



深圳市亿进五金有限公司  
Shenzhen Yijin Hardware Co., Ltd.

301



**MANUFACTURING SOLUTIONS**  
Custom Machined Parts  
CNC Machining Metal & Plastic Parts  
ISO 9001:2015 | ISO 14001



YIJIN HARDWARE

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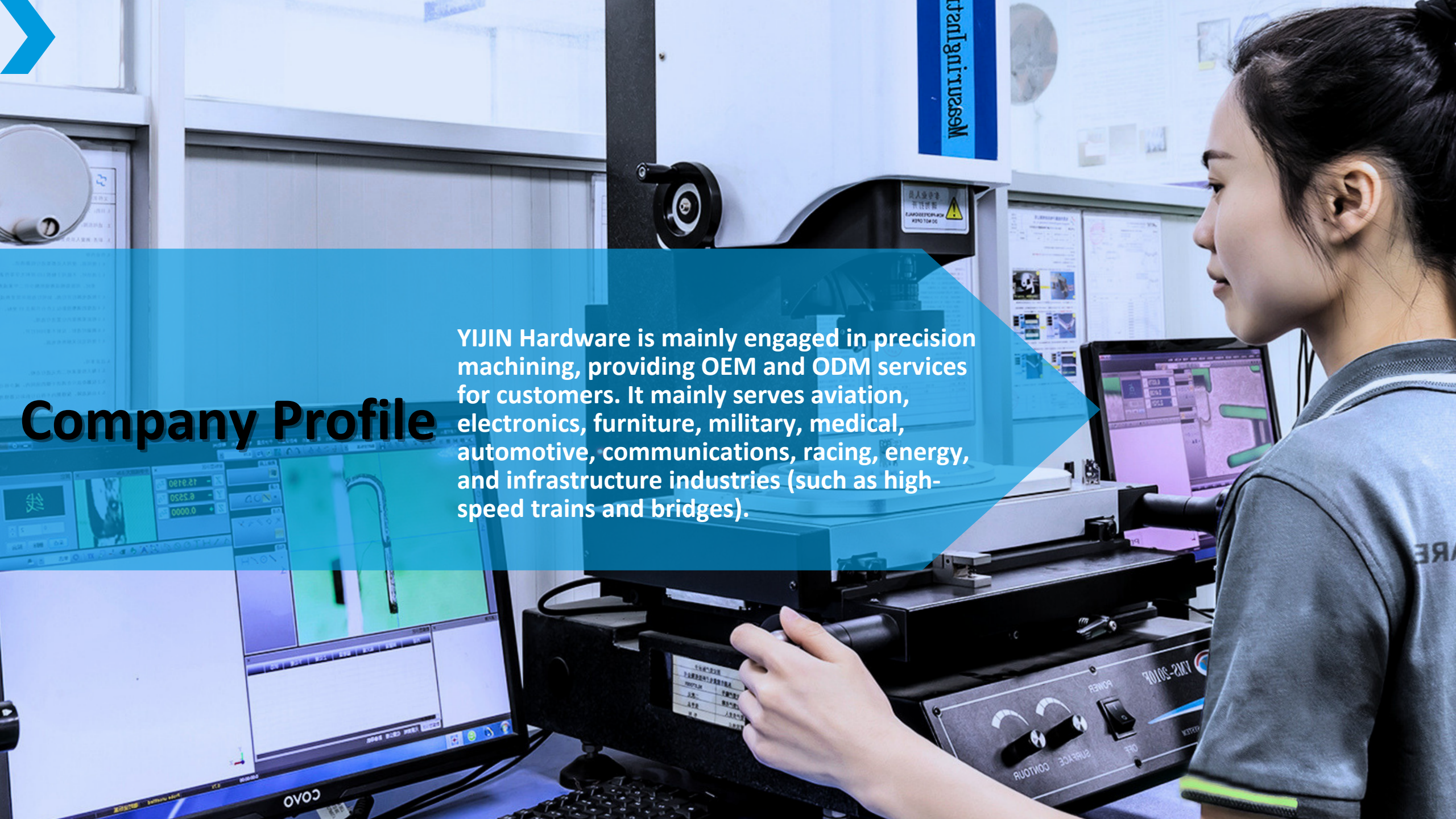
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# Company Profile

YIJIN Hardware is mainly engaged in precision machining, providing OEM and ODM services for customers. It mainly serves aviation, electronics, furniture, military, medical, automotive, communications, racing, energy, and infrastructure industries (such as high-speed trains and bridges).

## Company Profile



**YIJIN HARDWARE**

The factory of Shenzhen Yijin Hardware Co., Ltd. is located in Lianhua Mountain, Chang'an Town, Dongguan City. We own a group of professional scientific and technological talents. The company implements a standardized management model, actively participates in international competition, and gradually implements an internationalization strategy. It is our vision to become the leading electronics industry service provider in China.

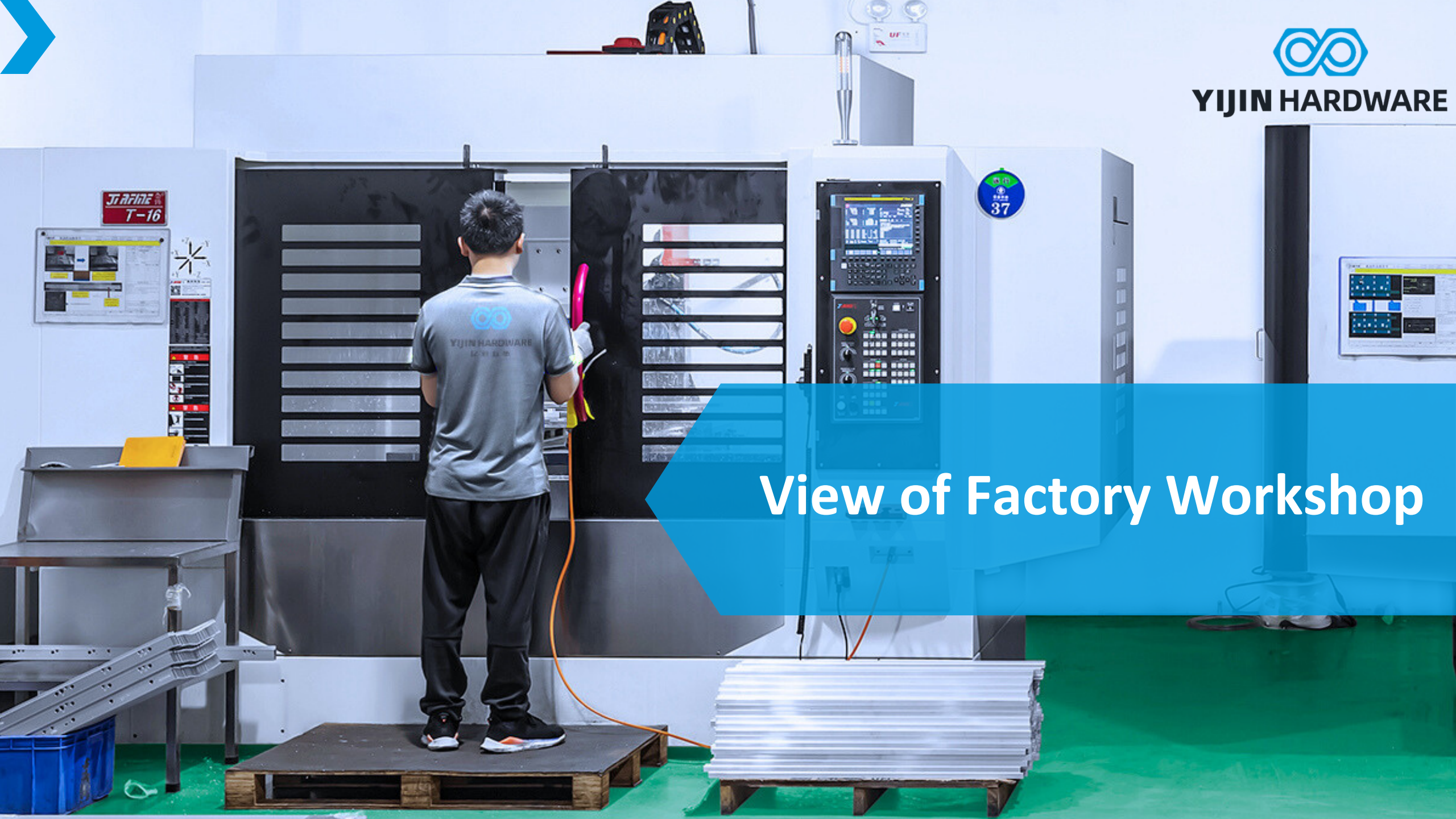


Shenzhen Yijin Hardware Co, Ltd. insists on brand innovation and has established a good strategic partnerships with many famous domestic enterprises.

Our company is mainly engaged in precision machining, providing OEM and ODM services for customers. It mainly serves aviation, electronics, furniture, military, medical, automotive, communications, racing, energy, and infrastructure industries (such as high-speed trains and bridges).



YIJIN HARDWARE



# View of Factory Workshop



## CNC Machining Workshop

Five-axis CNC machines for precision parts: Five-axis CNC machines can perform multiple processes at a single time, integrating milling, boring, drilling, tapping and threading.

Single, dual, tri-axis and interchangeable spindle boxes for maximum machining time savings

The machine can machine with an accuracy of  $\pm 0.001\text{mm}$ , a surface roughness of  $Ra:0.2$ , a maximum machining stroke of 200mm and minimum machining material diameter of 1.5mm.

## CNC Machining Workshop

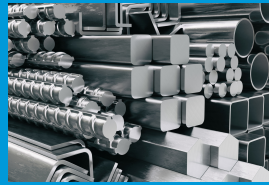


# Material



## Aluminum

AL2024, AL5083, AL5052,  
AL5754, AL6063, AL6082,  
AL7075, AL6061-T6 etc.



## Stainless Steel

303, 304 , 316, 316L ,304L ,430,  
440C, 321, 405, 201, 202, SUS420,  
SUS416, 17-4PH etc.



## Brass

C360, C230, C210, C220, C260,  
C272, C274, C314, C330, C335,  
C353, C365, C385, C443, C464 etc.



## Titanium

TA2, TA4, TA1, TA3,  
Ti 6Al-4V etc.



## Plastic

ABS, POM, PEEK, PE, HDPE, PA6,  
Acrylic, Noryl, PC, PET, PE, PPS, PP,  
PS, PU, PBT, PEI, PTE, PVC



## Steel

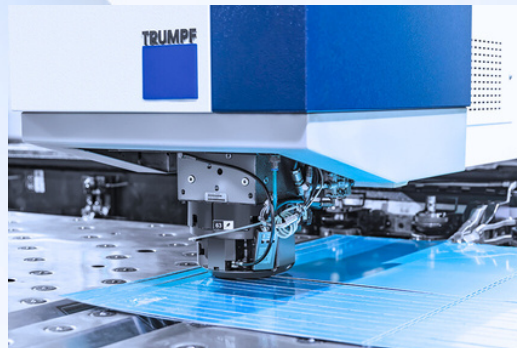
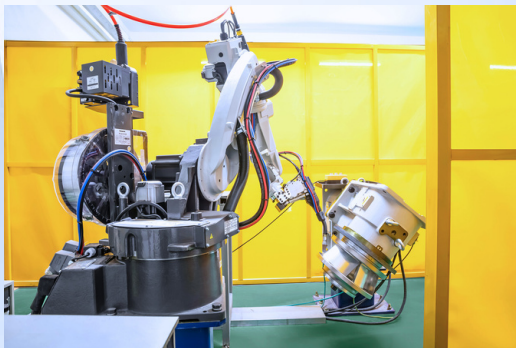
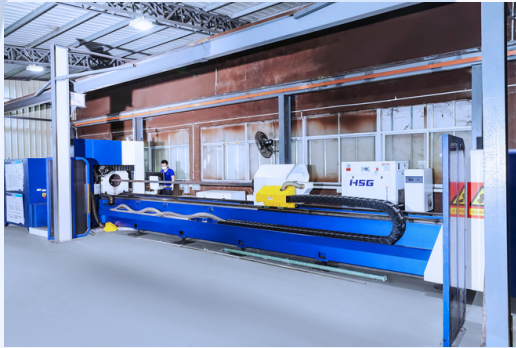
C45, Q235, A2, D2, 4140, 4340,  
A36, A529, A572, 1020, 1045,  
4130, 4150, 4340, 9310, 52100 etc.



## Copper

C101, C102, C2100, C2200, C2300,  
C2400, C2600, C2680, C3710,  
C3771, C3603, C3560, C2800 etc.

## View of Factory Workshop



## Sheet metal working shop

Sheet metal fabrication relies on a special set of tools across its cutting, welding bending, punching and joining processes to force the metal into the desired shape. Sheet metal fabrication is the most cost-effective choice for metal components with specified wall thickness. Best Prototypes can provide a wide range of sheet metal capabilities, from high quality cutting, punching, bending, to welding services.

## Secondary Processing Workshop

The secondary processing technology for precision metal parts includes side holes, tail holes, arc, slotting, milling, and plane processing.

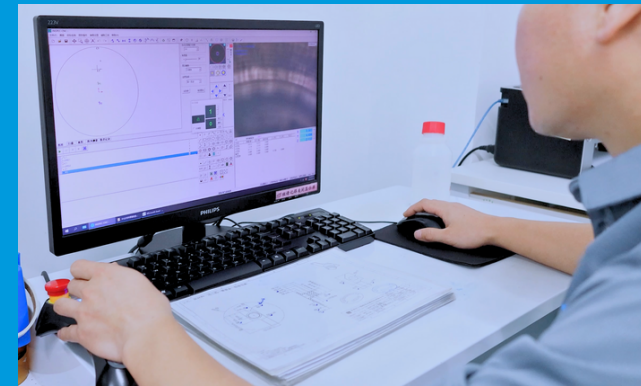
Processing machines include engraving machine, Suzhou tricorder, hand grinder, semi-automatic drilling machine, surface polishing machine, electric punching machine, high-speed punching machine, desktop punching machine, horizontal punching machine, automatic chamfering machine, milling machine, etc.



## Electroplating Workshop

We have mature nickel plating, silver plating, gold plating, and palladium plating technology. Such as thick metal treatment (more than 100u), heavy metal treatment (PdNi), etc.

Electroplating requires products with: excellent current transfer capability, anti-oxidation, corrosion resistance, and protection of substrates. Solderable or solder can be easily adhered to the surface.



## Quality Testing Equipment

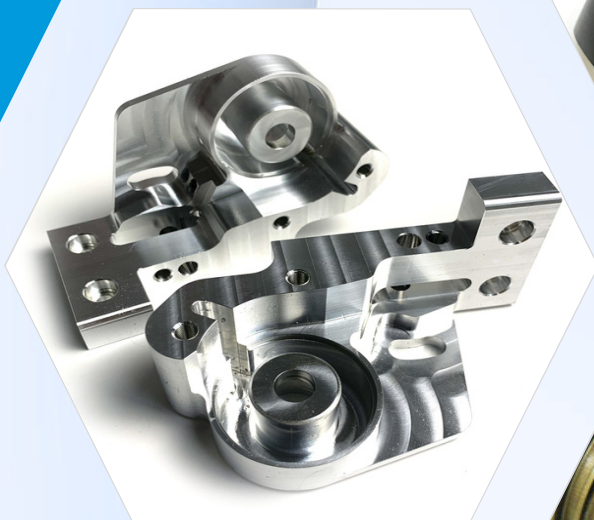
We have a series of high-precision testing equipment, which can meet the testing requirements of different products.

Equipment image can be enlarged to: 20  
p50p Measurement reading accuracy:  
0.001mm Dimensional hardness tester  
accuracy of  $\pm 2^\circ$ .





# Products and Services

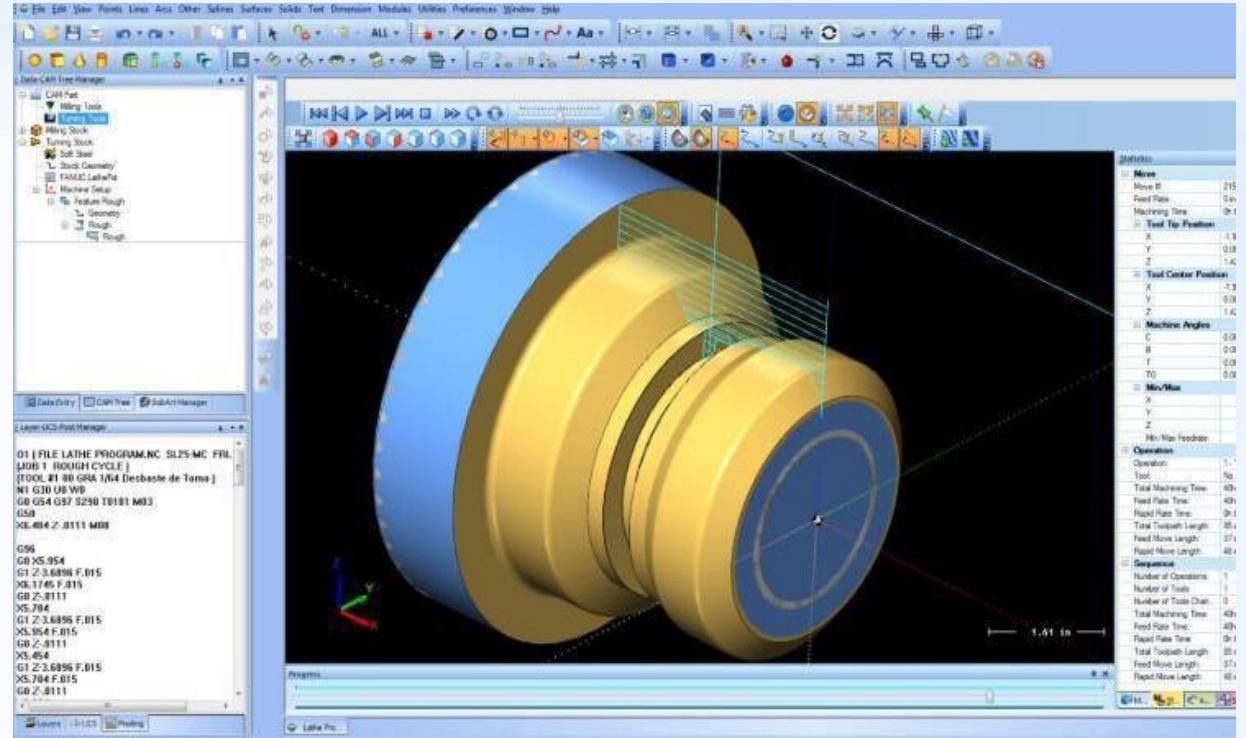
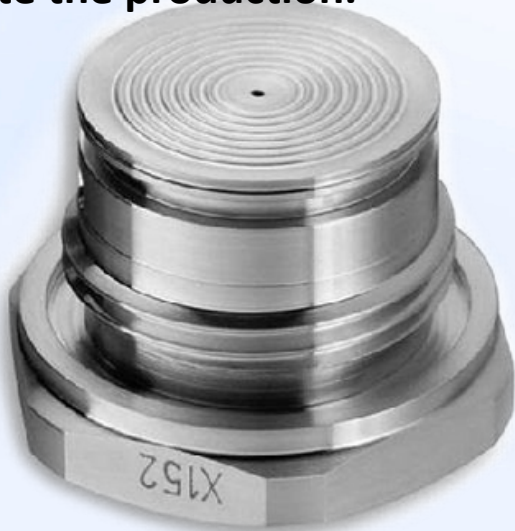


# CNC Machining of Military Defense Parts



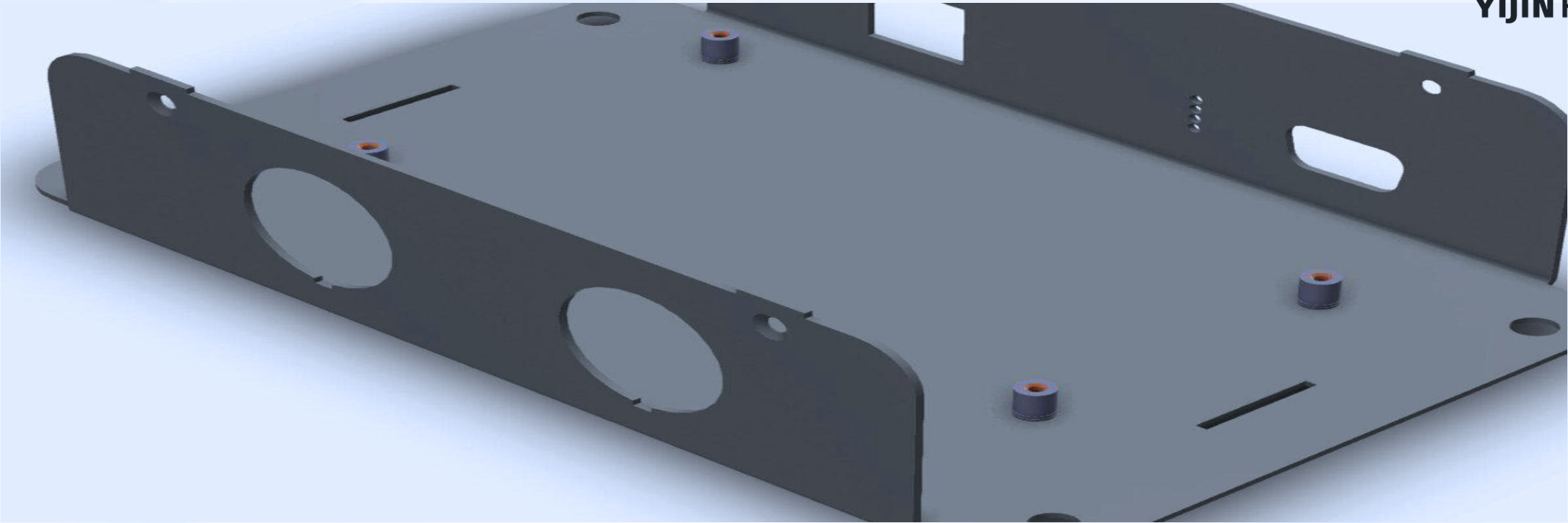
YIJIN HARDWARE

This is a military 316 stainless steel seal. The surface has been passivated. The seal ring is installed at the end face groove of it. It achieves the sealing effect through thread pre-tightening. The main difficulty in processing this part is the end face groove. Since the small diameter of the end face groove is smaller than the thread, and the thread relief space is small, the conventional tool will be interfered when processing the end face groove. Therefore, it is necessary to customize a special end face groove tool to complete the production.



You can place your order with confidence and YIJIN Hardware will take care of the rest for you.

We promise that the raw materials, production, surface treatment and after-sales service are all under strict quality control.



**This is a medical sheet metal made of aluminum with black electrophoretic surface treatment. This is produced by our company for a British medical equipment manufacturer. The difficulty is that it needs to be completed by sheet metal laser cutting. And it needs to go through CNC secondary processing, the surface of the shell cannot be scratched, and the four pillars cannot be welded as a whole, which has caused many problems. We spent a lot of materials and processing time in the trial production process. In the end, the finished product we processed was: a sheet metal shell without any scratches on both sides and no bending, which met all the requirements of the customer, and finally this customer became our regular customer.**



In 2017, GE Group USA came to our company as a Tier 2 supplier for evaluation and inquiry.

Our engineering and production departments carefully studied the drawings and offered them a very reasonable price. GE Group was very satisfied with our prompt response and evaluation. Therewith, we discussed and cooperated more deeply on this machined part for the automotive industry, and finally we decided to use a 5-axis linkage machine for production.

The material used for this product is aluminum, and the surface treatment is anodized. The difficult machining part is the four corner pillars, which need to be machined from a complete aluminum plate. The final product we processed for the customer is a small knife pattern, smooth surface treatment, without any impurity stain.

With this cooperation, Yijin Hardware has gained a lot of experience in machining for the automotive industry and added a valuable asset to the development of the company.

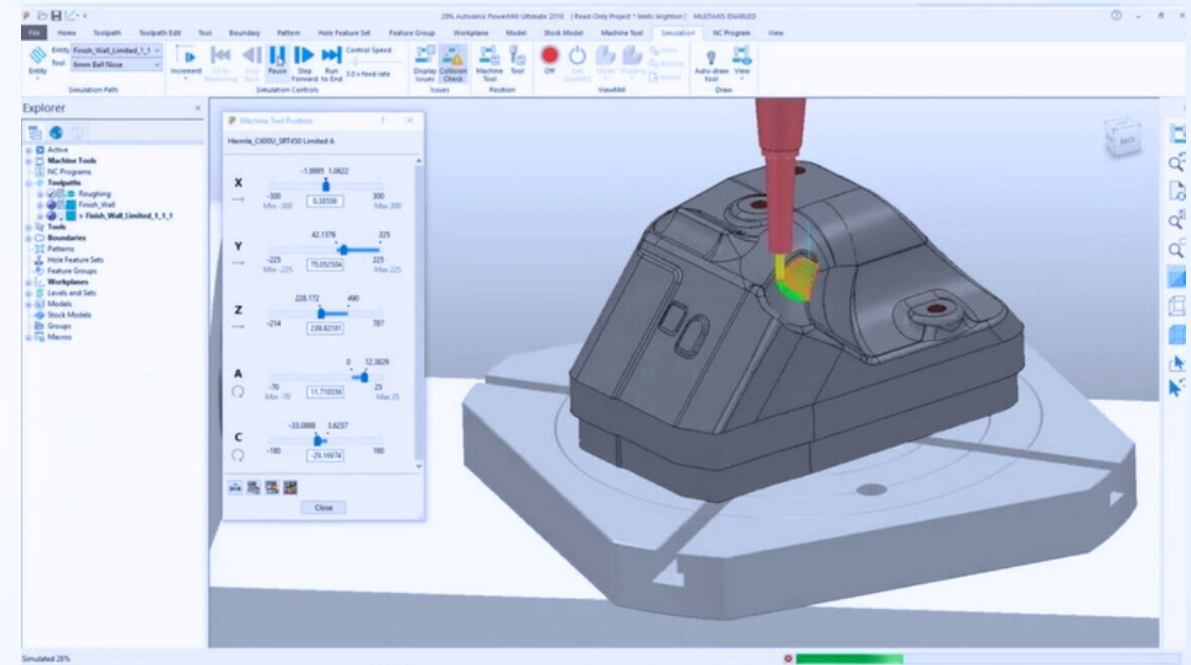


# CNC Machining of New Energy Parts

This machined product is used in the new energy industry. The material is brass H65. It is manufactured for a new energy company in Germany. Because of its high value, German engineers were dispatched to our factory for a visit.

The engineers from both sides discussed together and waited for the samples for prototyping. The product had to be milled to an approximate structure on a CNC machine and then finished on a five-axis engraving machine.

German customers are very satisfied with the efficiency of our company. In the process of processing this brass material, we encountered the problem of poor engraving of the bevel. It was difficult to drill the slant well. Fortunately, we have experienced engineers and technicians who finally solved them.



The aerospace transmission part was produced by Yijin Hardware for China Southern Airlines Civil Aircraft Maintenance Company.

We adopt the five-axis milling method, and it usually takes 3 days to process one piece of this kind of aerospace transmission parts. The material used in the product is 316l stainless steel, which is not easy to drill. The precision of the parts is high, and the outer diameter needs to reach 500mm, and the time is tight for us.

China Southern Airlines asked our company to process 200 pieces of aerospace transmission parts within 15 days. In this regard, our company used 5 sets of five-axis inkjet equipment for 24-hour processing and production and finally completed the cooperation within the time required by the customer.

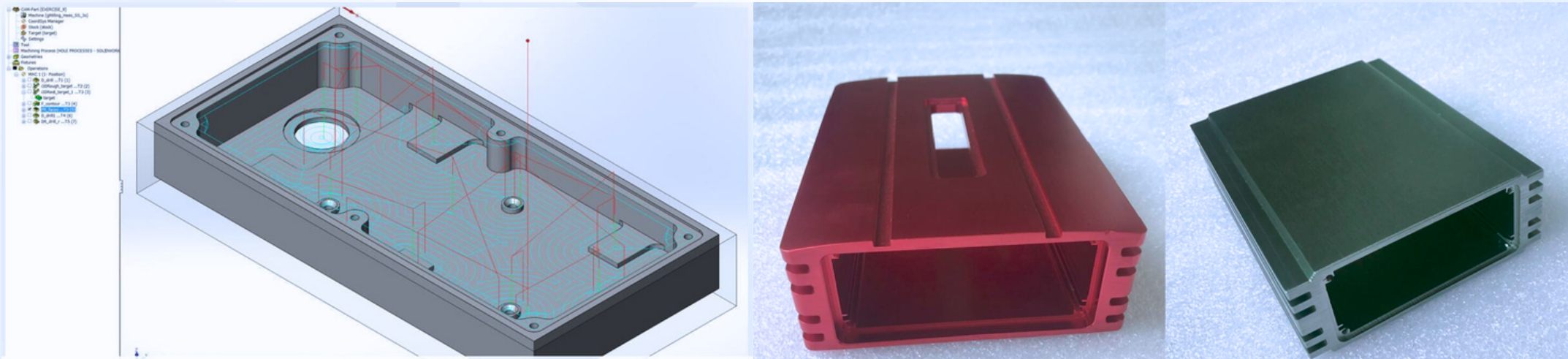
The maintenance department of China Southern Airlines spoke highly of Yijin Hardware's processing ability and time control. It is the responsibility and mission of Yijin Hardware to solve problems for customers and complete customer tasks on time.



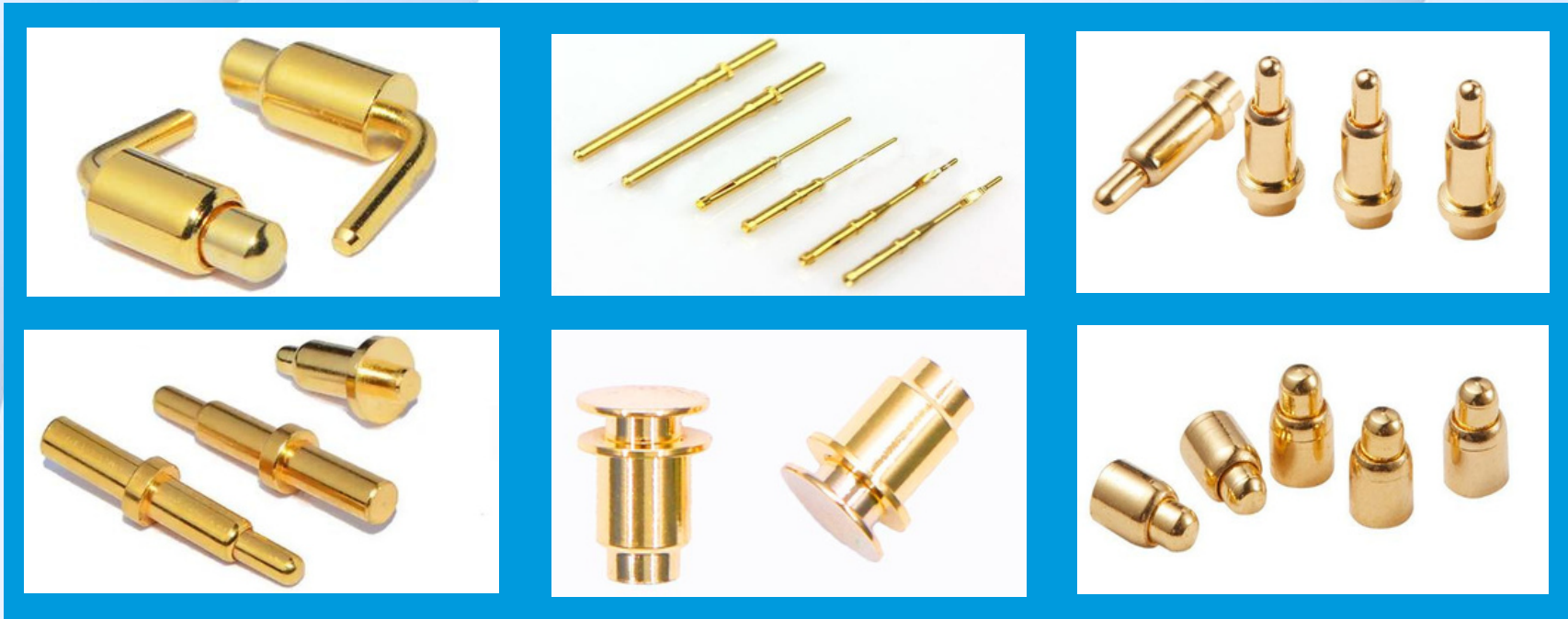
The Technology Department of China Xiaomi Technology Co., Ltd. pointed out that the shell capacity of the robot control box they designed was insufficient and assembly was difficult.

At that time, technical engineers from Xiaomi approached us and hoped that we could cooperate on this project, of course, it is our pleasure.

YIJIN Hardware redesigned and processed the shell of the robot control box with a CNC milling machine, which finally solved the customer's problem and met the customer's needs, and we have therefore achieved long-term cooperation.



# High Precision Connector



**Material: Brass**

**Application: cell phones, computer wireless communication equipment, telecommunications equipment, non-standard test equipment**

**The Pogo pin is a spring-loaded probe consisting of three basic components: a needle shaft, a spring and a needle barrel, pre-stressed with precision instruments and a precision spring structure inside.**

**The surface coating of spring pins is generally gold plated, which can better improve its anti-corrosion function, mechanical properties and electrical properties. The types of pins are pointed pins, gripping pins, round pins, knife pins, etc.**

**Pogo pin is generally used in cell phones, communications, automotive, medical, aerospace and other electronic products for precision connections, it can make these connectors have higher corrosion resistance, stability and durability. If your company needs this product, our company can also help design and produce it.**



**Tellurium copper**



**Pure copper**



**Brass**



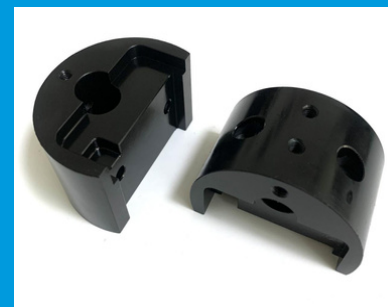
**Stainless Steel**



**PEEK**



**PVC**



**POM**



**Aluminum**



**New Energy**

**Railway Track**



**Bridge**

**Sailing**



**Nuclear Power  
Station**

**Shipping**



**Mine Field**

**Aerospace Field**



The newly released products of Yijin Hardware are shown in the picture above, and the material is AL6061-T6. The accuracy of this product needs to be between 0.005mm-0.15mm. In terms of surface finish, we chose yellow Alodin and black anodizing.

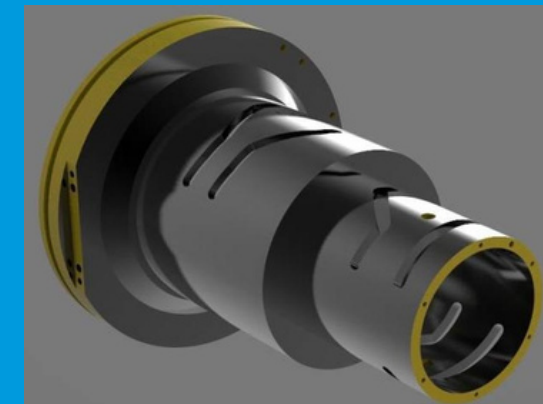
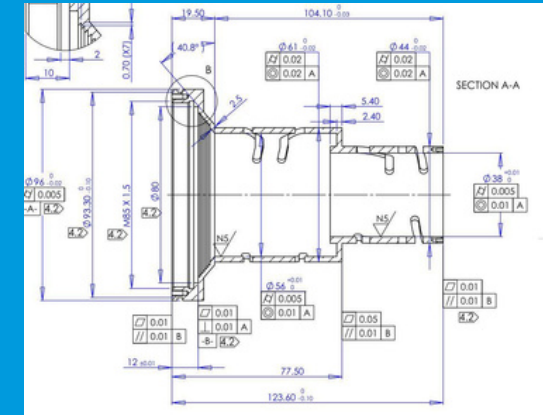
### There are some difficulties in production:

Two-tone finish, yellow Alodine and black anodized. The purpose is to allow the part to achieve anti-corrosion effect, improve the bonding force with the black anodized coating and retain the conductivity of the aluminum alloy structure in some places.

**The surface treatment plan:** complete the processing of this part by turning and milling → the overall yellow alodine surface treatment → cover the surface of the parts that do not need black anodizing treatment according to the drawing requirements → black anodizing

### According to the customer's request, we try the following three methods:

1. Use high-temperature resistant adhesive tape to cover the parts that need yellow alodine, and then carry out black anodizing.
2. For the parts that need to be treated with yellow Alodin, we customize and process the masking accessories, assemble the masking, and then carry out black anodizing.
3. Irrigate or apply silicone to parts that require yellow Alodine treatment, followed by black anodizing.



## Summary:

The anodizing process is all high-temperature immersion treatment. In method 3 above, the liquid infiltrated into the covered parts, causing the parts of the prepared yellow Alodine to be infected by black anodizing, resulting in a very high defect rate. And in the process of shielding, only artificial shielding can be used, which has low efficiency and high cost. Therefore, we eliminated the suggestion made by the customer.

## The final solution proposed by YIJIN Hardware is as follows:

CNC turning (reserve machining allowance for the yellow Alodine part) → CNC milling (reserve machining allowance for the yellow Alodine part) → overall yellow Alodine surface treatment → overall black anode Oxidation → Customize the special fixture for CNC turning for this product (reduce the repeated positioning error of the part under certain conditions), turn the margin reserved for the yellow Alodine part → customize the special fixture for CNC milling for this product (reduce the repeated positioning error of the part under certain conditions) Repeated positioning error of small parts), the margin reserved for the yellow Alodine part is milled → yellow Alodine surface treatment. Yellow Alodine will not adhere to black anodized coatings, so only turned, milled areas (that is, areas requiring a yellow Alodine finish) will adhere. Please refer to the finished product picture



Customer-oriented, to help customers find problems, optimize solutions, reduce costs, and solve problems, is the service purpose of YIJIN Hardware all along.

Shenzhen Yijin Hardware Co., Ltd. has passed the ISO9001:2008 quality management system certification. Our customers are mainly from France, Israel, Switzerland, Germany, the United States, Ukraine, Romania, the United Kingdom, Belgium, Venezuela, Mexico, Brazil, Malaysia, the United Arab Emirates, South Africa, etc.

Yijin Hardware has always been committed to providing high-quality precision hardware accessories for military, aviation, navigation and other fields. We sincerely look forward to cooperating with you!





# Why Choose Us

**An Excellent Team**



**Professional Factory**



**Fast Delivery and Sample is Provided**



**Advanced Equipments**



**A Complete Quality Inspection System**



**Provide You with the Most Sincere Service**






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