

METALLURGICAL MICROSCOPES

PROFESSIONAL MEASURING



KERN Pictograms

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

Abbreviations

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

KERN Models A – Z

OAB-L _____	110-111
OBE-12 · OBE-13 _____	16
OBE-S _____	67
OBL-12 · OBL-13 _____	16
OBL-14 · OBL-15 _____	18
OBL-S · OBN-S _____	68
OBN-13 · OBN-15 _____	20
OBN-14 _____	22
OBS-1 _____	10
OBT-1 _____	12
OCM-1 _____	24
ODC-2 _____	89
ODC-82 · ODC-83 · ODC-84 _____	86
ODC-85 · ODC-86 _____	87
ODC-87 · ODC-88 · ODC-89 _____	88
OIV-2 _____	64
OIV-3 _____	63
OIV-6 _____	65
OKM-1 _____	27
OKO-1 _____	29
OLM-1 _____	31
OPO-1 _____	34
ORA _____	94-100
ORL-B _____	107
ORM _____	101-106
OSE-4 · OZL-9 · OZM-9 _____	73
OSE-42 _____	38
OSF-4G _____	40
OXM-9 _____	90
OZB-H _____	82
OZB-IR _____	84
OZB-M _____	75-79
OZB-UE _____	81
OZB-UP _____	80
OZG-4 _____	58
OZL-44 _____	42
OZL-45 _____	48
OZL-45R _____	50
OZL-46 _____	44
OZL-47 _____	46
OZL-S _____	69
OZM-5 _____	52
OZM-9 _____	72
OZM-S · OZP-S _____	70
OZP-5 _____	54
OZS-5 _____	56
OXM-9 (Software OXM 901 · OXM 902) _____	90

KERN Customer Consultants

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

UK, IE, IS, FR, Maghreb, BE, LUX



Maren Möwert
Tel. +49 7433 9933 - 132
Mobil +49 151 46143240
maren.moewert@kern-sohn.com

Technical sales KERN Optics



Ralf Gutbrod
Tel. +49 7433 9933-306
optics@kern-sohn.com

DK, SE, FI, NO, PL, LV, LT, EE



Mark Hauder
Tel. +49 7433 9933 - 310
Mobil +49 160 3378426
mark.hauder@kern-sohn.com

Category Manager KERN Optics



Nicole Lebherz
Tel. +49 7433 9933-201
optics@kern-sohn.com

GR, CY, BG, HU, RO, SK, CZ, AL,
Ex-Yugoslavia, GUS



Ariana Sevcenco
Tel. +49 7433 9933 - 203
Mobil +49 151 72434692
ariana.sevcenco@kern-sohn.com

Sales & Marketing Manager



Stephan Ade
Tel. +49 7433 9933-121
Mobil +49 171 3060086
ade@kern-sohn.com

North America, Near- & Middle East,
Africa, Asia, Oceania, TR



Corinna Matthes
Tel. +49 7433 9933 - 215
Mobil +49 151 44568364
corinna.matthes@kern-sohn.com

KERN Hotlines

Technical questions about our products?

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



Service Hotline

→ 199

for general technical questions about your KERN product

Optical Devices

→ 777

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

Laboratory and Analytical Balances

→ 444

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

SAUTER Measuring Instruments

→ 555

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

System Solutions Industry 4.0

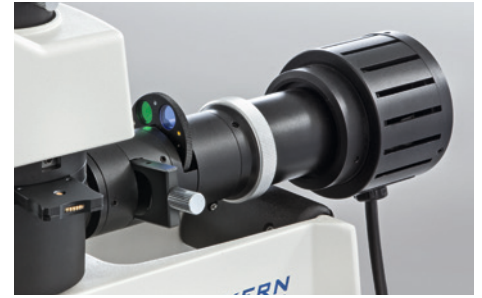
→ 200

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

Calibration and Verification Service

→ 196

for any questions concerning our calibration and verification service



Illumination unit with filter disc



Stage and objectives

2

Lab Line MET

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

Features

- The KERN OKM is an excellent metallurgical reflected light microscope, e.g. for surface quality testing of raw materials and finished products in industry
- The strong, continuously dimmable 5 W LED incident illumination unit 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×	5 W LED (incident)	2220,-

Model outfit	Model KERN		Order number	Price/piece excl. of VAT ex works €
	OKM 173			
2 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 	✓		
Reflected illumination unit	5-filter unit (Blue, Green, Yellow, Grey, Empty)	✓		
	Polarising unit (Incl. analyser and polariser slide)	✓		
C-Mount	1×	○	OBB-A1514	130,-
	0,5× (focus adjustable)	○	OBB-A1515	200,-

✓ = Included with delivery

○ = Option



Stage OKO



Illumination unit

Professional Line MET

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

Features

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

- A large selection of accessories, such as, for example, eyepieces and further objectives are available for longer working distances
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- A C-Mount adapter is required to connect a camera. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

Scope of application

- Metallurgy, material testing, quality assurance

Applications/Samples

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

Technical data

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

STANDARD



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

Model outfit		Model KERN		Order number	Price/piece excl. of VAT ex works €
		OKO 178			
Eyepieces (30 mm)	HWF 10×/∅ 22 mm (adjustable)	✓		OBB-A1491	100,-
	HWF 10×/∅ 22 mm (reticule 0,1 mm) (adjustable)	✓		OBB-A1523	155,-
Infinity Plan Semi Apochromatic objectives for long working distance	5×/0,15 W.D. 21,0 mm	✓		OBB-A1619	180,-
	10×/0,3 W.D. 20,0 mm	✓		OBB-A1620	275,-
	20×/0,40 W.D. 15,0 mm	✓		OBB-A1621	335,-
	50×/0,75 W.D. 4,25 mm	✓		OBB-A1641	480,-
	100×/0,85 (dry) W.D. 3,00 mm	○		OBB-A1623	1260,-
Infinity Plan objectives for long working distance	80×/0,80 (spring-loaded) W.D. 0,85 mm	○		OBB-A1530	520,-
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)	✓			
Illumination polarising unit	5 W LED spare bulb (incident)	✓		OBB-A1589	90,-
Polariser	For transmitted illumination	✓		OBB-A1470	150,-
Colour filters for transmitted illumination	Blue	✓		OBB-A1170	25,-
	Green	○		OBB-A1188	25,-
	Yellow	○		OBB-A1165	25,-
	Grey	○		OBB-A1183	25,-
C-Mount	1×	○		OBB-A1514	130,-
	0,75×	○		OBB-A1590	200,-
	0,5× (focus adjustable)	○		OBB-A1515	200,-

✓ = Included with delivery

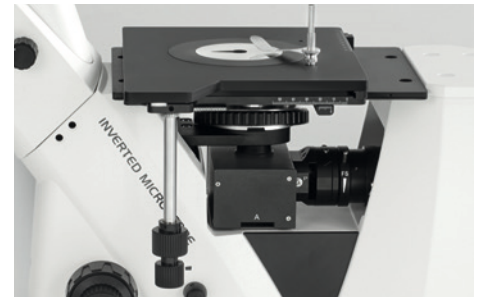
○ = Option



OLM 171



OLM 170



Specimen stage and illumination unit (OLM 171)



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

Scope of application

- Metallurgy, material testing, quality assurance

Applications/Samples

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

Technical data

- Infinity optical system

OLM 170

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

OLM 171

- 5-fold lens revolving unit
- Siedentopf 30° inclined
- Diopter adjustment: both-sided
- Overall dimensions W×D×H 271×379×747 mm
- Net weight approx. 12,5 kg

STANDARD



Model	Standard configuration					Price excl. of VAT ex works €
	Tube	Eyepiece	Objective quality	Objectives	Illumination	
KERN						
OLM 170	Trinocular	HWF 10×/ø 20 mm	Infinity Plan	LWD5×/LWD10×/ LWD20×/LWD50×	5W LED (incident)	3000,-
OLM 171	Trinocular	HWF 10×/ø 22 mm	Semi Apochromatic		50W Halogen (incident)	4200,-

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	✓		OBB-A1404	105,-
	WF 10×/∅ 20 mm (reticule 0,1 mm) (adjustable)	✓		OBB-A1532	26,-
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,-
Infinity Plan Semi Apochromatic objectives for long working distance	5x / 0,15 W.D. 21 mm		✓	OBB-A1619	1260,-
	10x / 0,30 W.D. 20 mm		✓	OBB-A1620	
	20x / 0,40 W.D. 15 mm	○	✓	OBB-A1621	
	50x / 0,55 W.D. 10 mm		✓	OBB-A1622	
	100×/0,85 (dry) W.D. 3,00 mm		○	OBB-A1623	
Trinocular tube	<ul style="list-style-type: none"> • Butterfly 45° inclined • Interpupillary distance 48-76 mm • Light distribution 20:80 • Diopter adjustment: One-sided 	✓			
	<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 	✓			
	<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 GmbH

Balances, Test Weights, Microscopes,
DAkkS Calibration Laboratory
Ziegelei 1
72336 Balingen
Germany
Tel. +49 7433 9933-0
info@kern-sohn.com
www.kern-sohn.com

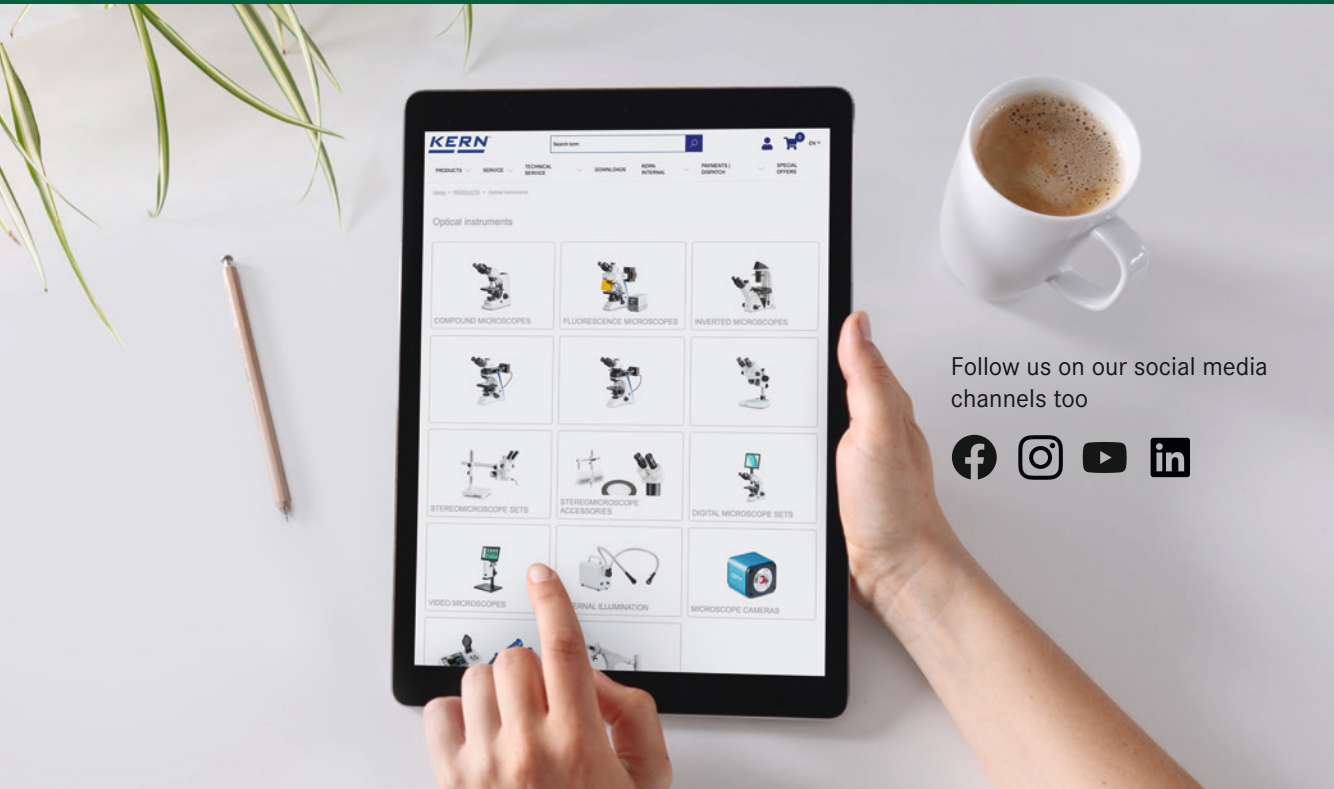
**The oldest Precision Balance
Factory in Germany**

180 YEARS
since 1844
KERN & SOHN

Discover the multifaceted World of Balances, Microscopes and Measuring Technology from KERN online: www.kern-sohn.com



- Full KERN & SAUTER Product Range
- Convenient 24/7 Ordering
- Selection of more than 5,000 Items across Weighing and Measuring Technology, Optical Instruments as well as Accessories and Services
- Extensive Information and useful Download Options
- Technical Product Data Sheets
- Operating Instructions
- Descriptive Image and Video Material
- Useful KERN Services
- Technical Glossary
- KERN Dealer Portal
- Practical Filter and Search Functions



Follow us on our social media channels too



Printed in Germany by KERN & SOHN GmbH
z-co-en-kr-2024 1

