

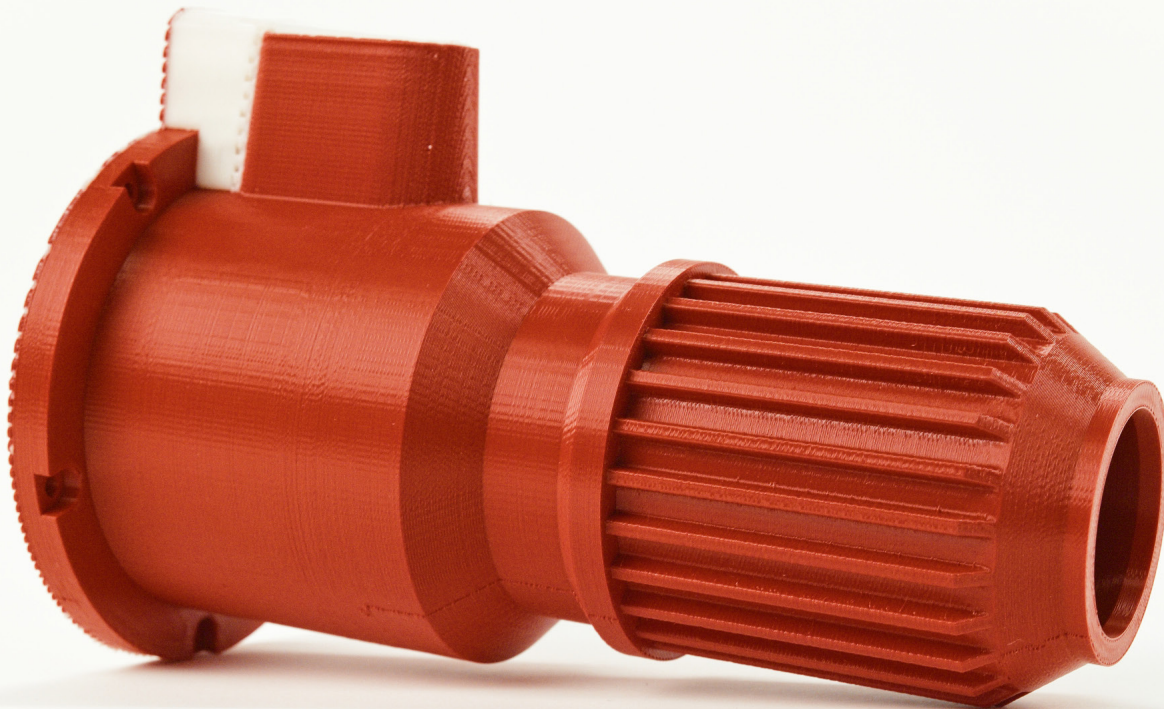


## F3300 Industrial FDM Printer

Minimal labor, lower cost,  
faster throughput.

Lower your production costs and print in half the time compared to legacy fused deposition 3D printers. The F3300™ embodies advanced FDM® technology to minimize labor and maximize economics.





# Lower your FDM **cost-per-part.**

Print parts for less compared to current-market FDM printers. The F3300 redefines state of the art for FDM technology with completely redesigned hardware, software, and systems that lower your production costs.

Pivotal factors that enable lower part costs include:

## **Faster Print Speed**

The F3300 prints up to twice the speed of current industrial FDM printers, producing twice as many parts in the same amount of time. Factored against the printer's amortized cost, the more parts you print per unit of time, the lower their cost.

## **High Part Yield**

Completely redesigned systems enable increased part quality and higher yields. More parts produced and reduced scrap lowers overall part cost.

## **Lower Material Pricing**

Large 4100 cc (250 cubic inch) material spools and simpler spool design lessen their manufacturing cost, particularly for high-performance materials. As a result, this lowers material prices and reduces a customer's cost to print each part.

## **Reduced Labor**

The F3300 incorporates features like autocalibration that eliminate or reduce the labor required to operate the printer. This takes cost out of your operation, lowering your cost to produce parts.

# Double your **throughput.**

The F3300 employs new technology that provides a step change in print speed compared to other FDM printers. These advancements let you print at rates up to twice what current high-production FDM systems are capable of. This ultimately means you can produce 1.5X to 2X the number of parts in a given timespan, depending on part geometry.

Significant developments that help achieve the F3300's higher throughput include:

## **Faster Gantry Speeds**

Linear motors and linear encoders – the mechanisms that move and position the print heads – enable faster and more precise movement than printers utilizing mechanical belts and pulleys.

## **Multiple Extruders**

Multiple extruders eliminate non-printing time when a single-extrusion printer requires time to heat up and cool down to switch between model and support material.

## **Multi-Resolution Printing**

Multiple extruders also allow printing with small and large-width bead thicknesses on the same print job. Thick beads provide faster buildup where aesthetics are not critical, while smaller bead widths are used in areas that require a finer surface finish.

## **Faster Extrusion Rates**

New extruder design pushes material through at a faster rate compared to legacy extrusion technology.

## **Autocalibration**

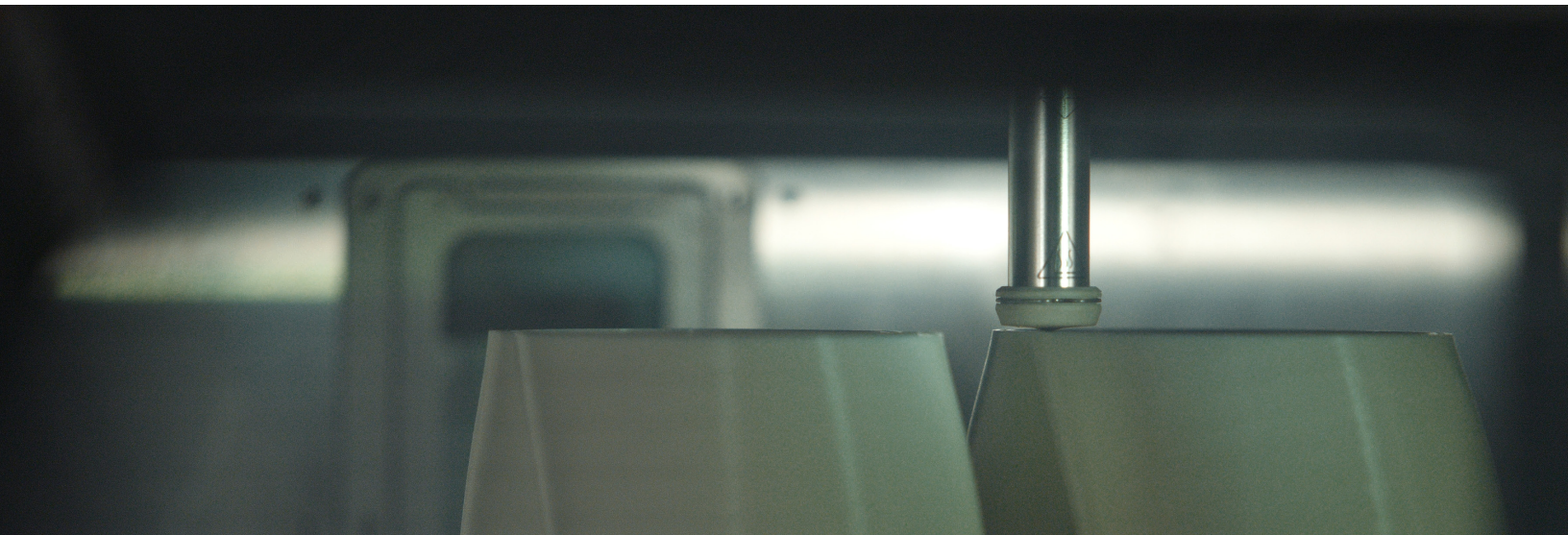
Time previously required to print and evaluate calibration boxes after a material change is eliminated. Calibration is now handled automatically in just a few minutes with no operator input required.

## **Larger Material Spools**

4100 cc (250 ci) material spools reduce reloading frequency, saving critical time in a production environment.

## **Multiple Extruders and Automatic Tool Changer**

Four preloaded, ready-to-print extruders multiply the printer's efficiency. In addition, a patented tool changer automatically swaps out extruders when needed, eliminating the time required to change materials or restart a print job.



# Print with benchmark **reliability.**

3D printing in a production environment demands predictable performance. The F3300's next-level reliability starts with a robust process monitoring capability and mechanical design focused on delivering maximum uptime and repeatable performance.

## **EtherCAT Onboard Communication**

An EtherCAT protocol provides comprehensive monitoring and communication with each F3300 subsystem at high speed and efficiency. This allows tight synchronicity among the systems controlling the print process, enabling highly accurate, repeatable, and reliable print results.

## **Redundancy for Critical Systems**

Multiple extrusion heads mean a standby extruder can take over if the primary unit faults, avoiding a failed build. Since each extruder has its own material supply, a different extrusion head can take over printing in less than a minute, preventing auto-changeover failures that halt the build process.

## **Extruder Instrumentation**

Strain gauges on the extruders coupled with the F3300's extensive self-monitoring network signal when extrusion parameters such as push force, position, temperature, or velocity are incorrect or degraded. This affords predictive failure monitoring, allowing you to detect failures and take corrective action before they occur.





# Make parts and tools with industry-leading **print quality.**

The F3300 introduces new capabilities that increase the quality of FDM 3D printed parts. Key among them are features that regulate material moisture and provide more control over the printing process.

## **Integrated Material Dryers**

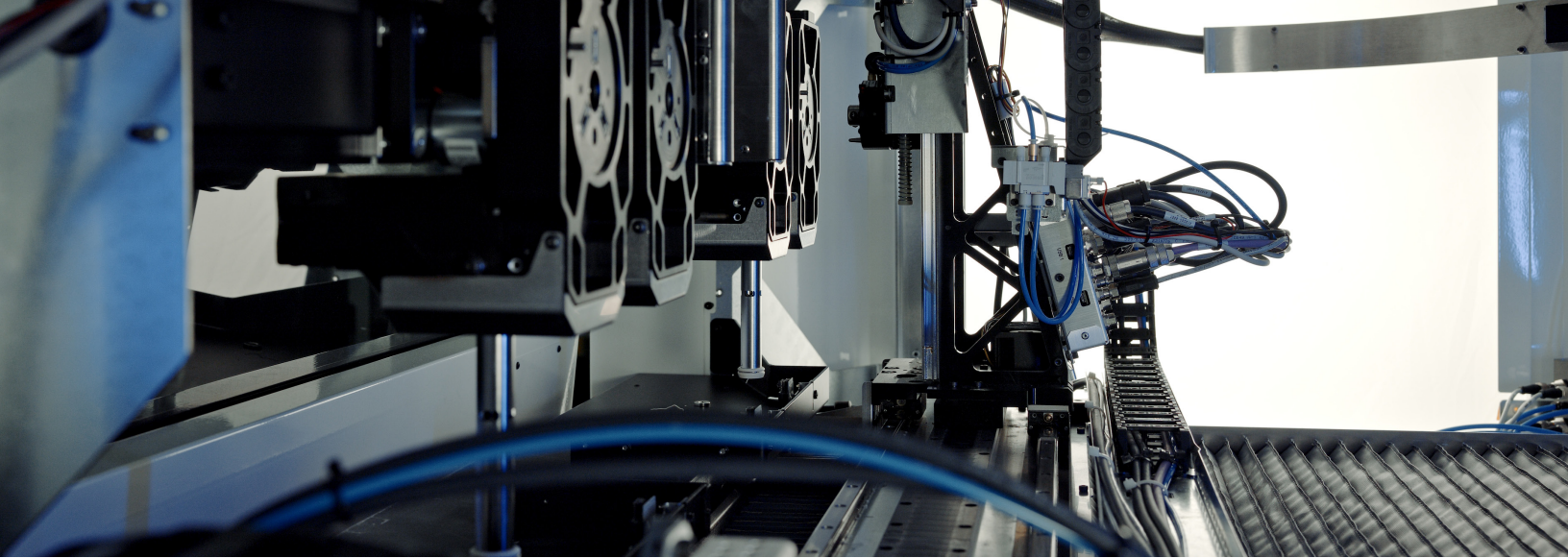
Eliminate poor quality and failed parts because of material moisture. Onboard dryers that combine dry air and temperature keep materials at the proper humidity levels to maintain optimal mechanical properties. This includes the ability to set a drying prescription that the onboard dryer will execute to establish the proper material desiccation.

## **Precise Gantry Controls**

The F3300's gantry system, which controls where material is deposited, is governed by linear encoders, which are among the most accurate positioning controls in machine automation. The result is precise material application and correct print results.

## **Advanced Extruder Control**

The repeatability and quality required for production applications demand tight control of the material extrusion process. F3300 extruders employ physical features and software algorithms that allow exacting temperature control of the plastic flow, resulting in accurate material application.



# Maximize utilization with easy-to-use operation.

State-of-the-art technology doesn't have to come with a steep learning curve. Besides embodying the latest FDM technology advancements, the F3300 includes intentional features that make it simple and straightforward to operate. At a time when skilled labor is increasingly scarce, the F3300 is purposely designed to allow virtually anyone to use it with minimal instruction. Using design features from the proven simplicity of our F123 Series™ printers, the F3300 employs the following user-friendly elements:

## **Large Intuitive User Interface**

Easy accessibility starts with an ample printer control touchscreen with two internal camera views and large color displays of extruder, material, and print status.

## **Autocalibration**

Calibrating the printer after a material change is handled automatically in minutes by the printer, requiring no operator input.

## **Easy-Access Print Bays**

All four print bays are conveniently located in the front of the printer. Loading material is a basic process of placing the spool in the bay and inserting the end of the filament into the feed port.

## **Front-Mounted Plug-In Extruders**

Extruders are conveniently located on the tool changer in the front of the printer for easy accessibility and replacement.

## **More Customer-Replaceable Units**

The F3300 includes more customer-replaceable components than legacy FDM systems. This lets you get operational much faster vs. having to wait for field support to replace the part should a fault occur.

## **Empowering User-Friendly Software**

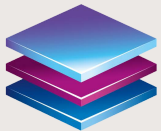
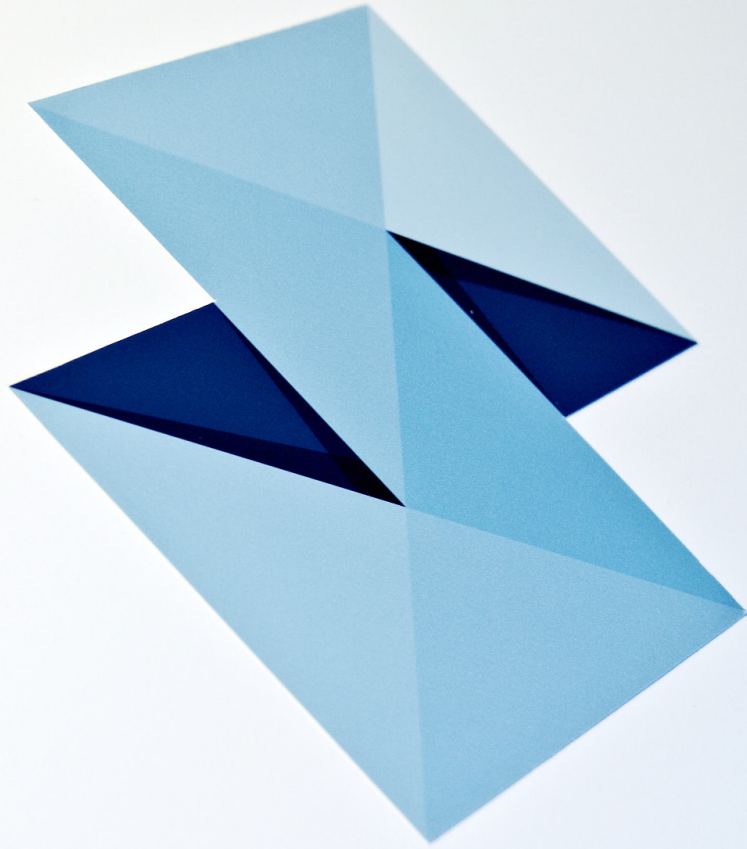
GrabCAD Print™ offers an intuitive, easy, CAD-to-print workflow with features that let you check build file integrity, organize print queues, and get real-time print status notifications. GrabCAD Print Pro™ contains all the features of GrabCAD Print plus additional workflow enhancement tools. Insight™ software and MTConnect are also included for users who want greater print processing control and factory-floor connectivity.

# Get unmatched **support** **when you need it.**

Stratasys invented FDM Technology and we've been perfecting it for over 30 years. Our engineers and technicians know how to make the most of your printer investment and address problems when they occur.

When you need help, our global support staff is here to assist, from professional installations to application guidance to contract manufacturing services. Whether optimizing your print results, solving a problem, providing training, or making parts for you, Stratasys support and contract services have the experience and reach to keep you operational.





# TRI-TECH 3D

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