

LPKF

Newsletter

LPKF[®]
Laser & Electronics



Dear valued customer,

We are coming to the end of the 1st Quarter of 2009 and all I can wonder is “where did the time go”? This quarter flew by faster than I could say “Leiterplatten Kopier Fräsen”(LPKF) translated, “circuit board copy milling.”

I would like to thank all of you who sent your ProtoMat[®] in for our vacation promotion. The maintenance special was very well received. Many of our customers were excited to finally maintenance their machines and/or get their machines back to their original quality.

This quarter's newsletter features our product guide for the production of multilayer boards as not all of you are aware of our multilayer capabilities. We are also introducing a few new products to our stencil, solder, and tooling lines. As always, we have included our maintenance corner and helpful hints as well. Enjoy!

Timoree Leggett

TIMOREE LEGGETT—Customer Service/Logistics Manager

Multilayer Technology from LPKF

LPKF offers a range of products to work along side our ProtoMat milling machines in order for you to create multilayer boards in house.

MultiPress S—Lamination Press

The LPKF MultiPress S is a compact bench-top multilayer press used to produce production-quality multilayer prototype boards. With a shorter lamination time of approximately ninety minutes, the system offers faster turnaround times than ever before. Up to nine different heating/pressing/cooling profiles can be programmed into the MultiPress S. Max material size (gross) is 9" x 12", with a max size of PCB artwork of 8.2" x 11.2". MultiPress S is available with either a manual or automatic hydraulic pump.



MiniContac RS/Contac RS Electro-Plating System

The LPKF Contac RS and MiniContac RS systems are easy to use electroplating systems designed for the use in a prototyping environment. The MiniContac RS is a table top system for PCBs up to 9" x 13" in size, whereas the Contac RS is a floor model that can plate vias in larger boards up to 12" x 18" in size. Both systems feature state-of-the-art reverse pulse plating, producing more

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NEW Contour Router— 0.5 mm (0.020")

We aim to make our tooling line as favorable and complete as possible. Due to popular demand, we have added a 20 mil/0.5mm contour router to our product line. With the same quality as our other tools, this small router enables cutting small slots within your design as well as depaneling boards which are fairly close together or step and repeat boards in CircuitCAM allowing for more board real-estate. The 20 mil router also enables smaller inside corner radii when inside corner dimensions are more critical.

This router is available with or without rings.

p/n 100878: 0.5 mm Down Draft Contour Router:

<http://www.lpkfusa.com/Store/ProductDetail.asp?ProductID=323>

p/n 100878-5: 0.5 mm Down Draft Contour Router w/yellow distance rings:

<http://www.lpkfusa.com/Store/ProductDetail.asp?ProductID=324>



LPKF Tools

Productivity and cost are some of the biggest concerns today. With this in mind LPKF has maintained high quality tooling with a competitive price tag. We offer a wide range, all of which are manufactured in the United States from solid Mitsubishi carbide blanks utilizing ultra fine grained carbide with 8% cobalt as a binder. Studies prove that carbide tools can last up to 20 times longer than HSS (High-speed steel) tooling. Solid carbide is an important feature as any coating on a tool will wear quickly.

We do not re-sharpen or re-grind our tools as this will never match the performance of a new tool. This is due to the difficulty in matching the cutting edge shape during the re-grinding process. Tools with inaccurate edge geometries often chip more easily, require more torque to drill/cut, or create more heat, thereby shortening the tool's life.

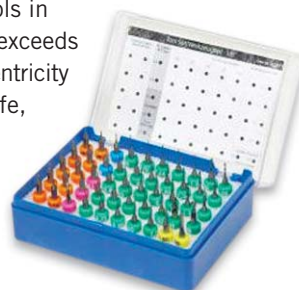
Our tools are manufactured using some of the tightest controls in the industry. The processes used in manufacturing our tools exceeds industry standards in controlling tight diameter tolerances, concentricity and Tool Indicator Runout (TIR). This results in longer tool life, greater accuracy and all-around superior performance than cutting tools offered by our competition. All of our cutting tools are subjected to extensive in-house performance testing and usually go through numerous revisions before we put our name on them.

LPKF tools are specifically manufactured for our machines as well. You will notice the overall length of the milling tools differs from the length of milling tools from any other suppliers. This ensures consistent cutting depth without dramatic depth adjustment when switching between drilling/cutting tools and milling tools. This can also be said for our ring position.

Tools are offered in drill bits, end mills, and contour routers of various sizes making it easy to find the best tool for your needs*.

All aftermarket tools and accessories are available for purchase on our secure online store: www.lpkfusa.com/store

* If unable to find the size tool you desire our aftermarket department can work with you in order to obtain it.



Ringed tools for s-Series Milling Machines



Tools for your Milling Machine

LPKF Introduces Lead-Free Solder Paste

The SN100C NL900 is a no-clean lead-free solder paste for use with SMT stencils. It is a modified rosin-based paste, which allows a previously unseen level of repeatability and consistency when applying to stencils. The solder paste is currently available for stencil printing down to 16 mils (0.4 mm) and printing up to 100 mm/sec. This is due to a unique rheology, which ensures that the higher shear rate viscosity is relatively low and the thixotropic index is high enough to ensure excellent definition and slump resistance, while maintaining good roll and drop off behavior. With excellent tack performance and printer open time, the paste is ideal for use with most SMT stencils. The paste is available in 30 gram syringes (p/n 220190) for prototyping work, or in 250 gram jars (p/n 220191) for use with stencil printers.



For more information and to purchase, visit our online store: <http://www.lpkfusa.com/Store>

Lubricating Lead Screws and Working Depth Limiter

Cleaning and lubrication of the X and Y axis lead screws helps the machine head to traverse smoothly. Proper lubrication of the screws is an essential component in maintaining your system.

Applying oil to the Z axis guide bars ensures that the machine head travels smoothly up and down. Proper maintenance will also help to extend tool life.

We recommend performing this step of preventive maintenance every 6 months.

Cleaning and lubricating of the working depth limiter allows the operator to adjust the milling tool depth accurately. However, due to the direct exposure of debris from the spindle motor, we recommend cleaning the depth limiter every 3 months, or as needed if it becomes difficult to adjust.

Proper maintenance will help to extend the life of your milling machine and keep it operating to factory specifications.

Please download the maintenance document listed below.

91s, 91s/HS, 91s/VS, 92s, 92s/VS, 93s, C-Series, L-Series and M-Series
(http://www.lpkfusa.com/downloads/support/docs/ht_maintmanual_9xcm.pdf)

95s, 95sII and H100
(http://www.lpkfusa.com/downloads/support/docs/ht_maintmanual_95h100.pdf)

S42, S62 and S100
(http://www.lpkfusa.com/downloads/support/docs/ht_maintmanual_s.pdf)

Visit our online store at www.lpkfusa.com to order the required lubricant for your machine type, or click on this hyperlink.

(<http://www.lpkfusa.com/Store/ProductList.asp?Category=Accessories%20-%20Maintenance>)