Panasonic
CONNECT

Full Digital CO_2/MAG Welding Machine

350VR1 series

Full Digital Controlled Welding Machine

FULL DIGITAL

Improved Arc Control in All Current Ranges

350VR1YU1/YA1

Easy to operate even for inexperienced operators

"Weld Navigation." for weld parameters

Standard

Weld Navigation

You can set weld parameters by setting joint, plate thicknesses, and weld speed.

"Thickness settings" for easier welding

Standard

You can set weld parameters only by entering plate thickness.

FULL DIGITAL

350VR1 series

Full Digital CO_2/MAG Welding Machine

Improved Arc Control in All Current Ranges

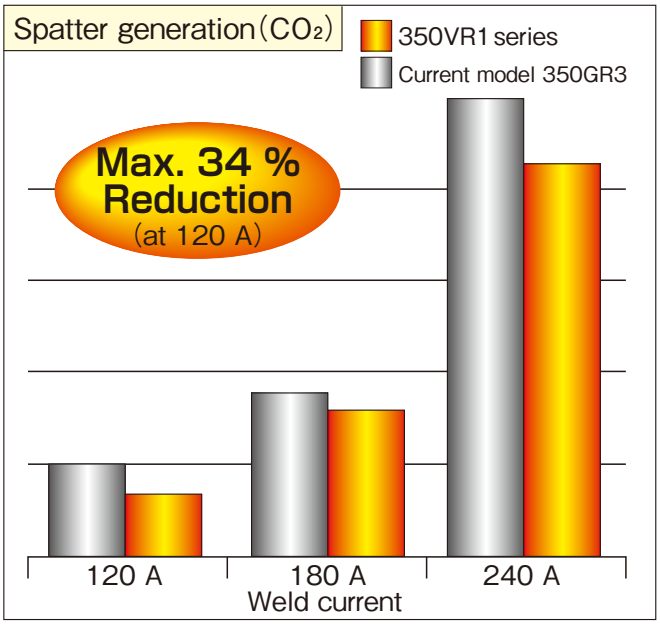
High welding performance. Various functions.

350VR1YU1/YA1

CO_2/ MAG

Stainless MIG

Improved arc control in all current ranges achieves stable arc.



·Joint: Fillet ·Material: Mild steel (SPCC) ·Weld speed: 50 cm/min
·Wire size: 1.2 mm ·Shielding gas: CO_2

Weld current	Bead appearance (350VR1 series)
120 A	
180 A	
240 A	

·Joint: Fillet ·Material: Mild steel (SPCC) ·Weld speed: 50 cm/min
·Wire size: 1.2 mm ·Shielding gas: CO_2

Full Software Control of Welding Waveform

350VR1 series (CO_2 welding)

●Spatter reduction
●Stable bead

Effective in all current ranges.

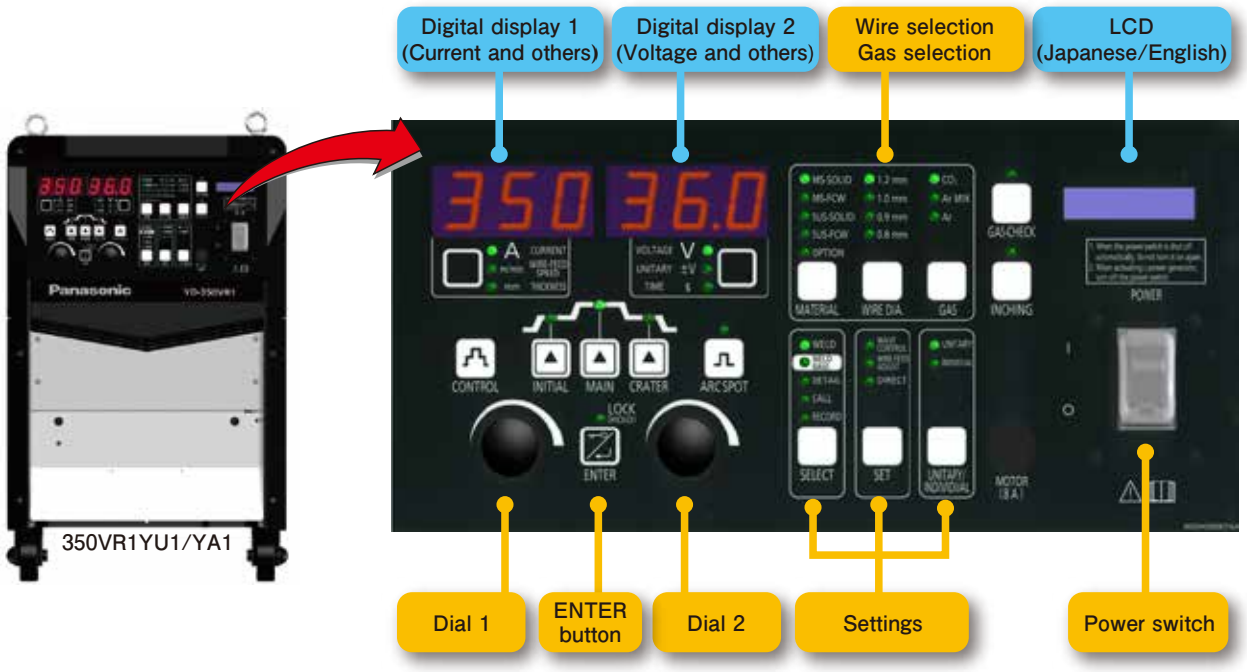
A variety of arc characteristics are standard for any application.

Output	DC																		
Wire type	Solid mild steel						Flux-cored mild steel				Solid stainless steel					Flux-cored stainless steel			
Shielding gas	CO_2/MAG						CO_2			MAG	MIG					CO_2			MAG
Wire size (mm)	0.8	0.9	1.0	1.2	1.4	1.6	1.2	1.4	1.6	1.2	0.8	0.9	1.0	1.2	1.6	0.9	1.2	1.6	1.2
YD-350VR1 series	○	○	○	○	—	—	○	—	—	○	○	○	○	○	—	○	○	—	○

Note: Characteristics for automatic welding system are also standard.

Easy and Intuitive

The operation is more intuitive than conventional GR3 series.



"Weld Navigation." for Weld Parameters

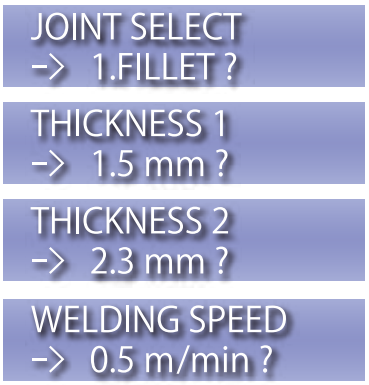
Same algorithm as TAWERS robot welding system with integrated power source.

Shorter parameter setting time.

STEP 1
Activate Weld Navigation.

STEP 2
Set weld conditions.

LCD



STEP 3
Welding parameters are set automatically*.

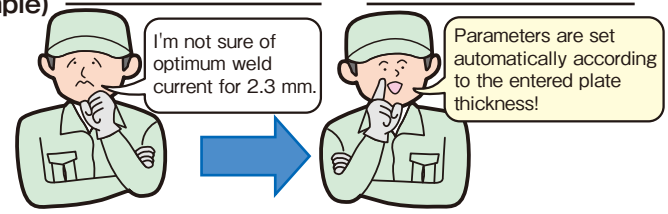
Start welding!

"Thickness setting" for easier welding

(Example)

Current setting (conventional)

Thickness setting (New)



The entered plate thickness determines the weld parameters*.

Just adjust the parameters to fit your torch movement.

Note: The parameters set by this function are for fillet joint of the same plate thickness.

Easy to use even for casual or inexperienced operators

*Weld parameters set by "Weld Navigation." or "Thickness setting" are guideline only and do not guarantee welding results.

Output Management Supports Welding Quality and Maintenance

The LCD blinks when a preset upper or lower limit is exceeded.

Setting item	Unit	Application example	LCD display	Contact output
Motor current (upper limit)	A	Maintenance of wire feed path	○	○
Welding current (upper/lower limit)	%	Improvement of welding quality or welding skill	○	○
Welding voltage (upper/lower limit)	%	Same as above	○	○
Number of welding (upper limit)	Times	Notification of contact tip replacement	○	–
Arc time (upper limit)	h/m/s	Same as above	○	–
Wire usage (upper limit)	kg	Notification of wire replacement	○	–
Fan rotation time (upper limit)	h/m/s	Maintenance of welding power source	○	–

LCD blinks.

Allows consistent welding quality and optimal maintenance timing.

Wire Feeder Achieves Stable Wire Feeding

YW-35DG2 series

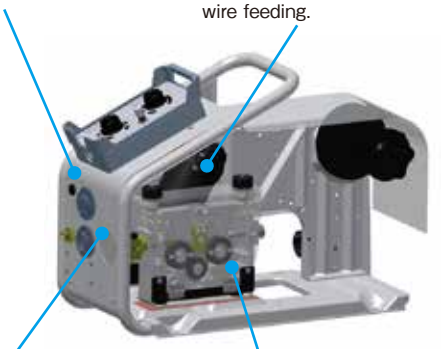
High safety and high usability.

Dust-proof cover

reduces dust accumulation on drive section.

Motor with encoder

compensates voltage or load fluctuation and achieves stable wire feeding.



Lightweight flame

reduces burden of moving the feeder.
・YW-35DG2: 12 kg (excluding cables)

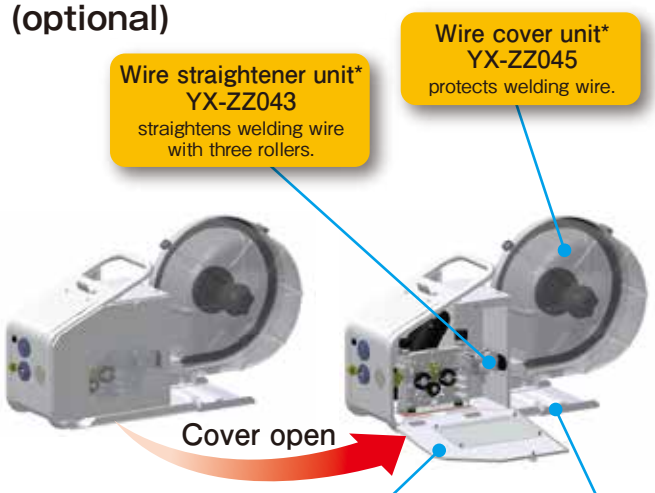
Drive section cover

prevents fingers from getting caught.

Non-remote control cable design

Only 3 lines between wire feeder and welding power source. This reduces potential for cable damage.

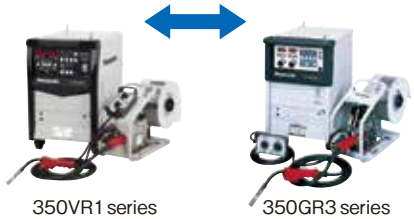
●Upgradable according to the site. (optional)



*The extension unit (YX-ZZ042) is necessary to use these units.

Interchangeable with Peripherals for 350GR3

Interchangeable


350VR1 series　350GR3 series

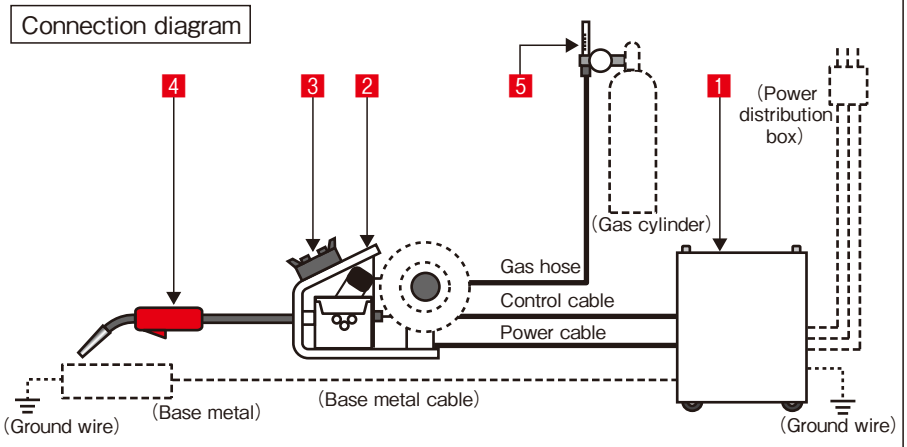
Welding power source	350VR1 series	×	350GR3 series
Wire feeder	YW-35DG2 YW-35DG2CA0		YW-35DG1 YW-35DG1CA0
Remote controller	YD-35GRR1 (standard) YD-35GRR1TAG (with 5 memory recall function)		
Torch	YT-CS4/CE4 series		
Gas regulator	YX-25AD1		

Peripherals for 350GR3 are also supported.

Welding system configuration

Other than this product (1 welding power source), equipment 2 to 5, and dotted equipment are necessary. Purchase them separately.

Connection diagram



Note: Equipment in ( ) and dotted equipment are customer supplied.

■Equipment required for welding

	Model No.	Remarks
1 Welding power source	YD-350VR1YU1	380 to 415 VAC
	YD-350VR1YA1	200 to 220 VAC
2 Wire feeder	YW-35DG2	1.8 m power cable
	YW-35DG2CA0	10 m power cable (direct connection)
3 Remote controller	YD-35GRR1	Standard type (2 m cable)
	YD-35GRR1TAG	5 memory recall function (2 m cable)
4 Torch (representative models)	YT-35CE4	Lightweight type (3 m)
	YT-35CS4	Standard type (3 m)
	YT-35CSM4	4.5 m
	YT-35CSL4	6 m
5 Gas regulator	YX-25AD1	For CO_2/MAG/MIG
	YX-25CC1	Exclusively for CO_2

■Standard components

	Model No.	Remarks
1 Welding power source	YD-350VR1YU1	
2 Wire feeder	YW-35DG2	1.8 m power cable
3 Remote controller	YD-35GRR1	Standard type (2 m cable)
4 Torch	YT-35CS4	Standard type (3 m)
5 Gas regulator	YX-25AD1	For CO_2/MAG/MIG

■Options (Purchase as necessary)

Model name	Model No.	Remarks
Connection cables (set of control cable, power cable, and gas hose)	YV-305GR3A	38 mm², 5 m
	YV-310GR3A	38 mm², 10 m
	YV-315GR3A	38 mm², 15 m
	YV-320GR3A	38 mm², 20 m
	YV-610GR3A	60 mm², 10 m
	YV-615GR3A	60 mm², 15 m
	YV-620GR3A	60 mm², 20 m

Model name (for wire feeder)	For YW-35DG2	Remarks
Extension unit	YX-ZZ042	
Wire straightener unit	YX-ZZ043	Extension unit is necessary.
Full cover unit	YX-ZZ044	
Wire cover unit	YX-ZZ045	
Flexible conduit fitting	MGX00002	

Connection with robot or automatic welding system

Welding system can be built easily in combination with TM/TL-GⅢ series* Panasonic robot.

YD-350VR1YU1/YA1

(equipped with interface for direct robot connection)

*Models manufactured in December 2014 or later

Automatic welding system / Competitor's robot

Model name		Model number	Remarks
Welding power source		YD-350VR1YU1	
		YD-350VR1YA1	
Wire feedetr for automatic welding system		YW-35DGA2*1	Power cable: 7 m
Welding torch for automatic welding system*2	Curved	YT-CAT353T38	Power cable: 2 m
	Straight	YT-CAT353T39	Power cable: 2 m
Torch clamp		TFM00167	For fixing torch (regarded as part of a product)
Robot interface		YC-001UG1YAA	For connection with robot

∗1: For 0.9 mm or 1.2 mm wire ∗2: For 1.2 mm wire

∗1, ∗2: To change wire sizes, additional parts are necessary. Consult us for details.

■Specifications

1 Welding power source		YD-350VR1YU1	YD-350VR1YA1
Rated input voltage (Allowable fluctuation range)	VAC	380 to 415 (342 to 456)	200 to 220 (180 to 242)
Phases, rated frequency	—	3-phase, 50 Hz/60 Hz (common)	
Rated input	—	16.4 kVA,15.0 kW	
Maximum no-load voltage	VDC	68	
Rated output current	ADC	350	
Rated output voltage	VDC	36	
Rated duty cycle	%	60	
Output current adjustable range	ADC	30 to 350	
Output voltage adjustable range	VDC	12 to 36	
Power control method	—	IGBT inverter type	
Memory	—	100-channel record/recall	
Welding process	—	CO_2 / MAG / Stainless steel MIG	
Waveform control method	—	Digital	
Sequence	—	Main welding Main welding - crater Initial welding - main welding - crater	
Shielding gas	—	CO_2(100 %) / MAG(Ar:80 %, CO_2:20 %) Stainless steel MIG(Ar:98 %, O_2:2 %)	
Wire size*1	mm	0.8 / 0.9 / 1.0 / 1.2	
Wire type	—	Mild steel / Flux cored mild steel / Stainless steel / Flux cored stainless steel	
Pre-flow time	s	0.0 to 10.0 (increment of 0.1)	
Post-flow time	s	0.0 to 10.0 (increment of 0.1)	
Arc spot time	s	0.3 to 10.0 (increment of 0.1)	
Input terminal	—	Terminal block (for 3-phase, M6 bolting)	
Output terminal	—	Copper terminal with M8 bolting	
Dimensions (W x D x H)*2	mm	380 x 540 x 660	380 x 540 x 640
Weight	kg	59	50

*1: For wire sizes of solid wires and flux cored wires, see "Applicable arc characteristics" in manual.
*2: Input terminal cover on the back side is excluded.

2 Wire feeder	YW-35DG2	YW-35DG2CA0
Torch connection	CC fitting	
Rated current	350 A	
Wire type	Mild steel / Flux cored mild steel / Stainless steel / Flux cored stainless steel	
Wire size*3	(0.8) / 0.9 / (1.0) / 1.2 mm	
Drive method	2 driven rolls and 2 idler rolls	
Spool shaft	With brake	
Cable and hose lengths	Power cable: 1.8 m Control cable: 2.1 m Gas hose: 4.8 m	Power cable: 10 m Control cable: 10.3 m Gas hose: 13.2 m
Weight	12 kg	19 kg

*3: Optional parts are required to use the wire sizes in ( ).

3 Remote controller	YD-35GRR1	YD-35GRR1TAG
Type	Standard	5-channnel memory recall function
Cable length(m)	2	2

4 Torch (CC fitting connection)

Model number	Rated current (A)	Cable length (m)	Wire sizes* (mm)	Rated duty cycle (%)	Weight (kg)	Remarks
YT-18CS4	180	3	0.8	40(CO_2) 20(MAG)	1.7	
YT-20CS4	200	3	0.9 / (1.0) / (1.2)	50(CO_2) 25(MAG)	1.9	
YT-35CS4	350	3	(0.9) / (1.0) / 1.2	45(CO_2) 35(MAG)	2.8	
YT-35CE4	350	3	(0.9) / (1.0) / 1.2	20(CO_2) 20(MAG)	2.1	Lightweight type
YT-35CH4	350	3	(0.9) / (1.0) / 1.2	60(CO_2) 35(MAG)	3.2	High duty cycle
YT-35CSM4	350	4.5	(0.9) / (1.0) / 1.2	45(CO_2) 35(MAG)	3.6	
YT-35CEM4	350	4.5	(0.9) / (1.0) / 1.2	20(CO_2) 20(MAG)	2.8	Lightweight type
YT-35CHM4	350	4.5	(0.9) / (1.0) / 1.2	60(CO_2) 35(MAG)	4.4	High duty cycle
YT-35CSL4	350	6	1.2	45(CO_2) 35(MAG)	4.5	
YT-35CHL4	350	6	1.2	60(CO_2) 35(MAG)	5.6	High duty cycle

*Optional parts are required to use the wire sizes in ( ).

Safety precautions •Before attempting to use any welding product always read the manual to ensure correct use.

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●Specifications are subject to change without notice.

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