

# COMPOUND MICROSCOPES

Laboratory | Industry | Food Industry



2025

### **KERN Pictograms**



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



POLAR

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 evepiece



**SD card** For data storage



USB 2.0 interface For data transmission



USB 3.0 interface For data transmission



**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



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.



Rechargeable battery pack Rechargeable set



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.



Pallet 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 Ø 23 mm

for 10× eyepiece)

W.D. Working Distance

**WF** Wide Field (Field number up to Ø 22 mm

for 10× eyepiece)

#### KERN Models A-Z

OAB-L	100
OAB-L OBE-12 · OBE-13	
OBE-S OBL-12 · OBL-13	05
OBL-14 · OBL-15	
OBL-S · OBN-S	
OBN-13 · OBN-15	
OBN-14 M	
OBS-1	
OBT-1 · OBT-2 <u>™</u>	
OCM-1	
OCS-9	
ODC-24	
ODC-25 NEW	
ODC-82 · ODC-83 · ODC-84	
ODC-85 · ODC-86	86
ODC-87 · ODC-88 · ODC-89	87
OIV-2	62
OIV-3 · OIV-9 NEW	
OIV-6	
OKM-1	
OKO-1	
OLM-1	
OPO-1	33
ORA	92-98
ORA ORL-B	92-98 105
ORA ORL-B9	92-98 105 9-104
ORA ORL-B 9 OSE-4 · OZL-9 · OZM-9 9	92-98 105 9-104 71
ORA ORL-B 9 ORM 9 OSE-4 · OZL-9 · OZM-9 0 SE-42	92-98 105 9-104 71 36
ORA 9 ORL-B 9 OSE-4 · OZL-9 · OZM-9 9 OSE-42 0SF-43 9	92-98 105 9-104 71 36 38
ORA 9 ORL-B 9 OSE-4 · OZL-9 · OZM-9 9 OSE-42 0SF-43 0XM-9 9	92-98 105 9-104 71 36 38 90
ORA 9 ORL-B 9 OSE-4 · OZL-9 · OZM-9 9 OSE-42 0SF-43 0XM-9 9 OZB-H 9	92-98 105 9-104 71 36 38 90 81
ORA 9 ORL-B 9 OSE-4 · OZL-9 · OZM-9 9 OSE-42 0SF-43 0XM-9 0ZB-H 0ZB-IR 9	92-98 105 9-104 71 36 38 90 81 83
ORA	92-98 105 9-104 71 36 38 90 81 83 74
ORA	92-98 105 9-104 71 36 38 90 81 83 74 80
ORA 9 ORL-B 9 OSE-4 · OZL-9 · OZM-9 9 OSF-43 9 OZB-H 0ZB-IR 0ZB-M 0ZB-UE 0ZB-UP 9	92-98 105 9-104 71 36 38 90 81 83 74 80 79
ORA 9 ORL-B 9 OSE-4 · OZL-9 · OZM-9 9 OSF-43 9 OZB-H 0ZB-IR 0ZB-M 0ZB-UE 0ZB-UP 0ZG-4 9	92-98 105 9-104 71 36 38 90 81 83 74 80 79 56
ORA 9 ORL-B 9 OSE-4 · OZL-9 · OZM-9 9 OSE-42 0SF-43 9 OZB-H 0ZB-IR 0ZB-UP 0ZB-UP 0ZG-4	92-98 105 9-104 71 36 38 90 81 83 74 80 79 56 40
ORA 9 ORL-B 9 OSE-4 · OZL-9 · OZM-9 9 OSE-42 0SF-43 9 OZB-H 0ZB-H 0ZB-IR 0ZB-UE 0ZB-UP 0ZB-UP 0ZG-4 0ZL-44	92-98 105 9-104 71 36 38 90 81 83 74 80 56 40 46
ORA	92-98 105 9-104 71 36 38 90 81 83 74 80 56 40 46 48
ORA	92-98 105 9-104 71 36 38 90 81 83 74 80 79 56 40 46 48 42
ORA 9 ORL-B 9 OSE-4 · OZL-9 · OZM-9 9 OSE-42 9 OSF-43 9 OZB-H 9 OZB-H 9 OZB-H 9 OZB-H 9 OZB-W	92-98 105 9-104 71 36 38 90 81 83 74 80 79 56 40 46 48 42 44
ORA 9 ORL-B 9 OSE-4 · OZL-9 · OZM-9 9 OSE-42 9 OSF-43 9 OZB-H 9 OZB-H 9 OZB-H 9 OZB-H 9 OZB-W 9 OZB	92-98 105 9-104 71 36 38 90 81 83 74 80 79 56 40 46 48 42 44 67
ORA	92-98 105 9-104 71 36 38 90 81 83 74 80 79 56 40 48 42 44 67 50
ORA	92-98 105 9-104 71 36 38 90 81 83 74 80 79 56 40 46 48 42 44 67 50 70
ORA	92-98 105 9-104 71 36 38 90 81 83 74 80 79 56 40 46 48 42 44 67 50 70 68
ORA	92-98 105 9-104 71 36 38 90 81 83 74 80 79 56 40 46 48 42 44 67 50 70 68

New model

#### **KERN Customer Consultants**

With questions about our products and services, we will be happy to advise you:

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#### **KERN Hotlines**

**Optical Devices** 



Technical questions about our products?
You will find assistance here quickly: +49 7433 9933-...

Service-Hotline	<b>→ 199</b>
for general technical questions about your KERN product	

for all technical questions concerning our microscopes, microscope cameras, refractometers, etc.

#### **Laboratory and Analytical Balances**

**→444** 

for all technical questions concerning our high quality precision balances, analytical balances (especially with electromagnetic force-compensated measuring systems, tuning fork and high application density)

### SAUTER Measuring Instruments → 555

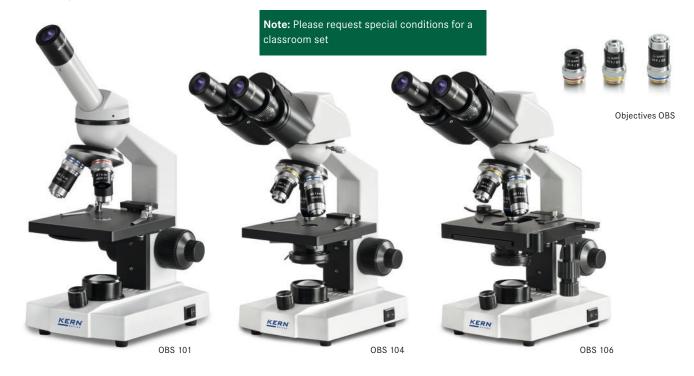
for all technical questions concerning our SAUTER measuring instruments, test benches, force measuring accessories (clamps etc.), SAUTER software

#### System Solutions Industry 4.0 → 200

for all technical questions concerning the interlocking of the latest information and communication technology with our scales, load cells and measuring devices as well as questions about KERN software

#### Calibration and Verification Service → 196

for any questions concerning our calibration and verification service



#### **Educational Line**

## The school microscope – For the first steps in microscopy and for use in biology lessons

#### **Features**

- The KERN OBS range is a solid and simple school microscope range, which is easy to use due to its intuitive control elements
- · The continuously dimmable 0.5W LED guarantees optimum illumination of the samples and also ensures long service life. Mobile use is also no problem through the use of rechargeable batteries
- The simple 0.65 condenser on the OBS 101 (condenser disc) and the OBS 102 (fixed condenser) ensures the very best concentration of light and illumination of the sample. The OBS 103, 104, 105 and 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 OBS 105, 106)
- · A large selection of different eyepieces and objectives is also available
- · Please find detailed information in the following model outfit list

#### Scope of application

· Primary school, secondary school, training, hobby use

#### Applications/Samples

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

#### Technical data

- · Finite optical system (DIN)
- · Triple (OBS 101, 102) or quadplex (OBS 103, 104, 105, 106) nosepiece
- Tube 45° (OBS 101, 102, 103, 105) or 30° (OBS 104, 106) inclined/360° rotatable
- · Diopter adjustment: Both-sided (for binocular models)
- · Overall dimensions W×D×H 130×300×310 mm
- · Net weight approx. 3 kg

STANDARD



Model





















KERN	Tube	pe Eyepiece Objective quality		Objectives	Illumination	Stage	excl. of VAT ex works €
OBS 101	Monocular	WF 10×/ø 18 mm	Achromatic		0,5W LED (transmitted) (battery incl., rechargeable)	fix	195,-
OBS 102	Monocular	WF 10×/ø 18 mm	Achromatic	_	0,5W LED (transmitted) (battery incl., rechargeable)	fix	205,-
OBS 103	Monocular	WF 10×/ø 18 mm	Achromatic	4 (10 (10	0,5W LED (transmitted) (battery incl., rechargeable)	fix	215,-
OBS 104	Binocular	WF 10×/ø 18 mm	Achromatic	— 4×/10×/40×	0,5W LED (transmitted) (battery incl., rechargeable)	fix	295,-
OBS 105	Monocular	WF 10×/ø 18 mm	Achromatic	_	0,5W LED (transmitted) (battery incl., rechargeable)	mechanical	255,-
OBS 106	Binocular	WF 10×/Ø 18 mm	Achromatic	_	0,5W LED (transmitted)	mechanical	340,-

Standard configuration

(battery incl., rechargeable)

Model outfit			Мо	del KE	RN	_	_	Order number	Price/piece excl. of VAT	
		OBS 101	OBS 102	OBS 103	OBS 104	OBS 105	OBS 106		ex works €	
	WF 10×/ø 18 mm	✓	✓	✓	√√	✓	√√	OBB-A1473	35,-	
Eyepieces	WF 16×/ø 13 mm	0	0	0	00	0	00	OBB-A1474	35,-	
(23,2 mm)	WF 20×/ø 11 mm	0	0	0	00	0	00	OBB-A1475	35,-	
	WF 10×/ø 18 mm (with Pointer)	0	0	0	0	0	0	OBB-A1561	35,-	
	4×/0,10 W.D. 18,0 mm	✓	✓	✓	✓	✓	✓	OBB-A1476	40,-	
	10×/0,25 W.D. 7,0 mm	✓	✓	✓	✓	✓	✓	OBB-A1477	45,-	
Achromatic objectives	40×/0,65 (spring-loaded) W.D. 0,53 mm	✓	✓	✓	✓	✓	✓	OBB-A1478	50,-	
, <del></del>	60×/0,85 (spring-loaded) W.D. 0,1 mm	0	0	0	0	0	0	OBB-A1479	65,-	
	100×/1,25 (oil) (spring-loaded) W.D. 0,07 mm	0	0	0	0	0	0	OBB-A1480	70,-	
	4×/0,10 W.D. 14,5 mm	0	0	0	0	0	0	OBB-A1562	45,-	
	10×/0,25 W.D. 5,65 mm	0	0	0	0	0	0	OBB-A1563	60,-	
E-Plan	40×/0,65 (spring-loaded) W.D. 0,85 mm	0	0	0	0	0	0	OBB-A1564	90,-	
objectives	100×/1,25 (oil) (spring-loaded) W.D. 0,07 mm	0	0	0	0	0	0	OBB-A1565	95,-	
	100×/0,80 (dry) (spring-loaded) W.D. 0,15 mm	0	0	0	0	0	0	OBB-A1442	190,-	
	Plan 100×/1,0 (water) (spring-loaded) W.D. 0,18 mm	0	0	0	0	0	0	OBB-A1441	205,-	
Monocular tube	45° inclined/360° rotatable	✓	✓	✓		✓		OBB-A1471		
Binocular tube	<ul> <li>45° inclined/360° rotatable</li> <li>Interpupillary distance 55-75 mm</li> <li>Diopter adjustment: Both-sided</li> </ul>		_	_	✓	_	✓	OBB-A1472		
Fixed stage	<ul> <li>Stage size W×D 110×120 mm</li> <li>Coaxial coarse and fine focusing knobs, scale: 2,5 µm</li> </ul>	<b>✓</b>	✓	✓	✓	_	_			
Mechanical stage	<ul> <li>Stage size W×D 115×125 mm</li> <li>Travel 75×18 mm</li> <li>Coaxial coarse and fine focusing knobs, scale: 2,5 μm</li> </ul>					<b>√</b>	<b>√</b>			
	Simple condenser N.A. 0,65	✓								
Condenser	Simple condenser N.A. 0,65 (aperture diaphragm)		✓							
_	Abbe N.A. 1,25 (aperture diaphragm)			✓	✓	✓	✓			
llumination	0,5 W LED illumination system (transmitted) (rechargeable)	✓	✓	✓	✓	✓	✓		_	
	Blue			✓	✓	✓	✓	OBB-A1466	25,-	
Colour filters	Green			0	0	0	0	OBB-A1467	25,-	
or transmitted Ilumination	Yellow			0	0	0	0	OBB-A1468	25,-	
	Grey			0	0	0	0	OBB-A1184	25,-	
					<b>√</b> =	= Incluc	ded with	h delivery	O = Option	



**Note:** Please request special conditions for a classroom set



Monocular version



Binocular version



#### **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
- NEW: 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
- NEW: 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. 6 kg

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360°	MONO	BINO	ABBE	LED	230 V	1 DAY	SCALE	BAT.
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Model		Standard configuration								
	Tube	Eyepiece	Objective quality	Objectives	Illumination	Stage	ex works €			
OBT 101	Monocular	WF 10 x/Ø 18 mm	Achromatic		1W LED (transmitted)	fix	220,-			
OBT 102	Monocular	WF 10 x/Ø 18 mm	Achromatic		1W LED (transmitted)	fix	240,-			
OBT 103	Monocular	WF 10 x/Ø 18 mm	Achromatic	- 4× / 10×/ 40× -	1W LED (transmitted)	mechanical	275,-			
OBT 104	Binocular	WF 10 x/Ø 18 mm	Achromatic	-	1W LED (transmitted)	mechanical	360,-			
OBT 105	Monocular	WF 10 x/Ø 18 mm	Achromatic		1W LED (transmitted)	mechanical	300,-			
OBT 106	Binocular	WF 10 x/Ø 18 mm	Achromatic	4× / 10× / 40× / 100×	1W LED (transmitted)	mechanical	380,-			
OBT 231	LCD display	-	Achromatic	_	1W LED (transmitted)	mechanical	790,-			

Model outfit			Model KERN						Order number	Price/piece excl. of VAT
		OBT 101	OBT 102	T OBT OBT 2 103 104		OBT 105	OBT 106			ex works €
	WF 10 ×/Ø 18 mm	✓	✓	✓	√√	✓	✓✓		OBB-A3200	35,-
Eyepieces (23,2 mm)	WF 10 ×/Ø 18 mm (with Pointer)	0	0	0	0	0	0		OBB-A3201	35,-
	WF 10 ×/Ø 18 mm (reticule 0,1 mm)	0	0	0	0	0	0		OBB-A3202	35,-
	4 ×/0,1 W.D. 27 mm	✓	✓	✓	✓	✓	✓	✓	OBB-A3203	30,-
Achromatic	10 ×/0,25 W.D. 7 mm	✓	✓	✓	✓	✓	✓	✓	OBB-A3204	35,-
objectives	40 ×/0,65 (spring-loaded) W.D. 0,6 mm	✓	✓	✓	✓	✓	✓	✓	OBB-A3205	45,-
	100 ×/1,25 (oil) (spring-loaded) W.D. 0,2 mm	0	0	0	0	✓	✓	✓	OBB-A3207	65,-
Monocular tube	45° angled/360° revolving	✓	✓	✓	0	✓	0	0	OBB-A3221	160,-
Binocular tube	<ul> <li>Siedentopf 45° inclined/360° rotatable</li> <li>Interpupillary distance 48 mm-75 mm</li> <li>Diopter adjustment one-sided</li> </ul>	0	0	0	✓	0	✓	0	OBB-A3222	230,-
Tube with LCD display	· Tablet Camera 2 MP · CMOS 1/2,8" · USB 2.0	0	0	0	0	0	0	✓	ODC 231	490,-
Fixed stage	· Stage size W×D 115×110 mm · Coaxial coarse and fine focusing knobs, scale: 2 µm	<b>√</b>	✓							
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			✓	<b>√</b>	✓	✓	✓		
	Simple condenser N.A. 0,65	✓								
Condenser	Abbe N.A. 1,25 (aperture diaphragm)		✓	✓	✓	✓	✓	✓		
Illumination	1W LED spare bulb (transmitted)	✓	✓	✓	✓	✓	✓	✓	OBB-A3208	29,-
	Blue	0	0	0	0	0	0	0	OBB-A3212	25,-
Colour filters for	Green	0	0	0	0	0	0	0	OBB-A3210	25,-
ransmitted Ilumination	Yellow	0	0	0	0	0	0	0	OBB-A3211	25,-
	Grey	0	0	0	0	0	0	0	OBB-A3209	25,-
					•	/ =  nc	cluded	with d	lelivery	O = Opti





Monocular version



Trinocular version



Butterfly tube

#### **Educational Line**

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

#### **Features**

- The 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 lens barrel which enables you to achieve the ideal viewing angle and is integrated as standard on all binocular and trinocular models. The heightadjustable 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
- · 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)

- · Finite optical system
- Quadplex nosepiece
- Butterfly 30° inclined
- Monocular lens barrel 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





















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Model		Price excl. of VAT				
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	ex works €
OBE 121	Monocular	HWF 10×/Ø 18 mm	Achromatic		3W LED (transmitted)	490,-
OBE 122	Binocular	HWF 10×/Ø 18 mm	Achromatic	4×/10×/40×	3W LED (transmitted)	580,-
OBE 124	Trinocular	HWF 10×/Ø 18 mm	Achromatic	_	3W LED (transmitted)	690,-
OBE 131	Monocular	HWF 10×/Ø 18 mm	Achromatic		3W LED (transmitted)	540,-
OBE 132	Binocular	HWF 10×/Ø 18 mm	Achromatic	4×/10×/40×/100×	3W LED (transmitted)	640,-
OBE 134	Trinocular	HWF 10×/Ø 18 mm	Achromatic		3W LED (transmitted)	760,-

Model outfit			Model	KERN			Order number	Price/piece excl. of VAT	
		OBE 121	OBE 122	OBE 124	OBE 131	OBE 132	OBE 134		excl. of VAI ex works €
	HWF 10×/ø 18 mm	✓	<b>√√</b>	11	✓	<b>√√</b>	11	OBB-A1403	50,-
Eyepieces	WF 16×/Ø 13 mm	0	00	00	0	00	00	OBB-A1354	50,-
(23,2 mm)	HWF 10×/ø 18 mm (with pointer)	0	0	0	0	0	0	OBB-A1348	45,-
	HWF 10×/Ø 18 mm (reticule 0,1 mm) (non-adjustable)	0	0	0	0	0	0	OBB-A1349	65,-
	4×/0,10 W.D. 18,6 mm	✓	✓	✓	✓	✓	✓	OBB-A1111	40,-
	10×/0,25 W.D. 6,5 mm	✓	✓	✓	✓	✓	✓	OBB-A1108	50,-
	40×/0,65 (spring-loaded) W.D. 0,47 mm	✓	✓	✓	✓	✓	✓	OBB-A1112	80,-
Achromatic	100×/1,25 (oil) (spring-loaded) W.D. 0,07 mm	0	0	0	✓	✓	✓	OBB-A1109	115,-
objectives	20×/0,40 (spring-loaded) W.D. 1,75 mm	0	0	0	0	0	0	OBB-A1110	95,-
	60×/0,85 (spring-loaded) W.D. 0,1 mm	0	0	0	0	0	0	OBB-A1113	115,-
	E-Plan 100×/0,80 (dry) (spring-loaded) W.D. 0,15 mm	0	0	0	0	0	0	OBB-A1442	190,-
	Plan 100×/1,0 (water) (spring-loaded) W.D. 0,18 mm	0	0	0	0	0	0	OBB-A1441	205,-
Monocular tube	30° inclined	✓			✓				
Binocular tube	<ul> <li>Butterfly 30° inclined</li> <li>Interpupillary distance 48 – 75 mm</li> <li>Diopter adjustment: One-sided</li> </ul>		✓			✓			
Trinocular tube	See binocular tube     Light distribution 20:80			✓			✓		
Mechanical stage	<ul> <li>Stage size W×D 125×115 mm</li> <li>Travel 50×70 mm</li> <li>Coaxial coarse and fine focusing knobs, scale: 2 µm</li> </ul>	✓	✓	✓	✓	✓	✓		
Condenser	Abbe N.A. 1,25 (aperture diaphragm)	✓	✓	✓	✓	✓	✓	OBB-A1101	95,-
Darkfield unit	Usable for 4× - 40× objectives	0	0	0	0	0	0	OBB-A1148	95,-
Illumination	3 W LED illumination system (transmitted)	✓	✓	✓	✓	✓	✓		
	Blue	0	0	0	0	0	0	OBB-A1466	25,-
Colour filters	Green	0	0	0	0	0	0	OBB-A1467	25,-
for transmitted illumination	Yellow	0	0	0	0	0	0	OBB-A1468	25,-
	Grey	0	0	0	0	0	0	OBB-A1184	25,-
	0,5× (focus adjustable)			0			0	OBB-A1137	175,-
C-Mount	1×			0			0	OBB-A1139	110,-
			✓ = Included with				ำ delivery	O = Optio	





Trinocular version



Simple polarising attachment

#### Lab Line

## The flexible laboratory assistant with infinity optical system and fixed, pre-centred Koehler illumination

#### **Features**

- The OBL series stands out through its infinity optical unit and is therefore ideally suited for all demanding transmitted illumination applications. The robust and ergonomic stand base guarantees safe and comfortable working
- The fixed, pre-centred and focusable 1,25 Abbe condenser with aperture diaphragm and field diaphragm gives you a simplified Koehler illumination, without having to move the centre
- 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 as well as a darkfield condenser, a simple polarising unit, different phase contrast kits through to HBO and LED fluorescence 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, oncology, entomology, vets, water analysis, sewage treatment plants and breweries

#### Applications/Samples

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

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



OPTION					
		0	•		Litter
FL-HB0	FL-LED	PH	DF	POLAR	SCALE

Model	Standard configuration							
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	ex works €		
OBL 127	Binocular	HWF 10×/Ø 20 mm	Infinity E-Plan	4×/10×/40×/100×	3 W LED (transmitted)	1060,-		
OBL 137	Trinocular	HWF 10×/Ø 20 mm	Infinity E-Plan	4×/10×/40×/100×	3 W LED (transmitted)	1200,-		

Model outfit		Model	KERN	Order number	Price/piece excl. of VAT	
		OBL 127	OBL 137		ex works €	
	HWF 10×/ø 20 mm	√√	44	OBB-A1404	105,-	
<b>Eyepieces</b> (23,2 mm)	WF 16×/Ø 13 mm	00	00	OBB-A1354	50,-	
· 	HWF 10×/ø 20 mm (with Pointer)	0	0	OBB-A1448	90,-	
	4×/0,10 W.D. 12,1 mm	✓	✓	OBB-A1161	100,-	
	10×/0,25 W.D. 2,1 mm	✓	✓	OBB-A1159	165,-	
	40×/0,65 (spring-loaded) W.D. 0,58 mm	✓	✓	OBB-A1160	290,-	
nfinity E-Plan objectives	100×/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	OBB-A1158	365,-	
,	Plan 20×/0,40 (spring-loaded) W.D. 2,41 mm	0	0	OBB-A1250	290,-	
	Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm	0	0	OBB-A1270	390,-	
	Plan 100×/1,15 (water) (spring-loaded) W.D. 0,18 mm	0	0	OBB-A1437	490,-	
Binocular tube	<ul> <li>Butterfly 30° inclined/360° rotatable</li> <li>Interpupillary distance 50 – 75 mm (for infinity system)</li> <li>Diopter adjustment: One-sided</li> </ul>	<b>~</b>	0	OBB-A1578		
Trinocular tube	<ul> <li>Butterfly 30° inclined/360° rotatable</li> <li>Interpupillary distance 50 – 75 mm</li> <li>Light distribution 20:80 (for infinity system)</li> <li>Diopter adjustment: One-sided</li> </ul>	0	<b>*</b>	OBB-A1580		
Mechanical stage	<ul> <li>Stage size W×D 145×130 mm</li> <li>Travel 76×52 mm</li> <li>Coaxial coarse and fine focusing knobs, scale: 2 µm</li> <li>Two slide holder</li> </ul>	✓	<b>✓</b>			
Condenser	Abbe N.A. 1,25 precentered (aperture diaphragm)	✓	✓	OBB-A1103	95,-	
Darkfield condenser	N.A. 0,85 – 0,91 (dry, paraboloid)	0	0	OBB-A1422	250,-	
	20 W Halogen spare bulb (transmitted)			OBB-A1643	60,-	
llumination	3 W LED illumination system (transmitted) (non-rechargeable)	✓	✓	<u> </u>		
Polarising unit	Analyser/Polariser	0	0	OBB-A1277	290,-	
	Single unit with ∞ PH-Plan objective 10×	0	0	OBB-A1215	340,-	
Phase contrast units	Single unit with ∞ PH-Plan objective 20×	0	0	OBB-A1217	390,-	
including PH-condenser and	Single unit with ∞ PH-Plan objective 40×	0	0	OBB-A1219	470,-	
PH-slides)	Single unit with ∞ PH-Plan objective 100×	0	0	OBB-A1213	570,-	
	If required, there are several magnification levels, please contact our O	PTICS-Team				
	100 W HBO Epi Fluorescence unit, three-hole slide (B/G) including centering objective	0	0	OBB-A1153	3490,-	
Fluorescence unit	5 W LED Epi Fluorescence unit, three-hole slide (B/G) including centering objective	0	0	OBB-A1157	3550,-	
	Blue (built-in)	✓	✓			
Colour filters	Green	0	0	OBB-A1188	25,-	
or transmitted Iumination	Yellow	0	0	OBB-A1165	25,-	
	Grey	0	0	OBB-A1183	25,-	
	0,5× (focus adjustable)		0	OBB-A1515	200,-	
-Mount	1×		0	OBB-A1514	130,-	





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

- · 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



Model		Price excl. of VAT				
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	ex works €
OBL 146	Binocular	HWF 10×/Ø 20 mm	Infinity E-Plan/ Plan	4×/PH10×/	3 W LED (transmitted)	1660,-
OBL 156	Trinocular	HWF 10×/Ø 20 mm	Infinity E-Plan/ Plan	PH40×/100×	3 W LED (transmitted)	1780,-

Model outfit		Model	Model KERN		Price/piece excl. of VAT
		OBL 146	OBL 156		ex works €
	HWF 10×/ø 20 mm	44	44	OBB-A1404	105,-
E <b>yepieces</b> 23,2 mm)	WF 16×/Ø 13 mm	00	00	OBB-A1354	50,-
· · · · · · · · · · · · · · · · · · ·	HWF 10×/ø 20 mm (with Pointer)	0	0	OBB-A1448	90,-
	4×/0,11 W.D. 12,1 mm	✓	✓	OBB-A1161	100,-
	10×/0,25 W.D. 2,1 mm	0	0	OBB-A1159	165,-
	40×/0,65 (spring-loaded) W.D. 0,58 mm	0	0	OBB-A1160	290,-
nfinity -Plan objectives	100×/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	OBB-A1158	365,-
	Plan 20×/0,40 (spring-loaded) W.D. 2,41 mm	0	0	OBB-A1250	290,-
	Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm	0	0	OBB-A1270	390,-
	Plan 100×/1,15 (water) (spring-loaded) W.D. 0,18 mm	0	0	OBB-A1437	490,-
Binocular tube	<ul> <li>Butterfly 30° inclined/360° rotatable</li> <li>Interpupillary distance 50 – 75 mm (for infinity system)</li> <li>Diopter adjustment: One-sided</li> </ul>	✓	0	OBB-A1578	
Frinocular tube	Butterfly 30° inclined/360° rotatable     Interpupillary distance 50 – 75 mm     Light distribution 20:80 (for infinity system)     Diopter adjustment: One-sided	0	<b>√</b>	OBB-A1582	
Mechanical stage	<ul> <li>Stage size W×D 145×130 mm</li> <li>Travel 76×52 mm</li> <li>Coaxial coarse and fine focusing knobs, scale: 2 µm</li> <li>Two slide holder</li> </ul>	<b>√</b>	<b>*</b>		
PH condenser	Abbe N.A. 1,25 precentered, for bright field and phase contrast	✓	✓	OBB-A1398	165,-
	Infinity PH-Plan objective 10×	✓	✓	OBB-A1390	185,-
	Infinity PH-Plan objective 20×	0	0	OBB-A1391	220,-
	Infinity PH-Plan objective 40×	✓	✓	OBB-A1392	285,-
	Infinity PH-Plan objective 100×	0	0	OBB-A1393	375,-
hase contrast units	PH slide 10×	✓	✓	OBB-A1399	85,-
	PH slide 20×	0	0	OBB-A1400	85,-
	PH slide 40×	✓	✓	OBB-A1401	85,-
	PH slide 100×	0	0	OBB-A1402	85,-
	Centering eyepiece	✓	✓		
Oarkfield ondenser	N.A. 0,85 – 0,91 (dry, paraboloid)	0	0	OBB-A1422	250,-
lumination	3 W LED illumination system (transmitted) (non-rechargeable)	✓	✓		
	Blue (built-in)	✓	✓		
olour filters	Green	✓	✓	OBB-A1188	25,-
r transmitted umination	Yellow	0	0	OBB-A1165	25,-
	Grey	0	0	OBB-A1183	25,-
	0,5× (focus adjustable)		0	OBB-A1515	200,-
-Mount	1×		0	OBB-A1514	130,-
or further ontional acc	essories, please see the list of items for the OBL-12 and OBL-13 series fro	m nogo 1E			





OBN-15: Mounted phase contrast condenser



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,

#### **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	
TRINO ABBE HAL LED PH INFINITY		
Madal	OBN OBN 132/158 135/159	

wodei		excl. of VAT				
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	ex works €
OBN 132	Trinocular	HWF 10×/Ø 20 mm	Infinity Plan	4×/10×/20×/	20 W Halogen (transmitted)	1680,-
OBN 135	Trinocular	HWF 10×/Ø 20 mm	Infinity Plan	40×/100×	3 W LED (transmitted)	1690,-
OBN 158	Trinocular	HWF 10×/Ø 20 mm	Infinity Plan	4×/PH10×/PH20×/	20 W Halogen (transmitted)	2970,-
OBN 159	Trinocular	HWF 10×/Ø 20 mm	Infinity Plan	PH40×/PH100×	3 W LED (transmitted)	2990,-

		Model KERN			Order number	Price/piece excl. of VAT
	OBN 132	OBN 135	OBN 158	OBN 159		ex works €
HWF 10×/ø 20 mm	44	44	44	44	OBB-A1404	105,-
WF 16×/ø 13 mm	00	00	00	00	OBB-A1354	50,-
4×/0,11 W.D. 12,1 mm	✓	✓	✓	✓	OBB-A1263	120,-
10×/0,25 W.D. 4,64 mm	✓	✓	0	0	OBB-A1243	215,-
20×/0,40 (spring-loaded) W.D. 2,41 mm	✓	✓	0	0	OBB-A1250	290,-
40×/0,66 (spring-loaded) W.D. 0,65 mm	✓	✓	0	0	OBB-A1257	315,-
100×/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	0	0	OBB-A1240	340,-
Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm	0	0	0	0	OBB-A1270	390,-
Plan 100×/1,15 (water) (spring-loaded) W.D. 0,18 mm	0	0	0	0	OBB-A1437	490,-
Butterfly 30° inclined/360° rotatable     Interpupillary distance 50 – 75 mm     Light distribution 100:0     Diopter adjustment: Both-sided	<b>√</b>	✓	✓	✓		
<ul> <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>✓</b>	✓	<b>√</b>		
Abbe N.A. 1,25 center-adjustable (aperture diaphragm)	✓	✓	0	0	OBB-A1102	95,-
Swing-out condenser N.A. 0,9/0,13 center-adjustable (aperture diaphragm)	0	0	0	0	OBB-A1104	240,-
N.A. 0,85 – 0,91 (dry, paraboloid)	0	0	0	0	OBB-A1421	290,-
N.A. 1,3 (oil, cardioid)	0	0	0	0	OBB-A1538	660,-
20 W Halogen spare bulb (transmitted)	✓		✓		OBB-A1643	60,-
3 W LED illumination system (transmitted) (non-rechargeable)		✓		✓		
Analyser/Polariser	0	0	0	0	OBB-A1283	290,-
Quintuple hole turret with 10×/20×/40×/100× Infinity-PH-Plan objectives (complete set)	0	0	✓	✓	OBB-A1237	1790,-
Single unit with ∞ PH-Plan objective 10×	0	0			OBB-A1214	340,-
Single unit with ∞ PH-Plan objective 20×	0	0			OBB-A1216	390,-
Single unit with ∞ PH-Plan objective 40×	0	0			OBB-A1218	470,-
Single unit with ∞ PH-Plan objective 100×	0	0			OBB-A1212	570,-
Centering eyepiece	0	0	✓	✓		
If required, there are several magnification levels, please conta	ct our OPT	ICS-Team				
1×	0	0	0	0	OBB-A1140	110,-
0,57× (focus adjustable)	0	0	0	0	OBB-A1136	175,-
100 W HBO Epi Fluorescence unit 6-filter disc (UV/V/B/G) including centering objective	0	0	0	0	OBB-A1155	4970,-
100 W HBO Epi Fluorescence unit, two-hole slide (B/G) including centering objective	0	0	0	0	OBB-A1153	3490,-
5 W LED Epi Fluorescence unit (B/G) including centering objective	0	0	0	0	OBB-A1156	3550,-
Blue	✓		✓	✓		
Green	0	0	✓	✓	OBB-A1188	25,-
Yellow	0	0	0	0	OBB-A1165	25,-
Grey	0	0	0	0	OBB-A1183	25,-
	WF 16×/Ø 13 mm  4×/0,11 W.D. 12,1 mm  10×/0,25 W.D. 4,64 mm  20×/0,40 (spring-loaded) W.D. 0,65 mm  100×/1,25 (oil) (spring-loaded) W.D. 0,65 mm  100×/1,25 (oil) (spring-loaded) W.D. 0,33 mm  Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm  Plan 100×/1,15 (water) (spring-loaded) W.D. 0,18 mm  Butterfly 30° inclined/360° rotatable (interpupillary distance 50 - 75 mm  Light distribution 100:0  Diopter adjustment: Both-sided  Stage size W×D 175×145 mm  Travel 78×55 mm  Coaxial coarse and fine focusing knobs  Two slide holder  Abbe N.A. 1,25 center-adjustable (aperture diaphragm)  Swing-out condenser N.A. 0,9/0,13 center-adjustable (aperture diaphragm)  N.A. 0,85 - 0,91 (dry, paraboloid)  N.A. 1,3 (oil, cardioid)  20 W Halogen spare bulb (transmitted)  3 W LED illumination system (transmitted) (non-rechargeable)  Analyser/Polariser  Quintuple hole turret with 10×/20×/40×/100× Infinity-PH-Plan objectives (complete set)  Single unit with ∞ PH-Plan objective 10×  Single unit with ∞ PH-Plan objective 40×  Single unit with ∞ PH-Plan objective 40×  Single unit with ∞ PH-Plan objective 100×  Centering eyepiece  If required, there are several magnification levels, please conta 1×  0,57× (focus adjustable)  100 W HBO Epi Fluorescence unit 6-filter disc (UV/V/B/G) including centering objective  5 W LED Epi Fluorescence unit (B/G) including centering objective  Blue  Green	HWF 10×/Ø 20 mm  WF 16×/Ø 13 mm  OO  4×/0,11 W.D. 12,1 mm  √  10×/0,25 W.D. 4,64 mm  √  20×/0,66 (spring-loaded) W.D. 0,65 mm  √  100×/1,25 (oil) (spring-loaded) W.D. 0,19 mm  √  Plan 60×/0,80 (spring-loaded) W.D. 0,19 mm  ✓  Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm  O  Plan 100×/1,15 (water) (spring-loaded) W.D. 0,18 mm  O  Butterfly 30° inclined/360° rotatable Interpupillary distance 50 - 75 mm Light distribution 100:0 Diopter adjustment: Both-sided  Stage size W.P.D 175×145 mm Travel 78×55 mm Coaxial coarse and fine focusing knobs Two slide holder  Abbe N.A. 1,25 center-adjustable (aperture diaphragm)  N.A. 0,85 - 0,91 (dry, paraboloid)  N.A. 1,3 (oil, cardioid)  20 W Halogen spare bulb (transmitted)  Analyser/Polariser  O  Quintuple hole turret with 10×/20×/40×/100× Infinity-PH-Plan objectives (complete set)  Single unit with ∞ PH-Plan objective 40×  O  Single unit with ∞ PH-Plan objective 40×  O  Single unit with ∞ PH-Plan objective 40×  O  Centering eyepiece  O  If required, there are several magnification levels, please contact our OPT  1×  O,57× (focus adjustable)  O W HBO Epi Fluorescence unit 6-filter disc (UV/V/B/G) including centering objective  5 W LED Epi Fluorescence unit 6-filter disc (UV/V/B/G) including centering objective  5 W LED Epi Fluorescence unit 6-filter disc (UV/V/B/G) including centering objective  5 W LED Epi Fluorescence unit (B/G) including centering objective	HWF 10×/Ø 20 mm         ✓         ✓           WF 16×/Ø 13 mm         ○         ○           4×/O,11 W.D. 12,1 mm         ✓         ✓           10×/0,25 W.D. 4,64 mm         ✓         ✓           20×/0,40 (spring-loaded) W.D. 0,65 mm         ✓         ✓           40×/0,66 (spring-loaded) W.D. 0,65 mm         ✓         ✓           100×/1,25 (oii) (spring-loaded) W.D. 0,19 mm         ✓         ✓           Plan 60×/0,80 (spring-loaded) W.D. 0,33 mm         ○         ○           Plan 100×/1,15 (water) (spring-loaded) W.D. 0,18 mm         ○         ○           Butterfly 30° inclined/360° rotatable Interpupillary distances 50~75 mm         ✓         ✓           Interpupillary distances 50~75 mm         ✓         ✓           Eutherfly 30° inclined/360° rotatable Interpupillary distances 50~75 mm         ✓         ✓           Interpupillary distances 50~75 mm         ✓         ✓           Eutherfly 30° inclined/360° rotatable Interpupillary distances 50~75 mm         ✓         ✓           Interpupillary distances 50~75 mm         ✓         ✓           Eutherfly 30° inclined/360° rotatable Interpupillary distances 50~75 mm         ✓         ✓           Interpupillary distances 50~75 mm         ✓         ✓         ✓           Stage size W~D 175×145 mm	HWF 10×/0 20 mm	Name	Name





Illumination unit



Sextuple filter wheel

#### **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 20 W halogen illumination unit (Philips) and a 100 W 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 3 W-LED transmitted illumination unit and 5 W-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
- As standard, the filter wheel which has up to 6 fittings is fitted with a B/G fluorescence filter (OBN 141/OBN 147) or B/G/UV/V fluorescence filter (OBN 148)
- 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 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, Veterinary practices, water analysis, breweries

#### Applications/Samples

 Specially for translucent, thin, low-contrast, challenging samples (e.g. Immunofluorescence, FISH, DAPI staining, etc.)

- · Infinity optical system
- Quintuple nosepiece
- Siedentopf  $30^{\circ}$  inclined/ $360^{\circ}$  rotatable
- · Diopter adjustment, both-sided
- Overall dimensions W×D×H 530×220×490 mm
- · Net weight approx. 13 kg

STANDARI	)									OPTION			
360°	TRINO	ABBE	HAL	ED LED	FL-HB0	FL-LED	INFINITY	230 V	1 DAY	○ PH	DF	POLAR	SCALE
360	TRINU	ADDE	OBN 147/148	OBN 141/142	OBN 147/148	OBN 141/142	INFINITI	230 V	IDAI	FR	DF	PULAN	SCALE

Model	Standard configuration								
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	ex works €			
OBN 141	Trinocular	HWF 10 x/Ø 20 mm	Infinity Plan		LED + 5W LED-Epi Fluorescence (B/G)	5190,-			
OBN 142 🔤	Trinocular	HWF 10 x/Ø 20 mm	Infinity Plan	4× / 10× / 20× /	LED + 5W LED-Epi Fluorescence (B/G/UV/V)	6570,-			
OBN 147	Trinocular	HWF 10 x/Ø 20 mm	Infinity Plan	40× / 100×	Halogen + 100W Epi Fluorescence (B/G)	5170,-			
OBN 148	Trinocular	HWF 10 x/Ø 20 mm	Infinity Plan	_	Halogen + 100W Epi Fluorescence (B/G/UV/V)	6550,-			

Model outfit			KERN	Order number	Price/piece excl. of VAT	
	OBN 141	OBN 142	OBN 147	OBN 148		ex works €
HWF 10 ×/Ø 20 mm	44	44	44	44	OBB-A1404	105,-
WF 10 ×/Ø 20 mm	00	00	00	00	OBB-A1351	95,-
WF 16 ×/Ø 13 mm	00	00	00	00	OBB-A1354	50,-
WF 10 $\times$ /Ø 20 mm (reticule 0,1 mm) (adjustable)	0	0	0	0	OBB-A1352	155,-
4 ×/0,11 W.D. 12,1 mm	✓	✓	✓	✓	OBB-A1263	120,-
10 ×/0,25 W.D. 4,64 mm	✓	✓	✓	✓	OBB-A1243	215,-
20 ×/0,4 (spring-loaded) W.D. 2,41 mm	✓	✓	✓	✓	OBB-A1250	290,-
40 ×/0,66 (spring-loaded) W.D. 0,65 mm	✓	✓	✓	✓	OBB-A1257	315,-
100 ×/1,25 (oil) (spring-loaded) W.D. 0,19 mm	✓	✓	✓	✓	OBB-A1240	340,-
Plan 60 ×/0,8 (spring-loaded) W.D. 0,33 mm	0	0	0	0	OBB-A1270	390,-
10 ×/0,3 W.D. 7,68 mm	0	0	0	0	OBB-A1634	395,-
20 ×/0,5 W.D. 1,96 mm	0	0	0	0	OBB-A1635	690,-
40 ×/0,75 (spring-loaded) W.D. 0,78 mm	0	0	0	0	OBB-A1636	1050,-
100 ×/1,3 (oil) (spring-loaded) W.D. 0,15 mm	0	0	0	0	OBB-A1637	1370,-
<ul> <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>	✓	✓	✓	✓		
<ul> <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>	✓	✓	✓	✓		
Abbe N.A. 1,25 center-adjustable (aperture diaphragm)	✓	✓	✓	✓	OBB-A1102	95,-
Swing-out condenser N.A. 0,9/0,13 center-adjustable (aperture diaphragm)	0	0	0	0	OBB-A1104	240,-
N.A. 0,85-0,91 (dry, paraboloid)	0	0	0	0	OBB-A1421	290,-
N.A. 1,3 (oil, cardioid)	0	0	0	0	OBB-A1538	660,-
20 W Halogen spare bulb (transmitted)			✓	✓	OBB-A1643	60,-
3 W LED illumination system (transmitted) (non-rechargeable)	✓	✓				
Analyser/Polariser	0	0	0	0	OBB-A1283	290,-
Quintuple hole turret with 10×/20×/40×/100× Infinity-PH-Plan objectives (complete set)	0	0	0	0	OBB-A1237	1790,-
Single unit with ∞ PH-Plan objective 10×	0	0	0	0	OBB-A1214	340,-
Single unit with ∞ PH-Plan objective 20×	0	0	0	0	OBB-A1216	390,-
Single unit with ∞ PH-Plan objective 40×	0	0	0	0	OBB-A1218	470,-
Single unit with ∞ PH-Plan objective 100×	0	0	0	0	OBB-A1212	570,-
If required, there are several magnification levels, please con	ntact our OP	TICS-Team				
1 ×	0	0	0	0	OBB-A1140	110,-
0,57 × (focus adjustable)	0	0	0	0	OBB-A1136	175,-
100 W HBO Epi Fluorescence unit 6-filter disc (UV/V/B/G) including centering objective				✓		
100 W HBO Epi Fluorescence unit, 6-filter-disc (B/G) including centering objective			✓			
5 W LED Epi Fluorescence unit 6-filter-disc (UV/V/B/G) including centering objective		✓				
5 W LED Epi Fluorescence unit 6-filter-disc (B/G) including centering objective	✓					
Blue	0	0	✓	✓		
	0	0	0	0	OBB-A1188	25,-
Green	O	O	•	•		,
Yellow	0	0	0	0	OBB-A1165	25,-
	WF 10 ×/Ø 20 mm  WF 16 ×/Ø 13 mm  WF 10 ×/Ø 20 mm (reticule 0,1 mm) (adjustable)  4 ×/0,11 W.D. 12,1 mm  10 ×/0,25 W.D. 4,64 mm  20 ×/0,4 (spring-loaded) W.D. 2,41 mm  40 ×/0,66 (spring-loaded) W.D. 0,65 mm  100 ×/1,25 (oil) (spring-loaded) W.D. 0,19 mm  Plan 60 ×/0,8 (spring-loaded) W.D. 0,33 mm  10 ×/0,3 W.D. 7,68 mm  20 ×/0,5 W.D. 1,96 mm  40 ×/0,75 (spring-loaded) W.D. 0,78 mm  100 ×/1,3 (oil) (spring-loaded) W.D. 0,15 mm  Butterfly 30° inclined/360° rotatable interpupillary distance 50 - 75 mm Light distribution 100:0 Diopter adjustment: Both-sided  Stage size W×D 175×145 mm  Travel 78×55 mm  Coaxial coarse and fine focusing knobs Two slide holder  Abbe N.A. 1,25 center-adjustable (aperture diaphragm)  N.A. 0,85-0,91 (dry, paraboloid)  N.A. 1,3 (oil, cardioid)  20 W Halogen spare bulb (transmitted)  30 W LED illumination system (transmitted)  (non-rechargeable)  Analyser/Polariser  Quintuple hole turret with 10×/20×/40×/100× Infinity-PH-Plan objectives (complete set)  Single unit with ∞ PH-Plan objective 10×  Single unit with ∞ PH-Plan objective 10×  Single unit with ∞ PH-Plan objective 100×  If required, there are several magnification levels, please cord 1×  0,57 × (focus adjustable)  100 W HBO Epi Fluorescence unit 6-filter-disc (B/G) including centering objective  5 W LED Epi Fluorescence unit 6-filter-disc (B/G) including centering objective  5 W LED Epi Fluorescence unit 6-filter-disc (B/G) including centering objective	HWF 10 ×/Ø 20 mm	HWF 10 × /0 20 mm  WF 10 × /0 20 mm  WF 10 × /0 30 mm  WF 10 × /0 20 mm (reticule 0,1 mm) (adjustable)  0 0 0  WF 10 × /0 20 mm (reticule 0,1 mm) (adjustable)  4 × /0,11 WD. 12,1 mm  10 × /0,25 W.D. 4,64 mm  20 × /0,66 (spring-loaded) W.D. 2,41 mm  40 × /0,66 (spring-loaded) W.D. 0,65 mm  40 × /0,66 (spring-loaded) W.D. 0,19 mm  40 × /0,3 W.D. 4,84 mm  0 0 0  Plan 60 × /0,8 (spring-loaded) W.D. 0,33 mm  0 0  10 × /0,25 W.D. 4,96 mm  0 0 0  20 × /0,5 W.D. 1,96 mm  0 0 0  80 × /0,5 W.D. 1,96 mm  0 0 0  100 × /1,3 (oil) (spring-loaded) W.D. 0,15 mm  0 0 0  100 × /1,3 (oil) (spring-loaded) W.D. 0,15 mm  0 0 0  100 × /1,3 (oil) (spring-loaded) W.D. 0,15 mm  0 0 0  100 × /1,3 (oil) (spring-loaded) W.D. 0,15 mm  0 0 0  20 × /0,5 W.D. 1,96 mm  40 × /0,75 (spring-loaded) W.D. 0,15 mm  0 0 0  8	HWF 10 × /0 20 mm	Non 141 Cont   Non 142 Cont   Non 148   Non 148   Non 148     Non 10 × 0 20 mm	No.   14   10   14   10   14   15   15   15   15   16   16   16   16





N.A. 0,3 Abbe Condenser with phase contrast slide



Coaxial control knobs for x/v can be fitted either left or right

#### LAB Line

## The inverted biological laboratory microscope also with fluorescence

#### **Features**

- The OCM range stands out through its design which is ergonomic, robust and extremely stable. This design, with its large working distance, is particularly suitable for the monitoring and analysis of cell cultures, for example
- A strong and continuously adjustable 30W halogen illumination unit ensures the optimum illumination in the bright field of your samples. In addition, either an Osram 100 W-HBO-(OCM 165/166) or a 5 W-LED Epi fluorescence incident illumination unit (OCM 167/168) are available to you as a fluorescence microscope for perfect illumination and stimulation of your fluorescence samples
- · A special Abbe N.A. 0.3 condenser with aperture diaphragm and large working distance of 72 mm guarantees the very best working practise in the bright field and with fluorescence applications
- · As standard, the OCM range is fitted with a trinocular eyepiece tube

- The mechanical stage including specimen holder (Ø 110 mm) means that you can work quickly and effectively. Further brackets for petri dishes are included with delivery or available as accessories
- · Further options such as, for example, a selection of eyepieces, objectives, specimen holders and other phase contrast units can be integrated as accessories
- · 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

· Research and breeding of cell cultures and tissue cultures

#### Applications/Samples

· Particularly for viewing samples in culture vessels (flasks, petri dishes, microtitre plates), translucent, thin, low-contrast, challenging samples (e.g. living mammal cells, tissue, microorganisms if necessary, immunofluorescence, FISH, DAPI staining etc.)

#### Technical data

- · Infinity optical system
- Quintuple nosepiece
- Siedentopf 45° inclined
- · Diopter adjustment: Both-sided

#### **OCM 161**

- · Overall dimensions W×D×H 304×599×530 mm
- Net weight approx. 13,5 kg

#### OCM 165-168

- · Overall dimensions W×D×H 304×782×530 mm
- · Net weight approx. 21 kg

STANDARD



Model	Standard configuration							
KERN	Tube	Eyepiece	Objective quality	Objectives	Illumination	ex works €		
OCM 161	Trinocular	HWF 10×/Ø 22 mm	Infinity Plan		30 W Halogen (transmitted)	3790,-		
OCM 165	Trinocular	HWF 10×/Ø 22 mm	Infinity Plan		30 W Halogen + 100 W Epi Fluorescence (B/G)	9180,-		
OCM 166	Trinocular	HWF 10×/Ø 22 mm	Infinity Plan	- LWD10×/LWD20×/ LWD40×/LWD20×PH	30 W Halogen + 100 W Epi Fluorescence (UV/V/B/G)	10790,-		
OCM 167	Trinocular	HWF 10×/Ø 22 mm	Infinity Plan		5W-LED + 5W LED-Epi Fluorescence (B/G)	9180,-		
OCM 168	Trinocular	HWF 10×/Ø 22 mm	Infinity Plan		5W-LED + 5W LED-Epi Fluorescence (UV/V/B/G)	10790,-		

Model outfit		Model KERN					Order number	Price/piece excl. of VAT
		OCM 161	OCM 165	OCM 166	OCM 167	OCM 168		ex works €
Eyepieces	HWF 10×/ø 22 mm (adjustable)	11	11	11	11	11	OBB-A1491	100,-
(30 mm)	HWF 10×/Ø 22 mm (reticule 0,1 mm) (adjustable)	0	0	0	0	0	OBB-A1523	155,-
Infinity	4×/0,11 W.D. 12,1 mm	0	0	0	0	0	OBB-A1600	140,-
Plan achromatic	10×/0,25 W.D. 10,3 mm	✓	✓	✓	✓	✓	OBB-A1601	210,-
Fluor objectives for long working	20×/0,45 W.D. 5,8 mm	✓	✓	✓	✓	✓	OBB-A1602	290,-
distance	40×/0,65 W.D. 5,1 mm	✓	✓	✓	✓	✓	OBB-A1603	360,-
Trinocular tube	<ul> <li>45° inclined</li> <li>Interpupillary distance 48–76 mm</li> <li>Light distribution 100:0</li> <li>Diopter adjustment: Both-sided</li> </ul>	✓	✓	✓	✓	✓		
Mechanical stage	<ul> <li>Stage size W×D 210×241 mm</li> <li>Travel128×80 mm</li> <li>Coaxial coarse and fine focusing knobs</li> <li>The x/y control knobs can be fitted either left or right</li> <li>Suitable for attaching a 96-hole microtitre plate</li> </ul>	✓	✓	1	✓	✓		
moonumour otago	Drop specimen holder (Ø 110)	✓	✓	✓	✓	✓	OBB-A1503	35,-
	Specimen holder for 35 mm culture dish	0	0	0	0	0	OBB-A1507	65,-
	Specimen holder for 54 mm culture dish	✓	✓	✓	✓	✓	OBB-A1506	65,-
	Specimen holder for 65 mm culture dish	0	0	0	0	0	OBB-A1505	65,-
Condenser	Abbe N.A. 0,3 (aperture diaphragm), LWD 72 mm	✓	✓	✓	✓	✓		
Illumination	30 W Halogen spare bulb (transmitted)	✓	✓	✓			OBB-A1650	90,-
mumination	5 W LED spare bulb (transmitted)				✓	✓	OBB-A1589	90,-
	Phase contrast slide 4×	0	0	0	0	0	OBB-A1608	95,-
	Phase contrast slide 10×	✓	✓	✓	✓	✓	OBB-A1609	95,-
	Phase contrast slide 20×/40×	✓	✓	✓	✓	✓	OBB-A1610	95,-
Phase contrast units	Infinity PH-Plan Fluor objective 4×	0	0	0	0	0	OBB-A1604	680,-
riidse contrast units	Infinity PH-Plan Fluor objective 10×	0	0	0	0	0	OBB-A1605	260,-
	Infinity PH-Plan Fluor objective 20×	✓	✓	✓	✓	✓	OBB-A1606	360,-
	Infinity PH-Plan Fluor objective 40×	0	0	0	0	0	OBB-A1607	410,-
	Centering eyepiece	✓	✓	✓	✓	✓	OBB-A1544	120,-
	100 W HBO Epi Fluorescence unit, two-hole slide (B/G)		✓					
Fluorescence unit	100 W HBO Epi Fluorescence unit, four-hole slide (UV/V/B/G)			✓				
	5 W HBO Epi Fluorescence unit, two-hole slide (B/G)				✓			
	5 W HBO Epi Fluorescence unit, four-hole slide (UV/V/B/G)					✓		
	Blue	✓	✓	✓	✓	✓	OBB-A1510	25,-
Colour filters	Green	✓	✓	✓	✓	✓	OBB-A1511	25,-
for transmitted illumination	Yellow	0	0	0	0	0	OBB-A1512	30,-
	Grey	0	0	0	0	0	OBB-A1513	25,-
C Marriet	0,5×	0	0	0	0	0	OBB-A1515	200,-
C-Mount	1×	0	0	0	0	0	OBB-A1514	130,-



## Cleaning sets for microscopes

#### Features

- This economical and fully equipped 7-piece cleaning set contains everything you need for the very best care of your microscope
- A silicon hand blower, dust brush, 60 ml of cleaning liquid, lint-free duster, optical cleaning cloths and cleaning swabs. You get all that in a high-quality KERN storage bag which you can also easily fix onto your belt
- You can use this set not only to gently clean your microscope, but also for example your camera, binoculars or all other optical surfaces
- The cleaning liquid is also available separately

Model KERN	Description	Price excl. of VAT ex works €
OCS 901	7-piece cleaning sets for microscopes und other optical instruments	35,-
OCS-A1101	Cleaning liquid	19,-

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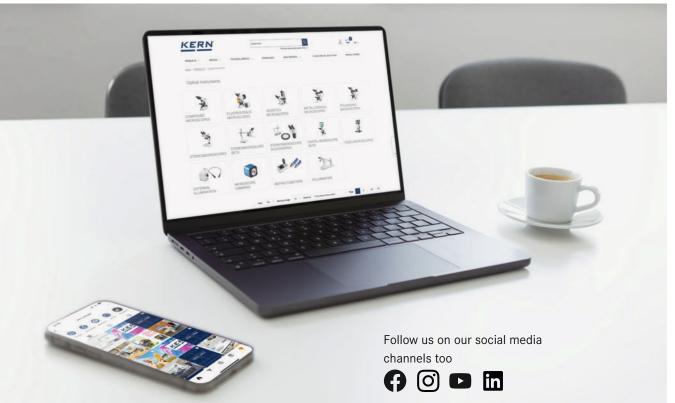
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