



The flexible, affordable all-rounder with zoom function as a digital solution for schools, training companies, inspection authorities and laboratories.

Features

- The flexible, cost-effective OZL-46 range is also available to you as a comprehensive digital solution for your live investigations. Optionally available with an adapted tablet or C-mount camera. Naturally, the appropriate C-mount adapter is included with the delivery
- The mounted KERN ODC 241 tablet-camera has been specially developed for simple, convenient and direct investigation of the sample on the screen. Ideally suited for school pupils and students in education or for demonstration purposes in the laboratory
- The mounted C-mount camera is available in different versions and can be used anywhere
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery

Technical data

- Optical system: Greenough optics
- Tube 45° inclined
- Magnification ratio 6,4:1
- Beam path distribution: 0:100
- Interpupillary distance: 55 mm – 75 mm
- Diopter adjustment, both-sided
- Eyepiece: HWF 10x/Ø 20 mm
- Field of view: Ø 28,6 mm – 4,4 mm
- Objective: 0,7x – 4,5x
- OZL 464/466: Stand: pillar
- OZL 468: Stand: mechanical
- Illumination: 3 W-LED (reflected light and transmitted light)
- Brightness adjustable (separate)
- Overall dimensions W×D×H 300×240×490 mm
- Net weight approx. 5,0 kg

For detailed information on the individual components, see the relevant product description of the individual item

Model	Included camera	Camera Resolution	Camera Interface	Camera Framerate	Camera Sensor
KERN					
OZL 464C825					
OZL 466C825	ODC 825	5,1 MP	USB 2.0	6,8 - 55 fps	CMOS 1/2,5"
OZL 468C825					
OZL 464C832					
OZL 466C832	ODC 832	5,1 MP	USB 3.0	14,2 - 101,2 fps	CMOS 1/2,5"
OZL 468C832					
OZL 464T241					
OZL 466T241	ODC 241	5 MP	WiFi, USB 2.0, HDMI, MicroSD card slot	30 fps	Sony CMOS 1/2,8"
OZL 468T241					



OZL 464
with standard stand



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 easy handling, flexibility as well as their stability and economical price.
- The LED incident and transmitted illumination included as standard guarantees the very best illumination of your sample
- The highlight of the KERN 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.
- As standard this microscope offers you continuous total magnification of 7x – 45x

- 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 mechanical 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-dimensional impression (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
- OZL 464/466/468: Beam path distribution: 0:100
- Interpupillary distance: 55 mm – 75 mm
- Diopter adjustment, both-sided
- Overall dimensions W×D×H 300×240×420 mm
- Net weight approx. 4,2 kg

STANDARD



Model	Tube	Eyepiece	Field of view	Objective Zoom	Stand	Illumination
KERN						
OZL 463	Binocular	HWF 10x/Ø 20 mm	Ø 28,6 – 4,4 mm	0,7x - 4,5x	pillar	3 W LED (incident + transmitted)
OZL 464	Trinocular	HWF 10x/Ø 20 mm	Ø 28,6 – 4,4 mm	0,7x - 4,5x	pillar	3 W LED (incident + transmitted)
OZL 465	Binocular	HWF 10x/Ø 20 mm	Ø 28,6 – 4,4 mm	0,7x - 4,5x	pillar	3 W LED (incident + transmitted)
OZL 466	Trinocular	HWF 10x/Ø 20 mm	Ø 28,6 – 4,4 mm	0,7x - 4,5x	pillar	3 W LED (incident + transmitted)
OZL 467	Binocular	HWF 10x/Ø 20 mm	Ø 28,6 – 4,4 mm	0,7x - 4,5x	mechanical	3 W LED (incident + transmitted)
OZL 468	Trinocular	HWF 10x/Ø 20 mm	Ø 28,6 – 4,4 mm	0,7x - 4,5x	mechanical	3 W LED (incident + transmitted)

Eyepiece	Specifications - Objectives					
	Magnification	Standard	Auxiliary objectives			
			1,0x	0,5x	0,75x	1,5x
HSWF 10x	Total magnification	7x - 45x	3,5x - 22,5x	5,3x - 33,8x	10,5x - 67,5x	14x - 90x
	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 15x	Total magnification	10,5x - 67,5x	5,3x - 33,8x	7,9x - 50,6x	15,5x - 101,3x	21x - 135x
	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 20x	Total magnification	14x - 90x	7x - 45x	10,5x - 67,5x	21x - 135x	28x - 180x
	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 25x	Total magnification	17,5x - 112,5x	8,8x - 56,3x	13,1x - 91,9x	26,3x - 168,8x	35x - 225x
	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 mm)	HWF 10x/Ø 20 mm	✓	✓	✓	✓	
HWF 15x/Ø 15 mm	○		○	○	○	○	○	OZB-A4632
HWF 20x/Ø 10 mm	○		○	○	○	○	○	OZB-A4633
HWF 25x/Ø 10 mm	○		○	○	○	○	○	OZB-A4634
Auxiliary objectives	0,5x	○	○			○	○	OZB-A4641
	1,5x	○	○			○	○	OZB-A4642
	2x	○	○			○	○	OZB-A4643
	0,75x	○	○			○	○	OZB-A4644
	Soldering protection lens	○	○			○	○	OZB-A4646
C-Mount	1x (focus adjustable)		✓		✓		✓	OZB-A4809
	0,3x (focus adjustable)		○		○		○	OZB-A4810
	0,5x (focus adjustable)		○		○		○	OZB-A4811
Eyepiece camera adapter	1,0x; for fitting an eyepiece camera to the trinocular connection of the microscope		○		○		○	OZB-A4863
Stand	Pillar, with 3 W LED illumination (transmitted + incident)	✓	✓					
	Pillar, with 3 W LED illumination (transmitted)			✓	✓			
	mechanical, incl. handle with 3 W LED illumination (transmitted + incident)					✓	✓	
Ring illumination	Integrated into the microscope head as incident illumination			✓	✓			
Stand insert	Frosted glass/Ø 95 mm	✓	✓	✓	✓	✓	✓	OZB-A4670
	Black-white/Ø 95 mm	✓	✓	✓	✓	✓	✓	OZB-A4806

✓ = included with the delivery

○ = Option

Further accessories and spare parts
see *internet*

Microscope Cameras KERN ODC – Specialists in microscopy for measurement, counting, documentation, archiving and image processing

A large selection of microscope cameras is available for your individual applications. The universal microscope cameras can be used anywhere and can be connected to the microscope as well as to a laptop or PC using the USB cable (USB 2.0 or USB 3.0, *see table*). The power supply is through the USB cable, which means that no additional power supply is required.

Your daily work is made significantly easier with the very best synchronisation, a high frame rate as well as stable image performance together with our accompanying Camera Software Microscope VIS KERN OXM 901. For details about our software please refer to the *Camera Software Microscope* product group in the catalogue

These universal cameras can also be connected to all microscopes available on the internet. Please order the appropriate C-mount adapter for the particular microscope.



Accessories: Object micrometer, for calibrating the software measuring function, KERN ODC-A2404

C-Mount Cameras – USB 2.0/3.0 KERN ODC-82 · ODC-83



Features

- Through the proven CMOS technology, in connection with the USB 2.0 or USB 3.0 the images are shown quickly and clearly
- These cameras are also ideal for more demanding applications, such as, for example, darkfield, phase contrast and for fluorescence applications
- As well as the camera, the delivery includes an USB cable (length: 2 m), various eyepiece adapters and an object micrometre to calibrate the software
- Please order the appropriate C-mount adapter to fit your KERN microscope now

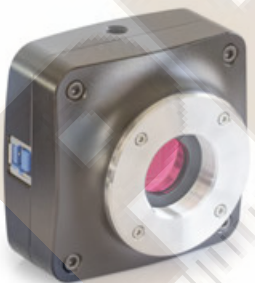
STANDARD



Model	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system
KERN							
ODC 825	5,1 MP	USB 2.0	6,8 – 55	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10, 11
ODC 831*	3,1 MP	USB 3.0	27,3 – 53,3	CMOS	1/3"	colour	Win XP, Vista, 7, 8, 10, 11
ODC 832	5,1 MP	USB 3.0	14,2 – 101,2	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10, 11

! * ONLY WHILE STOCKS LAST

C-Mount Camera – High Resolution KERN ODC-84



Features

- The high-resolution, professional ODC-84 range offers you an impressive 20 megapixel resolution which will give you bright detailed views of your sample. By using the integrated USB 3.0 interface, live images are transferred to the KERN OXM 902 for processing and documentation
- Power supply is through the USB interface so that there is no requirement for an external power source.
- As well as the camera, the delivery includes an USB cable (length: 2 m), various eyepiece adapters and an object micrometre to calibrate the software
- Please order the appropriate C-mount adapter (only 1,0x possible) to fit your KERN microscope now

Note: Can only be used in combination with compound microscopes

STANDARD



Model	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system
KERN							
ODC 841	20 MP	USB 3.0	15 – 60	CMOS	1"	colour	Win XP, Vista, 7, 8, 10, 11

Piktogramok: KERN mikroszkópok, refraktométerek



360°-ban elforgatható mikroszkópfej



Monokuláris mikroszkóp
Egy szemmel végezhető vizsgálatokhoz



Binokuláris mikroszkóp
Két szemmel végezhető vizsgálatokhoz



Trinokulár mikroszkóp Két szemmel végezhető vizsgálatokhoz és egy külön csatlakozóval opcionálisan rendelhető kamerák csatlakoztatásához



Abbe Condenser
Nagy numerikus apertúra, koncentrált fókusz és fény



Halogén megvilágítás
Éles, kontrasztos kép



LED megvilágítás
Hideg fényű, energiatakarékos, hosszú élettartamú megvilágítás



LED megvilágítás
Speciális LED $\lambda = 589$ nm hullámhosszal (sárga fény)



Felső megvilágítás
Nem áttetsző tárgyakhoz



Alsó megvilágítás
Áttetsző tárgyakhoz



Fluoreszkáló megvilágítás
Sztereo mikroszkópokhoz



Fluoreszkáló megvilágítás
100 W-os nagynyomású gőzlámpával vagy 5 W-os LED-del



Fénymező-megvilágító egység
Nagyobb kontraszthoz



Sötétmező megvilágító egység
Nagyobb kontraszt indirekt megvilágításnál



Polarizációs egység
A fény polarizálásához



Végtelenített rendszer
Végtelenre korrigált optikai rendszer



Zoom nagyítás
Sztereo mikroszkópoknál



Auto - fókusz
Automatikusan beálló fókusz



Telecentrikus rendszer
Sztereo mikroszkópokhoz, szemfáradás elkerüléséhez



Beépített skála
Okulárban



SD kártya
Adatok tárolásához



USB csatlakozó
A mérőeszköz csatlakoztatására PC-hez vagy más perifériához



WiFi csatlakozás
Adatátvitel nyomtatóra, PC-re vagy más perifériára



HDMI digitális kamera
Képek közvetlen átviteléhez külső megjelenítő eszközökre



PC szoftver
A mért értékek átvitelére és feldolgozására PC-n



Automatikus hőmérséklet kompenzálás
10 °C és 30 °C között végzett méréseknél



Por és folyadék elleni védelmi fokozat IPxx besorolás szerint:
A védelem konkrét fokozatát a piktogram mutatja.



Elemes működés
Elemmel működő eszköz. Az elem típusa a terméknél van megadva



Újratölthető elemmel működés
Újratölthető elem fogadására előkészített eszköz



Hálózati adapter
230V/50Hz EU szabvány szerint
Rendelésre GB, AUS, USA verzió



Hálózati működés
Eszközbe beépítve. 230V/50Hz EU szabvány. Rendelésre GB, AUS, USA szabvány szerint



Kiszállítás
Magyarországra általában 5 munkanap



Rakapos kiszállítás
Magyarországra általában 10 munkanap.

Rövidítések

C-Mount	Adapter kamera csatlakoztatásához trinokulár mikroszkópokhoz	SWF	Szuperszéles látómező (legalább $\varnothing 23$ mm 10x okkulárral)
FPS	Képkocka frissítés másodpercenként	W.D.	Munkatávolság
H(S)WF	Magas (Szuper) széles látómező (szemüveget viselőknél)	WF	Széles látómező ($\varnothing 22$ mm-ig 10x okkulárral)
LWD	Nagy munkatáv		
N.A.	Numerikus Apertúra		



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