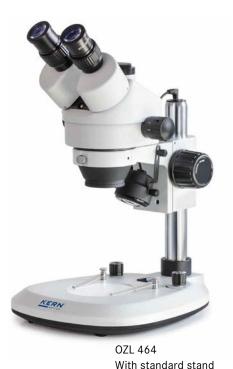
Stereo zoom microscope KERN OZL-46





OZL 465 With ring illumination

LAB LINE

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

### Features

STANDARD

- 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

KER

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

OZL 467

With handle

#### 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

Model				Standard c	onfiguration		
	Tube	Eyepiece	Field of view	Objective	Stand	Illumination	
KERN			mm	Zoom			
OZL 463	Binocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7×-4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	0
OZL 464	Trinocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7×-4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	•
OZL 465 🔤	Binocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7×-4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	
OZL 466 🔤	Trinocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7×-4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	
OZL 467 🔤	Binocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7×-4,5×	Arm curved	3 W LED (incident); 3 W LED (transmitted)	
OZL 468 🔤	Trinocular	HWF 10×/Ø 20 mm	Ø 28,6 - 4,4	0,7×-4,5×	Arm curved	3 W LED (incident); 3 W LED (transmitted)	

**(ERN Optics Catalogue 2018** 

KERN & SOHN GmbH • Ziegelei 1 • 72336 Balingen • Germany • Tel. + 49-[0]7433-9933-0 • Fax + 49-[0]7433-9933-149 • www.kern-sohn.com • info@kern-sohn.com



NEW

### Stereo zoom microscope KERN OZL-46



Eyepiece	Specifications – Objectives									
	Magnification	Standard	Auxiliary objectives							
		1,0×	0,5×	0,75×	1,5×	2,0×				
	Total magnification	7×-45×	3,5×-22,5×	5,3×-33,8×	10,5×-67,5×	14×-90×				
HSWF 10×	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×				
HWF 13^	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				
HSWF 20×	Total magnification	14×-90×	7×-45×	10,5×-67,5×	21×-135×	28×-180×				
H3WF 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				
	Total magnification	17,5× – 122,5×	8,8×-56,3×	13,1×-91,9×	26,3× - 168,8×	35×-225×				
HWF 25×	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	Maximum sample height		35 mm	80 mm	165 mm	185 mm				

WF 10×/Ø 20 mm         SWF 15×/Ø 15 mm         SWF 20×/Ø 10 mm         SWF 25×/Ø 9 mm         5×         75×         5×         5×         5×         5×         5×         5×         5×         5×         5×         5×         5×         5×         5×         5×         5×         5×	OZL 463 ✓✓ ○○○ ○○○ ○○ ○○ ○○ ○○ ○○	0ZL 464 √✓ 000 000 00 0 0	0ZL 465 ✓✓ 000 000 00 0 0	0ZL 466 ✓✓ 000 000 00 0 0	02L 467 ✓✓ 000 000 00	0ZL 468 ✓✓ 000 000 000	OZB-A4631           OZB-A4632           OZB-A4633           OZB-A4634           OZB-A4641           OZB-A4644	
SWF 15×/Ø 15 mm WF 20×/Ø 10 mm SWF 25×/Ø 9 mm 5× 75× 5×	00 00 00 0 0 0	00 00 00 0	00 00 00 0	00 00 00 0	00 00 00 0	00 00 00	OZB-A4632 OZB-A4633 OZB-A4634 OZB-A4641	
VF 20×/Ø 10 mm SWF 25×/Ø 9 mm 5× 75× 5×	00 00 0 0	00 00 0	00 00 0	00 00 0	00 00 0	00 00 0	OZB-A4633 OZB-A4634 OZB-A4641	
5× 5× 75× 5×	00 0 0 0	00 0 0	00 0 0	00 0 0	00 0 0	00	OZB-A4634 OZB-A4641	
5× 75× 5×	0 0 0	0	0	0	0	0	OZB-A4641	
75× 5×	0	0	0	0	0			
5×	0	_	-	-	-	0	OZB-A4644	
	_	0	0				=	
)×	0				0	0	OZB-A4642	
		0	0	0	0	0	OZB-A4643	
(focus adjustable)		✓		~		✓	OZB-A4809	
3× (focus adjustable)		0		0		0	OZB-A4810	
5× (focus adjustable)		0		0		0	OZB-A4811	
lar style, with 3 W-LED illumination ansmitted + incident)	~	~						
lar style, with 3 W-LED illumination ansmitted)			~	~				
m curved, incl. handle, with 3 W-LED illumination ansmitted + incident)					*	•		
egrated into the microscope head as incident illumination			~	~				
osted glass/ø 95 mm	1	✓	1	~	✓	✓	OZB-A4805	
ack-white/Ø 95 mm	✓	✓	✓	✓	✓	✓	OZB-A4806	
	<ul> <li>× (focus adjustable)</li> <li>× (focus adjustable)</li> <li>ar style, with 3 W-LED illumination nsmitted + incident)</li> <li>ar style, with 3 W-LED illumination nsmitted)</li> <li>ar ourved, incl. handle, with 3 W-LED illumination nsmitted + incident)</li> <li>argrated into the microscope head as incident illumination</li> <li>argrated glass/Ø 95 mm</li> <li>ck-white/Ø 95 mm</li> </ul>	<ul> <li>× (focus adjustable)</li> <li>× (focus adjustable)</li> <li>ar style, with 3 W-LED illumination nsmitted + incident)</li> <li>ar style, with 3 W-LED illumination nsmitted)</li> <li>ar style, with 3 W-LED illumination nsmitted)</li> <li>ar style, with 3 W-LED illumination</li> <li>ar style, with 3 W-LED illumination</li> <li>brance definition</li> <li>curved, incl. handle, with 3 W-LED illumination</li> <li>ar style definition</li> <li>brance definition</li> <li>curved, incl. handle, with 3 W-LED illumination</li> <li>brance definition</li> <li>curved, incl. handle, with 3 W-LED illumination</li> <li>curved, incl. handle, with 3 W-LED illumination</li> <li>brance definition</li> <li>curved, incl. handle, with 3 W-LED illumination</li> </ul>	× (focus adjustable)       O         × (focus adjustable)       O         ar style, with 3 W-LED illumination       ✓         nsmitted + incident)       ✓         ar style, with 3 W-LED illumination       ✓         nsmitted)       ✓         ar style, with 3 W-LED illumination       ✓         nsmitted)       ✓         ar style, with 3 W-LED illumination       ✓         sted (incl. handle, with 3 W-LED illumination       ✓         argrated into the microscope head as incident illumination       ✓         sted glass/Ø 95 mm       ✓       ✓         ck-white/Ø 95 mm       ✓       ✓	× (focus adjustable)       O         × (focus adjustable)       O         ar style, with 3 W-LED illumination       ✓         nsmitted + incident)       ✓         ar style, with 3 W-LED illumination       ✓         nsmitted)       ✓         ar style, with 3 W-LED illumination       ✓         nsmitted)       ✓         ar style, with 3 W-LED illumination       ✓         nsmitted)       ✓         ar style, with 3 W-LED illumination       ✓         sted glass/Ø 95 mm       ✓         sted glass/Ø 95 mm       ✓         ck-white/Ø 95 mm       ✓	× (focus adjustable)       O       O         × (focus adjustable)       O       O         × (focus adjustable)       O       O         ar style, with 3 W-LED illumination       ✓       ✓         ar style, with 3 W-LED illumination       ✓       ✓         nsmitted + incident)       ✓       ✓         ar style, with 3 W-LED illumination       ✓       ✓         nsmitted)       ✓       ✓         n curved, incl. handle, with 3 W-LED illumination       ✓       ✓         egrated into the microscope head as incident illumination       ✓       ✓         sted glass/Ø 95 mm       ✓       ✓       ✓         ck-white/Ø 95 mm       ✓       ✓       ✓	× (focus adjustable)       O       O         × (focus adjustable)       O       O         × (focus adjustable)       O       O         ar style, with 3 W-LED illumination       ✓       ✓         ar style, with 3 W-LED illumination       ✓       ✓         nsmitted + incident)       ✓       ✓         ar style, with 3 W-LED illumination       ✓       ✓         nsmitted)       ✓       ✓         n curved, incl. handle, with 3 W-LED illumination       ✓       ✓         nsmitted + incident)       ✓       ✓         argrated into the microscope head as incident illumination       ✓       ✓         sted glass/Ø 95 mm       ✓       ✓       ✓         ck-white/Ø 95 mm       ✓       ✓       ✓	× (focus adjustable)       O       O       O         × (focus adjustable)       O       O       O         × (focus adjustable)       O       O       O         ar style, with 3 W-LED illumination nsmitted + incident)       ✓       ✓       ✓         ar style, with 3 W-LED illumination nsmitted)       ✓       ✓       ✓         n curved, incl. handle, with 3 W-LED illumination nsmitted + incident)       ✓       ✓       ✓         egrated into the microscope head as incident illumination       ✓       ✓       ✓       ✓         sted glass/Ø 95 mm       ✓       ✓       ✓       ✓       ✓       ✓         ck-white/Ø 95 mm       ✓       ✓       ✓       ✓       ✓       ✓       ✓	× (focus adjustable)       O       O       O       O       OZB-A4810         × (focus adjustable)       O       O       O       O       OZB-A4810         × (focus adjustable)       O       O       O       OZB-A4811         ar style, with 3 W-LED illumination       ✓       ✓       ✓       ✓         ar style, with 3 W-LED illumination       ✓       ✓       ✓       ✓         ar style, with 3 W-LED illumination       ✓       ✓       ✓       ✓         n curved, incl. handle, with 3 W-LED illumination       ✓       ✓       ✓       ✓         egrated into the microscope head as incident illumination       ✓       ✓       ✓       ✓       ✓         sted glass/Ø 95 mm       ✓       ✓       ✓       ✓       ✓       ✓       ✓

 $\checkmark$  = Included with delivery

O = Option

# **KERN Pictograms:**



360° rotatable microscope head



Monocular Microscope For the inspection with one eye



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

Trinocular Microscope



the additional option for the connection of a camera Abbe Condenser With high numerical aperture for the

concentration and the focusing of light

For the inspection with both eyes and



73

ABBE

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 100W mercury lamp and filter

### 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)

C



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



Phase contrast unit For a higher contrast

Darkfield condenser/unit

For a higher contrast due to indirect





Polarising unit To polarise the light

Infinity system

illumination







For stereomicroscopes Parallel optical system

For stereomicroscopes, enables

Zoom magnification

fatigue-proof working

Infinity corrected optical system



Integrated scale human In the eyepiece SCALE



÷

USB 2.0

⊷

USB 3.0

SD card For data storage



USB 2.0 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 device



PC software To transfer the measurements from the device to a PC.



SOFTWARE

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



Protection against dust and water splashes IPxx The type of protection is shown by the

pictogram.



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





Mains adapter

230 V	



Power supply Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.

230V/50Hz in standard version for EU.

On request GB, AUS or USA version.



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

USB 3.0 digital camera For direct transmitting of the picture to a PC

Long Working Distance	SWF	Super Wig
Numerical Aperture		(Field nun for 10× ey
Single-Lens Reflex camera	W.D.	Working [
	6 6	Numerical Aperture

SWF	Super Wide Field (Field number at least $\emptyset$ 23 mm for 10× eyepiece)
W.D.	Working Distance
WF	Wide Field (Field number up to Ø 22 mm for 10× eyepiece)

## Your KERN specialist dealer:

