

PRODUCT CATALOGUE

**MANUFACTURER OF FULL LINE
INSERTION AUTOMATION**

THIM3

THIM3-OF6S

Online Visual Odd Insertion Machine



The online visual odd-form insertion machine automatically inserts various specifications of odd-form electronic components into printed circuit boards (PCBs), with corner fixing and detection functions, achieving high-speed, high-precision, and highly stable insertion effects.



Product Configuration

Operating System

The operating running in the Windows environment, including production data, management data, device parameters, editing programs, and all I/O signal diagnosis, can be completed on the host, with a user-friendly interface. The application of high-tech technology makes the device simple and efficient, easy to use, and has good operability.

Missing Parts Detection

When inserting missing parts, it can achieve missing part detection and has a re-insertion function.

Visual System

The industrial special HD camera and the self-developed visual correction software constitute a visual system. The deviation between the PCB hole position and the programmed coordinates can be seen, and all coordinates can be quickly and automatically corrected to align with the actual PCB hole position, ensuring the accuracy of the insertion and greatly improving the programming efficiency.

Important Parts Brand

- The servo motor adopts Panasonic brand from Japan.
- The motor for the board feeding and connecting platform system adopts the Eastern brand.
- Pneumatic components adopt the Japanese SMC brand.
- The screw adopts the Japanese THK brand.
- The camera system adopts the Daheng Image (5 million pixels) brand.
- The relay adopts Omron brand of Japan.
- The photoelectric sensor adopts the Japanese Panasonic brand.
- The main component materials are made of Japanese mold steel.

Device Parameters

Insertion Component Object	Various irregular components
Insertion speed	0.6 seconds per piece
PCB loading and unloading time	3s
Component packaging method	Bulk, tube, tape, roll, reel
Dimensions of detachable PCB	Max 380mm * 280mm; Min 50mm * 50mm (can be customized)
Number of insertion heads	Can set up 1~4 Insertion heads and simultaneously insertion different specifications of irregular electronic components
Component requirements	No serious deformation or bending of component feet
PCB board requirements	The edge of the backup plate needs to have positioning holes; The component aperture is 0.5mm larger than the component foot
Insertion direction	Can be set from 0 to 360 degrees in increments of 1 degree
Component body distance	The distance between components is 2mm (high density can be customized)
Control system	Self developed control system, Industrial PC+motion control card for efficient control
Display system	17 inch color LCD display
Material supply method	Bowl feeder, Tape feeder, Tube feeder, Tray feeder
Motion accuracy	0.001mm/pulse
Motor system	Panasonic servo controller, motor
Programming function	Online visual programming, visual correction, and simple Excel spreadsheet process
Data input	USB interface import, manual input
Communication interface	RS-232C/MES solution can be customized
Using the power supply	Single phase 220V/AC, 50/60HZ, 2KVA
Air pressure	5-6 kg/cm ²
Machine noise	≤45 dB
Ambient temperature	10°C~30°C
Environmental humidity	30%~70%
Gas consumption	0.63 m ³ /min
Equipment dimensions(LWH)	1450mm 1250mm 1750mm
Equipment weight	1500kg

THIM3-B

Online Button Insertion Machine



The online button insertion machine automatically inserts various bulk button (switch) electronic components into the printed circuit board (PCB) according to the set program of different products, with corner fixing and single pin detection functions, achieving high-speed, high-precision, and stable insertion effects.



Product Configuration

Operating System

The operating running in the Windows environment, including production data, management data, device parameters, editing programs, and all I/O signal diagnosis, can be completed on the host, with a user-friendly interface. The application of high-tech technology makes the device simple and efficient, easy to use, and has good operability

Missing Parts Detection

When inserting missing parts, it can achieve missing part detection and has a re-insertion function.

Important Parts Brand

- The servo motor adopts Panasonic brand from Japan.
- The motor for the board feeding and connecting platform system adopts the Eastern brand.
- Pneumatic components adopt the Japanese SMC brand.
- The screw adopts the Japanese THK brand.
- The camera system adopts the Daheng Image (5 million pixels) brand.
- The relay adopts Omron brand of Japan.
- The photoelectric sensor adopts the Japanese Panasonic brand.
- The main component materials are made of Japanese mold steel.

Visual System

The industrial special HD camera and the self-developed visual correction software constitute a visual system. The deviation between the PCB hole position and the programmed coordinates can be seen, and all coordinates can be quickly and automatically corrected to align with the actual PCB hole position, ensuring the accuracy of the insertion and greatly improving the programming efficiency.

Device Parameters

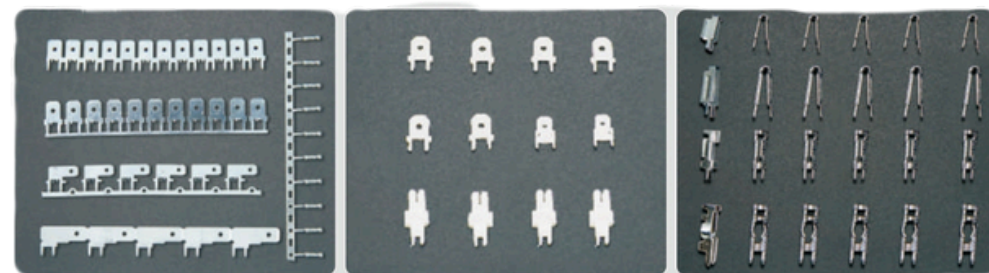
Insertion Component Object	Keys (switches) with an outer diameter of 66~1010 and a handle length of ≤ 18mm
Insertion speed	0.45 seconds per piece
PCB loading and unloading time	3s
Component packaging method	Bulk
Dimensions of detachable PCB	Max 380mm * 280mm; Min 50mm * 50mm (can be customized)
Number of insertion heads	Can be configured with 1~2 insertion heads, while inserting buttons of different specifications
Component requirements	No serious deformation or bending of component feet
PCB board requirements	The edge of the backup plate needs to have positioning holes; The component aperture is 0.5mm larger than the component foot
Insertion direction	Can be set from 0 to 360 degrees in increments of 1 degree
Component body distance	The distance between components is 2mm (high density can be customized)
Components detected	All four feet can be individually tested
Component fixation method	Bend all four feet in the middle (Four legged external bending can be customized according to requirements)
Control system	Self developed control system, Industrial PC+motion control card for efficient control
Display system	17 inch color LCD display
Material supply method	Bowl feeder
Motion accuracy	0.001mm/pulse
Motor system	Panasonic servo controller, motor
Programming function	Online visual programming, visual correction, and simple Excel spreadsheet process
Data input	USB interface import, manual input
Communication interface	RS-232C/MES solution can be customized
Using the power supply	Single phase 220V/AC, 50/60HZ, 2KVA
Air pressure	5-6 kg/cm ²
Machine noise	≤55 dB
Ambient temperature	10°C~30°C
Environmental humidity	30%~70%
Gas consumption	0.63 m ³ /min
Equipment dimensions(LWH)	1450mm1250mm 1750mm
Equipment weight	1500kg

THIM3-T

Online Terminal Insertion Machine



The online visual odd-form insertion machine automatically inserts various specifications of odd-form electronic components into printed circuit boards (PCBs), with corner fixing and detection functions, achieving high-speed, high-precision, and highly stable insertion effects.



Product Configuration

Operating System

The operating running in the Windows environment, including production data, management data, device parameters, editing programs, and all I/O signal diagnosis, can be completed on the host, with a user-friendly interface. The application of high-tech technology makes the device simple and efficient, easy to use, and has good operability.

Missing Parts Detection

When inserting missing parts, it can achieve missing part detection and has a re-insertion function.

Important Parts Brand

- The servo motor adopts Panasonic brand from Japan.
- The motor for the board feeding and connecting platform system adopts the Eastern brand.
- Pneumatic components adopt the Japanese SMC brand.
- The screw adopts the Japanese THK brand.
- The camera system adopts the Daheng Image (5 million pixels) brand.
- The relay adopts Omron brand of Japan.
- The photoelectric sensor adopts the Japanese Panasonic brand.
- The main component materials are made of Japanese mold steel.

Visual System

The industrial special HD camera and the self-developed visual correction software constitute a visual system. The deviation between the PCB hole position and the programmed coordinates can be seen, and all coordinates can be quickly and automatically corrected to align with the actual PCB hole position, ensuring the accuracy of the insertion and greatly improving the programming efficiency.

Device Parameters

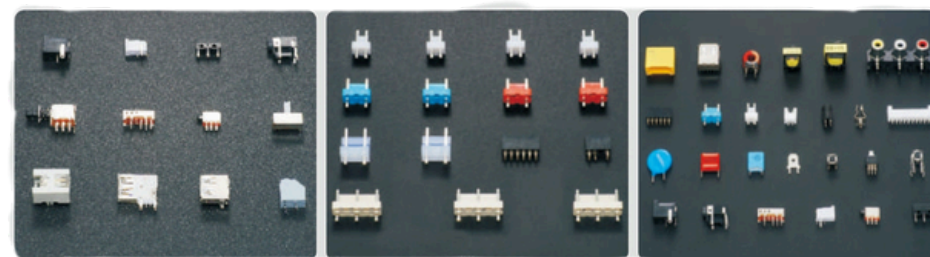
Insertion Component Object	Terminal, maximum size 10mm wide and 22mm high
Insertion speed	0.4 seconds per piece
PCB loading and unloading time	3s
Component packaging method	Jointly, in rolls, in bulk
Dimensions of detachable PCB	Max 380mm × 280mm; Min 50mm × 50mm (can be customized)
Number of insertion heads	Can be set with 1~4 insertion heads to insert terminals of different specifications
Terminal thickness requirements	0.6mm ≤ Terminal ≤ 1.2mm / 0.6mm ≤ Terminal ≤ 1.2mm
PCB board requirements	The edge of the backup plate needs to have positioning holes; The component aperture is 0.5mm larger than the component foot
Insertion direction	Can be set from 0 to 360 degrees in increments of 1 degree
Component body distance	The distance between components is 2mm (high density can be customized)
Component fixation method	Two feet are perpendicular to each other, and the component is bent towards both sides(Optional inner bend)
Control system	Self developed control system, Industrial PC+motion control card for efficient control
Display system	17 inch color LCD display
Material supply method	Bowl feeder, Packaging in rolls/continuous feeder
Motion accuracy	0.001mm/pulse
Motor system	Panasonic servo controller, motor
Programming function	Online visual programming, visual correction, and simple Excel spreadsheet process
Data input	USB interface import, manual input
Communication interface	MES/MES solution can be customized
Using the power supply	Single phase 220V/AC, 50/60HZ, 2KVA
Air pressure	5-6 kg/cm ²
Machine noise	55 dB
Ambient temperature	10°C~30°C
Environmental humidity	30%~70%
Gas consumption	0.63 m ³ /min
Equipment dimensions(LWH)	1750mm 1350mm 1750mm
Equipment weight	1500kg

THIM3-OF4S

Online High-speed Odd-form Insertion Machine



The online high-speed odd-form insertion machine automatically inserts various specifications of odd-form electronic components into printed circuit boards (PCBs) according to the set program of different products, with corner fixing and detection functions, achieving high-speed, high-precision, and highly stable insertion effects.



Product Configuration

Operating System

The operating running in the Windows environment, including production data, management data, device parameters, editing programs, and all I/O signal diagnosis, can be completed on the host, with a user-friendly interface. The application of high-tech technology makes the device simple and efficient, easy to use, and has good operability.

Missing Parts Detection

When inserting missing parts, it can achieve missing part detection and has a re-insertion function.

Visual System

The industrial special HD camera and the self-developed visual correction software constitute a visual system. The deviation between the PCB hole position and the programmed coordinates can be seen, and all coordinates can be quickly and automatically corrected to align with the actual PCB hole position, ensuring the accuracy of the insertion and greatly improving the programming efficiency.

Important Parts Brand

- The servo motor adopts Panasonic brand from Japan.
- The motor for the board feeding and connecting platform system adopts the Eastern brand.
- Pneumatic components adopt the Japanese SMC brand.
- The screw adopts the Japanese THK brand.
- The camera system adopts the Daheng Image (5 million pixels) brand.
- The relay adopts Omron brand of Japan.
- The photoelectric sensor adopts the Japanese Panasonic brand.
- The main component materials are made of Japanese mold steel.

Device Parameters

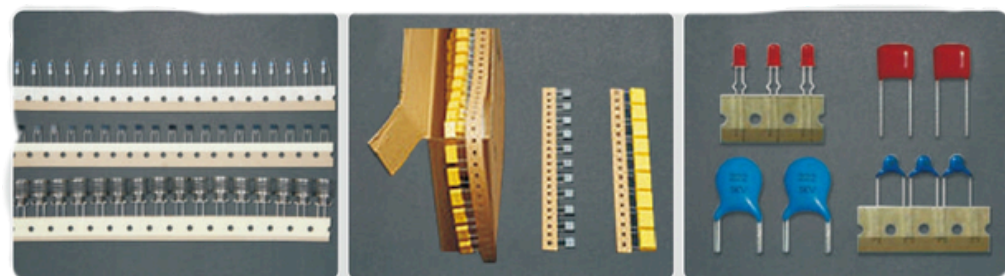
Insertion Component Object	Terminal, maximum size 10mm wide and 22mm high
Insertion speed	0.4 seconds per piece
PCB loading and unloading time	3s
Component packaging method	Jointly, in rolls, in bulk
Dimensions of detachable PCB	Max 380mm × 280mm; Min 50mm × 50mm (can be customized)
Number of insertion heads	Can be set with 1~4 insertion heads to insert terminals of different specifications
Terminal thickness requirements	0.6mm ≤ Terminal ≤ 1.2mm / 0.6mm ≤ Terminal ≤ 1.2mm
PCB board requirements	The edge of the backup plate needs to have positioning holes; The component aperture is 0.5mm larger than the component foot
Insertion direction	Can be set from 0 to 360 degrees in increments of 1 degree
Component body distance	The distance between components is 2mm (high density can be customized)
Component fixation method	Two feet are perpendicular to each other, and the component is bent towards both sides(Optional inner bend)
Control system	Self developed control system, Industrial PC+motion control card for efficient control
Display system	17 inch color LCD display
Material supply method	Bowl feeder, Packaging in rolls/continuous feeder
Motion accuracy	0.001mm/pulse
Motor system	Panasonic servo controller, motor
Programming function	Online visual programming, visual correction, and simple Excel spreadsheet process
Data input	USB interface import, manual input
Communication interface	MES/MES solution can be customized
Using the power supply	Single phase 220V/AC, 50/60HZ, 2KVA
Air pressure	5-6 kg/cm ²
Machine noise	55 dB
Ambient temperature	10°C~30°C
Environmental humidity	30%~70%
Gas consumption	0.63 m ³ /min
Equipment dimensions(LWH)	1750mm 1350mm 1750mm
Equipment weight	1500kg

THIM3-R

Online Radial Insertion Machine



The online T-type radial insertion machine automatically inserts various radial components into printed circuit boards (PCBs) according to the set program for different products, with corner fixing and detection functions, achieving high-speed, high-precision, and highly stable insertion effects.



Product Configuration

Operating System

The operating running in the Windows environment, including production data, management data, device parameters, editing programs, and all I/O signal diagnosis, can be completed on the host, with a user-friendly interface. The application of high-tech technology makes the device simple and efficient, easy to use, and has good operability.

Missing Parts Detection

When there is an insertion error, it is possible to detect missing parts and automatically insert them (when there is an insertion defect, the machine will automatically stop and the pop-up dialog box signal light will be red. It is necessary to manually check whether there are any defective components on the board surface. If there are any defective components that need to be manually removed, select whether the machine needs to insert them, select Y to automatically insert one in its original position, and select N to skip this line).

Visual System

The industrial special HD camera and the self-developed visual correction software constitute a visual system. The deviation between the PCB hole position and the programmed coordinates can be seen, and all coordinates can be quickly and automatically corrected to align with the actual PCB hole position, ensuring the accuracy of the insertion and greatly improving the programming efficiency.

Important Parts Brand

- Adopting the latest bus server from NIDEC SANKYO CORPORATION brand
- The stepper motor adopts an Eastern brand
- The motor of the connection system adopts a Chinese Eastern brand
- High frequency pneumatic components adopt Japanese SMC brand
- Low frequency pneumatic components shall be of Taiwan's Airtac or Taiwan's SNS brands
- The screw adopts the Japanese THK brand
- The camera system adopts Daheng Image with 5 million pixels
- The relay adopts Japanese Omron brand
- The photoelectric sensor adopts Panasonic brand from Japan
- The main components are made of Japanese mold steel material

Device Parameters

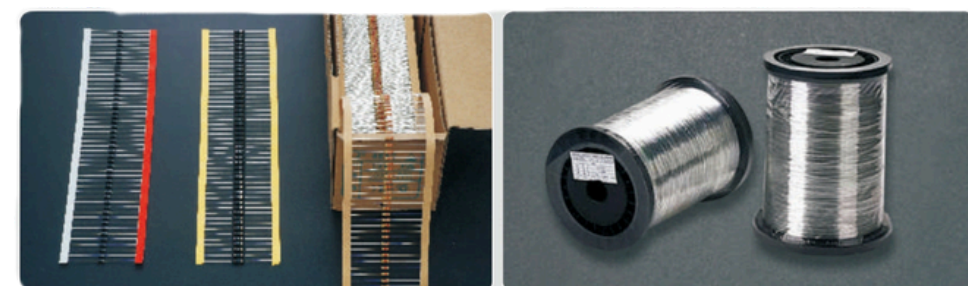
Theoretical speed	26000 points/hour (theoretical speed)
Poor insertion	<1000PPM
Insertion direction	0~360 degrees in 1 degree increments
Pin span	2.5/5.0mm or (2.5/3.5/5.0mm) or (2.5/5.0/7.5/10.0mm) /2.5/5.0mm or (2.5/3.5/5.0mm) or (2.5/5.0/7.5/1.0mm)
Substrate size	Maximum 400mm * 300mm: Minimum 50mm * 50mm
Substrate thickness	0.79-2.36mm
Inlet height	900 ± 20mm
Component specifications	Standard: Maximum height is 23mm, maximum diameter is 13mm
Component type	Standard vertical ribbon packaged electronic components such as capacitors, transistors, and transistors
Cutting foot length	1.5 ± 0.25mm
Insertion angle	15~35 degrees
Using the power supply	Single phase 220V/AC, 50/60HZ, 2KVA
Usage power	1.5KW (energy-saving type)
Using air pressure	0.6MPA
Usage volume	0.3m ³ /min
Operating ambient temperature	5-25 degrees
Machine noise	70 dB
Hole position correction method	Machine Vision System
Driving system	AC servo, AC motor
Software format	Excel document format, USB interface input
Programming mode	Manual mode, offline programming
Control system	Chinese operation interface (Windows system control platform) LCD display
Transmission mode	Automatic
Direction of plate entry	Left to right or right to left (optional)
Component density	High density insertion method
Automatic replenishment	Independently developed automatic replenishment function
Material supply configuration	10/15 stations (optional 20/30 stations)
Overall dimensions	L1850mmD1680mmH1750mm
Equipment weight	Approximately 1500KG
Feeding/cutting feet	High speed solenoid valve, base lifting rotary servo motor, one-way paper cutting, fast speed and low noise

THIM3-A

Online Axial Insertion Machine



The online axial insertion machine automatically inserts various axial components and jumper wire into the printed circuit board (PCB) according to the set program of different products, with corner fixing and detection functions, achieving high-speed, high-precision, and highly stable insertion effects.



Product Configuration

Operating System

The operating running in the Windows environment, including production data, management data, device parameters, editing programs, and all I/O signal diagnosis, can be completed on the host, with a user-friendly interface. The application of high-tech technology makes the device simple and efficient, easy to use, and has good operability.

Visual System

The industrial special HD camera and the self-developed visual correction software constitute a visual system. The deviation between the PCB hole position and the programmed coordinates can be seen, and all coordinates can be quickly and automatically corrected to align with the actual PCB hole position, ensuring the accuracy of the insertion and greatly improving the programming efficiency.

Missing Parts Detection

When there is an insertion error, it is possible to detect missing parts and automatically insert them (when there is an insertion defect, the machine will automatically stop and the pop-up dialog box signal light will be red. It is necessary to manually check whether there are any defective components on the board surface. If there are any defective components that need to be manually removed, select whether the machine needs to insert them, select Y to automatically insert one in its original position, and select N to skip this line).

Important Parts Brand

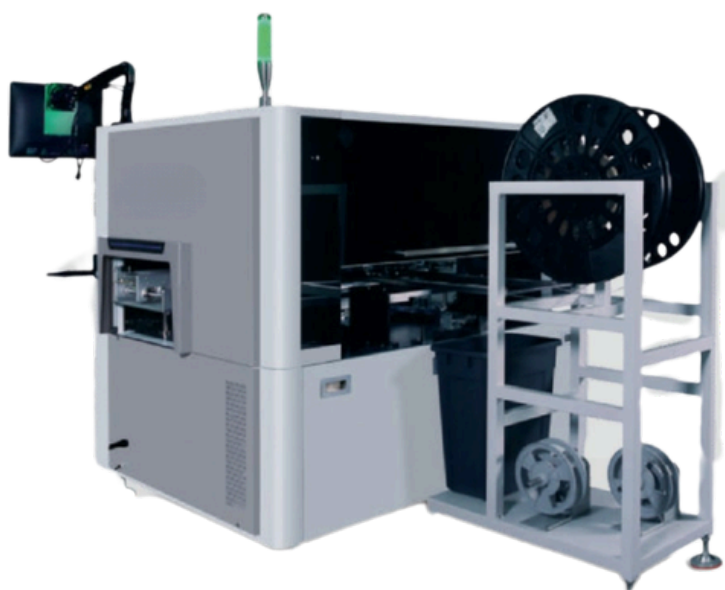
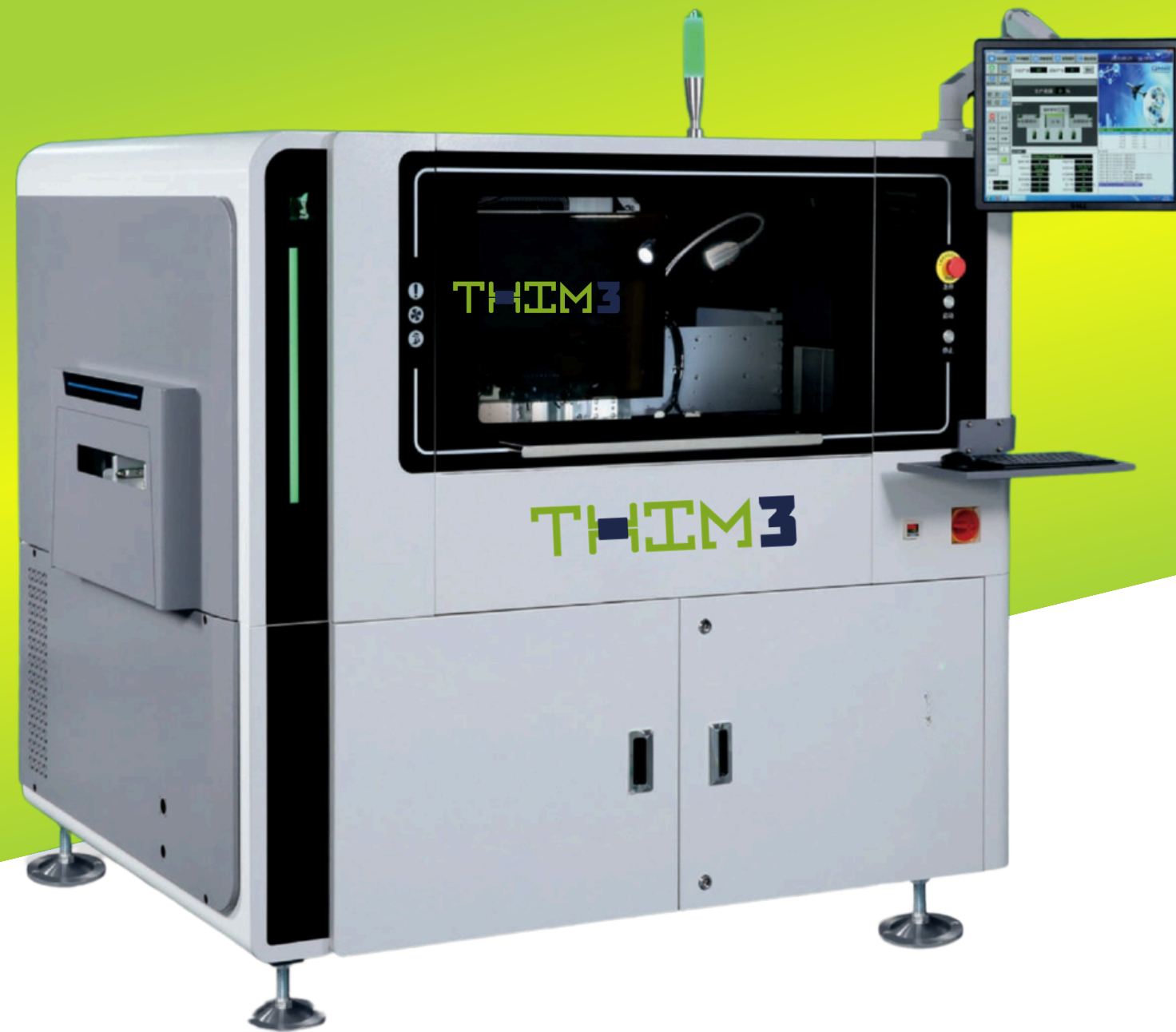
- Adopting the latest bus server from NIDEC SANKYO CORPATION brand
- The stepper motor adopts an Eastern brand
- The connection system motor adopts the Chinese brand of Yutian
- High frequency pneumatic components adopt Japanese SMC brand
- Low frequency pneumatic components shall be of Taiwan's Airtac or Taiwan's SNS brands
- The screw adopts the Japanese THK brand.
- The camera system adopts Daheng Image with 5 million pixels
- The relay adopts Japanese Omron brand
- The photoelectric sensor adopts Panasonic brand from Japan
- The main components are made of Japanese mold steel material

Device Parameters

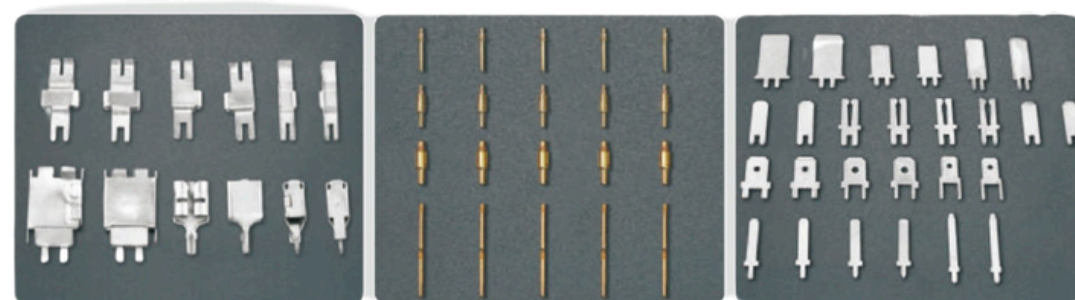
Theoretical speed	26000 (piece)
Poor insertion	<1000PPM
Insertion direction	0~360 degrees in 1 degree increments
Lead span	5.0-20mm, jumper wire 5.0-25mm
Substrate size	Minimum 100mm * 100mm, maximum 420 * 280mm (customizable for larger sizes)
Substrate thickness	0.79-2.36mm
Component specifications	The maximum length of the body is 16mm, the maximum diameter of the body is 5mm, and the pin diameter is 0.6mm
Component type	Horizontal tape packaging materials for resistors, diodes, transistors, fuses, capacitors, etc., with independent conveyor for jumper winding
Component lead clip length	1.2-2.2mm (adjustable)
Component lead bending length	0-35度(adjustable)
Number of material stations	optional 10~80 stations
Machine size (L * W * H)	17002320 1593mm (10站/stations) 17002820 1590mm (20站/stations)
Material station size	5001000 1410mm (10站/stations)
Machine weight	1700KG
Using the power supply	Single phase 220V/AC, 50/60HZ, 2KVA
Usage power	energy-saving type
Using air pressure	0.6-0.8MPA
Usage volume	0.2 m³/min
Operating ambient temperature	5-25 degrees
Machine noise	65 dB
Hole position correction method	Machine vision system, multi-point MARK visual correction
Driving system	AC servo, AC motor
Data input method	USB interface input (Excel document format)
Control system	Chinese operation interface (Windows system control platform)
Component density	1mm spacing between component bodies, and the distance between patch components and holes should not be less than 3mm
Workbench operation mode	XY axis direction
Circuit board conveying method	Fully automatic (left to right or right to left)

THIM3-T

Online Terminal Insertion Machine



The online terminal insertion machine automatically inserts various specifications of terminal components into printed circuit boards (PCBs) according to the set program of different products, with corner fixing and detection functions, achieving high-speed, high-precision, and highly stable insertion effects.



Product Configuration

Operating System

The operating software running in the Windows environment, including production data, management data, device parameters, editing programs, and all I/O signal diagnosis, can be completed on the host, with a user-friendly interface. The application of high-tech technology makes the device simple and efficient, easy to use, and has good operability.

Missing Parts Detection

When inserting missing parts, it can achieve missing part detection and has a re-insertion function.

Important Parts Brand

- ★ The servo motor adopts Panasonic brand from Japan.
- ★ The motor for the board feeding and connecting platform system adopts the Eastern brand.
- ★ Pneumatic components adopt the Japanese SMC brand.
- ★ The screw adopts the Japanese THK brand.
- ★ The camera system adopts the Daheng Image (5 million pixels) brand.
- ★ The relay adopts Omron brand of Japan.
- ★ The photoelectric sensor adopts the Japanese Panasonic brand.
- ★ The main component materials are made of Japanese mold steel.

Visual System

The industrial special HD camera and the self-developed visual correction software constitute a visual system. The deviation between the PCB hole position and the programmed coordinates can be seen, and all coordinates can be quickly and automatically corrected to align with the actual PCB hole position, ensuring the accuracy of the insertion and greatly improving the programming efficiency.

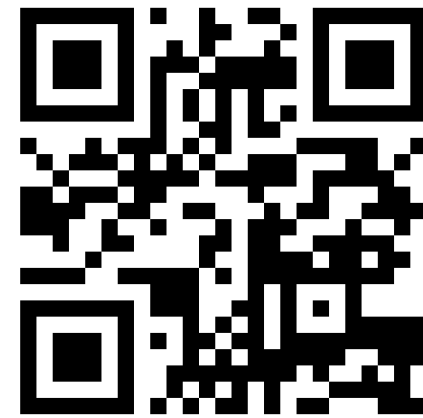
Device Parameters

Insertion Component Object	Various irregular components
Insertion speed	0.24 seconds per piece
PCB Loading and unloading time	3s
Component packaging method	Jointly, in rolls
Dimensions of detachable PCB	Max 380mm * 280mm; Min 50mm * 50mm (can be customized)
Number of insertion heads	Can be set with 1-3 heads and inserting different shaped terminal materials simultaneously
Head structure	Electric cam structure
Feeding system	Electric
In/Out board function	Automatic adjustment of workbench width
Force Measurement Capability	Optional
Vacuum collection	Vacuum recycling of iron filings and waste materials
PCB Board requirements	Pluggable and tight fitting, welding free process materials
Insertion direction	Can be set from 0 to 360 degrees in increments of 1 degree
Component body distance	The distance between components is 2mm (high density can be customized)
Component bending method	Inward clinching / Outward clinching / N
Control system	Self developed control system, Industrial PC + motion control card for efficient control
Display system	17 inch color LCD display
Material supply method	Packaging in rolls / continuous feeder
Motion accuracy	0.001mm / pulse
Sports system	Panasonic servo controller, motor
Programming function	Online visual programming, visual correction, and simple Excel spreadsheet process
Data Input	USB interface import, manual input
Communication Interface	RS-232C / MES solution can be customized
Using the power supply	Single phase 220V/AC, 50/60HZ, 2KVA
Air pressure	5-6 kg/cm ²
Machine noise	≤ 55 dB
Ambient temperature	10°C - 30°C
Environmental humidity	30% - 70%
Gas Consumption	0.63m ³ /min
Equipment dimensions (L*W*H)	1750mm * 1350mm * 1750mm
Equipment weight	1500kg

CONTACT



PLEASE CONTACT US BY
SCANNING OUR WHATSAPP
QR CODE



WANT TO LEARN MORE
ABOUT OUR SOLUTIONS?
VISIT OUR WEBSITE.

LOCATION MÉXICO

Zacatecas 503A, Lampacitos,
Huastecas de Lampacitos,
Reynosa, Tamaulipas. 88780

LOCATION USA

1124 N International blvd,
suite 650, Hidalgo,
Texas. 78557

+1(956) 897-3647

ventas@solucinde.com



PRODUCT CATALOGUE

MANUFACTURER OF FULL LINE INSERTION AUTOMATION

