FORMEX
FABTECH

Prototyping Excellence

Let's Build Your Innovation!

Precision component · Sheet Metal Specialists

Tooling & Molding Services · Custom Engineered Solutions

FORMEX FABRICATION TECHNOLOGY CO.,LTD

OUR SERVICE

General tolerances apply to ISO 2768 (m) for machined plastics and ISO 2768 (fine) for machined metals. Typically, we can control CNC machining tolerances between ±0.005" (±0.125mm) and ±0.002" (±0.05mm). If tighter tolerances are required, a 2D drawing with complete information is needed. Our engineering team will communicate critical dimension tolerances with you and provide the highest possible precision.

1. CNC MACHINING
2. SHEET METAL
3. 3D PRINTING
4. PLASTIC MOLDING
5. DIE CASTING
6. STAMPING MACHINING EXTRUSIONS
7. ACCESSORIES READY-TO-SHIP

Own factory| Free samples | Fast response

Specialized in sheet metal with 10+ years of experience.

2012

We've been in manufacturing since 2012, starting as a family-run workshop under a separate entity—years before FORMEX came to be. Our primary operations at that stage were metal stamping and precision spinning machining.

2022

After COVID-19, we streamlined our member team to a core of 10 professionals in 2022, keeping only some equipment for sheet metal work. We adopted a more agile model and formally established FORMEX as our new company. This lean setup enables end-to-end project management, boosting responsiveness and efficiency.

2025

While the company was registered then, we launched full-scale operations in 2025. We gradually phased out of the hardware stamping market,keep several welding and stamping machines and two laser cutting machine and refocused our core capabilities on precision mechanical component machining and optimized manufacturing solutions.

Today, as a technical procurement partner, we offer a diverse range of manufacturing services, including CNC machining, stamping machining, sheet metal processing, urethane casting, die casting, and fabrication. We remain deeply committed to the field of precision-engineered components, leveraging our professional expertise to deliver cost-effective and scalable production services to our customers.

Integrated factories

- Quick solutions for all processes

In-house customs clearance

- DDP/DAP terms available
- ships to 60+ countries

Extensive Material Selection

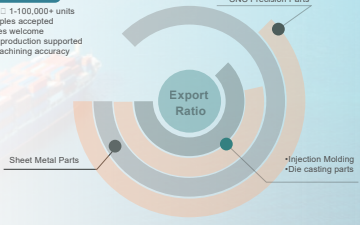
- 500+ material options (stainless steel, aluminum, titanium, etc.), with full material certifications）

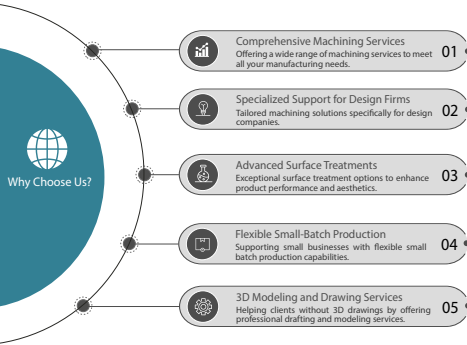
Total Surface Solution Provider

- 1.From basic polishing to MIL-SPEC coatings
- 2.Custom color/finish matching (Pantone/RAL)
- 3.In-house & partnered finishing facilities

Flexible Order Quantities

- No MOQ → □ 1-100,000+ units
- 1-piece samples accepted
- Small batches welcome
- Large-scale production supported ±0.01mm machining accuracy





VISUAL GUIDE TO PROCESSES & PARTS

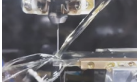
CNC MACHINING SERVICE

01 CNC Milling

Involves using CNC milling machines to create complex shapes and features from various materials.

02 CNC Turning

Utilizes CNC lathes to produce cylindrical parts, such as shafts and discs, with high precision.



03 Wire EDM (Electrical Discharge Machining)

A method using a fine wire to cut through conductive materials with exceptional precision, ideal for intricate shapes.

04 Gantry Milling

A milling process conducted on gantry mills, suitable for large workpieces requiring high stability.

05 Swiss Turning

Specializes in machining small, precision components, often used in the medical and electronics sectors

SHEET METAL SERVICE

Bending|Cutting|Welding|stamping|spinning

Own factory| Free samples | Fast response

Specialized in sheet metal with 10+ years of experience.

With over 10 years of expertise in the stamping and sheet metal cutting industry, we provide versatile solutions including bending, cutting, welding, stamping, and spinning.

Our in-house factory ensures that we deliver high-quality, customized components tailored to your specifications.Whether you need complex shapes or simple parts, our expert team delivers reliable results with a focus on efficiency and precision.

Common Features of Sheet Metal Parts

Material Thickness:

Sheet metal is commonly available in thicknesses ranging from 0.5 mm to 10 mm, with variations based on application requirements. Thicker materials provide greater durability, while thinner sheets allow for more intricate designs.

Flat Panels: Typically rectangular or square sheets used as bases or surfaces.

Bends and Folds: Circular or Cylindrical Plates: Used for applications like covers or end caps, often produced from round blanks.

Perforated Plates:

Panels with patterns of holes for lightweight design and ventilation, commonly used in acoustics or

PLASTIC MOLDING SERVICES

- **Injection Molding**

  Starts with designing the mold based on product specifications to ensure optimal functionality.

- **Blow Molding**

  Heating a plastic tube and inflating it within a mold to create hollow forms.

- **Extrusion**

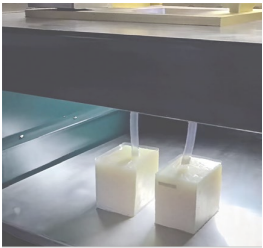
  Forcing molten plastic through a die to create continuous shapes.

- **Thermoforming**

  Heating a plastic sheet until pliable and then forming it over a mold.

- **Compression Molding**

  Placing material into a heated mold and applying pressure to form the part.



Standard Accuracy: ±0.15mm/100mm, ±0.05mm max

Maximum Part Size:
Vacuum equipment can accommodate molds with dimensions of 2000mm×1200mm×1000mm

Minimum Wall Thickness:
The minimum wall thickness is 0.5mm, and the optimal range is 1.5mm to 2.5mm

Service Life of Silicone Molds:
Each mold can produce a maximum of 10-20 replicated parts, and the mold storage period is approximately 30 days.

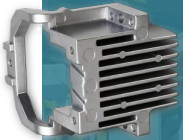
Standard Lead Time:
Approximately 50 sets can be produced within 7 to 10 days, depending on the specific part specifications and quantity.

Polyurethane Vacuum Casting
is a cost-effective alternative to low-volume injection molding for plastic parts.The molds are made of silicone rubber, with CNC or SLA parts serving as master patterns.

These molds can replicate every structural detail and surface texture of the product, and produce duplicate products through the casting process. One set of silicone mold can yield 10-15 copies of the part.

The parts produced via Polyurethane Vacuum Casting are primarily made from two-component polyurethane (PU) resins.
These resins can be formulated to mimic the properties of various engineering plastics or elastomers, tailored to different functional requirements of the parts:TPU/TPE-like soft gels/ABS-like resins/PC/PMMA-like transparent resins/PA (Nylon)-like resins/PP/PE-like resins

DIE CASTING SERVICES



- Cold Chamber Die Casting

  Molten metal is directly injected into an independent shot chamber, suitable for high-melting-point materials, with casting precision of ±0.1mm
  Typical products: Automobile gearbox housings, motorcycle engine blocks, industrial valve bodies.

- Hot Chamber Die Casting

  The injection mechanism is immersed in a holding furnace, with high production efficiency (300-500 cycles/hour), suitable for small and medium-sized parts
  Typical products: Electronic communication components (such as 5G base station radiators), bathroom hardware accessories, toy models

Applicable materials:

Aluminum alloys | zinc alloys
copper alloys | magnesium alloys
low-melting-point alloys

• Investment Casting

It uses a wax pattern as the prototype, with multiple layers of refractory material coated to form a shell. After dewaxing, metal is poured into the shell. This process enables the production of complex thin-walled parts (minimum wall thickness: 0.5mm, tolerance: ±0.05mm).

Typical Products: Aerospace ,turbine blades,Jewelry and ornaments,Medical artificial joints,Precision instrument movement parts.

Applicable Materials:

Stainless steel| High-temperature alloys | Titanium alloys | Precious metals |

How It Works:
From Mold Design to Final Delivery

01 Requirement & Drawing Confirmation

Provide the factory with **3D+2D drawings**, specifying product dimensions, tolerances, materials (die casting: aluminum alloy/zinc alloy, etc.; injection molding: ABS/PP/PC, etc.), and surface treatment requirements (e.g., painting for die casting, electroplating for injection molding).

02 Mold Design Review

We will provide the mold design plan(including gate position, parting line, cooling water channels, and ejection structure). You need to verify if the design matches product assembly and demolding requirements to avoid subsequent modification costs.

03 Mold Manufacturing & Trial Molding

After completion, conduct the first trial molding (T0 trial) to produce trial samples. Upon receiving the samples, inspect dimensional accuracy and appearance defects (e.g., flash/air holes for die casting, weld lines/shrinkage for injection molding) and provide revision suggestions.

04 Mold Optimization & Sample Approval

We will adjusts the mold (e.g., mold repair, process parameter adjustment) based on revision suggestions and conducts T1/T2 trial molding until the samples meet requirements. Sign the First Article Inspection (FAI) report.

05 Final Production & Delivery

Arrange small-batch production (e.g., 500 - 1000 units) to verify mold stability, production efficiency, and product consistency. Meanwhile, test if the packaging solution is suitable for transportation.
Or place the mass production order, specifying delivery cycle and acceptance criteria.

3D PRINTING SERVICE

FDM|SLA|SLS|SLM

3D printing is a revolutionary technology that can directly produce parts from your darwings that cannot be made with traditional methods. The advantages of this process include the ability to create strong, complex geometries, internal lattice structures, conformal cooling channels and other features that traditional machining cannot make.

Fused Deposition Modeling (FDM):

Filament materials (e.g., PLA, ABS) are heated and melted in a nozzle, then extruded layer-by-layer along a predefined path, and solidified after cooling.Thermoplastic filaments (PLA, ABS, PETG, etc.)

Selective Laser Sintering (SLS):

A laser beam selectively irradiates powder materials (e.g., nylon), causing the powder to absorb heat, melt, and sinter; unsintered powder acts as support.Thermoplastic powders (nylon, TPU), metal powders.
No need for support structures, high material utilization rate (≈95%)

Stereolithography (SLA):

Liquid photosensitive resin is selectively irradiated by ultraviolet (UV) light: the irradiated areas cure instantly and are stacked layer-by-layer to form a solid.Photosensitive resins (rigid, flexible, transparent, etc.) High precision (up to 0.01mm), smooth surface finish.

Selective Laser Melting (SLM) :

A high-power laser (e.g., fiber laser) fully melts metal powders (e.g., titanium alloy), which cool to form dense solids.
Metal powders (titanium alloy, aluminum alloy, stainless steel)High part density (≈99.5%), mechanical properties close to forged parts.

DIVERSIFIED SURFACE TREATMENT SOLUTIONS

SHEET METAL

Materials Type	
Carbon Steel	SPCC/SPHC/SGCC/SECC
Stainless steel	SS303/304/304L/316/316L/405/416
Aluminum Alloy	5052/6061/7075/6082/1060
Copper Alloy	T1/T2/T3/H96/H68/H62
Titanium Alloy	TA0/TA1/TA2/TA3/TC1/TC2/Ti - 6Al - 4V（Gr5）

CNC MACHINING

Materials Type	Materials Grades	Min. Size(mm)	Max. Size(mm)
Steel Alloy	Cold work mold steel:1.2379、1.2842、1.2080、1.2363 Hot work mold steel:1.2344、1.2343、1.2581 Alloy structural steel:5140/1.7035、4140/1.7225、4142、4340、5120/1.7147、4130/1.7218、4135、52100 Plastic mold steel:1.2311/p20、1.2321、1.2738、1.2083 (ASTM)1010、1020、1025、1040、1045、1050、G11170、G11440、4130、51100、52100、4140 （JIS）：SKD1、SKD11、SKT4	5*5*3	8000*4500*1500
Aluminium Alloy	Covers nearly all grades	5*5*3	8000*4500*1500
Stainless steel	SS303/304/304L/316/316L/405/416	5*5*3	8000*4500*1500
Copper Alloy	Red copper(Pure Copper & Copper Alloys with Minimal Impurities)C10100、C10200、TP2、TP1 Brass (Copper-Zinc Alloys) :H68、C24000、C22000 Bronze (Originally Cu-Sn Alloys; Now Refers to Cu Alloys Except Brass & Cupronickel):C60600、C61000、C50500、C51000、C52100 Cupronickel (Copper-Nickel Alloys, Nickel as Main Alloying Element) C70600	5*5*3	1200*700*180
Magnesium Alloy	AZ31、MAM61、MZK61	5*5*5	1200*700*70
Titanium Alloy	TC4(Ti-6Al-4V)/Grade 2	5*5*5	1200*700*70
Plastic	PP/PE/PVC/PS/ABS/PC/PA/PBT/POM/PEEK/PI/PPS	5*5*3	1200*700*70

DIE-CASTING	
Materials Type	Grade
Aluminum Alloy	A380/A360(YL102)/A356/ADC12
Zinc Alloy	ZA8 (ZnAl4Cu1)/ZA12 (ZnAl4)/ZA27 (ZnAl27)
Magnesium Alloy	AZ91D/AM60B/AE44
Copper Alloy	C85800(ZCuZn38)/C90700 (ZCuSn10Zn2

PLASTIC MOLDING	
Materials Type	
General Plastics	PP/PE/ABS/PVC/
Engineering Plastics	PA/POM/PC/PC+ABS/PBT/PET
Specialty Plastics	PTFE/PEEK/PSU
Thermosetting Plastics	Phenolic Resin /Epoxy Resin (EP)

3D PRINTING (2024 DATE)	
Materials Type	
Plastic	PLA/ABS/PETG/Nylon PA/TPU/PEEK/PP
Metals	SSU/titanium/aluminum/copper
Resins	AZ91D/AM60B/AE44
Ceramics	Photopolymer Resin/Epoxy Resin/Polyurethane Resin


Sand-blasted220# &Clear Anodized Aluminum
Blackening Steel
Sand-blasted120# &green anodized Aluminum
99% Gold-plated mirror polished Cu
Sand-blasted120# &black hard anodized Aluminum
Sand-blasted120# &black anodized &laser engraving
Sand-blasted120# &rose sand gold (matte)anodized
Silver-plated mirror polished copper-plated steel
Zinc-plated &polished Carbon steel
Hot-Dip Galvanized (natural finish) Carbon steel
Nickel plated 1045 steel
Painted white (matte) Aluminum
CD pattern Stainless steel
*white painted
Painted white &UV coating ABS+PC
Powder coating (black matte texture) ABS+PC
Painted white (bright) Aluminum

Silk screen printing | PVD plating |Passivation | Dacromet | Phosphating QPQ|carbonitriding| Masking

More surface treatments are not shown. Please contact us if needed.

SURFACE TREATMENT CUSTOMIZATION

Supports color card selection (Pantone/RAL color code matching), providing color customization services for processes such as anodizing, powder coating, and electrophoretic coating to meet personalized product appearance requirements.
Gloss levels (high-gloss/matte/semi-matte), textures (fine grain/coarse grain/orange peel), and colors to meet diverse material and functional requirements.

MAIN DISTRIBUTION OF FACTORIES

PACKAGING

Triple-layer protection

① Eco-paper wrap →

② EPE foam cushioning
PE film/tape primary layer →

③ Export-grade cartons/wooden crates with moisture barrier options

Optional Add-ons:

①.Waterproof membrane (upon request)
②.Edge protectors for fragile components
③.Custom wooden crates (for oversized/heavy parts)
④.Full-process QC inspection with optional third-party SGS&Salt Spray Test reports

DRAWING SERVICE (FOR PARTS WITHOUT 3D FILES)

If you only have physical samples or 2D sketches (no 3D models) for your parts, we provide professional 3D drawing services to support your manufacturing needs.

What We Offer:

1.Sample-to-3D Conversion

We reverse-engineer your physical part (e.g., gears, brackets) using precision measuring tools (coordinate measuring machines, calipers) to create accurate 3D models (compatible with SolidWorks, AutoCAD).

2.2D-to-3D Modeling

Convert your 2D technical drawings (with dimensions) into detailed 3D models, optimized for die casting, CNC machining, or sheet metal fabrication.

Efficiency:

Deliver the 3D file within 1–3 working days (based on part complexity).

Seamless Link: The 3D model will directly connect to our manufacturing process (mold design, machining), saving your communication time.

How It Works:

1.Send us your physical sample (or clear 2D sketch with dimensions).

2.We measure, model, and send you the 3D draft for confirmation.

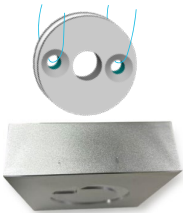
3.Finalize the 3D file and start manufacturing.

To help you optimize product design, reduce production costs, and avoid common mistakes, we've included concise machining and design guidelines in this catalog. For in-depth tutorials, industry best practices, and step-by-step guides, visit our blog – your trusted resource for manufacturing knowledge.

● Analysis of Design Features That Increase Production Costs

Hanging holes for surface treatment require modeling. Most surface finishing processes (such as anodizing) involve hoisting parts to immerse them in treatment solutions, or hanging them with hooks (e.g., for spray painting). Therefore, some ecorative parts need dedicated holes for lifting purposes.

①Through holes with a diameter of 3.5 mm or larger (general tolerance).
②Threaded holes of M5 or larger.
③Slotted holes with a width of 5 mm or larger.
④Special-shaped holes with a width of 3.5 mm or larger.



The lack of pre-designed holes forces the use of clamps, leading to cosmetic defects.

Parts requiring painting/coating (with only single threaded holes for masking) exhibit surface unpainted areas when using standard hanging techniques.

①Customized fixtures are thus necessary to ensure full and uniform coating coverage.
②Add additional holes or designated hanging locations.

Variations in hanging point positions directly affect surface finish quality.

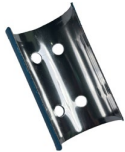
● Core Functions of Ejector Pins in Mold Product Design

①Avoid cosmetic surfaces for ejector pins : prioritize edges, ribs, pillars, or hidden assembly areas.
②Adopt mark-free ejection:
Ejector plate: Evenly lift product bottom (e.g., flat panels), no single-point marks.
③Ejector Sleeve: Eject around the product's pillars, with marks hidden inside the pillar holes.
④Tunnel Ejector: Eject from the side or gate of the product, with marks concealed.

Ejector pin marks refer to the traces left at the contact points between ejector pins and the product (usually appearing as small dots, dents, or protrusions).

Pricing Varies by Requirements & Process

For sheet metal components requiring flawless surface finishes (e.g., exposed cosmetic parts or parts with strict appearance standards), traditional bending processes often leave unavoidable bend marks due to material plastic deformation and mold friction.



(Avoid Marks Entirely)
①Stamping (one-step forming with high-precision dies, no bend stress marks).
Post-Processing Repair
②Brush along the bend direction to unify texture and hide marks.
③Polish/blast, or fill & spray (coating ≥30μm) to cover marks.

Pricing varies based on specific requirements. For parts produced via stamping, additional mold costs apply—this process is far more complex than simple bending and cannot be replaced by it.

So when you receive quotes with significant differences, taking the time to learn more and choose the most suitable option is the right approach.

Process & FAQs

More details available on our official website.

PROCESS

TRADE TERMS

ENGINEERING

DRAWINGS

DESIGN

SHIPPING

TIPS

Suitable part features for stamping

01.

Material & thickness

sheet metals, typically 0.1–6 mm (steel, galvanized, stainless, aluminum, copper)

02.

Sheet/plate geometry

predominantly flat or near-flat profiles—cutting, punching, and bending operations.

03.

Repeatable shapes

parts with repeated features that benefit from multi-station or progressive tooling.

04.

Moderate forming

bends, flanges, shallow draw, embossing, and local forming (not deep-draw complex cavities).

05.

Thin–walled / uniform sections

consistent wall thickness to reduce springback and cracking risk.

06.

Functional parts

enclosures, panels, brackets, rails, heat sinks, shields, clips, and mounting hardware.

Which parts are not suitable for sheet metal stamping?

Very thick, bulky, or solid 3D parts; deep-draw complex cavities; highly sculpted freeform surfaces; parts requiring extensive secondary machining or nonmetal materials.

Can you produce single prototypes or one-off parts?

What tolerances can stamping achieve?

What secondary operations do you provide?

Can you produce embossed, drawn or deep-draw parts?

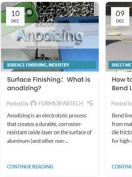
Can you accommodate design changes after tooling?

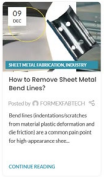
How is packaging and shipping handled for stamped parts?

BLOG

More details available on our official website.

(This catalogue provides a general overview of our manufacturing services. For complete information, please refer to our official website.)





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WEBSITE

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PROJECT

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SURFACE

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① Submit Project Requirements

Click to submit request via form

GET QUOTE QUICKLY

Must provide information(PDF/STEP drawings, materials, quantity, surface and special requirements)

② Quotation Reply

Regular quote will be replied within 24 hours, and bulk / multi-style quote will be replied within 48 hours.

③ Confirm The Plan

Send PO (Purchase Order) after finalizing the quotation.We update PI (Proforma Invoice) according to

④ Payment -Arrange Production

Pays the deposit and sends the receipt, the production plan will be started.

⑤ Production Progress Check

TRACK ORDER

You can view the order progress via the website, and updates will be synced to your email.

⑥ Complete Transaction

Arrange shipment after the customer pays the balance.

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FIND US ON MORE PLATFORMS

FORMEX
FABTECH

Thank you for reading through. Since the development of the industrial sector, the ever-changing international landscape and the economic downturn in the post-pandemic era have brought unprecedented pressures to all. We sincerely wish you every success in your endeavors! For more information, please feel free to contact us online anytime.

Nous vous remercions pour votre lecture jusqu'ici ! Depuis le développement du secteur industriel, le contexte international en constante évolution et la récession économique à l'ère post-pandémique ont imposé des pressions sans précédent à tous. Nous vous souhaitons sincèrement tout le succès dans vos projets ! Pour plus d'informations, n'hésitez pas à nous contacter en ligne à tout moment.