

Sonics Ultrasonic Processor (VCX-500)

Product Code: SONVCX-500

Brand: Sonics & Materials

Sonics Ultrasonic Processor (VCX-500) is a 500W laboratory sonicator designed to safely process a wide range of organic and inorganic materials from 250 microlitres to 1 litre. Typical applications include nanotechnology (producing nanoparticle materials and Graphene dispersions), cell lysing, sample preparation, homogenization, ChIP Assay, emulsification, disaggregation, and deagglomeration, plus uses in the field of sonochemical processing.

Features:

- **Exclusive Energy Setpoint:** The energy setpoint continuously monitors the amount of energy in Joules (watts x seconds), that is being delivered to the probe, and terminates the ultrasonics when the desired amount of energy has been dispensed.
- **Wattmeter:** Digitally displays the actual amount of power in watts that is being delivered to the probe.
- **Automatic Tuning and Frequency Control:** Eliminates the need for constant adjustment of the power supply.
- **Integrated Temperature Controller:** Precludes harmful overheating of the sample and guarantees process integrity by terminating the ultrasonics when the sample temperature reaches a predetermined limit. Enables process control and monitoring from 1°C to 100°C.
- **Consistent Reproducibility:** Time-saving user-programmed presets store up to ten procedures to facilitate protocol duplication, automate repetitive tasks, and eliminate technician-to-technician method variability.
- **Microprocessor Based - Programmable:** Digital accuracy and repeatability guarantee adherence to the most existing protocol.
- **Automatic Update Compensation:** Ensures uniform probe amplitude regardless of the varying loading conditions encountered during the processing cycle.
- **On Demand Real Time Display:** Provides a window on the process. No more assumptions. Pressing a button enables all set and run parameters to be continuously displayed on the screen, providing instant mode confirmation without process interruption.
- **Variable Power Output Control:** Allows the ultrasonic vibrations at the probe tip to be set to any desired amplitude. Selected output level is clearly displayed on the screen.
- **Ten Hour Process Timer:** Controls the processing time and the duration of processing.
- **Elapsed Time Indicator:** Monitors both the elapsed time and the duration of processing.
- **Independent On/Off Pulsar:** Enables safe treatment of temperature-sensitive samples at high intensity, and provides mixing by repeatedly allowing the sample to settle back under the probe after each burst. Both on and off cycles are independently controllable from 1 second to 59 seconds.
- **User Friendly:** Menu driven fill-in-the-blank prompts provide intuitive guidance through all functions.
- **Smallest Footprint in its Class:** Ultra-compact design eases emplacement and optimizes bench space. Only 190 x 340mm.
- **Power Supply:** Remote actuation compatible.



Specifications:

Power Supply	Net Power Output	500 Watts
	Frequency	20 kHz
	Dimensions (h x w x d)	235 x 190 x 340mm
	Weight	6.8kg
Sealed Converter	Part No. CV 334. Piezoelectric lead zirconate titanate crystals (PZT)	
	Diameter	63.5mm
	Length	183mm
	Weight	900g
Converter Cable	Cable Length	1.8m (Part No. 201-0300)
Standard Probe	Tip Diameter	13mm with threaded end and replaceable tip (Part No. 630-0220) or solid probe with non-replaceable tip (Part No. 630-0219). Please specify.
	Processing Capability	50ml to 250ml
	Length	136mm
	Weight	340g
	Titanium alloy Ti-6Al-4V	
Temperature Probe (optional)	Allows sample temperature to be monitored up to 100°C.	
	Stainless steel.	
	Part No. 830-00060	
Tool Kit	Supplied with one open end wrench (Part No. 888-00026) and one blue spanner wrench (Part No. 888-00041) for the converter and one red spanner wrench (Part No. 888-00042) for the probe.	
Electrical Requirements	Unless otherwise requested, units are shipped for 117 volts, 50/60Hz. For export, please specify desired voltage option.	

Note: Unless otherwise requested, shipped complete and ready for operation with a 13mm probe with replaceable tip, tool kit, and instruction manual.

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