



Mounted phase contrast condenser



Simple PH condenser with 40× PH slide

**LAB LINE**

High-quality phase contrast microscope – specially pre-configured with a series of options for flexible expansion

**Features**

- We have developed this series specially for general applications with phase contrast method. In addition, the stable, modular construction system of the OBL series offers many more options
- Depending on the application, there is a choice of models with strong, infinitely dimmable 3W LED or 20W halogen illumination (Philips)
- A special fixed, pre-centred phase contrast condenser as well as field diaphragm give you a simplified Koehler illumination and thereby a powerful phase-contrast display of your sample
- The large mechanical stage and its specimen holder holds up to two samples at the same time and is quick and easy to focus using a coaxial coarse and fine focusing knob on both sides
- A large selection of eyepieces, objectives and colour filters, a simple polarising unit as well as further phase contrast units are available to you as accessories
- 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 to the trinocular version. You can select this adapter from the following model outfit list
- Please find detailed information in the following model outfit list

**Scope of application**

- Haematology, urology, gynaecology, dermatology, pathology, microbiology and parasitology, immunology, Sewage treatment plants, Oncology, entomology, vets, water analysis and breweries

**Applications/Samples**

- Specially for extremely translucent, thin, low-contrast, challenging samples (e.g. living mammal cells, bacteria, tissue) with phase contrast

**Technical data**

- Infinity optical system
- Quadplex nosepiece
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment: One-sided
- Overall dimensions W×D×H 395×200×380 mm
- Net weight approx. 6,7 kg

STANDARD



OPTION



Model	Standard configuration				
	Tube	Eyepiece	Objective quality	Objectives	Illumination
<b>KERN OBL 145</b>	Binocular	HWF 10×/ø 20 mm	Infinity E-Plan/Plan	4×/PH10×/PH40×/100×	20 W Halogen (transmitted)
<b>OBL 146</b> <small>NEW</small>	Binocular	HWF 10×/ø 20 mm	Infinity E-Plan/Plan		3 W LED (transmitted)
<b>OBL 155</b>	Trinocular	HWF 10×/ø 20 mm	Infinity E-Plan/Plan		20 W Halogen (transmitted)
<b>OBL 156</b> <small>NEW</small>	Trinocular	HWF 10×/ø 20 mm	Infinity E-Plan/Plan		3 W LED (transmitted)

NEW New model

Phase contrast microscopes KERN OBL-14 · 15

Model outfit		Model KERN				Order number	
		OBL 145	OBL 155	OBL 146	OBL 156		
Eyepieces (23,2 mm)	HWF 10×/∅ 20 mm	✓✓	✓✓	✓✓	✓✓	OBB-A1404	
	WF 16×/∅ 13 mm	○○	○○	○○	○○	OBB-A1354	
	HWF 10×/∅ 20 mm (with Pointer)	○	○	○	○	OBB-A1448	
Infinity E-Plan objectives	4×/0,10 W.D. 12,1 mm	✓	✓	✓	✓	OBB-A1161	
	10×/0,25 W.D. 2,1 mm	○	○	○	○	OBB-A1159	
	40×/0,65 (spring-loaded) W.D. 0,58 mm	○	○	○	○	OBB-A1160	
	100×/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	✓	✓	OBB-A1158	
	Plan 20×/0,40 (spring-loaded) W.D. 2,41 mm	○	○	○	○	OBB-A1250	
	Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm	○	○	○	○	OBB-A1270	
	Plan 100×/1,15 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	○	OBB-A1437	
<b>Binocular tube</b>	<ul style="list-style-type: none"> <li>• Butterfly 30° inclined/360° rotatable</li> <li>• Interpupillary distance 50 – 75 mm (for infinity system)</li> <li>• Diopter adjustment: One-sided</li> </ul>	✓	○	✓	○	OBB-A1578	
<b>Trinocular tube</b>	<ul style="list-style-type: none"> <li>• Butterfly 30° inclined/360° rotatable</li> <li>• Interpupillary distance 50 – 75 mm</li> <li>• Light distribution 20:80 (for infinity system)</li> <li>• Diopter adjustment: One-sided</li> </ul>	○	✓	○	✓	OBB-A1582	
<b>Mechanical stage</b>	<ul style="list-style-type: none"> <li>• Stage size W×D 145×130 mm</li> <li>• Travel 76×52 mm</li> <li>• Coaxial coarse and fine focusing knobs, scale: 2 µm</li> <li>• Two slide holder</li> </ul>	✓	✓	✓	✓		
<b>PH condenser</b>	Abbe N.A. 1,25 precentered, for bright field and phase contrast	✓	✓	✓	✓	OBB-A1398	
<b>Phase contrast units</b>	Infinity PH-Plan objective 10×	✓	✓	✓	✓	OBB-A1390	
	Infinity PH-Plan objective 20×	○	○	○	○	OBB-A1391	
	Infinity PH-Plan objective 40×	✓	✓	✓	✓	OBB-A1392	
	Infinity PH-Plan objective 100×	○	○	○	○	OBB-A1393	
	PH slide 10×	✓	✓	✓	✓	OBB-A1399	
	PH slide 20×	○	○	○	○	OBB-A1400	
	PH slide 40×	✓	✓	✓	✓	OBB-A1401	
	PH slide 100×	○	○	○	○	OBB-A1402	
	Centering eyepiece	✓	✓	✓	✓		
<b>Darkfield condenser</b>	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	○	○	OBB-A1422	
<b>Illumination</b>	20 W Halogen spare bulb (transmitted)	✓	✓			OBB-A1370	
	3 W LED illumination system (transmitted) (non-rechargeable)			✓	✓		
<b>Colour filters for transmitted illumination</b>	Blue (built-in)	✓	✓	✓	✓		
	Green	✓	✓	✓	✓	OBB-A1188	
	Yellow	○	○	○	○	OBB-A1165	
	Grey	○	○	○	○	OBB-A1183	
<b>C-Mount</b>	0,5× (focus adjustable)		○		○	OBB-A1515	
	1×		○		○	OBB-A1514	

For further optional accessories, please see the list of items for the OBL-12 and OBL-13 series from page 19

✓ = Included with delivery

○ = Option

## Pictograms

<b>360° rotatable microscope head</b>	<b>Fluorescence illumination for compound microscopes</b> With 3 W LED illumination and filter	<b>USB 3.0 digital camera</b> For direct transmitting of the picture to a PC
<b>Monocular Microscope</b> For the inspection with one eye	<b>Phase contrast unit</b> For a higher contrast	<b>WLAN data interface</b> For transmitting of the picture to a mobile display device
<b>Binocular Microscope</b> For the inspection with both eyes	<b>Darkfield condenser/unit</b> For a higher contrast due to indirect illumination	<b>HDMI digital camera</b> For direct transmitting of the picture to a display device
<b>Trinocular Microscope</b> For the inspection with both eyes and the additional option for the connection of a camera	<b>Polarising unit</b> To polarise the light	<b>PC software</b> To transfer the measurements from the device to a PC
<b>Abbe Condenser</b> With high numerical aperture for the concentration and the focusing of light	<b>Infinity system</b> Infinity corrected optical system	<b>Automatic temperature compensation</b> For measurements between 10 °C and 30 °C
<b>Halogen illumination</b> For pictures bright and rich in contrast	<b>Zoom magnification</b> For stereomicroscopes	<b>Protection against dust and water splashes IPxx:</b> The type of protection is shown in the pictogram cf. DIN EN 60529:2000-09, IEC 60529:1989+A1:1999+A2:2013
<b>LED illumination</b> Cold, energy-saving and especially long-life illumination	<b>Auto-focus</b> For automatic control of the focus level	<b>Battery operation</b> Ready for battery operation. The battery type is specified for each device.
<b>Incident illumination</b> For non-transparent objects	<b>Parallel optical system</b> For stereomicroscopes, enables fatigue-proof working	<b>Battery operation rechargeable</b> Prepared for a rechargeable battery operation
<b>Transmitting illumination</b> For transparent objects	<b>Integrated scale</b> In the eyepiece	<b>Plug-in power supply</b> 230V/50Hz in standard version for EU. On request GB, AUS or USA version.
<b>Fluorescence illumination for stereomicroscopes</b>	<b>SD card</b> For data storage	<b>Integrated power supply unit</b> Integrated in microscope. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.
<b>Fluorescence illumination for compound microscopes</b> With 100 W mercury lamp and filter	<b>USB 2.0 digital camera</b> For direct transmitting of the picture to a PC	<b>Package shipment</b> The time required to manufacture the product internally is shown in days in the pictogram.

## 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 camera</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:**