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CASE STUDY
LMI+GrabCAD

Optimizing 24-Hour Production:

How LMI Maximizes Efficiency with GrabCAD Print Pro

Client Overview

Established in 1998, Laser Modeling Israel (LMI) has built a reputation over 25 years as Israel's premier industrial 3D printing service bureau. From its state-of-the-art facility, LMI produces over 60,000 parts monthly using advanced Stratasys technologies, serving more than 1,600 active clients across high-tech, biomedical, defense, and industrial manufacturing sectors.

With ISO 9001:2015 certification and a dedication to uncompromising quality standards, LMI has established itself as the trusted additive manufacturing partner for companies tackling complex engineering challenges. Their end-to-end approach spans the entire production cycle, from initial design consultation through manufacturing and post-processing, creating a seamless experience for their customers.

Challenge

As a high-volume service bureau managing over 60,000 parts monthly, LMI faced significant challenges in maximizing machine utilization while maintaining consistent quality. Operating a diverse fleet of Stratasys technologies-including multiple FDM, PolyJet, and SAF systems-LMI needed to:

1. Optimize printer scheduling to achieve 24-hour production workflows
2. Ensure consistent part quality for aerospace and defense applications with strict tolerances
3. Deliver accurate quotes and production estimates quickly to secure business
4. Maintain precise production control across multiple technologies and materials

Traditional production management methods were becoming increasingly inadequate as order volumes grew, especially for handling high-value aerospace and defense projects that required meticulous documentation and quality control.

Solution

LMI implemented GrabCAD Print Pro as their central production workflow management platform. The software's advanced features enabled them to create a continuous 24-hour production environment while maintaining stringent quality standards. Key solution components included:

Key Solution Components	Description
Intelligent Production Scheduling	The half-job capability allowed LMI to queue multiple print jobs automatically, maximizing machine utilization during nights and weekends.
Orientation Optimization	Advanced visualization tools helped technicians lock in the ideal part orientation, ensuring consistent quality for critical components with strict tolerance requirements.
Efficient Nesting	Automated nesting algorithms maximized the number of parts per build, dramatically increasing productivity for high-volume production runs.
Material and Time Estimation	Accurate pre-production estimates improved quoting accuracy and production planning, enabling LMI to optimize resource allocation.
Remote Monitoring	Web-based print monitoring capabilities allowed staff to check print progress from anywhere, supporting flexible work arrangements while maintaining quality oversight.

Results

Enhanced Quality Control and Part Consistency

> “Most customers are interested in quality - whether it's from SAF technology, FDM technology, or PolyJet. That's the most important thing," explains Arie, Director of Operations at LMI. "With GrabCAD, we can choose the proper orientation, lock it in place, and ensure we get the best cosmetic look of the part every time.”

The software's orientation visualization capabilities have proven particularly valuable for complex aerospace and medical components with intricate geometries, helping LMI maintain consistent quality across thousands of parts. This has resulted in a significant reduction in quality-related issues and has strengthened LMI's reputation as a trusted supplier for mission-critical applications.

Maximized Production Capacity

LMI has significantly improved printer utilization through GrabCAD Print Pro's advanced scheduling features, particularly for their SAF technology systems.

> “SAF is the technology that you can squeeze the maximum out of because it's fast, it's printing a lot of parts, it's production," notes Arie. "When you combine that with GrabCAD's nesting process and half-job capability, you can maximize the capacity of the printer 24 hours a day.”

Improved Business Operations

The software's estimation capabilities have transformed LMI's quoting process, making it faster and more accurate—a critical advantage in a highly competitive market.

> “GrabCAD's software helps us with crucial estimations - how much material we'll use, how long it'll take to print," explains Arie. "With the half-job feature, we can run 13 to 15-hour jobs and then squeeze as much as we want into a 24-hour period, maximizing our printer capacity."

Expanded Service Capabilities

By leveraging GrabCAD Print Pro alongside their diverse technology portfolio, LMI has organized their production around three key service "vectors":

1. Rapid Prototyping: Utilizing PolyJet and DLP technologies
2. Production Manufacturing: Leveraging FDM systems, including Fortus 450 and Fortus 900 platforms for ULTEM and engineering materials
3. High-Volume Production: Implementing SAF technology to produce thousands of end-use parts monthly

This structured approach, enabled by GrabCAD Print Pro's workflow capabilities, allows LMI to serve diverse customer needs with the optimal technology for each application.

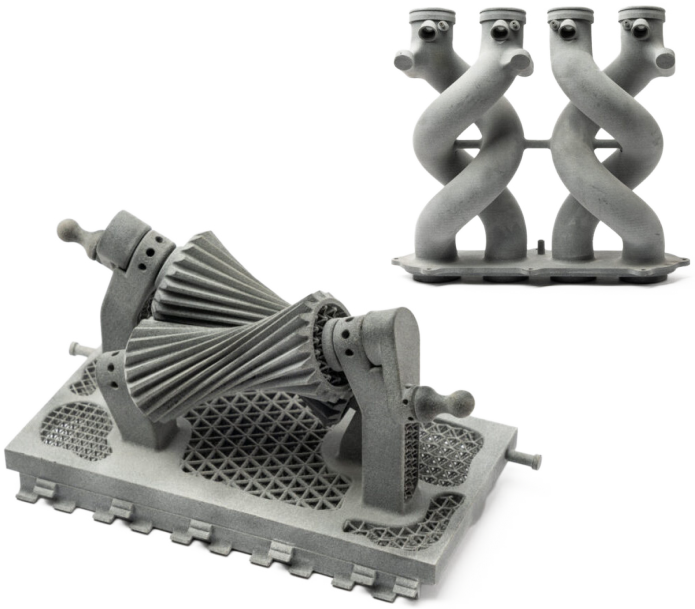
Conclusion

LMI's strategic implementation of GrabCAD Print Pro has transformed their operation into an industry-leading, high-volume additive manufacturing center capable of consistently delivering 60,000+ quality parts monthly. The software's advanced orientation tools, intelligent scheduling capabilities, and precise estimation features have become mission-critical components of their business success.

For service bureaus and manufacturing operations managing diverse technologies and demanding production requirements, GrabCAD Print Pro delivers measurable improvements in throughput, quality, and operational efficiency. The software's seamless integration with Stratasys hardware creates a complete solution that enables businesses to scale confidently while maintaining exceptional standards.

"The software is helping a lot with estimations and workflow efficiency," Arie concludes. "It's creating real benefits for both our business operations and our customers' experience—allowing us to maximize machine utilization, minimize production costs, and deliver consistently excellent parts."

With GrabCAD Print Pro as the backbone of their digital workflow, LMI is well-positioned to continue their growth trajectory, taking on increasingly complex manufacturing challenges while setting new standards for quality and efficiency in industrial 3D printing.



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