

Metallurgical microscopes KERN OKO-1



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



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

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Model outfit		Model KERN	Order number	
		OKO 178		
Eyepieces (30 mm)	HWF 10×/ø 22 mm (adjustable)	✓	OBB-A 1491	
	HWF 10×/ø 22 mm (reticule 0,1 mm) (adjustable)	✓	OBB-A 1523	
Infinity Plan objectives for long working distance	5×/0,13 W.D. 16,04 mm	✓	OBB-A 1525	
	10×/0,25 W.D. 18,48 mm	✓	OBB-A 1526	
	20×/0,40 W.D. 8,35 mm	✓	OBB-A 1527	
	50×/0,70 (spring-loaded) W.D. 1,95 mm	✓	OBB-A 1528	
	80×/0,80 (spring-loaded) W.D. 0,85 mm	○	OBB-A 1530	
	100×/0,85 (dry) W.D. 3,00 mm	○	OBB-A 1531	
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-A 1380	
Koehler illumination	5 W LED spare bulb (transmitted)	✓	OBB-A 1589	
Illumination polarising unit	5 W LED spare bulb (incident)			
Polariser	for transmitted illumination	✓	OBB-A 1470	
Colour filters for transmitted illumination	Blue	✓	OBB-A 1170	
	Green	○	OBB-A 1188	
	Yellow	○	OBB-A 1165	
	Grey	○	OBB-A 1183	
C-Mount	1×	○	OBB-A 1514	
	0,75×	○	OBB-A 1590	
	0,5× (focus adjustable)	○	OBB-A 1515	

✓ = Included with delivery

○ = Option

Pictograms

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

Abbreviations

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

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