

Metallurgical microscopes KERN OKO-1



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

































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

Metallurgical microscopes KERN OKO-1

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
Infinity Plan objectives for long working distance	80×/0,80 (spring-loaded) W.D. 0,85 mm	○	OBB-A1530
	100×/0,85 (dry) W.D. 3,00 mm	○	OBB-A1623
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)	✓	OBB-A1589
Illumination polarising unit	5 W LED spare bulb (incident)	✓	OBB-A1470
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

- 
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
- 
WiFi 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 \times eyepiece)
- W.D.** Working Distance
- WF** Wide Field (Field number up to \varnothing 22 mm for 10 \times eyepiece)