

Compound microscopes KERN OBN-13 · 15



OBN-13



OBN-15



OBN-15: Mounted phase contrast condenser



Quintuple PH universal rotary condenser with 10×/20×/40×/100× Infinity PH-Plan objectives (complete set, for OBN-15 included)

### PROFESSIONAL LINE

Professionalism and versatility united in one microscope – with Koehler illumination for demanding applications

#### Features

- The OBN series stands out because of its unbeatable and consistently high quality and its ergonomic design. The range of modular components means that the OBN series can be individually customised for the professional user
- Depending on the application, there is a choice of models with strong, continuously dimmable 3 W LED or 20 W halogen transmitted illumination (Philips)
- In addition the microscope is available as a pre-configured phase contrast microscope, which, through the combination of a professional quintuple condenser wheel, phase contrast condenser and Infinity Plan phase contrast objectives makes it a high-quality, fully-equipped microscope for all applications related to contrast procedures
- 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
- A wide variety of modular systems, such as, for example, a swing-out condenser, various eyepieces, objectives, colour filters, phase contrast units, a darkfield condenser, a simple polarising unit, Butterfly tube, through to complete fluorescence units are available to you as accessories
- The centring eyepiece for adjusting the phase contrast (OBN-15), a protective dust cover, eye cups as well as multi-lingual User instructions are included with the 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

- Translucent, thin, low-contrast, challenging samples (e.g. living mammal cells, bacteria, tissue)

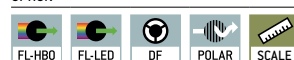
#### Technical data

- Infinity optical system
- Quintuple nosepiece
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment: Both-sided
- Overall dimensions W×D×H 390×200×400 mm
- Net weight approx. 9 kg

#### STANDARD



#### OPTION



#### Model

Standard configuration






























KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination
OBN 132	Trinocular	HWF 10×/ø 20 mm	Infinity Plan	4×/10×/20×/	20 W Halogen (transmitted)
OBN 135	Trinocular	HWF 10×/ø 20 mm	Infinity Plan	40×/100×	3 W LED (transmitted)
OBN 158	Trinocular	HWF 10×/ø 20 mm	Infinity Plan	4×/PH10×/PH20×/	20 W Halogen (transmitted)
OBN 159	Trinocular	HWF 10×/ø 20 mm	Infinity Plan	PH40×/PH100×	3 W LED (transmitted)

## Compound microscopes KERN OBN-13 · 15

Model outfit		Model KERN				Order number
		OBN 132	OBN 135	OBN 158	OBN 159	
<b>Eyepieces</b> (23,2 mm)	HWF 10×/∅ 20 mm	✓✓	✓✓	✓✓	✓✓	OBB-A1404
	WF 16×/∅ 13 mm	○	○	○	○	OBB-A1354
<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
	Plan 100×/1,15 (water) (spring-loaded) W.D. 0,18 mm	○	○	○	○	OBB-A1437
<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
	Centering eyepiece	○	○	✓	✓	
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	○	○	○	○	OBB-A1155
	100 W HBO Epi Fluorescence unit, two-hole slide (B/G) including centering objective	○	○	○	○	OBB-A1153
	3 W LED Epi Fluorescence unit (B/G) including centering objective	○	○	○	○	OBB-A1156
<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)