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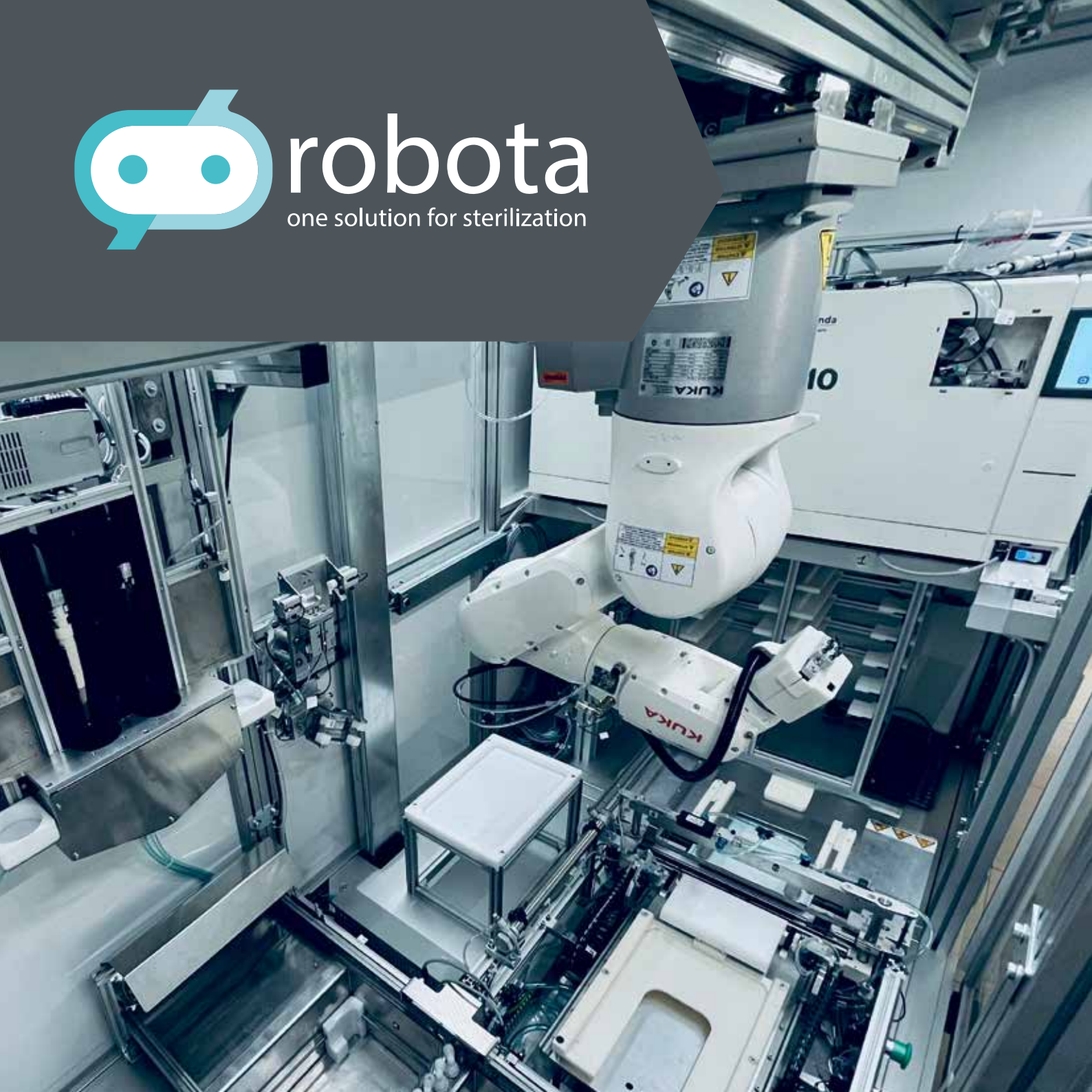
one solution for sterilization



The Critical Role of Sterilization in Dental Practices

Sterilization is a cornerstone of modern surgery, ensuring that medical devices are free from pathogens that could cause post operative infections. Despite advancements in sterilization techniques, healthcare facilities often face considerable challenges in maintaining high quality standards and safety.



Every year in Europe:

100.000 related **deaths**

80.000 operator hiv hbv hcv **infected**

7 B € Hospital acquired infection Costs

Water: 250M m^3 = **50M people**

CO_2 : 2,2Mt = **7,5M cars**

Energy 9 GVh **13M people**

Pain Points in the Sterilization Process

Time-Consuming Protocols: Proper sterilization is a time-intensive process. Rushing or cutting corners can jeopardize patient safety.

Biological risk: Non steril medical device can increase biological risk for the patients and users.

Human Error: The bustling environment of a health institution can lead to procedural oversights, which might compromise instrument sterility.

Environmental impact: The process involves extensive use of resources, including water, energy, and consumables.

Complexity of Instruments: Surgical instruments are intricate, with hard-to-clean components. Some designs trap biological matter or liquids, potentially harboring bacteria and spores that survive the sterilization process.

Traceability: Strict procedures and difficulties in compliance management can lead to poor process supervision.

Sterilization is seen as a tax: Rather than an added value to one's business.

Did You Know? Numerous studies show that improperly sterilized medical devices can lead to Surgical Site Infections, which affect 2-5% of patients undergoing surgery.

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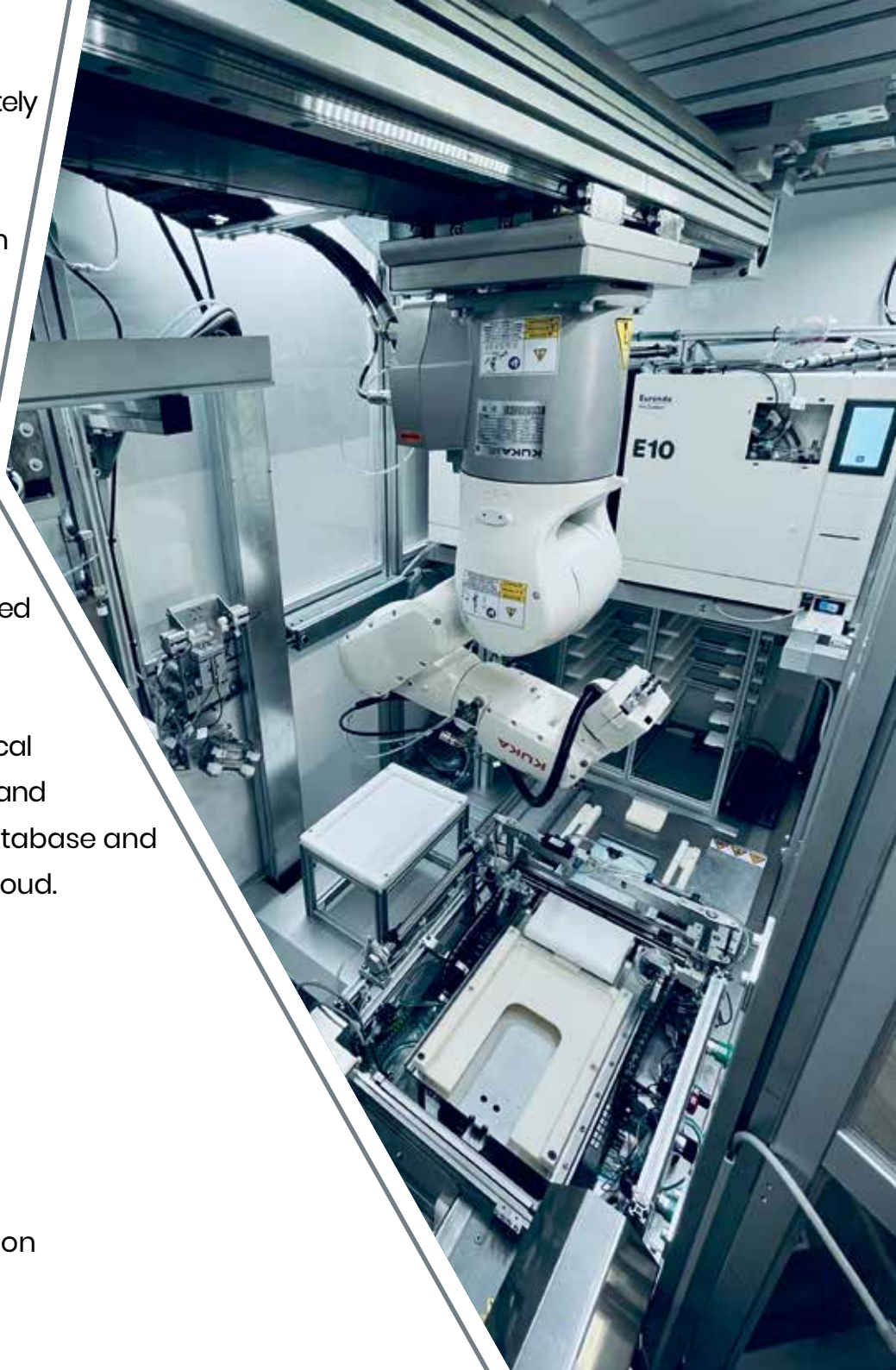
Our solution for dental practices

Tackling these challenges head-on with clever solutions and best practices is essential for healthcare facilities to ensure patient safety and high-quality surgical outcomes. For this reason, we have developed the world's first fully automated system for the handling of medical devices.

The system includes a completely automated, compact, and enclosed robotic cell, with ultrasonic tanks for disinfection and cleaning, RFID readers to track all phases of the processes, a robotic arm for handling instruments, a thermo sealer and autoclaves for sterilization. Assistants will only need to insert the tray with contaminated surgical instruments through an opening and retrieve it with packaged and sterilized surgical instruments. Data is collected and stored within the system's database and regularly backed up to the cloud.

- 100% regulatory compliant
- Zero errors
- No biological risks
- Energy saving
- Automation
- Traceability
- Safety
- Single use device elimination
- Powerful marketing tool





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• ***Streamline Sterilization Workflow:*** Optimize the workflow to manage time better without rushing.

• ***Standardization:*** To reduce variability and enhance quality control.

• ***Sustainability***: Reduction of energy and water consumption reduction of consumables usage and minimization of environmental impact.

• ***Quality Equipment***: Advanced sterilization equipment designed to handle complex instrument geometries.

• ***Regular Audits and Feedback:*** Conduct frequent audits of sterilization processes and seek staff feedback to identify potential issues and areas for improvement.

Why

Overcoming Sterilization Challenges in Dental Practices.

To address the challenges of surgical instrument sterilization, healthcare facilities are turning to the latest technological innovations and best practices.


KUKA


Euronda
Pro System
E10
Euronda
Pro System
E10

Capable of handling surgical and dental instruments, including ultrasonic straight and contra-angle handpieces

Technical features

- Dimensions (LxHxD): 240x230x110
- Weight: 480kg

Power Supply

- Three phase:

power supply line 9kw

Operational data

- Input trays: 8
- Max production. 6 trays/h
- Disinfectant consumption 0,04 lt/h
- Water consumption 3,8 lt/h
- Compressed air requested 4 bar
- Max tray payload 1 kg

Equipment

Standard:

- Sanification: UVC-UVB
- Ultrasonic tanks: 2x6lt
- Automatic sealer
- Autoclave: 2x6 trays
- Drying station: 2

Optionals:

- Ups
- Air compressor

* The data provided by the manufacturer may vary and could be subject to changes over time. It's advisable to verify the information provided to ensure it's timeliness and accuracy.

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Installation

The following elements are required for the installation:

- Connection to the power supply (three-phase or single-phase);
- Connection to the water network;
- Drainage for water;
- Connection to compressed air (if the optional compressor is not present);
- Internet Connection (Wi-Fi Lan).



Training

Training will take place after the installation and will be conducted on-site by our team.
No specific skills are required due to the ease of use.
For professional use only.

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Trays, Consumables and Licenses

To ensure efficiency and safety, the use of specific consumable materials is crucial, and these must be purchased directly from our company. Among these:

- Trays and sub-trays;
- Handle adapters;
- Disinfectant liquids;
- Sterilizable packaging materials;
- Test for the validation process.

Maintenance

Yearly maintenance fee is designed to cover the regular maintenance of the machine. It is important to note that this fee excludes autoclaves, the only component subject to more frequent issues. This annual contribution ensures that the machine undergoes constant monitoring and regular maintenance interventions, preserving its performance and extending its operational life.



Company profile

Robota was founded in 2018 to meet the needs of the dental and hospitals sector.
The team, comprised of robotics experts and doctors, consistently works to develop innovative and secure solutions.

Our Vision

The future will see a personal robot in every dental practices and hospitals.
The focus of our project is on humans; the robots will relieve us from repetitive, boring, and strenuous tasks every day with zero errors and complete control.

Our Mission

Robota automates all sterilization processes, ensuring the highest standards and workflow control. The entire medical sector will be revolutionized.

The need to innovate an outdated process that presents biological risks, very long cycle times, and potential human errors has driven us to use Robots and AGVs (Automated Guided Vehicles), maximizing their potential.

We solve all issues related to the human error.

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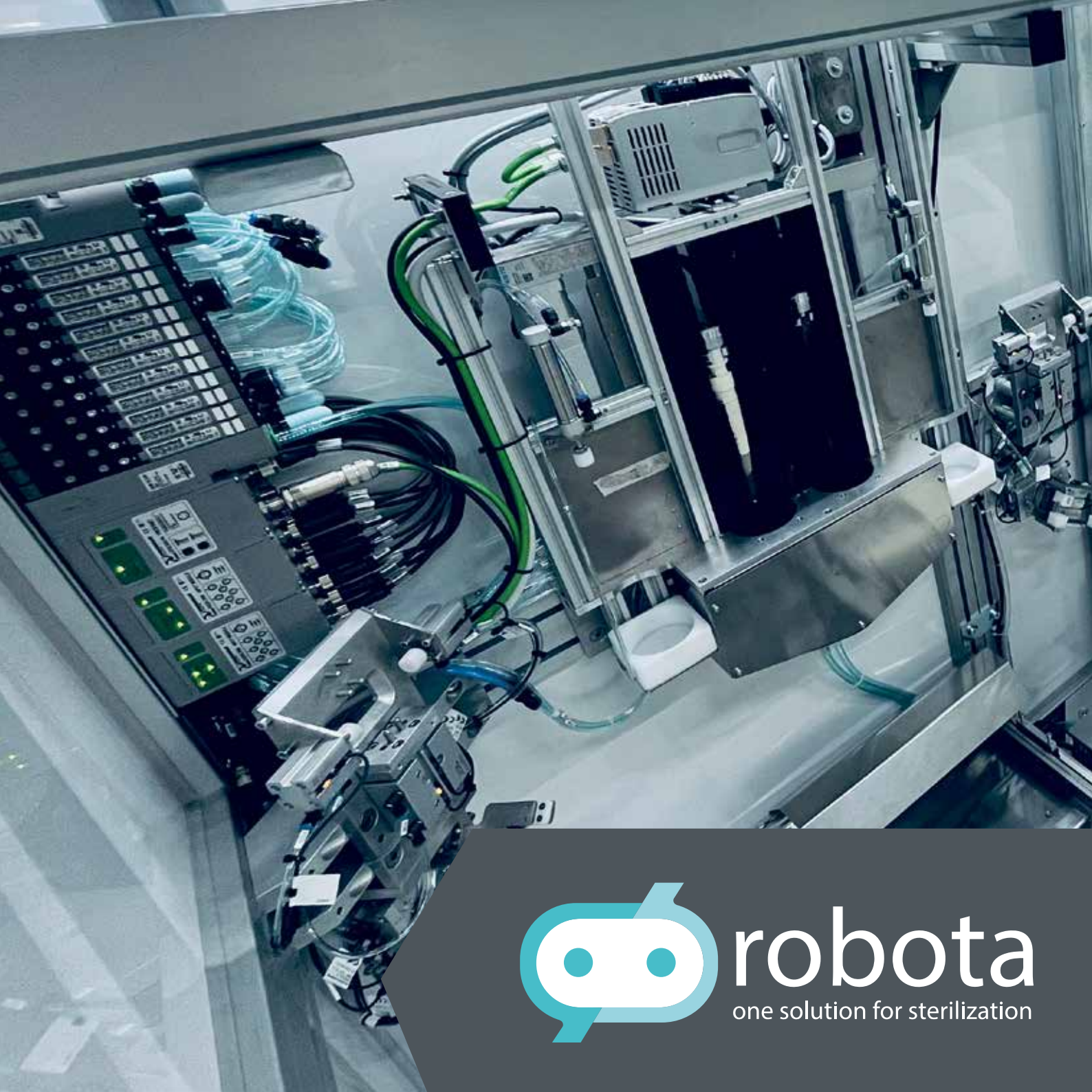

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