

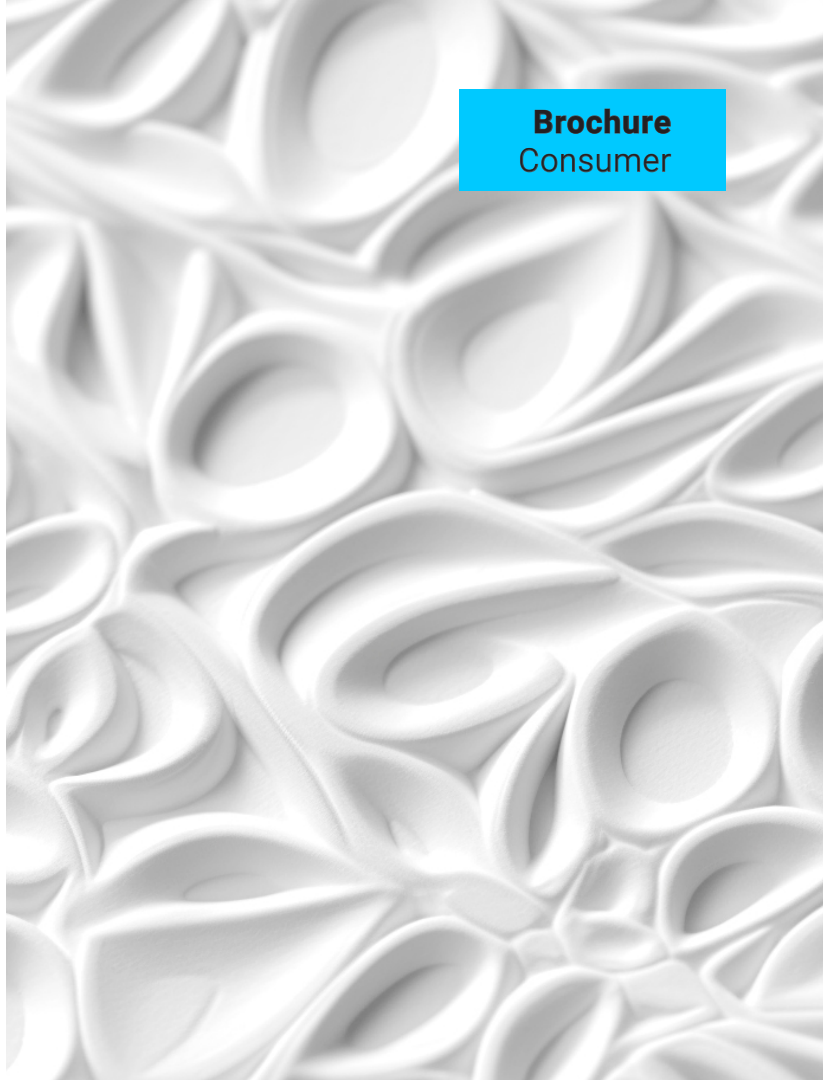


Brochure
Consumer

Advanced 3D Printing

GrabCAD Print Pro™ for PolyJet™

Where Innovation Meets
Advanced Rapid Prototyping





GrabCAD Print Pro™ for PolyJet™ combines our best software with our most advanced Additive Manufacturing solutions. The advanced capabilities offered provide customers with a transformative approach to rapid prototyping enabling high fidelity as well as functionality. These features enable the embedding of elements for print-in-function as well as print-in-decoration, directly within prints, on diverse materials, without post-processing for significant material savings and enhanced design fidelity. Additionally, they offer unprecedented

control over the physical and aesthetic properties of prototypes, from weight reduction and geometric stability to color, transparency, and texture. This suite of capabilities not only streamlines the manufacturing process but also elevates the potential for design complexity and prototype realism, delivering a tangible “wow” factor to potential customers and stakeholders.



Print-on-Object



The PolyJet Advantage

In a world where speed-to-market, customization, and efficiency are key to your success, PolyJet™ technology sets the standard. Our cutting-edge technology combined with the advanced software enhancements are meticulously designed to address the most pressing challenges faced by designers, engineers, and manufacturers today. From advanced prototyping to end-use part production, these features are not just improvements; they are a revolution in the way we bring ideas to life. Unleash bold designs that were not possible to achieve before

Introducing PolyJet x GrabCAD Print Pro: A suite of game-changing features designed to transform your 3D printing workflow:

- **Innovation Unleashed:** With exclusive features at your fingertips, push the boundaries of what's possible in design and functionality.
- **Rapid Iteration:** Accelerate your design process with fast iterations, moving from concept to advanced designs quicker than ever, slashing time to market dramatically.
- **Cost-Efficiency:** Dive into detailed cost estimation, labelling, and model analysis tools that ensure every print is both economically viable and precisely planned.
- **On-Demand Production:** Say goodbye to bloated inventories with our low volume production and on-demand capability, offering tailored parts exactly when you need them.
- **Unmatched Personalization and Customization:** Unleash your creativity with the freedom to design truly one-of-a-kind products, standing out in a world of uniformity.

- **Design Optimization:** Leverage optimized designs that not only look better but also consume less material, blending aesthetics with responsibility.
- **Productivity Reimagined:** Experience exciting new efficiencies in material usage and workflows, and marvel at accelerated print speeds.

GrabCAD Print Pro is ingeniously designed for a spectrum of innovators and professionals, including super-users pushing the technical boundaries of PolyJet printers, production-users in competitive markets striving for distinction, advanced prototype creators seeking unmatched precision, and those exploring bespoke production opportunities where customization is key. It serves consumer electronics pioneers aiming for rapid, innovative product development, packaging experts looking for visually captivating designs, digital signage creators desiring impactful displays, and collectibles manufacturers committed to producing exceptionally detailed items. For these diverse industries, PolyJet X GrabCAD Print Pro is a game-changing tool, enabling them to surpass traditional prototyping limitations with superior print quality, hyper-realism, and groundbreaking innovation.

[GrabCAD Print Pro™ for PolyJet™ is where bold vision meets precision engineering. It's the ultimate tool for innovators ready to redefine what's possible in the world of Additive Manufacturing.](#)



Smart Insert™



Advanced Printing Capabilities Exclusively for PolyJet!

Smart Insert™

Bring a new level of interactivity to your prototypes and products. With pause-resume combined with air voids design, Smart Insert allows for the addition of various elements - from buttons, magnets, electronic components to aesthetic details like gold leaf - directly into the print. It's particularly valuable in creating functional prototypes for consumer electronics where built-in sensing is required, as well as easier assembly where it saves time, manual labor and shipping solutions for complex designs and in innovative packaging solutions. Smart Insert is a powerful tool for early identification of design flaws, and offers unprecedented complexity and freedom in design, including functional integration and aesthetic embellishments.

Print-on-Tray

By printing directly on the tray, you'll be able to print with support or pedestal between the tray and your part, resulting in adaptive surface finish such as glass or carbon fiber with no need for special design, creating products with perfect surface areas and eliminating the need for post-processing. Deliver the 'wow' factor with unprecedented levels of hyper-realism in your prototypes, from the crisp detail of a wristwatch face to the smooth sheen of a cell phone screen. It's particularly effective for prototyping and producing end-use parts in industries like signage, consumer electronics, and packaging, offering on-demand customization and personalization where inventory prices for traditional production of such parts are substantially higher. Beyond its high-fidelity CMF, Print-on-Tray stands out for short production runs and cost efficiency, making it a game-changer for modern manufacturing..

Print-on-Object

Experience unparalleled customization and personalization with Print-on-Object printing onto a wide variety of substrates, including bricks, wood, phone cases, and ceramic tiles. Apply unique designs directly onto objects, enhancing the value and aesthetics of products like cosmetics packaging and speakers. With a simplified workflow without the need for calibration, Print-on-Object makes it easy for users of all skill levels to produce distinctive, custom pieces. The result is a process that supports on-demand production, providing a competitive edge for businesses looking to stand out in the market with truly customized or personalized offerings.

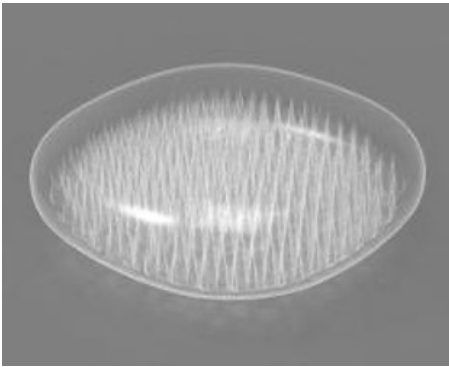




Advanced Printing Capabilities Exclusively for PolyJet!

Air-as-Material

Use Air-as-Material for cavity designs, for advanced features such as Smart Insert and Print-on-Object workflows. Explore the potential to reduce the weight of your parts with air voids structures. This feature is also useful for stability improvements of specific geometrics..



Voxel Print™

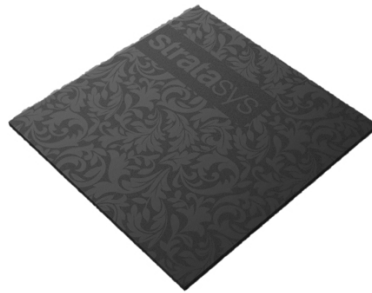
Define data at the voxel level - the three-dimensional equivalent of a pixel. With unprecedented control over every detail of the part, including color, transparency, and shore hardness, you can create super high-fidelity color, material, finish (CMF) models. You can make precise adjustments in the physical properties for each voxel, enabling highly complex, customized and intricate designs.



Support-as-Material

Reduce the cost of bulky parts by using support material at their core.

Create matte and glossy combined texture finishes on your designs by using Support-as-Material to print a dual glossy and matte surface. Improve the stability of tall parts with enforced support placed beneath a sacrificial shell, preventing the potential domino effect when printing multiple tall parts on a single tray.



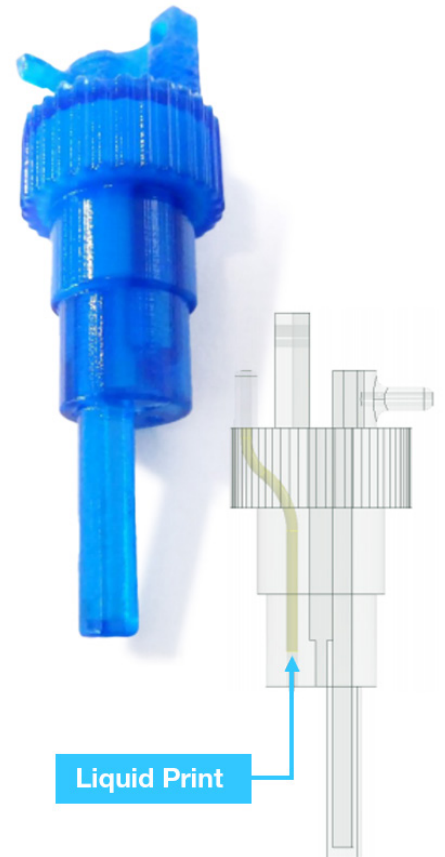
High-Speed for J55

Ideal for rapid prototyping and product development, this high-speed mode maintains the same layer thickness but operates at twice the speed when using dual materials along with one support material. Faster iteration and optimization, leads to faster time-to-market. Without the need for tooling or expensive molds, you benefit from significant cost savings and fewer iterations to reach your final product.

Available on J55 Prime printers in addition to J750/850 printers.

Liquid-as-Material

Particularly useful in medical or robotic research applications, print with liquid in place of traditional support structures to create hollow cylinder cavities. This facilitates the creation of advanced microfluidic structures. It supports simplified workflows and is ideal for applications requiring intricate internal structures and a streamlined manufacturing process.





Redefine what's Possible - from Prototype to Part

Truly unique designs, smart wearables, mechanical components, and ornamental creations are no longer just concepts but tangible assets you can design and produce with unparalleled ease. These features are not just tools; they're your creative partners in crafting items of exceptional value and functionality.

For Rapid Prototyping

For prototyping professionals, GrabCAD Print Pro marks a significant leap forward in product development. End traditional limitations with design simplicity for easier prototyping with minimal troubleshooting, meaning that the unknown in early-development stages are no longer a limitation. Our software advances offer Form-Fit with simplified assembly, enhancing Visual and, more than anything, Functional Prototyping with such ultra-precision and hyper-realism that it is nearly indistinguishable from the final product.

Achieve hyper-realism with up to 95% reduction in modeling time, GrabCAD Print Pro for PolyJet harmonizes efficiency with agility, drastically changing the game for engineers and designers who require early-stage design validation.



For End-Use Parts and Short Series Production

In the highly competitive world of consumer goods, the value proposition of being unique, innovative and agile is unimpartable.

PolyJet 3D printing is the ultimate tool, with one machine that can print a new product line whether it be customized, personalized, small series or capsule, 3D printing one part every few hours.

PolyJet x GrabCAD Print Pro offers a new set of tools that enhances this advantage with unprecedented innovative design options.





Unlock Productivity and Analysis Features

With GrabCAD Print Pro™, you can now open up PolyJet's full potential, from prototypes to end-use parts, and produce complex, colorful, multi-material, multi-dimensional 3D models with the finest details and unmatched accuracy. As well as the advanced printing capabilities above, you also unlock the following important productivity and utility features:

Cost Estimation

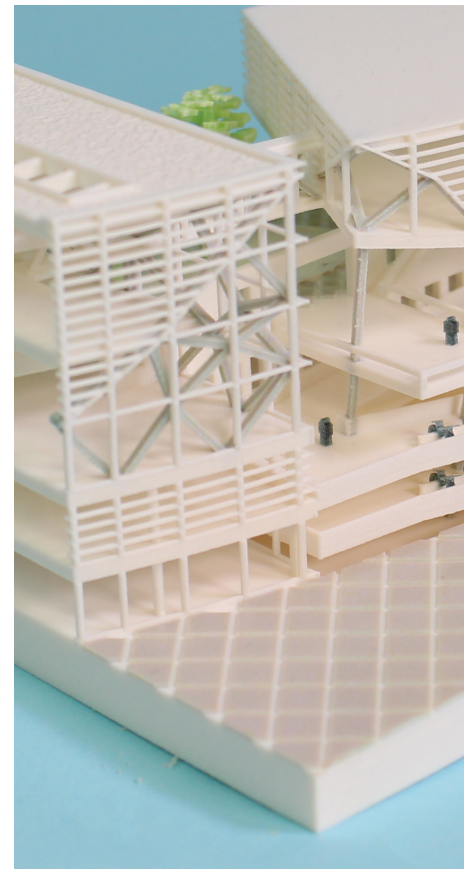
See detailed cost parameters for each printing tray, encompassing material, parts, and support structures, so you can make better decisions about resource allocation and budgeting. Taking into account various factors such as resin expenses, system depreciation, and direct labor costs, this clear overview of the financial implications of printing setups helps you to create more cost-effective production processes and better pricing strategies.

Labeling Feature

Add custom text to models, enabling users to mark and differentiate between various samples and iterations effectively. This is especially useful for identifying different versions of a prototype or for illustrating where logos and other identifiers should be placed on final products. The capability to add index numbers and names to models helps in organizing and tracking different versions, thereby streamlining the design and manufacturing process.

Wall Thickness Analysis Tool

Ensures your designs are robust and print-ready, saving precious time and resources. By setting a desired wall thickness, any part of the model that falls below this threshold is highlighted, so you can identify potential issues before printing begins. It's an invaluable pre-emptive feature, especially when reductions in part size could compromise the structural integrity due to insufficient wall thickness.





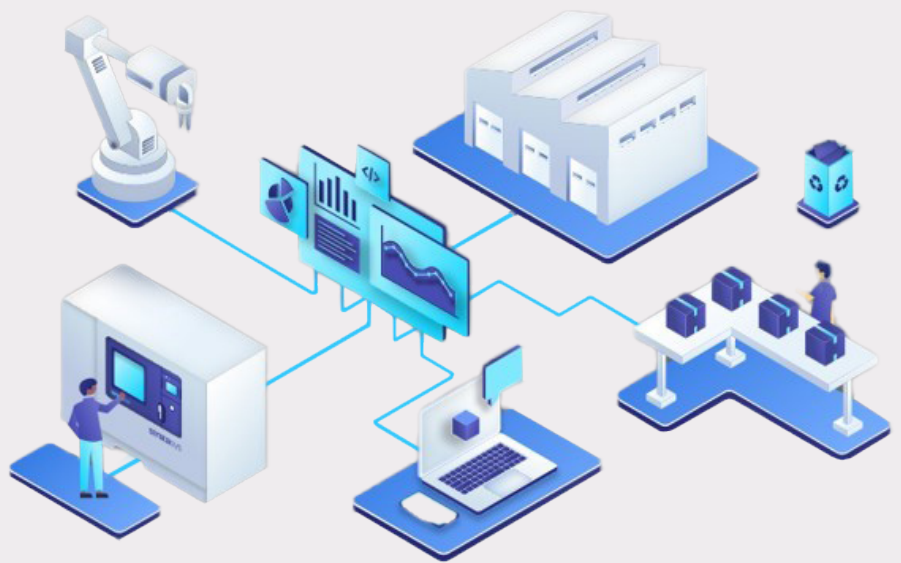
Industry 4.0 APIs

Experience a robust management system for inventory, connectivity, and print jobs across all printers. With the GrabCAD Printer Connectivity SDK, you have access to machine details, status updates, loaded materials, job submission capabilities, and print queue management, as well as the ability to view current and historical job data. This connectivity ensures that your printing process is streamlined and cost-efficient.

In conclusion, the unparalleled value that GrabCAD Print Pro brings to the table cannot be overstated. With its advanced and powerful features tailored not only for PolyJet but also for FDM and SAF technologies, it truly stands out as a game-changer. This comprehensive solution is designed to revolutionize your 3D printing workflow across three of Stratasys' leading polymer 3D printing technologies. By choosing GrabCAD Print Pro, you're not just enhancing your capabilities in one area but elevating your entire manufacturing and prototyping process to new heights. Embrace the future of 3D printing with GrabCAD Print Pro and transform your ideas into reality with efficiency, precision, and ease like never before.

GrabCAD Additive Manufacturing Platform

Integrated, Open, Enterprise Ready Platform that enables advanced Additive Manufacturing Workflows



alphacam GmbH
Erlenwiesen 16
D-73614 Schorndorf
Tel.: +49 7181 9222-0
info@alphacam.de

alphacam austria GmbH
Handelskai 92, Gate1 / 2. OG / Top A
A-1200 Wien
Tel.: +43 1 3619 600-0
info@alphacam.at

alphacam swiss GmbH
Zürcherstrasse 14
CH-8400 Winterthur
Tel.: +41 52 26207-50
info@alphacam.ch



alphacam.de
.at
.ch

