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PROFESSIONAL MEASURING

MICROSCOPES & REFRACTOMETERS for laboratory, industry and food

2023

EN

KERN OPTICS

MICROSCOPES & REFRACTOMETERS 23

for laboratory, industry and food

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KERN Pictograms

360° rotatable microscope head

Monocular Microscope
For the inspection with one eye

Binocular Microscope
For the inspection with both eyes

Trinocular Microscope
For the inspection with both eyes and the additional option for the connection of a camera

Abbe Condenser
With high numerical aperture for the concentration and the focusing of light

Halogen illumination
For pictures bright and rich in contrast

LED illumination
Cold, energy-saving and especially long-life illumination

Incident illumination
For non-transparent objects

Transmitting illumination
For transparent objects

Fluorescence illumination
For stereomicroscopes

Fluorescence illumination for compound microscopes
With 100 W mercury lamp and filter

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

Phase contrast unit
For a higher contrast

Darkfield condenser/unit
For a higher contrast due to indirect illumination

Polarising unit
To polarise the light

Infinity system
Infinity corrected optical system

Zoom magnification
For stereomicroscopes

Auto-focus
For automatic control of the focus level

Parallel optical system
For stereomicroscopes, enables fatigue-proof working

Integrated scale
In the eyepiece

SD card
For data storage

USB 2.0 digital camera
For direct transmitting of the picture to a PC

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

WIFI data interface:
For transmitting of the picture to a mobile display device

HDMI digital camera
For direct transmitting of the picture to a display device

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

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

Protection against dust and water splashes IPxx:
The type of protection is shown in the pictogram cf. DIN EN 60529:2000-09, IEC 60529:1989+A1:1999+A2:2013

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

Battery operation rechargeable
Prepared for a rechargeable battery operation

Plug-in power supply
230V/50Hz in standard version for EU. On request GB, AUS or USA version.

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

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

Abbreviations

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

Why you should choose a KERN microscope now!

For 175 years, KERN & SOHN has been synonymous with high precision weighing and measuring technology. This claim is the driving force for the development of our microscope and refractometer ranges.

Thanks to consistent customer focus paired with smart ideas and the latest available technology we are proud to be suppliers of high-quality, durable top microscopes and refractometers, which help you to be as efficient as possible in your daily work.

When developing our microscopes we have concentrated on the very best optical quality and have used only high-quality glass and the latest technologies to achieve this. The high-quality Philips halogen and modern LED illumination produce razor-sharp images with high contrast and which will impress you with their brilliant true-colour display – you must have noticed this yourself.

Your advantages:
- all mechanical parts have been designed for a long service life
- special attention has been given to the ergonomy of our microscopes, as this allows the user to work for several hours in a comfortable position which does not cause fatigue
- our microscopes are fully-equipped and can be used immediately
- Highlight for 2022: die KERN camera software – you will be amazed at how user-friendly and intuitive it is, a high-quality tablet camera as well as a comprehensive range of calibration services for refractometers
- and much more...

Use our practical “Check list for microscopes and refractometers”, which may help you to quickly determine specifications for the future instrument. Together with our KERN product specialist you can choose the right product for you.

If there is no suitable product in the standard range, for example, then we will of course configure an individual microscope for you.

Our aim is to develop a market-driven product solution, so with our microscope and refractometer range, the saying holds true: good quality at a competitive price! This is what we stand for and work towards, every day!

With our current 2022 product range you can benefit from improved quality and a clear reduction in price, which we have been able to achieve through more efficient production methods and increased global sales of our microscopes and refractometers and of course we pass this straight on to you

Do you have any questions about our range of microscopes and refractometers?

Your KERN customer consultants are available at any time to help you further.

I hope that you enjoy working efficiently with our KERN Optics products.

Albert Sauter, Managing Director

Your advantages

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www.kern-sohn.com
Information on current product availability, product data sheets, user instructions, useful knowledge, technical glossary and much for you to download, practical topic areas, which will guide you to the right product in your industry as well as a microscopes and refractometers search engine.

Retailer information

Sales conditions

All prices are valid as of January 1st 2023 until a new version of the KERN catalogue is released. In Europe, all prices do not include the applicable V.A.T.

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Delivery is usually via courier service.

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

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Managing director: Albert Sauter. For the full Terms and Conditions, please refer to the website. www.kern-sohn.com/en/kern/agbs.html

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 custom processes, such as, for example, special orders.

Warranty:
- 3 years for products with list price ≥ € 400.00
- 2 years for products with list price < € 400.00
- Does not apply to consumables such as batteries, rechargeable battery packs, illumination units, etc.

Services

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.

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Financing is available using KERN hire purchase – easy and convenient. Hire Purchase gives you the option of purchasing any product from the 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 services 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 on a new device: if repair costs exceed the current value of the defective device, a new device will be offered at a discount price. This offer is valid only up to 2 years after warranty expiration.

Spare parts service 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 for your marketing activities free of charge.

On demand, your company logo and address can be printed on the back of the KERN catalogue free of charge. In this way you have your own individual marketing tool. The KERN catalogue branch prospectuses are available in the following languages: DE, EN, FR, IT, ES.

Important notice

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

Miscellaneous

Product pictures printed in catalogue
All product pictures contained in our catalogue show devices similar to our products. Please note that possible technical innovations might be the cause of such deviations.

Accessory for optical instruments
Further extensive accessories for our optical instruments you can also find in the KERN Online shop on www.kern-sohn.com

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NEW IN → 2023

Innovative technology, stunning performance, improved features – all in proven KERN quality. You can see all our new additions in 2023 here – come and be inspired.

The beginner's video microscope including screen KERN OIV-3

The video microscope series is being expanded by an inexpensive all-in-one solution, which impresses especially with its intuitive and convenient handling.

Details, see page 63

Metallurgical Inverted Microscope KERN OLM-1

Metallurgical analyses of large samples now even easier to perform with the compact and handy OLM 170. The C-mount adapter for the camera connection is already integrated.

Details, see page 31

Digital handheld Refractometers KERN ORM

Our ORM series expands to a variety of different applications with a total of 15 new models.

Details, see page 101

HIGHLIGHTS → 2023

KERN Calibration service

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

Details, see page 109

KERN Microscope VIS software

The perfect software for measuring, counting and documenting your samples

Details, see page 91

Included with every KERN camera delivery

Android app for ODC 852 WiFi

Operate our microscope camera ODC 852 now also comfortably from your Android smartphone or tablet.

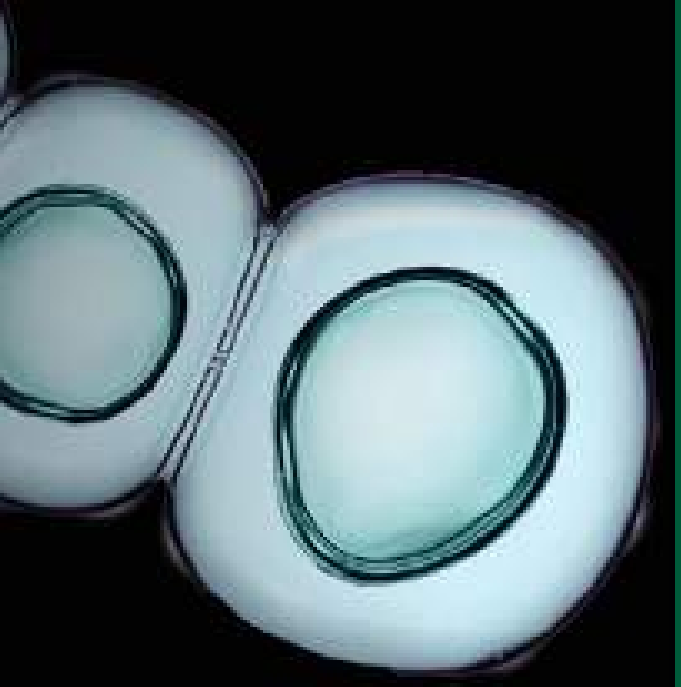
Details, see page 87

Stereo zoom microscope with gooseneck illumination KERN OZL-47

Our well-known OZL series gets further models, which ensure a very flexible adjustable incident light illumination by means of goosenecks.

Details, see page 46

MICROSCOPES



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01

COMPOUND MICROSCOPES

Compound, Phase contrast, Digital, Fluorescence and Inverted microscopes

Note

Please request special conditions for a classroom set

Objectives OBS

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 0.5W 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 the OBS 102 (fixed condenser) ensures the very best concentration of light and illumination of the sample. The OBS 103, 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

STANDARD

not OBS 101, 102

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)
- Triple (OBS 101, 102) or quadplex (OBS 103, 104, 105, 106) nosepiece
- Tube 45° (OBS 101, 102, 103, 105) or 30° (OBS 104, 106) inclined/360° rotatable
- Diopter adjustment: Both-sided (for binocular models)
- Overall dimensions W×D×H 130×300×310 mm
- Net weight approx. 3 kg

Model	Standard configuration						Price excl. of VAT ex works €
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	Stage	
OBS 101	Monocular	WF 10×/Ø 18 mm	Achromatic	4×/10×/40×	0,5W LED (transmitted) (battery incl., rechargeable)	fix	**205,–**
OBS 102	Monocular	WF 10×/Ø 18 mm	Achromatic		0,5W LED (transmitted) (battery incl., rechargeable)	fix	**210,–**
OBS 103	Monocular	WF 10×/Ø 18 mm	Achromatic		0,5W LED (transmitted) (battery incl., rechargeable)	fix	**220,–**
OBS 104	Binocular	WF 10×/Ø 18 mm	Achromatic		0,5W LED (transmitted) (battery incl., rechargeable)	fix	**305,–**
OBS 105	Monocular	WF 10×/Ø 18 mm	Achromatic		0,5W LED (transmitted) (battery incl., rechargeable)	mechanical	**265,–**
OBS 106	Binocular	WF 10×/Ø 18 mm	Achromatic		0,5W LED (transmitted) (battery incl., rechargeable)	mechanical	**350,–**

Model outfit		Model KERN						Order number	Price/piece excl. of VAT ex works €
		OBS 101	OBS 102	OBS 103	OBS 104	OBS 105	OBS 106		
Eyepieces (23,2 mm)	WF 10×/ø 18 mm	✓	✓	✓	✓✓	✓	✓✓	OBB-A1473	**35,–**
	WF 16×/ø 13 mm	○	○	○	○○	○	○○	OBB-A1474	**35,–**
	WF 20×/ø 11 mm	○	○	○	○○	○	○○	OBB-A1475	**35,–**
	WF 10×/ø 18 mm (with Pointer)	○	○	○	○	○	○	OBB-A1561	**35,–**
Achromatic objectives	4×/0,10 W.D. 18,0 mm	✓	✓	✓	✓	✓	✓	OBB-A1476	**40,–**
	10×/0,25 W.D. 7,0 mm	✓	✓	✓	✓	✓	✓	OBB-A1477	**45,–**
	40×/0,65 (spring-loaded) W.D. 0,53 mm	✓	✓	✓	✓	✓	✓	OBB-A1478	**50,–**
	60×/0,85 (spring-loaded) W.D. 0,1 mm	○	○	○	○	○	○	OBB-A1479	**65,–**
	100×/1,25 (oil) (spring-loaded) W.D. 0,07 mm	○	○	○	○	○	○	OBB-A1480	**70,–**
E-Plan objectives	4×/0,10 W.D. 14,5 mm	○	○	○	○	○	○	OBB-A1562	**45,–**
	10×/0,25 W.D. 5,65 mm	○	○	○	○	○	○	OBB-A1563	**60,–**
	40×/0,65 (spring-loaded) W.D. 0,85 mm	○	○	○	○	○	○	OBB-A1564	**90,–**
	100×/1,25 (oil) (spring-loaded) W.D. 0,07 mm	○	○	○	○	○	○	OBB-A1565	**95,–**
	100×/0,80 (dry) (spring-loaded) W.D. 0,15 mm	○	○	○	○	○	○	OBB-A1442	**190,–**
	Plan 100×/1,0 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	○	○	○	OBB-A1441	**205,–**
Monocular tube	45° inclined/360° rotatable	✓	✓	✓		✓		OBB-A1471	
Binocular tube	· 30° inclined/360° rotatable · Interpupillary distance 55-75 mm · Diopter adjustment: Both-sided				✓		✓	OBB-A1472	
Fixed stage	· Stage size W×D 110×120 mm · Coaxial coarse and fine focusing knobs, scale: 2,5 µm	✓	✓	✓	✓				
Mechanical stage	· Stage size W×D 115×125 mm · Travel 75×18 mm · Coaxial coarse and fine focusing knobs, scale: 2,5 µm					✓	✓		
Condenser	Simple condenser N.A. 0,65	✓							
	Simple condenser N.A. 0,65 (aperture diaphragm)		✓						
	Abbe N.A. 1,25 (aperture diaphragm)			✓	✓	✓	✓		
Illumination	0,5 W LED illumination system (transmitted) (rechargeable)	✓	✓	✓	✓	✓	✓		
Colour filters for transmitted illumination	Blue			✓	✓	✓	✓	OBB-A1466	**25,–**
	Green			○	○	○	○	OBB-A1467	**25,–**
	Yellow			○	○	○	○	OBB-A1468	**25,–**
	Grey			○	○	○	○	OBB-A1184	**25,–**

✓ = Included with delivery ○ = Option

Note

Please request special conditions for a classroom set

Monocular version

Objectives OBT

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 accurately, all models have a coarse and fine focusing knob on both sides. The mechanical angle table enables you to work with the samples and move them rapidly (for OBT 103, 104, 105, 106 models)
- A large selection of different eyepieces and objectives is also available
- 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 use

Applications/Samples

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

Technical data

- Finite optical system (DIN)
- Triple (OBT 101) or quadplex (OBT 102, 103, 104, 105, 106) nosepiece
- Tube 45° inclined/360° rotatable
- Diopter adjustment: Both-sided (for binocular models)
- Overall dimensions W×D×H 195×147×325 mm
- Net weight approx. 2,5 kg

STANDARD: 360° | MONO | BINO | ABBE (not OBT 101) | LED | 230 V | 1 DAY

OPTION: BATT | SCALE

Model	Standard configuration						Price excl. of VAT ex works
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	Stage	€
OBT 101	Monocular	HWF 10×/Ø 18 mm	Achromatic	4×/10×/40×	1W LED (transmitted)	fix	**240,–**
OBT 102	Monocular	HWF 10×/Ø 18 mm	Achromatic		1W LED (transmitted)	fix	**260,–**
OBT 103	Monocular	HWF 10×/Ø 18 mm	Achromatic		1W LED (transmitted)	mechanical	**300,–**
OBT 104	Binocular	HWF 10×/Ø 18 mm	Achromatic		1W LED (transmitted)	mechanical	**390,–**
OBT 105	Monocular	HWF 10×/Ø 18 mm	Achromatic	4x/10x/40x/100x	1W LED (transmitted)	mechanical	**330,–**
OBT 106	Binocular	HWF 10×/Ø 18 mm	Achromatic		1W LED (transmitted)	mechanical	**420,–**

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		
Eyepieces (23,2 mm)	WF 10×/⌀ 18 mm	✓	✓	✓	✓✓	✓	✓✓	OBB-A3200	**35,–**
	WF 10×/⌀ 18 mm (with Pointer)	○	○	○	○	○	○	OBB-A3201	**35,–**
	WF 10×/⌀ 18 mm (reticule 0,1 mm)	○	○	○	○	○	○	OBB-A3202	**35,–**
Achromatic objectives	4×/0,10 W.D. 27 mm	✓	✓	✓	✓	✓	✓	OBB-A3203	**30,–**
	10×/0,25 W.D. 7 mm	✓	✓	✓	✓	✓	✓	OBB-A3204	**35,–**
	40×/0,65 (spring-loaded) W.D. 0,6 mm	✓	✓	✓	✓	✓	✓	OBB-A3205	**45,–**
	100×/1,25 (oil) (spring-loaded) W.D. 0,2 mm	○	○	○	○	✓	✓	OBB-A3207	**65,–**
	60×/0,85 (spring-loaded) W.D. 0,4 mm	○	○	○	○	○	○	OBB-A3206	**55,–**
Monocular tube	45° inclined/360° rotatable	✓	✓	✓	○	✓	○	OBB-A3221	
Binocular tube	· Siedentopf 45° inclined/360° rotatable · Interpupillary distance 48–75 mm · Diopter adjustment: One-sided	○	○	○	✓	○	✓	OBB-A3222	
Fixed stage	· Stage size W×D 115×110 mm · Coaxial coarse and fine focusing knobs, scale: 2 µm	✓	✓						
Mechanical stage	· Stage size W×D 115×110 mm · Travel 52×20 mm · Coaxial coarse and fine focusing knobs, scale: 2 µm · One slide holder			✓	✓	✓	✓		
Condenser	Simple condenser N.A. 0,65	✓							
	Abbe N.A. 1,25 (aperture diaphragm)		✓	✓	✓	✓	✓		
Illumination	1 W LED spare bulb (transmitted)	✓	✓	✓	✓	✓	✓	OBB-A3208	**29,–**
Colour filters for transmitted illumination	Blue	○	○	○	○	○	○	OBB-A3212	**25,–**
	Green	○	○	○	○	○	○	OBB-A3210	**25,–**
	Yellow	○	○	○	○	○	○	OBB-A3211	**25,–**
	Grey	○	○	○	○	○	○	OBB-A3209	**25,–**

✓ = Included with delivery ○ = Option

Trinocular version

Monocular version

Note

Please request special conditions for a classroom set

Objectives OBE

Simple polarising unit

Darkfield unit

EDUCATIONAL LINE

The fully equipped all-round compound microscope for school, training and laboratories

Features

- The KERN OBE series is a range of high-quality, fully-equipped compound microscopes, which can't be beaten in terms of ease of use and ergonomic design
- The strong and continuously dimmable 3 W LED guarantees optimum illumination of the samples and also ensures long service life. Mobile use of several models is also no problem through the use of rechargeable batteries
- The height-adjustable and thereby focusable 1,25 Abbe condenser with aperture diaphragm is a further quality feature of the OBE series and ensures the very best concentration of light
- Height adjustment of the fully-equipped mechnical 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, a simple polarising unit and a darkfield kit 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 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

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

Applications/Samples

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

Technical data

- Finite optical system
- Quadplex nosepiece
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment: One-sided (for binocular and trinocular models)
- Overall dimensions W×D×H 320×180×365 mm
- Net weight approx. 5,5 kg

STANDARD

360° | MONO | BINO | TRINO | ABBE | LED | RECHARGE (OBE 103, OBE 113) | 230 V | 1 DAY

OPTION

DF | POLAR | SCALE

Only while stocks last

Remaining stocks of this series available at:
www.kern-sohn.com

Successor series OBE-12 · 13

→ see page 14

01

Note

Please request special conditions for a classroom set

Monocular version

Trinocular version

Butterfly tube

EDUCATIONAL LINE

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

Features

- The brand new 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 enables 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 3 W LED guarantees bright illumination of your sample
- A further highlight is the Butterfly tube which is integrated as standard and which enables you to achieve the ideal viewing angle. 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 mechnical 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 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

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

Applications/Samples

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

Technical data

- Finite optical system
- Quadplex nosepiece
- Butterfly 30° inclined
- Diopter adjustment: One-sided (for binocular and trinocular models)
- Overall dimensions W×D×H 360×150×320 mm
- Net weight approx. 4,6 kg

STANDARD

OPTION

Model	Standard configuration					Price excl. of VAT ex works
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	€
OBE 121	Monocular	HWF 10×/Ø 18 mm	Achromatic	4×/10×/40×	3W LED (transmitted)	**490,–**
OBE 122	Binocular	HWF 10×/Ø 18 mm	Achromatic		3W LED (transmitted)	**580,–**
OBE 124	Trinocular	HWF 10×/Ø 18 mm	Achromatic		3W LED (transmitted)	**690,–**
OBE 131	Monocular	HWF 10×/Ø 18 mm	Achromatic	4×/10×/40×/100×	3W LED (transmitted)	**540,–**
OBE 132	Binocular	HWF 10×/Ø 18 mm	Achromatic		3W LED (transmitted)	**640,–**
OBE 134	Trinocular	HWF 10×/Ø 18 mm	Achromatic		3W LED (transmitted)	**760,–**

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 10×/⌀ 18 mm	✓	✓✓	✓✓	✓	✓✓	✓✓	OBB-A1403	**50,–**
	WF 16×/⌀ 13 mm	○	○○	○○	○	○○	○○	OBB-A1354	**50,–**
	HWF 10×/⌀ 18 mm (with pointer)	○	○	○	○	○	○	OBB-A1348	**45,–**
	HWF 10×/⌀ 18 mm (reticule 0,1 mm) (non-adjustable)	○	○	○	○	○	○	OBB-A1349	**65,–**
Achromatic objectives	4×/0,10 W.D. 18,6 mm	✓	✓	✓	✓	✓	✓	OBB-A1111	**40,–**
	10×/0,25 W.D. 6,5 mm	✓	✓	✓	✓	✓	✓	OBB-A1108	**50,–**
	40×/0,65 (spring-loaded) W.D. 0,47 mm	✓	✓	✓	✓	✓	✓	OBB-A1112	**80,–**
	100×/1,25 (oil) (spring-loaded) W.D. 0,07 mm	○	○	○	✓	✓	✓	OBB-A1109	**115,–**
	20×/0,40 (spring-loaded) W.D. 1,75 mm	○	○	○	○	○	○	OBB-A1110	**95,–**
	60×/0,85 (spring-loaded) W.D. 0,1 mm	○	○	○	○	○	○	OBB-A1113	**115,–**
	E-Plan 100×/0,80 (dry) (spring-loaded) W.D. 0,15 mm	○	○	○	○	○	○	OBB-A1442	**190,–**
	Plan 100×/1,0 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	○	○	○	OBB-A1441	**205,–**
Monocular tube	30° inclined	✓			✓				
Binocular tube	· Butterfly 30° inclined · Interpupillary distance 48 – 75 mm · Diopter adjustment: One-sided		✓			✓			
Trinocular tube	· see binocular tube · Light distribution 20:80			✓			✓		
Mechanical stage	· Stage size W×D 125×115 mm · Travel 50×70 mm · Coaxial coarse and fine focusing knobs, scale: 2 µm	✓	✓	✓	✓	✓	✓		
Condenser	Abbe N.A. 1,25 (aperture diaphragm)	✓	✓	✓	✓	✓	✓	OBB-A1101	**95,–**
Darkfield unit	Usable for 4× – 40× objectives	○	○	○	○	○	○	OBB-A1148	**95,–**
Illumination	3 W LED illumination system (transmitted)	✓	✓	✓	✓	✓	✓		
Colour filters for transmitted illumination	Blue	○	○	○	○	○	○	OBB-A1466	**25,–**
	Green	○	○	○	○	○	○	OBB-A1467	**25,–**
	Yellow	○	○	○	○	○	○	OBB-A1468	**25,–**
	Grey	○	○	○	○	○	○	OBB-A1184	**25,–**
C-Mount	0,5× (focus adjustable)			○			○	OBB-A1137	**175,–**
	1×			○			○	OBB-A1139	**110,–**

✓ = Included with delivery ○ = Option

01

01

Trinocular version

Simple polarising attachment

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 unit and is therefore ideally suited for all demanding transmitted illumination applications. The robust and ergonomic stand base guarantees safe and comfortable working
- Depending on the application, there is a choice of models with strong, continuously dimmable 3 W LED or 20 W halogen illumination (Philips)
- 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 HBO and 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, oncology, entomology, vets, water analysis and breweries

Applications/Samples

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

Technical data

- Infinity optical system
- Quadplex nosepiece
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment: One-sided
- Overall dimensions W×D×H 395×200×380 mm
- Net weight approx. 6,7 kg

STANDARD

OPTION

Model	Standard configuration					Price excl. of VAT ex works €
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	
OBL 125*	Binocular	HWF 10×/⌀ 20 mm	Infinity E-Plan	4×/10×/40×/100×	20 W Halogen (transmitted)	**900,–**
OBL 127	Binocular	HWF 10×/⌀ 20 mm	Infinity E-Plan		3 W LED (transmitted)	**990,–**
OBL 137	Trinocular	HWF 10×/⌀ 20 mm	Infinity E-Plan		3 W LED (transmitted)	**1200,–**

! *ONLY WHILE STOCKS LAST

Model outfit		Model KERN			Order number	Price/piece excl. of VAT ex works €
		OBL 125	OBL 127	OBL 137		
Eyepieces (23,2 mm)	HWF 10×/⌀ 20 mm	✓✓	✓✓	✓✓	OBB-A1404	**105,–**
	WF 16×/⌀ 13 mm	○○	○○	○○	OBB-A1354	**50,–**
	HWF 10×/⌀ 20 mm (with Pointer)	○	○	○	OBB-A1448	**90,–**
Infinity E-Plan objectives	4×/0,10 W.D. 12,1 mm	✓	✓	✓	OBB-A1161	**100,–**
	10×/0,25 W.D. 2,1 mm	✓	✓	✓	OBB-A1159	**165,–**
	40×/0,65 (spring-loaded) W.D. 0,58 mm	✓	✓	✓	OBB-A1160	**290,–**
	100×/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	✓	OBB-A1158	**365,–**
	Plan 20×/0,40 (spring-loaded) W.D. 2,41 mm	○	○	○	OBB-A1250	**290,–**
	Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm	○	○	○	OBB-A1270	**390,–**
	Plan 100×/1,15 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	OBB-A1437	**490,–**
Binocular tube	· Butterfly 30° inclined/360° rotatable · Interpupillary distance 50 – 75 mm (for infinity system) · Diopter adjustment: One-sided	✓	✓	○	OBB-A1578	
Trinocular tube	· Butterfly 30° inclined/360° rotatable · Interpupillary distance 50 – 75 mm · Light distribution 20:80 (for infinity system) · Diopter adjustment: One-sided	○	○	✓	OBB-A1580	
Mechanical stage	· Stage size W×D 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	**95,–**
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	○	OBB-A1422	**250,–**
Illumination	20 W Halogen spare bulb (transmitted)	✓			OBB-A1643	**55,–**
	3 W LED illumination system (transmitted) (non-rechargeable)		✓	✓		
Polarising unit	Analyser/Polariser	○	○	○	OBB-A1277	**290,–**
Phase contrast units (including PH-condenser and PH-slides)	Single unit with ∞ PH-Plan objective 10×	○	○	○	OBB-A1215	**340,–**
	Single unit with ∞ PH-Plan objective 20×	○	○	○	OBB-A1217	**390,–**
	Single unit with ∞ PH-Plan objective 40×	○	○	○	OBB-A1219	**470,–**
	Single unit with ∞ PH-Plan objective 100×	○	○	○	OBB-A1213	**570,–**
	If required, there are several magnification levels, please contact our OPTICS-Team					
Fluorescence unit	100 W HBO Epi Fluorescence unit, three-hole slide (B/G) including centering objective	○	○	○	OBB-A1153	**3490,–**
	3 W LED Epi Fluorescence unit, three-hole slide (B/G) including centering objective	○	○	○	OBB-A1157	**3550,–**
Colour filters for transmitted illumination	Blue (built-in)	✓	✓	✓		
	Green	○	○	○	OBB-A1188	**25,–**
	Yellow	○	○	○	OBB-A1165	**25,–**
	Grey	○	○	○	OBB-A1183	**25,–**
C-Mount	0,5× (focus adjustable)			○	OBB-A1515	**200,–**
	1×			○	OBB-A1514	**130,–**

✓ = Included with delivery ○ = Option

Mounted phase contrast condenser

Simple PH condenser with 40× 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
- Depending on the application, there is a choice of models with strong, infinitely dimmable 3W LED or 20W halogen illumination (Philips)
- A special fixed, pre-centred phase contrast condenser as well as field diaphragm give you a simplified Koehler 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 polarising 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, vets, water analysis and 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
- Quadplex nosepiece
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment: One-sided
- Overall dimensions W×D×H 395×200×380 mm
- Net weight approx. 6,7 kg

STANDARD

OPTION

Model	Standard configuration					Price excl. of VAT ex works €
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	
OBL 146	Binocular	HWF 10×/⌀ 20 mm	Infinity E-Plan/ Plan	4×/PH10×/ PH40×/100×	3 W LED (transmitted)	**1660,–**
OBL 155	Trinocular	HWF 10×/⌀ 20 mm	Infinity E-Plan/ Plan		20 W Halogen (transmitted)	**1490,–**
OBL 156	Trinocular	HWF 10×/⌀ 20 mm	Infinity E-Plan/ Plan		3 W LED (transmitted)	**1780,–**

Model outfit		Model KERN			Order number	Price/piece excl. of VAT ex works €
		OBL 155	OBL 146	OBL 156		
Eyepieces (23,2 mm)	HWF 10×/⌀ 20 mm	✓✓	✓✓	✓✓	OBB-A1404	**105,–**
	WF 16×/⌀ 13 mm	○○	○○	○○	OBB-A1354	**50,–**
	HWF 10×/⌀ 20 mm (with Pointer)	○	○	○	OBB-A1448	**90,–**
Infinity E-Plan objectives	4×/0,10 W.D. 12,1 mm	✓	✓	✓	OBB-A1161	**100,–**
	10×/0,25 W.D. 2,1 mm	○	○	○	OBB-A1159	**165,–**
	40×/0,65 (spring-loaded) W.D. 0,58 mm	○	○	○	OBB-A1160	**290,–**
	100×/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	✓	OBB-A1158	**365,–**
	Plan 20×/0,40 (spring-loaded) W.D. 2,41 mm	○	○	○	OBB-A1250	**290,–**
	Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm	○	○	○	OBB-A1270	**390,–**
	Plan 100×/1,15 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	OBB-A1437	**490,–**
Binocular tube	· Butterfly 30° inclined/360° rotatable · Interpupillary distance 50 – 75 mm (for infinity system) · Diopter adjustment: One-sided	○	✓	○	OBB-A1578	
Trinocular tube	· Butterfly 30° inclined/360° rotatable · Interpupillary distance 50 – 75 mm · Light distribution 20:80 (for infinity system) · Diopter adjustment: One-sided	✓	○	✓	OBB-A1582	
Mechanical stage	· Stage size W×D 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	**165,–**
Phase contrast units	Infinity PH-Plan objective 10×	✓	✓	✓	OBB-A1390	**185,–**
	Infinity PH-Plan objective 20×	○	○	○	OBB-A1391	**220,–**
	Infinity PH-Plan objective 40×	✓	✓	✓	OBB-A1392	**285,–**
	Infinity PH-Plan objective 100×	○	○	○	OBB-A1393	**375,–**
	PH slide 10×	✓	✓	✓	OBB-A1399	**85,–**
	PH slide 20×	○	○	○	OBB-A1400	**85,–**
	PH slide 40×	✓	✓	✓	OBB-A1401	**85,–**
	PH slide 100×	○	○	○	OBB-A1402	**85,–**
	Centering eyepiece	✓	✓	✓		
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	○	OBB-A1422	**250,–**
Illumination	20 W Halogen spare bulb (transmitted)	✓			OBB-A1643	**55,–**
	3 W LED illumination system (transmitted) (non-rechargeable)		✓	✓		
Colour filters for transmitted illumination	Blue (built-in)	✓	✓	✓		
	Green	✓	✓	✓	OBB-A1188	**25,–**
	Yellow	○	○	○	OBB-A1165	**25,–**
	Grey	○	○	○	OBB-A1183	**25,–**
C-Mount	0,5× (focus adjustable)	○		○	OBB-A1515	**200,–**
	1×	○		○	OBB-A1514	**130,–**

For further optional accessories, please see the list of items for the OBL-12 and OBL-13 series from page 17

✓ = Included with delivery ○ = Option

01

OBN-13

OBN-15

OBN-15: Mounted phase contrast condenser

Quintuple PH universal rotary condenser with 10×/20×/40×/100×

Infinity PH-Plan objectives (complete set, for OBN-15 included)

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 transmitted 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 contrast procedures
- 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, Butterfly tube, through to complete fluorescence units are available to you as accessories
- The centring eyepiece for adjusting the phase contrast (OBN-15), a protective dust cover, eye cups as well as multi-lingual User instructions are included with the delivery
- A C-mount adapter is required to connect a camera. 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, vets, water analysis and 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 390×200×400 mm
- Net weight approx. 9 kg

STANDARD

OPTION

Model	Standard configuration					Price excl. of VAT ex works
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	€
OBN 132	Trinocular	HWF 10×/ø 20 mm	Infinity Plan	4×/10×/20×/40×/100×	20 W Halogen (transmitted)	**1680,–**
OBN 135	Trinocular	HWF 10×/ø 20 mm	Infinity Plan		3 W LED (transmitted)	**1690,–**
OBN 158	Trinocular	HWF 10×/ø 20 mm	Infinity Plan	4×/PH10×/PH20×/PH40×/PH100×	20 W Halogen (transmitted)	**2970,–**
OBN 159	Trinocular	HWF 10×/ø 20 mm	Infinity Plan		3 W LED (transmitted)	**2990,–**

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 10×/⌀ 20 mm	✓✓	✓✓	✓✓	✓✓	OBB-A1404	**105,–**
	WF 16×/⌀ 13 mm	○○	○○	○○	○○	OBB-A1354	**50,–**
Infinity Plan achromatic objectives	4×/0,10 W.D. 12,1 mm	✓	✓	✓	✓	OBB-A1263	**120,–**
	10×/0,25 W.D. 4,64 mm	✓	✓	○	○	OBB-A1243	**215,–**
	20×/0,40 (spring-loaded) W.D. 2,41 mm	✓	✓	○	○	OBB-A1250	**290,–**
	40×/0,66 (spring-loaded) W.D. 0,65 mm	✓	✓	○	○	OBB-A1257	**315,–**
	100×/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	○	○	OBB-A1240	**340,–**
	2,5×/0,07 W.D. 8,47 mm	○	○	○	○	OBB-A1247	**290,–**
	Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm	○	○	○	○	OBB-A1270	**390,–**
	Plan 100×/1,15 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	○	OBB-A1437	**490,–**
Trinocular tube	· Butterfly 30° inclined/360° rotatable · Interpupillary distance 50 – 75 mm · Light distribution 100:0 · Diopter adjustment: Both-sided	✓	✓	✓	✓		
Mechanical stage	· Stage size W×D 175×145 mm · Travel 78×55 mm · Coaxial coarse and fine focusing knobs · Two slide holder	✓	✓	✓	✓		
Condenser	Abbe N.A. 1,25 center-adjustable (aperture diaphragm)	✓	✓	○	○	OBB-A1102	**95,–**
	Swing-out condenser N.A. 0,9/0,13 center-adjustable (aperture diaphragm)	○	○	○	○	OBB-A1104	**240,–**
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	○	○	OBB-A1421	**290,–**
	N.A. 1,3 (oil, cardioid)	○	○	○	○	OBB-A1538	**660,–**
Koehler illumination	20 W Halogen spare bulb (transmitted)	✓		✓		OBB-A1643	**55,–**
	3 W LED illumination system (transmitted) (non-rechargeable)		✓		✓		
Polarising unit	Analyser/Polariser	○	○	○	○	OBB-A1283	**290,–**
Phase contrast units	Quintuple hole turret with 10×/20×/40×/100× Infinity-PH-Plan objectives (complete set)	○	○	✓	✓	OBB-A1237	**1790,–**
	Single unit with ∞ PH-Plan objective 10×	○	○			OBB-A1214	**340,–**
	Single unit with ∞ PH-Plan objective 20×	○	○			OBB-A1216	**390,–**
	Single unit with ∞ PH-Plan objective 40×	○	○			OBB-A1218	**470,–**
	Single unit with ∞ PH-Plan objective 100×	○	○			OBB-A1212	**570,–**
	Centering eyepiece	○	○	✓	✓		
	If required, there are several magnification levels, please contact our OPTICS-Team						
C-Mount	1×	○	○	○	○	OBB-A1140	**110,–**
	0,57× (focus adjustable)	○	○	○	○	OBB-A1136	**175,–**
Fluorescence unit	100 W HBO Epi Fluorescence unit 6-filter disc (UV/V/B/G) including centering objective	○	○	○	○	OBB-A1155	**4970,–**
	100 W HBO Epi Fluorescence unit, two-hole slide (B/G) including centering objective	○	○	○	○	OBB-A1153	**3490,–**
	3 W LED Epi Fluorescence unit (B/G) including centering objective	○	○	○	○	OBB-A1156	**3550,–**
Colour filters for transmitted illumination	Blue	✓		✓	✓		
	Green	○	○	✓	✓	OBB-A1188	**25,–**
	Yellow	○	○	○	○	OBB-A1165	**25,–**
	Grey	○	○	○	○	OBB-A1183	**25,–**

✓ = Included with delivery ○ = Option

Note

Semi apochromatic objectives available as accessories (see model outfit list page 25)

OBN 141/OBN 147

Illumination unit

Sextuple filter wheel OBN 148

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
- The powerful, dimmable 20W halogen illumination unit (Philips) and a 100W Epi fluorescence incident illumination unit on the OBN 147/OBN 148 models 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 3W LED transmitted illumination unit and 3W 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
- With the OBN 147/OBN 148 halogen variant you have a filter wheel which has up to 6 fittings. As standard this is fitted with a B/G or B/G/UV/V fluorescence filter. The OBN 141 LED variant is fitted with a B/G fluorescence filter with a changeover slider as standard. The changeover slider and the filter wheel mean that you can change the stimulation filter quickly
- 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. 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, vets, water analysis and breweries

Applications/Samples

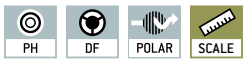
- Specially for translucent, thin, low-contrast, challenging samples (e.g. immunofluorescence, FISH, DAPI staining, etc.)

Technical data

- Infinity optical system
- Quintuple nosepiece
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 530×220×490 mm
- Net weight approx. 23 kg

STANDARD

OPTION



Model	Standard configuration					Price excl. of VAT ex works
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	€
OBN 141	Trinocular	HWF 10×/ø 20 mm	Infinity Plan	4×/10×/20×/ 40×/100×	LED + 3 W LED Epi Fluorescence (B/G)	**5190,–**
OBN 147	Trinocular	WF 10×/ø 20 mm	Infinity Plan		Halogen + 100 W Epi Fluorescence (B/G)	**5170,–**
OBN 148	Trinocular	HWF 10×/ø 20 mm	Infinity Plan		Halogen + 100 W Epi Fluorescence (B/G/UV/V)	**6550,–**

Model outfit		Model KERN			Order number	Price/piece excl. of VAT ex works €
		OBN 141	OBN 147	OBN 148		
Eyepieces (23,2 mm)	HWF 10×/⌀ 20 mm	✓✓		✓✓	OBB-A1404	**105,–**
	WF 10×/⌀ 20 mm		✓✓		OBB-A1351	**95,–**
	WF 16×/⌀ 13 mm	○○	○○	○○	OBB-A1354	**50,–**
	WF 10×/⌀ 20 mm (reticule 0,1 mm) (adjustable)	○	○	○	OBB-A1352	**155,–**
Infinity Plan achromatic objectives	4×/0,10 W.D. 12,1 mm	✓	✓	✓	OBB-A1263	**120,–**
	10×/0,25 W.D. 4,64 mm	✓	✓	✓	OBB-A1243	**215,–**
	20×/0,40 (spring-loaded) W.D. 2,41 mm	✓	✓	✓	OBB-A1250	**290,–**
	40×/0,66 (spring-loaded) W.D. 0,65 mm	✓	✓	✓	OBB-A1257	**315,–**
	100×/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	✓	OBB-A1240	**340,–**
	2,5×/0,07 W.D. 8,47 mm	○	○	○	OBB-A1247	**290,–**
	Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm	○	○	○	OBB-A1270	**390,–**
Infinity Plan Semi Apochromatic objectives	10×/0,3 W.D. 7,68 mm	○	○	○	OBB-A1634	**395,–**
	20×/0,5 W.D. 1,96 mm	○	○	○	OBB-A1635	**690,–**
	40×/0,75 (spring-loaded) W.D. 0,78 mm	○	○	○	OBB-A1636	**1050,–**
	100×/1,3 (oil) (spring-loaded) W.D. 0,15 mm	○	○	○	OBB-A1637	**1370,–**
Trinocular tube	· Butterfly 30° inclined/360° rotatable · Interpupillary distance 50 – 75 mm · Light distribution 100:0 · Diopter adjustment: Both-sided	✓	✓	✓		
Mechanical stage	· Stage size W×D 175×145 mm · Travel 78×55 mm · Coaxial coarse and fine focusing knobs · Two slide holder	✓	✓	✓		
Condenser	Abbe N.A. 1,25 center-adjustable (aperture diaphragm)	✓	✓	✓	OBB-A1102	**95,–**
	Swing-out condenser N.A. 0,9/0,13 center-adjustable (aperture diaphragm)	○	○	○	OBB-A1104	**240,–**
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	○	OBB-A1421	**290,–**
	N.A. 1,3 (oil, cardioid)	○	○	○	OBB-A1538	**660,–**
Koehler illumination	20 W Halogen spare bulb (transmitted)		✓	✓	OBB-A1643	**55,–**
	3 W LED illumination system (transmitted) (non-rechargeable)	✓				
Polarising unit	Analyser/Polariser	○	○	○	OBB-A1283	**290,–**
Phase contrast units	Quintuple hole turret with 10×/20×/40×/100× Infinity-PH-Plan objectives (complete set)	○	○	○	OBB-A1237	**1790,–**
	Single unit with ∞ PH-Plan objective 10×	○	○	○	OBB-A1214	**340,–**
	Single unit with ∞ PH-Plan objective 20×	○	○	○	OBB-A1216	**390,–**
	Single unit with ∞ PH-Plan objective 40×	○	○	○	OBB-A1218	**470,–**
	Single unit with ∞ PH-Plan objective 100×	○	○	○	OBB-A1212	**570,–**
	If required, there are several magnification levels, please contact our OPTICS-Team					
C-Mount	1×	○	○	○	OBB-A1140	**110,–**
	0,57× (focus adjustable)	○	○	○	OBB-A1136	**175,–**
Fluorescence unit	100 W HBO Epi Fluorescence unit 6-filter disc (UV/V/B/G) including centering objective			✓		
	100 W HBO Epi Fluorescence unit, two-hole slide (B/G) including centering objective		✓			
	3 W LED Epi Fluorescence unit (B/G) including centering objective	✓				
Colour filters for transmitted illumination	Blue	✓	✓	✓		
	Green	○	○	○	OBB-A1188	**25,–**
	Yellow	○	○	○	OBB-A1165	**25,–**
	Grey	○	○	○	OBB-A1183	**25,–**

✓ = Included with delivery ○ = Option

OCM 161

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. This design, with its large working distance, is particularly suitable for the monitoring and analysis of cell cultures, for example
- A strong and continuously adjustable 30W halogen illumination unit ensures the optimum illumination in the bright field of your samples. In addition, either an Osram 100 W-HBO- (OCM 165/166) or a 5 W-LED Epi fluorescence incident illumination unit (OCM 167/168) are available to you as a fluorescence microscope for perfect illumination and stimulation of your fluorescence samples
- 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 (⌀ 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
- 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 optical system
- Quintuple nosepiece
- Siedentopf 45° inclined
- Diopter adjustment: Both-sided

OCM 161
- Overall dimensions W×D×H 304×599×530 mm
- Net weight approx. 13,5 kg

OCM 165-168
- Overall dimensions W×D×H 304×782×530 mm
- Net weight approx. 21 kg

STANDARD

TRINO | ABBE | HAL | PH | FL-HBO | FL-LED | INFINITY | 230 V | 1 DAY

Model	Standard configuration					Price excl. of VAT ex works
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	€
OCM 161	Trinocular	HWF 10×/⌀ 22 mm	Infinity Plan	LWD10×/LWD20×/ LWD40×/LWD20×PH	30 W Halogen (transmitted)	**3790,–**
OCM 165	Trinocular	HWF 10×/⌀ 22 mm	Infinity Plan		30 W Halogen + 100 W Epi Fluorescence (B/G)	**9180,–**
OCM 166	Trinocular	HWF 10×/⌀ 22 mm	Infinity Plan		30 W Halogen + 100 W Epi Fluorescence (UV/V/B/G)	**10790,–**
OCM 167	Trinocular	HWF 10×/⌀ 22 mm	Infinity Plan		5W-LED + 5W Epi Fluorescence (B/G)	**9180,–**
OCM 168	Trinocular	HWF 10×/⌀ 22 mm	Infinity Plan		5W-LED + 5W Epi Fluorescence (UV/V/B/G)	**10790,–**

Model outfit		Model KERN					Order number	Price/piece excl. of VAT ex works €
		OCM 161	OCM 165	OCM 166	OCM 167	OCM 168		
Eyepieces (30 mm)	HWF 10×/⌀ 22 mm (adjustable)	✓✓	✓✓	✓✓	✓✓	✓✓	OBB-A1491	**100,–**
	HWF 10×/⌀ 22 mm (reticule 0,1 mm) (adjustable)	○	○	○	○	○	OBB-A1523	**155,–**
Infinity Plan achromatic Fluor objectives for long working distance	4×/0,11 W.D. 12,1 mm	○	○	○	○	○	OBB-A1600	**140,–**
	10×/0,25 W.D. 10,3 mm	✓	✓	✓	✓	✓	OBB-A1601	**210,–**
	20×/0,40 W.D. 5,8 mm	✓	✓	✓	✓	✓	OBB-A1602	**290,–**
	40×/0,60 W.D. 5,1 mm	✓	✓	✓	✓	✓	OBB-A1603	**360,–**
Trinocular tube	· 45° inclined · Interpupillary distance 48–76 mm · Light distribution 100:0 · Diopter adjustment: Both-sided	✓	✓	✓	✓	✓		
Mechanical stage	· Stage size W×D 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 microtitre plate	✓	✓	✓	✓	✓		
	Drop specimen holder (⌀ 110)	✓	✓	✓	✓	✓	OBB-A1503	**35,–**
	Specimen holder for 35 mm culture dish	○	○	○	○	○	OBB-A1507	**65,–**
	Specimen holder for 54 mm culture dish	✓	✓	✓	✓	✓	OBB-A1506	**65,–**
	Specimen holder for 65 mm culture dish	○	○	○	○	○	OBB-A1505	**65,–**
Condenser	Abbe N.A. 0,3 (aperture diaphragm), LWD 72 mm	✓	✓	✓	✓	✓		
Illumination	30 W Halogen spare bulb (transmitted)	✓	✓	✓			OBB-A1372	**40,–**
	5 W LED spare bulb (transmitted)				✓	✓	OBB-A1589	**90,–**
Phase contrast units	Phase contrast slide 4x	○	○	○	○	○	OBB-A1608	**95,–**
	Phase contrast slide 10x	✓	✓	✓	✓	✓	OBB-A1609	**95,–**
	Phase contrast slide 20x/40x	✓	✓	✓	✓	✓	OBB-A1610	**95,–**
	Infinity PH-Plan Fluor objective 4×	○	○	○	○	○	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,–**
	Centering eyepiece	○	○	○	○	○	OBB-A1544	**120,–**
Fluorescence unit	100 W HBO Epi Fluorescence unit, two-hole slide (B/G)		✓					
	100 W HBO Epi Fluorescence unit, four-hole slide (UV/V/B/G)			✓				
	5 W HBO Epi Fluorescence unit, two-hole slide (B/G)				✓			
	5 W HBO Epi Fluorescence unit, four-hole slide (UV/V/B/G)					✓		
Colour filters for transmitted illumination	Blue	✓	✓	✓	✓	✓	OBB-A1510	**25,–**
	Green	✓	✓	✓	✓	✓	OBB-A1511	**25,–**
	Yellow	○	○	○	○	○	OBB-A1512	**25,–**
	Grey	○	○	○	○	○	OBB-A1513	**25,–**
C-Mount	0,5×	○	○	○	○	○	OBB-A1515	**200,–**
	1×	○	○	○	○	○	OBB-A1514	**130,–**

✓ = Included with delivery ○ = Option

02

METALLURGICAL MICROSCOPES

Illumination unit with filter disc

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 30 W halogen reflected illumination unit (Philips) ensures excellent, high-contrast images
- The illumination unit with an integrated 5-slot filter wheel for blue, green, yellow, grey and blank means that you can quickly change the colour filter for different contrast views
- 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, objectives and a polarising unit 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

- Metallurgy, material testing, quality assurance

Applications/Samples

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

Technical data

- Infinity optical system
- Quadplex nosepiece
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment: One-sided
- Overall dimensions W×D×H 440×200×460 mm
- Net weight basic configuration approx. 8 kg

STANDARD

Model	Standard configuration					Price excl. of VAT ex works
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	€
OKM 173	Trinocular	HWF 10×/⌀ 18 mm	Infinity Plan	5×/10×/ LWD 20×/ LWD40×	30 W Halogen (incident)	**2220,–**

Model outfit		Model KERN	Order number	Price/piece excl. of VAT ex works €
		OKM 173		
Eyepieces (23,2 mm)	HWF 10×/⌀ 18 mm	✓	OBB-A1403	**50,–**
	HWF 10×/⌀ 18 mm (reticule 0,1 mm) (non-adjustable)	✓	OBB-A1349	**65,–**
	WF 5×/⌀ 20 mm	○	OBB-A1355	**60,–**
	WF 12,5×/⌀ 14 mm	○	OBB-A1353	**85,–**
	WF 16×/⌀ 13 mm	○	OBB-A1354	**50,–**
Infinity Plan achromatic objectives	5×/0,11 W.D. 6,80 mm	✓	OBB-A1268	**115,–**
	10×/0,25 W.D. 4,3 mm	✓	OBB-A1244	**215,–**
	20×/0,40 (spring-loaded) W.D. 2,14 mm	○	OBB-A1251	**290,–**
	40×/0,65 (spring-loaded) W.D. 0,45 mm	○	OBB-A1258	**315,–**
Infinity Plan achromatic objectives for long working distance	20×/0,40 W.D. 8,35 mm	✓	OBB-A1252	**315,–**
	40×/0,65 W.D. 3,90 mm	✓	OBB-A1259	**440,–**
	50×/0,70 (spring-loaded) W.D. 1,95 mm	○	OBB-A1266	**490,–**
	80×/0,80 (spring-loaded) W.D. 0,85 mm	○	OBB-A1271	**550,–**
Trinocular tube	· Siedentopf 30° inclined/360° rotatable · Interpupillary distance 50 – 75 mm · Light distribution 80:20 · Diopter adjustment: One-sided	✓	OBB-A1346	
Mechanical stage	· Stage size W×D 200×140 mm · Travel 76×52 mm · Coaxial coarse and fine focusing knobs	✓		
Illumination	30 W Halogen spare bulb (incident)	✓	OBB-A1372	**40,–**
Reflected illumination unit	5-filter unit (Blue, Green, Yellow, Grey, Empty)	✓		
	Polarising unit (Incl. analyser and polariser slide)	✓		
C-Mount	1×	○	OBB-A1514	**130,–**
	0,5× (focus adjustable)	○	OBB-A1515	**200,–**

✓ = Included with delivery ○ = Option

Stage OKO

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. 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
- Quintuple nosepiece
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 550×200×460 mm
- Net weight basic configuration approx. 14,5 kg

STANDARD

360° TRINO ABBE LED POLAR INFINITY SCALE 230 V 1 DAY

Model	Standard configuration					Price excl. of VAT ex works
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	€
OKO 178	Trinocular	HWF 10×/⌀ 22 mm	Infinity Plan	5x/10x/20x/50x	5 W LED (incident + transmitted)	**3350,–**

Model outfit		Model KERN	Order number	Price/piece excl. of VAT ex works €
		OKO 178		
Eyepieces (30 mm)	HWF 10×/⌀ 22 mm (adjustable)	✓	OBB-A1491	**100,–**
	HWF 10×/⌀ 22 mm (reticule 0,1 mm) (adjustable)	✓	OBB-A1523	**155,–**
Infinity Plan Semi Apochromatic objectives for long working distance	5×/0,15 W.D. 21,0 mm	✓	OBB-A1619	**180,–**
	10×/0,3 W.D. 20,0 mm	✓	OBB-A1620	**275,–**
	20×/0,40 W.D. 15,0 mm	✓	OBB-A1621	**335,–**
	50×/0,75 W.D. 4,25 mm	✓	OBB-A1641	**480,–**
Infinity Plan objectives for long working distance	80×/0,80 (spring-loaded) W.D. 0,85 mm	○	OBB-A1530	**520,–**
	100×/0,85 (dry) W.D. 3,00 mm	○	OBB-A1623	**1260,–**
Trinocular tube	· Siedentopf 30° inclined/360° rotatable · Interpupillary distance 48 – 76 mm · Light distribution 100:0	✓		
Mechanical stage for transmitted illumination	· Stage size W×D 182×140 mm · Travel 77×52 mm · Coaxial coarse and fine focusing knobs	✓		
Reflected illumination unit	Polarising unit (Incl. analyser, polariser and blue filter slide)	✓		
Condenser	Abbe N.A. 1,25 (aperture diaphragm)	✓	OBB-A1380	**110,–**
Koehler illumination	5 W LED spare bulb (transmitted)	✓	OBB-A1589	**90,–**
Illumination polarising unit	5 W LED spare bulb (incident)			
Polariser	for transmitted illumination	✓	OBB-A1470	**150,–**
Colour filters for transmitted illumination	Blue	✓	OBB-A1170	**25,–**
	Green	○	OBB-A1188	**25,–**
	Yellow	○	OBB-A1165	**25,–**
	Grey	○	OBB-A1183	**25,–**
C-Mount	1×	○	OBB-A1514	**130,–**
	0,75×	○	OBB-A1590	**200,–**
	0,5× (focus adjustable)	○	OBB-A1515	**200,–**

✓ = Included with delivery ○ = Option

OLM 170

OLM 171

Specimen stage and illumination unit (OLM 171)

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
- The compact design of the OLM 170 allows the user easier and more flexible handling, so that this model can also be considered for mobile use
- A large mechanical stage is included with delivery as standard. The coarse and fine focusing knob on both sides guarantees optimal adjustment and focusing
- 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
- Quintuple nosepiece
- Siedentopf 30° inclined
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 271×379×747 mm
- Net weight approx. 12,5 kg

STANDARD

TRINO | ABBE | HAL | LED | POLAR | INFINITY | SCALE | 230 V | 1 DAY

HAL: OLM-171 · LED: OLM-170

Model	Standard configuration					Price excl. of VAT ex works
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	€
OLM 170 NEW	Trinocular	HWF 10×/⌀ 20 mm	Infinity Plan	LWD5×/LWD10×/ LWD20×/LWD50×	5 W LED (incident)	**3000,–**
OLM 171	Trinocular	HWF 10×/⌀ 22 mm	Infinity Plan		50 W Halogen (incident)	**3710,–**

NEW New model

Model outfit		Model KERN		Order number	Price/piece excl. of VAT ex works €
		OLM 170	OLM 171		
Eyepieces (23,2 mm)	HWF 10×/ø 20 mm (adjustable)	✓		OBB-A1404	**105,–**
	WF 10×/ø 20 mm (reticule 0,1 mm) (adjustable)	✓		OBB-A1532	**24,–**
Eyepieces (30 mm)	HWF 10×/ø 22 mm (adjustable)		✓	OBB-A1491	**100,–**
	HWF 10×/ø 22 mm (reticule 0,1 mm) (adjustable)		✓	OBB-A1523	**155,–**
Infinity Plan achromatic objectives for long working distance	5×/0,13 W.D. 16,04 mm	✓	✓	OBB-A1525	**135,–**
	10×/0,25 W.D. 18,48 mm	✓	✓	OBB-A1526	**200,–**
	20×/0,40 W.D. 8,35 mm	✓	✓	OBB-A1527	**265,–**
	50×/0,70 (spring-loaded) W.D. 1,95 mm	✓	✓	OBB-A1528	**350,–**
	80×/0,80 (spring-loaded) W.D. 0,85 mm	○	○	OBB-A1530	**520,–**
	100×/0,85 (dry) W.D. 3,00 mm	○	○	OBB-A1623	**1260,–**
Trinocular tube	· Butterfly 45° inclined · Interpupillary distance 48-76 mm · Light distribution 20:80 · Diopter adjustment: One-sided	✓			
Trinocular tube	· Siedentopf 30° inclined · Interpupillary distance 48-76 mm · Light distribution 100:0 · Diopter adjustment: Both-sided		✓		
Mechanical stage	· Stage size B×T 155×180 mm · Travel 75×40 mm · Coaxial coarse and fine focusing knobs	✓			
Mechanical stage	· Stage size W×D 210×180 mm · Travel 50×50 mm · Coaxial coarse and fine focusing knobs		✓		
Illumination	5 W LED spare bulb (incident)	✓		OBB-A1589	**90,–**
Illumination	50 W Halogen spare bulb (incident)		✓	OBB-A1207	**25,–**
Reflected illumination unit	Polarising unit (Incl. analyser, polariser and colour filter slide)	✓	✓		
Colour filters for transmitted illumination	Blue		✓	OBB-A1510	**25,–**
	Green		○	OBB-A1511	**25,–**
	Yellow		○	OBB-A1512	**25,–**
	Grey	✓	○	OBB-A1513	**25,–**
C-Mount	0,5× (built-in)	✓			
	0,5×		○	OBB-A1515	**200,–**
	1×		○	OBB-A1514	**130,–**

✓ = Included with delivery ○ = Option

03

POLARISING MICROSCOPES

Bertrand lens, λ 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
- As standard all series are fitted with a complete polarising unit with scale, a Bertrand lens, a λ + ¼ λ Slip as well as a quartz wedge
- 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. 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. 14,5 kg

STANDARD

Model	Standard configuration					Price excl. of VAT ex works
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	€
OPO 185	Trinocular	HWF 10×/⌀ 20 mm	Infinity Plan	Non-stress 4×/10×/20×/40×/50×	5W LED (incident + transmitted)	**5740,–**

Model outfit		Model KERN	Order number	Price/piece excl. of VAT ex works €
		OPO 185		
Eyepieces (23,2 mm)	HWF 10×/20 mm	✓	OBB-A1591	**95,–**
	HWF 10×/20 mm (reticule 0,1 mm) (adjustable)	✓	OBB-A1592	**130,–**
Non-stress Infinity Plan objectives (transmitted)	4×/0,10 W.D. 12,1 mm	✓	OBB-A1294	**115,–**
	10×/0,25 W.D. 4,64 mm	✓	OBB-A1289	**220,–**
	20×/0,40 (spring-loaded) W.D. 2,41 mm	✓	OBB-A1290	**290,–**
	40×/0,66 (spring-loaded) W.D. 0,65 mm	✓	OBB-A1292	**335,–**
Non-stress Infinity Plan objectives (incident) for long working distance	5×/0,13 W.D. 16,04 mm	○	OBB-A1593	**110,–**
	10×/0,25 W.D. 18,48 mm	○	OBB-A1594	**220,–**
	20×/0,40 W.D. 8,35 mm	○	OBB-A1291	**375,–**
	Semi apochromatic 50×/0,75 W.D. 4,25 mm	✓	OBB-A1642	**480,–**
	100×/0,85 (dry) (spring-loaded) W.D. 3,00 mm	○	OBB-A1595	**1260,–**
Trinocular tube	· Siedentopf 30° inclined · Interpupillary distance 48 – 76 mm · Light distribution 100:0	✓		
Analyser unit with scale	360° rotatable, lockable	✓		
Bertrand lens	Insertable, center-adjustable	✓	OBB-A1121	**330,–**
λ + ¼ λ Slip	λ Slip and ¼ λ Slip (combination)	✓	OBB-A1316	**155,–**
Quartz wedge	I – IV Class	✓	OBB-A1321	**260,–**
Revolving round stage	360° rotatable, center-adjustable, division 1°, Vernier division 6'	✓		
Polarising attached mechanical stage	Polarising attached mechanical stage	○	OBB-A1337	**295,–**
Swing-out condenser	N.A. 0,9/0,13 swing-out achromatic condenser (aperture diaphragm)	✓	OBB-A1107	**255,–**
Polarising unit with scale (transmitted)	360° rotatable, lockable	✓		
Koehler illumination	5 W LED spare bulb (transmitted)	✓	OBB-A1589	**90,–**
Illumination polarising unit	5 W LED spare bulb (incident)			
Colour filters for transmitted illumination	Blue	✓	OBB-A1170	**25,–**
	Green	○	OBB-A1188	**25,–**
	Yellow	○	OBB-A1165	**25,–**
	Grey	○	OBB-A1183	**25,–**
C-Mount	1×	○	OBB-A1514	**130,–**
	0,75×	○	OBB-A1590	**200,–**
	0,5× (focus adjustable)	○	OBB-A1515	**200,–**

✓ = Included with delivery ○ = Option

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

Model **KERN**	Description	**Price** excl. of VAT ex works **€**
OCS 901	7-piece cleaning sets for microscopes und other optical instruments	**35,–**

04

STEREOMICROSCOPES

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 arm curved stand, the KERN OSE OSE-42 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
- An 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

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 – 75 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 200×180×300 mm
- Net weight approx. 2 kg

STANDARD

Model	Standard configuration						Price
	Tube	Eyepiece	Field of view	Objective	Stand	Illumination	excl. of VAT ex works
KERN			mm				€
OSE 421	Binocular	WF 10×/ø 20 mm	ø 20	2×/4×	Arm curved	1 W LED (incident); 1 W LED (transmitted)	**310,–**

Eyepiece	Specifications – Objectives		
	Magnification	**2×**	**4×**
WF 5×	Total magnification	10×	20×
	Field of view mm	⌀ 10	⌀ 5
WF 10×	Total magnification	20×	40×
	Field of view mm	⌀ 10	⌀ 5
WF 15×	Total magnification	30×	60×
	Field of view mm	⌀ 7,5	⌀ 3,7
WF 20×	Total magnification	40×	80×
	Field of view mm	⌀ 6,5	⌀ 3,2
Working distance		57 mm	57 mm

Model outfit		**Model KERN**	**Order number**	**Price**/piece excl. of VAT ex works **€**
		OSE 421		
Eyepieces (30,5 mm)	WF 5×/⌀ 16,2 mm	○○	OZB-A4101	**40,–**
	WF 10×/⌀ 20 mm	✓✓	OZB-A4102	**35,–**
	WF 15×/⌀ 15 mm	○○	OZB-A4103	**35,–**
	WF 20×/⌀ 10 mm	○○	OZB-A4104	**40,–**
	WF 10×/⌀ 20 mm (reticule 0,1 mm)	○	OZB-A4151	**50,–**
Stand	Arm curved, with 1 W LED illumination (transmitted + incident)	✓		
Stage plate	Frosted glass/⌀ 59,5 mm	✓	OZB-A4815	**25,–**
	Black-white/⌀ 59,5 mm	✓	OZB-A4816	**25,–**
External illumination	Please find the information about external illumination units in the catalogue on page 83 and on our website www.kern-sohn.com			

✓ = Included with delivery ○ = Option

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 arm curved stand, the KERN OSF-4G has been specially developed for schools and workshops
- The LED reflected and transmitted illumination included as standard guarantees the very best, continuously dimmable illumination of 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 three predefined magnifications is available to make your working procedures quicker and more effective
- 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 – 75 mm
- Diopter adjustment: One-sided
- Overall dimensions W×D×H 230×180×275 mm
- Net weight approx. 2,5 kg

STANDARD

Model	Standard configuration						Price excl. of VAT ex works
	Tube	Eyepiece	Field of view	Objective	Stand	Illumination	
KERN			mm				€
OSF 438	Binocular	WF 10×/⌀ 20 mm	⌀ 20	1×/2×/3×	Arm curved	1 W LED (incident); 0,35 W LED (transmitted)	**410,–**
OSF 439	Binocular	WF 10×/⌀ 20 mm	⌀ 20	1×/2×/4×	Arm curved	1 W LED (incident); 0,35 W LED (transmitted)	**410,–**

Eyepiece	Specifications – Objectives				
	Magnification	**1×**	**2×**	**3×**	**4×**
WF 5×	Total magnification	5×	10×	15×	20×
	Field of view mm	⌀ 20	⌀ 10	⌀ 6,7	⌀ 5
WF 10×	Total magnification	10×	20×	30×	40×
	Field of view mm	⌀ 20	⌀ 10	⌀ 6,7	⌀ 5
WF 15×	Total magnification	15×	30×	45×	60×
	Field of view mm	⌀ 15	⌀ 7,5	⌀ 5	⌀ 3,7
WF 20×	Total magnification	20×	40×	60×	80×
	Field of view mm	⌀ 10	⌀ 6,5	⌀ 4,3	⌀ 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 5×/⌀ 16,2 mm	○○	○○	OZB-A4101	**40,–**
	WF 10×/⌀ 20 mm	✓✓	✓✓	OZB-A4102	**35,–**
	WF 15×/⌀ 15 mm	○○	○○	OZB-A4103	**35,–**
	WF 20×/⌀ 10 mm	○○	○○	OZB-A4104	**40,–**
	WF 10×/⌀ 20 mm (reticule 0,1 mm)	○	○	OZB-A4151	**50,–**
Stand	Arm curved, incl. handle, with LED illumination (0,35 W transmitted + 1 W incident)	✓	✓		
Stage plate	Frosted glass/⌀ 59,5 mm	✓	✓	OZB-A4815	**25,–**
	Black-white/⌀ 59,5 mm	✓	✓	OZB-A4816	**25,–**
External illumination	Please find the information about external illumination units in the catalogue on page 83 and on our website www.kern-sohn.com				

✓ = Included with delivery ○ = Option

LAB LINE

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

Features

- The products in the KERN OZL-44 series are stereo zoom microscopes, which will impress you with their easy handling, flexibility as well as their stability and economical price
- The LED reflected and transmitted illumination included as standard guarantees the very best illumination of your sample
- As well as excellent optical characteristics and their large working surface, these models offer the highest level of comfort in this class – ideal for training companies, workshops as well as assembly and repair workstations, e.g. in the electronics industry
- The zoom objective gives you continuous magnification of 7,5× – 36×
- 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-dimesnional impression, zoom with variable magnification (depth, thickness), e.g. insects, seeds, circuit boards, components

Technical data

- Optical system: Greenough optics
- Brightness adjustable (separate)
- Tube 45° inclined
- Magnification ratio: 4,8:1
- Interpupillary distance 55 – 75 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 330×235×380 mm
- Net weight approx. 5 kg

STANDARD

360° | BINO | TRINO | LED | IL | TL | ZOOM | 230 V | 1 DAY

Model	Standard configuration						Price
	Tube	Eyepiece	Field of view	Objective	Stand	Illumination	excl. of VAT ex works
KERN			mm	Zoom			€
OZL 445	Binocular	WF 10×/⌀ 20 mm	⌀ 26,7 – 5,6	0,75× – 3,6×	Pillar style	1 W LED (incident); 0,35 W LED (transmitted)	**550,–**

OZL 445		Specifications – Objectives				
Eyepiece	**Magnification**	**Standard**	**Auxiliary objectives**			
		1,0×	**0,5×**	**0,75×**	**1,5×**	**2,0×**
WF 5×	Total magnification	3,75× – 18×	1,875× – 9×	2,81× – 13,5×	5,625× – 27×	7,5× – 36×
	Field of view mm	⌀ 26 – 6	⌀ 60 – 13	⌀ 32 – 7	⌀ 16 – 4	⌀ 12,5 – 3
WF 10×	Total magnification	7,5× – 36×	3,75× – 18×	5,625× – 27×	11,25× – 54×	15× – 72×
	Field of view mm	⌀ 26,7 – 5,6	⌀ 53,3 – 11,1	⌀ 35,5 – 7,4	⌀ 17,8 – 3,7	⌀13,3 – 2,8
WF 15×	Total magnification	11,25× – 54×	5,625× – 27×	8,44× – 40,5×	16,875× – 81×	22,5× – 108×
	Field of view mm	⌀ 19 – 4,5	⌀ 43 – 9,5	⌀ 24 – 5,5	⌀ 12 – 3	⌀ 9,5 – 2
WF 20×	Total magnification	15× – 72×	7,5× – 36×	56,25× – 54×	22,5× – 108×	30× – 144×
	Field of view mm	⌀ 12,5 – 3	⌀ 28 – 6	⌀ 16 – 3,5	⌀ 8 – 2	⌀ 6 – 1,5
Working distance		86 mm	178 mm	96 mm	42,5 mm	25,5 mm
Maximum sample height		100 mm	10 mm	60 mm	120 mm	135 mm

Model outfit		**Model KERN**	**Order number**	**Price**/piece excl. of VAT ex works **€**
		OZL 445		
Eyepieces (30,5 mm)	WF 5×/⌀ 16,2 mm	○○	OZB-A4101	**40,–**
	WF 10×/⌀ 20 mm	✓✓	OZB-A4102	**35,–**
	WF 15×/⌀ 15 mm	○○	OZB-A4103	**35,–**
	WF 20×/⌀ 10 mm	○○	OZB-A4104	**40,–**
	WF 10×/⌀ 20 mm (reticule 0,1 mm)	○	OZB-A4151	**50,–**
Auxiliary objectives	0,5×	○	OZB-A4201	**85,–**
	0,75×	○	OZB-A4202	**85,–**
	1,5×	○	OZB-A4204	**85,–**
	2,0×	○	OZB-A4205	**90,–**
	Soldering protection lens	○	OZB-A4251	**25,–**
Stand	Pillar style, with LED illumination (0,35 W transmitted + 1 W incident)	✓		
Stage plate	Frosted glass/⌀ 95 mm	✓	OZB-A4805	**25,–**
	Black-white/⌀ 95 mm	✓	OZB-A4806	**25,–**
External illumination	Please find the information about external illumination units in the catalogue on page 83 and on our website www.kern-sohn.com			

✓ = Included with delivery ○ = Option

OZL 464
With standard stand

OZL 465
With ring illumination

OZL 467
With handle

LAB LINE

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

Features

- The products in the KERN OZL-46 series are stereo zoom microscopes, which will impress you with their quality, easy handling, flexibility as well as their stability and economical price
- The LED reflected and transmitted illumination included as standard guarantees the very best illumination of your sample
- The highlight of the OZL 465/OZL 466 is the strong, continuously dimmable, integrated LED ring illumination in the objective housing, which ensures uniform, shadow-free illumination. An LED transmitted light variant is also included
- As well as excellent optical characteristics and their large working surface, these models offer the highest level of comfort in this class – ideal for training companies, workshops as well as assembly and repair workstations, e.g. in the electronics industry
- The zoom objective offers you continuous magnification from 7×–45×
- The KERN OZL-46 series is available as a binocular or trinocular version
- The pillar stand offers you the highest level of flexibility and the freedom to remove the microscope head and to integrate it into other modular systems, for example into a universal stand
- With its integrated handle as well as its stable arm curved stand, the KERN OZL 467/ OZL 468 has been specially developed for schools and workshops
- A large selection of eyepieces, external illumination units as well as auxiliary objectives are available as accessories
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- A C-mount adapter is required to connect a camera to the trinocular version. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

Scope of application

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

Applications/Samples

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

Technical data

- Optical system: Greenough optics
- Brightness adjustable (separate)
- Tube 45° inclined
- Magnification ratio: 6,4:1
- Light distribution OZL 464/466/468: 100:0
- Interpupillary distance 55 – 75 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 300×240×420 mm
- Net weight approx. 4 kg

STANDARD

Model	Standard configuration						Price
	Tube	Eyepiece	Field of view	Objective	Stand	Illumination	excl. of VAT ex works
KERN			mm	Zoom			€
OZL 463	Binocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7× – 4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	**600,–**
OZL 464	Trinocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7× – 4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	**670,–**
OZL 465	Binocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7× – 4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	**640,–**
OZL 466	Trinocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7× – 4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	**690,–**
OZL 467	Binocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7× – 4,5×	Arm curved	3 W LED (incident); 3 W LED (transmitted)	**600,–**
OZL 468	Trinocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7× – 4,5×	Arm curved	3 W LED (incident); 3 W LED (transmitted)	**660,–**

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

Model outfit		Model KERN						Order number	**Price**/piece excl. of VAT ex works **€**
		OZL 463	**OZL 464**	**OZL 465**	**OZL 466**	**OZL 467**	**OZL 468**		
Eyepieces (30,0 mm)	HWF 10×/⌀ 20 mm	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	OZB-A4631	**45,–**
	HSWF 15×/⌀ 15 mm	○○	○○	○○	○○	○○	○○	OZB-A4632	**55,–**
	HWF 20×/⌀ 10 mm	○○	○○	○○	○○	○○	○○	OZB-A4633	**55,–**
	HSWF 25×/⌀ 9 mm	○○	○○	○○	○○	○○	○○	OZB-A4634	**60,–**
Auxiliary objectives	0,5×	○	○			○	○	OZB-A4641	**90,–**
	0,75×	○	○			○	○	OZB-A4644	**90,–**
	1,5×	○	○			○	○	OZB-A4642	**90,–**
	2,0×	○	○			○	○	OZB-A4643	**90,–**
	Soldering protection lens	○	○			○	○	OZB-A4645	**40,–**
C-Mount	1× (focus adjustable)		✓		✓		✓	OZB-A4809	**55,–**
	0,3× (focus adjustable)		○		○		○	OZB-A4810	**95,–**
	0,5× (focus adjustable)		○		○		○	OZB-A4811	**105,–**
Eyepiece camera adapter	1,0×; for fitting an eyepiece camera to the trinocular connection of the microscope		○		○		○	OZB-A4863	**40,–**
Stand	Pillar style, with 3 W-LED illumination (transmitted + incident)	✓	✓						
	Pillar style, with 3 W-LED illumination (transmitted)			✓	✓				
	Arm curved, incl. handle, with 3 W-LED illumination (transmitted + incident)					✓	✓		
Ring illumination	Integrated into the microscope head as incident illumination			✓	✓				
Stage plate	Frosted glass/⌀ 95 mm	✓	✓	✓	✓	✓	✓	OZB-A4670	**25,–**
	Black-white/⌀ 95 mm	✓	✓	✓	✓	✓	✓	OZB-A4806	**25,–**
External illumination	Please find the information about external illumination units in the catalogue on page 83 and on our website www.kern-sohn.com								

✓ = Included with delivery ○ = Option

NEW

OZL 473

LAB LINE

The flexible, affordable all-rounder with flexible incident light for training companies, inspection authorities and laboratories

Features

- The KERN OZL-47 stereo zoom microscope series will impress you with its excellent optical characteristics, easy operation and high level of ergonomic working comfort
- A highlight is the powerful and continuously dimmable integrated LED double gooseneck illumination (incident light), which ensures an individually and quickly adjustable illumination.
- As well as excellent optical characteristics and their large working surface, these models offer the highest level of comfort in this class – ideal for training companies, workshops as well as assembly and repair workstations, e.g. in the electronics industry
- The zoom objective offers you continuous magnification from 7×–45×
- The 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-dimesnional impression, zoom with variable magnification (depth, thickness), e.g. insects, seeds, circuit boards, components

Technical data

- Optical system: Greenough optics
- Brightness adjustable
- Tube 45° inclined
- Magnification ratio: 6,4:1
- Light distribution OZL 474: 100:0
- Interpupillary distance 55 – 75 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 300×240×420 mm
- Net weight approx. 4 kg

STANDARD

360° BINO TRINO LED IL ZOOM 230 V 1 DAY

Model	Standard configuration						Price
	Tube	Eyepiece	Field of view	Objective	Stand	Illumination	excl. of VAT ex works
KERN			mm	Zoom			€
OZL 473	Binocular	HWF 10×/ø 20 mm	ø 28,6 – 4,4	0,7× – 4,5×	Pillar style	3 W LED (incident)	**840,–**
OZL 474	Binocular	HWF 10×/ø 20 mm	ø 28,6 – 4,4	0,7× – 4,5×	Pillar style	3 W LED (incident)	**930,–**

Eyepiece	Specifications – Objectives					
	Magnification	**Standard**	**Auxiliary objectives**			
		1,0×	**0,5×**	**0,75×**	**1,5×**	**2×**
HSWF 10×	Total magnification	7× – 45×	3,5× – 22,5×	5,3× – 33,8×	10,5× – 67,5×	14× – 90×
	Field of view mm	⌀ 28,6 – 4,4	⌀ 57,1 – 8,9	⌀ 38,1 –5,9	⌀ 19 – 3	⌀ 14,3 – 2,2
HWF 15×	Total magnification	10,5× – 67,5×	5,3× – 33,8×	7,9× – 50,6×	15,5× – 101,3×	21× – 135×
	Field of view mm	⌀ 21,4 – 3,3	⌀ 42,9 – 6,7	⌀ 28,5 – 4,4	⌀ 14,3 – 2,2	⌀ 10,7 – 1,7
HSWF 20×	Total magnification	14× – 90×	7× – 45×	10,5× – 67,5×	21× – 135×	28× – 180×
	Field of view mm	⌀ 14,3 – 2,2	⌀ 28,6 – 4,4	⌀ 19,1 – 2,9	⌀ 9,5 – 1,5	⌀ 7,1 – 1,1
HWF 25×	Total magnification	17,5× – 122,5×	8,8× – 56,3×	13,1× – 91,9×	26,3× – 168,8×	35× – 225×
	Field of view mm	⌀ 12,9 – 2	⌀ 25,7 – 4	⌀ 17,2 – 2,7	⌀ 8,6 – 1,3	⌀ 6,4 – 1
Working distance		105 mm	177 mm	120 mm	47 mm	26 mm
Maximum sample height		140 mm	35 mm	80 mm	165 mm	185 mm

Model outfit		Model KERN		Order number	**Price**/piece excl. of VAT ex works **€**
		OZL 473	**OZL 474**		
Eyepieces (30,0 mm)	HWF 10×/⌀ 20 mm	✓✓	✓✓	OZB-A4631	**45,–**
	HSWF 15×/⌀ 15 mm	○○	○○	OZB-A4632	**55,–**
	HWF 20×/⌀ 10 mm	○○	○○	OZB-A4633	**55,–**
	HSWF 25×/⌀ 9 mm	○○	○○	OZB-A4634	**60,–**
Auxiliary objectives	0,5×	○	○	OZB-A4641	**90,–**
	0,75×	○	○	OZB-A4644	**90,–**
	1,5×	○	○	OZB-A4642	**90,–**
	2,0×	○	○	OZB-A4643	**90,–**
	Soldering protection lens	○	○	OZB-A4645	**40,–**
C-Mount	1× (focus adjustable)		○	OZB-A4809	**55,–**
	0,3× (focus adjustable)		○	OZB-A4810	**95,–**
	0,5× (focus adjustable)		○	OZB-A4811	**105,–**
Eyepiece camera adapter	1,0×; for fitting an eyepiece camera to the trinocular connection of the microscope	○	○	OZB-A4863	**40,–**
Stand	Pillar style, with 3 W-LED illumination (incident)	✓	✓		
Stage plate	Black-white/⌀ 95 mm	✓	✓	OZB-A4806	**25,–**
External illumination	Please find the information about external illumination units in the catalogue on page 83 and on our website www.kern-sohn.com				

✓ = Included with delivery ○ = Option

04

LAB LINE

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

Features

- The KERN OZL-45 stereo zoom microscope series will impress you with its excellent optical characteristics, easy operation and high level of ergonomic working comfort
- 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
- The zoom objective offers you continuous magnification from 7,5×–50×
- The KERN OZL-45 series is available as a binocular version
- The pillar stand offers you the highest level of flexibility and the freedom to remove the microscope head and to integrate it into other modular systems, for example into a universal stand
- A large selection of eyepieces, external illumination units as well as auxiliary objectives are available as accessories
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- Please find detailed information in the following model outfit list

Scope of application

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

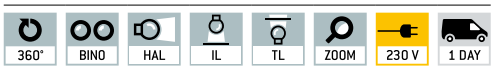
Applications/Samples

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

Technical data

- Optical system: Greenough optics
- Brightness adjustable
- Tube 45° inclined
- Magnification ratio: 6,7:1
- Interpupillary distance 55 – 75 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 330×270×460 mm
- Net weight approx. 5 kg

STANDARD



Model	Standard configuration						Price
	Tube	Eyepiece	Field of view	Objective	Stand	Illumination	excl. of VAT ex works
KERN			mm	Zoom			€
OZL 451	Binocular	HSWF 10×/⌀ 23 mm	⌀ 33 – 5	0,75× – 5,0×	Pillar style	10 W Halogen (incident) 10 W Halogen (transmitted)	**760,–**

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

Model outfit		Model KERN	Order number	**Price**/piece excl. of VAT ex works **€**
		OZL 451		
Eyepieces (30,0 mm)	HWF 5×/⌀ 23,2 mm	○○	OZB-A4112	**45,–**
	HSWF 10×/⌀ 23 mm	✓✓	OZB-A4118	**45,–**
	HWF 15×/⌀ 15 mm	○○	OZB-A4119	**45,–**
	HSWF 20×/⌀ 14,5 mm	○○	OZB-A4120	**70,–**
	HWF 25×/⌀ 11,7 mm	○○	OZB-A4121	**70,–**
Auxiliary objectives	0,5×	○	OZB-A4209	**135,–**
	0,75×	○	OZB-A4210	**135,–**
	2,0×	○	OZB-A4206	**130,–**
Stand	Pillar style, with 12 V/10 W Halogen Illumination (transmitted + incident)	✓		
Stage plate	Frosted glass/⌀ 95 mm	✓	OZB-A4805	**25,–**
	Black-white/⌀ 95 mm	✓	OZB-A4806	**25,–**
Illumination	10 W spare bulb (transmitted + incident)	✓	OZB-A4804	**25,–**
Mechanical stage (Pre-assembling on request)	Stage size W×D 180×155 mm, Travel 75×55 mm, for transmitted and incident illumination	○	OZB-A4605	**260,–**
External illumination	Please find the information about external illumination units in the catalogue on page 83 and on our website www.kern-sohn.com			

✓ = Included with delivery ○ = Option

Dimmable, integrated LED ring illumination

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 series 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, continuoulsy 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
- The zoom objective offers you continuous magnification from 7,5× – 50×
- As standard, the KERN OZL-45R series is provided as a binocular version with 10× 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

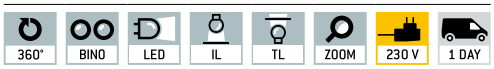
Applications/Samples

- Samples with focus on three-dimesnional impression, zoom with variable magnification (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 – 75 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 320×275×420 mm
- Net weight approx. 4,5 kg

STANDARD



Model	Standard configuration						Price
	Tube	Eyepiece	Field of view	Objective	Stand	Illumination	excl. of VAT ex works
KERN			mm	Zoom			€
OZL 456	Binocular	HSWF 10×/⌀ 23 mm	⌀ 33 – 5	0,75× – 5,0×	Arm curved	1 W LED (incident); 0,21 W LED (transmitted)	**870,–**

Eyepiece	Specifications – Objectives	
	Magnification	**Standard**
		1,0×
HWF 5×	Total magnification	3,75× – 25×
	Field of view mm	⌀ 31 – 4,6
HSWF 10×	Total magnification	7,5× – 50×
	Field of view mm	⌀ 33 – 5
HWF 15×	Total magnification	11,25× – 75×
	Field of view mm	⌀ 24 – 4,2
HSWF 20×	Total magnification	15× – 100×
	Field of view mm	⌀ 20 – 3,5
HWF 25×	Total magnification	18,75× – 125×
	Field of view mm	⌀ 15,8 – 2,4
Working distance		113 mm
Maximum sample height		45 mm

Model outfit		Model KERN	Order number	**Price**/piece excl. of VAT ex works **€**
		OZL 456		
Eyepieces (30,0 mm)	HWF 5×/⌀ 23,2 mm	○○	OZB-A4112	**45,–**
	HSWF 10×/⌀ 23 mm	✓✓	OZB-A4118	**45,–**
	HWF 15×/⌀ 15 mm	○○	OZB-A4119	**45,–**
	HSWF 20×/⌀ 14,5 mm	○○	OZB-A4120	**70,–**
	HWF 25×/⌀ 11,7 mm	○○	OZB-A4121	**70,–**
Stand	Arm curved, with LED illumination (0,21 W transmitted + 1 W incident)	✓		
Stage plate	Frosted glass/⌀ 95 mm	✓	OZB-A4805	**25,–**
	Black-white/⌀ 95 mm	✓	OZB-A4806	**25,–**
Mechanical stage (Pre-assembling on request)	Stage size W×D 180×155 mm, Travel 75×55 mm, for transmitted and incident illumination	○	OZB-A4605	**260,–**
External illumination	Please find the information about external illumination units in the catalogue on page 83 and on our website www.kern-sohn.com			

✓ = Included with delivery ○ = Option

LAB LINE

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

Features

- The KERN OZM 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 3 W LED reflected 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
- The zoom objective gives you continuous magnification from 7,5×–45×
- 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, electronics and semiconductor industry, assembly and repair

Applications/Samples

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

Technical data

- Optical system: Greenough optics
- Brightness adjustable (separate)
- Tube 45° inclined
- Magnification ratio: 6,4:1
- Light distribution OZM 543/544: 100:0
- Interpupillary distance 52 – 76 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 330×285×440 mm
- Net weight approx. 4,5 kg

STANDARD

OPTION

Model	Standard configuration						Price
	Tube	Eyepiece	Field of view	Objective	Stand	Illumination	excl. of VAT ex works
KERN			mm	Zoom			€
OZM 542	Binocular	HSWF 10×/⌀ 23 mm	⌀ 32,8 – 5,1	0,7× – 4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	**1390,–**
OZM 544	Trinocular	HSWF 10×/⌀ 23 mm	⌀ 32,8 – 5,1	0,7× – 4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	**1730,–**

Eyepiece	Specifications – Objectives					
	Magnification	**Standard**	**Auxiliary objectives**			
		1,0×	**0,5×**	**0,7×**	**1,5×**	**2×**
HSWF 10×	Total magnification	7× – 45×	3,5× – 22,5×	4,9× – 31,5×	10,5× – 67,5×	14× – 90×
	Field of view mm	⌀ 32,8 – 5,1	⌀ 65,7 – 10,2	⌀ 46,9 – 7,3	⌀ 21,9 – 3,4	⌀ 16,4 – 2,6
SWF 15×	Total magnification	10,5× – 67,5×	5,3× – 33,8×	7,4× – 47,2×	15,8× – 101,3×	21× – 135×
	Field of view mm	⌀ 24,3 – 3,8	⌀ 48,6 – 7,6	⌀ 34,7 – 5,4	⌀ 16,2 – 2,5	⌀ 12,1 – 1,9
SWF 20×	Total magnification	14× – 90×	7× – 45×	9,8× – 63×	21× – 135×	28× – 180×
	Field of view mm	⌀ 20 – 3,1	⌀ 40 – 6,2	⌀ 28,6 – 4,4	⌀ 13,3 – 2,1	⌀ 10 – 1,6
SWF 30×	Total magnification	21× – 135×	10,5× – 67,5×	14,7× – 94,5×	31,5× – 202,5×	42× – 270×
	Field of view mm	⌀ 12,9 – 2	⌀ 25,7 – 4	⌀ 18,4 – 2,9	⌀ 8,6 – 1,6	⌀ 6,4 – 1
Working distance		110 mm	195 mm	145 mm	50 mm	35 mm
Maximum sample height		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**		
Eyepieces (30,0 mm)	HSWF 10×/⌀ 23 mm	✓✓	✓✓	OZB-A5503	**70,–**
	SWF 15×/⌀ 17 mm	○○	○○	OZB-A5504	**75,–**
	SWF 20×/⌀ 14 mm	○○	○○	OZB-A5505	**85,–**
	SWF 30×/⌀ 9 mm	○○	○○	OZB-A5506	**120,–**
	HSWF 10×/⌀ 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	**125,–**
	SWF 15×/⌀ 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	**140,–**
	SWF 20×/⌀ 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	**140,–**
Achromatic auxiliary objectives	0,5×	○	○	OZB-A5612	**160,–**
	0,7×	○	○	OZB-A5613	**160,–**
	1,5×	○	○	OZB-A5615	**155,–**
	2,0×	○	○	OZB-A5616	**160,–**
	Soldering protection lens	○	○	OZB-A5614	**50,–**
C-Mount	0,3× (focus adjustable)		○	OZB-A5701	**140,–**
	0,5× (focus adjustable)		○	OZB-A5702	**140,–**
	1,0× (focus adjustable)		○	OZB-A5703	**105,–**
	1,0× (with micrometer) only in combination with OZB-A5703		○	OZB-A5704	**295,–**
	for SLR cameras (Nikon)		○	OZB-A5706	**295,–**
	for SLR cameras (Olympus)		○	OZB-A5707	**295,–**
	for SLR cameras (Canon)		○	OZB-A5708	**295,–**
Darkfield unit	Darkfield unit	○	○	OZB-A4601	**80,–**
Object clamp	Object clamp	○	○	OBB-A6205	**75,–**
Stand	Pillar style, without illumination				
	Pillar style, with 3 W LED illumination (transmitted + incident)	✓	✓		
	Please find more stands in the catalogue on page 80 and on our website www.kern-sohn.com				
Stage plate	Frosted glass/⌀ 94,5 mm	✓	✓	OZB-A5192	**25,–**
	Black-white/⌀ 94,5 mm	✓	✓	OZB-A5191	**25,–**
	Clear glass/⌀ 94,5 mm	○	○	OZB-A5190	**25,–**
Mechanical stage (Pre-assembling on request)	Stage size W×D 188×160 mm, Travel 76×65 mm, for transmitted and incident illumination	○	○	OZB-A5781	**240,–**
	Stage size W×D 180×175 mm, Travel 100×86 mm, for incident illumination only	○	○	OZB-A5782	**270,–**
External illumination	Please find the information about external illumination units in the catalogue on page 83 and on our website www.kern-sohn.com				

✓ = Included with delivery ○ = Option

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 3 W LED reflected and transmitted light variant for the very best illumination of your sample or as a variant without illumination
- With its large working distance, an extra large field of view and brilliant resolution, the KERN OZP provides sharp, high-contrast and colour-true images
- The extremely large, continuously adjustable magnification range from 6 to 55 times magnification means that you can work quickly and effectively
- 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, electronics and semiconductor industry, assembly and repair

Applications/Samples

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

Technical data

- Optical system: Greenough optics
- Brightness adjustable (separate)
- Tube: 35° inclined
- Magnification ratio: 9,2:1
- Light distribution OZP 557/558: 100:0
- Interpupillary distance 52 – 76 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 330×285×470 mm
- Net weight approx. 4,5 kg

STANDARD

OPTION

Model	Standard configuration						Price
	Tube	Eyepiece	Field of view	Objective	Stand	Illumination	excl. of VAT ex works
KERN			mm	Zoom			€
OZP 556	Binocular	HSWF 10×/⌀ 23 mm	⌀ 38,3 – 4,2	0,6× – 5,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	**1530,–**
OZP 558	Trinocular	HSWF 10×/⌀ 23 mm	⌀ 38,3 – 4,2	0,6× – 5,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	**1880,–**

Eyepiece	Specifications – Objectives					
	Magnification	**Standard**	**Auxiliary objectives**			
		1,0×	**0,5×**	**0,7×**	**1,5×**	**2×**
HSWF 10×	Total magnification	6× – 55×	3× – 27,5×	4,2× – 38,5×	9× – 82,5×	12× – 110×
	Field of view mm	⌀ 38,3 – 4,2	⌀ 76,7 – 8,4	⌀ 54,8 – 6	⌀ 25,6 – 2,8	⌀ 19,2 – 2,1
SWF 15×	Total magnification	9× – 82,5×	4,5× – 41,25×	6,3× – 57,75×	13,5× – 123,75×	18× – 165×
	Field of view mm	⌀ 28,3 – 3,1	⌀ 56,7 – 6,2	⌀ 40,5 – 4,4	⌀ 18,9 – 2,1	⌀ 14,2 – 1,5
SWF 20×	Total magnification	12× – 110×	6× – 55×	8,4× – 77×	18× – 165×	24× – 220×
	Field of view mm	⌀ 23,3 – 2,5	⌀ 46,7 – 5,1	⌀ 33,3 – 3,6	⌀ 15,6 – 1,7	⌀ 11,7 – 1,3
SWF 30×	Total magnification	18× – 165×	9× – 82,5×	12,6× – 115,5×	27× – 247,5×	36× – 330×
	Field of view mm	⌀ 15 – 1,6	⌀ 30 – 3,3	⌀ 21,4 – 2,3	⌀ 10 – 1,1	⌀ 7,5 – 0,8
Working distance		108 mm	195 mm	145 mm	50 mm	35 mm
Maximum sample height		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**		
Eyepieces (30,0 mm)	HSWF 10×/⌀ 23 mm	✓✓	✓✓	OZB-A5503	**70,–**
	SWF 15×/⌀ 17 mm	○○	○○	OZB-A5504	**75,–**
	SWF 20×/⌀ 14 mm	○○	○○	OZB-A5505	**85,–**
	SWF 30×/⌀ 9 mm	○○	○○	OZB-A5506	**120,–**
	HSWF 10×/⌀ 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	**125,–**
	SWF 15×/⌀ 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	**140,–**
	SWF 20×/⌀ 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	**140,–**
Achromatic auxiliary objectives	0,5×	○	○	OZB-A5612	**160,–**
	0,7×	○	○	OZB-A5613	**160,–**
	1,5×	○	○	OZB-A5615	**160,–**
	2,0×	○	○	OZB-A5616	**165,–**
	Soldering protection lens	○	○	OZB-A5614	**50,–**
C-Mount	0,3× (focus adjustable)		○	OZB-A5701	**140,–**
	0,5× (focus adjustable)		○	OZB-A5702	**140,–**
	1,0× (focus adjustable)		○	OZB-A5703	**165,–**
	1,0× (with micrometer) only in combination with OZB-A5703		○	OZB-A5704	**295,–**
	for SLR cameras (Nikon)		○	OZB-A5706	**295,–**
	for SLR cameras (Olympus)		○	OZB-A5707	**295,–**
	for SLR cameras (Canon)		○	OZB-A5708	**295,–**
Darkfield unit	Darkfield unit	○	○	OZB-A4601	**80,–**
Object clamp	Object clamp	○	○	OBB-A6205	**75,–**
Stand	Pillar style, without illumination				
	Pillar style, with 3 W LED illumination (transmitted + incident)	✓	✓		
	Please find more stands in the catalogue on page 80 and on our website www.kern-sohn.com				
Stage plate	Frosted glass/⌀ 94,5 mm		✓	OZB-A5192	**25,–**
	Black-white/⌀ 94,5 mm	✓	✓	OZB-A5191	**25,–**
	Clear glass/⌀ 94,5 mm		○	OZB-A5190	**25,–**
Mechanical stage (Pre-assembling on request)	Stage size W×D 188×160 mm, Travel 76×65 mm, for incident and transmitted illumination	○	○	OZB-A5781	**240,–**
	Stage size W×D 180×175 mm, Travel 100×86 mm, for incident illumination only	○	○	OZB-A5782	**270,–**
External illumination	Please find the information about external illumination units in the catalogue on page 83 and on our website www.kern-sohn.com				

✓ = Included with delivery ○ = Option

PROFESSIONAL LINE

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

Features

- The KERN OZS series is a special, high-quality stereo zoom microscope with parallel optics for demanding analyses
- The KERN OZS series is available as a strong, continuously adjustable 3 W LED reflected and transmitted light variant for the very best illumination of your sample or as a variant without illumination
- 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
- The continuously adjustable magnification range from 8 to 50 times magnification means that you can work quickly and effectively
- As standard, the models of the KERN OZS series are trinocular and are 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, electronics and semiconductor industry, assembly and repair

Applications/Samples

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

Technical data

- Optical system: Parallel optics
- Brightness adjustable (separate)
- Tube 45° inclined
- Magnification ratio: 10:1
- Light distribution 100:0
- Interpupillary distance 52 – 76 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 305×300×540 mm
- Net weight approx. 5,5 kg

STANDARD

OPTION

Model	Standard configuration						Price
	Tube	Eyepiece	Field of view	Objective	Stand	Illumination	excl. of VAT ex works
KERN			mm	Zoom			€
OZS 574	Trinocular	HWF 10×/⌀ 22 mm	⌀ 27,5 – 2,75	0,8× – 8×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	**3640,–**

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

Model outfit		**Model KERN**	**Order number**	**Price**/piece excl. of VAT ex works **€**
		OZS 574		
Eyepieces (30,0 mm)	HWF 10×/⌀ 22 mm	✓✓	OZB-A5502	**75,–**
	SWF 15×/⌀ 17 mm	○○	OZB-A5504	**75,–**
	SWF 20×/⌀ 14 mm	○○	OZB-A5505	**85,–**
	SWF 30×/⌀ 9 mm	○○	OZB-A5506	**120,–**
	HWF 10×/⌀ 22 mm (reticule 0,1 mm)	○	OZB-A5511	**130,–**
	SWF 15×/⌀ 17 mm (reticule 0,05 mm)	○	OZB-A5513	**140,–**
	SWF 20×/⌀ 14 mm (reticule 0,05 mm)	○	OZB-A5514	**140,–**
Plan achromatic objective	1,0×	✓	OZB-A5603	**640,–**
Achromatic objectives	0,5×	○	OZB-A5601	**230,–**
	0,7×	○	OZB-A5602	**230,–**
	1,5× Only in combination with OZB-A5603	○	OZB-A5604	**300,–**
Trinocular beamsplitter	Division 100:0	✓	OZB-A5401	**660,–**
	Division 50:50	○	OZB-A5402	**660,–**
C-Mount	0,3× (focus adjustable)	○	OZB-A5701	**140,–**
	0,5× (focus adjustable)	○	OZB-A5702	**140,–**
	1,0× (focus adjustable)	○	OZB-A5703	**105,–**
	1,0× (with micrometer) only in combination with OZB-A5703	○	OZB-A5704	**295,–**
	for SLR cameras (Nikon)	○	OZB-A5706	**295,–**
	for SLR cameras (Olympus)	○	OZB-A5707	**295,–**
	for SLR cameras (Canon)	○	OZB-A5708	**295,–**
Darkfield unit	Darkfield unit	○	OZB-A4601	**80,–**
Object clamp	Object clamp	○	OBB-A6205	**75,–**
Stand	Pillar style, with 3 W LED illumination (transmitted + incident)	✓		
Stage plate	Frosted glass/⌀ 94,5 mm	✓	OZB-A5192	**25,–**
	Black-white/⌀ 94,5 mm	✓	OZB-A5191	**25,–**
	Clear glass/⌀ 94,5 mm	○	OZB-A5190	**25,–**
Mechanical stage (Pre-assembling on request)	Stage size W×D 188×160 mm, Travel 76×65 mm, for incident and transmitted illumination	○	OZB-A5781	**240,–**
	Stage size W×D 180×175 mm, Travel 100×86 mm, for incident illumination only	○	OZB-A5782	**270,–**
External illumination	Please find the information about external illumination units in the catalogue on page 83 and on our website www.kern-sohn.com			

✓ = Included with delivery ○ = Option

Plug in for power supply

PROFESSIONAL LINE

The coaxial with parallel optics for excellent contrast and depth of field

Features

- The KERN OZC has been developed specially to meet requirements for high contrast and depth of field. These devices are absolutely essential for the LCD/LED electronics industry
- The coaxial 2 W LED reflected illumination which is integrated into the objective guarantees selective depth of focus, so that even low-lying sections can be recorded (e.g. the bottom of a drilled hole)
- The parallel optics 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
- The large, adjustable magnification range from 18 to 65 times gives you continuous zoom when you are working
- As standard, the KERN OZC is trinocular and is therefore equipped for connecting a camera for documentation purposes and for quality reports
- The arm curved stand ensures precise adjustment and focusing of your sample. The stand base is particularly heavy and therefore offers a high level of stability and an extremely secure footing
- A large selection of eyepieces and a mechanical stage extension 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. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

Scope of application

- LCD/LED electronics, semiconductor technology

Applications/Samples

- Samples with focus on three-dimesnional impression (depth, thickness), zoom for variable magnification, e.g. LCD/LED electronics, circuit boards, ICs

Technical data

- Optical system: Parallel optics
- Brightness adjustable
- Tube 45° inclined
- Magnification ratio: 3,6:1
- Light distribution 100:0
- Interpupillary distance 52 – 76 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H
  305×180×405 mm
- Net weight approx. 6,6 kg.

STANDARD

OPTION

Model	Standard configuration						Price
	Tube	Eyepiece	Field of view	Objective	Stand	Illumination	excl. of VAT ex works
KERN			mm	Zoom			€
OZC 583	Trinocular	HSWF 10×/⌀ 23 mm	⌀ 12,78 – 3,5	1,8× – 6,5×	Arm curved	2 W LED (coaxial incident)	**900,–**

! ONLY WHILE STOCKS LAST

Eyepiece	Specifications – Objectives	
	Magnification	**Standard**
		1,0×
HWF 10×	Total magnification	18× – 65×
	Field of view mm	⌀ 12,78 – 3,5
SWF 15×	Total magnification	27× – 97,5×
	Field of view mm	⌀ 9,5 – 2,6
SWF 20×	Total magnification	36× – 130×
	Field of view mm	⌀ 7,78– 2,2
SWF 30×	Total magnification	54× – 195×
	Field of view mm	⌀ 5 – 1,4
Working distance		92 mm
Maximum sample height		35 mm

Model outfit		**Model KERN**	**Order number**	**Price**/piece excl. of VAT ex works **€**
		OZC 583		
Eyepieces (30,0 mm)	HSWF 10×/⌀ 23 mm	✓✓	OZB-A5503	**70,–**
	SWF 15×/⌀ 17 mm	○○	OZB-A5504	**75,–**
	SWF 20×/⌀ 14 mm	○○	OZB-A5505	**85,–**
	SWF 30×/⌀ 9 mm	○○	OZB-A5506	**120,–**
	HSWF 10× /⌀ 23 mm (reticule 0,1 mm)	○	OZB-A5512	**125,–**
	SWF 15×/⌀ 17 mm (reticule 0,05 mm)	○	OZB-A5513	**140,–**
	SWF 20×/⌀ 14 mm (reticule 0,05 mm)	○	OZB-A5514	**140,–**
C-Mount	0,3× (focus adjustable)	○	OZB-A5701	**140,–**
	0,5× (focus adjustable)	○	OZB-A5702	**140,–**
	1,0× (focus adjustable)	○	OZB-A5703	**105,–**
	1,0× (with micrometer) only in combination with OZB-A5703	○	OZB-A5704	**295,–**
	for SLR cameras (Nikon)	○	OZB-A5706	**295,–**
	for SLR cameras (Olympus)	○	OZB-A5707	**295,–**
	for SLR cameras (Canon)	○	OZB-A5708	**295,–**
Stand	Arm curved, without illumination	✓		
External illumination	Please find the information about external illumination units in the catalogue on page 83 and on our website www.kern-sohn.com			

✓ = Included with delivery ○ = Option

Side view

LAB LINE

The specialist for jewellers and the gem industry

Features

- The KERN OZG series 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
- You have a choice of a strong halogen transmitted illumination unit as well as halogen reflected and transmitted illumination variants, each with an additional frontal illumination
- As well as very good optical characteristics, this model forms an ideal package with its 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
- 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-dimesnional 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
- Interpupillary distance 55 – 75 mm
- Diopter adjustment: Both-sided
- Magnification ratio: 5,1:1
- Overall dimensions W×D×H 310×170×350 mm
- Net weight approx. 5 kg

STANDARD

360° BINO HAL IL TL ZOOM 230 V 1 DAY

Model	Standard configuration						Price
	Tube	Eyepiece	Field of view	Objective	Stand	Illumination	excl. of VAT ex works
KERN			mm	Zoom			€
OZG 493	Binocular	WF 10×/⌀ 20 mm	⌀ 26,7 – 5,6	0,7× – 3,6×	Pillar style	10 W Halogen (incident) 10 W Halogen (transmitted) 10 W Fluorescence (front illumination)	**610,–**

OZG 493	Specifications – Objectives	
Eyepiece	**Magnification**	**Standard**
		1,0×
WF 5×	Total magnification	3,75× – 18×
	Field of view mm	⌀ 26 – 6
WF 10×	Total magnification	7,5× – 36×
	Field of view mm	⌀ 26,7 – 5,6
WF 15×	Total magnification	11,25× – 54×
	Field of view mm	⌀ 19 – 4,5
WF 20×	Total magnification	15× – 72×
	Field of view mm	⌀ 12,5 – 3
Working distance		86 mm

Model outfit		**Model KERN**	**Order number**	**Price**/piece excl. of VAT ex works **€**
		OZG 493		
Eyepieces (30,5 mm)	WF 5×/⌀ 16,2 mm	○○	OZB-A4101	**40,–**
	WF 10×/⌀ 20 mm	✓✓	OZB-A4102	**35,–**
	WF 15×/⌀ 15 mm	○○	OZB-A4103	**35,–**
	WF 20×/⌀ 10 mm	○○	OZB-A4104	**40,–**
Darkfield unit	Darkfield unit	✓	OZB-A4601	**80,–**
Object clamp	Object clamp (steel wire)	✓	OZB-A4604	**35,–**
Stand	Pillar style, with 12 V/10 W Halogen (transmitted + incident) and 10 W Fluorescent illumination (front)	✓		
Stage plate	Frosted glass/⌀ 95 mm	✓	OZB-A4805	**25,–**
	Black-white/⌀ 95 mm	✓	OZB-A4806	**25,–**
Illumination	10 W spare bulb (transmitted + incident)	✓	OZB-A4804	**25,–**

✓ = Included with delivery ○ = Option

05

VIDEO MICROSCOPES

NEW

Zoom wheel with click-stop

The beginner‘s video microscope with the simplest handling for applications of all kinds

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 0,7×–4,5×
- The powerful 5.0 megapixel 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 stick as well as the USB mouse which are integral components of the delivery, mean you can process and store your results digitally.
- An additional HDMI interface makes it possible to connect an external monitor and thus enable live observation on two devices operated in parallel
- A special feature of this microscope series are the zoom wheels with integrated click-stop. This offers precise selection of the magnification level and supports the user in calibrating the documentation functions in the software
- A protective dust cover, as well as multi-lingual user instructions are included in the scope of the delivery

Technical data

- Optical system: Axial
- Brightness adjustable
- Screen: 12“, 1920×1080 HD, -5°– 90° inclination
- Magnification ratio: 6,4:1
- Stand: arm curved
- Illumination: 3 W LED ring (incident)
- Data storage: External using USB (Max 128 GB)
- Working distance: 100 mm
- Maximum sample height: 110 mm
- Overall dimensions W×D×H 260×320×450 mm
- Net weight approx. 4,4 kg

Accessories

- Auxiliary objectives on request

STANDARD

Model	Standard configuration						Price
KERN	Resolution camera	Interface	Sensor	Field of view mm	Objective Zoom	Software functions	excl. of VAT ex works €
OIV 345	5 MP	HDMI (60 FPS)	CMOS 1/2,8"	ø 29,82–4,18	0,7×–4,5×	Images and videos, documentation	**2520,–**

OIV 254 Snapshot button

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 0.7×–5×.
- The powerful 2.0 megapixel 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 stick as well as the USB 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 capture at the push of a button, without having to detour via the software. Whereas the OIV 255 guarantees software-controlled taking of images and videos with additional, documentation functions
- A protective dust cover, as well as multi-lingual user instructions are included in the scope of the delivery

Technical data

- Optical system: Axial
- Brightness adjustable
- Screen: 12", 1920×1080 HD, -5°–15° inclination
- Magnification ratio: 7,1:1
- Stand: arm curved
- Illumination: 2 W LED ring (incident)
- 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

Accessories

- Auxiliary objective 0,5×, KERN OZB-A2101, **€ 310,–**

STANDARD

LED | IL | ZOOM | USB 2.0 | HDMI | 230 V | 1 DAY

Model	Standard configuration						Price
KERN	Resolution camera	Interface	Sensor	Field of view mm	Objective Zoom	Software functions	excl. of VAT ex works €
OIV 254	2 MP	HDMI (60 FPS)	CMOS 1/2"	ø 29,82–4,18	0,7×–5×	Image capture	**3100,–**
OIV 255	2 MP	HDMI (60 FPS)	CMOS 1/2“	ø 29,82–4,18	0,7×–5×	Images and videos, documentation	**3580,–**

Side view with screen connected
(not included with delivery)

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 suitable in the industrial sector
- The excellent optical unit enables continuous sharp image tracking across the entire zoom range from 0,7×–4,5×
- Through the integrated auto-focus, the focus level can also be optimised within a defined image section.
- The powerful 2.0 megapixel 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, documentation functions
- Multi-lingual user instructions are included in the scope of the delivery

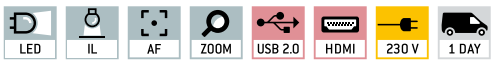
Technical data

- Optical system: Axial
- Brightness adjustable
- Magnification ratio: 6,5:1
- Stand: arm curved
- Illumination: 3 W LED ring (incident)
- Data storage: External using USB (Max 128 GB)
- Working distance: 91 mm
- Maximum sample height: 85 mm
- Overall dimensions W×D×H 372×285×482 mm
- Net weight approx. 7 kg

Accessories

- Auxiliary objective 0,5×, KERN OZB-A6101, **€ 310,–**
- Auxiliary objective 2,0×, KERN OZB-A6102, **€ 310,–**

STANDARD



Model	Standard configuration						Price
KERN	Resolution camera	Interface	Sensor	Field of view mm	Objective Zoom	Software functions	excl. of VAT ex works €
OIV 656	2 MP	HDMI (30 FPS)	CMOS 1/2,8"	⌀ 12,64–2,65	0,7×–4,5×	Images and videos, documentation	**5380,–**

06

DIGITAL MICROSCOPE SETS

OBE-1 with camera

OBE-1 with tablet

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

Features

- Laboratory microscopes from the OBE range are now also available to you as a comprehensive digital solution for your live investigations. Optionally available with an 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
- For detailed information on the individual components, see the relevant product description of the individual item
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of the delivery

Technical data

- Finite optical system
- Quadplex nosepiece
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment: One-sided
- Eyepiece: HWF 10×/ø 18 mm
- Objective quality: Achromatic
- Objectives OBE 124: 4×/10×/40×
- Objectives OBE 134: 4×/10×/40×/100×
- Illumination: 3 W LED (transmitted)
- Overall dimensions W×D×H 320×180×365 mm
- Net weight approx. 5,5 kg

Model	Standard configuration (camera)					Price excl. of VAT ex works
KERN	Included camera	Resolution camera	Interface	Sensor	Details microscope, camera	€
OBE 124C825	ODC 825	5 MP	USB 2.0 (6,8 – 55 FPS)	CMOS 1/2,5"	www.kern-sohn.com, KERN Optics catalogue Page 14, 86	**1250,–**
OBE 134C825						**1310,–**
OBE 124C832	ODC 832	5 MP	USB 3.0 (14,2 – 101,2 FPS)	CMOS 1/2,5"		**1410,–**
OBE 134C832						**1470,–**
OBE 124T241	ODC 241	5 MP	WiFi, USB 2.0, HDMI, SD (15 – 30 FPS)	CMOS 1/2,5"	www.kern-sohn.com, KERN Optics catalogue Page 14, 90	**1950,–**
OBE 134T241						**2020,–**

OBL-1 with camera | OBL-1 with tablet | OBN-1 with camera | OBN-1 with tablet

06

The digital laboratory assistant with infinity optical unit and fixed, Köhler illumination

Features

- Laboratory microscopes from the OBL and OBN range are now also available to you as a comprehensive digital solution for your live investigations. Optionally available with an 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
- For detailed information on the individual components, see the relevant product description of the individual item
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of the delivery

Technical data

- Infinity optical system
- Siedentopf 30° inclined/360° rotatable
- Eyepiece: HWF 10×/Ø 20 mm

OBL-1
- Quadplex nosepiece
- Diopter adjustment: One-sided
- Overall dimensions W×D×H 395×200×380 mm
- Net weight approx. 7,7 kg
- Objective quality: Infinity E-Plan
- Objectives: 4×/10×/40×/100×
- Illumination OBL 135: 20 W Halogen (transmitted)
- Illumination OBL 137: 3 W LED (transmitted)

OBN-1
- Quintuple nosepiece
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 390×200×400 mm
- Net weight approx. 10 kg
- Objective quality: Infinity Plan
- Objectives: 4×/10×/20×/40×/100×
- Illumination OBN 132: 20 W Halogen (transmitted)
- Illumination OBN 135: 3 W LED (transmitted)

Model	Standard configuration (camera)					Price excl. of VAT ex works €
	Included camera	Resolution camera	Interface	Sensor	Details microscope, camera	
OBL 137C825	ODC 825	5 MP	USB 2.0 (6,8 – 55 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 16, 86	**1770,–**
OBL 137C832	ODC 832	5 MP	USB 3.0 (14,2 – 101,2 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 16, 86	**1930,–**
OBL 137T241	ODC 241	5 MP	WiFi, USB 2.0, HDMI, SD (15 – 30 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 16, 90	**2480,–**
OBN 132C825	ODC 825	5 MP	USB 2.0 (6,8 – 55 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 20, 86	**2230,–**
OBN 135C825						**2160,–**
OBN 132C832	ODC 832	5 MP	USB 3.0 (14,2 – 101,2 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 20, 86	**2390,–**
OBN 135C832						**2320,–**
OBN 132T241	ODC 241	5 MP	WiFi, USB 2.0, HDMI, SD (15 – 30 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 20, 90	**2940,–**
OBN 135T241						**2870,–**

OZL 466 with camera

OZL 466 with tablet

OZL 464 with camera

OZL 468 with camera

OZL 464 with tablet

OZL 468 with tablet

06

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 now also available to you as a comprehensive digital solution for your live investigations. Optionally available with an 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
- For detailed information on the individual components, see the relevant product description of the individual item
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of the delivery

Technical data

- Optical system: Greenough optics
- Brightness adjustable (separate)
- Tube 45° inclined
- Magnification ratio: 6,4:1
- Light distribution 100:0
- Interpupillary distance 55 – 75 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 300×240×420 mm
- Net weight approx. 5 kg
- Eyepiece: HWF 10×/⌀ 20 mm
- Field of view: ⌀ 28,6 – 4,4 mm
- Objective: 0,7× – 4,5×
- Stand OZL 464/466: Pillar style
- Stand OZL 468: Arm curved
- Illumination: 3 W LED (incident + transmitted)

Model	Standard configuration (camera)					Price excl. of VAT ex works €
KERN	Included camera	Resolution camera	Interface	Sensor	Details microscope, camera	
OZL 464C825	ODC 825	5 MP	USB 2.0 (6,8 – 55 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 44, 86	**1160,–**
OZL 466C825						**1180,–**
OZL 468C825						**1160,–**
OZL 464C832	ODC 832	5 MP	USB 3.0 (14,2 – 101,2 FPS)	CMOS 1/2,5"		**1320,–**
OZL 466C832						**1340,–**
OZL 468C832						**1320,–**
OZL 464T241	ODC 241	5 MP	WiFi, USB 2.0, HDMI, SD (15 – 30 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 44, 90	**1870,–**
OZL 466T241						**1890,–**
OZL 468T241						**1870,–**

OZM-5 with camera

OZP-5 with camera

OZP-5 with tablet

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

Features

- Stereomicroscopes from the OZM and OZP range are now also available to you as a comprehensive digital solution for your live investigations. Optionally available with an 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
- For detailed information on the individual components, see the relevant product description of the individual item
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of the delivery

Technical data

- Optical system: Greenough optics
- Brightness adjustable (separate)
- Light distribution: 100:0
- Diopter adjustment: Both-sided
- Net weight approx. 5,5 kg
- Eyepiece: HSWF 10×/ø 23 mm
- Stand: Pillar style
- Illumination: 3 W LED (incident + transmitted)

OZM-5

- Tube 45° inclined
- Magnification ratio: 6,4:1
- Interpupillary distance 52 – 76 mm
- Overall dimensions W×D×H 330×285×440 mm
- Field of view: ø 32,8 – 5,1 mm
- Objective: 0,7× – 4,5×

OZP-5

- Tube: 35° inclined
- Magnification ratio: 9,2:1
- Interpupillary distance 52 – 76 mm
- Overall dimensions W×D×H 330×285×470 mm
- Field of view: ø 38,3 – 4,2 mm
- Objective: 0,6× – 5,5×

Model	Standard configuration (camera)					Price excl. of VAT ex works €
	Included camera	Resolution camera	Interface	Sensor	Details microscope, camera	
OZM 544C825	ODC 825	5 MP	USB 2.0 (6,8 – 55 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 52, 86	**2250,–**
OZM 544C832	ODC 832	5 MP	USB 3.0 (14,2 – 101,2 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 52, 86	**2410,–**
OZP 558C825	ODC 825	5 MP	USB 2.0 (6,8 – 55 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 54, 86	**2400,–**
OZP 558C832	ODC 832	5 MP	USB 3.0 (14,2 – 101,2 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 54, 86	**2560,–**
OZP 558T241	ODC 241	5 MP	WiFi, USB 2.0, HDMI, SD (15 – 30 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 54, 90	**3110,–**

07

STEREO MICROSCOPE SETS

OZM 912/913

OZM 932/933

OZM 952/953

OZM 982/983

07

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 (p. 74), a universal stand (p. 79/80), a holder (p. 81), a ring illumination (p. 83) and a dust cover (p. 81) 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 in expensive 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)	0,7× – 4,5×	Telescopic arm with plate (OZB-A5201)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	**1750,–**
OZM 913	Trinocular (OZM 547)	0,7× – 4,5×	Telescopic arm with plate (OZB-A5201)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	**2090,–**
OZM 932	Binocular (OZM 546)	0,7× – 4,5×	ball-beared double telescopic arm with plate (OZB-A5203)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	**2080,–**
OZM 933	Trinocular (OZM 547)	0,7× – 4,5×	ball-beared double telescopic arm with plate (OZB-A5203)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	**2420,–**
OZM 952	Binocular (OZM 546)	0,7× – 4,5×	Jointed arm with clamp (OZB-A5212)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	**1750,–**
OZM 953	Trinocular (OZM 547)	0,7× – 4,5×	Jointed arm with clamp (OZB-A5212)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	**2090,–**
OZM 982	Binocular (OZM 546)	0,7× – 4,5×	Spring loaded arm with clamp (OZB-A6302)	With coarse focusing knob Adjustable torque of the hand wheels	4,5 W LED ring light (OBB-A6102)	**1870,–**
OZM 983	Trinocular (OZM 547)	0,7× – 4,5×	Spring loaded arm with clamp (OZB-A6302)	With coarse focusing knob Adjustable torque of 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

- Sets which have already been defined (except OSE 409), consisting of a stereo microscope head (p. 74), a universal stand (p. 79/80), a holder (p. 83), a ring illumination (p. 83) and a dust cover (p. 81) 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 in expensive and highly-flexible solution for your microscope workplace

Model	Microscope head		Stand	Holder	Illumination	**Price** excl. of VAT ex works **€**
KERN	Tube	Objective Zoom				
OSE 409	Binocular (WF 10×/ ø 20 mm)	1x (WD: 230 mm)	Swivel arm with block pedestal	With coarse focusing knob Adjustable torque of the hand wheels	3W LED goose neck (integrated)	**440,–**
OZL 961	Binocular (OZL 461)	0,7× – 4,5×	Telescopic arm with plate	With coarse focusing knob Adjustable torque of the hand wheels	4,5 W LED ring light (OBB-A6102)	**1010,–**
OZL 963	Trinocular (OZL 462)	0,7× – 4,5×	Telescopic arm with plate	With coarse focusing knob Adjustable torque of the hand wheels	4,5 W LED ring light (OBB-A6102)	**1090,–**
OZM 902	Binocular (OZM 546)	0,7× – 4,5×	Telescopic arm with plate (OZB-A1201)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	**1560,–**
OZM 903	Trinocular (OZM 547)	0,7× – 4,5×	Telescopic arm with plate (OZB-A1201)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	**1900,–**
OZM 922	Binocular (OZM 546)	0,7× – 4,5×	ball-beared double telescopic arm with plate (OZB-A1203)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	**1610,–**
OZM 923	Trinocular (OZM 547)	0,7× – 4,5×	ball-beared double telescopic arm with plate (OZB-A1203)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	**1950,–**

08

STEREO MICROSCOPE MODULAR SYSTEM

! You can find sample diagrams of showing the configuration of a modular system like this on pages 77, 78 and 79 below.

Head of the microscope series OSF-5
(OSF 512, 516)

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, 557)

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
  - OSF-5: p. 76
  - OZL-46: p. 76
  - OZM-5: p. 77
  - OZP-5: p. 78
  - OZO-5: p. 79

Model **KERN**	Tube	Tube angle	Eyepieces (included)	Interpupilary distance	Objective Zoom	Magnification ratio	Diopter adjustment	**Price** excl. of VAT ex works **€**
OSF 512*	Binocular	45°	HSWF 10×/ø 23 mm	52–76 mm	1×/2×	–	One-sided (-6/6)	**190,–**
OSF 516*	Binocular	45°	HSWF 10×/ø 23 mm	52–76 mm	2×/4×	–	One-sided (-6/6)	**190,–**
OZL 461	Binocular	45°	HWF 10×/ø 20 mm	55–75 mm	0,7× – 4,5×	6,4:1	Both-sided (-5/5)	**470,–**
OZL 462	Trinocular	45°	HWF 10×/ø 20 mm	52–76 mm	0,7× – 4,5×	6,4:1	Both-sided (-5/5)	**540,–**
OZM 546	Binocular	45°	HSWF 10×/ø 23 mm	52–76 mm	0,7× – 4,5×	6,4:1	Both-sided (-6/6)	**930,–**
OZM 547	Trinocular	45°	HSWF 10×/ø 23 mm	52–76 mm	0,7× – 4,5×	6,4:1	Both-sided (-6/6)	**1280,–**
OZP 551	Binocular	35°	HSWF 10×/ø 23 mm	52–76 mm	0,6× – 5,5×	9,2:1	Both-sided (-6/6)	**1090,–**
OZP 552	Trinocular	35°	HSWF 10×/ø 23 mm	52–76 mm	0,6× – 5,5×	9,2:1	Both-sided (-6/6)	**1450,–**
OZO 556*	Binocular	35°	HSWF 10×/ø 23 mm	52–76 mm	0,8× – 7×	8,8:1	Both-sided (-6/6)	**1610,–**

! *ONLY WHILE STOCKS LAST

Fittings and accessories for the heads for the OSF-5 microscope range (OSF 512, OSF 516)

Eyepiece	Specifications – Objectives				
	Magnification	**1×**	**2×**	**3×**	**4×**
HSWF 10×	Total magnification	10×	20×	30×	40×
	Field of view mm	⌀ 23	⌀ 11,5	⌀ 7,67	⌀ 5,75
SWF 15×	Total magnification	15×	30×	45×	60×
	Field of view mm	⌀ 17	⌀ 8,5	⌀ 5,67	⌀ 4,25
SWF 20×	Total magnification	20×	40×	60×	80×
	Field of view mm	⌀ 14	⌀ 7	⌀ 4,67	⌀ 3,5
SWF 30×	Total magnification	30×	60×	90×	120×
	Field of view mm	⌀ 9	⌀ 4,5	⌀ 3	⌀ 2,25
Working distance		105 mm	105 mm	105 mm	105 mm

Model outfit		**Model KERN**		**Order number**	**Price**/piece excl. of VAT ex works **€**
		OSF 512	**OSF 516**		
Eyepieces (30,0 mm)	HSWF 10×/⌀ 23 mm	✓✓	✓✓	OZB-A5503	**70,–**
	SWF 15×/⌀ 17 mm	○○	○○	OZB-A5504	**75,–**
	SWF 20×/⌀ 14 mm	○○	○○	OZB-A5505	**85,–**
	SWF 30×/⌀ 9 mm	○○	○○	OZB-A5506	**120,–**
	HSWF 10×/⌀ 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	**125,–**
	SWF 15×/⌀ 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	**140,–**
	SWF 20×/⌀ 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	**140,–**

✓ = Included with delivery ○ = Option

08

Fittings and accessories for the heads for the OZL-46 microscope range (OZL 461, OZL 462)

Eyepiece	Specifications – Objectives					
	Magnification	**Standard**	**Auxiliary objectives**			
		1,0×	**0,5×**	**0,75×**	**1,5×**	**2,0×**
HSWF 10×	Total magnification	7× – 45×	3,5× – 22,5×	5,3× – 33,8×	10,5× – 67,5×	14× – 90×
	Field of view mm	⌀ 28,6 – 4,4	⌀ 57,1 – 8,9	⌀ 38,1 – 5,9	⌀ 19 – 3	⌀ 14,3 – 2,2
HWF 15×	Total magnification	10,5× – 67,5×	5,3× – 33,8×	7,9× – 50,6×	15,5× – 101,3×	21× – 135×
	Field of view mm	⌀ 21,4 – 3,3	⌀ 42,9 – 6,7	⌀ 28,5 – 4,4	⌀ 14,3 – 2,2	⌀ 10,7 – 1,7
HSWF 20×	Total magnification	14× – 90×	7× – 45×	10,5× – 67,5×	21× – 135×	28× – 180×
	Field of view mm	⌀ 14,3 – 2,2	⌀ 28,6 – 4,4	⌀ 19,1 – 2,9	⌀ 9,5 – 1,5	⌀ 7,1 – 1,1
HWF 25×	Total magnification	17,5× – 122,5×	8,8× – 56,3×	13,1× – 91,9×	26,3× – 168,8×	35× – 225×
	Field of view mm	⌀ 12,9 – 2,0	⌀ 25,7 – 4,0	⌀ 17,2 – 2,7	⌀ 8,6 – 1,3	⌀ 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 ex works **€**
		OZL 461	**OZL 462**		
Eyepieces (30,0 mm)	HWF 10×/⌀ 20 mm	✓✓	✓✓	OZB-A4631	**45,–**
	HSWF 15×/⌀ 15 mm	○○	○○	OZB-A4632	**55,–**
	HWF 20×/⌀ 10 mm	○○	○○	OZB-A4633	**55,–**
	HSWF 25×/⌀ 9 mm	○○	○○	OZB-A4634	**60,–**
Auxiliary objectives	0,5×	○	○	OZB-A4641	**90,–**
	0,75×	○	○	OZB-A4644	**90,–**
	1,5×	○	○	OZB-A4642	**90,–**
	2,0×	○	○	OZB-A4643	**90,–**
C-Mount	1× (focus adjustable)		✓	OZB-A4809	**55,–**
	0,3× (focus adjustable)		○	OZB-A4810	**95,–**
	0,5× (focus adjustable)		○	OZB-A4811	**105,–**

✓ = Included with delivery ○ = Option

Fittings and accessories for the heads for the OZM-5 microscope range (OZM 546, OZM 547)

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

Model outfit		**Model KERN**		**Order number**	**Price**/piece excl. of VAT ex works **€**
		OZM 546	**OZM 547**		
Eyepieces (30,0 mm)	HSWF 10×/⌀ 23 mm	✓✓	✓✓	OZB-A5503	**70,–**
	SWF 15×/⌀ 17 mm	○○	○○	OZB-A5504	**75,–**
	SWF 20×/⌀ 14 mm	○○	○○	OZB-A5505	**85,–**
	SWF 30×/⌀ 9 mm	○○	○○	OZB-A5506	**120,–**
	HSWF 10×/⌀ 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	**125,–**
	SWF 15×/⌀ 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	**140,–**
	SWF 20×/⌀ 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	**140,–**
Achromatic auxiliary objectives	0,37× only in combination with a universal stand	○	○	OZB-A5611	**170,–**
	0,5×	○	○	OZB-A5612	**160,–**
	0,7×	○	○	OZB-A5613	**160,–**
	1,5×	○	○	OZB-A5615	**155,–**
	2,0×	○	○	OZB-A5616	**160,–**
	Soldering protection lens	○	○	OZB-A5614	**50,–**
C-Mount	0,3× (focus adjustable)		○	OZB-A5701	**140,–**
	0,5× (focus adjustable)		○	OZB-A5702	**140,–**
	1,0× (focus adjustable)		○	OZB-A5703	**105,–**
	1,0× (with micrometer) only in combination with OZB-A5703		○	OZB-A5704	**295,–**
	for SLR cameras (Nikon)		○	OZB-A5706	**295,–**
	for SLR cameras (Olympus)		○	OZB-A5707	**295,–**
	for SLR cameras (Canon)		○	OZB-A5708	**295,–**

✓ = Included with delivery ○ = Option

Functionality of our stereo microscope modular system

Step 1:
Select a microscope head (from page 75), a universal stand (page 80/81), a bracket (page 82) and a ring illumination unit (page 84), in order to generate a customised model.

Sample configuration

Fittings and accessories for the heads for the OZP-5 microscope range (OZP 551, OZP 552)

Eyepiece	Specifications – Objectives						
	Magnification	**Standard**	**Auxiliary objectives**				
		1,0×	**0,37×**	**0,5×**	**0,7×**	**1,5×**	**2×**
HSWF 10×	Total magnification	6× – 55×	2,96× – 25,9×	3× – 27,5×	4,2× – 38,5×	9× – 82,5×	12× – 110×
	Field of view mm	⌀ 38,3 – 4,2	⌀ 74,3 – 8,5	⌀ 76,7 – 8,4	⌀ 54,8 – 6	⌀ 25,6 – 2,8	⌀ 19,2 – 2,1
SWF 15×	Total magnification	9× – 82,5×	4,44× – 38,9×	4,5× – 41,25×	6,3× – 57,75×	13,5× – 123,75×	18× – 165×
	Field of view mm	⌀ 28,3 – 3,1	⌀ 57,4 – 6,6	⌀ 56,7 – 6,2	⌀ 40,5 – 4,4	⌀ 18,9 – 2,1	⌀ 14,2 – 1,5
SWF 20×	Total magnification	12× – 110×	5,92× – 51,8×	6× – 55×	8,4× – 77×	18× – 165×	24× – 220×
	Field of view mm	⌀ 23,3 – 2,5	⌀ 47,3 – 5,4	⌀ 46,7 – 5,1	⌀ 33,3 – 3,6	⌀ 15,6 – 1,7	⌀ 11,7 – 1,3
SWF 30×	Total magnification	18× – 165×	8,88× – 77,7×	9× – 82,5×	12,6× – 115,5×	27× – 247,5×	36× – 330×
	Field of view mm	⌀ 15 – 1,6	⌀ 30,4 – 3,5	⌀ 30 – 3,3	⌀ 21,4 – 2,3	⌀ 10 – 1,1	⌀ 7,5 – 0,8
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 **€**
		OZP 551	**OZP 552**		
Eyepieces (30,0 mm)	HSWF 10×/⌀ 23 mm	✓✓	✓✓	OZB-A5503	**70,–**
	SWF 15×/⌀ 17 mm	○○	○○	OZB-A5504	**75,–**
	SWF 20×/⌀ 14 mm	○○	○○	OZB-A5505	**85,–**
	SWF 30×/⌀ 9 mm	○○	○○	OZB-A5506	**120,–**
	HSWF 10×/⌀ 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	**125,–**
	SWF 15×/⌀ 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	**140,–**
	SWF 20×/⌀ 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	**140,–**
Achromatic auxiliary objectives	0,37× only in combination with a universal stand	○	○	OZB-A5611	**170,–**
	0,5×	○	○	OZB-A5612	**160,–**
	0,7×	○	○	OZB-A5613	**160,–**
	1,5×	○	○	OZB-A5615	**155,–**
	2,0×	○	○	OZB-A5616	**160,–**
	Soldering protection lens	○	○	OZB-A5614	**50,–**
C-Mount	0,3× (focus adjustable)		○	OZB-A5701	**140,–**
	0,5× (focus adjustable)		○	OZB-A5702	**140,–**
	1,0× (focus adjustable)		○	OZB-A5703	**105,–**
	1,0× (with micrometer) only in combination with OZB-A5703		○	OZB-A5704	**295,–**
	for SLR cameras (Nikon)		○	OZB-A5706	**295,–**
	for SLR cameras (Olympus)		○	OZB-A5707	**295,–**
	for SLR cameras (Canon)		○	OZB-A5708	**295,–**
			✓ = Included with delivery		○ = Option

Functionality of our stereo microscope modular system

Step 2:
Further illumination units (page 84) and a suitable protective dust cover (page 82) give you the opportunity to adapt the configuration, expansion and field of application of your ideal microscope individually to suit your own requirements

Fiber illumination

Polarising ring light

Dust cover

Fittings and accessories for the heads for the OZO-5 microscope range (OZO 556)

Eyepiece	Specifications – Objectives						
	Magnification	**Standard**	**Auxiliary objectives**				
		1,0×	**0,37×**	**0,5×**	**0,7×**	**1,5×**	**2×**
HSWF 10×	Total magnification	8× – 70×	2,96× – 25,9×	4× – 35×	5,6× – 49×	12× – 105×	16× – 140×
	Field of view mm	⌀ 28,75 – 3,3	⌀ 74,3 – 8,5	⌀ 57,5 – 6,6	⌀ 41,1 – 4,7	⌀ 19,2 – 2,2	⌀ 14,4 – 1,6
SWF 15×	Total magnification	12× – 105×	4,44× – 38,9×	6× – 52,5×	8,4× – 73,5×	18× – 157,5×	24× – 210×
	Field of view mm	⌀ 21,25 – 2,4	⌀ 57,4 – 6,6	⌀ 42,5 – 4,9	⌀ 30,4 – 3,5	⌀ 14,2 – 1,6	⌀ 10,6 – 1,2
SWF 20×	Total magnification	16× – 140×	5,92× – 51,8×	8× – 70×	11,2× – 98×	24× – 210×	32× – 280×
	Field of view mm	⌀ 17,5 – 2	⌀ 47,3 – 5,4	⌀ 35 – 4	⌀ 25 – 2,9	⌀ 11,7 – 1,3	⌀ 8,75 – 1
SWF 30×	Total magnification	24× – 210×	8,88× – 77,7×	12× – 105×	16,8× – 147×	36× – 315×	48× – 420×
	Field of view mm	⌀ 11,25 – 1,3	⌀ 30,4 – 3,5	⌀ 22,5 – 2,6	⌀ 16,1 – 1,8	⌀ 7,5 – 0,9	⌀ 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 10×/⌀ 23 mm	✓✓	OZB-A5503	**70,–**
	SWF 15×/⌀ 17 mm	○○	OZB-A5504	**75,–**
	SWF 20×/⌀ 14 mm	○○	OZB-A5505	**85,–**
	SWF 30×/⌀ 9 mm	○○	OZB-A5506	**120,–**
	HSWF 10×/⌀ 23 mm (reticule 0,1 mm)	○	OZB-A5512	**125,–**
	SWF 15×/⌀ 17 mm (reticule 0,05 mm)	○	OZB-A5513	**140,–**
	SWF 20×/⌀ 14 mm (reticule 0,05 mm)	○	OZB-A5514	**140,–**
Achromatic auxiliary objectives	0,37× only in combination with a universal stand	○	OZB-A5611	**170,–**
	0,5×	○	OZB-A5612	**160,–**
	0,7×	○	OZB-A5613	**160,–**
	1,5×	○	OZB-A5615	**155,–**
	2,0×	○	OZB-A5616	**160,–**
	Soldering protection lens	○	OZB-A5614	**50,–**
C-Mount	0,3× (focus adjustable)		OZB-A5701	**140,–**
	0,5× (focus adjustable)		OZB-A5702	**140,–**
	1,0× (focus adjustable)		OZB-A5703	**105,–**
	1,0× (with micrometer) only in combination with OZB-A5703		OZB-A5704	**295,–**
	for SLR cameras (Nikon)		OZB-A5706	**295,–**
	for SLR cameras (Olympus)		OZB-A5707	**295,–**
	for SLR cameras (Canon)		OZB-A5708	**295,–**

✓ = Included with delivery ○ = Option

Functionality of our stereo microscope modular system

Step 3:
When using a trinocular microscope configuration, select the microscope camera (from page 85) 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).

OZB-A5201

OZB-A5203

OZB-A5211

OZB-A5212

OZB-A5213

OZB-A5221

OZB-A5222

OZB-A5223

Individuality, variety and flexible working through our modular construction system ▸ 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: 515 mm

OZB-A5201/OZB-A5211/OZB-A5221
- Length telescopic arm: 614 mm

OZB-A5212/OZB-A5222
- Length jointed arm: 553 mm

OZB-A5203/OZB-A5213/OZB-A5223
- Length double arm: 545 mm

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

Individuality, variety and flexible working through our modular construction system ▸ 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 KERN	Description	Price excl. of VAT ex works €
OZB-A1201	Telescopic arm – Plate – excl. holder	**400,–**
OZB-A1211	Telescopic arm – Clamp Edge of bench (Range: max. 40 mm) – excl. holder	**370,–**
OZB-A1203	Jointed arm – Plate – excl. holder	**445,–**
OZB-A1213	Jointed arm – Clamp Edge of bench (Range: max. 40 mm) – excl. holder	**420,–**
OZB-A6302	Spring loaded arm (Pneumatic spring) – Clamp (Range: max. 50 mm) – with holder (Coarse focusing knob)	**860,–**
OZB-A6303	Spring loaded arm (Compression spring) – Clamp (Range: max. 50 mm) – with holder (Coarse focusing knob)	**540,–**
OZB-A6301	Pillar style stand with “C”-shape base – excl. holder	**360,–**

OZB-A5301

OZB-A5306

Individuality, variety and flexible working through our modular construction system ▸ 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

Model KERN	Description	Price excl. of VAT ex works €
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,–**

Individuality, variety and flexible working through our modular construction system ▸ 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 KERN	Description	Suitable for	Price excl. of VAT ex works €
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,–**

09

EXTERNAL LIGHT SOURCES FOR STEREOMICROSCOPES

Ring illumination and cold light sources

Professional illumination units guarantee outstanding, uniform and strong illumination

> 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 ⌀	Colour temperature	Brightness adjustable	Illumination by segments	Polarising filter	**Price** excl. of VAT ex works
KERN		mm	K				**€**
OZB-A4571	4W-LED	60	7000 – 11000	✓			**100,–**
OZB-A4572	4W-LED	60	6500 – 7000	✓	✓		**155,–**
OBB-A6102	4,5W-LED	63	approx. 7600	✓			**150,–**
OZB-A7101	4,5W-LED	62	6500 – 7000	✓		✓	**690,–**

✓ = Included with delivery O = Option

09

Fiber 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
KERN		mm		K		**€**
OZB-A4515	Dual fiber LED unit	300	6W	5600 – 6300	✓	**165,–**
OZB-A4516	Dual fibre LED cold light source	540	20W	6400	✓	**720,–**

✓ = Included with delivery O = Option

10

MICROSCOPE CAMERAS & SOFTWARE

Specialists in microscopy for measurement, counting, documentation, archiving and image processing

Features

- 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 camera software microscope VIS KERN OXM 901 which we deliver with the product
- For details about our software please refer to the “Camera software microscope VIS KERN OXM 901” product group in the catalogue (page 91) or see 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, division 0,1 mm + 0,01 mm, KERN ODC-A2404, **€ 40,–**

C-mount cameras – USB 2.0/3.0 KERN ODC-82 · ODC-83

Features

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

STANDARD

USB 2.0 · USB 3.0 · SOFTWARE · 1 DAY

Model KERN	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works € €
ODC 824	3,1 MP	USB 2.0	11,5 – 45	CMOS	1/2"	colour	Win XP, Vista, 7, 8, 10	**410,–**
ODC 825	5,1 MP	USB 2.0	6,8 – 55	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10	**430,–**
ODC 831	3,1 MP	USB 3.0	27,3 – 53,3	CMOS	1/3"	colour	Win XP, Vista, 7, 8, 10	**570,–**
ODC 832	5,1 MP	USB 3.0	14,2 – 101,2	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10	**590,–**

10

C-mount camera – High resolution KERN ODC-84

Features

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

! Can only be used in combination with compound microscopes

STANDARD

USB 3.0 · SOFTWARE · 1 DAY

Model KERN	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works € €
ODC 841	20 MP	USB 3.0	15 – 60	CMOS	1"	colour	Win XP, Vista, 7, 8, 10	**1270,–**

ODC 852 (via WiFi) can also be operated with free Android app on smartphone or tablet. Details can be found in the operating instructions.

ANDROID APP ON Google play

STANDARD

USB 2.0 | HDMI | SD | WIFI | SOFTWARE | 230 V | 1 DAY

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 901 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 KERN OXM 902 software 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) and camera software Microscope VIS Basic KERN OXM 901
- 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

Model KERN	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works €
ODC 851	2 MP	HDMI, USB 2.0, SD	60	CMOS	1/2"	colour	Win XP, Vista, 7, 8, 10	**1150,–**
ODC 852*	5 MP	HDMI, SD, WLAN	25 – 60	CMOS	1/1,8"	colour	Win XP, Vista, 7, 8, 10	**1170,–**

*can only be used in combination with stereo microscopes

C-mount camera – High resolution KERN ODC-86

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 KERN OXM 902 software which is included with the delivery
- Power supply is from an external 12 V power unit
- Please order the appropriate C-mount adapter (only 1,0× possible) to fit your KERN microscope now

! Can only be used in combination with compound microscopes

STANDARD

USB 3.0 | SOFTWARE | 1 DAY

Model KERN	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works €
ODC 861	20 MP	USB 3.0	5 – 30	CMOS	1"	colour	Win XP, Vista, 7, 8, 10	**2400,–**

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 simplified version of our multi-lingual camera software Microscope VIS KERN OXM 901 (OXM 902 for model ODC 881), a USB cable (length: 1,5m), two eyepiece adapters and an object micrometer to calibrate the software
- Possible tube diamaters:
  23,2 mm (Standard)
  30,0 mm (Eyepiece adapter)
  30,5 mm (Eyepiece adapter)

STANDARD

USB 2.0 | USB 3.0 | SOFTWARE | 1 DAY

Model KERN	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works €
ODC 872	1,3 MP	USB 2.0	7,5 – 12,5	CMOS	1/3"	colour	Win XP, Vista, 7, 8, 10	**195,–**
ODC 874	3 MP	USB 2.0	3 – 7,5	CMOS	1/2,7"	colour	Win XP, Vista, 7, 8, 10	**240,–**
ODC 881	5 MP	USB 3.0	15 – 30	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10	**320,–**

USB microscope – USB 2.0 KERN ODC-89

The digital USB microscope for rapid testing or for hobby use

10

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 10× as well as 200×
- 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
- As well as the camera, you will also find a simplified version of our multi-lingual camera software Microscope VIS KERN OXM 901 included with delivery
- Cable length: 1,4 m

Stand with focus wheel:

- Work area: 150×80mm
- Focus range: 60 mm
- Overall dimensions: 150×80×135 mm

STANDARD

USB 2.0 | SOFTWARE | 1 DAY

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

ODC 910

Download on the App Store

Google play

Innovative hand-held microscope for mobile applications with immediate display of the image on a smartphone or tablet

Features

- The digital WiFi hand-held microscope is designed for rapid and simple surface observations. Ideally suited for coins, bank notes, stamps, circuit boards, plants, insects, gems and skin samples for industrial use, for all hobby scientists, children and students
- The KERN ODC 910 WiFi microscope has been specially developed for direct connection to your WiFi-enabled smartphone or tablet with iOS or android
- During the live transfer to your smartphone or tablet you can take photos and videos of the sample you are investigating, and these can also be stored on your device. For larger videos you can also insert a mini SD card directly into the microscope
- With the WiFi microscope you can easily adjust the magnification to suit all conventional samples. The focus can be adjusted to a magnification of 10× as well as 200×
- The six LEDs fitted in a ring shape ensure strong and effective illumination of your sample. Use the adjustment wheel on the microscope to control the illumination setting.
- You can download the app for the ODC 910 WiFi microscope from the Apple App Store or the Android Google Play Store free of charge and this app enables you to directly transfer images and videos from the microscope to your smartphone or tablet through a simple connection
- The scope of delivery includes the WiFi microscope with integrated rechargeable battery pack, a flexible column which is easy to adjust and which has a swan neck so that you can achieve the ideal height setting, as well as a mains adapter

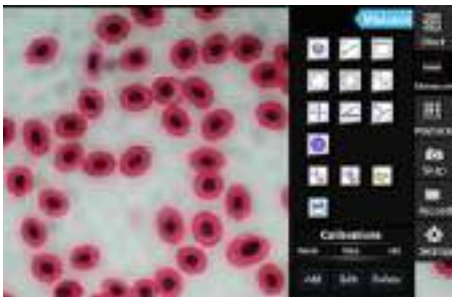
10

STANDARD

WIFI SD RECHARGE 230 V 1 DAY

Model	Resolution	Interface	FPS	Sensor	Sensor size	Supported operating system	Magnification levels	Focusing stand	Illumination	Price excl. of VAT ex works €
KERN										
ODC 910	2 MP	WiFi, SD	15 – 30	CMOS	1/4"	Android, iOS	10×, 200×	Goose neck	6× LED	**190,–**

ODC 241



Integrated software with measuring function

Digital microscopy brought up to date – tablet with integrated camera for optimal observation and digital documentation of the sample

Features

- 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
  - Transfer of stored data to external receivers using WiFi
- The delivery includes the tablet camera with pre-installed software as well as the mains adapter

Technical data

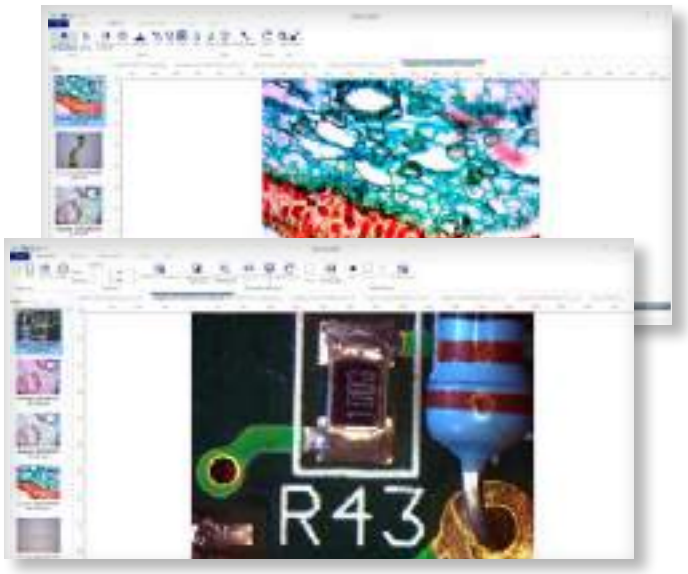
- 9.7" LCD-Touchscreen
- Screen resolution: 2048×1536 pixels
- CPU: Quad Core Cortex-A17; 1,8 GHz
- Overall dimensions W×D×H 238×51×206 mm
- Net weight approx. 0,65 kg

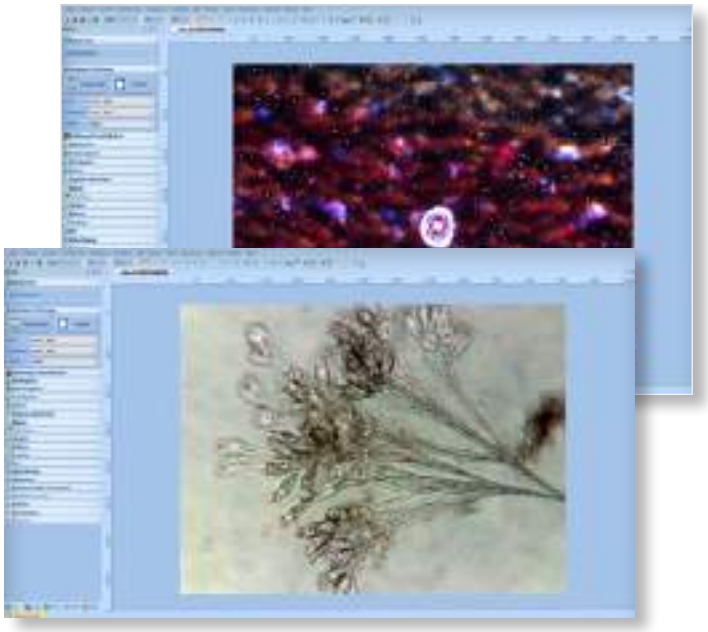
Cannot be combined with the microscopes of the OZM-5 series.

STANDARD

SD | USB 2.0 | WIFI | HDMI | 230 V | 1 DAY

Model	Resolution Camera	Interface	FPS	Sensor	Sensor size	Supported operating system	Price excl. of VAT ex works €
KERN							
ODC 241	5 MP	WiFi, USB 2.0, HDMI, SD	15 – 30	CMOS	1/2,5"	Android 5.1	**1110,–**





The digital specialist for measurement, counting and archiving – free of charge with all KERN microsope cameras

Features

OXM 901*

- The camera software **KERN microscope VIS Basic** is a multi-lingual software, which we have developed specially for all available Kern microscope cameras
- As well as the streaming function for the object to be viewed, the software also offers you an image snapshot function, as well as a video function
- Various measuring functions such as, for example, functions for measuring distance, surfaces and angles and a manual counting function are available. In addition there are extensive image processing and documentation functions available, and of course an exporting function to Microsoft Office applications Word® and Excel®
- With the display settings you can display different measurements, grid sizes, scales and rulers for the very best measuring procedure
- Automatic white balance and automatic contrast adjustment can be performed quickly and easily, which enables efficient working procedures

OXM 902

- With the camera software **KERN microscope VIS Pro** in essence, all functions of the Basic variant are supported, however, in addition many other features are integrated which can be used for image analysis at a more professional level.
- The following highlights are included:
  - Image Stitching
  - Image Stacking
  - Expanded measuring functions
  - Auto counting function
  - DShow and TWAIN support
  - Software development kit
- With this software it is possible operate all available KERN microscope cameras

Technical data

- Can be used for Microsoft Windows XP, Windows Vista, Windows 7, Windows 8, 8.1 and Windows 10
- Depending on the language setting of your Windows operating system the software KERN microscope VIS Basic & Pro will be identified and installed in the current language. This can be changed manually at any time
- The software is available in the following languages:
  OXM 901: German, English, Spanish, Italian, French, Portuguese, Polish
- **OXM 902**: German, English, Spanish, Italian, French, Portuguese, Polish, Russian, Turkish, Chinese, Japanese, Korean
- As well as the software CD, a USB cable and an object micrometer are included with all KERN cameras as well as all digital microscopes Please refer to the documentation for the software in the download area of our website www.kern-sohn.com for further details

*Cannot be used in combination with the following cameras: ODC 832, ODC 841, ODC 852, ODC 861, ODC 881

REFRACTOMETERS
POLARIMETERS

11 Analogue refractometers – type: hand-held 94

12 Digital refractometers – type: hand-held 101

13 Digital refractometers – type: desktop 108

14 Manual polarimeter 111

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Technical sales KERN Optics

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Also available with calibration certificate, see page 109!

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)
- The follwoing 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 without ATC: 20 °C
- Measurement temperature range with ATC: 10 °C/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)

STANDARD OPTION

1 DAY AUTO ATC

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

Model **KERN**	Scales	Measuring range	Division	ATC	**Price** excl. of VAT ex works **€**
ORA 10BB	Brix	0 – 10 %	0,1 %		**90,–**
ORA 10BA	Brix	0 – 10 %	0,1 %	✓	**95,–**
ORA 18BB	Brix	0 – 18 %	0,1 %		**90,–**
ORA 20BB	Brix	0 – 20 %	0,1 %		**90,–**
ORA 20BA	Brix	0 – 20 %	0,1 %	✓	**95,–**
ORA 32BB	Brix	0 – 32 %	0,2 %		**90,–**
ORA 32BA	Brix	0 – 32 %	0,2 %	✓	**95,–**
ORA 62BB	Brix	28 – 62 %	0,2 %		**90,–**
ORA 62BA	Brix	28 – 62 %	0,2 %	✓	**95,–**
ORA 82BB	Brix	45 – 82 %	0,5 %		**90,–**
ORA 80BB	Brix	0 – 80 %	0,5 %		**90,–**

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 **KERN**	Scales	Measuring range	Division	ATC	**Price** excl. of VAT ex works **€**
ORA 3HB	Brix Baumé Water content	58 – 92 % 38 – 43 °Bé 12 – 27 %	0,5 % 0,5 °Bé 1 %		**99,–**
ORA 3HA	Brix Baumé Water content	58 – 92 % 38 – 43 °Bé 12 – 27 %	0,5 % 0,5 °Bé 1 %	✓	**105,–**
ORA 6HB	Water content	12 – 30 %	0,1 %		**110,–**
ORA 6HA	Water content	12 – 30 %	0,1 %	✓	**115,–**

Scope of application: Salt

The following models are particularly suitable for the measurement and concentration control of the mass fraction of natrium 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 **KERN**	Scales	Measuring range	Division	ATC	**Price** excl. of VAT ex works **€**
ORA 1SB	Salinity specific gravity	0 – 100 ‰ 1,000 – 1,070 sg	1 ‰ 0,001 sg		**90,–**
ORA 1SA	Salinity specific gravity	0 – 100 ‰ 1,000 – 1,070 sg	1 ‰ 0,001 sg	✓	**95,–**
ORA 2SB	Salt (NaCl)	0 – 28 %	0,2 %		**90,–**
ORA 2SA	Salt (NaCl)	0 – 28 %	0,2 %	✓	**95,–**
ORA 3SB	Salt (NaCl) Brix	0 – 28 % 0 – 32 %	0,2 % 0,2 %		**90,–**
ORA 3SA	Salt (NaCl) Brix	0 – 28 % 0 – 32 %	0,2 % 0,2 %	✓	**95,–**

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 **KERN**	Scales	Measuring range	Division	ATC	**Price** excl. of VAT ex works **€**
ORA 1WB	Oechsle KMW (Babo) Brix	0 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,25 °KMW 0,2 %		**90,–**
ORA 1WA	Oechsle KMW (Babo) Brix	0 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,25 °KMW 0,2 %	✓	**95,–**
ORA 3WB	Oechsle Brix	30 – 140 °Oe 0 – 32 %	1 °Oe 0,2 %		**90,–**
ORA 3WA	Oechsle Brix	30 – 140 °Oe 0 – 32 %	1 °Oe 0,2 %	✓	**95,–**
ORA 7WB	Oechsle KMW (Babo) Brix	30 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,2 °KMW 0,2 %		**90,–**
ORA 7WA	Oechsle KMW (Babo) Brix	30 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,2 °KMW 0,2 %	✓	**95,–**

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 **KERN**	Scales	Measuring range	Division	ATC	**Price** excl. of VAT ex works **€**
ORA 3AB	Brix SG Wort	0 – 32 % 1,000 – 1,130 sgW	0,2 ‰ 0,001 sgW		**90,–**
ORA 3AA	Brix SG Wort	0 – 32 % 1,000 – 1,130 sgW	0,2 ‰ 0,001 sgW	✓	**95,–**
ORA 4AB	Plato	0 – 18° P	0,1° P		**90,–**
ORA 4AA	Plato	0 – 18° P	0,1° P	✓	**95,–**
ORA 1AB	Percentage by volume Percentage by volume	0 – 50 % (v/v) 50 – 80 % (v/v)	1 % (v/v) 2,5 % (v/v)		**90,–**
ORA 2AB	Percentage by mass Percentage by mass	0 – 50 % (w/w) 50 – 80 % (w/w)	1 % (w/w) 2,5 % (w/w)		**90,–**

Scope of application: Urine

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

The main scope of applications is:
- Hospitals
- Doctor’s surgeries/Physicians
- Medical training institutions
- Nursing homes
- Sports medicine (doping test)
- Veterinary

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

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 windscreen wash water (CW). Furthermore these models are suitable for the measurement of thermal exchange systems.

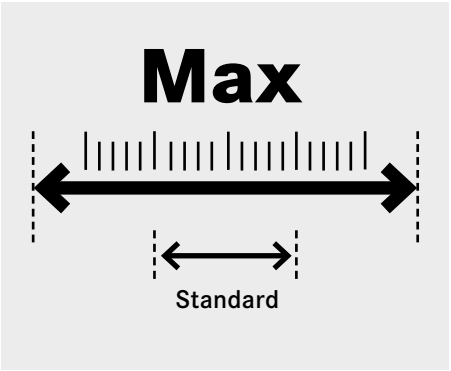
The main scope of applications is:
- Automotive industry: Car-workshops and producers, in accordance with the VW standards G11/G12 and G13
- Chemical industry
- Solar industry: Antifreeze monitoring

Model **KERN**	Scales	Measuring range	Division	ATC	**Price** excl. of VAT ex works **€**
ORA 4FB	EG (G11/12) PG (G13) CW BF	-50 – 0 °C -50 – 0 °C -40 – 0 °C 1,10 – 1,40 kg/l	1 °C 1 °C 5 °C 0,01 kg/l		**90,–**
ORA 4FA	EG (G11/12) PG (G13) CW BF	-50 – 0 °C -50 – 0 °C -40 – 0 °C 1,10 – 1,40 kg/l	1 °C 1 °C 5 °C 0,01 kg/l	✓	**95,–**
ORA 1UB	Urea	0 – 40 %	0,2 %		**90,–**
ORA 1UA	Urea	0 – 40 %	0,2 %	✓	**95,–**
ORA 4UB	Urea EG (G11/12) PG (G13) CW BF	30 – 35 % -50 – 0 °C -50 – 0 °C -40 – 0 °C 1,10 – 1,40 kg/l	0,2 % 1 °C 1 °C 5 °C 0,01 kg/l		**90,–**
ORA 4UA	Urea EG (G11/12) PG (G13) CW BF	30 – 35 % -50 – 0 °C -50 – 0 °C -40 – 0 °C 1,10 – 1,40 kg/l	0,2 % 1 °C 1 °C 5 °C 0,01 kg/l	✓	**95,–**

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 KERN	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
ORA 80BE	Brix	0 – 50 % 50 – 80 %	0,5 % 0,5 %		**160,–**
ORA 90BE	Brix	0 – 42 % 42 – 71 % 71 – 90 %	0,2 % 0,2 % 0,2 %		**360,–**
ORA 1RE	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		**360,–**
ORA 4RR	Refractive index	1,440 – 1,520 nD	0,001 nD		**95,–**

ORA 4RR

ORA 90 BE/ORA 1RE

ORA 80BE

Scope of application: Gemmology/Jewellery

The Gem models have 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

11

Model KERN	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
ORA 1GG	Refractive index	1,30 – 1,81 nD	0,01 nD		**250,–**

ORA 1GG

Accessory parts: Analogue refractometer – ORA

Prism coverplate with LED
ORA-A1101

Calibration liquid/
Contact liquid

Leather bag
ORA-A2103

Calibration block

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

Relationship overview – refractometer calibration (analogue)

Model refractometer	Calibration value	Calibration liquid	Article number liquid	Calibration block	Article number calibration block
ORA 10BA; ORA 10BB; ORA 18BB; ORA 1WA; ORA 1WB; ORA 20BA; ORA 20BB; ORA 32BA; ORA 32BB; ORA 3SA; ORA 3SB; ORA 3WA; ORA 3WB; ORA 7WA; ORA 7WB; ORA 80BB; ORA 80BE; ORA 3AB; ORA 3AA	0 % Brix	distilled water	ORA-A1010	–	–
ORA 4AA; ORA 4AB	0 ° Plato	distilled water		–	
ORA 1UA; ORA 1UB	0 % Urea	distilled water		–	
ORA 4FA; ORA 4FB; ORA 4UA; ORA 4UB	0 °C EG/PG/CW	distilled water		–	
ORA 1SA; ORA 1SB	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 2PB; ORA 5PB	1,000 sg Urine	distilled water		–	
ORA 62BA; ORA 62BB	29,6 % Brix	saturated salt solution	ORA-A1003	–	–
ORA 3HA; ORA 3HB; 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

NEW

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 follwoing accessory-parts are included:
  - Prism cover lid
  - Pipette
  - Storage box
  - 1 × 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 × AAA (1,5 V)
- Lifetime of the battery: approx. 10.000 measurements
- ATC (Automatic Temperature Compensation)
- Minimum sample volume: 4 drops
- Automatic energy management (AUTO-OFF after 60 seconds)
- Mean value measurement (15 measurements)

! Also available with calibration certificate, see page 109!

STANDARD

AUTO ATC | IP 65 | BATT | 1 DAY

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 **KERN**	Scales	Measuring range	Accuracy	Division	**Price** excl. of VAT ex works **€**
ORM 50BM	Brix Refractive index	0 – 50 % 1,3330 – 1,4200 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	**370,–**
ORM 1RS	Brix Refractive index	0 – 90 % 1,3330 – 1,5177 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	**470,–**

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 fruit for quality control in harvesting
- Restaurants and large-scale catering establishment

Model **KERN**	Scales	Measuring range	Accuracy	Division	**Price** excl. of VAT ex works **€**
ORM 1SU	Fructose	0 – 69 %	± 0,2 %	0,1 %	**470,–**
	Glucose	0 – 60 %	± 0,2 %	0,1 %	
	Brix	0 – 90 %	± 0,2 %	0,1 %	
	Refractive index	1,3330 – 1,577 nD %	± 0,0003 nD	0,0001 nD	
ORM 2SU	Lactose	0 – 17 %	± 0,2 %	0,1 %	**370,–**
	Maltose	0 – 16 %	± 0,2 %	0,1 %	
	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 KERN	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
ORM 1HO	Brix Baumé Water content Refractive index	5 – 38 % 33 – 48 °Bé 0 – 90 % 1,3330 – 1,5177 nD	± 0,2 % ± 0,2 °Bé ± 0,2 % ± 0,0003 nD	0,1 % 0,1 °Bé 0,1 % 0,0001 nD	470,–

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
- Fisch farm

Model KERN	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
ORM 1NA	Salt content (NaCl) %	0 – 28 %	± 0,2 %	0,1 %	370,–
	Salt content (NaCl) ‰	0 – 280 ‰	± 2 ‰	1 ‰	
	Spec. Gravity	1,000 – 1,220	± 0,002	0,001	
	Brix	0 – 28 %	± 0,2 %	0,1 %	
	Refractive index	1,3330 – 1,4100 nD	± 0,0003 nD	0,0001 nD	
ORM 1SW	Salt content seawater	0 – 100 ‰	± 2 ‰	1 ‰	370,–
	Chlorine content seawater	0 – 57 %	± 2 ‰	1 ‰	
	Spec. Gravity	1,000 – 1,070	± 0,002	0,1 %	
	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 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

Modell **KERN**	Skalen	Messbereich	Genauigkeit	Teilung	**Preis** zzgl. MwSt. ab Werk **€**
ORM 1AL	Percentage by mass Percentage by volume Brix Refractive index	0 – 72 % 0 – 80 % 0 – 50 % 1,3330 – 1,4200 nD	± 1 % ± 1 % ± 0,2 % ± 0,0003 nD	1 % 1 % 0,1 % 0,0001 nD	**370,–**
ORM 1BR	Plato SG Wort Brix Refractive index	0 – 31 °P 1,000 – 1,130 0 – 50 % 1,3330 – 1,4200 nD	± 0,3 °P ± 0,002 ± 0,2 % ± 0,0003 nD	0,1 0,1 0,1 % 0,0001 nD	**370,–**

Scope of application: Wine

The following models are particularly suitable for the measurement of the sugar content in fruit. 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. Alternatively the display can be switched to show Brix or the refractive index.

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 **KERN**	Scales	Measuring range	Accuracy	Division	**Price** excl. of VAT ex works **€**
ORM 1WN	Oechsle Percentage by volume KMW (Babo) Brix	0 – 150 °Oe 0 – 22 % 0 – 25 °KMW 0 – 50 %	± 2 °Oe ± 0,2 % ± 0,2 °KMW ± 0,2 %	1 °Oe 0,1 % 0,1 °KMW 0,1 %	**370,–**
ORM 2WN	Oechsle France Percentage by volume KMW (Babo) Brix	0 – 230 °Oe 0 – 22 % 0 – 25 °KMW 0 – 50 %	± 2 °Oe ± 0,2 % ± 0,2 °KMW ± 0,2 %	1 °Oe 0,1 % 0,1 °KMW 0,1 %	**370,–**

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 **KERN**	Skalen	Messbereich	Genauigkeit	Teilung	**Preis** zzgl. MwSt. ab Werk **€**
ORM 1CO	Coffee TDS 1 Brix Refractive index	0 – 25 0 – 50 % 1,3330 – 1,4200 nD	± 0,2 ± 0,2 % ± 0,0003 nD	0,1 0,1 % 0,0001 nD	**370,–**
ORM 2CO	Coffee TDS 2 Brix Refractive index	0 – 25 0 – 30 1,3330 – 1,4200 nD	± 0,2 ± 0,2 ± 0,0003 nD	0,01 0,1 0,0001 nD	**370,–**

Scope of application: Urine

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

The main scope of applications is:
- Hospitals
- Doctor’s surgeries/Physicians
- Medical training institutions
- Nursing homes
- Sports medicine (doping test)
- Veterinary

Model **KERN**	Scales	Measuring range	Accuracy	Division	**Price** excl. of VAT ex works **€**
ORM 1UN	Urine (spec. gravity) Serum protein Brix Refractive index	1,000 – 1,050 sgU 0 – 12 g/100 ml 0 – 50 % 1,3330 – 1,4200 nD	± 0,001 sgU ± 0,2 g/100 ml ± 0,2 % ± 0,0003 nD	0,001 sgU 0,1 g/100 ml 0,1 % 0,0001 nD	**370,–**
ORM 2UN	Urine (s. g. dog) Urine (s. g. cat) Brix Refractive index	1,000 – 1,060 sgU 1,000 – 1,060 sgU 0 – 50 % 1,3330 – 1,4200 nD	± 0,002 sgU ± 0,002 sgU ± 0,2 % ± 0,0003 nD	0,001 sgU 0,001 sgU 0,1 % 0,0001 nD	**370,–**

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 windscreen wash water (CW). Furthermore these models are suitable for the measurement of thermal exchange systems. Alternatively the display can be switched to show Brix.

The main scope of applications is:
- Automotive industry: Car-workshops and producers
- Chemical industry
- Solar industry: Antifreeze monitoring

Model **KERN**	Scales	Measuring range	Accuracy	Division	**Price** excl. of VAT ex works **€**
ORM 1CA	Wash water AdBlue® Battery fluid Brix Refractive index	(-60) – 0 °C 0 – 51 % 1,000 – 1,500 0 – 50 % 1,3330 – 1,4200	± 0,5 °C ± 0,2 % ± 0,005 ± 0,2 % ± 0,0003 nD	0,1 °C 0,1 % 0,1 % 0,1 % ± 0,0001 nD	**370,–**
ORM 2CA	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 %	**470,–**

12

Transport and storage case

Rear view, screw-on battery compartment cover

IP65: Protected against dust and water splashes

Digital refractive index measurement for laboratories and the industry for multi-application ▸ PREMIUM refractometer

Features

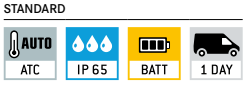
- The KERN ORF refractometers are accurate and universal maintenance free digital handheld refractometers
- The large display is easy to read. Mistakes in reading are avoided
- The typical and practical design is suitable for a quick and convenient everyday use and is characterized by its easy-using and robustness
- The PREMIUM refractometers from the KERN ORF range are protected to international IP65 protection class, against dust and water splashes. After use, you can rinse the refractometer under running water
- The large, easy-to-read TFT colour display with integrated temperature display supports the user to reliably determine the measurement
- A large selection of models is available with single or multiple scales. This allows the use in various applications
- The instrument comes with an optimized software that can show a result in different scales
- The integrated automatic temperature compensation (ATC), avoids the manual conversion of the measurement. This allows a quick and efficient usage of the instrument
- Due to the fact that the refractometer has been calibrated at the factory, this guarantees that it can be used immediately for accurately measuring your sample.
- The follwoing accessory-parts are included:
  - Calibration liquid
  - Pipette
  - Storage box
  - 2 × AAA batteries
  - Leather bag
  - Screwdriver
  - Cleaning tissue

Technical data

- Measurement temperature: 5 °C – 40 °C
- Overall dimensions W×D×H 145×67×40 mm
- Net weight approx. 200 g
- Power supply: 2 × AAA (1,5 V)
- Lifetime of the battery: approx. 3.750 measurements
- ATC (Automatic Temperature Compensation), does not apply to the refraction index scale
- Minimum sample volume: 2–3 drops
- Automatic energy management (AUTO-OFF after 90 seconds)

Also available with calibration certificate, see page 109!

STANDARD



Only while stocks last

Remaining stocks of this series

Successor series ORM

→ see page 101

Transport and storage case

Rear view, screw-on battery compartment cover

Digital refractive index measurement for laboratories and the industry for multi-application ▸ Laboratory refractometer

Features

- The models in the KERN ORL range are accurate, universal and maintenance-free digital desktop refractometers
- 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 multi-function 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.
- Mean value measurement (15 measurements)
- The follwoing accessory-parts are included:
  - Pipette
  - Storage box
  - USB cable
  - Power adapter
  - Screwdriver

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)

Accessories

- Rechargeable Battery 3,7 V 3000 mA, KERN ORL-A2007, **€ 65,–**

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! Also available with calibration certificate, see page 109!

STANDARD: AUTO ATC · USB 2.0 · 1 DAY

OPTION: RECHARGE

Model KERN	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
ORL 94BS	Brix Refractive index	0 – 94 % 1,3330 – 1,5290 nD	± 0,1 % ± 0,0002 nD	0,1 % 0,0001 nD	**920,–**

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

Features

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

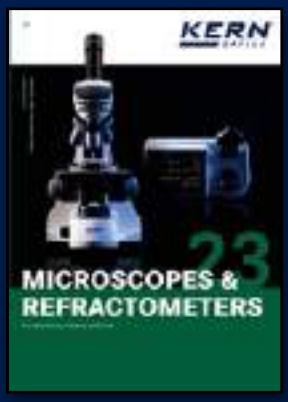
Important

- Refractive index standard traceable to SRM[1] of NIST[2] and PTB[3]
- This service is not possible for the following refractometer models:
  - ORA 6HA
  - ORA 1GG
- Calibration of products from other manufacturers is possible on request

[1]Standard reference material
[2]National Institute of Standards and Technology
[3]Physikalisch-Technische Bundesanstalt (German metrology institute)

Model	Description	Price excl. of VAT ex works €
KERN		
961-290	Calibration certificate for refractometers on initial calibration	**129,–**
961-290R	Calibration certificate for refractometers on recalibration	**129,–**

ASSORTMENT RANGE LEADER AND HIDDEN CHAMPION IN THE REGION: KERN WEIGHING & MEASURING TECHNOLOGY



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14

POLARIMETERS

The ideal helper for getting started with the analysis of your optically active solutions in the laboratory

Features

- The KERN OAB 10LN is a manual polarimeter which is characterised by its ergonomic design and easy handling
- The powerful 589 nm sodium vapour lamp is the optimum light source to produce a linear, polarised beam of light
- The 1° scale division including Nonius (0.05°) enables precise definition of the angle of rotation of the substance to be observed
- To hold liquid samples, two glass cuvettes (100 mm/200 mm) are included with the delivery
- Included with delivery:
  Sodium vapour lamp,100 mm glass cuvette, 200 mm Glasküvette, Replacement lenses and sealing rings for cuvettes

Technical data

- Light source: Sodium vapour lamp (589 nm)
- Stabilisation time: 10 mins after switching on
- Overall dimensions W×D×H
  500×135×330 mm
- Net weight approx. 5 kg

14

STANDARD

MONO POLAR 230 V 1 DAY

Scope of application: Laboratory/Education

The reliable polarimeters in the OAB-L range have been designed for simple laboratory applications as well as practical training. You can evaluate liquid, optically-active samples with chiral characteristics with this device. Typical applications are determining kinetics in cane sugar inversion, determining mutarotation of glucose and investigation of starch hydrolysis. The optical rotation is measured in degrees.

The main scope of applications is:
- Pharmacy
- Sugar industry: for example cane sugar
- Beverage industry
- Food industry
- Chemical industry
- Laboratories
- Training

Cuvette in measuring chamber

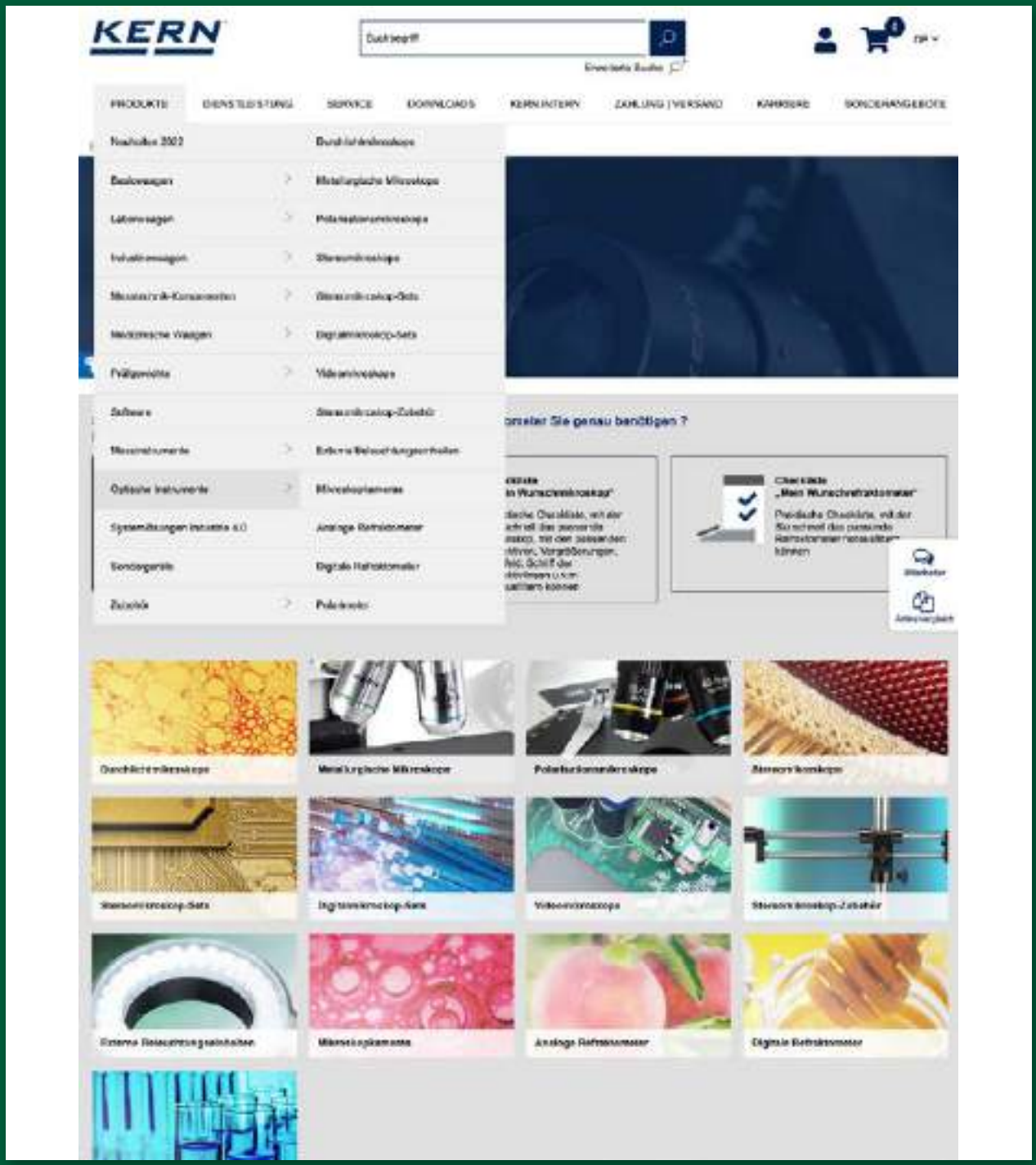
Model **KERN**	Scales	Measuring range	Division	Vernier	Wave lenght	**Price** excl. of VAT ex works **€**
OAB 10LN	Optical rotation	± 180°	1°	0,05°	589 nm	**920,–**

Accessory parts: OAB

Model **KERN**	Description	**Price** excl. of VAT ex works **€**
OAB-A2501	Glass cuvette, Length: 100 mm (Spare part)	**110,–**
OAB-A2502	Glass cuvette, Length: 200 mm (Spare part)	**110,–**
OAB-A2581	Sodium vapour lamp, Wave length: 589 mm (Spare part)	**120,–**

Cuvette 10 and 20 cm

www.kern-sohn.com

STRAIGHT TO THE TARGET!

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