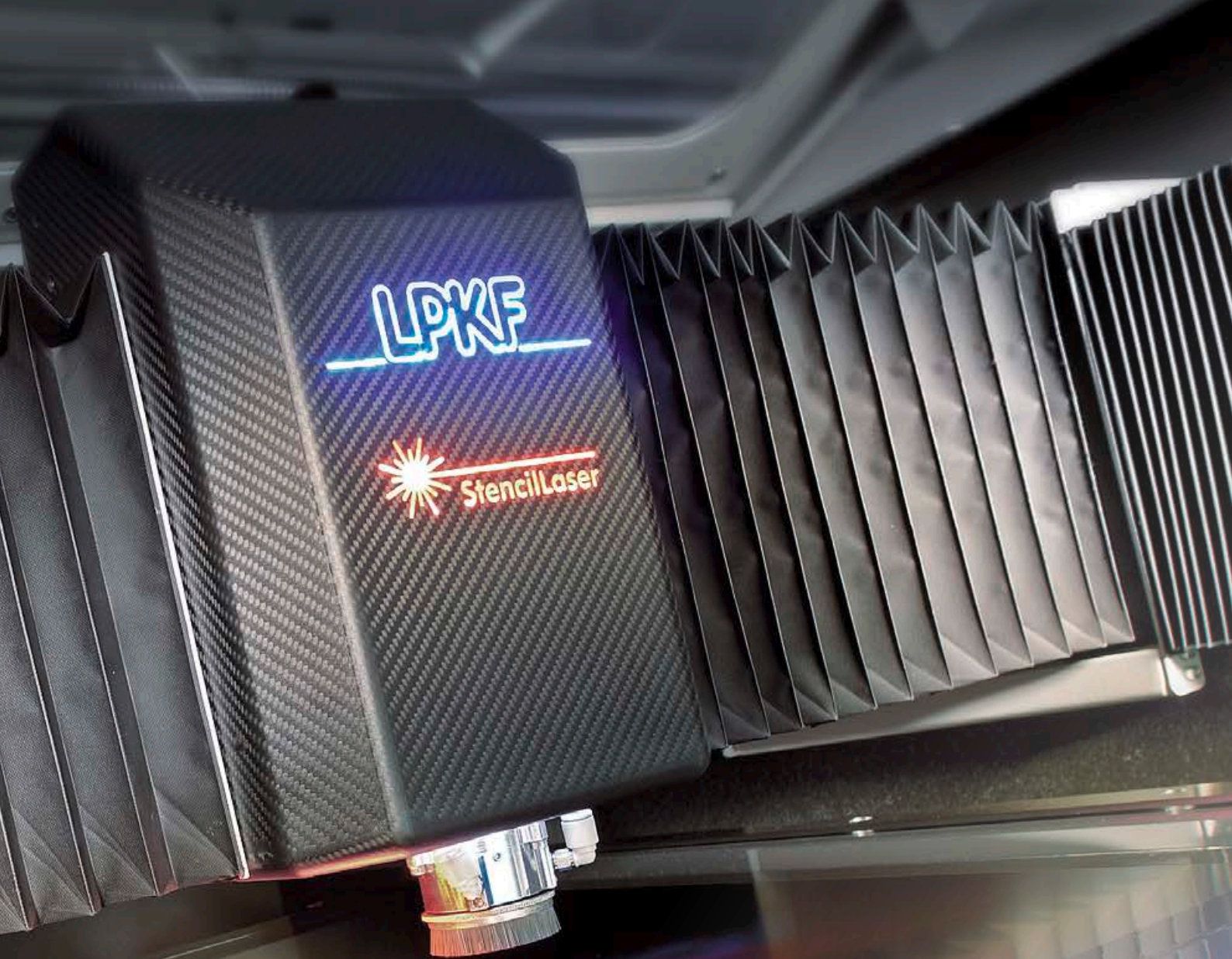


The Most Efficient SMT Solder Paste Stencil Cutter Available  
LPKF StencilLaser G 6080



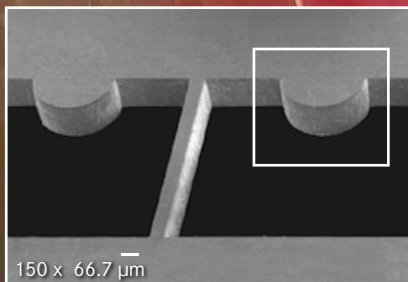
- 
- Improved Quality
  - No Chiller Needed
  - In Process Inspection
  - Specific Configurations
  - Stencils up to 1 600 mm long

See for yourself: Ask our sales team for help calculating your individual cost savings

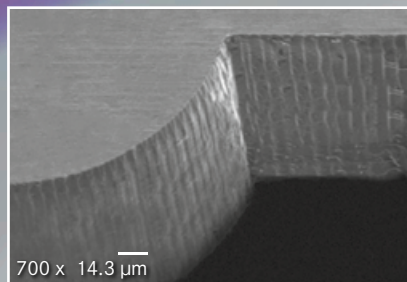
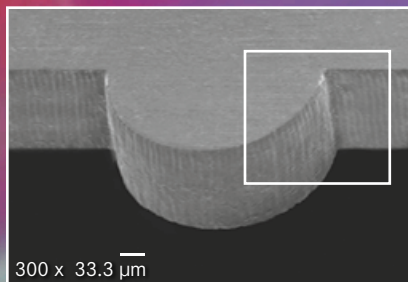


### Optimum Results

Exact geometries for each and every stencil aperture are essential to achieving perfect printing results. The LPKF StencilLaser G 6080 cuts materials from 20 to 1000  $\mu\text{m}$  (0.8 to 40 mil) with highest precision at unparalleled speed.



Accurate geometries. Smooth, vertical sidewalls



100% Assured LPKF Quality!



# Innovation Drives Revenue

The StencilLaser G 6080 represents everything LPKF is renowned for: Worldwide leadership in designing highly sophisticated products, inspired by customers. The StencilLaser G 6080 is designed to rapidly produce assured quality at minimum cost.

By specifically combining customers' in-depth process knowledge with quality assurance tools and in-house micro-machining expertise, LPKF helps increase efficiency and effectiveness beyond expectation.

The new LPKF StencilLaser G 6080 improves the stencil business with a comprehensive feature set, resulting in:

- increased overall performance
- reduced ownership costs
- simplified operation
- integrated quality control
- maximum up-time
- maximum production flexibility

The LPKF StencilLaser G 6080 helps LPKF customers stay ahead of the competition by utilizing the industry's most advanced technology. Purchasing a StencilLaser G 6080 adds greater flexibility, faster reaction cycles and a higher throughput to your portfolio.

## Engineered for Safety

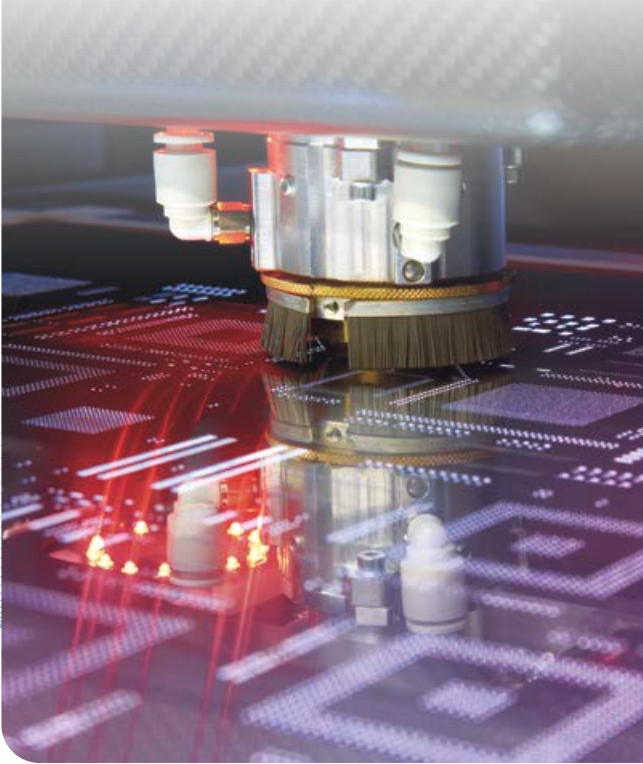
All LPKF StencilLaser systems are compliant with Class 1 laser safety guidelines. They feature easy access architecture, state-of-the-art fume extraction and simplified material handling. The systems meet or exceed the most stringent industry regulations and recommendations for a safe work environment and environmentally-friendly production.

## Worldwide Customer Support

LPKF maintains a global service staff with hubs located around the world. The experienced and well-trained service personnel provide the most reliable support structure in the industry. Furthermore LPKF's service staff can remotely service your system from anywhere in the world.

## Extended Stencils Option

With Extension Option, the LPKF StencilLaser G 6080 is able to machine stencils with a length of 1 600 mm (63"), e.g. for long retrofit LED applications.



## Best in class:

- Cutting performance
- Largest stencils
- Cutting quality
- Process monitoring

### Maximum Efficiency Benefits

Having out-performed every commercially available laser system used in stencil production LPKF continues to strengthen its market position by innovations. LPKF StencilLaser G 6080 is convincing with highly dynamic motion systems, automatic cutting gas management, and inline process control. With the new extension option the laser can process stencils up to 1 600 mm (63") long, e. g. for LED illuminants that replace flurescent tubes. This combination of heightened performance and cutting quality with increased system uptime directly adds greater flexibility, higher throughput and faster delivery.



#### Top Performance, Top Profits

LPKF's well-known carbon fiber gantry technology was revised to yield even higher performance. The heart of the

StencilLaser G 6080 is defined by an LPKF designed motion system. All of the parts in this system work together like high-end clockwork, providing maximum precision and performance. This improved dynamic design results in impressive benefits:

- Higher throughput through optimized motion control
- Enhanced stiffness of the gantry system to maintain accuracy
- Minimal preventative maintenance requirements

The StencilLaser G 6080 handles different speeds and cutting parameters, depending on the pattern. The EasyEdit software is rich in features and allows users to assign specific cutting parameters to various groups of apertures automatically.

#### An Easy Way to Perfect Stencils

Using the LPKF StencilLaser G 6080 is simple. Select a frame from the customized library, load the stencil, select the cutting job and push start. Easy to understand touch-screen menus guide the operator. A multi-level user architecture of the machine operation software allows extensive customization for managers and administrators, without compromising safe and simple operation.



LPKF's EasyEdit software is the most powerful stencil editor on the industry. It streamlines the customization process by applying modifications in aperture shape and dimensions either globally or individually. EasyEdit features include:

- One-click aperture modification
- Full scalability of aperture dimensions
- Custom libraries for automated aperture modifications
- Special cutting routines
- One-click data matrix code or barcode generation for stencil marking

# LPKF StencilLaser G 6080

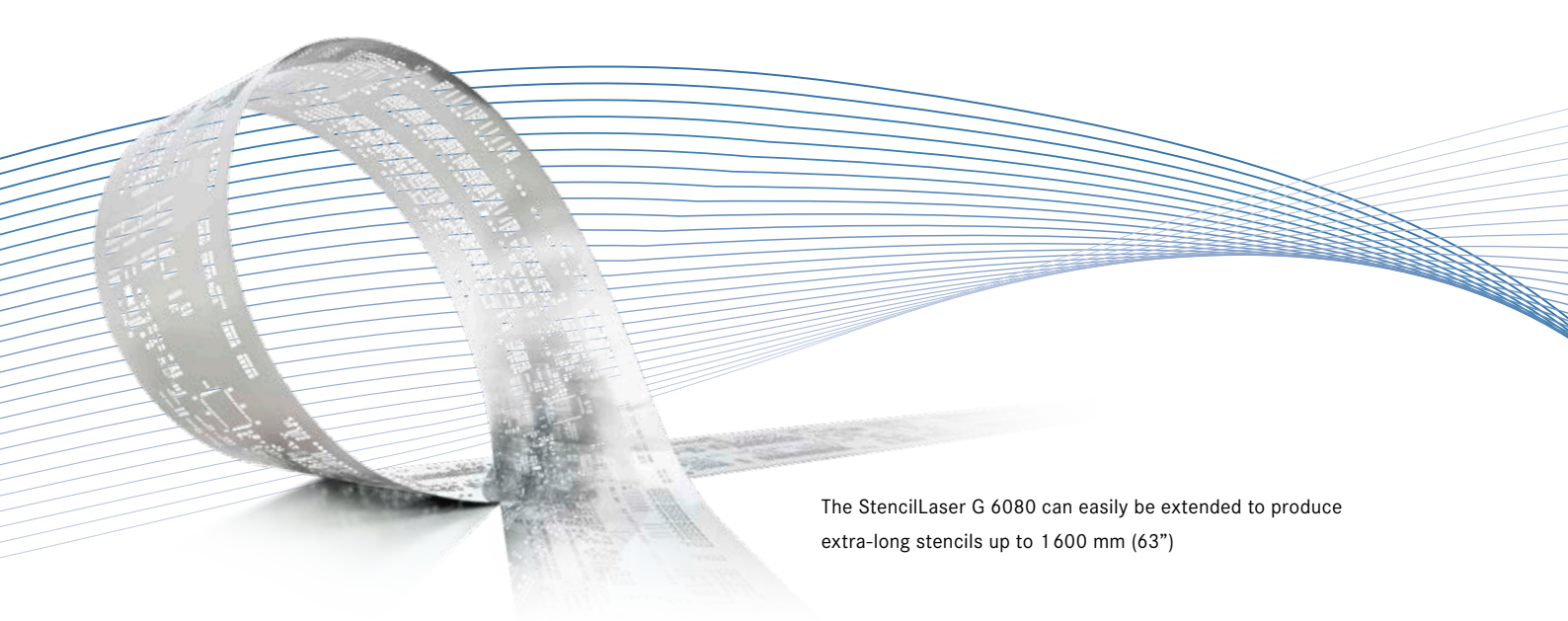


## Fast Setup: Loose Foils and Framed Stencils

The LPKF StencilLaser G 6080 automatically adjusts to fit frame size up to 740 x 1800 mm (29.1" x 70.8"). Loose metal sheets can be cut in a reusable clamping and stretching frame that does not require any tools to load and mount of the material. The StencilLaser G 6080 does not require any adaptors to handle sheets and stencils of various sizes.



One interesting feature in LPKF StencilLaser systems is their capability to be integrated into an automatic handling process. The StencilLaser G 6080 is equipped with a handling interface according to SMEMA standard, enabling the system to be connected to any auto-loading device. The automatic width adjustment allows the operation of a mix of stencil frames and even loose sheets without requiring any changeover or process stoppage.



The StencilLaser G 6080 can easily be extended to produce extra-long stencils up to 1600 mm (63")

### Micromachining Capability

The LPKF StencilLaser G 6080 offers power and efficiencies well-suited to a variety of applications. In addition to the ever-growing stencil market, micromachining of mechanical parts is another lucrative application for the LPKF StencilLaser G 6080 system. The system is capable of cutting metal sheets up to 1000  $\mu\text{m}$  (40 mil) thick with superior precision.



### Assured Quality

The fully automatic loading routine assures stencils remain at the optimal focal point. This feature enables the system to cut or engrave stencils from both sides. Manual calibration is not required.

### Easy Rework

The integrated LPKF vision system allows stencils to be re-worked with easy setup and high accuracy.



The new LPKF Real-Time Process Control monitors the cutting process for every aperture. If an undesired cutting result is detected, the LPKF Real-Time Process Control automatically optimizes the cutting parameters without wasting production time. This real-time process is significantly faster than a post-process visual scan. This feature allows skipping a tedious and time consuming post-process inspection of a stencil.

The G 6080's reliable production schedule and assured quality control is a highly desirable benefit for every solder paste stencil production. 100% quality does not have to be an illusion any longer. The LPKF StencilLaser G 6080 makes it a reality.

### Designed for 24/7 Use

The LPKF StencilLaser G 6080 is designed for permanent and professional use with minimal maintenance requirements. In addition the following features help to save money.

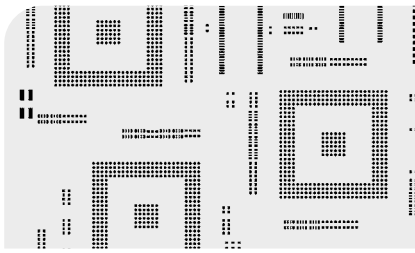


The proven LPKF LongLife fiber laser technology is now even more efficient, featuring 100% air-cooling. This reduces the system's total power consumption by about 30% while eliminating service and maintenance downtime for any external chiller system.

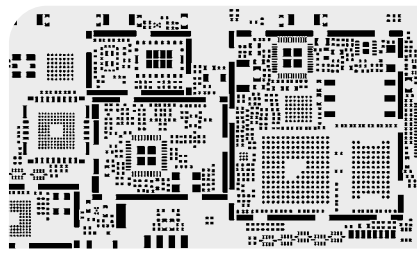


The StencilLaser G 6080 can use either compressed air or oxygen for cutting gas. In fact, it can even be operated with two different cutting gases in the same job. The selection of the gas type, as well as pressure adjustment and monitoring is done fully automatic. The setup is cutting tool dependent, allowing the operator to use the most appropriate gas type for the job at hand. As part of the parameter set, cutting gas is controlled for every single aperture type. This feature helps saving cost on more expensive cutting gases, such as oxygen, while also delivering the highest possible cutting quality where it really counts.

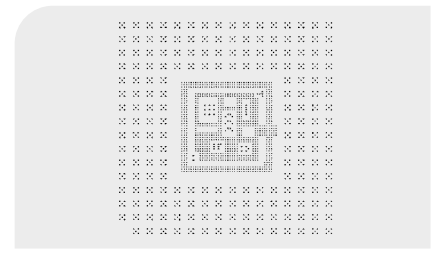
# Fast Fact Reference Layouts



**Reference layout A:**  
 Stainless steel, 150 µm (6 mil) thick  
 Number of apertures: 14 157  
 Speed: Up to 23 400 apertures per hour



**Reference layout B:**  
 Stainless steel, 100 µm (4 mil) thick  
 Number of apertures: 11 676  
 Speed: Up to 30 200 apertures per hour



**Reference layout C:**  
 Stainless steel, 40 µm (1.6 mil) thick  
 Number of apertures: 18 000  
 Speed: Up to 51 200 apertures per hour

## Technical Data: StencilLaser G 6080

<b>Laser class</b>	1
<b>Speed</b>	Please refer to: Fast fact reference layouts
<b>Cutting range (X/Y)</b>	600 mm x 800 mm (23.6" x 31.5")
<b>Maximum frame size (X/Y)</b>	740 mm x 1 800 mm x 40 mm (29.1" x 70.9" x 1.6")*
<b>Maximum loose sheet size (X/Y)</b>	650 mm x 850 mm (25.6" x 33.5")
<b>Material thickness</b>	Up to 1 mm (0.04")
<b>Laser repetition rate</b>	Max. 45 kHz
<b>Axial precision</b>	±2 µm
<b>Right-angle precision</b>	4 angular seconds
<b>Repeatability</b>	±2 µm
<b>Power consumption</b>	Max. 2 800 VA over all
<b>Dimension system (W x H x D)</b>	1 530 mm x 1 920 mm x 1 625 mm (61" x 75" x 64")
<b>Weight</b>	Less than 2 200 kg (4 850 lbs)

\* Maximum stencil length 800 mm / 1 600 mm (31.5"/63"), with extended option

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