Precision-Engineered Metal Frame Parts for High-Stakes Industries in Aerospace Defense Automotive and Industrial Machinery

Our Product Introduction

Basic Information

- Place of Origin: Shenzhen China
- Brand Name: Xianheng
- Certification: ISO9001:2015
- Model Number: MFA-XG-079
- 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

- Supply Type: OEM Service
- Material Capabilities: Stainless Steel, Brass, Aluminum, Steel
- Process: Bending, Laser Cutting, Welding, Stamping
- Application: Auto,motorcycle,industry,ariculture,furniture,e
- Packing Details: Carton, Wooden Case, Plastic Cargo
- Color: Black, Silver, Customized Color
- Place Of Origin: China

More Images

Our Product Introduction

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

Product Description

What We Can Provide

Precision-Engineered Metal Frame Parts for High-Stakes Industries in Aerospace Defense Automotive and Industrial Machinery

Description Of Precision-Engineered Metal Frame Parts for High-Stakes Industries in Aerospace Defense Automotive and Industrial Machinery

Precision-engineered metal frame parts are custom-designed structural components manufactured to exacting standards for industries where safety, reliability, and performance are non-negotiable. These parts form the backbone of critical systems in aerospace (aircraft, spacecraft, satellites), defense (military vehicles, weapon systems), automotive (electric vehicles, high-performance engines), and industrial machinery (robotics, heavy equipment, energy systems). They are engineered using advanced materials (e.g., titanium alloys, high-strength aluminum, nickel-based superalloys) and manufacturing techniques (e.g., CNC machining, laser cutting, additive manufacturing) to meet stringent requirements for dimensional accuracy, durability, and environmental resistance.

Material Of Precision-Engineered Metal Frame Parts for High-Stakes Industries in Aerospace Defense Automotive and Industrial Machinery

Production Capability
Secondary Operations

Surface Operations	* Deburring work by machines,then by hands; * As long as you need no scratches on the products, we can use the film protected material for products during production; * Remove sharps of the products; * Ultrasonic cleaning after production.
Surface Treatments	Powder Coating, Polishing, Brushing, PVD Plating, PVC Coating, Ceramic Coating, Chrome Plating, Nickel Plating, Tin Plating, Copper Plating, Silver Plating, Sandblasting, Anodizing, Dacromet, Baking Varnish, Electrophoresis Coating, Zinc Plating, Hot Dip Galvanizing.
LOGO Printing	Laser Engraving, Silk-screening etc
Assembly Service	Yolanda provide products assembly service after each component production.
Custom Packaging	* Design packaging according to your products; * Make the packagings according to your requests; * Print your LOGO on the packaging as long as you need; * Other request according to your need.

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)

Why Choose Us

Advantages

Unmatched Precision for System Integration
Tight tolerances (±0.001 mm or better) ensure seamless compatibility with complex assemblies, minimizing assembly errors and enhancing overall efficiency. For example, aerospace engine blades require micron-level accuracy to maintain structural integrity under extreme temperatures and rotational forces, while automotive engine cradles must align precisely with mounting points to reduce vibration and noise.

Custom Geometries for Enhanced Performance
Precision engineering enables the creation of optimized shapes tailored to specific applications. In defense, custom geometries improve aerodynamics for missile guidance systems and electromagnetic compatibility for radar enclosures. In industrial machinery, lightweight lattice structures reduce energy consumption in robotic arms without sacrificing strength.

Superior Durability in Extreme Environments

These parts are designed to withstand harsh conditions, including high temperatures, corrosion, and mechanical stress. Titanium alloys used in spacecraft frames resist thermal expansion in space, while nickel-based superalloys in defense vehicle armor maintain integrity under blast impacts. Automotive components, such as EV battery enclosures, use corrosion-resistant coatings to protect against moisture and chemicals.

Lightweight Design for Efficiency Gains
By leveraging topology optimization and advanced materials, precision-engineered parts achieve significant weight reductions. In aerospace, a 20–30% weight savings in aircraft frames lowers fuel consumption and emissions. In automotive applications, lightweight aluminum frames extend EV driving range by up to 15%, while industrial machinery benefits from reduced energy costs and improved maneuverability.

Multipe Machines

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

Strictly Confidential

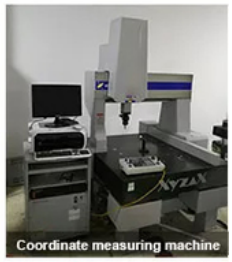
We will protect the customers'design and the customer can request a confidentiality agreement

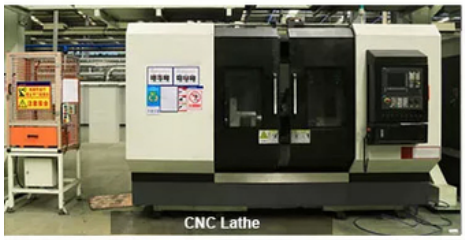
Quality Inspection

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

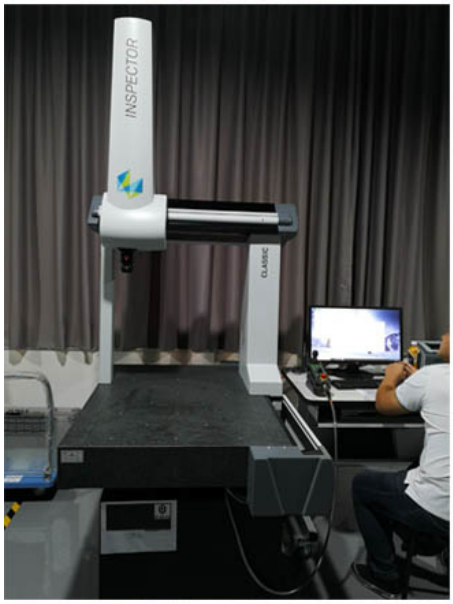
Factory Show

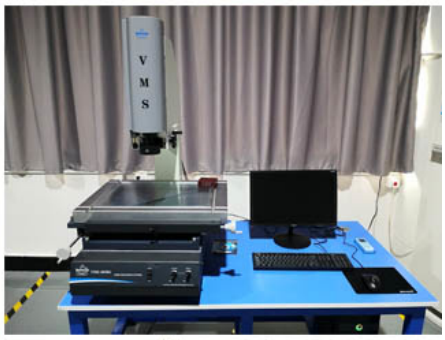
Factory Equipment











FAQ

1. How can I get the price? - We usually quote within 24 hours after we get your inquiry (except weekend and holidays). If you are urgent to get the price, please email us or contact us in other ways so that we can offer you a quote.

2. Can I buy samples? - Yes. Please feel free to contact us.

3. What is your lead time? - It depends on the order quantity and the season you place the order. Usually we can ship within 7-15 days for small quantity, and about 30 days for large quantity.

4. What is your payment term? - T/T, Western Union, MoneyGram, and Paypal. This is negotiable.

5. What is the shipping method? - It could be shipped by sea, by air, or by express (EMS, UPS, DHL, TNT, FEDEX etc). Please confirm with us before placing orders.

6. How do you make our business long-term and good relationship? - We keep good quality and competitive price to ensure our customers benefit. Furthermore, we respect every customer as our friend and we sincerely do business and make friends with them, no matter where they come from.

Shenzhen Xianheng Technology Co.,Ltd

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