

**HIGH PERFORMANCE
DIESEL WELDING SET**

DAW-500S

500A Permanent Magnet Welder



- Greatly improved arc welding performance
- 100% duty cycle realized at 400A
- Compact, lightweight and quiet
- Improved energy efficiency

Features

Dramatically improved arc welding performance

The 500A welder incorporates an innovative power generator with a permanent magnet and newly developed current control system that offers stable arc performance for all sizes of welding rods. This high-quality welding power source is suitable for pipeline construction and other projects.

Lightweight, compact design improves on-site maneuverability

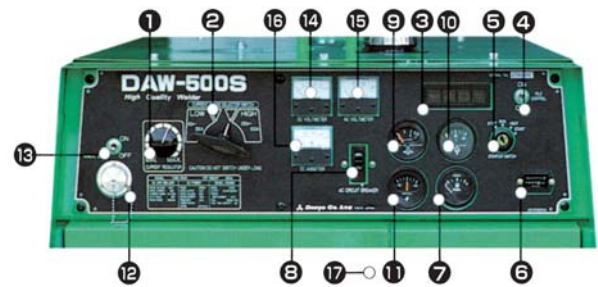
The welder's newly developed power generator incorporates a brushless permanent magnet and field coils that greatly reduce overall weight. Compared to previous models, 500A's powerful generator is more efficient, compact, lighter weight, and engine output requirement has been reduced by approximately 20%.

Economical owing to low fuel consumption

A built-in slow-down unit incorporated into the 500A's generator increases fuel efficiency and improves performance.

Designed for increased safety

The welding set is equipped with safety devices as standard equipment, such as an emergency shut-off device to protect the generator at welding output overload and the engine at low oil pressure, high water temperature and battery insufficient charge.



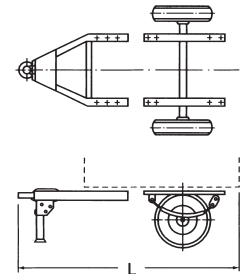
CONTROL PANEL

- | | | |
|---|-----------------------------|-------------------------------|
| Standard | Option Set 1 | Option Set 3 |
| ① Current Regulator | ⑨ Oil Pressure Gauge | ⑬ DC Voltmeter |
| ② Current Range Selector Switch | ⑩ Water Temperature Gauge | ⑭ AC Voltmeter |
| ③ Warning Lamp Unit (Oil, Water, Charge, Preheat) | ⑪ Battery Charging Ammeter | ⑮ DC Ammeter |
| ④ Idle Control Switch | Option Set 2 | Option Set 4 |
| ⑤ Starter Switch | ⑫ Remote Control Receptacle | ⑯ Polarity Change-Over Switch |
| ⑥ Hour Meter | ⑬ Remote Control Switch | |
| ⑦ Fuel Gauge | | |
| ⑧ AC Circuit Breaker | | |

TRAILER

	2-Wheel Trailer
Length	2070mm
Width	1290mm
Height	1325mm
Dry weight	520kg
Tire size	5.00 10-6PR

Dimensions and weight include welding set.



ISO 9001:2008 Certified
ISO 14001:2004

Specifications

MODEL DAW-500S

		MODEL DAW-500S					
DC WELDING GENERATOR	Type	Performance magnet type		ENGINE	Model	Kubota D-1703	
	Rated speed	2800min ⁻¹			Type	4-cycle, water-cooled diesel engine	
	Rated output	DC18kW			Rated output	25.4kW (34.5PS)/2800min ⁻¹	
	Rated current	460A			No. of cylinders	3	
	Rated voltage	38.4V			Displacement	1.647L	
	Current range	40~500A			Fuel	ASTM No. 2 diesel fuel or equivalent	
	Applicable electrode	2.6~8 mm			Fuel consumption	5.2L/hr	
Duty cycle	75%		Fuel tank capacity	45L			
AUXILIARY AC POWER	Maximum output	AC3.0kW		Starting system	Electric starting		
	Rated voltage	100/110/120/200/220/230/240V		Cooling system	Water-cooled by radiator with fan		
	Frequency	50Hz or 60Hz					
Dimensions (LxWxH)		1260 x 800 x 870 mm		Dry weight	435kg		

The specifications given herein are subject to change without notice.

Direct inquiries to the nearest Denyo distributor or to Denyo co.,Ltd.

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Denyo[®]

DIESEL ENGINE-DRIVEN DC WELDER/AC GENERATOR

DAW-500SS

High Performance 500A Permanent Magnet Welder DAW-500SS

-  **Greatly improved arc welding performance**
-  **100% duty cycle realized at 350A**
-  **Compact, lightweight and quiet**
-  **Improved energy efficiency**



FEATURES

Dramatically improved arc welding performance

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Lightweight, compact design improves on-site maneuverability

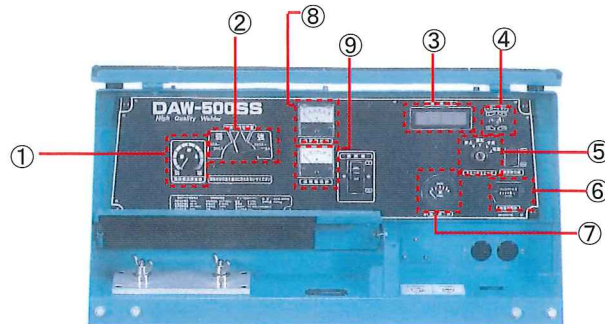
The welder's newly developed power generator incorporates a brushless permanent magnet and field coils that greatly reduce overall weight. Compared to previous models, 500A's powerful generator is more efficient, compact, lighter weight.

Economical owing to low fuel consumption

A built-in idle control unit incorporated into the 500A's generator increases fuel efficiency and improves performance.

Designed for increased safety

The welding set is equipped with safety devices as standard equipment, such as an emergency shut-off device to protect the generator at welding output overload and the engine at low oil pressure, high water temperature and battery insufficient charge.

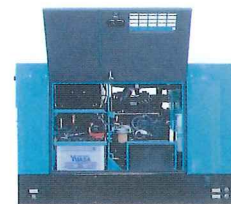


- ① Current Regulator
- ② Current Range Selector Switch
- ③ Warning Lamp Unit (Oil, Water, Charge, Preheat)
- ④ Idle Control Switch
- ⑤ Starter Switch
- ⑥ Hour Meter
- ⑦ Fuel Gauge
- ⑧ DC Voltmeter
- ⑨ DC Ammeter

Easy Daily Inspection & Maintenance

Daily inspection and maintenance can be carried out one side of the machine. In addition, the radiator can be cleaned easily. Switch key operation restarts the engine with air vented automatically. Alternator requires maintenance free.

The use of brushes or slip rings in the alternator eliminates the need for maintenance.



SPECIFICATIONS

DAW-500SS	
DC Welding Power	
Rated Output	17.7 kW
Rated Current	460A
Rated Voltage	38.4V
Welding Current Range	40-500A
Rated duty cycle	60%
Applicable electrode	2.0mm-8.0mm
AC Power Source	
Frequency	50/60Hz
Rated Output	3.0kVA
Rated Voltage	100/110/120/200/220/230/240V
No. of Phase	1-Phase
Power Factor	1.0
Diesel Engine	
Model	Kubota D1703-KA
Type	4-cycle, water-cooled diesel engine
Rated Output	25.4kW
Rated Speed	2800min ⁻¹
Displacement	1.647L
Fuel	ASTM No.2 diesel fuel or equivalent
Fuel consumption	5.0L/h ^{*1}
Fuel Tank Capacity	45L
Battery×Quantity	65D31R × 1
Dimensions/Weight	
Length×Width×Height	1420×800×900mm
Dry Weight	505kg
Noise	
7m dB(A)	65dB ^{*2}

*1 The fuel consumptions herein are measured under the condition that welding load is a rated value and the duty cycle is fixed at 60%

*2 The noise levels herein stated are the averaged value of the measured values of four directions of 7 meters length under non-loaded condition.

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Denyo The Denyo trademark is widely recognized as a brand, and is a registered trademark in 90 countries around the world.

DIESEL ENGINE-DRIVEN DC WELDER/AC GENERATOR

DLW-500ISW SmartStick



Smart Stick function improves efficiency and productivity of work!!

You can restart the engine even if you are working away from the welder. The operator needs only strike the welding stick!

FINISH!

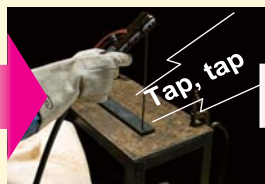


Finish welding.

STOP



The engine automatically stops within 1 to 30 minutes after welding ceases.



When restarting work, tapping the base metal with the electrode.

START



The engine welder will restart automatically.



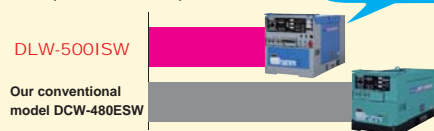
Resume welding works.

Innovative Smart stick technology will bring you awesome benefits!

1 UP the fuel efficiency

The sensor automatically shuts off the engine during periods of no load, so reduce the fuel consumption.

Comparison of uptime



Comparison of fuel cost



2 SAVE the maintenance cost

Less engine running hours = periodic replacements parts life will be longer. And extend the life-span of welding machine too.

3 ECO friendly products

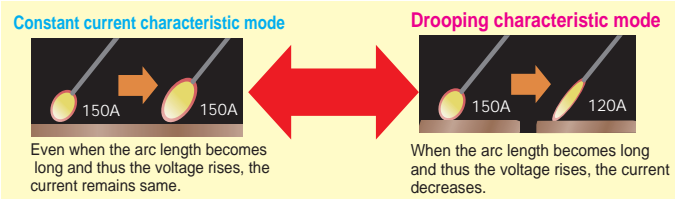
Shutting down the engine automatically while no operation = Save the limited valuable resource & Reduce the exhaust gas.



Further more features

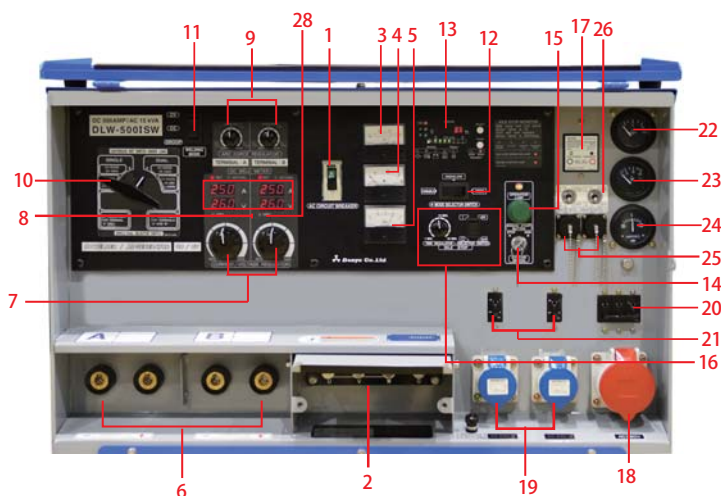
Welding Mode Selector Switch

EASY to use! Even beginners can do stable welding.
For professionals, they can adjust welding penetration as they like.
Only select your type of welding mode!



SAVE the fuel & maintenance cost.

The sensor automatically control the engine speed by the load capacity.
HIGH/LOW: Engine speed will be idle during no operation or the load capacity is low.
VARIABLE: Engine speed will be change depends on the welding Amp.



- 1.AC Circuit Breaker
- 2.3-Phase output Terminal
- 3.AC Voltmeter
- 4.AC Ammeter
- 5.Frequency Meter
- 6.DC Welding Output Terminal
- 7.Current / Voltage Regulator
- 8.Digital Panel (DC Voltmeter, DC Ammeter)
- 9.Arc Force Regulator
- 10.SINGLE-DUAL Selector Switch
- 11.Droop CC-CV Selector Switch
- 12.e-mode selector Switch
- 13.Engine Monitor Warning Lamp Unit (Oil Press. / Water Temp. / Charging / Preheat Hour Meter • Fuel Meter)
- 14.Starter Switch
- 15.Engine Start Button
- 16. Smart Stick Selector Switch/ Smart Stick Time Regulator
- 17. Earth Leakage Relay

OPTION

- 18. 3-Phase AC Output Receptacle
- 19. 1-Phase AC Output Receptacle
- 20.Circuit Breaker for 3-Phase AC Output Receptacle
- 21.Circuit Breaker for 1-Phase AC Output Receptacle

OPTION SET 1

- 22.Oil Pressure Gauge
- 23.Water Temperature Gauge
- 24.Battery Charging Ammeter

OPTION SET 2

- 25.Remote Control Receptacle
- 26.Remote Control Switch

OPTION SET 3

- 27.VRD SELECTOR (in the Bonnet)
- 28.VRD Lamp

SPECIFICATION TABLE

SPEC./MODEL		DLW-500ISW										
Frequency		Hz	50				60					
Rated output		kW	CC:17.1/CV:16.4				CC:18.8/CV:18.2					
Rated current		A	450				480					
Rated voltage		V	CC:38.0/CV:36.5				CC:39.2/CV:38.0					
DC WELDING OUTPUT	Single	Current Range	A CC:60~480				A CC:60~500					
		Voltage Range	V CV:14~37				V CV:14~40					
	Dual	Current Range	A CC:30~240				A CC:30~250					
		Voltage Range	V CV:14~29				V CV:14~29					
Rated Speed		min ⁻¹	3000				3600					
Duty Cycle		%	60									
AC POWER OUTPUT	Three Phase	Rated output	kVA 15									
		Rated voltage	V	200	380	400	415	220	240	380	415	440
		Rated current	A	43.3	22.8	21.7	20.9	39.4	36.1	22.8	20.9	19.7
		No. of Phase	3-Phase 4wire									
		Power Factor	0.8 (Lagging)									
		Excitation	Brushless type (with AVR)									
		No. of poles	2									
Insulation	Class F											

Maker/Model		KUBOTA V1505-K3B		
ENGINE	Type	Water-cooled diesel engine		
	Number of cylinders	4		
	BorexStroke	mm	78 x 78.4	
	Total displacement	L	1.498	
	Rated output	kW/min ⁻¹	24.6/3000	27.1/3600
	Battery	80D26R x 1		
	Fuel	DIESEL FUEL ASTM NO.2 or eq.		
	Fuel tank capacity	L	56	
	Lubricating oil capacity	L	6.0 (Oil pan 5.8L+Oil filter 0.2L)	
	Cooling water capacity	L	4.85 (Reserve tank included)	
SET	Length	mm	1550	
	Width	mm	800	
	Height	mm	885	
	Dry weight	kg	542	
	Total weight	kg	599	

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