labmaterial.ch
Laborgeräte zu fairen Preisen.

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Operating Instructions Ultrasonic Cleaners 2L to 30L

These instructions describe the safe installation, operation and care of Labmaterial digital ultrasonic cleaners from 2L to 30L. Read them completely before filling or switching on the unit, and keep them with the unit.

Scope: Models 2L, 3L, 6L, 10L, 15L and 30L. Product-specific performance and dimensional data are stated in the relevant data sheet and on the nameplate.

Model specifications: 2–30L operate at 40kHz and 230V. 2L and 3L have no fan; 6–30L have a fan underneath the unit to cool the electronics. The units are CE, RoHS and FCC compliant.



Before Starting

- Check for transport damage and completeness
- Place the unit securely on a dry surface
- Close the drain tap, if fitted
- Fill the tank at least two thirds full or as indicated by the fill mark/pictogram
- Place workpieces in the basket
- Only then connect the mains plug

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Safety Instructions

WARNING The following instructions must be followed before each startup.

- Never operate the unit without water or a suitable cleaning liquid. Fill the tank at least two thirds full or as indicated by the fill mark or pictogram on the unit. Liquid may evaporate during extended heating. Check the liquid level and top up in good time. Dry operation can damage the unit and presents a fire hazard.
- Do not touch the liquid while the unit is operating. Hot liquid can cause burns, and ultrasonic energy can injure tissue.
- Never use flammable solvents such as alcohol, acetone or ether. Vapours may ignite. Use only a non-flammable cleaning liquid that is suitable for the material, contamination and unit.
- Disconnect the mains plug before filling, emptying, cleaning or moving the unit. Do not touch the plug or controls with wet hands.
- Never immerse the unit, power cable or plug in water or other liquids. Do not spray liquid onto the housing or control panel.
- Operate the unit only from a correctly earthed outlet at the rated voltage stated on the nameplate.
- Keep ventilation openings clear. Do not place the unit on a soft surface or operate it in areas with flammable gases, corrosive vapours, high humidity or strong temperature fluctuations. Where a fan is fitted, it cools the electronics.
- Place parts carefully in the basket. Do not drop objects directly onto the bottom of the tank. Do not overload the basket or overlap workpieces.
- Switch off and unplug the unit after use. Do not operate the unit continuously for more than one hour; allow cooling periods during extended use.
- If there is smoke, sparking, a burning smell, unusual noise or any other fault, switch the unit off immediately, disconnect the mains plug and do not continue to use it.
- The unit may be used only by instructed persons. Children and persons who cannot operate the unit safely must not use it without supervision.

Warranty and liability: We exclude all warranty claims and other liability in cases of improper storage or handling, overloading or improper use.

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Intended Use

The unit generates ultrasound in water or another suitable non-flammable cleaning liquid. Cavitation removes contamination, including from gaps and recesses. The suitability of the workpiece and cleaning liquid must be checked in advance. The unit is intended for cleaning; it does not replace validated sterilisation or disinfection.

Scope of Delivery and Inspection

- Ultrasonic cleaner
- Lid
- Stainless-steel basket
- Power cable
- Operating instructions

Unpack the unit carefully. Check the housing, tank, controls, power cable, drain tap and accessories for visible damage. Do not connect a damaged unit.

Installation

- Place the unit on a level, clean, dry and load-bearing surface.
- Leave sufficient clearance around the ventilation openings.
- Switch off the controls and close the drain tap, if fitted.
- Route the power cable so that it cannot come into contact with liquid or hot surfaces.
- Never move the unit while it is filled.

Filling and Loading

- Disconnect the mains plug and make sure that the heater and ultrasound are switched off.
- Fill the tank with a suitable cleaning liquid. Fill the tank at least two thirds full or as indicated by the fill mark or pictogram on the unit. The liquid must sufficiently cover the area to be cleaned and must not exceed any MAX marking.
- Place the workpieces in the stainless-steel basket. Leave sufficient space between the parts and do not overload the basket.
- Lower the basket carefully into the tank. Do not place parts directly on the bottom of the tank.
- Fit the lid to reduce splashing and evaporation.
- Only then connect the mains plug to an earthed outlet.

Control Panel

Item	Description
Temperature display	shows the current or set temperature
TEMPERATURE + / –	sets the target temperature
HEATING ON/OFF	switches the heater on or off
Time display	shows the set or remaining operating time
TIME + / –	sets the timer
ULTRASONIC ON/OFF	starts or stops ultrasonic cleaning
DEGAS ON/OFF	starts or stops interval degassing

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Cleaning Cycle

Setting the Timer

- Set the required operating time with TIME + or TIME –. A short press changes the value step by step; pressing and holding changes it more quickly.
- The required duration depends on the workpiece, contamination, temperature and cleaning liquid. Start with a short time and check the result.

Using the Heater

- Set the target temperature with TEMPERATURE + or TEMPERATURE –.
- Press HEATING ON/OFF. The heating indicator lights while the heater is operating.
- For many applications, a suitable operating range is 40–60°C. Higher temperatures do not automatically improve cleaning. Do not set a temperature above 80°C.
- Check the liquid level during extended heating. The lid reduces heat loss and evaporation.
- When the set cleaning time has elapsed, ultrasound and heating switch off automatically.

Starting Ultrasound

- Press ULTRASONIC ON/OFF. The ultrasound indicator lights and the typical operating sound can be heard.
- When the set cleaning time has elapsed, ultrasound and heating switch off automatically. To stop it early, press ULTRASONIC ON/OFF again.
- Check the workpieces and liquid level between cycles. Do not operate the unit continuously for more than one hour.

Degassing Function

Freshly added liquid contains dissolved gases that can reduce cavitation. The degassing function automatically switches the ultrasound on and off at intervals.

- Set the required time with TIME + or TIME –.
- Press DEGAS ON/OFF. The ultrasound indicator lights during the active intervals.
- After degassing, press DEGAS ON/OFF again or wait for the timer to expire.

Selecting the Cleaning Liquid

Water is the basis for many applications. A small amount of a suitable non-flammable cleaning concentrate can improve performance. Observe the cleaning agent’s dosage and material compatibility. Strongly acidic or strongly alkaline solutions can attack the tank, housing or workpieces. Do not use abrasive products.

- Do not add flammable solvents to the tank.
- Do not use untested chemical mixtures.
- For sensitive materials, test first on a non-critical area.
- Replace the cleaning liquid when its effectiveness decreases or it becomes heavily contaminated.

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Stopping and Emptying

- Check that ultrasound and heating are switched off.
- Disconnect the mains plug and allow hot liquid to cool.
- Remove the basket carefully. Allow the workpieces to drain and rinse them with clean water if required.
- Empty units fitted with a drain tap through a suitable hose or into a suitable container. For units without a drain tap, carefully pour out the liquid only after it has cooled completely.
- Clean and dry the inside of the tank with a soft cloth. Wipe the housing only with a slightly damp cloth; do not allow liquid to enter ventilation openings or controls.
- Close the drain tap and store the unit in a dry place.

Care and Maintenance

- Empty, rinse and dry the tank after every use.
- Do not use harsh, abrasive or corrosive cleaning products on the tank or housing.
- Inspect the power cable, plug, drain tap and ventilation openings regularly.
- Do not open any part of the housing. Repairs may be carried out only by qualified personnel.
- Store the unit clean, dry and protected from frost. Do not place heavy objects on the lid.

Troubleshooting

Item	Description
No display	Check the outlet, mains plug and power cable. Do not continue to use the unit if there is visible damage.
No ultrasound	Check the timer and ULTRASONIC ON/OFF. Check the liquid level. If the function is still unavailable, switch off the unit and contact service.
No heating	Check the target temperature and HEATING ON/OFF. Heating takes time depending on the volume and starting temperature.
Irregular operation	Check the liquid level, load and spacing of the workpieces. Objects must not rest directly on the bottom of the tank.
Smoke, sparks or burning smell	Switch off immediately, disconnect the mains plug and do not switch the unit on again.

Service and Documents

For technical questions, spare parts or service, have the product code, serial number, nameplate details and a brief fault description ready.

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