



**The best choice
for thick plate welding
with a wide range of settings**

We[!]bee The Short Arc 500

Thick Plate Welding Market Challenges

● Major challenges facing the thick plate welding industry



Constant
requirement
for high **quality**



Aging workforce
with necessary skills



Successors and
skills transfer



Energy savings
and **environmental**
considerations



● Approach to meeting these challenges



Improved
quality



Improved
productivity



**Sustainable
development**
of the thick plate
welding industry

Welbee ***The Short Arc 500***

the best choice for thick plate welding, **provides the solution.**



Welbee
The Short Arc 500

- Highest quality welding
- Reduced dependence on skill
- Energy efficient for lower environmental impact

Helps meet thick plate welding challenges.

New welding mode:

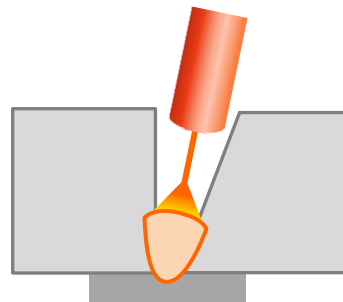
FP-GMA mode

- Enables deep penetration

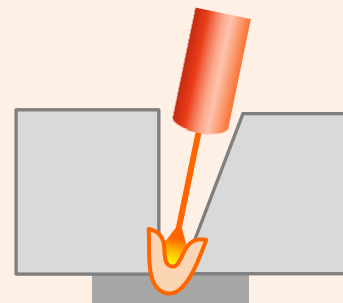


Helps resolve poor penetration in initial layer and other issues.

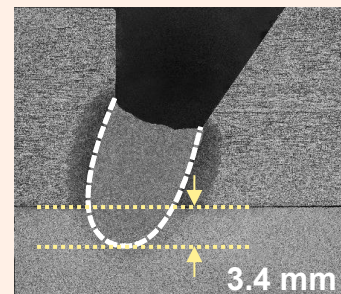
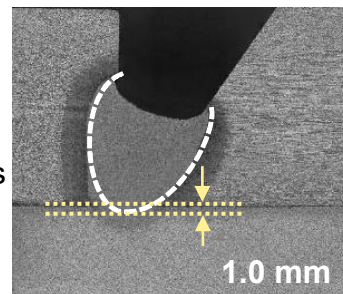
Conventional DC mode



FP-GMA mode



Cross-section
macro images



Range of functions for improved ease of use

Large LCD touch panel



LCD screen for improved visibility and intuitive operation

- Features large LCD touch panel
- Multilingual support
(English , Japanese , Vietnamese , Indonesian)

Extensive functions to assist beginners

- Welding guide function
- Welding advisor

New welding management functions

- Wire consumption calculation function
- Heat input display function

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Reduced training burden

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Welding guide function



Automatically sets optimum current & voltage for joint type and thickness specified

Enables anyone to produce high-quality welds easily

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Welding advisor



Gives users appropriate advice

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- **Welding advisor**

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Wire consumption calculation function



Preset target wire consumption volume

Prevents welding issues caused by sudden wire depletion

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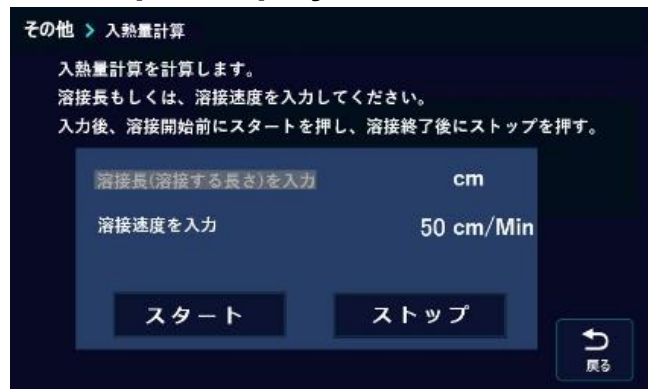
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Heat input display function



Enter weld length or welding speed

**Automatically calculates
heat input**

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We!bee
The Short Arc 500

Impressive energy-saving performance

Helps reduce electricity costs and contribute to decarbonization.

Reduces CO₂ emissions and power consumption **by over 10%** compared to previous Daihen products (thyristor type machines).

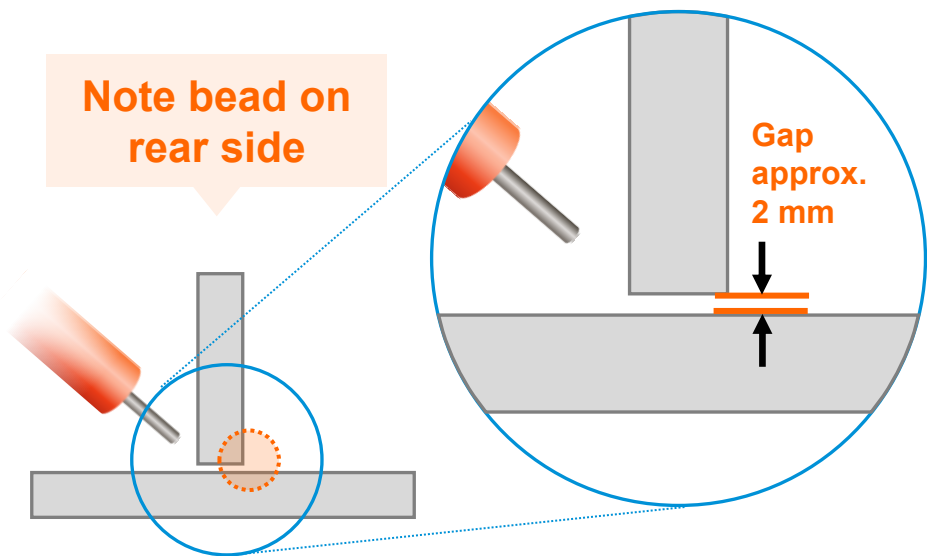
Annual CO₂ emissions reduced by **0.9 t**; electricity costs **reduced by approx. 50,000 yen**

Model	500 A thyristor-type	We!bee The Short Arc 500
Power consumption	15.8 kW	14.2 kW
Annual power consumption	Approx. 17,100 kWh	Approx. 15,900 kWh
Annual electricity costs	Approx. 393,000 yen	Approx. 343,000 yen

Assumed operating conditions Welding current: 350 A Welding time: 4 h/day (8 h)
Operating days: 260 days Electricity unit cost: 23 yen/kWh

Demonstration details

Comparison of **regular DC mode** and **FP-GMA mode** to demonstrate **difference in penetration depth**



Demonstration conditions

Material	Mild steel (SS400)
Plate thickness	9 mm
Target	Fillet
Gap	Approx. 2 mm
Welding conditions	350 A, 37 V
Gas/wire diameter	CO ₂ , Φ 1.2 mm

* This is a comparison performed under demo conditions. Plate thickness and target shape must be taken into account for actual welding.

Count on the *We[!]bee The Short Arc 500*
to meet **thick plate welding challenges.**

DAIHEN