



## Precision Metal Stamping Parts for Aerospace Applications with Tight Tolerances and Superior Performance

### Our Product Introduction

for more products please visit us on [cnc-metalmachining.com](http://cnc-metalmachining.com)

#### Basic Information

- Place of Origin: Shenzhen China
- Brand Name: Xianheng
- Certification: ISO9001:2015
- Model Number: PMS-XG-073
- 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: 50000 pcs per week



#### Product Specification

- Material: Copper, Stainless Steel, Aluminum, Brass, Etc.
- Surface Treatment: Hot Galvanized, Zinc Plating, Nickel Plating, Powder Plating, Anodize
- Process: Stamping, Punching, Bending, Punching Of Stamping Blanks, Stamping + CNC
- Application: Construction, Industrial, Used Widely Industry Auto, Mechanical Equipment, Auto Parts
- 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
- Oem: Available
- Quality: ISO9001
- Keywords: Custom Stamping Metal
- Packing: As Customers' Requirement



#### More Images



## Product Description

### What We Can Provide

#### Precision Metal Stamping Parts for Aerospace Applications with Tight Tolerances and Superior Performance

##### Description of Precision Metal Stamping Parts for Aerospace Applications with Tight Tolerances and Superior Performance

Precision metal stamping parts for aerospace applications are engineered to meet the most stringent requirements of the industry, combining tight dimensional tolerances (often within  $\pm 0.001$  inches for critical features) with superior mechanical performance under extreme conditions. These parts are manufactured using advanced stamping processes, high-precision molds, and specialized materials (e.g., titanium alloys, high-strength steels, or nickel-based superalloys) to ensure reliability in aerospace environments, which involve high altitudes, extreme temperatures, and intense vibrations.

##### Specification of Precision Metal Stamping Parts for Aerospace Applications with Tight Tolerances and Superior Performance

Name	Custom OEM Laser Cutting Sheet Metal Fabrication Services Copper Stainless Steel Anodised Aluminum Metal Stamping bending Parts
Material	Zn-plating, Ni-plating, Cr-plating, Tin-plating, copper-plating, the wreath oxygen resin spraying, the heat disposing, hot-dip galvanizing, black oxide coating, painting, powdering, color zinc-plated, blue black zinc-plated, rust preventive oil, titanium alloy galvanized, silver plating, plastic, electroplating, anodizing etc.
Applications	Automotive, instrument, electrical equipment, household appliances, furniture, mechanical equipment, daily living equipment, electronic sports equipment, light industry products, sanitation machinery, market/ hotel equipment supplies, artware etc.
Packaging	Regular: Paper, Foam, OPP bag, Carton; Other: According to customers' requirements
Testing Equipment	Projecting apparatus, Salt Spray Test, Durometer, and Coating thickness tester
Tolerance	$\pm 0.01-0.05\text{mm}$
Drawing	JPG, PDF, CAD, DWG, STP, STEP

##### 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 Precision Metal Stamping Parts for Aerospace Applications with Tight Tolerances and Superior Performance

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 Precision and Consistency

Precision metal stamping achieves micro-level accuracy (tolerances as tight as  $\pm 0.0005$  inches) through computer-controlled stamping presses and advanced mold design. This ensures that every part meets exact specifications, eliminating variability in critical components like fuel system fittings, sensor housings, or structural brackets.

Example: Aircraft engine components stamped with  $\pm 0.001$ -inch tolerance ensure optimal fuel flow and combustion efficiency, directly impacting performance and safety.

##### High Strength-to-Weight Ratio

Aerospace parts must withstand extreme forces while minimizing weight. Precision stamping enables the use of lightweight yet high-strength materials (e.g., aluminum-lithium alloys or carbon fiber composites) in complex geometries that would be impossible to manufacture via traditional methods.

Stamping is a high-volume, low-cost process once molds are created, making it ideal for aerospace programs requiring thousands of identical parts (e.g., fasteners, heat shields, or electrical connectors). Automated stamping lines reduce labor costs and material waste, while tight tolerances minimize rework and scrap.

Example: A single stamping die can produce 10,000+ aircraft-grade rivets per day at a fraction of the cost of machining each rivet individually.

Precision-stamped parts undergo rigorous surface treatments (e.g., anodizing, plating, or thermal spraying) to resist corrosion, thermal expansion, and fatigue. This ensures long-term reliability in conditions like:

- High temperatures (e.g., turbine blade components exposed to 1,200°C+).
- Cryogenic conditions (e.g., liquid fuel tank fittings).
- Corrosive atmospheres (e.g., salt-laden air for maritime aircraft).

Example: Stamped nickel-based alloy seals in rocket engines maintain hermetic integrity despite repeated thermal cycling from -200°C to 3,000°C.



**Professional machines, skillful workers,  
guarantee the quality and lead time.**



## Quality Inspection

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

# Stainless Steel Material

## Material:

Stainless Steel 201  
Stainless Steel 430  
Stainless Steel 304  
Stainless Steel 316

## Finish:

Mirror Polishing  
Brush Polishing  
Electro Polishing  
Vibration Polishing



## 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.



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