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-dimesnional 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: 100:0
- 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: 360° · BINO · TRINO · LED · IL · TL · ZOOM · 230 V · 1 DAY

OPTION: SCALE

| Model | Standard configuration | | | | | |
|---|---|---|---|---|---|---|
| | Tube | Eyepiece | Field of view | Objective | Stand | Illumination |
| KERN | | | mm | Zoom | | |
| **OZM 542** | 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) |
| **OZM 544** | 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** | **Auxiliary objectives** | | | |
| | | **1,0×** | **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 |
| **Working distance** | | 110 mm | 195 mm | 145 mm | 50 mm | 35 mm |
| **Maximum sample height** | | 130 mm | 30 mm | 65 mm | 160 mm | 175 mm |

| Model outfit | | Model KERN | | Order number |
|---|---|---|---|---|
| | | **OZM 542** | **OZM 544** | |
| **Eyepieces** (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 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 | ○ | ○ | OBB-A6205 |
| **Stand** | Pillar style, without illumination | | | |
| | Pillar style, with 3 W LED illumination (transmitted + incident) | ✓ | ✓ | |
| | Please find more stands in the catalogue on page 84 and on the internet | | | |
| **Stage plate** | Frosted glass/⌀ 94,5 mm | ✓ | ✓ | OZB-A5192 |
| | Black-white/⌀ 94,5 mm | ✓ | ✓ | OZB-A5191 |
| | Clear glass/⌀ 94,5 mm | ○ | ○ | OZB-A5190 |
| **Mechanical stage** (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 87 and on the internet | | | |

**360° rotatable microscope head**

**Monocular Microscope**
For the inspection with one eye

**Binocular Microscope**
For the inspection with both eyes

**Trinocular Microscope**
For the inspection with both eyes and the additional option for the connection of a camera

**Abbe Condenser**
With high numerical aperture for the concentration and the focusing of light

**Halogen illumination**
For pictures bright and rich in contrast

**LED illumination**
Cold, energy-saving and especially long-life illumination

**Incident illumination**
For non-transparent objects

**Transmitting illumination**
For transparent objects

**Fluorescence illumination**
For stereomicroscopes

**Fluorescence illumination for compound microscopes**
With 100 W mercury lamp and filter

**Fluorescence illumination for compound microscopes**
With 3 W LED illumination and filter

**Phase contrast unit**
For a higher contrast

**Darkfield condenser/ unit**
For a higher contrast due to indirect illumination

**Polarising unit**
To polarise the light

**Infinity system**
Infinity corrected optical system

**Zoom magnification**
For stereomicroscopes

**Auto-focus**
For automatic control of the focus level

**Parallel optical system**
For stereomicroscopes, enables fatigue-proof working

**Integrated scale**
In the eyepiece

**SD card**
For data storage

**USB 2.0 interface**
For data transmission

**USB 3.0 interface**
For data transmission

**WIFI data interface:**
For transmitting of the picture to a mobile display device

**HDMI digital camera**
For direct transmitting of the picture to a display device

**PC software**
To transfer the measure-mentsfrom the device to a PC.

**Automatic temperature compesation**
For measurements between 10 °C and 30 °C

**Protection against dust and water splashes IPxx:**
The type of protection is shown in the pictogram cf. DIN EN 60529:2000-09, IEC 60529:1989+A1:1999 +A2:2013

**Battery operation**
Ready for battery operation. The battery type is specified for each device.

**Battery operation rechargeable**
Prepared for a rechargeable battery operation

**Plug-in power supply**
230V/50Hz in standard version for EU.
On request GB, AUS or USA version.

**Integrated power supply unit**
Integrated in microscope. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.

**Package shipment**
The time required to manufacture the product internally is shown in days in the pictogram.

**Pallet shipment**
The time required to manufacture the product internally is shown in days in the pictogram.

## Abbreviations

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