

Qsonica 4423

Qsonica 4423 5/64" Probe User Manual

Model: 4423 | Brand: Qsonica

INTRODUCTION

This manual provides essential information for the proper use, setup, operation, and maintenance of the Qsonica 4423 5/64" Probe. This probe is specifically designed for efficient processing of samples ranging from 0.2 mL to 5 mL in volume and is compatible with Qsonica Q55 and Q125 ultrasonic processor models. Adhering to these instructions will ensure optimal performance and longevity of the product.



This image displays the Qsonica 4423 5/64" Probe, a slender, metallic instrument designed for efficient sample processing. It features a threaded top for secure attachment to compatible ultrasonic processors like the Q55 or Q125 models, and a tapered tip for precise energy delivery.

SETUP

Before initial use, ensure the probe is clean and free from any debris. Follow these steps to set up the 4423 Probe with your compatible Qsonica ultrasonic processor:

- 1. Inspect the Probe:** Carefully examine the probe for any signs of damage, bends, or wear. Do not use a damaged probe.
- 2. Prepare the Processor:** Ensure your Qsonica Q55 or Q125 model is powered off and disconnected from the power source before attaching the probe.
- 3. Attach the Probe:** Gently thread the 4423 Probe into the converter horn of your ultrasonic processor. Hand-tighten only; do not overtighten with tools, as this can damage the threads or the probe itself.
- 4. Secure the Setup:** Place the processor and attached probe in a stable position, ensuring the probe tip is correctly positioned within your sample vessel.

Always handle the probe with care to prevent damage to the delicate tip and threads.

OPERATING INSTRUCTIONS

The 4423 Probe is designed for high-efficiency processing of small volume samples. Follow these guidelines for optimal operation:

- **Sample Volume:** This probe is optimized for processing volumes between 0.2 mL and 5 mL. Using volumes outside this range may reduce efficiency or cause damage.
- **Immersion Depth:** Ensure the probe tip is adequately immersed in the sample. The exact depth may vary based on sample volume and desired effect, but typically the tip should be submerged to prevent cavitation at the liquid surface.
- **Power Settings:** Refer to your Q55 or Q125 processor's manual for recommended power settings. Start with lower power and gradually increase as needed, observing the sample's response.
- **Temperature Control:** Ultrasonic processing generates heat. Monitor sample temperature, especially for heat-sensitive materials. Use a cooling bath or pulsed sonication if temperature control is critical.
- **Safety:** Always wear appropriate personal protective equipment (PPE), including eye and ear protection, during operation.

The high level performance of this probe is achieved through precise design, ensuring reliable and consistent results when used correctly.

MAINTENANCE

Proper maintenance extends the life and ensures the continued high performance of your 4423 Probe.

- **Cleaning After Each Use:** Immediately after each use, clean the probe thoroughly. For most applications, rinsing with distilled water and wiping with a soft cloth is sufficient. For stubborn residues, use a mild detergent or appropriate solvent, followed by thorough rinsing.
- **Sterilization:** If sterilization is required, consult your laboratory's standard operating procedures. Autoclaving is generally acceptable for metallic probes, but verify with Qsonica's guidelines if available.
- **Inspection:** Regularly inspect the probe tip for erosion, pitting, or any signs of wear. A worn tip can significantly reduce efficiency and may require replacement. Also check the threads for damage.
- **Storage:** Store the probe in a clean, dry place, protected from physical damage. Avoid storing it with other tools that could scratch or dent its surface.

TROUBLESHOOTING

If you encounter issues with your 4423 Probe, consider the following common troubleshooting steps:

- **No Sonication/Low Power:**
 - Ensure the probe is securely attached to the converter horn.
 - Verify the processor is powered on and set to the correct frequency/power.
 - Check for visible damage to the probe or converter.
- **Ineffective Processing:**
 - Confirm the sample volume is within the 0.2 mL - 5 mL range.
 - Adjust the immersion depth of the probe tip.

- Increase the power setting on the ultrasonic processor gradually.
- Inspect the probe tip for excessive wear or erosion, which can reduce efficiency.

- **Excessive Heat Generation:**

- Consider using a cooling bath for your sample vessel.
- Implement pulsed sonication cycles (e.g., 10 seconds on, 10 seconds off) to allow for cooling.
- Reduce the power setting if high temperatures are not desired.

If problems persist after attempting these steps, contact Qsonica customer support or your authorized distributor for further assistance.

SPECIFICATIONS

Qsonica 4423 Probe Key Specifications

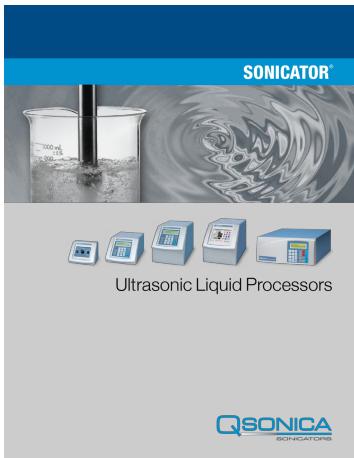
Feature	Detail
Model Number	4423
Processing Volume	0.2 mL - 5 mL
Compatibility	Qsonica Q55, Q125 Ultrasonic Processors
Manufacturer	Qsonica, LLC.
Package Dimensions	8 x 6 x 4 inches
Package Weight	1 Pound
First Available	December 29, 2016

WARRANTY AND SUPPORT

For specific warranty information regarding the Qsonica 4423 5/64" Probe, please refer to the documentation provided with your purchase or contact Qsonica, LLC. directly. Warranty terms typically cover manufacturing defects for a specified period from the date of purchase.

For technical support, troubleshooting assistance beyond this manual, or to inquire about replacement parts, please contact Qsonica customer service or your authorized Qsonica distributor. Ensure you have your product model number (4423) and purchase details available when seeking support.

Note: This manual is intended for informational purposes only. Qsonica, LLC. reserves the right to make changes to product specifications and information without prior notice.

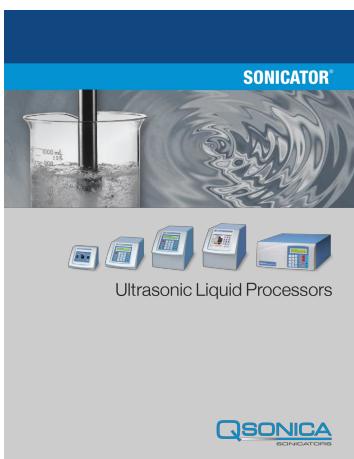


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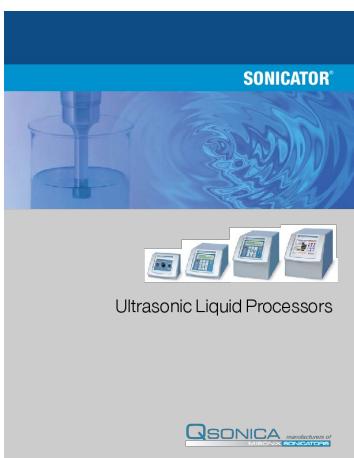


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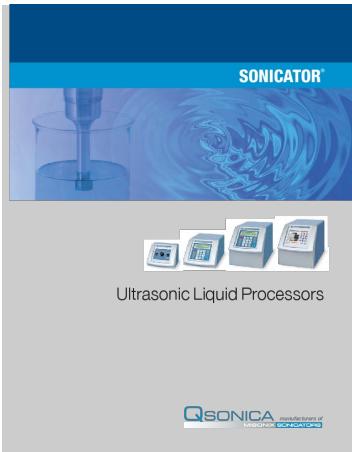


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Ultrasonic Liquid Processors Laboratory Equipment How Does a Sonicator Work A system is comprised of 3 major components Generator Converter and Horn also known as probe The ultrasonic electronic transforms AC line power to high frequency electrical energy sonicators qsonica laboratory equipment pub media asset library s o |||

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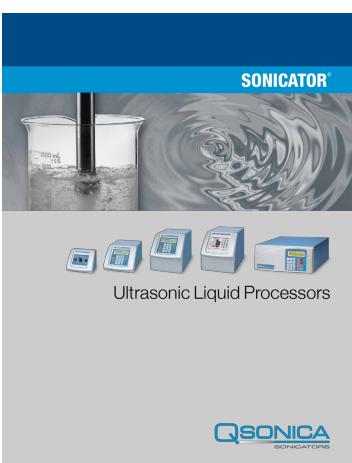


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