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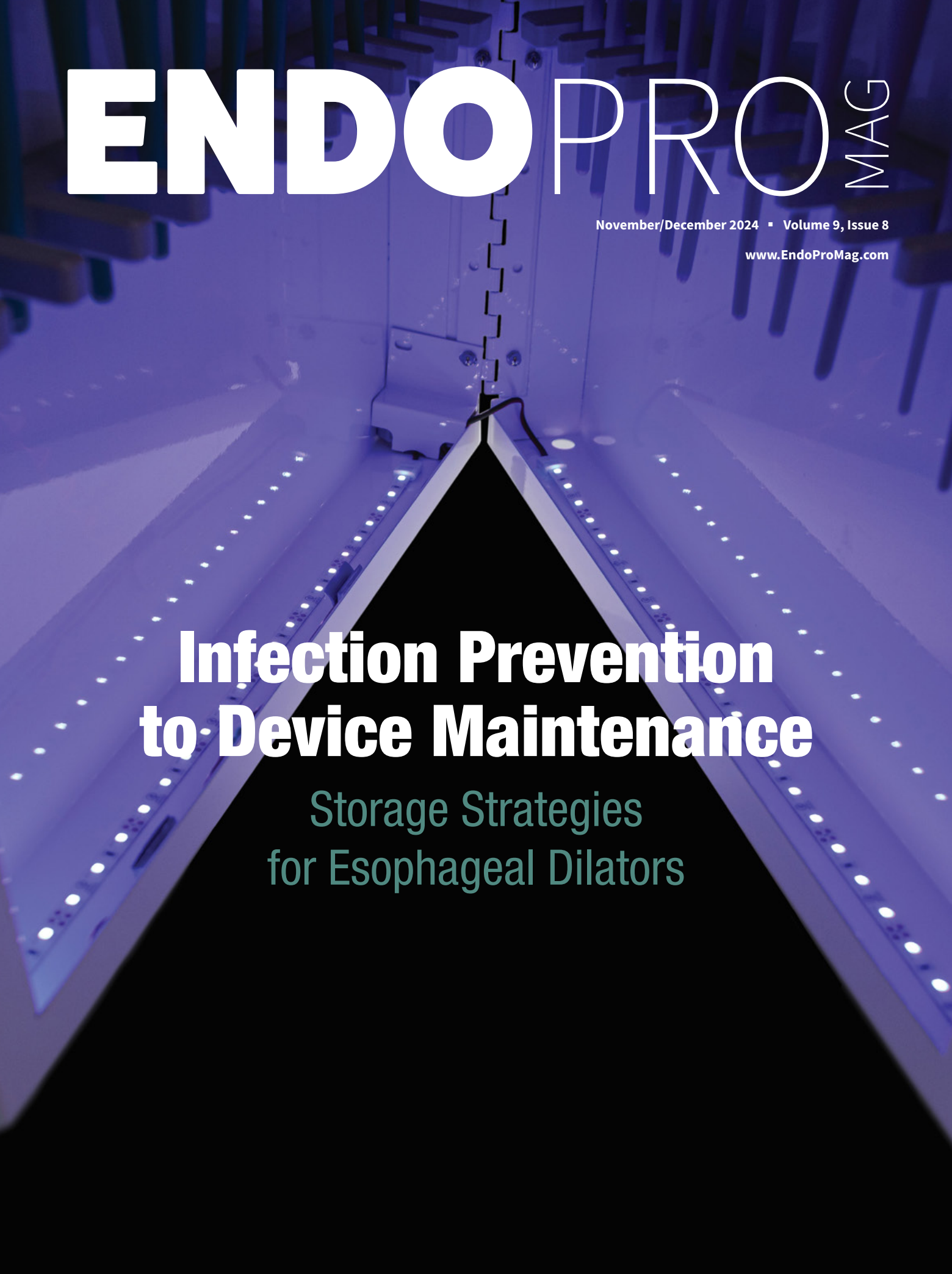

Infection Prevention to Device Maintenance

Storage Strategies for Esophageal Dilators

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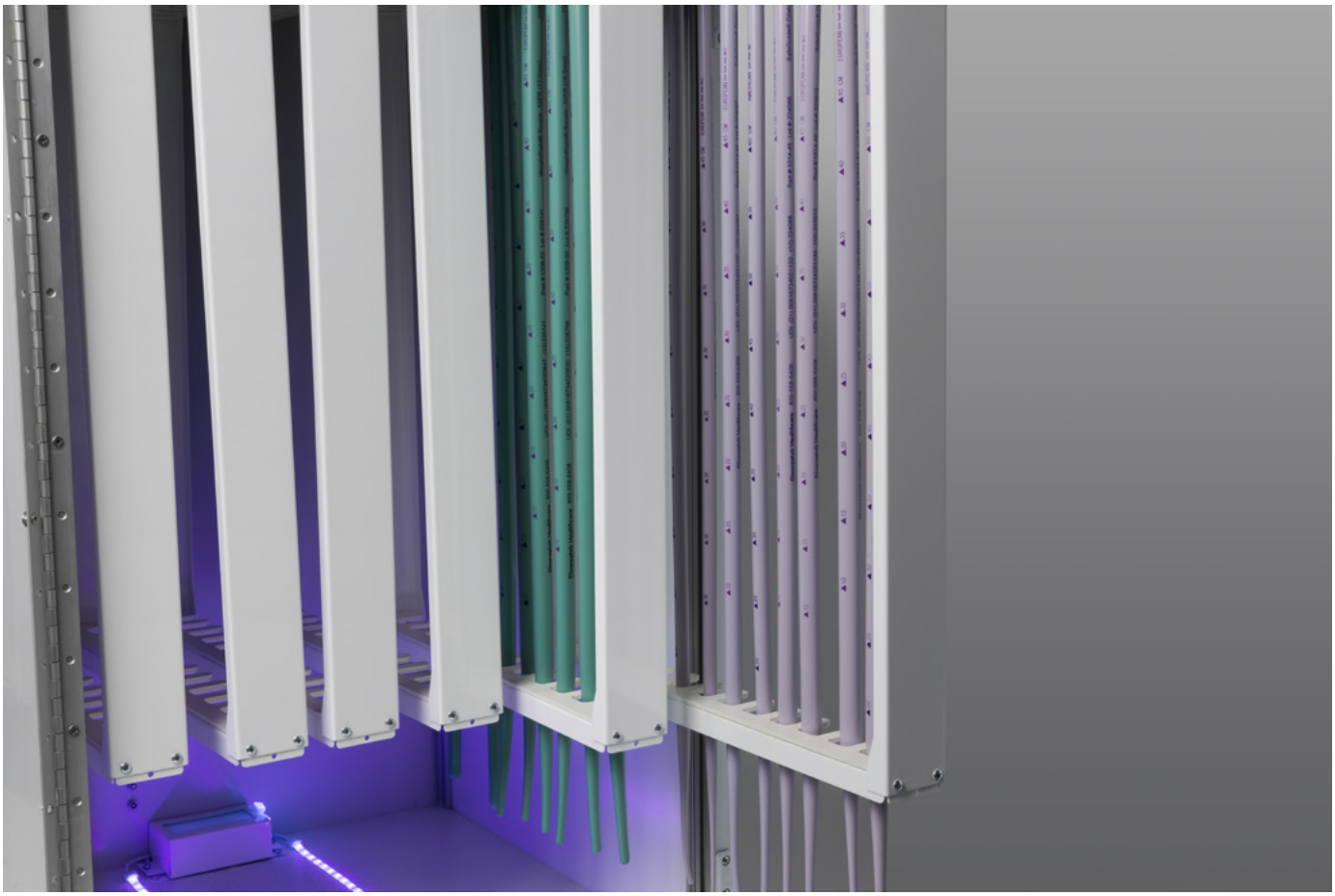
Storage Strategies for Esophageal Dilators

By Ken Wolcott, BT, MS

Esophageal dilators are vital in treating esophageal strictures and related conditions, significantly improving patients' swallowing ability and overall quality of life. Ensuring these devices are correctly stored is crucial for maintaining their efficacy and patient safety. This article explores the critical role of esophageal dilator storage in infection control and optimal dilator performance, highlighting advanced storage solutions and best practices based on established infection control guidelines.

Esophageal dilators, such as bougies (Maloney and Hurst) over-the-wire (OTW) dilators, are used to widen narrowed



Images provided by Diversatek.

Diversatek™
Healthcare

Forty years of leadership in dilatation solutions.

At Diversatek Healthcare (formerly Medovations and Sandhill Scientific), we understand your challenges. Our esophageal dilatation solutions—from balloon dilators to ultra-flexible bougies and over-the-guidewire dilators—are designed to meet your needs. Plus, our innovative storage systems are engineered to extend product life and reduce risk. For over 40 years, we've set the standard in esophageal care, **helping you deliver the best patient care while improving efficiency and reducing risk.** **DiversatekHealthcare.com**

Enclosed storage systems offer antimicrobial protection, ensuring industry compliance and reducing risks.

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areas of the esophagus. These devices help manage conditions such as achalasia, esophageal strictures, and Schatzki rings, improving patients' ability to swallow and overall quality of life. Given their critical role, these instruments must be pristine to prevent procedure complications.

Importance of Proper Storage: Infection Control

Cross-Contamination Prevention: Esophageal dilators, exposed to mucous membranes and bodily fluids, are susceptible to microbial contamination. Proper storage reduces the risk of cross-contamination between patients. The Centers for Disease Control and Prevention (CDC) emphasizes adherence to strict cleaning and storage protocols to prevent healthcare-associated infections (HAIs).

Advanced Storage Solutions: Incorporating high-efficiency particulate air (HEPA) filters and 405-nm LED disinfecting lights in storage solutions can significantly minimize microbial load. HEPA filters capture 99.97% of particles as small as 0.3 microns, ensuring a clean storage environment. Studies show that 405-nm light effectively inactivates pathogens, enhancing infection control.

Positive-Pressure Ventilation: Maintaining positive-pressure ventilation in storage areas is crucial for preventing airborne contamination. Airborne particles outside the storage cart are directed outward, helping maintain clean conditions.

Maintaining Device Integrity

Preventing Physical Damage: Proper storage systems avoid physical damage to dilators, such as bending or kinking, which can compromise functionality. Vertical storage carts, for instance, keep OTW dilators hanging straight, promoting lumen straightness and proper drying.

Organized Storage: Storage carts and cabinets with designated slots or trays ensure that each dilator is stored separately. This organization prevents dilators from contacting one another, reducing the risk of damage and contamination.

Drying

Eliminating moisture is crucial following the processing of dilators, as leftover humidity creates an environment conducive to microbial growth while the devices are stored. If not proper-

ly dried, these instruments might become breeding grounds for waterborne illnesses, including Pseudomonas aeruginosa, enabling these germs to thrive and produce resistant layers known as biofilms. The best practice suggests wiping each instrument with a clean, lint-free cloth or a special wipe designed to prevent lint residue.

For guidewire lumens, forced-air drying techniques such as pressured, oil-free instrument air or air filtered through a HEPA system are recommended. Moreover, having a specific section or station within the facility to dry these instruments is best, keeping them ready for safe use or storage. Always consult and adhere to the drying instructions provided by the device manufacturer to ensure efficacy and safety.

Comparative Analysis and Features of Advanced Storage Systems

When selecting storage solutions for esophageal dilators, factors such as capacity, mobility, ease of use, and the level of protection must be considered. Advanced storage systems, including vertical and horizontal storage carts and wall-mount storage cabinets, are designed to ensure infection control and maintain device integrity.

Vertical Storage Carts: These carts, which can hold up to 72 dilators, feature HEPA filtering systems, 405-nm disinfecting lights, and electronic keyless locking systems. They promote lumen straightness and proper drying, making them suitable for larger facilities with extensive equipment needs. A vital advantage of these mobile carts is their ease of movement, allowing them to be effortlessly transported in and out of procedure rooms and between different departments, facilitating workflow efficiency and adaptability to various clinical settings.

Horizontal Storage Carts: These carts can hold up to 72 dilators and incorporate similar advanced features. They use a unique tray system to separate dilators and promote cleanliness and organization. This design is ideal for silicone dilators that cannot be hung vertically. Like their vertical counterparts, horizontal storage carts are designed for mobility, quickly moving through the healthcare facility to provide accessible storage solutions wherever needed. However, they may require more space.

Wall-Mount Cabinets: With a capacity of up to 48 dilators, these cabinets offer a slim design with key locking systems, HEPA filters, and 405-nm disinfecting lights. While they provide a space-saving solution that ensures secure and contaminant-free storage, wall-mounted cabinets lack the mobility of cart-based systems. Still, they are ideal for smaller settings or areas with limited space.

Labeling and Organization: Each dilator should be appropriately labeled and stored in an organized manner to facilitate easy identification and retrieval. Designated slots or trays can prevent physical damage and reduce the risk of cross contamination.

The benefits and drawbacks of each system must be weighed against the facility's requirements to ensure optimal performance and infection control.

Best Practices for Infection Control in Esophageal Dilator Storage

To optimize infection control and ensure the longevity of esophageal dilators, healthcare facilities should adhere to the following best practices.

Cleaning Protocols and Documentation: Follow manufacturer instructions for cleaning storage units and dilators. Use hospital-grade disinfectants and ensure high-touch areas are cleaned regularly according to facility guidelines. Document all storage unit cleaning either on paper or digitally with a tracking system.

HEPA Filter Replacement: To maintain optimal air quality within the storage units, replace HEPA filters every six months or upon visible dirt accumulation.

Proper Handling and Storage

Storage Procedures: Store dilators according to manufacturer guidelines to prevent damage. Ensure they are placed in designated slots or trays without touching other instruments.

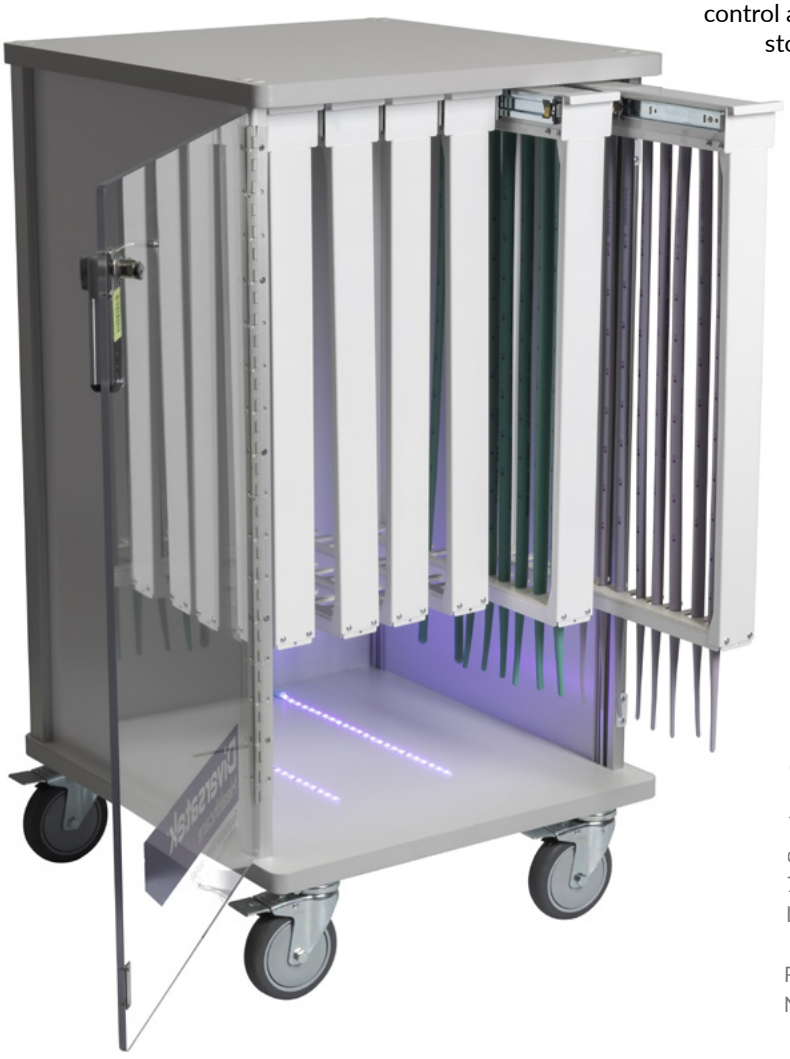
Locking Systems: Use storage units' locking features to secure dilators and prevent unauthorized access, reducing the risk of contamination.

Education, Training and Inspections

Staff Training: Regularly train staff on proper handling, cleaning, and storage protocols for esophageal dilators. Emphasize the importance of infection control and device maintenance to prevent HAIs and ensure patient safety.

Routine Inspections: Conduct routine inspections of the storage area and equipment to ensure compliance with storage protocols and promptly address any issues. Any signs of wear, damage or contamination should be addressed immediately to maintain the efficacy of the dilators.

Reprocessing of Dilators in Healthcare Facilities



The Association for the Advancement of Medical Instrumentation (AAMI) recently published a technical report (TIR99:2024) for correctly processing dilators in healthcare facilities. This report assists in making dilators safe and effective for use in patient care by providing precise and comprehensive information on the selection and use of cleaning, disinfection and sterilization systems cleared by the U.S. Food and Drug Administration (FDA) for use in hospitals and other healthcare facilities.

This technical report also emphasizes the importance of following the manufacturer's written instructions for use (IFU) and selecting the appropriate cleaning, disinfection and/or sterilization methods based on the types of procedures performed. The report classifies dilators based on infection risk: Critical devices must be sterile; semi-critical devices require high-level disinfection or sterilization; and non-critical devices should undergo low or intermediate-level disinfection. It also emphasizes the importance of proper transport and storage to maintain cleanliness, the design of processing areas to prevent contamination, and the need for ongoing personnel education and competency verification to uphold safety and effectiveness in patient care.

Proper storage of esophageal dilators is essential for infection control and optimal performance. By incorporating advanced storage solutions with features like HEPA filters and 405-nm disinfecting lights, healthcare facilities can minimize contamination risks and maintain device integrity. Adhering to best practices in cleaning, maintenance and storage will enhance patient safety, reduce healthcare-associated infections and ensure the effective use of esophageal dilators in gastroenterological procedures. As we progress, continuous innovation and adherence to stringent protocols will be vital to advancing the standards of care in this critical aspect of healthcare.

For article references, visit www.EndoProMag.com.

Ken Wolcott, BT, MS, is director of global marketing for Diversatek Healthcare. He is a seasoned marketing and product development executive with over 25 years of experience in the gastrointestinal medical device industry. He holds numerous patents and has successfully led cross-functional teams for GI device companies. He has executed global strategies and driven growth through innovative marketing and product development initiatives. He is passionate about all things GI endoscopy related. You can reach Wolcott at kwolcott@diversatek.com.

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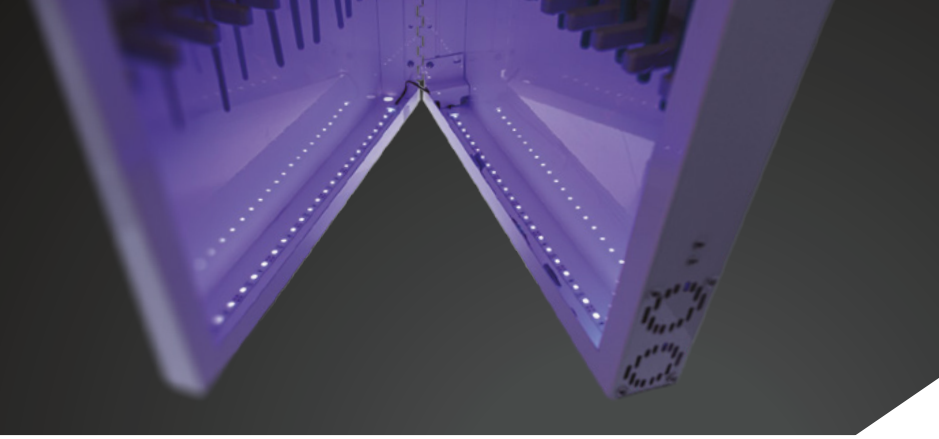
Esophageal Dilator Storage



Esophageal Dilator Storage Solutions

Choose between three innovative Esophageal Dilator Storage styles – all with the following features:

- Minimal exposure to particulates and airborne contaminants with forced air circulation and replaceable HEPA filters
- A positive pressure environment and antimicrobial protection during storage with an integral 405 nm LED disinfecting light[1]
- Durable and easy-to-clean stainless steel surfaces

Esophageal Dilator Storage

Includes fan with HEPA filter and 405 nm LED disinfecting light system

Part No.	Description	Qty
1214-70	Esophageal Dilator Wall-Mount Storage Cabinet	1
1214-71	Esophageal Dilator Horizontal Storage Cart	1
1214-72	Esophageal Dilator Vertical Storage Cart	1

Replacement Parts & Accessories

Part No.	Description	Qty/Case
1214-73	HEPA Filter	1
1214-74	Storage Cabinet Cleaning Brush	10
1214-75	Soft Grip Gasket	1
1214-76	Fan	1
1214-77	Power Supply	1
1214-78	LED Light Strip, Single Side	1
1214-79	Swing Bar	1
1214-80	Dilator Storage Tray (Stores up to 12 Bougies/Dilators)	1

[1] Maclean M, McKenzie K, Anderson JG, Gettinby G, MacGregor SJ. 405 nm light technology for the inactivation of pathogens and its potential role for environmental disinfection and infection control. J Hosp Infect. 2014 Sep;88(1):1-11. doi: 10.1016/j.jhin.2014.06.004. Epub 2014 Jul 3. PMID: 25066049.

Wall-Mount Storage Cabinet
Low-profile and easy to install

Specifications:
- Holds 24 Dilators
- 19”W x 36”H x 4”D

Ideal for:
- SafeGuide® Dilators
- WeightRight® Bougies

Locking System:
- Keylock

Horizontal Storage Cart
Mobile system that accommodates silicone dilators – which cannot be hung vertically

Specifications:
- Holds 72 Dilators
- 36”W x 36”H x 22”D

Ideal for:
- SafeGuide® Dilators
- WeightRight® Bougies
- M-Flex® Bougies

Locking System:
- Electronic Keyless Lock

New!

Vertical Storage Cart
Mobile system that orients dilators vertically to promote lumen straightness and drying

Specifications:
- Holds 72 Dilators
- 24”W x 44”H x 24”D

Ideal for:
- SafeGuide® Dilators
- WeightRight® Bougies

Locking System:
- Electronic Keyless Lock

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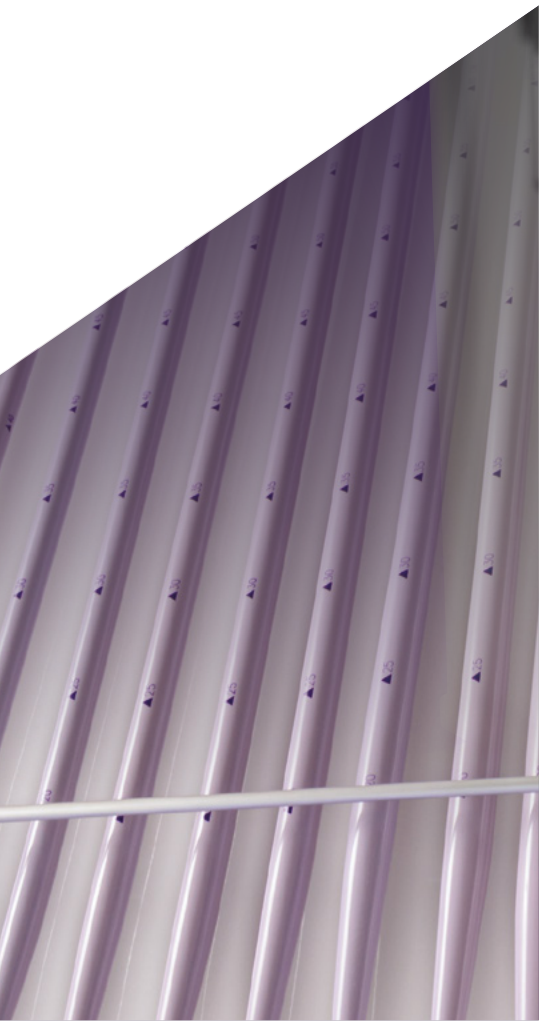
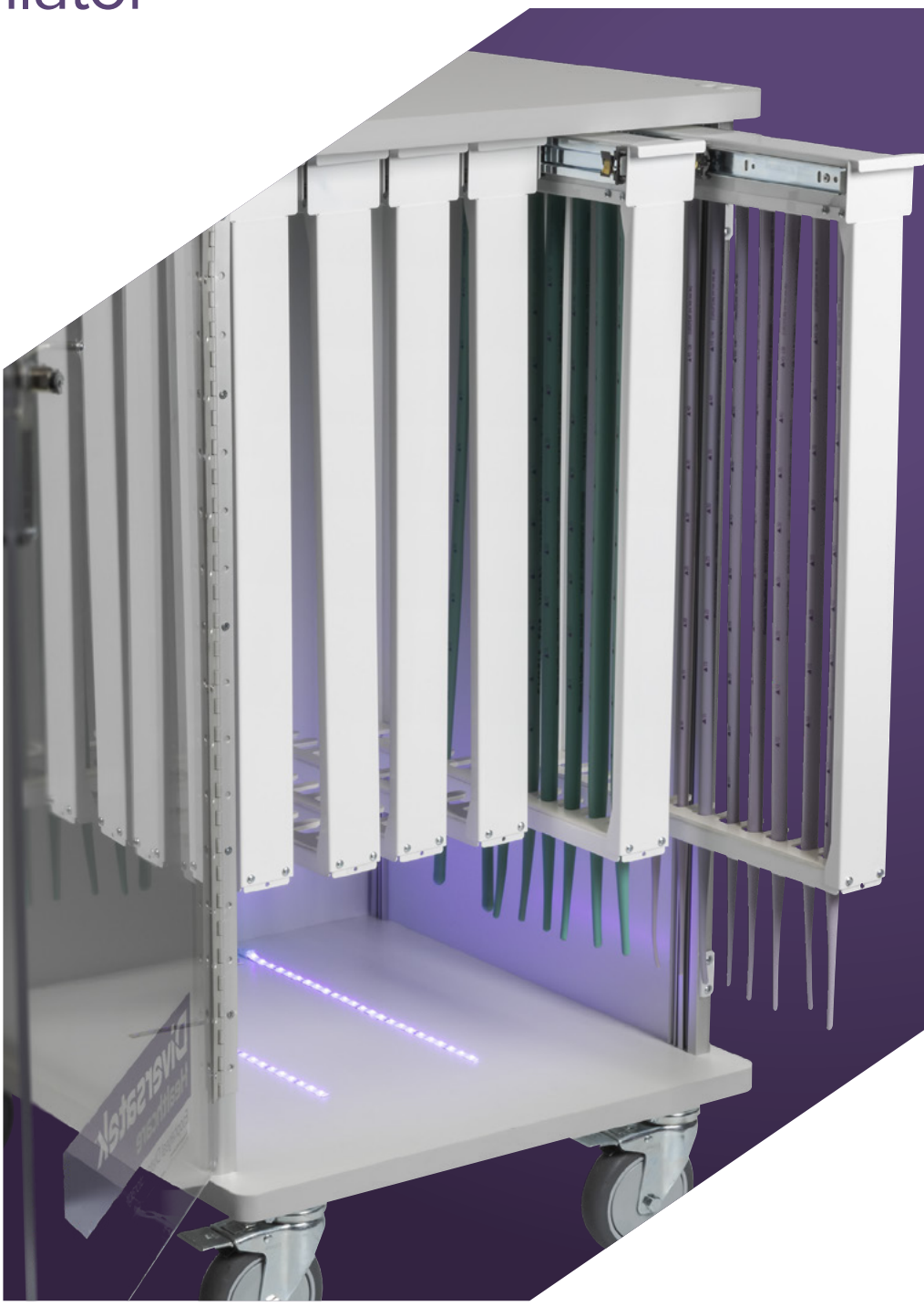
Esophageal Dilator Storage





Keep Dilators Clean, Straight & Secure.

Our innovative storage systems keep esophageal dilators fully enclosed, free from direct contact with one another – all while integrating unique features to reduce cross contamination risk between procedures.