Compound microscopes KERN OBE-12 ·13

Note

Please request special conditions for a classroom set

Monocular version

Trinocular version

Butterfly tube

EDUCATIONAL LINE

Elegant, dynamic and impressive – the new all-round compound microscope for schools, training and laboratories

Features

- The brand new OBE-12/13 range stands out through its exclusive, dynamic device, which is second to none in terms of sturdy construction and ergonomics. The clever storage compartment on the back will enables quick practical storage for your power cable. Thanks to the USB connection technology, it is also possible to supply power using an external powerbank
- The impressive, infinitely dimmable 3 W LED guarantees bright illumination of your sample
- A further highlight is the Butterfly tube which is integrated as standard and which enables you to achieve the ideal viewing angle. The height-adjustable and thereby focusable 1.25 Abbe condenser with aperture diaphragm is a further quality feature of the OBE range and guarantees the very best concentration of light
- Height adjustment of the fully-equipped mechnical stage is carried out using a coarse and fine focusing knob on both sides. The ergonomically designed coaxial drive enables you to work with the samples and move them rapidly
- A large selection of different eyepieces and objectives 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 the 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

- Training, haematology, sediment investigation, doctor's practise

Applications/Samples

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

Technical data

- Finite optical system
- Quadplex nosepiece
- Butterfly 30° inclined
- Diopter adjustment: One-sided (for binocular and trinocular models)
- Overall dimensions W×D×H 360×150×320 mm
- Net weight approx. 4,6 kg

STANDARD: MONO, BINO, TRINO, ABBE, LED, 230 V, 1 DAY

OPTION: DF, SCALE

Model	Standard configuration				
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination
OBE 121	Monocular	HWF 10×/ø 18 mm	Achromatic	4×/10×/40×	3W LED (transmitted)
OBE 122	Binocular	HWF 10×/ø 18 mm	Achromatic		3W LED (transmitted)
OBE 124	Trinocular	HWF 10×/ø 18 mm	Achromatic		3W LED (transmitted)
OBE 131	Monocular	HWF 10×/ø 18 mm	Achromatic	4×/10×/40×/100×	3W LED (transmitted)
OBE 132	Binocular	HWF 10×/ø 18 mm	Achromatic		3W LED (transmitted)
OBE 134	Trinocular	HWF 10×/ø 18 mm	Achromatic		3W LED (transmitted)

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Model outfit		Model KERN						Order number
		OBE 121	OBE 122	OBE 124	OBE 131	OBE 132	OBE 134	
Eyepieces (23,2 mm)	HWF 10×/⌀ 18 mm	✓	✓✓	✓✓	✓	✓✓	✓✓	OBB-A1403
	WF 16×/⌀ 13 mm	○	○○	○○	○	○○	○○	OBB-A1354
	HWF 10×/⌀ 18 mm (with pointer)	○	○	○	○	○	○	OBB-A1348
	HWF 10×/⌀ 18 mm (reticule 0,1 mm) (non-adjustable)	○	○	○	○	○	○	OBB-A1349
Achromatic objectives	4×/0,10 W.D. 18,6 mm	✓	✓	✓	✓	✓	✓	OBB-A1111
	10×/0,25 W.D. 6,5 mm	✓	✓	✓	✓	✓	✓	OBB-A1108
	40×/0,65 (spring-loaded) W.D. 0,47 mm	✓	✓	✓	✓	✓	✓	OBB-A1112
	100×/1,25 (oil) (spring-loaded) W.D. 0,07 mm	○	○	○	✓	✓	✓	OBB-A1109
	20×/0,40 (spring-loaded) W.D. 1,75 mm	○	○	○	○	○	○	OBB-A1110
	60×/0,85 (spring-loaded) W.D. 0,1 mm	○	○	○	○	○	○	OBB-A1113
	E-Plan 100×/0,80 (dry) (spring-loaded) W.D. 0,15 mm	○	○	○	○	○	○	OBB-A1442
	Plan 100×/1,0 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	○	○	○	OBB-A1441
Monocular tube	30° inclined	✓			✓			
Binocular tube	· Butterfly 30° inclined · Interpupillary distance 48 – 75 mm · Diopter adjustment: One-sided		✓			✓		
Trinocular tube	· see binocular tube · Light distribution 20:80			✓			✓	
Mechanical stage	· Stage size W×D 125×115 mm · Travel 50×70 mm · Coaxial coarse and fine focusing knobs, scale: 2 µm	✓	✓	✓	✓	✓	✓	
Condenser	Abbe N.A. 1,25 (aperture diaphragm)	✓	✓	✓	✓	✓	✓	OBB-A1101
Darkfield unit	Usable for 4× – 40× objectives	○	○	○	○	○	○	OBB-A1148
Illumination	3 W LED illumination system (transmitted)	✓	✓	✓	✓	✓	✓	
Colour filters for transmitted illumination	Blue	○	○	○	○	○	○	OBB-A1466
	Green	○	○	○	○	○	○	OBB-A1467
	Yellow	○	○	○	○	○	○	OBB-A1468
	Grey	○	○	○	○	○	○	OBB-A1184
C-Mount	0,5× (focus adjustable)			○			○	OBB-A1137
	1×			○			○	OBB-A1139

✓ = 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 compesation
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 ⌀ 23 mm for 10× eyepiece)
W.D.	Working Distance
WF	Wide Field (Field number up to ⌀ 22 mm for 10× eyepiece)