

Modes for Mild Steel, Stainless Steel, and Aluminum Are Standard.
Pulse Welding Machines with High Welding Performance and Various Functions.

CO₂/MAG
 Pulse MAG
 Stainless Pulse MIG



For Mild steel & Stainless steel

Aluminum Pulse MIG



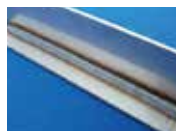
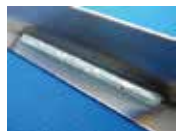
For Aluminum



CE compliant

“VP Pulse Control” for High Precision Pulse Period Control

Quick response to the arc length fluctuation to offer beautiful bead with less spatter.



Mild steel
 ·Weld current: 300 A
 ·Base metal: Mild steel
 ·Joint: Fillet
 ·Gas: 80 % Ar + CO₂

·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 + O₂

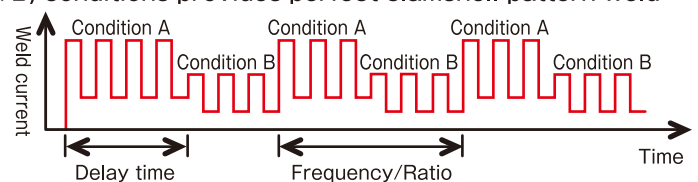
·Weld speed: 80 cm/min
 ·Plate thickness: 3.0 mm
 ·Wire: YS308 (1.2 mm)

Aluminum
 ·Weld current: 170 A
 ·Base metal: Aluminum (A5052)
 ·Joint: Fillet
 ·Gas: 100 % Ar

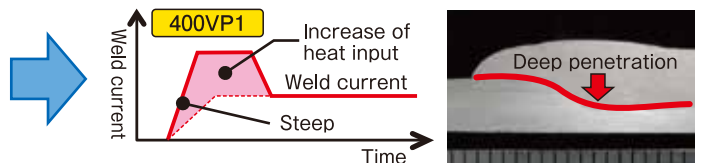
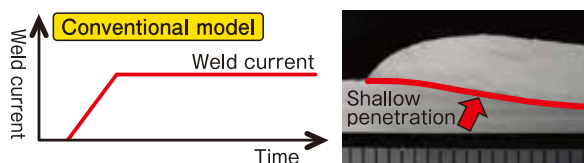
·Weld speed: 80 cm/min
 ·Plate thickness: 3.0 mm
 ·Wire: A5356-WY (1.2 mm)

High Quality Aluminum MIG Welding.

[Low-pulse function] Pulse outputs of different (A/B) conditions provides perfect clamshell-pattern weld bead, looks exactly the same as TIG welding.



[Control for deeper penetration] To ensure the effective length of weld from the start in Aluminum welding, VP1 had been improved its arc start performance.



Easy to operate even for inexperienced operators

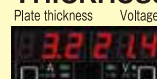
“Weld Navigation.” for weld parameters



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	YD-400VP1YHD (CE compliant)
		Semi-automatic	Available in both semi-auto process and automatic/robotic welding process	
Rated input voltage (Allowable fluctuation range)	200 V to 220 V (180 V to 242 V)		380 V / 415 V (342 V to 456 V)	400 V (360 V to 440 V)
Number of phases	3-phase			
Rated frequency	50 Hz / 60 Hz (Common)			
Rated input	19.7 kVA, 18.0 kW		17.8 kVA, 16.0 kW	
Maximum no-load voltage	82 V DC		78 V DC	
Rated output current / voltage	400 A / 38 V		400 A / 34 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 / Post-flow time	0.0 s to 10.0 s (Increment of 0.1 s) / 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)			Terminal block [for L1(U), L2(V), L3(W) and PE, M5 bolting]
Output terminal	Copper terminal with M8 bolting			Coupling device
EMC classification	-			Class A
Dimensions *2 (Width × Depth × Height)	380 mm × 540 mm × 640 mm		380 mm × 540 mm × 660 mm	380 mm × 540 mm × 800 mm
Mass (Weight)	54 kg	56 kg	63 kg	72 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)		③ Controller	YD-00DCR1	YD-40GTR1
	-	for CE (400VP1YHD)	-	-	for CE (400VP1YHD)		Type	Digital
Model number	YW-40DG2	YW-40DG2YAD	YW-40DG2TAK	YW-40DGW2TAK	YW-40DGW2YAE	Cable length	2 m	2 m
Drive method	Two drive rolls			Four drive rolls				
Applicable wired dia. (mm)	0.9, 1.2	1.0, 1.2	1.2, 1.6					
Spool shaft	With brake							

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)	
	-	for CE (400VP1YHD)	-	-	-	for CE (400VP1YHD)
Model number	YT-35CSG4	YT-35ESG4	YT-30MD2	YT-50MDW2	YT-50MFW2	
Rated current	350 A		300 A	500 A		
Applicable wire type	Mild steel / (Stainless steel)		Aluminum / (Mild steel / Stainless steel)			
Applicable wired dia.	1.2 mm			1.6 mm		
Cable length	3 m			3 m		
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 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	YD-400VP1YHD
Capacity	Power	19.7 kVA or more			17.8 kVA or more
Input protection	Fuse	60 A			30 A
	Breaker (Leakage breaker)	60 A			30 A
Input power cable		14 mm ² or more			5.5 mm ² or more
Grounding cable		14 mm ² or more			5.5 mm ² 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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