- Good portability
- Digital control
- User-friendly interface
- Modular design
- High precision
- Multi-functional

JASIC NEW TIG315PACDC E303 INTRODUCTION

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- Mix TIG

1.2 Other functions

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

1. Introduction (features)

- **Advanced IGBT inverter technology**

Equipped with voltage spike resistant IGBT, which renders the power source more compact and reliable

- **Cutting-edge control technology**

JASIC's proprietary new secondary inverter topology

JASIC's new control technology which reduce secondary inverter voltage spike, enhancing circuit reliability

- **Excellent welding performances**

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

- **Comprehensive auto-protection**

All-round auto protection with corresponding error codes for more convenient trouble-shooting

- **High reliablity & performances**

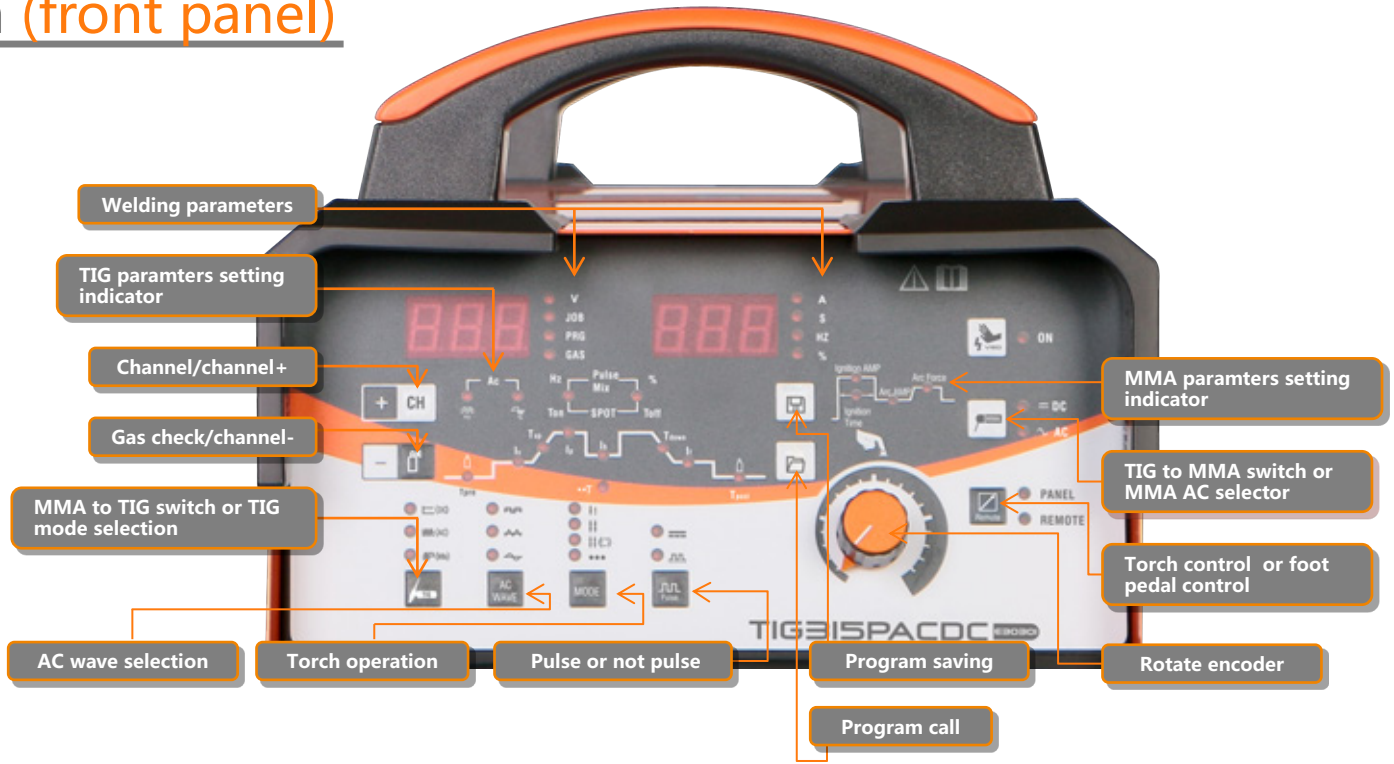
Intelligent digital control, consistent performance

- **Remote control interface available**

Optional torch control / foot pedal control

1. Introduction (front 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

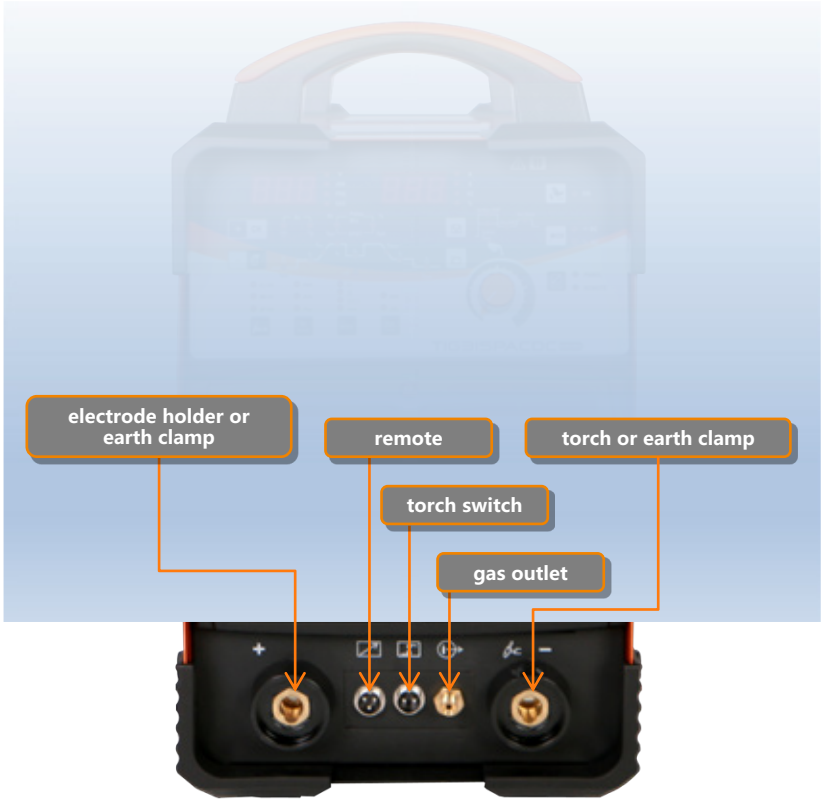


a. Standard AC square wave, polarity prompt switch, highly stable arc, great dynamic characteristics, great capability to clear oxidized layer on aluminum surface. Ideal for all aluminum and its alloy.

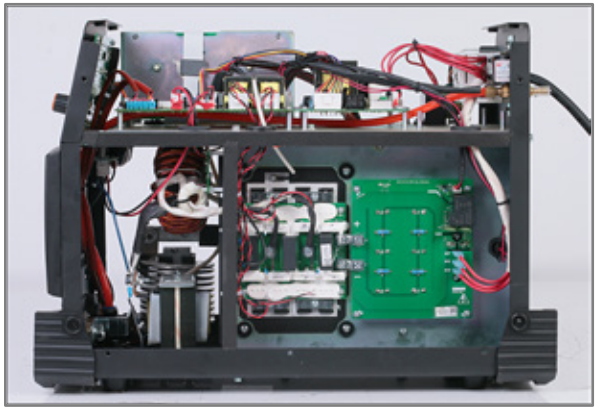
b. Triangular wave limits heat input, fast bead formation, decreasing distortion, suitable for thin plates welding.

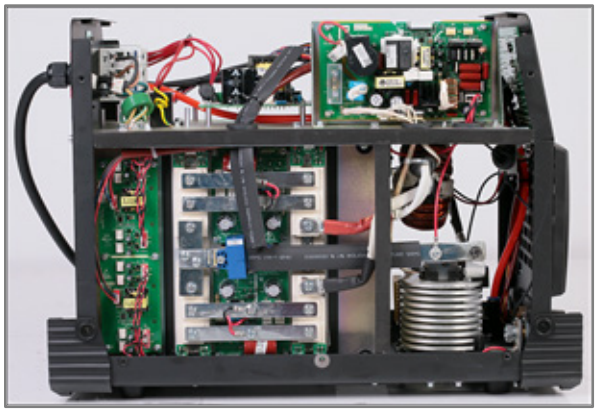
c. Sine wave with little arc noise and softer arc.

1. Introduction (interface)



1. Introduction (internal structure)





1. Introduction (accessories for ref. only)

Cooler and foot pedal are optional

5m WP-18 torch

3m cable 500A earth clamp

Quick connector : DKJ35-50

Tungsten tips : 2.4×150mm

1. Introduction (frame)

- More compact body with lighter weight for improved portability
- The adoption of secondary inverter technology can not only guarantees excellent welding performance, but also largely reduces machine size.

1. Introduction (parameter)

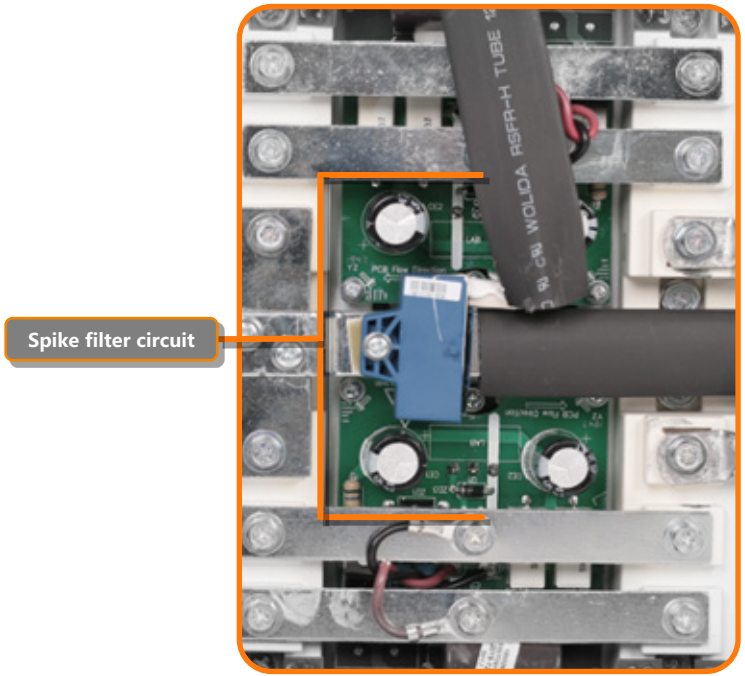
Name	3PH 380V multi functional ACDC TIG
Model	TIG315PACDC
Rated input power (KVA)	14.5@TIG 16.4@MMA
Rated input voltage (V)	3PH 380VAC±15%
Frequency(Hz)	50
Duty cycle (%)	35% (40℃)
Power factor	0.7
Size (mm)	522×267×442
Power source weight (kg)	26
Cooling	On-demand air cooling
Insulationi class	F
IP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

MMA	Rated output	270A/30.8V
	Outpu 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
	Mixed duty ratio (%)	5 ~ 95

2. Features

2.1 Innovative secondary inverter topology

The machine is equiped with JASIC new proprietary secondary inverter topology, stepless rectifier diode, which not only render the machine more compact, but also solve heat dissipation issue caused by power imbalance under AC/DC output. This technology is also patented by JASIC in China and abroad, patent number: CN105817740N



2.2 Innovative secondary inverter IGBT protection circuit

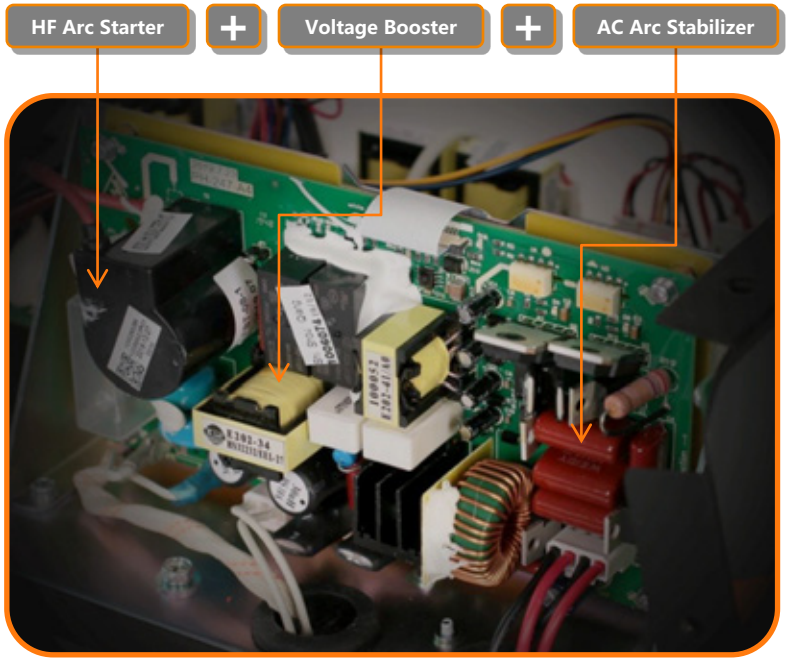
To improve secondary inverter IGBT's reliability, the protection circuit adopts electronic load circuit to replace traditional high power resistor, which not only absorbs the IGBT's voltage spike promptly and efficiently, but also transfer the heat generated to the heat sink, therefore improving heat dissipation efficiency and saving space.

2. Features

2.3 Integrated voltage-boosting arc starter circuit, electronic arc stabilizer circuit

Traditional ACDC TIG machine's arc starter circuit lifts HF voltage's amplitude and power to achieve high arc striking success rate. However, the radiation will cause huge interference to internal circuit, and it can also damage components, and can interfere with other equipments in the same network. Traditional ACDC TIG arc stabilization is realized by huge inductance, and this renders the machine more cumbersome. Arc stabilization performance is not satisfactory when the current is small. And big current can easily damage the IGBT, and other power electronic components, etc.

The new integrated voltage-boosting arc starter circuit and electronic arc stabilizer circuit adopts current transfer synchronization technology which accurately monitors arc stability. It also compensates or decompensates current value in real time, ensuring arc stability in all output modes. The shared arc stabilizer circuit works with accurate logic time/sequence control, and this achieves voltage-boosting arc starting, thus increasing arc start success rate.



2. Features

2.4 AC TIG multi wave welding functions

The machines is equipped with conventional AC square wave, and also triangular wave and sine wave to meet different welding requirements. Triangular wave reduces heat input and increases weld bead formation speed with limited distortion, which is suitable for thin plates welding. Sine wave generates soft arc with little noise. The ACDC switch can increase heat input on base metal,increase weld pool penetration and reduce tungsten consumption.

TH : 3mm Amp: 120A Wave : Square

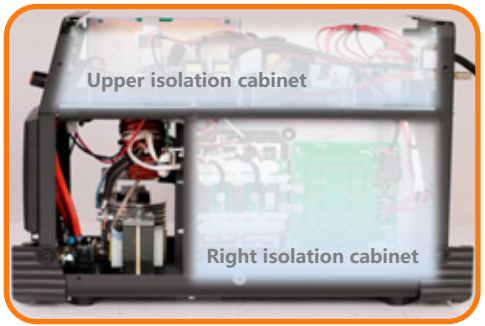
TH : 3mm Amp: 120A Wave : Triangular

TH : 3mm Amp: 120A Wave : Sine

2. Features

2.5 Isolated main circuit structure design

The machine uses main circuit cabinet closed structure design, which improves ventilation and enhances dust and humidity filtering capability.



2.6 Smart fan control, prolonged fan life-span

The machine uses double DC fan, which has stable speed and will not be affected by power grid voltage fluctuation. The smart fan control (on/off) not only improves heat dissipation, but also reduce dust input.

Ventilation Fan

2. Features

2.7 more than 50 user-defined operation parameter channel and parameters storage function

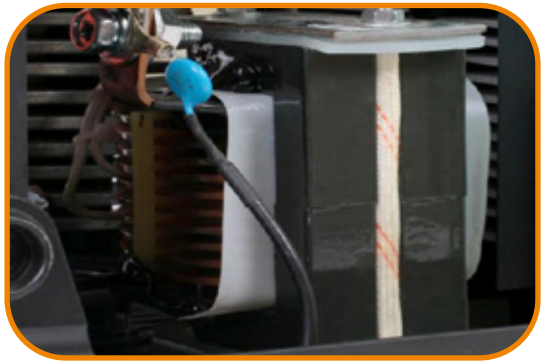
Storage function: Channel/channel+ → Parameter configuration → Program saving

Channel Function: Channel/channel+ → Program call → Parameter configuration recalled successfully

2. Features

2.8 New arc ignition transformer

The new arc ignition transformer uses large power ferrite core and red copper row winding, and this increases arc starting success rate and reduce loss. This new adoption also eliminates the electromagnetic interference caused by traditional magnetic bar arc starter.

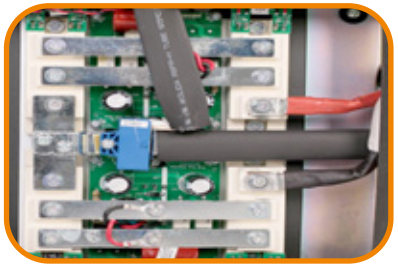


2.9 built in output inductors

The machine’ s output inductors uses high quality silicon steel and thick alumin row winding, ensuring stable arc in full range output.

2.10 high quality material

The machine uses high quality nickel-plated copper adapters to make sure they won’ t be oxidized when the machine is under big current with high heat input; the secondary IGBT adopts large current module package, which solves current imbalance in paralleled power components. The above improvement significantly strengthen the machine’ s overall reliability.



3. Foot pedal (OPT)

3.1 What' s it for?

Mainly used for amperage adjustment in TIG welding; the max welding current is set by the machine' s control panel, while the foot pedal can fine tune current value ranging from min current to the max value set on the machine' s control panel.

3.2 Parameters

Current adjustment range: 5~315A

Foot pedal switch potentiometer' s resistance value:10K

2-pin (torch switch)+3-pin (foot pedal signal) aviation socket.



Passionate About Your Welding

Thanks