

# LPKF Equipment Helps Government Agencies Save Time While Following Environmental Laws



**Challenge:**

**Maintaining Fast Turn-around Times while Adhering to Environmental Regulations**

Government agencies have long relied on in-house prototyping for circuit board design. Producing prototypes in-house allows organizations to turn projects around quickly and maintain confidentiality. Unfortunately, environmental laws limiting the use of hazardous chemicals typically used for etching printed circuit boards (PCBs) have forced many agencies to out-source their prototypes to third party production houses.

For one agency involved in rocket engineering, outsourcing PCB prototypes significantly hampered production schedules, making it difficult to complete new designs in a timely fashion. This led the agency to look for alternative solutions for in-house prototyping that could increase efficiency and create faster turn-around times without violating environmental regulations.

**Solution:**

**LPKF Mechanical Milling Prototyping Equipment**

In order to maintain compliance with environmental laws, the agency turned to LPKF® mechanical milling equipment to produce in-house PCB prototypes for rocket engineering. LPKF's state-of-the art PCB milling technology produces fully functional board prototypes in just a few hours, without the aid of hazardous chemicals. Laws regulating the use of etching chemicals have resulted in an increased use of mechanical milling systems over the last few years. Because of their complete lack of toxic chemicals, LPKF's PCB plotting systems have become a popular alternative to outsourcing.

**Results:**

**Environmentally Friendly Success for Project Timelines**

The agency now uses LPKF equipment to speed project turn-around times in many areas of rocket engineering, including pre-production testing and refining of circuit designs.

*As one of the agency's technicians states,*

*"The type of rocket we build includes multiple sub-systems. I think I have used our LPKF machine to support research and development or to furnish ground support equipment for just about every system on the rocket."*

LPKF equipment allows technicians to produce board prototypes quickly and efficiently, eliminating time spent waiting for shipments of outsourced boards to arrive. Since LPKF's equipment is completely chemical-free, the agency is able to keep their prototyping of circuit boards in-house, without having to worry about adhering to strict environmental laws.

Most importantly, according to agency employees, the time saved by using LPKF equipment has translated into considerable cost savings for the agency.



LPKF ProtoMat S62 milling head

**LPKF**

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LPKF Laser & Electronics AG manufactures machines and laser systems used in electronics fabrication, the automotive sector, and the production of solar cells. Around 20 percent of the workforce is engaged in research and development.