



OZL 451



OZL 453

LAB LINE

Stereo zoom microscope with or without halogen illumination, for the laboratory, training centres, quality control or agriculture

Features

- The KERN OZL-45 stereo zoom microscope series will impress you with its excellent optical characteristics, easy operation and high level of ergonomic working comfort.
- You have the choice of a model with a strong, continuously dimmable halogen reflected and transmitted illumination unit or a model without an integrated light source.
- The high-quality optics, together with a large working surface offers the highest level of comfort for your applications.
- The zoom objective offers you continuous magnification from 7,5×–50×.
- The KERN OZL-45 series is available as a binocular version.
- The pillar stand offers you the highest level of flexibility and the freedom to remove the microscope head and to integrate it into other modular systems, for example into a universal stand.

- A large selection of eyepieces, external illumination units as well as auxiliary objectives are available as accessories.
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery.
- Please find detailed information in the following charts.

Scope of application

- In vitro fertilisation, detection of parasites, zoology and botany, tissue preparation, section, quality control

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
- Tube 45° inclined
- Magnification ratio: 6,7:1
- Interpupillary distance: 55 – 75 mm
- Diopter adjustment: Both-sided

OZL 451

- Overall dimensions W×D×H 330×270×460 mm
- Net weight approx. 5 kg

OZL 453

- Overall dimensions W×D×H 315×285×470 mm
- Net weight approx. 4,5 kg

STANDARD



































| Model | Standard configuration | | | | | |
|----------------|------------------------|------------------|------------------|----------------|--------------|---|
| | Tube | Eyepiece | Field of view mm | Objective Zoom | Stand | Illumination |
| KERN | | | | | | |
| OZL 451 | Binocular | HSWF 10×/ø 23 mm | ø 33 – 5 | 0,75× – 5,0× | Pillar style | 12 V/10 W Halogen (incident) 12 V/10 W Halogen (transmitted) |
| OZL 453 | Binocular | HSWF 10×/ø 23 mm | ø 33 – 5 | 0,75× – 5,0× | Pillar style | – |

| Eyepiece | Specifications - Objectives | | | | |
|------------------|-----------------------------|------------------|----------------------|------------------|--------------|
| | Magnification | Standard 1,0× | Auxiliary objectives | | |
| | | | 0,5× | 1,5× | 2,0× |
| HWF 5× | Total magnification | 3,75× - 25× | 1,875× - 12,5× | 5,625× - 37,5× | 7,5× - 50× |
| | Field of view mm | ∅ 31 - 4,6 | ∅ 61,3 - 9,2 | ∅ 22 - 3,3 | ∅ 16 - 2,5 |
| HSWF 10× | Total magnification | 7,5× - 50× | 3,75× - 25× | 11,25× - 75× | 15× - 100× |
| | Field of view mm | ∅ 33 - 5 | ∅ 65 - 10 | ∅ 22 - 3,3 | ∅ 16 - 2,5 |
| HWF 15× | Total magnification | 11,25× - 75× | 5,625× - 37,5× | 16,875× - 112,5× | 22,5× - 150× |
| | Field of view mm | ∅ 24 - 4,2 | ∅ 48 - 8,5 | ∅ 16 - 2,8 | ∅ 12 - 2 |
| HSWF 20× | Total magnification | 15× - 100× | 7,5× - 50× | 22,5× - 150× | 30× - 200× |
| | Field of view mm | ∅ 20 - 3,5 | ∅ 40 - 7 | ∅ 13,3 - 2,3 | ∅ 10 - 1,8 |
| HWF 25× | Total magnification | 18,75× - 125× | 9,375× - 62,5× | 28,125× - 187,5× | 37,5× - 255× |
| | Field of view mm | ∅ 15,8 - 2,4 | ∅ 31,5 - 4,8 | ∅ 10,5 - 1,6 | ∅ 7,9 - 1,2 |
| Working distance | | 113 mm | 220 mm | 50 mm | 35 mm |

| Model outfit | | Model KERN | | Order number | |
|---|---|------------|---------|--------------|--|
| | | OZL 451 | OZL 453 | | |
| Eyepieces (30,0 mm) | HWF 5×/∅ 23,2 mm | ○ ○ | ○ ○ | OZB-A4112 | |
| | HSWF 10×/∅ 23 mm | ✓ ✓ | ✓ ✓ | OZB-A4118 | |
| | HWF 15×/∅ 15 mm | ○ ○ | ○ ○ | OZB-A4119 | |
| | HSWF 20×/∅ 14,5 mm | ○ ○ | ○ ○ | OZB-A4120 | |
| | HWF 25×/∅ 11,7 mm | ○ ○ | ○ ○ | OZB-A4121 | |
| Auxiliary objectives | 0,5× | ○ | ○ | OZB-A4201 | |
| | 1,5× | ○ | ○ | OZB-A4204 | |
| | 2,0× | ○ | ○ | OZB-A4206 | |
| Stand | Pillar style, with 12 V/ 10 W Halogen Illumination (transmitted + incident) | ✓ | | | |
| | Pillar style, without illumination | | ✓ | | |
| Stage plate | Frosted glass/∅ 95 mm | ✓ | | OZB-A4805 | |
| | Black-white/∅ 95 mm | ✓ | ✓ | OZB-A4806 | |
| Illumination | 12 V/ 10 W spare bulb (transmitted + incident) | ✓ | | OZB-A4804 | |
| Mechanical stage (Pre-assembling on request) | Stage size W×D 180×155 mm, Travel 75×55 mm, for transmitted and incident illumination | ○ | ○ | OZB-A4605 | |
| External illumination | Please find the information about external illumination units in the catalogue from page 81 and on our website www.kern-sohn.com | | | | |

✓ = Included with delivery

○ = Option

| | | | | | |
|---|--|---|---|--|---|
|  360° | 360° rotatable microscope head |  FL-LED | Fluorescence illumination for compound microscopes With 3 W LED illumination and filter |  SD | SD card For data storage |
|  MONO | Monocular Microscope For the inspection with one eye |  PH | Phase contrast unit For a higher contrast |  SOFTWARE | PC software To transfer the measurements from the device to a PC. |
|  BINO | Binocular Microscope For the inspection with both eyes |  DF | Darkfield condenser/unit For a higher contrast due to indirect illumination |  AUTO ATC | Automatic temperature compensation For measurements between 10 °C and 30 °C |
|  TRINO | Trinocular Microscope For the inspection with both eyes and the additional option for the connection of a camera |  POLAR | Polarising unit To polarise the light |  IP | Protection against dust and water splashes IPxx The type of protection is shown by the pictogram. |
|  ABBE | Abbe Condenser With high numerical aperture for the concentration and the focusing of light |  INFINITY | Infinity system Infinity corrected optical system |  BATT | Battery operation Ready for battery operation. The battery type is specified for each device. |
|  HAL | Halogen illumination For pictures bright and rich in contrast |  ZOOM | Zoom magnification For stereomicroscopes |  RECHARGE | Battery operation rechargeable Prepared for a rechargeable battery operation |
|  LED | LED illumination Cold, energy saving and especially long-life illumination |  PARALLEL | Parallel optical system For stereomicroscopes, enables fatigue-proof working |  230 V | Mains adapter 230V/50Hz in standard version for EU. On request GB, AUS or USA version. |
|  IL | Incident illumination For non-transparent objects |  SCALE | Integrated scale In the eyepiece |  230 V | Power supply Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request. |
|  TL | Transmitting illumination For transparent objects |  USB 2.0 | Integrated USB 2.0 digital camera For direct transmitting of the picture to a PC |  1 DAY | Package shipment The time required to manufacture the product internally is shown in days in the pictogram. |
|  FL | Fluorescence illumination For stereomicroscopes |  USB 3.0 | Integrated USB 3.0 digital camera For direct transmitting of the picture to a PC |  3 YEARS WARRANTY | Warranty The warranty period is shown in the pictogram. |
|  FL-HBO | Fluorescence illumination for compound microscopes With 100 W mercury lamp and filter |  HDMI | HDMI digital camera For direct transmitting of the picture to a display device | | |

Abbreviations

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

Your KERN specialist dealer: