

# MICROSCOPES & REFRACTOMETERS

Laboratory | Industry | Food Industry



# 2026

PROFESSIONAL MEASURING  
SINCE 1844

## It's so easy to order from KERN:

 Tel. +49 7433 9933-0

 E-Mail  
[optics@kern-sohn.com](mailto:optics@kern-sohn.com)

 Online Shop  
[www.kern-sohn.com](http://www.kern-sohn.com)

We look forward to meeting you  
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## Your Advantages – our Philosophy. All KERN Advantages at a Glance

### Online Shop [www.kern-sohn.com](http://www.kern-sohn.com)

For convenient ordering you will find a huge selection of products and services in our KERN online shop, 24/7.

### Advice from the experts

Our KERN experts will offer you individual advice in a range of languages and will be pleased to assist you: Mon - Fri from 8.00 am to 5.00 pm

### 100 % product availability and dispatch service

With KERN you can be sure that you will have immediate access to the products you need – provided that they are in stock. Our 24-hour dispatch service will send your products immediately. Ordered today, on their way tomorrow!

### Warranty

We offer you as the customer up to 3 years warranty on all products in our entire range, as an option the warranty can be extended for a small fee. Because our products deliver on their promises!

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Our customer service is personally available by telephone, e-mail or video call. We speak more than 7 languages and we will be happy to help with your requests.

### Trust through experience

Experience counts in terms of weighing and measuring technology and this has been the case for 180 years – for the benefit of our customers. Put us to the test!

### Accreditations/certification

- DAkkS accreditation DIN EN ISO/IEC 17025
- Certified QM system DIN EN ISO 9001
- Conformity assessment in accordance with NAWID 2014/31/EU
- Medical certifications DIN EN ISO 13485 and 93/42/EEC or VO (EU) 2017/745

### DAkkS-accredited calibrations

In the modern, accredited KERN calibration laboratory, we perform DAkkS-accredited calibrations for balances, test weights as well as for numerous other measuring devices. In addition we can offer calibrations on your premises. Of course, all services are in accordance with international standards.

### Verification service

Our professional verification service offers conformity assessments and verification of balances and weights – for a feeling of security in compliance with legal requirements.

### Individual customer solutions

We are the right partner for special customer requirements. KERN offers numerous modular system solutions for your very individual weighing requirements. Please contact us!

### Service Portal

You can find aftersales support in our online service portal: Technical Support, help with questions or problems, etc. [www.kern-sohn.com/shop/en/Serviceportal/](http://www.kern-sohn.com/shop/en/Serviceportal/)

### Spare parts and repair service

In spite of reliable KERN quality: If you should ever need to make a complaint about our products, we will help you quickly, flexibly and in an unbureaucratic manner.

### No storage costs

You have no storage costs – we maintain the storage. Direct dispatch of ordered goods to your customer is available, invoice will be issued to you (third party business).

### Still got questions?

You can find all KERN Service Hotlines on the inside flap

# KERN Pictograms

 <b>360° rotatable microscope head</b> For stereomicroscopes	 <b>Fluorescence illumination</b> For stereomicroscopes	 <b>SD card</b> For data storage	 <b>Plug-in power supply</b> 230V/50Hz in standard version for EU. On request GB, AUS or USA version.
 <b>Monocular Microscope</b> For the inspection with one eye	 <b>Fluorescence illumination</b> Either with a 100 W high-pressure vapour lamp or a 5 W LED fluorescent unit	 <b>Data interface USB</b> To connect the measuring instrument to a printer, PC or other peripheral devices	 <b>Integrated power supply unit</b> Integrated in microscope. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request
 <b>Binocular Microscope</b> For the inspection with both eyes	 <b>Phase contrast unit</b> For a higher contrast	 <b>WIFI data interface</b> To transfer data to a printer, PC or other peripherals	 <b>Package shipment</b> The time required to manufacture the product internally is shown in days in the pictogram.
 <b>Trinocular Microscope</b> For the inspection with both eyes and the additional option for the connection of a camera	 <b>Darkfield condenser/unit</b> For a higher contrast due to indirect illumination	 <b>HDMI digital camera</b> For direct transmitting of the picture to a display device	 <b>Pallet shipment</b> The time required to manufacture the product internally is shown in days in the pictogram.
 <b>Abbe Condenser</b> With high numerical aperture for the concentration and the focusing of light	 <b>Polarising unit</b> To polarise the light	 <b>PC software</b> To transfer the measurements from the device to a PC.	
 <b>Halogen illumination</b> For pictures bright and rich in contrast	 <b>Infinity system</b> Infinity corrected optical system	 <b>Automatic temperature compensation</b> For measurements between 10 °C and 30 °C	
 <b>LED illumination</b> Cold, energy-saving and especially long-life illumination	 <b>Zoom magnification</b> For stereomicroscopes	 <b>Protection against dust and water splashes IPxx:</b> The type of protection is shown in the pictogram	
 <b>LED illumination</b> Special LED with a wavelength of $\lambda = 589$ nm (yellow light)	 <b>Auto-focus</b> For automatic control of the focus level	 <b>Battery operation</b> Ready for battery operation. The battery type is specified for each device.	
 <b>Incident illumination</b> For non-transparent objects	 <b>Parallel optical system</b> For stereomicroscopes, enables fatigue-proof working	 <b>Integrated scale</b> In the eyepiece	 <b>Rechargeable battery pack</b> Rechargeable set
 <b>Transmitting illumination</b> For transparent objects			

## Abbreviations

<b>C-Mount</b>	Adapter for the connection of a camera to a trinocular microscope	<b>SWF</b>	Super Wide Field (Field number at least $\phi 23$ mm for 10x eyepiece)
<b>FPS</b>	Frames per second	<b>W.D.</b>	Working Distance
<b>H(S)WF</b>	High (Super) Wide Field (Eyepiece with high eye point for wearers of glasses)	<b>WF</b>	Wide Field (Field number up to $\phi 22$ mm for 10x eyepiece)
<b>LWD</b>	Long Working Distance		
<b>N.A.</b>	Numerical Aperture		

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NEW New model

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With questions about our products and services, we will be happy to advise you:

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## KERN Hotlines



**Technical questions about our products?**

You will find assistance here quickly: **+49 7433 9933- ...**

### Service-Hotline

for general technical questions about your KERN product

→ **199**

### Optical Devices

for all technical questions concerning our microscopes, microscope cameras, refractometers, etc.

→ **777**

### Laboratory and Analytical Balances

for all technical questions concerning our high quality precision balances, analytical balances (especially with electromagnetic force-compensated measuring systems, tuning fork and high application density)

→ **444**

### SAUTER Measuring Instruments

for all technical questions concerning our SAUTER measuring instruments, test benches, force measuring accessories (clamps etc.), SAUTER software

→ **555**

### System Solutions Industry 4.0

for all technical questions concerning the interlocking of the latest information and communication technology with our scales, load cells and measuring devices as well as questions about KERN software

→ **200**

### Calibration and Verification Service

for any questions concerning our calibration and verification service

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# NEW IN → 2026

Innovative technology, stunning performance, improved features – all in proven KERN quality.  
You can see all our new additions in 2026 here – come and be inspired.

NEW



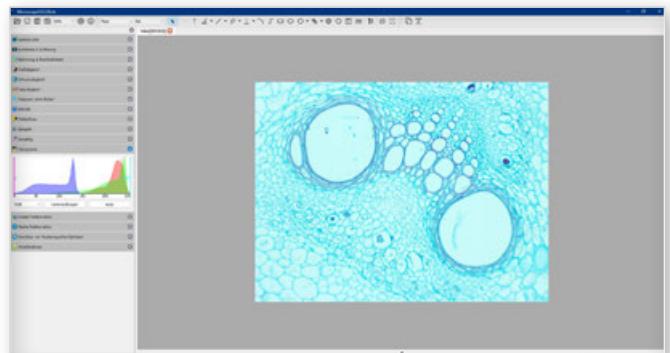
**For razor-sharp live images  
in real time!**

→ **4K camera**  
**KERN ODC-854**

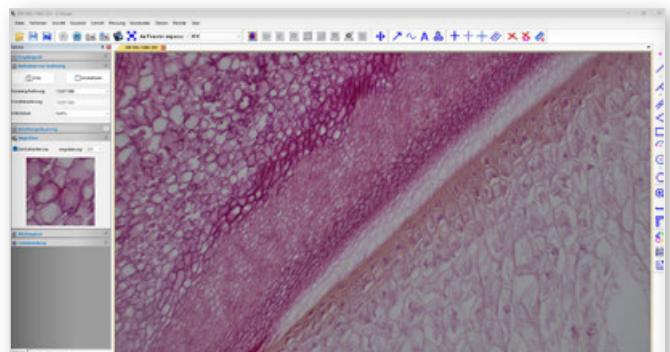
With brilliant image quality, high light sensitivity and versatile connectivity via HDMI, USB or WLAN, the self-contained 4K camera is perfect for precise analyses, detailed images and flexible use in laboratories, training and presentations.

For details, see *Microscope cameras*

NEW



Microscope VIS 2.0 Lite



S-Viewer

**The digital specialists for  
measurement, counting  
and documentation**

→ **Microscope camera software**  
**VIS 2.0 Pro • VIS 2.0 Lite • S-Viewer**

The Microscope VIS Pro, Lite and S-Viewer software solutions offer everything you need for professional work with microscope cameras: live views on a PC or laptop, image and video recording, precise measuring functions and versatile image processing. This makes them the ideal tools for detailed analyses, seamless documentation and daily use – in laboratories, in medical practices and in quality assurance.

For details, see *Microscope cameras*

# COMPOUND MICROSCOPES

Compound, Phase contrast, Fluorescence and Inverted microscopes





OBS 101



OBS 104



OBS 106

## Educational Line

### The school microscope – for the first steps in microscopy and for use in biology lessons

#### Features

- The KERN OBS range is a solid and simple school microscope range, which is easy to use due to its intuitive control elements
- The continuously dimmable 0,5 W LED guarantees optimum illumination of the samples and also ensures long service life. Mobile use is also no problem through the use of rechargeable batteries
- The simple 0.65 condenser on the OBS 101 (condenser disc) and on the OBS 102 (fixed condenser) ensures the very best concentration of light and illumination of the sample. The OBS 104, 105 and 106 models have a 1.25 Abbe condenser which is height-adjustable and can therefore be focussed and has an aperture diaphragm, which ensures the very best concentration of light

- To focus the object, all models have a coarse and fine focusing knob on both sides. The mechanical stage enables you to work with the samples and move them rapidly (only for OBS 105, 106)
- A large selection of different eyepieces and objectives is also available
- Please find detailed information in the following model outfit list

#### Scope of application

- Primary school, secondary school, training, hobby use

#### Applications/Samples

- Translucent, thin, high-contrast, less complex samples (e.g. plant tissue, coloured cells/parasites)

#### Technical data

- Finite optical system DIN
- OBS 101, 102: 3-fold lens revolving unit  
OBS 104, 105, 106: 4-fold lens revolving unit
- OBS 101, 102, 105: Tube 45° inclined/360° rotatable  
OBS 104, 106: Tube 30° inclined/360° rotatable
- Diopter adjustment, both-sided (for binocular models)
- Overall dimensions W×D×H 130×300×310 mm
- Net weight  
OBS 101, 102: approx. 2,2 kg  
OBS 104, 105, 106: approx. 3,2 kg

#### STANDARD

OBS 104  
- 106

Model	Tube	Eyepiece	Objective quality	Objectives	Illumination	Stage	Price excl. of VAT ex works €
<b>KERN</b>							
<b>OBS 101*</b>	Monocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	0,5W LED (transmitted) (battery incl., rechargeable)	fix	<b>170,-</b>
<b>OBS 102*</b>	Monocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	0,5W LED (transmitted) (battery incl., rechargeable)	fix	<b>180,-</b>
<b>OBS 104*</b>	Binocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	0,5W LED (transmitted) (battery incl., rechargeable)	fix	<b>270,-</b>
<b>OBS 105*</b>	Monocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	0,5W LED (transmitted) (battery incl., rechargeable)	mechanical	<b>230,-</b>
<b>OBS 106*</b>	Binocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	0,5W LED (transmitted) (battery incl., rechargeable)	mechanical	<b>315,-</b>

! \* ONLY WHILE STOCKS LAST

Model outfit	Model KERN					Order number	Price/piece excl. of VAT ex works €
	OBS 101	OBS 102	OBS 104	OBS 105	OBS 106		
Eyepieces (23,2 mm)	WF 10x/Ø 18 mm	✓	✓	✓✓	✓	✓✓	OBB-A1473 <b>35,-</b>
	WF 16x/Ø 13 mm	○	○	○○	○	○○	OBB-A1474 <b>35,-</b>
	WF 20x/Ø 11 mm	○	○	○○	○	○○	OBB-A1475 <b>35,-</b>
Achromatic objectives	WF 10x/Ø 18 mm (with Pointer)	○	○	○	○	○	OBB-A1561 <b>35,-</b>
	4x/0,1 W.D. 18 mm	✓	✓	✓	✓	✓	OBB-A1476 <b>40,-</b>
	10x/0,25 W.D. 7 mm	✓	✓	✓	✓	✓	OBB-A1477 <b>45,-</b>
	40x/0,65 (spring-loaded) W.D. 0,53 mm	✓	✓	✓	✓	✓	OBB-A1478 <b>50,-</b>
	60x/0,85 (spring-loaded) W.D. 0,1 mm	○	○	○	○	○	OBB-A1479 <b>65,-</b>
E-Plan objectives	100x/1,25 (oil) (spring-loaded) W.D. 0,07 mm	○	○	○	○	○	OBB-A1480 <b>70,-</b>
	4x/0,1 W.D. 14,5 mm	○	○	○	○	○	OBB-A1562 <b>45,-</b>
	10x/0,25 W.D. 5,65 mm	○	○	○	○	○	OBB-A1563 <b>60,-</b>
	40x/0,65 (spring-loaded) W.D. 0,85 mm	○	○	○	○	○	OBB-A1564 <b>90,-</b>
	100x/1,25 (oil) (spring-loaded) W.D. 0,07 mm	○	○	○	○	○	OBB-A1565 <b>95,-</b>
Monocular tube	E-Plan 100x/0,8 (dry) (spring-loaded) W.D. 0,15 mm	○	○	○	○	○	OBB-A1442 <b>190,-</b>
	Plan 100x/1 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	○	○	OBB-A1441 <b>205,-</b>
	45° inclined/360° revolving	✓	✓		✓		OBB-A1471 <b>55,-</b>
Binocular tube	· Siedentopf 45° inclined/360° rotatable · Interpupillary distance 55 mm - 75 mm · Diopter adjustment both-sided			✓		✓	OBB-A1472 <b>140,-</b>
Fixed stage	· Stage size W×D 110×120 mm · Coaxial coarse and fine focusing knobs, scale: 2,5 µm	✓	✓	✓			OBB-A1483 <b>30,-</b>
Mechanical stage	· Stage size B×T 125×115 mm · Travel 75×18 mm · Coaxial coarse and fine focusing knobs, scale: 2,5 µm				✓	✓	OBB-A1484 <b>55,-</b>
Condenser	Simple condenser N.A. 0,65		✓				OBB-A1486 <b>15,-</b>
	Simple condenser N.A. 0,65 (with aperture diaphragm)		✓				OBB-A1566 <b>35,-</b>
	Abbe N.A. 1,25 (aperture diaphragm)		✓	✓	✓		OBB-A1487 <b>45,-</b>
Colour filters for transmitted illumination	Blue		✓	✓	✓		OBB-A1466 <b>25,-</b>
	Green		○	○	○		OBB-A1467 <b>25,-</b>
	Yellow		○	○	○		OBB-A1468 <b>25,-</b>
	Grey		○	○	○		OBB-A1184 <b>25,-</b>

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*



OBT 231



Monocular version



Binocular version



LCD display ODC 231

## Educational Line

### The modern compound microscope for teaching in your class room

#### Features

- The KERN OBT range is a high-quality school microscope, which will impress you with its intuitive control elements, sturdy construction and modern design.
- The infinitely dimmable 1W LED guarantees optimum illumination of the samples and also ensures long service life. Mobile use is also no problem through optional battery operation
- The simple 0.65 condenser lens with adjustable aperture diaphragm on the OBT 101 ensures the very best concentration of light and illumination of the sample. The OBT 102, 103, 104, 105, 106 models have a 1.25 Abbe condenser which is height-adjustable and can therefore be focussed and has an aperture diaphragm, which ensures the very best concentration of light.
- To focus the object, all models have a coarse and fine focusing knob on both sides. The mechanical stage enables you to work with the

samples and move them rapidly (only for OBT 103, 104, 105, 106)

- A large selection of different eyepieces and objectives is also available
- KERN OBT 231: Digital kit with LCD display for viewing samples, USB dual power supply for microscopes and displays, software for measurements as well as a USB interface and micro SD card slot for documenting recordings
- KERN ODC 231: LCD display, can be retrofitted on all models of the OBT range, see model fittings table
- A dust cover as well as user instructions are included with the delivery
- Please find detailed information in the following model outfit list

#### Scope of application

- Primary school, secondary school, training, hobby

#### Applications/Samples

- Translucent, thin, high-contrast, less complex samples (e.g. plant tissue, coloured cells/parasites)

#### Technical data

- Finite optical system DIN
- OBT 101: 3-fold lens revolving unit, OBT 102, 103, 104, 105, 106, OBT 231: 4-fold lens revolving unit
- OBT-1: Tube 45° inclined/360° rotatable
- Dioptr adjustment, one-sided (for binocular models)
- Overall dimensions W×D×H  
OBT-1: 195×147×325 mm  
OBT-2: 182×195×360 mm
- Net weight  
OBT-1: approx. 2,8 kg  
OBT-2: approx. 3,0 kg



Model	Tube	Eyepiece	Objective quality	Objectives	Illumination	Stage	Price excl. of VAT ex works €
<b>KERN</b>							
<b>OBT 101</b>	Monocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	1 W LED (transmitted)	fix	<b>195,-</b>
<b>OBT 102</b>	Monocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	1 W LED (transmitted)	fix	<b>215,-</b>
<b>OBT 103</b>	Monocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	1 W LED (transmitted)	mechanical	<b>250,-</b>
<b>OBT 104</b>	Binocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	1 W LED (transmitted)	mechanical	<b>335,-</b>
<b>OBT 105</b>	Monocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x / 100x	1 W LED (transmitted)	mechanical	<b>275,-</b>
<b>OBT 106</b>	Binocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x / 100x	1 W LED (transmitted)	mechanical	<b>355,-</b>
<b>OBT 231</b>	LCD Display	-	achromatic	4x / 10x / 40x / 100x	1 W LED (transmitted)	mechanical	<b>760,-</b>

**Note:** Please request special conditions for a classroom set

Model outfit	Model KERN							Order number	Price/piece excl. of VAT ex works €
	OBT 101	OBT 102	OBT 103	OBT 104	OBT 105	OBT 106	OBT 231		
Eyepieces (23,2 mm)	WF 10x/Ø 18 mm	✓	✓	✓	✓✓	✓	✓✓	OBB-A3200	35,-
	WF 10x/Ø 18 mm (with Pointer)	○	○	○	○	○	○	OBB-A3201	35,-
	WF 10x/Ø 18 mm (reticule 0,1 mm)	○	○	○	○	○	○	OBB-A3202	35,-
Achromatic objectives	4x/0,1 W.D. 27 mm	✓	✓	✓	✓	✓	✓	OBB-A3203	30,-
	10x/0,25 W.D. 7 mm	✓	✓	✓	✓	✓	✓	OBB-A3204	35,-
	40x/0,65 (spring-loaded) W.D. 0,6 mm	✓	✓	✓	✓	✓	✓	OBB-A3205	45,-
Monocular tube	100x/1,25 (oil) (spring-loaded) W.D. 0,2 mm	○	○	○	○	✓	✓	OBB-A3207	65,-
	45° inclined/360° revolving	✓	✓	✓	○	✓	○	OBB-A3221	160,-
Binocular tube	· Siedentopf 45° inclined/360° rotatable	○	○	○	✓	○	✓	OBB-A3222	230,-
	· Interpupillary distance 48 mm - 75 mm								
Tube with LCD display	· Diopter adjustment one-sided								
	· Tablet camera 2 MP	○	○	○	○	○	○	ODC 231	490,-
	· CMOS 1/2,8"								
Fixed stage	· USB 2.0								
	· Stage size B×T 115×110 mm	✓							
Mechanical stage	· Coaxial coarse and fine focusing knobs, scale: 2 µm								
	· Stage size B×T 115×110 mm	✓							
	· Travel 52×20 mm								
Condenser	· Coaxial coarse and fine focusing knobs, scale: 2 µm								
	· Holder for one slide								
	Simple condenser N.A. 0,65	✓						OBB-A3223	45,-
Colour filters for transmitted illumination	Abbe N.A. 1,25 (aperture diaphragm)	✓	✓	✓	✓	✓	✓	OBB-A3224	50,-
	Blue	○	○	○	○	○	○	OBB-A3212	25,-
	Green	○	○	○	○	○	○	OBB-A3210	25,-
	Yellow	○	○	○	○	○	○	OBB-A3211	25,-
Grey		○	○	○	○	○	○	OBB-A3209	25,-

✓ = included with the delivery

○ = Option

 Further accessories and spare parts  
see *internet*



Monocular version



Trinocular version



Butterfly tube

## Educational Line

### Elegant, dynamic and impressive – the all-round compound microscope for schools, training and laboratories

#### Features

- The OBE-12/13 range stands out through its exclusive, dynamic device, which is second to none in terms of sturdy construction and ergonomics. The clever storage compartment on the back will enable quick practical storage for your power cable. Thanks to the USB connection technology, it is also possible to supply power using an external powerbank.
- The impressive, infinitely dimmable 3W LED guarantees bright illumination of your sample
- A further highlight is the butterfly lens barrel which enables you to achieve the ideal viewing angle and is integrated as standard on all binocular and trinocular models. The height-adjustable and thereby focusable 1.25 Abbe condenser with aperture diaphragm is a further quality feature of the OBE range and guarantees the very best concentration of light

- Height adjustment of the fully-equipped mechanical stage is carried out using a coarse and fine focusing knob on both sides. The ergonomically designed coaxial drive enables you to work with the samples and move them rapidly
- A large selection of different eyepieces and objectives are available to you 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

- Training, haematology, sediment investigation, doctor's practise, Veterinary

#### Applications/Samples

- Translucent, thin, high-contrast, less complex samples (e.g. plant tissue, coloured cells/parasites)

#### Technical data

- Finite optical system DIN
- 4-fold lens revolving unit
- OBE 121, 131: Monocular lens barrel, 30° angled
- OBE 122, 124, 132, 134: Butterfly 30° angled
- Dioptr adjustment, one-sided (for binocular and trinocular models)
- Overall dimensions WxDxH 360×150×320 mm
- Net weight approx. 4,6 kg

#### STANDARD



#### OPTION



#### Model

#### Tube

#### Eyepiece

#### Objective quality

#### Objectives

#### Illumination

#### Price excl. of VAT ex works €

#### KERN

Model	Tube	Eyepiece	Objective quality	Objectives	Illumination	Price excl. of VAT ex works €
<b>OBE 121</b>	Monocular	HWF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	3 W LED (transmitted)	<b>490,-</b>
<b>OBE 122</b>	Binocular	HWF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	3 W LED (transmitted)	<b>580,-</b>
<b>OBE 124</b>	Trinocular	HWF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	3 W LED (transmitted)	<b>690,-</b>
<b>OBE 131</b>	Monocular	HWF 10x/Ø 18 mm	achromatic	4x / 10x / 40x / 100x	3 W LED (transmitted)	<b>540,-</b>
<b>OBE 132</b>	Binocular	HWF 10x/Ø 18 mm	achromatic	4x / 10x / 40x / 100x	3 W LED (transmitted)	<b>640,-</b>
<b>OBE 134</b>	Trinocular	HWF 10x/Ø 18 mm	achromatic	4x / 10x / 40x / 100x	3 W LED (transmitted)	<b>760,-</b>

**Note:** Please request special conditions for a classroom set

Model outfit	Model KERN						Order number	Price/piece excl. of VAT ex works €
	OBE 121	OBE 122	OBE 124	OBE 131	OBE 132	OBE 134		
Eyepieces (23,2 mm)	HWF 10x/Ø 18 mm			✓	✓✓	✓✓	✓	✓✓ 50,-
	WF 16x/Ø 13 mm	○	○○	○○	○	○○	○○	○○ 50,-
	HWF 10x/Ø 18 mm (reticule 0,1 mm) (non-adjustable)	○	○	○	○	○	○	○○ 65,-
	HWF 10x/Ø 18 mm (with Pointer)	○	○	○	○	○	○	○○ 45,-
Achromatic objectives	4x/0,1 W.D. 18,6 mm	✓	✓	✓	✓	✓	✓	✓ 40,-
	10x/0,25 W.D. 6,5 mm	✓	✓	✓	✓	✓	✓	✓ 50,-
	40x/0,65 (spring-loaded) W.D. 0,47 mm	✓	✓	✓	✓	✓	✓	✓ 80,-
	100x/1,25 (oil) (spring-loaded) W.D. 0,07 mm	○	○	○	✓	✓	✓	✓ 115,-
	20x/0,4 (spring-loaded) W.D. 1,75 mm	○	○	○	○	○	○	○○ 95,-
	60x/0,85 (spring-loaded) W.D. 0,1 mm	○	○	○	○	○	○	○○ 115,-
	E-Plan 100x/0,8 (dry) (spring-loaded) W.D. 0,15 mm	○	○	○	○	○	○	○○ 190,-
Monocular tube	Plan 100x/1 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	○	○	○	○○ 205,-
	Butterfly 30° inclined	✓						
Binocular tube	· Butterfly 30° inclined							
	· Interpupillary distance 48 mm – 75 mm							
Trinocular tube	· Diopter adjustment one-sided							
	· see binocular tube							
Mechanical stage	· Light distribution 20:80							
	· Stage size B×T 125×115 mm							
	· Travel 50×70 mm							
Condenser	· Coaxial coarse and fine focusing knobs, scale: 2 µm	✓	✓	✓	✓	✓	✓	✓ 120,-
	Abbe N.A. 1,25 (aperture diaphragm)	✓	✓	✓	✓	✓	✓	✓ 95,-
Darkfield unit	Usable for 4x – 40x objectives	○	○	○	○	○	○	○○ 95,-
	Blue	○	○	○	○	○	○	○○ 25,-
Colour filters for transmitted illumination	Green	○	○	○	○	○	○	○○ 25,-
	Yellow	○	○	○	○	○	○	○○ 25,-
	Grey	○	○	○	○	○	○	○○ 25,-
C-Mount	0,5x (focus adjustable)				○		○	○○ 175,-
	1x				○		○	○○ 110,-

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*



Trinocular version



Simple polarising unit

## Lab Line

### The flexible laboratory assistant with infinity optical system and fixed, pre-centred Koehler illumination

#### Features

- The OBL series stands out through its infinity optical system and is therefore ideally suited for all demanding transmitted illumination applications. The robust and ergonomic stand base guarantees safe and comfortable working
- The fixed, pre-centred and focusable 1,25 Abbe condenser with aperture diaphragm and field diaphragm gives you a simplified Koehler illumination, without having to move the centre.
- The large mechanical stage and its specimen holder holds up to two samples at the same time and is quick and easy to focus using a coaxial coarse and fine focusing knob on both sides

- A large selection of eyepieces, objectives and colour filters as well as a darkfield condenser, a simple polarising unit, different phase contrast kits through to LED fluorescence units are available to you 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

- Haematology, urology, gynaecology, dermatology, pathology, microbiology and parasitology, immunology, sewage treatment plants, oncology, entomology, veterinary practices, water analysis, breweries

#### Applications/Samples

- Translucent, thin, low-contrast, challenging samples (e.g. living mammal cells, bacteria, tissue)

#### Technical data

- Infinity optical system
- 4-fold lens revolving unit
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment, one-sided
- Overall dimensions WxDxH 395x200x380 mm
- Net weight approx. 7 kg



Model	Tube	Eyepiece	Objective quality	Objectives	Illumination	Price excl. of VAT ex works €
<b>KERN</b>						
<b>OBL 127</b>	Binocular	HWF 10x/Ø 20 mm	Infinity E-Plan	4x / 10x / 40x / 100x	3 W LED (transmitted)	<b>970,-</b>
<b>OBL 137</b>	Trinocular	HWF 10x/Ø 20 mm	Infinity E-Plan	4x / 10x / 40x / 100x	3 W LED (transmitted)	<b>1110,-</b>

Model outfit	Model KERN		Order number	Price/piece excl. of VAT ex works €
	OBL 127	OBL 137		
Eyepieces (23,2 mm)	HWF 10x/Ø 20 mm	✓✓	✓✓	OBB-A1404 <b>105,-</b>
	WF 16x/Ø 13 mm	○○	○○	OBB-A1354 <b>50,-</b>
	HWF 10x/Ø 20 mm (with Pointer)	○	○	OBB-A1448 <b>90,-</b>
Infinity E-Plan objectives	4x/0,11 W.D. 12,1 mm	✓	✓	OBB-A1161 <b>100,-</b>
	10x/0,25 W.D. 2,1 mm	✓	✓	OBB-A1159 <b>165,-</b>
	40x/0,66 (spring-loaded) W.D. 0,58 mm	✓	✓	OBB-A1160 <b>290,-</b>
	100x/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	OBB-A1158 <b>365,-</b>
	Plan 20x/0,45 (spring-loaded) W.D. 2,41 mm	○	○	OBB-A1250 <b>290,-</b>
	Plan 60x/0,8 (spring-loaded) W.D. 0,33 mm	○	○	OBB-A1270 <b>390,-</b>
	Plan 100x/1,15 (water) (spring-loaded) W.D. 0,18 mm	○	○	OBB-A1437 <b>490,-</b>
Binocular tube	· Butterfly 30° inclined/360° rotatable · Interpupillary distance 50 mm - 75 mm · Diopter adjustment one-sided	✓	○	OBB-A1578 <b>290,-</b>
Trinocular tube	· Butterfly 30° inclined/360° rotatable · Interpupillary distance 50 mm - 75 mm · Light distribution 20:80 · Diopter adjustment one-sided	○	✓	OBB-A1580 <b>400,-</b>
Mechanical stage	· Stage size B×T 145×130 mm · Travel 76×52 mm · Coaxial coarse and fine focusing knobs, scale: 2 µm · Two slide holder	✓	✓	
Condenser	Abbe N.A. 1,25 precentered (aperture diaphragm)	✓	✓	OBB-A1103 <b>95,-</b>
Darkfield condenser	N.A. 0,85-0,91 (dry, paraboloid)	○	○	OBB-A1422 <b>250,-</b>
Polarising unit	Analyser/Polariser	○	○	OBB-A1277 <b>290,-</b>
Phase contrast units	Single unit with ∞ PH-Plan-objective 10×	○	○	OBB-A1215 <b>340,-</b>
	Single unit with ∞ PH-Plan-objective 20×	○	○	OBB-A1217 <b>390,-</b>
	Single unit with ∞ PH-Plan-objective 40 ×	○	○	OBB-A1219 <b>470,-</b>
	Single unit with ∞ PH-Plan-objective 100×	○	○	OBB-A1213 <b>570,-</b>
Fluorescence unit	100 W HBO Epi fluorescent unit, 6-filter-disc (B/G) including centring objective lens	○	○	OBB-A1153 <b>3490,-</b>
	5W LED Epi Flourecence unit (B/G) including centering objective	○	○	OBB-A1157 <b>3550,-</b>
Colour filters for transmitted illumination	Blue	○	○	OBB-A1170 <b>25,-</b>
	Green	○	○	OBB-A1188 <b>25,-</b>
	Yellow	○	○	OBB-A1165 <b>25,-</b>
	Grey	○	○	OBB-A1183 <b>25,-</b>
C-Mount	0,5x (focus adjustable)		○	OBB-A1515 <b>200,-</b>
	1x		○	OBB-A1514 <b>130,-</b>

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*



Mounted phase contrast condenser



Simple PH condenser with 40x PH slide

## Lab Line

### High-quality phase contrast microscope – specially pre-configured with a series of options for flexible expansion

#### Features

- We have developed this series specially for general applications with phase contrast method. In addition, the stable, modular construction system of the OBL series offers many more options.
- The impressive, infinitely dimmable 3W LED guarantees bright illumination of your sample
- A special fixed, pre-centred phase contrast condenser as well as field diaphragm give you a simplified Köhler illumination and thereby a powerful phase-contrast display of your sample
- The large mechanical stage and its specimen holder holds up to two samples at the same time and is quick and easy to focus using a coaxial coarse and fine focusing knob on both sides

- A large selection of eyepieces, objectives and colour filters, a simple polarizing unit as well as further phase contrast units are available to you 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

- Haematology, urology, gynaecology, dermatology, pathology, microbiology and parasitology, immunology, sewage treatment plants, oncology, entomology, veterinary practices, water analysis, breweries

#### Applications/Samples

- Specially for extremely translucent, thin, low-contrast, challenging samples (e.g. living mammal cells, bacteria, tissue) with phase contrast

#### Technical data

- Infinity optical system
- 4-fold lens revolving unit
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment, one-sided
- Overall dimensions WxDxH 395x200x380 mm
- Net weight approx. 6 kg

STANDARD



OPTION



#### Model

#### Tube

#### Eyepiece

#### Objective quality

#### Objectives

#### Illumination

Price  
excl. of VAT  
ex works  
€

#### KERN

<b>OBL 146</b>	Binocular	HWF 10x/Ø 20 mm	Infinity E-Plan / Plan	4x / 10x / 40x / 100x	3 W LED (transmitted)	<b>1580,-</b>
<b>OBL 156</b>	Trinocular	HWF 10x/Ø 20 mm	Infinity E-Plan / Plan	4x / 10x / 40x / 100x	3 W LED (transmitted)	<b>1700,-</b>

Model outfit	Model KERN		Order number	Price/piece excl. of VAT ex works €
	OBL 146	OBL 156		
Eyepieces (23,2 mm)	HWF 10x/Ø 20 mm	✓✓	✓✓	OBB-A1404 <b>105,-</b>
	WF 16x/Ø 13 mm	○○	○○	OBB-A1354 <b>50,-</b>
	HWF 10x/Ø 20 mm (with Pointer)	○	○	OBB-A1448 <b>90,-</b>
Infinity E-Plan objectives	4x/0,11 W.D. 12,1 mm	✓	✓	OBB-A1161 <b>100,-</b>
	10x/0,25 W.D. 2,1 mm	○	○	OBB-A1159 <b>165,-</b>
	40x/0,66 (spring-loaded) W.D. 0,58 mm	○	○	OBB-A1160 <b>290,-</b>
	100x/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	OBB-A1158 <b>365,-</b>
	Plan 20x/0,45 (spring-loaded) W.D. 2,41 mm	○	○	OBB-A1250 <b>290,-</b>
	Plan 60x/0,8 (spring-loaded) W.D. 0,33 mm	○	○	OBB-A1270 <b>390,-</b>
	Plan 100x/1,15 (water) (spring-loaded) W.D. 0,18 mm	○	○	OBB-A1437 <b>490,-</b>
Binocular tube	· Butterfly 30° inclined/360° rotatable · Interpupillary distance 50 mm - 75 mm · Diopter adjustment one-sided	✓	○	OBB-A1578 <b>290,-</b>
Trinocular tube	· Butterfly 30° inclined/360° rotatable · Interpupillary distance 50 mm - 75 mm · Light distribution 20:80 · Diopter adjustment one-sided	○	✓	OBB-A1580 <b>400,-</b>
Mechanical stage	· Stage size B×T 145×130 mm · Travel 76×52 mm · Coaxial coarse and fine focusing knobs, scale: 2 µm · Two slide holder	✓	✓	
PH condenser	Abbe N.A. 1,25 precentered, for bright field and phase contrast	✓	✓	OBB-A1398 <b>165,-</b>
	Infinity PH-Plan-objective 10x	✓	✓	OBB-A1390 <b>185,-</b>
	Infinity PH-Plan-objective 20x	○	○	OBB-A1391 <b>220,-</b>
	Infinity PH-Plan-objective 40x	✓	✓	OBB-A1392 <b>285,-</b>
	Infinity PH-Plan-objective 100x	○	○	OBB-A1393 <b>375,-</b>
Phase contrast units	PH Slider 10×	✓	✓	OBB-A1399 <b>85,-</b>
	PH Slider 20×	○	○	OBB-A1400 <b>85,-</b>
	PH Slider 40×	✓	✓	OBB-A1401 <b>85,-</b>
	PH Slider 100×	○	○	OBB-A1402 <b>85,-</b>
	Centring eyepiece	✓	✓	OBB-A1383 <b>105,-</b>
Darkfield condenser	N.A. 0,85-0,91 (dry, paraboloid)	○	○	OBB-A1422 <b>250,-</b>
Colour filters for transmitted illumination	Blue	✓	✓	OBB-A1170 <b>25,-</b>
	Green	✓	✓	OBB-A1188 <b>25,-</b>
	Yellow	○	○	OBB-A1165 <b>25,-</b>
	Grey	○	○	OBB-A1183 <b>25,-</b>
C-Mount	0,5x (focus adjustable)	○	○	OBB-A1515 <b>200,-</b>
	1x	○	○	OBB-A1514 <b>130,-</b>

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*



OBN-13



OBN-15



Mounted phase contrast condenser



## Professional Line

### Professionalism and versatility united in one microscope – with Koehler illumination for demanding applications

#### Features

- The OBN- series stands out because of its unbeatable and consistently high quality and its ergonomic design. The range of modular components means that the OBN series can be individually customised for the professional user.
- Depending on the application, there is a choice of models with strong, continuously dimmable 3 W LED or 20 W halogen illumination (Philips)
- In addition the microscope is available as a pre-configured phase contrast microscope, which, through the combination of a professional quintuple condenser wheel, phase contrast condenser and Infinity Plan phase contrast objectives makes it a high-quality, fully-equipped microscope for all applications related to this contrasting method
- This series has a professional Koehler illumination unit with an adjustable field diaphragm as well as a height-adjustable 1,25 Abbe condenser which can be centred and which has an adjustable aperture diaphragm.

- The extremely large mechanical stage with ergonomic, coaxial coarse and fine focusing knob on both sides enables you to adjust and focus your sample rapidly and accurately
- A wide variety of modular systems, such as, for example, a swing-out condenser, various eyepieces, objectives, colour filters, phase contrast units, a darkfield condenser, a simple polarising unit, a Butterfly Tube, through to complete fluorescence units are available to you as accessories
- KERN OBN 15: This centring eyepiece for adjusting the phase contrast, 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

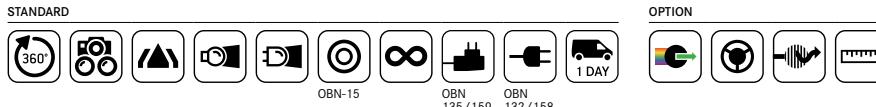
- Haematology, urology, gynaecology, dermatology, pathology, microbiology and parasitology, immunology, sewage treatment plants, oncology, entomology, veterinary practices, water analysis, breweries

#### Applications/Samples

- Translucent, thin, low-contrast, challenging samples (e.g. living mammal cells, bacteria, tissue)

#### Technical data

- Infinity optical system
- Quintuple nosepiece
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment, both-sided
- Overall dimensions W×D×H 390×200×395 mm
- Net weight approx. 10 kg



Model	Tube	Eyepiece	Objective quality	Objectives	Illumination	Price excl. of VAT ex works €
<b>KERN</b>						
OBN 132*	Trinocular	HWF 10x/Ø 20 mm	Infinity Plan	4x / 10x / 20x / 40x / 100x	20 W Halogen (transmitted)	1610,-
OBN 135	Trinocular	HWF 10x/Ø 20 mm	Infinity Plan	4x / 10x / 20x / 40x / 100x	3 W LED (transmitted)	1640,-
OBN 158	Trinocular	HWF 10x/Ø 20 mm	Infinity Plan	4x / 10x / 20x / 40x / 100x	20 W Halogen (transmitted)	2920,-
OBN 159	Trinocular	HWF 10x/Ø 20 mm	Infinity Plan	4x / 10x / 20x / 40x / 100x	3 W LED (transmitted)	2940,-

\* ONLY WHILE STOCKS LAST

Model outfit		Model KERN				Order number	Price/piece excl. of VAT ex works €
		OBN 132	OBN 135	OBN 158	OBN 159		
Eyepieces (23,2 mm)	HWF 10x/Ø 20 mm	✓✓	✓✓	✓✓	✓✓	OBB-A1404	105,-
	WF 16x/Ø 13 mm	○○	○○	○○	○○	OBB-A1354	50,-
Infinity Plan achromatic objectives	4x/0,11 W.D. 12,1 mm	✓	✓	✓	✓	OBB-A1263	120,-
	10x/0,25 W.D. 4,64 mm	✓	✓	○	○	OBB-A1243	215,-
	20x/0,45 (spring-loaded) W.D. 2,41 mm	✓	✓	○	○	OBB-A1250	290,-
	40x/0,65 (spring-loaded) W.D. 0,65 mm	✓	✓	○	○	OBB-A1257	315,-
	100x/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	○	○	OBB-A1240	340,-
	Plan 60x/0,8 (spring-loaded) W.D. 0,33 mm	○	○	○	○	OBB-A1270	390,-
	Plan 100x/1,15 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	○	OBB-A1437	490,-
Trinocular tube	· Butterfly 30° inclined/360° rotatable · Interpupillary distance 50 mm - 75 mm · Light distribution 0:100 · Diopter adjustment both-sided	✓	✓	✓	✓	OBB-A1382	570,-
Mechanical stage	· Stage size B×T 175×145 mm · Travel 78×55 mm · Coaxial coarse and fine focusing knobs · Holder for two slides	✓	✓	✓	✓	OBB-A1330	150,-
Condenser	Abbe N.A. 1,25 can be centred (with aperture diaphragm)	✓	✓	○	○	OBB-A1102	95,-
	“Swing-out” condenser N.A. 0,9/0,13 can be centred (with aperture diaphragm)	○	○	○	○	OBB-A1104	240,-
Darkfield condenser	N.A. 0,85-0,91 (dry, paraboloid)	○	○	○	○	OBB-A1421	290,-
	N.A. 1,3 (oil, cardiod)	○	○	○	○	OBB-A1538	660,-
Polarising unit	Analyser/Polariser	○	○	○	○	OBB-A1283	290,-
Phase contrast units	Quintuple condenser wheel with 10x/20x/40x/100x Infinity PH Plan objectives (complete set)	○	○	✓	✓	OBB-A1237	1790,-
	Single unit with ∞ PH-Plan-objective 10x	○	○			OBB-A1214	340,-
	Single unit with ∞ PH-Plan-objective 20x	○	○			OBB-A1216	390,-
	Single unit with ∞ PH-Plan-objective 40x	○	○			OBB-A1218	470,-
	Single unit with ∞ PH-Plan-objective 100x	○	○			OBB-A1212	570,-
	Centring eyepiece	○	○	✓	✓	OBB-A1383	105,-
Fluorescence unit	100W-HBO-Epi-Fluorescence unit, 6-filter-disc (UV/V/B/G) including centring-objective	○	○	○	○	OBB-A1155	4970,-
	100 W HBO Epi fluorescent unit, 6-filter-disc (B/G) including centring objective lens	○	○	○	○	OBB-A1153	3490,-
	5W LED Epi Flourecence unit, 6-filter-disc (B/G) including centring objective	○	○	○	○	OBB-A1156	3550,-
Colour filters for transmitted illumination	Blue	✓	○	✓	✓	OBB-A1170	25,-
	Green	○	○	✓	✓	OBB-A1188	25,-
	Yellow	○	○	○	○	OBB-A1165	25,-
	Grey	○	○	○	○	OBB-A1183	25,-
C-Mount	1x	○	○	○	○	OBB-A1514	130,-
	0,5x (focus adjustable)	○	○	○	○	OBB-A1515	200,-

✓ = included with the delivery

○ = Option

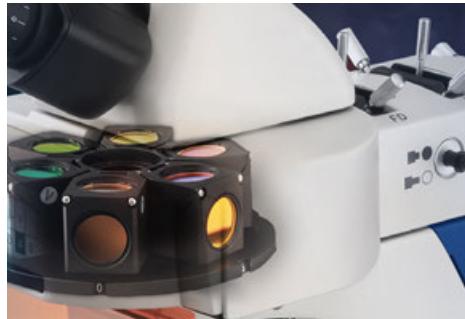
Further accessories and spare parts  
see *internet*



OBN 142



Illumination unit



Sextuple filter wheel

## Professional Line

### The fluorescence microscope for the professional user

#### Features

- The fluorescence microscope in the OBN-14 series is based on the usual high quality and versatility of the OBN series. The outstanding, stable design in combination with high-quality optics set the standard in fluorescence microscopy in this class
- OBN 147/148: The powerful, dimmable 20W halogen illumination unit (Philips) and a 100W Epi fluorescence incident illumination unit ensure perfect illumination and stimulation of your fluorescence samples
- As an alternative, with the OBN 141 model we can offer you a fluorescence microscope with a 3 W-LED transmitted illumination unit and 5 W-LED Epi fluorescence incident illumination unit
- This series has a professional Koehler illumination unit with an adjustable field diaphragm as well as a height-adjustable 1,25 Abbe condenser which can be centred and which has an adjustable aperture diaphragm.
- The extremely large mechanical stage with ergonomic, coaxial coarse and fine focusing knob on both sides enables you to adjust and focus your sample rapidly and accurately
- As standard, the filter wheel which has up to 6 fittings is fitted with a B/G fluorescence filter (OBN 141/OBN 147) or B/G/UV/V fluorescence filter (OBN 148)
- A large selection of eyepieces, objectives, colour filters, darkfield condensers as well as a Butterfly Tube, polarising and phase contrast units can easily be integrated thanks to the modular construction system
- The centring objective for adjusting the fluorescence, 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

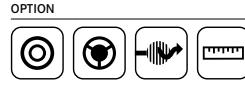
- Haematology, urology, gynaecology, dermatology, pathology, microbiology and parasitology, immunology, sewage treatment plants, oncology, entomology, veterinary practices, water analysis, breweries

#### Applications/Samples

- Specially for translucent, thin, low-contrast, challenging samples (e.g. Immunofluorescence, FISH, DAPI staining, etc.)

#### Technical data

- Infinity optical system
- Quintuple nosepiece
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment, both-sided
- Overall dimensions WxDxH 510x470x515 mm
- Net weight approx. 13 kg



Model	Tube	Eyepiece	Objective quality	Objectives	Illumination	Price excl. of VAT ex works €
<b>KERN</b>						
<b>OBN 141</b>	Trinocular	HWF 10x/Ø 20 mm	Infinity Plan	4x / 10x / 20x / 40x / 100x	LED + 5 W LED Epi Fluorescence (B/G)	<b>5140,-</b>
<b>OBN 142</b>	Trinocular	HWF 10x/Ø 20 mm	Infinity Plan	4x / 10x / 20x / 40x / 100x	LED + 5 W LED Epi Fluorescence (UV/V/B/G)	<b>6520,-</b>
<b>OBN 147*</b>	Trinocular	HWF 10x/Ø 20 mm	Infinity Plan	4x / 10x / 20x / 40x / 100x	Halogen + 100 W Epi Fluorescence (B/G)	<b>5120,-</b>
<b>OBN 148</b>	Trinocular	HWF 10x/Ø 20 mm	Infinity Plan	4x / 10x / 20x / 40x / 100x	Halogen + 100 W Epi Fluorescence (UV/V/B/G)	<b>6500,-</b>

**! \* ONLY WHILE STOCKS LAST**

Model outfit	Model KERN				Order number	Price/piece excl. of VAT ex works €
	OBN 141	OBN 142	OBN 147	OBN 148		
Eyepieces (23,2 mm)	HWF 10x/Ø 20 mm	✓✓	✓✓	✓✓	✓✓	OBB-A1404 <b>105,-</b>
	WF 10x/Ø 20 mm	○○	○○	○○	○○	OBB-A1351 <b>95,-</b>
	WF 16x/Ø 13 mm	○○	○○	○○	○○	OBB-A1354 <b>50,-</b>
Infinity Plan achromatic objectives	WF 10x/Ø 20 mm (reticule 0,1 mm) (adjustable)	○	○	○	○	OBB-A1352 <b>155,-</b>
	4x/0,11 W.D. 12,1 mm	✓	✓	✓	✓	OBB-A1263 <b>120,-</b>
	10x/0,25 W.D. 4,64 mm	✓	✓	✓	✓	OBB-A1243 <b>215,-</b>
	20x/0,45 (spring-loaded) W.D. 2,41 mm	✓	✓	✓	✓	OBB-A1250 <b>290,-</b>
	40x/0,65 (spring-loaded) W.D. 0,65 mm	✓	✓	✓	✓	OBB-A1257 <b>315,-</b>
Infinity Plan Semi Apochromatic objectives	100x/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	✓	✓	OBB-A1240 <b>340,-</b>
	Plan 60x/0,8 (spring-loaded) W.D. 0,33 mm	○	○	○	○	OBB-A1270 <b>390,-</b>
	10x/0,3 W.D. 7,68 mm	○	○	○	○	OBB-A1634 <b>395,-</b>
	20x/0,5 W.D. 1,96 mm	○	○	○	○	OBB-A1635 <b>690,-</b>
Trinocular tube	40x/0,75 (spring-loaded) W.D. 0,78 mm	○	○	○	○	OBB-A1636 <b>1050,-</b>
	100x/1,3 (oil) (spring-loaded) W.D. 0,15 mm	○	○	○	○	OBB-A1637 <b>1370,-</b>
	· Butterfly 30° inclined/360° rotatable · Interpupillary distance 50 mm - 75 mm · Light distribution 0:100 · Diopter adjustment both-sided	✓	✓	✓	✓	OBB-A1382 <b>570,-</b>
Mechanical stage	· Stage size B×T 175×145 mm · Travel 78×55 mm · Coaxial coarse and fine focusing knobs · Holder for two slides	✓	✓	✓	✓	OBB-A1330 <b>150,-</b>
Condenser	Abbe N.A. 1,25 can be centred (with aperture diaphragm)	✓	✓	✓	✓	OBB-A1102 <b>95,-</b>
	“Swing-out” condenser N.A. 0,9/0,13 can be centred (with aperture diaphragm)	○	○	○	○	OBB-A1104 <b>240,-</b>
Darkfield condenser	N.A. 0,85-0,91 (dry, paraboloid)	○	○	○	○	OBB-A1421 <b>290,-</b>
	N.A. 1,3 (oil, cardiod)	○	○	○	○	OBB-A1538 <b>660,-</b>
Polarising unit	Analyser/Polariser	○	○	○	○	OBB-A1283 <b>290,-</b>
Phase contrast units	Quintuple condenser wheel with 10x/20x/40x/100x Infinity PH Plan objectives (complete set)	○	○	○	○	OBB-A1237 <b>1790,-</b>
	Single unit with ∞ PH-Plan-objective 10x	○	○	○	○	OBB-A1214 <b>340,-</b>
	Single unit with ∞ PH-Plan-objective 20x	○	○	○	○	OBB-A1216 <b>390,-</b>
	Single unit with ∞ PH-Plan-objective 40x	○	○	○	○	OBB-A1218 <b>470,-</b>
	Single unit with ∞ PH-Plan-objective 100x	○	○	○	○	OBB-A1212 <b>570,-</b>
Fluorescence unit	100W-HBO-Epi-Fluorescence unit, 6-filter-disc (UV/V/B/G) including centering-objective				✓	OBB-A1155 <b>4970,-</b>
	100 W HBO Epi fluorescent unit, 6-filter-disc (B/G) including centring objective lens				✓	OBB-A1153 <b>3490,-</b>
	5W LED Epi Fluorecence unit, 6-filter-disc (UV/V/B/G) including centering objective				✓	OBB-A1654 <b>4970,-</b>
	5W LED Epi Flourecence unit, 6-filter-disc (B/G) including centering objective				✓	OBB-A1156 <b>3550,-</b>
	Blue	○	○	✓	✓	OBB-A1170 <b>25,-</b>
Colour filters for transmitted illumination	Green	○	○	○	○	OBB-A1188 <b>25,-</b>
	Yellow	○	○	○	○	OBB-A1165 <b>25,-</b>
	Grey	○	○	○	○	OBB-A1183 <b>25,-</b>
C-Mount	1x	○	○	○	○	OBB-A1514 <b>130,-</b>
	0,5x (focus adjustable)	○	○	○	○	OBB-A1515 <b>200,-</b>

Further accessories and spare parts  
see *internet*

✓ = included with the delivery

○ = Option



OCM 161/162



OCM 165-168



N.A. 0,3 Abbe Condenser with phase contrast slide



Coaxial control knobs for x/y can be fitted either left or right

## Lab Line

### The inverted biological laboratory microscope – also with fluorescence

#### Features

- The OCM range stands out through its design which is ergonomic, robust and extremely stable
- A powerful and continuously adjustable 30 W halogen illumination or 5 W LED illumination ensures optimum illumination in the bright field of your samples. For the models with an additional fluorescence unit, you can choose either an Osram 100 W-HBO- or an 5 W-LED epi-fluorescence unit
- A special Abbe N.A. 0.3 condenser with aperture diaphragm and large working distance of 72 mm guarantees the very best working practise in the bright field and with fluorescence applications
- As standard, the OCM range is fitted with a trinocular eyepiece tube
- The mechanical stage including specimen holder ( $\varnothing$  110 mm) means that you can work quickly and effectively. Further brackets for petri dishes are included with delivery or available as accessories
- Further options such as, for example, a selection of eyepieces, objectives, specimen holders and other phase contrast units can be integrated as accessories
- A dust cover as well as user instructions are included with the 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

- Research and breeding of cell cultures and tissue cultures

#### Applications/Samples

- Particularly for viewing samples in culture vessels (flasks, petri dishes, microtitre plates), translucent, thin, low-contrast, challenging samples (e.g. living mammal cells, tissue, microorganisms if necessary, Immunofluorescence, FISH, DAPI staining etc.)

#### Technical data

- Infinity optics
- Quintuple nosepiece
- Siedentopf 45° inclined
- Diopter adjustment, both-sided

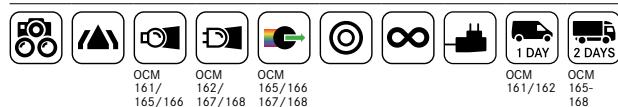
#### OCM 161/162

- Overall dimensions WxDxH 660x600x335 mm
- Net weight approx. 15 kg

#### OCM 165-168

- Overall dimensions WxDxH 782x304x530 mm
- Net weight approx. 22 kg

#### STANDARD



OCM  
161/  
165/166

OCM  
162/  
167/168

OCM  
165/166  
167/168

OCM  
161/162

OCM  
165-  
168

#### Model

#### Tube

#### Eyepiece

#### Objective quality

#### Objectives

#### Illumination

#### Price excl. of VAT ex works €

#### KERN

OCM 161	Trinocular	HWF 10x/0 22 mm	Infinity Plan	10x / 20x / 40x	30 W Halogen (transmitted)	3790,-
OCM 162	Trinocular	HWF 10x/0 22 mm	Infinity Plan	10x / 20x / 40x	5 W LED (transmitted)	3800,-
OCM 165	Trinocular	HWF 10x/0 22 mm	Infinity Plan	10x / 20x / 40x	30 W Halogen + 100 W Epi Fluorescence (B/G)	9180,-
OCM 166	Trinocular	HWF 10x/0 22 mm	Infinity Plan	10x / 20x / 40x	30 W Halogen + 100 W Epi Fluorescence (UV/V/B/G)	10790,-
OCM 167	Trinocular	HWF 10x/0 22 mm	Infinity Plan	10x / 20x / 40x	5 W LED + 5 W LED Epi Fluorescence (B/G)	9180,-
OCM 168	Trinocular	HWF 10x/0 22 mm	Infinity Plan	10x / 20x / 40x	5 W LED + 5 W LED Epi Fluorescence (UV/V/B/G)	10790,-

NEW New model

Model outfit		Model KERN						Order number	Price/piece excl. of VAT ex works €
		OCM 161	OCM 162	OCM 165	OCM 166	OCM 167	OCM 168		
Eyepieces (30 mm)	HWF 10x/Ø 22 mm (adjustable)	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	OBB-A1491	100,-
	HWF 10x/Ø 22 mm (reticule 0,1 mm) (adjustable)	○	○	○	○	○	○	OBB-A1523	155,-
Infinity Plan achromatic Fluor objectives	4x/0,11 W.D. 12,1 mm	○	○	○	○	○	○	OBB-A1600	140,-
	10x/0,25 W.D. 10,3 mm	✓	✓	✓	✓	✓	✓	OBB-A1601	210,-
	20x/0,45 W.D. 5,8 mm	✓	✓	✓	✓	✓	✓	OBB-A1602	290,-
	40x/0,65 W.D. 5,1 mm	✓	✓	✓	✓	✓	✓	OBB-A1603	360,-
Trinocular tube	· 45° inclined · Interpupillary distance 48 mm - 76 mm · Light distribution 100:0 · Diopter adjustment both-sided	✓	✓	✓	✓	✓	✓		
	· Stage size B×T 210×241 mm · Travel 128×80 mm · Coaxial coarse and fine focusing knobs · The x/y control knobs can be fitted either left or right · Suitable for attaching a 96-hole microtiter plate	✓	✓	✓	✓	✓	✓		
Mechanical stage	Specimen holder (Ø 110)	✓	✓	✓	✓	✓	✓	OBB-A1503	35,-
	Specimen holder for 35 mm petri dish	○	○	○	○	○	○	OBB-A1507	65,-
	Specimen holder for 54 mm petri dish	✓	✓	✓	✓	✓	✓	OBB-A1506	65,-
	Specimen holder for 65 mm petri dish	○	○	○	○	○	○	OBB-A1505	65,-
Condenser	Abbe N.A. 0,3 (with aperture diaphragm), LWD 72 mm	✓	✓	✓	✓	✓	✓		
	Phase contrast slide 4x	○	○	○	○	○	○	OBB-A1608	95,-
Phase contrast units	Phase contrast slide 10x	✓	✓	✓	✓	✓	✓	OBB-A1609	95,-
	Phase contrast slide 20x/40x	✓	✓	✓	✓	✓	✓	OBB-A1610	95,-
	Infinity PH-Plan Fluor objective 4x	○	○	○	○	○	○	OBB-A1604	680,-
	Infinity PH-Plan Fluor objective 10x	○	○	○	○	○	○	OBB-A1605	260,-
	Infinity PH-Plan Fluor objective 20x	✓	✓	✓	✓	✓	✓	OBB-A1606	360,-
	Infinity PH-Plan Fluor objective 40x	○	○	○	○	○	○	OBB-A1607	410,-
	Centring eyepiece	✓	✓	✓	✓	✓	✓	OBB-A1544	120,-
Colour filters for transmitted illumination	Blue	✓	✓	✓	✓	✓	✓	OBB-A1510	25,-
	Green	✓	✓	✓	✓	✓	✓	OBB-A1511	25,-
	Yellow	○	○	○	○	○	○	OBB-A1512	30,-
	Grey	○	○	○	○	○	○	OBB-A1513	25,-
C-Mount	0,5x (focus adjustable)	○	○	○	○	○	○	OBB-A1515	200,-
	1x	○	○	○	○	○	○	OBB-A1514	130,-

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*



## Cleaning Sets for Microscopes

### Features

- This economical and fully equipped 7-piece cleaning set contains everything you need for the very best care of your microscope.
- A silicon hand blower, dust brush, 60 ml of cleaning liquid, lint-free duster, optical cleaning cloths and cleaning swabs. You get all that in a high-quality KERN storage bag which you can also easily fix onto your belt.
- You can use this set not only to gently clean your microscope, but also for example your camera, binoculars or all other optical surfaces.
- The cleaning liquid is also available separately



### Model

### Description

### Price excl. of VAT ex works €

#### KERN

OCS 901	7-piece cleaning sets for microscopes und other optical instruments	35,-
OCS-A1101	Cleaning liquid	19,-

2

# METALLURGICAL MICROSCOPES





Illumination unit



Stage and objectives

## LAB LINE MET

### The metallurgical reflected light microscope for material testing and surface testing, as well as quality assurance in industry

#### Features

- The KERN OKM is an excellent metallurgical reflected light microscope, e.g. for surface quality testing of raw materials and finished products in industry
- The strong, continuously dimmable 5 W-LED illumination unit ensures excellent, high-contrast images
- A large mechanical stage for reflected illumination applications is configured as standard. The coarse and fine focusing knob on both sides guarantees optimal adjustment and focusing of your sample
- A simple polarising unit (analyser and polariser) is included with delivery
- A large selection of different eyepieces and objectives is also available
- 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

- Metallurgy, material testing, quality assurance

#### Applications/Samples

- Opaque and thick samples, workpieces (surfaces, fold lines, coatings)

#### Technical data

- Infinity optical system
- Siedentopf 30° inclined/360° rotatable
- 4-fold lens revolving unit
- Diopter adjustment, one-sided
- Overall dimensions WxDxH 440x200x460 mm
- Net weight approx. 8 kg

#### STANDARD



#### Model

#### Tube

#### Eyepiece

#### Objective quality

#### Objectives

#### Illumination

#### Price excl. of VAT ex works €

#### KERN

OKM 173

Trinocular

HWF 10x/Ø 20 mm

Infinity Plan

5x / 10x / 20x / 50x

5 W LED (incident)

2220,-

## Model outfit

		Model KERN OKM 173	Order number	Price/piece excl. of VAT ex works €
Eyepieces (23,2 mm)	HWF 10x/Ø 18 mm	✓	OBB-A1403	50,-
	HWF 10x/Ø 18 mm (reticule 0,1 mm) (non-adjustable)	✓	OBB-A1349	65,-
	WF 5x/Ø 20 mm	○	OBB-A1355	60,-
	WF 12,5x/Ø 14 mm	○	OBB-A1353	85,-
Infinity Plan achromatic objectives	WF 16x/Ø 13 mm	○	OBB-A1354	50,-
	5x/0,1 W.D. 12,1 mm	○	OBB-A1268	115,-
	10x/0,25 W.D. 4,64 mm	○	OBB-A1244	215,-
	20x/0,4 (spring-loaded) W.D. 2,14 mm	○	OBB-A1251	290,-
Infinity Plan achromatic objectives for long working distance	40x/0,66 (spring-loaded) W.D. 0,45 mm	○	OBB-A1258	315,-
	5x/0,15 W.D. 24,23 mm	✓	OBB-A1525	135,-
	10x/0,25 W.D. 18,48 mm	✓	OBB-A1526	200,-
	20x/0,4 W.D. 8,35 mm	✓	OBB-A1527	265,-
Trinocular tube	40x/0,65 W.D. 3,9 mm	○	OBB-A1259	440,-
	50x/0,75 (spring-loaded) W.D. 1,95 mm	✓	OBB-A1528	350,-
	80x/0,8 (spring-loaded) W.D. 0,85 mm	○	OBB-A1271	550,-
	· Siedentopf 30° inclined/360° rotatable · Interpupillary distance 50 mm - 75 mm · Light distribution 20:80 · Diopter adjustment one-sided	✓	OBB-A1580	400,-
Mechanical stage	· Stage size B×T 200×140 mm · Travel 76×52 mm · Coaxial coarse and fine focusing knobs	✓	OBB-A1327	165,-
Reflected illumination unit	5-filter unit (Blue, Green, Yellow, Grey, Empty)	✓		
Polarising unit	Incl. analyser and polariser	✓		
C-Mount	1x	○	OBB-A1514	130,-
	0,5x (focus adjustable)	○	OBB-A1515	200,-

✓ = included with the delivery

○ = Option

 Further accessories and spare parts  
see *internet*



Stage and objectives



Illumination unit

## PROFESSIONAL LINE MET

### The fully-equipped reflected and transmitted light microscope for numerous applications in metallurgy

#### Features

- This device is a professional, versatile, metallurgical microscope, which is used in testing metals and analysing surfaces
- The KERN OKO 178 is a combi variant of LED incident illumination and LED transmitted illumination. A height-adjustable 1.25 Abbe condenser which can be centred as well as a field diaphragm for complete professional Köhler illumination are part of the standard version
- An open, mechanical angle table is integrated as standard
- A simple polarising unit (analyser and polariser) is included with delivery

- A large selection of accessories, such as, for example, eyepieces and further objectives are available for longer working distances
- 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

- Metallurgy, material testing, quality control

#### Applications/Samples

- Opaque and thick samples, workpieces (surfaces, fold lines, coatings)

#### Technical data

- Infinity optical system
- Siedentopf 30° inclined/360° rotatable
- Quintuple nosepiece
- Diopter adjustment, both-sided
- Overall dimensions W×D×H 550×200×460 mm
- Net weight approx. 12 kg

#### STANDARD



#### Model

#### Tube

#### Eyepiece

#### Objective quality

#### Objectives

#### Illumination

#### Price excl. of VAT ex works €

#### KERN

OKO 178

Trinocular

WF 10x/Ø 22 mm

Infinity semi apochromatic

5x / 10x / 20x / 50x

5 W LED (transmitted + incident)

3350,-

## Model outfit

		Model KERN OKO 178	Order number	Price/piece excl. of VAT ex works €
<b>Eyepieces (30 mm)</b>	HWF 10x/Ø 22 mm (adjustable)	✓	OBB-A1491	100,-
	HWF 10x/Ø 22 mm (reticule 0,1 mm) (adjustable)	✓	OBB-A1523	155,-
<b>Infinity Plan Semi Apochromatic objectives for long working distance</b>	5x/0,15 W.D. 15 mm	✓	OBB-A1619	180,-
	10x/0,3 W.D. 20 mm	✓	OBB-A1620	275,-
	20x/0,4 W.D. 15 mm	✓	OBB-A1621	335,-
	50x/0,75 W.D. 4,25 mm	✓	OBB-A1641	480,-
	100x/0,85 (dry) (spring-loaded) W.D. 3 mm	○	OBB-A1623	1260,-
<b>Infinity Plan objectives for long working distance</b>	80x/0,8 (spring-loaded) W.D. 0,85 mm	○	OBB-A1530	520,-
<b>Trinocular tube</b>	· Siedentopf 30° inclined/360° rotatable · Interpupillary distance 48 mm - 76 mm · Light distribution 0:100	✓	OBB-A1599	670,-
<b>Mechanical stage</b>	· Stage size B×T 182×140 mm · Travel 77×52 mm · Coaxial coarse and fine focusing knobs	✓		
<b>Condenser</b>	Abbe N.A. 1,25 can be centred (aperture diaphragm)	✓	OBB-A1380	110,-
<b>Reflected illumination unit</b>	Incl. blue filter slider	✓		
<b>Polarising unit</b>	Incl. analyser and polariser for reflected and transmitted light	✓		
<b>Colour filters for transmitted illumination</b>	Blue	✓	OBB-A1170	25,-
	Green	○	OBB-A1188	25,-
	Yellow	○	OBB-A1165	25,-
	Grey	○	OBB-A1183	25,-
<b>C-Mount</b>	1x	○	OBB-A1514	130,-
	0,75x	○	OBB-A1590	200,-
	0,5x (focus adjustable)	○	OBB-A1515	200,-

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*



OLM 171



OLM 170



Specimen stage and illumination unit



Analyser/Polariser

## LAB LINE MET

### The inverted metallurgical microscope for professional applications

#### Features

- The KERN OLM range is part of the range of inverted microscopes and stands out through its design which is ergonomic, robust and extremely stable. This range, with its large working distance is, for example, particularly suitable for surface quality testing of raw materials and finished products in industry
- Depending on the application, you can choose from models with a powerful, continuously dimmable 5W LED or a 50W halogen incident light illumination, which ensure optimum illumination of the materials to be tested
- As standard, the OLM range is fitted with a trinocular eyepiece tube
- A simple polarising unit (analyser and polariser) is included with delivery
- A large mechanical stage is included with delivery as standard. The coarse and fine focusing knob on both sides guarantees optimal adjustment and focusing.

- The compact design of the OLM 170 means that handling is even easier and more flexible for the user, so this model can also be considered for mobile applications. In the same way, the pre-installed C-Mount Adapter (on the back of the microscope) also makes operation easier, as connecting the camera is even easier
- Further options such as, for example, a large selection of objectives can be integrated as accessories
- A dust cover as well as user instructions are included with the delivery
- Please find detailed information in the following model outfit list

#### Scope of application

- Metallurgy, material testing, Quality assurance

#### Applications/Samples

- Opaque and thick samples, workpieces (surfaces, fold lines, coatings)

#### Technical data

- Infinity optical system

#### OLM 170

- 4-fold lens revolving unit
- Butterfly 45° inclined
- Diopter adjustment, one-sided
- Overall dimensions W×D×H 470×240×330 mm
- Net weight approx. 7 kg

#### OLM 171

- Quintuple nosepiece
- Siedentopf 30° inclined
- Diopter adjustment, both-sided
- Overall dimensions W×D×H 747×271×379 mm
- Net weight approx. 13 kg

#### STANDARD



Model	Tube	Eyepiece	Objective quality	Objectives	Illumination	Price excl. of VAT ex works €
<b>KERN</b>						
OLM 170	Trinocular	HWF 10x/Ø 20 mm	Infinity Plan	5x / 10x / 20x / 50x	5 W LED (incident)	3000,-
OLM 171	Trinocular	HWF 10x/Ø 22 mm	Semi Apochromatic	5x / 10x / 20x / 50x	50 W Halogen (incident)	3950,-

## Model outfit

		Model KERN		Order number	Price/piece excl. of VAT ex works €
		OLM 170	OLM 171		
<b>Eyepieces (23,2 mm)</b>	HWF 10x/Ø 20 mm	✓		OBB-A1404	105,-
	WF 10x/Ø 20 mm (reticule 0,1 mm) (adjustable)	✓		OBB-A1352	155,-
<b>Eyepieces (30 mm)</b>	HWF 10x/Ø 22 mm (adjustable)		✓	OBB-A1491	100,-
	HWF 10x/Ø 22 mm (reticule 0,1 mm) (adjustable)		✓	OBB-A1523	155,-
<b>Infinity Plan achromatic objectives for long working distance</b>	5x/0,15 W.D. 24,23 mm	✓	○	OBB-A1525	135,-
	10x/0,25 W.D. 18,48 mm	✓	○	OBB-A1526	200,-
	20x/0,4 W.D. 8,35 mm	✓	○	OBB-A1527	265,-
	50x/0,75 (spring-loaded) W.D. 1,95 mm	✓	○	OBB-A1528	350,-
	80x/0,8 (spring-loaded) W.D. 0,85 mm	○	○	OBB-A1530	520,-
<b>Infinity Plan Semi Apochromatic objectives for long working distance</b>	5x/0,15 W.D. 15 mm		✓	OBB-A1619	180,-
	10x/0,3 W.D. 20 mm		✓	OBB-A1620	275,-
	20x/0,4 W.D. 15 mm	○	✓	OBB-A1621	335,-
	50x/0,55 W.D. 10 mm		✓	OBB-A1622	480,-
	100x/0,85 (dry) (spring-loaded) W.D. 3 mm		○	OBB-A1623	1260,-
<b>Trinocular tube</b>	· Butterfly 30° inclined · Interpupillary distance 48 mm - 76 mm · Light distribution 20:80 · Diopter adjustment: One-sided		✓		
	· Siedentopf 30° inclined · Interpupillary distance 48 mm - 76 mm · Light distribution 100:0 · Diopter adjustment: Both-sided		✓		
	· Stage size B×T 155×180 mm · Travel 75×40 mm · Coaxial coarse and fine focusing knobs		✓		
<b>Mechanical stage</b>	· Stage size B×T 210×180 mm · Travel 50×50 mm · Coaxial coarse and fine focusing knobs		✓		
	Incl. blue filter slider	✓	✓		
	Incl. analyser and polariser	✓	✓		
<b>Colour filters</b>	Blue		✓	OBB-A1510	25,-
	Green		○	OBB-A1511	25,-
	Yellow		○	OBB-A1512	30,-
	Grey	✓	○	OBB-A1513	25,-
<b>C-Mount</b>	0,5x (built-in)	✓			
	1x		○	OBB-A1514	130,-
	0,5x (focus adjustable)		○	OBB-A1515	200,-

✓ = included with the delivery

○ = Option

 Further accessories and spare parts  
see *internet*

# 3

## POLARISING MICROSCOPES



Bertrand lens,  $\lambda$  Slip, 360° rotatable analyser (removable)

Center-adjustable and turnable polarisation stage



"Swing-Out" condenser

## PROFESSIONAL LINE POL

### The flexible and powerful polarising microscope for all professional applications with reflected and transmitted light

#### Features

- This device is a professional, fully-equipped polarising microscope, which uses the polarisation of light to analyse minerals, crystals and isotropic materials
- The KERN OKO 185 is a combi variant of LED incident illumination and LED transmitted illumination. A height-adjustable 0.9/0.13 Swing-out Abbe condenser which can be centred for complete Köhler illumination are part of the standard version
- A 360° revolving stage with 1° division, 6' fine division and locking function is integrated into all series as standard.
- A large selection of accessories such as, for example, a mechanical stage attachment as well as further objectives for a long working distance and filter units are also available
- 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

- Mineralogy, texture observations, material testing, observation of crystals

#### Applications/Samples

- More complex samples with polarising properties

#### Technical data

- Infinity optical system
- Quintuple nosepiece
- Siedentopf 30° inclined
- Diopter adjustment, both-sided
- Overall dimensions W×D×H 500×200×500 mm
- Net weight approx. 13 kg

#### STANDARD



Model	Tube	Eyepiece	Objective quality	Objectives	Illumination	Price excl. of VAT ex works
<b>KERN</b>						

<b>OPO 185</b>	Trinocular	HWF 10x/Ø 20 mm	Infinity Plan	4x / 10x / 20x / 40x / 50x	5 W LED (transmitted + incident)	<b>5700,-</b>
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## Model outfit

		Model KERN	Order number	Price/piece excl. of VAT ex works €
			OPO 185	
Eyepieces (30 mm)	HWF 10x/Ø 20 mm	✓	OBB-A1591	95,-
	HWF 10x/Ø 20 mm (reticule 0,1 mm) (adjustable)	✓	OBB-A1592	130,-
Non-stress Infinity Plan objectives (transmitted)	4x/0,11 W.D. 12,1 mm	✓	OBB-A1294	115,-
	10x/0,25 W.D. 4,64 mm	✓	OBB-A1289	220,-
Non-stress Infinity Plan objectives (incident) for long working distance	20x/0,45 (spring-loaded) W.D. 2,41 mm	✓	OBB-A1290	290,-
	40x/0,66 (spring-loaded) W.D. 0,65 mm	✓	OBB-A1292	335,-
Non-stress Infinity Plan objectives (incident) for long working distance	5x/0,13 W.D. 16,04 mm	○	OBB-A1593	110,-
	10x/0,25 W.D. 18,48 mm	○	OBB-A1594	220,-
Non-stress Infinity Plan objectives (incident) for long working distance	20x/0,4 W.D. 8,35 mm	○	OBB-A1291	375,-
	Semi apochromatic 50x/0,75 W.D. 4,25 mm	✓	OBB-A1642	480,-
Trinocular tube	E-Plan 100x/0,85 (dry) (spring-loaded) W.D. 3 mm	○	OBB-A1595	1260,-
	· 30° inclined · Interpupillary distance 48 mm – 76 mm · Light distribution 0:100	✓		
Bertrand lens	Built-in, can be centred	✓	OBB-A1121	330,-
λ + 1/4 λ Slip	λ Slip and 1/4 λ Slip (combination)	✓	OBB-A1316	155,-
Quartz wedge	I - IV Class	✓	OBB-A1321	260,-
Revolving round stage	360° revolving, can be centred, 1° division, 6' fine division	✓	OBB-A1332	340,-
Polarising attached mechanical stage	Mechanical stage extension for the polarisation bench	○	OBB-A1337	295,-
Swing-out condenser	Achromatic condenser, centrable (with aperture diaphragm)	✓	OBB-A1107	255,-
Polarising unit	Incident light: analyser with scale, 360° rotatable, lockable, polariser	✓	OBB-A1597	3795,-
	Transmitted light: Incl. analyser and polariser, lockable, 360° rotatable	✓	OBB-A1284	275,-
Colour filters for transmitted illumination	Blue	✓	OBB-A1170	25,-
	Green	○	OBB-A1188	25,-
	Yellow	○	OBB-A1165	25,-
	Grey	○	OBB-A1183	25,-
C-Mount	1x	○	OBB-A1514	130,-
	0,75x	○	OBB-A1590	200,-
	0,5x (focus adjustable)	○	OBB-A1515	200,-

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*

# 4

## STEREO MICROSCOPES

Stereo, Stereo-Zoom, Coaxial and Gem Microscopes





Side view

## Educational Line

### Stereo microscope with robust, ergonomic design – ideal for workshops, schools and training

#### Features

- With its integrated handle as well as its stable mechanical stand, the KERN OSE 421 has been specially developed for schools and workshops
- The incident and transmitted illumination unit included as standard can be optionally enabled for the very best illumination of your sample
- Mobile use is also no problem due to the integrated battery compartment
- Despite its low price it has very good optical characteristics, which enable you to have sharp images over a large field of view
- A turnable objective with predefined magnifications is available to make your working procedures quicker and more efficient.
- The eyepieces are fixed in the eyepiece tube, to stop them getting damaged or lost
- A special feature of this adaptable and yet robust microscope series is the stable mechanism of the microscope stand which can be adjusted precisely. It will also impress you with its functionality and ergonomic design.
- A large selection of eyepieces as well as various additional external illumination units are available as accessories
- Please find detailed information in the following model outfit list

#### Scope of application

- Training, 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
- Tube 45° inclined
- Interpupillary distance: 55 mm – 75 mm
- Dioptr adjustment, both-sided
- Overall dimensions WxDxH 200x180x300 mm
- Net weight approx. 2,2 kg

#### STANDARD



Model	Tube	Eyepiece	Field of view	Objective	Stand	Illumination	Price excl. of VAT ex works €
<b>KERN</b>							
<b>OSE 421</b>	Binocular	WF 10x/Ø 20 mm	20 mm	2x / 4x	mechanical	1 W LED (incident), 1 W LED (transmitted)	290,-

## Eyepiece

## Specifications – Objectives

	<b>Magnification</b>	<b>2x</b>	<b>4x</b>
<b>WF 5x</b>	Total magnification	10x	20x
	Field of view mm	Ø 10	Ø 5
<b>WF 10x</b>	Total magnification	20x	40x
	Field of view mm	Ø 10	Ø 5
<b>WF 15x</b>	Total magnification	30x	60x
	Field of view mm	Ø 7,5	Ø 3,7
<b>WF 20x</b>	Total magnification	40x	80x
	Field of view mm	Ø 6,5	Ø 3,2
<b>Working distance</b>		57 mm	57 mm

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## Model outfit

## Model KERN

## Order number

Price/piece  
excl. of VAT  
ex works  
€

		<b>OSE 421</b>		
<b>Eyepieces (30,5 mm)</b>	WF 5x/Ø 16,2 mm	OO	OZB-A4 101	<b>40,-</b>
	WF 10x/Ø 20 mm	✓✓	OZB-A4 102	<b>35,-</b>
	WF 15x/Ø 15 mm	OO	OZB-A4 103	<b>35,-</b>
	WF 20x/Ø 10 mm	OO	OZB-A4 104	<b>40,-</b>
	WF 10x/Ø 20 mm (with scale 0,1 mm)	○	OZB-A4 151	<b>50,-</b>
<b>Stand</b>	Mechanical, with 1 W LED illumination (transmitted + incident)	✓		
<b>Stand insert</b>	Frosted glass/Ø 59,5 mm	✓	OZB-A4815	<b>25,-</b>
	Black-white/Ø 59,5 mm	✓	OZB-A4816	<b>25,-</b>

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*



4



Stage plate black



Stage plate white

## Educational Line

**The practical and robust product for schools, training centres, the workshop and laboratory**

### Features

- With its integrated handle as well as its stable mechanical stand, the KERN OSF-43 has been specially developed for schools and workshops
- The LED incident and transmitted illumination included as standard guarantees the very best, continuously dimmable illumination for your sample
- As well as very good optical characteristics, its ergonomic working surface means that it offers the highest level of convenience in this class.
- A turnable objective with predefined magnifications is available to make your working procedures quicker and more efficient.
- The eyepieces are fixed in the eyepiece tube, to stop them getting damaged or lost
- The ergonomic shape and the stable mechanism which can be adjusted extremely accurately offer a high level of functionality and enable you to work quickly and efficiently with very little effort.
- A large selection of eyepieces as well as various additional external illumination units 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 model outfit list

### Scope of application

- Training, 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
- Interpupillary distance: 55 mm - 75 mm
- Dioptr adjustment, one-sided
- Overall dimensions WxDxH 230x180x275 mm
- Net weight approx. 2,4 kg

### STANDARD



Model	Tube	Eyepiece	Field of view	Objective	Stand	Illumination	Price excl. of VAT ex works €
<b>KERN</b>							
<b>OSF 438</b>	Binocular	WF 10x/Ø 20 mm	20 mm	1x / 2x / 3x	mechanical	1 W LED (incident), 0,35 W LED (transmitted)	<b>360,-</b>
<b>OSF 439</b>	Binocular	WF 10x/Ø 20 mm	20 mm	1x / 2x / 4x	mechanical	1 W LED (incident), 0,35 W LED (transmitted)	<b>360,-</b>

## Eyepiece

## Specifications – Objectives

	Magnification	1x	2x	3x	4x
WF 5x	Total magnification	5x	10x	15x	20x
	Field of view mm	Ø 20	Ø 10	Ø 6,7	Ø 5
WF 10x	Total magnification	10x	20x	30x	40x
	Field of view mm	Ø 20	Ø 10	Ø 6,7	Ø 5
WF 15x	Total magnification	15x	30x	45x	60x
	Field of view mm	Ø 15	Ø 7,5	Ø 5	Ø 3,7
WF 20x	Total magnification	20x	40x	60x	80x
	Field of view mm	Ø 10	Ø 6,5	Ø 4,3	Ø 3,2
Working distance		57 mm	57 mm	57 mm	57 mm

## Model outfit

## Model KERN

## Order number

Price/piece  
excl. of VAT  
ex works  
€

		OSF 438	OSF 439	
Eyepieces (30,5 mm)	WF 5x/Ø 16,2 mm	○○	○○	OZB-A4 101 <b>40,-</b>
	WF 10x/Ø 20 mm	✓✓	✓✓	OZB-A4 102 <b>35,-</b>
	WF 15x/Ø 15 mm	○○	○○	OZB-A4 103 <b>35,-</b>
	WF 20x/Ø 10 mm	○○	○○	OZB-A4 104 <b>40,-</b>
	WF 10x/Ø 20 mm (with scale 0,1 mm)	○	○	OZB-A4 151 <b>50,-</b>
Stand	Mechanical, incl. handle, with LED illumination (0,35 W transmitted + 1 W incident)	✓	✓	
Stand insert	Frosted glass/Ø 59,5 mm	✓	✓	OZB-A4815 <b>25,-</b>
	Black-white/Ø 59,5 mm	✓	✓	OZB-A4816 <b>25,-</b>

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*



## Lab Line

### The affordable and flexible stereo zoom microscope for laboratories, inspection authorities and quality controls

#### Features

- The KERN OZL-44 is a stereo zoom microscope, which will impress you with the easy handling, flexibility as well as the stability and economical price
- The LED incident and transmitted illumination included as standard guarantees the very best illumination of your sample
- 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 7,5x – 36x
- The OZL-44 series is available as a binocular version. The eyepieces are fixed in the eyepiece tube, to stop them getting damaged or lost.
- 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 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 4,8:1
- Interpupillary distance: 55 mm – 75 mm
- Diopter adjustment, both-sided
- Overall dimensions W×D×H 230×235×360 mm
- Net weight approx. 4,4 kg

#### STANDARD



Model	Tube	Eyepiece	Field of view	Objective Zoom	Stand	Illumination	Price excl. of VAT ex works €
<b>KERN</b>							
<b>OZL 445</b>	Binocular	WF 10x/Ø 20 mm	Ø 28 – 6 mm	0,75x – 3,6x	pillar	1 W LED (incident), 0,35 W LED (transmitted)	550,-

## Eyepiece

## Specifications – Objectives

	Magnification	Standard	Auxiliary objectives			
			1,0x	0,5x	0,75x	1,5x
WF 5x	Total magnification	3,75x – 18x	1,875x – 9x	2,81x – 13,5x	5,625x – 27x	7,5x – 36x
	Field of view mm	Ø 26 – 6	Ø 60 – 13	Ø 32 – 7	Ø 16 – 4	Ø 12,5 – 3
WF 10x	Total magnification	7,5x – 36x	3,75x – 18x	5,625x – 27x	11,25x – 54x	15x – 72x
	Field of view mm	Ø 26,7 – 5,6	Ø 53,3 – 11,1	Ø 35,5 – 7,4	Ø 17,8 – 3,7	Ø 13,3 – 2,8
WF 15x	Total magnification	11,25x – 54x	5,625x – 27x	8,44x – 40,5x	16,875x – 81x	22,5x – 108x
	Field of view mm	Ø 19 – 4,5	Ø 43 – 9,5	Ø 24 – 5,5	Ø 12 – 3	Ø 9,5 – 2
WF 20x	Total magnification	15x – 72x	7,5x – 36x	56,25x – 54x	22,5x – 108x	30x – 144x
	Field of view mm	Ø 12,5 – 3	Ø 28 – 6	Ø 16 – 3,5	Ø 8 – 2	Ø 6 – 1,5
<b>Working distance</b>		86 mm	178 mm	96 mm	42,5 mm	25,5 mm
<b>Maximum sample height</b>		100 mm	10 mm	60 mm	120 mm	135 mm

## Model outfit

## Model KERN

## Order number

Price/piece  
excl. of VAT  
ex works  
€

		Model KERN	Order number	Price/piece excl. of VAT ex works €
		OZL 445		
Eyepieces (30,5 mm)	WF 5x/Ø 16,2 mm	○○	OZB-A4 101	40,-
	WF 10x/Ø 20 mm	✓✓	OZB-A4 102	35,-
	WF 15x/Ø 15 mm	○○	OZB-A4 103	35,-
	WF 20x/Ø 10 mm	○○	OZB-A4 104	40,-
Auxiliary objectives	WF 10x/Ø 20 mm (with scale 0,1 mm)	○	OZB-A4 151	50,-
	0,5x	○	OZB-A4 201	85,-
	0,75x	○	OZB-A4 202	85,-
	1,5x	○	OZB-A4 204	85,-
	2x	○	OZB-A4 205	90,-
	Soldering protection lens	○	OZB-A4 251	25,-
	Pillar, with LED illumination (0,35 W transmitted + 1 W incident)	✓		
Stand insert	Frosted glass/Ø 95 mm	✓	OZB-A4 805	25,-
	Black-white/Ø 95 mm	✓	OZB-A4 806	25,-

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*

OZL 464  
with standard standOZL 465  
with ring illuminationOZL 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	Price excl. of VAT ex works €
<b>KERN</b>							
<b>OZL 463</b>	Binocular	HWF 10x/0 20 mm	Ø 28,6 – 4,4 mm	0,7x – 4,5x	pillar	3 W LED (incident + transmitted)	600,-
<b>OZL 464</b>	Trinocular	HWF 10x/0 20 mm	Ø 28,6 – 4,4 mm	0,7x – 4,5x	pillar	3 W LED (incident + transmitted)	670,-
<b>OZL 465</b>	Binocular	HWF 10x/0 20 mm	Ø 28,6 – 4,4 mm	0,7x – 4,5x	pillar	3 W LED (incident + transmitted)	640,-
<b>OZL 466</b>	Trinocular	HWF 10x/0 20 mm	Ø 28,6 – 4,4 mm	0,7x – 4,5x	pillar	3 W LED (incident + transmitted)	690,-
<b>OZL 467</b>	Binocular	HWF 10x/0 20 mm	Ø 28,6 – 4,4 mm	0,7x – 4,5x	mechanical	3 W LED (incident + transmitted)	600,-
<b>OZL 468</b>	Trinocular	HWF 10x/0 20 mm	Ø 28,6 – 4,4 mm	0,7x – 4,5x	mechanical	3 W LED (incident + transmitted)	660,-

## Eyepiece

## Specifications – Objectives

	Magnification	Standard	Auxiliary objectives				
			1,0x	0,5x	0,75x	1,5x	2,0x
HWSF 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	
HWSF 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	
<b>Working distance</b>		105 mm	177 mm	120 mm	47 mm	26 mm	
<b>Maximum sample height</b>		140 mm	35 mm	80 mm	165 mm	185 mm	

## Model outfit

## Model KERN

## Order number

Price/piece  
excl. of VAT  
ex works  
€

		OZL 463	OZL 464	OZL 465	OZL 466	OZL 467	OZL 468	
Eyepieces (30 mm)	HWF 10x/Ø 20 mm	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	OZB-A4631 <b>45,-</b>
	HWF 15x/Ø 15 mm	○○	○○	○○	○○	○○	○○	OZB-A4632 <b>55,-</b>
	HWF 20x/Ø 10 mm	○○	○○	○○	○○	○○	○○	OZB-A4633 <b>55,-</b>
	HWF 25x/Ø 10 mm	○○	○○	○○	○○	○○	○○	OZB-A4634 <b>60,-</b>
Auxiliary objectives	0,5x	○	○		○	○	○	OZB-A4641 <b>90,-</b>
	1,5x	○	○		○	○	○	OZB-A4642 <b>90,-</b>
	2x	○	○		○	○	○	OZB-A4643 <b>90,-</b>
	0,75x	○	○		○	○	○	OZB-A4644 <b>90,-</b>
	Soldering protection lens	○	○		○	○	○	OZB-A4646 <b>40,-</b>
C-Mount	1x (focus adjustable)		✓		✓		✓	OZB-A4809 <b>55,-</b>
	0,3x (focus adjustable)	○	○		○	○	○	OZB-A4810 <b>95,-</b>
	0,5x (focus adjustable)	○	○		○	○	○	OZB-A4811 <b>105,-</b>
Eyepiece camera adapter	1,0x; for fitting an eyepiece camera to the trinocular connection of the microscope	○	○		○	○	○	OZB-A4863 <b>40,-</b>
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 <b>25,-</b>
	Black-white/Ø 95 mm	✓	✓	✓	✓	✓	✓	OZB-A4806 <b>25,-</b>

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*



OZL 473

4

## Lab Line

### The flexible, affordable all-rounder with flexible incident illumination for training workshops, inspection authorities and laboratories

#### Features

- The products in the KERN OZL-47 series are stereo zoom microscopes, which will impress you with their easy handling, flexibility as well as their stability and economical price.
- A highlight is the powerful and infinitely dimmable integrated LED double swan neck illumination unit (incident), which ensures individual illumination which can be adjusted quickly
- 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 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
- 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
- Tube 45° inclined
- Magnification ratio 6,4:1
- OZL 474: Beam path distribution: 0:100
- Interpupillary distance: 55 mm – 75 mm
- Dioptr adjustment, both-sided
- Overall dimensions WxDxH 300×240×420 mm
- Net weight approx. 4,2 kg

#### STANDARD



Model	Tube	Eyepiece	Field of view	Objective Zoom	Stand	Illumination	Price excl. of VAT ex works €
<b>KERN</b>							
OZL 473	Binocular	HWF 10x/Ø 20 mm	Ø 28,6 – 4,4 mm	0,7x – 4,5x	pillar	3 W LED (incident)	840,-
OZL 474	Trinocular	HWF 10x/Ø 20 mm	Ø 28,6 – 4,4 mm	0,7x – 4,5x	pillar	3 W LED (incident)	930,-

## Eyepiece

## Specifications – Objectives

	Magnification	Standard	Auxiliary objectives			
			1,0x	0,5x	0,75x	1,5x
<b>HWSF 10x</b>	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
<b>HWF 15x</b>	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
<b>HWSF 20x</b>	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
<b>HWF 25x</b>	Total magnification	17,5x – 122,5x	8,8x – 56,3x	13,1x – 91,9x	26,3x – 168,8x	35x – 225x
	Field of view mm	Ø 12,9 – 2	Ø 25,7 – 4	Ø 17,2 – 2,7	Ø 8,6 – 1,3	Ø 6,4 – 1
<b>Working distance</b>		105 mm	177 mm	120 mm	47 mm	26 mm
<b>Maximum sample height</b>		140 mm	35 mm	80 mm	165 mm	185 mm

## Model outfit

	Model KERN		Order number	Price/piece excl. of VAT ex works €
	OZL 473	OZL 474		

<b>Eyepieces (30 mm)</b>	HWF 10x/Ø 20 mm	✓/✓	✓/✓	OZB-A4631	45,-
	HWF 15x/Ø 15 mm	○○	○○	OZB-A4632	55,-
	HWF 20x/Ø 10 mm	○○	○○	OZB-A4633	55,-
	HWF 25x/Ø 10 mm	○○	○○	OZB-A4634	60,-
<b>Auxiliary objectives</b>	0,5x	○	○	OZB-A4641	90,-
	0,75x	○	○	OZB-A4644	90,-
	1,5x	○	○	OZB-A4642	90,-
	2x	○	○	OZB-A4643	90,-
	Soldering protection lens	○	○	OZB-A4646	40,-
	1x (focus adjustable)		✓	OZB-A4809	55,-
<b>C-Mount</b>	0,3x (focus adjustable)		○	OZB-A4810	95,-
	0,5x (focus adjustable)		○	OZB-A4811	105,-
<b>Eyepiece camera adapter</b>	1,0x; for fitting an eyepiece camera to the trinocular connection of the microscope	○	○	OZB-A4863	40,-
<b>Stand</b>	Pillar, with 3 W LED illumination (incident)	✓	✓		
<b>Stand insert</b>	Black-white/Ø 95 mm	✓	✓	OZB-A4806	25,-

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*



## Lab Line

### Stereo zoom microscope with halogen illumination, for the laboratory, training centres, quality control or agriculture

#### Features

- The KERN OZL 451 stereo zoom microscope will impress you with its excellent optical characteristics, easy operation and high level of ergonomic working comfort
- The Halogen incident and transmitted illumination included as standard guarantees the very best illumination of your sample
- The high-quality optics, together with a large working surface offers the highest level of comfort for your applications.
- As standard this microscope offers you continuous total magnification of 7,5x – 50x
- 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 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
- Tube 45° inclined
- Magnification ratio 6,7:1
- Interpupillary distance: 55 mm – 75 mm
- Diopter adjustment, both-sided
- Overall dimensions W×D×H 330×270×460 mm
- Net weight approx. 4,6 kg

#### STANDARD



Model	Tube	Eyepiece	Field of view	Objective Zoom	Stand	Illumination	Price excl. of VAT ex works €
<b>KERN</b>							
<b>OZL 451</b>	Binocular	H SWF 10x/Ø 23 mm	Ø 33 – 5 mm	0,75x – 5x	pillar	10 W Halogen (incident + transmitted)	<b>760,-</b>

## Eyepiece

## Specifications – Objectives

	Magnification	Standard	Auxiliary objectives		
			1,0x	0,5x	0,75x
HWF 5x	Total magnification	3,75x – 25x	1,875x – 12,5x	2,813x – 18,75x	7,5x – 50x
	Field of view mm	Ø 31 – 4,6	Ø 61,3 – 9,2	Ø 41,3 – 6,1	Ø 16 – 2,5
HSWF 10x	Total magnification	7,5x – 50x	3,75x – 25x	5,625x – 37,5x	15x – 100x
	Field of view mm	Ø 33 – 5	Ø 65 – 10	Ø 44 – 6,7	Ø 16 – 2,5
HWF 15x	Total magnification	11,25x – 75x	5,625x – 37,5x	8,438x – 56,25x	22,5x – 150x
	Field of view mm	Ø 24 – 4,2	Ø 48 – 8,5	Ø 32 – 5,6	Ø 12 – 2
HSWF 20x	Total magnification	15x – 100x	7,5x – 50x	11,25x – 75x	30x – 200x
	Field of view mm	Ø 20 – 3,5	Ø 40 – 7	Ø 26,7 – 4,7	Ø 10 – 1,8
HWF 25x	Total magnification	18,75x – 125x	9,375x – 62,5x	14,063x – 93,75x	37,5x – 255x
	Field of view mm	Ø 15,8 – 2,4	Ø 31,5 – 4,8	Ø 24,1 – 3,2	Ø 7,9 – 1,2
<b>Working distance</b>		113 mm	177 mm	117 mm	35 mm
<b>Maximum sample height</b>		120 mm	60 mm	90 mm	165 mm

## Model outfit

## Model KERN

## Order number

Price/piece  
excl. of VAT  
ex works  
€

		OZL 451		
Eyepieces (30 mm)	HWF 5x/Ø 23,2 mm	○○	OZB-A4112	45,-
	HSWF 10x/Ø 23 mm	✓✓	OZB-A4118	45,-
	HWF 15x/Ø 15 mm	○○	OZB-A4119	45,-
	HSWF 20x/Ø 14,5 mm	○○	OZB-A4120	70,-
	HWF 25x/Ø 11,7 mm	○○	OZB-A4121	70,-
Auxiliary objectives	0,5x	○	OZB-A4209	135,-
	0,75x	○	OZB-A4210	135,-
	2x	○	OZB-A4206	130,-
Stand	Pillar, with 12 V/10 W Halogen Illumination (transmitted + incident)	✓		
Stand insert	Frosted glass/Ø 95 mm	✓	OZB-A4805	25,-
	Black-white/Ø 95 mm	✓	OZB-A4806	25,-
Illumination	10 W spar bulb (transmitted + incident)	✓	OZB-A4804	25,-
Mechanical stage (Pre-assembling on request)	Stage size B×T 180×155 mm, Travel 75×55 mm, for transmitted and incident illumination	○	OZB-A4605	260,-

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*



Infinitely dimmable integrated LED ring illumination in the lens housing

## Lab Line

### The practical and flexible stereo zoom microscope with integrated LED ring illumination and large zoom range

#### Features

- The KERN OZL 456 stereo zoom microscope will impress you with its excellent optical characteristics, easy operation and its integrated LED ring illumination unit
- The highlight of the KERN OZL 456 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
- With its built-in, top-quality optics and powerful, integrated LED illumination unit, this model is a special all-rounder for all areas of application
- As standard this microscope offers you continuous total magnification of 7,5x – 50x

- As standard, the KERN OZL 456 is provided as a binocular version with 10x eyepieces with a field of view with a diameter of 23 mm
- The arm curved stand gives you a large working area as well as a precise adjustment mechanism
- A large selection of eyepieces 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 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
- Incident illumination dimmable
- Tube 45° inclined
- Magnification ratio 6,7:1
- Interpupillary distance: 55 mm – 75 mm
- Diopter adjustment, both-sided
- Overall dimensions W×D×H 320×275×420 mm
- Net weight approx. 4,6 kg

#### STANDARD



Model	Tube	Eyepiece	Field of view	Objective Zoom	Stand	Illumination	Price excl. of VAT ex works €
<b>KERN</b>							
<b>OZL 456</b>	Binocular	HSWF 10x/Ø 23 mm	Ø 33 – 5 mm	0,75x - 5x	mechanical	1 W LED (incident), 0,21 W LED (transmitted)	<b>870,-</b>

## Eyepiece

## Specifications – Objectives

	Magnification	Standard	
		1,0x	
HWF 5x	Total magnification	3,75x – 25x	
	Field of view mm	Ø 31 – 4,6	
HWSF 10x	Total magnification	7,5x – 50x	
	Field of view mm	Ø 33 – 5	
HWF 15x	Total magnification	11,25x – 75x	
	Field of view mm	Ø 24 – 4,2	
HWSF 20x	Total magnification	15x – 100x	
	Field of view mm	Ø 20 – 3,5	
HWF 25x	Total magnification	18,75x – 125x	
	Field of view mm	Ø 15,8 – 2,4	
<b>Working distance</b>		113 mm	
<b>Maximum sample height</b>		45 mm	

	Model outfit	Model KERN	Order number	Price/piece excl. of VAT ex works €
			OZL 456	
Eyepieces (30 mm)	HWF 5x/Ø 23,2 mm	○○	OZB-A4112	45,-
	HWSF 10x/Ø 23 mm	✓✓	OZB-A4118	45,-
	HWF 15x/Ø 15 mm	○○	OZB-A4119	45,-
	HWSF 20x/Ø 14,5 mm	○○	OZB-A4120	70,-
	HWF 25x/Ø 11,7 mm	○○	OZB-A4121	70,-
Stand	mechanical, with LED lighting (0,21 W transmitted + 1 W incident)	✓	OZB-A4341	235,-
Stand insert	Frosted glass/Ø 95 mm	✓	OZB-A4805	25,-
	Black-white/Ø 95 mm	✓	OZB-A4806	25,-
<b>Mechanical stage</b> (Pre-assembling on request)	Stage size B×T 180×155 mm, Travel 75×55 mm, for transmitted and incident illumination	○	OZB-A4605	260,-

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*



OZM 542



OZM 544

4

## Lab Line

### First-class optics and strong illumination combined with a high level of flexibility

#### Features

- The KERN OZM-5 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 3W LED incident 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.
- As standard this microscope offers you continuous total magnification of 7x – 45x
- 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, LCD/LED electronics, semiconductor technology, assembly and repair

#### Applications/Samples

- Samples with focus on three-dimesnional 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
- OZM 544: Beam path distribution: 0:100
- Interpupillary distance: 52 mm – 76 mm
- Diopter adjustment, both-sided
- Overall dimensions W×D×H 330×285×440 mm
- Net weight approx. 4,8 kg



Model	Tube	Eyepiece	Field of view	Objective Zoom	Stand	Illumination	Price excl. of VAT ex works €
<b>KERN</b>							
OZM 542	Binocular	HSWF 10x/Ø 23 mm	Ø 32,8 – 5,1 mm	0,7x - 4,5x	pillar	3 W LED (incident + transmitted)	1390,-
OZM 544	Trinocular	HSWF 10x/Ø 23 mm	Ø 32,8 – 5,1 mm	0,7x - 4,5x	pillar	3 W LED (incident + transmitted)	1730,-

## Eyepiece

## Specifications – Objectives

	Magnification	Standard	Auxiliary objectives			
			1,0x	0,5x	0,7x	1,5x
<b>H SWF 10x</b>	Total magnification	7x – 45x	3,5x – 22,5x	4,9x – 31,5x	10,5x – 67,5x	14x – 90x
	Field of view mm	Ø 32,8 – 5,1	Ø 65,7 – 10,2	Ø 46,9 – 7,3	Ø 21,9 – 3,4	Ø 16,4 – 2,6
<b>SWF 15x</b>	Total magnification	10,5x – 67,5x	5,3x – 33,8x	7,4x – 47,2x	15,8x – 101,3x	21x – 135x
	Field of view mm	Ø 24,3 – 3,8	Ø 48,6 – 7,6	Ø 34,7 – 5,4	Ø 16,2 – 2,5	Ø 12,1 – 1,9
<b>SWF 20x</b>	Total magnification	14x – 90x	7x – 45x	9,8x – 63x	21x – 135x	28x – 180x
	Field of view mm	Ø 20 – 3,1	Ø 40 – 6,2	Ø 28,6 – 4,4	Ø 13,3 – 2,1	Ø 10 – 1,6
<b>SWF 30x</b>	Total magnification	21x – 135x	10,5x – 67,5x	14,7x – 94,5x	31,5x – 202,5x	42x – 270x
	Field of view mm	Ø 12,9 – 2	Ø 25,7 – 4	Ø 18,4 – 2,9	Ø 8,6 – 1,6	Ø 6,4 – 1
<b>Working distance</b>		110 mm	195 mm	145 mm	58 mm	35 mm
<b>Maximum sample height</b>		130 mm	30 mm	65 mm	160 mm	175 mm

## Model outfit

## Model KERN

## Order number

Price/piece  
excl. of VAT  
ex works  
€

		OZM 542	OZM 544	
<b>Eyepieces (30 mm)</b>	H SWF 10x/Ø 23 mm	✓✓	✓✓	OZB-A5503 <b>70,-</b>
	SWF 15x/Ø 17 mm	○○	○○	OZB-A5504 <b>75,-</b>
	SWF 20x/Ø 14 mm	○○	○○	OZB-A5505 <b>85,-</b>
	SWF 30x/Ø 9 mm	○○	○○	OZB-A5506 <b>120,-</b>
	H SWF 10x/Ø 23 mm (reticule 0,1 mm)	○	○	OZB-A5512 <b>125,-</b>
	SWF 15x/Ø 17 mm (reticule 0,05 mm)	○	○	OZB-A5513 <b>140,-</b>
	SWF 20x/Ø 14 mm (reticule 0,05 mm)	○	○	OZB-A5514 <b>140,-</b>
<b>Achromatic auxiliary objectives</b>	0,5x	○	○	OZB-A5612 <b>160,-</b>
	0,7x	○	○	OZB-A5613 <b>160,-</b>
	1,5x	○	○	OZB-A5615 <b>160,-</b>
	2x	○	○	OZB-A5616 <b>165,-</b>
	Soldering protection lens	○	○	OZB-A5614 <b>50,-</b>
<b>C-Mount</b>	0,3x (focus adjustable)	○	○	OZB-A5701 <b>140,-</b>
	0,5x (focus adjustable)	○	○	OZB-A5702 <b>140,-</b>
	1x (focus adjustable)	○	○	OZB-A5703 <b>105,-</b>
	1,0x (with micrometer) only in combination with OZB-A5703	○	○	OZB-A5704 <b>295,-</b>
<b>Darkfield unit</b>		○	○	OZB-A4601 <b>80,-</b>
<b>Object clamp</b>		○	○	OBB-A6205 <b>75,-</b>
<b>Stand</b>	Pillar, with 3 W LED illumination (transmission + incident)	✓	✓	
<b>Stand insert</b>	Frostet glass/Ø 94,5 mm	✓	✓	OZB-A5192 <b>25,-</b>
	Black-white/Ø 94,5 mm	✓	✓	OZB-A5191 <b>25,-</b>
	Clear glass/Ø 94,5 mm	○	○	OZB-A5190 <b>25,-</b>
<b>Mechanical stage (Pre-assembling on request)</b>	Stage size B×T 188×160 mm, Travel 76×65 mm, for transmitted and incident illumination	○	○	OZB-A5781 <b>240,-</b>
	Stage size B×T 180×175 mm, Travel 100×86 mm, for incident illumination only	○	○	OZB-A5782 <b>270,-</b>

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*



OZP 556



OZP 558

4

## Lab Line

**Professional and powerful – thanks to its extremely large magnification range, strong illumination and first-class optics**

### Features

- The KERN OZP stereo zoom microscope stands out through its above-average magnification range and its robust shape which is also ergonomic, it enables effortless, simple working over a period of several hours
- The KERN OZP series is available as a strong, continuously adjustable 3W LED reflected and transmitted light variant for the very best illumination of your sample
- With its large working distance, an extra large field of view and its brilliant resolution, the KERN OZP provides sharp, high-contrast, colour-true images.
- As standard this microscope offers you continuous total magnification of 6x – 55x
- 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

- Zoology and botany, quality control, LCD/LED electronics, semiconductor technology, assembly and repair

### 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 35° inclined
- Magnification ratio 9,2:1
- OZP 558: Beam path distribution: 0:100
- Interpupillary distance: 52 mm – 76 mm
- Dioptr adjustment, both-sided
- Overall dimensions WxDxH 330×285×470 mm
- Net weight approx. 4,8 kg



Model	Tube	Eyepiece	Field of view	Objective Zoom	Stand	Illumination	Price excl. of VAT ex works €
<b>KERN</b>							
OZP 556	Binocular	HSWF 10x/Ø 23 mm	Ø 35 – 4,2 mm	0,6x - 5,5x	pillar	3 W LED (incident + transmitted)	1480,-
OZP 558	Trinocular	HSWF 10x/Ø 23 mm	Ø 38,3 – 4,2 mm	0,6x - 5,5x	pillar	3 W LED (incident + transmitted)	1830,-

## Eyepiece

## Specifications – Objectives

	Magnification	Standard	Auxiliary objectives			
			1,0x	0,5x	0,7x	1,5x
<b>HSWF 10x</b>	Total magnification	6x – 55x	3x – 27,5x	4,2x – 38,5x	9x – 82,5x	12x – 110x
	Field of view mm	Ø 38,3 – 4,2	Ø 76,7 – 8,4	Ø 54,8 – 6	Ø 25,6 – 2,8	Ø 19,2 – 2,1
<b>SWF 15x</b>	Total magnification	9x – 82,5x	4,5x – 41,25x	6,3x – 57,75x	13,5x – 123,75x	18x – 165x
	Field of view mm	Ø 28,3 – 3,1	Ø 56,7 – 6,2	Ø 40,5 – 4,4	Ø 18,9 – 2,1	Ø 14,2 – 1,5
<b>SWF 20x</b>	Total magnification	12x – 110x	6x – 55x	8,4x – 77x	18x – 165x	24x – 220x
	Field of view mm	Ø 23,3 – 2,5	Ø 46,7 – 5,1	Ø 33,3 – 3,6	Ø 15,6 – 1,7	Ø 11,7 – 1,3
<b>SWF 30x</b>	Total magnification	18x – 165x	9x – 82,5x	12,6x – 115,5x	27x – 247,5x	36x – 330x
	Field of view mm	Ø 15 – 1,6	Ø 30 – 3,3	Ø 21,4 – 2,3	Ø 10 – 1,1	Ø 7,5 – 0,8
<b>Working distance</b>		108 mm	195 mm	145 mm	58 mm	35 mm
<b>Maximum sample height</b>		110 mm	10 mm	45 mm	140 mm	150 mm

## Model outfit

## Model KERN

## Order number

Price/piece  
excl. of VAT  
ex works  
€

		OZP 556	OZP 558	
<b>Eyepieces (30 mm)</b>	HSWF 10x/Ø 23 mm	✓✓	✓✓	OZB-A5503 <b>70,-</b>
	SWF 15x/Ø 17 mm	○○	○○	OZB-A5504 <b>75,-</b>
	SWF 20x/Ø 14 mm	○○	○○	OZB-A5505 <b>85,-</b>
	SWF 30x/Ø 9 mm	○○	○○	OZB-A5506 <b>120,-</b>
	HSWF 10x/Ø 23 mm (reticule 0,1 mm)	○	○	OZB-A5512 <b>125,-</b>
	SWF 15x/Ø 17 mm (reticule 0,05 mm)	○	○	OZB-A5513 <b>140,-</b>
	SWF 20x/Ø 14 mm (reticule 0,05 mm)	○	○	OZB-A5514 <b>140,-</b>
<b>Achromatic auxiliary objectives</b>	0,5x	○	○	OZB-A5612 <b>160,-</b>
	0,7x	○	○	OZB-A5613 <b>160,-</b>
	1,5x	○	○	OZB-A5615 <b>160,-</b>
	2x	○	○	OZB-A5616 <b>165,-</b>
	Soldering protection lens	○	○	OZB-A5614 <b>50,-</b>
<b>C-Mount</b>	0,3x (focus adjustable)	○	○	OZB-A5701 <b>140,-</b>
	0,5x (focus adjustable)	○	○	OZB-A5702 <b>140,-</b>
	1x (focus adjustable)	○	○	OZB-A5703 <b>105,-</b>
	1,0x (with micrometer) only in combination with OZB-A5703	○	○	OZB-A5704 <b>295,-</b>
<b>Darkfield unit</b>		○	○	OZB-A4601 <b>80,-</b>
<b>Object clamp</b>		○	○	OBB-A6205 <b>75,-</b>
<b>Stand</b>	Pillar, with 3 W LED illumination (transmission + incident)	✓	✓	
<b>Stand insert</b>	Frosted glass/Ø 94,5 mm		✓	OZB-A5192 <b>25,-</b>
	Black-white/Ø 94,5 mm	✓	✓	OZB-A5191 <b>25,-</b>
	Clear glass/Ø 94,5 mm		○	OZB-A5190 <b>25,-</b>
<b>Mechanical stage (Pre-assembling on request)</b>	Stage size B×T 188×160 mm, Travel 76×65 mm, for transmitted and incident illumination	○	○	OZB-A5781 <b>240,-</b>
	Stage size B×T 180×175 mm, Travel 100×86 mm, for incident illumination only	○	○	OZB-A5782 <b>270,-</b>

✓ = included with the delivery

○ = Option

Further accessories and spare parts  
see *internet*



## Professional Line

### Professional stereo zoom microscope with parallel optics for excellent images, depth of field, contrast and fatigue-free working

#### Features

- The KERN OZS 574 is a special, high-quality stereo zoom microscope with parallel optics for demanding analyses
- The KERN OZS 574 is available as a strong, continuously adjustable 3 W LED reflected and transmitted light variant for the very best illumination of your sample
- The parallel optical system is a high-quality optical system and provides excellent images with the best contrast, colour and depth of field with fatigue-free working. Refocusing is also only necessary in very few cases when magnifying the zoom.
- As standard this microscope offers you continuous total magnification of 8x – 80x
- As standard, the KERN OZS 574 is trinocular and is therefore equipped 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, LCD/LED electronics, semiconductor technology, assembly and repair

#### 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: Parallel optics
- Brightness adjustable (separate)
- Tube 45° inclined
- Magnification ratio 10,0:1
- Beam path distribution: 0:100
- Interpupillary distance: 52 mm – 76 mm
- Dioptr adjustment, both-sided
- Overall dimensions W×D×H 305×300×540 mm
- Net weight approx. 6 kg

Further accessories and spare parts  
see *internet*



Model	Tube	Eyepiece	Field of view	Objective Zoom	Stand	Illumination	Price excl. of VAT ex works €
<b>KERN</b>							
<b>OZS 574</b>	Trinocular	HWF 10x/Ø 22 mm	Ø 27,5 – 2,75 mm	0,8x - 8x	pillar	3 W LED (incident + transmitted)	<b>3640,-</b>

## Eyepiece

## Specifications – Objectives

	Magnification	Standard Plan		Achr. objective	Achr. objective (Auxiliary)
		1,0x	0,5x	0,7x	1,5x
HWF 10x	Total magnification	8x – 80x	4x – 40x	5,6x – 56x	12x – 120x
	Field of view mm	Ø 27,5 – 2,75	Ø 55 – 5,5	Ø 39,3 – 3,93	Ø 18,33 – 1,83
SWF 15x	Total magnification	12x – 120x	6x – 60x	8,4x – 84x	18x – 180x
	Field of view mm	Ø 21,25 – 2,13	Ø 42,5 – 4,25	Ø 30,36 – 3,04	Ø 14,17 – 1,42
SWF 20x	Total magnification	16x – 160x	8x – 80x	11,2x – 112x	24x – 240x
	Field of view mm	Ø 17,5 – 1,75	Ø 35 – 3,5	Ø 25 – 2,5	Ø 11,67 – 1,17
SWF 30x	Total magnification	24x – 240x	12x – 120x	16,8x – 168x	36x – 360x
	Field of view mm	Ø 11,25 – 1,13	Ø 22,5 – 2,25	Ø 16,1 – 1,61	Ø 7,5 – 0,75
<b>Working distance</b>		91 mm	186 mm	135 mm	40 mm
<b>Maximum sample height</b>		100 mm	30 mm	80 mm	125 mm

	Model outfit	Model KERN	Order number	Price/piece excl. of VAT ex works €
			OZS 574	
Eyepieces (30 mm)	HWF 10x/Ø 22 mm	✓✓	OZB-A5502	<b>75,-</b>
	SWF 15x/Ø 17 mm	○○	OZB-A5504	<b>75,-</b>
	SWF 20x/Ø 14 mm	○○	OZB-A5505	<b>85,-</b>
	SWF 30x/Ø 9 mm	○○	OZB-A5506	<b>120,-</b>
	HWF 10x/Ø 22 mm (reticule 0,1 mm)	○	OZB-A5511	<b>130,-</b>
	SWF 15x/Ø 17 mm (reticule 0,05 mm)	○	OZB-A5513	<b>140,-</b>
	SWF 20x/Ø 14 mm (reticule 0,05 mm)	○	OZB-A5514	<b>140,-</b>
Plan achromatic objective	1x	✓	OZB-A5603	<b>640,-</b>
	0,5x	○	OZB-A5601	<b>230,-</b>
Achromatic objectives	0,7x	○	OZB-A5602	<b>230,-</b>
	1,5x, Only in combination with OZB-A5603	○	OZB-A5604	<b>300,-</b>
Trinocular beamsplitter	Division 100:0	✓	OZB-A5401	<b>660,-</b>
	Division 50:50	○	OZB-A5402	<b>660,-</b>
C-Mount	0,3x (focus adjustable)	○	OZB-A5701	<b>140,-</b>
	0,5x (focus adjustable)	○	OZB-A5702	<b>140,-</b>
	1x (focus adjustable)	○	OZB-A5703	<b>105,-</b>
	1,0x (with micrometer) only in combination with OZB-A5703	○	OZB-A5704	<b>295,-</b>
Darkfield unit		○	OZB-A4601	<b>80,-</b>
Object clamp		○	OBB-A6205	<b>75,-</b>
Stand	Pillar, with 3 W LED illumination (transmission + incident)	✓		
Stand insert	Frosted glass/Ø 94,5 mm	✓	OZB-A5192	<b>25,-</b>
	Black-white/Ø 94,5 mm	✓	OZB-A5191	<b>25,-</b>
	Clear glass/Ø 94,5 mm	○	OZB-A5190	<b>25,-</b>
Mechanical stage (Pre-assembling on request)	Stage size B×T 188×160 mm, Travel 76×65 mm, for transmitted and incident illumination	○	OZB-A5781	<b>240,-</b>
	Stage size B×T 180×175 mm, Travel 100×86 mm, for incident illumination only	○	OZB-A5782	<b>270,-</b>

✓ = included with the delivery

○ = Option



Side view

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## Lab Line

### The specialist for jewellers and the gem industry

#### Features

- The KERN OZG 493 has been specially developed for jewellers and mineral observations in the gem industry. Precious stones and gems can be checked and handled with this stereo zoom microscope
- As standard this microscope offers you continuous total magnification of 7x – 36x
- As well as very good optical characteristics, these models form an ideal package with their dark field unit with object clamp which is included in the scope of delivery.
- The KERN OZG 493 is fitted with a pole stand which has both integrated bright halogen light units with incident and transmitted illumination, as well as additional front lighting
- There is a range of eyepieces available as accessory options
- 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 model outfit list

#### Scope of application

- Jewellers and gem industry

#### Applications/Samples

- Samples with focus on three-dimensional impression (depth, thickness), zoom for variable magnification, special stand for processing workpieces e.g. gems, components, precious stones

#### Technical data

- Optical system: Greenough optics
- Brightness adjustable
- Tube 45° inclined
- Magnification ratio 5,1:1
- Interpupillary distance: 55 mm – 75 mm
- Diopter adjustment, both-sided
- Overall dimensions WxDxH 310x170x350 mm
- Net weight approx. 6 kg

#### STANDARD



Model	Tube	Eyepiece	Field of view	Objective Zoom	Stand	Illumination	Price excl. of VAT ex works €
<b>KERN</b>							
<b>OZG 493</b>	Binocular	WF 10x/Ø 20 mm	Ø 28 – 5,6 mm	0,7x - 3,6x	pillar	10 W Halogen (incident + transmitted) 10 W Fluorescence (front illumination)	<b>610,-</b>

■ ONLY WHILE STOCKS LAST

## Eyepiece

## Specifications – Objectives

	Magnification	Standard
		<b>1,0x</b>
WF 5x	Total magnification	3,75x – 18x
	Field of view mm	Ø 26 – 6
WF 10x	Total magnification	7,5x – 36x
	Field of view mm	Ø 26,7 – 5,6
WF 15x	Total magnification	11,25x – 54x
	Field of view mm	Ø 19 – 4,5
WF 20x	Total magnification	15x – 72x
	Field of view mm	Ø 12,5 – 3
<b>Working distance</b>		86 mm

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	Model KERN	Order number	Price/piece excl. of VAT ex works €
	OZG 493		
Eyepieces (30,5 mm)	WF 5x/Ø 16,2 mm	○○	OZB-A4 101 <b>40,-</b>
	WF 10x/Ø 20 mm	✓✓	OZB-A4 102 <b>35,-</b>
	WF 15x/Ø 15 mm	○○	OZB-A4 103 <b>35,-</b>
	WF 20x/Ø 10 mm	○○	OZB-A4 104 <b>40,-</b>
Darkfield unit		✓	OZB-A4601 <b>80,-</b>
Object clamp		✓	OZB-A4604 <b>35,-</b>
Stand	Pillar, with 12 V/10 W Halogen (transmitted + incident) and 10 W Fluorescent illumination (front)	✓	
Stand insert	Frosted glass/Ø 95 mm	✓	OZB-A4805 <b>25,-</b>
	Black-white/Ø 95 mm	✓	OZB-A4806 <b>25,-</b>
Illumination	10W spar bulb (transmitted + incident)	✓	OZB-A4804 <b>25,-</b>

✓ = included with the delivery

○ = Option

 Further accessories and spare parts  
see *internet*

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# 5

## VIDEO MICROSCOPES





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## The entry level video microscope with bright image reproduction and intuitive operation



**NEW:** KERN OIV 355 Stand with combined incident- and transmitted-light illumination



KERN OIV 901: Universal stands with hinged arm for clamping onto the edge of the bench



KERN OIV 902: Universal stands with hinged arm for screw onto a bench surface

**Features**

- The KERN OIV-3 is a video microscope which has been constructed to optimise digital stereo microscopy. Our well-conceived, comprehensive solution with axial optical unit enables immediate, simple display of your samples on the screen
- The LED incident illumination unit (ring) included as standard guarantees the very best illumination of your sample
- Combined with the large working surface, recording objects on the screen is ideally suited for monitoring, analysis and documentation in industrial environments
- The excellent optical unit enables continuous sharp image tracking across the entire zoom range from 0,7x - 4,5x
- The high-quality display made from toughened glass is easy to clean due to the absence of edges
- The intuitive software and wireless USB mouse, both included with delivery, make it possible for you to easily process your results digitally and store them
- Using an HDMI interface it is possible to connect an additional monitor and in this way you can observe two devices operated in parallel in real time
- The image can be viewed on the PC using a USB connection. The software required for this also offers the option of carrying out measurements. It is available for download (see *internet S-Viewer* microscope camera software)

- A special feature of this microscope range are the zoom wheels with integrated click stop. These offer precise selection of magnification levels and support the user when calibrating the documentation functions in the software
- The video microscope has one HDMI and two USB 2.0 interfaces as well as a micro SD card slot
- A protective dust cover, a USB stick (32 GB), a wireless USB mouse as well as multi-lingual user instructions are included in the delivery
- Menu languages: DE, EN, FR, IT, RU, JA, ZH

**NEW: KERN OIV 355**

- Combined incident- and transmitted-light illumination: The transmitted-light LED integrated in the stand supplements the incident-light illumination for flexible sample illumination

**KERN OIV-9**

- The integrated universal stands with hinged arm enable flexible working with the most varied samples, even with greater working distances. In addition, the microscope can be pushed to the side if necessary, to create space
- KERN OIV 901: Universal stands with hinged arm for clamping: The user simply attaches the microscope to the edge of a bench using the clamping device delivered with the product
- KERN OIV 902: Universal stands with hinged arm for screw onto a bench surface. Hole required

**Technical data**

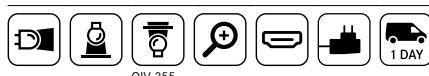
- Optical system: Axial
- Screen: 12", 1920×1080 HD, -5° - 90° inclination
- Magnification ratio 6,4:1
- Frame rate: 60 fps
- Camera resolution: 5 MP
- Stand: mechanical
- Illumination infinitely dimmable
- Data storage: External using USB (Max 32 GB)
- Working distance: 100 mm
- KERN OIV-9: Length Jointed arm
- KERN OIV-9: Column height 470 mm
- Overall dimensions W×D×H  
KERN OIV-3: 320×260×450 mm  
KERN OIV-9: 320×260×450 mm
- Net weight  
KERN OIV-3: approx. 4,4 kg  
KERN OIV-9: approx. 4,4 kg

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**Scope of application**

- Quality control
- Material testing
- Electronics and semiconductor industry
- Training
- Research
- Mineralogy
- Tissue preparation
- Detection of parasites

STANDARD



OIV 355

Model	Resolution camera	Objective Zoom	Interface	Illumination	Stand	Price excl. of VAT ex works €
<b>KERN</b>						
<b>OIV 345</b>	5 MP	0,7x - 4,5x	USB 2.0, HDMI, MicroSD card slot (60 fps)	3 W LED (incident)	Stand with base plate	<b>2520,-</b>
<b>OIV 355</b> <small>NEW</small>	5 MP	0,7x - 4,5x	USB 2.0, HDMI, MicroSD card slot (60 fps)	3 W LED (incident), 5 W LED (transmitted)	Stand with base plate	<b>2720,-</b>
<b>OIV 901</b>	5 MP	0,7x - 4,5x	USB 2.0, HDMI, MicroSD card slot (60 fps)	3 W LED (incident)	Universal hinge arm with clamp	<b>2960,-</b>
<b>OIV 902</b>	5 MP	0,7x - 4,5x	USB 2.0, HDMI, MicroSD card slot (60 fps)	3 W LED (incident)	Universal hinge arm with screws	<b>2990,-</b>

NEW New model



## The comprehensive digital solution for increased working comfort when carrying out continuous monitoring work in industry

### Features

- The KERN OIV-2 is a video microscope which has been constructed to optimise digital stereo microscopy. Our well-conceived, comprehensive solution with axial optical unit enables immediate, simple display of your samples on the screen
- The LED incident illumination unit (ring) included as standard guarantees the very best illumination of your sample
- Combined with the large working surface, recording objects on the screen is ideally suited for monitoring, analysis and documentation in industrial environments
- The excellent optical unit enables continuous sharp image tracking across the entire zoom range from 0,7x - 5x

- The powerful 2 MP camera of the microscope without eyepieces offers, thanks to the HDMI output, smooth live monitoring of your samples from the HD monitor. In addition, the software which is easy to use, the USB wireless mouse which are integral components of the delivery, mean you can process and store your results digitally
- With the OIV 254 model, there is the option of image documentation at the push of a button, without having to detour via the software. On the other hand, the OIV 255 guarantees software-controlled taking of images and videos with additional, extensive measuring functions
- A protective dust cover, as well as multi-lingual user instructions are included in the scope of delivery

### Technical data

- Optical system: Axial
- Screen: 12", 1920×1080 HD, -5° – 15° inclination
- Magnification ratio 7,1:1
- Stand: mechanical
- Illumination: 2 W-LED ring (Reflected light)
- Brightness adjustable
- Data storage: External using USB (Max 128 GB)
- Working distance: 105 mm
- Maximum sample height: 100 mm
- Overall dimensions W×D×H 320×260×483 mm
- Net weight approx. 6 kg

### STANDARD



Model	Resolution camera	Interface	Sensor	Field of view	Objective Zoom	Software functions	Price excl. of VAT ex works €
<b>KERN</b>							
<b>OIV 254*</b>	2 MP	HDMI (60 fps)	CMOS 1/2"	Ø 29,82 – 4,18	0,7x - 5x	Image capture	<b>1950,-</b>
<b>OIV 255*</b>	2 MP	HDMI (60 fps)	CMOS 1/2"	Ø 29,82 – 4,18	0,7x - 5x	Images and videos, documentation	<b>1990,-</b>

**■** \* ONLY WHILE STOCKS LAST



## The professional video microscope with auto-focus

### Features

- The KERN OIV-6 is a video microscope which has been constructed to optimise digital stereo microscopy. Our well-conceived, comprehensive solution with axial optical unit enables immediate, simple display of your samples on the screen
- The LED incident illumination unit (ring) included as standard guarantees the very best illumination of your sample
- Combined with the large working surface, recording objects on the screen is ideally suited for monitoring, analysis and documentation in industrial environments
- The excellent optical unit enables continuous sharp image tracking across the entire zoom range from 0,7x - 4,5x
- Through the integrated auto-focus, the focus level can also be optimised within a defined image section

- The powerful 2 MP camera of the microscope without eyepieces offers, thanks to the HDMI output, smooth live monitoring of your samples using an external monitor (not included with delivery). In addition, the software which is easy to use, the USB stick as well as the USB mouse which are integral components of the delivery, mean you can process and store your results digitally
- The OIV 656 guarantees software-controlled taking of images and videos with additional, extensive documentation functions
- A multi-lingual user instruction is included in the scope of the delivery

### Technical data

- Optical system: Axial
- Magnification ratio 6,5:1
- Stand: mechanical
- Illumination: 3 W-LED ring (Reflected light)
- Brightness adjustable
- Data storage: External using USB (Max 128 GB)
- Working distance: 91 mm
- Maximum sample height: 85 mm
- Overall dimensions WxDxH 372x285x482 mm
- Net weight approx. 7 kg

### STANDARD



Model	Resolution camera	Interface	Sensor	Field of view	Objective Zoom	Software functions	Price excl. of VAT ex works €
<b>KERN</b>							
OIV 656*	2 MP	HDMI (30 FPS)	CMOS 1/2,8"	Ø 12,64 - 2,65	0,7x - 4,5x	Images and videos documentation	4600,-

**!** \* ONLY WHILE STOCKS LAST

# 6

## DIGITAL MICROSCOPE SETS





OBE-1 + ODC 825/832



OBE-1 + ODC 241

## Our all-round compound microscope as a comprehensive digital solution for schools, training and laboratories

### Features

- Laboratory microscopes from the OBE range are also available to you as a comprehensive digital solution for your live investigations. Optionally available with a mounted 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

- Finite optical system DIN
- 4-fold lens revolving unit
- Butterfly 30° angled
- Diopter adjustment, one-sided
- Eyepiece: HWF 10x/Ø 18 mm
- Objective quality: Achromatic
- Objectives OBE 124: 4x/10x/40x
- Objectives OBE 134: 4x/10x/40x/100x
- Illumination: 3 W LED (transmitted)
- Overall dimensions WxDxH 360x150x390 mm
- Net weight approx. 6 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	Price excl. of VAT ex works €
<b>KERN</b>						
<b>OBE 124C825</b>	ODC 825	5,1 MP	USB 2.0	6,8 - 55 fps	CMOS 1/2,5"	1230,-
<b>OBE 134C825</b>						1290,-
<b>OBE 124C832</b>	ODC 832	5,1 MP	USB 3.0	14,2 - 101,2 fps	CMOS 1/2,5"	1380,-
<b>OBE 134C832</b>						1440,-
<b>OBE 124T241</b>	ODC 241	5 MP	WiFi, USB 2.0, HDMI, MicroSD card slot	30 fps	Sony CMOS 1/2,8"	1820,-
<b>OBE 134T241</b>						1890,-



OBL-1 + ODC 825/832



OBL-1 + ODC 241

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## The digital laboratory assistant with infinity optical unit and fixed, pre-centred Koehler illumination

### Features

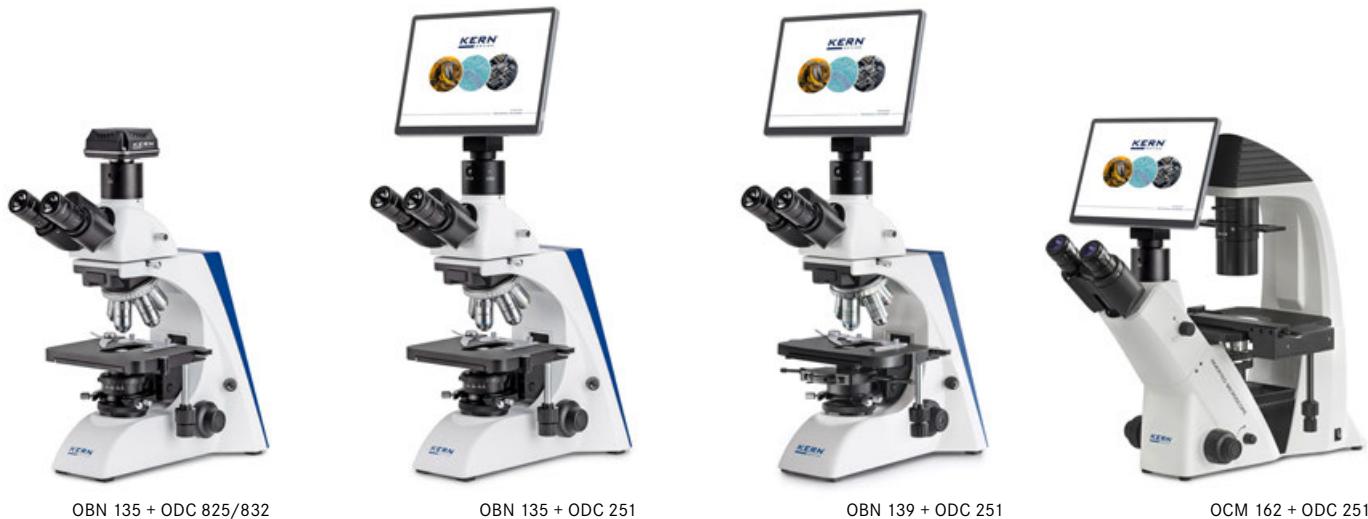
- Laboratory microscopes from the OBL range are also available to you as a comprehensive digital solution for your live investigations. Optionally available with a mounted tablet or C-mount camera. Naturally, the appropriate C-mount adapter is included with the delivery
- The mounted KERN ODC 241 tablet-camera 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

- Infinity optical system
- 4-fold lens revolving unit
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment, one-sided
- Eyepiece: HWF 10x/Ø 20 mm
- Objective quality: Infinity E-Plan
- Objectives: 4x/10x/40x/100x
- Illumination: 3 W LED (transmitted)
- Overall dimensions WxDxH: 394x185x450 mm
- Net weight approx. 8 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	Price excl. of VAT ex works €
<b>KERN</b>						
<b>OBL 137C825</b>	ODC 825	5,1 MP	USB 2.0	6,8 - 55 fps	CMOS 1/2,5"	<b>1660,-</b>
<b>OBL 137C832</b>	ODC 832	5,1 MP	USB 3.0	14,2 - 101,2 fps	CMOS 1/2,5"	<b>1810,-</b>
<b>OBL 137T241</b>	ODC 241	5 MP	WiFi, USB 2.0, HDMI, MicroSD card slot	30 fps	Sony CMOS 1/2,8"	<b>2260,-</b>



OBN 135 + ODC 825/832

OBN 135 + ODC 251

OBN 139 + ODC 251

OCM 162 + ODC 251

## The digital laboratory assistant with infinity optical unit and professional Koehler illumination

### Features

- The KERN ODC 251 microscope tablet camera is now also available as a complete digital solution in a practical set with microscope and matching C-mount adapter
- The intuitive KERN ODC 251 microscope tablet camera combines an Android tablet with a 10.5" HD display and a high-resolution 8 MP 4K camera
- The mounted C-mount camera is available in different versions and can be used anywhere
- The sets include either a KERN OBN 135 transmitted light microscope, a KERN OBN 159 phase contrast microscope or a KERN OCM 162 inverted microscope
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery

### Technical data

- Infinity optical system
- Quintuple nosepiece
- Diopter adjustment, both-sided
- Overall dimensions W×D×H 390×200×470 mm
- Net weight approx. 11 kg
- Eyepiece: HWF 10x/Ø 20 mm
- Objective quality: Infinity Plan

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

#### OBN-1

- Siedentopf 30° inclined/360° rotatable
- Objectives : 4x/10x/20x/40x/100x
- Illumination: 3 W LED (transmitted)

#### OCM-1

- Siedentopf 30° inclined
- Objectives: 10x/20x/40x
- Illumination: 5 W LED (transmitted)

#### ODC 251

- 10,5" LCD-Touchscreen
- Screen resolution: 1920×1280 pixels
- CPU: Quad Core Cortex-A17; 1,8 GHz
- Measuring software (pre-installed)

Model	Included camera	Camera Resolution	Camera Interface	Camera Framerate	Camera Sensor	Price excl. of VAT ex works €
<b>KERN</b>						
<b>OBN 135C825</b>	ODC 825	5,1 MP	USB 2.0	6,8 - 55 fps	CMOS 1/2,5"	<b>2090,-</b>
<b>OBN 135C832</b>	ODC 832	5,1 MP	USB 3.0	14,2 - 101,2 fps	CMOS 1/2,5"	<b>2240,-</b>
<b>OBN 135T251</b> <small>NEW</small>			Ethernet, Bluetooth,			<b>2900,-</b>
<b>OBN 159T251</b> <small>NEW</small>	ODC 251	8 MP 4 K	WiFi, USB 2.0, USB 3.0, HDMI	30 fps	CMOS 1/1,8"	<b>4150,-</b>
<b>OCM 162T251</b> <small>NEW</small>						<b>4950,-</b>

NEW New model

NEW



OBN 142C861



OBN 142T251

6

## Fluorescence digital set: high-resolution image quality for complex analyses

### Features

- The KERN OBN 142 fluorescence microscope is now also available as a complete digital solution in a practical set with camera and matching C-mount adapter. It combines high-quality optics with a stable design and 3 W LED transmitted illumination and 5 W LED epifluorescence incident illumination for excellent image quality
- The sets include either a KERN ODC 861 20 MP fluorescence camera or a KERN ODC 251 tablet microscope camera, see table for details
- The high-resolution KERN ODC 861 20 MP fluorescence camera with cooling enables razor-sharp and low-noise images
- The intuitive KERN ODC 251 microscope tablet camera combines an Android tablet with a 10.5" HD display and a high-resolution 8 MP 4K camera
- The C-mount adapter provides the right connection between microscope and camera, enabling stable, high-resolution image transmission

### Technical data

#### OBN 142

- Quintuple nosepiece
- Infinity optical system
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment, both-sided
- Eyepiece: HWF 10x/Ø 20 mm
- Overall dimensions W×D×H 390×235×620 mm
- Net weight approx. 11 kg

#### ODC 861

- 20 MP fluorescence camera with Peltier cooling
- Maximum resolution 5440×3648 Pixel
- Microscope software VIS Pro, see *internet*

#### ODC 251

- 10,5" LCD-Touchscreen
- Screen resolution: pixels 1920×1280
- CPU: Quad Core Cortex-A17; 1,8 GHz
- Measuring software (pre-installed)

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	Price excl. of VAT ex works €
<b>KERN</b>						
<b>OBN 142C861</b>	<small>NEW</small>	ODC 861	20 MP	USB 3.0	5 - 30 fps	Sony CMOS 1"
<b>OBN 142T251</b>	<small>NEW</small>	ODC 251	8 MP 4 K	Ethernet, Bluetooth, WiFi, USB 2.0, USB 3.0, HDMI	30 fps	CMOS 1/1,8"

NEW New model



OKO 178C832



OKO 178T251

NEW

## Digital set with metallurgical microscope, camera and C-mount adapter

### Features

- The KERN OKO 178 metallurgical microscope is now also available as a complete digital solution in a practical set with the KERN ODC 832 C-mount camera or the KERN ODC 251 tablet microscope camera and matching C-mount adapter
- The KERN OKO 178 is a professional and versatile metallurgical microscope for testing metals and analysing surfaces
- The KERN ODC 832 5.1 MP microscope camera with CMOS technology delivers clear and fast images and is also suitable for complex applications
- The intuitive KERN ODC 251 microscope tablet camera combines an Android tablet with a 10.5" HD display and a high-resolution 8 MP 4K camera

### Technical data

#### OKO 178

- Infinity optical system
- Quintuple nosepiece
- Diopter adjustment, both-sided
- Siedentopf 30° inclined/360° rotatable
- Overall dimensions W×D×H 390×235×620 mm
- Net weight approx. 11 kg

#### ODC 832

- Exposure method: Rolling Shutter
- Maximum resolution 2592×1944 Pixel
- Microscope software VIS Pro, see *internet*

#### ODC 251

- 10,5" LCD-Touchscreen
- Screen resolution: pixels 1920×1280
- CPU: Quad Core Cortex-A17; 1,8 GHz
- Measuring software (pre-installed)

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	Price excl. of VAT ex works €
<b>KERN</b>						
OKO 178C832	NEW ODC 832	5,1 MP	USB 3.0	14,2 - 101,2 fps	Aptina CMOS 1/2,5"	3900,-
OKO 178T251	NEW ODC 251	8 MP 4 K	Ethernet, Bluetooth, WiFi, USB 2.0, USB 3.0, HDMI	30 fps	CMOS 1/1,8"	4600,-

NEW New model



OZL 464 + ODC 825/832



OZL 466 + ODC 825/832



OZL 468 + ODC 825/832



OZL 464 + ODC 241



OZL 466 + ODC 241



OZL 468 + ODC 241

## 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	Price excl. of VAT ex works €
<b>KERN</b>						
OZL 464C825						1140,-
OZL 466C825	ODC 825	5,1 MP	USB 2.0	6,8 - 55 fps	CMOS 1/2,5"	1160,-
OZL 468C825						1140,-
OZL 464C832						1290,-
OZL 466C832	ODC 832	5,1 MP	USB 3.0	14,2 - 101,2 fps	CMOS 1/2,5"	1310,-
OZL 468C832						1290,-
OZL 464T241						1740,-
OZL 466T241	ODC 241	5 MP	WiFi, USB 2.0, HDMI, MicroSD card slot	30 fps	Sony CMOS 1/2,8"	1760,-
OZL 468T241						1740,-



OZM + ODC 825/832



OZP + ODC 825/832



OZP + ODC 241

## First-class optics as well as strong illumination combined with a high level of flexibility and digital tools

### Features

- The stereo microscopes of the OZM- and OZP range are available to you as a comprehensive digital solution for your live investigations. Optionally available with a mounted 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
- Beam path distribution: 0:100
- Interpupillary distance: 52 mm - 76 mm
- Diopter adjustment, both-sided
- Net weight approx. 6 kg
- Eyepiece: HSWF 10x/Ø 23 mm
- Stand: pillar
- Illumination: 3 W-LED (reflected light and transmitted light), Brightness adjustable (separate)

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

#### OZM 544

- Tube 45° inclined
- Magnification ratio 6,4:1
- Field of view: Ø 32,8 mm - 5,1 mm
- Objective: 0,7x - 4,5x
- Overall dimensions WxDxH 330x285x510 mm

#### OZP 558

- Tube 35° inclined
- Magnification ratio 9,2:1
- Field of view: Ø 38,3 mm - 4,2 mm
- Objective: 0,6x - 5,5x
- Overall dimensions WxDxH 330x285x540 mm

Model	Included camera	Camera Resolution	Camera Interface	Camera Framerate	Camera Sensor	Price excl. of VAT ex works €
<b>KERN</b>						
OZM 544C825	ODC 825	5,1 MP	USB 2.0	6,8 - 55 fps	CMOS 1/2,5"	2250,-
OZM 544C832	ODC 832	5,1 MP	USB 3.0	14,2 - 101,2 fps	CMOS 1/2,5"	2410,-
OZP 558C825	ODC 825	5,1 MP	USB 2.0	6,8 - 55 fps	CMOS 1/2,5"	2330,-
OZP 558C832	ODC 832	5,1 MP	USB 3.0	14,2 - 101,2 fps	CMOS 1/2,5"	2480,-
OZP 558T241	ODC 241	5 MP	WiFi, USB 2.0, HDMI, MicroSD card slot	30 fps	Sony CMOS 1/2,8"	2930,-

# 7

## STEREO MICROSCOPE SETS





OZM 912/913



OZM 932/933



OZM 952/953



OZM 982/983

## Predefined stereo microscope sets with PREMIUM universal stand and illumination for your functional workplace

### Features

- Sets which have already been defined, consisting of a stereo microscope head, a universal stand, a holder, a ring illumination and a dust cover from our range
- Simple – convenient – affordable
- This saves you spending time on configuration and being spoilt for choice in the combination of different components. In this way you get an inexpensive and highly-flexible solution for your microscope workplace

Model	Microscope head		Stand	Holder	Illumination	Price excl. of VAT ex works €
	KERN	Tube	Objective Zoom			
OZM 912	Binocular (OZM 546)	0,7x - 4,5x	Telescopic arm with plate (OZB-A5201)	With coarse focusing knob Adjustable torque on the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	1750,-
OZM 913	Trinocular (OZM 547)	0,7x - 4,5x	Telescopic arm with plate (OZB-A5201)	With coarse focusing knob Adjustable torque on the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	2090,-
OZM 932	Binocular (OZM 546)	0,7x - 4,5x	Ball-beared double telescopic arm with plate (OZB-A5203)	With coarse focusing knob Adjustable torque on the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	2080,-
OZM 933	Trinocular (OZM 547)	0,7x - 4,5x	Ball-beared double telescopic arm with plate (OZB-A5203)	With coarse focusing knob Adjustable torque on the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	2420,-
OZM 952	Binocular (OZM 546)	0,7x - 4,5x	Jointed arm with clamp (OZM-A5212)	With coarse focusing knob Adjustable torque on the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	1750,-
OZM 953	Trinocular (OZM 547)	0,7x - 4,5x	Jointed arm with clamp (OZM-A5212)	With coarse focusing knob Adjustable torque on the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	2090,-
OZM 982	Binocular (OZM 546)	0,7x - 4,5x	Spring loaded arm with clamp (OZB-A6302)	With coarse focusing knob Adjustable torque on the hand wheels	4,5 W LED ring light (OBB-A6102)	1870,-
OZM 983	Trinocular (OZM 547)	0,7x - 4,5x	Spring loaded arm with clamp (OZB-A6302)	With coarse focusing knob Adjustable torque on the hand wheels	4,5 W LED ring light (OBB-A6102)	2210,-



OSE 409



OZL 961/963



OZM 902/903



OZM 922/923

## Predefined stereo microscope sets with ECO universal stand and illumination for your functional workplace

### Features

- OSE 409: The KERN OSE 409 is an extremely robust, stable stereo microscope which is easy to use, it is ideal for all conventional applications in schools, workshops and training companies.
- OZL-9/OZM-9: Sets which have already been defined, consisting of a stereo microscope head, a universal stand, a holder, a ring illumination and a dust cover from our range
- Simple – convenient – affordable
- This saves you spending time on configuration and being spoilt for choice in the combination of different components. In this way you get an inexpensive and highly-flexible solution for your microscope workplace

Model	Microscope head		Stand	Holder	Illumination	Price excl. of VAT ex works €
KERN	Tube	Objective Zoom				
<b>OSE 409</b>	Binocular (WF 10x/ Ø 20 mm)	1x (WD: 230 mm)	Swivel arm with block pedestal	With coarse focusing knob Adjustable torque on the hand wheels	3 W LED goose neck (integrated)	<b>440,-</b>
<b>OZL 961</b>	Binocular (OZL 461)	0,7x - 4,5x	Telescopic arm with plate	With coarse focusing knob Adjustable torque on the hand wheels	4,5 W LED ring light (OBB-A6102)	<b>950,-</b>
<b>OZL 963</b>	Trinocular (OZL 462)	0,7x - 4,5x	Telescopic arm with plate	With coarse focusing knob Adjustable torque on the hand wheels	4,5 W LED ring light (OBB-A6102)	<b>990,-</b>
<b>OZM 902</b>	Binocular (OZM 546)	0,7x - 4,5x	Telescopic arm with plate (OZB-A1201)	With coarse focusing knob Adjustable torque on the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	<b>1560,-</b>
<b>OZM 903</b>	Trinocular (OZM 547)	0,7x - 4,5x	Telescopic arm with plate (OZB-A1201)	With coarse focusing knob Adjustable torque on the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	<b>1900,-</b>
<b>OZM 922</b>	Binocular (OZM 546)	0,7x - 4,5x	Ball-bearing double telescopic arm with plate (OZB-A1203)	With coarse focusing knob Adjustable torque on the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	<b>1610,-</b>
<b>OZM 923</b>	Trinocular (OZM 547)	0,7x - 4,5x	Ball-bearing double telescopic arm with plate (OZB-A1203)	With coarse focusing knob Adjustable torque on the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	<b>1950,-</b>

# 8

## STEREO MICROSCOPES MODULAR SYSTEM

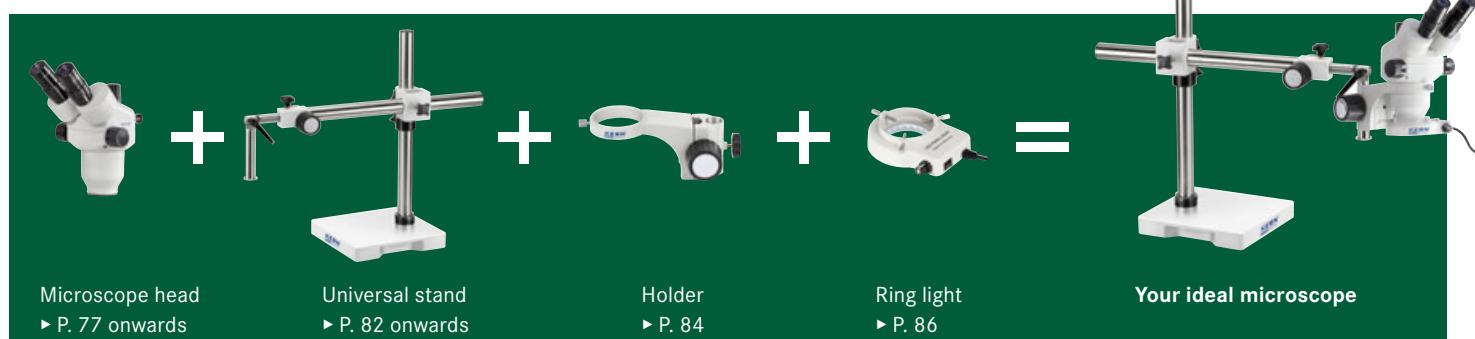


# SIMPLY CONFIGURE IT YOURSELF!

With our convenient modular system (for stereomicroscopes), you can easily put together your own individual microscope model. This is how easy it is.

## Step 1: You make your choice

Select a microscope head, a universal stand, a holder and an illumination unit and configure your own personal model to suit you.



Sample configuration

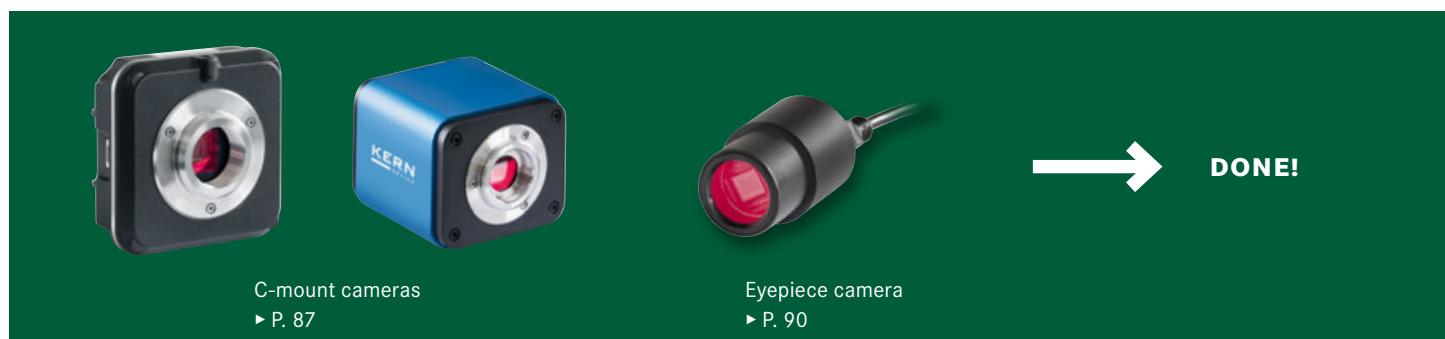
## Step 2: You add fittings – (external) illumination unit + other items

Additional illumination units and an appropriate protective dust cover offer you the opportunity to adapt the configuration, expansion and field of application of your ideal microscope individually to suit your own requirements.



## Step 3: You perfect your model – microscope cameras

If you are using a trinocular microscope configuration, select the microscope camera which meets your requirements. To find the appropriate C-mount adapter, which is essential to correctly connect the camera, please see the fitting lists of the selected microscope head (from page 75 ff.).





Head of the microscope series OZL-46 (OZL 461, 462)



Head of the microscope series OZM-5 (OZM 546, 547)



Head of the microscope series OZP-5 (OZP 551, 552)



Head of the microscope series OZO-5 (OZO 556)

## Individuality, variety and flexible working through our modular construction system – Stereo microscope heads

### Features

- To enable the highest level of flexibility for your special requirements and applications, we have a large selection of stereo microscope heads, universal stands and external illumination units, which are easy to combine
- Through the different properties of the stereo microscope heads, as well as the flexibility of the universal stands and the professional fixing of our brackets, we can configure your ideal microscope to suit your needs

- There are various microscope heads available from our product range for this purpose, both as binocular or trinocular versions
- A C-mount adapter is required to connect a camera to the trinocular version. You can select this adapter from the corresponding model outfit lists on the following pages

### Technical data

- Optical system: Greenough optics
- Further technical data and model features is located in the tables below on the following pages

Model	Tube	Tube angle	Eyepieces (included)	Interpupillary distance	Objective	Magnification ratio	Diopter adjustment	Price excl. of VAT ex works €
<b>KERN</b>								
<b>OZL 461</b>	Binocular	45°	HWF 10x/Ø 20 mm	55 – 75 mm	0,7x – 4,5x	6,4:1	Both-sided (-5/5)	<b>470,-</b>
<b>OZL 462</b>	Trinocular	45°	HWF 10x/Ø 20 mm	52 – 76 mm	0,7x – 4,5x	6,4:1	Both-sided (-5/5)	<b>540,-</b>
<b>OZM 546</b>	Binocular	45°	HSWF 10x/Ø 23 mm	52 – 76 mm	0,7x – 4,5x	6,4:1	Both-sided (-6/6)	<b>930,-</b>
<b>OZM 547</b>	Trinocular	45°	HSWF 10x/Ø 23 mm	52 – 76 mm	0,7x – 4,5x	6,4:1	Both-sided (-6/6)	<b>1280,-</b>
<b>OZP 551</b>	Binocular	35°	HSWF 10x/Ø 23 mm	52 – 76 mm	0,6x – 5,5x	9,2:1	Both-sided (-6/6)	<b>1040,-</b>
<b>OZP 552</b>	Trinocular	35°	HSWF 10x/Ø 23 mm	52 – 76 mm	0,6x – 5,5x	9,2:1	Both-sided (-6/6)	<b>1400,-</b>
<b>OZO 556*</b>	Binocular	35°	HSWF 10x/Ø 23 mm	52 – 76 mm	0,8x – 7x	8,8:1	Both-sided (-6/6)	<b>1150,-</b>

**! \*ONLY WHILE STOCKS LAST**

## Eyepiece

	Magnification	Specifications – Objectives				
		Standard		Auxiliary objectives		
		1,0x	0,5x	0,75x	1,5x	2,0x
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 – 122,5x	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

## Model outfit

		Model KERN		Order number	Price/piece excl. of VAT €
		OZL 461	OZL 462		
Eyepieces (30,0 mm)	HWF 10x/Ø 20 mm	✓✓	✓✓	OZB-A4631	45,-
	HSWF 15x/Ø 15 mm	○○	○○	OZB-A4632	55,-
	HWF 20x/Ø 10 mm	○○	○○	OZB-A4633	55,-
	HSWF 25x/Ø 9 mm	○○	○○	OZB-A4634	60,-
Auxiliary objectives	0,5x	○	○	OZB-A4641	90,-
	0,75x	○	○	OZB-A4644	90,-
	1,5x	○	○	OZB-A4642	90,-
	2,0x	○	○	OZB-A4643	90,-
C-Mount	1x (focus adjustable)		✓	OZB-A4809	55,-
	0,3x (focus adjustable)		○	OZB-A4810	95,-
	0,5x (focus adjustable)		○	OZB-A4811	105,-

✓ = Included with delivery

○ = Option

## Eyepiece

	Magnification	Standard	Specifications – Objectives				
			0,37x	0,5x	0,7x	1,5x	2x
			1,0x				
HSWF 10x	Total magnification	7x – 45x	2,59x – 16,65x	3,5x – 22,5x	4,9x – 31,5x	10,5x – 67,5x	14x – 90x
	Field of view mm	Ø 32,8 – 5,1	Ø 88,8 – 13,8	Ø 65,7 – 10,2	Ø 46,9 – 7,3	Ø 21,9 – 3,4	Ø 16,4 – 2,6
SWF 15x	Total magnification	10,5x – 67,5x	3,89x – 25x	5,3x – 33,8x	7,4x – 47,2x	15,8x – 101,3x	21x – 135x
	Field of view mm	Ø 24,3 – 3,8	Ø 65,6 – 10,2	Ø 48,6 – 7,6	Ø 34,7 – 5,4	Ø 16,2 – 2,5	Ø 12,1 – 1,9
SWF 20x	Total magnification	14x – 90x	5,18x – 33,3x	7x – 45x	9,8x – 63x	21x – 135x	28x – 180x
	Field of view mm	Ø 20 – 3,1	Ø 54,1 – 8,4	Ø 40 – 6,2	Ø 28,6 – 4,4	Ø 13,3 – 2,1	Ø 10 – 1,6
SWF 30x	Total magnification	21x – 135x	7,77x – 50x	10,5x – 67,5x	14,7x – 94,5x	31,5x – 202,5x	42x – 270x
	Field of view mm	Ø 12,9 – 2	Ø 34,7 – 5,4	Ø 25,7 – 4	Ø 18,4 – 2,9	Ø 8,6 – 1,6	Ø 6,4 – 1
Working distance		110 mm	275 mm	195 mm	145 mm	58 mm	35 mm

## Model outfit

		Model KERN		Order number	Price/piece excl. of VAT ex works €
		OZM 546	OZM 547		
Eyepieces (30,0 mm)	H SWF 10x/Ø 23 mm	✓✓	✓✓	OZB-A5503	70,-
	SWF 15x/Ø 17 mm	○○	○○	OZB-A5504	75,-
	SWF 20x/Ø 14 mm	○○	○○	OZB-A5505	85,-
	SWF 30x/Ø 9 mm	○○	○○	OZB-A5506	120,-
	H SWF 10x/Ø 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	125,-
	SWF 15x/Ø 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	140,-
	SWF 20x/Ø 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	140,-
Achromatic auxiliary objectives	0,37x only in combination with a universal stand	○	○	OZB-A5611	170,-
	0,5x	○	○	OZB-A5612	160,-
	0,7x	○	○	OZB-A5613	160,-
	1,5x	○	○	OZB-A5615	160,-
	2,0x	○	○	OZB-A5616	165,-
C-Mount	Soldering protection lens	○	○	OZB-A5614	50,-
	0,3x (focus adjustable)	○	○	OZB-A5701	140,-
	0,5x (focus adjustable)	○	○	OZB-A5702	140,-
	1,0x (focus adjustable)	○	○	OZB-A5703	105,-
	1,0x (with micrometer) only in combination with OZB-A5703	○	○	OZB-A5704	295,-

✓ = Included with delivery

○ = Option

## Eyepiece

	Magnification	Standard	Specifications – Objectives				
			0,37x	0,5x	0,7x	1,5x	2x
			1,0x				
HSWF 10x	Total magnification	6x – 55x	2,96x – 25,9x	3x – 27,5x	4,2x – 38,5x	9x – 82,5x	12x – 110x
	Field of view mm	Ø 38,3 – 4,2	Ø 74,3 – 8,5	Ø 76,7 – 8,4	Ø 54,8 – 6	Ø 25,6 – 2,8	Ø 19,2 – 2,1
SWF 15x	Total magnification	9x – 82,5x	4,44x – 38,9x	4,5x – 41,25x	6,3x – 57,75x	13,5x – 123,75x	18x – 165x
	Field of view mm	Ø 28,3 – 3,1	Ø 57,4 – 6,6	Ø 56,7 – 6,2	Ø 40,5 – 4,4	Ø 18,9 – 2,1	Ø 14,2 – 1,5
SWF 20x	Total magnification	12x – 110x	5,92x – 51,8x	6x – 55x	8,4x – 77x	18x – 165x	24x – 220x
	Field of view mm	Ø 23,3 – 2,5	Ø 47,3 – 5,4	Ø 46,7 – 5,1	Ø 33,3 – 3,6	Ø 15,6 – 1,7	Ø 11,7 – 1,3
SWF 30x	Total magnification	18x – 165x	8,88x – 77,7x	9x – 82,5x	12,6x – 115,5x	27x – 247,5x	36x – 330x
	Field of view mm	Ø 15 – 1,6	Ø 30,4 – 3,5	Ø 30 – 3,3	Ø 21,4 – 2,3	Ø 10 – 1,1	Ø 7,5 – 0,8
<b>Working distance</b>		108 mm	275 mm	195 mm	145 mm	50 mm	35 mm

## Model outfit

		Model KERN		Order number	Price/piece excl. of VAT ex works €
		OZP 551	OZP 552		
8 Eyepieces (30,0 mm)	HSWF 10x/Ø 23 mm	✓✓	✓✓	OZB-A5503	<b>70,-</b>
	SWF 15x/Ø 17 mm	○○	○○	OZB-A5504	<b>75,-</b>
	SWF 20x/Ø 14 mm	○○	○○	OZB-A5505	<b>85,-</b>
	SWF 30x/Ø 9 mm	○○	○○	OZB-A5506	<b>120,-</b>
	HSWF 10x/Ø 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	<b>125,-</b>
	SWF 15x/Ø 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	<b>140,-</b>
	SWF 20x/Ø 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	<b>140,-</b>
Achromatic auxiliary objectives	0,37x only in combination with a universal stand	○	○	OZB-A5611	<b>170,-</b>
	0,5x	○	○	OZB-A5612	<b>160,-</b>
	0,7x	○	○	OZB-A5613	<b>160,-</b>
	1,5x	○	○	OZB-A5615	<b>160,-</b>
	2,0x	○	○	OZB-A5616	<b>165,-</b>
C-Mount	Soldering protection lens	○	○	OZB-A5614	<b>50,-</b>
	0,3x (focus adjustable)	○	○	OZB-A5701	<b>140,-</b>
	0,5x (focus adjustable)	○	○	OZB-A5702	<b>140,-</b>
	1,0x (focus adjustable)	○	○	OZB-A5703	<b>105,-</b>
	1,0x (with micrometer) only in combination with OZB-A5703	○	○	OZB-A5704	<b>295,-</b>

✓ = Included with delivery

○ = Option

## Eyepiece

	Magnification	Specifications – Objectives					
		Standard		Auxiliary objectives			
		1,0x	0,37x	0,5x	0,7x	1,5x	2x
HSWF 10x	Total magnification	8x – 70x	2,96x – 25,9x	4x – 35x	5,6x – 49x	12x – 105x	16x – 140x
	Field of view mm	Ø 28,75 – 3,3	Ø 74,3 – 8,5	Ø 57,5 – 6,6	Ø 41,1 – 4,7	Ø 19,2 – 2,2	Ø 14,4 – 1,6
SWF 15x	Total magnification	12x – 105x	4,44x – 38,9x	6x – 52,5x	8,4x – 73,5x	18x – 157,5x	24x – 210x
	Field of view mm	Ø 21,25 – 2,4	Ø 57,4 – 6,6	Ø 42,5 – 4,9	Ø 30,4 – 3,5	Ø 14,2 – 1,6	Ø 10,6 – 1,2
SWF 20x	Total magnification	16x – 140x	5,92x – 51,8x	8x – 70x	11,2x – 98x	24x – 210x	32x – 280x
	Field of view mm	Ø 17,5 – 2	Ø 47,3 – 5,4	Ø 35 – 4	Ø 25 – 2,9	Ø 11,7 – 1,3	Ø 8,75 – 1
SWF 30x	Total magnification	24x – 210x	8,88x – 77,7x	12x – 105x	16,8x – 147x	36x – 315x	48x – 420x
	Field of view mm	Ø 11,25 – 1,3	Ø 30,4 – 3,5	Ø 22,5 – 2,6	Ø 16,1 – 1,8	Ø 7,5 – 0,9	Ø 5,625 – 0,6
Working distance		108 mm	275 mm	195 mm	145 mm	50 mm	35 mm

## Model outfit

		Model KERN		Order number	Price/piece excl. of VAT ex works €
		OZO	556		
Eyepieces (30,0 mm)	HSWF 10x/Ø 23 mm	✓	✓	OZB-A5503	70,-
	SWF 15x/Ø 17 mm	○○	○○	OZB-A5504	75,-
	SWF 20x/Ø 14 mm	○○	○○	OZB-A5505	85,-
	SWF 30x/Ø 9 mm	○○	○○	OZB-A5506	120,-
	HSWF 10x/Ø 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	125,-
	SWF 15x/Ø 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	140,-
	SWF 20x/Ø 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	140,-
Achromatic auxiliary objectives	0,37x only in combination with a universal stand	○	○	OZB-A5611	170,-
	0,5x	○	○	OZB-A5612	160,-
	0,7x	○	○	OZB-A5613	160,-
	1,5x	○	○	OZB-A5615	160,-
	2,0x	○	○	OZB-A5616	165,-
C-Mount	Soldering protection lens	○	○	OZB-A5614	50,-
	0,3x (focus adjustable)			OZB-A5701	140,-
	0,5x (focus adjustable)			OZB-A5702	140,-
	1,0x (focus adjustable)			OZB-A5703	105,-
	1,0x (with micrometer) only in combination with OZB-A5703			OZB-A5704	295,-

✓ = Included with delivery

○ = Option



OZB-A5201



OZB-A5203



OZB-A5211



OZB-A5212



OZB-A5213



OZB-A5221



OZB-A5222



OZB-A5223

## PREMIUM universal stands

### Features

- With our universal stands and basic stands, as well as microscope heads and external illumination units, you can configure your microscope to your own specifications and adapt it to your application
- Thanks to the versatile, adjustable universal stands it is possible to work in the very best way in all areas with the most varied of samples
- Large universal stands are available as stand base variants as well as with the option of a clamp for the edge or the centre of a bench. Depending on the model, you have the choice of a telescopic arm stand, a jointed arm stand or a telescopic double arm universal stand with ball bearings

### Technical data

- Column height: 470 mm

#### OZB-A5201/OZB-A5211/OZB-A5221

- Length telescopic arm: 614 mm

#### OZB-A5212/OZB-A5222

- Length jointed arm: 755 mm

#### OZB-A5203/OZB-A5213/OZB-A5223

- Length double arm: 545 mm

Model	Description	Price excl. of VAT ex works €
<b>KERN</b>		
<b>OZB-A5201</b>	Telescopic arm – Plate – excl. holder	590,-
<b>OZB-A5211</b>	Telescopic arm – Clamp Edge of bench (Range: max. 62 mm) – excl. holder	550,-
<b>OZB-A5221</b>	Telescopic arm – Clamp Centre of bench (hole required) – excl. holder	590,-
<b>OZB-A5212</b>	Jointed arm – Clamp Edge of bench (Range: max. 62 mm) – excl. holder	590,-
<b>OZB-A5222</b>	Jointed arm – Clamp Centre of bench (hole required) – excl. holder	620,-
<b>OZB-A5203</b>	Telescopic double arm with ball bearings – Plate – excl. holder	920,-
<b>OZB-A5213</b>	Telescopic double arm with ball bearings – Clamp Edge of bench (Range: max. 62 mm) – excl. holder	890,-
<b>OZB-A5223</b>	Telescopic double arm with ball bearings – Clamp Centre of bench (hole required) – excl. holder	930,-



OZB-A1201



OZB-A1203



OZB-A6302



OZB-A1211



OZB-A1213



OZB-A6303



OZB-A6301

## ECO universal stands

### Features

- With our universal stands and basic stands, as well as microscope heads and external illumination units, you can configure your microscope to your own specifications and adapt it to your application
- Thanks to the versatile, adjustable universal stands it is possible to work in the very best way in all areas with the most varied of samples
- Small universal stands are available as stand base variants as well as with the option of a clamp for the edge of a bench. Depending on the model, you have the choice of a telescopic arm stand or a telescopic double arm universal stand with ball bearings
- The spring loaded universal stands including bench clamp will make your daily work with your stereo microscope easier. Now including coarse adjustment knob for easy, flexible focussing

### Technical data

#### OZB-A1201/OZB-A1211

- Column height: 430 mm
- Length telescopic arm: 385 mm

#### OZB-A1203/OZB-A1213

- Column height: 430 mm
- Length telescopic arm: 480 mm

#### OZB-A6302

- Height spring loaded arm: 525 mm
- Length spring loaded arm: 620 mm

#### OZB-A6301

- Column height: 300 mm

#### OZB-A6303

- Height spring loaded arm: 400 mm
- Length spring loaded arm: 850 mm

Model	Description	Price excl. of VAT ex works €
<b>KERN</b>		
<b>OZB-A1201</b>	Telescopic arm – Plate – excl. holder	400,-
<b>OZB-A1211</b>	Telescopic arm – Clamp Edge of bench (Range: max. 40 mm) – excl. holder	370,-
<b>OZB-A1203</b>	Jointed arm – Plate – excl. holder	445,-
<b>OZB-A1213</b>	Jointed arm – Clamp Edge of bench (Range: max. 40 mm) – excl. holder	420,-
<b>OZB-A6302</b>	Spring loaded arm (Pneumatic spring) – Clamp (Range: max. 50 mm) – with holder (Coarse focusing knob)	860,-
<b>OZB-A6303</b>	Spring loaded arm (Compression spring) – Clamp (Range: max. 50 mm) – with holder (Coarse focusing knob)	540,-
<b>OZB-A6301</b>	Pillar style stand with "C"-shape base – excl. holder	360,-



OZB-A5301



OZB-A5306

## Holders

### Features

- There are two microscope head holders available for these flexible, modular systems. These brackets are suitable for all stereo microscope stands and universal stands (excluding spring loaded arm), to make focusing possible
- The first variant available is a holder with adjustable handwheel as well as adjustment of the torque for your configuration

- For professional applications you have the choice of a mount with coarse and fine focusing knob for the very best focusing operation
- Diameter of the connector for the microscope head: 76 mm
- Diameter of the connector for the stand: 25 mm

## 8

Model	Description	Price excl. of VAT ex works €
<b>KERN</b>		
OZB-A5301	Holder with adjustable torque of the hand wheel. Suitable for all universal stands (except of spring loaded arm) and for all basic stands as possible accessories.	180,-
OZB-A5306	Holder with coaxial coarse and fine focusing knob and adjustable torque of the hand wheel. Suitable for all universal stands (except of spring loaded arm) and for all basic stands as possible accessories.	300,-



## Dust covers

### Features

- When working with microscopes, we offer dust covers to give greater ease of use. By using these, you can easily avoid the time-consuming cleaning work which is necessary with routine use of your microscope

- Depending on the size of your microscope set or your microscope configuration you can select between three different models
- Please find detailed information in the following model outfit list

Model	Description	Suitable for	Price excl. of VAT ex works €
<b>KERN</b>			
OBB-A1387	Size 1: 485×450 mm	Stereo microscope heads	35,-
OBB-A1388	Size 2: 600×650 mm	Stereo microscope heads in combination with basic stands	35,-
OBB-A1389	Size 3: 700×900 mm	Stereo microscope sets, stereo microscope heads in combination with universal stands	35,-

# 9

## EXTERNAL LIGHT SOURCES FOR STEREO MICROSCOPES

Ring illumination and cold light sources



## Professional illumination units guarantee outstanding, uniform and strong illumination

**Tip:** These illumination units are also available with UK mains plug. For more information on this, visit our online shop or give us a ring



OZB-A4571



OZB-A4572



OBB-A6102



OZB-A7101

### Features

- Choose your favourite external illumination here to achieve maximum flexibility and greatest possible ease of use in stereo microscopy
- These professional illumination units provide a quality of light at a high, constant intensity at all times
- Regardless of whether your choice is space-saving ring lights or cold light sources using optical fiber, our range is all you can wish for
- With the **OZB-A7101** polarisation ring illumination unit, you also have an excellent component which has been specially optimised for observing shiny surfaces

- Naturally, these external illumination units also fit your standard stereo microscope
- Exception: The ring illumination units cannot be used in combination with the following ranges: OSE-1, OSF-4G, OZL-45R, OZC-5 and OZG-4

Model	Illuminance	Inner Ø	Colour temperature	Brightness adjustable	Illumination by segments	Polarising filter	Price excl. of VAT ex works €
<b>KERN</b>							
<b>OZB-A4571</b>	4W-LED	60	7000 - 11000 K	✓			100,-
<b>OZB-A4572</b>	4W-LED	60	6500 - 7000 K	✓	✓		155,-
<b>OBB-A6102</b>	4,5W-LED	63	5500 K	✓			150,-
<b>OZB-A7101</b>	4,5W-LED	62	6500 - 7000 K	✓		✓	690,-

✓ = Included with delivery

### Goose Neck Illumination KERN OZB-IF



OZB-A4516



OZB-A4515



Application example

### Features

- With the **OZB-A4516** 20 W-LED Goose Neck Illumination Unit with focusable light beam, you can adjust the illumination to suit your needs. Spot or scattered radiation means that you can achieve the very best illumination of your sample

Model	Description	Length	Illuminance	Colour temperature	Brightness adjustable	Price excl. of VAT ex works €
<b>KERN</b>						
<b>OZB-A4515</b>	Dual Goose Neck Illumination LED Unit	300 mm	6W	5600 - 6300 K	✓	165,-
<b>OZB-A4516</b>	Dual Goose Neck Illumination LED Cold Light Source	540 mm	20W	6400 K	✓	720,-

✓ = Included with delivery

# 10

## MICROSCOPE CAMERAS & SOFTWARE



# 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 or see [www.kern-sohn.com](http://www.kern-sohn.com)

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



Accessories: Object micrometer, for calibrating the software measuring function, KERN ODC-A2404, **€ 45,-**

## 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



Model	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works €
<b>KERN</b>								
<b>ODC 825</b>	5,1 MP	USB 2.0	6,8 – 55	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10, 11	<b>410,-</b>
<b>ODC 831*</b>	3,1 MP	USB 3.0	27,3 – 53,3	CMOS	1/3"	colour	Win XP, Vista, 7, 8, 10, 11	<b>530,-</b>
<b>ODC 832</b>	5,1 MP	USB 3.0	14,2 – 101,2	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10, 11	<b>560,-</b>

! \* 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.



Model	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works €
<b>KERN</b>								
<b>ODC 841</b>	20 MP	USB 3.0	15 – 60	CMOS	1"	colour	Win XP, Vista, 7, 8, 10, 11	<b>1200,-</b>

**Note:** Can only be used in combination with compound microscopes



### Features

- The ODC 851 HDMI microscope camera has been specially developed for direct HDMI connection to your HDMI compatible display device. The images can be stored straight onto the SD card which is delivered with the product or can be transferred to your PC or laptop for further processing using the USB 2.0 cable in combination with the OXM 902 software
- The HDMI autofocus camera ODC 852 offers you a perfect, effective solution for modern microscopy. The autofocus function automatically detects and adjusts the focus level so that you always have a razor-sharp image. Ideal for all applications in connection with a KERN stereo microscope
- Realtime images can be transferred to an HDMI-compatible display device using the HDMI connection and they can also be stored on the SD card which was delivered with the

product. As an alternative, data can also be transferred using the WiFi module (ODC 852) to a PC or laptop in combination with the software KERN Microscope VIS which is included with the delivery

- Power supply is from an external 12 V power unit
- Scope of delivery ODC 851: Camera, USB mouse, USB 2.0 cable (length: 2 m), HDMI cable (length: 2 m), SD card (16 GB)
- Scope of delivery ODC 852: Camera, USB mouse, HDMI cable (length: 2 m), SD card (16 GB), WiFi adapter and camera software Microscope VIS Pro KERN OXM 902
- 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	Price excl. of VAT ex works €
<b>KERN</b>								
ODC 851*	2 MP	HDMI, USB 2.0, SD	60	CMOS	1/2"	colour	Win XP, Vista, 7, 8, 10, 11	880,-
ODC 852	5 MP	HDMI, SD, WLAN	25 – 60	CMOS	1/1,8"	colour	Win XP, Vista, 7, 8, 10, 11	1100,-

! \* ONLY WHILE STOCKS LAST

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## 4K Camera – KERN ODC-854

NEW



### Features

- Self-contained 4K microscope camera with state-of-the-art Sony sensor – optionally with HDMI and USB or additionally with WLAN for maximum integration flexibility
- 4K resolution (3840 x 2160) at 30 fps for razor-sharp live images in real time
- High-performance Sony IMX678 CMOS colour sensor for outstanding image quality and high light sensitivity
- Large sensor surface (1/1,8") enables detailed and bright images
- Large pixel size (2,0 µm x 2,0 µm) ensures an excellent signal-to-noise ratio with low illumination
- 8-megapixel resolution for precise reproduction of live images in high detail

- HDMI and USB output enable simultaneous use on monitor and PC
- Supports Microsoft® Windows 7, 8, 10 and 11 – broad use even in existing IT infrastructure
- Integrated software functionality enables stand-alone operation without a PC
- S-Viewer PC software for convenient image processing and analysis – available on our website [www.kern-sohn.com/shop/en/DOWNLOADS](http://www.kern-sohn.com/shop/en/DOWNLOADS)
- C-mount connection for easy combination with all common trinocular microscopes
- Ideal for training courses and presentations thanks to live image transmission via monitor or projector

STANDARD



Model	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works €
<b>KERN</b>								
ODC 854	8 MP 4K	USB 2.0, HDMI	30	CMOS	1/1,8"	colour	Win 7, 8, 10, 11	700,-



## The cooled camera for professional fluorescence examinations



### Features

The ODC 861 camera with Peltier cooling technology has been specially designed for fluorescent applications. It is able to significantly compensate for image noise associated with weak lighting. Due to its high resolution and light-sensitive Sony CMOS colour sensor it proves first-class images. The practical, sturdy storage box serves as protection and for transportation of this premium camera

- Realtime images can be transferred straight to a PC or laptop using the integrated USB 3.0 interface. As an alternative, 2 USB 2.0 interfaces are available, to operate the camera with the software KERN Microscope VIS
- Power supply is from an external 12 V power unit
- Please order the appropriate C-mount adapter (only 1,0x possible) to fit your KERN microscope now
- Black balance possible

**Note:** Can only be used in combination with compound microscopes

STANDARD



Model	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works €
<b>KERN</b> <b>ODC 861</b>	20 MP	USB 3.0	5 – 30	CMOS	1"	colour	Win XP, Vista, 7, 8, 10, 11	<b>2310,-</b>

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## Eyepiece Cameras – USB 2.0/3.0 KERN ODC-87 · ODC-88



ODC-87, ODC-88



Eyepiece camera fixed into the tube

### Features

- With the KERN eyepiece cameras you can convert your standard microscope to a digital microscope, by replacing one eyepiece of your non-digital microscope with an eyepiece camera and connect this to your computer via USB
- The universal eyepiece can be connected to the microscope as well as to a laptop or PC using the USB cable (2.0 or 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 software

- As well as the camera, the delivery includes a USB cable (length: 1,5 m), two eyepiece adapters and an object micrometer to calibrate the software
- Possible tube diameters:
  - 23,2 mm (Standard)
  - 30,0 mm (Eyepiece adapter)
  - 30,5 mm (Eyepiece adapter)
- “Microsoft VIS” PC software for convenient image processing and analysis - available on our website [www.kern-sohn.com/shop/en/DOWNLOADS](http://www.kern-sohn.com/shop/en/DOWNLOADS)

STANDARD



Model	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works €
<b>KERN</b> <b>ODC 874</b>	3 MP	USB 2.0	3 – 7,5	CMOS	1/2,7"	colour	Win XP, Vista, 7, 8, 10, 11	<b>220,-</b>
<b>ODC 881</b>	5 MP	USB 3.0	15 – 30	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10, 11	<b>300,-</b>

## The digital USB microscope for rapid testing or for hobby use



ODC 895

### Features

- The USB hand-held microscope is designed for rapid and simple observations. Ideally suited for coins, plants, insects and skin samples for all hobby scientists, children and students
- With the USB microscope you can easily adjust the magnification to suit all conventional samples. The zoom range can be adjusted to a magnification of 10x as well as 200x
- The eight LEDs fitted in the ring shape ensure strong and effective illumination of your sample. Use the adjustment wheel on the cable to control the illumination setting
- Cable length: 1,4 m

### Stand with focus wheel:

- Work area: 150×80 mm
- Focus range: 60 mm
- Overall dimensions: 150×80×135 mm
- “Microscope VIS” PC software for convenient image processing and analysis - available on our website  
[www.kern-sohn.com/shop/en/DOWNLOADS](http://www.kern-sohn.com/shop/en/DOWNLOADS)



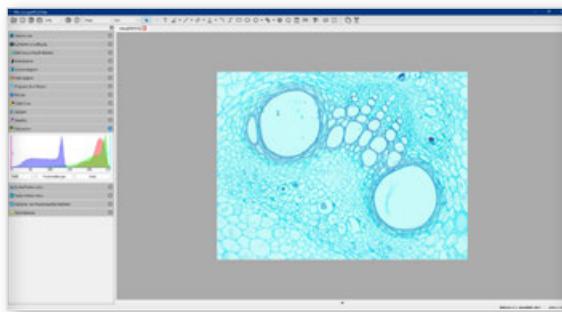
Model	Resolution	Interface	FPS	Sensor	Sensor size	Supported operating system	Magnification levels	Focusing stand	Illumination	Price excl. of VAT ex works €
<b>KERN</b> <b>ODC 895</b>	2 MP	USB 2.0	15 – 30	CMOS	1/3,2"	Win XP, Vista, 7, 8, 10, 11	10x, 200x	Focus wheel	8× LED	220,-

10

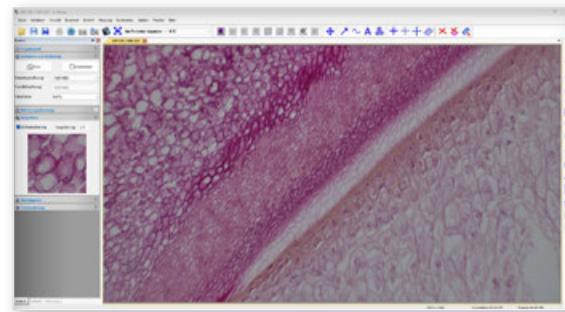
Microscope camera software VIS 2.0 Pro • VIS 2.0 Lite • S-Viewer

## The digital specialists for measurement, counting and documentation

NEW



Microscope VIS 2.0 Lite



S-Viewer

### Features

#### Microscope VIS 2.0 Pro

- This software was specially developed for the control, image acquisition and processing of microscope cameras. It offers extensive functions for image optimisation, measurement and file management. Suitable for models ODC 825, 832, 841, 852, 861, 874, 881 and 895

#### Microscope VIS 2.0 Lite

- The Lite version concentrates on the essentials: It offers all the important functions for everyday use when using a microscope and documenting your work without the additional functions of the PRO version – clear, efficient and user-friendly. It is also suitable for the ODC 825, 832, 841, 852, 861, 874, 881 and 895 models

#### S-Viewer

- The S-Viewer software is used for live viewing, image acquisition, measurement and editing of microscope images and videos. It is suitable for camera model ODC 854 as well as for the microscope series OIV-3, OIV-9, OBT-2

You can download all software versions free of charge from our website



ODC 241



Integrated software with measuring function

## Tablet with integrated camera for observation and digital documentation of the sample

### Features

10

- A 2-in-1 solution in digital microscopy as a universal system for trinocular microscopes with C-mount adapter. The ODC 241 microscope-tablet-camera consists of a large Android tablet in combination with a 5-MP camera
- The KERN ODC 241 tablet-camera has been specially developed for simple and direct observation of the sample on the screen. Ideally suited for school pupils and students in education or for demonstration purposes in the laboratory
- As well a live transfer of the image to the Android table, the integrated 5-MP camera also means that images and videos can be created for the documentation
- Simple measuring functions such as, for example, functions for measuring distance, surfaces and angles as well as a manual counting function are also available

- Automatic white balance and automatic contrast adjustment can be performed quickly and easily, which enables efficient working procedures
- A range of additional functions are provided through the integrated interfaces, such as, for example
  - Data storage on a USB stick or SD card
  - Connection to a USB mouse
  - Transfer of the live image to an external screen using HDMI
- The delivery includes the tablet camera with pre-installed software as well as the mains adapter

### Technical data

- 9.7" LCD-Touchscreen
- Screen resolution: 2048×1536 pixels
- CPU: Quad Core Cortex-A17; 1,8 GHz
- Overall dimensions W×D×H 238×51×206 mm
- Net weight approx. 0,65 kg

**Note:** Cannot be combined with the following microscopes: series OZM-5, OLM 170

STANDARD



Model	Resolution Camera	Interface	FPS	Sensor	Sensor size	Supported operating system	Price excl. of VAT ex works €
<b>KERN</b> <b>ODC 241</b>	5 MP	WiFi, USB 2.0, HDMI, SD	15 - 30	CMOS	1/2,5"	Android 5.1	980,-



Integrated software with touch user interface

## HD tablet with integrated 4K camera for convenient monitoring and professional digital documentation of the sample

### Features

- The KERN ODC 251 microscope tablet camera consists of an Android tablet with a 10.5" HD display in combination with an 8 MP camera. It is intuitive to use and is suitable for all trinocular microscopes with a C-mount adapter.
- The KERN tablet cameras have been specially developed for simple, direct monitoring of samples on the screen, whether used in the laboratory, in quality testing or in training and studying.
- The integrated high-performance camera has an 8 MP image sensor with a sensor size of 1/1.8" and is able to record videos with a resolution of 4K. In this way, as well a live transfer of the image to the Android table, high-resolution images and videos can also be created for the documentation. Measuring functions, such as, for example, functions for measuring distance, surfaces and angles are also available.

- Automatic white balance and automatic contrast adjustment can be performed quickly and easily, which enables efficient working procedures
- A range of additional functions are provided through the integrated interfaces, such as, for example
  - Data storage on a USB stick
  - Connection to a USB mouse
  - Transfer of the live image to an external screen using HDMI
  - Transfer stored data to a computer via USB data cable
- The delivery includes the tablet camera with pre-installed measuring software, the power supply, a calibration slide as well as user instructions

### Scope of application

- Goods inwards inspection
- Quality control
- Repair and Service
- Laboratories
- Training and study

### Technical data

- 10,5" LCD-Touchscreen
- Screen resolution: pixels 1920×1280
- CPU: Quad Core Cortex-A17; 1,8 GHz
- Overall dimensions W×D×H 237×169×57 mm
- Net weight approx. 0,80 kg

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**Note:** Cannot be combined with the following microscopes: OZM-5, OLM 170



Model	Resolution camera	Interfaces	FPS	Sensor	Sensor size	Supported operating system	Price excl. of VAT ex works €
KERN ODC 251	8 MP 4 K	Ethernet, Bluetooth, WLAN, USB 2.0, USB 3.0, HDMI	30 FPS	CMOS	1/1,8"	Android	1190,-

# 11 - 13

## REFRACTOMETERS



11 Analogue Refractometers – 95  
Type: Hand-held



**Ralf Gutbrod**  
Technical Sales KERN Optics  
Tel. +49 7433 9933-306  
optics@kern-sohn.com

12 Digital Refractometers – 102  
Type: Hand-held

13 Digital Refractometers – 108  
Type: Desktop



NEW: now with engraved serial number

## Refractive index measurement for laboratories and the industry

### Features

- The KERN ORA refractometers are universal, maintenance-free analogue handheld refractometers
- The handy and robust design allows the easy, efficient and sustainable use in everyday life
- Manually calculated conversions and errors of the user are avoided by multiple selectable scales
- These scales are especially developed, exactly calculated and checked. They are also characterized by their thin and clear lines
- The optical system and the prism cover are made of special material which allows a low-tolerance measuring
- All ORA models are equipped with an eyepiece for easy and smooth setting for many different diopter strengths
- The models marked with "ATC" have an automatic temperature compensation which enables accurate measurement at different ambient temperatures (10 °C/30 °C). For models without 'ATC', the results must be adjusted according to the enclosed international temperature correction table
- The following accessory-parts are included:
  - Storage box
  - Calibration liquid
  - Calibration block (if required)
  - Pipette
  - Screwdriver
  - Cleaning tissue
- Further accessories are optionally available

### Technical data

- Die-cast housing of copper-aluminium alloy, chrome coated
- Measurement temperature range 10 – 30 °C
- Dimensions of the box: 205×75×55 mm (depending on the model)
- Product length: approx. 130 – 200 mm (depending on the model)
- Net weight approx. 135 – 600 g (depending on the model)

**Note:** Also available with calibration certificate, see page 110



## Scope of application: Sugar

The following models are particularly suitable for the measurement of the “BRIX” value. They are used to determine the sugar content in food, especially in fruit, vegetables, juice and soft drinks. In the same ideal way these refractometers serve for monitoring processes in the industry (coolant monitoring, oils, water-based mixtures).

The main scope of applications is:

- Food industry: Beverages, fruits and sweets
- Agriculture: Determination of the degree of ripeness of fruits for quality control in harvesting, determination of colostrum milk quality
- Restaurants and large-scale catering establishment



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 10BA</b>	Brix	0 – 10 %	0,1 %	✓	<b>95,-</b>
<b>ORA 20BA</b>	Brix	0 – 20 %	0,1 %	✓	<b>95,-</b>
<b>ORA 32BA</b>	Brix	0 – 32 %	0,2 %	✓	<b>65,-</b>
<b>ORA 62BA</b>	Brix	28 – 62 %	0,2 %	✓	<b>95,-</b>
<b>ORA 82BB</b>	Brix	45 – 82 %	0,5 %		<b>90,-</b>
<b>ORA 80BB</b>	Brix	0 – 80 %	0,5 %		<b>90,-</b>

## Scope of application: Honey

The following models are particularly suitable for the measurement of the “BRIX” value, as well as the water content in honey and “degrees Baumé” to determine the relative density of liquids.

The main scope of applications is:

- Beekeeping
- Honey production

Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 3HA</b>	Brix Baumé Water content	58 – 92 % 38 – 43 °Bé 12 – 27 %	0,5 % 0,5 °Bé 1 %	✓	<b>105,-</b>
<b>ORA 6HA</b>	Water content according to AOAC standard	12 – 30 %	0,1 %	✓	<b>85,-</b>

6HA: no calibration certificate possible



## Scope of application: Salt

The following models are particularly suitable for the measurement and concentration control of the mass fraction of sodium chloride in water as well as of the content of NaCl (salt) in water. This is often used in the preparation and the cooking of sauces, bases for pastries, the production of brines (e.g. for white cheese) and the preparation of seafood and marinades for meat.



The main scope of applications is:

- Food industry
- Restaurants and large-scale catering establishment
- Aquaristic: Fishkeepers/Fishfarmers in sea and sweetwater

Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 1SA</b>	Salt content (NaCl) % specific gravity	0 - 100 % 1,000 - 1,070 sg	1 % 0,001 sg	✓	<b>95,-</b>
<b>ORA 3SA</b>	Salt content (NaCl) % Brix	0 - 28 % 0 - 32 %	0,2 % 0,2 %	✓	<b>95,-</b>

## Scope of application: Wine

The following models are particularly suitable for the measurement of the content of sugar in fruits. It indicates the expected °Alcohol of the fruit. The degree of ripeness of fruit (fruit-sugar) can also be determined, such as e.g. grapes.

The main scope of applications is:

- Agriculture: Wine-growing and fruit-growing
- Wine-production
- Must and alcohol production

°Oe = Degree Oechsle, °KMW = Klosterneuburger Must balance

Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 1WA</b>	Oechsle KMW (Babo) Brix	0 - 140 °Oe 0 - 25 °KMW 0 - 32 %	1 °Oe 0,25 °KMW 0,2 %	✓	<b>95,-</b>
<b>ORA 3WA</b>	Oechsle Brix	30 - 140 °Oe 0 - 32 %	1 °Oe 0,2 %	✓	<b>95,-</b>



## Scope of application: Beer/alcohol

The following models are particularly suitable for determining the sugar content of the original wort of beer in its unfermented state. The value can be read straightaway, without having to be converted, using the SG Wort and Degrees Plato scales. In addition, the percent by volume and percent by mass scales can be used to determine the alcohol content of clear spirits.

The main scope of applications is:

- Beer brewers
- Alcohol production



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 3AA</b>	Brix Original gravity (specific weight)	0 – 32 % 1,000 – 1,130	0,2 % 0,001	✓	<b>95,-</b>
<b>ORA 4AA</b>	Plato	0 – 18° P	0,1° P	✓	<b>95,-</b>
<b>ORA 1AB</b>	Percentage by volume Percentage by volume	0 – 50 % (v/v) 50 – 80 % (v/v)	1 % (v/v) 2,5 % (v/v)		<b>90,-</b>
<b>ORA 2AB</b>	Percentage by mass Percentage by mass	0 – 50 % (w/w) 50 – 80 % (w/w)	1 % (w/w) 2,5 % (w/w)		<b>90,-</b>

## Scope of application: Urine

The following models are particularly suitable for the measurement of the specific gravity (sg) in urine, the quantity of serum (serumproteine) in urine (doping control among athletes), and the refractive index.

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The main scope of applications is:

- Hospitals
- Doctor's surgeries/Physicians
- Medical training institutions
- Nursing homes
- Sports medicine (doping test)
- Veterinary



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 2PA</b>	Serum protein Urine (spec. gravity) Refractive index	0 – 12 g/100 ml 1,000 – 1,050 1,3330 – 1,3600 nD	0,2 g/100 ml 0,002 0,0005 nD	✓	<b>95,-</b>
<b>ORA 5PB</b>	Serum protein Urine (s. g. dog) Urine (s. g. cat)	2 – 14 g/100 ml 1,000 – 1,060 1,000 – 1,060	0,1 g/100 ml 0,001 0,001		<b>90,-</b>

## Scope of application: Industry/Automotive

The following models are particularly suitable for the measurement and determination of AdBlue®, glycol concentration ethylene (EG) and propylene (PG), battery fluid (BF), urea, the freezing point of windscreens wash water (CW). Furthermore these models are suitable for the measurement of thermal exchange systems.

The main scope of applications is:

- Automotive industry: Car-workshops and producers, in accordance with the VW standards G11/G12 and G13
- Chemical industry
- Solar industry: Antifreeze monitoring
- Industry: Monitoring of lubricants for process and quality control



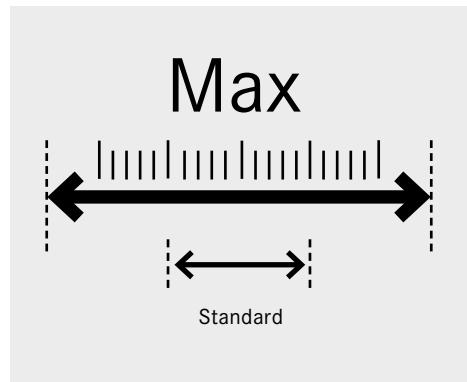
Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 32BA</b>	Brix	0 - 32 %	0,2 %	✓	<b>65,-</b>
	Ethylene glycol (G11/12)	-50 - 0 °C	1 °C		
<b>ORA 4FA</b>	Propylene glycol (G13)	-50 - 0 °C	1 °C	✓	<b>65,-</b>
	Windshield washer fluid	-40 - 0 °C	5 °C		
	Battery fluid	1,10 - 1,40 kg/l	0,01 kg/l		
<b>ORA 1UA</b>	Urea	0 - 40 %	0,2 %	✓	<b>95,-</b>
	Urea	30 - 35 %	0,2 %		
<b>ORA 4UA</b>	Ethylene glycol (G11/12)	-50 - 0 °C	1 °C	✓	<b>95,-</b>
	Propylene glycol (G13)	-50 - 0 °C	1 °C		
	Windshield washer fluid	-40 - 0 °C	5 °C		
	Battery fluid	1,10 - 1,40 kg/l	0,01 kg/l		

## Scope of application: Expert applications

The following models have a special large measuring range for the refractive index and large divided scales for the measurement and clear reading of Brix values.

The main scope of applications is:

- Universal application, especially when extra large measuring ranges are required



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 80BE</b>	Brix	0 - 50 % 50 - 80 %	0,5 % 0,5 %		<b>160,-</b>
<b>ORA 90BE</b>	Brix	0 - 42 % 42 - 71 % 71 - 90 %	0,2 % 0,2 % 0,2 %		<b>360,-</b>
<b>ORA 1RE*</b>	Refractive index	1,333 - 1,405 nD 1,405 - 1,468 nD 1,468 - 1,517 nD	0,005 nD 0,005 nD 0,005 nD		<b>360,-</b>
<b>ORA 4RR*</b>	Refractive index	1,440 - 1,520 nD	0,001 nD		<b>95,-</b>

\*no calibration certificate possible



ORA 4RR



ORA 90 BE/ORA 1RE



ORA 80BE

## Scope of application: Gemmology/Jewellery

This model has a special refracting-index range for jewellery. For this refractometer there is a nice leather bag in the scope of delivery included.

The main scope of applications is:

- Jewellers
- Training/Education
- Jewellery industry



Model	Scales	Measuring range	Division	Price excl. of VAT ex works €
<b>KERN</b>				
<b>ORA 1GG*</b>	Refractive index	1,30 - 1,81 nD	0,01 nD	<b>250,-</b>

\*no calibration certificate possible



ORA 1GG

## Accessory parts: Analogue refractometer – ORA



Prism coverplate with LED ORA-A1101



Calibration liquid/Contact liquid



Leather bag ORA-A2103



Calibration block

Model	Description	Price excl. of VAT ex works €
<b>KERN</b>		
<b>ORA-A1101</b>	Prism coverplate with integrated LED illumination	<b>25,-</b>
<b>ORA-A2103</b>	Leather bag for analog refractometers	<b>25,-</b>
<b>ORA-A2107</b>	Leather bag for Gem refractometers (Spare part)	<b>35,-</b>
<b>ORA-A1010</b>	Calibration liquid – distilled water – Set of 5 Volume: 5× approx. 3 ml	<b>25,-</b>
<b>ORA-A1002</b>	Contact liquid – Clove oil (for Calibration value 19,6%) Volume: approx. 2 ml	<b>25,-</b>
<b>ORA-A1003</b>	Calibration liquid – saturated salt solution Volume: approx. 2 ml	<b>25,-</b>
<b>ORA-A1004</b>	Contact liquid – Clove oil (for Calibration value 78,8%) Volume: approx. 2 ml	<b>25,-</b>
<b>ORA-A1005</b>	Calibration block for models ORA 82BB, ORA 3HA, ORA 3HB, ORA 6HA, ORA 6HB, ORA 4RR	<b>25,-</b>
<b>ORA-A1007</b>	Contact liquid – Diiodomethane "Standard" (Refractive index: 1,74 nD) Volume: approx. 2 ml	<b>30,-</b>
<b>ORA-A3001</b>	Contact liquid – Diiodomethane "Pro" (Refractive index: 1,79 nD) Volume: approx. 2 ml	<b>40,-</b>
<b>ORA-A1008</b>	Calibration block for model ORA 1GG	<b>25,-</b>
<b>ORA-A2001</b>	Prism coverplate (spare part)	<b>21,-</b>

### Relationship overview – refractometer calibration (analogue)

Model refractometer	Calibration value	Calibration liquid	Article number liquid	Calibration block	Article number calibration block
ORA 10BA; ORA 18BB; ORA 1WA; ORA 20BA; ORA 32BA; ORA 32BB; ORA 3SA; ORA 3WA; ORA 7WA; ORA 80BB; ORA 80BE; ORA 3AA	0 % Brix	distilled water	ORA-A1010	-	-
ORA 4AA	0 ° Plato	distilled water		-	
ORA 1UA	0 % Urea	distilled water		-	
ORA 4FA; ORA 4UA	0 °C EG/PG/CW	distilled water		-	
ORA 1SA	0 ‰ Salinity	distilled water	ORA-A1010	-	-
ORA 2SA; ORA 2SB	0 % Salt (NaCl)	distilled water		-	
ORA 2AB	0 % Vol (weight)	distilled water		-	
ORA 2PA; ORA 5PB	1,000 sg Urine	distilled water		-	
ORA 62BA	29,6 % Brix	saturated salt solution	ORA-A1003	-	-
ORA 3HA; ORA 82BB	78,8 % Brix	Clove oil CAS 8000-34-8	ORA-A1004	yes	ORA-A1005
ORA 4RR	1,4875 nD	Clove oil CAS 8000-34-8	ORA-A1004	yes	ORA-A1005
ORA 6HA; ORA 6HB	19,6 % Water content	Clove oil CAS 8000-34-8	ORA-A1002	yes	ORA-A1005
ORA 1GG	1,515 nD	Diiodomethane CAS 90-11-9	ORA-A1007	yes	ORA-A1008



Transport and storage case



Rear view, screw-on battery compartment cover

## Digital measurement of refraction index for universal application

### Features

- The KERN ORM refractometers are accurate and universal maintenance free digital handheld refractometers
- They are characterized by their easy-using and robustness
- The typical and practical design is suitable for a quick and convenient everyday use
- The large, easy-to-read display with integrated temperature display supports the user to reliably determine the measurement
- The integrated automatic temperature compensation (ATC), avoids the manual conversion of the measurement. This allows a quick and efficient usage of the instrument
- Rapid, user-friendly calibration of the refractometer is possible at any time using standard commercial distilled water
- The refractometers from the KERN ORM range are protected to international IP65 protection class, against dust and water splashes. After use, you can rinse the refractometer under running water
- Mean value measurements possible
- The following accessory-parts are included:
  - Prism cover lid
  - Pipette
  - Storage box
  - 1 x AAA battery
  - Screwdriver

### Technical data

- Measurement temperature: 0 °C – 40 °C
- Overall dimensions W×D×H 121×58×25 mm
- Net weight approx. 289 g
- Power supply: 1 x AAA (1,5 V)
- Lifetime of the battery: approx. 10.000 measurements
- ATC (Automatic Temperature Compensation 0 °C – 40 °C)
- Minimum sample volume: 4 drops
- Automatic energy management (AUTO-OFF after 60 seconds)
- Mean value measurement (15 measurements)

### Accessories

- Calibration liquid, KERN ORA-A1010, **€ 25,-**

**Note:** Also available with calibration certificate, see page 110

STANDARD

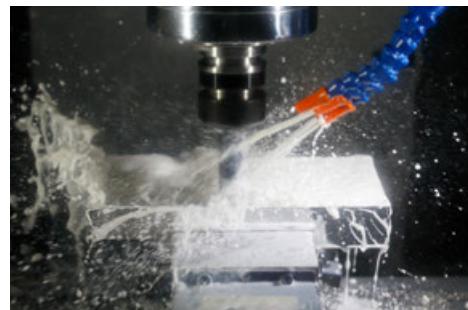


## Scope of application: Basic measurements for Brix and refractive index

The following models are particularly suitable for basic measurement where the result is required in Brix or refractive index. They are used to determine the sugar content in food or for monitoring processes in the industry (coolant monitoring, water-based mixtures). Alternatively the display can be switched to show Brix or the refractive index.

The main scope of applications is:

- Industry: Monitoring of lubricants in machines and quality control
- Food industry: Beverages, fruits and sweets
- Agriculture: Determination of the degree of ripeness of fruit for quality control in harvesting
- Restaurants and large-scale catering establishment



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORM 50BM</b>	Brix Refractive index	0 - 50 % 1,3330 - 1,4200 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	<b>305,-</b>
<b>ORM 1RS</b>	Brix Refractive index	0 - 90 % 1,3330 - 1,5177 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	<b>375,-</b>

## Scope of application: Sugar

The following models are particularly suitable for direct measurement of different types of sugar. These are used to determine the content of the respective type of sugar in water-based liquids. It is possible to switch between the four different scales.



The main scope of applications is:

- Food industry: Beverages, fruits and sweets
- Agriculture: Determination of the degree of ripeness of fruits for quality control in harvesting, determination of colostrum milk quality
- Restaurants and large-scale catering establishment

Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
	Fructose	0 - 69 %	± 0,2 %	0,1 %	
<b>ORM 1SU</b>	Glucose	0 - 60 %	± 0,2 %	0,1 %	<b>375,-</b>
	Brix	0 - 90 %	± 0,2 %	0,1 %	
	Refractive index	1,3330 - 1,5177 nD	± 0,0003 nD	0,0001 nD	
	Lactose	0 - 17 %	± 0,2 %	0,1 %	
<b>ORM 2SU</b>	Maltose	0 - 16 %	± 0,2 %	0,1 %	<b>305,-</b>
	Dextran	0 - 11 %	± 0,2 %	0,1 %	
	Brix	0 - 50 %	± 0,2 %	0,1 %	

## Scope of application: Honey

The following model is particularly suitable for the measurement of the water content in honey according to the International Honey Commission (IHC2002) and "degrees Baumé" to determine the relative density of liquids. Alternatively the display can be switched to show Brix or the refractive index.



The main scope of applications is:

- Beekeeping
- Honey production

Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
	Water content	5 – 38 %	± 0,2 %	0,1 %	
ORM 1HO	Baumé	33 – 48 °Bé	± 0,2 °Bé	0,1 °Bé	
	Brix	0 – 90 %	± 0,2 %	0,1 %	<b>375,-</b>
	Refractive index	1,3330 – 1,5177 nD	± 0,0003 nD	0,0001 nD	

## Scope of application: Salt

The following models are particularly suitable to determin the concentration of NaCl (salt) in water and seawater. This is often used for the preparation and for the cooking of sauces, bases for pastries, the production of brines (e.g. for white cheese) and the preparation of seafood and marinades for meat. Alternatively the display can be switched to show Brix or the refractive index.



The main scope of applications is:

- Food industry
- Restaurants, and large-scale catering establishment, canteens
- Aquaristic: Fishkeepers/Fishfarmers in sea and sweetwater

Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
	Salt content (NaCl) %	0 – 28 %	± 0,2 %	0,1 %	
	Salt content (NaCl) %	0 – 280 %	± 2 %	1 %	
ORM 1NA	Salt content (specific gravity)	1,000 – 1,220	± 0,002	0,001	<b>305,-</b>
	Brix	0 – 50 %	± 0,2 %	0,1 %	
	Refractive index	1,3330 – 1,4200 nD	± 0,0003 nD	0,0001 nD	
	Salt content seawater	0 – 100 %	± 2 %	1 %	
	Chlorine content seawater	0 – 57 %	± 2 %	1 %	
ORM 1SW	Salt content (specific gravity)	1,000 – 1,070	± 0,002	0,001	<b>305,-</b>
	Brix	0 – 50 %	± 0,2 %	0,1 %	
	Refractive index	1,3330 – 1,4200 nD	± 0,0003 nD	0,0001 nD	

## Scope of application: Beer/alcohol

The following models are particularly suitable for determining the sugar content of the original wort of beer in its unfermented state. The value can be read straightaway, without having to be converted, using the Original gravity (specific weight) and Degrees Plato scales. In addition, the percent by volume and percent by mass scales can be used to determine the alcohol content of clear spirits.

The main scope of applications is:

- Beer brewers
- Alcohol production



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORM 1AL</b>	Percentage by mass	0 - 72 %	± 1 %	1 %	
	Percentage by volume	0 - 80 %	± 1 %	1 %	
	Brix	0 - 50 %	± 0,2 %	0,1 %	<b>305,-</b>
	Refractive index	1,3330 - 1,4200 nD	± 0,0003 nD	0,0001 nD	
<b>ORM 1BR</b>	Plato	0 - 31 °P	± 0,3 °P	0,1 °P	
	Original gravity (specific weight)	1,000 - 1,130	± 0,002	0,001	
	Brix	0 - 50 %	± 0,2 %	0,1 %	<b>305,-</b>
	Refractive index	1,3330 - 1,4200 nD	± 0,0003 nD	0,0001 nD	

## Scope of application: Wine

The following models are particularly suitable for the measurement of the sugar content in fruit. They can be used to determine the expected alcohol content of the fruit and predict the probable alcohol content before fermentation. The degree of ripeness of fruit (fruit-sugar) can also be determined, such as e.g. grapes. Alternatively the display can be switched to show Brix.

The main scope of applications is:

- Agriculture: Wine-growing (viticulture) and fruit-growing
- Wine-production
- Must and alcohol production



°Oe = Degree Oechsle, °KMW = Klosterneuburger Most Waage

Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORM 1WN</b>	Oechsle	0 - 150 °Oe	± 2 °Oe	1 °Oe	
	Percentage by volume	0 - 22 %	± 0,2 %	0,1 %	
	KMW (Babo)	0 - 25 °KMW	± 0,2 °KMW	0,1 °KMW	<b>305,-</b>
	Brix	0 - 50 %	± 0,2 %	0,1 %	
<b>ORM 2WN</b>	Oechsle France	0 - 230 °Oe	± 2 °Oe	1 °Oe	
	Percentage by volume	0 - 22 %	± 0,2 %	0,1 %	
	KMW (Babo)	0 - 25 °KMW	± 0,2 °KMW	0,1 °KMW	<b>305,-</b>
	Brix	0 - 50 %	± 0,2 %	0,1 %	

## Scope of application: Coffee

The following models are particularly suitable for measuring the dissolved solids (TDS) in coffee to determine or compare the strength of a cup of coffee. For roasting plants, the TDS% value is used to determine the solubility level of a roast and to control the quality. Alternatively the display can be switched to show Brix or the refractive index.



The main scope of applications is:

- Coffee industry
- Coffee roasting plants
- Coffee competitions

Modell	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORM 1CO</b>	Coffee TDS 1	0 - 25 %	± 0,2 %	0,1 %	
	Brix	0 - 50 %	± 0,2 %	0,1 %	<b>305,-</b>
	Refractive index	1,3330 - 1,4200 nD	± 0,0003 nD	0,0001 nD	
<b>ORM 2CO</b>	Coffee TDS 2	0,00 - 25,00 %	± 0,2 %	0,01 %	
	Brix	0,00 - 30,00 %	± 0,2 %	0,01 %	<b>305,-</b>
	Refractive index	1,3330 - 1,4200 nD	± 0,0003 nD	0,0001 nD	

## Scope of application: Urine

The following models are particularly suitable for the measurement of the specific gravity (sg) in urine, the quantity of serum (serumproteine) in urine (doping control among athletes), and the refractive index.



The main scope of applications is:

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- Hospitals
- Doctor's surgeries/Physicians
- Medical training institutions
- Nursing homes
- Sports medicine (doping test)
- Veterinary

Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORM 1UN</b>	Urine (spec. gravity)	1,000 - 1,050	± 0,002	0,001	
	Serum protein	0 - 12 g/100 ml	± 0,2 g/100 ml	0,1 g/100 ml	
	Brix	0 - 50 %	± 0,2 %	0,1 %	<b>305,-</b>
	Refractive index	1,3330 - 1,4200 nD	± 0,0003 nD	0,0001 nD	
<b>ORM 2UN</b>	Urine (s. g. dog)	1,000 - 1,060	± 0,002	0,001	
	Urine (s. g. cat)	1,000 - 1,060	± 0,002	0,001	
	Brix	0 - 50 %	± 0,2 %	0,1 %	<b>305,-</b>
	Refractive index	1,3330 - 1,4200 nD	± 0,0003 nD	0,0001 nD	

## Scope of application: Industry/Automotive

The following models are particularly suitable for the measurement and determination of AdBlue®, glycol concentration ethylene (EG) and propylene (PG) (according to ASHRAE standard), battery fluid (BF), urea, the freezing point of windscreens wash water (CW). Furthermore these models are suitable for the measurement of thermal exchange systems. Alternatively the display can be switched to show Brix or the refractive index.

The main scope of applications is:

- Automotive industry: Car-workshops and producers
- Chemical industry
- Solar industry: Antifreeze monitoring
- Industry: Monitoring of lubricants for process and quality control



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORM 1CA</b>	Wash water AdBlue® Battery fluid Brix Refractive index	(-60) - 0 °C 0 - 51 % 1,000 - 1,500 kg/l 0 - 50 % 1,3330 - 1,4200 nD	± 0,5 °C ± 0,2 % ± 0,005 kg/l ± 0,2 % ± 0,0003 nD	0,1 °C 0,1 % 0,001 kg/l 0,1 % 0,0001 nD	<b>305,-</b>
<b>ORM 2CA</b>	Ethylene glycol (%) Ethylene glycol (°C) Propylene glycol (%) Propylene glycol (°C) Brix	0 - 100 % (-50) - 0 °C 0 - 100 % (-60) - 0 °C 0 - 90 %	± 0,5 % ± 0,5 °C ± 0,5 % ± 0,5 °C ± 0,2 %	0,1 % 0,1 °C 0,1 % 0,1 °C 0,1 %	<b>375,-</b>



Transport and storage case



Rear view, screw-on battery compartment cover

## Digital measurement of refraction index for universal application

### Features

- NEW: Up to eight additional, individually selectable scales available, for more details see internet
- NEW: Free OXR-BASIC software for performing measurements and for saving and exporting measurement results, for more details see internet
- The KERN ORL 94BS is a accurate, universal and maintenance-free digital desktop refractometer
- Other key features are the extra-large measuring range and a high degree of accuracy
- With their handy design, they are ideal for convenient and rapid everyday use
- The large, easy-to-read display with integrated temperature display supports the user to reliably determine the measurement

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- The integrated automatic temperature compensation (ATC), avoids the manual conversion of the measurement. This allows a quick and efficient usage of the instrument
- A quick and user-friendly calibration of the refractometer is possible at any time using commercially available distilled water
- Mean value measurements possible
- Scope of delivery:
  - Pipette
  - Storage case
  - USB cable
  - Power adapter
  - Screwdriver
  - Operating instructions

### Technical data

- Measurement temperature: 0 °C – 40 °C
- Overall dimensions W×D×H 180×100×55 mm
- Net weight approx. 365 g (without battery)
- Power supply: USB connection, as an alternative 1 × battery 3.7 V 3000 mA (not included with delivery)
- ATC (Automatic Temperature Compensation)
- Minimum sample volume: 0,3 – 0,4 ml
- Automatic energy management (AUTO-OFF after 3 Minutes)
- Mean value measurement (15 measurements)

**Note:** Also available with calibration certificate



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
ORL 94BS	Brix Refractive index	0 – 94 % 1,3330 – 1,5290 nD	± 0,1 % ± 0,0002 nD	0,1 % 0,0001 nD	840,-

## Digital refractometer application set with predefined scales

NEW

ORL 94BS digital refractometer set with Brix and refractive index scales as well as other predefined scales for your specific application area

### Area of application: Alcohol

Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
	Brix	0-94 %	±0,1 %	0,1%	
	Refraktive index	1,3330-1,5290 nD	±0,0002 nD	0,0001 nD	
	Percent by mass	0-72 %	±1 %	1%	
	Volume percentage	0-80 %	±1 %	1%	
	Plato	0-31 °P	±0,3 °P	0,1 °P	
<b>ORL 94AL</b>	Original gravity (specific weight)	1,000-1,130	±0,002	0,001	<b>990,-</b>
	Oechsle	0-150 °Oe	±2 °Oe	1 °Oe	
	Oechsle France	0-230 °Oe	±2 °Oe	1 °Oe	
	Volume percentage (Wine)	0-22 %	±0,2 %	0,1%	
	KWM ( Babo)	0-25 °KWM	±0,2 °KWM	0,1 °KWM	



### Area of application: Industry/Motor vehicles

Modell	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
	Brix	0-94 %	±0,1%	0,1%	
	Refraktive index	1,3330-1,5290 nD	±0,0002 nD	0,0001 nD	
	Windshield washer fluid (-60)-0 °C		±0,5 °C	0,1 °C	
<b>ORL 94IN</b>	Battery fluid	1,000-1,500 kg/l	±0,005 kg/l	0,001 kg/l	<b>990,-</b>
	Ethylene glycol (%)	0-100 %	±0,5 %	0,1%	
	Ethylene glycol (°C)*	(-50)-0 °C	±0,5 °C	0,1 °C	
	Propylene glycol (%)	0-100 %	±0,5 %	0,1%	
	Propylene glycol (°C)*	(-60)-0 °C	±0,5 °C	0,1 °C	



\*according to ASHRAE standard

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### Area of application: Food

Modell	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
	Brix	0-94 %	±0,1%	0,1%	
	Refraktive index	1,3330-1,5290 nD	±0,0002 nD	0,0001 nD	
	Fructose (fruit-sugar)	0-69 %	±0,2%	0,1%	
	Glucose (Grape sugar)	0-60 %	±0,2%	0,1%	
<b>ORL 94LM</b>	Lactose (milk sugar)	0-17 %	±0,2%	0,1%	<b>990,-</b>
	Maltose (Malt sugar)	0-16 %	±0,2%	0,1%	
	Dextran	0-11 %	±0,2%	0,1%	
	Salt content (NaCl) %	0-28 %	±0,2%	0,1%	
	Salt content (NaCl) %	0-280 %	±2 %	1 %	
	Salt content (specific gravity)	1,000-1,220	±0,002	0,001	



# OUR CALIBRATION SERVICE – TEST US!



## Your partner for calibration services, management of test equipment and support

### Testing, calibration, adjustment

Any analogue or digital refractometer will only give correct results if it is checked regularly, i.e. calibrated correctly and adjusted when required. A refractometer or another measuring device is only a reliable measuring and checking tool if it is calibrated and this calibration is documented as part of a quality procedure.

### Measuring correctly is essential!

Measuring "correctly" is of elementary significance, as it is not unusual for inaccurate or "wrong" measurements to have expensive economic consequences. Calibration or establishing the accuracy of checking equipment must therefore be carried out by laboratories throughout the world.

In the context of standard requirements for monitoring checking equipment, every company with a Quality Management system is obliged to test and document its measuring equipment at regular intervals.

### The refractometer calibration certificate

It documents the intended measuring functionality and confirms the measuring accuracy of your refractometer to you.

### Our offer for you:

- Calibration certificate for refractometers on initial calibration, KERN 961-290, **€ 141,-**
- Calibration certificate for refractometers on recalibration, KERN 961-290R, **€ 146,-**

### Important:

Refractive index standard traceable to SRM<sup>1</sup> of NIST<sup>2</sup> and PTB<sup>3</sup>

This service is not possible for the following refractometer models:

- ORA 6HA
- ORA 1RE
- ORA 4RR
- ORA 1GG

Calibration of products from other manufacturers is possible on request

<sup>1</sup>Standard reference material

<sup>2</sup>National Institute of Standards and Technology

<sup>3</sup>Physikalisch-Technische Bundesanstalt  
(German metrology institute)

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## POLARIMETERS





## Precise and durable: the reliable companion for your laboratory

### Features

- The KERN OAB 20LED is an analogue polarimeter featuring ergonomic design and simple handling
- The high-performance LED used offers a significantly longer service life than conventional sodium-vapour lamps
- The illumination can be customised thanks to a brightness regulator
- The measuring principle is based on optical rotation according to the half-shade principle and guarantees precise results
- The flexible sample chamber allows the use of measuring tubes up to a length of 220 mm
- The delivery includes two measuring tubes (100 and 200 mm) with bubble trap for easy filling, replacement lenses and sealing rings

### Technical data

- Light source: (589 nm) high-power LED
- Stabilisation time: approx. 5 s after switching on
- Overall dimensions W×D×H 500×130×330 mm
- Net weight approx. 2,8 kg

### Accessories

- Glass cuvette, length 100 mm (Spare part), KERN OAB-A2501, € 110,-
- Glass cuvette, length 200 mm (Spare part), KERN OAB-A2502, € 110,-

### Scope of application: Laboratory

The OAB 20LED polarimeter is the perfect choice for simple laboratory applications in companies and institutes and combines user-friendliness, precision and durability. Thanks to the robust, low-maintenance LED technology that replaces conventional sodium-vapour lamps, it is ideal for everyday use in laboratories, pharmacies and training centres. Typical applications include precise incoming and outgoing checks of pharmaceutical products in laboratories and pharmacies. It is also ideal for practical exercises, experiments and chemical analyses in academia and industry, for example on the kinetics of sucrose inversion or for determining the concentration of polysaccharides

### Main scope of applications:

- Chemists
- Hospitals
- Beverage industry
- Food industry
- Chemical industry
- Laboratories
- Training

STANDARD



### Model

### Scales

### Measuring range

### Division

### Vernier

### Wave lenght

### Price excl. of VAT ex works €

### KERN

OAB 20LED

Optical rotation

-180° – +180°

1°

0,05°

589 nm

990,-

# Retailer Information

## Sales conditions

All prices are valid as of January 1st 2026, Subject to change without notice. Current prices at [www.kern-sohn.com](http://www.kern-sohn.com). In Europe, all prices do not include the applicable V.A.T.

## Delivery Conditions

We supply ex works Balingen, e.g. the transport costs are invoiced. With our contract logistics partners we always offer you shipping at a good rate. When shipping to islands or other more distant areas, or areas which are difficult to access, the transport costs may possibly be higher, please ask for details. Any goods supplied remain KERN's property until complete payment for the goods sold has been received.



Delivery is usually via courier service.



When you see this symbol by truck, please ask for prices.n.

## Extract from general terms and conditions

### Court of jurisdiction/Legal domicile:

72336 Balingen, Germany;  
Commercial register N°: HRB 400865,  
AG Stuttgart; Managing director: Albert Sauter  
For the full Terms and Conditions,  
please refer to the website.  
<https://www.kern-sohn.com/shop/en/>  
IMPRINT/AGB2/

All dimensions are approximate. Technical changes in the course of further development, printing faults, price changes and product changes are likely in individual cases, due to product modifications as well as error.

## Sale or return

within 14 days of purchase. Not valid for Software and order-specific adaptations such as special productions, cable extensions, special weights, etc. or test services such as calibration, verification, etc. Depending on the time and effort involved, there may be processing and storage costs, please ask for details.

## Warranty

→ 3 years for products with list price  $\geq$  € 500.00  
→ 2 years for components as well as products with list price  $<$  € 500.00  
→ 1 year for pallet truck scales  
Does not apply to consumables such as batteries, rechargeable battery packs, etc.

## Service

### KERN DirectCash

The quick, secure COD procedure for protection against non-payment. With the KERN DirectCash COD system, you can safely deliver orders to end customers with unknown credit rating, with no risk of non-payment. Please request further details on this procedure.

### Hire Purchase

Financing is available using KERN hire purchase – easy and convenient. Hire Purchase gives you the option of purchasing any product from our range against a simple monthly installment. The product value is financed over the period of the agreement. On payment of the last installment, the ownership of the contract item automatically transfers from the contractor to the contractee. The Hire Purchase Agreement can – if you so choose – be set for a period of between one and five years. This package includes the transfer of items as well as the guarantee for the entire transfer period.

Compared with buying the product, KERN hire purchase offers the advantage that the initial financial investment is largely unnecessary. This is particularly relevant when purchasing a number of products, for example when refitting a laboratory, a company department or a hospital ward. In addition the monthly installments constitute a direct cost and the item does not have to be capitalised by the purchaser.

## After-Sales-Service

### Repair service

Within 1 week at our plant in Balingen, transportation costs are additional. In urgent cases, if requested by customer, a replacement device will be provided until all repairs are completed; please ask.

### Price reduction for a new device

If repair costs exceed the current value of the defective device, a new device will be offered for a discount price. This offer is valid only up to 2 years after warranty expiration.

### Spare parts service

Usually within 48 hours, transportation costs are additional.

## Marketing support

### KERN catalogues, brochures, branch prospectuses – your own personalised marketing tools

This catalogue and branch prospectuses are available free of charge. A neutral version of the catalogue, without the KERN address imprint, is also available free of charge for your marketing activities as PDF document. The KERN catalogue and branch prospectuses are available in the following languages: DE, EN, FR, IT, ES.

## Important notice

### Explosion hazard/Humidity

Our models are not suitable for rooms with a risk of explosion. Our models are also not suitable for rooms with a high level of air humidity (condensing). Please observe the applicable electrical regulations.

## FACTORY Calibration Certificate

Upon request, you will receive a factory calibration certificate for your KERN refractometers according to NIST (National Institute of Standards and Technology) and PTB (Physikalisch-Technische Bundesanstalt), which documents the metrological correctness of your refractometer in detail and is valid as a test equipment monitoring certificate in a quality management system according to ISO 9001.

## Accessories

Further extensive accessories for all our models can also be found in the KERN online shop [www.kern-sohn.com](http://www.kern-sohn.com)

## The oldest Precision Balance Factory in Germany

### KERN & SOHN GmbH

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Accredited Calibration Laboratory

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www.kern-sohn.com

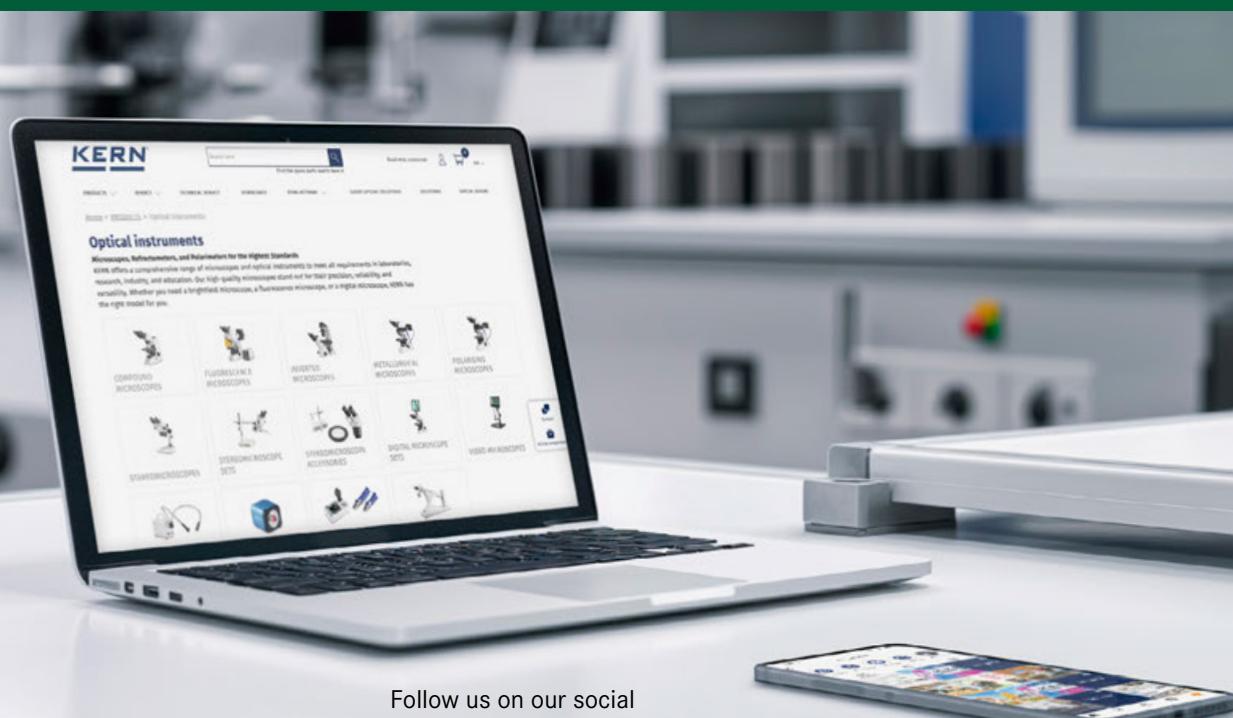
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