Tongtai

Laser Drilling | Mechanical Drilling | Routing

Smart Manufacturing & 5G Solution Provider

TLM$_{PCB}$ Smart Manufacturing

Tongtai TLM$_{PCB}$ lets you see problems, solve problems and improve efficiency.
Introduction of industry 4.0 ensures equipment productivity and uninterrupted production.

- Supports the monitoring of Tongtai drilling machine, routing machine and laser drilling machines.
- Alarm Management: records the alarm message and time that allows TLM$_{PCB}$ to analyze the alarms and help customers to locate the problem.
- Broken Tool Management: Broken tool information is collected by TLM$_{PCB}$, the data can be analyzed to improve production efficiency.
- Utilization Management: Summary of machine utilization, idle and operating time of each axis, provides the customers to effectively manage the load of each machine and improve utilization.
- Remote Control: Commands can be given to the machine through remote control, allows service team to troubleshoot effectively.

Keep machine running normally, No defective products.

TLCU-660 CO_2 /UV Combo Laser Processing Machine

- One machine allows users to utilize two laser sources for different applications.
- High productivity, simultaneous processing of dual laser sources for significantly reduced production time.
- Highly rigid machine structure, lightweight mobile platform, establishing stable processing conditions.
- Simplified human-machine interface for easy mass production.
- Hole-by-hole position measurement function - comprehensive hole deviation inspection.
- Target skiving / internal target recognition function - solves the problem of poor multi-layer lamination process.
- Equipped with linear motor XY platform to improve platform control response speed.
- Suitable for vehicle carrier boards, communication infrastructure, and server boards' multilayer drilling process (5G construction).

SDL Series Linear Motor Drilling Machine

- Working area 26"x30" (SDL-120) ; 21"x27"(SDL-620) ; 24"x30"(SDL-620B)
- New lightweight working table design reduces table positioning time and also increases 15~20% drilling efficiency (with Tongtai's test conditions)
- Linear motor driving system allows X/Y axis to achieve 80m/min moving speed and 1.2G of acceleration.
- The Z axis feeding system adopts the high precision design, including the dual linear guide, high rigidity structure and moving parts with inertia optimization, improve production efficiency.
- Equipped with multiple useful devices, including laser tool measurement real-time broken tool detection, high accuracy depth control, peck drilling and quick drilling, slot hole drilling optimization functions.
- Overall machine size reduction allows 10% increase of factory space utilization.
- For IC packaging BGA,Ø0.15mm hole drilling accuracy can achieve AVG+3σ ≦0.03mm.

TCDM-6 Ultra-High Precision Independent Axis Controlled PCB Drilling Machine

- X&Y table feeding system is driven by linear motors, with positioning speed of up to 80m/min.
- Integrated independent motion control for each station with CCD imaging system to compensate each station's workpiece error, Including skew and shrinkage.
- CCD auto focus function.
- Individual depth compensation by CBD device allows the depth control accuracy of up to ±0.03 mm.
- For high speed multilayer communication PCBs with 0.13mm-diameter holes, the back drilling can achieve less than 0.025 mm accuracy.

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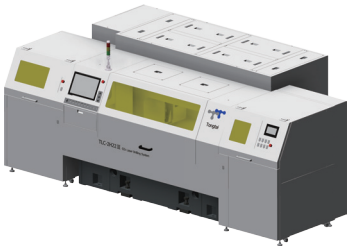
TCRM-6 Ultra-High Precision Individual-Axis Correction Routing Machine

- X&Y table is driven by linear motor feeding system.
- Integrated independent motion control for each station with CCD imaging system to compensate each station's workpiece error, including skew and shrinkage.
- Workpiece thickness measurement using linear gague ensures the depth routing accuracy up to ±0.03 mm.
- Depth control process utilizes vacuum chuck to fix the workpiece firmly, and ensure the process accuracy.

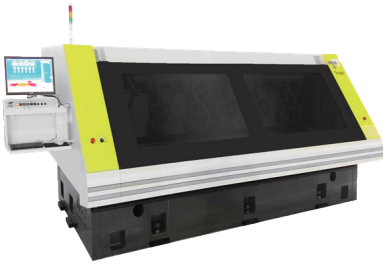
CO_2 Laser Drilling Machine

- Working area— 560x620mm(TLC-2H22III)/ 660x813mm(TLC-2H26)
- Big working area — up to 26"x32",can apply in the processing of 5G big material.
- Processing stability — new laser optical system and digital scanning system greatly improve drilling accuracy and stability, especially for advanced IC packaging processing,(3D IC package).
- Equipment utilization rate increase— the machine can be modified per customer's product sizes, including wafer, frame, and panel types.
- Support multiple types of panels — adapt new type of CO_2 laser, reduce equipment operating cost and increase production efficiency.
- EFFEM loading system module expansion — include SECS/GEM functionality, support Industry 4.0 standard.
- English/Chinese interface — free conversion software for current production programs.

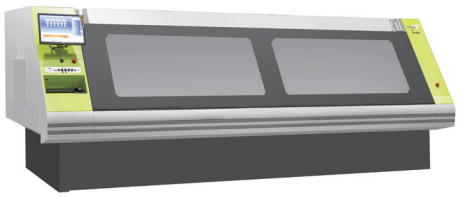


DCRM Depth Control Routing Machine

- Z-axis independent control with board thickness measurement, tool setter for length measurement, and vacuum chuck table can achieve high-accuracy depth control processing, the depth control accuracy achieves ±0.03 mm accuracy.
- Tool setter for length measurement device ensures tool length accuracy, measuring repeat accuracy up to ±0.01 mm.
- CCD image processing system can be utilized for alignment to realize the workpiece compensation function at a particular station.
- Real-time broken bit detection (BBD) device can be adopted, tool diameter measuring range 0.75 mm~3.175 mm.
- Various types of spindles can be used on the machine to meet a variety of processing needs.

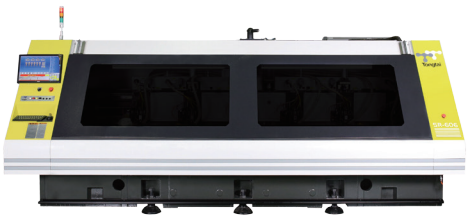


Numerical Control Drilling Machine



- Station Number: 1, 2, 5, 6, 7 stations
- Spindle Speed: 160K, 200K, 250K, 300K rpm
- Max. Tool Capacity: 400 pcs/station
- Suitable for small-hole drilling

Numerical Control Routing Machine



- Station Number: 1, 2, 4, 5, 6 stations
- Spindle Speed: 160K, 200K, 250K, 300K rpm
- High-rigidity machine structure design
- Automatic PIN lifting system

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