



QAQC LAB

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Ultrasonic Cleaner

User Guide



Ultrasonic Cleaner User Guide

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Description

Endecotts Ultrasonic cleaner has been specially designed for cleaning test sieves and is also suitable for general laboratory use. It is easy to operate and extremely efficient.

The all stainless steel construction and digital control panel are ergonomically designed to give a long trouble free life. Endecotts Ultrasonic cleaner is environmentally friendly, operating on 10.5 litres of organic solvent free water. It is equipped with 4 high frequency 30 – 40 KHz transducers, rear mounted for optimum performance. A sieve up to 200mm or 8” in diameter is placed on the sieve support rack which presents the sieve at the ideal angle to the transducers as well as allowing contaminants to fall free of the sieve onto a catch tray. Simply emptying the tray reduces the need to change the fluid.

The control panel enables the user to set the following parameters:

Fluid temperature: Off/On with range of 25-80°C

Cycle Time: 0-59 minutes

Ultrasonics: Off/On

The Endecotts Ultrasonic Cleaner is fully EMC and LVD compliant and complies with all relevant European directives

Description

The Endecotts Ultrasonic cleaner consists of a stainless steel tank with internal dimensions of 230 x 200 x 250mm deep. Heating is by way of base mounted heat pads, controlled by a variable thermostat.

Cleaning Fluid – use only organic solvent free water soluble detergent which is recommended for all sieve cleaning operations. **(a free sample has been supplied with your Ultrasonic cleaner)**

Sieves should be thoroughly rinsed and dried **(do not exceed 80°C to avoid the possibility of mesh distortion)** after cleaning.

It is not advisable to expose hands to cleaning chemicals, or regularly immerse hands in an active bath.

Never use “solvent” or other
“flammable” liquid

It is advisable to keep the tank filled with liquid at all times to prevent damage caused by inadvertent switching on and to prevent items dropped into the tank causing damage to the tank base, sides, heater or transducers. Tanks should be regularly cleaned out.

Unpacking/Checking/ Setting Up

Unpacking:

Care should be taken to ensure that no items are disposed of in the packaging including paperwork that may be attached to the outer packaging.

Retain all packaging in case of problems and the item needs to be returned to Endecotts.

Checking:

It is important to check that no damage has occurred during transit and any damage that has occurred should be notified to Endecotts or your supplier as soon as possible and before the equipment is installed and turned on.

Check that all items ordered are included and any shortages notified immediately.

Check that the voltage on the specification label on the machine matches that of your supply and that the supply is capable of supplying the current required. A check should be made to ensure that the equipment is as ordered before using the unit.

Accessories:

1 off Sieve support rack

1 off Contaminate tray

1 off Lid

1 off Free sample bottle of cleaning fluid

Operating Instructions

For UK and Continental European Models, connect to a 220 – 240 VAC fully earthed supply via a 3 pin plug. It can be dangerous to operate an ultrasonic bath without an earth connected.

It is recommended, in the interest of safety, that a residual current device (i.e., a circuit breaker) be used when connecting the Ultrasonic cleaner to the mains.

Fill the bath to the top of level marker 'Radiating Surface'. It is important that this level is maintained at all times. This is important to avoid damage to the machine or heaters. The use of the lid will prevent liquid loss by evaporation, and reduce fumes from certain cleaning fluids. (If the tank is run empty the heaters will be damaged and the warranty will be void).

After filling the bath with warm water and a 2% addition of detergent or recommended cleaning fluid, advance the timer to the required cleaning time.

Gases are present in a first fill with water from the tap. Cavitation, the appearance of 'cold-boiling', will only occur when the gases have been driven out of the solution. The period taken to degas the fluid varies. Generally, less than two minutes will see cavitation taking place. Once the solution is degassed, the bath is always available for immediate use.

The timer can be set for a maximum of 59 minutes. In practice most sieves will be cleaned within 5-10 minutes subject to the degree of contamination. The unit should be switched off when not required, which will prolong the transducer life.

Always use the sieve support rack and tray with the inside of the sieve (top of mesh) facing the rear tank wall. This will present the sieve in the optimum position for cleaning, and allow contaminants to fall into the tray.

At frequent intervals empty the bath and clean out the debris and residues which if left on the base will erode the stainless steel. An ultrasonic bath will operate better if clean and last considerably longer.

Before emptying, remove the mains lead from the machine and the supply socket. Empty the machine by the drain valve.

For any technical assistance contact your dealer or Endecotts Ltd.

E-mail: sales@endecotts.com web site: <http://www.endecotts.com>

Operating Instructions for the Digital Display Control Panel

WARNING: Before operating any controls ensure the bath is $\frac{3}{4}$ filled with warm water and the correct dosage of cleaning concentrate.

To switch on the ultrasonic activity

Press the far right SONICS key (marked with a clock symbol). The SONICS light will glow, activity will commence in the tank liquid and the display will count down from the factory-preset time of 10 minutes. At the end of the timed period the activity will stop and the timer will revert to the preset time, ready for a repeat of the operation. To stop the sonic activity at any time, press the SONICS key. To restart, press the SONICS key again and the cycle will recommence and run for the last set time.

To operate the heater

The far left HEAT key (marked with a heat symbol), switches on and off the tank heating. When on, the HEAT light will glow and the liquid temperature will rise until it reaches the factory preset level of 50 degrees C. At this point the HEAT light will flash until the liquid cools to below the set level. The HEAT light then will glow constantly until the set temperature is reached once again. **NOTE:** Ultrasonic activity can elevate the liquid temperature to above the set level, check temperatures with the sonics switched off.

To alter the time and temperature settings

To alter the set time, press the center MENU key (marked with a circle) until the 'Time Set' light glows. Press the Up or Down arrows until the required heat setting in degrees C is indicated. The new temperature setting will remain in memory until the machine is switched off at the mains supply. The center MENU button can be pressed at any time to view the time set or remaining, and the temperature set or temperature now.

Specification

Model:	Ultrasonic Cleaner
Power Consumption:	200 VA RMS (Ultrasonic) (250VA Heaters)
Power output into fluid:	20 Watts/Litre
Power:	230/50HZ Other voltages available
Timer:	0 – 59 minutes
Compact:	Only 340 x 270mm footprint
Height:	350mm
Weight:	10 kilos
Accessories:	Sieve retaining rack Contaminate catch tray and lid.

The Ultrasonic Cleaner should only be dismantled by service personnel qualified in HF and HV techniques as there are voltages present in certain areas in excess of 1KV

Endecotts policy is one of continuous development and we reserve the right to modify future models

General Advice / Procedures

Endecotts Ultrasonic Cleaners are fully tested and factory checked before shipping to customers.

The Ultrasonic Cleaner has been constructed and factory tested to ensure correct operation when connected to the specified electricity supply indicated on the machines rating plate.

Use of unapproved spares or any alteration to the machine would invalidate all warranties and compliance with European directives for 'CE' Marking.

Wherever possible site the bath close to sink for ease of emptying. Coil excess mains lead neatly behind the bath. Always switch off and remove the mains plug from the supply before emptying. Fill the bath with warm water, NOT boiling water.

REMEMBER

- Keep bath filled to "Radiating Surface" marker - NEVER operate an empty bath.
- Do not expose hands to cleaning solutions.
- For general use items for cleaning should be placed in a basket or glass beaker.
- NEVER put hot water into a cold bath.
- Remove mains plug from supply when emptying the bath.
- NEVER use flammable, toxic, caustic or acid solutions.
- Avoid breathing fumes from strong solutions.
- Keep bath filled with water when not in use. This will prevent items dropping onto the base of an empty bath.

Endecotts baths are manufactured in the United Kingdom to conform with BS EN ISO 61010-2, the LV and EMC Directives, compliance with which enables the CE Mark to be affixed.

The warranty will be invalidated if the bath is subjected to improper treatment or misuse.

If the unit stops working, check the indicator when switched on. If the indicator fails to glow, check the mains supply and fuse in the mains plug. There are no user serviceable parts inside the bath. If, after the above checks, the unit still fails to operate it should be returned to your supplier for service.

Endecotts Ltd does not accept any responsibility if the operating instructions contained in this manual are not strictly followed.

Endecotts Ultrasonic Cleaning System

The warranty on Endecotts Ultrasonic products applies to defects appearing within 24 months of the date of sale as a result of faulty materials or manufacture. Genuine defective items returned to Endecotts Ltd or it's distributor's premises, will be replaced or repaired free of charge at their discretion.

This warranty will be invalidated if liquid or cleaning chemical is allowed to be in contact with the transducers or bonding material.

The warranty does not apply to parts worn as a result of normal wear and tear, to damage caused by misuse, non-observance of maintenance, service or connection instructions, defects caused by the use of flammable, toxic or corrosive chemicals or fluids not recommended by Endecotts Ltd.

The user should refer to the relevant instructions for the unit before operating the equipment and should apply to Endecotts Ltd or it's distributors for cleaning techniques or chemicals. Endecotts Ltd will not be responsible for damage or injury caused by incorrect usage of the equipment.

Statutory rights are not affected