

Artsen CM 500C

Intelligent Welding Machine with Carrier-wave Communication for Industrial and Heavy-duty Conditions



- Professionally designed for shipbuilding, marine and offshore industry, and large-size steel construction.
- Born for long-distance Welding.
- Pioneer in carrier-wave technology for two-way communication.

Features:

- Statistics shows that 70% welding machines become defective on site because of the damaged control cable or its connectors. Thanks to the carrier-wave technology, cables are integrated. Reliability was greatly upgraded for higher production efficiency.
- Duty cycle of 100% for 500A output at 40°C .
- High wire-feeding speed of 24m/min to achieve high deposition efficiency.
- Outstanding protection design for the wire-feeder and PCBA to achieve stable performance in tough conditions like vibration, collision, moisture and salt damage.
- Long-distant welding up to 100 meters becomes practical and stable. Pioneer in the industry to apply carrier-wave technology for two-way communication between wire-feeder and power source.
- Allowing low amperage of 150A for upward vertical position of welding with flux-cored wire and with 50m connection cable.
- Allowing upward vertical position of welding in straight line for special-purposed flux-cored wire (E71T-1C). Comparing with weaving welding, heat input is largely reduced.
- Protecting the power source against short circuit from any of the peripheral cable sets. An error code will display in both the power source and the wire-feeder, and will disappear after short circuit is removed.
- Over-current protection for the wire-feeder against motor short circuit, stuck wire. Protection and recovery are both automatic.
- Automatic over-current / short circuit and open circuit protection for the electromagnetic valve.
- High-frequency inspection and control with full digital technology. Enabling a much more stabilized low current.
- Weight and dimension of external cables are greatly reduced, and brings convenience for mobility.

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- Clear display of welding current and voltage in the wire-feeder. Various welding parameters can be adjusted in the wire-feeder, saving extra adjustment equipment and time to operate on the power source.
 - Easier control of welding specification by the operators, who can check the welding parameters clearly as the distance is shortened by the wire-feeder. The complicated setup before welding will also not be necessary.
 - Allowing inspectors to check the real-time parameters for long-distance operation, bringing less concern to management and supervision.
 - Display of error code in the wire-feeder enabling a faster identification and feedback of the defects.
- The uniquely designed two-way high-speed carrier-wave communication. Wire-feeder and power source synchronizes at high speed, preventing the interface signal from interference.
 - Smoother arc ignition. Through synchronization, problems like inconsistent burn-back, wire exploration, damage to electrode can be avoided.
 - Improved crater performance. Through synchronization, risks like over-sized wire tips and sticking would be avoided.
 - The two-way digital communication enables the signals with higher ability against interference and ensures effective connection cable up to 100m. The same performance can be maintained with rolled-up cable set.

Comparison of Artsen CM500C and Carrier Machine

	Communication	Anti-interference	A/V display on wire feeder	Welding Result	PCB reliability
Artsen CM 500C	Two-way High-speed Carrier-way Communication	Excellent	Yes	Excellent	High
Conventional Carrier-wave Technology	One-way Analog Carrier-way Communication	Normal	No	Qualified	Normal



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Specification

	Artsen CM 500C
Control Mode	Full Digital-Control
Carrier-Wave Communication	High-speed Two-way Digital Carrier-wave Communication
Rated Input Voltage	AC 3PH 380V +/-25% (3PH 285V ~ 3PH 475V)
Input Frequency	30 ~80 HZ
Rated Input Power	24 KVA
Power Factor	0.93
Efficiency	86%
Rated OCV	75V
Rated Output Current	50 ~ 500 A
Rated Output Voltage	12 ~ 50 V (Precision at 0.1V)
Duty Cycle	500A / 39V 100% @ 40°C
Applicable Material	Carbon Steel
Welding Process	CO ₂ / MAG / FCAW / MMA
Wire Diameter	φ1.0 / 1.2 / 1.4 / 1.6 mm
Welding Operation Mode	2T / 4T / Special 4T
Parameter Channel	10 (Standard)
Inductance Scope (Soft / Strong Arc)	-9 ~ +9
Reserved Communication Interface	CAN
Cooling Mode	Air Cool
Digital Meter on Wire-feeder	YES
Wire-feeding Speed	1.4 ~ 24 m/min
Electromagnetic Compatibility	IEC60974:10 EMS
Ingress Protection	IP 23S
Insulation Grade	H
Protection Against Lightening	Class D (6000V/3000A)
Working Temperature	-39°C ~ +50°C
Dimension (L / W / H)	620 x 300 x 480 mm
Gross Weight	52 KG

