



Objectives OBS

**EDUCATIONAL LINE**

The school microscope – For the first steps in microscopy and for use in biology lessons

**Features**

- The KERN OBS range is a solid and simple school microscope range, which is easy to use due to its intuitive control elements
- The continuously dimmable 0.5W LED guarantees optimum illumination of the samples and also ensures long service life. Mobile use is also no problem through the use of rechargeable batteries
- The simple 0.65 condenser lens with rotating aperture diaphragm disc on the OBS 101 ensures the very best concentration of light and illumination of the sample. The OBS 104 and OBS 106 models have a 1.25 Abbe condenser which is height-adjustable and can therefore be focussed and has an aperture diaphragm, which ensures the very best concentration of light
- To focus the object, all models have a coarse and fine focusing knob on both sides. The mechanical stage enables you to work with the samples and move them rapidly (only for OBS 106)
- A large selection of different eyepieces and objectives is also available
- Please find detailed information in the following model outfit list

**Scope of application**

- Primary school, secondary school, training, hobby use

**Applications/Samples**

- Translucent, thin, high-contrast, less complex samples (e.g. plant tissue, coloured cells/parasites)

**Technical data**

- Finite optical system (DIN)
- Triple (OBS 101) or quadplex (OBS 104, OBS 106) nosepiece
- Tube 45° (OBS 101) or 30° (OBS 104, OBS 106) inclined/360° rotatable
- Diopter adjustment: Both-sided (for binocular models)
- Overall dimensions W×D×H 130×300×310 mm
- Net weight approx. 3 kg

STANDARD



OBS 104  
OBS 106

Model	Standard configuration					
	Tube	Eyepiece	Objective quality	Objectives	Illumination	Stage
<b>OBS 101</b>	Monocular	WF 10×/φ 18 mm	Achromatic	4×/10×/40×	0,5W LED (transmitted) (battery incl., rechargeable)	fix
<b>OBS 104</b>	Binocular	WF 10×/φ 18 mm	Achromatic		0,5W LED (transmitted) (battery incl., rechargeable)	fix
<b>OBS 106</b>	Binocular	WF 10×/φ 18 mm	Achromatic		0,5W LED (transmitted) (battery incl., rechargeable)	mechanical

↓ Price reduction

Model outfit		Model KERN			Order number	
		OBS 101	OBS 104	OBS 106		
<b>Eyepieces</b> (23,2 mm)	WF 10×/∅ 18 mm	✓	✓✓	✓✓	OBB-A1473	
	WF 16×/∅ 13 mm	○	○○	○○	OBB-A1474	
	WF 20×/∅ 11 mm	○	○○	○○	OBB-A1475	
<b>Achromatic objectives</b>	4×/0,10 W.D. 18,0 mm	✓	✓	✓	OBB-A1476	
	10×/0,25 W.D. 7,0 mm	✓	✓	✓	OBB-A1477	
	40×/0,65 (spring) W.D. 0,53 mm	✓	✓	✓	OBB-A1478	
	60×/0,85 (spring) W.D. 0,1 mm	○	○	○	OBB-A1479	
	100×/1,25 (oil) (spring) W.D. 0,07 mm	○	○	○	OBB-A1480	
	E-Plan 100×/0,80 (dry) (spring) W.D. 0,15 mm	○	○	○	OBB-A1442	
	Plan 100×/1,0 (water) (spring) W.D. 0,18 mm	○	○	○	OBB-A1441	
<b>Monocular tube</b>	45° inclined/360° rotatable	✓			OBB-A1471	
<b>Binocular tube</b>	<ul style="list-style-type: none"> <li>• 30° inclined/360° rotatable</li> <li>• Interpupillary distance 55-75 mm</li> <li>• Diopter adjustment: Both-sided</li> </ul>		✓	✓	OBB-A1472	
<b>Fixed stage</b>	<ul style="list-style-type: none"> <li>• Stage size W×D 110×120 mm</li> <li>• Coaxial coarse and fine focusing knobs, scale: 2,5 µm</li> </ul>	✓	✓			
<b>Mechanical stage</b>	<ul style="list-style-type: none"> <li>• Stage size W×D 115×125 mm</li> <li>• Travel 75×18 mm</li> <li>• Coaxial coarse and fine focusing knobs, scale: 2,5 µm</li> </ul>			✓		
<b>Condenser</b>	Simple condenser N.A. 0,65	✓				
	Abbe N.A. 1,25 (aperture diaphragm)		✓	✓		
<b>Illumination</b>	0,5 W LED illumination system (transmitted) (rechargeable)	✓	✓	✓		
<b>Colour filters</b> for transmitted illumination	Blue	✓	✓	✓	OBB-A1466	
	Green	○	○	○	OBB-A1467	
	Yellow	○	○	○	OBB-A1468	
	Gray	○	○	○	OBB-A1184	

✓ = Included with delivery

○ = Option

 <b>360°</b>	<b>360° rotatable microscope head</b>	 <b>FL-LED</b>	<b>Fluorescence illumination for compound microscopes</b> With 3 W LED illumination and filter	 <b>WLAN</b>	<b>WLAN data interface:</b> For transmitting of the picture to a mobile display device
 <b>MONO</b>	<b>Monocular Microscope</b> For the inspection with one eye	 <b>PH</b>	<b>Phase contrast unit</b> For a higher contrast	 <b>HDMI</b>	<b>HDMI digital camera</b> For direct transmitting of the picture to a display device
 <b>BINO</b>	<b>Binocular Microscope</b> For the inspection with both eyes	 <b>DF</b>	<b>Darkfield condenser/unit</b> For a higher contrast due to indirect illumination	 <b>SOFTWARE</b>	<b>PC software</b> To transfer the measurements from the device to a PC.
 <b>TRINO</b>	<b>Trinocular Microscope</b> For the inspection with both eyes and the additional option for the connection of a camera	 <b>POLAR</b>	<b>Polarising unit</b> To polarise the light	 <b>AUTO ATC</b>	<b>Automatic temperature compensation</b> For measurements between 10 °C and 30 °C
 <b>ABBE</b>	<b>Abbe Condenser</b> With high numerical aperture for the concentration and the focusing of light	 <b>INFINITY</b>	<b>Infinity system</b> Infinity corrected optical system	 <b>IP</b>	<b>Protection against dust and water splashes IPxx</b> The type of protection is shown by the pictogram.
 <b>HAL</b>	<b>Halogen illumination</b> For pictures bright and rich in contrast	 <b>ZOOM</b>	<b>Zoom magnification</b> For stereomicroscopes	 <b>BATT</b>	<b>Battery operation</b> Ready for battery operation. The battery type is specified for each device.
 <b>LED</b>	<b>LED illumination</b> Cold, energy saving and especially long-life illumination	 <b>PARALLEL</b>	<b>Parallel optical system</b> For stereomicroscopes, enables fatigue-proof working	 <b>RECHARGE</b>	<b>Battery operation rechargeable</b> Prepared for a rechargeable battery operation
 <b>IL</b>	<b>Incident illumination</b> For non-transparent objects	 <b>SCALE</b>	<b>Integrated scale</b> In the eyepiece	 <b>230 V</b>	<b>Mains adapter</b> 230V/50Hz in standard version for EU. On request GB, AUS or USA version.
 <b>TL</b>	<b>Transmitting illumination</b> For transparent objects	 <b>SD</b>	<b>SD card</b> For data storage	 <b>230 V</b>	<b>Power supply</b> Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.
 <b>FL</b>	<b>Fluorescence illumination</b> For stereomicroscopes	 <b>USB 2.0</b>	<b>USB 2.0 digital camera</b> For direct transmitting of the picture to a PC	 <b>1 DAY</b>	<b>Package shipment</b> The time required to manufacture the product internally is shown in days in the pictogram.
 <b>FL-HBO</b>	<b>Fluorescence illumination for compound microscopes</b> With 100 W mercury lamp and filter	 <b>USB 3.0</b>	<b>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>LWD</b> Long Working Distance	<b>SWF</b> Super Wide Field (Field number at least $\varnothing$ 23 mm for 10 $\times$ eyepiece)
<b>FPS</b> Frames per second	<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 $\varnothing$ 22 mm for 10 $\times$ eyepiece)

## Your KERN specialist dealer: