



**EDUCATIONAL LINE MET**

The robust inverted metallurgical model for your training establishment or workshops

**Features**

- The KERN OLE and OLF are very easy to use, stable, inverted metallurgical microscopes.
- They are suitable for all common routine applications in training establishments or workshops and produce impressive images.
- Available as mono- or binocular models with a variety of eyepieces.
- These microscopes are equipped with plan achromatic objectives as standard.
- A nosepiece for up to 4 objectives and a large stage are also provided as standard.

- The following optional accessories are available: LWD-objectives for a long working distance as well as various stage inlays and more.
- A powerful 3W LED is available as illumination source.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

**Technical data**

- Eyepieces: WF 10x18 mm
- Objectives: 10x / 20x / 40x
- Overall dimensions WxDxH 240x170x311 mm
- Net weight basic configuration approx. 7 kg

Please find detailed information in the following charts.

STANDARD

MONO  
 BINO  
 LED  
 230 V  
 1 DAY  
 3 YEARS WARRANTY

OPTION

SCALE

Model	Standard configuration		
	Optical system	Tube	Illumination
<b>KERN</b>			
<b>OLE 161</b>	Achromatic	Monocular	3W LED (reflecting)
<b>OLF 162</b>	Achromatic	Binocular	3W LED (reflecting)

Model outfit		Model KERN		Order number	
		OLE 161	OLF 162		
Eyepieces	WF 10x / Ø 18 mm	●	●●	OBB-A1347	
	WF 12,5x / Ø14 mm	○	○○	OBB-A1353	
	WF 16x / Ø 13 mm	○	○○	OBB-A1354	
	WF 5x / Ø 20 mm	○	○○	OBB-A1355	
	WF 10x / Ø 18 mm (reticule 0,1 mm) (non-adjustable)	○	○○	OBB-A1349	
Plan achromatic objectives	Plan 10x / 0,25	●	●	OBB-A1246	
	Plan 20x / 0,35 (spring)	●	●	OBB-A1253	
	Plan 40x / 0,65 (spring)	●	●	OBB-A1261	
	Plan 100x / 1,25 (spring) (oil)	○	○	OBB-A1242	
	Plan 4x / 0,10	○	○	OBB-A1265	
Infinity Plan achromatic objectives for LWD	PL L 40x / 0,60 W.D. 3,64 mm	○	○	OBB-A1262	
	PL L 50x / 0,70 W.D. 3,01 mm	○	○	OBB-A1267	
	PL L 80x / 0,80 (spring) W.D. 1,08 mm	○	○	OBB-A1272	
Monocular tube	45° inclined	●		OBB-A1228	
Binocular tube	· 45° inclined · With diopter adjustment (one-sided)		●	OBB-A1128	
Nosepiece	Quadplex	●	●		
Mechanical stage	· Stage size: WxD 180x180 mm · Travel: 50x40 mm	●	●		
Extra stage plate	1 (opening Ø 10 mm)	●	●	OBB-A1322	
	2 (opening Ø 20 mm)	●	●	OBB-A1323	
	3 (opening Ø 40 mm)	○	○	OBB-A1324	
Illumination	3W LED illumination system (reflecting)	●	●		
Filter	Blue	●	●	OBB-A1174	
	Green	●	●	OBB-A1190	
	Grey	●	●	OBB-A1184	
Stage micrometer	Specimen slide with scale 0,01 mm	○	○	OBB-A1224	

● = Standard configuration

○ = Option

 360°	<b>360° rotatable microscope head</b>	 FL-HB0	<b>Fluorescence illumination for compound microscopes</b> With 100 W mercury lamp and filter	 AUTO ATC	<b>Automatic temperature compensation</b> For measurements between 10 °C and 30 °C
 MONO	<b>Monocular Microscope</b> For the inspection with one eye	 FL-LED	<b>Fluorescence illumination for compound microscopes</b> With 3 W LED illumination and filter	 IP	<b>Protection against dust and water splashes IPxx</b> The type of protection is shown by the pictogram.
 BINO	<b>Binocular Microscope</b> For the inspection with both eyes	 PH	<b>Phase contrast unit</b> For a higher contrast	 BATT	<b>Battery operation</b> Ready for battery operation. The battery type is specified for each device.
 TRINO	<b>Trinocular Microscope</b> For the inspection with both eyes and the additional option for the connection of a camera	 POLAR	<b>Polarising unit</b> To polarise the light	 ACCU	<b>Rechargeable battery pack</b> Rechargeable set.
 ABBE	<b>Abbe Condenser</b> With high numerical aperture for the concentration and the focusing of light	 INFINITY	<b>Infinity system</b> Infinity corrected optical system	 230 V	<b>Mains adapter</b> 230V/50Hz in standard version for EU. On request GB, AUS or USA version.
 HAL	<b>Halogen illumination</b> For pictures bright and rich in contrast	 ZOOM	<b>Zoom magnification</b> For stereomicroscopes	 230 V	<b>Power supply</b> Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.
 LED	<b>LED illumination</b> Cold, energy saving and especially long-life illumination	 PARALLEL	<b>Parallel optical system</b> For stereomicroscopes, enables fatigue-proof working	 DAYS	<b>Package shipment</b> The time required to manufacture the product internally is shown in days in the pictogram.
 IL	<b>Incident illumination</b> For non-transparent objects	 SCALE	<b>Integrated scale</b> In the eyepiece	 3 YEARS WARRANTY	<b>Warranty</b> The warranty period is shown in the pictogram.
 TL	<b>Transmitting illumination</b> For transparent objects	 USB 2.0	<b>Integrated USB 2.0 digital camera</b> For direct transmitting of the picture to a PC		
 FL	<b>Fluorescence illumination</b> For stereomicroscopes	 USB 3.0	<b>Integrated USB 3.0 digital camera</b> For direct transmitting of the picture to a PC		

## Abbreviations

<b>C-Mount</b>	Adapter for the connection of a camera to a trinocular microscope	<b>N.A.</b>	Numerical Aperture	<b>W.D.</b>	Working Distance
<b>H(S)WF</b>	High (Super) Wide Field (Eyepiece with high eye point for wearers of glasses)	<b>SLR Kamera</b>	Single-Lens Reflex camera	<b>WF</b>	Wide Field (Field number up to Ø 22 mm for 10x eyepiece)
<b>LWD</b>	Long Working Distance	<b>SWF</b>	Super Wide Field (Field number at least Ø 23 mm for 10x eyepiece)		

## Your KERN specialist dealer: