



**科泰检夹具**  
MISSION GAUGE & FIXTURE



# Dongguan Mission Gauge & Fixture Co., Ltd

— Your Reliable Supplier for Checking Fixtures and Welding Jigs —

[www.missiongauge.com](http://www.missiongauge.com)

- Cubing ( Car Cubing UCF PCF )
- Checking Fixtures for Automotives
- Welding Automation Fixtures for Automotives
- Non-standard Precision fixtures



# Contents



**Company  
Overview**



**Business  
Introduction**

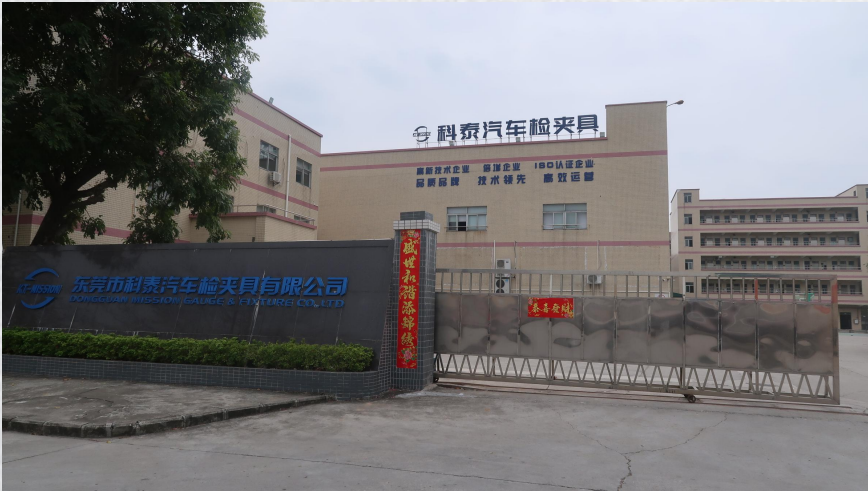


**Delivery  
Assurance**



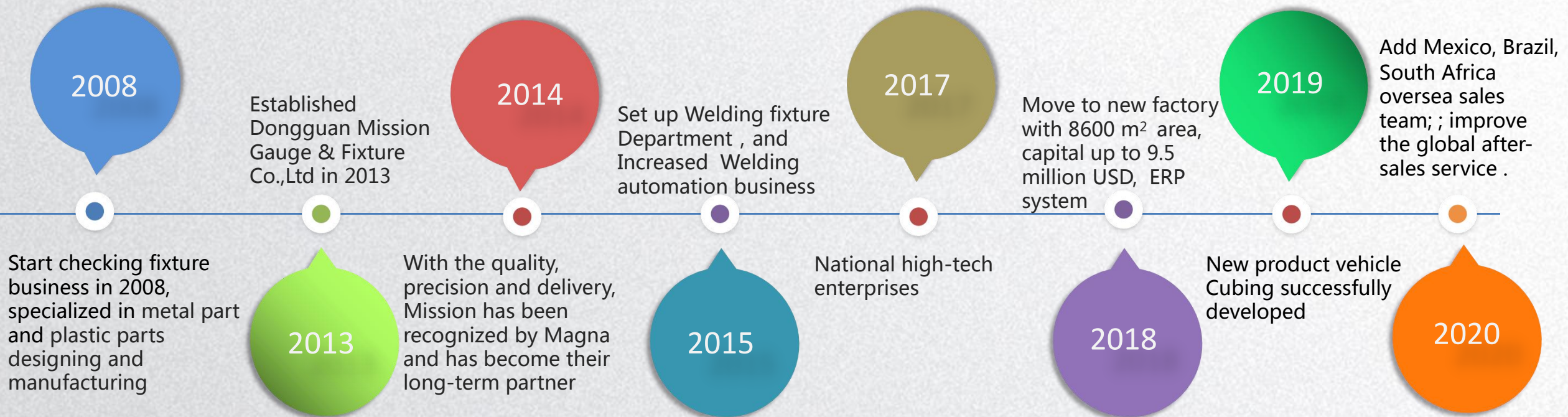
**Project  
Case**

## ➤ 1.1 Company Introduction



- Start checking fixture business in 2008, registered on 2013, specialized in cubing, checking fixtures, welding jigs , welding line for automotive parts, and precision machining parts. Mission has become a well-known supplier at home and abroad.
- 8600m<sup>2</sup> plant area, 230 employees in total. Registered capital of 4 million USD, Annual turnover 17 million USD.
- ISO9001:2015 certificated. State-level high-tech enterprise. 30 national patents.
- 6 sets of 5-axis CNC machines imported from Germany/Italy, 36 sets of 3-axis CNC machines from Taiwan 8 sets of CMM checking machines. Industry-leading human and equipment resources, to ensure highly accuracy requirement, and to be the leader in the industry.
- Main Customer : Magna、Valeo、Yanfeng、Martinrea、Metalsa、Kirchhoff 、 Johnson Control 、 Toyota、 Honda、 FAW Volkswagen、 FAW CAR、 Dongfeng Motor、 Nissan、 Geely、 Ford、 GAGC、 HAIMA、 Xiaopeng、 MITSUBISHI、 Hong Qi、 BJC、 South-East、 BYD etc.
- Mission policy" Customer First, Delivery on Time, Make Customer Satisfied" , vision" To build First-class Enterprises and Achieve Positive Life" .

## ➤ 1.3 Development History



➤ 1.4 Company qualification

ISO/IEC17025:2017 certified enterprise



ISO/IEC17025:2017 certified enterprise



50 National Patents



Guangdong Honest Enterprise



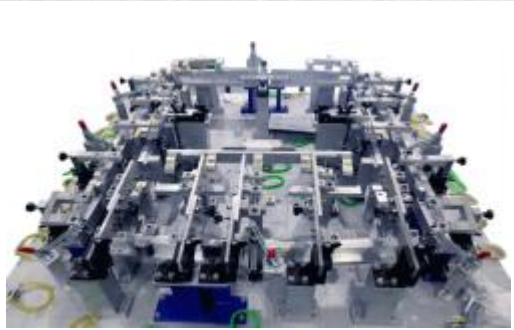
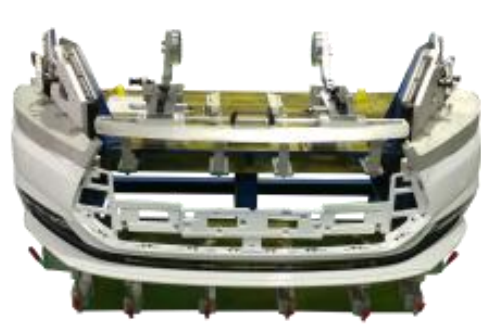
National High-tec Enterprise



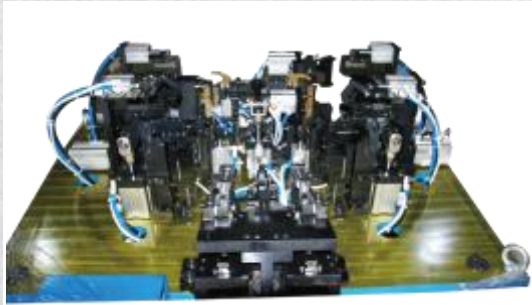
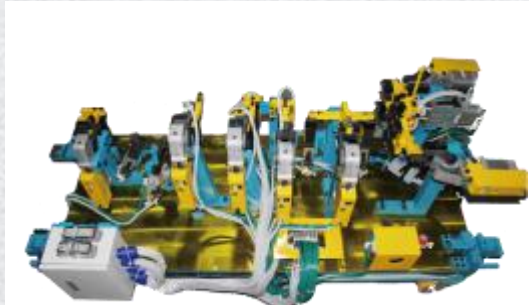
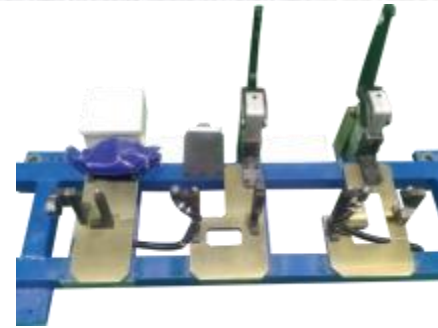
Contract abiding and honest enterprise



## ➤ 2.1 Main business-part 1

**Gauge-Assy metal part****Gauge-Assy plastic part****Gauge-Single metal part****Gauge-Single plastic part****Functional Master Model****Cubing-Door****CMM Holding Fixture****Flexible Combination**

## ➤ 2.1 Main business-part 2

**Welding jig-Arc welding****Welding jig-Spot welding****Cuting welding jig****Puppet Welding jig****Automation line****Automation line****Welding cell-Spot welding****Welding cell-Arc welding**

## ➤ 2.2 Market distribution





## ➤ 2.3 Customer visit pics



SMP group photo



PRD Customer group photo



JIC Group photo of customer's visit



FD Customer Visit



FD Customer visit

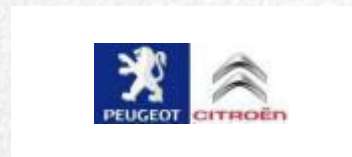
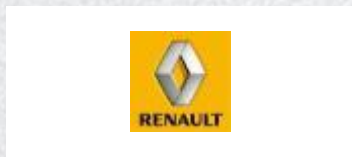
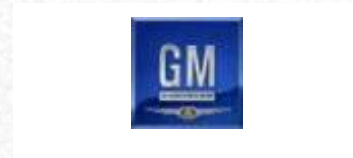



AAT General manager's visit


## ➤ 2.4 Direct customer



## ➤ 2.5 Major end customers



Machining Equipment							PIC
Machine Type	Parameter (mm)	Theoretical Accuracy	Actual Accuracy	QTY	Brand	Total	
5 axis Machine (Imported from German)	1250*700	0.005 mm	0.020 mm	2	DECKEL MAHO (DMU 60/80 Mono BLOCK)	6	
5 axis Machine (Imported from German)	1000*750	0.005 mm	/	2	DECKEL MAHO (DMU 95 Mono BLOCK)		
5 axis Machine (Imported from Italy)	3000*2000	0.005 mm	/	2	BRETON MATRIX 800		
High Speed CNC Milling Machine	2150*1500	0.010 mm	0.010 mm	2	HAITIAN	36	
3 axis CNC	4025*2400	0.010 mm	0.020 mm	2	AWEA LP-4025Z		
3 axis CNC	1000-1350*600	0.010 mm	0.020 mm	16	AWEA AF-1250		
3 axis CNC	800*600	0.010 mm	0.030 mm	10	MINGJIE/AWEA/DAWEI		
3 axis CNC	540*400	0.010 mm	0.020 mm	6	QIANGYANG		
WEDM-MS	500*350*270	0.010 mm	0.010 mm	9	FANUC/SUZHOU SANGUANG	9	

Quality Assurance Equipment						Total	PIC
Machine Type	Parameter(mm)	Accuracy	QTY	Brand			
3D Programmable CMM	5000*2500*1800	0.012mm/M	1	HEXAGON	9		
3D Programmable CMM	3000*1500*1200	0.008mm	1	HEXAGON			
3D Programmable CMM	2200*1200*1000	0.003mm	1	HEXAGON			
3D Programmable CMM	1500*1000*800	0.003mm	1	Leader			
3D Programmable CMM	1000*800*600	0.003mm	2	WKM/Series			
3D Programmable CMM	800*600*600	0.002mm	1	HEXAGON			
Romer Absolute Arm	3500/2500	/	2	FARU/HEXAGON			

## ➤ 3.2 Engineering Capability

◎Main Model ( Cubing UCF PCF ) ◎Plastic Part Gauge ◎Metal Part Gauge ◎Raster Holding Fixture

For checking fixture: 35 engineers in total, 20% are senior engineers, 50% are second class engineers. 45% engineers have 5 years work experience in this area.



## ➤ 3.2 Engineering Capability

### ◎Welding Work Station ◎Welding Assembly Line ◎Welding Jigs

For welding automation: 26 engineers in total, 20% are production engineers, 12% are electrical engineers, 68% are design engineers. 51% engineers have more than 5 years work experience in this area.

#### Design Simulation

- According to static simulation based to ensure the design is feasible.
- According to dynamic simulation based on ensure the welding is feasible.

#### Electrical Capacity

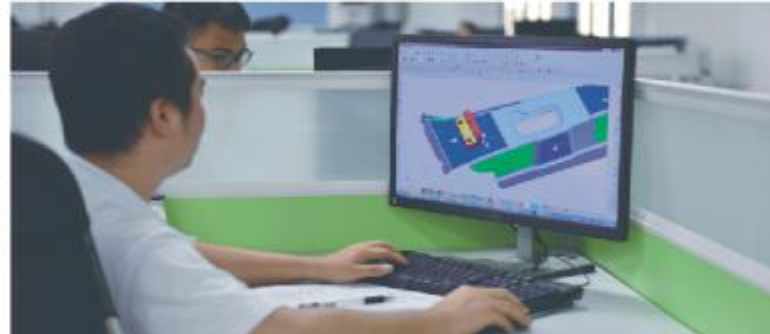
- Have PLC programming capacity: MITSUBISHI/SIEMENS/OMRON/AB.
- Have electric online debugging capacity.
- Have offline/online programming capacity.

#### Simulation Capacity

- Have robot offline programming capacity.
- Have Cycle-time analyzing capacity.
- Have interference testing capacity.

#### Process Design Capacity

- Have RPS analyzing capacity.
- Have panel processing capacity.
- Have spot processing capacity.
- Have cycle-time design capacity.
- Have capacity for choosing welding gun & robot.



#### Customer Standard

- Translate and Refine the standard , ensure gauge designing and building meet customers' requirements.



#### Software automation

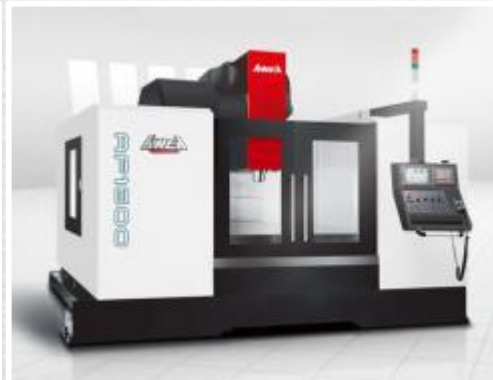
- Continuous investment in R&D costs, "automatic drawing " improve design efficiency by 40%.



#### Design simulation

- Simulate the floor activity mechanism by ensure the feasibility of the design.

### ➤ 3.3 Milling Horsepower



#### Equipment capacity

- Work in two shift to ensure max capacity
- Monthly accuracy check to ensure quality
- The fastest delivery:25days

#### OperProcess Standardizationational standardization

- Uniform processing,measuring,tool using mapping, bracket programming,base
- programming and five-axis programming standards

#### Process Standardization

Process design review -Receive the following figure information-Making timing plan-allocating task -Main programming-Program audit-Delivery site manager - Delivery

#### Five-axis programming standards

Clamping-Trial knife -Medium light-Semi polishing-Polishing-Clearance angle - rework-holes

- **3.4 Alignment Ability** Mission has more than 30 assembly technicians, which 40% have more than 6 years' assembly experience in the same industry and 35% have 4-6 years' experience





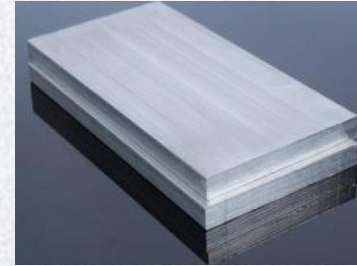
### ➤ 3.5 Project Management



PO Review



Design Review



Material Preparation



Machining



Delivery



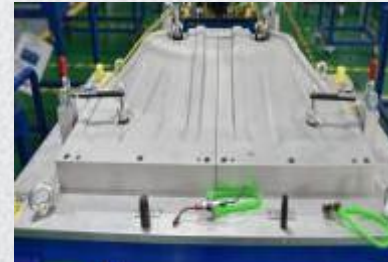
Assembly



3rd Party Certificate



Buy Off



Gauge Improvements



CMM checking

### ➤ 3.6 Total Quality Management(TQM)



<b>9 Sets of CMM</b>	
Brand :	HEXAGON、Series、leader
Software :	PC-DMIS 2013MR1
Max working platform :	5000X2500X1800 mm
Highest accuracy :	0.012mm/M (5M of CMM)

#### Quality Assurance

- We has a strong testing capability, with 30 engineers, including 15 measuring engineers, 10 debugging engineers and 5 others. We can measure more than 300 sets fixtures per month

#### Material inspection, Equipment Calibration

- Regular random inspection of raw materials ,
- Regular proceed third party proofreading for CMM equipments

#### ISO17025 Laboratory Accreditation

- ISO/IEC17025 certificate

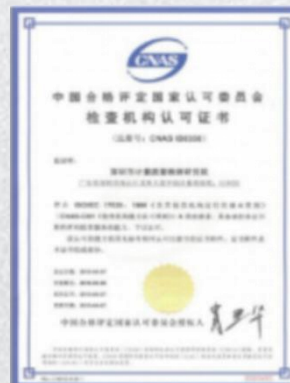
#### Measuring Equipment

- 9 sets of CMM machine and most of them are HEXAGON brand with high accuracy. The biggest CMM machine's parameter up to 5 meters. The software we are using is PC-DMIS.
- 1set of FARU and HEXAGON Articulated Arm Flexible CMM for each and the software we are using is CAM. The biggest measuring parameter up to 3.5 meters.

#### Measuring Capability

- We has a strong testing capability, with 20 engineers, including 15 measuring engineers, 8 debugging engineers and 5 measuring engineers for welding automation business unit.

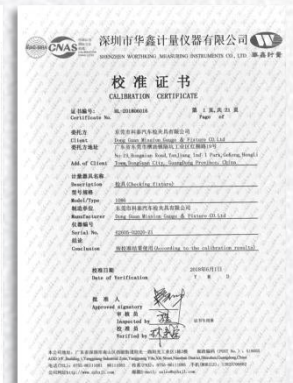
CNAS Certification



ISO 9001 Certification



Third Party Certification



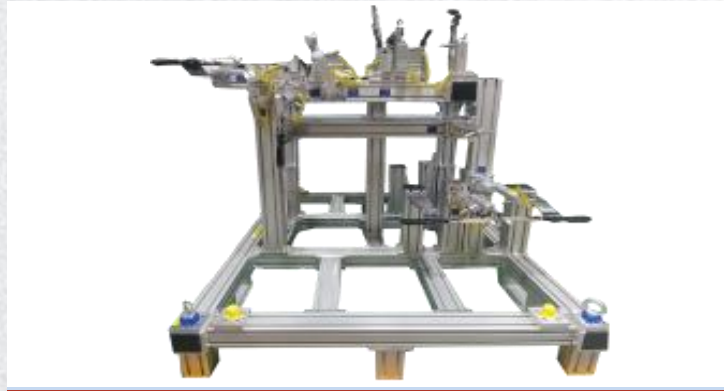
## ➤ 4.0 Cubing

**Master Model****Side Wall Cubing****Seat Cubing****Tail Cubing****Light Cubing****Front Door Cubing**

## ➤ 4.1 Raster Holding Fixture



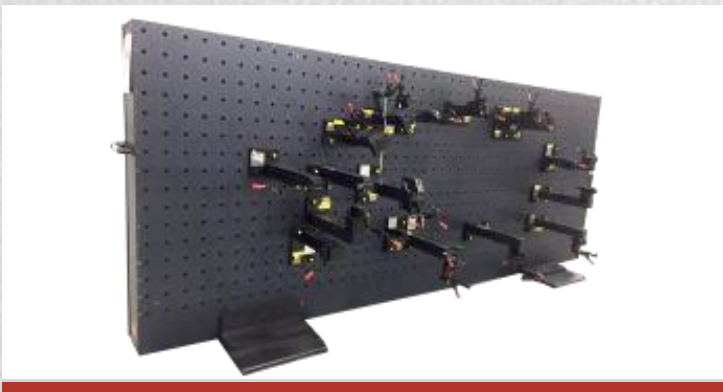
**Holding Fixture**



**Holding Fixture**



**Holding Fixture**



**Flexible Combination**



**Flexible Instrument Panel Holding fixture**

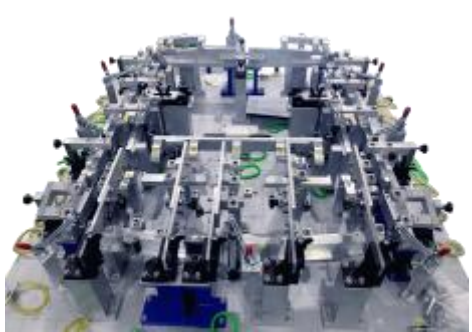


**Body Holding Fixture**

## ➤ 4.2 Assembly gauge

**Rear bumper****Side panel****Wheel Eyebrow Assembly****Roof assembly parts****Front bumper****Dashboard Assembly****Lighting Assembly****Radiator Fan**

## ➤ 4.3 Assembly gauge



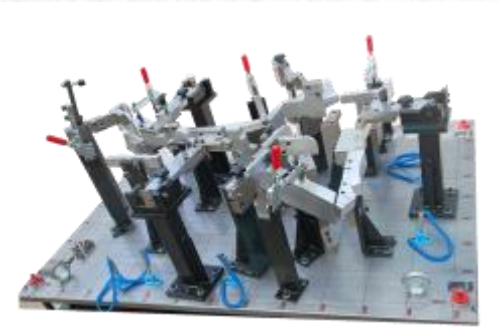
**Roof systems**



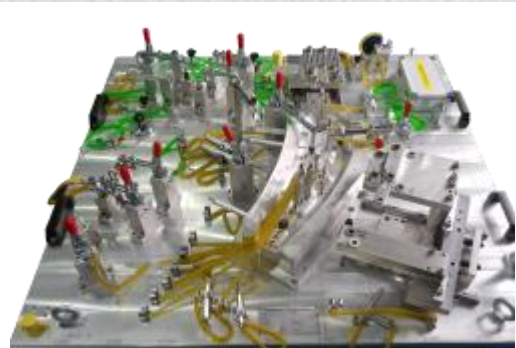
**Wheel Trim Assembly**



**Carling**



**B-pillar Assembly**



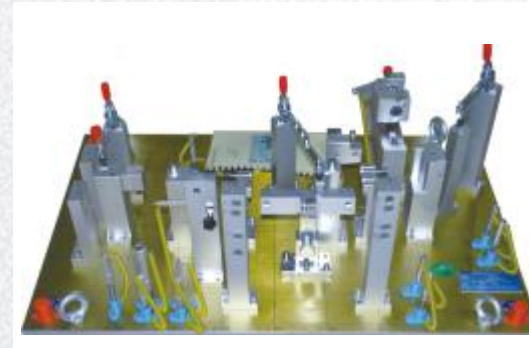
**Seat side panel**



**Csrling**

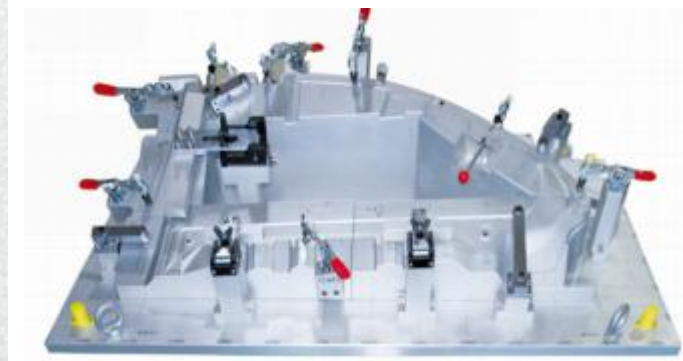
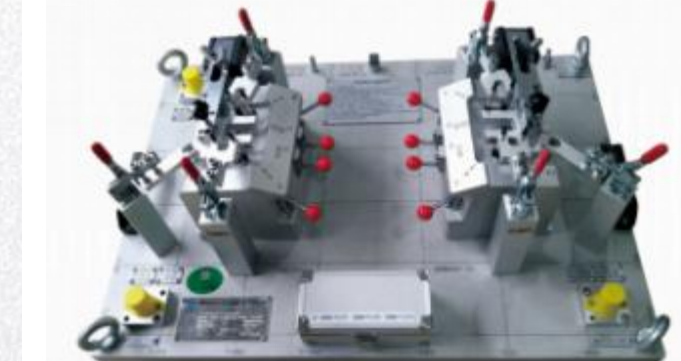
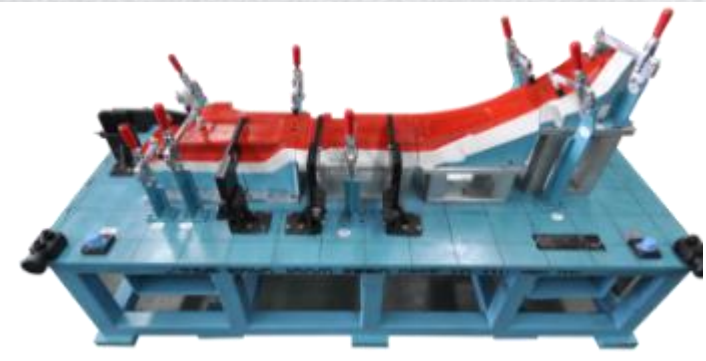


**Exhaust parts**

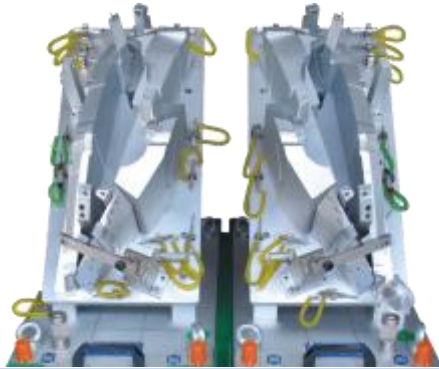


**Fore port side beam  
assembly**

## ➤ 4.4 Single Part-metal

**Wheel Trim Gauge****Stamping Part Gauge****Plastic Part Gauge****B-pillar Gauge****Floor crossbeam Gauge****Wheel Trim Gauge**

## ➤ 4.4 Single Part -Plastic Parts



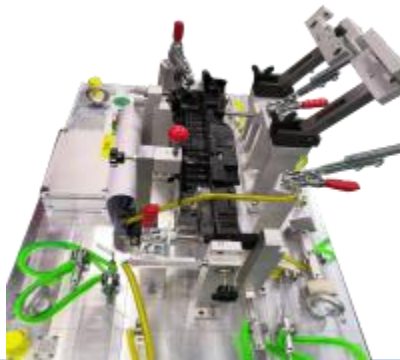
Single Plastic Part



Single Plastic Part



Single Plastic Part



Single Plastic Part



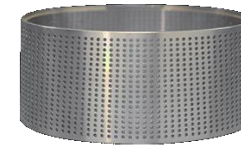
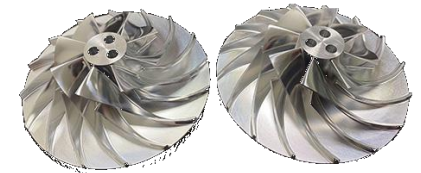
Single Plastic Part



Single Plastic Part



## ➤ 4.5 Precision machining

**Auto parts****Five axis processing of  
SLR Lens****Five axis machining of  
multi angle parts****Five axis machining spiral  
groove****Five axis machining  
turbine****Five axis machining  
impeller****Five axis machining  
turbocharger  
impeller****Five axis drilling****impeller machining**

## ➤ 5.0 Line automation



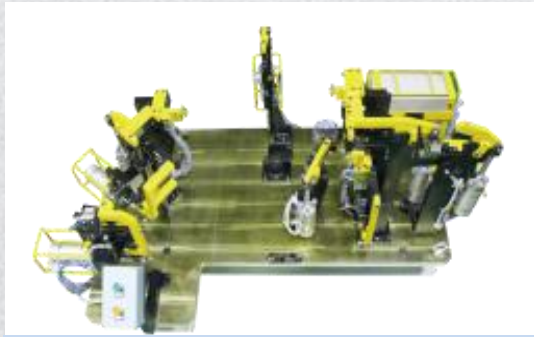
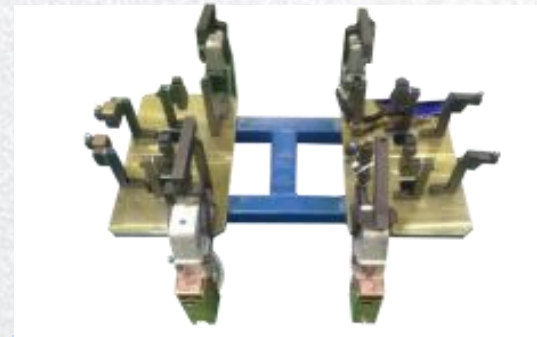
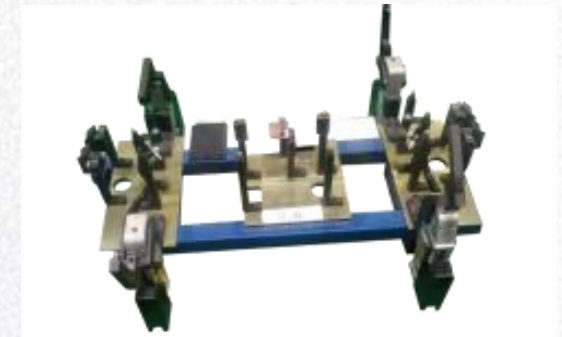
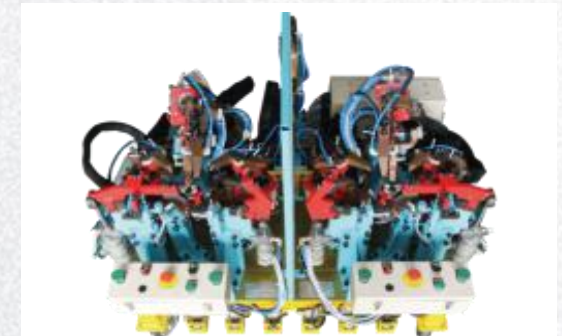
## ➤ 5.1 System Workstation-Spot Welding



## ➤ 5.2 System Workstation-Arc Welding



## ➤ 5.3 Welding fixture

**Arc Welding jig****Arc Welding jig****Cutting Welding jig****Cutting Welding jig****Spot Welding jig****Spot Welding jig****Puppet Welding jig****Puppet Welding jig**



**科泰检夹具**  
MISSION GAUGE & FIXTURE

# THANKS

**Dongguan Mission Gauge & Fixture Co.,Ltd**

Tel: +86-18822977874 / +86-769-38821737

E-mail: [kt-1@missiongauge.com](mailto:kt-1@missiongauge.com)

Website: [www.missiongauge.com](http://www.missiongauge.com)

New Address: No.19 Hongmian Rd, Gekeng Industrial Park,  
Hengli Town, Dongguan City, China. Zip Code 523469

## Welcome !

