



Foil test for Hygosonic

The following information is supplementary to the device installation and operating instructions.

As a general rule, the installation and operating instructions for the device must also be observed. These instructions include important information such as safety instructions and information on the setup, electrical connections, disinfection process, cleaning process etc.



9000-616-14

Routine inspection of the ultrasonic device

We recommend that you use the foil test to perform regular inspections of the Hygosonic ultrasonic device.

The foil test using aluminium foil is a simple procedure for testing the function of an ultrasonic device. It serves to assess the sound field distribution (intensity and distribution of the cavitation in the liquid) in the ultrasonic bath. The aluminium foil is perforated via the cavitation developing during operation.

The foil test must be performed and documented before commissioning and in regular intervals e.g. every 4 weeks.

Ports required:

- Aluminium foil (10 - 25 µm thick)
- Cement spatula or similar
- Washing lotion (e.g. HD 425, HD 435)



1 Preparing the ultrasonic bath

- › Fill the ultrasonic bath with water up to the marking.



- › Add 1 drop of washing lotion (e.g. HD 425, HD 435).



1x

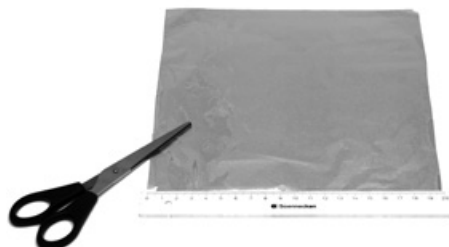


2 Switch on the unit.

- › Switch on the unit.
- › Activating the "Auto-Degas" function:
Depress the button for c. 2 seconds.
The unit will restart automatically. The liquid will be degassed for c. 10 minutes.

3 Preparing the test body

- › Cut the aluminium foil to size: 20 x 20 cm



- › Place the cement spatula on the prepared foil.



- › Press in the foil side.



4 Positioning the test body

- › Place the mesh basket in the ultrasonic bath.
- › Insert the aluminium foil in the mesh basket at an angle.
Ensure the identical position with every routine inspection.

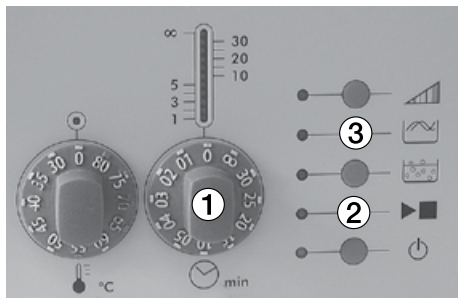


5 Perform the foil test



The routine inspection using the foil test must always be performed under identical conditions. The influence factors to be determined are:

- The filling height of the ultrasonic bath
 - Time and intensity of the ultrasonic irradiation
 - Temperature of the cleaning and disinfectant solution
 - Nature and concentration of the cleaning and disinfectant solution
 - Degassing time
 - Angle of the inserted aluminium foil
 - Quality and thickness of the aluminium foil
- › Set the time of the rotary switch to 3 minutes.

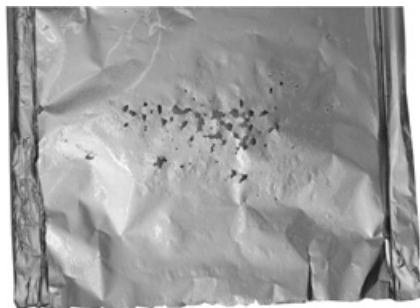


- › Starting ultrasonic operation:
press the button.
- › Press the Sweep (for a homogenous sound field distribution) button.

6 Evaluating the foil test



After three minutes, the aluminium foil presents a perforated pattern with a concentration of the perforations in the centre and fewer perforations on the edge.



- › Assess the pattern. It should remain the same in every test.

An increasing perforation size indicates a stronger impact of the ultrasonic energy. The more even the distribution of perforations on the foil, the better is the distribution of the ultrasonic activity within the liquid.

A significant reduction in the level of perforations indicates a decrease in ultrasonic energy transfer and a reduction in the cleaning performance of the unit. In such cases, contact customer services.

- › Document the results e.g. photographic documentation.

7 Cleaning the unit



CAUTION

Highly-fine residual aluminium particles entering the ultrasonic bath from the foil test can be transferred to the mucous membrane and accrete on the instruments.

Irritation of the mucus membrane and impairment of the instrument surface.

- › Clean the ultrasonic bath and the basket thoroughly after completing the foil test.

