Dental

**Cleaning solutions for dental practice and dental laboratories**

**Perfect cleaning results with ultrasonic and steam jet cleaning technology**

- Elmasteam steam jet technology with 4.5 to 8 bar in different versions
- Efficient ultrasonic cleaning technology with proven cleaning modes and programmes
- Suitable ultrasonic devices for cleaning dental trays
- Elma Dent & Med Clean cleaning agents
  for ultrasonic applications and for disinfection of instruments
Cleaning tasks in the dental field are highly varied and may vary considerably between dental surgeries and dental labs. Assisting users here in their typical operations are Elmasonic ultrasonic and Elmasteam steam jet devices as well as Elma Dent & Med Clean cleaning and disinfectant agents. Applications with ultrasonic and steam jet appliances can therefore be defined and laid down in the hygiene plan.

Elmasonic ultrasonic cleaning devices are mainly deployed for pre-cleaning used instruments, bonding plaster/cement removal and for intensive or revitalised cleaning of worn prostheses. In combination with the Elma Dent & Med Clean product series, the Elmasonic ultrasonic cleaning devices come up with first-rate cleaning results. Moreover, this goes easy on the cleaned instruments and materials. This is due to the cleaning and disinfectant agents being adapted to the various applications and materials.

Elmasteam steam jet devices are used in the intermediate cleaning steps in the production of prostheses, bridges and inlays. The tools are intensively cleaned for protective and effective removal of residues such as aluminium oxide from the sand jets, oxide residues from soldering/spot welding as well as waxes, abrasives and polishing agents. No chemistry is needed in the process.

**Straightforward dosing of the Elma Dent & Med Clean cleaning products**

The dosing charts of the Elma Dent & Med Clean cleaning and disinfectant agents provide an overview of the scope of application, dosing and application parameters of the cleaning and disinfectant products.

This enables users to specifically deploy the cleaning products and to correctly dose them.
Operations in the Dental Surgery

In the dental surgery instruments need to be both pre-disinfected and reliably cleaned. This is where the ultrasonic devices together with their adapted cleaning products are made use of.

The devices and chemistry allow pre-disinfection, plaster removal/simultaneous cleaning and cement applicator pre-cleaning to be quickly and easily undertaken.

Application example in the dental surgery

- Cleaning the instruments in the basket and with one cleaning solution
  Elmasonic S 30H or Elmasonic Denta Pro H

- Cleaning the instruments in glass beakers and with several cleaning solutions.
  The glass beakers allow incidental parts to be pre-treated and cleaned with various cleaning agents. As such, impression trays, cement/plaster-covered instruments, and drills are simultaneously cleaned in their specific solutions.

Operations in the Dental Lab

Multiple and varied working steps are involved in the dental lab where, for instance, prosthetic materials, bridges, and crowns are made for the patients.

Ultrasonic cleaning mainly concerns precision and final cleaning before the above are sent to the surgery. The delivered impression trays can be cleaned with the EC 25 Elma Dent & Med Clean alginate remover. In so doing, the sonic together with the cleaning product infiltrate the bonding points. Alginates and hydrocolloids can then be removed from the tray.

Use of the Elmasteam steam jet cleaner is indispensable here. The steam cleaning devices are used during the entire prosthetic materials process chain.
Elmasteam 4⁵ basic and Elmasteam 8 basic
Absolutely indispensable steam cleaning devices in the dental lab

The tools used in the production of prostheses, bridges and inlays are always intensively cleaned at every intermediate step. The high steam and high temperature ensure that residues such as aluminium oxide from sand jets, oxide residues from soldering and spot welding as well as waxes, abrasives and polishing agents are rapidly and gently removed.

A particular problem is associated, for example, with dewaxing. Fine wax residues necessitate the tool being heated up that much more to enable the wax melting point to be exceeded and for the wax to be removed. That is why the Elmasteam 8 basic has a wet steam function as an option. A rotary regulator at the device alters the steam/water mixture. Concentrating the steam with water heats up the device that much more. The effect is for the wax to melt and to be blasted off with no residues left behind.

The two Elmasteam steam cleaning devices are extremely powerful and have either a 4.5 steam pressure or one extending up to 8 bar. Both Elmasteam 4⁵ basic and Elmasteam 8 basic are available in various designs.

For continuous use, integrated pumps for automatically filling the boiler with water are available as an option. This does away with any refilling by hand and the resulting waiting time. As an option, compressed air can be attached for rapid tool drying.

Elmasteam 4⁵ basic

Functions and advantages:
- 4.5 bar steam pressure with high user safety
- Constant steam pressure due to high heating power
- Positioning independent of water supply due to manual filling
- Compact design - space saving tabletop model or with wall brackets
- Flexible hand piece with mounting and with operation via the foot pedal
- With 1.3 m hose length
- Easy-to-clean surfaces

Technical data

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mains voltage (V)</td>
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<tr>
<td>Mains frequency (Hz)</td>
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<tr>
<td>Max. power consumption (W)</td>
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<td>Steam temperature at the nozzle (°C)</td>
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<td>Operating pressure (bar)</td>
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<td>Pressure tank capacity (l)</td>
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<tr>
<td>Tank capacity max. (l)</td>
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<tr>
<td>Dimensions W/D/H (mm)</td>
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</tr>
<tr>
<td>Weight (kg)</td>
<td>6.75</td>
</tr>
</tbody>
</table>
Elmasteam 8 basic
Powerful steam jet cleaning units

Functions and advantages:
- 4.5 to 8 bar steam pressure with high steam availability
- Individual adjustable pressure modes „soft“ and „strong“ for different cleaning tasks
- Automatic „Eco“-mode: environment friendly and saves energy and costs
- Optional compressed air function for drying the cleaned parts and instruments
- Smart decalcification programme with defined cycles. The device automatically calculates the right time for decalcification and implements the decalcification programme item by item.
- Flexible hand piece with 1.4 m hose (optional also with 2.3 m)
- Optional with Brita water filtering cartridge to reduce maintenance efforts and extent service intervalls

Elmasteam 8 basic is available in the following versions:

Elmasteam 8 basic HS
- For manual filling with water
- With hand piece

Elmasteam 8 basic P-HS-DL
- Automatic filling with water,
- With hand piece and
- Connection for compressed air

Elmasteam 8 basic HS P-HS-DL-ND
- Automatic filling with water,
- With hand piece,
- Connection for compressed air and
- Additionally with wet-steam function

A fixed water connection or an optionally available storage canister can be used for running automatically filled models.

Technical data

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Mains voltage (V)</td>
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<td>Mains frequency (Hz)</td>
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<td>Steam temperature at the nozzle (°C)</td>
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<td>Tank capacity max. (l)</td>
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<td>Weight (kg)</td>
<td>20.0</td>
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</table>
Elmasonic EASY
The easy way to clean.

The Elmasonic EASY series includes 9 device sizes and is characterized by simple and user-friendly operation. With an ultrasonic frequency of 37 kHz, the devices are particularly suitable for cleaning dental instruments and prostheses.

Sensitive parts can be gently cleaned due to the integrated warning display with individually adjustable limit temperature indicating overtemperature in good time.

Tenacious, mineral contamination, polishing pastes, etc. can be easily removed with the switchable Pulse-function. In normal mode is the proven Sweep-function permanently integrated.

From Elmasonic EASY 30 H the devices are equipped as standard with heating and from Elmasonic EASY 60 H each device has a drain.

Functions and advantages:
- Clearly designed and splash-proof control unit
- Dry-run-safe heating
- Temperature setting from 30°C to 80°C
- More protection against splashing water with higher feet stand
- Cover as noise protection and as drip pan
- High user protection with automatic safety shutdown after 8 hours continuous operation or at 90°C bath temperature

Technical Data

<table>
<thead>
<tr>
<th></th>
<th>EASY 10 / H</th>
<th>EASY 20 / H</th>
<th>EASY 30 H</th>
<th>EASY 40 H</th>
<th>EASY 60 H</th>
<th>EASY 100 H</th>
<th>EASY 120 H</th>
<th>EASY 180 H</th>
<th>EASY 300 H</th>
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<td>176/189/218</td>
<td>301/189/218</td>
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<td>362/201/269</td>
<td>363/289/272</td>
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<td>393/352/322</td>
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<td>3.3</td>
<td>4.0</td>
<td>5.1</td>
<td>5.9</td>
<td>7.5</td>
<td>8.5</td>
<td>11.0</td>
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<td>112/103/49</td>
<td>198/106/49</td>
<td>190/105/74</td>
<td>255/115/74</td>
<td>255/200/73</td>
<td>250/190/113</td>
<td>280/250/113</td>
<td>455/250/112</td>
</tr>
</tbody>
</table>
Elmasonic Denta Pro H
Programme-controlled and optimized for the needs of dentist and dental lab alike

Sweep, Degas and Boost function? The right time and temperature setting? Operating a state-of-the-art ultrasonic device is often complex. But that belongs to the past.

Elmasonic Denta Pro H has cleaning programmes covering all the customary applications in the dental field. All the parameters required such as cleaning time, ultrasonic frequency, temperature and optimum use of Sweep, Degas and Boost functions are saved in these cleaning programmes. This enormously facilitates the user’s everyday work.

At the same time, the programmes ensure that the optimum cleaning process has been used. This also ensures constantly good cleaning results.

Functions and advantages:
- Optimum adaptation of all cleaning parameters
- Safe-to-run-dry heating with LED-display of the actual and specified temperature
- In the instrument cleaning programme, the safety shut-down mechanism stops any hardening of the blood proteins on the instrument should the critical temperature (55°C) be exceeded.
- The entire tank and enclosure are made of easy-to-care-for stainless steel
- Convenient drain

Technical data

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<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tank operating capacity (l)</td>
<td>1.9</td>
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<tr>
<td>Max. tank capacity (l)</td>
<td>2.75</td>
</tr>
<tr>
<td>Unit external dimensions W/D/H (mm)</td>
<td>301/189/218</td>
</tr>
<tr>
<td>Tank internal dimensions W/D/H (mm)</td>
<td>222/122/99</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>3.3</td>
</tr>
<tr>
<td>Basket internal dimensions W/D/H (mm)</td>
<td>198/106/49</td>
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</tbody>
</table>
Elmasonic S
Reliable ultrasonic technology for the effective cleaning of instruments

Elmasonic S ultrasonic devices are available in 16 device sizes from 0.8 to 90.0 liters maximum tank capacity. Equipped with an ultrasonic frequency of 37 kHz and functions like Sweep, Degas and Auto-Start, Elmasonic S devices can be used in a variety of applications.

Functions and advantages:
- 37 kHz ultrasonic frequency
- Switchable Sweep-function for an optimum sound field distribution throughout the whole cleaning bath in order to achieve an even ultrasonic impact
- Degas-function for quick degassing of fresh cleaning solutions
- Pause-function for interrupting a current application
- Temperature-controlled Auto-Start starts the ultrasound automatically when the set temperature is reached
- Functional filling level mark
- Safe-to-run-dry heating (only devices with heating)
- Clearly designed and splash-proof control unit
- Individual control of the cleaning time with display of the set and remaining cleaning time
- Individual temperature setting from 30°C to 80°C with display of set and actual temperature for monitoring

Technical data

<table>
<thead>
<tr>
<th></th>
<th>S 30 / H</th>
<th>S 60 / H</th>
<th>S 90 H</th>
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<td>Tank operating capacity (l)</td>
<td>1.9</td>
<td>4.3</td>
<td>7.3</td>
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<tr>
<td>Max. tank capacity (l)</td>
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<td>5.75</td>
<td>7.4</td>
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<td>Unit external dimensions W/D/H (mm)</td>
<td>301/189/218</td>
<td>362/201/269</td>
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<tr>
<td>Tank internal dimensions W/D/H (mm)</td>
<td>222/122/99</td>
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<tr>
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<td>5.1</td>
<td>6.4</td>
</tr>
<tr>
<td>Basket internal dimensions W/D/H (mm)</td>
<td>198/106/49</td>
<td>255/115/74</td>
<td>289/123/74</td>
</tr>
</tbody>
</table>

Elmasonic S units are thus reliable and cost-saving in daily use. The Elmasonic S 90 H is used for the optimal cleaning of norm tray cassettes with half DIN-norm size. Alternatively, a beaker glass and an instrument basket can also be simultaneously cleaned in the S 90 H.

- From Elmasonic S 30 (H) each device has a drain on the rear
- Elmasonic S devices have the "Elma Commitment to Quality" (for more see https://www.elma-ultrasonic.com/en/company/quality/)
- Registered as medical device class I*
Elmasonic S 130 H
The spatial miracle under the ultrasonic devices

Tray cassette systems are becoming ever more popular in dental clinics and with the orthodontist. For that reason, the Elmasonic S device series also incorporates a version in which a number of standard tray cassettes can be simultaneously cleaned.

Elmasonic S 130H is a special-purpose ultrasonic device for cleaning entire trays. Up to 3 standard tray cassettes or up to 2 glass beakers and an instrument basket can be simultaneously cleaned. As a result, 3 different liquids can be used at the same time e.g. for instruments, prostheses and drills.

The Elmasonic S 130H is an ultrasonic cleaning device that caters for every requirement.

Cleaning (and if necessary disinfecting) in up to 4 beaker glasses simultaneously

Cleaning (and, if necessary, disinfecting) individual instruments in the stainless steel basket

Simultaneous cleaning (and if necessary disinfecting) instruments and drills as well as prostheses in the basket and two glass beakers and perforated lid

Cleaning (and if necessary disinfecting) instruments in dental trays in the tray holder
- with up to 3 x 1/1 DIN trays (surgery) and
- with up to 6 ½ DIN trays (prophylaxis)

Technical data

<table>
<thead>
<tr>
<th>Tank operating capacity (l)</th>
<th>11.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. tank capacity (l)</td>
<td>12.5</td>
</tr>
<tr>
<td>Unit external dimensions W/D/H (mm)</td>
<td>403/282/301</td>
</tr>
<tr>
<td>Tank internal dimensions W/D/H (mm)</td>
<td>328/226/179</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>8.0</td>
</tr>
<tr>
<td>Basket internal dimensions W/D/H (mm)</td>
<td>296/200/73</td>
</tr>
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</table>
Elma Dent & Med Clean
Cleaning chemistry specially formulated for ultrasonic cleaning in the dental field

The Elma Clean cleaning concept in association with the Elmasonic ultrasonic cleaning devices ensure first-rate cleaning results and long service lives of the materials used.

Here you can find the Elma Clean product that has been specially developed and adapted for any of the usual applications and materials.

<table>
<thead>
<tr>
<th>Application</th>
<th>pH-value</th>
<th>Dosage</th>
<th>Application parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EC 10°</strong> Universal</td>
<td>10</td>
<td>5 % vol. (Given pronounced contamination up to 10 % vol. possible)</td>
<td>4 - 10 min, 60 - 80°C In the immersion bath: 15 - 30 min, 60 - 80°C Fresh blood/protein residues: &lt;55°C</td>
</tr>
<tr>
<td><strong>EC 25°</strong> Alginates &amp; Plasters</td>
<td>12</td>
<td>Undiluted</td>
<td>Dental plasters: 1 - 3 min, 40 - 70°C Alginates: 15 - 45 min, 60 - 70°C</td>
</tr>
<tr>
<td><strong>EC 35°</strong> Prostheses Daily</td>
<td>7</td>
<td>2 % vol.</td>
<td>3 min at room temperature</td>
</tr>
<tr>
<td><strong>EC 40°</strong> Prostheses &amp; Cements Intense</td>
<td>1</td>
<td>5 % vol. (Given pronounced contamination up to 10 % vol. possible)</td>
<td>5 - 10 min at room temperature</td>
</tr>
<tr>
<td><strong>EC 55°</strong> Instruments &amp; Burrs Disinfection</td>
<td>10</td>
<td>2 % vol.</td>
<td>Disinfection: 15 min, 20 - 70°C Fresh blood/protein residues: &lt;55°C</td>
</tr>
<tr>
<td><strong>EC 60°</strong> Acidic Intense</td>
<td>1</td>
<td>1 - 10 % vol.</td>
<td>1 - 5 min, 40 - 70°C</td>
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Qualification and re-qualification according to IEC TS 63001:2019
to verify the ultrasonic performance as part of process validation

The treatment of medical devices is part of the daily work of a dentist and requires safe, standardized processes. With standardized resp. validated processes, you can always compare and check all treatment steps, procedures and methods with the specified requirements.

The qualification of ultrasonic devices serves the quantitative evaluation of parameters which are directly or indirectly relevant for the cleaning performance of the device. It enables the integration of the ultrasonic devices into existing, validated processes.

Evaluation of the following parameters:
- Cavitation noise level according to the standardised acoustic procedure IEC TS 63001:2019
- Ultrasonic functions sweep and pulse
- Bath temperature and heating curve
- Technical and mechanical properties (evaluation of ultrasonic tank, electrical connections, drain, etc.)

The qualification of ultrasonic devices comprises three test certificates:
- for cavitation noise level
- for power consumption
- for bath temperature / heating curve

The cavimeter test

We developed the acoustic procedure for qualification and re-qualification - the cavimeter test - in order to check performance-relevant parameters of ultrasonic devices. This allows an evaluation of the device performance. Relevant and measurable parameters are the cavitation noise level, the excitation frequency, the sound pressure at the determined excitation frequency, the ultrasonic modes (Sweep, Pulse) and the functionality of the heating based on the actual and set temperature.

On request, both the initial qualification and the re-qualification can be carried out under specific process conditions defined by you or under the standard parameters defined by Elma.

All tests are carried out with calibrated measuring instruments according to standard EN 10204:2004.

When purchasing an ultrasonic unit, you can have it qualified before delivery at a charge. The device test certificates for all tested parameters are then also provided. Existing devices are re-qualified at our premises or on request and, under certain conditions, also at your premises.

This allows you to ensure and prove that the original characteristics and performance of your device are still present.

Advantages of (re-)qualification:
- Integration of ultrasonic cleaning devices in validated processes
- Ensuring the required cleaning performance
- Verification of the required product quality

To obtain very good, reproducible cleaning results in validated processes, a device qualification is indispensable.
Perfect cleaning results and high quality products are the measure of all things. With the large and thought-out product range, Elma is offering sophisticated solutions for dental cleaning tasks.

With our core competencies ultrasonic and steam cleaning technologies and our process laboratory with its own cleaning agent development behind us, we provide competent and reliable advice and tailor-cut cleaning solutions for our customers for even the most difficult cleaning tasks. We provide top quality in all manufacturing stages from design and development to service and after-sales-service.

Our process laboratory develops our own, for dental applications optimized, cleaning agents which are produced in our plant.

Years of experience, innovative research and development as well as our industry-specific know-how make us the partner of choice for you. A worldwide network of partners and distributors ensures high availability of devices and equipment with short response times.

Knowing the needs of our customers are our basis for innovation and efficient cooperation. Furthermore we consider trust and reliability to be the foundation of a sustainable partnership.

By providing you with Elma products and services, we want to contribute to your success as reliable, competent partner!