INSTRUCTION MANUAL
CAT. 71048, 71048-22
UltraSonic Cleaner; Model 200

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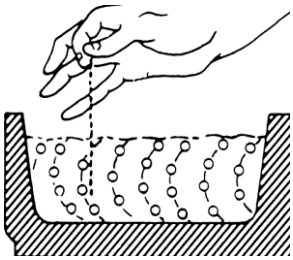
About Ultrasonic cleaning

Ultrasonic cleaning is a fast, safe way of cleaning that is used in laboratories, industries, by dentists and jewelers.



How to use this Ultrasonic cleaner

How it works

The ultrasonic cleaner uses high frequency sound waves to create millions of tiny, microscopic bubbles in the solution. These bubbles expand and then rapidly collapse. As they do so, they release a significant amount of energy creating an intense “scrubbing” action, which is effective on visible surfaces as well as small crevices and even blind holes. Dirt can be loosened and removed from any surface that the liquid touches. This action, called “cavitation”, occurs thousands of times every second to quickly produce clean parts.

Setting up

1. Be sure the ultrasonic cleaner is unplugged. Always unplug the unit before filling or emptying.
2. Fill the tank to within ½’’ of the top edge with warm water. Be sure to leave room for your chemistry and parts. The liquid level should not be allowed to drop below 1 ½ ‘’ from the tank bottom.
3. Plug the cleaner into an appropriate outlet. This would be 110-120V (United States) and 220V (Europe). Check the label on your unit and use only that voltage.
4. Press the “on” switch (+) and allow the cleaner to run for several minutes to drive excess gas from the solution.

Cleaning parts

1. Place objects to be cleaned the plastic basket. Items should not be placed directly on the tank bottom.
2. Suspend the basket in the cleaning solution. Cleaning is usually complete in 30 seconds to 2 minutes depending on the type and amount of soil. The cleaner automatically shuts off after 5 minutes. The unit can be shut off during the cleaning cycle by pressing the “off” switch (-). The cycle can be rerun by pressing “on” (+) again.
3. Rinse parts under running tap water and dry if necessary.

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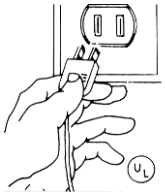
To be safe:

1. When cleaning items for the first time, test one piece before cleaning the rest.
2. Be sure that the cleaning solution you use is compatible with the stainless steel cleaner tank.
3. Follow instructions by the cleaning solution manufacturer.
4. Avoid contact with solutions and provide adequate ventilation.
5. To avoid possible discomfort, do not put fingers into the tank while the ultrasonic cleaner is operating.
6. Never use solvents or flammable liquids in the ultrasonic cleaner.
7. If you clean items with movable parts, you should consider re-oiling immediately after cleaning.
8. Do not operate the cleaner without liquid in the tank.
9. It is normal for your cleaner to become warm after 10-15 minutes of continuous operation.


What does it clean?

Due to the nature of ultrasonic cleaning, you will notice that it is extremely effective when used on metals, glass, stone, ceramic, and hard plastics. When used to clean these materials, the ultrasonic cleaner can remove many different types of soils. This includes but is not limited to the following: dust, oil, light grease, tarnish, and solder paste. It is particularly useful in laboratories where removing chemicals or protein residues is often necessary. It will also clean jewelry that contains sapphires, garnets, rubies, diamonds, and more.

What does it *not* clean?

Ultrasonics relies on the impact of cavitation bubbles against a hard surface to erode away the soils. For that reason, it is not very effective for cleaning soft materials like rubber, cloth, fibrous products, Styrofoam, or products with similar properties. These materials will absorb the sound and little energy will be left for soil removal. It is also necessary to exercise care when cleaning jewelry. Soft stones like pearls and opals should not be cleaned ultrasonically as cracking or discoloration may occur.

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What to look for:

There are two basic types of cleaning solutions: aqueous, which are based on water and solvents, which are more volatile and often flammable. This ultrasonic unit is designed to operate only with aqueous solutions.

NOTE: Solvents or flammable solutions should never be used in the ultrasonic cleaner.

Aqueous solutions come in two general types: acidic and alkaline or basic. These are available in many generally available commercial formulations designed for specific applications. Both can be used in your cleaner, which has a stainless steel tank, if they are not too strong. Ultrasonics can intensify chemical activity and some aggressive solutions may attack the stainless steel. A sign that this is happening will be the appearance of rough gray spots or pitting. If you should see this, discontinue the use of that solution immediately and rinse the tank with fresh water.

How to use them:

Cleaning solutions have to be degassed to work effectively with Ultrasonics. This is a process whereby dissolved gases are expelled from the solutions. The Ultrasonics will perform this task during the first several minutes of operation after the tank has been filled. You may note a different sound as the cleaner drives out the gas and begins to function efficiently. This process can be accelerated by filling the tank with warm water (120-140 degrees F) on startup. The cleaner and generally the solution will perform better at this slightly elevated temperature. Cleaning solutions should be changed regularly as they can lose their effectiveness over time. Dirty solutions will re-deposit soils on the parts and can coat the tank bottom limiting ultrasonic activity.

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