MEGMEET
WELDING TECHNOLOGY

Submerged Arc Welding

SA630/SA1000/SA1250



Product Advantages

- Supports constant current (CC) and constant voltage (CV) modes.
- Wire diameter: 1.6、2.0、2.4、3.0
- Welding material types: Carbon steel and its alloys, stainless steel.
- Real-time calculation and display of weld energy.
- Precise control during arc ignition, achieving a near-100% arc ignition success rate.
- The welding process is divided into three independent stages: arc starting, welding, and arc ending, allowing for the use of different welding parameters.
- Precise waveform control during welding ensures excellent welding performance.
- Supports weld pool stirring for enhanced penetration and improved weld formation.
- Supports arc characteristic adjustment for improved arc stability and a wider current and voltage welding range.
- Micro-control technology during arc ending and ball chipping adjusts the arc crater fullness and eliminates wire end balls.
- Intelligent wire feed control achieves constant penetration and adapts to changes in wire feed resistance.

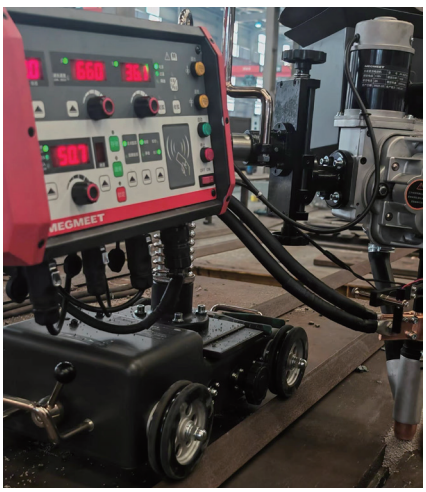
Applications

Widely used in welding of medium and thick plates in industries such as boilers, pressure vessels, ships, steel structures, and wind power.

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Submerged arc function

- With fixed-point arc starting and scrape arc starting functions, effectively ensure arc starting success rates under various operating conditions.
- Both arc starting and arc ending parameters are adjustable.
- Intelligent closed-loop wire feed control ensures more consistent penetration depth.



Carbon arc gouging function

- Multi-purpose machine for quick root cleaning and weld repair.
- High duty cycle, ideal for high-current, long-term root cleaning of medium and thick plate welds.
- Supports adjustable arc starting current and thrust current curves.
- Features short-circuit protection to prevent wire sticking.
- Features VRD protection to prevent electric shock.



MMA Function

- Suitable for long cable operations, with arc starting current and thrust current adjustment functions.
- Arc force control prevents electrode sticking.
- With automatic short-circuit protection function.

Product Specification

Model	SA630	SA1000	SA1250
Control method		Fully digital	
Wire feed drive control method		High-Frequency Back-EMF Control	
Input voltage		3-phase AC 380V (-15%~+25%)	
Input frequency		50/60Hz	
Input capacity		32.4KVA	
Power factor		≥0.92	
Efficiency	≥0.94	≥0.9	≥0.9
Rated no-load voltage	78V	78V	78V
Rated output current	50~630A	100～1000A	100～1250A
Rated output voltage	20~44V	20～44V	20～44V
Manual welding current	50~630A	100～1000A	100～1250A
Carbon arc gouging current	50~630A	100～1000A	100～1250A
Rated duty cycle	100%@630A	100%	100%
Electromagnetic compatibility		CLass A	
Lightning protection rating		D	
Welding parameter channel storage		9	
Insulation rating		Transformer F, Reactor H	
Protection level		IP23	
Environmental requirements		- 10℃～+40℃	
Dimensions (L x W x H)	670×320×540mm	646×386×823mm	646×386×823mm
Welding machine weight	40kg	84kg	84kg

Trolley Control Box Technical Specifications



Model	WPSA63110Z
LED Display	Default and actual voltage and current values, fault code display
Output Control	Local (gouging), Remote (submerged arc)
Compatible Models	SA630/SA1000/SA1250
Wire Diameter Setting	ϕ1.6/2.0/2.4/2.8/3.2/4.0/5.0/6.0
Welding Controls	Fixed point arc striking , Scrape Arc Ignition, Arc Starting, Welding, Arc Ending,
Connector	6 pins
Welding Modes	CC、CV
Wire Feeding	Manual Wire Inspection, Variable Speed Feeding, Constant Speed Feeding
Communication with power source	High-Voltage CAN
Motor Control	High-Frequency Back-EMF Control
Wire Feeding Speed	3.6m/min



Supports multiple communication protocols
Compatible with robotic welding, manual welding, and automated welding machines, offering a wide range of applications.

Supports Devicenet, Ethernet/IP, EtherCAT, Profinet, Analog and ModBus-TCP .

Analog DeviceNet EtherNet/IP PROFINET

EtherCAT CANopen MEGMEET CAN

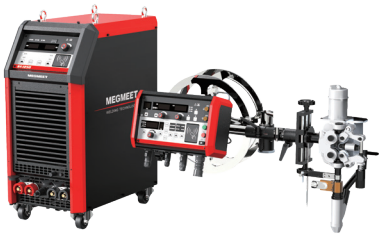
Communication protocols for submerged arc welding machines and robots

Functions	Arc tracking	Contact positioning		Interface between welding machines and robots					
		80-400V	Simulation	DeviceNet	CANopen	MEGMEET CAN	EtherNet/IP	EtherCAT	Profinet
	●	●	○	○	○	○	⊛	⊛	⊛

● Standard configuration ○ Select one of several options ⊛ Customization



Manual version



Automation version



Robot version



Submerged Arc Welding Carriage Technical Specifications

Model	WF5-63ZT-MD-7	WF5-125ZT-MD-7
Compatible Machine Models	SA630/SA630R	SA1000/SA1250/SA1000R
Welding Current	100%@640A	100%@1000A /100%@1250A
Wire Feed Motor Model	90ZY01	
Bracket Type	dual drive	
Wire Feed Motor Rated Voltage	DC110V	
Wire Feed Motor Rated Current	2A	
Travel Motor Rated Voltage	DC110V	
Travel Motor Rated Current	1A	
Welding Current	1250A@100%	
Wire Feed Speed Range	3.6m/min	
Travel Speed Range	0.2~1.8m/min	
Crossbeam liftable Height	70mm	
Head Adjustable Distance	100×100×70mm (up and down, left and right, front and back)	
Crossbeam Rotation Angle Around Column	±90°	
Torch Deflection Angle	±45°	
Head Rotation Angle	±45°	
Flux Capacity	6L	
Wire Spool Inner Diameter	ϕ300	
Applicable Wire Specifications	Φ3.2、4、5、6mm	
Applicable Wire Spool Weight	25kg	
Dimensions (L x W x H)	1020×480×740mm	
Carriage Weight	60kg	