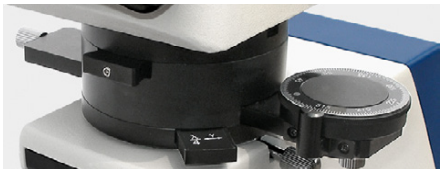
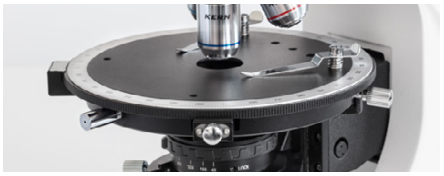
Polarising Microscopes KERN OPO-1



Bertrand lens, λ Slip, 360° rotatable analyser (removable)



Center-adjustable and turnable polarisation stage

"Swing-Out" condenser

Professional Line POL

The flexible and powerful polarising microscope for all professional applications with reflected and transmitted light

Features

- This device is a professional, fully-equipped polarising microscope, which uses the polarisation of light to analyse minerals, crystals and isotropic materials
- The KERN OKO 185 is a combi variant of LED incident illumination and LED transmitted illumination. A height-adjustable 0.9/0.13 Swing-out Abbe condenser which can be centred for complete Köhler illumination are part of the standard version
- A 360° revolving stage with 1° division, 6' fine division and locking function is integrated into all series as standard
- As standard all series are fitted with a complete polarising unit with scale, a Bertrand lens, a λ + ¼ λ Slip as well as a quartz wedge
- A large selection of accessories such as, for example, a mechanical stage attachment as well as further objectives for a long working distance and filter units 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. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

Scope of application

- Mineralogy, texture observations, material testing, observation of crystals

Applications/Samples

- More complex samples with polarising properties

Technical data

- Infinity optical system
- Quintuple nosepiece
- Siedentopf 30° inclined
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 500×200×500 mm
- Net weight approx. 14,5 kg

STANDARD

TRINO ABBE LED POLAR INFINITY SCALE 230 V 1 DAY

Model	Standard configuration				
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination
OPO 185	Trinocular	HWF 10×/⌀ 20 mm	Infinity Plan	Non-stress 4×/10×/20×/40×/50×	5W LED (incident + transmitted)

Model outfit		Model KERN	Order number
		OPO 185	
Eyepieces (23,2 mm)	HWF 10×/20 mm	✓	OBB-A1591
	HWF 10×/20 mm (reticule 0,1 mm) (adjustable)	✓	OBB-A1592
Non-stress Infinity Plan objectives (transmitted)	4×/0,10 W.D. 12,1 mm	✓	OBB-A1294
	10×/0,25 W.D. 4,64 mm	✓	OBB-A1289
	20×/0,40 (spring-loaded) W.D. 2,41 mm	✓	OBB-A1290
	40×/0,66 (spring-loaded) W.D. 0,65 mm	✓	OBB-A1292
Non-stress Infinity Plan objectives (incident) for long working distance	5×/0,13 W.D. 16,04 mm	○	OBB-A1593
	10×/0,25 W.D. 18,48 mm	○	OBB-A1594
	20×/0,40 W.D. 8,35 mm	○	OBB-A1291
	Semi apochromatic 50×/0,75 W.D. 4,25 mm	✓	OBB-A1642
	100×/0,85 (dry) (spring-loaded) W.D. 3,00 mm	○	OBB-A1595
Trinocular tube	• Siedentopf 30° inclined • Interpupillary distance 48 – 76 mm • Light distribution 100:0	✓	
Analyser unit with scale	360° rotatable, lockable	✓	
Bertrand lens	Insertable, center-adjustable	✓	OBB-A1121
λ + ¼ λ Slip	λ Slip and ¼ λ Slip (combination)	✓	OBB-A1316
Quartz wedge	I – IV Class	✓	OBB-A1321
Revolving round stage	360° rotatable, center-adjustable, division 1°, Vernier division 6'	✓	
Polarising attached mechanical stage	Polarising attached mechanical stage	○	OBB-A1337
Swing-out condenser	N.A. 0,9/0,13 swing-out achromatic condenser (aperture diaphragm)	✓	OBB-A1107
Polarising unit with scale (transmitted)	360° rotatable, lockable	✓	
Koehler illumination	5 W LED spare bulb (transmitted)	✓	OBB-A1589
Illumination polarising unit	5 W LED spare bulb (incident)		
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 interface
For data transmission

USB 3.0 interface
For data transmission

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 measure-mentsfrom the device to a PC.

Automatic temperature compesation
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.

Pallet 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 Ø 23 mm for 10× eyepiece)
W.D.	Working Distance
WF	Wide Field (Field number up to Ø 22 mm for 10× eyepiece)