



OBT 231



Monocular version



Binocular version



LCD display ODC 231

Educational Line

The modern compound microscope for teaching in your class room

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, 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 OBT 103, 104, 105, 106)

- A large selection of different eyepieces and objectives is also available
- KERN OBT 231: Digital kit with LCD display for viewing samples, USB dual power supply for microscopes and displays, software for measurements as well as a USB interface and micro SD card slot for documenting recordings
- KERN ODC 231: LCD display, can be retrofitted on all models of the OBT range, see model fittings table
- 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

Applications/Samples

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

Technical data

- Finite optical system DIN
- OBT 101: 3-fold lens revolving unit, OBT 102, 103, 104, 105, 106, OBT 231: 4-fold lens revolving unit
- OBT-1: Tube 45° inclined/360° rotatable
- Diopter adjustment, one-sided (for binocular models)
- Overall dimensions W×D×H
OBT-1: 195×147×325 mm
OBT-2: 182×195×360 mm
- Net weight
OBT-1: approx. 2,8 kg
OBT-2: approx. 3,0 kg

STANDARD



OPTION



nicht OBT 101

Model **Tube** **Eyepiece** **Objective quality** **Objectives** **Illumination** **Stage**

KERN

OBT 101	Monocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	1 W LED (transmitted)	fix
OBT 102	Monocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	1 W LED (transmitted)	fix
OBT 103	Monocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	1 W LED (transmitted)	mechanical
OBT 104	Binocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x	1 W LED (transmitted)	mechanical
OBT 105	Monocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x / 100x	1 W LED (transmitted)	mechanical
OBT 106	Binocular	WF 10x/Ø 18 mm	achromatic	4x / 10x / 40x / 100x	1 W LED (transmitted)	mechanical
OBT 231	LCD Display	-	achromatic	4x / 10x / 40x / 100x	1 W LED (transmitted)	mechanical

Note: Please request special conditions for a classroom set

Model outfit	Model KERN							Order number
	OBT 101	OBT 102	OBT 103	OBT 104	OBT 105	OBT 106	OBT 231	
Eyepieces (23,2 mm)	WF 10x/Ø 18 mm	✓	✓	✓	✓✓	✓	✓✓	OBB-A3200
	WF 10x/Ø 18 mm (with Pointer)	○	○	○	○	○	○	OBB-A3201
	WF 10x/Ø 18 mm (reticule 0,1 mm)	○	○	○	○	○	○	OBB-A3202
Achromatic objectives	4x/0,1 W.D. 27 mm	✓	✓	✓	✓	✓	✓	OBB-A3203
	10x/0,25 W.D. 7 mm	✓	✓	✓	✓	✓	✓	OBB-A3204
	40x/0,65 (spring-loaded) W.D. 0,6 mm	✓	✓	✓	✓	✓	✓	OBB-A3205
	100x/1,25 (oil) (spring-loaded) W.D. 0,2 mm	○	○	○	○	✓	✓	OBB-A3207
Monocular tube	45° inclined/360° revolving	✓	✓	✓	○	✓	○	OBB-A3221
Binocular tube	· Siedentopf 45° inclined/360° rotatable · Interpupillary distance 48 mm – 75 mm · Diopter adjustment one-sided	○	○	○	✓	○	✓	OBB-A3222
Tube with LCD display	· Tablet camera 2 MP · CMOS 1/2,8“ · USB 2.0	○	○	○	○	○	✓	ODC 231
Fixed stage	· Stage size B×T 115×110 mm · Coaxial coarse and fine focusing knobs, scale: 2 µm	✓	✓					
Mechanical stage	· Stage size B×T 115×110 mm · Travel 52×20 mm · Coaxial coarse and fine focusing knobs, scale: 2 µm · Holder for one slide			✓	✓	✓	✓	✓
Condenser	Simple condenser N.A. 0,65	✓						OBB-A3223
	Abbe N.A. 1,25 (aperture diaphragm)		✓	✓	✓	✓	✓	OBB-A3224
Colour filters for transmitted illumination	Blue	○	○	○	○	○	○	OBB-A3212
	Green	○	○	○	○	○	○	OBB-A3210
	Yellow	○	○	○	○	○	○	OBB-A3211
	Grey	○	○	○	○	○	○	OBB-A3209

✓ = included with the delivery

○ = Option

Further accessories and spare parts
see *internet*

KERN Pictograms

 360° rotatable microscope head	 Fluorescence illumination For stereomicroscopes	 SD card For data storage	 Plug-in power supply 230V/50Hz in standard version for EU. On request GB, AUS or USA version.
 Monocular Microscope For the inspection with one eye	 Fluorescence illumination Either with a 100 W high-pressure vapour lamp or a 5 W LED fluorescent unit	 Data interface USB To connect the measuring instrument to a printer, PC or other peripheral devices	 Integrated power supply unit Integrated in microscope. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.
 Binocular Microscope For the inspection with both eyes	 Phase contrast unit For a higher contrast	 WIFI data interface To transfer data to a printer, PC or other peripherals	
 Trinocular Microscope For the inspection with both eyes and the additional option for the connection of a camera	 Darkfield condenser / unit For a higher contrast due to indirect illumination	 HDMI digital camera For direct transmitting of the picture to a display device	 Package shipment The time required to manufacture the product internally is shown in days in the pictogram.
 Abbe Condenser With high numerical aperture for the concentration and the focusing of light	 Polarising unit To polarise the light	 PC software To transfer the measurements from the device to a PC.	 Pallet 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	 Infinity system Infinity corrected optical system	 Automatic temperature compensation For measurements between 10 °C and 30 °C	
 LED illumination Cold, energy-saving and especially long-life illumination	 Zoom magnification For stereomicroscopes	 Protection against dust and water splashes IPxx: The type of protection is shown in the pictogram	
 LED illumination Special LED with a wavelength of $\lambda = 589$ nm (yellow light)	 Auto-focus For automatic control of the focus level	 Battery operation Ready for battery operation. The battery type is specified for each device.	
 Incident illumination For non-transparent objects	 Parallel optical system For stereomicroscopes, enables fatigue-proof working	 Rechargeable battery pack Rechargeable set	
 Transmitting illumination For transparent objects	 Integrated scale In the eyepiece		

Abbreviations

C-Mount	Adapter for the connection of a camera to a trinocular microscope	SWF	Super Wide Field (Field number at least \varnothing 23 mm for 10x eyepiece)
FPS	Frames per second	W.D.	Working Distance
H(S)WF	High (Super) Wide Field (Eyepiece with high eye point for wearers of glasses)	WF	Wide Field (Field number up to \varnothing 22 mm for 10x eyepiece)
LWD	Long Working Distance		
N.A.	Numerical Aperture		