



Ultrasonics.Steam.Ultraclean.



## Watches and Jewellery

### Ultrasonic and Steam Cleaning Technology

for cleaning watch parts and jewellery during production and service

- Efficient ultrasonic cleaning technology with proven cleaning modes and suitable accessories
- Modular and tailor-cut cleaning lines
- Elmasteam steam cleaning technology for efficient and gentle cleaning with 4.5 to 8 bar
- Elma cleaning chemistry developed for watch and jewellery cleaning tasks
- Watch winders, watch testing and servicing devices

# Professional cleaning technology for watch manufacturing and service



Important cleaning tasks arise particularly in watch production and service. Watch cases, glass, metal straps and locks, for instance, need to be cleaned again and again in-between the production steps. Detailed specific-industry know-how in watch movement cleaning during production and in service involving ultrasonic and steam cleaning technologies has been in Elma's hands now for over 60 years.

Elma ultrasonic and steam cleaning appliances as well as ultrasonic systems are indispensable in jewellery manufacture and in the jewellery studio. For in-between cleaning, repairs and final cleaning, Elma cleaning technology is the first choice for highly-pure surfaces and shining cleaning results.

That is why major brand manufacturers and international service points have full confidence in Elma technology.

Thanks to the 3 Elmasolvex watch cleaning machines, Elma provides market-leading technology for cleaning mechanical watch movements.

The Elmasolvex cleaning machines cover cleaning operations both with ultrasonics as well as rotation and oscillation operations. As such, they function fully automatically in the single and multiple-chamber process. With Elmasolvex SE, Elma also has a purely mechanical version in its portfolio for small workshops.



Elma's X-tra line is a well-thought-out modular cleaning line concept for higher-throughput production. The most varied of aqueous processes can be reproduced here with ultrasonics followed by rinsing and parts drying.

*Elmasonic X-tra line pro*

# Ultrasonics. Steam. Cleaning Chemistry.

Made by Elma for shining jewellery.

Depending on the cleaning appliances different ultrasonic cleaning units of various sizes, with proven cleaning modes as Sweep, Degas and Pulse as well as for heavy-duty applications are available. Application-adapted cleaning concentrates, fully demineralized water rinsing cartridges and dryers round off the cleaning operation.

The Elma Clean cleaning concentrates have been especially developed to support the mechanical cleaning effect in the ultrasonic bath. As a result, gold and silver jewellery can be brightened and/or de-oxidized easily. The new EC 95 - Polish Paste & Soil Remover and the tried-and-tested Elma Noble Clean even provide the jewellery pieces with a temporary anti-tarnish film.

The Elmadry TD drying units are available for gentle warm and cold air drying of jewellery pieces following the immersion or ultrasonic bath resp. the rinsing.



Steam cleaning devices of the Elmasteam range with 4-8 bar steam pressure are available for the non-chemical cleaning of delicate parts. Under certain circumstances, it is not advisable to clean finished jewellery made of various precious metals, precious and semi-precious stones, pearls and coral in the ultrasonic bath. Here the jewellery pieces should be gently cleaned with the Elmasteam steam cleaning devices.

A 4.5 to 8 bar steam pressure ensures that polishing pastes and wax residues as well as other residues brought about from wear are easily removed. The cleaning outcome is further enhanced by optional functions, such as compressed air, wet steam and individual pressure control. Within seconds, steam removes polishing agent residues and wear dirt without leaving any residues or stains. By using the optional compressed-air function, the jewellery can be dried straight away with Elmasteam.

## The Elma Cleaning Concept





# Elmasonic EASY

The easy way to clean.



*Elmasonic EASY series*

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 jewellery and watch components.

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.



*Elmasonic EASY 30 H*



## Functions and advantages:

- Clearly designed and splash-proof control unit
- Safe-to-run-dry 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



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More on Elmasonic EASY devices.



# Elmasonic S

## Reliable ultrasonic technology



*Elmasonic S series*

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



*Elmasonic S 30 H with basket and cover*

- Individual temperature setting from 30°C to 80°C with display of set and actual temperature for monitoring
- 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/>)



*More on Elmasonic S devices.*



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# Elmasonic P

## Multi-frequency units with strong power and exceptionally silent

The digital display of the Elmasonic P devices is self-explanatory, easy to handle and very user-friendly. All target and actual values are easily identifiable and clearly legible.

### One instrument - Two frequencies

Each Elmasonic P has two frequencies integrated which - depending on the task - can be manually changed.

- 37 kHz frequency:  
for coarse cleaning tasks or degassing of new cleaning baths.
- 80 kHz frequency:  
ideal in silent workspaces with extension of the application time at the same time, ideal for the cleaning of inner areas of parts e.g. in capillaries.



Elmasonic P 30 H

### Functions and advantages:

- Normal-Mode for all cleaning applications
  - Pulse-function:  
activable extra power of about 20%  
through increased ultrasonic peak
  - Sweep-function for an even distribution  
of the ultrasonic power throughout the unit
  - Degas-function  
for the quick degassing of new cleaning baths
  - Individual power regulation  
for sensitive surfaces the ultrasonic power  
can be individually reduced
- Additional functions:
- Pause-function for interrupting a current application
  - Temperature-controlled auto-start  
starts the ultrasound automatically  
when the set temperature is reached



Elma Posätze



Ultrasonics, Steam, Ultraclean.

More on Elmasonic P devices.



# Elmasonic xtra TT

## Robust tabletop ultrasonic devices for heavy-duty applications

Elmasonic xtra TT tabletop ultrasonic devices are designed for heavy-duty use in production environments, workshops and servicing. Features like the permanently integrated Sweep function, the switchable Dynamic function or the individually settable limit temperature with LED warning indicator make the cleaning of parts in day to day work much easier.

All functions and cleaning parameters like time and heating preselection and ultrasonic frequency are arranged user-friendly on the control panel on the front of the device where users can set and monitor them at a glance. With their ultrasonic performance of 35 kHz, Elmasonic xtra TT devices are rated for continuous heavy-duty operation. The tanks are made of special stainless steel, which makes them robust with a long service life. If they are used in single-shift operation, they are guaranteed for three years.

- Robust welded tank made of special stainless steel with fill level marking and sloping trough base to drain the device more easily

- Clearly arranged control panel that is protected from spraying water with
  - Individual time and temperature regulation
  - Tried and tested Sweep-unction
  - Start/Stop- and Dynamic-function
  - Settable limit temperature with LED warning indicator



*Elmasonic xtra TT 60H*



*Elmasonic xtra TT 30H*

- Quick and easy draining of the contaminated cleaning liquid via the ball valve drain

### Functions and advantages:

- Permanently integrated Sweep-function for uniform distribution of the ultrasonic effect in the entire ultrasonic bath
- Switchable Dynamic-function increases the peak ultrasonic performance.  
This improves the effectivity of cleaning and makes it possible to remove even the most stubborn contaminants.
- Individually settable limit temperature with LED warning indicator on reaching the temperature  
Sensitive parts like jewellery or plastic parts are handled gently
- Clearly arranged, control unit that is protected from spraying water
- Temperature-controlled Auto-Start-function: the ultrasound starts automatically when the preselected temperature is reached
- User safety with safety shutdown



More on Elmasonic xtra TT devices.



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# Elmasonic xtra ST

## Powerfull ultrasonic single-tank devices



With 8 different tank sizes (30 - 250 l), the Elmasonic xtra ST series has been designed for heavy-duty applications in production, workshops and service. The stainless steel casing and the durable transducer tank are built for permanent operation. Thus Elma gives a 3-years warranty on the resistant, special stainless steel tank provided the unit is used properly and one-shift operated.

With the large number of features, the units can be easily and efficiently operated. All units are mounted on rollers and can easily be shifted to various workplaces in production or workshop. The up front arranged operating panel allows the quick and easy setting of all relevant parameters such as cleaning time, heating temperature or frequency.



*Hinged basket for Elmasonic xtra ST*

### Functions and advantages:

- Multi-frequency at 25/45 kHz: individually settable frequencies depending on the cleaning job.
- 25 kHz for rough part cleaning and removing stubborn contaminants like lapping and polishing paste, for example.
- 45 kHz for cleaning sensitive parts and surfaces from contaminants like oils, drilling emulsions and greases. Also ideal for hard metal and glass surfaces in industrial and artisan environments as well as jewellery manufactures.
- Sweep-function for optimum sound field distribution and cleaning performance in the entire ultrasonic bath.
- Switchable Pulse-function increases the peak ultrasonic performance output. This uprating makes it possible to remove even the most stubborn contaminants.
- Dynamic-function: The Sweep- and Pulse-functions run alternately on an automatic basis. The ultrasonic performance is temporarily increased by up to 20%. At the same time, the even ultrasonic sound field distribution in the ultrasonic bath enhances the cleaning effect.
- Short heating times due to the high heating capacity with temperature regulation (30 - 80°C)
- High user safety with automatic safety shutdown
- Easy to service due to quick changing of the generator and operator control unit. This means that the devices are ready for use again very quickly and are highly available for users.



*Elmasonic xtra ST 600H  
with noise protection cover and basket*



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# Elmadry TD

## Safe and efficient drying of watch and jewellery parts

Elmadry TD drying units are available in 3 sizes and designed for use in production, workshop and service. After ultrasonic cleaning, the parts are first rinsed in the basket with municipal water and then dipped into a bath of deionized or distilled water (needed for spotless drying).

The basket with the cleaned parts is then placed conveniently placed in the Elmadry TD drying unit. The hot air function is activated while the cover is on. The cover has ventilation slots, ensuring that maximum air turbulence is produced and the moist air is conducted to the outside.

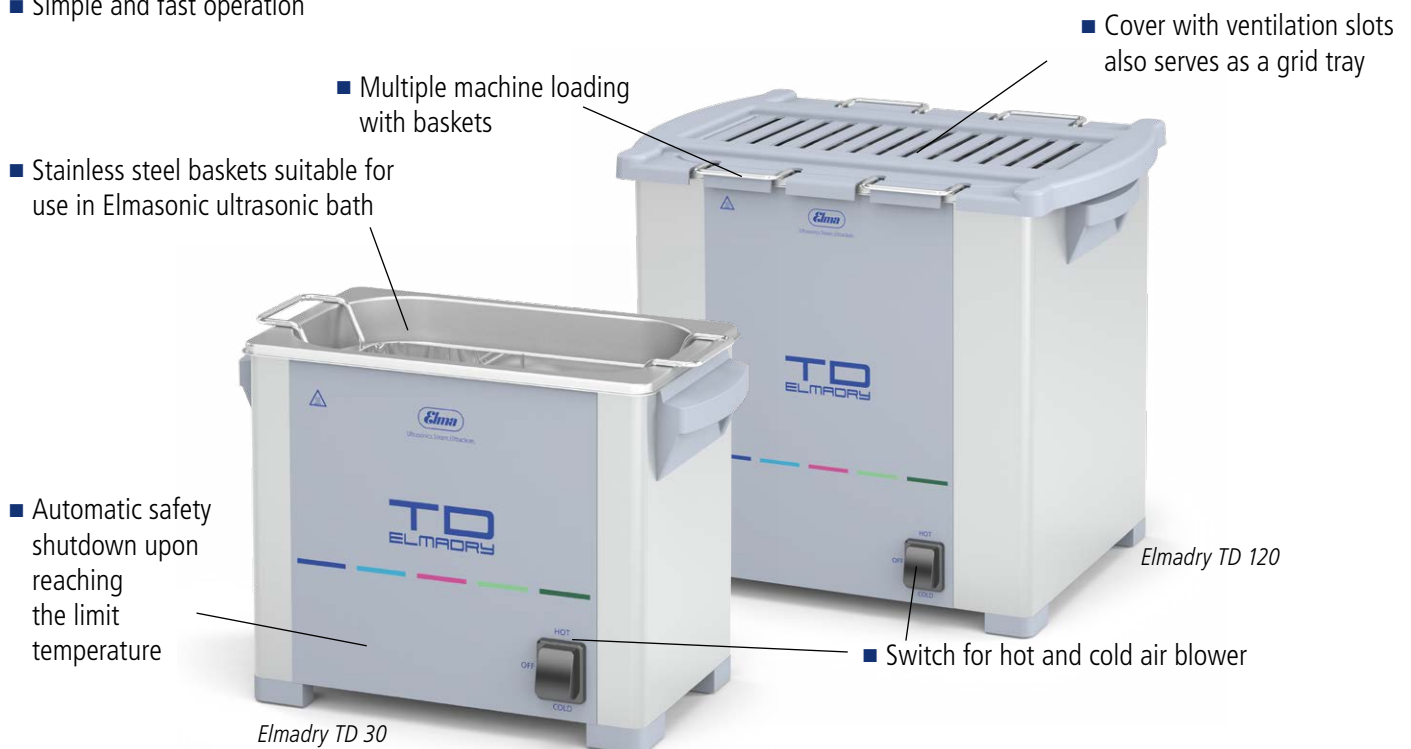
At the same time, the cover reduces energy consumption. The dust filter on the underside is replaceable and prevents re-soiling of the cleaned parts by the dust in the room air.

Fitted with cold and hot air blower (70 °C), sensitive parts can be dried gently. In cold air operation, the parts to be dried can also be cooled quickly.

Elmadry TD units are very user-safe thanks to the safety shutdown upon reaching the limit temperature.

### Functions and advantages:

- Hot air function with fixed temperature of 70 °C
- Cold air blower (ambient temperature) for drying sensitive parts
- High user safety through safety shutdown upon reaching the limit temperature
- 3 unit with 3 l, 12 l and 30 l for different baskets and holders
- Optional available silicone mats for protecting sensitive parts
- Simple and fast operation



Gentle drying of jewellery and watch parts



Heating and blower are integrated into the tank bottom

# Elma STC robot systems and Elma MTC lift and push installations

## Cleaning systems made to measure



Both Elma STC and Elma MTC systems are available in different tank sizes. They are designed to meet high cleanliness requirements at high throughput.

- Cleaning processes include a great number of individually selectable options to meet cleaning requirements, materials and parts to be cleaned
- Various different drying systems are available (hot air, trough, continuous flow, IR or vacuum dryers)
- Systems are easily expandable with suitable accessories and ancillaries (loading and unloading conveyors, wet loading tanks, etc.)
- Optional bath care ancillaries (filter pump systems, oil separators, pure water systems)
- Process-controlled production through data-logger and sensors with calibration certificates for validated, consistent product quality
- Industrial-PC control with intuitive visualization
- Remote control and maintenance options
- Optional connection to MES or customer IT-systems
- Optional use of barcode/data-matrix code-scanners or RFID-systems

## Customised Cleaning Systems

In close cooperation with our customers, we develop and provide tailor-cut cleaning solutions. We support our customers from cleaning tests in our process laboratory, to the development and design of individual cleaning processes and cleaning systems to system implementation and subsequent maintenance and servicing.

With Elma systems, customized and standardized cleaning solutions go hand in hand. Standardized ancillaries such as oil separators for extending the bath service life, filter pump devices or water processing units can be easily integrated into your cleaning system to meet even changed requirements.



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# Elmasonic X-tra line pro and precision

## Modular cleaning systems for different requirements

The modular Elmasonic X-tra pro and precision series are multi-frequency systems with 25/45 or 37/130 kHz, offering 5 tank sizes (30 - 160 l). Ideally for fine and ultra-fine cleaning of industrial precision parts.

All cleaning lines are ready for extensions as loading and unloading conveyors, etc. Furthermore a wide range of accessories like baskets, etc. is available. Accessories may also be added later on to adapt the system to changed requirements.

### Functions and advantages:

- Multi-frequency technology: 25/45 kHz or 37/130 kHz
- **weep-function** for optimal cleaning results
- **Degas-function** for quick degassing, esp. of a fresh cleaning bath
- Individually activatable **Pulse-function** for increased performance with difficult cleaning tasks
- Cleaning lines have a compact design and can be easily integrated into existing production processes
- Matching accessories, such as baskets and rinse station
- Optional ancillaries such as oil separator, filter pump units, etc.
- Easy to upgrade for automatic cleaning
- Highly cost-efficient cleaning line concept



*X-tra line pro manual*



*Elmasonic X-tra Flex 1 with rinsing station*



### Sustainable energy efficiency

- All units are sound and heat insulated
- Automated systems have a weekly time switch for starting and shutting down the system automatically
- Cascaded, connected cleaning tanks to reduce water consumption

### Modular software and user-friendly visualization

- IPC-based control
- Data-logger, OEE, trend analysis, SMS messenger and energy management
- Optional use of manual or automatic barcode/ data-matrix code scanners or RFID-systems
- Connection to MES or customer IT-systems possible
- Touch panel for a user-friendly visualization of the control surface





# Elmasteam 4<sup>5</sup> basic

## with fixed nozzle or flexible hand piece

Elmasteam 4<sup>5</sup> basic is the ideal steam cleaning machine for watch and jewellery making workshops for the cleaning of worn and mounted jewellery as well as for watch straps, chains and rings with set stones.

Cleaned with steam and/or in combination with ultrasound, the cleaned jewellery shines again after just a very short time. During production steps, polishing pastes are easily cleaned off with Elmasteam 4<sup>5</sup> basic. Furthermore Elma gives 3 years warranty on its Elmasteam steam cleaners.

### There are two versions of Elmasteam 4<sup>5</sup> basic:

#### With fixed nozzle:

Components and parts can be held securely with both hands and be cleaned under the fixed nozzle.

#### With flexible hand piece

With the flexible hand piece components and parts can be steam cleaned all around quickly and effectively.



### Application examples before and after the cleaning

Jewellery ring



*Cleaning of dirt arising from wearing*

Jewellery chain



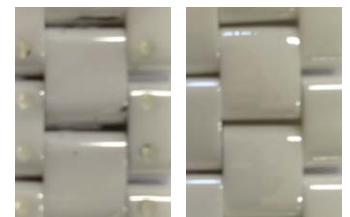
*Cleaning of polishing paste*

Watch case



*Cleaning of polishing paste*

Watch strap



*Cleaning of grease and silicone*

With the Elmasteam 4<sup>5</sup> basic, contaminations such as oils, adhesives and pickling agents can also be gently removed. The Elmasteam is used for degreasing the parts before galvanisation.

# Elmasteam 8 basic

## The environmentally friendly cleaning alternative

### Functions and advantages:

- Cleaning, rinsing and drying - all with one device
- Long steam availability with 8 bar steam pressure
- Individually adjustable pressure ranges „Soft“ and „Strong“
- Automatic „Eco-mode“ saves costs and energy and is environmentally friendly
- Integrated decalcification programme
- Optional with Brita water filtering cartridge to reduce maintenance efforts and extent service intervals
- 3 years warranty
- Simple filling with water
- Fixed nozzle for working with both hands
- Steam regulation as optional function:
  - „wet“ - wet steam
  - „dry“ - dry steam
- Flexible handpiece with 2 integrated functions:
  - Steam or
  - Compressed air for drying
- Optional with
  - Automatic filling or
  - Compressed air function
- Different settings and modes
- Compact design: Space-saving tabletop units with wall brackets



*Elmasteam 8 basic  
with handpiece and fixed nozzle*



#### **Cleaning with flexible handpiece**

Parts can be held securely (also with tweezers) and sprayed all-round quickly and effectively.



#### **Cleaning with fixed nozzle in the evaporating dish**

Moisture and dirt are absorbed and can be easily disposed.

# Elmasolvex RM and SE

Watch movement cleaning with one and multiple chamber technology



Elmasolvex RM

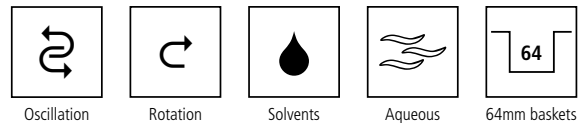
## Elmasolvex RM

Multiple-chamber technology for solvent and aqueous cleaning with certified TÜV Ex-protection

### Functions and advantages:

- Ex-protection for solvents with flashpoint  $\geq 23^{\circ}\text{C}$
- Cleaning with rotation and oscillation processes in 4 cleaning and one drying chamber (fine-filter warm-air technology)
- Completely automatic or alternatively with individually configurable parameters
- Service-friendly and easy-care design
- Maximum personnel safety due to connection of the machine to controlled exhaust air routing
- Basket frame for three baskets, optional holder for movements
- Suitable cleaning chemistry
  - for solvent cleaning: Elma Luxury Clean WF PRO and SUPROL PRO
  - for semi-aqueous combination process: Elma RED 1:9 and demineralised water

### Elmasolvex RM - Processes and Media



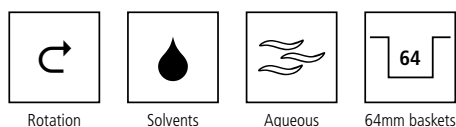
## Elmasolvex SE

Multiple-chamber technology for solvent and aqueous cleaning with certified TÜV Ex-protection

### Functions and advantages:

- TÜV certified Ex-protection for cleaning with solvents with flashpoint  $> 23^{\circ}\text{C}$
- Cleaning with rotation process in 4 cleaning and one drying chamber (fine-filter warm-air technology)
- Manual operation with latching in the working heights and above the media container positions
- Service-friendly and easy-care design
- Maximum personnel safety due to connection of the machine to controlled exhaust air routing
- Basket frame for three baskets, optional holder for movements
- Suitable cleaning chemistry
  - for cleaning with solvents: Elma Luxury Clean WF PRO and SUPROL PRO
  - for semi-aqueous combination processes: Elma RED 1:9 and demineralised water

### Elmasolvex SE - Processes and Media



Elmasolvex SE



# Elmasolvex VA

## Watch movement cleaning with flammable solvents

The quality of the mechanical watches and thus the requirements in production and service for the movement cleaning have increased continuously. Complex design of the precision engineering and continually increasing requirements for materials and surfaces require a cleaning process which satisfies these most exacting demands.

With the Elmasolvex VA it is possible to clean with ultrasound and flammable solvents under vacuum. The cleaning process allows best cleaning results with at the same time short process times.

Elmasolvex VA has its own self-contained intrinsic Ex-protection due to the vacuum technology used and all the measures required by TÜV and the applicable technical regulations for explosion safety. This means that the explosion protection measures integrated in the machine already rule out any fire hazard in the primary zone, operation in compliance with the manual provided.

## Elmasolvex VA

Single-chamber ultrasonic vacuum technology for cleaning with solvents TÜV-certified safety due to intrinsic Ex-protection

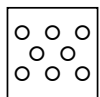


Elmasolvex VA

### Function and advantages:

- Ex-certified solvent-based cleaning of watch movements (TÜV Rheinland) with flashpoint  $\geq 12^{\circ}\text{C}$
- Operator protection against solvent vapours and odours due to extraction or self-contained filter system
- Maximum cleanliness due to vacuum and ultrasonic technology. Even difficult-to-access areas are reached and gas bubbles are removed from the movements.
- Cleaning and rinsing using multi-frequency ultrasound in rotation or oscillation process
- Machine can be completely rotated, media containers and connections are thus very easily accessible
- Integrated particle filter for increasing the service life of the cleaning and rinsing solutions
- Suitable cleaning chemistry (cleaning and rinsing solutions)  
Elma Luxury Clean WF PRO and SUPROL PRO
- Wide range of practical accessories

### Elmasolvex VA - Processes and Media



Ultrasound



Oscillation



Rotation



Solvents



80mm baskets



64mm baskets



Easy changing of cleaning and rinsing solution canisters



Controlled exhaust air routing



# Cyclomotion

The watch winder for watch makers worldwide



*Cyclomotion for up to 12 watches without protector hood*



*Cyclomotion pro with protector hood*

## The professional watch winder

The various possible options for watch mounting enable individual configuration of the watch winder tailored to the respective requirements. Different winding variants guarantee optimum winding and testing according to the respective requirements of the watch movements.

In particular, large and heavy mechanical watches can also be wound by the powerful motor. Due to its versatility, the Cyclomotion is designed for watch manufacturers and watchmakers.

## Functions and advantages:

- For up to 24 watches (with or without straps)
- Mains supply unit 100 - 240 Volt, 50/60 Hz
- Powerful, silent motor with integrated safety clutch and holding torque (stand-by mode) for a reliable protection of the watches
- Adjustable speed (1 or 4 rpm) for continued testing and quick winding
- Change of rotation direction possible
- Individually selectable retaining bracket combination enables simultaneous winding on one or both sides of watch movements to be wound

## Further Accessories:

- Lockable Protector hood for additional protection against dust and mechanical impacts
- Clip for 2 or 4 watches with straps
- Industrial clip for 4 watch cases (without straps)
- Wall brackets for wall mounting
- Watch box for up to 4 watches (without straps)



*Clip for watches with straps*



*Industrial clip*



*Watch box closed*



*Watch box for 4 watches*

# Polishing, watch testing and servicing devices

Useful devices for watch makers and jewellers

## Antimag

Demagnetizer



Parts of watches and tools are easily demagnetized.

## Leak Controller 2000

Watch testing unit



Vacuum testing unit for checking the water tightness of watches

- Easy operation
- Ideally for testing after battery exchange

## Cyclomatic-Due

Design and functionality in harmony



The Cyclomatic-due keeps two watches running without producing any noise. A compact unit for the collector and lover of precious automatic watches.

Due to the battery service life of up to one year the watches can be stored in a safe over longer periods. Mains supply unit available on request.

## Polini

The reliable polishing machine



- Powerful polishing unit with integrated dust suction
- Rotation speed set to 2800 rpm
- Transparent cover removable to allow the polishing of larger pieces
- Dirt collecting drawer with fine filter

## Unispeed

Polishing machine with two speeds



- Professional one-place polishing machine with integrated dust suction
- Two rotations speeds 1400 or 2800 rpm
- Dust protection cover removable to allow the polishing of larger pieces
- Polishing area is illuminated
- Dirt collecting drawer with fine filter

## Multispeed

Polishing machine with two brushes



- Large polishing machine with two polishing brushes and integrated dust suction
- Two rotations speeds 1400 or 2800 rpm
- Dust protection covers removable to allow the polishing of larger pieces
- Polishing areas are illuminated
- Dirt collecting drawer with fine filter



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# Effective and thoroughly jewellery cleaning agents

## for ultrasonic cleaning or in immersion baths



The Elma Clean cleaning concept in combination with Elmasonic cleaning devices and Elmasolvex watch cleaning units guarantees top-quality cleaning results and ensures the longevity of the materials.

There is the suitable and especially developed cleaning agent range for the jewellery cleaning. If for cleaning or for brightening - Elma Clean cleaning agents are productive, clean thoroughly and are ready for jewellery cleaning tasks and materials.

	Surfaces	pH-Value	Dosage	Application parameters
	<b>Elma Clean 85 - Neutral Cleaner</b> Concentrate for a very gentle removal of wear dirt and processing agents in the workshop and in manufacturing. For all metals - including light metals - plastics, soft stones, pearls and coral. No brightness comes from using Elma Clean 85.	8	Ultrasonic bath: 5 % Immersion bath: 10 %	Ultrasonic bath: 1-5 min, 30-60 °C Immersion bath: 30 min, 50-75 °C
	<b>EC 95 - Polish &amp; Soil Remover - Intensive Cleaner</b> Highly concentrated with strong brightness effect for removing wear dirt, processing agents and oxidation in the workshop and industry (without ammonia). EC 95 contains a temporary anti-tarnish finish. For rapid cleaning of precious metals and non-ferrous metals as well as their alloys and jewellery with hard stones. Check costume jewellery and soft stones beforehand for stability. Not suitable for pearls and coral!	10	Ultrasonic bath: 2 % (up to 4 % given considerable soiling) Immersion bath: 10 %	Ultrasonic bath: 2-5 min, 25-75 °C (For removing wear dirt: ambient temperature) (Polishing pastes & waxes: 25-75 °C) Immersion bath: 15 min, 25-75 °C
	<b>Elma Ultra Clean - Sensitive Cleaner</b> Gentle cleaning concentrate for delicate gold jewellery and also that with soft stones. Ensures the gold gleams brightly. For precious and non-ferrous metals as well as their alloys, jewellery with stones and costume jewellery. Check pearls for stability. Not for coral!	10,5	Ultrasonic bath: 5-10 % Immersion bath: 10-20 %	Ultrasonic bath: 2-5 min, 30-60 °C Immersion bath: 30-60 min, 30-60 °C
	<b>Elma Noble Clean - De-oxidation Cleaner</b> Extremely rapid and pronounced de-oxidation and brightening, especially for silver and silver alloys. Available in the wide-neck bottle for direct immersion. Elma noble clean contains a temporary anti-tarnish film. Not for costume jewellery, jewellery with soft stones, pearls and coral!	1-2	Ultrasonic bath: 50 % Immersion bath: non-diluted	Ultrasonic bath: 30-45 s, ambient temperature Immersion bath: 10-15 s, ambient temperature

# Cleaning chemistry for efficient watch and movement cleaning

Concentrates and cleaning solutions - developed by Elma



Here you find the right Elma Clean cleaning chemistry for the different applications and material for cleaning watch parts and watch movements.

From non-aqueous to aqueous rinsing and cleaning solutions to lubricants - the Elma chemistry is available in different package sizes.

	Surfaces	pH-Value	Dosage	Application Parameters
<b>ELMA RED 1:9</b>  <b>Water-Based Concentrate</b> Watch Movement Parts	Powerful brightening concentrate with ammonia for aqueous cleaning of watch movements and metallic precision parts.	10	Ultrasonic bath: 10 % (1 part concentrate to 9 parts water)	Cleaning time: 3-10 min
<b>WF PRO</b>  <b>Waterless Cleaning</b>	Non-aqueous cleaning solvent especially for cleaning watch movements and mechanical precision parts in all watch cleaning machines with and without ultrasonics.	-	Ready-to-use solvent	Cleaning time: 2-10 min
<b>SUPROL PRO</b>  <b>Waterless Rinsing</b>	Water and residue-free rinsing solvent for use after the cleaning of watch movements and mechanical precision parts e.g. with Elma WF Pro. For use in all watch cleaning machines with and without ultrasonics.	-	Ready-to-use solvent	Rinsing time: approx. 3 min
<b>SPIROL</b>  <b>Waterless Degreasing</b>	Degreasing agent for degreasing metallic precision parts especially of watch movements and mechanical watch coils.	-	Ready to use for the immersion bath	Cleaning time: approx. 3 min
<b>LNIMIX</b>  <b>Waterless Lubrication</b>	Ready-to-use one-bath lubricant for re-greasing after cleaning watch movement and precision parts. In the rotation and vibration operation as for instance with Elmasolvex SE and RM.	-	Ready to use	Dwelling time: approx. 3 min
<b>VACU-PROOF</b>  <b>Sealing fluid</b>	Sealing liquid for static and dynamic sealing points and seals of waterproof watches and precision appliances after service work.	-	Ready to use	Apply droplets oneself to the sealing faces or seals

## About us

Experienced. Committed. Service-oriented.



The Elma success story started in 1948 with an idea and two engineers. Back then the new watch cleaning machine - the Super Elite - took the world by storm. This success continues to this day and makes Elma one of the leading international companies for cleaning technology, thanks in part to our latest development - the Elmasolvex.

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 a development to service and after-sales-service.

With our highly motivated and international team of experts, we support our customers competent and solution-focused. For us, customer contact does not depend on physical proximity, but on attitude.

A worldwide network of partners and distributors ensures high availability of devices and equipment with short response times.

Years of experience in industrial precision cleaning, innovative research and development make us the partner of choice for you. 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!

