



CATALOGUE

COMPLETE SOLUTIONS FOR
WELDING & CUTTING



WE

DELIVER

VISION

INVESTING IN RESEARCH
AND DEVELOPMENT FOR
INNOVATIONS

CUSTOMER

SMART

STABLE

QUALITY

BY FOCUSING ON THE DEVELOPMENT,
SKILLS, MORALE AND WELLBEING
OF OUR PEOPLE, AOTAI DRIVES THE
GROWTH, PROFITABILITY,
COMPETITIVENESS AND LONG-TERM
SUCCESS OF OUR CLIENTS

QUICK RESPONSE
ON-TIME DELIVERY
PROFESSIONAL SOLUTIONS...

SHOWING APPRECIATION
FOR EMPLOYEES

AOTAI SERVICE TEAM
IS ALWAYS HERE FOR YOU

ON-LINE SUPPORT OR
ON-SITE TROUBLE
SHOOTING

LONG-TERM
CUSTOMER
RELATIONSHIPS

MISSION

TO BE THE HIGHEST
QUALITY AND
MOST INNOVATIVE
PROVIDER OF
WELDING AND
CUTTING EQUIPMENTS

POWERFUL ARC

VALUES

OUR TEAM MAKES US STAND OUT
EXPERIENCE, KNOWLEDGE
CREATIVITY AND DEDICATION
RESEARCHING AND MANUFACTURING
INVERTER ARC WELDER
AND PLASMA CUTTER FOR OVER
30 YEARS

CUSTOMER-CENTRIC
SYSTEM SOLUTIONS

SERVICE

INTRODUCTION

Aotai Electric Co., LTD is a leading manufacturer of welding and cutting equipments in China. Aotai offers nearly 100 welding machine models in 13 series. Its line of welding machine products includes Inverter MMA, Inverter TIG, Inverter MIG, Inverter SAW, Water Cooling Machine, Inverter Air Plasma Cutter as well as a variety of accessories. Uncompromising in its high standards, Aotai is making every effort to provide its customers with highly functional and adaptable products that are easy to install and maintain. Despite the white hot competitions in Chinese market, Aotai's inverter welding machine series have remained the best selling welding machine since 2005.

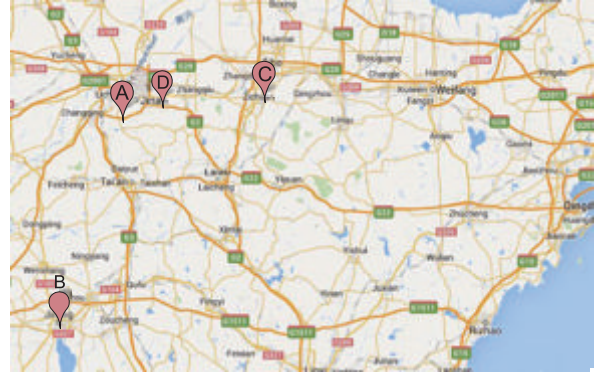
Aotai was founded by several professors and their graduate students from Shandong University in 1993. Since it was founded, Aotai is dedicated to pursue innovative technologies that bring breakthrough in its field. In 2002 it was named one of the National Torch Plan Hi-Tech Enterprise, which is an award for hi-tech companies with excellence in R&D achievements. Aotai also received a National Science and Technology Advancement silver award in 2004. Aotai has a team of passionate and experienced R&D engineers. Most of them possess advanced degrees and rich experiences. The managements are also specialists and experts with an average of over 30 years experience. These individuals are the ones who developed the core intellectual property of the company. This is the technical foundation of the expertise that makes Aotai a national leader. To meet the growing demands of Chinese market, Aotai built 28,000 square feet manufacturing facilities in 1999 and a 1,700,000 square feet factory in 2005. In 2006, Aotai also built a 50,000 square feet office building to accommodate the growing R&D activities. In 2013, the third 1,000,000 square feet manufacturing facilities was set up. These extensions have greatly boosted the production capability to over 200,000 units a year.

With successes in domestic market, Aotai started to explore the global market opportunities in 2006. Since Global Sales Division was founded, over fifty thousands units have already been shipped to over 128 countries and areas. In order to provide fast on site technical service and quick delivery for our global distributors, Aotai plan to set up service centers and warehouses globally. In 2015, Aotai India and Aotai Russia were founded. We are continuing this effort to boost global sales, and we welcome all interested parties around the world to contact us for our product information and collaboration opportunities.



OUR FACILITIES

- A-Headquarter: 2006, Jinan (50, 000 square feet)
- B- Factory I: 1999, Jining (28, 000 square feet)
- C- Factory II: 2005, Zichuan (1, 700, 000 square feet)
- D- Factory III: 2013, Jinan (1, 000, 000 square feet)



AOTAI Production Capacity

 **2,778,000**
Square feet workshop



322 Patents



572 R&D
staffs



4 R&D centers



50% Fully automated
production flowline



200,000 Units
Welding machines
production capacity

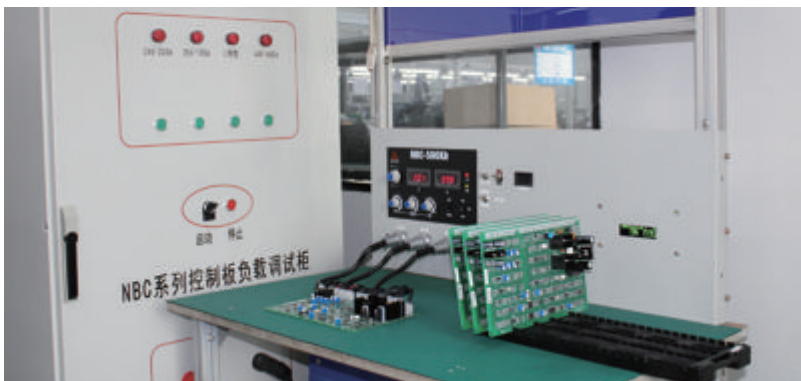


3 Manufacture facilities



38 Modern
production lines

DESIGN /TEST /MANUFACTURE /INSPECTION /PROCESS



EXTENSIVE AFTER-SALE SERVICE

Besides the high quality machines, we also offer you professional after-sale service. These service programs include:

1. Life time technical support. Our experienced customer support team will help you solve technical problems. We guarantee to respond to your inquiry within 24 hours, whether it comes from phone, mail or fax.
2. We provide detail English operation manual and maintenance manual for each model of equipment. These manuals include lots of pictures to show the detail procedures for trouble shooting and spare parts replacement. Operating DVD will be provided upon request. All documents and spare parts are carefully designed and easy for user to follow.
3. We provide comprehensive training for our international distributors and clients. The training is held twice per year.
4. We provide life time spare parts mail service to our international clients.



SPECIALLY DESIGNED FOR HARSH



100+ tests

Basic testing	Basic function testing	<ul style="list-style-type: none"> Control power source Faults reminds PWM Static characteristic Current static ripple Voltage static ripple Current dynamic ripple Voltage dynamic ripple Static/dynamic load testing Surge current Input current Rate of current rise Power factor Efficiency Energy saving Noise
	Human-machine interface testing	<ul style="list-style-type: none"> Button Rotary knob Switch for function Presentation Normal parameters Sub-menu parameters Logical function Power on testing Combined buttons Fault code Installation of automation equipment and auxiliary tools
	Communication function testing	<ul style="list-style-type: none"> Wire feeding Gas feeding Start and stop of wire feeder Arc striking success signal Wire sticking feedback signal Arc breaking signal Contact sensing enabling Start end detecting feedback signal Remote control of analog/digital interface Program recalling
	Unconventional testing	<ul style="list-style-type: none"> Phase loss Fault of control cable Locked rotor/short-circuiting for motor Solenoid valve short-circuiting Water path blocking
Safety testing	Electrical testing	<ul style="list-style-type: none"> Electric clearance/creepage distance Isolation resistance Dielectric strength Thermal performance testing Short-circuit testing Locked rotor testing for fan Overload testing Open-circuit temperature rising testing Soft-switch testing Capacitor Automatic discharge of input capacitor Inner conductor and its connection
	Mechanical testing	<ul style="list-style-type: none"> Machine case protection Cable fixing device Elevating device Rated tilting Shock resisting Protection against mechanical hazards
EMC testing	EMI	<ul style="list-style-type: none"> Radiated disturbance Conducted disturbance Harmonic current emission Voltage fluctuations and flicker
	EMS	<ul style="list-style-type: none"> Radiated immunity ESD immunity EFT/B Immunity Immunity to conducted disturbances, introduced by radio-frequency fields Voltage dips, short interruptions and voltage variation immunity testing Surge immunity testing
Consistency and reliability testing	Environment stress testing of whole machine	<ul style="list-style-type: none"> Package vibration testing Package drop testing Product vibration testing Product drop testing Tensile testing Over-pressure Under-pressure High temperature Low temperature Constant temperature and humidity Condensation Anti-dust Conductive dust Exposing to the rain Salt spray HF interference
	Acceptance testing for stability of the whole machine	<ul style="list-style-type: none"> Appearance and process inspection Static durability testing Power grid simulation testing Arc starting impact Life-span of HF parts Welding aging Parameters consistency
	Reinforced testing for stability of the whole machine	<ul style="list-style-type: none"> Hot and cold impact testing Temperature stepping Voltage stepping Vibration stepping Rain testing at high temperature Temperature cycling Compound stress
Welding performance testing		
Actual using environment testing for users		<ul style="list-style-type: none"> Pressure standing testing Drag testing for interfaces Natural raining Blazing solar radiation Pipeline in muddy environment Testing for water replacing coolant



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SMAW



SMAW SUMMARY

Special Industrial Application



ARC400II /DuraARC200II
For Cellulose Electrode
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ARC400-3T /6T
Multi-operators
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Standard Model



ARC-315 /400 /500 /630
Standard
Page 18



ARC-1000 /1250
Carbon ARC Gouging
Page 18

Portable Model



DuraARC200
1Ph Portable Model
Page 19

CHOOSE YOUR MODEL

	Model	TIG	Cellulose Electrode	Gouging	Current for Duty Cycle (A)@40°C			Input Voltage*		VRD
					35%	60%	100%			
1-Phase	DuraARC200	✓			200	153	118	230V		
	DuraARC200II	✓	✓		200	153	118	230V		✓
3-Phase	ARC400					400	310	380V~525V	220V~440V	Optional
	ARC400II		✓			400	310	380V~525V		Optional
	ARC400-3T			✓		400	310	380V~525V	220V	Optional
	ARC400-6T			✓		400	310	380V~525V		Optional
	ARC500					500	387	380V~525V		Optional
	ARC630			✓			630	380V~525V		Optional
	ARC1000			✓			1000			Optional
	ARC1250			✓			1250			Optional

* For Multi - Voltage Input, please check with sales for detail

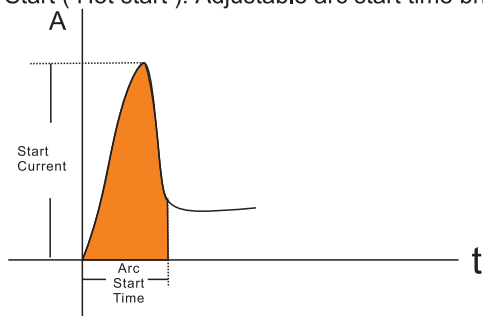
MMA (STICK) WELDERS



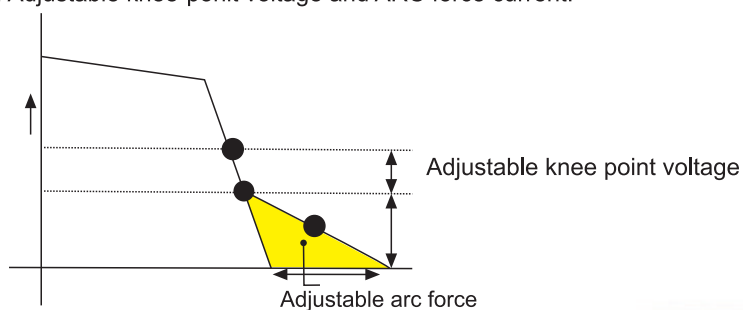
Aotai ARC series, a complete MMA solution, provide you versatile stick welders for shop and field applications. With the combination of modern inverter technology and precise wave control technology, ARC series reduce the spatter formation and ensure best quality weld results even when work with generator and 100 meters long distance welding.

Highlights for ARC

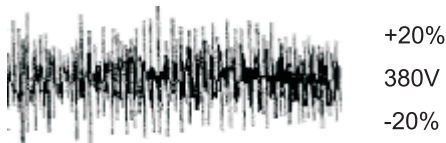
1. Multi-Voltage Adaptive technology: 3 phase 220V-440V, 380V-525V automatic voltage adaptation. (*Check each model for detail)
2. Anti-Voltage Fluctuation: Ensure the machines work perfectly under serious grid power fluctuation.
3. VRD: Low open circuit voltage. (*Check each model for detail)
4. Easy Arc Start (Hot start): Adjustable arc start time brings 100% arc ignition success.



5. ARC Force: Adjustable knee-point voltage and ARC force current.



6. Smart Fan: Fan starts when needed, for digital model.
7. Against voltage fluctuation







8. Workable With Generator



Welding machines are built-in the generator

Accessories for ARC Series

	Item NO.	Picture	Size (mm)	Model /Adjustable Parameters	Machine Model
Wire Remote Controller	340010-00075H		150*70*26	Mini-WRC • Welding Current	ARC Series
Wire Remote Controller with Digital Display	340010-00101		207*97*92	WRC • Welding Current • Arc Force Current	
Wireless Remote Controller with Magnet	340010-00005H		160*95*29	WLRC • Welding Current • Arc Force Current	
	340010-00004H		150*70*26	Mini-WLRC • Welding Current • Arc Force Current	

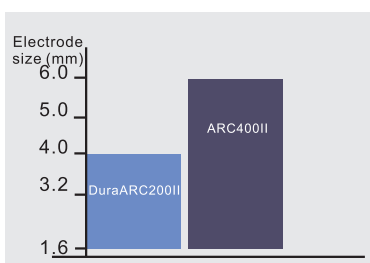
	Item NO.	Picture	Model /Specification	Machine Model
TIG Torch	310010-00278H		WP-17V 140A@35%, gas cooled 5m cable	ARC Series DuraARC Series
	310010-00263H		WP-26V 180A@35%, gas cooled 6m cable	
Electrode Holder	461005-00002H		EH-300 300A	
	461005-00004H		EH-500 500A	
Earth Clamp	461011-00002H		EC-300 300A	ARC630 /1000 /1250 ARC400-3T /6T
	461011-00004H		EC-500 500A	
Gouging Torch	310060-00004H		TBQ-500 500A@60% 1.5m Cable	
	310060-00018H		TBQ-1000 1000A@60% 1.5m Cable	



ARC II series is specially designed for MMA welding with Cellulose Electrodes (CEL). This series is suitable for working under extremely harsh industry field, special inner structure with optimum dust /water protection to ensure ARC II robust design with unconditional usage for optimum welding results.

Features and Benefits

- Hot Start ensure 100% arc ignition
- Wire remote control (ARC400II optional)
- Suitable for long distance welding (100m)
- Adjustable Arc Force bring great performance for all position welding
- Full power input ensure stable arc during long cable welding and voltage fluctuation
- Extra Arc Force Current ensure deep penetration and bring perfect vertical down-welding of cellulose electrodes (CEL)
- Work with generator
- Lift TIG process (DuraARC200II)



Standard Equipments (ARC400II)

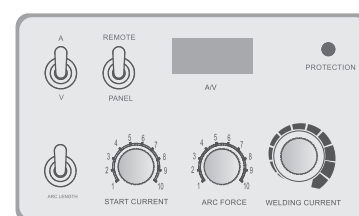
- 1 Power source
- 1 Connected primary cable L=3m
- 1 Welding cable L=3m
- 1 Ground cable L=3m

DuraARC200II

- 1 Power source
- 1 Connected primary cable L=3m
- 2 Quick plugs

Technical Specification

	ARC400II	DuraARC200II
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz	1 phase, AC230V±10%, 50 /60Hz
Rated input capacity (KVA)	18.4	9
Rated input current (A)	28	39
Duty cycle (40C)	60%@400A	35%@200A
OCV (V)	84	82 (VRD OFF) /13 (VRD ON)
Output current range (A)	20-400	10-200
Efficiency	89%	>80%
Protection class	IP21S	IP23S
Insulation class	H	F
Dimension (mm)	594*307*578	381*155*298
Weight (kg /lb)	43 /95	7.3 /16.1



ARC400II

3 Phase 380V
525V

Multi-voltage Option

Check on Page 13

Work with Remote Controller

Check on Page 15



DuraARC200II



ARC-T series is multi-operators model, it is new generation developed specially to meet industry requirement. The ARC-T integrates three or six single ARC units into one case. Three or six independent outputs allow corresponding number of welders to work at the same time

Features and Benefits

- 3 in 1 or 6 in 1, highly integrated, convenient to manage and transfer
- Simultaneous operation for multiple people, no interference, independent running
- Gouging process, paralleled output, up to 1200A /2400A

Standard Equipments (3T)

- 1 Connected primary cable L=3m
- 3 Electrode holders
- 3 Copper connectors
- 2 Copper connectors

Standard Equipments (6T)

- 2 Connected primary cable L=3m
- 6 Electrode holders
- 6 Copper connectors
- 4 Copper connectors



Technical Specification

	ARC400-3T	ARC400-6T
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz	
Rated input capacity (KVA)	18.7*3	18.7*6
Rated input current (A)	28.4*3	28.4*6
Duty cycle (40C)	60%@400A*3	60%@400A*6
OCV (V)	68	
Output current range (A)	20-400*3	20-400*6
Efficiency	89%	
Protection class	IP21S	
Insulation class	H	
Dimension (mm)	675*505*850	675*1045*1000
Weight (kg /lb)	120 /265	234 /516.8



ARC series gives a highly stable DC arc and ensures perfect welding in all situations and positions. It is new generation developed specially to meet harsh industry requirement and performs full power against voltage fluctuation and long distance welding (up to 100m).

Features and Benefits

- Suitable for BAS & RUT electrodes welding
- Hot arc starting current enjoys stepless adjustment and 100% arc starting success rate
- The continuously adjustable arc force in MMA mode provides effects of anti stick, unbroken arc and ensures stable arc for long cable welding
- The current and voltage enjoy digital display
- Wired remote control and optional wireless control
- Protection against overheat, over-current and over-voltage
- Optional VRD function
- Welding cable can reach as long as 100m
- Full-bridge inverter soft switch control technology, double IGBT modules and quick recovery diode module
- Multiple protections: Adopting multiple insulating material to protect PCB and main circuit to ensure high reliability
- Work with generator (optional)



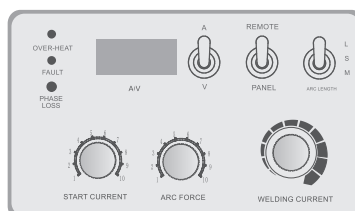
ARC-315 /400 /500 /630



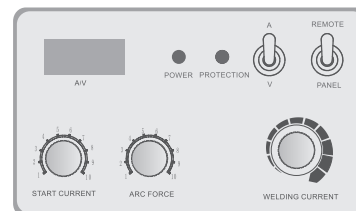
ARC-1000 /1250

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Welding cable L=3m
- 1 Ground cable L=3m



ARC-1000 /1250



ARC-315 /400 /500 /630

Technical Specification

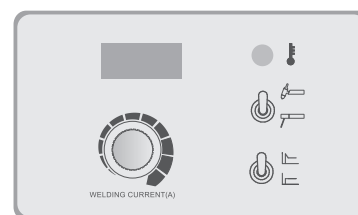
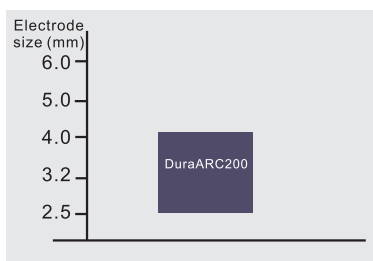
	ARC315	ARC400	ARC500	ARC630	ARC1000	ARC1250
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz					
Rated input capacity (KVA)	13.6	18.7	24.6	34.2	54.6	66.5
Rated input current (A)	20.7	28.4	37.4	52	83	101
Duty cycle (40°C)	60%@315A	60%@400A	60%@500A	100%@630A	100%@1000A	100%@1250A
OCV (V)	68	68	83	96	82	90
Output current range (A)	20-315	20-400	20-500	50-630	60-1000	60-1250
Efficiency	89%					
Protection class	IP23				IP21S	
Insulation class	H					
Dimension (mm)	660*320*560	660*320*560	660*320*560	660*320*560	767*352*757	767*352*802
Weight (kg /lb)	43 /95	43 /95	50 /110.4	58 /128.1	95 /209.8	100 /220.9



DuraARC series is new generation single phase portable MMA model for industry and household application. Light weight, compact size and outstanding robust design make it more convenient to carry around. DuraARC performs powerful stable DC arc and can continuously welding 4mm electrode without stop. DuraARC is designed to work with generator and it performs full power against voltage fluctuation.

Features and Benefits

- Fashionable streamline design, beautiful and upscale
- Real current output 200A, strong power, high duty cycle, capable of 4mm electrode long time welding
- Multiple protections: over voltage protection, under voltage protection, over heat protection, fan fault protection, over current protection



DuraARC200

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 2 Quick plugs

Technical Specification

	DuraARC200
Rated input voltage /frequency (V/Hz)	1 phase, AC230V±10%, 50 /60Hz
Rated input capacity (KVA)	8,6
Rated input current (A)	39
Duty cycle (40°C)	35%@200A
OCV (V)	59
Output current range (A)	10-200
Efficiency	>80%
Protection class	IP23S
Insulation class	F
Dimension (mm)	381*155*298
Weight (kg /lb)	7.3 /16.1

AUTAI WELDING

TIG



GTAW SUMMARY

Special Industrial Application



ATIG400P(HW)
Digital DC Pulse TIG /Hot Wire
Page 27



ATIG-315 /500 /630PACIII
Digital AC /DC Pulse TIG
Page 31



ATIG-315 /500 /630PAC
Digital AC /DC Pulse TIG
Page 33

Digital /Analog Professional Model



ATIG-315 /400 /500P
Digital DC Pulse TIG
Page 34



TIG-400 /400II /500 /630 /1000 /1250
Analog DC TIG
Page 35



ATIG-270P
Portable Digital DC Pulse TIG
Page 36

Single Phase Portable Model



ATIG200P
Digital DC Pulse TIG
Page 37



TIG200PRO
Analog DC Pulse TIG
Page 37



ATIG210PAC
Digital AC /DC Pulse TIG
Page 38

CHOOSE YOUR MODEL

Model		MMA	DC TIG	Pulse TIG	AC TIG	Thin Plate Welding	Input Voltage*		Stored Program	TIG Wire Feeder Optional
1-Phase	TIG200PRO	✔	✔	✔		✔	230V			
	ATIG200P	✔	✔	✔		✔	230V			
	ATIG210PAC	✔	✔	✔	✔	✔	115V /230V		✔ (up to 10)	
3-Phase	TIG-400 /500 /630	✔	✔				380V~525V	220V~440V		
	TIG-1000 /1250	✔	✔							
	ATIG270P	✔	✔	✔		✔		220V~440V		
	ATIG315P	✔	✔	✔		✔	380V~525V	220V~440V		✔
	ATIG400P	✔	✔	✔		✔	380V~525V	220V~440V		✔
	ATIG500P	✔	✔	✔			380V~525V	220V~440V		✔
	ATIG315PAC	✔	✔	✔	✔	✔	380V~525V	220V~440V		✔
	ATIG500PAC	✔	✔	✔	✔		380V~525V			✔
	ATIG630PAC	✔	✔	✔	✔		380V~525V			✔
	ATIG315PAC III	✔	✔	✔	✔	✔	380V~525V	220V~440V	✔ (up to 30)	✔
3-Phase	ATIG500PAC III	✔	✔	✔	✔		380V~525V		✔ (up to 30)	✔
	ATIG630PAC III	✔	✔	✔	✔	✔			✔ (up to 30)	✔
	ATIG400P(HW)	✔	✔	✔	✔					✔

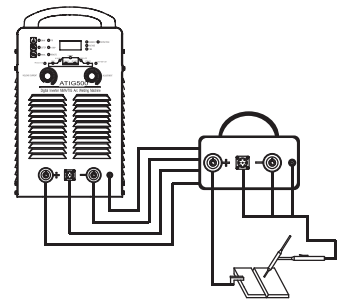
TIG WELDERS



AOTAI TIG series provides you full range of TIG welding products for the application needs in work shop or on-site. DC TIG series are powerful, robust and easy to operate, it brings extremely clean TIG Welding process. Full digital controlled ATIG-PACIII series have advanced wave control technology and they can be used in automatic and /or robotized welding system.

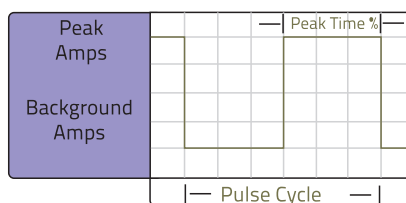
Highlights for DC TIG

1. Pre-Gas /post-gas protect the tungsten electrode and weld pool against oxidation.
2. Initial welding current allows to preheat work piece and point the start joint.
3. Up-slope current adjustment allows progressive increasing of the welding current.
4. Down-slope current adjustment prevents the crater at the end of welding process especially for thin welding material.
5. Final welding current reduction avoids the crater formation by reducing the current during extinguishing of the arc for a clean end of the weld seam.
6. Pulse TIG makes all position welding and thin sheet welding easier.
7. Full power output during the voltage fluctuation.
8. Repeat function allows secondary current to prevent over heat of workpiece.
9. Remote controller: hand or pedal controller.
10. Cold wire feeder: improves TIG productivity.
11. Tacking: allows quick tacking of joint before welding.
12. Extended torch technology (40m TIG welding torch): remote weld expert, with extended torch and improved components, to ensure 100% arc start success rate, and stable arc.
13. Junction components: remote weld solution, extend weld zone, reduce labor intensity. High duty cycle up to 100%.
14. TIG wire feeder: change from manual welding to semi-auto welding, highly reduce labor intensity, help for weld seam for mation.
15. Automation system interface: rich interface signals (start-stop, current on /off, voltage feedback signal), help to connect with automation system, realize auto welding.
16. Thin plate pulse weld: by adjusting pulse duty cycle to decrease heat input, suit for thin plate or material with larger crack tendency welding.
17. Shoe shape gas holding device with extra gas protection ensures high quality welding for nickel alloy and titanium alloy.

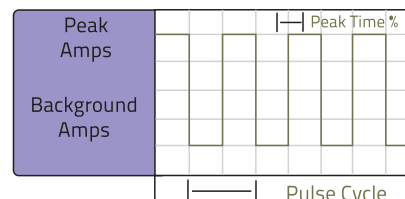


Highlights for AC /DC TIG

1. Square wave current provides more cleaning for Aluminum welding.
2. Balance adjustment improves the result during AC welding the penetration and clean phase.
3. Embedded expert database regulates the parameters for perfect arc.
4. Job saving: allows job memory for up to 30 welding tasks (optional).
5. Pulse TIG controls HF pulse, MAX 500Hz this can narrow weld seam, reduce heat affected zone, deepen weld seam penetration, improve weld speed.

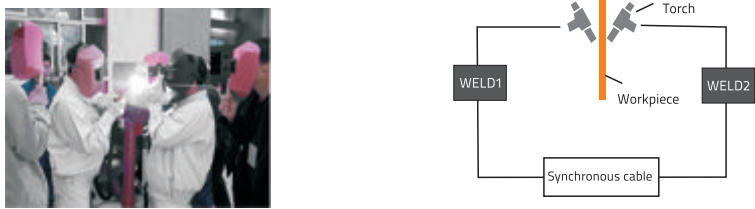


Conventional Pulse TIG

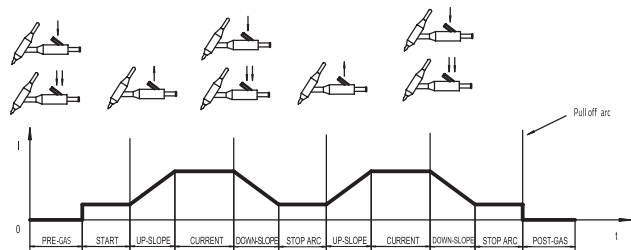


High-Speed Pulse TIG

6. Synchronous mutual arc welding technology: apply this technology for medium and thick plate, can improve weld efficiency (above 1.5 times), improve weld speed and weld deposition rate; by cooperative control, two welding machines' arc has no interference to each other.



7. Repeat function: realize discontinuous weld without arc breaking, reduce interference caused by frequency arc start.



CUSTOMIZE YOUR DIGITAL TORCH



Open Canopy

Remove Switch



Switch Replacement

Canopy Replacement





Close Canopy








Accessories for TIG Series

	Item NO.	Picture	Model /Specification	Machine Model
Gas Cooled Torch	310010-00065H		WP17 135A (DC) 95A (AC) @35% Tungsten size: 1.0-3.2mm 5m cable	TIG Series ATIG Series
	310010-00242H		SG26 180A (DC) 125A (AC) @35% Tungsten size: 1.0-3.0mm 5m cable	ATIG210PAC
Water Cooled Torch	310020-00446H		WP18 380A (DC) 270A (AC) @60% Tungsten size: 1.0-4.0mm 5m cable	ATIG-P Series ATIG-PAC Series
	310020-00052H		WP12 500A @60% Tungsten size: 1.6-6.0mm 5m cable	
	310020-00366H		SGTHW18SC 410(DC) 290(AC) @100% Electrode size:1.0-4.8mm 3m cable	ATIG-P(HW)
	310020-00478H		SGTCW18SC 410(DC) 290(AC) @100% Electrode size:1.0-4.8mm 3m cable	ATIG-P /PAC

	Item NO.	Picture	Size (mm)	Model /Adjustable Parameters	Machine Model
Wire Feeder	320010-00036H		650*380*290	WF-400T TIG wirefeeder • Wire feeding speed • Delay • Pulse • Gas test / wire test • Hot wire /Cold wire	ATIG-P Series ATIG-PAC Series ATIG-P(HW) Series

	Item NO.	Picture	Size (mm)	Model /Adjustable Parameters	Machine Model
Wire Remote Control	340010-00075H		100*60*82	Wire remote controller WRPTA-I • Welding current control	TIG Series ATIG-P Series ATIG-PAC Series
	340010-00027		207*97*92	WRC • Welding current • Arc force current	TIG Series
	340010-00076H		170*122*79	Digital remote controller • Full parameters control	ATIG-P Series
	340010-00068H				ATIG-PAC Series
Foot Pedal	340050-00013H		276*109*200	Foot pedal (JTKG-II) FP-II: • On/off switch with current control	ATIG-PAC Series

	Item NO.	Picture	Model /Specification	Machine Model
Cooling Unit	571500-00143H(65) 571500-00116H(50)		WCS-T Supply: 380V Flow rate: Max.3L /min Tank volume: 6L Integrated cooling unit	TIG Series ATIG-P Series ATIG-PAC Series
	561130-00005H		WCS-10 Supply: 1ph 220V Flow rate: Max.3L /min Tank volume: 9L	
	561130-00006H		WCS-20 Supply: 1ph 220V Flow rate: Max.3L /min Tank volume: 20L	

	Item NO.	Picture	Model /Specification	Machine Model
Trolley	361011-00028H		TM-I 2 castor wheels and 2 standard wheels Can integrate cooling unit, power source and gas cylinder	TIG Series ATIG-P Series ATIG-PAC Series
	361005-00009H		TM-II 2 castor wheels and 2 standard wheels Can integrate cooling unit, power source and gas cylinder	Portable Series

HOT WIRE TIG

ATIG400P(HW)



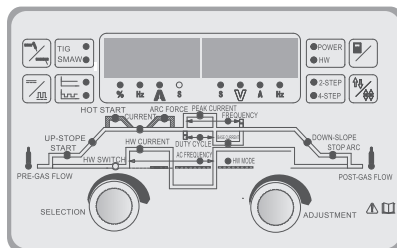
ATIG400P(HW) hot wire TIG system is a TIG welding equipment with high efficiency and high quality. It is a semi-automatic or automatic TIG welding system consisting of a welding power source, hot wire power source, wire feeding mechanism and special welding torch. Compared with cold wire TIG, it enjoys one time improved welding deposition rate and the same welding speed as MIG, which makes it become the best choice for high-quality and high-speed application of carbon steel/stainless steel/titanium alloy welding.

Features and Benefits

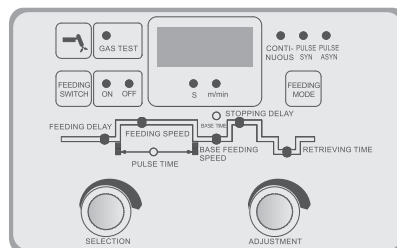
- Digital system: Multi-core digital control system precisely controls welding process and realizes synchronized work of wire feeding and welding
- High-speed welding: AC power source heat the wire has no interference to welding arc, has a certain stirring effect to the molten pool, and improves the welding speed
- Simple temperature control of welding wire: One key to switch hot wire and cold wire, one key to switch AC and DC
- Perfect welding seam formation: Pulse and CC welding process realizes synchronizing wire feeding with the pulse, and forms perfect welding seam
- Highly precised wire feeding system: 4 rolls drive, full-digital twin closed loop raster feedback wire feeding system, more precise and more stable wire feeding
- Welding automation interface: Standard analog control interface, easy to match with automatic welding equipment

Standard Equipments

- 1 Power source
- 1 Primary cable=3m
- 1 Hot wire power source
- 1 Water cooler
- 1 Wirefeeder
- 1 Trolley
- 1 Wirefeeder cable=10m
- 1 Ground cable=3m
- 1 Hot wire ground cable=3m
- 1 TIG torch



Power source control panel

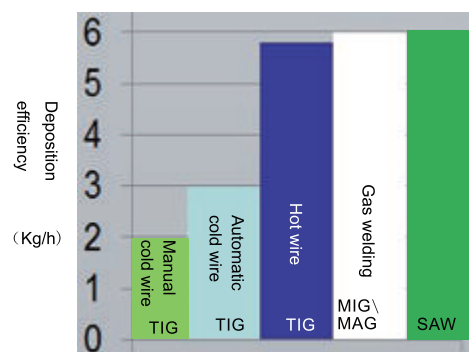
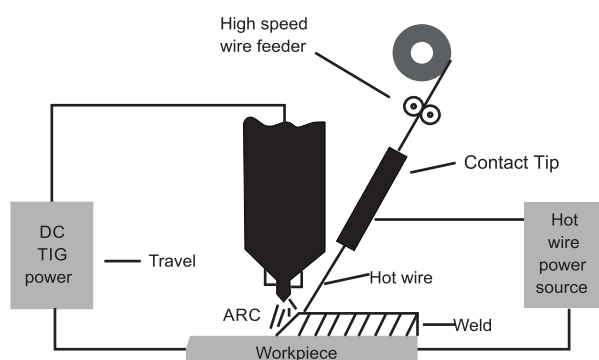


Wire feeder control panel



Process introduction

Hot wire TIG is designed based on cold wire TIG by adding one hot wire power source to pre-heat wire (300-400 °C), Without increasing base metal heat input, by increasing wire filling rate, the welding speed is almost close to MIG.



Technical Specification

Welding Power Source	
Model	ATIG400P (HW)
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)	18
Rated input current (A)	28
Rated duty cycle (%)	60
Adjustable current range (A)	5~400A
OCV (V)	73
Tungsten electrode diameter (mm)	1~6
Weight (Kg /lb)	55 /121.28
Dimension (mm)	660*320*560
Insulation class	IP23

Hot Wire Power Source	
Model	HW-200
Rated input voltage /frequency (V/Hz)	3 phase 380V±10%/50Hz
Rated input capacity (KVA)	2.6
Rated input current (A)	4
Rated duty cycle (%)	35
Output current range (A)	5~200A
OCV (V)	16
Weight (kg /lb)	21 /46.31
Dimension (mm)	690*330*290
Insulation class	H

Water Cooler		Wire Feeder	
Model	WCS-400T	Model	WF-400T
Rated input voltage /frequency (V/Hz)	1phase, AC380V±10%, 50 /60Hz	Power supply voltage (V)	DC24V
Motor power (W)	260	Wire diameter (mm)	0.8~1.6
Duty cycle (%)	100	Wire feeding speed (m/min)	0.3~7.0
Max. pressure (MPa)	0.3	Dimension (mm)	650*280*390
Temperature	-10~+40	Weight (kg /lb)	15 /33.08



HOT WIRE TIG

■ ATIG-400P(HW)

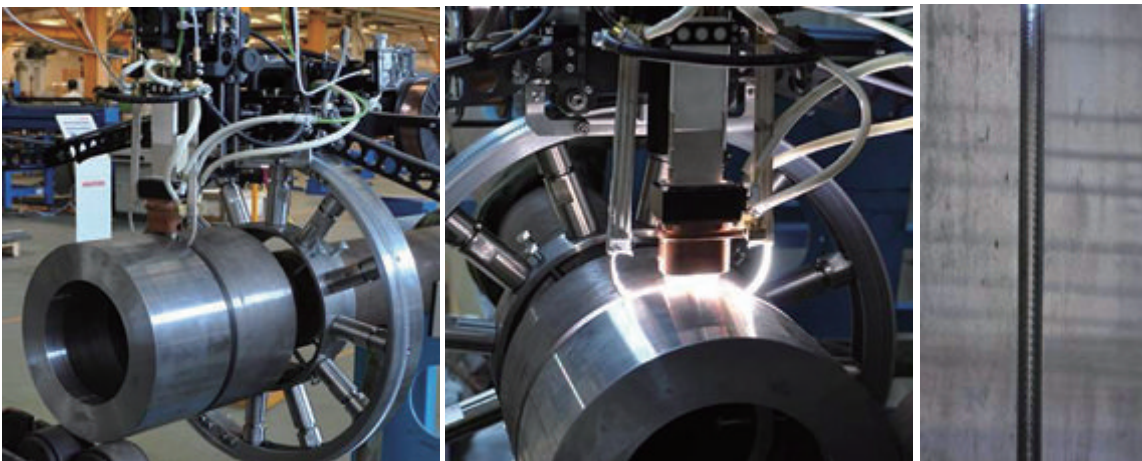
Industrial application

Hot wire TIG welding has been used for welding of important work pieces of carbon steel, low alloy steel, high alloy steel, stainless steel and nickel base alloys in high-end industrial sectors such as boilers, pressure vessels, high pressure pipelines, marine oil production equipment, petrochemical plants, aerospace engineering and ordnance manufacturing, etc.

High quality cladding



Narrow gap welding





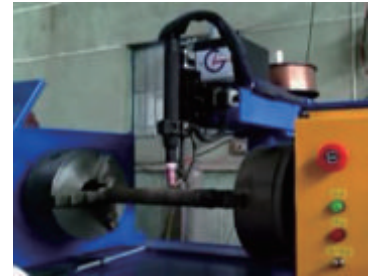
Pipe Welding

Small-diameter pipe

It can replace cold wire TIG, and welding efficiency is about twice of cold wire TIG

Parameter

Welding current	50A
HW current	30A
Wire feeding speed	0.3m/min



Big-diameter pipe

Low heat output, high welding quality, deposition rate close to SAW.

Parameter

Welding current	240A
HW current	100A
Wire feeding speed	3.2m/min



Cladding

Wine cans external cooling wall

Cladding at internal layer of pipe, low melting rate of base metal.

Parameter

Welding current	250A
HW current	100A
Wire feeding speed	4.0m/min
Cladding materials	Wear-resistant alloy steel



Tanks and vessels

Hot wire TIG welding deposition rate close to MIG.

Parameter

Welding current	180A
HW current	90A
Wire feeding speed	2.0m/min





Advanced Digital GTAW

ATIG-315 /500 /630PACIII



ATIG-PACIII series is fully digital models with high end DSP technology, it is suitable for both automatic application and manual welding. Compared with ATIG-PAC series, it offers advanced wave control technology which brings more flexibility for thinner /thicker material during critical aluminum welding. Smart parameters adjustment brings cleanest, deepest penetration and perfect welding result for high welding quality demanding.

Features and Benefits

- Full digital inverter power source. Current increasing speed during arc starting is greatly improved, which make beautiful aluminum welding
- Timing function which record the working time of welding machine.
- Tungsten electrode diameter select function, reduce the tungsten electrode consumption during arc ignition
- Five waveforms: standard square, Irregular square, Sine wave, Triangle wave, Mixture wave, suitable for various workpiece thickness
- Synchronous mutual arc feature
- All parameters can be precisely pre-setted
- Save and recall 30 sets of welding parameters
- Remote control function, can adjust welding current and peak current
- Can display current and voltage
- MMA: adjustable arc current, arc force current, knee point voltage, hot start current /time, easy arc starting
- AC MMA process (optional)
- Work with wirefeeder (Customized models)



Advanced Shape Wave Control

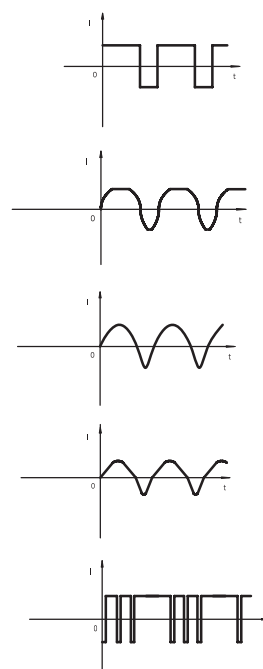
1. Standard square wave: Responsive arc with fast zero crosses and reduced peak current. Stable arc with good puddle control and fast travel speed, minimizes tungsten overheating.

2. Irregular square wave: Stronger arc with slow zero crosses and less noise; the strongest arc and deep penetration, less noise.

3. Sine wave: Traditional smooth shaped waveform. Soft arc and less noise. Good for wide seam.

4. Triangle wave: Minimized area (heat) under the curve shape with high peaks. Lower amperages can minimize heat input to the weld high peaks more best for anodized applications.

5. Mixture wave: Alternate output AC current and DC current, high efficiency.

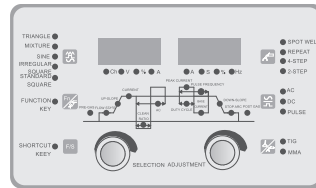




LOW NOISE

**0.38mm AL
Plate Welding**

Work with Remote Controller
Check on Page 26



ATIG-315 /500 /630PACIII

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Welding cable L=3m
- 1 Ground cable L=3m
- 1 TIG torch (water cooled)
- Water cooler (Optional)
- Trolley (Optional)
- Remote control unit (Optional)
- Foot pedal (Optional)

Technical Specification

				ATIG315PACIII	ATIG500PACIII	ATIG630PACIII
Rated input voltage /frequency (V/Hz)				3 phase, AC380V±10%, 50 /60Hz		
Rated input capacity (KVA)				13.6	25.4	34.8
Rated input current (A)				20.7	38.7	52.9
Duty cycle (40°C)				60%@315A	60%@500A	60%@630A
OCV (V)(MMA /TIG)				45/79	42/77	42/79
TIG	DC TIG	Output current range (A)		5-315	10-500	10-630
	Pulse TIG	Pulse frequency (Hz) (AC /DC)		0.2-250 /0.2-999		
		Peak current (A)		5-315	10-500	10-630
		Base current (A)		5-315	10-500	10-630
		Pulse duty cycle		15%-85%		
	AC TIG	Wave form		Square, Irregular square, Sine, Triangle, Mixture		
		AC frequency (Hz)		40-250		
		AC balance		-50%~+40%		
		Mixture	Frequency (Hz)	0.5-10		
			Duty cycle	15%-85%		
	Pre-gas /post gas (s)			OFF-10 /OFF-60		
	Initial /final current (A)			5-315 /5-315	10-500 /10-500	10-630 /20-630
	Up-slope /down-slope (s)			OFF-10 /OFF-15		
	Trigger mode			2/4T, Repeat, Spot		
	Arc ignition method			HF /Contact		
MMA	Output current (A)			5-315	10-500	10-630
	Arc force (A)			10-200		
	Knee-point voltage (V)			15-30		
	Hot start duration (s)			0.1-2		
	Hot start (A)			10-200		
Job channels				30		
Dimension (mm)				660*320*560	665*353*778	690*385*825
Weight (kg /lb)				53 /117	80 /176.6	90 /198.6



Digital AC /DC GTAW

ATIG-315 /500 /630PAC



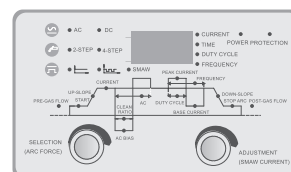
ATIG-PAC Series is digital models with high end MCU technology, suitable for both automatic application and manual welding. It offers multiple parameters adjustment to ensure perfect welding for stainless steel (DC) welding and Aluminum(AC) welding.

Features and Benefits

- All parameters can be precisely adjusted in real time
- MMA: adjustable arc current, arc force current, easy arc starting
- Can remotely control current
- Synchronous mutual arc feature
- Widely used for nuclear power installation, pipe installation, shipbuilding, high pressure container, etc.
- Suitable for stainless steel, carbon steel, copper, titanium ,aluminum welding
- Adjustable AC parameters, good purging effect
- AC MMA process (optional)
- Work with wirefeeder (Customized models)

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Welding cable L=3m
- 1 Ground cable L=3m
- 1 TIG torch (water cooled)
- Water cooling machine (Optional)
- Trolley (Optional)
- Remote control unit (Optional)
- Foot pedal (Optional)



Work with Remote Controller
Check on Page 26

ATIG-315 /500 /630PAC

Technical Specification

	ATIG315PAC	ATIG500PAC	ATIG630PAC
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz		
Rated input capacity (KVA)	13.6	25.4	34.8
Rated input current (A)	20.7	38.7	52.9
Duty cycle (40°C)	60%@315A	60%@500A	60%@630A
OCV (V)(MMA /TIG)	45 /79	45 /77	42 /79
MMA	Output current range (A)	5-315	10-630
	Arc force (A)	10-200	
	Pre-gas/post gas (s)	0.1-9.99/0.1-60	
	Initial/final current (A)	5-315 /5-315	10-630 /20-630
TIG	Up-slope/down-slope (s)	0.1-10 /0.1-15	0.1-10 /0.1-15
	Peak current (A)	5-315	10-630
	Pulse frequency (Hz)	0.2-20	
	Pulse duty cycle	15%-85%	
	AC frequency (Hz)	20-200	20-100
	AC balance	-40%~40%	
Protection class	IP23	IP21	
Dimension (mm)	660*320*560	665*353*778	690*385*825
Weight (kg /lb)	50 /110.3	77 /170	90 /198.6



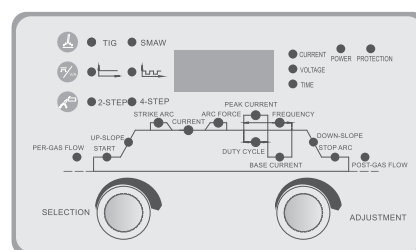
ATIG-P series is digital DC pulse TIG models with MCU technology, suitable for both automation application and manual welding. DC pulse function minimize the heat input for thin materials and provide a faster freezing for uphill welding.

Features and Benefits

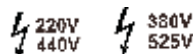
- Multi-process: DC TIG /PULSE TIG /MMA
- Digital MCU control: precisely control the welding procedure
- Sheet welding expert: pulse mode, reduced heat input
- Robust pulse: The frequency up to 500Hz deepens the welding penetration
- Remote control function: digital remote controller and analog remote controller
- Multi-protection: protection against short circuits, coolant shortage, and others; error code display
- Work with wire feeder (customized model)

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Welding cable L=3m
- 1 Ground cable L=3m
- 1 TIG torch



ATIG-315 /400 /500P



Multi-voltage Option

Check on Page 22

Technical Specification

	ATIG315P	ATIG400P	ATIG500P
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz		
Rated input capacity (KVA)	14.4	17.8	24.6
Rated input current (A)	21.9	27.1	37.4
Duty cycle (40°C)	60%@315A	60%@400A	60%@500A
OCV (V)(MMA /TIG)	68	71	84
MMA	Output current (A)	5-315	5-500
	Arc force (A)	10-200	
	Hot start (A)	20-160	
TIG	Output current (A)	5-315	5-500
	Pre-gas /post gas (s)	0.1-9.99/0.1-60	
	Initial /final current (A)	10-160 /5-315	10-160 /5-500
	Up-slope /down-slope (s)	0.1-10 /0.1-15	
	Peak current (A)	5-315	5-500
	Base current (A)	5-315	5-500
	Pulse frequency (Hz)	0.2-20 /20-50	
	Pulse duty cycle	15%-85%	
	Trigger mode	2T, 4T, Spot, Repeat	
	Arc ignition method	HF	
Protection class		IP23	
Insulation class		H	
Dimension (mm)		660*320*560	660*320*560
Weight (kg /lb)		42 /93	50 /108



Digital DC GTAW

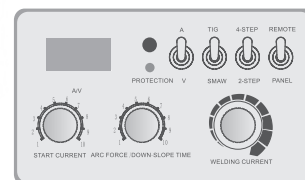
TIG-400 /400II /500 /630 /1000 /1250



TIG series is analog DC TIG models with soft switch inverter technology, specially designed for harsh industrial environment. Friendly user operation interface and stable ARC for manual welding.

TIG series provides high performance DC TIG and stick welding for alloy fabrication, pipe welding and workshop maintenance.

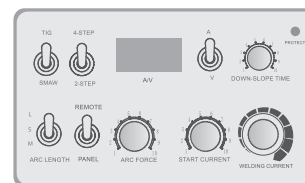
TIG400II is also suitable for great cellulose electrode welding application. current $\geq 630A$, 100% duty cycle and can perform Carbon Arc Gouging feature.



TIG-315 /400 /500 /630 /1000 /1250

Features and Benefits

- Adjustable ARC FORCE and hot start, down slope time
- Work with generator (optional)
- Wire /wireless remote control
- HF /scratch TIG with 100% ignition success rate
- Digital display
- 2 step /4 step
- TIG400II perform great cellulose electrode welding



TIG400II

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Welding cable L=3m
- 1 Ground cable L=3m
- 1 TIG torch



Work with Remote Controller
Check on Page **26**

Multi-voltage Option
Check on Page **22**

Technical Specification

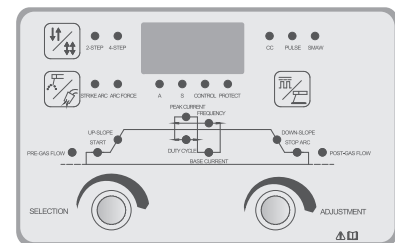
	TIG400	TIG400II	TIG500	TIG630	TIG1000	TIG1250
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz					
Rated input capacity (KVA)	18.7	18.7	24.6	34.2	54.6	66.5
Rated input current (A)	28.4	28.4	37.4	52	83	101
Duty cycle (40°C)	60%@400A	60%@400A	60%@500A	100%@630A	100%@1000A	100%@1250A
OCV (V)	71	85	84	95	83	95
Output current (A)	20-400	20-400	20-500	50-630	60-1000	60-1250
Arc ignition method	HF /Contact					
Trigger mode	2/4T					
Efficiency	89%					
Protection class	IP23			IP21S		
Insulation class	H					
Dimension (mm)	660*320*560	576*297*557	660*320*560	660*320*560	767*352*757	767*352*802
Weight (kg /lb)	43 /95	43 /95	50 /110.4	58 /128.1	95 /209.8	100 /220.9



ATIG270P welding machine is a portable type welding machine. According to the situation summary of site application and site repair, it is designed to equip TIG, MMA and CEL welding process, which can be used to weld CS, SS, Tialloy and other materials. With no doubt, it is the best product for pipeline construction, site installation, emergency repair, and small hardware industry.

Features and Benefits

- Digital system: MCU digital control system, precisely control the welding process, abundant TIG welding parameters control
- Friendly power supply matching: Multi-voltage self adaptive input (220V/380V/440V)
- Perfect welding seam formation: Pulse TIG and CC TIG welding process, beautiful fish scale welding and outstanding welding quality
- Full pipeline process: root welding through CEL or TIG welding process, fill and cap welding through MMA or TIG welding process
- Multiple remote control options: TIG torch, remote controller, foot pedal
- Designed for outdoors: 18kg portable design, work with generator



ATIG270P

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Welding cable L=3m
- 1 Ground cable L=3m
- 1 TIG torch

Technical Specification

ATIG270P		
Rated input voltage /frequency (V/Hz)		3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)		10
Rated input current (A)		16.5
Duty cycle (40°C)		35%@275A 100%@200A
OCV (V)(MMA /TIG)		MMA(23V) /TIG(77V)
MMA	Output current (A)	5-275
	Arc force (A)	10-200
	Hot start (A)	20-160
	Output current (A)	5-275
TIG	Pre-gas /post gas (s)	0.1-9.99/0.1-60
	Initial /final current (A)	5-275 /5-275
	Up-slope /down-slope (s)	0.1-10 /0.1-20
	Peak current (A)	5-275
	Base current (A)	5-275
	Pulse frequency (Hz)	0.2-30 /30-500
	Pulse duty cycle	10%-90%
	Trigger mode	2T, 4T, Spot welding, Repeat
	Arc ignition method	HF
	Protection class	IP23S
Insulation class		H
Dimension (mm)		460*210*410
Weight (kg /lb)		19 /42



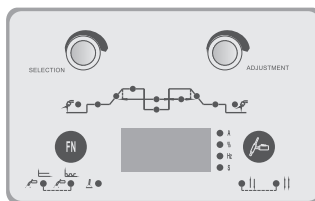
Portable DC GTAW

ATIG200P TIG200PRO



Features and Benefits

- Multi-process: DC TIG /PULSE TIG /MMA
- VRD feature
- MCU control: adjustable parameter such like Peak current, base current, duty cycle and the frequency,
- Multi-parameters adjustment: up-slope time /down-slope time /pre-gas /post-gas
- Multi-protection against overheating, over current, over voltage, etc

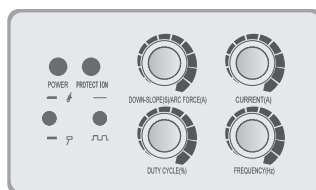


ATIG200P



Features and Benefits

- Multi-process: DC TIG /PULSE TIG /MMA
- Easy pulse TIG: pulse frequency, pulse width, peak current, down-slope time
- VRD function
- Reliable design: soft start, multi protection: over current, over voltage, over heat etc



TIG200PRO



Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 TIG torch (with accessories)
- 1 Ground cable L=3m with clamp and quick plug
- 1 Quick plug

Technical Specification

	ATIG200P	TIG200PRO
Rated input voltage /frequency (V/Hz)	1 phase, AC230V±10%, 50 /60Hz	
Rated input capacity (KVA)	6.6	7.5
Rated input current (A)	30	34
Duty cycle (40°C)	40%@200A (TIG)	
OCV (V)	60 /9 (VRD)	54 /9 (VRD)
MMA	Output current range (A)	20-160
	Arc force (A)	50
	Hot start (A)	50~100
TIG	Output current range (A)	10-200
	Pre-gas /post-gas (s)	0.1-15 /0.1-15
	Initial /final current (A)	10-200 /10-200
	Up-slope /down-slope time (s)	0.1-10 /0.1-10
	Base current (A)	10-200
	Pulse frequency (Hz)	0.2-20
	Pulse duty cycle	15-85%
	Trigger mode	2 /4T
	Arc ignition method	HF
Protection class	IP21S	
Insulation class	F	
Dimension (mm)	389*155*299	
Weight (kg /b)	9.5 /21	



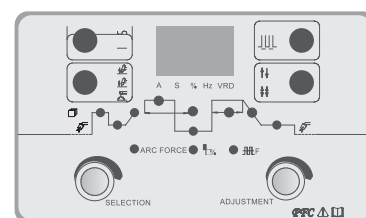
ATIG-PAC Series is digital models with high end MCU technology, suitable for both automatic application and manual welding. It offers multiple parameters adjustment to ensure perfect welding for stainless steel (DC) welding and Aluminum (AC) welding.

Features and Benefits

- Portable digital AC /DC TIG machine, high efficient inverter technology
- Perfect welding quality on heat-sensitive material and aluminum
- Controlled AC wave, including balance, AC frequency
- Fully controlled pulse wave, including pulse duty cycle, base current and high speed pulse frequency
- Multi controllable parameters, like pre-gas, post-gas, up-slope down-slope, initial current and final current
- HF and lift arc ignition, outstanding arc starting performance
- 2 /4T trigger mode, suitable for long /short welding seam
- Fast dynamic response, good arc characteristic
- PFC module, reduce harmonic wave input, improve power source efficiency, meet needs of 16A input (PFC model ONLY)
- Job channels are available (10)

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 TIG torch (with accessories)
- 1 Ground cable L=3m with clamp and quick plug
- 1 Quick plug



ATIG210PAC



Multi-voltage Option

Check on Page

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Technical Specification

ATIG210PAC		
Rated input voltage /frequency (V/Hz)		1 phase, AC230V±10%, 50 /60Hz
Rated input capacity (KVA)		5.7
Rated input current (A)		25
Duty cycle (40°C)		30%@210A
OCV (V)		60
MMA	Output current (A)	10-170
	Arc force (A)	0-100
	Hot start (A)	0-100
	Output current (A)	3-210
	Pre-gas /post-gas (s)	0.1-9.99 /0.1-60
	Initial /final current (A)	3-210 /3-210
	Up-slope /down-slope time (s)	0-10 /0-15
	Peak current (A)	3-210
	Base current (A)	3-210
	Pulse frequency (Hz)	DC: 0.2-500/ AC: 0.2-20
TIG	Pulse duty cycle	5-95%
	AC frequency (Hz)	10-250
	AC balance	-40%±40%
	Trigger mode	2 /4T, Spot, Repeat
	Arc ignition method	HF /Lift
	Protection class	IP23S
Insulation class		F
Dimension (mm)		430*160*300
Weight (kg /b)		11.5 /25.2

MIG



GMAW SUMMARY

Advanced process



Visual MIG500
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Visual MIG500Pro
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AMIG500P PLUS
Advanced pulse 60KHz
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Standard pulse



AMIG-350PM /500PM /350PMC
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AMIG280PM
Portable
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AMIG500PS
CS /SS Pulse
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CV MIG /MAG



AMIG350LST
Low Spatter Technology
Page 52



AMIG500M PLUS
Multiprocess 60KHz
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AMIG-350 /350C /500 /630
Digital
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MIG-350 /350C /400 /500 /630M
Multiprocess
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MIG-250C /350 /400 /500 /630
Analog
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AMIG-210M /210PM
1PH Portable
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CHOOSE YOUR MODEL

	Model	SMAW	GTAW	GMAW	FCAW	GMAW-P	Double Pulsed	LST	Fast Pulse	DP Pulse	Input Voltage*	Wire	Duty Cycle	Synergic Adjustment	Digital Communication	Program Saving
1 Phase	AMIG210PM	✓	✓	✓	✓	✓	✓				230V	CS SS AL AS	35%	✓		
	AMIG210M	✓	✓	✓	✓						230V	CS SS AL AS	35%	✓		
3 Phase	MIG250C			✓								CS	60%			
	MIG-350			✓	✓						380V~525V	CS	60%			
	MIG-500 /630			✓	✓						380V~525V	CS	100%			
	MIG-350 /400M	✓	✓	✓	✓						380V~525V	CS SS	60%			
	MIG350MC	✓	✓	✓	✓						380V~525V	CS SS	60%			
	MIG-500 /630M	✓	✓	✓	✓						380V~525V	CS SS	100%			
	AMIG350			✓	✓						380V~525V	CS	60%	✓		✓ (10)
	AMIG-500 /630			✓	✓						380V~525V	CS	100%	✓		✓ (10)
	AMIG350PM	✓	✓	✓	✓	✓	✓				380V~525V	CS SS AL Cu Ni	60%	✓	✓	✓ (100)
	AMIG500PM	✓	✓	✓	✓	✓	✓				380V~525V	CS SS AL Cu Ni	100%	✓	✓	✓ (100)
	AMIG350PMC	✓	✓	✓	✓	✓	✓					CS SS AL Cu Ni	60%	✓	✓	✓ (100)
	AMIG350LST			✓	✓			✓				CS SS zcs	60%	✓	✓	✓ (100)
	AMIG280PM	✓	✓	✓	✓	✓	✓					CS SS AL Cu	60%	✓	✓	✓ (100)
	AMIG500PS	✓	✓	✓	✓	✓					380V~525V	CS SS Cu	100%	✓		✓ (10)
	AMIG500P PLUS	✓	✓	✓	✓	✓	✓		✓	✓		CS SS AL Cu Ni	100%	✓	✓	✓ (100)
	AMIG500M PLUS	✓	✓	✓	✓							CS SS	100%	✓	✓	✓ (10)
	Visual MIG500	✓	✓	✓	✓	✓	✓		✓	✓		CS SS AL Cu Ni	100%	✓	✓	✓ (100)
	Visual MIG500Pro	✓	✓	✓	✓	✓	✓	✓	✓	✓		CS SS AL Cu Ni zcs	100%	✓	✓	✓ (100)

* For Multi - Voltage Input, please check with sales for detail

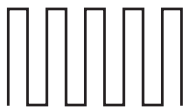
CS Carbon Steel SS Stainless Steel Cu Copper Ag Al-Mg alloy AL Aluminum zcs ZincCoatedSteel

DP Pulse-deep-penetration pulse LST-Low Spatter technology

MIG /MAG WELDERS



AOTAI MIG Series provides you variety of MIG /MAG inverter welding products for different application needs in workshop or on site. Full digital Pulse MIG series provides precise control metal transfer to work piece, optimum weld pool control and impressive seam formation. For conventional MIG /MAG series, it offers incredible stable ARC and synergic operation features for digital models.



Pulse:

Thanks to pulse technology, users can get high quality, low spatter, and better thermal control. Through the detection of the metal transfer process, it can control the current waveform of all stages in the process of pulse, so as to control excess arc heat and achieve high-quality welding.



Double pulse:

Double pulse technology enjoys far higher welding speed, better control of the weld pool, and reduced heat input in addition to the benefits of single pulse GMAW. The double pulse technology enhances the stirring force to the weld pool to release the gas in welds and reduce porosity flaws. Meanwhile, the double pulse technology will automatically produce even weld ripples, which makes welds cosmetically pleasing.



Rapid pulse:

Fast pulse not only retains the advantages of low spatter and high-quality pulse welding but also improves the welding speed, increases the deposition rate, reduces the heat input, and deepens the penetration. These benefits will bring new welding experience to you: higher welding efficiency, better arc control, less consumable consumption, faster metal transfer, and narrower HAZ.



Deep penetration:

The deep-penetration pulse enjoys a more concentrated and stable arc at the same current. It also provides higher arc pressure, faster metal transfer, deeper penetration, fewer welding defects, and higher root fusion quality. Reduced groove angle saves filler materials, and reduced numbers of welding layers and passes save welding time and improve welding efficiency.









Low spatter:

Full digital high-speed fine control technology realizes precise control for the transfer of each droplet. Barely any spatter generates during welding, which makes it cost less time on polishing, and improves deposition rate and welds quality. It also enjoys strong weld seam bridging ability that can control welds formation and better minimize the deformation.

Accessories for MIG /MAG Series

	Item NO.	Picture	Model /Specification	Machine Model
Gas-Cooled Torch	310030-00037H		N24 3m Rated 60%@250A(CO ₂) /220A (mixed gas) Gas cooled, Euro connector Wire size: 0.6mm-1.2m	MIG Series AMIG Series AMIG-PM Series
	310030-00664H		N36 3m Rated 60%@340A (CO ₂) /300A (mixed gas) Gas cooled, Euro connector Wire size: 0.8mm-1.6m	
	310030-00023H		MB36KD 3m Rated 60%@340A(CO ₂) /300A(mixed gas) Gas cooled, Euro connector Wire size: 1.0mm-1.6mm	
Water-Cooled Torch	310040-00057H		MB501D 3m Rated 100%@500A (CO ₂) /450A (mixed gas) Water cooled, Euro connector Wire size: 1.0mm-1.6mm	
	310040-00403H		PP401D 8m Rated 100%@350A (CO ₂) /320A (mixed gas) Water cooled, Euro connector Wire size: 0.8mm-1.6mm Push-pull drive	
Digital Torch	310040-00162H		MMB5000 DM 501W 3m Rated 100%@500A (CO ₂) /450A (mixed gas) Water cooled, Euro connector Wire size: 1.0mm-1.6mm	AMIG-PM Series
	310030-00750H		SGB3800 3m Rated 60%@320A (CO ₂) /290A (mixed gas) Gas cooled, Euro connector Wire size: 0.8mm-1.2mm	
	 <p>On /Off Switch LED On /Off Illumination Up /Down Mouse Control</p>		 <p>On /Off Switch LED On /Off Illumination Job Mode & Display Up /Down Mouse Control</p>	

	Item NO.	Picture	Model /Adjustable Parameters	Machine Model
Wire Feeder	320130-00158H		Mini WF-K series <ul style="list-style-type: none"> • Closed type • Gas-cooled /water cooled option • 4 rollers • 500×200×350mm • 11kg 	MIG Series AMIG Series
	320130-00191H		WF-P series <ul style="list-style-type: none"> • Plastic case • Closed type /encoder motor • Gas-cooled /water cooled option • Digital display • Digital communication interface 4 rollers 	AMIG-PM Series
	320010-00050		WF-500-A <ul style="list-style-type: none"> • Display current and voltage • Replaceable flame resistance case • Full-closed structure from generating The quick connecting design of • Wire feeding mechanism with large torque 	MIG Series AMIG Series
Remote controller	340010-00138H		MIGYK-III <ul style="list-style-type: none"> • Display Current & WFS & Voltage & Arc length & Job number • Adjustment Current & WFS & Voltage & Arc length & Job number • Cable length L=5m 	AMIG-PM Series AMIG-PMC

	Item NO.	Picture	Model /Adjustable Parameters	Machine Model
Carriage	921060-00025		AWC500-2C <ul style="list-style-type: none"> • Horizontal and vertical adjustment • Powered by battery • Guide wheel 	MIG Series AMIG Series AMIG-PM Series
	921060-00026		AWC500-6 <ul style="list-style-type: none"> • Horizontal and vertical adjustment • Torch swing control • Powered by battery • Guide wheel 	



Visual MIG500 is an advanced pulse welding equipment with high efficiency, high quality, and a high deposition rate. It adopts a 7" LCD for direct display and simple operation. It finely controls the waveform through a high-speed ARM 32-bit digital chip to realize the breakthrough of the advanced MIG welding process. It adopts AOTAI's new-generation high-frequency main circuit platform to precisely control the arc shape and greatly improve the welding effect. Visual MIG500 is a welding product that can represent new-generation technology.

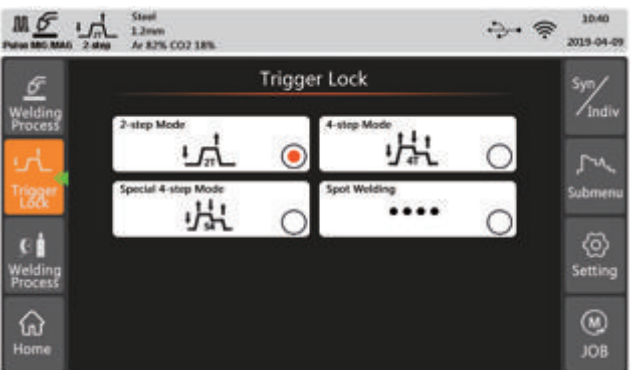
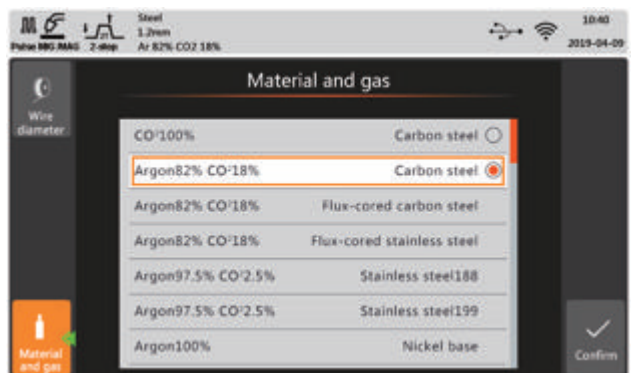
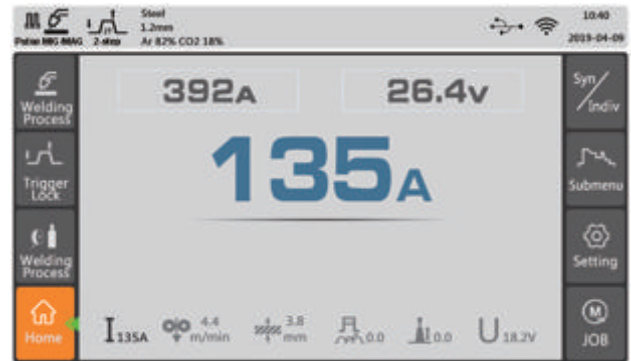
Features and Benefits

- LCD HMI: 7" LCD touchscreen
- High-frequency inverter: 60kHz inverting frequency, finely managing droplet energy in real-time, concentrated arc energy, and high arc stiffness
- Stable arc: latest energy control solution, up to 45m pulse welding loop cable, stable welding with low current, non-broken arc
- Precise current: wider adaptive range of mixed gas, more precise consistency between electrode extension length and current
- Easy arc striking: freely switch between arc starting modes, high arc striking success rate
- Advanced processes: It equips pulse, double pulse, rapid MIG, deep penetration penetration, and CV welding process modules as standard, low spatter, and other welding processes as optional. Customized developing process modules according to customer requirements are available.
- Aluminum alloy welding expert: strong oxidation film breakthrough ability of aluminum alloy welding, strong arc directivity, even metal transfer, fine and beautiful welds appearance
- Stable wire feeding: Newly designed twin-closed-loop wire feeding control system cooperates with a large-torque permanent magnet motor to ensure precise and stable wire feeding
- One-key operation: save and recall 100 sets of parameters
- Exclusive usage: Bound via IC card, exclusive usage for the nominated person, quality control, and quality traceability



Technical Specification

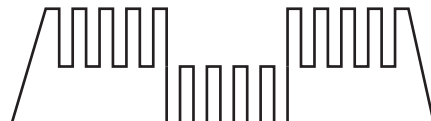
	Visual MIG500
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)	25
Rated input current (A)	38
Display	7" LCD (Touch screen)
Range of welding current (A)	60~500
Range of welding voltage (V)	17~39
OCV (V)	76
Duty cycle (%)	100
Full-load efficiency (%)	≥87
Wire diameter (mm)	Φ1.0, Φ1.2, Φ1.4, Φ1.6
Gas flow (L/min)	10~25
Dimension (mm3)	660*320*560
Weight (kg /lb)	55 /121.3
Insulation class	H
IP class	IP23



Pulse:



Double pulse:



Rapid pulse:



Deep penetration:





Visual MIG500 Pro is an iterative high-speed platform MIG welding machine. It adopts a 7" LCD for direct display and simple operation. It realizes the breakthrough of multiple advanced MIG processes through the high-speed hardware circuit computation of FPGA digital chip. It adopts a new-generation high-frequency main circuit platform of AOTAI to precisely control the arc shape and greatly improve the welding effect. Visual MIG500 Pro is a welding product that can represent new-generation technology.

Features and Benefits

- LCD HMI: 7" LCD touch screen, easy operation
- High-frequency inverter: 60kHz inverting frequency, finely managing droplet energy in real-time, concentrated arc energy, high arc stiffness
- Stable arc: latest energy control solution, up to 45m pulse welding loop cable, stable welding with low current, non-broken arc
- Precise current: wider adaptive range of mixed gas, more precise consistency between electrode extension length and current
- Easy arc striking: freely switching arc striking mode, high arc striking success rate
- Advanced process: high-speed FGPA processor platform, hardware circuit realizes logic computation; It equips pulse, double pulses, low spatter, CV, and other welding process modules, even customized developing process modules according to customer requirements. The secondary chopper technology helps to realize optimal welding current and voltage control.
- Aluminum alloy welding expert: stronger oxidation film breakthrough ability of aluminum alloy welding, strong arc directivity, even metal transfer, fine and beautiful welds appearance
- Sheet welding expert: ultra-low spatter technology, best short-circuit arc ignition energy control, Min. thickness can reach 0.6mm
- Stable wire feeding: Newly designed twin-closed-loop wire feeding control system cooperates with a large-torque permanent magnet motor to ensure precise and stable wire feeding
- One-key operation: save and recall 100 sets of parameters
- Remote software upgrade



Technical Specification

	Visual MIG500Pro
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)	25
Rated input current (A)	38
Display	7" LCD (Touch screen)
Range of welding current (A)	60~500
Range of welding voltage (V)	17~39
OCV (V)	86
Duty cycle (%)	100
Full-load efficiency (%)	≥87
Wire diameter (mm)	Φ0.8, Φ1.0, Φ1.2
Gas flow (L/min)	10~25
Dimension (mm)	660*320*560
Weight (kg /lb)	58 /127.8
Insulation class	H
IP class	IP23



AMIG500P PLUS series is a pulse welding equipment with high efficiency, high quality and high deposition rate. It can conduct fine control to waveform and realize the breakthrough for multiple advanced MIG process through the high-speed ARM 32-bit digital chip. It also adopts new-generation high-frequency main circuit platform from AOTAI, which can precisely control arc forms and greatly improved the welding effects.

Features and Benefits

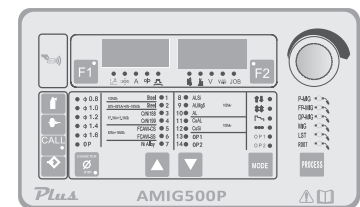
- High-frequency inverter: 60kHz frequency; real-time fine droplet energy management, concentrated and stiff arc
- Stable arc: 45m welding cable to weld carbon steel under pulse mode, stable low-current welding
- Precise current: extended applicable range for shielding gas, precise consistency between electrode extension and current
- Easy arc starting: freely switched arc starting mode, high arc starting success rate
- Platformization design: pulse, double pulse, rapid pulse, deep penetration, CV and other advanced processes modules, even customized process modules are available
- Aluminum welding experts: strong oxidation film cleaning ability, high arc directivity, even droplet transfer, beautiful welds
- Twin-core control: twin 32-bit high-speed high-precision ARM processor, nanosecond-level responding speed
- Stable wire feeding: new twin closed loops wire feeding control system + large-torque permanent magnet motor
- One-key operation: save and recall 100 sets of parameters
- Specific personnel operating: bound through IC card to achieve process controlling and quality tracing
- ECO design

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Water cooling machine
- 1 Ground cable L=3m
- 1 Water-cooled (or Gas-cooled) torch L=3m
- 1 Wire feeder with Europe connection
- 1 Trolley
- 1 wire feeder cable L=2m

Technical Specification

AMIG500P PLUS	
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)	25
Rated input current (A)	38
Range of welding current (A)	60~500
Range of welding voltage (V)	17~39
OCV (V)	76
Duty cycle (%)	100
Full-load efficiency (%)	≥87
Wire diameter (mm)	Φ1.0, Φ1.2, Φ1.4, Φ1.6
Gas flow (L/min)	10~25
Dimension (mm)	660×320×560
Weight (kg /lb)	55 /121.3
Insulation class	H
IP class	IP23



AMIG500P PLUS

Digital Multi-Process Pulse GMAW

AMIG-350PM /500PM /350PMC



CS SS Ni AL CU

AMIG-PM series is full digital pulse MIG series with multi-process feature. Due to high end DSP and waveform control technology, it provides outstanding control of arc and weld pool and brings spatter free welding quality and high efficient productivity. It can work with digital wire feeder and digital torch to achieve precise control and be ideal for both automation /robotic welding and manual welding.

Features and Benefits

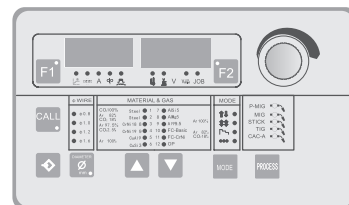
- Full digital multi-core MCU + DSP control
- Built-in expert database, performing well in solid-cored and flux-cored arc welding on carbon steel, stainless steel and other materials
- Selectable wire diameters
- Multi-process: DOUBLE PULSE MIG /PULSE MIG /CV MIG /LIFT TIG /MMA
- 2T /4T /SP-4T / spot welding
- Save and recall 100 sets of parameters
- Intelligent fan control technology; Eco design;
- Multiple protection against faults of welding machine and wire feeder; error code display
- Stable and robust wire feeding mechanism, 4-roller drive + encoder feedback
- Euro-type push/digital/push-pull welding torch
- Available trolley for integrated machine

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Water cooling machine
- 1 Ground cable L=3m
- 1 Water-cooled (or Gas-cooled) torch L=3m
- 1 Wire feeder with Europe connection
- 1 Trolley
- 1 wire feeder cable L=2m

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m
- 1 Gas -cooled torch L=3m



AMIG-350PM /500PM /350PMC

Technical Specification

	AMIG350PM	AMIG500PM	AMIG350PMC
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz		
Rated input capacity (KVA)	13	24	13
Rated input current (A)	20	38	20
Duty cycle (40°C)	60%@350A	100%@500A	60%@350A
OCV (V)	84	84	84
Adjustable current range (A)	25-350	25-500	25-350
Adjustable voltage range (V)	14-40	14-50	14-40
Trigger mode	2 /4T, Spot, Special 4T /Special 2T		
Wire size (mm)	0.8, 1.0, 1.2	1.0, 1.2, 1.6	0.8, 1.0, 1.2
Double pulse frequency (Hz)	0.5-5		
Job channels	100		
Protection class	IP23		IP21
Dimension (mm)	660*320*560	660*320*560	944*500*865
Weight (kg /lb)	45 /99	53 /116.3	65 /143.3



AMIG280PM series is a portable welding machine that equips a built-in 4-roller wire feeding mechanism. It is specially designed for light industry, which enjoys light weight, small size, easy transport, and stable wire feeding. AMIG280PM can be applied to weld aluminum sheets, carbon steel, and stainless steel.

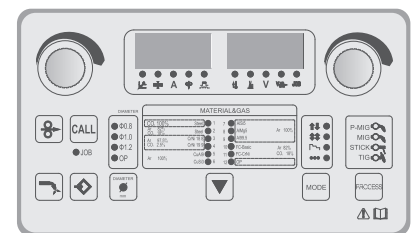
Features and Benefits

- The new digital control system and perfect combination of exact arc control algorithm, make more excellent thin sheet welding performance
- Sheet welding expert, especially suitable for 0.7-4mm aluminum alloy sheet welding
- Dual core double closed loop wire feeding control system + dual digital grating feedback control, which makes the wire feeding more precise and the arc more stable
- Multiple welding modes: single pulse, double pulse, CV, MMA, TIG
- Built-in wire feeder integrated design structure, which is small in size, light in weight and easy to move
- Synergic function easy to operate and control Standard digital interface which makes convenient for automatic machine



Standard Equipments

- 1 Power source
- 1 Connected primary cables L=3m
- 1 Ground cable L=3m
- 1 Gas cooled torch L=3m



AMIG280PM

Technical Specification

	AMIG280PM
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)	14.3
Rated input current (A)	21.5
Duty cycle (40°C)	40%@280A
OCV (V)	107
VRD (V)	16
Output current range (A)	20-280
Output voltage range (V)	15-28
Wire size (mm)	0.8,1.0,1.2
Protection class	IP21S
Dimension (mm)	630*280*480
Weight (kg /lb)	34 /74.8



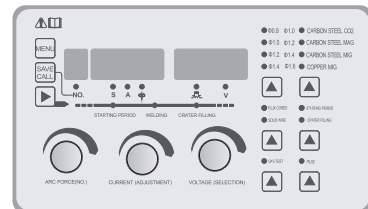
AMIG500PS series is a single pulse welding machine specially designed for carbon steel and stainless steel. It enjoys good welding performance and extremely high cost-performance.

Features and Benefits

- Embedded welding expert database, to provide intelligent combination of different welding parameters
- Stable single pulse arc length, ensure minimize splashing and excellent bead appearance
- Synergic operation for optimum welding parameters 4-roller drive makes wire feeding more stable
- Capable of storing 10 sets of user-defined parameters
- 2-step /4-step /special 4-step operation mode. In standard long seam welding, 4-step /special 4-step will reduce workload and improve efficiency greatly
- Available for carbon steel and stainless steel welding

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Water cooling machine
- 1 Ground cable L=3m
- 1 Water-cooled (or Gas-cooled) torch L=3m
- 1 Wire feeder with Europe connection
- 1 Trolley
- 1 wire feeder cable L=2m



AMIG500PS

Technical Specification

	AMIG500PS
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)	24
Rated input current (A)	38
Duty cycle (40°C)	100% @500A
OCV (V)	101
Output voltage range (V)	17-39
Output current range (A)	60-500
Protection class	IP23
Insulation class	H
Dimension (mm)	660*320*560
Weight (kg /lb)	50 /110



AMIG-LST is fully digital MIG series with new low spatter technology. Due to high end DSP + FPGA and waveform control technology. It provides outstanding control of arc and weld pool and bring spatter free welding quality and high efficient productivity.

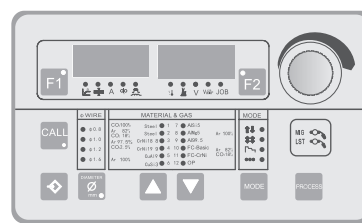
Features and Benefits

- High speed DSP+CPLD multi-core system, can shorten control period to control arc effectively
- Periodic molten drop control technology, molten pool is more stable, with beautiful welding seam formation
- Welding spatter for carbon steel decreases 80%, reduce spatter clean work; heat input reduces 10%~20%, small deformation
- Could realize weld the thickness range of 0.8-3mm carbon steel, stainless steel galvanized sheet with less spatter.
- ECO design
- Save and recall 100 sets welding parameters



Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m
- 1 Gas-cooled torch L=3m
- 1 Wire feeder with Europe connection
- 1 voltage sensor cable
- 1 wire feeder cable L=5m



AMIG350LST

Technical Specification

	AMIG350LST
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)	12.7
Rated input current (A)	19.4
Duty cycle (40°C)	60%@350A
OCV (V)	72
Adjustable current range (A)	40-350
Adjustable voltage range (V)	14-40
Trigger mode	2 /4T, Spot, Repeat
Wire size (mm)	0.8, 1.0, 1.2
Protection class	IP23
Insulation class	H
Dimension (mm)	660*320*560
Weight (kg /lb)	55 /121.3

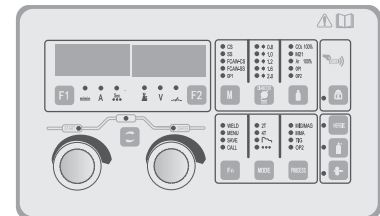
AMIG500M PLUS



AMIG500M PLUS series is a cv welding equipment with high efficiency, high quality and high deposition rate. It can conduct fine control to waveform and realize the breakthrough for multiple advanced MIG process through the high-speed ARM 32-bit digital chip. It also adopts new-generation high-frequency main circuit platform from AOTAI, which can precisely control arc forms and greatly improved the welding effects.

Features and Benefits

- High-frequency inverter: 60kHz frequency, real-time finely managing droplet energy, energy-concentrated and high-stiffness arc
- Stable arc: latest energy control solution, low-current stable welding, unbroken arc
- Precise current: wider range for mixed gas to adapt, more precise consistency between electrode extension and current
- Easy arc striking: freely switch arc-striking modes, high arc striking success rate
- Digital control: ARM core, precise control; Faster arc reacting speed
- Multi-process: CV MIG/DP CV MIG/MMA/TIG
- Flux-cored wire/solid wire; CO₂/MAG shielding gas modes for selection
- Selectable welding wire diameter
- Operating modes: 2T /4T /SP-4T /Spot welding
- Synergic/separate adjustment
- Save and recall 9 sets of parameters
- Intelligent fan control technology; Eco design
- Faults self-diagnosis function: overheat, over-current, over-voltage, output short-circuiting
- ECO design



AMIG500M PLUS

Standard Equipments

- 1 Power source
- 1 water cooling machine
- 1 wire feeder with EC
- 1 Trolley
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m
- 1 Water -cooled torch L=3m
- 1 wire feeder cable L=2m

Technical Specification

	AMIG500M PLUS
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)	25
Rated input current (A)	38
Range of welding current (A)	60~500
Range of welding voltage (V)	17~39
OCV (V)	82
Duty cycle (%)	100
Wire diameter (mm)	Φ1.0,Φ1.2,Φ1.4,Φ1.6
Gas flow (L/min)	10~25
Dimension (mm)	660*320*560
Weight (kg /lb)	55 /121.3
Insulation class	H
IP class	IP23



AMIG series is specially designed digital MIG for steel welding. The control is based on MCU technology. All important MIG preference, like burnback, creep start and synergic is already included in this power source.

Features and Benefits

- Perfect functions of starting arc and reducing melting ball while stopping arc
- ECO design
- Capable of operation with extended 50M long welding cable
- Save and recall 10 sets of user-defined parameters
- Fault self-diagnosis over heat, over current, over voltage and short circuit protections, error code display make it convenient for maintenance

Standard Equipments

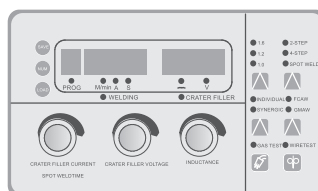
- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m
- 1 Gas-cooled (or water-cooled) torch L=3m
- 1 Wire feeder with Europe connection
- 1 wire feeder cable L=5m

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m
- 1 Gas-cooled torch L=3m



AMIG-350 /500 /630



AMIG-350 /350C /500 /630



AMIG350C

Technical Specification

	AMIG350	AMIG500	AMIG630	AMIG350C
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz			
Rated input capacity (KVA)	12.7	23	33.6	12.7
Rated input current (A)	19.3	35	51	19.3
Duty cycle (40°C)	60%@350A	100%@500A	100%@630A	60%@350A
OCV (V)	70	82	95	70
Adjustable current range (A)	40-350	40-500	40-630	40-350
Adjustable voltage range (V)	14-40	14-50	14-50	14-40
Trigger mode	2 /4T, Spot			
Wire size (mm)	0.8, 1.0, 1.2	1.0, 1.2, 1.6	1.0, 1.2, 1.6	0.8, 1.0, 1.2
Job channels	10			
Protection class	IP23			IP21S
Insulation class	H			
Dimension (mm)	660*320*560	660*320*560	660*320*560	944*500*865
Weight (kg /lb)	40 /88.3	50 /110.3	60 /132.4	65 /143.3



MIG-M series is specially designed analog MIG for steel welding. All important MIG preference, like burnback and creep start is already included in this power source. All MIG-M machines is multiprocess to perform all needs.

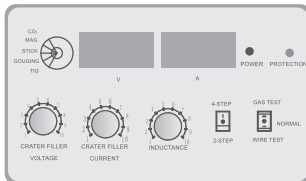
MIG-MC series is compact design.

Features and Benefits

- Unique wave control technology ensures less spatter, stable current
- Advanced creep start and flashback, easily arc striking and arc stopping
- Built-in wire feeder, but also leave socket for separate wire feeder (MIG350MC)
- Stepless adjustment of current and voltage with wide range
- 2 step /4 step
- VRD feature

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m
- 1 Gas-cooled (or water-cooled) torch L=3m
- 1 Wire feeder with Europe connection
- 1 wire feeder cable L=5m



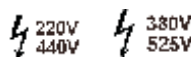
MIG-350 /350C /400 /500 /630M



MIG-350 /400 /500 /630M



MIG350MC



Multi-voltage Option

Check on Page 41

Technical Specification

	MIG350M	MIG400M	MIG500M	MIG630M	MIG350MC
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz				
Rated input capacity (KVA)	12.7	18.7	23.4	33.6	12.7
Rated input current (A)	19.4	28.4	36.1	51.0	19.4
Duty cycle (40°C)	60%@350A	60%@400A	100%@500A	100%@630A	60%@350A
OCV (V)	70	70	82	95	70
Adjustable current range (A)	60-350	60-400	60-500	60-630	20-350
Adjustable voltage range (V)	14-40	14-40	14-50	14-50	14-40
Trigger mode	2 /4T				
Wire size (mm)	0.8, 1.0, 1.2	0.8, 1.0, 1.2	1.0, 1.2, 1.6	1.0, 1.2, 1.6	0.8, 1.0, 1.2
Electrode size (mm)	2.0-6.0				
Protection class	IP23			IP21S	
Insulation class	H				
Dimension (mm)	660*320*560	660*320*560	660*320*560	660*320*560	944*500*865
Weight (kg /lb)	40 /88.3	40 /88.3	50 /110.3	60 /132.4	65 /143.3



MIG series is specially designed analog MIG for steel welding. All important MIG preference, like burnback and creep start is already included in this power source.

Features and Benefits

- Low welding distortion, pretty weld formation, high welding deposit rate
- Easy arc starting with slow wire feeding
- Stopping arc procedure has reducing melting ball feature
- Less spatter due to the advanced wave form control technology
- Continuous adjustment of current and voltage with wide range
- Can weld continuously for long time with high duty cycle
- Digital display for accurate parameter preset, easy to operate
- Used for solid /flux-cored welding wire

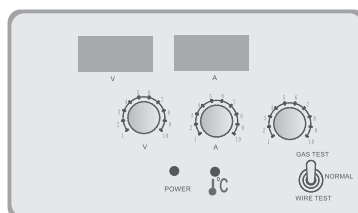
Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m
- 1 Gas-cooled (or water-cooled) torch L=3m
- 1 Wire feeder with Europe connection
- 1 wire feeder cable L=5m

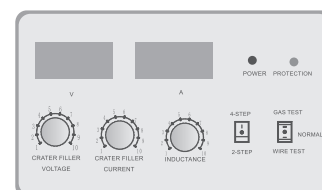


Multi-voltage Option

Check on Page 41



MIG250C



MIG-350 /500 /630



Technical Specification

	MIG250C	MIG350	MIG500	MIG630
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz			
Rated input capacity (KVA)	8.5	12.7	23	33.6
Rated input current (A)	12.9	19.3	35	51
Duty cycle (40℃)	60%@250A	60%@350A	100%@500A	100%@630A
OCV (V)	55	70	82	95
Adjustable current range (A)	40-250	60-350	60-500	60-630
Adjustable voltage range (V)	14-30	14-40	14-50	
Trigger mode	2T	2 /4T		
Wire size (mm)	0.8, 1.0	0.8, 1.0, 1.2	1.0, 1.2 ,1.6	
Protection class	IP21S	IP23		
Insulation class	H			
Dimension (mm)	500*272*495	660*320*560	660*320*560	660*320*560
Weight (kg /lb)	30 /66.3	40 /88.3	50 /110.3	60 /132.4



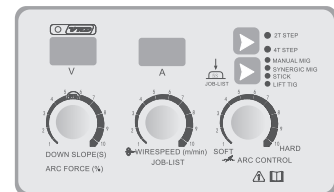
AMIG210M /PM series is a portable welding machine. It is powered by a 230V power supply and specializes in performing multi-process welding on carbon steel, stainless steel, aluminum, and other materials. AMIG210M /PM is a product specially designed for civil /thin sheets applications.

Features and Benefits

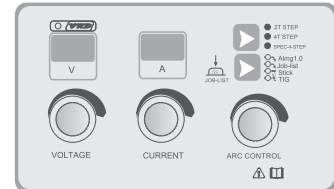
- Multi-process: MMA, lift TIG, MIG/MAG, FCAW-G/S, (pulse-AMIG210PM)
- Portable design: 17kg, robust carrying handle, reserved strap mounting holes
- Built-in wire feeding mechanism: 5kg (200mm) and 15kg (270mm)
- Available welding wire spool
- Optional various torches: push welding torch, pull welding torch
- Safe and reliable: VRD design, multiple insulations for protection inside the welding machine
- Multiple protections: over-current and over-voltage, fault self-diagnosis, error code display

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m
- 1 gas cooled torch
- Spool gun (optional)



AMIG210M



AMIG210PM

Technical Specification

	AMIG210M	AMIG210PM
Rated input voltage /frequency (V/Hz)	1 phase, AC230V±10%, 50 /60Hz	
Rated input capacity (KVA)	9.7	11.4
Rated input current (A)	42	52
Duty cycle (40°C)	35% @210A(MIG)	
Modes	MMA /TIG /MIG	MMA /TIG /MIG /MIG-P
OCV (V)	63 /13.6 (VRD ON)	60
Output current range (A)	30-210 (MIG)/10-200(MMA/TIG)	
Output voltage range (V)	10-26	
Spool weight (kg)	5/15	
Wire Diameter (mm)	0.8, 1.0, 1.2	
Trigger mode	2T /4T	2T /4T /Special 4T
Protection class	IP21S	
Insulation class	F	
Dimension (mm)	540*220*420	
Weight (kg /lb)	17 /37.4	

SAW

A close-up photograph of an industrial saw cutting through a piece of metal. The saw blade is visible, creating a bright orange-red molten metal chip that is being removed. The machine is complex, with various hydraulic lines, hoses, and structural components. The background is blurred, showing a factory environment.

SAW SUMMARY

Powerful SAW



ASAW-630 /1000 /1250 /1600II
Digital DC SAW & GOUGING
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ASAW-1000 /1250ACDC
Digital ACDC SAW
Page 64



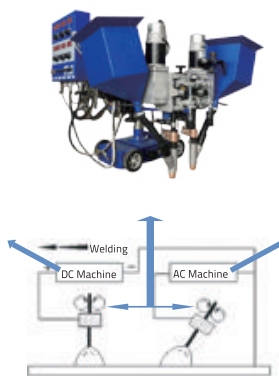
ASAW-1000 /1250IV
Digital DC SAW & MIG & GOUGING
Page 65



ASAW1250IIX
Double stations MIG
Page 68



ASAW-1000 /1250IIZ
Special tractor
Page 66



TAMDEM-1000 /1250
Page 69

CHOOSE YOUR MODEL

Model		SAW DC	SAW AC	SAW Twin-Wire	SMAW	Gouging	GMAW	Strip Cladding	ESW	Weldable Metals	Program Saving
3-Phase	ASAW-630 /1000 /1250 /1600II	●		●	●	●		●	●	CS / AS / SS / TiS	↓ (10)
	ASAW-1000 /1250IV	●		●	●	●	●	●	●	CS / AS / SS / TiS	↓ (10)
	ASAW1250IIz	●			●	●				CS / AS / SS / TiS	↓ (10)
	ASAW1250IIx	●			●	●	●			CS / AS / SS / TiS	↓ (10)
	TANDEM-1000 /1250	●	●	●	●	●				CS / AS / SS / TiS	↓ (10)
	ASAW-1000 /1250ACDC	●	●	●	●	●				CS / AS / SS / TiS	↓ (10)

● Excellent **Mg** Al-Mg alloy **cs** Carbon Steel **ss** Stainless Steel **AS** Alloy Steel
ESW-Electroslag Welding

FOR HEAVY INDUSTRY

SHIP BUILDING

OFFSHORE

PIPELINE INDUSTRY

HEAVY MACHINERY

POWER STATION

STEEL FABRICATION

SAW WELDERS



Aotai SAW series provides customer best application with variety of submerge ARC welding, single wire, twin wire, tandem system, strip cladding with column and many other different solutions.

1. Using of inverter technology and CC /CV mode in digital power source give a high quality and stable of welding.
2. Friendly user interface for easy operation and setting of welding parameters
3. AC power source in cooperating with DC power source gives ability to use high end technology:
 - Twin Arc
 - Tandem Arc
4. Professional design for harsh industrial application , with extra coating inner structure to protect against dust, moisture and etc.
5. All models can be integrated with automation system to increase the welding performance
6. High duty cycle up to 100% for non-stop work in heavy duty projects.
7. Memory up to 10 programs (digital)

More for special technology

Twin welding:

This technology can be used for special project to increase the welding performance by using two welding wires from 1.6 mm to 2.4 mm connected to one power source. For DC power source two wires create one arc, for AC power source two wires create two arc.

Tandem welding:

Combine two power sources with DC and AC welding current, we can create a high performance welding process with stable arc.

Performance of this process can be increased by adding additional AC power source and additional arc for every welding pass.

Strip cladding:

For high performance cladding process, it is possible to use welding strip width from 30 to 60 mm.

The performance is 10 times higher than standard cladding process using standard wire.

Accessories for SAW Series

	Item NO.	Picture	Model /Adjustable Parameters	Machine Model
Welding Tractor	330010-00057H		MZC-Q1 • 3.0mm-6.0mm thick wire, pipe welding • WFS: 0.25-2.5m/min • Dimension: 800*500*700	ASAW Series
	330010-00022H		MZC-P1 • WFS: 0.25-2.5m /min • Wire size: 3.0-6mm • Dimension: 1020*480*1000	
	330020-00018H		MZC-P3 • WFS: 0.25-2.5m /min • Wire size: 3.0-6mm Dimension: 1100*900*770	Tandem-1000 /1250
	330020-00001H		MZC-P4 • WFS: 0.55-6m /min • Wire size: 1.6-2.4mm • Dimension: 1020*480*740	ASAW Series
Welding Head	930010-00025H		Cladding head • DJ-60 • Cladding width: 30-60mm	ASAW Series
	331119-00074H		Machine head • WFS: 0.25-2.5m /min • Wire size: 3.0-6.0mm	ASAW Series
Flux Recovery System	971021-00279H		• Load capacity: 50kg • Level recovery distance: 10-15m • Level transportation distance: 8-25 • Up and down speed of boom: 5-7m	Automation Equipment
	361023-00080H		Gas drive	ASAW Series
ESW	220900-00731H		Consumable guide eletroslag welding	ASAW Series



ASAW-II Series provides customer best application with variety of submerge ARC welding, single wire, twin wire, tandem system, strip cladding with column and many other different solutions.

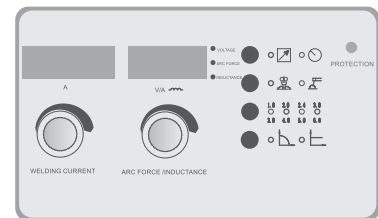
Features and Benefits

- MCU+CPLD controlled technology, precise control, good welding performance
- Embedded expert program with 10 sets of complete welding parameters
- Flexible adjustment of welding parameters, reliable and convenient maintenance performance, low failure rate
- Weakly influenced by input voltage fluctuation
- Featured function of wire diameter selection
- Digital communication between tractor and welder
- 100% duty cycle
- Smart fan feature greatly expands working life of the fan and reduces fault rate
- Self-diagnostic function with error code display



Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 2 Ground cable L=5m (630II 1 Ground cable)
- 2 Welding cable L=15m(630II 1 Welding cable)
- 1 Control cable L=16m
- 1 Tractor



ASAW-630 /1000 /1250 /1600II

Work with Tractor
Check on page 62

Technical Specification

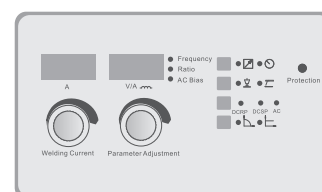
	ASAW630II	ASAW1000II	ASAW1250II	ASAW1600II
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz			
Rated input capacity (KVA)	34	55	69	88
Rated input current (A)	51	83	105	130
Duty cycle (40C)	100%@630A	100%@1000A	100%@1250A	100%@1600A
OCV (V)	89	84	92	92
Adjustable current range (A)	60-630	60-1000	60-1250	60-1600
Adjustable voltage range (V)	22-44			
Wire size (mm)	1.6-3.0	3.0-6.0		
Protection class	IP21S			
Insulation class	H			
Dimension (mm)	708*336*584	788*366*815	788*366*846	788*366*846
Weight (kg /lb)	55 /110.4	95 /209.8	100 /220.9	130 /287



ASAW-ACDC series applies IGBT soft switch technology, enjoy reasonable static characteristic and sound dynamic characteristic. It can perform carbon steel, stainless steel, heat resistant steel, and alloy steel welding. It has AC square wave submerged arc welding characteristic.

Features and Benefits

- High power plate welding: weld plate thicker than 3mm
- Single wire, twin-wire single arc and twin-wire twin-arc SAW
- SMAW and GOUGING processes
- Tractor enjoys digital communication control; thick wire ($\phi 3.0 - \phi 6.0$) welding tractor, thin wire ($\phi 2.0 - \phi 2.4$) welding tractor, fillet welding tractor, three-wheeled tractor and pipeline welding tractor can be applied
- Suitable to match with automation equipment and Tandem system
- CC&CV characteristics
- SAW process: arc starting current, arc starting time, slow wire feeding speed, arc stopping current, arc stopping voltage, arc stopping time and burn back time are adjustable
- Controllable AC square waveform output [AC frequency, duty cycle, DC bias] can control penetration and deposition rate of welding seam
- The control design to prevent tractor from tipping over (the function to protect against welding wire short-circuiting with workpiece)
- Save and recall 10 sets of parameters
- Intelligent fan control technology; Eco design;
- Protection against overheat, over-current, over-voltage and output short-circuiting; error code display



ASAW-1000 /1250ACDC

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 2 Ground cable L=5m
- 2 Welding cable L=15m
- 1 Control cable L=16m
- 1 Tractor

Work with Tractor	
Check on page	62

Technical Specification

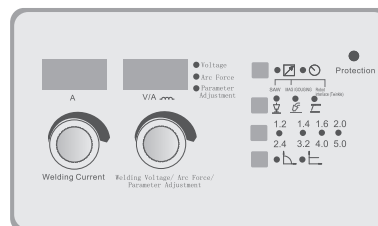
	ASAW1000ACDC	ASAW1250ACDC	
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz		
Rated input capacity (KVA)	55	69	
Rated input current (A)	83	105	
Duty cycle (40C)	100%@1000A	100%@1000A(DC)	100%@1250A(AC)
AC frequency	10-100Hz	10-100Hz	
AC duty cycle	25%-75%	25%-75%	
AC bias	±25%	±25%	
OCV (V)	90	92	
Adjustable current range (A)	50-1010	50-1010(DC)	50-1260(AC)
Adjustable voltage range (V)	20-50	20-50	
Wire size (mm)			1.6-5.0
Protection class	IP21S	IP21S	
Insulation class	H		
Dimension (mm)	1040*500*720		
Weight (kg /lb)	165 /364.7	170 /374.7	



ASAW-IV is used in pipeline prefabrication, cladding, working with robot and automation equipment, high-power gas shielded welding, repairing wear resistant material and other industries. It enjoys great popularity for its comprehensive functions and multi-purpose performance.

Features and Benefits

- Multi-process welding machine: SAW, GMAW, Gouging and SMAW
- Equipping CC and CV characteristics makes it suitable for several kinds of applications
- Plenty choices for configuration; supporting many kinds of
- SAW processes: thick wire, thin wire, strip cladding, twin-wire single arc, visible arc flux-cored wire and other welding
- Supporting several kinds of GMAW process: single wire and twin-wire single arc of solid wire welding, FCAW and so on
- Equipping digital or analog interface and supporting extension of robot interfaces achieve robotic SAW and robotic GMAW processes
- Equipping digital or analog interface enables matching with PLC and others to form welding automation system
- Enjoying great application in pipeline, steel fabrication, wear-resisting layer cladding and other industries



ASAW1000IV

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 2 Ground cable L=5m
- 2 Welding cable L=15m
- 1 Control cable L=16m
- 1 Tractor

Technical Specification

	ASAW1000IV	ASAW1250IV
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz	
Rated input capacity (KVA)	55	69
Rated input current (A)	83	105
Duty cycle (40C)	100%@1000A	100%@1250A
OCV (V)	84	92
Adjustable current range (A)	60-1000	60-1250
Adjustable voltage range (V)	14-50	22-44
Wire size (mm)	1.2-1.6 /3.0-5.0	1.2-1.6 /3.0-6.0
Protection class	IP21S	IP21S
Insulation class	H	H
Dimension (mm)	788*366*815	788*366*846
Weight (kg /lb)	95 /209.8	100 /220.9



ASAW-IIz is a welding power source specially designed for matching other brands' wire feeding mechanisms, which provides the standard analog interface and can be used to replace the product.

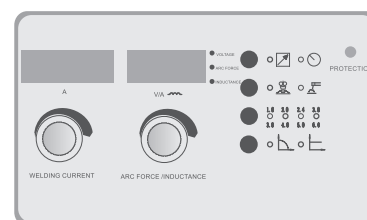
Features and Benefits

- Multi-process: SAW, Gouging, and MMA
- Double characteristics: The SAW process enjoys double characteristics of CC and CV, which is adaptive to multiple application scenarios
- Compatible with 115V wire feeding mechanism: capable of matching with Lincoln NA-5 and other control boxes to achieve compatibility and matching operation of the product
- Multiple working conditions: Thick wire, thin wire, open-arc flux-cored wire, and others can be applied for the SAW process
- Welding automation interface: RS485 digital and analog interfaces design, extremely easy to realize welding automation by matching with automation equipment
- Fault self-diagnosis function, error code display
- High duty cycle: 100% duty cycle



Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 2 Ground cable L=5m
- 2 Welding cable L=15m
- 1 Control cable L=16m



ASAW1250IIz

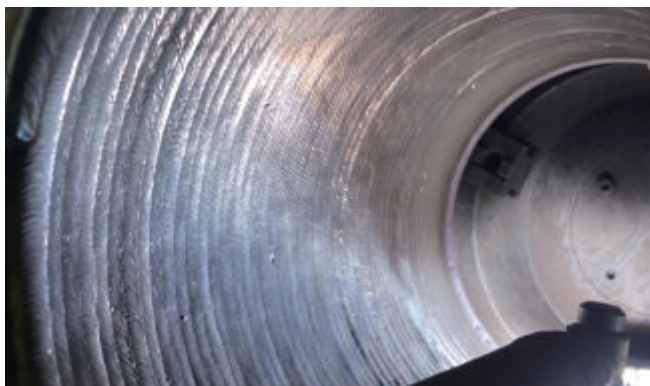
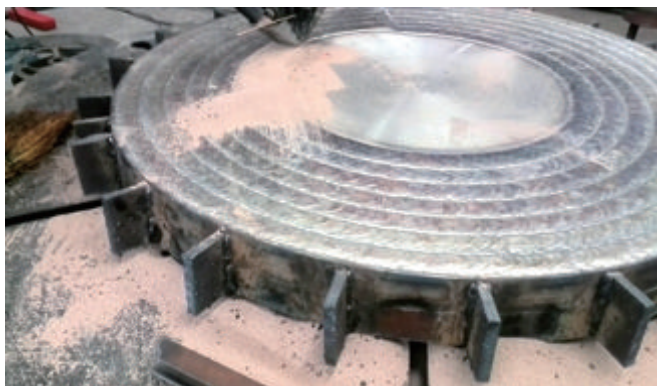
Technical Specification

	ASAW1000IIz	ASAW1250IIz
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz	
Rated input capacity (KVA)	60	69
Rated input current (A)	76	105
Rated duty cycle (%)	100	94
Rated OCV (V)	88	60A~1250A
Output current range (A)	60A~1000A	
Output voltage range (V)	22.4V~44V	
Protection class	IP21S	
Insulation class	H	
Dimension (mm)	788*366*815	788*366*846
Weight (kg /lb)	95 /209.8	100 /220.9



**Digital
SAW**

ASAW-1000 /1250Hz

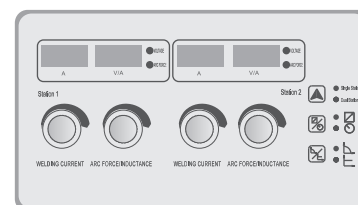




ASAW1250IIx is a two-station welding machine that can not only cooperate with two MIG wire feeders at the same time without any interference, but also be used in parallel to perform gouging process. ASAW1250IIx is a special-purpose production for the cladding industry.

Features and Benefits

- CS /SS /wear-resisting plates cladding
- SAW: open-arc cladding process; accessible to match with Lincoln NA-5 control box
- GOUGING: carbon arc air gouging process
- GMAW: cladding process (1.2 /1.6)
- Dual-station GMAW process, dual wire feeder work separately with no interference
- Dual-station GOUGING process, matching with automatic carbon arc air gouging equipment
- Paralleling two positive outputs to realize single-station high-current gouging function
- Automation interfaces: easy to realize automation
- Analog switch, setting potentiometer, and analog interface for matching with automation; actual current and voltage analog signal output, successful arc striking contact signal
- Wire diameter: 1.2-1.6mm for gas shielded welding, over 2.0mm for FCAW-S
- Digital operation interface; for dual-station operation, current and voltage can be controlled separately, actual current and voltage can be displayed separately
- Supplying power for automation matched low-power equipment: 250W, AC110V
- Adjustable gas pre-flow time, gas post-flow time, burn back time and slow wire feeding speed for GMAW process
- Intelligent fan control technology; Eco design
- Protection against overheat, over-current, over-voltage, output short-circuiting and others; error code display



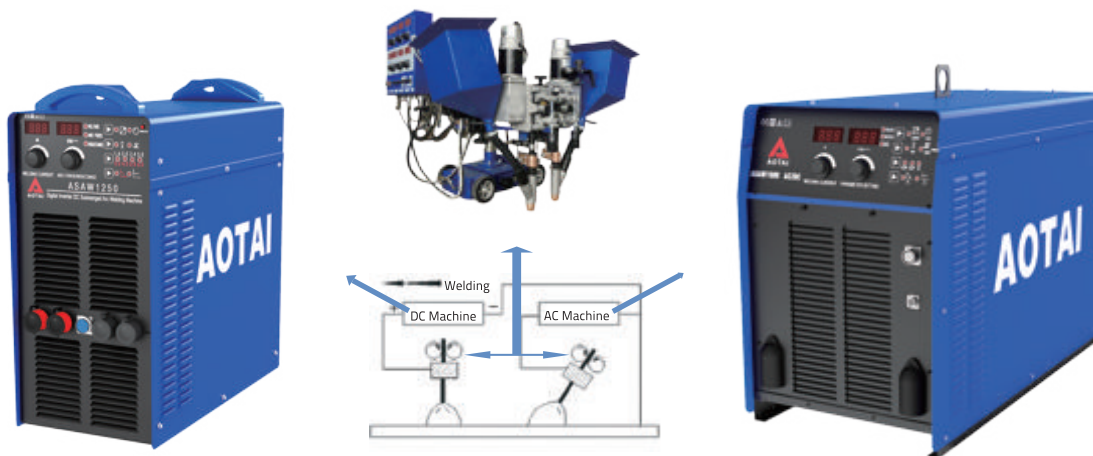
ASAW1250IIx

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 2 Ground cable L=5m
- 2 Wirefeeder cable L=5m
- 2 wirefeeder
- 2 MIG/MAG torch
- 1 Control cable L=16m

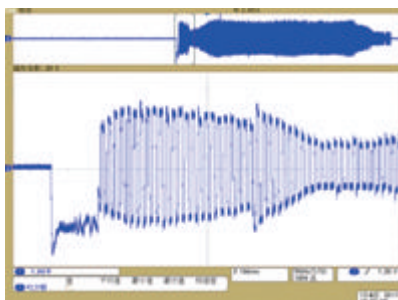
Technical Specification

ASAW1250IIx	
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)	76
Rated input current (A)	105
Duty cycle (40C)	100%@630A*2
OCV (V)	95
Adjustable current range (A)	630A*2
Adjustable voltage range (V)	22-44
Wire size (mm)	1.2-1.6/1.6-3.0
Protection class	IP21S
Insulation class	H
Dimension (mm)	770*350*800
Weight (kg /lb)	115 /253.5

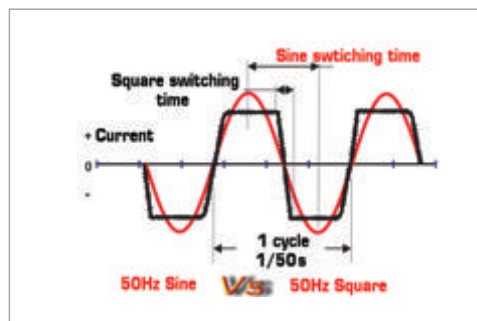


Features and Benefits

- High speed and efficient work could be done easily, and the welding speed and efficiency are over two times than single wire SAW
- Anterior DC works with posterior AC simultaneously, and separate work is also available
- The tractor head can be hung on the auxiliary machines, such as gantry, manipulator, etc.
- Applicable to the wire with the diameter more than 3mm, suitable for three welding modes: DC welding /AC welding /Tandem welding
- More adjustable parameters to guarantee the melting penetration and width, improve the welding quality



ASAW-ACDC applies DC arc starting, then converts to AC mode, arc starting success rate is much higher than AC transformer power source.



ASAW -ACDC can precisely control switching current, faster switching response, much better re-arc performance than AC transformer power source.

Technical Specification

	TANDEM1000		TANDEM1250	
	ASAW1000II	ASAW1000ACDC	ASAW1250II	ASAW1250ACDC
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz			
Rated input capacity (KVA)	55x2		69	68
Rated input current (A)	83x2		105	103
Duty cycle (40°C)	100%@1000A	100%@1000A	100%@1250A	100%@1250A
OCV (V)	89	90	92	92
Adjustable current range (A)	60-1000	50-1010	60-1250	50-1260
Adjustable voltage range (V)	20-50			
Wire size (mm)	3.0-6.0			
Protection class	IP21S			
Insulation class	H			
Dimension (mm)	788*366*815	1040*500*720	788*366*846	1040*500*720
Weight (kg /lb)	95 /209.8	165 /364.7	100 /220.9	170 /374.7



Section flange welding



Girth welding



Longitudinal seam welding by manipulator



Flat welding formation

PLASMA CUTTER



PLASMA CUTTER SUMMARY

Digital Professional Model



ACUT-300 / 400 / 500
High performance
Page 75



ACUT200
High performance
Page 76



ACUT120Y
CUT & MMA
Page 77

Plasma Cutter for CNC



ACUT120a
CNC CUT
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ACUT-60 / 100 / 120
Standard
Page 80

Portable Model

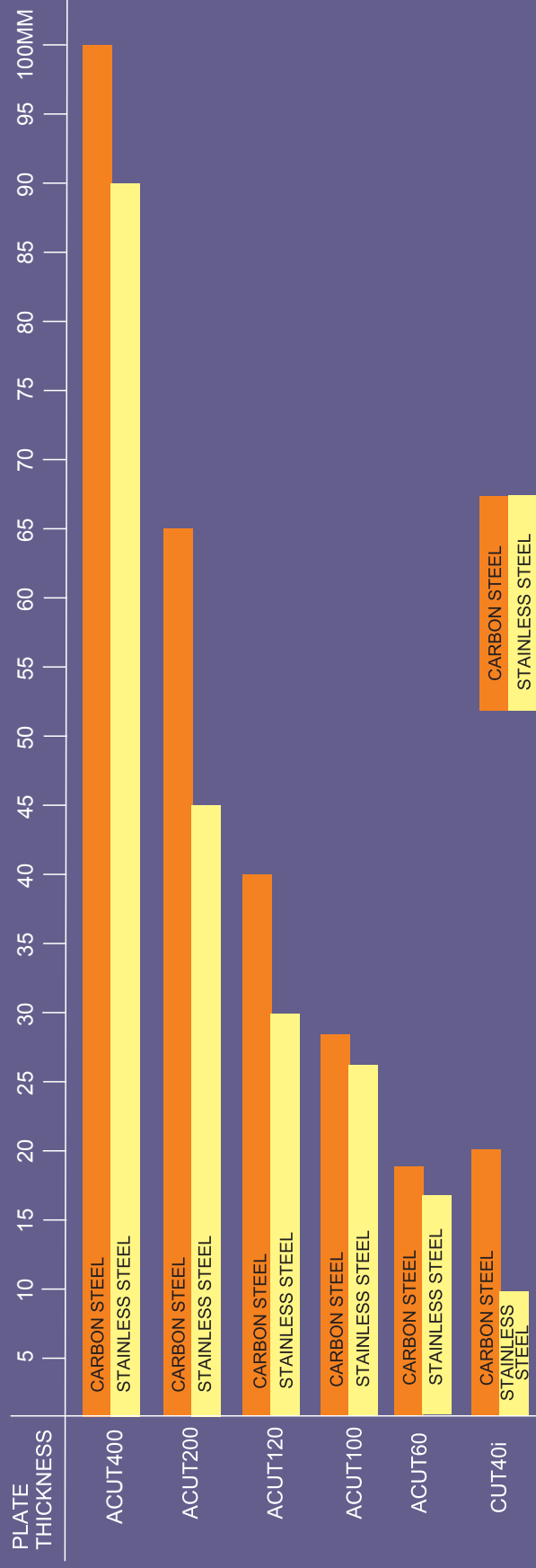


CUT40i
1ph Portable Analog Model
Page 81











CHOOSE YOUR MODEL


Model		Input Voltage*	Portable	Contact HF	NON-HF Ignition	HF Pilot-arc Ignition	CNC	MMA	Gouging
1-Phase	CUT40i	230V	✓	✓					
	ACUT60	380V		✓					
3-Phase	ACUT100 /120	380V				✓			
	ACUT120a	380V			✓		✓		
	ACUT120Y	380V				✓	✓	✓	
	ACUT200	380V				✓	✓		
	ACUT300 /400 /500	380V				✓	✓		✓

* For PFC and Multi - Voltage Input, please check with sales for detail



Accessories for CUTTER Series

	Item NO.	Picture	Model /Specification	Machine Model
Hand Cutting	310050-00196H		PT31 40A@60%, gas cooled, 4m cable, HF contact	CUT40i
	310050-00217H		P80 60A@60%, gas cooled, 5m cable, HF contact	ACUT60
	310050-00002H		A101 100A@60%, gas cooled, 6m cable, HF pilot	Gas-electric connector
	310050-00313H			ACUT100 Central socket
	310050-00106H		S105 100A@60%, gas cooled, 10m cable, LF	Gas-electric connector ACUT120
	310050-00008H		A141 140A@60%, gas cooled, 6m cable, special HF	Gas-electric connector
	310050-00318H			ACUT120 Central socket
	310050-00192H		HB200 200A@60%, water cooled, 6m cable, special HF	ACUT200
Machine Cutting	310050-00039H		PS105 100A@60%, gas cooled, 5m cable, LF	Gas-electric connector
	310050-00287H			ACUT120a Central socket
	310050-00144H		HB2000 200A@100%, water cooled, 6m cable, special HF	ACUT200
	310050-00281H		FY – A400 400A@100%, water cooled, 10m cable, special HF	ACUT400
	310050-00312H		FY-402S 400A@100%, water cooled, 8m cable, special HF	ACUT400

	Item NO.	Picture	Model /Specification	Machine Model
Relieve Valve	220900-00155H		PV-II Setting pressure: 0.05-0.7MPa Connector: M5	ACUT Series

Heavy Plasma CUTTER

ACUT-300 /400 /500



ACUT300 /400 /500 cutting machine is a sharp tool for thick plate cutting, which enjoys the benefits of large cutting thickness, fast cutting speed, and the ability to cut almost all materials. ACUT300 /400 /500 is the best choice for the production and fabrication of thick-plate workpieces.

Features and Benefits

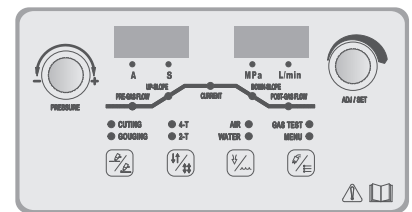
- Outstanding controlling performance: full digital control, continuous adjustable parameters such as pre-gas, post-gas, up-slope and down-slope
- Best choice for thick plate cutting: the cutting thickness of ACUT300 is 100mm; the cutting thickness of ACUT400 is 110mm.
- Humanized air control design: digital display of air pressure; air regulation function is set on front panel, which is easy to operate
- Digital display of liquid flow
- Fault self-diagnosis function: equipping error code display and automatic protection, for overheat, lack of coolant, lack of air, input undervoltage and so on
- Be equipped with automation equipment: The standard configuration includes machine interface, which is convenient to form automatic cutting equipment.
- It enjoys high reliability for semi-independent air duct design and anti-dust design inside
- 100% duty cycle

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m
- 1 Pressure-reducing valve
- 1 Plasma torch
- 1 Refrigerating machine

Technical Specification

	ACUT300	ACUT400	ACUT500
Primary power voltage /Frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz		
Rated input capacity (KVA)	74	95	123
Rated input current (A)	112	142	187
Output current range (A)	60-300	60-400	60-500
Output voltage range (V)	104-200		
Rated duty cycle (%)	100		
Open circuit voltage (V)	380		
Efficiency (%)	≥89%		
Air pressure (bar)	4.5-6		
Air flow (L/min)	≥250		
Maximum cutting thickness/CS (mm)	80	110	120
Cutting thickness in quality/CS (mm)	≤70	≤80	≤100
Dimensions (mm3)	783*364*849		
Weight (kg /lb)	116 /255.7	120 /264.6	125 /275.6
IP class	IP21S		
Insulation class	H		



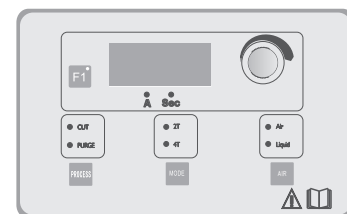
ACUT-300 /400 /500



ACUT 200 is invented for professional use in heavy duty application. ACUT power source can be used for manual cutting with HF ignition to provide best arc start and avoid defect in arc start process. ACUT series can show best result for cutting steel with thickness up to 60 mm.

Features and Benefits

- Excellent cutting ability: Concentrated energy ensures smooth and neat cutting surface
- Multiple protection: Ensuring stable operation of air compressor
- CNC interface: CNC interface and multiple functions make it enjoy great popularity
- Outstanding cut thickness: As for carbon steel cutting, an edge starts is applicable for no more than 40mm, a pierce starts is applicable for no more than 20mm.
- Long-cable cutting torch: up to 15m
- Easy arc starting: The maximum arc starting height is 10mm



ACUT200

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m
- 1 Pressure-reducing valve
- 1 Plasma torch
- 1 Water cooler 20L

Mild Steel Cutting Capability



55mm / 2.17"
200A

Stainless Steel Cutting Capability



45mm / 1.76"
200A

Technical Specification

	ACUT200
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)	34
Rated input current (A)	55
Duty cycle (40°C)	100% @200A
OCV (V)	320
Arc ignition method	Special HF
Output current range (A)	30-200
Maximum cutting thickness (mm)	60
Clean cut thickness (mm)	1-30
Air pressure (Mpa)	0.4-0.55
Water flow rate (L/min)	≥1.4
Protection class	IP23
Insulation class	H
Dimension (mm)	720*330*630
Weight (kg /lb)	58 /128.1



ACUT120Y cutting equipment is a metal cutting equipment with high efficiency, high quality and low cost. It integrates cut and weld functions to one machine, which can be applied to perform manual cutting and CNC cutting. It equips built-in air compressor, which makes it become the portable type edge tool in site installation and fabrication industries.

Features and Benefits

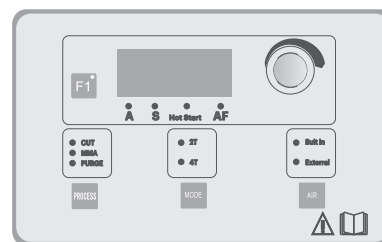
- MMA welding process: 400A welding current, hot arc start with adjustable arc force
- Built-in compressor: High quality and high power, long-time stable welding
- Excellent cutting ability: Concentrated energy ensures smooth and neat cutting surface
- Selectable air source: internal air source and external air source, varies requirements from customers can be met
- Multiple protection: Ensuring stable operation of air compressor
- CNC interface: CNC interface and multiple functions make it enjoy great popularity
- Outstanding cut thickness: As for carbon steel cutting, an edge starts is applicable for no more than 40mm, a pierce starts is applicable for no more than 20mm.
- Long-cable cutting torch: up to 15m
- Easy arc starting: The maximum arc starting height is 10mm

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m with clamp and quick plug
- 1 Pressure-reducing valve
- 1 Plasma torch

Technical Specification

		ACUT120Y
Rated input voltage /frequency (V/Hz)		3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)		19
Rated input current (A)		29
Plasma cutting	Cutting current range (A)	30 - 120
	OCV (V)	340
	Duty cycle (%)	60
	Maximum cutting thickness/CS (mm)	40
	Quality cutting thickness/CS (mm)	1-20
MMA	Welding current range(A)	50 - 400
	OCV (V)	70
	Arc force range (A)	10 - 200
	Duty cycle (%)	35
Dimension (mm)		758×322×630
Weight (kg /lb)		65 /143.3
Protection class		IP21S
Insulation class		H



ACUT120Y

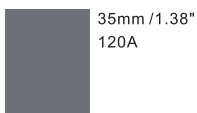


ACUT-a series is invented for professional use in heavy duty application with CNC system. ACUT-a series can be integrated with CNC system and have special non HF ignition for best arc start. ACUT-a series can show best result for cutting steel with thickness up to 15 mm.

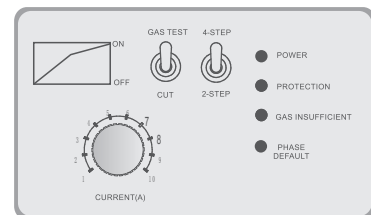
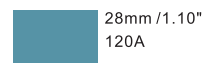
Features and Benefits

- Inverter technology provide a low weight power source that can be easily maintained or carried by the welder
- ACUT-a is air cooled power source to provide a non-stop work with 60% duty cycle with full power
- ACUT-a provides cutting of steel, stainless steel, copper, aluminum and etc
- Self-diagnostic and different protections help in work and maintain power source
- Post flow function gives additional cooling for plasma torch
- ACUT-a series can be integrated with CNC system and has special non HF ignition for best arc start
- Smart fan feature greatly expands working life of the fan and reduces fault rate

Mild Steel Cutting Capability



Stainless Steel Cutting Capability



ACUT120a

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m with clamp and quick plug
- 1 Pressure-reducing valve
- 1 Plasma torch

Work with CNC

Technical Specification

	ACUT120a
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)	16.5
Rated input current (A)	25
Duty cycle (40°C)	60%@120A
OCV (V)	340
Output current rang (A)	30-120
Arc ignition method	Non-HF (low frequency)
Maximum cutting thickness (mm)	35
Clean cut thickness (mm)	1-15
Air pressure (Mpa)	0.8
Protection class	IP21S
Insulation class	H
Dimension (mm)	621*311*557
Weight (kg /lb)	43.5 /96.1



Portable Type CNC

Portable Type CNC

Features and Benefits

- **More user friendly**
USB Port
31-64M memory for user's programs
Built-in library of commonly used figures
Free FastCAM software
- **Fast cutting speed**
Can operate at a speed as high as 6 meters per minute (20 feet /minute)
- **Larger cutting area**
CNC cutting system can cut as wide as 2.0 meters (6.6ft), as long as 15 meters (48ft)
- **Easier maintenance**
Check up and maintenance of the controller can be done simply by removing the top cover
- **Motor enable/disable button**
This feature allows the user to enable or disable the motors



Series	Effective cutting area (X*Y)				
	Standard system (mm)	Customized system (mm) (feet)			
AOCUT CNC System	1500X3000	1200X2500	1300X2500 (4'X8')		1800X2500 (6'X8')
		1200X3000	1300X3000 (4'X10')	...	1800X3000 (6'X10')
		1200X3500	1300X3500 (4'X11')	...	1800X3500 (6'X11')
		⋮	⋮	...	⋮
		1200X15000	1300X15000 (4'X48')		1800X15000 (6'X48')

Model	AOCUT CNC-1500 x 3000
Rated input voltage (V)	1phase, AC110 /220V
Frequency (Hz)	50 /60
Rated input power (W)	180
Display	LCD 7 "
Range of effective cutting (mm)	X-Axis: 1500 Y-Axis: 3000
Travelling speed (mm /min)	0-4000
Cutting speed (mm /min)	0-3000 (Plasma)
Cutting software	FastCAM standard version
Plasma power source	ACUT120a /ACUT200
Total machine weight (kg /lb)	70.5 /155.4



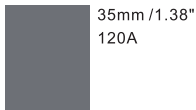
ACUT series is designed for professional use in heavy duty application. ACUT power source can be used for manual cutting with HF ignition to provide best arc start and avoid defect in arc start process. ACUT series can show best result for cutting steel with thickness up to 35 mm.

Features and Benefits

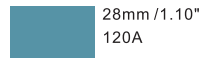
- Inverter technology provides a low weight power source that can be easily maintained or carried by the welder
- ACUT is air cooled power source to provide a non-stop work
- ACUT provides cutting of steel, stainless steel, copper, aluminum etc
- Self diagnostic and different protections help in work and maintain power source
- Post flow function gives additional cooling for plasma torch
- Smart fan feature greatly expands working life of the fan and reduces fault rate



Mild Steel Cutting Capability

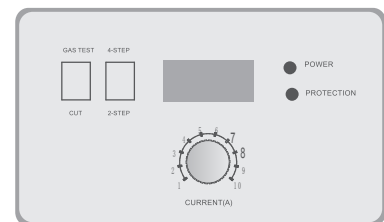


Stainless Steel Cutting Capability



Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m
- 1 Pressure-reducing valve
- 1 Plasma torch



ACUT-60 /100 /120

Technical Specification

	ACUT60	ACUT100	ACUT120
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz		
Rated input capacity (KVA)	7.5	14.4	16.5
Rated input current (A)	11.4	21.9	25
Duty cycle (40°C)	60%@60A	60%@100A	60%@120A
OCV (V)	319	319	340
Output current rang (A)	30-60	30-100	30-120
Arc ignition method	HF contact	HF pilot	HF pilot
Maximum cutting thickness (mm)	15	30	35
Clean cut thickness (mm)	1-8	1-12	1-18
Air pressure (Mpa)	0.45-0.6		
Protection class	IP21S		
Insulation class	H		
Dimension (mm)	501*232*495	576*297*557	576*297*557
Weight (kg /lb)	28.5 /63	43.2 /95.4	43.5 /96.1

Portable Plasma CUTTER

CUT40i



CUT-i is invented as a portable power source for professional use in heavy duty application. CUT power source can be used for manual cutting with HF ignition to provide best arc start and avoid defect in arc start process. CUT-i series can show best result for cutting steel with thickness up to 12 mm.

Features and Benefits

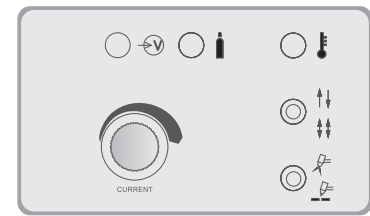
- Inverter technology provide a low weight power source that can be easily maintained or carried by the welder
- CUT-i is air cooled power source to provide a non-stop work with 60% duty cycle with full power
- CUT-i provides cutting of steel, stainless steel, copper, aluminum etc.
- Self-diagnostic and different protections help in work and maintain power source
- Post flow function gives additional cooling for plasma torch

Mild Steel Cutting Capability

12mm / 0.47"
40A

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m with clamp and quick plug
- 1 Pressure-reducing valve (Built-in)
- 1 Plasma torch



CUT40i

Technical Specification

	CUT40i
Rated input voltage /frequency (V/Hz)	1 phase, AC230V±10%, 50 /60Hz
Rated input capacity (KVA)	60%@40A
Rated input current (A)	285
Duty cycle (40°C)	15-40
OCV (V)	≤12
Output current rang (A)	1-7
Arc ignition method	0.4-0.6
Maximum cutting thickness (mm)	7
Clean cut thickness (mm)	32
Air pressure (Mpa)	HF contact
Efficiency	>80%
Protection class	IP23S
Insulation class	F
Dimension (mm)	391*155*298
Weight (kg /lb)	9 /20

ROBOTIC WELDING



ROBOTICS

MIG



Visual MIG500R
Page 86



AMIG500PR PLUS
60KHz
Page 87



AMIG-350 /500PR
Pulse /Double Pulse
Page 88



Visual MIG-350 /500ProR
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AMIG-350LST-R /350RPL
Page 90

TIG



ATIG400PR
DC/Pulse TIG
Page 91



ATIG315PAC-R
AC/DC/Pulse TIG
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Robot body



COBOT AR10
Page 93



ROBOT
Page 94



Wire feeder
Page 95



Digital interface
Page 95



Torch cleaning station
Page 96

CHOOSE YOUR MODEL

Model	GTAW	GMAW	FCAW	PULSE	Double Pulsed	LST	FP	DP	Wire	Duty Cycle	Digital Communication	Program Saving
Visual MIG500R		✓	✓	✓	✓		✓	✓	CS SS AL Cu Ni	100%	✓	✓ (100)
Visual MIG500ProR		✓	✓	✓	✓	✓	✓	✓	CS SS AL Cu Ni zcs	100%	✓	✓ (100)
AMIG350LST-R		✓				✓			CS SS zcs	60%	✓	✓ (100)
AMIG350RPL		✓	✓	✓		✓			CS SS AS Cu Ni	60%	✓	✓ (100)
AMIG350 /500PR		✓	✓	✓	✓				CS SS AL Cu Ni	100%	✓	✓ (100)
AMIG500 /630PDR		✓	✓	✓	✓			✓	CS SS AL Cu Ni	100%	✓	✓ (100)
AMIG500 PR Plus		✓	✓	✓	✓		✓	✓	CS SS AL Cu Ni	100%	✓	✓ (100)
AMIG500 RPS Plus		✓	✓	✓	✓		✓	✓	CS SS Cu	100%	✓	✓ (100)
ATIG400P-R	✓			✓					CS SS Cu Ti	60%	✓	
ATIG315PAC-R	✓			✓					CS SS AL Cu Ti	60%	✓	✓ (10)

3
Phase

CS Carbon Steel SS Stainless Steel T Titanium C Copper Ag Al-Mg alloy Si Al-Si alloy AL Aluminum
LST-Low Spatter FP-Fast pulse DP-Deep-penetration



Visual MIG500R is an advanced pulse welding equipment with high efficiency, high quality, and a high deposition rate. It adopts a 7" LCD for direct display and simple operation. It finely controls the waveform through a high-speed ARM 32-bit digital chip to realize the breakthrough of the advanced MIG welding process. It adopts AOTAI's new-generation high-frequency main circuit platform to precisely control the arc shape and greatly improve the welding effect. Visual MIG500 PLUS is a welding product that can represent new-generation technology.

Features and Benefits

- LCD HMI: 7" LCD touchscreen
- High-frequency inverter: 60kHz inverting frequency, finely managing droplet energy in real-time, concentrated arc energy, and high arc stiffness
- Stable arc: latest energy control solution, up to 45m pulse welding loop cable, stable welding with low current, non-broken arc
- Precise current: wider adaptive range of mixed gas, more precise consistency between electrode extension length and current
- Easy arc striking: freely switch between arc starting modes, high arc striking success rate
- Advanced processes: It equips pulse, double pulse deep penetration, and CV welding process modules as standard, low spatter, and other welding processes as optional.
- Customized developing process modules according to customer requirements are available.
- Aluminum alloy welding expert: strong oxidation film breakthrough ability of aluminum alloy welding, strong arc directivity, even metal transfer, fine and beautiful welds appearance
- Stable wire feeding: Newly designed twin-closed-loop wire feeding control system cooperates with a large-torque permanent magnet motor to ensure precise and stable wire feeding
- One-key operation: save and recall 100 sets of parameters
- Exclusive usage: Bound via IC card, exclusive usage for the nominated person, quality control, and quality traceability



Technical Specification

Work with Robot

	Visual MIG500R
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)	25
Rated input current (A)	38
Display	7" LCD (Touch screen)
Range of welding current (A)	60~500
Range of welding voltage (V)	17~39
OCV (V)	76
Duty cycle (%)	100
Full-load efficiency (%)	≥87
Wire diameter (mm)	Φ1.0, Φ1.2, Φ1.4, Φ1.6
Gas flow (L/min)	10~25
Dimension (mm)	660×320×560
Weight (kg /lb)	55 /121.3
Insulation class	H
Protection class	IP23



Robotic Welding Power Source

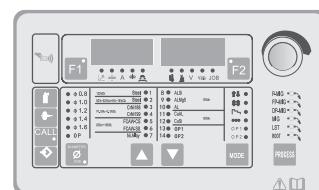
AMIG500PR PLUS



AMIG500PR PLUS is a pulse welding equipment with high efficiency, high quality and high deposition rate. It can conduct fine control to waveform and realize the break-through for multiple advanced MIG process through the high-speed ARM 32-bit digital chip. It also adopts new-generation high-frequency main circuit platform from AOTAI, which can precisely control arc forms and greatly improved the welding effects.

Features and Benefits

- High-frequency inverter: 60KHZ inverting frequency, delicately manage the energy of droplets in real time, energy-centralized and high-stiffness arc
- Stable arc: The newest energy control solution, up to 45 meters loop cable in pulsed welding, stable low-current welding with unbroken arc
- Precise current: Wider adapting range for mixture gas, more precise current consistency during welding with long electrode extension
- Easy arc starting: Freely switch arc starting mode, high arc starting success rate
- Advantage process: pulse, twin pulse, super twin pulse, rapid pulse, deep penetration, low spatter, CV and many other welding processes; customized developing process modules according to customer requirements is accessible
- Aluminum alloy welding expert: In aluminum alloy welding, it enjoys strong ability to break oxidative film, strong arc directionality, even metal transfer, beautiful seam formation.
- Twin-core control: Twin-core 32-bit ARM processor is adopted as the main control system, nanosecond response speed
- Stable wire feeding: Newly designed twin closed loops wire feeding control system cooperates with high-torque permanent-magnet machine to ensure precise and stable wire feeding.
- One-key operation: save and recall 100 sets of parameters



AMIG500PR Plus

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m
- 1 Wire feeder
- 1 Wirefeeder cable L=5m
- 1 Wire conduit
- 1 Voltage feedback wire
- 1 Analog control cable
- 1 Wire spool holder

Technical Specification

Work with Robot

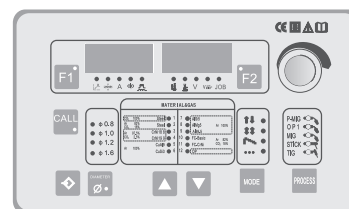
AMIG500PR PLUS	
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)	25
Rated input current(A)	38
Range of welding current(A)	60~500
Range of welding voltage(V)	17~39
OCV(V)	76
Duty cycle (%)	100
Full-load efficiency(%)	≥89
Wire diameter (mm)	Φ1.0,Φ1.2,Φ1.4,Φ1.6
Gas flow (L/min)	15~20
Dimension (mm)	660*320*560
Weight (kg /lb)	55 /121.3
Insulation class	H
Protection class	IP23



AMIG PR series is a high efficiency and high quality MIG welding equipment. It controls metal transfer precisely through high speed DSP signal processing, so as to realize spatter-free welding, reduce manual cleaning cost and improve deposition rate. It is the best choice for the application industries of carbon steel and stainless steel.

Features and Benefits

- MCU+DSP full digital control system brings precise control of welding process and realizes low spatter welding
- Multi-process: PULSE /DOUBLE PULSE /CV MIG
- Double pulses process to improve quality of welding seam; best fish-scale welding seam
- Low-spatter pulse welding widens the application range of welding machine: medium thick plate welding enjoys unlimited possibility
- Save and recall (100 sets), one-key to switch welding process
- 4 Rolls drive and the full digital twin closed loops grating feedback wire feeding system provide a more precise and stable wire feeding
- Fault self-diagnosis function, to achieve safe protection for welding machines and robots
- Lots of configuration solutions of robot peripherals ensure worry-free connection with robot



AMIG-350 /500PR

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m with clamp
- 1 Wire feeder
- 1 Wirefeeder cable L=5m
- 1 Wire conduit
- 1 Voltage feedback wire
- 1 Analog control cable
- 1 Wire spool holder

Technical Specification

Work with Robot

	AMIG350PR	AMIG500PR
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz	
Rated input capacity (KVA)	15.5	29
Rated input current(A)	24	44
Range of welding current(A)	60~350	60~500
Range of welding voltage(V)	17~31.5	17~39
OCV(V)	84	
Duty cycle (%)	60	100
Wire diameter (mm)	Φ0.8,Φ1.0,Φ1.2	Φ1.0,Φ1.2,Φ1.6
Gas flow (L/min)	15~20	
Dimension (mm)	660x320x560	
Weight (kg /lb)	50 /110.2	55 /121.3
Insulation class	H	
Protection class	IP23	



Robotic Welding Power Source

Visual MIG-350 /500ProR



Visual MIG350 /500 ProR is an iterative high-speed platform MIG welding machine. It adopts a 7" LCD for direct display and simple operation. It realizes the breakthrough of multiple advanced MIG processes through the high-speed hardware circuit computation of FPGA digital chip. It adopts a new-generation high-frequency main circuit platform of AOTAI to precisely control the arc shape and greatly improve the welding effect. Visual MIG500 PRO is a welding product that can represent new-generation technology.

Features and Benefits

- LCD HMI: 7" LCD touch screen, easy operation
- High-frequency inverter: 60kHz inverting frequency, finely managing droplet energy in real-time, concentrated arc energy, high arc stiffness
- Stable arc: latest energy control solution, up to 45m pulse welding loop cable, stable welding with low current, non-broken arc
- Precise current: wider adaptive range of mixed gas, more precise consistency between electrode extension length and current
- Easy arc striking: freely switching arc striking mode, high arc striking success rate
- Advanced process: high-speed FGPA processor platform, hardware circuit realizes logic computation; It equips pulse, double pulses, low spatter, CV, and other welding process modules, even customized developing process modules according to customer requirements. The secondary chopper technology helps to realize optimal welding current and voltage control.
- Aluminum alloy welding expert: stronger oxidation film breakthrough ability of aluminum alloy welding, strong arc directivity, even metal transfer, fine and beautiful welds appearance
- Sheet welding expert: ultra-low spatter technology, best short-circuit arc ignition energy control, Min. thickness can reach 0.6mm
- Stable wire feeding: Newly designed twin-closed-loop wire feeding control system cooperates with a large-torque permanent magnet motor to ensure precise and stable wire feeding
- One-key operation: save and recall 100 sets of parameters
- Remote software upgrade



Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m with clamp
- 1 Wire feeder
- 1 Wirefeeder cable L=5m
- 1 Wire conduit
- 1 Voltage feedback wire
- 1 Analog control cable
- 1 Wire spool holder

Work with Robot

Technical Specification

	Visual MIG350ProR	Visual MIG500ProR
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz	
Rated input capacity (KVA)	14	25
Rated input current (A)	26	38
Range of welding current(A)	60~350	60~500
Range of welding voltage (V)	17~31.5	17~39
OCV(V)	90	86
Duty cycle (%)	60	100
Full-load efficiency(%)	≥87	
Wire diameter (mm)	Φ0.8, Φ1.0, Φ1.2	Φ1.0, Φ1.2, Φ1.6
Gas flow (L/min)	15~20	
Dimension (mm)	660*320*560	
Weight (kg /lb)	55 /121.3	
Insulation class	H	
Protection class	IP23	



AMIG350LST-R/RPL is a welding equipment with high efficiency, high quality and low spatter. It precisely controls metal transfer through high-speed DSP signal processing, in order to realize spatter-free welding, reduce labor cleaning cost and improve deposition rate. It comes with three technologies. Furthermore, it is the best choice for the applied industries of galvanized carbon steel sheet and medium plate.

Features and Benefits

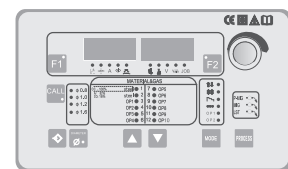
- Full digital control: MCU+DSP core, high-speed control of metal transfer cooperates with chopping wave technology to achieve an advanced welding process
- Multi-process: LST/CV MIG, PULSE MIG(AMIG350RPL)
- LST - low spatter technology: over 80% reduced spatter, reduced labor cost
- Sheet welding expert: 0.7mm thick carbon steel sheet, outstanding galvanized sheet welding performance
- One-key operation: save and recall 100 sets of parameters

Standard Equipments

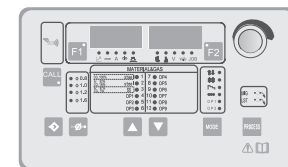
- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m with clamp
- 1 Wire feeder
- 1 Wirefeeder cable L=5m
- 1 Wire conduit
- 1 Voltage feedback wire
- 1 Analog control cable
- 1 Wire spool holder

Technical Specification

	AMIG350LST-R	AMIG350RPL
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz	
Rated input capacity (KVA)	14	
Rated input current (A)	21	
Range of welding current(A)	60~350	
Range of welding voltage (V)	17~31.5	
OCV(V)	90	
Duty cycle (%)	60	
Full-load efficiency(%)	≥87	
Wire diameter (mm)	Φ0.8, Φ1.0, Φ1.2	
Gas flow (L/min)	15~20	
Dimension (mm)	660*320*560	
Weight (kg /lb)	55 /121.3	
Insulation class	H	
Protection class	IP23	



AMIG350RPL



AMIG350LST-R

Work with Robot



Robotic Welding Power Source

ATIG400PR



ATIG400PR is a TIG welding power source specially designed for robots, which integrates wire feeding control, arc control, robotic interface, and other functions. ATIG400PR enjoys outstanding welding performance and high reliability.

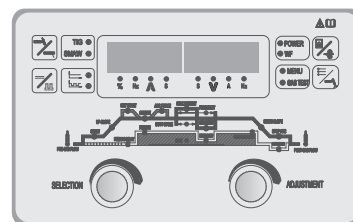
Features and Benefits

- Multi-process: DC TIG /Pulse TIG
- 100% arc starting success rate: high-frequency arc starting cooperates with suitable arc striking current, outstanding arc striking performance
- Short circuit protection: prevent tungsten electrode from sticking with the workpiece due to short circuit during welding
- Multiple wire feeding modes: pulse simultaneous /constant speed wire feeding modes, realizing excellent welds formation
- Stable wire feeding: 4-roll drive system + encoder speed feedback, realizing high-precision smooth wire feeding
- Abundant robotic communication interfaces: It can achieve CAN /485 /DEVICENET /ETHERNETIP /ETHERCAT /PROFINET and other digital communication through digital interface box, and human-machine control through analog and switching value



Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m
- 1 Wire feeder
- 1 Wirefeeder control cable L=5m
- 1 TIG Torch
- 1 Wire Spool
- 1 Guide hose
- 1 Analog communication cable
- 1 Welding torch liner



ATIG400PR

Technical Specification

Work with Robot

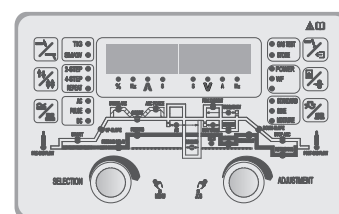
	ATIG400PR
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)	18
Rated input current(A)	28
Range of welding current(A)	5~400
Range of welding voltage(V)	17~31.5
OCV(V)	73
Duty cycle (%)	60
Full-load efficiency(%)	≥87
Wire diameter (mm)	0.3~7.0
Gas flow (L/min)	15~20
Dimension (mm)	660*330*580
Weight (kg /lb)	55 /121.3
Insulation class	H
Protection class	IP23



ATIG315PAC-R is an AC TIG welding machine specially designed for robotic welding. It equips wire feeding control, welding machine characteristics control, and other functions to realize welding aluminum, stainless steel, and other metal materials.

Features and Benefits

- Multi-process: AC TIG /DC TIG /Pulse TIG
- Multi-waveform of AC TIG: square waveform, sine waveform, mixed waveform
- 100% arc starting success rate: high-frequency arc starting, cooperating with arc starting current, outstanding arc starting performance
- Short circuit protection: prevent tungsten electrode from sticking with workpiece due to short circuit during welding
- Multiple wire feeding modes: pulse simultaneous /constant speed wire feeding modes, realizing excellent welds formation
- Stable wire feeding: 4-roll drive system + encoder speed feedback, realizing high-precision smooth wire feeding
- Save and recall 10 sets of customized parameters
- Abundant robotic communication interfaces: It can achieve CAN /485 /DEVICENET /ETHERNETIP /ETHERCAT /PROFINET and other digital communication through digital interface box, and human-machine control through analog and switching value.



ATIG315PAC-R

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m with clamp and quick plug
- 1 Wire feeder
- 1 Wirefeeder control cable L=5m
- 1 TIG Torch
- 1 Wire Spool
- 1 Guide hose
- 1 Analog communication cable
- 1 Welding torch liner

Technical Specification

Work with Robot

	ATIG350PAC-R
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50/60Hz
Rated input capacity (KVA)	13
Rated input current(A)	22.4
Range of welding current(A)	5~315
Range of welding voltage(V)	10~22.6
OCV(V)	66
Duty cycle (%)	60
Wire diameter (mm)	1.6-5
Gas flow (L/min)	5-25
Dimension (mm)	660*330*560
Weight (kg /lb)	57 /125.6
Insulation class	H
Protection class	IP23



Robotic Welding Robot Body

COBOT AR10

Aotai Cobot Solutions are the robot system that can be deployed quickly. Compared with traditional welding robot solutions, Aotai Cobot Solutions possess advantages of flexible deployment, broad adaptation, and low cost.

Features and Benefits

- Full-platform operation terminal, modularized programming, rapid programming
- Arm moves via drag-and-drop, intuitive and convenient, rapid locating
- Advanced welding process package, good interconnection and intercommunication with welding machines; multiple oscillating types, perfect welds appearance
- Open hardware interfaces, plug-in liked components, easy to deploy in various working conditions and environments
- To ensure safe welding operations to achieve error-free human-robot collaboration, automatically detecting collisions, highly sensitive responding
- Small size, light weight, design to be moveable, 10-minute installation
- IP54 rate protection, adaptive to the harsh environment
- Design for long life span, 32000-hour designed service life



Technical Specification

Model		AR10
Weight		40 kg
Maximum Payload		10 kg
Working Radius		1300 mm
Max Reach		1525 mm
Rated input voltage /frequency (V/Hz)		1 phase, AC220V, 50 /60Hz
Maximum Speed of TCP		4 m/s
Joint Ranges	J1	±360°
	J2	±360°
	J3	±160°
	J4	±360°
	J5	±360°
	J6	±360°
Maximum Speed of Joints	J1/J2	120°/s
	J3/J4/J5/J6	180°/s
End-Effector I/O Interface	DI/DO/AI	2
	AO	0
Communication Interface	Communication	RS485; Devicenet
Communication Interface	DI	16
	DO/DI	16
	AI/AO	2
	ABZ Incremental Encoder	1
Repeatability		±0.03 mm
Communication		TCP/IP, Modbus, Wi-Fi
IP Rating		IP54
Temperature		0°C-45°C
Power		350W
Materials		Aluminum alloy, ABS plastic



In order to ensure the welding quality and efficiency, the robot system is equipped with a complete self-protection function and arc welding database. The main functions are as follows.

Features and Benefits

- Temporary stop self-recovery
- Torch cleaning and wire cutting function (optional)
- Weld seam locating function (optional)
- Anti-collision function
- Expert database
- Teaching programming
- Fault self-diagnosis
- Torch swing



Technical Specification

Model		FANUC M-10iD/8L
Control axes		6
Installation		Floor, Upside-down, Angle mount
Reach		2032mm
Motion range (Max speed)	J1 axis	340°(260°/s)
	J2 axis	235°(240°/s)
	J3 axis	455°(260°/s)
	J4 axis wrist rotation	380°(430°/s)
	J5 axis wrist rotation	360°(430°/s)
	J6 axis wrist rotation	900°(720°/s)
Maximum load capacity at wrist		10Kg
Allowable load moment at wrist	J4 axis	22.0N·m
	J5 axis	22.0N·m
	J6 axis	9.8N·m
Allowable load inertia at wrist	J4 axis	0.65kg·m ²
	J5 axis	0.65kg·m ²
	J6 axis	0.17kg·m ²
Repeatability		±0.03mm *
Weight		150kg

Installation environment

Ambient temperature 0-45°C Ambient humidity:
usually below 75%RH Short-term below 95%RH
(within one month) Vibration: below 0.5G



Robotic Welding Accessories

Wire feeder /Digital interface

The WF-500R wire feeder provided by AOTAI is specially designed for robotic welding systems, with small size and light weight.

Features and Benefits

- The wire feeding system is stable
Fully digital wire feeding control, high-resolution encoder speed feedback, high-precision speed adjustment
Four-rolls drive, Stable wire feeding
Double spring pressure arm adjustment, suitable for welding wire diameter of 0.8~1.6mm
- Easy to install and remove
Wire feed roll replacement can be done without tools
European torch interface
The overall design is compact and lightweight, which maximizes the motion performance of the robot



WF-500R	
Speed	1.5 - 22m/min
Wire size	0.8, 1.0, 1.2, 1.6
Method	Four-wheel drive
Body material	Cast aluminum
Weight	8.2kg
Control method	DC Servo

Digital interface

- Abundant digital interface;
- Standard communication protocol provides a easier communication because robot and welding machine;
- Light and handy structure design offers a easy installation and connection with welding machine;
- Standard interface design, easy to install and use





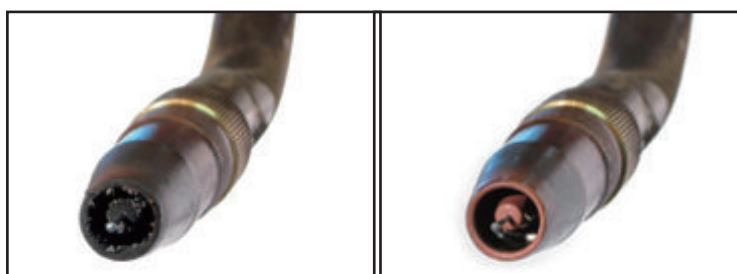
In order to ensure the welding quality and improve the utilization rate of the robot, the spatter inside the welding torch must be cleaned regularly. The robot system can be programmed to regularly send the welding gun to the torch cleaning station for spatter cleaning. The interval period of torch cleaning is based on different welding tasks and processes, and is preset according to experience.

When it is difficult for the medium and heavy plate robot system or group to ensure the consistency of the workpiece, it is necessary to use the contact sensor to find the welding seam, and the consistent welding wire length becomes a necessary condition. Ensure consistent dry elongation.

The torch cleaning station can quickly complete mechanical cleaning, welding slag cleaning, wire cutting and silicone oil spraying through the robot control program.



Comparison of the effect before and after cleaning the torch



Before

After

The main technical data of the torch cleaning station are as follows.

Gas nominal pressure	6bar(kgf/cm ²)
Air flow volume	10L/s
Program control	Pneumatic
Control voltage	24VDC
Clearing time	5s
Silicone oil dosage	40000 times /L

PIPELINE



Pipeline power source



DC500II
FCAW-S & CEL & TIG
Page 99



DC500IV
LST & FC-Metal & FCAW-S & CEL
Page 100



AMIG350Pipeline
LST & FCAW-G
Page 101

Automatic carriage



AT-350M
Automatic Carriage
Page 102

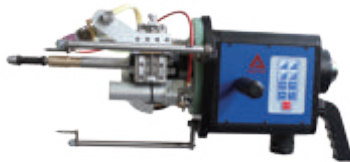


AT-900-W1
Automatic Carriage
Page 103

Orbital



WZM400 Power Source
Page 104



WTS60
Page 106



WTS40
Page 107



Advanced all-position
welding head
Page 108



TIG Orbital Welding System
Page 109



Robotic tube-to-tubesheet
welding system
Page 111

Pipeline Power Source

DC500II

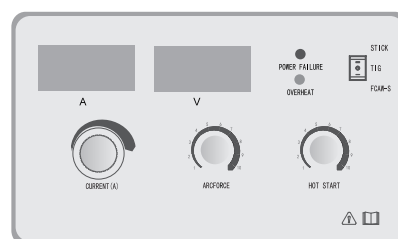


CS X70 X80

DC500II series is a welding machine specially designed for pipeline construction, which enjoys simple adjustment, convenient operation, and reliable design, and is the most suitable product for field pipeline construction.

Features and Benefits

- Multiprocess FCAW /MMA /TIG
- Anti-vibration design makes it suitable to be applied with generator;
- Generator powering;
- Waveform control technology; FCAW-S enjoys fine welding particle and good formation;
- The function specially designed for cellulose electrode welding ensures strong arc force and good back formation;
- Full-bridge inverter soft switch control technology, double IGBT modules, quick recovery diode module; long-life polypropylene filter capacitor;
- PCB is processed with three-proofing lacquer; the drive board is processed with rubber for protection;
- IP23 class protection and H class insulation;
- Protection against overheat, over-current, over-voltage/under-voltage /phase-loss;
- Full closed wire feeding mechanism is suitable for self-shielded flux-cored wire.



DC500II

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m with clamp and quick plug
- 1 Pressure-reducing valve
- 1 Plasma torch

Technical Specification

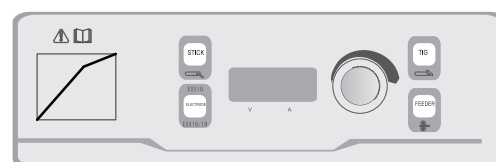
	DC500II
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±15%, 50 /60Hz
Rated input capacity (KVA)	30
Rated input current (A)	45.6
Duty cycle (40C)	100%@400A 60%@500A
OCV (V)	CV: around 83 CC: around 79
Output voltage range in CV mode (V)	12-39
Output current range in CC mode (A)	20-500
Wire type	FCAW-S
Wire size (mm)	2.0
Arc ignition method in TIG	Scratch TIG
Dimension (mm)	658*336*588
Weight (kg /lb)	50 /110.4
Insulation class	H
Protection class	IP23S



DC500IV series is a welding equipment with high efficiency, high quality and low spatter. It provides precise metal transfer control through high-speed DSP signal processing. This can realize spatter-free welding, reduce manual cleaning cost and improve deposition rate. That's why it is the best choice for CS/galvanized plate sheet application industries.

Features and Benefits

- Generator powering
- Full closed type wire feeding mechanism; welding processes and welding parameters can be selected on the panel of wire feeder
- The multi-process welding machine equips multiple pipeline welding processes
- This welding machine is the one who enjoys the most complete functions among the domestic pipeline welding machines
- It adopts independent wind channel structure design, and can be used normally in - 40°C environment
- LST(solid wire) /MT(metal core wire) low-spatter rapid root welding functions enjoy strong adaptability to stick-out length, without interference caused by multi-pass welding on the same workpiece at the same time
- PCB is processed with three-proofing lacquer; the drive board is processed with rubber for protection
- IP23 class protection and H class insulation
- Protection against overheat, over-current, over-voltage/under-voltage.



DC500IV

Standard Equipments

- 1 Connected primary cable L=3m
- 1 Ground cable L=14m with quick plug
- 1 Welding cable L=14m with electrode holder and quick plug
- 1 Flux-cored welding torch L=3m
- 1 Digital Wire feeder with 14m cable and Europe connection
- 1 Voltage feedback cable with clamp L=3.5m

Technical Specification

	DC500IV
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±15%, 50 /60Hz
Rated input capacity (KVA)	30
Rated input current (A)	45.6
Rated duty cycle (%)	60
Output current adjustment range (A)	20~500
Output OCV voltage (V)	91
The adjustment range of arc force in MMA	0~99 The recommended value 40
The arc starting adjustment range in MMA	0.0~2.0 The recommended value 1.0
Applied wire diameter (mm)	Φ0.9, Φ1.0, Φ1.2, Φ2.0
Weight (kg /lb)	48 /105.8
Dimension (mm)	615*360*460
Gas flow (L/min)	15~20
Insulation class	H

Pipeline Power Source

AMIG350Pipeline

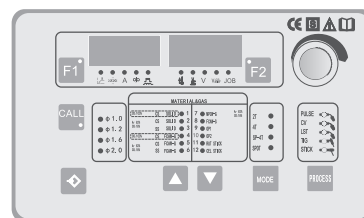


CS X70 X80

AMIG350Pipeline is a welding machine specially designed for oil & gas pipelines, which equips low spatter technology for the root welding process, and applies FCAW-G wire in the filling and cosmetic welding processes. It is a high-efficiency welding process equipment in pipeline welding.

Features and Benefits

- Extremely less welding spatter, beautiful welding seam formation
- Optimized functions of arc starting, crater filling and melted ball reducing
- Full digital control system realizes precise control and stable arc length in the process of welding
- Powerful digital error reporting function, and various faults can be displayed with error codes
- System built-in welding expert database provides intelligent parameters combination
- Friendly operation interface and synergic adjustment method make it easy to master
- Multi process: Pulse, CV, Low spatter, Low spatter root welding , Flux-cored gas shielded arc welding
- Solid-cored gas shielded arc welding
- Save and recall 10 sets of customized parameters



AMIG350Pipeline

Standard Equipments

- 1 Power source
- 1 Connected primary cable L=3m
- 1 Ground cable L=3m
- 1 Gas-cooled torch L =3m
- 1 Gas-cooled torch for root welding L =3m
- 1 Wier feeder with Europe connection
- 1 wirefeeder cable L=5m

Work with carriage

Check on page 98

Technical Specification

	AMIG350Pipeline
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±15%, 50 /60Hz
Rated input capacity (KVA)	14
Rated input current (A)	21
Rated duty cycle (%)	60
OCV (V)	96
Output current/voltage range (A/V)	60-350 /17-31.5
Diameter of welding wire (mm)	0.8,1.0,1.2
Wire feeding type	Push
Gas flow rate (L/min)	15-20
Cooling mode of welding torch	Air-cooled
Dimension (mm)	660*320*560
Weight (kg /lb)	55 /121.3
Insulation class	H
Protection class	IP23

Features and Benefits

- Pipeline automatic single torch welding system adopts flexible steel-made rail that enjoys high rigidity, light weight and convenient mobility. The welding tractor adopts the traveling method of meshing operation of gear and rack, which enjoys high traveling precision.
- Besides, it also enjoys a longer service life because the rack can be replaced independently. Moreover, it adopts separated type circle structure design to ensure quick and convenient installation
- Welding carriage enjoys light weight, good dust prevention and convenient clamping. It adopts driving method of single gear and rack between tractor and rail, which enjoys stable drive and high drive precision
- The button of the hand-held box adopts concave-convex design that has a sense of hierarchy. And the function of button is independent, which enjoys convenient operation and easy mastering
- The straight weaving and angle weaving of welding torch can be switched freely, which can realize welding of one machine multi-welding type, so as to effectively improve the qualified rate of welding for different welding process. In addition, the left and right position of the small pipeline diameter single carriage welding can be switched intelligently
- In the process of welding circumferential travel, the welding parameters of different position change along the variation of welding position. Parameters of every node in circumference are all completed by automatic control program, which can realize automatic adjustment of welding process parameters
- It adopts visible touch screen to set, display, adjust and save welding parameters. It provides uploading and downloading data. The system is able to save and recall twenty kinds of process parameters. Besides, the adjusting interface is humanized and convenient.



Standard Equipments

- 1 AMIG-350PipeLine
- 1 Control cable assembly
- 1 Welding cable
- 1 Welding carriage
- 1 Control system
- 1 Rail
- 1 Handheld control box

Technical Specification

	AT-350M
Rated input voltage /frequency (V/Hz)	1 phase, AC220V±10%, 50 /60Hz
Applicable pipeline diameter (mm)	D168--D1422
The adjustment range of welding torch (up and down, left and right) (mm)	30
Adjustment stroke of angle weaving (mm)	70
Wire diameter (mm)	φ1.0 φ1.2
Wire spool weight (kg /lb)	5 /11
Environmental temperature (°C)	40~65
Tractor travelling speed (mm/min)	0~1500
Wire feeding speed (mm/min)	0~20000
Weaving frequency (osc/min)	0~240
Applicable misalignment (mm)	3
Applicable altitude (m)	4000
Applicable relative air humidity	≤90%
Carriage dimension (mm)	490*380*255
Weight (kg /lb)	10 /22
Drive method	Perforation / rack drive

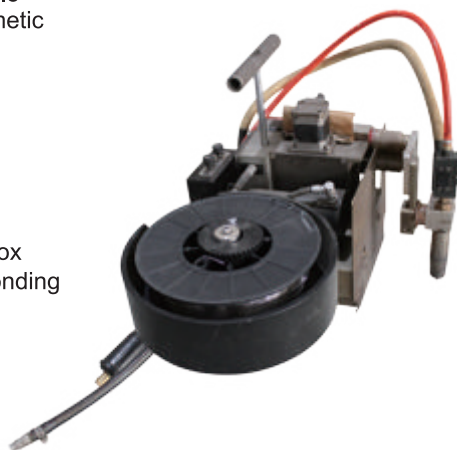
Automatic Carriage

AT-900-W1 Automatic Carriage

AT-900-W1 automatic welding system is a new welding equipment equips new generation control technology and welding process control technology. It is mainly applied in all-position root welding, fill welding and cosmetic welding for pipeline, cylinder and tank.

Features and Benefits

- Whole set of the system adopts digital precise control method
- It enjoys high welding efficiency and beautiful formation
- It lowers labor intensity through the operation on handheld control box
- Built-in expert database provides modification and recall of corresponding welding parameters for different operators. (Different operators have different permissions.)
- It equips precise arc tracking function



Standard Equipments

- 1 AMIG-350PipeLine
- 1 Control cable assembly
- 1 Welding cable
- 1 Welding carriage
- 1 Control system
- 1 Rail
- 1 Handheld control box



Technical Specification

	AT-900-W1
Rated input voltage /frequency (V/Hz)	1 phase, AC2200V±10%, 50 /60Hz
Adaptation for pipe diameter (mm)	D323-D1422
Adaptation for relative air humidity	≤90%
Adjusting range of up and down, left and right for welding torch (mm)	20
Diameter of welding wire (mm)	1.0 ,1.2
Weight of wire spool (kg)	5
Environment temperature (°C)	-22-55
Moving speed (mm)	2200-14200
Number of segments every group	13
Adaptation for altitude (m)	0-3500
Dimension of tractor (mm)	530*345*330
Weight of tractor (kg /lb)	15 /33
Control accuracy of position (°)	1

Orbital Welding System- Tube-To-Tube sheet WZM400+WTS60 (Welding with filler wire or autogenous welding)



Orbital Welding System- Tube-To-Tube sheet WZM400+WTS40 (Autogenous welding)



Orbital Welding System-Tube-To-Tube WZM400+Advanced all-position welding Head



Orbital Welding System-Tube-To-Tube WZM200+WTC (Autogenous welding)



Robotics Tube-To-Tube sheet Welding System



Orbital Welding System Power Source

WZM400 Power Source

Features and Benefits

- Programmable automatic digital system, fine control of welding process
- Real-time fine tuning welding parameters on remote control box, perfect control of welding process
- Highly integrated design, compact structure, easy to move
- Functions: CC or pulse current output /Rotation control
- /Wire feeding control /Protection gas control /Arc length control /Horizontal swing control, etc
- Water shortage, overheating, emergency stop and other protection functions, safe and reliable



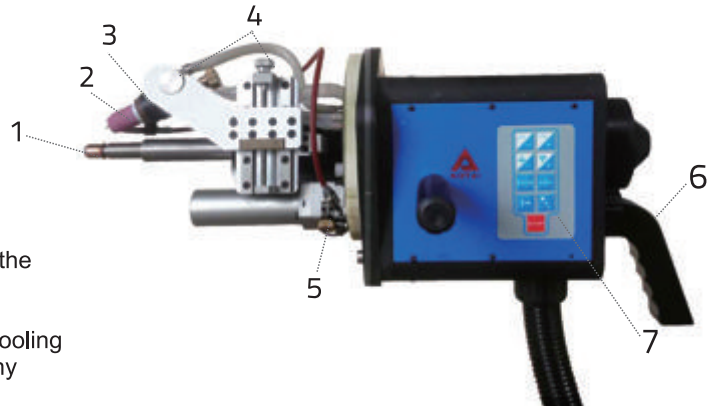
Technical Specification

	WZM400
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60Hz
Rated input capacity (KVA)	13.5
Welding current	5~400A
Duty cycle (20°C)	400A 60%/315A 100%
Savable programs	60
Sections	16
Display	10 inch touch screen digital display
Main function	CC or pulse current output/Rotation control/ Wire feeding control/Protection gas control/ Auto control of arc length/ Horizontal swing control, etc.
Protection/insulation class	IP21S/H
Weight (no coolant)	99kg /218.2lb
Dimension (mm)	1100*600*1250

Features and Benefits

- Easy operation, reduce welder's skill requirements
- Excellent welding performance and appearance
- Infinite rotation device, no intertwine trouble of wire, water, power and gas feeding

1. Center positioning copper head available for all tube diameters (end-user provided, when more than 60mm, the related machinery parts shall be customized)
 2. Standard TIG torch, maintenance friendly
 3. Longtime continuous working with circulating water cooling
 4. Manual adjustment knob, easy adjustment without any tools, save time and energy
 5. Integrated wire feeder using 1.0kg wire reel (included)
 6. Arc length automatic tracking and manual adjustment
 7. One press to start and automatically welds till complete.
- Efficient and reliable



Technical Specification

WTS60	
Tube sheet connection form	Tube protrusion or flush tube
Weldable material	Carbon steel, stainless steel, titanium alloy, etc.
Tube diameter (mm /inch)	16-80 /0.6-3.1(For 60-80, it needs to replace related mechanical parts.)
Maximum welding current (A)	300
Wire diameter (mm /inch)	0.8 1.0 /0.031 0.039
Torch rotation speed (rpm)	0.35~6.0
Maximum wire feeding speed (mm/inch/min)	1800 /71
Cooling	Water cooled
Weight (kg /lb)	12.5 /27.5
Duty cycle (%)	300@70%
Dimension (mm)	425*265*210



Equipment name	Item	Item
Manipulator	X axis stroke (mm /inch)	750 /29
	Y axis stroke (mm/inch)	1900 /75
	Z axis stroke (mm/inch)	1200 /47
	Minimum welding height (mm/inch)	600 /24

Orbital Welding System

Tube-To-Tube Sheet Welding Head

WTS40

Features and Benefits

- Small size, light weight, simple operation, zero requirement for welder skill
- Flexible and accurate positioning, safe and reliable.
- Closed-type welding ensures welding seam quality
- Infinite rotation structure avoids water, power, and gas winding.
- Water cooled, high duty cycle

Summary

- Mainly used for flush tubes, self-melting, tube-tube sheet welding
- Main welding material: stainless steel, titanium alloy, carbon steel, etc.
- Power source WZM-400

Application area

- Power stations, air conditioners, heat exchangers, boilers, nuclear power, chemical and other industries



Technical Specification

	WTS40	
Weldable material	Carbon steel, stainless steel, titanium alloy etc.	
Main tube sheet connection form	Flush tubes	
Tube diameter (mm)	Φ16~Φ38	
Tungsten electrode diameter	2.4	
Torch rotation speed (rpm)	0.5-10	
Tungsten electrode angle (mm)	7°	Range: Φ16~Φ28
	0°	Range: Φ25~Φ38
Protection gas	Argon	
Cooling	Water cooled	
Cooling water flow (ml/min)	≥600	
Weight (kg /lb)	3 /6.6	
Dimension (mm)	317*86*148	
Rated welding current	100A, rated duty cycle : 70%	
Power source	WZM-400	

The automatic open head all-position TIG orbital welding system for small-diameter pipeline, which is mainly applied in girth seam automatic welding of water, petroleum, natural gas and other pipelines. It is one of the advanced equipment to realize all-position automatic welding.

Features and Benefits

- The welding head travelling and wire feeding are drove by constant torque motor. Meanwhile, in the condition of ensuring wire feeding stability, the encoder is equipped to keep welding stable for both downward welding and upward welding.
- The welding head can calculate the travelling position according to the rotation angle, and can provide accurate position signal in the process of all-position welding, which greatly improves the quality of all-position welding.
- Wire feeding angle setting device can be applied to adjust wire feeding tip flexibly in all directions.
- The welding head can be customized according to pipe diameter, which is suitable for several kinds of pipe diameter, 30mm-168mm
- Matching with WZM400 power source



Technical Specification

	K114	K168	K219
Application range (mm)	Φ30-114	Φ60-168	Φ89-219
Welding thickness (mm)	2 - 8		
Output current (A)	5 - 400		
Torch rotating speed (rpm)	0.01 -0.5/5		
Applicable pipe forms	Pipes butt welding		
Applicable materials	Carbon steel, stainless steel		
Welding processes	CC TIG, pulse TIG		
Automatic wire feeding function	Yes		
Arc tracking	Track in vertical		
Horizontal oscillating travel (mm)	42		
Arc length travel (mm)	42		
Adaptability for generator powering	Adaptable		

Orbital Welding System Power Source

WZM200 Power Source

WZM-200 closed tube-to-tube automatic welding machine is a special all-position automatic TIG equipment designed for all kinds of tube fitting joints. It adopts the welding method without filler wire, which is widely applied in electronics, chemical engineering, food/beverage, air conditioner, pharmaceuticals/medical equipment, instruments and apparatus, aerospace, engineering installation, nuclear and other industries.

Features and Benefits

- Small and light welding head: Easy operation with no need of manual interference
- 7-inch touch screen: friendly and visualized programming interface with simple and easy operating method
- Long-life motor: high-quality DC core-less servo motor enjoys stable performance and long service life
- Unlimited rotation: not entangled by water hoses, electric wires, and gas hoses
- Save and recall 60 sets of parameters: Up to 60 sets of parameters can be saved and recalled, and one process can be divided into up to 16 sectors
- Abundant expert database: The welding programs can be generated automatically according to different pipe diameters and wall thickness
- Built-in printer: Automatically print welding parameters for convenient filing



Technical Specification

	WZM-200
Purpose	Realizing all-position TIG tube-to-tube welding
Welding current	10~200A
Duty cycle (40℃)	200A 35% / 153A 60% / 118A 100%
OCV	60V
Rated input voltage /frequency (V/Hz)	3 phase, AC220V±15%, 50 /60Hz
Cooling method of welding torch	Liquid cooling
Display	7-inch touch screen
Control function	DC/Pulsed current Rotation Wire feeding control Arc length control Shielding gas control Print control
Programs storage capacity	60
The number of divided sectors	1~16
Protection/Insulation class	IP21S/F
Weight (without coolant)	16.4kg /36.2lb
Dimension (mm)	440*200*410
Operating environment	Indoors temperature: -10℃~+40℃ Humidity: ≤ 95%

Tube-tube Welding Head -WTC Series



Summary

- Mainly used for all-position, self- fusion, tube-tube welding
- Mainly suitable for thin-wall tube-tube welding of stainless steel, titanium alloy, etc.
- Can work with power source WZM-200

Application area

Electronic, chemical, food/drinking water, air conditioner, medicine/medical equipment, instrument & meter, aviation/aerospace, engineering installation and nuclear power , etc.

Features and Benefits

- Small size, light weight, simple operation, zero requirement for welder skill
- Flexible automatic centering fixture, accurate positioning, safe and reliable.
- Closed-type welding ensures welding quality.
- Infinite rotation device avoids water, power, and gas winding.
- Water cooled, high duty cycle
- Common function keys on welding head make it convenient for fast welding.

Technical Specification

	WTC18	WTC40	WTC80	WTC118	WTC158
Weldable material	Carbon steel, stainless steel, titanium and titanium alloy etc.				
Tube diameter (mm)	Φ6~Φ12.7	Φ6~Φ38.1	Φ19.05~Φ76.2	Φ38.1~Φ101.6	Φ50.8~Φ152.4
Torch rotation speed (rpm)	0.3~6.0	0.2657~5.3145	0.194~3.877	0.092~1.924	0.073~1.472
Duty cycle (%)	60%	Duty cycle 40%@85 Duty cycle 60%@65 Duty cycle 100%@45	Duty cycle 40%@100 Duty cycle 60%@75 Duty cycle 100%@55	Duty cycle 40%@120 Duty cycle 60%@100 Duty cycle 100%@80	Duty cycle 40%@120 Duty cycle 60%@90 Duty cycle 100%@75
Protection gas	Argon				
Cooling	Water cooled				
Cooling water flow (ml/min)	≥450m				
Weight (kg /lb)	2.0 /0.9	3.5 /7.7	5/11.1	6.5 /14.4	10 /22.2
Dimension (mm)	292*96*34	377*70*42	436*156*44.5	540*195*54	577*255*56

Orbital Welding System

Robotics Tube-To-Tube sheet Welding System

Technical advantages

- Fast locating speed, locating can be finished in 2s;
- Flexible adjustment, which enjoys extremely low requirements for the placement position and angle of workpiece;
- The levelling of the welding head and the position correction of the workpiece can be finished in 5 minutes after replacing the workpiece;
- Inputting the relevant parameters of the workpiece (tube diameter, deviation, extension length) is the only thing need to finish without establishing a template, which makes visual application convenient;
- There are few requirements for operators and no need to learn robot programming knowledge.

Features and Benefits

- Full automatic welding, no need for manual intervention;
- Directly import the CAD drawings and transform it to the coordinate of robot, no need to teach and programme for robot;
- Freely marking the welding procedure can prevent tubesheet from deforming;
- The workpiece processing deviation is compensated by vision detecting, which ensures the qualification rate of welding seam;
- 6-axis robot, the locating time is less than 2s;



Technical Specification

The connecting method of tube-to-tubesheet	Welding of protruding tubes and flush tubes
Weldable materials	Carbon steel, stainless steel, titanium alloy and so on
Weldable tube diameter (mm)	Φ10 ~ Φ60
Welding torch rotating speed (rpm)	0.35~6.0
Maximum wire feeding speed (mm/min)	2500
Arc length responding speed (mm/min)	0~250
Radius adjusting speed (mm/min)	0~250
Welding torch tilt angle (°)	-10°~30°adjustable
Maximum welding current (A)	300
Arc length adjusting interval (mm)	0~20
Radius adjusting range (mm)	0~50
Welding wire diameter (mm)	0.8 /1.0
Shielding gas	Argon
Cooling method	water cooling
Coolant flow rate (mL/min)	≥600
Weight (kg /lb)	7 /15.4
Duty cycle (%)	70%@300A
Dimension (mm)	386*287*220



LASER WELDING



ATW Laser



ATW Laser-1500/2000L
Liquid cooled
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ATW Laser 3000L
Liquid cooled
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ATW Laser 1500G
Air cooled
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Accessories



Wire feeder
Page 118



Robust Laser Welding Torch
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Laser Welding System

ATW Laser -1500/2000L

Laser welding is a very precise and efficient process, and it is often used in the manufacturing of medical devices, automotive parts, and other precision components. Laser welding is also used in the repair of delicate components, such as jewelry and watches.

Features and Benefits

- The robust and safe control system, multiple safety alarms, reliable operation
- Laser source specially for welding, better beam quality, more stable, low light attenuation, long-lasting service life
- The laser welding torch adopts an ergonomic design, which enjoys light weight, comfortable holding feeling, and can meet requirements for long-time welding
- Fully digitalized design, four-roller driven wire feeding mechanism, stable wire feeding
- Dual-temperature dual-control water cooler, segmented type control, high-precise temperature control, ensuring the service life of laser source and welding torch
- Save and recall nine sets of welding parameters
- Low heat input and small welding distortion, not affected by electromagnetic field
- Can be applied to weld a wide range of materials, and also can be applied to join different materials
- Can be applied to match with automation equipment and robot, to perform automated high-speed welding



Technical Specification

	ATWLaser1500L	ATWLaser2000L
Equipment size (mm)	945*690*930	
Packaging size (external size) (mm)	1400*870*1265	
Total power of equipment (kW)	9	12
Equipment weight (kg /lb)	260 /573.2	260 /573.2
Weldable thickness (mm)	≤3	≤4
Power of laser device (W)	1500	2000
Wave length of laser device (nm)	1080	1080
Length of optical fiber (m)	10	10
Diameter of optical fiber (μm)	50	50
Power of water cooler (W)	1500	2000
Welding speed range (mm/s)	0-120	
Wire diameter (mm)	0.8-1.6	
Wire material	Standardly equipped φ1mm stainless steel welding wire, 1kg	
System language	Chinese, English	
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60HZ	
Temperature range of operating environment	-10-40°C	

Features and Benefits

- The robust and safe control system, multiple safety alarms, reliable operation
- Laser source specially for welding, better beam quality, more stable, low light attenuation, long-lasting service life
- The laser welding torch adopts an ergonomic design, which enjoys light weight, comfortable holding feeling, and can meet requirements for long-time welding
- Fully digitalized design, four-roller driven wire feeding mechanism, stable wire feeding
- Dual-temperature dual-control water cooler, segmented type control, high-precise temperature control, ensuring the service life of laser source and welding torch
- Save and recall nine sets of welding parameters
- Low heat input and small welding distortion, not affected by electromagnetic field
- Can be applied to weld a wide range of materials, and also can be applied to join different materials
- Can be applied to match with automation equipment and robot, to perform automated high-speed welding
- Double wire feeding, increased welding width



Technical Specification

	ATWLaser3000L
Equipment size (mm)	1210*715*1200
Total power of equipment (kW)	15
Equipment weight (kg /lb)	300 /661.3
Weldable thickness (mm)	≤6
Power of laser device (W)	3000
Wave length of laser device (nm)	1080
Length of optical fiber (m)	10
Diameter of optical fiber (μm)	50
Power of water cooler (W)	2000
Welding speed range (mm/s)	0-120
Wire diameter (mm)	1.0-2.0
System language	Chinese, English
Rated input voltage /frequency (V/Hz)	3 phase, AC380V±10%, 50 /60HZ
Temperature range of operating environment	-10-40°C

Laser Welding System

ATW Laser1500G

Features and Benefits

- The output power is 1500W, and the welding penetration reaches up to 4mm
- Based on 976nm pump technology, high photoelectric conversion efficiency $\geq 42\%$
- Single pendulum welding head, adjustable welding width
- Whole machine weight < 70kg, compact design, small size
- Unique air cooling design, low power consumption, energy saving and environment protecting, power supply 220V AC-18A
- Triple protection design, built-in air/gas pressure detecting device
- The fiber laser is specially designed for industrial applications, reliable and efficient ABR and SPP technologies; proprietary heat treatment mode filtering technology, durable and novel structure of fiber laser.



Technical Specification

	ATW Laser1500G
Dimension (mm)	650*300*621
Weight (total) (kg /lb)	<70 /154.3
Total power of equipment (kW)	≤ 4.8
Rated input voltage /frequency (V/Hz)	1 phase, AC220V $\pm 10\%$, 50 /60Hz
Power of laser source (W)	1500
Wave length of laser source (nm)	1080
Focus length (mm)	150
Fiber length (m)	10
Wedling thickness (mm)	≤ 4
Welding speed range (mm/s)	0-120
Wire feeding diameter (mm)	0.8-1.6
Material of feeding wire	Equipping $\phi 1\text{mm}$ stainless steel wire as standard, 1 kg in total
Shielding gas	Inert gas: Argon, Nitrogen, Ar+CO2 mix
System language	Chinese and English
The temperature range of operating environment	-10-40°C
The humidity range of operating environment	$\leq 85\%$

Features and Benefits

- Fully digitalized design, operating status is clear at a glance
- $\phi 0.8 / 1.0 / 1.2 / 1.6 / 2.0$ mm welding wires are applicable
- 4-roller driven wire feeding mechanism, stable wire feeding
- Wire feeding and retracting function
- Single-wire and double-wire feeding mechanism



Features and Benefits

- Adopting swing welding head, swing width ≥ 5 mm, applicable for more complicated welding requirements.
- Initially created the anti-spatter structure of welding torch head
- The focus lens can be installed and disassembled promptly, which is more convenient for maintenance and repair
- The laser welding torch head adopts an ergonomic design, which enjoys light weight, comfortable holding sense, and can meet demands for long-time welding
- Self-developed welding head remedies the defect that the laser welding spot is small, enlarges the tolerance range and welds' width of the workpiece to achieve higher quality welding



Nozzle

- Equipping nozzles of different models to meet application requirements for different scenarios

SHIPYARD



MIG



MIG500M
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AMIG500PM
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AMIG500P PLUS
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MMA /TIG



ARC400-3T /6T
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TIG500
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ATIG315PAC
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PLASMA CUTTER



ACUT-60 /100 /120
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ACUT200
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ACUT-300/400/500
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SAW

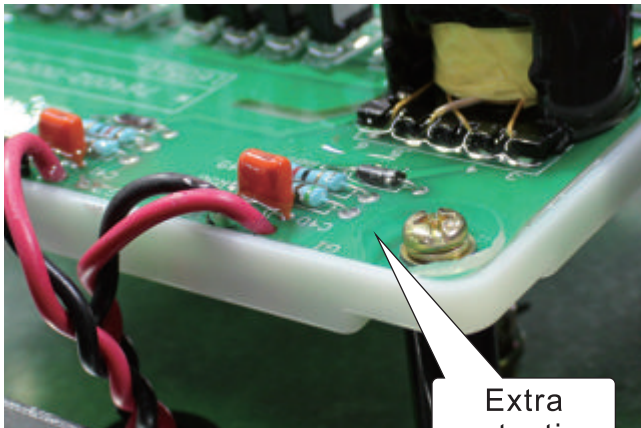


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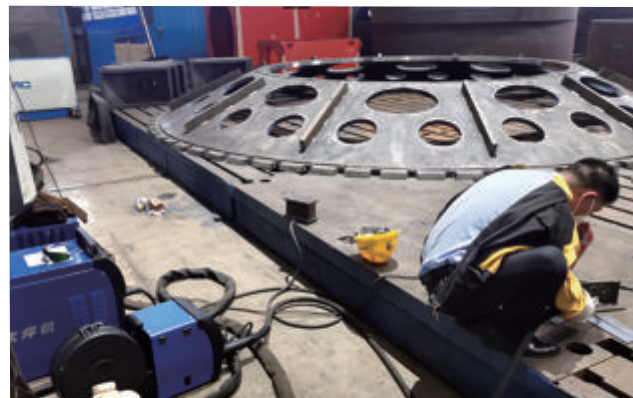
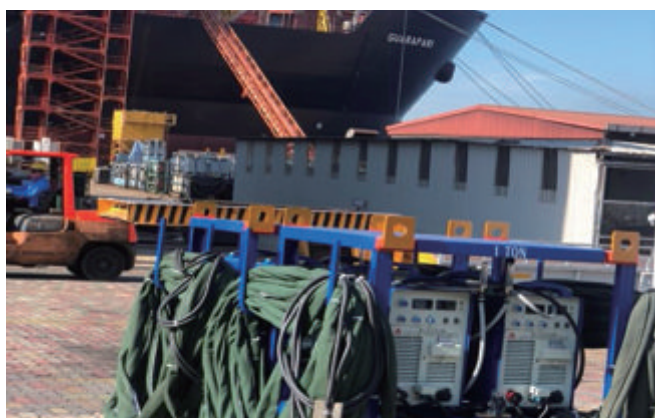
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Shipyard Application

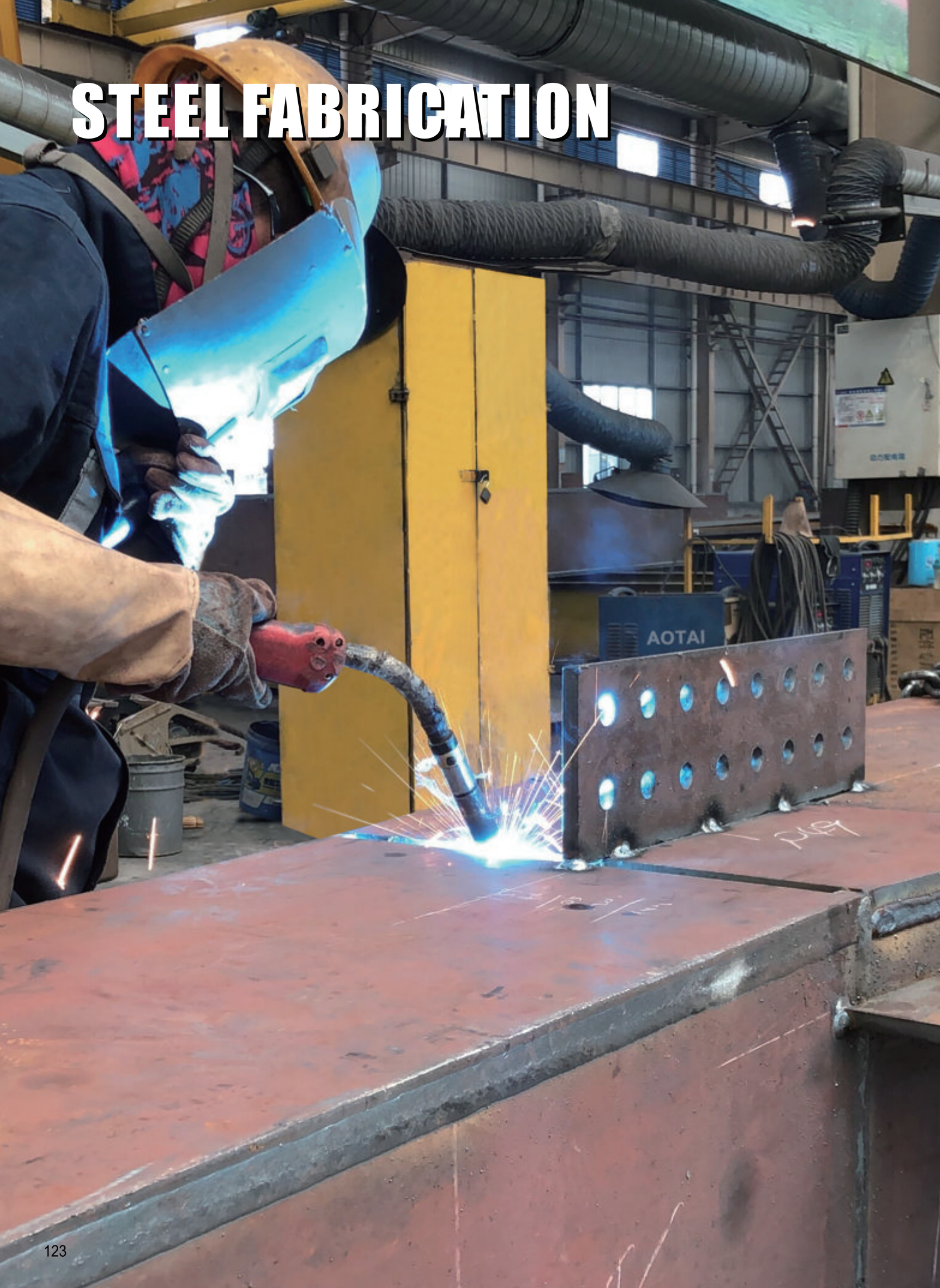


Extra
protection
for PCB





STEEL FABRICATION



MIG



AMIG-350 /500PM
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AMIG-350 /500
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MIG630M
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MMA



ARC500
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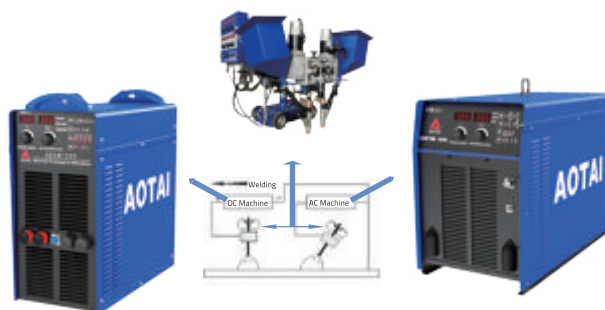
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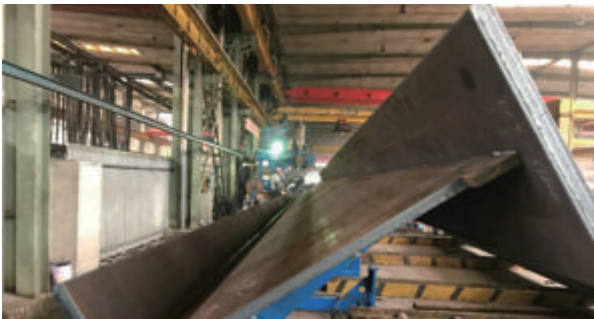
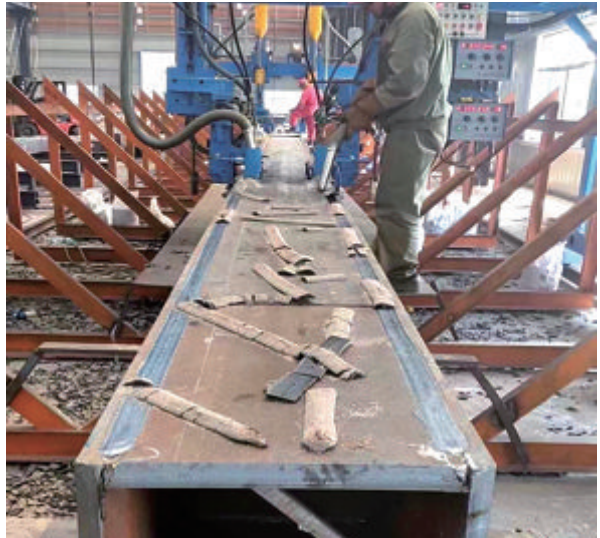


ASAW-1000 /1250IV
Digital DC SAW & MIG & GOUGING
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TAMDEM-1000/1250
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Steel Fabrication

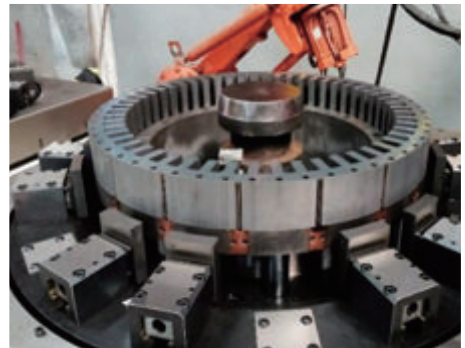
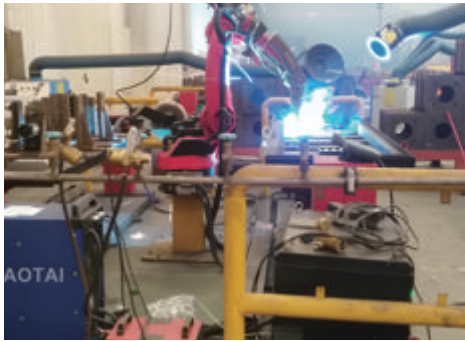


ROBOT



Robot welding

Robot welding



PRESSURE VESSEL







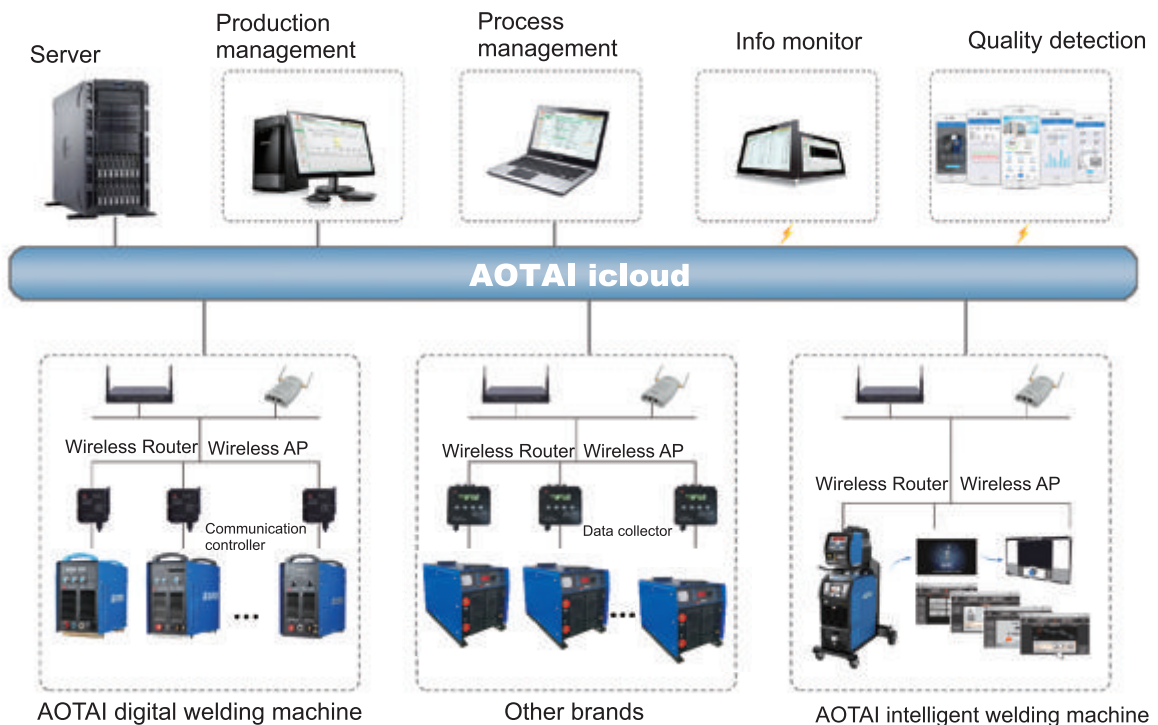
INTELLIGENT WELDING CLOUD SYSTEM



Intelligent welding cloud system

Intelligent welding cloud system is designed by AOTAI for welding machine management on site. It can realize welding machine status real-time monitoring, welding parameter online control, welding data mass storage, statistics, analysis, etc. It helps production companies improve product welding quality and reduce production cost.

The system adopts industrial Ethernet (wireless, wired) for connection. The upper computer system adopts B/S (browser/server) structure. It is convenient to realize remote access of data through enterprise network and data sharing by docking with enterprise information system.



Intelligent welding cloud system structure

Communication controller

ATQ communication controller can be used with AOTAI digital welding machine to complete communication between welding machine and server, and realize collection and control of all parameters of welding machine.

Communication controller can use wired or wireless communication modes. It has real-time clock and large-capacity data storage inside. Data can be temporarily stored when cannot connect with server so as to ensure data integrity.



Welding data collector

ATQ-CJ welding data collector can work with AOTAI analog welding machine or other brand welding machines to realize collection of welding current, welding voltage, wire feeding speed and gas flow. Welding parameter limit can be set as needed. When welding parameters exceed the limit, sound and light alarm can be alarmed until welding machine is stopped.

Data collector can use wired or wireless communication modes. It has real-time clock and large-capacity data storage inside. Data can be temporarily stored when cannot connect with server so as to ensure data integrity.



Intelligent welding cloud system



IC card

IC card application and system can realize welder identification and automatically bind welding machine to welder. With IC card, welder's working data on any machine will be automatically connected with him to achieve statistical analysis of his attendance data.



Welding cloud front server

Realize pretreatment and temporary storage of welding data.

Configuration

Industrial CPU

Memory size: 8G

Hard disk: 1TB

Operating system: Windows 7

Dimension: 280mm×219.2mm×62mm

Operating temperature: -20~60

Installation method: Desktop or wall mounting



Welding cloud front terminal

Realize checking and operation of products, tasks, welding records and other information in workshop.

Configuration

CPU: Industrial CPU

Memory size: 4G

Hard disk: 120G SSD

Operating system : Windows 7

Display: 19 inches

Peripherals: metal keyboard, trackball mouse, IC card reader

Operating temperature: -20~60



Welding cloud handheld terminal

Function module :

Welding monitoring

Equipment maintenance

Statistical analysis

Welding procedure

Alarm management

System management

System Features

1. Workshop board

Real-time display of quality management factors during production in workshop, including people, machines, materials, methods, etc.



2. Equipment monitoring

Real-time display status of welding machines in the system, using status of all welding machines can be clearly displayed.



3. Device details

Real-time display of parameter changes during welding process, showing current working state of welding machine with dynamic curves.



4. Welding parameters

Preset welding parameters of welders in the system and lock the parameters within allowable range.



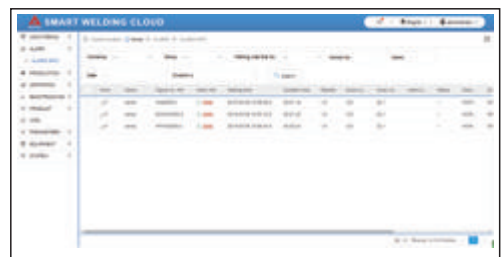
5. Statistical report

Statistics of working hours, welding material consumption, and process conformity in aspects of welders, equipment, products, etc., and multi-dimensional production data is presented in form of sheets.



6. Alarm management

Current alarm info, alarm statistical analysis and historical traceback are reminded in real time through APP message, mobile phone short message, system message and other means.



AOTAI GLOBAL PARTNERS







Aotai Electric Co.,LTD

Headquarter: 282 Bole Ave High-tech Development Zone,
Jinan, Shandong 250101, P.R.China
Tel: +86-531-81921036 Fax: +86-531-88876665
Email: sales@aotaiwelding.com
www.aotaiwelding.com



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