



ULTRASONIC CLEANERS



EN ISO 9001:2000

- Easy operation using only two push-buttons
- Adjustable heating from 35°C to 85°C
- Excellent cleaning with pure water
- Standard sizes available 2.0, 3.0 and 4.0 litres
- Highly efficient
- Including basket and lid
- EMAG ultrasonic cleaners are maintenance-free



1. Description



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|-----------|-------------------------|------------------|-----------------------|
| 1. Lid | 3. Stainless steel tank | 5. ON/OFF | 7. Temperature switch |
| 2. Basket | 4. Mains cable | 6. Digital timer | |

2. Technical Information

Characteristics		Emmi 20 – 2,0 Litre	Emmi 30 – 3,0 Litre	Emmi 40 – 4,0 Litre
Height	(mm)	220	240	240
Width	(mm)	150	165	180
Length	(mm)	260	265	325
Volume	(L)	2,0	3.0	4.0
Tank (WxDxH)	(mm)	230 x 120 x 80	240 x 135 x 100	300 x 155 x 100
Main source	(V)	230/50 HZ	230/50 HZ	230/50 HZ
Classification		IP 20	IP 20	IP 20
Max. wattage		100 W	150 W	200 W
Ultrasonic transducers		2 (app. 38kHz)	3 (app. 38kHz)	4 (appr.38kHz)

2004/D

Technical changes reserved!

3. Important Notes

- The ultrasonic cleaner must only be operated with the main source voltage printed on the nameplate (rear of the casing). (In earthed socket outlet.)
- Do not fill combusive or aggressive chemical agents (acids etc.) directly into the tank. Use glass containers instead.
- Do not put your hands into the cleansing liquid during the process of ultrasonic cleaning.
- In the case of transport damages do not connect unit to power system.
- Do not use ultrasonic cleaner to clean animals or part of the human body (fingernails etc.)
- Do not remain in the immediate vicinity (1 m) for longer than 4 hours.
- If objects are heavily soiled, place them soiled side down into the liquid and do not stack them.
- The ultrasonic cleaner only must be operated with a sufficient amount of water (**approximately three-quarter filling of the tank, i.e. approximately 1-2 cm measured from the upper rim of the tank**).

It is absolutely normal that the upper rims of the tank warm up after a longer period of operation.

4. Operating Instructions



Fill tank (3) with water and plug mains plug (4) into socket. By pressing of the mains switch (5) the cleaning time is set; the temperature (7) is adjusted with the help of the turning knob. Setting on continuous operation (8) also is possible (counter-clockwise rotation). For reasons of safety, however, we do not recommend such procedure. The unit may run dry due to evaporation and thus get damaged. The cleaning time to be set depends on the degree of soiling of the objects you want to clean. If the pre-set cleaning cycle has been finished, the unit automatically terminates the cleaning process. Another turning of turning knobs will put the unit back into operation.

After the termination of the cleaning process remove the objects from the tank and rinse them shortly with water in order to remove remaining particles of dirt

After one or several cleaning sessions it is recommendable to pour the water from the tank, rinse the tank and dry it with a rag. Make sure that no water seeps through the air slots in the bottom of the casing into the unit.

Note:

If the tank is filled with fresh tap water make sure to consider the outgassing period in accordance with the degree of hardness. (For most effective cleaning use outgassed water, e.g. boiled, stale or distilled water.) In other cases, we recommend to fill the unit with water and to let it run for 10 minutes before the objects are added.

5. Examples of Ultrasonic Cleaning of Objects

- Spectacles, frames of spectacles (make sure that there is no direct contact between the glass and the stainless steel bottom of the tank!!)
- Gold- and silver, precious stones, emeralds, pearls
- Indian ink pens, drawing equipment / accessories
- Dentures, braces, instruments, etc.
- Sheer heads of electric razors
- Motor parts, electrical circuit boards, ink cartridges, motorcycle chains and carburettors, etc.
- Precision engineering parts, parts of weapons such as magazines, cartridge cases, firing pins, springs

6. Recommended additives

For each different cleaning process there is a different chemical additive to intensify the cleaning effect. These additives are available at the site where you purchased your Emmi Ultrasonic Cleaner or under <http://www.emag-germany.de>.

EMAG AG recommends the following concentrations depending on the intended utilization:

EM 070 – for dental purposes and to clean dentures at home.

EM 080 – to clean jewels (such as precious stones, emeralds, pearls),
for spectacles, optical glasses, Indian ink pens, spherical heads,
small tools and instruments as well as for small precision parts,
shear heads of electric razors, (not to be used for contact lenses).

EM 081 – for parts of weapons and for particularly greasy objects.

EM 100 – concentration to remove oxidizing from silver, etc. (only to be used in glass cup).

EM 200 – Descoton-Forte, concentrated disinfectant for instruments, etc. (to be used without heater).

EM 300 Super Plus – Extreme cleaning for difficult cases (holders, hinges, wheel bearings,
parts of weapons, cases, brass, etc.)

EM303 – to clean circuit boards (printed circuit boards)

EM404 – to clean cast aluminium (carburator etc.)

If cleaning additives by other manufacturers have been used we do not take any responsibility for the parts cleaned in ultrasonic cleaning bath. Please do not hesitate to contact us for more detailed information.

7. Warranty

This product is warranted for a period of 24 months from the date of purchase.

Defects occurring during the period of warranty, whether due to faulty material or due to faulty manufacture, will be remedied free of cost either by repair or by replacement. Additional claims for compensation are excluded as far as legally valid.

The warranty becomes void if third parties are involved i.e. if third parties disassemble the unit without prior explicit consent by us. In the case of intentional damaging or faulty operation the warranty also becomes void

In the case of service under warranty conditions, the entire period of warranty is not extended.

In the case of unjustified reclamations such as faulty installation or operation, we reserve ourselves the right to bring the corresponding costs to account.

For any claim under this warranty it is absolutely necessary to keep the sales slip with date of the purchase.

To expedite any claim under guarantee please disregard the specialized trade and mail post paid directly to:

EMAG AG , Service Center , Gerauerstr. 34 , D-64546 Mörfelden-Walldorf
Tel.: 06105-406 700 Fax.: 06105-406 750 <http://www.emag-germany.de>

Stamp of the seller:

Date:



subject to changes