

# Q2000 Sonicator

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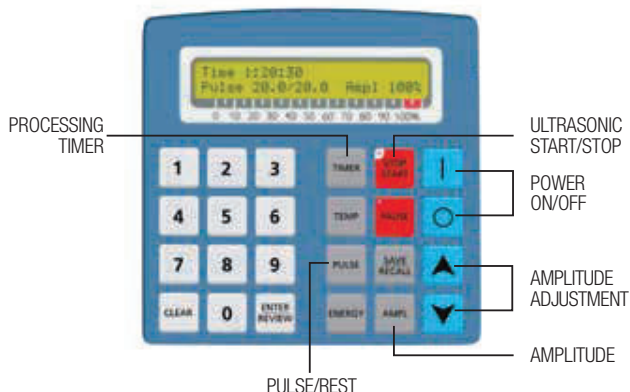
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**The Q2000 offers the ability to process large volumes in individual batches or flow through applications. This model includes a high amplitude, 1.5" diameter, 10" long probe and booster. The Q2000 is powerful, durable and customizable.**

The Q2000 Sonicator allows the user to program processing times and a full range of intensity settings. Processing time can be set from 1 second to 10 hours. A pulsing feature is also included. Pulsing can reduce the amount of heat generated by sonication when processing temperature sensitive samples. A temperature monitoring probe option is also available.



Stand sold separately.



## 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

### Temperature protection

Prevents overheating of samples

## PART NO. Q2000 INCLUDES:

- Generator
- Converter
- Booster
- Converter cable
- Power cable
- Wrench set
- #4777

## TECHNICAL SPECIFICATIONS:

<b>Power Rating:</b>	2,000 watts
<b>Frequency:</b>	20kHz
<b>Programmable Timer:</b>	10 hours
<b>Adjustable Pulse On/Off:</b>	1 second to 1 minute
<b>Dimensions (H x W x D):</b>	7 x 15 x 18.25 in. (178 x 380 x 463 mm)
<b>Voltage:</b>	230V, 50/60 Hz

## High Volume Batch Processing

The powerful 2,000 watt generator delivers high amplitude sonication to a wide variety of sample types. High viscosity samples (such as oils, slurries, emulsions, etc.) require more power than traditional sonicators are capable of supplying. The Q2000 is a reliable solution for many applications.



## Replacement Probes

The #4777 comes standard with the Q2000 System. The two additional probes are available as options to accommodate other sample volumes.



Part #	Tip Diameter	Processing Volume	Amplitude
4777	1.5" (38mm)	5 - 20L	100µm
4697	1" (25mm)	1 - 5L	100µm
4776	0.5" (12mm)	50 - 400ml	100µm

*Note: Processing volumes are application specific. There are many variables (viscosity, concentration, etc.) that can affect the min/max processing volumes and processing times. Stirring may be beneficial to viscous samples. Contact us for assistance.*

## Optional Accessories



#4474



#461



#4060

Part #	Description
4474	Sound Enclosure (H x W x D) 36 x 16 x 16 in. (914 x 406 x 406 mm)
461	Support Stand and Converter Clamp
4060	Temperature Probe

*\*Stand and clamp can be used inside of enclosure.*

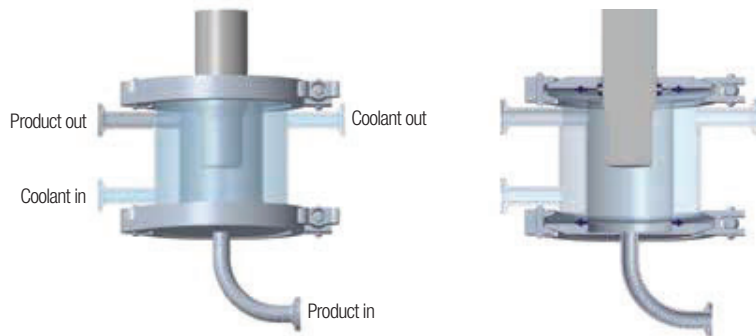
### High Volume In-Line Processing

Flocells offer inline/continuous, large volume, sample processing. The sample may be processed in a single pass, recirculated through multiple times or have a multi-unit configuration for faster processing. The type of configuration and actual flow rate are dependent on the individual application, sample type and desired end result.

The liquid sample is pumped into the Flocell through the inlet at the bottom of the unit. As the sample passes through the cavitation field, it is processed. The processed liquid exits the unit through an outlet port. The degree of processing can be controlled by adjusting the intensity of sonication as well as flow rate.



Sound enclosure and chiller sold separately.



The unit is recommended for processing volumes of 10L or larger. Routine applications include emulsification, cell lysis, degassing, homogenization, solubilizing, deagglomerating and dispersing.

The Flocell is compatible with the Q2000 system. It is equipped with 1/2" sanitary connections and includes the #4676 probe. An integral water jacket is used to regulate both the system and the sample temperature for efficient operation. An optional recirculating chiller (#4906) is available to cool the Flocell's water jacket. Use of a sound enclosure (#4475) is always recommended.

Part #	Description
Q2000F	Q2000 (without standard probe) Including <b>High Volume Flocell (#4678)</b>
4678	<b>High Volume Flocell</b> <ul style="list-style-type: none"> <li>Includes #4676 Probe</li> <li>Material: 316L Stainless Steel</li> <li>1/2" (13mm) Sanitary connections</li> <li>Internal volume: 250mL</li> <li>Water jacketed for cooling</li> <li>Maximum flow rate: 20L/min.</li> </ul>
4676	<b>Flocell Probe</b> 1.5" (38mm) diameter
4475	<b>Sound Enclosure</b> 16.5 x 31 x 14 in. (419 x 787 x 356 mm)
4906	<b>Recirculating Chiller</b> 13 x 11 x 13 in. (320 x 344 x 234 mm)

Note: Pump system and compressed air source are not included.