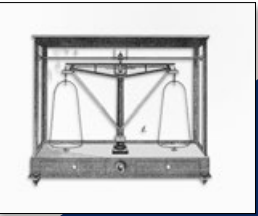


KERN – Tradition and Innovation for over 170 years

An independent family business, KERN since already 8 generations is synonymous with quality and reliability in customer service.



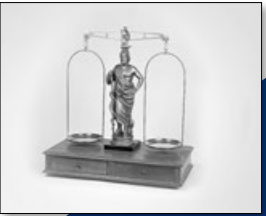
1844

KERN is founded – precision balances are produced



1863

A proud Gottlieb Kern with his staff



1880

Pharmaceutical balance with Aesculap



1923

Inflation – KERN wages are paid with self printed currency



1980

The electronic balance ousts mechanical devices



1994

Accredited DKD laboratory (ISO 17025)



2000

New premises in Balingen



2002

Existing QM system certification in accordance with DIN EN ISO 9001:2000 standards



2007

Approval for the manufacture of medical products (DIN EN 13485 and 93/42/EEC)



2008

Authorisation for initial verification by the manufacturer (2009/23/EC)



2009

Approval for the manufacture and sale of height rods (DIN EN 13485 and 93/42/EEC)



2012

Verification point for non-automatic balances and test weights.

New customer portal www.kern-sohn.com goes live



2014

Expansion of the product range to include optical instruments (microscopes and refractometers)



2015

Inauguration of Ziegelei 2.0 with computer-controlled high-bay warehouse



2017

Come with KERN into the digital future: Expansion of the model ranges compatible with Industry 4.0, as well as the related services

KERN & SOHN GmbH
Microscopes and Refractometers
Ziegelei 1
72336 Balingen
Germany

Tel. +49 [0] 7433 9933-0
Fax +49 [0] 7433 9933-146

info@kern-sohn.com
www.kern-sohn.com



GB

MICROSCOPES & REFRACTOMETERS – for laboratory, industry and food

2018

GB

MICROSCOPES & REFRACTOMETERS

for laboratory, industry and food



PROFESSIONAL MEASURING

2018

KERN Models A – Z

OBB-C	80	ORF	98
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ORA	92	Checklist for your refractometer	114

Do you have questions about our products? Our customer consultants will be pleased to assist you:



UK, IE, SE, NO, FI, IS, FO, MT
Marietta Gulde
Tel. +49 [0] 7433 9933-288
Fax +49 [0] 7433 9933-29288
marietta.gulde@kern-sohn.com



USA, CAN, TR, PL, EE, LT, LV,
Middle East, Africa, Oceania
Matthias Huget
Tel. +49 [0] 7433 9933-118
Fax +49 [0] 7433 9933-29118
matthias.huget@kern-sohn.com



BG, South East Asia, Germany (PC 3)
Corinna Klaass
Tel. +49 [0] 7433 9933-215
Fax +49 [0] 7433 9933-29215
klaass@kern-sohn.com



CZ, SK, GUS
Inna Wandler
Tel. +49 [0] 7433 9933-167
Fax +49 [0] 7433 9933-29167
wandler@kern-sohn.com



BeNeLux, SLO, HR, BA, RS, MK
Germany (PC 4)
Taras Mikitisin
Tel. +49 [0] 7433 9933-143
Fax +49 [0] 7433 9933-29143
Mobil +49 [0] 171 5590115
mikitisin@kern-sohn.com



HU, RO, Germany (PC 5, 6)
Fabienne Kolbus
Tel. +49 [0] 7433 9933-305
Fax +49 [0] 7433 9933-29305
fabienne.kolbus@kern-sohn.com



DK, Germany (PC 0, 1, 2)
Bettina Schwedt
Tel. +49 [0] 7433 9933-141
Fax +49 [0] 7433 9933-29141
Mobil +49 [0] 171 3059661
bettina.schwedt@kern-sohn.com



Manager KERN Optics
Daniel Junger
Tel. +49 [0] 7433 9933-155
Fax +49 [0] 7433 9933-149
daniel.junger@kern-sohn.com



Technical Sales & Product Management KERN Optics
Samuel Haasis
Tel. +49 [0] 7433 9933-173
Fax +49 [0] 7433 9933-29173
samuel.haasis@kern-sohn.com

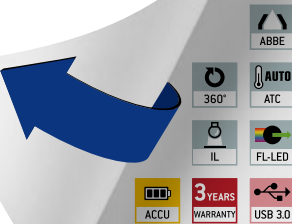


Product specialist for optical instruments
Ralf Gutbrod
Tel. +49 [0] 7433 9933-306
Fax +49 [0] 7433 9933-29306
ralf.gutbrod@kern-sohn.com

Quick help for all questions regarding our technical service and maintenance:



Technical Service
Ralf Kurschat
Tel. +49 [0] 7433 9933-166
Fax +49 [0] 7433 9933-195
ralf.kurschat@kern-sohn.com



KERN Pictograms

	360° rotatable microscope head		Parallel optical system For stereomicroscopes, enables fatigue-proof working
	Monocular Microscope For the inspection with one eye		Integrated scale In the eyepiece
	Binocular Microscope For the inspection with both eyes		SD card For data storage
	Trinocular Microscope For the inspection with both eyes and the additional option for the connection of a camera		USB 2.0 digital camera For direct transmitting of the picture to a PC
	Abbe Condenser With high numerical aperture for the concentration and the focusing of light		USB 3.0 digital camera For direct transmitting of the picture to a PC
	Halogen illumination For pictures bright and rich in contrast		WLAN data interface: For transmitting of the picture to a mobile display device
	LED illumination Cold, energy saving and especially long-life illumination		HDMI digital camera For direct transmitting of the picture to a display device
	Incident illumination For non-transparent objects		PC software To transfer the measurements from the device to a PC.
	Transmitting illumination For transparent objects		Automatic temperature compensation For measurements between 10 °C and 30 °C
	Fluorescence illumination For stereomicroscopes		Protection against dust and water splashes IPxx The type of protection is shown by the pictogram.
	Fluorescence illumination for compound microscopes With 100W mercury lamp and filter		Battery operation Ready for battery operation. The battery type is specified for each device.
	Fluorescence illumination for compound microscopes With 3 W LED illumination and filter		Battery operation rechargeable Prepared for a rechargeable battery operation
	Phase contrast unit For a higher contrast		Mains adapter 230V/50Hz in standard version for EU. On request GB, AUS or USA version.
	Darkfield condenser/unit For a higher contrast due to indirect illumination		Power supply Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.
	Polarising unit To polarise the light		Package shipment The time required to manufacture the product internally is shown in days in the pictogram.
	Infinity system Infinity corrected optical system		
	Zoom magnification For stereomicroscopes		

Abbreviations

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

Why you should choose a KERN microscope now!

For over 170 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.

By working closely with you and our production partners, within 3 years we have developed a complete product range of high-quality microscopes and refractometers.

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 2018: die KERN camera software – you will be amazed at how user-friendly and intuitive it is
 - 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 2018 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

fast	reliable	versatile
<ul style="list-style-type: none">• 24 hour dispatch service for products in stock – order today, on its way tomorrow• Sales & service hotline from 8:00 am to 5:00 pm	<ul style="list-style-type: none">• Up to 3 years warranty• Certified QM system DIN EN ISO 9001	<ul style="list-style-type: none">• One-stop shopping: from microscope through to refractometer – everything from one supplier• Quick as a flash, find the product you want with the “Quick-Finder” at www.kern-sohn.com

	Order hotline +49 [0] 7433 9933 -0		E-mail order info@kern-sohn.com		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 clever test weight and balance search engine.
	Service hotline +49 [0] 7433 9933 -199		Fax Order +49 [0] 7433 9933 -146		
	Online shop www.kern-sohn.com		Our team of consultants will assist you from Monday to Friday from 8:00 am to 5:00 pm		



Retailer information

Sales conditions

All prices are valid as of January 1st 2018 until a new version of the KERN catalogue is released. In Europe, all prices do not include the applicable V.A.T.

At KERN there is no minimum order value. For orders less than € 15.00 there is no re-sale discount available.

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

	Delivery is usually via courier service.
	When you see this symbol by truck, please ask for prices.

Extract from general terms and conditions :
Court of jurisdiction/Legal domicile: 72336 Balingen, Germany;
Commercial register N°: HRB 400865, AG Stuttgart;
Managing director: Albert Sauter, Martin 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.

Hire Purchase
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, GB, 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

Product group index 2018



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08

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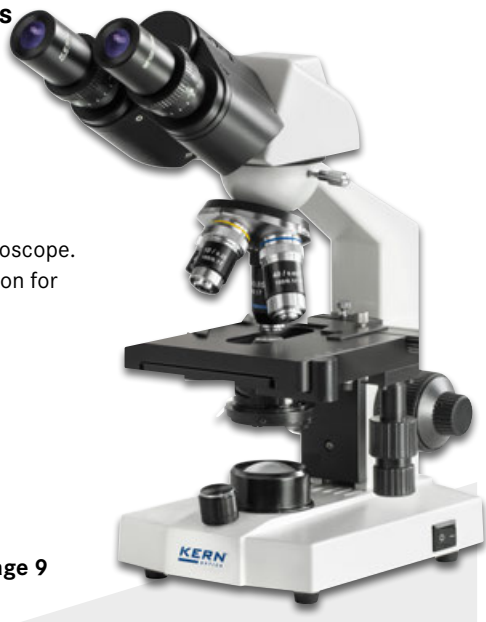
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HIGHLIGHTS 2018

Our highlights 2018: Innovative products in the usual KERN quality:

EDUCATIONAL LINE KERN OBS series

The new school microscope.
The perfect companion for
biology lessons



Further details ► page 9
from € 205,-

LAB LINE KERN OCM Inverted microscope

The inverted biological laboratory
microscope – also with fluorescence



Further details ► page 28
from € 3180,-

LAB LINE KERN OBL phase contrast

Phase contrast procedure made
easy through powerful features



Further details ► page 18
from € 1420,-

KERN 100× objectives (water/dry)

Generate 1000× magnification
WITHOUT using oil. Water and air are
then used as the immersion media,
which ensures high-quality imaging.



Further details ► page 10, 12, 13, 15, 17, 19, 21
only € 170,-

PROFESSIONAL LINE KERN OBN phase contrast

Fully-equipped phase contrast
microscope for a high level of
flexibility



Further details ► page 24
only € 2540,-

LED Fluorescence microscope

Expansion of our fluorescence
microscope range with a model
which is equipped with modern
LED technology



Further details ► page 26
only € 4470,-

LAB LINE KERN OLM Inverted microscope

The inverted metallurgical
microscope for professional
applications



Further details ► page 37
only € 3190,-

Stereomicroscopes KERN OZL-46

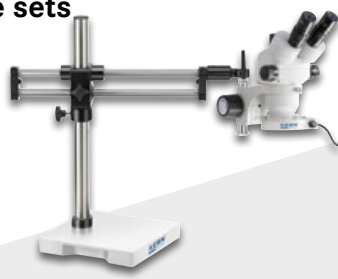
The bestseller range has grown
to include models with integrated
ring illumination units and a
practical carrying handle



Further details ► page 52
from € 500,-

KERN stereo microscope sets

Preconfigured stereo microscope set including stand and illumination for a large working distance



Further details ► page 72
from € 355,-

Stereo microscope modular system

Universal configuration for the very best level of flexibility and individual work



Further details ► from page 74

Polarisation ring illumination OZB-A7101

Powerful polarisation ring illumination unit which has been specially optimised for observing shiny surfaces



Further details ► page 83
only € 590,-

NEW

KERN C-mount cameras

Your assistant for professional digital observations



Further details ► page 86
from € 280,-

KERN eyepiece cameras

It's easy and in no time at all you're all ready for digital microscopy



Further details ► page 87
from € 185,-

KERN WLAN microscope

Digital microscopy, easier than ever before. Direct, wireless transfer of the live image from the hand-held microscope to your tablet or smartphone.



Further details ► page 88
only € 185,-

NEW

KERN Microscope VIS software

The perfect software for measuring, counting and documenting your samples



Further details ► page 89
Included with every KERN camera delivery

Digitale Refraktometer KERN ORF-Serie

Even more performance! IP65 protection, colour display, factory calibration and much more - all in the standard product!

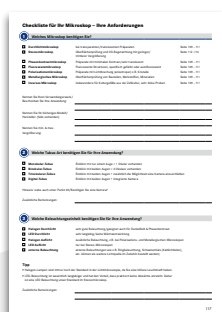


Further details ► page 98
from € 340,-

NEW

KERN Checklist for "My ideal microscope"

The clever helper when you are looking for the right microscope for your application

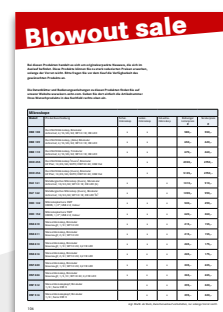


Further details ► page 108

KERN Blowout sale

Unbeatable offers/Everything must go. Buy products from our stock of discontinued models at significantly reduced prices.

Further details ► page 106







Microscopes

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Daniel Junger
Manager KERN Optics

Tel. +49 [0] 7433 9933- 155
Fax +49 [0] 7433 9933- 149
daniel.junger@kern-sohn.com

1 Compound microscopes

Compound, Phase contrast, Digital, Fluorescence and Inverted microscopes





OBS 101



OBS 104



OBS 106



Objectives OBS

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 lens with rotating aperture diaphragm disc on the OBS 101 ensures the very best concentration of light and illumination of the sample. The OBS 104 and OBS 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 106)
- A large selection of different eyepieces and objectives is also available
- Please find detailed information in the following model outfit list

Scope of application

- Primary school, secondary school, training, hobby use

Applications/Samples

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

Technical data

- Finite optical system (DIN)
- Triple (OBS 101) or quadplex (OBS 104, OBS 106) nosepiece
- Tube 45° (OBS 101) or 30° (OBS 104, OBS 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

STANDARD

OBS 104
OBS 106

Model	Standard configuration						Price excl. of VAT ex works €
	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 104	Binocular	WF 10×/ø 18 mm	Achromatic		0,5W LED (transmitted) (battery incl., rechargeable)	fix	325,- ↓
OBS 106	Binocular	WF 10×/ø 18 mm	Achromatic		0,5W LED (transmitted) (battery incl., rechargeable)	mechanical	360,- ↓

↓ Price reduction

Model outfit		Model KERN			Order number	Price/piece excl. of VAT ex works €
		OBS 101	OBS 104	OBS 106		
Eyepieces (23,2 mm)	WF 10×/ø 18 mm	✓	✓✓	✓✓	OBB-A1473	30,-
	WF 16×/ø 13 mm	○	○○	○○	OBB-A1474	30,-
	WF 20×/ø 11 mm	○	○○	○○	OBB-A1475	30,-
Achromatic objectives	4×/0,10 W.D. 18,0 mm	✓	✓	✓	OBB-A1476	35,-
	10×/0,25 W.D. 7,0 mm	✓	✓	✓	OBB-A1477	40,-
	40×/0,65 (spring) W.D. 0,53 mm	✓	✓	✓	OBB-A1478	45,-
	60×/0,85 (spring) W.D. 0,1 mm	○	○	○	OBB-A1479	60,-
	100×/1,25 (oil) (spring) W.D. 0,07 mm	○	○	○	OBB-A1480	65,-
	E-Plan 100×/0,80 (dry) (spring) W.D. 0,15 mm	○	○	○	OBB-A1442	170,-
	Plan 100×/1,0 (water) (spring) W.D. 0,18 mm	○	○	○	OBB-A1441	170,-
Monocular tube	45° inclined/360° rotatable	✓			OBB-A1471	
Binocular tube	<ul style="list-style-type: none"> • 30° inclined/360° rotatable • Interpupillary distance 55-75 mm • Diopter adjustment: Both-sided 		✓	✓	OBB-A1472	
Fixed stage	<ul style="list-style-type: none"> • Stage size W×D 110×120 mm • Coaxial coarse and fine focusing knobs, scale: 2,5 µm 	✓	✓			
Mechanical stage	<ul style="list-style-type: none"> • 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	✓				
	Abbe N.A. 1,25 (aperture diaphragm)		✓	✓		
Illumination	0,5 W LED illumination system (transmitted) (rechargeable)	✓	✓	✓		
Colour filters for transmitted illumination	Blue	✓	✓	✓	OBB-A1466	19,-
	Green	○	○	○	OBB-A1467	19,-
	Yellow	○	○	○	OBB-A1468	19,-
	Gray	○	○	○	OBB-A1184	19,-

✓ = Included with delivery

○ = Option



Trinocular version



Monocular version



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 mechanical stage is carried out using a coarse and fine focusing knob on both

sides. The ergonomically designed coaxial drive enables you to work with the samples and move them rapidly

- A large selection of different eyepieces and objectives, 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

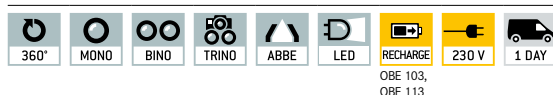
Applications/Samples

- 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



OPTION



Model	Standard configuration					Price excl. of VAT ex works €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
KERN						
OBE 101	Monocular	HWF 10×/ø 18 mm	Achromatic	4×/10×/40×	3 W LED (transmitted)	385,- ↓
OBE 102	Binocular	HWF 10×/ø 18 mm	Achromatic		3 W LED (transmitted)	480,- ↓
OBE 103	Binocular	HWF 10×/ø 18 mm	Achromatic		3 W LED (transmitted) (battery incl., rechargeable)	550,- ↓
OBE 104	Trinocular	HWF 10×/ø 18 mm	Achromatic		3 W LED (transmitted)	590,- ↓
OBE 111	Monocular	HWF 10×/ø 18 mm	Achromatic	4×/10×/40×/100×	3 W LED (transmitted)	450,-
OBE 112	Binocular	HWF 10×/ø 18 mm	Achromatic		3 W LED (transmitted)	540,- ↓
OBE 113	Binocular	HWF 10×/ø 18 mm	Achromatic		3 W LED (transmitted) (battery incl., rechargeable)	610,- ↓
OBE 114	Trinocular	HWF 10×/ø 18 mm	Achromatic		3 W LED (transmitted)	650,- ↓

↓ Price reduction

Model outfit		Model KERN				Order number	Price/piece excl. of VAT ex works €
		OBE 101	OBE 102	OBE 103	OBE 104		
Eyepieces (23,2 mm)	HWF 10×/ø 18 mm	✓	✓✓	✓✓	✓✓	OBB-A1403	45,-
	WF 16×/ø 13 mm	○	○○	○○	○○	OBB-A1354	45,-
	HWF 10×/ø 18 mm (with Pointer)	○	○	○	○	OBB-A1348	40,-
	HWF 10×/ø 18 mm (reticule 0,1 mm) (non-adjustable)	○	○	○	○	OBB-A1349	60,-
Achromatic objectives	4×/0,10 W.D. 18,6 mm	✓	✓	✓	✓	OBB-A1111	35,-
	10×/0,25 W.D. 6,5 mm	✓	✓	✓	✓	OBB-A1108	45,-
	40×/0,65 (spring) W.D. 0,47 mm	✓	✓	✓	✓	OBB-A1112	70,-
	100×/1,25 (oil) (spring) W.D. 0,07 mm	○	○	○	○	OBB-A1109	105,-
	20×/0,40 (spring) W.D. 1,75 mm	○	○	○	○	OBB-A1110	85,-
	60×/0,85 (spring) W.D. 0,1 mm	○	○	○	○	OBB-A1113	105,-
	E-Plan 100×/0,80 (dry) (spring) W.D. 0,15 mm	○	○	○	○	OBB-A1442	170,-
	Plan 100×/1,0 (water) (spring) W.D. 0,18 mm	○	○	○	○	OBB-A1441	170,-
Monocular tube	30° inclined/360° rotatable	✓				OBB-A1227	
Binocular tube	• Siedentopf 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Diopter adjustment: One-sided		✓	✓		OBB-A1123	
Trinocular tube	• see binocular tube • Light distribution 20:80				✓	OBB-A1341	
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	85,-
Darkfield unit	Usable for 4× – 40× objectives	○	○	○	○	OBB-A1148	85,-
Polarising unit	Analyser/Polariser	○	○	○	○	OBB-A1276	265,-
Illumination	3 W LED illumination system (transmitted) (non-rechargeable)	✓	✓		✓		
	3 W LED illumination system (transmitted) (rechargeable)			✓			
Colour filters for transmitted illumination	Blue	○	○	○	○	OBB-A1466	19,-
	Green	○	○	○	○	OBB-A1467	19,-
	Yellow	○	○	○	○	OBB-A1468	19,-
	Gray	○	○	○	○	OBB-A1184	19,-
C-Mount	0,5× (focus adjustable)				○	OBB-A1137	160,-
	1×				○	OBB-A1139	100,-

✓ = Included with delivery

○ = Option

Model outfit		Model KERN				Order number	Price/piece excl. of VAT ex works €
		OBE 111	OBE 112	OBE 113	OBE 114		
Eyepieces (23,2 mm)	HWF 10×/ø 18 mm	✓	✓✓	✓✓	✓✓	OBB-A1403	45,-
	WF 16×/ø 13 mm	○	○○	○○	○○	OBB-A1354	45,-
	HWF 10×/ø 18 mm (with Pointer)	○	○	○	○	OBB-A1348	40,-
	HWF 10×/ø 18 mm (reticule 0,1 mm) (non-adjustable)	○	○	○	○	OBB-A1349	60,-
Achromatic objectives	4×/0,10 W.D. 18,6 mm	✓	✓	✓	✓	OBB-A1111	35,-
	10×/0,25 W.D. 6,5 mm	✓	✓	✓	✓	OBB-A1108	45,-
	40×/0,65 (spring) W.D. 0,47 mm	✓	✓	✓	✓	OBB-A1112	70,-
	100×/1,25 (oil) (spring) W.D. 0,07 mm	✓	✓	✓	✓	OBB-A1109	105,-
	20×/0,40 (spring) W.D. 1,75 mm	○	○	○	○	OBB-A1110	85,-
	60×/0,85 (spring) W.D. 0,1 mm	○	○	○	○	OBB-A1113	105,-
	E-Plan 100×/0,80 (dry) (spring) W.D. 0,15 mm	○	○	○	○	OBB-A1442	170,-
	Plan 100×/1,0 (water) (spring) W.D. 0,18 mm	○	○	○	○	OBB-A1441	170,-
Monocular tube	30° inclined/360° rotatable	✓				OBB-A1227	
Binocular tube	• Siedentopf 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Diopter adjustment: One-sided		✓	✓		OBB-A1123	
Trinocular tube	• see binocular tube • Light distribution 20:80				✓	OBB-A1341	
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	85,-
Darkfield unit	Usable for 4× – 40× objectives	○	○	○	○	OBB-A1148	85,-
Polarising unit	Analyser/Polariser	○	○	○	○	OBB-A1276	265,-
Illumination	3 W LED illumination system (transmitted) (non-rechargeable)	✓	✓		✓		
	3 W LED illumination system (transmitted) (rechargeable)			✓			
Colour filters for transmitted illumination	Blue	○	○	○	○	OBB-A1466	19,-
	Green	○	○	○	○	OBB-A1467	19,-
	Yellow	○	○	○	○	OBB-A1468	19,-
	Gray	○	○	○	○	OBB-A1184	19,-
C-Mount	0,5× (focus adjustable)				○	OBB-A1137	160,-
	1×				○	OBB-A1139	100,-

✓ = Included with delivery

○ = Option



Trinocular version



Simple polarising attachment

LAB LINE

The high-performance compound microscope for every laboratory with fixed, pre-centred Koehler illumination

Features

- The KERN OBF models are excellent, stable laboratory microscopes for all common routine applications. A central feature of this adaptable, robust microscope series is the stable mechanism which can be adjusted precisely
- 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 and a simple polarising unit 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

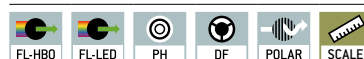
- Haematology, urology, gynaecology, dermatology, pathology, microbiology and parasitology, immunology, oncology, entomology, vets, water analysis and breweries

Applications/Samples

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

Technical data

- Finite optical system (DIN)
- 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 €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
KERN						
OBF 121	Binocular	HWF 10×/ø 18 mm	Achromatic	4×/10×/40×/100×	6 V/20 W Halogen (transmitted)	750,-
OBF 122	Binocular	HWF 10×/ø 18 mm	Plan		6 V/20 W Halogen (transmitted)	860,-
OBF 123	Binocular	HWF 10×/ø 18 mm	Plan		3 W LED (transmitted)	840,-
OBF 131	Trinocular	HWF 10×/ø 18 mm	Achromatic		6 V/20 W Halogen (transmitted)	860,-
OBF 132	Trinocular	HWF 10×/ø 18 mm	Plan		6 V/20 W Halogen (transmitted)	970,-
OBF 133	Trinocular	HWF 10×/ø 18 mm	Plan		3 W LED (transmitted)	950,-

Price reduction

Model outfit		Model KERN						Order number	Price/piece excl. of VAT ex works €
		OBF 121	OBF 131	OBF 122	OBF 132	OBF 123	OBF 133		
Eyepieces (23,2 mm)	HWF 10×/ø 18 mm	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	OBB-A1403	45,-
	WF 16×/ø 13 mm	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	OBB-A1354	45,-
	HWF 10×/ø 18 mm (with Pointer)	○	○	○	○	○	○	OBB-A1348	40,-
	HWF 10×/ø 18 mm (reticule 0,1 mm) (non-adjustable)	○	○	○	○	○	○	OBB-A1349	60,-
Achromatic objectives	4×/0,10 W.D. 18,6 mm	✓	✓					OBB-A1111	35,-
	10×/0,25 W.D. 6,5 mm	✓	✓					OBB-A1108	45,-
	40×/0,65 (spring) W.D. 0,47 mm	✓	✓					OBB-A1112	70,-
	100×/1,25 (oil) (spring) W.D. 0,07 mm	✓	✓					OBB-A1109	105,-
	20×/0,40 (spring) W.D. 1,75 mm	○	○					OBB-A1110	85,-
	60×/0,85 (spring) W.D. 0,1 mm	○	○					OBB-A1113	105,-
Plan objectives	4×/0,10 W.D. 14,5 mm			✓	✓	✓	✓	OBB-A1255	65,-
	10×/0,25 W.D. 5,65 mm			✓	✓	✓	✓	OBB-A1238	80,-
	40×/0,65 (spring) W.D. 0,85 mm			✓	✓	✓	✓	OBB-A1256	115,-
	100×/1,25 (oil) (spring) W.D. 0,07 mm			✓	✓	✓	✓	OBB-A1239	150,-
	20×/0,40 (spring) W.D. 1,5 mm			○	○	○	○	OBB-A1249	115,-
	60×/0,85 (spring) W.D. 0,07 mm			○	○	○	○	OBB-A1269	155,-
	100×/1,0 (water) (spring) W.D. 0,18 mm	○	○	○	○	○	○	OBB-A1441	170,-
Binocular tube	<ul style="list-style-type: none"> • Siedentopf 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm (for non-infinity system) • Diopter adjustment: One-sided 	✓	○	✓	○	✓	○	OBB-A1129	
Trinocular tube	<ul style="list-style-type: none"> • Siedentopf 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Light distribution 20:80 (for non-infinity system) • Diopter adjustment: One-sided 	○	✓	○	✓	○	✓	OBB-A1345	
Mechanical stage	<ul style="list-style-type: none"> • 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	85,-
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	○	○	○	○	OBB-A1422	230,-
Illumination	6 V/20 W Halogen spare bulb (transmitted)	✓	✓	✓	✓			OBB-A1370	25,-
	3 W LED illumination system (transmitted) (non-rechargeable)					✓	✓		
Polarising unit	Analyser/Polariser	○	○	○	○	○	○	OBB-A1277	265,-
Colour filters for transmitted illumination	Blue (built-in)	✓	✓	✓	✓	✓	✓		
	Green	○	○	○	○	○	○	OBB-A1188	19,-
	Yellow	○	○	○	○	○	○	OBB-A1165	19,-
	Gray	○	○	○	○	○	○	OBB-A1183	19,-
C-Mount	0,47× (focus adjustable)		○		○		○	OBB-A1135	160,-
	1×		○		○		○	OBB-A1142	100,-

✓ = Included with delivery

○ = Option



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

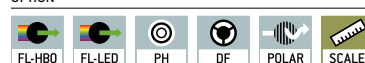
- Haematology, urology, gynaecology, dermatology, pathology, microbiology and parasitology, immunology, oncology, entomology, vets, water analysis and breweries

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 KERN	Standard configuration					Price excl. of VAT ex works €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
OBL 125	Binocular	HWF 10×/ø 20 mm	Infinity E-Plan	4×/10×/40×/100×	6 V/20 W Halogen (transmitted)	910,-
OBL 127	Binocular	HWF 10×/ø 20 mm	Infinity E-Plan		3 W LED (transmitted)	910,-
OBL 135	Trinocular	HWF 10×/ø 20 mm	Infinity E-Plan		6 V/20 W Halogen (transmitted)	1020,-
OBL 137	Trinocular	HWF 10×/ø 20 mm	Infinity E-Plan		3 W LED (transmitted)	1020,-

Price reduction

Model outfit		Model KERN				Order number	Price/piece excl. of VAT ex works €
		OBL 125	OBL 135	OBL 127	OBL 137		
Eyepieces (23,2 mm)	HWF 10×/ø 20 mm	✓✓	✓✓	✓✓	✓✓	OBB-A1404	95,-
	WF 16×/ø 13 mm	○ ○	○ ○	○ ○	○ ○	OBB-A1354	45,-
	HWF 10×/ø 20 mm (with Pointer)	○	○	○	○	OBB-A1448	80,-
Infinity E-Plan objectives	4×/0,10 W.D. 12,1 mm	✓	✓	✓	✓	OBB-A1161	90,-
	10×/0,25 W.D. 2,1 mm	✓	✓	✓	✓	OBB-A1159	150,-
	40×/0,65 (spring) W.D. 0,58 mm	✓	✓	✓	✓	OBB-A1160	265,-
	100×/1,25 (oil) (spring) W.D. 0,19 mm	✓	✓	✓	✓	OBB-A1158	335,-
	Plan 20×/0,40 (spring) W.D. 2,41 mm	○	○	○	○	OBB-A1250	265,-
	Plan 60×/0,80 (spring) W.D. 0,33 mm	○	○	○	○	OBB-A1270	360,-
	Plan 100×/1,15 (water) (spring) W.D. 0,18 mm	○	○	○	○	OBB-A1437	445,-
Binocular tube	<ul style="list-style-type: none"> Siedentopf 30° inclined/360° rotatable Interpupillary distance 50 – 75 mm (for infinity system) Diopter adjustment: One-sided 	✓	○	✓	○	OBB-A1130	
Trinocular tube	<ul style="list-style-type: none"> Siedentopf 30° inclined/360° rotatable Interpupillary distance 50 – 75 mm Light distribution 20:80 (for infinity system) Diopter adjustment: One-sided 	○	✓	○		OBB-A1346	
					✓	OBB-A1549	
Mechanical stage	<ul style="list-style-type: none"> 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	85,-
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	○	○	OBB-A1422	230,-
Illumination	6 V/20 W Halogen spare bulb (transmitted)	✓	✓			OBB-A1370	25,-
	3 W LED illumination system (transmitted) (non-rechargeable)			✓	✓		
Polarising unit	Analyser/Polariser	○	○	○	○	OBB-A1277	265,-
Phase contrast units (including PH-condenser and PH-slides)	Single unit with ∞ PH-Plan objective 10×	○	○	○	○	OBB-A1215	310,-
	Single unit with ∞ PH-Plan objective 20×	○	○	○	○	OBB-A1217	350,-
	Single unit with ∞ PH-Plan objective 40×	○	○	○	○	OBB-A1219	420,-
	Single unit with ∞ PH-Plan objective 100×	○	○	○	○	OBB-A1213	510,-
	If required, there are several magnification levels, please contact our OPTICS product management team						
Fluorescence unit	100 W HBO Epi Fluorescence unit, three-hole slide (B/G) including centering objective	○	○	○	○	OBB-A1154	2350,-
	3 W LED Epi Fluorescence unit, three-hole slide (B/G) including centering objective	○	○	○	○	OBB-A1157	3110,-
Colour filters for transmitted illumination	Blue (built-in)	✓	✓	✓	✓		
	Green	○	○	○	○	OBB-A1188	19,-
	Yellow	○	○	○	○	OBB-A1165	19,-
	Gray	○	○	○	○	OBB-A1183	19,-
C-Mount	0,47× (focus adjustable)	○	○	○		OBB-A1135	160,-
	0,5× (focus adjustable)				○	OBB-A1515	185,-
	1×	○	○	○		OBB-A1142	100,-
					○	OBB-A1514	120,-

✓ = 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
- A strong and continuously adjustable 20 W halogen illumination unit (Philips) ensures the optimum lighting conditions
- A special fixed, pre-centred phase contrast condenser with aperture diaphragm 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 €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
KERN						
OBL 145	Binocular	HWF 10×/ø 20 mm	Infinity E-Plan/ Plan	4×/PH10×/ PH40×/100×	6 V/20 W Halogen (transmitted)	1420,-
OBL 155	Trinocular	HWF 10×/ø 20 mm	Infinity E-Plan/ Plan		6 V/20 W Halogen (transmitted)	1530,-

Price reduction

Model outfit		Model KERN		Order number	Price/piece excl. of VAT ex works €
		OBL 145	OBL 155		
Eyepieces (23,2 mm)	HWF 10×/ø 20 mm	✓✓	✓✓	OBB-A1404	95,-
	WF 16×/ø 13 mm	○ ○	○ ○	OBB-A1354	45,-
	HWF 10×/ø 20 mm (with Pointer)	○	○	OBB-A1448	80,-
Infinity E-Plan objectives	4×/0,10 W.D. 12,1 mm	✓	✓	OBB-A1161	90,-
	10×/0,25 W.D. 2,1 mm	○	○	OBB-A1159	150,-
	40×/0,65 (spring) W.D. 0,58 mm	○	○	OBB-A1160	265,-
	100×/1,25 (oil) (spring) W.D. 0,19 mm	✓	✓	OBB-A1158	335,-
	Plan 20×/0,40 (spring) W.D. 2,41 mm	○	○	OBB-A1250	265,-
	Plan 60×/0,80 (spring) W.D. 0,33 mm	○	○	OBB-A1270	360,-
	Plan 100×/1,15 (water) (spring) W.D. 0,18 mm	○	○	OBB-A1437	445,-
Binocular tube	<ul style="list-style-type: none"> • Siedentopf 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm (for infinity system) • Diopter adjustment: One-sided 	✓	○	OBB-A1130	
Trinocular tube	<ul style="list-style-type: none"> • Siedentopf 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Light distribution 20:80 (for infinity system) • Diopter adjustment: One-sided 	○	✓	OBB-A1549	
Mechanical stage	<ul style="list-style-type: none"> • 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	150,-
Phase contrast units	Infinity PH-Plan objective 10×	✓	✓	OBB-A1390	170,-
	Infinity PH-Plan objective 20×	○	○	OBB-A1391	200,-
	Infinity PH-Plan objective 40×	✓	✓	OBB-A1392	260,-
	Infinity PH-Plan objective 100×	○	○	OBB-A1393	345,-
	PH slide 10×	✓	✓	OBB-A1399	75,-
	PH slide 20×	○	○	OBB-A1400	75,-
	PH slide 40×	✓	✓	OBB-A1401	75,-
	PH slide 100×	○	○	OBB-A1402	75,-
	Centering eyepiece	✓	✓		
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	OBB-A1422	230,-
Illumination	6 V/20 W Halogen spare bulb (transmitted)	✓	✓	OBB-A1370	25,-
Colour filters for transmitted illumination	Blue (built-in)	✓	✓		
	Green	✓	✓	OBB-A1188	19,-
	Yellow	○	○	OBB-A1165	19,-
	Gray	○	○	OBB-A1183	19,-
C-Mount	0,5× (focus adjustable)		○	OBB-A1515	185,-
	1×		○	OBB-A1514	120,-

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



Easy connection to the PC,
Laptop not included in delivery
Please find the description of the
software in chapter 8 (p. 93)

LAB LINE

The digital all-round talent for your applications, documentation
and live transmissions through an integrated camera

Features

- The KERN OBD is an excellent, stable laboratory microscope with integrated camera and infinity optical system, based on the OBL series
- A strong and continuously adjustable 20 W halogen illumination unit (Philips) ensures the optimum lighting conditions
- 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, a simple polarising unit as well as phase contrast units are available to you as accessories
- Multi-lingual software, USB cable, calibration scale as well as a protective dust cover, eye cups and multi-lingual user instructions are included in the scope of delivery
- 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, if necessary, for training where there will be lots of people observing the screen/beamer at the same time

Applications/Samples

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

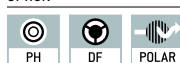
Technical data

- Infinity optical system
- Quadplex nosepiece
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment: One-sided
- Overall dimensions W×D×H
395×200×430 mm
- Net weight approx. 7 kg

STANDARD



OPTION



Model	Standard configuration					Price excl. of VAT ex works €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
KERN						
OBD 127	Binocular/3MP digital/USB 2.0	HWF 10×/ø 20 mm	Infinity E-Plan	4×/10×/40×/100×	6 V/20 W Halogen (transmitted)	1510,-
OBD 128	Binocular/5MP digital/USB 2.0	HWF 10×/ø 20 mm	Infinity E-Plan		6 V/20 W Halogen (transmitted)	1600,-

Price reduction

Model outfit		Model KERN		Order number	Price/piece excl. of VAT ex works €
		OBD 127	OBD 128		
Eyepieces (23,2 mm)	HWF 10×/ø 20 mm	✓✓	✓✓	OBB-A1404	95,-
	WF 16×/ø 13 mm	○○	○○	OBB-A1354	45,-
	HWF 10×/ø 20 mm (with Pointer)	○	○	OBB-A1448	80,-
Infinity E-Plan objectives	4×/0,10 W.D. 12,1 mm	✓	✓	OBB-A1161	90,-
	10×/0,25 W.D. 2,1 mm	✓	✓	OBB-A1159	150,-
	40×/0,65 (spring) W.D. 0,58 mm	✓	✓	OBB-A1160	265,-
	100×/1,25 (oil) (spring) W.D. 0,19 mm	✓	✓	OBB-A1158	335,-
	Plan 20×/0,40 (spring) W.D. 2,41 mm	○	○	OBB-A1250	265,-
	Plan 60×/0,80 (spring) W.D. 0,33 mm	○	○	OBB-A1270	360,-
	Plan 100×/1,15 (water) (spring) W.D. 0,18 mm	○	○	OBB-A1437	445,-
Digital tube Trinocular (3MP)	<ul style="list-style-type: none"> • 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Diopter adjustment: One-sided • Light distribution 80:20 • Built-in digital 3MP Camera with ½" CMOS • USB port for PC without extra power supply • With multilingual (DE, EN, FR, IT, ES) software "Microscope VIS" for Windows XP, Vista, 7, 8, 10 	✓		OBB-A1126	
Digital tube Trinocular (5MP)	<ul style="list-style-type: none"> • 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Diopter adjustment: One-sided • Light distribution 80:20 • Built-in digital 5 MP Camera with ½,5" CMOS • USB port for PC without extra power supply • With multilingual (DE, EN, FR, IT, ES) software "Microscope VIS" for Windows XP, Vista, 7, 8, 10 		✓	OBB-A1127	
Object micrometer	For calibrating the software measuring function, 0.01 mm division	✓	✓	OBB-A1224	70,-
Mechanical stage	<ul style="list-style-type: none"> • Stage size W×D 145×130 mm • Travel 76×52 mm • Two slide holder • Coaxial coarse and fine focusing knobs, scale: 2 µm 	✓	✓		
Condenser	Abbe N.A. 1,25 precentered (aperture diaphragm)	✓	✓	OBB-A1103	85,-
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	OBB-A1422	230,-
Illumination	6 V/20 W Halogen spare bulb (transmitted)	✓	✓	OBB-A1370	25,-
Polarising unit	Analyser/Polariser	○	○	OBB-A1277	265,-
Phase contrast units (including PH-condenser and PH-slides)	Single unit with ∞ PH-Plan objective 10×	○	○	OBB-A1215	310,-
	Single unit with ∞ PH-Plan objective 20×	○	○	OBB-A1217	350,-
	Single unit with ∞ PH-Plan objective 40×	○	○	OBB-A1219	420,-
	Single unit with ∞ PH-Plan objective 100×	○	○	OBB-A1213	510,-
	If required, there are several magnification levels, please contact our OPTICS product management team				
Colour filters for transmitted illumination	Blue (built-in)	✓	✓		
	Green	○	○	OBB-A1188	19,-
	Yellow	○	○	OBB-A1165	19,-
	Gray	○	○	OBB-A1183	19,-

✓ = Included with delivery

○ = Option



Abbe condenser center-adjustable,
also available with swing-out lens



Butterfly Tube (optionally available)

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)
- 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
- 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

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

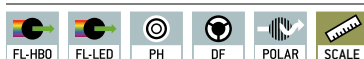
Technical data

- 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 €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
KERN						
OBN 132	Trinocular	HWF 10×/ø 20 mm	Infinity Plan	4×/10×/20×/ 40×/100×	6 V/20 W Halogen (transmitted)	1370,-
OBN 135	Trinocular	HWF 10×/ø 20 mm	Infinity Plan		3 W LED (transmitted)	1390,-

Price reduction

Model outfit		Model KERN		Order number	Price/piece excl. of VAT ex works €
		OBN 132	OBN 135		
Eyepieces (23,2 mm)	HWF 10×/ø 20 mm	✓✓	✓✓	OBB-A1404	95,-
	WF 16×/ø 13 mm	○ ○	○ ○	OBB-A1354	45,-
Infinity Plan achromatic objectives	4×/0,10 W.D. 12,1 mm	✓	✓	OBB-A1263	110,-
	10×/0,25 W.D. 4,64 mm	✓	✓	OBB-A1243	195,-
	20×/0,40 (spring) W.D. 2,41 mm	✓	✓	OBB-A1250	265,-
	40×/0,66 (spring) W.D. 0,65 mm	✓	✓	OBB-A1257	290,-
	100×/1,25 (oil) (spring) W.D. 0,19 mm	✓	✓	OBB-A1240	315,-
	2,5×/0,07 W.D. 8,47 mm	○	○	OBB-A1247	265,-
	Plan 60×/0,80 (spring) W.D. 0,33 mm	○	○	OBB-A1270	360,-
	Plan 100×/1,15 (water) (spring) W.D. 0,18 mm	○	○	OBB-A1437	445,-
Trinocular tube	• Siedentopf 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Light distribution 100:0 • Diopter adjustment: Both-sided	✓	✓		
	• Butterfly 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Light distribution 100:0 • Diopter adjustment: Both-sided	○	○	OBB-A1382	520,-
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	85,-
	Swing-out condenser N.A. 0,9/0,13 center-adjustable (aperture diaphragm)	○	○	OBB-A1104	220,-
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	OBB-A1421	265,-
Koehler illumination	6 V/20 W Halogen spare bulb (transmitted)	✓		OBB-A1370	25,-
	3 W LED illumination system (transmitted) (non-rechargeable)		✓		
Polarising unit	Analyser/Polariser	○	○	OBB-A1283	265,-
Phase contrast units	Quintuple hole turret with 10×/20×/40×/100× Infinity-PH-Plan objectives (complete set)	○	○	OBB-A1237	1570,-
	Single unit with ∞ PH-Plan objective 10×	○	○	OBB-A1214	310,-
	Single unit with ∞ PH-Plan objective 20×	○	○	OBB-A1216	350,-
	Single unit with ∞ PH-Plan objective 40×	○	○	OBB-A1218	420,-
	Single unit with ∞ PH-Plan objective 100×	○	○	OBB-A1212	510,-
	If required, there are several magnification levels, please contact our OPTICS product management team				
C-Mount	1×	○	○	OBB-A1140	100,-
	0,57× (focus adjustable)	○	○	OBB-A1136	160,-
Fluorescence unit	100 W HBO Epi Fluorescence unit 6-filter disc (UV/V/B/G) including centering objective	○	○	OBB-A1155	4340,-
	100 W HBO Epi Fluorescence unit, two-hole slide (B/G) including centering objective	○	○	OBB-A1153	3080,-
	3 W LED Epi Fluorescence unit (B/G) including centering objective	○	○	OBB-A1156	3110,-
Colour filters for transmitted illumination	Blue	✓			
	Green	○	○	OBB-A1188	19,-
	Yellow	○	○	OBB-A1165	19,-
	Gray	○	○	OBB-A1183	19,-

✓ = Included with delivery

○ = Option



Mounted phase contrast condenser



Quintuple PH universal rotary condenser with
10×/20×/40×/100×
Infinity PH-Plan objectives (complete set)

PROFESSIONAL LINE

The powerful, fully-equipped phase contrast microscope with varied options

Features

- This series stands out through its wide-ranging phase-contrast feature which goes beyond the standard OBN level of quality
- A strong and continuously adjustable 20 W halogen transmitted illumination unit (Philips) ensures the optimum illumination of your samples
- This series has a professional Koehler illumination unit with a special height-adjustable PH universal rotary condenser which can be centred as well as an aperture diaphragm and field 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
- The combination of a professional quintuple condenser wheel, the phase contrast condenser and the Infinity Plan phase contrast objectives makes the KERN OBN 158 a high-quality, fully-equipped microscope for all applications related to contrast procedures
- A wide variety of modular systems, such as, for example, a swing-out condenser, various eyepieces, objectives, colour filters, a darkfield condenser, a simple polarising unit, Butterfly Tube, through to complete fluorescence units are available to you as accessories
- This centring eyepiece for adjusting the phase contrast, a protective dust cover, eye cups as well as multi-lingual user instructions are included in the scope of delivery
- A C-mount adapter is required to connect a camera. 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

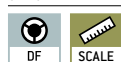
Technical data

- Infinity optical system
- 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 €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
KERN						
OBN 158	Trinocular	HWF 10×/ø 20 mm	Infinity Plan	4×/PH10×/PH20×/ PH40×/PH100×	6 V/20 W Halogen (transmitted)	2540,-

Price reduction

Model outfit		Model KERN	Order number	Price/piece excl. of VAT ex works €
		OBN 158		
Eyepieces (23,2 mm)	HWF 10×/ø 20 mm	✓✓	OBB-A1404	95,-
	WF 16×/ø 13 mm	○ ○	OBB-A1354	45,-
Infinity Plan achromatic objectives	4×/0,10 W.D. 12,1 mm	✓	OBB-A1263	110,-
	10×/0,25 W.D. 4,64 mm	○	OBB-A1243	195,-
	20×/0,40 (spring) W.D. 2,41 mm	○	OBB-A1250	265,-
	40×/0,66 (spring) W.D. 0,65 mm	○	OBB-A1257	290,-
	100×/1,25 (oil) (spring) W.D. 0,19 mm	○	OBB-A1240	315,-
	2,5×/0,07 W.D. 8,47 mm	○	OBB-A1247	265,-
	Plan 60×/0,80 (spring) W.D. 0,33 mm	○	OBB-A1270	360,-
Trinocular tube	<ul style="list-style-type: none"> • Siedentopf 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Light distribution 100:0 • Diopter adjustment: Both-sided 	✓		
	<ul style="list-style-type: none"> • Butterfly 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Light distribution 100:0 • Diopter adjustment: Both-sided 	○	OBB-A1382	520,-
Mechanical stage	<ul style="list-style-type: none"> • Stage size W×D 175×145 mm • Travel 78×55 mm • Coaxial coarse and fine focusing knobs • Two slide holder 	✓		
PH condenser	Universal rotary condenser for bright field and phase contrast suitable for 10×/20×/40×/100× PH objectives center-adjustable PH ring units; with aperture diaphragm	✓		
Phase contrast units	Infinity PH-Plan objective 10×	✓	OBB-A1390	170,-
	Infinity PH-Plan objective 20×	✓	OBB-A1391	200,-
	Infinity PH-Plan objective 40×	✓	OBB-A1392	260,-
	Infinity PH-Plan objective 100×	✓	OBB-A1393	345,-
	Centering eyepiece	✓		
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	OBB-A1421	265,-
Koehler illumination	6 V/20 W Halogen spare bulb (transmitted)	✓	OBB-A1370	25,-
Colour filters for transmitted illumination	Blue	○	OBB-A1170	19,-
	Green	✓		
	Yellow	○	OBB-A1165	19,-
	Gray	○	OBB-A1183	19,-
C-Mount	1×	○	OBB-A1140	100,-
	0,57× (focus adjustable)	○	OBB-A1136	160,-

For further optional accessories, please see the list of items for the OBN-13 series from page 23

✓ = Included with delivery

○ = Option



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.)

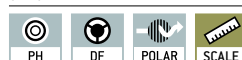
Technical data

- 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 €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
KERN						
OBN 141 <small>NEW</small>	Trinocular	WF 10×/ø 20 mm	Infinity Plan	4×/10×/20×/ 40×/100×	LED + 3 W LED Epi Fluorescence (B/G)	4470,-
OBN 147	Trinocular	WF 10×/ø 20 mm	Infinity Plan		Halogen + 100 W Epi Fluorescence (B/G)	4390,- <small>↓</small>
OBN 148	Trinocular	WF 10×/ø 20 mm	Infinity Plan		Halogen + 100 W Epi Fluorescence (B/G/UV/V)	5630,- <small>↓</small>

NEW New model

↓ Price reduction

Model outfit		Model KERN			Order number	Price/piece excl. of VAT ex works €
		OBN 141	OBN 147	OBN 148		
Eyepieces (23,2 mm)	WF 10×/ø 20 mm	✓✓	✓✓	✓✓	OBB-A1351	85,-
	WF 16×/ø 13 mm	○ ○	○ ○	○ ○	OBB-A1354	45,-
	WF 10×/ø 20 mm (reticule 0,1 mm) (adjustable)	○	○	○	OBB-A1352	140,-
Infinity Plan achromatic objectives	4×/0,10 W.D. 12,1 mm	✓	✓	✓	OBB-A1263	110,-
	10×/0,25 W.D. 4,64 mm	✓	✓	✓	OBB-A1243	195,-
	20×/0,40 (spring) W.D. 2,41 mm	✓	✓	✓	OBB-A1250	265,-
	40×/0,66 (spring) W.D. 0,65 mm	✓	✓	✓	OBB-A1257	290,-
	100×/1,25 (oil) (spring) W.D. 0,19 mm	✓	✓	✓	OBB-A1240	315,-
	2,5×/0,07 W.D. 8,47 mm	○	○	○	OBB-A1247	265,-
	Plan 60×/0,80 (spring) W.D. 0,33 mm	○	○	○	OBB-A1270	360,-
Trinocular tube	• Siedentopf 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Light distribution 100:0 • Diopter adjustment: Both-sided	✓	✓	✓		
	• Butterfly 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Light distribution 100:0 • Diopter adjustment: Both-sided	○	○	○	OBB-A1382	520,-
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	85,-
	Swing-out condenser N.A. 0,9/0,13 center-adjustable (aperture diaphragm)	○	○	○	OBB-A1104	220,-
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	○	OBB-A1421	265,-
Koehler illumination	6 V/20 W Halogen spare bulb (transmitted)	✓	✓	✓	OBB-A1370	25,-
Polarising unit	Analyser/Polariser	○	○	○	OBB-A1283	265,-
Phase contrast units	Quintuple hole turret with 10×/20×/40×/100× Infinity-PH-Plan objectives (complete set)	○	○	○	OBB-A1237	1570,-
	Single unit with ∞ PH-Plan objective 10×	○	○	○	OBB-A1214	310,-
	Single unit with ∞ PH-Plan objective 20×	○	○	○	OBB-A1216	350,-
	Single unit with ∞ PH-Plan objective 40×	○	○	○	OBB-A1218	420,-
	Single unit with ∞ PH-Plan objective 100×	○	○	○	OBB-A1212	510,-
	If required, there are several magnification levels, please contact our OPTICS product management team					
C-Mount	1×	○	○	○	OBB-A1140	100,-
	0,57× (focus adjustable)	○	○	○	OBB-A1136	160,-
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	19,-
	Yellow	○	○	○	OBB-A1165	19,-
	Gray	○	○	○	OBB-A1183	19,-

✓ = Included with delivery

○ = Option



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. An additional Osram 100 W Epi fluorescence illumination unit is available to you as a fluorescence microscope (OCM 165) for perfect illumination and excitation 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 (Ø 118 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

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

STANDARD



Model	Standard configuration					Price excl. of VAT ex works €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
KERN						
OCM 161	Trinocular	HWF 10×/Ø 22 mm	Infinity Plan	LWD10×/LWD20×/ LWD40×/LWD20×PH	6 V/30 W Halogen (transmitted)	3180,- ↓
OCM 165	Trinocular	HWF 10×/Ø 22 mm	Infinity Plan		6 V/30 W Halogen + 100 W Epi Fluorescence (B/G)	7790,- ↓

↓ Price reduction

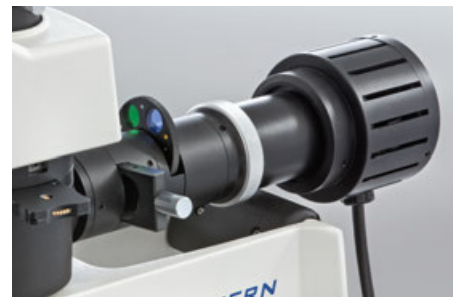
Model outfit		Model KERN		Order number	Price/piece excl. of VAT ex works €
		OCM 161	OCM 165		
Eyepieces (30 mm)	HWF 10×/ø 22 mm (adjustable)	✓✓	✓✓	OBB-A1491	90,-
	HWF 10×/ø 20 mm (reticule 0,1 mm) (adjustable)	○	○	OBB-A1523	140,-
Infinity Plan achromatic objectives for long working distance	4×/0,11 W.D. 12,1 mm	○	○	OBB-A1493	135,-
	10×/0,25 W.D. 8,3 mm	✓	✓	OBB-A1494	160,-
	20×/0,40 W.D. 7,2 mm	✓	✓	OBB-A1495	215,-
	40×/0,60 W.D. 3,4 mm	✓	✓	OBB-A1496	280,-
Trinocular tube	<ul style="list-style-type: none"> • 45° inclined • Interpupillary distance 48–76 mm • Light distribution 100:0 • Diopter adjustment: Both-sided 	✓	✓		
Mechanical stage	<ul style="list-style-type: none"> • 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 (ø 110)	✓	✓	OBB-A1503	30,-
	Specimen holder for 35 mm culture dish	○	○	OBB-A1505	60,-
	Specimen holder for 54 mm culture dish	✓	✓	OBB-A1506	60,-
	Specimen holder for 65 mm culture dish	○	○	OBB-A1507	60,-
Condenser	Abbe N.A. 0,3 (aperture diaphragm), LWD 72 mm	✓	✓		
Illumination	6 V/30 W Halogen spare bulb (transmitted)	✓	✓	OBB-A1372	35,-
Phase contrast units	Phase contrast slide (universal)	✓	✓	OBB-A1500	100,-
	Infinity PH-Plan objective 10×	○	○	OBB-A1497	215,-
	Infinity PH-Plan objective 20×	✓	✓	OBB-A1498	280,-
	Infinity PH-Plan objective 40×	○	○	OBB-A1499	330,-
	Centering eyepiece	✓	✓	OBB-A1544	110,-
Fluorescence unit	100 W HBO Epi Fluorescence unit, two-hole slide (B/G)		✓		
Colour filters for transmitted illumination	Blue	✓	✓	OBB-A1510	19,-
	Green	✓	✓	OBB-A1511	19,-
	Yellow	○	○	OBB-A1512	19,-
	Gray	○	○	OBB-A1513	19,-
C-Mount	0,5×	○	○	OBB-A1515	185,-
	1×	○	○	OBB-A1514	120,-

✓ = Included with delivery

○ = Option

2 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 €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
KERN						
OKM 172*	Binocular	HFW 10×/ø 18 mm	Infinity Plan	5×/10×/ LWD 20×/ LWD40×	6 V/30 W Halogen (incident)	1830,- ↓
OKM 173	Trinocular	HFW 10×/ø 18 mm	Infinity Plan		6 V/30 W Halogen (incident)	1920,- ↓

! *ONLY WHILE STOCKS LAST

↓ Price reduction

Model outfit		Model KERN		Order number	Price/piece excl. of VAT ex works €
		OKM 172	OKM 173		
Eyepieces (23,2 mm)	HWF 10×/ø 18 mm	✓	✓	OBB-A1403	45,-
	HWF 10×/ø 18 mm (reticule 0,1 mm) (non-adjustable)	✓	✓	OBB-A1349	60,-
	WF 5×/ø 20 mm	○	○	OBB-A1355	55,-
	WF 12,5×/ø 14 mm	○	○	OBB-A1353	75,-
	WF 16×/ø 13 mm	○	○	OBB-A1354	45,-
Infinity Plan achromatic objectives (no cover glass)	5×/0,11 W.D. 12,10 mm	✓	✓	OBB-A1268	105,-
	10×/0,25 W.D. 4,75 mm	✓	✓	OBB-A1244	195,-
	20×/0,40 (spring) W.D. 2,14 mm	○	○	OBB-A1251	265,-
	40×/0,65 (spring) W.D. 0,45 mm	○	○	OBB-A1258	290,-
Infinity Plan achromatic objectives (no cover glass) for long working distance	20×/0,40 W.D. 8,35 mm	✓	✓	OBB-A1252	290,-
	40×/0,65 W.D. 3,90 mm	✓	✓	OBB-A1259	405,-
	50×/0,70 (spring) W.D. 1,95 mm	○	○	OBB-A1266	450,-
	80×/0,80 (spring) W.D. 0,85 mm	○	○	OBB-A1271	500,-
Binocular tube	<ul style="list-style-type: none"> • Siedentopf 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Diopter adjustment: One-sided 	✓	○	OBB-A1130	
Trinocular tube	<ul style="list-style-type: none"> • Siedentopf 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Light distribution 80:20 • Diopter adjustment: One-sided 	○	✓	OBB-A1346	
Mechanical stage	<ul style="list-style-type: none"> • Stage size W×D 200×140 mm • Travel 76×52 mm • Coaxial coarse and fine focusing knobs 	✓	✓		
Illumination	6 V/30 W Halogen spare bulb (incident)	✓	✓	OBB-A1372	35,-
Reflected illumination unit	5-filter unit (Blue, Green, Yellow, Gray, Empty)	✓	✓		
	Polarising unit (Incl. analyser and polariser slide)	✓	✓		
C-Mount	1×	○	○	OBB-A1142	100,-
	0,47× (focus adjustable)	○	○	OBB-A1135	160,-

✓ = Included with delivery

○ = Option



Stage OKN



Stage OKO



Illumination unit

02

PROFESSIONAL LINE MET

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

Features

- The KERN OKN and OKO series are professional, versatile, metallurgical microscopes, which are used in testing metals and analysing surfaces
- You can choose between two reflected illumination units: A 50 W halogen reflected illumination unit or a premium illumination unit with stunning 100 W reflected illumination for powerful performance
- A height-adjustable 1,25 Abbe condenser which can be centred as well as a field diaphragm are available for the transmitted light variants (KERN OKO series), for complete professional Koehler illumination
- The KERN OKO transmitted illumination variant is fitted with an open, mechanical stage, as standard. On the other hand, the KERN OKN reflected illumination variant has a closed, mechanical stage, as standard
- A simple polarising unit (analyser and polariser) is included with delivery
- A large selection of accessories, such as, for example, a Butterfly Tube, 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



Model	Standard configuration					Price excl. of VAT ex works €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
KERN						
OKN 175	Trinocular	WF 10×/ø 18 mm	Infinity Plan	5×/10×/LWD20×/LWD40×	12 V/50 W Halogen (incident)	2390,- ↓
OKO 176	Trinocular	WF 10×/ø 18 mm	Infinity Plan	5×/10×/LWD20×/LWD40×/100×	12 V/50 W Halogen (incident) + 6 V/20 W (transmitted)	2960,- ↓
OKN 177	Trinocular	WF 10×/ø 18 mm	Infinity Plan	5×/10×/LWD20×/LWD40×	12 V/100 W Halogen (incident)	2620,- ↓
OKO 178	Trinocular	WF 10×/ø 18 mm	Infinity Plan	5×/10×/LWD20×/LWD40×/100×	12 V/100 W Halogen (incident) + 6 V/20 W (transmitted)	3180,- ↓

↓ Price reduction

Model outfit		Model KERN				Order number	Price/piece excl. of VAT ex works €
		OKN 175	OKO 176	OKN 177	OKO 178		
Eyepieces (23,2 mm)	WF 10×/ø 18 mm	✓✓	✓✓	✓✓	✓✓	OBB-A1347	40,-
	WF 10×/ø 18 mm (reticule 0,1 mm) (adjustable)	✓	✓	✓	✓	OBB-A1350	90,-
	WF 5×/ø 20 mm	○ ○	○ ○	○ ○	○ ○	OBB-A1355	55,-
	WF 12,5×/ø 14 mm	○ ○	○ ○	○ ○	○ ○	OBB-A1353	75,-
	WF 16×/ø 13 mm	○ ○	○ ○	○ ○	○ ○	OBB-A1354	45,-
Infinity Plan objectives (no cover glass)	5×/0,11 W.D. 6,73 mm	✓	✓	✓	✓	OBB-A1268	105,-
	10×/0,25 W.D. 4,19 mm	✓	✓	✓	✓	OBB-A1244	195,-
	20×/0,40 (spring) W.D. 2,14 mm	○	○	○	○	OBB-A1251	265,-
	40×/0,65 (spring) W.D. 0,45 mm	○	○	○	○	OBB-A1258	290,-
	100×/1,25 (oil) (spring) W.D. 0,12 mm		✓		✓	OBB-A1241	315,-
Infinity Plan objectives (no cover glass) for long working distance	20×/0,40 W.D. 8,35 mm	✓	✓	✓	✓	OBB-A1252	290,-
	40×/0,65 W.D. 3,90 mm	✓	✓	✓	✓	OBB-A1259	405,-
	50×/0,70 (spring) W.D. 1,95 mm	○	○	○	○	OBB-A1266	450,-
	80×/0,80 (spring) W.D. 0,85 mm	○	○	○	○	OBB-A1271	500,-
Trinocular tube	• Siedentopf 30° inclined/360° rotatable • Interpupillary distance 50 – 75mm • Light distribution 100:0 • Diopter adjustment: Both-sided	✓	✓	✓	✓		
	• Butterfly 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Light distribution 100:0 • Diopter adjustment: Both-sided	○	○	○	○	OBB-A1382	520,-
Mechanical stage for reflection	• Stage size W×D 200×140 mm • Travel 78×55 mm • Stage fast lowering unit • Stage Up-Down moving range: max. 50 mm	✓		✓			
Mechanical stage for transmitted illumination	• Stage size W×D 175×145 mm • Travel 78×55 mm • Coaxial coarse and fine focusing knobs		✓		✓		
Stage plate	Plate for sample placement	✓	✓	✓	✓		
Glass plate	Glass plate		○		○	OBB-A1378	50,-
Reflected illumination unit	Polarising unit (Incl. analyser, polariser and blue filter slide)	✓	✓	✓	✓		
Condenser	Abbe N.A. 1,25 (aperture diaphragm)		✓		✓	OBB-A1380	100,-
Illumination	6 V/20 W Halogen spare bulb (transmitted)		✓		✓	OBB-A1370	25,-
	12 V/50 W Halogen spare bulb (incident)	✓	✓			OBB-A1207	19,-
	12 V/100 W Halogen spare bulb (incident)			✓	✓	OBB-A1377	35,-
Polarising unit	for transmitted illumination		✓		✓	OBB-A1470	135,-
Colour filters for transmitted illumination	Blue		✓		✓		
	Green		○		○	OBB-A1188	19,-
	Yellow		○		○	OBB-A1165	19,-
	Gray		○		○	OBB-A1183	19,-
C-Mount	1×	○	○	○	○	OBB-A1140	100,-
	0,57× (focus adjustable)	○	○	○	○	OBB-A1136	160,-

✓ = Included with delivery

○ = Option



OLE 161



OLF 162

EDUCATIONAL LINE MET

The compact inverted metallurgical microscope for details with large workpieces

Features

- The inverted series – KERN OLE and KERN OLF – stand out through their design which is compact, stable and ergonomic
- The strong, continuously dimmable 3 W LED reflected illumination guarantees a permanent optimum illumination of the materials being tested
- A mechanical stage with additional plate (opening \varnothing 10 mm and \varnothing 20 mm) is included with delivery as standard. The coarse and fine focusing knob on both sides guarantees optimal adjustment and focusing
- Colour filters (blue, green and grey) are included with delivery
- A large selection of eyepieces, stage inserts and objectives for a larger working distance 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, metallurgy, material testing, quality assurance

Applications/Samples

- Inverted opaque or translucent samples, workpieces (surfaces, fold lines, coatings), inverted viewing

Technical data

- Finite optical system (DIN)
- Quadplex nosepiece
- Tube 45° inclined
- Diopter adjustment: One-sided (for binocular models)
- Overall dimensions W×D×H 340×190×330 mm
- Net weight basic configuration approx. 7 kg

STANDARD



OPTION



Model	Standard configuration					Price excl. of VAT ex works €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
KERN						
OLE 161	Monocular	WF 10×/ϕ 18 mm	Plan	10×/20×/40×	3 W LED (incident)	910,-
OLF 162	Binocular	WF 10×/ϕ 18 mm	Plan		3 W LED (incident)	990,-

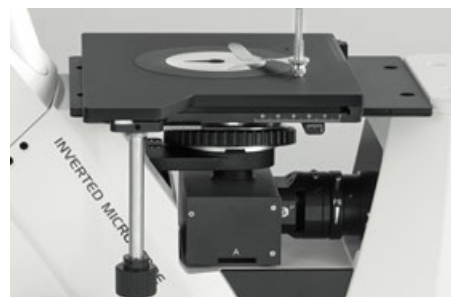
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Price reduction

Model outfit		Model KERN		Order number	Price/piece excl. of VAT ex works €
		OLE 161	OLF 162		
Eyepieces (23,2 mm)	WF 10×/ø 18 mm	✓	✓✓	OBB-A1347	40,-
	WF 12,5×/ø 14 mm	○	○○	OBB-A1353	75,-
	WF 16×/ø 13 mm	○	○○	OBB-A1354	45,-
	WF 5×/ø 20 mm	○	○○	OBB-A1355	55,-
	WF 10×/ø 18 mm (reticule 0,1 mm) (non-adjustable)	○	○○	OBB-A1349	60,-
Plan achromatic objectives	10×/0,25 W.D. 8,87 mm	✓	✓	OBB-A1246	140,-
	20×/0,35 (spring) W.D. 1,6 mm	✓	✓	OBB-A1253	220,-
	40×/0,65 W.D. 0,72 mm	✓	✓	OBB-A1261	220,-
	100×/1,25 (spring) (oil) W.D. 0,69 mm	○	○	OBB-A1242	245,-
	5×/0,10 W.D. 14,5 mm	○	○	OBB-A1265	115,-
Plan achromatic objectives for long working distance	40×/0,60 W.D. 3,64 mm	○	○	OBB-A1262	420,-
	50×/0,70 W.D. 3,01 mm	○	○	OBB-A1267	420,-
	80×/0,80 (spring) W.D. 1,08 mm	○	○	OBB-A1272	460,-
Monocular tube	45° inclined	✓		OBB-A1228	
Binocular tube	• Siedentopf 45° inclined • Diopter adjustment: One-sided		✓	OBB-A1128	
Mechanical stage	• Stage size W×D 180×180 mm • Travel 50×40 mm	✓	✓		
Extra stage plate	1 (opening ø 10 mm)	✓	✓	OBB-A1322	50,-
	2 (opening ø 20 mm)	✓	✓	OBB-A1323	50,-
	3 (opening ø 40 mm)	○	○	OBB-A1324	50,-
Illumination	3 W LED illumination system (incident)	✓	✓		
Colour filters for transmitted illumination	Blue	✓	✓	OBB-A1174	19,-
	Green	✓	✓	OBB-A1190	19,-
	Gray	✓	✓	OBB-A1184	19,-

✓ = Included with delivery

○ = Option



Specimen stage and illumination unit



Analyser/Polariser

LAB LINE

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
- Strong and continuously adjustable 50W halogen illumination unit ensures the optimum illumination of the materials to be tested
- As standard, the OLM range is fitted with a trinocular eyepiece tube
- A simple polarising unit (analyser and polariser) is included with delivery
- A large mechanical stage is included with delivery as standard. The coarse and fine focusing knob on both sides guarantees optimal adjustment and focusing
- 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



Model	Standard configuration					Price excl. of VAT ex works €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
KERN						
OLM 171	Trinocular	HWF 10×/ø 22 mm	Infinity Plan	LWD5×/LWD10×/ LWD20×/LWD50×	12 V/50 W Halogen (incident)	3190,-

Price reduction

Model outfit		Model KERN	Order number	Price/piece excl. of VAT ex works €
		OLM 171		
Eyepieces (30 mm)	HWF 10×/ø 22 mm (adjustable)	✓	OBB-A1491	90,-
	HWF 10×/ø 22 mm (reticule 0,1 mm) (adjustable)	✓	OBB-A1523	140,-
Infinity Plan achromatic objectives for long working distance	5×/0,13 W.D. 24,23 mm	✓	OBB-A1525	125,-
	10×/0,25 W.D. 18,48 mm	✓	OBB-A1526	185,-
	20×/0,40 W.D. 8,35 mm	✓	OBB-A1527	245,-
	50×/0,70 (spring) W.D. 1,95 mm	✓	OBB-A1528	320,-
	80×/0,80 (spring) W.D. 0,85 mm	○	OBB-A1530	480,-
	100×/0,90 (dry) W.D. 1,0 mm	○	OBB-A1531	720,-
Trinocular tube	<ul style="list-style-type: none"> • 30° inclined • Interpupillary distance 48-76 mm • Light distribution 100:0 • Diopter adjustment: Both-sided 	✓		
Mechanical stage	<ul style="list-style-type: none"> • Stage size W×D 210×180 mm • Travel 50×50 mm • Coaxial coarse and fine focusing knobs 	✓		
Illumination	12 V/50 W Halogen spare bulb (incident)	✓	OBB-A1207	19,-
Reflected illumination unit	Polarising unit (Incl. analyser, polariser and colour filter slide)	✓		
Colour filters for transmitted illumination	Blue	✓	OBB-A1510	19,-
	Green	○	OBB-A1511	19,-
	Yellow	○	OBB-A1512	19,-
	Gray	○	OBB-A1513	19,-
C-Mount	0,5×	○	OBB-A1515	185,-
	1×	○	OBB-A1514	120,-

✓ = Included with delivery

○ = Option

3 Polarising microscopes





λ Slip and quartz wedge

EDUCATIONAL LINE POL

The economical polarising microscope for training, laboratory and industry

Features

- The KERN OPE series is a range of excellent polarising microscopes with transmitted light for all common routine applications, such as, for example observation and analysis of translucent, isotropic materials such as, for example, crystals or minerals
- The strong, continuously dimmable 20 W halogen transmitted illumination is the basis for excellent and high-contrast images
- The height-adjustable and focusable 1,25 Abbe condenser with aperture diaphragm is a further quality feature of the KERN OPE series and ensures the very best adjustment of the illumination
- A quadruple nosepiece enables rapid and simple changing to the different magnification levels. As standard, the nosepiece is fitted with three achromatic "non stress" polarising objectives
- The monocular eyepiece tube is fitted with a polarising unit, a Bertrand lens and a $\lambda + \frac{1}{4} \lambda$ Slip
- A 360° revolving stage with 1° division, 6' fine division and locking function is integrated into the KERN OPE series as standard
- A large selection of accessories such as, for example, a quartz wedge, a mechanical table attachment as well as further objectives are available
- 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, mineralogy, texture observations, material testing, observation of crystals

Applications/Samples

- Less complex samples with polarising properties

Technical data

- Finite Optik (DIN)
- Quadplex nosepiece
- Siedentopf 30° inclined/360° rotatable
- Overall dimensions W×D×H 320×180×380 mm
- Net weight approx. 5,5 kg

STANDARD



Model	Standard configuration					Price excl. of VAT ex works €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
KERN						
OPE 118	Monocular	HWF 10×/ø 18 mm	Achromatic	Non-stress 4×/10×/40×	6 V/20 W Halogen (transmitted)	880,-

Price reduction

Model outfit		Model KERN	Order number	Price/piece excl. of VAT ex works €
		OPE 118		
Eyepieces (23,2 mm)	HWF 10×/ø 18 mm (reticule 0,1 mm) (non-adjustable)	✓	OBB-A1349	60,-
	WF 16×/ø 13 mm	○	OBB-A1354	45,-
Non-stress achromatic objectives	4×/0,10 W.D. 18,6 mm	✓	OBB-A1280	60,-
	10×/0,25 W.D. 6,5 mm	✓	OBB-A1278	75,-
	40×/0,66 (spring) W.D. 0,47 mm	✓	OBB-A1281	85,-
	20×/0,10 (spring) W.D. 1,75 mm	○	OBB-A1279	85,-
	60×/0,80 (spring) W.D. 0,1 mm	○	OBB-A1282	95,-
Monocular tube	30° inclined/360° rotatable	✓	OBB-A1227	105,-
Analyser unit	0 – 90°, can easily be moved out of the optical path	✓		
Bertrand lens	Can easily be moved out of the optical path	✓	OBB-A1120	230,-
λ + ¼ λ Slip	λ Slip and ¼ λ Slip (combination)	✓	OBB-A1316	140,-
Quartz wedge	I – IV Class	○	OBB-A1320	240,-
Revolving round stage	360° rotatable, Division 1°, Fine division 6', locking fuction	✓		
Polarising attached mechanical stage	Polarising attached mechanical stage	○	OBB-A1337	270,-
Condenser	Abbe N.A. 1,25 (aperture diaphragm)	✓	OBB-A1101	85,-
Polarising unit	Can be moved out of the optical path	✓		
Colour filters for transmitted illumination	Blue (holder ring)	✓	OBB-A1173	45,-
Illumination	6 V/20 W Halogen spare bulb (transmitted)	✓	OBB-A1370	25,-

✓ = Included with delivery

○ = Option



OPO



OPM



OPN

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

- These devices are professional, fully-equipped polarising microscopes, which use the polarisation of light to analyse minerals, crystals and isotropic materials
- You can choose between a pure transmitted light variant (KERN OPM), a pure reflected light variant (KERN OPN) and a combi variant (KERN OPO). A complete Koehler illumination is integrated into all series as standard
- As standard, the KERN OPM and OPO transmitted illumination variants have a height-adjustable 0,9/0,13 swing-out Abbe condenser which can be centred, for complete Koehler illumination
- 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 $\lambda + \frac{1}{4} \lambda$ 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/360° rotatable
- Diopter adjustment: One-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 €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
KERN						
OPM 181	Trinocular	WF 10×/ø 20 mm	Infinity Plan	Non-stress 4×/10×/20×/40×	6 V/20 W Halogen (transmitted)	3640,- ↓
OPN 182	Trinocular	WF 10×/ø 18 mm	Infinity Plan	Non-stress 4×/10×/20×/40×	12 V/50 W Halogen (incident)	3630,- ↓
OPO 183	Trinocular	WF 10×/ø 18 mm	Infinity Plan	Non-stress 4×/10×/20×/40×/60×	12 V/50 W Halogen (incident) + 6 V/20 W (transmitted)	4990,- ↓
OPN 184	Trinocular	WF 10×/ø 18 mm	Infinity Plan	Non-stress 4×/10×/20×/40×	12 V/100 W Halogen (incident)	3790,- ↓
OPO 185	Trinocular	WF 10×/ø 18 mm	Infinity Plan	Non-stress 4×/10×/20×/40×/60×	12 V/100 W Halogen (incident) + 6 V/20 W (transmitted)	5190,- ↓

↓ Price reduction

Model outfit		Model KERN					Order number	Price/piece excl. of VAT ex works €
		OPM 181	OPN 182	OPO 183	OPN 184	OPO 185		
Eyepieces (23,2 mm)	WF 10×/18 mm		✓	✓	✓	✓	OBB-A1347	40,-
	WF 10×/18 mm (reticule 0,1 mm) (adjustable)		✓	✓	✓	✓	OBB-A1464	90,-
	WF 10×/20 mm	✓					OBB-A1351	85,-
	WF 10×/20 mm (reticule 0,1 mm) (adjustable)	✓					OBB-A1465	140,-
Non-stress Infinity Plan objectives	4×/0,10 W.D. 12,1 mm	✓	✓	✓	✓	✓	OBB-A1294	105,-
	10×/0,25 W.D. 4,64 mm	✓	✓	✓	✓	✓	OBB-A1289	200,-
	20×/0,40 (spring) W.D. 2,41 mm	✓	✓	✓	✓	✓	OBB-A1290	265,-
	40×/0,65 (spring) W.D. 0,65 mm	✓		✓		✓	OBB-A1292	310,-
	40×/0,65 (spring) (no cover glass) W.D. 3,9 mm	○	✓	○	✓	○	OBB-A1288	390,-
	60×/0,80 (spring) W.D. 0,33 mm	○	○	✓	○	✓	OBB-A1296	370,-
Infinity Plan objectives (no cover glass) for long working distance	20×/0,40 W.D. 8,35 mm	○	○	○	○	○	OBB-A1291	345,-
	40×/0,65 W.D. 3,90 mm	○	○	○	○	○	OBB-A1293	390,-
	50×/0,70 (spring) W.D. 1,95 mm	○	○	○	○	○	OBB-A1295	415,-
	80×/0,80 (spring) W.D. 0,85 mm	○	○	○	○	○	OBB-A1297	500,-
Trinocular tube	<ul style="list-style-type: none"> • Siedentopf 30° inclined • Interpupillary distance 50 – 75 mm • Light distribution 100:0 • Diopter adjustment: One-sided 	✓	✓	✓	✓	✓		
Professional dedicated polarising trinocular head	To keep the reticular cross in the right-hand eyepiece in the same position, independent of the adjustment of the tube.	○	○	○	○	○	OBB-A1210	550,-
Analyser unit with scale	360° rotatable, lockable	✓	✓	✓	✓	✓		
Bertrand lens	Built-in, center-adjustable	✓	✓	✓	✓	✓	OBB-A1121	305,-
λ + ¼ λ Slip	λ Slip and ¼ λ Slip (combination)	✓	✓	✓	✓	✓	OBB-A1316	140,-
Quartz wedge	I – IV Class	✓	✓	✓	✓	✓	OBB-A1321	240,-
Revolving round stage	360° rotatable, center-adjustable, division 1°, Vernier division 6'	✓	✓	✓	✓	✓		
Polarising attached mechanical stage	Polarising attached mechanical stage	○	○	○	○	○	OBB-A1337	270,-
Swing-out condenser	N.A. 0,9/0,13 swing-out achromatic condenser (aperture diaphragm)	✓		✓		✓	OBB-A1107	135,-
Polarising unit with scale (transmitted)	360° rotatable, lockable	✓		✓		✓		
Koehler illumination	6 V/20 W Halogen spare bulb (transmitted)	✓		✓		✓	OBB-A1370	25,-
Reflecting polarising unit replacement bulb	12 V/50 W Halogen		✓	✓	○	○	OBB-A1207	19,-
	12 V/100 W Halogen		○	○	✓	✓	OBB-A1377	35,-
Colour filters for transmitted illumination	Blue	✓		✓		✓	OBB-A1170	19,-
	Green	○		○		○	OBB-A1188	19,-
	Yellow	○		○		○	OBB-A1165	19,-
	Gray	○		○		○	OBB-A1183	19,-
C-Mount	1×	○	○	○	○	○	OBB-A1140	100,-
	0,57× (focus adjustable)	○	○	○	○	○	OBB-A1136	160,-

✓ = 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	Description	Price excl. of VAT ex works €
KERN		
OCS 901	7-piece cleaning sets for microscopes und other optical instruments	25,-

Microscopy, measuring technology and testing services from a single source



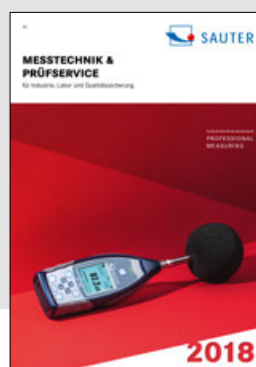
Optical instruments
catalogue



Balances & test service
catalogue



Medical scales
catalogue



SAUTER measuring
equipment catalogue



DAkkS calibration
service brochure

4 Stereomicroscopes

Stereo, Stereo-Zoom, Coaxial and Gem microscopes





OSE 416/417



With white stage plate



With black stage plate

EDUCATIONAL LINE

The small robust model for school, training establishment or workshops

Features

- The KERN OSE-4 is an extremely robust, stable stereo microscope which is easy to use, it is ideal for all conventional applications in schools, workshops and training companies
- Depending on the model, optional LED reflected illumination as well as transmitted and reflected illumination ensure the very best illumination of your sample
- Despite its low price it has very good optical characteristics, which enable you to have sharp images over a large field of view
- A turnable objective with predefined magnifications is available to make your working procedures quicker and more efficient
- The eyepieces are fixed in the eyepiece tube, to stop them getting damaged or lost
- A special feature of this adaptable and yet robust microscope series is the stable mechanism of the microscope stand which can be adjusted precisely. It will also impress you with its functionality and ergonomic design
- A large selection of eyepieces as well as various additional external illumination units are available as accessories
- 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
- Tube 45° inclined
- Interpupillary distance 55 – 75 mm
- Diopter adjustment: One-sided
- Overall dimensions W×D×H
230×130×330 mm
- Net weight approx. 2 kg

STANDARD



Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective	Stand	Illumination	
KERN							
OSE 416	Binocular	WF 10×/ø 20 mm	ø 20	1×/3×	Pillar style	0,21 W LED (incident); 0,21 W LED (transmitted)	255,-
OSE 417	Binocular	WF 10×/ø 20 mm	ø 20	2×/4×	Pillar style	0,21 W LED (incident); 0,21 W LED (transmitted)	255,-

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 €
		OSE 416	OSE 417		
Eyepieces (30,5 mm)	WF 5×/∅ 16,2 mm	○ ○	○ ○	OZB-A4101	35,-
	WF 10×/∅ 20 mm	✓ ✓	✓ ✓	OZB-A4102	30,-
	WF 15×/∅ 15 mm	○ ○	○ ○	OZB-A4103	30,-
	WF 20×/∅ 10 mm	○ ○	○ ○	OZB-A4104	35,-
Stand	Pillar style, without illumination				
	Pillar style, with 0,21 W LED illumination (incident)				
	Pillar style, with 0,21 W LED illumination (transmission + incident)	✓	✓		
Stage plate	Black-white/∅ 59,5 mm			OZB-A4816	19,-
	Frosted glass/∅ 95 mm	✓	✓	OZB-A4805	19,-
	Black-white/∅ 95 mm	✓	✓	OZB-A4806	19,-
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

4

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 mm	Objective	Stand	Illumination	
KERN							
OSF 438	Binocular	WF 10×/ø 20 mm	ø 20	1×/2×/3×	Arm curved	1 W LED (incident); 0,35 W LED (transmitted)	325,-
OSF 439	Binocular	WF 10×/ø 20 mm	ø 20	1×/2×/4×	Arm curved	1 W LED (incident); 0,35 W LED (transmitted)	325,-

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	35,-
	WF 10×/∅ 20 mm	✓✓	✓✓	OZB-A4102	30,-
	WF 15×/∅ 15 mm	○○	○○	OZB-A4103	30,-
	WF 20×/∅ 10 mm	○○	○○	OZB-A4104	35,-
Stand	Arm curved, incl. handle, with LED illumination (0,35 W transmitted + 1 W incident)	✓	✓		
Stage plate	Frosted glass/∅ 59,5 mm	✓	✓	OZB-A4815	19,-
	Black-white/∅ 59,5 mm	✓	✓	OZB-A4816	19,-
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-dimensional 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



Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
KERN							
OZL 445	Binocular	WF 10×/ø 20 mm	ø 26,7 – 5,6	0,75× – 3,6×	Pillar style	1 W LED (incident); 0,35 W LED (transmitted)	410,-

OZL 445		Specifications – Objectives				
Eyepiece	Magnification	Standard 1,0×	Auxiliary objectives			
			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	35,-
	WF 10×/∅ 22 mm		OZB-A4105	35,-
	WF 10×/∅ 20 mm	✓✓	OZB-A4102	35,-
	WF 15×/∅ 15 mm	○ ○	OZB-A4103	30,-
	WF 20×/∅ 10 mm	○ ○	OZB-A4104	30,-
Auxiliary objectives	0,5×	○	OZB-A4201	75,-
	0,75×	○	OZB-A4202	75,-
	1,5×	○	OZB-A4204	75,-
	2,0×	○	OZB-A4205	80,-
	Soldering protection lens	○	OZB-A4251	19,-
Stand	Pillar style, with LED illumination (0,35 W transmitted + 1 W incident)	✓		
Stage plate	Frosted glass/∅ 95 mm	✓	OZB-A4805	19,-
	Black-white/∅ 95 mm	✓	OZB-A4806	19,-
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-dimensional impression, zoom with variable magnification (depth, thickness), e.g. insects, seeds, circuit boards, components

Technical data

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

STANDARD



Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
KERN							
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)	500,-
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)	570,-
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)	550,-
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)	620,-
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)	510,-
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)	580,-

New model

Price reduction

Eyepiece	Specifications – Objectives					
	Magnification	Standard 1,0×	Auxiliary objectives			
			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
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	40,-
	HSWF 15×/∅ 15 mm	○	○	○	○	○	○	OZB-A4632	50,-
	HWF 20×/∅ 10 mm	○	○	○	○	○	○	OZB-A4633	50,-
	HSWF 25×/∅ 9 mm	○	○	○	○	○	○	OZB-A4634	55,-
Auxiliary objectives	0,5×	○	○	○	○	○	○	OZB-A4641	80,-
	0,75×	○	○	○	○	○	○	OZB-A4644	80,-
	1,5×	○	○	○	○	○	○	OZB-A4642	80,-
	2,0×	○	○	○	○	○	○	OZB-A4643	80,-
C-Mount	1× (focus adjustable)		✓		✓		✓	OZB-A4809	50,-
	0,3× (focus adjustable)		○		○		○	OZB-A4810	85,-
	0,5× (focus adjustable)		○		○		○	OZB-A4811	95,-
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-A4805	19,-
	Black-white/∅ 95 mm	✓	✓	✓	✓	✓	✓	OZB-A4806	19,-
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-dimensional 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 excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
KERN							
OZL 45 I	Binocular	HSWF 10×/ø 23 mm	ø 33 – 5	0,75× – 5,0×	Pillar style	12 V/ 10 W Halogen (incident) 12 V/ 10 W Halogen (transmitted)	610,-

Eyepiece	Specifications – Objectives				
	Magnification	Standard 1,0×	Auxiliary objectives		
			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	40,-
	HSWF 10×/∅ 23 mm	✓ ✓	OZB-A4118	40,-
	HWF 15×/∅ 15 mm	○ ○	OZB-A4119	40,-
	HSWF 20×/∅ 14,5 mm	○ ○	OZB-A4120	60,-
	HWF 25×/∅ 11,7 mm	○ ○	OZB-A4121	60,-
Auxiliary objectives	0,5×	○	OZB-A4509	120,-
	0,75×	○	OZB-A4510	120,-
	2,0×	○	OZB-A4206	115,-
Stand	Pillar style, with 12 V/10 W Halogen Illumination (transmitted + incident)	✓		
Stage plate	Frosted glass/∅ 95 mm	✓	OZB-A4805	19,-
	Black-white/∅ 95 mm	✓	OZB-A4806	19,-
Illumination	12 V/10 W spare bulb (transmitted + incident)	✓	OZB-A4804	19,-
Mechanical stage (Pre-assembling on request)	Stage size W×D 180×155 mm, Travel 75×55 mm, for transmitted and incident illumination	○	OZB-A4605	235,-
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 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, continuously dimmable, integrated LED ring illumination in the objective housing, which ensures uniform, shadow-free illumination. An LED transmitted light variant is also included
- With its built-in, top-quality optics and powerful, integrated LED illumination unit, this model is a special all-rounder for all areas of application
- 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-dimensional 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 excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
KERN							
OZL 456	Binocular	HSWF 10×/ø 23 mm	ø 33 – 5	0,75× – 5,0×	Arm curved	1 W LED (incident); 0,21 W LED (transmitted)	690,-

Eyepiece	Specifications – Objectives		
	Magnification	Standard 1,0×	Auxiliary objectives
			2,0×
HWF 5×	Total magnification	3,75× – 25×	7,5× – 50×
	Field of view mm	∅ 31 – 4,6	∅ 16 – 2,5
HSWF 10×	Total magnification	7,5× – 50×	15× – 100×
	Field of view mm	∅ 33 – 5	∅ 16 – 2,5
HWF 15×	Total magnification	11,25× – 75×	22,5× – 150×
	Field of view mm	∅ 24 – 4,2	∅ 12 – 2
HSWF 20×	Total magnification	15× – 100×	30× – 200×
	Field of view mm	∅ 20 – 3,5	∅ 10 – 1,8
HWF 25×	Total magnification	18,75× – 125×	37,5× – 255×
	Field of view mm	∅ 15,8 – 2,4	∅ 7,9 – 1,2
Working distance		113 mm	35 mm
Maximum sample height		45 mm	95 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	40,-
	HSWF 10×/∅ 23 mm	✓ ✓	OZB-A4118	40,-
	HWF 15×/∅ 15 mm	○ ○	OZB-A4119	40,-
	HSWF 20×/∅ 14,5 mm	○ ○	OZB-A4120	60,-
	HWF 25×/∅ 11,7 mm	○ ○	OZB-A4121	60,-
Auxiliary objectives	2,0×	○	OZB-A4206	115,-
Stand	Arm curved, with LED illumination (0,21 W transmitted + 1 W incident)	✓		
Stage plate	Frosted glass/∅ 95 mm	✓	OZB-A4805	19,-
	Black-white/∅ 95 mm	✓	OZB-A4806	19,-
Mechanical stage (Pre-assembling on request)	Stage size W×D 180×155 mm, Travel 75×55 mm, for transmitted and incident illumination	○	OZB-A4605	235,-
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

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-dimensional 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: 50:50
- 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 excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
KERN							
OZM 542	Binocular	HSWF 10×/ø 23 mm	ø 32,8 – 5,1	0,7× – 4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	1070,-
OZM 544	Trinocular	HSWF 10×/ø 23 mm	ø 32,8 – 5,1	0,7× – 4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	1350,-

Eyepiece	Specifications – Objectives					
	Magnification	Standard 1,0×	Auxiliary objectives			
			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	60,–
	SWF 15×/∅ 17 mm	○○	○○	OZB-A5504	60,–
	SWF 20×/∅ 14 mm	○○	○○	OZB-A5505	70,–
	SWF 30×/∅ 9 mm	○○	○○	OZB-A5506	85,–
	HSWF 10×/∅ 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	95,–
	SWF 15×/∅ 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	110,–
	SWF 20×/∅ 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	110,–
Achromatic auxiliary objectives	0,5×	○	○	OZB-A5612	120,–
	0,7×	○	○	OZB-A5613	120,–
	1,5×	○	○	OZB-A5615	120,–
	2,0×	○	○	OZB-A5616	120,–
	Soldering protection lens	○	○	OZB-A5614	45,–
C-Mount	0,3× (focus adjustable)		○	OZB-A5701	120,–
	0,5× (focus adjustable)		○	OZB-A5702	120,–
	1,0× (focus adjustable)		○	OZB-A5703	95,–
	1,0× (with micrometer) only in combination with OZB-A5703		○	OZB-A5704	255,–
	for SLR cameras (Nikon)		○	OZB-A5706	255,–
	for SLR cameras (Olympus)		○	OZB-A5707	255,–
	for SLR cameras (Canon)		○	OZB-A5708	255,–
Darkfield unit	Darkfield unit	○	○	OZB-A4601	70,–
Object clamp	Object clamp	○	○	OBB-A6205	35,–
Stand	Pillar style, without illumination				
	Pillar style, with 3 W LED illumination (transmitted + incident)	✓	✓		
	Please find more stands in the catalogue on page 79 and on our website www.kern-sohn.com				
Stage plate	Frosted glass/∅ 94,5 mm	✓	✓	OZB-A5192	19,–
	Black-white/∅ 94,5 mm	✓	✓	OZB-A5191	19,–
	Glass/∅ 94,5 mm	○	○	OZB-A5190	19,–
Mechanical stage (Pre-assembling on request)	Stage size W×D 188×160 mm, Travel 76×65 mm, for transmitted and incident illumination	○	○	OZB-A5781	175,–
	Stage size W×D 180×175 mm, Travel 100×86 mm, for incident illumination only	○	○	OZB-A5782	240,–
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



Trinocular version

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-dimensional 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: 50:50
- 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 excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
KERN							
OZP 556	Binocular	HSWF 10×/ø 23 mm	ø 38,3 – 4,2	0,6× – 5,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	1230,-
OZP 558	Trinocular	HSWF 10×/ø 23 mm	ø 38,3 – 4,2	0,6× – 5,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	1530,-

Eyepiece	Specifications – Objectives					
	Magnification	Standard 1,0×	Auxiliary objectives			
			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	60,–
	SWF 15×/∅ 17 mm	○○	○○	OZB-A5504	60,–
	SWF 20×/∅ 14 mm	○○	○○	OZB-A5505	70,–
	SWF 30×/∅ 9 mm	○○	○○	OZB-A5506	85,–
	HSWF 10×/∅ 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	95,–
	SWF 15×/∅ 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	110,–
	SWF 20×/∅ 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	110,–
Achromatic auxiliary objectives	0,5×	○	○	OZB-A5612	120,–
	0,7×	○	○	OZB-A5613	120,–
	1,5×	○	○	OZB-A5615	120,–
	2,0×	○	○	OZB-A5616	120,–
	Soldering protection lens	○	○	OZB-A5614	45,–
C-Mount	0,3× (focus adjustable)		○	OZB-A5701	120,–
	0,5× (focus adjustable)		○	OZB-A5702	120,–
	1,0× (focus adjustable)		○	OZB-A5703	95,–
	1,0× (with micrometer) only in combination with OZB-A5703		○	OZB-A5704	255,–
	for SLR cameras (Nikon)		○	OZB-A5706	255,–
	for SLR cameras (Olympus)		○	OZB-A5707	255,–
	for SLR cameras (Canon)		○	OZB-A5708	255,–
Darkfield unit	Darkfield unit	○	○	OZB-A4601	70,–
Object clamp	Object clamp	○	○	OBB-A6205	35,–
Stand	Pillar style, without illumination				
	Pillar style, with 3 W LED illumination (transmitted + incident)	✓	✓		
	Please find more stands in the catalogue on page 79 and on our website www.kern-sohn.com				
Stage plate	Frosted glass/∅ 94,5 mm		✓	OZB-A5192	19,–
	Black-white/∅ 94,5 mm	✓	✓	OZB-A5191	19,–
	Glass/∅ 94,5 mm		○	OZB-A5190	19,–
Mechanical stage (Pre-assembling on request)	Stage size W×D 188×160 mm, Travel 76×65 mm, for incident and transmitted illumination	○	○	OZB-A5781	175,–
	Stage size W×D 180×175 mm, Travel 100×86 mm, for incident illumination only	○	○	OZB-A5782	240,–
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



OZR 564
With illumination



OZR 563
Without illumination

PROFESSIONAL LINE

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

Features

- The KERN OZR series is a special, high-quality stereo zoom microscope with parallel optics for demanding analyses
- The KERN OZR 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 OZR 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-dimensional impression, zoom with variable magnification (depth, thickness), e.g. insects, seeds, circuit boards, components

Technical data

- Optical system: Parallel optics
- Brightness adjustable (separate)
- Tube 45° inclined
- Magnification ratio: 6,25:1
- Light distribution 50:50
- 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 excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
KERN							
OZR 563	Trinocular	HWF 10×/ø 22 mm	ø 27,5 – 4,4	0,8× – 5×	Pillar style	–	1550,-
OZR 564	Trinocular	HWF 10×/ø 22 mm	ø 27,5 – 4,4	0,8× – 5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	1750,-

ONLY WHILE STOCKS LAST

Price reduction

Eyepiece	Specifications – Objectives				
	Magnification	Standard Plan 1,0×	Achromatic objectives		
			0,5×	0,7×	1,5× (Auxiliary)
HWF 10×	Total magnification	8× – 50×	4× – 25×	5,6× – 35×	12× – 75×
	Field of view mm	∅ 27,5 – 4,4	∅ 55 – 8,8	∅ 39,3 – 6,3	∅ 18,33 – 2,93
SWF 15×	Total magnification	12× – 75×	6× – 37,5×	8,4× – 5,5×	18× – 112,5×
	Field of view mm	∅ 21,25 – 3,4	∅ 42,5 – 6,8	∅ 30,36 – 4,86	∅ 14,17 – 2,27
SWF 20×	Total magnification	16× – 100×	8× – 50×	11,2× – 70×	24× – 150×
	Field of view mm	∅ 17,5 – 2,8	∅ 35 – 5,6	∅ 25 – 4	∅ 11,67 – 1,87
SWF 30×	Total magnification	24× – 150×	12× – 75×	16,8× – 105×	36× – 225×
	Field of view mm	∅ 11,25 – 1,8	∅ 22,5 – 3,6	∅ 16,1 – 2,57	∅ 7,5 – 1,2
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 €
		OZR 563	OZR 564		
Eyepieces (30,0 mm)	HWF 10×/∅ 22 mm	✓✓	✓✓	OZB-A5502	60,–
	SWF 15×/∅ 17 mm	○○	○○	OZB-A5504	60,–
	SWF 20×/∅ 14 mm	○○	○○	OZB-A5505	70,–
	SWF 30×/∅ 9 mm	○○	○○	OZB-A5506	85,–
	HWF 10×/∅ 22 mm (reticule 0,1 mm)	○	○	OZB-A5511	95,–
	SWF 15×/∅ 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	110,–
	SWF 20×/∅ 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	110,–
Plan achromatic objective	1,0×	✓	✓	OZB-A5603	490,–
Achromatic objectives	0,5×	○	○	OZB-A5601	205,–
	0,7×	○	○	OZB-A5602	205,–
	1,5× Only in combination with OZB-A5603	○	○	OZB-A5604	265,–
Trinocular beamsplitter	Division 100:0	✓	✓	OZB-A5401	575,–
	Division 50:50	○	○	OZB-A5402	575,–
C-Mount	0,3× (focus adjustable)	○	○	OZB-A5701	120,–
	0,5× (focus adjustable)	○	○	OZB-A5702	120,–
	1,0× (focus adjustable)	○	○	OZB-A5703	95,–
	1,0× (with micrometer) only in combination with OZB-A5703	○	○	OZB-A5704	255,–
	for SLR cameras (Nikon)	○	○	OZB-A5706	255,–
	for SLR cameras (Olympus)	○	○	OZB-A5707	255,–
	for SLR cameras (Canon)	○	○	OZB-A5708	255,–
Darkfield unit	Darkfield unit		○	OZB-A4601	70,–
Object clamp	Object clamp	○	○	OBB-A6205	35,–
Stand	Pillar style, without illumination	✓			
	Pillar style, with 3 W LED illumination (transmitted + incident)		✓		
Stage plate	Frosted glass/∅ 94,5 mm		✓	OZB-A5192	19,–
	Black-white/∅ 94,5 mm	✓	✓	OZB-A5191	19,–
	Glass/∅ 94,5 mm		○	OZB-A5190	19,–
Mechanical stage (Pre-assembling on request)	Stage size W×D 188×160 mm, Travel 76×65 mm, for incident and transmitted illumination	○	○	OZB-A5781	175,–
	Stage size W×D 180×175 mm, Travel 100×86 mm, for incident illumination only	○	○	OZB-A5782	240,–
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



OZS 574
With illumination



OZS 573
Without illumination

PROFESSIONAL LINE

High-quality parallel optics for the best images, depth of field and contrast – with extra large zoom range

Features

- The devices in the KERN OZS series are special, high-quality stereo zoom microscopes with parallel optics and an above-average zoom range 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 optics is a high-quality optical system and provides excellent images with the best contrast, colour and depth of field with fatigue-free working
- The exceptionally large, adjustable magnification range from 8 to 80 times magnification gives you continuous zoom for the views you need
- As standard, the models of the KERN OZS series are trinocular and therefore equipped for connecting a camera for documentation purposes and for quality reports
- These models are particularly flexible due to the modular construction, the pillar stand as well as the powerful, longlife LED reflected and transmitted illumination which can be integrated as an option
- 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. 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-dimensional impression, zoom with variable magnification (depth, thickness), e.g. insects, seeds, circuit boards, components

Technical data

- Optical system: Parallel optics
- Brightness adjustable (separate)
- Tube 45° inclined
- Magnification ratio: 10:1
- Light distribution 50:50
- 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 excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
KERN							
OZS 573*	Trinocular	HWF 10×/ø 22 mm	ø 27,5 – 2,75	0,8× – 8×	Pillar style	–	2350,-
OZS 574	Trinocular	HWF 10×/ø 22 mm	ø 27,5 – 2,75	0,8× – 8×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	2960,-

*ONLY WHILE STOCKS LAST

Price reduction

Eyepiece	Specifications – Objectives				
	Magnification	Standard Plan 1,0×	Achromatic objectives		
			0,5×	0,7×	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 573	OZS 574		
Eyepieces (30,0 mm)	HWF 10×/∅ 22 mm	✓✓	✓✓	OZB-A5502	60,-
	SWF 15×/∅ 17 mm	○○	○○	OZB-A5504	60,-
	SWF 20×/∅ 14 mm	○○	○○	OZB-A5505	70,-
	SWF 30×/∅ 9 mm	○○	○○	OZB-A5506	85,-
	HWF 10×/∅ 22 mm (reticule 0,1 mm)	○	○	OZB-A5511	95,-
	SWF 15×/∅ 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	110,-
	SWF 20×/∅ 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	110,-
Plan achromatic objective	1,0×	✓	✓	OZB-A5603	490,-
Achromatic objectives	0,5×	○	○	OZB-A5601	205,-
	0,7×	○	○	OZB-A5602	205,-
	1,5× Only in combination with OZB-A5603	○	○	OZB-A5604	265,-
Trinocular beamsplitter	Division 100:0	✓	✓	OZB-A5401	575,-
	Division 50:50	○	○	OZB-A5402	575,-
C-Mount	0,3× (focus adjustable)	○	○	OZB-A5701	120,-
	0,5× (focus adjustable)	○	○	OZB-A5702	120,-
	1,0× (focus adjustable)	○	○	OZB-A5703	95,-
	1,0× (with micrometer) only in combination with OZB-A5703	○	○	OZB-A5704	255,-
	for SLR cameras (Nikon)	○	○	OZB-A5706	255,-
	for SLR cameras (Olympus)	○	○	OZB-A5707	255,-
	for SLR cameras (Canon)	○	○	OZB-A5708	255,-
Darkfield unit	Darkfield unit		○	OZB-A4601	70,-
Object clamp	Object clamp	○	○	OBB-A6205	35,-
Stand	Pillar style, without illumination	✓			
	Pillar style, with 3 W LED illumination (transmitted + incident)		✓		
Stage plate	Frosted glass/ ∅ 94,5 mm		✓	OZB-A5192	19,-
	Black-white/∅ 94,5 mm	✓	✓	OZB-A5191	19,-
	Glass/∅ 94,5 mm		○	OZB-A5190	19,-
Mechanical stage (Pre-assembling on request)	Stage size W×D 188×160 mm, Travel 76×65 mm, for incident and transmitted illumination	○	○	OZB-A5781	175,-
	Stage size W×D 180×175 mm, Travel 100×86 mm, for incident illumination only	○	○	OZB-A5782	240,-
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-dimensional 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 50:50
- 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 excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
KERN							
OZC 583	Trinocular	HSWF 10×/ø 23 mm	ø 12,78 – 3,5	1,8× – 6,5×	Arm curved	2 W LED (coaxial incident)	3190,-

* ONLY WHILE STOCKS LAST

Price reduction

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	60,–
	SWF 15×/∅ 17 mm	○ ○	OZB-A5504	60,–
	SWF 20×/∅ 14 mm	○ ○	OZB-A5505	70,–
	SWF 30×/∅ 9 mm	○ ○	OZB-A5506	85,–
	HSWF 10×/∅ 23 mm (reticule 0,1 mm)	○	OZB-A5512	95,–
	SWF 15×/∅ 17 mm (reticule 0,05 mm)	○	OZB-A5513	110,–
	SWF 20×/∅ 14 mm (reticule 0,05 mm)	○	OZB-A5514	110,–
C-Mount	0,3× (focus adjustable)	○	OZB-A5701	120,–
	0,5× (focus adjustable)	○	OZB-A5702	120,–
	1,0× (focus adjustable)	○	OZB-A5703	95,–
	1,0× (with micrometer) only in combination with OZB-A5703	○	OZB-A5704	255,–
	for SLR cameras (Nikon)	○	OZB-A5706	255,–
	for SLR cameras (Olympus)	○	OZB-A5707	255,–
	for SLR cameras (Canon)	○	OZB-A5708	255,–
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



OZG 493



OZG 497 *



Backside of OZG 497



Tilt positions



Tilt positions

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, these models form an ideal package with their dark field unit with object clamp which is included in the scope of delivery
- The KERN OZG 493 is fitted with a pillar stand as well as an integrated bright halogen light unit with reflected and transmitted illumination
- The KERN OZG 497 has a arm curved stand, which is extremely flexible as it can be tilted and rotated Together with the powerful illumination units, which also includes a single fiber. This is an ideal solution for jewellers and the gem industry

- 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

- Jewellers and gem industry

Applications/Samples

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

Technical data

- Optical system: Greenough optics
- Brightness adjustable
- Tube 45° inclined
- Interpupillary distance 55 – 75 mm
- Diopter adjustment: Both-sided

OZG 493

- Magnification ratio: 5,1:1
- Overall dimensions W×D×H 310×170×350 mm
- Net weight approx. 5 kg

OZG 497

- Magnification ratio: 6,7:1
- Light distribution 50:50
- Overall dimensions W×D×H 340×235×480 mm
- Net weight approx. 11,5 kg

STANDARD



Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
KERN							
OZG 493	Binocular	WF 10×/ø 20 mm	ø 26,7 – 5,6	0,7× – 3,6×	Pillar style	12 V/10 W Halogen (incident) 12 V/10 W Halogen (transmitted) 10 W Fluorescence (front illumination)	495,-
OZG 497 *	Trinocular	HSWF 10×/ø 23 mm	ø 33 – 5,1	0,75× – 5,0×	Arm curved	12 V/10 W Halogen (transmitted) 10 W Fluorescence (front illumination including single fiber)	1290,-

* ONLY WHILE STOCKS LAST

Price reduction

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

OZG 497	Specifications – Objectives	
Eyepiece	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

Model outfit		Model KERN		Order number	Price/piece excl. of VAT ex works €
		OZG 493	OZG 497		
Eyepieces (30,5 mm)	WF 5×/∅ 16,2 mm	○ ○		OZB-A4101	35,-
	WF 10×/∅ 20 mm	✓ ✓		OZB-A4102	35,-
	WF 15×/∅ 15 mm	○ ○		OZB-A4103	30,-
	WF 20×/∅ 10 mm	○ ○		OZB-A4104	30,-
Eyepieces (30,0 mm)	HWF 5×/∅ 23,2 mm		○ ○	OZB-A4112	40,-
	HSWF 10×/∅ 23 mm		✓ ✓	OZB-A4118	40,-
	HWF 15×/∅ 15 mm		○ ○	OZB-A4119	40,-
	HSWF 20×/∅ 14,5 mm		○ ○	OZB-A4120	60,-
	HWF 25×/∅ 11,7 mm		○ ○	OZB-A4121	60,-
C-Mount	1,0× (focus adjustable)		○	OZB-A4809	50,-
	0,3× (focus adjustable)		○	OZB-A4810	85,-
	0,5× (focus adjustable)		○	OZB-A4811	95,-
Darkfield unit	Darkfield unit	✓	✓	OZB-A4601	70,-
Object clamp	Object clamp (steel wire)	✓	✓	OZB-A4604	30,-
Stand	Pillar style, with 12 V/10 W Halogen (transmitted + incident) and 10 W Fluorescent illumination (front)	✓			
	Arm curved, with 12 V/10 W Halogen (transmitted) and 10 W Fluorescent illumination (front) + Single fiber illumination		✓		
Stage plate	Frosted glass/∅ 95 mm	✓		OZB-A4805	19,-
	Black-white/∅ 95 mm	✓		OZB-A4806	19,-
Illumination	12 V/10 W spare bulb (transmitted + incident)	✓	✓	OZB-A4804	19,-

✓ = Included with delivery

○ = Option



Otto Grunenberg, Head of Technical Department & Test Services



1 Pure competence in balances

"KERN offers you a complete, carefully-designed range of laboratory balances, analytical balances, moisture analysers, industrial scales and test weights. And all this at an extremely attractive price with the same high level of quality.

Browse and find products in the KERN 2018 catalogue for Balances & Test service."

TIPS FROM THE EXPERTS

As well as our microscopes and refractometers, we can offer you an extensive range of precision balances, industrial scales, medical balances, measuring and testing technology as well as an extensive range of test services.

We will offer you reliable quality at fair prices and with the shortest delivery times. Our product specialists will give you professional advice, will work with you to find the right product and will provide comprehensive support after the purchase too. This ensures a high level of investment security and a good feeling – KERN, the nice balance manufacturer from the wilds of Southern Germany.

For all the details on our ranges, please see www.kern-sohn.com request your own personal catalogues right now:
Telephone +49 [0]7433-9933-0

2 Pure competence in measuring and testing technology

"The SAUTER measuring technology range covers a large selection of force-measurement devices, measurement devices for coating thickness, material thickness, hardness measurement equipment (Shore, Leeb), calliper gauges, photometers, sound level meters and test benches.

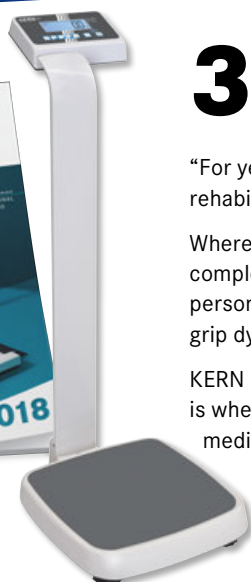
With the SAUTER 2018 catalogue for measuring technology and test services you are perfectly equipped for all technical measuring applications."



Albert Sauter, Managing Director
SAUTER measuring equipment



Hendrik Neff, Product specialist
Medical Scales



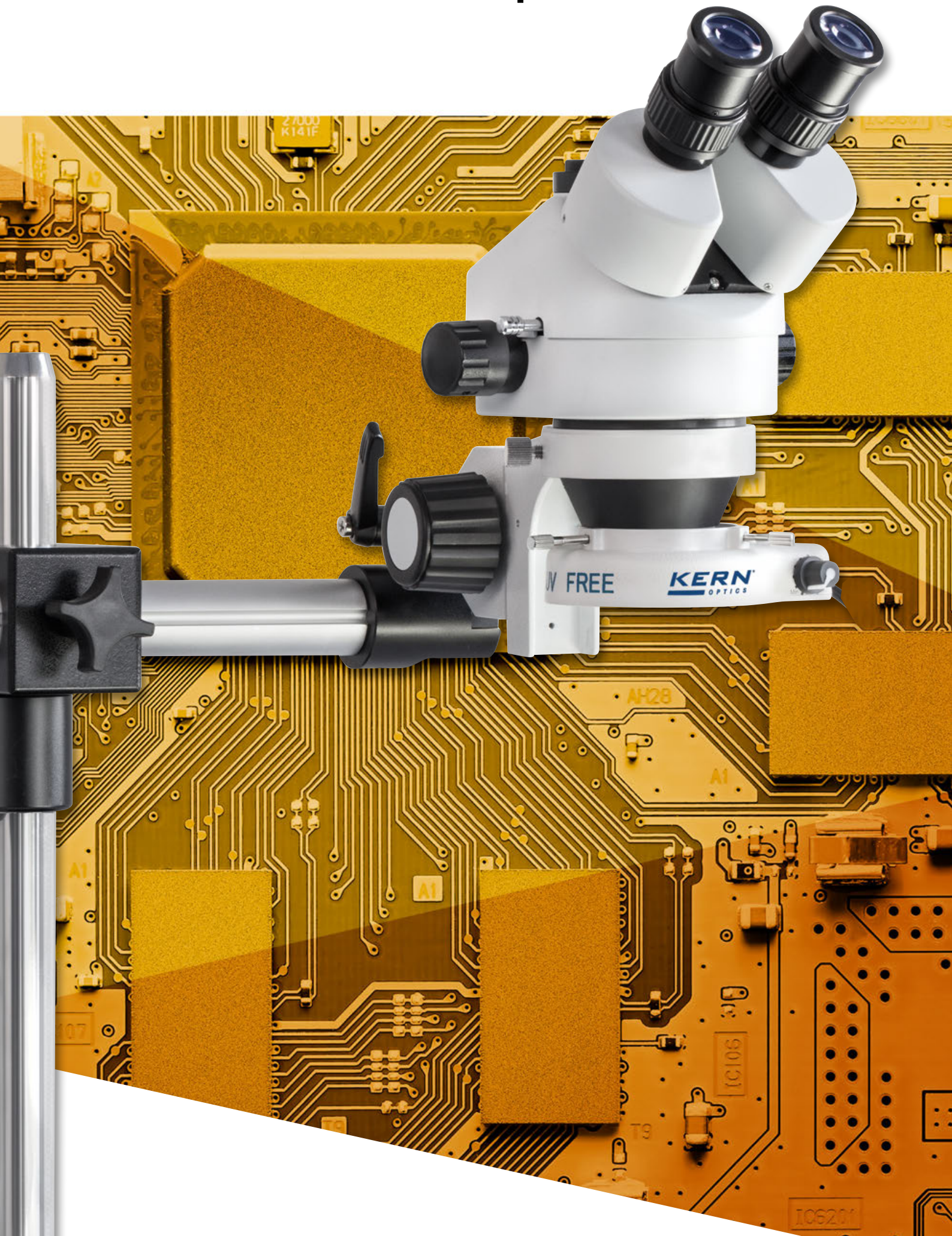
3 Medical products from KERN – products you can rely on

"For years an established name in hospitals, doctors' surgeries, rehabilitation clinics and nursing homes.

Wherever reliable quality is important, look no further than the complete KERN range of medical scales, from baby scales, to personal scales, chair scales, obesity scales through to hand grip dynamometers.

KERN 2018 catalogue for medical balances and devices – this is where you will find everything for day-to-day tasks in the medical environment!"

5 Stereo microscope sets





OZL 961/963



OZM 912/913



OSE 409



OZM 932/933



OZM 952/953



OZM 982/983

Predefined stereo microscope sets with 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), a holder (p. 80) and a ring illumination from our range (p. 83)
- 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 KERN	Microscope head		Stand	Holder	Illumination	Price excl. of VAT ex works €
	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)	355,-
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-A6 102)	880,-
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-A6 102)	950,-
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-A6 102)	1440,-
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-A6 102)	1740,-
OZM 932	Binocular (OZM 546)	0,7× – 4,5×	ball-bearing 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-A6 102)	1730,-
OZM 933	Trinocular (OZM 547)	0,7× – 4,5×	ball-bearing 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-A6 102)	2030,-
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-A6 102)	1390,-
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-A6 102)	1690,-
OZM 982	Binocular (OZM 546)	0,7× – 4,5×	Spring loaded arm with clamp (OZB-A6302)	With double handle	4,5 W LED ring light (OBB-A6 102)	1380,-
OZM 983	Trinocular (OZM 547)	0,7× – 4,5×	Spring loaded arm with clamp (OZB-A6302)	With double handle	4,5 W LED ring light (OBB-A6 102)	1680,-

Price reduction

6 Stereo microscope modular system

You can find sample diagrams of showing the configuration of a modular system like this on pages 76, 77 and 78 below.





Head of the microscope series OSF-5
(OSF 512, 514, 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. 75
 - OZL-46: p. 75
 - OZM-5: p. 76
 - OZP-5: p. 77
 - OZO-5: p. 78

Model	Tube	Tube angle	Eyepieces (included)	Interpupillary distance	Objective	Magnification ratio	Diopter adjustment	Price excl. of VAT ex works €
KERN					Zoom			
OSF 512	Binocular	45°	HSWF 10×/ø 23 mm	52–76 mm	1×/2×	–	One-sided (-6/6)	320,-
OSF 514	Binocular	45°	HSWF 10×/ø 23 mm	52–76 mm	1×/3×	–	One-sided (-6/6)	320,-
OSF 516	Binocular	45°	HSWF 10×/ø 23 mm	52–76 mm	2×/4×	–	One-sided (-6/6)	320,-
OZL 461	Binocular	45°	HWF 10×/ø 20 mm	55–75 mm	0,7× – 4,5×	6,4:1	Both-sided (-5/5)	390,-
OZL 462	Trinocular	45°	HWF 10×/ø 20 mm	52–76 mm	0,7× – 4,5×	6,4:1	Both-sided (-5/5)	460,-
OZM 546	Binocular	45°	HSWF 10×/ø 23 mm	52–76 mm	0,7× – 4,5×	6,4:1	Both-sided (-6/6)	740,-
OZM 547	Trinocular	45°	HSWF 10×/ø 23 mm	52–76 mm	0,7× – 4,5×	6,4:1	Both-sided (-6/6)	1040,-
OZP 551	Binocular	35°	HSWF 10×/ø 23 mm	52–76 mm	0,6× – 5,5×	9,2:1	Both-sided (-6/6)	920,-
OZP 552	Trinocular	35°	HSWF 10×/ø 23 mm	52–76 mm	0,6× – 5,5×	9,2:1	Both-sided (-6/6)	1220,-
OZO 556	Binocular	35°	HSWF 10×/ø 23 mm	52–76 mm	0,8× – 7×	8,8:1	Both-sided (-6/6)	1350,-
OZO 557	Trinocular	35°	HSWF 10×/ø 23 mm	52–76 mm	0,8× – 7×	8,8:1	Both-sided (-6/6)	1690,-

Fittings and accessories for the heads for the OSF-5 microscope range (OSF 512, 514, 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 514	OSF 516		
Eyepieces (30,0 mm)	HSWF 10×/∅ 23 mm	✓✓	✓✓	✓✓	OZB-A5503	60,-
	SWF 15×/∅ 17 mm	○○	○○	○○	OZB-A5504	60,-
	SWF 20×/∅ 14 mm	○○	○○	○○	OZB-A5505	70,-
	SWF 30×/∅ 9 mm	○○	○○	○○	OZB-A5506	85,-
	HSWF 10×/∅ 23 mm (reticule 0,1 mm)	○	○	○	OZB-A5512	95,-
	SWF 15×/∅ 17 mm (reticule 0,05 mm)	○	○	○	OZB-A5513	110,-
	SWF 20×/∅ 14 mm (reticule 0,05 mm)	○	○	○	OZB-A5514	110,-

✓ = Included with delivery

○ = Option

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

Eyepiece	Specifications – Objectives					
	Magnification	Standard 1,0×	Auxiliary objectives			
			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	95 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	40,-
	HSWF 15×/∅ 15 mm	○○	○○	OZB-A4632	50,-
	HWF 20×/∅ 10 mm	○○	○○	OZB-A4633	50,-
	HSWF 25×/∅ 9 mm	○○	○○	OZB-A4634	55,-
Auxiliary objectives	0,5×	○	○	OZB-A4641	80,-
	0,75×	○	○	OZB-A4644	80,-
	1,5×	○	○	OZB-A4642	80,-
	2,0×	○	○	OZB-A4643	80,-
C-Mount	1× (focus adjustable)		✓	OZB-A4809	50,-
	0,3× (focus adjustable)		○	OZB-A4810	85,-
	0,5× (focus adjustable)		○	OZB-A4811	95,-

✓ = Included with delivery

○ = Option

Eyepiece	Specifications – Objectives						
	Magnification	Standard 1,0×	Auxiliary objectives				
			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	60,-
	SWF 15×/∅ 17 mm	○ ○	○ ○	OZB-A5504	60,-
	SWF 20×/∅ 14 mm	○ ○	○ ○	OZB-A5505	70,-
	SWF 30×/∅ 9 mm	○ ○	○ ○	OZB-A5506	85,-
	HSWF 10×/∅ 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	95,-
	SWF 15×/∅ 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	110,-
	SWF 20×/∅ 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	110,-
Achromatic auxiliary objectives	0,37× only in combination with a universal stand	○	○	OZB-A5611	135,-
	0,5×	○	○	OZB-A5612	120,-
	0,7×	○	○	OZB-A5613	120,-
	1,5×	○	○	OZB-A5615	120,-
	2,0×	○	○	OZB-A5616	120,-
	Soldering protection lens	○	○	OZB-A5614	45,-
C-Mount	0,3× (focus adjustable)		○	OZB-A5701	120,-
	0,5× (focus adjustable)		○	OZB-A5702	120,-
	1,0× (focus adjustable)		○	OZB-A5703	95,-
	1,0× (with micrometer) only in combination with OZB-A5703		○	OZB-A5704	255,-
	for SLR cameras (Nikon)		○	OZB-A5706	255,-
	for SLR cameras (Olympus)		○	OZB-A5707	255,-
	for SLR cameras (Canon)		○	OZB-A5708	255,-

✓ = Included with delivery

○ = Option

Functionality of our stereo microscope modular system

Step 1:

Select a microscope head (from page 74), a universal stand (page 79), a bracket (page 80) and a ring illumination unit (page 83), in order to generate a customised model.



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

Eyepiece	Specifications – Objectives						
	Magnification	Standard 1,0×	Auxiliary objectives				
			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	60,-
	SWF 15×/∅ 17 mm	○○	○○	OZB-A5504	60,-
	SWF 20×/∅ 14 mm	○○	○○	OZB-A5505	70,-
	SWF 30×/∅ 9 mm	○○	○○	OZB-A5506	85,-
	HSWF 10×/∅ 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	95,-
	SWF 15×/∅ 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	110,-
	SWF 20×/∅ 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	110,-
Achromatic auxiliary objectives	0,37× only in combination with a universal stand	○	○	OZB-A5611	135,-
	0,5×	○	○	OZB-A5612	120,-
	0,7×	○	○	OZB-A5613	120,-
	1,5×	○	○	OZB-A5615	120,-
	2,0×	○	○	OZB-A5616	120,-
	Soldering protection lens	○	○	OZB-A5614	45,-
C-Mount	0,3× (focus adjustable)		○	OZB-A5701	120,-
	0,5× (focus adjustable)		○	OZB-A5702	120,-
	1,0× (focus adjustable)		○	OZB-A5703	95,-
	1,0× (with micrometer) only in combination with OZB-A5703		○	OZB-A5704	255,-
	for SLR cameras (Nikon)		○	OZB-A5706	255,-
	for SLR cameras (Olympus)		○	OZB-A5707	255,-
	for SLR cameras (Canon)		○	OZB-A5708	255,-

✓ = Included with delivery

○ = Option

Functionality of our stereo microscope modular system

Step 2:

Further illumination units (page 83), a suitable protective dust cover (page 80) or a multitude of other basic stands (page 81) 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

Basic stand



Eyepiece	Specifications – Objectives						
	Magnification	Standard 1,0×	Auxiliary objectives				
			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 551	OZO 552	OZO 553	OZO 554		
Eyepieces (30,0 mm)	HSWF 10×/∅ 23 mm	✓✓	✓✓	✓✓	✓✓	OZB-A5503	60,-
	SWF 15×/∅ 17 mm	○○	○○	○○	○○	OZB-A5504	60,-
	SWF 20×/∅ 14 mm	○○	○○	○○	○○	OZB-A5505	70,-
	SWF 30×/∅ 9 mm	○○	○○	○○	○○	OZB-A5506	85,-
	HSWF 10×/∅ 23 mm (reticule 0,1 mm)	○	○	○	○	OZB-A5512	95,-
	SWF 15×/∅ 17 mm (reticule 0,05 mm)	○	○	○	○	OZB-A5513	110,-
	SWF 20×/∅ 14 mm (reticule 0,05 mm)	○	○	○	○	OZB-A5514	110,-
Achromatic auxiliary objectives	0,37× only in combination with a universal stand	○	○	○	○	OZB-A5611	135,-
	0,5×	○	○	○	○	OZB-A5612	120,-
	0,7×	○	○	○	○	OZB-A5613	120,-
	1,5×	○	○	○	○	OZB-A5615	120,-
	2,0×	○	○	○	○	OZB-A5616	120,-
	Soldering protection lens	○	○	○	○	OZB-A5614	45,-
C-Mount	0,3× (focus adjustable)			○	○	OZB-A5701	120,-
	0,5× (focus adjustable)			○	○	OZB-A5702	120,-
	1,0× (focus adjustable)			○	○	OZB-A5703	95,-
	1,0× (with micrometer) only in combination with OZB-A5703			○	○	OZB-A5704	255,-
	for SLR cameras (Nikon)			○	○	OZB-A5706	255,-
	for SLR cameras (Olympus)			○	○	OZB-A5707	255,-
	for SLR cameras (Canon)			○	○	OZB-A5708	255,-

✓ = 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-A5211



OZB-A5202/OZB-A5212



OZB-A5203/OZB-A5213



OZB-A6301



OZB-A6302

Individuality, variety and flexible working through our modular construction system ► 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
- Universal stands are available as stand base variants as well as with the option of a bench clamp. 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
- A spring loaded universal stand including bench clamp will make your daily work with your stereo microscope easier

Model	Description	Price excl. of VAT ex works €
KERN		
OZB-A5201	Telescopic arm – Plate – excl. holder	460,-
OZB-A5211	Telescopic arm – Clamp (Range: max. 62 mm) – excl. holder	450,-
OZB-A5202 *	Jointed arm – Plate – excl. holder	490,-
OZB-A5212	Jointed arm – Clamp (Range: max. 62 mm) – excl. holder	480,-
OZB-A5203	Telescopic double arm with ball bearings – Plate – excl. holder	740,-
OZB-A5213	Telescopic double arm with ball bearings – Clamp (Range: max. 62 mm) – excl. holder	730,-
OZB-A6301	Pillar stand with "C"-shape base – excl. holder	265,-
OZB-A6302	Spring loaded arm – Clamp (Range: max. 50 mm) – with holder	500,-

! * ONLY WHILE STOCKS LAST



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	Description	Price excl. of VAT ex works €
KERN		
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.	145,-
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.	245,-

Stereo microscope modular system – Dust covers KERN OBB-C

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	Description	Suitable for	Price excl. of VAT ex works €
KERN			
OBB-A1387	Size 1: 485×440 mm	Stereo microscope heads	30,-
OBB-A1388	Size 2: 600×600 mm	Stereo microscope heads in combination with basic stands	30,-
OBB-A1389	Size 3: 650×750 mm	Stereo microscope sets, stereo microscope heads in combination with universal stands	30,-



OZB-A5121 with coarse and fine adjustment



OZB-A5123 with coarse and fine adjustment as well as incident and transmitted illumination



OZB-A5104 (Arm curved stand)



OZB-A5106 (Arm curved stand) with incident and transmitted illumination



OZB-A5107 with extra small stage



OZB-A5109 with extra small stage as well as incident and transmitted illumination



OZB-A5114 with rust protection iron stage



OZB-A5127 with coated steel stage as well as coarse and fine adjustment

A holder is included with every basic stand

Model	Stand style	Illumination	Description	Dimensions mm	Price excl. of VAT ex works €
KERN					
OZB-A5 121	Pillar style	-	With coaxial coarse and fine adjustment	283×292×271,5	295,-
OZB-A5 123	Pillar style	3 W LED (incident + transmitted)	With coaxial coarse and fine adjustment	283×292×303,5	465,-
OZB-A5 104	Arm curved	-	Coarse focusing knob	283×292×240	195,-
OZB-A5 106	Arm curved	3 W LED (incident + transmitted)	Coarse focusing knob	283×292×272	395,-
OZB-A5 107	Pillar style	-	Coarse focusing knob	170×245×271,5	195,-
OZB-A5 109	Pillar style	3 W LED (incident + transmitted)	Coarse focusing knob	170×245×303,5	390,-
OZB-A5 114	Pillar style	-	Coarse focusing knob	400×300×371,5	265,-
OZB-A5 127	Pillar style	-	With coaxial coarse and fine adjustment	181×245×272	345,-

7 External light sources for stereomicroscopes

Ring illumination and cold light sources



Professional illumination units guarantee outstanding, uniform and strong illumination

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

NEW



OZB-A7101



OZB-A4571



OZB-A4572



OBB-A6102

Model	Illuminance	Inner ø	Colour temperature	Brightness adjustable	Illumination by segments	Polarising filter	Price excl. of VAT ex works €
KERN		mm	K				
OZB-A4571	3W-LED	60	7000 – 11000	✓			90,-
OZB-A4572	3W-LED	60	6500 – 7000	✓	✓		140,-
OBB-A6102	4,5W-LED	63	ca. 7600	✓			135,-
OZB-A7101 <small>NEW</small>	4,5W-LED	62	6500 – 7000	✓		✓	590,-

NEW New model

✓ = Included with delivery

○ = Option

Fiber illumination KERN OZB-IF



OZB-A4515



OZB-A4512



OZB-A4531



OZB-A4532



OZB-A4533

Model	Description	Length	Illuminance	Colour temperature	Brightness adjustable	Price excl. of VAT ex works €
KERN		mm		K		
OZB-A4515	Dual fiber unit LED	300	6W	5600 – 6300	✓	160,-
OZB-A4512	Cold light source halogen	–	24V/150W	3150 – 3200	✓	290,-
OZB-A4531	Single fiber	490	Usable for OZB-A4512			175,-
OZB-A4532	Dual fiber	490				245,-
OZB-A4533	Ring fiber	900				350,-

✓ = Included with delivery

○ = Option

8 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 89) 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

C-mount cameras – USB 2.0 KERN ODC-1



Features

- These USB 2.0 cameras give particular good images in demanding applications, such as, for example, in darkfield, phase contrast and with fluorescence applications through improved light sensitivity of the sensors
- As well as the camera, the delivery includes our multi-lingual camera software Microscope VIS KERN OXM 901, a USB cable (Length: 1,8 m) and an object micrometer to calibrate the software
- Please order the appropriate C-Mount or eyepiece adapter to fit your KERN microscope



STANDARD

Model	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works €
KERN								
ODC 132 *	3,1 MP	USB 2.0	5 – 30	CMOS	1/2"	colour	Win XP, Vista, 7, 8, 10	290,-
ODC 152 *	5,1 MP	USB 2.0	3.5 – 30	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10	360,-
OBB-A14 14	1× Eyepiece adapter (ø 23,2 mm) for cameras from the ODC-1							140,-
OBB-A14 16	1× Eyepiece adapter (ø 30,0 mm) for cameras from the ODC-1							140,-
OBB-A14 17	1× Eyepiece adapter (ø 23,2 + 30,0 mm) for cameras from the ODC-1							175,-

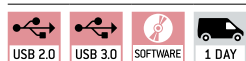
*ONLY WHILE STOCKS LAST Price reduction



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 Microscope VIS KERN OXM 901, a USB cable (Length: 2 m) various eyepiece adapters and an object micrometer to calibrate the software
- Please order the appropriate C-mount adapter to fit your KERN microscope now

STANDARD



Model	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works €
KERN								
ODC 822	1,3 MP	USB 2.0	15 – 48	CMOS	1/3"	colour	Win XP, Vista, 7, 8, 10	280,- ↓
ODC 824	3,1 MP	USB 2.0	11,5 – 45	CMOS	1/2"	colour	Win XP, Vista, 7, 8, 10	370,- ↓
ODC 825	5,1 MP	USB 2.0	6,8 – 55	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10	385,- ↓
ODC 831	3,1 MP	USB 3.0	27,3 – 53,3	CMOS	1/3"	colour	Win XP, Vista, 7, 8, 10	500,- ↓
ODC 832	5,1 MP	USB 3.0	14,2 – 101,2	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10	530,- ↓

↓ Price reduction

C-mount camera – HDMI KERN ODC-85

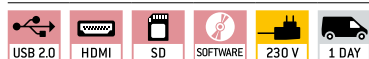


Scope of supplies

Features

- The ODC-851 HDMI microscope camera has been specially developed for direct HDMI connection to your HDMI compatible display device. The images can also be stored directly onto the SD card delivered with the device
- As an alternative, a USB 2.0 connection is also still available to connect a laptop or PC
- Power supply is from an external 12 V power unit
- Scope of delivery: Camera, software, USB mouse, USB 2.0 cable (Length: 2 m), HDMI cable (Length: 2 m) and SD card (16 GB)
- Please order the appropriate C-mount adapter to fit your KERN microscope now

STANDARD



Model	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works €
KERN								
ODC 851	2 MP	HDMI, USB 2.0, SD	30 – 60	CMOS	1/2,8"	colour	Win XP, Vista, 7, 8, 10	990,- ↓

↓ Price reduction

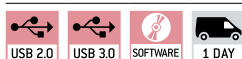


ODC-87, ODC-88



Eyepiece camera fixed into the tube

STANDARD



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, a USB cable (Length: 1,5 m) and an object micrometer to calibrate the software

Model	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works €
KERN								
ODC 872	1,3 MP	USB 2.0	7,5 – 12,5	CMOS	1/3"	colour	Win XP, Vista, 7, 8, 10	185,-
ODC 874	3 MP	USB 2.0	3 – 7,5	CMOS	1/2,7"	colour	Win XP, Vista, 7, 8, 10	220,-
ODC 881	5 MP	USB 3.0	15 – 30	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10	295,-

Price reduction

USB microscope – USB 2.0 KERN ODC-89



ODC 894



ODC 895

STANDARD



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
- There are two stands available for you to use as a column
- Cable length: 1,4 m

Stand with integrating coaxial focusing:

- Work area: 150×80 mm
- Focus range: 51 mm
- Overall dimensions: 150×80×147 mm

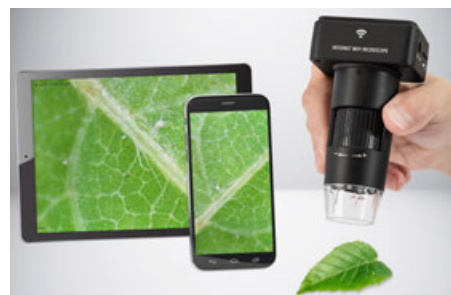
Stand with focus wheel:

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

Model	Resolution	Interface	FPS	Sensor	Sensor size	Supported operating system	Magnification levels	Focusing stand	Illumination	Price excl. of VAT ex works €
KERN										
ODC 894	2 MP	USB 2.0	15 – 30	CMOS	1/3,2"	Win XP, Vista, 7, 8, 10	10×, 200×	Coaxial	8× LED	210,-
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	230,-

Price reduction

NEW

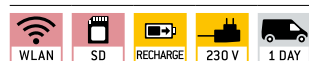


Innovative hand-held microscope for mobile applications with immediate display of the image on a smartphone or tablet

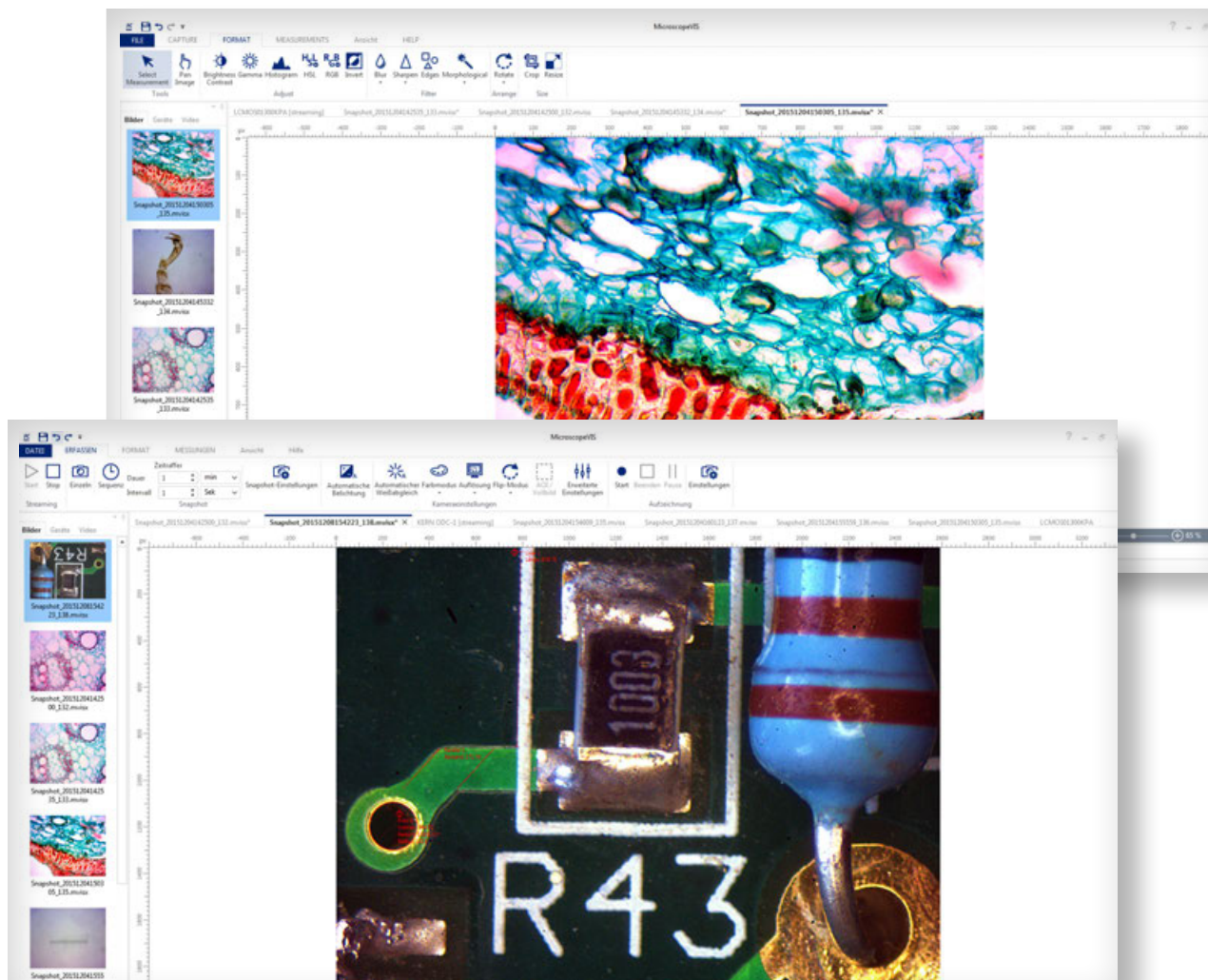
Features

- The digital WLAN 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 WLAN microscope has been specially developed for direct connection to your WLAN-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 WLAN 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 WLAN 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 WLAN 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

STANDARD



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	WLAN, SD	15 – 30	CMOS	1/4"	Android, iOS	10×, 200×	Goose neck	6× LED	185,-



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

Features

- The camera software microscope VIS KERN OXM 901 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
- As well as the software, 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

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 KERN VIS software 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: German, English, Spanish, Italian French and Portuguese





Refractometers

9	Analogue refractometers – type: hand-held	92
10	Digital refractometers – type: hand-held	98
11	Abbe refractometers – type: desktop	103



Daniel Junger
Manager KERN Optics

Tel. +49 [0] 7433 9933- 155
Fax +49 [0] 7433 9933- 149
daniel.junger@kern-sohn.com



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 following accessory-parts are included:
 - Storage box
 - Calibration liquid
 - Calibration block (if required)
 - Pipette
 - Small screwdriver
 - Cleaning tissue
- Further accessories are available optionally

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)



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, lubricants and fats).

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	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
ORA 10BB	Brix	0 – 10 %	0,1 %		80,-
ORA 10BA	Brix	0 – 10 %	0,1 %	✓	85,-
ORA 18BB	Brix	0 – 18 %	0,1 %		80,-
ORA 20BB	Brix	0 – 20 %	0,1 %		80,-
ORA 20BA	Brix	0 – 20 %	0,1 %	✓	85,-
ORA 32BB	Brix	0 – 32 %	0,2 %		80,-
ORA 32BA	Brix	0 – 32 %	0,2 %	✓	85,-
ORA 62BB	Brix	28 – 62 %	0,2 %		80,-
ORA 62BA	Brix	28 – 62 %	0,2 %	✓	85,-
ORA 82BB	Brix	45 – 82 %	0,5 %		80,-
ORA 80BB	Brix	0 – 80 %	0,5 %		80,-

Scope of application: Honey

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

The main scope of applications is:

- Beekeeping
- Honey production

Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
ORA 3HB	Brix Baumé Water content	58 – 92 % 38 – 43 °Bé 12 – 27 %	0,5 % 0,5 °Bé 1 %		85,-
ORA 3HA	Brix Baumé Water content	58 – 92 % 38 – 43 °Bé 12 – 27 %	0,5 % 0,5 °Bé 1 %	✓	90,-
ORA 6HB	Water content	12 – 30 %	0,1 %		95,-
ORA 6HA	Water content	12 – 30 %	0,1 %	✓	100,-



Scope of application: Salt

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

The main scope of applications is:

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



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
ORA 1SB	Salinity specific gravity	0 – 100 ‰ 1,000 – 1,070 sg	1 ‰ 0,001 sg		80,-
ORA 1SA	Salinity specific gravity	0 – 100 ‰ 1,000 – 1,070 sg	1 ‰ 0,001 sg	✓	85,-
ORA 2SB	Salt (NaCl)	0 – 28 %	0,2 %		80,-
ORA 2SA	Salt (NaCl)	0 – 28 %	0,2 %	✓	85,-
ORA 3SB	Salt (NaCl) Brix	0 – 28 % 0 – 32 %	0,2 % 0,2 %		80,-
ORA 3SA	Salt (NaCl) Brix	0 – 28 % 0 – 32 %	0,2 % 0,2 %	✓	85,-

Scope of application: Wine

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

The main scope of applications is:

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



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

Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
ORA 1WB	Oechsle KMW (Babo) Brix	0 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,25 °KMW 0,2 %		80,-
ORA 1WA	Oechsle KMW (Babo) Brix	0 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,25 °KMW 0,2 %	✓	85,-
ORA 3WB	Oechsle Brix	30 – 140 °Oe 0 – 32 %	1 °Oe 0,2 %		80,-
ORA 3WA	Oechsle Brix	30 – 140 °Oe 0 – 32 %	1 °Oe 0,2 %	✓	85,-
ORA 7WB	Oechsle KMW (Babo) Brix	30 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,2 °KMW 0,2 %		80,-
ORA 7WA	Oechsle KMW (Babo) Brix	30 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,2 °KMW 0,2 %	✓	85,-
ORA 1AB <small>NEW</small>	Percentage by volume Percentage by volume	0 – 50 % (v/v) 50 – 80 % (v/v)	1 % (v/v) 2,5 % (v/v)		80,-
ORA 2AB	Percentage by mass Percentage by mass	0 – 50 % (w/w) 50 – 80 % (w/w)	1 % (w/w) 2,5 % (w/w)		80,-

NEW New model

Scope of application: Urine

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

The main scope of applications is:

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



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
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		80,-
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	✓	85,-
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		80,-

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 fountain solution (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
- Chemical industry
- Solar industry: Antifreeze monitoring
- Geothermal industry: Brine-concentration-measurement for ground heat
- Forestry/Lumbermen



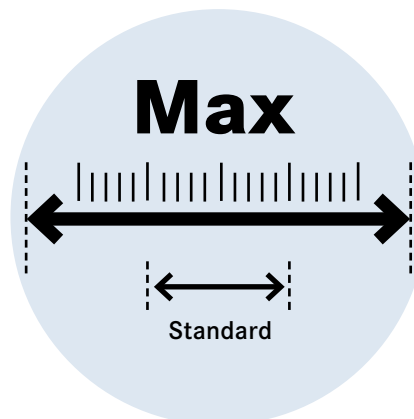
Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
ORA 4FB	EG (G11/12) PG (G13) CW BF	-50 – 0 °C -50 – 0 °C -40 – 0 °C 1,10 – 1,40 kg/l	1 °C 1 °C 5 °C 0,01 kg/l		80,-
ORA 4FA	EG (G11/12) PG (G13) CW BF	-50 – 0 °C -50 – 0 °C -40 – 0 °C 1,10 – 1,40 kg/l	1 °C 1 °C 5 °C 0,01 kg/l	✓	85,-
ORA 1UB	Urea	0 – 40 %	0,2 %		80,-
ORA 1UA	Urea	0 – 40 %	0,2 %	✓	85,-
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		80,-
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	✓	85,-

Scope of application: Expert applications

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

The main scope of applications is:

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



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
ORA 80BE	Brix	0 – 50 % 50 – 80 %	0,5 % 0,5 %		140,-
ORA 90BE	Brix	0 – 42 % 42 – 71 % 71 – 90 %	0,2 % 0,2 % 0,2 %		315,-
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		320,-
ORA 4RR	Refractive index	1,440 – 1,520 nD	0,001 nD		85,-



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



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
ORA 1GG	Refractive index	1,30 – 1,81 nD	0,01 nD		225,-



ORA 1GG



Accessory parts: Analogue refractometer – ORA



Prism coverplate with LED
ORA-A1101



Calibration liquid/
Contact liquid



Leather bag
ORA-A2103



Calibration block

Model	Description	Price excl. of VAT ex works €
KERN		
ORA-A1101	Prism coverplate with integrated LED illumination	19,-
ORA-A2103	Leather bag for analog refractometers	19,-
ORA-A1001	Calibration liquid – distilled water Volume: 2,5 ml	19,-
ORA-A1002	Contact liquid – Clove oil (for Calibration value 19,6%) Volume: 2,5 ml	19,-
ORA-A1003	Calibration liquid – saturated salt solution Volume: 2,5 ml	19,-
ORA-A1004	Contact liquid – Clove oil (for Calibration value 78,8%) Volume: 2,5 ml	19,-
ORA-A1005	Calibration block for models ORA 82BB, ORA 3HA, ORA 3HB, ORA 6HA, ORA 6HB , ORA 4RR	19,-
ORA-A1007	Contact liquid – Diiodomethane “Standard” (Refractive index: 1,74 nD) Volume: 2,5 ml	19,-
ORA-A3001	Contact liquid – Diiodomethane “Pro” (Refractive index: 1,79 nD) Volume: 2 ml	35,-
ORA-A1008	Calibration block for model ORA 1GG	19,-
ORA-A2001	Prism coverplate (spare part)	19,-

Price reduction

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	0 % Brix	distilled water	ORA-A1001	–	–
ORA 1UA; ORA 1UB	0 % Urea	distilled water	ORA-A1001	–	–
ORA 4FA; ORA 4FB; ORA 4UA; ORA 4UB	0 °C EG/PG/CW	distilled water		–	
ORA 1SA; ORA 1SB	0 ‰ Salinity	distilled water		–	
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

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

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 KERN ORF range is 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 following accessory-parts are included:
 - Calibration liquid
 - Pipette
 - Storage box
 - 2 × AAA batteries
 - Leather bag
 - Small screwdriver
 - Cleaning tissue

Technical data

- Measurement temperature: 5 °C – 40 °C
- Overall dimensions W×D×H 133×65×38 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)
- Minimum sample volume: 2–3 drops
- Automatic energy management (AUTO-OFF after 90 seconds)

STANDARD



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 sweet or soft drinks. In the same ideal way, these refractometers serve in monitoring processes in the industry (coolant monitoring, oils, lubricants and fats). Alternatively, the display can be switched to show the refractive index.

The main scope of applications is:

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



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORF 45BM	Brix Refractive index	0 – 45 % 1,3330 – 1,4098 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	340,-
ORF 92BM	Brix Refractive index	58 – 92 % 1,4370 – 1,5233 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	370,-
ORF 85BM	Brix Refractive index	0 – 85 % 1,3330 – 1,5100 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	395,-

Scope of application: Honey

The following models are particularly suitable for the measurement of the “BRIX” value, 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 the refractive index.

The main scope of applications is:

- Beekeeping
- Honey production



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORF 92HM	Brix Baumé Water content Refractive index	58 – 92 % 38 – 43 °Bé 13 – 25 % 1,4370 – 1,5233 nD	± 0,2 % ± 0,2 °Bé ± 0,2 % ± 0,0003 nD	0,1 % 0,1 °Bé 0,1 % 0,0001 nD	370,-

Scope of application: Salt

The following models are particularly suitable to determine the concentration of NaCl (salt) in water. 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 the refractive index.

The main scope of applications is:

- Food industry
- Restaurants, and large-scale catering establishment, canteens



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORF 3SM	Brix Salt (NaCl) Refractive index	0 – 45 % 0 – 28 % 1,3330 – 1,4100 nD	± 0,2 % ± 0,2 % ± 0,0003 nD	0,1 % 0,1 % 0,0001 nD	340,-

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.

The main scope of applications is:

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



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

Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORF 2WM	Mass SW Vol. AP Oechsle KMW (Babo)	0 – 35 % 0 – 22 % 0 – 150 °Oe 0 – 25 °KMW	± 0,2 % ± 0,2 % ± 1 °Oe ± 0,2 °KMW	0,1 % 0,1 % 1 °Oe 0,1 °KMW	340,-

Scope of application: Urine

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

The main scope of applications is:

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



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORF 1PM	Serum protein Urine (spec. gravity) Refractive index	0 – 12 g/dl 1,000 – 1,050 sgU 1,3330 – 1,3900 nD	± 0,1 g/dl ± 0,001 sgU ± 0,0003 nD	0,1 g/dl 0,001 sgU 0,001 nD	340,-

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 fountain solution (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
- Chemical industry
- Solar industry: Antifreeze monitoring
- Geothermal industry: Brine-concentration-measurement for ground heat
- Forestry/Lumbermen



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORF 2UM	EG PG BF CW	-50 – 0 °C -50 – 0 °C 1,00 – 1,50 kg/l -40 – 0 °C	± 0,5 °C ± 0,5 °C ± 0,01 kg/l ± 0,5 °C	0,1 °C 0,1 °C 0,01 kg/l 0,1 °C	340,-
ORF 5UM	EG PG Urea CW	-50 – 0 °C -50 – 0 °C 0 – 40 % -40 – 0 °C	± 0,5 °C ± 0,5 °C ± 0,2 % ± 0,5 °C	0,1 °C 0,1 °C 0,1 % 0,1 °C	340,-
ORF 6US <small>NEW</small>	Urea Refractive index	0 – 40 % 1,3330 – 1,4100 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	340,-

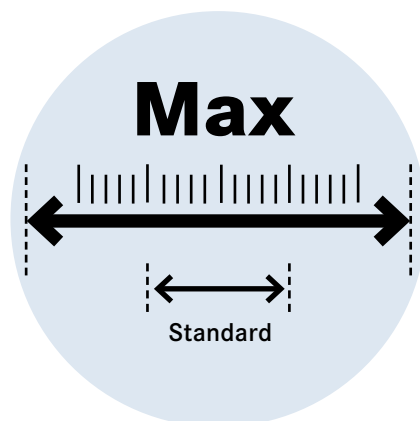
NEW New model

Scope of application: Expert applications

The following model has a special large measuring range for the refractive index.


The main scope of applications is:


- Universal measuring instrument, especially for applications with extra large measuring ranges



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORF 1RS	Refractive index	1,3330 – 1,5400 nD	± 0,0005 nD	0,0001 nD	430,-

Accessory parts: Digital refractometer – ORF

Model	Description	Price excl. of VAT ex works €
KERN		
ORF-A1005	Prism cover for digital refractometers	25,-
ORA-A1001	Calibration liquid – distilled water Volume: 2,5 ml	19,-
ORA-A1006	Calibration liquid – Triethyl citrate Volume: 2,5 ml	19,-
ORD-A2104	Leather bag for digital refractometer (Spare part)	19,- 

 Price reduction



Calibration liquid/
Contact liquid

Relationship overview – refractometer calibration (digital)

Model refractometer	Calibration value	Calibration liquid	Article number liquid	Calibration block	Article number calibration block
ORF 45BM; ORF 85BM; ORF 3SM	0 % Brix	distilled water	ORA-A1001	–	–
ORF 2WM	0 °KMW	distilled water	ORA-A1001	–	–
ORF 1PM; ORF 1RS	1,3330 nD	distilled water	ORA-A1001	–	–
ORF 2UM; ORF 5UM	0 °C EG/PG/CW	distilled water	ORA-A1001	–	–
ORF 6US	0 % Urea	distilled water	ORA-A1001	–	–
ORF 92BM; ORF 92HM	60 % Brix	Triethyl citrate CAS 77-93-0	ORA-A1006	–	–



Refractive index measurement for pharmacy, laboratories and industry

Features

- The KERN ORT refractometers are universal analog Abbe refractometers
- The handy and robust design allows the easy, efficient and sustainable use in everyday life
- The integrated scale allows the use in different applications and provides the best possible security to read the measurement results accurately
- The scope of delivery includes:
 - Calibration solution
 - Calibration block
 - Pipette
 - Small screwdriver
 - Cleaning tissue
 - Digital thermometer
- Accessories are available as options

Technical data

- Measurement temperature: 20 °C
- Overall dimensions W×D×H
180×90×240 mm
- Net weight approx. 1950 g

STANDARD



Scope of application: Industry/Pharmacy/Laboratory

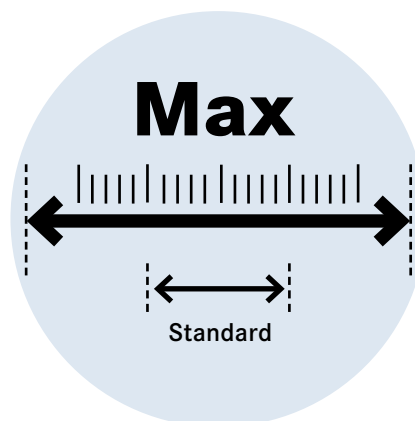
The following model is a simple yet highly reliable Abbe refractometer with a digital thermometer. Liquid, solid and pasty samples can be evaluated. This refractometer is robust, accurate and easy to use. Optionally a solide aluminium case for transport and storage is available. It measures the refractive index (nD).

The main scope of applications is:

- Sugar industry: for example cane sugar
- Pharmacy
- Beverage industry
- Food industry
- Chemical industry
- Oil industry/Refinery
- Laboratories
- Training

Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORT 1RS	Brix Refractive index	0 – 95 % 1,3000 – 1,7000 nD	± 0,1 % ± 0,0002 nD	0,25 % 0,0005 nD	690,- ↓

↓ Price reduction



ORT 1RS

Accessory parts: Abbe refractometer – ORT

Model	Description	Price excl. of VAT ex works €
KERN		
ORA-A1102	Aluminium suitcase Dimension: 310×120×240 mm, weight: 1300 g	80,- ↓
ORA-A2266	Digital thermometer (0 °C/50 °C) (Spare part)	60,-
ORA-A2267	Calibration block for ORT 1RS	40,-
ORA-A1107	Contact liquid – Alpha-Bromonaphthalene (Refractive index: 1,65 nD) Volume: 2,5 ml	25,-
ORA-A3001	Contact liquid – Diiodomethane “Pro” (Refractive index: 1,79 nD) Volume: 2 ml	35,- ↓

↓ Price reduction



Transport and storage case
ORA-A1102



Calibration block
ORA-A2267

Relationship overview – refractometer calibration (Abbe)

Model refractometer	Calibration value	Calibration liquid	Article number liquid	Calibration block	Article number calibration block
ORT 1RS	engraved on the block (nD value)	Alpha-Bromnaphthalene CAS 90-11-9	ORA-A1107	yes	ORA-A2267

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KERN

WARENKORB
0 Artikel zur Kasse Direkt-Bestellung

THEMENWELTEN PRODUKTE DIENSTLEISTUNG DOWNLOADS KERN intern ZAHLUNG | VERSAND SONDERANGEBOTE

Sie befinden sich hier: Start > Optische Instrumente > Stereomikroskop-Zubehör

Optische Instrumente

- Neuheiten 2017
- Basicwaagen
- Laborwaagen
- Industriewaagen
- Komponenten
- Medizinische Waagen
- Prüfgewichte
- Messinstrumente
- Optische Instrumente
- Software
- Sondergeräte
- Zubehör

Durchlichtmikroskope
Metallurgische Mikroskope
Polarisationsmikroskope
Stereomikroskope
Stereomikroskop-Sets
Stereomikroskop-Zubehör
Externe Beleuchtungseinheiten
Mikroskopkameras
Analoge Refraktometer
Digitale Refraktometer
Abbe-Refraktometer

Sie sind sich nicht sicher, welches Mikroskop Sie genau benötigen ?
Diese Checklisten helfen Ihnen weiter !

Praktische Mikroskop-Anwendungsmatrix
Welches Mikroskop ist das richtige für biologische, metallurgische, polarisations- oder Stereomikroskop-typische Anwendungen

Checkliste „Mein Wunschmikroskop“
Praktische Checkliste, mit der Sie schnell das passende Mikroskop, mit den passenden Objektiven, Vergrößerungen, Sehfeld, Schliff der Objektiven u.v.m. herausfiltern können

Checkliste „Mein Wunschrefraktometer“
Praktische Checkliste, mit der Sie schnell das passende Refraktometer herausfiltern können

Durchlichtmikroskope
Metallurgische Mikroskope
Polarisationsmikroskope
Stereomikroskope
Stereomikroskop-Sets
Stereomikroskop-Zubehör
Externe Beleuchtungseinheiten
Mikroskopkameras
Analoge Refraktometer
Digitale Refraktometer
Abbe-Refraktometer

Blowout sale

These products relate to the new products in their original packaging, which are being discontinued. You can buy these products at significantly reduced prices, while stocks last. Before making your purchase please check the availability of the product you require.

Please refer to our website www.kern-sohn.com for the data sheets and operating instructions for these products. Simply enter the item number of the product you require in the search field at the top right.

Microscopes						
Model	Product description	School microscope	Laboratory microscope	Industrial microscope	Previous list price €	Special Price €
OBE 108	Compound microscope, binocular Achromatic; 4/10/20/40; WF 10×18; 3W LED	x	x		580,-	550,-
OBE 109	Compound microscope, (rechargeable battery pack), binocular Achromatic; 4/10/20/40; WF 10×18; 3W LED	x	x		650,-	620,-
OBE 110	Compound microscope, trinocular Achromatic; 4/10/20/40; WF 10×18; 3W LED	x	x		670,-	660,-
OCO 255	Compound microscope (inverted), binocular Inf Plan; 10/20/40/20PH; HWF 10×20; 30W Hal		x		4930,-	2750,-
OCO 256	Compound microscope (inverted), binocular Inf Plan; 10/20/40/20PH; HWF 10×20; 30W Hal		x		5135,-	2750,-
OLE 161	Metallurgical microscope (Inverted), monocular Achromat; 10/20/40; WF 10×18; 3W LED (IL)	x		x	1310,-	910,-
OLF 162	Metallurgical microscope (inverted), binocular Achromat; 10/20/40; WF 10×18; 3W LED (IL)	x		x	1390,-	990,-
ODC 132	Microscope cameras 3MP CMOS; 1/2"; USB 2.0; Colour	x	x	x	530,-	290,-
ODC 152	Microscope cameras 5MP CMOS; 1/2,5"; USB 2.0; Colour	x	x	x	620,-	360,-
OSE 410	Stereomicroscope; binocular Greenough; 1/3×; WF 10×20	x	x	x	215,-	155,-
OSE 411	Stereomicroscope; binocular Greenough; 2/4×; WF 10×20	x	x	x	215,-	155,-
OSE 413	Stereomicroscope; binocular Greenough; 1/3×; WF 10×20; 0,21W LED	x	x	x	245,-	175,-
OSE 414	Stereomicroscope; binocular Greenough; 2/4×; WF 10×20; 0,21W LED	x	x	x	245,-	175,-
OSF 430	Stereomicroscope; binocular Greenough; 1/3×; WF 10×20; 0,21W LED	x	x	x	335,-	225,-
OSF 434	Stereomicroscope; binocular Greenough; 1/2/3×; WF 10×20; 0,21W LED	x	x	x	365,-	245,-
OSF 512	Stereo microscope head, binocular 1/2×; series OSF-5		x	x	395,-	320,-
OSF 514	Stereo microscope head, binocular 1/2×; series OSF-5		x	x	395,-	320,-

excl. of VAT ex works, subject to prior sale, as long as stocks last

Note

Your personal KERN customer advisor will be pleased to put together an attractive package of discontinued models at special purchasing conditions, please just ask!

Microscopes						
Model	Product description	School microscope	Laboratory microscope	Industrial microscope	Previous list price €	Special Price €
OSF 516	Stereo microscope head, binocular 2/4×; series OSF-5		x	x	395,-	320,-
OSF 522	Stereomicroscope; binocular Greenough; 1/2×; HSWF10×23	x	x	x	530,-	330,-
OSF 524	Stereomicroscope; binocular Greenough; 1/3×; HSWF10×23		x	x	530,-	330,-
OSF 525	Stereomicroscope; binocular Greenough; 1/3×; HSWF10×23; 3W LED		x	x	750,-	570,-
OSF 526	Stereomicroscope; binocular Greenough; 2/4×; HSWF10×23		x	x	530,-	330,-
OZG 497	Stereo zoom microscope (Gem), trinocular 220V Greenough; 0,75-5,0×; HSWF10×23; 10W Hal		x	x	1820,-	1290,-
OZL 441	Stereo zoom microscope, trinocular Greenough; 1-4×; WF10×22; 0,35W LED	x		x	600,-	490,-
OZL 453	Stereo zoom microscope, binocular Greenough; 0,75-5,0×; HSWF10×23	x	x	x	560,-	370,-
OZO 551	Stereo zoom microscope, binocular Greenough; 0,8-7,0×; HSWF10×23		x	x	1525,-	1140,-
OZO 552	Stereo zoom microscope, binocular Greenough; 0,8-7,0×; HSWF10×23; 3W LED		x	x	1745,-	1240,-
OZO 553	Stereo zoom microscope, trinocular Greenough; 0,8-7,0×; HSWF10×23		x	x	1895,-	1340,-
OZP 555	Stereo zoom microscope, binocular Greenough; 0,6-5,5×; HSWF10×23		x	x	1070,-	810,-
OZP 557	Stereo zoom microscope, trinocular Greenough; 0,6-5,5×; HSWF10×23		x	x	1385,-	940,-
OZC 583	Stereo zoom microscope (coaxial), trinocular Parallel; 1,8-6,5×; HSWF10×23; 2W LED			x	4290,-	3190,-
OZR 563	Stereo zoom microscope, trinocular Parallel; 0,8-5,0×; HSWF10×22		x	x	1940,-	1550,-
OZR 564	Stereo zoom microscope, trinocular Parallel; 0,8-5,0×; HSWF10×22; 3W LED		x	x	2140,-	1750,-
OZS 573	Stereo zoom microscope, trinocular Parallel; 0,8-8,0×; HSWF10×22		x	x	2750,-	2350,-

excl. of VAT ex works, subject to prior sale, as long as stocks last

Checklist for your microscope – your requirements

1 Which kind of microscope do you need?

<input type="checkbox"/> Compound microscope	primarily used for transparent/translucent preparation	Page 108 – 110
<input type="checkbox"/> Stereo microscope	surface observation with 3-dimensional optic with slow/medium magnification	Page 111 – 113
<input type="checkbox"/> Phase contrast microscope	Preparations with minimal contrast/very translucent	Page 108 – 110
<input type="checkbox"/> Fluorescence microscope	fluorescent structures, which are specific coloured or auto coloured	Page 108 – 110
<input type="checkbox"/> Polarisation microscope	Preparations with refraction (anisotropic) for example Crystal	Page 108 – 110
<input type="checkbox"/> Metallurgical microscope	surface observation of components, materials and minerals	Page 108 – 110
<input type="checkbox"/> Inverted microscope	used primarily for culture fessel from cell culture/for very thick preparation	Page 108 – 110

State your intended use/
Describe your application:

State your previous
model/manufacture: (if available)

State your min. and max.
magnification:

2 What type of eyepiece tube do you need for your application?

<input type="checkbox"/> Monocular eyepiece tube	view with one eye = 1 eyepiece available
<input type="checkbox"/> Binocular eyepiece tube	view with both eyes = 2 eyepieces available
<input type="checkbox"/> Trinocular eyepiece tube	view with both eyes + additional option to adapt a camera
<input type="checkbox"/> Digital eyepiece tube	view with both eyes + integrated camera

Attention: look also at point 20 – Do you need a camera?

Additional comments:

3 Which illumination do you need for your application?

<input type="checkbox"/> Halogen transmitted illumination	very good illumination/also suitable for dark field and phase contrast
<input type="checkbox"/> LED transmitted illumination	extremely long life time/no heat generation
<input type="checkbox"/> Halogen reflecting illumination	additional illumination, e.g. for Polarisation and metallurgical microscopes
<input type="checkbox"/> LED incident illumination	only for stereo microscopes
<input type="checkbox"/> External illumination	external illumination could be ordered additionally, for example ring illumination unit, swan neck (cold light source), as Accessories)

Interesting facts

- ▶ Halogen bulbs are still the standard in light microscopy, because they have a better brightness.
- ▶ The LED illumination have a much longer life time and the advantage that there is no heat generation.
For this reason, we use LED illumination in our stereo microscopes as standard illumination.

Additional comments:

4 Do you need Koehler illumination?

- ☐ **no**
- ☐ **fixed, pre-centred Koehler illumination** condenser is centred, can be height-adjusted and focussed, field diaphragm/aperture diaphragm available.
- ☐ **full Koehler illumination** condenser can be fully centred and focussed, field diaphragm/aperture diaphragm available.

State your intended use/
Describe your application:

5 How many objectives would you like to use?

- ☐ **4 objectives** Quadplex nosepiece
- ☐ **5 objectives** Quintuple nosepiece

6 What magnification (objectives) do you need?

- ☐ **4× objective (40× magnification)** when using the 10× magnification eyepiece
- ☐ **20× objective (200× magnification)** when using the 10× magnification eyepiece
- ☐ **40× objective (400× magnification)** when using the 10× magnification eyepiece
- ☐ **60× objective (600× magnification)** when using the 10× magnification eyepiece
- ☐ **100× objective (1000× magnification)** when using the 10× magnification eyepiece

Interesting facts

► Magnification formula: objective magnification × eyepiece magnification = Total magnification

State the magnification you require

Additional phase contrast objective

7 What quality do you need for the objective?

- ☐ **Achromatic** DIN standard objectives
- ☐ **Plan achromatic** DIN standard objectives
- ☐ **Infinity E-Plan/Semi Plan** infinitely corrected objectives for professional methods
- ☐ **Achromatic Infinity Plan** infinitely corrected objectives for professional methods

Additional comments:

8 What eyepiece diameter (visual field) and what eyepiece magnification do you need?

10× magnification

- ☐ Ø 18 mm
- ☐ Ø 18 mm with pointer needle
- ☐ Ø 18 mm with 0.1 mm scale
- ☐ Ø 20 mm
- ☐ Ø 20 mm with 0.1 mm scale

Dioptre adjustment

- ☐ Yes, on one side
- ☐ Yes, on both sides
- ☐ No

Further magnifications possible:

(State the magnification you require:)

9 Do you need a camera to save the documents?

- ☐ yes
- ☐ no

Interesting facts

► With a trinocular microscope, you always have to use a C-mount adapter to adapt a camera!

Additional comments:

(e.g. required number of Mpx etc.)

10 Do you need any further functions?

- ☐ Dark field unit
- ☐ Polarisation unit
- ☐ Fluorescent unit
- ☐ Phase-contrast unit
- ☐ Colour filter
- ☐ Additional objectives

Additional comments:

Statement of phase contrast magnification:

Statement Fluorescence-channel

(colour UV/V/B/G):

11 Further technical characteristics:

State your requirements:

Technical requirements of stereo microscope

12 What type of eyepiece tube do you need for your application?

- | | |
|--|---|
| <input type="checkbox"/> Binocular eyepiece tube | view with both eyes, two eyepieces |
| <input type="checkbox"/> Trinocular eyepiece tube | view with both eyes and additional option to adapt a camera |

Attention: look also at point 20 – Do you need a camera?

Additional comments:

13 Please select the required optical system?

- | | |
|---|---|
| <input type="checkbox"/> Greenough | beam paths which are completely separate from each other |
| <input type="checkbox"/> Parallel/ABBE | beam paths which are completely separate from each other which run parallel |

Additional comments:

14 Which illumination do you need for your application?

- | | |
|--|--|
| <input type="checkbox"/> None | stereo microscope without illumination |
| <input type="checkbox"/> Incident illumination | incident illumination e.g. LED or halogen |
| <input type="checkbox"/> Transmitted illumination | additional illumination for translucent samples |
| <input type="checkbox"/> Coaxial illumination | integrated coaxial illumination for selective depth of focus |
| <input type="checkbox"/> External illumination | external illumination could be ordered additionally, for example ring illumination unit, swan neck (cold light source), as Accessories |

Additional comments:

15 What type of magnification do you need?

- | | |
|--|--|
| <input type="checkbox"/> Rotation objective | changing the magnification by rotating the objective |
| <input type="checkbox"/> Zoom | continuous magnification |

Additional comments:

16

What magnification do you need?☐ Minimum: _____☐ Maximum: _____

Additional comments:

Interesting facts

► Magnification formula: Eyepiece magnification × objective magnification (zoom) = Total magnification

17

What eyepiece diameter (visual field) and what eyepiece magnification do you need?

10× magnification

☐ Ø 20 mm☐ Ø 22 mm☐ Ø 23 mm

Dioptre adjustment

☐ Yes, on one side☐ Yes, on both sides

Further magnifications possible:

(State the magnification you require:)

18

What working distance do you need?☐ Minimum: _____ mm☐ Maximum: _____ mm

Additional comments:

Interesting facts

► The working distance is the distance between the objective and the sample.

19

What size of field of view do you need?☐ Minimum: _____ mm☐ Maximum: _____ mm

Additional comments:

Interesting facts

► The field of view is the section which is shown through the magnification. If the magnification (Zoom) is very high, the field of view will be reduced. By magnifying and focussing a specific section, it is not possible to capture the whole sample.

20

Do you need a camera to save the documents?

- ☐ yes
- ☐ no

Interesting facts

► With a trinocular microscope, you always have to use a C-mount adapter to adapt a camera!

Additional comments:

(e.g. required number of Mpx etc.)

21

Do you need any further functions?

- ☐ Dark field unit
- ☐ Stand inlays
(preparation-background) e.g. glass, opaque glass, black, white
- ☐ Universal stand
- ☐ Mechanical bench

Additional comments:

22

Further technical characteristics:

State your requirements:

Please fill in your contact, that we could make you an offer for a suitable microscope

Customer number:

Company:

Surname, first name:

Street:

Postcode/Area:

Country:

Tel.:

Fax:

E-Mail:

Checklist for your refractometer – your requirements

1 Which kind of refractometer do you need?

- | | |
|---|--|
| <input type="checkbox"/> Analogue refractometer | hand-held device for rapid analysis/can be used for mobile applications |
| <input type="checkbox"/> Digital refractometer | digital, hand-held device for rapid analysis/can be used for mobile applications |
| <input type="checkbox"/> Analogue ABBE refractometer | stand benchtop device/refraction index & Brix – Measuring for all applications |

State your intended use/
Describe your application:

2 State your area of application

- | | |
|---|---|
| <input type="checkbox"/> Sugar/lubricants | determining the sugar content in e.g. fruit, vegetables, juice,
drinks which contain sugar, lubricants for drills, milling machines and lathes |
| <input type="checkbox"/> Honey | determining the sugar content, water content and relative density of liquids |
| <input type="checkbox"/> Salt | determining the sodium chloride in water (salinity) and determining the salt in water |
| <input type="checkbox"/> Wine | determining the alcohol content, degree of ripeness through fruit sugar |
| <input type="checkbox"/> Urine | Determination of specific urine weight (density), the serum content (serum protein in urine)
and the refraction index |
| <input type="checkbox"/> Industry/motor vehicles | Determination of glycol concentration (ethylene, propylene), of battery fluid, screen wash |
| <input type="checkbox"/> Refractive index | determining the refraction index of different substances |

What sort of results are you expecting:
(to determine the scale)

3 Do you need automatic temperature compensation?

- | | |
|-------------------------------------|--|
| <input type="checkbox"/> yes | ATC allows you take measurements with different environmental, device and sample temperatures
between 10 °C and 30 °C |
| <input type="checkbox"/> no | without ATC the environmental, device and sample temperatures must be 20° C in order to
get a precise measuring result. If the table is different, the result must be corrected manually. |

Please fill in your contact, that we could make you an offer for a suitable refractometer

Customer number:

Company:

Surname, first name:

Street:

Postcode/Area:

Country:

Tel.:

Fax:

E-Mail:
