TOPWELL®

PROFESSIONAL IN WELDING

www.cn-topwell.com

Web & Mail
www.cn-topwell.com
sales@topwellwelders.com

Phone
(+86)571-88231791
(+86)571-88231792

Address
Yanxiang Technology Building,
No.333, Jianghong Road, Hangzhou.

2018/2019

Welding
Equipment Catalogue

TOPWELL®

PROFESSIONAL IN WELDING

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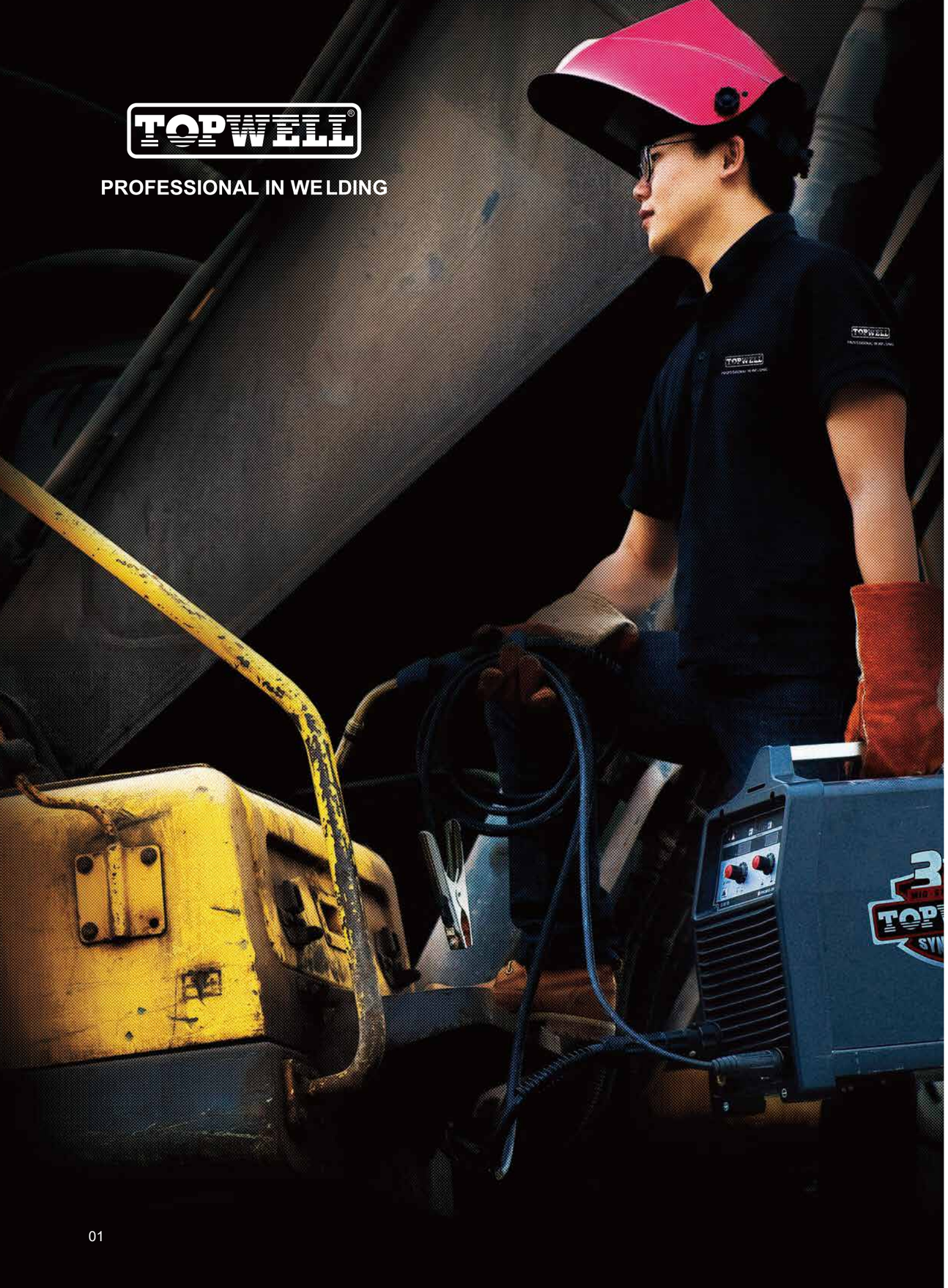
CONTENTS

SYMBOL DESCRIPTION

- Requires single phase supply
- Requires three phase supply
- Water cooling optional
- 4 rollers wire drive
- 2 rollers wire drive
- Constant current output
- Multi voltage unit
- Constant voltage output
- Direct and pulsed current output
- Alternating,direct and pulsed current output
- Constant current and constant voltage output
- Energy efficient compared to alternative products options



MIG (GMAW)

Model	Mild Steel	Stainless Steel	Aluminum	Wire Dia (Steel)	Wire Dia (Aluminum)	Metal plate thinkness	Page
PROMIG-200SYN	√			0.6/0.8/1.0		≥2MM	03
PROMIG-200SYN Pulse	√	√	√	0.6/0.8/1.0	0.8/1.0/1.2	≥2MM	03
PROMIG-250SYN	√			0.8/1.0/1.2		≥2MM	09
PROMIG-250SYN PULSE	√	√	√	0.8/1.0/1.2	0.8/1.0/1.2	≥2MM	09
MIG-350HD	√			0.8/1.0/1.2/1.6		≥2MM	15
MIG-350HD PULSE	√	√		0.8/1.0/1.2/1.6		≥2MM	15
MIG-500HD	√			0.8/1.0/1.2/1.6		≥2MM	15
MIG-500HD PULSE	√	√		0.8/1.0/1.2/1.6		≥2MM	15
ALUMIG-250P	√		√	0.8/1.0/1.2	0.8/1.0/1.2	≥2MM	19
ALUMIG-300P	√		√	0.8/1.0/1.2	0.8/1.0/1.2	≥2MM	19
ALUMIG-350CP	√		√	0.8/1.0/1.2/1.6	0.8/1.0/1.2/1.6	≥2MM	23
ALUMIG-500CP	√		√	0.8/1.0/1.2/1.6	0.8/1.0/1.2/1.6	≥2MM	23

Designed for the welders with an eye for quality, TOPWELL MIG/MAG equipment keeps the technology on the inside, and simple, intuitive control and performance on the outside.

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PROMIG-200SYN/200SYN Pulse

Versatile and synergy tool for the portable welder

Quick Specs CE

- **Processes:**
  MIG/MAG, Flux-Cored,
  Pulse MIG,
  TIG, MMA(Stick)
- **Input Power:**
  200-240V/1-PH/50-60Hz
- **Rated Output at 40°C (104°F):**
  200A/24V/60%
- **Applications:**
  Metal Fabrication,
  Maintenance and Repair

TOP Features:

- ✓ **The True Multi-process** welder will performs MIG/MAG with solid or flux-cored wire, stick and TIG like it was born to run that process.
- ✓ **Synergy with JOB-LISTS** covers different metal materials, different wire diameters and different shield gases, easily welds mild steel, stainless steel and aluminum.
- ✓ **Built-in featured waveform** constantly monitors complex arc characteristics adapting to your technique to provide a smooth, stable arc and superior, repeatable welds.
- ✓ **Dynamic Control** controls the welding arc cone width, a slightly softer arc or a slightly harder arc depends on your preference and application.
- ✓ **Produces less spatter.**
- ✓ **True high deposition rate**.
- ✓ **2T or 4T selection.**
- ✓ **Spot welding function.**

TRUE MULTI-PROCESS

Many machines claim they are multi-process, but are little more than a MIG machine in disguise. PROMIG-200SYN/200SYN Pulse is a true multi-process welder, which means whether you are welding MIG/MAG with solid or Flux-Cored wire, MMA – even the most tricky electrodes – or Lift TIG, PROMIG-200SYN/200SYN Pulse will perform like it was born to run that process.

- Professional-grade MIG performance, including flux-cored
- Excellent MMA performance, including stainless steel
- Exceptional lift TIG performance down to 5A

TRUE MULTI-MATERIAL

Model	Mild Steel	Stainless Steel	Aluminum	Wire Dia (Steel)	Wire Dia (Aluminum)	Metal plate thinkness
PROMIG-200SYN	√			0.6/0.8/1.0		≥2MM
PROMIG-200SYN Pulse	√	√	√	0.6/0.8/1.0	0.8/1.0/1.2	≥2MM

True Synergy with JOB-LISTS

With thousands of welding jobs, we built the True Synergy with JOB-LISTS. It covers different metal materials, different wire diameters and different shield gases. After setting wire feeding amperage regarding to the wire feeding guide, the PROMIG-200SYN/200SYN Pulse will automatically match the best waveform to make your welding comfortable and excellent!

1.Select Job-list number

JOBs-list

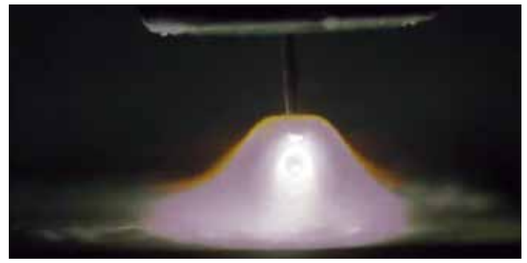
Material	Gas	Wire 0.6	0.8	0.9	1.0	1.2
		JOBs No.				
Fe	100%CO_2	101	102	103	104	/
	80%Ar 2%CO_2	201	202	203	204	/
S.S	98%Ar 2%CO_2	301	302	303	304	/
Al	100%Ar	/	402	403	404	405
Flux Cored	Self-shield	/	502	503	504	505

2.Set wire feeding amperage

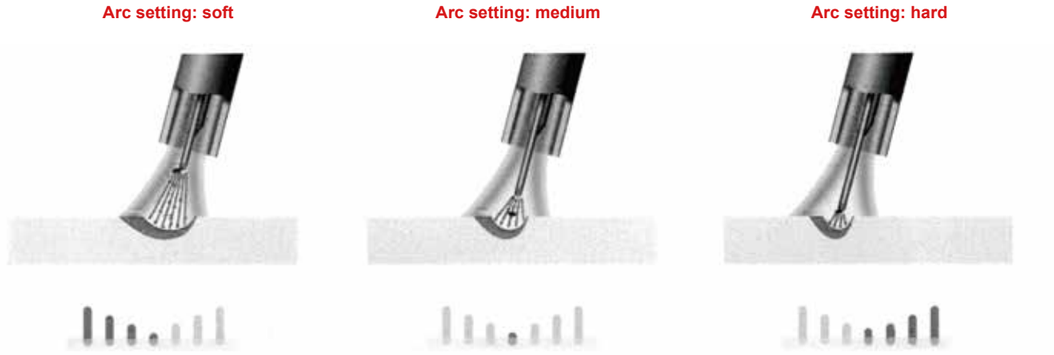
3.Start welding and PROMIG does the rest

Pulse MIG (Pulse version only)

- The pulsed MIG process works by forming one droplet of molten metal at the end of the electrode per pulse. Then, just the right amount of current is added to push that one droplet across the arc and in to the puddle. The transfer of these droplets occurs through the arc, one droplet per pulse.
- Reduced levels of heat induced distortion.
- Excellent weld bead appearance.



Dynamic control



Dynamic control with a push of a button

You know how it is from experience. Every transformer system has its own unique characteristics. One system produces a slightly softer arc, while the next generates a slightly harder arc. More importantly, every welder has his own preference in terms of what he considers to be the perfect arc: softer and longer, shorter and harder or somewhere in between. This calls for a level of distinction that a transformer systems simply cannot realize. Our system allows you to individually adjust the dynamics of the arc to suit the work and welding position at hand and will find the simplest and fastest arc setting that is most suitable in each case. The rest of the job is carried out by the intelligent arc control technology incorporated into the background to achieve a perfect weld seam every time.

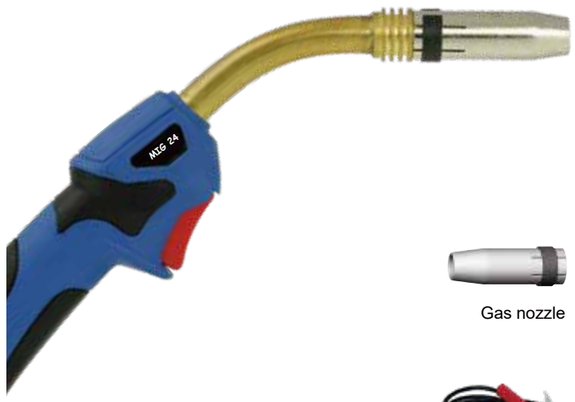
Technical Specifications

Item No	PROMIG-200SYN	PROMIG-200SYN Pulse
Rated Input Voltage	1PH ~ 230V ±15%	1PH ~ 230V ±15%
Max. Load Power Capacity	8.75KVA	8.75KVA
Rated Duty Cycle(40˚C) 60%	MIG: 200A/24V	MIG: 200A/24V
	MMA: 200A/28V	MMA: 200A/28V
	TIG: 200A/18V	TIG: 200A/18V
100%	MIG: 160A/22V	MIG: 160A/22V
	MMA: 160A/26.4V	MMA: 160A/26.4V
	TIG: 160A/16.4V	TIG: 160A/16.4V
Welding Current/Voltage Range	MIG: 10A/14.5V ~200A/24V	MIG: 10A/14.5V ~200A/24V
	MMA: 20A/20.8V~200A/28V	MMA: 20A/20.8V~200A/28V
	TIG: 5A/10.2V~200A/18V	TIG: 5A/10.2V~200A/18V
Open Circuit Voltage	70V~80V	70V~80V
Power Factor	0.8	0.8
Efficiency	80%	80%
Pre-Gas Time	Preset	Preset
Flow-Gas Time	Preset	Preset
Wire-feed Mechanism	2 Rollers	2 Rollers
Wire-feed Speed Range	2-18m/min	2-18m/min
Wire Spool Capacity	200mm (5kg)	200mm (5kg)
Filler Wires (mm) for Fe :	0.6~1.0 mm	0.6~1.0 mm
For Stainless steel:	/	0.6~1.0 mm
For Aluminum:	/	0.8~1.2 mm
Dimension	490x230x385mm	490x230x385mm
Weight	20KG	20KG

Accessories

Standard accessories

MIG-24



Technical data (EN 60 974-7):	
Rating:	250 A CO_2
	220 A mixed gas M21
	(DIN EN ISO 14175)
Duty cycle:	60 %
Wire size:	Φ 0.8 – 1.2 mm

Gas nozzle

Contact tip

Contact tip holder

Gas diffuser

Electrode holder with cable 2M
Earth clamp with cable 2M

Optional accessories

BINZEL MB EVO PRO 24

Technical data (EN 60 974-7):	
Rating:	250 A CO_2
	220 A mixed gas M21
	(DIN EN ISO 14175)
Duty cycle:	60 %
Wire size:	Φ 0.8 – 1.2 mm

Argon gas regular
or co_2 gas regular with heater

Spool gun:
QLBF-200/8M

TIG torch:TIG-26

Push-pull Troch:
QTLB-24KD/36KD

PROMIG-250SYN/250SYN Pulse

Welding excellent

Quick Specs CE

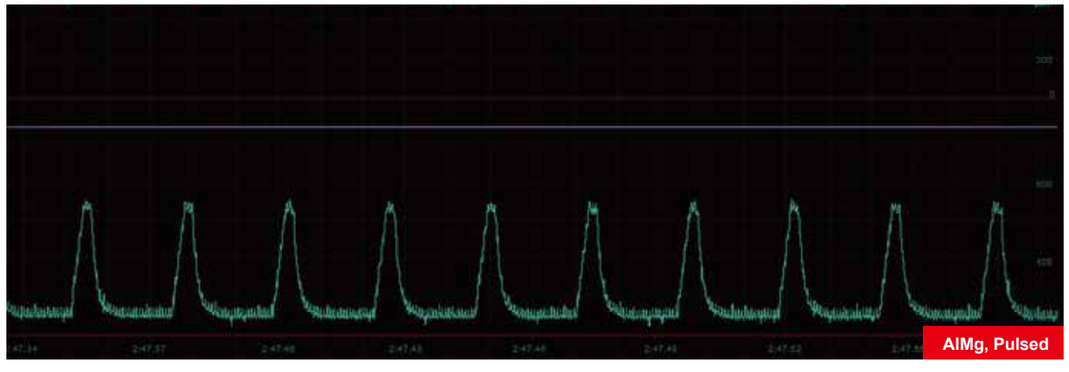
- **Processes:**
  MIG/MAG, Flux-Cored,
  Pulse MIG,
  TIG, MMA(Stick)
- **Input Power:**
  200-240V/1-PH/50-60Hz
- **Rated Output at 40℃ (104℉):**
  250A/26.5V/60%
- **Applications:**
  Metal Fabrication,
  Maintenance and Repair,
  Auto Body,
  Light Industrial,
  Workshop

TOP Features:

- ✓ **Full IGBT Modules Structure** makes it more reliable than ever and extremely promote the peak amperage up to 450Amps.
- ✓ **The True Multi-process** welder will performs MIG/MAG with solid or flux-cored wire, stick and TIG like it was born to run that process.
- ✓ **Synergy with JOB-LISTS** covers different metal materials, different wire diameters and different shield gases, easily welds mild steel, stainless steel and aluminum.
- ✓ **Built-in featured waveform** constantly monitors complex arc characteristics adapting to your technique to provide a smooth, stable arc and superior, repeatable welds.
- ✓ **Dynamic Control** controls the welding arc cone width, a slightly softer arc or a slightly harder arc depends on your preference and application.
- ✓ **Produces less spatter.**
- ✓ **True high deposition rate**.
- ✓ **2T or 4T selection.**
- ✓ **Spot welding function.**
- ✓ **Professional 4-rollers** wire feeding system.

True Pulse to Weld Excellent

Most people think pulse function is only used for welding aluminum and stainless steel. We built the PROMIG-250SYN PULSE not only using pulse for them, but also mild steel! The real spray arc transfer forms droplet of molten metal at the end of the electrode, then just the right amount of current is added to push that droplet across the arc and into the puddle. With practicing thousands of welding jobs, the pulse curve is improved for different materials and different situations. After selecting JOB-LISTS, the waveform control system constantly monitors complex arc characteristics adapting to your technique to provide a smooth, stable arc, superior, repeatable welds. Whatever mild steel, stainless steel and aluminum, the PROMIG-250SYN PULSE ensure you welding excellent and full of joy.



Full IGBT Modules Structure

PROMIG-250SYN/250SYN Pulse is a combination of modularity, ease of use and wide range of usage. Its peak amperage is up to 450Amps and pack huge duty cycle performance into compact lean dimensions and weight, increasing productivity and work site mobility.

True Multi-Process

Many machines claim they are multi-process, but are little more than a MIG machine in disguise. PROMIG-250SYN/250SYN Pluse is a true multi-process welder, which means whether you are welding MIG/MAG with solid or Flux-Cored wire, MMA – even the most tricky electrodes – or Lift TIG, PROMIG-250SYN/250SYN Pluse will perform like it was born to run that process.

- Professional-grade MIG performance, including flux-cored
- Excellent MMA performance, including stainless steel
- Exceptional lift TIG performance down to 5A

True Synergy with JOB-LISTS

With thousands of welding jobs, we built the True Synergy with JOB-LISTS. It covers different metal materials, different wire diameters and different shield gases. After setting wire feeding amperage regarding to the wire feeding guide, the PROMIG-250SYN/250SYN PULSE will automatically match the best waveform to make your welding comfortable and excellent!

1.Select Job-list number

JOBs-list

Material	Gas	Wire 0.6	0.8	0.9	1.0	1.2
		JOBs No.				
Fe	100%CO_2	101	102	103	104	/
	80%Ar 2%CO_2	201	202	203	204	/
S.S	98%Ar 2%CO_2	301	302	303	304	/
Al	100%Ar	/	402	403	404	405
Flux Cored	Self-shield	/	502	503	504	505

2.Set wire feeding amperage

3.Start welding and PROMIG does the rest

Professional 4-rollers drive systems

- Four-rollers drive systems deliver the electrode to the welding torch. It provides a stable wire speed and is popular for industrial applications.
- 4-Rollers wire feeder also provides continuous push force to the wire and ensure an accurate and positive wire feed speed, which is important for aluminum.

Dynamic control

Arc setting: soft

Dynamics

Arc setting: medium

Dynamics

Arc setting: hard

Dynamics

Dynamic control with a push of a button

You know how it is from experience. Every transformer system has its own unique characteristics. One system produces a slightly softer arc, while the next generates a slightly harder arc. More importantly, every welder has his own preference in terms of what he considers to be the perfect arc: softer and longer, shorter and harder or somewhere in between. This calls for a level of distinction that a transformer systems simply cannot realize. Our system allows you to individually adjust the dynamics of the arc to suit the work and welding position at hand and will find the simplest and fastest arc setting that is most suitable in each case. The rest of the job is carried out by the intelligent arc control technology incorporated into the background to achieve a perfect weld seam every time.

Technical Specifications

Item No	PROMIG-250SYN	PROMIG-250SYN PULSE
Rated Input Voltage	1PH ~ 230V ±15%/3PH ~ 400V ±15%	1PH ~ 230V ±15%/3PH ~ 400V ±15%
Max. Load Power Capacity	11.72KVA	11.72KVA
Rated Duty Cycle(40˚C) 60%	MIG: 250A/26.5V	MIG: 250A/26.5V
	MMA: 250A/30V	MMA: 250A/30V
	TIG: 250A/20V	TIG: 250A/20V
100%	MIG: 200A/24V	MIG: 200A/24V
	MMA: 200A/28V	MMA: 200A/28V
	TIG: 200A/18V	TIG: 200A/18V
Welding Current/Voltage Range	MIG: 10A/14.5V ~250A/26.5V	MIG: 10A/14.5V ~250A/26.5V
	MMA: 20A/20.8V~250A/30V	MMA: 20A/20.8V~250A/30V
	TIG: 5A/10.2V~250A/20V	TIG: 5A/10.2V~250A/20V
Open Circuit Voltage	70V~80V	70V~80V
Power Factor	0.8	0.8
Efficiency	80%	80%
Pre-Gas Time	Preset	Preset
Flow-Gas Time	Preset	Preset
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 (mm) for Fe :	0.8~1.2 mm	0.8~1.2 mm
For Stainless steel:	/	0.8~1.2 mm
For Aluminum:	/	0.8~1.2 mm
Dimension	770x250x650mm	770x250x650mm
Weight	32KG	32KG

Accessories

Standard accessories

MIG-24

Technical data (EN 60 974-7):	
Rating:	250 A CO_2
	220 A mixed gas M21
	(DIN EN ISO 14175)
Duty cycle:	60%
Wire size:	Φ 0.8–1.2 mm

Gas nozzle

Contact tip

Contact tip holder

Gas diffuser

Electrode holder with cable 2M

Earth clamp with cable 2M

Optional accessories

BINZEL MB EVO PRO 24

Technical data (EN 60 974-7):	
Rating:	250 A CO_2
	220 A mixed gas M21
	(DIN EN ISO 14175)
Duty cycle:	60%
Wire size:	Φ 0.8–1.2 mm

Argon gas regular
or co_2 gas regular with heater

Push-pull Troch:
QTLB-24KD/36KD

TIG torch:TIG-26

MIG-350HD/500HD/Pulse Version

Proven reliability, heavy duty and high deposition rate for industry

Quick Specs CE

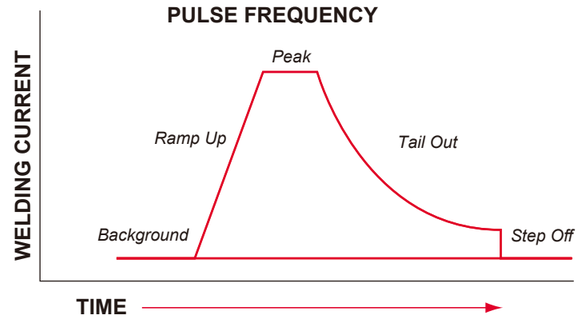
- **Processes:**
  MIG/MAG, Flux-Cored,
  Pulse MIG,
  MMA(Stick)
- **Input Power:**
  340-460V/3-PH/50-60Hz
- **Rated Output at 40°C (104°F):**
  MIG-350HD: 350A/31.5V/60%
  MIG-500HD: 500A/39V/60%
- **Applications:**
  Metal fabrication workshops
  Shipyards and offshore industry
  Chemical and process industry
  Steel structure workshops

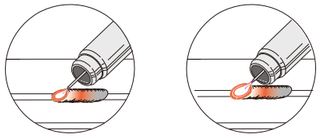
TOP Features:

- ✓ **Full IGBT Modules Structure** greatly improve its reliability and productivity.
- ✓ **Pulse MIG** – Cost savings, better quality, improved productivity and easier operation.
- ✓ **Synergic control** – Set weld procedures with one control, simple and easy to operate.
- ✓ **All position carbon steel welding with Pulse MIG process:** use the cheaper CO_2 gas but get a similar Ar/CO_2 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** controls the welding arc cone width, a slightly softer arc or a slightly harder arc depends on your preference and application.
- ✓ **Synergy** 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.
- ✓ High deposition rate.
- ✓ Arc Crater function eliminate the crater.
- ✓ 10 channels memory capacity.

Advanced Pulse MIG for welding stainless steel

It's a distinctive function for MIG-350HD Pulse and MIG-500HD Pulse. With thousands of stainless steel welding experiments, TOPWELL improve the pulse curve to make a better welding result. Low heat input and high deposition rate.

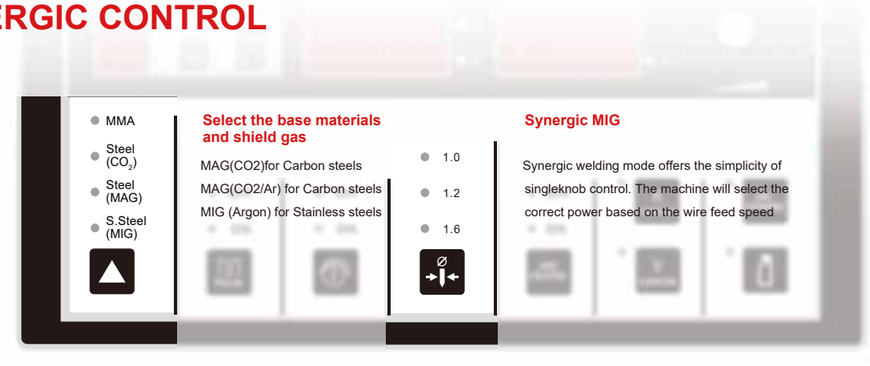




THE ADVANTAGE OF WAVE-FORM CONTROL SYSTEM

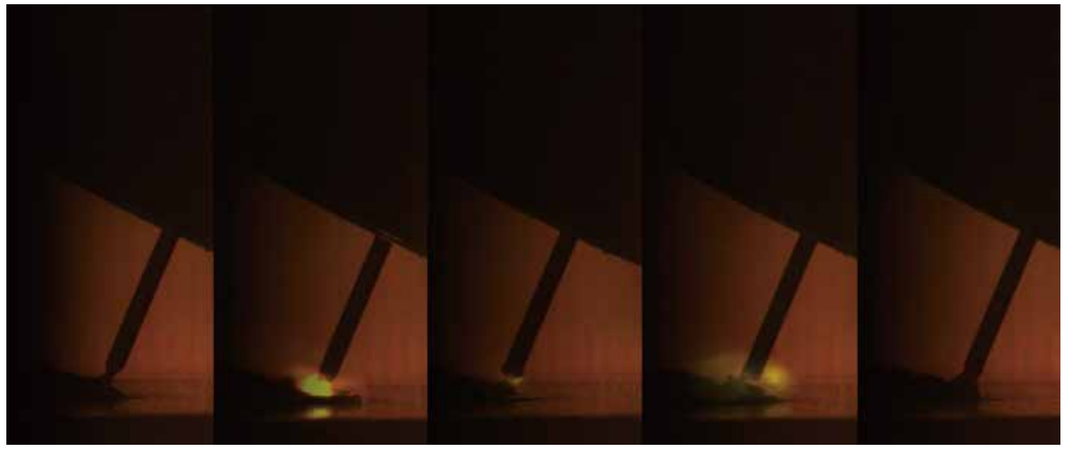
The latest technology of Waveform Control System, can perfectly control the output of welding power and get the precision Arc performance. The wire melting droplet transfer cycle is very clear, the welding beam is very clean and very few spatters during welding.

SYNERGIC CONTROL



CLASSICAL MIG/MAG

TIn classic mode, MIG / MAG welding is carried out in inert gas with automatic wire feed.With this mode, a high welding speed and excellent quality are offered without any extra costs in the processing of ferrous metals, as well as various steels.



Technical Specifications

Item No	MIG-350HD	MIG-500HD
Rated Input Voltage	3PH ~ 400V ±15%	3PH ~ 400V ±15%
Max. Load Power Capacity	15.26KVA	26.99KVA
Rated Duty Cycle(40) 60% ˚C	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	Preset	Preset
Flow-Gas Time	Preset	Preset
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:	0.8~1.6 mm	0.8~1.6 mm
Dimension (LxWxH)	960x420x1400mm	960x420x1400mm
Weight (KG)	85KG	85KG

Water-cooling Unit: WC-150	
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

Accessories

Standard accessories

MIG-501D

Technical data (EN 60 974-7):	
Rating:	550A /575A CO_2
Duty cycle 60%	500A/525A mixed gas
	M21 (DIN EN ISO 14175)
Duty cycle:	100%
Wire Size	1.0 –1.6mm

Gas nozzle

Contact tip

Contact tip holder

Gas diffuser

Earth clamp

Optional accessories

BINZEL MB EVO PRO 501D

Technical data (EN 60 974-7):	
Rating:	550A /575A CO_2
Duty cycle 60%	500A/525A mixed gas
	M21 (DIN EN ISO 14175)
Duty cycle:	100%
Wire Size	1.0 –1.6mm

Argon gas regular
or co_2 gas regular with heater

ALUMIG-250P/300P

Synergy, Pulse and Double Pulse MIG

Quick Specs CE

- **Processes:**
  MIG/MAG, Flux-Cored,
  Pulse MIG,
  Double Pulse MIG,
  MMA(Stick)
- **Input Power:**
  ALUMIG-250P:
  200-240V/1-PH/50-60Hz
  ALUMIG-300P:
  340-460V/3-PH/50-60Hz
- **Rated Output at 40℃ (104℉):**
  ALUMIG-250P: 250A/26.5V/60%
  ALUMIG-300P: 300A/29V/60%
- **Applications:**
  Metal Fabrication,
  Maintenance and Repair,
  Auto Body,
  Light Industrial

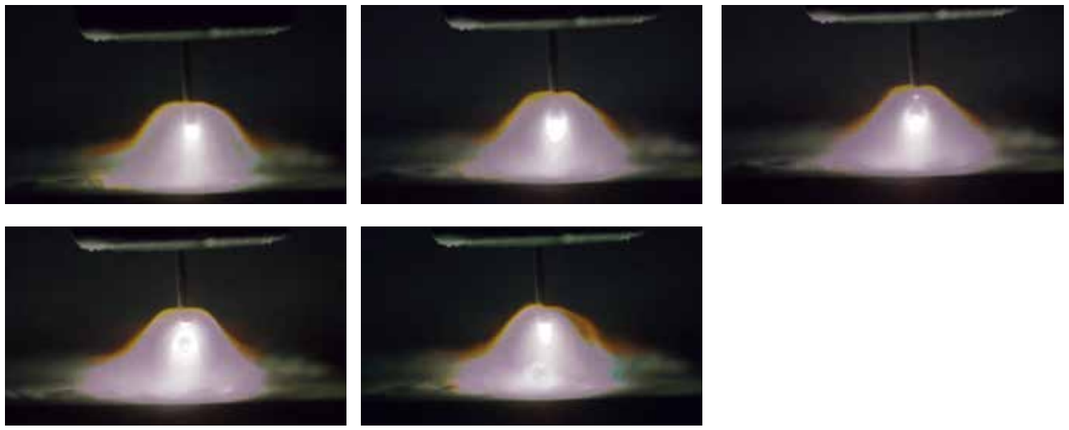
TOP Features:

- **Multi-Process capable** – Welds MIG, flux-cored, stick, pulsed MIG, and advanced process of Pulse-On-Pulse.
- **Pulse MIG** – Cost savings, better quality, improved productivity and easier operation.
- **Aluminum Pulse Process** – Welds 4XXX (AlSi wires) and 5XXX (AlMg wires) series aluminum for superior quality welding.
- **Double Pulse** – Delivers a stacked dime appearance when welding aluminum.
- **Dynamic control** – Set arc control to crisp or soft depending on your preference and application.
- **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.
- **Special Trigger Hold (S4T)** allows to hold the preset Initial Current by user until get a successful Arc Start on Aluminumplate.
- **Featured Wave-form control system:** Maintains a stable, smooth arc for short arc welding on steel. Improved penetrationon thicker aluminum sections.
- **Burn Back function.**
- **Fast, precise, clean arc ignition and arc ending.**
- **10 channels memory capacity.**

Synergy MIG

The synergic operation of the machine makes it easy to use, even for the beginning welder. Simply set wire type and diameter, then choose a wire speed. Now you're off to weld! As wire speed increases/decreases, the arc voltage also increases/decreases to maintain a constant welding arc.

Pulse MIG



The Pulsed MIG process works by forming one droplet of molten metal at the end of the electrode per pulse. Then, just the right amount of current is added to push that one droplet across the arc and into the puddle. The transfer of these droplets occurs through the arc, one droplet per pulse.

Advantage:

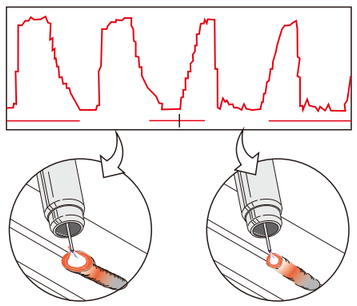
- Absent or very low levels of spatter.
- More resistant to lack of fusion defects than other modes of GMAW metal transfer.
- Excellent weld bead appearance.
- Reduced levels of heat induced distortion.
- Ability to weld out-of-position.
- Lower hydrogen deposit.
- Reduces the tendency for arc blow.
- Lends itself to robotic and hard automation applications.

Double Pulse MIG

Using Waveform Control Technology, the welding machine alternates between high and low energy pulses. This combination of high and low pulses produces the "rippled" bead appearance. The high energy pulses provide a hotter arc (longer arc duration), which improves cleaning action at the base material. The low energy pulses allow the weld puddle to cool, which controls the heat input for good penetration.

Advantage:

- Minimal distortion, even when gap conditions and wire placement vary.
- Outstanding control of arc characteristics, making it easier to produce excellent welds.
- Rippled bead appearance requires no weaving to produce a uniform bead.
- Controls the arc length and heat input together for excellent penetration profile.
- Controls the arc heat, making it ideal for welding thinner materials.



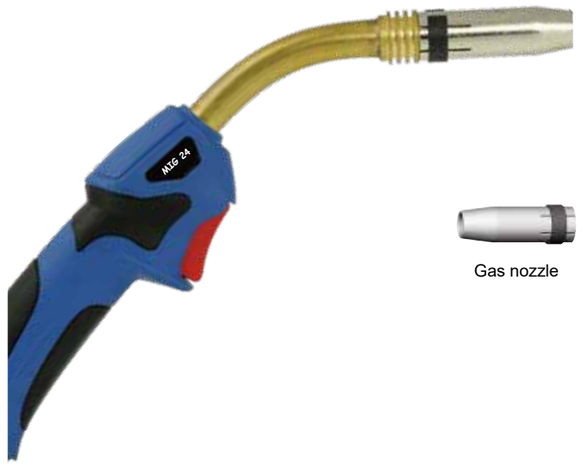
Technical Specifications

Item No	ALUMIG-250P	ALUMIG-300P
Rated Input Voltage	1PH ~ 230V ±15%	3PH ~ 400V ±15%
Max. Load Power Capacity	10.35KVA	12.04KVA
Rated Duty Cycle(40℃) 60%	MIG: 250A/26.5V	MIG: 300A/29V
	MMA: 250A/28V	MMA: 250A/28V
100%	MIG: 200A/24V	MIG: 250A/26.5V
	MMA: 200A/28V	MMA: 200A/30V
Welding Current/Voltage Range	MIG: 10A/14.5V~250A/26.5V	MIG: 10A/14.5V~300A/29V
	MMA:10A/20.4V~250A/30V	MMA:10A/20.4V~250A/30V
Open Circuit Voltage	55V	55V
Power Factor	0.8	0.85
Efficiency	80%	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:	0.6~1.2 mm	0.6~1.2mm
FLUX CORED:	0.9~1.2 mm	0.9~1.2 mm
Al:	0.8~1.2 mm	0.8~1.2 mm
Dimension	770x250x650mm	770x250x650mm
Weight	32KG	32KG

Accessories

Standard accessories

MIG-24



Technical data (EN 60 974-7):	
Rating:	250 A CO_2
	220 A mixed gas M21
	(DIN EN ISO 14175)
Duty cycle:	60%
Wire size:	Φ 0.8–1.2 mm

Gas nozzle

Contact tip

Contact tip holder

Gas diffuser

Electrode holder with cable 2M
Earth clamp with cable 2M

Optional accessories

BINZEL MB EVO PRO 24

Technical data (EN 60 974-7):	
Rating:	250 A CO_2
	220 A mixed gas M21
	(DIN EN ISO 14175)
Duty cycle:	60%
Wire size:	Φ 0.8–1.2 mm

Argon gas regular
or co_2 gas regular with heater

Push-pull Troch:
QTLB-24KD/36KD

ALUMIG-350CP/500CP

Top welding performance for industrial MIG/MAG welding

Quick Specs CE

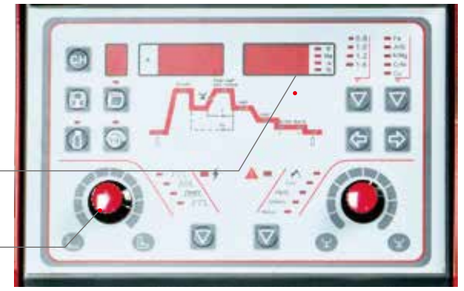
- **Processes:**
  MIG/MAG, Flux-Cored,
  Pulse MIG,
  Double Pulse MIG,
  MMA(Stick)
- **Input Power:**
  ALUMIG-350CP:
  340-460V/3-PH/50-60Hz
  ALUMIG-500CP:
  340-460V/3-PH/50-60Hz
- **Rated Output at 40℃ (104℉):**
  ALUMIG-350CP: 350A/31.5V/60%
  ALUMIG-500CP: 500A/39V/60%
- **Applications:**
  Metal fabrication workshops
  Shipyards and offshore industry
  Chemical and process industry
  Steel structure workshops

TOP Features:

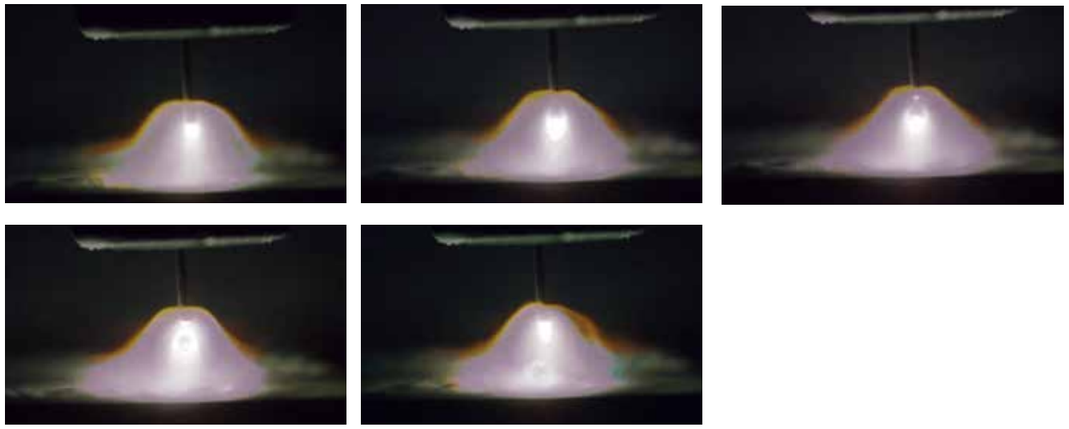
- ✓ **Full IGBT Modules Structure** greatly improve its reliability and productivity.
- ✓ **Multi-Process capable** – Welds MIG, flux-cored, stick, pulsed MIG, and advanced process of Pulse-On-Pulse.
- ✓ **Pulse MIG** – Cost savings, better quality, improved productivity and easier operation.
- ✓ **Aluminum Pulse Process** – Welds 4XXX (AlSi wires) and 5XXX (AlMg wires) series aluminum for superior quality welding.
- ✓ **Double Pulse** – Delivers a stacked dime appearance when welding aluminum.
- ✓ **Dynamic control** – Set arc control to crisp or soft depending on your preference and application.
- ✓ **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.
- ✓ **Special Trigger Hold (S4T)** allows to hold the preset Initial Current by user until get a successful Arc Start on Aluminumplate.
- ✓ **Featured Wave-form control system:** Maintains a stable, smooth arc for short arc welding on steel. Improved penetrationon thicker aluminum sections.
- ✓ **Burn Back function.**
- ✓ **Fast, precise, clean arc ignition and arc ending.**
- ✓ **10 channels memory capacity.**

Synergy MIG

The synergic operation of the machine makes it easy to use, even for the beginning welder. Simply set wire type and diameter, then choose a wire speed. Now you're off to weld! As wire speed increases/decreases, the arc voltage also increases/decreases to maintain a constant welding arc.



Pulse MIG



The Pulsed MIG process works by forming one droplet of molten metal at the end of the electrode per pulse. Then, just the right amount of current is added to push that one droplet across the arc and into the puddle. The transfer of these droplets occurs through the arc, one droplet per pulse.

Advantage:

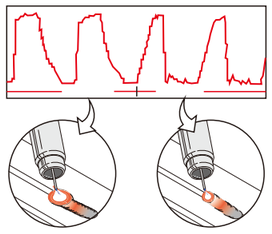
- Absent or very low levels of spatter.
- More resistant to lack of fusion defects than other modes of GMAW metal transfer.
- Excellent weld bead appearance.
- Reduced levels of heat induced distortion.
- Ability to weld out-of-position.
- Lower hydrogen deposit.
- Reduces the tendency for arc blow.
- Lends itself to robotic and hard automation applications.

Double Pulse MIG

Using Waveform Control Technology, the welding machine alternates between high and low energy pulses. This combination of high and low pulses produces the "rippled" bead appearance. The high energy pulses provide a hotter arc (longer arc duration), which improves cleaning action at the base material. The low energy pulses allow the weld puddle to cool, which controls the heat input for good penetration.

Advantage:

- Minimal distortion, even when gap conditions and wire placement vary.
- Outstanding control of arc characteristics, making it easier to produce excellent welds.
- Rippled bead appearance requires no weaving to produce a uniform bead.
- Controls the arc length and heat input together for excellent penetration profile.
- Controls the arc heat, making it ideal for welding thinner materials.



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	85KG	85KG

Water-cooling Unit:WC-150	
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

Accessories

Standard accessories

MIG-501D

Technical data (EN 60 974-7):	
Rating:	550A /575A CO_2
Duty cycle 60%	500A/525A mixed gas
	M21 (DIN EN ISO 14175)
Duty cycle:	100%
Wire Size	1.0 –1.6mm

Gas nozzle

Contact tip

Contact tip holder

Gas diffuser

Earth clamp

Optional accessories

BINZEL MB EVO PRO 501D

Technical data (EN 60 974-7):	
Rating:	550A /575A CO_2
Duty cycle 60%	500A/525A mixed gas
	M21 (DIN EN ISO 14175)
Duty cycle:	100%
Wire Size	1.0 –1.6mm

Argon gas regular
or co_2 gas regular with heater

TIG (GTAW)

	Model	Mild Steel	Stainless Steel	Aluminum	Metal plate thinkness	Page
AC/DC TIG	ALUTIG-200HD	√	√	√	≥2MM	29
	ALUTIG-250HD	√	√	√	≥2MM	29
	MASTERTIG-250AC	√	√	√	≥2MM	35
	MASTERTIG-300AC	√	√	√	≥2MM	35
	MASTERTIG-300CT	√	√	√	≥2MM	41
	MASTERTIG-400CT	√	√	√	≥2MM	41
	MASTERTIG-500CT	√	√	√	≥2MM	41
DC TIG	PROTIG-200Di	√	√		≥2MM	47
	PROTIG-250Di	√	√		≥2MM	47
	PROTIG-300CT	√	√		≥2MM	51
	PROTIG-400CT	√	√		≥2MM	51
	PROTIG-500CT	√	√		≥2MM	51

Precise ignition and smooth, stable current flow are the baseline for every model in our TIG welding equipment range. Optional remote control units can be selected to suit either workshop or site conditions, allowing welders to concentrate on quality..

ALUTIG-200HD/250HD

All TIG functions in one package

Quick Specs CE

- **Processes:**
  DC TIG,
  AC TIG,
  MIX TIG,
  MMA(Stick)
- **Input Power:**
  200-240V/1-PH/50-60Hz
- **Rated Output at 40℃ (104℉):**
  200HD: 200A at 18V @60% Duty Cycle
  250HD: 250A at 20V @60% Duty Cycle
- **Applications:**
  Metal Fabrication
  Maintenance and Repair
  Auto Body
  Light Industrial

TOP Features:

- ✓ **DC TIG Features** With the Pulse function, it can reduce heat input and increase control of the weld puddle, penetration and distortion.
- ✓ **AC TIG Features**

4 AC Waveforms

Standard Square Wave
fast freezing puddle, deep penetration and fast travel speeds.

Sine Wave
For customers that like a traditional arc. Quiet with good wetting.

Soft Square Wave
For a soft buttery arc with maximum puddle control and good wetting action.

Triangle Wave
Reduces the heat input and is good on thin aluminum. Fast travel speeds.

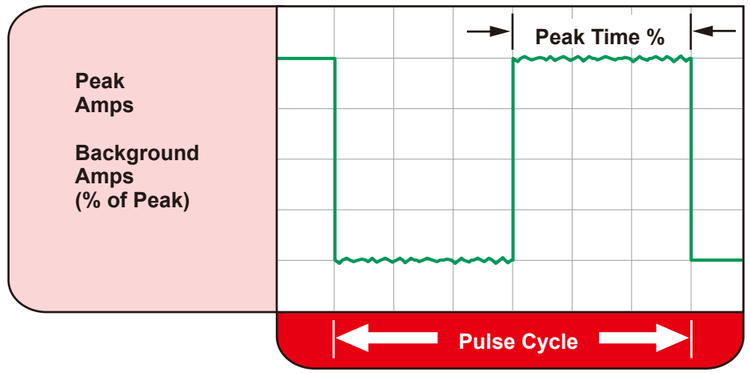
3 AC Waveshape Controls

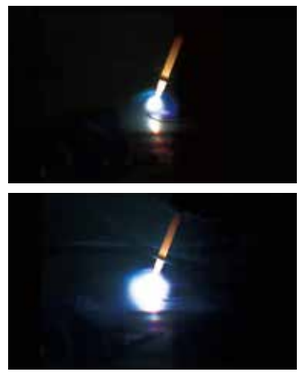
- **Balance control** provides adjustable oxide removal which is essential for creating the highest quality aluminum welds.
- **Frequency controls** the width of the arc cone and can improve directional control of the arc.
- **Amplitude controls** the heat input to the work piece and the electrode.

- ✓ **MIX TIG Features** AC current and DC current in one duty cycle, easily get an excellent arc concentration and reduce heat input.
- ✓ HF start and Lift-Arc start are both available
- ✓ DC+/DC-: Improved TIG starting
- ✓ Pre-flow and post-flow adjustment
- ✓ 2T and 4T selection
- ✓ Capable to remote control
- ✓ 10 channels memory capacity

Pulse TIG

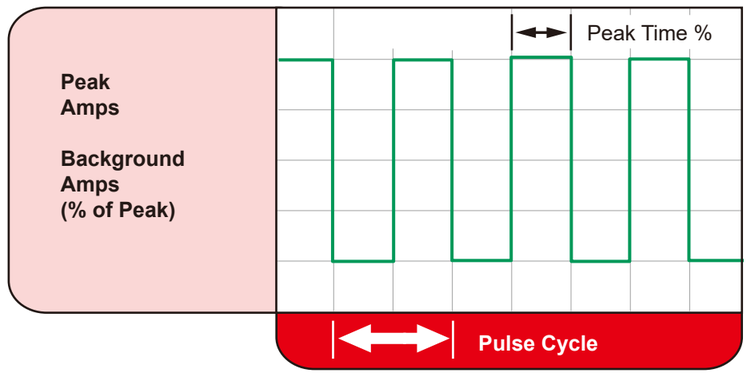
◆ Conventional Pulsed TIG

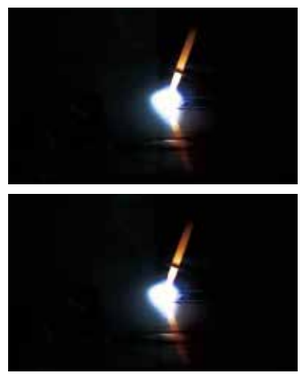




Typically from 0.2 to 10 PPS. Provides a heating and cooling effect on the weld puddle and can reduce distortion by lowering the average amperage. This heating and cooling effect also produces a distinct ripple pattern in the weld bead. The relationship between pulse frequency and travel speed determines the distance between the ripples. Slow pulsing can also be coordinated with filler metal addition and can increase overall control of the weld puddle.

◆ High Speed Pulsed TIG





In excess of 40 PPS, Pulsed TIG becomes more audible than visible—causing increased puddle agitation for a better as-welded microstructure. Pulsing the weld current at high speeds — between a high Peak and a low Background amperage — can also constrict and focus the arc. This results in maximum arc stability, increased penetration and increased travel speeds.

AC Waveforms

Standard Square Wave

The Standard Square Wave offers fast transitions between EN and EP for a responsive, dynamic, and focused arc with better directional control. It forms a fast-freezing puddle with deep penetration and fast travel speeds.

Soft Square Wave

The Soft Square Wave provides a smooth, soft, "buttery" arc with a fluid puddle and good wetting action. The puddle is more fluid than with standard square wave and more controllable than with sine wave.

Sine Wave

The Sine Wave a soft arc with the feel of a conventional power source. It provides good wetting action and actually sounds quieter than other waves. Its fast transition through the zero amperage point also eliminates the need for continuous high frequency.

Triangle Wave

The Triangular Wave peak amperage while reducing overall heat input into the weld. This leads to quick puddle formation, low weld distortion, and fast travel speeds. It is especially good for welding thin aluminum.

MIX TIG Control

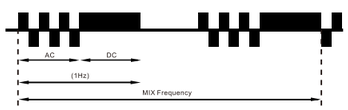
Features of MIX TIG:

The AC current can get a very good clearance, and DC current can get a deeper penetration. Use the MIX TIG we can get an excellent Arc Concentration, can be carried out the excellent welding performance from thin to thick plate.

1) Nice weld appearance, deep penetration.
2) Excellent Arc Concentration.
3) Substantially reduce the electrode consumption.

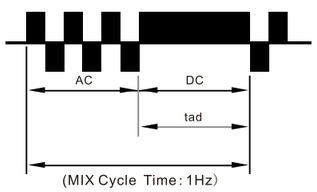
MIX TIG Frequency (Hz):

the cycle time of MIX
TIG in 1 second. Adjustable range: 1-5Hz.



MIX TIG Balance (DC) %:

DC Balance (%) = (tad/Tmix) x 100

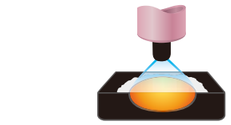


AC Waveshape Controls

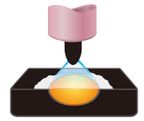
AC Frequency control

Controls the width of the arc cone. Increasing the AC Frequency provides a more focused arc with increased directional control.

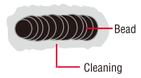
Note: Decreasing the AC Frequency softens the arc and broadens the weld puddle for a wider weld bead.



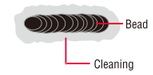
Wider bead, good penetration ideal for buildup work



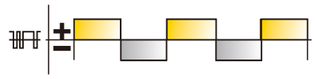
Narrower bead for fillet welds and automated applications

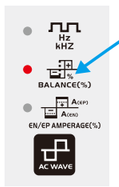


Wider bead and cleaning acting



Narrower bead and cleaning acting

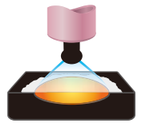




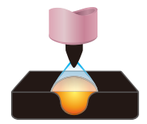
AC Balance Control

Controls arc cleaning action. Adjusting the % EN of the AC wave controls the width of the etching zone surrounding the weld.

Note: Set the AC Balance control for adequate arc cleaning action at the sides and in front of the weld puddle. AC Balance should be fine tuned according to how heavy or thick the oxides are.



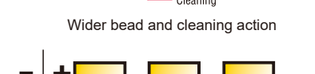
Wider bead, good penetration ideal for buildup work

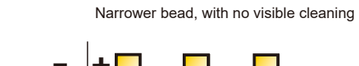


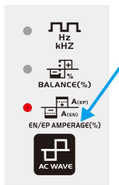
Narrower bead, good penetration ideal for buildup work

Wider bead and cleaning action

Narrower bead, with no visible cleaning





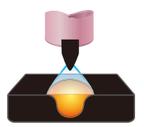


Amplitude Control

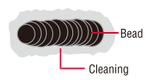
Adjusts the ratio of EN to EP amperage to precisely control heat input to the work and the electrode.

EN amperage controls the level of penetration, while EP amperage dramatically effects the arc cleaning action along with the AC Balance control.

More current in EP than EN: Shallower penetration



More current in EN than EP: Deeper penetration and faster travel speeds



Wider bead and cleaning action

Narrower bead, with no visible cleaning

Technical Specifications

Item No			ALUTIG-200HD	ALUTIG-250HD
Rated Input Voltage			1PH ~ 230V ±15%	1PH ~ 230V ±15%
Max. Load Power Capacity			TIG: 5.63KVA	TIG: 7.81KVA
			MMA: 6.60KVA	MMA: 8.75KVA
Rated Duty Cycle(40℃) 60%			TIG: 200A/18V	TIG: 250A/20V
			MMA: 160A/26.4V	MMA: 200A/28V
100%			TIG: 160A/16.4V	TIG: 200A/18V
			MMA: 130A/25.2V	MMA: 160A/26.4V
Welding Current/Voltage Range			TIG: 5A/10.2V~200A/18V	TIG: 5A/10.2V~250A/20V
			MMA: 20A/20.8V~160A/26.4V	MMA: 20A/20.8V~200A/28V
Open Circuit Voltage			70V~80V	70V~80V
Power Factor			0.8	0.8
Efficiency			80%	80%
TIG	Pulse	Peak Current	5A~250A	5A~250A
		Pulse Frequency	0.2Hz~200Hz	0.2Hz~200Hz
		Pulse Width (Ratio)	1~100%	1~100%
	AC TIG	AC Frequency Range	20Hz~250Hz	20Hz~250Hz
		AC Clean Width (AC Balance)	+40~-40	+40~-40
		AC Clean Ratio (AC Bias) %	+30~-50	+30~-50
	MIX TIG	MIX Frequency	1Hz~5Hz	1Hz~5Hz
		DC Balance (%)	20~80	20~80
	Arc-starting Current		5A~200A	5A~250A
	Crater-filling Current		5A~200A	5A~250A
	Current Up-slope Time		0.1S~15S	0.1S~15S
	Current Down-slop Time		0.1S~15S	0.1S~15S
	Pre-Gas Time		0.1S~15S	0.1S~15S
	Flow-Gas Time		0.1S~15S	0.1S~15S
	Spot Arc Time		0.1S-10S	0.1S-10S
MMA	Arc Force		10A~160A	10A~200A
	Hot Start Time		0.1~3S	0.1~3S
	Hot Start Current		10A~160A	10A~200A
Dimension (LxWxH)			540x240x480mm	540x240x480mm
Weight (KG)			23KG	23KG

Water-cooling Unit: WC-100 (optional)	
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

Accessories

Standard accessories

TIG-26

Technical data (EN 60 974-7):	
Type of cooling:	Gas cooled
Rating:	180A DC
	150A AC
Duty cycle:	35%
Tungsten electrodes:	Ø 0.5–4 mm

Consumables:

Back cap

Collet

Insulating ring/Adaptor

Collet body

Gas nozzle, ceramic

Electrode holder with cable 2M
Earth clamp with cable 2M

Optional accessories

BINZEL ABITIG ® GRIP 26

Technical data (EN 60 974-7):	
Type of cooling:	air cooled
Rating:	180A DC
	130A AC
Duty cycle:	35%
Tungsten electrodes:	Ø 0.5–4.0 mm

Argon gas regular

Trolley:WT-100

Water-cooling unit: WC-100

Foot Pedal

MASTERTIG-250AC/300AC

The total solution of TIG welding

Quick Specs CE

- **Processes:**
  DC TIG,
  AC TIG,
  MIX TIG,
  MMA(Stick)
- **Input Power:**
  250AC: 200-240V/1-PH/50-60Hz
  300AC: 340-460V/3-PH/50-60Hz
- **Rated Output at 40℃ (104℉):**
  MASTERTIG-250AC:
  250A/20V/60%
  MASTERTIG-300AC
  300A/22V/60%
- **Applications:**
  Metal Fabrication
  Maintenance and Repair
  Auto Body
  Light Industrial

TOP Features:

- ✓ **DC TIG Features** With the Pulse function, it can reduce heat input and increase control of the weld puddle, penetration and distortion.
- ✓ **AC TIG Features**

  2 AC Waveforms

  Standard Square Wave
  fast freezing puddle, deep penetration and fast travel speeds.

  Sine Wave
  For customers that like a traditional arc. Quiet with good wetting.

  3 AC Waveshape Controls

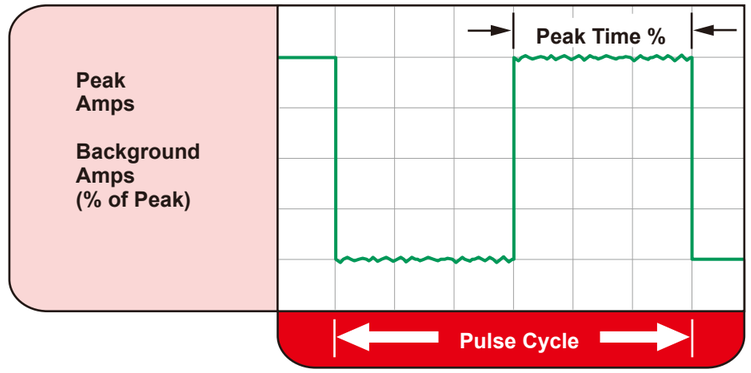
  • **Balance control** provides adjustable oxide removal which is essential for creating the highest quality aluminum welds.

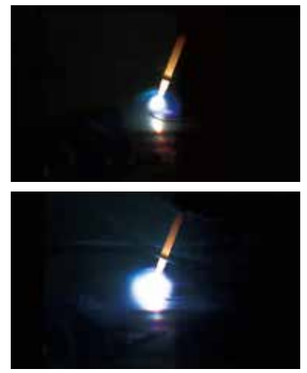
  • **Frequency controls** the width of the arc cone and can improve directional control of the arc.

  • **Amplitude controls** the heat input to the work piece and the electrode.
- ✓ **MIX TIG Features** AC current and DC current in one duty cycle, easily get an excellent arc concentration and reduce heat input.
- ✓ DC+/DC-: Improved TIG starting
- ✓ Pre-flow and post-flow adjustment
- ✓ 2T and 4T selection
- ✓ Capable to remote control
- ✓ 10 channels memory capacity

Pulse TIG

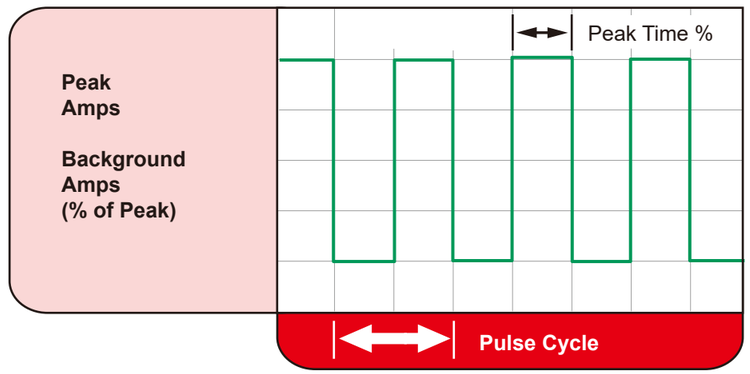
◆ Conventional Pulsed TIG

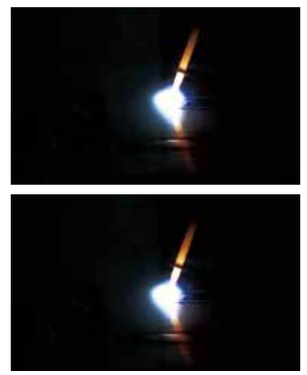




Typically from 0.2 to 10 PPS. Provides a heating and cooling effect on the weld puddle and can reduce distortion by lowering the average amperage. This heating and cooling effect also produces a distinct ripple pattern in the weld bead. The relationship between pulse frequency and travel speed determines the distance between the ripples. Slow pulsing can also be coordinated with filler metal addition and can increase overall control of the weld puddle.

◆ High Speed Pulsed TIG





In excess of 40 PPS, Pulsed TIG becomes more audible than visible—causing increased puddle agitation for a better as-welded microstructure. Pulsing the weld current at high speeds — between a high Peak and a low Background amperage — can also constrict and focus the arc. This results in maximum arc stability, increased penetration and increased travel speeds.

AC Waveforms

Standard Square Wave

The Standard Square Wave offers fast transitions between EN and EP for a responsive, dynamic, and focused arc with better directional control. It forms a fast-freezing puddle with deep penetration and fast travel speeds.

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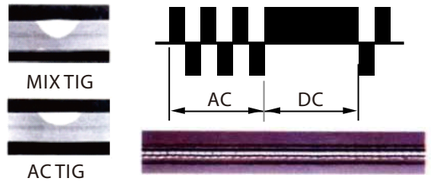
The Sine Wave a soft arc with the feel of a conventional power source. It provides good wetting action and actually sounds quieter than other waves. Its fast transition through the zero amperage point also eliminates the need for continuous high frequency.

MIX TIG Control

Features of MIX TIG:

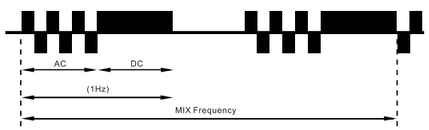
The AC current can get a very good clearance, and DC current can get a deeper penetration. Use the MIX TIG we can get an excellent Arc Concentration, can be carried out the excellent welding performance from thin to thick plate.

1) Nice weld appearance, deep penetration.
2) Excellent Arc Concentration.
3) Substantially reduce the electrode consumption.



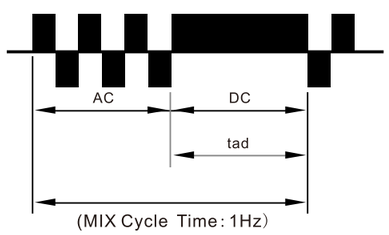
MIX TIG Frequency (Hz):

the cycle time of MIX
TIG in 1 second. Adjustable range: 1-5Hz.

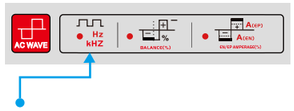


MIX TIG Balance (DC) %:

DC Balance (%) = (tad/Tmix) x 100



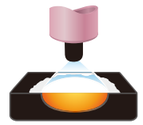
AC Waveshape Controls



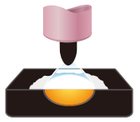
AC Frequency control

Controls the width of the arc cone. Increasing the AC Frequency provides a more focused arc with increased directional control.

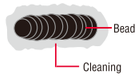
Note: Decreasing the AC Frequency softens the arc and broadens the weld puddle for a wider weld bead.



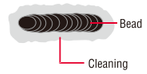
Wider bead, good penetration ideal for buildup work



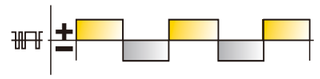
Narrower bead for fillet welds and automated applications

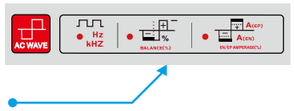


Wider bead and cleaning acting



Narrower bead and cleaning acting

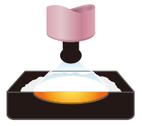




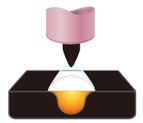
AC Balance Control

Controls arc cleaning action. Adjusting the % EN of the AC wave controls the width of the etching zone surrounding the weld.

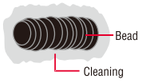
Note: Set the AC Balance control for adequate arc
cleaning action at the sides and in front of the weld puddle. AC Balance should be fine tuned according to
how heavy or thick the oxides are.



Wider bead, good penetration ideal for buildup work

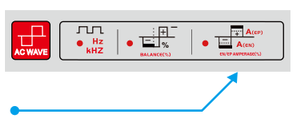


Narrower bead, good penetration ideal for buildup work



Wider bead and cleaning action

Narrower bead, with no visible cleaning

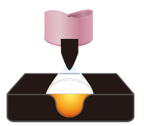


Amplitude Control

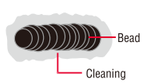
Adjusts the ratio of EN to EP amperage to precisely control heat input to the work and the electrode.

EN amperage controls the level of penetration, while EP amperage dramatically effects the arc cleaning action along with the AC Balance control.

More current in EP than EN: Shallower penetration

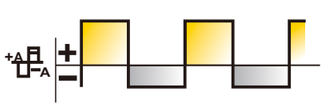


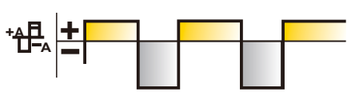
More current in EN than EP: Deeper penetration and faster travel speeds



Wider bead and cleaning action

Narrower bead, with no visible cleaning





Technical Specifications

Item No			MASTER TIG-250AC	MASTER TIG-300AC
Rated Input Voltage			1PH ~ 230V ±15%	3PH ~ 400V ±15%
Max. Load Power Capacity			TIG: 7.81KVA	TIG: 9.13KVA
			MMA: 8.75KVA	MMA: 10.38KVA
Rated Duty Cycle(40℃) 60%			TIG: 250A/20V	TIG: 300A/22V
			MMA: 200A/28V	MMA: 250A/20V
100%			TIG: 200A/18V	TIG: 250A/20V
			MMA: 160A/26.4V	MMA: 200A/28V
Welding Current/Voltage Range			TIG: 5A/10.2V~250A/20V	TIG: 5A/10.2V~300A/22V
			MMA: 20A/20.8V~200A/28V	MMA: 20A/20.8V~250A/30V
Open Circuit Voltage			70V~80V	70V~80V
Power Factor			0.8	0.85
Efficiency			80%	85%
TIG	Pulse	Peak Current	5A~250A	5A~250A
		Pulse Frequency	0.2Hz~200Hz	0.2Hz~200Hz
		Pulse Width (Ratio)	1~100%	1~100%
	AC TIG	AC Frequency Range	20Hz~250Hz	20Hz~250Hz
		AC Clean Width (AC Balance)	+40~-40	+40~-40
		AC Clean Ratio (AC Bias) %	+30~-50	+30~-50
	MIX TIG	MIX Frequency	1Hz~5Hz	1Hz~5Hz
		DC Balance (%)	20~80	20~80
	Arc-starting Current		5A~250A	5A~300A
	Crater-filling Current		5A~250A	5A~300A
	Current Up-slope Time		0.1S~15S	0.1S~15S
	Current Down-slop Time		0.1S~15S	0.1S~15S
	Pre-Gas Time		0.1S~15S	0.1S~15S
	Flow-Gas Time		0.1S~15S	0.1S~15S
	Spot Arc Time		0.1S-10S	0.1S-10S
MMA	Arc Force		10A~200A	10A~160A
	Hot Start Time		0.1~3S	0.1~3S
	Hot Start Current		10A~200A	10A~160A
Dimension (LxWxH)			540x240x480mm	540x240x480mm
Weight (KG)			23KG	23KG

Water-cooling Unit: WC-100 (optional)	
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

Accessories

Standard accessories

TIG-26

Technical data (EN 60 974-7):	
Type of cooling:	Gas cooled
Rating:	180A DC
	150A AC
Duty cycle:	60%
Tungsten electrodes:	Ø 0.5–4 mm

Consumables:

Back cap

Collet

Insulating ring/Adaptor

Collet body

Gas nozzle, ceramic

Electrode holder with cable 2M
Earth clamp with cable 2M

Optional accessories

BINZEL ABITIG ® GRIP 26

Technical data (EN 60 974-7):	
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Rating:	180A DC
	130A AC
Duty cycle:	35%
Tungsten electrodes:	Ø 0.5–4.0 mm

Argon gas regular

Trolley:WT-100

Water-cooling unit: WC-100

Foot Pedal

MasterTig-300CT/400CT/500CT

The master of TIG welding

Quick Specs CE

- **Processes:**
  DC TIG,
  AC TIG,
  MIX TIG,
  MMA(Stick)
- **Input Power:**
  340-460V/3-PH/50-60Hz
- **Rated Output at 40℃ (104℉):**
  300CT: 300A at 22V @60% Duty Cycle
  400CT: 400A at 26V @60% Duty Cycle
  500CT: 500A at 30V @60% Duty Cycle
- **Applications:**
  Metal fabrication workshops
  Shipyards and offshore industry
  Chemical and process industry
  Steel structure workshops

TOP Features:

- ✓ **DC TIG Features** With the Pulse function, it can reduce heat input and increase control of the weld puddle, penetration and distortion.
- ✓ **AC TIG Features**

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  Standard Square Wave
  fast freezing puddle, deep penetration and fast travel speeds.

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- ✓ **MIX TIG Features** AC current and DC current in one duty cycle, easily get an excellent arc concentration and reduce heat input.
- ✓ HF start and Lift-Arc start are both available
- ✓ DC+/DC-: Improved TIG starting
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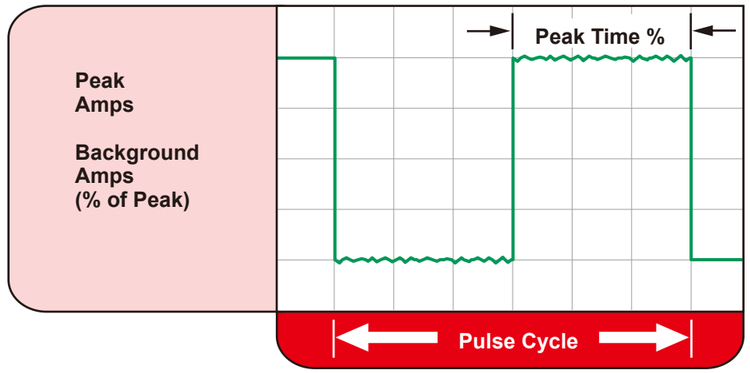
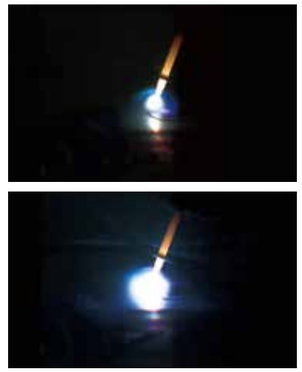
- ✓ 2T and 4T selection
- ✓ Capable to remote control
- ✓ 10 channels memory capacity

Pulse TIG

◆ Conventional Pulsed TIG





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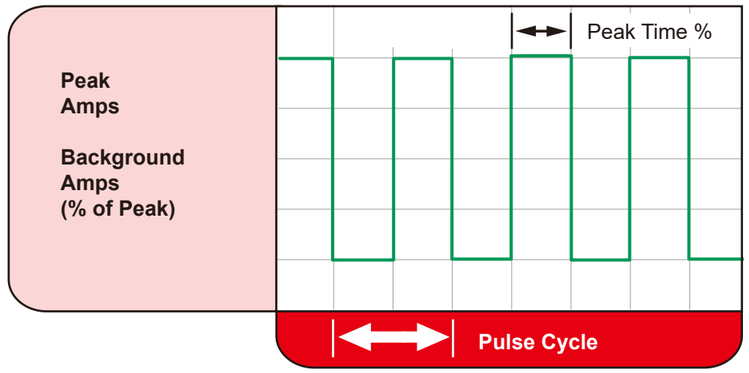

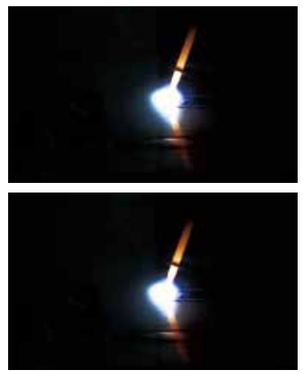

In excess of 40 PPS, Pulsed TIG becomes more audible than visible—causing increased puddle agitation for a better as-welded microstructure. Pulsing the weld current at high speeds — between a high Peak and a low Background amperage — can also constrict and focus the arc. This results in maximum arc stability, increased penetration and increased travel speeds.

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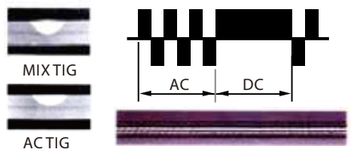
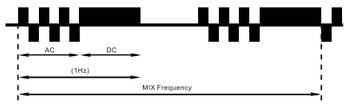
2) Excellent Arc Concentration.
3) Substantially reduce the electrode consumption.



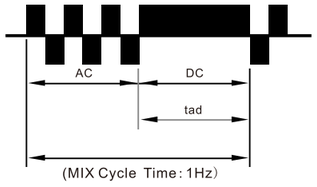
MIX TIG Frequency (Hz):

the cycle time of MIX
TIG in 1 second. Adjustable range: 1-5Hz.

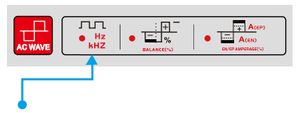


MIX TIG Balance (DC) %:

DC Balance (%) = (tad/Tmix) x 100



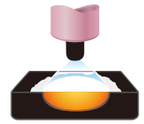
AC Waveshape Controls



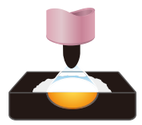
AC Frequency control

Controls the width of the arc cone. Increasing the AC Frequency provides a more focused arc with increased directional control.

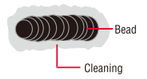
Note: Decreasing the AC Frequency softens the arc and broadens the weld puddle for a wider weld bead.



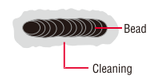
Wider bead, good penetration ideal for buildup work



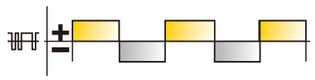
Narrower bead for fillet welds and automated applications

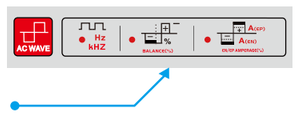


Wider bead and cleaning acting



Narrower bead and cleaning acting

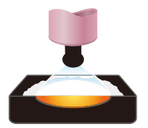




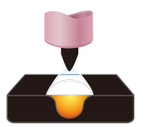
AC Balance Control

Controls arc cleaning action. Adjusting the % EN of the AC wave controls the width of the etching zone surrounding the weld.

Note: Set the AC Balance control for adequate arc
cleaning action at the sides and in front of the weld puddle. AC Balance should be fine tuned according to
how heavy or thick the oxides are.



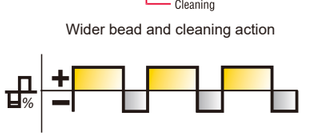
Wider bead, good penetration ideal for buildup work

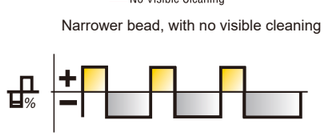


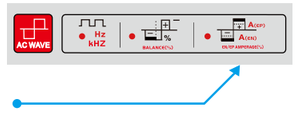
Narrower bead, good penetration ideal for buildup work

Wider bead and cleaning action

Narrower bead, with no visible cleaning





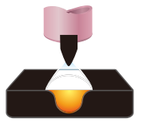


Amplitude Control

Adjusts the ratio of EN to EP amperage to precisely control heat input to the work and the electrode.

EN amperage controls the level of penetration, while EP amperage dramatically effects the arc cleaning action along with the AC Balance control.

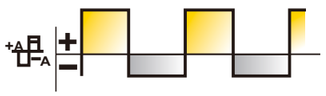
More current in EP than EN: Shallower penetration

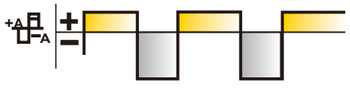


More current in EN than EP: Deeper penetration and faster travel speeds

Wider bead and cleaning action

Narrower bead, with no visible cleaning





Technical Specifications

Item No			MasterTig-300CT	MasterTig-400CT	MasterTig-500CT
Rated Input Voltage			3PH ~ 400V ±15%	3PH ~ 400V ±15%	3PH ~ 400V ±15%
Max. Load Power Capacity			TIG: 9.13KVA	TIG: 14.39KVA	TIG: 50.76KVA
			MMA: 10.38KVA	MMA: 14.21KVA	MMA: 19.93KVA
Rated Duty Cycle(40℃) 60%			TIG: 300A/22V	TIG: 400A/26V	TIG: 500A/30V
			MMA: 250A/30V	MMA: 315A/32.6V	MMA: 400A/36V
100%			TIG: 250A/20V	TIG: 315A/22.6V	TIG: 400A/26V
			MMA: 200A/28V	MMA: 250A/30V	MMA: 3150A/32.6V
Welding Current/Voltage Range			TIG: 5A/10.2V~300A/22V	TIG: 5A/10.2V~400A/26V	TIG: 5A/10.2V~500A/30V
			MMA: 20A/20.8V~250A/30V	MMA: 20A/20.8V~315A/32.6V	MMA: 20A/20.8V~400A/36V
Open Circuit Voltage			70V~80V	70V~80V	70V~80V
Power Factor			0.8	0.85	0.85
Efficiency			80%	85%	85%
TIG	Pulse	Peak Current	5A~300A	5A~400A	5A~500A
		Pulse Frequency	0.2Hz~200Hz	0.2Hz~200Hz	0.2Hz~200Hz
		Pulse Width (Ratio)	1~100%	1~100%	1~100%
	AC TIG	AC Frequency Range	20Hz~250Hz	20Hz~250Hz	20Hz~250Hz
		AC Clean Width (AC Balance)	+40~-40	+40~-40	+40~-40
		AC Clean Ratio (AC Bias) %	+30~-50	+30~-50	+30~-50
	MIX TIG	MIX Frequency	1Hz~5Hz	1Hz~5Hz	1Hz~5Hz
		DC Balance (%)	20~80	20~80	20~80
	Arc-starting Current		5A~300A	5A~400A	5A~500A
	Crater-filling Current		5A~300A	5A~400A	5A~500A
	Current Up-slope Time		0.1S~15S	0.1S~15S	0.1S~15S
	Current Down-slop Time		0.1S~15S	0.1S~15S	0.1S~15S
	Pre-Gas Time		0.1S~15S	0.1S~15S	0.1S~15S
	Flow-Gas Time		0.1S~15S	0.1S~15S	0.1S~15S
	Spot Arc Time		0.1S-10S	0.1S-10S	0.1S-10S
MMA	Arc Force		10A~250A	10A~315A	10A~400A
	Hot Start Time		0.1~3S	0.1~3S	0.1~3S
	Hot Start Current		10A~250A	10A~315A	10A~400A
Dimension (LxWxH)			960x420x900mm	960x420x900mm	960x420x1100mm
Weight (KG)			75KG	80KG	85KG

Water-cooling Unit: WC-150	
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

Accessories

Standard accessories

TIG-12

Technical data (EN 60 974-7):	
Type of cooling:	Water Cooled
Rating:	350A DC
	250A AC
Duty cycle:	100%
Tungsten electrodes:	Ø 1.6–4.0 mm

Consumables:

Back cap

Collet

Insulating ring/Adaptor

Collet body

Gas nozzle, ceramic

Electrode holder with cable 2M
Earth clamp with cable 2M

Optional accessories

BINZEL ABITIG ® GRIP 12

Technical data (EN 60 974-7):	
Type of cooling:	liquid cooled
Rating:	350A DC
	250A AC
Duty cycle:	100%
Tungsten electrodes:	Ø 1.6–4.0 mm

Argon gas regular

Trolley:WT-100

Water-cooling unit: WC-100

Foot Pedal

PROTIG-200Di/250Di

Refined TIG welding for industrial applications

1 Phase CV DC

ECO 100%

Quick Specs CE

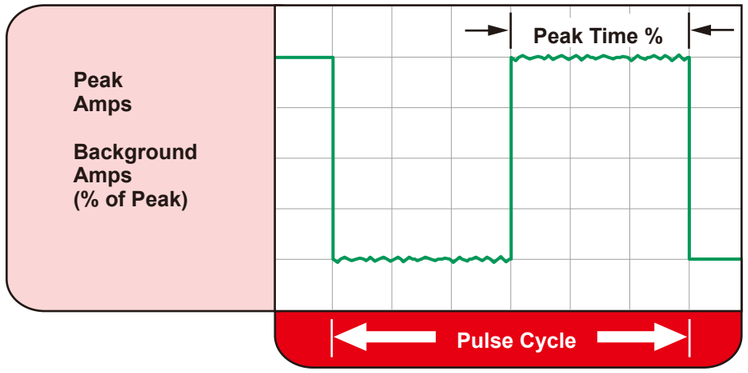
- **Processes:**
  DC TIG
  MMA(Stick)
- **Input Power:**
  200-240V/1-PH/50-60Hz
- **Rated Output at 40℃ (104℉):**
  200Di: 200A at 18V @60% Duty Cycle
  250Di: 250A at 20V @60% Duty Cycle
- **Applications:**
  Metal Fabrication
  Maintenance and Repair
  Auto Body
  Light Industrial

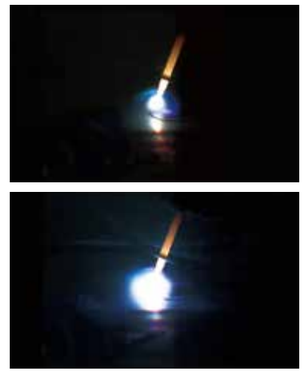
TOP Features:

- ✓ **Refined arc ignition from 3A.**
- ✓ **Pulse control:**
  Built in pulsing functions help minimize heat input on thin materials, and provide for a faster freezing weld puddle for uphill welding on curved surfaces such as process piping. The TIG pulse also helps moderate filler metal deposition for consistent bead appearance.
- ✓ **High-frequency TIG starting:**
  Makes it easy to establish an arc under a variety of conditions. Enhances quality by minimizing the potential for weld contamination created by tungsten inclusions in the weld.
- ✓ **Fast Spot Arc system** simply controls the spot arc parameter and offers a stable arc.
- ✓ **Pre-gas and post-gas adjustment**
- ✓ **4T Trigger Hold** allows to hold the present current by user until press the trigger again.
- ✓ **Hot Start Function** reliably ignites the electrode and melts perfectly to ensure the best quality even at the start of the seam.
- ✓ **Arc Force** makes it easier to weld large-drop melting electrode types at low current strengths with a short arc in particular.
- ✓ **Fast, precise, clean arc ignition and arc ending.**
- ✓ **10 channels memory capacity**

Pulse TIG

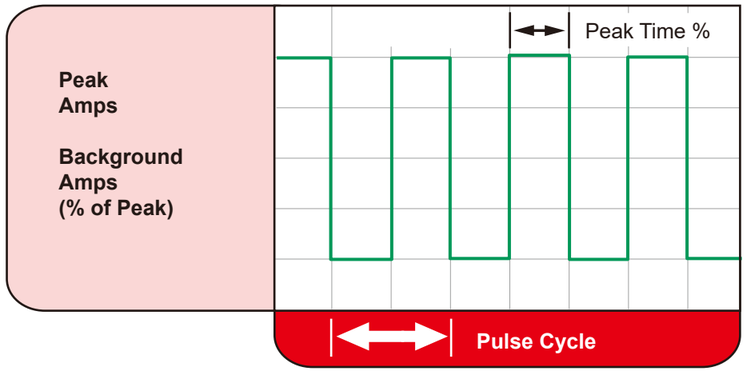
- **Conventional Pulsed TIG**

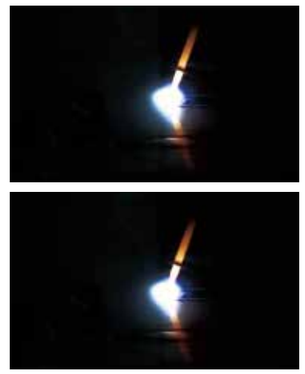




Typically from 0.2 to 10 PPS. Provides a heating and cooling effect on the weld puddle and can reduce distortion by lowering the average amperage. This heating and cooling effect also produces a distinct ripple pattern in the weld bead. The relationship between pulse frequency and travel speed determines the distance between the ripples. Slow pulsing can also be coordinated with filler metal addition and can increase overall control of the weld puddle.

- **High Speed Pulsed TIG**





In excess of 40 PPS, Pulsed TIG becomes more audible than visible—causing increased puddle agitation for a better as-welded microstructure. Pulsing the weld current at high speeds — between a high Peak and a low Background amperage — can also constrict and focus the arc. This results in maximum arc stability, increased penetration and increased travel speeds.

Technical Specifications

Item No		PROTIG-200Di	PROTIG-250Di
Rated Input Voltage		1PH ~ 230V ±15%	1PH ~ 230V ±15%
Max. Load Power Capacity		TIG: 5.62 KVA	TIG: 7.81 KVA
		MMA:6.60 KVA	MMA: 5.63KVA
Rated Duty Cycle(40℃) 60%		TIG: 200A/18V	TIG: 250A/20V
		MMA: 160A/26.4V	MMA: 200A/28V
100%		TIG: 160A/16.4V	TIG: 200A/18V
		MMA: 130A/25.2V	MMA: 160A/26.4V
Welding Current/Voltage Range		TIG: 3A/10.1V~200A/18V	TIG: 3A/10.1V~250A/20V
		MMA: 20A/20.8V~160A/26.4V	MMA: 20A/20.8V~200A/28V
Open Circuit Voltage		70V~80V	70V~80V
Power Factor		0.8	0.8
Efficiency		80%	80%
TIG	Peak Current	0.2Hz~200Hz	0.2Hz~200Hz
	Pulse Frequency	1~100%	1~100%
	Arc-starting Current	5A~200A	5A~250A
	Crater-filling Current	5A~200A	5A~250A
	Current Up-slope Time	0.1S~15S	0.1S~15S
	Current Down-slop Time	0.1S~15S	0.1S~15S
	Pre-Gas Time	0.1S~15S	0.1S~15S
	Flow-Gas Time	0.1S~15S	0.1S~15S
	Spot Arc Time	0.1S~10S	0.1S~10S
MMA	Arc Force	10A~160A	10A~200A
	Hot Start Time	0.1~3S	0.1~3S
	Hot Start Current	10A~160A	10A~200A
Dimension (LxWxH)		410x190x305mm	410x190x305mm
Weight (KG)		15KG	15KG

Water-cooling Unit: WC-150	
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

Accessories

Standard accessories

TIG-26

Technical data (EN 60 974-7):	
Type of cooling:	Gas cooled
Rating:	180A DC
	150A AC
Duty cycle:	35%
Tungsten electrodes:	Ø 0.5–4 mm

Consumables:

Back cap

Collet

Insulating ring/Adaptor

Collet body

Gas nozzle, ceramic

Electrode holder with cable 2M
Earth clamp with cable 2M

Optional accessories

BINZEL ABITIG ® GRIP 26

Technical data (EN 60 974-7):	
Type of cooling:	air cooled
Rating:	180A DC
	130A AC
Duty cycle:	35%
Tungsten electrodes:	Ø 0.5–4.0 mm

Argon gas regular

Trolley:WT-100

Water-cooling unit: WC-100

Foot Pedal

PROTIG-300CT/400CT/500CT

Reliable and powerful DC TIG equipment

Quick Specs CE

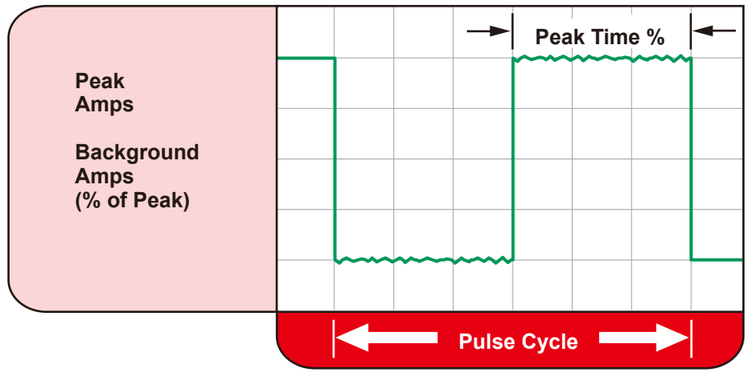
- **Processes:**
  DC TIG
  MMA(Stick)
- **Input Power:**
  340-460V/3-PH/50-60Hz
- **Rated Output at 40℃ (104℉):**
  300CT: 300A at 22V @60% Duty Cycle
  400CT: 400A at 26V @60% Duty Cycle
  500CT: 500A at 30V @60% Duty Cycle
- **Applications:**
  Metal fabrication workshops
  Shipyards and offshore industry
  Chemical and process industry
  Steel structure workshops

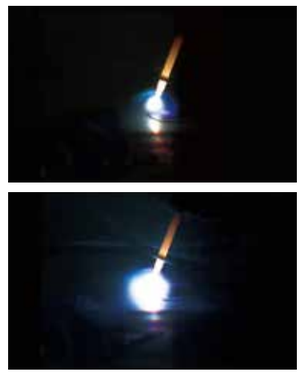
TOP Features:

- ✓ **Full IGBT Modules Structure** greatly improve its reliability and productivity.
- ✓ **Refined arc ignition from 3A.**
- ✓ **Pulse control:**
  Built in pulsing functions help minimize heat input on thin materials, and provide for a faster freezing weld puddle for uphill welding on curved surfaces such as process piping. The TIG pulse also helps moderate filler metal deposition for consistent bead appearance.
- ✓ **High-frequency TIG starting:**
  Makes it easy to establish an arc under a variety of conditions. Enhances quality by minimizing the potential for weld contamination created by tungsten inclusions in the weld.
- ✓ Fast Spot Arc system simply controls the spot arc parameter and offers a stable arc.
- ✓ Pre-gas and post-gas adjustment
- ✓ **4T Trigger Hold** allows to hold the present current by user until press the trigger again.
- ✓ **Hot Start Function** reliably ignites the electrode and melts perfectly to ensure the best quality even at the start of the seam.
- ✓ **Arc Force** makes it easier to weld large-drop melting electrode types at low current strengths with a short arc in particular.
- ✓ **Fast, precise, clean arc ignition and arc ending.**
- ✓ **10 channels memory capacity**

Pulse TIG

◆ Conventional Pulsed TIG





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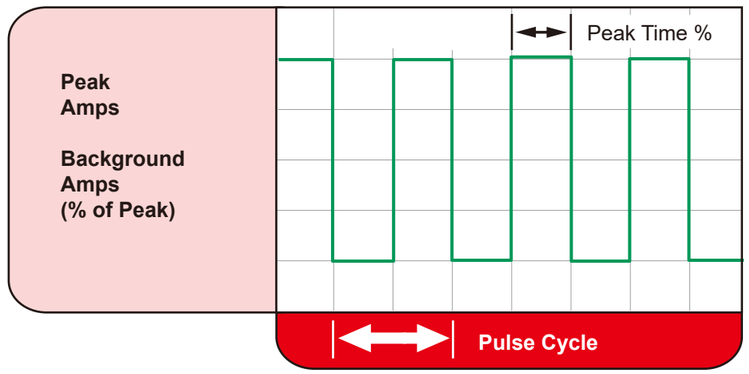
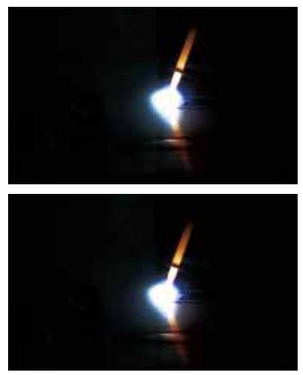
◆ High Speed Pulsed TIG





In excess of 40 PPS, Pulsed TIG becomes more audible than visible—causing increased puddle agitation for a better as-welded microstructure. Pulsing the weld current at high speeds — between a high Peak and a low Background amperage — can also constrict and focus the arc. This results in maximum arc stability, increased penetration and increased travel speeds.

Technical Specifications

Item No		PROTIG-300CT	PROTIG-400CT	PROTIG-500CT
Rated Input Voltage		3PH ~ 400V ±15%	3PH ~ 400V ±15%	3PH ~ 400V ±15%
Max. Load Power Capacity		TIG: 9.13 KVA	TIG: 14.39 KVA	TIG: 20.76 KVA
		MMA: 10.38 KVA	MMA: 14.21 KVA	MMA: 19.93 KVA
Rated Duty Cycle(40℃) 60%		TIG: 300A/22V	TIG: 400A/26V	TIG: 500A/30V
		MMA: 250A/30V	MMA: 315A/32.6V	MMA: 400A/36V
100%		TIG: 250A/20V	TIG: 315A/22.6V	TIG: 400A/26V
		MMA: 200A/28V	MMA: 250A/30V	MMA: 315A/32.6V
Welding Current/Voltage Range		TIG: 5A/10.2V~300A/22V	TIG: 3A/10.1V~400A/26V	TIG: 3A/10.1V~500A/30V
		MMA: 20A/20.8V~250A/30V	MMA: 20A/20.8V~315A/32.6V	MMA: 20A/20.8V~400A/36V
Open Circuit Voltage		70V~80V	70V~80V	70V~80V
Power Factor		0.85	0.85	0.85
Efficiency		85%	85%	85%
TIG	Peak Current	0.2Hz~200Hz	0.2Hz~200Hz	0.2Hz~200Hz
	Pulse Frequency	1~100%	1~100%	1~100%
	Arc-starting Current	5A~300A	5A~400A	5A~500A
	Crater-filling Current	5A~300A	5A~400A	5A~500A
	Current Up-slope Time	0.1S~15S	0.1S~15S	0.1S~15S
	Current Down-slop Time	0.1S~15S	0.1S~15S	0.1S~15S
	Pre-Gas Time	0.1S~15S	0.1S~15S	0.1S~15S
	Flow-Gas Time	0.1S~15S	0.1S~15S	0.1S~15S
	Spot Arc Time	0.1S~10S	0.1S~10S	0.1S~10S
MMA	Arc Force	10A~250A	10A~315A	10A~400A
	Hot Start Time	0.1~3S	0.1~3S	0.1~3S
	Hot Start Current	10A~250A	10A~315A	10A~400A
Dimension (LxWxH)		960x420x900mm	960x420x900mm	960x420x900mm
Weight (KG)		70KG	70KG	70KG

Water-cooling Unit: WC-150	
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

Accessories

Standard accessories

TIG-12

Technical data (EN 60 974-7):	
Type of cooling:	Water Cooled
Rating:	350A DC
	250A AC
Duty cycle:	100%
Tungsten electrodes:	Ø 1.6–4.0 mm

Consumables:

Back cap

Collet

Insulating ring/Adaptor

Collet body

Gas nozzle, ceramic

Electrode holder with cable 2M
Earth clamp with cable 2M

Optional accessories

BINZEL ABITIG ® GRIP 18

Technical data (EN 60 974-7):	
Type of cooling:	liquid cooled
Rating:	350A DC
	250A AC
Duty cycle:	100%
Tungsten electrodes:	Ø 1.6–4.0 mm

Argon gas regular

Trolley:WT-100

Water-cooling unit: WC-100

Foot Pedal

Multiple Power Station

	MMA/STICK	TIG	MIG	Submerged Arc Welding	Gouging
ARC-600/800/1000/1250Plus	√	√	√	√	√
Earth clamp	√	√	√	√	√
Electrode holder	√				√
Cold wire feeder for TIG		√			
TIG-12 torch		√			
ARC-length-feedback wire feeder unit			√		
MIG-501 torch			√		
ARC Tractor				√	

Simple. Reliable. Flexible. Specify the ARC-600/800/1000/1250Plus for your heavy duty applications.

www.cn-topwell.com

Multiple Power Station

Multi-Process Power Source for Heavy Duty Applications

ARC-600/800/1000/1250Plus

Quick Specs CE

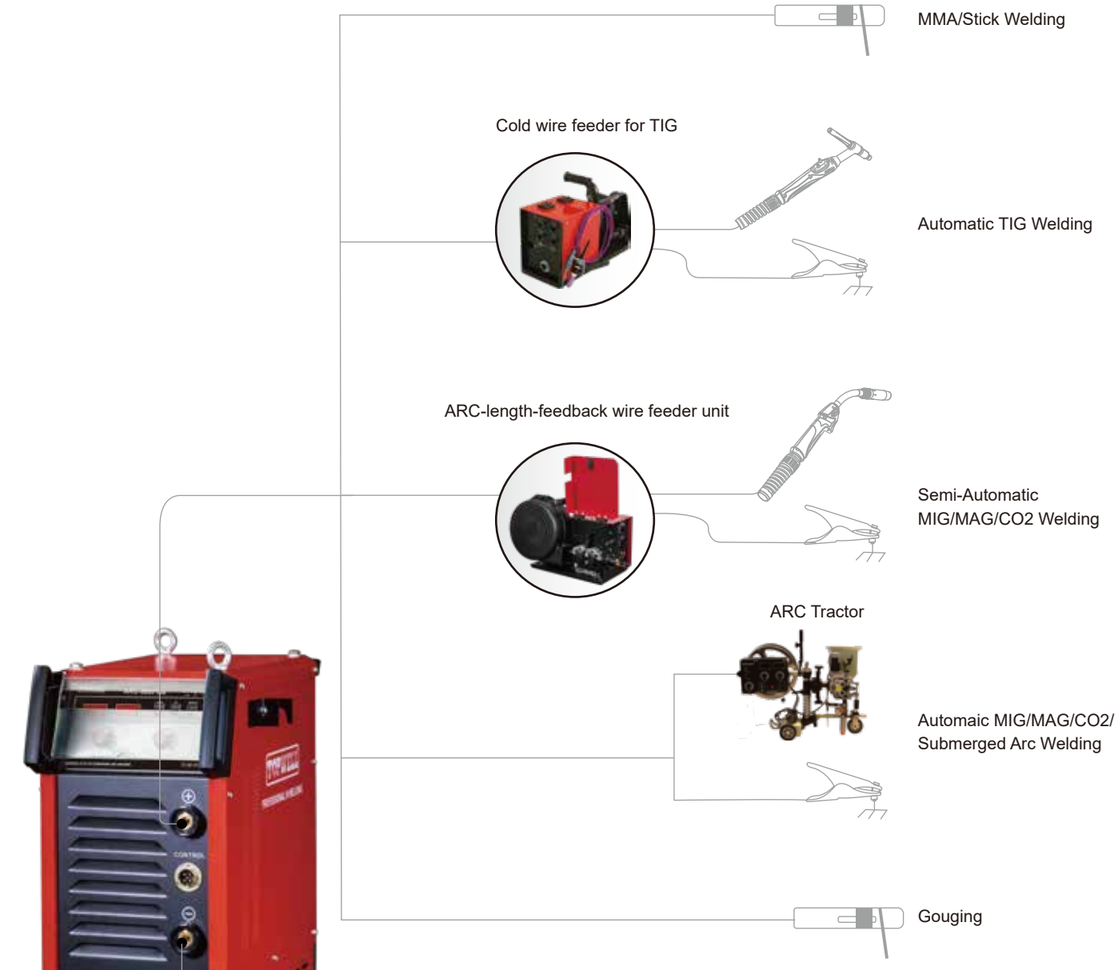
- **Processes:**
  Stick,
  TIG,
  MIG, Flux-Cored,
  Submerged Arc,
  Gouging
- **Input Power:**
  200-440V/3-PH/50-60Hz
- **Rated Output at 40℃ (104℉):**
  Arc-600Plus: 600A/44V/60%
  Arc-800Plus: 800A/44V/60%
  Arc-1000Plus: 1000A/44V/60%
  Arc-1250Plus: 1250A/44V/60%

Features:

This multi-process welder delivers high welding power for a variety of applications, including construction, shipbuilding and heavy fabrication. It is so simple to connect the related accessories to do stick welding, TIG welding, MIG welding, Flux-cored, Submerged Arc welding and Gouging. Embedded technology drives welding control at the arc, increase quality and enhance productivity and safety on the job site. The world-ready ARC-600/800/1000/1250Plus will run on a wide range of available voltage input power and is IP23 rated for outdoor operation and storage.

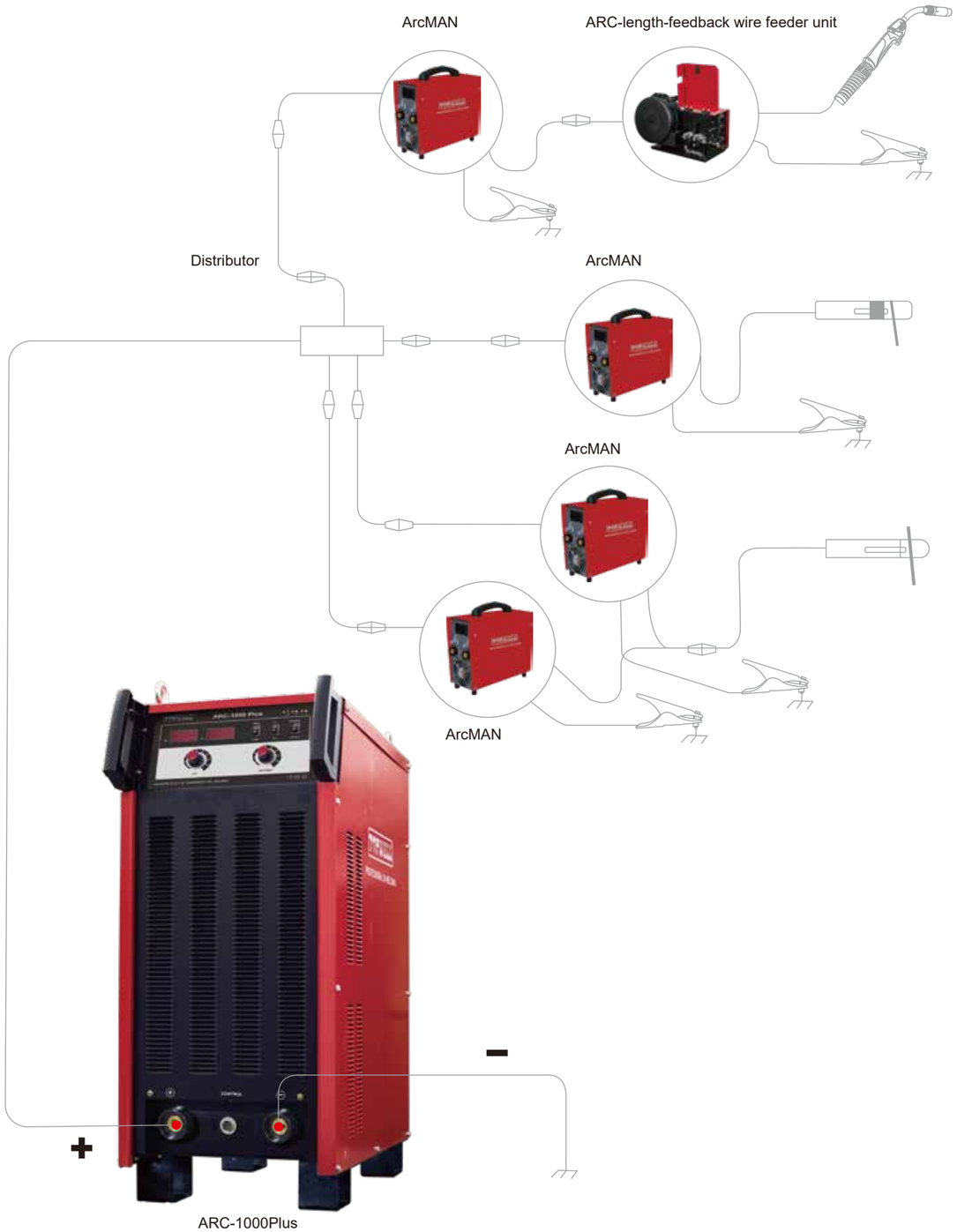
Simple. Reliable. Flexible. Specify the ARC-600/800/1000/1250Plus for your heavy duty applications.

Flexible to do stick welding, TIG welding, MIG welding, Flux-cored, Submerged Arc welding and Gouging



ARC-800Plus

Working with ArcMAN power divider make it capable to do different welding processes at the same time



Technical Specifications

Item No	ARC-600Plus	ARC-800Plus	ARC-1000Plus	ARC-1250Plus
Input power	200-440V/3-PH/50-60Hz			
Rated Output Current/-Voltage/Duty Cycle	600A/44V/60%	800A/44V/60%	1000A/44V/60%	1250A/44V/60%
Output Range	20-600A	20-800A	20-1000A	20-1250A
Dimensions	960x420x1100MM			
Weight	265KG			

Accessories


ARC-length-feedback wire feeder unit


ArcMAN power divider


Intermediate cable kit 10 meter


Electrode holder with 5 meter cable


Water cooling unit


Cold wire feeder for TIG


MIG-501 torch


TIG-12 torch

TOPWELL®

PROFESSIONAL IN WELDING

Submerged Arc System

Submerged Arc System

Increase Productivity, Quality and Flexibility

SUBARC-1000DC/1250DC

SUBARC-1000DC/1250DC is constant current and constant voltage inverter based welding power source. Designed primarily for subarc welding, it is also ideal for MIG, MAG, MMA, CAG and OAC which require high current and high duty cycle, with dia 1.2-6.0mm wires and CAG(Dia 6-12mm) carbons.

Quick Specs CE

- **Processes:** Submerged arc, MIG, Flux-cored, Gouging
- **Input Power:** 340-460V/3-PH/50-60Hz
- **Rated Output at 40℃ (104℉):** SUBARC-1000DC: 1000A/50V/100% SUBARC-1250DC: 1250A/50V/100%
- **Wedling Head Options** AH-1, AH-1S, AH-2, AH-3, AH-4, AH-5, AH-6
- **Wire Feeder Options** ArcFeeder Ⅰ/Ⅲ/Ⅳ
- **Applications:** Shipbuilding, wind tower and pressure verssels
- **Welding Arc Tractor** Options AT-1/2/3/4/5

SUBARC-1000/AC/DC
SUBARC-1250AC/DC

Three-phase squarewave AC/DC machine with phase-shifting capability with steps to refine arc. AC/DC squarewave provides excellent quality of penetration/bead profile and high performance in deposition rate with low heat input (increased mechanical properties and reduced distortion).

Quick Specs CE

- **Processes:** Submerged arc, MIG, Flux-cored, Gouging
- **Input Power:** 340-460V/3-PH/50-60Hz
- **Rated Output at 40℃ (104℉):** SUBARC-1000AC/DC: 1000A/50V/100% SUBARC-1250AC/DC: 1250A/50V/100%
- **Applications:** Shipbuilding, wind tower and pressure verssels
- **Welding Arc Tractor** Options AT-1/2/3/4/5
- **Wedling Head Options** AH-1, AH-1S, AH-2, AH-3, AH-4, AH-5, AH-6
- **Wire Feeder Options** ArcFeeder Ⅰ/Ⅲ/Ⅳ

SUBARC-1000XD/1250XD

Three-phase, CC/CV DC power sources are designed to semiautomatic and automatic welding, the precise control of the SubArc-1000XD/1250XD delivers superior arc for Submerged Arc (SAW), as well as MIG, MAG, MMA, CAG and OAC which require high current and high duty cycle, with(Dia 1.2-6.0mm) wires and CAG(Dia 6-12mm) carbons.

Moreover, the SubArc-1000XD/1250XD are capable to Nickel-based Alloys and have excellent performance on very thin plates.

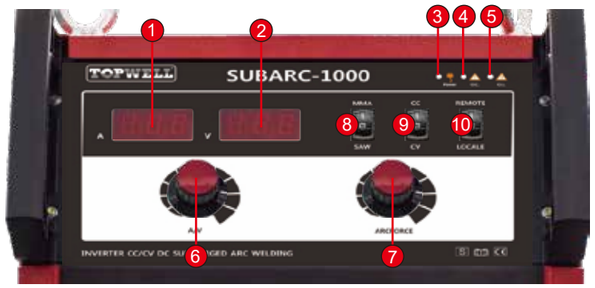
Quick Specs CE

- **Processes:** Submerged arc, MIG, Flux-cored, Gouging
- **Input Power:** 340-460V/3-PH/50-60Hz
- **Rated Output at 40℃ (104℉):** SUBARC-1000XD: 1000A/50V/100% SUBARC-1250XD: 1250A/50V/100%
- **Wedling Head Options** AH-1, AH-1S, AH-2, AH-3, AH-4, AH-5, AH-6
- **Wire Feeder Options** ArcFeeder Ⅰ/Ⅲ/Ⅳ
- **Applications:** Shipbuilding, wind tower and pressure verssels
- **Welding Arc Tractor** Options AT-1/2/3/4/5

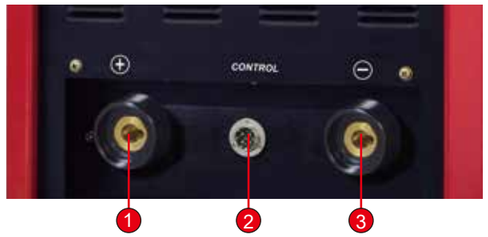
TOP Features:

- ✓ **Ability to preset the current**
- ✓ **1000A@100% duty cycle with a maximum output capacity of 1500A**
- ✓ **Reduced heat affected zone, minimized distortion and increased mechanical properties**
- ✓ **Overloading, over current, loss of phase and short circuit protection ensure long-lasting performance**
- ✓ **Use the mode switch to select the desired output characteristics for the process being used–CC and CV**
- ✓ **Versatile power source is capable to MMA, MIG/MAG and Carbon Arc Gouging**
- ✓ **Precise output control results in a stable arc.**
- ✓ **Modular parallel to enhance reliability**
- ✓ **User-friendly operation panel**

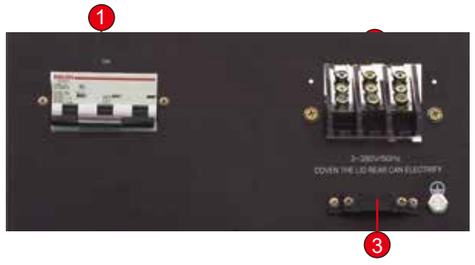
CLOSER LOOK



1. Amperage Display
2. Volage Display
3. Power Indicator Light
4. Over Current Indicator Light
5. Over Loading Indicator Light
6. Amperage/Voltage Adjustment Control
7. Arcforce Knob
8. Function-MMA-or SAW
9. CC or CV Switch
10. Remote or Panel Switch



1. Output Positive Terminal
2. Tractor Interface (Controller Interface)
3. Output Negative Terminal



1. Power Switch
2. Input Terminal
3. Cable Glands

Printed Control Board(PCB)

Potted PCB with thermal conductive silicone enables the PCB to work in tough environment, such as high temperature and high humidity environment. All components are in the fully enclosed PCB, which prevents dust, corrosion and humid.

Air Tunnel Design

Air tunnel thermal design with external rotor motor allows the SubArc-1000XD/1250XD to work in tough environment.

Technical Date

Product Name	Input Voltage	Rated Output Current/Volatge/Dutuy Cycle	Output Range	Dimension H xW x D in. (mm)
SubArc-1000DC	3 phase 380V+/-15%	1000A/50V/100%	CC Mode: 100-1000A CVMode: 10-50V	960x420x1100
SubArc-1250DC	3 phase 380V+/-15%	1250A/50V/100%	CC Mode: 100-1000A CV Mode: 10-50V	960x420x1100
SubArc-1000XD	3 phase 380V+/-15%	1000A/50V/100%	CC Mode: 100-1000A CVMode: 10-50V	960x420x1100
SubArc-1250XD	3 phase 380V+/-15%	1250A/50V/100%	CC Mode: 100-1000A CV Mode: 10-50V	960x420x1100
SubArc-1000AC/DC	3 phase 380V+/-15%	1000A/50V/100%	CC Mode: 100-1000A CV Mode: 10-50V	960x420x1100
SubArc-1250AC/DC	3 phase 380V+/-15%	1000A/50V/100%	CC Mode: 100-1000A CV Mode: 10-50V	960x420x1100

AT-1 SubArc Tractor

The superb welding tractor for linear, circular or curve welding

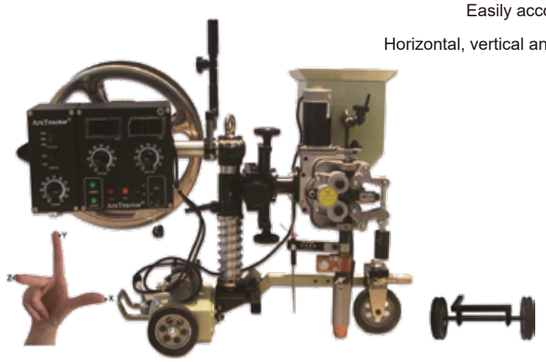
Quick Specs CE

- **Applications**
  Ship and barge building
  Storage tank erectionBeam
  Girder or column fabrication
  Bridge deck installation
  Long seams on heavy weldments
- **Process**
  Submerged Arc
- **Recommended Power Supply**
  SubArc-1000XD/1250XD
- **Net Weight**
  110lb.(50kg) without flux or wire
- **Wire Feed Speed**
  1-11mpm for φ1.2-4.0mm
  0.5-7mpm for φ2.0-6.0mm

Features:

- Compact and efficient design allows for easy movement between work pieces.
- Self-propelled, 3-wheeled drive provides stable, accurate and constant operation.
- Arc Tractor Process Control with digital display, allows presetting and control of welding parameters.

X-axis is the travel direction, 0.1-1.3mpm(3.9-51 IPM)
+Y-axis (vertical) 0-70mm +± 100mm(Vertical head lift and slide)
R y ±90°. Weld angle is up to 90°from vertical to either side
R z 45°. Angle forward or backwards by up to 45 degrees
R x 45°. Drag angle is up to 45°from vertical



Easily accommodates a 55-pound (25kg) wire reel for fewer wire changeovers.
Horizontal, vertical and rotary slides allow for quick adjustment of weld nozzle into various
The rugged design ensures a long life span in harsh conditions.
Manual clutch enables freewheeling movement of the tractor.
Can upgrade to 4-wheel tractor

Advantage

- Exceptional tracking control and self-steering in most applications leave the operator free for quality control, joint cleaning and flux handing.
- Welds butts, horizontal fillet and lap joints to the left or right side of the tractor frame for convenience
- Close mechanical alignment between wire and joint maximizes weld quality with no fixturing costs.
- Using PWM control technology to ensure precise and stable traveling.

Technical Data

Wire dimensions,mm	Max wirefeed speed, m/min	Electrode weight, kg	Flux volume	Weight excl. wire and flux. Kg	Permissible load 100%, A	Input voltage, V	Travel speed, m/min
Steel(1.2-5.0mm) Stainless(1.2-4.0mm) Cored wire(1.2-4.0mm)	11(7)	25	6	50	1000	15-115	0.1-1.3

More Tractors Available

Twin arc welding involves feeding two wires in parallel through the same contact tip. It differs from tandem welding in using only on power unit and one wire feeder. In comparison with the use of a single wire, twin arc welding results in a higher rate of melt production and improved stability

For Multi welding positions, especially fillet welding in horizontal fillet & slope position

- Strengthen torque and stable wire feed thanks to 4-rolls with straightening mechanism
- Easy to adjust feed head and torch

For flat or fillet welding medium and thin plates **AT-2**

For various positions welding **AT-3**

For flat or fillet welding medium and thin plate, inside and outside circular **AT-4**

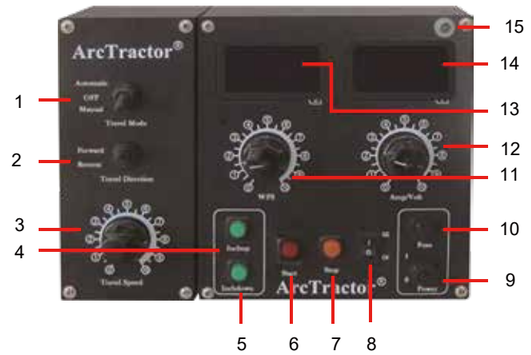
For Twin Wires Welding **AT-5**

For Twin Wires Welding **AT-6**

ArcTractor Digital

- With Arc Voltage Sensing Technology, heat input is reduced and deposition rate is increased by 30%. This technology also ensures stable welding arc over a wide range of parameters and precise output control.
- Scratch and direct start methods

1.Auto/OFF/Manual Travel Switch
2.Travel direction- Forward/ Backward
3.Travel Speed Adjustment
4.Inch Up Button
5.Inch Down Button
6.Start Button
7.Stop Button
8. CC/CV Switch
9.Power Switch1
0.Circuit Breaker
11.Wire Feed Speed
12.Current/Voltage Adjustment
13.Amps Display
14.Voltage Display



Designed to work in conjunction with the SubArc-1000XD/1250XD power source. This controller is used to set the welding parameters & stop/start the welding process. This robust unit has two digital displays and allows presetting of all welding parameters prior to welding including travel speed of tractor. Real time welding parameters are also displayed during welding. The digital controller can be mounted onto our welding tractorcolumn & boom or positioned wherever required. Manual moving of the wire up and down and the travel back and forward is also easily operated from the front of the controller.

Technical Parameter

Supply voltage from the power source	15-115VDC (Arc Voltage)	Welding speed	0.1-1.3mpm
Welding voltage control	10-50VDC	Operating temperature	-10 ℃- +40 ℃
Power consumption	max 200VA	Control cable max	max 100m
Speed control	PWM Control Technology	Wire feed speed, consumable wire	0.5-5.5mpm /1-11mpm (depending on wire feed unit)

Features:

- CC/CV mode for CC/CV characteristic welding machine
  Preset of welding parameter
- Travel mode: manual and automatic
- Wire feed control box and tractor control box can be assembled separately
  User-friendly

AH-1 SubArc Welding Head

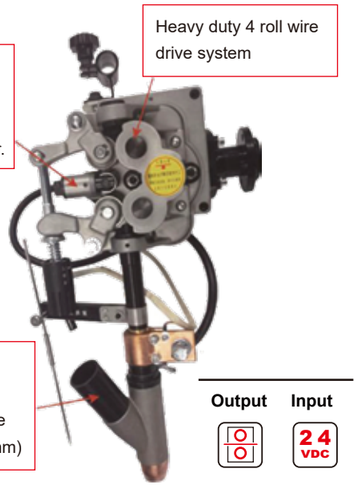
Quick Specs	Rotational Speed	DC Input Power	Wire Feed Speed
	4000RMP	15-115V	1-11mpm for φ1.2-4.0mm 0.5-7mpm for φ2.0-6.0mm

AH-1 SubArc Welding Head

Designed for the SubArc-1000XD/1250XD power source, for boom mounting or tractor mounting.The AH-1 welding head consists of a heavy duty 4 roll wire drive system with large 40mm rollers & hears driven by a powerful 24V DC print motor to give the best possible feeding of welding wire. At the end of every weld the wire automatically retracts for perfect finished. The motor has free-maintenance brushes for a long life span. A height adjustment slide is fitted to the drive block to assist with positioning of the welding head. The welding head is ideal for tractor mounting, column& boom or a frame mounting etc.

Feature

- The pre-selection of nominal values for welding current, arc voltage and speed in coordination with the SubArc-1000XD/1250XD
- The AH-1 welding head has an automatic ignition and automatic burn-back with withdraw for an optimized welding process.
- The welding head also has adjustment to angle forward or backwards by up to 45 degrees & side to side by up to 45 degrees.
- All welding heads are equipped with a laser pointer and a mechanical pointer for visual seam tracking. Via a cross support, the AH-1 can be manually positioned with an effective adjusting range of 100mm each.



Technical Specifications			
Wire feeding range	1.6mm-6.0mm	Horizontal adjustment, mm	±100mm
Flux hopper capacity	6L	Swivel arrangement, Deg	360°
Drive system	4 roll 40 mm + wire straightener	Torch tilt, Deg	±45°
Wire feed range	1.0-11mpm/0.5-7mpm	Dimension, L*W*H	200*446*213mm
Motor spec	24V DC 150W	Vertical adjustment,	0-70mm +± 100mm
Welding current, A	1000A(continuous)		

More Welding Heads Available

AH-1S

The wires are normally small diameter φ1.2-2.8 (3.0)mm

Wire Feed Speed: 1-11mpm

AH-2 Twin Arc

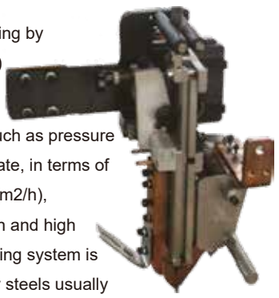
Higher Deposition Rates & Lower HeatWire diameter: φ1.2-2.5mmIt offers up to 30% higher deposition rates and can be used at higher currents and speeds. Very high welding speeds can be achieved in fillet welding, but are also used successfully for butt welding. Cored wires can further enhance deposition rates.

AH-1S

Deposition rate: increase by 40%Wire diameter: φ 2.0-6.0mmWire feed speed: 0.5-7mpmBy using the hot wire without arc, increase in heat input could be suppressed but the amount of weld deposit could be greatly increased.

AH-4 Strip Cladding

60*0.5mm(0.3mm)Strip cladding by submerged arc welding(SAW) is the preferred methods for cladding or for larger areas such as pressure vessels. It ofhigh deposition rate, in terms of both kg/h and area coverage(m2/h), combined with low penetration and high deposit quality. The strip welding system is used to overlay mild and alloy steels usually with stainless steel.



AH-5 Open Arc Cladding

It is applied to the metal surface of deposited, corrosion and abrasion resistance material, and improves the wear-resisting property of the metal. The deposited metal surface has quality excellence, due to equal arc length and equal penetration; it is suitable for multi-pipe of boiler, pipes, wear-resistant plate, mining machinery and other metal repaired industry.

AH-6 Large Diameter MIG

Wire diameter: φ2.4-3.0mm
Wire feed speed: 1-1 1mpm.

Increase deposition rate.
Increase welding speed
and reduce heat input.
Suitable for huge metal
structure and multi-core wires.

Notes

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To be the welding expert

Notes