e-scope®
green efficiency
green efficiency
3.7V LED illumination and conventional alkaline batteries – an almost impossible combination up to now. Not just pie in the sky, but state of the art. The new e-scope® is the perfect blend of leading-edge LED technology, more efficient diagnosis and an environment-friendly energy source. Because the e-scope® breaks new ground with its world innovation, the IPC (Integrated Power Converter): younger, smarter and greener.

The innovative potential of the e-scope®

- LED technology for otoscopes and ophthalmoscopes with low-reflection, bright and white light. The pure white light (approx. 5,500 K) ensures colour-neutral illumination in addition to improved colour differentiation, thereby aiding more efficient diagnosis in comparison with halogen or xenon bulbs.
LED illumination

For uniform illumination of the examination field with pure white light (5500 K). The LED illumination shows colours as they really are. Helpful for efficient diagnostics plus an almost unlimited service life.

**green efficiency**

- Low maintenance costs thanks to long LED and battery service lives. Whilst the service life of a xenon light source is only approx. 20 hours, LED burns for at least 20,000 hours, i.e. over 2 years at a go – with e-scope®, even with two conventional AA batteries.

- Particularly high environment-friendliness, for the newly developed IPC in the e-scope® always converts the voltage of simple alkaline batteries into the optimum voltage required for LED operation, resulting in battery lives of around 50 operating hours.

Its optimum values in all these fields make the e-scope® a pioneering pocket instrument for flexible diagnosis.
AA batteries deliver a maximum 3V. However, a 3.7V voltage means that considerably more efficient LEDs can be used. Incompatible technical prerequisites? Not anymore. With the IPC, Riester has succeeded in producing a development that revolutionises illumination of pocket instruments. Because the tiny IPC inside the e-scope® always converts the voltage of conventional AA-size batteries into the optimum voltage supply for LEDs, thereby allowing efficient operation of LED illumination with alkaline batteries. As a result, the IPC not only allows optimum light quality, but also provides economic and ecological benefits. The service life of a light-emitting diode is therefore up to 1,000 times longer than that of xenon illumination and the batteries used in the e-scope® are discharged considerably more thoroughly thanks to the IPC; consequently, they do not need to be disposed of and replaced as often.
Continuous improvement has always been Riester’s claim. With the new e-scope®, a further step has been successfully taken towards optimum illumination, environment-friendlyliness and profitability.

**e-scope®**

**SIMPLY MORE INTELLIGENT**

3.7 V LED, 2.5 V xenon or vacuum illumination

Fibre optics

3x magnifying pivoting lens

Reusable or disposable ear speculum

Pneumatic test connection

On/off switch

Battery compartment and ABS synthetic material casing

3.7 V LED, 2.5 V xenon or vacuum illumination

Dioptre display

Dioptre adjustment wheel

Aperture wheel

Spectacle protection

Dust-protected casing
e-scope®

PRODUCT RANGE

**e-scope® otoscopes** are available with halogen or vacuum direct illumination, F.O. xenon or F.O. LED

- Sealing precision optics pivotable to both sides with triple magnification for optimum view
- Sturdy ear speculum receptacle in hardwearing hygienic metal for e-scope®/ri-scope® L1/L2 speculum
- Compatible with ear speculæ from other renowned manufacturers
- Suitable for performance of pneumatic tests (supplied without connector and insufflator)
- Available in a choice of black or white finish

**e-scope® otoscope with fibre optics (F.O.)**

- Economically priced fibre optic version with 2.5 V xenon (3200 K) or innovative 3.7 V LED illumination (5500 K)
- Fibre optics for optimum focusing and guiding of the light

**e-scope® otoscope with direct illumination**

- Inexpensive basic model with low-reflection direct illumination with a 2.7 V vacuum bulb (2500 K) or xenon illumination (3000 K)

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** Kelvin data for otoscopes and ophthalmoscopes**

<table>
<thead>
<tr>
<th>LED</th>
<th>Xenon</th>
<th>Halogen</th>
<th>Vacuum</th>
</tr>
</thead>
<tbody>
<tr>
<td>5500 K</td>
<td>3200 K</td>
<td>3000 K</td>
<td>2500 K</td>
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</tbody>
</table>

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**e-scope® otoscope F.O.**
Fibre optics with 2.5 V xenon or 3.7 V LED illumination ensure an unimpeded, free view

**e-scope® otoscope with direct illumination**
Minimised-reflection, economically priced direct illumination with 2.5 V xenon or 2.7 V vacuum illumination

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**e-scope®**

OTOSCOPES
**e-scope®**

**PRODUCT RANGE**

**e-scope®** ophthalmoscopes are available with vacuum, xenon or LED illumination.

- With 2.7V vacuum or 2.5V xenon illumination and with innovative 3.7V LED illumination for higher-contrast and more efficient diagnosis
- Dioptre disc with 18 corrective lenses (+/- 1, 2, 3, 4, 6, 8, 10, 15, 20 dioptres)
- Easy-to-use aperture wheel with six different apertures (fixation star, large circle, small circle, red free filter, blue filter, semi circle)
- High performance optics with aspherical condenser lens
- Spectacle protection
- Parallel optical path
- Dust-protected

**Optical path**

Corneal and iris reflexes are avoided by separation of the parallel observation and illumination beams (Gullstrand’s principle). The illuminated retinal area is fully visible – even with narrow pupils. Optimum conditions are achieved for ophthalmological examinations.

**Apertures**

With easy-to-use aperture wheel

<table>
<thead>
<tr>
<th>Aperture</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixation star</td>
<td>Red free filter</td>
</tr>
<tr>
<td>Large circle</td>
<td>Blue filter</td>
</tr>
<tr>
<td>Small circle</td>
<td>Semi circle</td>
</tr>
</tbody>
</table>

**Healthy fundus**

**Pathological fundus**

**Fundus with red free filter**

**Dioptre disc**

With 18 corrective lenses

<table>
<thead>
<tr>
<th>Dioptre</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>D+</td>
<td>1, 2, 3, 4, 6, 8, 10, 15, 20</td>
</tr>
<tr>
<td>D-</td>
<td>1, 2, 3, 4, 6, 8, 10, 15, 20</td>
</tr>
</tbody>
</table>
e-scope® otoscopes and ophthalmoscopes are available in an impact-resistant case or in a space-saving bag. They include special inserts in which the instruments can be perfectly stowed and offer adequate space for the battery handle and ear speculums.

### e-scope® Otoscope with Direct Illumination

- **Vacuum 2.7 V, in bag**
  - white: Art. No.: 2100-200
  - black: Art. No.: 2101-200
- **XL 2.5 V, in bag**
  - white: Art. No.: 2100-201
  - black: Art. No.: 2101-201

### e-scope® F.O. Otoscope

- **XL 2.5 V, in case**
  - white: Art. No.: 2110-202
  - black: Art. No.: 2111-202
- **LED 3.7 V, in case**
  - white: Art. No.: 2110-203
  - black: Art. No.: 2111-203

### e-scope® Ophthalmoscope

- **Vacuum 2.7 V, in bag**
  - white: Art. No.: 2120-200
  - black: Art. No.: 2121-200
- **XL 2.5 V, in case**
  - white: Art. No.: 2122-201
  - black: Art. No.: 2123-201
- **LED 3.7 V, in case**
  - white: Art. No.: 2122-203
  - black: Art. No.: 2123-203

### e-scope® Otoscope with Direct Illumination / Ophthalmoscope

- **Vacuum 2.7 V, in bag**
  - white: Art. No.: 2130-200
  - black: Art. No.: 2131-200

### e-scope® F.O. Otoscope / Ophthalmoscope

- **XL 2.5 V, in case**
  - white: Art. No.: 2130-202
  - black: Art. No.: 2131-202
- **LED 3.7 V, in case**
  - white: Art. No.: 2130-203
  - black: Art. No.: 2131-203
### Reusable ear speculums
- 2 mm: 10 items, Art. No.: 10775
- 2.5 mm: 10 items, Art. No.: 10779
- 3 mm: 10 items, Art. No.: 10783
- 4 mm: 10 items, Art. No.: 10789
- 5 mm: 10 items, Art. No.: 10795

### Disposable ear speculums
- 2 mm: 100 items, Art. No.: 14061-532
- 2.5 mm: 100 items, Art. No.: 14061-531
- 3 mm: 100 items, Art. No.: 14061-533
- 4 mm: 100 items, Art. No.: 14061-534
- 5 mm: 100 items, Art. No.: 14061-535

### Pneumatic test accessories
- Insufflator, Art. No.: 10960
- Metal connector for the pneumatic test, Art. No.: 10961

### Replacement bulbs
- **for e-scope® F.O. otoscope**
  - XL 2.5V, pack containing 6 items, Art. No.: 10600
  - LED 3.7V, Art. No.: 14041
- **for e-scope® otoscope with direct illumination**
  - Vacuum 2.7V, pack containing 6 items, Art. No.: 10488
  - XL 2.5V, pack containing 6 items, Art. No.: 10489
- **for e-scope® ophthalmoscope**
  - Vacuum 2.7V, pack containing 6 items, Art. No.: 14050
  - XL 2.5V, pack containing 6 items, Art. No.: 10605
  - LED 3.7V, Art. No.: 14051