

The Problem

Undetected Damaged Light Fibers in Flexible Endoscopes

Flexible endoscopes are fragile and complex instruments that must be handled with care, as the light fibers in the insertion tube and universal cord can be damaged easily by both physical trauma and fluid invasion.

Image quality matters, and high quality images from flexible endoscopes contribute to patient safety and clinical care. Damaged fibers may also indicate further damage to the endoscope; a contamination risk. However, during the extensive inspections including on leak testing and visual inspection, damaged light fibers are often overlooked. Early intervention is critical for both patient safety and endoscope repair, as small problems can lead to major, catastrophic damage to your endoscope over time.^{1,2}

References/Bibliography

¹ Dix K, Infection Control Today Magazine 2008, *Scope Cleaning and Repair: Top 10 Ways to Keep Scopes Happy*, accessed 5 May 2020, < <https://www.infectioncontroltoday.com/sterile-processing/scope-cleaning-and-repair> >

² Total Scope, Inc. n.d., "Hard" vs. "Easy" Scope Repairs, accessed 12 May 2020, < <https://www.totalscopeinc.com/hard-vs-easy-scope-repairs/> >



The Solution

Fast and objective Light Transmission and Light Spectrum measurements for Flexible Endoscopes

The MedZense LG20-Flex is a universal light transmission testing solution for flexible endoscopes. We have combined the MedZense LG20 (for testing light guide cables) with the new MedZense PT11 to allow light transmission measurements for flexible endoscopes. This is the first light transmission testing solution for hospitals to objectively and efficiently assess the light transmittance quality of flexible endoscopes across the visible light spectrum.

The MedZense LG20-Flex allows the reprocessing technician to identify problems with the light fibers. As the light fibers are easily damaged by both physical trauma and fluid invasion, the MedZense LG20-Flex serves as an additional tool to inspect and secure the overall quality of the flexible endoscope.

Regular quality inspections on the light fibers of your flexible endoscopes highly contributes to preventing low quality medical instruments reaching the patient, and to early detection of low cost repairs; resulting in better light and contrast during medical procedures and ultimately decreasing patient risks, delays and costs.



The Benefits

- + Documented objective light transmission inspection for flexible endoscopes.
- + Increased quality of equipment used in procedures, improving patient safety.
- + All major types of fittings are supported.
- + Test light transmission across the full visible light spectrum.
- + Test flexible endoscopes of all diameters up to 16mm.
- + Adjustable acceptance and rejection criteria.
- + Designed and engineered in the Netherlands.
- + Compatible with MedZense IQM Platform.



The System

The MedZense LG20-Flex can be connected via USB to the MedZense IQM (Instrument Quality Management) Platform to collect and analyze the test results on instrument level.

The MedZense LG20-Flex consists of:
MedZense LG20 Light Transmission main testdevice
MedZense PT11 - Testing probe for testing flexible endoscopes
Disposable testing tubes

Disinfection vs Sterilization:

Since flexible endoscopes are usually not fully sterilized but disinfected during reprocessing, regular quality tests could potentially be a source of cross-contamination. The MedZense LG20-Flex requires the use of a disposable testing tube to prevent cross-contamination.

