



COMPANY **BROCHURE**

HIGH  **3D**
Exceeding Expectations



www.highon3d.co.in



About HIGH On 3D

HIGH On 3D Established in February 2018 is an expanding start-up based in Pune Maharashtra. HIGH On 3D is committed to delivering quality 3D printing/Additive Manufacturing solutions in designing, manufacturing, and engineering processes as per customer requirements. With rapid prototyping technology, we assemble 3D objects from polymeric systems.

We manufacture the highest quality prototypes, electronics enclosures, machined parts and more. For over 5+ years , HIGH On 3D has served 150+ satisfied clients from disciplines including Automotive , Electronics , Automation , Aerospace , Bio-Medical and More.

Our Capabilities

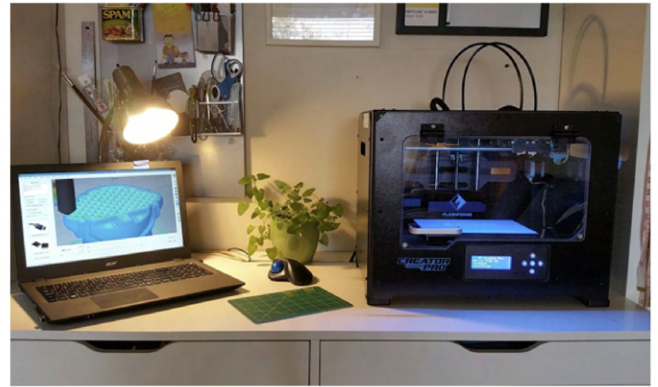
- ♦ 3D Printing/Additive Manufacturing
 - FDM 3D Printing
 - SLA - Stereolithography / Resin 3D Printing
 - HP Multi-Jet Fusion 3D Printing
- ♦ Vacuum Casting
- ♦ Design and Engineering
- ♦ 3D Laser Scanning/ Reverse Engineering
- ♦ Electronics Enclosures
- ♦ Low Volume Production
- ♦ CNC Plastic Machining
- ♦ Plastic Injection Moulding



We define ourself as

We strive to be seen as a partner with our clients, not just a supplier of prototyping services. We want our clients to view us as an extension of their design and development team.

- ♦ Dedicated
- ♦ Consistent
- ♦ Providing high-quality work
- ♦ Producing worry-free results



Our Facility

Since March 2023, we have been in our two custom designed 5500+ square foot facility in Chakan MIDC & Narhe, Maharashtra. Our progressive and advanced facility has allowed us to grow and add new capabilities to meet our client's evolving needs. Give us a call to set up an appointment to visit and see our capabilities first-hand. We would love to show you around and discuss how we could better help you with any upcoming projects

Our Mission

HIGH On 3D is committed to providing our customers with the highest quality available. We strive to employ the latest technologies to produce working 3D prototypes and concept appearance models. We dedicate ourselves to meeting or exceeding the needs and expectations of our clients.

Our Goals

HIGH On 3D works directly with the manufacturers of the 3D Printing materials we use, so that we remain at the forefront of the newest advances in the industry. In doing this, our knowledge and expertise can be passed on to our clients. This commitment to industry standards and advances ensures that our clients receive only the best resources for their project needs.

All of our 3D Printing parts and models undergo a series of checks and measures to ensure that those parts and models conform to the specifications set by our clients. Our goal is to provide 100% satisfaction to our customers 100% of the time. Anything less is unacceptable.



Our Capabilities

1 3D Printing/Additive Manufacturing

Producing prototypes for evaluation, form-fit-function, and presentation

Additive manufacturing, also termed as 3D Printing is the fastest technique to get the component made in a short time. Be it rapid prototyping of a new product or repairing of existing tools, Additive Manufacturing is the manufacturing revolution of the 21st century.

A FDM 3D Printing

With Industrial Grade Flashforge 3D Printers , We can offer the very best in FDM 3D Printing. Our industrial grade FDM 3D Printers can print using over 15+ materials.

Materials

- ♦ ABS
- ♦ PETG
- ♦ PLA
- ♦ CF
- ♦ PC
- ♦ PC-ABS
- ♦ PA-CF
- ♦ HIPS
- ♦ Ultem
- ♦ PP
- ♦ TPU
- ♦ Nylon PA-12
- ♦ ASA

Our Industrial grade Flashforge 3D printers build durable , accurate, repeatable parts. We can 3D print parts as large as 500 X 500 X 500 mm in a range of high grade engineering , medical and food-safe thermoplastics , offering different properties and colours. We provide different 3D printing parameters like four-layer thickness , range of options enabling the right balance between detail, performance and speed of 3D printing production.

It is Ideal for demanding functional prototypes , production parts , jigs , fixtures and factory tooling with unmatched accuracy, repeatability and predictability.All our 3D Printers are used for R&D, prototyping and Small batch Production.



Printed by Flashforge Creator 4 0.4mm Nozzle - PA12 CF

B SLA - Stereolithography / Resin 3D Printing

The SLA 3D printing process uses a UV laser to photo-cure a variety of epoxy-based resins to form 3D objects layer-by-layer from 3D design data (STL files). Because it is an 3D Printing/ additive process, highly complex geometries can be built with assistance from support structures that are easily removed without adverse effect. The key advantage of SLA is its ability to rapidly produce highly detailed models with exceptional aesthetic qualities.



Key Benefits

- ♦ Fine detail and smooth surface finishing
- ♦ Accuracy within 0.050 mm
- ♦ Variety of resins ranging in rigidity, detail, color, clarity, temperature tolerance.
- ♦ Capable of light-duty functional and short-run low-temp tooling
- ♦ 3D Printing of Flexible parts is possible

Key Uses

- ♦ Form, fit & function testing
- ♦ Quick concept and presentation models
- ♦ Master Part for RTV tooling/Vacuum Casting and urethane part production
- ♦ Short run part prototypes



C HP Multi-Jet Fusion 3D Printing

A complete end-to-end solution for the prototyping and production of functional parts with fine detail and great accuracy.

This new Multi-Jet Fusion technology allows faster prototyping and short-run production with end-use part material reliability. This production style is considerably faster than the other additive manufacturing options or traditional manufacturing methods, such as injection molding. We will be able to offer clients a much more cost-efficient path to final production parts while receiving prototype parts in the end-use material from the beginning of the design process.



HP High-Reusability PA12 Nylon The resulting parts are extremely strong, highly accurate and have a surface finish that makes them ideal for mechanical testing and production manufacturing. All this at speeds up to 10x faster than legacy technologies.

Key Benefits

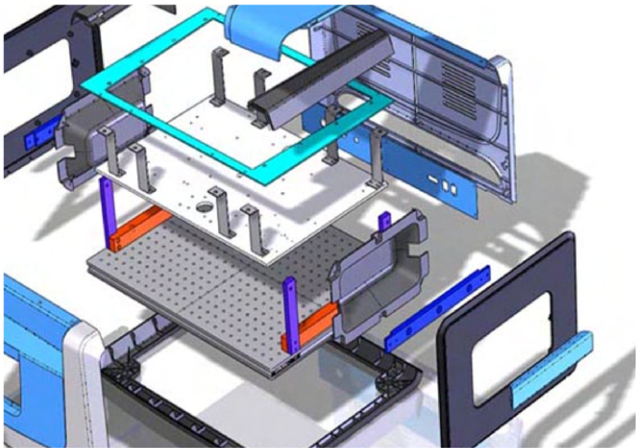
- ◆ Excellent detail and surface quality
- ◆ Accuracy within thousandths of an inch
- ◆ Can be finished and painted for show-quality appearance while maintaining production functionality of many features, including snap- and clip-features
- ◆ Delivery of most parts within a few working days
- ◆ Ability to prototype in an end-use, production PA12 nylon material



2 Design and Engineering

Advanced CAD technology and engineering , Full Design Process from concept to production and anywhere in between.

- ◆ Product design and development
- ◆ 2D drafting
- ◆ 3D solid modeling and 2D/3D file conversion
- ◆ Reverse engineering
- ◆ Performance analysis



3 3D Laser Scanning/ Reverse Engineering

HIGH On 3D has years of expertise and the right equipment to scan your parts.

The use of 3D scanning opens a world of possibilities. Without question, scanners are faster and more accurate to use. Collecting immense amounts of data from the surface of an object, we then utilize dedicated, automated software to process the output information into the precise data needed for the job at hand.



With reverse engineering, the experts at HighOn3D can extract and analyze the needed knowledge and design information from almost any object. With reverse engineering solutions, we can 3D scan existing parts to create intelligent models that allow us to both recreate existing parts and also improve upon their design.

There are many possibilities to consider with Reverse Engineering:

- ◆ Replicate an out-of-production part
- ◆ Rebuild a part with missing data
- ◆ Design a new item with the like pieces(s) of existing parts
- ◆ Recreate and improve the design of existing parts

4 Low Volume Production

HIGH On 3D is one of the largest 3D printing farms in Pune producing FDM and SLS 3D printed parts in super quick time and on-demand. We're bridging the gap where it isn't economical to invest in the expensive tooling needed for injection molding, or where the flexibility to change designs, colours and materials as the needs of your products and customers change is paramount.

- ◆ Reduction of part product development times
- ◆ Elimination of waiting for weeks on tooling
- ◆ Production of a small batch of parts before more standard production runs are available.
- ◆ Reduction of the number of parts and number of components to assemble
- ◆ Provision of a backup of parts during shortages
- ◆ Faster design iteration



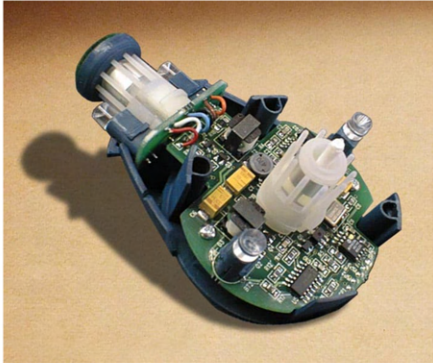
Engineering, electronics, product development and start-up organisations have all benefited from our volume 3d printing capability allowing us to provide the critical components in their products or manufacturing processes, usually at significantly lower cost to traditional manufacturing methods.

We've even supported one-off marketing and educational requirements with unique and engaging activities using 3D printing/Additive Manufacturing.



5 Electronics Enclosures

3D printing can provide a cost-effective way to construct custom IOT/Electronics enclosures. 3D Printing gives freedom & flexibility of design in terms of change in design as per the requirements after initial Test run of Newly developed IoT/ Electronic device,



Why to choose Additive Manufacturing/3D Printing for PCB Enclosures ?

- ◆ No Tooling Cost
1, 10 or 500+ parts with no initial investment for Injection Moulds is possible using 3D Printing . Unlike traditional manufacturing, we require no set-up costs to 3D print your part.
- ◆ No Min Quantity
Use our 3D printers to produce a 1 off prototype or a batch run of parts, there is no minimum order quantity required.
- ◆ Design Freedom
Use design features impossible in traditional manufacturing. Modify the design of your product between orders.
- ◆ Post Processing/Finishing/Colouring Available
Take advantage of our Vibro-polishing & Black Dye services for durable high end finishes.
- ◆ Fast Turnaround
Express 1-2 working days means you can prototype your part quickly before moving to production.



6 Vacuum Casting

In Vacuum Casting process, liquid silicone rubber is poured around a master pattern.

It is a casting process for elastomers using a vacuum to draw the liquid material into the mold. The process starts by placing two pieces silicon mold in a vacuum chamber . The raw material is mixed and degassed and then poured into the mold. Firstly, a master model is made by CNC or SLA and polished to the final surface finish of the part for Silicone Rubber Mold making.



Normally, one Silicone Rubber Mold can produce up to about 20-25 parts and it depends on the design complexity of the part and casting material. Many materials with stimulant properties of real engineering plastic materials are available for vacuum casting. We are able to duplicate the product in a range of different plastic simulant materials,

- ◆ Provide precision and premium plastic prototypes
- ◆ Are used to assist engineering design before hard tools.
- ◆ Offer low cost tooling, allowing easy modification.
- ◆ Are used to evaluate potential markets
- ◆ Assist in design approval and in-house testing
- ◆ Offer aesthetic application where appearance is critical.



7 CNC Plastic Machining

We utilise our CNC routers and vertical milling centres to produce a large variety of high-quality parts, in an assortment of materials. Our team of engineers can hold tight tolerances using a combination of CAD/CAM, CNC machines and calibrated measuring equipment.



CNC Engineering Plastic Machining Service Materials

ABS, HIPS, polycarbonate, and acrylic sheets are commonly requested by our clients in an array of applications, whether they come to us in their flat form, or have been vacuum formed in advance. Our engineering team give great results to our clients, whether they require a small component to be modified on a CNC milling machine, or multiple large sheets to be trimmed on a CNC router.

Acetal, Delrin, HDPE and Polyurethane engineering plastics are used for their improved mechanical and thermal properties to create more functional products than the plastics listed above, in sheet or round form.

8 Plastic Injection Molding

Our plastic injection molding process produces custom - rapid prototypes and end-use production parts in 25 days or less. We use aluminium molds that offer cost-efficient tooling and accelerated manufacturing cycles, and stock more than 100 different thermoplastic resins.

Plastic Injection Molding Design Guidelines will help you understand capabilities and limitations. We have two injection moulding service options—prototyping and on-demand manufacturing—with each offering their own benefits depending on your project needs. If part quantities are higher, an affordable piece-part price is important and quick-turn production throughout the product life cycle is critical. For this our on-demand manufacturing option is ideal.





Our Clients



GODREJ & BOYCE



TATA AUTOCOMP SYSTEMS LIMITED

Honeywell

karloskar
limitless

HITACHI
Inspire the Next



TATA ELXSI LIMITED

Symphony®
Refreshing Lives



KENSTAR

DASSAULT
SYSTEMES

GENSOL

GENSOL ENGINEERING LIMITED

CMR
SURGICAL

DSC
— SINCE 2005 —

Shalya®



45RIECO
Celebrating 45 Solid Years

SBEM
Partner for Level and Flow

LODMA®
WORKING CLEAN, BREATHING HEALTHY

ACCURATE
INDUSTRIAL CONTROLS PVT. LTD.

MATEL
MOTION . ENERGY

MACNMAN
STRONGER TOGETHER



SFC Solutions
YOUR FLEXIBLE PARTNER

and many more...





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