

S E R V I C E S

DESIGN | ADDITIVE MANUFACTURING | METROLOGY





proto3000

Inspire Innovation

At Proto3000, we commit ourselves to helping companies leverage the transformative power of advanced manufacturing using industry-leading additive manufacturing and metrology solutions. Our portfolio of products and services are crafted to address the growing challenges faced in design, manufacturing and the supply chain across various industries and businesses. We equip your organization with the knowledge, tools, and resources you need to reinvent the way you imagine and create new ideas and products. With the Proto3000 team as your partner, you can focus on sustainable growth with a unique competitive advantage designed for today's global marketplace. Let's start building the future, together.

Trusted By

THOSE SHAPING THE FUTURE OF...

AEROSPACE



Pratt & Whitney
A United Technologies Company

BOMBARDIER

AIRBUS



AUTOMOTIVE



TOYOTA

NISSAN



CONSUMER PRODUCTS

Nikon



3M

HEALTHCARE

SickKids



EVERYTHING ELSE



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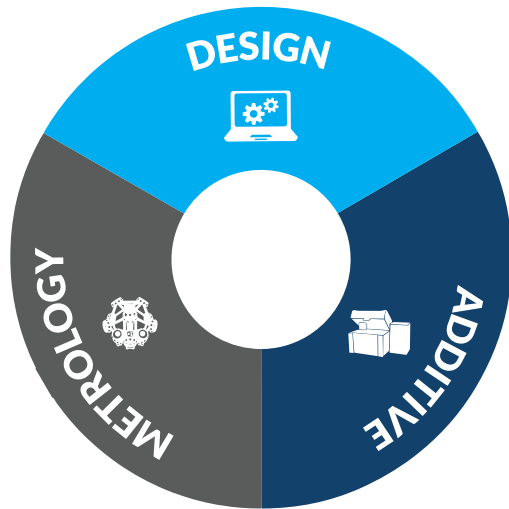
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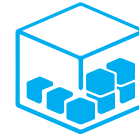
**ADVANCED
MANUFACTURING
LIVES HERE**

END-TO-END PRODUCT DEVELOPMENT & MANUFACTURING SERVICES

The factory of the future exists today. New additive manufacturing and metrology technologies are changing the way products are envisioned, developed, and produced. Receive expert end-to-end product development and manufacturing services from our team to ensure your concept grows into a finished product equipped for the industries of today and tomorrow.



**RAPID
PROTOTYPING**



**ADDITIVE
MANUFACTURING**



DESIGN



INSPECTION



FINISHING



DESIGN

UNLOCK THE FULL POTENTIAL OF YOUR IDEA WITH 3D DESIGN

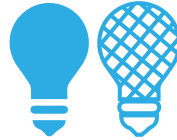
Take your ideas to the next level. Our designers take full advantage of the technological potential from 3D printing and 3D scanning, without the constraints of conventional manufacturing methods. From concept to production, the Proto3000 team will help you unlock the full potential of your idea using today's most advanced 3D design technology.



**PRODUCT
DESIGN**



**VIRTUAL
ENVIRONMENTS**



**REVERSE
ENGINEERING**



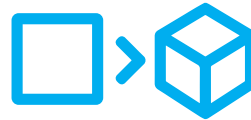
**EXPLODED
ASSEMBLIES**



CAD ENGINEERING



**DESIGN FOR
ADDITIVE**



**2D TO 3D
CONVERSION**



FILE CLEANUP

ADDITIVE



ADDITIVE MANUFACTURING IS TRANSFORMING BUSINESSES

Additive manufacturing is redefining how parts and products are imagined, designed, and produced. With unlimited design potential you can create parts that are stronger and lighter with improved performance and unique functionality. Gone are the days of one size fits all; with additive, you can now take a customized and low-volume approach to your product development and manufacturing. Work with our team of additive experts to dream the impossible and make the unmakeable with world class technology.



POLYJET



FUSED DEPOSITION MODELING



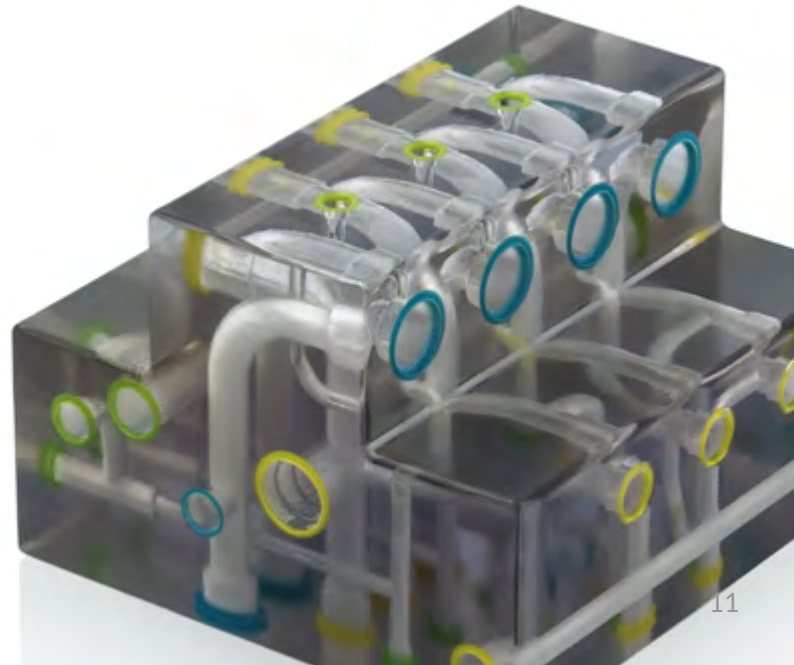
STEREOLITHOGRAPHY



SELECTIVE LASER SINTERING



DIRECT METAL LASER SINTERING





PolyJet

PolyJet is an additive process that jets layers of liquid photopolymer resin to print models that have complex geometries, fine details and smooth surfaces. Combine multiple colours and materials that range from rigid to flexible in a single print, giving you an endless palette of material and colour possibilities.

POLYJET PERFORMANCE

LAYER RESOLUTION OUTSTANDING	THIN WALLS OUTSTANDING	SURFACE FINISH OUTSTANDING	FUNCTIONALITY GOOD



CONCEPT
MODELS



FULL-COLOUR
MODELS



MULTI-MATERIAL
MODELS



FUNCTIONAL
PROTOTYPES



MOLDS &
PATTERNS



JIGS &
FIXTURES



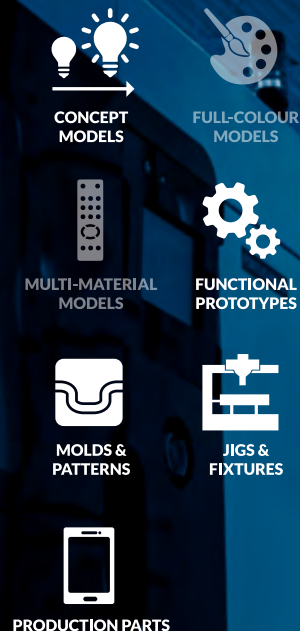
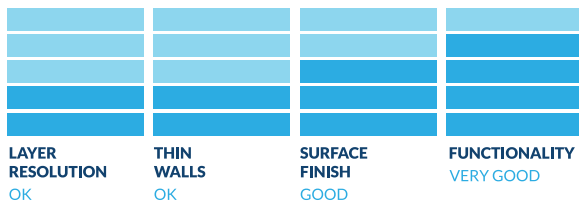
PRODUCTION PARTS



Fused Deposition Modeling

FDM is an extrusion based technology that uses production-grade thermoplastics to print durable parts with outstanding thermal and chemical resistance, and strength to weight ratios. Perfect for creating functional prototypes and end-use parts.

FDM PERFORMANCE





Stereolithography

SLA is an additive process that uses a UV laser to precisely cure resin and produce fantastic prototypes for visual aids and displays. Models are quickly printed with smooth surfaces and fine detail.

SLA PERFORMANCE

LAYER RESOLUTION VERY GOOD	THIN WALLS OUTSTANDING	SURFACE FINISH OUTSTANDING	FUNCTIONALITY GOOD



CONCEPT
MODELS



FULL-COLOUR
MODELS



MULTI-MATERIAL
MODELS



FUNCTIONAL
PROTOTYPES



MOLDS &
PATTERNS



JIGS &
FIXTURES



PRODUCTION PARTS



CONCEPT
MODELS



FULL-COLOUR
MODELS



MULTI-MATERIAL
MODELS



FUNCTIONAL
PROTOTYPES



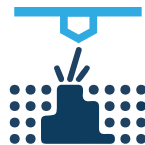
MOLDS &
PATTERNS



JIGS &
FIXTURES



PRODUCTION PARTS



Laser Sintering

Laser Sintering uses a high powered laser to fuse sintered thermoplastic powders and create parts that are geometrically complex yet strong and durable. With strong repeatability and accuracy you can produce parts that are lightweight, durable, and environmentally-resistant to suit a variety of applications.

SLS PERFORMANCE

LAYER RESOLUTION GOOD	THIN WALLS GOOD	SURFACE FINISH VERY GOOD	FUNCTIONALITY VERY GOOD



Direct Metal Laser Sintering

DMLS uses a high-powered laser to melt layers of fine metal powders together and build real metal parts without conventional manufacturing limitations. With this technology you can produce highly accurate metal prototypes and end-use parts to meet the needs of any industry.

DMLS PERFORMANCE

LAYER RESOLUTION VERY GOOD	THIN WALLS OK	SURFACE FINISH GOOD	FUNCTIONALITY OUTSTANDING



CONCEPT
MODELS



FULL-COLOUR
MODELS



MULTI-MATERIAL
MODELS



FUNCTIONAL
PROTOTYPES



MOLDS &
PATTERNS



JIGS &
FIXTURES



PRODUCTION PARTS

Materials

CREATE MORE

The right materials matter. With our in-house mix of additive manufacturing technologies, we offer a dynamic range of materials which cater to a variety of applications throughout your product development lifecycle. With options, we can meet the critical, time and cost sensitive needs of manufacturers and product development teams while still delivering on the complex geometries and benefits of working with additive processes. From fast concept modeling to highly detailed hyper-realistic end-use parts, we have material solutions to usher in a new generation of products and parts.



**STANDARD
PLASTICS**



**ENGINEERING
PLASTICS**



**HIGH
PERFORMANCE
PLASTICS**



PHOTOPOLYMERS



METALS





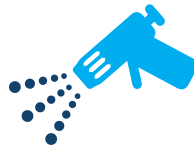
Finishing

THE FINAL TOUCH

The right finish can mean the difference between a raw prototype and a product that's ready for the market. Our expert finishing services can help create visually striking prototypes that enhance the purpose and functionality of your 3D printed parts. Using our state of the art finishing technologies, such as our semi-downdraft spray booth, we take 3D printed parts and transform them into something you would be proud to put your name on.



BONDING/GLUING



BEAD BLASTING



PAINTING
(SPRAY CHROME OPTION)



SEALING



ELECTROPLATING



MASS FINISHING



SANDING



SMOOTHING

CONCEPT MODELING

It takes countless ideas to get to one that works, and with 3D printing these ideas can be evaluated faster and more extensively than ever before. Empower your engineers and designers to put their best work forward by working with our team to produce low-cost, early stage concept models.



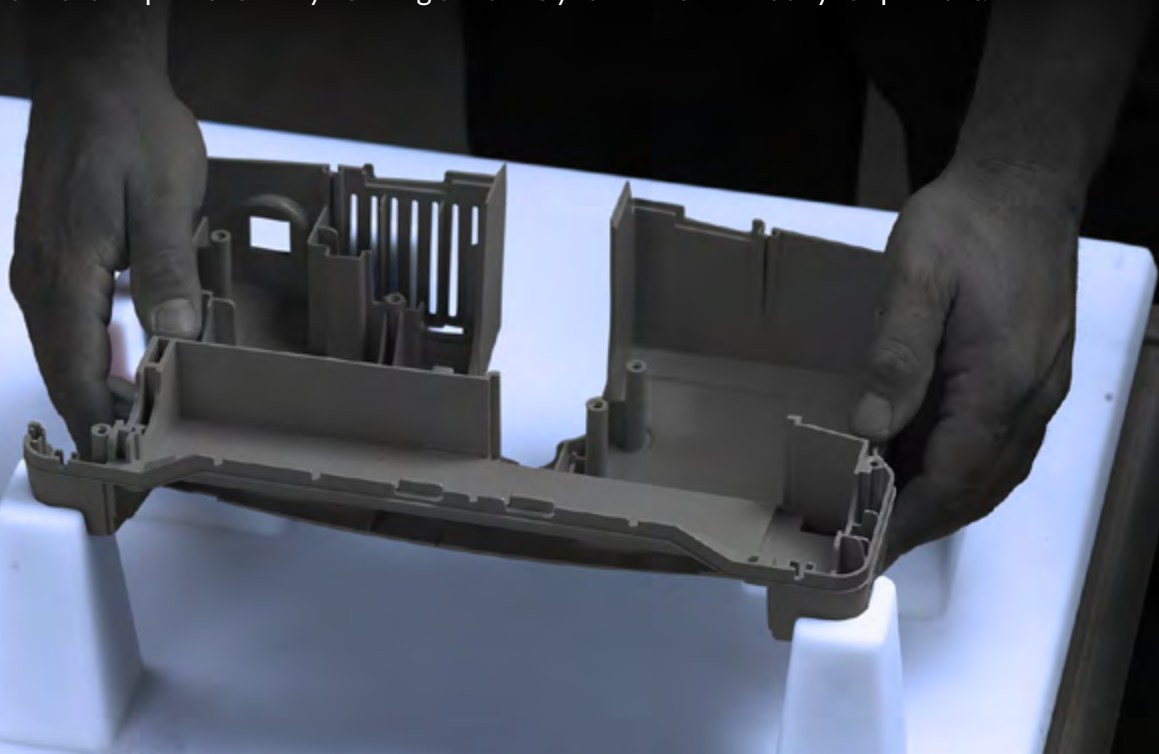
A man with dark hair, wearing a white button-down shirt, is shown in profile, looking down at a 3D printed object he is holding. The object is a green, hollow, lattice-like structure. He is also holding a small, colorful, geometric object made of many small cubes, which is partially visible. The background is dark and out of focus.

RAPID PROTOTYPING

Go to market faster than ever. 3D printing enables rapid prototyping at unprecedented speeds by accelerating tangible design iterations and enabling more in-depth communication between design teams. With the Proto3000 team creating your prototypes, your organization can focus on testing and design, with the end result of making better products.


RAPID TOOLING

Manufacturing tools and aids are essential to delivering products reliably, consistently and at a low cost. With 3D printing solutions, your organization can benefit from producing high quality manufacturing aids such as jigs, fixtures, templates, molds, and gauges in a streamlined and cost-efficient manner. Reduce the cost and risk associated with traditional tool production by building the tools you need to execute your product.



LOW-VOLUME PRODUCTION

Go directly from digital design to a final part. 3D printing technology eliminates the need for costly tooling processes by allowing cost-effective production of single-unit or low-volume parts. Customize your products to local markets and your customer's unique tastes. Eliminate valuable inventory space and cut aftermarket lead-times by designing digital files that can be printed on demand.



Fortus 450mc
3D Production System

Production

THE NEW INDUSTRIAL REVOLUTION IS HERE

Utilizing additive manufacturing for production applications opens the door to true breakthroughs in production and product development. With this technology you can create products and parts that have enhanced performance and function due to complete freedom of design. With economies of scale mitigated, and the line between volume and cost blurring, the stage is set for localized, on-demand production. Focus on conceptualizing your best idea and let us worry about manufacturing it.



METROLOGY

DISCOVER DIGITAL MEASUREMENT

Rely on our team of metrology experts for reliable, accurate and non-destructive measurement data for projects that are critical to your business.



REVERSE ENGINEERING



INSPECTION



NON-DESTRUCTIVE TESTING



LARGE-SCALE PROJECTS



ON-SITE



Inspection

MICRONS MATTER

Product quality is central to your business and with inspection services from the Proto3000 team you can be confident that your parts are produced within spec and are ready for the world. With our on-site or in-house inspection technologies we can reduce manufacturing errors while increasing product quality and production efficiency all in real time. Rely on us for critical and time-sensitive projects in any industry.



PART-TO-PART



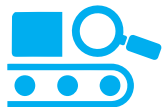
PART-TO-CAD



SAMPLING



COLOUR OVERLAY



FIRST ARTICLE



**JIG
CONFIRMATION**



**NON-DESTRUCTIVE
TESTING**



QUALITY CHECKS

Reverse Engineering

DIGITIZE YOUR WORLD

With reverse engineering services from Proto3000 you can digitize almost anything into workable 3D CAD data. By digitizing your products and parts you can modernize your manufacturing and product development processes and eliminate the need for physical inventory.



**CAD
DEVELOPMENT**



**REFERENCE
BODIES**



**ASSEMBLY
MAPPING**



CASING



BOM CREATION



ARCHIVING



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