

Focus on
Automation in Photonics Industry

PRODUCT CATALOG



Official subscription account

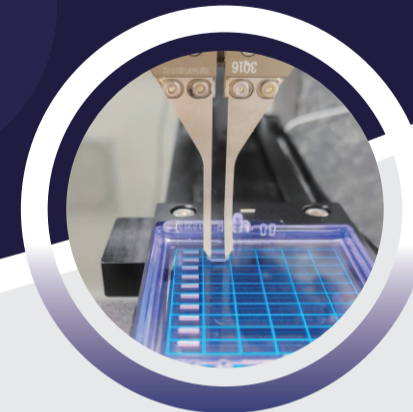
Wuxi Opto Automation Technologies Co.,Ltd

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COMPANY PROFILE

Established in June 2015, Wuxi Opto Automation technologies Co.,Ltd is located in the beautiful coast of Taihu Lake - National Sensing Information Center, Wuxi, China covering 11,000 sq. meters workshop, it is a high-tech company focusing on the integration of optical, mechanical, electronic and software systems with more than 70 employees, while keeping 52 authorized patents ranking No.1 in related market segment of China.

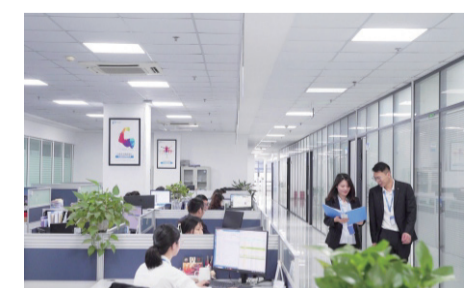
Our goal is to provide comprehensive automation systems and solutions to diverse industries, including the semiconductor, optical communications, optics, electronics, and scientific research sectors for domestic and overseas customers. By implementing complete automation solutions, we enable our customers to reduce their reliance on traditional manual production, which significantly improves production efficiency and product consistency. This allows China's traditional manufacturing industry to transform and upgrade from labor-intensive production modes to intelligent and automated production modes, effectively reducing production and operation costs.

Our core entrepreneurial team is comprised of experts from leading optoelectronic technology companies in the United States and Japan, with extensive experience in semiconductors, optical communication, optics, electronics, mechanical design and automation, we provide comprehensive automation solutions and system integration tailored to the specific needs of domestic customers. We have established offices and service centers in Beijing, Shenzhen and Wuhan. Our main business system comprises the semiconductor division, optical communications division, and automation testing division.

Presently, our independently developed automation equipment has broken the long-standing technical and market monopoly of Germany, the United States, and Japan in their respective market segments. Our products are favored and continuously ordered by domestic customers, including several large listed companies, owing to their high cost-performance ratio. We have achieved a leading position in the corresponding market share.

In the future, Opto will continue to uphold the spirit of "quality makes the brand, honesty brings the future", continuously increase our technological development and innovation, provide efficient full automation solutions and system integration for domestic and foreign customers, enable our customers to benefit from our products and services, and achieve mutually beneficial development with our customers.

QUALITY MAKES THE BRAND HONESTY BRINGS THE FUTURE



1st

We are proud to be the first company in China to commercialize fully automated semiconductor pump laser mirrors, fast-axis collimators, and COS chip testing systems

90%

More than 90% of our customers are large domestic listed companies, large military units, and research institutes

90%

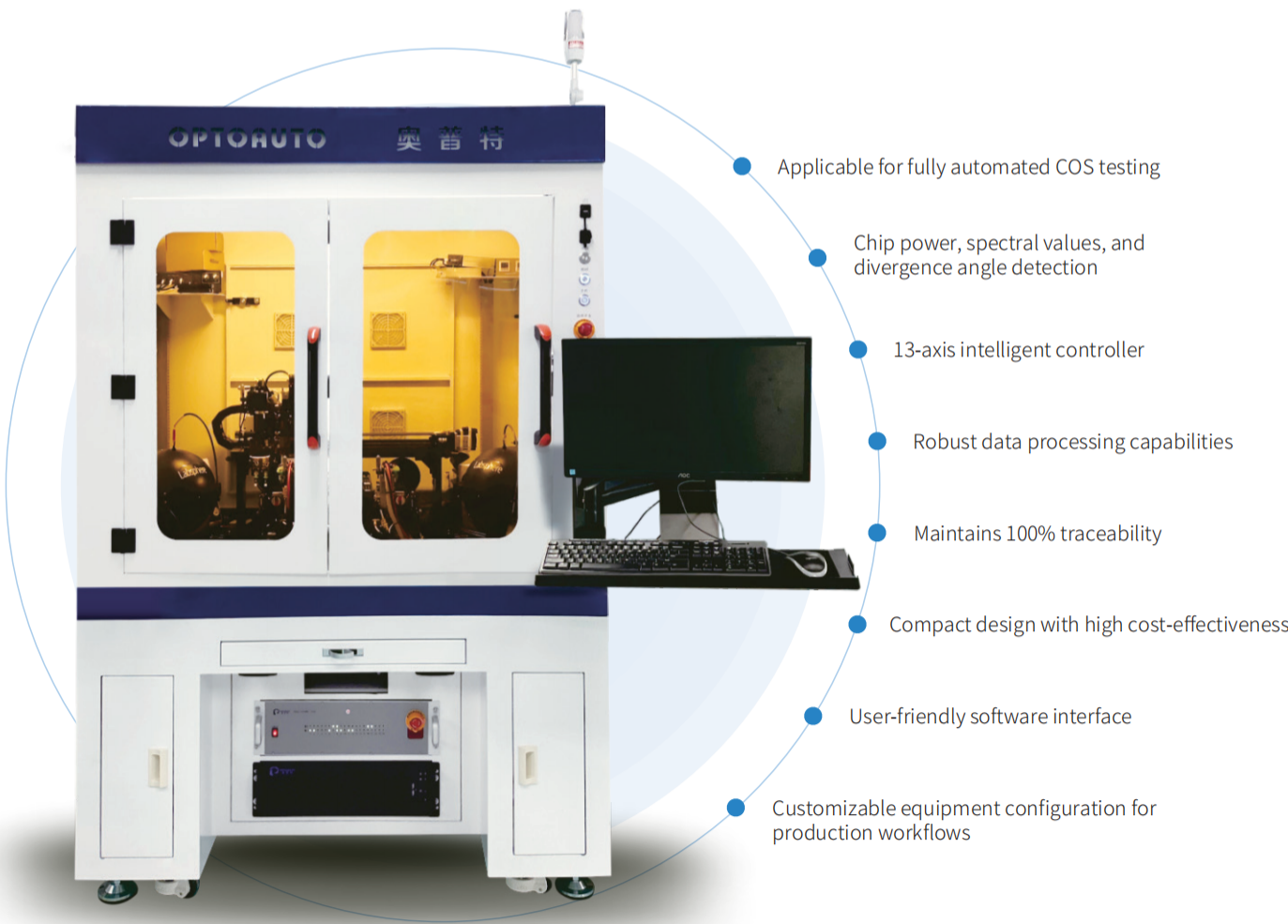
The company has talents of semiconductor, optical communication, optics, electronics, mechanical design and automation

High-power Automatic COS Chips Testing System

Our company's independently developed high-power fully automated COS chip testing system (Model: OA15000-COS) achieves fully automated COS chip testing, replacing traditional manual testing. It automatically measures the chip's luminous power, central wavelength, and fast/slow-axis divergence angles.

The system's main functional modules include: Automatic material retrieval, Automatic water droplet application, Automated testing and status judgment, Automatic moisture wiping, Automatic return to original position or sorting into categorized storage boxes, Automatic data upload to databases, Manual debugging module.

The system seamlessly integrates with our self-developed OCR character recognition system via databases, efficiently replacing traditional manual observation and recording through high-magnification microscopes. This ensures 100% traceability for every COS chip.



Equipment Specifications

✓ Name	High-powerAutomatic COS Chips Testing System
✓ Model	OA15000-COS
✓ Pressure range	0.6 ± 0.1 MPa
✓ Rated voltage	220V / 16A
✓ Rated Power	2.2 KW
✓ Power supply	(198~242) VAC, 50Hz
✓ Vacuum source	-0.07Mpa
✓ Network	Cat5/6
✓ Outline dimension	W1300xD1120xH2200mm (excluding the expanded portion of the observation window and the display)
✓ Weight	500kg
✓ Operating environment	Avoid high temperatures and ensure good lightingin the working area Do not expose the equipment to moisture Do not use it in workshops withoutadequaterain protectionmeasuresForindooruseonly
✓ Equipment structural requirements	The equipment's structural layout should be reasonable, with no interference between modules, and with sufficient clearance
✓ Other requirements	① The equipment's design and manufacturing should feature advanced mechanical structure, process manufacturing, control systems, and user-friendly design, while ensuring safe operation ② The necessary standard configuration for the equipment's normal use must be complete and matching, including all corresponding accessories, cables, tools, and spare parts

High-power Automatic FAC Alignment System

Our company's independently developed High-power Automatic FAC Alignment System (Model:OA9000-PLF) is designed for automated production of fast-axis collimator mirrors for arrayed semiconductor fiber-coupled pump lasers. The system automates collimator mirror assembly, replacing the industry-prevalent traditional manual production mode to significantly increase production efficiency while ensuring product specification consistency. The small size and ultra-short micrometer-level back focal length of the Fast Axis Collimator(FAC) collimator mirror make manual assembly extremely challenging and increase the likelihood of semiconductor chip damage. Our automation system provides an optimal solution to this practical problem.

This system comprises a motion unit, automatic dispensing unit, imaging unit, control unit, and programmable control software. The core motion unit features Japanese imported motors with high accuracy and long service life ensuring long-term stable operation of the system. The combination of efficient image algorithms, our unique control technology, and dispensing design ensures that the system's comprehensive performance is comparable to that of imported equipment from abroad.



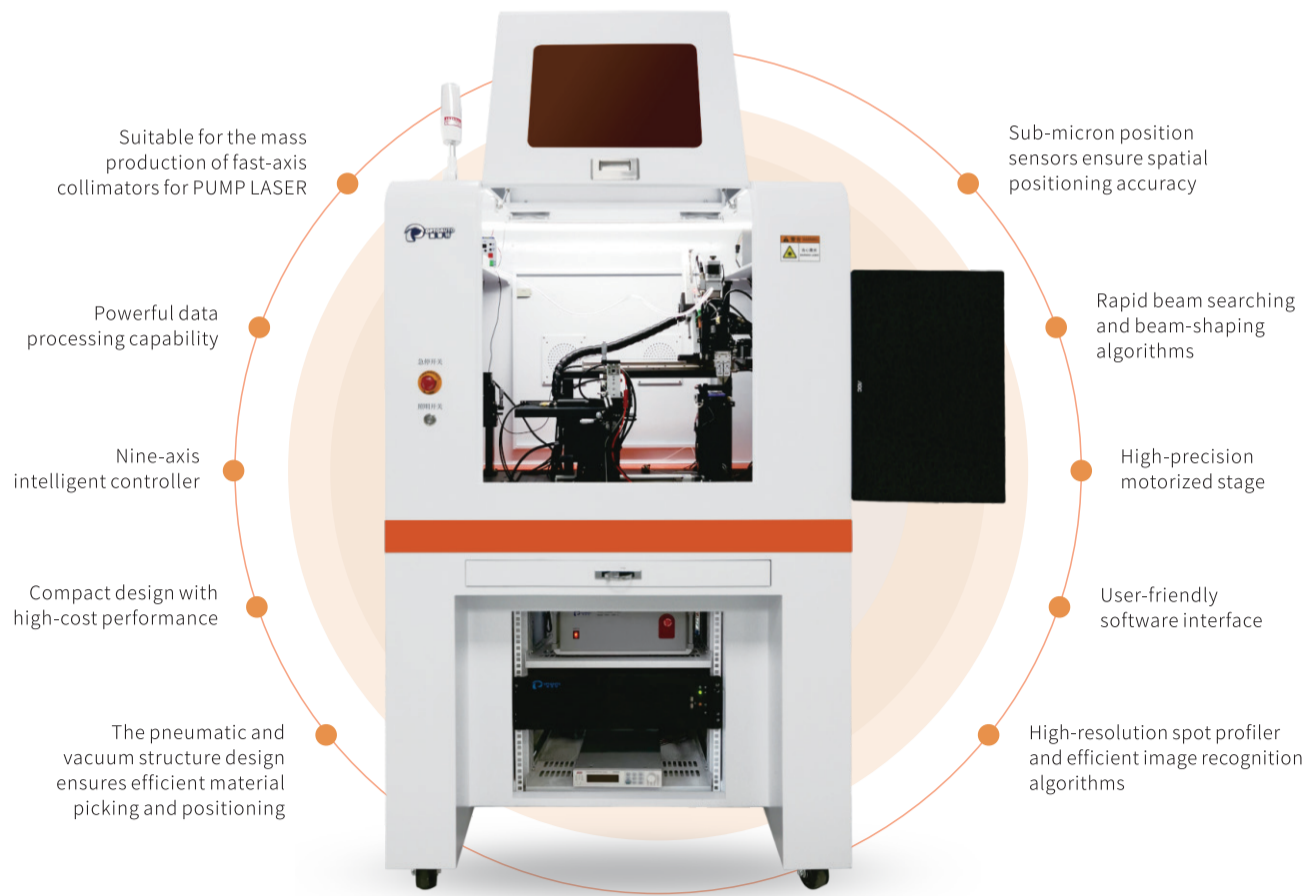
Equipment Specifications

✓ Name	High-power Automatic FAC Alignment System
✓ Model	OA9000 - PLF
✓ Pressure range	0.6 - 0.8 MPa
✓ Rated voltage	220V / 16A
✓ Rated Power	3 KW
✓ Power supply	(198~242) VAC, 50Hz
✓ Vacuum source	-0.09 Mpa
✓ Network	Cat5/6
✓ Outline dimension	W1300xD1100xH2000mm (excluding the expanded portion of the observation window and the display)
✓ Weight	900kg
✓ Operating environment	Avoid high temperatures and ensure good lighting in the working area Do not expose the equipment to moisture Do not use it in workshops without adequate rain protection measures. For indoor use only.
✓ Equipment structural requirements	The equipment's structural layout should be reasonable, with no interference between modules, and with sufficient clearance.
✓ Other requirements	① The equipment's design and manufacturing should feature advanced mechanical structure, process manufacturing, control systems, and user-friendly design, while ensuring safe operation. ② The necessary standard configuration for the equipment's normal use must be complete and matching, including all corresponding accessories, cables, tools, and spare parts.

Automatic Blue-laser FAC Alignment System

Our company's independently developed Automatic Blue-laser FAC Alignment System(Model: OA9000-PBF) is designed for the automated production of array semiconductor fiber-coupled pump lasers. The system automates collimator mirror assembly, replacing the traditional manual production mode, which is still prevalent in the industry, leading to a significant increase in production efficiency while ensuring consistency in product specifications. The small size and ultra-short micrometer-level back focal length of the Fast Axis Collimator (FAC) collimator mirror make manual assembly extremely challenging and increase the likelihood of semiconductor chip damage. Our automation system provides an optimal solution to this practical problem.

This system comprises a motion unit, automatic dispensing unit, imaging unit, control unit, and programmable control software. The core motion unit features Japanese imported motors with high accuracy and long service life, ensuring long-term stable operation of the system. The combination of efficient image algorithms, our unique control technology, and dispensing design ensures that the system's comprehensive performance is comparable to that of imported equipment from abroad.



Equipment Specifications

√ Name	Automatic Blue-laser FAC Alignment System
√ Model	OA9000 - PBF
√ Pressure range	0.6 ± 0.1 MPa
√ Rated voltage	220V / 16A
√ Rated Power	1.8 KW
√ Power supply	(198~242) VAC, 50Hz
√ Vacuum source	-0.07Mpa
√ Network	Cat5/6
√ Outline dimension	W800xD1000xH1685mm (excluding the expanded portion of the observation window and the display)
√ Weight	300kg
√ Operating environment	Avoid high temperatures and ensure good lighting in the working area Do not expose the equipment to moisture and do not use it in workshops without adequate rain protection measures For indoor use only
√ Equipment structural requirements	The equipment's structural layout should be reasonable, with no interference between modules, and with sufficient clearance
√ Other requirements	① The equipment's design and manufacturing should feature advanced mechanical structure, process manufacturing, control systems, and user-friendly design, while ensuring safe operation ② The necessary standard configuration for the equipment's normal use must be complete and matching, including all corresponding accessories, cables, tools, and spare parts

High-power Automatic Mirror Alignment System

Our company's independently developed High-power Automatic Mirror Alignment System (Model: OA11000-PLM) is designed for the fully automated production of array semiconductor fiber-coupled pump lasers. The system features a pneumatic and vacuum structure design to ensure efficient material picking and positioning, and uses a high-precision stainless steel motorized stages to ensure precise movement in six-dimensional space. We provide a eleven-axis intelligent controller with self-developed operating software. Compared with manual assembly, this automatic alignment system can significantly improve production capacity, reduce dependence on skilled operators, and ensure product consistency.

The system comprises a coupling unit, automatic dispensing unit, imaging unit, control unit, and programmable control software. The core coupling unit features Japanese imported motors with high accuracy and long service life, ensuring long-term stable operation of the system. The combination of efficient algorithms, our unique control technology, and dispensing design ensures that the system's comprehensive performance is comparable to that of imported equipment from abroad.



Equipment Specifications

✓ Name	High-power Automatic Mirror Alignment System
✓ Model	OA11000-PLM
✓ Pressure range	0.6 ± 0.1 MPa
✓ Rated voltage	220V / 16A
✓ Rated Power	3KW
✓ Power supply	(198~242) VAC, 50Hz
✓ Vacuum source	-0.07Mpa
✓ Network	Cat5/6
✓ Outline dimension	W1300xD1100xH2000mm (excluding the expanded portion of the observation window and the display)
✓ Weight	800kg
✓ Operating environment	Avoid high temperatures and ensure good lighting in the working area Do not expose the equipment to moisture and do not use it in workshops without adequate rain protection measures For indoor use only
✓ Equipment structural requirements	The equipment's structural layout should be reasonable, with no interference between modules, and with sufficient clearance
✓ Other requirements	① The equipment's design and manufacturing should feature advanced mechanical structure, process manufacturing, control systems, and user-friendly design, while ensuring safe operation ② The necessary standard configuration for the equipment's normal use must be complete and matching, including all corresponding accessories, cables, tools, and spare parts

Automatic Laser Assembly System for Automotive Lidar

Our company's independently developed Automatic Mirror Alignment System is designed for the fully automated production of array semiconductor fiber-coupled pump lasers. The system features a pneumatic and vacuum structure design to ensure efficient material picking and positioning, and uses a high-precision stainless steel motorized stages to ensure precise movement in six-dimensional space. We provide a nine-axis intelligent controller with self-developed operating software. Compared with manual assembly, this automatic alignment system can significantly improve production capacity, reduce dependence on skilled operators, and ensure product consistency.

The system comprises a coupling unit, automatic dispensing unit, imaging unit, control unit, and programmable control software. The core coupling unit features Japanese imported motors with high accuracy and long service life ensuring long-term stable operation of the system. The combination of efficient algorithms, our unique control technology, and dispensing design ensures that the system's comprehensive performance is comparable to that of imported equipment from abroad.



Automatic Mirror/FAC Alignment System

Equipment Specifications

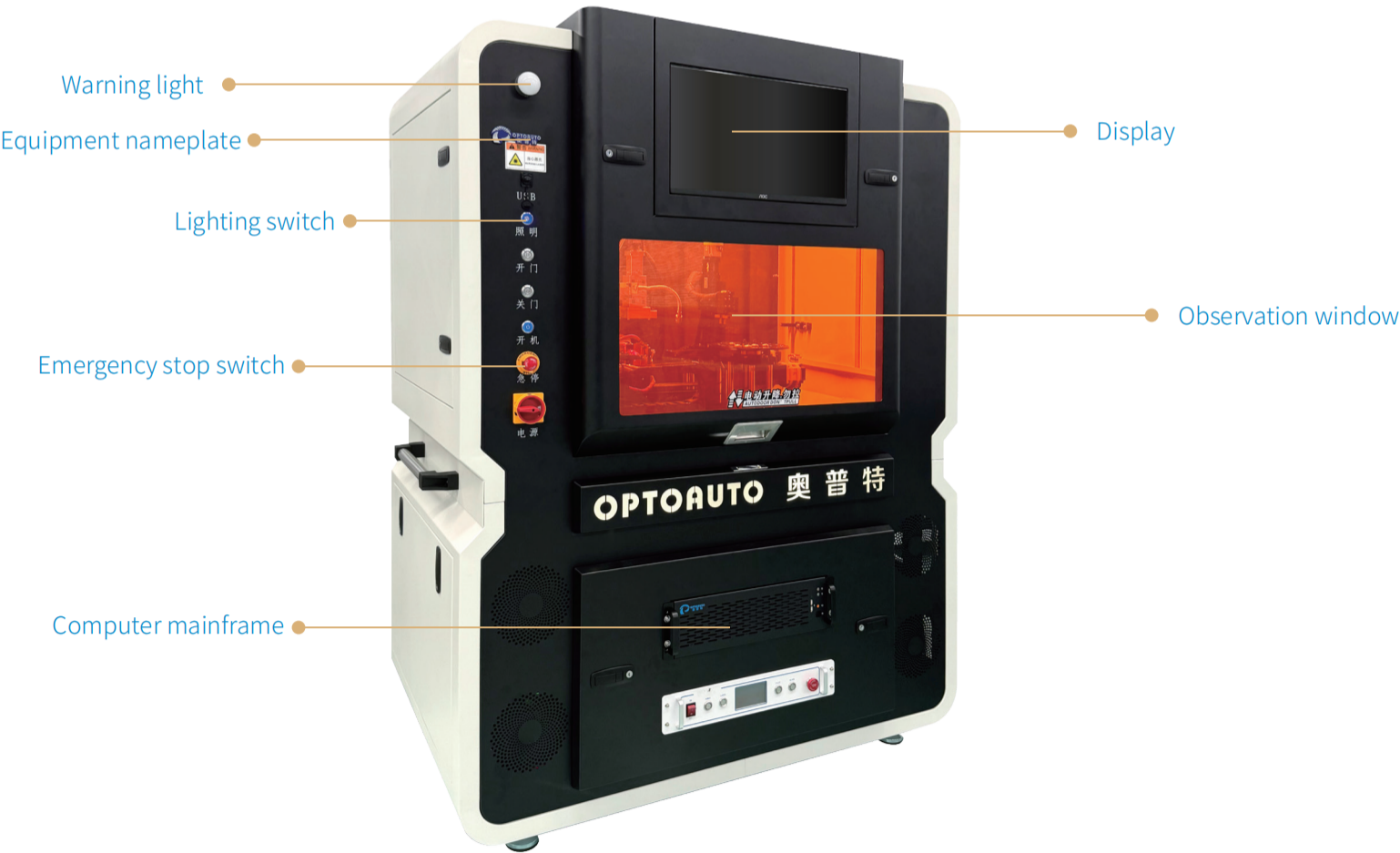
✓ Name	Automatic Mirror/FAC Alignment System
✓ Model	OA9000 - PLM/OA9000 - PLF
✓ Pressure range	0.6 ± 0.1 MPa
✓ Rated voltage	220V / 16A
✓ Rated Power	1.8 KW
✓ Power supply	(198~242) VAC, 50Hz
✓ Vacuum source	-0.07Mpa
✓ Network	Cat5/6
✓ Outline dimension	W800xD1000xH1685mm (excluding the expanded portion of the observation window and the display)
✓ Weight	300kg
✓ Operating environment	Avoid high temperatures and ensure good lighting in the working area Do not expose the equipment to moisture and do not use it in workshops without adequate rain protection measures For indoor use only
✓ Equipment structural requirements	The equipment's structural layout should be reasonable, with no interference between modules, and with sufficient clearance
✓ Other requirements	① The equipment's design and manufacturing should feature advanced mechanical structure, process manufacturing, control systems, and user-friendly design, while ensuring safe operation ② The necessary standard configuration for the equipment's normal use must be complete and matching, including all corresponding accessories, cables, tools, and spare parts

Fully Automated Golden Jewelry Welding System

Our self-developed Fully Automated Golden Jewelry Welding System (Model: OA-BLW2500-J) is suitable for the automatic welding production process of gold pendant. It can realise the three-in-one fully automatic production of automatic loading and unloading of Tray disc bin, automatic material picking and placing, and automatic laser welding.

The system functions include automatic material picking, automatic searching, automatic contour matching, automatic welding, automatic unloading, automatic inspection, automatic refining, automatic data saving, automatic data uploading to the customer's database and automatic alarm.

Suitable for batch production of gold pendant welding, micron-level position sensor ensures spatial positioning accuracy, pneumatic and co-servicing structure design ensures efficient material pickup and positioning. High-precision electronically controlled displacement table, 8-axis intelligent controller, automatic finding of the original and automatic wheel following algorithm, powerful data processing capabilities, user-friendly software interface, compact design, cost-effective, equipment can be customised according to the production process.



Equipment Specifications

▼ Name	Fully Automated Golden Jewelry Welding System
▼ Model	OA-BLW2500-J
▼ Applicable range	<ul style="list-style-type: none">• Gold hollow wide body bracelet sealing welding• Gold Peace Buckle Seam Welding• Gold 3D shaped moulding welding• Gold Hollow Yuanbao Seam Welding• Gold Ruyi Lock Seam Welding• Gold Buddha Head Welding
▼ Equipment features	<ul style="list-style-type: none">① Automatic loading and unloading system, operators away from heat and laser② Laser welding, high efficiency and speed③ Continuous weld seam, beautiful, reduce the back-end polishing process④ Deep molten pool, solid welding⑤ Demonstration welding, or can be paired with 3D identification, easy to operate⑥ No need to add solder, no gold loss⑦ Can weld 0 to 0.7mm thickness, welding coverage
▼ Air pressure range	0.6 ± 0.1 MPa
▼ Rated Voltage	220V/16A
▼ Rated Power	3.4 KW
▼ Power supply	(198~242) VAC, 50Hz
▼ Network	Cat5/6
▼ Overall Dimension	W1400 X D900 X H1960mm (Excludes viewing window expansion and display section)
▼ Weight	1 t
▼ Operating Environment	Avoid high temperatures and keep the work area well lit Avoid humidity, not to be used in workplaces without rain protection.

Laser Chain Weaving System

Our self-developed laser chain welding system (Model: OA-BZL1300-J) is suitable for a variety of welding machine models.

The system functions mainly include automatic welding, automatic water cooling system, multi-equipment status display, light output time setting, light output lag setting, etc.



Equipment Specifications

√ Name	Laser chain welding systems
√ Model	OA-BZL1200-J
√ Applicable range	Laser Welding Systems
√ Equipment features	<ul style="list-style-type: none">· The equipment is compact and takes up little space;· Laser welding, high efficiency and speed;· Modular design, simple operation;· Deep melting pool, solid welding;· No need to add solder, no gold loss
√ Rated voltage	220V/9A
√ Rated power	1.8KW
√ Power supply	(198~242) VAC, 50Hz
√ Size	W293XD651XH1155mm
√ Weights	80KG
√ Operating environment	Avoid high temperatures and keep the work area well lit; Avoid humidity, not to be used in a workshop without rain protection measures