

Power source technology for the future

Denyo[®]

Diesel Engine-Driven Welders



Diesel Engine-Driven Welders Line up

DAW-180SS

DLW-300LS

DLW-320LS2



Item

DC Welding Power

Rated Output	(kW)	4.5	7.90 / 8.74	7.9/8.7
Rated Current	(A)	170	260 / 280	
Rated Voltage	(V)	26.8	30.4 / 31.2	
Welding Current Range	(A)	30 - 180	30 - 280 / 30 - 300	30 - 300 / 30 - 320
Welding Voltage Range	(V)	-	-	-
Rated duty cycle	(%)	50	100	
Applicable electrode	(mm)	2.0 - 4.0	2.0 - 6.0	

Generator Output

Frequency	(Hz)	50 / 60	50 / 60	
Rated Output	(kVA)	3.0	10.4 / 11.4	10.7 / 11.8
Rated Voltage*1	(V)	220(100-240)	380(200-240 or 380-440)	
No. of Phase		1-Phase, 2wire	3-Phase, 4wire	
Power Factor		1.0	0.8 (Lagging)	

Diesel Engine

Model		Kubota Z402	Yanmar 3-3TNM68G	Kubota D902-K3A
Type		4-cycle, vertical, water-cooled with radiator		
Rated Output	(kW)	7.28	12.5 / 15.0	14.9 / 17.8
Rated Speed	(rpm)	3600	3000 / 3600	
Displacement	(L)	0.4	0.784	0.898
Fuel		ASTM No.2 diesel fuel or equivalent		
Fuel consumption*2	(L/h)	1.32	1.96/2.34	2.18 / 2.56
Fuel Tank Capacity	(L)	15	36	
Battery×Quantity		38B20R×1	55B24L×1	

Dimensions/Weight

Length×Width×Height	(mm)	990×590×750	1410×560×770	1410×680×760
Dry Weight	(kg)	181	379	386

Noise

7mdB	(A)*3	64	63 / 65	64 / 66
------	-------	----	---------	---------

*1 () indicates options *2 The fuel consumptions herein are measured under the condition that welding load is a rated value and the duty cycle is fixed at 50%. *3 The noise

Features

Welding Characteristics	CC	Welding Mode Selector switch: DROOP/CC
	-	Arc Force Regulator
Improves Work Efficiency	Inverter	AVR
Fuel Reduction	SLOW DOWN	e-mode(3 Position)
	-	SmartStick
Safety Device	-	Non-stick welding function
	-	Voltage Reductoin Device (VRD)

& Personalized Welding Operation

Change “  Welding mode selector switch” to DROOP/CC/CV to get suitable welding conditions.

DROOP (Drooping characteristic):
For stick welding and if you want to change the conditions by the arc length.



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

CC (Constant Current characteristic):
For stick welding and if you want to do stable welding.



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

CV (Constant Voltage characteristic):
For semi-automatic welding. (Wire Feeder)

Adjust “  Arc Force Regulator” SOFT, HARD or STANDARD” .



SOFT:
Pipe welding and welding in all types of positions. Able to get the end result looks more manicured because of the less spatter.

HARD:
Overlay welding, Underwater welding, Arc air gouging. Makes arc start easier. (Prevent the electrode form getting stuck on the base material.)

STANDARD:
Fillet welding. If you are ever in doubt, choose “STANDARD” .

DLW-300LSW2

DLW-400LSW

DCW-480ESW

DLW-500ISW



Single 7.9 / 8.74 Dual 3.28 x 2 / 3.58 x 2	Single 12.9 / 13.9 Dual 5.07 x 2 / 5.42 x 2	CC:17.1/CV:16.4	CC:17.1/CV:16.4	CC:18.8/CV:18.2
Single 260 / 280 Dual 130 / 140	Single 370 / 390 Dual 185 / 195	Single: 450 Dual: 225	Single: 450 Dual: 225	Single: 480 Dual: 240
Single 30.4 / 31.2 Dual 25.2 / 25.6	Single 34.8 / 35.6 Dual 27.4 / 27.8	(Single) CC: 38.0 / CV: 36.5 (Dual) CC: 29.0 / CV: 25.3	(Single) CC: 38.0 / CV: 36.5 (Dual) CC: 29.0 / CV: 25.3	(Single) CC: 39.2 / CV: 38.0 (Dual) CC: 29.6 / 26.0
Single 60-280 / 60-300 Dual 30-150 / 30-160	Single 60-380 / 60-400 Dual 30-190 / 30-200	Single CC:60-480 Dual CC:30-240	Single CC:60 - 480 Dual CC:30 - 240	Single CC:60 - 500 Dual CC:30 - 250
-	-	Single CV:14 - 37 Dual CV:14 - 37	Single CV:14 - 37 Dual CV:14 - 29	Single CV:14 - 40 Dual CV:14 - 29
100		60		
Single 2.0 - 6.0 Dual 2.0 - 3.2	Single 2.0 - 8.0 Dual 2.0 - 4.0	Single 2.0 - 8.0 Dual 2.0 - 5.0	Single 2.0 - 8.0 Dual 2.0 - 5.0	
50 / 60		50	50	60
10.4 / 11.4	15.0			
380(200-240 or 380-440)		380(200-240 or 380-440)		
3-Phase, 4wire 0.8 (Lagging)				

Kubota D902-K3A	Kubota D1105-K3B	Kubota V1505	Kubota V1505-K3B
4-cycle, vertical, water-cooled with radiator			
14.9 / 17.8	17.8 / 20.7	25.2	24.6/27.1
3000/3600		3000	3000/3600
0.898	1.123	1.498	1.498
ASTM No.2 diesel fuel or equivalent			
2.14 / 2.49	3.14 / 3.69	3.26	3.45/3.69
36	42	45	56
55B24L x 1		80D26R x 1	80D26R x 1
1410 x 560 x 770	1520 x 700 x 770	1540 x 720 x 885	1550 x 800 x 885
375	471	500	537
66 / 68	64 / 68	68	66/70

Levels herein stated are the averaged value of the measured values of four directions of 7 meters length under non-loaded condition.

Welding Mode Selector switch: DROOP/CC	CC / CV	Welding Mode Selector switch: DROOP/CC/CV
Arc Force Regulator		
Dual Operator Welding		
AVR		
e-mode(3 Position)	SLOW DOWN	e-mode(3 Position)
-	e-mode(2 Position)	SmartStick _{3s}
Non-stick welding function	-	Non-stick welding function
Voltage Reductoin Device (VRD)		

Dual Operator Welding

Denyo engine driven welders can be used for welding by two operators at the same time. This helps reduce purchasing costs for welding machines and contributes significantly to work efficiency improvements.



AVR & Inverter Can also be used as generators

Able to do double-duty at all kinds of work sites. Denyo Engine Welders can provide high quality electricity. It can be used for the power source for the precision machinery such as computer.



DAW-500S

DAW-500SS



17.7	17.7
460	
38.4	
40 - 500	
-	-
75	60
2.0 - 8.0	
50 / 60	
3.0	
220(100-240)	
1-Phase, 2wire	
1.0	

Kubota D1703	Kubota D1703-KA
4-cycle, vertical, water-cooled with radiator	
25.4	
2800	
1.647	
ASTM No.2 diesel fuel or equivalent	
5.2	5.0
45	
75D31R×1	95D31R×1
1260 x 800 x 870	1420 x 800 x 900
435	505
71	65

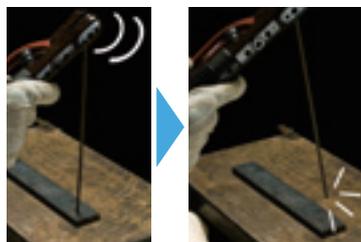
CC	
<input type="checkbox"/> Arc Force Regulator	
-	-
<input checked="" type="checkbox"/> Inverter	
<input checked="" type="checkbox"/> SLOW DOWN	
-	-
-	-
-	-

SAFE and SECURE

“Non-stick welding function” can improve work efficiency.

Easy to remove the electrode from the base metal even if the short-circuit occurs and the electrode sticks to the base metal.

Not only that, it can prevent accidents if the short-circuit occurs while operators are away from at site.



SLOW DOWN

Reducing CO₂ emission and Fuel consumption

Contribute to the environmental preservation and SAVE your maintenance cost.
Using Denyo eco functions, max of \$1,500/year can be saved!



e-mode

SmartStick SMART STICK



SLOWDOWN[OR IDLECONTROL]

Operation is at high speed during welding or when connected to an AC load, and at low speed with no load.



e-mode (2 position):

Engine rpm is changed to high or 2200min⁻¹ depending on the welding current.



e-mode (3 position):

Automatically adjust the engine rpm based on welding current.



SmartStick Smart Stick :

Automatically, engine shuts down while no operation after 1 to 30minutes that users set, and restart the engine by tapping the base material with the electrode.



Finish Welding.
The engine auto-matically stops within 1 to 30 minutes after welding ceases.



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



The engine welder will restart automatically. Then resume welding works.

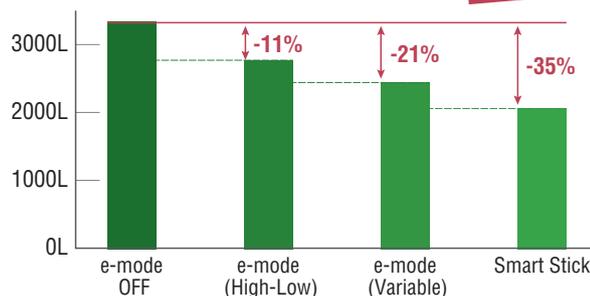
ANNUAL FUEL CONSUMPTION

<Sample>

MODEL: DLW-500ISW

When you weld at the Frequency of 50Hz Welding Power at 50%(225A) Duty cycle at 60%

Smart Stick Reduces Fuel Consumption by up to US \$1,500 yearly!



*Hours used: 4h/day (240day/year)

Diesel: Average price globally @ February 2022 (cite: Global Petrol Prices.com)

*The above figures are not guaranteed value and may vary depending on conditions of use.



“Voltage Reductoin Device (VRD)”

Reduce the risks from incidental disasters of electrical accidents. So workers can work even working in high places or in high humidity with relief.



Control Panel

DAW-180SS



DLW-300LS



DLW-320LS2



DLW-300LSW2



DLW-400LSW



DCW-480ESW



DLW-500ISW



DAW-500S



DAW-500SS



*The actual control panel may differ from the above photos depending on the options.

Options

	Related Welding and AC work						Security	Measures Against Salt Damage					Easy to Move		
	Remote Controller (30m)	Extension Cable for remote control (30m)	Spark Arrestor(built-in type)	Voltage Reduction Device (VRD)	Earth Leakage Relay or Earth Leakage AC circuit Breaker	Receptacle	Lockable Fuel Tank Cap	Alternator with Salt Damage Prevention coating	Salt Resistant Paint	Bonnet Caulking	Stainless Bolt	4-wheel Caster	4-wheel Trolley	2-wheel Trailer	
DAW-180SS			—	—	●	◎	—	●	●	●	●	◎	—	—	
DLW-300LS	●	●	●	◎	●	●	●	●	●	●	●	●			
DLW-320LS2	●	●		◎	●	●	●	●	●	●	●				
DLW-300LSW2	●	●	●	◎	●	●	●	●	●	●	●			●	
DLW-400LSW	●	●	●	◎	●	●	●	●	●	●	●			●	
DCW-480ESW	●	●	●	●	●	●	●	●	●	●	—			●	
DLW-500ISW	●	●	●	●	◎	◎	●	●	●	●	—	●		●	
DAW-500S	●	●		—	●	●	●	●	●	●	—	●		●	
DAW-500SS	●	●		—	●	●	●	●	●	●	—	●		●	

◎ : Standard equipment ● : Option — : Not Available

*Cold District Specification is available.

*DCW-480ESW, DLW-500ISW, DAW-500S have some other options. Please refer to each catalog.

*For other options, please feel free to ask your Denyo dealer.

Lockable Fuel Tank Cap



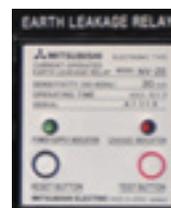
Spark Arrestor



Remote Controller(30m)



Earth Leakage Relay



4-Wheel Caster



2-Wheel Trailer



4-Wheel Trolley



Denyo[®]

The Denyo trademark is widely recognized as a brand, and is a registered trademark in 93 countries and 8 regions.



ISO 9001:2015
ISO 14001:2015
Certified

The specifications given herein are subject to change without notice.



CAT.No.FW06-06-20221101-02

Printed in Japan(SZ)

Denyo Co., Ltd.

Head office:2-8-5,Nihonbashi-horidomecho,Chuo-ku,Tokyo

103-8566,Japan

Tel:+81-3-6861-0055 Fax:+81-3-6861-1188

www.denyo.co.jp/english/



Diesel Engine-Driven Welders



Control Panel

DAW-180SS



DLW-300LS



DLW-320LS2



DLW-300LSW2



DLW-400LSW



DCW-480ESW



DLW-500ISW



DAW-500S



DAW-500SS



Options

	Related Welding and AC work					Security	Measures Against Salt Damage				Easy to Move			
	Remote Controller (30m)	Extension Cable for remote control (30m)	Spark Arrestor(built-in type)	Voltage Reduction Device (VRD)	Earth Leakage Relay or Earth Leakage AC circuit Breaker	Receptacle	Lockable Fuel Tank Cap	Alternator with Salt Damage Prevention coating	Salt Resistant Paint	Bonnet Caulking	Stainless Bolt	4-wheel Caster	4-wheel Trolley	2-wheel Trailer
DAW-180SS			—	—	●	◎	—	●	●	●	●	◎	—	—
DLW-300LS	●	●	●	◎	●	●	●	●	●	●	●	●		
DLW-320LS2	●	●		◎	●	●	●	●	●	●	●	●		
DLW-300LSW2	●	●	●	◎	●	●	●	●	●	●	●	●		●
DLW-400LSW	●	●	●	◎	●	●	●	●	●	●	●	●		●
DCW-480ESW	●	●	●	●	●	●	●	●	●	●	●	—		●
DLW-500ISW	●	●	●	●	◎	◎	●	●	●	●	●	—	●	●
DAW-500S	●	●		—	●	●	●	●	●	●	●	—	●	●
DAW-500SS	●	●		—	●	●	●	●	●	●	●	—	●	●

◎ : Standard equipment ● : Option — : Not Available
 *Cold District Specification is available.
 *DCW-480ESW, DLW-500ISW, DAW-500S have some other options. Please refer to each catalog.
 *For other options, please feel free to ask your Denyo dealer.

Lockable Fuel Tank Cap



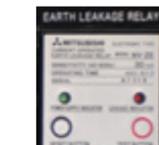
Spark Arrestor



Remote Controller(30m)



Earth Leakage Relay



4-Wheel Caster



2-Wheel Trailer



4-Wheel Trolley



Denyo® The Denyo trademark is widely recognized as a brand, and is a registered trademark in 93 countries and 8 regions.

The specifications given herein are subject to change without notice.



ISO 9001:2015
 ISO 14001:2015
 Certified

Denyo Co., Ltd.

Head office: 2-8-5, Nihonbashi-horidomecho, Chuo-ku, Tokyo
 103-8566, Japan
 Tel: +81-3-6861-0055 Fax: +81-3-6861-1188



www.denyo.co.jp/english/

Diesel Engine-Driven Welders Line up



Item

DC Welding Power											
Rated Output	(kW)	4.5	7.90 / 8.74	7.9/8.7	Single 7.9 / 8.74 Dual 3.28 x 2 / 3.58 x 2	Single 12.9 / 13.9 Dual 5.07 x 2 / 5.42 x 2	CC:17.1/CV:16.4	CC:17.1/CV:16.4	CC:18.8/CV:18.2	17.7	17.7
Rated Current	(A)	170	260 / 280		Single 260 / 280 Dual 130 / 140	Single 370 / 390 Dual 185 / 195	Single: 450 Dual: 225	Single: 450 Dual: 225	Single: 480 Dual: 240	460	
Rated Voltage	(V)	26.8	30.4 / 31.2		Single 30.4 / 31.2 Dual 25.2 / 25.6	Single 34.8 / 35.6 Dual 27.4 / 27.8	(Single) CC: 38.0 / CV: 36.5 (Dual) CC: 29.0 / CV: 25.3	(Single) CC: 38.0 / CV: 36.5 (Dual) CC: 29.0 / CV: 25.3	(Single) CC: 39.2 / CV: 38.0 (Dual) CC: 29.6 / 26.0	38.4	
Welding Current Range	(A)	30 - 180	30 - 280 / 30 - 300	30 - 300 / 30 - 320	Single 60-280 / 60-300 Dual 30-150 / 30-160	Single 60-380 / 60-400 Dual 30-190 / 30-200	Single CC:60-480 Dual CC:30-240	Single CC:60 - 480 Dual CC:30 - 240	Single CC:60 - 500 Dual CC:30 - 250	40 - 500	
Welding Voltage Range	(V)	-	-	-	-	-	Single CV:14 - 37 Dual CV:14 - 37	Single CV:14 - 37 Dual CV:14 - 29	Single CV:14 - 40 Dual CV:14 - 29	-	
Rated duty cycle	(%)	50	100		100		60		75	60	
Applicable electrode	(mm)	2.0 - 4.0	2.0 - 6.0		Single 2.0 - 6.0 Dual 2.0 - 3.2	Single 2.0 - 8.0 Dual 2.0 - 4.0	Single 2.0 - 8.0 Dual 2.0 - 5.0	Single 2.0 - 8.0 Dual 2.0 - 5.0		2.0 - 8.0	

Generator Output											
Frequency	(Hz)	50 / 60	50 / 60		50 / 60		50	50	60	50 / 60	
Rated Output	(kVA)	3.0	10.4 / 11.4	10.7 / 11.8	10.4 / 11.4	15.0	15.0		3.0	3.0	
Rated Voltage*1	(V)	220(100-240)	380(200-240 or 380-440)		380(200-240 or 380-440)		380(200-240 or 380-440)		220(100-240)	220(100-240)	
No. of Phase		1-Phase, 2wire	3-Phase, 4wire		3-Phase, 4wire		3-Phase, 4wire		1-Phase, 2wire	1-Phase, 2wire	
Power Factor		1.0	0.8 (Lagging)		0.8 (Lagging)		0.8 (Lagging)		1.0	1.0	

Diesel Engine										
Model		Kubota Z402	Yanmar 3-3TNM68G	Kubota D902-K3A	Kubota D902-K3A	Kubota D1105-K3B	Kubota V1505	Kubota V1505-K3B	Kubota D1703	Kubota D1703-KA
Type		4-cycle, vertical, water-cooled with radiator				4-cycle, vertical, water-cooled with radiator			4-cycle, vertical, water-cooled with radiator	
Rated Output	(kW)	7.28	12.5 / 15.0	14.9 / 17.8	14.9 / 17.8	17.8 / 20.7	25.2	24.6/27.1	25.4	
Rated Speed	(rpm)	3600	3000 / 3600		3000/3600		3000	3000/3600	2800	
Displacement	(L)	0.4	0.784	0.898	0.898	1.123	1.498	1.498	1.647	
Fuel		ASTM No.2 diesel fuel or equivalent				ASTM No.2 diesel fuel or equivalent			ASTM No.2 diesel fuel or equivalent	
Fuel consumption*2	(L/h)	1.32	1.96/2.34	2.18 / 2.56	2.14 / 2.49	3.14 / 3.69	3.26	3.45/3.69	5.2	5.0
Fuel Tank Capacity	(L)	15	36		36	42	45	56	45	
BatteryxQuantity		38B20Rx1	55B24Lx1		55B24L x 1		80D26R x 1	80D26R x 1	75D31Rx1	95D31Rx1

Dimensions/Weight											
LengthxWidthxHeight	(mm)	990x590x750	1410x560x770	1410x680x760	1410 x 560 x 770	1520 x 700 x 770	1540 x 720 x 885	1550 x 800 x 885	1260 x 800 x 870	1420 x 800 x 900	
Dry Weight	(kg)	181	379	386	375	471	500	537	435	505	

Noise											
7mdB	(A)*3	64	63 / 65	64 / 66	66 / 68	64 / 68	68	66/70	71	65	

*1 () indicates options *2 The fuel consumptions herein are measured under the condition that welding load is a rated value and the duty cycle is fixed at 50%. *3 The noise levels herein stated are the averaged value of the measured values of four directions of 7 meters length under non-loaded condition.

Features	CC	Welding Mode Selector switch: DROOP/CC	Welding Mode Selector switch: DROOP/CC	CC / CV	Welding Mode Selector switch: DROOP/CC/CV	CC
Welding Characteristics	-	Arc Force Regulator	Arc Force Regulator	Arc Force Regulator	Arc Force Regulator	Arc Force Regulator
Improves Work Efficiency	Inverter	AVR	Dual Operator Welding	AVR	Inverter	Inverter
Fuel Reduction	SLOW DOWN	e-mode(3 Position)	e-mode(3 Position)	SLOW DOWN	e-mode(3 Position)	SLOW DOWN
Safety Device	-	Non-stick welding function	Non-stick welding function	-	Non-stick welding function	-
	-	Voltage Reductoin Device (VRD)	Voltage Reductoin Device (VRD)	Voltage Reductoin Device (VRD)	Voltage Reductoin Device (VRD)	-

Personalized Welding Operation

Change "Welding mode selector switch" to DROOP/CC/CV to get suitable welding conditions.

DROOP (Drooping characteristic):
For stick welding and if you want to change the conditions by the arc length.



CC(Constant current characteristic):
For stick welding and if you want to do stable welding.



CV (Constant Voltage characteristic):
For semi-automatic welding. (Wire Feeder)

Adjust "Arc Force Regulator" to SOFT, HARD or STANDARD".

SOFT:
Pipe welding and welding in all types of positions. Able to get the end result looks more manicured because of the less spatter.

HARD:
Overlay welding, Underwater welding, Arc air gouging. Makes arc start easier. (Prevent the electrode form getting stuck on the base material.)

STANDARD:
Fillet welding. If you are ever in doubt, choose "STANDARD".



Dual Operator Welding

Denyo engine driven welders can be used for welding by two operators at the same time. This helps reduce purchasing costs for welding machines and contributes significantly to work efficiency improvements.

AVR & Inverter Can also be used as generators

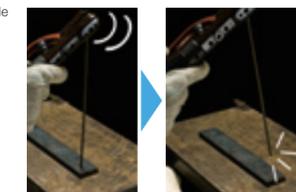
Able to do double-duty at all kinds of work sites. Denyo Engine Welders can provide high quality electricity. It can be used for the power source for the precision machinery such as computer.



SAFE and SECURE

"Non-stick welding function" can improve work efficiency.

Easy to remove the electrode from the base metal even if the short-circuit occurs and the electrode sticks to the base metal. Not only that, it can prevent accidents if the short-circuit occurs while operators are away from at site.



SLOW DOWN

e-mode

SmartStick SMART STICK

Reducing CO₂ emission and Fuel consumption

Contribute to the environmental preservation and SAVE your maintenance cost. Using Denyo eco functions, max of \$1,500/year can be saved!

SLOWDOWN[OR IDLECONTROL]

Operation is at high speed during welding or when connected to an AC load, and at low speed with no load.

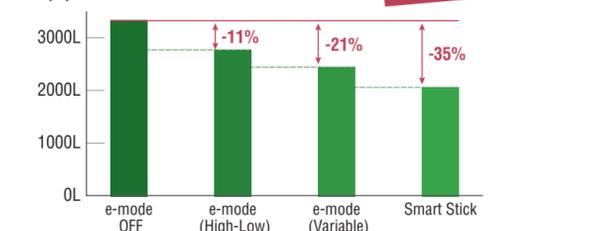
e-mode (2 position):
Engine rpm is changed to high or 2200min⁻¹ depending on the welding current.

e-mode (3 position):
Automatically adjust the engine rpm based on welding current.

SmartStick Smart Stick :
Automatically, engine shuts down while no operation after 1 to 30minutes that users set, and restart the engine by tapping the base material with the electrode.

ANNUAL FUEL CONSUMPTION

<Sample>
MODEL: DLW-500ISW
When you weld at the Frequency of 50Hz Welding Power at 50%(225A)
Duty cycle at 60%



*Hours used: 4h/day (240day/year)
Diesel: Average price globally @ February 2022
(cite: Global Petrol Prices.com)
*The above figures are not guaranteed value and may vary depending on conditions of use.

"Voltage Reductoin Device (VRD)"
Reduce the risks from incidental disasters of electrical accidents. So workers can work even working in high places or in high humidity with relief.

