

## Stereo zoom microscope KERN OZM-5



### LAB LINE

First-class optics and strong illumination combined with a high level of flexibility

#### Features

- The KERN OZM series is a range of excellent stereo zoom microscopes with above-average optical features
- The ergonomic shape allows a simple, effortless working over a period of several hours
- The extraordinarily strong and continuously dimmable 3 W LED reflected and transmitted illumination ensures a flexible and particularly good level of illumination for your sample
- With its large working distance, an extra large field of view and its brilliant resolution, the KERN OZM provides sharp, high-contrast, colour-true images
- The zoom objective gives you continuous magnification from 7,5×–45×
- There is a choice of a binocular model as well as a trinocular model for connecting a camera for documentation purposes and for quality reports
- The pillar stand is particularly flexible due to its variable and sturdy adjustment mechanism and therefore enables ergonomic working procedures
- A large selection of eyepieces, (universal) stands, a darkfield kit, external illumination units as well as auxiliary objectives and more are available as accessories
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- A C-mount adapter is required to connect a camera to the trinocular version. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

#### Scope of application

- In vitro fertilisation, detection of parasites, zoology and botany, tissue preparation, section, quality control, electronics and semiconductor industry, assembly and repair

#### Applications/Samples

- Samples with focus on three-dimensional impression, zoom with variable magnification (depth, thickness), e.g. insects, seeds, circuit boards, components

#### Technical data

- Optical system: Greenough optics
- Brightness adjustable (separate)
- Tube 45° inclined
- Magnification ratio: 6,4:1
- Light distribution OZM 543/544: 50:50
- Interpupillary distance 52 – 76 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H  
330×285×440 mm
- Net weight approx. 4,5 kg

#### STANDARD



#### OPTION



| Model          | Standard configuration |                  |                     |                   |              |   |  |
|----------------|------------------------|------------------|---------------------|-------------------|--------------|---|--|
|                | Tube                   | Eyepiece         | Field of view<br>mm | Objective<br>Zoom | Stand        | Illumination                              |  |
| <b>KERN</b>    |                        |                  |                     |                   |              |   |  |
| <b>OZM 542</b> | Binocular              | HSWF 10×/ø 23 mm | ø 32,8 – 5,1        | 0,7× – 4,5×       | Pillar style | 3 W LED (incident); 3 W LED (transmitted) |  |
| <b>OZM 544</b> | Trinocular             | HSWF 10×/ø 23 mm | ø 32,8 – 5,1        | 0,7× – 4,5×       | Pillar style | 3 W LED (incident); 3 W LED (transmitted) |  |

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| Eyepiece                     | Specifications - Objectives |                  |                      |               |                |              |
|------------------------------|-----------------------------|------------------|----------------------|---------------|----------------|--------------|
|                              | Magnification               | Standard<br>1,0× | Auxiliary objectives |               |                |              |
|                              |                             |                  | 0,5×                 | 0,7×          | 1,5×           | 2×           |
| HSWF 10×                     | Total magnification         | 7× - 45×         | 3,5× - 22,5×         | 4,9× - 31,5×  | 10,5× - 67,5×  | 14× - 90×    |
|                              | Field of view mm            | ∅ 32,8 - 5,1     | ∅ 65,7 - 10,2        | ∅ 46,9 - 7,3  | ∅ 21,9 - 3,4   | ∅ 16,4 - 2,6 |
| SWF 15×                      | Total magnification         | 10,5× - 67,5×    | 5,3× - 33,8×         | 7,4× - 47,2×  | 15,8× - 101,3× | 21× - 135×   |
|                              | Field of view mm            | ∅ 24,3 - 3,8     | ∅ 48,6 - 7,6         | ∅ 34,7 - 5,4  | ∅ 16,2 - 2,5   | ∅ 12,1 - 1,9 |
| SWF 20×                      | Total magnification         | 14× - 90×        | 7× - 45×             | 9,8× - 63×    | 21× - 135×     | 28× - 180×   |
|                              | Field of view mm            | ∅ 20 - 3,1       | ∅ 40 - 6,2           | ∅ 28,6 - 4,4  | ∅ 13,3 - 2,1   | ∅ 10 - 1,6   |
| SWF 30×                      | Total magnification         | 21× - 135×       | 10,5× - 67,5×        | 14,7× - 94,5× | 31,5× - 202,5× | 42× - 270×   |
|                              | Field of view mm            | ∅ 12,9 - 2       | ∅ 25,7 - 4           | ∅ 18,4 - 2,9  | ∅ 8,6 - 1,6    | ∅ 6,4 - 1    |
| <b>Working distance</b>      |                             | 110 mm           | 195 mm               | 145 mm        | 50 mm          | 35 mm        |
| <b>Maximum sample height</b> |                             | 130 mm           | 30 mm                | 65 mm         | 160 mm         | 175 mm       |

| Model outfit                                    |   | Model KERN |         | Order number |  |
|---|---|------------|---------|--------------|--|
|   |   | OZM 542    | OZM 544 |              |  |
| Eyepieces<br>(30,0 mm)                          | HSWF 10×/∅ 23 mm  | ✓✓         | ✓✓      | OZB-A5503    |  |
|   | SWF 15×/∅ 17 mm   | ○○         | ○○      | OZB-A5504    |  |
|   | SWF 20×/∅ 14 mm   | ○○         | ○○      | OZB-A5505    |  |
|   | SWF 30×/∅ 9 mm  | ○○         | ○○      | OZB-A5506    |  |
|   | HSWF 10×/∅ 23 mm (reticule 0,1 mm)  | ○          | ○       | OZB-A5512    |  |
|   | SWF 15×/∅ 17 mm (reticule 0,05 mm)  | ○          | ○       | OZB-A5513    |  |
|   | SWF 20×/∅ 14 mm (reticule 0,05 mm)  | ○          | ○       | OZB-A5514    |  |
| Achromatic<br>auxiliary objectives              | 0,5×  | ○          | ○       | OZB-A5612    |  |
|   | 0,7×  | ○          | ○       | OZB-A5613    |  |
|   | 1,5×  | ○          | ○       | OZB-A5615    |  |
|   | 2,0×  | ○          | ○       | OZB-A5616    |  |
|   | Soldering protection lens   | ○          | ○       | OZB-A5614    |  |
| C-Mount   | 0,3× (focus adjustable)   |            | ○       | OZB-A5701    |  |
|   | 0,5× (focus adjustable)   |            | ○       | OZB-A5702    |  |
|   | 1,0× (focus adjustable)   |            | ○       | OZB-A5703    |  |
|   | 1,0× (with micrometer) only in combination with OZB-A5703   |            | ○       | OZB-A5704    |  |
|   | for SLR cameras (Nikon)   |            | ○       | OZB-A5706    |  |
|   | for SLR cameras (Olympus)   |            | ○       | OZB-A5707    |  |
|   | for SLR cameras (Canon)   |            | ○       | OZB-A5708    |  |
| Darkfield unit                                  | Darkfield unit  | ○          | ○       | OZB-A4601    |  |
| Object clamp                                    | Object clamp  | ○          | ○       | OB-B-A6205   |  |
| Stand   | Pillar style, without illumination  |            |         |              |  |
|   | Pillar style, with 3 W LED illumination (transmitted + incident)  | ✓          | ✓       |              |  |
|   | Please find more stands in the catalogue on page 77 and on the internet                                       |            |         |              |  |
| Stage plate                                     | Frosted glass/∅ 94,5 mm   | ✓          | ✓       | OZB-A5192    |  |
|   | Black-white/∅ 94,5 mm   | ✓          | ✓       | OZB-A5191    |  |
|   | Glass/∅ 94,5 mm   | ○          | ○       | OZB-A5190    |  |
| Mechanical stage<br>(Pre-assembling on request) | Stage size W×D 188×160 mm, Travel 76×65 mm, for transmitted and incident illumination                         | ○          | ○       | OZB-A5781    |  |
|   | Stage size W×D 180×175 mm, Travel 100×86 mm, for incident illumination only                                   | ○          | ○       | OZB-A5782    |  |
| External illumination                           | Please find the information about external illumination units in the catalogue on page 82 and on the internet |            |         |              |  |

✓ = Included with delivery

○ = Option

## Pictograms

|  |   |   |
|--|---|---|
| <b>360° rotatable microscope head</b>  | <b>Fluorescence illumination for compound microscopes</b><br>With 3 W LED illumination and filter | <b>WLAN data interface</b><br>For transmitting of the picture to a mobile display device                              |
| <b>Monocular Microscope</b><br>For the inspection with one eye   | <b>Phase contrast unit</b><br>For a higher contrast   | <b>HDMI digital camera</b><br>For direct transmitting of the picture to a display device                              |
| <b>Binocular Microscope</b><br>For the inspection with both eyes   | <b>Darkfield condenser/unit</b><br>For a higher contrast due to indirect illumination             | <b>PC software</b><br>To transfer the measurements from the device to a PC.   |
| <b>Trinocular Microscope</b><br>For the inspection with both eyes and the additional option for the connection of a camera | <b>Polarising unit</b><br>To polarise the light   | <b>Automatic temperature compensation</b><br>For measurements between 10 °C and 30 °C                                 |
| <b>Abbe Condenser</b><br>With high numerical aperture for the concentration and the focusing of light                      | <b>Infinity system</b><br>Infinity corrected optical system                                       | <b>Protection against dust and water splashes IPxx</b><br>The type of protection is shown by the pictogram.           |
| <b>Halogen illumination</b><br>For pictures bright and rich in contrast  | <b>Zoom magnification</b><br>For stereomicroscopes  | <b>Battery operation</b><br>Ready for battery operation. The battery type is specified for each device.               |
| <b>LED illumination</b><br>Cold, energy saving and especially long-life illumination                                       | <b>Parallel optical system</b><br>For stereomicroscopes, enables fatigue-proof working            | <b>Battery operation rechargeable</b><br>Prepared for a rechargeable battery operation                                |
| <b>Incident illumination</b><br>For non-transparent objects  | <b>Integrated scale</b><br>In the eyepiece  | <b>Mains adapter</b><br>230V/50Hz in standard version for EU. On request GB, AUS or USA version.                      |
| <b>Transmitting illumination</b><br>For transparent objects  | <b>SD card</b><br>For data storage  | <b>Power supply</b><br>Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.   |
| <b>Fluorescence illumination for stereomicroscopes</b>   | <b>USB 2.0 digital camera</b><br>For direct transmitting of the picture to a PC                   | <b>Package shipment</b><br>The time required to manufacture the product internally is shown in days in the pictogram. |
| <b>Fluorescence illumination for compound microscopes</b><br>With 100 W mercury lamp and filter                            | <b>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>LWD</b> Long Working Distance            | <b>SWF</b> Super Wide Field (Field number at least $\varnothing$ 23 mm for 10 $\times$ eyepiece) |
| <b>FPS</b> Frames per second  | <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 camera</b> Single-Lens Reflex camera | <b>WF</b> Wide Field (Field number up to $\varnothing$ 22 mm for 10 $\times$ eyepiece)           |

**Your KERN specialist dealer:**