

PROFESSIONAL MEASURING



METALLURGICAL MICROSCOPES

KERN Pictograms



360° rotatable microscope head



Monocular Microscope
For the inspection with one eye



Binocular Microscope
For the inspection with both eyes



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



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



Halogen illumination
For pictures bright and rich in contrast



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



Incident illumination
For non-transparent objects



Transmitting illumination
For transparent objects



Fluorescence illumination
For stereomicroscopes



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



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



Phase contrast unit
For a higher contrast



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



Polarising unit
To polarise the light



Infinity system
Infinity corrected optical system



Zoom magnification
For stereomicroscopes



Auto-focus
For automatic control of the focus level



Parallel optical system
For stereomicroscopes, enables fatigue-proof working



Integrated scale
In the eyepiece



SD card
For data storage



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



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



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 compensation
For measurements between 10 °C and 30 °C



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



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



Battery operation rechargeable
Prepared for a rechargeable battery operation



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



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



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

Abbreviations

C-Mount	Adapter for the connection of a camera to a trinocular microscope
FPS	Frames per second
H(S)WF	High (Super) Wide Field (Eyepiece with high eye point for wearers of glasses)
LWD	Long Working Distance
N.A.	Numerical Aperture

SLR camera	Single-Lens Reflex camera
SWF	Super Wide Field (Field number at least \varnothing 23 mm for 10× eyepiece)
W.D.	Working Distance
WF	Wide Field (Field number up to \varnothing 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 ergonomics of our microscopes, as this allows the user to work for several hours in a comfortable position which does not cause fatigue
- our microscopes are fully-equipped and can be used immediately
- Highlight for 2022: die KERN camera software – you will be amazed at how user-friendly and intuitive it is, a high-quality tablet camera as well as a comprehensive range of calibration services for refractometers
- and much more...

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

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

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

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

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

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

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



Albert Sauter, Managing Director

Your advantages

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

- Up to 3 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” at www.kern-sohn.com



Order hotline
+49 7433 9933-0



E-mail order
info@kern-sohn.com



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



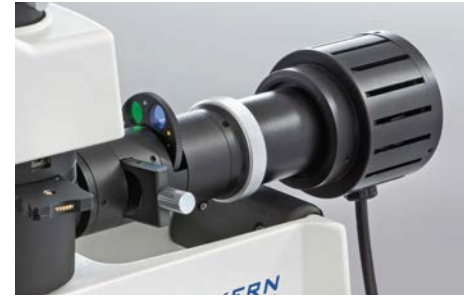
Service hotline
+49 7433 9933-199



Our team of consultants will assist you
from Monday to Friday
from 8:00 am to 5:00 pm



Online shop
www.kern-sohn.com



Illumination unit with filter disc



Stage and objectives

02

LAB LINE MET

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

Features

- The KERN OKM is an excellent metallurgical reflected light microscope, e.g. for surface quality testing of raw materials and finished products in industry
- The strong, continuously dimmable 30 W halogen reflected illumination unit (Philips) ensures excellent, high-contrast images
- The illumination unit with an integrated 5-slot filter wheel for blue, green, yellow, grey and blank means that you can quickly change the colour filter for different contrast views
- A large mechanical stage for reflected illumination applications is configured as standard. The coarse and fine focusing knob on both sides guarantees optimal adjustment and focusing of your sample
- A simple polarising unit (analyser and polariser) is included with delivery
- A large selection of different eyepieces, objectives and a polarising unit are also available
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- A C-mount adapter is required to connect a camera to the trinocular version. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

Scope of application

- Metallurgy, material testing, quality assurance

Applications/Samples

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

Technical data

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

STANDARD



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

Metallurgical microscope KERN OKM-1

Model outfit		Model KERN	Order number	Price/piece excl. of VAT ex works €
		OKM 173		
Eyepieces (23,2 mm)	HWF 10×/∅ 18 mm	✓	OBB-A1403	50,-
	HWF 10×/∅ 18 mm (reticule 0,1 mm) (non-adjustable)	✓	OBB-A1349	65,-
	WF 5×/∅ 20 mm	○	OBB-A1355	60,-
	WF 12,5×/∅ 14 mm	○	OBB-A1353	85,-
	WF 16×/∅ 13 mm	○	OBB-A1354	50,-
Infinity Plan achromatic objectives	5×/0,11 W.D. 6,80 mm	✓	OBB-A1268	115,-
	10×/0,25 W.D. 4,3 mm	✓	OBB-A1244	215,-
	20×/0,40 (spring-loaded) W.D. 2,14 mm	○	OBB-A1251	290,-
	40×/0,65 (spring-loaded) W.D. 0,45 mm	○	OBB-A1258	315,-
Infinity Plan achromatic objectives for long working distance	20×/0,40 W.D. 8,35 mm	✓	OBB-A1252	315,-
	40×/0,65 W.D. 3,90 mm	✓	OBB-A1259	440,-
	50×/0,70 (spring-loaded) W.D. 1,95 mm	○	OBB-A1266	490,-
	80×/0,80 (spring-loaded) W.D. 0,85 mm	○	OBB-A1271	550,-
Trinocular tube	<ul style="list-style-type: none"> • Siedentopf 30° inclined/360° rotatable • Interpupillary distance 50 – 75 mm • Light distribution 80:20 • Diopter adjustment: One-sided 	✓	OBB-A1346	
Mechanical stage	<ul style="list-style-type: none"> • Stage size W×D 200×140 mm • Travel 76×52 mm • Coaxial coarse and fine focusing knobs 	✓		
Illumination	30 W Halogen spare bulb (incident)	✓	OBB-A1372	40,-
Reflected illumination unit	5-filter unit (Blue, Green, Yellow, Grey, Empty)	✓		
	Polarising unit (Incl. analyser and polariser slide)	✓		
C-Mount	1×	○	OBB-A1514	130,-
	0,5× (focus adjustable)	○	OBB-A1515	200,-

✓ = Included with delivery

○ = Option

02



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



Model	Standard configuration					Price excl. of VAT ex works €
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)	3350,-

Metallurgical microscopes KERN OKO-1

Model outfit		Model KERN	Order number	Price/piece excl. of VAT ex works €
		OKO 178		
Eyepieces (30 mm)	HWF 10×/∅ 22 mm (adjustable)	✓	OBB-A1491	100,-
	HWF 10×/∅ 22 mm (reticule 0,1 mm) (adjustable)	✓	OBB-A1523	155,-
Infinity Plan Semi Apochromatic objectives for long working distance	5×/0,15 W.D. 21,0 mm	✓	OBB-A1619	180,-
	10×/0,3 W.D. 20,0 mm	✓	OBB-A1620	275,-
	20×/0,40 W.D. 15,0 mm	✓	OBB-A1621	335,-
	50×/0,75 W.D. 4,25 mm	✓	OBB-A1641	480,-
Infinity Plan objectives for long working distance	80×/0,80 (spring-loaded) W.D. 0,85 mm	○	OBB-A1530	520,-
	100×/0,85 (dry) W.D. 3,00 mm	○	OBB-A1623	1260,-
Trinocular tube	<ul style="list-style-type: none"> • Siedentopf 30° inclined/360° rotatable • Interpupillary distance 48 – 76 mm • Light distribution 100:0 	✓		
Mechanical stage for transmitted illumination	<ul style="list-style-type: none"> • Stage size W×D 182×140 mm • Travel 77×52 mm • Coaxial coarse and fine focusing knobs 	✓		
Reflected illumination unit	Polarising unit (Incl. analyser, polariser and blue filter slide)	✓		
Condenser	Abbe N.A. 1,25 (aperture diaphragm)	✓	OBB-A1380	110,-
Koehler illumination	5 W LED spare bulb (transmitted)	✓	OBB-A1589	90,-
Illumination polarising unit	5 W LED spare bulb (incident)	✓		
Polariser	for transmitted illumination	✓	OBB-A1470	150,-
Colour filters for transmitted illumination	Blue	✓	OBB-A1170	25,-
	Green	○	OBB-A1188	25,-
	Yellow	○	OBB-A1165	25,-
	Grey	○	OBB-A1183	25,-
C-Mount	1×	○	OBB-A1514	130,-
	0,75×	○	OBB-A1590	200,-
	0,5× (focus adjustable)	○	OBB-A1515	200,-

✓ = Included with delivery

○ = Option

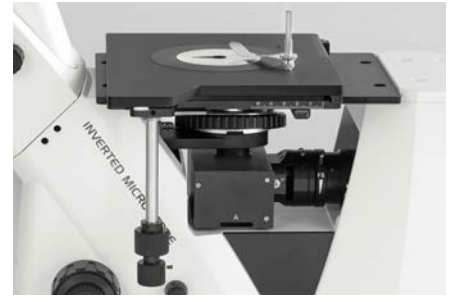
02



OLM 171



OLM 170



Specimen stage and illumination unit (OLM 171)



Analyser/Polariser

LAB LINE MET

The inverted metallurgical microscope for professional applications

Features

- The KERN OLM range is part of the range of inverted microscopes and stands out through its design which is ergonomic, robust and extremely stable. This range, with its large working distance is, for example, particularly suitable for surface quality testing of raw materials and finished products in industry
- Depending on the application, you can choose from models with a powerful, continuously dimmable 5W LED or a 50W halogen incident light illumination, which ensure optimum illumination of the materials to be tested
- As standard, the OLM range is fitted with a trinocular eyepiece tube
- A simple polarising unit (analyser and polariser) is included with delivery
- The compact design of the OLM 170 allows the user easier and more flexible handling, so that this model can also be considered for mobile use
- A large mechanical stage is included with delivery as standard. The coarse and fine focusing knob on both sides guarantees optimal adjustment and focusing
- Further options such as, for example, a large selection of objectives can be integrated as accessories
- A dust cover as well as user instructions are included with the delivery
- Please find detailed information in the following model outfit list

Scope of application

- Metallurgy, material testing, quality assurance

Applications/Samples

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

Technical data

- Infinity optical system
- Quintuple nosepiece
- Siedentopf 30° inclined
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 271×379×747 mm
- Net weight approx. 12,5 kg

STANDARD



OLM-171 OLM-170

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

NEW New model

Metallurgical inverted microscope KERN OLM-1

Model outfit	Model KERN		Order number	Price/piece excl. of VAT ex works €	
	OLM 170	OLM 171			
Eyepieces (23,2 mm)	HWF 10×/∅ 20 mm (adjustable)	✓		OBB-A1404	105,-
	WF 10×/∅ 20 mm (reticule 0,1 mm) (adjustable)	✓		OBB-A1532	24,-
Eyepieces (30 mm)	HWF 10×/∅ 22 mm (adjustable)		✓	OBB-A1491	100,-
	HWF 10×/∅ 22 mm (reticule 0,1 mm) (adjustable)		✓	OBB-A1523	155,-
Infinity Plan achromatic objectives for long working distance	5×/0,13 W.D. 16,04 mm	✓	✓	OBB-A1525	135,-
	10×/0,25 W.D. 18,48 mm	✓	✓	OBB-A1526	200,-
	20×/0,40 W.D. 8,35 mm	✓	✓	OBB-A1527	265,-
	50×/0,70 (spring-loaded) W.D. 1,95 mm	✓	✓	OBB-A1528	350,-
	80×/0,80 (spring-loaded) W.D. 0,85 mm	○	○	OBB-A1530	520,-
	100×/0,85 (dry) W.D. 3,00 mm	○	○	OBB-A1623	1260,-
Trinocular tube	<ul style="list-style-type: none"> • Butterfly 45° inclined • Interpupillary distance 48-76 mm • Light distribution 20:80 • Diopter adjustment: One-sided 	✓			
Trinocular tube	<ul style="list-style-type: none"> • Siedentopf 30° inclined • Interpupillary distance 48-76 mm • Light distribution 100:0 • Diopter adjustment: Both-sided 		✓		
Mechanical stage	<ul style="list-style-type: none"> • Stage size B×T 155×180 mm • Travel 75×40 mm • Coaxial coarse and fine focusing knobs 	✓			
Mechanical stage	<ul style="list-style-type: none"> • Stage size W×D 210×180 mm • Travel 50×50 mm • Coaxial coarse and fine focusing knobs 		✓		
Illumination	5 W LED spare bulb (incident)	✓		OBB-A1589	90,-
Illumination	50 W Halogen spare bulb (incident)		✓	OBB-A1207	25,-
Reflected illumination unit	Polarising unit (Incl. analyser, polariser and colour filter slide)	✓	✓		
Colour filters for transmitted illumination	Blue		✓	OBB-A1510	25,-
	Green		○	OBB-A1511	25,-
	Yellow		○	OBB-A1512	25,-
	Grey	✓	○	OBB-A1513	25,-
C-Mount	0,5× (built-in)	✓			
	0,5×		○	OBB-A1515	200,-
	1×		○	OBB-A1514	130,-

✓ = Included with delivery

○ = Option

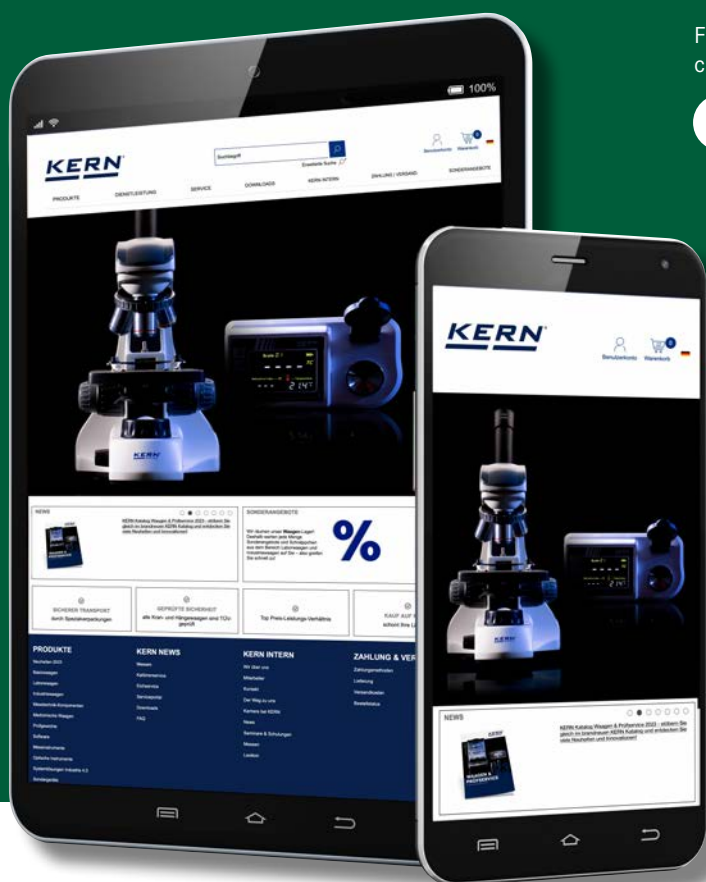
KERN & SOHN – The wide range of product champion that is situated in the Swabian Alb

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