

Quality and Service You Can Depend On



The IDCT SZ-1000 represents the state of the art in high speed mechanical via formation.

FEATURES

■ 275,000 RPM Drilling

Higher RPM means faster drill infeed and faster retract, thus less dwell time in the hole. This helps to prevent thermal degradation of the drill, resulting in a much longer life. Faster infeed and retract, combined with faster X-Y positioning, increase production rate and overall hole wall quality.

■ Graphical User Interface

The SZ-1000 features an easy to use graphical user interface with touchscreen input. Ease of operator interface coupled with SPC data collection makes this operating system one of the friendliest and most useful on the market.

OPTIONS

■ Vision Drilling

Using high-end optical components and sophisticated fiducial-finding software, IDCT's optional vision package can acquire features down to 0.002" diameter; automatically calculates alignment, scale factors, and creates new drilling coordinates to drill the hole with one mil accuracy. Multiple fiducials may be referenced to compensate for skew, rotation, stretch and other distortions in the board material.

■ Tool Diameter Verification

Advanced laser technology verifies the diameter and length of every tool after tool change.

IDCT
MICRODRILLING
SYSTEMS



Be sure to visit our website at www.pcbdriller.com for more information



SZ-1000
MICRODRILLING SYSTEM

SZ-1000 MICRODRILLING SYSTEM

Physical

Number of Stations.....	1
Drilling Area of Station.....	24"x30"
Machine Dimensions.....	76"x61"x70"
Weight (approximate).....	7,500 lbs.

XY Positioning Specifications

Type of Construction.....	split axis
Position Speed.....	2,200 in/min each axis
Position Accuracy.....	+/-0.0002"
Software Correctable To.....	+/-0.0001"
Positioning Repeatability.....	+/-0.0001"
Positioning Drive System.....	2 Brushless DC Linear Servo Motors
Positioning Feedback.....	2 Incremental Glass Scales
Feedback Resolution.....	0.00002"

Spindle Description

The SZ-1000 utilizes revolutionary drilling/routing assemblies that incorporate two axes of motion. Within each spindle, drill bit rotation (RPM) and vertical motion (Z-axis) are controlled by moving only the drill bit. The IDCT spindle is a proprietary device.

Speed.....	10,000 to 275,000 RPM
Hits Per Minute.....	up to 350
Drill Infeed Rate.....	Programmable Up To 1,000"/min.
Drill Retract Rate.....	Up To 1,000"/min.
Drilled Hole Accuracy.....	+/-0.0007"
Drilled Hole Depth Accuracy.....	+/-0.001"
Z-axis Stroke.....	Up To 0.300"
Drill Size Capacity.....	0.002 to 0.125"
(holes larger than 0.125 are automatically routed)	
Maximum Router Bit Capacity.....	0.093"
Drill / Router Bit Shank Size: Diameter.....	Standard 0.1250"
Length.....	Standard 1.50"
RINGLESS DRILL BITS	
Average Stroke Reversal Time.....	3 msec.
Spindle Motor.....	Brushless DC
Spindle Static Runout.....	<+/-0.0001"
Spindle Collet/Chuck.....	None required
Spindle Positioning Feedback.....	Incremental Encoder
Feedback Resolution.....	0.000035"

Pressure Foot

Integral part of spindle assembly	
Clamping pressure.....	0 to 40 pounds
Activation.....	Brushless DC linear motor
Feedback.....	Incremental Encoder
Pressure Foot Stroke (maximum).....	1.0"
Pressure Foot Clearance Adjustment.....	Programmable
Spindle Cooling.....	2.2 SCFM (@10PSI)
NO HEAT EXCHANGER REQUIRED	
Chip Removal.....	Vacuum system through pressure foot orifice

Automatic Tool Changer Assembly

Number of Tool Bits.....	200
Number of Tool Sizes.....	40
Average Tool Change Time.....	<12 sec.
Broken Tool Bit Detection.....	Electrical

User Interface Specifications

Computer.....	IBM Compatible PC
Processor.....	Intel Pentium 700 MHz (min)
Memory.....	128MB
Storage.....	2.0 GB Hard Disk (min)
Network.....	Network Card
Video.....	15" Touch Screen VGA Monitor
Misc.....	Bit 3 VME Interface Board
Operating System.....	Microsoft Windows NT 4.0
Part Program Input.....	Industry Standard Formats
Uninterruptable Power Supply	

Servo Controller Specifications

Processor.....	60 Mhz Motorola 56002 DSP
Servo Rate.....	4 KHz (<55 msec per axis)
Motion Profile.....	Linear and S-curve Acceleration
Execution Rate.....	1000 Blocks Per Second
Memory:	
ROM.....	128K Words
RAM.....	384K, 8K Dual Ported
Parameter Storage.....	2K Non-volatile

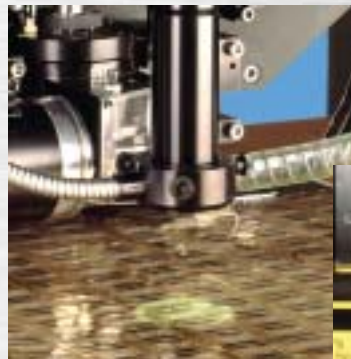
Operational Requirements

Electrical:	
Voltage.....	208/230 Volts
Frequency.....	60 Cycles
Phase.....	Three Phase
Power Consumption.....	1KVA, Max., Intermittent
Voltage Regulation.....	Max. +/- 10%
Pneumatic:	
Pressure.....	90 PSI Min.
Flow Rate.....	15 SCFM
Air Quality.....	Clean and Dry
Vacuum Requirement: Min. Lift Pressure.....	30" H ₂ O

Ambient Operating Conditions

Temperature.....	72°F +/- 2°F
Humidity.....	<95%

All Specifications Are Subject To Change



Sales and Service Worldwide

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