Robot Arc Welding System

CO_2/MAG/MIG welding

carbon steel | stainless steel | galvanized plate

The Applications

Automotive parts, motorcycle parts, sports equipment, medical equipment, electric vehicle parts, daily hardware, metal furniture and school supplies industries.

Ultra-low spatter welding system

Welding Power Source Technical Parameters

Model	D350S
Rated input voltage	Three-phase AC 400V (±10%)
Rated input power	18kVA
Output current range	30A-350A
Output voltage range	12V-36V
Rated frequency	50/60Hz
Duty cycle	350A (60%@40°C)
Welding methods	CO2/MAG/MIG short-circuit welding, MAG/MIG pulse welding
Applicable materials	carbon steel, stainless steel, galvanized steel plate
Dimension	693mm×368mm×610mm
Weight	70Kg

carbon steel | stainless steel | galvanized plate

Product features

- **Ultra-low spatter**

  Precise control of the entire cycle from arc ignition to liquid bridge breaking to achieve short-circuit transition with ultra-low spatter, which is one tenth of regular digital welding power source.
- **Contact retraction arc starting**

  New contact retraction arc starting reduces arc starting spatter and improves the success rate of arc starting.
- **Suitable for multiple materials**

  With a rich built-in database of welding experts, it can achieve pulse and short-circuit welding of materials such as carbon steel, stainless steel, galvanized sheet, aluminum alloy, etc., especially suitable for the fields of furniture, fitness equipment, electric vehicles, and other thin plates.
- **Simple and convenient operation**

  The use of synergic regulation, simple operation, and free adjustment of arc shape adapt to different welding requirements.
- **Arc length constant control**

  Full digital high-speed inverter control, quickly adjusts the arc and voltage to achieve stable welding in a wide range of arc voltages.
- **Digital communication**

  Digital communication with robots using Ethernet digital communication.

Standard Configuration for Robot Arc Welding System

Robot	KR1440/KR2010
Welding torch with anti-collision	TC1440H/TC2010H(Built-in anti-collision feature)
Welding power source	D350S (Ultra-low spatter)
Wire feeder	WR-FE120Z-1440/WR-FE120Z-2010 (Encoder-based, dual-drive printing motor)
Accessories	Control cable, wire feeding tube, and wire feeding rack

The Applications

Engineering machinery, transportation, agricultural machinery, mining machinery and other industries

Thick plate robot welding system

Welding Power Source Technical Parameters

Model	D500S
Rated input voltage	Three-phase 400VAC (±10%)
Rated input power	26kVA
Output current range	30A-500A
Output voltage range	12V-45V
Duty cycle	500A (80%@40°C)
Rated frequency	50/60Hz
Welding methods	CO2/MAG/MIG short-circuit welding, pulse welding
Applicable materials	carbon steel, stainless steel, galvanized plate
Dimension	693mm×368mm×610mm
Weight	70Kg

Product features

- **Built-in rich welding expert database**

  Pulse and short circuit welding of carbon steel, stainless steel, galvanized plate, aluminum alloy and other materials
- **Adapt to the characteristics of the thick plate industry**

  Arc stiffness is high and the follow-up is good, suitable for various posi tions welding
- **Easy operation**

  Using synergic regulation, the operation is simple and the arc shape can be freely adjusted to accommodate different welding requirements.
- **Multiple sensors**

  Optionally with contact sensor, arc tracking, laser tracking and other sensor technology.

Standard Configuration for Robot Arc Welding System

Robot	KR1440/KR2010
Air-cooled/water-cooled welding torch	Robot-specific welding torch 300R
Welding power source	D500S (Ultra-low spatter)
Wire feeder	Customized (With encoder, dual-drive, feader roller)
Accessories	Control cable, wire feeding tube and wire feeding rack
Water Tank	Optional
Contact sensor	Optional
Arc tracking	Optional

Robot Servo Welding System

CO_2/MAG/MIG welding

carbon steel | stainless steel | aluminum alloy | galvanized plate

Robot servo arc welding system

The Applications

Automotive parts, motorcycle parts, sports equipment, medical equipment, electric vehicles and tricycles parts, household hardware,metal furniture, and tools and manufacturing industries.

Product features

Almost zero spatter
Compared with traditional short-circuit transition, the amount of spatter can be reduced by 99%.

Fast arc starting and crater
Pull-back arc starting without spatter, speed increased twice.

Low heat input
The servo arc welding process has a low heat input when welding aluminum alloy, which is 90% lower than TIG welding.

Arc length adaptive control
The arc length is not affected by the condition of the workpiece surface and the welding speed, and the arc adaptability is super strong with changes in the extension.

Low dilution rate of surfacing layer
The iron percentage at the 2.5mm thickness of the surfacing layer after processing is controlled below 5%,which can ensure the corrosion performance of the surfacing layer.

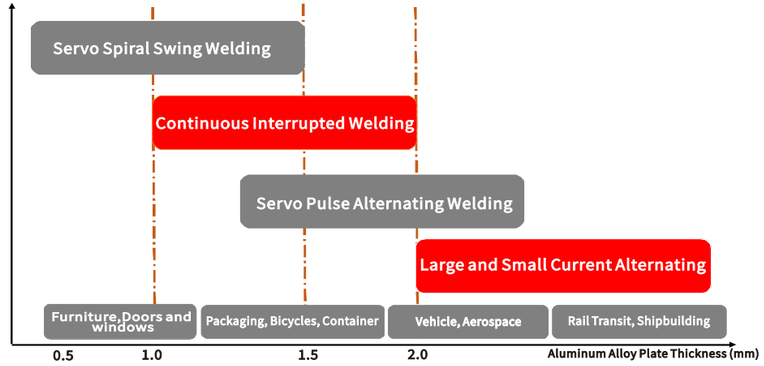
Smaller deformation
The lower heat input can reduce deformation of thin plates in a greater extent.

Strong gap bridging ability
2mm board with 2mm gap can be easily welded.

Faster welding speed
The welding short-circuit frequency can reach between 125Hz and 150Hz depending on the welding application, with a welding speed of 1 m /min for 2mm thick workpiece, or a welding speed of 2 m /min for 0.8mm thick workpiece.

Adapt to various materials
Used for carbon steel, stainless steel, aluminum alloy, and dissimilar material welding.

Related Plate Thickness and Application Industry



Configuration of Robot Servo Arc Welding System (adapt to various robotics brand)

Robot welding standard configuration

Robot	Multi-brand(Hollow shaft)
Servo welding torch	KSTC-1440/KSTC-2010, can be customized (Adopt servo motor and magnetic force collision protector)
Welding power source	X350SW(Special servo welding power source)
Wire feeder	WAT-300(V2)
Welding accessories	Control cable, wire feeder sleeve, wire feeder rack, Cooling water tank, control cable, wire feeder sleeve, Wire feeder rack, welding cable, gas tube.

Robot-Specific Welding Power Source Technical Parameters

Model	X350SW
Rated voltage, frequency	Three-phase, 380VAC 50Hz
Allowable working range	Voltage:320V~450V;Frequency:40~60Hz
Rated no-load voltage	80V
Output current, voltage	350A/31.5V
Duty cycle	350A (100%@40°C)
Output voltage range	12~45V
Output current range	30A~350A
Dimension	647mm×296mm×572mm
Weight	70kg