Large Format.
Industrial Strength 3D Printers.
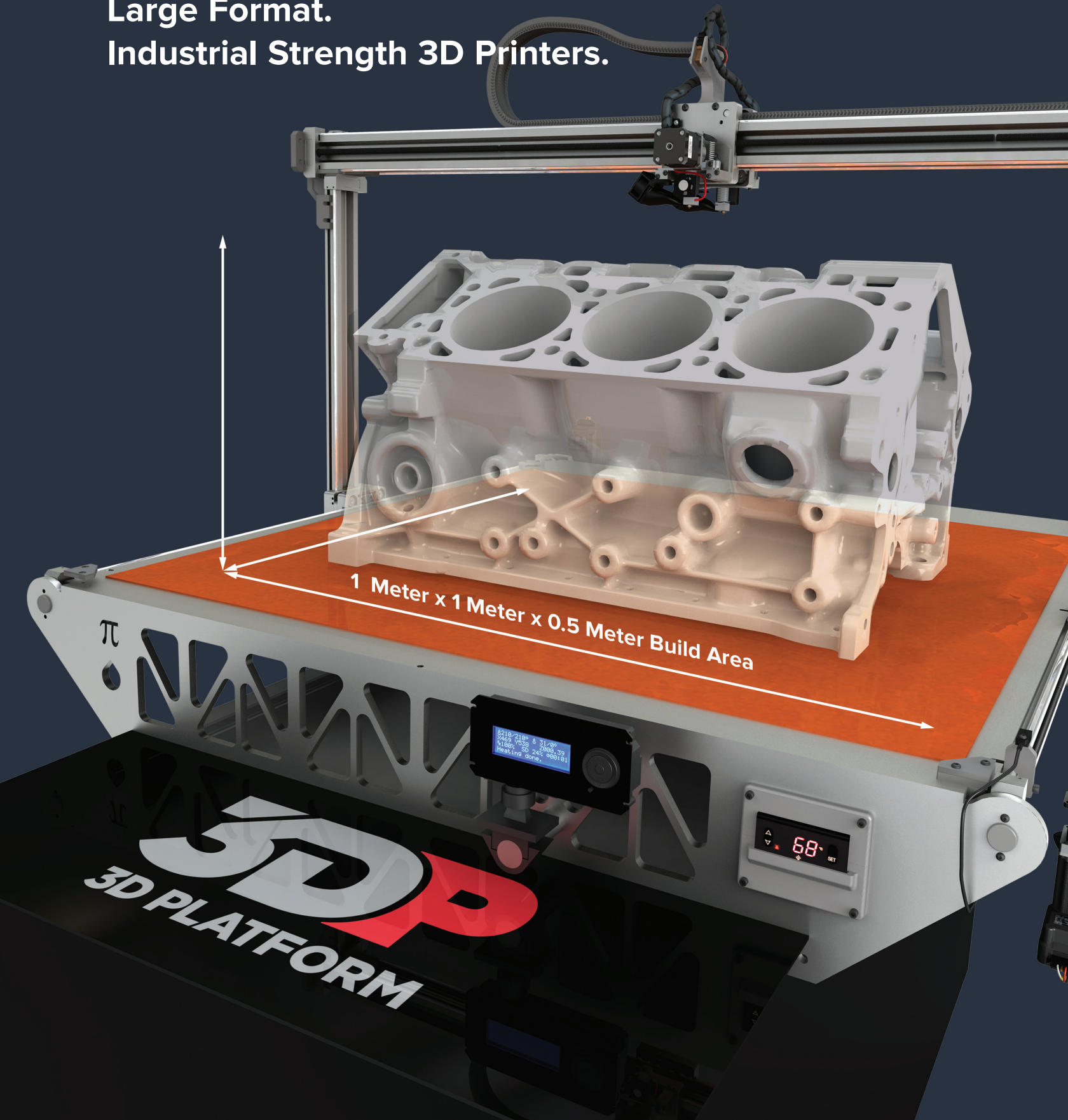
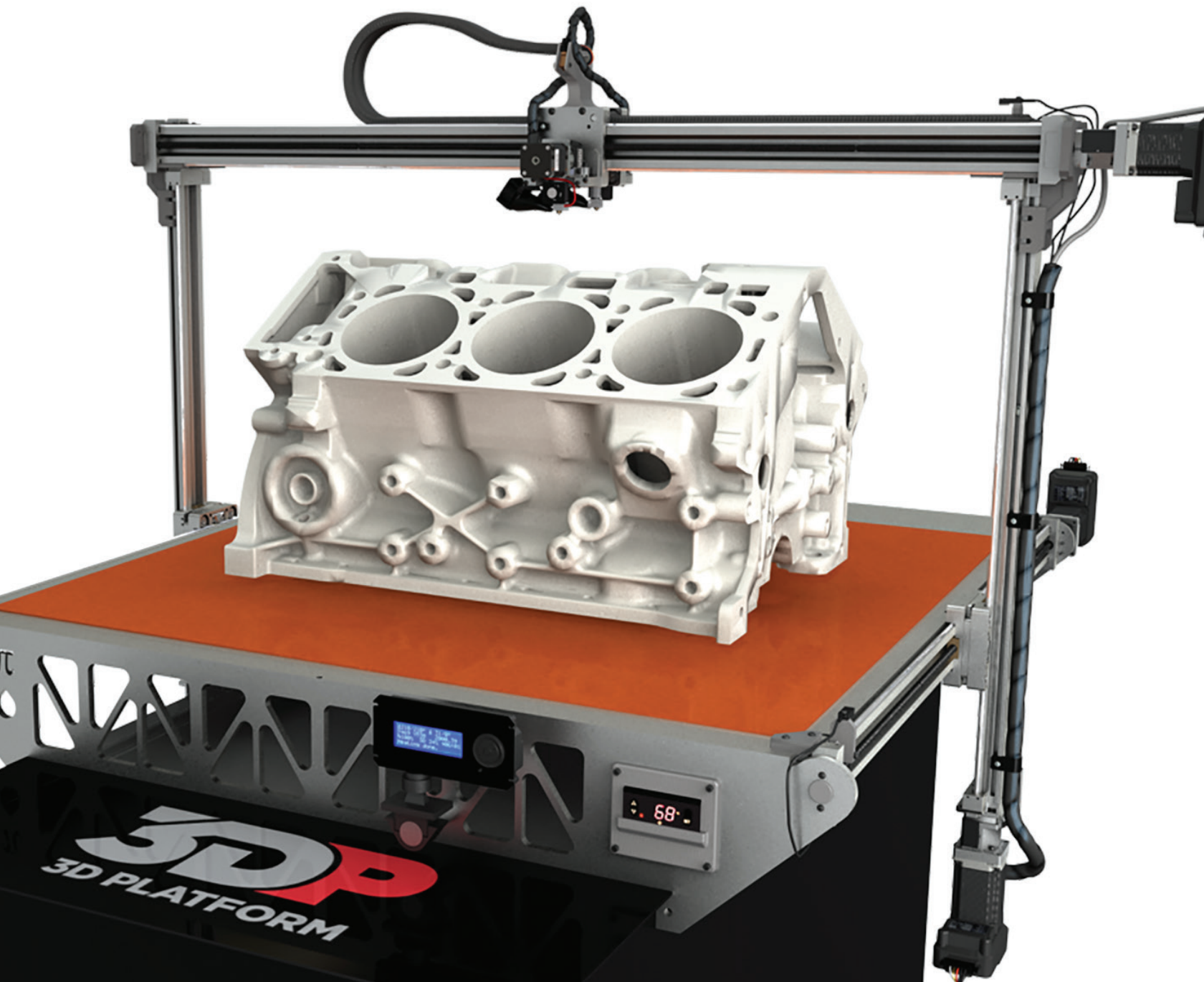1 Meter x 1 Meter x 0.5 Meter Build Area

Why Choose 3D Platform

BIG

- 1 meter x 1 meter x 0.5 meter build area
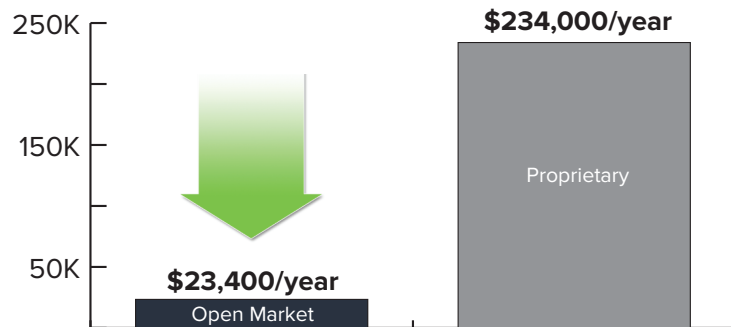- 74X larger build area than the standard desktop 3D printer

ECONOMICAL

- Low purchase price, starting under $20,000

- Low operating cost, 90% savings using open market materials

Case Study: Gas Tank Demos

Material Cost Comparison: Open Market vs. Proprietary System

Study based upon the printing of one gas tank demo per week x 50 weeks per year = **50 tanks per year**. Open Market Advantage: $468 material per tank = **$23,400 material per year**. Proprietary System: $4,680 material per tank = **$234,000 material per year**.

ACCURATE

- SurePrint™ servos provide closed loop system

- 20,000 count encoder

- 1.25 micron feedback resolution

- Print layer resolutions down to 70 microns

ROBUST

- Industrial strength mechatronics delivers superior performance and reliability

- Utilizes SIMO® Series precision rails and Constant Force™ anti-backlash lead screws and nuts from PBC Linear®

- Expand your print capabilities with:

  - Inserts

  - Core Modeling

3DP
3D PLATFORM
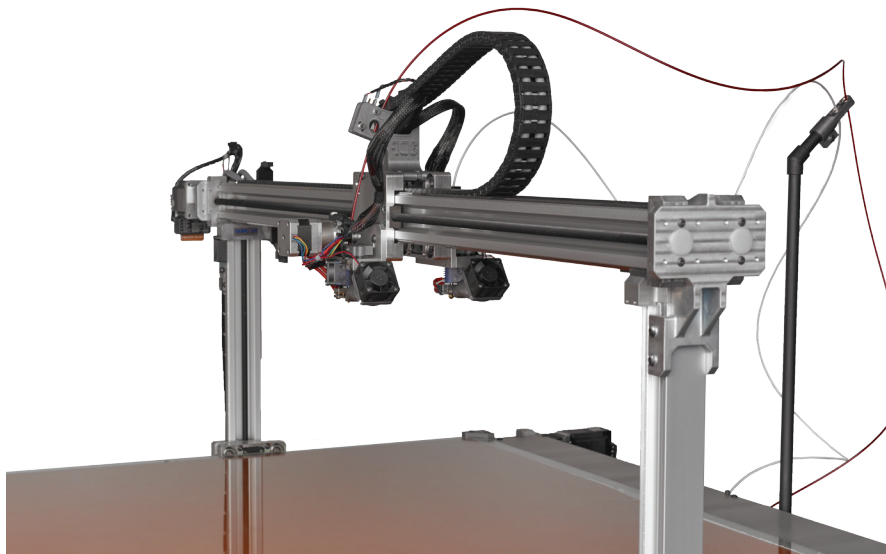
The Open Platform Advantage

OPEN MARKET MATERIAL DIVERSITY

- Flexibility to choose from a **wide variety** of open market materials such as:
  - Flexible and rubber-like properties
  - Electrically conductive
  - Filled—bronze, wood, carbon fiber, etc.
  - Food contact safe
  - And many more
- Ongoing material science advancements provide a pipeline to rapid innovations

STATE-OF-THE-ART MOTION CONTROL

- Platforms utilize SIMO® Series linear actuators and Constant Force™ lead screws and nuts from PBC Linear®
- SurePrint™ Servo Technology
  - 85% more motor torque equals **faster prints**
  - Closed loop system improves print quality
  - Sophisticated control similar to a car's traction control and anti-lock brake system
- Go green!
  - 60% reduced energy consumption
  - 50% lower running temperature

3DP 3D PLATFORM

SurePrint™ Technology
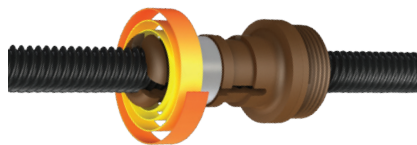
BEST IN CLASS HARDWARE

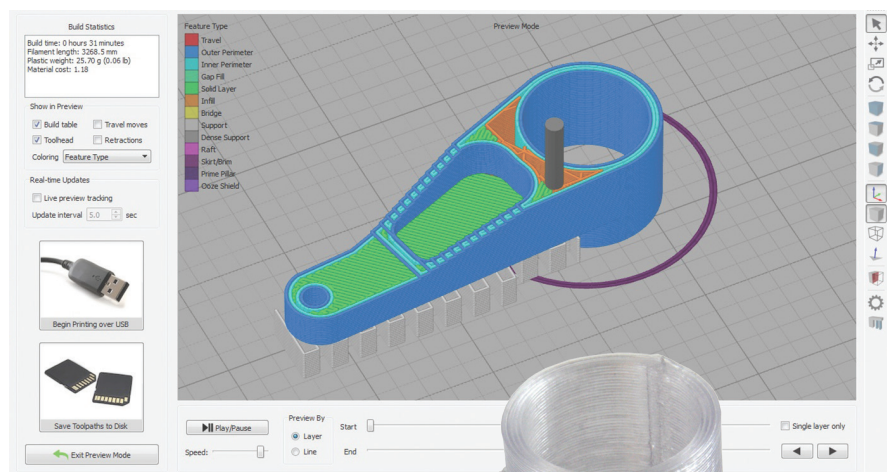- Ability to access and adopt the newest **extruder options** on the market

- Flexibility to change nozzles: small diameter used for fine layer resolutions; large diameter for fast printing and strong parts

- Print **6 times faster** with larger size (1.2 mm) nozzle

0.4mm NOZZLE　　0.6mm NOZZLE　　1.2mm NOZZLE

PRINT TIMES

2x Faster!

6x Faster!
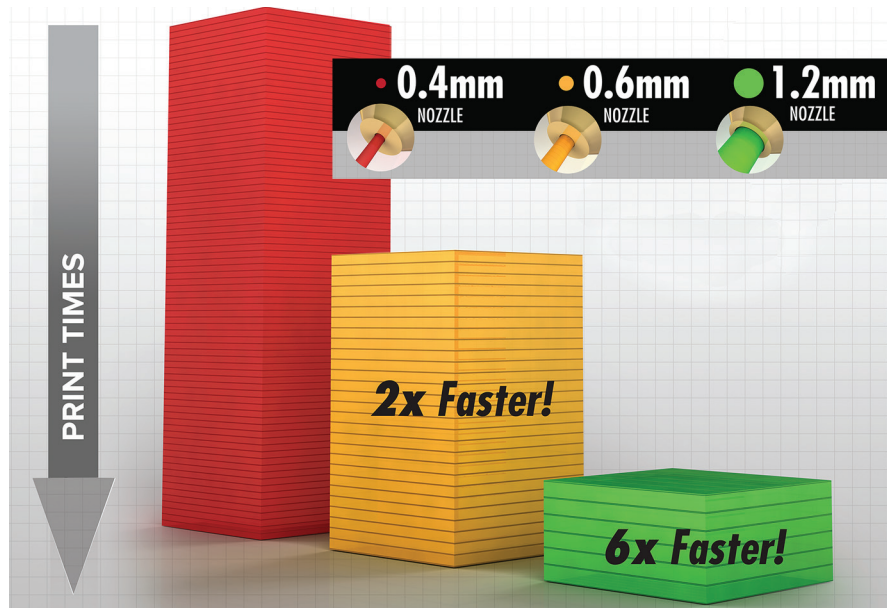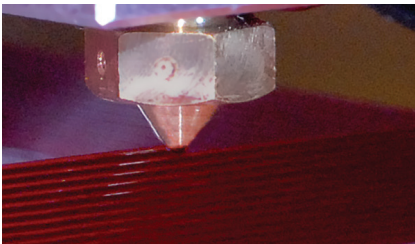
CUTTING-EDGE SOFTWARE

- Best-in-class **open market** 3D printing software

- Includes detailed print previews

- Advanced print algorithm

- Benefits in design and printing speed

- Enables **higher quality** prints

Software shown in example: Simplify3D®

3DP
3D PLATFORM

3D Platform Solutions

PROTOTYPING

3D Platform provides **full-scale** printing capabilities.

No need to scale down or print multiple parts that require assembly.

Cut time to market with rapid design iteration.

Key Advantages:

- Diverse open market material selections enable **90% savings** vs. proprietary materials
- Superior **fast print** speed of 70-100 mm/sec enabled by SurePrint™ technology
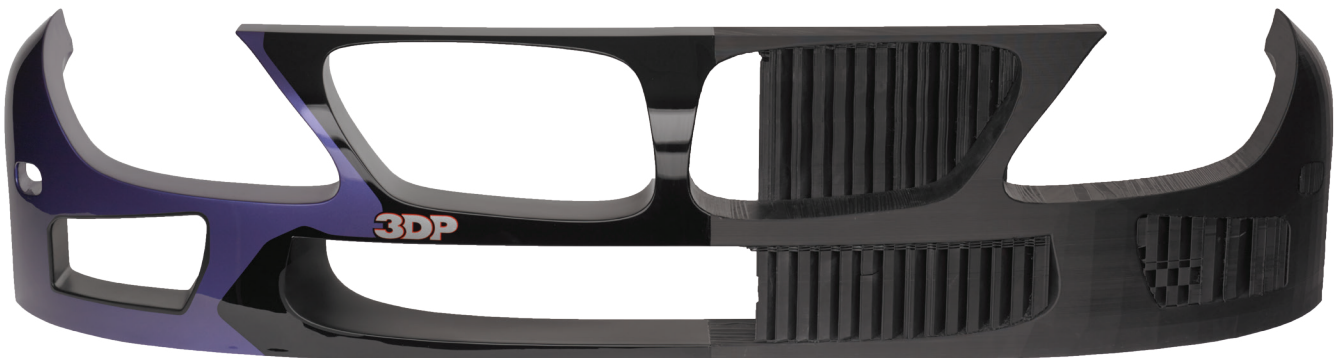- Print up to 6x faster with larger nozzle sizes

Gas Tank
Material Cost: $450

Rim
Material Cost: $100

Bumper
Material Cost: $832

PRODUCTION

The large build area enables users to **mass-produce** end-use parts.

Print **fully functional** parts quickly with multiple nozzle diameter options, and **cost effectively** with open market materials.

Key Advantages:

- Advanced capabilities:
  - Embed inserts: fasteners, electronics, sensors, etc.
  - Core modeling
- Open market software allows for core modeling—creating **different process zones** within a printed object—optimizing strength and weight
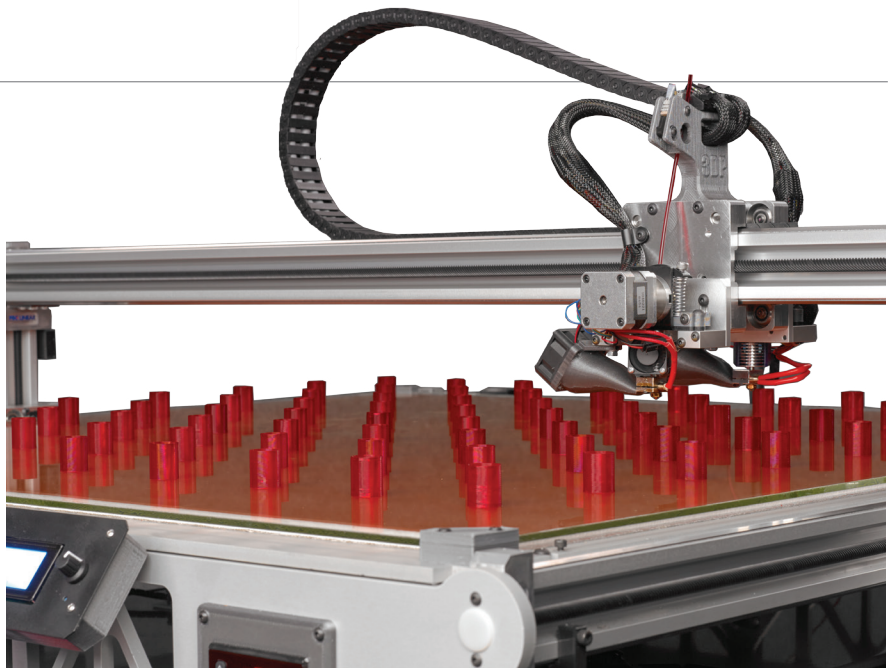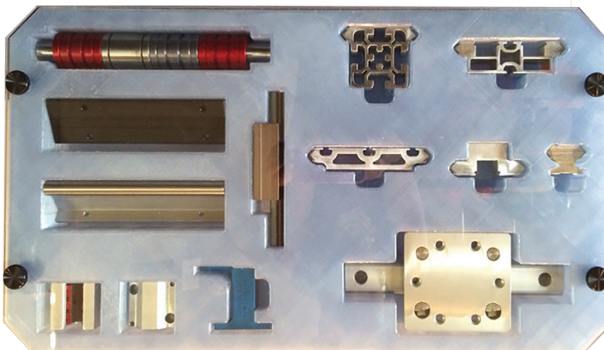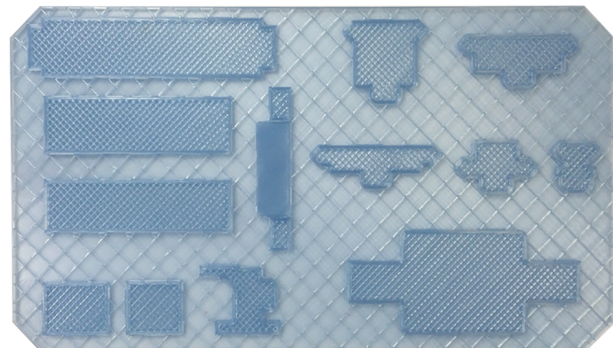

100 Cylinders
Material Cost: $25

Actuator Bracket
Material Cost: $20

Shadow Board
Material Cost: $60

Example of core modeling. Dense infill assigned to support the heavy objects in the shadow board.

3DP
3D PLATFORM

3D Platform Solutions

Design without limits.

PERSONALIZATION

3D Platform enables users to print **full-scale objects** that are customized to fit their needs.

Custom 3D printed objects are commonly derived from 3D scans and are often applied in the medical, fashion, education, and entertainment industries.

Key Advantages

- Diverse open market materials enable printing when unique physical properties are desired
  - Flexible
  - Pliable
  - Strong and rigid
  - Mix of the above
- Advanced capabilities:
  - Integration of inserted objects, such as fasteners, electronics, sensors, etc.
  - Core modeling optimizes strength, weight, and print times

Prosthetic Hand
Material Cost: $60

Full Body Print
Material Cost: $400

CREATIVE

3D Platform enables 3D artists to unleash their creativity and bring big ideas to life.

Large build area allows for **full-scale** printing, without scaling down or multiple parts that require post-print assembly.

Key Advantages:

- Advanced capabilities:
  - Embed inserts: fasteners, electronics, sensors, etc.
  - Core modeling optimizes strength, weight, and print times
- Diverse open market materials enable printing when unique physical properties are desired
  - Flexible
  - Pliable
  - Strong and rigid
  - Mix of the above

Frankenstein Head
Material Cost: $240
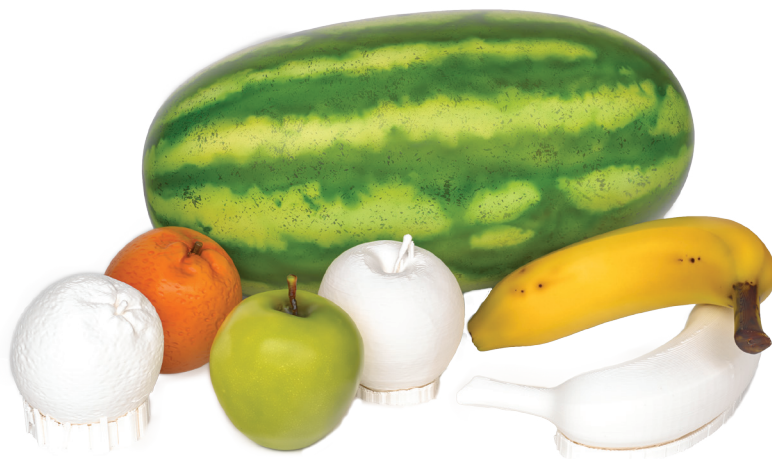
Fruit
Material Cost: $40

Expanded 3D Printing Capabilities

REINFORCED CHAIR

Advanced processes in 3D printing, such as inserts, core modeling, and multiple materials, can expand the capabilities of a 3D printer. Incorporating non-printed elements, such as fasteners, electronics, switches, sensors, or even metal substructures, into a printed part expands the spectrum of usability—resulting in fully functional models and prototypes.

The Challenge

3D print a chair that is sturdy enough to use.

The Solution

- Print a full-size chair using PLA with steel inserts to provide structural reinforcement
- Model-in the space for inserts within the 3D design, allowing for placement of the steel during printing
- Place stainless steel braces into the print at each programmed pause, then resume printing

The Result

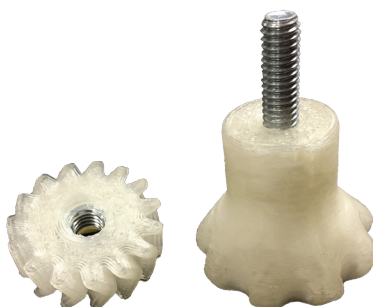- A fully functional, steel reinforced, 3D printed chair

Chair
Material Cost: $562
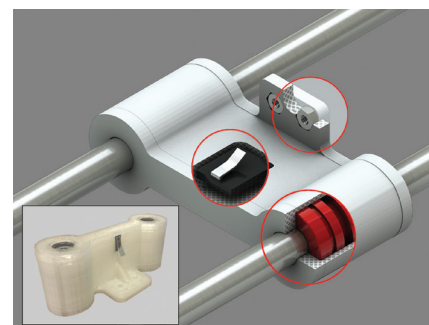
OTHER APPLICATION EXAMPLES
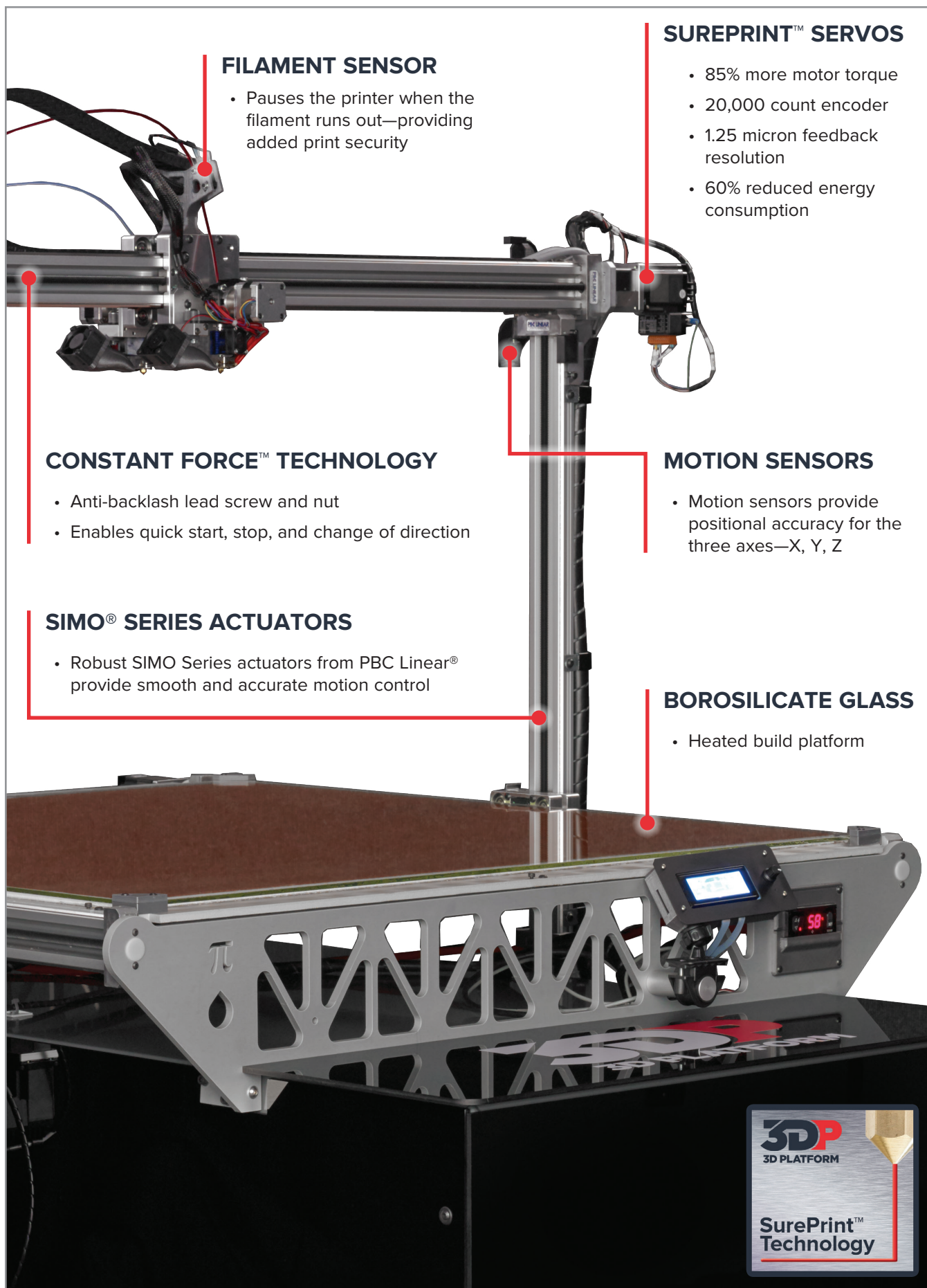
Electronics

Nut and bolt combination

Linear bearings, nuts, and sensor

FILAMENT SENSOR

- Pauses the printer when the filament runs out—providing added print security

SUREPRINT™ SERVOS

- 85% more motor torque
- 20,000 count encoder
- 1.25 micron feedback resolution
- 60% reduced energy consumption

CONSTANT FORCE™ TECHNOLOGY

- Anti-backlash lead screw and nut
- Enables quick start, stop, and change of direction

MOTION SENSORS

- Motion sensors provide positional accuracy for the three axes—X, Y, Z

SIMO® SERIES ACTUATORS

- Robust SIMO Series actuators from PBC Linear® provide smooth and accurate motion control

BOROSILICATE GLASS

- Heated build platform

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3D PLATFORM

SurePrint™ Technology

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3D PLATFORM

Technical Specifications

PRINTER SPECIFICATIONS

Printer Type	Fused Filament Fabrication (FFF)
Build Volume	1 m x 1 m x 0.5 m (39.3 in x 39.3 in x 19.6 in)
Build Platform	Heated borosilicate glass; 120°C maximum temperature
Layer Resolution	Down to 70 microns (0.0027 in)
Build Speed	70-100 mm/sec
Build Materials	• Open source materials • 3 mm diameter filament • Melt point below 295°C
Extruder Options	Dual or single head extruder
Nozzle Diameter	0.6 mm standard—other sizes optional; 0.25 mm, 0.4 mm, 0.8 mm, 1.2 mm
Certifications	CE Certification
Power Input	Option 1: 110 V, 15 AMP, 60Hz Option 2: 208-220 V, 15 AMP, 60 Hz
Ambient Operating Temp.	15° - 32°C (60° - 90°F)

PHYSICAL DIMENSIONS & WEIGHT

Overall Width	1.42 m (56 in)
Overall Depth	1.68 m (66 in)
Overall Height	1.52 m (60 in)
Approx. System Weight	180 kg (400 lbs.)
Shipping Crate Dimensions	1.5 m x 1.8 m x 1.8 m (5 ft x 6 ft x 6 ft)
Approx. Shipping Weight	544kg (1200 lbs.)

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SOFTWARE PLATFORM

Repetier Host & Slic3r

Repetier Host is a free, open market software used to operate your 3D printer – with controls for temperature, speed, flow, and movement. It includes an interface with Slic3r, which is used for processing files, cutting a model into horizontal slices–called layers–generating tool paths to fill them and calculating the amount of material that will be extruded. The program is available for download at www.repetier.com.

Simplify3D®

Simplify3D is an easy-to-use program used to import, repair, slice, preview, and print all from the same application. Simplify3D is available for purchase at www.simplify3d.com.

Note: Repetier Host and Slic3r are used in conjunction and can be downloaded simultaneously from the Repetier Host website. Simplify3D is used singularly to process files and operate the printer.

ABOUT 3D PLATFORM

3D Platform is a leading manufacturer of large-scale, industrial-class 3D printers. 3DP's flagship 3D printer, the 3DP1000, offers a large build area of 1 meter x 1 meter x 0.5 meter. Based in Roscoe, Illinois, 3D Platform is a company of skilled mechatronics engineers who embrace advancements in technology to innovate, design, and build next generation equipment for rapid prototyping. 3D Platform is committed to building on industrial strength linear motion components, actuators, and motors while maintaining affordable flexibility with open market software and control solutions.

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