

HW-D Series Ultrasonic Handheld Welder



Handheld model which contributes to shorten processing time and quality improvement!

High-end Model

HW-D250H-28

HW-D250H-40

HW-D200H-60

Multi power supply;
100 to 240V, single phase
Variable oscillation;
30 to 100%

Standard model

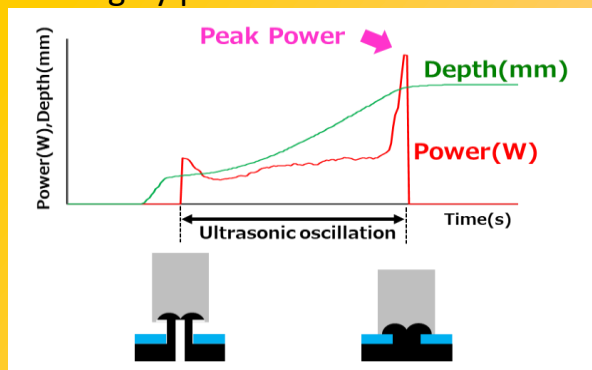
HW-D250S-28

HW-D250S-40



Peak power control mode equipped!

Capturing deformation process of plastic caulking by power behavior



When a boss is completely crushed, load resistance to ultrasonic vibration increases, which makes sharp increase of power (W). Stable caulking quality can be obtained by controlling to stop oscillation when specified power is reached.

Adaptability by frequency

Special quality		Frequency	28kHz	40kHz	60kHz
Surface heating efficiency			Low	↔	High
Horn size			Large Long	↔	Small Short
Staking	Boss size ~φ2mm		poor	fair	excellent
	Boss size φ2~6mm		fair	excellent	good
	Boss size φ6mm~		excellent	good	fair

Higher frequency with higher surface heating efficiency is more suitable for welding of thin sheet/film • small boss caulking

Fast and stable welding

- ◆ Digital oscillation tracking function
- ◆ Selectable oscillation control mode

Reliable welding management

- ◆ Welding result display / Error code display
- ◆ Enhanced external interface

High power line up of 60kHz

- ◆ Contributes to faster cycle time
- ◆ Caulking of small diameter boss

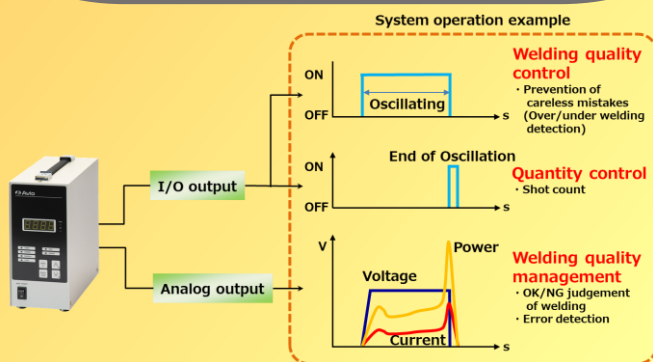
High power 60kHz for fine work

Surface heating efficiency becomes higher as frequency increases

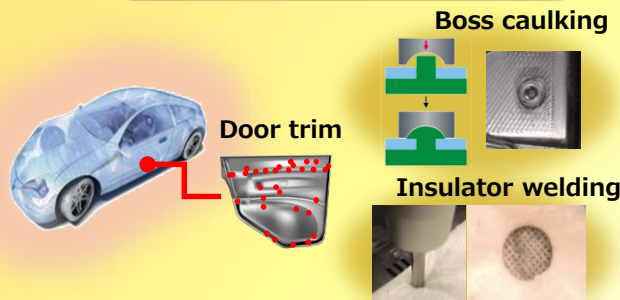
- ◆ Quick welding start contributes to high production
- ◆ Suppress buckling of small size boss to contribute to higher yield.



Operation example to enhance quality control



Application example



HW-D Series Specification

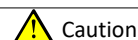
■ Ultrasonic generator

Model		High-end type			Standard type	
		HW-D250H-28	HW-D250H-40	HW-D200H-60	HW-D250S-28	HW-D250S-40
Maximum output		280W		240W	280W	
Rated output		250W		200W	250W	
Continuous output		180W		140W	180W	
Frequency		28kHz	40kHz	60kHz	28kHz	40kHz
Oscillation method		Digital ATHMOS（Automatic frequency tracking）method				
Oscillation control mode		Timer, Energy, Peak power, Continuous oscillation (Selectable)				
Setting range	Timer	0.01 to 10.00s （0.01s step）				
	Energy	10 to 3000J （10J step）				
	Peak power*	50 to 250W		40 to 200W	50 to 250W	
	Oscillation	Valiable 30 to 100% （5% step）			Fixed (100%)	
	Up slope	50/100/200/500ms Selectable			50ms Fixed	
Display		7 segment 4 digit LED, Status display LED				
Welding result display function		Frequency(kHz), Oscillation time(s), Energy(J), Peak power(W)（Final result）				
Protection function		Phase, Over current, FET, Over voltage, Over heat, Over time				
Interface		I/O, Analog				
Power input		AC100 to 240V single phase, 50/60Hz			AC100V 50/60Hz	
Power consumption		370VA		300VA	370VA	
Environmental temprature		5 to 40℃				
Environmental humidity		30 to 85%, No condensation				
Size		W100×D250×H210mm				
Weight		2.5kg			2.5kg	

*Peak power is 5W step

■ Handheld unit

Model	W2005-28-HP-P	W2005-40-HP-AL	MA1P200-60
Frequency	28kHz	40kHz	60kHz
Transducer trigger switch	Push buttun type		
Housing case	Plastic	Aluminum	
Hanging hook	Yes	N/A	
Transducer cooling joint	Yes	N/A	Yes
Output cable length	2.5m		
Outside diameter of grip	37mm ϕ		31mm ϕ
Weight	350g		200g



Caution

To operate a unit correctly, read the operation manual carefully. The unit should be situated away from the place filled with water, moisture, steam, dust or soot, which may cause a fire, an electric shock, troubles, etc.

※Specifications are subject to change without notice for improvement.



URL <https://www.avio.co.jp/english/>

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