



Laboratory Equipment Pty Ltd

INSTRUCTION MANUAL FOR LABEC ULTRASONIC BATHS

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GUIDELINES:

Always allow 5 minutes for fresh liquids to degas. Degassing is the action of removing air bubbles from the solution, which is achieved from turning the ultrasonics on.

It is not recommended to operate unit for longer than 30 minutes.

Fluid temperature will increase under operating conditions.

The operator should always be aware that it only takes a small amount of moisture contamination on the power connections to cause electrical breakdown.

DO:

- ✓ Use a suitable chemical applicable to your application. Check the suitability of the chemical for use in ultrasonics, as some chemicals can emit a dangerous toxic gas.
- ✓ Use beakers and positioning covers or auxiliary pans for additional solutions.
- ✓ Rinse thoroughly after each cleaning application.
- ✓ Keep tank bottom free of silt and dirt accumulation.
- ✓ Always drain the basket fully of fluid before leaving the cleaning chamber.

DON'T:

- × Run machine without solution in the tank.
- × Do not allow liquid level to drop below 80mm from tank bottom.
- × Use heaters without a thermostat control.
- × Setting for the thermostat on heated models should not exceed 60°C.
- × Place items directly on the tank bottom, always suspend in basket or rack.
- × Drop items into stainless steel bath.
- × Do not pour hot water directly into the tank.
- × Use chemicals with very high or low pH level.
- × Use wax and compound removers on plastic or acrylics.
- × Use a flammable or combustible solution.
- × Subject the jacket and controls to splashing liquid and fluid overflows.

GENERAL CLEANING:

- The turnover of solution must be determined by the user to satisfy acceptable cleaning results of the finished article.
- If the contamination is heavy and difficult to remove, a pre-rinse in a heated solution could be enough to soften and loosen unwanted debris for ultrasonic cleaning.
- At the other end of the scale, after the items have been removed it is essential that a final rinse be performed to remove any residue that remains on the cleaned parts.

SERVICING

Unauthorized repairs will void warranty.

Only Unisonics Australia employees should service this ultrasonic cleaner.

The circuit board presents high-level voltage. Improper testing or repair procedures could result in injury to the service person and damage to the product.

All repair requests are supplied as a no obligation free quote.

PERFORMANCE TEST:

Please find as follows the testing process for efficiency levels in the ultrasonic cleaner.

The aluminium foil test is an economical and consistent test for units under 60 Litres to gauge performance. Ultrasonic cleaners over 60 Litres should use a cavitation meter for more accurate testing.

Testing Procedure:

1. Always degas the solution prior to the performance test to allow for the elimination of air found in fresh solution. This is achieved by turning the ultrasonics on for 5 minutes.
2. Testing should always be carried out in a solution only chamber (basket and cleaning items removed).
3. The foil must be suspended in the solution for a duration of 30 seconds.
4. A consistent pattern of perforation should result with hole sizes varying from one to four mm in diameter.
5. Tested fluid should be disposed of, as aluminium residue will remain and deposit as a contaminant.

Please note: Inconsistency in foil thickness and manual holding can create a degree of error that will vary the results of the foil test.

INSTALLATION:

When locating a position for the cleaner, consideration should be given to the following:

Generous circulation of air all around the cleaner.
Surrounding air free of dirt, contamination and high temperatures.
Away from possible liquid splatter.
Easy access for manual adjustment.

OPERATION:

Insert the single phase 10A plug into a 240-volt, AC outlet.
Pour cleaning fluid of your choice into the tank.
Switch the supply mains ON.
The unit is now ready to operate.

For M/MH:

Turn the Mechanical timer switch to the desired time setting and ultrasonic cavitation will occur in the liquid.

For D/DH:

If time display is set, press I/O power button to start countdown.
To change interval time, press SET.
Use the Up and Down arrows to adjust Minutes.
Press SET to lock time, and I/O to start countdown.
When countdown finishes, 5 seconds of beeps are given, and the relay is off.
To terminate the countdown process early, press the I/O power button for 2 seconds.
To re-start the same cycle of countdown, press I/O power button.
Ensure timer is terminated before switching off mains power.

TANK HEATING:

Unisonics heated ultrasonic cleaner models use silicon rubber contact heaters on the outside face of the tank and are thermostatically controlled. The liquid level in all cleaners should not drop below 80mm from the tank bottom and the thermostat setting should not exceed 60°C. Hot water should never be poured directly into tank bottom but instead be brought to temperature gradually.

Once the cleaner has been turned on according to the Operations above, the thermostat can be set to your desired temperature. (Note: Heaters come standard wired through the timer control to ensure the heater is not accidentally left on for extended periods of time.)