



Precision Sheet Metal Shell Fabrication for Medical Equipment Customized High-Tolerance Solutions

Our Product Introduction

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

Basic Information

- Place of Origin: China
- Brand Name: Xiange
- Certification: ISO 9001:2015 SGS RoHS
- Model Number: MF-XG-30
- Minimum Order Quantity: 1 pcs
- Price: USD 1\$-2\$
- Packaging Details: Carton Wooden case
- Delivery Time: 5-8 days
- Payment Terms: T/T, Western Union, MoneyGram
- Supply Ability: 10 SET per week



Product Specification

- Material Capabilities: Stainless Steel, Aluminium, Copper, Brass
- Products: Metal Equipment Shell
- Process: Metal Sheets Fabrication, Welding Cutting Punching Stamping
- Application: Electronic Equipment Sheet Metal Shell, Custom Control Box Cabinet Chassis Shell
- OEM/ODM: Acceptable
- Equipment: Precision Nonstandard Parts
- Surface Treatment: Powder Coated, Hot Galvanized, Painting, Polishing, Spray Coating, Brushing, Cathaphoresis, Sandblasting, Electroplate Chrome/Zinc/Nickel Plating/Anodize/Electronic Polish, Silk-screen Etc;
- Package: Platic Bag ,Blister Box ,Tap Reel Or As Your Required
- Used: Computer, Telecom, mechical ,electronics, appliance, military, aerospace.



More Images



Product Description

What We Can Provide

Precision Sheet Metal Shell Fabrication for Medical Equipment Customized High-Tolerance Solutions

Description of Precision Sheet Metal Shell Fabrication for Medical Equipment Customized High-Tolerance Solutions

Precision sheet metal shell fabrication is a specialized manufacturing process tailored to produce high-precision, custom-engineered enclosures for medical equipment. This method combines advanced technologies such as CNC laser cutting, precision bending, robotic welding, and surface finishing to meet the stringent requirements of medical devices, including biocompatibility, sterilizability, electromagnetic interference (EMI) shielding, and dimensional accuracy.

Specification of Precision Sheet Metal Shell Fabrication for Medical Equipment Customized High-Tolerance Solutions

Product	Custom Sheet Metal Fabrication Laser Cutting Bending Sheet Metal Stamping Parts
Material	Stainless Steel, Carbon Steel(Q235), Aluminum(6061,6063, 5052), Copper, Brass etc.
Process	Bending, Stamping, Welding
Finish	Zinc Plating, Mirror Polished, Brush Polished, Paint, Anodic Oxidation, Powder Coated
Package	Plywood Box + Plywood Pallet, Plywood Box
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 Precision Sheet Metal Shell Fabrication for Medical Equipment Customized High-Tolerance Solutions

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 promise

Material Versatility for Diverse Medical Needs

Medical devices require materials that balance weight, strength, and biocompatibility. Precision sheet metal fabrication supports:

Stainless steel for autoclavable instruments (resists pitting from repeated sterilization).
Titanium for lightweight, corrosion-resistant enclosures in implantable devices.
Aluminum alloys for EMI shielding in MRI-compatible equipment.
Specialized coatings (e.g., antimicrobial, non-reflective) for infection control and optical clarity.
Benefit: Enables customization for specific medical environments, extending device lifespan.

Rapid Prototyping & Cost-Effective Scalability

Unlike injection molding, which requires expensive tooling, sheet metal fabrication allows:

Fast design iterations (prototypes in 5–7 days) using digital twin simulations.
Seamless scaling from low-volume clinical trials (10–100 units) to mass production (100,000+ units).
Reduced material waste via optimized nesting algorithms (scrap rates <5%).
Example: During COVID-19, a ventilator manufacturer used sheet metal fabrication to redesign enclosures in 12 hours, cutting lead times by 60%.
Benefit: Accelerates time-to-market while maintaining precision and reducing costs.

Enhanced Durability & Sterilizability for Infection Control

Medical enclosures must withstand harsh cleaning protocols without degradation. Precision sheet metal fabrication ensures:

Seamless, crevice-free designs to prevent bacterial harboring.
Resistance to chemicals, UV light, and high-pressure sterilization.
Electropolished surfaces that reduce biofilm formation by 99% compared to standard finishes.
Example: An endoscope housing fabricated with electropolished stainless steel survived 500+ autoclave cycles without corrosion.

Benefit: Extends device lifespan, lowers replacement costs, and minimizes infection risks.



Multiple Machines

5-Axis CNC & Imp Professional machines, skillful workers, machines, skillful
(with accuracy of guarantee the quality and lead time. nite 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

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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