

ALUMIG-350CP/500CP



**Quick
Specs**



Processes:

MIG,
Flux-Cored,
MMA(Stick),
TIG

Applications:

Metal Fabrication
Maintenance and Repair
Auto Body
Light Industrial

Input Power:

350CP: 400V,3-Phase/500CP: 400V,3-Phase

Amperage Range:

350CP: 10-350A/500CP:10-500A

Rated Output at 40°C (104°F):

350CP: 350A at 31.5V @60% Duty Cycle

500CP: 500A at 39V @60% Duty Cycle

Weight : 350CP:65KG/500CP:85KG

For MIG and Stick Welding

The total solution of industrial MIG/MAG welding

ALMIG-350CP/500CP is a synergic, pulsed MIG /MAG welding machine, suitable for Carbon steels and Stainless Steels. Air or water cooled packages combine with innovative distance wire feeding and remote control options to deliver outstanding welding performance. Heavy duty welding powers and modular designs makes the machine very strong and reliable. It's the perfect solution of the industrial welding jobs.

Specialist Features

Precision Arc Performance:

- **Multi-Process capable** - Welds MIG, flux-cored, stick and pulsed MIG.
- **Synergic control** – Set weld procedures with one control, simple and easy to operate.
- **Synergic MIG** provides communication between power source, feeder and gun.
As wire speed increases or decreases, the arc voltage also increases or decreases to maintain a constant welding arc.
- **All position carbon steel welding with Pulse MIG process:**
use the cheaper CO2 gas but get a similar Ar/CO2 MAG welding performance.
- **Featured Wave-form control system:** Maintains a stable, smooth arc for short arc welding on steel. Improved penetration on thicker aluminum sections.
- **Dynamic control** with a push of a button.
- **Fast, precise, clean arc ignition and arc ending.**
- **10 channels memory capacity.**



Outstanding Quality:

- Newly designed using the latest power electronic technology for improved reliability.
- CE Certified.
- One-Year Warranty on parts.



Technical specifications

Item No	ALUMIG-350CP	ALUMIG-500CP
Rated Input Voltage	3PH ~ 400V ±15%	3PH ~ 400V ±15%
Max. Load Power Capacity	15.26KVA	26.99KVA
Rated Duty Cycle(40℃) 60%	MIG: 350A/31.5V	MIG: 500A/39V
	MMA: 350A/34V	MMA: 500A/40V
100%	MIG: 300A/29V	MIG: 350A/31.5V
	MMA:300A/32V	MMA:350A/34V
Welding Current/Voltage Range	MIG: 10A/14.5V~350A/31.5V	MIG: 10A/14.5V~500A/39V
	MMA:10A/20.4V~350A/34V	MMA:10A/20.4V~500A/40V
Open Circuit Voltage	70V~80V	70V~80V
Power Factor	0.85	0.85
Efficiency	85%	85%
Pre-Gas Time	0.1-15S	0.1-15S
Flow-Gas Time	0.1-15S	0.1-15S
Wire-feed Mechanism	4 Rollers	4 Rollers
Wire-feed Speed Range	0~25m/ min	0~25m/ min
Wire Spool Capacity	300mm (15kg)	300mm (15kg)
Filler Wires Ø (mm) Fe, Ss:	0.6~1.6 mm	0.6~1.6 mm
FLUX CORED:	0.8~1.6 mm	0.8~1.6 mm
Al:	1.0~1.6mm	1.0~1.6 mm
Dimension:	960X420X1400mm	960X420X1400mm
Weight:	65KG	85KG

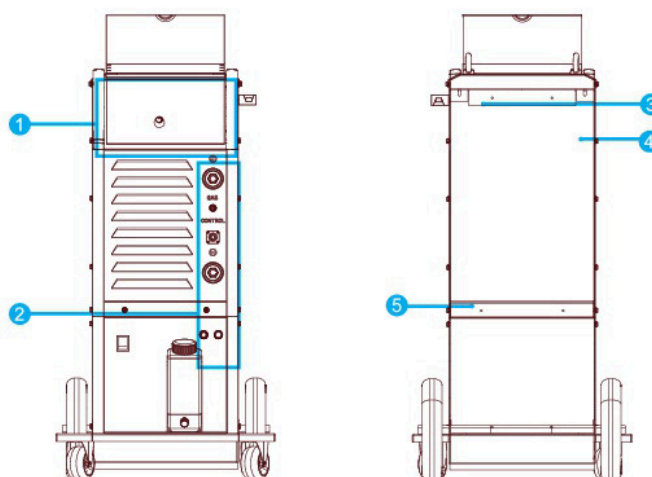
Water-cooling Unit: WC-100

Operating Voltage	230V 50/60Hz
Rated Power	260W
Cooling Power	1.5KW(1L/MIN)
Maximum Pressure	0.3MPA/60HZ
Recommended Cooling Liquid	20%~40% ethanol/water
Tank Volume	6.5L

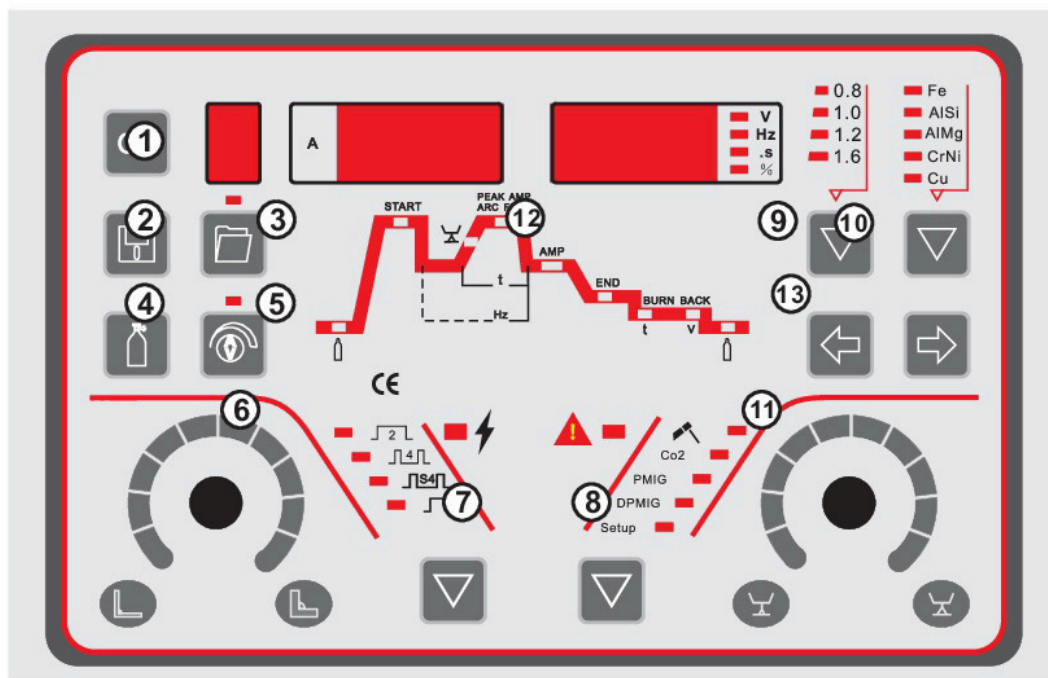
Panel & Connections

Panel & Connections

1. Control Panel
2. Output connectors
3. Power Switch
4. Ground/Earth connector
5. Connecting nipple M16X1.5, shielding gas connection



General View of Control Panel



Control Panel Parameter Values

1. **SELECT** the Memory channel

2. **OPEN** the parameter of selected memory channel

3. **STORE** the setting to Memory channel

4. **Push to Check Gas**

5. **Push to use Synergic Setting**

6. **Welding parameter setting, rotary dial**

Adjustment of the welding current or feeding speed.

7. **Torch Holding Mode**

Push to select the torch handing type:

1) 2T

2) 4T

3) S4: for aluminium welding from cold to hot situation.

8. **Welding Process**

Push to select:

Welding process: MMA, MIG/MAG/CO₂, Pulse MIG, Double Pulse MIG.

9. **Dia. of Welding Wire**

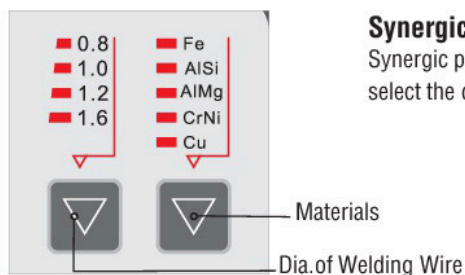
10. **Wire Type**

11. **button, throttling effect (arc dynamics)**

12. **Function Sequence**

13. **Welding Settings**

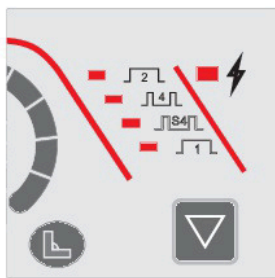
Synergic control



Synergic MIG

Synergic pulsed welding mode offers the simplicity of single-knob control. The machine will select the correct pulse power based on the wire feed speed (WFS) set by the operator.

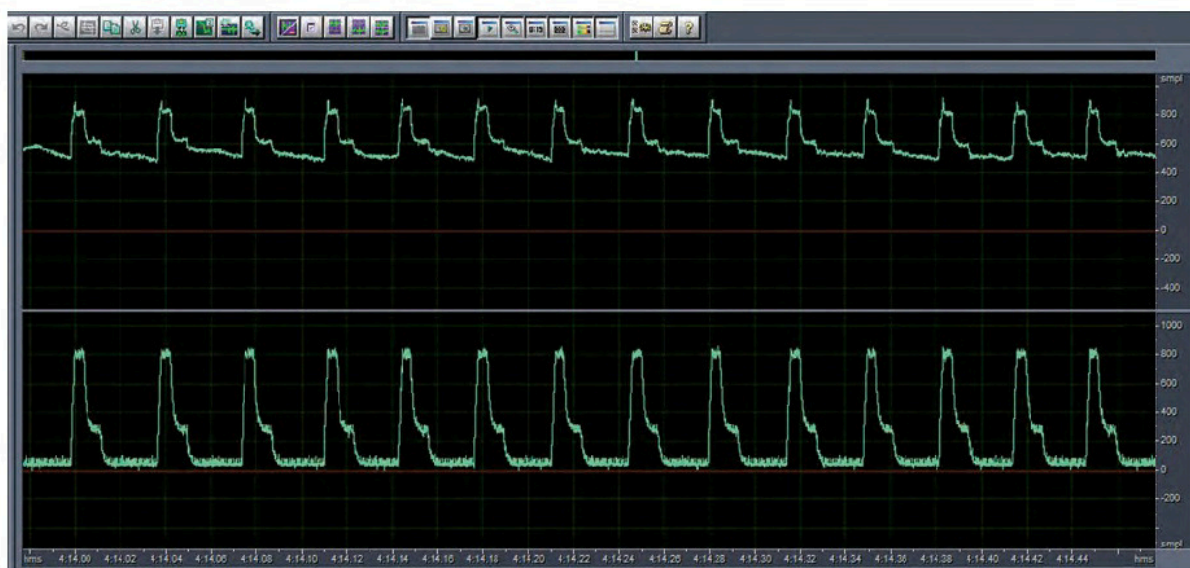
S4T Mode



S4T Mode.

Begin and end welds with ease and confidence. Hot start eliminates incomplete fusion at the beginning of a weld, a common issue with aluminum welding. Crater gradually decreases weld current at the end of a weld to eliminate crater defects. Adjustable pre- and post-flow rates ensure that the puddle always has adequate gas coverage.

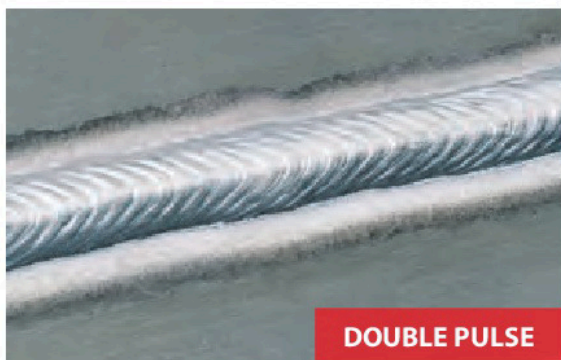
The advantage of Wave-form Control System



Fe,Pulsed

The latest technology of Waveform Control System with pulsed MIG control mode, can perfectly control the output of welding power and get the precision Arc performance. The wire melting droplet transfer cycle is very clear, the welding beam is very clean and very few spatters during welding.

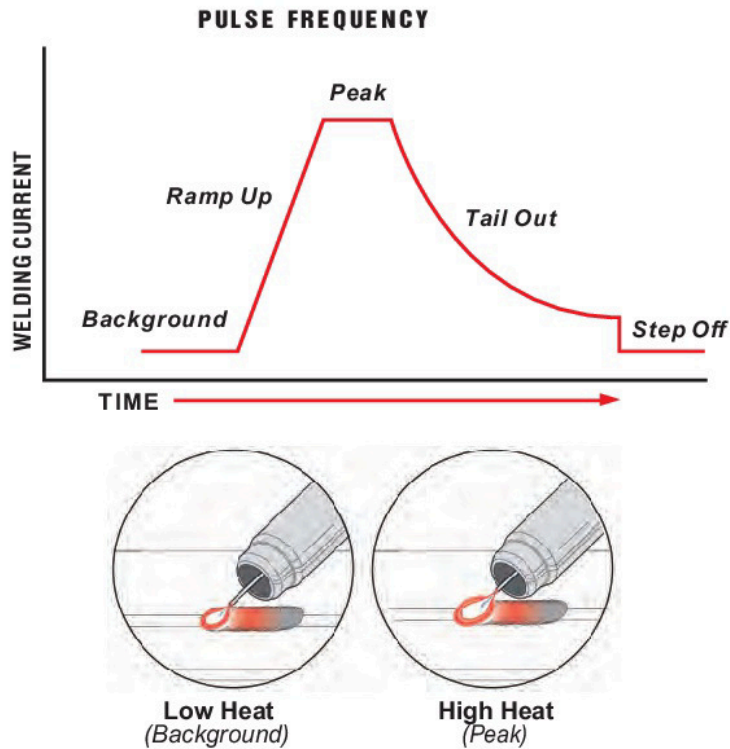
DOUBLE PULSE



DOUBLE PULSE

Double Pulse uses a sequence of varying pulse wave shapes to produce a TIG-like bead appearance and excellent weld properties when MIG welding aluminum. Double Pulse controls arc length and heat input together, making it easier to achieve good penetration (see DPMIG, Double Pulse MIG.pdf).

Pulse MIG



Pulsed MIG varies weld current between peak (high heat) and background (low heat) current to provide better control of heat input, which minimizes warping and burnthrough on thin materials. Pulsed MIG also enables flat, horizontal, vertical up, or overhead welding without a slag system. Optimized GMAW-P waveforms are readily available to use on aluminum, carbon steel, high strength low alloy steel, stainless steel, and nickel alloys.

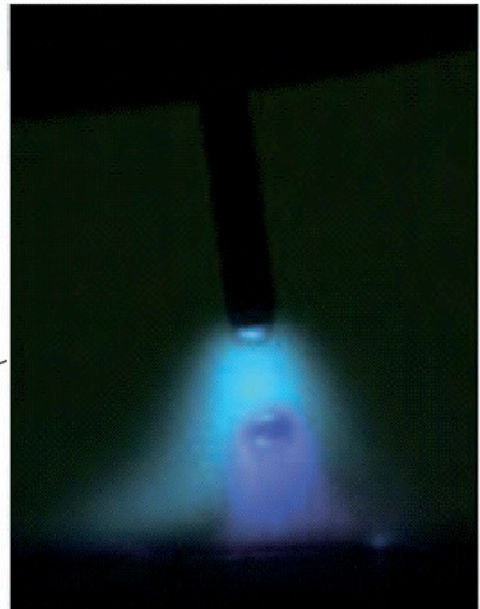
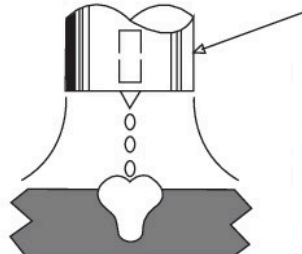
PULSED MIG

Pulse MIG precisely controls heat input through the 1-drop-per-pulse-transfer and offers a stable arc in the wide transfer area between short and spray arc.

Spray arc transfer “sprays” a stream of tiny molten droplets across the arc, from the electrode wire to the base metal. It produces a characteristic humming or buzzing sound.

Advantages of pulse mig:

- High deposition
- Good fusion and penetration
- Good bead appearance
- Capability of using larger diameter wires
- Presence of very little spatter



Accessories

For Standard accessories



MIG torch: MIG-501D
PTEE liner



Earth clamp with cable 3M

For Optional accessories



Co₂ gas regular with heater



Argon gas regular



Trolley: WT-150

Consumables

For MIG torch: MIG-501D



Nozzles

ICS0713	Gas nozzle Φ 16mm
ICS0740	Gas nozzle Φ 14mm
ICS0746	Gas nozzle Φ 19mm
ICS0747	Adjusted tapered nozzle Φ 15mm
ICS0748	Spot welding gas nozzle Φ 20mm



Contact Tips

ICU0005-08	Contact tip Φ 0.8mm M8x30 Ecu
ICU0005-10	Contact tip Φ 1.0mm M8x30 Ecu
ICU0005-12	Contact tip Φ 1.2mm M8x30 Ecu
ICU0005-16	Contact tip Φ 1.6mm M8x30 Ecu
ICU0005-20	Contact tip Φ 2.0mm M8x30 Ecu
ICU0005-24	Contact tip Φ 2.4mm M8x30 Ecu
ICU0005-58	Contact tip Φ 0.8mm M8x30 CuAl
ICU0005-59	Contact tip Φ 0.9mm M8x30 CuAl

ICU0005-60	Contact tip Φ 1.0mm M8x30 CuAl
ICU0005-62	Contact tip Φ 1.2mm M8x30 CuAl
ICU0005-66	Contact tip Φ 1.6mm M8x30 CuAl
ICU0005-70	Contact tip Φ 2.0mm M8x30 CuAl
ICU0005-74	Contact tip Φ 2.4mm M8x30 CuAl
ICU0005-78	Contact tip Φ 0.8mm M8x30 CuCrZr
ICU0005-80	Contact tip Φ 1.0mm M8x30 CuCrZr
ICU0005-82	Contact tip Φ 1.2mm M8x30 CuCrZr



Replacement Lines

IIC0226	Brass terminal Φ 3.0X4.5mm 0.35m
IIC0210	Teflon liner Φ 3.0X4.5mm 3m Yellow
IIC0580	Steel liner Φ 1.2-1.6mm 3m

Others



10-pin connector



Drive Roll

Fe 0.6/0.8 mm
Fe 0.8/0.9 mm
Fe 0.8/1.0 mm
Fe 1.0/1.2 mm
Fe 1.2/1.6 mm
Al 0.6/0.8 mm
Al 0.8/0.9 mm
Al 0.8/1.0 mm
Al 1.0/1.2 mm
Al 1.2/1.6 mm