

Stand-alone units  
for the "Industrial  
parts cleaning"  
with controlled  
cavitation fields  
and multifrequency



## Elmasonic XL

- large ultrasonic units available in 3 sizes from 140 l up to approx. 300 l
- ideal for the removal of polishing pastes, particles, fats and oils
- high ultrasonic cleaning power with bottom-mounted ultrasound, or with side-mounted ultrasound on 2 or 3 sides
- multifrequency for rough and fine cleaning at 25 or 45 kHz
- industrial operating panel with display, very easy operation, clearly arranged display
- "controlled cavitation field": with side-mounted ultrasound on 2 sides, the cavitation fields can be controlled to optimize the sound field distribution
- all units are equipped with oil overflow basin to allow the connection of an oil separator
- optional: cleaning basket oscillation device for rinsing off contaminations in the bath
- very high heating power
- optional: hinged flip-top noise protection cover for the reduction of the noise level
- all units equipped with Pulse mode to increase the ultrasonic power through sound wave modulation
- Sweep mode to guarantee an even distribution of the ultrasonic power throughout the bath
- Degas mode for the quick degassing of fresh cleaning baths



[www.elma-ultrasonic.com](http://www.elma-ultrasonic.com)



## Elmasonic XL stand-alone units for ultrasonic cleaning

### How does ultrasound work?

Specially designed ultrasonic transducer systems transform electric energy into mechanic vibrations. The vibrations are taken into the cleaning liquid through the stainless-steel tank floor creating minuscule vacuum bubbles, which implode at very high speed (cavitation). The highly energetic jets caused by the cavitation remove very efficiently particles and contaminations from the surfaces of the cleaned parts.

### Cavitation field control

Special applications requiring an even sound field distribution, such as the cleaning of mirrored glass or metal surfaces, need equal ultrasonic power everywhere in the bath. On units with transducers mounted to opposite sides the generator controls the cavitation field, creating a travelling wave that moves continuously through the bath so that the time-averaged ultrasonic power is the same throughout the bath. Stationary sound maxima and minima are avoided. Cavitation damage and "surface shadows" on very sensitive surfaces are avoided and the cleaning of the surfaces is perfect and gentle.

### Power control

Gentle cleaning is not only possible at high ultrasonic frequencies, but also through the intelligent power regulation of the generator control (between 10 and 100 %).

### Multifrequency

The Elma multifrequency technology provides two ultrasonic frequencies on one unit. The lower frequency is used for coarse tenacious contaminations, and the higher frequency is perfect for sensitive surfaces. Ultrasonic cleaning is gentle and efficient and reaches even smallest grooves and bore holes.

### Degas

Fresh cleaning liquids are saturated with air. The ultrasonic cleaning effect is best in degassed liquids. The degassing of a fresh cleaning bath is accelerated by operating the unit in Degas mode. Regular pulse pauses take the macroscopic gas bubbles to the surface. The cavitation which is the primary factor of cleaning is fully operative only in a degassed cleaning bath.

### Sweep

The Sweep mode causes a continued shifting of the sound pressure maxima which provides a homogeneous sound field distribution and so guarantees a uniform cleaning performance everywhere in the bath and the thorough cleaning all over the immersed surfaces.

### Pulse

If a cleaning job requires increased ultrasonic power, the unit can be operated in Pulse mode. In this mode rapid frequency changes create high power peaks.

	XL 1200			XL 1600			XL 2700		
	Bottom sound	2-side sound with phase control	3-side sound	Bottom sound	2-side sound with phase control	3-side sound	Bottom sound	2-side sound with phase control	3-side sound
Capacity	140.8	140.8	140.8	192.5	192.5	192.5	305	305	305
Voltage	400 V	400 V	400 V	400 V	400 V	400 V	400 V	400 V	400 V
Ultrasonic power effective	2000 W	3200 W	3000 W	2000 W	4000 W	4000 W	3000 W	4000 W	4000 W
Sweep	yes			yes			yes		
Pulse	yes			yes			yes		
Heating power	5800 W	5800 W	5800 W	8700 W	8700 W	8700 W	10500 W	10500 W	10500 W
Heating type	tube-shaped heating elements			tube-shaped heating elements			tube-shaped heating elements		
Tank inner dimensions (mm)	580 x 450 x 450			780 x 400 x 520			780 x 600 x 550		
Overflow capacity (litre)	15			21			32		
Basket inner dimensions WxDxH (mm)	464 x 368 x 296			664 x 318 x 354			664 x 518 x 354		
Unit outer dimensions WxDxH (mm)	940 x 815 x 1020			1180 x 765 x 1020			1180 x 965 x 1020		
Max. basket load (with/without oscillation)	100 kg			100 kg			100 kg		



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