High Precision CNC Turning Parts for Consistent Repeatability in Industrial Machinery Fabrication

Our Product Introduction

Basic Information

- Place of Origin: Shenzhen China
- Brand Name: Xianheng
- Certification: ISO9001:2015
- Model Number: TN-CNC-82
- 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

Our Product Introduction

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

Product Description

What We Can Provide

High Precision CNC Turning Parts for Consistent Repeatability in Industrial Machinery Fabrication

Description of High Precision CNC Turning Parts for Consistent Repeatability in Industrial Machinery Fabrication

High-precision CNC turning parts are critical components in industrial machinery fabrication, where consistent repeatability ensures reliability, efficiency, and long-term performance. These parts are manufactured using advanced Computer Numerical Control (CNC) turning technology, which automates the machining process with sub-micron accuracy. By leveraging multi-axis control, real-time error compensation, and rigid machine structures, CNC turning achieves unparalleled precision in complex geometries, such as cylindrical shafts, threaded components, and intricate profiles for aerospace, automotive, and medical applications.

Specification of High Precision CNC Turning Parts for Consistent Repeatability in Industrial Machinery Fabrication

CNC Capacity				
CNC Machining Center	3 / 4 / 5 axis CNC Machining Centers		40+ CNC Machines	
CNC Turning	φ0.5 - φ300 * 750 mm		DIN-2768-Fine +/-0.005 mm	
CNC Machining	1270×508×635 mm(max)		DIN-2768-Fine +/-0.005 mm	
CNC Stamping	1000 * 1000 mm(max)		DIN-2768-Fine +/-0.005 mm	
Drawing Format	IGS,STP,X_T ,DXF,DWG , Pro/E, PDF			
Inspection Equipments	Measurement Instrument, Projector, CMM, Altimeter, Micrometer, Thread Gages, Calipers, Pin Gauge etc.			
Material Available				
Stainless Steel	SS201,SS301, SS303, SS304, SS316, SS416, 17-4PH, etc.			
Steel	Mild steel, Carbon Steel, 4140, 4340, Q235, Q345B, 20#, 45# etc.			
Brass	HPb63, HPb62, HPb61, HPb59, H59, H68, H80, H90 etc.			
Copper	C11000,C12000,C12000 C36000 etc.			
Aluminum	AL6061, Al6063, AL6082, AL7075, AL5052, A380 etc.			
Iron	A36, 45#, 1213, 12L14, 1215 etc.			
Plastic	ABS, PC, PE, POM, Delrin, Nylon, Teflon, PP,PEI, Peek etc.			
Surface Finishing				
Aluminum Parts	**Stainless Steel Parts**	**Steel Parts**	**Copper /Brass**	**Plastic Parts**
Clear Anodized	Polishing	Zinc plating	Polishing	Painting
Color Anodized	Passivating	Oxide black	Passivation	Chrome plating
Sandblast Anodized	Sandblasting	Nickel plating	Galvanized	polishing
Chemical Film	Laser engraving	Chrome plating	Nickel Plating	Sandblast
Brushing		Carburized	Chrome plating	Laser engraving
Polishing		Heat treatment		
Chroming		Powder Coated		

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 High Precision CNC Turning Parts for Consistent Repeatability in Industrial Machinery Fabrication

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

Our Advantages

Micron-Level Dimensional Accuracy

CNC turning machines utilize high-resolution encoders and closed-loop feedback systems to maintain positional accuracy within ±0.001 mm, ensuring every part matches the CAD model exactly. For example, in aerospace turbine shafts, deviations beyond this tolerance could lead to catastrophic failures. Advanced CNC systems like DJC's twin-spindle lathes integrate thermal stabilization and vibration damping to eliminate drift, guaranteeing identical dimensions across millions of cycles.

Unmatched Batch Consistency

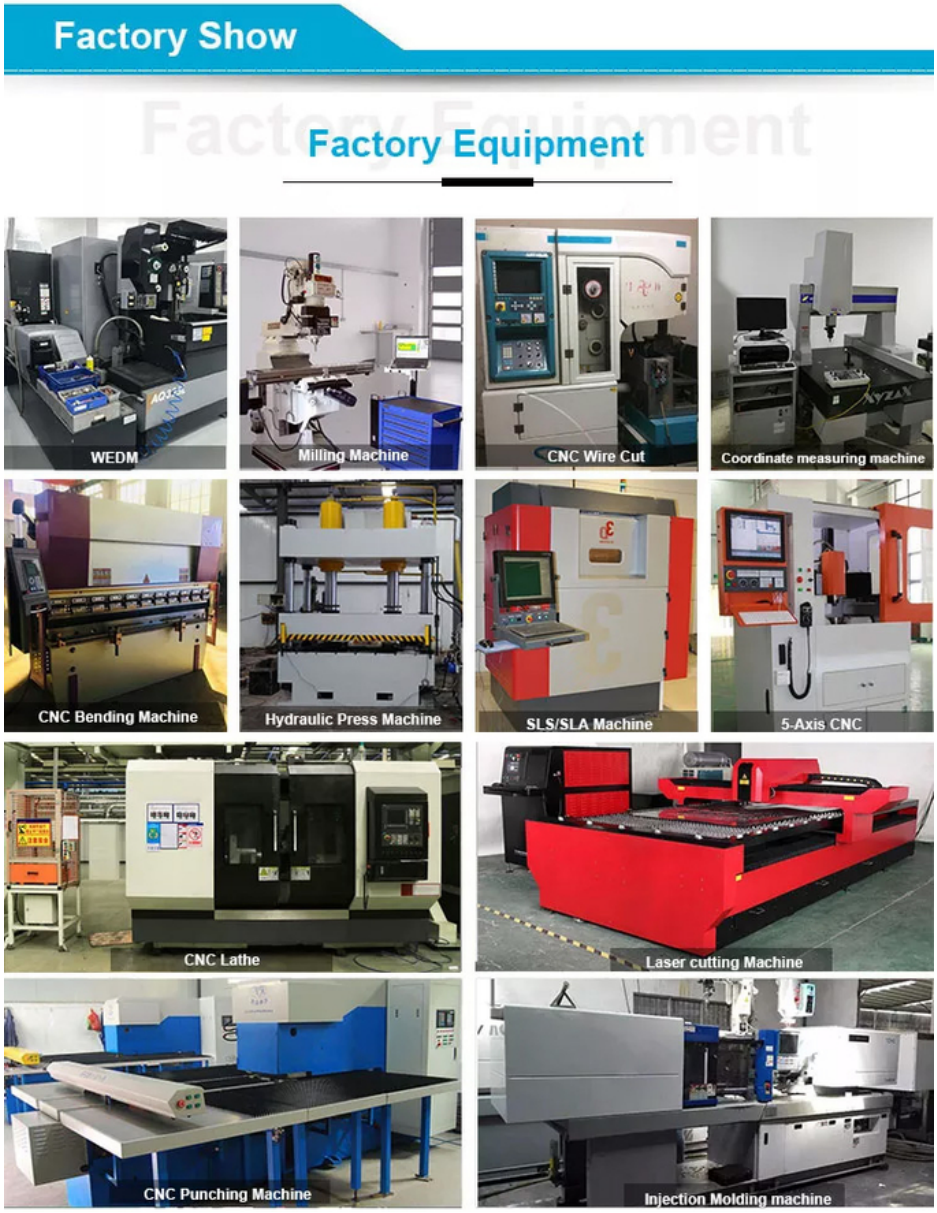
Unlike manual machining, CNC turning eliminates human variability by executing the same program repeatedly. This is vital for industries like automotive manufacturing, where a single engine block may require hundreds of identical bolt holes. Multi-spindle CNC lathes can machine up to 12 components simultaneously, all synchronized to the same cutting parameters, reducing variation to near-zero levels. For instance, DJC's 14-station multi-spindle machines achieve a CPK ≥ 1.67 (Six Sigma standard) in mass production.

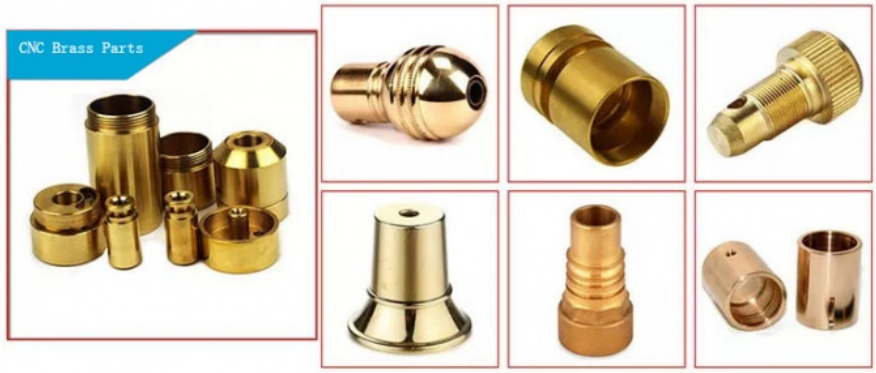
Complex Geometry Capability Without Compromising Repeatability

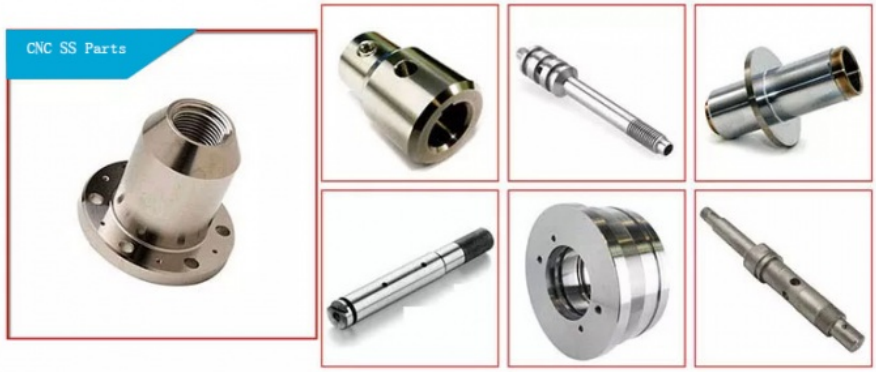
Five-axis CNC turning centers enable the machining of non-circular profiles, such as camshafts or hydraulic valve bodies, with angular tolerances as tight as ±0.005°. This is achieved through dynamic tool path optimization and real-time compensation for tool wear. In medical implants, like titanium hip stems, CNC turning ensures consistent surface roughness (Ra ≤ 0.2 μm) and thread pitch accuracy, critical for biocompatibility and long-term functionality.

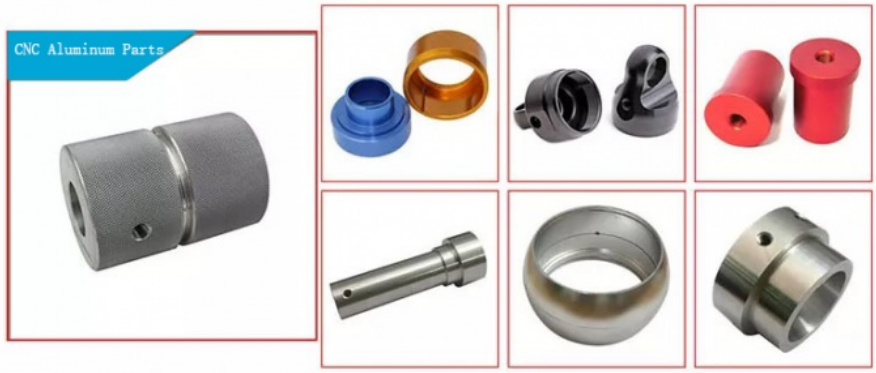
Reduced Downtime and Cost Through Predictive Maintenance

High-precision CNC systems monitor spindle load, temperature, and tool wear in real time, triggering alerts before deviations occur. For example, if a cutting tool's flank wear reaches 0.05 mm, the machine automatically pauses and suggests a replacement, preventing scrap parts. This predictive approach reduces unplanned downtime by 30–50% compared to traditional methods, as seen in DJC's aerospace component production lines.









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, Hight, Width), CAD or 3D file will be made for you if placed order.

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