



Laboratory and Industry



Solutions for the Laboratory and Industry– designed for professionals

- Made in Germany
- In stock and ready to ship from the USA
- Powerful and reliable for fast cleaning
- Industry leading warranty with excellent technical support and service

Equipment designed for laboratory and industry applications



Dissolving and homogenising

of hardly soluble substances for analytical purposes or for the production of analytical substances.

Elma – the specialists for ultrasonic technology work in close cooperation with the customers to develop new solutions for laboratory applications, such as analysing, sample processing and cleaning of laboratory instruments. The range of our ultrasonic units is optimized for the use in laboratories. The Elma units are indispensable both for research and for the practical use in the lab to find solutions for problems and to get reproducible test results.

Elma offers various different types of ultrasonic cleaners. Each series consists of units of different sizes. They are designed for special applications and meet the requirements of the everyday work in a lab.

Practical accessories facilitate the handling, and specialized additional equipment expand the range of possible applications, e.g. for sieve cleaning.

The cleaning of laboratory glassware and laboratory instruments is a crucial task in any lab. Elma offers a special programme of chemical cleaners which can be used both in ultrasonic units and in laboratory rinsing automats.

The use of Elmasonic ultrasonic units combined with elma lab clean chemicals guarantees a high degree of efficiency and excellent environmental compatibility.



*elma lab clean cleaning solutions
Solutions for the laboratory
see page 9*



*Elmasonic S 150
specialised laboratory Elmasonic S unit*



Degassing

for the reliable removal of gas from samples (e.g. for the removal of carbon dioxide) or for the degassing of HPLC solvents in the analytical lab.

Emulsifying

of two liquids that are not ordinarily mixable, e.g. oil in water.

Dispersing

of substances that are not ordinarily mixable; generally solid substances in liquid, e.g. pigments in water.

Cleaning

of laboratory glassware or laboratory instruments, even in joints of articulated components and in hollow bodies. A special application is the cleaning of analytical sieves. Combined with elma lab clean chemicals this is an environment-friendly application.





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Elmasonic E Plus



Professional Ultrasonic Cleaning Units for Lab and Industry

The easy way to clean.

- Unique pulse function provides powerful cleaning for difficult jobs
- Thorough and uniform cleaning with sweep function
- Pulse functionality for common laboratory mixing and degassing operations
- Quality promise: 2-year warranty with replacement guarantee for first year
- 9 units available with tanks sizes from ¼ to 7-½ gallons

Elmasonic E Plus

Technical Data

	EP 10/H	EP 20 H	EP 30 H	EP 40 H	EP 60 H	EP 100 H	EP 120 H	EP 180 H	EP 300 H
Ultrasonic frequency (kHz)	37	37	37	37	37	37	37	37	37
Tank maximum capacity (gal)	0.2	0.5	0.7	1.1	1.5	2.5	3.4	4.8	7.4
Ultrasonic power effective (W)	30	35	80	140	150	150	200	200	300
Heating power (W)	60	120	200	200	400	400	800	800	1200
Unit external dim. W/D/H (in)	8.1/4.7/7.3	6.9/6.9/8.6	10.4/6.9/8.6	10.4/6.9/10.6	13.4/7.7/10.6	13.3/11.1/10.7	13.5/11.2/12.7	14.6/13.7/12.7	21.4/13.7/12.7
Tank internal dim. W/D/H (in)	7.5/3.3/2.4	5.9/5.4/3.9	9.4/5.4/3.9	9.4/5.4/5.9	11.8/5.9/5.9	11.8/9.4/5.9	11.8/9.4/7.9	12.9/11.8/7.9	19.9/11.8/7.9
Basket internal dim. W/D/H (in)	7.0/2.9/1.2	4.4/4.1/2	7.8/4.2/2.0	7.5/4.1/3.0	10.0/4.5/3.0	10.0/7.9/3.0	9.8/7.5/4.5	11.0/9.8/4.5	17.9/9.8/4.5
Weight (lbs)	4.4	4.6	7.3	8.8	11.2	13.0	16.5	18.7	24.3

All units available in 115-120 VAC and 220-240 VAC

Accessories

The extensive range of accessories includes cooling coils, noise protection boxes, and various baskets, holders, and brackets.

Thus Elmasonic E Plus ultrasonic units can be used to clean laboratory instruments, to pre-clean dental or medical instruments before sterilization, to clean electronics or optics, or for industrial parts cleaning.



Cleaning baskets in different dimensions and with different mesh sizes: 7x1 mm, 9x1 mm or 16x1.2 mm, ring holder, clamping devices for watch straps, hot air dryer, etc.



Hostalen™ and acid resistant plastic tubs, test tube holders, clamps, and immersion baskets.



Noise protection boxes in 2 different sizes to reduce noise up to 75%



Cooling coils, glass beakers, covers with holes to insert glass beakers, etc.



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Elmasonic S

State of the art ultrasonic technology with the most important laboratory functions degassing, dissolving and cleaning



The Elmasonic S units are available in 13 different sizes and have all the technical features that are indispensable for modern everyday laboratory applications. The materials used and the elaborate technology prolong the service life of the units. The design is functional and operation is intuitive and easy.

The basis for the optimised ultrasonic performance are the 37 kHz transducer systems. The intelligent generator automatically adjusts itself to the filling level and transmits the required ultrasonic power safely into the liquid.

Typical laboratory applications such as dissolving, emulsifying or dispersing are carried out reliably and thoroughly in the powerful units. The special Degas mode allows quick degassing of HPLC solvents, and the Sweep mode helps to get perfect cleaning results. In Sweep mode the “electronic oscillation” cleans the immersed items independent of the filling level, and the ultrasonic power is the same throughout the tank.

The features

- Electronic timer and temperature control
- Performance transducers
- Heating safe to run dry
- Quick degassing (Degas/Autodegas)
- Electronic sound field oscillation (Sweep)
- Temperature-controlled Autostart



*Elmasonic S 30
with basket and cover*

Elmasonic S

Technical data

		S10/H	S15/H	S30/H	S40/H	S60/H	S70/H	S80/H	S100/H	S120/H	S180/H	S300/H	S450 H	S900H
Tank max. volume	litre	0.8	1.75	2.75	4.25	5.75	6.9	9.4	9.5	12.75	18	28	45	90
Tank max. volume	gal.	0.2	0.5	0.7	1.0	1.5	1.8	2.4	2.5	3.4	4.7	7.4	11.9	23,8
Tank internal dimensions	W x D x H mm	190x85x60	151x137x100	240x137x100	240x137x150	300x151x150	505x137x100	505x137x150	300x240x150	300x240x200	327x300x200	505x300x200	500x300x300	600x500x300
Unit external dimensions	W x D x H mm	206x116x178	175x180x212	300x179x214	300x179x264	365x186x264	568x179x214	568x179x264	365x278x264	365x278x321	390x340x321	568x340x321	615x370x467	715x570x467
Weight	kg (ca.)	2.0	2.1	3.3	4.0	5.1	5.6	6.4	5.9	7.5	8.5	11.0	25	45
Ultrasonic frequency	kHz	37	37	37	37	37	37	37	37	37	37	37	37	37
Ultrasonic peak power max. * ¹⁾	W	240* ²⁾	280* ²⁾	320* ³⁾	560* ³⁾	600* ³⁾	600* ³⁾	600* ³⁾	600* ³⁾	800* ³⁾	800* ³⁾	1200* ³⁾	1600* ³⁾	3200* ³⁾
Heating power	W	0/60	0/60	0/200	0/200	0/400	0/600	0/600	0/400	0/800	0/800	0/1200	1600	2000
Power consumption total	W	30/90	35/95	80/280	140/340	150/550	150/750	150/750	150/550	200/1000	200/1000	300/1500	2000	2800
Sweep		4	4	4	4	4	4	4	4	4	4	4	4	4
Degas/Autodegas		4	4	4	4	4	4	4	4	4	4	4	4	4
Carrying handles		no	no	4	4	4	4	4	4	4	4	4	4	4
Drain duct/ diameter	inch	no	no	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"
Accessories:														
Basket internal dimensions	W x D x H mm	177x73x30	112x103x50	198x106x50	190x105x75	255x115x75	465x106x50	455x106x75	255x200x80	250x190x115	280x250x115	455x250x115	455x270x194	545x450x250
Basket mesh size	mm	7x1	7x1	7x1	7x1	9x1	9x1	9x1	9x1	9x1	9x1	9x1	9x1	16x1,2
Basket loading	kg	1	1	1	3	5	5	5	6	7	8	10	20	30

*¹⁾ The choice of the waveform has been matched to the relevant tank size.

*²⁾ Impulse waveform.

*³⁾ Standard sine-wave modulation.

Units are available in 115–120 VAC and 220-240 VAC (S450 H and S900 H in 220-240 VAC Only)

*Elmasonic S series
units available in 13 different sizes*



Elmasonic P

Ultrasonic multi-frequency units with extra strong power, exceptionally silent the right solution for laboratory and industry



Digital display, self-explanatory indication of all values, clear arrangement of set and actual values, very easy operating with all parameters in view: that's the Elmasonic P series, professional units for the laboratory.

Two frequencies (interchangeable) in one unit:

37 kHz – for coarse contaminations, for dissolving, mixing, dispersing and degassing.

80 kHz – silent, perfect for quiet work places, extended operating time, ideal for the cleaning of hollow bodies, e.g. capillaries.

Features

- Standard mode – for laboratory applications such as mixing, dissolving, dispersing
- Pulse mode – activatable extra power, approx. 20 % more power through increased ultrasonic peak
- Sweep mode – for an even distribution of the ultrasonic power throughout the unit
- Degas mode – for the quick degassing of samples or HPLC solvents
- Power regulation – for sensitive surfaces the ultrasonic power can be reduced

Additional features

- Pause – interrupts the current application
- Temperature-controlled Auto Start – starts the ultrasound automatically when the set temperature is reached



Elmasonic P



Normal



Pulse



Sweep



Degas

Technical details

	P 30 H	P 60 H	P 70 H	P 120 H	P 180 H	P 300 H
Tank max. capacity (litre)	2.75	5.75	6.9	12.75	18.0	28.0
Tank internal dimensions W/H/D (mm)	240x137x100	300x151x150	505x137x100	300x240x200	327x300x200	505x300x200
Unit external dimensions W/H/D (mm)	300x179x221	365x186x271	568x179x221	365x278x321	390x340x321	568x340x321
Basket (accessory) internal dim. W/H/D (mm)	198x106x50	255x115x75	465x106x50	250x190x115	280x250x115	455x250x115
Voltage (V)	115-120 220-240	115-120 220-240	115-120 220-240	115-120 220-240	115-120 220-240	115-120 220-240
Power consumption total (W)	320/300	580/550	820	1130	1130	1580
Ultrasonic frequency	37/80	37/80	37/80	37/80	37/80	37/80
Ultrasonic power effective (W)	120 / 100	180 / 150	220	330	330	380
Ultrasonic peak power (W)	480 / 400	720 / 600	880	1320	1320	1520
Sweep	integrated	integrated	integrated	integrated	integrated	integrated
Pulse	activatable	activatable	activatable	activatable	activatable	activatable
Heating power (W)	200	400	600	800	800	1200
Drain duct V4A (")	3/8	3/8	3/8	3/8	3/8	3/8



Elmasonic P,
available in
6 different sizes



Elmasonic TI-H with multi-frequency technology

Specialized Elma units for the multiple requirements in terms of power, permanent operation or different frequencies in the industrial laboratory and for simulation purposes in the technical center



Elmasonic TI-H units with multi-frequency technology available in 4 different sizes

The features

- two ultrasonic frequencies for intensive and gentle cleaning, interchangeable, two different models available: MF2 and MF3
frequencies MF2: 25/45 kHz
frequencies MF3: 35/130 kHz
or single frequency 35 kHz
- multi-frequency model 25/45 kHz:
25 kHz for the coarse cleaning and removal of lapping and polishing media
45 kHz for the fine cleaning and removal of oil and grease
Perfect for hard metal and glass surfaces in industry, handicraft and jewellery manufacturing, only hard precious stones
- multi-frequency model 35/130 kHz:
35 kHz for the removal of oil and grease from hard metal and glass surfaces and from hard precious stones
130 kHz for the cleaning of sensitive surfaces in jewellery and electronics manufacturing
- Degas mode for the efficient degassing of the cleaning liquid
- Sweep mode for the optimised sound field distribution
- adjustable ultrasonic power
- transducer tanks made of special robust stainless steel, for tough applications and for an extended service life
- timer, ultrasonic operation can be set to periods between 1 and 15 min



Elmasonic TI-H 10 with multi-frequency technology 25/45 kHz and cover with holes





Floor-mounted ultrasonic devices

Xtra robust and Xtra cleaning performance for heavy-duty applications

- Mobile single-tank devices of 8 sizes
- 25/45 kHz multi-frequenz technology
for cleaning stubborn contaminations and sensitive surfaces with one device
- Switchable Dynamic-, Pulse- and Sweep-functions for more ultrasonic performance
- Long-lasting, robust devices with tanks made of special stainless steel
- Easy and clear operation, protected against spraying water

Suitable Cleaning Chemistry for perfect cleaning results

Depending on the cleaning job, Elma has just the right cleaning chemicals. From alkaline to acidic, all of our cleaning concentrates have been developed and tested in our in-house application lab.

- **Elma Clean**
for watch and jewellery cleaning jobs.
- **Elma Tec Clean**
for industrial parts cleaning in workshops and servicing



Technical data of Elmasonic xtra ST

	xtraST 300H	xtraST 500H	xtra ST 600H	xtra ST 800H
Ultrasonic frequency (kHz)	25/45	25/45	25/45	25/45
Tank labour capacity (l)	22.0	42.0	45.0	70.0
Max. tank capacity (l)	30.0	50.0	58.0	83.0
Ultrasonic power effective - Normal,Pulse (W)	480	480	800 / 900	900 / 1000
Ultrasonic power effective - Dynamic (W)	600	540 / 600	1000	1000
Heating power (W)	1400	1400	1400	4200
Unit external dimensions W/D/H (mm)	500 / 550 / 936	500 / 550 / 936	670 / 580 / 936	670 / 580 / 936
Tank internal dimensions W/D/H (mm)	300 / 300 / 300	300 / 300 / 500	500 / 330 / 350	500 / 330 / 500
Max. basket loading (kg)	12.0	12.0	25.0	40.0
Basket internal dimensions W/D/H (mm)	255 / 230 / 170	255 / 230 / 370	400 / 255 / 220	400 / 255 / 370
Weight (kg)	50.0	54.0	61.0	66.0

	xtraST 1400H	xtraST 1600H	xtra ST 1900S	xtra ST 2500H
Ultrasonic frequency (kHz)	25/45	25/45	25/45	25/45
Tank labour capacity (l)	97.0	133.0	134.0	215.0
Max. tank capacity (l)	126.0	162.0	187,0	255.0
Ultrasonic power effective- Normal, Pulse (W)	1440	1600 / 1800	1000	1600 / 1800
Ultrasonic power effective - Dynamic (W)	1800	2000	-	2000
Heating power (W)	5000	7500	2300	7500
Unit external dimensions W/D/H (mm)	885 / 850 / 936	885 / 850 / 936	610 / 900 / 940	1035 / 900 / 936
Tank internal dimensions W/D/H (mm)	600 / 600 / 350	600 / 600 / 450	410 / 650 / 720	750 / 650 / 520
Max. basket loading (kg)	50.0	50.0	40.0	50.0
Basket internal dimensions W/D/H (mm)	490 / 525 / 210	480 / 525 / 300	360 / 560 / 240	630 / 575 / 370
Weight (kg)	87.0	95.0	75.0	109.0



Laboratory and Industry

About us

Ultrasonic Cleaning Technology · Industrial Cleaning Technology · Appliances · Cleaning Media & Procedures



The name Elma represents quality and know-how in all sectors where cleaning processes and cleaning technology are required – and it has done so for more than 50 years now. The heart of the company's success is the ultrasonic technology.

The Elma product range for ultrasonic cleaning is the largest worldwide, both with regard to serial units and to standardised and special cleaning lines. Based on its long-term experience, its innovative development and the specialised know-how, Elma manufactures and supplies top of the range technology for all sorts of cleaning jobs. This is what has made Elma famous as supplier of problem solutions all over the world, even for the most crucial cleaning tasks. But the high quality standard does not end with developing and manufacturing equipment and installations: our perfect service and round-the-clock technical support complete the excellent general picture.

The cleaning chemicals, developed for various cleaning purposes in our own laboratory, are another Elma product.

Today, Elma employs over 200 people; we are certified according to DIN EN 9001 and stand for reliability and cooperation with our customers.

"Made by Elma Germany" – that's the underlying principle which guarantees motivation, precision, quality and a constant enthusiasm for new developments.



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