



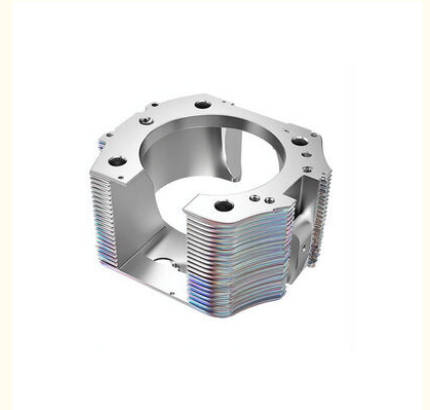
Ultra-High-Precision CNC Machining of Medical-Grade Titanium Alloys and Engineering Plastics with Tight Tolerance Control and Automated Quality Inspection

Our Product Introduction

for more products please visit us on cnc-metalmachining.com

Basic Information

- Place of Origin: Shenzhen China
- Brand Name: Xianheng
- Certification: ISO9001:2015
- Model Number: ML-CNC-085
- Minimum Order Quantity: 1 pcs
- Price: USD \$0.1-\$1.99
- Packaging Details: Carton, As Customers' packaging requirements
- Delivery Time: Samples 7-10 days, Mass production 20-25 days
- Payment Terms: T/T, Western Union, MoneyGram
- Supply Ability: 10000 pcs per week



Product Specification

- Cnc Machining Or Not: CNC Machining
- Type: CNC Milling
- Material Capabilities: Copper, Aluminum, Bronze, Stainless Steel, Brass
- Surface Treatment: Anodized, Anodizing, Anodize/natural, Sandblast, Silk-screen
- Service: OEM/ODM, OEM ODM Metal Stamping, Customized OEM OEM ODM, OEM Service
- Tolerance: 0.01mm, 0.05 Mm, +/-0.005, 0.003-0.05mm
- Application: Machinery, Automotive, Laptop, Industrial Equipment, Engineering
- Color: As Per Customers' Requirement



More Images



Product Description

What We Can Provide

Ultra-High-Precision CNC Machining of Medical-Grade Titanium Alloys and Engineering Plastics with Tight Tolerance Control and Automated Quality Inspection

Description of Ultra-High-Precision CNC Machining of Medical-Grade Titanium Alloys and Engineering Plastics with Tight Tolerance Control and Automated Quality Inspection

Ultra-High-Precision CNC Machining of Medical-Grade Titanium Alloys and Engineering Plastics with Tight Tolerance Control and Automated Quality Inspection refers to a manufacturing process that uses computer numerical control (CNC) machines to produce highly precise components from medical-grade titanium alloys and engineering plastics, ensuring strict adherence to dimensional tolerances and integrating automated systems for quality verification.

Specification of Ultra-High-Precision CNC Machining of Medical-Grade Titanium Alloys and Engineering Plastics with Tight Tolerance Control and Automated Quality Inspection

Product Name	High Quality Copper Steel Stainless Brass Material CNC Milling Parts Services
Material	Aluminum, Stainless Steel, Copper, Brass, Titanium, Galvanized, Nylon, ABS, POM etc.
Surface Treatment	Zinc Plating, Painting, Mirror Polished, Brush Polished, Powder Coating, Electroplating, Anodizing, Sandblasting etc.
Processing	Laser Cutting, Precision Stamping, Bending, CNC Punching, Threading, Riveting, Drilling, Welding, Painting, Assembly etc.
Drawing Format	3D/CAD/DWG/IGS/STEP/PDF/JPG
OEM Service	Accept

Quality Control

1. Checking the raw material after they reach our factory----- Incoming quality control (IQC)
2. Checking the details before the production line operated
3. Have full inspection and routing inspection during mass production---In process quality control(IPQC)
4. Checking the goods after they are finished---- Final quality control(FQC)
5. Checking the goods after they are finished-----Outgoing quality control(OQC)

Application Of Ultra-High-Precision CNC Machining of Medical-Grade Titanium Alloys and Engineering Plastics with Tight Tolerance Control and Automated Quality Inspection

1. Auto Components Hardware Parts Auto Parts
2. Communication Equipment
3. Industrial Equipment
4. Medical EquipmentsMechanical Parts
5. Ship Accessories
6. Electrical Equipment
7. Mechanical Equipment

Why Choose Us

Advantages

Unmatched Dimensional Accuracy and Consistency: Tight tolerance control (e.g., ± 0.01 mm or finer) ensures parts fit seamlessly within complex medical assemblies, reducing risks of implant rejection, device malfunction, or patient harm. For example, titanium hip implants require exact geometry to avoid friction-induced wear, while plastic components in drug-delivery systems demand precise flow channels.

Enhanced Material Performance Optimization: Medical-grade titanium (e.g., Ti-6Al-4V) offers biocompatibility, corrosion resistance, and strength-to-weight ratios ideal for load-bearing implants. Engineering plastics (e.g., PEEK, UHMWPE) provide chemical inertness, flexibility, and radiolucency for non-metallic components. Ultra-high-precision CNC machining tailors these materials' properties to specific applications, such as porous coatings on titanium implants for bone integration or smooth, drug-resistant surfaces on plastic catheters.

Automated Quality Inspection for Zero-Defect Production: Integrated systems like coordinate measuring machines (CMMs), optical scanners, and AI-driven vision systems perform real-time checks on critical dimensions, surface finishes, and material integrity. This automation accelerates inspection (reducing cycle times by up to 70%), eliminates human variability, and ensures 100% part traceability—vital for regulatory compliance and patient safety.

Cost Efficiency and Scalability: While initial setup costs for ultra-precision CNC systems are high, they reduce long-term expenses by minimizing material waste, rework, and recall risks. Automated processes enable high-volume production with consistent quality, critical for scaling medical device manufacturing. For instance, automated inspection can detect micro-

cracks in titanium implants that manual checks might miss, preventing costly field failures and liability issues.

Factory Show

Factory Equipment



WEDM



Milling Machine



CNC Wire Cut



Coordinate measuring machine



CNC Bending Machine



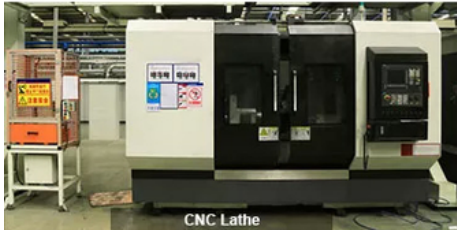
Hydraulic Press Machine



SLS/SLA Machine



5-Axis CNC



CNC Lathe



Laser cutting Machine



CNC Punching Machine



Injection Molding machine



FAQ

Q: How can I customize my products ?

A: Please describe your project. Include the following information so that we can provide an accurate quote: Part Name, 3D CAD Drawing, Quantity, Material, Color, Finishing.

Q: How can I know my products going on ?

A: We will offer a detailed production schedule and send weekly reports with digital pictures and videos which show the production process.

Q: Can You sign a confidentiality greement ?

A: We can sign a confidentiality agreement according to your needs.

Q: What is your terms of payment ?

A: 30% in advance ,70% balance before shipment. Other terms negotiable.

Q: Are you a trading company or factory?

A: We are direct factory with 20 experienced engineers and more than 80 employees as well approximate 3,000 square meters workshop area.

Q: What shall we do if we do not have drawings?

A: Please send your sample to our factory,then we can copy or provide you better solutions. Please send us pictures or drafts with dimensions(Length, Height, Width), CAD or 3D file will be made for you if placed order.



Shenzhen Xianheng Technology Co.,Ltd

0086-13682614486

shawn@xianheng-tech.com

cnc-metalmachining.com

Room 8-1409, Xingji jiyuan building 8-9#, HongXing community, Songgang street, Bao'an District, Shenzhen
City China