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Porpoise™ Air/Water Cleaning Adapter

Executive summary

How it works

A cleaning adapter facilitates a critical step of the Olympus® pre-cleaning process: flushing the endoscope channels and nozzle to aid in preventing buildup of potentially infectious bioburden and foreign debris.[1-7]

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Reduces risk of cross-contamination

The use of single-use cleaning adapters helps ensure that a clean, functioning air/water cleaning adapter is available post-procedure, guarding against the risk of contamination that may result from incomplete bedside reprocessing or wear and tear on reusable adapters.[5,6 8,9]

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Supports compliance

The Porpoise Air/Water Cleaning Adapter is designed to meet the pre-cleaning guideline requirements for a cleaning adapter in the applicable Olympus reprocessing manuals. A single-use cleaning adapter that meets these requirements help support audit readiness and streamlines compliance and training for staff.[1-6]

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Promotes operational efficiency

The use of a single-use air/water cleaning adapter eliminates:

- The labor burden and costs associated with reprocessing, tracing, and maintaining reusable cleaning adapters potentially impacting operational efficiency.
- The risk of misplacing, discarding, and having to frequently replace a reusable cleaning adapter, potentially contributing to economic savings.[5,6]

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Potential benefits of standardizing

In addition, working with Boston Scientific brings benefits of standardization including inventory readiness and educational support.

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Clinical overview

Every endoscope and its associated components must be reprocessed per manufacturer reprocessing instructions to reduce the risk of cross-contamination and protect patient safety. Reprocessing guidelines from the Centers for Disease Control and Prevention (CDC),[1] societies,[2-4] and manufacturer reprocessing manuals[5,6] cite common steps in reprocessing: pre-clean, leak testing, manual clean, visual inspection, high-level disinfection (HLD), drying, and storage.

Although reprocessing guidelines describe variations in steps, there is a consensus that pre-cleaning conducted in the procedure room is the first step. This step is intended to:

- Protect the area from the procedure room to the reprocessing room from potential contamination.[7]
- Clean debris that can prevent effective reprocessing and the endoscope's proper functioning.[7]
- Prevent potential biofilm development.[1]

The pre-cleaning step is intended to remove gross contaminants from the endoscope's channels. The air/water channel is prone to clogs, due to its small size, the distal nozzle angle, and the retrograde force of air used for procedural insufflation. The most effective way to clear this channel is forced air flow using an accessory device such as an air/water cleaning adapter.[7]

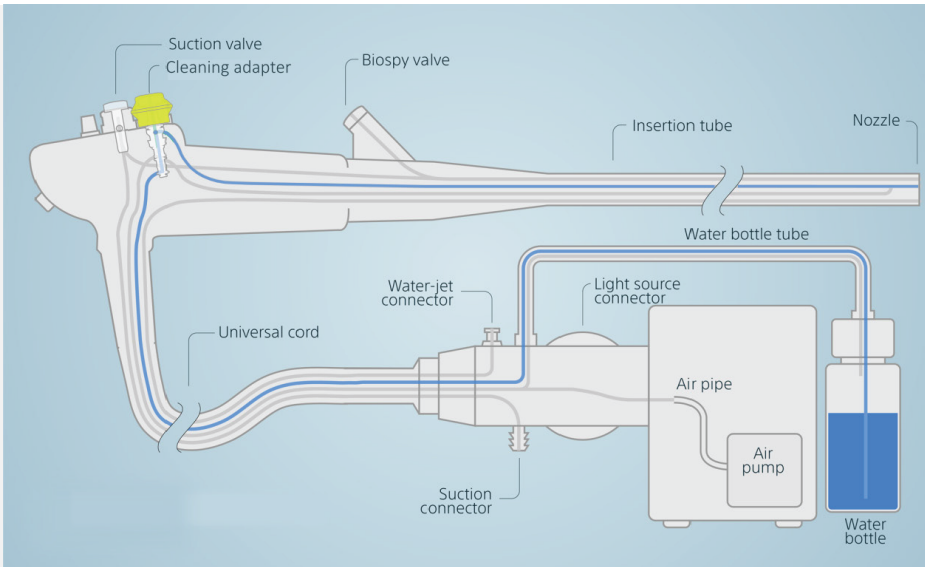
Product overview

The Porpoise™ Air/Water Cleaning Adapter is:

- A single-use alternative to reusable cleaning adapters designed to address issues related to potential contamination during reprocessing.
- Designed to flush the air and water channels with air and water during the bedside pre-cleaning process, after endoscopic procedures.
- Compatible with the following gastrointestinal endoscopes: Olympus® EVIS EXERA (160), EVIS EXERA II (180), and EVIS EXERA III (190).

How it works

The Porpoise Air/Water Cleaning Adapter is attached to the air/water cylinder of the endoscope. When the Cleaning Adapter is depressed, water from the bottle is fed through the air/water channels to flush them along with the nozzle of the endoscope. When the Cleaning Adapter is not depressed, air is fed constantly through the air/water channels.



Clinical and economic benefits

Reduces risk of cross-contamination

Reusable cleaning adapters must be reprocessed and maintained according to manufacturer reprocessing instructions to avoid cross-contamination risk due to ineffective reprocessing.

- All reusable accessories, including cleaning adapters, must be reprocessed after each use to prevent cross-contamination risk.[5,6] Reusable air/water adapters are complex devices that require meticulous, time-consuming manual cleaning. Human error and variability in reprocessing steps are a major cause of scope contamination.[8]
- A reusable cleaning adapter may not be refurbished or repaired and is intended to be replaced once it shows signs of wear and tear. Using an adapter that is worn or not functioning as intended may affect equipment performance, reduce the efficacy of reprocessing, and may present a potential risk to patients.[5,6]

A contamination event has the potential to introduce patient-to-patient transmission of a hospital-acquired infection (HAI). It could also have an economic impact to the facility, including the potential costs associated with notifying each exposed patient, incident investigation and reporting, legal costs, and reputational damage.[9]

The use of a single-use cleaning adapter ensures a clean and functioning air/water cleaning adapter is available for endoscopes post-procedure, guarding against the contamination risk associated with incomplete bedside reprocessing steps or wear and tear on reusable cleaning adapters.[5,6,8,9]

Supports compliance

The Porpoise™ Air/Water Cleaning Adapter is designed to meet the pre-cleaning requirements of the (CDC),[1] societies,[2-4] and manufacturer reprocessing manuals[5,6] (see table 1).

Table 1: (CDC),[1] societies,[2-4] and manufacturer reprocessing manuals[5,6] guidelines for pre-cleaning.

Reference	Pertinent statement	Porpoise meets the need?
(CDC)[1]	Pre-clean flexible endoscopes and reusable accessories by following the device manufacturer instructions for use.	✓
American Society for Gastrointestinal Endoscopy (ASGE)[2]	Aspirate detergent through all channels (e.g. air/water and biopsy channels).	✓
Society of Gastroenterology Nurses and Associates (SGNA)[3]	Flush air and water channels in accordance with the endoscope manufacturer instructions.	✓
Association of periOperative Registered Nurses (AORN)[4]	Pre-cleaning should be performed in accordance with the endoscope manufacturer IFU flushing the air, water, and other channels of the endoscope alternately with the cleaning solution and air, finishing with air.	✓
Olympus® instructions for use[5,6]	All channels of the endoscope—and all accessories used with the endoscope—must be reprocessed after each patient procedure, even if the channels or accessories were not used during the patient procedure. Insufficient reprocessing of these components may post an infection control risk to patients and/or operators.	✓

Adherence to cited standards and manufacturer reprocessing manuals can be a part of an accreditation survey administered by groups like The Joint Commission on Accreditation of Healthcare Organizations.

Additionally, as a single-use accessory, the Porpoise Air/Water Cleaning Adapter eliminates the need to reprocess reusable cleaning adapters that can streamline compliance and training, particularly relevant for high staff turnover facilities.

The Porpoise Air/Water Cleaning Adapter is designed to meet the pre-cleaning guideline requirements in the applicable Olympus reprocessing manuals for a cleaning adapter. A single-use cleaning adapter that meets these requirements can support and can streamline audit readiness and streamlines compliance and training for staff.[1-6]

Clinical and economic benefits (continued)

Promotes operational efficiency

There is a set of standard operational steps necessary for a hospital to properly maintain a fleet of reusable cleaning adapters in accordance with providing high-quality clinical care, including:

Reprocessing

There are over 30 steps required to reprocess endoscope accessories such as cleaning adapters according to the reprocessing instructions. The cleaning adapter must be cleaned and reprocessed separately from the endoscope.[5,6] These steps require staff time and costs for reprocessing equipment and supplies, incremental to the endoscope reprocessing.

The use of a single-use air/water cleaning adapter eliminates:

- **The labor burden and costs associated with reprocessing, tracing, and maintaining reusable cleaning adapters potentially impacting operational efficiency.**
- **The risk of misplacing, discarding, and having to frequently replace a reusable cleaning adapter, potentially contributing to economic savings.[5,6]**

Potential benefits of standardizing

Inventory readiness

Boston Scientific has a robust supply chain system designed to keep your inventory stocked.

Educational support to help your lab stay up-to-date

Each year, more than 35,000 physicians, nurses, technicians, and administrators take advantage of more than 1,000 educational programs worldwide. This includes Infection Prevention specific programs and guided or self-assessment tools. Please contact your Boston Scientific sales representative to access educational offerings for your staff.

When-you-need-it operational support

Boston Scientific has clinical representatives covering every market in the U.S. as well as coding and reimbursement support. Additionally, Boston Scientific's supply chain excellence, product satisfaction programs, and clinical training and education can help you support your lab's operational efficiency.

Robust single-use product portfolio

Boston Scientific can offer streamlined inventory management and installation support, while also minimizing the number of medical device representatives in the hospital to support cases and staff training.

Environmental sustainability and impact

Aligned to Boston Scientific's deep commitment to corporate responsibility, environmental sustainability has been integral to the Porpoise™ Air/Water Cleaning Adapter product development including:

- Simple design using a bright visual differentiator with no added tag
- Recyclable packaging
- LEED-certified facility supporting sustainable manufacturing practices
- Supply chain emission minimization

As a global medical device manufacturer, Boston Scientific understands that our planet is facing challenges that affect us all. By proactively addressing energy consumption, carbon output, waste management, and water use, we are making progress towards shaping a better future for our planet. The Global Energy Management System (GEMS) helps ensure that Boston Scientific meets its energy reduction commitment globally. Boston Scientific has pledged to achieve carbon neutrality in key manufacturing and distribution sites only for all our products by 2030.

For additional details on Boston Scientific sustainability efforts, please click here.

Sources:

1. Centers for Disease Control and Prevention (CDC). Essential Elements of a Reprocessing Program for Flexible Endoscopes – Recommendations of the Healthcare Infection Control Practices Advisory Committee; Last update: 2017.
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