Phase contrast microscopes KERN OBL-14 · 15


Mounted phase contrast condenser

Simple PH condenser with 40× PH slide

LAB LINE

## High-quality phase contrast microscope – specially pre-configured with a series of options for flexible expansion

### Features

- We have developed this series specially for general applications with phase contrast method. In addition, the stable, modular construction system of the OBL series offers many more options
- Depending on the application, there is a choice of models with strong, infinitely dimmable 3W LED or 20W halogen illumination (Philips)
- A special fixed, pre-centred phase contrast condenser as well as field diaphragm give you a simplified Koehler illumination and thereby a powerful phase-contrast display of your sample
- The large mechanical stage and its specimen holder holds up to two samples at the same time and is quick and easy to focus using a coaxial coarse and fine focusing knob on both sides
- A large selection of eyepieces, objectives and colour filters, a simple polarising unit as well as further phase contrast units 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 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

- Haematology, urology, gynaecology, dermatology, pathology, microbiology and parasitology, immunology, Sewage treatment plants, Oncology, entomology, vets, water analysis and breweries

### Applications/Samples

- Specially for extremely translucent, thin, low-contrast, challenging samples (e.g. living mammal cells, bacteria, tissue) with phase contrast

### Technical data

- Infinity optical system
- Quadplex nosepiece
- Siedentopf 30° inclined/360° rotatable
- Diopter adjustment: One-sided
- Overall dimensions W×D×H 395×200×380 mm
- Net weight approx. 6,7 kg

STANDARD: 360° | BINO | TRINO | ABBE | HAL | LED | PH | INFINITY | 230 V | 1 DAY

OPTION: DF | POLAR | SCALE

| Model | Standard configuration | | | | |
|---|---|---|---|---|---|
| KERN | Tube | Eyepiece | Objective quality | Objectives | Illumination |
| **OBL 146** | Binocular | HWF 10×/⌀ 20 mm | Infinity E-Plan/ Plan | 4×/PH10×/ PH40×/100× | 3 W LED (transmitted) |
| **OBL 155** | Trinocular | HWF 10×/⌀ 20 mm | Infinity E-Plan/ Plan | | 20 W Halogen (transmitted) |
| **OBL 156** | Trinocular | HWF 10×/⌀ 20 mm | Infinity E-Plan/ Plan | | 3 W LED (transmitted) |

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| Model outfit | | Model KERN | | | Order number |
|---|---|---|---|---|---|
| | | OBL 155 | OBL 146 | OBL 156 | |
| **Eyepieces** (23,2 mm) | HWF 10×/⌀ 20 mm | ✓✓ | ✓✓ | ✓✓ | OBB-A1404 |
| | WF 16×/⌀ 13 mm | ○○ | ○○ | ○○ | OBB-A1354 |
| | HWF 10×/⌀ 20 mm (with Pointer) | ○ | ○ | ○ | OBB-A1448 |
| **Infinity E-Plan objectives** | 4×/0,10 W.D. 12,1 mm | ✓ | ✓ | ✓ | OBB-A1161 |
| | 10×/0,25 W.D. 2,1 mm | ○ | ○ | ○ | OBB-A1159 |
| | 40×/0,65 (spring-loaded) W.D. 0,58 mm | ○ | ○ | ○ | OBB-A1160 |
| | 100×/1,25 (oil) (spring-loaded) W.D. 0,19 mm | ✓ | ✓ | ✓ | OBB-A1158 |
| | Plan 20×/0,40 (spring-loaded) W.D. 2,41 mm | ○ | ○ | ○ | OBB-A1250 |
| | 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 |
| **Binocular tube** | · Butterfly 30° inclined/360° rotatable<br>· Interpupillary distance 50 – 75 mm (for infinity system)<br>· Diopter adjustment: One-sided | ○ | ✓ | ○ | OBB-A1578 |
| **Trinocular tube** | · Butterfly 30° inclined/360° rotatable<br>· Interpupillary distance 50 – 75 mm<br>· Light distribution 20:80 (for infinity system)<br>· Diopter adjustment: One-sided | ✓ | ○ | ✓ | OBB-A1582 |
| **Mechanical stage** | · Stage size W×D 145×130 mm<br>· Travel 76×52 mm<br>· Coaxial coarse and fine focusing knobs, scale: 2 µm<br>· Two slide holder | ✓ | ✓ | ✓ | |
| **PH condenser** | Abbe N.A. 1,25 precentered, for bright field and phase contrast | ✓ | ✓ | ✓ | OBB-A1398 |
| **Phase contrast units** | Infinity PH-Plan objective 10× | ✓ | ✓ | ✓ | OBB-A1390 |
| | Infinity PH-Plan objective 20× | ○ | ○ | ○ | OBB-A1391 |
| | Infinity PH-Plan objective 40× | ✓ | ✓ | ✓ | OBB-A1392 |
| | Infinity PH-Plan objective 100× | ○ | ○ | ○ | OBB-A1393 |
| | PH slide 10× | ✓ | ✓ | ✓ | OBB-A1399 |
| | PH slide 20× | ○ | ○ | ○ | OBB-A1400 |
| | PH slide 40× | ✓ | ✓ | ✓ | OBB-A1401 |
| | PH slide 100× | ○ | ○ | ○ | OBB-A1402 |
| | Centering eyepiece | ✓ | ✓ | ✓ | |
| **Darkfield condenser** | N.A. 0,85 – 0,91 (dry, paraboloid) | ○ | ○ | ○ | OBB-A1422 |
| **Illumination** | 20 W Halogen spare bulb (transmitted) | ✓ | | | OBB-A1643 |
| | 3 W LED illumination system (transmitted) (non-rechargeable) | | ✓ | ✓ | |
| **Colour filters** for transmitted illumination | Blue (built-in) | ✓ | ✓ | ✓ | |
| | Green | ✓ | ✓ | ✓ | OBB-A1188 |
| | Yellow | ○ | ○ | ○ | OBB-A1165 |
| | Grey | ○ | ○ | ○ | OBB-A1183 |
| **C-Mount** | 0,5× (focus adjustable) | ○ | | ○ | OBB-A1515 |
| | 1× | ○ | | ○ | OBB-A1514 |

For further optional accessories, please see the list of items for the OBL-12 and OBL-13 series from page 17

✓ = 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) |

WolfLabs

**Pricing on any accessories shown can be found by keying the part number into the search box on our website.**

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct.
If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.