



# HWASHIN TECHNOLOGY CO.

WORLDWIDE DISTRIBUTION WITH SUPPORT AT THE LOCAL LEVEL

## The Most Powerful Bench-top Ultrasonic Cleaner

Represented by

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## Message

We, Hwashin Technology Co., founded in 1998 and ISO-certified, have been manufacturing Ultrasonic Cleaners, Vortex Mixers, Roller Mixers & Differential Counters and exporting them to many countries including those in Asia, Europe and Oceania.

Throughout our marketing activities to date, we have acquired a good reputation for our accurate, prompt services and the best quality in the laboratory instrument industry. We're always working so hard to develop new products and now expanding our network globally.

All our staff members are here to be in support of you and look forward to assisting you in the near future.

Thank you for your attention.

Hwashin Technology Co., Korea



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# Ultrasonic Cleaner

## The Most Powerful Bench-top Ultrasonic Cleaner

### What is Ultrasonic Cleaning?

Ultrasonic cleaning is a faster, more effective method for reducing cleaning time and cost than any other method – including scrubbing, steam and so on.

Ultrasonic sound is sound transmitted at frequencies beyond the range of human hearing. As the sound waves from the transducer radiate through the liquid in the bath, they alternate high and low pressures in the liquid.

During the low pressure stage, millions of bubbles form and grow. This process is called Cavitation. During the high pressure stage, the bubbles collapse, or implode, releasing enormous amounts of energy. They work in all directions, attack every surface and invade all recesses and openings.



### Optional Perforated/Solid Tray

We recommend using a perforated tray to protect the bottom of the bath, which contributes to longer use of the cleaner. Also, you can easily take out materials after cleaning.

### Typical Applications

- Surgical and dental instruments
- Intricate lab glassware
- Scientific instruments and components
- Metal parts and assemblies
- Plastic parts and assemblies
- PC boards
- Electrical and electronic components
- Jewelry and watches, Clock movements
- Optical equipment
- Eyeglasses and frames
- Veterinary instruments
- Instrument part and assemblies



BRAND NEW POWERSONIC 600 Series (603/605/610/620)



POWERSONIC 400 Series (405/410/420)



POWERSONIC 500 Series (505/510/520)



Specifications and designs are subject to change without prior notice for continuous product improvement.

# BRAND NEW POWERSONIC 600 Series

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POWERSONIC 605/620 (5liter/20liter)



### Keypad for 605/610/620



### Features

- Built-in microprocessor controller
- High-performance industrial BLT Type transducer
- Selectable use of ultrasonic power (3 steps : Low-1, Medium-2, High-3)
- **Degassing function to eliminate dissolved gas in water or solutions**
- User-friendly control panel for easy and simple operation
- Elegant style and strong durability
- Lid to see the inside of the bath
- Built-in alarm function for operation stop
- Stainless steel tray (Optional)

### Specifications

Model	POWERSONIC 603	POWERSONIC 605	POWERSONIC 610	POWERSONIC 620
Transducer	Industrial BLT Type			
Time Range	1~99 min (Digital)			
Temp. Range	Ambient~60°C (Digital)	Ambient~70°C (Digital)		
Frequency	40 KHz			
Housing Material	SUS 304 + ABS	SUS 304 + PP		
Bath Capacity	3.3 L	5.7 L	10.7 L	20.7 L
Bath Dimensions	W240 x D140 x H100mm	W300 x D155 x H150mm	W300 x D240 x H150mm	W500 x D300 x H150mm
Overall Dimensions	W325 x D225 x H255mm	W385 x D255 x H270mm	W385 x D345 x H270mm	W590 x D405 x H275mm
Tray Dimensions	W240 x D135 x H105mm	W240 x D120 x H100mm	W250 x D200 x H100mm	W440 x D250 x H100mm
Required Power	200 watt	350 watt	400 watt	700 watt
Net Weight	4.5 kg	6.1 kg	7.3 kg	11.8 kg
Voltage	Available from 100 to 240V, 50/60Hz			

### New Features for 605/610/620

- Housing material of SUS 304 + PP(Polypropylene) for stronger durability
- Sweep function to optimize the cleaning power by modulating the frequency

- Drain knob on the right side of the unit for greater convenience.



Drain Knob for 605/610/620



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## POWERSONIC 400 Series

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## POWERSONIC 500 Series

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POWERSONIC 410 (10liter)



Keypad

POWERSONIC 510 (10liter)



Keypad

### Features

- Built-in digital thermometer and timer to set optimum condition for cleaning
- Selectable use of ultrasonic power (3 steps : Low-1, Medium-2, High-3)
- Easy to read operation status on digital display
- Built-in drain valve unit
- Silicon rubber heater for durability and stability
- Built-in alarm function for operation stop
- Stainless steel tray (Optional)



### Features

- Backlit LCD screen (Furnishing all information)
- Selectable use of ultrasonic power (3 steps : Low-1, Medium-2, High-3)
- Easy to adjust time and temperature setting with number key
- Strong power and durability enhanced by built-in BLT transducer
- Manual function key for turning ON/OFF the heater
- Built-in alarm function for operation stop
- Stainless steel tray (Optional)

All information available on the "One digital LCD screen"

### Specifications

Model	POWERSONIC 405	POWERSONIC 410	POWERSONIC 420
Transducer	Industrial BLT Type		
Time Range	1~99 min [Digital]		
Temp. Range	Ambient~70 °C (Digital)		
Frequency	40 KHz		
Housing Material	ABS		
Bath Capacity	5.7 L	10.7 L	20.7 L
Bath Dimensions	W300 x D155 x H150mm	W300 x D240 x H150mm	W500 x D300 x H150mm
Overall Dimensions	W500 x D285 x H260mm	W510 x D375 x H280mm	W720 x D450 x H280mm
Tray Dimensions	W240 x D140 x H150mm	W255 x D200 x H100mm	W500 x D300 x H150mm
Required Power	350 watt	400 watt	700 watt
Net Weight	7 kg	9 kg	14 kg
Voltage	Available from 100 to 240V, 50/60Hz		

### Specifications

Model	POWERSONIC 505	POWERSONIC 510	POWERSONIC 520
Display	70 x 40mm LCD Screen		
Transducer	Industrial BLT Type		
Time Range	1~99 min [Digital]		
Temp. Range	Ambient~70 °C (Digital)		
Frequency	40 KHz		
Housing Material	ABS		
Bath Capacity	5.7 L	10.7 L	20.7 L
Bath Dimensions	W300 x D155 x H150mm	W300 x D240 x H150mm	W500 x D300 x H150mm
Overall Dimensions	W500 x D285 x H260mm	W510 x D375 x H280mm	W720 x D450 x H280mm
Tray Dimensions	W240 x D140 x H150mm	W255 x D200 x H100mm	W500 x D300 x H150mm
Required Power	350 watt	400 watt	700 watt
Net Weight	7 kg	9 kg	14 kg
Voltage	Available from 100 to 240V, 50/60Hz		

# Ultrasonic Pipette Cleaner



POWERSONIC 212 (12liter)



POWERSONIC 212 Ultrasonic Pipette Cleaner is a device to clean the pipette by Ultrasonic with Siphon shower method.

You can clean the multiple pipettes at the same time and check the remaining time.

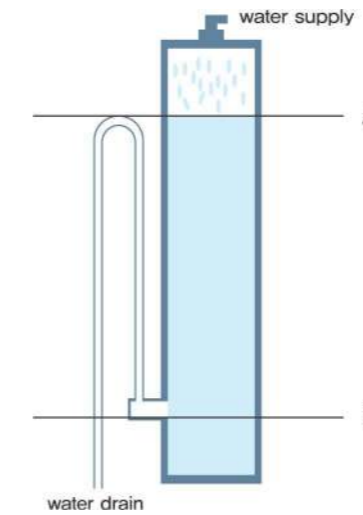


Keypad

## ■ Features

- Automatic water supply and drain by Siphon principle
- Strong power and durability enhanced by built-in BLT transducer
- **No need to change water when cleaning (Short cleaning time)**
- Easy to check the inside of the round bath (acrylic resin construction)
- Easy to adjust the cleaning time with built-in digital timer
- Convenient operation plate
- Available to clean multiple pipettes with safety basket

## ■ Siphon Shower Method



When the solution is filled to the point A, it is automatically drained through the point B.



Accessory (Basket)

## ■ Specifications

Model	POWERSONIC 212
Transducer	Industrial BLT Type
Time Range	1~99 min [Digital]
Frequency	28KHz
Cabinet Material	Stainless Steel SUS 304
Bath Material	Transparent Acryl Resin
Bath Capacity	12 L
Bath Dimensions	Ø160 x H685mm
Overall Dimensions	W320 x D320 x H850mm
Tray Dimensions	Ø140 x H505mm
Required Power	150 watt
Net Weight	15 kg
Voltage	Available from 100 to 240V, 50/60Hz
Accessory	Tray, Water Supply Hose (3m)

## Differential Cell Counter

### Model 309DF / 312DF

Our Differential Counters are designed for the efficiency to be required in your hematology laboratory and let you count faster and have less fatigue with soft-touch keys than you have ever experienced on a mechanical counter.

Model 312DF (12 Keys)



Keypad for 312DF

## Vortex Mixer

### Model 250VM / 260VM

Our Vortex Mixers are general laboratory equipment and intended for applications where vortexing of single or multiple tubes is required.

Model 250VM (Test Tube Type)



Model 260VM (Flat Head Type)



### Key Functions

- Counting Keys : Each key enters a count into a separate channel and into the TOTAL channel.
- NON TOTAL : Enters a count into a separate channel, but not into the TOTAL channel.
- T/% : Total, otherwise calculating percentage (312DF)
- CONTI : You can get a count of more than 100. (312DF)
- +/- : Adding or subtracting the numbers counted by S/P key to totalize (312DF)
- CLEAR : Clears all channels

### Features

- A separate 2-digit display for each cell type
- Alarm actuates every 100 counts.
- Countable up to 999 (312DF)



Model 309DF (9 Keys)

### Specifications

Model	309DF	312DF
Key Pad & Function	9counting keys plus CLEAR key	12counting keys plus T / %, CONTI, +/- & CLEAR key
Total Counts	Countable up to 100	Countable up to 999
Housing Material	ABS Resin Body & Chemical Resistance Keypad Film	
Dimensions	W180 x D250 x H85mm	
Required Power	5 watt	
Net Weight	1 kg	
Voltage	Available from 100 to 240V, 50/60Hz	

### Features

- Adjustable speed control by a toggle switch
- A two-position power switch (FULL/TOUCH selector) enables the mixer to be operated continuously or by depression of the rubber top.
- Suitable for the experiments of mixture, reaction and dissolution of fluid samples in a moment
- Proper speed according to the environment of experiments can be achieved with a toggle switch.

### Specifications

Model	250VM	260VM
Type	Test Tube	Flat Head
Head Material	NBR	PE Foam
Housing Material	Engineering ABS	
Speed	Max 3,000 rpm	
Dimensions	W135 x D185 x H180mm	W135 x D185 x H190mm
Required Power	40 watt	
Net Weight	2.75 kg	
Voltage	Available from 100 to 240V, 50/60Hz	



Control Panel for 260VM

# Roller Mixer

## Model 205RMC w/Speed Controller

Our Roller Mixers, designed to provide continuous rolling and rocking motion to samples, are highly reliable and efficient apparatus for subsequent whole blood analysis by mixing a wide range of samples. All the rollers rotate in a gentle manner, so sample vials or their labels remain intact.

Model 205RMC



Speed Controller for 205RMC

The model 205RMC has an adjustable speed control between 12~70 rpm. Details are as a table below.

Control	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9
RPM	12	24	30	36	48	54	60	66	70

### Features

- Simultaneous rotating and rocking action provides fast gentle mixing.
- Rollers are made of plastics, which are durable and facilitate easy disposal of contaminants.
- Each roller has an eccentric bearing at one end and thus, becomes tilted at an angle of 10 degrees in rotation.
- The quiet motor, durable plastic gears and smooth mixing actions result in a low noise level.

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Model 205RM



Model 208RM



Model 210RM



### Applications

- General laboratory
- Blood analysis
- Anti-coagulation of blood samples

### Specifications

Model	205RM	205RMC	208RM	210RM
Roller	5 ea	5 ea	8 ea	10 ea
Speed	40 rpm	12~70 rpm	40 rpm	
Roller Length	325 mm			
Capacity	Universal bottle 12		Universal bottle 21	Universal bottle 27
Dimensions	W220 x D480 x H110mm	W220 x D490 x H110mm	W340 x D480 x H110mm	W420 x D480 x H110mm
Required Power	12 watt	9 watt	20 watt	20 watt
Net Weight	4.5 kg	5.4 kg	7.9 kg	8.5 kg
Voltage	Available from 100 to 240V, 50/60Hz			