

## PROBE SONICATOR (ADVANCED)

**PreCiSonic™**  
(Pre-Cision Ultrasonic Bath, Probe Sonicators)



Titanium Tip / Rod

### Model Features

- Auto frequency chasing, avoiding adjustment liquid crystal display at peak value.
- Convenient operation.
- Display temperature control checking and set over-hot protection on the samples.
- Output amplitude 0-100% adjustment.
- Overlead protection, so that equipment can not be damaged.
- 10 operation programs for application or reserve after refreshing.

### Specification

- Working Voltage : 220-240 VAC, 50-60 Hz
- Timing Mode Working Time Clocking : 0~59 mins. 59 seconds.
- Counting Mode Ultrasonic Working Times : 0~149 Times.
- Ultrasonic Time Scope : 0~10 seconds.
- Interval Time Scope : 0~10 seconds.
- The interval time = 0s is for Ultrasonic Continuous Working
- Power Adjustment Scope : 0~99% of the rated power.
- Temperature Setting Scope : 0~59 °C
- Time Control Precision : 1S + 0.1%
- Temperature Control Precision : ±1 °C
- Over temperature protection & alarming functions.
- Ultrasonic output intensity automatic restriction functions.

Model	PKS 250F	PKS 500F	PKS 750F	PKS 900F	PKS 1200F	PKS 1800F
Ultrasonic Wave Power (Watt)	250	500	750	900	1200	1800
Available Probe Tips Dia. in mm	3,6,8	3,6,8	3,6,8, 10,15	3,6,8, 15,20	10,15, 20,25	15,20, 25
Pulverizing Volume (ml)	0.5-200	0.5-400	0.5-600	0.5-600	50-1000	550-1200

## PROBE SONICATOR MODEL : PS-120 W



This Velocity Horn is used for THE PROCESSING APPLICATIONS. Ultrasonic processor (Probe sonicator) is a tool specially designed for Pharmaceutical, Chemical Labs & various research institutes, colleges, universities.

### Some of its applications are

- Tissue Processing (Plant & Animal Tissues)
- Emulsification of Immiscible Liquids.
- De-gassing & De-aerating of Liquids.
- Formulations.
- Particle Dispersion
- In small volume batches of upto 250 ml.

### Advantages

- Homogenization, Micro Fined Emulsion.
- More stable compared to other processes.
- Very Flexible. It can easily be transferred from one batch to other without intermediary operations like emptying, cleaning & refilling. Ultrasonic Processor can be transported to various locations of sample operations.

### Principle of Ultrasoni Processor

High frequency vibrations are produced by the Titanium velocity Horn which is immersed into liquid to be processed. The vibrations give raise to millions of Intense Microscopic Vacuum Bubbles which form & implode at a very high rate. This phenomenon is known as 'CAVITATION'. Cavitation give rise to intense Local Pressure Waves & Micro Streaming of liquid round the points of collapse. This in turn produces High Shear gradients which are responsible for the above stated applications.

### Ultrasonic Processor Consists of

(A) Ultrasonic Generator to produce high ultrasonic frequency of 20 KHz and an Ultrasonic Power 120 watts.

(B) Velocity Horn fitted with PZT Crystals (Transducer Elements). This Velocity Horn assembly converts the electrical energy fed from the Ultrasonic Generator to mechanical vibrations at the rate of applied electrical frequency. The amplitude of these mechanical vibrations are magnified by this Velocity Horn.

Model	Sample Capacity	Probe Size	Frequency	Wattage
PS120W	5 ml - 250 ml	6,12	20 khz	120 watts