MEGMEET
WELDING TECHNOLOGY

MEGMEET | Stock code 002851

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Follow us:

MEGMEET's strong technical strength, extensive industry application experience, relentless attention to customer needs, and the spirit of continuous innovation enable us to bring tailor-made products and solutions to help customers achieve greater success.

*MEGMEET Welding Technology Co., Ltd is continuously striving to develop and innovate for new product. We reserves the right of changing the technical specifications and designs without notices in advance.
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2024-07

RevoTig ACDC

Full-digital IGBT Inverter Multifunctional ACDC TIG

www.megmeet-welding.com

MEGMEET
WELDING TECHNOLOGY

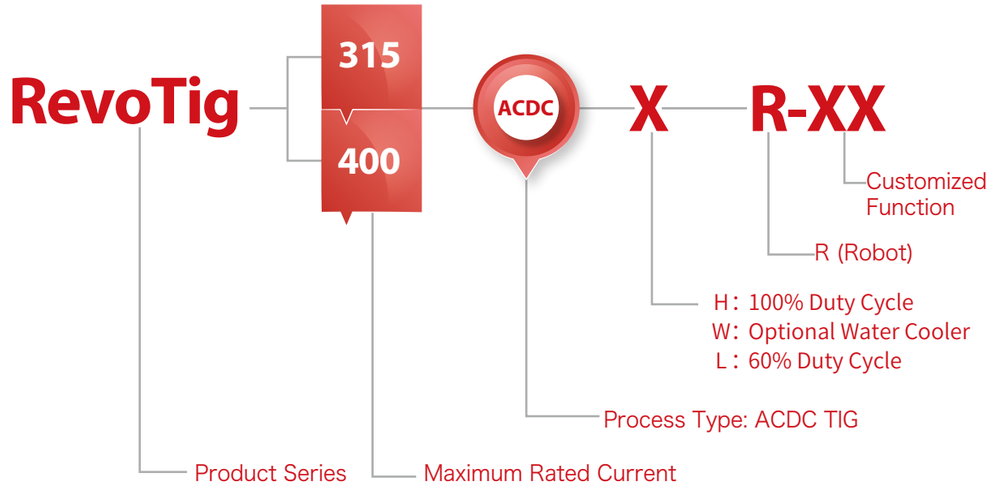
RevoTig 315/400ACDC

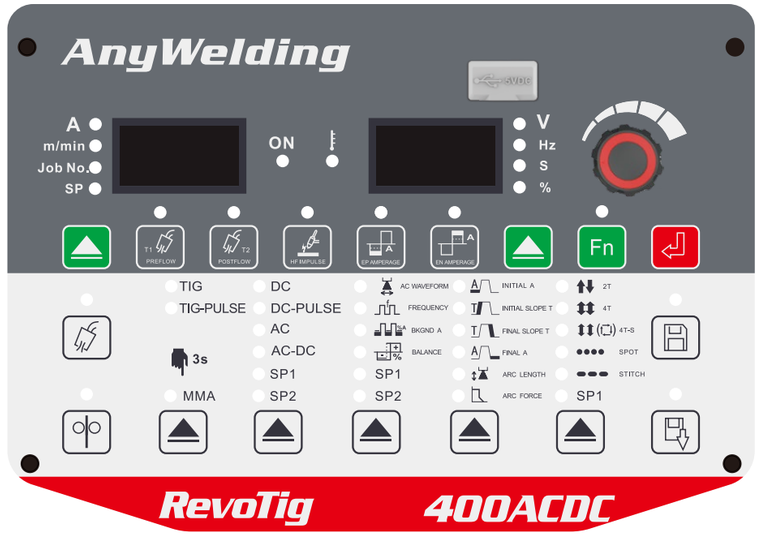
(Full-digital IGBT Inverter Multifunctional ACDC TIG)

AC/DC | 380 3PH | 40~70 Hz | CC | Class D 6000W/300A

Product Features

- Comprehensive applications: carbon steel, 9Ni, stainless steel, alloy steel, copper, magnesium alloy, aluminum, AL alloy and others, adaptive for dissimilar-metal welding;
- Extensive functions with AC-DC TIG, AC-DC Pulse TIG, high-speed TIG spot welding and MMA;
- Full digital intelligent control is adopted. Internal background menu is open and adjustable to better satisfy more technological requirements of various working conditions;
- VRD anti-shock function with adjustable arc force in MMA mode and better arc stiffness;
- IoT interface is reserved to quickly access to Megmeet SMARC management platform or the third-party welding data management system to realize efficient welding interconnection;
- Communication interface is reserved to support multiple types of communication protocols to connect with various brands of robots and automation devices;
- Software is up-gradable through U-disk interface to help customers easily obtain Megmeet foremost welding process or customized functions;
- Optional foot switch, water-cooler, water-cooled torch, trolley, etc.





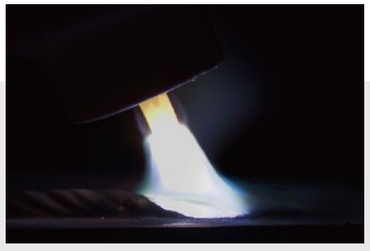
☑ Carbon Steel ☑ Pulse ☑ Al Alloy ☑ DC ☑ Spot Welding ☑ AC-DC
☑ Stainless Steel ☑ TIG-Pulse ☑ MMA ☑ AC ☑ U-disk ☐ SMARC IOT

Extensive Welding Process

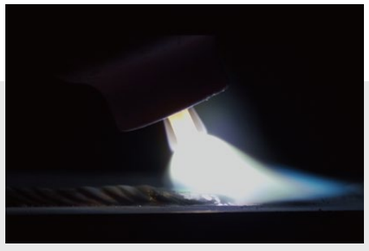
Welding Process Type	Welding Process Name	Advantage	Material	Industry
DC TIG	DC TIG	Stable arc, high adaptability for gap, easier for one-sided welding and double-sided forming	Carbon steel, stainless steel, titanium alloy, etc	Petrochemical, pressure pipeline&vessel backing weld, etc.
DC PULSE TIG	DC-Pulse TIG	Low heat input, beautiful fish-scale shape is available, pulse frequency up to 3000Hz	Carbon steel, stainless steel, titanium alloy, etc	Sheet metal and welding occasions with requirements for heat input and weld form, etc.
AC TIG	AC TIG	Stable arc, AC frequency up to 300Hz	Aluminum, aluminum alloy, magnesium, etc.	Aluminum alloy pipelines, bicycle frame welding with high appearance requirements, etc.
AC TIG Pulse	Double Pulse AC TIG	Low heat input, clear fish-scale welding shape	Aluminum, aluminum alloy, magnesium, etc.	Aluminum alloy thin-plate and welding occasion requiring heat input and weld forming , etc.
AC-DC TIG Pulse	Double-pulse AC-DC TIG	Deeper penetration and less tungsten loss	Aluminum alloy, aluminum, magnesium etc.	Aluminum alloy medium&thick plates, and welding occasions requiring depth of penetration, etc.
MMA	MMA	Easy arc start, non-stick with rod, softer arc&less spatter, and beautiful weld shape	Carbon steel, alloy steel, stainless steel, etc.	Boiler, pressure vessel, petrochemical industry, pressure pipeline, outdoor construction, etc.

Multiple waveform controls provide optimal combination according to welding needs

- Multiple selections with triangle wave, square wave, sine wave, trapezoidal wave and others;
- Optimal setting for waveform in different welding phases;
- EN/EP range ratio is able to be adjusted to efficiently clean oxide film on surface while ensuring the depth of penetration.



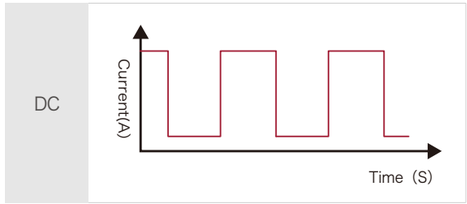
Conventional TIG Welding

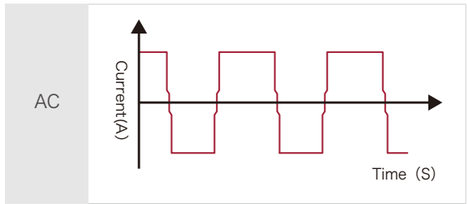


Triangular-wave TIG Welding

Square Wave

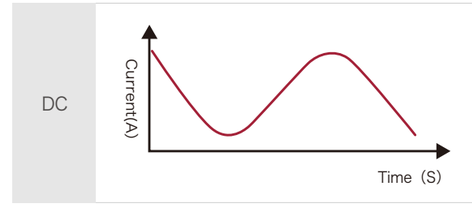
DC/AC square wave, polarity fast-switching, high-stability of arc, good dynamic characteristics, strong-ability to clean aluminum oxide film, suitable for a wide range of aluminum and aluminum alloy welding.

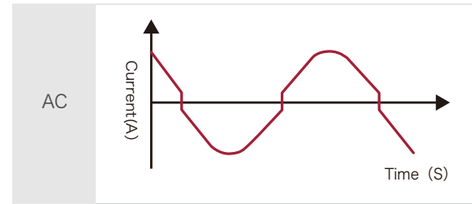




Sine Wave

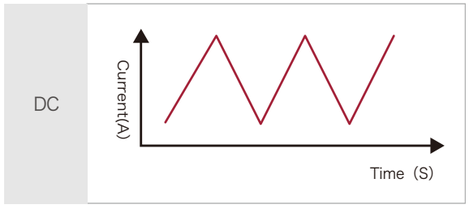
DC/AC sine wave, rectangular transition at zero-crossing point, less and softer arc noise.

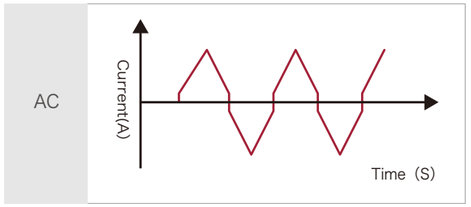




Triangle Wave

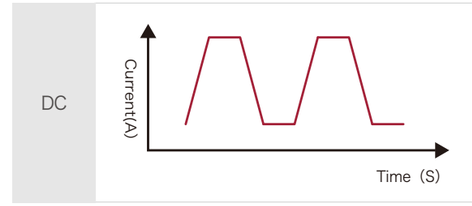
Short peak-time and low heat input, suited to welding of thermo-sensitive metals as thin plates.

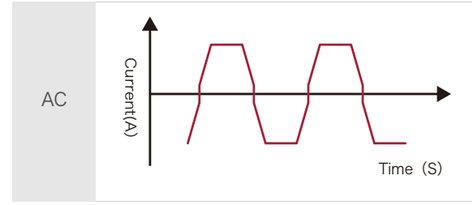




Trapezoidal Wave

DC/AC trapezoidal wave, polarity stable-switching, soft arc brings good wetting effect to fusion pool, applicable for groove welding and overhead welding.

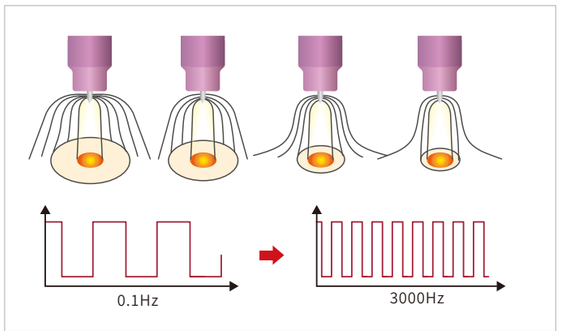


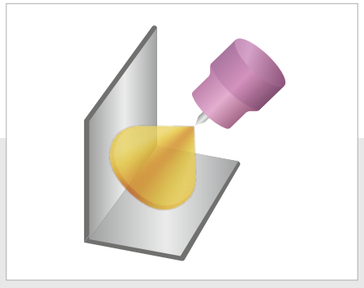


0.1Hz-3000Hz High Frequency Output

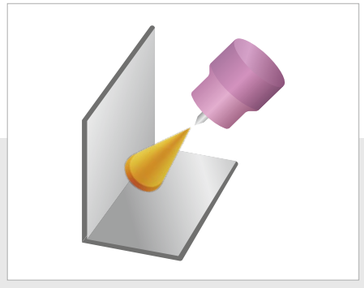
Enables high-quality welding from extreme-thin to medium-thick plates

- In low-frequency pulse (0.1-10Hz), arc column is wide, adaptive for all-position welding;
- In medium-high frequency pulse (10-3000Hz), arc directivity is strong and heat input is low, supporting thin plate high-speed welding and fillet welding.





Regular 1.5Hz



3000Hz high-frequency brings more concentrated arc

Arc is able to start and stabilize at 3A in DC welding

- Unique circuit design supports arc to start at 3A and stabilize at 3A in DC welding, ensuring continuous arc in very small current.

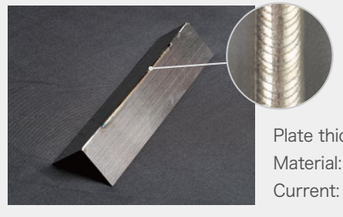
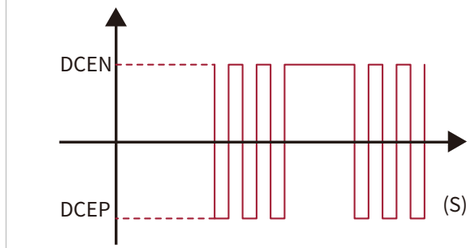
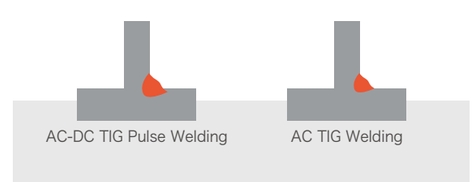


Plate thickness: 0.3mm
Material: stainless steel
Current: 3A

AC-DC Pulse

- DC is blended into AC-wave to further raise the heat input of base metal and increase the depth of penetration;
- In AC-DC Pulse, tungsten rod loss could be reduced in DCEN;
- In AC-DC Pulse, EP ratio is adjustable in AC section to improve cleaning effect;
- Arc stiffness and concentration is good and heat input is high to further improve welding efficiency.



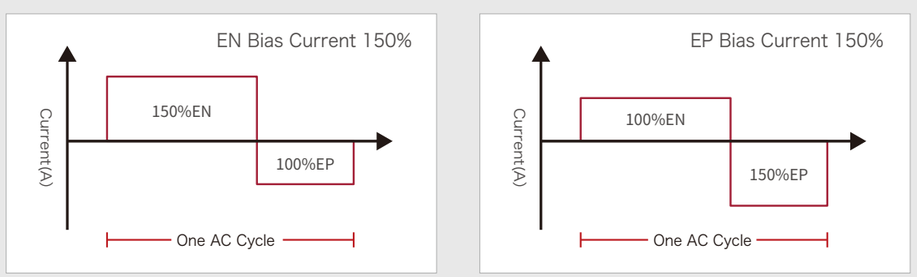


AC-DC TIG Pulse welding contains EN DC, so deeper penetration is attainable.

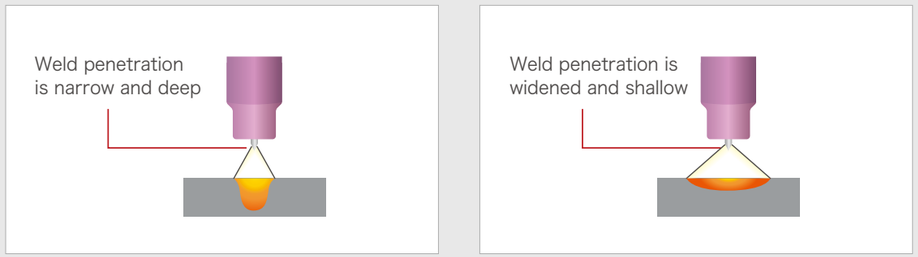
EN and EP range ratio is separately adjustable

Range ratio of EN and EP is able to be independently adjusted to further change the cleaning strength of oxide film, as well as welding penetration depth and width, to realize easier welding operation.

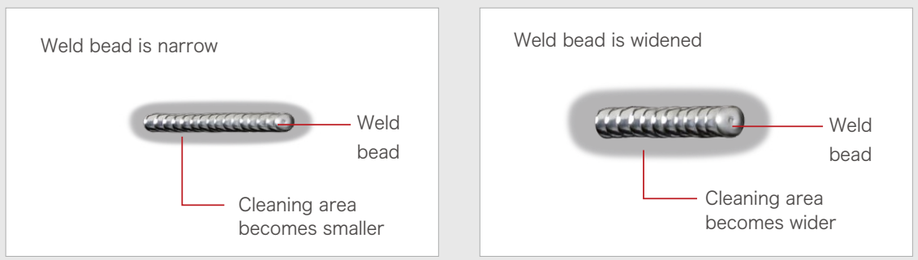
Waveform



Penetration Varies

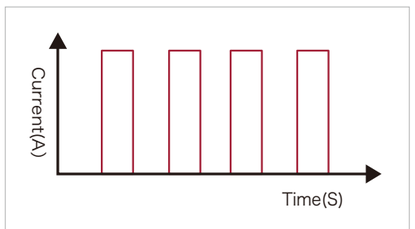


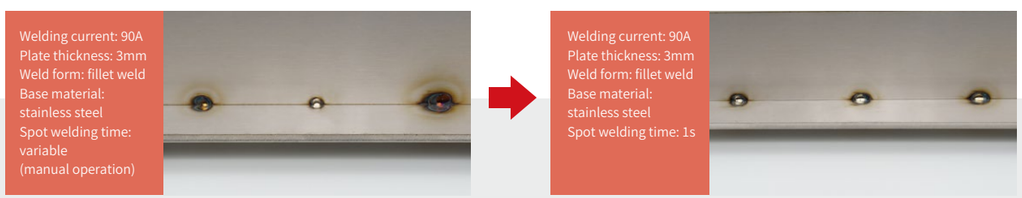
Weld Forming



High-stability TIG Spot Welding Function

- Fine regulation is suitable for high-quality welding of ultra-thin plates;
- Setting range of spot welding time is 0.1-30 seconds (adjustment unit is 0.1 seconds) with stable arc and consistent solder joints





Spot welding function is not used

Spot welding function is used

U-Disk Interface

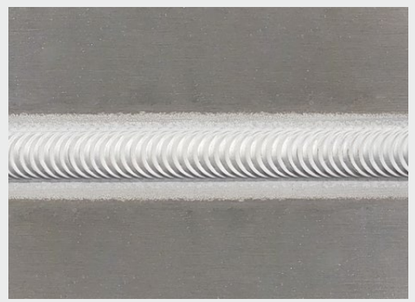
- To ensure customers quickly obtaining Megmeet foremost welding software and customized functions;
- Welding process and software could be sent to user by email and upgraded into machines through U-disk interface.

Aluminum Alloy Welding

- Machine Name: MetaTig 500 ACDC
- Product Name: Aluminum alloy oil-tank truck
- Welding position: Jointed welding of tank body plate
- Automation: Automation Device for Plate-Jointing
- Base material: Al-Mg/5182/65.7
- Welding consumables: Er5183/Medium 1.6
- Joint type: butt joint/no groove/no gap

Welding parameters:

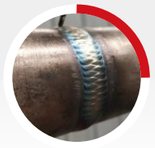
- Peak current 280A
- Base current 140A
- Pulse frequency 2.2Hz
- AC frequency 60Hz
- Duty cycle 50%
- Wire feeding speed 1.8m/min
- Welding speed 170mm/min



RevoTig ACDC Series is capable to weld diversified metals.

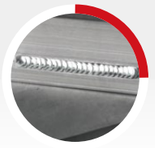
Carbon Steel

Output current ripple is small and arc is stable. Fusion pool is well controllable.



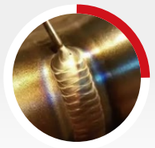
Stainless Steel

High-frequency pulse effectively compresses arc and reduces heat-input, easier welding for thin-plate stainless steel and welding shape is more beautiful.



Aluminum Alloy

Variable polarity to adjust the range ratio of EN and EP, combined with the cleaning width, brings high-quality welding for aluminum alloy welding.



Copper

With unique triangular wave, sine wave, square wave, trapezoidal wave, complex wave and other waveforms, welding for copper, titanium, magnesium and other troublesome metals is easier.

Foot Switch

- Easy operation in current adjustment;
- Current is able to be set with the maximum range: 5~500A;
- 5-pin control cable and 2 meters of length (can be extended as demand) to meet long-distance welding;
- Control modes are optional. Current can be adjusted by foot switch or by welding machine as needed.

Circulating Water Cooler (Optional)

Circulating Water Cooler AnyCool-66	
Water cooler power supply	Powered by welding machine
Rated power	370W
Rated voltage	220VAC / 380VAC
Cooling water capacity	6.5L
Cooling water flow	3.5L/min
Cooling water lifting range	30~35m
Flow alarm	√

Technical Specification

Model	RevoTig 315ACDC	RevoTig 400ACDC
Control method		
Input voltage	3 Phase AC 400 V(-28%~18%)	3 Phase AC 400 V(-28%~18%)
Input frequency	40~70Hz	40-70Hz
Inverter switching frequency	110KHz	110KHz
Rated input capacity	12.6KVA/11.6KW	14.4KVA/13.5KW
Rated output no-load voltage	68V	68V
Rated output current	315A	350A
Rated output voltage	22.6V	24V
Duty cycle	100%@315A	60%@350A 100%@315A
Set current range	DC TIG 3~315A	DC TIG 3~400A
	AC TIG 3~315A	AC TIG 3~400A
	MMA 30~315A	MMA 30~400A
Power factor	0.94	0.94
Efficiency	88%@315A	88%@400A
DC pulse frequency	0.1~3000Hz	0.1~3000Hz
AC pulse frequency	20~300Hz	20~300Hz
Pulse width	1~99%	1~99%
Arc ignition method	High frequency arc ignition/lifting arc ignition	
Parameter JOB	50 JOB	50 JOB
Rise time	0-20s Continuous regulation (0.1s increments)	
Fall time	0-20s Continuous regulation (0.1s increments)	
Pre-gas time	0-25s Continuous regulation (0.1s increments)	
Post-gas time	0-25s Continuous regulation (0.1s increments)	
Output terminal	Quick plug	Quick plug
The welding torch contains a foot pedal signal	Can be adapted to foot pedal	Can be adapted to foot pedal
Foot switch(optional)	√	√
Protection rating	IP23S	IP23S
Insulation class	H	H
Cooling method	Forced-air	Forced-air
Water flow protection*	√	√
Dimensions (L×W×H)	647×291×572mm	647×291×572mm
Weight	40kg	40kg
Extension function		
IoT SMARC system (optional)	√	√
USB upgrade	√	√
Robot (optional)	√	√
LCD front panel (optional)	√	√

*: RevoTig 315/400ACDC water flow protection function needs to be equipped with the water cooler supplied by Megmeet.