

The Laparoscopic ERAGONmodular Instrument Series: A Sterile Processing Perspective

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Introduction

Let's face it. As sterile processing technicians, whenever we're assigned to decontamination, we know that our shift is going to be filled with lots of hurdles. This includes trying to keep up with the workflow by pushing instruments into the automated washers, to keeping track of every tray that is to be reprocessed by scanning barcodes – all while gowned up in personal protective equipment (PPE). After a demanding day, the last obstacle we would want to encounter is needing to figure out how to reprocess a cumbersome instrument.

Medical device companies try their best to ensure that IFUs are clear and that sterile processing departments are provided with educational tools. Sometimes however, their devices are just that hard to clean. Take any single-piece laparoscopic instrument for instance. As you flush the channel for the umpteenth time, and as bioburden and debris are still being pushed out, your frustration grows and you wonder where so much debris is coming from. So, you fill the syringe again to flush the channel and cannot help but wish that the instrument could have just been disassembled for cleaning.

The ERAGONmodular instrument series from Richard Wolf, consisting of the ERAGONmodular and the ERAGONmodular mini, was designed with the sterile processing technician in mind. The instruments' features and benefits, which will be expanded on in the below sections, allow for easy decontamination, assembly, and sterilization. This ensures the instrument is free from bioburden and is safe for patient use.

Design Philosophy

One of the design philosophies behind the ERAGONmodular series is ease of use for all parties handling the instruments – surgeons, OR staff, and of course, sterile processing technicians. The instruments are designed to easily disassemble into three main components: the handle, the sheath, and the insert (Fig. 1)



Figure 1

Many modular instruments on the market are difficult to disassemble and, as sterile processing technicians, we have often found ourselves struggling while trying to keep up with the workflow in decontamination. Here is where the ERAGONmodular series excels yet again. The disassembly mechanism features “Click-it” lock technology that promotes straightforward and intuitive disassembly (and assembly) of the instruments. With just the press of a button, the handle and sheath separate from one another (Fig. 2) and a simple twist, uncouples the insert from the sheath (Fig. 3) – it’s as quick and easy as that!



Figure 2

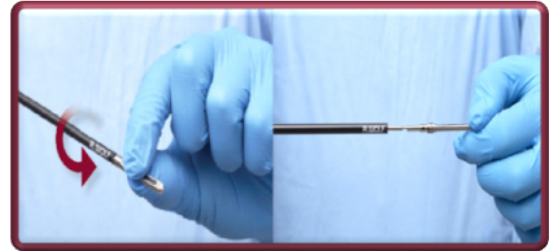


Figure 3

Benefits

The benefit of a modular instrument that is simple to disassemble and assemble is that reprocessing turnaround times are made faster and easier than ever. We are able to quickly perform the necessary cleaning processes (per IFU instructions) and send the instruments through the washer. Our team in the prep and pack area also enjoy this feature during inspection and assembly by being able to easily inspect each component for bioburden.

Another benefit that the ERAGONmodular series has over other laparoscopic instruments on the market is the quality of the sheath insulation. Sheaths are insulated with a high-quality material called Halar® (Fig. 4).



Figure 4

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Halar® insulation is less likely to sustain damage as compared to shrink tubing insulation. The durability of the material makes it capable of withstanding many reprocessing and sterilization cycles. This ensures its quality, as opposed to other instruments on the market whose insulation easily breaks down after multiple uses.

As we know, insulation testing is a crucial step in the inspection process since it enables us to detect any damages to the insulation of a laparoscopic device. Performing insulation testing ensures that damaged devices, which could potentially cause patient tissue burns if used, are removed from circulation. The Halar® coating on the ERAGONmodular sheaths provides a reliable bond with the metal sheath, as well as enhanced protection when using monopolar HF current.

In addition to the above-mentioned benefits, the ERAGONmodular series offers a versatile catalog of jaw patterns, sheath diameters, working lengths, and handles that can be used for a wide range of applications across multiple surgical disciplines (Fig.5).

This enables surgeons to build their ideal laparoscopic toolboxes and for sterile processing departments to standardize their laparoscopic trays. Standardization of trays further helps increase efficiency as it streamlines reprocessing efforts and minimizes the burden on technicians by having to follow only one IFU.

Richard Wolf performed extensive lab testing in accordance with AAMI standards and FDA regulations to ensure that sterilizing the instruments assembled or disassembled is substantiated. The ability to sterilize the instruments assembled or disassembled is extremely beneficial to our overall workflow as we're able to quickly turn around instruments, thereby increasing productivity, and clearing that cart!

With the ERAGONmodular series of laparoscopic hand instruments, Richard Wolf aims to provide not only a tool for a surgeon to use, but a solution that supports something that is priceless in a hospital setting – time and productivity. In a setting where timeliness, readiness, and dependability are key factors, it is clear to see how the ERAGONmodular series can positively influence success for all parties.

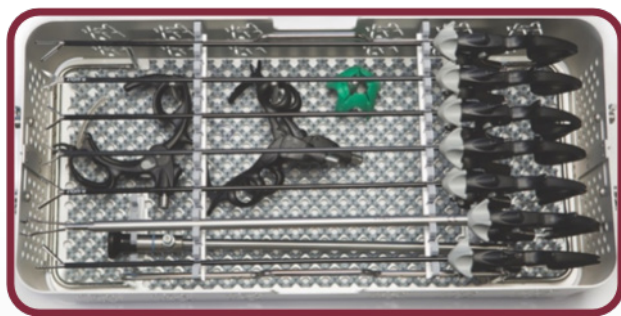
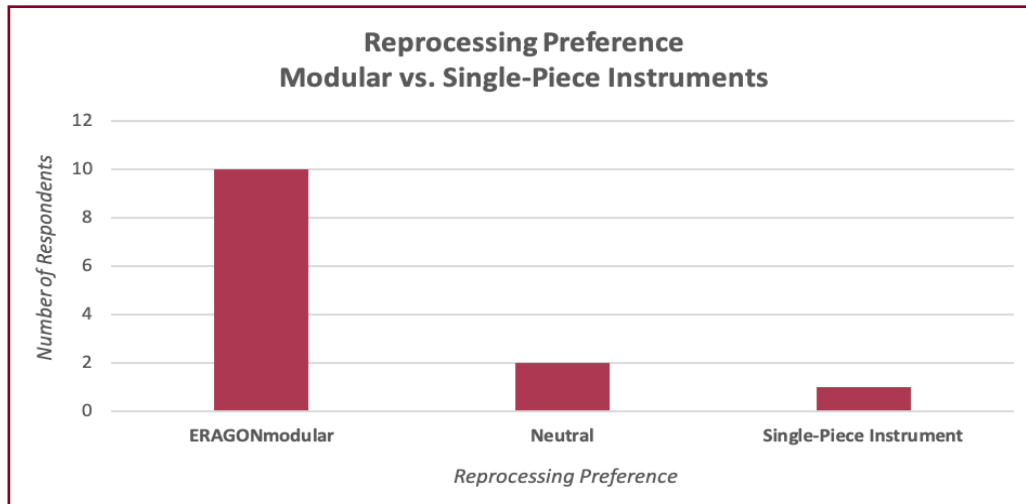


Figure 5

Discussion - Major Findings, Trends, and Comparisons

A survey was conducted in the sterile processing department of a Chicago-based hospital that is a leader in minimally invasive surgery. The objective of this survey was to reveal SPD technicians' preference of reprocessing ERAGONmodular instruments versus single-piece laparoscopic instruments. The below graph represents the views of the survey participants.



About 76% of the participants said they preferred reprocessing the take-apart, ERAGONmodular instruments versus single-piece laparoscopic instruments. Many noted the ease of disassembling and cleaning the instrument compared to cleaning single-piece devices. From a patient safety standpoint, the single-piece devices may pose an increased risk of infection due to there being no guarantee of cleaning effectiveness since a flush port is the only means for the cleaning of the sheath. As a result, the participants expressed their frustration when cleaning these devices. Feedback from the aforementioned survey also revealed that the ability to assemble or disassemble the ERAGONmodular instrument for sterilization creates a meaningful, positive difference in productivity.

Conclusion

For cleaning to be effective, we must be able to thoroughly clean each component of a device. Patient safety and disease prevention efforts hinge on cleanliness. The ERAGONmodular series by Richard Wolf allows us to better push towards these two efforts by providing a solution that empowers the SPD to clean thoroughly, efficiently, and frustration free.



About the Author

Benedicta Ampadu has worked within the healthcare industry for the past 10 years. Her experience began in Ghana, Africa after successful education in the field of nursing, where she took to working as a nurse midwife. After moving to the United States, Benedicta continued her career within the field of sterile processing as a technician at Loyola University Medical Center in Chicago, IL. She progressed into more leadership roles as a shift manager and attained 3 certifications in sterile processing as a Certified Registered Central Service Technician (CRCST), Certified Endoscope Reprocessor (CER), and Certified Healthcare Leader (CHL). She currently works as a Reprocessing Educator, and is a subject matter expert in medical device reprocessing for Richard Wolf Medical Instruments Corp.



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