



Denyo®

DENYO SOUNDPROOF TYPE

DIESEL ENGINE WELDER



DLW Series



DAW/TLW Series

Denyo Co., Ltd.

DLW SERIES

The improved diesel engine welder achieves low fuel consumption and low noise in newly developed e-mode operations.
High-quality AC power can be used while welding is being performed.



Narrow Body Width 560mm!

DLW-300LS



Welding Mode Selector Switch is equipped:
(for DLW-300LS and DLW-400LSW)

DENYO's DLW series welders are equipped with Welding Mode Selector Switch which enables the welding workers to change the working mode between the drooping characteristics mode and the constant current characteristic mode.



Constant current characteristic mode
Even when the arc length becomes long and thus the voltage rises, the current remains same.



Drooping characteristic mode
When the arc length becomes long and thus the voltage rises, the current decreases.



Two people can perform welding simultaneously.

DLW-300LSW

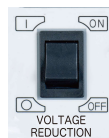


Short-circuit current during welding work can be adjusted:
(for DLW-300LSW)

The conditions of welding work can be freely adjusted from "Hard" to "Soft" at the discretion of a welding worker by Arc Force Regulator. When "Soft" is selected, the current for welding work becomes stable and welding of pipes and upward welding become easier to do. On the other hand, when "Hard" is selected, start of arc becomes much smoother.

Voltage reducing device is equipped
(for DLW-300LS and DLW-400LSW)

DENYO's engine-driven welders is capable to reduce the welding open circuit voltage down to 15V for non-working conditions and thus it is possible to prevent electric shocks of welding workers even at a place of a high altitude and a high humidity.



Duty Cycle 100% is realized:
(for DLW-300LS and DLW-400LSW)
Denyo's welders realized duty cycle 100% by adopting high-performance generators and allowance-rich engines.



DLW-400LSW



3Position control of engine rotation e-mode is equipped
(for DLW-300LS and DLW-400LSW)

DLW-300LS/400LSW is able to control in a non-step fashion the number of rotations in compliance with the load to be applied and a lower noise level and lower fuel consumption are attained with an excellent job performance.

Worker may select the optimum mode or e-mode from the 3 positions of control.
This realizes a lower consumption of fuel.
(for DLW-300LS and DLW-400LSW)

Variable /Low Speed Mode

When the welding work starts, the rotation of equipped engine works under non-step and variable rotation manner and the welding machine works at high speed mode when it is connected to alternate current (AC) power and works at low speed mode when it is under no load of current.



High/Low Speed Mode

When the welding work is performed by the machine or the welder is connected to alternate current (AC) power, the machine works at high speed mode, and when the machine is under no load of current, it works at low speed mode.

High Speed Mode

The welder works at high speed mode regardless non-load conditions or loaded conditions.

Welding work can be performed under a low-speed condition of the engine
(for DLW-300LSW)

Full Range Mode

When welding work starts or the equipped AC generator starts to operate, the welders works at high speed mode and when the unloaded condition of current is applied, the machine operates at low speed mode.

e-mode

When welding work is performed steadily, the welders becomes low speed mode. When the alternate current generator becomes in operation, the welders operates at high speed mode and the generator becomes in an unloaded condition, the welders comes back to low speed mode.



Explanation of a mark



The maximum welding current and the maximum application welding rod at the time of single welding.



Dry Weight



A brushless generator and a reactor



The maximum welding current and The maximum application welding rod of welding for two people.



IGBT chopper control system with Welding mode selector switch or Arc Force Regulator.



AVR, inverter load, thyristor load and computer load makes a quality exchange power supply with little waveform distortion to an electronic circuit.



AC power output 1- Phase 100/110/120/200/220/230/240V



IGBT chopper control system and with Arc Force Regulator.



Waveform correction circuit is included in the circuit of an inverter system, and a quality exchange power supply with little waveform distortion can be supplied.



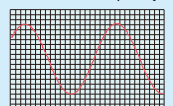
AC power output 3- Phase 200/220/230/240 or 380~440V



Thyristor electronic control and arc drive control.



Single or two people usage can be chosen with selector switch



DAW/TLW SERIES



DAW-180SS



Lightweight and compact design with water-cooled 2-cylinder diesel engine.



DAW-300LS



Non-step automatic control with a microcomputer assures optimum engine revolutions under any load conditions, with slow-down (low-speed) revolutions kept under no load.

The fuel cost can thus be reduced, ultra-low fuel consumption achieved, and ultralow noise level maintained under any working conditions.

The best arc-welding characteristics

The e-AVC300's microcomputer-aided welding control assures quiet, optimum operation that will accommodate any kind of welding rod.



TLW-230LS



Lightweight and compact design with water-cooled 2-cylinder diesel engine.



AC Power can be used while welding is being performed.



Economical at low fuel consumption.

All the products listed in this brochure are provided with the following functions.

Clean Engine

The engine equipped with the Closed Breathing System which keeps the blow-by gas in the machine, and the aluminum radiator which does not cause lead pollution is categorized as a construction machine that satisfies the emission gas regulation stage 3 (DAW-300LS/DLW-300LS/DLW-300LSW/DLW-400LSW/TLW-230LS), enforced by the Ministry of Land, Infrastructure and Transport (except for DAW-180SS)

Slowdown device reduces noises and saves

The Slowdown unit automatically lowers engine speed during no-load, reducing noise and increasing fuel efficiency. (except for DLW-300LS/DLW-400LSW)



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

The machine is equipped with an automatic airventing unit that eliminates air by turning a switch key when restarting the engine after fueling.

Alternator requires maintenance free

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

Various protective systems assuring safety

- This machine can automatically cut the power off when over-loading DC output. (except for TLW-230LS)
- Protect over-loading AC output by shutting down its circuit breaker.
- Automatically stop the engine with the warning indicators, at low lub oil pressure, high water temperature, and insufficient charging of the battery.
- Prevent from electrical leaking with its relay. (optional for all the products)

Options:

Four-wheel kit (except for DAW-180SS), exhaust pipe attachment, remote controller, measures against salt damage.



remote controller



Four-wheel kit

SPECIFICATION TABLE

Item \ Model	DAW-180SS	DAW-300LS	TLW-230LS	DLW-300LS	DLW-300LSW	e-mode	DLW-400LSW
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DC Welding Power

Rated Output (kW)	4.5	8.7	5.6	7.90/8.74	Single 7.90/8.74 Dual 3.28×2/3.58×2	4.22 1.86×2	Single 12.9/13.9 Dual 5.07×2/5.42×2
Rated Current (A)	170	280	200	260/280	Single 260/280 Dual 130/140	160 80	Single 370/390 Dual 185/195
Rated Voltage (V)	26.8	31.2	28	30.4/31.2	Single 30.4/31.2 Dual 25.2/25.6	26.4 23.2	Single 34.8/35.6 Dual 27.4/27.8
Welding Current Range (A)	30~180	30~300 (2200~3000min ⁻¹)	50~230	30~280/30~300	Single 60~280/60~300 Dual 30~140/30~150	60~160 30~80	Single 60~380/60~400 Dual 30~190/30~200
Rated duty cycle (%)	50			100	50	100	100
Applicable electrode (mm)	2.0~4.0	2.0~6.0	2.6~5.0	2.0~6.0	Single 2.0~6.0 Dual 2.0~3.2	2.0~4.0 2.0~2.6	Single 2.0~8.0 Dual 2.0~4.0

AC Power Source

Frequency (Hz)	50/60					
Rated Output (kVA)	3.0		5.0/5.5	10.4/11.4	10.0	15.0
Rated Voltage (V)	100/110/120/200/220/230/240			200/220/230/240 or 380/440		
No. of Phase	1-Phase, 2wire			3-Phase, 4wire		
Power Factor	1.0			0.8 (Lagging)		

Diesel Engine

Model	Kubota Z402	Kubota D722-K3A	Kubota Z482-K3A	Yanmar 3-3TNM68G	Kubota D905-K3A	Kubota D1105-K3B
Type	4-cycle, vertical, water cooled with radiator					
Rated Output (kW)	7.28	11.7	9.6	12.5/15.0	14.7/17.3	17.8/20.7
Rated Speed (min ⁻¹)	3600	3000	3600	3000/3600		
Displacement (L)	0.4	0.719	0.479	0.784	0.898	1.123
Fuel	ASTM No.2 diesel fuel or equivalent					
Fuel consumption (L/h) ※1	1.31	2.1	1.6	1.96/2.34	2.33/2.69	1.46
Fuel Tank Capacity (L)	15	19	36			42
Battery x Quantity	36B20L×1	55B24L×1	36B20L×1	55B24L×1		

Dimensions/Weight

Length×Width×Height (mm)	990×590×750	1270×680×740	1220×610×720	1410×560×770	1410×680×770	1520×700×770
Dry Weight (kg)	181	300	285	379	405	471

Noise

7m dB (A) ※2	65	64	60/63	63/65	64/67	58	64/67
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※1 The fuel consumptions herein are measured under the condition that welding load is a rated value and the duty cycle is fixed at 50%.

※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.

* When a welding machine and a generator are used simultaneously, please use them according to the instructions stipulated in the Operation Manual.



ISO 9001 Certified

The specifications, appearance and/or coloring of the products may be subject to change without notice.
Due to printing conditions of this brochure, coloring of the products may not be same as printed herein.
Storage, transportation and usage of the products shall, at any time, be carried out in accordance with the Operation Manual.

Denyo

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

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

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