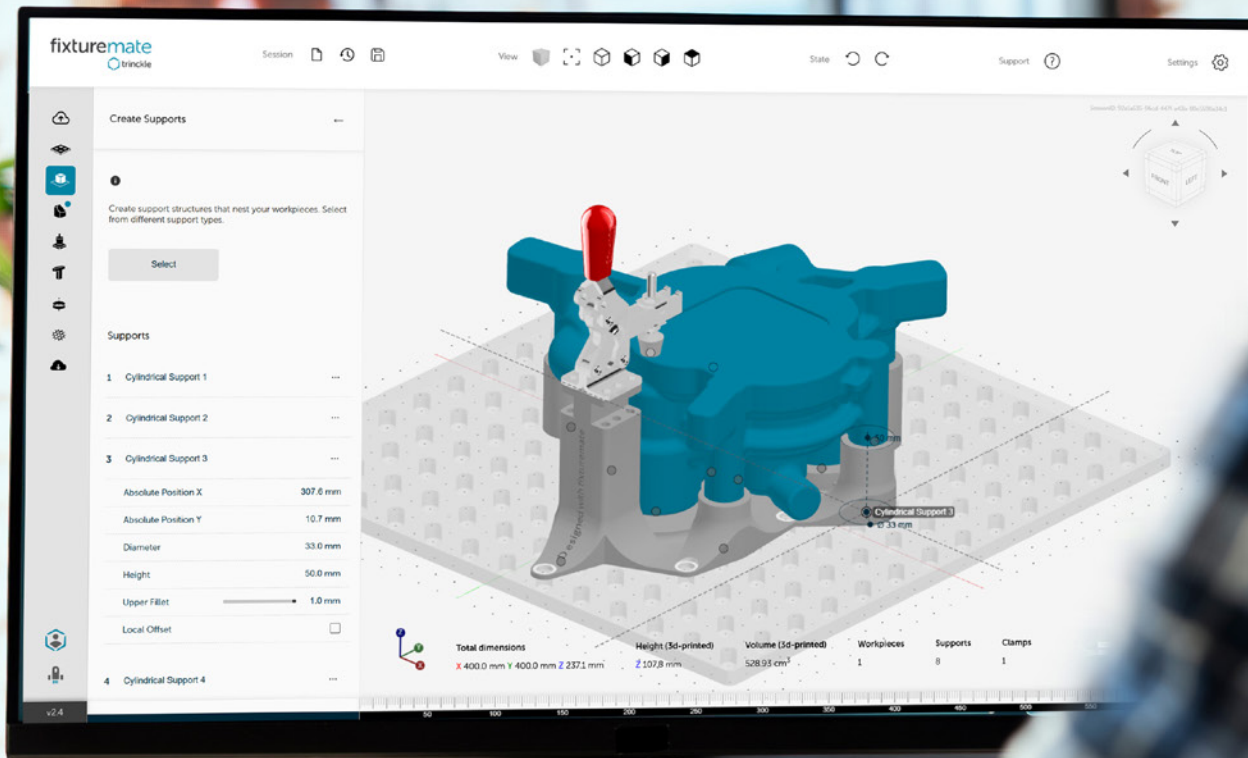


fixturemate by trinckle + GrabCAD Print Pro

Automated Fixture Design
for Manufacturing Operations



- Address the skilled labor shortage with production tooling automation
- Eliminate engineering bottlenecks and reduce fixture creation time by 80% with automated design tools that enable your AM operators to create professional-grade fixtures without CAD expertise or expensive software licenses.





Manufacturing Challenge: Engineering Bottleneck

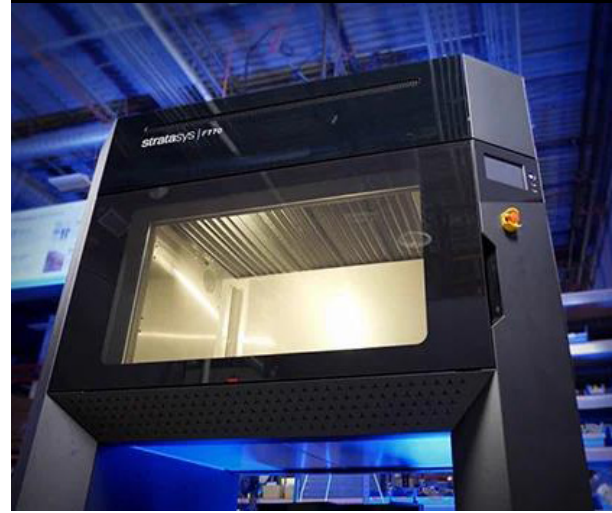
The Problem:

- Skilled labor shortage affects 80% of manufacturers
- 2-3 day wait times for routine fixture design
- CAD expertise required for simple tooling needs
- Engineering resources tied up on low-value tasks
- Multiple software licenses increase operational costs

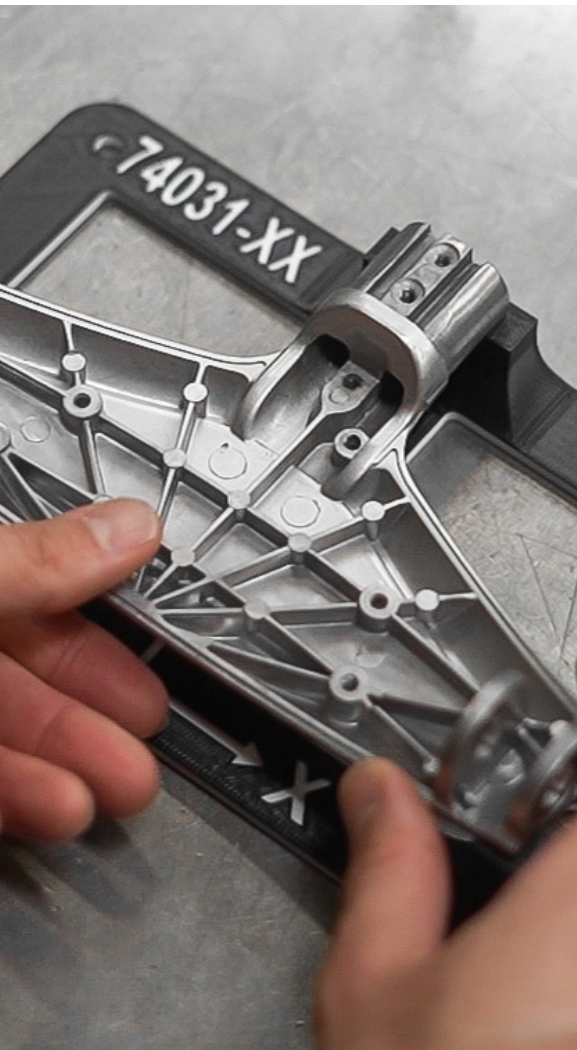
The Solution:

Wizard-style fixture design integrated directly into GrabCAD Print Pro

The Potential ▼



The Bottleneck ▼



Proven Manufacturing Results

Automotive Supplier Case Study:

Before: Manufacturing engineer required 2-3 days for custom inspection fixture

After: AM operator completes fixture design in 2-3 hours using fixturemate

Result: 80% time reduction, eliminated engineering dependency

CMM Inspection Operations:

Before: CMM setup using traditional blocks took 1+ hours

After: fixturemate-designed fixtures reduce setup to minutes

Result: Dramatically improved inspection throughput

Production Tooling:

Before: 3-hour setup times for fixture deployment

After: 20-minute setup with fixturemate-designed fixtures

Result: 85% reduction in fixture deployment time



Complete Fixture Design Capabilities

Production Tooling Applications:

- **Assembly Fixtures** - Consistent component positioning for production lines
- **Welding Fixtures** - Repeatable part alignment for quality welds
- **Inspection Gauges** - Custom go/no-go gauges for quality control
- **Machining Fixtures** - Secure workholding for CNC operations
- **Measuring Fixtures** - Dimensional inspection and CMM setup
- **Carrier Trays** - Component transport and organization

Design Time:

Under 20 minutes from concept to print-ready

No CAD Required:

Wizard-style interface for manufacturing technicians

ROI Analysis for Manufacturing Operations

Labor Cost Savings:

- Eliminate engineering time for routine fixture design
- Reduce fixture lead times from days to hours
- Free up skilled engineers for higher-value design work
- Enable cross-training of AM operators on tooling design

Operational Efficiency:

- Faster production setup with optimized fixture design
- Reduced downtime waiting for custom tooling
- Improved part quality with precision fixture positioning
- Scalable tooling production for varying batch sizes

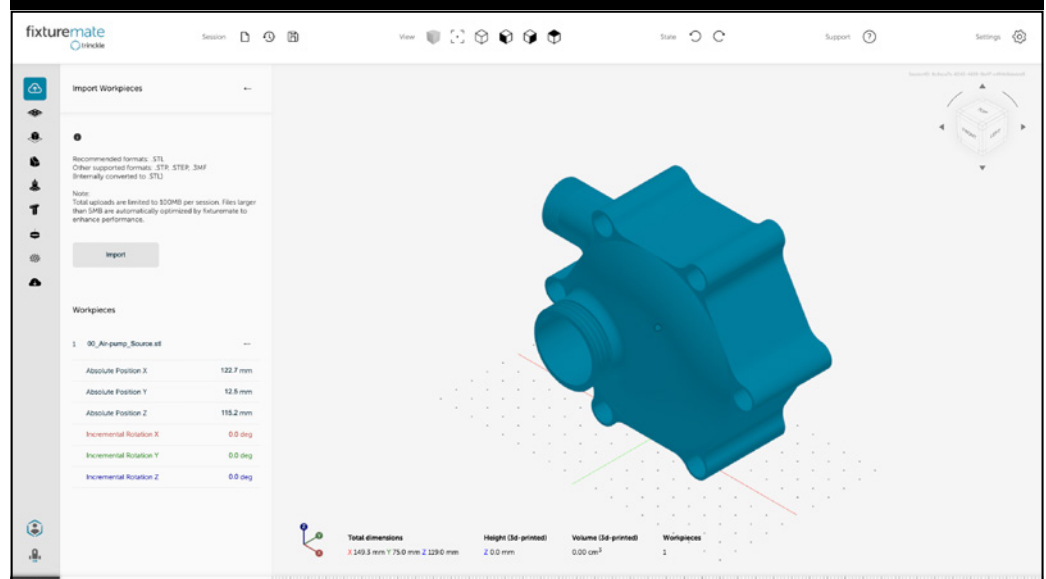
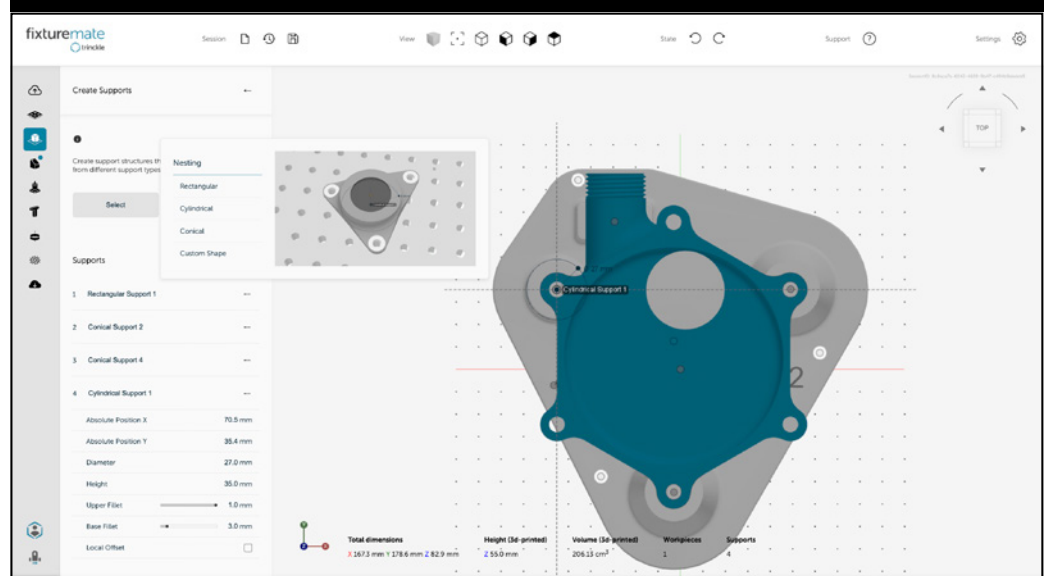
Cost Structure Impact:

- No additional software licensing - included with GrabCAD Print Pro
- Reduced CAD software needs for routine tooling
- Lower training costs with intuitive interface
- Faster ROI through immediate productivity gains



Technical Integration & Workflow

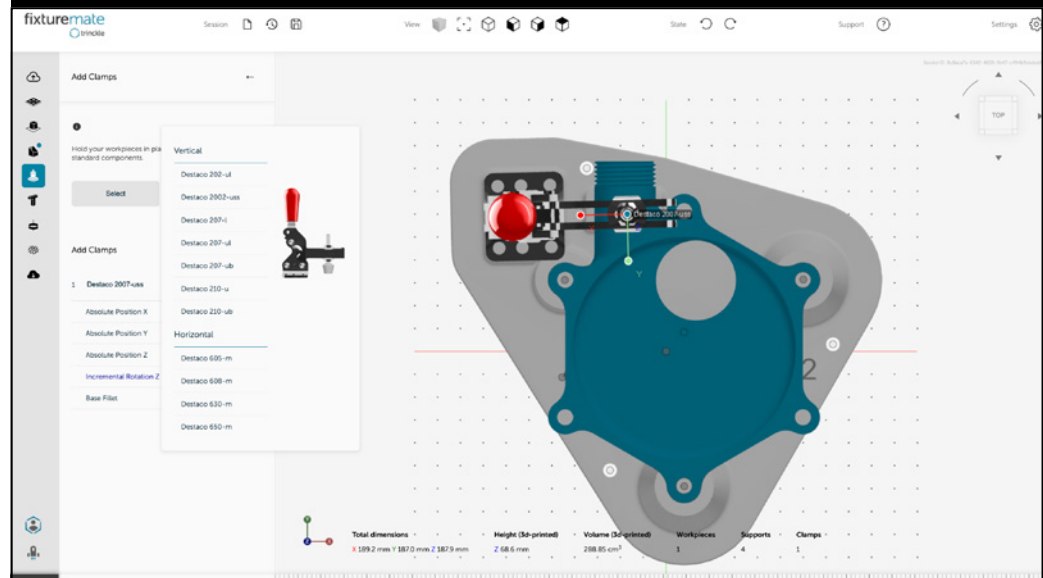
Simple 4-Step Process:

1**Import Workpiece** - Use existing CAD files or scan data**2****Generate Support** - Automatic intelligent support structures



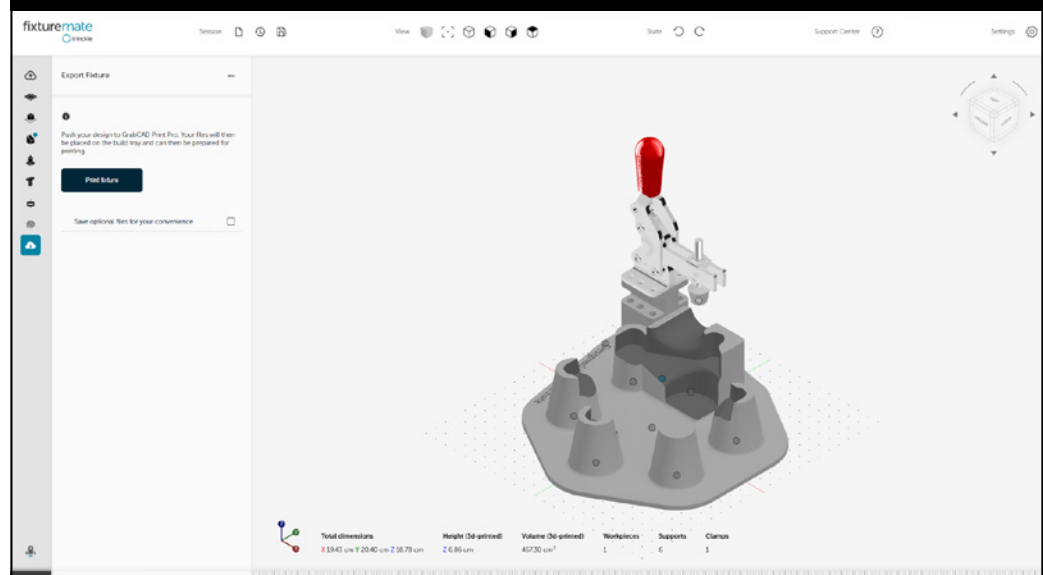
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Configure Clamps - Select from built-in hardware library



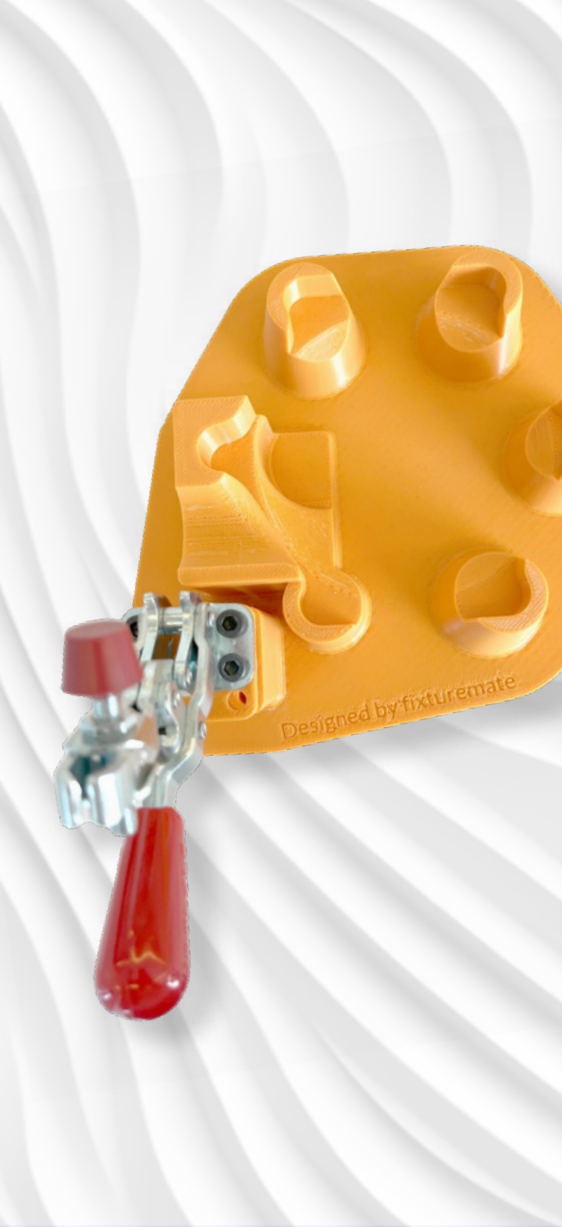
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Export & Print - Direct integration to GrabCAD Print Pro workflow



Manufacturing Environment Features:

- **Offline Operation** - No cloud connectivity required for IP security
- **Local Installation** - Runs entirely on your manufacturing computers
- **Multi-Language Support** - Available in English, German, Simplified Chinese
- **Enterprise Security** - Integrated with GrabCAD Print Pro security features



Material & Technology Compatibility

Industrial-Grade Materials:

- **ABS-CF10** - Carbon fiber reinforced for high-strength applications
- **Nylon 12 CF** - Chemical resistance and dimensional stability
- **TPU 92A** - Flexible fixtures for delicate components
- **PolyJet Resins** - Smooth finish for precision applications

Production Technology Support:

- **FDM** - Proven reliability for manufacturing tooling
- **SAF** - High-throughput production of fixture components
- **P3 DLP** - Precision fixtures with excellent surface finish
- **PolyJet** - Multi-material fixtures with varying properties

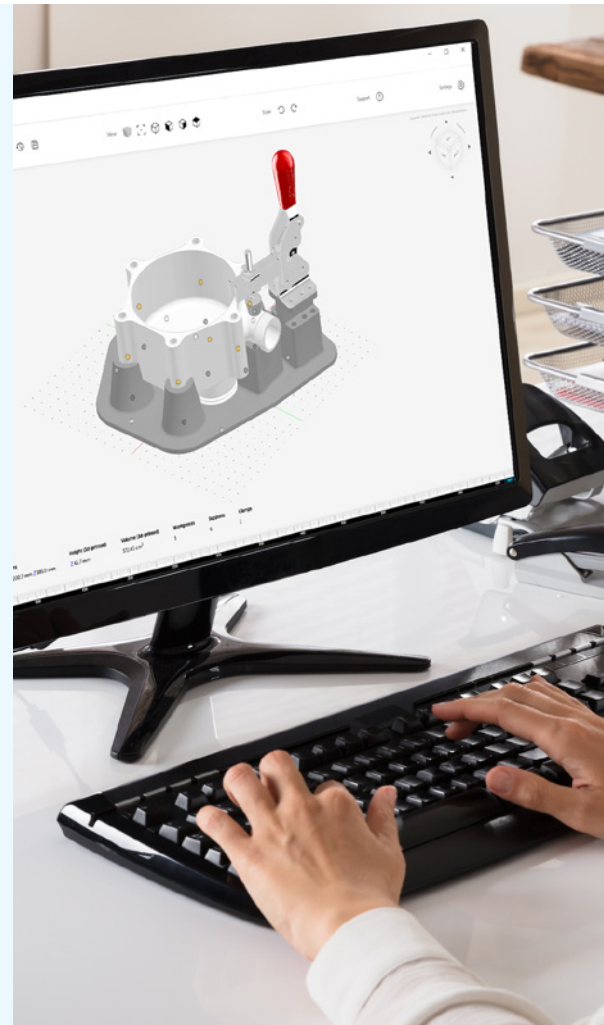
Implementation & Support

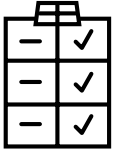
Getting Started:

- **Included with GrabCAD Print Pro** - No additional licensing costs
- **30-day free trial** - Full feature evaluation (available Q3 2025)
- **Direct technical support** - GrabCAD Print customer success team
- **Training resources** - Complete documentation and video tutorials

Transition Planning:

- **Existing trinckle customers:** Contact Stratasys for transition support
- **New implementations:** Seamless integration with existing workflows
- **Team training:** Intuitive interface requires minimal CAD knowledge





Next Steps for Manufacturing Teams?

Ready to eliminate fixture design bottlenecks and address skilled labor shortages?

Evaluate fixturemate:

[Join our Monthly Office Hours](#) - See real fixture design in under 20 minutes

[Start GrabCAD Print Pro Trial](#) - Full access including fixturemate (Q3 2025)



Questions?

Technical Support: print@grabcad.com

Manufacturing Consulting: Contact your Stratasys representative

fixturemate integration available Q3 2025 with GrabCAD Print Pro
trickle empowers automotive, manufacturing, and medical industries with advanced design automation



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SOFTWARE**

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