

Panasonic

Welding machine
Robot
Laser Welding System

Full Digital Controlled Pulse MIG/MAG Welding Machine

YD-350/500GL4

350/500GL4

New Epoch Full Digital Controlled Pulse MIG/MAG Welding Machine

Exquisite Workmanship with an Ingenious Design



Panasonic pursues **Only one** in welding

Rated specifications

Model	YD-350GL4	YD-500GL4
Power control method	-	IGBT inverter type
Rated input voltage	-	3-phase AC 380 V
Rated input frequency	Hz	50/60
Rated input	kVA/kW	17.6/13.5 29.9/23.9
Output characteristic	-	CV(Constant Voltage)
Rated output current	A	DC 350 Pulse OFF: DC 500 Pulse ON: DC 400
Rated output voltage	V	31.5 39
Rated duty cycle	%	60
Rated output no-load voltage	V	DC 80
Output current adjustable range	A	DC 40~430 Pulse OFF: DC 60~500 Pulse ON: DC 60~400
Output voltage adjustable range	V	16~35.5 Pulse ON: 17~39 Pulse OFF: 17~34
Method of welding	-	Individual / Unitary
Enclosure protection class	-	IP23S
Insulation grade	-	Main transformer 155°C (F class) , Reactor 200°C
EMC class	-	A class
Cooling mode	-	Air forced AF
Applicable welding wire type	-	Solid/Fcw
Applicable wire size(diameter)	mm	Solid 0.8/1.0/1.2/1.4/1.6
	mm	FCW carbon steel 1.2/1.4/1.6 FCW stainless steel 1.2/1.6
Applicable wire material	-	Carbon steel(MS) Carbon steel-Flux-cored(MF_FCW) Stainless steel(SUS) Stainless steel-Flux-cored(SUS_FCW)
Memory	-	100 channels of welding parameters can be stored and recalled.
Sequence	-	Welding/ Welding-crater/Initial-welding-crater/Tack welding
Shielding gas	-	CO ₂ Gas MAG Gas MIG Gas
Gas check time	-	60 s (Max)
Pre-flow time	-	0 s - 5.0 s continuous (0.1 s Increment)
Post-flow time	-	0 s - 5.0 s continuous (0.1 s Increment)
Tack welding time	-	0.3 s - 10.0 s continuous (0.1 s Increment)
Dimension	mm	692 × 380 × 612 (L × W × H) 772 × 380 × 612 (L × W × H)
Mass	kg	68 75

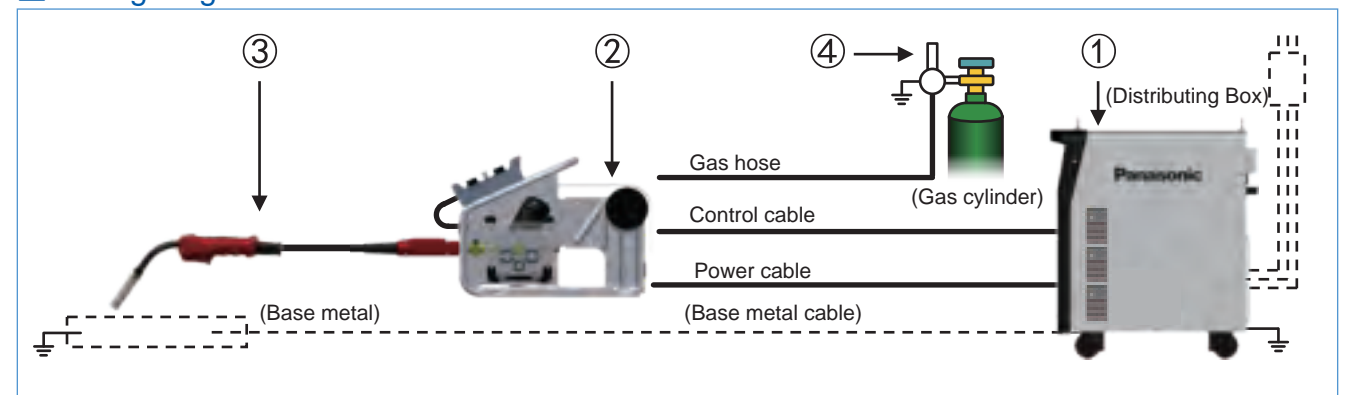
Power capacity and cables

Welding Power Source		YD-350GL4	YD-500GL4
Input power		AC 3 phase 380 V	
The power capacity	Grid power	Over 20 kVA	Over 35 kVA
	Generator	Over 15 kVA twice capacity	Over 25 kVA twice capacity
Input protection (Distributing Box)	Fuse	32 A	50 A
	Circuit breaker	50 A	63 A
Electric cables	Power input side	Over 6 mm ²	Over 10 mm ²
	Power output side	Over 35 mm ²	Over 70 mm ²
	Ground	Same or greater than that of the power input side	

Welding machine configuration

No.	Item	Model Number	
1	Welding power source	YD-350GL4	YD-500GL4
2	Wire feeder	YW-35DG1	YW-50DG1
3	Welding gun	YT-35CS4	YT-50CS4
4	Gas regulator	YX-25CD1	

Wiring diagram



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

Panasonic

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GL4 Exquisite Workmanship with an Ingenious Design

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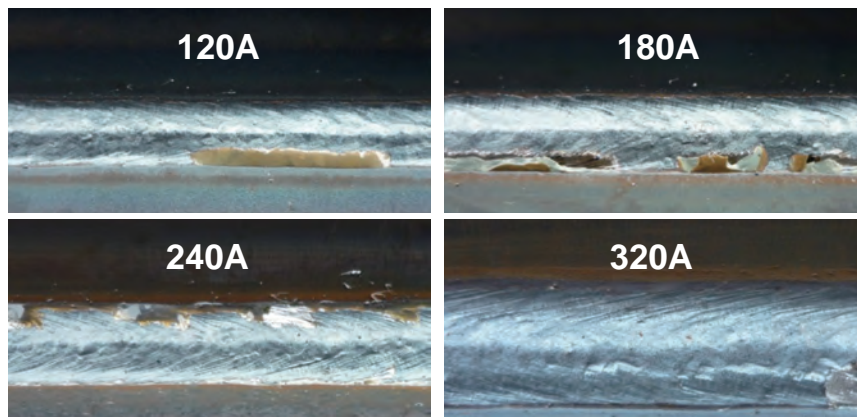
1 Capable of filling the extra large gap between thin plates

- As standard configuration, **Root Welding** function is provided to realize root pass and all position welding with ease (even for 2mm thickness plate with 8mm gap).
- Thanks to Root programs, the arc burning energy can be precisely controlled by molten drop transfer. The low heat input and quick-cooling molten pool enable the machine to acquire excellent bridging ability, suitable for filling the extra large gap between thin plates.

Application for root pass and all position welding

2 Smooth welding in full range of current

- Even if the current is as low as 40A, GL4 can make a stable pulse welding come true.



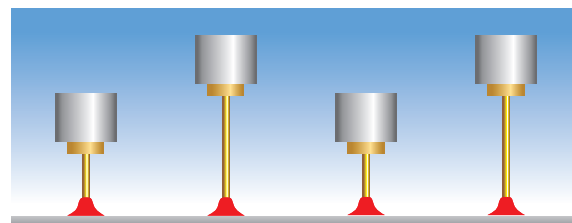
In CO₂ atmosphere, the demand on low spatter welding can be satisfied.

- Newly developed "Light Spatter" waveform control combines three technologies: high-speed electronic reactor, molten drop detection & control and pulse & short-circuit fusion control.

Application for various materials welding in full range of current.

3 Unique pulse arc length control technology

Pulse cycle is smoother and arc stability is enhanced significantly. When wire extension length varies, the arc length can be kept same to stabilize the arc.



Different wire extension length, same arc length

An unskilled welder can achieve stable welding performance.

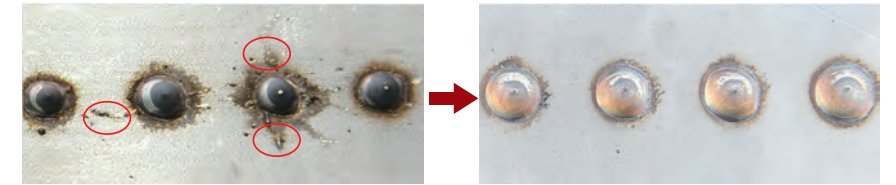


Abundant functions

- Software can be upgraded and customized according to specific requirement of the customer.
- As standard configuration, the welding programs for 3 and 4 series stainless steel are activated.
- Dual pulse function for stainless steel and carbon steel welding
- 100 channels can be stored and recalled.
- The connection to Panasonic robot is enabled, realizing welding automation.
- Accessible to Panasonic iWeld Intelligent Welding Management System, improving management level and operation efficiency. (For details, please refer to the introductions to iWeld system.)
- The automatic circuit compensation function can offset the loss according to the length of the cable.
- The display of error code makes it easy to diagnose the type of troubles.
- A variety of protection functions including over- and under-voltage, overheat and short-circuit etc.

4 Unique arc ignition and crater technology

The arc ignition performance for tack welding (stainless steel)

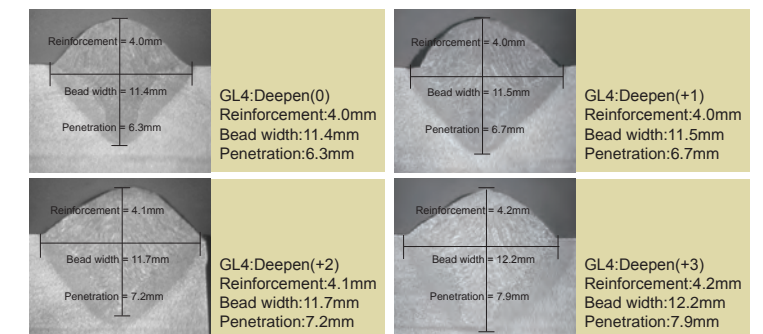


- By using energy boosting technology at the moment of arc ignition, the arc start successful rate is greatly increased, avoiding arc ignition defects.
- By detecting wire feed speed at the end of welding, the machine can adjust the output energy automatically, reaching the ideal shape of the molten ball, increasing arc ignition successful rate and realizing high quality welding.

Application for SPM and robot, which require frequent quality tack welding

5 Deepen Technology

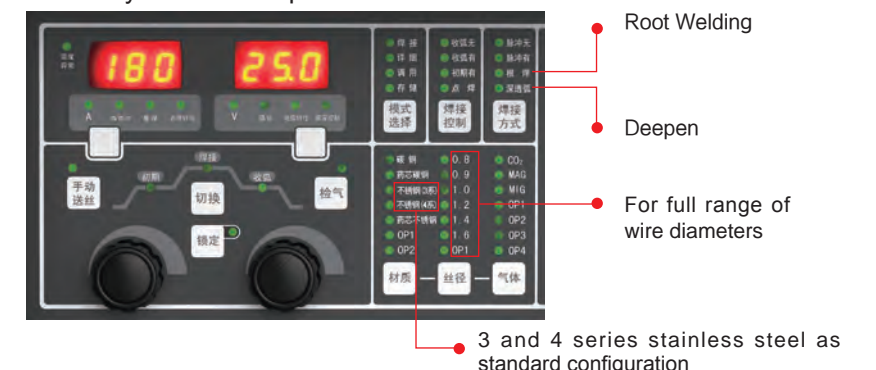
For thick plate welding, deeper penetration is achievable in 4 levels.



The bevel processing volume for thick plate can be reduced and less filling metal and welding materials are consumed, therefore faster welding with lower cost. For fillet welding, the fully penetrated weld at both sides with one side welding can reduce 50% of amount of work, increasing efficiency greatly. (*Deepen is an optional function.)

Application to deep penetration for thick plate with high efficiency

The easy-to-use front panel



To ensure the performance, please select and use Panasonic genuine parts.

PWST makes green products by fully implementing green procurement.