



# URETHANE CASTING

## FOR A SHORT RUN OF FUNCTIONAL AND AESTHETICALLY PLEASING PRODUCTION PARTS

Urethane Casting is the next step after a 3D printed prototype. Our proprietary process uses SLA, FDM, or CNC master model patterns to create the highest quality cast-urethane parts available.

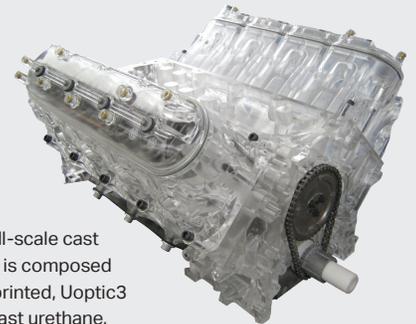
<b>Materials</b>	More than 50 resins available
<b>Standard accuracy</b>	± .007" first inch plus .003" per inch thereafter
<b>Minimum wall thickness</b>	We'll review your CAD for best results
<b>Maximum part size</b>	Can vary – we'll review your project scope
<b>Typical quantities</b>	Varies by geometric complexity and material
<b>Finishes</b>	Virtually limitless. Review your desired finish with us.

### APPLICATIONS

- Functional prototypes and end-use parts
- Batch production medical devices
- Aircraft interior parts
- Specialty overmold requirements
- Complex prototypes
- Aesthetic marketing models



This computer housing was made using cast urethane with cast-in custom color with UABS 83 (PX224) material and post-process pad printing.



This full-scale cast engine is composed of 3D printed, Uoptic3 clear cast urethane, and OEM parts.

## SERVICES



Metal Additive



Polymer 3D Printing



Injection Molding



Precision Machining



Engineering Services



Urethane Castings



Full Assembly



This rear auto light lens was made using cast urethane with cast-in custom colors and a Clear Uoptic 3 (multiprocess cast process) material. The rear light bucket used UABS 83 material and cast urethane with post-process chrome plating.

## CAPABILITIES

Ambition has no limit, either in scope or reach. ADDMAN provides manufacturing solutions across infinite horizons through innovation and engineering expertise. Complete lists available upon request.

### Metal Additive

- 3D Systems ProX DMP 320
- Additive Industries MetalFAB1 EOS M400-1, M400-4, M290, M280, M270, M100
- GE Additive Concept Laser M2
- Nikon SLM Solutions 280
- VELO 3D Sapphire, Sapphire XC

### Injection Molding

- Arburg 370 Golden Electric 66-ton
- Arburg Allrounder 630 A 280-ton
- Fanuc Roboshot S-2000i 55-ton
- Fanuc Roboshot S-2000i 100B 110-ton
- Fanuc Roboshot S-2000i 150B 165-ton
- Fanuc Roboshot a-S330iA 358-ton
- Sumitomo Electric SE100D 100-ton
- Sumitomo SE500EV-A-HD 562-ton

### Post-Processing

- Anodizing: Titanium | Teflon Hard Chrome | Sulfuric Acid
- Powder Coatings
- Plating: Zinc | Chromium | Nickel Copper | Gold
- Dry Film
- Black Oxide
- Passivation: Nitric Acid | Citric Acid
- Shot Peening
- Heat Treating
- Penetrant Inspection
- Non-Destructive Testing
- Pickle and Oiling
- Lubricants
- Polishing | Electropolishing
- Masking | Brushed Masking
- Annealing | Isothermal | Stress Relief
- Primer | Paint Application
- Chemfilm | Chromate Conversion
- Bead Blasting

### 3D Polymer Printing

- 3D Systems Prox 320, Prox 800
- 3D Systems SLA-5000, SLA-7000
- 3D Systems Viper
- Aextra Lumia X1
- Carbon 3D L1, M2, M3
- Formlabs 3BL, Form 2, 3, 3L, Fuse1
- Fusion3 F410
- HP 4200, 5210, 5420
- Markforged Mark 2
- Nexa 3D XiP
- Roboze Argo 500
- Stratasys 360, 400, F370, NEO 800, 400 MC, 450 MC
- Titan Atlas 2.5

### Precision Machining

- 3-7 Axis Vertical CNC Machines
- 3-5 Axis Horizontal CNC Machines
- Turnin g/Milling Centers
- CNC Lathes
- CMM Centers
- Drill EDM
- EDM Press
- Friction Stir Welding

## MATERIALS

We have over 30 years of experience in material and parameter science. Understanding and isolating process variables allow us to show improved strength, density, and fatigue resistance. Complete lists available upon request.

### 3D Printing Metals

#### Core Capabilities

- Aluminum Alloys\*
- Nickel Alloys \*
- Niobium C103
- Steel Alloys\*
- Titanium Alloys\*

#### Available Upon Request

- Cobalt Chrome
- Copper Alloys\*
- Rhenium
- Tantalum
- Tungsten

\*Select alloys available

### 3D Printing Polymers

- Carbon Matrix Composite
- Polymer Matrix Composite
- HexPEKK
- ABS & ABS-Carbon Fiber
- Ceramic Resin
- Elastic 50A
- ESD Resin
- Flexible 80A
- Nylon 11,12
- PC-Glass Filled
- Polycarbonate
- Polypropylene
- Rigid 10K, 4000
- TPU

### CNC Metals

- Aluminum
- Brass
- Copper
- Graphite
- Hastelloy
- Invar
- Kovar
- Molybdenum
- Inconel
- Stainless Steel
- Titanium
- Tungsten

### Thermoplastics

- ABS
- Nylon
- Polycarbonate
- TPU
- Bioresins
- Isoplast™
- Filled: carbon, glass, metal
- EcoMass™
- PEEK
- Radel™
- Stanyl™
- Ultem™
- Thermally-conductive, Electric and dielectric



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