Metallurgical inverted microscopes KERN OLE-1 · OLF-1





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 charts.

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
- 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 | | | | | | OPTION | |
|----------|------|-----|-----------|-------|----------------|--------|--|
| 0 | 00 | Ð | E | | 3 YEARS | Lunu | |
| MONO | BINO | LED | 230 V | 1 DAY | WARRANTY | SCALE | |

| Model | Standard configuration | | | | | |
|---------|------------------------|----------------|-------------------|------------------|--------------------|--|
| | | | | | | |
| | Tube | Eyepiece | Objective quality | Objectives | Illumination | |
| KERN | | | | | | |
| 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) | |

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| Model outfit | | Mode | I KERN | Order number | |
|-----------------------------------|---|---------|---------|--------------|------------|
| | | OLE 161 | OLF 162 | | |
| | WF 10×/Ø 18 mm | ¥ | 44 | OBB-A1347 | |
| | WF 12,5×/Ø14 mm | 0 | 00 | OBB-A1353 | |
| Eyepieces (23,2 mm) | WF 16×/Ø 13 mm | 0 | 00 | OBB-A1354 | |
| (20)2) | WF 5×/Ø 20 mm | 0 | 00 | OBB-A1355 | |
| | WF 10×/Ø 18 mm (reticule 0,1 mm) (non-adjustable) | 0 | 00 | OBB-A1349 | |
| | Plan 10×/0,25 | ✓ | ✓ | OBB-A1246 | |
| | Plan 20×/0,35 (spring) | ✓ | * | OBB-A1253 | |
| Plan achromatic objectives | Plan 40×/0,65 (spring) | ✓ | ✓ | OBB-A1261 | |
| 0.5,001100 | Plan 100×/1,25 (spring) (oil) | 0 | 0 | OBB-A1242 | |
| | Plan 4×/0,10 | 0 | 0 | OBB-A1265 | |
| Plan achromatic | PL L 40×/0,60 W.D. 3,64 mm | 0 | 0 | OBB-A1262 | |
| objectives for long working | PL L 50×/0,70 W.D. 3,01 mm | 0 | 0 | OBB-A1267 | |
| distance | PL L 80×/0,80 (spring) W.D. 1,08 mm | 0 | 0 | OBB-A1272 | |
| Monocular tube | 45° inclined | 1 | | OBB-A1228 | |
| Binocular tube | 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 filtoro | Blue | ✓ | ✓ | OBB-A1174 | |
| Colour filters for transmitted | Green | ✓ | ✓ | OBB-A1190 | |
| illumination | Gray | 1 | 4 | OBB-A1184 | |
| | Z = Included with delivery | | | | O = Option |

 \checkmark = Included with delivery

O = Option

KERN Pictograms:



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



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HAL

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

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) |



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





Polarising unit To polarise the light

Infinity system

illumination





Zoom magnification For stereomicroscopes



Parallel optical system For stereomicroscopes, enables fatigue-proof working

Infinity corrected optical system



Integrated scale In the eyepiece

HDMI digital camera

SLR Kamera Single-Lens Reflex camera

display device



USB 2.0

......

HDMI

LWD

N.A.

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

For direct transmitting of the picture to a



Integrated USB 3.0 digital camera For direct transmitting of the picture to a PC



SD card For data storage

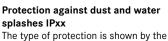


PC software To transfer the measurements from the device to a PC.



Automatic temperature compesation For measurements between 10 °C and 30 °C





pictogram. **Battery operation**



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



Battery operation rechargable Prepared for a rechargable battery



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



Power supply

pictogram.

operation

Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.

On request GB, AUS or USA version.

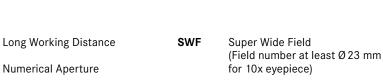


Package shipment The time required to manufacture the

product internally is shown in days in the pictogram. Warrantv

The warranty period is shown in the

3YEARS WARRANTY



WF

| W.D. Working Distance | e |
|-----------------------|---|
|-----------------------|---|

Wide Field (Field number up to Ø22 mm for 10x eyepiece)

Your KERN specialist dealer:

