

Panasonic
ideas for life

Full Digital
Pulsed MAG/MIG Welding Machine
350GE2 / 350HM3

Full Digital

Superior welding performance

Excellent arc start

Instantaneous response

Simple operation



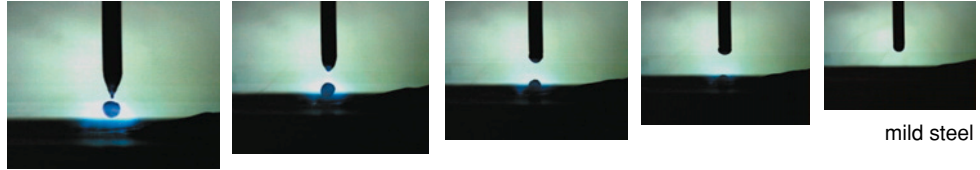
Full Digital Pulse waveform control technology

Features

1. Superior welding performance



stainless steel



mild steel

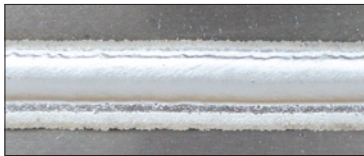
- **Exceptional performance over wide range of material thickness**

The GE2 has excellent arc stability at every current range. Precise pulse waveform control optimizes the welding arc to achieve one pulse-one drop transfer.

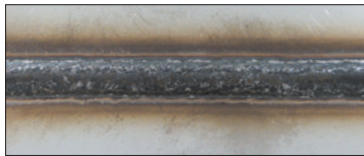
- **High speed arc control reduces spatter**

The GE2's 32 bit RISC CPU allows us to achieve high speed waveform control. This control removes small secondary short circuits in the welding arc which is one of the factors that causes spatter and arc instability. This allows stable welding over a wide range of welding currents with less spatter generation.

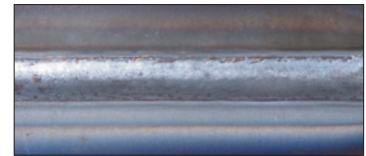
- **Suitable for wide variety of materials** (aluminum, mild steel and stainless steel)



aluminum (1mm thick)
66A, 16.6V, 1m/min, pulsed MIG



stainless steel (1mm thick)
110A, 21.7V, 1m/min, pulsed MIG



mild steel (1mm thick)
90A, 21.5V, 1m/min, pulsed MAG

2. Improved arc start performance

- **Quick and Instantaneous Arc Starts**

The GE2 produces excellent arc starting performance by using a 2 step high current arc start and impulse starting technology in a short period of time.

- **New FTT control**

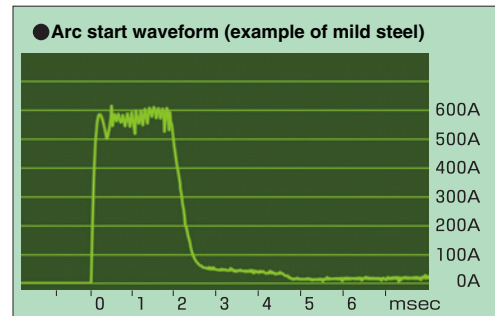
The GE2 also reduces the ball on the end of the welding wire at the end of the weld. This enables stable arc starts every time.



aluminum

- **New CDM Arc Start method**

CDM (Current Detect Masking) method provides extremely stable and quick arc starts by precisely controlling the wire feed motor at the moment of arc ignition.



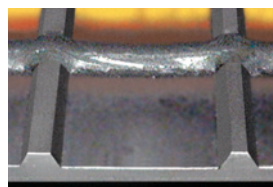
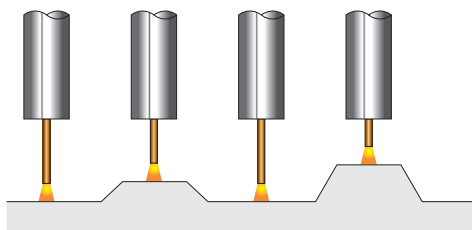
- **Accurate Wire control**

AC servo motor with encoder realized the fine and stable wire feed control at arc start.

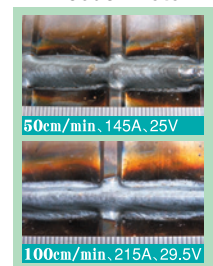


Encoder motor

3. Instantaneous response to changes in arc length



mild steel 2.5mmt



50cm/min, 145A, 25V

100cm/min, 215A, 29.5V

produces high quality, low spatter welding.

4. Simple operation controller realizes accurate welding conditions

● Easily viewable controller and simple operation

Welding current can be set by **1 ampere** and welding voltage can be set by **0.2 volt** by digital display and independent JOG dials. The display shows actual output value while welding. All the welding conditions can be set by the controller.

● Convenient memory function

GE2 can store up to **32** welding schedules. This function is suitable for high-mix low-volume production and will reduce the set up time. The stored data can be protected by pass word.

● Reduction of installation / set up time

Full Digital technology minimized the individual difference of welding machines and wire feeders. The best welding condition of one GE2 can be transferred easily to other GE2. This simplifies setup and allows for tighter process control.

● Screen lock function

The "Screen lock" function for the controller is to disable the JOG dial, Current adjustment dial, Voltage adjustment dial and F4 key (to select pulse ON/OFF) operation which is useful to prevent accidental operation mistakes.

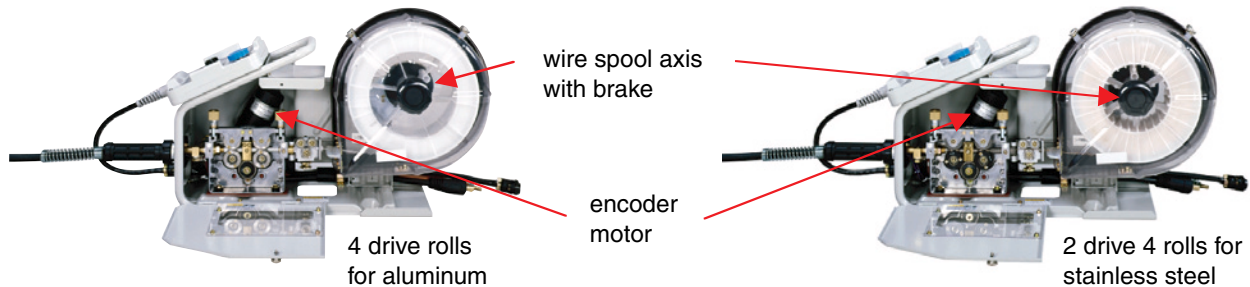
● Alarm indication of feed load fluctuation



Controller
YD-00DES1YAD

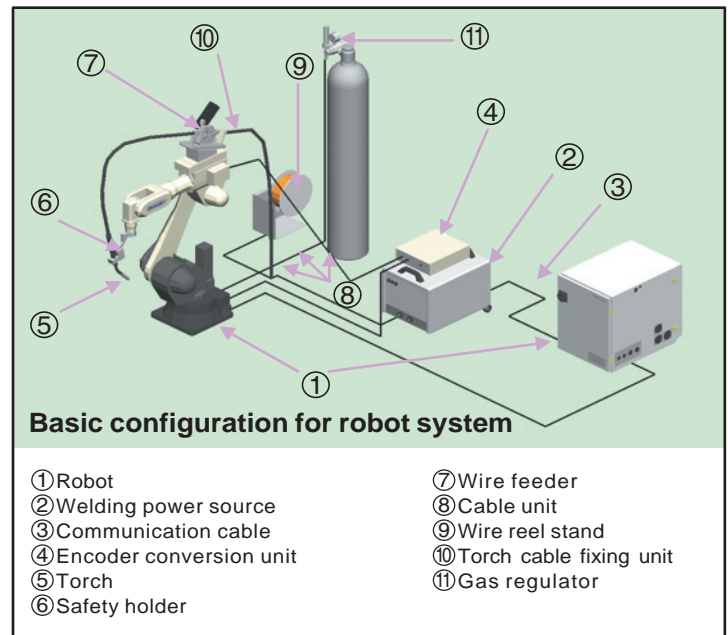
5. Stable Wire Feed by motor with encoder

The encoder of wire feed motor feeds back the motor revolutions precisely and instantaneously to CPU, which commands the offset output value to keep the wire feed speed stable. If feed load on torch becomes higher or the primary input voltage fluctuates within the range of 10% of rated input, stable welding can be achieved. This allows excellent welding results under a wide variety of welding conditions.



6. Excellent performance with Panasonic G2 robots

GE2 can be connected with Panasonic's G2 robots by a single digital communication cable, an interface box is no longer required. The power source can be recognized automatically by G2 robot controller. Through full digital control, the robot can digitally fine adjust the GE2's welding waveform. The GE2 shows excellent performance in tack welding coupled with the quick and precise movement of Panasonic's G2 robots will allow a drastic reduction in short weld cycle time.



Please consult sales person to chose the most suitable accessories and options.

Configuration for manual welding

1 Welding power source

2 Controller

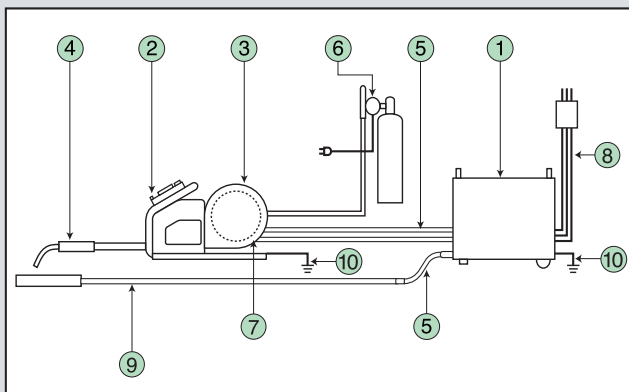
3 Wire feeder

4 Torch

※ For CE model, please consult sales staff.

5 Connection cable

※ Output cable (0.5m) is included.



Please prepare following accessories by customer.

- 6 Gas regulator
- 7 Welding wire
- 8 Input cable
- 9 Extension output cable
- 10 Grounding

In case of using water cooling torch, please prepare following accessories.

- Water tank
- Water hoses

Note:
Combination of the equipment differs by the materials, thickness of the work pieces or welding methods. Please consult sales person to choose the most suitable accessories (ex. welding torch, gas regulator etc.) and options (ex. water cooling unit etc.).

Specifications of power source

	Standard model for Asia (excluding China) YD-350GE2YAA	CCC model for China YD-350GE2YGD	CE model for Europe YD-350GE2YHD	CUL model for US,Canada YD-350HM3
Input voltage	200/220V AC Three phase	380V AC ±10% Three phase	400V AC ±10% Three phase	230/460V AC ±10% Three phase
Frequency	50/60Hz	50Hz		60Hz
Rated input capacity	20kVA(18kW)			
Maximum no-load voltage	74V DC	70V DC	74V DC	71V DC
Output current	30 - 350A			
Output voltage	12 - 36V	12 - 31.5V		12 - 36V
Rated duty cycle	60%			
Computer interface	RS-232C, RS-422			
Applicable welding method	CO ₂ , MIG, MAG, pulsed MIG, pulsed MAG			
Applicable wire diameter	0.8 / 0.9 / 1.0 / 1.2 mm			0.030/0.035/0.045/0.062 in.
Dimensions	380 × 510 × 485 mm	380 × 510 × 570 mm		15.0 × 20.9 × 27.2 in.
Weight	58 kg	66 kg		169 lbs. (77 kg)



Safety precautions

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



We provide the products friendly to the environment.

Aiming for the earth-friendly company, Panasonic Welding Systems Co., Ltd. has been promoting to disuse hazardous substances to the products as the company policy.

Panasonic Welding Systems Co., Ltd.
Global Sales and Marketing Group
1-1, 3-chome, Inazu-cho, Toyonaka, OSAKA 561-0854 JAPAN
TEL: 81-6-6866-8505 FAX: 81-6-6866-0709
<http://panasonic.net/pws>

Panasonic Factory Solutions Company of America
909 Asbury, Buffalo Grove, IL 60089 USA
TEL: 1-888-PANWELD / 1-847-495-6100
<http://www.panasonicfca.com>

Panasonic Factory Solutions Europe
Robot & Welding Systems
Harkortstrasse 11, D-40880 Ratingen Germany
TEL: 49-2102-94213-0 FAX: 49-2102-94213-200
<http://www.panasonic-industrial.com>

Panasonic Welding Systems (Tangshan) Co., Ltd.
Tangshan New & Hi-Tech Development Zone, 063020
Tangshan, Hebei, China
TEL: 86-315-3206066 FAX: 86-315-3206070
<http://pwst.panasonic.cn>

Panasonic Industrial (Thailand) Ltd.
252/133 Muang Thai-Phatra Complex Building, 31st Fl.
Rachadaphisek Rd., Huaykwang, Bangkok 10320 Thailand
TEL: 662-693-3421 FAX: 662-693-3427

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