

ISO 9001 Registered



be smart  
tough

**We/bee II**

**NEW**

- P400L II
- P500L II
- P400 II
- M350L II
- M350 II
- M500 II

The best choice  
for all welding scenes.



DAIHEN Corporation

# Welbee II

Better usability for everyone



**P400L II** **M350L II**  
**P400 II** **M350 II**

**P500L II**  
**M500 II**

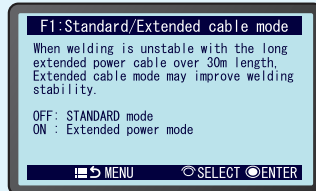
## be smart

### New panel with excellent visibility and easy operation

#### Easier to access welding info

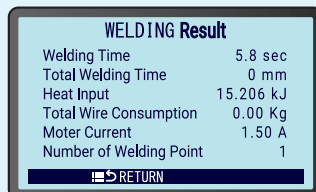
##### | Detailed display of functions

Details such as functions, welding management functions, and errors are displayed, and you can utilize the functions and deal with troubles without an instruction manual.



##### | Display of welding results

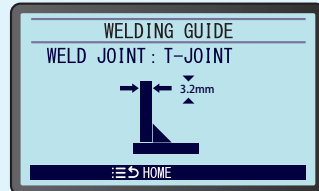
When welding is completed, such records as welding time, wire consumption, and heat input are displayed. This is useful for welding quality control and prediction of maintenance time.



#### User-friendly functions

##### | Welding guide function

Welding conditions are automatically set simply by selecting the joint type and plate thickness. This function supports the setting of conditions for those who are unfamiliar with welding work.



##### | Improved visibility of current / voltage display

The current/voltage display screen is 140% larger than before, so you can clearly see it even when you are away from the welding power source.

##### | Easy-to-read LCD panel display

You can easily change the font size and background color of the panel according to the usage environment and worker's choice.

\* Welding conditions are guidelines and do not guarantee welding results.

## be tough

### Pursuit of durability and maintainability

#### ■ Welbee side-flow structure

##### | High dust resistance

Improved reliability with the separate structure that prevents dust from entering the area in which electronic components are mounted.

##### | Easy maintenance

Due to the revolution control of the cooling fan according to its duty cycle or ambient air temperature, the design prevents dust from entering the area where electronic components are installed. Also, air blow can be made without opening the cover, making it easy to clean dust and dirt.



Dust intrusion into electronic parts can be reduced by approx.

98%

### The rich product lineup is available for various types of welding.

Model	Welding process	Wire type	Wire dia. (mm)						Shielding gas
M350LII	CBT-EX (DC low spatter)	Mild steel	0.8	0.9	1.0	1.2	-	-	CO <sub>2</sub> /MAG
		Stainless steel / Stainless ferritic	0.8	0.9	1.0	1.2	-	-	MIG (Ar-2%O <sub>2</sub> )
	DC	Mild steel	0.8	0.9	1.0	1.2	-	-	CO <sub>2</sub> /MAG
		Mild steel flux cored	-	-	1.0	1.2	1.4	-	CO <sub>2</sub>
		Mild steel metal cored	-	-	-	1.2	1.4	-	CO <sub>2</sub>
		Stainless steel / Stainless ferritic	0.8	0.9	1.0	1.2	-	-	MIG (Ar-2%O <sub>2</sub> )
		Stainless flux cored	-	0.9	-	1.2	-	-	CO <sub>2</sub>
		Mild steel	-	-	-	1.2	1.4	1.6	CO <sub>2</sub> /MAG
M500II	DC	Mild steel flux cored	-	-	-	1.2	1.4	1.6	CO <sub>2</sub>
		Mild steel metal cored	-	-	-	1.2	1.4	1.6	CO <sub>2</sub>
		Stainless steel	-	-	-	1.2	-	1.6	MIG (Ar-2%O <sub>2</sub> )
		Stainless ferritic	-	-	-	1.2	-	-	MIG (Ar-2%O <sub>2</sub> )
		Stainless flux cored	-	-	-	1.2	-	1.6	CO <sub>2</sub>
		Mild steel	-	0.9	1.0	1.2	-	-	MAG
		Stainless steel / Stainless ferritic	-	0.9	1.0	1.2	-	-	MIG (Ar-2%O <sub>2</sub> )
		P400II	DC pulse	Soft aluminum	-	-	-	1.2	-
Hard aluminum	-			-	1.0	1.2	-	1.6	MIG (Ar)
Brazing Cu Si	-			0.9	-	1.2	-	-	MIG (Ar)
Brazing Cu Al	-			0.9	-	1.2	-	-	MIG (Ar)
DC	Mild steel		0.8	0.9	1.0	1.2	-	-	CO <sub>2</sub> /MAG
	Mild steel flux cored		-	-	1.0	1.2	-	-	CO <sub>2</sub>
	Mild steel metal cored		-	-	-	1.2	-	-	CO <sub>2</sub>
	Stainless steel		0.8	0.9	1.0	1.2	-	-	MIG (Ar-2%O <sub>2</sub> )
MS-MIG	Stainless ferritic	-	-	-	1.2	-	-	MIG (Ar-2%O <sub>2</sub> )	
	Stainless flux cored	-	0.9	-	1.2	-	-	CO <sub>2</sub>	
	Soft aluminum	-	-	-	1.2	-	1.6	MIG (Ar)	
	Hard aluminum	-	-	1.0	1.2	-	1.6	MIG (Ar)	
P400LII P500LII	DC pulse	Hard aluminum	-	-	-	-	-	1.6	MIG (Ar)
		Mild steel	0.8	0.9	1.0	1.2	(1.4)	(1.6)	MAG
	DC	Stainless steel	0.8	0.9	1.0	1.2	-	(1.6)	MIG (Ar-2%O <sub>2</sub> )
		Stainless ferritic	0.8	0.9	1.0	1.2	-	-	MIG (Ar-2%O <sub>2</sub> )
		Soft aluminum	-	-	-	1.2	-	1.6	MIG (Ar)
		Hard aluminum	-	-	1.0	1.2	-	1.6	MIG (Ar)
		Brazing Cu Si	-	0.9	-	1.2	-	-	MIG (Ar)
		Brazing Cu Al	-	0.9	-	1.2	-	-	MIG (Ar)
	CBT-EX (DC low spatter)	Mild steel	0.8	0.9	1.0	1.2	-	-	CO <sub>2</sub> /MAG
		Stainless steel / Stainless ferritic	0.8	0.9	1.0	1.2	-	-	MIG (Ar-2%O <sub>2</sub> )
		Mild steel	0.8	0.9	1.0	1.2	(1.4)	(1.6)	CO <sub>2</sub> /MAG
		Mild steel flux cored	-	-	1.0	1.2	1.4	(1.6)	CO <sub>2</sub>
Mild steel metal cored		-	-	-	1.2	1.4	(1.6)	CO <sub>2</sub>	
Stainless steel		0.8	0.9	1.0	1.2	-	(1.6)	MIG (Ar-2%O <sub>2</sub> )	
MS-MIG	Stainless flux cored	-	0.9	-	1.2	-	(1.6)	CO <sub>2</sub>	
	Stainless ferritic	0.8	0.9	1.0	1.2	-	-	MIG (Ar-2%O <sub>2</sub> )	
	Soft aluminum	-	-	-	1.2	-	1.6	MIG (Ar)	
	Hard aluminum	-	-	1.0	1.2	-	1.6	MIG (Ar)	
	Brazing Cu Si	-	0.9	-	1.2	-	-	MIG (Ar)	
	Brazing Cu Al	-	0.9	-	1.2	-	-	MIG (Ar)	

DC manual welding and DC TIG (touch start) can be used with all welding power sources. The TIG solenoid valve kit is required when using TIG welding (see Optional Parts).

# DC pulse / Wave pulse P400 II P400L II P500L II

Welbee pulse welding has been refined to enable the best welding of all the materials of steel, stainless steel and aluminum.

## High quality pulse welding by Welbee

### Mild steel

No special technique is required to obtain beautiful welding results with less spatter and uniform bead toes.

- Welding conditions
- Welding current : 115A ● Arc voltage : 23.1V ● Plate thickness : 2.3mm
  - Wire dia. :  $\phi$ 1.2mm ● Travel speed : 60cm/min ● Shielding gas : 80%Ar+20%CO<sub>2</sub>



### Stainless steel

Controlled droplet transfer enables to obtain good weld beads even with highly viscous stainless steel wire's molten droplets.

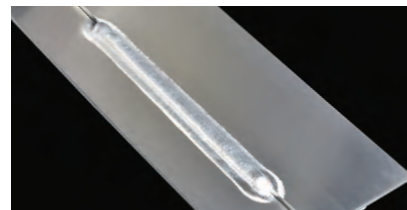
- Welding conditions
- Welding current : 115A ● Arc voltage : 21.0V ● Plate thickness : 2.0mm
  - Wire dia. :  $\phi$ 1.2mm ● Travel speed : 60cm/min ● Shielding gas : 98%Ar+2%O<sub>2</sub>



### Aluminum

Beautiful weld beads can be obtained by suppressing the generation of fine particle spatter.

- Welding conditions
- Welding current : 55A ● Arc voltage : 18.5V ● Plate thickness : 2.0mm
  - Wire : Hard aluminum  $\phi$ 1.2mm ● Travel speed : 35cm/min ● Shielding gas : 100%Ar



## Best-suited smart welding pulse by AI technology NEW

In the case of high speed welding, the set voltage is generally lowered to suppress undercutting, but there have been such problems to be solved as increased spatter, adhered spatter on the base metal and reduced weld metal. The smart pulse is helpful to reduce spatter in which it predicts spatter occurrence to adjust automatically the pulse waveform to the most appropriate shape to reduce spatter, according to the rule base developed by OTC independently.

■ Comparison in high speed welding by smart pulse ●Function No.84,85

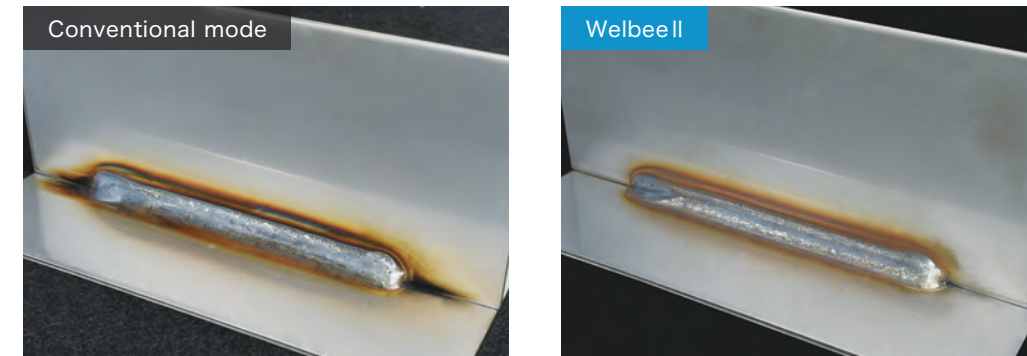
	Smart pulse_OFF	Smart pulse_ON
Auto-adjust switching	230A / 29.0V	230A / 23.5V
Welding conditions		
State of arcing	Undercut	Increased spatter
Bead appearance	Generated undercut	Adhered spatter
Cross-section	3mm	3mm
	Open arc caused undercut.	Smart pulse reduced spatter and achieved good welding results.

- Welding conditions
- Welding mode : Mild steel DC pulse
  - Plate thickness : 1.6mm
  - Wire dia. :  $\phi$ 1.2mm
  - Travel speed : 150cm/min
  - Shielding gas : 80%Ar-20%CO<sub>2</sub>

\*1 The rule base is a method of processing data based on the input rules.  
\* Automatic machine mode of mild steel pulse is supported only.

## Improved stainless steel mode provides more beautiful bead appearance. NEW

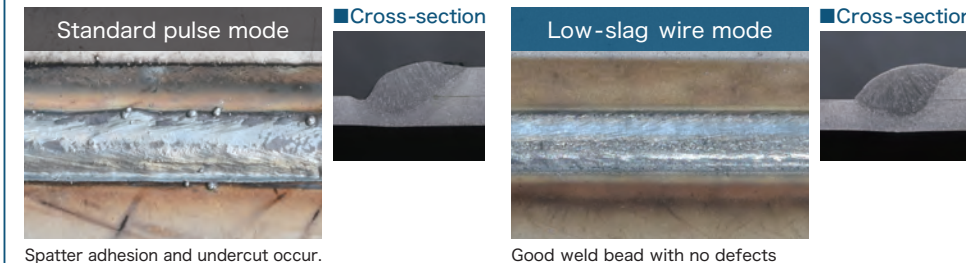
The soft arc created by the originally developed new waveform realizes stable droplet transfer while suppressing the weld scale which has been a problem in stainless steel welding. Also, the short arc length improves the arc position aiming and manipulation performance.



- Welding conditions
- Welding current : 200A
  - Arc voltage : 26.7V
  - Plate thickness : 2.0mm
  - Wire dia. :  $\phi$ 1.2mm
  - Travel speed : 100cm/min
  - Shielding gas : 98%Ar+2%O<sub>2</sub>

## Option Improved performance for low slag wires NEW

Low slag wires with low Si content tend to cause unstable arc in high speed welding and have such many problems as bead meandering, undercut, and large particle spatter adhesion. This mode is designed specifically for low slag wires to solve these problems. Highly efficient welding can be made, creating the sound weld beads without welding defects even in high speed welding.



- Welding conditions
- Welding current : 270A
  - Arc voltage : 27.8V
  - Base metal : galvanized steel 45g/m<sup>2</sup> 2.3mm
  - Wire dia. :  $\phi$ 1.2mm
  - Travel speed : 130cm/min
  - Shielding gas : 80%Ar+20%CO<sub>2</sub>

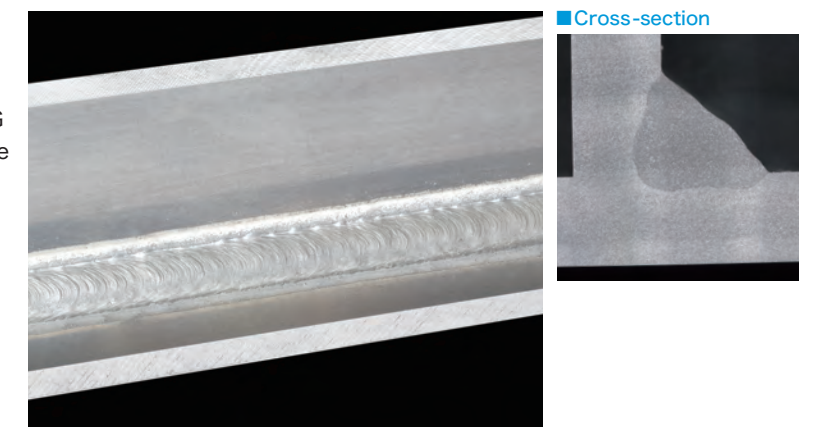
## MS-MIG P400 II P400L II P500L II

### Achieving outstanding stability in aluminum welding of medium thick plates NEW

In aluminum welding in the medium and high current ranges, the arc tends to become unstable, which causes such problems as bead meandering and poor penetration. Originally developed MS-MIG from OTC is resistant to disturbance and keeps the welding current constant. Even in the medium and high current ranges, the stable arc achieves beautiful beads and consistent penetration.

\* Applicable only to hard aluminum wire with a diameter of 1.6mm

- Welding conditions
- Welding current : 280A
  - Plate thickness : 10mm
  - Wire : Hard aluminum  $\phi$ 1.6mm
  - Travel speed : 40cm/min
  - Shielding gas : 100%Ar



# CBT-EX (DC low spatter)

Controlled Bridge Transfer-Expanded

**P400L II** **P500L II** **M350L II**

## Free of spatter removal work by Welbee's precision control

Spatter generation can be reduced by up to 80% in the low, medium and high current ranges. Since the amount of spatter that adheres on the base metal can be reduced, the time for removing such spatter can be shortened. This contributes to improving work efficiency.

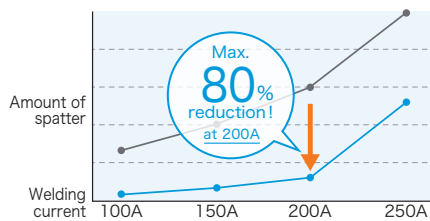
Welding method	Comparison of spatter during welding	Large spatter particles that have to be removed (0.5mm or larger)
CO <sub>2</sub> welding		
Welbee II CBT-EX		

**Welding conditions**

- Welding current : 200A ● Travel speed : 50cm/min
- Wire dia. : φ1.2mm ● Shielding gas : CO<sub>2</sub>
- Welding time : 2.5min

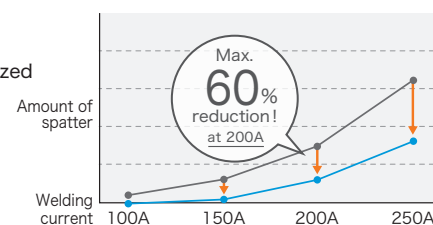
**CO<sub>2</sub> welding**

Low spatter comparable to those in MAG welding can be achieved even in CO<sub>2</sub> welding.



**MAG welding**

Spatter can be minimized in MAG welding.



# DC welding

Common to the series

## High quality welding can be achieved in all scenes in the low and high current ranges.

High welding performance can be demonstrated in a wide range of applications by using both semi-automatic and automatic machines. Uniform bead appearance can be achieved due to little change in arc length even when the wire extension fluctuates and in high speed welding.

**Thin plate**



Uniform and beautiful beads with little spatter

**Welding conditions**

- Welding current : 120A
- Arc voltage : 16.9V
- Plate thickness : 1.6mm
- Wire dia. : φ0.9mm
- Travel speed : 45cm/min
- Shielding gas : MAG

**Medium thick plate**



Stable arc realizes flat weld beads even at high current.

**Welding conditions**

- Welding current : 300A
- Arc voltage : 35.0V
- Plate thickness : 9.0mm
- Wire : Mild steel flux cored φ1.2mm
- Travel speed : 35cm/min
- Shielding gas : CO<sub>2</sub>

## Convenience and stability provided by extension mode

When the power cable is extended, the arc tends to become unstable. In such case, the use of this mode minimizes the influence of disturbance, and thereby stable welding performance can be provided.

**Welding conditions**

- Welding current : 250A ● Arc voltage : 29.0V ● Plate thickness : 6.0mm
- Wire dia. : φ1.2mm ● Travel speed : 40cm/min ● Shielding gas : CO<sub>2</sub>

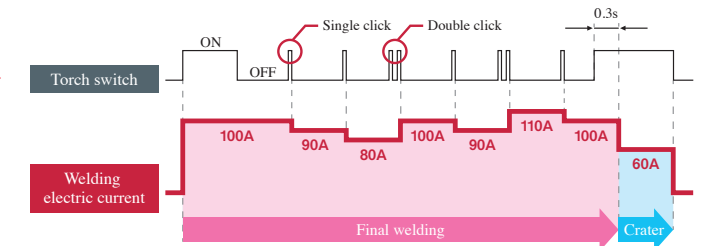
	Standard mode	Extension mode
Cable length 40m		

# Smart function

Common to the series

## Adjusting the welding electric current by clicking

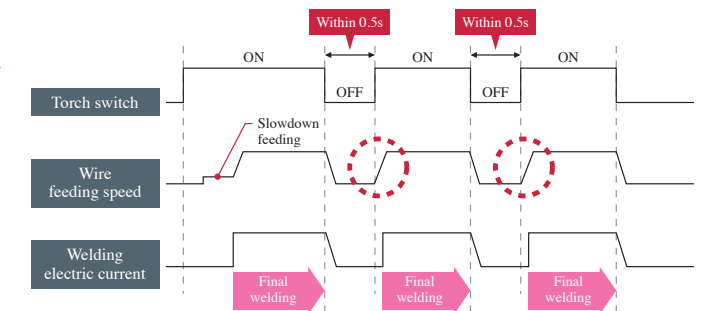
You can increase or decrease the output electric current by any preset amount of change by operating the torch switch (single click/double click). If you want to change the input heat during welding in accordance with sheet-thickness changes, you can change the welding conditions without suspending your welding work.



\*You cannot use this function when the analog remote controller is connected.

## High-speed tack start

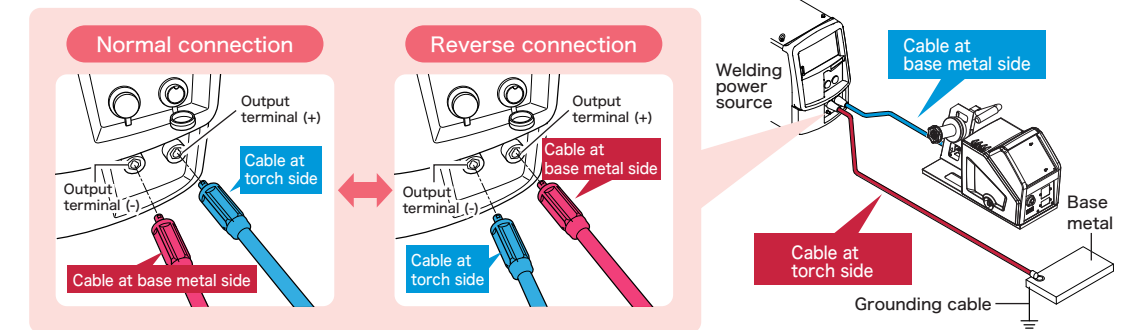
You can use settings such that the welding machine starts skipping the slowdown feeding operation when the torch switch is pressed again within 0.5s after completing the welding work. You can realize satisfactory tack welding, resulting in a reduction in the number of working hours.



## Straight polarity (DCEN) mode

NEW

By setting the function number "38", welding can be performed with straight polarity (in which the plus and minus of the power cable are connected in reverse). Such a straight polarity (DCEN) wire as used in welding galvanized steel sheets can easily be used as well.



## Evolved multifunctional remote controller

NEW

By assigning the functions frequently used by a worker (selecting from 6 functions) to the switching knob, the frequency of returning to the welding power source can be reduced, thereby improving work efficiency.



F2	Functions	Remote controller switching knob		
		[1]	[2]	[3]
1	Crater setting	Crater OFF	Crater ON (with pulse)	Crater ON (No pulse)
2	Gas check	OFF	OFF	ON
3	Constant penetration	OFF	OFF	ON
4	Tack start	OFF	OFF	ON
5	Read out of welding conditions	OFF	OFF	ON
6	Welding process	P400LII P500LII	CBT-EX (DC low spatter)	DC pulse
		P400II	DC pulse	DC wave pulse
		M350LII	CBT-EX (DC low spatter)	DC
		M350II M500II	-	-

# Welbee's extensive functionality and IoT-based quality control

## Welbee's convenient functions installed as standard

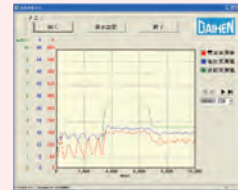
With the USB port equipped as standard, various data can easily be read. By using the "Smart Wave Viewer" that can be downloaded from HP, you can easily graph the read welding data on your PC.



You can easily edit and manage data by using USB.



- Welding waveform display screen
- CSV file output



1	A	B	C	D
2	時間[ms]	電圧実測値[V]	電圧実測値[V]	電圧実測値[V]
3	0	42	53.8	1.0
4	100	97	25.3	2.1
5	200	139	12.3	2.1
6	300	146	11.7	2.1
7	400	150	13.1	2.1
8	500	108	15.6	2.1
9	600	107	16.8	2.1
10	700	119	16.5	2.1
11	800	112	14.9	2.1
12	900	129	14.2	2.1
13	1000	118	15.3	2.1
14	1100	125	14.6	2.1
15	1200	150	12.3	2.1
16	1300	141	13.8	2.1
17	1400	117	14.9	2.1
18				

\* Various software can be downloaded for free from OTC HP. (<https://www.daihen.co.jp/products/welder/software/>)

Access to the downloading site



### List of data that can be output

- Simple data log : Current · voltage · wire feed setting and actual measurement,
- Abnormal log : Recording the past 10 abnormal codes,
- Welding conditions,
- Welding result management : Weld points, Wire consumption, Total weldingtime, Welding monitoring, Total operating time,
- Internal function setting values

## Easy connection to external devices



A lineup of interfaces is abundantly available for connecting to a robot. A wide range of options are available according to particular communication specifications.

Connection method	Format
Analog	IFR-101WB
EtherNet/IP	IFR-800EI
PROFIBUS	IFR-800PB
DeviceNet	IFR-800DN
PROFINET	IFR-800PN

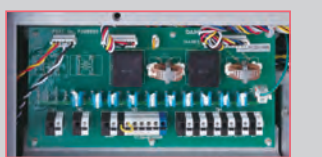
Wire feeder for robot

Wire feeder	Model	CMRE-742
* Applicable wire dia.	mm	(0.8), 0.9, 1.0, 1.2, (1.4), (1.6)
Type of wire		Solid wire, Flux cored wire
Wire feeding speed	m/min	22
External dimensions (WxDxH)	mm	195x275x235 (No cable is included.)
Mass	kg	7

\* For using the wire diameters given in parentheses, optional part is required.

Simply open the small window on the back of the welding power source to connect easily to external equipment without tool.

External I/O terminal block for tool-less connection



### Option

## High performance LCD panel with excellent ability to customize



Large, highly visible touch LCD panel

### Features of LCD panel (E-2664)

- 1 Abundant standard installed languages (8 languages)
  - ▶ Japanese ▶ Chinese ▶ Korean ▶ English (North America) ▶ English (Europe) ▶ German ▶ Vietnamese ▶ Spanish
- 2 Touch panel that can easily be operated even with leather gloves on.
- 3 The functions displayed on the home screen can be customized to improve work efficiency.
- 4 Capable of checking the details of functions and errors on the spot without instruction manual.

### Option

## Welbee welding monitor

Data from up to 100 welding power sources can be collectively monitored on a PC to support quality control.

Capable of checking the operating status of the welding power sources even at a remote location.

On the collected monitoring screen, you can monitor not only the operating status of each welding power source but also errors and warnings at a glance.



Capable of getting the detailed condition of the welding power sources.

On the individual monitoring screen, welding current, arc voltage, and wire feed conditions can be checked and also welding abnormalities can be detected immediately by setting the upper and lower limits.



Welding work can be more efficient by visualizing welding results.

Welding data can be organized in an easy-to-understand manner for each "worker," "work," and "welding power source," which can be used for planning and reviewing the work processes.



Quality control and traceability can be strengthened.

Welding data is automatically graphed and the results can be checked at a glance. Welding results are stored in a database and can easily be retrieved.



### Monitoring parameters

Welding current (Setting)	Welding voltage (Setting)	Welding current (Measured)	Welding voltage (Measured)
Wire feed speed (Measured)	Starting signal	Primary input voltage	Motor current
Various error codes	Power source's interior temperature	FAN rotation speed	Wire feed load rate

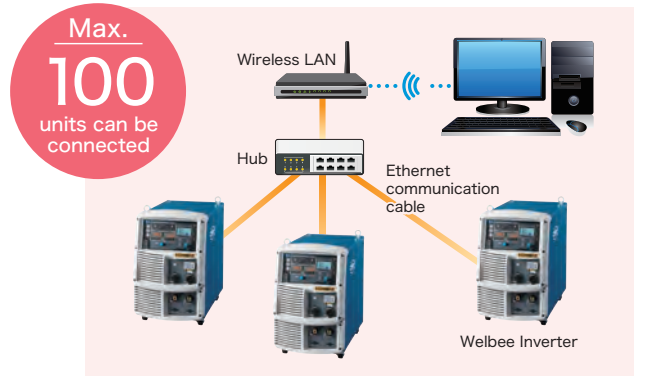
### Welbee welding monitor's system configuration

#### Standard configuration

- Extension board kit for welding power source
- Welding monitor software for PC

#### Items to be prepared by customer

- PC (Ethernet connectable)
  - Supported OS : Windows8.1, 10
  - Required memory capacity : Min. 8GB,
  - Display : Min. 32bit color / Min. 1920 x 1080 resolution
- Ethernet communication hub (when connecting multiple units)
- Ethernet communication cable
- Wireless LAN interface (for wireless connection)

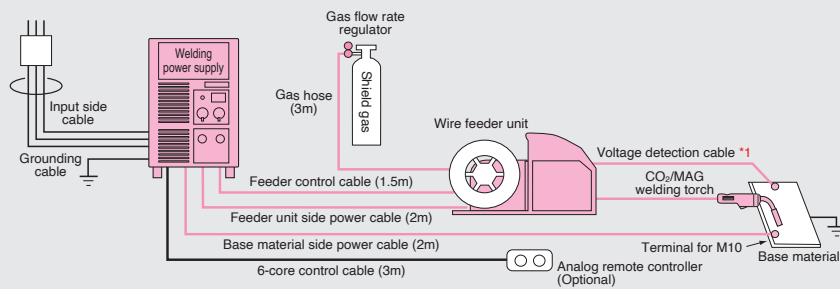


\* The number of connectable devices may be limited depending on your PC and communication environment.  
\* When you use the extension board kit (E-2560), you can use the latest welding monitor by preparing only the PC software (K-7496).

# Specification

## Connection diagram

The parts in this color are standard components. (CO<sub>2</sub>/MAG air cooling specification)



\*1 Use the K5791G00 voltage detection cable (5m) attached to the welding power supply unit. (Only for Low spatter model)

The voltage detection cable is not necessary when you do not use the CBT-EX (low-spatter) mode.

## Power source's installed capacity and connection cable

Item	Model	WB-M352L	WB-M352	WB-M502	WB-P402	WB-P402L	WB-P502L
Power supply voltage	V	400±15%	400±15%	400±15%	400±15%	400±15%	400±15%
Phase number		Three-phase	Three-phase	Three-phase	Three-phase	Three-phase	Three-phase
Installed capacity	kVA	16 or more	16 or more	26 or more	19 or more	21 or more	26 or more
Protective device	Fuse	A	30	30	50	30	30
	No-fuse breaker	A	40	40	50	40	50
Input side cable	mm <sup>2</sup>	6 to 38	6 to 38	10 to 38	6 to 38	10 to 38	10 to 38
Base-metal-side cable	mm <sup>2</sup>	60	38	60	60	60	60
Grounding cable	mm <sup>2</sup>	6 or more	6 or more	10 or more	6 or more	10 or more	10 or more

\*1 When selecting the CBT-EX mode (DC low spatter), use the voltage detection cable K5791G00 (5m) that comes with the welding power source (WB-M352L/P402L/P502L).

## Standard configuration

General brand name	Welbee Inverter M350LII		Welbee Inverter M350II	Welbee Inverter M500II	Welbee Inverter P400II			Welbee Inverter P400LII			Welbee Inverter P500LII					
	WB-M352L		WB-M352	WB-M502	WB-P402			WB-P402L			WB-P502L					
●Welding power source	CO <sub>2</sub> /MAG Air cooling		CO <sub>2</sub> /MAG Air cooling	CO <sub>2</sub> /MAG Air cooling	CO <sub>2</sub> /MAG Air cooling	Aluminum MIG, Air cooling	Aluminum MIG, Water cooling	CO <sub>2</sub> /MAG Air cooling	CBT-EX (DC low spatter)	Aluminum MIG, Air cooling	Aluminum MIG, Water cooling	CO <sub>2</sub> /MAG Air cooling	CBT-EX (DC low spatter)	CO <sub>2</sub> /MAG Water cooling	Aluminum MIG, Air cooling	Aluminum MIG, Water cooling
Usage	Air cooling		Air cooling	Air cooling	Air cooling	Air cooling	Water cooling	Air cooling	DC low spatter	Air cooling	Water cooling	Air cooling	DC low spatter	Water cooling	Air cooling	Water cooling
Wire feeder	CM-7403		CM-7403	CM-7403	CM-7403	CMA-7403	CMAW-7403	CM-7403	CMA-7403	CMAW-7403	CM-7403	CMW-7403	CMA-7403	CMAW-7403	CM-7403	CMW-7403
Welding torch	BT3500-30	BT3500V-30*2	BT3500-30	BT5000-30	BT3510-30	BTA300-30	BTAW400-30	BT3510-30	BT3510V-30*2	BTA300-30	BTAW400-30	BT5000-30	BT3510V-30*2	BTW500-30	BTA300-30	BTAW500-30
*1 Power cable	Wire feeder side	BKPDT-6002		BKPT-3802	BKPT-6002	BKPDT-6002			BKPDT-6002			BKPT-6002				
	Base metal side	BKPDT-6002		BKPT-3802	BKPT-6002	BKPDT-6002			BKPDT-6002			BKPT-6002				

\*1 Power cables have to be arranged on the torch side and base metal side separately. If you want to change the cable length, select the required length from the optional parts.

\*2 When selecting the CBT-EX mode (DC low spatter), attach the voltage detection adapter (K5952E00) to the wire feeder (CM-7403, CMW-7403).

## Standard specification

General name		Welbee Inverter M350LII	Welbee Inverter M350II	Welbee Inverter M500II	Welbee Inverter P400II			Welbee Inverter P400LII			Welbee Inverter P500LII					
●Welding power source		WB-M352L		WB-M352	WB-M502			WB-P402			WB-P402L			WB-P502L		
Rated input voltage	V	400±15% (50/60Hz shared)		400±15% (50/60Hz shared)	400±15% (50/60Hz shared)			400±15% (50/60Hz shared)			400±15% (50/60Hz shared)			400±15% (50/60Hz shared)		
Phase number		Three-phase		Three-phase	Three-phase			Three-phase			Three-phase			Three-phase		
Rated input	kVA	14.7 (13.6kW)		14.7 (13.6kW)	25.4 (23.1kW)			19.2 (17.4kW)			20.1 (18.1kW)			25.3kVA (24.4kW)		
Rated duty cycle	%	60		60	100			60(DC) / 50(Pulse)			60(DC) / 50(Pulse)			60(DC) / 80(Pulse)		
Continuous output current	A	300		300	500			310(DC) / 283(Pulse)			310(DC) / 283(Pulse)			410(DC) / 350(Pulse)		
Rated output current	A	350 (STICK : 300)		350 (STICK : 300)	500 (STICK : 400)			400 (STICK : 300)			350 (STICK : 300)			500 (DC) / 400 (Pulse) (STICK : 400)		
Rated load voltage	V	31.5 (STICK : 32)		31.5 (STICK : 32)	39 (STICK : 36)			34 (STICK : 32)			34 (STICK : 32)			39 (DC) / 34 (Pulse) (STICK : 36)		
Output current range	A	30~350		30~350	30~500			30~400			30~400			30~500		
Output voltage range	V	12~36		12~36	15.5~39			12~34			12~34			12~39		
Max no-load voltage	V	70		70	70			80			70			80		
Welding condition memory quantity		100		100	100			100			100			100		
*3 External dimensions (W×D×H)	mm	395 × 710 × 640		395 × 710 × 640	395 × 710 × 810			395 × 710 × 640			395 × 710 × 640			395 × 710 × 810		
Mass	kg	62		61	77			60			62			79		
●Wire-feeder-side power cable	Model	BKPDT-6002		BKPT-3802	BKPT-6002			BKPDT-6002			BKPDT-6002			BKPT-6002		
Cable thickness	mm <sup>2</sup>	60		38	60			60			60			60		
●Base-metal-side power cable	Model	BKPDT-6002		BKPT-3802	BKPT-6002			BKPDT-6002			BKPDT-6002			BKPT-6002		
Cable thickness	mm <sup>2</sup>	60		38	60			60			60			60		

●Wire feeder	Model	CM-7403			CMW-7403	CMA-7403	CMAW-7403			
Applicable wire		Solid wire Cored wire			Solid wire Cored wire	Hard aluminum Soft aluminum	Hard aluminum Soft aluminum			
*4 Applicable wire dia.	mm	(0.8), 0.9, 1.0, 1.2, (1.4), (1.6)			(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 feed speed	m/min	22(Max)			22(Max)	22(Max)	22(Max)			
External dimensions (W×D×H)	mm	254 × 611 × 393			254 × 611 × 393	285 × 723 × 393	285 × 723 × 393			
Weight	kg	14			14	15	16			
Cooling system		Air cooling			Water cooling	Air cooling	Water cooling			
●Welding torch	Model	BT3500-30	BT3510-30	BT5000-30	BT3500V-30*5	BT3510V-30*5	BTW500-30	BTA300-30	BTAW400-30	BTAW500-30
Rated current	A	350	350	500	350	350	500	300	400	500
*4 Applicable wire dia.	mm	(0.9), (1.0), 1.2	(0.9), (1.0), 1.2, (1.4)	(1.2), 1.4, (1.6)	(0.9), (1.0), 1.2	(0.9), (1.0), 1.2, (1.4)	(1.2), (1.4), 1.6	(1.0), 1.2, (1.6)	1.2, (1.6)	(1.2), 1.6
Duty cycle	%	30	60	60	30	60	100	50	100	80
Cable length	m	3, (4.5, 6)	3, (4.5, 6)	3, (4.5, 6)	3, (4.5, 6)	3, (4.5, 6)	3, (5)	3	3	3

\*3 Eyebolts are not included in the external dimensions. \*4 If you use the wire diameter in parentheses, the optional part is required.

\*5 When selecting the CBT-EX mode (DC low spatter), attach the voltage detection adapter (K5952E00) to the wire feeder (CM-7403, CMW-7403).

## Wire feeder with maximized safety, operability and durability

■ For steel and stainless steel



Air cooling CM-7403<sup>®1</sup>  
Water cooling CMW-7403<sup>®1</sup>

■ For aluminum



Air cooling CMA-7403  
Water cooling CMAW-7403

\*1 If you use CBT-EX (DC low spatter), the voltage detection adapter (K5952E00) is required separately for the wire feeder.  
\* When you use a pack wire, prepare the guide adapter (K5977J04) separately.

## ● Optional parts

### ■ Extension cable

			5m	10m	15m	20m
Power cable (Common to the base metal side and the wire feeder side)	WB-M352	(38mm <sup>2</sup> )	BKPDT-3807	BKPDT-3812	BKPDT-3817	BKPDT-3822
	WB-M352L	(60mm <sup>2</sup> )	BKPDT-6007	BKPDT-6012	BKPDT-6017	BKPDT-6022
	WB-P402	(80mm <sup>2</sup> )	BKPDT-8007	BKPDT-8012	BKPDT-8017	BKPDT-8022
	WB-P402L	(80mm <sup>2</sup> )	BKPDT-8007	BKPDT-8012	BKPDT-8017	BKPDT-8022
	WB-M502	(60mm <sup>2</sup> )	BKPT-6007	BKPT-6012	BKPT-6017	BKPT-6022
	WB-P502L	(80mm <sup>2</sup> )	—	—	BKPT-8017	BKPT-8022
Gas hose			BKGG-0605	BKGG-0610	BKGG-0615	BKGG-0620
Control cable of wire feeder side (10 cores)			BKCPJ-1005	BKCPJ-1010	BKCPJ-1015	BKCPJ-1020
Control cable for analog remote controller (6 cores)			BKCPJ-0605	BKCPJ-0610	BKCPJ-0615	BKCPJ-0620
Control cable for digital panel			BKCAN-0509	BKCAN-0514	BKCAN-0519	BKCAN-0524
Water hose			BKWR-0605	BKWR-0610	BKWR-0615	BKWR-0620

\* No standard power cable (2m) is required when using an extension cable. \* If you use an automatic machine or a current value close to the rated current, use a one-rank thicker cable.

\* According to the extension wiring regulations, the thickness of the power cable is 38 mm<sup>2</sup> for 250A or less, 60mm<sup>2</sup> for 400A or less, and 100mm<sup>2</sup> for 600A or less. (For a rated duty cycle of 50%)

### ■ Voltage detection cable

		5m	10m	15m	20m
Voltage detection cable		K5791G00	K5416N00	—	K5791E00

\* The welding power sources (WB-M352L/P502L) are equipped with a 5-m voltage detection cable.

### ■ Voltage detection adaptor

When using CBT-EX (DC low spatter), attach it to the wire feeder (CM(W)-7403).

Part name	Part No.
Voltage detection adaptor	K5952E00

How to install



### ■ Voltage detection line for welding torch

Prepare it when using CBT-EX (DC low spatter) with a MIG torch for stainless steel.

Part name	Part No.
Voltage detection cable	U5365P00

### ■ Welding torch

#### ● MIG welding torch for stainless steel

Part name	Model	BTS300-30
Applicable wire dia.	mm	(0.9)、(1.0)、1.2
Specified max current	A	300A
Duty cycle	%	50%
Cooling method		Air cooling
Cable length	m	3m

### ■ Remote controller

#### ● Analog remote controller

Part name	Part No.
Analog remote controller(3m)	K5804S00



#### ● Conversion cable for conventional analog remote controller (K5416Z00)

Part name	Part No.
Conversion cable	K8116E00

#### ● Digital remote controller

(One set of the following three items are needed.)

Part name	Model
Digital remote controller (Main unit)	E-2452
CAN communication cable	BKCAN-0410(10m) BKCAN-0420(20m)
BKCAN conversion connector	K5810B00

\* Software update is necessary.

Please contact your dealer for details.

### ■ Cooling water circulator

Part name	Model / Part No.
Cooling water circulator	PU-701
Water hose kit	BBPU-3002

\* When using a water-cooled welding torch with WB-M502, prepare a water-cooling kit (K5848A00) in addition to the above. Contact your dealer or OTC's sales office to install the water cooling kit.

### ■ TIG solenoid valve kit

Part name	Part No.
TIG solenoid valve kit	K8197A00

\* Conversion cable (BKPUT-60R2) is separately required for WB-M502/P502L.

### ■ Panel for wire feeder

#### ● Analog panel

Current/voltage setting and inching can be operated in the same way as with analog remote controller.

Part name	Part No.
Analog panel	K8028A00
Conversion cable	K8116E00

\* Control cable BKCPJ-06\*\* is separately required.

\* Function switching by F2 cannot be used.



#### ● Digital panel

Such operations as current/voltage setting, inching, and storage/reading of parameter setting can be made in the same way as a digital remote controller.

Part name	Model
Digital panel	E-2628

\* Control cable BKCAN-05\*\* is separately required.



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