

# EndoBenchXT/XTB™



Verify  
endoscope  
image quality  
before and  
after repair



EndoBenchXT



EndoBenchXTB

Endobench XT and XTB enables medical and service professionals to quantitatively measure and verify clinically relevant optical characteristics of rigid and flexible endoscopes.



**Lighthouse Imaging**

Because precision is everything

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EndoBenchXT/XTB is an endoscope image quality test system for scope manufacturing and repair QC testing, suitable for high production work environments. The instrument consists of a custom designed opto-mechanical system and software to evaluate and report the parameters that are central to a clinical environment. Adapters and fixtures are included for measuring rigid, flexible and video endoscopes.



## EndoBenchXT™

EndoBench improves the quality of endoscopes by:

- Measure scopes when new, before and after repair
- Provides quantitative measurement data for tracking scopes in medical equipment inventory
- Meets Joint Commission tracking requirement
- Ensure optimal image quality for rigid and flexible endoscopes

## EndoBenchXTB™

EndoBenchXTB is configured as a bench-mounted system for users that do not require portability and prefer a heavy-duty opto-mechanical assembly. Base model includes:

- EndobenchXTB test bench system w/rail assembly and components
  - Machine vision computer (HP) – Windows 7 OS
  - Endobench v9.1 software; SQL (Access) database; Excel file support
  - 15 inch touch screen display
  - System connection modules (2 ea.) and cabling
  - Keyboard (packed in foam sleeve)
  - Accessories (contained in case)
    - Schott LED Light Source w/ power supply and RS-232 Adapter w/Cable & Light Cable (Lightguide, Light Guide Adapter)
    - Source Adapters - Instrument Adaptor(s) – 4 each
  - 17mm Diopter Scale Coupler, 27mm Diopter Scale Coupler, 40mm Diopter Scale Coupler
  - USB Hub, power supply, and Interface Cable
  - Binder (book) of targets
- Optional components include:**
- Fixture for mounting camera at offset or off-axis position for measuring offset or angled rigid scopes
  - Digital encoder for direction of view (DOV) and field of view (FOV) measurements
  - Side-load scope tip mount for small diameter or flexible scopes
  - Diopter at infinity - measurement of eyepiece diopter error for object at infinity
  - Eyepiece runout – measures image wander when scope is rotated in video coupler

### Specifications

**Diameters:** 2 -16mm

**Lengths:** 90 - 635mm

**Angles of view:** 50°-140° Field of view, -30°-115° direction of view

**Endoscope types that can be tested:**

Rigid endoscopes (laparoscopes, arthroscopes, etc.), flexible fiberoptic endoscopes, video endoscopes (with VCR/NTSC output)

**Available measurements:**

MTF (image sharpness), image optics transmission and uniformity, fiberoptics brightness and distribution, coloration, distortion, eyepiece diopter error, real and apparent field of view, direction of view

### We set a higher standard

Lighthouse Imaging Corporation is a leading provider of optical engineering and design services for the medical device industry.

We design, develop and manufacturer optical assemblies for the medical device industry and are the leading provider of test and measurement equipment for verifying the optical quality of endoscopes.

Lighthouse Imaging is an ISO 13485:2003 and ISO 9001:2008 certified, FDA registered medical device manufacturer specializing in minimally invasive surgical applications.



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