



Tight-Tolerance CNC Machined Components Manufacturer Factory Supplier for Demanding Specifications

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: CNC-XG-096
- 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

- Application: Automotive, Aerospace, Medical, Etc.
- Drawing Format: CAD, PDF, JPG, Etc.
- Inspection: 100% Inspection Before Shipment
- Lead Time: 7-15 Days
- MOQ: 1 Piece
- Material: Metal
- Package: Carton Box, Wooden Box, Etc.
- Payment Term: T/T, L/C, PayPal, Etc.
- Process: CNC Machining
- Size: Customized
- Surface Treatment: Polishing, Sandblasting, Anodizing, Etc.
- Tolerance: $\pm 0.005\text{mm}$
- Transport: By Air, By Sea, By Express, Etc.



More Images



Product Description

What We Can Provide

Tight-Tolerance CNC Machined Components Manufacturer Factory Supplier for Demanding Specifications

Description Of Tight-Tolerance CNC Machined Components Manufacturer Factory Supplier for Demanding Specifications

This specialized facility focuses on producing CNC-machined components with exceptionally strict dimensional tolerances (often ± 0.001 mm or tighter), adhering to rigorous specifications for industries such as aerospace, medical devices, defense, and precision instrumentation.

Material Of Tight-Tolerance CNC Machined Components Manufacturer Factory Supplier for Demanding Specifications

Processing	CNC Turning, CNC Milling, Laser Cutting, Bending, Spinning, Wire Cutting, Stamping, Electric Discharge Machining (EDM), Injection Molding
Materials	Aluminum: 2000 series, 6000 series, 7075, 5052, etc.
	Stainless steel: SUS303, SUS304, SS316, SS316L, 17-4PH, etc.
	Steel: 1214L/1215/1045/4140/SCM440/40CrMo, etc.
	Brass: 260, C360, H59, H60, H62, H63, H65, H68, H70, Bronze, Copper
	Titanium: Grade F1-F5
Surface Treatment	Plastic: Acetal/POM/PA/Nylon/PC/PMMA/PVC/PU/Acrylic/ABS/PTFE/PEEK etc.
	Anodized, Bead Blasted, Silk Screen, PVD Plating, Zinc/Nickel/Chrome/Titanium Plating, Brushing, Painting, Powder Coated, Passivation, Electrophoresis, Electro Polishing, Knurl, Laser/Etch/Engrave etc.
Tolerance	$\pm 0.002 \sim \pm 0.005$ mm
Surface Roughness	Min Ra 0.1~3.2

Application Of Tight-Tolerance CNC Machined Components Manufacturer Factory Supplier for Demanding Specifications

1. Computers and Laptops: Skived heatsinks are widely used in computer processors, graphics cards, and other internal components to dissipate heat generated during intense computing tasks. They help prevent overheating and maintain optimal performance.
2. LED Lighting: LED lights generate heat, and efficient cooling is essential to maintain their longevity and brightness. Skived heatsinks are used in various LED lighting applications, including residential, commercial, and automotive lighting systems.
3. Audio Amplifiers: High-power audio amplifiers generate significant heat during operation. Skived heatsinks are employed to cool down the amplifier circuitry, ensuring stable performance and minimizing distortion.

Features Of Tight-Tolerance CNC Machined Components Manufacturer Factory Supplier for Demanding Specifications

1. Efficient Heat Dissipation: Aluminum is a highly efficient conductor of heat, and skived heatsinks are designed to maximize the surface area for heat dissipation. The skived fin structure enhances the heatsink's ability to transfer heat away from the electronic components.
2. Thin and Lightweight: Skived heatsinks are manufactured using a precision machining process that allows for the creation of thin and lightweight fins. This design makes them suitable for applications where space and weight are critical considerations.
3. Customizable Fin Geometry: The skiving process allows for the creation of intricate and customizable fin geometries, which can be tailored to specific thermal requirements and airflow conditions. This flexibility ensures optimal performance for various applications.

Why Choose Us

Advantages

Ultra-Precision for Critical Applications

Tight-tolerance machining enables components to meet stringent requirements for industries where failure is not an option. For example, medical implants require biocompatible materials machined to sub-micron tolerances to ensure seamless integration with the human body, while aerospace turbine blades demand precise airfoil profiles to optimize fuel efficiency and withstand extreme temperatures.

Enhanced Consistency & Repeatability

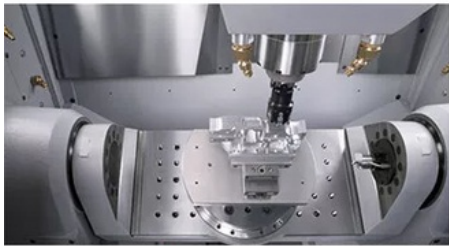
Advanced CNC systems with automated tool calibration, spindle monitoring, and in-process gauging ensure every part matches the CAD model within specified tolerances. This eliminates human error and batch-to-batch variability, critical for high-stakes applications like semiconductor manufacturing equipment or scientific instruments requiring nanoscale precision.

Material-Specific Machining Expertise

The factory tailors machining parameters—such as cutting speeds, feed rates, and coolant strategies—to each material's unique properties. For instance, machining heat-resistant superalloys (e.g., Inconel) requires optimized cooling to prevent work hardening, while brittle ceramics demand diamond-coated tools and slow, controlled cuts to avoid micro-fractures. This expertise maximizes material performance and part longevity.

Cost-Effective Production for Low-Volume, High-Mix Demands

Unlike mass-production methods requiring expensive dies or molds, CNC machining adapts to low-volume, high-mix production runs economically. Reprogrammable machines handle design iterations or custom orders without retooling, reducing per-unit costs for specialized components (e.g., custom surgical tools or prototype satellite parts). Automated quality checks and minimal material waste further enhance cost efficiency while maintaining precision.



High Precision

**5-Axis CNC & Imported machines
with accuracy $\pm 0.02-0.10\text{mm}$**



Fast Lead Time

**Multiple CNC machines, skillful
workers, guarantee fast lead time**



Strictly Confidential

**We will protect the customers' design
and the customer can request a
confidentiality agreement**



Quality Inspection

**We have a strict quality inspection
process to ensure the quality of our
products**

Factory Equipment



WEDM



Milling Machine



CNC Wire Cut



Coordinate measuring machine



CNC Bending Machine



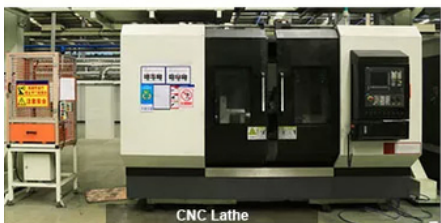
Hydraulic Press Machine



SLS/SLA Machine



5-Axis CNC



CNC Lathe



Laser cutting Machine



CNC Punching Machine



Injection Molding machine

FAQ

Q1: Where can I get product & price information?

A1: Send us inquiry e-mail, we will contact you as we receive your mail.

Q2: How long can I get the sample?

A2: Depends on your specific items, within 3-7 days is required generally.

Q3: What kinds of information you need for quote?

A3: Kindly please provide the product drawing in PDF, and will be better you can provide in STEP or IGS.

Q4: What are the payment terms?

A4: We accept 50% as payment deposit, when the goods is done, we take photos for your check and you then pay the balance.

Q5: Are you a trading company or factory?

A5: We are direct factory with 10 experienced engineers and more than 650 employees as well approximate 2,000 square ft. workshop area.

Q6: What shall we do if we do not have drawings?

A6: 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

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