#### Stereo zoom microscope KERN OZL-46







OZL 465 With ring illumination



OZL 467 With handle

#### LAB LINE

# The flexible, affordable all-rounder with zoom function for schools, training companies, inspection authorities and laboratories

#### **Features**

- The products in the KERN OZL-46 series are stereo zoom microscopes, which will impress you with their quality, easy handling, flexibility as well as their stability and economical price
- The LED reflected and transmitted illumination included as standard guarantees the very best illumination of your sample
- The highlight of the OZL 465/OZL 466 is the strong, continuously dimmable, integrated LED ring illumination in the objective housing, which ensures uniform, shadow-free illumination. An LED transmitted light variant is also included
- As well as excellent optical characteristics and their large working surface, these models offer the highest level of comfort in this class – ideal for training companies, workshops as well as assembly and repair workstations, e.g. in the electronics industry
- The zoom objective offers you continuous magnification from 7×-45×

- The KERN OZL-46 series is available as a binocular or trinocular 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
- With its integrated handle as well as its stable arm curved stand, the KERN OZL 467/ OZL 468 has been specially developed for schools and workshops
- 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
- 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

#### Applications/Samples

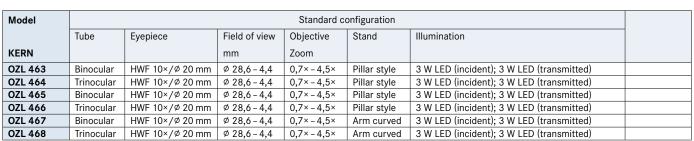
 Samples with focus on three-dimesnional impression, zoom with variable magnification (depth, thickness), e.g. insects, seeds, circuit boards, components

#### **Technical data**

- Optical system: Greenough optics
- · Brightness adjustable (separate)
- Tube 45° inclined
- Magnification ratio: 6,4:1
- Light distribution 50:50
- Interpupillary distance 55 75 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 300×240×420 mm
- · Net weight approx. 4 kg

#### STANDARD







Stereo zoom microscope KERN OZL-46

Eyepiece	Specifications - Objectives										
	Magnification	Standard	Auxiliary objectives								
		1,0×	0,5×	0,75×	1,5×	2,0×					
HSWF 10×	Total magnification	7×-45×	3,5× - 22,5×	5,3×-33,8×	10,5× - 67,5×	14× - 90×					
	Field of view mm	Ø 28,6 – 4,4	Ø 57,1 – 8,9	Ø 38,1 – 5,9	Ø 19-3	Ø 14,3 - 2,2					
HWF 15×	Total magnification	10,5× - 67,5×	5,3×-33,8×	7,9×-50,6×	15,5× - 101,3×	21× - 135×					
	Field of view mm	Ø 21,4 - 3,3	Ø 42,9 - 6,7	Ø 28,5 - 4,4	Ø 14,3 - 2,2	Ø 10,7 – 1,7					
LICWE 20.	Total magnification	14× - 90×	7× - 45×	10,5×-67,5×	21× - 135×	28× - 180×					
HSWF 20×	Field of view mm	Ø 14,3 - 2,2	Ø 28,6 - 4,4	Ø 19,1-2,9	Ø 9,5 – 1,5	Ø 7,1 – 1,1					
HWF 25×	Total magnification	17,5× – 112,5×	8,8×-56,3×	13,1×-91,9×	26,3× - 168,8×	35× - 225×					
	Field of view mm	Ø 12,9 - 2,0	Ø 25,7 – 4,0	Ø 17,2 - 2,7	Ø 8,6 – 1,3	Ø 6,4 – 1,0					
Working distance		105 mm	177 mm	120 mm	47 mm	26 mm					
Maximum sample height		140 mm	35 mm	80 mm	165 mm	185 mm					

Model outfit		Model KERN					Order number	
		OZL 463	OZL 464	OZL 465	OZL 466	OZL 467	OZL 468	
Eyepieces (30,0 mm)	HWF 10×/Ø 20 mm	11	11	11	11	11	11	OZB-A4631
	HSWF 15×/ø 15 mm	00	00	00	00	00	00	OZB-A4632
	HWF 20×/Ø 10 mm	00	00	00	00	00	00	OZB-A4633
	HSWF 25×/ø 9 mm	00	00	00	00	00	00	OZB-A4634
	0,5×	0	0			0	0	OZB-A4641
	0,75×	0	0			0	0	OZB-A4644
Auxiliary objectives	1,5×	0	0			0	0	OZB-A4642
	2,0×	0	0			0	0	OZB-A4643
	Soldering protection lens	0	0			0	0	OZB-A4645
C-Mount	1× (focus adjustable)		✓		✓		✓	OZB-A4809
	0,3× (focus adjustable)		0		0		0	OZB-A4810
	0,5× (focus adjustable)		0		0		0	OZB-A4811
Eyepiece camera adapter	1,0×; for fitting an eyepiece camera to the trinocular connection of the microscope		0		0		0	OZB-A4863
Stand	Pillar style, with 3 W-LED illumination (transmitted + incident)	<b>✓</b>	<b>~</b>					
	Pillar style, with 3 W-LED illumination (transmitted)			✓	<b>✓</b>			
	Arm curved, incl. handle, with 3 W-LED illumination (transmitted + incident)					1	<b>√</b>	
Ring illumination	Integrated into the microscope head as incident illumination			✓	✓			
Stage plate	Frosted glass/Ø 95 mm	✓	✓	✓	✓	✓	1	OZB-A4670
	Black-white/Ø 95 mm	1	1	1	✓	1	1	OZB-A4806
External illumination	Please find the information about external illumination units in the catalogue on page 83 and on the internet  ✓ = Included with delivery  O = Optic							



#### **Pictograms**



360° rotatable





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



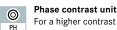
Fluorescence illumination

for compound microscopes USB 2.0 With 100W mercury lamp and filter



Fluorescence illumination for compound microscopes

With 3 W LED illumination and filter



Phase contrast unit



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 digital camera

For direct transmitting of the picture to a PC



USB 3.0 digital camera

For direct transmitting of the picture to a PC



WLAN data interface

For transmitting of the picture to a mobile display device



HDMI digital camera

For direct transmitting of the picture to a display



PC software

To transfer the measurements from 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.

### **Abbreviations**

Adapter for the connection of a C-Mount

camera to a trinocular microscope

LWD Long Working Distance SWF Super Wide Field (Field number at

least Ø 23 mm for 10× eyepiece)

**FPS** Frames per second N.A. Numerical Aperture

Working Distance W.D.

H(S)WF High (Super) Wide Field (Eyepiece with SLR Single-Lens Reflex camera high eye point for wearers of glasses) camera

WF Wide Field (Field number up to Ø 22 mm for 10× eyepiece)

#### Your KERN specialist dealer:



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Use the above details to contact us if this literature doesn't answer all your questions.

Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.





