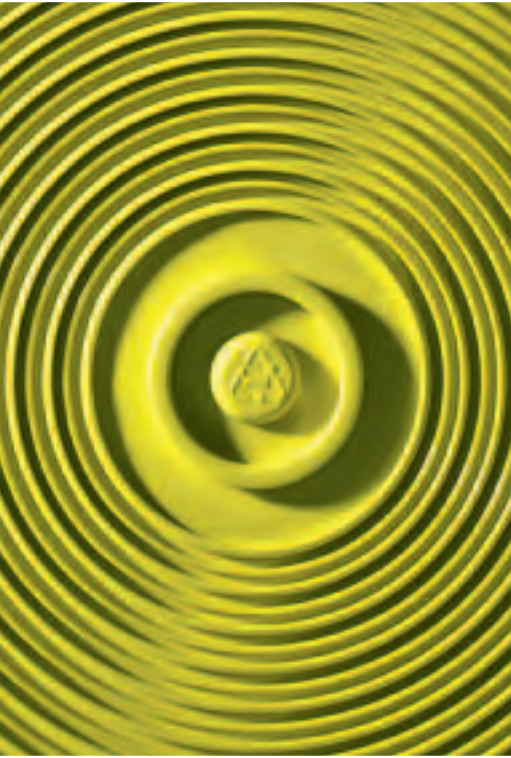


Sterile Containers



MicroStop[®]

THE NEW FORM OF SAFETY

KLS martin
GROUP

MicroStop® Sterile Containers

It is hard to imagine a working environment where cleanness and sterility are more important than in the OR. Safety takes absolute priority – on the one hand. On the other hand, there is the cost factor. Hospitals are nowadays under enormous pressure to cut costs. The good news is that the KLS Martin Group satisfies both demands – thanks to our sterile containers with MicroStop® technology! MicroStop® is not only safe but cost-effective as well. In fact, it is the most innovative technology currently available on the market.

Tested and found to be excellent. Certified safety.

The *MicroStop®* sterile container system has been subjected to the most rigorous safety tests – and has passed them all with ease. Not surprising, the system has obtained all major certifications and approvals. In addition, two special test certificates impressively underpin its functional safety and reliability. The result: *MicroStop®* guarantees germ retention at a rate of at least 99.99999%. And what's more, the system works without any follow-up costs at all. Neither filter media nor metal seals are required!

Additional advantages of our *MicroStop®* sterile container system include easy handling and straightforward logistical features.

The system is manufactured from the best materials and features a whole range of well-thought-out, user-friendly design details. A comprehensive range of accessories rounds off a remarkable container system.

In short, the KLS Martin Group's *MicroStop®* sterile container system offers everything hospitals need.



Tested by the well-known Fraunhofer Institute for Interfacial Engineering and Biotechnology as well as by Prof. Dr. Junghannß, University of Anhalt, Köthen (Germany).



Complies with all national and international standards relating to sterile supply packages (DIN EN 868, Part 1 – edition 1997-05, Part 8 – edition 1998-08, ISO 11607, Parts 1 and 2 – edition 2004-07; CE-marking acc. to EU Directive 93/42/EEC relating to medical devices).

Approved for steam sterilization procedures complying with EN 285 and validated in accordance with EN 554.

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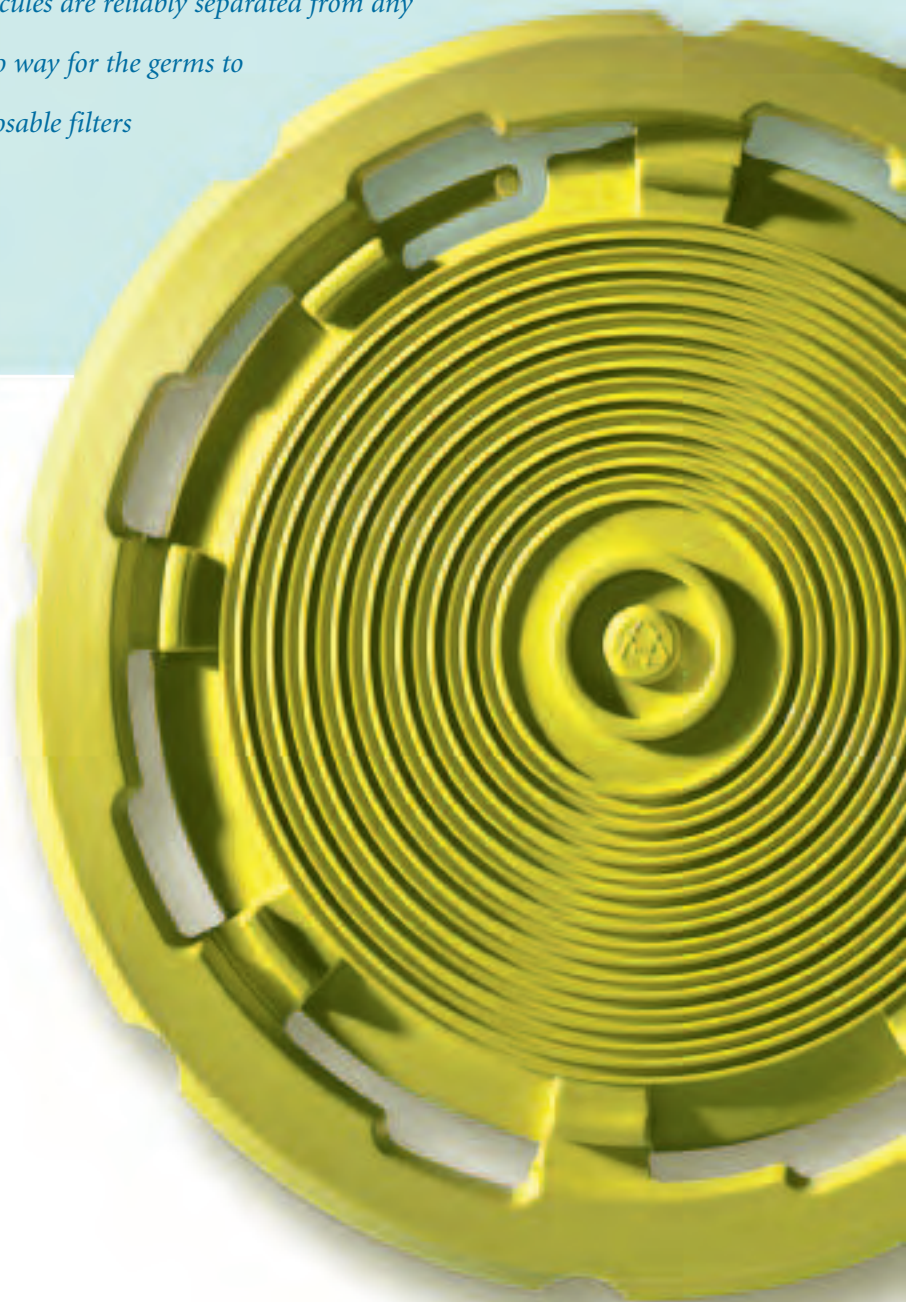
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MicroStop® – No Chance for Germs

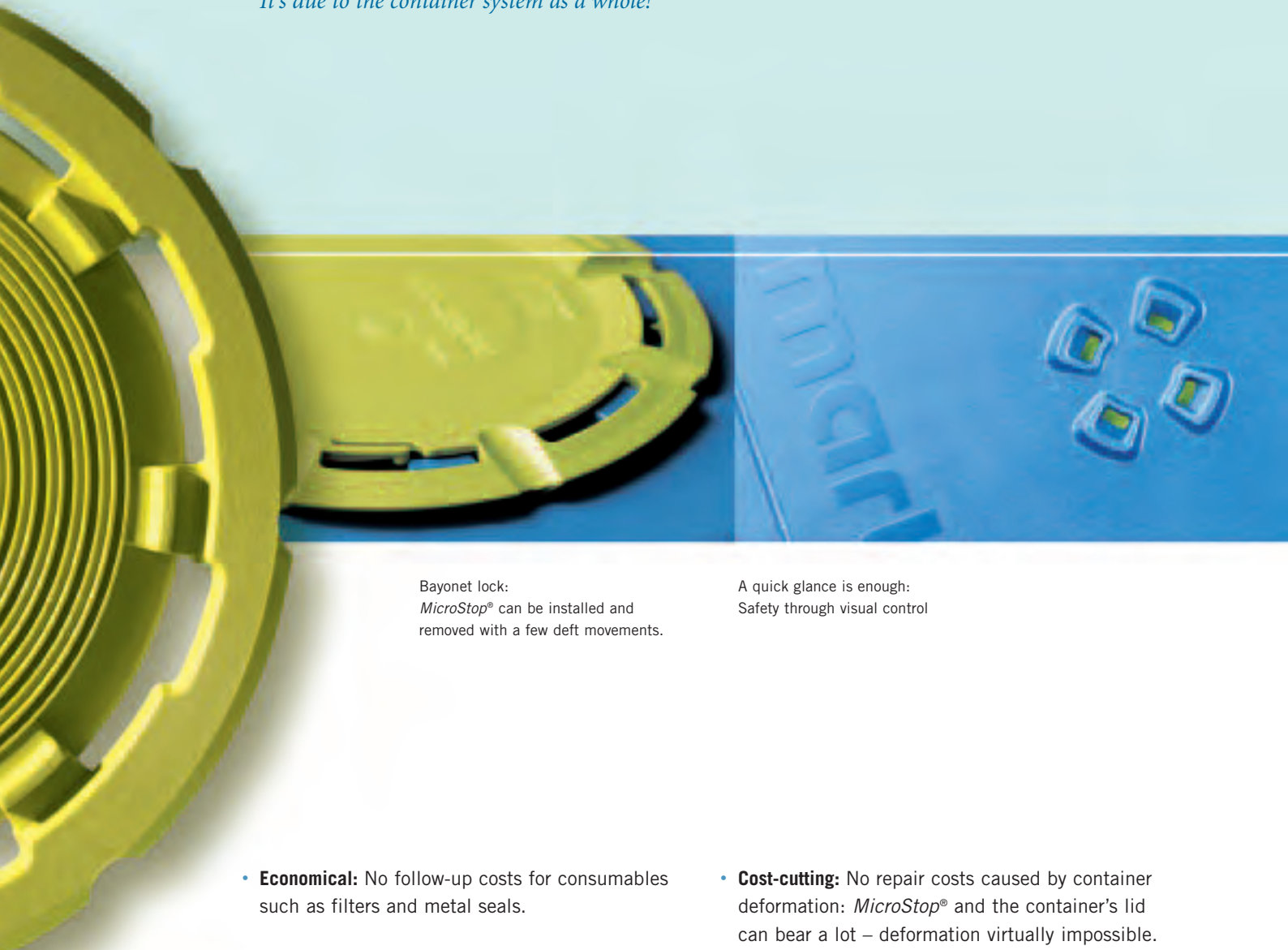
The new form of safety. The MicroStop® antimicrobial barrier consists of the yellow MicroStop® disk and the subsystem integrated into the inner surface of the lid. The working principle is simple: Due to the system's special geometry, the air molecules are reliably separated from any microorganisms contained in the flow. There is no way for the germs to overcome the barriers. As a result, the use of disposable filters is definitely a thing of the past.

The advantages.

- **Approved:** For steam sterilization techniques complying with EN 285 specifications and validated acc. to EN 554.
- **Efficient:** With a proven germ retention rate of at least 99.99999%, *MicroStop®* is more effective than conventional disposable filters.
- **Controllable:** The *MicroStop®* system can be easily opened and inspected. Besides, you can check at a mere glance whether *MicroStop®* has been installed or not.
- **Hygienic:** With a single movement, the *MicroStop®* system can be opened for easy cleaning.
- **Safe:** In contrast to soft packages and disposable (single-use) filters, hazards such as perforation of the package by "sharps" are fully prevented thanks to the containers' non-deformability. With *MicroStop®*, your staff is on the safe side!



The new form of cost-effectiveness. MicroStop® is just perfect – not least in terms of economy. Because it's an effective as well as cost-efficient alternative to using disposable filters. Cycle by cycle, you are saving real money – and time – and effort! This is not only due to the MicroStop® technology. It's due to the container system as a whole!



Bayonet lock:
MicroStop® can be installed and removed with a few deft movements.

A quick glance is enough:
Safety through visual control

- **Economical:** No follow-up costs for consumables such as filters and metal seals.
- **Time-saving:** No need to deal with filters and seals. This spares you the laborious tasks of ordering them, sorting them in and attaching them to the containers.
- **Space-saving:** *MicroStop®* helps you to save space in your storeroom.
- **Cost-cutting:** No repair costs caused by container deformation: *MicroStop®* and the container's lid can bear a lot – deformation virtually impossible.
- **Ecological:** Fewer disposables, less waste, lower disposal costs.

Everything Under Control – In Every Application

With the MicroStop® sterile containers, you have everything under control wherever you use them.

In fact, the microbiological barrier is just one outstanding feature. Virtually all container details are the result of a practically-minded design concept – for fast, safe and ergonomic use in the OR as well as during processing and sterilization.



Specially shaped edge plus silicone lip seal – tightness guaranteed

Absolutely tight. The lock.

- **Non-permeable:** In conjunction with the silicone lip seal, the distinctly outward-drawn edge of the container box guarantees utmost stability and safety. You simply place the lid on the box and press it in place.
- **Non-destructible:** The hingeless, hard-wearing push-button lock guarantees a perfect permanent fit in addition to easy handling.
- **Non-deformable:** The sturdy lid withstands any bump or mechanical impact.

Impossible to overlook. The sterility status indicator.

- **Clear:** Just as on the road – green means “go” and red means “stop”. Due to the heat impact, the indicator roll turns from red to green during the sterilization process.
- **Unambiguous:** Inadvertent, unnoticed opening is impossible because the indicator roll turns back to red as soon as the opening button has been operated. And unlike metal seals, opening the container in the OR poses no injury hazards!



Pushbutton opener – durable



Sterility indicator roll – “go” or “stop”



Retaining clip – for your log labels

Simply logical. The logistics.

- **Well-thought-out:** Logistics framelets in different colors, along with detailed coding labels, provide immediate information on the container’s contents and destination.
- **Practical:** The holding clip allows easy attachment and removal of differently-sized log labels.

Well protected. The disposal container.

- **Suitable:** For dry or wet disposal of contaminated instruments, including their transportation and storage until processed.
- **Unmistakable:** Unlike the sterile container, the lid of the disposal container is gray and the box made of stainless steel.

Clear & Unambiguous



Gripping panel provided in lid.

The (molded) stacking facilities and the orientation arrow.

The carrying handles prevent burns.

Additional details.

- **Ergonomical:** The carrying handles have a stop at 90 degrees, thus providing optimum transportation convenience without any danger of burns caused by the hot container.
- **Handy:** The gripping panel provided in the lid ensures contamination-proof lid removal in the OR.
- **Optimal:** The stacking facilities provided on the upper side of the lid allow space-saving storage.
- **Informative:** The outer orientation arrow indicates how the inner packaging (if used) has been aligned for practical unfolding of the sterile drape.
- **Standardized:** The box can accommodate any standard sterilization tray.

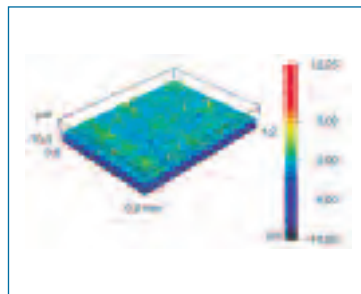
The Material

The MicroStop® sterile containers are safe, economical and practical.

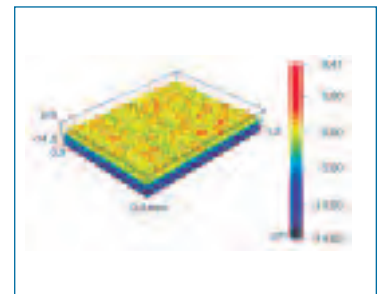
One reason is the material from which they are made.

The advantages.

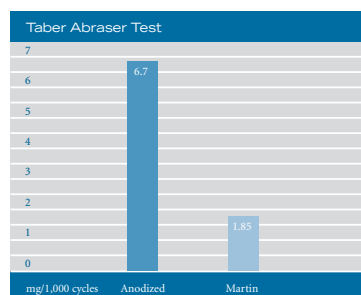
- **Dimensionally stable:** Both the *MicroStop*® system and the lid are made of heat-resistant, steam-sterilizable high-performance plastic – scratch-proof, highly impact-resistant, excellent chemical resistance, thermostable. Permanent deformation impossible!
- **Corrosion-proof:** The container box is made of a high-grade aluminum alloy with an ultra-hard, anodized surface – more resistant than conventional anodic oxide layers.
- **Smooth:** The inner wall surfaces have no protruding screws or rivets. The optimized microstructure of all container surfaces has outstanding tribological characteristics.
- **Low-weight:** Aluminum containers are lightweights.
- **Superior:** The physical properties of aluminum include high heat storage capacity and high heat conductivity. This ensures excellent drying results.



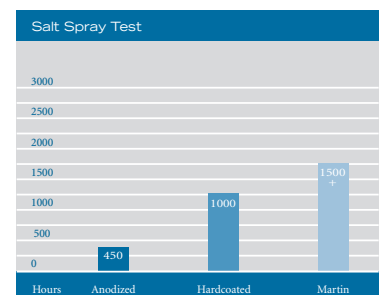
KLS Martin sterile container. The surface analysis shows that the *MicroStop*® container is significantly smoother.



Conventional anodization.



In the Taber Abraser test, the *MicroStop*® container has a significantly greater resistance to wear.



In the Salt Spray test, the *MicroStop*® container has a significantly higher resistance to corrosion.



MicroStop® disposal containers

Disposal containers

Length x width	Height	Order number
300 x 300 mm	160 mm	55-865 - 15
600 x 300 mm	160 mm	55-868 - 15



What's More: Container Trolleys and Tables

Whenever you are using MicroStop® sterile containers, the KLS Martin Group also puts the appropriate supplies table right at your fingertips. And not only tables, but compartment and container trolleys for transport and storage as well!



1 | Mobile container cabinet

Mobile container trolley

- For contamination-free transportation and space-saving storage of your sterile containers.
- Each container can be separately stored and removed (if preferred).
- Double-wing door, each wing with a 270-degree range.
- Nine pairs of storage rails for accommodating nine STUs*.
- With protective corner caps.
- Each compartment with a clear width of 302 mm; rails height-adjustable in 55-mm increments.
- Rugged, all-around guard strip at bottom of trolley.
- 4 castors, two of them lockable.
- Material: 18/10 chromium-nickel steel.



2 | 3 Sterile-supplies tables

Sterile-supplies tables

- Optionally, with a small or large tabletop – small plate: 665 x 425 mm (left), large plate: 665 x 665 mm (right).
- With rails for temporary storage of the container lid.
- With protective corner caps.
- 4 castors, two of them lockable.
- Material: 18/10 chromium-nickel steel.

Sterile-supplies transport and storage trolley

- With shelves, two of them height-adjustable in 55-mm increments.
- With protective corner caps.
- 4 castors, two of them lockable.
- Material: 18/10 chromium-nickel steel.



4 | Sterile-supplies transport and storage trolley



5 | Transport and storage compartment trolley

Transport and storage compartment trolley

- For space-saving stacking of your sterile containers.
- Each container can be separately stored and removed (if preferred).
- Three separate (vertical) compartments for altogether 9 STUs*.
- With slots for easy storage-rail insertion; rails adjustable in height (55-mm increments).
- 9 pairs of storage rails included.
- With protective corner caps.
- 4 castors, two of them lockable.
- Material: 18/10 chromium-nickel steel.

Container trolleys and tables

1 Mobile container cabinet	W x D x H (mm)	Order no.
External dimensions	1219 x 729 x 1405	55-998-05
Internal dimensions	994 x 640 x 1075	55-998-05
2 3. Sterile-supplies table	W x D x H (mm)	Order no.
	700 x 460 x 900	55-998-01
	700 x 700 x 900	55-998-02
4 Sterile-supplies transport and storage trolley	W x D x H (mm)	Order no.
	1075 x 675 x 1350	55-998-03
5 Transport and storage compartment trolley	W x D x H (mm)	Order no.
	1090 x 675 x 1350	55-998-04

* STU = sterilization unit

MicroStop® with mario® Instrument Organization

Our MicroStop® sterile containers guarantee absolute safety. In addition, the KLS Martin Group offers you mario®, a service package for perfect instrument management. By the way, mario® stands for KLS Martin Instrument Organization. This full-fledged instrument management system ensures reliable instrument tracking down to the last detail – in other words, even more safety, more transparency, and more cost efficiency. For you, for your routine processes, for your hospital!

What can you expect from mario®?

mario® is a service package that offers you a whole range of targeted modules that support you optimally in your work:

- **mario® Analysis:** This module allows you to inventory and manage your entire instrument stock. How many instruments do you have? What's the current working condition of each individual instrument? What's the current value of your instrument stock? Which instruments are actually being used – and which not? Running your mario® analysis gives you the answers to all these questions.
- **mario® Setop:** Following data acquisition and analysis, you get valuable recommendations – how to optimize your sets, based on what your sterilization trays currently contain and what they actually should!
- **mario® RepServ:** All instruments that work fine are OK. The rest is our job. We repair them. At special, particularly favorable terms – for you!
- **mario® Data Matrix:** With this instrument coding method (standardized acc. to ISO/IEC 16022), each of your instruments gets a unique ID mark (UIM) – a sort of “identity card” that renders it unmistakable, everywhere in the world, ensuring reliable (“no-gap”) instrument tracking down to the last detail.



mario® Analysis and Set Optimization

mario® Data Matrix and HIBC data structure

mario® RepServ (repair and substitution)

- **mario®:** This is your easy-to-handle software solution for a reliable, comprehensive, integral instrument management that puts everything into context. For details, see next page.
- **mario® Financing:** This module offers you attractive financing options for individual instruments, trays, sets and entire *MicroStop*® sterile containers.
- **mario® Lab:** This service module offers you, upon request, comprehensive material analyses, damage assessments, etc.
- **mario® Training:** We offer special training courses for your staff to make them fit regarding container handling and use, instrument know-how and instrument processing.
- **mario® Consulting:** Based on your specific requirements, we help you in planning new purchases: instruments, implants, *MicroStop*® sterile container systems and other equipment.

MicroStop® and RFID*

Now, let's get to the heart of the matter – your perfect instrument management. It is as simple as this: Get your mario® software plus your MicroStop® container systems. The latter allow you to incorporate so-called transponders, tiny silicon memory chips complete with an ultra-thin antenna. The only device you need in addition is a scanner for reading these transponders and storing information on them.

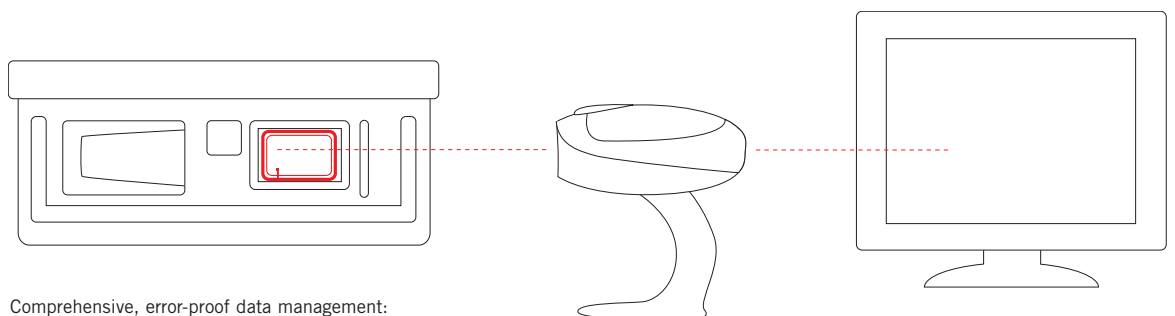
* Radio-frequency identification technology

And this is how it works:

Sterile containers or instrument sets are marked with a transponder (RFID tag). A scanner allows you to read out the data stored on the transponder and to process it with your mario® software. In this way, you know exactly the current status of each of your instrument sets – whether it is being used in the OR, processed in the CSSD, kept in stock or out for repair. As long as you store all this information in the scanner only, you even don't need an IT environment.

What's more: You can also write with your scanner, storing the results of the various steps of the sterile processing cycle on the transponder for future processing.

And as you would expect, the transponder technology can be easily used in conjunction with a bar code system.



Comprehensive, error-proof data management: the transponder (memory chip) attached to the container, the network, and the scanner that establishes the connection between the two.



User-friendly – with mario®, everything is safe and a lot easier.

Perfect identification – each container has its own, scanner-readable and scanner-writable RFID chip.

Everything complete? OK, let's go! The contents of the container are stored on the transponder and can be easily checked and read in by scanner.

The advantages for you:

- **Perfect quality management:** You get maximum safety in terms of hygiene and instrument sterility. All processes are documented and reproducible. Current standards and recommendations are automatically taken into account.
- **Cost transparency:** You profit from clear cost allocation. Any costs incurred – for sterile processing and supply, purchases, repairs, etc. — are posted to cost centers.
- **Legal security:** This important benefit results from documented and validated processes. Detailed documentation includes registration of all relevant information such as date, time, place, person(s) in charge, containers, sets, instruments and, of course, the patient-specific use of any product.
- **Process simplification:** Standardized and simplified tray/set management. Benefits include error minimization, comprehensively documented packing lists, separate and transparent repair and purchase order management, etc.
- **User-friendliness:** mario® comes with a user interface specially designed to meet CSSD requirements: easy to learn, easy to handle, easy to service, and easy to adjust to the country-specific environment.