





EDUCATIONAL LINE MET

The compact inverted metallurgical microscope for details with large workpieces

Features

- The inverted series KERN OLE and KERN OLF

 stand out through their design which is
 compact, stable and ergonomic
- The strong, continuously dimmable 3 W LED reflected illumination guarantees a permanent optimum illumination of the materials being tested
- A mechanical stage with additional plate (opening Ø 10 mm and Ø 20 mm) is included with delivery as standard. The coarse and fine focusing knob on both sides guarantees optimal adjustment and focusing
- Colour filters (blue, green and grey) are included with delivery

- A large selection of eyepieces, stage inserts and objectives for a larger working distance are available as accessories
- A protective dust cover, eye cups, as well as multi-lingual user instructions are included in the scope of delivery
- Please find detailed information in the following model outfit list

Scope of application

Training, metallurgy, material testing, quality assurance

Applications/Samples

 Inverted opaque or translucent samples, workpieces (surfaces, fold lines, coatings), inverted viewing

Technical data

- · Finite optical system (DIN)
- · Quadplex nosepiece
- Tube 45° inclined
- Diopter adjustment: One-sided (for binocular models)
- Overall dimensions W×D×H 340×190×330 mm
- · Net weight basic configuration approx. 7 kg

STANDARD













Model	Standard configuration						
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination		
OLE 161	Monocular	WF 10×/Ø 18 mm	Plan	10×/20×/40×	3 W LED (incident)	•	
OLF 162	Binocular	WF 10×/Ø 18 mm	Plan	10^/20^/40^	3 W LED (incident)	0	



Model outfit		Mode	I KERN	Order number	
		OLE 161	OLF 162		
Eyepieces (23,2 mm)	WF 10×/ø 18 mm	✓	11	OBB-A1347	
	WF 12,5×/Ø14 mm	0	00	OBB-A1353	
	WF 16×/ø 13 mm	0	00	OBB-A1354	
(==,=,	WF 5×/ø 20 mm	0	00	OBB-A1355	
	WF 10×/Ø 18 mm (reticule 0,1 mm) (non-adjustable)	0	00	OBB-A1349	
	10×/0,25 W.D. 8,87 mm	✓	✓	OBB-A1246	
	20×/0,35 (spring) W.D. 1,6 mm	✓	✓	OBB-A1253	
Plan achromatic objectives	40×/0,65 W.D. 0,72 mm	✓	✓	OBB-A1261	
,	100×/1,25 (spring) (oil) W.D. 0,69 mm	0	0	OBB-A1242	
	5×/0,10 W.D. 14,5 mm	0	0	OBB-A1265	
Plan achromatic	40×/0,60 W.D. 3,64 mm	0	0	OBB-A1262	
objectives for long working	50×/0,70 W.D. 3,01 mm	0	0	OBB-A1267	
distance	80×/0,80 (spring) W.D. 1,08 mm	0	0	OBB-A1272	
Monocular tube	45° inclined	✓		OBB-A1228	
Binocular tube	Siedentopf 45° inclined Diopter adjustment: One-sided		✓	OBB-A1128	
Mechanical stage	Stage size W×D 180×180 mm Travel 50×40 mm	✓	✓		
	1 (opening Ø 10 mm)	✓	✓	OBB-A1322	
Extra stage plate	2 (opening Ø 20 mm)	✓	✓	OBB-A1323	
	3 (opening Ø 40 mm)	0	0	OBB-A1324	
Illumination	3 W LED illumination system (incident)	✓	✓		
Colour filters	Blue	✓	✓	OBB-A1174	
for transmitted illumination	Green	✓	✓	OBB-A1190	
	Gray	✓	✓	OBB-A1184	

✓ = Included with delivery

O = Option

KERN Pictograms:

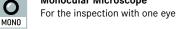




360° rotatable microscope head









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 3W 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



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



WLAN 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 compesation

For measurements between

10 °C and 30 °C



Protection against dust and water

splashes IPxx

The type of protection is shown by the pictogram.



Battery operation

Ready for battery operation. The battery type is specified for each device.



Battery operation rechargable

Prepared for a rechargable battery operation



Mains adapter

230V/50Hz in standard version for EU. On request GB, AUS or USA version.



1 DAY

Power supply

Integrated in balance. 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)

N.A.

LWD

Long Working Distance

Numerical Aperture

SLR Kamera Single-Lens Reflex camera

SWF

Super Wide Field

(Field number at least Ø 23 mm for 10× eyepiece)

Working Distance W.D.

WF

Wide Field (Field number up to Ø 22 mm for 10× eyepiece)

Your KERN specialist dealer: