

DLCNC PCB Machine Product Catalog

PCB CNC drilling machines routing machines drilling and routing platforms UV LED exposure machines and consumable parts built by Chengdu Jindali Technology Co., Ltd in Chengdu China. Every specification in this catalogue is the published machine specification.



The Company

- ISO-9001 quality certificate obtained in 2012
- National High Tech Enterprise approved by Sichuan provincial authorities
- Patented auto pin insert function for PCB routing machines granted November 2019
- Joint Intellectual Equipment Technology Research and Develop Center with Xihua University
- Three service stations covering South China East China and North China
- Member of HKPCA exhibiting at the Shenzhen international circuit exhibition

Factory base 2000m2 with around 60 employees building more than 200 machines per year.

PCB CNC Drilling Machine

DLCNC has developed four PCB CNC drilling series. They are D1X D2X D3X and D4X. Every series runs on a granite marble base frame for rigidity and vibration absorption so the bed is not inclined to distortion. The series differ in the number of independent Z axes and in the drive technology used on the X Y and Z axes which is what sets the achievable feed speed and hole location accuracy.

D1X PCB Drilling Machine

Model D12 / D14 / D16



One Z axis carrying one or multiple spindles with a maximum of four spindles on XYZ ball screw drive. The entry point into the DLCNC drilling range.

Configuration

- XYZ axis imported AC servo drive system
- Imported high precision ball screw and linear guides
- Air bearing spindles
- Granite marble base frame

Features

- Smart gripper design picks and loads efficiently and precisely
- 66pcs tooling capacity for the spindle to handle
- Automatic tooling length check
- Contacted tooling broken detection greatly reduces reaction time
- Water cooling system with real time monitoring on cooling temperature and water flow to protect the spindles

Specifications

Item	Parameters
Processing Area of Each Axis	580mm×680mm
Spindle Speed	160krpm
Drilling Diameter	0.3- 6.35mm
XY axis max movement speed	28-35m/min
Positioning Accuracy	±0.01mm
Repeatability Accuracy	±0.005mm

Power Supply Requirement	3PH-AC380V+PE 50/60Hz
Compressed Air Requirement	35L/min per axis air pressure 2Kg/cm
Cooling Water Temperature	18 -25
Working Condition Temperature	20 -25
Humidity	50%-75%

D2X PCB Drilling Machine

Model D2X series including D22



Independent Z axis structure on XYZ ball screw drive. The independent Z axis holds the vertical accuracy of the machine and improves the drilling speed.

Configuration

- XYZ axis imported AC servo drive system
- Imported high precision ball screw and linear guides
- Air bearing spindles
- Granite marble base frame

Features

- XYZ independent structure
- Independent Z axis holds the vertical accuracy of the machine and improves the drilling speed
- Quick drill function reduces the waiting time
- QIC function improves the drilling accuracy and speed
- Smart gripper design picks and loads efficiently and precisely
- 220pcs tooling capacity for the spindle to handle
- Automatic tooling length and diameter check
- Contacted tooling broken detection greatly reduces reaction time
- Water cooling system with real time monitoring on cooling temperature and water flow to protect the spindles

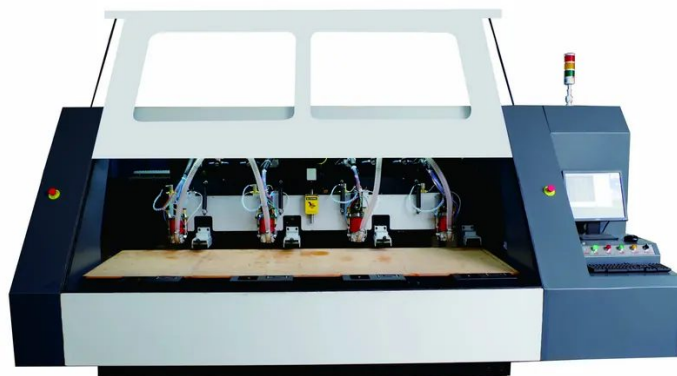
Specifications

Item	Parameters
Processing Area of Each Axis	680mm×680mm
Spindle Speed	160-200krpm

Drilling Diameter	0.15- 6.35mm
XY axis max movement speed	50/min
Z axis max movement speed	30/min
Positioning Accuracy	±0.01mm
Repeatability Accuracy	±0.005mm
Drilling Accuracy	±1mil
Power Supply Requirement	3PH-AC380V+PE 50/60Hz 4KVA
Compressed Air Requirement	35L/min per axis air pressure 2Kg/cm
Cooling Water Temperature	18 -25
Working Condition Temperature	20 -25
Humidity	50%-75%

D3X PCB Drilling Machine

Model D3X series



XYZ axis linear motor drive with high precision linear scale and guide. The fastest configuration in the DLCNC drilling range.

Configuration

- XYZ axis linear motor
- High precision linear scale and guide
- Granite marble base frame

Features

- XYZ independent structure with linear motor to improve the drilling speed
- Quick drill function reduces the waiting time
- QIC function improves the drilling accuracy and speed
- Smart gripper design picks and loads efficiently and precisely
- 220pcs tooling capacity for the spindle to handle
- Automatic tooling length and diameter check
- Contacted tooling broken detection greatly reduces reaction time
- Water cooling system with real time monitoring on cooling temperature and water flow to protect the spindles

Specifications

Item	Parameters
Processing Area of Each Axis	680mm×680mm
Spindle Speed	160-200krpm
Drilling Diameter	0.15- 6.35mm
XY axis max movement speed	80/min
Z axis max movement speed	50/min
Positioning Accuracy	±0.01mm
Repeatability Accuracy	±0.005mm
Drilling Accuracy	±1mil
Power Supply Requirement	3PH-AC380V+PE 50/60Hz 4KVA
Compressed Air Requirement	35L/min per axis air pressure 2Kg/cm
Cooling Water Temperature	18 -25
Working Condition Temperature	20 -25
Humidity	50%-75%

D4X PCB Drilling Machine

Model D42 / D44 / D46



Linear motor drive with high precision linear scale and guide on a granite marble base frame. The D4X is the volume drilling configuration in the DLCNC range.

Configuration

- XYZ axis linear motor
- High precision linear scale and guide
- Granite marble base frame

Features

- XYZ independent structure with linear motor to improve the drilling speed
- Quick drill function reduces the waiting time
- QIC function improves the drilling accuracy and speed

- Smart gripper design picks and loads efficiently and precisely
- 220pcs tooling capacity for the spindle to handle
- Automatic tooling length and diameter check
- Contacted tooling broken detection greatly reduces reaction time
- Water cooling system with real time monitoring on cooling temperature and water flow to protect the spindles

Specifications

Item	Parameters
Processing Area of Each Axis	680mm×680mm
Spindle Speed	160-200krpm
Drilling Diameter	0.15- 6.35mm
XY axis max movement speed	80/min
Z axis max movement speed	30/min
Positioning Accuracy	±0.01mm
Repeatability Accuracy	±0.005mm
Drilling Accuracy	±1mil
Power Supply Requirement	3PH-AC380V+PE 50/60Hz 4KVA
Compressed Air Requirement	35L/min per axis air pressure 2Kg/cm
Cooling Water Temperature	18 -25
Working Condition Temperature	20 -25
Humidity	50%-75%

PCB CNC Routing Machine

PCB routing machines cut the board profile and the slots holes and frames that a press tool cannot produce. Depending on your demand you can choose one spindle or multiple spindles to improve work efficiency. Because routing does not need high speed DLCNC designs one motor for one or multiple spindles which improves the cost effectiveness of the machine. You can also choose an independent Z axis to suit your own situation. DLCNC is a demand oriented corporation and turns customer requirements into real machines.

2 Heads PCB CNC Routing Machine

Model R12 / R12K / R12KT



Two head routing machine for small batch board routing. A bigger size table can be supplied to suit your panel format.

Features

- Customized to the panel format you actually run
- Cost effective two spindle layout
- Steady cutting behaviour on profile and slot work
- Easy going operation interface

Specifications

Item	Parameters
Number of Z axis	1
Number of Spindles	2
Processing Area of Each Axis	680mm×730mm
XYZ axis Movement Area	700mm×825mm×55mm
Drilling Diameter	0.5- 6.35mm
Routing Diameter	0.6- 6.35mm
XY axis max movement speed	28/min
Z axis max movement speed	25/min
Positioning Accuracy	±0.01mm
Repeatability Accuracy	±0.005mm
Routing Accuracy	±0.05mm

Power Supply Requirement	3PH-AC380V+PE 50/60Hz 4KVA
Compressed Air Requirement	0.7-0.8MPa
Cooling Water Temperature	18 -25
Working Condition Temperature	20 -25
Humidity	50%-75%

4 Heads PCB CNC Routing Machine

Model R14 / R14K / R14KT



Four head routing machine independently developed by DLCNC for steady production routing of circuit boards.

Features

- Customized table and tool count
- Cost effective four spindle output
- Steady cut quality across all four stations
- Easy going operation interface

Specifications

Item	Parameters
Number of Z axis	1
Number of Spindles	4
Processing Area of Each Axis	520mm×650mm
XYZ axis Movement Area	700mm×825mm×55mm
Drilling Diameter	0.5- 6.35mm
Routing Diameter	0.6- 6.35mm
XY axis max movement speed	28/min
Z axis max movement speed	25/min
Positioning Accuracy	±0.01mm
Repeatability Accuracy	±0.005mm
Routing Accuracy	±0.05mm

Power Supply Requirement	3PH-AC380V+PE 50/60Hz 4KVA
Compressed Air Requirement	0.7-0.8MPa
Cooling Water Temperature	18 -25
Working Condition Temperature	20 -25
Humidity	50%-75%

6 Heads PCB CNC Routing Machine

Model R16 / R16K



Six head routing machine for volume batch board routing. It is the model chosen when the routing station has to keep pace with the rest of the line.

Features

- Six spindles across three independent Z axes
- Customized table sizes including 630mm by 830mm and 650mm by 830mm builds
- Steady cutting at 35m/min XY feed
- Easy going operation interface

Specifications

Item	Parameters
Number of Z axis	3
Number of Spindles	6
Processing Area of Each Axis	580mm×730mm
Drilling Diameter	0.5- 6.35mm
Routing Diameter	0.6- 6.35mm
XY axis max movement speed	35/min
Positioning Accuracy	±0.01mm
Repeatability Accuracy	±0.005mm
Routing Accuracy	±0.05mm
Power Supply Requirement	3PH-AC380V+PE 50/60Hz 4KVA

Compressed Air Requirement	0.7-0.8MPa
Cooling Water Temperature	18 -25
Working Condition Temperature	20 -25
Humidity	50%-75%

Planer Type PCB Router Machine

Model LMR12A / LMR12B



Planer type customized machine built on a full granite mechanical frame with a DLCNC self owned control system.

Configuration

- XYZ axis imported AC servo
- Imported high precision ball screw and linear square rails
- Full granite mechanical frame
- Self owned control system

Features

- Tool cassette beside the spindle for easy tool pick up
- 66pcs tool capacity for one spindle adjusted per customer requirement
- Tool length checked automatically
- Automatic water recycling cooling system with thermal monitoring to keep the spindles working safely
- Automatic memory of the original point of the programme
- A complete set of displacement restriction protection for hardware and software
- Overheat overload and overcurrent protection system

CNC PCB Drilling Routing Machine

Model DR11 / DR12 / DR14



The PCB CNC drilling and routing machine focuses on offering a high precision drilling and routing choice on one platform. This model is equipped with a CCD camera or depth control function.

Features

- Customized build
- High precision drilling and routing on one platform
- CCD camera option
- Depth control option

UV LED Exposure Machine

The DLCNC UV LED double side exposure machine is designed for drying solder mask PCB. The machine can process the mass production of various kinds of different colour ink including white green blue and black. It is equipped with a PLC control system and a touch screen with an easy going interface. The LED lamps are imported from America and are power saving with a long service life covered by a three year warranty.

UV LED Exposure Machine for PCB

Model E1200D / E760D / E1500D



Energy saving LED cold light source double layer semi automatic UV LED exposure machine for PCB.

Features

- More lamps ensure complete exposure
- Air condition cooling system reduces the cooling time

Specifications

Item	Parameters
Thickness of PCB	0.075-3.2mm
Line Resolution	50 μ m
Exposure Frame	Double frame
Exposure Mode	Double mode
Optical glass	Mylar/glass or glass/glass
Type of Light Source	UV-LED light
Energy Uniformity	> 92%
Cooling Mode	Air cooling
Computer + PLC	Touch screen + Delta PLC
Power Supply	AC 220V 20A 3-phase 4-wire
Environment Temperature	20 $^{\circ}$ ± 3 $^{\circ}$ C
Environment Humidity	55% ± 5%

Spare Parts and Consumables

DLCNC fully supports customers for spare part sourcing and supply on the machine. Consumables and mechanical spares are supplied in all the diameters and specifications used on DLCNC drilling and routing machines and on comparable equipment already installed in the plant.

PCB Drill Bits Milling Cutters and Consumable Parts

Model All diameters and specifications



DLCNC fully supports customers for spare part sourcing and supply on the machine.

Features

- PCB drill bit with all diameters and specifications
- PCB milling cutter with all diameters and specifications
- Collets
- Ball screw brand THK Hiwin and equivalent
- Guide rail with slide block brand THK Hiwin and equivalent
- Inverters brand Delta and equivalent
- Spindles brand Westwind and domestic
- Bearings collets armature and disc spring
- PLC card

Contact

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