



# 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.

#### 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

A full complement of processing and finishing elements are available with ADDMAN's precision machining footprint, which includes 5 axis CNC turning centers, wire EDM systems, and complete processing and finishing capabilities. With over 50 years of experience in precision machining, we have achieved the highest quality standards.

#### 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 domestic injection molding capabilities are fueled by the dedicated team at our HARBEC business. With more than 45 years of experience, we offer superior strength and product durability, fast production speeds, and the capacity to meet the need for high production volumes.

## EQUIPMENT

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

### Metal Additive Manufacturing

- 3x VELO3D Sapphire
- 1x Additive Industries MetalFAB1
- 1x EOS M 400 - 1 (single laser)
- 1x EOS M 400 - 4 (quad laser)
- 7x EOS M 290
- 1x EOS M 270
- 1x EOS M 100
- 3x 3D Systems PROx 300
- 1x 3D Systems PROx 200
- 2x Concept Laser M2
- 1x Renishaw RenAM 500 Flex

### 3D Polymer Printing

- 2x Titan Atlas
- 1x Fusion3 F410
- 2x Shape
- 5x Formlabs Form 3L
- 1x 3D systems Projet 600HD SLA
- 1x Connex 500 Polyjet
- 1x Markforged FDM
- 1x 3D Systems Fortus 400MC FDM
- 1x 3D Systems Fortus 450MC FDM
- 1x Roboze Argo 500 FDM

### CNC Machining

- 123x 3-7 Axis Machining Centers
- 14x Turning/Milling Centers
- 5x CNC Lathes
- 15x CMM Centers

### Injection Molding Reciprocating Screw Machines

- 8x Fanuc Roboshot S-2000i 55-ton
- 2x Sumitomo Electric SE100D 100-ton
- 4x Fanuc Roboshot S-2000i 100B 110-ton
- 5x Fanuc Roboshot S-2000i 150B 165-ton
- 2x Fanuc Roboshot a-S330iA 358-ton
- 4x Arburg 370 Golden Electric- 67-ton

## 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.

### 3D Printing Metals

- Aluminum
- Carbon Composites
- Cobalt Chrome
- Copper
- Magnesium
- Nickel Alloys
- Niobium Alloys
- Steel Alloys
- Titanium
- Rhenium
- Tantalum
- Tungsten

### 3D Printing Polymers

- ABS & ABS-Carbon Fiber
- ASA
- Ceramic Resin
- Elastic 50A
- ESD Resin
- Flexible 80A
- Nylon 11
- Nylon 12
- PC-Glass Filled
- PEEK/PEK
- PETG
- Polycarbonate
- Polypropylene
- Rigid 10K
- Rigid 4000
- Tough 2000
- TPU
- Ultem 9085, 1010

### CNC Metals

- Aluminum
- Brass
- Copper
- Graphite
- Hastelloy
- Inbar
- Kobar
- Molybdenum
- Steel (Inconel, Stainless)
- Titanium
- Tungsten

### Injection Molding Thermoplastics

- ABS, Nylon, Polycarbonate, TPU
- **Bioresins:** reclaimed, biodegradable
- **Chemical-resistant:** Isoplast™
- **Filled:** carbon, glass, metal, mineral
- **High-density:** EcoMass™
- **High-heat:** PEEK, Radel™, Stanyl™, Ultem™
- **Thermally-conductive:** Electric and dielectric



### Certifications

- ITAR Compliant
- ISO 9001 / AS9100
- ISO 13485:2016
- ISO 14001:2004
- ISO 50001
- NIST 800-171 Compliance
- JCP: 0086270 / 0058842 / 0025691 / 0081082
- Exostar 3.55

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