Althea Solutions Pvt. Ltd.

ULTRASONIC PROBE SONICATOR

Vacuum Filtration Manifold
HPLC Solvent & Sample Filtration

- **Corrosion Proof Durability**
  Smooth Finish High Strength

ULTRASONIC PROBE SONICATOR (ULTRASONIC PROCESSOR)

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ULTRASONIC HOMOGENIZER PROCESSOR SONICATOR FOR LIQUID PROCESSING

ALHP-Series Ultrasonic Processor is a high-performance system for efficient liquid processing using ultrasonic cavitation. With a digital intelligent generator for stability and reliability, it is ideal for cell disruption, emulsification, homogenization, extraction, and accelerating chemical reactions in lab applications.

MAIN APPLICATION :

- Suitable for extraction and disruption of cells, bacteria, and viral tissues.
- Enables dispersion, homogenization, and emulsification, including nano materials.
- Accelerates dissolution and chemical reactions; supports chemical synthesis.
- Equipped with soundproof box and low-temperature system for efficient operation.
- Ideal for ultrasonic crushing, plant extraction, water treatment, and deagglomeration.
- Ensures stable, uniform particle dispersion in liquids.
- Compatible with Total Organic Carbon (TOC) analysis pre-treatment.

TECHNICAL FEATURES :

- The latest ultrasonic circuit, continuous uninterrupted ultrasound, automatic tracking frequency and automatic resonance point and power control, no need to manually adjust energy manually
- Working mode: 3.5-inch touch screen touch operation, the operation is simple and convenient; the screen displays the working parameters in real time, and the running status is cumulatively displayed; the micro- processing controller program, and the 99-hour process control timer controls the total time: 1 second to 99 hours 99 mins 99 seconds
- Ultrasonic frequency converter adopts lead zirconate titanate crystal piezoelectric frequency converter to seal and isolate water vapor and corrosive gas.
- On/Off pulse timer, closed cycle and open cycle can be set arbitrarily from 1 second to 99 seconds to ensure high intensity processing of samples.
- Unique automatic amplitude and pulse compensation function to ensure that the probe amplitude does not change due to load change during ultrasonic.
- The transducer is made of German ceramic wafer material, which has high ultrasonic efficiency and is not easy to heat for a long time.
- Ultrasonic probe is made of US standard TC4 titanium alloy. It is not easy to wear and cavitation when using probe for a long time (requires on-site verification, continuous ultrasonic for 30 mins without damage to the probe)
- The equipment can work intermittently or at no load. It meets the requirements of different experiments and needs to be verified (no-load ultrasonic for 10 mins is acceptable)
- Equipment is opened for mold making, with small volume & high efficiency, & beautiful appearance.
- PT 100 Sensor with Platinum Coated
- Probe MOC - Titanium Alloy

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MAIN TECHNICAL PARAMETERS :

Models	ALHP-150S	ALHP-250S	ALHP-400S
Operating mode	Automatic, Manual	Automatic, Manual	Automatic, Manual
Screen size	3.5 inch high definition large touch screen control		
Ultrasonic power(W)	5-150	5-250	5-400
Frequency(KHz)	20-25	20-25	20-25
Duty ratio(%)	1~99%	1~99%	1~100%
Handling capacity(ml)	0.1 ~ 5 ml	0.1~ 10 ml	10 ~ 100 ml
Ultrasonic time(s/min)	1s-99m-99h	1s-99m-99h	1s-99m-99h
Random horn(Φ mm)	2 mm	3 mm	6 mm
Power source	220V/ 50Hz (110V Can be customized)		
Optional horn(Φ mm)	2mm (0.1 ~ 5) ml	2 (0.1 ~ 5) ml 3 (3 ~ 10) ml	2 (0.1 ~ 5) ml 3 (3 ~ 10) ml 6 (10 ~ 100) ml
Mainframe Weight (kg)	4.2	4.2	4.5
Total package weight (kg)	5.8	6.2	6.5

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MAIN TECHNICAL PARAMETERS :

TECHNICAL FEATURES :

Ultrasonic processor also known as ultrasonic disintegrator, ultrasonic homogenizer, ultrasonic cell crusher, ultrasonic nano-material disperser, etc. The ALHP series is a kind of cavitation effect that uses strong ultrasound to produce cavitation effects in liquids and ultrasonically treat substances. A functional, multi-purpose instrument that can be used to break a variety of animal and plant cells, virus cells, and can be used for emulsification, separation, homogenization, extraction, defoaming, cleaning, and accelerating chemical reactions. It is widely used in biochemistry, microbiology, medicinal chemistry, surface chemistry, physics, zoology and other fields.

MAIN APPLICATION :

- Used for crushing animal and plant cells, bacteria, spores or tissues, extracting protein from cells, and conducting scientific culture experiments of viruses and vaccines.
- Accelerate the reaction speed of chemistry and physics and accelerate the degassing of liquid.
- Scientific analysis of crude oil dilution, oil-water emulsification, accelerated de-crystallization, and glass homogenization.
- Disperse rare earths, various inorganic minerals, and prepare a homogenized mixture of nearly one percent of nanometer emulsion.
- Quick, powerful and high-precision lotion for mold micro-holes and blind holes.

FEATURES:

- Large touch screen (TFT) is easy to read.
- High Quality and Reasonable Price, Time setting.
- All models with temperature indicator and controller.
- Auto-tuning for convenience use and optimal processing efficiency.
- Power-emitted display for accuracy and repeatability, Variable power output, 0-900 watts.
- Equipped with a soundproof box to reduce noise pollution during ultrasonic operation.
- These machines are controlled by microcomputers.
- The microcomputer regulates the ultrasonic frequency for more reliable operation.
- The machine will automatically give a warning signal if it malfunctions.
- Protective container prevents contamination and keeps noise level low during operation.

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- Very wide range for power adjustment: the power level can be set between 1 and 99.9%, giving users control for more sensitive applications.
- Various sizes of ultrasonic poles can be purchased: very small-diameter probes can concentrate the power in very small volume samples (excellent for cell disruption of very small samples); larger-diameter probes are necessary for larger samples (especially useful for forming homogenous mixtures of larger volumes).

*It can be used to break the efficient cell wall of plant cell tissue and extract more specific substances.
It has been widely used in crushing and extraction of cannabis. (herbal extraction and 420 crushing extraction).

MAIN TECHNICAL PARAMETERS :

Models	Ultrasonic Frequency(KHZ)	Maximum Power(W)	Optional Variable Amplitude Level (Φ) Mm AS PER SAMPLE VOLUME	Including with Instrument	Capacity per time (ml)
ALHP-500	20-25	500	2,3,6,10,12	6	0.5-500
ALHP-650	20-25	650	2,3,6,10,12	6	0.5-600
ALHP-750	20-25	750	6,10,12,15	6	0.5-700
ALHP-900	20-25	950	6,10,12,15	6	0.5-1000
ALHP-1000	20-25	1000	6,10,12,15	15	0.5-1200
ALHP-1200	20-25	1200	6,10,15,20,22,25	15	20-1500
ALHP-1800	20-25	1800	6,10,15,20,22,25	22	20-2000
ALHP-2000	20-25	2000	6,10,15,20,22,25	25	20-2000

TECHNICAL SPECIFICATION OF ULTRASONIC HORN:

Models (mm)	Inch	Frequency	Power Reference Range	Crushing Capacity Reference
Φ2	1/12"	20-25KHz	min-150W	0.1-10ml
Φ3	1/8"	20-25KHz	min-250W	3-20ml
Φ6	1/4"	20-25KHz	20-400W	50-300ml
Φ10	5/12"	20-25KHz	100-600W	50-400ml
Φ12	1/2"	20-25KHz	200-900W	300-600ml
Φ15	5/8"	20-25KHz	300-1000W	500-700ml
Φ20	4/5"	19.5-20.5KHz	400-1100W	700-1000ml
Φ22	5/6"	19.5-20.5KHz	400-1100W	800-1200ml
Φ25	1"	19.5-20.5KHz	800-1500W	800-2000ml

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