

JASIC NEW TIG315PACDC E303 INTRODUCTION

- Convenient for moving
- Digi control
- User-friendly interface
- Module design
- High precision
- Multi-functional



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- 3. foot control(optional)**

1. Power source intro (functions)

1. Basic functions

- MMA-DC
- MMA-AC
- AC-TIG (triangular wave, square wave, sine wave)
- DC-TIG
- AC Pulse-TIG
- DC Pulse-TIG
- Mix TIG

2. Other functions

- **On-demand** fan operation
- **Voltage-boosting** arc start
- Welding parameters saving and management
- **Analog** remote control
- Spot welding
- Gas check

1. Power source intro (features)

- **Advanced IGBT inverter technology**

main power components are using spike withstanding IGBT, with smaller sizes and higher reliability

- **Cutting-edge control technology**

JASIC exclusive patented new secondary inverter topology

JASIC new control technology, to make sure secondary inverter voltage spike smaller and more reliable.

- **Excellent welding performances**

AC TIG can be widely used for aluminum and magnesium alloy, etc.

- **Thorough auto-protection**

Complete auto protection with accoring error codes for more conveneint matianances

- **High reliability & performances**

Intellgent digi control for higher reliability and performacnes

- **Available remote control**

Torch control or foot control for optional

1. Power source intro (operation panel)

Voltage: voltage unit indicator
 Channel: channel storage selection status indicator
 Program: to save/save channel status indicator
 Gas check: gas working indicator
 Current: current unit indicator
 Time: time unit indicator
 Frequency: frequency unit indicator
 Duty ratio: % indicator



TIG parameters setting indicator

Channel/channel+

gas check/channel-

MMA parameters setting indicator

TIG to MMA switch or MMA AC selection

torch control or foot control

program saving

rotate encoder

MMA to TIG switch or TIG mode selection

AC wave selection

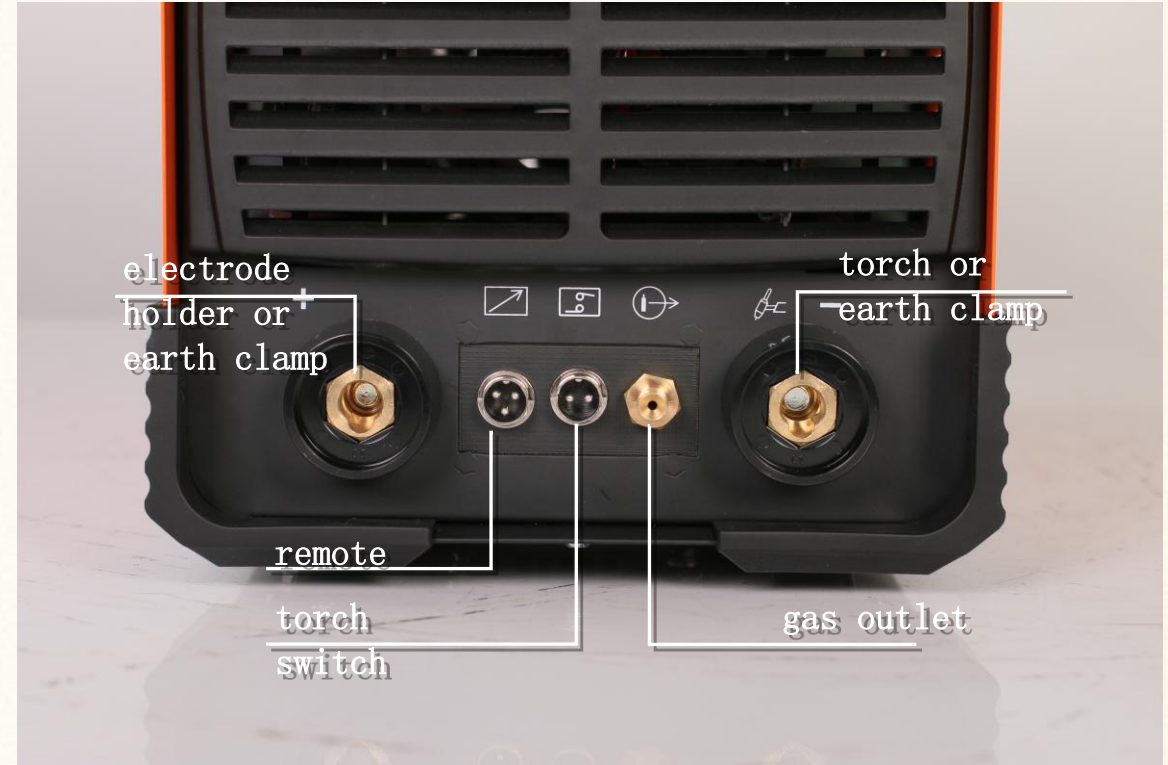
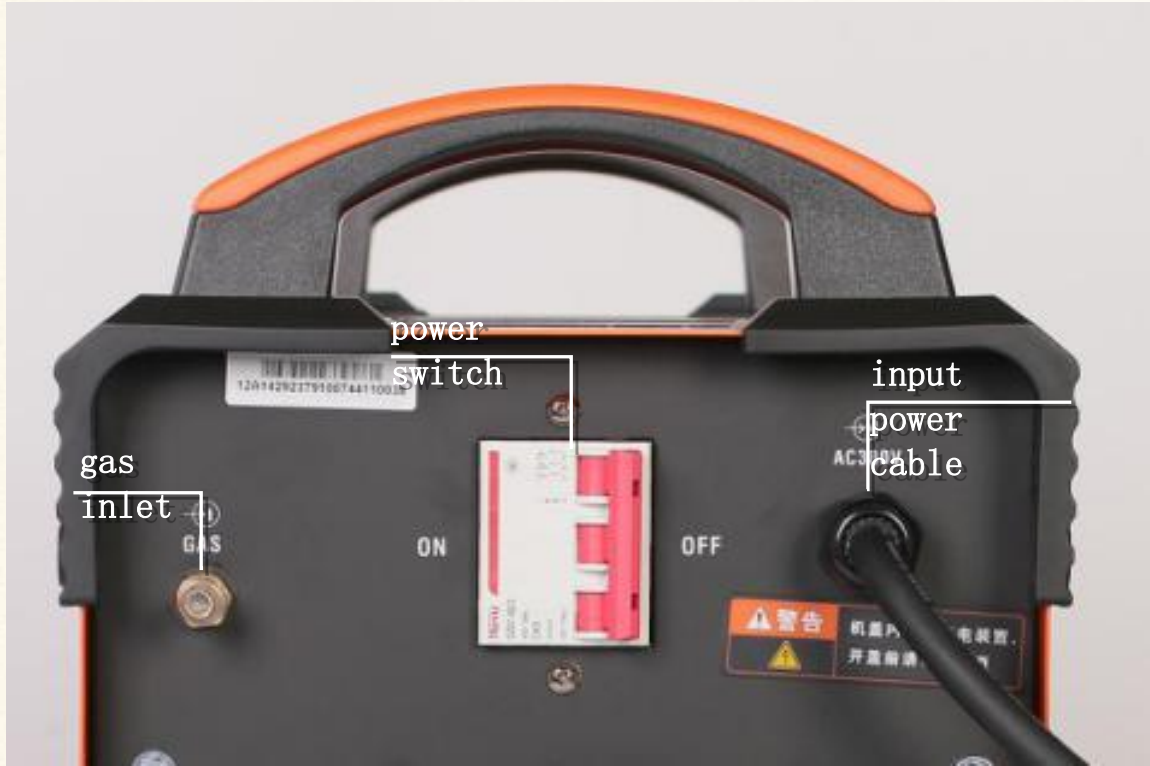
Torch operation

Pulse or not pulse

Program call

1. Standard AC square wave, polarity prompt switch, highly stable arc, great dynamic characteristic, great capability to clear the oxidized layer on aluminum. Can be used widely for all aluminum and its alloy.
2. Triangular wave to decrease heat input, quick welding bead shape, decreasing distortion, suitable for thin plates welding.
3. Sino wave with little arc noise and soft arc.

1. Power source intro (interface)



1. Power source intro

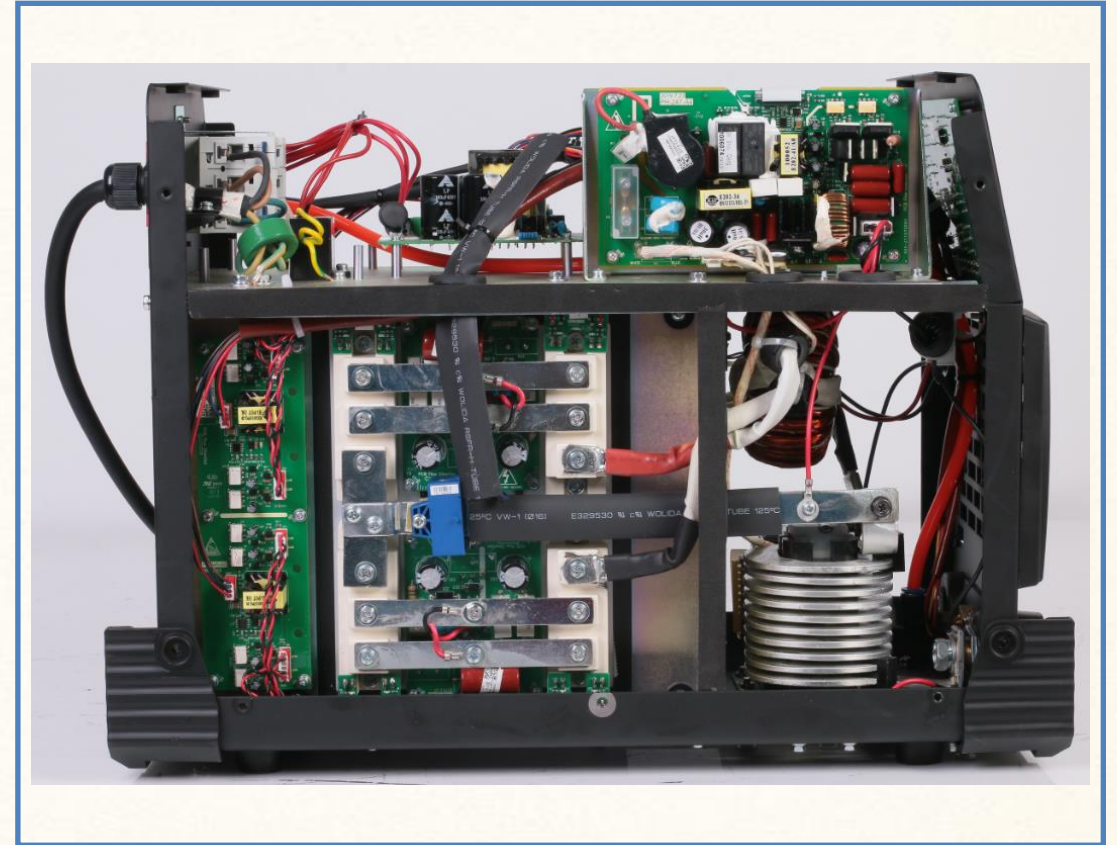
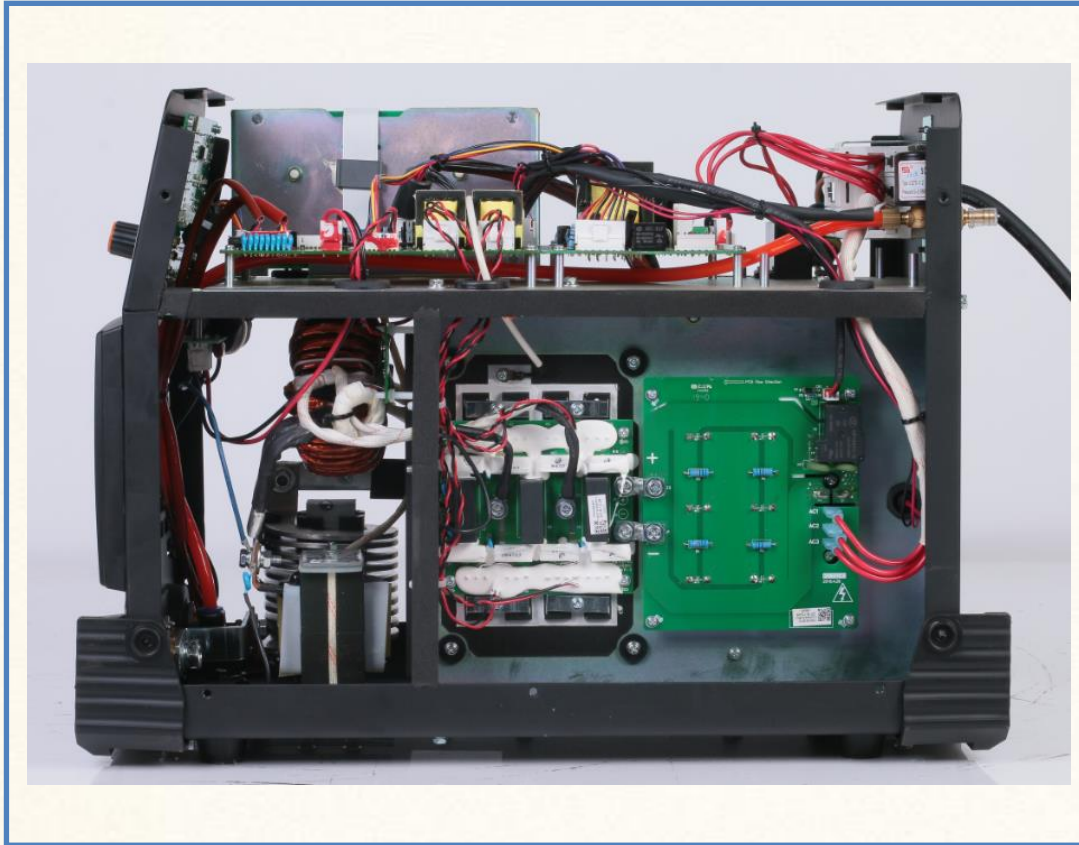
PARAMETERS



Name	3PH 380 multi functional ACDC TIG	
Model	TIG315PACDC	
Rated input power (KVA)	14.5@TIG	16.4@MMA
Rated input voltage (V)	3PH 380VAC ± 15%	
Frequency (Hz)	50	
Duty cycle (%)	35% (40℃)	
Power factor	0.7	
Size (MM)	522 × 267 × 442	
Power source weight (KG)	26	
Cooling	On-demand air cooling	
Insulationi class	F	
IP	IP21S	

MMA	rated output	270A/30.8V
	output current (A)	20~270
	arc force current (A)	0~100
	hot start current (A)	0~80
	hot start time(S)	0.01~1.5
	OCV (V)	75
TIG	DC output current (A)	5~315
	AC output current (A)	20~315
	preflow time(S)	0~10
	initial current (A)	5~315
	upslope time(S)	0~15
	downslope time(S)	0~15
	crater current(A)	5~315
	postflow time(S)	0.5~15
	background current (A)	5~315
	pulse frequency (HZ)	AC:0.5~200;DC:0.5~20
	pulse duty ratio(%)	5~95
	AC frequency(HZ)	50~200
	balance(%)	20~60
	mixed frequency(HZ)	0.5~20
mix duty ratio(%)	5~95	

1. Power source intro (internal structure)



1. Power source intro (accessories-just for ref.)



Cooler and foot control are optional



5m WP-18 TORCH:



3M cable 500A earth clamp



quick connector: DKJ35-50



Tungsten: 2.4*150MM

2. Features

Smaller size with lighter weight, more convenient for moving around

The adoption of secondary inverter technology can not only guarantee excellent welding performances, but also largely reduce machine size, for more compact design and lighter weight, so that to save space in workshop and more convenient for operation outdoor.



 JASIC佳士

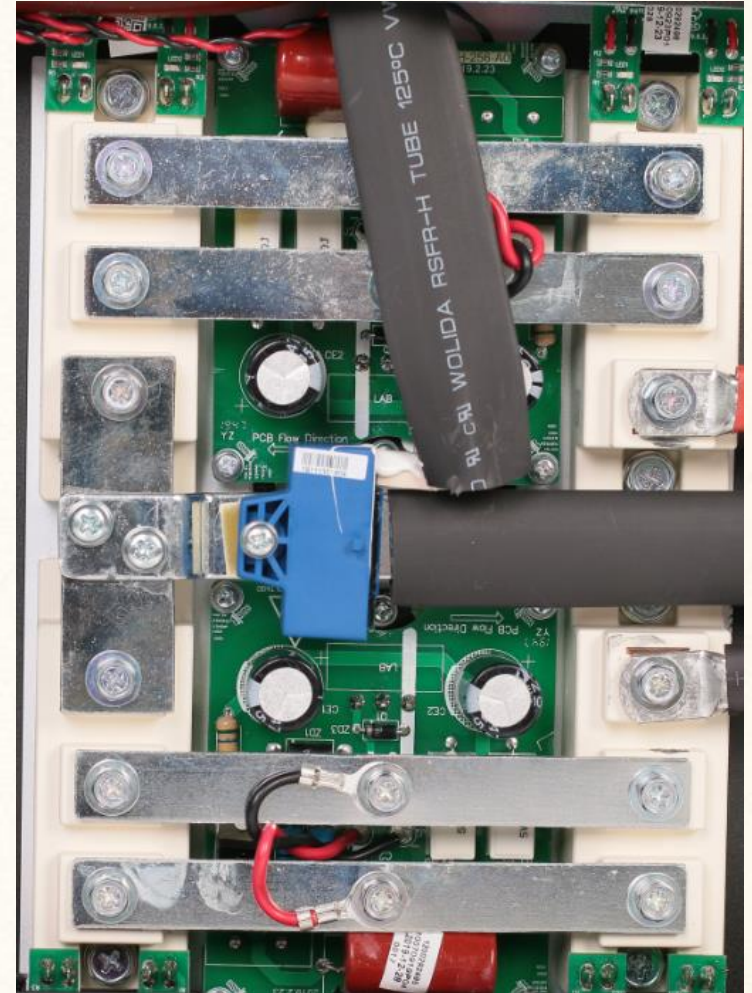
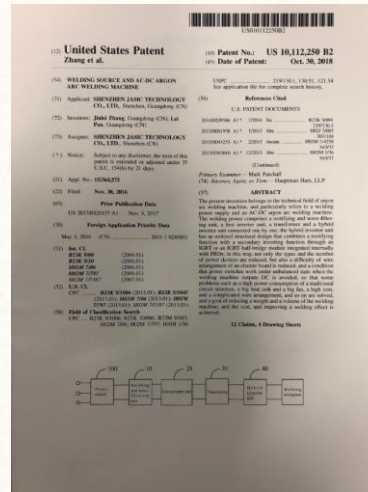
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weight
26KG

2. Features

Innovative secondary inverter topology

The machine is equipped with JASIC exclusive brand new secondary inverter topology, stepless rectifier diode, which not only saves pace, but also solve the problem of heat dissipation, which is caused by imbalanced power dissipation while under AC/DC output. This technology is also patented by JASIC in China and abroad, patent number: CN105817740N



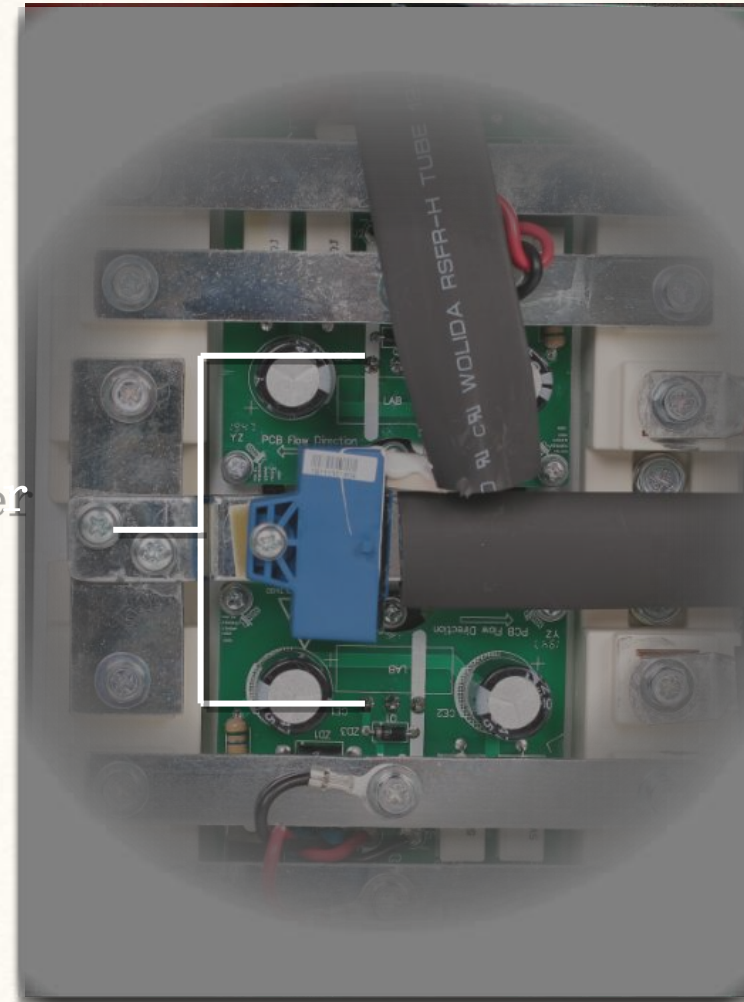
2. Features

2.3 innovative secondary inverter IGBT protection circuit

To improve the reliability for secondary inverter IGBT, the protection circuit adopts

Electronic load circuit to replace the traditional high power resistor, which will not only absorb the IGBT' s spike voltage promptly and efficiently, but also dissipate the heat generated to heat sink, therefore to improve heat dissipation efficiency and to save space.

Spike filter
circuit

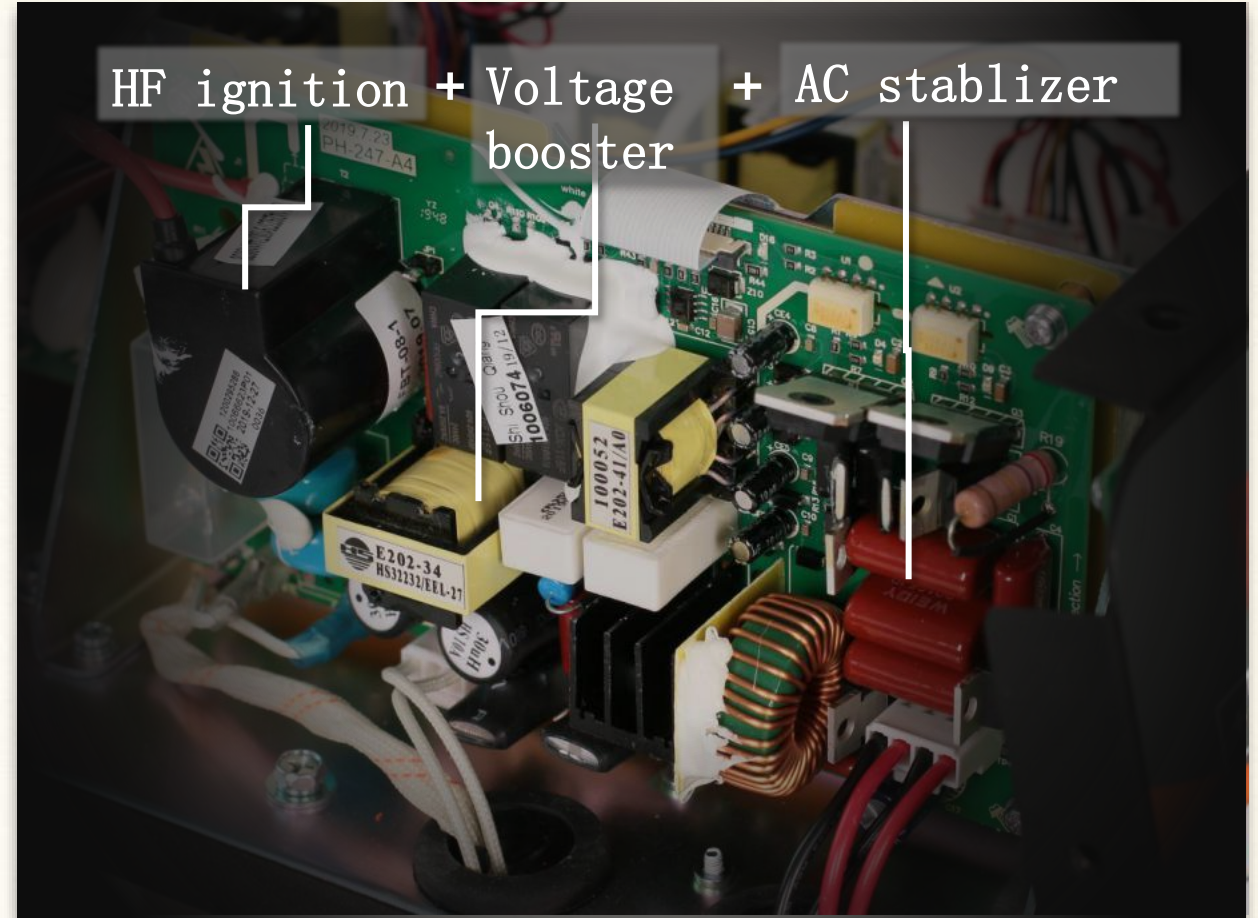


2. Features

2.4 Integrated **voltage-boosting** arc start design, electronic **arc-stabilization** circuit

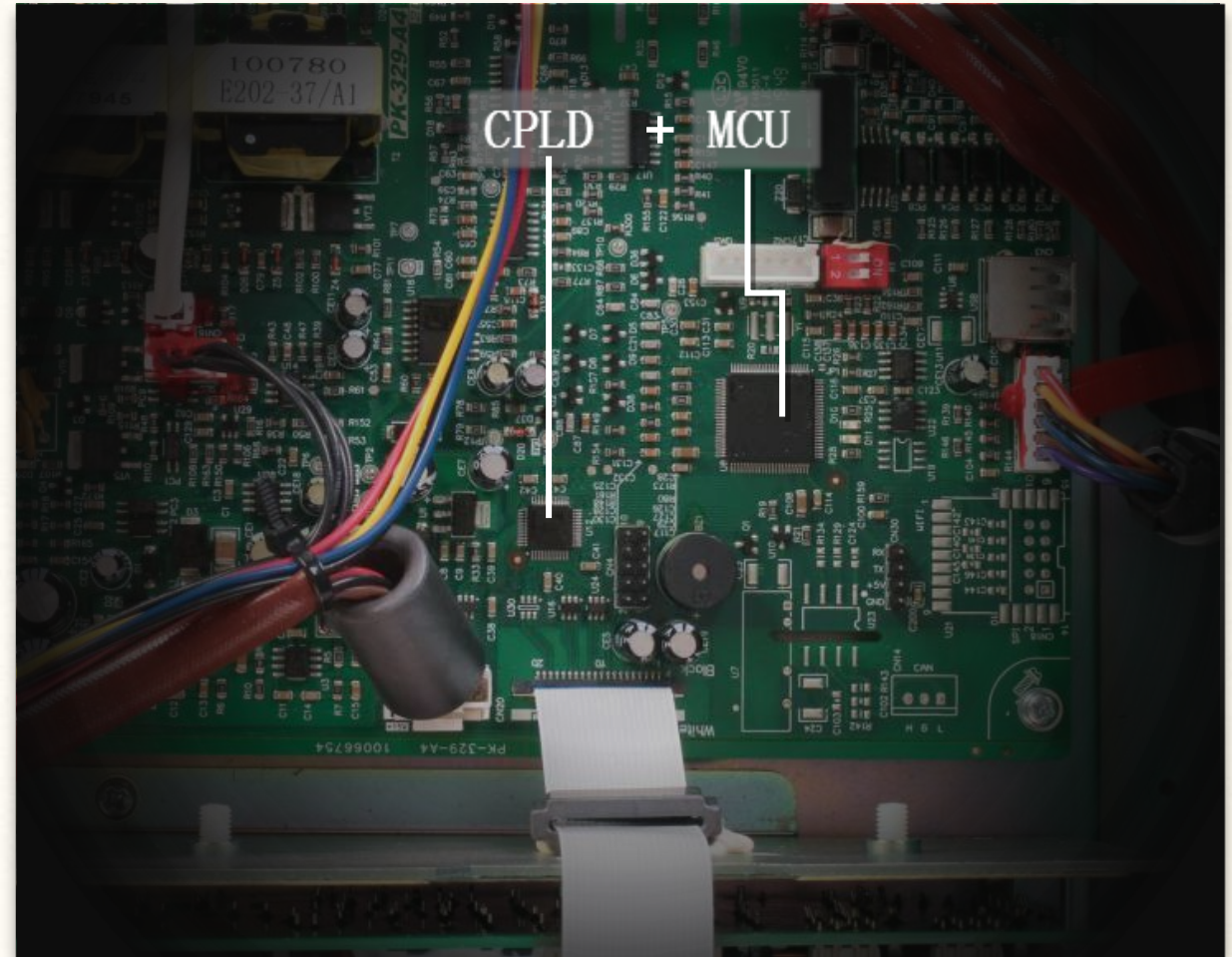
The traditional ACDC TIG machine's arc start circuit adopts lifting **amplitude and power** of HF voltage **increase's HZ value and power rate** to achieve arc start rate, but the radiation will not only generate huge interferences for internal circuit, which will cause components damage, but also interferences to other equipments in the same network. The traditional ACDC TIG arc stabilization are realized by huge inductance to make stable AC arc stability, but it's of huge size and heavy weight, as well as not satisfactory small current arc stabilization, and big current can easily causing hazardous voltage to damage the IGBT, and other power components, etc.

The new integrated **voltage-boosting** arc start and electronic arc stabilizer circuit design adopts current transfer synchronizing technology to accurately follow the arc stability status and to compensate or optimized real time, so that to make sure all outputs are under arc stability all the time. The shared arc stabilizer circuit works with accurate logic time/sequence control, as well as to guarantee **voltage-boosting** arc start , to increase arc start success rate.



2. Features

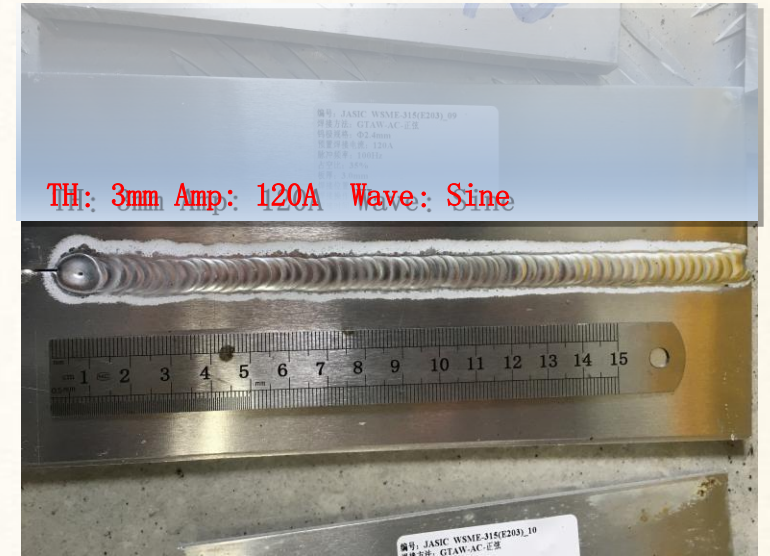
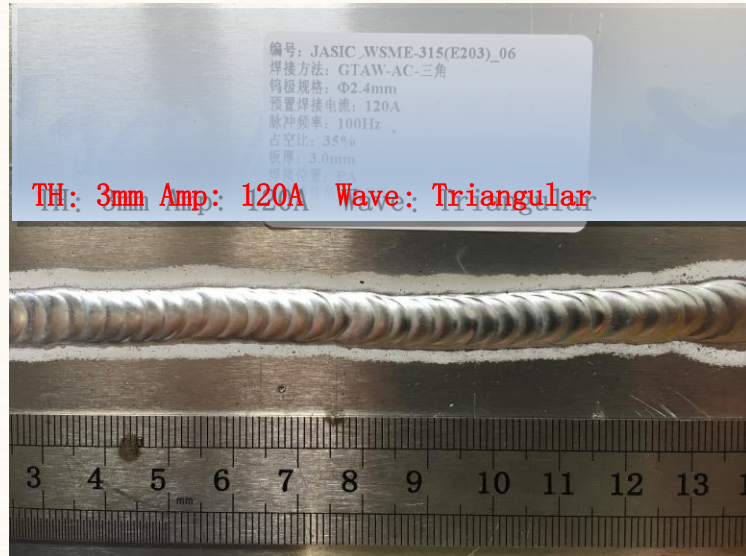
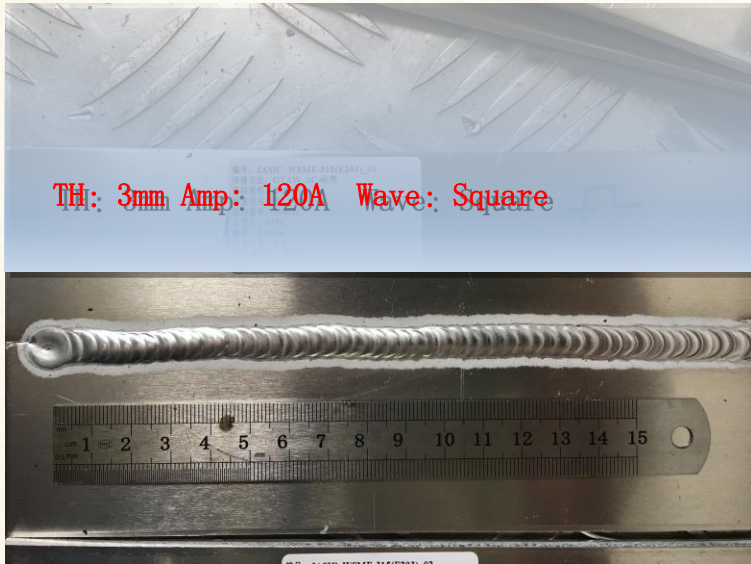
2.5 brand new digital architecture design
The machine adopts double ARM micro control+single CPLD programmable control structure- the combination can realize machine function control and logic time/sequence control, user interface communication, etc. The adoption of PID adjustment technology makes sure the machine has stable and accurate output current.



2. Features

2.6 AC TIG multi wave welding functions

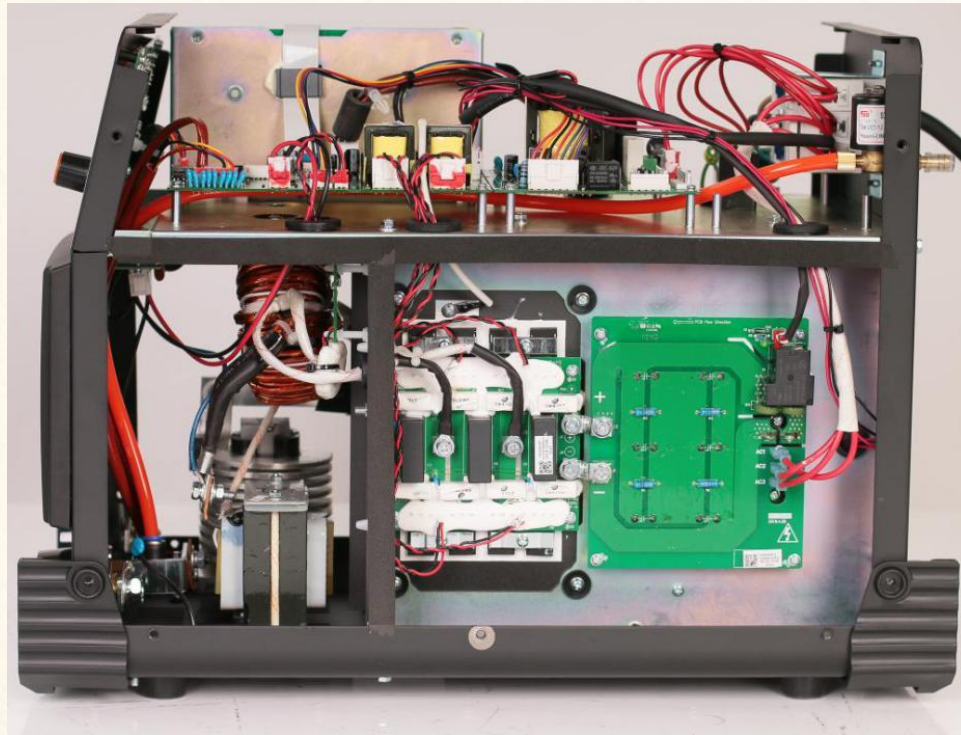
The machines is equipped not only traditional AC square wave, but also triangular wave and sine wave to meet various welding demands. Triangular wave can reduce heat input and have quick welding bead and reduce distortion. it's suitable for thin plates welding. Sine wave is with little arc noise and soft arc. The ACDC switch can increase heat input on base material, increase melt pool penetration and reduce tungsten consumption.



2. Features

2.7 main circuit close structure design

The machine uses main circuit cabinet closed structure design, which not only guarantee great heat ventilation, but also reduce the dust and humidity input, as they can easily cause short circuit



2. Features

2.8 On-demand fan control , prolonged fan life-span

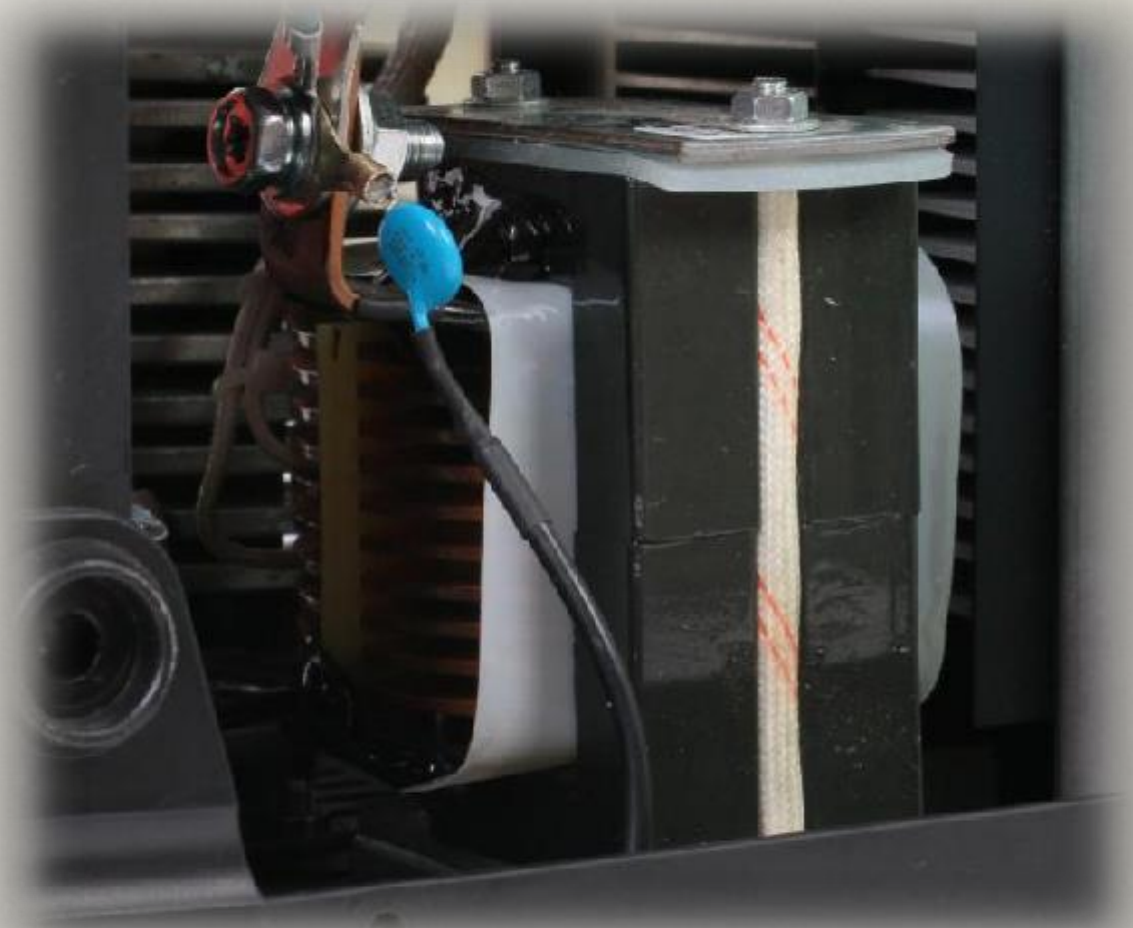
The machine uses double DC fan, which has stable speed and will not be affected by network voltage fluctuation. The intelligent and air forced fan control (on/off) not only to better the heat dissipation, but also reduce the dust input.



2. Features

2.9 brand new arc start transformer

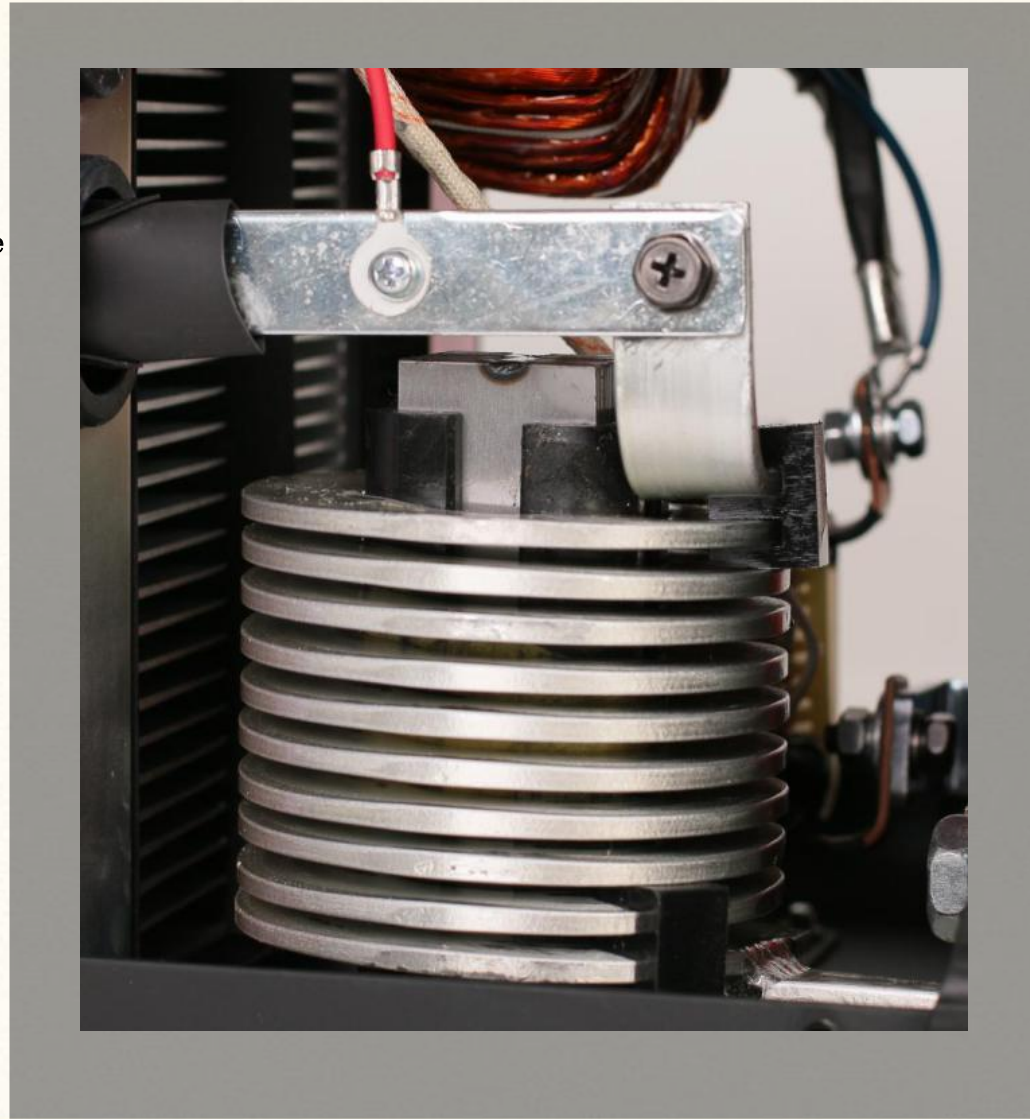
Arc start transformer uses large power ferrite core and red copper row winding, to furtherly increase arc start success rate and reduce loss, as well as to solve the arc start magnet interference which is caused by traditional magnetic bar arc starter.



2. Features

2.11 built in output big inductance

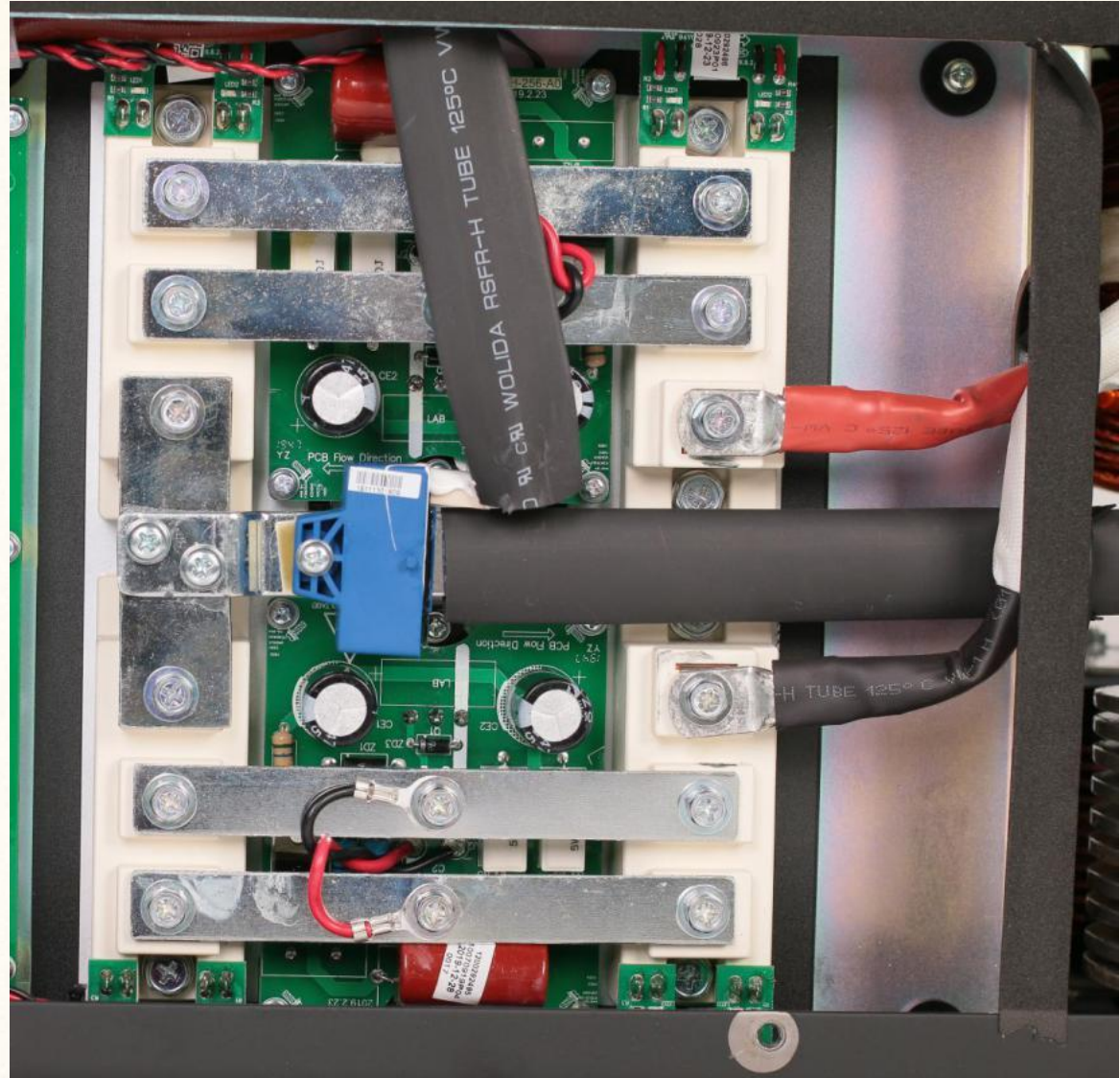
Output inductance uses high quality silicon steel and thick alumin row winding, so that to make sure stable arc full range output .



2. Features

2.12 high quality material

The machine uses high quality copper adapters to make sure they won't be oxidized while machine is under big current and is with high heat input; the secondary IGBT is adopting big current module seal package, to avoid paralleled power components' imbalanced current. The high quality materials and components used largely increases machine reliability.



3. Foot control introduction (OPT)

3.1 Function introduction

Mainly for TIG welding current adjustment; the max welding current is set by panel, and pedal is to control the current output between min current and panel set max current.

3.2 Parameters

Current adjustment 5~315A

Foot control switch potentiometer's resistance value:10K

2pin(Torch switch)+3pin(foot control) aviation socket.



Thanks
Thanks