

ER Series Welding Robots

In 1993, Estun Automation was incorporated in Nanjing, the capital of six ancient dynasties. Dedicated and faithful business philosophy as well as sound market environment of the reform and opening-up make Estun Automation grow and expand step by step. Today, the company has become one of the leading enterprises in domestic high-end intelligent mechanical equipment and its core control and functional parts manufacturing industry. On March 20, 2015, Estun Automation was officially listed on Shenzhen Stock Exchange(stock abbreviation: Estun. Stock code: 002747), becoming one of mainstream listed companies of homemade robot having fully independent core technology in China.

Industrial robot is a new emerging industry in development strategy planning of Estun Automation. The company will target at promoting national industry development of China's industrial robot, give full play to the existing AC servo products of the company, control technological and cost advantage of system products, broaden the development space of down-stream industry and develop series industrial robot products and complete equipment with independent and core control technology and high cost-effective performance. Furthermore, the company is devoted to the scale and localization of industrial robot, aiming to establish an internationally known Estun industrial robot brand and a famous company in trade union through years of efforts, and also commitment to becoming the fourth production line followed by forging automatic production line, electro-hydraulic servo production line, AC servo and motion control production line, so that to gather new impetus for rapid development of the company in the next few years.

Currently, Estun Robot Company has a professional research and development team of high level, who has technological advantages keeping pace with the development of international industrial robotics technology. The company has possessed full range of industrial robot products, including Delta robot and SCARA industrial robot series, among which, specification of standard industrial robot ranges from 4kg to 450kg, which can be applied in spot welding, arc welding, transport, stacking, feeding of machine tool, polishing, spray coating and assembling, etc. Meanwhile, the company has established a strong design team for industrial robotics engineering application, who is devoted to maximizing customer value as well as providing the customer with total solution and intelligent manufacturing system of industrial robot application.

Development goal of Estun Robotics Engineering Co., Ltd. is to become a Chinese industrial robotics company with great international influence.

We are offering Accuracy & Efficiency



ESTUN welding robot series

ESTUN welding robot series	ER4 arc welding robot	ER6 arc welding robot	ER10L arc welding robot	ER10 argon-arc welding robot	ER170 spot welding robot
Model	ER4-1450	ER6-1600	ER10L-1900	ER10-1600	ER170-2605
Maximum load	4kg	6kg	10kg	10kg	170kg
Reach of arms	1450mm	1600	1900	1600	2600



ER4 arc welding robot has low load, which is an ideal product for standard arc welding operation. Flexible and high efficient with 1.45 m reach of arms.



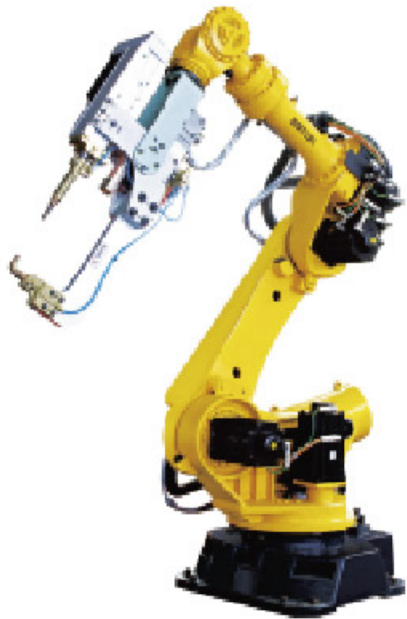
ER6 arc welding robot adopts hollow design of arms, and all pipelines use built-in structure, which will not be winded at the front end of robot and welding fixture even its wrist movements are very complicated. It also can lessen turning radius and extend service life of cables.



ER10L long arms extension arc welding robot can provide you with working radius reaching up to 1.9m.



ER10 argon-arc welding robot can realize arc welding automatic production as well as good weld appearance.



ER170-2605 six-axis articulated robot is equipped with ESTUN servo motor, servo electrode holder, pipeline package, water& gas unit and other external equipment, which can realize high speed, sensitive and accurate spot welding requirements.

ESTUN robot control system



- New type of electrical cabinet with smaller size and compact structure
- The expansion of 16-axis synchronous control is available
- Be able to provide the customization of engineering and electric integration according to application requirements.
- Adopt ergonomics design, portable and with comfortable operation
- Chinese display and friendly interface
- Display screens of different sizes are optional as needed
- Two-circuit safety switch can fully assure the operation safety for operators
- Equipped with USB interface, and support import and export of demonstration program

Arc welding process package software (ER-Arc Support)

Arc welding software package of ESTUN integrates the robot with welding source, which supports field bus and I/O communication mode. Real-time interaction of mass data between robot and welding source can be achieved. In addition to possessing basic welding functions, the software package also supports registration code activation function, with curve chart to monitor current, voltage and wire feed rate, sticky thread detection and self-removal, robot and welder interlocking function, sequence welding function, intermittent welding function, swing welding and other advanced functions. Weld interface on the teaching box can perform various welding settings, which also can provide feedback of a variety of welding parameters, through abundant exclusively used welding instructions to meet welding requirements of users.



Spot welding software application package (ER-Spot Support)

As additional axis of spot welding robot, ESTUN servo welding gun adopts full-digital AC servo system for driving, which is controlled by the robot to realize precise control of position, speed and pressure of servo welding gun. It cooperates with the robot to realize rapid and high-efficient spot welding functions. Servo welding gun software feature package has complete control instructions, for example, welding instruction Spot_Welding, gun calibration instruction CalibrationGun, specification number setting instruction Spot_Set, mold repair instruction Wear and welding gun and tools coordinate system invoking instruction, SpotTool, etc., so that to realize pressurization,

6 welding, technology selection, mold repair and compensation functions during spot welding.

ESTUN robot welding system

Estun keeps close cooperation with many world well-known welding source and support equipment manufacturers, who jointly provides welding robot of high quality to meet different welding demands and achieve multiple welding technologies.

Ancillary equipment of arc welding

1 Welding source



Aotai



Megmeet



Lincoln



EWM



Kemppi Oy



Fronius

2 Arc welding gun



Ancillary equipment of spot welding

1 Electrode holder for spot welding



Obara electromechanical



Denyo electromechanical



Shenzhen Hongbai

2 Pipeline package



Leoni



Robot System Products



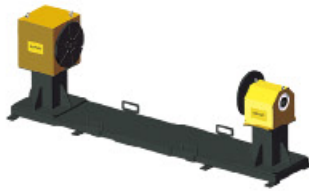
ESTUN high efficient and complete welding ancillary equipment

ESTUN servo positioner

ESTUN servo positioner can cooperate with all welding robots, which can keep stable welding speed and gesture to improve welding quality.



ESP-1D/uniaxial positioner



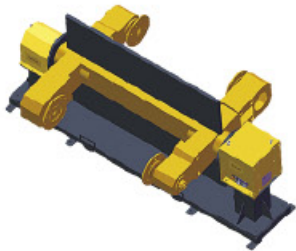
ESP-1H/uniaxial head and tail bracket positioner



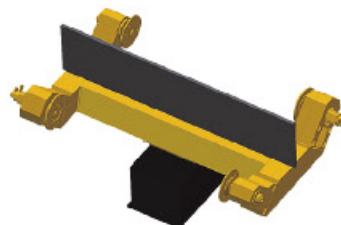
ESP-2U/U type biaxial positioner



ESP-2L/L type biaxial positioner



ESP-3W/W type triaxial vertical flip positioner



ESP-3C/C type triaxial horizontal rotary positioner

EMG external shaft motor



Model	EMG-10	EMG-15	EMG-20	EMG-30	EMG-50
rated output power (Kw)	1.0	1.5	2.0	3.0	5.0
rated torque (N.m)	4.78	7.16	9.55	14.30	23.90
rated current (Amps)	6.0	9.0	12.0	18.0	28.0
rated speed (r/min)	2000				

※ Positioner of different axis numbers and load bearing can be customized according to actual application demands of the customer

Technical parameters of ESTUN robot

Model		ER4-1450	ER6-1600	ER10L-1900	ER10-1600	ER170-2605
maximum loading (kg)		4	6	10	10	170
reach of arms (mm)		1450	1600	1900	1600	2600
repetitive positioning precision (mm)		± 0.1	± 0.08	± 0.1	± 0.1	± 0.2
protection grade		IP65	IP65	IP65	IP65	IP65
working range	axis 1	± 180°	± 180°	± 180°	± 180°	± 180°
	axis 2	-70°~ +160°	-60°~ +140°	-60°~ +140°	-60°~ +140°	-53°~ +78°
	axis 3	-200°~ +80°	-150°~ +80°	-165°~ +80°	-170°~ +80°	-193°~ +78°
	axis 4	± 170°	± 170°	± 360°	± 360°	± 360°
	axis 5	± 135°	± 180°	± 130°	-130°~ +120°	± 123°
	axis 6	± 360°	± 360°	± 360°	± 360°	± 360°
maximum speed	axis 1	155° /s	137° /s	132° /s	137° /s	79° /s
	axis 2	155° /s	101° /s	120° /s	101° /s	75° /s
	axis 3	230° /s	170° /s	132° /s	170° /s	82° /s
	axis 4	360° /s	403° /s	220° /s	320° /s	105° /s
	axis 5	430° /s	397° /s	245° /s	320° /s	102° /s
	axis 6	540° /s	476° /s	240° /s	422° /s	140° /s
weight (kg)		145	164	290	170	1375
way of installation		floor/backward installation	floor/backward installation	floor/bracket	floor/backward installation	floor/bracket

ESTUN welding system solution

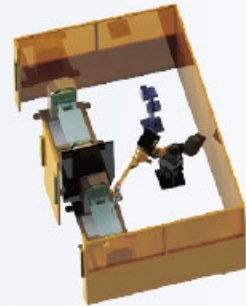
ESTUN not only provides welding unit, but also provides you with complete welding system solutions

H-type double-station welding system



Flexible loading and unloading, save space occupation of the work piece.

I-type uniaxial flip positioner welding system



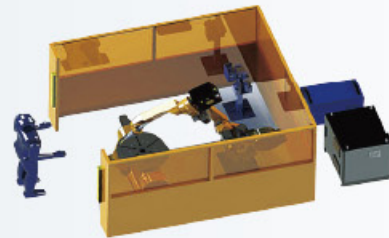
Supporting uniaxial flip positioned finishing complete welding and reducing labor intensity.

H-type uniaxial flip positioner welding system



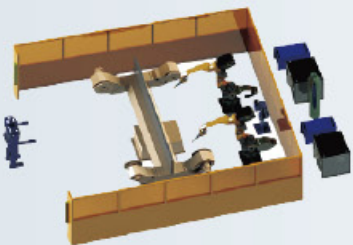
Welding work station of clamp in larger size and weight. Zero-downtime of the robot.

U-type biaxial positioner welding system



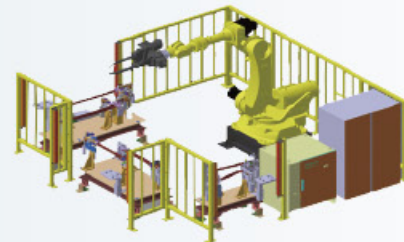
Welding robot matches with biaxial positioner to realize multi-dimensional welding.

C type triaxial horizontal rotary welding system



Welding work station of clamp in larger size and weight. Zero-downtime of the robot.

Spot welding robot system



Flexible and multiple station spot welding system. Zero-downtime of the robot

Case of ESTUN robot for general industrial purposes



- | | |
|--|---|
| ① Shopping cart for store& supermarket | ⑦ Intermediate beam of the truck |
| ② Protective screening | ⑧ Electromobile frame |
| ③ ④ Auto parts | ⑨ Dune buggy frame |
| ⑤ Ultrasonic welding for automobile bumper | ⑩ Brake pad welding of motor car |
| ⑥ Rear axle support and front axle of agricultural vehicle | ⑪ Spot welding of vehicle door's bumper bar |



Mission — We are offering Accuracy & Efficiency!

Vision — Enjoy your life from Automation!

Values — Focus, Integrity, Growing together!

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Specifications subject to change without notice.