



## LPKF ProtoMat® S62

A new generation of  
advanced circuit board plotters

- Superior milling speed, resolution and accuracy
- Automatic tool change for unmatched ease-of-use
- Vacuum table and fiducial recognition available

# The new standard for in-house prototyping

## LPKF ProtoMat® S62

The LPKF ProtoMat S62 introduces a new era of state-of-the-art circuit board plotters for in-house rapid PCB prototyping. This compact high-speed plotter provides unequaled precision and performance for quickly and easily milling and drilling circuit board prototypes in minutes. In-house PCB prototyping gets your designs to market faster by eliminating production delays and high costs that can occur with outside vendors. It also makes your design data secure by keeping it in-house and under your control.

### Precision and speed

The ProtoMat S62 delivers unmatched precision with system resolution as fine as 0.01 mils (0.25  $\mu\text{m}$ ). Each system is carefully calibrated at the factory for unsurpassed overall accuracy. As a result, the plotter can mill and drill all types of PCBs with extremely fine traces, including RF and microwave boards. Its milling head travel speed of 6" (150 mm) per second and high-performance 62,000 RPM spindle motor makes it a premiere high-speed performer for producing quality PCBs in-house.

### Convenience and easy handling

Rich features and simple, automatic operation makes the ProtoMat S62 easy to use. No external compressed air is needed, so just plug it in and you'll be completing your boards in minutes. A standard USB cable easily connects the plotter to a computer.

### Automatic tool change

Its advanced features include a 10-position tool changer that automatically replaces milling and drilling tools while the board is being produced, so manual setup time is minimized and the plotter can be operated unattended.

### Integrated head lighting

Shadow-free illumination of the milling area from integrated head lighting makes direct quality control faster and easier.

### Silence and security

An integrated acoustic cabinet reduces system sounds and is a protective cover, so the plotter can safely operate in any work environment.

### CAM software included

Each plotter comes with comprehensive LPKF CircuitCAM and BoardMaster software for importing PCB data from any CAD package and for controlling the operation of the plotter. This easy-to-use software is developed by LPKF, and it processes the same data that would be sent to a PCB manufacturer. It's extremely easy to learn and use, so you'll be setting up your boards in no time.

### Three-dimensional operation

With its unique motorized Z-axis drive, the ProtoMat S62 is ideal for machining instrument front panels and housings, as well as pockets in microwave boards. It can also mill around mounted PCB components, simplifying board rework and depanelization jobs.



# Optional Accessories

Each can be conveniently retrofitted on-site!



## Integrated vacuum table top

Holds the board material securely in place and maintains perfect flatness. It eliminates any misalignment errors that can occur if the material shifts during the milling process.



## Fiducial recognition camera system

Automates front-to-back and multilayer alignment by locating fiducials embedded in the board layers. The PCB can be remounted or flipped and it will always be properly aligned, eliminating user interaction and simplifying the board alignment process. It also automatically inspects the status of the drill bits.

*(Camera requires a separate USB 2.0 port)*



# Applications



*Single-sided, double-sided and multilayer mixed-signal boards*



*RF and microwave boards*



*Housings*



*Front panels and depaneling holders*

<b>Specifications LPKF ProtoMat® S62</b>	
Minimum track width	4 mils (0.1 mm)
Minimum isolation width	4 mils (0.1 mm)
Minimum drill hole diameter	6 mils (0.15 mm)
Working area (X/Y/Z)	9" x 12" x 1.5" (229 mm x 305 mm x 38 mm)
Resolution	0.01 mil (0.25 µm)
Milling motor rpm	62,000 rpm
Tool change	automatic, 10 positions
Tool collet	1/8"
Drilling speed	150 holes per minute
Travel speed (max)	6" per second (150 mm per second)
X/Y positioning system	3-phase stepper motors
Z drive	stepper motor
Dimensions (W/H/D)	25.6" x 21" x 31.5" (650 mm x 510 mm x 800 mm)
Weight	121 lb (55 kg)
Power supply	120/240 V, 50-60 Hz/200 VA
USB computer connection requirement	USB 1.1 port or better
Optional fiducial camera USB computer connection requirement	Additional USB 2.0 port
Subject to technical modifications.	

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