



Precision CNC Machining Capabilities

Company Overview

12th Dimension Industries is a boutique precision machine shop specializing in CNC milling, prototyping, and engineering-driven fabrication. We work with engineers, manufacturers, and product teams who require accurate parts, clear communication, and disciplined execution.

Engineer-owned and operated, our approach emphasizes understanding design intent, machining with precision, and delivering parts that meet specification — especially for complex and tolerance-critical applications.

Core Capabilities

CNC Milling

- Precision CNC milling (3-axis and 5-axis)
- Tight-tolerance components
- Complex geometries and multi-operation parts
- Prototypes and small batch production
- Batch or per-part pricing

Prototyping & Small Batch Production

- Design validation and iteration
- Fit, form, and function testing
- Early-stage and pilot production runs
- Support from prototype through small production

Engineering & Design Consultation

- Design review and refinement
- Manufacturability feedback
- Tolerance evaluation and optimization
- Material selection considerations
- Pre-machining problem solving

Materials Machined

Experience includes, but is not limited to:

- **Aluminum alloys** (e.g., 6061, 7075, aerospace-grade aluminum)
- **Stainless steels** (including 15-5 PH, heat-treated conditions)
- **Alloy steels**
- **Titanium alloys** (e.g., Ti-6Al-4V)
- **Nickel-based superalloys** (e.g., Inconel 718)

Additional materials reviewed on a project-by-project basis.

Machining & Process Capabilities

- 3-axis and 5-axis CNC milling
- Multi-operation machining workflows
- Heat treat coordination between operations
- Tight-tolerance machining (including profile, position, and threaded features)
- Complex GD&T-driven parts
- Repeatable setups for consistency across runs

Tolerance & Complexity Experience

- Linear tolerances to $\pm 0.005"$ and tighter where required
- True position, profile of surface, and threaded tolerancing
- Multi-axis machining for complex features and access requirements

(Specific tolerances reviewed and confirmed per project.)

Industries Served

- Aerospace & Defense
- Industrial & Manufacturing
- Prototyping, R&D, and Product Development

Quality & Process

Quality is built into our process, not inspected in at the end.
Our work emphasizes:

- Careful review of design intent and requirements
- Process discipline and repeatability
- Dimensional accuracy and consistency
- Clear communication throughout the job

Every project is evaluated before machining begins to ensure requirements are fully understood.

Why 12th Dimension

- Engineer-owned and operated
- Boutique, hands-on approach
- Experience with aerospace-grade materials and tolerances
- Creative problem-solving for complex parts
- Honest timelines and transparent pricing
- Direct communication — no middle layers

Location

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Request a Quote or Discuss a Project

