DQS MED ISO 9001

German Excellence Group
Member

1769
Ancestor Johann Jakob Sauter built the Hahn inclination scale out of iron, a foundation stone for weighing for the balance industry in Southern Germany

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

2019
Significant anniversary year!
25 years of accredited DKD laboratory
175 years of KERN & SOHN
250 years of balance manufacture in the Sauter family-owned company

2020
Construction of Ziegelei 3.0, extension of administration building

MARCA LAB

MICROSCOPES & REFRACTOMETERS

for laboratory, industry and food

MICROSCOPES & REFRACTOMETERS – for laboratory, industry and food
2021

PROFESSIONAL MEASURING

2021

KERN Models A – Z

For an overwiew of the symbols, see the reverse side

360° IL ACCU USB 3.0

KERN Pictograms

360° rotatable microscope head

Monocular Microscope
For the inspection with one eye

Binocular Microscope
For the inspection with both eyes

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

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

Halogen illumination
For pictures bright and rich in contrast

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

Incident illumination
For non-transparent objects

Transmitting illumination
For transparent objects

Fluorescence illumination
For stereomicroscopes

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

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

Phase contrast unit
For a higher contrast

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

Polarising unit
To polarise the light

Infinity system
Infinity corrected optical system

Zoom magnification
For stereomicroscopes

Parallel optical system
For stereomicroscopes, enables fatigue-proof working

Integrated scale
In the eyepiece

SD card
For data storage

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

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

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

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

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

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

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

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

Battery operation rechargeable
Prepared for a rechargeable battery operation

Mains adapter
230V/50Hz in standard version for EU. On request GB, AUS or USA version.

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

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

Abbreviations

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

Why you should choose a KERN microscope now!

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

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

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

Your advantages:
- all mechanical parts have been designed for a long service life
- special attention has been given to the ergonomy of our microscopes, as this allows the user to work for several hours in a comfortable position which does not cause fatigue
- our microscopes are fully-equipped and can be used immediately
- Highlight for 2021: die KERN camera software – you will be amazed at how user-friendly and intuitive it is, a high-quality tablet camera as well as a comprehensive range of calibration services for refractometers
- and much more...

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

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

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

With our current 2021 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
- 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

reliable
- 2+ years warranty
- Certified QM system DIN EN ISO 9001

versatile
- 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”

Notes

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 on the internet, see back side of the envelope.

Product group index 2021

Microscopes

Refractometers

Polarimeter

NEWS 2021

Innovative products in familiar KERN quality:

MET and POL microscopes with LED illumination KERN OKO-1/OPO-1

The well-known metallurgy and polarisation microscopes in the OKO-1 and OPO-1 ranges for professional applications fully converted to advanced LED lighting systems.

Further details ▸ page 34/39

Fluorescence microscopes KERN OCM-1

The popular OCM-1 inverse microscope range has been expanded to include three new fluorescence variants

Further details ▸ page 28

Video microscopes KERN OIV-2

The new video microscopes with impressive image quality offer a high level of comfort for quality controllers in industrial environments.

Further details ▸ page 74

Polarimeter KERN OAB-N

As well as microscopes and refractometers, manual polarimeters are also part of our product range.This affordable entry-level device is the perfect companion for laboratory staff taking their first steps into polarimetry.

Further details ▸ page 114/115

HIGHLIGHTS 2021

KERN Calibration service

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

Further details ▸ page 112

KERN Microscope VIS software

The perfect software for measuring, counting and documenting your samples

Further details ▸ page 95

Included with every KERN camera delivery

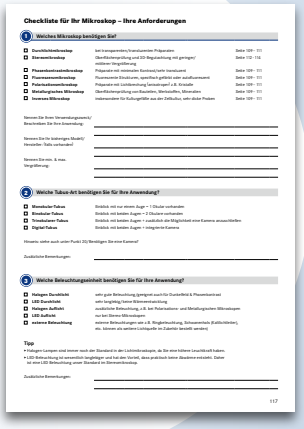
Basic laboratory microscope KERN OBE-12 OBE-13

Microscopes with modern design, which ensure even greater ergonomics, have now been added to the topseller Kern OBE range

Further details ▸ page 16/17

KERN Checklist for “My ideal microscope”

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



Checkliste für Ihr Mikroskop – Ihre Anforderungen

1 Welches Mikroskop benötigen Sie?

2 Welche Tubus-Art benötigen Sie für Ihre Anwendung?

3 Welche Beleuchtungseinheit benötigen Sie für Ihre Anwendung?

Tipp

Further details ▸ page 116

KERN Digital microscope sets

Pre-configured, discounted set solutions through the combination of bestseller microscopes and cameras or tablets

Further details ▸ page 69-72


WF10X
DIN/18MM
4/0.10
160/0.17
10/0.25
160/0.17

Microscopes

1 Compound microscopes

Compound, Phase contrast, Digital, Fluorescence and Inverted microscopes

Note

Please request special conditions for a classroom set

Objectives OBS

OBS 101

OBS 104

OBS 106

EDUCATIONAL LINE

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

Features

- The KERN OBS range is a solid and simple school microscope range, which is easy to use due to its intuitive control elements
- The continuously dimmable 0.5W LED guarantees optimum illumination of the samples and also ensures long service life. Mobile use is also no problem through the use of rechargeable batteries
- The simple 0.65 condenser on the OBS 101 (condenser disc) and the OBS 102 (fixed condenser) ensures the very best concentration of light and illumination of the sample. The OBS 103, 104, 105 and 106 models have a 1.25 Abbe condenser which is height-adjustable and can therefore be focussed and has an aperture diaphragm, which ensures the very best concentration of light
- To focus the object, all models have a coarse and fine focusing knob on both sides. The mechanical stage enables you to work with the samples and move them rapidly (only for OBS 105, 106)
- A large selection of different eyepieces and objectives is also available
- Please find detailed information in the following model outfit list

STANDARD

not OBS 101, 102

Scope of application

- Primary school, secondary school, training, hobby use

Applications/Samples

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

Technical data

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

Model	Standard configuration						
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	Stage	
OBS 101	Monocular	WF 10×/Ø 18 mm	Achromatic	4×/10×/40×	0,5W LED (transmitted) (battery incl., rechargeable)	fix	
OBS 102	Monocular	WF 10×/Ø 18 mm	Achromatic		0,5W LED (transmitted) (battery incl., rechargeable)	fix	
OBS 103	Monocular	WF 10×/Ø 18 mm	Achromatic		0,5W LED (transmitted) (battery incl., rechargeable)	fix	
OBS 104	Binocular	WF 10×/Ø 18 mm	Achromatic		0,5W LED (transmitted) (battery incl., rechargeable)	fix	
OBS 105	Monocular	WF 10×/Ø 18 mm	Achromatic		0,5W LED (transmitted) (battery incl., rechargeable)	mechanical	
OBS 106	Binocular	WF 10×/Ø 18 mm	Achromatic		0,5W LED (transmitted) (battery incl., rechargeable)	mechanical	

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

✓ = Included with delivery ○ = Option

Note

Please request special conditions for a classroom set

Monocular version

Objectives OBT

EDUCATIONAL LINE

The modern compound microscope for teaching in your class room

Features

- The KERN OBT range is a high-quality school microscope, which will impress you with its intuitive control elements, sturdy construction and modern design
- The infinitely dimmable 1W LED guarantees optimum illumination of the samples and also ensures long service life. Mobile use is also no problem through optional battery operation
- The simple 0.65 condenser lens with adjustable aperture diaphragm on the OBT 101 ensures the very best concentration of light and illumination of the sample. The OBT 102, 103, 104, 105, 106 models have a 1.25 Abbe condenser which is height-adjustable and can therefore be focussed and has an aperture diaphragm, which ensures the very best concentration of light
- To focus the object accurately, all models have a coarse and fine focusing knob on both sides. The mechanical angle table enables you to work with the samples and move them rapidly (for OBT 103, 104, 105, 106 models)
- A large selection of different eyepieces and objectives is also available
- A dust cover as well as user instructions are included with the delivery
- Please find detailed information in the following model outfit list

Scope of application

- Primary school, secondary school, training, hobby use

Applications/Samples

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

Technical data

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

STANDARD

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

OPTION

BATT | SCALE

Model KERN	Standard configuration						
	Tube	Eyepiece	Objective quality	Objectives	Illumination	Stage	
OBT 101	Monocular	HWF 10×/Ø 18 mm	Achromatic	4×/10×/40×	1W LED (transmitted)	fix	
OBT 102	Monocular	HWF 10×/Ø 18 mm	Achromatic		1W LED (transmitted)	fix	
OBT 103	Monocular	HWF 10×/Ø 18 mm	Achromatic		1W LED (transmitted)	mechanical	
OBT 104	Binocular	HWF 10×/Ø 18 mm	Achromatic		1W LED (transmitted)	mechanical	
OBT 105	Monocular	HWF 10×/Ø 18 mm	Achromatic	4x/10x/40x/100x	1W LED (transmitted)	mechanical	
OBT 106	Binocular	HWF 10×/Ø 18 mm	Achromatic		1W LED (transmitted)	mechanical	

Model outfit		Model KERN						Order number	
		OBT 101	OBT 102	OBT 103	OBT 104	OBT 105	OBT 106		
Eyepieces (23,2 mm)	WF 10×/⌀ 18 mm	✓	✓	✓	✓✓	✓	✓✓	OBB-A3200	
	WF 10×/⌀ 18 mm (with Pointer)	○	○	○	○	○	○	OBB-A3201	
	WF 10×/⌀ 18 mm (reticule 0,1 mm)	○	○	○	○	○	○	OBB-A3202	
Achromatic objectives	4×/0,10 W.D. 27 mm	✓	✓	✓	✓	✓	✓	OBB-A3203	
	10×/0,25 W.D. 7 mm	✓	✓	✓	✓	✓	✓	OBB-A3204	
	40×/0,65 (spring-loaded) W.D. 0,6 mm	✓	✓	✓	✓	✓	✓	OBB-A3205	
	100×/1,25 (oil) (spring-loaded) W.D. 0,2 mm	○	○	○	○	✓	✓	OBB-A3207	
	60×/0,85 (spring-loaded) W.D. 0,4 mm	○	○	○	○	○	○	OBB-A3206	
Monocular tube	45° inclined/360° rotatable	✓	✓	✓	○	✓	○	OBB-A3221	
Binocular tube	· Siedentopf 45° inclined/360° rotatable · Interpupillary distance 48–75 mm · Diopter adjustment: One-sided	○	○	○	✓	○	✓	OBB-A3222	
Fixed stage	· Stage size W×D 115×110 mm · Coaxial coarse and fine focusing knobs, scale: 2 µm	✓	✓						
Mechanical stage	· Stage size W×D 115×110 mm · Travel 52×20 mm · Coaxial coarse and fine focusing knobs, scale: 2 µm · One slide holder			✓	✓	✓	✓		
Condenser	Simple condenser N.A. 0,65	✓							
	Abbe N.A. 1,25 (aperture diaphragm)		✓	✓	✓	✓	✓		
Illumination	1 W LED spare bulb (transmitted)	✓	✓	✓	✓	✓	✓	OBB-A3208	
Colour filters for transmitted illumination	Blue	○	○	○	○	○	○	OBB-A3212	
	Green	○	○	○	○	○	○	OBB-A3210	
	Yellow	○	○	○	○	○	○	OBB-A3211	
	Grey	○	○	○	○	○	○	OBB-A3209	

✓ = Included with delivery ○ = Option

Trinocular version

Monocular version

! Note

Please request special conditions for a classroom set

Objectives OBE

Simple polarising unit

Darkfield unit

EDUCATIONAL LINE

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

Features

- The KERN OBE series is a range of high-quality, fully-equipped compound microscopes, which can't be beaten in terms of ease of use and ergonomic design
- The strong and continuously dimmable 3 W LED guarantees optimum illumination of the samples and also ensures long service life. Mobile use of several models is also no problem through the use of rechargeable batteries
- The height-adjustable and thereby focusable 1,25 Abbe condenser with aperture diaphragm is a further quality feature of the OBE series and ensures the very best concentration of light
- Height adjustment of the fully-equipped mechnical stage is carried out using a coarse and fine focusing knob on both sides. The ergonomically designed coaxial drive enables you to work with the samples and move them rapidly
- A large selection of different eyepieces and objectives, a simple polarising unit and a darkfield kit are available to you as accessories
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of the delivery
- A C-mount adapter is required to connect a camera to the trinocular version. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

Scope of application

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

Applications/Samples

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

Technical data

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

STANDARD

OBE 103, OBE 113

OPTION

Model	Standard configuration					
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	
OBE 101	Monocular	HWF 10×/⌀ 18 mm	Achromatic	4×/10×/40×	3 W LED (transmitted)	
OBE 102	Binocular	HWF 10×/⌀ 18 mm	Achromatic		3 W LED (transmitted)	
OBE 103*	Binocular	HWF 10×/⌀ 18 mm	Achromatic		3 W LED (transmitted) (battery incl., rechargeable)	
OBE 104	Trinocular	HWF 10×/⌀ 18 mm	Achromatic		3 W LED (transmitted)	
OBE 111	Monocular	HWF 10×/⌀ 18 mm	Achromatic	4×/10×/40×/100×	3 W LED (transmitted)	
OBE 112	Binocular	HWF 10×/⌀ 18 mm	Achromatic		3 W LED (transmitted)	
OBE 113	Binocular	HWF 10×/⌀ 18 mm	Achromatic		3 W LED (transmitted) (battery incl., rechargeable)	
OBE 114	Trinocular	HWF 10×/⌀ 18 mm	Achromatic		3 W LED (transmitted)	

*! ONLY WHILE STOCKS LAST

Model outfit		Model KERN				Order number	
		OBE 101	OBE 102	OBE 103	OBE 104		
Eyepieces (23,2 mm)	HWF 10×/⌀ 18 mm	✓	✓✓	✓✓	✓✓	OBB-A1403	
	WF 16×/⌀ 13 mm	○	○○	○○	○○	OBB-A1354	
	HWF 10×/⌀ 18 mm (with Pointer)	○	○	○	○	OBB-A1348	
	HWF 10×/⌀ 18 mm (reticule 0,1 mm) (non-adjustable)	○	○	○	○	OBB-A1349	
Achromatic objectives	4×/0,10 W.D. 18,6 mm	✓	✓	✓	✓	OBB-A1111	
	10×/0,25 W.D. 6,5 mm	✓	✓	✓	✓	OBB-A1108	
	40×/0,65 (spring-loaded) W.D. 0,47 mm	✓	✓	✓	✓	OBB-A1112	
	100×/1,25 (oil) (spring-loaded) W.D. 0,07 mm	○	○	○	○	OBB-A1109	
	20×/0,40 (spring-loaded) W.D. 1,75 mm	○	○	○	○	OBB-A1110	
	60×/0,85 (spring-loaded) W.D. 0,1 mm	○	○	○	○	OBB-A1113	
	E-Plan 100×/0,80 (dry) (spring-loaded) W.D. 0,15 mm	○	○	○	○	OBB-A1442	
	Plan 100×/1,0 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	○	OBB-A1441	
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	
Darkfield unit	Usable for 4× – 40× objectives	○	○	○	○	OBB-A1148	
Polarising unit	Analyser/Polariser	○	○	○	○	OBB-A1276	
Illumination	3 W LED illumination system (transmitted) (non-rechargeable)	✓	✓		✓		
	3 W LED illumination system (transmitted) (rechargeable)			✓			
Colour filters for transmitted illumination	Blue	○	○	○	○	OBB-A1466	
	Green	○	○	○	○	OBB-A1467	
	Yellow	○	○	○	○	OBB-A1468	
	Grey	○	○	○	○	OBB-A1184	
C-Mount	0,5× (focus adjustable)				○	OBB-A1137	
	1×				○	OBB-A1139	

✓ = Included with delivery ○ = Option

Model outfit		Model KERN				Order number	
		OBE 111	OBE 112	OBE 113	OBE 114		
Eyepieces (23,2 mm)	HWF 10×/⌀ 18 mm	✓	✓✓	✓✓	✓✓	OBB-A1403	
	WF 16×/⌀ 13 mm	○	○○	○○	○○	OBB-A1354	
	HWF 10×/⌀ 18 mm (with Pointer)	○	○	○	○	OBB-A1348	
	HWF 10×/⌀ 18 mm (reticule 0,1 mm) (non-adjustable)	○	○	○	○	OBB-A1349	
Achromatic objectives	4×/0,10 W.D. 18,6 mm	✓	✓	✓	✓	OBB-A1111	
	10×/0,25 W.D. 6,5 mm	✓	✓	✓	✓	OBB-A1108	
	40×/0,65 (spring-loaded) W.D. 0,47 mm	✓	✓	✓	✓	OBB-A1112	
	100×/1,25 (oil) (spring-loaded) W.D. 0,07 mm	✓	✓	✓	✓	OBB-A1109	
	20×/0,40 (spring-loaded) W.D. 1,75 mm	○	○	○	○	OBB-A1110	
	60×/0,85 (spring-loaded) W.D. 0,1 mm	○	○	○	○	OBB-A1113	
	E-Plan 100×/0,80 (dry) (spring-loaded) W.D. 0,15 mm	○	○	○	○	OBB-A1442	
	Plan 100×/1,0 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	○	OBB-A1441	
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	
Darkfield unit	Usable for 4× – 40× objectives	○	○	○	○	OBB-A1148	
Polarising unit	Analyser/Polariser	○	○	○	○	OBB-A1276	
Illumination	3 W LED illumination system (transmitted) (non-rechargeable)	✓	✓		✓		
	3 W LED illumination system (transmitted) (rechargeable)			✓			
Colour filters for transmitted illumination	Blue	○	○	○	○	OBB-A1466	
	Green	○	○	○	○	OBB-A1467	
	Yellow	○	○	○	○	OBB-A1468	
	Grey	○	○	○	○	OBB-A1184	
C-Mount	0,5× (focus adjustable)				○	OBB-A1137	
	1×				○	OBB-A1139	

✓ = Included with delivery ○ = Option

01

! Note

Please request special conditions for a classroom set

Monocular version

Trinocular version

Butterfly tube

EDUCATIONAL LINE

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

Features

- The brand new OBE-12/13 range stands out through its exclusive, dynamic device, which is second to none in terms of sturdy construction and ergonomics. The clever storage compartment on the back will enables quick practical storage for your power cable. Thanks to the USB connection technology, it is also possible to supply power using an external powerbank
- The impressive, infinitely dimmable 3 W LED guarantees bright illumination of your sample
- A further highlight is the Butterfly tube which is integrated as standard and which enables you to achieve the ideal viewing angle. The height-adjustable and thereby focusable 1.25 Abbe condenser with aperture diaphragm is a further quality feature of the OBE range and guarantees the very best concentration of light
- Height adjustment of the fully-equipped mechnical stage is carried out using a coarse and fine focusing knob on both sides. The ergonomically designed coaxial drive enables you to work with the samples and move them rapidly
- A large selection of different eyepieces and objectives are available to you as accessories
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of the delivery
- A C-mount adapter is required to connect a camera to the trinocular version. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

Scope of application

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

Applications/Samples

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

Technical data

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

STANDARD

OPTION

Model KERN	Standard configuration					
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
OBE 121	Monocular	HWF 10×/ø 18 mm	Achromatic	4×/10×/40×	3W LED (transmitted)	
OBE 122	Binocular	HWF 10×/ø 18 mm	Achromatic		3W LED (transmitted)	
OBE 124	Trinocular	HWF 10×/ø 18 mm	Achromatic		3W LED (transmitted)	
OBE 131	Monocular	HWF 10×/ø 18 mm	Achromatic	4×/10×/40×/100×	3W LED (transmitted)	
OBE 132	Binocular	HWF 10×/ø 18 mm	Achromatic		3W LED (transmitted)	
OBE 134	Trinocular	HWF 10×/ø 18 mm	Achromatic		3W LED (transmitted)	

Model outfit		Model KERN						Order number	
		OBE 121	OBE 122	OBE 124	OBE 131	OBE 132	OBE 134		
Eyepieces (23,2 mm)	HWF 10×/⌀ 18 mm	✓	✓✓	✓✓	✓	✓✓	✓✓	OBB-A1403	
	WF 16×/⌀ 13 mm	○	○○	○○	○	○○	○○	OBB-A1354	
	HWF 10×/⌀ 18 mm (with pointer)	○	○	○	○	○	○	OBB-A1348	
	HWF 10×/⌀ 18 mm (reticule 0,1 mm) (non-adjustable)	○	○	○	○	○	○	OBB-A1349	
Achromatic objectives	4×/0,10 W.D. 18,6 mm	✓	✓	✓	✓	✓	✓	OBB-A1111	
	10×/0,25 W.D. 6,5 mm	✓	✓	✓	✓	✓	✓	OBB-A1108	
	40×/0,65 (spring-loaded) W.D. 0,47 mm	✓	✓	✓	✓	✓	✓	OBB-A1112	
	100×/1,25 (oil) (spring-loaded) W.D. 0,07 mm	○	○	○	✓	✓	✓	OBB-A1109	
	20×/0,40 (spring-loaded) W.D. 1,75 mm	○	○	○	○	○	○	OBB-A1110	
	60×/0,85 (spring-loaded) W.D. 0,1 mm	○	○	○	○	○	○	OBB-A1113	
	E-Plan 100×/0,80 (dry) (spring-loaded) W.D. 0,15 mm	○	○	○	○	○	○	OBB-A1442	
	Plan 100×/1,0 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	○	○	○	OBB-A1441	
Monocular tube	30° inclined	✓			✓				
Binocular tube	· Butterfly 30° inclined · Interpupillary distance 48 – 75 mm · Diopter adjustment: One-sided		✓			✓			
Trinocular tube	· see binocular tube · Light distribution 20:80			✓			✓		
Mechanical stage	· Stage size W×D 125×115 mm · Travel 50×70 mm · Coaxial coarse and fine focusing knobs, scale: 2 µm	✓	✓	✓	✓	✓	✓		
Condenser	Abbe N.A. 1,25 (aperture diaphragm)	✓	✓	✓	✓	✓	✓	OBB-A1101	
Darkfield unit	Usable for 4× – 40× objectives	○	○	○	○	○	○	OBB-A1148	
Illumination	3 W LED illumination system (transmitted)	✓	✓	✓	✓	✓	✓		
Colour filters for transmitted illumination	Blue	○	○	○	○	○	○	OBB-A1466	
	Green	○	○	○	○	○	○	OBB-A1467	
	Yellow	○	○	○	○	○	○	OBB-A1468	
	Grey	○	○	○	○	○	○	OBB-A1184	
C-Mount	0,5× (focus adjustable)			○			○	OBB-A1137	
	1×			○			○	OBB-A1139	

✓ = Included with delivery ○ = Option

01

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 KERN	Standard configuration					
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
OBF 121	Binocular	HWF 10×/ø 18 mm	Achromatic	4×/10×/40×/100×	20 W Halogen (transmitted)	↓
OBF 122	Binocular	HWF 10×/ø 18 mm	Plan		20 W Halogen (transmitted)	↓
OBF 123	Binocular	HWF 10×/ø 18 mm	Plan		3 W LED (transmitted)	↓
OBF 131	Trinocular	HWF 10×/ø 18 mm	Achromatic		20 W Halogen (transmitted)	↓
OBF 132	Trinocular	HWF 10×/ø 18 mm	Plan		20 W Halogen (transmitted)	↓
OBF 133	Trinocular	HWF 10×/ø 18 mm	Plan		3 W LED (transmitted)	↓

! ONLY WHILE STOCKS LAST ↓

Model outfit		Model KERN						Order number	
		OBF 121	OBF 131	OBF 122	OBF 132	OBF 123	OBF 133		
Eyepieces (23,2 mm)	HWF 10×/⌀ 18 mm	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	OBB-A1403	
	WF 16×/⌀ 13 mm	○○	○○	○○	○○	○○	○○	OBB-A1354	
	HWF 10×/⌀ 18 mm (with Pointer)	○	○	○	○	○	○	OBB-A1348	
	HWF 10×/⌀ 18 mm (reticule 0,1 mm) (non-adjustable)	○	○	○	○	○	○	OBB-A1349	
Achromatic objectives	4×/0,10 W.D. 18,6 mm	✓	✓					OBB-A1111	
	10×/0,25 W.D. 6,5 mm	✓	✓					OBB-A1108	
	40×/0,65 (spring-loaded) W.D. 0,47 mm	✓	✓					OBB-A1112	
	100×/1,25 (oil) (spring-loaded) W.D. 0,07 mm	✓	✓					OBB-A1109	
	20×/0,40 (spring-loaded) W.D. 1,75 mm	○	○					OBB-A1110	
	60×/0,85 (spring-loaded) W.D. 0,1 mm	○	○					OBB-A1113	
Plan objectives	4×/0,10 W.D. 14,5 mm			✓	✓	✓	✓	OBB-A1255	
	10×/0,25 W.D. 5,65 mm			✓	✓	✓	✓	OBB-A1238	
	40×/0,65 (spring-loaded) W.D. 0,85 mm			✓	✓	✓	✓	OBB-A1256	
	100×/1,25 (oil) (spring-loaded) W.D. 0,07 mm			✓	✓	✓	✓	OBB-A1239	
	20×/0,40 (spring-loaded) W.D. 1,5 mm			○	○	○	○	OBB-A1249	
	60×/0,85 (spring-loaded) W.D. 0,07 mm			○	○	○	○	OBB-A1269	
	100×/1,0 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	○	○	○	OBB-A1441	
Binocular tube	· Siedentopf 30° inclined/360° rotatable · Interpupillary distance 50 – 75 mm (for non-infinity system) · Diopter adjustment: One-sided	✓	○	✓	○	✓	○	OBB-A1129	
Trinocular tube	· 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	· 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	
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	○	○	○	○	OBB-A1422	
Illumination	20 W Halogen spare bulb (transmitted)	✓	✓	✓	✓			OBB-A1370	
	3 W LED illumination system (transmitted) (non-rechargeable)					✓	✓		
Polarising unit	Analyser/Polariser	○	○	○	○	○	○	OBB-A1277	
Colour filters for transmitted illumination	Blue (built-in)	✓	✓	✓	✓	✓	✓		
	Green	○	○	○	○	○	○	OBB-A1188	
	Yellow	○	○	○	○	○	○	OBB-A1165	
	Grey	○	○	○	○	○	○	OBB-A1183	
C-Mount	0,47× (focus adjustable)				○		○	OBB-A1135	
	0,5× (focus adjustable)		○					OBB-A1515	
	1×				○		○	OBB-A1142	
			○					OBB-A1514	

✓ = Included with delivery ○ = Option

01

Trinocular version

Simple polarising attachment

LAB LINE

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

Features

- The OBL series stands out through its infinity optical unit and is therefore ideally suited for all demanding transmitted illumination applications. The robust and ergonomic stand base guarantees safe and comfortable working
- Depending on the application, there is a choice of models with strong, continuously dimmable 3 W LED or 20 W halogen illumination (Philips)
- The fixed, pre-centred and focusable 1,25 Abbe condenser with aperture diaphragm and field diaphragm gives you a simplified Koehler illumination, without having to move the centre
- The large mechanical stage and its specimen holder holds up to two samples at the same time and is quick and easy to focus using a coaxial coarse and fine focusing knob on both sides
- A large selection of eyepieces, objectives and colour filters as well as a darkfield condenser, a simple polarising unit, different phase contrast kits through to HBO and LED fluorescence units are available to you as accessories
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- A C-mount adapter is required to connect a camera to the trinocular version. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

Scope of application

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

Applications/Samples

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

Technical data

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

STANDARD

OPTION

Model	Standard configuration					
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	
OBL 125	Binocular	HWF 10×/Ø 20 mm	Infinity E-Plan	4×/10×/40×/100×	20 W Halogen (transmitted)	
OBL 127	Binocular	HWF 10×/Ø 20 mm	Infinity E-Plan		3 W LED (transmitted)	
OBL 135	Trinocular	HWF 10×/Ø 20 mm	Infinity E-Plan		20 W Halogen (transmitted)	
OBL 137	Trinocular	HWF 10×/Ø 20 mm	Infinity E-Plan		3 W LED (transmitted)	

Model outfit		Model KERN				Order number	
		OBL 125	OBL 135	OBL 127	OBL 137		
Eyepieces (23,2 mm)	HWF 10×/⌀ 20 mm	✓✓	✓✓	✓✓	✓✓	OBB-A1404	
	WF 16×/⌀ 13 mm	○○	○○	○○	○○	OBB-A1354	
	HWF 10×/⌀ 20 mm (with Pointer)	○	○	○	○	OBB-A1448	
Infinity E-Plan objectives	4×/0,10 W.D. 12,1 mm	✓	✓	✓	✓	OBB-A1161	
	10×/0,25 W.D. 2,1 mm	✓	✓	✓	✓	OBB-A1159	
	40×/0,65 (spring-loaded) W.D. 0,58 mm	✓	✓	✓	✓	OBB-A1160	
	100×/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	✓	✓	OBB-A1158	
	Plan 20×/0,40 (spring-loaded) W.D. 2,41 mm	○	○	○	○	OBB-A1250	
	Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm	○	○	○	○	OBB-A1270	
	Plan 100×/1,15 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	○	OBB-A1437	
Binocular tube	· Siedentopf 30° inclined/360° rotatable · Interpupillary distance 50 – 75 mm (for infinity system) · Diopter adjustment: One-sided	✓	○	✓	○	OBB-A1130	
Trinocular tube	· 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	· 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	
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	○	○	OBB-A1422	
Illumination	20 W Halogen spare bulb (transmitted)	✓	✓			OBB-A1370	
	3 W LED illumination system (transmitted) (non-rechargeable)			✓	✓		
Polarising unit	Analyser/Polariser	○	○	○	○	OBB-A1277	
Phase contrast units (including PH-condenser and PH-slides)	Single unit with ∞ PH-Plan objective 10×	○	○	○	○	OBB-A1215	
	Single unit with ∞ PH-Plan objective 20×	○	○	○	○	OBB-A1217	
	Single unit with ∞ PH-Plan objective 40×	○	○	○	○	OBB-A1219	
	Single unit with ∞ PH-Plan objective 100×	○	○	○	○	OBB-A1213	
	When several magnification levels are required, please contact us						
Fluorescence unit	100 W HBO Epi Fluorescence unit, three-hole slide (B/G) including centering objective	○	○	○	○	OBB-A1154	
	3 W LED Epi Fluorescence unit, three-hole slide (B/G) including centering objective	○	○	○	○	OBB-A1157	
Colour filters for transmitted illumination	Blue (built-in)	✓	✓	✓	✓		
	Green	○	○	○	○	OBB-A1188	
	Yellow	○	○	○	○	OBB-A1165	
	Grey	○	○	○	○	OBB-A1183	
C-Mount	0,5× (focus adjustable)		○		○	OBB-A1515	
	1×		○		○	OBB-A1514	

✓ = Included with delivery ○ = Option

01

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 continously adjustable 20 W halogen illumination unit (Philips) ensures the optimum lighting conditions
- A special fixed, pre-centred phase contrast condenser as well as field diaphragm give you a simplified Koehler illumination and thereby a powerful phase-contrast display of your sample
- The large mechanical stage and its specimen holder holds up to two samples at the same time and is quick and easy to focus using a coaxial coarse and fine focusing knob on both sides
- A large selection of eyepieces, objectives and colour filters, a simple polarising unit as well as further phase contrast units are available to you as accessories
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- A C-mount adapter is required to connect a camera to the trinocular version. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

Scope of application

- Haematology, urology, gynaecology, dermatology, pathology, microbiology and parasitology, immunology, Sewage treatment plants, Oncology, entomology, vets, water analysis and breweries

Applications/Samples

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

Technical data

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

STANDARD

OPTION

Model KERN	Standard configuration					
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
OBL 145	Binocular	HWF 10×/⌀ 20 mm	Infinity E-Plan/ Plan	4×/PH10×/ PH40×/100×	20 W Halogen (transmitted)	
OBL 155	Trinocular	HWF 10×/⌀ 20 mm	Infinity E-Plan/ Plan		20 W Halogen (transmitted)	

Model outfit		Model KERN		Order number	
		OBL 145	OBL 155		
Eyepieces (23,2 mm)	HWF 10×/⌀ 20 mm	✓✓	✓✓	OBB-A1404	
	WF 16×/⌀ 13 mm	○○	○○	OBB-A1354	
	HWF 10×/⌀ 20 mm (with Pointer)	○	○	OBB-A1448	
Infinity E-Plan objectives	4×/0,10 W.D. 12,1 mm	✓	✓	OBB-A1161	
	10×/0,25 W.D. 2,1 mm	○	○	OBB-A1159	
	40×/0,65 (spring-loaded) W.D. 0,58 mm	○	○	OBB-A1160	
	100×/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	OBB-A1158	
	Plan 20×/0,40 (spring-loaded) W.D. 2,41 mm	○	○	OBB-A1250	
	Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm	○	○	OBB-A1270	
	Plan 100×/1,15 (water) (spring-loaded) W.D. 0,18 mm	○	○	OBB-A1437	
Binocular tube	· Siedentopf 30° inclined/360° rotatable · Interpupillary distance 50 – 75 mm (for infinity system) · Diopter adjustment: One-sided	✓	○	OBB-A1130	
Trinocular tube	· 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	· 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	
Phase contrast units	Infinity PH-Plan objective 10×	✓	✓	OBB-A1390	
	Infinity PH-Plan objective 20×	○	○	OBB-A1391	
	Infinity PH-Plan objective 40×	✓	✓	OBB-A1392	
	Infinity PH-Plan objective 100×	○	○	OBB-A1393	
	PH slide 10×	✓	✓	OBB-A1399	
	PH slide 20×	○	○	OBB-A1400	
	PH slide 40×	✓	✓	OBB-A1401	
	PH slide 100×	○	○	OBB-A1402	
	Centering eyepiece	✓	✓		
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	OBB-A1422	
Illumination	20 W Halogen spare bulb (transmitted)	✓	✓	OBB-A1370	
Colour filters for transmitted illumination	Blue (built-in)	✓	✓		
	Green	✓	✓	OBB-A1188	
	Yellow	○	○	OBB-A1165	
	Grey	○	○	OBB-A1183	
C-Mount	0,5× (focus adjustable)		○	OBB-A1515	
	1×		○	OBB-A1514	
For further optional accessories, please see the list of items for the OBL-12 and OBL-13 series from page 20					

✓ = Included with delivery ○ = Option

OBN-13

OBN-15

OBN-15: Mounted phase contrast condenser

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

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

PROFESSIONAL LINE

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

Features

- The OBN series stands out because of its unbeatable and consistently high quality and its ergonomic design. The range of modular components means that the OBN series can be individually customised for the professional user
- Depending on the application, there is a choice of models with strong, continuously dimmable 3 W LED or 20 W halogen transmitted illumination (Philips)
- In addition the halogen variant is available as a pre-configured phase contrast microscope, which, through the combination of a professional quintuple condenser wheel, phase contrast condenser and Infinity Plan phase contrast objectives makes it a high-quality, fully-equipped microscope for all applications related to this contrasting method
- This series has a professional Koehler illumination unit with an adjustable field diaphragm as well as a height-adjustable 1,25 Abbe condenser which can be centred and which has an adjustable aperture diaphragm
- The extremely large mechanical stage with ergonomic, coaxial coarse and fine focusing knob on both sides enables you to adjust and focus your sample rapidly and accurately
- A wide variety of modular systems, such as, for example, a swing-out condenser, various eyepieces, objectives, colour filters, phase contrast units, a darkfield condenser, a simple polarising unit, Butterfly tube, through to complete fluorescence units are available to you as accessories
- This centring eyepiece for adjusting the phase contrast (OBN 158), 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					
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	
OBN 132	Trinocular	HWF 10×/⌀ 20 mm	Infinity Plan	4×/10×/20×/40×/100×	20 W Halogen (transmitted)	
OBN 135	Trinocular	HWF 10×/⌀ 20 mm	Infinity Plan		3 W LED (transmitted)	
OBN 158	Trinocular	HWF 10×/⌀ 20 mm	Infinity Plan	4×/PH10×/PH20×/PH40×/PH100×	20 W Halogen (transmitted)	

Order Hotline: Go to back page of catalogue

Model outfit		Model KERN			Order number	
		OBN 132	OBN 135	OBN 158		
Eyepieces (23,2 mm)	HWF 10×/⌀ 20 mm	✓✓	✓✓	✓✓	OBB-A1404	
	WF 16×/⌀ 13 mm	○○	○○	○○	OBB-A1354	
Infinity Plan achromatic objectives	4×/0,10 W.D. 12,1 mm	✓	✓	✓	OBB-A1263	
	10×/0,25 W.D. 4,64 mm	✓	✓	○	OBB-A1243	
	20×/0,40 (spring-loaded) W.D. 2,41 mm	✓	✓	○	OBB-A1250	
	40×/0,66 (spring-loaded) W.D. 0,65 mm	✓	✓	○	OBB-A1257	
	100×/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	○	OBB-A1240	
	2,5×/0,07 W.D. 8,47 mm	○	○	○	OBB-A1247	
	Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm	○	○	○	OBB-A1270	
	Plan 100×/1,15 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	OBB-A1437	
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	
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	
	Swing-out condenser N.A. 0,9/0,13 center-adjustable (aperture diaphragm)	○	○	○	OBB-A1104	
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	○	OBB-A1421	
	N.A. 1,3 (oil, cardioid)	○	○	○	OBB-A1538	
Koehler illumination	20 W Halogen spare bulb (transmitted)	✓		○	OBB-A1370	
	3 W LED illumination system (transmitted) (non-rechargeable)		✓			
Polarising unit	Analyser/Polariser	○	○	○	OBB-A1283	
Phase contrast units	Quintuple hole turret with 10×/20×/40×/100× Infinity-PH-Plan objectives (complete set)	○	○	✓	OBB-A1237	
	Single unit with ∞ PH-Plan objective 10×	○	○		OBB-A1214	
	Single unit with ∞ PH-Plan objective 20×	○	○		OBB-A1216	
	Single unit with ∞ PH-Plan objective 40×	○	○		OBB-A1218	
	Single unit with ∞ PH-Plan objective 100×	○	○		OBB-A1212	
	Centering eyepiece	○	○	✓		
	When several magnification levels are required, please contact us					
C-Mount	1×	○	○	○	OBB-A1140	
	0,57× (focus adjustable)	○	○	○	OBB-A1136	
Fluorescence unit	100 W HBO Epi Fluorescence unit 6-filter disc (UV/V/B/G) including centering objective	○	○	○	OBB-A1155	
	100 W HBO Epi Fluorescence unit, two-hole slide (B/G) including centering objective	○	○	○	OBB-A1153	
	3 W LED Epi Fluorescence unit (B/G) including centering objective	○	○	○	OBB-A1156	
Colour filters for transmitted illumination	Blue	✓		✓		
	Green	○	○	✓	OBB-A1188	
	Yellow	○	○	○	OBB-A1165	
	Grey	○	○	○	OBB-A1183	

✓ = 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

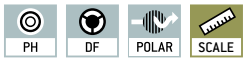
- Specially for translucent, thin, low-contrast, challenging samples (e.g. immunofluorescence, FISH, DAPI staining, etc.)

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



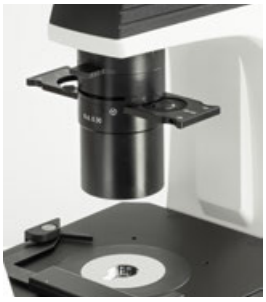
Model KERN	Standard configuration					
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
OBN 141	Trinocular	HWF 10×/ø 20 mm	Infinity Plan	4×/10×/20×/ 40×/100×	LED + 3 W LED Epi Fluorescence (B/G)	
OBN 147	Trinocular	WF 10×/ø 20 mm	Infinity Plan		Halogen + 100 W Epi Fluorescence (B/G)	
OBN 148	Trinocular	HWF 10×/ø 20 mm	Infinity Plan		Halogen + 100 W Epi Fluorescence (B/G/UV/V)	

Model outfit		Model KERN			Order number	
		OBN 141	OBN 147	OBN 148		
Eyepieces (23,2 mm)	HWF 10×/⌀ 20 mm	✓✓		✓✓	OBB-A1404	
	WF 10×/⌀ 20 mm		✓✓		OBB-A1351	
	WF 16×/⌀ 13 mm	○○	○○	○○	OBB-A1354	
	WF 10×/⌀ 20 mm (reticule 0,1 mm) (adjustable)	○	○	○	OBB-A1352	
Infinity Plan achromatic objectives	4×/0,10 W.D. 12,1 mm	✓	✓	✓	OBB-A1263	
	10×/0,25 W.D. 4,64 mm	✓	✓	✓	OBB-A1243	
	20×/0,40 (spring-loaded) W.D. 2,41 mm	✓	✓	✓	OBB-A1250	
	40×/0,66 (spring-loaded) W.D. 0,65 mm	✓	✓	✓	OBB-A1257	
	100×/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	✓	OBB-A1240	
	2,5×/0,07 W.D. 8,47 mm	○	○	○	OBB-A1247	
	Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm	○	○	○	OBB-A1270	
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	
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	
	Swing-out condenser N.A. 0,9/0,13 center-adjustable (aperture diaphragm)	○	○	○	OBB-A1104	
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	○	OBB-A1421	
	N.A. 1,3 (oil, cardioid)	○	○	○	OBB-A1538	
Koehler illumination	20 W Halogen spare bulb (transmitted)	✓	✓	✓	OBB-A1370	
Polarising unit	Analyser/Polariser	○	○	○	OBB-A1283	
Phase contrast units	Quintuple hole turret with 10×/20×/40×/100× Infinity-PH-Plan objectives (complete set)	○	○	○	OBB-A1237	
	Single unit with ∞ PH-Plan objective 10×	○	○	○	OBB-A1214	
	Single unit with ∞ PH-Plan objective 20×	○	○	○	OBB-A1216	
	Single unit with ∞ PH-Plan objective 40×	○	○	○	OBB-A1218	
	Single unit with ∞ PH-Plan objective 100×	○	○	○	OBB-A1212	
	When several magnification levels are required, please contact us					
C-Mount	1×	○	○	○	OBB-A1140	
	0,57× (focus adjustable)	○	○	○	OBB-A1136	
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	
	Yellow	○	○	○	OBB-A1165	
	Grey	○	○	○	OBB-A1183	

✓ = Included with delivery ○ = Option

OCM 161

OCM 165-168



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

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

LAB LINE

The inverted biological laboratory microscope – also with fluorescence

Features

- The OCM range stands out through its design which is ergonomic, robust and extremely stable. This design, with its large working distance, is particularly suitable for the monitoring and analysis of cell cultures, for example
- A strong and continuously adjustable 30W halogen illumination unit ensures the optimum illumination in the bright field of your samples. In addition, either an Osram 100 W-HBO- (OCM 165/166) or a 5 W-LED Epi fluorescence incident illumination unit (OCM 167/168) are available to you as a fluorescence microscope for perfect illumination and stimulation of your fluorescence samples
- A special Abbe N.A. 0.3 condenser with aperture diaphragm and large working distance of 72 mm guarantees the very best working practise in the bright field and with fluorescence applications
- As standard, the OCM range is fitted with a trinocular eyepiece tube
- The mechanical stage including specimen holder (⌀ 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 165-168
- Overall dimensions W×D×H 304×782×530 mm
- Net weight approx. 21 kg

STANDARD

Model	Standard configuration					
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	
OCM 161	Trinocular	HWF 10×/⌀ 22 mm	Infinity Plan	LWD10×/LWD20×/ LWD40×/LWD20×PH	30 W Halogen (transmitted)	
OCM 165	Trinocular	HWF 10×/⌀ 22 mm	Infinity Plan		30 W Halogen + 100 W Epi Fluorescence (B/G)	
OCM 166 NEW	Trinocular	HWF 10×/⌀ 22 mm	Infinity Plan		30 W Halogen + 100 W Epi Fluorescence (UV/V/B/G)	
OCM 167 NEW	Trinocular	HWF 10×/⌀ 22 mm	Infinity Plan		5W-LED + 5W Epi Fluorescence (B/G)	
OCM 168 NEW	Trinocular	HWF 10×/⌀ 22 mm	Infinity Plan		5W-LED + 5W Epi Fluorescence (UV/V/B/G)	

NEW New model

Order Hotline: Go to back page of catalogue

Model outfit		Model KERN					Order number	
		OCM 161	OCM 165	OCM 166	OCM 167	OCM 168		
Eyepieces (30 mm)	HWF 10×/⌀ 22 mm (adjustable)	✓✓	✓✓	✓✓	✓✓	✓✓	OBB-A1491	
	HWF 10×/⌀ 22 mm (reticule 0,1 mm) (adjustable)	○	○	○	○	○	OBB-A1523	
Infinity Plan achromatic objectives for long working distance	4×/0,11 W.D. 12,1 mm	○	○				OBB-A1493	
	10×/0,25 W.D. 8,3 mm	✓	✓				OBB-A1494	
	20×/0,40 W.D. 7,2 mm	✓	✓				OBB-A1495	
	40×/0,60 W.D. 3,4 mm	✓	✓				OBB-A1496	
Infinity Plan achromatic Fluor objectives for long working distance	4×/0,11 W.D. 12,1 mm			○	○	○	OBB-A1600	
	10×/0,25 W.D. 10,3 mm			✓	✓	✓	OBB-A1601	
	20×/0,40 W.D. 5,8 mm			✓	✓	✓	OBB-A1602	
	40×/0,60 W.D. 5,1 mm			✓	✓	✓	OBB-A1603	
Trinocular tube	· 45° inclined · Interpupillary distance 48–76 mm · Light distribution 100:0 · Diopter adjustment: Both-sided	✓	✓	✓	✓	✓		
Mechanical stage	· Stage size W×D 210×241 mm · Travel 128×80 mm · Coaxial coarse and fine focusing knobs · The x/y control knobs can be fitted either left or right · Suitable for attaching a 96-hole microtitre plate	✓	✓	✓	✓	✓		
	Drop specimen holder (⌀ 110)	✓	✓	✓	✓	✓	OBB-A1503	
	Specimen holder for 35 mm culture dish	○	○	○	○	○	OBB-A1505	
	Specimen holder for 54 mm culture dish	✓	✓	✓	✓	✓	OBB-A1506	
	Specimen holder for 65 mm culture dish	○	○	○	○	○	OBB-A1507	
Condenser	Abbe N.A. 0,3 (aperture diaphragm), LWD 72 mm	✓	✓	✓	✓	✓		
Illumination	30 W Halogen spare bulb (transmitted)	✓	✓				OBB-A1372	
	5 W LED spare bulb (transmitted)				✓	✓	OBB-A1589	
Phase contrast units	Phase contrast slide 4x	○	○	○	○	○	OBB-A1608	
	Phase contrast slide 10x	✓	✓	✓	✓	✓	OBB-A1609	
	Phase contrast slide 20x/40x	✓	✓	✓	✓	✓	OBB-A1610	
	Infinity PH-Plan objective 10×	○	○				OBB-A1497	
	Infinity PH-Plan objective 20×	✓	✓				OBB-A1498	
	Infinity PH-Plan objective 40×	○	○				OBB-A1499	
	Infinity PH-Plan Fluor objective 4×			○	○	○	OBB-A1604	
	Infinity PH-Plan Fluor objective 10x			○	○	○	OBB-A1605	
	Infinity PH-Plan Fluor objective 20x			✓	✓	✓	OBB-A1606	
	Infinity PH-Plan Fluor objective 40x			○	○	○	OBB-A1607	
	Centering eyepiece	○	○	○	○	○	OBB-A1544	
Fluorescence unit	100 W HBO Epi Fluorescence unit, two-hole slide (B/G)		✓					
	100 W HBO Epi Fluorescence unit, four-hole slide (UV/V/B/G)			✓				
	5 W HBO Epi Fluorescence unit, two-hole slide (B/G)				✓			
	5 W HBO Epi Fluorescence unit, four-hole slide (UV/V/B/G)					✓		
Colour filters for transmitted illumination	Blue	✓	✓	✓	✓	✓	OBB-A1510	
	Green	✓	✓	✓	✓	✓	OBB-A1511	
	Yellow	○	○	○	○	○	OBB-A1512	
	Grey	○	○	○	○	○	OBB-A1513	
C-Mount	0,5×	○	○	○	○	○	OBB-A1515	
	1×	○	○	○	○	○	OBB-A1514	

✓ = Included with delivery ○ = Option

TIPS FROM THE EXPERTS

In addition to our range of microscopes and refractometers, we also offer you a comprehensive range of professional measuring and testing technology as well as a comprehensive range of medical scales.

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.

Stephan Ade, Head of Sales Balances and test service

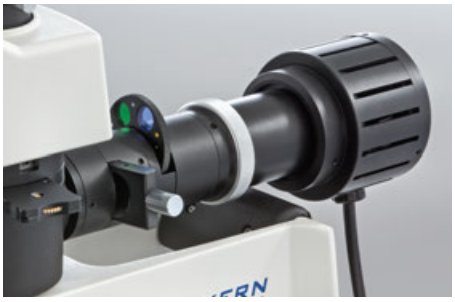
Pure competence in balances

“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 2021 catalogue for Balances & Test service.”

2 Metallurgical microscopes

02



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					
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	
OKM 173	Trinocular	HWF 10×/⌀ 18 mm	Infinity Plan	5×/10×/ LWD 20×/ LWD40×	30 W Halogen (incident)	

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

✓ = Included with delivery ○ = Option

FACE LIFT

Stage OKO

Illumination unit

PROFESSIONAL LINE MET

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

Features

- This device is a professional, versatile, metallurgical microscope, which is used in testing metals and analysing surfaces
- The KERN OKO 178 is a combi variant of LED incident illumination and LED transmitted illumination. A height-adjustable 1.25 Abbe condenser which can be centred as well as a field diaphragm for complete professional Köhler illumination are part of the standard version.
- An open, mechanical angle table is integrated as standard
- A simple polarising unit (analyser and polariser) is included with delivery
- A large selection of accessories, such as, for example, eyepieces and further objectives are available for longer working distances
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- A C-Mount adapter is required to connect a camera. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

Scope of application

- Metallurgy, material testing, quality assurance

Applications/Samples

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

Technical data

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

STANDARD

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

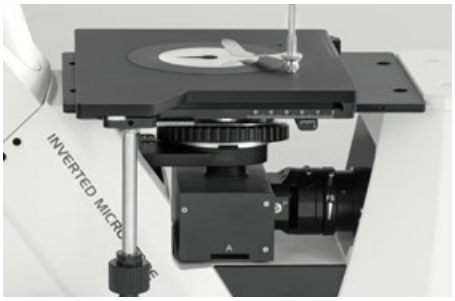
Model	Standard configuration					
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	
OKO 178	Trinocular	HWF 10×/Ø 22 mm	Infinity Plan	5x/10x/20x/50x	5 W LED (incident + transmitted)	

Order Hotline: Go to back page of catalogue

Model outfit		Model KERN	Order number	
		OKO 178		
Eyepieces (30 mm)	HWF 10×/⌀ 22 mm (adjustable)	✓	OBB-A1491	
	HWF 10×/⌀ 22 mm (reticule 0,1 mm) (adjustable)	✓	OBB-A1523	
Infinity Plan objectives for long working distance	5×/0,13 W.D. 16,04 mm	✓	OBB-A1525	
	10×/0,25 W.D. 18,48 mm	✓	OBB-A1526	
	20×/0,40 W.D. 8,35 mm	✓	OBB-A1527	
	50×/0,70 (spring-loaded) W.D. 1,95 mm	✓	OBB-A1528	
	80×/0,80 (spring-loaded) W.D. 0,85 mm	○	OBB-A1530	
	100×/0,85 (dry) W.D. 3,00 mm	○	OBB-A1531	
Trinocular tube	· Siedentopf 30° inclined/360° rotatable · Interpupillary distance 48 – 76 mm · Light distribution 100:0	✓		
Mechanical stage for transmitted illumination	· Stage size W×D 182×140 mm · Travel 77×52 mm · Coaxial coarse and fine focusing knobs	✓		
Reflected illumination unit	Polarising unit (Incl. analyser, polariser and blue filter slide)	✓		
Condenser	Abbe N.A. 1,25 (aperture diaphragm)	✓	OBB-A1380	
Koehler illumination	5 W LED spare bulb (transmitted)	✓	OBB-A1589	
Illumination polarising unit	5 W LED spare bulb (incident)			
Polariser	for transmitted illumination	✓	OBB-A1470	
Colour filters for transmitted illumination	Blue	✓	OBB-A1170	
	Green	○	OBB-A1188	
	Yellow	○	OBB-A1165	
	Grey	○	OBB-A1183	
C-Mount	1×	○	OBB-A1514	
	0,75×	○	OBB-A1590	
	0,5× (focus adjustable)	○	OBB-A1515	

✓ = Included with delivery ○ = Option

02



Specimen stage and illumination unit

Analyser/Polariser

LAB LINE MET

The inverted metallurgical microscope for professional applications

Features

- The KERN OLM range is part of the range of inverted microscopes and stands out through its design which is ergonomic, robust and extremely stable. This range, with its large working distance is, for example, particularly suitable for surface quality testing of raw materials and finished products in industry
- 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

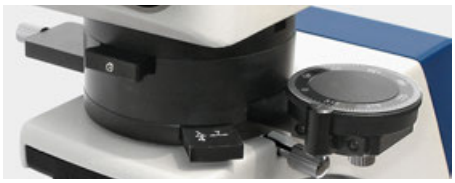
Model	Standard configuration					
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	
OLM 171	Trinocular	HWF 10×/⌀ 22 mm	Infinity Plan	LWD5×/LWD10×/ LWD20×/LWD50×	50 W Halogen (incident)	

Model outfit		Model KERN	Order number	
		OLM 171		
Eyepieces (30 mm)	HWF 10×/⌀ 22 mm (adjustable)	✓	OBB-A1491	
	HWF 10×/⌀ 22 mm (reticule 0,1 mm) (adjustable)	✓	OBB-A1523	
Infinity Plan achromatic objectives for long working distance	5×/0,13 W.D. 16,04 mm	✓	OBB-A1525	
	10×/0,25 W.D. 18,48 mm	✓	OBB-A1526	
	20×/0,40 W.D. 8,35 mm	✓	OBB-A1527	
	50×/0,70 (spring-loaded) W.D. 1,95 mm	✓	OBB-A1528	
	80×/0,80 (spring-loaded) W.D. 0,85 mm	○	OBB-A1530	
	100×/0,85 (dry) W.D. 3,00 mm	○	OBB-A1531	
Trinocular tube	· 30° inclined · Interpupillary distance 48-76 mm · Light distribution 100:0 · Diopter adjustment: Both-sided	✓		
Mechanical stage	· Stage size W×D 210×180 mm · Travel 50×50 mm · Coaxial coarse and fine focusing knobs	✓		
Illumination	50 W Halogen spare bulb (incident)	✓	OBB-A1207	
Reflected illumination unit	Polarising unit (Incl. analyser, polariser and colour filter slide)	✓		
Colour filters for transmitted illumination	Blue	✓	OBB-A1510	
	Green	○	OBB-A1511	
	Yellow	○	OBB-A1512	
	Grey	○	OBB-A1513	
C-Mount	0,5×	○	OBB-A1515	
	1×	○	OBB-A1514	

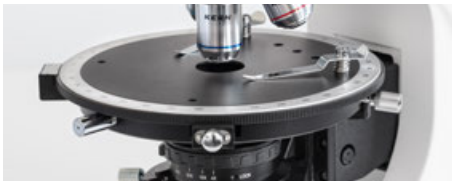
✓ = Included with delivery ○ = Option

3 Polarising microscopes

FACE LIFT



Bertrand lens, λ Slip, 360° rotatable analyser (removable)



Center-adjustable and turnable polarisation stage

"Swing-Out" condenser

PROFESSIONAL LINE POL

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

Features

- This device is a professional, fully-equipped polarising microscope, which uses the polarisation of light to analyse minerals, crystals and isotropic materials
- The KERN OKO 185 is a combi variant of LED incident illumination and LED transmitted illumination. A height-adjustable 0.9/0.13 Swing-out Abbe condenser which can be centred for complete Köhler illumination are part of the standard version.
- A 360° revolving stage with 1° division, 6' fine division and locking function is integrated into all series as standard
- As standard all series are fitted with a complete polarising unit with scale, a Bertrand lens, a λ + ¼ λ Slip as well as a quartz wedge
- A large selection of accessories such as, for example, a mechanical stage attachment as well as further objectives for a long working distance and filter units are also available
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- A C-Mount adapter is required to connect a camera. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

Scope of application

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

Applications/Samples

- More complex samples with polarising properties

Technical data

- Infinity optical system
- Quintuple nosepiece
- Siedentopf 30° inclined
- Diopter adjustment: One-sided
- Overall dimensions W×D×H 500×200×500 mm
- Net weight approx. 14,5 kg

STANDARD

TRINO ABBE LED POLAR INFINITY SCALE 230 V 1 DAY

Model	Standard configuration					
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	
OPO 185	Trinocular	HWF 10×/⌀ 20 mm	Infinity Plan	Non-stress 4×/10×/20×/40×/50×	5W LED (incident + transmitted)	

Model outfit		Model KERN	Order number	
		OPO 185		
Eyepieces (23,2 mm)	HWF 10×/20 mm	✓	OBB-A1591	
	HWF 10×/20 mm (reticule 0,1 mm) (adjustable)	✓	OBB-A1592	
Non-stress Infinity Plan objectives (transmitted)	4×/0,10 W.D. 12,1 mm	✓	OBB-A1294	
	10×/0,25 W.D. 4,64 mm	✓	OBB-A1289	
	20×/0,40 (spring-loaded) W.D. 2,41 mm	✓	OBB-A1290	
	40×/0,66 (spring-loaded) W.D. 0,65 mm	✓	OBB-A1292	
Non-stress Infinity Plan objectives (incident) for long working distance	5×/0,13 W.D. 16,04 mm	○	OBB-A1593	
	10×/0,25 W.D. 18,48 mm	○	OBB-A1594	
	20×/0,40 W.D. 8,35 mm	○	OBB-A1291	
	50×/0,70 (spring-loaded) W.D. 1,95 mm	✓	OBB-A1295	
	100×/0,85 (dry) (spring-loaded) W.D. 3,00 mm	○	OBB-A1595	
Trinocular tube	· Siedentopf 30° inclined · Interpupillary distance 48 – 76 mm · Light distribution 100:0	✓		
Analyser unit with scale	360° rotatable, lockable	✓		
Bertrand lens	Insertable, center-adjustable	✓	OBB-A1121	
λ + ¼ λ Slip	λ Slip and ¼ λ Slip (combination)	✓	OBB-A1316	
Quartz wedge	I – IV Class	✓	OBB-A1321	
Revolving round stage	360° rotatable, center-adjustable, division 1°, Vernier division 6'	✓		
Polarising attached mechanical stage	Polarising attached mechanical stage	○	OBB-A1337	
Swing-out condenser	N.A. 0,9/0,13 swing-out achromatic condenser (aperture diaphragm)	✓	OBB-A1107	
Polarising unit with scale (transmitted)	360° rotatable, lockable	✓		
Koehler illumination	5 W LED spare bulb (transmitted)	✓	OBB-A1589	
Illumination polarising unit	5 W LED spare bulb (incident)			
Colour filters for transmitted illumination	Blue	✓	OBB-A1170	
	Green	○	OBB-A1188	
	Yellow	○	OBB-A1165	
	Grey	○	OBB-A1183	
C-Mount	1×	○	OBB-A1514	
	0,75×	○	OBB-A1590	
	0,5× (focus adjustable)	○	OBB-A1515	

✓ = Included with delivery ○ = Option

Cleaning sets for microscopes

Features

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

Model KERN	Description	
OCS 901	7-piece cleaning sets for microscopes und other optical instruments	

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

TIPS FROM THE EXPERTS

As well as our balances and test services, we can offer you an extensive range of medical scales.

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.

Jesús Martinez, product specialist Medical scales

“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 2021 catalogue for medical balances and devices – this is where you will find everything for day-to-day tasks in the medical environment!

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

BINO LED IL TL BATT 230 V 1 DAY

Model KERN	Standard configuration						
	Tube	Eyepiece	Field of view mm	Objective	Stand	Illumination	
OSE 416	Binocular	WF 10×/⌀ 20 mm	⌀ 20	1×/3×	Pillar style	0,21 W LED (incident); 0,21 W LED (transmitted)	
OSE 417	Binocular	WF 10×/⌀ 20 mm	⌀ 20	2×/4×	Pillar style	0,21 W LED (incident); 0,21 W LED (transmitted)	

! ONLY WHILE STOCKS LAST

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	
		OSE 416	**OSE 417**		
Eyepieces (30,5 mm)	WF 5×/⌀ 16,2 mm	○○	○○	OZB-A4101	
	WF 10×/⌀ 20 mm	✓✓	✓✓	OZB-A4102	
	WF 15×/⌀ 15 mm	○○	○○	OZB-A4103	
	WF 20×/⌀ 10 mm	○○	○○	OZB-A4104	
Stand	Pillar style, with 0,21 W LED illumination (transmission + incident)	✓	✓		
Stage plate	Frosted glass/⌀ 95 mm	✓	✓	OZB-A4805	
	Black-white/⌀ 95 mm	✓	✓	OZB-A4806	
External illumination	Please find the information about external illumination units in the catalogue on page 88 and on the internet				

✓ = Included with delivery ○ = Option

OSE 421/422

Side view

The successor of the well-known series OSF-4

EDUCATIONAL LINE

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

Features

- With its integrated handle as well as its stable arm curved stand, the KERN OSE OSE-42 has been specially developed for schools and workshops
- The incident and transmitted illumination unit included as standard can be optionally enabled for the very best illumination of your sample. Mobile use of the OSE 422 is also no problem through the use of rechargeable batteries
- Despite its low price it has very good optical characteristics, which enable you to have sharp images over a large field of view
- An turnable objective with predefined magnifications is available to make your working procedures quicker and more efficient
- The eyepieces are fixed in the eyepiece tube, to stop them getting damaged or lost
- A special feature of this adaptable and yet robust microscope series is the stable mechanism of the microscope stand which can be adjusted precisely. It will also impress you with its functionality and ergonomic design
- A large selection of eyepieces as well as various additional external illumination units are available as accessories

Scope of application

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

Applications/Samples

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

Technical data

- Optical system: Greenough optics
- Brightness adjustable
- Tube 45° inclined
- Interpupillary distance 55 – 75 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 200×180×300 mm
- Net weight approx. 2 kg

STANDARD

Model	Standard configuration						
KERN	Tube	Eyepiece	Field of view mm	Objective	Stand	Illumination	
OSE 421	Binocular	WF 10×/⌀ 20 mm	⌀ 20	2×/4×	Arm curved	1 W LED (incident); 1 W LED (transmitted)	
OSE 422	Binocular	WF 10×/⌀ 20 mm	⌀ 20	2×/4×	Arm curved	1 W LED (incident); 1 W LED (transmitted) (Rechargeable batteries included)	

Order Hotline: Go to back page of catalogue

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

Model outfit		Model KERN		Order number	
		OSF 421	**OSF 422**		
Eyepieces (30,5 mm)	WF 5×/⌀ 16,2 mm	○○	○○	OZB-A4101	
	WF 10×/⌀ 20 mm	✓✓	✓✓	OZB-A4102	
	WF 15×/⌀ 15 mm	○○	○○	OZB-A4103	
	WF 20×/⌀ 10 mm	○○	○○	OZB-A4104	
Stand	Arm curved, with 1 W LED illumination (transmitted + incident)	✓	✓		
Stage plate	Frosted glass/⌀ 59,5 mm	✓	✓	OZB-A4815	
	Black-white/⌀ 59,5 mm	✓	✓	OZB-A4816	
External illumination	Please find the information about external illumination units in the catalogue on page 88 and on the internet				

✓ = Included with delivery ○ = Option

Stage plate black

Stage plate white

EDUCATIONAL LINE

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

Features

- With its integrated handle as well as its stable arm curved stand, the KERN OSF-4G has been specially developed for schools and workshops
- The LED reflected and transmitted illumination included as standard guarantees the very best, continuously dimmable illumination of your sample
- As well as very good optical characteristics, its ergonomic working surface means that it offers the highest level of convenience in this class
- A turnable objective with three predefined magnifications is available to make your working procedures quicker and more effective
- The eyepieces are fixed in the eyepiece tube, to stop them getting damaged or lost
- The ergonomic shape and the stable mechanism which can be adjusted extremely accurately offer a high level of functionality and enable you to work quickly and efficiently with very little effort
- A large selection of eyepieces as well as various additional external illumination units are available as accessories
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- Please find detailed information in the following model outfit list

Scope of application

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

Applications/Samples

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

Technical data

- Optical system: Greenough optics
- Brightness adjustable (separate)
- Tube 45° inclined
- Interpupillary distance 55 – 75 mm
- Diopter adjustment: One-sided
- Overall dimensions W×D×H 230×180×275 mm
- Net weight approx. 2,5 kg

STANDARD

Model KERN	Standard configuration						
	Tube	Eyepiece	Field of view mm	Objective	Stand	Illumination	
OSF 438	Binocular	WF 10×/⌀ 20 mm	⌀ 20	1×/2×/3×	Arm curved	1 W LED (incident); 0,35 W LED (transmitted)	
OSF 439	Binocular	WF 10×/⌀ 20 mm	⌀ 20	1×/2×/4×	Arm curved	1 W LED (incident); 0,35 W LED (transmitted)	

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	
		OSF 438	**OSF 439**		
Eyepieces (30,5 mm)	WF 5×/⌀ 16,2 mm	○○	○○	OZB-A4101	
	WF 10×/⌀ 20 mm	✓✓	✓✓	OZB-A4102	
	WF 15×/⌀ 15 mm	○○	○○	OZB-A4103	
	WF 20×/⌀ 10 mm	○○	○○	OZB-A4104	
Stand	Arm curved, incl. handle, with LED illumination (0,35 W transmitted + 1 W incident)	✓	✓		
Stage plate	Frosted glass/⌀ 59,5 mm	✓	✓	OZB-A4815	
	Black-white/⌀ 59,5 mm	✓	✓	OZB-A4816	
External illumination	Please find the information about external illumination units in the catalogue on page 88 and on the internet				

✓ = Included with delivery ○ = Option

LAB LINE

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

Features

- The products in the KERN OZL-44 series are stereo zoom microscopes, which will impress you with their easy handling, flexibility as well as their stability and economical price
- The LED reflected and transmitted illumination included as standard guarantees the very best illumination of your sample
- As well as excellent optical characteristics and their large working surface, these models offer the highest level of comfort in this class – ideal for training companies, workshops as well as assembly and repair workstations, e.g. in the electronics industry
- The zoom objective gives you continuous magnification of 7,5× – 36×
- The OZL-44 series is available as a binocular version. The eyepieces are fixed in the eyepiece tube, to stop them getting damaged or lost
- The pillar stand offers you the highest level of flexibility and the freedom to remove the microscope head and to integrate it into other modular systems, for example into a universal stand
- A large selection of eyepieces, external illumination units as well as auxiliary objectives are available as accessories
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- Please find detailed information in the following model outfit list

Scope of application

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

Applications/Samples

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

Technical data

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

STANDARD

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

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

OZL 445	Specifications – Objectives					
Eyepiece	**Magnification**	**Standard**	**Auxiliary objectives**			
		1,0×	**0,5×**	**0,75×**	**1,5×**	**2,0×**
WF 5×	Total magnification	3,75× – 18×	1,875× – 9×	2,81× – 13,5×	5,625× – 27×	7,5× – 36×
	Field of view mm	ø 26 – 6	ø 60 – 13	ø 32 – 7	ø 16 – 4	ø 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	ø 26,7 – 5,6	ø 53,3 – 11,1	ø 35,5 – 7,4	ø 17,8 – 3,7	ø13,3 – 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	ø 19 – 4,5	ø 43 – 9,5	ø 24 – 5,5	ø 12 – 3	ø 9,5 – 2
WF 20×	Total magnification	15× – 72×	7,5× – 36×	56,25× – 54×	22,5× – 108×	30× – 144×
	Field of view mm	ø 12,5 – 3	ø 28 – 6	ø 16 – 3,5	ø 8 – 2	ø 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	
		OZL 445		
Eyepieces (30,5 mm)	WF 5×/ø 16,2 mm	○○	OZB-A4101	
	WF 10×/ø 20 mm	✓✓	OZB-A4102	
	WF 15×/ø 15 mm	○○	OZB-A4103	
	WF 20×/ø 10 mm	○○	OZB-A4104	
Auxiliary objectives	0,5×	○	OZB-A4201	
	0,75×	○	OZB-A4202	
	1,5×	○	OZB-A4204	
	2,0×	○	OZB-A4205	
	Soldering protection lens	○	OZB-A4251	
Stand	Pillar style, with LED illumination (0,35 W transmitted + 1 W incident)	✓		
Stage plate	Frosted glass/ø 95 mm	✓	OZB-A4805	
	Black-white/ø 95 mm	✓	OZB-A4806	
External illumination	Please find the information about external illumination units in the catalogue on page 88 and on the internet			

✓ = Included with delivery ○ = Option

OZL 464
With standard stand

OZL 465
With ring illumination

OZL 467
With handle

LAB LINE

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

Features

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

Scope of application

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

Applications/Samples

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

Technical data

- Optical system: Greenough optics
- Brightness adjustable (separate)
- Tube 45° inclined
- Magnification ratio: 6,4:1
- Light distribution 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 KERN	Standard configuration						
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
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)	
OZL 464	Trinocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7× – 4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	
OZL 465	Binocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7× – 4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	
OZL 466	Trinocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7× – 4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	
OZL 467	Binocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7× – 4,5×	Arm curved	3 W LED (incident); 3 W LED (transmitted)	
OZL 468	Trinocular	HWF 10×/Ø 20 mm	Ø 28,6 – 4,4	0,7× – 4,5×	Arm curved	3 W LED (incident); 3 W LED (transmitted)	

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

04

Model outfit		Model KERN						Order number	
		OZL 463	OZL 464	OZL 465	OZL 466	OZL 467	OZL 468		
Eyepieces (30,0 mm)	HWF 10×/⌀ 20 mm	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	OZB-A4631	
	HSWF 15×/⌀ 15 mm	○○	○○	○○	○○	○○	○○	OZB-A4632	
	HWF 20×/⌀ 10 mm	○○	○○	○○	○○	○○	○○	OZB-A4633	
	HSWF 25×/⌀ 9 mm	○○	○○	○○	○○	○○	○○	OZB-A4634	
Auxiliary objectives	0,5×	○	○			○	○	OZB-A4641	
	0,75×	○	○			○	○	OZB-A4644	
	1,5×	○	○			○	○	OZB-A4642	
	2,0×	○	○			○	○	OZB-A4643	
	Soldering protection lens	○	○			○	○	OZB-A4645	
C-Mount	1× (focus adjustable)		✓		✓		✓	OZB-A4809	
	0,3× (focus adjustable)		○		○		○	OZB-A4810	
	0,5× (focus adjustable)		○		○		○	OZB-A4811	
Eyepiece camera adapter	1,0×; for fitting an eyepiece camera to the trinocular connection of the microscope		○		○		○	OZB-A4863	
Stand	Pillar style, with 3 W-LED illumination (transmitted + incident)	✓	✓						
	Pillar style, with 3 W-LED illumination (transmitted)			✓	✓				
	Arm curved, incl. handle, with 3 W-LED illumination (transmitted + incident)					✓	✓		
Ring illumination	Integrated into the microscope head as incident illumination			✓	✓				
Stage plate	Frosted glass/⌀ 95 mm	✓	✓	✓	✓	✓	✓	OZB-A4670	
	Black-white/⌀ 95 mm	✓	✓	✓	✓	✓	✓	OZB-A4806	
External illumination	Please find the information about external illumination units in the catalogue on page 88 and on the internet								

✓ = Included with delivery ○ = Option

LAB LINE

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

Features

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

Scope of application

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

Applications/Samples

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

Technical data

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

STANDARD

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

Order Hotline: Go to back page of catalogue

Eyepiece	Specifications – Objectives				
	Magnification	Standard	Auxiliary objectives		
		1,0×	0,5×	0,75×	2,0×
HWF 5×	Total magnification	3,75× – 25×	1,875× – 12,5×	2,813× – 18,75×	7,5× – 50×
	Field of view mm	ø 31 – 4,6	ø 61,3 – 9,2	ø 41,3 – 6,1	ø 16 – 2,5
HSWF 10×	Total magnification	7,5× – 50×	3,75× – 25×	5,625× – 37,5×	15× – 100×
	Field of view mm	ø 33 – 5	ø 65 – 10	ø 44 – 6,7	ø 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	ø 24 – 4,2	ø 48 – 8,5	ø 32 – 5,6	ø 12 – 2
HSWF 20×	Total magnification	15× – 100×	7,5× – 50×	11,25× – 75×	30× – 200×
	Field of view mm	ø 20 – 3,5	ø 40 – 7	ø 26,7 – 4,7	ø 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	ø 15,8 – 2,4	ø 31,5 – 4,8	ø 24,1 – 3,2	ø 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	
		OZL 451		
Eyepieces (30,0 mm)	HWF 5×/ø 23,2 mm	○○	OZB-A4112	
	HSWF 10×/ø 23 mm	✓✓	OZB-A4118	
	HWF 15×/ø 15 mm	○○	OZB-A4119	
	HSWF 20×/ø 14,5 mm	○○	OZB-A4120	
	HWF 25×/ø 11,7 mm	○○	OZB-A4121	
Auxiliary objectives	0,5×	○	OZB-A4209	
	0,75×	○	OZB-A4210	
	2,0×	○	OZB-A4206	
Stand	Pillar style, with 12 V/10 W Halogen Illumination (transmitted + incident)	✓		
Stage plate	Frosted glass/ø 95 mm	✓	OZB-A4805	
	Black-white/ø 95 mm	✓	OZB-A4806	
Illumination	10 W spare bulb (transmitted + incident)	✓	OZB-A4804	
Mechanical stage (Pre-assembling on request)	Stage size W×D 180×155 mm, Travel 75×55 mm, for transmitted and incident illumination	○	OZB-A4605	
External illumination	Please find the information about external illumination units in the catalogue on page 88 and on the internet			

✓ = Included with delivery ○ = Option

Dimmable, integrated LED ring illumination

LAB LINE

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

Features

- The KERN OZL-456 stereo zoom microscope series will impress you with its excellent optical characteristics, easy operation and its integrated LED ring illumination unit
- The highlight of the KERN OZL-456 is the strong, continuoulsy dimmable, integrated LED ring illumination in the objective housing, which ensures uniform, shadow-free illumination. An LED transmitted light variant is also included
- With its built-in, top-quality optics and powerful, integrated LED illumination unit, this model is a special all-rounder for all areas of application
- The zoom objective offers you continuous magnification from 7,5× – 50×
- As standard, the KERN OZL-45R series is provided as a binocular version with 10× eyepieces with a field of view with a diameter of 23 mm
- The arm curved stand gives you a large working area as well as a precise adjustment mechanism
- A large selection of eyepieces as well as auxiliary objectives are available as accessories
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- Please find detailed information in the following model outfit list

Scope of application

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

Applications/Samples

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

Technical data

- Optical system: Greenough optics
- Incident illumination dimmable
- Tube 45° inclined
- Magnification ratio: 6,7:1
- Interpupillary distance 55 – 75 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 320×275×420 mm
- Net weight approx. 4,5 kg

STANDARD

360° BINO LED IL TL ZOOM 230 V 1 DAY

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

Order Hotline: Go to back page of catalogue

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

Model outfit		Model KERN	Order number	
		OZL 456		
Eyepieces (30,0 mm)	HWF 5×/ø 23,2 mm	○○	OZB-A4112	
	HSWF 10×/ø 23 mm	✓✓	OZB-A4118	
	HWF 15×/ø 15 mm	○○	OZB-A4119	
	HSWF 20×/ø 14,5 mm	○○	OZB-A4120	
	HWF 25×/ø 11,7 mm	○○	OZB-A4121	
Stand	Arm curved, with LED illumination (0,21 W transmitted + 1 W incident)	✓		
Stage plate	Frosted glass/ø 95 mm	✓	OZB-A4805	
	Black-white/ø 95 mm	✓	OZB-A4806	
Mechanical stage (Pre-assembling on request)	Stage size W×D 180×155 mm, Travel 75×55 mm, for transmitted and incident illumination	○	OZB-A4605	
External illumination	Please find the information about external illumination units in the catalogue on page 88 and on the internet			

✓ = Included with delivery ○ = Option

LAB LINE

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

Features

- The KERN OZM series is a range of excellent stereo zoom microscopes with above-average optical features
- The ergonomic shape allows a simple, effortless working over a period of several hours
- The extraordinarily strong and continuously dimmable 3 W LED reflected and transmitted illumination ensures a flexible and particularly good level of illumination for your sample
- With its large working distance, an extra large field of view and its brilliant resolution, the KERN OZM provides sharp, high-contrast, colour-true images
- The zoom objective gives you continuous magnification from 7,5×–45×
- There is a choice of a binocular model as well as a trinocular model for connecting a camera for documentation purposes and for quality reports
- The pillar stand is particularly flexible due to its variable and sturdy adjustment mechanism and therefore enables ergonomic working procedures
- A large selection of eyepieces, (universal) stands, a darkfield kit, external illumination units as well as auxiliary objectives and more are available as accessories
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- A C-mount adapter is required to connect a camera to the trinocular version. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

Scope of application

- In vitro fertilisation, detection of parasites, zoology and botany, tissue preparation, section, quality control, electronics and semiconductor industry, assembly and repair

Applications/Samples

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

Technical data

- Optical system: Greenough optics
- Brightness adjustable (separate)
- Tube 45° inclined
- Magnification ratio: 6,4:1
- Light distribution OZM 543/544: 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 KERN	Standard configuration						
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
OZM 542	Binocular	HSWF 10×/⌀ 23 mm	⌀ 32,8 – 5,1	0,7× – 4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	
OZM 544	Trinocular	HSWF 10×/⌀ 23 mm	⌀ 32,8 – 5,1	0,7× – 4,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	

Order Hotline: Go to back page of catalogue

Eyepiece	Specifications – Objectives					
	Magnification	Standard	Auxiliary objectives			
		1,0×	0,5×	0,7×	1,5×	2×
HSWF 10×	Total magnification	7× – 45×	3,5× – 22,5×	4,9× – 31,5×	10,5× – 67,5×	14× – 90×
	Field of view mm	⌀ 32,8 – 5,1	⌀ 65,7 – 10,2	⌀ 46,9 – 7,3	⌀ 21,9 – 3,4	⌀ 16,4 – 2,6
SWF 15×	Total magnification	10,5× – 67,5×	5,3× – 33,8×	7,4× – 47,2×	15,8× – 101,3×	21× – 135×
	Field of view mm	⌀ 24,3 – 3,8	⌀ 48,6 – 7,6	⌀ 34,7 – 5,4	⌀ 16,2 – 2,5	⌀ 12,1 – 1,9
SWF 20×	Total magnification	14× – 90×	7× – 45×	9,8× – 63×	21× – 135×	28× – 180×
	Field of view mm	⌀ 20 – 3,1	⌀ 40 – 6,2	⌀ 28,6 – 4,4	⌀ 13,3 – 2,1	⌀ 10 – 1,6
SWF 30×	Total magnification	21× – 135×	10,5× – 67,5×	14,7× – 94,5×	31,5× – 202,5×	42× – 270×
	Field of view mm	⌀ 12,9 – 2	⌀ 25,7 – 4	⌀ 18,4 – 2,9	⌀ 8,6 – 1,6	⌀ 6,4 – 1
Working distance		110 mm	195 mm	145 mm	50 mm	35 mm
Maximum sample height		130 mm	30 mm	65 mm	160 mm	175 mm

Model outfit		Model KERN		Order number	
		OZM 542	OZM 544		
Eyepieces (30,0 mm)	HSWF 10×/⌀ 23 mm	✓✓	✓✓	OZB-A5503	
	SWF 15×/⌀ 17 mm	○○	○○	OZB-A5504	
	SWF 20×/⌀ 14 mm	○○	○○	OZB-A5505	
	SWF 30×/⌀ 9 mm	○○	○○	OZB-A5506	
	HSWF 10×/⌀ 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	
	SWF 15×/⌀ 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	
	SWF 20×/⌀ 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	
Achromatic auxiliary objectives	0,5×	○	○	OZB-A5612	
	0,7×	○	○	OZB-A5613	
	1,5×	○	○	OZB-A5615	
	2,0×	○	○	OZB-A5616	
	Soldering protection lens	○	○	OZB-A5614	
C-Mount	0,3× (focus adjustable)		○	OZB-A5701	
	0,5× (focus adjustable)		○	OZB-A5702	
	1,0× (focus adjustable)		○	OZB-A5703	
	1,0× (with micrometer) only in combination with OZB-A5703		○	OZB-A5704	
	for SLR cameras (Nikon)		○	OZB-A5706	
	for SLR cameras (Olympus)		○	OZB-A5707	
	for SLR cameras (Canon)		○	OZB-A5708	
Darkfield unit	Darkfield unit	○	○	OZB-A4601	
Object clamp	Object clamp	○	○	OBB-A6205	
Stand	Pillar style, without illumination				
	Pillar style, with 3 W LED illumination (transmitted + incident)	✓	✓		
	Please find more stands in the catalogue on page 84 and on the internet				
Stage plate	Frosted glass/⌀ 94,5 mm	✓	✓	OZB-A5192	
	Black-white/⌀ 94,5 mm	✓	✓	OZB-A5191	
	Clear glass/⌀ 94,5 mm	○	○	OZB-A5190	
Mechanical stage (Pre-assembling on request)	Stage size W×D 188×160 mm, Travel 76×65 mm, for transmitted and incident illumination	○	○	OZB-A5781	
	Stage size W×D 180×175 mm, Travel 100×86 mm, for incident illumination only	○	○	OZB-A5782	
External illumination	Please find the information about external illumination units in the catalogue on page 88 and on the internet				

✓ = Included with delivery ○ = Option

LAB LINE

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

Features

- The KERN OZP stereo zoom microscope stands out through its above-average magnification range and its robust shape which is also ergonomic, it enables effortless, simple working over a period of several hours
- The KERN OZP series is available as a strong, continuously adjustable 3 W LED reflected and transmitted light variant for the very best illumination of your sample or as a variant without illumination
- With its large working distance, an extra large field of view and brilliant resolution, the KERN OZP provides sharp, high-contrast and colour-true images
- The extremely large, continuously adjustable magnification range from 6 to 55 times magnification means that you can work quickly and effectively
- There is a choice of a binocular model as well as a trinocular model for connecting a camera for documentation purposes and for quality reports
- The pillar stand is particularly flexible due to its variable and sturdy adjustment mechanism and therefore enables ergonomic working procedures
- A large selection of eyepieces, (universal) stands, a darkfield kit, external illumination units as well as auxiliary objectives and more are available as accessories
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- A C-mount adapter is required to connect a camera to the trinocular version. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

Scope of application

- Zoology and botany, quality control, electronics and semiconductor industry, assembly and repair

Applications/Samples

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

Technical data

- Optical system: Greenough optics
- Brightness adjustable (separate)
- Tube: 35° inclined
- Magnification ratio: 9,2:1
- Light distribution OZP 557/558: 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 KERN	Standard configuration						
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
OZP 556	Binocular	HSWF 10×/⌀ 23 mm	⌀ 38,3 – 4,2	0,6× – 5,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	
OZP 558	Trinocular	HSWF 10×/⌀ 23 mm	⌀ 38,3 – 4,2	0,6× – 5,5×	Pillar style	3 W LED (incident); 3 W LED (transmitted)	

Eyepiece	Specifications – Objectives					
	Magnification	Standard	Auxiliary objectives			
		1,0×	0,5×	0,7×	1,5×	2×
HSWF 10×	Total magnification	6× – 55×	3× – 27,5×	4,2× – 38,5×	9× – 82,5×	12× – 110×
	Field of view mm	⌀ 38,3 – 4,2	⌀ 76,7 – 8,4	⌀ 54,8 – 6	⌀ 25,6 – 2,8	⌀ 19,2 – 2,1
SWF 15×	Total magnification	9× – 82,5×	4,5× – 41,25×	6,3× – 57,75×	13,5× – 123,75×	18× – 165×
	Field of view mm	⌀ 28,3 – 3,1	⌀ 56,7 – 6,2	⌀ 40,5 – 4,4	⌀ 18,9 – 2,1	⌀ 14,2 – 1,5
SWF 20×	Total magnification	12× – 110×	6× – 55×	8,4× – 77×	18× – 165×	24× – 220×
	Field of view mm	⌀ 23,3 – 2,5	⌀ 46,7 – 5,1	⌀ 33,3 – 3,6	⌀ 15,6 – 1,7	⌀ 11,7 – 1,3
SWF 30×	Total magnification	18× – 165×	9× – 82,5×	12,6× – 115,5×	27× – 247,5×	36× – 330×
	Field of view mm	⌀ 15 – 1,6	⌀ 30 – 3,3	⌀ 21,4 – 2,3	⌀ 10 – 1,1	⌀ 7,5 – 0,8
Working distance		108 mm	195 mm	145 mm	50 mm	35 mm
Maximum sample height		110 mm	10 mm	45 mm	140 mm	150 mm

Model outfit		Model KERN		Order number	
		OZP 556	OZP 558		
Eyepieces (30,0 mm)	HSWF 10×/⌀ 23 mm	✓✓	✓✓	OZB-A5503	
	SWF 15×/⌀ 17 mm	○○	○○	OZB-A5504	
	SWF 20×/⌀ 14 mm	○○	○○	OZB-A5505	
	SWF 30×/⌀ 9 mm	○○	○○	OZB-A5506	
	HSWF 10×/⌀ 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	
	SWF 15×/⌀ 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	
	SWF 20×/⌀ 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	
Achromatic auxiliary objectives	0,5×	○	○	OZB-A5612	
	0,7×	○	○	OZB-A5613	
	1,5×	○	○	OZB-A5615	
	2,0×	○	○	OZB-A5616	
	Soldering protection lens	○	○	OZB-A5614	
C-Mount	0,3× (focus adjustable)		○	OZB-A5701	
	0,5× (focus adjustable)		○	OZB-A5702	
	1,0× (focus adjustable)		○	OZB-A5703	
	1,0× (with micrometer) only in combination with OZB-A5703		○	OZB-A5704	
	for SLR cameras (Nikon)		○	OZB-A5706	
	for SLR cameras (Olympus)		○	OZB-A5707	
	for SLR cameras (Canon)		○	OZB-A5708	
Darkfield unit	Darkfield unit	○	○	OZB-A4601	
Object clamp	Object clamp	○	○	OBB-A6205	
Stand	Pillar style, without illumination				
	Pillar style, with 3 W LED illumination (transmitted + incident)	✓	✓		
	Please find more stands in the catalogue on page 84 and on the internet				
Stage plate	Frosted glass/⌀ 94,5 mm		✓	OZB-A5192	
	Black-white/⌀ 94,5 mm	✓	✓	OZB-A5191	
	Clear glass/⌀ 94,5 mm		○	OZB-A5190	
Mechanical stage (Pre-assembling on request)	Stage size W×D 188×160 mm, Travel 76×65 mm, for incident and transmitted illumination	○	○	OZB-A5781	
	Stage size W×D 180×175 mm, Travel 100×86 mm, for incident illumination only	○	○	OZB-A5782	
External illumination	Please find the information about external illumination units in the catalogue on page 88 and on the internet				

✓ = Included with delivery ○ = Option

OZR 564/OZS 574
With illumination

OZR 563/OZS 573
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/OZS series is a special, high-quality stereo zoom microscope with parallel optics for demanding analyses
- The KERN OZR/OZS series is available as a strong, continuously adjustable 3 W LED reflected and transmitted light variant for the very best illumination of your sample or as a variant without illumination
- The parallel optical system is a high-quality optical system and provides excellent images with the best contrast, colour and depth of field with fatigue-free working. Refocusing is also only necessary in very few cases when magnifying the zoom
- The continuously adjustable magnification range from 8 to 50 times (OZR-5) or 80 times (OZS-5) magnification means that you can work quickly and effectively
- As standard, the models of the KERN OZR/OZS series are trinocular and are therefore equipped for connecting a camera for documentation purposes and for quality reports
- The pillar stand is particularly flexible due to its variable and sturdy adjustment mechanism and therefore enables ergonomic working procedures
- A large selection of eyepieces, (universal) stands, a darkfield kit, external illumination units as well as auxiliary objectives and more are available as accessories
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- A C-mount adapter is required to connect a camera to the trinocular version. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

Scope of application

- In vitro fertilisation, detection of parasites, zoology and botany, tissue preparation, section, quality control, electronics and semiconductor industry, assembly and repair

Applications/Samples

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

Technical data

- Optical system: Parallel optics
- Brightness adjustable (separate)
- Tube 45° inclined
- Magnification ratio OZR-5: 6,25:1
- Magnification ratio OZS-5: 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 KERN	Standard configuration						
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
OZR 563*	Trinocular	HWF 10×/ø 22 mm	ø 27,5 – 4,4	0,8× – 5×	Pillar style	–	
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)	
OZS 573*	Trinocular	HWF 10×/ø 22 mm	ø 27,5 – 2,75	0,8× – 8×	Pillar style	–	
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)	

*! ONLY WHILE STOCKS LAST

Eyepiece	Specifications – Objectives							
	Magnification	Standard Plan 1,0×		Achr. objective 0,5×		Achr. objective 0,7×		Achr. objective 1,5× (Auxiliary)	
		OZR 563	OZS 573	OZR 563	OZS 573	OZR 563	OZS 573	OZR 563	OZS 573
HWF 10×	Total magnification	8× – 50×	8× – 80×	4× – 25×	4× – 40×	5,6× – 35×	5,6× – 56×	12× – 75×	12× – 120×
	Field of view mm	⌀ 27,5 – 4,4	⌀ 27,5 – 2,75	⌀ 55 – 8,8	⌀ 55 – 5,5	⌀ 39,3 – 6,3	⌀ 39,3 – 3,93	⌀ 18,33 – 2,93	⌀ 18,33 – 1,83
SWF 15×	Total magnification	12× – 75×	12× – 120×	6× – 37,5×	6× – 60×	8,4× – 5,5×	8,4× – 84×	18× – 112,5×	18× – 180×
	Field of view mm	⌀ 21,25 – 3,4	⌀ 21,25 – 2,13	⌀ 42,5 – 6,8	⌀ 42,5 – 4,25	⌀ 30,36 – 4,86	⌀ 30,36 – 3,04	⌀ 14,17 – 2,27	⌀ 14,17 – 1,42
SWF 20×	Total magnification	16× – 100×	16× – 160×	8× – 50×	8× – 80×	11,2× – 70×	11,2× – 112×	24× – 150×	24× – 240×
	Field of view mm	⌀ 17,5 – 2,8	⌀ 17,5 – 1,75	⌀ 35 – 5,6	⌀ 35 – 3,5	⌀ 25 – 4	⌀ 25 – 2,5	⌀ 11,67 – 1,87	⌀ 11,67 – 1,17
SWF 30×	Total magnification	24× – 150×	24× – 240×	12× – 75×	12× – 120×	16,8× – 105×	16,8× – 168×	36× – 225×	36× – 360×
	Field of view mm	⌀ 11,25 – 1,8	⌀ 11,25 – 1,13	⌀ 22,5 – 3,6	⌀ 22,5 – 2,25	⌀ 16,1 – 2,57	⌀ 16,1 – 1,61	⌀ 7,5 – 1,2	⌀ 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	
		OZR 563	OZR 564	OZS 573	OZS 574		
Eyepieces (30,0 mm)	HWF 10×/⌀ 22 mm	✓✓	✓✓	✓✓	✓✓	OZB-A5502	
	SWF 15×/⌀ 17 mm	○○	○○	○○	○○	OZB-A5504	
	SWF 20×/⌀ 14 mm	○○	○○	○○	○○	OZB-A5505	
	SWF 30×/⌀ 9 mm	○○	○○	○○	○○	OZB-A5506	
	HWF 10×/⌀ 22 mm (reticule 0,1 mm)	○	○	○	○	OZB-A5511	
	SWF 15×/⌀ 17 mm (reticule 0,05 mm)	○	○	○	○	OZB-A5513	
	SWF 20×/⌀ 14 mm (reticule 0,05 mm)	○	○	○	○	OZB-A5514	
Plan achromatic objective	1,0×	✓	✓	✓	✓	OZB-A5603	
Achromatic objectives	0,5×	○	○	○	○	OZB-A5601	
	0,7×	○	○	○	○	OZB-A5602	
	1,5× Only in combination with OZB-A5603	○	○	○	○	OZB-A5604	
Trinocular beamsplitter	Division 100:0	✓	✓	✓	✓	OZB-A5401	
	Division 50:50	○	○	○	○	OZB-A5402	
C-Mount	0,3× (focus adjustable)	○	○	○	○	OZB-A5701	
	0,5× (focus adjustable)	○	○	○	○	OZB-A5702	
	1,0× (focus adjustable)	○	○	○	○	OZB-A5703	
	1,0× (with micrometer) only in combination with OZB-A5703	○	○	○	○	OZB-A5704	
	for SLR cameras (Nikon)	○	○	○	○	OZB-A5706	
	for SLR cameras (Olympus)	○	○	○	○	OZB-A5707	
	for SLR cameras (Canon)	○	○	○	○	OZB-A5708	
Darkfield unit	Darkfield unit		○		○	OZB-A4601	
Object clamp	Object clamp	○	○	○	○	OBB-A6205	
Stand	Pillar style, without illumination	✓		✓			
	Pillar style, with 3 W LED illumination (transmitted + incident)		✓		✓		
Stage plate	Frosted glass/⌀ 94,5 mm		✓		✓	OZB-A5192	
	Black-white/⌀ 94,5 mm	✓	✓	✓	✓	OZB-A5191	
	Clear glass/⌀ 94,5 mm		○		○	OZB-A5190	
Mechanical stage (Pre-assembling on request)	Stage size W×D 188×160 mm, Travel 76×65 mm, for incident and transmitted illumination	○	○	○	○	OZB-A5781	
	Stage size W×D 180×175 mm, Travel 100×86 mm, for incident illumination only	○	○	○	○	OZB-A5782	
External illumination	Please find the information about external illumination units in the catalogue on page 88 and on the internet						

✓ = Included with delivery ○ = Option

Plug in for power supply

PROFESSIONAL LINE

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

Features

- The KERN OZC has been developed specially to meet requirements for high contrast and depth of field. These devices are absolutely essential for the LCD/LED electronics industry
- The coaxial 2 W LED reflected illumination which is integrated into the objective guarantees selective depth of focus, so that even low-lying sections can be recorded (e.g. the bottom of a drilled hole)
- The parallel optics is a high-quality optical system and provides excellent images with the best contrast, colour and depth of field with fatigue-free working.
  Refocusing is also only necessary in very few cases when magnifying the zoom
- The large, adjustable magnification range from 18 to 65 times gives you continuous zoom when you are working
- As standard, the KERN OZC is trinocular and is therefore equipped for connecting a camera for documentation purposes and for quality reports
- The arm curved stand ensures precise adjustment and focusing of your sample. The stand base is particularly heavy and therefore offers a high level of stability and an extremely secure footing
- A large selection of eyepieces and a mechanical stage extension are available as accessories
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- A C-mount adapter is required to connect a camera. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

Scope of application

- LCD/LED electronics, semiconductor technology

Applications/Samples

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

Technical data

- Optical system: Parallel optics
- Brightness adjustable
- Tube 45° inclined
- Magnification ratio: 3,6:1
- Light distribution 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 KERN	Standard configuration						
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
OZC 583	Trinocular	HSWF 10×/⌀ 23 mm	⌀ 12,78 – 3,5	1,8× – 6,5×	Arm curved	2 W LED (coaxial incident)	

! ONLY WHILE STOCKS LAST

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

Model outfit		Model KERN	Order number	
		OZC 583		
Eyepieces (30,0 mm)	HSWF 10×/ø 23 mm	✓✓	OZB-A5503	
	SWF 15×/ø 17 mm	○○	OZB-A5504	
	SWF 20×/ø 14 mm	○○	OZB-A5505	
	SWF 30×/ø 9 mm	○○	OZB-A5506	
	HSWF 10× /ø 23 mm (reticule 0,1 mm)	○	OZB-A5512	
	SWF 15×/ø 17 mm (reticule 0,05 mm)	○	OZB-A5513	
	SWF 20×/ø 14 mm (reticule 0,05 mm)	○	OZB-A5514	
C-Mount	0,3× (focus adjustable)	○	OZB-A5701	
	0,5× (focus adjustable)	○	OZB-A5702	
	1,0× (focus adjustable)	○	OZB-A5703	
	1,0× (with micrometer) only in combination with OZB-A5703	○	OZB-A5704	
	for SLR cameras (Nikon)	○	OZB-A5706	
	for SLR cameras (Olympus)	○	OZB-A5707	
	for SLR cameras (Canon)	○	OZB-A5708	
Stand	Arm curved, without illumination	✓		
External illumination	Please find the information about external illumination units in the catalogue on page 88 and on the internet			

✓ = Included with delivery ○ = Option

Side view

LAB LINE

The specialist for jewellers and the gem industry

Features

- The KERN OZG series has been specially developed for jewellers and mineral observations in the gem industry. Precious stones and gems can be checked and handled with this stereo zoom microscope
- You have a choice of a strong halogen transmitted illumination unit as well as halogen reflected and transmitted illumination variants, each with an additional frontal illumination
- As well as very good optical characteristics, this model forms an ideal package with its dark field unit with object clamp which is included in the scope of delivery
- The KERN OZG 493 is fitted with a pole stand which has both integrated bright halogen light units with incident and transmitted illumination, as well as additional front lighting
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- Please find detailed information in the following model outfit list

Scope of application

- Jewellers and gem industry

Applications/Samples

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

Technical data

- Optical system: Greenough optics
- Brightness adjustable
- Tube 45° inclined
- Interpupillary distance 55 – 75 mm
- Diopter adjustment: Both-sided
- Magnification ratio: 5,1:1
- Overall dimensions W×D×H 310×170×350 mm
- Net weight approx. 5 kg

STANDARD

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

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

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

✓ = Included with delivery ○ = Option

5 Digital microscope sets

OBE-1 with camera | OBE-1 with tablet | OBF-1 with camera | OBF-1 with tablet

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

Features

- Laboratory microscopes from the OBE and OBF range are now also available to you as a comprehensive digital solution for your live investigations. Optionally available with an mounted tablet or C-mount camera. Naturally, the appropriate C-mount adapter is included with the delivery
- The mounted KERN ODC 241 tablet-camera has been specially developed for simple, convenient and direct investigation of the sample on the screen. Ideally suited for school pupils and students in education or for demonstration purposes in the laboratory
- The mounted C-mount camera is available in different versions and can be used anywhere
- For detailed information on the individual components, see the relevant product description of the individual item
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of the delivery

Technical data

- Finite optical system
- Quadplex nosepiece
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment: One-sided
- Eyepiece: HWF 10×/⌀ 18 mm

OBE-1
- Overall dimensions W×D×H 320×180×365 mm
- Net weight approx. 5,5 kg
- Objective quality: Achromatic
- Objectives OBE 104: 4×/10×/40×
- Objectives OBE 114: 4×/10×/40×/100×
- Illumination: 3 W LED (transmitted)

OBF-1
- Overall dimensions W×D×H 395×200×380 mm
- Net weight approx. 7,7 kg
- Objective quality OBF 131: Achromatic
- Objective quality OBF 132/133: Plan
- Objectives: 4×/10×/40×/100×
- Illumination OBF 131/132: 20 W Halogen (transmitted)
- Illumination OBF 133: 3 W LED (transmitted)

Model KERN	Standard configuration (camera)					
	Included camera	Resolution camera	Interface	Sensor	Details microscope, camera	
OBE 104C825	ODC 825	5 MP	USB 2.0 (6,8 – 55 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 13, 90	
OBE 114C825						
OBE 104C832	ODC 832	5 MP	USB 3.0 (14,2 – 101,2 FPS)	CMOS 1/2,5"		
OBE 114C832						
OBE 104T241	ODC 241	5 MP	WLAN, USB 2.0, HDMI, SD (15 – 30 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 13, 94	
OBE 114T241						
OBF 131C825*	ODC 825	5 MP	USB 2.0 (6,8 – 55 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 18, 90	
OBF 132C825*						
OBF 133C825*						
OBF 131C832*	ODC 832	5 MP	USB 3.0 (14,2 – 101,2 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 18, 90	
OBF 132C832*						
OBF 133C832*						
OBF 131T241*	ODC 241	5 MP	WLAN, USB 2.0, HDMI, SD (15 – 30 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 18, 94	
OBF 132T241*						
OBF 133T241*						

*! ONLY WHILE STOCKS LAST

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

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

Features

- Laboratory microscopes from the OBL and OBN range are now also available to you as a comprehensive digital solution for your live investigations. Optionally available with an mounted tablet or C-mount camera. Naturally, the appropriate C-mount adapter is included with the delivery.
- The mounted KERN ODC 241 tablet-camera has been specially developed for simple, convenient and direct investigation of the sample on the screen. Ideally suited for school pupils and students in education or for demonstration purposes in the laboratory
- The mounted C-mount camera is available in different versions and can be used anywhere
- For detailed information on the individual components, see the relevant product description of the individual item
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of the delivery

Technical data

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

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

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

Model	Standard configuration (camera)					
	Included camera	Resolution camera	Interface	Sensor	Details microscope, camera	
OBL 135C825	ODC 825	5 MP	USB 2.0 (6,8 – 55 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 20, 90	
OBL 137C825						
OBL 135C832	ODC 832	5 MP	USB 3.0 (14,2 – 101,2 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 20, 90	
OBL 137C832						
OBL 135T241	ODC 241	5 MP	WLAN, USB 2.0, HDMI, SD (15 – 30 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 20, 94	
OBL 137T241						
OBN 132C825	ODC 825	5 MP	USB 2.0 (6,8 – 55 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 24, 90	
OBN 135C825						
OBN 132C832	ODC 832	5 MP	USB 3.0 (14,2 – 101,2 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 24, 90	
OBN 135C832						
OBN 132T241	ODC 241	5 MP	WLAN, USB 2.0, HDMI, SD (15 – 30 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 24, 94	
OBN 135T241						

OZL 464 with camera

OZL 466 with camera

OZL 468 with camera

OZL 464 with tablet

OZL 466 with tablet

OZL 468 with tablet

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

Features

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

Technical data

- Optical system: Greenough optics
- Brightness adjustable (separate)
- Tube 45° inclined
- Magnification ratio: 6,4:1
- Light distribution 50:50
- Interpupillary distance 55 – 75 mm
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 300×240×420 mm
- Net weight approx. 5 kg
- Eyepiece: HWF 10×/Ø 20 mm
- Field of view: Ø 28,6 – 4,4 mm
- Objective: 0,7× – 4,5×
- Stand OZL 464/466: Pillar style
- Stand OZL 468: Arm curved
- Illumination: 3 W LED (incident + transmitted)

Model	Standard configuration (camera)					
KERN	Included camera	Resolution camera	Interface	Sensor	Details microscope, camera	
OZL 464C825	ODC 825	5 MP	USB 2.0 (6,8 – 55 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 52, 90	
OZL 466C825						
OZL 468C825						
OZL 464C832	ODC 832	5 MP	USB 3.0 (14,2 – 101,2 FPS)	CMOS 1/2,5"		
OZL 466C832						
OZL 468C832						
OZL 464T241	ODC 241	5 MP	WLAN, USB 2.0, HDMI, SD (15 – 30 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 52, 94	
OZL 466T241						
OZL 468T241						

OZM-5 with camera

OZP-5 with camera

OZP-5 with tablet

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

Features

- Stereomicroscopes from the OZM and OZP range are now also available to you as a comprehensive digital solution for your live investigations. Optionally available with an mounted tablet or C-mount camera. Naturally, the appropriate C-mount adapter is included with the delivery
- The mounted KERN ODC 241 tablet-camera has been specially developed for simple, convenient and direct investigation of the sample on the screen. Ideally suited for school pupils and students in education or for demonstration purposes in the laboratory
- The mounted C-mount camera is available in different versions and can be used anywhere
- For detailed information on the individual components, see the relevant product description of the individual item
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of the delivery

Technical data

- Optical system: Greenough optics
- Brightness adjustable (separate)
- Light distribution: 50:50
- Diopter adjustment: Both-sided
- Net weight approx. 5,5 kg
- Eyepiece: HSWF 10×/ø 23 mm
- Stand: Pillar style
- Illumination: 3 W LED (incident + transmitted)

OZM-5

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

OZP-5

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

Model	Standard configuration (camera)					
	Included camera	Resolution camera	Interface	Sensor	Details microscope, camera	
OZM 544C825	ODC 825	5 MP	USB 2.0 (6,8 – 55 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 58, 90	
OZM 544C832	ODC 832	5 MP	USB 3.0 (14,2 – 101,2 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 58, 90	
OZP 558C825	ODC 825	5 MP	USB 2.0 (6,8 – 55 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 60, 90	
OZP 558C832	ODC 832	5 MP	USB 3.0 (14,2 – 101,2 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 60, 90	
OZP 558T241	ODC 241	5 MP	WLAN, USB 2.0, HDMI, SD (15 – 30 FPS)	CMOS 1/2,5"	KERN Optics catalogue Page 60, 94	

Order Hotline: Go to back page of catalogue

6 Video microscopes

NEW

OIV 254 Snapshot button

06

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

Features

- The Kern OIV is a video microscope which has been constructed to optimise digital stereo microscopy. Our well-conceived, comprehensive solution with axial optical unit enables immediate, simple display of your samples on the screen.
- The LED incident illumination unit (ring) included as standard guarantees the very best illumination of your sample.
- Combined with the large working surface, recording objects on the screen is ideally suited for monitoring, analysis and documentation in industrial environments.
- The excellent optical unit enables continuous sharp image tracking across the entire zoom range from 0.7×–5×.
- The powerful 2.0 megapixel camera of the microscope without eyepieces offers, thanks to the HDMI output, smooth live monitoring of your samples from the HD monitor. In addition, the software which is easy to use, the USB stick as well as the USB mouse which are integral components of the delivery, mean you can process and store your results digitally.
- With the OIV 254 model, there is the option of image documentation at the push of a button, without having to detour via the software. On the other hand, the OIV 255 guarantees software-controlled taking of images and videos with additional, extensive measuring functions.
- A protective dust cover, as well as multi-lingual user instructions are included in the scope of the delivery

Technical data

- Optical system: Axial
- Brightness adjustable
- Screen: 12", 1920×1080 HD, -5°–15° inclination
- Magnification ratio: 7,1:1
- Stand: arm curved
- Illumination: 2 W LED ring (incident)
- Data storage: External using USB (Max 128 GB)
- Overall dimensions W×D×H 320×260×483 mm
- Net weight approx. 10 kg

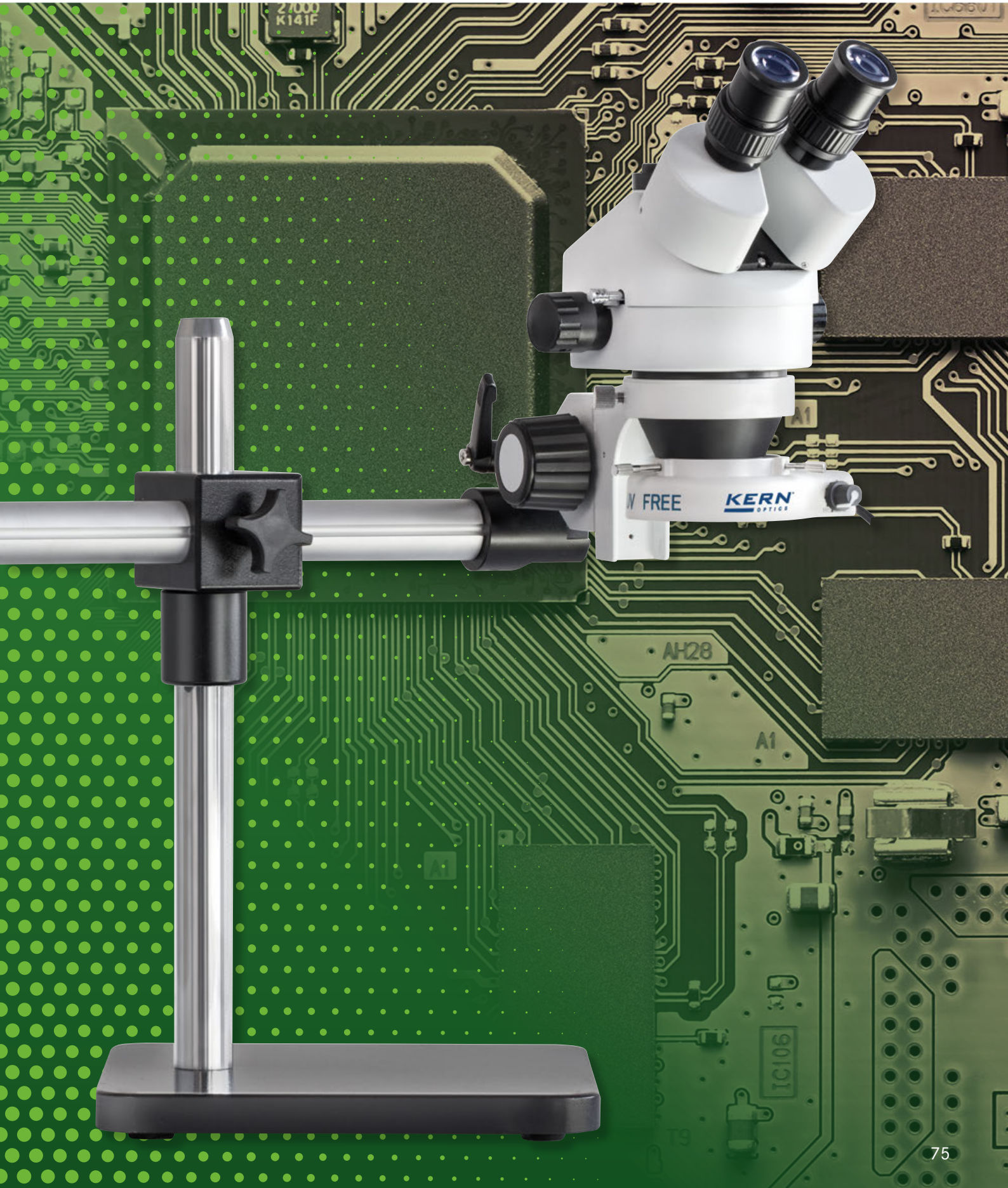
Accessories

- Auxiliary objective 0,5×, KERN OZB-A2101

STANDARD

Model KERN	Standard configuration						
	Resolution camera	Interface	Sensor	Field of view mm	Objective Zoom	Software functions	
OIV 254	2 MP	HDMI (60 FPS)	CMOS 1/2"	ø 29,82–4,18	0,7×–5×	Image capture	
OIV 255	2 MP	HDMI (60 FPS)	CMOS 1/2“	ø 29,82–4,18	0,7×–5×	Images and videos, measurements	

7 Stereo microscope sets



OZM 912/913

OZM 932/933

OZM 952/953

OZM 982/983

07

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

Features

- Sets which have already been defined, consisting of a stereo microscope head (p. 79), a universal stand (p. 84/85), a holder (p. 86), a ring illumination (p. 88) and a dust cover (p. 86) from our range
- Simple – convenient – affordable
- This saves you spending time on configuration and being spoilt for choice in the combination of different components. In this way you get an in expensive and highly-flexible solution for your microscope workplace

Model KERN	Microscope head		Stand	Holder	Illumination	
	Tube	Objective Zoom				
OZM 912	Binocular (OZM 546)	0,7× – 4,5×	Telescopic arm with plate (OZB-A5201)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	
OZM 913	Trinocular (OZM 547)	0,7× – 4,5×	Telescopic arm with plate (OZB-A5201)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	
OZM 932	Binocular (OZM 546)	0,7× – 4,5×	ball-beared double telescopic arm with plate (OZB-A5203)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	
OZM 933	Trinocular (OZM 547)	0,7× – 4,5×	ball-beared double telescopic arm with plate (OZB-A5203)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	
OZM 952	Binocular (OZM 546)	0,7× – 4,5×	Jointed arm with clamp (OZB-A5212)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	
OZM 953	Trinocular (OZM 547)	0,7× – 4,5×	Jointed arm with clamp (OZB-A5212)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	
OZM 982	Binocular (OZM 546)	0,7× – 4,5×	Spring loaded arm with clamp (OZB-A6302)	With coarse focusing knob Adjustable torque of the hand wheels	4,5 W LED ring light (OBB-A6102)	
OZM 983	Trinocular (OZM 547)	0,7× – 4,5×	Spring loaded arm with clamp (OZB-A6302)	With coarse focusing knob Adjustable torque of the hand wheels	4,5 W LED ring light (OBB-A6102)	

OSE 409

OZL 961/963

OZM 902/903

OZM 922/923

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

Features

- Sets which have already been defined (except OSE 409), consisting of a stereo microscope head (p. 79), a universal stand (p. 84/85), a holder (p. 88), a ring illumination (p. 88) and a dust cover (p. 86) from our range
- Simple – convenient – affordable
- This saves you spending time on configuration and being spoilt for choice in the combination of different components. In this way you get an in expensive and highly-flexible solution for your microscope workplace

Model KERN	Microscope head		Stand	Holder	Illumination	
	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)	
OZL 961	Binocular (OZL 461)	0,7× – 4,5×	Telescopic arm with plate	With coarse focusing knob Adjustable torque of the hand wheels	4,5 W LED ring light (OBB-A6102)	
OZL 963	Trinocular (OZL 462)	0,7× – 4,5×	Telescopic arm with plate	With coarse focusing knob Adjustable torque of the hand wheels	4,5 W LED ring light (OBB-A6102)	
OZM 902	Binocular (OZM 546)	0,7× – 4,5×	Telescopic arm with plate (OZB-A1201)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	
OZM 903	Trinocular (OZM 547)	0,7× – 4,5×	Telescopic arm with plate (OZB-A1201)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	
OZM 922	Binocular (OZM 546)	0,7× – 4,5×	ball-beared double telescopic arm with plate (OZB-A1203)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	
OZM 923	Trinocular (OZM 547)	0,7× – 4,5×	ball-beared double telescopic arm with plate (OZB-A1203)	With coarse focusing knob Adjustable torque of the hand wheels (OZB-A5301)	4,5 W LED ring light (OBB-A6102)	

8 Stereo microscope modular system

You can find sample diagrams of showing the configuration of a modular system like this on pages 81, 82 and 83 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. 80
  - OZL-46: p. 80
  - OZM-5: p. 81
  - OZP-5: p. 82
  - OZO-5: p. 82

Model **KERN**	Tube	Tube angle	Eyepieces (included)	Interpupilary distance	Objective Zoom	Magnification ratio	Diopter adjustment	
OSF 512	Binocular	45°	HSWF 10×/ø 23 mm	52–76 mm	1×/2×	–	One-sided (-6/6)	⬇
OSF 514	Binocular	45°	HSWF 10×/ø 23 mm	52–76 mm	1×/3×	–	One-sided (-6/6)	⬇
OSF 516	Binocular	45°	HSWF 10×/ø 23 mm	52–76 mm	2×/4×	–	One-sided (-6/6)	⬇
OZL 461	Binocular	45°	HWF 10×/ø 20 mm	55–75 mm	0,7× – 4,5×	6,4:1	Both-sided (-5/5)	
OZL 462	Trinocular	45°	HWF 10×/ø 20 mm	52–76 mm	0,7× – 4,5×	6,4:1	Both-sided (-5/5)	
OZM 546	Binocular	45°	HSWF 10×/ø 23 mm	52–76 mm	0,7× – 4,5×	6,4:1	Both-sided (-6/6)	
OZM 547	Trinocular	45°	HSWF 10×/ø 23 mm	52–76 mm	0,7× – 4,5×	6,4:1	Both-sided (-6/6)	
OZP 551	Binocular	35°	HSWF 10×/ø 23 mm	52–76 mm	0,6× – 5,5×	9,2:1	Both-sided (-6/6)	
OZP 552	Trinocular	35°	HSWF 10×/ø 23 mm	52–76 mm	0,6× – 5,5×	9,2:1	Both-sided (-6/6)	
OZO 556*	Binocular	35°	HSWF 10×/ø 23 mm	52–76 mm	0,8× – 7×	8,8:1	Both-sided (-6/6)	
OZO 557*	Trinocular	35°	HSWF 10×/ø 23 mm	52–76 mm	0,8× – 7×	8,8:1	Both-sided (-6/6)	

! *ONLY WHILE STOCKS LAST ⬇

Fittings and accessories for the heads for the OSF-5 microscope range (OSF 512, OSF 514, OSF 516)

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

Model outfit		Model KERN			Order number	
		OSF 512	**OSF 514**	**OSF 516**		
Eyepieces (30,0 mm)	HSWF 10×/ø 23 mm	✓✓	✓✓	✓✓	OZB-A5503	
	SWF 15×/ø 17 mm	○○	○○	○○	OZB-A5504	
	SWF 20×/ø 14 mm	○○	○○	○○	OZB-A5505	
	SWF 30×/ø 9 mm	○○	○○	○○	OZB-A5506	
	HSWF 10×/ø 23 mm (reticule 0,1 mm)	○	○	○	OZB-A5512	
	SWF 15×/ø 17 mm (reticule 0,05 mm)	○	○	○	OZB-A5513	
	SWF 20×/ø 14 mm (reticule 0,05 mm)	○	○	○	OZB-A5514	

✓ = Included with delivery ○ = Option

08

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

Eyepiece	Specifications – Objectives					
	Magnification	**Standard**	**Auxiliary objectives**			
		1,0×	**0,5×**	**0,75×**	**1,5×**	**2,0×**
HSWF 10×	Total magnification	7× – 45×	3,5× – 22,5×	5,3× – 33,8×	10,5× – 67,5×	14× – 90×
	Field of view mm	ø 28,6 – 4,4	ø 57,1 – 8,9	ø 38,1 – 5,9	ø 19 – 3	ø 14,3 – 2,2
HWF 15×	Total magnification	10,5× – 67,5×	5,3× – 33,8×	7,9× – 50,6×	15,5× – 101,3×	21× – 135×
	Field of view mm	ø 21,4 – 3,3	ø 42,9 – 6,7	ø 28,5 – 4,4	ø 14,3 – 2,2	ø 10,7 – 1,7
HSWF 20×	Total magnification	14× – 90×	7× – 45×	10,5× – 67,5×	21× – 135×	28× – 180×
	Field of view mm	ø 14,3 – 2,2	ø 28,6 – 4,4	ø 19,1 – 2,9	ø 9,5 – 1,5	ø 7,1 – 1,1
HWF 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	ø 12,9 – 2,0	ø 25,7 – 4,0	ø 17,2 – 2,7	ø 8,6 – 1,3	ø 6,4 – 1,0
Working distance		105 mm	177 mm	120 mm	47 mm	26 mm

Model outfit		Model KERN		Order number	
		OZL 461	**OZL 462**		
Eyepieces (30,0 mm)	HWF 10×/ø 20 mm	✓✓	✓✓	OZB-A4631	
	HSWF 15×/ø 15 mm	○○	○○	OZB-A4632	
	HWF 20×/ø 10 mm	○○	○○	OZB-A4633	
	HSWF 25×/ø 9 mm	○○	○○	OZB-A4634	
Auxiliary objectives	0,5×	○	○	OZB-A4641	
	0,75×	○	○	OZB-A4644	
	1,5×	○	○	OZB-A4642	
	2,0×	○	○	OZB-A4643	
C-Mount	1× (focus adjustable)		✓	OZB-A4809	
	0,3× (focus adjustable)		○	OZB-A4810	
	0,5× (focus adjustable)		○	OZB-A4811	

✓ = Included with delivery ○ = Option

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

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

Model outfit		Model KERN		Order number	
		OZM 546	OZM 547		
Eyepieces (30,0 mm)	HSWF 10×/ø 23 mm	✓✓	✓✓	OZB-A5503	
	SWF 15×/ø 17 mm	○○	○○	OZB-A5504	
	SWF 20×/ø 14 mm	○○	○○	OZB-A5505	
	SWF 30×/ø 9 mm	○○	○○	OZB-A5506	
	HSWF 10×/ø 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	
	SWF 15×/ø 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	
	SWF 20×/ø 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	
Achromatic auxiliary objectives	0,37× only in combination with a universal stand	○	○	OZB-A5611	
	0,5×	○	○	OZB-A5612	
	0,7×	○	○	OZB-A5613	
	1,5×	○	○	OZB-A5615	
	2,0×	○	○	OZB-A5616	
	Soldering protection lens	○	○	OZB-A5614	
C-Mount	0,3× (focus adjustable)		○	OZB-A5701	
	0,5× (focus adjustable)		○	OZB-A5702	
	1,0× (focus adjustable)		○	OZB-A5703	
	1,0× (with micrometer) only in combination with OZB-A5703		○	OZB-A5704	
	for SLR cameras (Nikon)		○	OZB-A5706	
	for SLR cameras (Olympus)		○	OZB-A5707	
	for SLR cameras (Canon)		○	OZB-A5708	

✓ = Included with delivery ○ = Option

08

Functionality of our stereo microscope modular system

Step 1:
Select a microscope head (from page 79), a universal stand (page 84/85), a bracket (page 86) and a ring illumination unit (page 86), in order to generate a customised model.

Sample configuration

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

Eyepiece	Specifications – Objectives						
	Magnification	Standard	Auxiliary objectives				
		1,0×	0,37×	0,5×	0,7×	1,5×	2×
HSWF 10×	Total magnification	6× – 55×	2,96× – 25,9×	3× – 27,5×	4,2× – 38,5×	9× – 82,5×	12× – 110×
	Field of view mm	ø 38,3 – 4,2	ø 74,3 – 8,5	ø 76,7 – 8,4	ø 54,8 – 6	ø 25,6 – 2,8	ø 19,2 – 2,1
SWF 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	ø 28,3 – 3,1	ø 57,4 – 6,6	ø 56,7 – 6,2	ø 40,5 – 4,4	ø 18,9 – 2,1	ø 14,2 – 1,5
SWF 20×	Total magnification	12× – 110×	5,92× – 51,8×	6× – 55×	8,4× – 77×	18× – 165×	24× – 220×
	Field of view mm	ø 23,3 – 2,5	ø 47,3 – 5,4	ø 46,7 – 5,1	ø 33,3 – 3,6	ø 15,6 – 1,7	ø 11,7 – 1,3
SWF 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	ø 15 – 1,6	ø 30,4 – 3,5	ø 30 – 3,3	ø 21,4 – 2,3	ø 10 – 1,1	ø 7,5 – 0,8
Working distance		108 mm	275 mm	195 mm	145 mm	50 mm	35 mm

Model outfit		Model KERN		Order number	
		OZP 551	OZP 552		
Eyepieces (30,0 mm)	HSWF 10×/ø 23 mm	✓✓	✓✓	OZB-A5503	
	SWF 15×/ø 17 mm	○○	○○	OZB-A5504	
	SWF 20×/ø 14 mm	○○	○○	OZB-A5505	
	SWF 30×/ø 9 mm	○○	○○	OZB-A5506	
	HSWF 10×/ø 23 mm (reticule 0,1 mm)	○	○	OZB-A5512	
	SWF 15×/ø 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	
	SWF 20×/ø 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	
Achromatic auxiliary objectives	0,37× only in combination with a universal stand	○	○	OZB-A5611	
	0,5×	○	○	OZB-A5612	
	0,7×	○	○	OZB-A5613	
	1,5×	○	○	OZB-A5615	
	2,0×	○	○	OZB-A5616	
	Soldering protection lens	○	○	OZB-A5614	
C-Mount	0,3× (focus adjustable)		○	OZB-A5701	
	0,5× (focus adjustable)		○	OZB-A5702	
	1,0× (focus adjustable)		○	OZB-A5703	
	1,0× (with micrometer) only in combination with OZB-A5703		○	OZB-A5704	
	for SLR cameras (Nikon)		○	OZB-A5706	
	for SLR cameras (Olympus)		○	OZB-A5707	
	for SLR cameras (Canon)		○	OZB-A5708	

✓ = Included with delivery ○ = Option

08

Functionality of our stereo microscope modular system

Step 2:
Further illumination units (page 88) and a suitable protective dust cover (page 86) give you the opportunity to adapt the configuration, expansion and field of application of your ideal microscope individually to suit your own requirements

Fiber illumination

Polarising ring light

Dust cover

Fittings and accessories for the heads for the OZO-5 microscope range (OZO 556, OZO 557)

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

Model outfit		Model KERN				Order number	
		OZO 551	OZO 552	OZO 553	OZO 554		
Eyepieces (30,0 mm)	HSWF 10×/⌀ 23 mm	✓✓	✓✓	✓✓	✓✓	OZB-A5503	
	SWF 15×/⌀ 17 mm	○○	○○	○○	○○	OZB-A5504	
	SWF 20×/⌀ 14 mm	○○	○○	○○	○○	OZB-A5505	
	SWF 30×/⌀ 9 mm	○○	○○	○○	○○	OZB-A5506	
	HSWF 10×/⌀ 23 mm (reticule 0,1 mm)	○	○	○	○	OZB-A5512	
	SWF 15×/⌀ 17 mm (reticule 0,05 mm)	○	○	○	○	OZB-A5513	
	SWF 20×/⌀ 14 mm (reticule 0,05 mm)	○	○	○	○	OZB-A5514	
Achromatic auxiliary objectives	0,37× only in combination with a universal stand	○	○	○	○	OZB-A5611	
	0,5×	○	○	○	○	OZB-A5612	
	0,7×	○	○	○	○	OZB-A5613	
	1,5×	○	○	○	○	OZB-A5615	
	2,0×	○	○	○	○	OZB-A5616	
	Soldering protection lens	○	○	○	○	OZB-A5614	
C-Mount	0,3× (focus adjustable)			○	○	OZB-A5701	
	0,5× (focus adjustable)			○	○	OZB-A5702	
	1,0× (focus adjustable)			○	○	OZB-A5703	
	1,0× (with micrometer) only in combination with OZB-A5703			○	○	OZB-A5704	
	for SLR cameras (Nikon)			○	○	OZB-A5706	
	for SLR cameras (Olympus)			○	○	OZB-A5707	
	for SLR cameras (Canon)			○	○	OZB-A5708	

✓ = 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 90) 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 80).


OZB-A5201


OZB-A5202


OZB-A5203


OZB-A5211


OZB-A5212


OZB-A5213


OZB-A5221


OZB-A5222


OZB-A5223

08

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

Features

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

Technical data

- Column height: 515 mm

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

OZB-A5202/OZB-A5212/OZB-A5222
- Length jointed arm: 553 mm

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

Model KERN	Description	
OZB-A5201	Telescopic arm – Plate – excl. holder	
OZB-A5211	Telescopic arm – Clamp Edge of bench (Range: max. 62 mm) – excl. holder	
OZB-A5221	Telescopic arm – Clamp Centre of bench (hole required) – excl. holder	
OZB-A5202 *	Jointed arm – Plate – excl. holder	
OZB-A5212	Jointed arm – Clamp Edge of bench (Range: max. 62 mm) – excl. holder	
OZB-A5222	Jointed arm – Clamp Centre of bench (hole required) – excl. holder	
OZB-A5203	Telescopic double arm with ball bearings – Plate – excl. holder	
OZB-A5213	Telescopic double arm with ball bearings – Clamp Edge of bench (Range: max. 62 mm) – excl. holder	
OZB-A5223	Telescopic double arm with ball bearings – Clamp Centre of bench (hole required) – excl. holder	

! *ONLY WHILE STOCKS LAST

OZB-A1201

OZB-A1203

OZB-A6302

OZB-A1211

OZB-A1213

OZB-A6303

OZB-A6301

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

Features

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

Technical data

OZB-A1201/OZB-A1211
- Column height: 430 mm
- Length telescopic arm: 385 mm

OZB-A1203/OZB-A1213
- Column height: 430 mm
- Length telescopic arm: 480 mm

OZB-A6302
- Height spring loaded arm: 525 mm
- Length spring loaded arm: 620 mm

OZB-A6301
- Column height: 300 mm

OZB-A6303
- Height spring loaded arm: 400 mm
- Length spring loaded arm: 850 mm

Model KERN	Description	
OZB-A1201	Telescopic arm – Plate – excl. holder	
OZB-A1211	Telescopic arm – Clamp Edge of bench (Range: max. 40 mm) – excl. holder	
OZB-A1203	Jointed arm – Plate – excl. holder	
OZB-A1213	Jointed arm – Clamp Edge of bench (Range: max. 40 mm) – excl. holder	
OZB-A6302	Spring loaded arm (Pneumatic spring) – Clamp (Range: max. 50 mm) – with holder (Coarse focusing knob)	
OZB-A6303	Spring loaded arm (Compression spring) – Clamp (Range: max. 50 mm) – with holder (Coarse focusing knob)	
OZB-A6301	Pillar style stand with “C”-shape base – excl. holder	

OZB-A5301

OZB-A5306

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

Features

- There are two microscope head holders available for these flexible, modular systems. These brackets are suitable for all stereo microscope stands and universal stands (excluding spring loaded arm), to make focusing possible
- The first variant available is a holder with adjustable handwheel as well as adjustment of the torque for your configuration
- For professional applications you have the choice of a mount with coarse and fine focusing knob for the very best focusing operation
- Diameter of the connector for the microscope head: 76 mm
- Diameter of the connector for the stand: 25 mm

Model KERN	Description	
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.	
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.	

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

Features

- When working with microscopes, we offer dust covers to give greater ease of use. By using these, you can easily avoid the time-consuming cleaning work which is necessary with routine use of your microscope
- Depending on the size of your microscope set or your microscope configuration you can select between three different models
- Please find detailed information in the following model outfit list

Model KERN	Description	Suitable for	
OBB-A1387	Size 1: 485×440 mm	Stereo microscope heads	
OBB-A1388	Size 2: 600×600 mm	Stereo microscope heads in combination with basic stands	
OBB-A1389	Size 3: 650×750 mm	Stereo microscope sets, stereo microscope heads in combination with universal stands	

9 External light sources for stereomicroscopes

Ring illumination and cold light sources

Professional illumination units guarantee outstanding, uniform and strong illumination

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

OZB-A4571

OZB-A4572

OBB-A6102

OZB-A7101

Features

- Choose your favourite external illumination here to achieve maximum flexibility and greatest possible ease of use in stereo microscopy
- These professional illumination units provide a quality of light at a high, constant intensity at all times
- Regardless of whether your choice is space-saving ring lights or cold light sources using optical fiber, our range is all you can wish for
- With the OZB-A7101 polarisation ring illumination unit, you also have an excellent component which has been specially optimised for observing shiny surfaces
- Naturally, these external illumination units also fit your standard stereo microscope
- Exception: The ring illumination units cannot be used in combination with the following ranges: OSE-1, OSF-4G, OZL-45R, OZC-5 and OZG-4

Model KERN	Illuminance	Inner ⌀ mm	Colour temperature K	Brightness adjustable	Illumination by segments	Polarising filter	
OZB-A4571	3W-LED	60	7000 – 11000	✓			
OZB-A4572	3W-LED	60	6500 – 7000	✓	✓		
OBB-A6102	4,5W-LED	63	approx. 7600	✓			
OZB-A7101	4,5W-LED	62	6500 – 7000	✓		✓	

✓ = Included with delivery O = Option

09

Fiber illumination KERN OZB-IF

OZB-A4516

OZB-A4515

Application example

Features

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

Model KERN	Description	Length mm	Illuminance	Colour temperature K	Brightness adjustable	
OZB-A4515	Dual fiber LED unit	300	6W	5600 – 6300	✓	
OZB-A4516	Dual fibre LED cold light source	540	20W	6400	✓	

✓ = Included with delivery O = Option

10 Microscope cameras & Software

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

Features

- A large selection of microscope cameras is available for your individual applications
- The universal microscope cameras can be used anywhere and can be connected to the microscope as well as to a laptop or PC using the USB cable (USB 2.0 or USB 3.0, see table)
- The power supply is through the USB cable, which means that no additional power supply is required
- Your daily work is made significantly easier with the very best synchronisation, a high frame rate as well as stable image performance together with our camera software microscope VIS KERN OXM 901 which we deliver with the product
- For details about our software please refer to the “Camera software microscope VIS KERN OXM 901” product group in the catalogue (page 95) or on the internet.
- These universal cameras can also be connected to all microscopes available on the market offering the appropriate C-mount adapter for the particular microscope

Accessories

- Object micrometer, for calibrating the software measuring function, division 0.01 mm, KERN ODC-A2403

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

STANDARD

USB 2.0 · USB 3.0 · SOFTWARE · 1 DAY

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 Basic 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

Model KERN	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	
ODC 824	3,1 MP	USB 2.0	11,5 – 45	CMOS	1/2"	colour	Win XP, Vista, 7, 8, 10	
ODC 825	5,1 MP	USB 2.0	6,8 – 55	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10	
ODC 831	3,1 MP	USB 3.0	27,3 – 53,3	CMOS	1/3"	colour	Win XP, Vista, 7, 8, 10	
ODC 832	5,1 MP	USB 3.0	14,2 – 101,2	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10	

C-mount camera – High resolution KERN ODC-84

STANDARD

USB 3.0 · SOFTWARE · 1 DAY

Features

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

! Can only be used in combination with compound microscopes

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

C-mount camera – HDMI KERN ODC-85

Features

- The ODC 851 HDMI microscope camera has been specially developed for direct HDMI connection to your HDMI compatible display device. The images can be stored straight onto the SD card which is delivered with the product or can be transferred to your PC or laptop for further processing using the USB 2.0 cable in combination with the OXM 901 software.
- The HDMI autofocus camera ODC 852 offers you a perfect, effective solution for modern microscopy. The autofocus function automatically detects and adjusts the focus level so that you always have a razor-sharp image. Ideal for all applications in connection with a KERN stereo microscope.
- Realtime images can be transferred to an HDMI-compatible display device using the HDMI connection and they can also be stored on the SD card which was delivered with the product. As an alternative, data can also be transferred using the WLAN module (ODC 852) to a PC or laptop in combination with the KERN OXM 902 software which is included with the delivery
- Power supply is from an external 12 V power unit
- Scope of delivery ODC 851: Camera, USB mouse, USB 2.0 cable (length: 2 m), HDMI cable (length: 2 m), SD card (16 GB) and camera software Microscope VIS Basic KERN OXM 901
- Scope of delivery ODC 852: Camera, USB mouse, HDMI cable (length: 2 m), SD card (16 GB), WiFi adapter and camera software Microscope VIS Pro KERN OXM 902
- Please order the appropriate C-mount adapter to fit your KERN microscope now

STANDARD

Model KERN	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	
ODC 851	2 MP	HDMI, USB 2.0, SD	30 – 60	CMOS	1/2,8"	colour	Win XP, Vista, 7, 8, 10	
ODC 852*	5 MP	HDMI, USB 2.0, SD, WLAN	25 – 60	CMOS	1/1,8"	colour	Win XP, Vista, 7, 8, 10	

*can only be used in combination with stereo microscopes

C-mount camera – High resolution KERN ODC-86

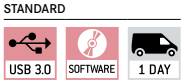
The cooled camera for professional fluorescence examinations

Features

- The ODC 861 camera with Peltier cooling technology has been specially designed for fluorescent applications. It is able to significantly compensate for image noise associated with weak lighting. Due to its high resolution and light-sensitive Sony CMOS colour sensor it proves first-class images. The practical, sturdy storage box serves as protection and for transportation of this premium camera
- Realtime images can be transferred straight to a PC or laptop using the integrated USB 3.0 interface. As an alternative, 2 USB 2.0 interfaces are available, to operate the camera with the KERN OXM 902 software which is included with the delivery
- Power supply is from an external 12 V power unit
- Please order the appropriate C-mount adapter (only 1,0× possible) to fit your KERN microscope now

Can only be used in combination with compound microscopes

STANDARD



Model KERN	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	
ODC 861	20 MP	USB 3.0	5 – 30	CMOS	1"	colour	Win XP, Vista, 7, 8, 10	

ODC-87, ODC-88

Eyepiece camera fixed into the tube

Features

- With the KERN eyepiece cameras you can convert your standard microscope to a digital microscope, by replacing one eyepiece of your non-digital microscope with an eyepiece camera and connect this to your computer via USB
- The universal eyepiece can be connected to the microscope as well as to a laptop or PC using the USB cable (2.0 or 3.0, see table)
- The power supply is through the USB cable, which means that no additional power supply is required
- Your daily work is made significantly easier with the very best synchronisation, a high frame rate as well as stable image performance together with our software
- As well as the camera, the delivery includes a simplified version of our multi-lingual camera software Microscope VIS KERN OXM 901 (OXM 902 for model ODC 881), a USB cable (length: 1,5m), two eyepiece adapters and an object micrometer to calibrate the software
- Possible tube diamaters:
  23,2 mm (Standard)
  30,0 mm (Eyepiece adapter)
  30,5 mm (Eyepiece adapter)

STANDARD

USB 2.0 | USB 3.0 | SOFTWARE | 1 DAY

Model KERN	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	
ODC 872	1,3 MP	USB 2.0	7,5 – 12,5	CMOS	1/3"	colour	Win XP, Vista, 7, 8, 10	
ODC 874	3 MP	USB 2.0	3 – 7,5	CMOS	1/2,7"	colour	Win XP, Vista, 7, 8, 10	
ODC 881	5 MP	USB 3.0	15 – 30	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10	

USB microscope – USB 2.0 KERN ODC-89

The digital USB microscope for rapid testing or for hobby use

10

ODC 895

Features

- The USB hand-held microscope is designed for rapid and simple observations. Ideally suited for coins, plants, insects and skin samples for all hobby scientists, children and students
- With the USB microscope you can easily adjust the magnification to suit all conventional samples. The zoom range can be adjusted to a magnification of 10× as well as 200×
- The eight LEDs fitted in the ring shape ensure strong and effective illumination of your sample. Use the adjustment wheel on the cable to control the illumination setting
- As well as the camera, you will also find a simplified version of our multi-lingual camera software Microscope VIS KERN OXM 901 included with delivery
- Cable length: 1,4 m

Stand with focus wheel:

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

STANDARD

USB 2.0 | SOFTWARE | 1 DAY

Model KERN	Resolution	Interface	FPS	Sensor	Sensor size	Supported operating system	Magnification levels	Focusing stand	Illumination	
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	

ODC 910

Download on the App Store

ANDROID APP ON Google play

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

Features

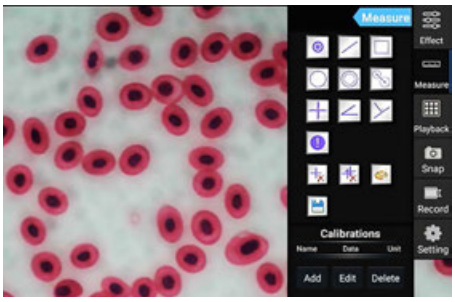
- The digital WLAN hand-held microscope is designed for rapid and simple surface observations. Ideally suited for coins, bank notes, stamps, circuit boards, plants, insects, gems and skin samples for industrial use, for all hobby scientists, children and students
- The KERN ODC 910 WLAN microscope has 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

WIFI SD RECHARGE 230 V 1 DAY

Model KERN	Resolution	Interface	FPS	Sensor	Sensor size	Supported operating system	Magnification levels	Focusing stand	Illumination	
ODC 910	2 MP	WLAN, SD	15 – 30	CMOS	1/4"	Android, iOS	10×, 200×	Goose neck	6× LED	

ODC 241



Integrated software with measuring function

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

Features

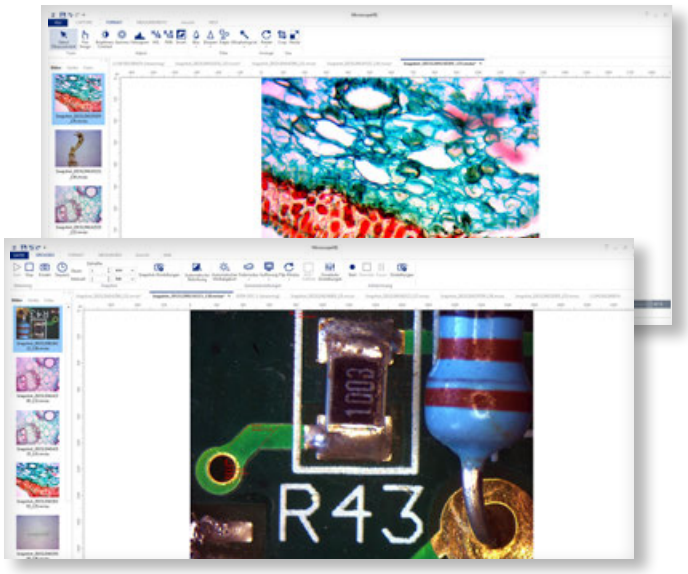
- A 2-in-1 solution in digital microscopy as a universal system for trinocular microscopes with C-mount adapter. The ODC 241 microscope-tablet-camera consists of a large Android tablet in combination with a 5-MP camera
- The KERN ODC 241 tablet-camera has been specially developed for simple and direct observation of the sample on the screen. Ideally suited for school pupils and students in education or for demonstration purposes in the laboratory
- As well a live transfer of the image to the Android table, the integrated 5-MP camera also means that images and videos can be created for the documentation.
- Simple measuring functions such as, for example, functions for measuring distance, surfaces and angles as well as a manual counting function are also available
- Automatic white balance and automatic contrast adjustment can be performed quickly and easily, which enables efficient working procedures
- A range of additional functions are provided through the integrated interfaces, such as, for example
  - Data storage on a USB stick or SD card
  - Connection to a USB mouse
  - Transfer of the live image to an external screen using HDMI
  - Transfer of stored data to external receivers using WLAN
- The delivery includes the tablet camera with pre-installed software as well as the mains adapter

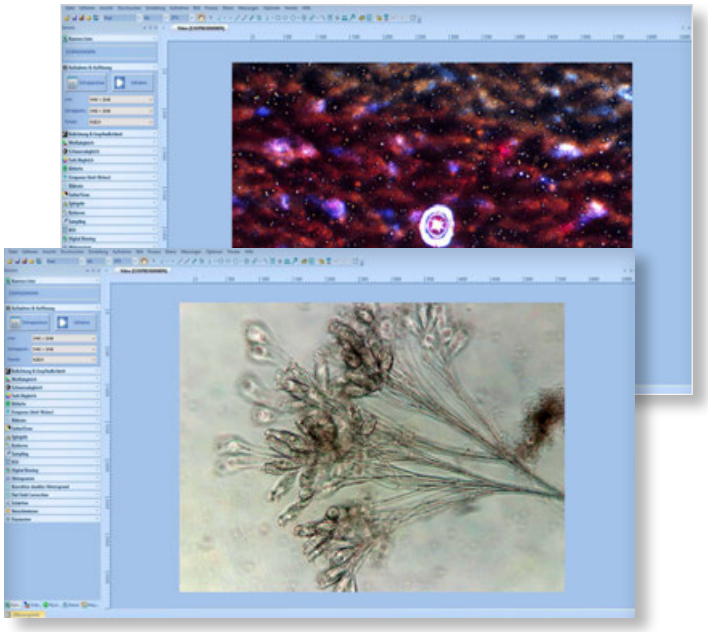
Technical data

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

STANDARD

Model KERN	Resolution Camera	Interface	FPS	Sensor	Sensor size	Supported operating system	
ODC 241	5 MP	WLAN, USB 2.0, HDMI, SD	15 – 30	CMOS	1/2,5"	Android 5.1	





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

Features

OXM 901*

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

OXM 902

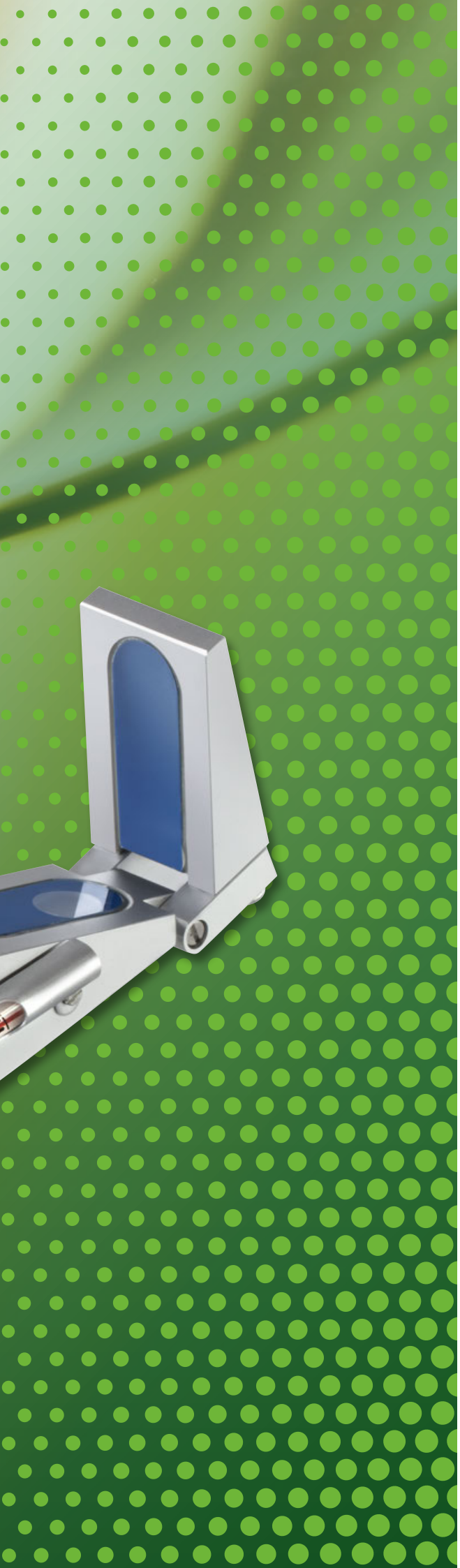
- With the camera software **KERN microscope VIS Pro** in essence, all functions of the Basic variant are supported, however, in addition many other features are integrated which can be used for image analysis at a more professional level.
- The following highlights are included:
  - Image Stitching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

Technical data

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

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


Brix
7.3 %
ATC
Temp.
23.5 °C
→0←
MEAS
ON
OFF
KERN
OPTICS



Refractometers

Now also available with calibration certificate, see page 116!

Refractive index measurement for laboratories and the industry

Features

- The KERN ORA refractometers are universal, maintenance-free analogue handheld refractometers
- The handy and robust design allows the easy, efficient and sustainable use in everyday life
- Manually calculated conversions and errors of the user are avoided by multiple selectable scales
- These scales are especially developed, exactly calculated and checked. They are also characterized by their thin and clear lines
- The optical system and the prism cover are made of special material which allows a low-tolerance measuring
- All ORA models are equipped with an eyepiece for easy and smooth setting for many different diopter strengths
- The models marked with “ATC” have an automatic temperature compensation which enables accurate measurement at different ambient temperatures (10 °C/30 °C)
- The follwoing accessory-parts are included:
  - Storage box
  - Calibration liquid
  - Calibration block (if required)
  - Pipette
  - Small screwdriver
  - Cleaning tissue
- Further accessories are optionally available

Technical data

- Die-cast housing of copper-aluminium alloy, chrome coated
- Measurement temperature without ATC: 20 °C
- Measurement temperature range with ATC: 10 °C/30 °C
- Dimensions of the box: 205×75×55 mm (depending on the model)
- Product length: approx. 130 – 200 mm (depending on the model)
- Net weight approx. 135 – 600 g (depending on the model)

STANDARD OPTION

1 DAY AUTO ATC

Scope of application: Sugar

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

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

Model KERN	Scales	Measuring range	Division	ATC	
ORA 10BB	Brix	0 – 10 %	0,1 %		
ORA 10BA	Brix	0 – 10 %	0,1 %	✓	
ORA 18BB	Brix	0 – 18 %	0,1 %		
ORA 20BB	Brix	0 – 20 %	0,1 %		
ORA 20BA	Brix	0 – 20 %	0,1 %	✓	
ORA 32BB	Brix	0 – 32 %	0,2 %		
ORA 32BA	Brix	0 – 32 %	0,2 %	✓	
ORA 62BB	Brix	28 – 62 %	0,2 %		
ORA 62BA	Brix	28 – 62 %	0,2 %	✓	
ORA 82BB	Brix	45 – 82 %	0,5 %		
ORA 80BB	Brix	0 – 80 %	0,5 %		

Scope of application: Honey

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

The main scope of applications is:
- Beekeeping
- Honey production

Model KERN	Scales	Measuring range	Division	ATC	
ORA 3HB	Brix Baumé Water content	58 – 92 % 38 – 43 °Bé 12 – 27 %	0,5 % 0,5 °Bé 1 %		
ORA 3HA	Brix Baumé Water content	58 – 92 % 38 – 43 °Bé 12 – 27 %	0,5 % 0,5 °Bé 1 %	✓	
ORA 6HB	Water content	12 – 30 %	0,1 %		
ORA 6HA	Water content	12 – 30 %	0,1 %	✓	

Scope of application: Salt

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

The main scope of applications is:
- Food industry
- Restaurants and large-scale catering establishment
- Aquaristic: Fishkeepers/Fishfarmers in sea and sweetwater

Model KERN	Scales	Measuring range	Division	ATC	
ORA 1SB	Salinity specific gravity	0 – 100 ‰ 1,000 – 1,070 sg	1 ‰ 0,001 sg		
ORA 1SA	Salinity specific gravity	0 – 100 ‰ 1,000 – 1,070 sg	1 ‰ 0,001 sg	✓	
ORA 2SB	Salt (NaCl)	0 – 28 %	0,2 %		
ORA 2SA	Salt (NaCl)	0 – 28 %	0,2 %	✓	
ORA 3SB	Salt (NaCl) Brix	0 – 28 % 0 – 32 %	0,2 % 0,2 %		
ORA 3SA	Salt (NaCl) Brix	0 – 28 % 0 – 32 %	0,2 % 0,2 %	✓	

Scope of application: Wine

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

The main scope of applications is:
- Agriculture: Wine-growing and fruit-growing
- Wine-production
- Must and alcohol production

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

Model KERN	Scales	Measuring range	Division	ATC	
ORA 1WB	Oechsle KMW (Babo) Brix	0 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,25 °KMW 0,2 %		
ORA 1WA	Oechsle KMW (Babo) Brix	0 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,25 °KMW 0,2 %	✓	
ORA 3WB	Oechsle Brix	30 – 140 °Oe 0 – 32 %	1 °Oe 0,2 %		
ORA 3WA	Oechsle Brix	30 – 140 °Oe 0 – 32 %	1 °Oe 0,2 %	✓	
ORA 7WB	Oechsle KMW (Babo) Brix	30 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,2 °KMW 0,2 %		
ORA 7WA	Oechsle KMW (Babo) Brix	30 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,2 °KMW 0,2 %	✓	
ORA 1AB	Percentage by volume Percentage by volume	0 – 50 % (v/v) 50 – 80 % (v/v)	1 % (v/v) 2,5 % (v/v)		
ORA 2AB	Percentage by mass Percentage by mass	0 – 50 % (w/w) 50 – 80 % (w/w)	1 % (w/w) 2,5 % (w/w)		

Order Hotline: Go to back page of catalogue

Scope of application: Urine

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

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

Model KERN	Scales	Measuring range	Division	ATC	
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		
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	✓	
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		

Scope of application: Industry/Automotive

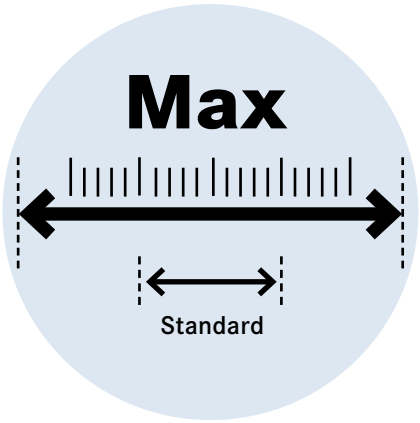
The following models are particularly suitable for the measurement and determination of AdBlue, glycol concentration (ethylene (EG) and propylene (PG)), battery fluid (BF), urea, the freezing point of fountain solution (CW). Furthermore these models are suitable for the measurement of thermal exchange 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 KERN	Scales	Measuring range	Division	ATC	
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		
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	✓	
ORA 1UB	Urea	0 – 40 %	0,2 %		
ORA 1UA	Urea	0 – 40 %	0,2 %	✓	
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		
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	✓	

Scope of application: Expert applications

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



The main scope of applications is:
- Universal application, especially when extra large measuring ranges are required

Model KERN	Scales	Measuring range	Division	ATC	
ORA 80BE	Brix	0 – 50 % 50 – 80 %	0,5 % 0,5 %		
ORA 90BE	Brix	0 – 42 % 42 – 71 % 71 – 90 %	0,2 % 0,2 % 0,2 %		
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		
ORA 4RR	Refractive index	1,440 – 1,520 nD	0,001 nD		

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

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Model KERN	Scales	Measuring range	Division	ATC	
ORA 1GG	Refractive index	1,30 – 1,81 nD	0,01 nD		

ORA 1GG

Accessory parts: Analogue refractometer – ORA

Prism coverplate with LED
ORA-A1101

Calibration liquid/
Contact liquid

Leather bag
ORA-A2103

Calibration block

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

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

Transport and storage case

Rear view, screw-on battery compartment cover

Digital measurement of refraction index for universal application
▸ ECO refractometer

Features

- The KERN ORF refractometers are accurate and universal maintenance free digital handheld refractometers
- The large display is easy to read. Mistakes in reading are avoided
- The typical and practical design is suitable for a quick and convenient everyday use and is characterized by its easy-using and robustness
- The large, easy-to-read display with integrated temperature display supports the user to reliably determine the measurement
- The integrated automatic temperature compensation (ATC at ORF 45BE), avoids the manual conversion of the measurement. This allows a quick and efficient usage of the instrument
- Due to the fact that the refractometer has been calibrated at the factory, this guarantees that it can be used immediately for accurately measuring your sample.
- The follwoing accessory-parts are included:
  - Calibration liquid
  - Pipette
  - Storage box
  - 2 × AAA batteries
  - Leather bag
  - Small screwdriver
  - Cleaning tissue

Technical data

- Measurement temperature: 10 °C – 40 °C
- Overall dimensions W×D×H 145×67×40 mm
- Net weight approx. 200 g
- Power supply: 2 × AAA (1,5 V)
- Lifetime of the battery: approx. 5.000 measurements
- ATC (Automatic Temperature Compensation), does not apply to the refraction index scale
- Minimum sample volume: 2–3 drops
- Automatic energy management (AUTO-OFF after 90 seconds)

Now also available with calibration certificate, see page 116!

12

STANDARD

AUTO ATC | BATT | 1 DAY

ORF 45BE

Model KERN	Scales	Measuring range	Accuracy	Division	
ORF 45BE	Brix	0 – 45 %	± 0,2 %	0,1 %	
ORF 45RE	Refractive index	1,3330 – 1,4098 nD	± 0,0003 nD	0,0001 nD	

Transport and storage case

Rear view, screw-on battery compartment cover

IP65: Protected against dust and water splashes

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

Features

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

Technical data

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

! Now also available with calibration certificate, see page 116!

STANDARD

AUTO ATC | IP 65 | BATT | 1 DAY

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, water-based mixtures). Alternativly, the dispaly 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 **KERN**	Scales	Measuring range	Accuracy	Division	
ORF 45BM	Brix Refractive index	0 – 45 % 1,3330 – 1,4098 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	
ORF 92BM	Brix Refractive index	58 – 92 % 1,4370 – 1,5233 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	
ORF 85BM	Brix Refractive index	0 – 85 % 1,3330 – 1,5100 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	

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 **KERN**	Scales	Measuring range	Accuracy	Division	
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	

Scope of application: Salt

The following models are particularly suitable to determin 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 **KERN**	Scales	Measuring range	Accuracy	Division	
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	

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 **KERN**	Scales	Measuring range	Accuracy	Division	
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	

Scope of application: Urine

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

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

Model **KERN**	Scales	Measuring range	Accuracy	Division	
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	

Scope of application: Industry/Automotive

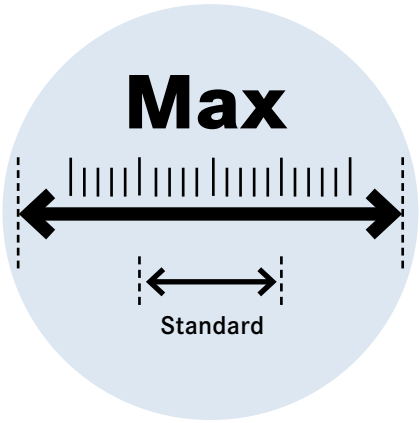
The following models are particularly suitable for the measurement and determination of AdBlue, glycol concentration (ethylene (EG) and propylene (PG)), battery fluid (BF), urea, the freezing point of fountain solution (CW). Furthermore these models are suitable for the measurement of thermal exchange 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 **KERN**	Scales	Measuring range	Accuracy	Division	
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	
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	
ORF 6US	Urea Refractive index	0 – 40 % 1,3330–1,4100 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	

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 KERN	Scales	Measuring range	Accuracy	Division	
ORF 1RS	Refractive index	1,3330 – 1,5400 nD	± 0,0005 nD	0,0001 nD	

Accessory parts: Digital refractometer – ORF

Model KERN	Description	
ORF-A1005	Prism cover for digital refractometers	
ORA-A1001	Calibration liquid – distilled water Volume: 2,5 ml	
ORA-A1006	Calibration liquid – Triethyl citrate Volume: 2,5 ml	
ORD-A2104	Leather bag for digital refractometer (Spare part)	

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	–	–

Now also available with calibration certificate, see page 116!

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

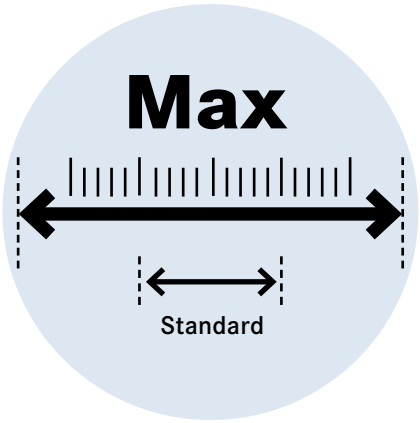
13

STANDARD

MONO ABBE 1 DAY

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
- Laboratories
- Training

Model KERN	Scales	Measuring range	Accuracy	Division	
ORT 1RS	Brix Refractive index	0 – 95 % 1,3000 – 1,7000 nD	± 0,1 % ± 0,0002 nD	0,25 % 0,0005 nD	

ORT 1RS

Accessory parts: Abbe refractometer – ORT

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


Transport and storage case
ORA-A1102


Calibration block
ORA-A2267

13

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

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

Features

- Any analogue or digital refractometer will only give correct results if it is checked regularly, i.e. calibrated correctly and adjusted when required. A refractometer or another measuring device is only a reliable measuring and checking tool if it is calibrated and this calibration is documented as part of a quality procedure
- Measuring “correctly” is of elementary significance, as it is not unusual for inaccurate or “wrong” measurements to have expensive economic consequences. Calibration or establishing the accuracy of checking equipment must therefore be carried out by laboratories throughout the world
- In the context of standard requirements for monitoring checking equipment, every company with a Quality Management system is obliged to test and document its measuring equipment at regular intervals
- The refractometer calibration certificate documents the intended measuring functionality and confirms the measuring accuracy of your refractometer to you

Important

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

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

Model KERN	Description	
961-290	Calibration certificate for refractometers on initial calibration	
961-290R	Calibration certificate for refractometers on recalibration	

14 Polarimeter

NEW

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

Features

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

Technical data

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

STANDARD

MONO POLAR 230 V 1 DAY

14

Scope of application: Laboratory/Education

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

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

Cuvette in measuring chamber

Model **KERN**	Scales	Measuring range	Division	Vernier	Wave lenght	
OAB 10LN	Optical rotation	± 180 °	1°	0,05°	589 nm	

Accessory parts: OAB

Model **KERN**	Description	
OAB-A2501	Glass cuvette, Length: 100 mm (Spare part)	
OAB-A2502	Glass cuvette, Length: 200 mm (Spare part)	
OAB-A2581	Sodium vapour lamp, Wave length: 589 mm (Spare part)	

Cuvette 10 and 20 cm

Checklist for your microscope – your requirements

1 Which kind of microscope do you need?

☐ **Compound microscope**	primarily used for transparent/translucent preparation	Page 116 – 118
☐ **Stereo microscope**	surface observation with 3-dimensional optic with slow/medium magnification	Page 119 – 123
☐ **Phase contrast microscope**	Preparations with minimal contrast/very translucent	Page 116 – 118
☐ **Fluorescence microscope**	fluorescent structures, which are specific coloured or auto coloured	Page 116 – 118
☐ **Polarisation microscope**	Preparations with refraction (anisotropic) for example Crystal	Page 116 – 118
☐ **Metallurgical microscope**	surface observation of components, materials and minerals	Page 116 – 118
☐ **Inverted microscope**	used primarily for culture fessel from cell culture/for very thick preparation	Page 116 – 118

State your intended use/
Describe your application: _____

_____

State your previous
model/manufacturer: (if available) _____

_____

State your min. and max.
magnification: _____

_____

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

☐ **Monocular eyepiece tube**	view with one eye = 1 eyepiece available
☐ **Binocular eyepiece tube**	view with both eyes = 2 eyepieces available
☐ **Trinocular eyepiece tube**	view with both eyes + additional option to adapt a camera
☐ **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?

☐ **Halogen transmitted illumination**	very good illumination/also suitable for dark field and phase contrast
☐ **LED transmitted illumination**	extremely long life time/no heat generation
☐ **Halogen reflecting illumination**	additional illumination, e.g. for Polarisation and metallurgical microscopes
☐ **LED incident illumination**	only for stereo microscopes
☐ **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

- ☐ **⌀ 18 mm**
- ☐ **⌀ 18 mm with pointer needle**
- ☐ **⌀ 18 mm with 0.1 mm scale**
- ☐ **⌀ 20 mm**
- ☐ **⌀ 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?

☐ **Binocular eyepiece tube**	view with both eyes, two eyepieces
☐ **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?

☐ **Greenough**	beam paths which are completely separate from each other
☐ **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?

☐ **None**	stereo microscope without illumination
☐ **Incident illumination**	incident illumination e.g. LED or halogen
☐ **Transmitted illumination**	additional illumination for translucent samples
☐ **Coaxial illumination**	integrated coaxial illumination for selective depth of focus
☐ **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?

☐ **Rotation objective**	changing the magnification by rotating the objective
☐ **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

☐ **⌀ 20 mm**

☐ **⌀ 22 mm**

☐ **⌀ 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?

☐ **Analogue refractometer**	hand-held device for rapid analysis/can be used for mobile applications
☐ **Digital refractometer**	digital, hand-held device for rapid analysis/can be used for mobile applications
☐ **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

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

☐ **yes**	ATC allows you take measurements with different environmental, device and sample temperatures between 10 °C and 30 °C
☐ **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: _____