

# ADVANCED MANUFACTURING

# SERVICES & CAPABILITIES

# YOUR MANUFACTURING CHALLENGES ARE OUR BUSINESS.

We provide end-to-end manufacturing solutions for hypersonic flight, space travel, automotive, medical and energy applications. Our process begins with understanding our customers' biggest challenges and desired outcomes. We then develop and implement manufacturing solutions tailored to their applications and their requirements.



# **SERVICES**

## What role does innovative technology or processes play in your company's product roadmap?

By handling complexity, ADDMAN frees up customers to focus on what they do best. Our unrivaled engineering expertise allows customers to add seasoned and accomplished engineers to their teams, allowing them to focus on their core responsibilities, like building rockets.



Metal Additive



Polymer 3D Printing



Injection Molding



CNC Machining



Engineering Services



Quick-Turn Parts



Full Assembly

# **Engineering Consultancy**

With your part requirements in hand, we can develop your part's application-specific design, material, and manufacturing process.

- Design services
- Metallurgy & Material parameter development
- Reverse engineering
- Advanced training & support

### **Precision Machining**

ADDMAN Precision delivers top-tier CNC manufacturing solutions, powered by state-of-the-art equipment and expert craftsmanship. Our advanced capabilities include precise machining with 3-7-axis milling, turning centers, and wire EDM systems. We also support post-processing for additive components, with a full range of finishing and processing options that deliver tailored solutions to meet your requirements.

# **Additive Manufacturing**

By using cutting-edge metal and polymer printing technologies, we can create deeply complex results that are otherwise impossible. Our team creates custom material parameter sets and has developed a polymer process that produces parts that are 70% stronger and 100x less porous than typical polymer parts.

#### Injection Molding

Our injection molding capabilities draw on over 45 years of experience to deliver superior strength and product durability, fast production speeds, and reliable performance for high-volume production. We offer a breadth of material options and precision tooling to meet demanding part requirements from prototype through mass production.

# 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

#### **3D Polymer Printing**

- 3D Systems Prox 320, Prox 800
- 3D Systems SLA-5000, SLA-7000
- · 3D Systems Viper
- Axtra 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

#### **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

#### **CNC Machining**

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

#### **Post-Processing**

- Anodizina: 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

# 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

