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TRISON 4000.2

Ultrasonic bath for robotic, MIS and standard instruments

A new standard for the pre-cleaning

Robot-assisted surgery? That’s no longer a vision of the future!

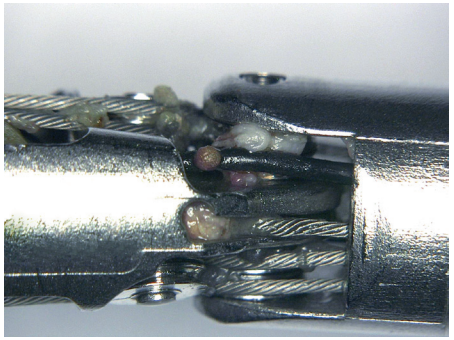
The robotic systems now used in many clinics for supporting surgical treatments offer surgeons numerous advantages. First of all, they ensure a gentle and highly precise, minimally invasive procedure that can be carried out while preserving the nerves and organs.

For patients, procedures are more tolerable and put less strain on the body, and the recovery time is shortened. The highly complex technology has long become a standard in modern surgery and will come to be even more relevant for other medical disciplines in the future.

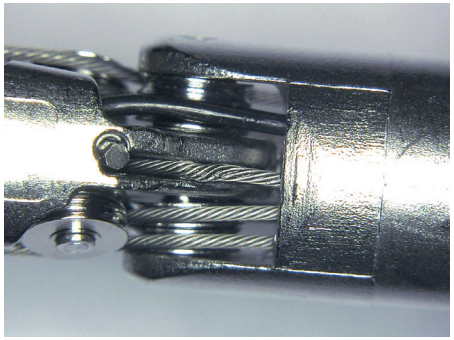
Complex instruments = complex reprocessing?

Due to their complex structure, robotic instruments have many critical points that need to be reprocessed. The instruments, which cannot be disassembled, consist of a housing with a long, thin shaft, various filigree Bowden cables and complex tips.
Due to their design and surgical use, robotic instruments need to be reprocessed via many individual process steps in order to be used on the next patient. Here, particular attention is paid to effective pre-cleaning before the actual disinfection and sterilisation processes. Purely manual pre-cleaning, which not only ties up a lot of staff due to the repeated manual rinsing, moving and cleaning but is also prone to errors, is not acceptable for users as a reprocessing step.

The alternative: an ultrasonic bath, specially developed for pre-cleaning robotic instruments – the TRISON 4000.2.



Before reprocessing.



After reprocessing with ultrasound.

TRISON 4000.2: the standard for pre-cleaning robotic instruments

It is an innovative, modular ultrasonic bath, adapted to robotic instruments, which makes it possible to perform the 3 basic functions of cleaning, rinsing and moving in one process. This sequence ensures the best, and reproducible, cleaning results, saves time during pre-cleaning, optimises the overall reprocessing procedure, and also provides valid process documentation. Intuitive operation via the large touch display also ensures safe handling.

Movement

Improves cleaning performance

The patented moving device is designed to hold 4 instruments at the same time and allows each individual instrument to move throughout the entire process. Incrustations can thereby be loosened, and all accessible points of the instruments are reached by ultrasound.

Ultrasound

Achieves the best possible cleaning results

The ultrasonic oscillating tank, whose dimensions are designed for large, robotic instruments, enables time-saving and intensive, but also gentle, instrument cleaning and is particularly effective in hard-to-reach places.

Rinsing

Ensures effective interior cleaning

The instruments are rinsed several times during the process in several sequential procedures. Contamination is removed from the instrument, and, using single-channel control, the rinsing control checks to see whether the instruments are rinsable.

For more information and videos:
youtube.com/@BANDELIN/videos

Easy to use – safe processes

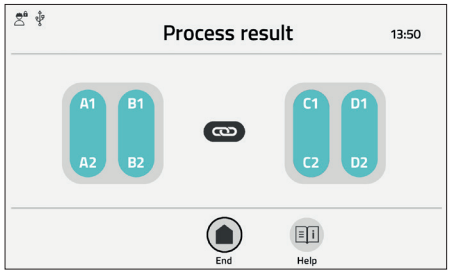
Everything at a glance

The programs can be selected in one click directly on the home screen. Other useful functions, such as rapid degassing, device care and settings, can be easily selected thanks to large buttons with supporting icons.

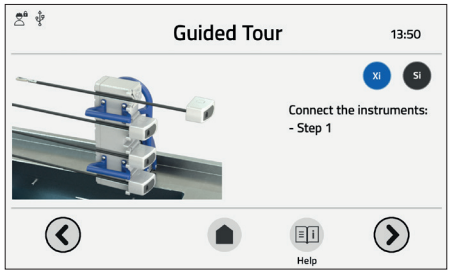
Operation via **7-inch touch display**

User-optimised menu navigation:

- Program quick start or supporting program management
- Visual representation of individual steps
- Help pages with explanations
- Individual settings (language, process times, warning temperatures, etc.)
- Program favourites
- Initial configuration when putting into service
- Access for servicing



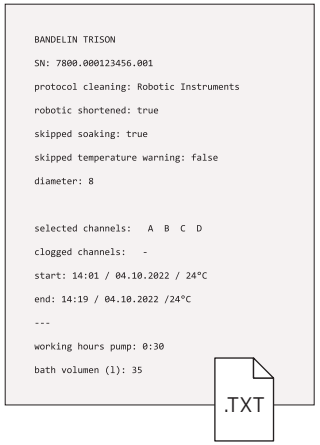
Process screen with successful rinsing.



Visual representation of individual steps.

Process documentation

The TRISON 4000.2 has an interface concept for digital process documentation. A protocol with all relevant cleaning parameters is created for each individual cleaning process. The protocols can be transmitted via the USB interface. Alternatively, the TRISON can be integrated into CSSD management software via the integrated network interface.

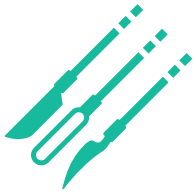


1 device – 3 uses

The TRISON has been specially developed for robotic instruments. However, MIS and standard instruments can also be cleaned effectively with appropriate accessories. In order to meet the cleaning requirements in question in the best possible way, there is a cleaning program available for each type of instrument.

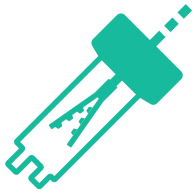
Robotics

For simultaneous cleaning of up to 4 robotic instruments using the Twist moving device and corresponding hose connections for rinsing.



MIS

Ultrasonic cleaning and sequential individual rinsing of up to 8 MIS instruments in the specially developed TRISON Rack. The MIS program also includes rinsing channel monitoring.



Standard

For cleaning instruments in DIN and ISO baskets before further machine reprocessing. A basket holder is required.

Other advantages:

Temperature monitoring with warning function
Ensures that the set limit values are complied with.

User languages
Easy to select different language outputs.

Flexible mounting
Available as a left-sided or right-sided version – for integration into a row or as a single solution in a rollable cabinet.

Process safety due to self-monitoring
Control of all functions to avoid incorrect operation.

Overall process optimisation
Increases the quality and reproducibility of the entire treatment chain.

Integrated or mobile?

Fits into every pre-cleaning area

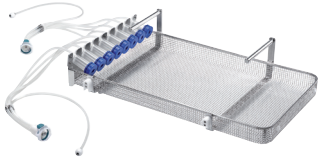
The TRISON 4000.2 is available in two versions: as a built-in device or as a mobile device in a rollable cabinet, the SONOBOARD TRISON.

For optimal workflows, the best possible variant is to integrate the TRISON into a stainless steel row of units. Depending on the orientation of the pre-cleaning area, the ultrasonic bath can be installed on the left or right side. However, the space conditions in CSSDs are often limited, or it is not possible to convert the stainless steel row at the particular time in question. In such cases, the SONOBOARD variant of the TRISON can be procured. The SONOBOARD is a ready-to-use set, i.e., all components are preassembled in a rollable stainless steel cabinet. When putting the device into service, only the necessary media (electricity, waster water system and, if necessary, the dosing system) need to be connected and the device is ready for use immediately. No complex installation and no conversion, but a high degree of flexibility on site.

The TRISON integrated into a stainless steel row of units.

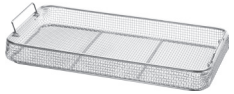
The SONOBOARD variant of the TRISON.

Accessories



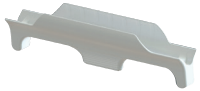
TR 3001 TRISON Rack
Basket with connectors for up to 8 rinsable MIS instruments. Right- and left-sided versions available.

TR 4000 TRISON Rack
For Hugo™ RAS System or Versius® Surgical Robotic System robotic instruments.



K 29 EM Insert basket
For holding the objects to be cleaned (e.g., standard instruments).

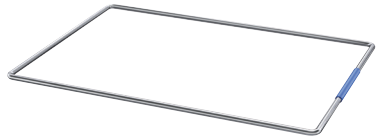
KT 3000 Z basket holder
For holding the insert basket.



TX 4000 Xi spacer
Spacers of the TRISON Twist Xi for stapler instructions.

D 4000 A lid
Can be used universally for all TRISON variants. Right- and left-sided versions available.

FT 42 foil test frame
The foil test is a simple method for displaying the intensity and distribution of ultrasonic cavitation in an ultrasonic bath.



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