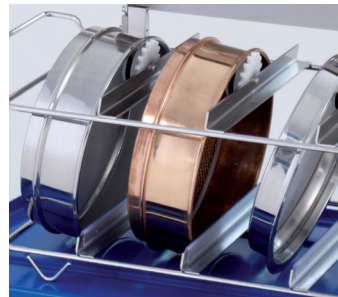




Ultrasonics.Steam.Ultraclean.



Laboratory

## Elmasonic S 50 R, S 350 R and sieve cleaning module

Test sieve cleaning with program-controlled ultrasound

- for cleaning test sieves DIN ISO 3310 up to max. 545 mm
- special programs for sieve cleaning and sample preparation
- effective fast degassing of samples and HPLC solvents

# Developments for the laboratory requirements

Cleaning of analysis sieves, HPLC solvent degassing and sample preparations



The Elma S 350 R completes the Elma product range in the laboratory area. Previously, the focus was on sieves up to 200 mm diameter; very large sieves up to 500 mm diameter can now also be cleaned in the new Elma S 350 R. The different applications such as sieve cleaning, degassing and sample preparation and treatment require special ultrasound modes. Optimised by laboratory users in practical tests, these ultrasound modes are stored in programs. The users can activate the correct ultrasound parameters using "sieve cleaning", "degas" or "sample preparation" easily and quickly by pressing a button and the machine operates in the respective stored ultrasound mode. For example, the test sieve cleaning is performed using the special "sieve cleaning" ultrasonic cleaning mode (program with ultrasound shock waves) whereby the sieves are cleaned quickly and effectively.

Correct filling of the machines is simplified thanks to fill level markings in the bath. The S 50 R has three different fill level markings for 3 L, 4 L and 5 L. The fill level marking in the S 350 R is for 57 litres. The Elma S 350 R has an outlet for bath draining that also enables particularly even sound field distribution due to its central arrangement.

The sieve analysis, a standard process in analytical food and environment laboratories, functions perfectly if the last grain residues have been removed from the mesh. Elma has particular competence here, both for the intensive cleaning of individual sieves as well as for the preparation of up to 4 test sieves simultaneously.

With the Elma S 50 R and the Elma S 350 R, Elma has developed new program-controlled ultrasonic cleaners in the LabTechnology series that are strictly oriented to the laboratory applications required by users.

The focus points are the test sieve clean-

ing, HPLC solvent degassing and laboratory applications such as the removal of difficult to dissolve substances, emulsion manufacture and the reaction acceleration.

Extensive tests have been carried out in collaboration with two independent laboratories to be able to record and practically implement the required applications in the machine.

The Elma S 50 R and Elma S 350 R with round designs have high ultrasound power that can be evenly distributed both horizontally as well as vertically. The machines thus provide optimum energy input.



*Elma S 350 R*

# Elmasonic S 50 R and S 350 R "LabTechnology"

Only really clean sieves result in reliable analysis results

The Elmasonic S 50 R and S 350 R machines can be used for various laboratory applications. Special ultrasound modes ensure optimum results independently of fill level.

## Sieve cleaning

The test sieve is loaded with the sieve holder for sieve cleaning. The special "sieve cleaning" function switches back and forth between two ultrasound modes

and causes active strong impulses with simultaneous independence from the fill level.

The process can be designed standardised and repeatable and is thus ideal for defined laboratory applications.

The use of a residue-free rinsing cleaning agent afterwards can be required for cleaning in food laboratories. elma lab clean N10 (not a hazardous product) is tried and tested for this.

## HPLC solvent degassing

Degassing in the Elmasonic S 50 R is performed very effectively and with reduced noise. The special Degas function switches back and forth between maximum power and a mode that drives out the now macroscopic bubbles upwards via a lift-out effect. The laboratory glassware can be fixed using the optionally connected laboratory stand so that the laboratory glassware does not rattle unnecessarily loudly on the basket base.



*Elmasonic S 300 H with SRH sieve cleaning module*



*Elmasonic S 50 R*

## Sieve cleaning in the Elmasonic S 300 H

Elma provides an electrically-operated rotation basket that can be inserted in the Elmasonic S 300 (H) ultrasonic cleaner for cleaning a larger number of test sieves. As several sieves are inserted here at the same time, the throughput using the Elma rotation equipment can be significantly increased. Up to four sieves can be intensively cleaned of sieved product residues simultaneously in the SRH sieve cleaning module. Sieves from different manufacturers can be cleaned simultaneously in the universal adapter. The baskets rotate during the cleaning. The adjusted angle ensures that the cleaned grains fall out automatically.

# Technical Data

	<b>S 50 R</b>	<b>S 350 R</b>	<b>S 300 H</b>	<b>SRH</b>
Mains voltage (V AC)	230 / 115 / 100	230 / 115	100-120 / 220-240	230 / 115
Ultrasound frequency (kHz)	37	37	37	
Total power consumption (W)	150	600	1500	
Effective ultrasound power (W)	150	600	300	
Max. ultrasound peak power* (W)	600 2	400	1200	
Machine external dimensions D / H (mm)	304 / 335	650 / 455	568 / 340 / 321	580 / 260 / 300
Bath internal dimensions D / H (mm)	240 / 140	600 / 245	505 / 300 / 200	
Basket internal dimensions D / H (mm)	220 / 70	545 / 70		
Suitable for sieves up to	200 mm	500 mm	200 mm	
Max. filling volume (litres)	5.3	70	28	
Fill level markings	3, 4, 5 L	57 L	–	
Outlet	–	yes	yes	
Weight (kg)	5.0	21.0	11.0	6.8
Bath material	stainless steel	stainless steel	stainless steel	
Case material	stainless steel	stainless steel	stainless steel	stainless steel
Carrying handle	yes	yes	yes	
CE conformity	yes	yes	yes	
Protection class	IP 20	IP 20	IP 20	

\* Due to the signal form, the quadruple value is produced for the maximum peak value of the ultrasound power.

## Sieve cleaning with Elma

- time and cost saving intensive cleaning of up to 4 analysis sieves simultaneously, D 200 / 203 mm, 8"
- sieves from different manufacturers can be cleaned at the same time
- gentle ultrasonic cleaning (in contrast to manual cleaning) does not change the fabric tension or the mesh size; the dimensional accuracy is 100% maintained
- wide range of accessories
- environmentally-compatible in combination with elma lab clean cleaners



*Elmasonic S 50 R*



*Elmasonic S 350 R*



*Elmasonic S 300 H*



*The Elma SRH sieve cleaning module*

