

ri-cam

Riester

The familiar way



Ergonomic and Compact

Compact, easy-to-handle 1CCD camera system. The integrated electronic of the camera head provides an outstanding image quality. The ergonomic camera head and TV adapter have been designed to be used with sterile sheaths and gloves.

Anti-Moiré Version (optional)

Recommendable for the use with the flexible naso-pharyngoscope. With opto-electronic anti-Moiré filter.

Data transfer

The **ri-cam** in connection with the **ri-capture** grabbing-box and a digital USB 2.0 interface a high image quality. This connection to a PC* provides the user the unlimited possibilities of the digital image and video processing at a fair price.

* MDD (Medical Device Directive) compatible PC with Windows 2000 (SP 4), Windows XP (SP 1) and USB 2.0/1.0 Interface, 2 GHz or more.

ENT- Endoscopy

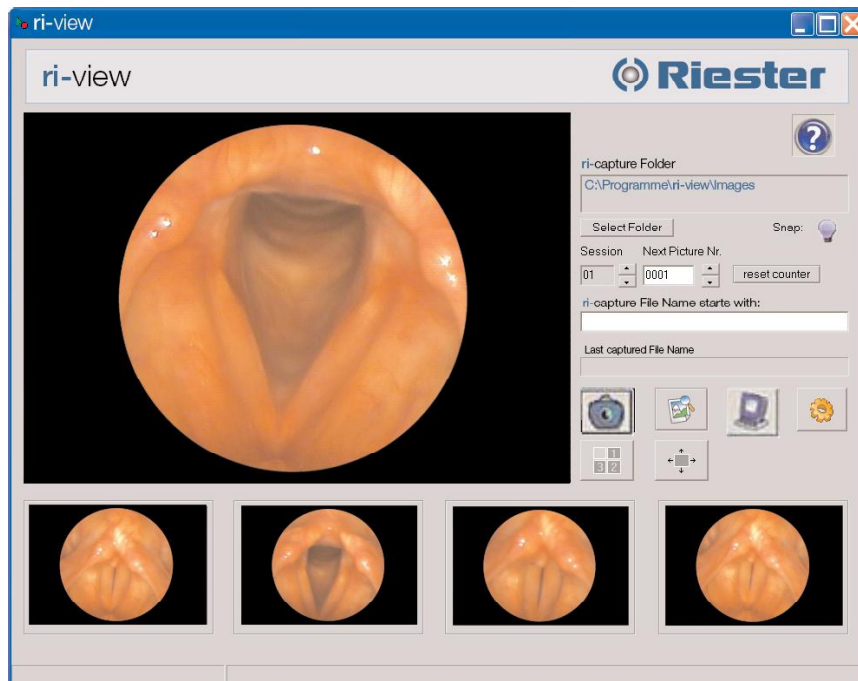
ri-cam



The familiar way

ri-view-easy processing of images

Accessory for ri-capture with digital USB 2.0 interface to display and to store endoscopic images. User friendly software and simple installation.



Picture recording by mouse click, alt. by camera functionkey.



Picture-survey



Video-options



Program-images



Survey of 4 images



Full screen picture

Main-display:
Live video-images, previous 4 memorized images, data-file options



Benefits

- ➔ Viewing of pictures by available software.
- ➔ Standard version is included by the delivery of ri-capture with USB 2.0 interface.
- ➔ DirectX/DirectShow compatible.
- ➔ Compatible with WIN 2000 (SP4) and XP (SP1).
- ➔ Telecontrol by camera-function key (in combination with ri-cam, ri-capture and PC 2 GHz or higher)

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Subject to alterations

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The logo for ri-cam, featuring the text "ri-cam" in a blue sans-serif font. The "ri" is in a lighter blue, and "cam" is in a darker blue. The logo is set against a light gray background within an orange-bordered box.The Riester logo, consisting of a blue circular icon with a white dot in the center, followed by the word "Riester" in a bold blue sans-serif font. Below it, the tagline "The familiar way" is written in a smaller, lighter blue sans-serif font.

Technical Data

| | | |
|---------------------|---------------------------------------------|-------------------------------------------------|
| - Operation control | Hand piece: | White balance/window function, function key |
| | Image sensor: | 1/3" CCD |
| - Camera head | Image resolution (lines): | 470 (H) x 420 (V) PAL 470 (H) x 350 (V) NTSC |
| | Image resolution (pixels): | 440.000 (PAL)/380.000 (NTSC) |
| | Light sensitivity: | 2 Lx/f = 1.4 |
| | Endoscope coupler: | Standard eye piece, C-mount, detachable |
| | Focal length TV adapter: | f = 23 mm |
| - System | Acc. guideline Med. Prod. 93/42 EWG Class 1 | |
| | Electromagn. compatibility: | EN 60601-1 |
| | Classification: | BF/CE mark |
| | Power connection: | 100-240 V AC, 50/60 Hz |
| | Power consumption: | 2 VA |
| | Separate power supply | |
| - Dimensions/Weight | Camera head: | 135 x 50 mm (L x ø) |
| | Camera cable: | 3 m |
| | Weight camera head: | 300 g |

Disinfection

by liquid disinfectant

Anti-Moiré function

The anti-Moiré filter provides optimization of image quality for the use of image bundle endoscopes to reduce artefacts significantly.

(Image processing by ri-cam requires ri-capture video-grabbing system!)

ri-cam PAL + ri-capture + ri-view

No. 3940

ri-cam PAL anti-Moiré + ri-capture + ri-view

No. 3941

NTSC -versions on demand.

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ri-cam



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ri-capture

The **ri-capture** video grabbing system provides image processing of **ri-cam**. The smartbox can be connected with the PC (USB 2.0) or alternatively with a conventional video system (FBAS) and the camera. The **ri-view** software delivers live images which can be stored as single images by pressing the function key. Thus this combination offers an easy upgrade of an analogue camera to a digital image processing system.



Benefits

- Conversion of an analogue video signal into a digitized USB 2.0 signal.
- "Plug and Play" without assembly.
- Easiest installation even for non PC specialists.
- Use of complete **ri-view** software functional range.
- Compatible to MS-Windows image processing Software via TWAIN and DirectX interface.
- PAL/NTSC compatible.

Delivery

- **ri-view** software cd with drivers
- Smartbox (video grabber) W x H x D: 80 x 35 x 170 mm
- (Outputs: 1 x USB 2.0, 1 x Video (FBAS))
- USB cable
- Instruction manual

Requirements

- PC or notebook with at least 512 MB RAM;
USB 2.0 interface and > 2 GHz processor
- Windows 2000 (SP4 or higher)
Windows XP (SP1 or higher)
- **ri-cam**

ENT- Endoscopy

Light sources

Cold- light devices



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Xenon cold-light devices for endoscopes with fibre optic - light conductor.

Xenon Cold-light Projector XL 24

High performance cold-light source

• **Technical data:**

- Dimensions: W 175 x H 82.5 x D 202 mm.
- Protective class BF.
- Weight 2.5 kg.
- Light conductor connection: Standard type Storz, interchangeable.
- Lamp: 24 watt xenon short arc lamp with cold-light reflector, (service life approx. 500 hours).
- Colour temperature: 5500° K.
- Light control: Infinitely variable via dimmer at constant colour temperature and even fibre illumination.
- Power consumption: 50 W.



Xenon Cold-light Projector XL 100

High performance cold-light source

• **Technical data:**

- Dimensions: W 355 x H 110 x D 347 mm.
- Protective class BF.
- Weight 9.5 kg.
- Light conductor connection: Standard type Storz, interchangeable.
- Lamp: 100 watt xenon short arc lamp with elliptical cold-light reflector, (service life approx. 500 hours).
- Colour temperature: 5600° K.
- Light control: Electrical, precise via membrane keyboard at constant colour temperature and even fibre illumination.
- Power connection: alterable 230 V/120 V.
- Power consumption: 185 W.



ENT- Endoscopy

Light sources

Cold- light devices



Disinfection

Caution: Pull out the mains plug before cleaning!

All external surfaces of the instrument (casing, front plate, rear panel) are non-reactive to all common cleaning and disinfecting agents, so that these may be used without restriction. A soft cloth or absorbent paper should be used to apply cleaning or disinfecting liquids, in order to avoid scratching the surface and to dose and spread out the liquid better.

Do not simply pour and then spread out the cleaning and disinfecting agents on the casing. Especially liquids which are inflammable, such as alcohol, should be measured out using a cloth. Do not allow any liquid to run inside the device. After cleaning with an inflammable liquid, allow the device to dry for at least 1 hour before it is switched on again. Otherwise there is a danger of an explosive mixture of air and cleaning agent igniting when switching the instrument on.

Order numbers

Xenon Cold-light Projector XL 24

No. 6301 230 V
No. 6306 120 V

Xenon Cold-light Projector XL 100

No. 6302 230 V/120V

Accessories

Light conductor

No. 12147 Ø 4.8 mm Working length 1800 mm connectors standard type Storz

Replacement lamps

No. 12133 xenon 24 W 1 item
No. 12134 xenon 100 W 1 item

Adapters

No. 12126 Adapter type Storz,
for CL-cable projector side.
No. 12127 Adapter type Wolf,
for CL-cable projector side.
No. 12128 Adapter type Olympus New,
for CL-cable projector side.
No. 12129 Adapter type ACM British,
for CL-cable projector side.
No. 12130 Adapter type Pentax,
for CL-cable projector side.
No. 12131 Adapter type Fuji,
for CL-cable projector side.

Replacement fuses

No. 12140 Precision fuse, slow-blow 5 x 20 mm
for XL 24, 230 V, 1 AT
No. 12141 Precision fuse, slow-blow 5 x 20 mm
for XL 24, 120 V, 2 AT
No. 12142 Precision fuse, slow-blow 5 x 20 mm
for XL 100, 230 V, 2.5 AT
No. 12143 Precision fuse, slow-blow 5 x 20 mm
for XL 100, 120 V, 5 AT

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Light sources Handles



Light-intensive LED handles for mobile applications of endoscopes. 3 Watt LED lamps with 5500° Kelvin reference colour temperature and Li-batteries or Li-Ion rechargeable batteries provide a reliable and efficient supply of light without cable or light-conductor.

Handles



Battery handles Type C without batteries

- With rheostat
- Handle diameter: 28 mm.
- Easy to charge in the ri-charger® L charging base.
- Without adapter

for Li-ion rechargeable battery ri-accu® L

No. 10670

for Li batteries

No. 10630

Li-ion rechargeable battery ri-accu® L

No. 10691

3.5 V



Li battery (2 pieces)

No. 11287



Battery handles Type AA without batteries

- With rheostat
- Handle diameter: 19 mm.
- Easy to charge in the ri-charger® L charging base.
- Without adapter

for Li-ion rechargeable battery ri-accu® L

No. 10642

for Li batteries

No. 10643

Li-ion rechargeable battery ri-accu® L

No. 10690

3.5 V



Li battery (2 pieces)

No. 11287



Charging base



ri-charger® L

complete, with wall holder

No. 10705

230 V

- For all rechargeable handles with Li-ion batteries, 120 V + 230 V

No. 10706

120 V

Accessories

Replacement lamp 3,5V/3 Watt

No. 12148

Adapter type ACMI

No. 12149

Other adapters - on demand

Light sources ri-former®



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The modular wall-station for up to 5 handles for 120 or 230 V

- For adapter with 3,5V/3 watt LED lamps with 5500° Kelvin reference colour temperature
- Automatic switch on/off of the rheostat-handles when removing or replacing them in the station
- Spiral cord expandable up to 3 m
- Digital clock



Diagnostic station ri-former®



Diagnostic station ri-former® 1 handle

- Without adapter.
- Complete with wall mounting plate, plugs, screws, and assembly plan.

with clock

No. 3650

3.5 V/230 V

No. 3651

3.5 V/120 V



Diagnostic station ri-former® 2 handles

- Without adapter.
- Complete with wall mounting plate, plugs, screws, and assembly plan.

with clock

No. 3650-300

3.5 V/230 V

No. 3651-300

3.5 V/120 V

Handle modules



Extension module, 1 handle

No. 300

- For expanding the ri-former® base module.
- Complete with wall mounting plate, plugs, screws, and assembly plan.

Accessories

Replacement lamp 3,5V/3 Watt

No. 12148

Adapter type ACMI

No. 12149

Other adapters - on demand

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ENT- Endoscopy

Sinusscopes



The familiar way

The fibre-optic of the sinusscopes enables at small dimensions a high contrast as well as high resolved images for a perfect and patient-friendly diagnosis.

- High performance optic.
- Cold light source or LED illumination.
- High mechanical capacity by application of high-quality materials reduces the risk of damages and repair-services.
- Tested according to medical compatibility and autoclaving.
- HD-Ready.



Technical data

| | | |
|---------------------|--------------------|------------|
| Art.No. 3904 | Diameter: | 2.7 mm |
| | Working length: | 187 mm |
| | Viewing direction: | 0° |
| | Viewing angle : | standard |
| Art.No. 3905 | Diameter: | 2.7mm |
| | Working length: | 187 mm |
| | Viewing direction: | 30° |
| | Viewing angle : | standard |
| Art.No. 3906 | Diameter: | 4.0 mm |
| | Working length: | 175 mm |
| | Viewing direction: | 0° |
| | Viewing angle : | wide angle |
| Art.No. 3907 | Diameter: | 4.0 mm |
| | Working length: | 175 mm |
| | Viewing direction: | 30° |
| | Viewing angle : | wide angle |

Adapter Types (included): ACMI, Wolf and Storz

Sterilization

by autoclave, 134 °C / 273 °F, 18 min.

ENT-Endoscopy

Otoscope



Riester

The familiar way

The otoscope, made for ear-diagnosis, enables by its small dimensions a patient-friendly examination and diagnostic images of highest quality.

- High performance optic.
- Cold light source or LED illumination.
- High mechanical capacity by application of high-quality materials reduces the risk of damages and repair-services.
- Specula holder for Riester L1/L2 ear-specula.



Technical data

| | |
|--------------------|-----------------------|
| Diameter: | 2,7 mm |
| Working length: | 34 mm |
| Viewing direction: | 0° |
| Viewing angle: | wide angle |
| Specula: | Riester specification |

Adapter types (included): ACMI, Wolf and Storz

Disinfection

by liquid disinfectant

Order numbers

| | |
|--------------|-----------------|
| Otoscope | No. 3920 |
| Ear-specula: | ri-scope L1/L2 |

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ENT-Endoscopy

Naso-Pharyngoscope



Flexible precision-endoscope with high performance optic.

Engineered for highest standards and daily requirements. A long life period is guaranteed by the high resolved bundle-light, combined with mechanical components of high precision and a sturdy construction. The highest quality requirements are complied by the bundle-light with 10.000 pixels and the multi-lenses objective.



Technical data

Image bundle 10.000 pixel Min.

Working length 300 mm

Working Diameter 3,8 mm

Flexibility of distal end 2 x 125°

Length of bendable distal end 25 mm

Min. bending-radius 30 mm

Viewing direction 0°

Viewing angle 90°

Depth of focus 5 mm until infinity

Weight 255 g

Adapter types (included): ACMI, Wolf and Storz

Disinfection/Sterilization

In liquid disinfectant

Gas-sterilizable

Order numbers

Naso-Pharyngoscope 3,8 mm incl. case
Test device to verify sealing of flexible tube

no. 3900
no. 1360.007

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Tele-Laryngo-Pharyngoscope



The Tele-Laryngo-Pharyngoscope offers 2 different magnifications and a very high optical performance during the examination.

- Excellent images, significant depth of focus
- High performance illumination
- 2 different magnifications: panoramic view and view of details
- Integrated air channel to avoid condensation (with Luer-Lock connection)



Technical data

Working diameter: 10 mm
Working length: 153 mm fix
Viewing direction: 90°
Working distance: 15 mm to infinity

Adapter types (included): ACMI, Wolf and Storz

Disinfection/Sterilization

In liquid disinfectant
Gas-sterilizable

Order number:

Tele-Laryngo-Pharyngoscope no. 3930

ENT- Endoscopy

Laryngo-Pharyngoscope



The Laryngo-Pharyngoscope offers detailed pictures with a high contrast and very high optical performance during the examination.

- Excellent images, significant depth of focus
- High performance illumination
- Panoramic view



Technical data

Working diameter: 10 mm
Working length: 165 mm fix
Viewing direction: 90°
Working distance: 15 mm to infinity

Adapter types (included): ACMI, Wolf and Storz

Disinfection/Sterilization

In liquid disinfectant
Gas-sterilizable

Order number:

Laryngo-Pharyngoscope no. 3931

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