

# Product Guide

## [TIG Welding Machines]

Model	Process					Weld Navigation	Input			Output Current (A)			Duty Cycle (%)	Pulse Frequency (Hz)	Arc Spot Time (s)	Base Metal Thickness (mm)	Page
	AC TIG	DC TIG	Pulse	AC Stick	DC Stick		Phase	Voltage (VAC)	Frequency (Hz)	AC TIG	DC TIG	DC Stick					
<b>Full Digital (Inverter)</b> 300BZ3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		3	380 or 415	50/60	—	300	250	40	0.8 to 500	0.1 to 5.0	Stainless steel: 0.3 to 6.0	2
200BL3YNA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		1	200 to 240	50/60	—	200	150	20	0.5 to 500	0.1 to 5.0	Stainless steel: 0.3 to 4.5	2
300BP4YUA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3	380 to 415	50/60	300	300	250	40	0.1 to 500	0.1 to 5.0	Stainless steel: 0.3 to 6.0 Aluminum: 0.8 to 6.0	3
<b>Inverter</b> 315TX3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		3	380 or 415	50/60	—	315	315	60	0.5 to 500	—	Stainless steel: 0.5 to 6.0	3
400TX3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		3	380 or 415	50/60	—	400	400	60	0.5 to 500	—	Stainless steel: 0.5 to 8.0	3
200BL1HDK	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		1	220	50/60	—	200	160	20	—	—	Stainless steel: 0.5 to 4.5	4
300WX4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		3	380 or 415	50/60	300	300	250	40	0.5 to 500	—	Stainless steel: 0.5 to 6.0 Aluminum: 0.8 to 6.0	4
500WX4Y0E	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		3	380	50/60	500	500	400	60	0.5 to 500	—	Stainless steel: 0.8 to 8.0 Aluminum: 1.5 to 8.0	4
300WY4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		3	380 or 415	50/60	300	300	250	40	0.5 to 500	—	Stainless steel: 0.5 to 6.0 Aluminum: 0.8 to 6.0	5
200BR1YAA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		1	200	50/60	200	200	—	25	0 to 500	—	Stainless steel: 0.5 to 4.5 Aluminum: 0.8 to 4.5	5
<b>Thyristor</b> 300TSP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		3	380 or 415	50/60	—	300	300	40	0.5 to 15	0.5 to 5.0	Stainless steel: 0.5 to 6.0	6
500TSP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		3	380 or 415	50/60	—	500	500	60	0.5 to 15	0.5 to 5.0	Stainless steel: 0.8 to 8.0	6
150TM(Mini)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		1	220 or 380	50/60	—	150	150	20	—	—	Stainless steel: 0.5 to 4.5	6
300WP5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		1	220 or 380 or 415	50/60	315	315	315	40	0.5 to 10	0.5 to 5.0	Stainless steel: 0.8 to 6.0 Aluminum: 1.5 to 6.0	7

[Full Digital (Inverter)]: Digital display, control and communication for easier operation, increased energy savings, reduced size and weight and superior welding performance compared to non-digital or thyristor welding machines.

[Inverter]: Inverter control achieves improved welding performance compared to thyristor models while providing increased energy savings in a smaller and lighter design.

[Thyristor]: Standard welding models.

## [AC/DC Stick Welding Machines, Plasma Cutting Machines]

Model	Process				Input			Output Current (A)	Duty Cycle (%)	Page	
	AC Stick	DC Stick	Arc Gouging	DC Simple TIG	Cutting	Phase	Voltage (VAC)				Frequency (Hz)
400AT3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		3	380 or 415	50/60	400	60	16
630AT3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		3	380 or 415	50/60	630	60	16
400SS3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		3	380 or 415	50	400	60	16
630SS3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		3	380 or 415	50	630	60	16
405FL4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		1	220 or 380 or 415	50	400	60	17
505FL4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		1	220 or 380 or 415	50	500	60	17
305AA3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		1	380	50	300	60	17
060PS2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3	380 or 415	50/60	63	60	18
100PS2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3	380 or 415	50/60	100	60	18

# 200BL1

Inverter Control DC TIG Welding Machine

Portable Type  
Weight\*  
10 kg

DC TIG DC Stick



200BL1

\*Weight is for machine only.

Compact and Lightweight,  
Weighing Only 10 kg.  
Portable Model Suitable for  
Mobile Welding.

±20% input voltage compensation for stable welding performance.

### Easy to Use for Mobile Welding

- Good Portability.
  - Compact.
  - Lightweight with only 10 kg.



### Good Welding Performance

- High-speed IGBT inverter control achieves instantaneous arc starting.
- DC Stick welding is also available.
- Initial current and crater-fill current can be set.

# WX4

Twin Inverter Control AC/DC TIG Welding Machines

AC TIG DC TIG DC Stick



300WX4

500WX4Y0E

High-Performance Models for  
Producing High-Quality Welds  
on a Variety of Materials.

### Various Welding Modes for High Quality Welding

Twin inverter control and adjustable AC output for welding a wide variety of aluminum workpieces.

- High AC output frequency produces a concentrated arc.

Ideal for welding hard aluminum (No.6000 and 7000 of JIS) and aluminum bronze.

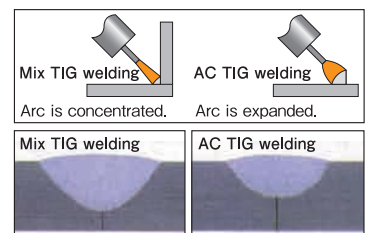


- Low AC output frequency makes it possible to weld a wide range of workpieces such as thin plates, thick plates and aluminum alloys.

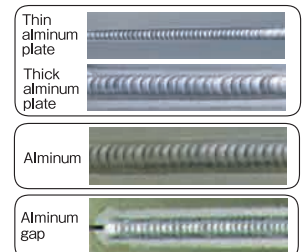


### Various welding modes for various workpieces.

- Mix TIG welding
  - A concentrated arc is ideal for lap welding of thin aluminum plates.
  - Combination of AC and DC TIG allows deep penetration and significantly reduces electrode consumption.

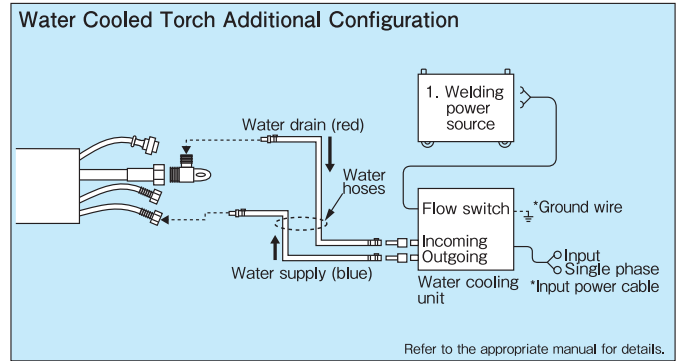
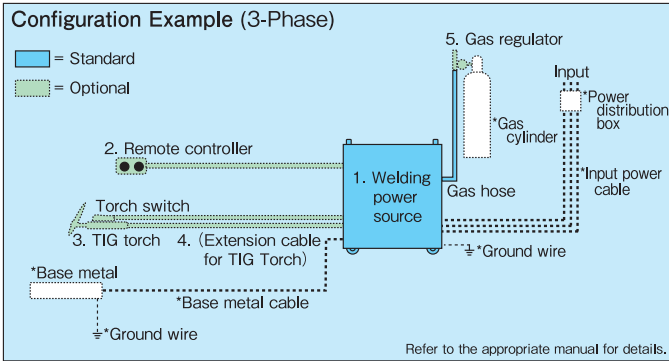


- AC standard TIG welding  
Allows you to weld a wide variety of materials from thin to thick plates.
- AC soft TIG welding  
Produces a soft arc with low noise.
- AC hard TIG welding
  - Produces a concentrated arc.
  - Great for gap welding of thin plates.



# Welding System Configuration

## TIG



\*Customer supplied items

\*Customer supplied items

1. Welding Power Source	2. Remote Controller (optional)	3. Welding Torch (optional) *Common model names are described below.	4. Extension Cable (optional)	5. Gas Regulator (optional)	Other Items
YC-300BZ3 • 3m gas hose included. • Terminal adaptor for 0.3 m base metal cable included.	YC-30BPR1 (5 m)	<ul style="list-style-type: none"> <li>● YT-30TS2TAG (4 m, air-cooled)</li> <li>● Selectable between No.9-10, 14, 15, 18, 19 of page 10</li> </ul>	Selectable between 5, 10, 15 m	YX-251 A	Optional water cooling unit YX-09KGC1 required to use water-cooled torches. (3 m water hose included.)
YC-200BL3YNA • 2.5 m input power cable included.	—	<ul style="list-style-type: none"> <li>● YT-15TS2TAD (4 m, air-cooled)</li> </ul>	—	YX-16AG1	—
YC-300BP4YUA • 3 m gas hose included. • Terminal adaptor for 0.3 m base metal cable included.	YC-30BPR1 (5 m) YC-30BPR4 (5 m, parameter recall)	<ul style="list-style-type: none"> <li>● YT-30TS2TAG (4 m, air-cooled)</li> <li>● Selectable between No.9-10, 14, 15, 18, 19 of page 10</li> </ul>	Selectable between 5, 10, 15 m	YX-251 A	Optional water cooling unit YX-09KGC1 required to use water-cooled torches. (3 m water hose included.)
YC-315TX3 • 3m gas hose included.	—	—	—	—	—
YC-400TX3 • 3m gas hose included.	—	—	—	—	—
YC-200BL1HDK • 3m gas hose included. • Attached cable/ Torch switch adaptor included.	—	<ul style="list-style-type: none"> <li>● YT-158T</li> <li>● YT-208T</li> </ul>	—	—	—
YC-300WX4 • 3 m gas hose included.	YC-301URTRK1 (5 m)	<ul style="list-style-type: none"> <li>● YT-30TS2 (4 m, air-cooled)</li> <li>● Selectable between No.1-4, 6, 7, 11-13, 16, 17, 20, 21 of page 10</li> </ul>	Selectable between 5, 10, 15 m	YX-251 A	Optional water cooling unit YX-09KGC1 required to use water-cooled torches. (3 m water hose included.)
YC-500WX4Y0E • 3 m gas hose included.	YC-301URTRK1 (5 m)	<ul style="list-style-type: none"> <li>● YT-50TSW2 (4 m, water-cooled)</li> <li>● Selectable between No.1-4, 6, 7, 11-13, 16, 17, 20, 21 of page 10</li> </ul>	Selectable between 5, 10, 15 m	YX-251 A	Optional water cooling unit YX-09KGC1 required to use water-cooled torches. (3 m water hose included.)
YC-300WY4 • 3 m gas hose included.	—	—	—	—	—
YC-200BR1YAA • 3 m gas hose included. • 3 m base metal cable included.	—	<ul style="list-style-type: none"> <li>● YT-20TS2TAD (8m, air-cooled)</li> </ul>	—	YX-16AG1	—
YC-300TSP	—	—	—	—	—
YC-500TSP • 3 m gas hose included.	YC-301URTRK1 (5 m)	<ul style="list-style-type: none"> <li>● YT-50TSW2 (4 m, water-cooled)</li> <li>● YT-50TSW2 C1 (8 m, water-cooled)</li> </ul>	Selectable between 5, 10, 15 m	YX-251 A	Optional water cooling unit YX-09KGC1 required to use water-cooled torches. (3 m water hose included.)
YC-150TM(Mini)	—	—	—	—	—
YC-300WP5	YC-304URW (4 m)	—	—	—	—

# Specifications

TIG

## 1. Welding Power Sources

Model	Rated Input Voltage Phase Rated Frequency	Rated Input (kVA) (kW)	Output Current Adjustable Range (A)						Rated Duty Cycle (%)	Arc Spot Time (s)	AC Frequency (Hz)	MIX Frequency (Hz)	Pulse Frequency (Hz)	Dimensions (W×D×H) (mm)	Weight (kg)
			AC TIG			MIX TIG	DC TIG	DC Stick							
			Standard	Hard	Soft										
YC-300BZ3	380 V or 415 V 3-phase 50/60 Hz	10.5 9.5	—	—	—	—	4 to 300	4 to 250	40	0.1 to 5	—	—	0.8 to 500	380×510×410	35
YC-200BL3YNA	200 to 240 V 1-phase 50/60 Hz	7.8 5.1	—	—	—	—	5 to 200	5 to 150	20	0.1 to 5	—	—	0.5 to 500	95×420×295	9
YC-300BP4YUA	380 to 415 V 3-phase 50/60 Hz	11.6 9.7	10 to 300	20 to 300	10 to 200	10 to 300	4 to 300	4 to 250	40	0.1 to 5	30 to 400	0.1 to 20	0.1 to 500	375×523×634	64
YC-315TX3	380 V or 415 V 3-phase 50/60 Hz	8.8 8.3	—	—	—	—	4 to 315	4 to 315	60	—	—	—	0.5 to 500	327×555×602	42
YC-400TX3	380 V or 415 V 3-phase 50/60 Hz	14.5 12.4	—	—	—	—	4 to 400	4 to 400	60	—	—	—	0.5 to 500	327×555×602	43
YC-200BL1HDK	220 V 1-phase 50/60 Hz	7.5 4.5	—	—	—	—	5 to 200	5 to 160	20	—	—	—	—	150×345×252	10
YC-300WX4	380 V or 415 V 3-phase 50/60 Hz	12.0 10.5	10 to 300	20 to 300	10 to 200	10 to 300	4 to 300	4 to 250	40	—	—	0.5 to 10	0.5 to 500	380×530×730	74
YC-500WX4Y0E	380 V 3-phase 50/60 Hz	24.0 19.5	20 to 500	40 to 500	20 to 330	20 to 500	5 to 500	50 to 400	60	—	—	0.5 to 10	0.5 to 500	440×585×945	118
YC-300WY4	380 V or 415 V 3-phase 50/60 Hz	10.5 9.0	10 to 300	20 to 300	10 to 200	10 to 300	4 to 300	4 to 250	40	—	—	0.5 to 10	0.5 to 500	380×530×730	74
YC-200BR1YAA	200 V 1-phase 50/60 Hz	7.3 5.4	10 to 200	—	—	—	4 to 200	—	25	—	—	—	0 to 500	212×448×333	15
YC-300TSP	380 V or 415 V 3-phase 50/60 Hz	16.1 13.5	—	—	—	—	5 to 300	5 to 300	40	0.5 to 5	—	—	0.5 to 15	470×560×845	136
YC-500TSP	380 V or 415 V 3-phase 50/60 Hz	33.2 30.7	—	—	—	—	5 to 500	5 to 500	60	0.5 to 5	—	—	0.5 to 15	500×650×1 020	225
YC-150TM(Mini)	220 V or 380 V 1-phase 50/60 Hz	11.4 6.3	—	—	—	—	8 to 150	8 to 150	20	—	—	—	—	300×460×520	62
YC-300WP5	220 V or 380 V or 415 V 1-phase 50/60 Hz	26.0 17.0	20 to 315	—	—	—	5 to 315	5 to 315	40	0.5 to 5	—	—	0.5 to 10	465×617×846	193

## 2. Remote Controllers

Eliminate the need to return to the power source to adjust welding current or voltage.

### ■ YC-301URTRK1

- For use with WX4
- 5 m 6 core cable



### ■ YC-30BPR1

- For use with BZ3 and BP4
- 5 m 12 core cable
- Pulse current adjustment



### ■ YC-30BPR4

- For use with BP4
- Recall of welding parameters
- 5 m 12 core cable
- Pulse current adjustment



## 5. Argon Gas Regulator

● YX-251A

Provides accurate regulation of shielding gas for quality welding.



## 4. Extension Cables for Welding Torches (Build-to-Order)

Torch	Cable Length (m)	Cooling Method	Connector	Power Source
YT-20TS2TAG	4	Air-cooled	Dinse	300BP4/300BZ3
YT-20TS2TAH	8	Air-cooled	Dinse	300BP4/300BZ3
YT-30TS2TAG	4	Air-cooled	Dinse	300BP4/300BZ3
YT-30TS2TAH	8	Air-cooled	Dinse	300BP4/300BZ3
YT-30TS2	4	Air-cooled	Ring	
YT-30TS2C1	8	Air-cooled	Ring	
YT-30TSW2TAG	4	Water-cooled	Dinse	300BP4/300BZ3
YT-30TSW2THA	8	Water-cooled	Dinse	300BP4/300BZ3
YT-30TSW2	4	Water-cooled	Ring	
YT-30TSW2C1	8	Water-cooled	Ring	
YT-50TSW2	4	Water-cooled	Ring	
YT-50TSW2C1	8	Water-cooled	Ring	

### For Air-Cooled Torches

Model	Section Area(mm <sup>2</sup> )	Length(m)
TWU20131	38	5
TWU20132		10
TWU20133		15

### For Water-Cooled Torches

Model	Section Area(mm <sup>2</sup> )	Length(m)
TWU30132	38	5
TWU30133		10
TWU30134		15

### For 500 A Water-Cooled Torches

Model	Section Area(mm <sup>2</sup> )	Length(m)
TWU50137	60	5
TWU50138		10
TWU50139		15

Note: A terminal block adapter (CWC00180) and a control cable assembly (TWX00018) are required to connect an extension cable to 300BP4 or 300BZ3.