

ZS-400 High-speed four-axis vision curved pcb cutting machine

ZS-400



I . Configuration:

Hardware	
Principal axis	Xingchen spindle and quadrangle inverter series
CCD	Daxiang 1200TVL series industrial camera
Lens	CCTVLENS EX2C
Lead screw	Taiwan TBI grinding precision ball screw
Rail	Taiwan TBI linear widened guide rail
Servo motor	FUJI Electric ALPHA5 series
I/O control card	ADT PCI-850
Motion control card	ADT PCI-850
Adapter card	ADT type
Industrial control host	Custom industrial computer case, motherboard (GLGABYTE), solid state drive memory 2GB 2CPU 2.0G
Display	DELL LCD LCD19" display
Number of machine axes	X axis, Y1 axis, Y2 axis, Z axis
Software (Software)	
Control system	Windows 7 Professional(32-bit)
Operating interface	Chinese Windows 7
Programming	On-line mode
Visual system	Pixel computing high precision CCD visual positioning correction System (self-developed)
Control software	F 1.0.2 beta version

II . Machine performance indicators

Overall	
Equipment size	1260mm x 1260mm x 1420mm
Weight	700KG
Foot height adjustable	60~110mm

Manipulator	
Control motor type	FUJI Electric ALPHA5 series
Control motor repetition accuracy	0.001mm
Maximum travel range	800mm*450mm*60mm
Work station	
How the board is positioned	Fixture positioning, universal thimble positioning, visual correction
Access plate system	Left and right table FUJI servo + screw guide drive
Maximum size of single table divider	350mm*400mm
Maximum plate thickness	5mm
Fixturing	
Rigid fixture	Custom made anti-static fixture
Upper clamp	The hole positioning method is adopted
Spindle Motor	
Power	150W
Maximum speed	40000rpm/min
Cooling mode	Natural cooling system
Change tool mode	Special wrench replacement
Routing capability	
Maximum cutting speed	100mm/s
Maximum moving speed	1000mm/s
Cutting repetition accuracy	0.025mm
Vacuum System	
Filter system power	2.2KW 380V motor
Filter	Vertical type
Utilities	
Power	4.5KW AC380V
Air supply	4-6KG/cm2
Programming (程序)	
Programming mode	On-line programming

Editing function	Straight line, oblique line, circle solitary, circle
Program store	Select the storage location as required
Configuration programming CCD	Daxiang 1200TVL series high pixel color CCD
Tool diameter compensation	Auto
Filter setting	Automatically vibrate the cleaning filter bag and collect the dust into the dust collection box after each processing shutdown
Operation Monitors	
Tricolour light	High-brightness three-color lights monitor the various working states of the machine
Tool quality detection	Tool life service cumulative distance detection
Motor overheat detection	With overheat, overload, low voltage and other protection functions
Servo overload detection	With overload, line is normal, low voltage and other protection functions
Tool life tracking	Tool life accumulated distance detection
Panel counting	Sub-board counting, sub-board time counting method.
Machine error record	Software automatic machine alarm prompts
Accuracy	
Shaft position accuracy	$\pm 0.01\text{mm}$
Splitter accuracy	$\pm 0.025\text{mm}$
Machine repetition accuracy	$\pm 0.01\text{mm}$
Repeated cutting accuracy	$\pm 0.025\text{mm}$
Safety	
Working range protector	Adopt the four-sided sealing protection mode
Emergency stop button	Left and right work table