



TP-MIG (SYN-AI)-500i

Power Source

Rugged and robust EVO20 family look

Advanced digital control platform: DSP + ARM dual microprocessors, next-gen digital control algorithms, next-level arc control and welding performance

Next-level MIG welding performance

- **Arc starting:** 60% increase in arc start success rate and 75% reduction in time from arc start to arc maintenance thanks to optimized coordination between wire feeding and output energy control.
- **Refined droplet transfer:** Precise waveform control delivers improved droplet size control and transfer consistency, resulting in less spatter, better weld seam formation and penetration, and enhanced stick-out length adaptability and arc adaptability.
- **Auto Ball-Removal:** Instant arc extinguishment right after droplet peels off, no molten metal ball forming at the wire tip, ensuring success of subsequent arc ignition; excellent performance in manual spot welding

Ample remote control options available: digital torch, wireless helmet remote, mobile app, handheld remote, and foot pedal.

Flexible configuration: Power source can merge with wire feeder, water cooler module, toolbox module and trolley to accommodate different needs

Synergic function for ease of use and Welding Engineer Mode for advanced customization

10 job slots per welding mode for efficient parameter recall

Standard Accessories

- 3M MB-36 air-cooled MIG torch
- 500A earth clamp (MIG500: 50mm²; MIG350: 35mm²)
- 5M interconnecting cable (MIG500: 50mm²; MIG350: 35mm²)
- 1 pc quick connector
- 2.5M rubber air hose



DIGITALLY CONTROLLED WIRE FEEDER

Enhanced wire feed mechanism

- Dual-drive wire feeder ensures stable wire feeding
- Reduced rotational inertia for faster response
- Gear-driven wire feed system with enlarged feed roller (from $\phi 30\text{mm}$ to $\phi 37.45\text{mm}$)
- Quick change feed rollers
- Anti-pinch design
- One-key wire feeding function

Enhanced usability

- HD digital control panel with *ClearVision tech*
- Transparent viewing window
- Built-in LED lighting
- USB Type-C port



Upgraded wire feed mechanism



HD digital panel with
ClearVision tech

POWER SOURCE

		TP-MIG (SYN-AI)-350i	TP-MIG (SYN-AI)-500i
MIG	Input Voltage	3ph, AC400V $\pm 15\%$ 50/60 Hz	3ph, AC400V $\pm 15\%$ 50/60 Hz
	Rated Input Current	19.5 A	33.7 A
	Power Capacity	13.5 kVA	23 kVA
	Output Current Range	30~350 A	30~500 A
	Output Voltage Range	10~40 V	10~48 V
	Wire Feed Speed Range	2~24 m/min	2~24 m/min
	Open Circuit Voltage	75 V	82 V
TIG	Duty Cycle	50%	40%
	Rated Input Current	15.5 A	27 A
	Power Capacity	11 kVA	18.5 kVA
	Open Circuit Voltage	75 V	82 V
MMA	Output Current Range	20~350 A	20~500 A
	Duty Cycle	50%	40%
	Rated Input Current	20.8 A	34.4 A
	Power Capacity	14.5 kVA	23.5 kVA
	Output Current Range	20~350 A	20~500 A
	Arc Force Range	0~200 A	0~200 A
	Hot Start Range	0~200 A	0~200 A
	Open Circuit Voltage	75 V	82 V
	Duty Cycle	50%	40%
Power Factor		0.92	0.94
Efficiency (at max current)		89%	89%
Idle Power Consumption		30 W	30 W
Insulation Class		H	H
Protection Class		IP23S	IP23S
Dimensions (L×W×H)		657*278*511 mm	657*278*511 mm
Net Weight		26.9 kg	29.8 kg

WIRE FEEDER

		TP-WF (SYN) - 500	WATER COOLER	TP-WC (SYN) - 500
WIRE FEEDER	Rated Voltage	DC 24V	Input Power Source	1 ph AC400V $\pm 15\%$ 50/60Hz
	Rated Current	3.5A	Rated Input Power	140 W
	Wire Feed Speed	2~24 m/min	Water Tank Volume	6.5 L
	Wire Feed Mechanism	4-roll	Maximum Pressure	0.42 MPa
	Diameter of Feed Rolls	37.45 mm	Maximum Flow	5 L/min
	Wire Spool Diameter	300 mm	Rated Cooling Power	1.5 KW (1L/min)
	Protection Class	IP2X	Protection Class	IP23S
	Dimensions (L×W×H)	700 × 233 × 462 mm	Coolant	Industrial distilled water, antifreeze
	Net Weight	17 kg	Operating Ambient Temperature	Industrial distilled water: 7~60°C, Antifreeze: -20~50°C
			Storage Temperature Range	-20~60 °C
			Noise	< 70 db
			Dimensions (L×W×H)	663×265×303 mm
			Net Weight	15 kg

WATER CHILLING UNIT

Enhanced reliability

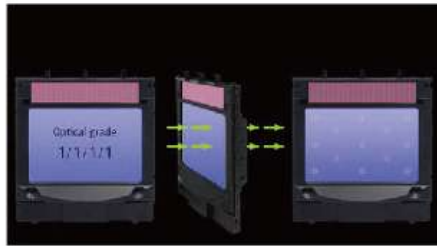
- Built-in hall sensors reduce electromagnetic interference
- Potted power supply circuit with IP23S protection class
- Motor with dual-loop CV/CC power supply for enhanced stability
- Comprehensive protection including overvoltage, overcurrent, overheating, and abnormal water flow safeguards for enhanced equipment longevity

Enhanced usability

- (Optional) built-in water vibration buffer reduces vibration in welding torches, conducive to smooth operation and consistent weld quality
- Built-in high lift pump compatible with welding torches of up to 30m
- Built-in LED for clear water level monitoring



TP-AI-HELMET



Remote control and feedback module

- Lateral control knobs for quick welding parameter adjustment
- Voice feedback enabled
- Powered by 1200mAh battery lasts up to 1 month
- USB Type-C charging

High performance lens

- 1/1/1/1 true color lens
- Large viewing area 3.94" x 2.56"
- 4 sensors with 0.03ms response time
- Wide shade range from DIN 3 (light) to 4-8/9-13 (dark)
- Anti blue light tech reduces eye fatigue for prolonged use comfort
- UV/IR protection: Up to Shade DIN 16 at all times

Other features

- Compatible with standard PAPR systems
- Compliant with DIN EN 379, DIN EN 175, and ANSI Z87.1-2015 standards

Specifications

WELDING HELMET	TP – AI - HELMET
Viewing Area	100 x 65 mm
Number of Sensors	4
Optical Class (CE)	1/1/1/1
Cartridge Size	122 x 125 x 9 mm
UV/IR Protection	Up to shade DIN 16 at all times
Light State	Shade DIN 3 or DIN 4 (Internal)
Variable Shade Range	DIN 4~8/9~13
Power On/Off	Fully automatic
Sensitivity Control	Internally adjustable
Mode Selection	Welding/Grinding selectable
Switching Time (Light to Dark)	1/30,000 s
Switching Time (Dark to Light)	0.25~0.8 s (adjustable)
Working Voltage (For remote control)	3.7 V
Working Distance (For remote control)	30 m
Battery Type	Solar cells + Lithium battery (1200mAh)
Battery Life	40 days (for remote control; life varies with usage frequency)
Helmet Material	High-impact resistant plastic/Polyamide (Nylon)
Protection Class	IP21
Environmental Standard	ROHS 2.0
Dimensions (L×W×H)	230*225*320 mm
Total Weight	610 g (Net)/ 910 g (Gross)

OFFICE ADDRESS:

Ground Floor, Shop No. 13,
268/2, Grand Trunk Road, Howrah, Liluah – 711204
PHONE: 9953499007
Email: technologypipl@gmail.com
Web: www.technologypromoters.com

WORK ADDRESS:

1826, M.I.E. PART B BAHADURGARH
HARAYANA 124507
PHONE: 9830488739
Email: director_vd@technologypromoters.com
Web: www.technologypromoters.com