



JY-N series

ULTRASONIC HOMOGENIZER



Description

JY-N series ultrasonic homogenizer is a multi-functional and multi-purpose instrument that utilizes the cavitation effect of ultrasonic waves to process experimental samples. It is suitable for 100µl-600ml capacity samples, with the advantages of continuously adjustable ultrasonic time and power, and is capable of crushing all kinds of animal and plant tissues, cells, bacteria, and can be used for emulsification, separation, dispersion,

Working Principle

Based on the cavitation effect of ultrasonic waves in the liquid, the transducer will generate high intensity shear force in the liquid at the top of the tool head through the amplitude-variable rod to form high-frequency alternating water pressure, which will cause the cavity to expand and explode to break the cells. In addition, the use of ultrasonic propagation in the liquid to produce a violent perturbation effect, so that the particles produce a large acceleration, thus colliding with each other or collision with the wall to achieve the effect of crushing, emulsification and separation.

Features

Flexible parameters
Ultrasonic duration, power continuously adjustable, good stability

High stability
TC4 titanium alloy transducer (certain models)

High safety
Equipped with over-temperature, overload, and time alarm functions

Wide applicability
Different models of the instrument can meet various customer needs, with a fragmentation range of 100 µl to 1200 ml.

Selectable modes
Intermittent/Continuous pulse mode



Application Fields

Bioengineering
Disruption of cells, bacteria, viruses, spores, and other cell structures.

Food engineering
Ultrasonic homogenization of beverages. Maturation and aging acceleration techniques for wine. Accelerating dissolution and chemical reactions, such as in fat processing.

Environmental engineering
Homogenization of soil and rock samples. Study of the structural and physical characteristics of rocks.

Biopharmaceuticals
Dispersion of pharmaceutical substances for injection. Dispersion and extraction of traditional Chinese medicines. Disruption, emulsification, homogenization, and fragmentation of particles like carbon nanotubes and rare earth materials.

Technical Specifications

For small volume samples

Model	JY96-IIN	JY88-IIN	JY92-IIN	JY92-IIDN
Frequency	20-25 KHz	20-25 KHz	20-25 KHz	20-25 KHz
Display	7 inch TFT touch screen	7 inch TFT touch screen	7 inch TFT touch screen	7 inch TFT touch screen
Adjustable Power	150 W (1%-100%)	250 W (1%-100%)	650 W (1%-100%)	900 W (1%-100%)
Tip (Φ)	6 mm	6 mm	6 mm	6 mm
Optional (Φ)	3 mm	3 mm	2, 3, 10mm	2, 3, 10, 12, 15 mm
Processing Volume	10-100 ml	10-200 ml	100µl-500 ml	100µl-600 ml
Duty Ratio	0.1-99.9 %	0.1-99.9 %	0.1-99.9%	0.1-99.9%
Temperature Alarm	0-99.9°C (Prevents overheating)	0-99.9°C (Prevents overheating)	0-99.9°C (Prevents overheating)	0-99.9°C (Prevents overheating)
Alarm	time, overload	time, overload	time, overload	time, temp, overload
Size (mm)	430*245*300	430*245*300	430*245*300	430*245*300
Weight	8.4 Kg	8.5 Kg	9.5Kg	9.6 Kg
Soundproof Box Size	345*345*535 mm	345*345*535mm	345*345*535mm	345*345*535mm

Note: When using 10mm, 12mm, 15mm transducer, it is strongly recommended to use titanium alloy transducer, which has the advantages of high energy conversion rate, stability and durability, and suitable for long time work compared with general transducer.

For large volume samples

Model	JY98-IIIDN	JY99-IIDN
Frequency	19.5-20.5 KHz	19.5-20.5KHz
Display	7 inches TFT touch screen	7 inches TFT touch screen
Adjustable Power range	1200 W (1%-100%)	1800 W (1%-100%)
Accompany tip (Φ)	20mm	25mm
Optional tip (Φ)	15, 25 mm	20, 28 mm
Processing Volume	50-1000 ml	50-1200 ml
Duty Ratio	0.1-99.9%	0.1-99.9%
Temperature Alarm	0-99.9°C	0-99.9°C
Alarm	time, temp, overload	time, temp, overload
Size of Power Supply Chassis (mm)	430*245*300mm	430*245*300mm
Weight	11.6 Kg	11.8 Kg
Soundproof Box Size	345*345*535mm	345*345*535mm