



OZL 451



OZL 453

**LAB LINE**

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

**Features**

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

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

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 our website <a href="http://www.kern-sohn.com">www.kern-sohn.com</a>				

● = Standard configuration

○ = Option

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

## Abbreviations

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

## Your KERN specialist dealer: