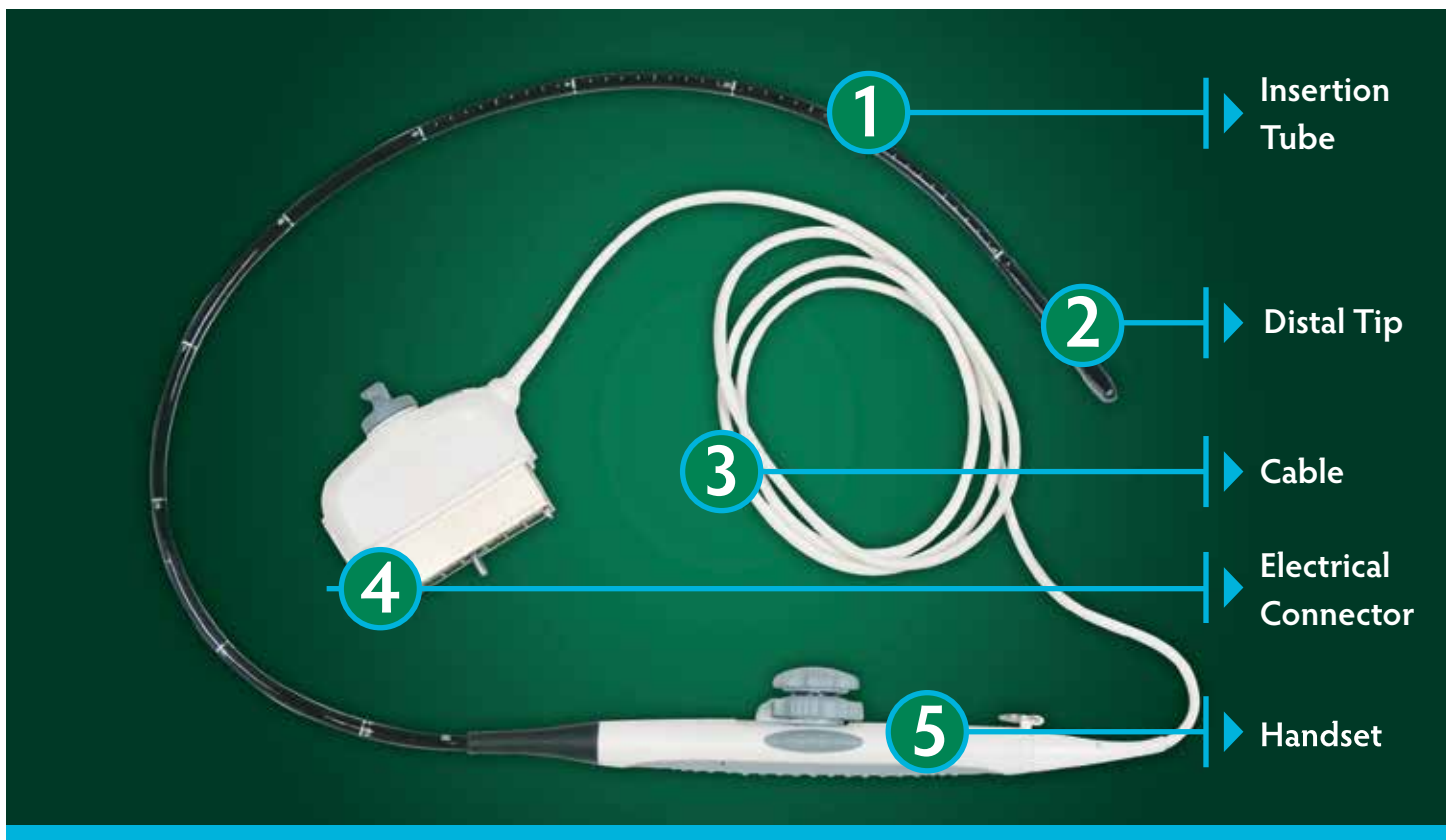




10 Steps to Successful TEE Probe Reprocessing

CS Medical 



TEE Probe Overview and Challenges

Knowing the TEE Ultrasound Probe

TEE ultrasound probes consist of five main parts, as described by probe manufacturers and as illustrated above.

- The electrical connector (4) connects the ultrasound machine to the probe.
- The cable (3) of the probe connects the handset (5) to the electrical connector. This steering mechanism and handle are not water tight and should not be submersed in liquid.
- The long insertion tube (1) with transducer at the distal tip (2) can be difficult to handle during pre-cleaning, cleaning, high-level disinfection, drying and subsequent storage and transportation.

The overall length of the TEE ultrasound probe and the fragile nature of the transducer make handling of the device susceptible to damage and challenging for healthcare professional. Care to minimize excessive handling and contact shock to the distal tip should be taken when manipulating the components during all facets of reprocessing. To properly reprocess a TEE probe the technician should be aware of the delicate nature of the various components.

The critical difference between a colonoscope or a gastroscope and a TEE probe is it can't be completely submersed into the rinse and high-level disinfectant baths. The TEE probe is not water tight and complete submersion of the probe could cause serious damage and result in the inoperability of the TEE probe.

A thorough understanding of the TEE ultrasound probe and how it should be reprocessed is critical. This knowledge will lead to minimized TEE ultrasound probe damage, improved patient outcome and allow for proper reprocessing that minimize Healthcare-Associated Infections (HAIs).

10 Steps to Successful TEE Probe Reprocessing



How to Reprocess a TEE Ultrasound Probe

10
Steps

- Step # 1 - Point of Use Cleaning
- Step # 2 - TEE Probe Transportation Case (soiled)
- Step # 3 - Enzymatic Cleaning
- Step # 4 - Rinse and Dry Probe
- Step # 5 - Electrical Leak Testing
- Step # 6 - High-Level Disinfection
- Step # 7 - Rinsing After High-Level Disinfection
- Step # 8 - Probe Drying
- Step # 9 - HEPA Filtered Probe Storage
- Step # 10 - TEE Probe Procedure Case (clean)





#1 Step 1

Point of Use Cleaning

TEEZyme® Enzymatic Sponge

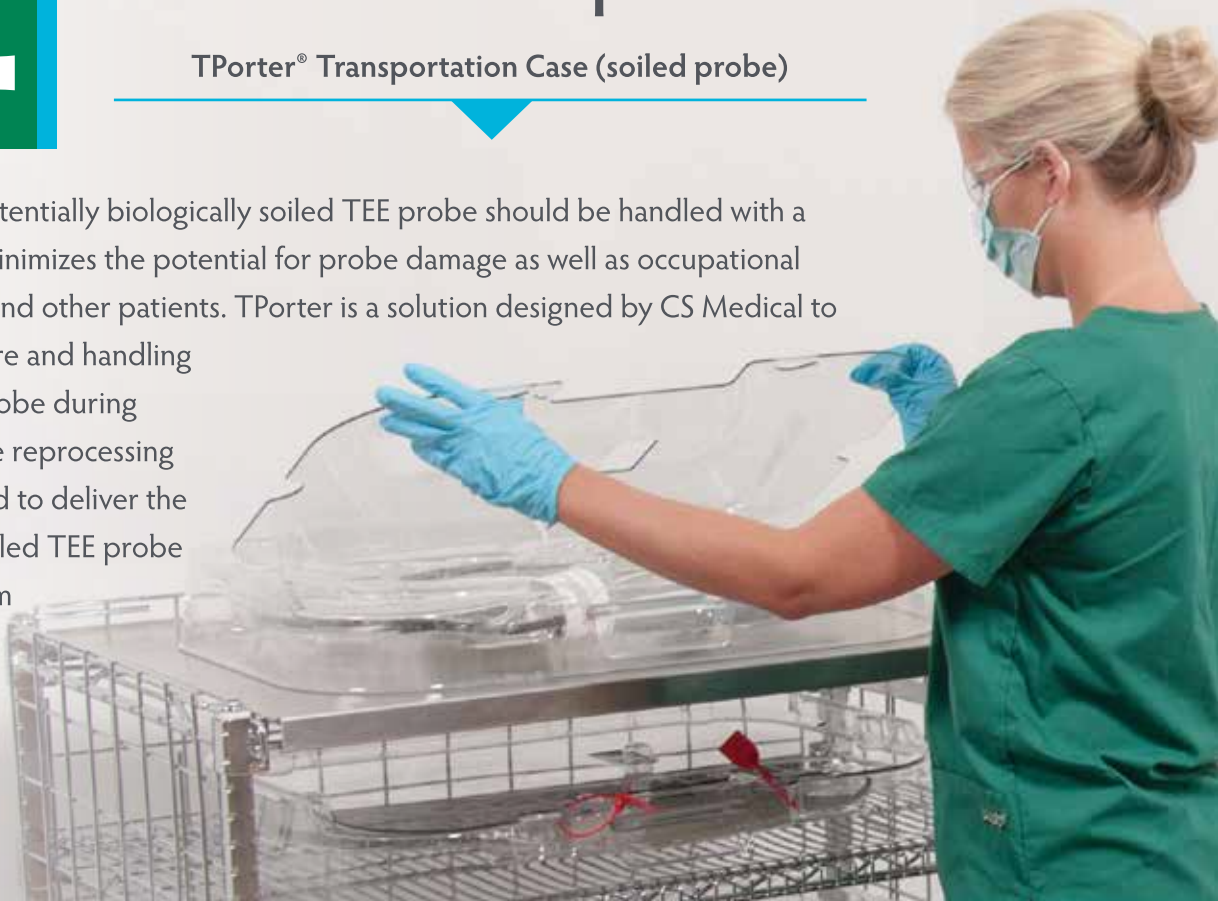
Bedside cleaning, also known as pre-cleaning or point of use cleaning, must be done for the successful reprocessing cycle of a soiled TEE ultrasound probe. When the probe is removed from the patient it should be wiped with an enzymatic product, like the TEEZyme® Enzymatic Sponge, to remove organic and inorganic soil so as to prevent these materials from drying on the probe.

#2 Step 2

TEE Probe Transportation

TPorter® Transportation Case (soiled probe)

Transportation of the potentially biologically soiled TEE probe should be handled with a device or method that minimizes the potential for probe damage as well as occupational exposure to fellow staff and other patients. TPorter is a solution designed by CS Medical to provide standardized care and handling of the TEE ultrasound probe during this critical portion of the reprocessing cycle. TPorter is designed to deliver the enzymatically treated soiled TEE probe from the procedure room to the designated area for reprocessing.



#3 Step 3

Enzymatic Cleaning

TEEZyme[®]MC Enzymatic Cleaner

TEEZyme[®]MC is a dual enzymatic cleaner that removes blood, protein, mucus, vomit and fecal matter. This formulation of Protease and Amylase enzymes, with buffers and non-ionic detergents, is perfect for all scopes and instruments and extends usable lifetime. TEEZyme[®]MC will solve any problem with clogged channels, sticky forceps or clouded lenses and will leave both scopes and instruments free of any unpleasant odors or baked-on blood.



TEE Probe Rinse & Dry

#4 Step 4

QwikDry[®] TEE Probe Drying Cloth

Drying of the TEE Ultrasound Probe, with a product like the QwikDry ultrasound drying cloth, is recommended before placing the probe into the high-level disinfectant solution. This can eliminate excess moisture that could interfere with subsequent microbicidal processes. Debris and gel can act as a barrier; while water can dilute the disinfectant which can mitigate the disinfection process. With reusable disinfectants this can become problematic. The healthcare professional must be vigilant in conducting a Minimum Required Concentration (MRC) test prior to each and every high-level disinfection process.





Electrical Leak Testing

#5 Step

Ultrasound Leakage Tester

Most TEE manufacturers' operator's manuals recommend electrical leakage testing before every patient exam. If a facility is IAC accredited it is required by the standard of care to conduct an electrical leakage test on all TEE probes prior to high-level disinfection. Electrical leakage testing can be done with CS Medical's ULT-PC-31 electrical conductive probe within the TD 100[®] prior to high-level disinfection. Conducting the electrical leakage test, with the TD 100, is simple and requires less set up and supplies when compared to other solutions.

#6 Step

High-Level Disinfection

TD 100 Automated TEE Probe Disinfector

The TD 100 is microprocessor-controlled and disinfects each TEE ultrasound probe with high-level disinfectant in only 5 minutes. Verification is printed upon completion of each successful disinfection cycle. A vapor management system captures and neutralizes disinfectant fumes.

The TEE probe handset is held securely within the TD 100. Specially designed hanger and mounts minimize strain on the cable and electrical connector of the TEE probe. The TD 100 saves labor and cycle time because setup requires less than one minute of operator interaction, while the whole disinfection and rinse cycle is completed in less than 17 minutes.



#7 Step 7

Rinsing After High-Level Disinfection

Nephros Water Filter

The Nephros DSU-H filter is a patented, dual-stage, hollow-fiber water filter that retains bacteria, viruses, and endotoxins found in water. All filtration occurs in the first stage of the filter while the second stage serves as a redundant safety filter. The expected life span of a DSU-H ultrapure filter is up to 6 months and is easily installed in-line between the TD 100 and the hospital water supply.



TEE Probe Drying

#8 Step 8

QwikDry® TEE Probe Drying Cloth

Drying of the TEE ultrasound probe, with a product like the QwikDry® Ultrasound Drying Cloth, is critical before storage or transport. Wetted surfaces are prone to attracting airborne contaminants resulting in probe contamination and potential HAIs being passed from the environment to the next TEE patient. By drying the probe before storage the potential for bacterial growth is removed from forming on the TEE ultrasound probe. Warm, wet surfaces foster bacterial growth and depending on the storage method, a wet probe can create this ideal environment.

#9 Step

Probe Storage

CleanShield™ TEE Probe Storage Cabinet

TEE ultrasound probes should be stored in a dry environment, hung vertically and within a HEPA clean environment. The CleanShield TEE Ultrasound Probe Storage Cabinet allows compliance with The Joint Commission (TJC) standards for care.



Step #10

TEE Probe Procedure Transport

TPorter® Procedure Case (clean probe)

Each TEE ultrasound probe must be transported from the patient procedure room to a designated area for reprocessing. The method of transport should deliver the probe to the procedure room without re-introducing contaminants or without dropping or hitting the transducer on any surface that could result in damage and to ensure proper probe operation.

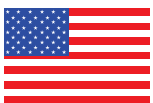
TEE COMPLETE CARE®

CS Medical

2179 East Lyon Station Road • Creedmoor, NC 27522 USA

Phone: +1 (919) 255-9472 • Toll Free: 877-255-9472 • Fax: +1 (919) 528-3400

www.csmedicalllc.com • info@csmedicalllc.com



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