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METALLURGICAL MICROSCOPES



Illumination unit with filter disc



Stage and objectives

Lab Line MET

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

Features

- The KERN OKM is an excellent metallurgical reflected light microscope, e.g. for surface quality testing of raw materials and finished products in industry
- The strong, continuously dimmable 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

KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination
OKM 173	Trinocular	HWF 10×/ø 18 mm	Infinity Plan	5×/10×/ LWD 20×/ LWD50×	5 W LED (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×/0,66 (spring-loaded) W.D. 0,45 mm	○	OBB-A1258
Infinity Plan achromatic objectives for long working distance	5×/0,13 W.D. 24,23 mm	✓	OBB-A1525
	10×/0,25 W.D. 18,48 mm	✓	OBB-A1526
	20×/0,40 W.D. 8,35 mm	✓	OBB-A1527
	40×/0,65 W.D. 3,90 mm	○	OBB-A1259
	50×/0,75 (spring-loaded) W.D. 1,95 mm	✓	OBB-A1528
	80×/0,80 (spring-loaded) W.D. 0,85 mm	○	OBB-A1271
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
	0,5× (focus adjustable)	○	OBB-A1515

✓ = Included with delivery

○ = Option



Revolving stage with glass plate



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

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

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 Semi Apochromatic objectives for long working distance	5×/0,15 W.D. 21,0 mm	✓	OBB-A1619
	10×/0,3 W.D. 20,0 mm	✓	OBB-A1620
	20×/0,40 W.D. 15,0 mm	✓	OBB-A1621
	50×/0,75 W.D. 4,25 mm	✓	OBB-A1641
	100×/0,85 (dry) W.D. 3,00 mm	○	OBB-A1623
Infinity Plan objectives for long working distance	80×/0,80 (spring-loaded) W.D. 0,85 mm	○	OBB-A1530
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
Koehler illumination	5 W LED spare bulb (transmitted)	✓	
Illumination polarising unit	5 W LED spare bulb (incident)	✓	OBB-A1589
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

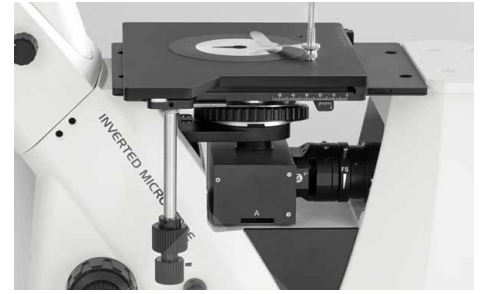
○ = Option



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 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



OLM 171 OLM 170

OLM 171 OLM 170

Model	Standard configuration				
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination
OLM 170	Trinocular	HWF 10×/φ 20 mm	Infinity Plan	LWD5×/LWD10×/ LWD20×/LWD50×	5W LED (incident)
OLM 171	Trinocular	HWF 10×/φ 22 mm	Semi Apochromatic		50W Halogen (incident)

Model outfit		Model KERN		Order number
		OLM 170	OLM 171	
Eyepieces (23,2 mm)	HWF 10×/∅ 20 mm	✓		OBB-A1404
	WF 10×/∅ 20 mm (reticule 0,1 mm) (adjustable)	✓		OBB-A1352
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
Infinity Plan Semi Apochromatic objectives for long working distance	5×/0,15 W.D. 21 mm		✓	OBB-A1619
	10×/0,30 W.D. 20 mm		✓	OBB-A1620
	20×/0,40 W.D. 15 mm	○	✓	OBB-A1621
	50×/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
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× (built-in)	✓		
	0,5×		○	OBB-A1515
	1×		○	OBB-A1514

✓ = Included with delivery

○ = Option