



Trinocular version



Objectives OBF



Simple polarising attachment

**LAB LINE**

The variable model for the flexible user in the laboratory and vocational training

**Features**

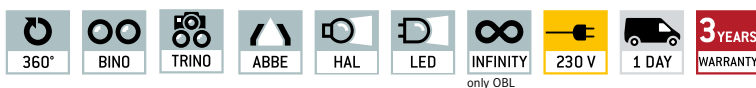
- The KERN OBF-1 and OBL-1 models are excellent and robust laboratory microscopes for all common routine applications.
- Thanks to the simple Koehler illumination, the adjustable field diaphragm and a pre-centred and height adjustable Abbe condenser with adjustable aperture diaphragm, these microscopes produce impressive images in both bright and dark field applications.
- The microscopes are equipped with wide field eyepieces, with achromatic, plan achromatic or infinity corrected E-plan objectives, depending on the model.
- These microscopes are equipped with diopter adjustment.
- Available as binocular and trinocular models.
- A nosepiece for up to four objectives and a large stage are provided as standard.
- The following optional accessories are available: A variety of eyepieces, objectives, a complete polarisation kit, a phase contrast unit, complete HBO and LED fluorescence kits and more.
- 20W halogen illumination and a 3W LED alternative version are available for illumination.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism.

**Technical data**

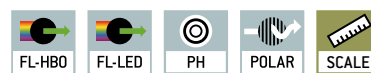
- Overall dimensions WxDxH 395x200x380 mm
- Net weight approx. 6,5 kg

Please find detailed information in the following charts.

STANDARD



OPTION



Model	Standard configuration				
	Tube	Eye pieces	Quality of objectives	Objectives	Illumination
<b>OBF 121</b>	Binocular	WF 10x / Ø 18 mm	Achromatic	4x/10x/40x/100x	6V/20W Halogen (transmitted)
<b>OBF 122</b>	Binocular	WF 10x / Ø 18 mm	Plan	4x/10x/40x/100x	6V/20W Halogen (transmitted)
<b>OBF 123</b>	Binocular	WF 10x / Ø 18 mm	Plan	4x/10x/40x/100x	3W LED (transmitting)
<b>OBF 131</b>	Trinocular	WF 10x / Ø 18 mm	Achromatic	4x/10x/40x/100x	6V/20W Halogen (transmitted)
<b>OBF 132</b>	Trinocular	WF 10x / Ø 18 mm	Plan	4x/10x/40x/100x	6V/20W Halogen (transmitted)
<b>OBF 133</b>	Trinocular	WF 10x / Ø 18 mm	Plan	4x/10x/40x/100x	3W LED (transmitting)
<b>OBL 125</b>	Binocular	WF 10x / Ø 20 mm	Infinity E-Plan	4x/10x/40x/100x	6V/20W Halogen (transmitted)
<b>OBL 127</b>	Binocular	WF 10x / Ø 20 mm	Infinity E-Plan	4x/10x/40x/100x	3W LED (transmitting)
<b>OBL 135</b>	Trinocular	WF 10x / Ø 20 mm	Infinity E-Plan	4x/10x/40x/100x	6V/20W Halogen (transmitted)
<b>OBL 137</b>	Trinocular	WF 10x / Ø 20 mm	Infinity E-Plan	4x/10x/40x/100x	3W LED (transmitting)

Model outfit		Model KERN			Order number
		OBF 121	OBF 122	OBF 123	
Eyepieces	WF 10x / Ø 18 mm	●●	●●	●●	OBB-A1347
	WF 16x / Ø 13 mm	○○	○○	○○	OBB-A1354
	WF 10x / Ø 18 mm (reticule 0,1 mm) (non-adjustable)	○	○	○	OBB-A1349
	WF 10x / Ø 18 mm (reticule 0,1 mm) (adjustable)	○	○	○	OBB-A1350
	WF 10x / Ø 20 mm (reticule 0,1 mm) (adjustable)	○	○	○	OBB-A1352
Achromatic objectives	4x / 0,10	●			OBB-A1111
	10x / 0,25	●			OBB-A1108
	40x / 0,65 (spring)	●			OBB-A1112
	100x / 1,25 (oil) (spring)	●			OBB-A1109
	20x / 0,40	○			OBB-A1110
	60x / 0,80 (spring)	○			OBB-A1113
Plan objectives	4x / 0,10		●	●	OBB-A1255
	10x / 0,25		●	●	OBB-A1238
	40x / 0,65 (spring)		●	●	OBB-A1256
	100x / 1,25 (oil) (spring)		●	●	OBB-A1239
	20x / 0,40		○	○	OBB-A1249
	60x / 0,80 (spring)		○	○	OBB-A1269
	100x / 1,0 (water) (spring)		○	○	OBB-A1441
<b>Binocular tube</b>	<ul style="list-style-type: none"> <li>• Siedentopf, 30° inclined, 360° rotatable</li> <li>• Interpupillary distance: 50 – 75 mm (for non-infinity system)</li> <li>• With diopter adjustment (one-sided)</li> </ul>	●	●	●	OBB-A1129
<b>Trinocular tube</b>	<ul style="list-style-type: none"> <li>• Siedentopf, 30° inclined, 360° rotatable</li> <li>• Interpupillary distance: 50 – 75 mm</li> <li>• Light distribution: 20:80 (for non-infinity system)</li> <li>• With diopter adjustment (one-sided)</li> </ul>	○	○	○	OBB-A1345
<b>Nosepiece</b>	Quadplex	●	●	●	
<b>Mechanical stage</b>	<ul style="list-style-type: none"> <li>• Stage size: WxD 145x140 mm</li> <li>• Travel: 76x52 mm</li> <li>• Coaxial coarse and fine focusing knobs, scale: 2 µm</li> <li>• Two slide holder</li> </ul>	●	●	●	
<b>Condenser</b>	Abbe N.A. 1,25 precentered (aperture diaphragm)	●	●	●	OBB-A1103
<b>Illumination</b>	6V / 20W Halogen (transmitting)	●	●		OBB-A1370
	3W LED illumination system (transmitting) (non-rechargeable)			●	
<b>Field diaphragm</b>	Field diaphragm	●	●	●	
<b>Darkfield condenser</b>	N.A. 0,85-0,91 (Dry)	○	○	○	OBB-A1422
<b>Polarising unit</b>	Analyser / Polariser	○	○	○	OBB-A1277
<b>Fluorescence unit</b>	100W HBO Epi Fluorescence unit, three-hole slide (B / G) including centering objective	○	○	○	OBB-A1154
	3W LED Epi Fluorescence unit, three-hole slide (B / G) including centering objective	○	○	○	OBB-A1157
<b>Filter</b>	Blue	●	●	●	
	Green	○	○	○	OBB-A1188
	Yellow	○	○	○	OBB-A1165
<b>C-Mount</b>	0,47x (focus adjustable)	○	○	○	OBB-A1135
	1x	○	○	○	OBB-A1142

● = Standard configuration

○ = Option

Model outfit		Model KERN			Order number
		OBF 131	OBF 132	OBF 133	
Eyepieces	WF 10x / Ø 18 mm	●●	●●	●●	OBB-A1347
	WF 16x / Ø 13 mm	○○	○○	○○	OBB-A1354
	WF 10x / Ø 18 mm (reticule 0,1 mm) (non-adjustable)	○	○	○	OBB-A1349
	WF 10x / Ø 18 mm (reticule 0,1 mm) (adjustable)	○	○	○	OBB-A1350
	WF 10x / Ø 20 mm (reticule 0,1 mm) (adjustable)	○	○	○	OBB-A1352
Achromatic objectives	4x / 0,10	●			OBB-A1111
	10x / 0,25	●			OBB-A1108
	40x / 0,65 (spring)	●			OBB-A1112
	100x / 1,25 (oil) (spring)	●			OBB-A1109
	20x / 0,40	○			OBB-A1110
	60x / 0,80 (spring)	○			OBB-A1113
Plan objectives	4x / 0,10		●	●	OBB-A1255
	10x / 0,25		●	●	OBB-A1238
	40x / 0,65 (spring)		●	●	OBB-A1256
	100x / 1,25 (oil) (spring)		●	●	OBB-A1239
	20x / 0,40		○	○	OBB-A1249
	60x / 0,80 (spring)		○	○	OBB-A1269
	100x / 1,0 (water) (spring)		○	○	OBB-A1441
<b>Binocular tube</b>	<ul style="list-style-type: none"> <li>Siedentopf, 30° inclined, 360° rotatable</li> <li>Interpupillary distance: 50 – 75 mm (for non-infinity system)</li> <li>With diopter adjustment (one-sided)</li> </ul>	○	○	○	OBB-A1129
<b>Trinocular tube</b>	<ul style="list-style-type: none"> <li>Siedentopf, 30° inclined, 360° rotatable</li> <li>Interpupillary distance: 50 – 75 mm</li> <li>Light distribution: 20:80 (for non-infinity system)</li> <li>With diopter adjustment (one-sided)</li> </ul>	●	●	●	OBB-A1345
<b>Nosepiece</b>	Quadplex	●	●	●	
<b>Mechanical stage</b>	<ul style="list-style-type: none"> <li>Stage size: WxD 145x140 mm</li> <li>Travel: 76x52 mm</li> <li>Coaxial coarse and fine focusing knobs, scale: 2 µm</li> <li>Two slide holder</li> </ul>	●	●	●	
<b>Condenser</b>	Abbe N.A. 1,25 precentered (aperture diaphragm)	●	●	●	OBB-A1103
<b>Illumination</b>	6V / 20W Halogen (transmitting)	●	●		OBB-A1370
	3W LED illumination system (transmitting) (non-rechargeable)			●	
<b>Field diaphragm</b>	Field diaphragm	●	●	●	
<b>Darkfield condenser</b>	N.A. 0,85-0,91 (Dry)	○	○	○	OBB-A1422
<b>Polarising unit</b>	Analyser / Polariser	○	○	○	OBB-A1277
<b>Fluorescence unit</b>	100W HBO Epi Fluorescence unit, three-hole slide (B / G) including centering objective	○	○	○	OBB-A1154
	3W LED Epi Fluorescence unit, three-hole slide (B / G) including centering objective	○	○	○	OBB-A1157
<b>Filter</b>	Blue	●	●	●	
	Green	○	○	○	OBB-A1188
	Yellow	○	○	○	OBB-A1165
<b>C-Mount</b>	0,47x (focus adjustable)	○	○	○	OBB-A1135
	1x	○	○	○	OBB-A1142

● = Standard configuration

○ = Option

Model outfit		Model KERN		Order number
		OBL 125	OBL 127	
<b>Eyepieces</b>	WF 10x / Ø 20 mm	●●	●●	OBB-A1351
	WF 16x / Ø 13 mm	○○	○○	OBB-A1354
	WF 10x / Ø 18 mm (reticule 0,1 mm)	○	○	OBB-A1349
	WF 10x / Ø 18 mm (reticule 0,1 mm) (adjustable)	○	○	OBB-A1350
	WF 10x / Ø 20 mm (reticule 0,1 mm) (adjustable)	○	○	OBB-A1352
<b>Infinity E-Plan objectives</b>	4x / 0,10	●	●	OBB-A1161
	10x / 0,25	●	●	OBB-A1159
	40x / 0,65 (spring)	●	●	OBB-A1160
	100x / 1,25 (oil) (spring)	●	●	OBB-A1158
	Plan 20x / 0,40	○	○	OBB-A1250
	Plan 60x / 0,80 (spring)	○	○	OBB-A1270
	Plan 100x / 1,0 (water) (spring)	○	○	OBB-A1437
<b>Binocular tube</b>	<ul style="list-style-type: none"> <li>• Siedentopf, 30° inclined, 360° rotatable</li> <li>• Interpupillary distance: 50 – 75 mm (for infinity system)</li> <li>• With diopter adjustment (one-sided)</li> </ul>	●	●	OBB-A1130
<b>Trinocular tube</b>	<ul style="list-style-type: none"> <li>• Siedentopf, 30° inclined, 360° rotatable</li> <li>• Interpupillary distance: 50 – 75 mm</li> <li>• Light distribution: 20:80 (for infinity system)</li> <li>• With diopter adjustment (one-sided)</li> </ul>	○	○	OBB-A1346
<b>Nosepiece</b>	Quadplex	●	●	
<b>Mechanical stage</b>	<ul style="list-style-type: none"> <li>• Stage size: WxD 145x140 mm</li> <li>• Travel: 76x52 mm</li> <li>• Coaxial coarse and fine focusing knobs, scale: 2 µm</li> <li>• Two slide holder</li> </ul>	●	●	
<b>Condenser</b>	Abbe N.A. 1,25 precentered (aperture diaphragm)	●	●	OBB-A1103
<b>Illumination</b>	6V / 20W Halogen (transmitting)	●		OBB-A1370
	3W LED illumination system (transmitting) (non-rechargeable)		●	
<b>Field diaphragm</b>	Field diaphragm	●	●	
<b>Darkfield condenser</b>	N.A. 0,85-0,91 (Dry)	○	○	OBB-A1422
<b>Polarising unit</b>	Analyser / Polariser	○	○	OBB-A1277
<b>Independent phase contrast unit</b> (including PH-condenser and PH-slides)	Independent slot with ∞ PH-Plan objective 10x	○	○	OBB-A1215
	Independent slot with ∞ PH-Plan objective 20x	○	○	OBB-A1217
	Independent slot with ∞ PH-Plan objective 40x	○	○	OBB-A1219
	Independent slot with ∞ PH-Plan objective 100x	○	○	OBB-A1213
<b>Fluorescence unit</b>	100W HBO Epi Fluorescence unit, three-hole slide (B / G) including centering objective	○	○	OBB-A1154
	3W LED Epi Fluorescence unit, three-hole slide (B / G) including centering objective	○	○	OBB-A1157
<b>Filter</b>	Blue	●	●	
	Green	○	○	OBB-A1188
	Yellow	○	○	OBB-A1165
<b>C-Mount</b>	0,47x (focus adjustable)	○	○	OBB-A1135
	1x	○	○	OBB-A1142





























● = Standard configuration

○ = Option

Model outfit		Model KERN		Order number
		OBL 135	OBL 137	
Eyepieces	WF 10x / Ø 20 mm	●●	●●	OBB-A1351
	WF 16x / Ø 13 mm	○○	○○	OBB-A1354
	WF 10x / Ø 18 mm (reticule 0,1 mm)	○	○	OBB-A1349
	WF 10x / Ø 18 mm (reticule 0,1 mm) (adjustable)	○	○	OBB-A1350
	WF 10x / Ø 20 mm (reticule 0,1 mm) (adjustable)	○	○	OBB-A1352
Infinity E-Plan objectives	4x / 0,10	●	●	OBB-A1161
	10x / 0,25	●	●	OBB-A1159
	40x / 0,65 (spring)	●	●	OBB-A1160
	100x / 1,25 (oil) (spring)	●	●	OBB-A1158
	Plan 20x / 0,40	○	○	OBB-A1250
	Plan 60x / 0,80 (spring)	○	○	OBB-A1270
	Plan 100x / 1,0 (water) (spring)	○	○	OBB-A1437
Binocular tube	<ul style="list-style-type: none"> <li>• Siedentopf, 30° inclined, 360° rotatable</li> <li>• Interpupillary distance: 50 – 75 mm (for infinity system)</li> <li>• With diopter adjustment (one-sided)</li> </ul>	○	○	OBB-A1130
Trinocular tube	<ul style="list-style-type: none"> <li>• Siedentopf, 30° inclined, 360° rotatable</li> <li>• Interpupillary distance: 50 – 75 mm</li> <li>• Light distribution: 20:80 (for infinity system)</li> <li>• With diopter adjustment (one-sided)</li> </ul>	●	●	OBB-A1346
Nosepiece	Quadplex	●	●	
Mechanical stage	<ul style="list-style-type: none"> <li>• Stage size: WxD 145x140 mm</li> <li>• Travel: 76x52 mm</li> <li>• Coaxial coarse and fine focusing knobs, scale: 2 µm</li> <li>• Two slide holder</li> </ul>	●	●	
Condenser	Abbe N.A. 1,25 precentered (aperture diaphragm)	●	●	OBB-A1103
Illumination	6V / 20W Halogen (transmitting)	●		OBB-A1370
	3W LED illumination system (transmitting) (non-rechargeable)		●	
Field diaphragm	Field diaphragm	●	●	
Darkfield condenser	N.A. 0,85-0,91 (Dry)	○	○	OBB-A1422
Polarising unit	Analyser / Polariser	○	○	OBB-A1277
Independent phase contrast unit (including PH-condenser and PH-slides)	Independent slot with ∞ PH-Plan objective 10x	○	○	OBB-A1215
	Independent slot with ∞ PH-Plan objective 20x	○	○	OBB-A1217
	Independent slot with ∞ PH-Plan objective 40x	○	○	OBB-A1219
	Independent slot with ∞ PH-Plan objective 100x	○	○	OBB-A1213
Fluorescence unit	100W HBO Epi Fluorescence unit, three-hole slide (B / G) including centering objective	○	○	OBB-A1154
	3W LED Epi Fluorescence unit, three-hole slide (B / G) including centering objective	○	○	OBB-A1157
Filter	Blue	●	●	
	Green	○	○	OBB-A1188
	Yellow	○	○	OBB-A1165
C-Mount	0,47x (focus adjustable)	○	○	OBB-A1135
	1x	○	○	OBB-A1142

● = standard configuration

○ = Option

 <b>360°</b>	<b>360° rotatable microscope head</b>	 <b>FL-HB0</b>	<b>Fluorescence illumination for compound microscopes</b> With 100 W mercury lamp and filter	 <b>AUTO ATC</b>	<b>Automatic temperature compensation</b> For measurements between 10 °C and 30 °C
 <b>MONO</b>	<b>Monocular Microscope</b> For the inspection with one eye	 <b>FL-LED</b>	<b>Fluorescence illumination for compound microscopes</b> With 3 W LED illumination and filter	 <b>IP</b>	<b>Protection against dust and water splashes IPxx</b> The type of protection is shown by the pictogram.
 <b>BINO</b>	<b>Binocular Microscope</b> For the inspection with both eyes	 <b>PH</b>	<b>Phase contrast unit</b> For a higher contrast	 <b>BATT</b>	<b>Battery operation</b> Ready for battery operation. The battery type is specified for each device.
 <b>TRINO</b>	<b>Trinocular Microscope</b> For the inspection with both eyes and the additional option for the connection of a camera	 <b>POLAR</b>	<b>Polarising unit</b> To polarise the light	 <b>ACCU</b>	<b>Rechargeable battery pack</b> Rechargeable set.
 <b>ABBE</b>	<b>Abbe Condenser</b> With high numerical aperture for the concentration and the focusing of light	 <b>INFINITY</b>	<b>Infinity system</b> Infinity corrected optical system	 <b>230 V</b>	<b>Mains adapter</b> 230V/50Hz in standard version for EU. On request GB, AUS or USA version.
 <b>HAL</b>	<b>Halogen illumination</b> For pictures bright and rich in contrast	 <b>ZOOM</b>	<b>Zoom magnification</b> For stereomicroscopes	 <b>230 V</b>	<b>Power supply</b> Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.
 <b>LED</b>	<b>LED illumination</b> Cold, energy saving and especially long-life illumination	 <b>PARALLEL</b>	<b>Parallel optical system</b> For stereomicroscopes, enables fatigue-proof working	 <b>DAYS</b>	<b>Package shipment</b> The time required to manufacture the product internally is shown in days in the pictogram.
 <b>IL</b>	<b>Incident illumination</b> For non-transparent objects	 <b>SCALE</b>	<b>Integrated scale</b> In the eyepiece	 <b>3 YEARS WARRANTY</b>	<b>Warranty</b> The warranty period is shown in the pictogram.
 <b>TL</b>	<b>Transmitting illumination</b> For transparent objects	 <b>USB 2.0</b>	<b>Integrated USB 2.0 digital camera</b> For direct transmitting of the picture to a PC		
 <b>FL</b>	<b>Fluorescence illumination</b> For stereomicroscopes	 <b>USB 3.0</b>	<b>Integrated USB 3.0 digital camera</b> For direct transmitting of the picture to a PC		

## Abbreviations

<b>C-Mount</b>	Adapter for the connection of a camera to a trinocular microscope	<b>N.A.</b>	Numerical Aperture	<b>W.D.</b>	Working Distance
<b>H(S)WF</b>	High (Super) Wide Field (Eyepiece with high eye point for wearers of glasses)	<b>SLR Kamera</b>	Single-Lens Reflex camera	<b>WF</b>	Wide Field (Field number up to Ø 22 mm for 10x eyepiece)
<b>LWD</b>	Long Working Distance	<b>SWF</b>	Super Wide Field (Field number at least Ø 23 mm for 10x eyepiece)		

## Your KERN specialist dealer:



**Wolflabs**

# Wolf Laboratories Limited

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