

Panasonic CO₂/MAG/MIG Welding Machine Guide

Model		Process								Output		Input			Applicable Wire Diameter (mm)	Guide for Applicable Thickness (mm)	Page
		CO ₂ /MAG	Pulse MAG	MIG		Pulse MIG		DC Arc Gouging	DC Stick	Current Range (A)	Duty Cycle (%)	Voltage (V)	Phase	Frequency (Hz)			
Stainless Steel	Aluminum			Stainless Steel	Aluminum												
Full Digital (Inverter)	350GZ4 YUA	○		○						30 to 350	60	380 to 415	3	50/60	0.8/0.9 1.0/1.2	0.8 to 12.0	2
	350VR1 YU1	○		○						30 to 350	60	380 to 415	3	50/60	0.8/0.9 1.0/1.2	0.8 to 12.0	2
	350GR3 YGA	○		○						30 to 350	60	380	3	50/60	0.8/0.9 1.0/1.2	0.8 to 12.0	3
	500GR3 YGA	○		○						60 to 500	100	380 to 415	3	50/60	1.2/1.4 1.6	1.2 to 25.0	3
	350GY3	○		○						30 to 350	60	380 to 415	3	50/60	0.8/0.9 1.0/1.2	0.8 to 12.0	3
	500GY3	○		○						60 to 500	100	380 to 415	3	50/60	1.2/1.4 1.6	1.2 to 25.0	3
	400GT3 YUA	○	○	○		○				30 to 400	60	380 to 415	3	50/60	0.9/1.0 1.2/1.4	0.8 to 16.0	4
	400GT3 YUD For aluminum	(○)	(○)	(○)	○	(○)	○			30 to 400	60	380 to 415	3	50/60	1.2/1.6	1.2 to 16.0	4
	350GL3	○	○	○		○				30 to 430	60	380 or 415	3	50/60	0.8/0.9 1.0/1.2	0.8 to 12.0	5
	500GL3	○	○	○		○				60 to 550	100	380 or 415	3	50/60	1.2/1.4 1.6	1.2 to 25.0	5
Inverter	350FR1	○								40 to 350	60	380 to 415	3	50/60	0.8/1.0 1.2	1.2 to 12.0	6
	500FR1	○								60 to 500	100	380 to 415	3	50/60	1.0/1.2 1.6	1.2 to 25.0	6
	350RX1	○								50 to 430	60	380 or 415	3	50/60	0.8 or 0.9 1.0/1.2	1.2 to 12.0	6
	400RX1	○								50 to 430	60	380 or 415	3	50/60	0.8 or 0.9 1.0/1.2	1.2 to 16.0	6
	500RX1	○								60 to 550	100	380 or 415	3	50/60	(1.0)/1.2 1.4/1.6	1.2 to 25.0	6
	600RF2 YGA	○								60 to 600	100	380	3	50/60	1.2/1.4 1.6	1.2 to 40.0	7
Thyristor	200KR2	○								50 to 200	60	380	3	50/60	0.8/0.9 1.0/1.2	0.8 to 6.0	8
	350KR2	○								60 to 350	50	380	3	50/60	0.8/0.9 1.0/1.2	1.2 to 12.0	8
	500KR2	○								60 to 500	60	380	3	50/60	1.2/1.4 1.6	1.2 to 25.0	8
	600KH2	○						○	○	60 to 600	100	380	3	50/60	1.2/1.4 1.6	1.2 to 40.0	8
	500CL5	○						● (optional)	● (optional)	60 to 500	60	380	3	50/60	1.2/1.4 1.6	1.2 to 25.0	9
Slide Transformer	180SL7	○								60 to 180	40	380	3	50/60	0.8/1.2	0.8 to 6.0	9

(○): If Steel or Stainless Steel is desired for these standard Aluminum packages, please select the appropriate wire feeder and torch for these alternate materials.

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.

Inverter FR1 series

Inverter Controlled CO₂/MAG Welding Machines

CO₂/MAG

Achieving Stable Welding Performance and Easy Operation.



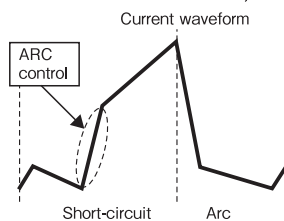
500FR1
Duty cycle
100 %
@ 500 A

Made in China

High Welding Performance

Equipped with arc control function

- It adjusts the slope of current waveform.
- "Hard" increases di/dt, faster reaction
- "Soft" decreases di/dt, slower reaction



Adjustment	Changes
STD	Standard
To "SOFT"	• Softer arc • Lower spatter
To "HARD"	• Harder arc • Stable arc in high-speed welding

Welding voltage is set automatically based on the set welding current.

Easy Operation

- Simple control panel for easy use on site.

Front control panel



Larger digital meter that is easier to read

Hard switches allow easy confirmation of setup.

Arc control

Inverter RX1 series

Inverter Controlled CO₂/MAG Welding Machines

CO₂/MAG

Tough. Energy Saving. Affordable. Better Welding Performance.



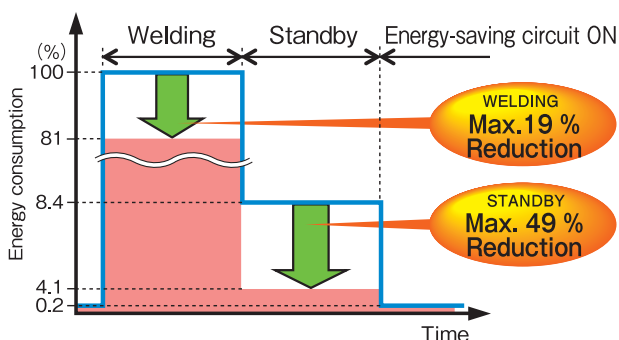
Made in China

Higher Energy-Saving Performance

Energy consumption comparison between 350RX1 and thyristor model

*Weld current: 150 A range

350RX1 (Red line) Thyristor (Blue line)



- High power efficiency allows energy-saving welding.

- Power supply to the transformer stops after welding, which prevents transformer loss (no-load loss) and reduces standby power consumption.

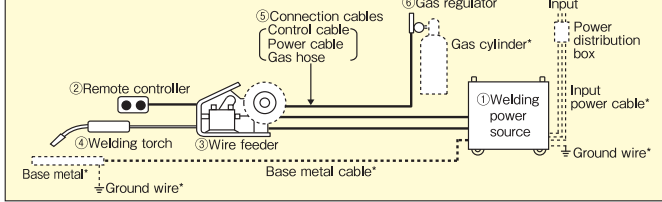
- Energy-saving circuit turns on seven minutes after the torch switch is released.

Higher Welding Performance

- Digital waveform control achieves good arc starting and stable arc.
- Unitary control of weld current and voltage eliminates the need of voltage setting, allowing easy weld parameter setting and high working efficiency.
- Wire feed speed is constant even if the voltage fluctuates.

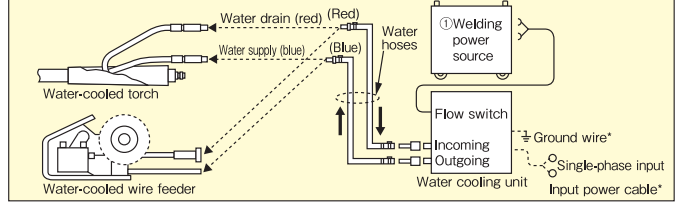
Welding System Configuration

Standard Layout (non-remote type)



*Customer supplied items

Water Cooled Torch & Wire Feeder Additional Configuration



*Customer supplied items

①Welding Power Source	②Remote Controller	③Wire Feeder	④Welding Torch*	⑤Connection Cables	⑥Gas Regulator	Other Items
YD-350GZ4YUA	YD-00DHR1YAA (2 m)	YW-35DH1	•YT-35CS4TAB (Special) •No.34 to 38 selectable	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m) •Extension cables optional	YX-25AD1	•Voltage detection wire (5 m) supplied with welding power source •Extension cable (DWC00**) optional
YD-350VR1YU1	YD-35GRR1 (2 m)	•YW-35DG2 (2.1 m control cable) •YW-35DG2CA0 (10 m control cable)	•YT-35CV4 •No.1 to 10 selectable	•Supplied with wire feeder •Extension cables optional	•YX-25AD1 for CO ₂ /MAG/MIG •YX-25CC1 (YX-01GB1) for CO ₂	
YD-350GR3YGA	YD-35GRR1 (2 m)	•YW-35DG1 (1.8 m control cable) •YW-35DG1CA0 (10 m control cable)	•YT-35CV4 •No.1 to 10 selectable	•Supplied with wire feeder •Extension cables optional	•YX-25AD1 for CO ₂ /MAG/MIG •YX-25CC1 (YX-01GB1) for CO ₂	
YD-500GR3YGA	YD-50GGR1 (2 m)	YW-50DG1	•YT-50CS4 •No.12 to 17 selectable	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m) •Extension cables optional	•YX-25AD1 for CO ₂ /MAG/MIG •YX-25CC1 (YX-01GB1) for CO ₂	
YD-350GY3		YW-35DG1HA1	YT-35CS4HAE	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m)	YX-25CD1	
YD-500GY3		YW-50DG1HA1	YT-50CS4HAE	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m)	YX-25CD1	
YD-400GT3YUA (for mild steel/stainless steel)	YD-40GTR1 (2 m)	YW-40DG1	•YT-35CSG4 •No.11 to 18 selectable	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m) •Extension cables optional	YX-25AD1	
YD-400GT3YUD (for aluminum)	YD-40GTR1 (2 m)	YW-40DG1TAK	•YT-30MD2 •No.26 to 29 selectable	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m) •Extension cables optional	YX-25AD1	
YD-350GL3		YW-35DG1HA3	YT-35CS3VTA	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m)	YX-25CD1	
YD-500GL3		YW-50DG1HA1	YT-50CS3VTA	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m)	YX-25CD1	
YD-350FR1	Supplied with wire feeder	YW-35KB3HME	•YT-35CS3CTA •No.1 to 10 selectable	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m)	YX-25CD1	
YD-500FR1	Supplied with wire feeder	YW-50KB3HME	•YT-50CS3CTA •No.3 to 10, 12 to 17 selectable	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m)	YX-25CD1	
YD-350RX1		YW-35KB3HAJ	YT-35CS3	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m)	YX-25CD1	
YD-400RX1		YW-40KB3HAF	YT-40CS4	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m)	YX-25CD1	
YD-500RX1		YW-50KB3HRO	YT-50CS4	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m)	YX-25CD1HAK	
YD-600RF2YGA	YD-60RFR1	•YW-50AF1 (air-cooled) •YW-60AFW2 (water-cooled)	•YT-50CS4 (air-cooled) •YT601CCW (water-cooled)	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m)	•YX-25AD1 for CO ₂ /MAG/MIG •YX-25CC1 for CO ₂	Water cooling unit YX-09KGC1 optional
YD-200KR2	Supplied with wire feeder	YW-20KB3HAE	•YT-20CS3CTA •No.1 to 2 selectable	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m)	YX-25CD1	
YD-350KR2	Supplied with wire feeder	YW-35KB3HAE	•YT-35CS3CTA •No.1 to 10 selectable	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m)	YX-25CD1	
YD-500KR2	Supplied with wire feeder	YW-50KB3HAE	•YT-50CS3CTA •No.12 to 17 selectable	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m)	YX-25CD1	
YD-600KH2	Supplied with wire feeder	YW-60KCW2HAE	YT-601CCWHA	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m)	YX-25CD1	Water cooling unit YX-09KGC1HGE optional
YD-500CL5	Supplied with wire feeder	YW-50CA2HAJ	•YT-35CSM3CTA •No.3 to 10, 12 to 17 selectable		YX-25CD1	
YD-180SL7		YW-181FK2HAE	•YT-20CS3CTA •No.1 to 2 selectable	•Supplied with wire feeder •Control/Power cables (1.8 m) •Gas hose (4.8 m)	YX-25CD1	

*Refer to page 15 for torch numbers

Specifications

①Welding Power Sources

	Rated Input Voltage •Phase •Rated Frequency	Rated Input Capacity	Output Current Adjustable Range (A)	Output Voltage Adjustable Range (V)	Rated Duty Cycle (%)	Applicable Wire Diameter (mm)	Applicable Welding Wire	Dimensions (W×D×H) (mm)	Weight (kg)
YD-350GZ4YUA	•380/415 V •3-phase •50/60 Hz	17.7 kVA / 16 kW	30 to 350	12 to 36	60	0.8/0.9/ 1.0/1.2	•Mild steel •Stainless steel	380×550×640	61
YD-350VR1YU1	•380/415 V •3-phase •50/60 Hz	16.4 kVA / 15 kW	30 to 350	12 to 36	60	0.8/0.9/ 1.0/1.2	•Mild steel •Stainless steel	380×540×660	59
YD-350GR3YGA	•380 V •3-phase •50/60 Hz	17 kVA / 16 kW	30 to 350	12 to 36	60	0.8/0.9/ 1.0/1.2	•Mild steel •Stainless steel	380×540×640	52
YD-500GR3YUA	•380/415 V •3-phase •50/60 Hz	28.5 kVA / 26.5 kW	60 to 500	14 to 45	100	1.2/1.4/1.6	•Mild steel •Stainless steel	380×540×810	65.5
YD-350GY3	•380 or 415 V •3-phase •50/60 Hz	14.5 kVA / 14 kW	30 to 350	12 to 36	60	0.8/0.9/ 1.0/1.2	•Mild steel •Stainless steel	380×550×645	50
YD-500GY3	•380 or 415 V •3-phase •50/60 Hz	23.3 kVA / 22.4 kW	60 to 500	17 to 45	100	1.2/1.4/1.6	•Mild steel •Stainless steel	380×550×815	60
YD-400GT3YUA (Mild steel/ stainless steel)	•380/415 V •3-phase •50/60 Hz	20.5 kVA / 19 kW	30 to 400	12 to 38	60	0.9/1.0/ 1.2/1.4	•Mild steel •Stainless steel	380×540×675	61
YD-400GT3YUD (Mild steel/stainless steel/aluminum)	•380/415 V •3-phase •50/60 Hz	20.5 kVA / 19 kW	30 to 400	12 to 38	60	0.9/1.0/1.2/1.4/1.6 (1.6 is for hard aluminum only.)	•Mild steel •Stainless steel •Hard aluminum	380×540×675	61
YD-350GL3	•380 or 415 V •3-phase •50/60 Hz	14.5 kVA / 14 kW	30 to 430	16 to 35.5	60	0.8/0.9/ 1.0/1.2	•Mild steel •Stainless steel	380×550×645	50
YD-500GL3	•380 or 415 V •3-phase •50/60 Hz	23.3 kVA / 22.4 kW	60 to 500	17 to 45	100	1.2/1.4/1.6	•Mild steel •Stainless steel	380×550×815	60
YD-350FR1	•415 V •3-phase •50/60 Hz	13.5 kVA / 13 kW	40 to 350	16 to 31.5	60	0.8/1.0/1.2	Mild steel	372×545×669	56
YD-500FR1	•415 V •3-phase •50/60 Hz	23.3 kVA / 22.4 kW	60 to 500	17 to 39	100	1.0/1.2/ 1.4/1.6	Mild steel	372×545×669	62
YD-350RX1	•380 or 415 V •3-phase •50/60 Hz	13.1 kVA / 12.6 kW	50 to 430	16.5 to 35.5	60	0.8 or 0.9 1.0/1.2	Mild steel	380×545×570	52
YD-400RX1	•380 or 415 V •3-phase •50/60 Hz	16.2 kVA / 15.6 kW	50 to 430	16.5 to 35.5	60	0.8 or 0.9 1.0/1.2	Mild steel	380×545×570	52
YD-500RX1	•380 or 415 V •3-phase •50/60 Hz	23.1 kVA / 22.2 kW	60 to 550	17 to 41.5	100	(1.0)/1.2/1.4/1.6 (1.0 is type of HGF/HJE.)	Mild steel	380×545×635	60
YD-600RF2YGA	•380 V •3-phase •50/60 Hz	37 kVA / 35 kW	60 to 600	14 to 50	100	1.2/1.4/1.6	Mild steel	440×585×1005	120
YD-200KR2	•380 V •3-phase •50/60 Hz	7.6 kVA / 6.5 kW	50 to 200	15 to 25	60	0.8/1.0/1.2	Mild steel	376×675×747	89
YD-350KR2	•380 V •3-phase •50/60 Hz	18.1 kVA / 16.1 kW	60 to 350	16 to 31.5	50	0.8/1.0/1.2	Mild steel	376×675×747	117
YD-500KR2	•380 V •3-phase •50/60 Hz	31.9 kVA / 28.1 kW	60 to 500	17 to 39	60	1.2/1.4/1.6	Mild steel	436×675×762	158
YD-600KH2	•380 V •3-phase •50/60 Hz	45 kVA / 40 kW	60 to 600	17 to 44	100	1.2/1.4/1.6	Mild steel	500×690×920	232
YD-500CL5	•380 V •3-phase •50/60 Hz	30.4 kVA / 28.1 kW	60 to 500	17 to 39	60	1.2/1.4/1.6	Mild steel	436×675×762	148
YD-180SL7	•380 V •3-phase •50/60 Hz	6.8 kVA / 6.4 kW	60 to 180	17 to 23	40	0.8/1.2	Mild steel	310×430×509	49

Specifications

③ Wire Feeders

	For Welding Power Source	Applicable Welding Wire	Applicable Wire Diameter (mm)	Connector Type for Welding Torch	Drive Method	Weight (kg)	Accessories
YW-35DH1	YD-350GZ4YUA	•Mild steel •Stainless steel	(0.8)/0.9/(1.0)/1.2	CC fitting	2 drive 4 roll	15	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-35DG2	YD-350VR1YU1	•Mild steel •Stainless steel	(0.8)/0.9/(1.0)/1.2	CC fitting	2 drive 4 roll	12	•Control cables: 2.1 m •Power cables: 1.8 m •Gas hose: 4.8 m
YW-35DG2CA0	YD-350VR1YU1	•Mild steel •Stainless steel	(0.8)/0.9/(1.0)/1.2	CC fitting	2 drive 4 roll	19	•Control cables: 10.3 m •Power cables: 10 m •Gas hose: 13.2 m
YW-35DG1	YD-350GR3YGA	•Mild steel •Stainless steel	(0.8)/0.9/(1.0)/1.2	CC fitting	2 drive 4 roll	12	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-35DG1CA0	YD-350GR3YGA	•Mild steel •Stainless steel	(0.8)/0.9/(1.0)/1.2	CC fitting	2 drive 4 roll	19	•Control/Power cables: 10 m •Gas hose: 13 m
YW-40DG1	YD-400GT3YUA	Stainless steel	0.9/(1.0)/1.2/(1.4)	CC fitting	2 drive 4 roll	12.5	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-50DG1	YD-500GR3YUA	•Mild steel •Stainless steel	1.2/1.4/(1.6)	CC fitting	2 drive 4 roll	13	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-35DG1HA1	YD-350GY3	•Mild steel •Stainless steel	(0.8)/(0.9)/1.0/1.2	CC fitting	2 drive 4 roll	12	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-35DG1HA3	YD-350GL3	•Mild steel •Stainless steel	(0.8)/(0.9)/1.0/1.2	CC fitting	2 drive 4 roll	12	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-40DG1TAK	YD-400GT3YUD	Aluminum	1.2/1.6	CC fitting	4 drive roll	15	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-50DG1HA1	•YD-500GY3 •YD-500GL3	•Mild steel •Stainless steel	1.2/(1.4)/1.6	CC fitting	2 drive 4 roll	13.5	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-35KB3HME	YD-350FR1	Mild steel	1.0/1.2	CC fitting	1 drive 2 roll	10	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-50KB3HME	YD-500FR1	Mild steel	1.2/1.6	CC fitting	1 drive 2 roll	10.5	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-35KB3HAJ	YD-350RX1	Mild steel	0.8/(0.9)/(1.0)/1.2	CC fitting	1 drive 2 roll	10	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-40KB3HAF	YD-400RX1	Mild steel	(0.8)/0.9/(1.0)/1.2	CC fitting	1 drive 2 roll	10.5	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-50KB3HR0	YD-500RX1	Mild steel	1.2/(1.4)/1.6	CC fitting	1 drive 2 roll	10.5	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-50AF2 (Air cooled)	YD-600RF2YGA	Mild steel	1.2/1.6	CC fitting	1 drive 2 roll	10.5	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-60AFW2 (Water cooled)	YD-600RF2YGA	Mild steel	1.2/(1.4)/1.6	CC fitting	1 drive 2 roll	12	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-20KB3HAE	YD-200KR2	Mild steel	0.8/1.0	CC fitting	1 drive 2 roll	10	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-35KB3HAE	YD-350KR2	Mild steel	1.0/1.2	CC fitting	1 drive 2 roll	10	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-50KB3HAE	YD-500KR2	Mild steel	1.2/1.6	CC fitting	1 drive 2 roll	10.5	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-60KCW2HAE	YD-600KH2	Mild steel	1.2/1.6	CC fitting	1 drive 2 roll	12	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-50CA2HAJ	YD-500CL5	Mild steel	1.0/1.2	CC fitting	1 drive 2 roll	12	•Control/Power cables: 1.8 m •Gas hose: 4.8 m
YW-181FK2HAE	YD-180SL7	Mild steel	0.8/1.2	CC fitting	1 drive 2 roll	9	•Control/Power cables: 1.8 m •Gas hose: 4.8 m