

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	
	360°
	MONO
	BINO
	ABBE
	LED
	230 V
	BATT
	SCALE

not
OBT 101

OPTION	
	BATT
	SCALE

Model

Standard configuration

KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	Stage
OBT 101	Monocular	HWF 10×/Ø 18 mm	Achromatic		1W LED (transmitted)	fix
OBT 102	Monocular	HWF 10×/Ø 18 mm	Achromatic	4×/10×/40×	1W LED (transmitted)	fix
OBT 103	Monocular	HWF 10×/Ø 18 mm	Achromatic		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	4×/10×/40×/100×	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	
Eyepieces (23,2 mm)	WF 10×/Ø 18 mm	✓	✓	✓	✓✓	✓	✓✓ OBB-A3200
	WF 10×/Ø 18 mm (with Pointer)	○	○	○	○	○	○ OBB-A3201
	WF 10×/Ø 18 mm (reticule 0,1 mm)	○	○	○	○	○	○ OBB-A3202
Achromatic objectives	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
Monocular tube	60×/0,85 (spring-loaded) W.D. 0,4 mm	○	○	○	○	○	○ OBB-A3206
	45° inclined/360° rotatable	✓	✓	✓	○	✓	○ OBB-A3221
Binocular tube	• Siedentopf 45° inclined/360° rotatable	○	○	○	✓	○	✓ OBB-A3222
	• Interpupillary distance 48-75 mm						
	• Diopter adjustment: One-sided						
Fixed stage	• Stage size W×D 115×110 mm	✓					
	• Coaxial coarse and fine focusing knobs, scale: 2 µm						
Mechanical stage	• Stage size W×D 115×110 mm						
	• Travel 52×20 mm						
	• Coaxial coarse and fine focusing knobs, scale: 2 µm						
	• One slide holder						
Condenser	Simple condenser N.A. 0,65	✓					
	Abbe N.A. 1,25 (aperture diaphragm)	✓	✓	✓	✓	✓	
Illumination	1 W LED spare bulb (transmitted)	✓	✓	✓	✓	✓	OBB-A3208
Colour filters for transmitted illumination	Blue	○	○	○	○	○	OBB-A3212
	Green	○	○	○	○	○	OBB-A3210
	Yellow	○	○	○	○	○	OBB-A3211
	Grey	○	○	○	○	○	OBB-A3209

✓ = Included with delivery

○ = Option

 360° rotatable microscope head	 Infinity system Infinity corrected optical system	 Battery operation Ready for battery operation. The battery type is specified for each device.
 Monocular Microscope For the inspection with one eye	 Zoom magnification For stereomicroscopes	 Battery operation rechargeable Prepared for a rechargeable battery operation
 Binocular Microscope For the inspection with both eyes	 Auto-focus For automatic control of the focus level	 Plug-in power supply 230V/50Hz in standard version for EU. On request GB, AUS or USA version.
 Trinocular Microscope For the inspection with both eyes and the additional option for the connection of a camera	 Parallel optical system For stereomicroscopes, enables fatigue-proof working	 Integrated power supply unit Integrated in microscope. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.
 Abbe Condenser With high numerical aperture for the concentration and the focusing of light	 Integrated scale In the eyepiece	 Package shipment The time required to manufacture the product internally is shown in days in the pictogram.
 Halogen illumination For pictures bright and rich in contrast	 SD card For data storage	 1 DAY
 LED illumination Cold, energy-saving and especially long-life illumination	 USB 2.0 digital camera For direct transmitting of the picture to a PC	
 Incident illumination For non-transparent objects	 USB 3.0 digital camera For direct transmitting of the picture to a PC	
 Transmitting illumination For transparent objects	 WIFI data interface: For transmitting of the picture to a mobile display device	
 Fluorescence illumination For stereomicroscopes	 HDMI digital camera For direct transmitting of the picture to a display device	
 Fluorescence illumination for compound microscopes With 100 W mercury lamp and filter	 PC software To transfer the measurements from the device to a PC.	
 Fluorescence illumination for compound microscopes With 3 W LED illumination and filter	 Automatic temperature compensation For measurements between 10 °C and 30 °C	
 Phase contrast unit For a higher contrast	 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	
 Darkfield condenser/unit For a higher contrast due to indirect illumination		
 Polarising unit To polarise the light		

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 ϕ 23 mm for 10 \times eyepiece)
W.D.	Working Distance
WF	Wide Field (Field number up to ϕ 22 mm for 10 \times eyepiece)