



智 焊 科 技
ZHIHANKEJI



Digital Intelligent Electric Welder



Company Profile

Baoji Zhihan Mechanical Technology CO.,Ltd is a high-tech technology company, integrating R&D, production, sale and service, lies in Baoji High-Tech Science and Technology Park. Our company has high ability of research and development, already won a number of invention patents and patents for utility design. Besides, we own the independent intellectual property rights of core technology. It passes the certification of ISO9001:2008 international quality system and the certification of CE.

Under the supports of government and the help of welding laboratory of Tsinghua University, our company developed a series of high-tech technologies, including welding power source, digital intelligent electric welding machine, digital intelligent welding control way of single drop current transfer equilibrium, application of auxiliary ultra wide large power supply, international and domestic general use adaptive power supply with super large power etc. we'll spare no effort to supply advanced technology, high quality products and services to the industries of welding, military equipment, shipbuilding and flow operation.



About Zhihan

Baoji Zhihan Mechanical Technology Co., Ltd has the high international technology and invention patents, committed to the digital intelligent electric welder, which also has a strong international competitiveness. The welding machines in our company are based on the design philosophy of “single multi-mode” and “single multi-purpose”, covered with different areas of welding materials. The implementation of this philosophy with no need to replace the machine for different functions, but only need to buy the upgraded software, so as to meet the requirement of users in different welding materials. Our company devoted to make our customers get maximum return with minimal investment and shortest time. According to the concept of high energy saving, it can save 50%--70% more energy than traditional welding machine. With the advantage of perfect welding performance, less slag and small slash. It is widely used in aerospace, nuclear power, shipbuilding, bridge building, deep-water welding, pressure vessel and petroleum pipeline and other high-end areas. Our after-sales service commitment is: guaranteed for two years (except man-made damage), life-long service. At the same time, we will provide you with free system update and maintenance.

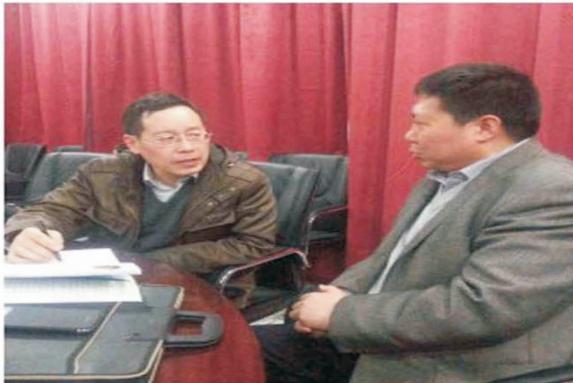
Social Influence



TV Interview



Technical Seminar



Technical Discussion with Prof. Zhang



The Meeting with Science and Technology Department

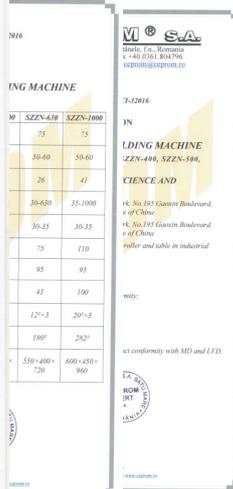


The Patents and New Inventions are Reported by Local Newspaper



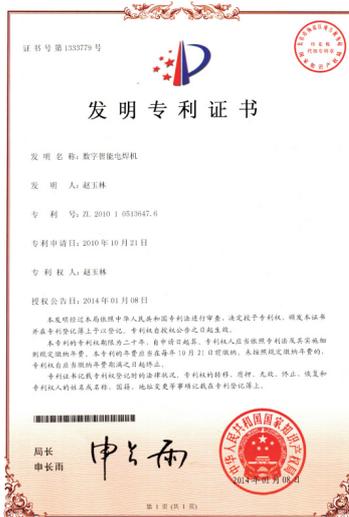
Our New Product is Used in the Workshop

Qualifications



CE International Certification

ISO90001



Invention Patents

Digital Intelligent Welder

Adopting computer control technology with the software as the core, possess human imitating thinking software control system with self-analysis, self-judgment, self-control, and self-input, which is called “fool welder”, just like a fool type camera, easy to use. This welder has good welding technology, especially in the fields of refractory metal and rare metal.

Digital Intelligent Welder follows the development of industrial age 4.0 and the tendency of “Made in China” with forward looking and leading features, plays an important role in improving inner quality and life-long usage of industrial manufacture, even conventional welder cannot reach this level. Providing a solid underpinning for the high-end equipment, military manufacture and 3D print technology.



The Advantages of Digital Intelligent DC Welder

Number	Digital Intelligent DC Welder	Traditional Welder
1	Multi-mode self-control	Single conditional fixed mode control
2	Excitation protection control	Do not possess
3	Single drop current transfer equilibrium control	Constant current and constant pressure control
4	Digital electronic reactor	Routine reactor
5	Short circuit current can be arbitrarily controlled to a minimum	Only can be controlled to about 100A
6	Can be adjusted with the change of environmental conditions	Do not reach that level
7	Can be adjusted according to the action of workers	Do not possess
8	Intelligent self-analysis in welding process	Do not possess
9	Less splash	More splash
10	High welding density (8 times more than traditional machine)	Low welding density
11	Energy saving (saving 70% power)	Do not possess
12	Low electronic interference	Strong grid interference
13	Input thermal intelligent control	Do not possess
14	Intelligent anti-slag control	Do not possess

Digital Intelligent Cellulose Specific Welder

Product Features



- ★ High speed CPU digital intelligent control, auto-adjusting optimum output;
- ★ Excellent follow performance of arc, high-speed reaction rate;
- ★ Built-in software control system with human imitating thinking, automatically match the welding parameters in different conditions according to material, solder wire, gas, function;
- ★ Environmental protection, energy saving, small in size and light in weight;
- ★ Upgradeable welding software in different metallic materials.

Welding Effect



cellulose electrode vertical down fillet welding effect



cellulose electrode vertical down welding effect

- ◇ Convenient arc striking method, reliable welding process.
- ◇ Smooth welding process with complete vertical down welding method, the efficiency is 3 times higher than traditional one.

The Difference with Conventional Power Source

The biggest difference with conventional power source is installing software according to different requirements, and expanding application fields and functions of hardware by upgrading software, to achieve a single multi-mode way of working.

Digital Intelligent DC Arc Welder

Product Features



- ★ High speed CPU digital intelligent control, auto -adjusting optimum output;
- ★ Excellent follow performance of arc, high-speed reaction rate;
- ★ Built-in software control system with human imitating thinking, automatically match the welding parameters in different conditions according to material, solder wire, gas, function;
- ★ Environmental protection ,energy saving ,small in size ,light in weight;
- ★ Upgradeable welding software in different metallic materials.

A free software update will be provided

Technical Parameters

Parameters	Models	SZZN -NP400	SZZN -NP500	SZZN -NP630	Remarks
Control mode		CPU digital intelligent control	CPU digital intelligent control	CPU digital intelligent control	
Rated input voltage (V)		380	380	380	
No -load voltage (V)		70	70	70	
Welding output current (A)		25 -400	25 -500	30 -630	1. Available for all kinds of acid and alkaline welding rod , and cellulose - based electrode vertical down welding. 2. Suitable for welding all kinds of low, medium and high carbon steel, low alloy steel and stainless steel.
Power frequency (Hz)		50 -60	50 -60	50 -60	
Welding output voltage (V)		25 -35	25 -35	25 -35	
Fuse capacity (A)		25	36	43	
Duty cycle (%)		60	60	60	
Rated input capacity (KW)		16.5	22.4	26	
Insulation class		F	F	F	
Cooling style		Wind-cooling	Wind-cooling	Wind-cooling	
Input cable (mm)		4 ² × 3	6 ² × 3	12 ² × 3	
Output cable (mm)		120 ²	150 ²	180 ²	
Weight (KG)		55	55	75	
Overall dimensions (mm)		550 × 400 × 720	550 × 400 × 720	550 × 400 × 720	

SZZN-NP215 Digital Intelligent DC Arc Welder

The Implementation of Electrical Source Power

The implementation of electrical source power adopted advanced aerotechnics, making the volume of welding transformer and power loss 100-200 times smaller than conventional welding transformer. To achieve the target of small in size, light in weight, high in power, less in material consumption, and high energy-saving.

Product Features



- ★ High speed CPU digital intelligent control, auto-adjusting optimum output;
- ★ Excellent follow performance of arc, high-speed reaction rate;
- ★ Built-in software control system with human imitating thinking, automatically match the welding parameters in different conditions according to material, solder wire, gas, function;
- ★ Environmental protection, energy saving, small in size and light in weight;
- ★ Upgradeable welding software in different metallic materials ;
- ★ Available for light gauge welding and special metallic materials welding;
- ★ Unique input method of plate thickness (more details are in the specification)

A free software update will be provided

Welding Effect



Butt welding effect of 0.5mm plate

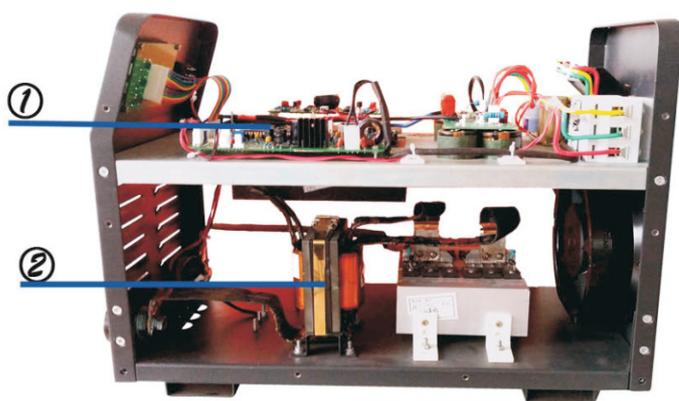
- ★ Minimum operational current can be steadily reached to 10A;
- ★ The best choice of light gauge welding;
- ★ Available for not only thin plate welding, but also thick plate welding.

Manual arc welding can solve the problem of light gauge welding

SZZN-NP215 Digital Intelligent DC Arc Welder

Inner Structure

Totally-enclosed Structure of Mainboard



1. Control area---adopting totally-enclosed structure, resistance of dust, EMI and moisture.
2. Separated heat dissipation channel can improve the tolerance of environment temperature, and prolong the service life of the whole machine.

Technical Parameters

Parameters	TYPE/SZZN-NP 215	Remarks
Control mode	CPU digital intelligent control	
Rated input voltage (V)	380	
No-load voltage (V)	70	
Welding output current (A)	20-215	1. Available for all kinds of acid and alkaline welding rod, and cellulose-based electrode vertical down welding.
Power frequency (Hz)	50-60	
Welding output voltage (V)	17-30	2. Suitable for welding all kinds of low, medium and high carbon steel, low alloy steel and stainless steel.
Fuse capacity (A)	16	
Duty cycle (%)	60	
Rated input capacity (KW)	7.5	
Insulation class	F	
Cooling style	Wind-cooling	
Input cable (mm)	4 ² × 3	
Output cable (mm)	70 ² - 75 ²	
Weight (KG)	13	
Overall dimensions (mm)	490 × 240 × 340	

SZZN-NP315-S Digital Intelligent DC Arc Welder

The Technology of Intelligent Welder

Change the conventional technology of electronic circuit design, adopt a new thinking, and apply intelligent analysis control of computer. Add the digital intelligent thinking control in the process of welding, and use the method --- “hybrid control of constant current, constant power, constant voltage” to control the welding output of welder in different conditions. That is a new technology of conventional current voltage.

Product Features



- ✧ High speed CPU digital intelligent control, auto- adjusting optimum output ;
- ✧ Excellent follow performance of arc, high -speed reaction rate;
- ✧ Built-in software control system with human imitating thinking, automatically match the welding parameters in different conditions according to material, solder wire, gas, function;
- ✧ Environmental protection , energy saving , small in size, light in weight;
- ✧ Upgradeable welding software in different metallic materials .

A free software update will be provided

Welding Effect

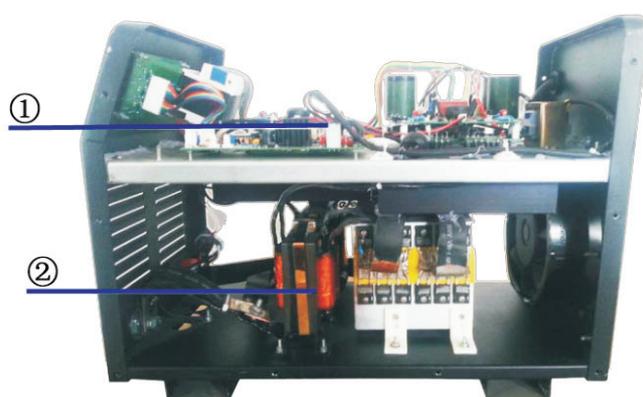


Vertical Welding Effect

- Good welding performance , less slag, no blowhole;
- Deep weld penetration, small heat influence area.

SZZN-NP315-S Digital Intelligent DC Arc Welder

Inner Structure



1. Reasonable design, half-size, more convenient.
2. Separated heat dissipation channel can improve the tolerance of environment temperature.

Technical Parameters

Parameters	TYPE/SZZN-NP315-S	Remarks
Control mode	CPU digital intelligent control	
Rated input voltage (V)	380	
No-load voltage (V)	70	
Welding output current (A)	25-315	1.Available for all kinds of acid and alkaline welding rod, and cellulose based electrode vertical down-welding.
Power frequency (Hz)	50-60	
Welding output voltage (V)	17-35	
Fuse capacity (A)	16	
Duty cycle (%)	60	2.Suitable for welding all kinds of low, medium and high carbon steel, low alloy steel and stainless steel.
Rated input capacity (KW)	11.8	
Insulation class	F	
Cooling style	Wind-cooling	
Input cable (mm)	4 ² × 3	
Output cable (mm)	90 ² -95 ²	
Weight (KG)	13	
Overall dimensions (mm)	490 × 240 × 340	

SZZN-NP315-B Digital Intelligent DC Arc Welder

Digital intelligent welder is widely used in military equipment, shipbuilding, high buildings, bridges, and other large constructs. Operating in the poor conditions of dust, high temperature, moisture, and salt fog corrosion. Designed for long-time and high-power working.

Product Features



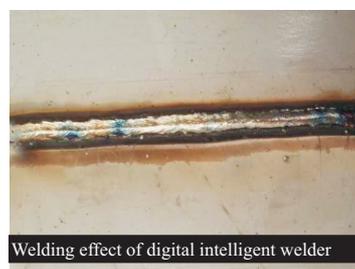
- ★ High speed CPU digital intelligent control, auto-adjusting optimum output;
- ★ Excellent follow performance of arc, high-speed reaction rate;
- ★ Built-in software control system with human imitating thinking, automatically match the welding parameters in different conditions according to material, solder wire, gas, function;
- ★ Having robot digital interface, the ideal power supply for automatic welding;
- ★ Upgradeable welding software in different metallic materials.

A free software update will be provided

Welding Effect

Comparison of welding effect of stainless steel plate

- Anti-adhesion , anti-slag
- Perfect appearance of welding
- Saving 70% power



SZZN-NP315-B Digital Intelligent DC Arc Welder

Inner Structure

New Model of 3-tier & 4-cavity



1. High integrated monolithic plate, CPU control (upgradeable software with different welding materials).
2. Separated air duct, high-power fan.
3. 3-tier & 4-cavity structure, resistance of dust and EMI, can prolong service life of the whole machine.

Technical Parameters

Parameters	TYPE/SZZN-NP315-B	Remarks
Control mode	CPU digital intelligent control	
Rated input voltage (V)	380	
No-load voltage (V)	70	
Welding output current (A)	25-315	1.Available for all kinds of acid and alkaline welding rod, and cellulose-based electrode vertical down welding. 2.Suitable for welding all kinds of low, medium and high carbon steel, low alloy steel and stainless steel.
Power frequency (Hz)	50-60	
Welding output voltage (V)	17-35	
Fuse capacity (A)	16	
Duty cycle (%)	60	
Rated input capacity (KW)	11.8	
Insulation class	F	
Cooling style	Wind-cooling	
Input cable (mm)	4 ² × 3	
Output cable (mm)	90 ² -95 ²	
Weight (KG)	55	
Overall dimensions (mm)	550 × 400 × 720	

Plasma Cutting Series

Product Features



- ★ Adopting advanced technological computer control system, with steady output welding current;
- ★ Adjustable and continuous cutting current from 20A to the maximum output current, available for the requirement of different welding materials, thicknesses and different cutting speed, and with beautiful and smooth cutting surface;
- ★ Adopting non-contact and high-frequency arc initiation method, poses less interference to the nearby electronic equipment;
- ★ Applicable to carbon steel, stainless steel, galvanized steel, cooper, aluminum etc;
- ★ Available for 380V with 3-phase, adaptable supply voltage, can be varied from the range of $\pm 1.5\%$;
- ★ Built-in power supply under-voltage protection, overheat protection and compressed air system;
- ★ Having the function of insufficient air pressure protection, with high operating reliability.

Technical Parameters

Parameters	Models				
	SZZN-LGK60	SZZN-LGK80	SZZN-LGK100	SZZN-LGK120	SZZN-LGK160
Supply voltage (V)	380	380	380	380	380
Rated input current (A)	8-20	23-32	17-22	20-26	17-35
Rated input voltage range (V)	340-430	340-430	340-430	340-430	340-430
Arc welding voltage (V)	8-17	8-17	8-17	8-17	8-17
Cutting thickness (mm)	20	25	30	35	42
Duty cycle (%)	85	85	85	85	85
Efficiency (%)	95	95	95	95	95
Power factor	0.95	0.95	0.95	0.95	0.95
Weight (kg)	11	11	11	11	11
Overall dimensions (mm)	400×180×290	400×180×290	400×180×290	400×180×290	400×180×290

Digital Intelligent Argon Arc Welding Series

Product Features



- ★ Advanced digital intelligent control mode, advanced IGBT technology;
- ★ Good product consistency, stable performance;
- ★ Practical welding process management function;
- ★ High quality manual welding can be realized;
- ★ High requirements of argon arc welding can be realized;
- ★ Support various remote control modes;
- ★ Support automatic welding network;
- ★ Available to a wide range of power supply voltage;
- ★ Applicable to carbon steel, stainless steel, alloy steel, copper, titanium and etc.

Technical Parameters

Parameters	Models	SZZN-WSM160	SZZN-WSM250	SZZN-WSM320
Supply voltage (V)		220	220	380
Rated input current (A)		8-20	20-30	22-26
Rated load voltage (V)		180-250	180-250	340-440
Arc voltage (V)		8-15	8-15	8-15
Duty cycle (%)		85	85	85
Efficiency (%)		95	95	95
Power factor		0.95	0.95	0.95
Weight (kg)		11	11	11
Overall dimensions (mm)		400×180×290	400×180×290	400×180×290

Global Adaptive Power Supply Series

Product Features



- ★ High speed CPU digital intelligent control, auto-adjusting optimum output ;
- ★ Excellent follow performance of arc, high-speed reaction rate
- ★ Built-in software control system with human imitating thinking, automatically match the welding parameters in different conditions according to material, solder wire, gas, function
- ★ Super wide power grid voltage design, complete protection function, the preparation function of digital display parameter
- ★ The welding heat input does not change with the power network voltage, constant heat input of arc welding;
- ★ Environmental protection, energy saving, small in size, light in weight;
- ★ Upgradeable welding software in different metallic materials.

Technical Parameters

Parameters	Models				Remarks
	SZZN-PSAQ320	SZZN-PSA400	SZZN-PSA500	SZZN-PSA630	
Rated power					
supply voltage (V)	220	380	380	380	
Rated input current (A)	20-30	16-20	36	78	
Input voltage range (V)	110-220	110-465	110-465	110-465	
Rated welding voltage (V)	18-28	18-35	18-40	18-44	
Output no-load voltage (V)	75	75	75	75	
Duty cycle(%)	85	85	85	85	
Efficiency (%)	95	95	95	95	
Power factor	0.95	0.95	0.95	0.95	
Weight (kg)	11	13	13	55	
Overall dimensions (mm)	400×180×290	490×240×340	490×240×340	520×320×490	

1. Available for all kinds of acid and alkaline welding rod, and cellulose-based electrode vertical down welding.
2. Suitable for welding all kinds of low, medium and high carbon steel, low alloy steel and stainless steel.

Digital Intelligent Manual Arc & Gas-Shield Welder

Product Features



- ★ High speed CPU digital intelligent control, auto -adjusting optimum output;
- ★ Excellent follow performance of arc, high-speed reaction rate;
- ★ Good performance of low current, especially suitable for welding thin plate and all-position;
- ★ Advanced and steady wire feed circuit;
- ★ Extra margin of welding power , cable extension to 50m, suitable for most materials;
- ★ The welding heat input does not change with the power network voltage, constant heat input of arc welding.

Technical Parameters

Parameters	Models		
	SZZN -MIG 350	SZZN -MIG 500	SZZN -MIG 630
Supply voltage (V)	380	380	380
Rated input current (A)	31	50	78
Input voltage range (V)	340-440	340-440	340-440
Arc voltage (V)	17-28	17-30	17-44
Duty cycle (%)	85	85	85
Efficiency (%)	95	95	95
Power factor	0.95	0.95	0.95
Weight (kg)	11	11	11
Overall dimensions (mm)	400 × 180 × 290	400 × 180 × 290	400 × 180 × 290

Digital Intelligent Wire Feeder

Product Features



- ★ CPU digital intelligent control;
- ★ Using digital intelligent motor, operating speed 3 times faster than conventional motor;
- ★ Coding accuracy increased by 8 times, more perceive of wire feeding control;
- ★ Adopt new wire feeding drive, the stability of wire feeding improved in external factors.

Technical Parameters

Wire Feeder Device	Drive Mode	Wire Diameter (mm)	Wire Shaft
	4 Drive	0.8/1.6	With Brake
Welding Torch	Rated Current (A)	Cable Length	Wire Diameter (mm)
	500A	3m	0.8/1.2

The Difference of Usage

Digital intelligent welder has broken the traditional operating mode, simple to operate and easy to learn. Apply the constant heat mode to ensure welding quality. Adopt unique input method of plate thickness, digital circuit control, and different welding methods of thick and super-thin plate, which reduces the requirements of operating skill. Eliminate the annealing phenomenon of sharp increasing point-temperature, and decrease the welding noise. Achieve the target of standby mode, good quality, effort-saving, time-saving, efficiency and environment.

Combination Model

Basic Configuration = Mainframe + Main Control System

Free Configuration = Mainframe + Different Control System + Auxiliary System

Digital intelligent welder includes horizontal type and vertical type

Full-auto intelligent welding=

(big size)



welding power supply



wire feeder



manipulator

Semi-auto intelligent welding=



welding power supply



wire feeder



Ful -auto intelligent welding=

(small size)



welding power supply



wire feeder



manipulator

Semi-auto intelligent welding=



welding power supply



wire feeder

Special Custom

We can provide you rationalized configuration according to your requirements and spare no effort to help you solve the problem. We sincerely appreciate for your suggestions and new ideas.

Single Multi-purpose & Single Multi-function

Single Multi-purpose

Digital intelligent welder adopts single-chip digital circuits, and software controls. Without changing hardware device, manual arc welding, gas-shielded welding, argon arc welding and plasma cutting can be realized.



Single Multi-function

Applicable to carbon steel, stainless steel, alloy steel, cast iron and other materials without changing technical welders. Just select corresponding welding program in the function menu.

Function Key

0001: Carbon Steel

0002: Stainless Steel

0003: Alloy Steel

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Different Ways of Welding, flush welding, butt welding, fillet welding, overhead welding. Just select corresponding welding program in the function menu.

Function Key

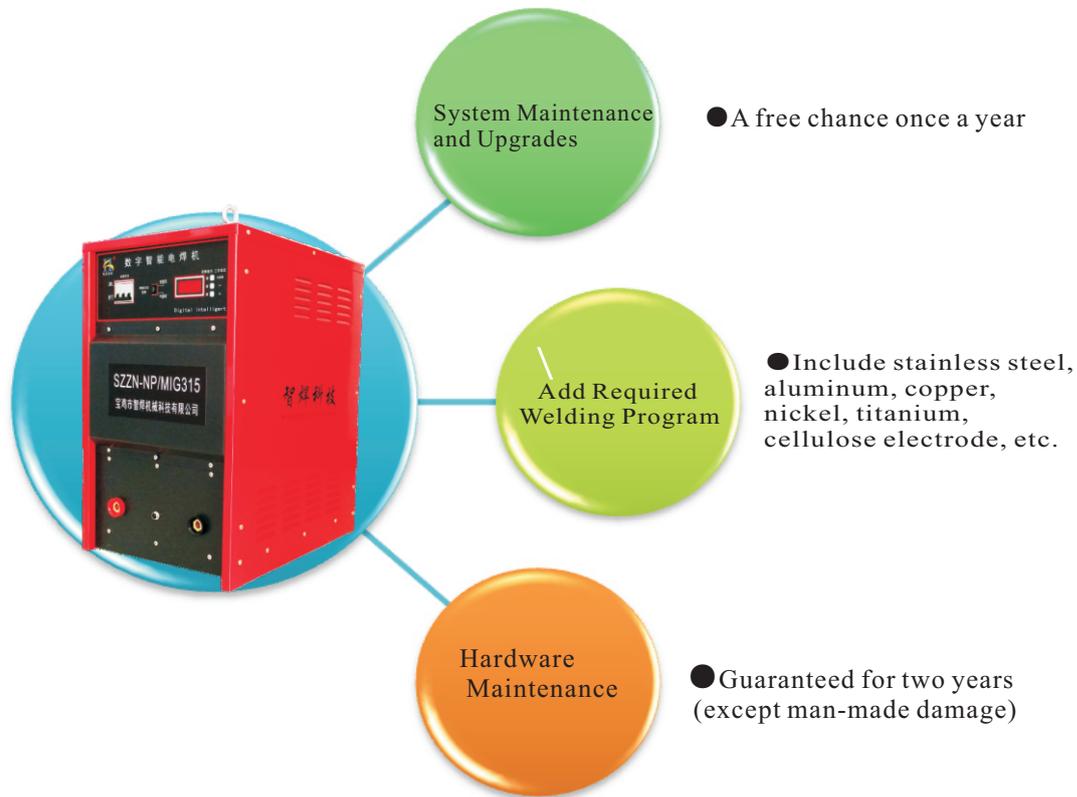
0010: Butt Welding

0011: Fillet Welding

0012: Overhead Welding

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Service Commitment



We Will Provide What You Want

We will provide life-long service for our customer, offer solution and help for the technical problems. Scanning QR code, you can get training from video teaching. Meanwhile, we will provide you different software to meet your demands.

Digital Intelligent Electric Welder

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