# KERN

## 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

STANDARI	)							
Q		$\Delta$	Ð		$\mathbf{\infty}$	hunn		
360°	TRINO	ABBE	LED	POLAR	INFINITY	SCALE	230 V	1 DAY

Model	Standard configuration					
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)	



# Metallurgical microscopes KERN OKO-1

Model outfit		Model KERN	Order number	
		ОКО 178		
Eyepieces	HWF 10×/Ø 22 mm (adjustable)	✓	OBB-A1491	
(30 mm)	HWF 10×/Ø 22 mm (reticule 0,1 mm) (adjustable)	✓	OBB-A1523	
	5×/0,13 W.D. 16,04 mm	✓	OBB-A1525	
	10×/0,25 W.D. 18,48 mm	✓	OBB-A1526	
Infinity Plan objectives	20×/0,40 W.D. 8,35 mm	✓	OBB-A1527	
for long working distance	50×/0,70 (spring-loaded) W.D. 1,95 mm	✓	OBB-A1528	
uistance	80×/0,80 (spring-loaded) W.D. 0,85 mm	0	OBB-A1530	
	100×/0,85 (dry) W.D. 3,00 mm	0	OBB-A1531	
Trinocular tube	<ul> <li>Siedentopf 30° inclined/360° rotatable</li> <li>Interpupillary distance 48 – 76 mm</li> <li>Light distribution 100:0</li> </ul>	*		
Mechanical stage for transmitted illumination	<ul> <li>Stage size W×D 182×140 mm</li> <li>Travel 77×52 mm</li> <li>Coaxial coarse and fine focusing knobs</li> </ul>	*		
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	
	Blue	✓	OBB-A1170	
Colour filters	Green	0	OBB-A1188	
for transmitted illumination	Yellow	0	OBB-A1165	
	Grey	0	OBB-A1183	
<b>0 M</b> = 1	1×	0	OBB-A1514	
C-Mount	0,75×	0	OBB-A1590	
	0,5× (focus adjustable)	0	OBB-A1515	

 $\checkmark$  = Included with delivery

O = Option

# **KERN OPTICS CATALOGUE 2021**



360° rotatable Q microscope head



360°

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 100W 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

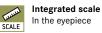


PARALLEL

Zoom magnification For stereomicroscopes



Parallel optical system For stereomicroscopes, enables fatigue-proof working



SD card For data storage



÷

USB 3.0

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



1 DAY

Package shipment

Power supply

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	LWD	Long Working Distance	SWF	Super Wide Field (Field number at least Ø 23 mm for 10× 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 Ø 22 mm for 10× eyepiece)

Your KERN specialist dealer:





WLAN data interface For transmitting of the picture to a mobile display device

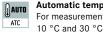
HDMI

devic

HDMI digital camera For direct transmitting of the picture to a display

o I
SOFTWARE
JOI THAILE

PC software To transfer the measurements from the device to a PC



Automatic temperature compesation For measurements between

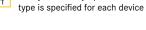


Protection against dust and water splashes IPxx

The type of protection is shown by the pictogram

BATT

**Battery operation** ..... Ready for battery operation. The battery





Battery operation rechargeable Prepared for a rechargeable battery



Mains adapter 230V/50Hz in standard version for EU.

On request GB, AUS or USA version

Integrated in microscope. 230V/50Hz

-6 230 V

