

Where there is automatic welding,
there is Zhenkang.

We are originated from, rooted in and innovative in welding.
It's been over 20 years since our products and technology
served in the welding industry.

Without exception, all our products are greatly acknowledged
by our customers, which is the very reason we secure the
highest market share of our products globally.

Through a decade endeavor, we have developed another an
excellent performance whole machine - high precision arc
welding robot .

We are concentrating on only one
type of machine.

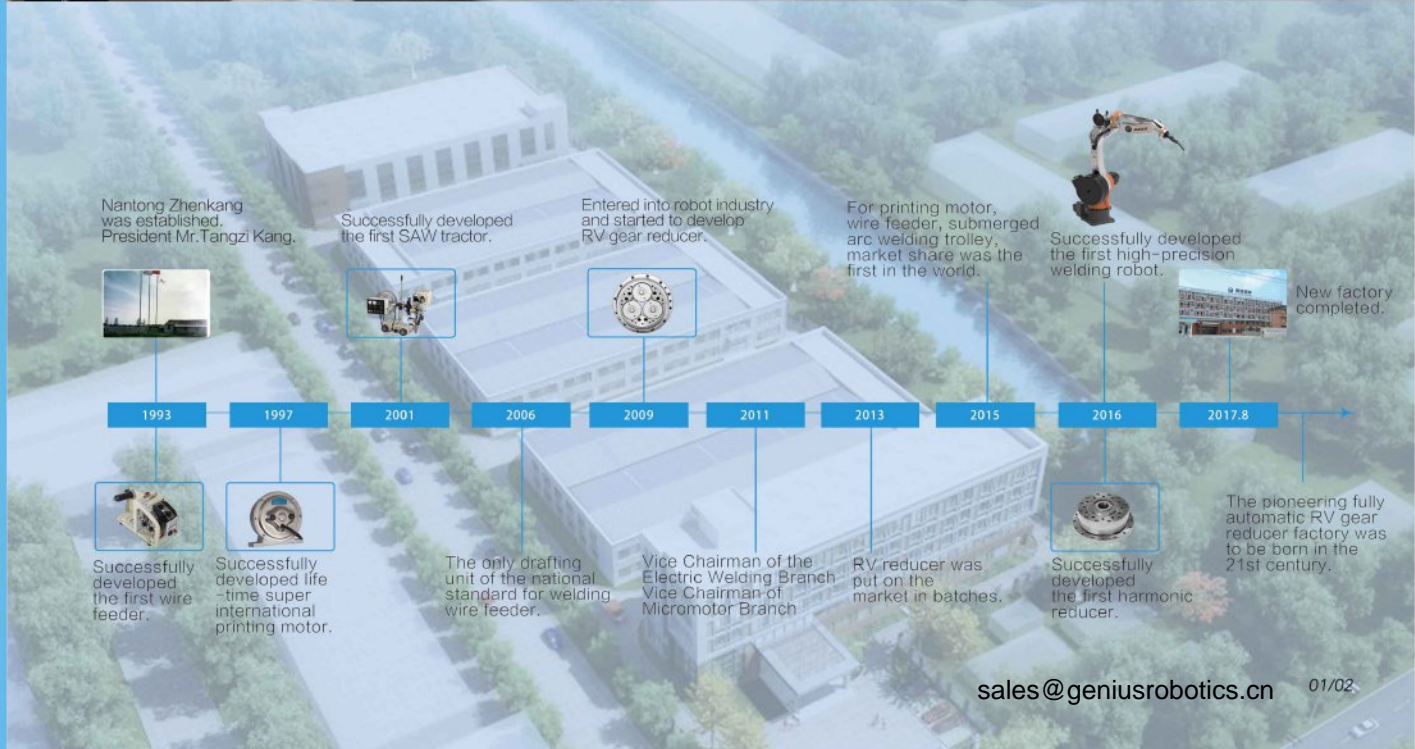
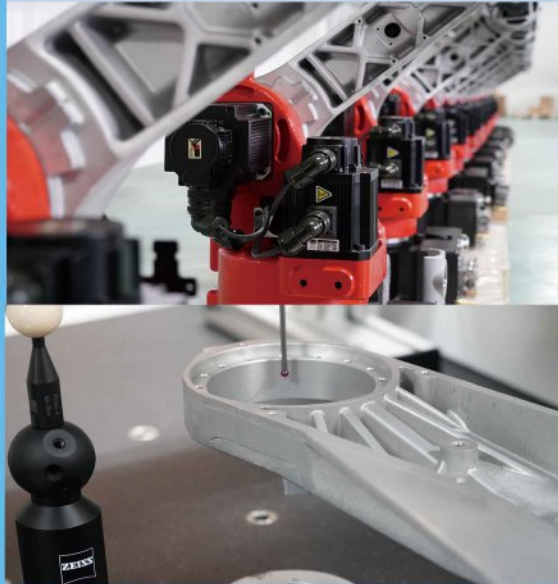


Zhenkang Wire Feeder

Promoted the automation process of China's
welding industry.

Zhenkang Industrial Welding Robot

Will promote the intelligent process of China's
welding industry.



STRUCTURE PRINCIPLE

Harmonic Reducer

The fifth and sixth axes use harmonic reducers to reject various types of bevel gears, arc gears and spring backlash gears to ensure low noise, high rigidity and high precision.

 Nantong Zhenkang developed, invention patent protection.

Anti-collision Device

Pure mechanical structure, repeat positioning accuracy of up to 0.05mm, far higher than the import level. Recalibration is not required after a minor collision and can be resumed immediately.

 Nantong Zhenkang developed, invention patent protection.

Integrated Welding Torch

Integrated embedded structure, compact and beautiful, reducing cable distortion, preventing fatigue breakage, reducing wire passage and resistance, and smoother wire feeding.

 Nantong Zhenkang developed, invention patent protection.

Wire Spool

The special welding wire disc with damping design is installed on the second joint of the robot, which greatly reduces the wire feeding path and resistance and ensures high-precision welding.

 Nantong Zhenkang developed, invention patent protection.

Drive and Controller

Ultra-small size, realize the world's leading integrated control technology, super performance, and achieve various precision indicators beyond the import level.

 Shenzhen Googol Tech developed, invention patent protection.



Wire Feeder

As the world's leading wire feeder manufacturer, we offer the best wire feeder products for our arc welding robots.

 Nantong Zhenkang developed, invention patent protection.

Servo Motor

High precision absolute encoder, excellent performance, stable and reliable.

 Changzhou Hetai developed, invention patent protection.

Cast Aluminum

Low-pressure steel die casting, high surface roughness, anti-oxidation all year round, refused to paint or spray paint.

RV Gear Reducer

As the largest manufacturer of RV reducers in China, it broke the import monopoly and forced the price of imported RV reducers to drop by 50%. We put the proud reducer products into our welding robots to achieve better robot track accuracy.

 Nantong Zhenkang developed, invention patent protection.

Iron Casting

Casting with low-pressure steel die, the metal structure is dense, and higher body stiffness is obtained.

ROBOT BODY SPECIFICATION

Model	ZK1400-06	
Application	Arc welding, Palletizing, Loading and unloading	
Installation	Ground, lifting, hanging	
Number of Axes	6	
Maximum load	10KG	
Max working radius	1400mm	
Positional repeatability	0.07mm	
Body weight	185KG	
Electric cabinet	26KG	
Input power	3P AC220V 50Hz	
Working environment	Temp	0~45°C
	Humidity	20~80% RH
	Others	Keep away from corrosive gases or liquids or explosive gases, away from water, oil, dust, away from seismic sources, magnetic fields, high-frequency signal sources.
Power capacity	6KVA(Robot) +24KVA (Welding source)	

Performance	Motion range	Max speed	Load capacity
Axes			
J1	±160°	176.7 %/s	511Nm
J2	-72° ~+110°	173.6 %/s	416Nm
J3	-120° ~+70°	170.0 %/s	188Nm
J4	±150°	295.9 %/s	105Nm
J5	-110° ~+105°	197.3 %/s	44Nm 0.30kg·m ²
J6	±320°	194.6 %/s	68Nm 0.05kg·m ²

EXCELLENT PERFORMANCE

1.Precision

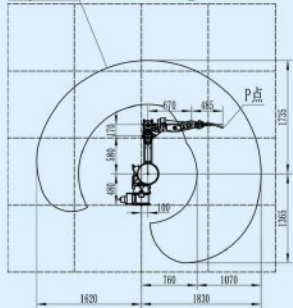
Unit : mm

Index	Type	Actual data (Zhenkang)	Reference data (Import)	Test speed	Test scheme
Position repeatability RP		0.063	±0.07	60m/min	A
Straight line accuracy ATP (Tracking accuracy)		0.322	0.500	2m/min	B
Track repeatability RTP		0.060	---	2m/min	A
Track speed accuracy		0.034%	---	2m/min	A
Track speed repeatability RV		0.025%	---	2m/min	A
Position overshoot		0.052	0.050	2m/min	A
Big circle roundness1		0.617	---	2m/min	A
Big circle roundness2		0.402	---	2m/min	B
Small circle roundness		0.286	0.300	2m/min	A

★ Noted:

- All Zhenkang measured data were obtained strictly according to the national standard GB/T12642 (ISO9283) test method.
- Test plan A represents the test using Leica laser tracker. The measured data were all from the test report issued by Shanghai Electrical Equipment Testing Co., Ltd. (National Robot Testing and Evaluation Center Headquarters) (Report No. ROT18-0112), for the measured data in the table, the worst value of all the results in the test report was taken. The test plan B represents the test using the Faro laser tracker. The measured data is from the Zhenkang robot test room, and the measured data is taken as the average value of the batch test.
- Because the welding robot is required to run faster as fast as possible, the repeatability of the first performance index is 60m/min according to the international test speed, and since the actual welding speed will not exceed 2m/min, other performance indicators are based on international the test speed is 2m/min.
- Import reference data are from performance specifications or public reports of international mainstream robots.

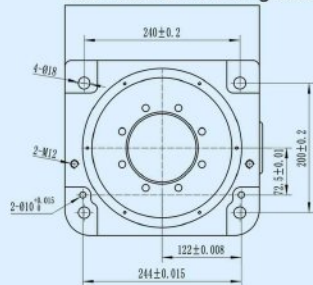
P point motion range



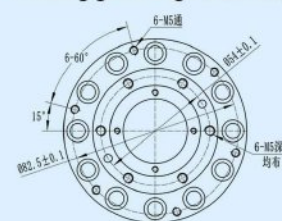
P point motion range



Robot base mounting size



Welding gun flange mounting size



2.Noise

Unit: dB

Motion position	The 1 axis	The 2 axis	The 3 axis	The 4 axis	The 5 axis	The 6 axis	6 Axes linkage
Measured value	65.6—70	61.8—66.8	58.4—66.3	62.7—67.7	61.2—69.1	58.4—62.4	62.4—68.3

★ Noted:

- The speed was 100%, the ambient noise was 54.3dB, and the ambient temperature was 15.9° C.
- Using the pulse sound level meter (HS5660B), the measured value is measured from the distance of 1 m from the measured position.

APPLICATION

Welding field

1. Suitable for a variety of arc forming



MAG Welding

TIG Welding

Laser Welding

CO2 Welding

2. Suitable for welding a variety of materials



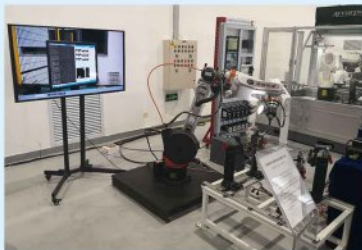
Stainless steel

Aluminum

Cast iron

Titanium alloy

Other fields (Grinding, Spraying, Handling, Palletizing)



Thanks to the Googol tech "self-learning" function, the welding robot can realize automatic visual locating - trial welding - visual acceptance of welds - automatic solution of better parameters - re-testing - so iteratively repeated until outstanding welding process parameters.



A large number of Zhenkang robots were used in the RV reducer production line (more than 100 applications before 2020), not only can the robots assemble their own bodies, but also realize the robots to participate in the manufacturing process.

QUALITY SERVICE

Positioning equipment



General type



High rigidity type

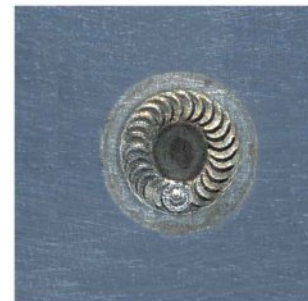
All positioners adopt a monolithic structure, and the Zhenkang RV reducer is installed to ensure the high-precision rotation of the positioner (repetition accuracy <math><1\text{ arc}</math>). Thanks to the world's leading integrated multi-axis control technology, the positioner can be connected with the robot to form an eight-axis linkage.

Welding power source



It is suitable for localized digital welding power supply to achieve low spatter welding effect. Can save labor hours such as weld grinding.

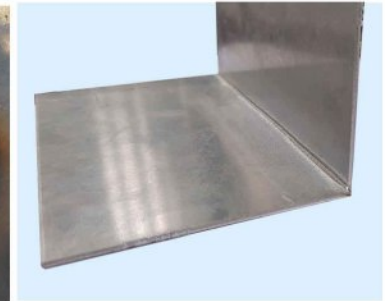
Process parameters



$\Phi 10\text{mm}$



$\Phi 20\text{mm}$



1.5mm Aluminum

Free trial welding of qualified samples, provide welding process parameters and complete solutions.

LEADING TECHNOLOGY

1. High stiffness configuration technology

The robot body with a rated load of six kilograms uses four RV reducers (50C, 40E, 20E, 10C) and two harmonic reducers (SHG20, SHG25), and all six reducers are designed with high rigidity and custom design.

2. Low noise technology

Using the world's leading input shaft refining technology, the noise of the reducer is lower than that of the imported products, thus obtaining the mute effect of the whole machine.

3. Reducer and motor integration technology

RV reducer and servo motor share the same axis, reduce assembly error, improve joint accuracy and extend working life.

4. Welding system embedded technology

The robotic welding hardware system (wire spool, wire feeder, anti-collision, welding torch, cable) and the robot body cleverly integrate the in-line design to obtain the welding effect that is unimaginable for ordinary robots.

5. Metal color technology

The first "naked" robot with cast aluminum parts, no paint, and anti-oxidation all year round, is innovative in green manufacturing.

6. Drive and control integrated technology

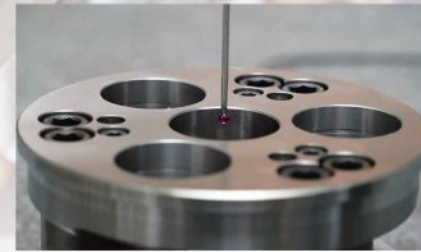
Greatly reduce the volume of control cabinet, any part of the robot can "sense the external force" and stop when touched, effectively improving the safety of the robot.

7. Perfect welding technology

Provide technical support for various complex welding processes with long-term accumulated welding experience. For example, a thin plate of stainless steel or aluminum plate with a thickness of less than 1.5 mm is welded.



1. Headquarters provide free training including basic operation, safety and maintenance.
2. One year warranty, lifetime maintenance.



Parts



Parts



Parts



Assemble



Calibration



Finished product



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