

OM500 Ultrasonic Homogenizer (500W)

The OM500 is a powerful ultrasonic homogenizer featuring programmable operation and a digital display of operating parameters. Popular applications include nanoparticle dispersion, creating emulsions, cell lysis and homogenization.

Adjustable pulse On and Off times can be programmed from 1 second to 1 minute. Total programming has a maximum setting of 10 hours.

A wide variety of probes and accessories are available to handle virtually any application.



Processing probes and stand sold separately

Technical specifications

Specify desired voltage when ordering

Power rating	500 Watts
Frequency	20 kHz
Timer	10 Hours
Pulse ON/OFF	1 second to 1 minute
Dimensions	W: 8" (20.3 cm), D: 15.25" (38.7 cm), H: 8.5" (21.6 cm)
Voltage	110 or 220V 50/60 Hz

OM500 Includes power supply, convertor, cables, and wrench set

Features

- **Programmable operation:** Set time and amplitude for hands-free operation
- **Pulse mode:** Prevent heat buildup in temperature sensitive samples
- **Digital amplitude/intensity control:** Output intensity can be set from 20 to 100%
- **Elapsed time indicator:** Displays duration of sonication
- **Display of wattage and joules:** Real-time energy monitoring
- **Overload protection:** Prevents damage to circuitry if a fault occurs
- **RoHS compliant:** Uses lead-free components

OM500 probes and accessories

Horns (also known as probes) are made from titanium and machined to specific sizes and shapes. When driven at their resonant frequency, they expand and contract longitudinally. This mechanical vibration is amplified and transmitted down the length of the probe. In liquid, the probe causes cavitation which constitutes the main mechanism for sample processing.

Choosing the appropriate horn is extremely important. The sample volume to be processed is directly related to the tip diameter. Smaller tip diameters (Microtip probes) deliver high

intensity sonication, but the energy is focused within a small, concentrated area. Larger tip diameters can process larger volumes, but offer lower intensity. Probes are offered with replaceable tips.

Probe tips will pit or erode over time and require replacement. Replaceable tip probes are used with aqueous samples only. In addition to aqueous samples, solid probes can be used with organic solvents, alcohols and low surface tension liquids. Contact us with questions regarding appropriate tip selection.

Standard probes

Probe part #	Processing volume	Tip type	Tip diameter	Amplitude
060-500	20 mL to 250 mL	Replaceable	1/2" (12.7 mm)	120 μ m
060-750	50 mL to 500 mL	Replaceable	3/4" (19.1 mm)	60 μ m
060-1000	100 mL to 1 L	Replaceable	1" (25.4 mm)	30 μ m

Note: All amplitude values are measured at 100% output.



Replacement tips for standard probes

Standard 1/2", 3/4" and 1" probes have replaceable tips. During normal use tips erode and become less effective over time. These worn tips can be easily replaced.

Probe part #	Tip diameter	For use with
060-500R	1/2" (12.7 mm)	060-500
060-750R	3/4" (19.1 mm)	060-750
060-1000R	1" (25.4 mm)	060-1000



Microtip probes

Microtips are thin, high-intensity probes which are designed for processing small volumes. Microtips screw into the threaded end of the standard 1/2" probe (Part number: 060-500).

Standard probes

Probe part #	Processing volume	Tip diameter	Amplitude
060-062K	200 µL to 5 mL	1/16" (1.6 mm)	320 µm
060-125K	1 mL to 15 mL	1/8" (3.2 mm)	380 µm
060-250K	5 mL to 50 mL	1/4" (6.4 mm)	200 µm

Note: The recommended processing volume is application specific. For example, samples containing surfactants foam easily and may require larger volumes for effective sonication. Contact us for application assistance.



Sound enclosure

Sonicators are extremely loud devices and will cause discomfort to the user and anyone nearby. The Sound Enclosure reduces noise by approximately 20 dBA and is made to work with all accessories. In addition to reducing noise, the Sound Enclosure has an internal support rod and converter mounting system.

Any probe or horn will be held safely and securely inside the unit. Two ports are located on either side of the enclosure for coolant tubing or a temperature monitoring probe. The interior walls are lined with acoustical foam and the door has a window so experiments can be visually monitored.

Part #	Description
060-22	Sound Enclosure with converter holder W: 13.5" (34.3 cm), D: 13" (33 cm), H: 30.5" (77.5 cm)



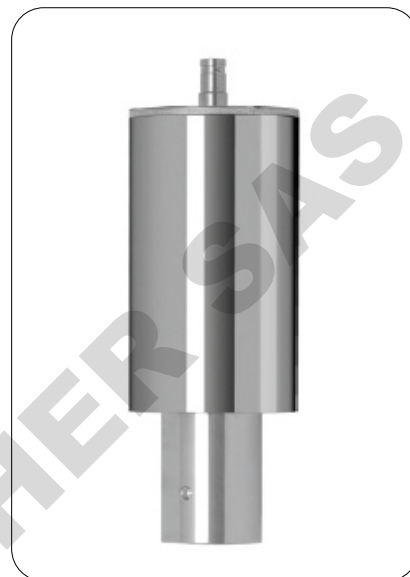
OM500 general accessories



Support stand with converter holder
(Part number: 060-20)



Heavy duty stand (Part number: 060-21)



Replacement converter
(Part number: 060-23)



6 ft. replacement converter cable
(Part number: 060-24)



Replacement wrench set
(Part number: 060-26)

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