

Tech Pro[®]

[AN ISO 9001 : 2008 & 14001 : 2004 CERTIFIED COMPANY]



**DIGITALLY CONTROLLED IGBT INVERTER BASED MULTI-PROCESS
EQUIPMENT FOR MIG / MAG, SYNERGIC MIG & MMA APPLICATION
(WITH PULSE)**



1. **SYNCHRONIZED
Program Presetting**
2. **Automatic
MEMORY function**
3. **Parameters STORAGE**
4. **ARC output ENERGY
CONTROL**
5. **Double PULSE**

MODEL : TP-MIG-500i (SYN-P)

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COMPLETE SOLUTION FOR WELDING & PLASMA CUTTING

The TECHPRO MIG 500P is a high quality digital MIG/MAG power source. It provides low spatter consistent welding with minimal rework on a wide range of materials. The Jasic MIG 500P provides multi process pulsed MIG, synergic MIG, TIG and MMA options for a wide range of applications.

KEY FEATURES

- IGBT multi process inverter
- Pulsed MIG, MIG/MAG, Lift TIG and DC MMA
- Double Pulse
- Synergic or standard operating modes
- DSP digital technology for optimum welding performance
- Smart fan and water control
- Job storage system
- 4 roll wire feed unit
- Suitable for 0.8, 1.0, 1.2 and 1.6mm welding wire
- Easy parameter settings for the operator
- Synergic curves for common materials & wire diameters
- Self diagnostic system
- Encoder feedback control of wire feed system
- Power & status LED's
- Inverter trolley takes full size gas bottle
- AVR generator friendly

OPTIONAL

MMA Leads



TECHNICAL SPECIFICATION :

DESCRIPTION	PARAMETER
Input Power	415 V +/- 10%, 3P, 50/60 Hz
Rated Input Capacity (KVA)	26.7
Rated No-Load Voltage (V)	86
Current Range (A)	20 - 500
Efficiency (%)	92
Power Factor	0.90
Protection / Insulation Class	IP23 / H
Duty Cycle @ 40°C	500A @ 50%
Wire Speed (m/min)	1.5 - 24
Dimensions (LxWxH mm)	1080 x 510 x 1180
Weight (Kg)	129 Kg (Approx.)

Brief and convenient front panel

500A inverter power source
 Customized-generators friendly
 Operation panel
 Wire feeder; synchronized control
 Monopulse operation
 Dipulse operation

Convenient operation

Power input cable with standard plug
 Ground cable with clamp
 Welding torch and torch holder

Suitable welding tools

Welding torch consistent with ergonomic design
 Mobile trolley with gas cylinder on it

Continuous cooling

Air cooling power source
 Water cooling welding torch

Mobile welding equipment

Mobile trolley frame with gas cylinder holder
 Steady rubber wheel and self-locking omni-directional wheel

Continuous feeding

4 gears double-drive wire feeder
 Euro welding torch connector
 Wire spool for 300mm wire

High reliability

Adoption of international top-rank components and high power devices
 Equipped with over-heat protection, over-current protection, power input under-voltage protection

Advanced control technology

The adoption of international cutting edge DSP digital technology guarantees abundant functions, excellent performance, high accuracy and fine consistency



2 Precise and Convenient Operation Panel with Abundant Functions

Friendly Human-computer Interface Concise And Convenient Operation

1 One Machine Can Satisfy Various Functions

- MAGCO₁ Synchronic
- MAGCO₂ Monopulse
- MIGMAG Dipulse
- MIGMAG Welding

2 Display of welding current, wire feeding speed and workpiece thickness selection.

3 Display of welding voltage, duty circle and frequency selection.

4 2T/4T spot welding selection

5 Wire feeding gas detection

6 Selection of wire diameter

- φ 0.8
- φ 1.0
- φ 1.2
- φ 1.6
- Flux cored

7 Selection of gas type

- 100%CO₂
- 80%Ar 20%CO₂
- 90%Ar 5%CO₂ 5%O₂
- 98%Ar 2%CO₂
- 100%Ar

8 Selection of workpiece material

- Steel
- CrNi
- AISi 5
- AIMg 5
- Al 99.5

3 Welding Parameters Memory Function

Welding parameters can be automatically saved in case of power off or accident blackout; it can come back to previous welding parameters when restart the machine.

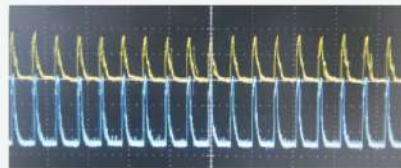
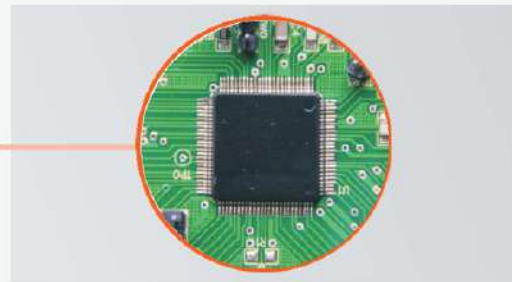
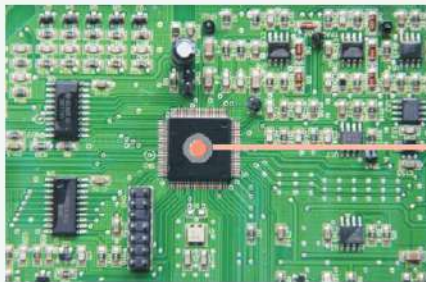
4 Synchronized Program Presetting



Conciseness, Convenience, Reliability

Built-in expert database can realize automatic fast matching welding parameters based on workpiece material, wire diameter, shielding gas type, etc.

5 High Speed Digital Control Technology



To provide stable and high quality welding arc.

6 Arc Regulation

Absolute CV control to guarantee stable arc length in the middle of welding.



7 Arc Output Energy Control

Concise and convenient operation; operators can adjust welding procedure through current, wire feeding speed or workpiece thickness selection

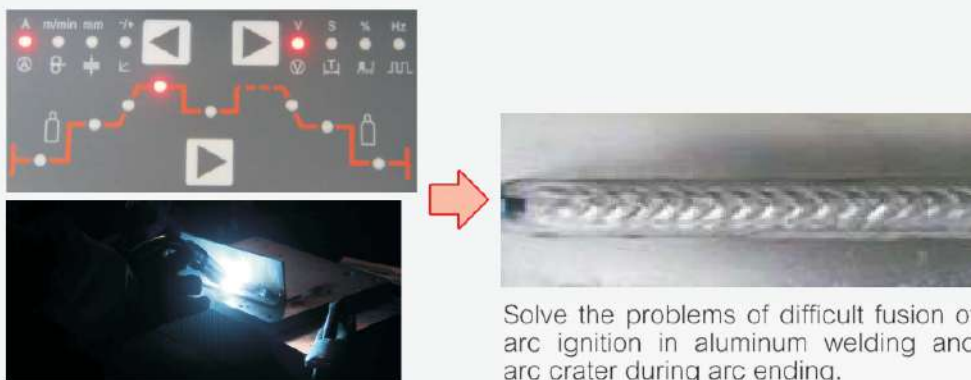


8 Wire Feeder with Speed Feedback



Digital wire feeding control system to guarantee stable aluminum wire feeding.

9 Specially Aluminum Welding Program Design is of High Efficiency, Deep Penetration, Less Porosity and High Quality Welding Bead



Solve the problems of difficult fusion of arc ignition in aluminum welding and arc crater during arc ending.

10 Communications with Wire Feeder

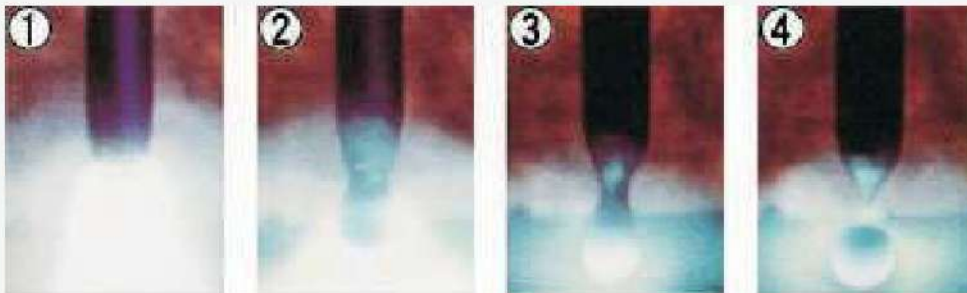


- Compact aviation socket is with protection cover to prevent foreign matters entering into it.



- Can significantly reduce cable pins which is improving welding reliability.

11 Hf Pulse Control Molten Drop Transfer---One Pulse One Drop



Digital control, accurate waveform control to realize one pulse and one drop transfer, so that to acquire stable and no spatter welding processing.

12 Specially Designed Unique Crater Solution

To optimize wire ends' shape so that to ensure next smooth arc ignition



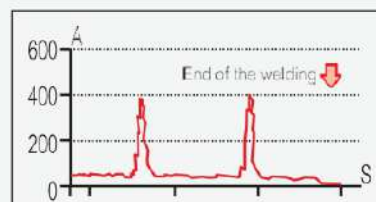
Ø1.19

MIG-400P



Ø1.38

Before The Machine



13 Concise, Steady and Practical Customized Design

- **XXL gas cylinder trolley**

Detachable chain lock to fix gas cylinder and prevent dump.



- **Hand shank for moving the machine**

Hand shank for convenient moving the machine.



- **Enhance stability**

Big steady rubber wheels can withstand large force.



- **Omni-directional wheels**

Useful and sturdy self-locking omni-directional wheels.



OFF



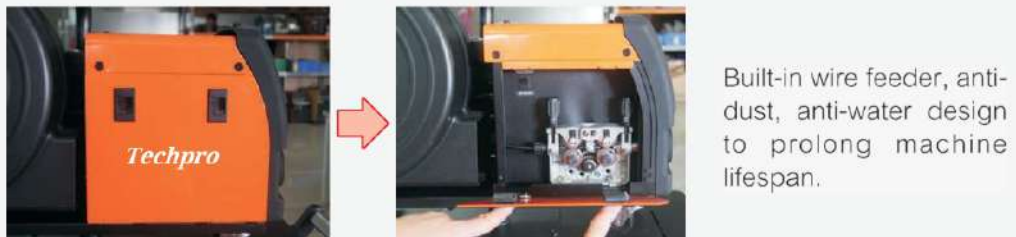
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14 Digital Wire Feeder

- Outstanding appearance is the combination of elegance and excellent performance



- Precise 4 gear wire feeder



15 Big Capacity Water Cooler



• Front panel



Cooler



Front fuse for convenient replacement

• Rear panel



Standard power source: AC 220V



Water inlet and outlet varies with each other by colors, which is corresponding with wire feeder.

Features

Concentrated current can effectively suppress pores in weld and decrease welding distortion.
Refined grain lowers crack sensibility.

Welding Bead

- Aluminum alloy welding bead

Monopulse aluminum alloy welding bead

Welding parameters



Dipulse aluminum alloy welding bead

Welding parameters



- **Stainless steel welding bead**

Welding parameters



- **Carbon steel welding bead**

Welding parameters

