



With white stage plate



With black stage plate

## EDUCATIONAL LINE

The small robust model for school, training establishment or workshops

### Features

- The KERN OSE-4 is a very robust, stable and easy to use stereo microscope.
- This model is optimally suited to schools, workshops and training establishments.
- It displays extremely good optical characteristics for its class, allowing clear images over its broad field of view.
- The model-dependent LED illumination reliably ensures good illumination at all times.
- The multitude of objective combinations and eyepieces are all you can wish for.
- The eyepieces are fixed in the tube to protect them against loss or damage.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

### Technical data

- Optical system: Greenough
- Tube: 45° inclined
- Interpupillary distance: 55 – 75 mm
- Diopter adjustment (one-sided)
- Packing dimensions WxDxH 295x162x345 mm

#### OSE 410 / OSE 411

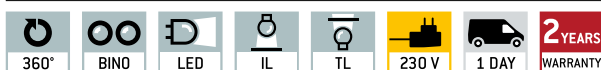
- Net weight approx. 1,75 kg

#### OSE 413 / OSE 414 / OSE 416 / OSE 417

- Net weight approx. 2,25 kg

Please find detailed information in the following charts.

STANDARD































| Model          | Standard configuration |                |                  |           |              |  |
|----------------|------------------------|----------------|------------------|-----------|--------------|--|
|                | Tube                   | Eyepiece       | Field of view mm | Objective | Stand        | Illumination                                   |
| <b>KERN</b>    |                        |                |                  |           |              |  |
| <b>OSE 410</b> | Binocular              | WF 10x Ø 20 mm | Ø 20             | 1x / 3x   | Pillar style | -  |
| <b>OSE 411</b> | Binocular              | WF 10x Ø 20 mm | Ø 20             | 2x / 4x   | Pillar style | -  |
| <b>OSE 413</b> | Binocular              | WF 10x Ø 20 mm | Ø 20             | 1x / 3x   | Pillar style | 0,21W LED (incident)                           |
| <b>OSE 414</b> | Binocular              | WF 10x Ø 20 mm | Ø 20             | 2x / 4x   | Pillar style | 0,21W LED (incident)                           |
| <b>OSE 416</b> | Binocular              | WF 10x Ø 20 mm | Ø 20             | 1x / 3x   | Pillar style | 0,21W LED (incident); 0,21W LED (transmitting) |
| <b>OSE 417</b> | Binocular              | WF 10x Ø 20 mm | Ø 20             | 2x / 4x   | Pillar style | 0,21W LED (incident); 0,21W LED (transmitting) |

| Eyepiece         | Specifications – Objectives |       |       |       |       |
|------------------|-----------------------------|-------|-------|-------|-------|
|                  | Magnification               | 1x    | 2x    | 3x    | 4x    |
| WF 5x            | Total magnification         | 5x    | 10x   | 15x   | 20x   |
|                  | Field of view mm            | Ø 20  | Ø 10  | Ø 6,7 | Ø 5   |
| WF 10x           | Total magnification         | 10x   | 20x   | 30x   | 40x   |
|                  | Field of view mm            | Ø 20  | Ø 10  | Ø 6,7 | Ø 5   |
| WF 15x           | Total magnification         | 15x   | 30x   | 45x   | 60x   |
|                  | Field of view mm            | Ø 15  | Ø 7,5 | Ø 5   | Ø 3,7 |
| WF 20x           | Total magnification         | 20x   | 40x   | 60x   | 80x   |
|                  | Field of view mm            | Ø 10  | Ø 6,5 | Ø 4,3 | Ø 3,2 |
| Working distance |                             | 57 mm | 57 mm | 57 mm | 57 mm |

| Model outfit          |   | Model KERN |         |         |         |         |         | Order number |  |
|-----------------------|---|------------|---------|---------|---------|---------|---------|--------------|--|
|                       |   | OSE 410    | OSE 411 | OSE 413 | OSE 414 | OSE 416 | OSE 417 |              |  |
| Eyepieces             | WF 5x / Ø 16,2 mm   | ○          | ○       | ○       | ○       | ○       | ○       | OZB-A4101    |  |
|                       | WF 10x / Ø 20 mm  | ●          | ●       | ●       | ●       | ●       | ●       | OZB-A4102    |  |
|                       | WF 15x / Ø 15 mm  | ○          | ○       | ○       | ○       | ○       | ○       | OZB-A4103    |  |
|                       | WF 20x / Ø 10 mm  | ○          | ○       | ○       | ○       | ○       | ○       | OZB-A4104    |  |
| Stands                | Pillar style, without illumination  | ●          | ●       |         |         |         |         |              |  |
|                       | Pillar style, with 0,21W LED illumination (incident)  |            |         | ●       | ●       |         |         |              |  |
|                       | Pillar style, with 0,21W LED illumination (transmission + incident)   |            |         |         |         | ●       | ●       |              |  |
| Stage plate           | Black-white / Ø 59,5 mm   | ●          | ●       | ●       | ●       |         |         | OZB-A4816    |  |
|                       | Frosted glass / Ø 95 mm   |            |         |         |         | ●       | ●       | OZB-A4805    |  |
|                       | Black-white / Ø 95 mm   |            |         |         |         | ●       | ●       | OZB-A4806    |  |
| External illumination | Please find the information about external illumination units in the catalogue from page 68 and on the internet |            |         |         |         |         |         |              |  |

● = Standard configuration

○ = Option

|   |  |  |   |   |   |
|---|--|--|---|---|---|
| <br>360°  | <b>360° rotatable microscope head</b>  | <br>FL-HB0    | <b>Fluorescence illumination for compound microscopes</b><br>With 100 W mercury lamp and filter   | <br>AUTO<br>ATC          | <b>Automatic temperature compensation</b><br>For measurements between 10 °C and 30 °C                                 |
| <br>MONO  | <b>Monocular Microscope</b><br>For the inspection with one eye   | <br>FL-LED    | <b>Fluorescence illumination for compound microscopes</b><br>With 3 W LED illumination and filter | <br>IP                   | <b>Protection against dust and water splashes IPxx</b><br>The type of protection is shown by the pictogram.           |
| <br>BINO  | <b>Binocular Microscope</b><br>For the inspection with both eyes   | <br>PH        | <b>Phase contrast unit</b><br>For a higher contrast   | <br>BATT                 | <b>Battery operation</b><br>Ready for battery operation. The battery type is specified for each device.               |
| <br>TRINO | <b>Trinocular Microscope</b><br>For the inspection with both eyes and the additional option for the connection of a camera | <br>POLAR     | <b>Polarising unit</b><br>To polarise the light   | <br>ACCU                 | <b>Rechargeable battery pack</b><br>Rechargeable set.   |
| <br>ABBE  | <b>Abbe Condenser</b><br>With high numerical aperture for the concentration and the focusing of light                      | <br>INFINITY  | <b>Infinity system</b><br>Infinity corrected optical system                                       | <br>230 V                | <b>Mains adapter</b><br>230V/50Hz in standard version for EU. On request GB, AUS or USA version.                      |
| <br>HAL   | <b>Halogen illumination</b><br>For pictures bright and rich in contrast  | <br>ZOOM      | <b>Zoom magnification</b><br>For stereomicroscopes  | <br>230 V                | <b>Power supply</b><br>Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.   |
| <br>LED   | <b>LED illumination</b><br>Cold, energy saving and especially long-life illumination                                       | <br>PARALLEL  | <b>Parallel optical system</b><br>For stereomicroscopes, enables fatigue-proof working            | <br>DAYS                 | <b>Package shipment</b><br>The time required to manufacture the product internally is shown in days in the pictogram. |
| <br>IL   | <b>Incident illumination</b><br>For non-transparent objects  | <br>SCALE    | <b>Integrated scale</b><br>In the eyepiece  | <br>3 YEARS<br>WARRANTY | <b>Warranty</b><br>The warranty period is shown in the pictogram.   |
| <br>TL  | <b>Transmitting illumination</b><br>For transparent objects  | <br>USB 2.0 | <b>Integrated USB 2.0 digital camera</b><br>For direct transmitting of the picture to a PC        |   |   |
| <br>FL  | <b>Fluorescence illumination</b><br>For stereomicroscopes  | <br>USB 3.0 | <b>Integrated USB 3.0 digital camera</b><br>For direct transmitting of the picture to a PC        |   |   |

## Abbreviations

|                |   |                   |   |             |  |
|----------------|---|-------------------|---|-------------|--|
| <b>C-Mount</b> | Adapter for the connection of a camera to a trinocular microscope             | <b>N.A.</b>       | Numerical Aperture  | <b>W.D.</b> | Working Distance   |
| <b>H(S)WF</b>  | High (Super) Wide Field (Eyepiece with high eye point for wearers of glasses) | <b>SLR Kamera</b> | Single-Lens Reflex camera   | <b>WF</b>   | Wide Field (Field number up to Ø 22 mm for 10x eyepiece) |
| <b>LWD</b>     | Long Working Distance   | <b>SWF</b>        | Super Wide Field (Field number at least Ø 23 mm for 10x eyepiece) |             |  |

## Your KERN specialist dealer: