



High Precision CNC Machining Parts with ± 0.005 mm Tolerance and 5-Axis Machining for Custom Aluminum Components with Anodizing Finishing

Our Product Introduction

for more products please visit us on lathecnmachining.com

Basic Information

- Brand Name: Shenzhen Industrial Man
- Model Number: OEM
- Minimum Order Quantity: 1PC
- Price: Negotiable
- Packaging Details: As the requirement of customer
- Payment Terms: L/C,D/A,D/P,T/T,Western Union,MoneyGram



Product Specification

- Quotation: According To Your Drawings (size, Material, Thickness, Machining Details, Surface Finishing Requirements, Etc.)
- Drawing Formats: PRO/E, AutoCAD, SolidWorks, UG, CAD / CAM / CAE, PDF
- Tolerance : ± 0.01 Mm ~ ± 0.005 Mm (Customizable)
- Machining Service: CNC Milling, CNC Turning, Drilling, Tapping, 3/4/5-axis Machining, Deburring
- Available Materials: Aluminum Alloys: AL6061, AL6082, AL7075, AL5052, AL6063 And Customized Grades
- Available Processes: Milling, Turning, Drilling, Grinding, Wire EDM Cutting, Laser Cutting
- Surface Finishing: Anodizing (clear/black/color), Bead Blasting, Brushing, Powder Coating, Chemical Film, Polishing



More Images



Product Description

High Precision Aluminum Machining Solutions

Custom CNC milling, turning, and drilling services for both prototype development and production manufacturing.

Comprehensive Manufacturing Service

Our Product

Our High Precision Aluminum Machining Solutions provide fully customized CNC milling, turning, drilling, tapping, and multi-process machining for both rapid prototypes and stable production runs. Using advanced 3/4/5-axis CNC machining centers, high-speed drilling units, and automated inspection equipment, we deliver tight-tolerance aluminum parts with consistent accuracy, smooth surface quality, and reliable performance across all engineering applications.

Clients simply send us their drawings (2D/3D) and our engineering team performs a detailed manufacturability review, selects the optimal machining method, confirms critical tolerances, and provides fast quotations. From prototype validation to long-term supply, we offer one-stop services including machining, surface finishing, assembly, functional testing, and secure packaging—ensuring every part meets your exact requirements.

Key Features

- High-precision CNC milling, turning, and drilling for complex aluminum parts
- Supports prototypes, small batches, and mass production
- Tight tolerance capability down to ± 0.005 mm
- ISO9001-certified quality control with full inspection reports
- Flexible manufacturing with fast lead times
- Wide selection of aluminum alloys & custom finishing
- Engineering support for drawing review and optimization

Technical Specifications

Quotation Basis	According to your drawings (size, material, thickness, machining details, surface finishing requirements, etc.)
Drawing Formats	PRO/E, AutoCAD, SolidWorks, UG, CAD/CAM/CAE, PDF
Tolerance	± 0.01 mm ~ ± 0.005 mm (Customizable)
Machining Services	CNC milling, CNC turning, drilling, tapping, 3/4/5-axis machining, deburring
Available Materials	Aluminum alloys: AL6061, AL6082, AL7075, AL5052, AL6063 and customized grades
Available Processes	Milling, turning, drilling, grinding, wire EDM cutting, laser cutting
Surface Finishing	Anodizing (clear/black/color), bead blasting, brushing, powder coating, chemical film, polishing
Quality Control	100% full process inspection, CMM measurement, size reports, material certification
Sample Availability	Available
Lead Time	3-7 days for prototypes
Service Type	OEM/ODM custom manufacturing
Workflow	CNC machining → deburring → surface finishing → inspection → packaging

Applications

Widely used in industrial equipment, automation systems, precision instruments, consumer electronics, robotics structures, communication housings, aerospace tooling, automotive components, medical device parts, testing fixtures, laboratory devices, electronic enclosures, machine frames, semiconductor equipment, smart home components, aluminum structural parts, prototype validation parts, and various OEM custom engineering applications.

Frequently Asked Questions

Do you only machine aluminum parts?

No. While we specialize in high-precision aluminum machining, we also support stainless steel, brass, copper, engineering plastics, and hybrid parts depending on project requirements.

Can you handle both prototypes and large-volume production?

Yes. We provide rapid prototyping, small-batch machining, and stable mass production with consistent quality and fast turnaround.

What file formats do you support for quotation?

We accept PDF, STEP, IGES, DWG, DXF, STP, SolidWorks files, and other 2D/3D formats.

How do you ensure machining accuracy?

All parts go through dimensional inspection, CMM measurement, material verification, toolpath optimization, and final QC checks before shipping.

Can you provide surface finishing and assembly?

Yes. We offer anodizing, blasting, painting, powder coating, brushing, plus sub-assembly and packaging services upon request.



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