Rated Specifications

Item	Unit	YC-350WX5	YC-500WX5
Control method	-	Digital IGBT Control	
Rated input Power supply and number of phases	-	3 - Ph, AC 380V	
Input power frequency	Hz	50/60	
Rated input capacity	kVA/kW	16.6/13.5	29.5/22.5
Rated output No-load voltage	V	DC 62	DC 70
Rated output current	A	To Stick 300	TIG 500 Stick 400
Rated output voltage	V	To Stick 32	TIG 30 Stick 36
Rated duty cycle	%	35	60
Output current range	A	DC TIG 4-350 AC TIG 10-350 Stick 10-300	DC TIG 5-500 AC TIG 20-500 Stick 20-400
Output voltage range	V	TIG 10.16-24 Stick 20.4-32	TIG 10.2-30 Stick 20.2-36
Pulse current	A	DC TIG 4-350 AC TIG 10-350	DC TIG 5-500 AC TIG 20-500
Pulse frequency	Hz	0.1-500	
Memory	-	100 channels for storing and recalling	
Shielding gas	-	Ar: 99.99% or higher	
Up-slope time	s	0-20 continuous adjustment (0.1 increment)	
Down-slope time	s	0-20 continuous adjustment (0.1 increment)	
Gas pre-flow time	s	0-30 continuous adjustment (0.1 increment)	
Gas after-flow time	s	0-30 continuous adjustment (0.1 increment)	
AC frequency (AC TIG)	Hz	30-100 (factory setting: 70)	
Input power terminal	-	Terminal block (for 3 phases, M5 bolts)	
Output terminal	-	Fast plug	Bolt fastening method
Enclosure class	-	IP23S	
Insulation class	-	200	
cooling method	-	Forced air cooling	
Dimensions (Length×Width×Height)	mm	560×380×730	730×380×875
Mass	kg	74	128

Note:
The output current and voltage range is measured with resistance load according to GB/T 15579.1-2013.
The external dimensions are of the welding power source measured when the built-in liquid cooling system and the trolley are not included.

Optional peripheral devices

YX-09KGC2
Liquid cooling system

YJ-18TH
Hot wire filling device

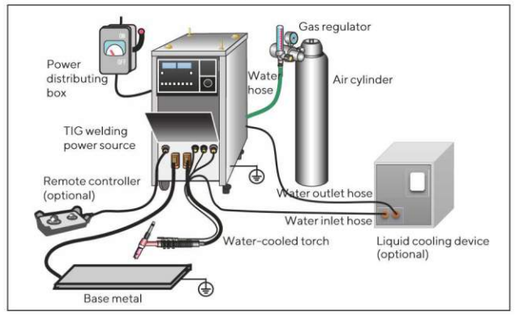
YJ-1052T
Automatic wire filling device

TSMAU041
Foot controller

WTCXW00008
Remote control

Note: 500WX5 needs to be equipped with large-capacity liquid cooling device YX-09KGC2HGT.

Equipment set-up



World-class Welding Quality at Your Doorstep

- Panasonic Smart Factory Solutions India has set-up its state-of-the-art manufacturing facility in Jhajjar, Haryana, India. So our globally proven range of welding equipment including MMAW, MIG/MAG, TIG, Plasma Cutting, Welding Accessories, and Welding Robots are now available at your doorstep.
- Assured commitment to long-term product support in terms of Sales, Service and Spares.
- All-India Sales and Service network.

Range of Welding Equipment: MMAW | MIG/MAG | TIG | Plasma Cutting | Welding Accessories | Welding Robots
Panasonic has set-up its own state-of-the-art welding equipment manufacturing facility at Jhajjar near Gurugram, Haryana, India.

PANASONIC LIFE SOLUTIONS INDIA PVT. LTD.
(Division Company: Panasonic Smart Factory Solutions India)

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Phone: +91-124-4871300

Factory : Village Bid Dadri, Tehsil and District: Jhajjar - 124103, Haryana, India.

Eastern Regional Office : Acropolis Mall, 8/6, Plot No. 1858, 8th Floor, Rajdanga Main Road, Opp. Kasba New Market, Kolkata - 700016, West Bengal.

Western Regional Office : 5th Floor, Unit No. 502 & 503, Windfall Building, Sahar Plaza Complex, Survey No. 179A to 179H, J. B. Nagar, Andheri East, Mumbai - 400058, Maharashtra.

Southern Regional Office : 66th Floor, Polyhose Towers, No. 86, Anna Salai, Guidy, Chennai-600032, Tamil Nadu

Central Regional Office : Ayodhya, 119, 2nd Floor, Bajaj Nagar, Nagpur - 440010, Maharashtra.

Sales Offices at Ahmedabad, Bengaluru, Bhubaneswar, Mumbai and Hyderabad.

For more information and service related queries please write to: **Psfsin.enquiry@in.panasonic.com**

Authorised Sales & Service Provider

+91-9729900200

PSFSIN / YD-350/500WX5/022023

Panasonic

YC-350/500WX5

Full Digital AC/DC Pulse TIG Welding Machine

FULL DIGITAL

A variety of waveforms for your selection
The high-quality welding results are achievable for aluminum and a wide range of materials!

AC balance control-cleaning width adjustment

TIG Welding Torches

- **YT-20TS**
(Applicable thickness: 4.5mm or less)

- **YT-30TSW**
(Applicable thickness: 6.0mm or less)

- **YT-308TPW**
(Applicable thickness: 6.0mm or less)

- **YT-158TP**
(Applicable thickness: 3.0mm or less)

www.panasonic.com/in/business/introduction.html

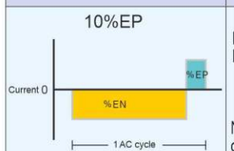
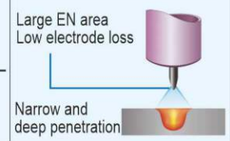
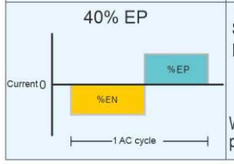
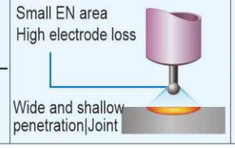
RoHS
Restriction of Hazardous Substances

The high-quality welding results of aluminum and various metal materials can be easily realized!

AC waveform control

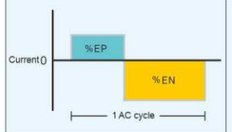
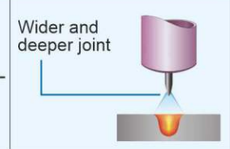
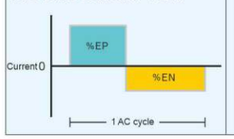
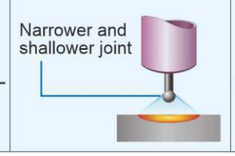
AC balance control-cleaning width adjustment

For AC TIG aluminum welding, the cleaning width can be adjusted. The adjustment range of EP is 10-50% by changing the percentage of EP, the higher percentage of EP, the wider the cleaning width and the shallower the penetration.

Waveform	Effect on weld bead	Effect on appearance
10%EP 	Large EN area Low electrode loss  Narrow and deep penetration	Narrow joint  Joint
40% EP 	Small EN area High electrode loss  Wide and shallow penetration Joint	Wide joint with cleaning area  Joint Cleaning area

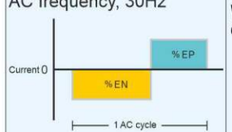
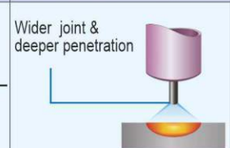
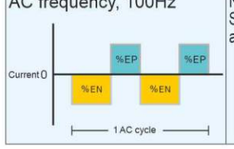
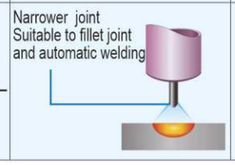
AC balance control-bias current adjustment

For AC TIG aluminum welding, the cleaning strength of removing the oxide film can be further adjusted by changing the amplitude ratio of EP and EN, achieving the ideal the penetration and width of the joint. The bias current range is -70% - 70% and the standard is 0.

Waveform	Effect on weld bead	Effect on appearance
The bias current 10% 	Wider and deeper joint 	Narrower joint  Joint Smaller cleaning area
The bias current -10% 	Narrower and shallower joint 	Wider joint  Joint Larger cleaning area

AC balance control-AC frequency adjustment

Through the adjustment of AC frequency (adjustment range 30-100Hz), the arc concentration and arc stiffness can be controlled, the higher the frequency, the stronger the arc concentration.

Waveform	Effect on weld bead	Effect on appearance
AC frequency, 30Hz 	Wider joint & deeper penetration 	Wider joint  Joint Cleaning area
AC frequency, 100Hz 	Narrower joint Suitable to fillet joint and automatic welding 	Wider joint  Joint Cleaning area

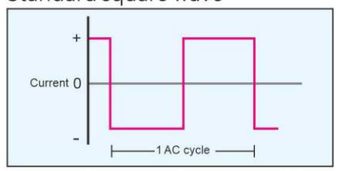
EP: Electrode rod positive polarity EN: Electrode rod negative polarity

AC waveform selection

AC standard TIG mode

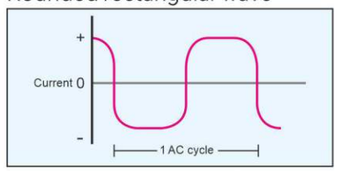
As a rectangular wave current with the same positive and negative peaks, AC standard mode is widely used in aluminum, magnesium and their alloys from thin plates to thick plates; The thin and thick plate have a large heat capacity difference. When they are welded together, the low-frequency pulses (0.5-10Hz) are used to control the output, making welding easier.

Standard square wave



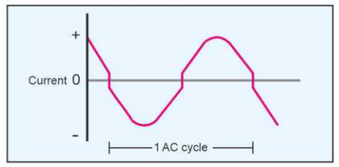
Standard AC waveform: fast polarity switching, high arc stability, good dynamic characteristics, and strong ability to clean aluminum oxide film
Suitable for a wide range of aluminum and its alloy welding

Rounded rectangular wave



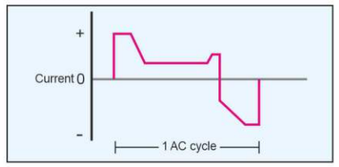
The rounded rectangular waveform: smooth polarity switching, soft arc, and nice wetting effect on the molten pool.
Suitable for overhead and grooved welding.

Flexible waveform



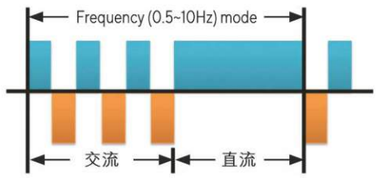
The wave shape at zero-crossing point is rectangular. And the wave crest is a sine wave. The arc noise is low and softer.

Hard waveform



Hard wave: the arc heat concentration is high. (Suitable for welding with narrow bead.)
Suitable for thin plate welding.
Fillet welds of the normal thickness plates.
If pulse is turned ON, it can be suitable for plates of different thickness.

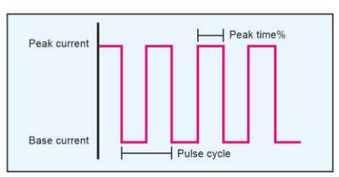
Mixed TIG mode

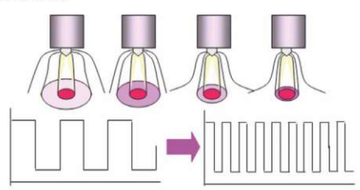


In MIX TIG mode, the alternate outputs of AC and DC further increase the heat input of the heating base metal and the penetration depth, and reduce the tungsten electrode burning loss. You can obtain the satisfied welding result by filling the wire during AC period. (if the frequency is adjusted to 1-2Hz, it is easy to find the insertion time of the filler wire.)

Pulse control

Generally speaking, TIG pulse welding can be divided into the following types:
① Low frequency pulse (0.1~10Hz); ② Intermediate frequency pulse (10~500Hz);
Low-frequency pulse is focused on controlling the amount of heat input, while the medium-frequency pulse welding is mainly used to increase the stiffness of the arc.
Pulse frequency and main welding characteristics:





Pulse type	Arc state	Main features
Low frequency pulse	Wider arc column	All-position welding, shifted welding of different plate thicknesses and penetration welding
Intermediate frequency pulse	Concentrated arc. Arc sound	High-speed welding of thin plates, fillet welding, easy for wire filling

Welding method description

Recommended application of various welding methods

Welding method	Weld bead appearance	Welding Speed	Arc noise	Butt joint	Thin plate fillet joint	Thick plate butt	Thick plate fillet	Different board thickness	Vertical edge butt joint	Easy to fill wire?	Electrode life
Mix TIG	● Medium width	▲	●	◎	●	●	●	●	◎	◎	◎
Standard TIG	◎ Medium width	◎	●	●	●	◎	◎	●	●	◎	●
Hard TIG	● Narrow width	●	▲	◎	◎	●	◎	◎	●	●	●
Soft TIG	● Wide width	◎	◎	●	▲	●	●	▲	●	●	●

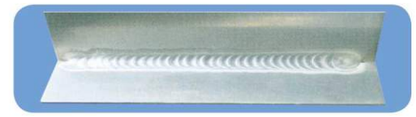
◎Excellent ●Good △Acceptable

With multiple welding modes, corresponding to different welding needs

Mix TIG welding

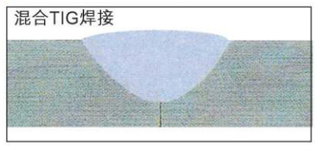
(Aluminum)

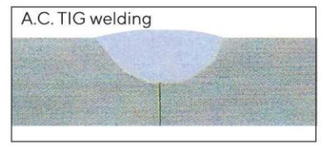
※Mix TIG welding:
Panasonic's unique welding method enables machine to alternately out - put AC TIG and DC TIG.



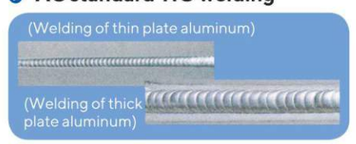
- Thanks to high arc concentration, it's easy for you to complete the aluminum thin plate fillet welding and realize the reliable tack welding.

- Because AC TIG welding contains DC components, deeper penetration can be obtained.



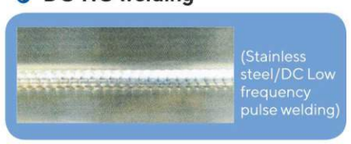


AC standard TIG welding



- From thin plate to thick plate, various shapes workpiece can be welded.

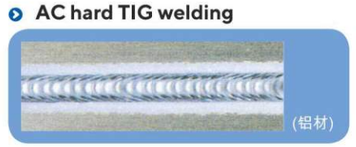
DC TIG welding



- Choose the arc ignition method according to the purpose.
- Suitable for multi-point welding.

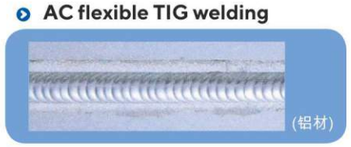
※EP=electrode positive polarity method

AC hard TIG welding



- Strong arc concentration.
  Suitable for welding thin plates with gaps.

AC flexible TIG welding



- The arc is soft and the noise is low.

Welding power source configuration (●Available/Yes ○Not-available/None)

Welding Power Source	Stick welding	Analog communication interface	Digital SPM interface	IoT	RFID Card reading	Integrated water cooling system	External water cooling system	Wire-filling device	Remote control/foot controller	Robot interface
YC-350WX5HGE YC-500WX5HGE	●	●	○	○	○	○	●	●	●	○
YC-350WX5HGW	●	●	●	●	●	●	○	●	●	●
YC-500WX5HGT	●	●	●	●	●	○	●	●	●	●