

## Compound microscope KERN OBT-1



### Note

Please request special conditions for a classroom set



Monocular version



Objectives OBT

### EDUCATIONAL LINE

The modern compound microscope for teaching in your classroom

#### Features

- The KERN OBT range is a high-quality school microscope, which will impress you with its intuitive control elements, sturdy construction and modern design
- The infinitely dimmable 1W LED guarantees optimum illumination of the samples and also ensures long service life. Mobile use is also no problem through optional battery operation
- The simple 0.65 condenser lens with adjustable aperture diaphragm on the OBT 101 ensures the very best concentration of light and illumination of the sample. The OBT 102, 103, 104, 105, 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 accurately, all models have a coarse and fine focusing knob on both sides. The mechanical angle table enables you to work with the samples and move them rapidly (for OBT 103, 104, 105, 106 models)
- A large selection of different eyepieces and objectives is also available
- A dust cover as well as user instructions are included with the delivery
- 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 (OBT 101) or quadplex (OBT 102, 103, 104, 105, 106) nosepiece
- Tube 45° inclined/360° rotatable
- Diopter adjustment: Both-sided (for binocular models)
- Overall dimensions W×D×H 195×147×325 mm
- Net weight approx. 2,5 kg

#### STANDARD



not OBT 101

#### OPTION



#### Model

Standard configuration






























KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	Stage
OBT 101	Monocular	HWF 10×/ø 18 mm	Achromatic	4×/10×/40×	1W LED (transmitted)	fix
OBT 102	Monocular	HWF 10×/ø 18 mm	Achromatic		1W LED (transmitted)	fix
OBT 103	Monocular	HWF 10×/ø 18 mm	Achromatic	4×/10×/40×/100×	1W LED (transmitted)	mechanical
OBT 104	Binocular	HWF 10×/ø 18 mm	Achromatic		1W LED (transmitted)	mechanical
OBT 105	Monocular	HWF 10×/ø 18 mm	Achromatic		1W LED (transmitted)	mechanical
OBT 106	Binocular	HWF 10×/ø 18 mm	Achromatic		1W LED (transmitted)	mechanical

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Model outfit	Model KERN						Order number	
	OBT 101	OBT 102	OBT 103	OBT 104	OBT 105	OBT 106		
<b>Eyepieces</b> (23,2 mm)	WF 10×/∅ 18 mm	✓	✓	✓	✓✓	✓	✓✓	OBB-A3200
	WF 10×/∅ 18 mm (with Pointer)	○	○	○	○	○	○	OBB-A3201
	WF 10×/∅ 18 mm (reticule 0,1 mm)	○	○	○	○	○	○	OBB-A3202
<b>Achromatic objectives</b>	4×/0,10 W.D. 27 mm	✓	✓	✓	✓	✓	✓	OBB-A3203
	10×/0,25 W.D. 7 mm	✓	✓	✓	✓	✓	✓	OBB-A3204
	40×/0,65 (spring-loaded) W.D. 0,6 mm	✓	✓	✓	✓	✓	✓	OBB-A3205
	100×/1,25 (oil) (spring-loaded) W.D. 0,2 mm	○	○	○	○	✓	✓	OBB-A3207
	60×/0,85 (spring-loaded) W.D. 0,4 mm	○	○	○	○	○	○	OBB-A3206
<b>Monocular tube</b>	45° inclined/360° rotatable	✓	✓	✓	○	✓	○	OBB-A3221
<b>Binocular tube</b>	<ul style="list-style-type: none"> <li>Siedentopf 45° inclined/360° rotatable</li> <li>Interpupillary distance 48–75 mm</li> <li>Dioptr adjustment: One-sided</li> </ul>	○	○	○	✓	○	✓	OBB-A3222
<b>Fixed stage</b>	<ul style="list-style-type: none"> <li>Stage size W×D 115×110 mm</li> <li>Coaxial coarse and fine focusing knobs, scale: 2 µm</li> </ul>	✓	✓					
<b>Mechanical stage</b>	<ul style="list-style-type: none"> <li>Stage size W×D 115×110 mm</li> <li>Travel 52×20 mm</li> <li>Coaxial coarse and fine focusing knobs, scale: 2 µm</li> <li>One slide holder</li> </ul>			✓	✓	✓	✓	
<b>Condenser</b>	Simple condenser N.A. 0,65	✓						
	Abbe N.A. 1,25 (aperture diaphragm)		✓	✓	✓	✓	✓	
<b>Illumination</b>	1 W LED spare bulb (transmitted)	✓	✓	✓	✓	✓	✓	OBB-A3208
<b>Colour filters</b> for transmitted illumination	Blue	○	○	○	○	○	○	OBB-A3212
	Green	○	○	○	○	○	○	OBB-A3210
	Yellow	○	○	○	○	○	○	OBB-A3211
	Grey	○	○	○	○	○	○	OBB-A3209

✓ = Included with delivery

○ = Option

- 
**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
- 
**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 100 W mercury lamp and filter
- 
**Fluorescence illumination for compound microscopes**  
 With 3 W 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
- 
**Auto-focus**  
 For automatic control of the focus level
- 
**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
- 
**WiFi 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 compensation**  
 For measurements between 10 °C and 30 °C
- 
**Protection against dust and water splashes IPxx:**  
 The type of protection is shown in the pictogram cf. DIN EN 60529:2000-09, IEC 60529:1989+A1:1999+A2:2013
- 
**Battery operation**  
 Ready for battery operation. The battery type is specified for each device.
- 
**Battery operation rechargeable**  
 Prepared for a rechargeable battery operation
- 
**Plug-in power supply**  
 230V/50Hz in standard version for EU. On request GB, AUS or USA version.
- 
**Integrated power supply unit**  
 Integrated in microscope. 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)
- LWD** Long Working Distance
- N.A.** Numerical Aperture
- SLR camera** Single-Lens Reflex camera
- SWF** Super Wide Field (Field number at least  $\varnothing$  23 mm for 10 $\times$  eyepiece)
- W.D.** Working Distance
- WF** Wide Field (Field number up to  $\varnothing$  22 mm for 10 $\times$  eyepiece)