Panasonic
BUSINESS

Full Digital Pulse MAG/MIG Welding Machines

400VP1

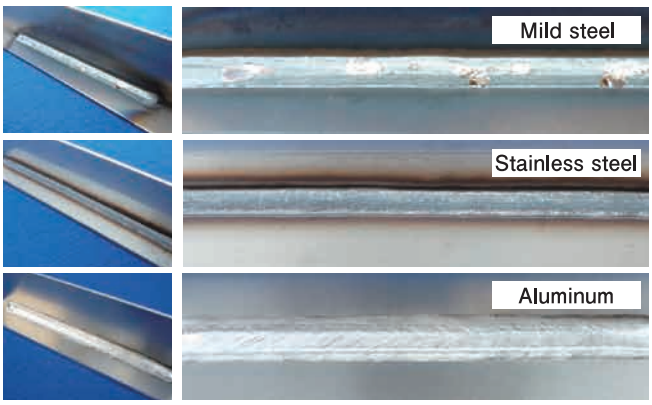
November 2017

Modes for Mild Steel, Stainless Steel, and Aluminum Are Standard.

Pulse Welding Machines with High Welding Performance and Various Functions.

"VP Pulse Control" for High Precision Pulse Period Control

compensates arc length change and achieves beautiful bead and low spatter welding.



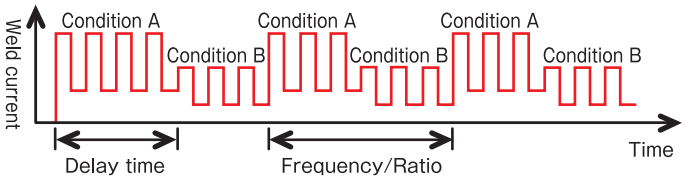
Mild steel
- ·Weld current: 300 A
- ·Base metal: Mild steel
- ·Joint: Fillet
- ·Gas: 80 % Ar + CO_2
- ·Weld speed: 80 cm/min
- ·Plate thickness: 3.2 mm
- ·Wire: YGW15 (1.2 mm)

Stainless steel
- ·Weld current: 200 A
- ·Base metal: Stainless steel (SUS304)
- ·Joint: Fillet
- ·Gas: 98 % Ar + O_2
- ·Weld speed: 80 cm/min
- ·Plate thickness: 3.0 mm
- ·Wire: YS308 (1.2 mm)

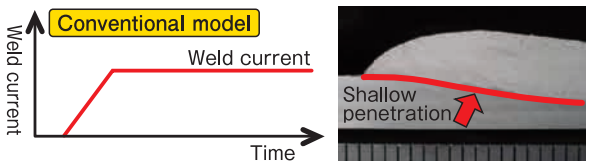
Aluminum
- ·Weld current: 170 A
- ·Base metal: Aluminum (A5052)
- ·Joint: Fillet
- ·Gas: 100 % Ar
- ·Weld speed: 80 cm/min
- ·Plate thickness: 3.0 mm
- ·Wire: A5356-WY (1.2 mm)

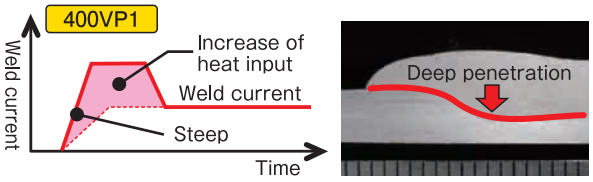
High Quality Aluminum MIG Welding.

[Low-pulse function] Pulse output of 2 conditions (A and B) achieves beautiful bead and low spatter welding.



[Control for deeper penetration] Deep penetration at the start of aluminum welding achieves long effective weld length.





Easy to operate even for inexperienced operators

"Weld Navigation." for weld parameters

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

Standard

"Thickness settings" for easier welding

You can set weld parameters only by entering plate thickness.

Standard

Specifications

① Welding Power Source	YD-400VP1YAA	YD-400VP1YA1	YD-400VP1YU1
	Semi-automatic	Automatic or robotic (equipped with robot connection interface)	
Rated input voltage (Allowable fluctuation range)	200 V to 220 V (180 V to 242 V)		380 V to 415 V (342 V to 456 V)
Number of phases	3-phase		
Rated frequency	50 Hz/60 Hz (Common)		
Rated input	19.7 kVA, 18.0 kW		
Maximum no-load voltage	82 V DC		
Rated output current	400 A		
Rated output voltage	38 V		
Rated duty cycle	60 %		
Output current adjustable range	30 A DC to 400 A DC		
Output voltage adjustable range	12 V DC to 38 V DC		
Power control process	IGBT inverter type		
Memory	100-channel reproducible storage		
Sequence	Main welding, Main welding-Crater, Initial welding-Main welding-Crater, Arc spot		
Waveform control process	Digital setting [-99 (low) to 0 (Standard) to 99 (high)]		
Applicable welding process	CO_2, MAG, MIG, Pulsed MAG, Pulsed MIG		
Applicable shielding gas	CO_2 welding: 100 % CO_2 MAG welding: Mixed gas of 80 % Ar and 20 % CO_2 Stainless steel MIG welding: Mixed MIG gas of 98 % Ar and 2 % O_2 Aluminum MIG welding: Ar 100 % (MIG gas) [CO_2: Carbon dioxide, Ar: Argon, O_2: Oxygen]		
Applicable wire size (diameter)	0.8 mm/0.9 mm/1.0 mm/1.2 mm/1.4 mm/1.6 mm		
Applicable wire type *1	Mild steel (MS) , Flux cored mild steel (MS_FCW) , Stainless steel (Solid) , Flux cored stainless steel (SUS_FCW) [FCW: Flux cored wire] , Hard aluminum, Soft aluminum		
Pre-flow time	0.0 s to 10.0 s (Increment of 0.1 s)		
Post-flow time	0.0 s to 10.0 s (Increment of 0.1 s)		
Arc spot time	0.3 s to 10.0 s (Increment of 0.1 s)		
Input terminal	Terminal block (for 3-phase, M6 bolting)		
Output terminal	Copper terminal with M8 bolting		
Dimensions *2 (Width × Depth × Height)	380 mm × 540 mm × 640 mm		380 mm × 540 mm × 660 mm
Mass (Weight)	54 kg	56 kg	63 kg

*1 For robot welding, only mild steel (MS) , flux cored mild steel (MS_FCW) , stainless steel (solid) , and flux cored stainless steel are applicable.
*2 Excluding the input terminal cover on the rear panel.

② Wire Feeder	Mild steel/Stainless steel (Air-cooled)	Aluminum (Air-cooled)	Aluminum (Water-cooled)
Model number	YW-40DG2	YW-40DG2TAK	YW-40DGW2TAK
Drive method	Two drive rolls	Four drive rolls	Four drive rolls
Applicable wired dia. (mm)	0.9, 1.2	1.2, 1.6	1.2, 1.6
Spool shaft	With brake	With brake	With brake

③ Controller	YD-00DCR1	YD-40GTR1
Type	Digital	Standard
Cable length	2 m	2 m

To use a wire diameter other than the applicable one, an optional part (sold separately) is needed.

④ Welding Torches		Mild steel/Stainless steel (Air-cooled)	Aluminum (Air-cooled)	Aluminum (Water-cooled)
Model number		YT-35CSG4	YT-30MD2	YT-50MDW2
Rated current		350 A	300 A	500 A
Applicable wire type		Mild steel / (Stainless steel)	Aluminum / (Mild steel / Stainless steel)	Aluminum / (Mild steel / Stainless steel)
Applicable wire dia.		1.2 mm	1.2 mm	1.6 mm
Cable length		3 m	3 m	3 m
Cooling method		Air-cooled	Air-cooled	Water-cooled
Duty cycle	CO_2	300 A: 60 %, 350 A: 45 %	(350 A: 45 %)	(500 A: 100 %)
	MAG	350 A: 35 %	(280 A: 60 %, 300 A: 50 %)	(450 A: 100 %, 500 A: 80 %)
	MIG	(350 A: 35 %)	280 A: 60 %, 300 A: 50 %	450 A: 100 %, 500 A: 80 %
	Pulsed MAG	350 A: 20 %	(300 A: 30 %)	(500 A: 60 %)
	Pulsed MIG	(350 A: 10 %)	300 A: 30 %	500 A: 60 %

- To apply a welding process or wire type indicated in the parentheses ( ), an optional part (sold separately) is needed. If the optional part is not used, the torch wears significantly.
- To use a wire diameter other than the applicable one, an optional part (sold separately) is needed.
- Use of a wire other than the specified diameter or an elongated wire (over 3 m) can cause trouble in wire feed performance as an result, arc becomes unstable.
- To use a water-cooled torch, it is necessary to use an optional (separately sold) water coolant and water cooling hose unit.

Power supply facilities

Model		YD-400VP1YAA	YD-400VP1YA1	YD-400VP1YU1
Capacity	Power	19.7 kVA or more		
Input protection	Fuse	60 A		30 A
	Breaker (Leakage breaker)	60 A		30 A
Input power cable		14 mm² or more		5.5 mm² or more
Grounding cable		14 mm² or more		5.5 mm² or more

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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