

## Fluorescence microscope KERN OBN-14



### Note

Semi apochromatic objectives available as accessories (see model outfit list page 25)



OBN 141/OBN 147



Illumination unit



Sextuple filter wheel OBN 148

### PROFESSIONAL LINE

The fluorescence microscope for the professional user

#### Features

- The fluorescence microscope in the OBN-14 series is based on the usual high quality and versatility of the OBN series. The outstanding, stable design in combination with high-quality optics set the standard in fluorescence microscopy in this class
- The powerful, dimmable 20W halogen illumination unit (Philips) and a 100W Epi fluorescence incident illumination unit on the OBN 147/OBN 148 models ensure perfect illumination and stimulation of your fluorescence samples
- As an alternative, with the OBN 141 model we can offer you a fluorescence microscope with a 3W LED transmitted illumination unit and 3W LED Epi fluorescence incident illumination unit
- This series has a professional Koehler illumination unit with an adjustable field diaphragm as well as a height-adjustable 1,25 Abbe condenser which can be centred and which has an adjustable aperture diaphragm
- The extremely large mechanical stage with ergonomic, coaxial coarse and fine focusing knob on both sides enables you to adjust and focus your sample rapidly and accurately

- With the OBN 147/OBN 148 halogen variant you have a filter wheel which has up to 6 fittings. As standard this is fitted with a B/G or B/G/UV/V fluorescence filter. The OBN 141 LED variant is fitted with a B/G fluorescence filter with a changeover slider as standard. The changeover slider and the filter wheel mean that you can change the stimulation filter quickly
- A large selection of eyepieces, objectives, colour filters, darkfield condensers as well as a Butterfly tube, polarising and phase contrast units can easily be integrated thanks to the modular construction system
- The centring objective for adjusting the fluorescence, 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. 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 translucent, thin, low-contrast, challenging samples (e.g. immunofluorescence, FISH, DAPI staining, etc.)

#### Technical data

- Infinity optical system
- Quintuple nosepiece
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 530×220×490 mm
- Net weight approx. 23 kg

#### STANDARD



#### OPTION



#### Model

Standard configuration




























KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination
OBN 141	Trinocular	HWF 10×/ø 20 mm	Infinity Plan	4×/10×/20×/40×/100×	LED + 3 W LED Epi Fluorescence (B/G)
OBN 147	Trinocular	WF 10×/ø 20 mm	Infinity Plan	40×/100×	Halogen + 100 W Epi Fluorescence (B/G)
OBN 148	Trinocular	HWF 10×/ø 20 mm	Infinity Plan		Halogen + 100 W Epi Fluorescence (B/G/UV/V)

## Fluorescence microscope KERN OBN-14

Model outfit	Model KERN			Order number	
	OBN 141	OBN 147	OBN 148		
<b>Eyepieces</b> (23,2 mm)	HWF 10×/∅ 20 mm	✓✓		✓✓	OBB-A1404
	WF 10×/∅ 20 mm		✓✓		OBB-A1351
	WF 16×/∅ 13 mm	○ ○	○ ○	○ ○	OBB-A1354
	WF 10×/∅ 20 mm (reticule 0,1 mm) (adjustable)	○	○	○	OBB-A1352
<b>Infinity Plan achromatic objectives</b>	4×/0,10 W.D. 12,1 mm	✓	✓	✓	OBB-A1263
	10×/0,25 W.D. 4,64 mm	✓	✓	✓	OBB-A1243
	20×/0,40 (spring-loaded) W.D. 2,41 mm	✓	✓	✓	OBB-A1250
	40×/0,66 (spring-loaded) W.D. 0,65 mm	✓	✓	✓	OBB-A1257
	100×/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	✓	OBB-A1240
	2,5×/0,07 W.D. 8,47 mm	○	○	○	OBB-A1247
	Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm	○	○	○	OBB-A1270
<b>Infinity Plan Semi Apochromatic objectives</b>	10×/0,3 W.D. 7,68 mm	○	○	○	OBB-A1634
	20×/0,5 W.D. 1,96 mm	○	○	○	OBB-A1635
	40×/0,75 (spring-loaded) W.D. 0,78 mm	○	○	○	OBB-A1636
	100×/1,3 (oil) (spring-loaded) W.D. 0,15 mm	○	○	○	OBB-A1637
<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 100:0</li> <li>• Diopter adjustment: Both-sided</li> </ul>	✓	✓	✓	
<b>Mechanical stage</b>	<ul style="list-style-type: none"> <li>• Stage size W×D 175×145 mm</li> <li>• Travel 78×55 mm</li> <li>• Coaxial coarse and fine focusing knobs</li> <li>• Two slide holder</li> </ul>	✓	✓	✓	
<b>Condenser</b>	Abbe N.A. 1,25 center-adjustable (aperture diaphragm)	✓	✓	✓	OBB-A1102
	Swing-out condenser N.A. 0,9/0,13 center-adjustable (aperture diaphragm)	○	○	○	OBB-A1104
<b>Darkfield condenser</b>	N.A. 0,85 – 0,91 (dry, paraboloid)	○	○	○	OBB-A1421
	N.A. 1,3 (oil, cardioid)	○	○	○	OBB-A1538
<b>Koehler illumination</b>	20 W Halogen spare bulb (transmitted)		✓	✓	OBB-A1643
	3 W LED illumination system (transmitted) (non-rechargeable)	✓			
<b>Polarising unit</b>	Analyser/Polariser	○	○	○	OBB-A1283
<b>Phase contrast units</b>	Quintuple hole turret with 10×/20×/40×/100× Infinity-PH-Plan objectives (complete set)	○	○	○	OBB-A1237
	Single unit with ∞ PH-Plan objective 10×	○	○	○	OBB-A1214
	Single unit with ∞ PH-Plan objective 20×	○	○	○	OBB-A1216
	Single unit with ∞ PH-Plan objective 40×	○	○	○	OBB-A1218
	Single unit with ∞ PH-Plan objective 100×	○	○	○	OBB-A1212
	When several magnification levels are required, please contact us				
<b>C-Mount</b>	1×	○	○	○	OBB-A1140
	0,57× (focus adjustable)	○	○	○	OBB-A1136
<b>Fluorescence unit</b>	100 W HBO Epi Fluorescence unit 6-filter disc (UV/V/B/G) including centering objective			✓	
	100 W HBO Epi Fluorescence unit, two-hole slide (B/G) including centering objective		✓		
	3 W LED Epi Fluorescence unit (B/G) including centering objective	✓			
<b>Colour filters for transmitted illumination</b>	Blue	✓	✓	✓	
	Green	○	○	○	OBB-A1188
	Yellow	○	○	○	OBB-A1165
	Grey	○	○	○	OBB-A1183

✓ = 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)