



**Instructions for Use: Flexible Inspection Scope Kit**

<b>Brand Name of Product</b>	Flexible Inspection Scope Kit
<b>Generic Name of Product</b>	Flexible Inspection Scope Kit
<b>Product Code Number(s)</b>	FIS-005, FIS-005SK
<b>Intended Use</b>	For visually inspecting instruments.
<b>Range of Applications for Product</b>	Instruments that require visual inspection by providing light, vision, magnification and the option for documentation in hard-to-see crevices, channels and lumens in instruments that are not visible to the unaided eye.
<b>Key Specifications of Product</b>	<p><b>Flexible Inspection Scope Features and Connections- FIS-005</b></p> <ul style="list-style-type: none"> <li>● Flexible Inspection Scope Diameter- 31.8 mm (1.25”), overall length of Digital Inspection Scope- 45cm (17.7”).</li> <li>● Weight- 18.2 grams (0.64oz.)</li> <li>● Optical <ul style="list-style-type: none"> <li>○ Field of View- 120° in air</li> <li>○ Angle of View- 0°</li> </ul> </li> <li>● Distal Camera 1.9 mm (0.075”) - Distal portion of the Inspection Scope that contains the camera lens.</li> <li>● Flexible Working Length 110cm (43.3”) - The portion of the scope that is inserted into an instrument during visual inspection.</li> <li>● Brightness increase button and decrease button- To increase illumination and decrease illumination intensity.</li> <li>● Handpiece Capture Image Button- Press button to capture video or image.</li> <li>● White Balance Button- Press to white balance the image.</li> <li>● Camera Cable Connection- Connects the Controller Handpiece to USB on computer.</li> </ul> <p><b>Flexible Inspection Scope Accessories- FIS-005SK</b></p> <ul style="list-style-type: none"> <li>● USB (Type-A Male) Connector- Plugs into USB port on computer.</li> <li>● Camera Connector- Plugs into Digital Inspection Scope.</li> <li>● USB Flash Drive- Plugs into USB Port on computer for downloading software and instruction for use.</li> <li>● Soaking Cap.</li> </ul>

<b>Shipping &amp; Storage</b>	
<b>Shipping Conditions &amp; Requirements</b>	
<b>Storage Conditions</b>	
<b>Packaging Conditions</b>	
<b>Shelf Life</b>	

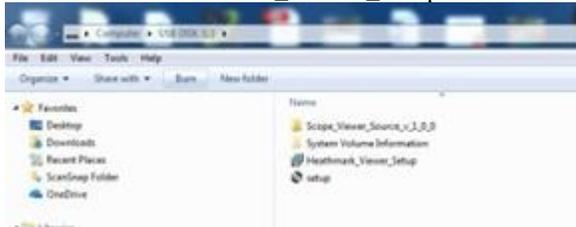
<b>Instructions for Using Product</b>	
<b>Description of Use(s)</b>	Use the inspection scope to directly inspect internal channels.
<b>Preparation for Use</b>	<p>Before connecting the Flexible Inspection Scope, install the Healthmark software from the USB Flash drive on a computer. System requirements: MS Windows versions 7, 8 or 10.</p> <ol style="list-style-type: none"> <li>1. Remove the USB stick and plug into USB port.</li> <li>2. Window will pop up on the computer stating, ‘Install software’. (If it does not come up, go to launch files explorer, scroll down and click USB Disk).</li> </ol>



3. Under 'General Options' click on 'Open folder to view files'.



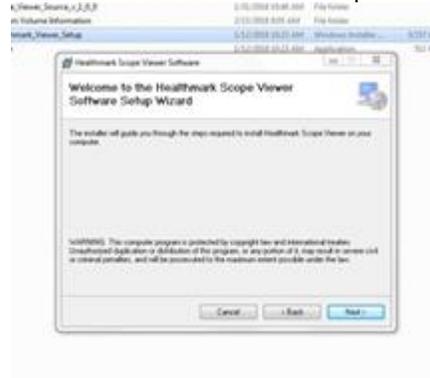
4. Double click Healthmark\_Viewer\_Setup to install software.



5. The Healthmark Scope Viewer Software screen comes up and click 'Next>'.



6. Welcome to the Healthmark Scope Viewer Software Setup Wizard screen appears and click 'Next>'.



7. The License Agreement page comes up and click 'I Agree' in License Agreement.



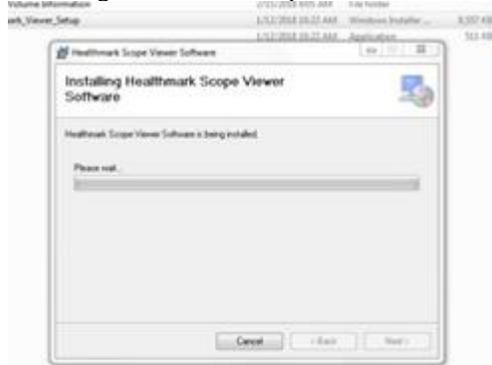
8. Then click 'Next>'.



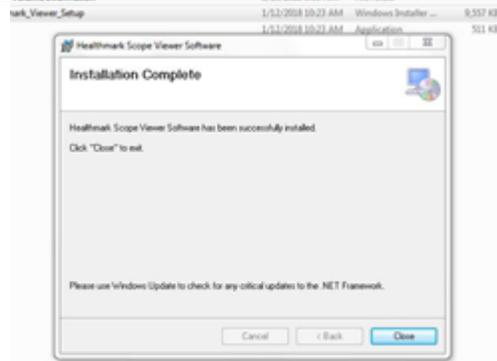
9. The Confirm Installation page pops up, click 'Next>'.



10. Installing Healthmark Scope Viewer Software is being installed.



11. Installation Complete Screen comes up and click 'Close'.



12. Once the installation is complete, remove the USB.



13. Then take the round cable connector and plug into the top of the Flexible Inspection Scope.



14. Plug in the USB Connector to the USB port in your computer.



#### **VERIFYING OPERATION**

##### **IMAGE-**

1. Open the Healthmark Viewer Software on the computer. An image from the camera should appear on the computer monitor.



2. If the image does not appear true white when the camera is pointed at a white object, direct the Distal Camera toward a solid white object such as a blank white sheet of paper. Press the White Balance (WB) Button on the Flexible Inspection Scope and release when the image on your monitor appears white.



Before



After

#### ILLUMINATION

1. The illumination capability of the Flexible Inspection Scope can be verified prior to use. Once the scope is connected to the computer with the power on, the distal tip of the Flexible Inspection Scope will cast visible light from its tip and can be observed on any surface to which it is directed. The Flexible Inspection Scope will default to the minimum light intensity setting when started. To adjust the lighting, press (in increments or hold) the Brightness Increase (+) Button or Brightness Decrease (-) Button on the Flexible Inspection Scope.

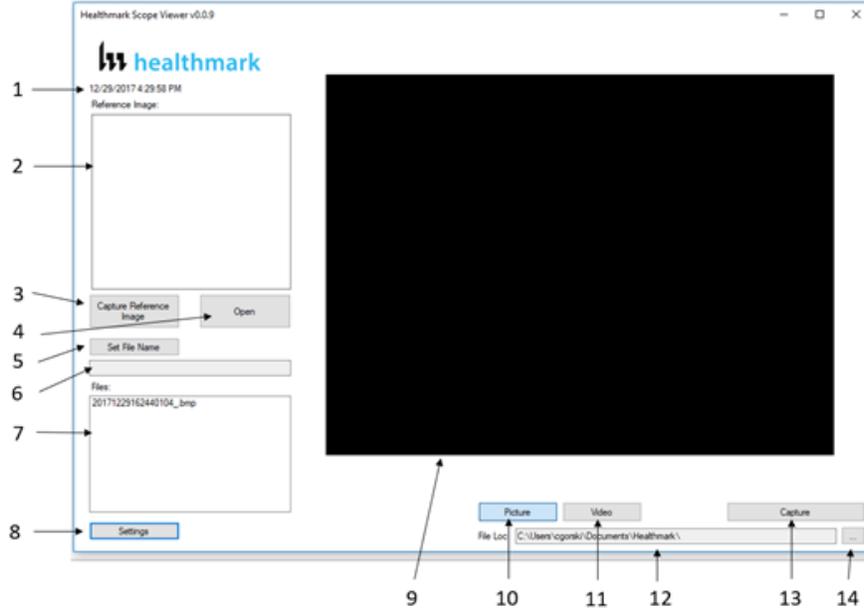


#### Healthmark Viewer Software Fig. 1

1. Date and Time Display
2. Reference Image Window- Displays a Reference Image.
3. Capture Reference Image Button- Captures still image being displayed in the Main Image Window.
4. Open Button- Opens the file location (File Loc) where images are being saved and allows you to select image that is displayed in Reference Image Window.
5. Set File Name Button- Click to identify a default name that will be included with the file name when capturing images.
6. File Name Box- Text box creating a File Name.
7. Files Box- Displays captured images that are routed and stored in the area being shown in File Loc.
8. Settings Button- Click to select the video camera and resolution settings.
9. Main Image Window- Displays the image from the camera.
10. Picture Button- Click to select the picture option when capturing still images.
11. Video Button- Click to select the video option when capturing video images.

12. File Loc Button- Location where captured images are being saved.
13. Capture Button- Option to click for capturing images. Also used to start/stop video images.
14. Ellipse Button- Opens window for browsing file locations to save images.

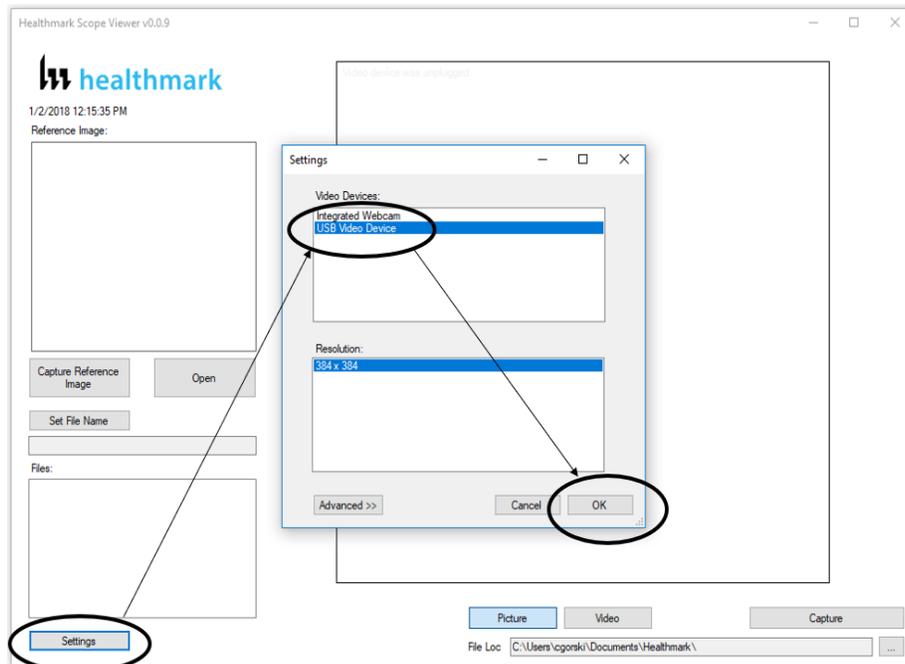
**Figure 1**



**Selecting the Video Device or Camera Fig. 2**

1. Click the 'Settings' Button in the lower left of the Healthmark Scope Viewer Software to display video devices or cameras that are being detected by your computer.
2. Select a device for capturing images using the Healthmark Scope Viewer.
  - A. The example below shows an Integrated Webcam and USB Video Device on the computer. Select the USB Video Device for the Flexible Inspection Scope.
3. Click 'OK' to view the selected Video Device.

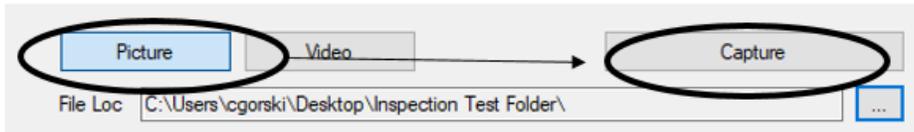
**Figure 2**



**Capturing Still Pictures**

1. Select the 'Picture' Button on the software. **Fig. 3**

**Figure 3**



2. Use any of the following options to capture an image:
  - A. Click 'Capture' on the Healthmark Viewer Software. **Fig. 3**
  - B. Press the Handpiece Capture Image Button on the Flexible Inspection Scope.
  - C. Press the spacebar on your computer keyboard.

**NOTE:** When an image is captured, "Picture Captured" in red text will flash on the lower portion of the screen and a new file will appear in the Files Box. **Fig. 4**

**Figure 4**



**Capturing Video Images**

1. Select the 'Video' Button on the Software. **Fig. 5**

**Figure 5**



2. Use any of the following options to start and stop the video:
  - A. Click the 'Capture' Button on the Healthmark Viewer Software. **Fig. 5**
  - B. Press the Handpiece Capture Button on the Flexible Inspection Scope.
  - C. Press the spacebar on the computer keyboard.
3. When the video is recording, "Recording" in red text will appear toward the bottom of the software window. **Fig. 6**
4. To stop recording, use any method as described in Step 2 above for starting the video. **NOTE:** The Image Capture Button will now read 'Stop Video' while recording. **Fig. 6**

**Figure 6**



**Displaying Reference Image**

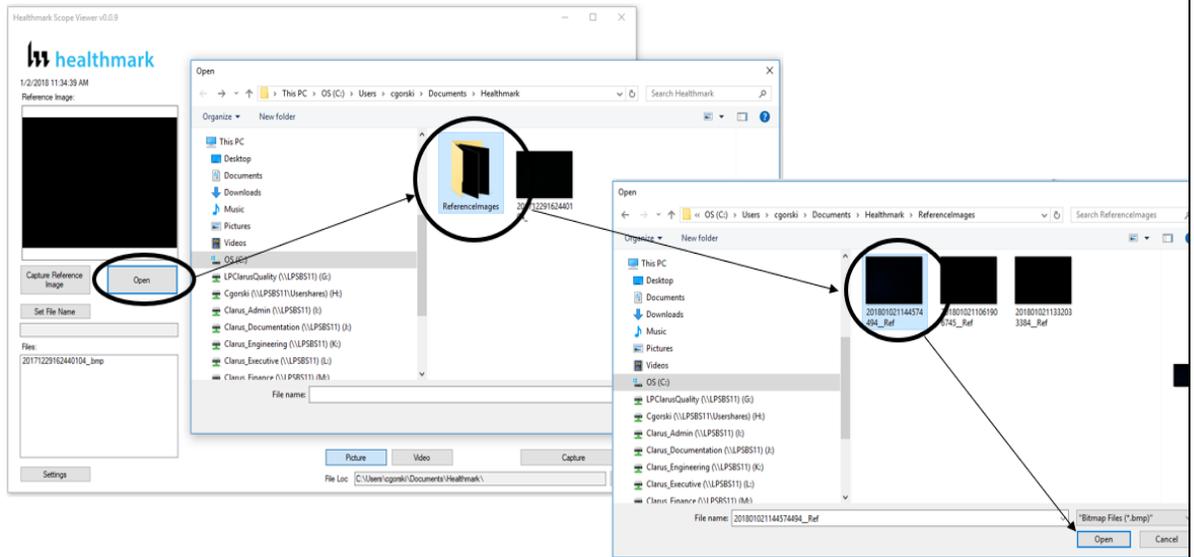
1. To display an image currently being displayed in the Main Image Window, click 'Capture Reference Image' Button. **NOTE:** The images will be saved in a file folder titled "Reference Images" in the designated File Loc. **Fig. 7**



**Figure 7**

2. To display a saved image in the Reference Image Window from your File Loc:
  - A. Click the 'Open' Button. **Fig. 8**
  - B. Click on the Reference Images Folder.
  - C. Select the file that you would like to display.
  - D. Click the 'Open' Button, to display the image in the Reference Image Window.

**Figure 8**



**Setting File Name**

1. Click 'Set File Name' Button. **Fig. 9**
2. Enter the characters that you would like to be included in file name. **Fig. 9A**
3. Click the 'OK' Button to set as default name.

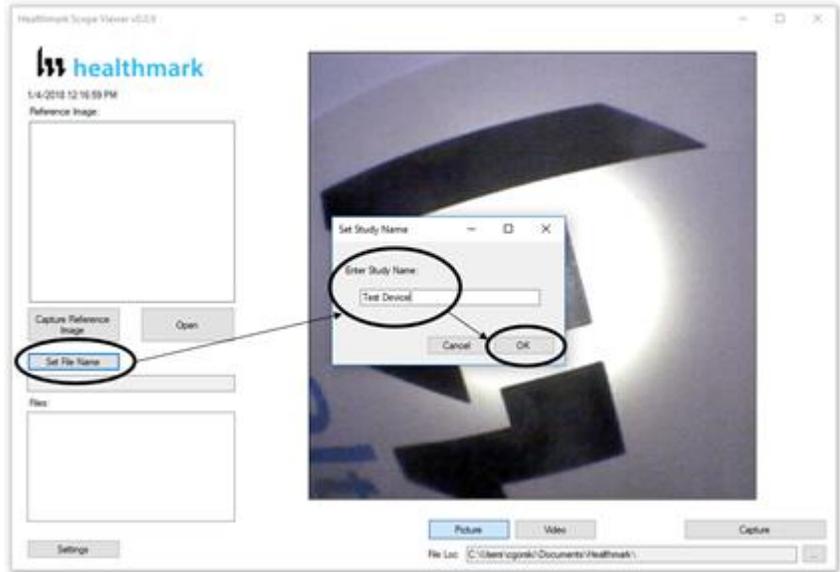


Figure 9

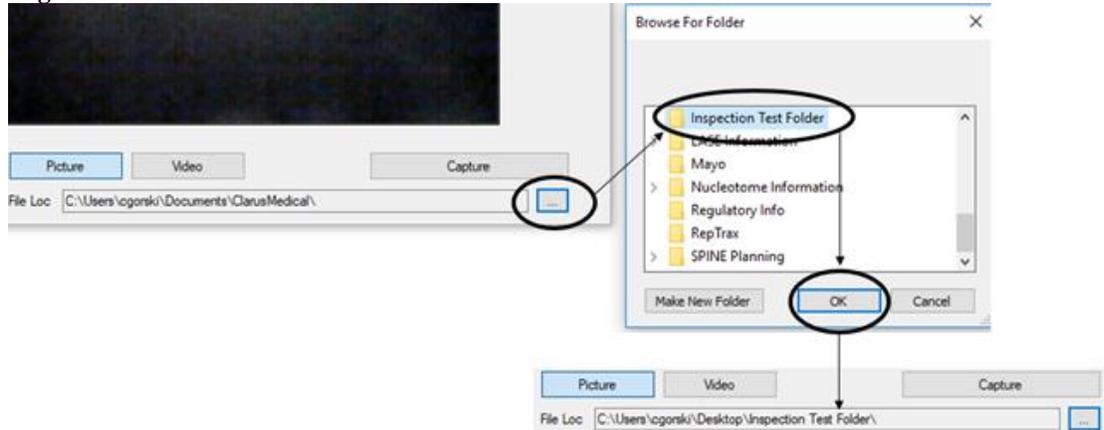


Figure 9A

**Setting Location for Saved Files**

1. Click the Ellipse Button. **Fig. 10**
2. Select the file location where you would like to save captured images.
3. Click 'OK' to set the File Loc for saved files.

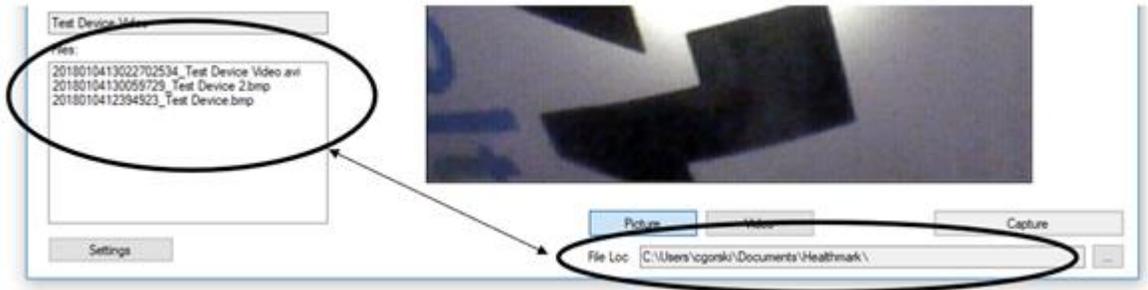
**Figure 10**



### Deleting Saved Files

The Files Window **Fig. 11** in the Healthmark Viewer displays image files that are being stored in the File Loc **Fig. 11**. To delete files, go to the location (shown in the File Loc) on the computer, outside of the Healthmark Viewer Software.

**Figure 11**



### Creating New Folder Location for Saved Files (Move before Deleting)

1. Click the Ellipse Button. **Fig. 12**
2. Click the 'Make New Folder' Button.
3. Create a name for the new folder.
4. Click the 'OK' Button to create the new file in File Loc.

**Figure 12**



### Diagrams (drawings, pictures)



**Figure 1**



**Figure 2**

### Steps for Use of Product

#### PERFORMING INSPECTION

1. Secure the Flexible Inspection Scope into an arm fixture (optional).
2. Grasp the Flexible Inspection Scope near its distal end and gently insert the Flexible Working Length into the intended instrument. **Fig. 1**
3. Adjust light on the Flexible Inspection Scope with the plus (+) or minus (-) brightness button for ideal lighting.
4. Use short advancements while keeping your fingers close to the instrument's opening. View the monitor while inserting into the device. If an obstruction hinders the path of the Flexible Inspection Scope, gently attempt to manipulate or rotate the device to avoid the obstacle. **Fig. 2**

	5. Once the Distal End of the scope has reached the end of the area that is being inspected, retract the scope slowly while looking for debris or damage.
<b>Interpretation of Results</b>	
<b>Contraindications of Test Results</b>	
<b>Documentation</b>	
<b>Special Warnings and Cautions</b>	<ul style="list-style-type: none"> <li>● Do not attempt to use the Flexible Inspection Scope if it appears to be damaged.</li> <li>● The Flexible Inspection Scope is <b>NOT STERILE</b>. Follow the instruction for cleaning, disinfecting and sterilizing provided in this document.</li> <li>● Do not autoclave or dry heat the Flexible Inspection Scope.</li> <li>● Avoid looking directly at the light emitted from the distal end when the scope is powered on.</li> <li>● Do not bend device beyond a 0.85” (21.6mm) radius; this may cause damage to the device.</li> <li>● Do not apply excessive force to the Flexible Inspection Scope. If there is resistance, or an obstruction hinders the path of the scope, gently attempt to manipulate or rotate the device to avoid the obstacle. Also, slowly withdraw a short distance and try advancing again.</li> <li>● Applying excessive force to the scope past an obstacle can result in damage to the device.</li> <li>● Avoid rubbing against sharp edges, as this can also damage the device.</li> <li>● Do not clean, disinfect, or sterilize the Flexible Inspection Scope or its accessories using an ultrasonic cleaner, washer sanitizer, washer pasteurizer, washer sterilizer, steam autoclave, or any method with a processing temperature above 60°C (140°F).</li> </ul>
<b>Disposal</b>	

<b>Reprocessing Instructions</b>	
<b>Point of Use</b>	
<b>Preparation for Decontamination</b>	
<b>Disassembly Instructions</b>	Disconnect the Camera Cable from the Flexible Inspection Scope prior to cleaning.
<b>Cleaning – Manual</b>	<p><b>NOTE:</b> Place the Soaking Cap on the Camera Connector prior to soaking the Flexible Inspection Scope. Repeated exposure to fluids will corrode the contacts of the Camera Connector.</p> <ol style="list-style-type: none"> <li>1. Unplug and disconnect all components from the Flexible Inspection Scope prior to cleaning.</li> <li>2. Secure the Soaking Cap on the Flexible Inspection Scope Camera Connector.</li> <li>3. Place the scope in a bath of enzymatic detergent and soak the device for the duration specified by the manufacturer (in fluid up to 1 meter for up to 30 Minutes).</li> <li>4. Wipe thoroughly with low linting wipe and moistened with facility approved neutral detergent. Use the appropriate brushes with detergent solution to remove any residues from areas that cannot be reached with the wipes.</li> <li>5. Rinse with low linting wipe moistened with AAMI Utility Water for 45 to 60 seconds, dry with low linting wipe.</li> </ol>
<b>Cleaning – Automated</b>	
<b>Disinfection</b>	<ul style="list-style-type: none"> <li>● The Flexible Inspection Scope can be submerged with a secured cap and processed in an AER.</li> <li>● The Flexible Inspection Scope Camera Cable is not waterproof and may be cleaned with facility approved Isopropyl Alcohol wipes. Do not soak camera cable.</li> </ul>
<b>Drying</b>	
<b>Maintenance, Inspection, and Testing</b>	<ul style="list-style-type: none"> <li>● Inspect the Flexible Inspection Scope for signs of wear or damage.</li> <li>● No serviceable parts within the Flexible Inspection Scope. No user maintenance beyond cleaning is required. Refer all service or replacement needs to the manufacturer.</li> <li>● Inspect the external surfaces of the Flexible Inspection Scope and any accessories to assure they are smooth and free of any protrusions or sharp edges.</li> </ul>
<b>Reassembly Instructions</b>	
<b>Packaging</b>	
<b>Sterilization</b>	
<b>Storage</b>	<ul style="list-style-type: none"> <li>● Store the instrument no higher than 60°C or lower than -20°C.</li> <li>● Store the equipment in a clean, dry and ventilated location.</li> </ul>

<b>Additional Information</b>	If upon inspecting an item it is determined not to be clean, reprocess according to the manufacturer's instruction for use.
<b>Related Healthmark Products</b>	Video Inspection Scope with Display, optical inspection products.
<b>Other Product Support Documents</b>	ProSys™ Brochure, ProSys™ Price List
<b>Reference Documents</b>	
<b>Customer Service Contact</b>	Healthmark Industries Company, Inc 33671 Doreka Fraser, MI 48026 1-586-774-7600 <a href="mailto:healthmark@hmark.com">healthmark@hmark.com</a> <a href="http://hmark.com">hmark.com</a>

2018-05-22 Suzanne Latta