





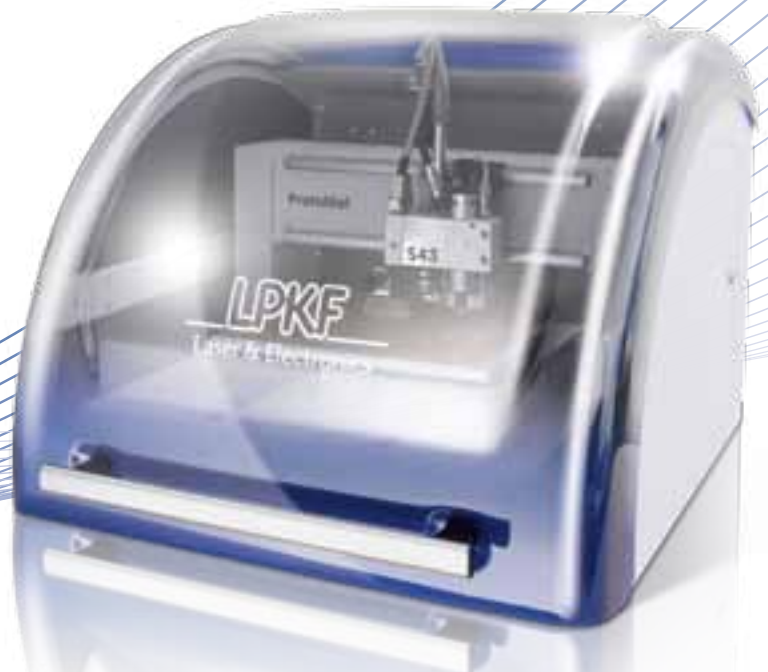
# LPKF ProtoMat S43

## Entry-Level with Upgrade Options

**Product:** LPKF ProtoMat S43  
**Part no.:** 127686  
**Ordering info:** See front sleeve

### Applications

-  Milling/drilling 1- & 2-sided PCBs
-  Contour routing of circuit boards
-  Front panels/sign engraving
-  SMD stencil cutting



**Available upgrade kits:**

- ProtoMat S43 to S63
- ProtoMat S43 to S103

**For more information about upgrades please see page 105 in the TechInfo.**

The LPKF ProtoMat S43 is the entry-level model in the ProtoMat S-series. It can be upgraded in two steps to have the same features as the top of the line model, the S103.

The precision and capacity of the compact system ensure quick and easy PCB prototype production in mere hours – easily handling multiple cycles in one day.

The S43 is the perfect entry into the world of professional Rapid PCB Prototyping, especially for occasional use or limited budgets.

- 40,000 rpm spindle speed, highest resolution (0.5  $\mu\text{m}$ ) and repeatability ( $\pm 0.001$  mm)
- Acoustic cabinet for quiet operation
- Easy handling with quick-release tool holder
- Many options available – upgradeable to S63 or S103

## Features

### 40,000 rpm milling spindle

At a maximum travel speed of 150 mm per second (approx. 6"/s) and a spindle speed of 40,000 rpm the S43 is the perfect entry level model for high-quality circuit board prototypes produced in-house.



### Upgradeable to ProtoMat S63 and S103

Upgrading to the S63 includes a milling head with 60,000 rpm spindle, camera, 15-position tool changer, automatic milling width adjustment, dispenser and automatic width adjustment.

Upgrading to the S103 includes a milling head with 100,000 rpm spindle, pneumatic non-contact working depth limiter, 15-position tool changer, automatic milling width adjustment, camera, dispenser and vacuum table.

### Options & accessories

- Vacuum table (Part no. 127688)
- Optical fiducial recognition (Part no. 127689)
- Dust extraction (Part no. 114647)
- Status light (Part no. 120128)

Other options and tools start on page 19.

## Applications



### Single- and double-sided PCBs on different materials

The main area of application for the LPKF ProtoMat S43 is fabricating high-quality professional FR4-based PCB prototypes. The included software reliably and accurately converts the original CAD data to PCB production data.

Technical Specifications: LPKF ProtoMat S43	
Part no.	127686
Max. material size and layout area (X/Y/Z)	229 mm x 305 mm x 27 mm (9" x 12" x 1")
Resolution (X/Y)	0.5 µm (0.02 mil)
Repeatability	± 0.001 mm (± 0.4 mil)
Precision of front-to-back alignment	± 0.02 mm (± 0.8 mil)
Milling spindle	Max. 40,000 rpm, software controlled
Tool change	Manual, quick-release holder
Milling width adjustment	Manual
Tool holder	3.175 mm (1/8")
Drilling speed	100 strokes/min
Travel speed (X/Y)	Max. 150 mm/s (6"/s)
X/Y-drive	3-phase stepper motor
Z-drive	2-phase stepper motor
Dimensions (W x H x D)	670 mm x 540 mm x 840 mm (26.4" x 21.3" x 33")
Weight	55 kg (121 lbs)
Operating conditions	
Power supply	90 – 240 V, 50 – 60 Hz, 450 W
Required accessories	Exhaust, please refer to page 21

Technical specifications subject to change.