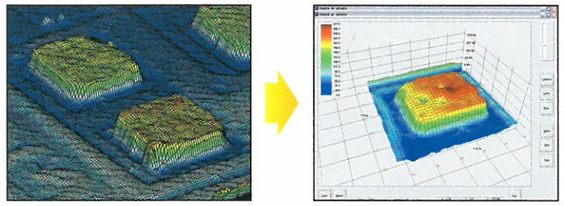


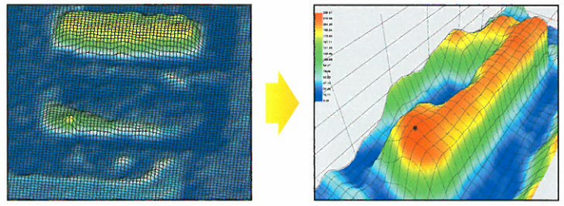




3D Inspection Vision Screen Printer

3D Inspection Vision Screen Printer can reduce the defective products of excessive, shape defects etc. and Inspect for No Good, Bridge, Shift and etc. during Solder Paste Printing





Vision Screen Printer

This allows the user to monitor the performance of the printing process and correct problems before placement and soldering and thus substantially increasing "first pass yield" and saving production time and cost

Customers demand better printing control for

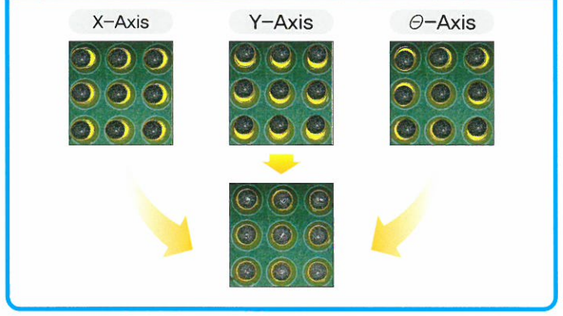
Real-time feedback and control of screen printer system through the Solder Paste 3D total inspection to develop best quality & productivity

Closed-Loop Control function

3D Inspection Screen Printer
HP-520SPI

Screen Printer ⇔ SPI communication control - Offset

Screen Printer and SPI Data communication Solution Axis Offset control



Benefits

Increase productivity Minimizing rework of defective board Reduction in build cost

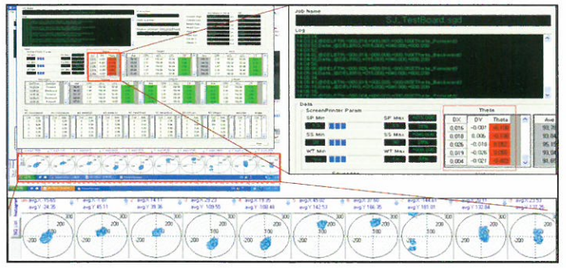
Optimum In-Line total inspection solution

Realization of Solder paste total inspection by high speed Data progressing

3D Solder Paste Inspection

Perform size, height, volume and location of all solder paste deposits with high speed 3D

Screen Printer ⇔ SPI DATA



Mask Correction including the existing Theta values that include warped Offset

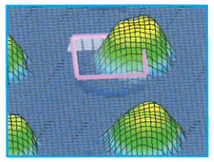
Screen Printer ⇔ SPI (Closed-Loop Control)

Auto offset

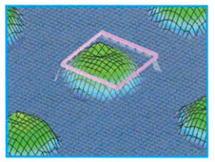
Auto Cleaning

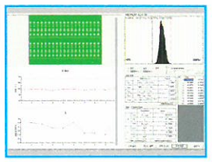
NG Option

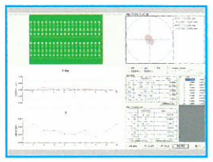
Cycle Stop
Squeegee Pressure control
Squeegee Speed Up/Down
Work Up/Down
By-Pass Function



Real-time Auto Position Correction



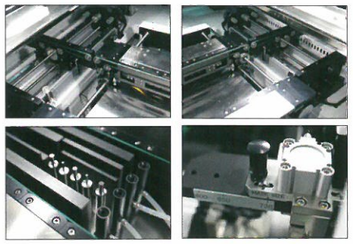




HP-520S
HP-680S
HP-850S
HP-1000S

Convenience for operator

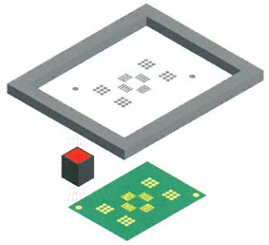
- Easily Model Change
- Auto Width adjust for Conveyor
- Various PCB Back up unit
- Table Up/Down regardless of PCB 't' size change

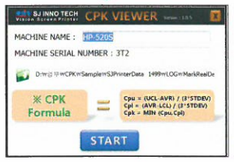


Machine Cpk

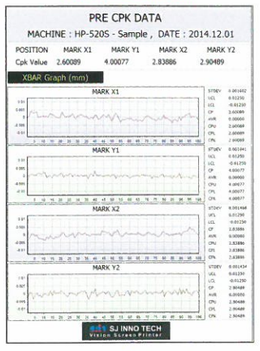
STD built in Machine CPK measure

- X, Y-axis Alignment measure
- CPK data acquire after repeated measure
- Total System Alignment Cpk (Pre-Print Cpk)
- Printing Alignment Cpk (Post-Print Cpk)

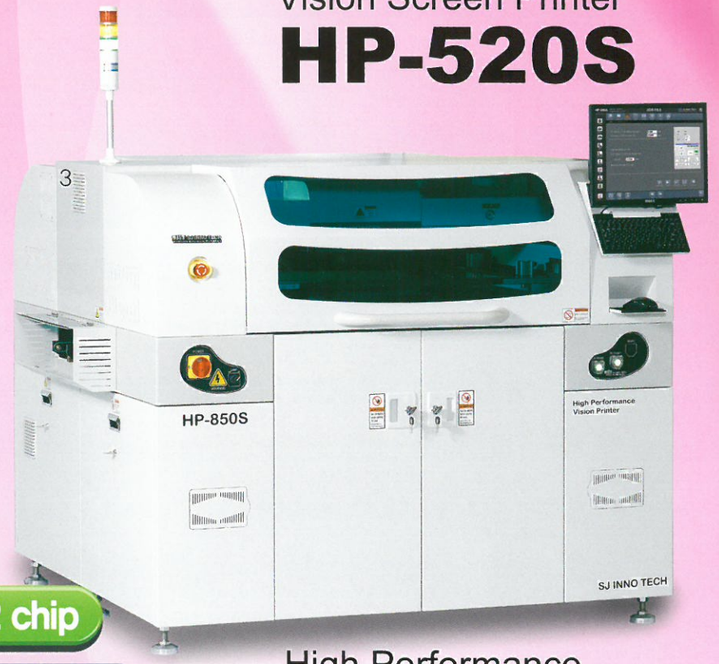




Total System Alignment
2.0Cpk@±12.5㎛

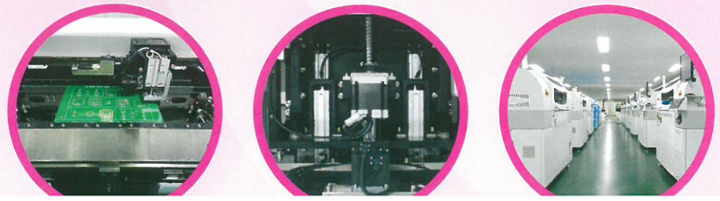


High Performance
Vision Screen Printer
HP-520S



0402 chip
0.3 pitch QFP
Ø 0.2 MBGA

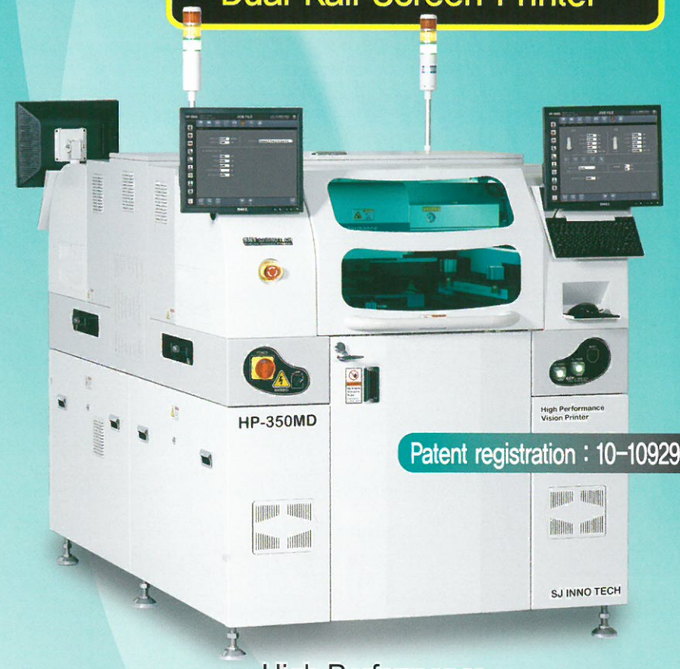
High Performance
Vision Screen Printer
HP-850S



Mobile High Precision Screen Printer

High Performance
Vision Screen Printer
HP-350M

Dual Rail Screen Printer



Patent registration : 10-1092990

High Performance
Vision Screen Printer
HP-350MD

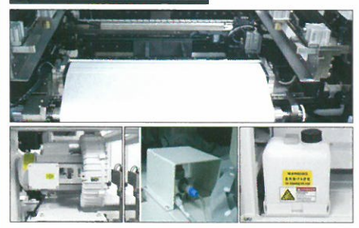
HP-350M
HP-350MD
HP-620MD

Vision System(Work Programming

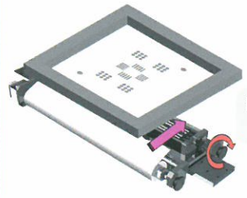
[Mouse Click Method]
Register Fiducial Position and Coordinate by Camera X, Y with Moving of Mouse Click on PCB Image

Auto Cleaning System(Performance)

- 4 row squeegee structure
- IPA fixed volume discharge (Motion Type)
- IPA tank improvement (3.5 Liter)
- Special (Winding Cleaning)

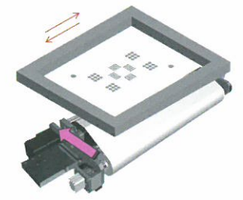


USC Winding Cleaning
Forehead moving of Cleaning unit with winding of Cleaning paper so improvement cleaning performance (selection)



Paper Moving with rolling

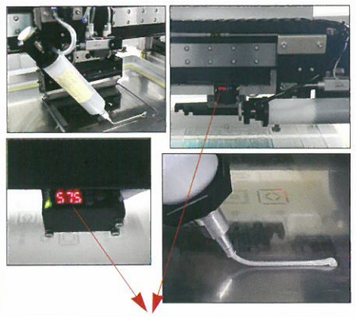
Stencil Waver(Shake) Cleaning
Forehead moving of Cleaning Unit and Stencil Frame wave Left to Right at the same time (selection)



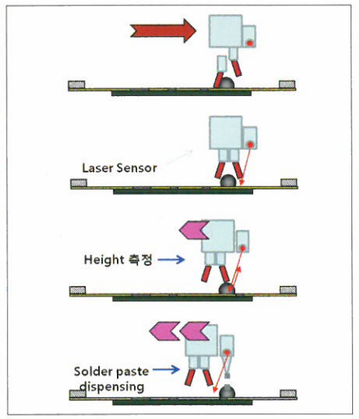
HP-880L
HPX-1300S

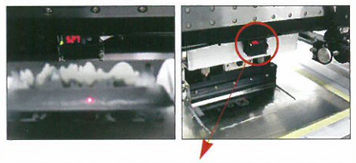
Large LED Bar & BLU Screen Printer

Auto Solder Dispenser



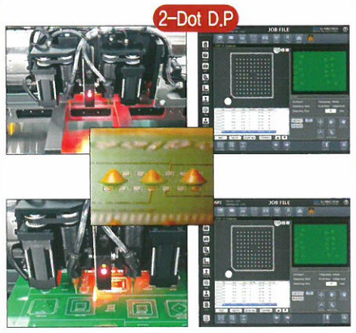
Paster Solder Height Measure
Laser Sensor





Laser Sensor

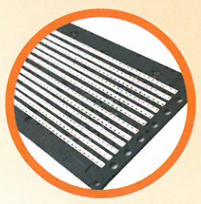
Dot Dispenner



High Performance
Vision Screen Printer
HP-880L

Patent registration : 10-1166789

High Performance
Vision Screen Printer
HPX-1300S



Squeegee Direction

STD M/C Squeegee Direction

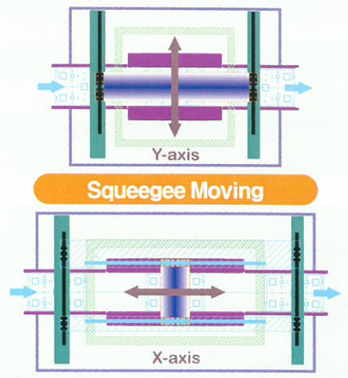
HP-520S
HP-680S
HP-850S
HP-880L

HP-350M
HP-350MD
HP-620MD

HP-520SPI
HP-850SPI

Special M/C Squeegee Direction

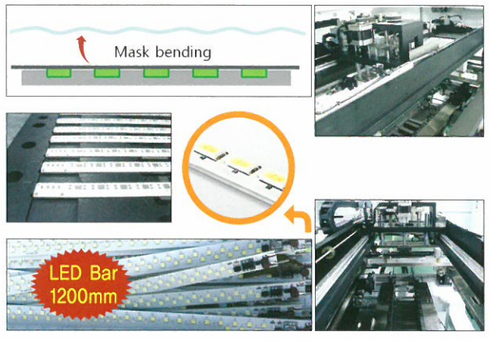
HPX-1300S
(Patent registration : 10-1166789)



Free Size Stencil Change

■ Stencil Align Structure ■ Auto Stencil Position

Application

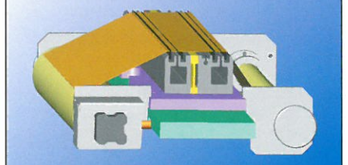


Auto Under Stencil Cleaning

Patent registration : 10-0631156

2-VACUUM UNIT & Paper Rolling Unit

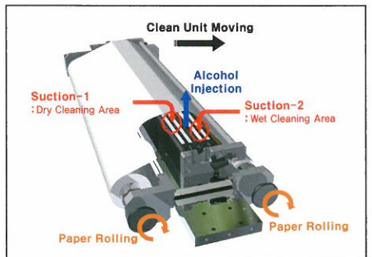
During Mask Cleaning, Quality improvement with same moving Roll Paper so can remove solder rest at Mask hole



1st return working is same benefit like 4th Cleaning

High efficiency improvement for Cleaning

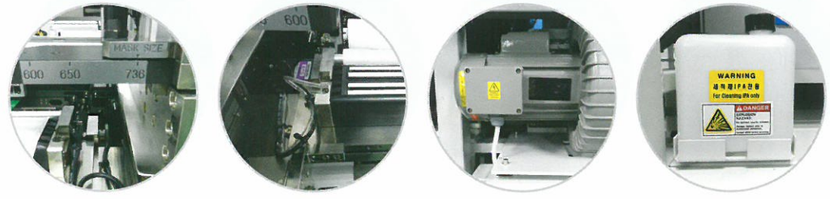
Double structure Vacuum and Cleaning Unit
Select for Alcohol, Vacuum and Below
Human Cleaning point
Select for Cleaning times
Strong Vacuum(Vacuum Motor capacity : 1,100mmH_2O
4 row Cleaning Squeegee Structure
IPA fixed volume discharge(Motion type)
Large volume of IPA tank
Special (Winding Cleaning)
Special (Wave Cleaning)



Like Double Cleaning benefit at 1st Cleaning with wet and dry effect.

Paper Winding Cleaning

Patent registration : 10-0843782

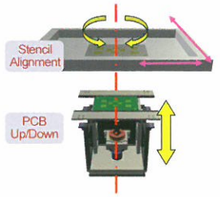


Alignment System

Alignment (Stencil Align Mode)

Stencil Align & PCB Up/Down Mode

- Stencil Align & PCB Up/Down
- One Click, All-axis Auto Align
- Paste falling down enhancement
- During Front-Rear printing, small difference Lead thickness
- Table LM Guide Up/Down Method



Patent registration : 10-1244228

User Interface

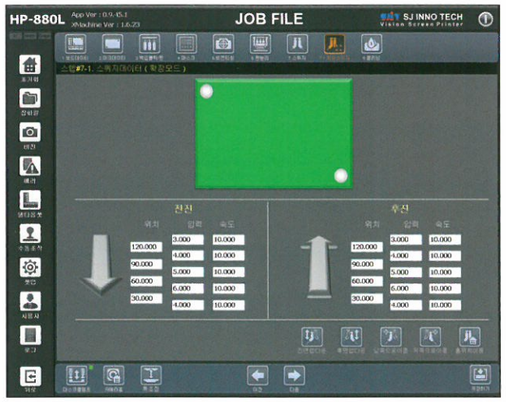
Temperature, Pressure Display on Monitor(Apply Load Cell)

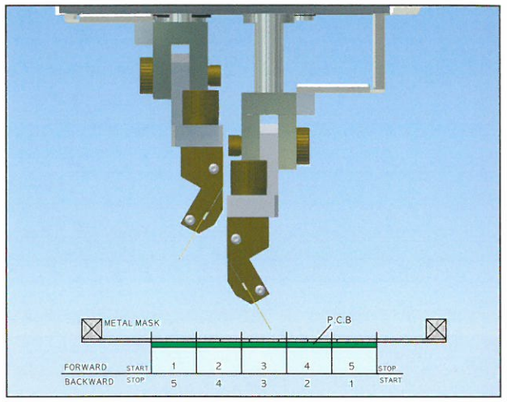
Easy Operation

Various Info Display

Speed/Pressure Control each section of Printing

Patent registration : 10-0505314

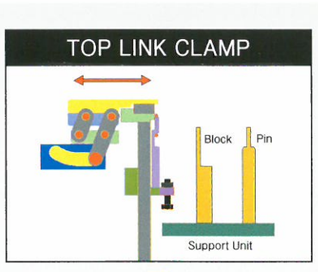


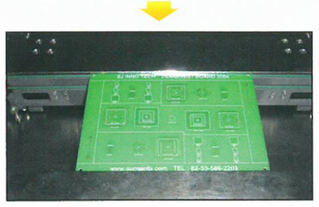


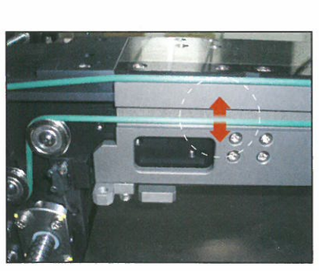
- Max. 5 section for control of speed and pressure by S/W
- High Productivity and High Printing quality

PCB Clamping

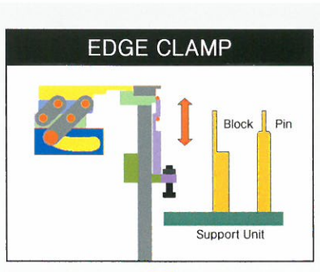
Patent registration : 10-0505315

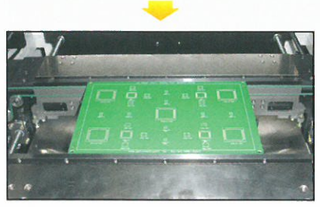






Over PCB thickness 0.8t, Prevent damage for EDGE GUIDE BLADE





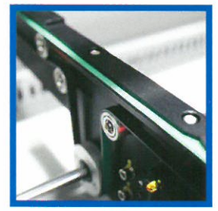
Under PCB thickness 0.8t, PCB prevent derailed during Clamp at Y axis

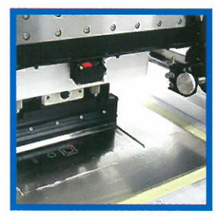
Better Advanced Technology and Convenience in Use for Customers

New Technology

High Performance VISION SCREEN PRINTER HP-520S

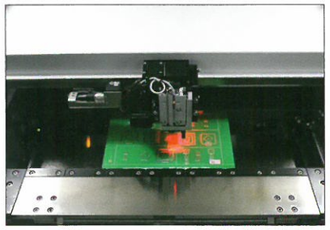
- 0402 Chip, 0.3Pitch QFP, Φ0.2MBGA
- Squeegee Precision Control for Pressure (Load-Cell Control)
- Machine Cpk Measure Software STD
- Closed-Loop Control Function (Screen Printer ⇔ SPI ⇔ Offset)
- 3 Stage Auto Width Control
- Registered Mark Position and Coordinate with Mouth Click
- 4 Stage Squeegee Structure
- Stencil Waiver Feature During Cleaning
- Free Size Stencil Change
- Stencil Align & Work Table UP/DOWN System
- Improve Processing for FPCB Due to Based Equipped with ARRAY PCB INSPECTION S/W
- Saved all Data of Job File and CPK Data by MES(Traceability)
- Solder 2D Inspection System
- AUTO SOLDER DISPENSER(Height Measure by Laser Sensor) (Option)
- Dot Dispenser Feature (Option)
- Mask, Paste and Squeegee Assembly ID Can Compare Each Other by Hand Barcode Reader System (Option)
- 2D Barcode Reading System (Option)
- Part Eecognition Sensor on Top of PCB (Option)
- High Speed Conveyor System 5sec (Option)
- Paper Winding Feature During Cleaning (Patent Registration : 10-0843782)
- PCB X-axis Moving System for LED Line (Patent Registration : 10-1166789)
- Printing Speed and Pressure Control at Each Section of Printing (Patent Registration : 10-0505314)
- Perfect PCB Clamping with Top Link and Edge Guide (Patent Registration : 10-0505315)

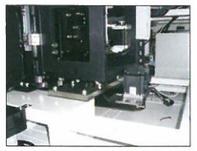


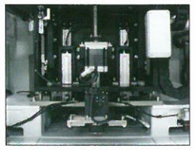


Work Table Unit

- Precision Control by Servo Motor
- 8ea LM Guide an 1ea Lead Screw
- Z1, Z2 Moving Screw, One Unit
- Z1, Z2 Up/Down Air Cushion Unit

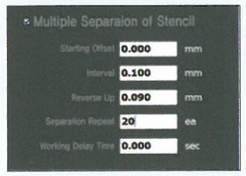






Work Table Unit (Pcb Separation)

Multiple Separation of Stencil (Work Table Vibration Separation)



Vision System (Work Programming)

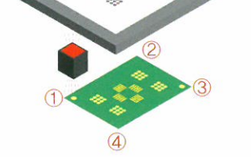
[Mask Teaching for User friendly]

[Mouse Click Method]

Camera X, Y moving by Mouse click on PCB image. Register coordinate and confirm Fiducial position by Vision

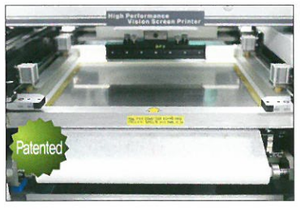
Vision System (4-Point Fiducial Teaching)

- Fiducial mark Vision Teaching
  - 0~4 Point(Selection by Operator)
  - Accuracy Printing Coordinate



Auto Stencil Cleaning

Improved cleaning efficiency



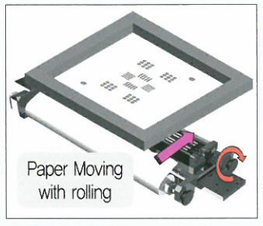
- 2 step Vacuum과 Cleaning Unit
- Function selection for IPA, Vacuum, Blower
- Human Cleaning Function
- Cleaning time selection

Automatically back to stand by status after cleaning when the machine is stop over designated time at Auto run status

Auto Cleaning System (Performance)

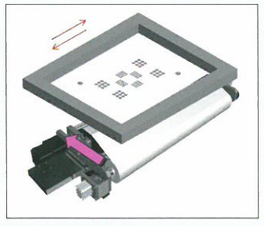
USC Winding Cleaning

Cleaning Unit moving forehead and same time rolling with Cleaning Paper and moving Moving Improve cleaning ability (Selection)



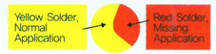
Stencil Waver(Shake) Cleaning

Cleaning Unit moving forehead and same time stencil frame moving Left/Right, Improve cleaning performance (Selection)



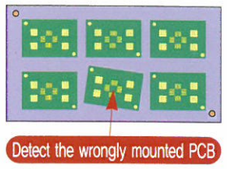
Standard 2D Inspection

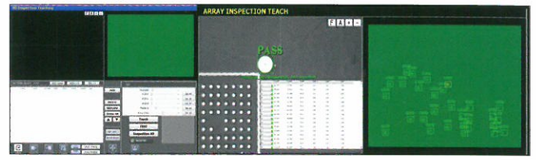
- Inspection Area
  - 11mm×8mm
- Speed
  - Per site inspection 400ms
- Programming
  - Teaching by Stencil Image
  - Calculation for Image Paste Spread by Each Site
  - Easy for Modify / Manage due to Confirming Error by Each Site



Array PCB Inspection

1. Inspect individual mark of FPCB on the JIG and detect the wrongly mounted FPCB by alarm
2. Minimize the cleaning process lose when the FPCB is mounted on the JIG by operator

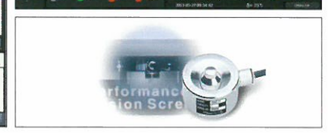




Squeegee Pressure Close-loop

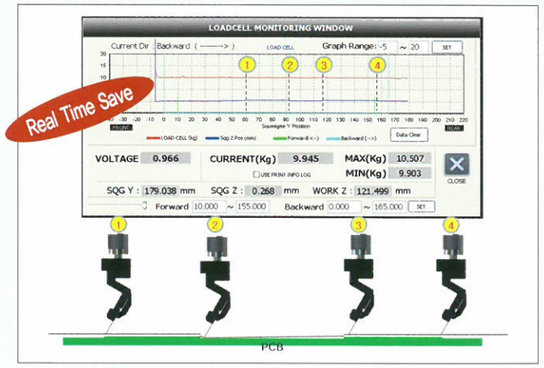
Squeegee Assembly

- Application of Load cell
- Real-time control of pressure
- Pressure monitoring
- Pressure Calibration
- Real time saving the Graph



Squeegee Pressure Close-loop

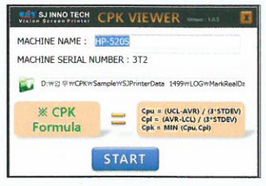
Squeegee auto pressure control by PCB shape

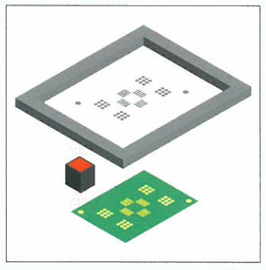


Machine Cpk

Machine Cpk measurement Software standard installation

- X, Y-axis Alignment measurement
- After repeated measurement, Cpk calculation
- Total system alignment Cpk (Pre-Print Cpk)
- Printing alignment Cpk (Post-Print Cpk)

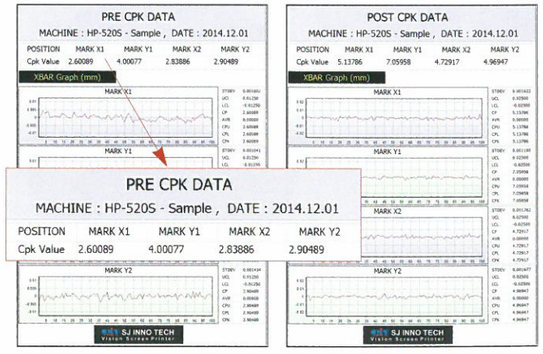




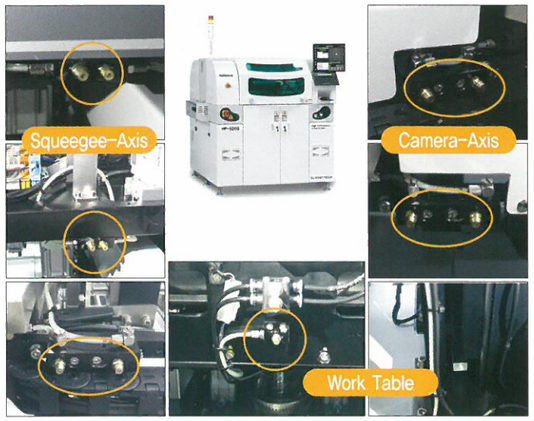
Machine Cpk

Total System Alignment
2.0Cpk@±12.5㎛

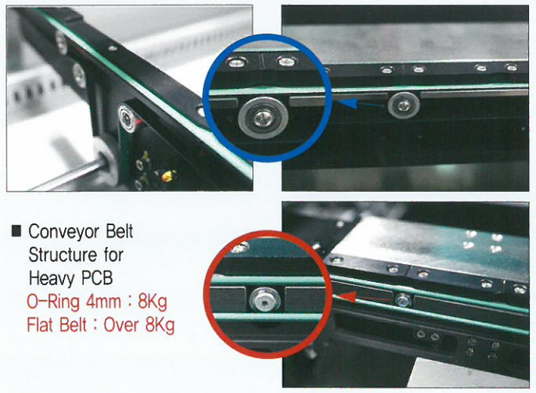
Printing Alignment
2.0Cpk@±25㎛



Grease Refuel System



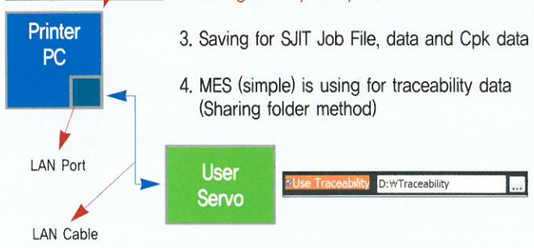
Heavy PCB Loading



■ Conveyor Belt
Structure for
Heavy PCB
O-Ring 4mm : 8Kg
Flat Belt : Over 8Kg

Traceability (MES)-Screen Printer

1. Saving function of production history
2. Using for processing the server file with saving Text file (CSV) at directly take by user server (Using for required part)
3. Saving for SJIT Job File, data and Cpk data
4. MES (simple) is using for traceability data (Sharing folder method)



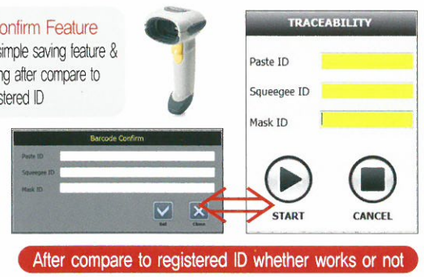
Traceability (MES)-Screen Printer

Screen Printer : Traceability(Offline Barcode Option Interworking)

■ Hand Barcode Reader
· Stencil Mask ID
· Stencil Paste ID
· Squeegee Assembly ID

Use Traceability
Use Paste, Squeegee, Mask ID

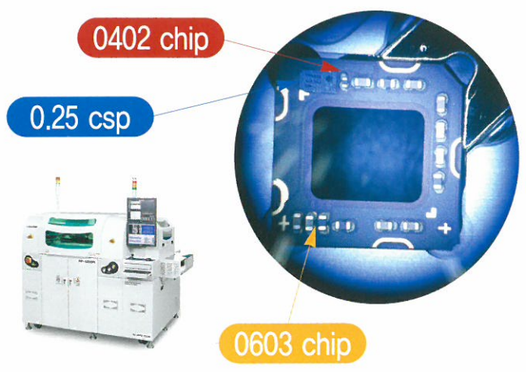
Barcode Confirm Feature
Above 3 kind ID, simple saving feature & Decision working after compare to registered ID



After compare to registered ID whether works or not

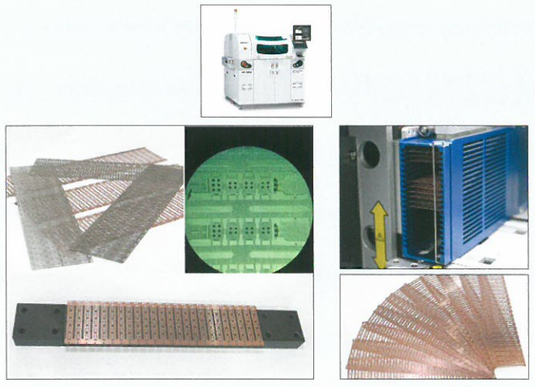
Printing Quality

Smart Phone Camera Module



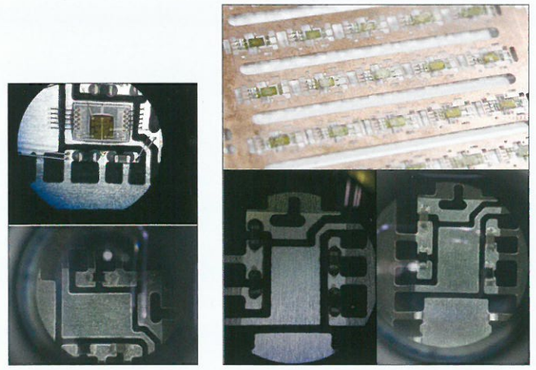
Printing Quality

Lead Frame Printing



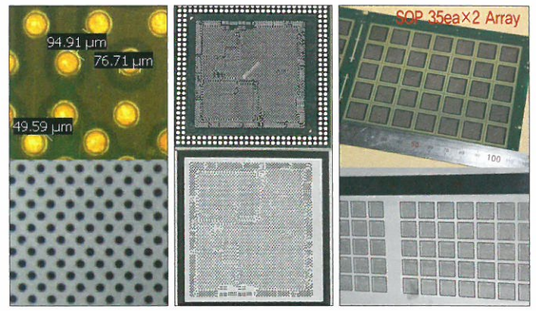
Printing Quality

Lead Frame Printing



Printing Quality

S.O.P (Ultra Fine Pitch)

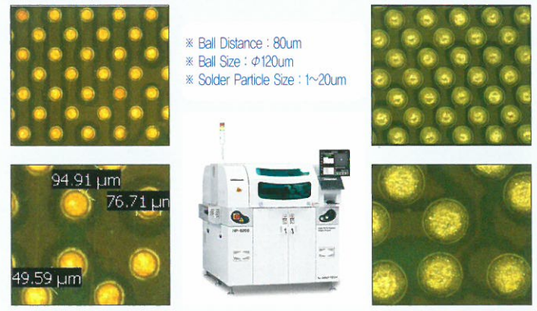


Printing Quality

HP-520SPI - SJIT Test Board

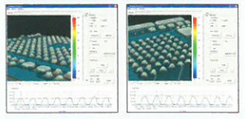
Printing Quality

After Printing



Screen Printer & 3D Inspection

HP-520SPI HP-520SPI

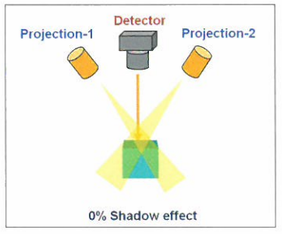


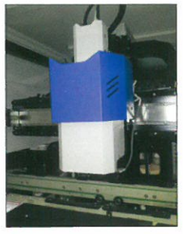
SP & SPI Data Close-loop

■ Screen printer real time control
■ Solder paste 3D inspection
■ Lot test

SPI Dual Projection Camera

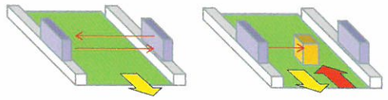
SPI-Dual Projection CAMERA



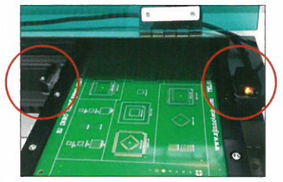


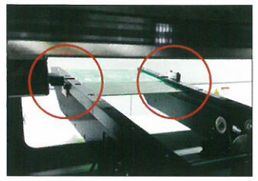
Spec	Camera	FOV(mm)	Speed	Inspect Time (PCB200×200)	Remark
Standard	4M(18um)	36.8×36.8	46cm²/sec	8.4sec	Dual Projection

Component Detector on the PCB OPTION



In case of part on PCB, Sensor detection,
Back PCB and alarming





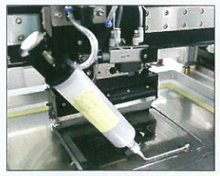
Temperature Control Unit OPTION

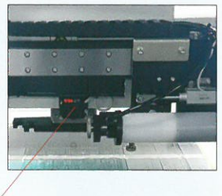
■ Temperature Control Unit

- Non Air Circulation System
- Cooling Capablity : 2,500 kcal/h
- PTC Heater 1.6Kw
- Setting Temperature : 20℃~30℃
- Operating Range : 2.0℃~30℃, 40%~60%
- 220VAC, 60Hz , 15Amp
- Dimension : 500x600x990(H)

Model : HTC-1380

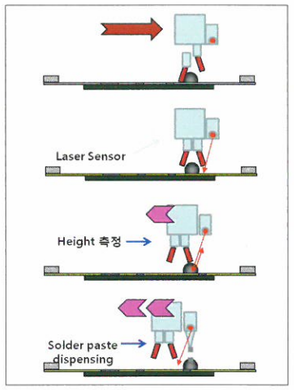
Auto Solder Dispenser OPTION

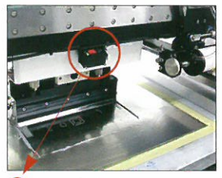




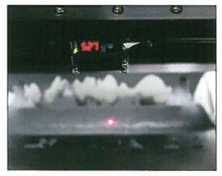
Paste Solder
Height measure
Laser Sensor

Auto Solder Dispenser OPTION



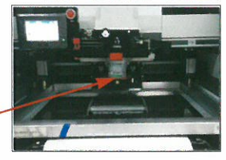


○ Laser Sensor



Auto Solder Dispenser OPTION

■ Made by DOOWON PRECISION
- Squeegee Carriage Center Position
- Program Working by Independent
- Remote Monitoring (Option)



[Paste outlet]

2D Barcode Reading OPTION

1. Screen printer : On PCB, 2D Barcode recognition (reading)

Metrics Code
QR Code

※ Screen printer camera recognition
※ Metrics Code Reading
※ In 7 x 7 mm Size

⇒ 2D barcode reading and CSV file saving ⇒ Traceability

2. SPI : On PCB, 2D Barcode recognition (reading)

Metrics Code
QR Code

※ SPI camera recognition
※ Metrics Code Reading
※ In 15 x 15 mm Size

⇒ 2D barcode reading and CSV / SPC DATA saving ⇒ Traceability / SPC Data

Off line Barcode Manger OPTION

JOB Change by Barcode Scan(Production Model Change)

■ Job Program Change by Registered with Barcode Scan
■ Barcode Scan Works with Registered Only Job File
■ Register Another Job for New Job File

Click

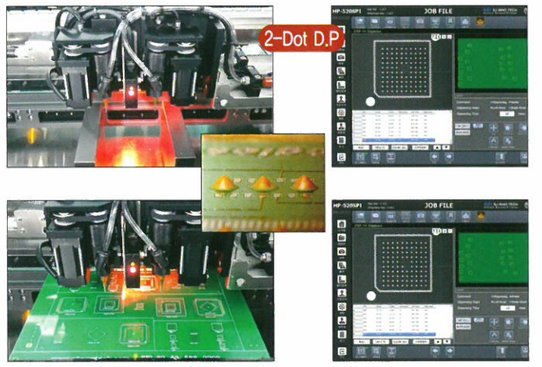
Off line Barcode Manger OPTION

■ Offline Barcode Count Management System
- Squeegee, Mask and Paste Management of Historical Use by Barcode
- No Service for Integrated for Other Machines
- All Info Save at Traceability

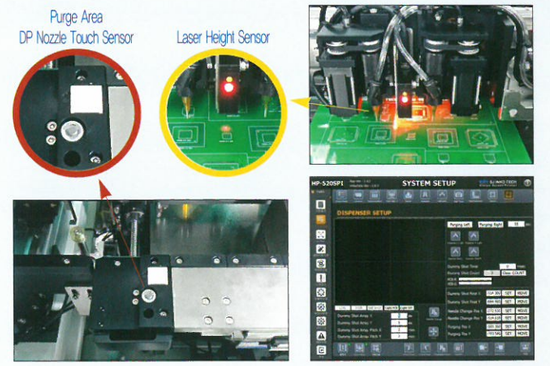
■ Barcode ID Accumulated Count Feature
- Stencil Mask ID
- Front, Rear Squeegee ID
- Paste ID (Time Management)

- Count Limit Setting
- Count Reset
- Count Over ➔ M/C Stop
- Count Over ID Delete Feature

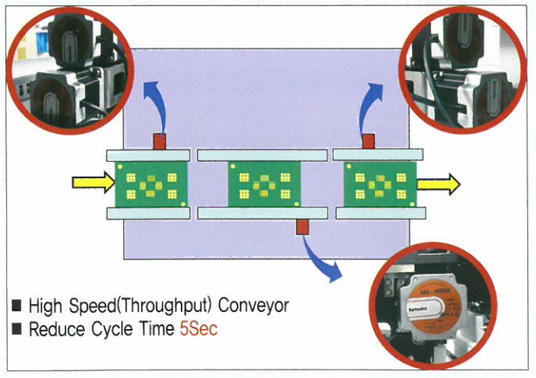
Dot Dispenser OPTION



Dot Dispenser OPTION



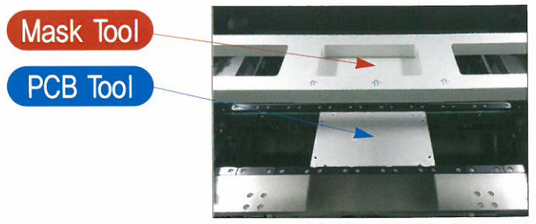
High Speed Conveyor OPTION



■ High Speed(Throughput) Conveyor
■ Reduce Cycle Time 5Sec

CPK Measure Tooling (JIG) OPTION

Mask Tool
PCB Tool



SJ INNOTECH Mode
Specification

ITEM	HP-350M	HP-350MD	HP-620MD
Total System Alignment Accuracy and Repeatability	2.0Cpk@±12.5㎛, 6-Sigma / ±0.0125mm		
Printing Alignment Accuracy and Repeatability	2.0Cpk@±25㎛, 6-Sigma / ±0.025mm		
Cycle Time (203×145mm PCB)	Excluding Printing : 6sec *Real Time about 11sec	Excluding Printing : 6sec *Real Time about 11sec → Single	6sec(Real Time 15sce) → Single
Stencil Frame Size	STD : 650×550mm (L×W)	STD : 650×550mm (L×W) Only	STD : 650×550mm, 736×736mm (L×W)
PCB Size	50×50 ~ 350mm×250mm (L×W)	50×50 ~ 350mm×250mm (L×W)	50×50 ~ 620mm×300mm (L×W)
PCB Thickness	0.3mm ~ 6.5mm		
PCB Weight	2.0Kg	2.0Kg	5.0Kg
Conveyor Width Adjustment	Programmable(Automatic) / In/Work/Out 3-Stage Conveyor		
Squeegee Speed	1 ~ 150mm/s (Inc 0.01mm/s)		
Squeegee Pressure	Load-Cell Application 0.1 - 50Kg/f (Software Programmable)	Load-Cell Application 0.1 - 50Kg/f (Software Programmable)	Load-Cell Application 0.1 - 50Kg/f
Vision Camera	Interlaced Scan CCD, *F.O.V 11mm×8mm		
2D Inspection	Paste On Pad - Detection of Insufficient Solder (Standard)		
Cleaning System	IPA + Paper + Vacuum Control in Software Parameter		
Dimension(mm)	1490(L) × 1492(W) × 1445(H)	1310(L) × 2275(W) × 1447(H)	1690(L) × 2600(W) × 1477(H)
Weight	1,130Kg	2,050Kg	2,400Kg
Power	AC220V, 50/60HZ, 6.0Kw	AC220V, 50/60HZ, 6.0Kw(single)×2대 total:12.0Kw	AC220V, 50/60HZ, 6.0Kw(single)×2대 total:12.0Kw
Pneumatic(AIR)	0.5MPa, 40NL/min	0.5MPa, 40NL/min×2	0.5MPa, 40NL/min×2
OS Program	Industrial PC, Microsoft Windows / LCD Monitor 17"		

ITEM	HP-880L	HPX-1300S
Accuracy & Repeatability	2.0Cpk@±25㎛, 6-Sigma	
Stencil Frame Size	736×736~1050×800	1100,1200,1300,1400,1500,1580mm(L)×650,736,800(W)
PCB Size	100×80 ~ 850mm×480mm (L×W)	200×150 ~ 1240mm×450mm (L×W)
PCB Thickness	0.3mm ~ 6.5mm	
PCB Weight	8Kg	8Kg
Conveyor Width Adjustment	Programmable(Automatic) / One Stage Conveyor System	Programmable(Automatic) / In/Work/Out 3 Stage Conveyor
Squeegee Speed	1 ~ 150mm/s (Inc 0.01mm/s)	
Squeegee Pressure	Load-Cell Application, 0.1 - 50Kg/f (Software Programmable)	
Vision Camera	Interlaced Scan CCD, *F.O.V 11mm×8mm	
2D Inspection	Paste On Pad - Detection of Insufficient Solder (Standard)	
Cleaning System	IPA + Paper + Vacuum Control in Software Parameter	
Dimension(mm)	1530(L) × 1840(W) × 1480(H)	2580(L) × 1700(W) × 1445(H)
Weight	1,300Kg	2,000Kg
Power	AC220V, 50/60HZ, 6.0Kw	AC220V, 50/60HZ, 6.0Kw
Pneumatic(AIR)	0.5MPa, 40NL/min	
OS Program	Industrial PC, Microsoft Windows / LCD Monitor 17"	

SJ INNOTECH Mode
Specification

ITEM	HP-520S	HP-680S	HP-850S	HP-1000S
Total System Alignment Accuracy and Repeatability	2.0Cpk@±12.5㎛, 6-Sigma / ±0.0125mm			
Total System Alignment Accuracy and Repeatability	2.0Cpk@±25㎛, 6-Sigma / ±0.025mm			
Cycle Time (203×145mm PCB)	Excluding Printing : 7sec *Real Time about 13sec	Excluding Printing : 10sec *Real Time about 16sec	Excluding Printing : 12sec *Real Time about 18sec	Excluding Printing : 20sec *Real Time about 28sec
Stencil Frame Size	STD : 600×550mm (L×W) 650×550, 736×736mm	STD : 650,736,800,860(L)mm ×550,736,800(W)mm	STD : 736,800,860,920,1000,1050(L)mm ×736,800,850(W)mm	STD : 920,1000,1100,1200(L)mm ×800,900(W)mm
PCB Size	50×50 ~ 520mm×420mm (L×W)	50×50 ~ 680mm×510mm (L×W)	70×70 ~ 850mm×510mm (L×W)	200×150 ~ 940mm×610mm (L×W)
Print Area	50×50 ~ 520mm×420mm (L×W)	50×50 ~ 680mm×510mm (L×W)	70×70 ~ 850mm×510mm (L×W)	200×150 ~ 940mm×610mm (L×W)
PCB Thickness	0.3mm ~ 6.5mm			
PCB Weight	2Kg	5Kg	8Kg	10Kg
PCB Warpage	0 ~ 4mm (Inc. Thickness)			
PCB Stopper	Camera moves by Program automatically and stop Board at correct position			
PCB Support	· Magnetic Support Pin or Block · Auto adjustment of height according to PCB "t" · Support Pin Height : 73.9mm · Vacuum Type Support(Option)			
PCB Clamping(Fixed)	· Top Link Clamping (0.8 ~ 6t) · Top Knife Edge Clamping (0.2 ~ 0.8t) · Vacuum Type(Option)			
PCB Under Clearance	30mm			
Board Side(Edge)Permissible Range	· Top Link Clamping : Limitlessness · Top Knife Edge Clamping : 3mm · Vacuum Type : Limitlessness			
Conveyor Width Adjustment	· Programmable (Automatic) · In/Work/Out 3 Stage Conveyor			
PCB Direction	Left ⇒ Right, Right ⇒ Left, Front Fixed (STD)			
Squeegee Type	· Metal (Stainless Alloy Steel) 0.2t, 0.3t, Etching Blade · User selective			
Squeegee Level Method	Self Balancing			
Squeegee Speed	1 ~ 150mm/s (Inc 0.01mm/s)			
Squeegee Pressure	Load-Cell Application 0.1 - 50Kg/f (Programmable)	Load-Cell Application 0.1 - 50Kg/f (Programmable)	Load-Cell Application 0.1 - 50Kg/f (Programmable)	Load-Cell Application 0.1 - 50Kg/f (Programmable)
Snap-off	· Distance : 0 - 5.0mm (Inc 0.01mm) · Speed : 1-150mm/sec (Inc 0.01mm/sec)			
Vision Camera	Interlaced Scan CCD, *F.O.V 11mm×8mm			
Vision Board	EURESYS LIBRARY Application			
2D Inspection	Paste On Pad - Detection of Insufficient Solder (Standard)			
Fiducials	Registered Figure Matching, Pattern Matching			
Fiducials Size	0.4 ~ 5mm			
Cleaning System	IPA + Paper + Vacuum Control을 Software Parameter에서 Programmable			
Dimension (mm)	1530(L) × 1635(W) × 1457(H)	1750(L) × 1735(W) × 1457(H)	1910(L) × 1750(W) × 1457(H)	1950(L) × 1945(W) × 1457(H)
Weight	1,360Kg	1,500Kg	1,650Kg	1,800Kg
Power	AC220V, 50/60HZ, 6.0Kw	AC220V, 50/60HZ, 6.0Kw	AC220V, 50/60HZ, 6.0Kw	AC220V, 50/60HZ, 6.0Kw
Pneumatic (AIR)	0.5MPa, 40NL/min			
OS Program	Industrial PC, Microsoft Windows / LCD Monitor 17"			
Host Communication	· SEMEMA Interface (STD) · TCP/IP (Option)			

SJ INNOTECH Mode

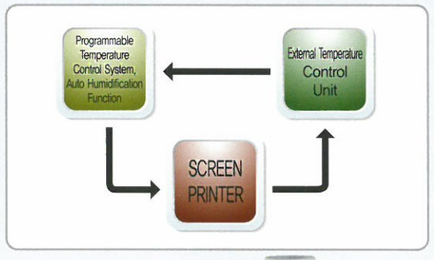
Specification

ITEM	HP-520SPI	HP-850SPI
Total System Alignment Accuracy and Repeatability	2.0Cpk@±12.5㎛, 6-Sigma / ±0.0125mm	
Total System Alignment Accuracy and Repeatability	2.0Cpk@±25㎛, 6-Sigma / ±0.025mm	
Cycle Time (203×145mm PCB)	Excluding Printing : 7 sec *Real Time about 13 sec	Excluding Printing : 12 sec *Real Time about 18 sec (Just Printing)
Stencil Frame Size	기본 : 600×550mm (L×W) 650×550, 736×736mm	L : 736, 800, 860, 920, 1000, 1050mm W : 736, 800mm
PCB Size	50×50 ~ 520mm×420mm (L×W)	70×70 ~ 850mm×450mm
PCB Size	50×50 ~ 520mm×420mm (L×W)	70×70 ~ 850mm×450mm
PCB Thickness	0.4mm ~ 6mm	
PCB Weight	2Kg	8Kg
PCB Warpage	0 ~ 8mm (Inc. Thickness)	
PCB Stopper	Camera moves by Program automatically and stop Board at correct position	
PCB Support	· Magnetic Support Pin or Block · Auto adjustment of height according to PCB "t" · Support Pin Height : 73.9mm · Vacuum Type Support(Option)	
PCB Clamping(Fixed)	· Top Link Clamping (0.8 ~ 6t) · Top Knife Edge Clamping (0.2 ~ 0.8t) · Vacuum Type(Option)	
PCB Under Clearance	30mm	
Board side(Edge) Permissible range	· Top Link Clamping : Limitlessness · Top Knife Edge Clamping : 3mm · Vacuum Type : Limitlessness	
Conveyor Width Adjustment	· Programmable (Automatic) · In/Work/Out 3Stage Conveyor	
Squeegee Type	· Metal (Stainless Alloy Steel) 0.2t, 0.3t, Etching Blade · User selective	
Squeegee Level Method	Self Balancing	
Squeegee Speed	1 ~ 150mm/s (Inc 0.01mm/s)	
Squeegee Pressure	Load-Cell Application 0.1 - 50Kg/f (Software Programmable)	Load-Cell Application 0.1 - 50Kg/f (Software Programmable)
PCB Sepatation	· Distance : 0 - 5.0mm (Inc 0.01mm) · Speed : 1-150mm/sec (Inc 0.01mm/sec)	
Vision Camera	Interlaced Scan CCD, *F.O.V 11mm×8mm	
Vision Board	EURESYS LIBRARY Application	
Fiducials	Registered Figure Matching, Pattern Matching	
Fiducials Size	0.4 ~ 5mm	
Cleaning System	IPA + Paper + Vacuum Control in Software Parameter	
Dimension (mm)	2115(L) X 1625(W) X 1457(H)	2550(L) X 1915(W) X 1485(H)
Weight	1,500Kg	2,700Kg
Power	AC220V, 50/60HZ, 6.0Kw	AC220V, 50/60HZ, 8.0Kw
Pneumatic(AIR)	0.5MPa, 40NL/min	
OS Program	Industrial PC, Microsoft Windows / LCD Monitor 17"	
Host Communication	· SEMEMA Interface (STD) · TCP/IP (Option)	

SPI(3D)Part Specification (Commonness)

1. 2D/3D Vision Algorithm
   · 2D : Vision Inspection Algorithm
   · 3D : PMP (Phase Measuring Profilometry) Algorithm
2. Camera
   · IOI 4M180MCL
3. 18㎛ (FOV : 36.8×36.8mm) - Standard
   · 15㎛ (FOV : 30×30mm) - Option
4. Inspection Speed
   · 0.29sec/1(F.O.V)
5. Solder Paste Height Range
   · 0 ~ 450㎛
6. Height Resolution
   · 0.4㎛
7. Height Repeatability (Standard)
   · ±0.5% (3σ)*
8. Height Repeatability (Rear PCB)
   · ±2% (3σ)*
9. Height Accuracy
   · 2㎛*
10. Max. PCB Warp
    · ±5mm
11. Gage R&R
    · ‹ 10%*(6σ)*
12. Dual Projection Application

Programmable Temperature Control System



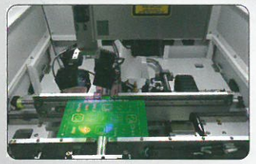
HTC-1380

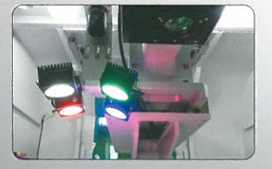
Programmable Temperature Control System

LASER MARKING SYSTEM

SLM-350T/SLM-520T

- EO Technics CO^2 Laser Marking application
- Accuracy Marking Position setting with Vision Camera
- Based application for IONIZER
- Based application for both up and down marking by 180 Turning
- Various word and symbol marking for 2D QR code
- X, Y Table Moving System
- PCB Size SLM-350T : 80×80~250×330
  SLM-520T : 80×80~420×520





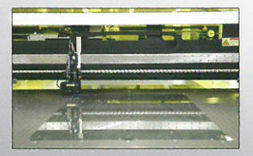
SEMICONDUCTOR LEAD FRAME SCREEN PRINTER

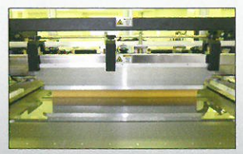
HP-350S

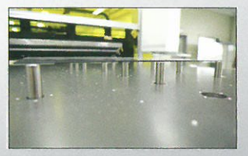
LARGE TOUCH GLASS & FILM SCREEN PRINTER

Glass Max Size : 1100×1300

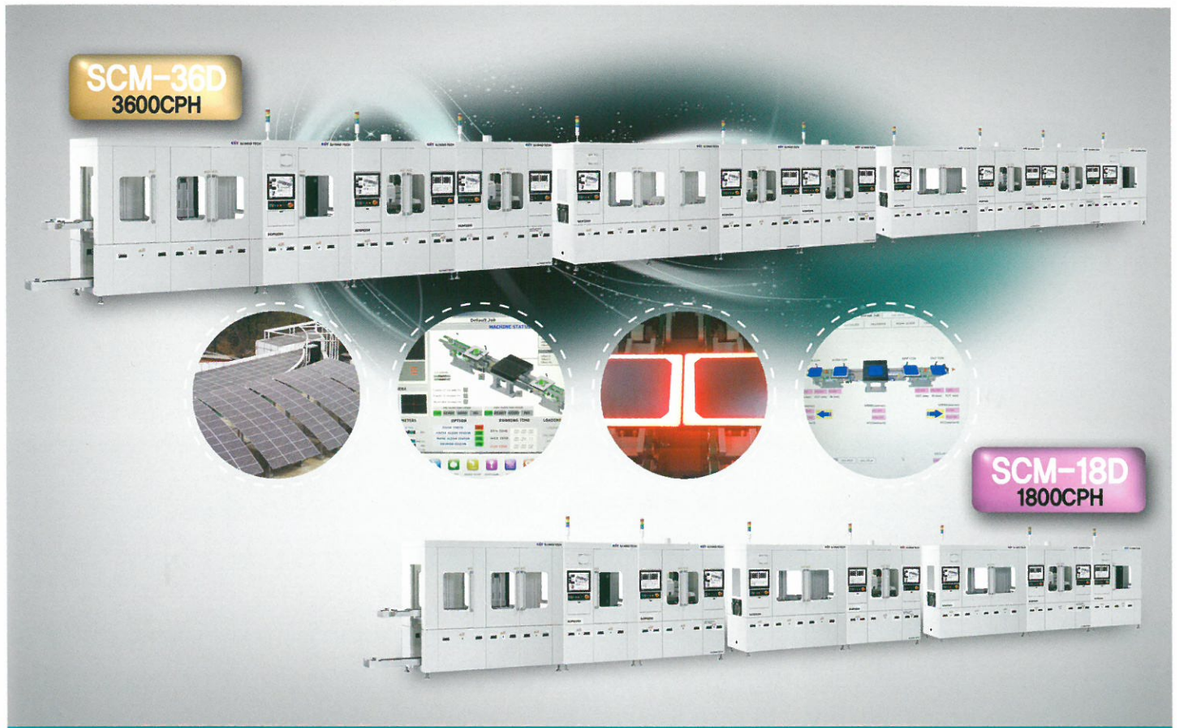
- Mask Tilting Function
- Squeegee Swing feature for protected INK drop







SOLAR METALLIZATION INLINE SYSTEM



SOLAR R/D LINE

Loader

Screen Printer

Dryer

Unloader

THICK FILM RESISTOR VISION SCREEN PRINTER

JAPAN SEISHIN TRADING CO., LTD. ODM

- Cycle Time : 4sec/1-Head
- Repeated Printing Degree : 4㎛

TOUCH GLASS VISION SCREEN PRINTER

Glass Size : Min 4″~ Max 15.6″

GL-300 > GP-300 > DRY >GU-300

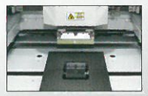
- Cycletime : 6sec
- Accuracy : ±12.5㎛
- Mask Auto Alignment
- Mask Tilting Function
- Squeegee Swing feature for protected INK drop

BM Printing

IR Printing

ROGO Printing



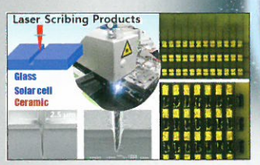




LASER SCRIBER

JAPAN SEISHIN TRADING CO., LTD. ODM

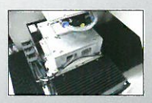
SLS-400

- Moving speed : 400mm/sec
- Repeated degree : ±2㎛
- X.Y Table Cleaning System
- Laser Scriber for 0402 and 0603









GLOBAL NO.1

New Technology
High Performance
VISION SCREEN PRINTER

www.sjinnotech.com

Challenge & Execution
Communication & Cooperation
Creative & Innovation

PATENT


Patent 10-0419460


Patent 10-0505314


Patent 10-0505315


Patent 10-0843782


Patent 10-0892001


Patent 10-1000902

Patent 10-1100773

Patent 10-0994199

Patent 10-1165747

Patent 10-1018675

Patent 10-1137995

Patent 10-1075252


Patent 10-1092990


Patent 10-1117321


Patent 10-1137995


Patent 10-1166789


Patent 10-1244226


Patent 10-1244228

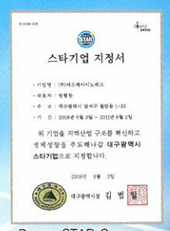
CERTIFICATE


INNO-BIZ Certificate

Trade Promotion Citation


Global Small Giants

Export hidden Champions



Daegu STAR Company

Excellent STAR Company

Small and Medium-sized businesses excellence award

Venture Company Certificate

ISO9001

ISO14001


R&D Center Certificate