

Dongguan World Precision Manufacture Co., Ltd.



Vision

Excellent wisdom makes a better world

Mission

Becoming a leading intelligent equipment solution provider



CONTENT

01 **Company
Introduction**

02 Business
Growth

03 Hardware
Facilities

04 Quality
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05 Honor
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06 Product
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Company Profile

(Company abbreviation: WP)

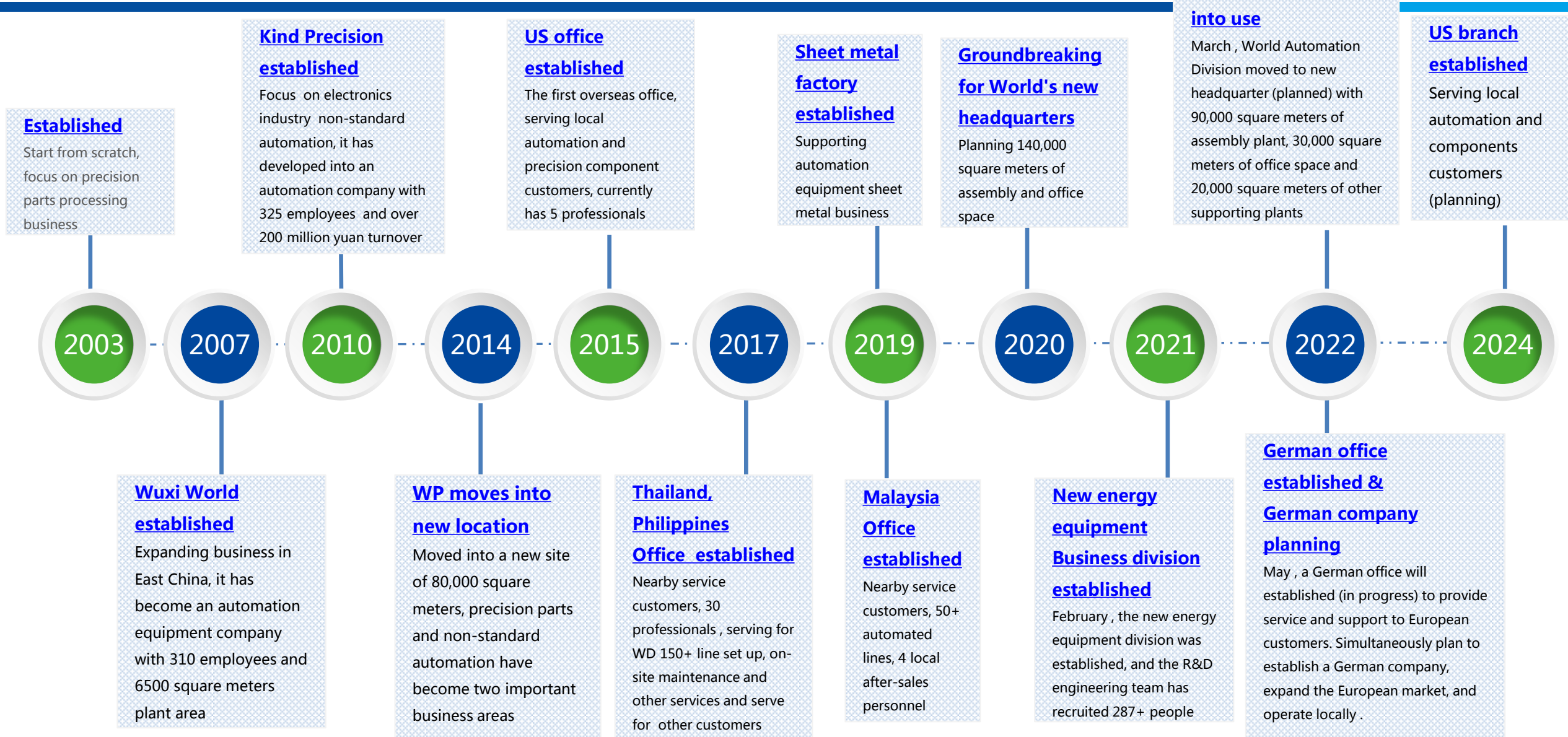


WP Intelligent Industrial Park

- Established in 2003, registered capital of 280 million yuan, a plant area of 200,000 m²
- Recognized as one of the top 500 manufacturing companies in Guangdong Province
- Headquartered located in the world's manufacturing center innovation city-Wanjiang District, Dongguan City
- There are more than 3,000 employees, including more than 30% R&D personnel
- Specializing in non-standard automation system integration and intelligent equipment manufacturing
- Since 2016, it has been assessed as National High-tech Enterprise
- Passed ISO9001, ISO13485, ISO14001, AS9100D quality and environmental management system certifications
- A total of 488 patents have been obtained and 297 have been authorized



Company History And Planning





Location Scale



Location	DG Former Headquarter	WX	KS	DG New Industrial Park	Total Area(㎡)
Area (㎡)	80,000	6,500	4,500	110,000	201,000



R & D Assembly And After-sales Strength



336+

R&D engineers

54+

New product introduction
(NPI) engineers

284+

Assembly
engineers

544+

After-sales
Service personnel

100%

Bachelor degree
(R&D Engineer)

67%

"985 , 211"
professional background

19+ years

Technology precipitation, specializing in non-standard
automation system integration, design and manufacture
with intelligent equipment

90000+ m²

Assembly workshop, can support multiple sets of
equipment assembly test at the same time

488+

Patent



Product Development History



After nearly 20 years of development, World Precision has gradually formed 2 major industrial pillars!

Precision Parts Machining

Module



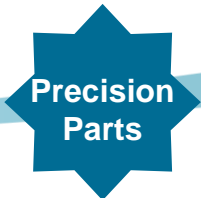
Precision parts



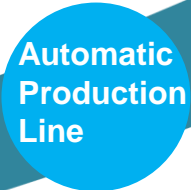
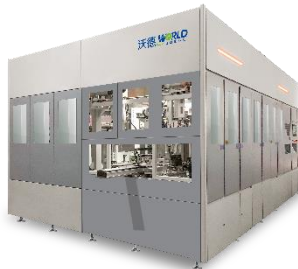
Tooling fixture



Sheet metal parts



Non-standard automation equipment & Lithium battery equipment





Industry Area



Automation



Automobile
components



Consumer
Electronics



Aerospace



Semiconductor



Optoelectronics
Industry



Medical
instruments



Emerging
Energy



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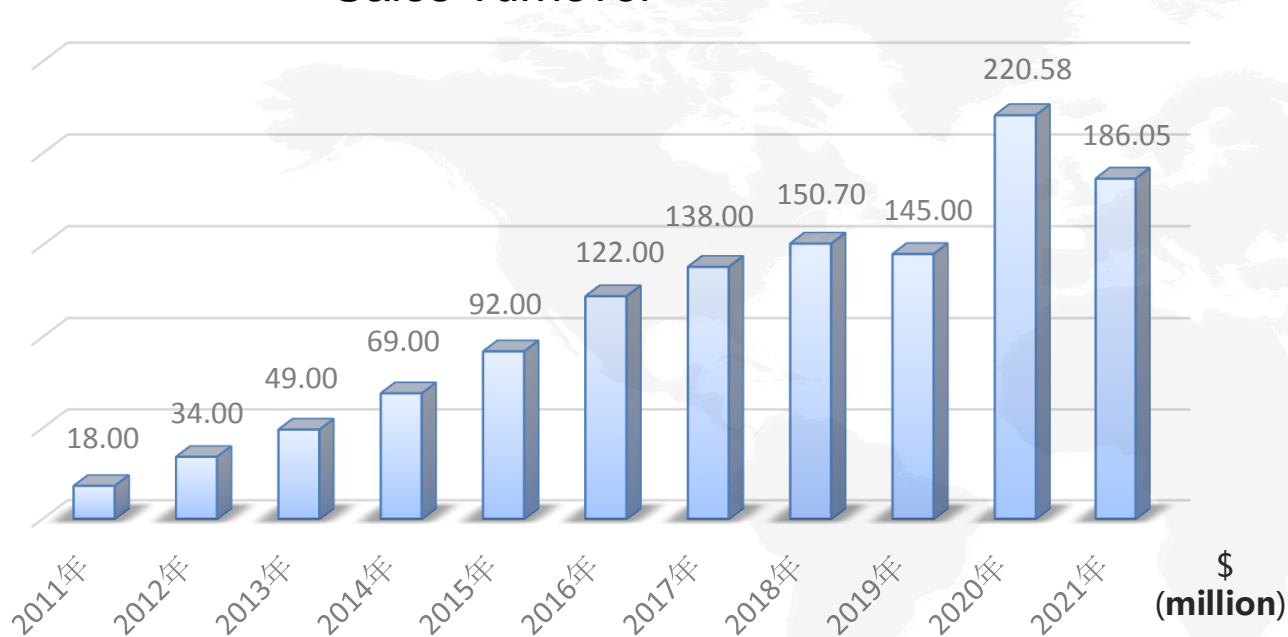
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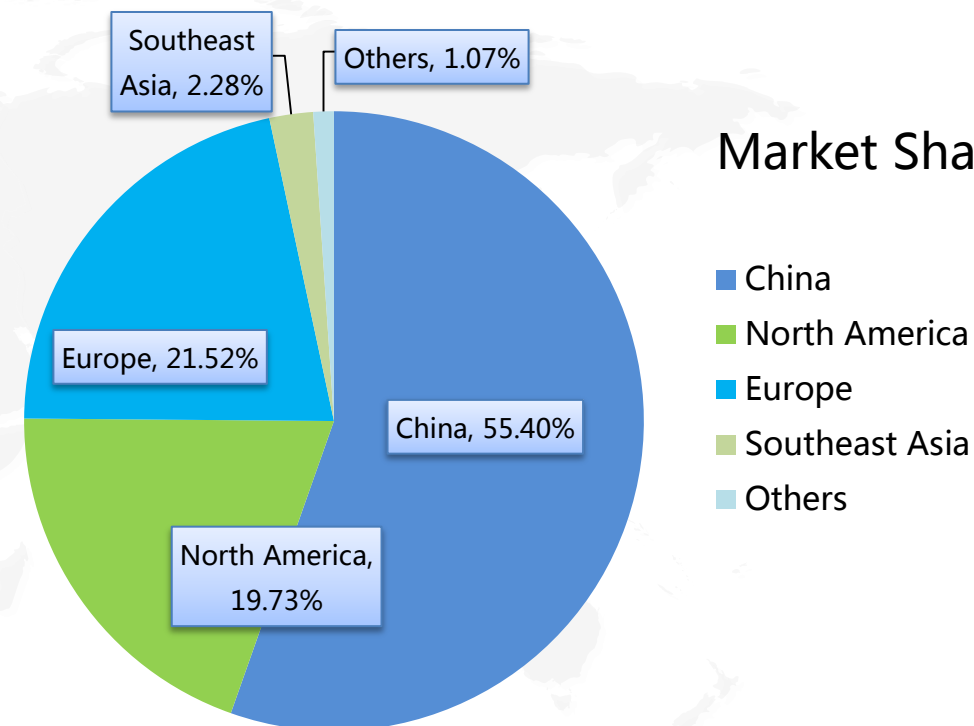


Sales and Distribution

Sales Turnover



Market Share



34%

Precision Machining

66%

Automation System

■ 2021 Overall Sales

\$186,050,000



Main Customers





International Vision



GERMANY

HANNOVER MESSE
MOTek
SPSIPCDRIVES



U.S

ATX East
IMTS
ATX West
PACK EXPO
INTERNATIONAL



EUROPE

UK SUBCON
FRANCE AEROMART
TOULOUSE



JAPAN

TOKYO M-TECH
OSAKA M-TECH

In order to expand international horizon, World Precision not only built up branch in US but also actively participate in different exhibitions all over the world including: Germany, US, UK, Japan, Singapore, Thailand, Vietnam, France etc.



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Production capacity

380+

3 axis machining center
(ZAZAK/DMG
MORI)

8+

Horizontal machining center
(MAZAK/DMG MORI)

30+

5 axis machining center
(MAZAK/DMG MORI)

45+

CNC lathe
(TAKISAWA/圣特斯)

4+

CNC turning
machine
(Star)

65+

Milling machine
(Xin Hujiang/Jie
Yongda)

40+

Grinding machine
(Jiande/Changdao)

18+

Lathe
(Nanfang)

30+

Cutting、EDM
(Sodick/Su
Sanguang)

10+

Water
milling
(Jiande)



Precision Machining

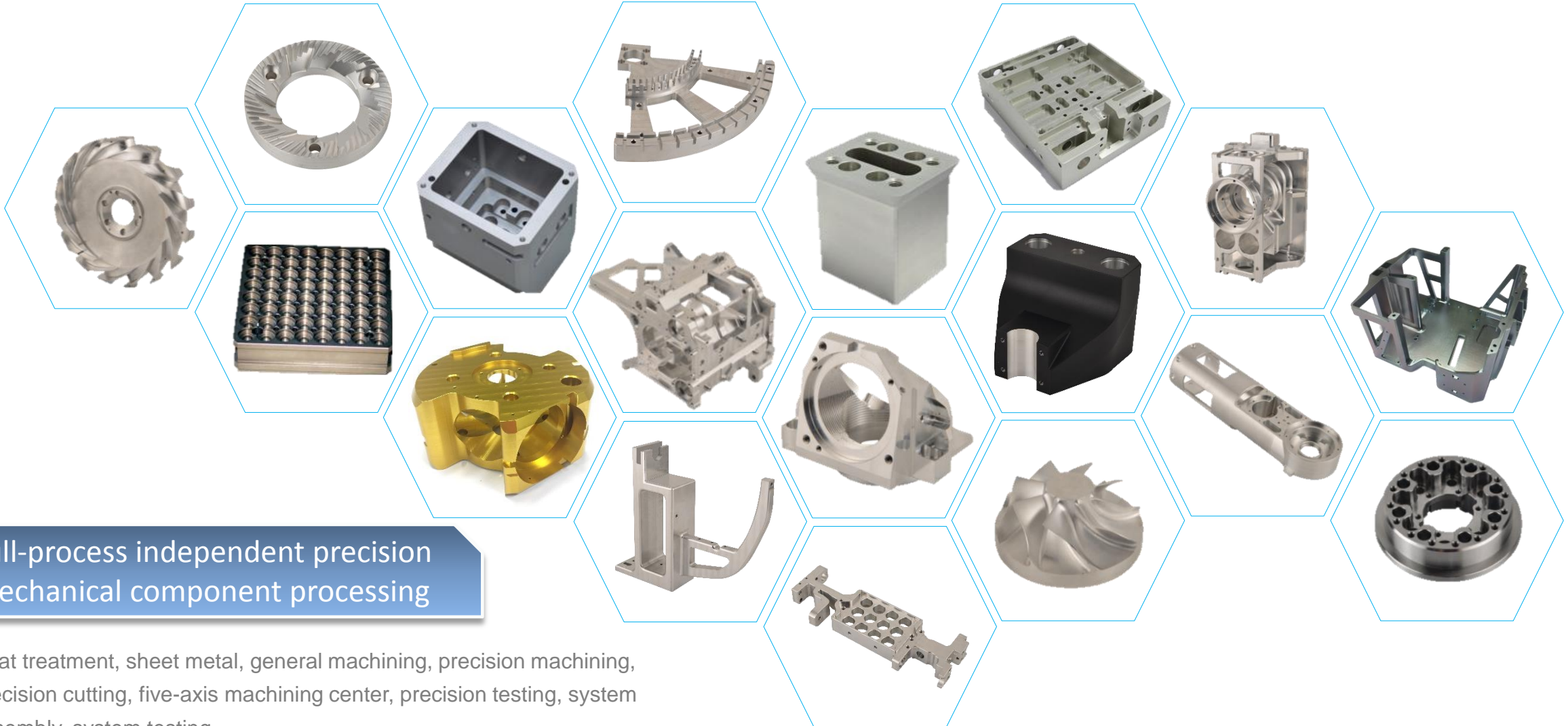
CNC Productive Forces

- It can locate and process complex surface at one time
- Capable of one-time processing and forming
- The machining accuracy is $\pm 0.005\text{mm}$
- The surface smoothness can reach micron level
- Have the ability of independent vacuum surface heat treatment





Precision Parts Processing



Full-process independent precision
mechanical component processing

Heat treatment, sheet metal, general machining, precision machining,
precision cutting, five-axis machining center, precision testing, system
assembly, system testing



Sheet Metal Center



Sheetmetal Factory

- Baichao laser cutting machine can process copper plate, aluminum plate, thicker stainless steel and other conventional materials
- Amada turret CNC punch in Japan has high machining accuracy and stable machining quality
- AMADA CNC bending machine in Japan has high precision and stable processing performance
- The company has been certified by CWB of Canada welding Bureau, and the passing rate of welding workers is more than 60%
- Panasonic welding machine is equipped with three-dimensional welding platform, which is suitable for various welding processing requirements





Automatic Equipment Assembly Workshop



Automatic production and assembly workshop

- World Precision aims to provide customers with high-precision non-standard automated intelligent equipment, test fixtures, production line assembly fixtures and other solutions
- Covering an area of 90000 square meters, the production line is equipped with a large number of workstations to complete the production and assembly of different equipment
- More than 280 assembly technicians





Module Assembly

Precision Module + OEM Facilities

- Standardized design and manufacturing, mature application of fa & SOP process system
- Strong batch manufacturing strength, output 1000 + sets / month
- Increasing customer demand year by year, with an annual output value of 30 + million
- Module products are widely used in medical devices, aerospace and many other fields





The assembly fixture

Product Superiority

- Standardized module design, industry non-standard customization, can quickly replace the line body, short design cycle and fast delivery, can meet customers' needs of rapid sample, mass production
- SAP system, can monitor the production process at any time, production controllable
- 18 years of design and manufacturing experience, can provide customers with personalized customized services, reliable and feasible solutions

Application Area

- 3C consumer electronic products: Mobile phone, tablet, Bluetooth headset, stereo, keyboard, folding screen, motor, etc
- Medical equipment, vacuum and textile industries and other terminal parts assembly and manufacturing
- Products cover mounting, pressure holding, locking attached, positioning, bending, dispensing, buckle, pen, testing height, welding, precision assembly, multi-functional integration, flexible line body, etc





Product Superiority

- Strong precision machining capacity, fixture delivery is guaranteed
- Proofing stage: delivery within 5 days for simple fixtures, 10-15 days for medium fixtures and 20 days for complex fixtures.
- Mass production stage: test fixture weekly delivery capacity of more than 1920 sets (fixture assembly time 20H/ set)
- Experienced in microneedle testing In the microneedle test of male and female connectors, it has the advantage of misdetection rate less than 2% and long service life.
- Modular design of test automation loading and unloading equipment It is compatible with different sizes of objects to be measured, reducing the cost of product upgrading and reducing manpower expenditure.

Application Area

- Mainly used in 3C intelligent terminal products test fixture and test automation equipment:
- SMT line test: FWDL/RF/FCT test, male and female connector microneedle test;
- Assembly line test: functional test of semi-finished products/finished products, such as wireless charging test, compass test,
- Camera test, machine function rapid test, etc.
- Test automation equipment: test station automatic loading and unloading





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Quality and Environment Certification



ISO 9001:2015
Quality Management
System Certification



ISO 13485:2016
Medical Parts
Manufacturing Certification



ISO 14001:2015
Environmental Management
System Certification



AS 9100D
Aerospace Industry
Manufacturing Certification

Excellent quality system support IQC, IPQC, FQC, OQC



Quality assurance

1+

XOS Elemental



Danaher XOS

1+

Helium leak



1+

Laser scanning automatic
OM measuring machine



7+

CMM



蔡司

1+

Profile of a meter



1+

Cylindricity measuring
machine



2+

Coating thickness gauge



Quality policy: quality quick service innovation



Main testing equipment



Roundness meter



Hardness tester



Tensile testing machine



Spectrometer



Image measuring instrument



Profilometer



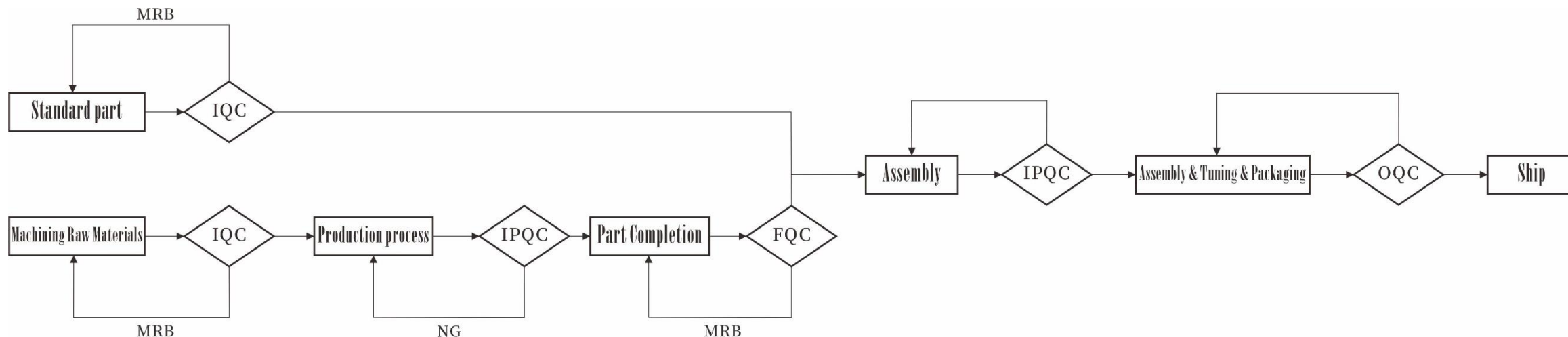
Altimeter



CMM



Quality Control Flow Chart



Dept	Doc Description	Reference Document
PUR	BOM	<ul style="list-style-type: none">Table
QA	IQC report	<ul style="list-style-type: none">Standard part IQC report exampleMachining part IQC report exampleMRB slip example
MFG	SOP	<ul style="list-style-type: none">Machining part processing station SOP
IPQC	IPQC report	<ul style="list-style-type: none">Machining part processing IPQC report example
PMC	BOM	<ul style="list-style-type: none">Table

Dept	Doc Description	Reference Document
QA	FQC report	<ul style="list-style-type: none">Machining part processing PQC report example
IE	SOP	<ul style="list-style-type: none">Machine type assembly station SOP
IPQC	IPQC report	<ul style="list-style-type: none">Machine type assembly IPQC Report
IE	SOP	<ul style="list-style-type: none">Machine type functional test station' s SOPMachine Type packaging guidelines
QA	OQC report	<ul style="list-style-type: none">Machine type OQC Report example
PMC	Notice	<ul style="list-style-type: none">Internal order shipping information



Prototype project process & Lead time

➤ Automation equipment process and standard time (unit: day)

Standard process		Customer demand research and analysis	Conceptual design	Detailed 3D design	2D / BOM drawing	Manufacturing	Equipment assembly	In plant installation and commissioning	Inspection packaging	Total (days)	Type remarks
automation equipment	Large automation line	21	45	14	13.00	26.00	14	14	2	149	<ul style="list-style-type: none"> ➤ 10 or more small automation equipment ➤ More than or equal to 7 sets of medium-sized automation equipment ➤ 5 or more large automation equipment
	Medium sized automation line	21	40	14	9.50	24.50	12	10	1	132	<ul style="list-style-type: none"> ➤ 7 or more small automation equipment ➤ 5 or more medium-sized automation equipment ➤ 3 or more large automation equipment
	Small automatic line	21	35	9	7.50	24.50	10	7	1	115	<ul style="list-style-type: none"> ➤ 5 or more small automation equipment ➤ More than or equal to 3 sets of medium-sized automation equipment ➤ 2 or more large automation equipment
	Large scale automation equipment	14	25	7	6.25	22.75	7	2	0.5	84.5	<ul style="list-style-type: none"> ➤ Within 500-1000 drawings ➤ Unit price above 800000 ➤ R & D, including high-risk new processes
	Medium sized automation equipment	10	21	5	5.25	18.75	5	2	0.5	67.5	<ul style="list-style-type: none"> ➤ Within 300-500 drawings ➤ Unit price within 300000-800000
	Small automation equipment	7	14	4	3.25	15.75	4	2	0.5	50.5	<ul style="list-style-type: none"> ➤ Within 300 drawings ➤ Equipment with similar experience, ➤ Unit price within 300000

➤ Test and assembly fixture process and standard time (unit: hour)

Standard process		Customer demand research and analysis	Conceptual design	Detailed 3D design	2D / BOM drawing	Manufacturing	Equipment assembly	In plant installation and commissioning	Inspection packaging	Total (hours)	Type definition
Te test fixture	Complex fixture	72	168	36	48	294	48	8	4	678	There are more complex and XY motion mechanisms, electrical control
	Simple fixture	34	96	24	36	221	12	4	4	431	All mobile phone fixtures
Me fixture	Complex fixture	216	168	36	48	294	48	8	4	822	There are XY motion mechanism, electrical control, estimated to be more than 100 drawings, hot press, cold press, film pasting / marking machine, multi station combined fixture
	Relatively complex fixture	24	96	24	36	221	12	4	4	421	With XY motion mechanism, electrical control, estimated to be more than 80 drawings; Press type, lock screw fixture, fixture with pressure sensor, turnover fixture
	Relatively simple fixture	12	36	12	24	147	6	2	4	243	Box pressing mechanism controlled by air cylinder, with less than 30-80 drawings, positioning assembly fixture and vacuum suction
	Simple fixture	12	24	6	12	98	3	1	4	160	Simple assembly fixture without cylinder control,

World provide customers with fast and professional technical service support, and according to the characteristics of customer distribution to establish after-sales service network covering all regions.

Our goal: always put customer satisfaction first

Professional knowledge: provide high quality and efficient service with professional knowledge and enthusiasm

Technical support: provide reliable and powerful support for customers' production and operation

Service center: established service network covering all regions

Domestic service center: 23 cover South China, East China, central China and southwest China

Overseas service center: USA, Germany, India, Thailand, Malaysia, Philippines, Vietnam





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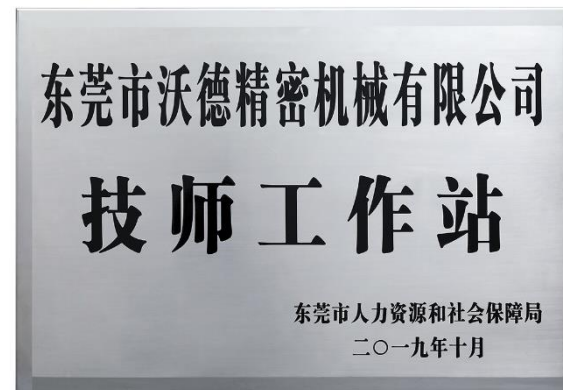
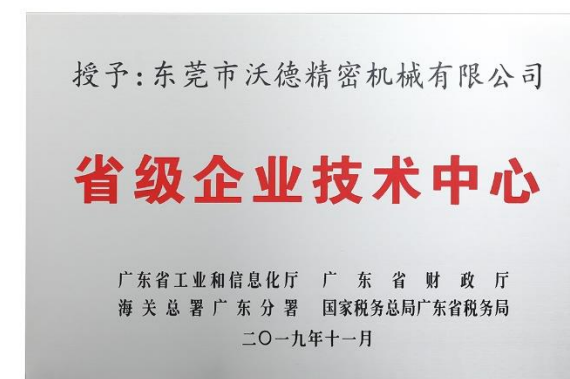
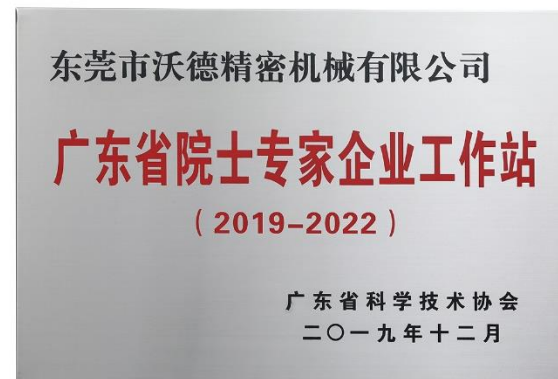
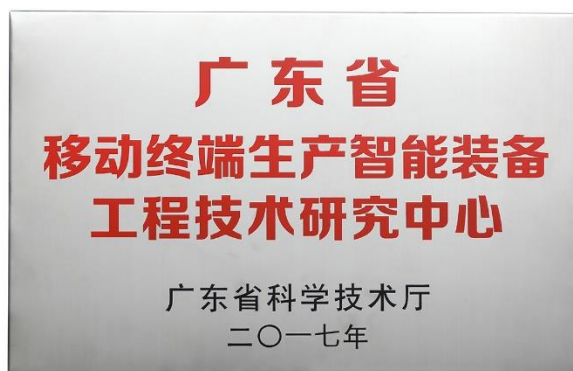
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Company Honor





Honorary Patents





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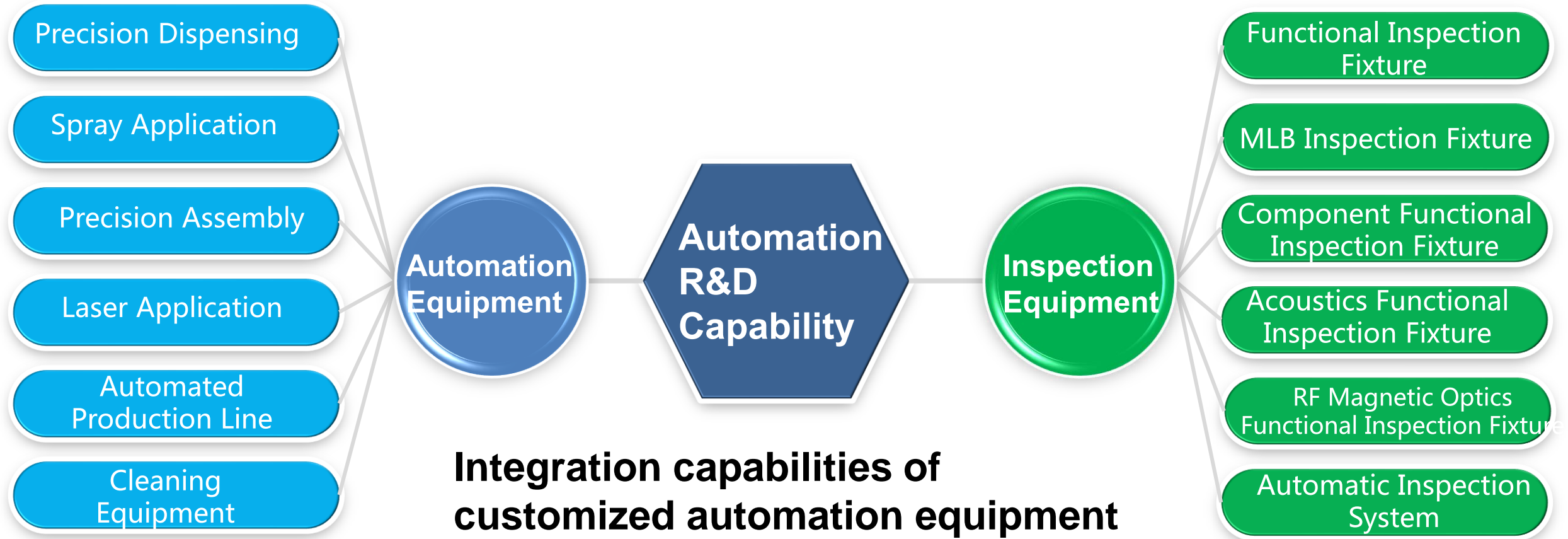
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Precision Dispensing: Hot Melt Adhesive

WAM Hot Melt Glue Dispensing Machine

◆ Feature

1. Transferring by conveyor
2. Hot melt glue jetting valve (2sets)
3. On-line glue weighting
4. Auto wipe off for jetting head
5. Grating ruler to ensure high precision
6. CCD for positioning and AOI
7. IR non-contact heater for pre-heat
8. Position precision : $\pm 0.025\text{mm}$

◆ Advantage

1. HSG Hot Melt Glue Dispensing and woofer assembly
2. Pre-heat+Jetting+Assembly+AOI

◆ Benefit

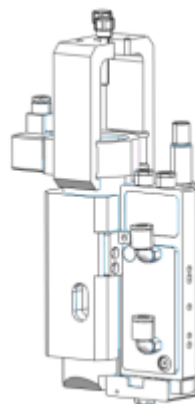
Cycle time : 15 s/pcs

Application

3C industry



Hot melt glue
Jetting Valve



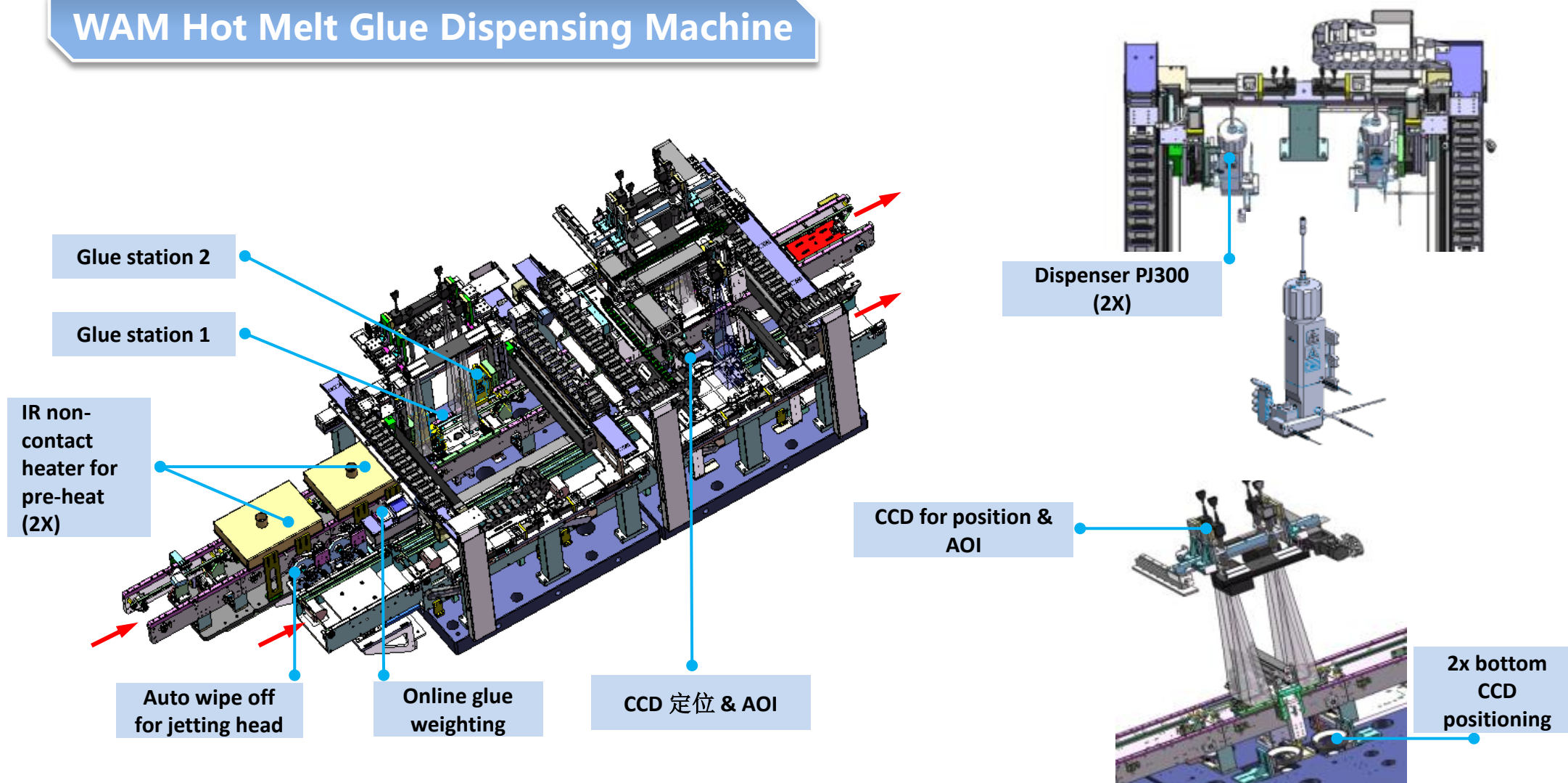
Micro woofer





Precision Dispensing: Hot Melt Adhesive

WAM Hot Melt Glue Dispensing Machine





Precision Dispensing: AB Glue

Shield to Upper Housing AB Glue Machine

◆ Feature

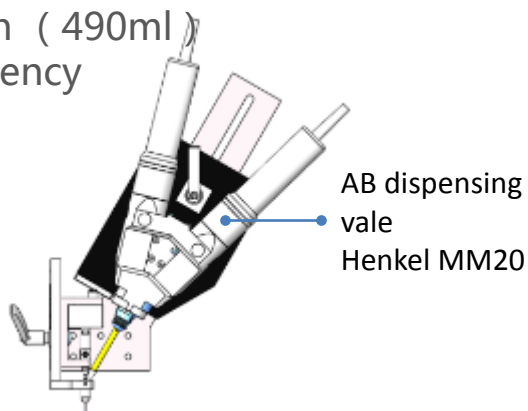
1. AB two kinds glue dispenser
2. High volume glue syringe application (490ml)
3. Dual working channels for high efficiency

◆ Advantage

1. For Shield to Upper Housing assembly by AB gluing
2. AB glue dispensing + Assembly

◆ Benefit

Cycle time : 45 s/pcs



Application

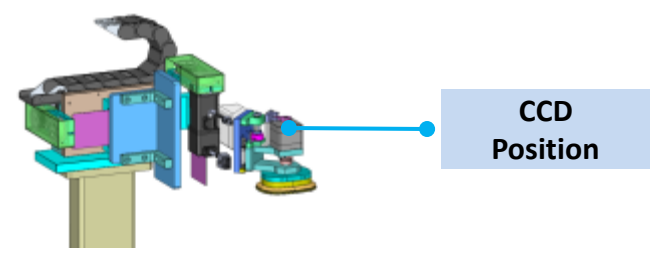
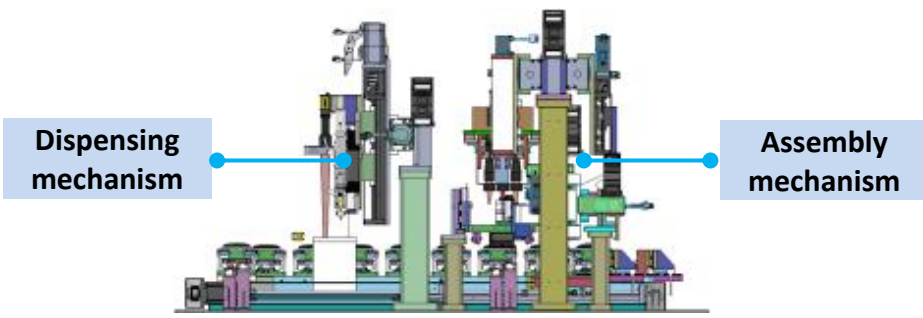
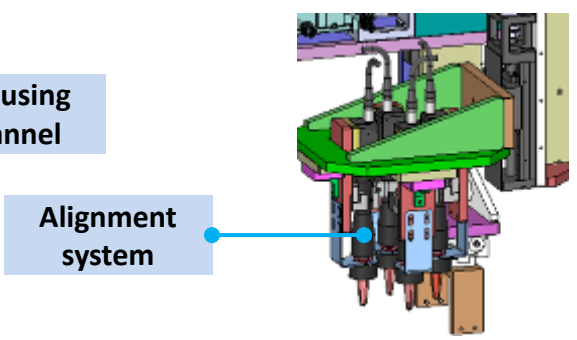
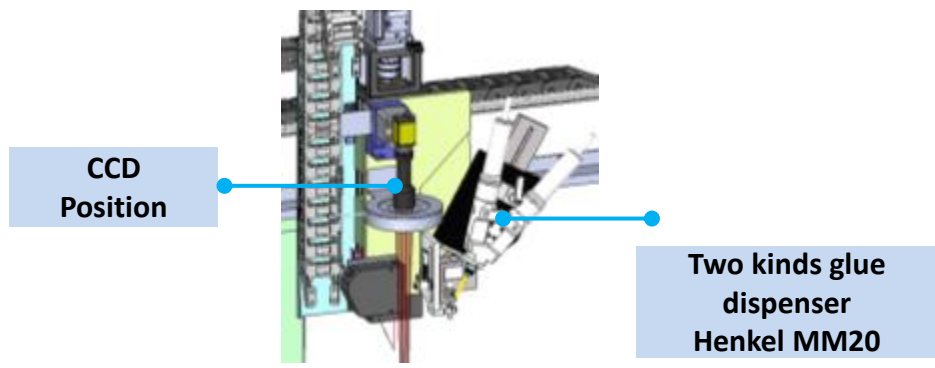
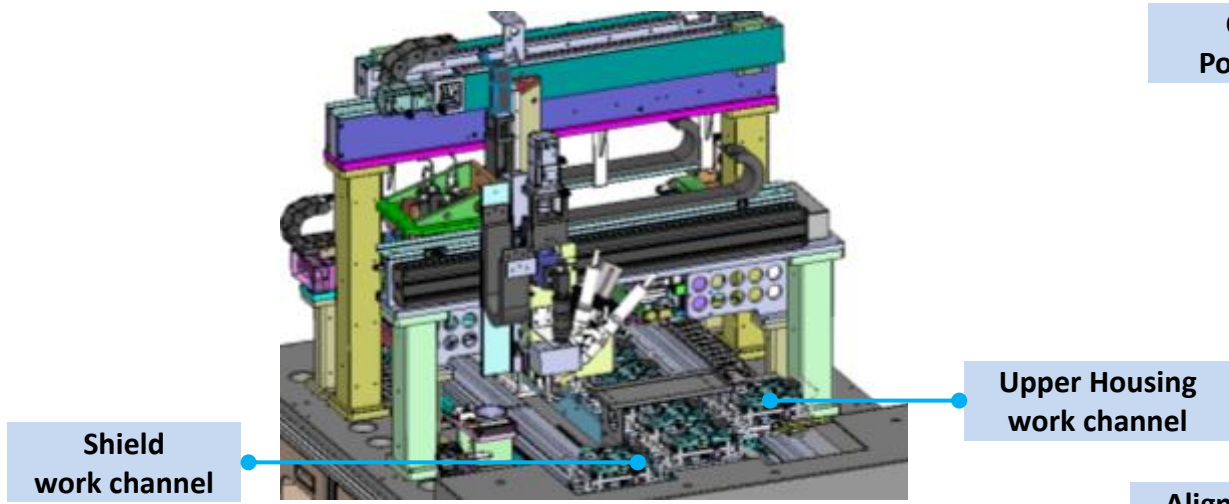
3C industry





Precision Dispensing: AB Glue

Shield to Upper Housing AB Glue Machine





Insertion : Special-sharped Plug Insertion

Auto Special-sharped Plug-in Machine

◆ Feature

1. Industrial computer control system and modular design ;
2. Flexible and diversified feeding system ;
3. CCD automatic compensation positioning, ;
4. Position precision : $\pm 0.02\text{mm}$
5. Insertion angle : $0\sim 360\text{degree}$ (increment is 1 degree)

◆ Advantage

1. Large and special-shaped components plug-in
2. Machine vision system, multipoint mark for vision correction

◆ Benefit

Plugin speed : $1\sim 1.5\text{ sec/pcs}$
Yield $\geq 99.5\%$

应用领域

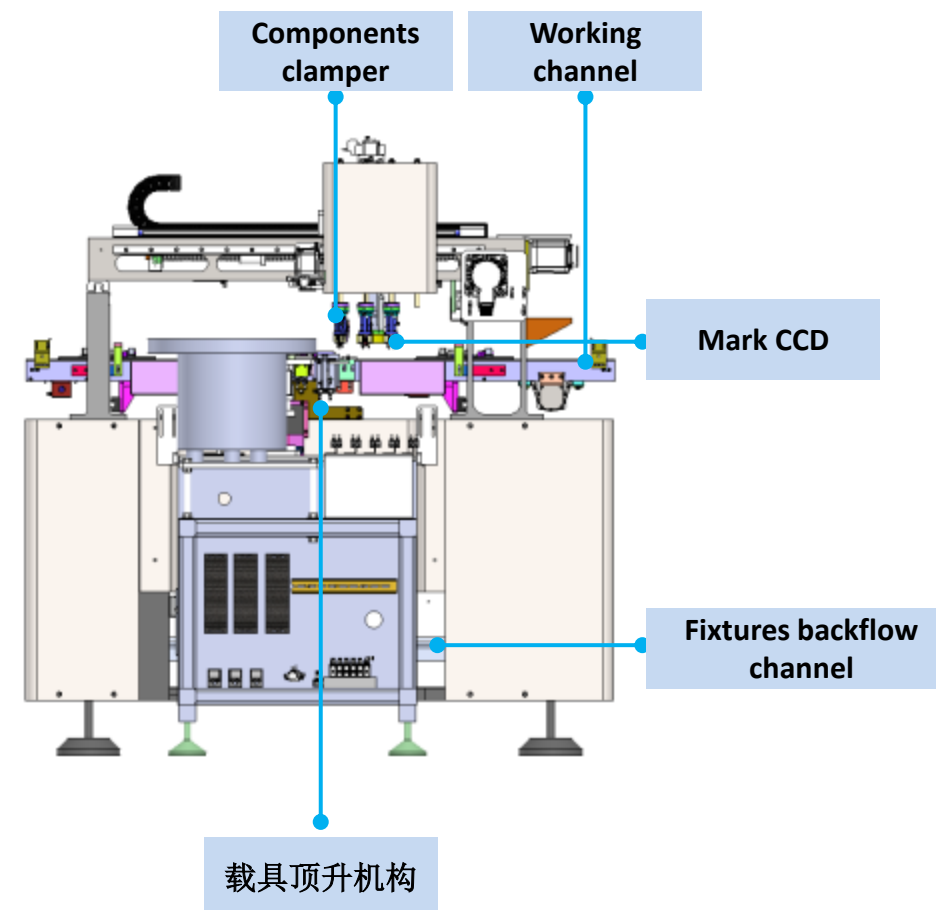
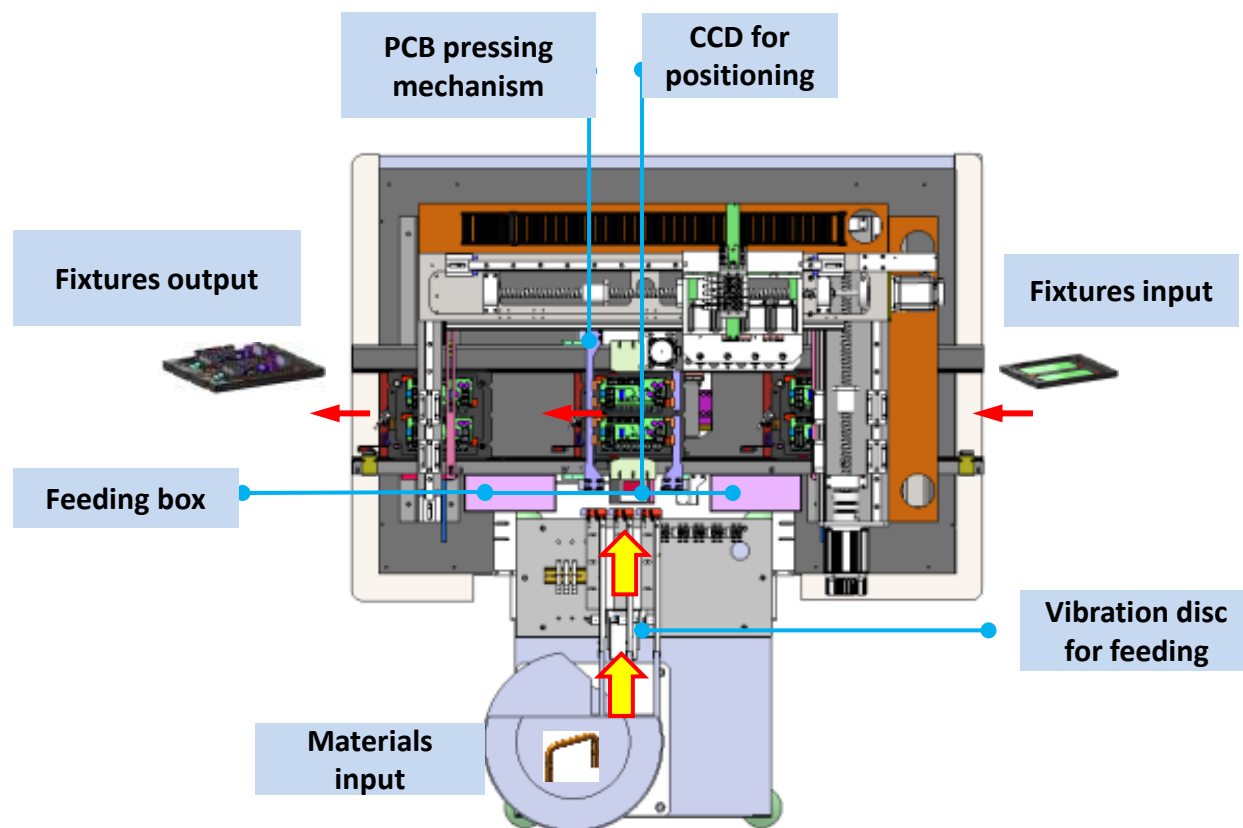
Large electromechanical 、 New energy vehicle、 Home appliance industry .etc.





Insertion : Special-Sharped Plug Insertion

Auto Special-sharped Plug-in Machine





Laser Application: Laser Solder Ball Bonding

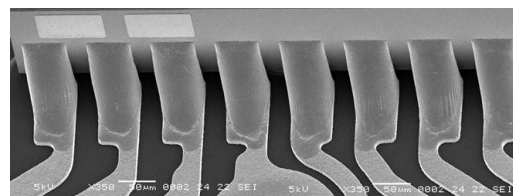
Laser Solder Ball Bonding Machine (LSBB)

◆ Feature

1. No touch soldering
2. No flux & Clean-free
3. Dual working channels
4. Liner motor with grating ruler
5. 1064nm fiber laser source
6. Position precision : $\pm 0.005\text{mm}$
7. Micro space /gap 0.1mm Min
8. Solder ball size $\varnothing 0.1\text{-}0.76\text{ mm}$



球径 $\varnothing 0.76\text{ mm}$ 焊接



球径 $\varnothing 0.1\text{ mm}$ 焊接

◆ Advantage

1. Laser soldering by solder ball jetting
2. Precision micro soldering

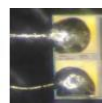
◆ Benefit

Soldering speed 4-6 ball/sec



Application

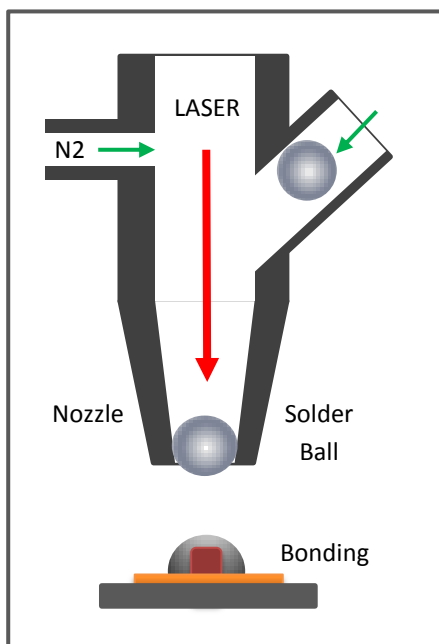
Wafer Level CSP 、 CMOS Sensors、 HDD 、 VCM、 CCM etc.



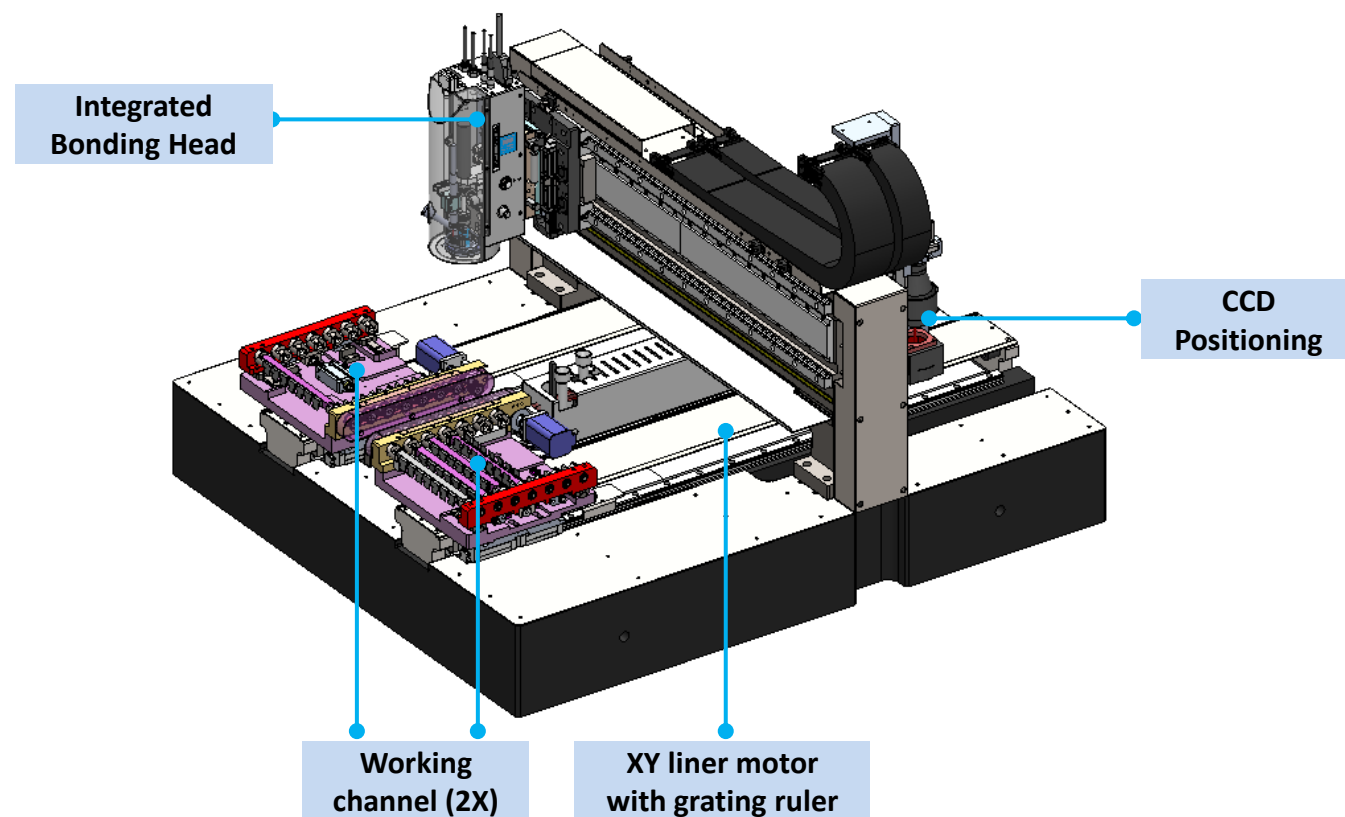


Laser Application: Laser Solder Ball Bonding

Laser Solder Ball Bonding Machine (LSBB)



LSBB Scheme





Automatic Production Line: Packaging Line

SSD Auto Package Line

◆ Feature

1. Modular design for flexible layout
2. High compatibility for fast product interchange
3. Continue bag packaging, Initiative of roll bag instead of single bag for packaging
4. Intelligent identification & accurate position
5. ESD treatment and suitable for clean room
6. Surface resistance $10E6\Omega$ - $10E9\Omega$

◆ Advantage

1. For SSD, HDD auto test and packaging
2. Auto L/UL, intelligent identification, labeling, ESD bag packaging, small tray auto stacking, auto stack packaging, vacuum sealing, auto-incasing packaging

◆ Benefit

1. Code reading time $\leq 0.2s$
2. UPH ≥ 1200 pcs
3. Labeling accuracy $\pm 0.5mm$
4. Bag sealing width $4 \pm 0.5mm$
5. Yield 99.8%

Application

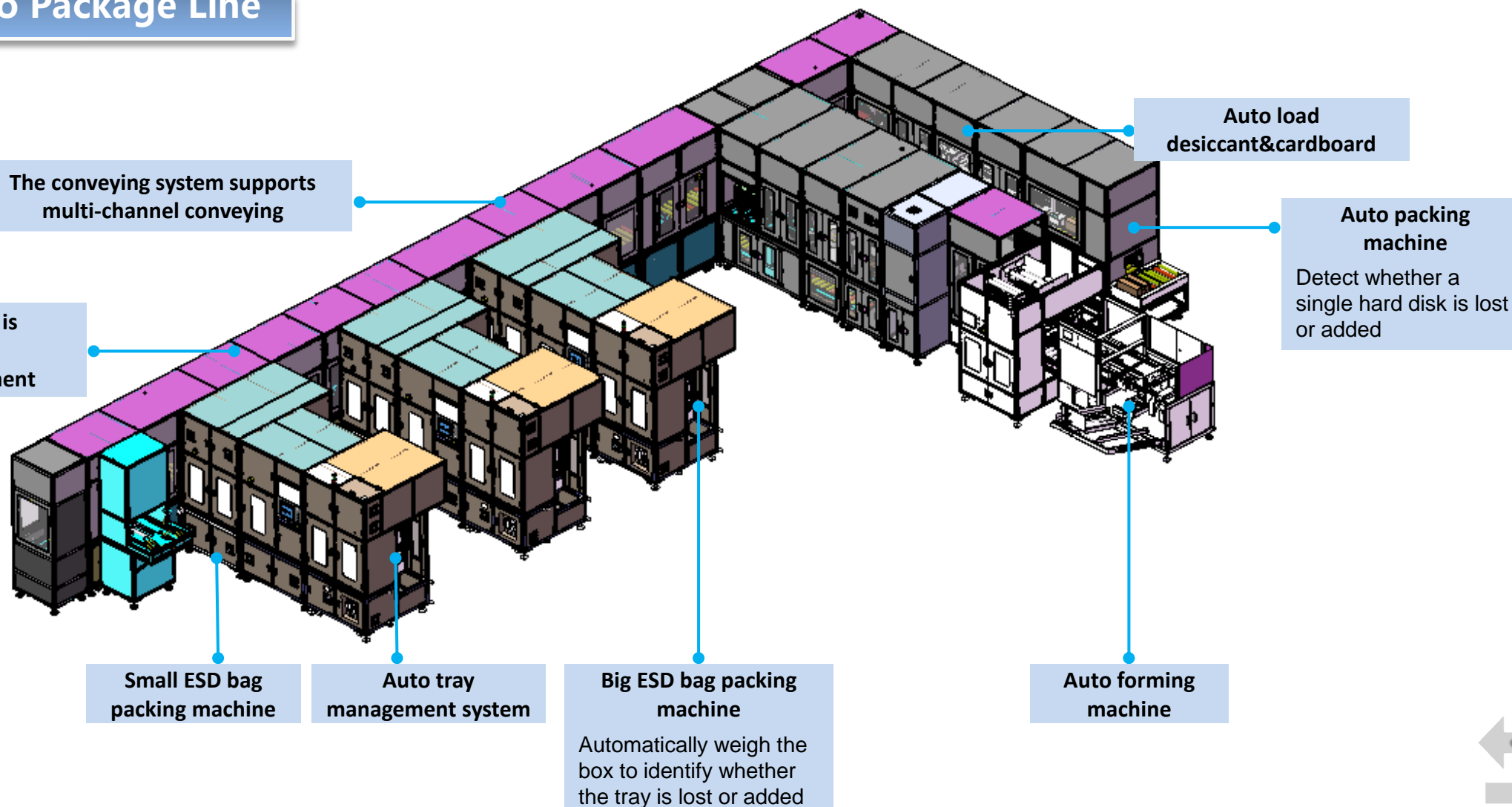
3C industry
Packing





Automatic Production Line: Packaging Line

SSD Auto Package Line





System Matrix: Car Antenna

Car Antenna Auto Assembly Line

◆ Feature

1. 4-in-1 integrated auto assembly line
2. Multi process integration from material input to product package output
3. Seal ring assembly precision $\pm 0.1\text{mm}$;
4. Glue filling precision $\pm 1\text{ml}$
5. Assembly precision $\pm 0.2\text{mm}$;
6. Pin pressing precision $\pm 0.2\text{mm}$
7. Laser marking precision $\pm 0.5\text{mm}$

◆ Advantage

1. For car antenna assembly
2. Assembly、testing、cutting、glue filling&curing、marking、OCR&packing

◆ Benefit

1. Cycle time 2.4sec/pc
2. Yield >99.8%

Application

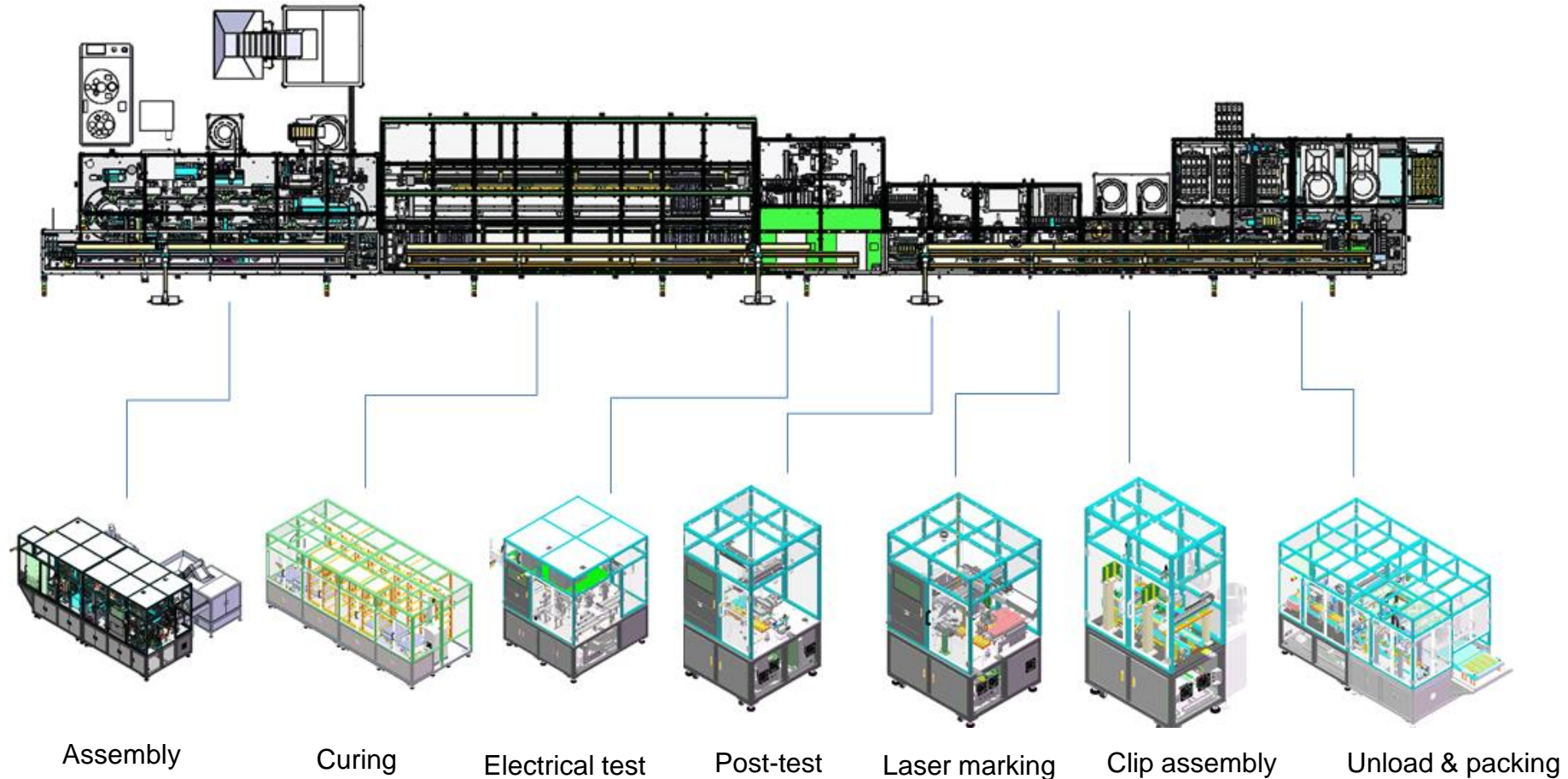
Automobile industry

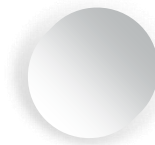




Car Antenna Auto Assembly Line

Car Antenna Auto Assembly Line





THANKS

Wish happy cooperation !

