Adaptable. Reliable. Connected.

Elmasystem Neo

www.elma-ultrasonic.com

Elmasystem Neo

Smart cleaning systems. As adaptable and versatile as your requirements.

Unmatched performance.
Elmasystem Neo delivers high-end ultrasonic cleaning tailored to the specific needs of each project. Every system is designed around your process requirements and meets the highest standards for both film-type and particulate cleanliness. Whether aqueous, semi-aqueous or solvent-based – the combination of multifunctional cleaning technology, flexible goods handling and precise process control makes Elmasystem Neo the go-to solution for demanding applications. Intelligent sensor technology and real-time monitoring provide continuous oversight of all cleaning parameters. With scalable tank sizes, high-performance drying systems and innovative filtration, dosing and monitoring systems, Elmasystem Neo ensures efficient, future-proof cleaning results – perfectly aligned with your requirements.

Highlight

MAXIMUM BENEFITS

Developed for	Cleans	Removes
Medical technology	Implants, instruments and contact lenses	Adhesive residues
Photonics	Precision optics, optics for safety and monitoring systems, vacuum components, parts for laser and lithography technology	Oil and grease
Energy and drive technology	Components for fuel cells and drive systems, power electronics, electromechanical components	Abrasive and polishing pastes
Precision components	Technical ceramics and substrates, components for injection moulding tools, valves, nozzles, springs	Particles
Watches and jewellery	Micromechanical components, cases, straps	Flux
		Film-like impurities
		Organic and inorganic impurities
		Particulate impurities
		Oxidation
		Protective coatings

Elmasystem Neo

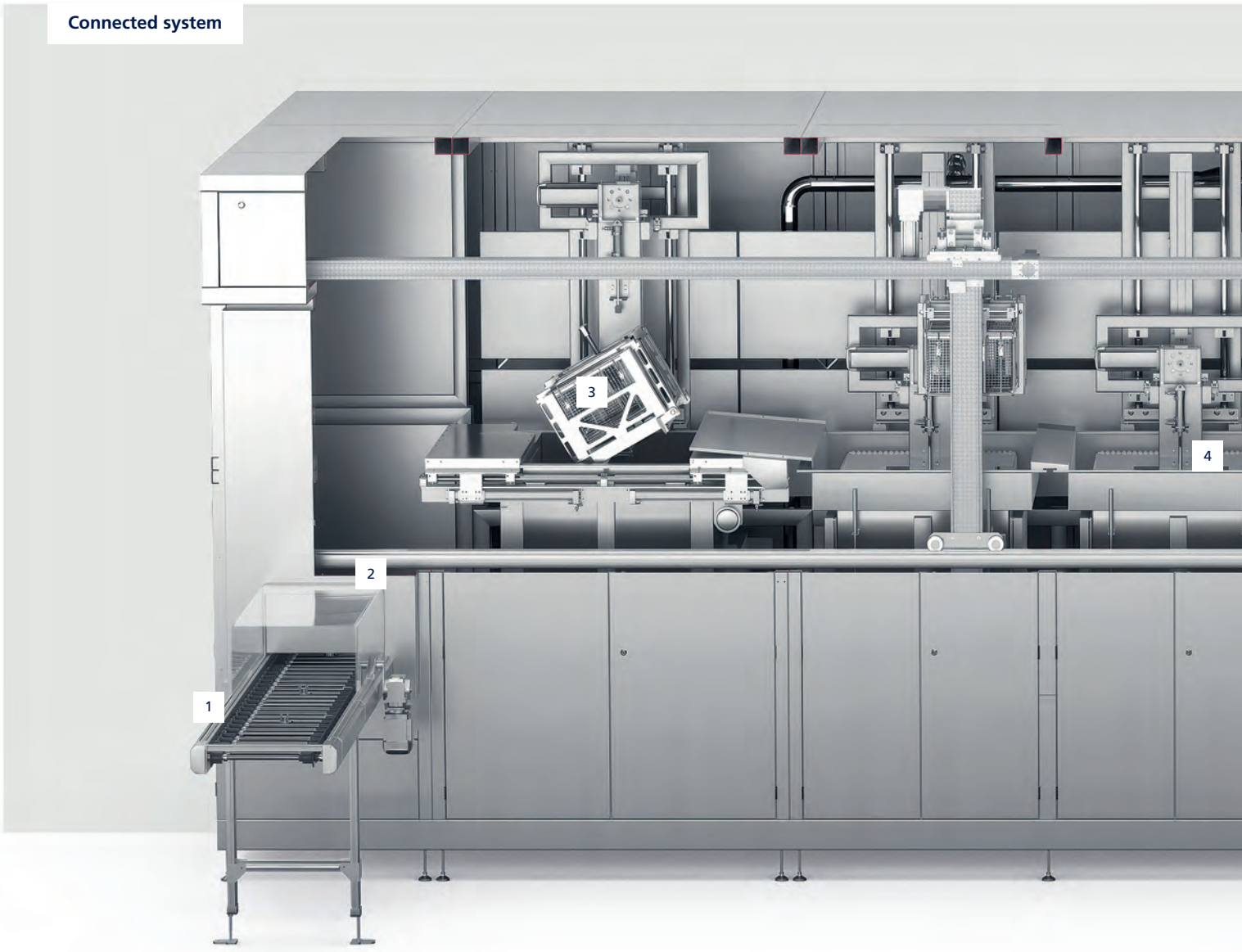
Maximum cleaning performance. Smart processes. Perfect results.

A compelling choice.

Elmasystem Neo is redefining industrial component cleaning. Thanks to advanced ultrasonic technology and intelligent process control, these bespoke systems ensure reliable, efficient performance – even for complex cleaning processes.

Every process parameter can be fine-tuned – from material type and motion control to the precise management of cleaning media. Its seamless integration into existing production environments makes Elmasystem Neo the ideal solution for highly complex manufacturing processes.

Connected system



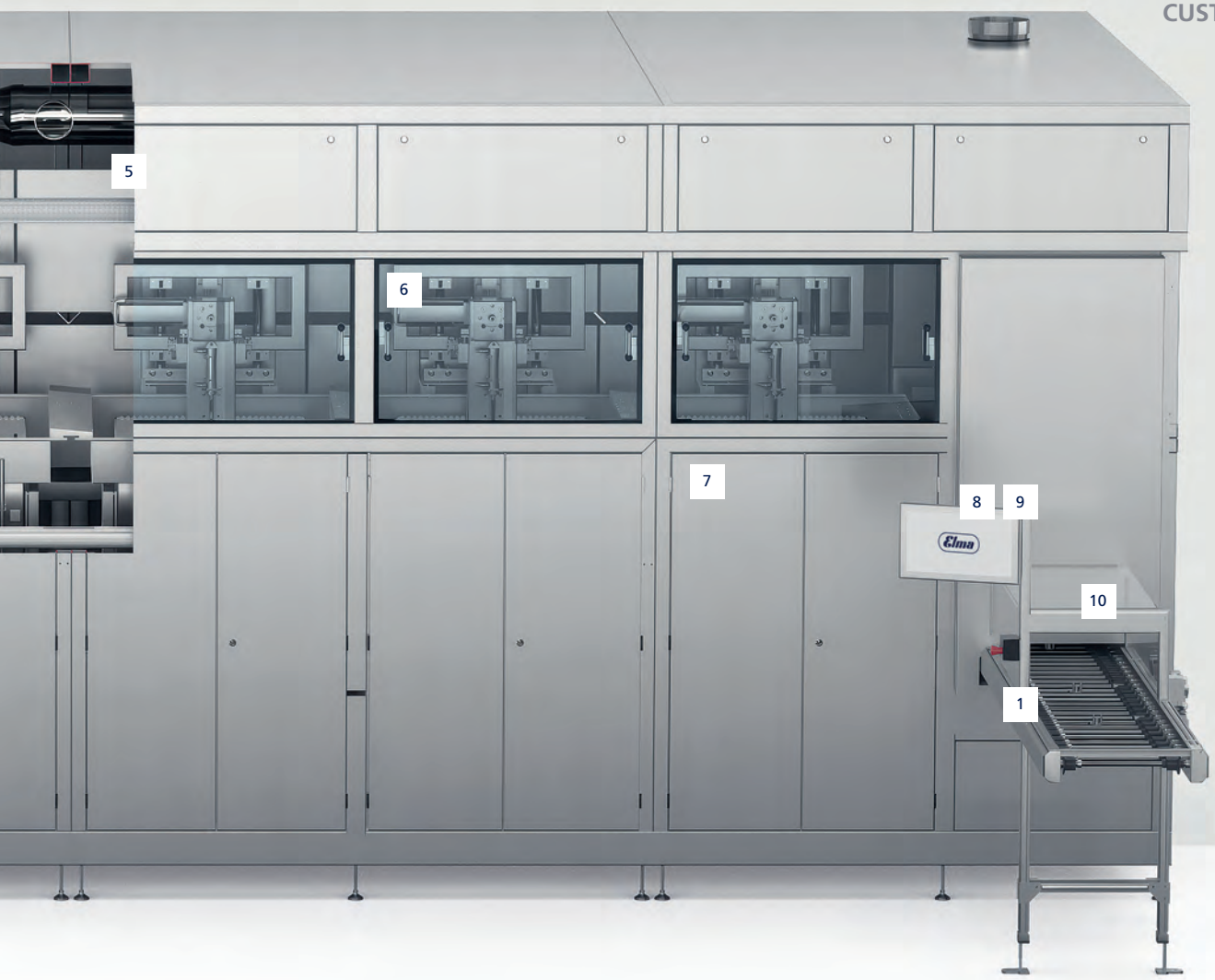
Technology at a glance

Elmasystem Neo

1. Feed and discharge through automated conveyor systems
2. Transfer option between grey room and cleanroom through lift doors / double airlocks
3. Automated basket transfer and movement
4. Fill level monitoring, automated bath maintenance and dosing options
5. Separation of cleaning and maintenance zones through encapsulation
6. Flexible and variable
7. Defined environmental conditions – for example, through system enclosures and laminar flow boxes
8. User-friendly system visualisation and process monitoring
9. Diagnostic management, user administration and audit trail
10. Traceability via barcode, DMC and RFID systems

VOLUME	FREQUENCY	MODE	SIZE	MEDIUM	TEMPERATURE	WEIGHT
from 5 to 3,000 litres – or custom sizes on request	25 / 45, 37 / 130 or custom frequencies on request	Degas, Sonic Sweep and Pulse modes available	Various usable basket dimensions available	Aqueous, semi-aqueous or solvent-based GK AI (ATEX)	Individually adjustable	From a few to several hundred kilograms
✓	✓	✓	✓	✓	✓	✓

CONNECTED AND CUSTOMISABLE



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Elmasystem Neo

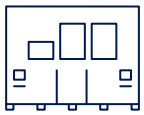
Maximum safety for solvent-based processes.

Certified. Efficient. Tailor-made.
Elmasystem Neo is the customised solution for ATEX-compliant cleaning and immersion systems using flammable solvents such as acetone, IPA or ethanol. With over 30 years of experience in building ATEX systems in a variety of configurations – from component cleaning units to dedicated rinsing and drying systems – Elma delivers proven expertise. These systems are also suitable for final cleaning of medical implants.

The closed solvent circuit enables simultaneous solvent distillation and incorporates efficient process steps such as cleaning (with or without ultrasound), rinsing, condensate rinsing and drying. Elmasystem Neo complies with current CE, ATEX and FM Global standards, ensuring reliable, compliant and safe system and process control via state-of-the-art monitoring and control technology.

At a glance.

Components



: **Exhaust system** with integrated monitoring.
: **Freeboard cooling** to reduce solvent loss.
: **Indirect heating/cooling** of the process chambers.
: **Gas warning system** (20% LEL or 40% LEL) for reliable monitoring.
: **Fire suppression system** for maximum operational safety.
: **Nitrogen purging** of ultrasonic systems to prevent ignition sources.
: **Intrinsically safe circuits** for compliant and secure system control.

System types and process steps.

Single-chamber compact systems	Inline systems	Modules	Immersion process systems
Application: for low throughput – with or without basket lift.	*Application:* with transport robot for higher throughput requirements.	*Application:* rinsing and drying unit for hybrid systems.	*Application:* with transport robot for higher throughput – e.g. for extraction and hydration.
Process: : Cleaning with ultrasound in heated solvent. : Condensate rinsing. : Evaporation.	*Process:* : Cleaning with ultrasound in heated solvent.* : Rinsing in cooled solvent. : Condensate rinsing. : Evaporation.	*Process:* : Cleaning with ultrasound in heated solvent. : Rinsing in cooled solvent. : Condensate rinsing. : Evaporation.	*Process:* : The number of process steps and chamber size are tailored to individual requirements.

** An additional cleaning chamber is available for pre-cleaning with a second solvent, with or without ultrasound.*

Elmasystem Neo

Highest cleanliness standards. Scalable flexibility. Efficient in continuous operation.

Elmasystem Neo is ideal for cleaning high-specification components in a wide range of sizes. The system combines all essential process steps into a compact ultrasonic cleaning cycle – precisely tailored to your production process. The modular system architecture allows for customised configurations – from standalone process stations to fully automated large-scale systems.

Elma's specialists carry out installation and commissioning on site to ensure seamless integration. Intelligent automation solutions guarantee maximum process reliability and long-term operational efficiency.

Highlights

Project-specific system design.

Integrated ultrasonic cleaning for efficient processes.

Functionality – scalable to suit your needs and budget.

Elmasystem Neo Service

Long-term reliability. Service at the highest level.

Comprehensive support.
Elmasystem Neo is more than just a system – it's a long-term investment in precise and sustainable cleaning solutions. From first contact to installation and beyond, we work with our customers to continually refine and improve their cleaning processes. Furthermore, by selecting optimal system components, we maximise process efficiency.

Sustainable process optimisation.
Intelligent control systems ensure optimal process parameters and efficient use of resources. Automated monitoring of temperature, conductivity and pH levels enables precise chemical dosing. Efficient water treatment, recirculation systems and modern energy-saving concepts contribute to more sustainable and cost-effective operation.

Maximum availability.
Before the system is put into operation, operators receive in-depth training from Elma's specialists. Regular service and maintenance of the system contribute to reliable system availability. Elma makes this easy with tailor-made spare parts packages as well as service and maintenance contracts. If a fault does occur, Elma's service team will support you every step of the way – whether on site or via remote access.

Any questions?
Our service team will be happy to help!

+49 7731 882-2288

Elma Smart Solutions

Intelligent processes for maximum added value.

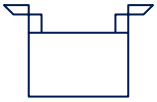
Elmasystem Neo automates the entire ultrasonic cleaning process – from pre-cleaning to drying – while intelligent control systems ensure maximum reproducibility and cleanliness throughout.

Visualisation software

- Intuitive and user-friendly interface.
- Connectivity with external systems.
- Data logger, audit trail, diagnostics.

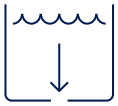
Environment and resources

- Intelligent rinsing water management.
- Energy-saving and noise reduction concepts.
- Water treatment and recirculation systems.



Movement and product handling

- Baskets and product carriers.
- Oscillation, rotation, lift-out.
- Integration into upstream/downstream processes, e.g. cleanrooms, packaging, assembly.
- Automated loading and unloading concepts using handling or robotic systems: single/multi-position transfer units, lift/push systems or robotic handling.



Process parameters and process monitoring

- Dosing, oil separation and filtration.
- Calibrated process sensor technology.
- Measurement of temperature, conductivity and pH value.
- Measurement of TOC, refractive index and particle count and size.

Elma process laboratory

Qualified experts with one goal – perfect cleaning results.

In our in-house process laboratory, qualified chemists develop highly effective products for various cleaning processes. These are produced at Elma and put to use in various industries. Our specialists will be happy to help you develop your cleaning procedures and answer any questions you may have about process parameters and the application of cleaning agents.

Made in Germany

Individual cleaning tests.

The cleaning agents developed in our own application laboratory and manufactured in our own production facilities can master even difficult cleaning tasks for various applications. In our in-house process laboratory, we work together with our customers to develop process solutions for individual cleaning tasks, resulting in a coordinated system concept that includes the cleaning process and the associated chemistry.

Focus on quality.

An unwavering commitment to the highest quality is the foundation of the company's philosophy. The consistent further development of our core competencies and a constant focus on improvement and complete customer satisfaction underline Elma's exceptionally high quality standards. Furthermore, Elma is certified by DQS in accordance with DIN EN ISO 13485:2016.

Simple.
Residue-free.

The really tough cases are our speciality. This is where the quality of our products really gets to shine.

Interested?

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