



Comparing  
Stratasys J35™  
Pro against  
other desktop  
resin 3D  
printers;  
**The results  
are in...**



# You'll never make a better investment than **Stratasys J35™ Pro**

If you're eyeing other desktop resin 3D printers, you're looking at a false economy. In comparative testing, the J35 Pro, powered by PolyJet™ technology, outperforms every time.

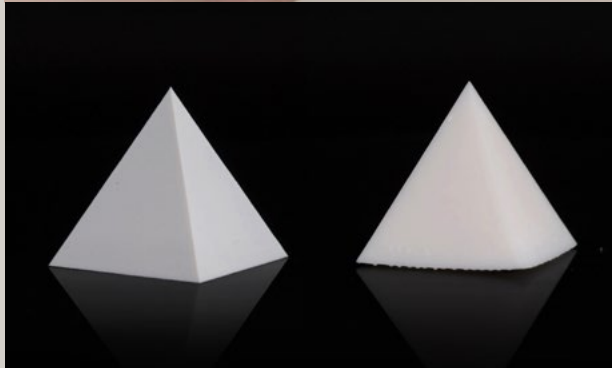
Stratasys PolyJet technology is unparalleled in its ability to produce high-quality 3D printed parts with vivid details and smooth surfaces at rapid speeds with an easy workflow. No other desktop resin 3D printer can deliver the same results.

**We took a deep dive across the four key areas important to engineers:**

- Part accuracy and quality
- Ease of use
- Time to part
- Total cost of ownership

[We'll let the results speak for themselves.](#)





# Keystone 1:

## Part accuracy and quality

### Make your multi-part assembly fit right away

Thanks to its high resolution, PolyJet 3D printing is the stand-out technology for delivering supreme accuracy and quality.

### Comparison of TCO

(including printer costs and manual labor)

Many other desktop resin 3D printers on the market

J35 Pro	Other 3D resin printer
Accuracy	
$\pm 100\mu$ accuracy on length under 100mm	$\pm 1000\mu$ accuracy
Translucency	
83%	76%

produce parts with visible warping and obstructive support pins that require significant sanding work. Assembling parts requires lengthy post processing to remedy the issues that arise from deformations and manually removed supports.

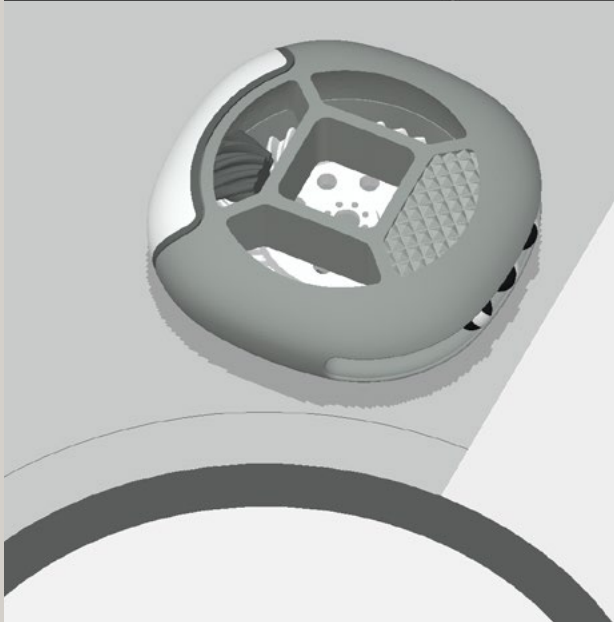
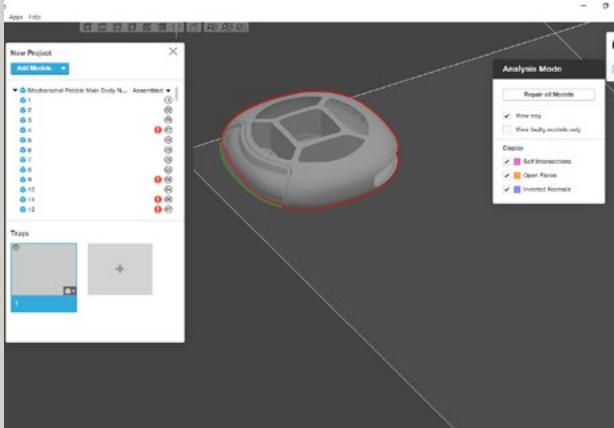
Seamlessly tailored form-fit and functional parts can

be created quickly and more cost-effectively with PolyJet technology. The J35 Pro delivers the best-in-class geometric accuracy for clicking mating parts together right after support removal - making it an ideal choice for designers and manufacturers.

### Near-injection molding surface quality and detail

With the J35 Pro's PolyJet technology, you can combine greyscale color, near PMMA-level transparency, multiple textures and moving parts to create realistic models that key decision-makers can hold in their hand.

The J35 Pro delivers advanced multi-material printing capabilities, smooth surface and uniformity straight off the printer. This makes it ideal for creating complex designs that require high precision and details. Other desktop resin 3D printers do not have the option to print a glossy finish and can only achieve a smooth surface on one side of the model, with sanding required to mask the issue of support touchpoints, which often results in damage on intricate models.



## Keystone 2: Ease of use

The revolutionary J35 Pro 3D Printer offers an impressive range of advantages for any 3D printing workflow. It is cleaner, faster and safer than other 3D printing processes. It can use up to three different modeling materials simultaneously, making it suited to a wide range of applications.

### Cleaner, faster, safer

Other technologies often produce dense support structures. It is difficult to see where the model ends and the support structure begins, so there is a high risk of damage to parts during support removal. Cleaning often requires the use of flammable materials such as IPA. Uncured photopolymer resins are also a hazard requiring a continuously ventilated room.

Stratasys fully office-ready solution is optimised for user safety. It is easy to install in any engineering or design department. Cleaning parts is safe and convenient, with the innovative WSS™150 water-soluble support material that dissolves support easily with regular tap water.

### Native CAD files makes print prep a breeze

The J35 Pro offers an intuitive way to prepare multi-material, multi-part prints, importing native CAD files in a process that takes just a few seconds. Users reduce print preparation by up to 10x compared to the STL based software of other printers, where the highly cumbersome workflow can take up to an hour, and often involves the manual design of support structures.

The J35 Pro provides a user-friendly experience, with features and integrations with other systems that make it incredibly powerful - ideal for those who need their projects done quickly and efficiently.



## Keystone 3: Time to part

Our engineers design 3D printers for your engineers. We know the things you value and the things that make your life a little easier.

Time is money. Time is critical. With efficiency engineered into every corner of the J35 Pro, here are some of the features that decrease time to part and put you ahead of the game.

- **4x faster printing.** Cut your print time from 10+ hours to just a few hours on J35 Pro. No more running print jobs overnight just to find they've failed.
- **Water-soluble support.** No need to remove support structures manually with pliers and dangerous chemicals, and no filing needed to get a smooth finish. WSS™150 dissolves in regular tap water.
- **Multi-finish parts in one print.** You can achieve vibrant matte, gloss and dual-finish parts regardless of the complexity of the part itself.
- **Greyscale pallets.** Print not only solid objects but also texts, labels and graphic textures with a range up to three different materials in one print.
- **Accurate form-fit parts.** With precision and uniformity straight off the printer, there's no need for filing, sanding or polishing to force parts together.
- **Three permanently loaded resin cartridges.** Save time switching out and cleaning printer tanks - they're always ready to go until the last drop.
- **Native CAD files.** Powerful GrabCAD™ print software instead of STL-based software cuts print preparation time down to mere minutes.

### Get same-day functional prototypes

The J35 Pro PolyJet printer offers a superior 3D printing experience that is unlike any other desktop resin 3D printer. Other technologies just can't match this level of precision and uniformity, meaning lengthy post processing like sanding or polishing is required to reach an acceptable level.

# Keystone 4:

## Total Cost of Ownership (TCO)

The total cost of ownership of a Stratasys J35 Pro is less than half of the next best desktop resin 3D printer on the market today. By scaling in-house prototyping without any incremental costs, the higher the throughput, the lower the total cost per part.

While other 3D printers appear much cheaper initially, hidden costs are hitting customers hard once they start increasing the volume of printed parts and calculating labor costs.

Compared to other desktop resin 3D printers which offer limited material choices, not only does the J35 Pro offer great resin versatility, its efficient material consumption reduces costs in the long run.

Couple this with minimal labor costs with the J35, thanks to its speedy, intuitive software, 4x-faster printing, and almost-no post-processing required, you can see where the significant cost-savings lie. Other desktop resin 3D printers simply don't have the ability to print as accurately, as precisely and

as smoothly as the J35 Pro straight off the printer, so many hours are required in post processing to achieve the desired result.

### Comparison of TCO

(including printer costs and manual labor)

J35 Pro	Other 3D resin printer
Sample part: Single-material flashlight	
\$75	\$175



# Key Takeaways

Our users see clear benefits from the J35 Pro in 4x faster time to part, 10x faster print preparation, almost no manual post-processing required, a significantly lower total cost of ownership, best-in-class geometric accuracy, and a safer work environment than with other desktop resin 3D printers.

The J35 Pro delivers superior, multi-material parts and a uniform surface finish, and allows for greyscale shades and transparency options that other desktop resin 3D printers do not. PolyJet technology offers a cleaner, faster, and safer workflow compared to other 3D printing processes, partly due to WSS150, the innovative water-soluble support material.

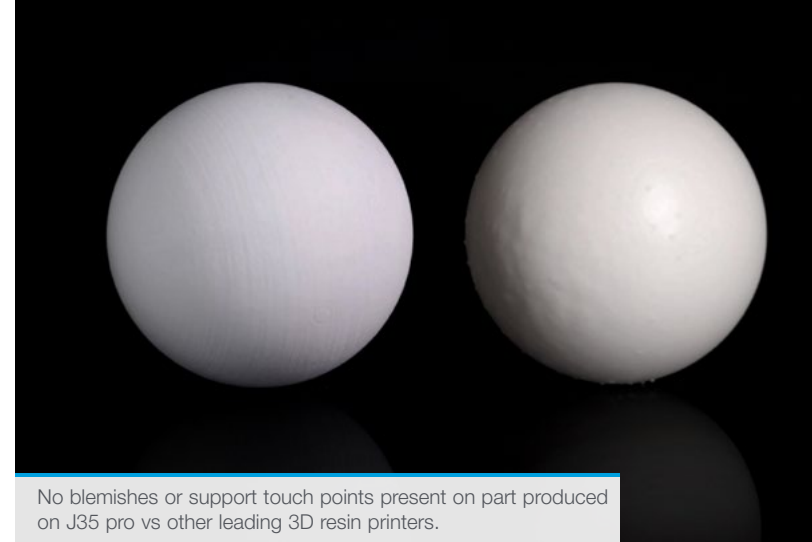
The J35 Pro delivers superior, multi-material parts and a uniform surface finish, and allows for

greyscale shades and transparency options that other desktop resin 3D printers do not. PolyJet technology offers a cleaner, faster, and safer workflow compared to other 3D printing processes, partly due to WSS150, the innovative water-soluble support material.

**“Printing one of our small engine parts and using the water-soluble support has been a game changer for us.”**

Brian Tempest, Design Engineer – Tempest Tool & Machine, Inc.

**“We just left it overnight in a bucket of tap water and the part was 100% clean and clear of support.”**



No blemishes or support touch points present on part produced on J35 pro vs other leading 3D resin printers.

**That speaks volumes for what that support material can do for us. It has completely changed what we can do as far as clean up. It's unbelievably simple.”**



# Side-by-side benefit comparison

Stratasys J35 Pro	Other desktop resin 3D printer
<b>Print time</b>	
4x faster time to part. Get your presentable functional prototypes the same day.	With print times of 10+ hours, you can run the part printing overnight just to find out that on average a third of print jobs fail.
<b>Post-processing time</b>	
Finish parts in just 5-15 minutes while our innovative WSS™150 water soluble support material dissolves your support structures in tap water.	Post-processing takes 2-3 hours, as operators manually wash parts and remove support structures with pliers, increasing the risk of part damage.
<b>Operator safety</b>	
Fully office-ready solution designed for safe operation, with fully enclosed printing chamber and safe handling of cured parts.	Hazardous operation with uncured photopolymer resins and flammable IPA. Ventilated room is necessary during the washing process.
<b>Part accuracy</b>	
Make your multi-part assembly fit right away with $\pm 100\mu$ accuracy on length under 100 mm.	A $\pm 1000\mu$ accuracy with visible warping and unsightly support touchpoints that require significant sanding and forced fit.





# Side-by-side benefit comparison

Stratasys J35 Pro	Other desktop resin 3D printer
<b>Surface quality</b>	
Near-injection molding surface quality and detail, and a choice of uniform matte or glossy surface finish provides the best possible visual match of the prototype with the final product.	Smooth surface only on one side of the model. The supported side is dotted with rough pins requiring sanding to mask the issue, and no option to print glossy surface finish.
<b>Translucency</b>	
Translucency similar to PMMA with users achieving 90% light transmission with VeroUltra™ClearS material after photobleaching. Reaches a very low yellow index of 2.6.	The clarity of the printed parts decreases after going through the wash and cure process, reducing light transmission to 76% or below. Cannot be improved by photobleaching. 10 times higher yellow index than J35 Pro.
<b>Total cost of ownership (TCO) per single material flashlight assembly</b>	
\$75 TCO (including printer costs and manual labor). By scaling in-house prototyping without any incremental costs, the higher the throughput, the lower the total cost per part.	\$175 TCO including printer costs and manual labor). While the initial printer purchase is very affordable, costs are hitting customers as they increase the volume of printed parts - driven by expensive resins and increased manual labor.
<b>Materials wastage</b>	
The J35 Pro operates with fully sealed cartridges preventing deterioration and switching of resin. The three permanently loaded 1.1kg material cartridges are ready to go and use every drop.	Opened resin desktop printer tanks have a 10–35 week limited life, so lack of planning of sequence of materials use can lead to expiry of opened materials, deterioration and excessive costs and material scrap.



# Behind the Scenes: A Day in the Life of Two Product Engineers and their 3D Printers

Sarah is using Stratasys J35™ Pro 3D printer powered by PolyJet™ technology. John is using the next best desktop resin 3D printer. Let's see how they get on...



## Day 1, 9am | Print prep

Sarah prepares her multi-material print, importing native CAD files at the touch of a button and goes to make a coffee.

## Day 1, 9.30am | Begin printing

Sarah's printer has three permanently loaded 1.1kg material cartridges so every last drop of resin is used, with no resin switching.

## Day 1, 12.30pm | Print complete

Sarah's part took 3 hours to print, and she lets the WSS™150 water-soluble support material cleanly dissolve away from the part. No post-processing filing is needed at all.

## Day 1, 1pm | First review

Her colleagues are delighted with the precision and accuracy of the prototype. They have asked for another version involving a clear section and a rubber handle. Sarah updates the GrabCAD™ Print file and initiates printing.

## Day 1, 5pm | Second print finished

By 5pm the revised part is complete, and she lets the regular tap water work to dissolve the support while she plans her presentation for the stakeholder meeting.

## Day 1, 6pm | Stakeholder meeting

Sarah presents a fully functional tested prototype to the stakeholders, who are delighted with the speed and accuracy of the part.

## Day 1, 9am | Print prep

John begins the tedious process of generating the support structures, and it usually takes several iterations to get right.

## Day 1, 10am | Load the resin

Frustratingly, when John goes to print he finds his tank has expired - despite having only used it a few times. He now needs to empty it, filter the material and refill to a new tank. He wasn't expecting this added expense.

## Day 1, 12pm | Begin printing

John prepares his work area and begins his print, which will take around 10 hours to complete. He won't see a finished part until he arrives tomorrow morning.

## Day 2, 9am | Failed print

Oh no! Despite being given the OK by his software, John's arrived in the morning to only a partial print because of a failure. He re-prepares his materials and initiates a reprint.

## Day 3, 9am | Wash and dry printed part

John finally gets his printed part and starts several rounds of washing. Then he leaves it to dry, and then cures it. As he tries to assemble the part, he realizes there is significant warpage.

## Day 3, 12pm | Stakeholder meeting

John comes to the meeting with an unfinished model that cannot be assembled. He explains that he needed to reprint and has not begun post processing.

## Day 3, 1:30 pm | Begin filing

John starts filing the warpage and the support touch points to get an even surface finish - post-processing often takes him around 3 hours, so it will be a late finish for John today.



**USA - Headquarters**

7665 Commerce Way  
Eden Prairie, MN 55344, USA  
+1 952 937 3000

**ISRAEL - Headquarters**

1 Holtzman St., Science Park  
PO Box 2496  
Rehovot 76124, Israel  
+972 74 745 4000

[stratasys.com](https://www.stratasys.com)

ISO 9001:2015 Certified

**EMEA**

Airport Boulevard B 120  
77836 Rheinmünster, Germany  
+49 7229 7772 0

**South Asia**

1F A3, Ninghui Plaza  
No.718 Lingshi Road  
Shanghai, China  
Tel: +86 21 3319 6000



**GET IN TOUCH.**

[www.stratasys.com/contact-us/locations](https://www.stratasys.com/contact-us/locations)

