

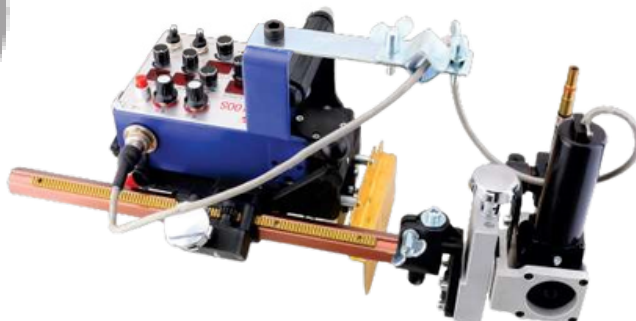
# BRONCO BR-100S



## Oscillating Tank Automatic Welding Carriage

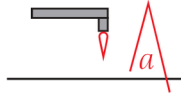
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- Reduce labor intensity and improve working environment
- Improve work efficiency, 1.5 times that of manual welding
- Avoid poor quality welds caused by human factors. Usually manual defect rate is about 20%. The use of an automatic welding carriage does not result in a poor welding rate, so the overall efficiency is nearly 200% higher than the manual welding.
- High degree of automation to ensure the stability of welding quality, and even unskilled workers can also quickly master the operation.
- The BR-100S oscillating tank automatic welding carriage was developed on the basis of a standard fillet carriage to obtain a large weld joint and one pass weld. It combines the simplicity and lightness of the standard fillet carriage, and further improves the welding efficiency.



### Application:

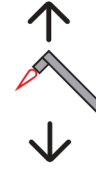
- Trailer manufacturing
- Tank truck
- Oil tank
- Water storage tank
- Transformer
- Shipyard
- Any application requiring electric welding and continuous fillet welds



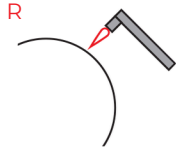
Oscillating angle  $\pm 10^\circ$



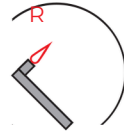
Horizontal welding speed 50–800mm/min



Vertical welding speed 50–750 mm/min



Curved tank external welding  
Minimum diameter  $R \geq 1,500\text{mm}$



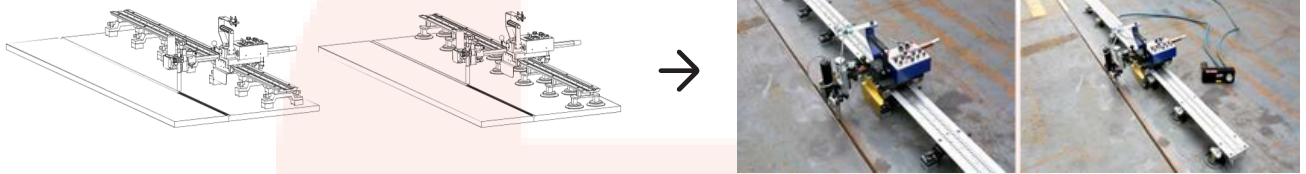
Curved tank internal welding  
Minimum diameter  $R \geq 1,500\text{mm}$



Main machine body weight 9Kg

## Applicable welding:

Plane butt welding



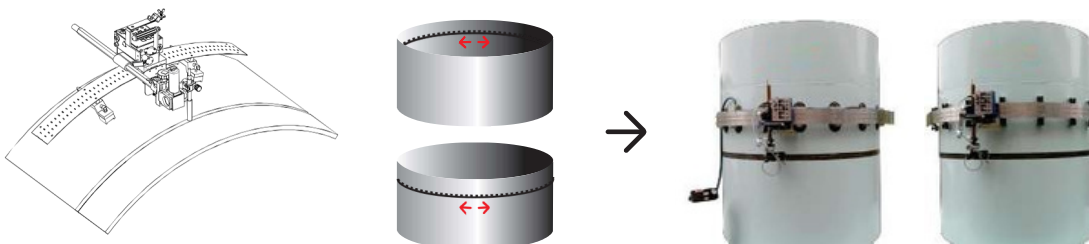
Horizontal welding



Vertical welding

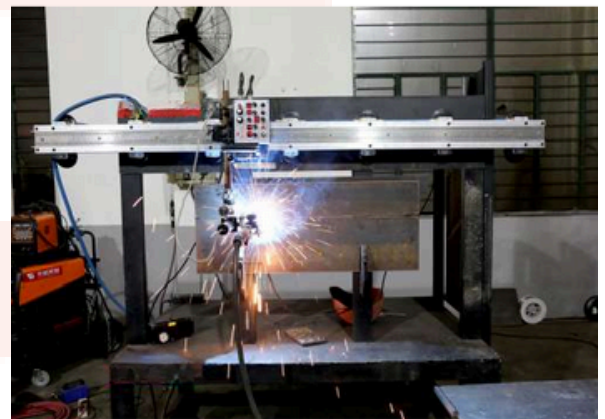
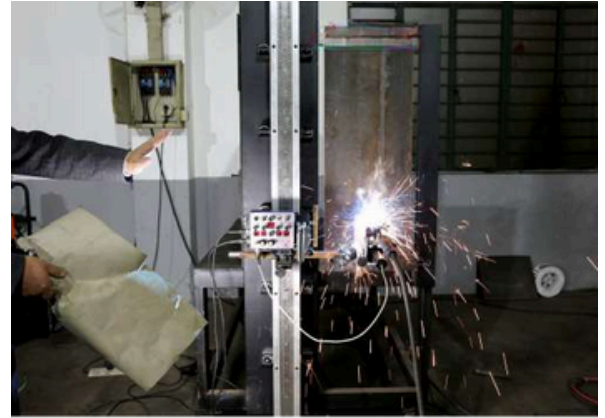


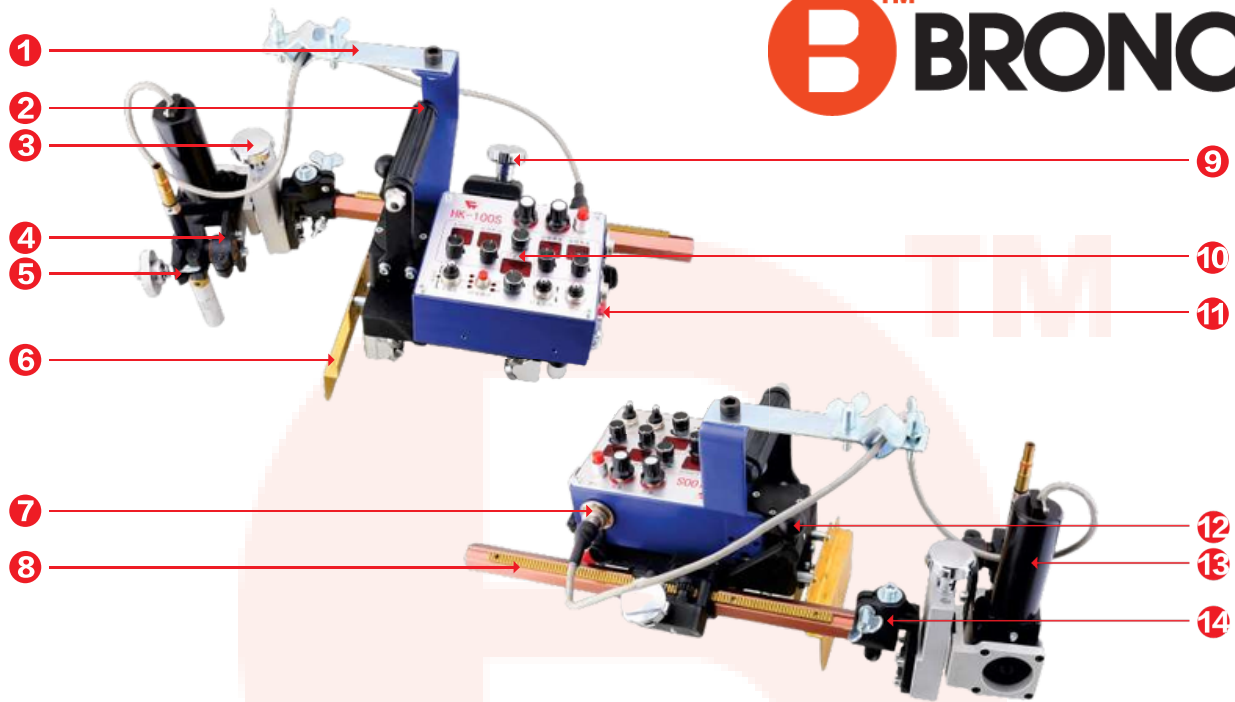
Curved tank welding Minimum diameter  $R \geq 1,500\text{mm}$



## Main features and benefits:

- The BR-100S flexible rail oscillating welding carriage is an automatic device that allows for a wide weld seam in one pass. It is especially suitable for the welding of curved surface material (pipes) with a radius bigger than 750mm.
  - The oscillating speed, oscillating angle, center offset position, and left & right stay time can be adjusted, to suit the weld bead with various specifications.
  - The magnets are all controlled by switches, which is convenient for cleaning iron garbage and moving carriages; the moving of the carriages can be controlled through the rail, and it thus can avoid the phenomenon that the carriages are separated from the welding line.
  - Maintenance-free sprocket drive
  - The installation and disassembly of the carriage and the rail are controlled by special devices,
  - which is very convenient to operate.
- With small size and light weight, it is easy to move and install, and even unskilled workers can perform the welding.






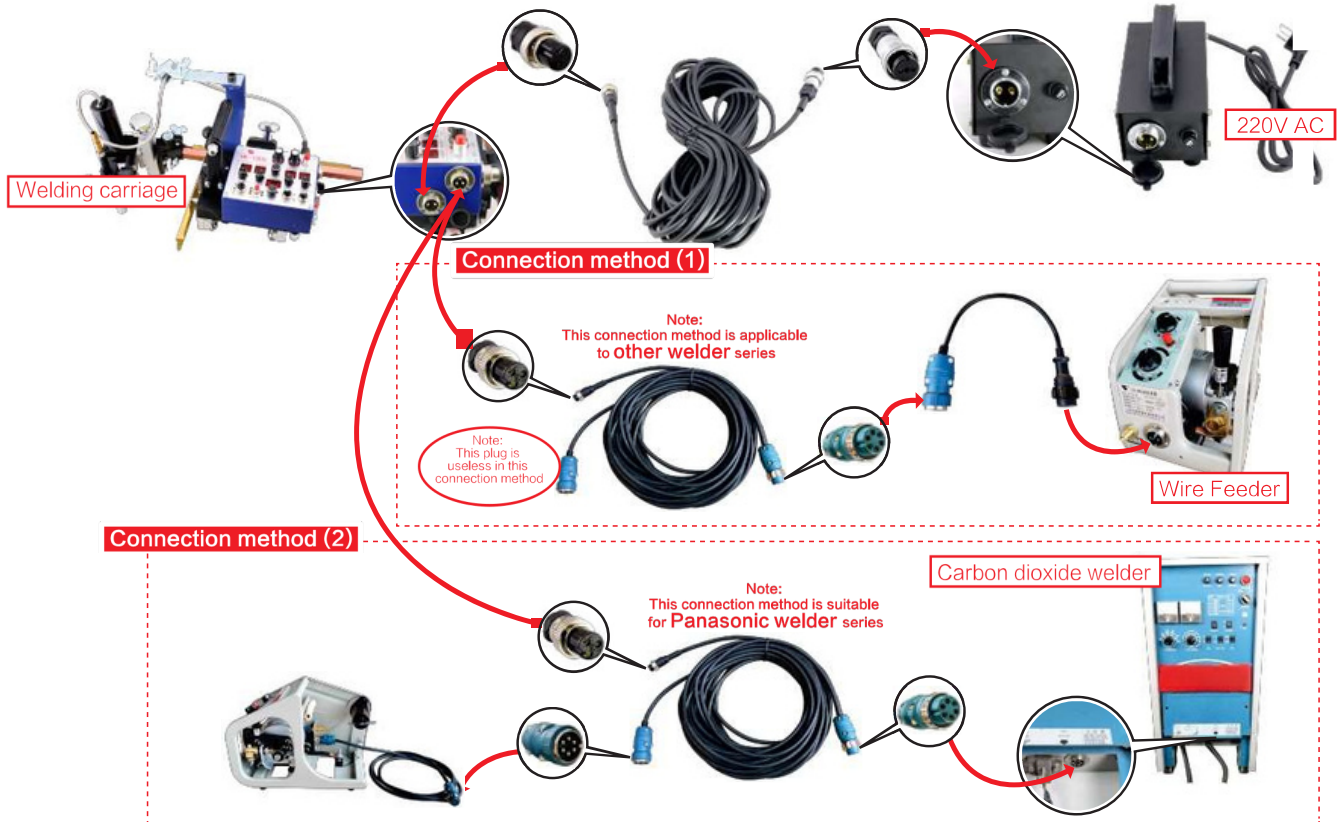
## Part Name:

- |                                      |   |
|--------------------------------------|---|
| 1 Cable anchor                       | 2 Handle                                |
| 3 Moving up and down                 | 4 Clamping connector                    |
| 5 Torch holder                       | 6 Protective plate                      |
| 7 Oscillator socket                  | 8 Transverse rack                       |
| 9 Transverse handwheel               | 10 Control panel                        |
| 11 Rail quick clamping clutch handle | 12 Clutch handle                        |
| 13 Oscillator                        | 14 Oscillator traverse rack conjunction |

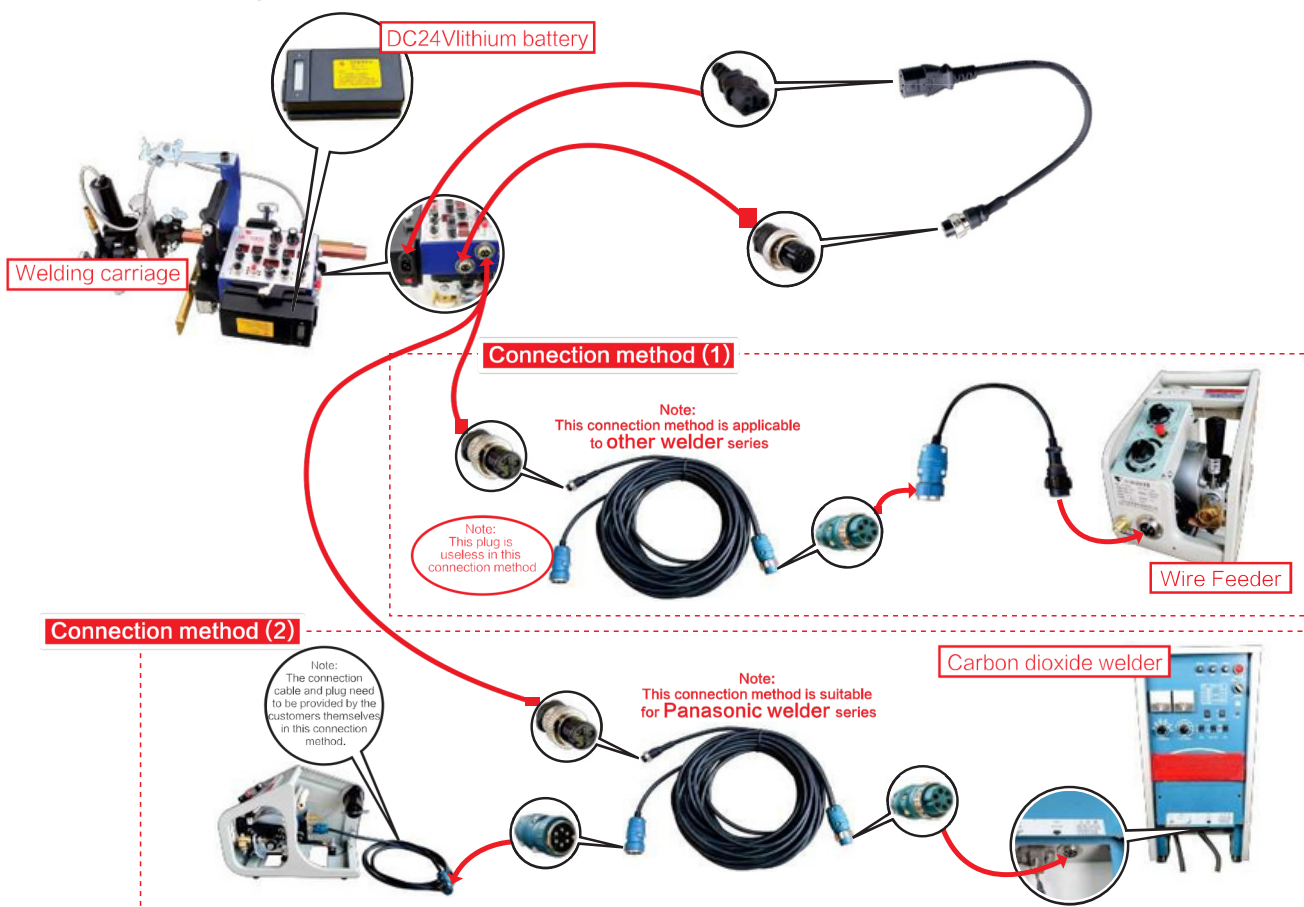
## The main technical parameters:

Dimensions	580X250X345 mm	
Machine weight	9Kg ( including the oscillator )	
Lithium battery and connecting plate set	1.5Kg ( optional )	
Package dimensions	600X375X405 mm	
Package weight	16.9Kg	
Input voltage	220V AC 50/60Hz DC24V / 4AH capacity lithium battery ( optional )	
Oscillating motor	Brushless motor ( DC24V )	
Drive mode	Sprocket drive	
Welding speed	50 ~ 800mm/min	
Torch adjustment range	Up and down	50mm
	Left and right	200mm
	Torch holder adjustable angle	± 45°
	Oscillating angle	± 10°
Oscillating parameter	Left and right stay time	0 ~ 2.5S
	Oscillating speed	0 ~ 99
	Oscillating angle	± 10°
Oscillating mode selection		

## 220V voltage connection method



## Lithium battery connection



# Machine standard accessories:



Main machine body



Oscillator



Torch holder  
Connection holder



Oscillator traverse  
rack conjunction



Oscillator connector  
Connector for  
moving up and down



Cable anchor



Power box assembly  
(2m/3 × 0.75mm<sup>2</sup>)



Wire feeder cable



Two-dimensional rail (2)  
(2m, 7 sets of magnetic steel)



Power cable  
(20m/2 × 0.75mm<sup>2</sup>)



Wire feeder cable  
(20m/3 × 0.75mm<sup>2</sup>)



Traverse rack  
(400mm)



Allen wrench  
(1 set)



Fuse  
220V/2A (2 pieces)



1 instruction manual  
1 certificate

## Optional:



DC24V/4AH capacity lithium  
battery (8 hours)



Mobile battery connection  
board set



Lithium battery cable  
(0.5m/2 × 0.75mm<sup>2</sup>)



Lithium battery charger

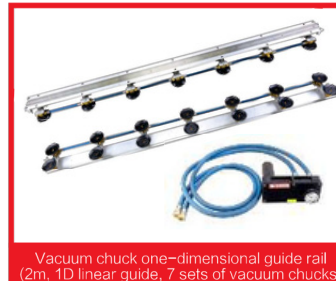


Vacuum generator



Unidimensional guide rail  
(2m, 1D linear guide, 7 sets of magnetic steel)

Packing size: 2115mm × 280mm × 172mm  
Guide rail weight: 15.6Kg  
Package weight: 26Kg



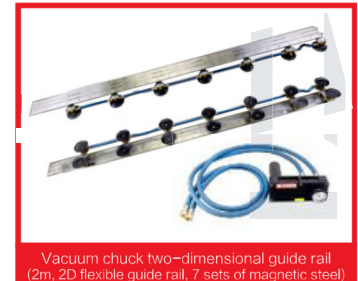
Vacuum chuck one-dimensional guide rail  
(2m, 1D linear guide, 7 sets of vacuum chucks)

Packing size: 2115mm × 280mm × 172mm  
Guide rail weight: 16Kg  
Package weight: 26.4Kg



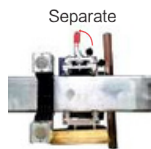
Two-dimensional guide rail  
(2m, 2D flexible guide rail, 7 sets of magnetic steel)

Packing size: 2115mm × 280mm × 172mm  
Guide rail weight: 10.4Kg  
Package weight: 20.8Kg

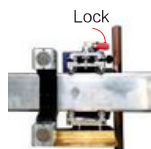


Vacuum chuck two-dimensional guide rail  
(2m, 2D flexible guide rail, 7 sets of magnetic steel)

Packing size: 2115mm × 280mm × 172mm  
Guide rail weight: 11Kg  
Package weight: 21.4Kg

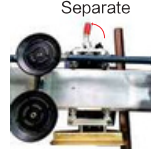


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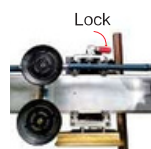


Lock

One-dimensional rail quick installation



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Vacuum chuck 1D rail quick installation

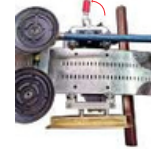


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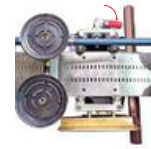


Lock

Two-dimensional rail quick installation



Separate



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Vacuum chuck 2D rail quick installation



## All-position Automatic Welding Machine

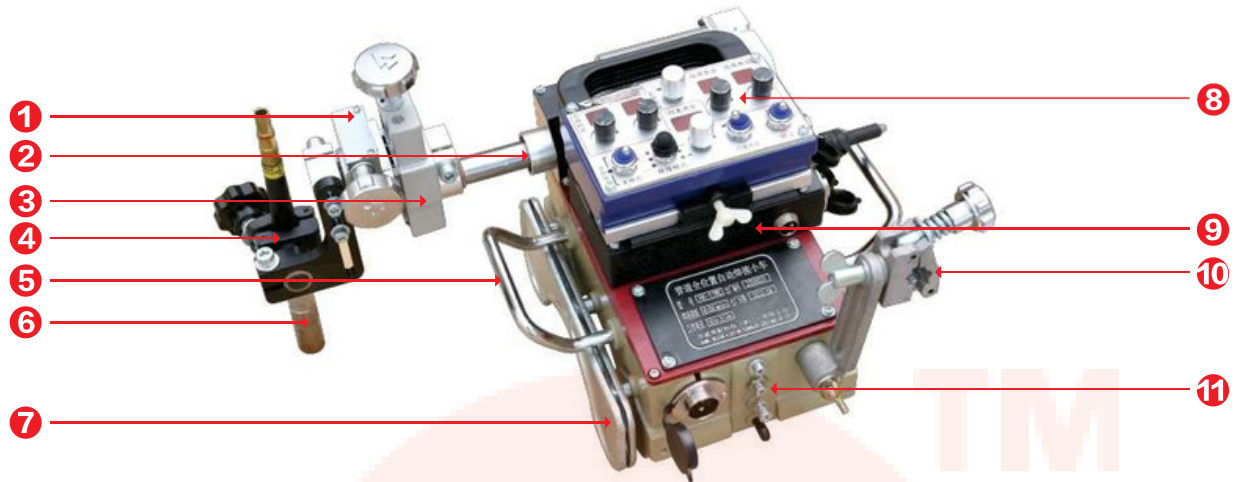
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- The BR-11WE pipeline all-position automatic welding machine adopts permanent magnet wheel which can be adsorbed and walk on the steel pipe. It can realize all-position automatic welding of pipes. The welding process adopts CO2 gas shielded welding with high efficiency and low cost.
- It is mainly characterized in that it is light and exquisite in design, convenient to carry about, and particularly suitable for full-automatic welding of pipes at the construction site. It is characterized by easy operation, fast welding speed, high production efficiency, low labor intensity, and stable welding performance and the like.
- It has a wide scope of application, which is suitable for pipes with a diameter higher than @150 mm. Theoretically, it has no weldable wall thickness limit and can adopt a multi-layer and multi-pass welding method for thick wall pipes.



### Application:

- Petroleum
- Petrochemicals
- Chemicals
- Heating power
- Natural gas
- Marine engineering
- Municipal administration



## Part Name:

- |                                |                         |
|--------------------------------|-------------------------|
| ① Angle Fine Adjustment Device | ② Oscillating Assembly  |
| ③ Up/Down Moving Assembly      | ④ Welding Torch Clamper |
| ⑤ Handle                       | ⑥ Welding Torch         |
| ⑦ Heat Shield                  | ⑧ Controller            |
| ⑨ Electrical Assembly          | ⑩ Support Rod           |
| ⑪ Magnetic Carriage            |                         |

## Main Technical Parameters:

External Dimensions	250X400X210 mm	
Weight	12Kg ( including wiggler )	
Package Size	600X375X405 mm	
Package Weight	20.5Kg	
Supply voltage	220V AC 50/60Hz	
Oscillating Motor	Brush motor	
Method of Driving	Magnetic wheel drive	
Welding Speed	50 ~ 500mm/min	
Range for Adjusting Torch	Up/Down	60mm
	Forward/Backward	360°
Wavering Control	Left/Right pause time	0 ~ 2.5S
	Wavering speed	0 ~ 99
	Wavering distance	± 20mm

## Product Configuration:



### All-position Automatic Welding Machine



#### Optional:

### BRONCO Welding Machine Power Supply

#### Functions of control system of pipeline all-position automatic welding machine:

- Wavering amplitude: you can adjust the amplitude of reciprocating wavering when the wiggler walks (note: the adjustment range is  $\pm 20$  mm);
- Wavering speed: you can directly rotate the knob next to it to adjust the value without pressing the button when adjusting;
- Left pause time: you can turn the knob next to it to adjust the parameters to set the left pause time;
- Right pause time: you can turn the knob next to it to adjust the parameters to set the right pause time;
- Walking speed: used to adjust the walking speed of equipment during welding (note: the speed range is 50 - 500 cm/min, and the adjustment range of electronic screen display is 0 - 100);
- Welding mode: welding mode button: you can click this button to switch between different welding modes. Only when the indicator light of a certain welding mode is on, it means that this mode is currently used.
- Arc-closing/Non-welding/Non-arc-closing: selector switch: it is the selector switch for welding/non-welding of welding torch. If the walking switch is pressed in the non-welding mode, the welding torch will only simulate walking along the weld seam without welding; if arc-closing is selected, the welding torch will automatically close the arc at the end of welding, so that the appearance of the weld can be more beautiful and full; and if non-arc-closing is selected, there will be no arc closing at the end of welding, thus resulting in arc pits at the end of the weld seam.
- Alignment: used to adjust the center position of the welding torch to the weld seam. When the welding torch deviates from the welding line during the welding process, you can press this button to adjust the welding torch without stopping the machine.
- Walking direction: you can choose to walk forward or backward.
- Start/stop: If the stop button is pressed while the carriage is walking, the carriage will stop moving.

### Walking carriage of pipeline all-position automatic welding machine:



BRONCO BR-11WE

- Applicable pipe diameter: over 150 mm
- Applicable wall thickness: 4-50 mm
- Applicable materials: carbon steel, stainless steel, alloy steel, low temperature steel, etc. [matching rails available for stainless steel]
- Applicable welds: all kinds of pipe section welds, such as pipe-pipe weld, pipe-elbow weld, pipe-flange weld, (if necessary, false pipe used for transition connection)
- Drive system: brushless motor worm and gear drive
- Speed regulation mode: PWM pulse speed regulation;
- Adjustment mode: electric adjustment;
- Wavering system: brushless motor wavering, which is the company's proprietary technology product;
- Control system: embedded system, which is the company's proprietary technology product.



BRONCO Invermig  
300W/500W

MODEL	INVERMIG(MIG/MAG)	
	350W	500W
Input Voltage (V)	3Phase / 400V	3Phase / 400V
Supply Frequency (Hz)	50/60Hz	50/60Hz
Rate Input Current (A)	25.5A	41.8A
Rate Input Power Capacity (KVA)	16.8 KVA	27.5 KVA
Output Current (A)	30-350A (MIG/MAG) 25-350A (MMA)	40-500A (MIG/MAG) 40-490A (MMA)
Output Voltage (V)	15.5-31.5V (MIG/MAG) 21-34V (MMA)	16-39V (MIG/MAG) 21.6-39.6V (MMA)
Open Circuit Voltage (V)	73V	73V
Permissible Load at 60% Duty Cycle (MIG/MAG)	350A / 31.5V	500A / 39V
Permissible Load at 60% Duty Cycle (MMA)	350A / 34V	490A / 39.6V
Permissible Load at 100% Duty Cycle (MIG/MAG)	271A / 27.6V	387A / 33.4V
Permissible Load at 100% Duty Cycle (MMA)	271A / 30.8V	380A / 35.2V
Power Factor Max Current	0.92	0.92
Efficiency	85%	85%
Operating Temperature	-10 ~ 40°C	-10 ~ 40°C
Protection Class	IP21S	IP21S
Insulation Class	H	H
Weight (Kg)	40Kg	41Kg
Diamention (LxWxH)	576x297x557mm.	576x297x557mm.
Diameter of Rod (mm)	0.8-1.2mm.	0.8-1.6mm.

## All-position pipeline automatic welding machine:



- Working principle The all-position pipeline automatic welding machine adopts permanent magnet wheel which can be adsorbed and walk on the steel pipe. It can realize all-position automatic welding of pipes. The welding process adopts CO2 gas shielded welding with high efficiency and low cost.
- Structure overview and instructions The pipeline all-position automatic welding machine consists of four parts, namely control system, welding carriage, welding power supply, wire feeding device and accessories.

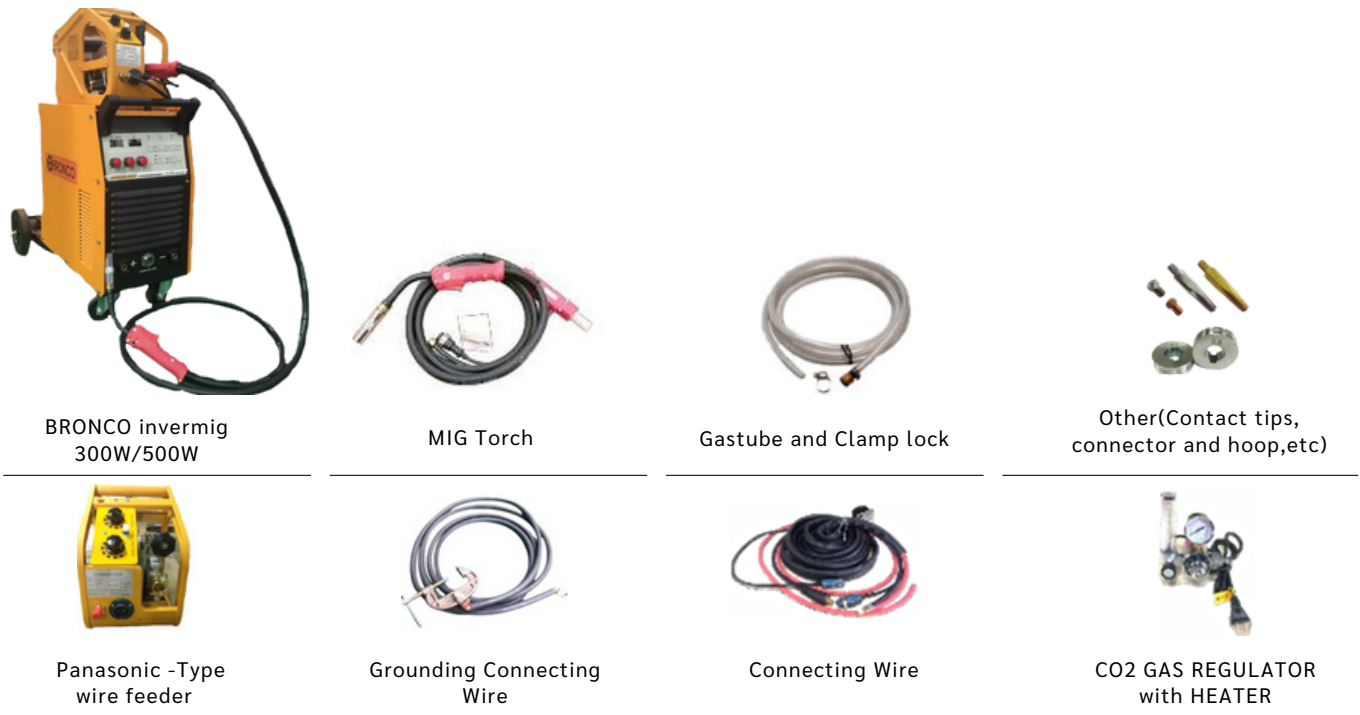


**Welding Sample**


**BR-11WE Pipeline All-position Automatic Welding Machine *Suit I:***  
**( Basic type )**

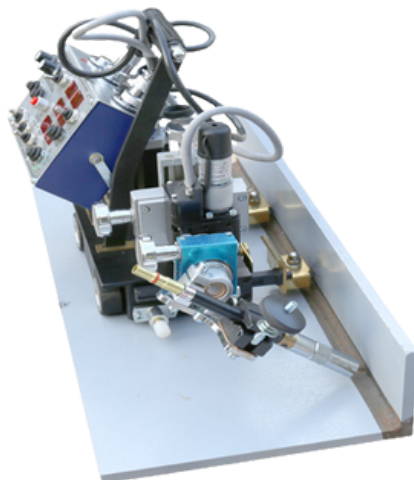
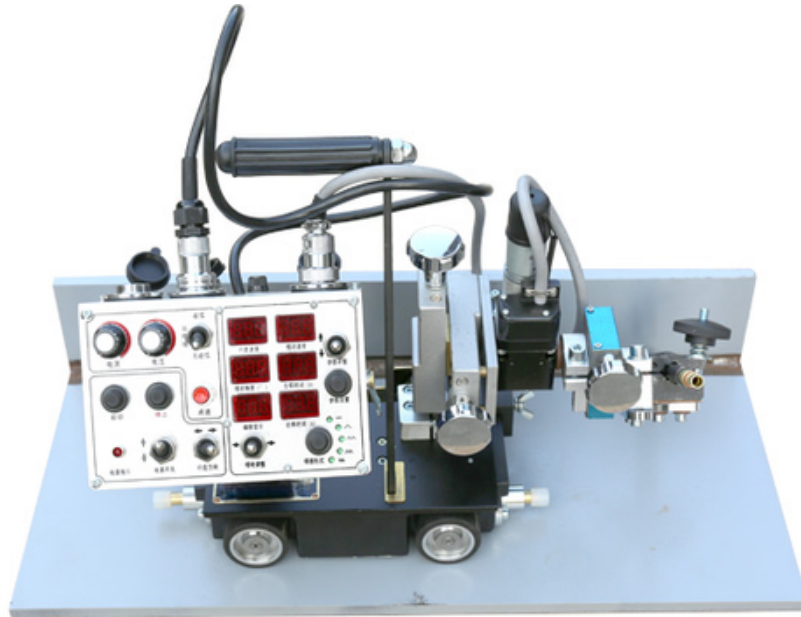


**BR-11WE Pipeline All-position Automatic Welding Machine *Suit II:***  
**(Power supply for BRONCO welding machine )**  
**(including all accessories in *Suit I*)**



## Oscillation Auto Welding Carriage

- It has wavering function for various welding path so as to make best welding result.
- Wavering speed, angle, central shifting and left/right pause time can be adjusted, all data can be shown on the meter.
- The control device can be used as remote controller.
- Both for vertical and level angle welding, suitable for intersect position of reinforce parts.
- Widely use in shipbuilding bridge vehicle oil&chemical and steel structure engineering.
- Wavering mode: 



### Application

- Structural Steel Work
- Automotive / Trailer Fabrication
- Corner Joint Fabrication
- General Construction Work
- Base plate welding for tanks

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# Specification

MODEL	BR-5W			
Supply Voltage	220V/50Hz			
Rang for adjusting torch	Up down	Forward backward	Work angle	Proceeding angle
	40mm	40mm	±45°	±10°
Wavering control	Left/right pause time	Shifting distance set	Wavering speed	Wavering angle
	0~2.5s	0~±8°	0~100	±15°
LxWxH	430x280x290mm			

## Machine standard accessories:



Main machine body



Torch holder  
Connection holder



Adjust the angle of the  
welding gun grip



Oscillating connector  
(connector for dual-axis  
movement)



Wire feeder cable



Wire feeder cable



Power box assembly  
(2m/3 x 0.75mm<sup>2</sup>)



Allen wrench  
(1 set)



Fuse  
220V/2A (2 pieces)



1 instruction manual  
1 certificate

