

# 500W Ultrasonic Homogenizer

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.

## 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 20-100%

### 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



*Stand sold separately.*

Technical Specifications - <i>Specify desired voltage when ordering</i>	
<b>Power Rating</b>	500 Watts
<b>Frequency</b>	20 kHz
<b>Timer</b>	10 Hours
<b>Pulse ON/OFF</b>	1 second to 1 minute
<b>Dimensions</b>	W: 8" (20.3 cm), D: 15.25" (38.7 cm), H: 8.5" (21.6 cm)
<b>Voltage</b>	110 or 220V 50/60 Hz

OM500 Includes generator, convertor, cables and wrench set

# 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 Omni with questions regarding appropriate tip selection.

## Standard Probes

Probe Part #	Processing Volume	Tip Type	Tip Diameter	Amplitude
<b>060-500</b>	20 mL to 250 mL	Replaceable	1/2" (12.7 mm)	120 $\mu\text{m}$
<b>060-750</b>	50 mL to 500 mL	Replaceable	3/4" (19.1 mm)	60 $\mu\text{m}$
<b>060-1000</b>	100 mL to 1 L	Replaceable	1" (25.4 mm)	30 $\mu\text{m}$

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
<b>060-500R</b>	1/2" (12.7 mm)	060-500
<b>060-750R</b>	3/4" (19.1 mm)	060-750
<b>060-1000R</b>	1" (25.4 mm)	060-1000



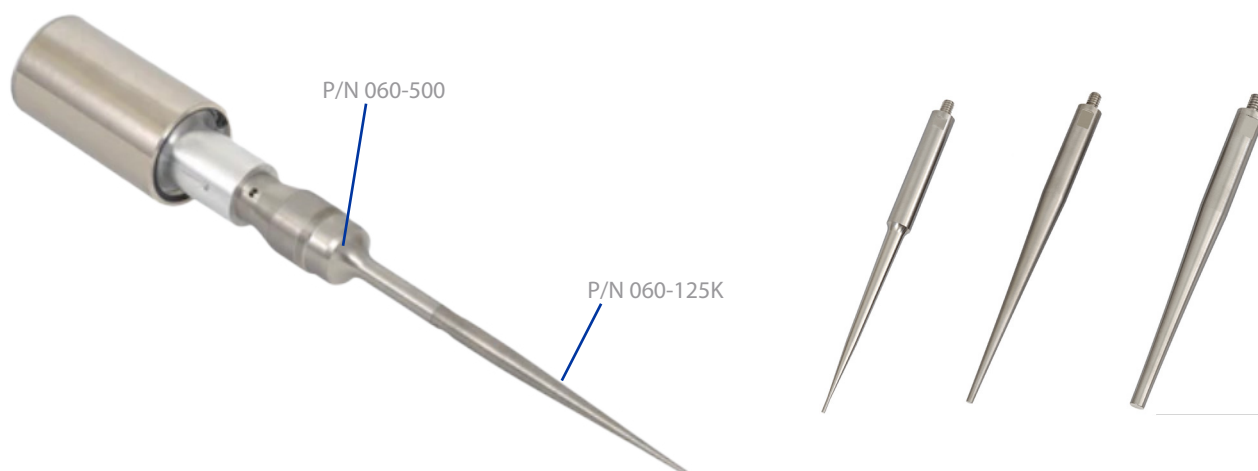
# OM500 Probes and Accessories

## 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 (#060-500)

Probe Part Number	Processing Volume	Tip Diameter	Amplitude
060-62K	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	10 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 Omni 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.

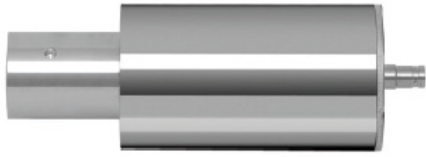
Any probe or horn will be held safely and securely inside the unit. Two ports are located on either side of the enclosure for coolant tubing or a temperature monitoring probe. The interior walls are lined with acoustical foam and the door has a window so experiments can be visually monitored.

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

## Replacement Convertor



## Replacement Wrenches



## Replacement Convertor Cable



## Heavy Duty Stand



## Support Stand



Part Number	Description
060-20	Support Stand with Convertor Holder
060-21	Heavy Duty Stand
060-23	Replacement Converter
060-24	6 ft Replacement Converter Cable
060-25	Replacement Pin Spanner Wrench
060-26	Replacement Wrench Set



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