



W400

AC/DC Pulse MAG/MIG Welder

Higher Productivity and Welding Quality! AC Pulse Welder is full of advantage!

- Daihen's AC-MIG pulse welder delivers high-quality welds on your thinnest material.
- Daihen's exclusive AC WavePulse produces the best welds with the least welding defects.
- The W400 Welbee delivers the best welds for aluminum, mild steel and stainless steel.
- Increased output of 33% over our prior model enables welding of medium-to-thick material!

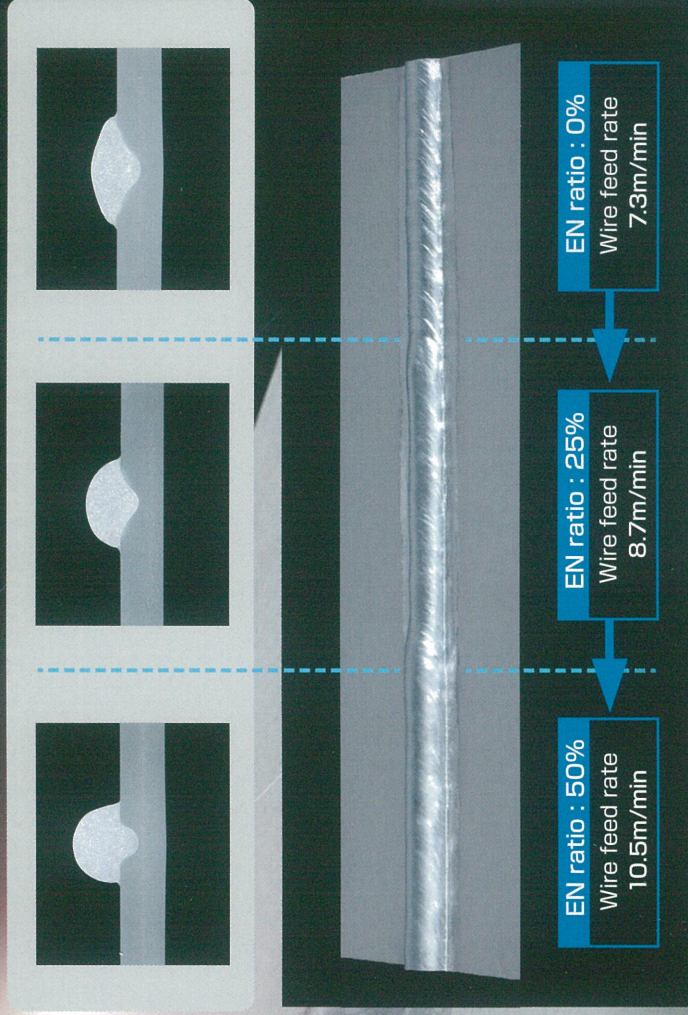
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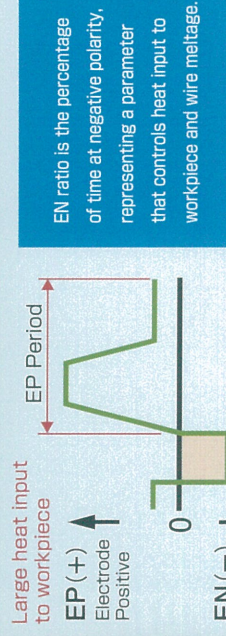
DAIHEN Corporation

Higher productivity! Higher welding quality! Universal Dual-Current Pulse MAG/MIG

Daihen's exclusive **AC pulse welding method** delivers the cleanest welds on the thinnest material.



W400 Welbee produces clean welds without burn-through...reducing the heat input to the workpiece while increasing the wire melting rate. Increasing the EN ratio from 40% of conventional welders to 50% of the Welbee W400 results in a weld with finer deposition control.



Click here to watch AC pulse welding video.



With a 33% increase in output current over the prior model, the W400 will make quick work of welding your medium to thick materials!

Our 400A rated output is capable of welding medium and thick material. AC Pulse MIG applications using 1.6mm diam. wire now support thin, medium and thick material welding.

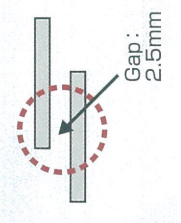
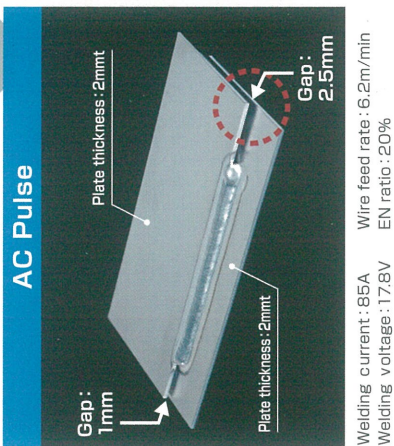
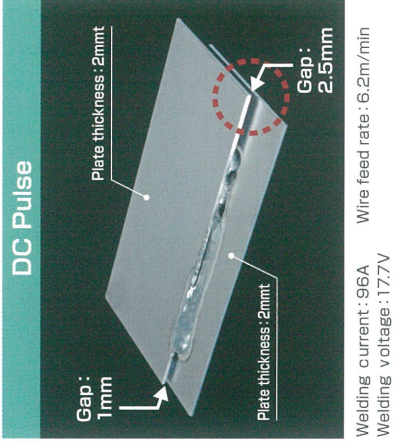
If you struggle to weld thin plates,

AC pulse welding eliminates gaps, burn-through and holes when welding thin plates.

Burn through in the welding of thin plates can be avoided.

When welding thin aluminum plates, controlled penetration and consistent wire melting can be achieved, eliminating defects due to burn-through.

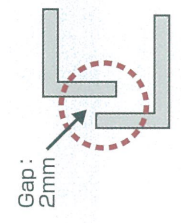
■ DC Pulse vs. AC Pulse Comparison—Weld Bridging
● Travel Speed : 60cm/min ● Base metal : A5052 (hard aluminum)



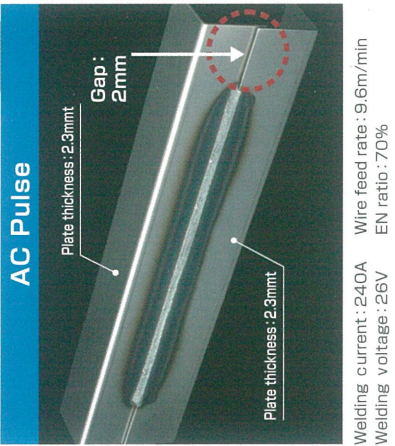
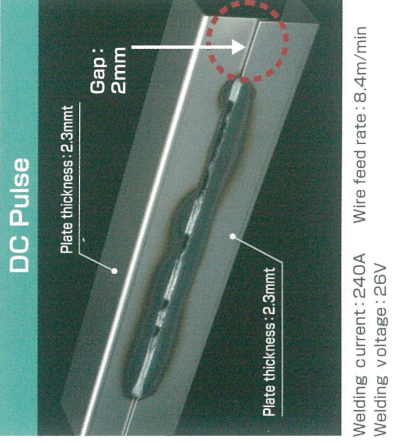
Clean welds on difficult joints with poor fit-up and gaps.

Poor fit-up with gaps larger than the thickness of the workpiece material can be handled through adjustment of the **EN ratio**.

Steady welding across inconsistent gaps, every time.



■ DC Pulse vs AC Pulse Comparison—Vertical Lap Joint
● Travel Speed : 75cm/min ● Base metal : SS400 (ASTM A36, EN S275)



If you demand the cleanest weld appearance without welding defects,

Daihen exclusive **WavePulse** delivers the cleanest welds with the least amount of defects.

Is it possible to get high-quality welds while using aluminum?



Can't MIG welding deliver clean welds on thin plates?



Auto Welder is full of advantages!

If you are required to weld a variety of materials and thickness,

Clean welds on **aluminum**, **mild steel** and **stainless steel**, regardless of thickness.

aluminum

Reduction and elimination of weld fumes and soot, produces cleaner welds and a healthier work environment.

Through the reduction of droplet temperature, welding fumes and soot are suppressed, creating a healthier welding environment. The resulting welds are clean and ready for assembly and finishing.

mild steel

High-quality welding is available even in the high-speed welding.

AC Pulse MIG welding utilizes **high EN ratio** to ensure sufficient weld deposits, even under high-speed, high-production applications.

stainless steel

The SUS ferrite mode is incorporated and application range is increased further.

The SUS ferrite mode is incorporated in addition to the conventional SUS solid mode. Wide application range including the welding of very thin plates for the mufflers of motorbikes, etc. is provided.

Is welding of various materials possible?



■ DC Pulse vs. AC Pulse Comparison—Welding Fumes
● Travel Speed: 40cm/min

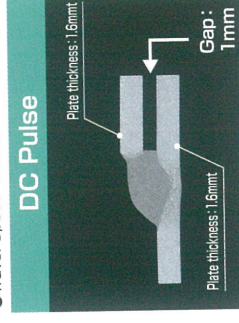


Welding current: 80A
Welding voltage: 17.8V
Wire feed rate: 5.2m/min

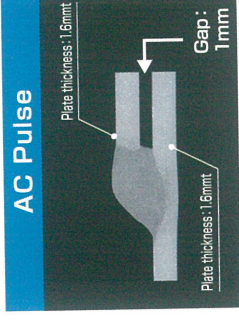


Welding current: 80A
Welding voltage: 17.8V
Wire feed rate: 5.9m/min
EN ratio: 20%

■ DC Pulse vs. AC Pulse Comparison—Welding deposition on gap
● Travel Speed: 150cm/min ● Base metal: SS400 (ASTM A36, EN S275)

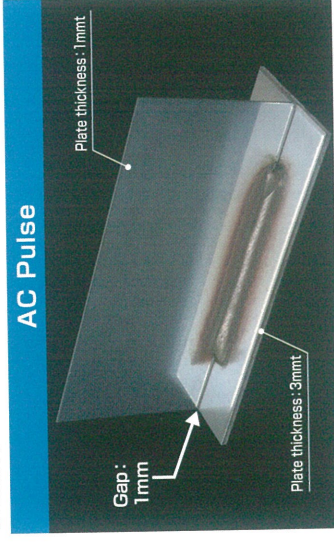


Welding current: 205A
Welding voltage: 23.5V
Wire feed rate: 6.6m/min

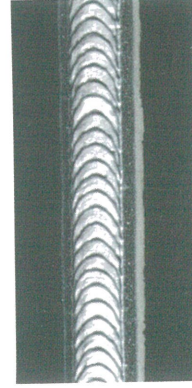


Welding current: 270A
Welding voltage: 27.5V
Wire feed rate: 9.9m/min
EN ratio: 60%

● Travel Speed: 70cm/min ● Base metal: SUS430 (ferrite)



Welding current: 140A
Welding voltage: 22V
Wire feed rate: 6.2m/min
Wave frequency: 20Hz
EN ratio: 70%



Welding current: 100A
Welding voltage: 20V
Wire feed rate: 40cm/min
Base metal: A5052
Plate thickness: 3mm
Wire: A5356 1.2mm

Daihen's exclusive AC Wave Pulse delivers beautiful TIG-like bead appearance.

Our AC WavePulse II controls arc length and wire feed speed to produce well-defined, scaled, TIG-like beads.

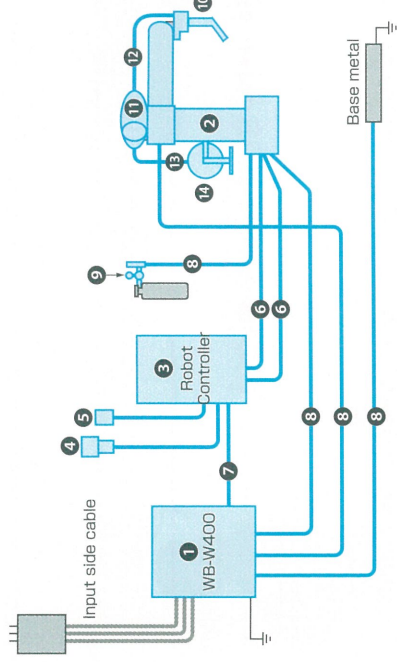
Minimizes Welding Defects Specific to Materials

AC WavePulse eliminates crack sensitivity and blow holes when welding aluminum, mild steel and stainless steel.

Connection Diagram, Typical Combination, and Periphery Equipment Required

Daihen FD-Series Robotic Welding Configuration

(Aluminum Welding)

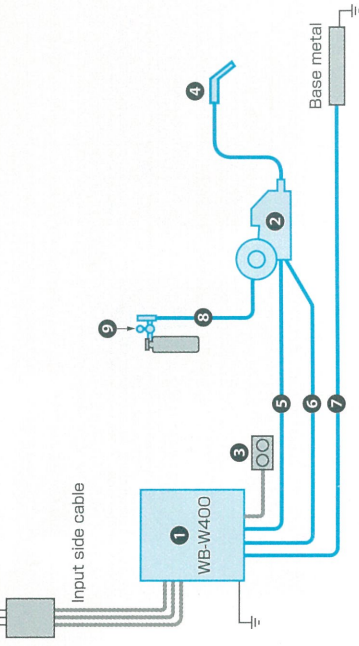


denotes standard components.

* The diagram above shows main components of a system configured with a robot and standard MIG.

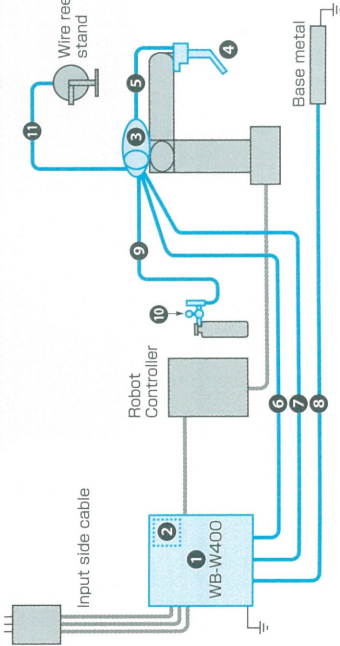
* For more information, contact your local distributor or DAIHEN sale personnel.

Manual welding Configuration



denotes standard components.

Robotic made by other companies Configuration



denotes standard components.

* The diagram above shows main components of an MIG configuration.

* Detailed specification needs to be determined if establishing connections with Robot made by other companies and auto machine.

Input Power Capacity and Cables Specifications

Items	Model	WB-W400
Input voltage	V	400 ± 15%
Phase	—	Three phase
Input power capacity	kVA	22 or more
Fuse/Breaker Capacity	Switch with fuse Breaker *1	A 50
Input side cable *2	mm ²	10 or more to 38 or less
Base Metal/Feeder power cable	mm ²	60
Earth Ground cable *2	mm ²	10 or more

*1: When using a no-fuse breaker, use a motor breaker.
*2: Numerical value in a parenthesis indicates the size of the welding machine side pureness terminal.
CE-Marking welding power supplies are equipped with a input cable and a ground cable.
● Depending on the area in which a power source is used, the specification is different.

Specifications

General name	Walbee Inverter W400	
Welding power source	Model	WB-W400
Rated input voltage	V	400±15%(Common to both 50 and 60Hz)
Number of phase		Three phases
Rated input	kVA	21.4(17.0kW)
Rated duty cycle	%	DC, DC Pulse:40/100, AC Pulse:60/100
Rated output current	A	DC:400/350, DC Pulse:400/283, AC Pulse:350/300
Rated load voltage	V	DC:34/31.5, DC Pulse:34/28.2, AC Pulse:31.5/29
Rated output current range	A	30~400
Rated output voltage range	V	12~34
Maximum no-load voltage	V	92
External dimensions(WxDxH)	mm	395×710×640(w/o eyebolt)
Mass	kg	86
Wire feeder unit	Model	CM-7403
Wire diameter *1	mm	(0.8, 0.9, 1.0, 1.2, (1.4, 1.6) 1.0, 1.2, (1.6) (1.0), 1.2, 1.6
Wire used		A solid wire and flux wire Hard/soft aluminum
Wire feeding speed	m/min	22 MAX
External dimensions(WxDxH)	mm	252×611×393
Mass	kg	14
Welding Torch	Model	BT3510-30
Rated current	A	MIG:300
Wire diameter *1	mm	(0.9, 1.0), 1.2 (1.0), 1.2, (1.6) 1.2, (1.6)
Rated duty cycle	%	MIG:50
Cooling system		DC MIG:50
Cable length	mm	Pulse MIG:30
Feeder unit side power cable	Model	3 (4, 5, 6)
Cable size	mm ²	Water cooling
Base material side power cable	Model	BKPD-6002
Cable size	mm ²	60

*1: Option parts are required if selecting any of bracketed wire diameters.

Standard Accessories

Wire feeder	CM-7403	CMA-7403	CMAW-7403
Gas hose (3m)	1	1	1
Welding touch	BT3510-30	WTS300-SD	BTA300-30
Hex key (M5)	1	1	1

Options

Extension cable

	5m	10m	15m	20m
Power cable * (common for base material and feeder hose)	BKPD-6007	BKPD-6012	—	—
Gas hose	—	—	BKPD-8017	BKPD-8022
Feeder control cable (10-core)	BKGG-0605	BKGG-0610	BKGG-0615	BKGG-0620
Analog remote control cable	BKCPJ-1005	BKCPJ-1010	BKCPJ-1015	BKCPJ-1020
Digital remote control cable	BKCPJ-0605	BKCPJ-0610	BKCPJ-0615	BKCPJ-0620
Water hose	BKCAN-0405	BKCAN-0410	BKCAN-0415	BKCAN-0420
	BKWR-0605	BKWR-0610	BKWR-0615	BKWR-0620

*Welding machine powered by an extension cable does not require the use of a 2 m standard power cable.
*Contact us to specify needed length of your power cable over 20 m.
*It is recommended to select an 80 mm² cable for welders run at near rated current, water-cooled, or with over 15 m power cable.

Analog remote control box(3m)

Product Name	Parts Number
Analog remote control box(3m)	K5416S00

Digital remote control box

(requires a complete set composed of three below)

Product Name	Model
Digital remote control box	E-2442
Control cable	BKCAN-0410(10m)
Conversion adapter (classified as a part)	K5810B00

Interface for Robot made by other companies

Product Name	Model
Interface	IFR-101WB

*Contact us for details to establish connections with an external robot.

Wire Feeder for Robot made by other companies

Model	CMRE-742
Wire diameter	1.2, 1.6mm
Wire type	Solid; Flux-cored Wire
Mass	7kg
External dimensions(WxDxH)	195×275×235mm

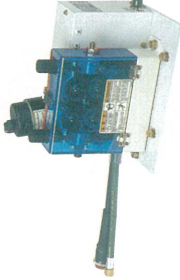
*The weight and dimensions above exclude cables.

Parts Kit CMRE-742 for Aluminum Welding

Parts Number : K5879B00



Digital remote control box



Wire feeder unit for Robot made by other companies

In accordance with DAIHEN's policy of make continuing improvements, design and/or specifications are subject to change without notice and without any obligation on the part of manufacturer.

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