

KERN – Tradition and Innovation for 170 years

An independent family business, KERN since already 7 generations is synonymous with quality and reliability in customer service.

Printed in Germany  
by KERN & SOHN GmbH  
Z-60 gb-kp-2015Z

GB



MICROSCOPES & REFRACTOMETERS  
for laboratory, industry and food

fast


- 24 hours delivery service – order today, on its way tomorrow
- Sales & service hotline from 8:00 am to 6:00 pm


reliable

- 3 years warranty for instruments over € 400,-
- Certified QM system DIN EN ISO 9001:2008


versatile


- One-stop shopping: from microscope through to refractometer – everything from one supplier
- Quick as a flash, find the product you want with the “Quick-Finder” at [www.kern-sohn.com](http://www.kern-sohn.com)


 **Order hotline**  
+49 [0] 7433 9933-0


 **E-mail order**  
[info@kern-sohn.com](mailto:info@kern-sohn.com)

 **[www.kern-sohn.com](http://www.kern-sohn.com)**  
For product specification sheets, user manuals, useful information, technical glossary pictures and much more to download

 **Service hotline**  
+49 [0] 7433 9933-199

 **Fax Order**  
+49 [0] 7433 9933-146

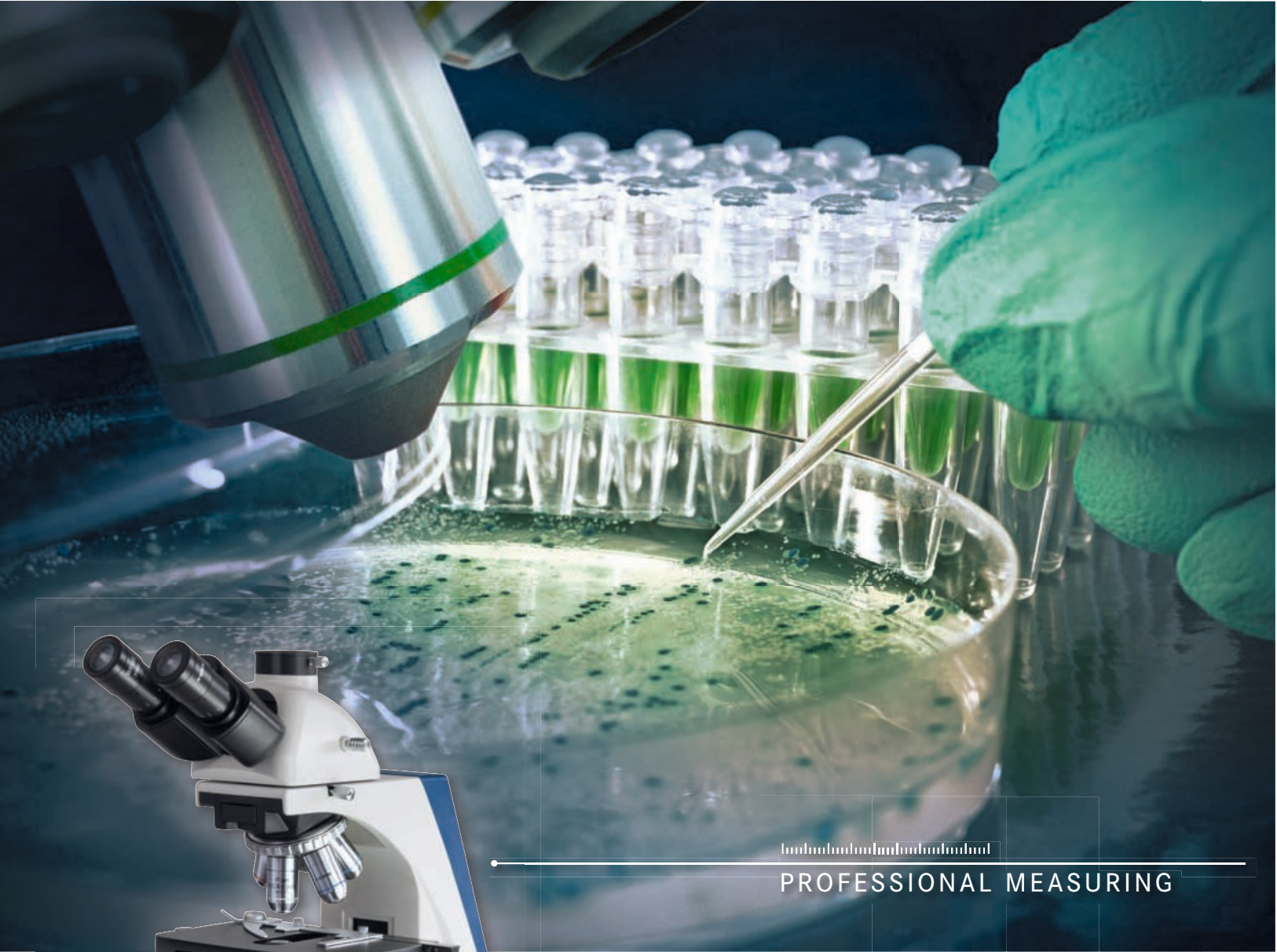
 **Online shop**  
[www.kern-sohn.com](http://www.kern-sohn.com)

 **Our team of consultants will assist you**  
from Monday to Friday  
from 8:00 am to 6:00 pm

**KERN & SOHN GmbH**  
**Microscopes and Refractometers**  
Ziegelei 1  
72336 Balingen  
Germany


Tel. +49 [0] 7433 9933-0  
Fax +49 [0] 7433 9933-149

[info@kern-sohn.com](mailto:info@kern-sohn.com)  
[www.kern-sohn.com](http://www.kern-sohn.com)




2015

Do you have questions about our products?  
Our customer consultants will be pleased to assist you:

 South East Asia  
**Corinna Klaass**  
Tel. +49 [0] 7433 9933-215  
Fax +49 [0] 7433 9933-29215  
[corinna.klaass@kern-sohn.com](mailto:corinna.klaass@kern-sohn.com)


 PT, SLO, HR, BA, RS, MK, BE, LUX  
**Taras Mikitisin**  
Tel. +49 [0] 7433 9933-143  
Fax +49 [0] 7433 9933-29143  
Mobil +49 [0] 171 5590115  
[mikitisin@kern-sohn.com](mailto:mikitisin@kern-sohn.com)

 RO, CZ, SK, HU, DE (ZIP Code 4, 5)  
**Katharina Queitsch**  
Tel. +49 [0] 7433 9933-218  
Fax +49 [0] 7433 9933-29218  
Mobil +49 [0] 151 46142894  
[katharina.queitsch@kern-sohn.com](mailto:katharina.queitsch@kern-sohn.com)

 GB, IE, MT, Scandinavia  
**Marietta Diener**  
Tel. +49 [0] 7433 9933-167  
Fax +49 [0] 7433 9933-29167  
Mobil +49 [0] 151 46143236  
[diener@kern-sohn.com](mailto:diener@kern-sohn.com)

Special questions for the OPTICS product management:

 Manager KERN Optics  
**Daniel Junger**  
Tel. +49 [0] 7433 9933-155  
Fax +49 [0] 7433 9933-149  
[daniel.junger@kern-sohn.com](mailto:daniel.junger@kern-sohn.com)


 Assistant Technical Sales & Product Management KERN Optics  
**Samuel Haasis**  
Tel. +49 [0] 7433 9933-173  
Fax +49 [0] 7433 9933-29173  
[samuel.haasis@kern-sohn.com](mailto:samuel.haasis@kern-sohn.com)


 Segment Development  
**Ingo Schlaich**  
Tel. +49 [0] 7433 9933-158  
Fax +49 [0] 7433 9933-149  
[ingo.schlaich@kern-sohn.com](mailto:ingo.schlaich@kern-sohn.com)

 Product specialist for optical instruments  
**Ralf Gutbrod**  
Tel. +49 [0] 7433 9933-306  
Fax +49 [0] 7433 9933-29306  
[ralf.gutbrod@kern-sohn.com](mailto:ralf.gutbrod@kern-sohn.com)


Quick help for all questions regarding our technical service and maintenance:

 Technical Service  
**Frank Eigler**  
Tel. +49 [0] 7433 9933-166  
Fax +49 [0] 7433 9933-195  
[eigler@kern-sohn.com](mailto:eigler@kern-sohn.com)

 Technical Service  
**Heiko Taufenbach**  
Tel. +49 [0] 7433 9933-120  
Fax +49 [0] 7433 9933-195  
[taufenbach@kern-sohn.com](mailto:taufenbach@kern-sohn.com)

 Technical Service  
**Max-Julian Matthes**  
Tel. +49 [0] 7433 9933-193  
Fax +49 [0] 7433 9933-195  
[matthes@kern-sohn.com](mailto:matthes@kern-sohn.com)

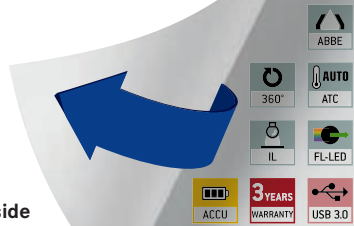
Special questions on sales & marketing:

 General Management  
**Albert Sauter**  
Tel. +49 [0] 7433 9933-157  
Fax +49 [0] 7433 9933-29157  
[albert-sauter@kern-sohn.com](mailto:albert-sauter@kern-sohn.com)

 Sales Management  
**Ulrich Ulmer**  
Tel. +49 [0] 7433 9933-160  
Fax +49 [0] 7433 9933-29160  
Mobil +49 [0] 172 7423944  
[ulmer@kern-sohn.com](mailto:ulmer@kern-sohn.com)

 Marketing Management  
**Thomas Fimpel**  
Tel. +49 [0] 7433 9933-130  
Fax +49 [0] 7433 9933-29130  
[fimpel@kern-sohn.com](mailto:fimpel@kern-sohn.com)

For an overview  
of the symbols,  
see the reverse side



# Product group index 2015



## Microscopes

1	Compound microscopes	06	<a href="#">1</a>
2	Metallurgical microscopes	22	<a href="#">2</a>
3	Polarizing microscopes	29	<a href="#">3</a>
4	Stereomicroscopes	35	<a href="#">4</a>
5	Stereomicroscope stands	64	<a href="#">5</a>
6	External light sources for stereomicroscopes	68	<a href="#">6</a>
7	Microscope cameras	70	<a href="#">7</a>



## Refractometers

8	Analogue refractometers – type: hand-held	74	<a href="#">8</a>
9	Digital refractometers – type: hand-held	80	<a href="#">9</a>
10	Abbe refractometers – type: desktop	85	<a href="#">10</a>







# Microscopes

1	Compound microscopes Compound, Fluorescence, Digital and Inverted microscopes	6
2	Metallurgical microscopes	22
3	Polarizing microscopes	29
4	Stereomicroscopes Stereo, Stereo-Zoom, Coaxial and Gem microscopes	35
5	Stereomicroscope stands	64
6	External illumination units for stereomicroscopes Ring illumination and cold light sources	68
7	Microscope cameras	70

Your KERN product specialist will be happy to help:



**Daniel Junger**  
Manager KERN Optics

Tel. +49 [0] 7433 9933-155  
Fax +49 [0] 7433 9933-149  
[daniel.junger@kern-sohn.com](mailto:daniel.junger@kern-sohn.com)

# 1 Compound microscopes

Compound, Fluorescence, Digital and Inverted microscopes





# Compound microscope KERN OBE-1



Monocular OBE 111



Objectives OBE



Simple polarising unit



Darkfield unit

## EDUCATIONAL LINE

The robust model for use in school, vocational training and laboratory

### Features

- The KERN OBE-1 is a very easy to use, robust and stable educational microscope for all common routine applications.
- Thanks to its dimmable, strong 3W LED light source, it produces impressive images for its class.
- These microscopes are fitted with wide field eyepieces, achromatic objectives, a nosepiece for up to four objectives, a large, fully-fledged stage and an Abbe condenser, all as standard.
- Available as a mono, binocular or trinocular model with diopter adjustment (binocular and trinocular models only).
- Also available in different objective-outfits upon request
- A large selection of different eyepieces and objectives, a simple polarisation unit and a dark field unit are also available.
- Height adjustment is by means of coarse and fine focusses on both sides.
- A rechargeable model, equipped with a long-life battery, is also available.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

### Technical data

- Eyepieces: WF 10x18 mm
- Objectives: 4x / 10x / 40x / 100x
- Quadplex nosepiece
- Tube 360° rotatable / 30° inclined
- Overall dimensions WxDxH 324x191x348 mm
- Net weight approx. 5,5 kg

Please find detailed information in the following charts.

#### STANDARD



only OBE 113

#### OPTION



Model	Standard configuration			Price excl. of VAT ex works €
	Optical system	Tube	Illumination	
<b>KERN</b>				
<b>OBE 111</b>	Achromatic	Monocular	3W LED (transmitting)	<b>480,-</b>
<b>OBE 112</b>	Achromatic	Binocular	3W LED (transmitting)	<b>580,-</b>
<b>OBE 113</b>	Achromatic	Binocular	3W LED (transmitting) (rechargeable battery incl., rechargeable)	<b>650,-</b>

# Compound microscope KERN OBE-1

Model outfit		Model KERN			Order number	Price excl. of VAT ex works €
		OBE 111	OBE 112	OBE 113		
Eyepieces	WF 10x / Ø 18 mm	●	●●	●●	OBB-A1347	55,-
	WF 10x / Ø 18 mm (with Pointer)	○	○	○	OBB-A1348	55,-
	WF 16x / Ø 13 mm	○	○○	○○	OBB-A1354	55,-
	WF 10x / Ø 18 mm (reticule 0,1 mm) (non-adjustable)	○	○	○	OBB-A1349	80,-
Achromatic objectives	4x / 0,10	●	●	●	OBB-A1111	45,-
	10x / 0,25	●	●	●	OBB-A1108	55,-
	40x / 0,65 (spring)	●	●	●	OBB-A1112	75,-
	100x / 1,25 (oil) (spring)	●	●	●	OBB-A1109	105,-
	20x / 0,40	○	○	○	OBB-A1110	85,-
	60x / 0,85 (spring)	○	○	○	OBB-A1113	105,-
Monocular tube	30° inclined, 360° rotatable	●			OBB-A1227	105,-
Binocular tube	<ul style="list-style-type: none"> <li>• Siedentopf, 30° inclined, 360° rotatable</li> <li>• Interpupillary distance: 50 – 75 mm</li> <li>• With diopter adjustment (one-sided)</li> </ul>		●	●	OBB-A1123	220,-
Nosepiece	Quadplex	●	●	●		
Mechanical stage	<ul style="list-style-type: none"> <li>• Stage size: WxD 125x115 mm</li> <li>• Travel: WxD 50x70 mm</li> </ul>	●	●	●		
Condenser	Abbe N.A. 1,25 (aperture diaphragm)	●	●	●	OBB-A1101	85,-
Darkfield unit	Usable for 4x – 40x objectives	○	○	○	OBB-A1148	85,-
Polarising unit	Analyser / Polariser	○	○	○	OBB-A1276	265,-
Illumination	3W LED illumination system (transmitting) (non-rechargeable)	●	●			
	3W LED illumination system (transmitting) (rechargeable)			●		

● = Standard configuration

○ = Option

# Compound microscopes KERN OBF-1 · OBL-1



Trinocular version



Objectives OBF



Simple polarising attachment



Darkfield unit

## 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 binocular microscopes are equipped with diopter adjustment.
- Trinocular versions are also available, allowing a camera to be fitted.
- 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

- Eyepieces: WF 10x18 mm / WF 10x20 mm
- Objectives: 4x / 10x / 40x / 100x
- Overall dimensions  
WxDxH 395x200x380 mm
- Net weight approx. 6,5 kg

Please find detailed information in the following charts.

#### STANDARD



only OBL

#### OPTION



Model	Standard configuration			Price excl. of VAT ex works €
	Optical system	Tube	Illumination	
<b>KERN</b>				
<b>OBF 121</b>	Finity	Binocular	6V / 20W Halogen (transmitting)	<b>800,-</b>
<b>OBF 122</b>	Finity	Binocular	6V / 20W Halogen (transmitting)	<b>920,-</b>
<b>OBF 123</b>	Finity	Binocular	3W LED (transmitting)	<b>900,-</b>
<b>OBL 125</b>	Infinity	Binocular	6V / 20W Halogen (transmitting)	<b>970,-</b>
<b>OBL 127</b>	Infinity	Binocular	3W LED (transmitting)	<b>970,-</b>



# Compound microscope KERN OBF-1

Model outfit		Model KERN			Order number	Price excl. of VAT ex works €
		OBF 121	OBF 122	OBF 123		
Eyepieces	WF 10x / Ø 18 mm	●●	●●	●●	OBB-A1347	55,-
	WF 16x / Ø 13 mm	○○	○○	○○	OBB-A1354	55,-
	WF 10x / Ø 18 mm (reticule 0,1 mm) (non-adjustable)	○	○	○	OBB-A1349	80,-
	WF 10x / Ø 18 mm (reticule 0,1 mm) (adjustable)	○	○	○	OBB-A1350	100,-
	WF 10x / Ø 20 mm (reticule 0,1 mm) (adjustable)	○	○	○	OBB-A1352	150,-
Achromatic objectives	4x / 0,10	●			OBB-A1111	45,-
	10x / 0,25	●			OBB-A1108	55,-
	40x / 0,65 (spring)	●			OBB-A1112	75,-
	100x / 1,25 (oil) (spring)	●			OBB-A1109	105,-
	20x / 0,40	○	○	○	OBB-A1110	85,-
	60x / 0,85 (spring)	○	○	○	OBB-A1113	105,-
Plan objectives	4x / 0,10		●	●	OBB-A1255	65,-
	10x / 0,25		●	●	OBB-A1238	80,-
	40x / 0,65 (spring)		●	●	OBB-A1256	120,-
	100x / 1,25 (oil) (spring)		●	●	OBB-A1239	150,-
	20x / 0,40		○	○	OBB-A1249	115,-
	60x / 0,85 (spring)		○	○	OBB-A1269	155,-
Binocular tube	<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	260,-
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 non-infinity system)</li> <li>With diopter adjustment (one-sided)</li> </ul>	○	○	○	OBB-A1345	370,-
Nosepiece	Quadplex	●	●	●		
Mechanical stage	<ul style="list-style-type: none"> <li>Stage size: WxD 145x130 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	85,-
Illumination	6V / 20W Halogen spare bulb (transmitting)	●	●		OBB-A1370	30,-
	3W LED illumination system (transmitting) (non-rechargeable)			●		
Field diaphragm	Field diaphragm	●	●	●		
Darkfield unit	N.A. 0,9 (Dry) Usable for 4x – 40x objectives	○	○	○	OBB-A1149	85,-
Polarising unit	Analyser / Polariser	○	○	○	OBB-A1277	265,-
Fluorescence unit	100W HBO Epi Fluorescence unit, three-hole slide (B / G) including centering objective	○	○	○	OBB-A1154	2350,-
	3W LED Epi Fluorescence unit, three-hole slide (B / G) including centering objective	○	○	○	OBB-A1157	3380,-
Filter	Blue (built-in)	●	●	●	OBB-A1178	30,-
	Green	○	○	○	OBB-A1194	30,-
	Yellow	○	○	○	OBB-A1203	30,-
C-Mount	0,47x (focus adjustable)	○	○	○	OBB-A1135	160,-
	1x	○	○	○	OBB-A1142	115,-

● = Standard configuration

○ = Option

# Compound microscope KERN OBL-1

Model outfit		Model KERN		Order number	Price excl. of VAT ex works €
		OBL 125	OBL 127		
Eyepieces	WF 10x / Ø 20 mm	●●	●●	OBB-A1351	95,-
	WF 16x / Ø 13 mm	○○	○○	OBB-A1354	55,-
	WF 10x / Ø 18 mm (reticule 0,1 mm)	○	○	OBB-A1349	80,-
	WF 10x / Ø 18 mm (reticule 0,1 mm) (adjustable)	○	○	OBB-A1350	100,-
	WF 10x / Ø 20 mm (reticule 0,1 mm) (adjustable)	○	○	OBB-A1352	150,-
Infinity E-Plan objectives	4x / 0,10	●	●	OBB-A1161	90,-
	10x / 0,25	●	●	OBB-A1159	145,-
	40x / 0,65 (spring)	●	●	OBB-A1160	260,-
	100x / 1,25 (oil) (spring)	●	●	OBB-A1158	335,-
	Plan 20x / 0,40	○	○	OBB-A1250	260,-
	Plan 60x / 0,85 (spring)	○	○	OBB-A1270	355,-
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	260,-
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	370,-
Nosepiece	Quadplex	●	●		
Mechanical stage	<ul style="list-style-type: none"> <li>Stage size: WxD 145x130 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	85,-
Illumination	6V / 20W Halogen spare bulb (transmitting)	●		OBB-A1370	30,-
	3W LED illumination system (transmitting) (non-rechargeable)		●		
Field diaphragm	Field diaphragm	●	●		
Darkfield unit	N.A. 0,9 (Dry) Usable for 4x – 40x objectives	○	○	OBB-A1149	85,-
Polarising unit	Analyser / Polariser	○	○	OBB-A1277	265,-
Independent phase contrast unit (including PH-condenser and PH-slides)	Independent slot with ∞ PH-Plan objective 10x	○	○	OBB-A1215	320,-
	Independent slot with ∞ PH-Plan objective 20x	○	○	OBB-A1217	360,-
	Independent slot with ∞ PH-Plan objective 40x	○	○	OBB-A1219	440,-
	Independent slot with ∞ PH-Plan objective 100x	○	○	OBB-A1213	530,-
Fluorescence unit	100W HBO Epi Fluorescence unit, three-hole slide (B / G) including centering objective	○	○	OBB-A1154	2350,-
	3W LED Epi Fluorescence unit, three-hole slide (B / G) including centering objective	○	○	OBB-A1157	3380,-
Filter	Blue	●	●	OBB-A1178	30,-
	Green	○	○	OBB-A1194	30,-
	Yellow	○	○	OBB-A1203	30,-
C-Mount	0,47x (focus adjustable)	○	○	OBB-A1135	160,-
	1x	○	○	OBB-A1142	115,-

● = Standard configuration

○ = Option

# Compound microscope KERN OBD-1

1



Easy connection to the PC,  
Laptop not included in delivery

## LAB LINE

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

### Features

- The KERN OBD-1 is an excellent and robust laboratory microscope with integral, 3 MP camera for all common routine applications.
- English-language software is included.
- 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.
- The microscopes are equipped with diopter adjustment, wide field eyepieces and infinity corrected E-plan objectives.
- A nosepiece for up to four objectives and a large stage are provided as standard.
- The following optional accessories are available: A complete polarisation kit, a phase contrast unit and a dark field unit.
- One of the central features of this variable and simultaneously robust digital microscopes is the stable and precisely adjustable mechanism.

### Technical data

- Eyepieces: WF 10x20 mm
- Objectives: 4x / 10x / 40x / 100x
- Overall dimensions  
WxDxH 394x185x419 mm
- Net weight approx. 7 kg

Please find detailed information in the following charts.

#### STANDARD



#### OPTION



Model	Standard configuration			Price excl. of VAT ex works €
	Optical system	Tube	Illumination	
KERN OBD 127	Infinity	Binocular / digital	6V / 20W Halogen (transmitting)	1600,-



# Compound microscope KERN OBD-1

Model outfit		Model KERN	Order number	Price excl. of VAT ex works €
		OBD 127		
<b>Eyepiece</b>	WF 10x / Ø 20 mm	●●	OBB-A1351	95,-
<b>Infinity E-Plan objectives</b>	4x / 0,10	●	OBB-A1161	90,-
	10x / 0,25	●	OBB-A1159	145,-
	40x / 0,65 (spring)	●	OBB-A1160	260,-
	100x / 1,25 (oil) (spring)	●	OBB-A1158	335,-
	Plan 20x / 0,40	○	OBB-A1250	260,-
	Plan 60x / 0,80 (spring)	○	OBB-A1270	355,-
<b>Digital tube Trinocular (3MP)</b>	<ul style="list-style-type: none"> <li>• 30° inclined, 360° rotatable</li> <li>• Interpupillary distance: 50 – 75 mm</li> <li>• With diopter adjustment (one-sided)</li> <li>• Light distribution: 80:20</li> <li>• Built-in digital 3MP Camera with ½" CMOS</li> <li>• USB port for PC without extra power supply</li> <li>• With English language software "MicroscopePIC" for Windows XP, 7, Vista</li> </ul>	●	OBB-A1126	760,-
<b>Nosepiece</b>	Quadplex	●		
<b>Mechanical stage</b>	<ul style="list-style-type: none"> <li>• Stage size: WxD 145x130 mm,</li> <li>• Travel: 76x52 mm</li> <li>• Two slide holder</li> </ul>	●		
<b>Condenser</b>	Abbe N.A. 1,25 precentered (aperture diaphragm)	●	OBB-A1103	85,-
<b>Illumination</b>	6V / 20W Halogen spare bulb (transmitting)	●	OBB-A1370	30,-
<b>Field diaphragm</b>	Field diaphragm	●		
<b>Darkfield unit</b>	N.A. 0,9 (Dry) Usable for 4x – 40x objectives	○	OBB-A1149	85,-
<b>Polarising unit</b>	Analyser / Polariser	○	OBB-A1277	265,-
<b>Independent phase contrast unit</b> (including PH-condenser and PH-slides)	Independent slot with ∞ PH-Plan objective 10x	○	OBB-A1215	320,-
	Independent slot with ∞ PH-Plan objective 20x	○	OBB-A1217	360,-
	Independent slot with ∞ PH-Plan objective 40x	○	OBB-A1219	440,-
	Independent slot with ∞ PH-Plan objective 100x	○	OBB-A1213	530,-
<b>Filter</b>	Blue (built-in)	●	OBB-A1178	30,-

● = Standard configuration

○ = Option

# Compound microscope KERN OBN-13



Nosepiece and stage



Abbe condenser center-adjustable, also available with swing-out lens



Quintuple hole turret with 10x / 20x / 40x / 100x Infinity-PH-Plan objectives (complete set)

## PROFESSIONAL LINE

The flexible expandable model for the experienced user

### Features

- The KERN OBN-13 is an excellent and stable laboratory microscope for all common routine applications for impressive images.
- These trinocular microscopes are equipped with wide field eyepieces with a large field of view, diopter adjustment on both sides and infinity corrected plan achromatic objectives as standard.
- The professional Koehler illumination is easily adjustable. It includes an adjustable field diaphragm, and a centerable and height adjustable Abbe condenser with adjustable aperture diaphragm. This provides impressive images in both bright and dark field applications.
- A nosepiece for up to five 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 swing-out condenser, diverse phase contrast sets, complete HBO and LED fluorescence kits, and more.
- One of the central features of this highly variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

### Technical data

- Eyepieces: WF 10x20 mm
- Objectives: 4x / 10x / 20x / 40x / 100x
- Overall dimensions  
WxDxH 390x200x400 mm
- Net weight approx. 10 kg

Please find detailed information in the following charts.

#### STANDARD



#### OPTION



Model	Standard configuration			Price excl. of VAT ex works €
	Optical system	Tube	Illumination	
KERN OBN 132	Infinity	Trinocular	6V / 20W Halogen (transmitting)	1480,-

# Compound microscope KERN OBN-13

Model outfit		Model KERN	Order number	Price excl. of VAT ex works €
		OBN 132		
Eyepieces	WF 10x / Ø 18 mm	○○	OBB-A1347	55,-
	WF 10x / Ø 20 mm	●●	OBB-A1351	95,-
	WF 16x / Ø 13 mm	○○	OBB-A1354	55,-
	WF 10x / Ø 18 mm (reticule 0,1 mm) (adjustable)	○	OBB-A1350	100,-
	WF 10x / Ø 20 mm (reticule 0,1 mm) (adjustable)	○	OBB-A1352	150,-
Infinity Plan achromatic objectives	4x / 0,10	●	OBB-A1263	115,-
	10x / 0,25	●	OBB-A1243	190,-
	20x / 0,40	●	OBB-A1250	260,-
	40x / 0,66 (spring)	●	OBB-A1257	280,-
	100x / 1,25 (oil) (spring)	●	OBB-A1240	320,-
	2,5x / 0,07	○	OBB-A1247	265,-
	60x / 0,80 (spring)	○	OBB-A1270	355,-
Tube Binocular	• Siedentopf, 30° inclined, 360° rotatable • Interpupillary distance: 50 – 75 mm • With diopter adjustment (both-sided)	○	OBB-A1125	260,-
Trinocular tube	• Siedentopf, 30° inclined, 360° rotatable • Interpupillary distance: 50 – 75 mm • Light distribution: 100:0 • With diopter adjustment (both-sided)	●	OBB-A1344	420,-
Nosepiece	Quintuple	●		
Mechanical stage	• Stage size: WxD 175x145 mm • Travel: 78x55 mm • Coaxial coarse and fine focusing knobs • Two slide holder	●		
Condenser	Abbe N.A. 1,25 center-adjustable (aperture diaphragm)	●	OBB-A1102	85,-
	Swing-out condenser N.A. 0,9 / 0,13 center-adjustable (aperture diaphragm)	○	OBB-A1104	215,-
Koehler illumination	6V / 20W Halogen spare bulb (transmitting)	●	OBB-A1370	30,-
Polarising unit	Analyser / Polariser	○	OBB-A1283	265,-
Phase contrast unit	Quintuple hole turret with 10x / 20x / 40x / 100x Infinity-PH-Plan objectives (complete set)	○	OBB-A1237	1650,-
	Independent slot with ∞ PH-Plan objective 10x	○	OBB-A1214	320,-
	Independent slot with ∞ PH-Plan objective 20x	○	OBB-A1216	360,-
	Independent slot with ∞ PH-Plan objective 40x	○	OBB-A1218	440,-
	Independent slot with ∞ PH-Plan objective 100x	○	OBB-A1212	530,-
Darkfield unit	N.A. 0,9 (Dry) Usable for 4x – 40x objectives	○	OBB-A1150	85,-
C-Mount	1x	○	OBB-A1140	105,-
	0,57x (focus adjustable)	○	OBB-A1136	160,-
Fluorescence unit	100W HBO Epi Fluorescence unit 6-filter disc (UV / V / B / G) including centering objective	○	OBB-A1155	4070,-
	100W HBO Epi Fluorescence unit, two-hole slide (B / G) including centering objective	○	OBB-A1153	2350,-
	3W LED Epi Fluorescence unit (B / G) including centering objective	○	OBB-A1156	3380,-
Field diaphragm	Field diaphragm	●		
Filter	Blue	●	OBB-A1170	30,-
	Green	○	OBB-A1187	30,-
	Yellow	○	OBB-A1201	30,-

● = Standard configuration

○ = Option



# Fluorescence microscope KERN OBN-14



OBN 147



Illumination unit



Quintuple filter disc OBN 148

## PROFESSIONAL LINE

The fluorescing model for the flexible and professional user

### Features

- The KERN OBN-14 is based on the basic KERN OBN-13 model.
- It is an excellent and stable laboratory microscope for all common routine applications in light and fluorescence microscopy, providing impressive images.
- These trinocular microscopes are equipped with wide field eyepieces with a large field of view, diopter adjustment on both sides and infinity corrected plan achromatic objectives as standard.
- Either blue / green or blue / green / UV / V fluorescence filters, and a centering objective for the fluorescence illumination are included with the microscope, depending on the model.
- The professional Koehler illumination is easily adjustable. It includes an adjustable field diaphragm, and a centerable and height

adjustable Abbe condenser with adjustable aperture diaphragm. This provides impressive images in either bright or dark field applications.

- A nosepiece for up to 5 objectives and a large stage are also provided as standard.
- The following optional accessories are available: A variety of eyepieces, objectives, a complete polarisation kit, a swing-out condenser, a phase contrast set, and more.
- One of the central features of this highly variable and simultaneously robust series of fluorescence microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

### Technical data

- Eyepieces: WF 10x20 mm
- Objectives: 4x / 10x / 20x / 40x / 100x
- Overall dimensions  
WxDxH 306x200x460 mm
- Net weight approx. 17 kg

Please find detailed information in the following charts.

#### STANDARD



#### OPTION



Model	Standard configuration			Price excl. of VAT ex works €
	Optical system	Tube	Illumination	
<b>KERN</b>				
<b>OBN 147</b>	Infinity	Trinocular	Halogen + 100W Epi Fluorescence (B / G)	<b>3860,-</b>
<b>OBN 148</b>	Infinity	Trinocular	Halogen + 100W Epi Fluorescence (B / G / UV / V)	<b>5490,-</b>

# Fluorescence microscope KERN OBN-14

Model outfit		Model KERN		Order number	Price excl. of VAT ex works €
		OBN 147	OBN 148		
Eyepieces	WF 10x / Ø 20 mm	●●	●●	OBB-A1351	95,-
	WF 16x / Ø 13 mm	○○	○○	OBB-A1354	55,-
	WF 10x / Ø 18 mm (reticule 0,1 mm) (adjustable)	○	○	OBB-A1350	100,-
	WF 10x / Ø 20 mm (reticule 0,1 mm) (adjustable)	○	○	OBB-A1352	150,-
Infinity Plan achromatic objectives	4x / 0,10	●	●	OBB-A1263	115,-
	10x / 0,25	●	●	OBB-A1243	190,-
	20x / 0,40	●	●	OBB-A1250	260,-
	40x / 0,66 (spring)	●	●	OBB-A1257	280,-
	100x / 1,25 (oil) (spring)	●	●	OBB-A1240	320,-
	2,5x / 0,07	○	○	OBB-A1247	265,-
	60x / 0,80 (spring)	○	○	OBB-A1270	355,-
Binocular tube	<ul style="list-style-type: none"> <li>Siedentopf, 30° inclined, 360° rotatable</li> <li>Interpupillary distance: 50 – 75 mm</li> <li>With diopter adjustment (both-sided)</li> </ul>	○	○	OBB-A1125	260,-
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: 100:0</li> <li>With diopter adjustment (both-sided)</li> </ul>	●	●	OBB-A1344	420,-
Nosepiece	Quintuple	●	●		
Mechanical stage	<ul style="list-style-type: none"> <li>Stage size: WxD 175x145 mm, Travel: 78x55 mm</li> <li>Coaxial coarse and fine focusing knobs</li> <li>Two slide holder</li> </ul>	●	●		
Condenser	Abbe N.A. 1,25 center-adjustable (aperture diaphragm)	●	●	OBB-A1102	85,-
	Swing-out condenser N.A. 0,9 / 0,13 center-adjustable (aperture diaphragm)	○	○	OBB-A1104	215,-
Koehler illumination	6V / 20W Halogen spare bulb (transmitting)	●	●	OBB-A1370	30,-
Polarising unit	Analyser / Polariser	○	○	OBB-A1283	265,-
Phase contrast unit	Quintuple hole turret with 10x / 20x / 40x / 100x Infinity-PH-Plan objectives (complete set)	○	○	OBB-A1237	1650,-
	Independent slot with ∞ PH-Plan objective 10x	○	○	OBB-A1214	320,-
	Independent slot with ∞ PH-Plan objective 20x	○	○	OBB-A1216	360,-
	Independent slot with ∞ PH-Plan objective 40x	○	○	OBB-A1218	440,-
	Independent slot with ∞ PH-Plan objective 100x	○	○	OBB-A1212	530,-
Darkfield unit	N.A. 0,9 (Dry) Usable for 4x – 40x objectives	○	○	OBB-A1150	85,-
C-Mount	1x	○	○	OBB-A1140	105,-
	0,57x (focus adjustable)	○	○	OBB-A1136	160,-
Fluorescence unit	100W HBO Epi Fluorescence unit 6-filter disc (UV / V / B / G) including centering objective		●	OBB-A1155	4070,-
	100W HBO Epi Fluorescence unit, two-hole slide (B / G) including centering objective	●		OBB-A1153	2350,-
Field diaphragm	Field diaphragm	●	●		
Filter	Blue	●	●	OBB-A1170	30,-
	Green	○	○	OBB-A1187	30,-
	Yellow	○	○	OBB-A1201	30,-

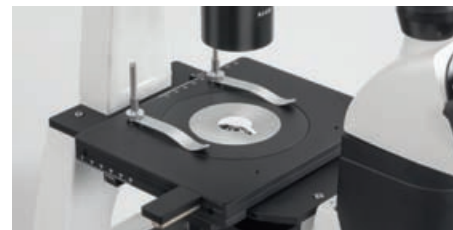
● = Standard configuration

○ = Option

# Inverted microscope KERN OCL-2



Trinocular head



Stage



Phase contrast slide

Coaxial pinion drive  
for x/y  
Coarse and fine height  
adjustment

## LAB LINE

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

### Features

- The KERN OCL-2 is a very easy to use, robust and stable inverted microscope for all common routine applications, producing impressive images.
- These trinocular microscopes are equipped with wide field eyepieces with a large field of view, diopter adjustment and infinity corrected plan achromatic objectives as standard.
- A nosepiece for up to 5 objectives, a large, mechanically adjusted stage and a phase contrast set are also provided as standard with the microscope.
- The Abbe condenser with its aperture diaphragm and the long 72 mm working distance, together with the fine, 0,001 mm scale focus, sets standards in this microscope class.
- The following optional accessories are available: A variety of eyepieces, objectives for a large working distance, a fixed stage and much more.
- One of the central features of this variable and simultaneously robust series of inverted microscopes is the stable and precisely adjustable mechanism.
- This model is available for both, right- and lefthanded persons.

### Technical data

- Eyepieces: HWF 10x20 mm
- Objectives: 10x / 20x / 40x und 20xPH
- Overall dimensions  
WxDxH 220x510x530 mm
- Net weight approx. 13 kg

#### OCL 251

- Right handed version

#### OCL 252

- Left handed version

Please find detailed information in the following charts.

#### STANDARD



#### OPTION



Model	Standard configuration			Price excl. of VAT ex works €
	Optical system	Tube	Illumination	
<b>KERN</b>				
<b>OCL 251</b>	Infinity	Trinocular	6V / 30W Halogen (transmitting)	<b>3100,-</b>
<b>OCL 252</b>	Infinity	Trinocular	6V / 30W Halogen (transmitting)	<b>3100,-</b>



# Inverted microscope KERN OCL-2

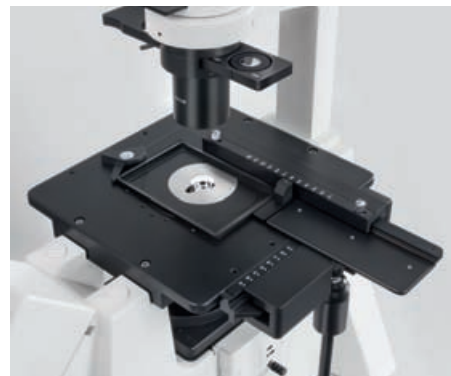
Model outfit			Model KERN		Order number	Price excl. of VAT ex works €
			OCL 251	OCL 252		
Eyepieces	HWF 10x / Ø 20 mm		●●	●●	OBB-A2403	55,-
	WF 16x / Ø 13 mm		○○	○○	OBB-A2406	40,-
	HWF 10x / Ø 18 mm (reticule 0,1 mm)		○	○	OBB-A2404	190,-
	HWF 10x / Ø 20 mm (reticule 0,1 mm)		○	○	OBB-A2410	110,-
	HWF 10x / Ø 22 mm (Only in combination with tube OBB-A2407 / OBB-A2408)		○○	○○	OBB-A2409	70,-
Infinity Plan achromatic objectives (for long working distance)	4x / 0,13		○	○	OBB-A2413	100,-
	10x / 0,25		●	●	OBB-A2414	160,-
	20x / 0,40		●	●	OBB-A2415	225,-
	40x / 0,60		●	●	OBB-A2416	325,-
	60x / 0,70		○	○	OBB-A2417	425,-
Binocular tube	<ul style="list-style-type: none"> <li>• 30° inclined</li> <li>• Interpupillary distance: 52 – 75 mm</li> <li>• With diopter adjustment (one-sided)</li> </ul>		○	○	OBB-A2401	135,-
	<ul style="list-style-type: none"> <li>• 30° inclined</li> <li>• Interpupillary distance: 52 – 75 mm</li> <li>• With diopter adjustment (one-sided)</li> <li>• (Only in combination with tube OBB-A2409)</li> </ul>		○	○	OBB-A2407	160,-
Trinocular tube	<ul style="list-style-type: none"> <li>• 30° inclined</li> <li>• Interpupillary distance: 52 – 75 mm</li> <li>• Light distribution: 80:20</li> <li>• With diopter adjustment (one-sided)</li> </ul>		●	●	OBB-A2402	205,-
	<ul style="list-style-type: none"> <li>• 30° inclined</li> <li>• Interpupillary distance: 52 – 75 mm</li> <li>• Light distribution: 80:20</li> <li>• With diopter adjustment (one-sided)</li> <li>• (Only in combination with tube OBB-A2409)</li> </ul>		○	○	OBB-A2408	245,-
Nosepiece	Quintuple		●	●		
Mechanical stage	<ul style="list-style-type: none"> <li>• Stage size: WxD 180x155 mm,</li> <li>• Travel: 80x50 mm</li> <li>• Coaxial coarse and fine focusing knobs</li> </ul>	Right handed v.	●			
		Left handed v.		●		
	Drop specimen holder (Ø 110)		●	●	OBB-A2425	65,-
	Specimen holder (Clip)		●	●	OBB-A2426	50,-
Fixed stage	Stage size: WxD 240x180 mm		○	○	OBB-A2424	150,-
	Drop specimen holder (Ø 110)		○	○	OBB-A2425	65,-
Condenser	Abbe N.A. 0,3 (aperture diaphragm), LWD 72 mm		●	●		
Illumination	6V / 30W Halogen spare bulb (transmitting)		●	●	OBB-A2440	55,-
Phase contrast unit	Phase contrast slide		●	●	OBB-A2432	105,-
	Infinity plan achromatic PH-objective 10x		○	○	OBB-A2418	190,-
	Infinity plan achromatic PH-objective 20x		●	●	OBB-A2419	260,-
	Infinity plan achromatic PH-objective 40x		○	○	OBB-A2420	360,-
	Centering telescope		●	●	OBB-A2405	95,-
C-Mount	0,5x		○	○	OBB-A2437	85,-
	1x		○	○	OBB-A2438	55,-
	0,25x		○	○	OBB-A2439	115,-
Filter	Filter holder		●	●	OBB-A1357	55,-
	Blue (Ø 34 mm)		●	●	OBB-A2434	35,-
	Green (Ø 34 mm)		●	●	OBB-A2435	35,-
	Yellow (Ø 34 mm)		●	●	OBB-A2436	35,-

● = Standard configuration

○ = Option

# Inverted microscope KERN OCO-2

1



Stage



Camera connection and coaxial coarse and fine focusing knob

## PROFESSIONAL LINE

The professional inverted model for the experienced user in the laboratory

### Features

- The KERN OCO-2 models are very easy to use, robust and stable inverted microscopes for all common routine applications, producing impressive images.
- These binocular microscopes are equipped with wide field eyepieces with a large field of view, diopter adjustment and infinity corrected plan achromatic objectives as standard.
- A nosepiece for up to 5 objectives, a camera mount including a 0,5x C mount adapter and a phase contrast set are also provided as standard with the microscope.
- A large, mechanically adjustable or fixed stage is fitted, depending on the model.
- The Abbe condenser with its aperture diaphragm and the long 72 mm working distance, together with the fine, 0,001 mm scale focus, round off the features of this high-quality microscope.
- The following optional accessories are available: A variety of eyepieces, objectives for a large working distance, a fixed stage and much more.
- One of the central features of this variable and simultaneously robust series of inverted microscopes is the stable and precisely adjustable mechanism.

### Technical data

- Eyepieces: WF 10x20 mm
- Objectives: 10x / 20x / 40x und 20xPH
- Connection for cameras
- Overall dimensions  
WxDxH 350x600x600 mm
- Net weight approx. 26,5 kg

Please find detailed information in the following charts.

#### STANDARD



#### OPTION



Model	Standard configuration			Price excl. of VAT ex works €
	Optical system	Tube	Illumination	
<b>KERN</b>				
<b>OCO 255</b>	Infinity	Binocular	6V / 30W Halogen (transmitting)	<b>4930,-</b>
<b>OCO 256</b>	Infinity	Binocular	6V / 30W Halogen (transmitting)	<b>5135,-</b>

# Inverted microscope KERN OCO-2

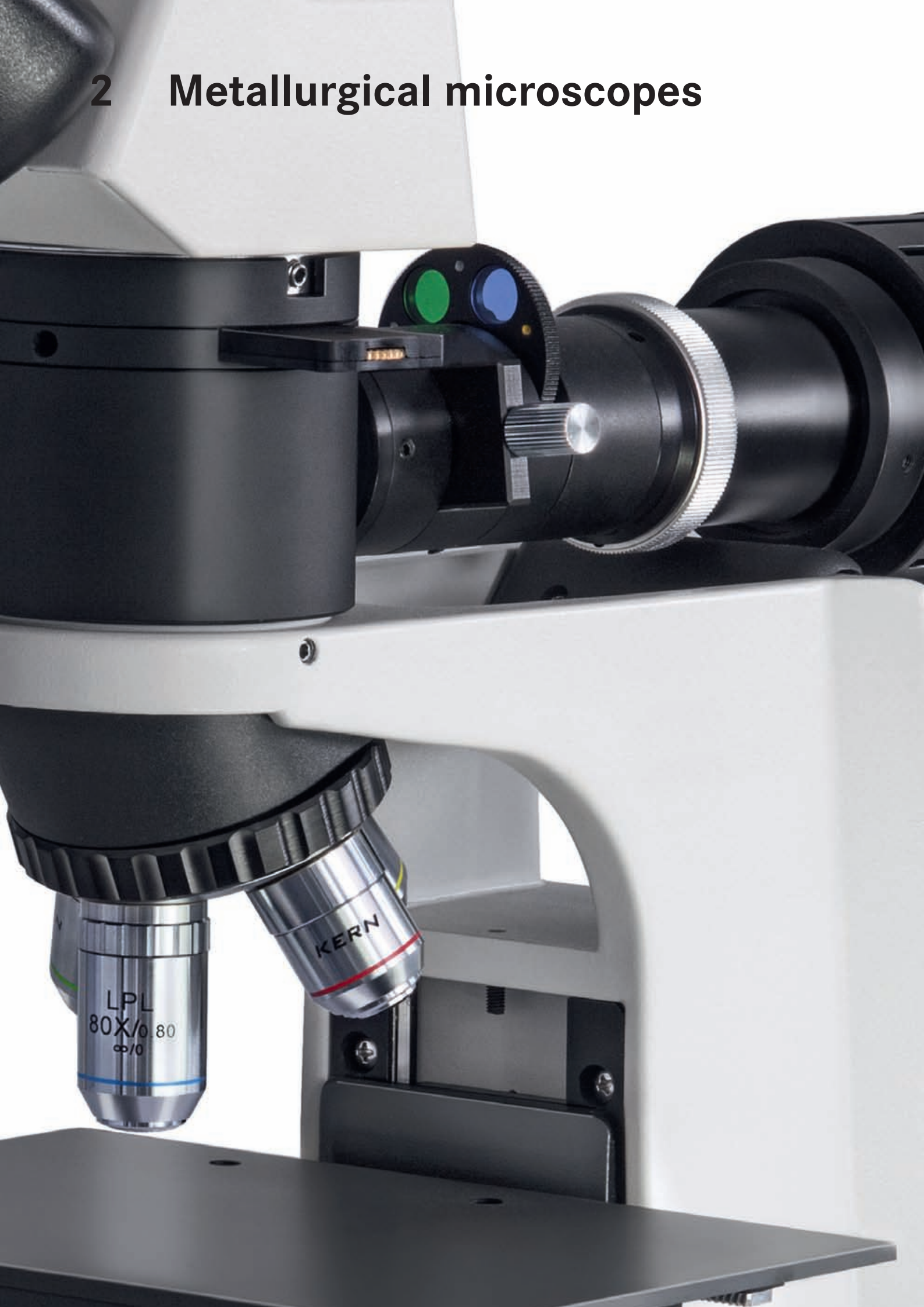
Model outfit		Model KERN		Order number	Price excl. of VAT ex works €
		OCO 255	OCO 256		
Eyepieces	HWF 10x / Ø 20 mm	●●	●●	OBB-A2503	55,-
	WF 16x / Ø 13 mm	○○	○○	OBB-A2507	35,-
	HWF 10x / Ø 20 mm (reticule 0,1 mm)	○	○	OBB-A2410	110,-
	HWF 10x / Ø 22 mm	○○	○○	OBB-A2409	70,-
Infinity Plan achromatic objectives (for long working distance)	4x / 0,13	○	○	OBB-A2413	100,-
	10x / 0,25	●	●	OBB-A2414	160,-
	20x / 0,40	●	●	OBB-A2415	225,-
	40x / 0,60	●	●	OBB-A2416	325,-
	60x / 0,70	○	○	OBB-A2417	425,-
Binocular tube	• 45° inclined • Interpupillary distance: 52 – 75 mm • With diopter adjustment (one-sided)	●	●	OBB-A2501	270,-
	• 45° inclined • Interpupillary distance: 48 – 75 mm • With diopter adjustment (one-sided)	○	○	OBB-A2502	305,-
Nosepiece	Quintuple	●	●		
Mechanical stage	• Stage size: WxD 350x208 mm • Travel: 50x50 mm • Coaxial coarse and fine focusing knobs		●		
	Drop specimen holder (Ø 118)		●	OBB-A2520	100,-
Fixed stage	• Stage size: WxD 240x260 mm • Travel: 135x85 mm	●			
	Drop specimen holder (Ø 118)	●		OBB-A2520	100,-
	Specimen holder for 54 mm culture dish	●		OBB-A2522	75,-
	Specimen holder for 96-hole microtitre plate	○		OBB-A2521	100,-
	Specimen holder for 60 mm culture dish	○		OBB-A2560	75,-
	Specimen holder for 65 mm culture dish	○		OBB-A2561	75,-
	Specimen holder for 30 mm culture dish	○		OBB-A2562	75,-
Condenser	Abbe N.A. 0,3 (aperture diaphragm) LWD 72 mm	●	●		
Illumination	6V / 30W Halogen spare bulb (transmitting)	●	●	OBB-A2440	55,-
Phase contrast unit	Phase contrast slide	●	●	OBB-A2432	105,-
	Infinity plan achromatic PH-objective 10x	○	○	OBB-A2418	190,-
	Infinity plan achromatic PH-objective 20x	●	●	OBB-A2419	260,-
	Infinity plan achromatic PH-objective 40x	○	○	OBB-A2420	360,-
	Centering telescope	●	●	OBB-A2506	95,-
C-Mount	0,5x	●	●	OBB-A2531	85,-
	0,25x	○	○	OBB-A2532	115,-
Filter	Filter holder	●	●	OBB-A1357	55,-
	Blue (Ø 34 mm)	●	●	OBB-A2434	35,-
	Green (Ø 34 mm)	●	●	OBB-A2435	35,-
	Yellow (Ø 34 mm)	●	●	OBB-A2436	35,-

● = Standard configuration

○ = Option



## 2 Metallurgical microscopes



# Metallurgical microscope KERN OKM-1



Illumination unit with filter disc



Stage and objectives

## LAB LINE MET

The metallurgical model for the experienced user

### Features

- The KERN OKM-1 is an excellent and stable metallurgical reflecting light microscope.
- It is suitable for all common routine applications, producing excellent images thanks to its strong 30 W halogen illumination.
- These microscopes are equipped with infinity corrected, plan achromatic objectives as standard.
- A trinocular head is optionally available, allowing a camera to be fitted.
- A nosepiece for up to four objectives and a large stage are provided as standard.
- The following optional accessories are available: A variety of lenses, LWD objectives for long working distances, plus a complete polarisation kit and more.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism.

### Technical data

- Eyepieces: WF 10x18 mm
- Objectives: 5x / 10x and LWD 20x / 40x
- Overall dimensions  
WxDxH 240x170x400 mm
- Net weight basic configuration approx. 8 kg

Please find detailed information in the following charts.

#### STANDARD

**360°**

**BINO**

**HAL**

**INFINITY**

**SCALE**

**230 V**

**1 DAY**

**3 YEARS  
WARRANTY**

#### OPTION

**TRINO**

**POLAR**

Model	Standard configuration			Price excl. of VAT ex works €
	Optical system	Tube	Illumination	
KERN OKM 172	Infinity	Binocular	6V / 30W Halogen (reflecting)	1950,-

# Metallurgical microscope KERN OKM-1

Model outfit		Model KERN	Order number	Price excl. of VAT ex works €
		OKM 172		
Eyepieces	WF 10x / Ø 18 mm	●	OBB-A1347	55,-
	WF 10x / Ø 18 mm (reticule 0,1 mm) (non-adjustable)	●	OBB-A1349	80,-
	WF 5x / Ø 20 mm	○	OBB-A1355	70,-
	WF 12,5x / Ø 14 mm	○	OBB-A1353	85,-
	WF 16x / Ø 13 mm	○	OBB-A1354	55,-
Infinity Plan achromatic objectives (no cover glass)	5x / 0,11 W.D. 12,10 mm	●	OBB-A1268	110,-
	10x / 0,25 W.D. 4,75 mm	●	OBB-A1244	190,-
	20x / 0,40 (spring) W.D. 2,14 mm	○	OBB-A1251	260,-
	40x / 0,65 (spring) W.D. 0,45 mm	○	OBB-A1258	280,-
Infinity Plan achromatic objectives (no cover glass) for long working distance	20x / 0,40 (spring) W.D. 8,35 mm	●	OBB-A1252	290,-
	40x / 0,65 (spring) W.D. 3,90 mm	●	OBB-A1259	415,-
	50x / 0,70 (spring) W.D. 1,95 mm	○	OBB-A1266	460,-
	80x / 0,80 (spring) W.D. 0,85 mm	○	OBB-A1271	510,-
Binocular tube	<ul style="list-style-type: none"> <li>• Siedentopf, 30° inclined, 360° rotatable</li> <li>• Interpupillary distance: 50 – 75 mm</li> <li>• With diopter adjustment (one-sided)</li> </ul>	●	OBB-A1130	260,-
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: 80:20</li> <li>• With diopter adjustment (one-sided)</li> </ul>	○	OBB-A1346	370,-
Nosepiece	Quadplex	●		
Mechanical stage	<ul style="list-style-type: none"> <li>• Stage size: WxD 200x140 mm</li> <li>• Travel: 76x52 mm</li> <li>• Coaxial coarse and fine focusing knobs</li> </ul>	●		
Illumination	6V / 30W Halogen spare bulb (reflecting)	●	OBB-A1372	30,-
Filter unit	5-filter unit (Blue, Green, Amber, Grey, Empty)	●		
Polarising unit	Analyser / Polariser	●		
C-Mount	1x	○	OBB-A1142	115,-
	0,47x (focus adjustable)	○	OBB-A1135	160,-

● = Standard configuration

○ = Option



Stage OKN



Stage OKO



Illumination unit

PROFESSIONAL LINE MET

The metallurgical model for the flexible and professional user

Features

- The KERN OKN-1 and OKO-1 microscope series are metallurgical microscopes for professional applications.
- They are available with two illumination systems: Standard halogen illumination (50 W) and premium illumination (100 W). They are both suitable for all common routine applications and produce impressive images.
- Additional transmitted light halogen illumination is available for some models.
- These microscope models are equipped with infinity corrected, plan achromatic objectives as standard.
- A nosepiece for up to 5 objectives, a large stage and a complete polarisation kit are standard on the OKN and OKO models.
- The transmitted light models equipped with Koehler illumination have an additional centerable and height adjustable Abbe condenser and an adjustable aperture diaphragm.
- These binocular microscopes are equipped with diopter adjustment and are available with a variety of eyepieces.
- A trinocular head is optionally available, allowing a camera to be fitted.
- The following optional accessories are available: A variety of eyepieces, LWD objectives for long working distances and more.
- One of the central features of this highly variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

Technical data

- Eyepieces: 3x WF 10x18 mm
- Objectives: 5x / 10x / (100x) and LWD 20x / 40x
- Overall dimensions WxDxH 306x200x448 mm
- Net weight basic configuration approx. 12 kg

Please find detailed information in the following charts.

STANDARD



OPTION

Model	Standard configuration			Price excl. of VAT ex works €
	Optical system	Tube	Illumination	
OKN 175	Infinity	Binocular	12V / 50W Halogen (reflecting)	2380,-
OKO 176	Infinity	Binocular	12V / 50W Halogen (reflecting) + 6V / 20W (transmitting)	2960,-
OKN 177	Infinity	Binocular	12V / 100W Halogen (reflecting)	2600,-
OKO 178	Infinity	Binocular	12V / 100W Halogen (reflecting) + 6V / 20W (transmitting)	3180,-



# Metallurgical microscopes KERN OKN-1 · OKO-1

2

Model outfit		Model KERN				Order number	Price excl. of VAT ex works €
		OKN 175	OKO 176	OKN 177	OKO 178		
Eyepieces	WF 10x / Ø 18 mm	●●	●●	●●	●●	OBB-A1347	55,-
	WF 10x / Ø 18 mm (reticule 0,1 mm) (adjustable)	●	●	●	●	OBB-A1350	100,-
	WF 5x / Ø 20 mm	○○	○○	○○	○○	OBB-A1355	70,-
	WF12,5x / Ø 14 mm	○○	○○	○○	○○	OBB-A1353	85,-
Infinity Plan objectives (no cover glass)	5x / 0,11 W.D. 6,73 mm	●	●	●	●	OBB-A1268	110,-
	10x / 0,25 W.D. 4,19 mm	●	●	●	●	OBB-A1244	190,-
	20x / 0,40 (spring) W.D. 2,14 mm	○	○	○	○	OBB-A1251	260,-
	40x / 0,65 (spring) W.D. 0,45 mm	○	○	○	○	OBB-A1258	280,-
	100x / 1,25 (oil) (spring) W.D. 0,12 mm	○	●	○	●	OBB-A1241	320,-
Infinity Plan objectives Infinity (no cover glass) for long working distance	20x / 0,40 (spring) W.D. 8,35 mm	●	●	●	●	OBB-A1252	290,-
	40x / 0,65 (spring) W.D. 3,90 mm	●	●	●	●	OBB-A1259	415,-
	50x / 0,70 (spring) W.D. 1,95 mm	○	○	○	○	OBB-A1266	460,-
	80x / 0,80 (spring) W.D. 0,85 mm	○	○	○	○	OBB-A1271	510,-
Binocular tube	<ul style="list-style-type: none"> <li>Siedentopf, 30° inclined, 360° rotatable</li> <li>Interpupillary distance: 50 – 75 mm</li> <li>With diopter adjustment (both-sided)</li> </ul>	●	●	●	●	OBB-A1125	260,-
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: 100:0</li> <li>With diopter adjustment (both-sided)</li> </ul>	○	○	○	○	OBB-A1344	420,-
Nosepiece	Quintuple	●	●	●	●		
Mechanical stage for reflection	<ul style="list-style-type: none"> <li>Stage size: WxD 200x140 mm</li> <li>Travel: 78x55 mm</li> <li>Stage fast lowering unit</li> <li>Stage Up-Down moving range: max. 50 mm</li> </ul>	●		●			
Mechanical stage for transmission	<ul style="list-style-type: none"> <li>Stage size: WxD 175x145 mm</li> <li>Travel: 78x55 mm</li> <li>Coaxial coarse and fine focusing knobs</li> </ul>		●		●		
Stage plate	Plate for sample placement	●	●	●	●		
Glass plate	Glass plate		○		○	OBB-A1378	40,-
Clip	Clip		●		●	OBB-A1134	55,-
Stage micrometer	Specimen slide with scale reticule 0,01 mm	○	○	○	○	OBB-A1224	70,-
Polarising unit	Reflective light unit with polarising / Analyser slide	●	●	●	●		
Condenser	Abbe N.A. 1,25 (aperture diaphragm)		●		●	OBB-A1380	90,-
Illumination	6V / 20W Halogen spare bulb (transmitting)		●		●	OBB-A1370	30,-
	12V / 50W Halogen spare bulb (reflecting)	●	●			OBB-A1207	35,-
	12V / 100W Halogen spare bulb (reflecting)			●	●	OBB-A1377	35,-
Field diaphragm	Field diaphragm		●		●		
Filter	Blue	○	●	○	●	OBB-A1176	30,-
	Green	○	○	○	○	OBB-A1192	30,-
	Yellow	○	○	○	○	OBB-A1202	30,-
C-Mount	1x	○	○	○	○	OBB-A1361	120,-
	0,57x (focus adjustable)	○	○	○	○	OBB-A1136	160,-

● = Standard configuration

○ = Option



EDUCATIONAL LINE MET

The robust inverted metallurgical model for your training establishment or workshops

Features

- The KERN OLE-1 and OLF-1 are very easy to use, stable, inverted metallurgical microscopes.
- They are suitable for all common routine applications in training establishments or workshops and produce impressive images.
- Available as mono- or binocular models with a variety of eyepieces.
- These microscopes are equipped with plan achromatic objectives as standard.
- A nosepiece for up to 4 objectives and a large stage are also provided as standard.
- The following optional accessories are available: LWD-objectives for a long working distance as well as various stage inlays and more.
- A powerful 3W LED is available as illumination source.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

Technical data

- Eyepieces: WF 10x18 mm
- Objectives: 10x / 20x / 40x
- Overall dimensions  
WxDxH 240x170x311 mm
- Net weight basic configuration approx. 7 kg

Please find detailed information in the following charts.

STANDARD

 MONO

 BINO

 LED

 230 V

 1 DAY

 3 YEARS WARRANTY

OPTION

 SCALE

Model	Standard configuration			Price excl. of VAT ex works €
	Optical system	Tube	Illumination	
KERN				
OLE 161	Achromatic	Monocular	3W LED (reflecting)	1360,-
OLF 162	Achromatic	Binocular	3W LED (reflecting)	1460,-

# Metallurgical inverted microscopes KERN OLE-1 · OLF-1

2

Model outfit		Model KERN		Order number	Price excl. of VAT ex works €
		OLE 161	OLF 162		
Eyepieces	WF 10x / Ø 18 mm	●	●●	OBB-A1347	55,-
	WF 12,5x / Ø 14 mm	○	○○	OBB-A1353	85,-
	WF 16x / Ø 13 mm	○	○○	OBB-A1354	55,-
	WF 5x / Ø 20 mm	○	○○	OBB-A1355	70,-
	WF 10x / Ø 18 mm (reticule 0,1 mm) (non-adjustable)	○	○○	OBB-A1349	80,-
Plan achromatic objectives	Plan 10x / 0,25	●	●	OBB-A1246	140,-
	Plan 20x / 0,35 (spring)	●	●	OBB-A1253	220,-
	Plan 40x / 0,65 (spring)	●	●	OBB-A1261	220,-
	Plan 100x / 1,25 (spring) (oil)	○	○	OBB-A1242	240,-
	Plan 4x / 0,10	○	○	OBB-A1265	120,-
Infinity Plan achromatic objectives for LWD	PL L 40x / 0,60 W.D. 3,64 mm	○	○	OBB-A1262	420,-
	PL L 50x / 0,70 W.D. 3,01 mm	○	○	OBB-A1267	420,-
	PL L 80x / 0,80 (spring) W.D. 1,08 mm	○	○	OBB-A1272	470,-
Monocular tube	45° inclined	●		OBB-A1228	105,-
Binocular tube	• 45° inclined • With diopter adjustment (one-sided)		●	OBB-A1128	220,-
Nosepiece	Quadplex	●	●		
Mechanical stage	• Stage size: WxD 180x180 mm • Travel: 50x40 mm	●	●		
Extra stage plate	1 (opening Ø 10 mm)	●	●	OBB-A1322	60,-
	2 (opening Ø 20 mm)	●	●	OBB-A1323	60,-
	3 (opening Ø 40 mm)	○	○	OBB-A1324	60,-
Illumination	3W LED illumination system (reflecting)	●	●		
Filter	Blue	●	●	OBB-A1174	30,-
	Green	●	●	OBB-A1190	30,-
	Grey	●	●	OBB-A1184	30,-
Stage micrometer	Specimen slide with scale 0,01 mm	○	○	OBB-A1224	70,-

● = Standard configuration

○ = Option

### 3 Polarizing microscopes





# Polarising microscope KERN OPE-1



λ Slip and quartz wedge

## EDUCATIONAL LINE POL

The robust polarising model for your training establishment or workshops

### Features

- The KERN OPE-1 is a very easy to use, robust and stable polarisation microscope.
- It is suitable for all common routine applications in training establishments or workshops and produces impressive images.
- This microscope is equipped with a reticule wide field eyepiece, non-stress achromatic objectives, a Bertrand lens and an Abbe condenser as standard.
- A nosepiece for up to 4 objectives and a stage rotatable through 360° are provided as standard.
- The following optional accessories are available: A quartz wedge, additional eyepiece, objectives and a mechanical stage unit.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

### Technical data

- Eyepieces: WF 10x18 mm
- Objectives: Non-stress 4x / 10x / 40x
- Overall dimensions  
WxDxH 242x170x379,3 mm
- Net weight approx. 6,5 kg

Please find detailed information in the following charts.

#### STANDARD



Model	Standard configuration			Price excl. of VAT ex works €
	Optical system	Tube	Illumination	
KERN				
OPE 118	Achromatic	Monocular	6V / 20W Halogen (transmitting)	940,-

# Polarising microscope KERN OPE-1

Model outfit		Model KERN	Order number	Price excl. of VAT ex works €
		OPE 118		
Eyepieces	WF 10x / Ø 18 mm (reticule 0,1mm) (non-adjustable)	●	OBB-A1349	80,-
	WF 16x / Ø 13 mm	○	OBB-A1354	55,-
Non-stress achromatic objectives	4x / 0,10	●	OBB-A1280	65,-
	10x / 0,25	●	OBB-A1278	75,-
	40x / 0,66 (spring)	●	OBB-A1281	80,-
	20x / 0,40	○	OBB-A1279	95,-
	60x / 0,80 (spring)	○	OBB-A1282	100,-
Monocular tube	30° inclined, 360° rotatable	●	OBB-A1227	105,-
Nosepiece	Quadplex	●		
Analyser unit	0 – 90°, can be moved out of the optical path for single polarising observe	●	OBB-A1118	160,-
Bertrand lens	Can be moved out of the optical path	●	OBB-A1120	220,-
$\lambda + \frac{1}{4} \lambda$ Slip	$\lambda$ Slip and $\frac{1}{4} \lambda$ Slip (combination)	●	OBB-A1316	135,-
Quartz wedge	I – IV class	○	OBB-A1320	235,-
Revolving round stage	360° rotatable, division 1°, Vernier division 6', lockable	●		
Polarising attached mechanical stage	Polarising attached mechanical stage	○	OBB-A1337	260,-
Condenser	Abbe N.A. 1,25 (aperture diaphragm)	●	OBB-A1101	85,-
Polarising unit	Can be moved out of the optical path	●	OBB-A1285	170,-
Filter	Blue	●	OBB-A1173	45,-
Illumination	6V / 20W Halogen spare bulb (transmitting)	●	OBB-A1370	30,-

● = Standard configuration

○ = Option



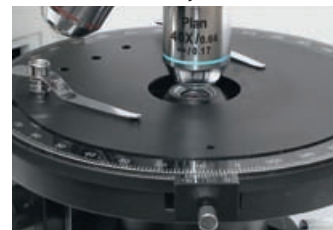
OPM



OPN



Bertrand lens, λ Slip, 360° rotatable analyser (detachable)



Centrable and rotatable polarisation stage



Swing-out condenser

## PROFESSIONAL LINE POL

The polarising model for the flexible and professional user

### Features

- The KERN OPM-1, OPN-1 and OPO-1 microscope series are polarisation microscopes for professional applications.
- They are available with two illumination systems: Standard halogen illumination (50 W) and premium illumination (100 W).
- They are both suitable for all common routine applications and produce impressive images.
- A transmitted light model (OPM), an reflecting light model (OPN) and a combination model (OPO) are available.
- A nosepiece with objective centring option for up to 5 objectives and a precise stage, rotatable through 360° and lockable, are provided as standard.
- These microscopes are equipped with wide field eyepieces with large field of view, non-stress, infinity corrected, plan achromatic objectives, λ slips, a Bertrand lens and a quartz wedge as standard, plus numerous additional valuable features, depending on model.
- The following optional accessories are available: A mechanical stage unit, a special polarisation microscope head, LWD objectives for a large working distance, diverse filters and more.
- One of the central features of this highly variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

### Technical data

#### OPM 181

- Overall dimensions WxDxH 306x200x445 mm
- Net weight approx. 10 kg

#### OPN 182 / OPN 184

- Overall dimensions WxDxH 306x200x497,5 mm
- Net weight approx. 13 kg

#### OPO 183 / OPO 185

- Overall dimensions WxDxH 306x200x497,5 mm
- Net weight approx. 12 kg

Please find detailed information in the following charts.

#### STANDARD



#### OPTION



Model	Standard configuration			Price excl. of VAT ex works €
	Optical system	Tube	Illumination	
<b>KERN</b>				
<b>OPM 181</b>	Infinity	Binocular	6V / 20W Halogen (transmitting)	<b>3660,-</b>
<b>OPN 182</b>	Infinity	Binocular	12V / 50W Halogen (reflecting)	<b>3650,-</b>
<b>OPO 183</b>	Infinity	Binocular	12V / 50W Halogen (reflecting) + 6V / 20W (transmitting)	<b>5150,-</b>
<b>OPN 184</b>	Infinity	Binocular	12V / 100W Halogen (reflecting)	<b>3880,-</b>
<b>OPO 185</b>	Infinity	Binocular	12V / 100W Halogen (reflecting) + 6V / 20W (transmitting)	<b>5350,-</b>

# Polarizing microscopes KERN OPM-1 · OPN-1 · OPO-1

Model outfit		Model KERN	Order number	Price excl. of VAT ex works €
		OPM 181		
Eyepieces	WF 10 / Ø 20 mm	●	OBB-A1351	95,-
	WF 10x / Ø 20 mm (reticule 0,1 mm) (adjustable)	●	OBB-A1352	150,-
Non-stress Infinity plan objectives	4x / 0,10	●	OBB-A1294	110,-
	10x / 0,25	●	OBB-A1289	200,-
	20x / 0,40 (spring)	●	OBB-A1290	265,-
	40x / 0,65 (spring)	●	OBB-A1292	315,-
	60x / 0,80 (spring)	○	OBB-A1296	375,-
Binocular tube	<ul style="list-style-type: none"> <li>• Siedentopf, 30° inclined, 360° rotatable</li> <li>• Interpupillary distance: 50 – 75 mm</li> <li>• With diopter adjustment (one-sided)</li> </ul>	●	OBB-A1125	260,-
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: 100:0</li> <li>• With diopter adjustment (one-sided)</li> </ul>	○	OBB-A1344	420,-
Professional dedicated polarising binocular head	To keep the reticular cross in the right-hand eyepiece in the same position, independent of the adjustment of the tube.	○	OBB-A1209	415,-
Professional dedicated polarising trinocular head		○	OBB-A1210	550,-
Nosepiece	Quintuple	●		
Analyser unit with scale	360° rotatable, lockable	●		
Bertrand lens	Built-in, center-adjustable	●	OBB-A1121	300,-
$\lambda + \frac{1}{4} \lambda$ Slip	$\lambda$ Slip and $\frac{1}{4} \lambda$ Slip (combination)	●	OBB-A1316	135,-
Quartz wedge	I – IV Class	●	OBB-A1321	235,-
Revolving round stage	360° rotatable, center-adjustable, division 1°, Vernier division 6'	●		
Polarising attached mechanical stage	Polarising attached mechanical stage	○	OBB-A1337	260,-
Swing-out condenser	N.A. 0,9 / 0,13 swing-out achromatic condenser (aperture diaphragm)	●	OBB-A1107	135,-
Polarising unit with scale	360° rotatable, lockable	●		
Koehler illumination	6V / 20W Halogen spare bulb (transmitting)	●	OBB-A1370	30,-
Filter	Blue	●	OBB-A1172	30,-
	Amber	○	OBB-A1165	30,-
	Green	○	OBB-A1189	30,-
	Neutral	○	OBB-A1198	30,-
C-Mount	1x	○	OBB-A1140	105,-
	0,57x (focus adjustable)	○	OBB-A1136	160,-

● = Standard configuration

○ = Option



# Polarizing microscopes KERN OPM-1 · OPN-1 · OPO-1

Model outfit		Model KERN				Order number	Price excl. of VAT ex works €
		OPN 182	OPO 183	OPN 184	OPO 185		
Eyepieces	WF 10x / 18 mm	●	●	●	●	OBB-A1347	55,-
	WF 10x / 18 mm (reticule 0,1 mm) (adjustable)	●	●	●	●	OBB-A1350	100,-
Non-stress Infinity Plan objectives	4x / 0,10	●	●	●	●	OBB-A1294	110,-
	10x / 0,25	●	●	●	●	OBB-A1289	200,-
	20x / 0,40 (spring)	●	●	●	●	OBB-A1290	265,-
	40x / 0,65 (spring)		●		●	OBB-A1292	315,-
	40x / 0,65 (spring) (no cover glass)	●	○	●	○	OBB-A1288	390,-
	60x / 0,80 (spring)	○	●	○	●	OBB-A1296	375,-
Infinity Plan objectives (no cover glass) for LWD	LWD 20x / 0,40 (spring) W.D. 8,35 mm	○	○	○	○	OBB-A1291	345,-
	LWD 40x / 0,65 (spring) W.D. 3,90 mm	○	○	○	○	OBB-A1293	390,-
	LWD 50x / 0,70 (spring) W.D. 1,95 mm	○	○	○	○	OBB-A1295	415,-
	LWD 80x / 0,80 (spring) W.D. 0,85 mm	○	○	○	○	OBB-A1297	510,-
Binocular tube	<ul style="list-style-type: none"> <li>• Siedentopf, 30° inclined, 360° rotatable</li> <li>• Interpupillary distance: 50 – 75 mm</li> <li>• With diopter adjustment (one-sided)</li> </ul>	●	●	●	●	OBB-A1125	260,-
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: 100:0</li> <li>• With diopter adjustment (one-sided)</li> </ul>	○	○	○	○	OBB-A1344	420,-
Professional dedicated polarising binocular head	To keep the reticular cross in the right-hand eyepiece in the same position, independent of the adjustment of the tube.	○	○	○	○	OBB-A1209	415,-
Professional dedicated polarising trinocular head		○	○	○	○	OBB-A1210	550,-
Nosepiece	Quintuple	●	●	●	●		
Analyser unit with scale	360° rotatable, lockable	●	●	●	●		
Bertrand lens	Built-in, center-adjustable	●	●	●	●	OBB-A1121	300,-
$\lambda + \frac{1}{4} \lambda$ Slip	$\lambda$ Slip und $\frac{1}{4} \lambda$ Slip (combination)	●	●	●	●	OBB-A1316	135,-
Quartz wedge	I – IV class	●	●	●	●	OBB-A1321	235,-
Revolving round stage	360° rotatable, center-adjustable, division 1°, Vernier division 6'	●	●	●	●		
Polarising attached mechanical stage	Polarising attached mechanical stage	○	○	○	○	OBB-A1337	260,-
Swing-out condenser	N.A. 0,9 / 0,13 swing-out achromatic condenser (aperture diaphragm)		●		●	OBB-A1107	135,-
Polarising unit with scale	360° rotatable, lockable		●		●		
Koehler illumination	6V / 20W Halogen spare bulb (transmitting)		●		●	OBB-A1370	30,-
Filter	Blue	●	●	●	●	OBB-A1172	30,-
	Amber	○	○	○	○	OBB-A1165	30,-
	Green	○	○	○	○	OBB-A1189	30,-
	Neutral	○	○	○	○	OBB-A1198	30,-
Reflecting polarising unit replacement bulb	12V / 50W Halogen	●	●	○	○	OBB-A1207	35,-
	12V / 100W Halogen	○	○	●	●	OBB-A1377	35,-
C-Mount	1x	○	○	○	○	OBB-A1140	105,-
	0,57x (focus adjustable)	○	○	○	○	OBB-A1136	160,-

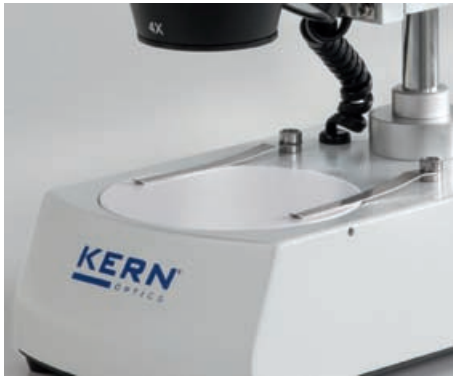
● = Standard configuration

○ = Option

# 4 Stereomicroscopes

Stereo, Stereo Zoom, Coaxial and Gem microscopes





With white stage plate



With black stage plate

EDUCATIONAL LINE

The small robust model for school, training establishment or workshops

Features

- The KERN OSE-4 is a very robust, stable and easy to use stereo microscope.
- This model is optimally suited to schools, workshops and training establishments.
- It displays extremely good optical characteristics for its class, allowing clear images over its broad field of view.
- The model-dependent LED illumination reliably ensures good illumination at all times.
- The multitude of objective combinations and eyepieces are all you can wish for.
- The eyepieces are fixed in the tube to protect them against loss or damage.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

Technical data

- Optical system: Greenough
- Tube: 45° inclined
- Interpupillary distance: 55 – 75 mm
- Diopter adjustment (one-sided)
- Packing dimensions  
WxDxH 295x162x345 mm
- OSE 410 / OSE 411**
  - Net weight approx. 1,75 kg
- OSE 413 / OSE 414 / OSE 416 / OSE 417**
  - Net weight approx. 2,25 kg

Please find detailed information in the following charts.

STANDARD

360°

BINO

LED

IL

TL

230 V

1 DAY

2 YEARS  
WARRANTY

Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective	Stand	Illumination	
KERN							
OSE 410	Binocular	WF 10x Ø 20 mm	Ø 20	1x / 3x	Pillar style	–	215,–
OSE 411	Binocular	WF 10x Ø 20 mm	Ø 20	2x / 4x	Pillar style	–	215,–
OSE 413	Binocular	WF 10x Ø 20 mm	Ø 20	1x / 3x	Pillar style	0,21W LED (incident)	245,–
OSE 414	Binocular	WF 10x Ø 20 mm	Ø 20	2x / 4x	Pillar style	0,21W LED (incident)	245,–
OSE 416	Binocular	WF 10x Ø 20 mm	Ø 20	1x / 3x	Pillar style	0,21W LED (incident); 0,21W LED (transmitting)	260,–
OSE 417	Binocular	WF 10x Ø 20 mm	Ø 20	2x / 4x	Pillar style	0,21W LED (incident); 0,21W LED (transmitting)	260,–

# Stereomicroscope KERN OSE-4

Eyepiece	Specifications – Objectives				
	Magnification	1x	2x	3x	4x
WF 5x	Total magnification	5x	10x	15x	20x
	Field of view mm	Ø 20	Ø 10	Ø 6,7	Ø 5
WF 10x	Total magnification	10x	20x	30x	40x
	Field of view mm	Ø 20	Ø 10	Ø 6,7	Ø 5
WF 15x	Total magnification	15x	30x	45x	60x
	Field of view mm	Ø 15	Ø 7,5	Ø 5	Ø 3,7
WF 20x	Total magnification	20x	40x	60x	80x
	Field of view mm	Ø 10	Ø 6,5	Ø 4,3	Ø 3,2
Working distance		57 mm	57 mm	57 mm	57 mm

Model outfit		Model KERN						Order number	Price excl. of VAT ex works €
		OSE 410	OSE 411	OSE 413	OSE 414	OSE 416	OSE 417		
Eyepieces	WF 5x / Ø 16,2 mm	○○	○○	○○	○○	○○	○○	OZB-A4101	50,-
	WF 10x / Ø 20 mm	●●	●●	●●	●●	●●	●●	OZB-A4102	45,-
	WF 15x / Ø 15 mm	○○	○○	○○	○○	○○	○○	OZB-A4103	45,-
	WF 20x / Ø 10 mm	○○	○○	○○	○○	○○	○○	OZB-A4104	50,-
Stands	Pillar style, without illumination	●	●						
	Pillar style, with 0,21W LED illumination (incident)			●	●				
	Pillar style, with 0,21W LED illumination (transmission + incident)					●	●		
Stage plate	Black-white / Ø 59,5 mm	●	●	●	●			OZB-A4816	30,-
	Frosted glass / Ø 95 mm					●	●	OZB-A4805	30,-
	Black-white / Ø 95 mm					●	●	OZB-A4806	30,-
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>								

● = Standard configuration

○ = Option





OSF 430



OSF 435

## EDUCATIONAL LINE

The small robust model for school, training establishment or workshops

### Features

- The KERN OSF-4 are very robust, stable and easy to use stereo microscopes.
- Their mechanical stands makes them particularly stable.
- Models OSF 434 and OSF 435 are provided with 3 objectives each and an additional fine focussing knob for precise focussing.
- In addition to its very good optical properties, its large working surface offers the best possible ease of use in this class.
- This model is optimally suited to schools, workshops and training establishments.
- The model-dependent LED incident and transmitted illumination unit reliably ensures good illumination at all times.
- The multitude of objective combinations and eyepieces are all you can wish for.
- The eyepieces are fixed in the tube to protect them against loss or damage.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

### Technical data

- Optical system: Greenough
- Tube: 45° inclined
- Interpupillary distance: 55 – 75 mm
- Diopter adjustment (one-sided)
- Packing dimensions WxDxH 290x210x380 mm
- Net weight approx. 3 kg

Please find detailed information in the following charts.

### STANDARD



Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective	Stand	Illumination	
<b>KERN</b>							
<b>OSF 430</b>	Binocular	WF 10x Ø 20 mm	Ø 20	1x / 3x	Arm curved	1W LED (incident); 0,21W LED (transmitting)	<b>335,-</b>
<b>OSF 431</b>	Binocular	WF 10x Ø 20 mm	Ø 20	2x / 4x	Arm curved	1W LED (incident); 0,21W LED (transmitting)	<b>335,-</b>
<b>OSF 434</b>	Binocular	WF 10x Ø 20 mm	Ø 20	1x / 2x / 3x	Arm curved	1W LED (incident); 0,21W LED (transmitting)	<b>365,-</b>
<b>OSF 435</b>	Binocular	WF 10x Ø 20 mm	Ø 20	1x / 2x / 4x	Arm curved	1W LED (incident); 0,21W LED (transmitting)	<b>365,-</b>

# Stereomicroscope KERN OSF-4

Eyepiece	Specifications – Objectives				
	Magnification	1x	2x	3x	4x
WF 5x	Total magnification	5x	10x	15x	20x
	Field of view mm	Ø 20	Ø 10	Ø 6,7	Ø 5
WF 10x	Total magnification	10x	20x	30x	40x
	Field of view mm	Ø 20	Ø 10	Ø 6,7	Ø 5
WF 15x	Total magnification	15x	30x	45x	60x
	Field of view mm	Ø 15	Ø 7,5	Ø 5	Ø 3,7
WF 20x	Total magnification	20x	40x	60x	80x
	Field of view mm	Ø 10	Ø 6,5	Ø 4,3	Ø 3,2
Working distance		100 mm	100 mm	100 mm	100 mm

Model outfit		Model KERN				Order number	Price excl. of VAT ex works €
		OSF 430	OSF 431	OSF 434	OSF 435		
Eyepieces	WF 5x / Ø 16,2 mm	○○	○○	○○	○○	OZB-A4 101	50,-
	WF 10x / Ø 20 mm	●●	●●	●●	●●	OZB-A4 102	45,-
	WF 15x / Ø 15 mm	○○	○○	○○	○○	OZB-A4 103	45,-
	WF 20x / Ø 10 mm	○○	○○	○○	○○	OZB-A4 104	50,-
Stands	Arm curved, with LED illumination (0,21W transmitting + 1W incident)	●	●				
	Arm curved, incl. fine adjustment, with LED illumination (0,21W transmitting + 1W incident)			●	●		
Stage plate	Frosted glass / Ø 74,5 mm	●	●	●	●	OZB-A48 13	30,-
	Black-white / Ø 74,5 mm	●	●	●	●	OZB-A48 14	30,-
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>						

● = Standard configuration

○ = Option

# Stereomicroscope KERN OSF-4G



Stage plate black



Stage plate white

## EDUCATIONAL LINE

The robust and practical model for school, training establishment, workshops and laboratory

### Features

- The KERN OSF 4G is a very practical and easy to use stereo microscope.
- This microscope can be safely and easily moved around thanks to its built-in handle.
- Its mechanical stand makes it particularly stable.
- In addition to the very good optical properties, its ergonomically designed working surface offers the best possible ease of use in this class.
- This model is optimally suited to schools, workshops and training establishments.
- A strong LED incident and transmitted illumination unit reliably delivers the necessary light.
- The multitude of objective combinations and eyepieces are all you can wish for.
- The eyepieces are fixed in the tube to protect them against loss or damage.

### Technical data

- Optical system: Greenough
- Brightness adjustable (separate)
- Tube: 45° inclined
- Interpupillary distance: 55 – 75 mm
- Diopter adjustment (one-sided)
- Packing dimensions  
WxDxH 290x225x340 mm
- Net weight approx. 2,5 kg

Please find detailed information in the following charts.

STANDARD



Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective	Stand	Illumination	
<b>KERN</b>							
<b>OSF 438</b>	Binocular	WF 10x Ø 20 mm	Ø 20	1x / 2x / 3x	Arm curved	1W LED (incident); 0,35W LED (transmitting)	<b>325,-</b>
<b>OSF 439</b>	Binocular	WF 10x Ø 20 mm	Ø 20	1x / 2x / 4x	Arm curved	1W LED (incident); 0,35W LED (transmitting)	<b>325,-</b>

# Stereomicroscope KERN OSF-4G

Eyepiece	Specifications – Objectives				
	Magnification	1x	2x	3x	4x
WF 5x	Total magnification	5x	10x	15x	20x
	Field of view mm	Ø 20	Ø 10	Ø 6,7	Ø 5
WF 10x	Total magnification	10x	20x	30x	40x
	Field of view mm	Ø 20	Ø 10	Ø 6,7	Ø 5
WF 15x	Total magnification	15x	30x	45x	60x
	Field of view mm	Ø 15	Ø 7,5	Ø 5	Ø 3,7
WF 20x	Total magnification	20x	40x	60x	80x
	Field of view mm	Ø 10	Ø 6,5	Ø 4,3	Ø 3,2
Working distance		57 mm	57 mm	57 mm	57 mm

Model outfit		Model KERN		Order number	Price excl. of VAT ex works €
		OSF 438	OSF 439		
Eyepieces	WF 5x / Ø 16,2 mm	○○	○○	OZB-A4 101	50,-
	WF 10x / Ø 20 mm	●●	●●	OZB-A4 102	45,-
	WF 15x / Ø 15 mm	○○	○○	OZB-A4 103	45,-
	WF 20x / Ø 10 mm	○○	○○	OZB-A4 104	50,-
Stands	Arm curved, incl. handle, with LED illumination (0,35W transmitting + 1W incident)	●	●		
Stage plate	Frosted glass / Ø 59,5 mm	●	●	OZB-A48 15	30,-
	Black-white / Ø 59,5 mm	●	●	OZB-A48 16	30,-
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>				

● = Standard configuration

○ = Option





OSF 527



OSF 526

## EDUCATIONAL LINE

The robust model for school, training establishment, workshops or laboratory

### Features

- The KERN OSF-5 is a very robust, stable and easy to use stereo microscope.
- Thanks to its qualities and the flexible pillar stand, it is optimally suited to rough working environments, workshops, schools and training establishments.
- In addition to its very good optical properties, its large working surface offers the best possible ease of use in this class.
- The model-dependent, powerful and separately dimmable incident and transmitted LED illumination unit reliably ensures good illumination at all times.
- The multitude of objective combinations, the extra large working distance and the depth of view are all you can wish for.
- The large selection of additional eyepieces, including for wearers of glasses, and further accessories, round the package off.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

### Technical data

- Optical system: Greenough
- Brightness adjustable (separate)
- Tube: 45° inclined
- Interpupillary distance: 52 – 76 mm
- Diopter adjustment (one-sided)
- Packing dimensions  
WxDxH 370x330x385 mm

#### OSF 522 / OSF 524 / OSF 526

- Net weight approx. 2,8 kg

#### OSF 523 / OSF 525 / OSF 527

- Net weight approx. 3,8 kg

Please find detailed information in the following charts.

#### STANDARD



#### OPTION



Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective	Stand	Illumination	
<b>KERN</b>							
<b>OSF 522</b>	Binocular	HSWF 10x Ø 23 mm	Ø 23	1x / 2x	Pillar style	–	<b>530,-</b>
<b>OSF 523</b>	Binocular	HSWF 10x Ø 23 mm	Ø 23	1x / 2x	Pillar style	3W LED (incident); 3W LED (transmitting)	<b>750,-</b>
<b>OSF 524</b>	Binocular	HSWF 10x Ø 23 mm	Ø 23	1x / 3x	Pillar style	–	<b>530,-</b>
<b>OSF 525</b>	Binocular	HSWF 10x Ø 23 mm	Ø 23	1x / 3x	Pillar style	3W LED (incident); 3W LED (transmitting)	<b>750,-</b>
<b>OSF 526</b>	Binocular	HSWF 10x Ø 23 mm	Ø 23	2x / 4x	Pillar style	–	<b>530,-</b>
<b>OSF 527</b>	Binocular	HSWF 10x Ø 23 mm	Ø 23	2x / 4x	Pillar style	3W LED (incident); 3W LED (transmitting)	<b>750,-</b>

# Stereomicroscope KERN OSF-5

Eyepiece	Specifications – Objectives				
	Magnification	1x	2x	3x	4x
HSWF 10x	Total magnification	10x	20x	30x	40x
	Field of view mm	Ø 23	Ø 11,5	Ø 7,67	Ø 5,75
SWF 15x	Total magnification	15x	30x	45x	60x
	Field of view mm	Ø 17	Ø 8,5	Ø 5,67	Ø 4,25
SWF 20x	Total magnification	20x	40x	60x	80x
	Field of view mm	Ø 14	Ø 7	Ø 4,67	Ø 3,5
SWF 30x	Total magnification	30x	60x	90x	120x
	Field of view mm	Ø 9	Ø 4,5	Ø 3	Ø 2,25
Working distance		105 mm	105 mm	105 mm	105 mm

Model outfit		Model KERN						Order number	Price excl. of VAT ex works €
		OSF 522	OSF 523	OSF 524	OSF 525	OSF 526	OSF 527		
Eyepieces	HSWF 10x / Ø 23 mm	●●	●●	●●	●●	●●	●●	OZB-A5503	60,-
	SWF 15x / Ø 17 mm	○○	○○	○○	○○	○○	○○	OZB-A5504	60,-
	SWF 20x / Ø 14 mm	○○	○○	○○	○○	○○	○○	OZB-A5505	70,-
	SWF 30x / Ø 9 mm	○○	○○	○○	○○	○○	○○	OZB-A5506	85,-
	HSWF 10x / Ø 23 mm (reticule 0,1 mm)	○	○	○	○	○	○	OZB-A5512	95,-
	SWF 15x / Ø 17 mm (reticule 0,05 mm)	○	○	○	○	○	○	OZB-A5513	110,-
	SWF 20x / Ø 14 mm (reticule 0,05 mm)	○	○	○	○	○	○	OZB-A5514	110,-
Darkfield attachment	Darkfield attachment	○	○	○	○	○	○	OB-B-A4601	85,-
Object clamp	Object clamp	○	○	○	○	○	○	OB-B-A6205	45,-
Stands	Pillar style, without illumination	●		●		●			
	Pillar style, with 3W LED illumination (transmitting + incident)		●		●		●		
	Please find more stands in the catalogue on page 64 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>								
Stage plate	Frosted glass / Ø 94,5 mm		●		●		●	OZB-A5192	30,-
	Black-white / Ø 94,5 mm	●	●	●	●	●	●	OZB-A5191	30,-
	Glass / Ø 94,5 mm		○		○		○	OZB-A5190	30,-
Mechanical stage	Stage size: WxD 188x160 mm, Travel: 76x65 mm, for transmitting and incident illumination	○	○	○	○	○	○	OZB-A5781	165,-
	Stage size: WxD 180x175 mm; Travel: 100x86 mm, for incident illumination only	○	○	○	○	○	○	OZB-A5782	240,-
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>								

● = Standard configuration

○ = Option

# Stereo zoom microscope KERN OZL-44



OZL 445

## LAB LINE

The flexible model for laboratory and quality control

### Features

- The KERN OZL-44 models are flexible, robust and easy to use stereo microscopes with zoom function.
- Their qualities, the flexible pillar stand and the integral, dimmable LED incident and transmitted illumination make these models especially flexible.
- These models are optimally suited to schools, training establishments, workshops, and assembly and repair workstations in the electronics industry.
- These models are also ideal for use in both production and quality control.
- In addition to their very good optical properties, these models offer the best possible ease of use in this class thanks to their large working surface.
- The multitude of auxiliary objectives, eyepieces and additional accessory parts are all you can wish for.
- The eyepieces are fixed in the tube to protect them against loss or damage.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

### Technical data

- Optical system: Greenough
- Brightness adjustable (separate)
- Tube: 45° inclined
- Interpupillary distance: 55 – 75 mm
- Diopter adjustment (both-sided)

#### OZL 441

- Magnification ratio: 4:1
- Packing dimensions WxDxH 370x392x470 mm
- Net weight approx. 5 kg

#### OZL 445

- Magnification ratio: 4,8:1
- Packing dimensions WxDxH 365x392x470 mm
- Net weight approx. 4,5 kg

Please find detailed information in the following charts.

### STANDARD



Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
<b>KERN</b>							
<b>OZL 441</b>	Trinocular	WF 10x Ø 22 mm	Ø 23 – 5,5	1x – 4x	Pillar style	1W LED (incident); 0,35W LED (transmitting)	<b>600,-</b>
<b>OZL 445</b>	Binocular	HWF 10x Ø 21,5 mm	Ø 28 – 6	0,75x – 3,6x	Pillar style	1W LED (incident); 0,35W LED (transmitting)	<b>415,-</b>

# Stereo zoom microscope KERN OZL-44

OZL 441	Specifications – Objectives					
Eyepiece	Magnification	Standard 1,0x	Auxiliary objectives			
			0,5x	0,75x	1,5x	2,0x
WF 5x	Total magnification	5x – 20x	2,5x – 10x	3,75x – 15x	7,5x – 30x	10x – 40x
	Field of view mm	Ø 20 – 5	Ø 40 – 11	Ø 25 – 6,5	Ø 13 – 3,5	Ø 10 – 2,5
WF 10x	Total magnification	10x – 40x	5x – 20x	7,5x – 30x	15x – 60x	20x – 80x
	Field of view mm	Ø 23 – 5,5	Ø 52 – 12	Ø 30 – 7	Ø 15 – 4,8	Ø 11,5 – 3
WF 15x	Total magnification	15x – 60x	7,5x – 30x	11,25x – 45x	22,5x – 90x	30x – 120x
	Field of view mm	Ø 15,5 – 4	Ø 36 – 8,5	Ø 21 – 5	Ø 10,5 – 2,5	Ø 8 – 2
WF 20x	Total magnification	20x – 80x	10x – 40x	15x – 60x	30x – 120x	40x – 160x
	Field of view mm	Ø 10,5 – 3	Ø 25 – 5,8	Ø 14 – 3,5	Ø 7 – 1,8	Ø 5,5 – 1,5
Working distance		91 mm	170 mm	100 mm	42 mm	28 mm

OZL 445	Specifications – Objectives					
Eyepiece	Magnification	Standard 1,0x	Auxiliary objectives			
			0,5x	0,75x	1,5x	2,0x
WF 5x	Total magnification	3,75x – 18x	1,875x – 9x	2,81x – 13,5x	5,625x – 27x	7,5x – 36x
	Field of view mm	Ø 26 – 6	Ø 60 – 13	Ø 32 – 7	Ø 16 – 4	Ø 12,5 – 3
HWF 10x	Total magnification	7,5x – 36x	3,75x – 18x	5,625x – 27x	11,25x – 54x	15x – 72x
	Field of view mm	Ø 28 – 6	Ø 63 – 14	Ø 35 – 8	Ø 18 – 4	Ø 14 – 3
WF 15x	Total magnification	11,25x – 54x	5,625x – 27x	8,44x – 40,5x	16,875x – 81x	22,5x – 108x
	Field of view mm	Ø 19 – 4,5	Ø 43 – 9,5	Ø 24 – 5,5	Ø 12 – 3	Ø 9,5 – 2
WF 20x	Total magnification	15x – 72x	7,5x – 36x	56,25x – 54x	22,5x – 108x	30x – 144x
	Field of view mm	Ø 12,5 – 3	Ø 28 – 6	Ø 16 – 3,5	Ø 8 – 2	Ø 6 – 1,5
Working distance		86 mm	178 mm	96 mm	42,5 mm	25,5 mm

4

Model outfit		Model KERN		Order number	Price excl. of VAT ex works €
		OZL 441	OZL 445		
Eyepieces	WF 5x / Ø 16,2 mm	●●	●●	OZB-A4101	50,-
	WF 10x / Ø 22 mm	●●		OZB-A4105	50,-
	HWF 10x / Ø 21,5 mm		●●	OZB-A4106	50,-
	WF 15x / Ø 15 mm	●●	●●	OZB-A4103	45,-
	WF 20x / Ø 10 mm	●●	●●	OZB-A4104	50,-
Auxiliary objectives	0,5x	○	○	OZB-A4201	75,-
	0,75x	○	○	OZB-A4202	75,-
	1,5x	○	○	OZB-A4204	75,-
	2,0x	○	○	OZB-A4205	80,-
C-Mount	1x adjustable focus	○		OZB-A4809	65,-
	0,3x adjustable focus	○		OZB-A4810	85,-
	0,5x adjustable focus	○		OZB-A4811	100,-
Stands	Pillar style, with LED illumination (0,35W transmitting + 1W incident)	●	●		
Stage plate	Frosted glass / Ø 95 mm	●	●	OZB-A4805	30,-
	Black-white / Ø 95 mm	●	●	OZB-A4806	30,-
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>				

● = Standard configuration ○ = Option



# Stereo zoom microscope KERN OZL-45

4



OZL 451



OZL 453

## LAB LINE

The smart model for laboratory, training establishment, quality control and agriculture

### Features

- The KERN OZL-45 models are very robust and easy to use stereo microscopes with a large zoom range.
- Their qualities, the flexible pillar stand and the optional integral, bright halogen incident and transmitted illumination make these models especially flexible.
- These models are optimally suited to workstations in very rough working environments, training establishments, workshops, as well as assembly and repair workstations in the electronics industry.
- These models are also ideal for use in both production and quality control.
- In addition to their very good optical properties, these models offer the best possible ease of use in this class thanks to their large working surface.
- The multitude of auxiliary objectives, eyepieces and additional accessory parts facilitates use in all common stereo microscopy applications.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

### Technical data

- Optical system: Greenough
- Brightness adjustable
- Magnification ratio: 6,7:1
- Tube: 45° inclined
- Interpupillary distance: 55 – 75 mm
- Diopter adjustment (both-sided)
- Packing dimensions  
WxDxH 345x320x470 mm

**OZL 451**  
• Net weight approx. 3,5 kg

**OZL 453**  
• Net weight approx. 5 kg

Please find detailed information in the following charts.

### STANDARD

360°

BINO

HAL

IL

TL

ZOOM

230 V

1 DAY

3 YEARS WARRANTY

Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
<b>KERN</b>							
<b>OZL 451</b>	Binocular	HSWF 10x Ø 23 mm	Ø 33 – 5	0,75x – 5,0x	Pillar style	12V / 10W Halogen (incident) 12V / 10W Halogen (transmitting)	<b>595,-</b>
<b>OZL 453</b>	Binocular	HSWF 10x Ø 23 mm	Ø 33 – 5	0,75x – 5,0x	Pillar style	–	<b>560,-</b>

# Stereo zoom microscope KERN OZL-45

Eyepiece	Specifications – Objectives				
	Magnification	Standard 1,0x	Auxiliary objectives		
			0,5x	1,5x	2,0x
HWF 5x	Total magnification	3,75x – 25x	1,875x – 12,5x	5,625x – 37,5x	7,5x – 50x
	Field of view mm	Ø 31 – 4,6	Ø 61,3 – 9,2	Ø 22 – 3,3	Ø 16 – 2,5
HSWF 10x	Total magnification	7,5x – 50x	3,75x – 25x	11,25x – 75x	15x – 100x
	Field of view mm	Ø 33 – 5	Ø 65 – 10	Ø 22 – 3,3	Ø 16 – 2,5
HWF 15x	Total magnification	11,25x – 75x	5,625x – 37,5x	16,875x – 112,5x	22,5x – 150x
	Field of view mm	Ø 24 – 4,2	Ø 48 – 8,5	Ø 16 – 2,8	Ø 12 – 2
HSWF 20x	Total magnification	15x – 100x	7,5x – 50x	22,5x – 150x	30x – 200x
	Field of view mm	Ø 20 – 3,5	Ø 40 – 7	Ø 13,3 – 2,3	Ø 10 – 1,8
HWF 25x	Total magnification	18,75x – 125x	9,375x – 62,5x	28,125x – 187,5x	37,5x – 255x
	Field of view mm	Ø 15,8 – 2,4	Ø 31,5 – 4,8	Ø 10,5 – 1,6	Ø 7,9 – 1,2
Working distance		113 mm	220 mm	50 mm	35 mm

4

Model outfit		Model KERN		Order number	Price excl. of VAT ex works €
		OZL 451	OZL 453		
Eyepieces	HWF 5x / Ø 23,2 mm	oo	oo	OZB-A4112	55,-
	HSWF 10x / Ø 23 mm	●●	●●	OZB-A4118	55,-
	HWF 15x / Ø 15 mm	oo	oo	OZB-A4119	55,-
	HSWF 20x / Ø 14,5 mm	oo	oo	OZB-A4120	70,-
	HWF 25x / Ø 11,7 mm	oo	oo	OZB-A4121	70,-
Auxiliary objectives	0,5x	o	o	OZB-A4201	75,-
	1,5x	o	o	OZB-A4204	75,-
	2,0x	o	o	OZB-A4205	80,-
Stands	Pillar style, with 12V / 10W Halogen Illumination (transmitting + incident)	●			
	Pillar style, without illumination		●		
Stage plate	Frosted glass / Ø 95 mm	●		OZB-A4805	30,-
	Black-white / Ø 95 mm	●	●	OZB-A4806	30,-
Mechanical stage	Stage size: WxD 180x155 mm, Travel: 75x55 mm, for transmitting and incident illumination	o	o	OZB-A4605	215,-
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>				

● = Standard configuration

○ = Option

# Stereo zoom microscope KERN OZL-45R



## LAB LINE

The practical model for your laboratory, training establishment, quality control and agriculture

### Features

- The KERN OZL-45R models are very robust and easy to use stereo microscopes with a large zoom range.
- Its mechanical stand makes it particularly stable.
- These models are optimally suited to workstations in very rough working environments, training establishments, workshops, as well as assembly and repair workstations in the electronics industry.
- These models are also ideal for use in both production and quality control.
- In addition to their very good optical properties, these models offer the best possible ease of use in this class thanks to their large working surface.
- The multitude of auxiliary objectives, eyepieces and additional accessory parts facilitates use in all common stereo microscopy applications.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism as well as an integrated, dimmable LED-illumination ring. This is underlined by the functional and ergonomic design.

### Technical data

- Optical system: Greenough
- Transmitting illumination dimmable
- LED ring illumination dimmable
- Magnification ratio: 6,7:1
- Tube: 45° inclined
- Interpupillary distance: 55 – 75 mm
- Diopter adjustment (both-sided)
- Packing dimensions WxDxH 345x320x470 mm
- Net weight approx. 5 kg

Please find detailed information in the following charts.

### STANDARD



Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
KERN							
OZL 456	Binocular	HSWF 10x Ø 23 mm	Ø 33 – 5	0,75x – 5,0x	Arm curved	1W LED (incident); 0,21W LED (transmitting)	700,-

# Stereo zoom microscope KERN OZL-45R

Eyepiece	Specifications – Objectives				
	Magnification	Standard 1,0x	Auxiliary objectives		
			0,5x	1,5x	2,0x
HWF 5x	Total magnification	3,75x – 25x	1,875x – 12,5x	5,625x – 37,5x	7,5x – 50x
	Field of view mm	Ø 31 – 4,6	Ø 61,3 – 9,2	Ø 22 – 3,3	Ø 16 – 2,5
HSWF 10x	Total magnification	7,5x – 50x	3,75x – 25x	11,25x – 75x	15x – 100x
	Field of view mm	Ø 33 – 5	Ø 65 – 10	Ø 22 – 3,3	Ø 16 – 2,5
HWF 15x	Total magnification	11,25x – 75x	5,625x – 37,5x	16,875x – 112,5x	22,5x – 150x
	Field of view mm	Ø 24 – 4,2	Ø 48 – 8,5	Ø 16 – 2,8	Ø 12 – 2
HSWF 20x	Total magnification	15x – 100x	7,5x – 50x	22,5x – 150x	30x – 200x
	Field of view mm	Ø 20 – 3,5	Ø 40 – 7	Ø 13,3 – 2,3	Ø 10 – 1,8
HWF 25x	Total magnification	18,75x – 125x	9,375x – 62,5x	28,125x – 187,5x	37,5x – 255x
	Field of view mm	Ø 15,8 – 2,4	Ø 31,5 – 4,8	Ø 10,5 – 1,6	Ø 7,9 – 1,2
Working distance		113 mm	220 mm	50 mm	35 mm

4

Model outfit		Model KERN	Order number	Price excl. of VAT ex works €
		OZL 456		
Eyepieces	HWF 5x / Ø 23,2 mm	○○	OZB-A4112	55,-
	HSWF 10x / Ø 23 mm	●●	OZB-A4118	55,-
	HWF 15x / Ø 15 mm	○○	OZB-A4119	55,-
	HSWF 20x / Ø 14,5 mm	○○	OZB-A4120	70,-
	HWF 25x / Ø 11,7 mm	○○	OZB-A4121	70,-
Auxiliary objectives	0,5x	○	OZB-A4201	75,-
	1,5x	○	OZB-A4204	75,-
	2,0x	○	OZB-A4205	80,-
Stands	Arm curved, with LED illumination (0,21W transmitting + 1W incident)	●		
Stage plate	Frosted glass / Ø 95 mm	●	OZB-A4805	30,-
	Black-white / Ø 95 mm	●	OZB-A4806	30,-
Mechanical stage	Stage size: WxD 180x155 mm, Travel: 75x55 mm, for transmitting and incident illumination	○	OZB-A4605	215,-
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>			

● = Standard configuration

○ = Option



OZM 544



OZM 541

LAB LINE

The high-quality model for experienced users

Features

- The KERN OZM-5 models are very robust and easy to use stereo microscopes with a zoom function operable from both sides.
- Their qualities, the flexible pillar stand and the optional integral, powerful and long-life LED incident and transmitted illumination make these models especially flexible.
- On all models it is possible to adjust the diopter on both tubes.
- A trinocular model version, allowing a camera to be fitted, is also available.
- These models are optimally suited to workstations in very rough working environments, training establishments, workshops, as well as assembly and repair workstations in the electronics and semi-conductor industries.
- These models are also ideal for use in production, in quality control and in biological laboratory and research areas.
- The design of the optical system allows a large depth of field, where only very little refocussing at the zoom enlargement is necessary.
- In addition, it provides precise resolution, an extra large field of view and is absolutely true-to-colour.
- These models offer the best possible ease of use thanks to their extra large working distance providing a large working surface.
- The multitude of auxiliary objectives, eyepieces, universal stands and additional accessory parts facilitates use in all common stereo microscopy applications.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

Technical data

- Optical system: Greenough
- Brightness adjustable (separate)
- Magnification ratio: 6,4:1
- Tube: 45° inclined
- Interpupillary distance: 52 – 76 mm
- Diopter adjustment (both-sided)
- Packing dimensions  
WxDxH 370x330x385 mm

**OZM 541 / OZM 543**  
• Net weight approx. 5,2 kg

**OZM 542 / OZM 544**  
• Net weight approx. 6,2 kg

Please find detailed information in the following charts.

STANDARD

360°

BINO

TRINO

LED

IL

TL

ZOOM

230 V

1 DAY

3 YEARS WARRANTY

OPTION

SCALE

Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
<b>KERN</b>							
<b>OZM 541</b>	Binocular	HSWF 10x Ø 23 mm	Ø 32,8 – 5,1	0,7x – 4,5x	Pillar style	–	<b>895,-</b>
<b>OZM 542</b>	Binocular	HSWF 10x Ø 23 mm	Ø 32,8 – 5,1	0,7x – 4,5x	Pillar style	3W LED (incident); 3W LED (transmitting)	<b>1120,-</b>
<b>OZM 543</b>	Trinocular	HSWF 10x Ø 23 mm	Ø 32,8 – 5,1	0,7x – 4,5x	Pillar style	–	<b>1195,-</b>
<b>OZM 544</b>	Trinocular	HSWF 10x Ø 23 mm	Ø 32,8 – 5,1	0,7x – 4,5x	Pillar style	3W LED (incident); 3W LED (transmitting)	<b>1415,-</b>



# Stereo zoom microscope KERN OZM-5

Eyepiece	Specifications – Objectives						
	Magnification	Standard 1,0x	Auxiliary objectives				
			0,37x	0,5x	0,7x	1,5x	2x
<b>HSWF 10x</b>	Total magnification	7x – 45x	2,59x – 16,65x	3,5x – 22,5x	4,9x – 31,5x	10,5x – 67,5x	14x – 90x
	Field of view mm	Ø 32,8 – 5,1	Ø 88,8 – 13,8	Ø 65,7 – 10,2	Ø 46,9 – 7,3	Ø 21,9 – 3,4	Ø 16,4 – 2,6
<b>SWF 15x</b>	Total magnification	10,5x – 67,5x	3,89x – 25x	5,3x – 33,8x	7,4x – 47,2x	15,8x – 101,3x	21x – 135x
	Field of view mm	Ø 24,3 – 3,8	Ø 65,6 – 10,2	Ø 48,6 – 7,6	Ø 34,7 – 5,4	Ø 16,2 – 2,5	Ø 12,1 – 1,9
<b>SWF 20x</b>	Total magnification	14x – 90x	5,18x – 33,3x	7x – 45x	9,8x – 63x	21x – 135x	28x – 180x
	Field of view mm	Ø 20 – 3,1	Ø 54,1 – 8,4	Ø 40 – 6,2	Ø 28,6 – 4,4	Ø 13,3 – 2,1	Ø 10 – 1,6
<b>SWF 30x</b>	Total magnification	21x – 135x	7,77x – 50x	10,5x – 67,5x	14,7x – 94,5x	31,5x – 202,5x	42x – 270x
	Field of view mm	Ø 12,9 – 2	Ø 34,7 – 5,4	Ø 25,7 – 4	Ø 18,4 – 2,9	Ø 8,6 – 1,6	Ø 6,4 – 1
<b>Working distance</b>		110 mm	275 mm	195 mm	145 mm	50 mm	35 mm

Model outfit		Model KERN				Order number	Price excl. of VAT ex works €
		OZM 541	OZM 542	OZM 543	OZM 544		
<b>Eyepieces</b>	HSWF 10x / Ø 23 mm	●●	●●	●●	●●	OZB-A5503	60,-
	SWF 15x / Ø 17 mm	○○	○○	○○	○○	OZB-A5504	60,-
	SWF 20x / Ø 14 mm	○○	○○	○○	○○	OZB-A5505	70,-
	SWF 30x / Ø 9 mm	○○	○○	○○	○○	OZB-A5506	85,-
	HSWF 10x / Ø 23 mm (reticule 0,1 mm)	○	○	○	○	OZB-A5512	95,-
	SWF 15x / Ø 17 mm (reticule 0,05 mm)	○	○	○	○	OZB-A5513	110,-
	SWF 20x / Ø 14 mm (reticule 0,05 mm)	○	○	○	○	OZB-A5514	110,-
<b>Achromatic auxiliary objectives</b>	0,37x only in combination with universal stand	○	○	○	○	OZB-A5611	135,-
	0,5x	○	○	○	○	OZB-A5612	120,-
	0,7x	○	○	○	○	OZB-A5613	120,-
	1,5x	○	○	○	○	OZB-A5615	120,-
	2,0x	○	○	○	○	OZB-A5616	120,-
<b>C-Mount</b>	0,3x			○	○	OZB-A5701	120,-
	0,5x			○	○	OZB-A5702	120,-
	1,0x			○	○	OZB-A5703	95,-
	1,0x (with micrometer) only in combination with OZB-A5703			○	○	OZB-A5704	250,-
	for SLR cameras (Nikon)			○	○	OZB-A5706	250,-
	for SLR cameras (Olympus)			○	○	OZB-A5707	250,-
	for SLR cameras (Canon)			○	○	OZB-A5708	250,-
<b>Darkfield attachment</b>	Darkfield attachment	○	○	○	○	OBZ-A4601	85,-
<b>Object clamp</b>	Object clamp	○	○	○	○	OBZ-A6205	45,-
<b>Stands</b>	Pillar style, without illumination	●		●			
	Pillar style, with 3W LED illumination (transmitting + incident)		●		●		
	Please find more stands in the catalogue on page 64 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>						
<b>Stage plate</b>	Frosted glass / Ø 94,5 mm		●		●	OZB-A5192	30,-
	Black-white / Ø 94,5 mm	●	●	●	●	OZB-A5191	30,-
	Glass / Ø 94,5 mm		○		○	OZB-A5190	30,-
<b>Mechanical stage</b>	Stage size: WxD 188x160 mm, Travel: 76x65 mm, for transmitting and incident illumination	○	○	○	○	OZB-A5781	165,-
	Stage size: WxD 180x175 mm, Travel: 100x86 mm, for incident illumination only	○	○	○	○	OZB-A5782	240,-
<b>External illumination</b>	Please find the information about external illumination units in the catalogue from page 68 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>						

● = Standard configuration

○ = Option

Stereo zoom microscope KERN OZO-5



LAB LINE

The high-quality model for flexible and professional users

Features

- The KERN OZO-5 models are very robust and easy to use stereo microscopes with a zoom function operable from both sides for an above-average enlargement range.
- Their qualities, the flexible pillar stand and the optional integral, powerful and long-life LED incident and transmitted illumination make these models especially flexible.
- On all models it is possible to adjust the diopter on both tubes.
- A trinocular model version, allowing a camera to be fitted, is also available.
- These models are optimally suited to quality control, assembly and repair workstations in the electronics and semi-conductor industries as well as in biological laboratories and research establishments.
- These models are also ideal for use at workstations in rough working environments, such as training establishments, workshops and in production.
- The design of these special optical system allows a large depth of field, where only very little refocussing at the zoom enlargement is necessary.
- In addition, thanks to its precise resolution, it provides high-contrast images, an extra large field of view and is absolutely true-to-colour.
- These models offer the best possible ease of use thanks to their extra large working distance providing a large working surface.
- The multitude of auxiliary objectives, eyepieces, universal stands and additional accessory parts facilitates use in all common stereo microscopy applications.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

Technical data

- Optical system: Greenough
- Brightness adjustable (separate)
- Magnification ratio: 8,8:1
- Tube: 35° inclined
- Interpupillary distance: 52 – 76 mm
- Diopter adjustment (both-sided)
- Packing dimensions  
WxDxH 370x330x385 mm

OZO 551 / OZM 553

- Net weight approx. 5,1 kg

OZM 552 / OZM 554

- Net weight approx. 6,1 kg

Please find detailed information in the following charts.

STANDARD



OPTION



Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
<b>KERN</b>							
<b>OZO 551</b>	Binocular	HSWF 10x Ø 23 mm	Ø 28,75 – 3,3	0,8x – 7x	Pillar style	–	<b>1525,-</b>
<b>OZO 552</b>	Binocular	HSWF 10x Ø 23 mm	Ø 28,75 – 3,3	0,8x – 7x	Pillar style	3W LED (incident); 3W LED (transmitting)	<b>1745,-</b>
<b>OZO 553</b>	Trinocular	HSWF 10x Ø 23 mm	Ø 28,75 – 3,3	0,8x – 7x	Pillar style	–	<b>1895,-</b>
<b>OZO 554</b>	Trinocular	HSWF 10x Ø 23 mm	Ø 28,75 – 3,3	0,8x – 7x	Pillar style	3W LED (incident); 3W LED (transmitting)	<b>2115,-</b>

# Stereo zoom microscope KERN OZO-5

Eyepiece	Specifications – Objectives						
	Magnification	Standard 1,0x	Auxiliary objectives				
			0,37x	0,5x	0,7x	1,5x	2x
<b>HSWF 10x</b>	Total magnification	8x – 70x	2,96x – 25,9x	4x – 35x	5,6x – 49x	12x – 105x	16x – 140x
	Field of view mm	Ø 28,75 – 3,3	Ø 74,3 – 8,5	Ø 57,5 – 6,6	Ø 41,1 – 4,7	Ø 19,2 – 2,2	Ø 14,4 – 1,6
<b>SWF 15x</b>	Total magnification	12x – 105x	4,44x – 38,9x	6x – 52,5x	8,4x – 73,5x	18x – 157,5x	24x – 210x
	Field of view mm	Ø 21,25 – 2,4	Ø 57,4 – 6,6	Ø 42,5 – 4,9	Ø 30,4 – 3,5	Ø 14,2 – 1,6	Ø 10,6 – 1,2
<b>SWF 20x</b>	Total magnification	16x – 140x	5,92x – 51,8x	8x – 70x	11,2x – 98x	24x – 210x	32x – 280x
	Field of view mm	Ø 17,5 – 2	Ø 47,3 – 5,4	Ø 35 – 4	Ø 25 – 2,9	Ø 11,7 – 1,3	Ø 8,75 – 1
<b>SWF 30x</b>	Total magnification	24x – 210x	8,88x – 77,7x	12x – 105x	16,8x – 147x	36x – 315x	48x – 420x
	Field of view mm	Ø 11,25 – 1,3	Ø 30,4 – 3,5	Ø 22,5 – 2,6	Ø 16,1 – 1,8	Ø 7,5 – 0,9	Ø 5,625 – 0,6
<b>Working distance</b>		108 mm	275 mm	195 mm	145 mm	50 mm	35 mm

Model outfit		Model KERN				Order number	Price excl. of VAT ex works €
		OZO 551	OZO 552	OZO 553	OZO 554		
<b>Eyepieces</b>	HSWF 10x / Ø 23 mm	●●	●●	●●	●●	OZB-A5503	60,–
	SWF 15x / Ø 17 mm	○○	○○	○○	○○	OZB-A5504	60,–
	SWF 20x / Ø 14 mm	○○	○○	○○	○○	OZB-A5505	70,–
	SWF 30x / Ø 9 mm	○○	○○	○○	○○	OZB-A5506	85,–
	HSWF 10x / Ø 23 mm (reticule 0,1 mm)	○	○	○	○	OZB-A5512	95,–
	SWF 15x / Ø 17 mm (reticule 0,05 mm)	○	○	○	○	OZB-A5513	110,–
	SWF 20x / Ø 14 mm (reticule 0,05 mm)	○	○	○	○	OZB-A5514	110,–
<b>Achromatic auxiliary objectives</b>	0,37x only in combination with universal stand	○	○	○	○	OZB-A5611	135,–
	0,5x	○	○	○	○	OZB-A5612	120,–
	0,7x	○	○	○	○	OZB-A5613	120,–
	1,5x	○	○	○	○	OZB-A5615	120,–
	2,0x	○	○	○	○	OZB-A5616	120,–
<b>C-Mount</b>	0,3x			○	○	OZB-A5701	120,–
	0,5x			○	○	OZB-A5702	120,–
	1,0x			○	○	OZB-A5703	95,–
	1,0x (with micrometer) only in combination with OZB-A5703			○	○	OZB-A5704	250,–
	for SLR cameras (Nikon)			○	○	OZB-A5706	250,–
	for SLR cameras (Olympus)			○	○	OZB-A5707	250,–
	for SLR cameras (Canon)			○	○	OZB-A5708	250,–
<b>Darkfield attachment</b>	Darkfield attachment	○	○	○	○	OBZ-A4601	85,–
<b>Object clamp</b>	Object clamp	○	○	○	○	OBZ-A6205	45,–
<b>Stands</b>	Pillar style, without illumination	●		●			
	Pillar style, with 3W LED illumination (transmitting + incident)		●		●		
	Please find more stands in the catalogue on page 64 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>						
<b>Stage plate</b>	Frosted glass / Ø 94,5 mm		●		●	OZB-A5192	30,–
	Black-white / Ø 94,5 mm	●	●	●	●	OZB-A5191	30,–
	Glass / Ø 94,5 mm		○		○	OZB-A5190	30,–
<b>Mechanical stage</b>	Stage size: WxD 188x160 mm, Travel: 76x65 mm, for transmitting and incident illumination	○	○	○	○	OZB-A5781	165,–
	Stage size: WxD 180x175 mm, Travel: 100x86 mm, for incident illumination only	○	○	○	○	OZB-A5782	240,–
<b>External illumination</b>	Please find the information about external illumination units in the catalogue from page 68 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>						

● = Standard configuration

○ = Option

Stereo zoom microscope KERN OZP-5



LAB LINE

The high-quality model for flexible and professional users

Features

- The KERN OZP-5 models are very robust and easy to use stereo microscopes with a zoom function operable from both sides for an above-average enlargement range.
- Their qualities, the flexible pillar stand and the optional integral, powerful and long-life LED incident and transmitted illumination make these models especially flexible.
- On all models it is possible to adjust the diopter on both tubes.
- A trinocular model version, allowing a camera to be fitted, is also available.
- These models are optimally suited to quality control, assembly and repair workstations in the electronics and semi-conductor industries and in biological laboratories and research establishments.
- These models are also ideal for use at workstations in rough working environments, such as training establishments, workshops and in production.
- The design of these special optical system allows a large depth of field, where only very little refocussing at the zoom enlargement is necessary.
- In addition, thanks to its precise resolution, it provides high-contrast images, an extra large field of view and is absolutely true-to-colour.
- These models offer the best possible ease of use thanks to their extra large working distance providing a large working surface.
- The multitude of auxiliary objectives, eyepieces, universal stands and additional accessory parts facilitates use in all common stereo microscopy applications.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

Technical data

- Optical system: Greenough
- Brightness adjustable (separate)
- Magnification ratio: 9,2:1
- Tube: 35° inclined
- Interpupillary distance: 52 – 76 mm
- Diopter adjustment (both-sided)
- Packing dimensions WxDxH 370x330x385 mm

**OZP 555 / OZP 557**  
• Net weight approx. 5,1 kg

**OZP 556 / OZP 558**  
• Net weight approx. 6,1 kg

Please find detailed information in the following charts.

STANDARD



OPTION



Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
<b>KERN</b>							
<b>OZP 555</b>	Binocular	HSWF 10x Ø 23 mm	Ø 38,3 – 4,2	0,6x – 5,5x	Pillar style	–	<b>1070,-</b>
<b>OZP 556</b>	Binocular	HSWF 10x Ø 23 mm	Ø 38,3 – 4,2	0,6x – 5,5x	Pillar style	3W LED (incident); 3W LED (transmitting)	<b>1290,-</b>
<b>OZP 557</b>	Trinocular	HSWF 10x Ø 23 mm	Ø 38,3 – 4,2	0,6x – 5,5x	Pillar style	–	<b>1385,-</b>
<b>OZP 558</b>	Trinocular	HSWF 10x Ø 23 mm	Ø 38,3 – 4,2	0,6x – 5,5x	Pillar style	3W LED (incident); 3W LED (transmitting)	<b>1605,-</b>

# Stereo zoom microscope KERN OZP-5

Eyepiece	Specifications – Objectives						
	Magnification	Standard 1,0x	Auxiliary objectives				
			0,37x	0,5x	0,7x	1,5x	2x
<b>HSWF 10x</b>	Total magnification	6x – 55x	2,22x – 20,4x	3x – 27,5x	4,2x – 38,5x	9x – 82,5x	12x – 110x
	Field of view mm	Ø 38,3 – 4,2	Ø 99,1 – 10,8	Ø 76,7 – 8,4	Ø 54,8 – 6	Ø 25,6 – 2,8	Ø 19,2 – 2,1
<b>SWF 15x</b>	Total magnification	9x – 82,5x	3,33x – 30,5x	4,5x – 41,25x	6,3x – 57,75x	13,5x – 123,75x	18x – 165x
	Field of view mm	Ø 28,3 – 3,1	Ø 76,6 – 8,35	Ø 56,7 – 6,2	Ø 40,5 – 4,4	Ø 18,9 – 2,1	Ø 14,2 – 1,5
<b>SWF 20x</b>	Total magnification	12x – 110x	4,44x – 40,7x	6x – 55x	8,4x – 77x	18x – 165x	24x – 220x
	Field of view mm	Ø 23,3 – 2,5	Ø 63,1 – 6,9	Ø 46,7 – 5,1	Ø 33,3 – 3,6	Ø 15,6 – 1,7	Ø 11,7 – 1,3
<b>SWF 30x</b>	Total magnification	18x – 165x	6,66x – 61,1x	9x – 82,5x	12,6x – 115,5x	27x – 247,5x	36x – 330x
	Field of view mm	Ø 15 – 1,6	Ø 40,5 – 4,4	Ø 30 – 3,3	Ø 21,4 – 2,3	Ø 10 – 1,1	Ø 7,5 – 0,8
<b>Working distance</b>		108 mm	275 mm	195 mm	145 mm	50 mm	35 mm

Model outfit		Model KERN				Order number	Price excl. of VAT ex works €
		OZP 555	OZP 556	OZP 557	OZP 558		
<b>Eyepieces</b>	HSWF 10x / Ø 23 mm	●●	●●	●●	●●	OZB-A5503	60,–
	SWF 15x / Ø 17 mm	○○	○○	○○	○○	OZB-A5504	60,–
	SWF 20x / Ø 14 mm	○○	○○	○○	○○	OZB-A5505	70,–
	SWF 30x / Ø 9 mm	○○	○○	○○	○○	OZB-A5506	85,–
	HSWF 10x / Ø 23 mm (reticule 0,1 mm)	○	○	○	○	OZB-A5512	95,–
	SWF 15x / Ø 17 mm (reticule 0,05 mm)	○	○	○	○	OZB-A5513	110,–
	SWF 20x / Ø 14 mm (reticule 0,05 mm)	○	○	○	○	OZB-A5514	110,–
<b>Achromatic auxiliary objectives</b>	0,37x only in combination with universal stand	○	○	○	○	OZB-A5611	135,–
	0,5x	○	○	○	○	OZB-A5612	120,–
	0,7x	○	○	○	○	OZB-A5613	120,–
	1,5x	○	○	○	○	OZB-A5615	120,–
	2,0x	○	○	○	○	OZB-A5616	120,–
<b>C-Mount</b>	0,3x			○	○	OZB-A5701	120,–
	0,5x			○	○	OZB-A5702	120,–
	1,0x			○	○	OZB-A5703	95,–
	1,0x (with micrometer) only in combination with OZB-A5703			○	○	OZB-A5704	250,–
	for SLR cameras (Nikon)			○	○	OZB-A5706	250,–
	for SLR cameras (Olympus)			○	○	OZB-A5707	250,–
	for SLR cameras (Canon)			○	○	OZB-A5708	250,–
<b>Darkfield attachment</b>	Darkfield attachment	○	○	○	○	OBZ-A4601	85,–
<b>Object clamp</b>	Object clamp	○	○	○	○	OBZ-A6205	45,–
<b>Stands</b>	Pillar style, without illumination	●		●			
	Pillar style, with 3W LED illumination (transmitting + incident)		●		●		
	Please find more stands in the catalogue from page 64 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>						
<b>Stage plate</b>	Frosted glass / Ø 94,5 mm		●		●	OZB-A5192	30,–
	Black-white / Ø 94,5 mm	●	●	●	●	OZB-A5191	30,–
	Glass / Ø 94,5 mm		○		○	OZB-A5190	30,–
<b>Mechanical stage</b>	Stage size: WxD 188x160 mm, Travel: 76x65 mm, for incident and transmitting illumination	○	○	○	○	OZB-A5781	165,–
	Stage size: WxD 180x175 mm, Travel: 100x86 mm, for incident illumination only	○	○	○	○	OZB-A5782	240,–
<b>External illumination</b>	Please find the information about external illumination units in the catalogue from page 68 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>						

● = Standard configuration

○ = Option



4



OZR 563



OZR 564

PROFESSIONAL LINE

The high-contrast parallel model for the professional user

Features

- The KERN OZR-5 models are highly professional, very robust but easy to use stereo microscopes with a zoom function operable from both sides.
- Their qualities, the flexible pillar stand and the optional integral, powerful and long-life LED incident and transmitted illumination make these models especially flexible.
- All models have diopter adjustment on both tubes and are supplied with an adapter, allowing a camera to be fitted.
- The parallel optical system allows work without tiring the eyes and offers a large depth of field. In addition, only very minor refocussing at the zoom enlargement is necessary.
- Furthermore, it provides precise resolution, an extra large field of view and is absolutely true-to-colour.
- These models are optimally suited to quality control, assembly and repair workstations

in the electronics and semi-conductor industries as well as in biological laboratories and research establishments.

- These models are also ideal for use at workstations in rough working environments, such as training establishments, workshops and in production.
- These models offer the best possible ease of use thanks to their extra large working distance providing a large working surface.
- The multitude of auxiliary objectives, eyepieces, universal stands and additional accessory parts facilitates use in all common and professional stereo microscopy applications.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

Technical data

- Optical system: Parallel
- Brightness adjustable (separate)
- Magnification ratio: 6,25:1
- Tube: 45° inclined
- Interpupillary distance: 52 – 76 mm
- Diopter adjustment (both-sided)
- Packing dimensions  
WxDxH 370x330x385 mm

**OZR 563**  
• Net weight approx. 5,9 kg

**OZR 564**  
• Net weight approx. 6,9 kg

Please find detailed information in the following charts.

STANDARD

360°

TRINO

LED

IL

TL

ZOOM

PARALLEL

230 V

1 DAY

3 YEARS WARRANTY

OPTION

SCALE

Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
KERN							
OZR 563	Trinocular	HWF 10x Ø 22 mm	Ø 27,5 – 4,4	0,8x – 5x	Pillar style	–	2030,–
OZR 564	Trinocular	HWF 10x Ø 22 mm	Ø 27,5 – 4,4	0,8x – 5x	Pillar style	3W LED (incident); 3W LED (transmitting)	2250,–

# Stereo zoom microscope KERN OZR-5

Eyepiece	Specifications – Objectives				
	Magnification	Standard Plan 1,0x	Achromatic objectives		
			0,5x	0,7x	1,5x (Auxiliary)
HWF 10x	Total magnification	8x – 50x	4x – 25x	5,6x – 35x	12x – 75x
	Field of view mm	Ø 27,5 – 4,4	Ø 55 – 8,8	Ø 39,3 – 6,3	Ø 18,33 – 2,93
SWF 15x	Total magnification	12x – 75x	6x – 37,5x	8,4x – 5,5x	18x – 112,5x
	Field of view mm	Ø 21,25 – 3,4	Ø 42,5 – 6,8	Ø 30,36 – 4,86	Ø 14,17 – 2,27
SWF 20x	Total magnification	16x – 100x	8x – 50x	11,2x – 70x	24x – 150x
	Field of view mm	Ø 17,5 – 2,8	Ø 35 – 5,6	Ø 25 – 4	Ø 11,67 – 1,87
SWF 30x	Total magnification	24x – 150x	12x – 75x	16,8x – 105x	36x – 225x
	Field of view mm	Ø 11,25 – 1,8	Ø 22,5 – 3,6	Ø 16,1 – 2,57	Ø 7,5 – 1,2
Working distance		91 mm	186 mm	135 mm	40 mm

Model outfit		Model KERN		Order number	Price excl. of VAT ex works €
		OZR 563	OZR 564		
Eyepieces	HWF 10x / Ø 22 mm	●●	●●	OZB-A5502	60,-
	SWF 15x / Ø 17 mm	○○	○○	OZB-A5504	60,-
	SWF 20x / Ø 14 mm	○○	○○	OZB-A5505	70,-
	SWF 30x / Ø 9 mm	○○	○○	OZB-A5506	85,-
	HWF 10x / Ø 22 mm (reticule 0,1 mm)	○	○	OZB-A5511	95,-
	SWF 15x / Ø 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	110,-
	SWF 20x / Ø 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	110,-
Plan achromatic objective	1,0x	●	●	OZB-A5603	495,-
Achromatic objectives	0,5x	○	○	OZB-A5601	195,-
	0,7x	○	○	OZB-A5602	195,-
	1,5x (Only in combination with OZB-A5603)	○	○	OZB-A5604	255,-
Trinocular beamsplitter	Division 100:0	●	●	OZB-A5401	575,-
	Division 50:50	○	○	OZB-A5402	575,-
C-Mount	0,3x	○	○	OZB-A5701	120,-
	0,5x	○	○	OZB-A5702	120,-
	1,0x	○	○	OZB-A5703	95,-
	1,0x (reticule) only in combination with OZB-A5703	○	○	OZB-A5704	250,-
	for SLR cameras (Nikon)	○	○	OZB-A5706	250,-
	for SLR cameras (Olympus)	○	○	OZB-A5707	250,-
	for SLR cameras (Canon)	○	○	OZB-A5708	250,-
Darkfield attachment	Darkfield attachment	○	○	OBB-A4601	85,-
Object clamp	Object clamp	○	○	OBB-A6205	45,-
Stands	Pillar style, without illumination	●			
	Pillar style, with 3W LED illumination (transmitting + incident)		●		
Stage plate	Frosted glass / Ø 94,5 mm		●	OZB-A5192	30,-
	Black-white / Ø 94,5 mm	●	●	OZB-A5191	30,-
	Glass / Ø 94,5 mm		○	OZB-A5190	30,-
Mechanical stage	Stage size: WxD 188x160 mm, Travel: 76x65 mm, for incident and transmitting illumination	○	○	OZB-A5781	165,-
	Stage size: WxD 180x175 mm, Travel: 100x86 mm, for incident illumination only	○	○	OZB-A5782	240,-
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>				

● = Standard configuration

○ = Option

# Stereo zoom microscope KERN OZS-5



OZS 573



OZS 574

## PROFESSIONAL LINE

The high-zoom parallel model for the professional user

### Features

- The KERN OZS-5 models are highly professional, very robust but easy to use stereo microscopes with a zoom function operable from both sides for an above-average enlargement range.
- Their qualities, the flexible pillar stand and the optional integral, powerful and long-life LED incident and transmitted illumination make these models especially flexible.
- All models have diopter adjustment on both tubes and are supplied with an adapter, allowing a camera to be fitted.
- The parallel optical system allows work without tiring the eyes and offers a large depth of field. In addition, only very minor refocussing at the zoom enlargement is necessary.
- Furthermore, it provides precise resolution, an extra large field of view and is absolutely true-to-colour.
- These models are optimally suited to quality control, assembly and repair workstations

- in the electronics and semi-conductor industries as well as in biological laboratories and research establishments.
- These models are also ideal for use at workstations in rough working environments, such as training establishments, workshops and in production.
- These models offer the best possible ease of use thanks to their extra large working distance providing a large working surface.
- The multitude of auxiliary objectives, eyepieces, universal stands and additional accessory parts facilitates use in all common and professional stereo microscopy applications.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

### Technical data

- Optical system: Parallel
- Brightness adjustable
- Magnification ratio: 10:1
- Tube: 45° inclined
- Interpupillary distance: 52 – 76 mm
- Diopter adjustment (both-sided)
- Packing dimensions  
WxDxH 370x330x385 mm

#### OZS 573

- Net weight approx. 6,1 kg

#### OZS 574

- Net weight approx. 7,1 kg

Please find detailed information in the following charts.

#### STANDARD



#### OPTION



Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
<b>KERN</b>							
<b>OZS 573</b>	Trinocular	HWF 10x Ø 22 mm	Ø 27,5 – 2,75	0,8x – 8x	Pillar style	–	<b>2885,-</b>
<b>OZS 574</b>	Trinocular	HWF 10x Ø 22 mm	Ø 27,5 – 2,75	0,8x – 8x	Pillar style	3W LED (incident); 3W LED (transmitting)	<b>3110,-</b>

# Stereo zoom microscope KERN OZS-5

Eyepiece	Specifications – Objectives				
	Magnification	Standard Plan 1,0x	Achromatic objectives		
			0,5x	0,7x	1,5x (Auxiliary)
HWF 10x	Total magnification	8x – 80x	4x – 40x	5,6x – 56x	12x – 120x
	Field of view mm	Ø 27,5 – 2,75	Ø 55 – 5,5	Ø 39,3 – 3,93	Ø 18,33 – 1,83
SWF 15x	Total magnification	12x – 120x	6x – 60x	8,4x – 84x	18x – 180x
	Field of view mm	Ø 21,25 – 2,13	Ø 42,5 – 4,25	Ø 30,36 – 3,04	Ø 14,17 – 1,42
SWF 20x	Total magnification	16x – 160x	8x – 80x	11,2x – 112x	24x – 240x
	Field of view mm	Ø 17,5 – 1,75	Ø 35 – 3,5	Ø 25 – 2,5	Ø 11,67 – 1,17
SWF 30x	Total magnification	24x – 240x	12x – 120x	16,8x – 168x	36x – 360x
	Field of view mm	Ø 11,25 – 1,13	Ø 22,5 – 2,25	Ø 16,1 – 1,61	Ø 7,5 – 0,75
Working distance		91 mm	186 mm	135 mm	40 mm

Model outfit		Model KERN		Order number	Price excl. of VAT ex works €
		OZS 573	OZS 574		
Eyepieces	HWF 10x / Ø 22 mm	●●	●●	OZB-A5502	60,-
	SWF 15x / Ø 17 mm	○○	○○	OZB-A5504	60,-
	SWF 20x / Ø 14 mm	○○	○○	OZB-A5505	70,-
	SWF 30x / Ø 9 mm	○○	○○	OZB-A5506	85,-
	HWF 10x / Ø 22 mm (reticule 0,1 mm)	○	○	OZB-A5511	95,-
	SWF 15x / Ø 17 mm (reticule 0,05 mm)	○	○	OZB-A5513	110,-
	SWF 20x / Ø 14 mm (reticule 0,05 mm)	○	○	OZB-A5514	110,-
Plan achromatic objective	1,0x	●	●	OZB-A5603	495,-
Achromatic objectives	0,5x	○	○	OZB-A5601	195,-
	0,7x	○	○	OZB-A5602	195,-
	1,5x (Only in combination with OZB-A5603)	○	○	OZB-A5604	255,-
Trinocular beamsplitter	Division 100:0	●	●	OZB-A5401	575,-
	Division 50:50	○	○	OZB-A5402	575,-
C-Mount	0,3x	○	○	OZB-A5701	120,-
	0,5x	○	○	OZB-A5702	120,-
	1,0x	○	○	OZB-A5703	95,-
	1,0x (reticule) only in combination with OZB-A5703	○	○	OZB-A5704	250,-
	for SLR cameras (Nikon)	○	○	OZB-A5706	250,-
	for SLR cameras (Olympus)	○	○	OZB-A5707	250,-
	for SLR cameras (Canon)	○	○	OZB-A5708	250,-
Darkfield attachment	Darkfield attachment	○	○	OB-B-A4601	85,-
Object clamp	Object clamp	○	○	OB-B-A6205	45,-
Stands	Pillar style, without illumination	●			
	Pillar style, with 3W LED illumination (transmitting + incident)		●		
Stage plate	Frosted glass / Ø 94,5 mm		●	OZB-A5192	30,-
	Black-white / Ø 94,5 mm	●	●	OZB-A5191	30,-
	Glass / Ø 94,5 mm		○	OZB-A5190	30,-
Mechanical stage	Stage size: WxD 188x160 mm, Travel: 76x65 mm, for incident and transmitting illumination	○	○	OZB-A5781	165,-
	Stage size: WxD 180x175 mm, Travel: 100x86 mm, for incident illumination only	○	○	OZB-A5782	240,-
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>				

● = Standard configuration

○ = Option

Coaxial microscope KERN OZC-5



Plug in for power supply

PROFESSIONAL LINE

The coaxial model for your LCD / LED-electronic and semi-conductor workstation

Features

- The KERN OZC-5 models are very robust and easy to use trinocular stereo microscopes, with a zoom range operated from both sides and coaxial illumination for above-average images with excellent contrast and depth of field.
- The base is solid and therefore extremely stable.
- Their ideal applications are at monitoring, control and measuring workstations in the semi-conductor, LCD and LED industries, where coaxial illumination is required.
- The parallel optical system allows work without tiring the eyes. In addition, only very minor refocussing at the zoom enlargement is necessary.
- Furthermore, it provides precise resolution, an extra large field of view and is absolutely true-to-colour.
- These models offer the best possible ease of use thanks to their extra large working distance providing a large working surface.
- The multitude of eyepieces and additional accessory parts facilitates use in all common and professional stereo microscopy applications.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism. This is underlined by the functional and ergonomic design.

Technical data

- Optical system: Parallel
- Brightness adjustable
- Magnification ratio: 3,6:1
- Tube: 45° inclined
- Interpupillary distance: 52 – 76 mm
- Diopter adjustment (both-sided)
- Packing dimensions WxDxH 370x330x385 mm
- Net weight approx. 7,1 kg

Please find detailed information in the following charts.

STANDARD



360°



TRINO



LED



IL



ZOOM



PARALLEL



230 V



1 DAY



3 YEARS  
WARRANTY

OPTION



SCALE

Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
KERN							
OZC 583	Trinocular	HSWF 10x Ø 23 mm	Ø 12,78 – 3,5	1,8x – 6,5x	Arm curved	2W LED (coaxial incident)	4490,-



# Coaxial microscope KERN OZC-5

Eyepiece	Specifications – Objectives	
	Magnification	Standard 1,0x
HWF 10x	Total magnification	18x – 65x
	Field of view mm	Ø 12,78 – 3,5
SWF 15x	Total magnification	27x – 97,5x
	Field of view mm	Ø 9,5 – 2,6
SWF 20x	Total magnification	36x – 130x
	Field of view mm	Ø 7,78 – 2,2
SWF 30x	Total magnification	54x – 195x
	Field of view mm	Ø 5 – 1,4
Working distance		92 mm

Model outfit		Model KERN	Order number	Price excl. of VAT ex works €
		OZC 583		
Eyepieces	HSWF 10x / Ø 23 mm	●●	OZB-A5503	60,-
	SWF 15x / Ø 17 mm	○○	OZB-A5504	60,-
	SWF 20x / Ø 14 mm	○○	OZB-A5505	70,-
	SWF 30x / Ø 9 mm	○○	OZB-A5506	85,-
	HSWF 10x / Ø 23 mm (reticule 0,1 mm)	○	OZB-A5512	95,-
	SWF 15x / Ø 17 mm (reticule 0,05 mm)	○	OZB-A5513	110,-
	SWF 20x / Ø 14 mm (reticule 0,05 mm)	○	OZB-A5514	110,-
C-Mount	0,3x	○	OZB-A5701	120,-
	0,5x	○	OZB-A5702	120,-
	1,0x	○	OZB-A5703	95,-
	1,0x (with micrometer) only in combination with OZB-A5703	○	OZB-A5704	250,-
	for SLR cameras (Nikon)	○	OZB-A5706	250,-
	for SLR cameras (Olympus)	○	OZB-A5707	250,-
	for SLR cameras (Canon)	○	OZB-A5708	250,-
Stands	Arm curved, without illumination	●		
Mechanical stage	Stage size: WxD 188x160 mm, Travel: 76x65 mm, for incident and transmitting illumination	○	OZB-A5781	165,-
	Stage size: WxD 180x175 mm, Travel: 100x86 mm, for incident illumination only	○	OZB-A5782	240,-
External Illumination	Please find the information about external illumination units in the catalogue from page 68 and on our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>			

● = Standard configuration

○ = Option



OZG 493



OZG 497



Backside of OZG 497



Tilt positions



Tilt positions

## LAB LINE

## The flexible model for the jeweller and the jewellery industry

### Features

- The KERN OZG-4 models are stereo microscopes with zoom function specially developed for the jewellery industry and jewellers.
- The KERN OZG 493 is equipped with a pillar stand and bright integral halogen incident and transmitted illumination units.
- The KERN OZG 497 is provided with a mechanical stand and is extremely flexible thanks to its tip and rotate function. Together with its powerful illumination including a fiber illumination, this is an ideal solution for jewellers and the jewellery industry.
- In addition to their very good optical properties, these models offer an optimal package thanks to their dark field unit with stage clamp, provided with the microscope.
- One of the central features of this variable and simultaneously robust series of microscopes is the stable and precisely adjustable mechanism.

### Technical data

- Optical system: Greenough
- Brightness adjustable
- Tube: 45° inclined
- Interpupillary distance: 55 – 75 mm
- Diopter adjustment (both-sided)

#### OZG 493

- Magnification ratio: 5,1:1
- Packing dimensions WxDxH 365x292x470 mm
- Net weight approx. 5 kg

#### OZG 497

- Magnification ratio: 6,7:1
- Packing dimensions WxDxH 370x355x480 mm
- Net weight approx. 11 kg

Please find detailed information in the following charts.

### STANDARD



Model	Standard configuration						Price excl. of VAT ex works €
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
<b>KERN</b>							
<b>OZG 493</b>	Binocular	HWF 10x Ø 21,5 mm	Ø 28 – 5,6	0,7x – 3,6x	Pillar style	12V / 10W Halogen (incident) 12V / 10W Halogen (transmitting) 10W Fluorescence (front illumination)	<b>485,-</b>
<b>OZG 497</b>	Trinocular	HSWF 10x Ø 23 mm	Ø 33 – 5,1	0,75x – 5,0x	Arm curved	12V / 10W Halogen (transmitting) 10W Fluorescence (front illumination including single fiber)	<b>1820,-</b>

# Gem microscope KERN OZG-4

OZG 493	Specifications – Objectives	
Eyepiece	Magnification	Standard 1,0x
WF 5x	Total magnification	3,75x – 18x
	Field of view mm	Ø 26 – 6
HWF 10x	Total magnification	7,5x – 36x
	Field of view mm	Ø 28 – 6
WF 15x	Total magnification	11,25x – 54x
	Field of view mm	Ø 19 – 4,5
WF 20x	Total magnification	15x – 72x
	Field of view mm	Ø 12,5 – 3
Working distance		86 mm

OZG 497	Specifications – Objectives	
Eyepiece	Magnification	Standard 1,0x
HWF 5x	Total magnification	3,75x – 25x
	Field of view mm	Ø 31 – 4,6
HSWF 10x	Total magnification	7,5x – 50x
	Field of view mm	Ø 33 – 5
HWF 15x	Total magnification	11,25x – 75x
	Field of view mm	Ø 24 – 4,2
HSWF 20x	Total magnification	15x – 100x
	Field of view mm	Ø 20 – 3,5
HWF 25x	Total magnification	18,75x – 125x
	Field of view mm	Ø 15,8 – 2,4
Working distance		113 mm

4

Model outfit		Model KERN		Order number	Price excl. of VAT ex works €
		OZG 493	OZG 497		
Eyepieces	WF 5x / Ø 16,2 mm	oo		OZB-A4101	50,-
	HWF 10x / Ø 21,5 mm	●●		OZB-A4106	50,-
	WF 15x / Ø 15 mm	oo		OZB-A4103	45,-
	WF 20x / Ø 10 mm	oo		OZB-A4104	50,-
	HWF 5x / Ø 23,2 mm		oo	OZB-A4112	55,-
	HSWF 10x / Ø 23 mm		●●	OZB-A4118	55,-
	HWF 15x / Ø 15 mm		oo	OZB-A4119	55,-
	HSWF 20x / Ø 14,5 mm		oo	OZB-A4120	70,-
	HWF 25x / Ø 11,7 mm		oo	OZB-A4121	70,-
C-Mount	1x		o	OZB-A4809	65,-
	0,3x		o	OZB-A4810	85,-
	0,5x		o	OZB-A4811	100,-
Darkfield attachment	Darkfield attachment	●	●	OZB-A4601	70,-
Object clamp	Object clamp (steel wire)	●	●	OZB-A4604	45,-
Stands	Pillar style, with 12V / 10W Halogen (transmitting + incident) and 10W Fluorescent illumination (front)	●			
	Arm curved, with 12V / 10W Halogen (transmitting) and 10W Fluorescent illumination (front) + Single fiber illumination		●		

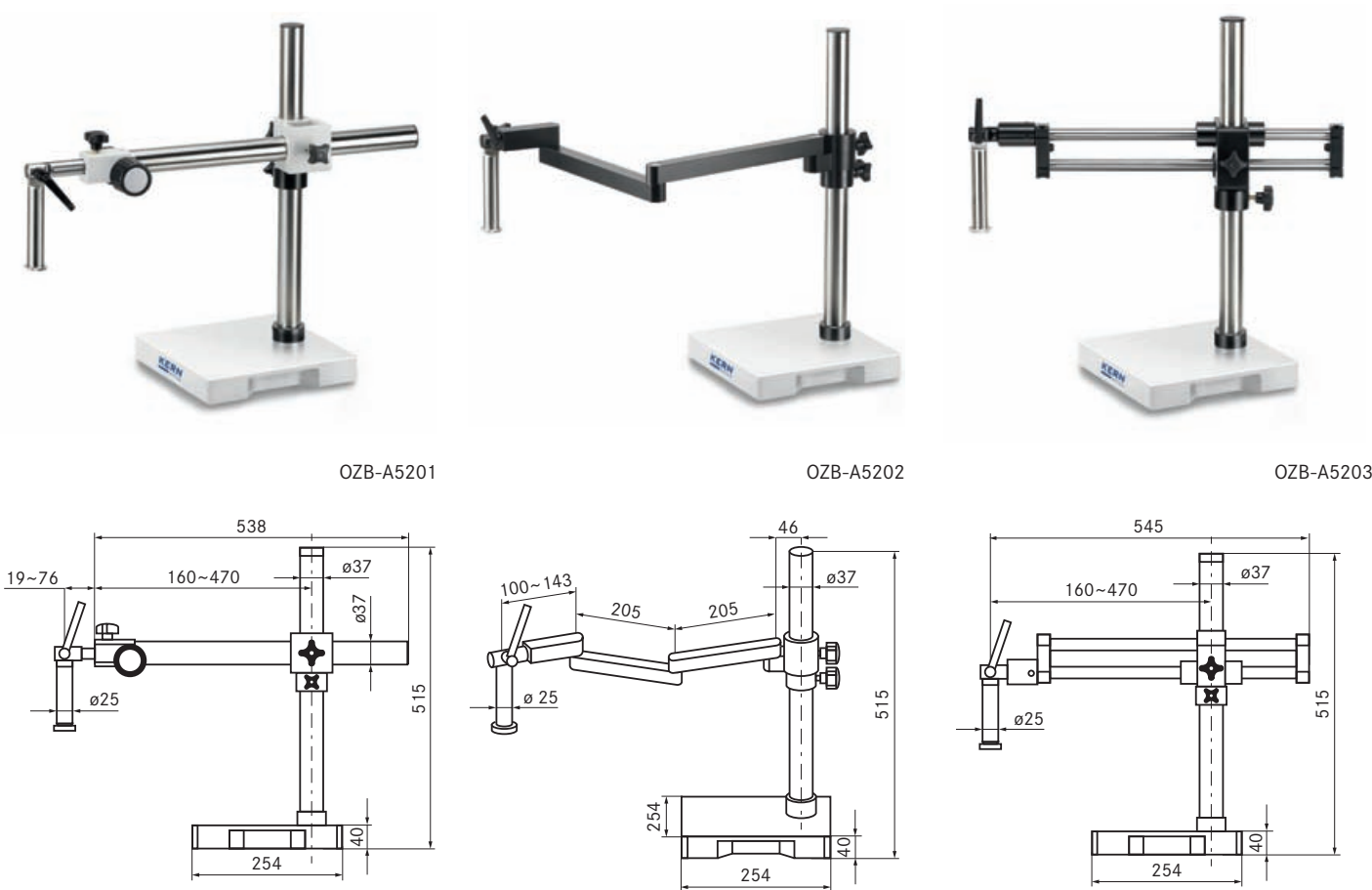
● = Standard configuration

o = Option

## 5 Stereomicroscope stands



Universal stands



Model	Description	Price excl. of VAT ex works €
KERN		
OZB-A5201	Universal stand with telescopic arm	500,-
OZB-A5202	Universal stand with jointed arm	500,-
OZB-A5203	Universal stand with ball bearing mounted double arm	810,-

Please  
check our  
webshop for  
new universal  
stands!

Holders



Model	Description	Price excl. of VAT ex works €
KERN		
OZB-A5301	With adjustable tension of the hand wheel. Suitable for all universal stands as well as the illustrated accessory-pillar stands and for models of series OSF 5x, OZM, OZO and OZP	145,-
OZB-A5306	With coaxial coarse and fine adjustment and adjustable tension of the hand wheel. Suitable for all universal stands as well as the illustrated accessory-pillar stands and for models of series OSF 5x, OZM, OZO and OZP	255,-



## Stereomicroscope stands



OZB-A5121 with coarse and fine adjustment



OZB-A5123 with coarse and fine adjustment as well as incident and transmitting illumination



OZB-A5104 (Arm curved stand)



OZB-A5106 (Arm curved stand) with incident and transmitting illumination



OZB-A5107 with extra small stage



OZB-A5109 with extra small stage as well as incident and transmitting illumination

## Stereomicroscope stands



OZB-A5114 with rust protection iron stage



OZB-A5127 with coated steel stage as well as coarse and fine adjustment

## Stereomicroscope stands for the greatest flexibility

5

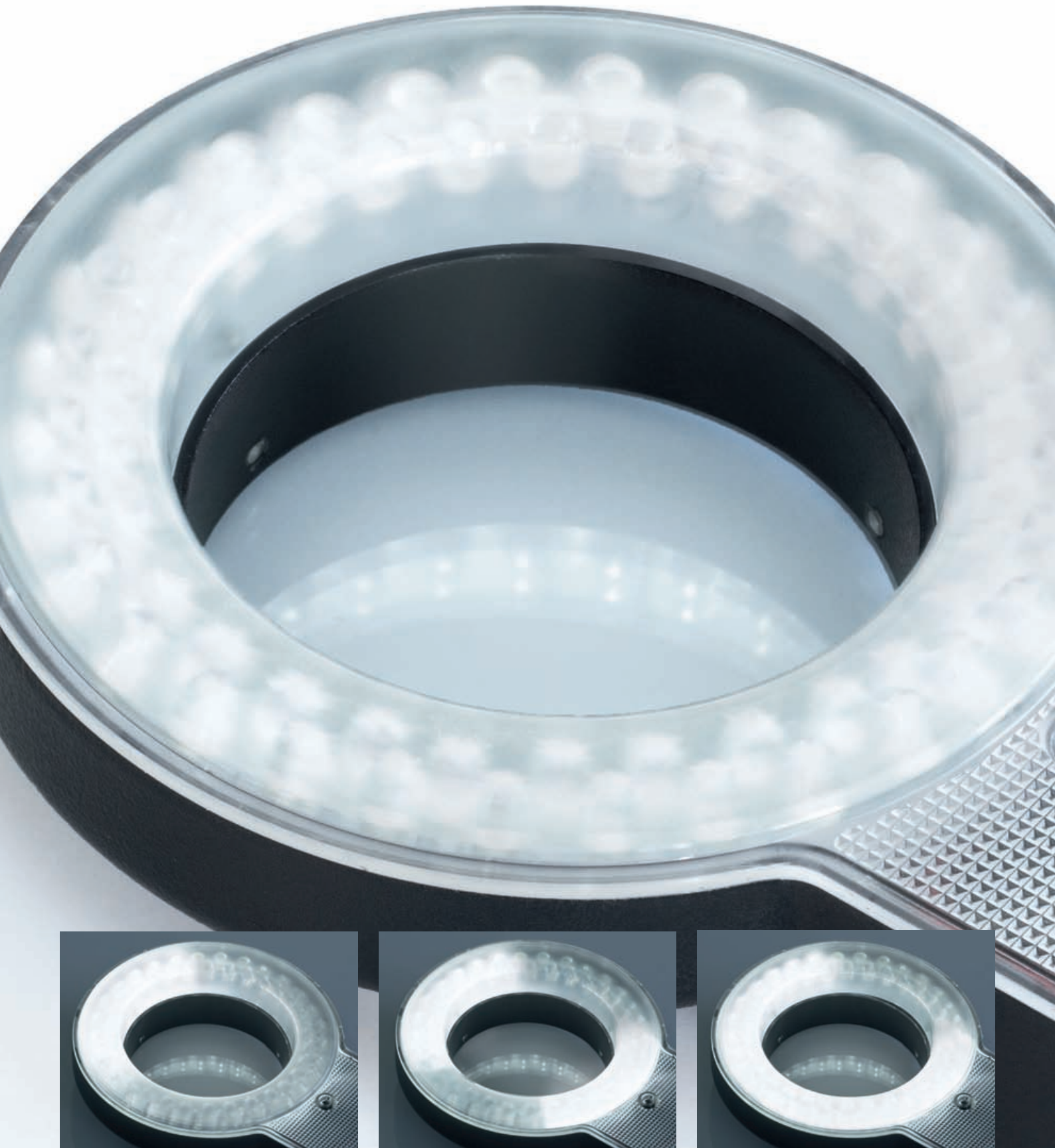
### Features

- Choose your favourite stand here to achieve the maximum flexibility and greatest possible ease of use in stereo microscopy.
- We supply a wide range of stands with and without integral illumination unit.
- These stands are very robust and flexible, and are characterised by their precise mechanism.
- Suitable for all KERN OSF-5, OZM, OZO and OZP stereomicroscopes.
- Stands for other models are available on request or by going to [www.kern-sohn.com](http://www.kern-sohn.com)

Model	Stand style	Illumination	Description	Dimensions mm	Price excl. of VAT ex works €
<b>KERN</b>					
<b>OZB-A5 121</b>	Pillar style	-	With coaxial coarse and fine adjustment	283x292x271,5	<b>300,-</b>
<b>OZB-A5 123</b>	Pillar style	3W LED (incident + transmitting)	With coaxial coarse and fine adjustment	283x292x303,5	<b>485,-</b>
<b>OZB-A5 104</b>	Arm curved	-		283x292x240	<b>215,-</b>
<b>OZB-A5 106</b>	Arm curved	3W LED (incident + transmitting)		283x292x272	<b>435,-</b>
<b>OZB-A5 107</b>	Pillar style	-		170x245x271,5	<b>215,-</b>
<b>OZB-A5 109</b>	Pillar style	3W LED (incident + transmitting)		170x245x303,5	<b>430,-</b>
<b>OZB-A5 114</b>	Pillar style	-	With rust protection iron stage	400x300x371,5	<b>255,-</b>
<b>OZB-A5 127</b>	Pillar style	-	With coated steel stage	181x245x272	<b>360,-</b>

# 6 External illumination units for stereomicroscopes

Ring illumination and cold light sources



## Ring illumination



OZB-A4571



OZB-A4572



OBB-A6102

Model	Illuminance	Inner Ø	Colour temperature	Brightness adjustable	Illumination by segments	Price excl. of VAT ex works €
<b>KERN</b>		mm	K			
<b>OZB-A4571</b>	3W LED	60	7000 – 11000	●		<b>80,-</b>
<b>OZB-A4572</b>	3W LED	60	6500 – 7000	●	●	<b>125,-</b>
<b>OBB-A6102</b>	4,5W LED	63	approx. 7600	●		<b>125,-</b>

## Fiber illumination



OZB-A4515



OZB-A4512



OZB-A4531



OZB-A4532



OZB-A4533

Model	Description	Length	Illuminance	Colour temperature	Brightness adjustable	Price excl. of VAT ex works €
<b>KERN</b>		mm		K		
<b>OZB-A4515</b>	Dual fiber unit LED	300	6W	5600 – 6300	●	<b>130,-</b>
<b>OZB-A4512</b>	Cold light source halogen	–	24V / 150W	3150 – 3200	●	<b>255,-</b>
<b>OZB-A4531</b>	Single fiber	490	Usable for OZB-A4512			<b>155,-</b>
<b>OZB-A4532</b>	Dual fiber	490				<b>220,-</b>
<b>OZB-A4533</b>	Ring fiber	900				<b>320,-</b>

## Cold light sources and ring lights for maximum flexibility in stereo microscopy

### Features

- Choose your favourite external illumination here to achieve maximum flexibility and greatest possible ease of use in stereo microscopy.
- These professional illumination units provide a quality of light at a high, constant intensity at all times.
- Regardless of whether your choice is space-saving ring lights or cold light sources using optical fibre, our range is all you can wish for.
- Additional models are available on request or by going to [www.kern-sohn.com](http://www.kern-sohn.com)



## 7 Microscope cameras





# Microscope cameras



ODC 132



ODC 152



USB-cable with micrometer slide

## Microscope cameras for common microscopy applications

### Features

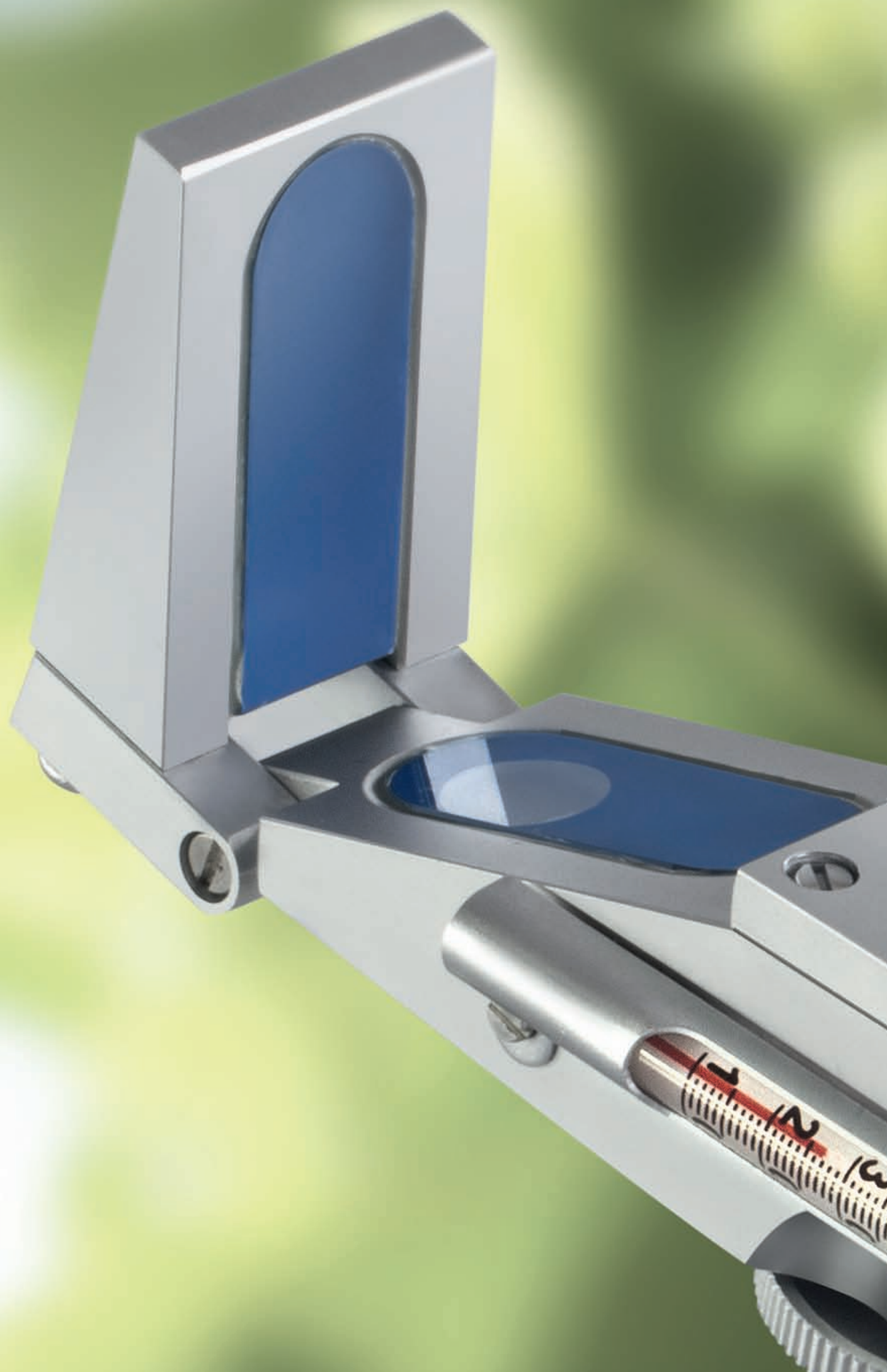
- These microscope cameras are universal and can be easily connected to the microscope and a PC / laptop via USB.
- The proven CMOS technology provides fast, clear images.
- The attached English-language software provides a good basis for observing, measuring and documenting your work in all common microscopy applications.
- The camera, USB cable, software CD and a stage micrometer for calibration are included in the scope of delivery.
- Please don't forget to order the C-Mount adapter
- Additional models are available on request or by going to [www.kern-sohn.com](http://www.kern-sohn.com)

7

STANDARD



Model	Resolution	USB	FPS	Sensor	Sensor size	Colour / Monochrome	Supported operating system	Price excl. of VAT ex works €
<b>KERN</b>								
ODC 132	3 MP	2.0	5-30	CMOS	1/2"	colour	Win 2000, XP, 7, Vista	530,-
ODC 152	5 MP	2.0	5.5-30	CMOS	1/2,5"	colour	Win 2000, XP, 7, Vista	620,-





# Refractometers

8	Analogue refractometers – type: hand-held	74
9	Digital refractometers – type: hand-held	80
10	Abbe refractometers – type: desktop	85

Your KERN product specialist will be happy to help:



**Daniel Junger**  
Manager KERN Optics

Tel. +49 [0] 7433 9933-155  
Fax +49 [0] 7433 9933-149  
[daniel.junger@kern-sohn.com](mailto:daniel.junger@kern-sohn.com)



Box with accessories

## Refractive index measurement for laboratories and the industry

### Features

- The KERN ORA refractometers are universal, maintenance free analogue handheld refractometers.
- The handy and robust design allows the easy, efficient and sustainable use in everyday life.
- Manually calculated conversions and errors of the user are avoided by multiple selectable scales.
- These scales are especially developed, exactly calculated and checked. They are also characterized by their thin and clear lines.
- The optical system and the prism cover are made of special material which allows a low-tolerance measuring.
- All ORA models are equipped with an eyepiece for easy and smooth setting for many different diopter strengths.
- The models marked with "ATC" have an automatic temperature compensation which enables accurate measurement at different ambient temperatures (10 °C to 30 °C).
- The following accessory-parts are included:
  - Calibration liquid
  - Calibration block (if required)
  - Storage box
  - Pipette
  - Small screwdriver
  - Cleaning tissue.
- Further accessories are available optionally.

### Technical data

- Die-cast housing of copper-aluminium alloy, chrome coated
- Measurement temperature without ATC: 20 °C
- Measurement temperature range with ATC: 10 °C – 30 °C
- Packing dimensions WxDxH 215x94x65 mm (depending on the model)
- Dimensions of the box: 205x75x55 mm (depending on the model)
- Product length: approx. 130 – 200 mm (depending on the model)
- Net weight approx. 135 – 600 g (depending on the model)

STANDARD



**2 YEARS**  
WARRANTY

OPTION





# Analogue refractometer KERN ORA

## Scope of application: Sugar

The following models are particularly suitable for the measurement of the “BRIX” value. They are used to determine the sugar content in food, especially in fruit, vegetables, juice and soft drinks. In the same ideal way these refractometers serve for monitoring processes in the industry (coolant monitoring, oils, lubricants and fats).

The main scope of applications is:

- Industry: Monitoring of lubricants for process and quality control
- Food industry: Beverages, fruits and sweets
- Agriculture: Determination of the degree of ripeness of fruits for quality control in harvesting
- Restaurants and large-scale catering establishment



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 10BB</b>	Brix	0 – 10 %	0,1 %		<b>80,-</b>
<b>ORA 10BA</b>	Brix	0 – 10 %	0,1 %	●	<b>85,-</b>
<b>ORA 18BB</b>	Brix	0 – 18 %	0,1 %		<b>80,-</b>
<b>ORA 20BB</b>	Brix	0 – 20 %	0,1 %		<b>80,-</b>
<b>ORA 20BA</b>	Brix	0 – 20 %	0,1 %	●	<b>85,-</b>
<b>ORA 32BB</b>	Brix	0 – 32 %	0,2 %		<b>80,-</b>
<b>ORA 32BA</b>	Brix	0 – 32 %	0,2 %	●	<b>85,-</b>
<b>ORA 62BB</b>	Brix	28 – 62 %	0,2 %		<b>80,-</b>
<b>ORA 62BA</b>	Brix	28 – 62 %	0,2 %	●	<b>85,-</b>
<b>ORA 82BB</b>	Brix	45 – 82 %	0,5 %		<b>85,-</b>
<b>ORA 80BB</b>	Brix	0 – 80 %	0,5 %		<b>85,-</b>

## Scope of application: Honey

The following models are particularly suitable for the measurement of the “BRIX” value, as well as the water content in honey and “degrees Baumé” to determine the relative density of liquids.

The main scope of applications is:

- Beekeeping
- Honey production

Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 3HB</b>	Brix Baumé Water content	58 – 92 % 38 – 43 °Bé 12 – 27 %	0,5 % 0,5 °Bé 1 %		<b>80,-</b>
<b>ORA 3HA</b>	Brix Baumé Water content	58 – 92 % 38 – 43 °Bé 12 – 27 %	0,5 % 0,5 °Bé 1 %	●	<b>85,-</b>
<b>ORA 6HB</b>	Water content	12 – 30 %	0,1 %		<b>80,-</b>
<b>ORA 6HA</b>	Water content	12 – 30 %	0,1 %	●	<b>85,-</b>





# Analogue refractometer KERN ORA

## Scope of application: Salt

The following models are particularly suitable for the measurement and concentration control of the mass fraction of sodium chloride in water as well as of the content of NaCl (salt) in water. This is often used in the preparation and the cooking of sauces, bases for pastries, the production of brines (e.g. for white cheese) and the preparation of seafood and marinades for meat.

The main scope of applications is:

- Food industry
- Restaurants and large-scale catering establishment
- Aquaristic: Fishkeepers / Fishfarmers in sea and sweetwater



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 1SB</b>	Salinity specific gravity	0 – 100 ‰ 1,000 – 1,070 sg	1 ‰ 0,001 sg		<b>80,-</b>
<b>ORA 1SA</b>	Salinity specific gravity	0 – 100 ‰ 1,000 – 1,070 sg	1 ‰ 0,001 sg	●	<b>85,-</b>
<b>ORA 2SB</b>	Salt (NaCl)	0 – 28 %	0,2 %		<b>80,-</b>
<b>ORA 2SA</b>	Salt (NaCl)	0 – 28 %	0,2 %	●	<b>85,-</b>
<b>ORA 3SB</b>	Salt (NaCl) Brix	0 – 28 % 0 – 32 %	0,2 % 0,2 %		<b>80,-</b>
<b>ORA 3SA</b>	Salt (NaCl) Brix	0 – 28 % 0 – 32 %	0,2 % 0,2 %	●	<b>85,-</b>

## Scope of application: Wine

The following models are particularly suitable for the measurement of the content of sugar in fruits. It indicates the expected °Alcohol of the fruit. The degree of ripeness of fruit (fruit-sugar) can also be determined, such as e.g. grapes.

The main scope of applications is:

- Agriculture: Wine-growing and fruit-growing
- Wine-production
- Must and alcohol production



°Oe = Degree Oechsle, °KMW = Klosterneuburger Must balance

8

Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 1WB</b>	Oechsle KMW (Babo) Brix	0 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,25 °KMW 0,2 %		<b>80,-</b>
<b>ORA 1WA</b>	Oechsle KMW (Babo) Brix	0 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,25 °KMW 0,2 %	●	<b>85,-</b>
<b>ORA 3WB</b>	Oechsle Brix	30 – 140 °Oe 0 – 32 %	1 °Oe 0,2 %		<b>80,-</b>
<b>ORA 3WA</b>	Oechsle Brix	30 – 140 °Oe 0 – 32 %	1 °Oe 0,2 %	●	<b>85,-</b>
<b>ORA 7WB</b>	Oechsle KMW (Babo) Brix	30 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,2 °KMW 0,2 %		<b>80,-</b>
<b>ORA 7WA</b>	Oechsle KMW (Babo) Brix	30 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,2 °KMW 0,2 %	●	<b>85,-</b>
<b>ORA 2AB</b>	Vol (weight) Vol (weight)	0 – 50 % Vol 50 – 80 % Vol	1 % Vol 2,5 % Vol		<b>80,-</b>

# Analogue refractometer KERN ORA

## Scope of application: Urine

The following models are particularly suitable for the measurement of the specific gravity (sg) in urine, the quantity of serum (serumproteine) in urine (doping control among athletes), and the refractive index.

The main scope of applications is:

- Hospitals
- Doctor's surgeries / Physicians
- Medical training institutions
- Nursing homes
- Sports medicine (doping test)

Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 2PB</b>	Serum protein Urine (spec. gravity) Refractive index	0 – 12 g / dl 1,000 – 1,050 sgU 1,3330 – 1,3600 nD	0,2 g / dl 0,002 sgU 0,0005 nD		<b>80,-</b>
<b>ORA 2PA</b>	Serum protein Urine (spec. gravity) Refractive index	0 – 12 g / dl 1,000 – 1,050 sgU 1,3330 – 1,3600 nD	0,2 g / dl 0,002 sgU 0,0005 nD	●	<b>85,-</b>



## Scope of application: Industry / Automotive

The following models are particularly suitable for the measurement and determination of AdBlue, glycol concentration (ethylene EG, propylene PG), battery fluid (BF), urea, the freezing point of fountain solution (CW) and the refractive index. Furthermore these models are suitable for the measurement of thermal exchange systems.

The main scope of applications is:

- Automotive industry: Car-workshops and producers
- Chemical industry
- Solar industry: Antifreeze monitoring
- Geothermal industry: Brine-concentration-measurement for ground heat
- Forestry / Lumbermen

Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 4FB</b>	EG (G13) PG (G11 / 12) CW BF	-50 – 0 °C -50 – 0 °C -40 – 0 °C 1,10 – 1,40 kg / l	1 °C 1 °C 5 °C 0,01 kg / l		<b>80,-</b>
<b>ORA 4FA</b>	EG (G13) PG (G11 / 12) CW BF	-50 – 0 °C -50 – 0 °C -40 – 0 °C 1,10 – 1,40 kg / l	1 °C 1 °C 5 °C 0,01 kg / l	●	<b>85,-</b>
<b>ORA 1UB</b>	Urea	0 – 40 %	0,2 %		<b>80,-</b>
<b>ORA 1UA</b>	Urea	0 – 40 %	0,2 %	●	<b>85,-</b>
<b>ORA 4UB</b>	Urea EG (G13) PG (G11 / 12) CW BF	30 – 35 % -50 – 0 °C -50 – 0 °C -40 – 0 °C 1,10 – 1,40 kg / l	0,2 % 1 °C 1 °C 5 °C 0,01 kg / l		<b>80,-</b>
<b>ORA 4UA</b>	Urea EG (G13) PG (G11 / 12) CW BF	30 – 35 % -50 – 0 °C -50 – 0 °C -40 – 0 °C 1,10 – 1,40 kg / l	0,2 % 1 °C 1 °C 5 °C 0,01 kg / l	●	<b>85,-</b>



# Analogue refractometer KERN ORA

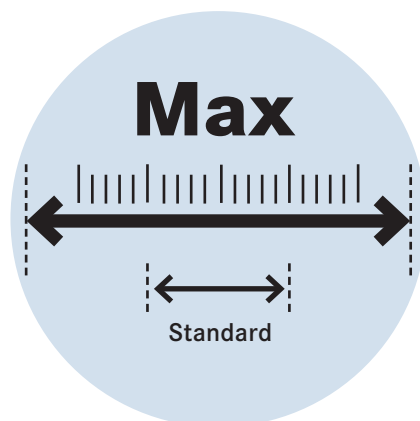
## Scope of application: Expert applications

The following models have a special large measuring range for the refractive index and large divided scales for the measurement and clear reading of Brix values.

The main scope of applications is:

- Universal application, especially when extra large measuring ranges are required

Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 80BE</b>	Brix	0 – 50 % 50 – 80 %	0,5 % 0,5 %		<b>115,-</b>
<b>ORA 90BE</b>	Brix	0 – 42 % 42 – 71 % 71 – 90 %	0,2 % 0,2 % 0,2 %		<b>275,-</b>
<b>ORA 1RE</b>	Refractive index	1,333 – 1,405 nD 1,405 – 1,468 nD 1,468 – 1,517 nD	0,005 nD 0,005 nD 0,005 nD		<b>275,-</b>
<b>ORA 4RR</b>	Refractive index	1,440 – 1,520 nD	0,001 nD		<b>85,-</b>



ORA 4RR



ORA 90 BE / ORA 1RE



ORA 80BE

## Scope of application: Gemmology / Jewellery

The Gem models have a special refracting-index range for jewellery. For this refractometer there is a nice leather bag in the scope of delivery included.

The main scope of applications is:

- Jewellers
- Training / Education
- Jewellery industry



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORA 1GG</b>	Refractive index	1,30 – 1,81 nD	0,01 nD		<b>190,-</b>



ORA 1GG



# Analogue refractometer KERN ORA

## Accessory parts: Analogue refractometer – ORA

Model	Description	Price excl. of VAT ex works €
KERN		
ORA-A1101	Prism coverplate with integrated LED-Diode	30,-
ORA-A2103	Leather bag for analog refractometers	30,-
ORA-A1001	Calibration liquid 0% (Distilled Water) Volume: 2,5 ml	30,-
ORA-A1002	Contact liquid 19,6 % for models ORA 6HB, ORA 6HA Volume: 2,5 ml	30,-
ORA-A1003	Calibration liquid 29,6 % for models ORA 62BB Volume: 2,5 ml	30,-
ORA-A1004	Contact liquid 78,8 % for models ORA 82BB, ORA 3HA, ORA 3HB, ORA 4RR; Volume: 2,5 ml	30,-
ORA-A1005	Calibration block for models ORA 82BB, ORA 3HA, ORA 3HB, ORA 6HA, ORA 6HB, ORA 4RR	30,-
ORA-A1007	Contact liquid 2-Iodmethan for model ORA 1GG Volume: 2,5 ml	30,-
ORA-A1008	Calibration block for model ORA 1GG	40,-
ORA-2001	Prism coverplate (spare part)	30,-



Prism coverplate with LED  
ORA-A1101



Leather bag  
ORA-A2103



Calibration liquid



Calibration block



Transport and storage case



Battery compartment

## Digital refractive index measurement for laboratories and the industry for multi-application

### Features

- The KERN ORD refractometers are accurate and universal maintenance free digital handheld refractometers.
- The typical and practical design is suitable for a quick and convenient everyday use and is characterized by its easy-using and robustness.
- The large display is easy to read. Mistakes in reading are avoided.
- A large selection of models is available with single or multiple scales. This allows the use in various applications.
- The instrument comes with an optimized software that can show a result in different scales.
- The integrated automatic temperature compensation (ATC), avoids the manual conversion of the measurement. This allows a quick and efficient usage of the instrument.

- The required calibration liquid is already included in scope of in the delivery, as well as a storage box, a leather case, a pipette, a small screwdriver and a cleaning cloth.

### Technical data

- Measurement temperature: 10°C – 30°C
- Packing dimensions WxDxH 235x200x65 mm
- Overall dimensions WxDxH 133x65x38 mm
- Net weight approx. 200 g
- Power supply: 2 x AAA (1,5V)
- Lifetime of the battery: 10000 measurements
- ATC (Automatic Temperature Compensation)
- Minimum sample volume: 2 drops
- Automatic energy management (turns off after 5 minutes)

STANDARD





# Digital refractometer KERN ORD

## Scope of application: Sugar

The following models are particularly suitable for the measurement of the “BRIX” value. They are used to determine the sugar content in food, especially in fruit, vegetables, juice and sweet or soft drinks. In the same ideal way, these refractometers serve in monitoring processes in the industry (coolant monitoring, oils, lubricants and fats). Alternatively, the display can be switched to show the refractive index.

The main scope of applications is:

- Industry: Monitoring of lubricants in machines and quality control
- Food industry: Beverages, fruits and sweets
- Agriculture: Determination of the degree of ripeness of fruit for quality control in harvesting
- Restaurants and large-scale catering establishment



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORD 45BM</b>	Brix Refractive index	0 – 45 % 1,3330 – 1,4098 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	<b>305,-</b>
<b>ORD 92BM</b>	Brix Refractive index	58 – 92 % 1,4370 – 1,5233 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	<b>335,-</b>
<b>ORD 85BM</b>	Brix Refractive index	0 – 85 % 1,3330 – 1,5100 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	<b>365,-</b>

## Scope of application: Honey

The following models are particularly suitable for the measurement of the “BRIX” value, the water content in honey according to the International Honey Commission (IHC2002) and “degrees Baumé” to determine the relative density of liquids. Alternatively the display can be switched to show the refractive index.

The main scope of applications is:

- Beekeeping
- Honey production



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORD 92HM</b>	Brix Baumé Water content Refractive index	58 – 92 % 38 – 43 °Bé 13 – 25 % 1,4370 – 1,5233 nD	± 0,2 % ± 0,1 °Bé ± 0,1 % ± 0,0003 nD	0,1 % 0,1 °Bé 0,1 % 0,0001 nD	<b>335,-</b>

# Digital refractometer KERN ORD

## Scope of application: Salt

The following models are particularly suitable to determine the concentration of NaCl (salt) in water. This is often used for the preparation and for the cooking of sauces, bases for pastries, the production of brines (e.g. for white cheese) and the preparation of seafood and marinades for meat. Alternatively the display can be switched to show the refractive index.

The main scope of applications is:

- Food industry
- Restaurants, and large-scale catering establishment, canteens



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORD 1SM</b>	Salt (NaCl) Refractive index	0 – 28 % 1,3330 – 1,3900 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	<b>305,-</b>
<b>ORD 3SM</b>	Brix Salt (NaCl) Refractive index	0 – 35 % 0 – 28 % 1,3330 – 1,3900 nD	± 0,2 % ± 0,2 % ± 0,0003 nD	0,1 % 0,1 % 0,0001 nD	<b>305,-</b>

## Scope of application: Wine

The following models are particularly suitable for the measurement of the sugar content in fruit. It indicates the expected °Alcohol of the fruit. The degree of ripeness of fruit (fruit-sugar) can also be determined, such as e.g. grapes.

The main scope of applications is:

- Agriculture: Wine-growing (viticulture) and fruit-growing
- Wine-production
- Must and alcohol production



°Oe = Degree Oechsle, °KMW = Klosterneuburger Most Waage

Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORD 2WM</b>	Mass SW Vol. AP Oechsle KMW (Babo)	0 – 35 % 0 – 22 % 30 – 150 °Oe 0 – 25 °KMW	± 0,2 % ± 0,1 % ± 1 °Oe ± 0,1 °KMW	0,1 % 0,1 % 1 °Oe 0,1 °KMW	<b>305,-</b>

# Digital refractometer KERN ORD

## Scope of application: Urine

The following models are particularly suitable for the measurement of the specific gravity (sg) in urine, the quantity of serum (serumproteine) in urine (doping control among athletes), and the refractive index.

The main scope of applications is:

- Hospitals
- Doctor's surgeries / Physicians
- Medical training institutions
- Nursing homes
- Sports medicine (doping test)

Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORD 1PM</b>	Serum protein Urine (spec. gravity) Refractive index	0 – 12 g / dl 1,000 – 1,050 sgU 1,3330 – 1,3990 nD	± 0,1 g / dl ± 0,001 sgU ± 0,0003 nD	0,1 g / dl 0,001 sgU 0,001 nD	<b>305,-</b>



## Scope of application: Industry / Automotive

The following models are particularly suitable for the measurement and determination of AdBlue, glycol concentration (ethylene EG, propylene PG), battery fluid (BF), urea, the freezing point of fountain solution (CW) and the refractive index. Furthermore these models are suitable for the measurement of thermal exchange systems.

The main scope of applications is:

- Automotive industry: Car-workshops and producers
- Chemical industry
- Solar industry: Antifreeze monitoring
- Geothermal industry: Brine-concentration-measurement for ground heat
- Forestry / Lumbermen

Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
<b>KERN</b>					
<b>ORD 2UM</b>	EG PG BF CW	-50 – 0 °C -50 – 0 °C 1.00 – 1.50 kg / l -40 – 0 °C	± 0,5 °C ± 0,5 °C ± 0,01 kg / l ± 0,5 °C	0,1 °C 0,1 °C 0,01 kg / l 0,1 °C	<b>305,-</b>
<b>ORD 5UM</b>	EG PG Urea CW	-50 – 0 °C -50 – 0 °C 0 – 40 % -40 – 0 °C	± 0,5 °C ± 0,5 °C ± 0,2 % ± 0,5 °C	0,1 °C 0,1 °C 0,1 % 0,1 °C	<b>305,-</b>
<b>ORD 6US</b>	Urea	0 – 40 %	± 0,2 %	0,1 %	<b>305,-</b>



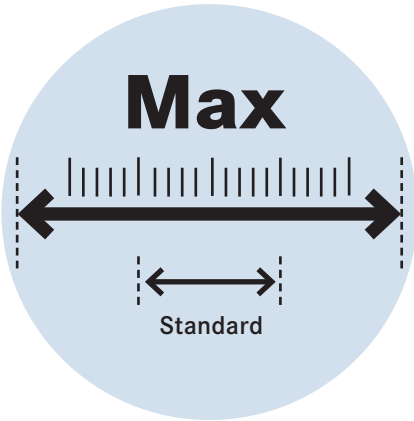
# Digital refractometer KERN ORD

## Scope of application: Expert applications

The following model has a special large measuring range for the refractive index.

The main scope of applications is:

- Universal measuring instrument, especially for applications with extra large measuring ranges



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORD 1RS	Refractive index	1,3330 – 1,5400 nD	± 0,0003 nD	0,0001 nD	395,-

## Accessory parts: Digital refractometer – ORD

Model	Description	Price excl. of VAT ex works €
KERN		
ORA-A1006	Calibration liquid 60,0 % for ORD 92BM and ORD 92HM Content: 2,5 ml	30,-
ORA-A2103	Leather bag for digital refractometer	30,-
ORA-A1001	Calibration liquid 0 % (Distilled Water) Volume: 2,5 ml	30,-



Calibration liquid

# Abbe refractometer KERN ORT-1



Thermometer

## Refractive index measurement for pharmacy, laboratories and industry

### Features

- The KERN ORT refractometers are universal analog Abbe refractometers.
- The handy and robust design allows the easy, efficient and sustainable use in every-day life
- The integrated scale allows the use in different applications and provides the best possible security to read the measurement results accurately.
- The scope of delivery includes:
  - calibration solution
  - calibration block
  - pipette
  - small screwdriver
  - cleaning tissue
- Accessories are available as options

### Technical data

- Measurement temperature: 20 °C
- Overall dimensions  
WxDxH 180x90x240 mm
- Dimensions aluminium box  
WxDxH 310x120x240 mm
- Packing dimensions  
WxDxH 350x130x270 mm
- Net weight approx. 1950 g

### STANDARD





# Abbe refractometer KERN ORT-1

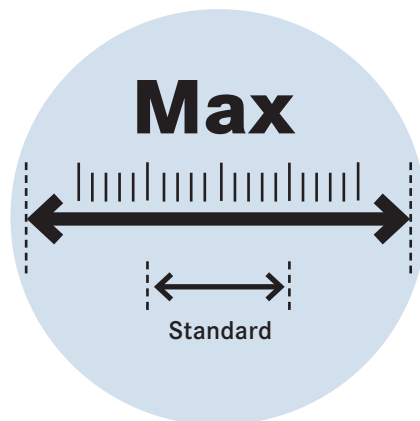
## Scope of application: Industry / Pharmacy / Laboratory

The following model is a simple yet highly reliable Abbe refractometer with a digital thermometer. Liquid, solid and pasty samples can be evaluated. This refractometer is robust, accurate and easy to use. Optionally a solide aluminium case for transport and storage is available. It measures the refractive index (nD).

The main scope of applications is:

- Sugar industry: for example cane sugar
- Pharmacy
- Beverage industry
- Food industry
- Chemical industry
- Oil industry / Refinery
- Laboratories
- Training

Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORT 1RS	Brix Refractive index	0 – 95 % 1,3000 – 1,7000 nD	± 0,1 % ± 0,0002 nD	0,25 % 0,0005 nD	675,-



## Accessory parts: Abbe refractometer – ORT

Model	Description	Price excl. of VAT ex works €
KERN		
ORA-A1102	Aluminium suitcase Dimension: 310x120x240 mm, weight: 1300 g	90,-
ORA-A2266	Digital thermometer	40,-
ORA-A2267	Calibration block for ORT 1RS	35,-
ORA-A1107	Contact liquid: Alpha-Bromonaphthalene for ORT 1RS Volume: 2,5 ml	40,-



Calibration block  
ORA-A2267



Transport and storage case  
ORA-A1102

KERN Pictograms

**360° rotatable microscope head**  
360°

**Monocular Microscope**  
For the inspection with one eye  
MONO

**Binocular Microscope**  
For the inspection with both eyes  
BINO

**Trinocular Microscope**  
For the inspection with both eyes and the additional option for the connection of a camera  
TRINO

**Abbe Condenser**  
With high numerical aperture for the concentration and the focusing of light  
ABBE

**Halogen illumination**  
For pictures bright and rich in contrast  
HAL

**LED illumination**  
Cold, energy saving and especially long-life illumination  
LED

**Incident illumination**  
For non-transparent objects  
IL

**Transmitting illumination**  
For transparent objects  
TL

**Fluorescence illumination**  
For stereomicroscopes  
FL

**Fluorescence illumination for compound microscopes**  
With 100W mercury lamp and filter  
FL-HB0

**Fluorescence illumination for compound microscopes**  
With 3W LED illumination and filter  
FL-LED

**Phase contrast unit**  
For a higher contrast  
PH

**Polarising unit**  
To polarise the light  
POLAR

**Infinity system**  
Infinity corrected optical system  
INFINITY

**Zoom magnification**  
For stereomicroscopes  
ZOOM

**Parallel optical system**  
For stereomicroscopes, enables fatigue-proof working  
PARALLEL

**Integrated scale**  
In the eyepiece  
SCALE

**Integrated USB 2.0 digital camera**  
For direct transmitting of the picture to a PC  
USB 2.0

**Integrated USB 3.0 digital camera**  
For direct transmitting of the picture to a PC  
USB 3.0

**Automatic temperature compensation**  
For measurements between 10 °C and 30 °C  
ATC

**Protection against dust and water splashes IPxx**  
The type of protection is shown by the pictogram.  
IP

**Battery operation**  
Ready for battery operation. The battery type is specified for each device.  
BATT

**Rechargeable battery pack**  
Rechargeable set.  
ACCU

**Mains adapter**  
230V/50Hz in standard version for EU. On request GB, AUS or USA version.  
230 V

**Power supply**  
Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.  
230 V

**Package shipment**  
The time required to manufacture the product internally is shown in days in the pictogram.  
DAYS

**Warranty**  
The warranty period is shown in the pictogram.  
3 YEARS WARRANTY

<b>Abbreviations</b>	
<b>C-Mount</b>	Adapter for the connection of a camera to a trinocular microscope
<b>FPS</b>	Frames per second
<b>H(S)WF</b>	High (Super) Wide Field (Eyepiece with high eye point for wearers of glasses)
<b>LWD</b>	Long Working Distance

<b>N.A.</b>	Numerical Aperture
<b>SLR camera</b>	Single-Lens Reflex camera
<b>SWF</b>	Super Wide Field (Field number at least Ø 23 mm for 10x eyepiece)
<b>W.D.</b>	Working Distance
<b>WF</b>	Wide Field (Field number up to Ø 22 mm for 10x eyepiece)

Microscopy, measuring technology and testing services from a single source

**Optical instruments catalogue**

**Balances & test service catalogue**

**Medical scales catalogue**

**SAUTER measuring equipment catalogue**

**DAkkS calibration service brochure**

KERN – your partner for optical instruments

Dear Customer,

Precision is our business and it has been for more than 170 years.

We are constantly using these years of experience and the very latest know-how to create new products, to help you and your customers carry out your daily work as efficiently as possible.

So we already have a large selection of products on offer - precision balances and industrial scales, medical scales, measuring instruments, test weights and a comprehensive range of calibration services.

In this catalogue we are now expanding our product range to include high-quality microscopes and refractometers.

Over recent years, a specially created department has been working with your requests, market requirements and the latest developments, so that we can offer you a complete, carefully-designed range of devices, which are high-quality and highly-competitive in terms of price.

Comprehensive product details, high-quality materials, durability and ergonomic operation are all in line with the typical KERN “virtues” - quick delivery, large stocks, competent advice, comprehensive pre and after sales service.

Do you have any questions about our range of microscopes and refractometers? Your KERN customer advisers are available at any time to help you further.

I hope that you enjoy working efficiently with our KERN Optics products.

Albert Sauter, Managing Director

Your advantages

**Quick Delivery**  
Items in stock are sent the same day if orders are placed before 1:00 pm (valid for parcel service delivery within the EC).

**Price performance ratio**  
KERN microscopes and refractometers are always an inexpensive alternative. They are durable, uncomplicated and easy to place into operation.

**Direct dispatch**  
of ordered goods to your customer is available, invoice will be issued to you (third party business).

**3 years warranty**  
Items under € 400,-: 2 years

**No stock-keeping necessary.**  
KERN does the warehousing for you.

**Sale or return**  
within 14 days of purchase.

Retailer information

Sales conditions

**All prices are valid as of January 1st 2016** until a new version of the KERN catalogue is released. In Europe, all prices do not include the applicable V.A.T..

**At KERN there is no minimum order value.** For orders less than € 15.00 there is no re-sale discount available. A minimum fee of € 15.00 (net) will be charged for orders less than € 15.00 (net).

**Delivery Conditions:** we supply ex works Balingen, i.e. the transport costs are invoiced. With our contract logistics partners we always offer you shipping at a good rate. When shipping to islands or other more distant areas, or areas which are difficult to access, the transport costs may possibly be higher, please ask for details. Any goods supplied remain KERN's property until complete payment for the goods sold has been received.

Delivery is usually via courier service.

When you see this symbol by truck, please ask for prices.

**Extract from general terms and conditions:**  
Court of jurisdiction/Legal domicile: 72336 Balingen, Germany; Commercial register N°: HRB 400865, AG Stuttgart; Managing director: Albert Sauter, Martin Sauter. For the full Terms and Conditions, please refer to the website. [www.kern-sohn.com/en/kern/agbs.html](http://www.kern-sohn.com/en/kern/agbs.html)

**Price changes and product changes** are likely in individual cases due to product modifications as well as error.

**Sale or return:** within 14 days of purchase. Not valid for custom processes, such as, for example, special orders.

**Warranty:** 3 years.  
2 years for products with list price ≤ € 400.00  
Does not apply to consumables such as batteries, rechargeable battery packs, etc.

Services

**Free delivery:** all orders from dealers through the KERN Online shop with an order value over € 150.00 (list price) and parcel shipment, within the EU (except of MT, CY) with our parcel service (no pallet shipment) are delivered free of charge.

**3 % web discount:** Additional discount for dealer orders from the KERN Online shop (only in combination with KERN e-invoice, please ask for details).

**KERN DirectCash:** The quick, secure COD procedure for protection against non-payment. With the KERN DirectCash COD system, you can safely deliver orders to end customers with unknown credit rating, with no risk of non-payment. Please request further details on this procedure.

After-Sales-Service

**Repair services** within 1 week at our plant in Balingen, transportation costs are additional. In urgent cases, if requested by customer, a replacement device will be provided until all repairs are completed; please ask.

**Price reduction on a new device:**  
if repair costs exceed the current value of the defective device, a new device will be offered at a discount price. This offer is valid only up to 2 years after warranty expiration.

**Spare parts service** within 48 hours, transportation costs are additional.

Marketing support

**KERN catalogues, brochures, branch prospectuses – your own personalised marketing tools**  
This catalogue and branch prospectuses are available free of charge. A neutral version of the catalogue, without the KERN address imprint, is also available for your marketing activities free of charge (200 pcs., larger quantities on request).

On demand, your company logo and address can be printed on the back of the KERN catalogue free of charge (200 pcs., larger quantities on request). In this way you have your own individual marketing tool. The KERN catalogue branch prospectuses are available in the following languages: DE, GB, FR, IT, ES.

Important notice

**Humidity**  
Our models are not suitable for rooms with a high level of air humidity (condensing). Please observe the applicable electrical regulations.

Miscellaneous

**Product pictures printed in catalogue**  
All product pictures contained in our catalogue show devices similar to our products. Please note that possible technical innovations might be the cause of such deviations.

**Accessory for optical instruments**  
Further extensive accessories for our optical instruments you can also find in the KERN Online shop on [www.kern-sohn.com](http://www.kern-sohn.com)