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					
Full Digital (Inverter)	300BZ3		○	○		○		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		○	○		○		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	○	○	○		○	○	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
Inverter	315TX3		○	○		○		3	380 or 415	50/60	—	315	315	60	0.5 to 500	—	Stainless steel: 0.5 to 6.0	3
	400TX3		○	○		○		3	380 or 415	50/60	—	400	400	60	0.5 to 500	—	Stainless steel: 0.5 to 8.0	3
	200BL1HDK		○			○		1	220	50/60	—	200	160	20	—	—	Stainless steel: 0.5 to 4.5	4
	300WX4	○	○	○		○		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	○	○	○		○		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	○	○	○		○		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	○	○	○				1	200	50/60	200	200	—	25	0 to 500	—	Stainless steel: 0.5 to 4.5 Aluminum: 0.8 to 4.5	5
Thyristor	300TSP		○	○		○		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		○	○		○		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)		○			○		1	220 or 380	50/60	—	150	150	20	—	—	Stainless steel: 0.5 to 4.5	6
	300WP5	○	○	○	○	○		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		○		○		3	380 or 415	50/60	400	60	16
630AT3		○	○	○		3	380 or 415	50/60	630	60	16
400SS3		○				3	380 or 415	50	400	60	16
630SS3		○	○			3	380 or 415	50	630	60	16
405FL4	○					1	220 or 380 or 415	50	400	60	17
505FL4	○					1	220 or 380 or 415	50	500	60	17
305AA3	○					1	380	50	300	60	17
060PS2					○	3	380 or 415	50/60	63	60	18
100PS2					○	3	380 or 415	50/60	100	60	18

FULL DIGITAL

300BZ3

Full Digital DC TIG Welding Machine

DC TIG DC Stick

Full Digital Control Changes Welding.

User-friendly control panel and jog dial allow easy parameter settings.

300BZ3

High Welding Performance

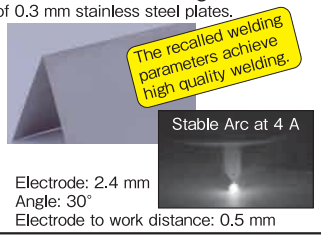
Precise control only possible with Full Digital control. Straight and consistent bead edges valued highly.

- Welding current adjustable in 1 A increments allows high-quality welding.
- Appropriate welding parameters can be recalled from the database.

Stainless steel (0.5 mm)
Lap welding (fusion welding)
Base and pulse current: 5 A, 50 A
Weld speed: 30 cm/min.

Revolutionary arc starting.

- Almost 100 % success rate of instantaneous arc starting even at 4 A.
  Minimizes burn-through in butt welding of 0.3 mm stainless steel plates.
  (Hot current setting: Low)
- Concentrated and stable arc.
- The ability to weld a wide range of thicknesses using a thick 2.4 mm electrode.
- Optional gas lens nozzle for better bead appearance.



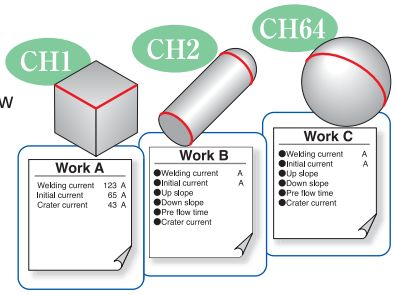
Electrode: 2.4 mm
Angle: 30°
Electrode to work distance: 0.5 mm

Versatile.

- Three welding processes:
  - DC TIG (including DC pulse TIG)
  - DC arc spot
  - DC stick

Easy setting.

- User-friendly control panel and jog dial allow easy setting.



Welding parameter memory.

- Allows storage and recall of up to 64 sets of welding parameters.

Easy connection with other equipment.

- Easy connection with G2/G3 controller for Panasonic robot.

FULL DIGITAL

200BL3

Full Digital DC TIG Welding Machine

Portable Type Weight* 9 kg

DC TIG DC Stick

Full Digital and Portable. Perfectly Suited for Mobile Welding.


200BL3

*Weight is for machine only.

Easy to Use for Mobile Welding

- Only 9 kg despite all metal strong case.
- Input voltage from 200 to 240 V (170 to 264 V) for stable welding.
- Additional DC Stick welding control with arc drive function (arc force control) and voltage reduction device.

Welding Processes and Functions for Stable Welding Quality

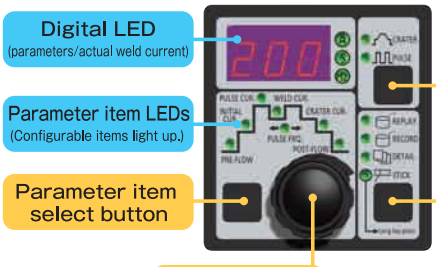
Full Digital control allows easy setting, storage and recall of welding parameters.

- DC pulse welding.
- Arc spot welding.
- Memory to store/recall up to 9 sets of welding parameters.

Easy Setting

Full Digital control allows precise and easy parameter setting.

Large Jog Dial and Three Buttons on Control Panel

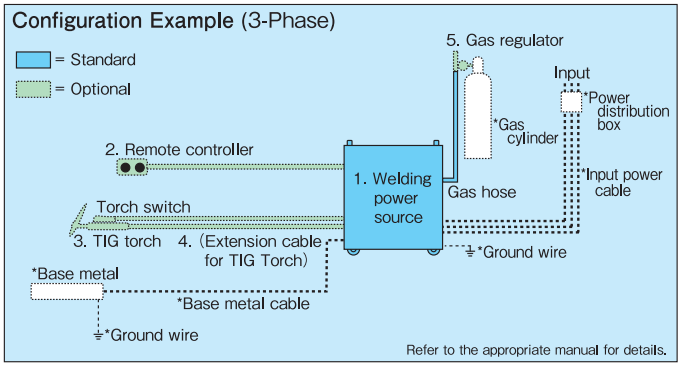


Parameter memory function allows recall of optimum welding parameters.

Welding System Configuration

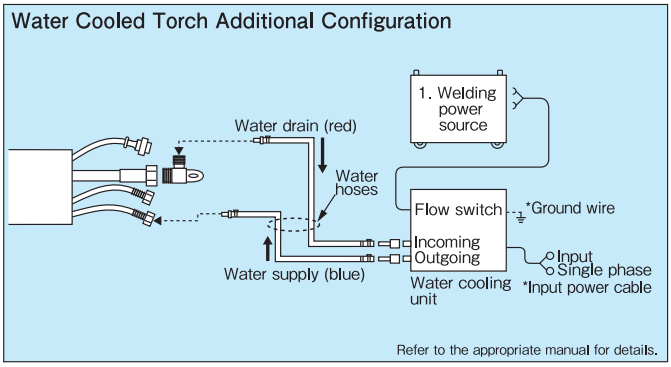
TIG

Configuration Example (3-Phase)



*Customer supplied items

Water Cooled Torch Additional Configuration



*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)	●YT-30TS2TAG (4 m, air-cooled) ●Selectable between No.9-10, 14, 15, 18, 19 of page 10	Selectable between 5, 10, 15 m	YX-251A	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.	–	●YT-15TS2TAP (4 m, air-cooled)	–	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)	●YT-30TS2TAG (4 m, air-cooled) ●Selectable between No.9-10, 14, 15, 18, 19 of page 10	Selectable between 5, 10, 15 m	YX-251A	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 inclued.	–	●YT-158T ●YT-208T	–	–	–
YC-300WX4 ・3 m gas hose included.	YC-301URTRK1 (5 m)	●YT-30TS2 (4 m, air-cooled) ●Selectable between No.1-4, 6, 7, 11-13, 16, 17, 20, 21 of page 10	Selectable between 5, 10, 15 m	YX-251A	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)	●YT-50TSW2 (4 m, water-cooled) ●Selectable between No.1-4, 6, 7, 11-13, 16, 17, 20, 21 of page 10	Selectable between 5, 10, 15 m	YX-251A	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.	–	●YT-20TS2TAD (8m, air-cooled)	–	YX-16AG1	–
YC-300TSP	–	–	–	–	–
YC-500TSP ・3 m gas hose included.	YC-301URTRK1 (5 m)	●YT-50TSW2 (4 m, water-cooled) ●YT-50TSW2 C1(8 m, water-cooled)	Selectable between 5, 10, 15 m	YX-251A	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	

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

For Air-Cooled Torches

Model	Section Area(mm²)	Length(m)
TWU20131	38	5
TWU20132		10
TWU20133		15

For Water-Cooled Torches

TWU30132	38	5
TWU30133		10
TWU30134		15

For 500 A Water-Cooled Torches

TWU50137	60	5
TWU50138		10
TWU50139		15

3. RED TIG TORCH 2

TIG Welding Torches

All New. RED

Higher Welding Performance, Operability and Safety.

YT-50TSW2

YT-30TS2

No.	Model	Rated Current (A)		Duty Cycle (%)	Cable Length (m)	Electrode Diameter (mm) Sizes in ( ) Optional	Nozzle Inner Diameter (mm) Sizes in ( ) Optional	Water Flow (L/min)	Water Pressure (MPa)	Water Cooling Unit Capacity (kW)	Weight (kg)	Cooling Method
		DC	AC									
1	YT-08TS2	80	55	35	4	(0.5), (1.0), 1.6	8	–	–	–	0.9	Air-cooled
2	YT-12TS2	120	85	35	4	(0.5), (1.0), 1.6, (2.0)	6.4, (8), (10), (11), (12.7), (16)	–	–	–	0.9	Air-cooled
3	YT-15TS2	150	105	35	4	(0.5), (1.0), 1.6, (2.0), (2.4)	(6.5), 8, (9.5), (11), (12.7), (16), (19)	–	–	–	1.2	Air-cooled
4	YT-15TS2C1	150	105	35	8	(0.5), (1.0), 1.6, (2.0), (2.4)	(6.5), 8, (9.5), (11), (12.7), (16), (19)	–	–	–	2.0	Air-cooled
5	YT-15TS2TAP	150	105	35	8	(0.5), (1.0), 1.6, (2.0), (2.4)	(6.5), 8, (9.5), (11), (12.7), (16), (19)	–	–	–	2.1	Air-cooled
6	YT-20TS2	200	140	35	4	(0.5), (1.0), (1.6), (2.0), 2.4, (3.2)	(6.5), (8), 9.5, (11), (12.7), (16), (19)	–	–	–	1.8	Air-cooled
7	YT-20TS2C1	200	140	35	8	(0.5), (1.0), (1.6), (2.0), 2.4, (3.2)	(6.5), (8), 9.5, (11), (12.7), (16), (19)	–	–	–	3.0	Air-cooled
8	YT-20TS2TAD	200	140	35	8	(0.5), (1.0), (1.6), (2.0), 2.4, (3.2)	(6.5), (8), 9.5, (11), (12.7), (16), (19)	–	–	–	3.0	Air-cooled
9	YT-20TS2TAG	200	140	35	4	(0.5), (1.0), (1.6), (2.0), 2.4, (3.2)	(6.5), (8), 9.5, (11), (12.7), (16), (19)	–	–	–	1.9	Air-cooled
10	YT-20TS2TAH	200	140	35	8	(0.5), (1.0), (1.6), (2.0), 2.4, (3.2)	(6.5), (8), 9.5, (11), (12.7), (16), (19)	–	–	–	3.1	Air-cooled
11	YT-20TSW2	200	140	100	4	(0.5), (1.0), (1.6), (2.0), 2.4, (3.2)	(6.4), (8), 10, (11), (12.7), (16)	0.7 or more	0.1 to 0.35	0.75 or more	1.4	Water-cooled
12	YT-30TS2	300	210	20	4	(0.5), (1.0), (1.6), (2.0), (2.4), 3.2, (4.0)	(6.5), (8), (9.5), 11, (12.7), (16), (19)	–	–	–	2.2	Air-cooled
13	YT-30TS2C1	300	210	20	8	(0.5), (1.0), (1.6), (2.0), (2.4), 3.2, (4.0)	(6.5), (8), (9.5), 11, (12.7), (16), (19)	–	–	–	3.7	Air-cooled
14	YT-30TS2TAG	300	210	20	4	(0.5), (1.0), (1.6), (2.0), (2.4), 3.2, (4.0)	(6.5), (8), (9.5), 11, (12.7), (16), (19)	–	–	–	2.3	Air-cooled
15	YT-30TS2TAH	300	210	20	8	(0.5), (1.0), (1.6), (2.0), (2.4), 3.2, (4.0)	(6.5), (8), (9.5), 11, (12.7), (16), (19)	–	–	–	3.8	Air-cooled
16	YT-30TSW2	300	210	100	4	(0.5), (1.0), (1.6), (2.0), (2.4), 3.2, (4.0)	(6.5), (8), (9.5), 11, (12.7), (16), (19)	0.7 or more	0.1 to 0.35	0.8 or more	1.8	Water-cooled
17	YT-30TSW2C1	300	210	100	8	(0.5), (1.0), (1.6), (2.0), (2.4), 3.2, (4.0)	(6.5), (8), (9.5), 11, (12.7), (16), (19)	0.7 or more	0.1 to 0.35	1.6 or more	3.0	Water-cooled
18	YT-30TSW2TAG	300	210	100	4	(0.5), (1.0), (1.6), (2.0), (2.4), 3.2, (4.0)	(6.5), (8), (9.5), 11, (12.7), (16), (19)	0.7 or more	0.1 to 0.35	0.8 or more	1.9	Water-cooled
19	YT-30TSW2TAH	300	210	100	8	(0.5), (1.0), (1.6), (2.0), (2.4), 3.2, (4.0)	(6.5), (8), (9.5), 11, (12.7), (16), (19)	0.7 or more	0.1 to 0.35	1.6 or more	3.1	Water-cooled
20	YT-50TSW2	500	350	100	4	(1.0), (1.6), (2.0), (2.4), (3.2), 4.0, (4.8), (6.4)	(9.5), (12.7), 16, (19)	1.0 or more	0.15 to 0.35	1.9 or more	2.6	Water-cooled
21	YT-50TSW2C1	500	350	100	8	(1.0), (1.6), (2.0), (2.4), (3.2), 4.0, (4.8), (6.4)	(9.5), (12.7), 16, (19)	1.5 or more	0.2 to 0.35	3.3 or more	4.4	Water-cooled

Note: Torch switch included. *Flexible type and pencil type also available. **Optional collet and collet body required to use optional electrode.