

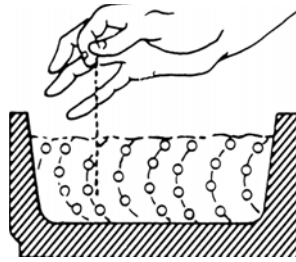
BRANSON ULTRASONIC CLEANER



Model B200

INSTRUCTIONS

Ultrasonic Cleaning



Ultrasonic cleaning is a fast, safe way of cleaning that's been used by laboratories, dentists, jewelers, and industry for years. And now, with this unit you can take advantage of ultrasonic cleaning for many small, difficult to clean items.

How it works:

The ultrasonic cleaner uses high frequency sound waves to create literally millions of tiny, microscopic bubbles in the solution. These bubbles expand and then rapidly collapse. As they collapse, 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.

Cleaning Solutions

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. **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 use of that solution immediately and rinse the tank with fresh water.

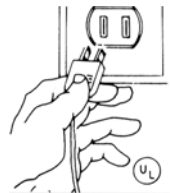
How to use this Ultrasonic Cleaner

To set up:

1. Be sure the ultrasonic cleaner is unplugged. Always unplug the unit before filling or emptying
2. Fill the tank to within 1/2" 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 1/2" from the tank bottom
3. Plug the cleaner into an appropriate outlet. This would be 110-120 volts in the U.S. and 220 volts in 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.

To clean parts:

1. Place objects to be cleaned in 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.



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 and precautions recommended 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 it will clean:

Due to the nature of ultrasonic cleaning you will find it very effective when used on hard materials such as metals, glass, stone, ceramic, and even dense, hard plastics. When used to clean these types of hard materials your ultrasonic cleaner can remove a great number of different types of soil. These can include such things as dust, dirt, oils, many light greases, tarnish, even solder paste. It is particularly useful in laboratories for removing chemical or protein residues from intricate or complex labware and instruments. It will also do an excellent job on jewelry with hard natural stones like sapphires, garnets, rubies, diamonds, etc.

What it will 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.

Cleaning Solutions

Limited Warranty

How to use them:

Each manufacturer includes directions for using their chemistry on associated packaging. Follow the manufacturer's directions.

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.

BRANSON ULTRASONICS warrants this ultrasonic cleaner to be free from defects in material and workmanship for a period of two years from date of sale. BRANSON's liability under this warranty is limited solely to repairing, or, at BRANSON's option, replacing those products included within the warranty which are deemed defective and returned to BRANSON within the applicable warranty period, shipping charges prepaid. This warranty shall not apply to any product which has been subjected to misuse, negligence, accident, or has been improperly installed, misapplied, modified, or repaired by unauthorized persons.

Inspection: Buyer shall inspect the product upon receipt. The buyer shall notify BRANSON in writing of any claims of defects in material and workmanship within 30 days. Failure to make such a claim shall be considered a waiver of right to claim.

Disclaimer: The provisions stated herein are BRANSON's sole obligation and specifically exclude all other remedies or warranties, expressed or implied including those related to merchantability or fitness for a particular purpose.

Limitations: BRANSON shall not be liable for any incidental, consequential, or special damages, losses, or expenses. Any action relative to this warranty must be initiated within one year of purchase.