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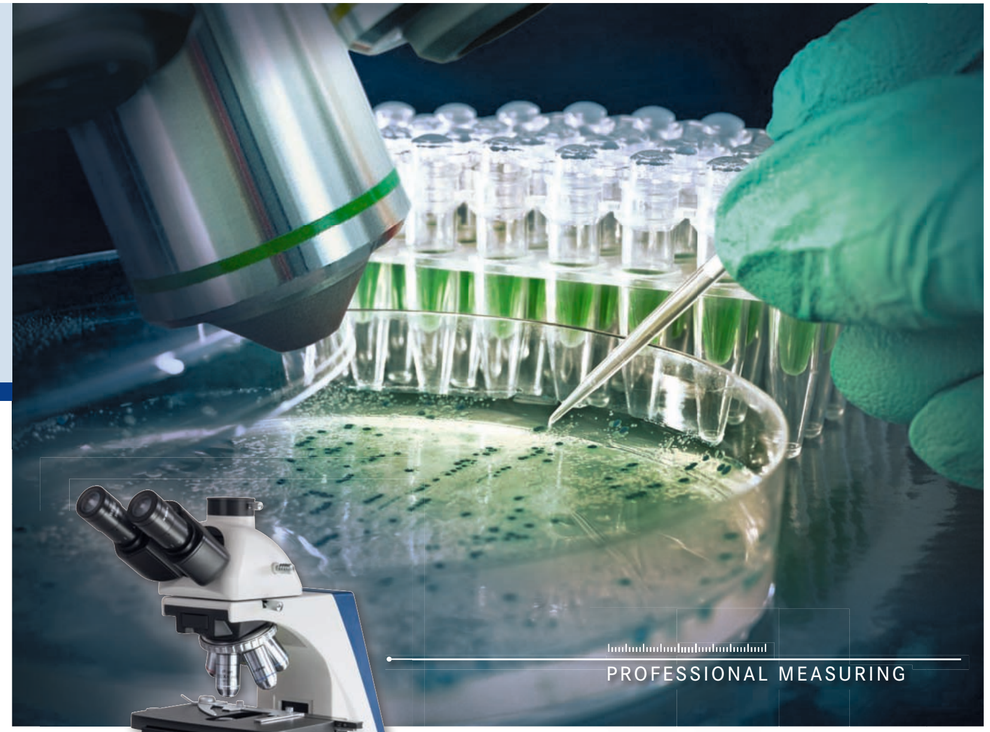


German Excellence Group
Member

2015

For an overwiew of the symbols, see the reverse side

Product group index 2015

Microscopes

Refractometers

Microscopes

1 Compound microscopes

Compound, Fluorescence, Digital and Inverted microscopes

Mononcular 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

360° | MONO | BINO | ABBE | LED | ACCU (only OBE 113) | 230 V | 1 DAY | 3 YEARS WARRANTY

OPTION

POLAR | SCALE

Model KERN	Standard configuration			
	Optical system	Tube	Illumination	
OBE 111	Achromatic	Monocular	3W LED (transmitting)	
OBE 112	Achromatic	Binocular	3W LED (transmitting)	
OBE 113	Achromatic	Binocular	3W LED (transmitting) (rechargeable battery incl., rechargeable)	

Compound microscope KERN OBE-1

Model outfit		Model KERN			Order number	
		OBE 111	OBE 112	OBE 113		
Eyepieces	WF 10x / Ø 18 mm	●	●●	●●	OBB-A1347	
	WF 10x / Ø 18 mm (with Pointer)	o	o	o	OBB-A1348	
	WF 16x / Ø 13 mm	o	oo	oo	OBB-A1354	
	WF 10x / Ø 18 mm (reticule 0,1 mm) (non-adjustable)	o	o	o	OBB-A1349	
Achromatic objectives	4x / 0,10	●	●	●	OBB-A1111	
	10x / 0,25	●	●	●	OBB-A1108	
	40x / 0,65 (spring)	●	●	●	OBB-A1112	
	100x / 1,25 (oil) (spring)	●	●	●	OBB-A1109	
	20x / 0,40	o	o	o	OBB-A1110	
	60x / 0,85 (spring)	o	o	o	OBB-A1113	
Monocular tube	30° inclined, 360° rotatable	●			OBB-A1227	
Binocular tube	· Siedentopf, 30° inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm · With diopter adjustment (one-sided)		●	●	OBB-A1123	
Nosepiece	Quadplex	●	●	●		
Mechanical stage	· Stage size: WxD 125x115 mm · Travel: WxD 50x70 mm	●	●	●		
Condenser	Abbe N.A. 1,25 (aperture diaphragm)	●	●	●	OBB-A1101	
Darkfield unit	Usable for 4x – 40x objectives	o	o	o	OBB-A1148	
Polarising unit	Analyser / Polariser	o	o	o	OBB-A1276	
Illumination	3W LED illumination system (transmitting) (non-rechargeable)	●	●			
	3W LED illumination system (transmitting) (rechargeable)			●		

● = Standard configuration o = Option

For more information about these models on the internet, go to back page of catalogue

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

360° | BINO | ABBE | HAL | LED | INFINITY (only OBL) | 230 V | 1 DAY | 3 YEARS WARRANTY

OPTION

TRINO | FL-HBO | FL-LED | PH | POLAR | SCALE

Model KERN	Standard configuration			
	Optical system	Tube	Illumination	
OBF 121	Finity	Binocular	6V / 20W Halogen (transmitting)	
OBF 122	Finity	Binocular	6V / 20W Halogen (transmitting)	
OBF 123	Finity	Binocular	3W LED (transmitting)	
OBL 125	Infinity	Binocular	6V / 20W Halogen (transmitting)	
OBL 127	Infinity	Binocular	3W LED (transmitting)	

Compound microscope KERN OBF-1

Model outfit		Model KERN			Order number	
		OBF 121	OBF 122	OBF 123		
Eyepieces	WF 10x / Ø 18 mm	●●	●●	●●	OBB-A1347	
	WF 16x / Ø 13 mm	oo	oo	oo	OBB-A1354	
	WF 10x / Ø 18 mm (reticule 0,1 mm) (non-adjustable)	o	o	o	OBB-A1349	
	WF 10x / Ø 18 mm (reticule 0,1 mm) (adjustable)	o	o	o	OBB-A1350	
	WF 10x / Ø 20 mm (reticule 0,1 mm) (adjustable)	o	o	o	OBB-A1352	
Achromatic objectives	4x / 0,10	●			OBB-A1111	
	10x / 0,25	●			OBB-A1108	
	40x / 0,65 (spring)	●			OBB-A1112	
	100x / 1,25 (oil) (spring)	●			OBB-A1109	
	20x / 0,40	o	o	o	OBB-A1110	
	60x / 0,85 (spring)	o	o	o	OBB-A1113	
Plan objectives	4x / 0,10		●	●	OBB-A1255	
	10x / 0,25		●	●	OBB-A1238	
	40x / 0,65 (spring)		●	●	OBB-A1256	
	100x / 1,25 (oil) (spring)		●	●	OBB-A1239	
	20x / 0,40		o	o	OBB-A1249	
	60x / 0,85 (spring)		o	o	OBB-A1269	
Binocular tube	· Siedentopf, 30° inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm (for non-infinity system) · With diopter adjustment (one-sided)	●	●	●	OBB-A1129	
Trinocular tube	· Siedentopf, 30° inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm Light distribution: 20:80 (for non-infinity system) · With diopter adjustment (one-sided)	o	o	o	OBB-A1345	
Nosepiece	Quadplex	●	●	●		
Mechanical stage	· Stage size: WxD 145x130 mm · Travel: 76x52 mm · Coaxial coarse and fine focusing knobs, scale: 2 µm · Two slide holder	●	●	●		
Condenser	Abbe N.A. 1,25 precentered (aperture diaphragm)	●	●	●	OBB-A1103	
Illumination	6V / 20W Halogen spare bulb (transmitting)	●	●		OBB-A1370	
	3W LED illumination system (transmitting) (non-rechargeable)			●		
Field diaphragm	Field diaphragm	●	●	●		
Darkfield unit	N.A. 0,9 (Dry) Usable for 4x – 40x objectives	o	o	o	OBB-A1149	
Polarising unit	Analyser / Polariser	o	o	o	OBB-A1277	
Fluorescence unit	100W HBO Epi Fluorescence unit, three-hole slide (B / G) including centering objective	o	o	o	OBB-A1154	
	3W LED Epi Fluorescence unit, three-hole slide (B / G) including centering objective	o	o	o	OBB-A1157	
Filter	Blue (built-in)	●	●	●	OBB-A1178	
	Green	o	o	o	OBB-A1194	
	Yellow	o	o	o	OBB-A1203	
C-Mount	0,47x (focus adjustable)	o	o	o	OBB-A1135	
	1x	o	o	o	OBB-A1142	

● = Standard configuration o = Option

For more information about these models on the internet, go to back page of catalogue

Compound microscope KERN OBL-1

Model outfit		Model KERN		Order number	
		OBL 125	OBL 127		
Eyepieces	WF 10x / Ø 20 mm	●●	●●	OBB-A1351	
	WF 16x / Ø 13 mm	○○	○○	OBB-A1354	
	WF 10x / Ø 18 mm (reticule 0,1 mm)	○	○	OBB-A1349	
	WF 10x / Ø 18 mm (reticule 0,1 mm) (adjustable)	○	○	OBB-A1350	
	WF 10x / Ø 20 mm (reticule 0,1 mm) (adjustable)	○	○	OBB-A1352	
Infinity E-Plan objectives	4x / 0,10	●	●	OBB-A1161	
	10x / 0,25	●	●	OBB-A1159	
	40x / 0,65 (spring)	●	●	OBB-A1160	
	100x / 1,25 (oil) (spring)	●	●	OBB-A1158	
	Plan 20x / 0,40	○	○	OBB-A1250	
	Plan 60x / 0,85 (spring)	○	○	OBB-A1270	
Binocular tube	· Siedentopf, 30° inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm (for infinity system) · With diopter adjustment (one-sided)	●	●	OBB-A1130	
Trinocular tube	· Siedentopf, 30° inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm · Light distribution: 20:80 (for infinity system) · With diopter adjustment (one-sided)	○	○	OBB-A1346	
Nosepiece	Quadplex	●	●		
Mechanical stage	· Stage size: WxD 145x130 mm · Travel: 76x52 mm · Coaxial coarse and fine focusing knobs, scale: 2 µm · Two slide holder	●	●		
Condenser	Abbe N.A. 1,25 precentered (aperture diaphragm)	●	●	OBB-A1103	
Illumination	6V / 20W Halogen spare bulb (transmitting)	●		OBB-A1370	
	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	
Polarising unit	Analyser / Polariser	○	○	OBB-A1277	
Independent phase contrast unit (including PH-condenser and PH-slides)	Independent slot with ∞ PH-Plan objective 10x	○	○	OBB-A1215	
	Independent slot with ∞ PH-Plan objective 20x	○	○	OBB-A1217	
	Independent slot with ∞ PH-Plan objective 40x	○	○	OBB-A1219	
	Independent slot with ∞ PH-Plan objective 100x	○	○	OBB-A1213	
Fluorescence unit	100W HBO Epi Fluorescence unit, three-hole slide (B / G) including centering objective	○	○	OBB-A1154	
	3W LED Epi Fluorescence unit, three-hole slide (B / G) including centering objective	○	○	OBB-A1157	
Filter	Blue	●	●	OBB-A1178	
	Green	○	○	OBB-A1194	
	Yellow	○	○	OBB-A1203	
C-Mount	0,47x (focus adjustable)	○	○	OBB-A1135	
	1x	○	○	OBB-A1142	

● = Standard configuration ○ = Option

Compound microscope KERN OBD-1

Easy connection to the PC,
Laptop not included in delievery

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

360° | BINO | ABBE | HAL | INFINITY | USB 2.0 | 230 V | 1 DAY | 3 YEARS WARRANTY

OPTION

PH | POLAR

Model	Standard configuration			
KERN	Optical system	Tube	Illumination	
OBD 127	Infinity	Binocular / digital	6V / 20W Halogen (transmitting)	

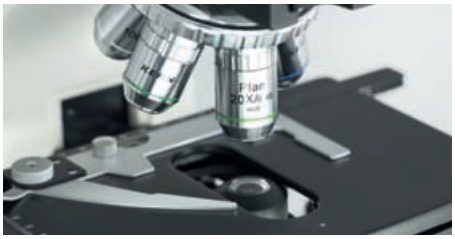
For more information about these models on the internet, go to back page of catalogue

Compound microscope KERN OBD-1

Model outfit		Model KERN	Order number	
		OBD 127		
Eyepiece	WF 10x / Ø 20 mm	●●	OBB-A1351	
Infinity E-Plan objectives	4x / 0,10	●	OBB-A1161	
	10x / 0,25	●	OBB-A1159	
	40x / 0,65 (spring)	●	OBB-A1160	
	100x / 1,25 (oil) (spring)	●	OBB-A1158	
	Plan 20x / 0,40	○	OBB-A1250	
	Plan 60x / 0,80 (spring)	○	OBB-A1270	
Digital tube Trinocular (3MP)	· 30° inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm · With diopter adjustment (one-sided) · Light distribution: 80:20 · Built-in digital 3MP Camera with ½" CMOS · USB port for PC without extra power supply · With English language software "MicroscopePIC" for Windows XP, 7, Vista	●	OBB-A1126	
Nosepiece	Quadplex	●		
Mechanical stage	· Stage size: WxD 145x130 mm, · Travel: 76x52 mm · Two slide holder	●		
Condenser	Abbe N.A. 1,25 precentered (aperture diaphragm)	●	OBB-A1103	
Illumination	6V / 20W Halogen spare bulb (transmitting)	●	OBB-A1370	
Field diaphragm	Field diaphragm	●		
Darkfield unit	N.A. 0,9 (Dry) Usable for 4x – 40x objectives	○	OBB-A1149	
Polarising unit	Analyser / Polariser	○	OBB-A1277	
Independent phase contrast unit (including PH-condenser and PH-slides)	Independent slot with ∞ PH-Plan objective 10x	○	OBB-A1215	
	Independent slot with ∞ PH-Plan objective 20x	○	OBB-A1217	
	Independent slot with ∞ PH-Plan objective 40x	○	OBB-A1219	
	Independent slot with ∞ PH-Plan objective 100x	○	OBB-A1213	
Filter	Blue (built-in)	●	OBB-A1178	

● = 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

360° | TRINO | ABBE | HAL | INFINITY | 230 V | 1 DAY | 3 YEARS WARRANTY

OPTION

BINO | FL-HBO | FL-LED | PH | POLAR | SCALE

Model	Standard configuration			
KERN	Optical system	Tube	Illumination	
OBN 132	Infinity	Trinocular	6V / 20W Halogen (transmitting)	

Compound microscope KERN OBN-13

Model outfit		Model KERN	Order number	
		OBN 132		
Eyepieces	WF 10x / Ø 18 mm	○○	OBB-A1347	
	WF 10x / Ø 20 mm	●●	OBB-A1351	
	WF 16x / Ø 13 mm	○○	OBB-A1354	
	WF 10x / Ø 18 mm (reticule 0,1 mm) (adjustable)	○	OBB-A1350	
	WF 10x / Ø 20 mm (reticule 0,1 mm) (adjustable)	○	OBB-A1352	
Infinity Plan achromatic objectives	4x / 0,10	●	OBB-A1263	
	10x / 0,25	●	OBB-A1243	
	20x / 0,40	●	OBB-A1250	
	40x / 0,66 (spring)	●	OBB-A1257	
	100x / 1,25 (oil) (spring)	●	OBB-A1240	
	2,5x / 0,07	○	OBB-A1247	
	60x / 0,80 (spring)	○	OBB-A1270	
Tube Binocular	· Siedentopf, 30° inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm · With diopter adjustment (both-sided)	○	OBB-A1125	
Trinocular tube	· Siedentopf, 30° inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm · Light distribution: 100:0 · With diopter adjustment (both-sided)	●	OBB-A1344	
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	
	Swing-out condenser N.A. 0,9 / 0,13 center-adjustable (aperture diaphragm)	○	OBB-A1104	
Koehler illumination	6V / 20W Halogen spare bulb (transmitting)	●	OBB-A1370	
Polarising unit	Analyser / Polariser	○	OBB-A1283	
Phase contrast unit	Quintuple hole turret with 10x / 20x / 40x / 100x Infinity-PH-Plan objectives (complete set)	○	OBB-A1237	
	Independent slot with ∞ PH-Plan objective 10x	○	OBB-A1214	
	Independent slot with ∞ PH-Plan objective 20x	○	OBB-A1216	
	Independent slot with ∞ PH-Plan objective 40x	○	OBB-A1218	
	Independent slot with ∞ PH-Plan objective 100x	○	OBB-A1212	
Darkfield unit	N.A. 0,9 (Dry) Usable for 4x – 40x objectives	○	OBB-A1150	
C-Mount	1x	○	OBB-A1140	
	0,57x (focus adjustable)	○	OBB-A1136	
Fluorescence unit	100W HBO Epi Fluorescence unit 6-filter disc (UV / V / B / G) including centering objective	○	OBB-A1155	
	100W HBO Epi Fluorescence unit, two-hole slide (B / G) including centering objective	○	OBB-A1153	
	3W LED Epi Fluorescence unit (B / G) including centering objective	○	OBB-A1156	
Field diaphragm	Field diaphragm	●		
Filter	Blue	●	OBB-A1170	
	Green	○	OBB-A1187	
	Yellow	○	OBB-A1201	

● = Standard configuration ○ = Option

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 KERN	Standard configuration			
	Optical system	Tube	Illumination	
OBN 147	Infinity	Trinocular	Halogen + 100W Epi Fluorescence (B / G)	
OBN 148	Infinity	Trinocular	Halogen + 100W Epi Fluorescence (B / G / UV / V)	

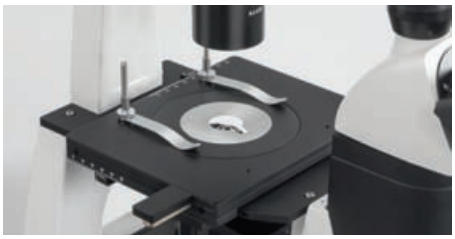
For more information about these models on the internet, go to back page of catalogue

Fluorescence microscope KERN OBN-14

Model outfit		Model KERN		Order number	
		OBN 147	OBN 148		
Eyepieces	WF 10x / Ø 20 mm	●●	●●	OBB-A1351	
	WF 16x / Ø 13 mm	○○	○○	OBB-A1354	
	WF 10x / Ø 18 mm (reticule 0,1 mm) (adjustable)	○	○	OBB-A1350	
	WF 10x / Ø 20 mm (reticule 0,1 mm) (adjustable)	○	○	OBB-A1352	
Infinity Plan achromatic objectives	4x / 0,10	●	●	OBB-A1263	
	10x / 0,25	●	●	OBB-A1243	
	20x / 0,40	●	●	OBB-A1250	
	40x / 0,66 (spring)	●	●	OBB-A1257	
	100x / 1,25 (oil) (spring)	●	●	OBB-A1240	
	2,5x / 0,07	○	○	OBB-A1247	
	60x / 0,80 (spring)	○	○	OBB-A1270	
Binocular tube	· Siedentopf, 30° inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm · With diopter adjustment (both-sided)	○	○	OBB-A1125	
Trinocular tube	· Siedentopf, 30° inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm · Light distribution: 100:0 · With diopter adjustment (both-sided)	●	●	OBB-A1344	
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	
	Swing-out condenser N.A. 0,9 / 0,13 center-adjustable (aperture diaphragm)	○	○	OBB-A1104	
Koehler illumination	6V / 20W Halogen spare bulb (transmitting)	●	●	OBB-A1370	
Polarising unit	Analyser / Polariser	○	○	OBB-A1283	
Phase contrast unit	Quintuple hole turret with 10x / 20x / 40x / 100x Infinity-PH-Plan objectives (complete set)	○	○	OBB-A1237	
	Independent slot with ∞ PH-Plan objective 10x	○	○	OBB-A1214	
	Independent slot with ∞ PH-Plan objective 20x	○	○	OBB-A1216	
	Independent slot with ∞ PH-Plan objective 40x	○	○	OBB-A1218	
	Independent slot with ∞ PH-Plan objective 100x	○	○	OBB-A1212	
Darkfield unit	N.A. 0,9 (Dry) Usable for 4x – 40x objectives	○	○	OBB-A1150	
C-Mount	1x	○	○	OBB-A1140	
	0,57x (focus adjustable)	○	○	OBB-A1136	
Fluorescence unit	100W HBO Epi Fluorescence unit 6-filter disc (UV / V / B / G) including centering objective		●	OBB-A1155	
	100W HBO Epi Fluorescence unit, two-hole slide (B / G) including centering objective	●		OBB-A1153	
Field diaphragm	Field diaphragm	●	●		
Filter	Blue	●	●	OBB-A1170	
	Green	○	○	OBB-A1187	
	Yellow	○	○	OBB-A1201	

● = Standard configuration ○ = Option

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 micro-scope 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 availabe 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

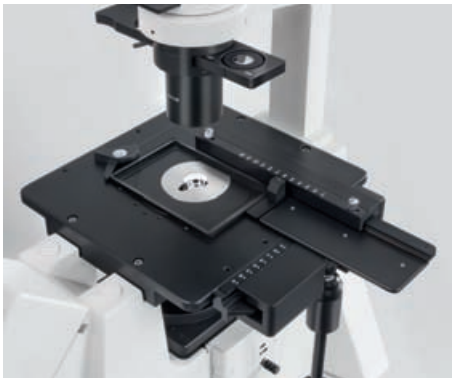
Model KERN	Standard configuration			
	Optical system	Tube	Illumination	
OCL 251	Infinity	Trinocular	6V / 30W Halogen (transmitting)	
OCL 252	Infinity	Trinocular	6V / 30W Halogen (transmitting)	

For more information about these models on the internet, go to back page of catalogue

Inverted microscope KERN OCL-2

Model outfit			Model KERN		Order number	
			OCL 251	OCL 252		
Eyepieces	HWF 10x / Ø 20 mm		●●	●●	OBB-A2403	
	WF 16x / Ø 13 mm		○○	○○	OBB-A2406	
	HWF 10x / Ø 18 mm (reticule 0,1 mm)		○	○	OBB-A2404	
	HWF 10x / Ø 20 mm (reticule 0,1 mm)		○	○	OBB-A2410	
	HWF 10x / Ø 22 mm (Only in combination with tube OBB-A2407 / OBB-A2408)		○○	○○	OBB-A2409	
Infinity Plan achromatic objectives (for long working distance)	4x / 0,13		○	○	OBB-A2413	
	10x / 0,25		●	●	OBB-A2414	
	20x / 0,40		●	●	OBB-A2415	
	40x / 0,60		●	●	OBB-A2416	
	60x / 0,70		○	○	OBB-A2417	
Binocular tube	· 30° inclined · Interpupillary distance: 52 – 75 mm · With diopter adjustment (one-sided)		○	○	OBB-A2401	
	· 30° inclined · Interpupillary distance: 52 – 75 mm · With diopter adjustment (one-sided) (Only in combination with tube OBB-A2409)		○	○	OBB-A2407	
Trinocular tube	· 30° inclined · Interpupillary distance: 52 – 75 mm · Light distribution: 80:20 · With diopter adjustment (one-sided)		●	●	OBB-A2402	
	· 30° inclined · Interpupillary distance: 52 – 75 mm · Light distribution: 80:20 · With diopter adjustment (one-sided) (Only in combination with tube OBB-A2409)		○	○	OBB-A2408	
Nosepiece	Quintuple		●	●		
Mechanical stage	· Stage size: WxD 180x155 mm, · Travel: 80x50 mm · Coaxial coarse and fine focusing knobs	Right handed v.	●			
		Left handed v.		●		
	Drop specimen holder (Ø 110)		●	●	OBB-A2425	
	Specimen holder (Clip)		●	●	OBB-A2426	
Fixed stage	Stage size: WxD 240x180 mm		○	○	OBB-A2424	
	Drop specimen holder (Ø 110)		○	○	OBB-A2425	
Condenser	Abbe N.A. 0,3 (aperture diaphragm), LWD 72 mm		●	●		
Illumination	6V / 30W Halogen spare bulb (transmitting)		●	●	OBB-A2440	
Phase contrast unit	Phase contrast slide		●	●	OBB-A2432	
	Infinity plan achromatic PH-objective 10x		○	○	OBB-A2418	
	Infinity plan achromatic PH-objective 20x		●	●	OBB-A2419	
	Infinity plan achromatic PH-objective 40x		○	○	OBB-A2420	
	Centering telescope		●	●	OBB-A2405	
C-Mount	0,5x		○	○	OBB-A2437	
	1x		○	○	OBB-A2438	
	0,25x		○	○	OBB-A2439	
Filter	Filter holder		●	●	OBB-A1357	
	Blue (Ø 34 mm)		●	●	OBB-A2434	
	Green (Ø 34 mm)		●	●	OBB-A2435	
	Yellow (Ø 34 mm)		●	●	OBB-A2436	

● = Standard configuration ○ = Option



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 KERN	Standard configuration			
	Optical system	Tube	Illumination	
OCO 255	Infinity	Binocular	6V / 30W Halogen (transmitting)	
OCO 256	Infinity	Binocular	6V / 30W Halogen (transmitting)	

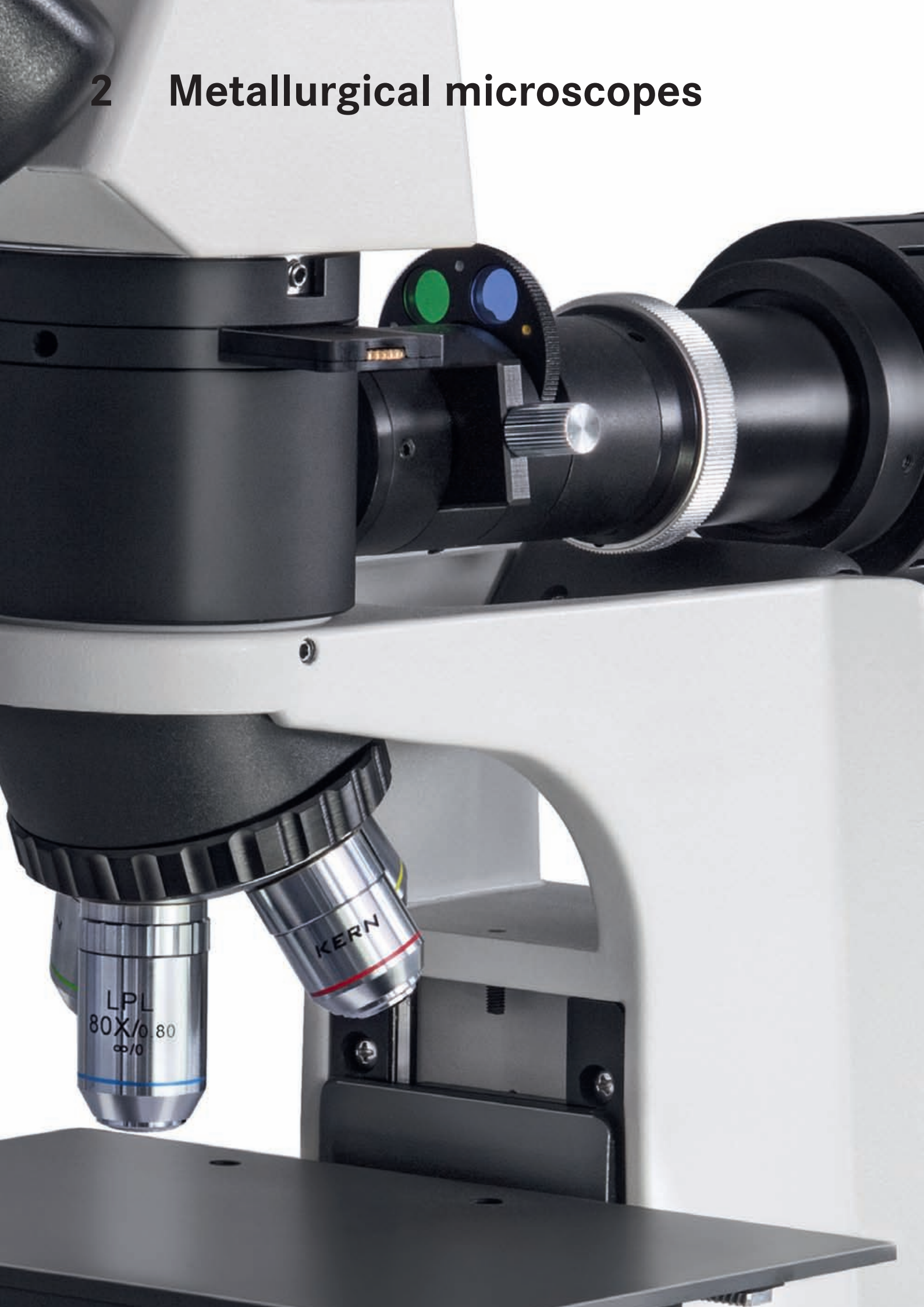
For more information about these models on the internet, go to back page of catalogue

Inverted microscope KERN OCO-2

Model outfit		Model KERN		Order number	
		OCO 255	OCO 256		
Eyepieces	HWF 10x / Ø 20 mm	●●	●●	OBB-A2503	
	WF 16x / Ø 13 mm	○○	○○	OBB-A2507	
	HWF 10x / Ø 20 mm (reticule 0,1 mm)	○	○	OBB-A2410	
	HWF 10x / Ø 22 mm	○○	○○	OBB-A2409	
Infinity Plan achromatic objectives (for long working distance)	4x / 0,13	○	○	OBB-A2413	
	10x / 0,25	●	●	OBB-A2414	
	20x / 0,40	●	●	OBB-A2415	
	40x / 0,60	●	●	OBB-A2416	
	60x / 0,70	○	○	OBB-A2417	
Binocular tube	· 45° inclined · Interpupillary distance: 52 – 75 mm · With diopter adjustment (one-sided)	●	●	OBB-A2501	
	· 45° inclined · Interpupillary distance: 48 – 75 mm · With diopter adjustment (one-sided)	○	○	OBB-A2502	
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	
Fixed stage	· Stage size: WxD 240x260 mm · Travel: 135x85 mm	●			
	Drop specimen holder (Ø 118)	●		OBB-A2520	
	Specimen holder for 54 mm culture dish	●		OBB-A2522	
	Specimen holder for 96-hole microtitre plate	○		OBB-A2521	
	Specimen holder for 60 mm culture dish	○		OBB-A2560	
	Specimen holder for 65 mm culture dish	○		OBB-A2561	
	Specimen holder for 30 mm culture dish	○		OBB-A2562	
Condenser	Abbe N.A. 0,3 (aperture diaphragm) LWD 72 mm	●	●		
Illumination	6V / 30W Halogen spare bulb (transmitting)	●	●	OBB-A2440	
Phase contrast unit	Phase contrast slide	●	●	OBB-A2432	
	Infinity plan achromatic PH-objective 10x	○	○	OBB-A2418	
	Infinity plan achromatic PH-objective 20x	●	●	OBB-A2419	
	Infinity plan achromatic PH-objective 40x	○	○	OBB-A2420	
	Centering telescope	●	●	OBB-A2506	
C-Mount	0,5x	●	●	OBB-A2531	
	0,25x	○	○	OBB-A2532	
Filter	Filter holder	●	●	OBB-A1357	
	Blue (Ø 34 mm)	●	●	OBB-A2434	
	Green (Ø 34 mm)	●	●	OBB-A2435	
	Yellow (Ø 34 mm)	●	●	OBB-A2436	

● = 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

OPTION

Model KERN	Standard configuration			
	Optical system	Tube	Illumination	
OKM 172	Infinity	Binocular	6V / 30W Halogen (reflecting)	

Metallurgical microscope KERN OKM-1

Model outfit		Model KERN	Order number	
		OKM 172		
Eyepieces	WF 10x / Ø 18 mm	●	OBB-A1347	
	WF 10x / Ø 18 mm (reticule 0,1 mm) (non-adjustable)	●	OBB-A1349	
	WF 5x / Ø 20 mm	○	OBB-A1355	
	WF 12,5x / Ø 14 mm	○	OBB-A1353	
	WF 16x / Ø 13 mm	○	OBB-A1354	
Infinity Plan achromatic objectives (no cover glass)	5x / 0,11 W.D. 12,10 mm	●	OBB-A1268	
	10x / 0,25 W.D. 4,75 mm	●	OBB-A1244	
	20x / 0,40 (spring) W.D. 2,14 mm	○	OBB-A1251	
	40x / 0,65 (spring) W.D. 0,45 mm	○	OBB-A1258	
Infinity Plan achromatic objectives (no cover glass) for long working distance	20x / 0,40 (spring) W.D. 8,35 mm	●	OBB-A1252	
	40x / 0,65 (spring) W.D. 3,90 mm	●	OBB-A1259	
	50x / 0,70 (spring) W.D. 1,95 mm	○	OBB-A1266	
	80x / 0,80 (spring) W.D. 0,85 mm	○	OBB-A1271	
Binocular tube	· Siedentopf, 30° inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm · With diopter adjustment (one-sided)	●	OBB-A1130	
Trinocular tube	· Siedentopf, 30° inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm · Light distribution: 80:20 · With diopter adjustment (one-sided)	○	OBB-A1346	
Nosepiece	Quadplex	●		
Mechanical stage	· Stage size: WxD 200x140 mm · Travel: 76x52 mm · Coaxial coarse and fine focusing knobs	●		
Illumination	6V / 30W Halogen spare bulb (reflecting)	●	OBB-A1372	
Filter unit	5-filter unit (Blue, Green, Amber, Grey, Empty)	●		
Polarising unit	Analyser / Polariser	●		
C-Mount	1x	○	OBB-A1142	
	0,47x (focus adjustable)	○	OBB-A1135	

● = 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 KERN	Standard configuration			
	Optical system	Tube	Illumination	
OKN 175	Infinity	Binocular	12V / 50W Halogen (reflecting)	
OKO 176	Infinity	Binocular	12V / 50W Halogen (reflecting) + 6V / 20W (transmitting)	
OKN 177	Infinity	Binocular	12V / 100W Halogen (reflecting)	
OKO 178	Infinity	Binocular	12V / 100W Halogen (reflecting) + 6V / 20W (transmitting)	

Metallurgical microscopes KERN OKN-1 · OKO-1

Model outfit		Model KERN				Order number	
		OKN 175	OKO 176	OKN 177	OKO 178		
Eyepieces	WF 10x / Ø 18 mm	●●	●●	●●	●●	OBB-A1347	
	WF 10x / Ø 18 mm (reticule 0,1 mm) (adjustable)	●	●	●	●	OBB-A1350	
	WF 5x / Ø 20 mm	oo	oo	oo	oo	OBB-A1355	
	WF12,5x / Ø 14 mm	oo	oo	oo	oo	OBB-A1353	
Infinity Plan objectives (no cover glass)	5x / 0,11 W.D. 6,73 mm	●	●	●	●	OBB-A1268	
	10x / 0,25 W.D. 4,19 mm	●	●	●	●	OBB-A1244	
	20x / 0,40 (spring) W.D. 2,14 mm	o	o	o	o	OBB-A1251	
	40x / 0,65 (spring) W.D. 0,45 mm	o	o	o	o	OBB-A1258	
	100x / 1,25 (oil) (spring) W.D. 0,12 mm	o	●	o	●	OBB-A1241	
Infinity Plan objectives Infinity (no cover glass) for long working distance	20x / 0,40 (spring) W.D. 8,35 mm	●	●	●	●	OBB-A1252	
	40x / 0,65 (spring) W.D. 3,90 mm	●	●	●	●	OBB-A1259	
	50x / 0,70 (spring) W.D. 1,95 mm	o	o	o	o	OBB-A1266	
	80x / 0,80 (spring) W.D. 0,85 mm	o	o	o	o	OBB-A1271	
Binocular tube	· Siedentopf, 30°inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm · With diopter adjustment (both-sided)	●	●	●	●	OBB-A1125	
Trinocular tube	· Siedentopf, 30°inclined, 360° rotatable · Interpupillary distance: 50 – 75mm · Light distribution: 100:0 · With diopter adjustment (both-sided)	o	o	o	o	OBB-A1344	
Nosepiece	Quintuple	●	●	●	●		
Mechanical stage for reflection	· Stage size: WxD 200x140 mm · Travel: 78x55 mm · Stage fast lowering unit · Stage Up-Down moving range: max. 50 mm	●		●			
Mechanical stage for transmission	· Stage size: WxD 175x145 mm · Travel: 78x55 mm · Coaxial coarse and fine focusing knobs		●		●		
Stage plate	Plate for sample placement	●	●	●	●		
Glass plate	Glass plate		o		o	OBB-A1378	
Clip	Clip		●		●	OBB-A1134	
Stage micrometer	Specimen slide with scale reticule 0,01 mm	o	o	o	o	OBB-A1224	
Polarising unit	Reflective light unit with polarising / Analyser slide	●	●	●	●		
Condenser	Abbe N.A. 1,25 (aperture diaphragm)		●		●	OBB-A1380	
Illumination	6V / 20W Halogen spare bulb (transmitting)		●		●	OBB-A1370	
	12V / 50W Halogen spare bulb (reflecting)	●	●			OBB-A1207	
	12V / 100W Halogen spare bulb (reflecting)			●	●	OBB-A1377	
Field diaphragm	Field diaphragm		●		●		
Filter	Blue	o	●	o	●	OBB-A1176	
	Green	o	o	o	o	OBB-A1192	
	Yellow	o	o	o	o	OBB-A1202	
C-Mount	1x	o	o	o	o	OBB-A1361	
	0,57x (focus adjustable)	o	o	o	o	OBB-A1136	

● = Standard configuration o = Option

For more information about these models on the internet, go to back page of catalogue

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

OPTION

Model KERN	Standard configuration			
	Optical system	Tube	Illumination	
OLE 161	Achromatic	Monocular	3W LED (reflecting)	
OLF 162	Achromatic	Binocular	3W LED (reflecting)	

Metallurgical inverted microscopes KERN OLE-1 · OLF-1

Model outfit		Model KERN		Order number	
		OLE 161	OLF 162		
Eyepieces	WF 10x / Ø 18 mm	●	●●	OBB-A1347	
	WF 12,5x / Ø14 mm	o	oo	OBB-A1353	
	WF 16x / Ø 13 mm	o	oo	OBB-A1354	
	WF 5x / Ø 20 mm	o	oo	OBB-A1355	
	WF 10x / Ø 18 mm (reticule 0,1 mm) (non-adjustable)	o	oo	OBB-A1349	
Plan achromatic objectives	Plan 10x / 0,25	●	●	OBB-A1246	
	Plan 20x / 0,35 (spring)	●	●	OBB-A1253	
	Plan 40x / 0,65 (spring)	●	●	OBB-A1261	
	Plan 100x / 1,25 (spring) (oil)	o	o	OBB-A1242	
	Plan 4x / 0,10	o	o	OBB-A1265	
Infinity Plan achromatic objectives for LWD	PL L 40x / 0,60 W.D. 3,64 mm	o	o	OBB-A1262	
	PL L 50x / 0,70 W.D. 3,01 mm	o	o	OBB-A1267	
	PL L 80x / 0,80 (spring) W.D. 1,08 mm	o	o	OBB-A1272	
Monocular tube	45° inclined	●		OBB-A1228	
Binocular tube	· 45° inclined · With diopter adjustment (one-sided)		●	OBB-A1128	
Nosepiece	Quadplex	●	●		
Mechanical stage	· Stage size: WxD 180x180 mm · Travel: 50x40 mm	●	●		
Extra stage plate	1 (opening Ø 10 mm)	●	●	OBB-A1322	
	2 (opening Ø 20 mm)	●	●	OBB-A1323	
	3 (opening Ø 40 mm)	o	o	OBB-A1324	
Illumination	3W LED illumination system (reflecting)	●	●		
Filter	Blue	●	●	OBB-A1174	
	Green	●	●	OBB-A1190	
	Grey	●	●	OBB-A1184	
Stage micrometer	Specimen slide with scale 0,01 mm	o	o	OBB-A1224	

● = Standard configuration o = Option

For more information about these models on the internet, go to back page of catalogue

3 Polarizing microscopes

Polarising microscope KERN OPE-1

λ Slip and quartz wedge

3

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

360° MONO HAL POLAR SCALE 230 V 1 DAY 3 YEARS WARRANTY

Model KERN	Standard configuration			
	Optical system	Tube	Illumination	
OPE 118	Achromatic	Monocular	6V / 20W Halogen (transmitting)	

Polarising microscope KERN OPE-1

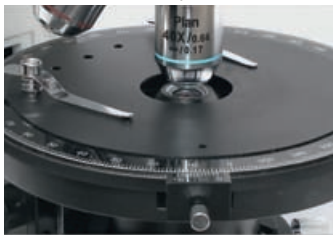
Model outfit		Model KERN	Order number	
		OPE 118		
Eyepieces	WF 10x / Ø 18 mm (reticule 0,1mm) (non-adjustable)	●	OBB-A1349	
	WF 16x / Ø 13 mm	○	OBB-A1354	
Non-stress achromatic objectives	4x / 0,10	●	OBB-A1280	
	10x / 0,25	●	OBB-A1278	
	40x / 0,66 (spring)	●	OBB-A1281	
	20x / 0,40	○	OBB-A1279	
	60x / 0,80 (spring)	○	OBB-A1282	
Monocular tube	30° inclined, 360° rotatable	●	OBB-A1227	
Nosepiece	Quadplex	●		
Analyser unit	0 – 90°, can be moved out of the optical path for single polarising observe	●	OBB-A1118	
Bertrand lens	Can be moved out of the optical path	●	OBB-A1120	
λ + ¼ λ Slip	λ Slip and ¼ λ Slip (combination)	●	OBB-A1316	
Quartz wedge	I – IV class	○	OBB-A1320	
Revolving round stage	360° rotatable, division 1°, Vernier division 6', lockable	●		
Polarising attached mechanical stage	Polarising attached mechanical stage	○	OBB-A1337	
Condenser	Abbe N.A. 1,25 (aperture diaphragm)	●	OBB-A1101	
Polarising unit	Can be moved out of the optical path	●	OBB-A1285	
Filter	Blue	●	OBB-A1173	
Illumination	6V / 20W Halogen spare bulb (transmitting)	●	OBB-A1370	

● = 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 KERN	Standard configuration			
	Optical system	Tube	Illumination	
OPM 181	Infinity	Binocular	6V / 20W Halogen (transmitting)	
OPN 182	Infinity	Binocular	12V / 50W Halogen (reflecting)	
OPO 183	Infinity	Binocular	12V / 50W Halogen (reflecting) + 6V / 20W (transmitting)	
OPN 184	Infinity	Binocular	12V / 100W Halogen (reflecting)	
OPO 185	Infinity	Binocular	12V / 100W Halogen (reflecting) + 6V / 20W (transmitting)	

For more information about these models on the internet, go to back page of catalogue

Model outfit		Model KERN	Order number	
		OPM 181		
Eyepieces	WF10 / Ø 20 mm	●	OBB-A1351	
	WF 10x / Ø 20 mm (reticule 0,1 mm) (adjustable)	●	OBB-A1352	
Non-stress Infinity plan objectives	4x / 0,10	●	OBB-A1294	
	10x / 0,25	●	OBB-A1289	
	20x / 0,40 (spring)	●	OBB-A1290	
	40x / 0,65 (spring)	●	OBB-A1292	
	60x / 0,80 (spring)	○	OBB-A1296	
Binocular tube	· Siedentopf, 30°inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm · With diopter adjustment (one-sided)	●	OBB-A1125	
Trinocular tube	· Siedentopf, 30°inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm · Light distribution: 100:0 · With diopter adjustment (one-sided)	○	OBB-A1344	
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	
Professional dedicated polarising trinocular head		○	OBB-A1210	
Nosepiece	Quintuple	●		
Analyser unit with scale	360° rotatable, lockable	●		
Bertrand lens	Built-in, center-adjustable	●	OBB-A1121	
λ + ¼ λ Slip	λ Slip and ¼ λ Slip (combination)	●	OBB-A1316	
Quartz wedge	I – IV Class	●	OBB-A1321	
Revolving round stage	360° rotatable, center-adjustable, division 1°, Vernier division 6'	●		
Polarising attached mechanical stage	Polarising attached mechanical stage	○	OBB-A1337	
Swing-out condenser	N.A. 0,9 / 0,13 swing-out achromatic condenser (aperture diaphragm)	●	OBB-A1107	
Polarising unit with scale	360° rotatable, lockable	●		
Koehler illumination	6V / 20W Halogen spare bulb (transmitting)	●	OBB-A1370	
Filter	Blue	●	OBB-A1172	
	Amber	○	OBB-A1165	
	Green	○	OBB-A1189	
	Neutral	○	OBB-A1198	
C-Mount	1x	○	OBB-A1140	
	0,57x (focus adjustable)	○	OBB-A1136	

● = Standard configuration ○ = Option

Model outfit		Model KERN				Order number	
		OPN 182	OPO 183	OPN 184	OPO 185		
Eyepieces	WF 10x / 18 mm	●	●	●	●	OBB-A1347	
	WF 10x / 18 mm (reticule 0,1 mm) (adjustable)	●	●	●	●	OBB-A1350	
Non-stress Infinity Plan objectives	4x / 0,10	●	●	●	●	OBB-A1294	
	10x / 0,25	●	●	●	●	OBB-A1289	
	20x / 0,40 (spring)	●	●	●	●	OBB-A1290	
	40x / 0,65 (spring)		●		●	OBB-A1292	
	40x / 0,65 (spring) (no cover glass)	●	○	●	○	OBB-A1288	
	60x / 0,80 (spring)	○	●	○	●	OBB-A1296	
Infinity Plan objectives (no cover glass) for LWD	LWD 20x / 0,40 (spring) W.D. 8,35 mm	○	○	○	○	OBB-A1291	
	LWD 40x / 0,65 (spring) W.D. 3,90 mm	○	○	○	○	OBB-A1293	
	LWD 50x / 0,70 (spring) W.D. 1,95 mm	○	○	○	○	OBB-A1295	
	LWD 80x / 0,80 (spring) W.D. 0,85 mm	○	○	○	○	OBB-A1297	
Binocular tube	· Siedentopf, 30°inclined, 360° rotatable · Interpupillary distance: 50 – 75 mm · With diopter adjustment (one-sided)	●	●	●	●	OBB-A1125	
Trinocular tube	· Siedentopf, 30°inclined, 360° rotatable · Interpupillary distance: 50 – 75mm · Light distribution: 100:0 · With diopter adjustment (one-sided)	○	○	○	○	OBB-A1344	
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	
Professional dedicated polarising trinocular head		○	○	○	○	OBB-A1210	
Nosepiece	Quintuple	●	●	●	●		
Analyser unit with scale	360° rotatable, lockable	●	●	●	●		
Bertrand lens	Built-in, center-adjustable	●	●	●	●	OBB-A1121	
λ + ¼ λ Slip	λ Slip und ¼ λ Slip (combination)	●	●	●	●	OBB-A1316	
Quartz wedge	I – IV class	●	●	●	●	OBB-A1321	
Revolving round stage	360° rotatable, center-adjustable, division 1°, Vernier division 6'	●	●	●	●		
Polarising attached mechanical stage	Polarising attached mechanical stage	○	○	○	○	OBB-A1337	
Swing-out condenser	N.A. 0,9 / 0,13 swing-out achromatic condenser (aperture diaphragm)		●		●	OBB-A1107	
Polarising unit with scale	360° rotatable, lockable		●		●		
Koehler illumination	6V / 20W Halogen spare bulb (transmitting)		●		●	OBB-A1370	
Filter	Blue	●	●	●	●	OBB-A1172	
	Amber	○	○	○	○	OBB-A1165	
	Green	○	○	○	○	OBB-A1189	
	Neutral	○	○	○	○	OBB-A1198	
Reflecting polarising unit replacement bulb	12V / 50W Halogen	●	●	○	○	OBB-A1207	
	12V / 100W Halogen	○	○	●	●	OBB-A1377	
C-Mount	1x	○	○	○	○	OBB-A1140	
	0,57x (focus adjustable)	○	○	○	○	OBB-A1136	

● = Standard configuration ○ = Option

4 Stereomicroscopes

Stereo, Stereo Zoom, Coaxial and Gem microscopes

Stereomicroscope KERN OSE-4

With white stage plate

With black stage plate

4

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

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

For more information about these models on the internet, go to back page of catalogue

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	
		OSE 410	**OSE 411**	**OSE 413**	**OSE 414**	**OSE 416**	**OSE 417**		
Eyepieces	WF 5x / Ø 16,2 mm	oo	oo	oo	oo	oo	oo	OZB-A4101	
	WF 10x / Ø 20 mm	●●	●●	●●	●●	●●	●●	OZB-A4102	
	WF 15x / Ø 15 mm	oo	oo	oo	oo	oo	oo	OZB-A4103	
	WF 20x / Ø 10 mm	oo	oo	oo	oo	oo	oo	OZB-A4104	
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	
	Frosted glass / Ø 95 mm					●	●	OZB-A4805	
	Black-white / Ø 95 mm					●	●	OZB-A4806	
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on the internet								

● = Standard configuration o = Option

Stereomicroscope KERN OSF-4

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						
KERN	Tube	Eyepiece	Field of view mm	Objective	Stand	Illumination	
OSF 430	Binocular	WF 10x Ø 20 mm	Ø 20	1x / 3x	Arm curved	1W LED (incident); 0,21W LED (transmitting)	
OSF 431	Binocular	WF 10x Ø 20 mm	Ø 20	2x / 4x	Arm curved	1W LED (incident); 0,21W LED (transmitting)	
OSF 434	Binocular	WF 10x Ø 20 mm	Ø 20	1x / 2x / 3x	Arm curved	1W LED (incident); 0,21W LED (transmitting)	
OSF 435	Binocular	WF 10x Ø 20 mm	Ø 20	1x / 2x / 4x	Arm curved	1W LED (incident); 0,21W LED (transmitting)	

For more information about these models on the internet, go to back page of catalogue

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	
		OSF 430	**OSF 431**	**OSF 434**	**OSF 435**		
Eyepieces	WF 5x / Ø 16,2 mm	oo	oo	oo	oo	OZB-A4101	
	WF 10x / Ø 20 mm	●●	●●	●●	●●	OZB-A4102	
	WF 15x / Ø 15 mm	oo	oo	oo	oo	OZB-A4103	
	WF 20x / Ø 10 mm	oo	oo	oo	oo	OZB-A4104	
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-A4813	
	Black-white / Ø 74,5 mm	●	●	●	●	OZB-A4814	
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on the internet						

● = Standard configuration o = Option

Stereomicroscope KERN OSF-4G

Stage plate black

Stage plate white

4

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 KERN	Standard configuration						
	Tube	Eyepiece	Field of view mm	Objective	Stand	Illumination	
OSF 438	Binocular	WF 10x Ø 20 mm	Ø 20	1x / 2x / 3x	Arm curved	1W LED (incident); 0,35W LED (transmitting)	
OSF 439	Binocular	WF 10x Ø 20 mm	Ø 20	1x / 2x / 4x	Arm curved	1W LED (incident); 0,35W LED (transmitting)	

For more information about these models on the internet, go to back page of catalogue

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	
		OSF 438	**OSF 439**		
Eyepieces	WF 5x / Ø 16,2 mm	oo	oo	OZB-A4101	
	WF 10x / Ø 20 mm	●●	●●	OZB-A4102	
	WF 15x / Ø 15 mm	oo	oo	OZB-A4103	
	WF 20x / Ø 10 mm	oo	oo	OZB-A4104	
Stands	Arm curved, incl. handle, with LED illumination (0,35W transmitting + 1W incident)	●	●		
Stage plate	Frosted glass / Ø 59,5 mm	●	●	OZB-A4815	
	Black-white / Ø 59,5 mm	●	●	OZB-A4816	
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on the internet				

● = Standard configuration o = Option

OSF 527

OSF 5 26

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						
KERN	Tube	Eyepiece	Field of view mm	Objective	Stand	Illumination	
OSF 522	Binocular	HSWF 10x Ø 23 mm	Ø 23	1x / 2x	Pillar style	–	
OSF 523	Binocular	HSWF 10x Ø 23 mm	Ø 23	1x / 2x	Pillar style	3W LED (incident); 3W LED (transmitting)	
OSF 524	Binocular	HSWF 10x Ø 23 mm	Ø 23	1x / 3x	Pillar style	–	
OSF 525	Binocular	HSWF 10x Ø 23 mm	Ø 23	1x / 3x	Pillar style	3W LED (incident); 3W LED (transmitting)	
OSF 526	Binocular	HSWF 10x Ø 23 mm	Ø 23	2x / 4x	Pillar style	–	
OSF 527	Binocular	HSWF 10x Ø 23 mm	Ø 23	2x / 4x	Pillar style	3W LED (incident); 3W LED (transmitting)	

For more information about these models on the internet, go to back page of catalogue

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	
		OSF 522	**OSF 523**	**OSF 524**	**OSF 525**	**OSF 526**	**OSF 527**		
Eyepieces	HSWF 10x / Ø 23 mm	●●	●●	●●	●●	●●	●●	OZB-A5503	
	SWF 15x / Ø 17 mm	oo	oo	oo	oo	oo	oo	OZB-A5504	
	SWF 20x / Ø 14 mm	oo	oo	oo	oo	oo	oo	OZB-A5505	
	SWF 30x / Ø 9 mm	oo	oo	oo	oo	oo	oo	OZB-A5506	
	HSWF 10x / Ø 23 mm (reticule 0,1 mm)	o	o	o	o	o	o	OZB-A5512	
	SWF 15x / Ø 17 mm (reticule 0,05 mm)	o	o	o	o	o	o	OZB-A5513	
	SWF 20x / Ø 14 mm (reticule 0,05 mm)	o	o	o	o	o	o	OZB-A5514	
Darkfield attachment	Darkfield attachment	o	o	o	o	o	o	OBB-A4601	
Object clamp	Object clamp	o	o	o	o	o	o	OBB-A6205	
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 the internet								
Stage plate	Frosted glass / Ø 94,5 mm		●		●		●	OZB-A5192	
	Black-white / Ø 94,5 mm	●	●	●	●	●	●	OZB-A5191	
	Glass / Ø 94,5 mm		o		o		o	OZB-A5190	
Mechanical stage	Stage size: WxD 188x160 mm, Travel: 76x65 mm, for transmitting and incident illumination	o	o	o	o	o	o	OZB-A5781	
	Stage size: WxD 180x175 mm; Travel: 100x86 mm, for incident illumination only	o	o	o	o	o	o	OZB-A5782	
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on the internet								

● = Standard configuration o = Option

Stereo zoom microscope KERN OZL-44

OZL 445

4

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 KERN	Standard configuration						
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
OZL 441	Trinocluar	WF 10x Ø 22 mm	Ø 23 – 5,5	1x – 4x	Pillar style	1W LED (incident); 0,35W LED (transmitting)	
OZL 445	Binocular	HWF 10x Ø 21,5 mm	Ø 28 – 6	0,75x – 3,6x	Pillar style	1W LED (incident); 0,35W LED (transmitting)	

Stereo zoom microscope KERN OZL-44

OZL 441	Specifications – Objectives					
Eyepiece	**Magnification**	**Standard**	**Auxiliary objectives**			
		1,0x	**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**	**Auxiliary objectives**			
		1,0x	**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	Ø14 – 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

Model outfit		**Model KERN**		**Order number**	
		OZL 441	**OZL 445**		
Eyepieces	WF 5x / Ø 16,2 mm	oo	oo	OZB-A4101	
	WF 10x / Ø 22 mm	●●		OZB-A4105	
	HWF 10x / Ø 21,5 mm		●●	OZB-A4106	
	WF 15x / Ø 15 mm	oo	oo	OZB-A4103	
	WF 20x / Ø 10 mm	oo	oo	OZB-A4104	
Auxiliary objectives	0,5x	o	o	OZB-A4201	
	0,75x	o	o	OZB-A4202	
	1,5x	o	o	OZB-A4204	
	2,0x	o	o	OZB-A4205	
C-Mount	1x adjustable focus	o		OZB-A4809	
	0,3x adjustable focus	o		OZB-A4810	
	0,5x adjustable focus	o		OZB-A4811	
Stands	Pillar style, with LED illumination (0,35W transmitting + 1W incident)	●	●		
Stage plate	Frosted glass / Ø 95 mm	●	●	OZB-A4805	
	Black-white / Ø 95 mm	●	●	OZB-A4806	
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on the internet				

● = Standard configuration o = Option

Stereo zoom microscope KERN OZL-45

OZL 451

OZL 453

4

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

Model KERN	Standard configuration						
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
OZL 451	Binocular	HSWF 10x Ø 23 mm	Ø 33 – 5	0,75x – 5,0x	Pillar style	12V / 10W Halogen (incident) 12V / 10W Halogen (transmitting)	
OZL 453	Binocular	HSWF 10x Ø 23 mm	Ø 33 – 5	0,75x – 5,0x	Pillar style	–	

For more information about these models on the internet, go to back page of catalogue

Stereo zoom microscope KERN OZL-45

Eyepiece	Specifications – Objectives				
	Magnification	Standard	Auxiliary objectives		
		1,0x	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

Model outfit		Model KERN		Order number	
		OZL 451	OZL 453		
Eyepieces	HWF 5x / Ø 23,2 mm	oo	oo	OZB-A4112	
	HSWF 10x / Ø 23 mm	●●	●●	OZB-A4118	
	HWF 15x / Ø 15 mm	oo	oo	OZB-A4119	
	HSWF 20x / Ø 14,5 mm	oo	oo	OZB-A4120	
	HWF 25x / Ø 11,7 mm	oo	oo	OZB-A4121	
Auxiliary objectives	0,5x	o	o	OZB-A4201	
	1,5x	o	o	OZB-A4204	
	2,0x	o	o	OZB-A4205	
Stands	Pillar style, with 12V / 10W Halogen Illumination (transmitting + incident)	●			
	Pillar style, without illumination		●		
Stage plate	Frosted glass / Ø 95 mm	●		OZB-A4805	
	Black-white / Ø 95 mm	●	●	OZB-A4806	
Mechanical stage	Stage size: WxD 180x155 mm, Travel: 75x55 mm, for transmitting and incident illumination	o	o	OZB-A4605	
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on the internet				

● = Standard configuration o = Option

Stereo zoom microscope KERN OZL-45R

4

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

360° | BINO | LED | IL | TL | ZOOM | 230 V | 1 DAY | 3 YEARS WARRANTY

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

For more information about these models on the internet, go to back page of catalogue

Stereo zoom microscope KERN OZL-45R

Eyepiece	Specifications – Objectives				
	Magnification	Standard	Auxiliary objectives		
		1,0x	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

Model outfit		Model KERN	Order number	
		OZL 456		
Eyepieces	HWF 5x / Ø 23,2 mm	oo	OZB-A4112	
	HSWF 10x / Ø 23 mm	●●	OZB-A4118	
	HWF 15x / Ø 15 mm	oo	OZB-A4119	
	HSWF 20x / Ø 14,5 mm	oo	OZB-A4120	
	HWF 25x / Ø 11,7 mm	oo	OZB-A4121	
Auxiliary objectives	0,5x	o	OZB-A4201	
	1,5x	o	OZB-A4204	
	2,0x	o	OZB-A4205	
Stands	Arm curved, with LED illumination (0,21W transmitting + 1W incident)	●		
Stage plate	Frosted glass / Ø 95 mm	●	OZB-A4805	
	Black-white / Ø 95 mm	●	OZB-A4806	
Mechanical stage	Stage size: WxD 180x155 mm, Travel: 75x55 mm, for transmitting and incident illumination	o	OZB-A4605	
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on the internet			

● = Standard configuration o = Option

Stereo zoom microscope KERN OZM-5

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

OPTION

Model	Standard configuration						
KERN	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
OZM 541	Binocular	HSWF 10x Ø 23 mm	Ø 32,8 – 5,1	0,7x – 4,5x	Pillar style	–	
OZM 542	Binocular	HSWF 10x Ø 23 mm	Ø 32,8 – 5,1	0,7x – 4,5x	Pillar style	3W LED (incident); 3W LED (transmitting)	
OZM 543	Trinocular	HSWF 10x Ø 23 mm	Ø 32,8 – 5,1	0,7x – 4,5x	Pillar style	–	
OZM 544	Trinocular	HSWF 10x Ø 23 mm	Ø 32,8 – 5,1	0,7x – 4,5x	Pillar style	3W LED (incident); 3W LED (transmitting)	

For more information about these models on the internet, go to back page of catalogue

Stereo zoom microscope KERN OZM-5

Eyepiece	Specifications – Objectives						
	Magnification	Standard	Auxiliary objectives				
		1,0x	0,37x	0,5x	0,7x	1,5x	2x
HSWF 10x	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
SWF 15x	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
SWF 20x	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
SWF 30x	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
Working distance		110 mm	275 mm	195 mm	145 mm	50 mm	35 mm

Model outfit		Model KERN				Order number	
		OZM 541	OZM 542	OZM 543	OZM 544		
Eyepieces	HSWF 10x / Ø 23 mm	●●	●●	●●	●●	OZB-A5503	
	SWF 15x / Ø 17 mm	oo	oo	oo	oo	OZB-A5504	
	SWF 20x / Ø 14 mm	oo	oo	oo	oo	OZB-A5505	
	SWF 30x / Ø 9 mm	oo	oo	oo	oo	OZB-A5506	
	HSWF 10x / Ø 23 mm (reticule 0,1 mm)	o	o	o	o	OZB-A5512	
	SWF 15x / Ø17 mm (reticule 0,05 mm)	o	o	o	o	OZB-A5513	
	SWF 20x / Ø14 mm (reticule 0,05 mm)	o	o	o	o	OZB-A5514	
Achromatic auxiliary objectives	0,37x only in combination with universal stand	o	o	o	o	OZB-A5611	
	0,5x	o	o	o	o	OZB-A5612	
	0,7x	o	o	o	o	OZB-A5613	
	1,5x	o	o	o	o	OZB-A5615	
	2,0x	o	o	o	o	OZB-A5616	
C-Mount	0,3x			o	o	OZB-A5701	
	0,5x			o	o	OZB-A5702	
	1,0x			o	o	OZB-A5703	
	1,0x (with micrometer) only in combination with OZB-A5703			o	o	OZB-A5704	
	for SLR cameras (Nikon)			o	o	OZB-A5706	
	for SLR cameras (Olympus)			o	o	OZB-A5707	
	for SLR cameras (Canon)			o	o	OZB-A5708	
Darkfield attachment	Darkfield attachment	o	o	o	o	OBB-A4601	
Object clamp	Object clamp	o	o	o	o	OBB-A6205	
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 the internet						
Stage plate	Frosted glass / Ø 94,5 mm		●		●	OZB-A5192	
	Black-white / Ø 94,5 mm	●	●	●	●	OZB-A5191	
	Glass / Ø 94,5 mm		o		o	OZB-A5190	
Mechanical stage	Stage size: WxD 188x160 mm, Travel: 76x65 mm, for transmitting and incident illumination	o	o	o	o	OZB-A5781	
	Stage size: WxD 180x175 mm, Travel: 100x86 mm, for incident illumination only	o	o	o	o	OZB-A5782	
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on the internet						

● = Standard configuration o = Option

OZO 552

OZO 551

Trinocular tube

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						
KERN	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
OZO 551	Binocular	HSWF 10x Ø 23 mm	Ø 28,75 – 3,3	0,8x – 7x	Pillar style	–	
OZO 552	Binocular	HSWF 10x Ø 23 mm	Ø 28,75 – 3,3	0,8x – 7x	Pillar style	3W LED (incident); 3W LED (transmitting)	
OZO 553	Trinocular	HSWF 10x Ø 23 mm	Ø 28,75 – 3,3	0,8x – 7x	Pillar style	–	
OZO 554	Trinocular	HSWF 10x Ø 23 mm	Ø 28,75 – 3,3	0,8x – 7x	Pillar style	3W LED (incident); 3W LED (transmitting)	

For more information about these models on the internet, go to back page of catalogue

Stereo zoom microscope KERN OZO-5

Eyepiece	Specifications – Objectives						
	Magnification	Standard	Auxiliary objectives				
		1,0x	0,37x	0,5x	0,7x	1,5x	2x
HSWF 10x	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
SWF 15x	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
SWF 20x	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
SWF 30x	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
Working distance		108 mm	275 mm	195 mm	145 mm	50 mm	35 mm

Model outfit		Model KERN				Order number	
		OZO 551	OZO 552	OZO 553	OZO 554		
Eyepieces	HSWF 10x / Ø 23 mm	●●	●●	●●	●●	OZB-A5503	
	SWF 15x / Ø 17 mm	oo	oo	oo	oo	OZB-A5504	
	SWF 20x / Ø 14 mm	oo	oo	oo	oo	OZB-A5505	
	SWF 30x / Ø 9 mm	oo	oo	oo	oo	OZB-A5506	
	HSWF 10x / Ø 23 mm (reticule 0,1 mm)	o	o	o	o	OZB-A5512	
	SWF 15x / Ø 17 mm (reticule 0,05 mm)	o	o	o	o	OZB-A5513	
	SWF 20x / Ø 14 mm (reticule 0,05 mm)	o	o	o	o	OZB-A5514	
Achromatic auxiliary objectives	0,37x only in combination with universal stand	o	o	o	o	OZB-A5611	
	0,5x	o	o	o	o	OZB-A5612	
	0,7x	o	o	o	o	OZB-A5613	
	1,5x	o	o	o	o	OZB-A5615	
	2,0x	o	o	o	o	OZB-A5616	
C-Mount	0,3x			o	o	OZB-A5701	
	0,5x			o	o	OZB-A5702	
	1,0x			o	o	OZB-A5703	
	1,0x (with micrometer) only in combination with OZB-A5703			o	o	OZB-A5704	
	for SLR cameras (Nikon)			o	o	OZB-A5706	
	for SLR cameras (Olympus)			o	o	OZB-A5707	
	for SLR cameras (Canon)			o	o	OZB-A5708	
Darkfield attachment	Darkfield attachment	o	o	o	o	OBB-A4601	
Object clamp	Object clamp	o	o	o	o	OBB-A6205	
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 the internet						
Stage plate	Frosted glass / Ø 94,5 mm		●		●	OZB-A5192	
	Black-white / Ø 94,5 mm	●	●	●	●	OZB-A5191	
	Glass / Ø 94,5 mm		o		o	OZB-A5190	
Mechanical stage	Stage size: WxD 188x160 mm, Travel: 76x65 mm, for transmitting and incident illumination	o	o	o	o	OZB-A5781	
	Stage size: WxD 180x175 mm, Travel: 100x86 mm, for incident illumination only	o	o	o	o	OZB-A5782	
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on the internet						

● = Standard configuration o = Option

OZP 555

Trinocular head

OZP 558

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						
KERN	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
OZP 555	Binocular	HSWF 10x Ø 23 mm	Ø 38,3 – 4,2	0,6x – 5,5x	Pillar style	–	
OZP 556	Binocular	HSWF 10x Ø 23 mm	Ø 38,3 – 4,2	0,6x – 5,5x	Pillar style	3W LED (incident); 3W LED (transmitting)	
OZP 557	Trinocular	HSWF 10x Ø 23 mm	Ø 38,3 – 4,2	0,6x – 5,5x	Pillar style	–	
OZP 558	Trinocular	HSWF 10x Ø 23 mm	Ø 38,3 – 4,2	0,6x – 5,5x	Pillar style	3W LED (incident); 3W LED (transmitting)	

For more information about these models on the internet, go to back page of catalogue

Stereo zoom microscope KERN OZP-5

Eyepiece	Specifications – Objectives						
	Magnification	Standard	Auxiliary objectives				
		1,0x	0,37x	0,5x	0,7x	1,5x	2x
HSWF 10x	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
SWF 15x	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
SWF 20x	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
SWF 30x	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
Working distance		108 mm	275 mm	195 mm	145 mm	50 mm	35 mm

Model outfit		Model KERN				Order number	
		OZP 555	OZP 556	OZP 557	OZP 558		
Eyepieces	HSWF 10x / Ø 23 mm	●●	●●	●●	●●	OZB-A5503	
	SWF 15x / Ø 17 mm	oo	oo	oo	oo	OZB-A5504	
	SWF 20x / Ø 14 mm	oo	oo	oo	oo	OZB-A5505	
	SWF 30x / Ø 9 mm	oo	oo	oo	oo	OZB-A5506	
	HSWF 10x / Ø 23 mm (reticule 0,1 mm)	o	o	o	o	OZB-A5512	
	SWF 15x / Ø 17 mm (reticule 0,05 mm)	o	o	o	o	OZB-A5513	
	SWF 20x / Ø 14 mm (reticule 0,05 mm)	o	o	o	o	OZB-A5514	
Achromatic auxiliary objectives	0,37x only in combination with universal stand	o	o	o	o	OZB-A5611	
	0,5x	o	o	o	o	OZB-A5612	
	0,7x	o	o	o	o	OZB-A5613	
	1,5x	o	o	o	o	OZB-A5615	
	2,0x	o	o	o	o	OZB-A5616	
C-Mount	0,3x			o	o	OZB-A5701	
	0,5x			o	o	OZB-A5702	
	1,0x			o	o	OZB-A5703	
	1,0x (with micrometer) only in combination with OZB-A5703			o	o	OZB-A5704	
	for SLR cameras (Nikon)			o	o	OZB-A5706	
	for SLR cameras (Olympus)			o	o	OZB-A5707	
	for SLR cameras (Canon)			o	o	OZB-A5708	
Darkfield attachment	Darkfield attachment	o	o	o	o	OBB-A4601	
Object clamp	Object clamp	o	o	o	o	OBB-A6205	
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 the internet						
Stage plate	Frosted glass / Ø 94,5 mm		●		●	OZB-A5192	
	Black-white / Ø 94,5 mm	●	●	●	●	OZB-A5191	
	Glass / Ø 94,5 mm		o		o	OZB-A5190	
Mechanical stage	Stage size: WxD 188x160 mm, Travel: 76x65 mm, for incident and transmitting illumination	o	o	o	o	OZB-A5781	
	Stage size: WxD 180x175 mm, Travel: 100x86 mm, for incident illumination only	o	o	o	o	OZB-A5782	
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on the internet						

● = Standard configuration o = Option

Stereo zoom microscope KERN OZR-5

OZR 563

OZR 564

4

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

OPTION

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

Stereo zoom microscope KERN OZR-5

Eyepiece	Specifications – Objectives				
	Magnification	Standard Plan	Achromatic objectives		
		1,0x	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	
		OZR 563	OZR 564		
Eyepieces	HWF 10x / Ø 22 mm	●●	●●	OZB-A5502	
	SWF 15x / Ø 17 mm	oo	oo	OZB-A5504	
	SWF 20x / Ø 14 mm	oo	oo	OZB-A5505	
	SWF 30x / Ø 9 mm	oo	oo	OZB-A5506	
	HWF 10x / Ø 22 mm (reticule 0,1 mm)	o	o	OZB-A5511	
	SWF 15x / Ø 17 mm (reticule 0,05 mm)	o	o	OZB-A5513	
	SWF 20x / Ø 14 mm (reticule 0,05 mm)	o	o	OZB-A5514	
Plan achromatic objective	1,0x	●	●	OZB-A5603	
Achromatic objectives	0,5x	o	o	OZB-A5601	
	0,7x	o	o	OZB-A5602	
	1,5x (Only in combination with OZB-A5603)	o	o	OZB-A5604	
Trinocular beamsplitter	Division 100:0	●	●	OZB-A5401	
	Division 50:50	o	o	OZB-A5402	
C-Mount	0,3x	o	o	OZB-A5701	
	0,5x	o	o	OZB-A5702	
	1,0x	o	o	OZB-A5703	
	1,0x (reticule) only in combination with OZB-A5703	o	o	OZB-A5704	
	for SLR cameras (Nikon)	o	o	OZB-A5706	
	for SLR cameras (Olympus)	o	o	OZB-A5707	
	for SLR cameras (Canon)	o	o	OZB-A5708	
Darkfield attachment	Darkfield attachment	o	o	OBB-A4601	
Object clamp	Object clamp	o	o	OBB-A6205	
Stands	Pillar style, without illumination	●			
	Pillar style, with 3W LED illumination (transmitting + incident)		●		
Stage plate	Frosted glass / Ø 94,5 mm		●	OZB-A5192	
	Black-white / Ø 94,5 mm	●	●	OZB-A5191	
	Glass / Ø 94,5 mm		o	OZB-A5190	
Mechanical stage	Stage size: WxD 188x160 mm, Travel: 76x65 mm, for incident and transmitting illumination	o	o	OZB-A5781	
	Stage size: WxD 180x175 mm, Travel: 100x86 mm, for incident illumination only	o	o	OZB-A5782	
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on the internet				

● = Standard configuration o = 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 KERN	Standard configuration						
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
OZS 573	Trinocular	HWF 10x Ø 22 mm	Ø 27,5 – 2,75	0,8x – 8x	Pillar style	–	
OZS 574	Trinocular	HWF 10x Ø 22 mm	Ø 27,5 – 2,75	0,8x – 8x	Pillar style	3W LED (incident); 3W LED (transmitting)	

For more information about these models on the internet, go to back page of catalogue

Stereo zoom microscope KERN OZS-5

Eyepiece	Specifications – Objectives				
	Magnification	Standard Plan	Achromatic objectives		
		1,0x	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	
		OZS 573	OZS 574		
Eyepieces	HWF 10x / Ø 22 mm	●●	●●	OZB-A5502	
	SWF 15x / Ø 17 mm	oo	oo	OZB-A5504	
	SWF 20x / Ø 14 mm	oo	oo	OZB-A5505	
	SWF 30x / Ø 9 mm	oo	oo	OZB-A5506	
	HWF 10x / Ø 22 mm (reticule 0,1 mm)	o	o	OZB-A5511	
	SWF 15x / Ø 17 mm (reticule 0,05 mm)	o	o	OZB-A5513	
	SWF 20x / Ø 14 mm (reticule 0,05 mm)	o	o	OZB-A5514	
Plan achromatic objective	1,0x	●	●	OZB-A5603	
Achromatic objectives	0,5x	o	o	OZB-A5601	
	0,7x	o	o	OZB-A5602	
	1,5x (Only in combination with OZB-A5603)	o	o	OZB-A5604	
Trinocular beamsplitter	Division 100:0	●	●	OZB-A5401	
	Division 50:50	o	o	OZB-A5402	
C-Mount	0,3x	o	o	OZB-A5701	
	0,5x	o	o	OZB-A5702	
	1,0x	o	o	OZB-A5703	
	1,0x (reticule) only in combination with OZB-A5703	o	o	OZB-A5704	
	for SLR cameras (Nikon)	o	o	OZB-A5706	
	for SLR cameras (Olympus)	o	o	OZB-A5707	
	for SLR cameras (Canon)	o	o	OZB-A5708	
Darkfield attachment	Darkfield attachment	o	o	OBB-A4601	
Object clamp	Object clamp	o	o	OBB-A6205	
Stands	Pillar style, without illumination	●			
	Pillar style, with 3W LED illumination (transmitting + incident)		●		
Stage plate	Frosted glass / Ø 94,5 mm		●	OZB-A5192	
	Black-white / Ø 94,5 mm	●	●	OZB-A5191	
	Glass / Ø 94,5 mm		o	OZB-A5190	
Mechanical stage	Stage size: WxD 188x160 mm, Travel: 76x65 mm, for incident and transmitting illumination	o	o	OZB-A5781	
	Stage size: WxD 180x175 mm, Travel: 100x86 mm, for incident illumination only	o	o	OZB-A5782	
External illumination	Please find the information about external illumination units in the catalogue from page 68 and on the internet				

● = Standard configuration o = Option

Coaxial microscope KERN OZC-5

Plug in for power supply

4

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

OPTION

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

For more information about these models on the internet, go to back page of catalogue

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	
		OZC 583		
Eyepieces	HSWF 10x / Ø 23 mm	●●	OZB-A5503	
	SWF 15x / Ø 17 mm	oo	OZB-A5504	
	SWF 20x / Ø 14 mm	oo	OZB-A5505	
	SWF 30x / Ø 9 mm	oo	OZB-A5506	
	HSWF 10x / Ø 23 mm (reticule 0,1 mm)	o	OZB-A5512	
	SWF 15x / Ø 17 mm (reticule 0,05 mm)	o	OZB-A5513	
	SWF 20x / Ø 14 mm (reticule 0,05 mm)	o	OZB-A5514	
C-Mount	0,3x	o	OZB-A5701	
	0,5x	o	OZB-A5702	
	1,0x	o	OZB-A5703	
	1,0x (with micrometer) only in combination with OZB-A5703	o	OZB-A5704	
	for SLR cameras (Nikon)	o	OZB-A5706	
	for SLR cameras (Olympus)	o	OZB-A5707	
	for SLR cameras (Canon)	o	OZB-A5708	
Stands	Arm curved, without illumination	●		
Mechanical stage	Stage size: WxD 188x160 mm, Travel: 76x65 mm, for incident and transmitting illumination	o	OZB-A5781	
	Stage size: WxD 180x175 mm, Travel: 100x86 mm, for incident illumination only	o	OZB-A5782	
External Illumination	Please find the information about external illumination units in the catalogue from page 68 and on the internet			

● = Standard configuration o = Option

Gem microscope KERN OZG-4

OZG 493

OZG 497

Backside of OZG 497

Tilt positions

Tilt positions

4

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

360° | BINO | TRINO | HAL | IL | TL | ZOOM | 230 V | 1 DAY | 3 YEARS WARRANTY

Model KERN	Standard configuration						
	Tube	Eyepiece	Field of view mm	Objective Zoom	Stand	Illumination	
OZG 493	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)	
OZG 497	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)	

For more information about these models on the internet, go to back page of catalogue

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	
		OZG 493	OZG 497		
Eyepieces	WF 5x / Ø 16,2 mm	○○		OZB-A4101	
	HWF 10x / Ø 21,5 mm	●●		OZB-A4106	
	WF 15x / Ø 15 mm	○○		OZB-A4103	
	WF 20x / Ø 10 mm	○○		OZB-A4104	
	HWF 5x / Ø 23,2 mm		○○	OZB-A4112	
	HSWF 10x / Ø 23 mm		●●	OZB-A4118	
	HWF 15x / Ø 15 mm		○○	OZB-A4119	
	HSWF 20x / Ø 14,5 mm		○○	OZB-A4120	
	HWF 25x / Ø 11,7 mm		○○	OZB-A4121	
C-Mount	1x		○	OZB-A4809	
	0,3x		○	OZB-A4810	
	0,5x		○	OZB-A4811	
Darkfield attachment	Darkfield attachment	●	●	OZB-A4601	
Object clamp	Object clamp (steel wire)	●	●	OZB-A4604	
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 ○ = Option

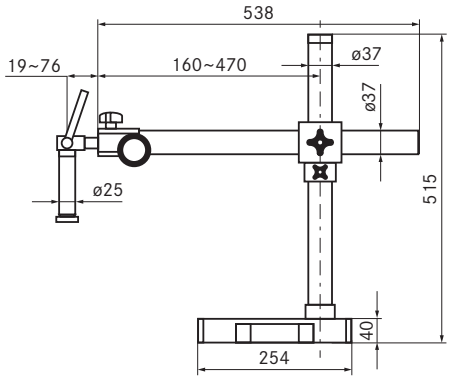
5 Stereomicroscope stands

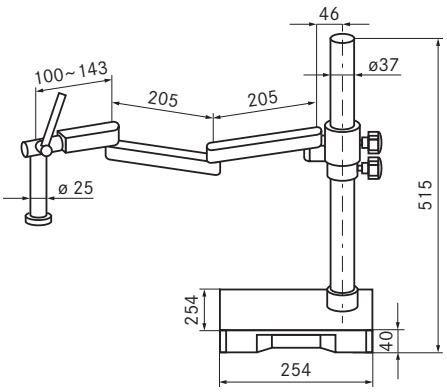
Universal stands

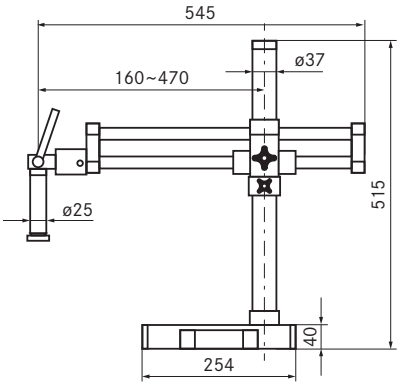
OZB-A5201

OZB-A5202

OZB-A5203







Model KERN	Description	
OZB-A5201	Universal stand with telescopic arm	
OZB-A5202	Universal stand with jointed arm	
OZB-A5203	Universal stand with ball bearing mounted double arm	

Please check our webshop for new universal stands!

Holders

OZB-A5301

OZB-A5306

Model KERN	Description	
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	
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	

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

For more information about these models on the internet, go to back page of catalogue

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

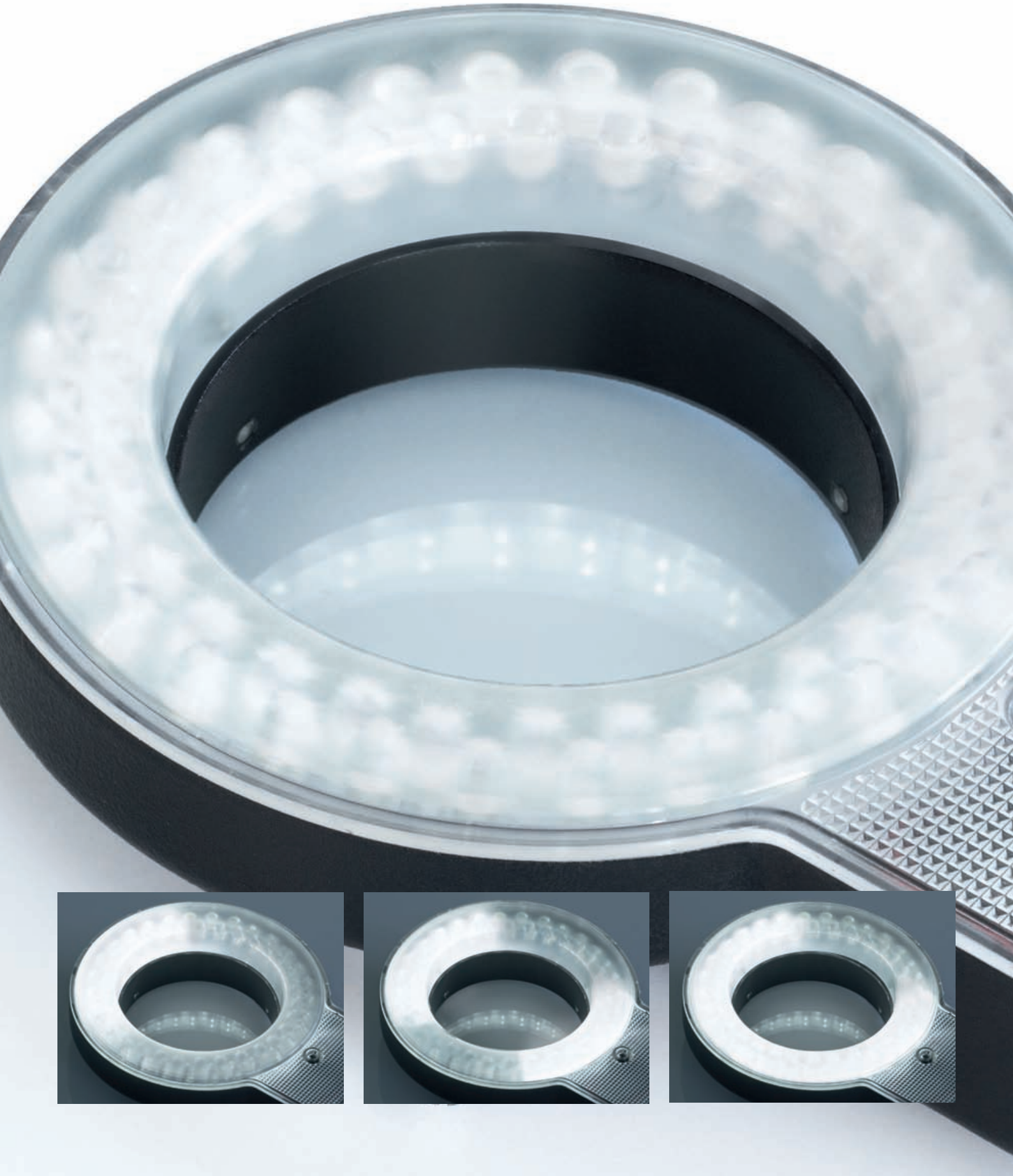
Features

- 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 on the internet

Model **KERN**	Stand style	Illumination	Description	Dimensions mm	
OZB-A5121	Pillar style	-	With coaxial coarse and fine adjustment	283x292x271,5	
OZB-A5123	Pillar style	3W LED (incident + transmitting)	With coaxial coarse and fine adjustment	283x292x303,5	
OZB-A5104	Arm curved	-		283x292x240	
OZB-A5106	Arm curved	3W LED (incident + transmitting)		283x292x272	
OZB-A5107	Pillar style	-		170x245x271,5	
OZB-A5109	Pillar style	3W LED (incident + transmitting)		170x245x303,5	
OZB-A5114	Pillar style	-	With rust protection iron stage	400x300x371,5	
OZB-A5127	Pillar style	-	With coated steel stage	181x245x272	

6 External illumination units for stereomicroscopes

Ring illumination and cold light sources



Ring illumination

OZB-A4571

OZB-A4572

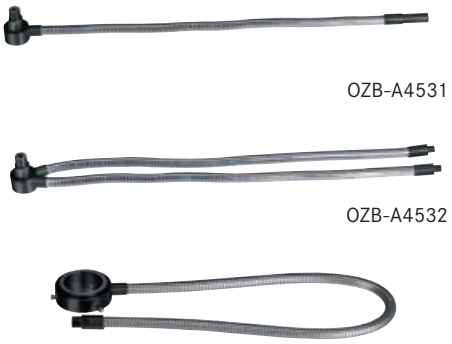
OBB-A6102

Model KERN	Illuminance	Inner Ø mm	Colour temperature K	Brightness adjustable	Illumination by segments	
OZB-A4571	3W LED	60	7000 – 11000	●		
OZB-A4572	3W LED	60	6500 – 7000	●	●	
OBB-A6102	4,5W LED	63	approx. 7600	●		

Fiber illumination

OZB-A4515

OZB-A4512



OZB-A4531

OZB-A4532

OZB-A4533

Model KERN	Description	Length mm	Illuminance	Colour temperature K	Brightness adjustable	
OZB-A4515	Dual fiber unit LED	300	6W	5600 – 6300	●	
OZB-A4512	Cold light source halogen	–	24V / 150W	3150 – 3200	●	
OZB-A4531	Single fiber	490	Usable for OZB-A4512			
OZB-A4532	Dual fiber	490				
OZB-A4533	Ring fiber	900				

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 on the internet

7 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 on the internet

STANDARD

USB 2.0 | 1 DAY | 3 YEARS WARRANTY

Model KERN	Resolution	USB	FPS	Sensor	Sensor size	Colour / Monochrome	Supported operating system	
ODC 132	3 MP	2.0	5-30	CMOS	1/2"	colour	Win 2000, XP, 7, Vista	
ODC 152	5 MP	2.0	5.5-30	CMOS	1/2,5"	colour	Win 2000, XP, 7, Vista	

Refractometers

Analogue refractometer KERN ORA

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 especailly 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 follwoing 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)

8

STANDARD

OPTION

For more information about these models on the internet, go to back page of catalogue

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 **KERN**	Scales	Measuring range	Division	ATC	
ORA 10BB	Brix	0 – 10 %	0,1 %		
ORA 10BA	Brix	0 – 10 %	0,1 %	●	
ORA 18BB	Brix	0 – 18 %	0,1 %		
ORA 20BB	Brix	0 – 20 %	0,1 %		
ORA 20BA	Brix	0 – 20 %	0,1 %	●	
ORA 32BB	Brix	0 – 32 %	0,2 %		
ORA 32BA	Brix	0 – 32 %	0,2 %	●	
ORA 62BB	Brix	28 – 62 %	0,2 %		
ORA 62BA	Brix	28 – 62 %	0,2 %	●	
ORA 82BB	Brix	45 – 82 %	0,5 %		
ORA 80BB	Brix	0 – 80 %	0,5 %		

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 **KERN**	Scales	Measuring range	Division	ATC	
ORA 3HB	Brix Baumé Water content	58 – 92 % 38 – 43 °Bé 12 – 27 %	0,5 % 0,5 °Bé 1 %		
ORA 3HA	Brix Baumé Water content	58 – 92 % 38 – 43 °Bé 12 – 27 %	0,5 % 0,5 °Bé 1 %	●	
ORA 6HB	Water content	12 – 30 %	0,1 %		
ORA 6HA	Water content	12 – 30 %	0,1 %	●	

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 natrium 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 KERN	Scales	Measuring range	Division	ATC	
ORA 1SB	Salinity specific gravity	0 – 100 ‰ 1,000 – 1,070 sg	1 ‰ 0,001 sg		
ORA 1SA	Salinity specific gravity	0 – 100 ‰ 1,000 – 1,070 sg	1 ‰ 0,001 sg	●	
ORA 2SB	Salt (NaCl)	0 – 28 %	0,2 %		
ORA 2SA	Salt (NaCl)	0 – 28 %	0,2 %	●	
ORA 3SB	Salt (NaCl) Brix	0 – 28 % 0 – 32 %	0,2 % 0,2 %		
ORA 3SA	Salt (NaCl) Brix	0 – 28 % 0 – 32 %	0,2 % 0,2 %	●	

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

Model KERN	Scales	Measuring range	Division	ATC	
ORA 1WB	Oechsle KMW (Babo) Brix	0 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,25 °KMW 0,2 %		
ORA 1WA	Oechsle KMW (Babo) Brix	0 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,25 °KMW 0,2 %	●	
ORA 3WB	Oechsle Brix	30 – 140 °Oe 0 – 32 %	1 °Oe 0,2 %		
ORA 3WA	Oechsle Brix	30 – 140 °Oe 0 – 32 %	1 °Oe 0,2 %	●	
ORA 7WB	Oechsle KMW (Babo) Brix	30 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,2 °KMW 0,2 %		
ORA 7WA	Oechsle KMW (Babo) Brix	30 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,2 °KMW 0,2 %	●	
ORA 2AB	Vol (weight) Vol (weight)	0 – 50 % Vol 50 – 80 % Vol	1 % Vol 2,5 % Vol		

For more information about these models on the internet, go to back page of catalogue

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 quantitiy 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 KERN	Scales	Measuring range	Division	ATC	
ORA 2PB	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		
ORA 2PA	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	●	

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.

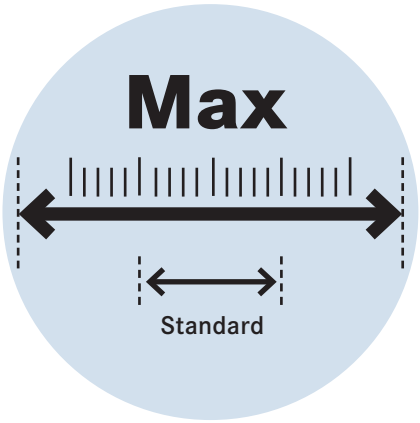
The main scope of applications is:
- Automotive industry: Car-workshops and producers
- Chemical industry
- Solar industry: Antifreeze monitoring
- Geothermal industry: Brine-concentration-measurement for ground heat
- Forestry / Lumbermen

Model KERN	Scales	Measuring range	Division	ATC	
ORA 4FB	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		
ORA 4FA	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	●	
ORA 1UB	Urea	0 – 40 %	0,2 %		
ORA 1UA	Urea	0 – 40 %	0,2 %	●	
ORA 4UB	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		
ORA 4UA	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	●	

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 KERN	Scales	Measuring range	Division	ATC	
ORA 80BE	Brix	0 – 50 % 50 – 80 %	0,5 % 0,5 %		
ORA 90BE	Brix	0 – 42 % 42 – 71 % 71 – 90 %	0,2 % 0,2 % 0,2 %		
ORA 1RE	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		
ORA 4RR	Refractive index	1,440 – 1,520 nD	0,001 nD		


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

8

Model KERN	Scales	Measuring range	Division	ATC	
ORA 1GG	Refractive index	1,30 – 1,81 nD	0,01 nD		


ORA 1GG

For more information about these models on the internet, go to back page of catalogue

Accessory parts: Analogue refractometer – ORA

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

Prism coverplate with LED
ORA-A1101

Leather bag
ORA-A2103

Calibration liquid

Calibration block

Digital refractometer KERN ORD

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)

9

STANDARD

BATT | 1 DAY | 2 YEARS WARRANTY

For more information about these models on the internet, go to back page of catalogue

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). Alternativly, the dispaly 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 **KERN**	Scales	Measuring range	Accuracy	Division	
ORD 45BM	Brix Refractive index	0 – 45 % 1,3330 – 1,4098 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	
ORD 92BM	Brix Refractive index	58 – 92 % 1,4370 – 1,5233 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	
ORD 85BM	Brix Refractive index	0 – 85 % 1,3330 – 1,5100 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	

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 **KERN**	Scales	Measuring range	Accuracy	Division	
ORD 92HM	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	

Digital refractometer KERN ORD

Scope of application: Salt

The following models are particularly suitable to determin 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 **KERN**	Scales	Measuring range	Accuracy	Division	
ORD 1SM	Salt (NaCl) Refractive index	0 – 28 % 1,3330 – 1,3900 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	
ORD 3SM	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	

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 **KERN**	Scales	Measuring range	Accuracy	Division	
ORD 2WM	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	

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 quantitiy 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 **KERN**	Scales	Measuring range	Accuracy	Division	
ORD 1PM	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	

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.

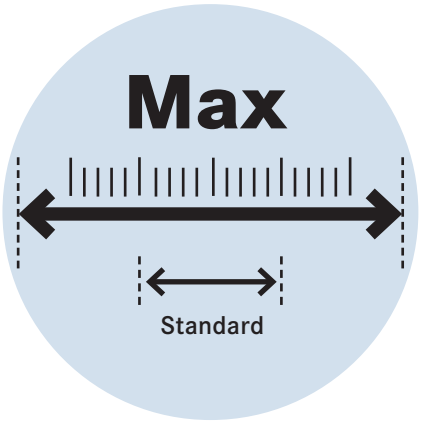
The main scope of applications is:
- Automotive industry: Car-workshops and producers
- Chemical industry
- Solar industry: Antifreeze monitoring
- Geothermal industry: Brine-concentration-measurement for ground heat
- Forestry / Lumbermen

Model **KERN**	Scales	Measuring range	Accuracy	Division	
ORD 2UM	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	
ORD 5UM	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	
ORD 6US	Urea	0 – 40 %	± 0,2 %	0,1 %	

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 KERN	Scales	Measuring range	Accuracy	Division	
ORD 1RS	Refractive index	1,3330 – 1,5400 nD	± 0,0003 nD	0,0001 nD	

Accessory parts: Digital refractometer – ORD

Model KERN	Description	
ORA-A1006	Calibration liquid 60,0 % for ORD 92BM and ORD 92HM Content: 2,5 ml	
ORA-A2103	Leather bag for digital refractometer	
ORA-A1001	Calibration liquid 0 % (Destilled Water) Volume: 2,5 ml	

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 everyday 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

10

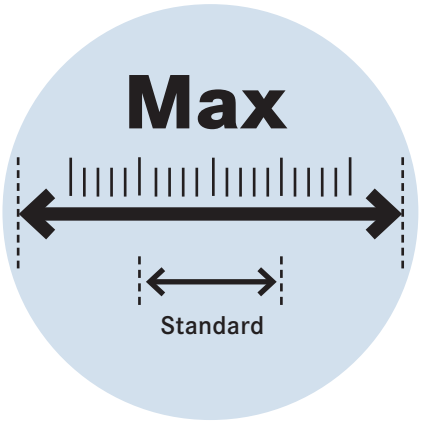
STANDARD

1 DAY | ABBE | MONO | 3 YEARS WARRANTY

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 KERN	Scales	Measuring range	Accuracy	Division	
ORT 1RS	Brix Refractive index	0 – 95 % 1,3000 – 1,7000 nD	± 0,1 % ± 0,0002 nD	0,25 % 0,0005 nD	

ORT 1RS

Accessory parts: Abbe refractometer – ORT

Model KERN	Description	
ORA-A1102	Aluminium suitcase Dimension: 310x120x240 mm, weight: 1300 g	
ORA-A2266	Digital thermometer	
ORA-A2267	Calibration block for ORT 1RS	
ORA-A1107	Contact liquid: Alpha-Bromonaphthalene for ORT 1RS Volume: 2,5 ml	


Calibration block
ORA-A2267


Transport and storage case
ORA-A1102

KERN Pictograms

360° rotatable microscope head

Monocular Microscope
For the inspection with one eye

Binocular Microscope
For the inspection with both eyes

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

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

Halogen illumination
For pictures bright and rich in contrast

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

Incident illumination
For non-transparent objects

Transmitting illumination
For transparent objects

Fluorescence illumination
For stereomicroscopes

Fluorescence illumination for compound microscopes
With 100 W mercury lamp and filter

Fluorescence illumination for compound microscopes
With 3 W LED illumination and filter

Phase contrast unit
For a higher contrast

Polarising unit
To polarise the light

Infinity system
Infinity corrected optical system

Zoom magnification
For stereomicroscopes

Parallel optical system
For stereomicroscopes, enables fatigue-proof working

Integrated scale
In the eyepiece

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

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

Automatic temperature compesation
For measurements between 10 °C and 30 °C

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

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

Rechargeable battery pack
Rechargeable set.

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

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

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

Warranty
The warranty period is shown in the pictogram.

Abbreviations

C-Mount Adapter for the connection of a camera to a trinocular microscope

FPS Frames per second

H(S)WF High (Super) Wide Field (Eyepiece with high eye point for wearers of glasses)

LWD Long Working Distance

N.A. Numerical Aperture

SLR camera Single-Lens Reflex camera

SWF Super Wide Field (Field number at least Ø 23 mm for 10x eyepiece)

W.D. Working Distance

WF 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).

2+ years warranty

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

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

Notes

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 on the internet, see back side of the envelope.