

8. WARRANTY

This product is warranted against defects in manufacturing or materials for a period of two year from the date of purchase. Defects may be corrected by repair, or by replacement of the unit, at the option of the manufacturer.

This warranty may be voided if the unit is not operated in accordance with the instructions provided by the manufacturer. The warranty may also be voided by the opening of the unit, and/or its partial or total assembly, without prior factory authorization.

Any claim made under this clause shall be directed to the seller, and shall be verified by proof of purchase. The seller will advise the buyer concerning disposition of the unit. The normal procedure shall be for the manufacturer to issue a warranty claim number, and to authorize return of the unit to the factory. Buyer shall bear shipping costs.

EMAG AG

Gerauer Str. 34, D-64546 Mörfelden-Walldorf
Tel.: +49 (0)6105 - 40 67 00
www.emag-germany.de

Type / Model

Date of Sale

Stamp of Seller

Changes reserved

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RoHS **CE**
(§6Abs.3, ElektroG)

ULTRASONIC – CLEANING EQUIPMENTS

Emmi 20 HC - 60 HC with power regulator

Operating Manual



New: Regulator for Ultrasonic Power

- Power regulator for 3 levels of ultrasonic power
- Easy operation by rotary switches
- Adjustable heating from +35°C to +85°C
- Excellent cleaning efficiency with pure water
- Four standard sizes: 2,0, 3,0, 4,0 and 6,0 liters
- High efficiency
- Inclusive of basket and cover, both out of stainless steel
- EMAG ultrasonic cleaners are maintenance free

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1058

1. DESCRIPTION



1. Cover – stainless steel
2. Basket – stainless steel
3. Tank – stainless steel
4. Power supply cable
5. ON / OFF
6. Timer switch
7. Temperature switch
- ⑧. New: Power regulator for 3 levels of ultrasonic power

2. TECHNICAL DATA

Characteristics	Emmi 20HC	Emmi 30HC	Emmi 40HC	Emmi 60HC
Length (mm)	260	265	325	325
Width (mm)	150	165	180	175
Height (mm)	220	240	240	285
Volume (liter)	2,0	3,0	4,0	6,0
Tank dimensions ca. LxWxH (mm)	230 x 120 x 80	240 x 135 x 100	300 x 155 x 100	300 x 155 x 130
Basket dimensions ca. LxWxH (mm)	205 x 100 x 60	205 x 110 x 75	265 x 130 x 75	270 x 130 x 95
Width of basket mesh (mm)	6 x 6	6 x 6	6 x 6	6 x 6
Power Supply (V)	230 V / 50 Hz	230 V / 50 Hz	230 V / 50 Hz	230 v / 50Hz
Protection Class	IP 20	IP 20	IP 20	IP 20
Ultrasonic Power max (W)	150	200	250	450
No. of Ultrasonic Oscillators	2 (ca. 38kHz)	3 (ca. 38kHz)	4 (ca. 38kHz)	6 (ca. 45kHz)

Technical changes reserved

7. CLEANING ADDERS

For the individual items to be cleaned individual cleaning adders are available which make cleaning more intensive and efficient. You can buy these cleaning adders from the source where you have bought your equipment, or you may buy it under www.emag-germany.de. We recommend for the individual applications the following highly concentrated adders:

- EM 070** - for dental applications in laboratories, or at home, 1%
- EM 080** - looking glasses, jewellery, indian ink pens, ball heads, small tools and instruments, small precision engineering parts, razor heads etc. (except contact lenses)
- EM 100** - de-oxidation concentrate for silver
- EM 200** - Desinfection concentrate for instruments etc., 1%
- EM 300** - Super plus - extreme cleaner for difficult cases (i.e. settings, sockets, shells, weapon parts, brass), 1%
- EM 303** - Printed circuit board cleaner
- EM 404** - Aluminium and diecast cleaner (carburetors, engine blocks, cylinder heads etc.)

If above adders are used please observe application notes!

If cleaning adders of other manufacturers are used we cannot take any liability for the cleaned goods or the condition of the tank. For detailed information you can contact us at any time.




6. EXAMPLES OF GOODS TO BE CLEANED WITH AN ULTRASONIC BATH

- Looking glasses, glasses frames (please make sure that the glasses do not have direct contact with the bottom of the tank).
- Gold and silver jewelry, precious stones, emeralds, pearls
- Indian ink pens, drawing equipments and accessories
- Dentures, prosthesis, braces
- Motor parts, printed circuit boards, ink cartridges, motor bike chains, tools, carburetors etc.
- Precision engineering parts, weapon parts, i.e. cartridges, springs

3. CONVENTIONAL USE

The equipment may only be used for the purpose as set forth in the catalogue and in the technical descriptions which means for the cleaning of goods recommended in this operating manual, and only in conjunction with external devices and components which are recommended or approved by EMAG AG. Any other use of the equipment is considered to be non conventional.

In case of non conventional use EMAG AG will not be liable for possible damages and will not warrant for the correct and functional work of the components.

Part of the conventional use is also the observance of all information given in the operating manual. To this attention is drawn by the  sign on the type plate.

The correct and safe operation of the equipment implies appropriate transportation, storage, installation and assembly as well as careful handling and maintenance.

4. NON CONVENTIONAL USE

In case of non conventional use of the equipment danger for life and limb as well as danger for property may occur. Therefore a non conventional use is prohibited.

In case of non conventional use EMAG AG will not be liable for possible damages and will not warrant for the correct and functionally work of the components.

In order to avoid non conventional use of the ultrasonic cleaning equipment the following directions are to be considered:

- The ultrasonic cleaning equipment may only be operated with the voltage printed on the type plate on the backside of the housing (shockproof socket).
- No flammable or aggressive chemicals (i.e. acids etc.) must be used for cleaning of the goods (use glass container **EM-50 DG** if needed).
- During cleaning process don't grab into the cleaning liquid.
- In case of transportation damage, don't connect the equipment with main source.
- ⚠ • Don't clean animals or nails in the ultrasonic bath.
- The ultrasonic cleaning equipment must only be operated with the correct level of water (approx. 1 cm below upper brim)
- If objects are heavily soiled, place them soiled side down into the liquid and do not stack them.
- During operation do not stay in vicinity of the equipment (1 m) for more than 4 hours.
- The equipment must only be operated indoor and within dry environments.
- It is normal that the upper brims of the tank warm up during operation.
- Before emptying the tank the power supply must be disconnected.

5. OPERATING INSTRUCTION

The tank is filled with water or a disinfection / cleaning agent and the power supply cable is connected with main source. After the power switch is switched ON the cleaning time, the temperature and the ultrasonic power can be adjusted by using the rotary switches. If continuous operation is wished, turn the time switch counter-clockwise. For reasons of safety, however, we do not recommend permanent operation. The unit may run dry due to evaporation and thus get damaged. In no case a permanent operation of max. 4 hours may be exceeded.

The cleaning time to be set depends on the degree of dirt of the objects you want to clean.

If the preset cleaning cycle has been finished, the unit automatically terminates the cleaning process. Another turning of the rotary switches will put the unit back into operation.

After termination of the cleaning process remove cleaned goods from the tank and shortly wash them up under running water in order to remove dirt particles which may still stick to the goods.

After termination of one or more cleaning cycles it is recommended to empty the tank, to wash up the tank and to dry it with a cloth. Please make sure that no water can penetrate into the equipment through the slots in the bottom of the equipment.

Note: Before you empty the tank the power supply must be disconnected.

Note: Please, note that when the tank is filled with fresh water - depending on the degree of hardness of the water - a certain operating time for the out gazing of the water shall be considered. The best efficiency is achieved when using out gazed or distilled water. If no distilled water is available, please operate the equipment filled with water for approx. 10 minutes before putting goods in for cleaning.