



- Advanced functionality
- Quality components
- High-quality construction
- Perfectly matched

## Options & Accessories for LPKF Circuit Board Plotters

The capabilities of LPKF circuit board plotters and other LPKF systems can be upgraded with accessories and options. High-quality materials and precise machining ensure high reliability and a long life for all upgrades. The accessories can quickly and easily be installed on-site. The ProtoMat S-series circuit board plotters can be upgraded to turn an entry-level system into a high-end model.

**i** Ordering info: See front sleeve.

# Options

## Upgrade kits

The LPKF ProtoMat S43 and S63 circuit board plotters can be upgraded to an S103 high-end system at any time. All that's needed is the corresponding upgrade kit.

Upgrade	Part no.	ProtoMat S43/S63
<b>Upgrade ProtoMat S43 to S63</b>	127700	Milling head S63 with tool change bar (automatic tool change and milling width adjustment), camera, dispenser with pneumatic components and software upgrade LPKF CircuitPro Full
<b>Upgrade ProtoMat S43 to S103</b>	127701	Milling head S103 with pneumatic non-contact working depth limiter, tool change bar (automatic tool change and milling width adjustment), camera, dispenser with pneumatic components, vacuum table and software LPKF CircuitPro Full
<b>Upgrade ProtoMat S63 to S103</b>	127702	Milling head S103 with pneumatic non-contact working depth limiter (milling head S103 without camera, already installed on S63) and vacuum table.



## Optical fiducial recognition with drill bit inspection

Referencing a PCB with optical fiducial recognition is more precise and significantly faster than front-to-back alignment – making it virtually indispensable for structuring multilayer boards. The LPKF software supported camera automatically locates fiducials, then determines the material position. The camera system further provides for automatic bit status inspection and direct measuring function. The camera on the S-series merely requires a computer with a USB 2.0 port, the ProtoMat X60 requires a Windows computer with an empty PCI slot.

Optical fiducial recognition	ProtoMat S43	ProtoMat X60
<b>Part no.</b>	1277689	114487



## Vacuum table

The vacuum table secures the work piece tightly across the entire work surface and prevents the substrate from buckling. The use of a vacuum table allows flexible and rigid-flex PCBs to be machined.

Vacuum table	ProtoMat S43/S63
<b>Part no.</b>	127688



# Accessories

## Dust extraction

The LPKF dust extraction with absolute filter ensures a clean workspace – no fibers, no shavings, no fine dust. The built-in AutoSwitch automatically turns the vacuum on and off. This ensures safety and an extended vacuum life while eliminating unnecessary noise when the machine is not in operation.

Dust extraction	ProtoMats	ProtoLaser S and U
<b>Part no.</b>	114647	124391
<b>Vacuum pressure</b>	Max. 22,500 Pascal	Max. 21,000 Pascal
<b>Air flow rate</b>	241 m <sup>3</sup> /hour (142 cfm)	320 m <sup>3</sup> /hour (188 cfm)
<b>Power consumption</b>	800 W (230 V) or 960 W (120 V)	1.6 kW (230 V, 50/60 Hz)
<b>Dimensions (W x H x D)</b>	250 mm x 300 mm x 350 mm (10" x 12" x 14")	365 mm x 740 mm x 501 mm (14" x 29" x 20")
<b>Acoustic pressure</b>	50 dB(A)	Approx. 65 dB(A)
<b>Absolute filter</b>	HEPA filter	HEPA filter
<b>Remote control</b>	Software controlled	Software controlled

All specifications are subject to technical modifications.



## Measuring microscope

The LPKF measuring microscope with its 60x magnification and metric scale facilitates setting the isolation widths and quality control.

Measuring microscope	
<b>Part no.</b>	113495



## Precision ring setter

The LPKF precision ring setter, consisting of an adjustment unit with measuring microscope, accurately places distance rings on the tool. The tools can then be used with ease without the need for readjustments.

Precision ring setter	ProtoMat S43/E33
<b>Part no.</b>	116698



## Brush head (for ProtoMat X60 only)

The brush head, used primarily for reworking populated PCBs, maintains low-pressure for dust extraction. The workspace is kept dust-free without damaging the placed components.

Brush head	ProtoMat X60
<b>Part no.</b>	113815 (plus 109688 [micrometer screw])



## Accessories (continued)

### Compressor

The LPKF compressors ensure a constant, reliable supply of compressed air for LPKF systems using compressed air supply.

Compressor	Small compressor	Large compressor	ProtoLaser S
<b>Part no.</b>	101092	104863	122805
<b>Tank size</b>	6 liter	50 liter	60 liter
<b>Max. pressure</b>	6 bar (116 psi)	10 bar (145 psi)	10 bar (145 psi)
<b>Output</b>	33 l/min (1.1 cfm)	165 l/min (5.8 cfm)	240 l/min (8.5 cfm)
<b>Outside dims. (W x H x D)</b>	360 x 430 x 360 mm (14.2" x 16.9" x 14.2")	1000 x 770 x 390 mm (39.4" x 30.3" x 15.4")	970 x 770 x 480 mm (38" x 30" x 19")
<b>Weight</b>	21 kg (46.2 lbs)	56 kg (123.2 lbs)	90 kg (198.4 lbs)
<b>Acoustic noise at a distance of 4 m (157.5")</b>	52 dB(A)	68 dB(A)	83 dB(A)
<b>Recommended for</b>	LPKF ProtoPlace S	LPKF ProtoMat S103 LPKF ProtoMat H100 LPKF ProtoMat X60	LPKF ProtoLaser S

All specifications are subject to technical modifications.



### Status light

The LPKF StatusLight indicates the LPKF ProtoMat operating status. This allows a constant monitoring of the ProtoMat in large production halls without a need for operating personnel to be in close proximity.

Status light	ProtoMat S-Series	ProtoMat H100
<b>Part no.</b>	120128	119036



### Adjustment tool (ProtoLaser S & U)

This precision tool set is helpful for adjusting the work bench and laser.

Adjustment tool	ProtoLaser S & U
<b>Part no.</b>	118005

