YUE XIN

Jinan YueXin Intelligent Equipment Co.,ltd

For more information please go to the website:
www.yxequipment.com

Equipment Configuration List

Package List

No.	Name	QTY	Brand
1	AUBO cobot i16-0.9m-16kg	1 set	XH LASER
2	Laser source	1 set	MAX/Raycus
3	Laser head	1 set	XH-Ultra X
4	Control system	1 set	XH-SVT V5
5	Teaching box	1 set	AUBO
6	CCD monitoring system	1 set	HK V
7	Water chiller	1 set	S&A
8	Magnet base of cobot		XH
9	Electrical parts	1 set	Schneider
10	Pneumatic components	1 set	AirTec
11	Consumable kit	1 set	XH LASER
12	Tools kit	1 set	XH LASER
13	Machine body	1 set	XH-LASER
14	*OPT. Servo wire feeder*	*1 set*	*XH-Smart feeder v3*
15	*OPT. Safety fence OD4 and optional safety configuration*		*Customizable*

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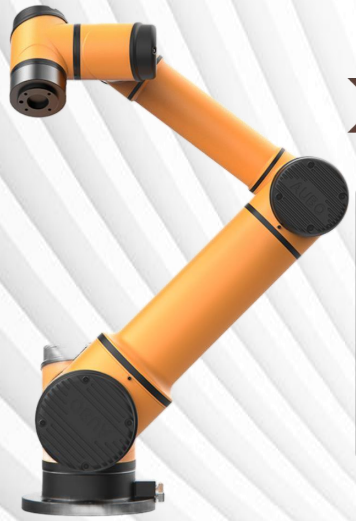
Technical Parameters and Specification

Technical Specification			
Machine	Cobot laser welding mahine		
Cobot Reach length	967.5mm		
Cobot Payload	16kg		
Lasersource	MAX		
Laser power	3000W		
Laser wave length	1064nm		
Welding speed range	0—150mm/s		
Output fiber length	Standard 10 Meters/Maximum 15 Meters		
Cooling Chiller	Industrial water chiller S&A / TongFei		
Auxiliary gas	Nitrogen / Argon / Oxygen		
Working environment temperaturerange	—20˚C ~45˚C		
Humiduty range of working environment	＜70% No condensation		
Laser frequency	5000—10000Hz		
Model	XH—CW—L1500	XH—CW—L2000	XH—CW—L3000
Gross Weight	195 Kg	220KG	265KG
Machine dimensions	124*53*105 CM		
Working voltage	1—2KW : 220V/SINGLE PHASE/50&60HZ 3KW : 380V/THREE PHASE/50&60HZ		
Total power	1.5KW 8.2KVA/37.3A	2KW 10.6KVA/48.3A	3KW 24,6KVA/37.4A
Welding thickness	0.5—8mm		
Welding gap requirements	⩽3mm		

Project overview

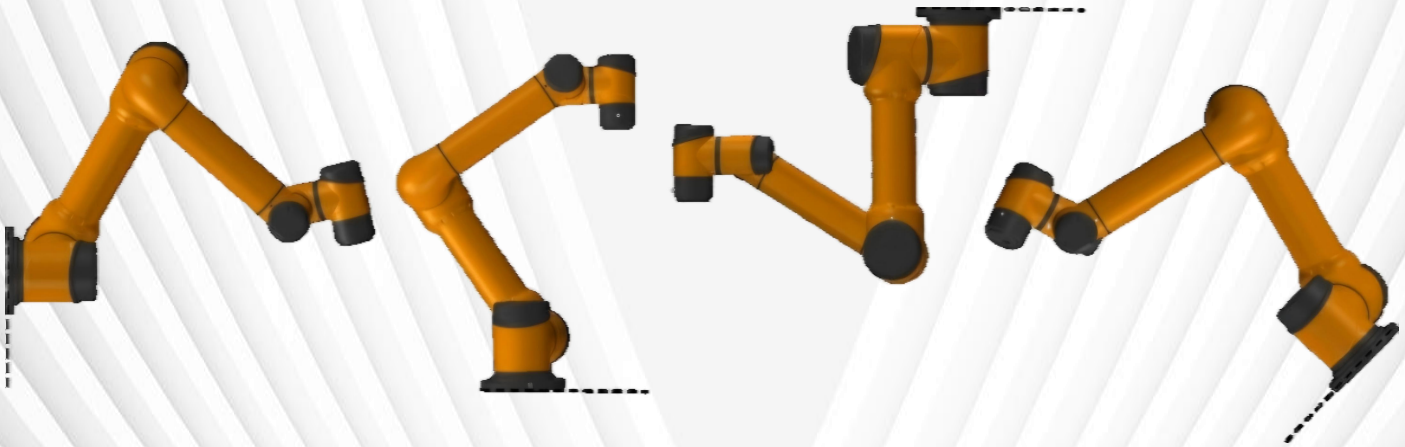
Schematic



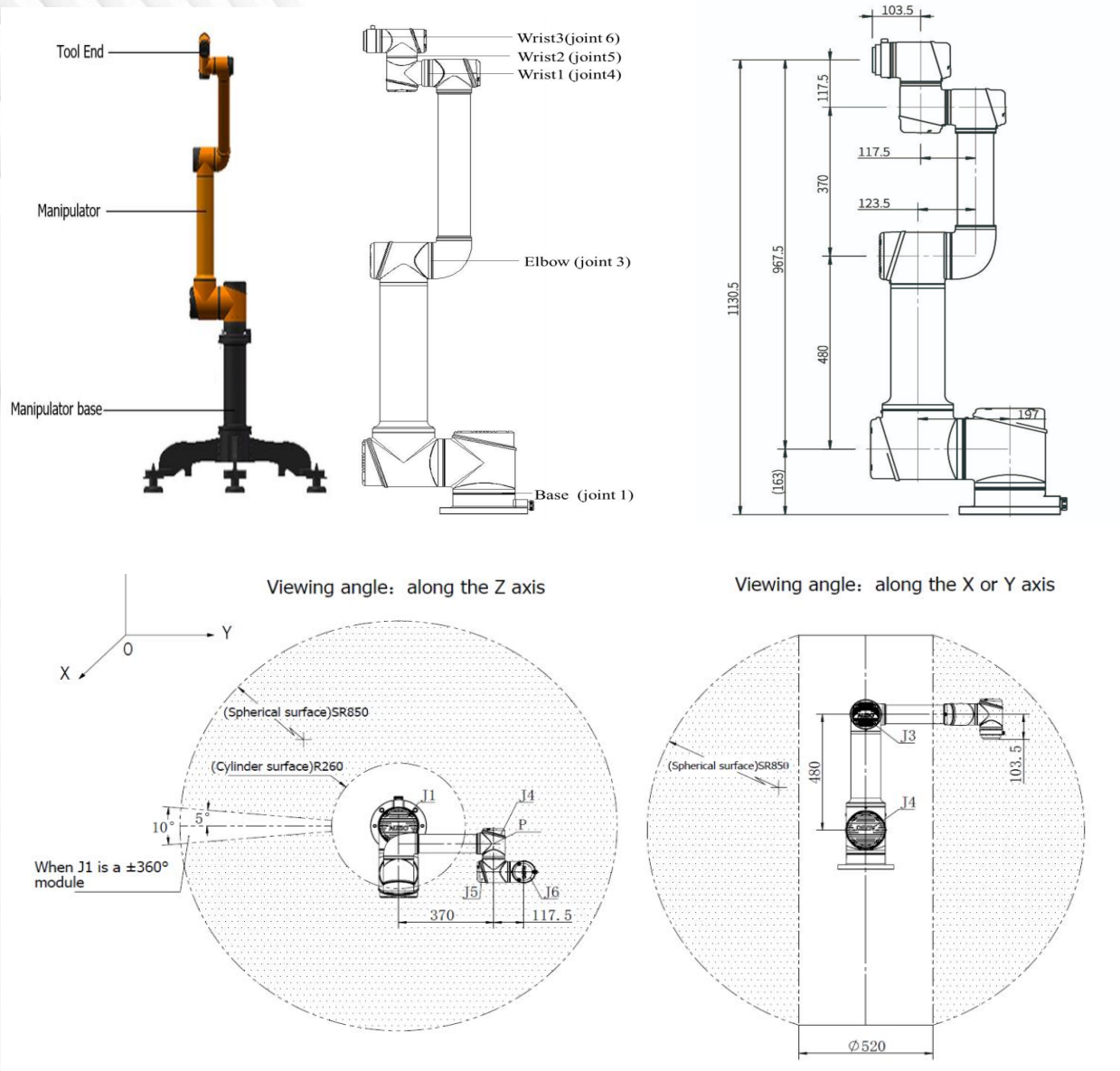
1. START
2. Manually place the workpiece
3. The positioner rotate to corresponding position
4. welding robot performs welding work
5. After welding unloading workpiece
6. End

Project overview

Schematic—Manipulator Installation



workspace illustration



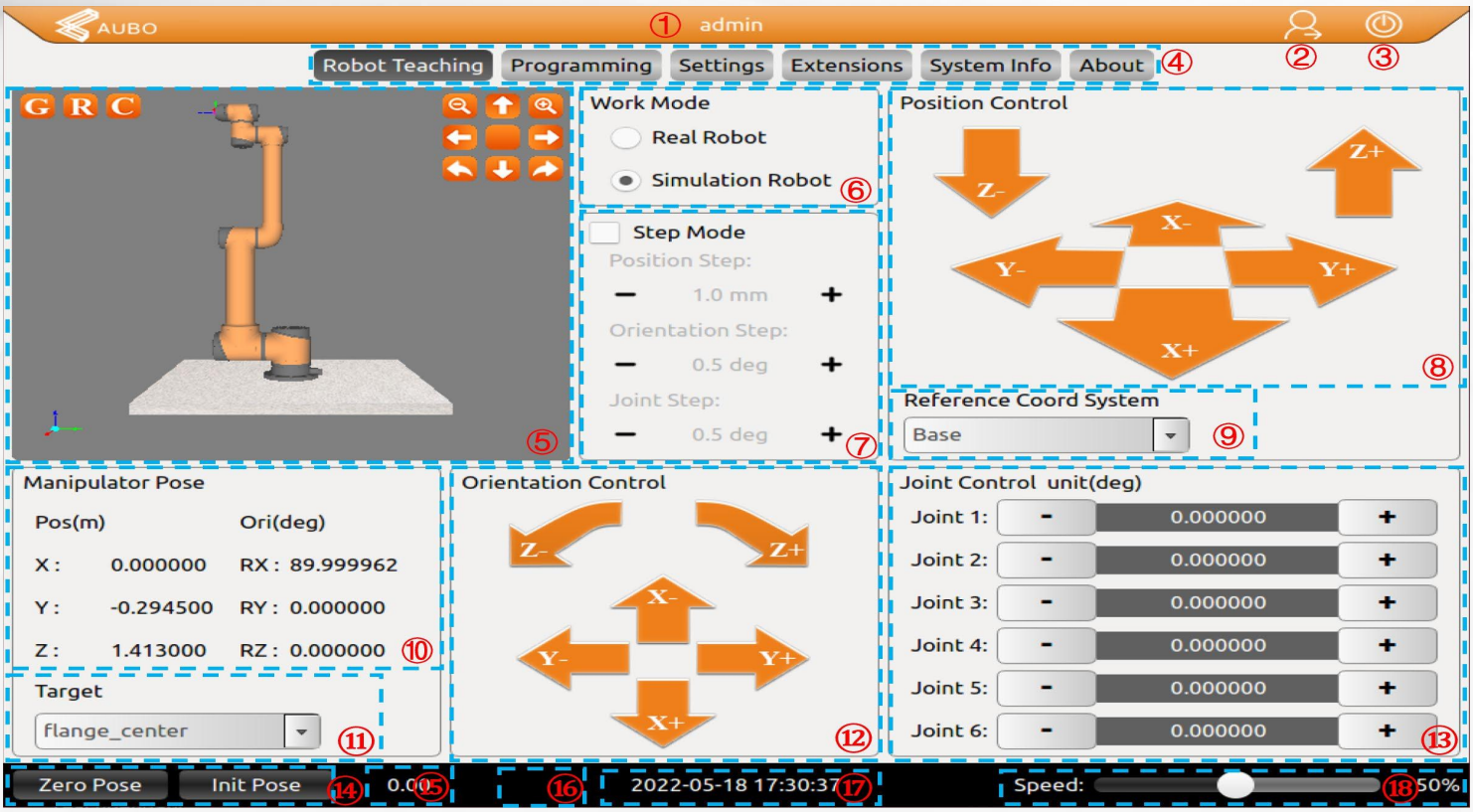
Specification

Teach box and Fast switches

Features

- Simple UI interface, easy to understand and operate
- Supports the selection of wireless and wired teaching devices
- Quick start button box, can quickly start and pause, integrated with emergency stop button, can respond to emergencies, safe, flexible, and fast

Teaching interface



Specification

Cabinet&controller

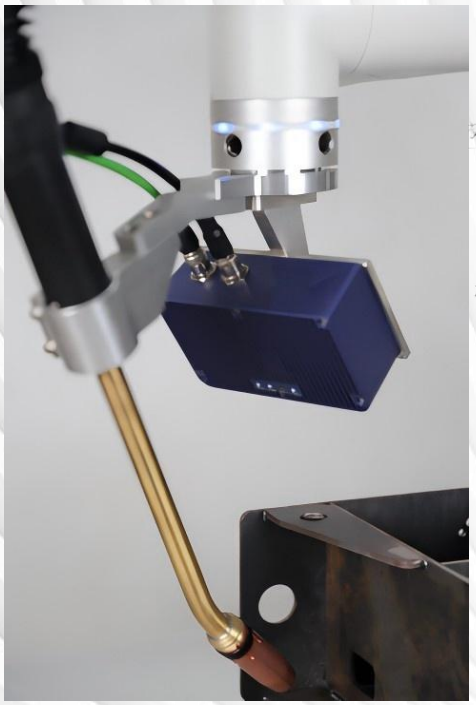
Features

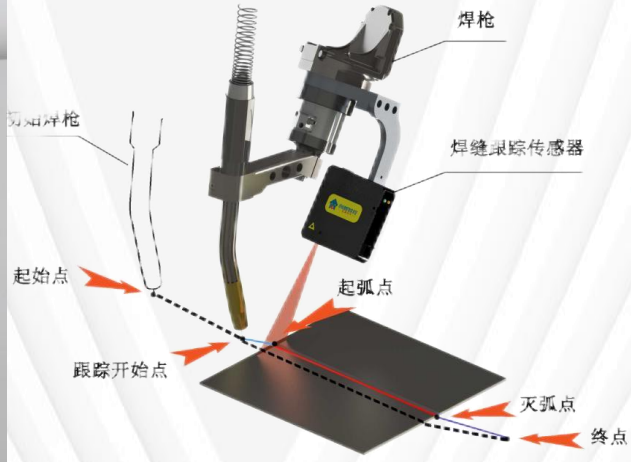
- Built to a global standard and does not require a transformer for input voltages ranging from 380VAC to 480VAC
- I/O communication speed is improved by as much as 50% for superior work efficiency
- MLX300 software add—on option for PLC integration
- High path accuracy enables increased precision in trajectory performance independently of motion speed
- Integrated machine and functional safety for simplified setup
- Single controller—to—robot cable for improved cable reliability

Name	Function
TEACH PENDANT ENABLE/DISABLE	The teach pendant enable/disable switch
MANIPULATOR ON	The indicator lights up to indicate that the robot is powered on.
POWER	The indicator lights up to indicate that the external power is on.
STANDBY	When the indicator light is on, it indicates that the control box interface board program is initialized and the robot can be powered on by pressing the teach pendant power button.
EMERGENCY STOP	The indicator lights up to indicate that the robot is in emergency stop state.
MODE MANUAL/LINKAGE	Robot manual mode and linkage mode selection. When the button is pressed, the robot enters the linkage mode.
TEACH PENDANT	Teach pendant cable socket, connect the teach pendant cable.
ROBOT	Robot socket, connect the manipulator cable.
ON(I) / OFF(O)	Power switch, turn on or turn off the power.
POWER IN	Power socket, connect the power cable.

Specification

Laser scanner & magnet base



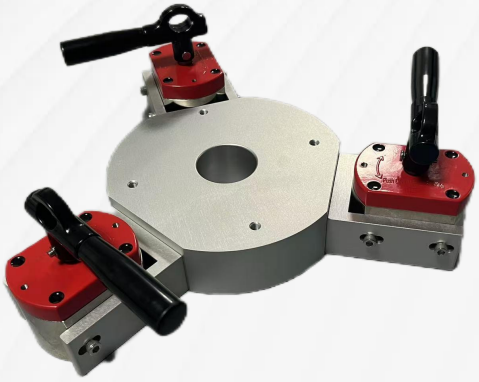


Laser scanner OPT.

Laser scanner

- High precision laser scanning sensor for weld compensation, achieving higher precision weld identification and improving welding quality
- Scanning speed completed within 0.3 seconds, fast and accurate
- Not afraid of the influence of light sources and material colors

Magnet base OPT.



Magnet base OPT.

- Quickly open the magnetic controller with your hand, **Easy**
- 500KG magnetic adsorption force, **Stable**
- Can be moved to any metal surface for adsorption and fixation welding, **Flexible**

Description of Main Configuration

Laser source

IPG Photonics is a global leader of the high power fiber laser. The fiber laser manufactured by it has such advantages as high quality light beam quality andreliability, ultrahigh output power, higher electro—optical conversion efficiency, lower maintenance cost, volume with compact structure, mobility and durability, low consumption, environment friendly, etc.

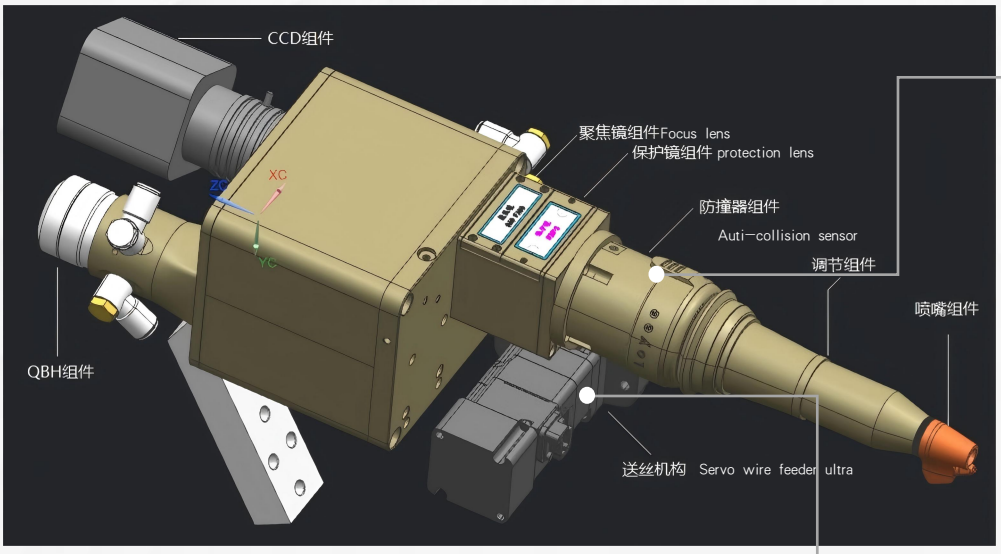
MAX Laser is a new generation of CW laser. This product integrates high power, lightweight, user—friendly control, high—quality beam quality and high light conversion efficiency. It is used for fast cutting of various thick plate materials such as carbon steel, stainless steel, brass and aluminum. The laser cutting frequency is high and the cutting surface is smooth. It can meet the requirements of precision machining, 3C product welding and high anti material cutting.

Specification

Welding gun&Cleaner

WSX Laser head

- This welding joint has strong advantages in high resistance material welding and high—power welding applications, making it an economical and efficient welding joint.
- The welding head adopts a motor driven X and Y—axis vibrating mirror, with multiple swing modes, and swing welding allows for irregular welding of the workpiece, larger gaps, and other processing parameters, which can significantly improve welding quality.
- The internal structure of the welding head is completely sealed, which can prevent the optical part from being contaminated by dust.
- Equipped with air curtain components to reduce the pollution of welding smoke and splashing residue on the lens.
- The protective lens adopts a drawer type structure, which is easy to replace
- Can be equipped with coaxial

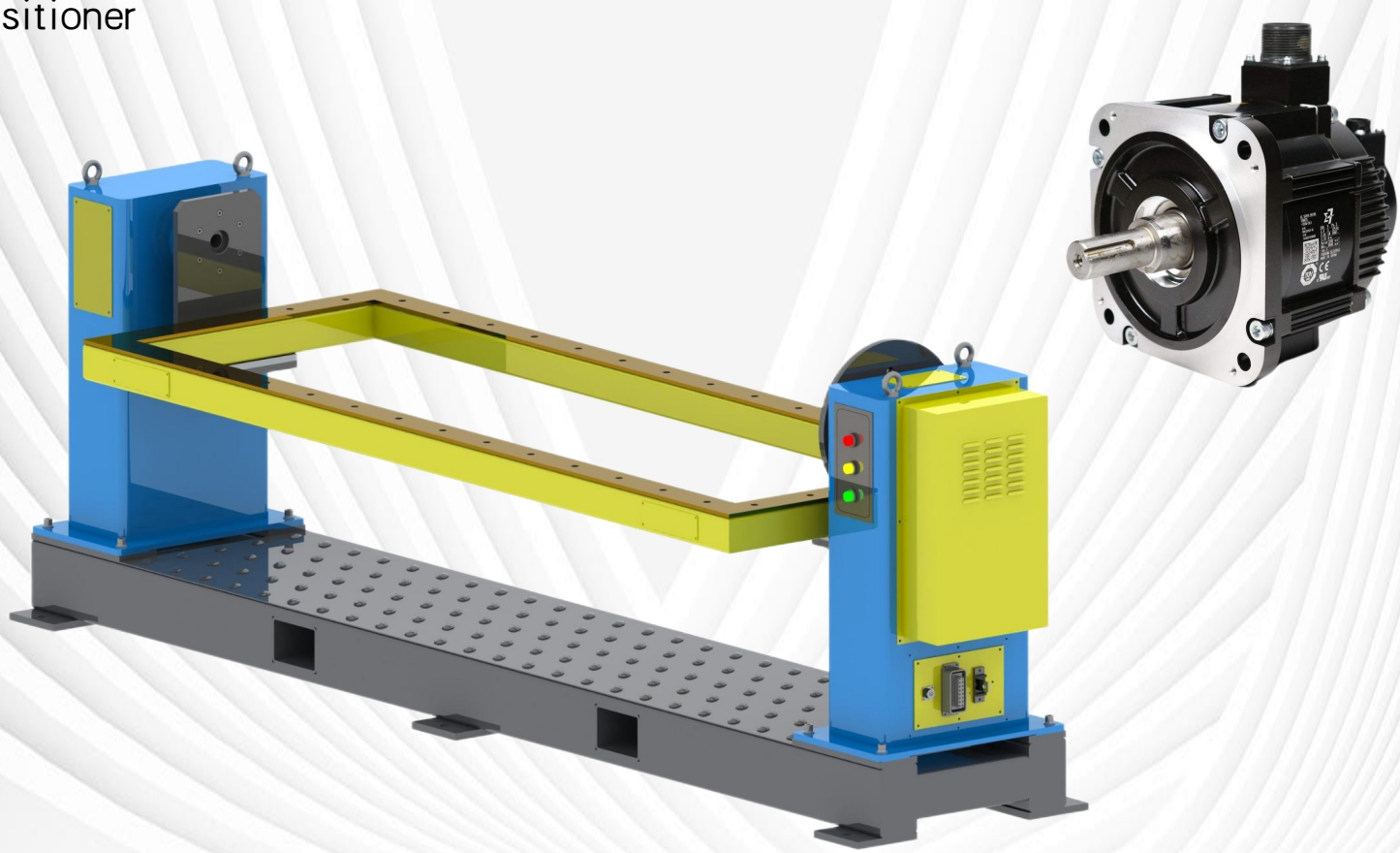


Auti—collision sensor
Unique anti—collision sensor, which can effectively avoid damage to the laser head caused by mistake during the welding process

Servo wire feeder
The servo wire feeding mechanism is integrated below the welding head, only **10cm** away from the wire feeding position, which improves the **stability** of the wire feeding structure while ensuring the **accuracy** of wire feeding

Specification

Positioner



- The single—axis servo positioner is mainly composed of an integral fixed base, a rotating headstock and a tailbox, a welding frame, a servo motor and a precision reducer, a conductive mechanism, a protective cover and an electrical control system.
- By configuring different servo motors, the positioner can be operated remotely through robot teaching device or external operation box;
- The required welding and assembly angle is achieved by turning the workpiece fixed on the workbench;
- The rotation of the worktable is controlled by servo motor, which can obtain ideal welding speed;
- The workpiece is clamped by the positioner chuck, and the tooling is added again through the shape of the middle plate to prevent the workpiece from shifting during welding, and the roller is used to support the workpiece.
- The fixed workpiece adopts domestic well—known brand chuck to ensure the stability of the product during welding and the convenience of loading and unloading;

The pictures are for reference only, and the final design is the main;

Welding machine list

Handheld laser welding machine



Robot laser welding machine



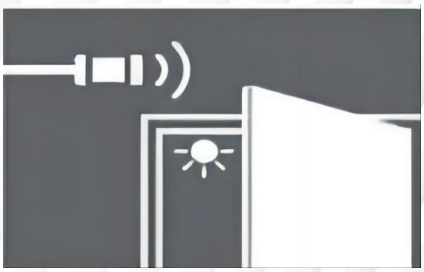

Mold laser welding machine


Auto platform laser welding machine

OPT.—Protection solution

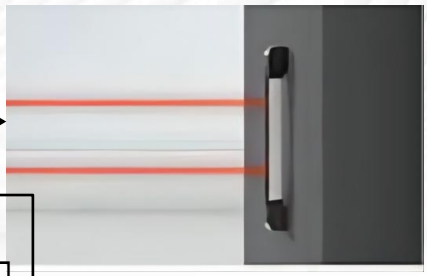
Laser Emission

Door open



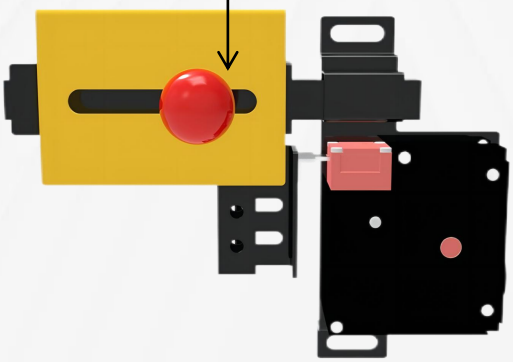
Human intrusion

Light curtain

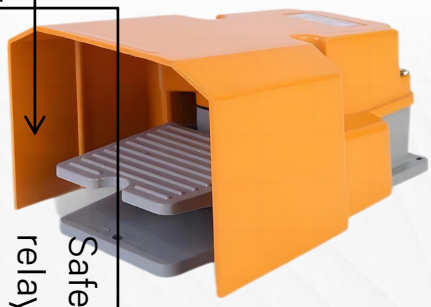


Dust collector

Door Switch

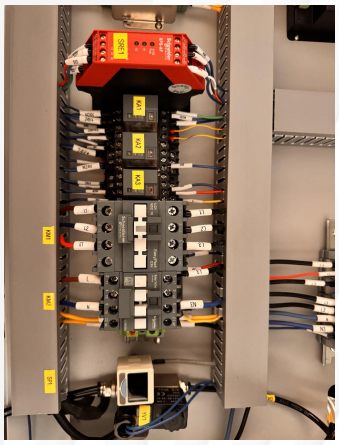


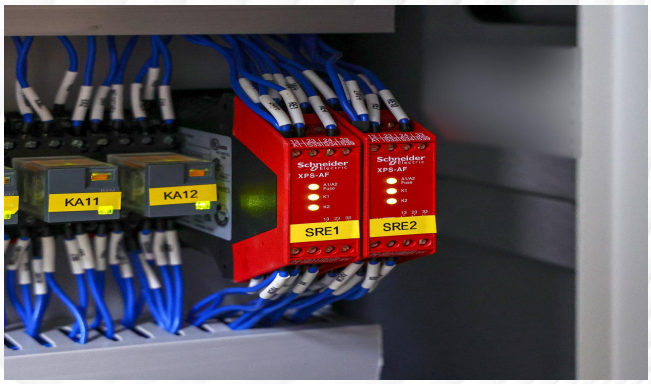
Foot switch

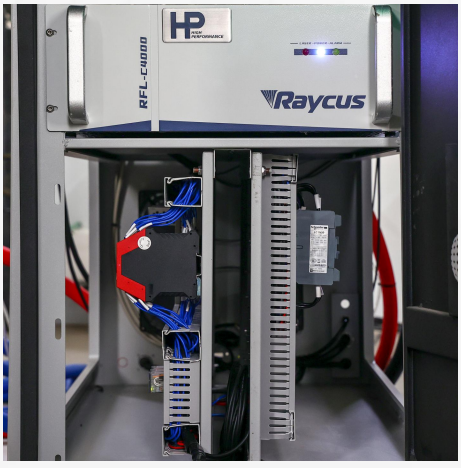


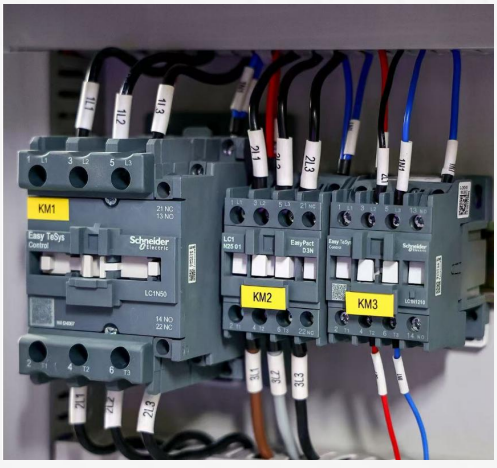
Safety relay loop

OPT.—Protection solution

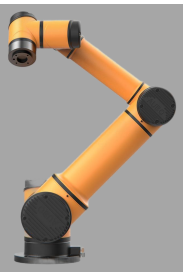
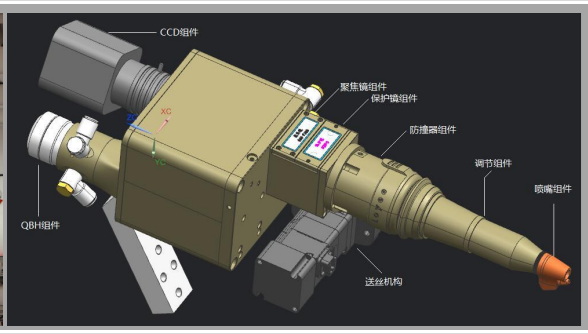
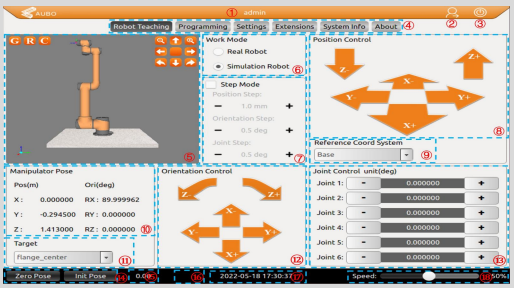




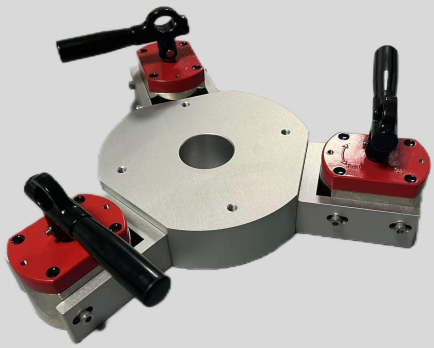
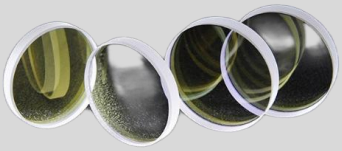
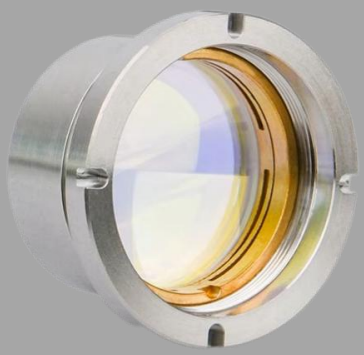




Description of Main Configuration

No.	Name and Brand	Photo
1	Robot YASKAWA/FANUC /ABB	
2	Laser source IPG/Raycus /MAX	
3	Laser head	 
4	System	
5	Chiller	

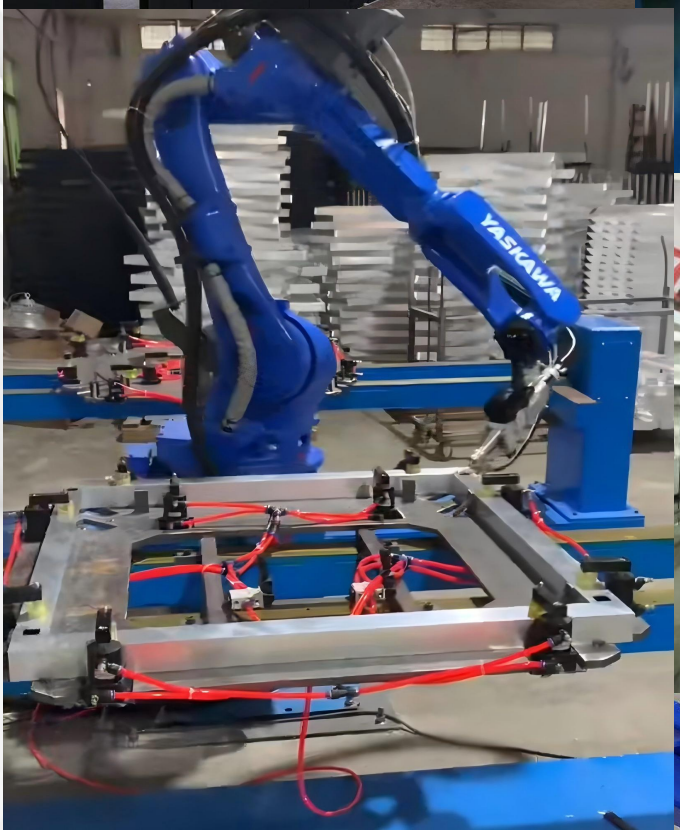
Description of Main Configuration

No.	Name and Brand	Photo
6	Wire feeder	
7	Magnet base	
8	Nozzle	
9	Proteccion lentes	
10	Focus lens	

Description of Main Configuration

No.	Name and Brand	Photo
11	Colimating lens	
12	Reflection lens	
13	Seal ring	
14	OD8+ Protective helmet (OPT.)	
15	OD6+ Protective glasses	

Project show



Project show

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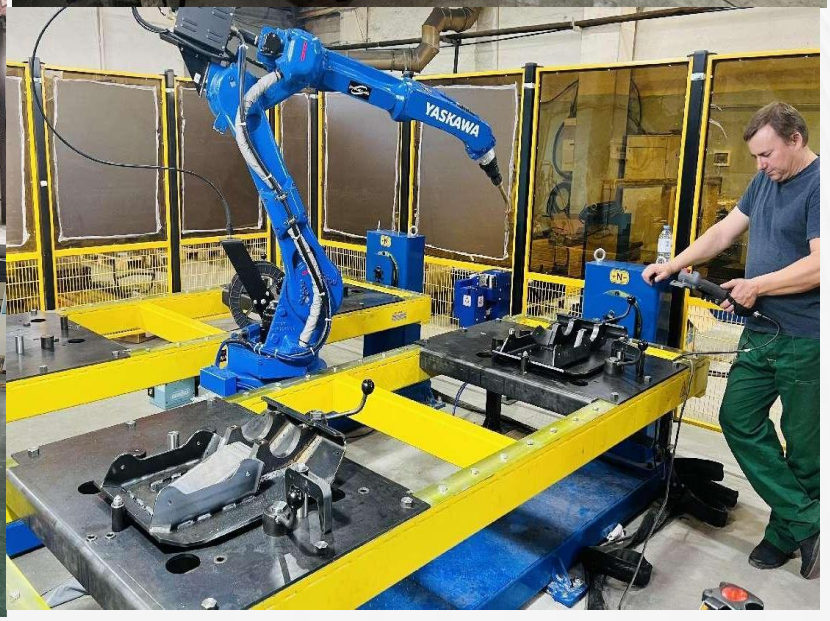
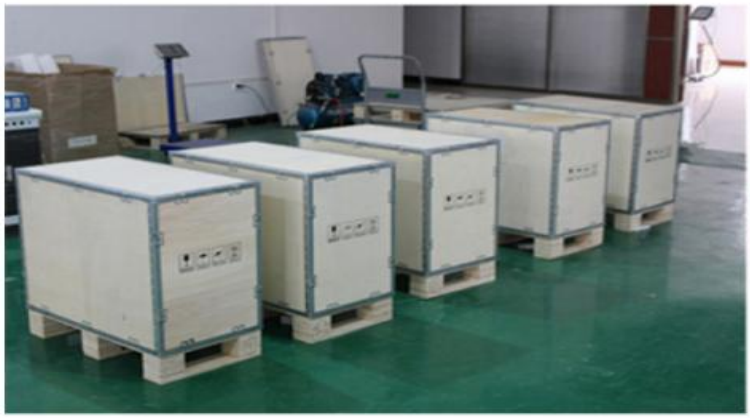
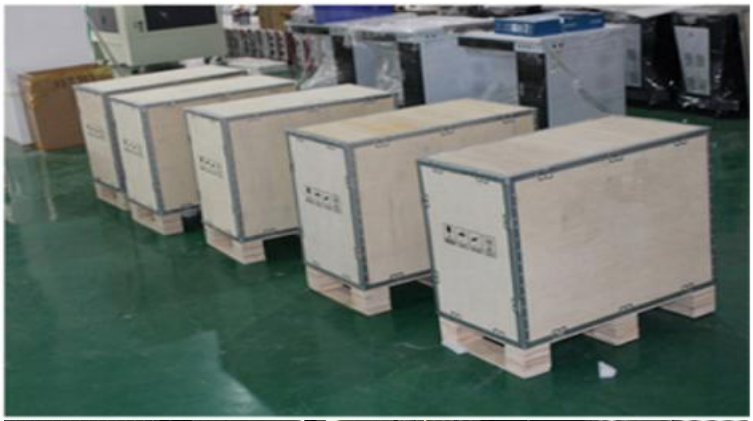


Package show





CUT FUTURE WELD DREAM

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