

RAPID
PROTOTYPING PVT LTD

www.rptnpd.com



CONCEPT TO CREATION

WE BUILD YOUR IDEAS WITH PRECISION

CONCEPT CREATION

BUILD

PROTOTYPE

REVIEW

REFINE & ITERATE

MASS MANUFACTURING

- Turning concepts to reality
- Smart solutions for complex ideas
- High precision & accuracy
- Scalable, Reliable & Efficient

INNOVATION
Turning concepts into reality

PROTOTYPE
High precision & accuracy

ENGINEERING SERVICES
Smart solutions for complex ideas

MASS MANUFACTURING
Scalable, Reliable & Efficient



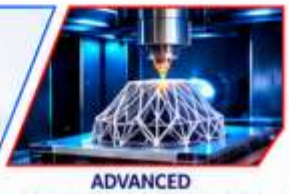
FUNCTIONAL PROTOTYPES



RAPID PROTOTYPING



CONCEPT MODELS



ADVANCED 3D PRINTING TECHNOLOGY

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ABOUT US



Rapid Prototyping Pvt. Ltd. is a leading technology-driven company delivering innovative prototyping and manufacturing solutions.

We turn ideas into functional products with precision, quality, and speed.

OUR VISION

To be a global leader in rapid prototyping and smart manufacturing solutions, empowering innovators and industries to transform ideas into real-world impact through speed, precision, and reliability.



OUR MISSION

To deliver high-quality, accurate, and scalable prototyping and manufacturing solutions using advanced technologies like 3D printing and reverse engineering. We are committed to innovation, customer satisfaction, and continuous improvement — turning concepts into solutions that shape a better future.



OUR PROCESS

01 IDEA
Share your concept or requirement

02 DESIGN
We create 3D models and validate

03 PROTOTYPE
Build and test your prototype

04 APPROVE
Review and final approval

05 PRODUCE
Scale to production with quality

Rapid Prototyping Pvt. Ltd.

Concept to Physical Model

Your Trusted Partner in Innovative Product Development

3D PRINTING PROTOTYPING ENGINEERING SERVICES

WHY US ?

Choose us for reliable, innovative and cost-effective solutions.



- **Expertise & Experience** — Years of industry experience in prototyping & manufacturing.
- **Cost Effective** — Optimized solutions for your budget.
- **Advanced Technology** — Access to latest 3D printing, CNC and fabrication methods.
- **On-Time Delivery** — We value your time and deliver as promised.
- **High Quality** — Accurate, durable and reliable parts.
- **Complete Support** — From design to final product, we are with you at every step.

WHAT ?

We provide a wide range of rapid prototyping and manufacturing services to turn your ideas into reality.

1. **Concept to Physical Model** — Start from idea to real model.
2. **Product Design & Design** — Innovative and functional design solutions.
3. **3D Printing** — SLA, MJF, SLS, FDM, PolyJet & DMLS.
4. **Vacuum Casting** — High quality replicas with excellent finish.
5. **Electronic Products (IoT) & Robotics** — Smart and intelligent solutions.
6. **Reverse Engineering** — Reproduce and improve existing parts.
7. **Laser Cutting** — Metal & Non Metals.
8. **Fabrication with Powder Coating** — Strong, durable and premium finish.
9. **Soft Moulding** — Flexible and precise moulding solutions.
10. **Mass Manufacturing** — For large scale production.

SAMPLES OF OUR WORK



HOW ?

Our process is simple, transparent and focused on your success.

1. **Share Your Idea** — Tell us your concept or requirement.
2. **Design & Develop** — We create the best CAD model for you.
3. **Prototype / Print** — Using advanced 3D printing & other technologies.
4. **Test & Refine** — Ensure accuracy, strength and functionality.
5. **Deliver to You** — On time, with complete support.

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Noida – 201301 (U.P.), India

Let's Build Your Ideas Together!

Rapid Prototyping Pvt. Ltd.

Rapid Prototyping Process Flow

From your idea to a physical model, faster than ever.



1. Concept & Idea
2. 3D CAD Modeling
3. Design Validation
4. Prototype Manufacturing
5. Post-Processing
6. Testing & Evaluation

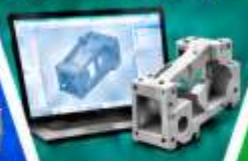
Design Approved?

- **No** → Modify CAD Design → back to 3. Design Validation
- **Yes** → 7. Final Product Design → 8. Mass Production

Your Idea → Our Expertise → Real Solutions

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1 From Concept to Physical Model (NPD)



2 Product Design



3 3D Printing (SLA, MJF, SLS, FDM, PolyJet & DMLS)



4 Electronic Products (IoT) & Robotics



5 Vacuum Casting



6 Reverse Engineering



7 Laser Cutting, Fabrication & Powder Coating



8 RIM (Reaction Injection Moulding)



9 Soft Moulding



10 Mass Manufacturing



Rapid Prototyping Pvt Ltd

www.rptnpd.com

High Accuracy | Excellent Finish | Wide Range of Materials | On-Time Delivery

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PROTOTYPING | INNOVATION | MANUFACTURING

RAPID PROTOTYPING PVT. LTD.

Prototyping and Mass Manufacturing – Mechanical and Electronic / IoT

Your Idea
Our Support
Real Solutions

Concept Creation

Turning Ideas into Practical Designs for Prototyping and Manufacturing



Understand Your Idea » Discuss Requirements » Concept Development » Design Validation » Finalize Design for Prototyping » Ready for Prototyping

Our Concept Creation Process



1 Idea Understanding

We understand your concept, purpose and application in detail.



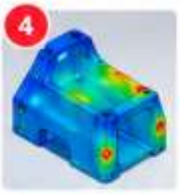
2 Concept Sketching

Initial hand sketches and concept visuals to explore design possibilities.



3 3D CAD Modelling

Detailed 3D model with accurate dimensions and engineering feasibility.



4 Design Analysis

Form, fit and function validation for real-world application.



5 Design Finalization

Optimized design with suitable materials, assembly and manufacturing considerations.



6 Ready for Prototype

Final design ready for rapid prototyping and further manufacturing.

Concept Application Areas

- New Product Development (NPD)
- Product Improvement
- Reverse Engineering Concepts
- Innovation & R&D Projects
- Custom Design Solutions
- Industry Specific Designs

Benefits to You

- Practical and Feasible Designs
- Optimized for Manufacturing
- Reduced Development Time
- Cost-Effective Solutions
- End-to-End Engineering Support

Industries We Serve

- Space & Defence
- Education & Research (IITs, IIMs, etc.)
- Industrial Manufacturing
- R&D / Product Development
- Electronics & IoT
- Automotive & Others

Let's Build Innovative Products Together

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RAPID PROTOTYPING PVT LTD

TRUST • INNOVATION • IMPACT

NEW PRODUCT DEVELOPMENT (NPD)

Your Idea Our Innovation

From Idea to Market — We Build What's Next

Concept → Design → Prototype → Validate → Manufacture

Turning Ideas into Real Products

At Rapid Prototyping Pvt. Ltd., we help businesses and innovators bring their ideas to life through end-to-end **New Product Development (NPD)** services. From concept and design to prototype, validation and production — we make your vision a reality.

Innovative Solutions for a Better Tomorrow



OUR NPD SERVICES

- Concept Development & Feasibility Study
- 3D CAD Modelling & Design
- Prototyping (3D Printing, Vacuum Casting, (CNC etc.)
- Engineering Analysis & Testing
- Reverse Engineering
- Design Optimization
- From Prototype to Production Support

OUR NPD PROCESS

01 IDEA & CONCEPT	02 DESIGN & ENGINEERING	03 PROTOTYPING	04 TESTING & VALIDATION	05 PRODUCTION SUPPORT
Understanding needs, market study & concept development.	3D CAD modelling, functional & aesthetic design.	Quick and accurate prototypes with advanced technologies.	Performance, quality and user testing.	Scale up and manufacturing readiness.

OUR CAPABILITIES



3D CAD Modelling & Design

Detailed design for better functionality and cost efficiency.



Rapid Prototyping

Test, refine and perfect your product quickly.



Electronic Prototypes (IoT)

Smart solutions for a connected future.



Robotics

Automation for smarter operations.



Reverse Engineering

Recreate, improve, loadiness.



CNC Machining

High precision parts with excellent finish.



Tooling & Moulds

Durable and accurate tooling solutions.



Product Development Support

From prototype to production.



Design for Manufacturability

Optimized for cost, quality and scale.



Final Product

Your idea, ready for market.

WHY CHOOSE US?

- Experienced Engineering Team
- Faster Time to Market
- High Quality Standards
- Cost Effective Solutions
- End-to-End Support

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Let's Build Your Next Big Idea

Rapid Prototyping Pvt Ltd

From Concept to Functional Prototype

3D Printing for Innovative Product Development

SLA
(Stereolithography)



- High accuracy
- Smooth surface finish
- Detailed prototypes
- Wide range of resins

DLP
(Digital Light Processing)



- High accuracy
- Smooth surface finish
- Detailed prototypes
- Wide range of resins

MJF
(Multi Jet Fusion)



- Strong and durable
- Functional prototypes
- Nylon PA12 material
- Ideal for end-use parts

ADDITIVE MANUFACTURING

From Concept to Functional Prototype

FDM
(Fused Deposition Modeling)



- Cost effective
- Wide material options
- Good strength
- Suitable for large parts

PolyJet



- Multi-colour & multi-material
- High detail and smooth finish
- Realistic prototypes
- Ideal for design validation

DMLS
(Direct Metal Laser Sintering)



- Metal 3D printing
- High strength & heat resistant
- Complex and lightweight parts
- Suitable for functional and end-use parts

Design Freedom | **Faster Development** | **Cost Effective** | **Innovative Solutions** | **From Concept to Reality**

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Rapid Prototyping Pvt Ltd

From Concept to Functional Prototype

Innovative Product Development (NPD)

VMC
(Vertical Machining Center)



- High precision machining
- Complex 3D geometries
- Wide material range
- Prototype to production

CNC Turning



- High dimensional accuracy
- Smooth surface finish
- Custom shafts & components
- Suitable for metal and plastic

Laser Cutting
(Metal & Non-Metals)



- High speed & accurate
- Clean edge finish
- Suitable for complex shapes
- Metals and non-metals



SUBTRACTIVE MANUFACTURING

From Concept to Functional Prototype

CNC Milling



- 3D complex parts
- High accuracy & strength
- Variety of materials
- Prototype to production

EDM
(Electrical Discharge Machining)



- For hard and complex materials
- High precision and fine details
- Suitable for dies, moulds and tools
- Excellent surface finish

Sheet Metal Fabrication with Powder Coating



- Cutting, Bending, Welding
- Fabrication with Powder Coating
- Strong and durable
- Custom enclosures and frames

High Precision | **Faster Development** | **Cost Effective** | **Wide Material Compatibility** | **From Concept to Reality**

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+91 120 4995577

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Prototyping and Mass Manufacturing – Mechanical and Electronic / IoT

Your Idea
Our Support
Real Solutions

Electronic Products for a Smarter Tomorrow

Custom electronic product development, prototyping and manufacturing solutions for your innovative ideas.



- Design & Development
- Prototype Build
- Testing & Validation
- Mass Production

Our Electronic Products



IoT Devices & Modules
- Smart Sensors
- Wireless Modules
- Data Loggers
- IoT Gateways



Control & Automation
- Control Boards
- Relay Modules
- Motor Drivers
- Industrial Controllers



Embedded Systems
- MCU Boards
- Sensor Interfaces
- Communication Modules
- Custom Firmware



Power Electronics
- SMPS
- DC-DC Converters
- Power Supplies
- Battery Management



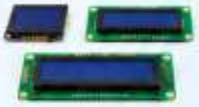
PCB Assembly
- SMT Assembly
- Through Hole Assembly
- Prototype to Production
- Testing & Quality Check



Enclosures & Housing
- Custom Enclosures
- Plastic / ABS / Nylon
- 3D Printed Enclosures
- Design Support



Wiring & Harnesses
- Cable Assembly
- Wire Harness
- Connectors
- Electromechanical Assembly



Display & User Interface
- LCD / OLED Displays
- Touch Panels
- Keypads
- Indicators



Prototyping Solutions
- Rapid Electronics Prototyping
- Small Batch Production
- Functional Testing
- Design to Build Support



Custom Electronic Solutions
- Product Design
- Hardware Development
- Firmware Development
- End-to-End Support

Why Choose Us?

- High Quality Components
- Reliable Performance
- On-Time Delivery
- Expert Support

Applications & Industries

- IoT & Smart Devices
- Industrial Automation
- Healthcare & Medical
- Automotive Electronics
- Consumer Electronics
- Aerospace & Defence

Turning Innovative Ideas into Reliable Electronic Solutions

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Prototyping and Mass Manufacturing – Mechanical and Electronic / IoT

ROBOTICS

Innovative Robotics Solutions for a Smarter Tomorrow

Design | Prototype | Build | Integrate

From Concept to Intelligent Machines

Smart Robotics for Real World Solutions

We design and develop custom robotic systems and components to help you innovate, automate and stay ahead.

From concept and prototyping to low-volume production, we support your robotics journey with precision engineering, advanced manufacturing and electronics integration.



Our Robotics Services

Design & Engineering
Custom robotic systems, mechanisms and control solutions.

Prototyping & Development
Functional prototypes for testing and validation.

Electronics & IoT Integration
Sensors, controllers, communication and smart automation.

Assembly & Testing
Reliable assembly, calibration and performance testing.

Low Volume Manufacturing
Small batch production for market-ready products.

Support & Customization
Modifications, upgrades and ongoing technical support.

Robotics Applications



Industrial Automation
Pick & Place, Assembly, Material Handling



AGV & AMR
Smart Logistics, Intralogistics



Robotics Research
Education, R&D, Innovation



Aerial Robotics
Drones, UAVs, Surveillance



Medical Robotics
Surgical, Rehabilitation, Assistive



Service Robotics
Humanoid, Assistance, Customer Interaction

Why Choose Us

- ✓ Experienced team with expertise in robotics & automation
- ✓ Advanced design using CAD, simulation and analysis
- ✓ High-quality components and precise assembly
- ✓ Flexible solutions for custom requirements
- ✓ On-time delivery and reliable support

Your Idea → Our Design → Real Robots

Our Process

Concept & Requirement Analysis → **Design & Simulation** → **Prototyping & Testing** → **Development & Integration** → **Production & Support**

Let's Build Intelligent Solutions Together

Customized Robotics | Smart Automation | Future Ready

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+91 7777 88 53 99

+91 120 4995577

info@rptnpd.com

www.rptnpd.com

Innovate Automate Advance

RAPID PROTOTYPING PVT. LTD.

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Prototyping and Mass Manufacturing – Mechanical and Electronic / IoT

Your Idea
Our Support
Real Solutions

Vacuum Casting

High quality prototypes and low-volume production using silicone moulds and casting resins.



- High Quality Surface Finish
- Production Like Parts
- Multiple Material Options
- Cost Effective Low Volume

Process Overview



Key Features

- Excellent Detail and Surface Finish
- Production Like Material Properties
- Ideal for Functional Prototypes
- Suitable for Low to Medium Volume
- Faster Turnaround Time
- Multiple Colour Options

Sample Vacuum Cast Parts



Materials Available



Applications

- Consumer Products
- Automotive Components
- Industrial Products
- Medical Devices
- Electronic Enclosures
- Functional Prototypes

Turning Innovative Ideas into Reliable Solutions

+91 7777 88 53 99 | +91 7777 98 44 99 | 0120 4995577
info@rptnpd.com
www.rptnpd.com
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Rapid Prototyping Pvt. Ltd.
Noida, India

Your Partner in
Prototype to Production
Innovative • Reliable • Quality

REACTION INJECTION MOLDING (RIM)

High Strength, Low Cost & Excellent Finish

Reaction Injection Molding (RIM) is a versatile manufacturing process used to produce high-quality, lightweight and strong plastic parts. It is ideal for medium to large size components with excellent surface finish and dimensional stability. RIM is widely used for both prototypes and low to medium volume production.



How RIM Works?

1. **Mixing** — Two liquid reactive components (polyol & isocyanate) are mixed.
2. **Injection** — The mixture is injected into a closed mold.
3. **Reaction** — The materials react inside the mold to form a solid part.
4. **Cooling** — The part cools and hardens in the mold.
5. **Demolding** — The finished part is removed from the mold.

Key Benefits

- Produces strong and durable parts
- Excellent surface finish
- Ideal for large and complex shapes
- Low tooling cost compared to other methods
- Good dimensional stability
- Suitable for low to medium production runs

Materials We Use



- Polyurethane (PU) Systems
- Epoxy-based Systems
- Custom Formulations

We can also work with customer supplied materials.

Typical Applications

- Automotive Components
- Industrial Equipment Covers & Housings
- Electronic Enclosures
- Furniture Parts
- Custom Engineering Components

Our RIM Parts


Automotive Housing


Equipment Enclosure


Industrial Cover


Furniture Part


Custom Component

Rapid Prototyping Pvt. Ltd.
D-315, Sector-10,
Noida – 201301, Uttar Pradesh, India

+91 7777 88 53 99
+91 7777 98 44 99
Landline: +91 120 4995577

info@rptnpd.com
www.rptnpd.com

Bring Your Ideas to Life with Our RIM Solutions!

Rapid Prototyping Pvt Ltd

Prototyping and Mass Manufacturing — Mechanical and Electronic / IoT

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- Innovative Product Development
- Concept to Physical Model with CAD Modelling
- From Idea to Real Working Model

Applications of Prototyping

1 Product Development & NPD

- Convert ideas into physical models
- Validate design concepts
- Reduce time to market



2 Design Validation

- Check form, fit and function
- Identify design issues early
- Improve product reliability



3 Functional Testing

- Test real-world performance
- Evaluate materials and strength
- Validate moving parts



4 Visualization & Presentation

- Turn digital designs into real models
- Better communication with clients and teams
- Supports marketing and fundraising



5 Customization & Low Volume Production

- Ideal for limited quantities
- Customize designs as per requirements
- Suitable for market testing



6 Reverse Engineering

- Recreate unavailable parts
- Develop improved designs
- Supports repair and replacement



7 Education & Research

- Learning and innovation in academic projects
- Supports R&D and product development
- Hands-on understanding of real products



8 Industry Specific Applications

- Automotive – concept models, fixtures and parts
- Aerospace & Defence – functional and structural prototypes
- Medical & Healthcare – patient specific models and devices
- Industrial – custom tools and jigs





9 Market Testing

- Show prototypes to users
- Get early feedback
- Reduce product development risk



10 Manufacturing Support

- Jigs, fixtures and tooling
- Assembly verification
- Bridge to mass manufacturing



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Your Idea
Our Support
Real Solutions

Mass Manufacturing for Your Ideas

High quality, reliable and cost-effective manufacturing solutions for your large-scale production needs.

- Consistent Quality
- Scalable Production
- On-Time Delivery
- End-to-End Support



Our Mass Manufacturing Capabilities



Injection Moulding

High volume production with excellent precision and consistency.



Sheet Metal Fabrication

Robust and durable solutions for complex designs.



CNC Machining

High precision machining for critical applications.



3D Printed Parts (Production)

Quick and flexible manufacturing for short & medium batches.



Vacuum Casting

Cost-effective solution for low volume production & aesthetic finish.



Electronic Assembly

Complete assembly solutions with testing and quality check.

Materials We Work With

Plastics & Polymers

- ABS
- PA (Nylon)
- PC
- PP
- PE
- POM (Acetal)
- PVC
- Others

Metals

- Aluminium
- Stainless Steel
- Brass
- Titanium (on request)
- Other Alloys

Special Materials

- High Performance Plastics
- Heat Resistant Materials
- Conductive Materials
- Custom Materials (on request)

Why Choose Us?

- Large Scale Production
- High Quality Standards
- Cost Effective Solutions
- Skilled Team
- Advanced Infrastructure
- On-Time Delivery

Industries We Serve

- Automotive
- Industrial Equipment
- Healthcare & Medical
- Electronics & IoT
- Space & Defence
- Consumer Products
- Agriculture & Others



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TRUST • INNOVATION • IMPACT

FROM RESEARCH TO REAL-WORLD SOLUTIONS

Our Clients
Across Leading Sectors & Institutions

We are proud to work with organizations that are shaping a smarter, safer and more innovative future.

Space Sector
Exploring New Possibilities

IIT Delhi
Ideas Today, Impact Tomorrow

IIM Lucknow
Nurturing Future Leaders

R&D & Product Development Industry
Turning Ideas Into Real Solutions

Sabhiparkar
R&D | Product Development Industry

Indian Institute of Technology
Innovation for a Better Tomorrow

Indian Railways
Safety • Speed • Progress



Collaborating for Greater Possibilities

STRONG PARTNERSHIPS | REAL-WORLD SOLUTIONS | LONG-TERM IMPACT | A BETTER TOMORROW

People Projects Progress Together

Our Clients Across the Globe

LOCAL CLIENTS
Supporting local innovation & industries

NATIONAL CLIENTS
Partnering with organizations across India

INTERNATIONAL CLIENTS
Building global impact through innovation

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YOUR IDEA → OUR EXPERTISE → REAL SOLUTIONS