

CATALOG

2023 • 2024

PART 3



MICROSCOPES FOR EDUCATION, LIFE SCIENCE AND INDUSTRY

PART 1 MICROSCOPES FOR EDUCATION

PART 2 MICROSCOPES FOR LIFE SCIENCE

PART 3 MICROSCOPES FOR INDUSTRY



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## euromex MICROSCOPE COLLECTION 2023 • 2024



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## EDUCATION | BIOLOGICAL MICROSCOPES

MicroBlue • EcoBlue • BioBlue  
BioBlue.Lab • bScope • iScope

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## EDUCATION | STEREO MICROSCOPES

EduBlue • StereoBlue  
NexiusZoom • AP series

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## EDUCATION | DIGITAL SOLUTIONS

Digital microscopes • MacroZoom • USB cameras • HD cameras • WiFi cameras  
Cooled cameras • Tablet cameras • Software • Adapters

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## LIFE SCIENCE | BIOLOGICAL MICROSCOPES

iScope • bScope • Delphi-X Observer • Oxion  
BioBlue.Lab • Oxion Inverso • Delphi-X Inverso

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## LIFE SCIENCE | FLUORESCENCE MICROSCOPES

iScope • bScope • Delphi-X Observer • Oxion • Oxion Inverso  
Delphi-X Inverso • LED light sources (fluorescence) • Fluorescence filter sets

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## LIFE SCIENCE | STEREO MICROSCOPES

NexiusZoom (EVO) • StereoBlue • DZ series  
Z series • P series

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## LIFE SCIENCE | DIGITAL SOLUTIONS

Digital microscope • MacroZoom • WiFi camera • USB cameras  
HD cameras • Cooled cameras • Tablet camera • Software • Adapters

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## INDUSTRY | STEREO MICROSCOPES

NexiusZoom, -EVO and -ESD • NexiusZoom for Gemology  
StereoBlue • DZ series • Z series • BE-50 series • P series

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## INDUSTRY | MATERIALS SCIENCE MICROSCOPES

iScope (materials & polarization) • bScope  
Delphi-X Observer • Oxion • Oxion Inverso

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## INDUSTRY | DIGITAL SOLUTIONS

Digital microscopes • MacroZoom • WiFi camera • USB cameras  
HD cameras • Cooled cameras • Tablet cameras • Software • Adapters

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## ACCESSORIES | FOR MICROSCOPY

Illumination solutions • Preparation accessories • Dissection kits  
Microscope prepared slides • Disposables • Stains

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## OTHER OPTICAL PRODUCTS

Magnifiers & measuring microscopes • Refractometers  
Polarimeters • Spectroscopes • Pathology Scanner

**Euromex Microscopen bv** is a leading manufacturer of microscopes and other optical instruments. Founded in 1966, Euromex has become a world-class supplier of biological, stereo and metallurgical microscopes

The corporate office is based in Arnhem, The Netherlands. A facility with a 2,000 m<sup>2</sup> conditioned logistics warehouse, an opto-mechanical workshop, an R&D department and a high-level quality control department

Around the world, Euromex operates in more than 120 countries through distributors, resellers and agents. A wide variety of customers such as schools and educational institutes, clinical and research laboratories and a broad range of industrial customers are using Euromex microscopes



Visit **Euromex Academy** for  
Video Tutorials and Manuals



View the Product Videos  
on YouTube

choose the right  
microscope



microscope selector

We have made a guide to help you find the right microscope for your specific application. A list of recommended models for most common applications in education, life science and industry can simplify your selection

SEE PAGE 412

At the end of the catalog you'll also find an index page, listing the products featuring in this catalog alphabetically

SEE PAGE 420

# industry

## stereo microscopes



stereo microscopes



product information

Stereo microscopes of Euromex are designed to provide high resolution three-dimensional images

These high-end microscopes are robust, ergonomic and enable long, eye fatigue-free working sessions in both laboratory and industrial environments

ESD safe versions as well as long working distance set-ups are available

**NEXIUSZOOM, -EVO AND -ESD • PAGE 272**

**NEXIUSZOOM FOR GEMOLOGY • PAGE 284**

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# nexiuszoom

the new standard in stereo microscopy



NexiusZoom ESD



NexiusZoom GEM



NexiusZoom (EVO)

The NexiusZoom stereo microscopes enable you to examine your specimen with high-performance precision and generate two- and three-dimensional images allowing observation for your most demanding microscopy applications

These top level zoom microscopes are perfect for analyzing all kinds of material surfaces or for observing larger objects

# STEREO MICROSCOPES

## NexiusZoom, -EVO and -ESD

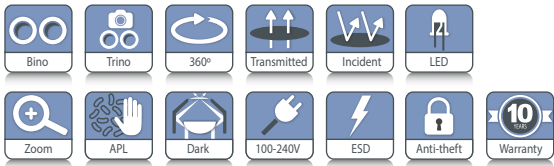
The NexiusZoom, -EVO and NexiusZoom ESD stereo microscopes are supplied with a large choice of objectives and stands, with or without illumination. Ideal for all kinds of applications. Magnifications from 3.3 up to 220 times can be achieved with auxiliary lenses and eyepieces. ESD safe microscopes for the electronics industry complete this series



● NZ.1903-U ESD



product information



<b>NZ.1903-S</b>
339 (h) x 256 (w) x 311 mm (d)   5.1 kg
<b>NZ.1903-P</b>
299 (h) x 256 (w) x 311 mm (d)   5.3 kg
For weight of other products see table

NexiusZoom



## HIGHLIGHTS

- Binocular and trinocular heads with HWF 10x/22 or HWF 10x/23 mm eyepieces
- Zoom 1:6.7 ratio, 6.7x to 45x or 1:8.4, 6.5x to 55x
- Ergonomic stands
- 3 W LED illuminations
- Configurations up to 220x magnification
- ESD safe models available
- 10 Years warranty

## SPECIFICATIONS

### EYEPIECES

The standard NexiusZoom is supplied with a pair of HWF 10x/22 mm eyepieces. The NexiusZoom EVO is supplied with a pair of HWF 10x/23 mm eyepieces

### HEAD

Binocular or trinocular heads with 45° inclined tubes. Both eyepieces with  $\pm 5$  diopter adjustments. Interpupillary distance adjustable between 54 mm and 75 mm. Trinocular head is supplied with a fixed light path beam splitter. The NexiusZoom EVO models are now equipped with click-stops

### OBJECTIVES

The standard NexiusZoom is supplied with a 1:6.7 zoom objective with 0.67x to 4.5x magnifications, a field of view from 33 mm to 4.9 mm. Working distance 110 mm



● NZ.1902-PG

The NexiusZoom EVO is supplied with a 1:8.4 zoom objective with 0.65x to 5.5x magnifications, a field of view from 35.4 mm to 4.2 mm. Working distance 110 mm

### AUXILIARY LENSES

For extra working distances the following auxiliary lenses are available for both the standard NexiusZoom and NexiusZoom EVO: 0.3x, 0.4x, 0.5x, 0.75x, 1.5x and 2.0x. For fields of view and working distances, see table magnifications

*All optics are anti-fungus treated and anti-reflection coated for maximum light throughput*



● NZ.1703-AP

● NZ.1902-A

POLARIZATION

The NexiusZoom and NexiusZoom EVO can be supplied with an optional 360° rotatable circular stage with built-in polarization filter and/or an optional rotatable analyzer filter in mount to be screwed under the objective

STAND

- Ergonomic pillar or rack & pinion stand with 3 W incident and 3 W transmitted LED illuminations (-P and -S stands)
- Ergonomic pillar stand with two 3 W gooseneck type incident LED illuminations on each side and a 3 W transmitted LED illumination (-PG stand)
- Ergonomic pillar stand with rotating mirror and 3 W LED transmitted and incident illuminations (-M stand)
- Ergonomic universal or boom stands, without illumination (-U and B stands)
- Articulated arm stand for table mounting or with heavy desktop stand, both without head holder, without illumination (-A and -AP stands)

All pillar and rack & pinion stands are supplied with two object clamps. Alloy metal cast, hardened coating.

More illumination options see chapter 10 (Accessories)

STAGE

180 x 155mm X-Y mechanical stage with 76 x 55mm translation stage and transparent glass plate for NexiusZoom, fixed on stage of microscope. Only available with new microscopes (due to fixing), so it has to be ordered with the purchase of a microscope (see picture: NZ.9505)



● NZ.9505

ILLUMINATION

3 W transmitted and incident LED illuminators with internal power supply 100-240 V. Both illuminators can be used simultaneously and the light intensities can be adjusted separately. The universal single or double arm stands and the articulated stands can be equipped with the ring illuminators LE.1974 and LE.1973 with respectively 72 or 144 power LEDs controlled in segments or with the LE.5212 illumination station, ideal for creating or lifting shades

ESD SAFE MICROSCOPES

For inspection and assembly applications. Electrostatic discharge (ESD) is the unwanted sudden flow of electricity between two electrically charged objects. ESD can cause a range of harmful effects as well as permanent damage to solid state electronic components

Euromex therefore introduces electrostatic protected microscopes in the NexiusZoom range. The body and stand of the microscope are coated with a special static dissipative paint, eliminating harmful electrostatic discharges, making the microscopes suitable for all static-sensitive environments

ANTI-THEFT SLOT

At the back of the microscope a Kensington Security slot is placed, which can be used to secure the instrument from theft (only on th P-, PG-, and S-models)

PACKAGE CONTENT

Supplied with power cord, dust cover and user manual. All packed in a polystyrene box

Electrostatic discharge (ESD)

-

To select an ESD safe microscope model, please find them in the table on the next pages marked with suffix ESD



NEXIUSZOOM 0.67-4.5 (WF 10X/22MM)

MODELS	Bino	Trino	Pillar stand	Rack & pinion stand	Universal stand	Boom stand on heavy base plate	Articulated arm stand on table clamp	Articulated arm stand on heavy base plate	Gooseneck dual LED	Mirror LED	Weight (kg)
NZ.1902-P	•		•								5.0
NZ.1902-PG	•		•						•		5.1
NZ.1902-S	•			•							4.9
NZ.1902-U	•				•						15.6
NZ.1902-B	•					•					22.1
NZ.1902-A	•						•				8.6
NZ.1902-AP	•							•			20.7
NZ.1903-P		•	•								5.2
NZ.1903-PG		•	•						•		5.3
NZ.1903-M		•	•							•	5.1
NZ.1903-S		•		•							5.1
NZ.1903-U		•			•						15.7
NZ.1903-B		•				•					22.2
NZ.1903-A		•					•				8.7
NZ.1903-AP		•						•			20.8

NEXIUSZOOM EVO 0.65-5.5 (WF 10X/23MM)

MODELS	Bino	Trino	Pillar stand	Rack & pinion stand	Universal stand	Boom stand on heavy base plate	Articulated arm stand on table clamp	Articulated arm stand on heavy base plate	Gooseneck dual LED	Mirror LED	Weight (kg)
NZ.1702-P	•		•								5.0
NZ.1702-PG	•		•						•		5.1
NZ.1702-M	•		•							•	5.1
NZ.1702-S	•			•							4.9
NZ.1702-U	•				•						15.6
NZ.1702-B	•					•					22.1
NZ.1702-A	•						•				8.6
NZ.1702-AP	•							•			20.7
NZ.1703-P		•	•								5.2
NZ.1703-PG		•	•						•		5.3
NZ.1703-M		•	•							•	5.1
NZ.1703-S		•		•							5.1
NZ.1703-U		•			•						15.7
NZ.1703-B		•				•					22.2
NZ.1703-A		•					•				8.7
NZ.1703-AP		•						•			20.8



ESD SAFE

MODELS	Binocular	Trinocular	Pillar stand (-P)	Rack & pinion stand (-S)	Universal stand (-U)	Boom stand (-B)	Weight (kg)
NZ.1902-P-ESD	•		•				5.0
NZ.1902-S-ESD	•			•			4.9
NZ.1902-U-ESD	•				•		15.6
NZ.1902-B-ESD	•					•	22.1
NZ.1903-P-ESD		•	•				5.3
NZ.1903-S-ESD		•		•			5.1
NZ.1903-U-ESD		•			•		15.7
NZ.1903-B-ESD		•				•	22.2

MAGNIFICATIONS

**NexiusZoom and NexiusZoom ESD:** working distance and field of view with standard high wide field (HWF) 10x / 22 eyepieces

Zoom indication	Auxiliary lens 0.3x WD 287 mm		Auxiliary lens 0.4x WD 220 mm		Auxiliary lens 0.5x WD 183 mm		Auxiliary lens 0.75x WD 105 mm		Without auxiliary lens WD 110 mm		Auxiliary lens 1.5x WD 53 mm		Auxiliary lens 2x WD 34 mm	
	Total mag.	F.o.v. in mm	Total mag.	F.o.v. in mm	Total mag.	F.o.v. in mm	Total mag.	F.o.v. in mm	Total mag.	F.o.v. in mm	Total mag.	F.o.v. in mm	Total mag.	F.o.v. in mm
0.67	2.0	109.5	2.7	82.1	3.35	65.7	5.0	43.8	6.7	32.8	10.1	21.9	13.4	16.4
0.7	2.1	104.8	2.8	78.6	3.5	62.9	5.3	41.9	7.0	31.4	10.5	21.0	14.0	15.7
0.8	2.4	91.7	3.2	68.8	4.0	55.0	6.0	36.7	8.0	27.5	12.0	18.3	16.0	13.8
1.0	3.0	73.3	4.0	55.0	5.0	44.0	7.5	29.3	10.0	22.0	15.0	14.7	20.0	11.0
1.5	4.5	48.9	6.0	36.7	7.5	29.3	11.3	19.6	15.0	14.7	22.5	9.8	30.0	7.3
2.0	6.0	36.7	8.0	27.5	10.0	22.0	15.0	14.7	20.0	11.0	30.0	7.3	40.0	5.5
3.0	9.0	24.4	12.0	18.3	15.0	14.7	22.5	9.8	30.0	7.3	45.0	4.9	60.0	3.7
4.0	12.0	18.3	16.0	13.8	20.0	11.0	30.0	7.3	40.0	5.5	60.0	3.7	80.0	2.8
4.5	13.5	16.3	18.0	12.2	22.5	9.8	33.8	6.5	45.0	4.9	67.5	3.3	90.0	2.4

**NexiusZoom EVO:** working distance and field of view with standard high wide field (HWF) 10x / 23 eyepieces

Zoom indication	Auxiliary lens 0.3x WD 287 mm		Auxiliary lens 0.4x WD 220 mm		Auxiliary lens 0.5x WD 183 mm		Auxiliary lens 0.75x WD 105 mm		Without auxiliary lens WD 110 mm		Auxiliary lens 1.5x WD 53 mm		Auxiliary lens 2x WD 34 mm	
	Total mag.	F.o.v. in mm	Total mag.	F.o.v. in mm	Total mag.	F.o.v. in mm	Total mag.	F.o.v. in mm	Total mag.	F.o.v. in mm	Total mag.	F.o.v. in mm	Total mag.	F.o.v. in mm
0.65	1.95	117.9	2.6	88.5	3.25	70.8	4.9	47.2	6.5	35.4	9.8	23.6	13.0	17.7
1.0	3.0	76.7	4.0	57.5	5.0	46.0	7.5	30.7	10.0	23.0	15.0	15.3	20.0	11.5
1.5	4.5	51.1	6.0	38.3	7.5	30.7	11.3	20.4	15.0	15.3	22.5	10.2	30.0	7.7
2.0	6.0	38.3	8.0	28.8	10.0	23.0	15.0	15.3	20.0	11.5	30.0	7.7	40.0	5.8
2.5	7.5	30.7	10.0	23.0	12.5	18.4	18.8	12.3	25.0	9.2	37.5	6.1	50.0	4.6
3.0	9.0	25.6	12.0	19.2	15.0	15.3	22.5	10.2	30.0	7.7	45.0	5.1	60.0	3.8
3.5	10.5	21.9	14.0	16.4	17.5	13.1	26.3	8.8	35.0	6.6	52.5	4.4	70.0	3.3
4.0	12.0	19.2	16.0	14.4	20.0	11.5	30.0	7.7	40.0	5.8	60.0	3.8	80.0	2.9
4.5	13.5	17.0	18.0	12.8	22.5	10.2	33.8	6.8	45.0	5.1	67.5	3.4	90.0	2.6
5.0	15.0	15.3	20.0	11.5	25.0	9.2	37.5	6.1	50.0	4.6	75.0	3.1	100.0	2.3
5.5	16.5	13.9	22.0	10.5	27.5	8.4	41.3	5.6	55.0	4.2	82.5	2.8	110.0	2.1

WD = working distance, FoV = Field of view, Total mag. = total magnification



ACCESSORIES AND SPARE PARTS

HEADS & EYEPIECES

- NZ.5302** NexiusZoom binocular head with eyepieces
- NZ.5303** NexiusZoom trinocular head with eyepieces
- NZ.6010** Pair of HWF 10x / 22 mm eyepieces
- NZ.6010-C** HWF 10x/22 mm eyepiece only with crosshairs
- NZ.6010-CM** HWF 10x/22 mm eyepiece only with 10/100 micrometer and crosshairs
- NZ.6020-CM** HWF 20x/12 mm eyepieces with 10/100 micrometer and crosshairs
- NZ.6015** Pair of HWF 15x / 16 mm eyepieces
- NZ.6020** Pair of HWF 20x / 12 mm eyepieces
- NZ.6210** Pair of HWF 10x/23 mm eyepieces for NZ EVO
- NZ.6210-C** HWF 10x/23 mm eyepiece only with crosshairs for NZ EVO
- NZ.6210-CM** HWF 10x/23 mm eyepiece only with 10/100 micrometer and crosshairs for NZ EVO
- NZ.6099** Pair of eyecups



● NZ.5302 / NZ.5303

AUXILIARY LENSES

- NZ.8903** Additional 0.3x lens for NZ. WD 287 mm. Only suitable for A, AP, U, B and BC stands
- NZ.8904** Additional 0.4x lens for NZ. WD 220 mm. Only suitable for A, AP, U, B and BC stands
- NZ.8905** Additional 0.5x lens for NZ. WD 183 mm. Not suitable for S stands

- NZ.8907** Additional 0.75x lens for NZ. WD 105 mm
- NZ.8915** Additional 1.5x lens for NZ. WD 53 mm
- NZ.8920** Additional 2.0 lens for NZ. WD 34 mm. Not suitable for S stands

WD = Working distance

STANDS

- NZ.9000** Ergo pillar stand without illumination
- NZ.9005** Ergo pillar stand with adjustable transmitted 3 W LED illumination
- NZ.9010** Ergo rack & pinion stand with incident and transmitted 3 W LED illuminators
- NZ.9015** Ergo pillar stand with incident and transmitted 3 W LED illuminators
- NZ.9018** Ergo pillar stand with two 3 W gooseneck type incident LED illuminations on each side and a 3 W transmitted LED illumination
- NZ.9020** Universal one-arm stand without NZ head holder
- NZ.9025** Black universal stand with table clamp without NZ head holder
- NZ.9027** Black universal stand with heavy baseplate without NZ head holder
- NZ.9030** Universal double-arm boom stand without NZ head holder
- NZ.9032** Universal two-arm stand with table clamp without NZ head holder
- NZ.9042** Stand with rotating mirror and indirect transmitted LED illumination
- NZ.9090** NexiusZoom head holder (for NZ.9020, NZ. 9030 and NZ. 9032)

HEAD HOLDERS

- NZ.9081** NZ head holder 76 mm for NZ and black universal stand NZ.9025/NZ.9027
- NZ.9090** NZ head holder for NZ.9020/9030/9032 pillar stands
- NZ.9095** NZ head holder with fine and coarse adjustment for NZ.9020/9030/9032 pillar stands. Only available with new microscopes

NZ = NexiusZoom

ILLUMINATION

- LE.5207** Multi-functional dual 3 W LED adjustable light source. Equipped with two flexible gooseneck arms with LED illuminator
- LE.5212** Euromex illumination station with two independently controlled goosenecks, a ring light and a transmitted stage illuminator
- LE.5260** Interchangeable high power (standard) white 6,500K light guide for NZ.9018/LE.5207/LE.5212, 1 pc
- LE.5261** Interchangeable high power 365 nm flexible arm for NZ.9018/LE.5207/LE.5212, 1 pc
- LE.5262** Interchangeable high power 395 nm flexible arm for NZ.9018/LE.5207/LE.5212, 1 pc
- LE.5263** Interchangeable high power 420 nm flexible are for NZ.9018/LE.5207/LE.5212, 1 pc
- LE.1974** Ring illuminator with 72 LEDs with adjustable light intensity. External power supply 110-240 Vac / 12 Vdc (50/60 Hz). With segment controller. Brightness of 20,000 Lux at 100 mm distance and color temperature of 6,500 K. Mounting for stereo head with diameter from 25 to 61 mm
- LE.1973** Ring illuminator with 144 LEDs with adjustable light intensity. External power supply 100-240 Vac / 12 Vdc (50/60 Hz). With segment controller. Brightness of 23,000 Lux at 100 mm distance and color temperature of 6,500 K. Mounting for stereo head with diameter from 25 to 61 mm
- LE.5210** Euromex cold light illuminator EK-1, 100 W. 110 V and 230 V models available
- LE.5211** Euromex cold light illuminator, 150 W halogen. 110 V and 230 V models available
- LE.5211-LED** Euromex cold light illuminator LED, 30 W high power LED
- LE.5214** Dual arm light conductor, gooseneck self-sustaining, 50 cm long, 4 mm diameter core
- LE.5215** Triple arm light conductor, gooseneck self-sustaining, 50 cm long, 4 mm diameter core
- LE.5222** Focusing head suitable for focusing lens LE.5214 and LE.5215. Needs LE.5224

- LE.5224** Aspherical focusing lens for mounting in LE.5222  
*More illumination options, see chapter 11*

POLARIZATION ATTACHMENTS

- NZ.9520** Polarization kit for NexiusZoom: 360° rotatable circular stage with built-in polarization filter (NZ.9524) + analyzer in mount to be screwed under the head (NZ.9525). Not suitable with auxiliary lenses
- NZ.9524** 360° rotatable circular stage with built-in polarization filter for NexiusZoom
- NZ.9525** 360° rotatable analyzer in mount to be screwed under the head of NexiusZoom. Not suitable for use in combination with auxiliary lenses

DARKFIELD ATTACHMENT

- NZ.9040** Darkfield attachment (for -S and -P stands)

STAGES

- NZ.9505** Mechanical 180 x 155 mm X-Y stage with 75 x 55 mm translation and transparent glass plate
- AE.5168-NZ** Heating stage with PID controller up to 50°C. Only with the purchase of a new microscope

CAMERA ACCESSORIES

- NZ.9850** C-mount adapter with 0.5x lens for 1/2 inch cameras
- AE.5130** Universal SLR adapter with built-in 2x lens for standard 23.2 mm tube. Needs T2 adapter
- AE.5025** T2 adapter for Nikon D SLR digital camera
- AE.5040** T2 adapter for Canon EOS SLR digital camera  
*Other T2 adapters on request*

MISCELLANEOUS

- NZ.8950** Protection glass for NexiusZoom head
- NZ.9045** Fall protection ring for NexiusZoom pillars. Note: the one- and double arm stands are as a standard supplied with this ring
- NZ.9570** Pair of object clamps for stage



- NZ.9572** Adjustable GEM object clamp for -P, -PL and -S stands
- NZ.9950** Standard opaque stage plate
- NZ.9956** Black/white stage plate, Ø 95 mm
- NZ.9958** Standard glass object plate, opaque, Ø 95 mm
- NZ.9983-R** 3 W LED replacement unit for NZ, incident illumination
- NZ.9983** 3 W LED replacement unit for NZ, transmitted illumination
- AE.1112** Object micrometer 50 mm (divided in 500 parts on glass slide 76 x 26 mm)

## DISPOSABLES

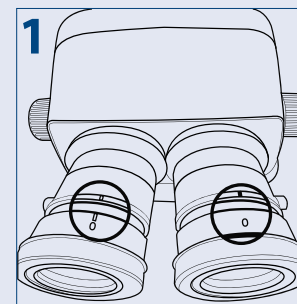
- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5274** Isopropyl alcohol 99%, 200 ml
- PB.5275** Cleaning kit: lens fluid, lint free lens tissue/paper, brush, air blower, cotton swabs
- PB.5276** Microscope maintenance and servicing kit, 16pcs: cleaning brush, 6 pcs screwdriver set, air blower, 3 pcs Allen key 1.5, 2, 2.5 mm, lens cleaning fluid 20 ml, cleaning cloth 140 x 140 mm, 100 pcs lens tissue sheets, tube of maintenance grease, 10 ml bottle of oil, packed in a toolbox



● The LE.5212 in two different configurations

## how to set up a stereo microscope

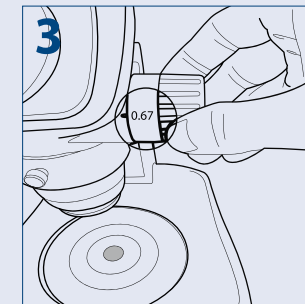
Setting up your stereo microscope properly is essential to getting parfocal images during the entire zoom range. It also prevents head aches, stressful eyes and fatigue. Below you will find a setup guide that will help get the best out of your microscope



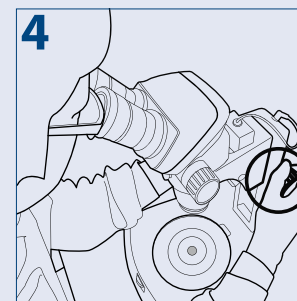
Turn the diopter adjustment rings of both eyepieces to position "0"



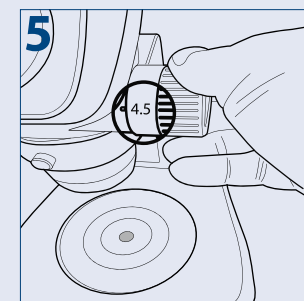
Put a specimen on the stage plate



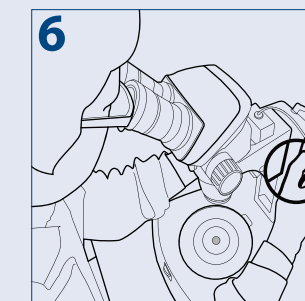
Turn the zoom adjustment knob to the lowest magnification



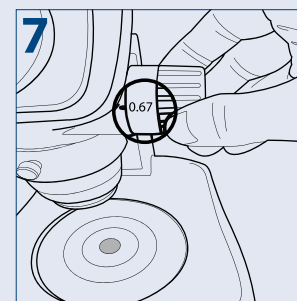
Rotate the focus adjustment knob to bring the specimen into focus



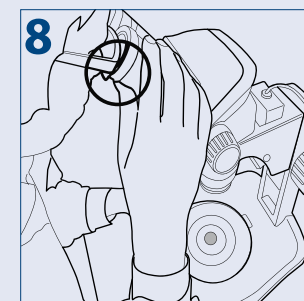
Turn the zoom adjustment knob to the highest magnification



Rotate the focus adjustment knob to bring the specimen into focus



Turn the zoom adjustment knob to the lowest magnification



Rotate the diopter adjustment rings of the left and right eyepiece to bring the specimen into focus

## PLEASE NOTE

Put the zoom adjustment knob at the highest magnification again and check the image focusing. The diopter adjustment is complete when the image is accurately focused during zooming

If not, please repeat steps 3 to 8

# MICROSCOPES FOR GEMOLOGY

NexiusZoom

## NexiusZoom for gemology

The specialized backwards tilting stand of the NexiusZoom and NexiusZoom EVO stereo microscopes for gemology applications offers 30 W halogen transmitted illumination towards the specimen at oblique angles. This enables the examination of your gems in perfect darkfield conditions. The stand is also available with 1 W LED or a 7 W fluorescent incident illumination for brightfield contrast



● NZ.1902-GEML

**NZ.1903-GEML**  
510 (h) x 260 (w) x 310 mm (d) | 8.4 kg  
**NZ.1903-GEMF**  
510 (h) x 260 (w) x 310 mm (d) | 8.4 kg



● NZ.1902 with backwards tilting stand

## SPECIFICATIONS

### EYEPIECES

The standard NexiusZoom is supplied with a pair of HWF 10x/22 mm eyepieces

The NexiusZoom EVO is supplied with a pair of HWF 10x/23 mm eyepieces

### HEAD

Binocular or trinocular heads with 45° inclined tubes. Both eyepieces with  $\pm 5$  diopter adjustments. Interpupillary distance adjustable between 54 mm and 75 mm

### OBJECTIVES

The standard NexiusZoom is supplied with a 1:6.7 zoom objective with 0.67x to 4.5x magnifications, a field of view from 33 mm to 4.9 mm. Working distance 110 mm

The NexiusZoom EVO is supplied with a 1:8.4 zoom objective with 0.65x to 5.5x magnifications, a field of view from 35.4 mm to 4.2 mm. Working distance approx. 110 mm

Auxiliary lenses 0.75x, 1.5x and 2.0x are available

*All optics are anti-fungus treated and anti-reflection coated for maximum light throughput*

## HIGHLIGHTS

- Binocular and trinocular heads
- Standard HWF 10x eyepieces with 22 mm or 23 mm field of view
- Zoom objectives with 0.7 to 4.5x or 0.65 to 5.5x magnification
- Ergonomic backwards tilting stand
- 30 Watt halogen transmitted illumination
- 1 W LED or 7 W fluorescent incident illumination
- Configurations up to 220x magnification



### STAND

Ergonomic stand with backwards 0 to 45° tilting arm with 76 mm head holder for darkfield and brightfield. Built-in 100-240 V power supply

### STAGE

Flat darkfield stage with clamp object holder - which can be placed either on the right or on the left side - iris diaphragm and incident illumination

### ILLUMINATION

30 Watt halogen transmitted illumination, adjustable intensity. 1 Watt LED, adjustable intensity, or 7 Watt fluorescent incident illumination, intensity not adjustable. Both illuminators can be used simultaneously

### PACKAGE CONTENT

Supplied with power cord, dust cover, a spare fuse and user manual. All packed in a polystyrene box

MODELS	Binocular	Tinocular	Objective 0.67-4.5	Objective 0.65-5.5	1 W LED incident illumination	7 W fluorescent incident illumination	30 W halogen transmitted illumination	Working distance (mm)
NZ.1902-GEML	•		•		•		•	110
NZ.1902-GEMF	•		•			•	•	110
NZ.1702-GEML	•			•	•		•	110
NZ.1702-GEMF	•			•		•	•	110
NZ.1903-GEML		•	•		•		•	110
NZ.1903-GEMF		•	•			•	•	110
NZ.1703-GEML		•		•	•		•	110
NZ.1703-GEMF		•		•		•	•	110

MAGNIFICATIONS

NexiusZoom WD and field of view with standard HWF 10x / 22 high wide field eyepieces

Zoom indication	Without auxiliary lens WD 110 mm		Auxiliary lens 0.75x WD 105 mm		Auxiliary lens 1.5x WD 53 mm		Auxiliary lens 2x WD 34 mm	
	Total magnification	Field of view in mm	Total magnification	Field of view in mm	Total magnification	Field of view in mm	Total magnification	Field of view in mm
0.67	6.7	32.8	5.0	43.8	10.1	21.9	13.4	16.4
0.7	7.0	31.4	5.3	41.9	10.5	21.0	14.0	15.7
0.8	8.0	27.5	6.0	36.7	12.0	18.3	16.0	13.8
1.0	10.0	22.0	7.5	29.3	15.0	14.7	20.0	11.0
1.5	15.0	14.7	11.3	19.6	22.5	9.8	30.0	7.3
2.0	20.0	11.0	15.0	14.7	30.0	7.3	40.0	5.5
3.0	30.0	7.3	22.5	9.8	45.0	4.9	60.0	3.7
4.0	40.0	5.5	30.0	7.3	60.0	3.7	80.0	2.8
4.5	45.0	4.9	33.8	6.5	67.5	3.3	90.0	2.4

NexiusZoom EVO WD and field of view with standard HWF 10x/23 high wide field eyepieces

Zoom indication	Without auxiliary lens WD 110 mm		Auxiliary lens 0.75x WD 105 mm		Auxiliary lens 1.5x WD 53 mm		Auxiliary lens 2x WD 34 mm	
	Total magnification	Field of view in mm	Total magnification	Field of view in mm	Total magnification	Field of view in mm	Total magnification	Field of view in mm
0.65	6.5	35.4	4.9	47.2	9.8	23.6	13.0	17.7
0.7	7.0	32.9	5.3	43.4	10.5	21.9	14.0	16.4
0.8	8.0	28.8	6.0	38.3	12.0	19.2	16.0	14.4
1.0	10.0	23.0	7.5	30.7	15.0	15.3	20.0	11.5
1.5	15.0	15.3	11.3	20.4	22.5	10.2	30.0	7.7
2.0	20.0	11.5	15.0	15.3	30.0	7.7	40.0	5.8
3.0	30.0	7.7	22.5	10.2	45.0	5.1	60.0	3.8
4.0	40.0	5.8	30.0	7.7	60.0	3.8	80.0	2.9
4.5	45.0	5.1	33.8	6.8	67.5	3.4	90.0	2.6
5.5	55.0	4.2	41.3	5.6	82.5	2.8	110	2.1

ACCESSORIES AND SPARE PARTS

HEADS & EYEPIECES

- NZ.5302** NexiusZoom binocular head with eyepieces
- NZ.5303** NexiusZoom trinocular head with eyepieces
- NZ.5312** NexiusZoom EVO binocular head with eyepieces
- NZ.5313** NexiusZoom EVO trinocular head with eyepieces
- NZ.6010** Pair of HWF 10x / 22 mm eyepieces
- NZ.6210** Pair of HWF 10x / 23 mm eyepieces.  
Only suitable for NexiusZoom EVO
- NZ.6015** Pair of HWF 15x / 16 mm eyepieces
- NZ.6020** Pair of HWF 20x / 12 mm eyepieces
- NZ.6099** Pair of eyecups

AUXILIARY LENSES

- NZ.8907** Auxiliary lens 0.75x. WD 105 mm
- NZ.8915** Auxiliary lens 1.5x. WD 53 mm
- NZ.8920** Auxiliary lens 2.0x. WD 34 mm  
Not suitable for NZ.1902-S and NZ.1903-S

WD = working distance

CAMERA ACCESSORIES

- NZ.9850** C-mount adapter with 0.5x lens for 1/2" cameras  
Suitable for trinocular models
- AE.5130** Universal SLR camera adapter with 2x projection  
lens for 23.2 mm tubes. Needs T2 adapter
- AE.5020** T2 adapter for Nikon D digital SLR cameras
- AE.5040** T2 adapter for Canon EOS digital SLR cameras  
Other T2 adapters on request

MISCELLANEOUS

- NZ.8950** Protection glass for NexiusZoom head  
Not suitable with auxiliary lenses
- NZ.9525** 360° rotatable analyzer in mount to be screwed  
under head of NexiusZoom
- NZ.9527** Polarization filter for GEM stands of NexiusZoom
- NZ.9572-G** Adjustable GEM object clamp for NexiusZoom  
with tilting stand for gemology
- AE.1112** Object micrometer 50 mm (divided in 500 parts  
on glass slide 76 x 26 mm)
- SL.3678** Halogen spare bulb 6V, 30 W for NexiusZoom  
gemology



● The clamp holder allows precise positioning of objects



● The variable iris diaphragm is used for maximizing contrast



● Brightfield/darkfield switch for transmitted illumination for maximum flexibility



● NZ.5302 / NZ.5303





STEREO MICROSCOPES

StereoBlue

Stereo microscopes of the StereoBlue series are especially developed for industrial applications and are greatly appreciated by geologists, mechanical and electronic engineers and other professionals such as jewelers and dental technicians



SB.1903



product information

Bino

Trino

360°

Transmitted

Incident

LED

Zoom

APL

Battery

100-240V

Anti-theft

5 Years Warranty

<b>SB.1903</b>
330 (h) x 220 (w) x 266 mm (d)   4.4 kg
<b>SB.1903-P</b>
299 (h) x 220 (w) x 266 mm (d)   5.1 kg
<b>SB.1302/SB.1402</b>
330 (h) x 220 (w) x 266 mm (d)   4.0 kg
<b>SB.1302-P/SB.1402-P</b>
299 (h) x 220 (w) x 266 mm (d)   4.7 kg

HIGHLIGHTS

- Binocular and trinocular models
- WF 10x/21 mm eyepieces
- Dual 1x/3x or 2x/4x magnification objectives
- Zoom stereo 0.7x to 4.5x objective/  
0.5x to 5.5 objective
- Ergonomic stands
- Available in ergonomic rack & pinion, pillar, universal and boom stands
- 3 W LED illuminators
- Also available with batteries
- Built-in ring light
- Ergonomic carrying grip
- 5 Years warranty



Boom stand  
(SB.1903-B)

Universal stand  
(SB.1902-U)

SPECIFICATIONS

EYEPIECES

Pair of WF 10x/21 mm secured eyepieces supplied with eyecups

HEAD

- Binocular or trinocular 45° inclined tubes
- Diopter adjustment on both eyepieces, except the models SB.1302-P/1402-P and SB.1302-S/1402-S, which have diopter adjustment on one eyepiece
- Interpupillary distance adjustable between 55 mm and 75 mm
- Trinocular head is supplied with a fixed light path beam splitter

All optics are anti-fungus treated and anti-reflection coated for maximum light throughput

DUAL MAGNIFICATION OBJECTIVES

- Nosepiece with dual 1x/3x or 2x/4x revolving objectives
- Magnifications 10x/30x or 20x/40x
- Field of view 21 mm/6.9 mm or 10.5 mm/5.25 mm
- Working distance 100 mm

ZOOM OBJECTIVE

- Zoom stereo 0.7x to 4.5x parfocal objective
- Magnification from 7x to 45x
- Field of view 29.9 mm to 4.6 mm
- Working distance 100 mm



Built-in ring light  
with 30 intensity  
adjustable LED's

EVO ZOOM OBJECTIVE

- Zoom stereo 0.5x to 5.5x parfocal objective
- Magnification from 5x to 55x
- Field of view 38 mm to 3.9 mm
- Working distance 100 mm

STAND

- The rack & pinion and pillar stands of the StereoBlue are equipped with ergonomic flat bases, complete with two object clamps and Ø 60 mm transparent and black/white stage plates  
The coarse adjustment is equipped with tension control
- The ergonomic universal (single arm stand, U) and boom stand (dual arm, B) are ideal for viewing large samples or working under the microscope. They come without illumination

- The U- and B-stand can be equipped with ring illuminators LE.1974 and LE.1973 with respectively 72 or 144 power LEDs controlled in segments, ideal for creating or lifting shades
- The stands are alloy metal casted with hardened coating

More illumination options see chapter 11 (Accessories)

ILLUMINATION

3 W transmitted and incident LED illuminators which can be used simultaneously. Model SB.3903 and SB.3903-P are equipped with 3 W transmitted and incident LED illuminators and a built-in 30 LED ring light incident illuminator. The light intensities can be adjusted separately. Also available with batteries (add "B" after article number, e.g. SB.1302-PB)

STEREOBLUE 1X/3X AND 2X/4X OBJECTIVES

MODELS	Binocular	1x/3x objective	2x/4x objective	Rack & pinion stand 3 W LED	Pillar stand 3 W LED	Weight (kg)
SB.1302	•	•		•		3.3
SB.1302-P	•	•			•	4.2
SB.1402	•		•	•		3.3
SB.1402-P	•		•		•	4.2

STEREOBLUE 0.7X UP TO 4.5X ZOOM/0.5X UP TO 5.5X ZOOM EVO

MODELS	Bino	Trino	0.7 - 4.5x zoom	0.5 - 5.5x zoom EVO	Rack & pinion stand 3 W LED	Pillar stand 3 W LED	Universal stand	Boom stand on heavy base plate	30 LED right light	Weight (kg)
SB.1902	•		•		•					3.6
SB.1902-P	•		•			•				4.4
SB.1902-U	•		•				•			15.4
SB.1902-B	•		•					•		21.9
SB.1903		•	•		•					3.7
SB.1903-P		•	•			•				4.5
SB.1903-U		•	•				•			15.5
SB.1903-B		•	•					•		22.0
SB.3903		•	•		•				•	3.7
SB.3903-P		•	•			•			•	4.5
SB.1702	•			•	•					3.6
SB.1702-P	•			•		•				4.4
SB.1702-U	•			•			•			15.4
SB.1702-B	•			•				•		21.9
SB.1703		•		•	•					3.7
SB.1703-P		•		•		•				4.5
SB.1703-U		•		•			•			15.5
SB.1703-B		•		•				•		22.0

ANTI-THEFT SLOT

At the back of the microscope a Kensington Security slot is placed, which can be used to secure the instrument from theft (not on the U- and B-models)

PACKAGE CONTENT

Models with illumination are supplied with power cord, dust cover, eyecups, a spare fuse, Ø 60 mm transparent, black/white stage plates and user manual. All packed in a polystyrene box



ACCESSORIES AND SPARE PARTS

EYEPIECES

- SB.6210** Pair of HWF 10x/21 mm eyepieces
- SB.6210-C** WF 10X/21 mm eyepiece with crosshairs
- SB.6210-M** WF 10X/21 mm eyepiece with micrometer scale
- SB.6015** Pair of HWF 15x/15 mm eyepieces
- SB.6015-C** WF 15X/15 mm eyepiece with crosshairs
- SB.6015-M** WF 15X/15 mm eyepiece with micrometer scale
- SB.6020** Pair of HWF 20x/10 mm eyepieces
- SB.6020-C** WF 20/10 mm eyepiece with crosshairs
- SB.6020-M** WF 20/10 mm eyepiece with micrometer scale
- SB.6099** Pair of eyecups

- SB.9040** Darkfield attachment, only for -S and -P models
- SB.9045** Fall protection ring for StereoBlue pillars.  
Note: the one- and double arm stands are as a standard supplied with this ring
- SB.9570** Pair of object clamps for stage
- SB.9952** Stage plate transparent, Ø 60 mm
- SB.9956** Stage plate black/white, Ø 60 mm
- SB.9983-R** 3 W LED replacement unit, incident illumination
- SB.9983** 3 W LED replacement unit, transmitted illumination
- AE.1112** Micrometer 76 x 26 mm slide, 50 mm/50 divisions

AUXILIARY LENSES

- SB.8903** Auxiliary 0.3x lens for zoom models, WD 287 mm. Only suitable for boom and articulated stands
- SB.8905** Auxiliary 0.5x lens for zoom models, WD 179 mm. Not suitable for SB.1X02, SB.1X03, SB.3903 and SB.3903-P
- SB.8907** Auxiliary 0.75x lens for zoom models, WD 105 mm
- SB.8915** Auxiliary 1.5x lens for zoom models, WD 53 mm. Not suitable for SB.39xx

WD = working distance

CAMERA ACCESSORIES

- SB.9850** C-mount adapter with 0.5x lens for 1/2" cameras. Only for trinocular models
- AE.5130** Universal SLR camera adapter with 2x projection lens for 23.2 mm tubes. Needs T2 adapter
- AE.5025** T2 adapter for Nikon D digital SLR cameras
- AE.5040** T2 adapter for Canon EOS digital SLR cameras  
Other T2 adapters on request

DISPOSABLES

- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5274** Isopropyl alcohol 99% (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue, brush, air blower, cotton swabs

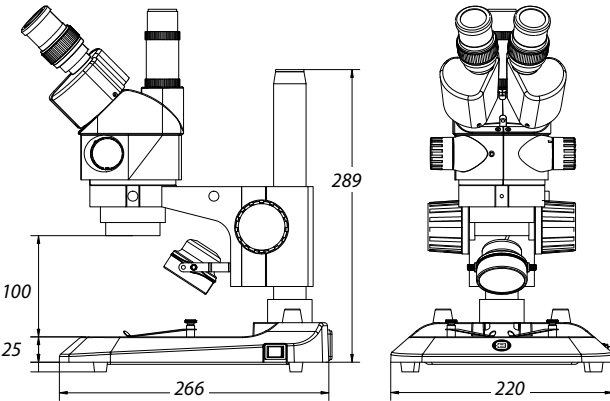
POLARIZATION ATTACHMENT

- SB.9520** Polarization kit: 360° rotatable circular stage with built-in polarization filter (SB.9524) + analyzer in mount to be screwed under the head (SB.9525)
- SB.9524** 360° rotatable circular stage with built-in polarization filter
- SB.9525** 360° rotatable analyzer in mount to be screwed under the head

MISCELLANEOUS

- SB.8950** Protection glass window
- SB.9020** Universal single-arm stand without head holder and without illumination
- SB.9030** Universal double-arm stand without head holder and without illumination
- SB.9090** Head holder for SB.9020

DIMENSIONS





## STEREO MICROSCOPES

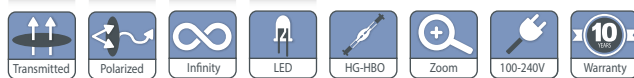
### DZ series

The modular stereo microscopes of the DZ series can be built around no less than three different central zoom units with respectively zoom ratios from 0.8 to 5 times, 0.8 to 6.4 times or 0.8 to 8 times. Thanks to the modular design of this series, you can adapt the instrument to your individual needs. To build your own microscope just select a central zoom unit, a pair of eyepieces, one of the available objectives, stands and other accessories

● *customized configuration model*  
DZ.0800, 2x DZ.3010,  
DZ.2025, DZ.4010  
and DZ.5040



product information



**DZ.1100 / DZ.1600 / DZ.1800**

305 (h) x 330 (w) x 285 mm (d) | 6.0 kg

**DZ.1105 / DZ.1605 / DZ.1805**

305 (h) x 330 (w) x 285 mm (d) | 5.2 kg

For weight of other products see table 'Models'

## HIGHLIGHTS

- Binocular and trinocular models
- Six standard configurations or customized configuration
- Ergonomic tilting head from 0 to 35° tilting or fixed 20° inclined head, EWF 10x/22mm eyepieces,
- Three central zoom units from 4 to 320x
- Fields of view from 55 to 1.4 mm
- Working distances from 126 to 33 mm
- Ergonomic rack and pinion stands, universal stand or articulated arm stand
- Transmitted and incident LED illumination
- 100 W epi-fluorescence mercury vapor illuminator
- 10 Years warranty

## SPECIFICATIONS

### EYEPIECES

Pair of EWF 10x/22 mm eyepieces

### HEAD

- Ergonomic binocular 0-35° tilting head
- Binocular 20° tilted head
- Diopter  $\pm 5$  adjustment on both eyepieces
- Interpupillary distance from 55 to 75 mm
- Photo ports for one or two cameras
- Click-stops

### CENTRAL ZOOM UNIT

Three central zoom units are available:

- 1:6.3 for total magnifications from 8 to 50x
- 1:8 for total magnifications from 8 to 64x
- 1:10 for total magnifications from 8 to 80x

### COMMON MAIN OBJECTIVE

Standard configurations are supplied with a plan apochromatic common main objective (CMO) 1x, working distance 78 mm. Other plan apochromatic common main objectives 0.5x (working distance 126 mm) and 2x (WD 33 mm) are also available



● Customized fluorescence model

*All optics have an anti-reflection coating for maximum light throughput and are anti-fungus treated*

### STAND

Large ergonomic stand with  $\varnothing$  100 mm object plate and two object clamps. Coarse adjustment with adjustable friction. A universal stand and an articulated arm stand without illumination are also available for configurations built to customer's specifications

### ILLUMINATION

The transmitted and incident 3 W LED illuminations are supplied with a built-in 100-240 V power supply. Both illuminators can be used simultaneously and the light intensities can be adjusted separately

### PACKAGE CONTENT

Supplied with power cord, dust cover, a spare fuse and user manual. All packed in a polystyrene box

## STANDARD CONFIGURATIONS

All six standard configurations are equipped with EWF 10x/22mm eyepieces, plan achromatic common main objective 1x and rack & pinion stand with incident and transmitted LED illumination

### DZ SERIES STANDARD

MODELS	Binocular 20° head	Binocular Ergo 0 to 35° tilting	Magnifications from 8 to 50x	Magnifications from 8 to 64x	Magnifications from 8 to 80x
DZ.1100		•			•
DZ.1105	•				•
DZ.1800		•		•	
DZ.1805	•			•	
DZ.1600		•	•		
DZ.1605	•		•		

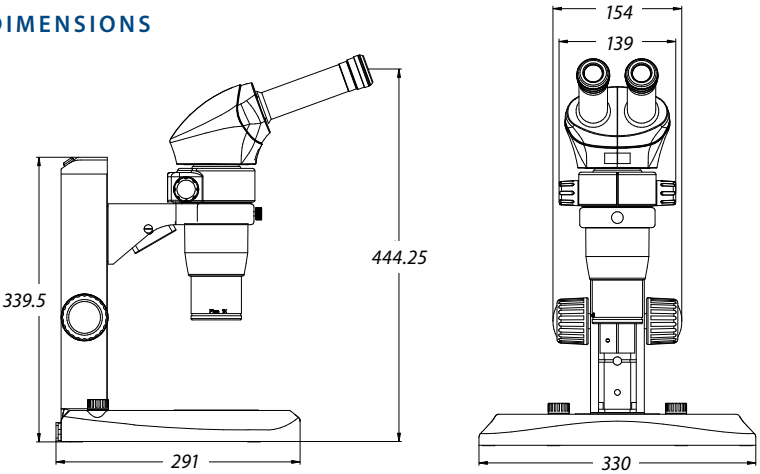
All equipped with EWF 10x/22 mm eyepieces

### MAGNIFICATIONS AND FIELDS OF VIEW FOR STANDARD CONFIGURATIONS

MODELS	Zoom indication	0.5x Objective WD 126 mm		1.0x Objective WD 78 mm		2.0x Objective WD 33 mm	
		Total magnification	Field of view	Total magnification	Field of view	Total magnification	Field of view
DZ.1100 / DZ.1105  DZ.1800 / DZ.1805  DZ.1600 / DZ.1605	0.8x	4x	55	8x	27.5	16x	13.7
	1.0x	5x	44	10x	22	20x	11
	1.5x	7.5x	29.3	15x	14.6	30x	7.3
	2.0x	10x	22	20x	11	40x	5.5
	3.0x	15x	14.6	30x	7.3	60x	3.6
	4.0x	20x	11	40x	5.5	80x	2.7
	5.0x	25x	8.8	50x	4.4	100x	2.2
	6.0x	30x	7.3	60x	3.6	120x	1.8
	6.4x	32x	6.8	64x	3.4	128x	1.7
	7.0x	35x	6.3	70x	3.1	140x	1.5
	8.0x	40x	5.5	80x	2.75	160x	1.4

All equipped with EWF 10x/22 mm eyepieces

### DIMENSIONS



## BUILD YOUR OWN MICROSCOPE

A customized DZ series stereo microscope can be configured to customer's specifications by choosing one of the three central zoom units DZ.0630, DZ.0800 or DZ.1000 and adding the necessary components for the application. A pair of eyepieces, an ergonomic 0 to 35° tilting head or fixed 20° inclined head, a 0.5x, 1x or 2x common main objective (CMO), a large ergonomic LED stand, a universal or an articulated arm stand. Other accessories such as a photo/camera unit or dual iris diaphragm can complete the configuration

## ACCESSORIES/SPARE PARTS

### CENTRAL ZOOM UNITS

- DZ.0630** Central zoom unit 1:6.3 unit with magnifications from 8 to 50 times
- DZ.0800** Central zoom unit 1:8 unit with magnifications from 8 to 64 times
- DZ.1000** Central zoom unit 1:10 unit with magnifications from 8 to 80 times

- DZ.4010** Plan apochromatic common main objective 1.0x. WD 78 mm
- DZ.4020** Plan apochromatic common main objective 2.0x. WD 33 mm

All optics are anti-fungus treated and anti-reflection coated for maximum light throughput

WD = Working distance

### HEADS

- DZ.2020** Ergonomic binocular 0-35° tilting head without eyepieces
- DZ.2025** Binocular 20° tilted head without eyepieces  
Interpupillary distance from 55 to 75 mm

### STANDS

- DZ.5020** Universal stand without illumination.  
Dimensions 460(h) x 280 (l) x 400 (d) mm
- DZ.5040** Ergonomic stand with transmitted and incident LED illumination. Coaxial coarse and fine adjustments, 100 graduations, 0.015 mm per graduations
- 65.980** Articulated arm stand for mounting on table without head holder (65.981 )
- 65.981** Head holder 76 mm for DZ series and black articulated arm stand (65.980)
- NZ.9025** Articulated arm stand with table clamp (without DZ head holder 65.981)
- NZ.9027** Articulated arm stand with heavy stand (without DZ head holder 65.981)
- NZ.9042** Stand with rotating mirror and transmitted LED illumination
- NZ.9030** Boom (double arm) stand with heavy stand (without head holder NZ.9090)
- NZ.9032** Boom (double arm) stand with table clamp (without head holder NZ.9090)
- NZ.9090** Head holder (for NZ.9020, NZ. 9030 and NZ.9032)

### EYEPIECES

- DZ.3010** EWF 10x/22 eyepiece, 1 piece
- DZ.3012** EWF 10x/22 eyepiece with crosshairs, 1 piece
- DZ.3015** WF 15x/16 eyepiece, 1 piece
- DZ.3020** WF 20x/12 eyepiece, 1 piece



### IRIS DIAPHRAGMS

- DZ.9010** Double iris diaphragms for increased depth of field

### OBJECTIVES

- DZ.4003** Plan common main objective 0.3x. WD 276 mm
- DZ.4005** Plan apochromatic common main objective 0.5x. WD 126 mm

## FLUORESCENCE ATTACHMENT

- DZ.9050** Attachment for fluorescence with 100 W mercury vapor illumination with GFP-B and GFP-LP filter sets and one 23.2 mm photo port. Supplied with power supply
- DZ.9060** Filter cube with GFP-B band-pass filter set for blue excitation, EX 460-500, DM 505, EM 510-560
- DZ.9061** Filter cube with GFP-L long-pass filter set for blue excitation, EX 460-500, DM 505, EM 510
- DZ.9049** Empty filter cube

Other fluorescence filters available on request

Each cube needs two emission fluorescence filters

- Customized configuration model DZ.0800, 2x DZ.3010, DZ.2025, DZ.9005, DZ.9010, DZ.4010 and DZ.5040



## POLARIZATION ATTACHMENTS

- DZ.9045** Polarizer, 360° rotatable, to be mounted on common main objectives of DZ series
- DZ.9047** Polarizer, 360° rotatable, to be placed on the stage

## CAMERA ACCESSORIES

- DZ.9005** Photo port attachment with one 23.2 mm tube
- DZ.9007** Photo port attachment with two 23.2 mm tubes
- DZ.9013** C-mount 1x objective for insertion into photo port attachments
- AE.5130** Universal SLR camera adapter with 2x projection lens for 23.2 mm tubes. Needs T2 adapter
- AE.5025** T2 adapter for Nikon D digital SLR cameras
- AE.5040** T2 adapter for Canon EOS digital SLR cameras

Other T2 adapters on request

## MISCELLANEOUS

- DZ.9020** Large 185 x 145 mm stage with mechanical X-Y 50 x 50 mm stage, to be moved by hand
- DZ.9040** Darkfield attachment for DZ.5040
- AE.1112** Micrometer slide, 50 mm/50 divisions
- AE.1900** Glass object plate, Ø 100mm
- AE.1903** Acrylic white/black object plate, Ø 100mm
- 50.875** Adjustable GEM clamp
- SL.5520** LED replacement for incident LED illumination of DZ.5040 stand

## DISPOSABLES

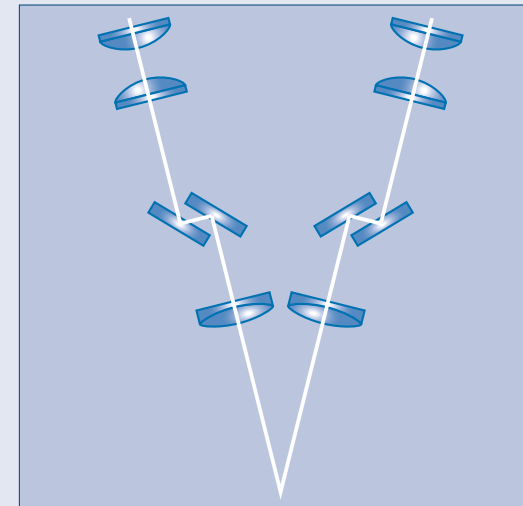
- AE.1385** 100 W HBO mercury vapor bulb for fluorescence
- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5274** Isopropyl alcohol 99% (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue, brush, air blower, cotton swabs

# about stereo microscopes

Most modern stereo microscopes are built according to two concepts: the Greenough and the common main objective (CMO). The Greenough system is named after the American instrument designer, Horatio S. Greenough, who introduced this concept in the early 1890's; it is a system that became the workhouse for biological dissection in the 20th century. Much later, in 1957, a stereo zoom microscope with a common main objective was introduced in the United States by the American Optical Company

## greenough

### principle



Two optical trains with their optical axes under a small angle generate two images of the object

- Low cost
- Compact
- Magnifications<sup>(1)</sup> up to approximately 100x
- Good quality
- Production environment

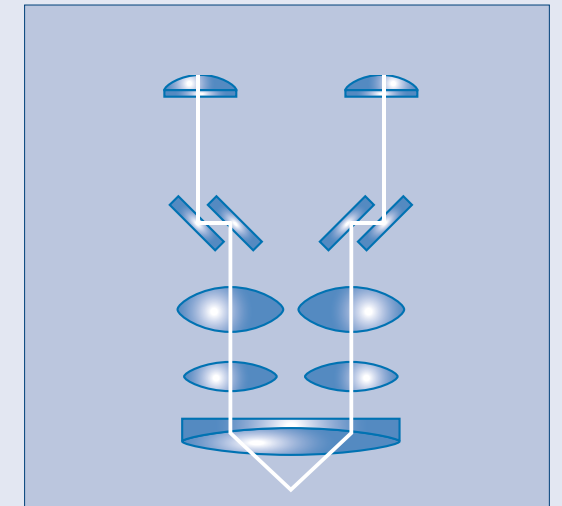
<sup>(1)</sup> Objective without auxiliary lenses and with 10x eyepieces

<sup>(2)</sup> With 10x eyepieces

<sup>(3)</sup> The parallel system allows many accessories such as photo and epi-fluorescence attachments, iris diaphragms, beam splitters to be added

## common main objective (CMO)

### principle



Two parallel optical trains share a common main objective and generate two images under a small angle

- Allows modular systems (infinity optical system)
- Enables higher magnifications<sup>(2)</sup>, up to 300x
- Upgradeable<sup>(3)</sup>
- High imaging quality
- Research and development labs



## STEREO MICROSCOPES

These versatile high-end stereo microscopes are highly appreciated by the professional research teams and industry for the excellent optical and mechanical characteristics. Indispensable for a reliable quality inspection of industrial products. Certain components are also integrated in machines.

Depending on the application, the microscopes can be configured with different zoom heads, together with other components such as eyepieces, additional lenses, stands, stages, filters, etc



product information



● ST.1720, ZE.1654  
and LE.5210, LE.5239

**ZE.1654**

210 (h) x 155 (w) x 210 mm (d) | 2.5 kg

**ST.1720**

780 (h) x 270 (w) x 740 (max) mm (d) | 19 kg

## HIGHLIGHTS

- Modular system
- Binocular and trinocular models
- Standard SWF 10x/23 mm eyepieces
- Stereo zoom heads with a fixed 45° inclined tubes
- Zoom magnification objectives
- Superior resolution optics
- Multiple stands
- 10 Years warranty

## SPECIFICATIONS

### EYEPIECES

Pair of SWF 10x/23 mm eyepieces

### HEAD

- Binocular or trinocular heads with a 45° inclined tubes
- Diopter  $\pm 6^\circ$  adjustment on both tubes for Z series
- Interpupillary distance from 55 to 75 mm
- Optional click-stops

### ZOOM MAGNIFICATION OBJECTIVES

- Zoom objective with magnifications from 0.4x to 2.5x
- Zoom objective with magnifications from 0.7x to 4.5x
- Zoom objective with magnifications from 1x to 7x

*Zoom objectives with click stops are also available on request*

*All optics have an anti-reflection coating for maximum light throughput and are anti-fungus treated*

### STANDS WITHOUT ILLUMINATION

**ST.1710** Pillar stand with ST.1790 head holder.

Pillar height 210 mm, diameter  $\varnothing$  20 mm

Dimensions 250 (h) x 150 (w) x 240 mm (d)

**ST.1718** Pillar ergonomically flat stand with ST.1790 head holder.

Pillar height 213 mm, diameter  $\varnothing$  20 mm.

Dimensions 258 (h) x 330 (w) x 306 (d)



● ZE.1657 - ST.1710

### STANDS WITH ILLUMINATION

**ST.1740** Rack & pinion stand with 10 W halogen illumination. Supplied with frosted filter for transmitted illumination and a blue filter for incident illumination. Both illuminations are adjustable and can be used simultaneously. With integrated power supply. Dimensions: 290 (h) x 160 (w) x 240 mm (d) min/max height 240-290 mm

*Stand with 3 W LED illumination and rotatable double-sided coated mirror*



BOOM STANDS

- ST.1720** Articulated one arm boom stand with a 270 x 270 mm base, 610 mm and Ø 29 mm pillar, with orientable stereo head holder ST.1794. Vertical post 780 mm. Weight 19.5 kg
- 65.980** Articulated one arm stand to be mounted on table without 83 mm head holder. Depth positioning of stereo head between 33 and 100 cm. Working distance: 0 - 295 mm
- 65.983** Head holder 85 mm diameter for 65.980

HEAD HOLDERS

Other optional head holders for boom stands

- ST.1790** Head holder with coarse adjustment\*
- ST.1796** Head holder with coarse and fine adjustment\*  
Head holder with coarse adjustment and opening for one fiber light guide\*
- ST.1792** Head holder with coarse adjustment and opening for one fiber light guide\*[
- ST.1794** Orientable head holder with coarse adjustment and opening for one fiber light guide\*\*
- ST.1798** Orientable head holder with coarse and fine adjustment and opening for one fiber light guide\*\*

\* Not suitable for boom stands ST.1720 and 65.980/65.983

\*\* Only suitable for boom stand ST.1720

All head holders have an internal diameter of 84 mm and a friction adjustment

FOCUSING

Coarse adjustment and friction adjustment for head holders for ST.1790, ST.1794, ST.1796. The head holders ST.1796 and ST.1798 are also equipped with a fine focusing adjustment

PACKAGE CONTENT

Models with illumination are supplied with power cord, dust cover, a spare fuse and user manual. All packed in a polystyrene box



● ST.1718

ZOOM STEREO HEADS

MODELS	Binocular	Trinocular	Tilt tubes	Objective zoom	Magnification	WD (mm)	Field of view (mm)
ZE.1624	•		45°	0.7 - 4.5x	7 - 45x	93	32/5.1
ZE.1654		•	45°	0.7 - 4.5x	7 - 45x	93	32/5.1
ZE.1657		• *	45°	0.7 - 4.5x	7 - 45x	104	32/5.1
ZE.1670	•		45°	1 - 7x	10 - 70x	104	23/3.3

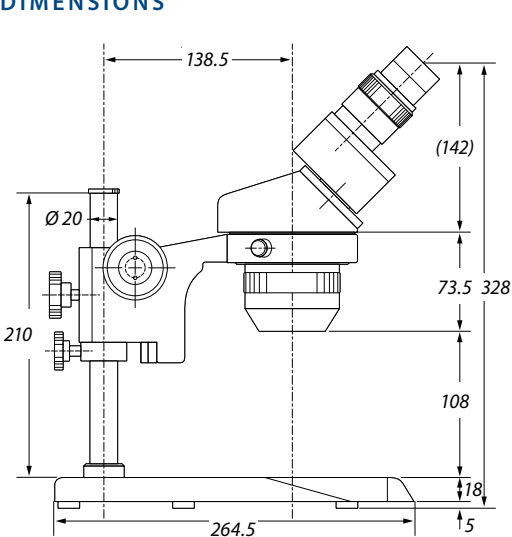
\* When the trinocular tube is engaged, the image is still available in both eyepieces  
All zoom stereo heads are supplied with SWF 10x/23 mm eyepieces without eyecups

STANDS

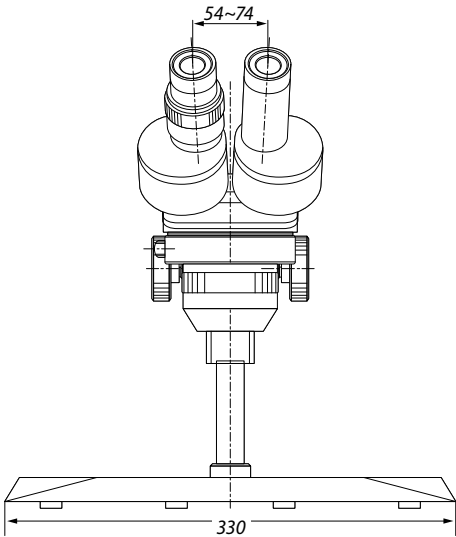
MODELS	Column (mm)	Diameter (mm)	Rack & pinion	Base (w x d mm)	Height (mm)	Head holder	Illumination
ST.1710	210	20		240 x 150	258	ST.1790	
ST.1718	213	20		330 x 306	285	ST.1790	
ST.1720	610	29		780 x 270	650	ST.1794	
ST.1735			•	240 x 160	290		3 W LED
ST.1740			•	240 x 160	290		10 W Hal
ST.1770	360	29		500 x 580	400	ST.1790	
65.980/65.983			•	Ø 1000 *	0/295	65.983	

\* Length with the two arms totally extended

DIMENSIONS



● ST.1710



ACCESSORIES AND SPARE PARTS

EYEPIECES

(without eyecups)

- AE.1835** Pair of SWF 5x/26 mm eyepieces
- AE.1836** Pair of SWF 10x/23 mm eyepieces
- AE.1834** Pair of SWF 12.5x/20 mm eyepieces
- AE.1840** Pair of SWF 30x/7.5 mm eyepieces
- AE.5439** Pair of eyecups
- AE.5425** Pair of eyecups, suitable when wearing glasses

MICROMETER EYEPIECES

(with adjustable lens)

- AE.1839** SWF 10x/21 mm with 10 mm/100 micrometer reticle and crosshairs



## MICROMETER SLIDE

**AE.1112** Object slide 76 x 26 mm with micrometer  
50mm/500, 100 µm/division

## ADDITIONAL LENSES

(for ZE.1659)

**AE.1822** Additional 0.57x lens. WD 300 mm

## ADDITIONAL LENSES

(for ZE.1624, ZE.1654, ZE.1626)

**AE.1870** Additional 0.44x lens. WD 180 mm.  
Suitable with ST.1720, ST.1770, ST.1780, ST.1785  
and 65.980 stands

**AE.1856** Additional 0.5x lens. WD 150 mm.  
Suitable with ST.1740. Maximum object size  
is 15 mm

**AE.1857** Additional 0.75x lens. WD 97 mm

**AE.1858** Additional 1.5x lens. WD 50 mm

**AE.1859** Additional 2.0x lens. WD 34 mm

## ADDITIONAL LENSES

(for ZE.1657)

**AE.1816** Additional 0.35x lens. WD 250 mm

**AE.1817** Additional 0.5x lens. WD 174 mm

**AE.1818** Additional 1.5x lens. WD 57 mm

WD = working distance

## PROTECTION WINDOWS

(to be screwed under the objectives)

**AE.1845** Protection window for all heads of ZE series  
except ZE.1659

**AE.1825** Protection window for ZE.1659.  
Not suitable with additional lenses

## DARKFIELD

**AE.1878** Darkfield attachment for ST.1740

## POLARIZATION

**AE.1890** Analyzer, in rotatable mount.  
Not suitable with ZE.1659

## MECHANICAL STAGES

**AE.1876** Plain stage 145 x 115 mm with 75 x 50 mm  
X-Y mechanical stage on ball bearings.

Horizontal coaxial adjustment.

Double Vernier with 0.1 mm graduations.

Only with ST.1710 and ST.1740

**AE.1896** Stage 145 x 115 mm with central glass object  
plate and 75 x 50 mm X-Y mechanical stage on  
ball bearings. Horizontal coaxial adjustments.

Double Vernier with 0.1 mm graduations.

Only with ST.1740 and ST.1760

**AE.1877** Large stage 170 x 155 mm with 100 x 105 mm  
X-Y mechanical stage on ball bearings.

For ST.1710 and ST.1740

## OBJECT PLATES - Ø 94 MM

**AE.1882** Acrylic black/white object plate

## FILTERS - Ø 40 MM

**AE.1897** Frosted glass filter

## OBJECT HOLDER

**AE.5446** Orientable clamp for gems.

Interchangeable with object plate clamp

## SPARE BULB AND FUSES

**SL.1868** 30 W 230 V incandescent bulb for ST.1750 stand

**SL.1869** 10 W 6 V halogen bulb for ST.1740 illumination

**AE.5252** Fuses for ST.1740 stand. Per 10 pieces

## CAMERA ACCESSORIES

**DC.1320** Projection 1x objective with C-mount

**DC.1324** Projection 0.5x objective with C-mount  
for cameras with 1/2" sensor.

To be inserted into a 23.2 mm tube

**DC.1326** Projection 0.33x objective with C-mount  
for cameras with 1/3" sensor.

To be inserted into a 23.2 mm tube

**AE.5130** Universal SLR camera adapter with 2x projection  
lens for 23.2 mm tubes. Needs T2 adapter

**AE.5025** T2 adapter for Nikon D digital SLR cameras

**AE.5040** T2 adapter for Canon EOS digital SLR cameras

**AE.5063** 0.7x Objective with C-mount. To be mounted  
over a 23.2 mm tube of a Z-, M-, F-series

Other T2 adapters on request



● AE.1845 Protection window



● AE.1825 Protection window for ZE.1659



● AE.1890 Analyzer, in rotatable mount



● AE.1882 Acrylic black/white object plate



● AE.5446 Orientable clamp for gems



● AE.1877



● AE.1876

● AE.1896 Stage 145 x 115 mm with central glass object plate



# STEREO MICROSCOPES

## BE series

### BE-50 series

Stereo microscopes of the BE-50 series with interchangeable objectives mounted in a slider are intensively used in the industry. The high depth of field and the extra large working distance are the main characteristics of this stereo microscope

These characteristics allow users to work under the microscope with ease. Ideal for jewelers, watchmakers, soldering, quality inspection and so on

A 44 cm flexible arm LED light source makes sure the object can be illuminated from any angle. The heavy metal base makes this system very stable. Magnifications vary from 2.5x to 40x



product information



● BE.1812

**BE-50**  
345 (h) x 130 (w) x 410 mm (d) | 7.0 kg

## HIGHLIGHTS

- Professional stereo microscopes for extra long working distances
- Interchangeable magnifications from 2.5x up to 40x
- Overhanging stand
- Large working area
- LED illumination
- 5 Years warranty



● BE.7405 / BE.7410 / BE.7420

## SPECIFICATIONS

### EYEPIECES

Pair of WF 10x/20 mm

### HEAD

Binocular 45° inclined tube. Interpupillary distance adjustable between 55 and 75 mm

### STAND

Stable overhanging heavy base stand with pillar

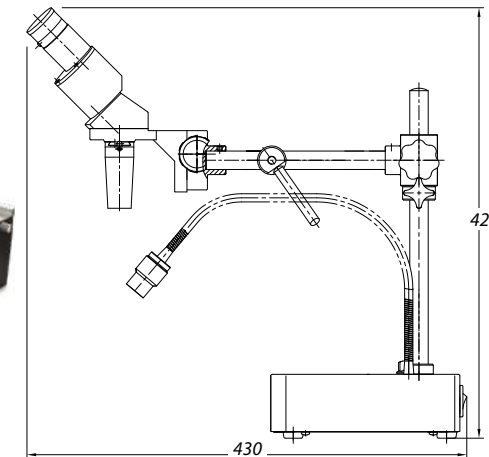
### FOCUSING ADJUSTMENT

Coarse adjustment with tension control

### ILLUMINATION

Incident 1 W LED illumination 44 cm on flexible arm. Intensity is adjustable

## DIMENSIONS



### OBJECTIVES

- Comes with 0.5x fixed magnification objective, magnification 5x, field of view 40 mm. Working distance 250 mm
  - Additional 1x fixed magnification objective available, magnification 10x, field of view 20 mm. Working distance 230 mm
  - Additional 2x fixed magnification objective available, magnification 20x, field of view 10 mm. Working distance 119 mm
- Other magnifications available with optional eyepieces up to 40x*  
*All optics are anti-fungus treated and anti-reflection coated for maximum light throughput*

## ACCESSORIES AND SPARE PARTS

<b>BE.6005</b>	Pair of HWF 5x/22 mm eyepieces	<b>BE.7405</b>	0.5x objective for BE-50 LED. WD 250 mm
<b>BE.6010</b>	Pair of HWF 10x/20 mm eyepieces	<b>BE.7410</b>	1.0x objective for BE-50 LED. WD 230 mm
<b>BE.6015</b>	Pair of HWF 15x/12 mm eyepieces	<b>BE.7420</b>	2.0x objective for BE-50 LED. WD 119 mm
<b>BE.6020</b>	Pair of HWF 20x/10 mm eyepieces	<b>AE.1112</b>	Micrometer slide, 50 mm/50 divisions
<b>BE.6110</b>	HWF 10x/20 mm eyepiece with micrometer		
<b>BE.6099</b>	Pair of eyecups		

MODELS	Binocular	0.5x objective	1.0x objective	2.0x objective	WD	LED illumination
BE.1802	•	•			250 mm	•
BE.1812	•		•		230 mm	•
BE.1820	•			•	119 mm	•



# STEREO MICROSCOPES

## P series

### P series

The microscopes of the P series are specifically designed for industrial purposes and come in 10/30x or 20x/40x magnification versions. By using optional eyepieces magnifications from 5x to 80x can be achieved

These microscopes are equipped with a rack & pinion stand and a 360° rotatable head

The P series are compact and lightweight, ideal microscopes for industrial applications either in a workshop or for field work



product information



60.200 (P-20)



60.100 / 60.200  
315 (h) x 120 (w) x 190 mm (d) | 2.5 kg

## HIGHLIGHTS

- Binocular models
- Easy to use
- 360° Revolving rotatable head with 45° Inclined tubes
- Secured WF 10x/20 mm eyepieces
- 10x/30x and 20x/40x magnification in revolving nosepiece
- Robust rack & pinion stand with powerful halogen or LED illumination
- LED illumination with rechargeable batteries for cordless use
- Incident and transmitted illuminations can be used simultaneously
- Lightweight; easy to carry to any location
- 5 Years warranty



60.100 (P-10)

## SPECIFICATIONS

### EYEPIECES

Pair of secured wide field eyepieces WF 10x/20 mm. Supplied with eyecups

### HEAD

Binocular head with 45° inclined tubes. One tube supplied with diopter adjustment. Interpupillary distance from 55 to 75 mm

### OBJECTIVES

- The P-10 and P-10 LED models are supplied with revolving 1x/3x objectives for total magnification of 10 and 30 times with a field of view from 20 to 6.7 mm
- The P-20 and P-20-8 LED models are supplied with revolving 2x/4x objectives for total magnification of 20 and 40 times with a field of view from 10 to 5 mm
- Magnifications of 5 to 80x can be achieved by using 5x, 15x or 20x eyepieces

All optics are anti-fungus treated and anti-reflection coated for maximum light throughput

### STAND

Robust pillar stand with 35 mm coarse adjustment. Supplied with black/white object plate and two object clamps

### ILLUMINATION

The P-10 and P-20 models are supplied with 10 W 12 V halogen transmitted and incident illumination and internal power supply. Both illuminators can be operated independently or simultaneously

The P-10 LED and P-20 LED models are supplied with high power LED transmitted and incident illumination and with three rechargeable AA batteries for maximum 35 hours continuous cordless operation. Both illuminators can be operated independently or simultaneously. Supplied with external mains adapter

CAMERAS

Euromex offers a wide range of industrial and laboratory grade cameras, see chapter 10 (Digital solutions).  
For P series, the camera replaces one of the eyepieces

PACKAGE CONTENT

Supplied with power cord, three rechargeable AA batteries, dust cover, a spare fuse and user manual (and spare bulb for halogen models). All packed in a polystyrene box

ACCESSORIES AND SPARE PARTS

EYEPIECES

- 50.805** Pair of wide field eyepieces WF 5x/22 mm
- 50.810** Pair of wide field eyepieces WF 10x/20 mm
- 50.811** Micrometer eyepiece WF 10x/20 mm, 10 mm/100
- 50.815** Pair of wide field eyepieces WF 15x/16 mm
- 50.820** Pair of wide field eyepieces WF 20x/10 mm
- 50.840** Pair of eyecups

MISCELLANEOUS

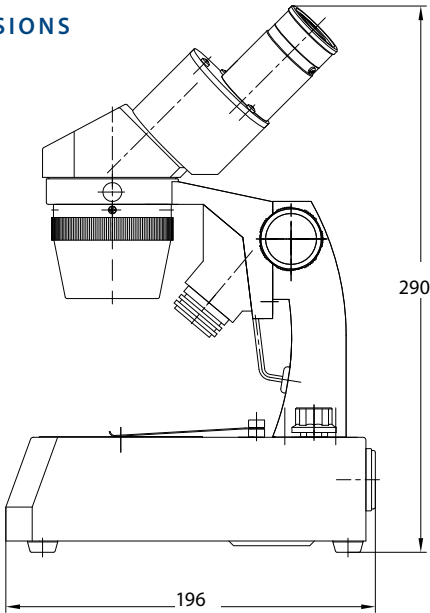
- 50.871** Black/white stage plate Ø 94 mm
- 50.873** Glass stage plate Ø 94 mm
- 50.875** Adjustable GEM object clamp for P series
- 50.876** Darkfield attachment
- 50.882** Spare halogen bulb 12 V 10 W for P series (transmitted illumination)
- 50.961** Plastic case for P series



DISPOSABLES

- AE.1112** Micrometer slide, 50 mm/50 divisions
- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5274** Isopropyl alcohol 99% (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue, brush, air blower and cotton swabs

DIMENSIONS



MODELS	45° head	1x/3x objective	2x/4x objective	Transmitted halogen illumination	Incident halogen illumination	Transmitted LED illumination	Incident LED illumination
60.100 (P-10)	•	•		•	•		
60.110 (P-10 LED)	•	•				•	•
60.200 (P-20)	•		•	•	•		
60.210 (P-20 LED)	•		•			•	•

about magnifiers

A basic magnifier consists of a convex lens that is mounted in a frame and handle to magnify an object. Lenses have been widely used in the Mediterranean region and Middle East over several millennia



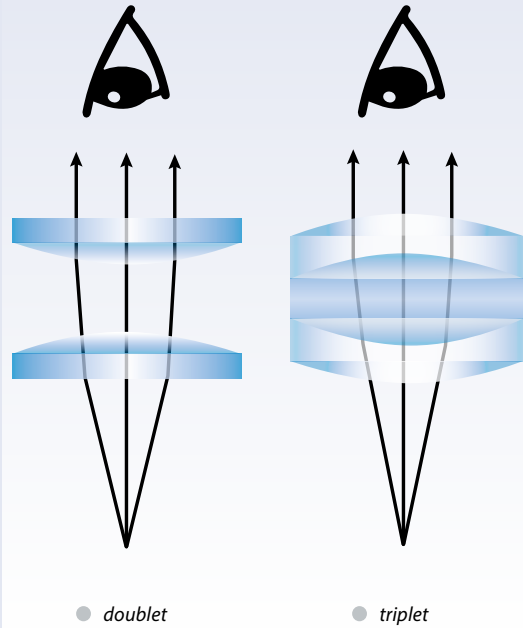
Basic magnifying glasses have low magnifications from 2 to 6 times. The magnification of such a basic magnifier depends upon the position between the user's eye, the object being viewed and the total distance between them  
*At higher magnifications, the image quality decreases rapidly due to important spherical aberration*

Doublet and triplet magnifiers with multiple lenses enable higher magnifications from 10 to 30 times. These are often mounted in a cylindrical holder with no handle (often called a "loupe")  
Such magnifiers have very small apertures and they must be placed close to both the object and the eye



Other types of loupes are designed to be put on the table or sample, without or with micrometer scales in order to perform quick measurements

For magnification beyond 30 times, a stereomicroscope must be used





materials science



product information

Microscopes for materials science applications have specific objectives and other tools such as incident illuminations, polarization and compensation filters. This allows precise observation of materials such as metals, plastics, minerals, glass, wood and chemical materials

Euromex offers a range of metallurgical microscopes, microscopes with rotatable stages and strain-free objectives for polarized light observation and inverted materials science microscopes

**ISCOPE (MATERIALS & POLARIZATION) • PAGE 312**  
**BSCOPE (MATERIALS) • PAGE 320**  
**DELPHI-X OBSERVER (MATERIALS) • PAGE 324**  
**OXION (MATERIALS) • PAGE 332**  
**DELPHI-X INVERSO (MATERIALS) • PAGE 336**  
**OXION INVERSO (MATERIALS) • PAGE 340**



# MATERIALS SCIENCE MICROSCOPES

iscope®

NeoLED™  
euromex optical technology

## iScope® for materials science

The iScope® microscopes are supplied with specific attachments that turn the iScope® into a state-of-the-art materials science microscope, suitable for various applications

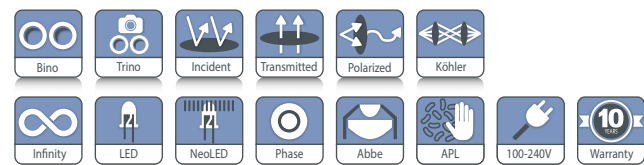
There are two types of materials science microscopes; metallurgical and polarization microscopes



IS metallurgical



IS polarization



● IS.1053-PLMi



IS.1053-PLMi

585 (h) x 210 (w) x 480 mm (d) | 10.5 kg

IS.1053-PLPOLRi

590 (h) x 210 (w) x 475 mm (d) | 12.3 kg

## HIGHLIGHTS

- EWF 10x/20 mm and EWF 10x/22 mm eyepieces
- Binocular and trinocular models
- Reversed revolving nosepiece
- Infinity corrected IOS objectives for material observation and polarization
- 150 x 140 mm rackless stage equipped with metal and glass inserts
- Ø 160 mm rotatable circular stage for polarization models
- Diascopic 3 W NeoLED™ Köhler illumination
- Epi-NeoLED™ illumination for metallurgical models
- 50 W Epi-illumination for polarization models
- iCare sensor for energy saving
- CSS - Cable Storage System
- 10 Years warranty

## SPECIFICATIONS

### EYEPIECES

The metallurgical models are supplied with extended EWF 10x/20 mm (Ø 30 mm tube) eyepieces. Polarization models are supplied with a pair of EWF 10x/22 mm or EWF 10x/20 mm (Ø 30 mm tube) eyepieces, one eyepiece with crosshairs and one eyepiece with crosshairs and micrometer reticle

### HEAD

Binocular and trinocular Siedentopf type heads with 30° inclined tubes. Interpupillary distance from 48 to 76 mm. Two ± 5 diopter adjustments. A unique rotating system allows ergonomic positioning of both tubes in a high (431 mm) and in a low position (397 mm).

Optional photo C-mount adapters with built-in 0.33x or 0.5x objective fits the trinocular head with 23.2 mm tube

### NOSEPIECE

Models for polarization are supplied with reversed revolving quadruple nosepiece. Other models have a reversed quintuple nosepiece on ball bearings



● IS.1053-PLPOLRi

### STAGE

- 150 x 140 mm rackless stage equipped with double slide holder and integrated 78 x 53 mm mechanical stage. Supplied with a plain metal and plain glass insert
  - Ø 160 mm circular stage for polarization models, 360° rotatable with Vernier and two object clamps; an optional 30 x 40 mm X-Y mechanical stage is available
- A ceramic stage is also available on request*

STANDARD CONDENSER

Metallurgical models are equipped with height adjustable Abbe N.A. 1.25 condenser with iris diaphragm. Suitable for slider with darkfield stop for magnifications up to maximum 400x. Optional height adjustable Abbe N.A. 0.9/1.25 swing-out condenser with iris diaphragm

CONDENSER

*for polarization*  
Height adjustable Abbe N.A. 1.25 condenser with iris diaphragm and 360° rotatable polarizer

FOCUSING

Coaxial coarse and fine adjustments, 200 graduations, 1 µm per graduation, 200 µm per rotation, total travel range is approximately 24 mm (20 mm for metallurgical versions) and is supplied with an adjustable rack stop to prevent damage to sample and objectives. The coarse adjustment is equipped with friction control

TRANSMITTED ILLUMINATION

Intensity adjustable 3 W Köhler NeoLED™ illumination with internal 100-240 V power supply. The larger aperture of NeoLED™ allows the optical systems of the iScope® microscope to produce images at higher resolutions, very close to the theoretical diffraction limit of the optics. Other benefits for choosing NeoLED™ are low energy consumption, no heating and a long operating life span. The Köhler setting provides homogeneous illumination and high contrast. Polarisation models with transmitted light only are supplied with: 360° rotatable polarization filter, 360° rotatable analyzer with 180 increments and nonius for 0.2 degree readout, Bertrand lens (build-in), 1 λ first red and 1/4 λ retardation plate, a quartz wedge, 45 mm green and blue filters for lamp house

REFLECTED ILLUMINATION

*for metallurgical models*  
Metallurgical models are equipped with a reflected NeoLED™ illumination and external 100-240 V power supply. Supplied with a 0-90° polarization filter in slider, fixed analyzer in slider, white, green, blue and yellow filters

REFLECTED ILLUMINATION

*for polarization models*  
Polarization models are equipped with a 50 W 12 V halogen epi-illumination and external 100-240 V power supply. Supplied with 360° rotatable polarization filter, 360° rotatable analyzer with 180 increments and nonius for 0.2 degree readout, Bertrand lens (build-in), 1 λ first red plate, 1/4 λ retardation plate, a quartz wedge, sliders with green/blue and white/neutral density filter. 45 mm green and blue filters for lamp house

ICARE SENSOR

The unique iCare Sensor is developed to avoid unnecessary loss of energy. The illumination of the microscope automatically switches off shortly after microscopists step away from their position

CSS – CABLE STORAGE SYSTEM

iScope® allows users to easily insert the power cable into the back of the instrument, which enables easy storage. The integrated carrying grip at the back of the microscope ensures safe transportation of the microscope

PACKAGE CONTENT

Supplied with power cord, dust cover, spare fuse and user manual. All packed in polystyrene boxes

OBJECTIVES

Plan PLMi IOS <sup>(1)</sup>	5x/0.12	10/0.25	20x/0.40		50x/0.70	S100x/0.80 <sup>(5)</sup>
Plan PLPOLi IOS <sup>(2)</sup>	5x/0.12	10/0.25	20x/0.40	S40x/0.65	S60x/0.80 <sup>(6)</sup>	S100x/1.25 <sup>(5)</sup>
Plan PLPOLRi IOS <sup>(3)</sup>	5x/0.12	10/0.25	20x/0.40		50x/0.70	S100x/0.80 <sup>(5)</sup>
Plan PLi IOS <sup>(4)</sup>	4x/0.10	10/0.25	20x/0.40	S40x/0.65	S60x/0.85 <sup>(6)</sup>	S100x/1.25 <sup>(5)</sup>

- <sup>(1)</sup> Plan PLMi Infinity corrected objectives for observation of materials. No cover glass correction
- <sup>(2)</sup> Plan PLPOLi strain free infinity corrected objectives for polarization applications. With 0.17 mm cover glass correction. For transmitted illumination
- <sup>(3)</sup> Plan PLPOLRi strain free Infinity corrected objectives for polarization applications. No cover glass correction. For reflected illumination attachment
- <sup>(4)</sup> Plan PLi infinity corrected objectives for asbestos research. With 0.17 mm cover glass correction
- <sup>(5)</sup> Optional objectives

All optics are anti-fungus treated and anti-reflection coated for maximum light throughput



● IS.1052-PLPOLi



ISCOPE® POLARIZATION MODELS

MODELS	Bino	Trino	EWF 10x/20 mm <sup>(4)</sup>	EWF 10x/22 mm <sup>(4)</sup>	Plan PLPOLi 5x/10x/20x/ S40x IOS objectives <sup>(1)</sup>	Plan PLPOLRi 5x/10x/20x/ S50x IOS objectives <sup>(2)</sup>	Ø160 mm stage, 360° rotatable	Polarization condenser with gratuated 360° polarizer	Transmitted illumination Köhler LED	50W 12V halogen epi- illumination <sup>(3)</sup>
IS.1052-PLPOLi	•			•	•		•	•	•	
IS.1053-PLPOLi		•		•	•		•	•	•	
IS.1052-PLPOLRi	•		•			•	•	•	•	•
IS.1053-PLPOLRi		•	•			•	•	•	•	•

<sup>(1)</sup> Strain free objectives with 0.17 mm cover glass correction

<sup>(2)</sup> Strain free objectives without 0.17 mm cover glass correction

<sup>(3)</sup> The reflected 50 W illumination attachment of the IS.1052-PLPOLRi and IS.1053-POLRi models are equipped with a 360° rotatable polarization filter, analyzer, Bertrand lens, 1 λ first red plate, 1/4 λ retardation plate, a quartz wedge, slider with green and blue filter. External 240 or 115 Vac/ 12 Dc 4.16 A power supply

<sup>(4)</sup> The iScope® polarization models are supplied with one eyepiece with crosshairs and one eyepiece with crosshairs and 10/100 micrometer

ISCOPE® METALLURGICAL MODELS

MODELS	Bino	Trino	EWF 10x/20 mm	Plan PLMi 5x/10x/20x/ S50x IOS objectives *	Mechanical rackless stage	Abbe condenser	Köhler 3 W LED	Metallurgical attachment with NeoLED™ epi-illumination
IS.1053-PLMi		•	•	•	•	•	•	•

\*Objectives without cover glass correction

The reflected illumination attachment is supplied with a 0-90° polarizer mounted in a slider, a fixed analyzer in slider, a white, yellow and blue filter, all mounted in a slider. External 100-240 Vac/ 7.5 Dc power adapter



**Note:**  
the iScope® model is equipped with a 87/230 x 140 mm rackless stage with double slide holder and integrated 79 x 52 mm mechanical stage. The iScope® rackless stage has no protruding parts, enables more smooth movements and is safer to work with (see photo on the right)

ACCESSORIES AND SPARE PARTS

EYEPIECES

- IS.6210** EWF 10x/22 mm eyepiece\*
- IS.6210-C** EWF 10x/22 mm eyepiece with crosshairs\*
- IS.6210-P** EWF 10x/22 mm eyepiece with pointer\*
- IS.6210-CM** EWF 10x/22 mm eyepiece with 10/100 micrometer and crosshairs\*
- IS.6212** WF 12.5x/17 mm eyepiece\*
- IS.6215** WF 15x/16 mm eyepiece\*
- IS.6215-CM** EWF 15x/16 mm eyepiece with 10/100 micrometer and crosshairs\*
- IS.6220** WF 20x/12 mm eyepiece\*
- IS.6299** Pair of eyecups for infinity corrected iScope® models
- IS.6310** EWF 10x/20 mm eyepiece\*
- IS.6310-C** EWF 10x/20 mm eyepiece with crosshairs\*
- IS.6310-CM** EWF 10x/20 mm eyepiece with 10/100 micrometer and crosshairs\*

\*Ø 30 mm tube

PLAN PLMI INFINITY CORRECTED IOS OBJECTIVES FOR MATERIALS SCIENCE

- IS.8105** Plan PLMi 5x/0.12 IOS objective. \* WD 15.5 mm
  - IS.8110** Plan PLMi 10x/0.25 IOS objective. \* WD 10 mm
  - IS.8120** Plan PLMi 20x/0.40 IOS objective. \* WD 4.3 mm
  - IS.8150** Plan PLMi S50x/0.70 IOS objective. \* WD 0.32 mm
  - IS.8100** Plan PLMi S100x/0.80 IOS objective. \* WD 2 mm
- \* No cover glass correction

PLAN PLPOLRI INFINITY CORRECTED IOS OBJECTIVES FOR POLARIZATION

- with reflected illumination attachment
- IS.7905-R** Plan PLPOLi 5x/0.12 IOS objective. \* WD 15.5 mm
  - IS.7910-R** Plan PLPOLi 10x/0.25 IOS objective. \* WD 10 mm
  - IS.7920-R** Plan PLPOLi 20x/0.40 IOS objective \* WD 5.8 mm
  - IS.7950-R** Plan PLPOLi S50x/0.75 IOS objective. \* WD 0.92 mm
  - IS.7900-R** Plan PLPOLi S100x/0.80 IOS objective. \* WD 2 mm
- \* No cover glass correction

PLAN PLPOLI INFINITY CORRECTED IOS OBJECTIVES FOR POLARIZATION

- without reflected illumination attachment
- IS.7905-T** Plan PLPOLi 5x/0.12 IOS objective. \* WD 15.5 mm
  - IS.7910-T** Plan PLPOLi 10x/0.25 IOS objective. \* WD 10 mm
  - IS.7920-T** Plan PLPOLi 20x/0.40 IOS objective. \*\* WD 5.1 mm
  - IS.7940-T** Plan PLPOLi S40x/0.65 IOS objective. \*\* WD 0.54 mm
  - IS.7960-T** Plan PLPOLi S60x/0.80 IOS objective. \*\* WD 0.14 mm
  - IS.7900-T** Plan PLPOLi S100x/1.25 IOS oil immersion objective. \*\* WD 0.13 mm
- \* No cover glass correction
- \*\* With 0.17 mm cover glass correction
- WD = working distance

TRANSMITTED KÖHLER ILLUMINATION SYSTEM

- IS.9700** Blue filter 45 mm for lamphouse
- IS.9702** Green filter 45 mm for lamphouse
- IS.9704** Yellow filter 45 mm for lamphouse
- IS.9706** White opaque filter 45 mm for lamphouse
- SL.5503** 3 W NeoLED™ replacement unit

POLARIZATION ATTACHMENT

- without reflected illumination
- IS.9604** Quartz wedge in slider
  - IS.9608** Analyzer 0-360° rotatable
  - IS.9610** Lambda plate first red 530 nm in slider
  - IS.9612** Lambda/4 retardation plate in slider

POLARIZATION ATTACHMENT

- with reflected 50W/12V halogen illumination
- IS.9602-R** Polarizer
  - IS.9604-R** Quartz wedge in slider
  - IS.9608-R** 360° Rotatable analyzer in slider
  - IS.9610-R** Lambda plate first red 530 nm
  - IS.9612-R** Lambda/4 retardation plate in slider
  - AE.3679** Halogen spare bulb 12 V 50 W



MATERIALS SCIENCE ATTACHMENT

with reflected NeoLED™ epi-illumination

- IS.9230** Reflected NeoLED™ epi-illumination attachment with for materials science with 5x, 10x, 20x and 550x objectives. Supplied with a 0-90° polarizer mounted in a slider, a fixed analyzer in slider, a white, yellow and blue filter, all mounted in a slider. With external 100-240 Vac/ 7.5 Vdc power adapter
- IS.9720** Blue filter in slider
- IS.9722** Green filter in slider
- IS.9724** Yellow filter in slider
- IS.9726** White filter in slider
- IS.9727** Polarizer 0-90° in slider for materials science attachment (IS.9230)
- IS.9728** Analyzer 0-360° rotatable in slider for materials science attachment (IS.9230)
- IS.9731** Slider with green and blue filters
- IS.9515** Metal plain insert for mechanical stage
- IS.9518** Glass plain insert for mechanical stage
- IS.9503** Large ceramic stage for iScope. Only with new microscopes
- SL.5500** 3 W NeoLED™ replacement unit

CAMERA ACCESSORIES

- AE.5130** Universal SLR adapter with built-in 2x lens without T2 adapter. For standard 23.2 mm tube
- AE.5040** T2 adapter for Canon EOS SLR digital camera
- AE.5025** T2 adapter for Nikon D SLR digital camera

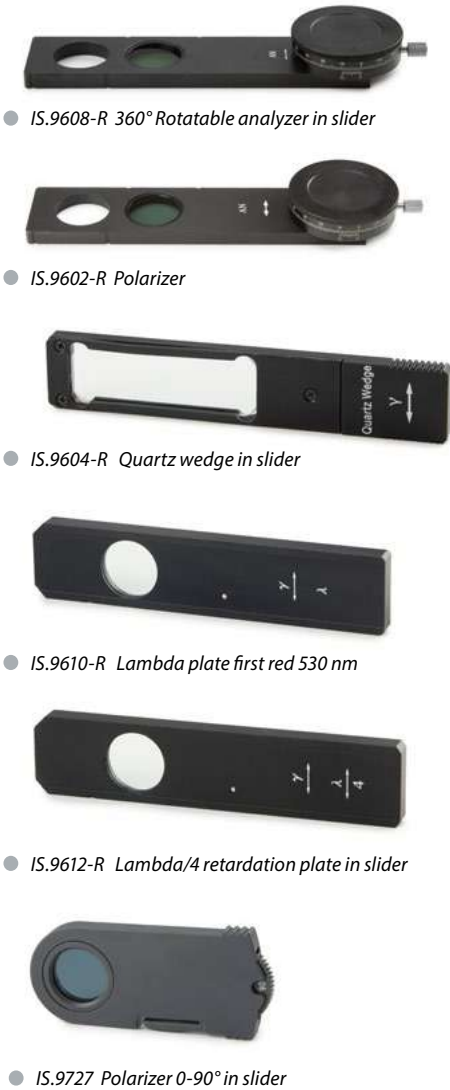
MISCELLANEOUS

- IS.9501-ADD** Stage with ergonomical low-positionned X-Y adjustments of mechanical stage. Right handed. Add-on price, only with new microscopes
- IS.9522** Optional 30 x 40 mm X-Y mechanical stage for circular polarization stage

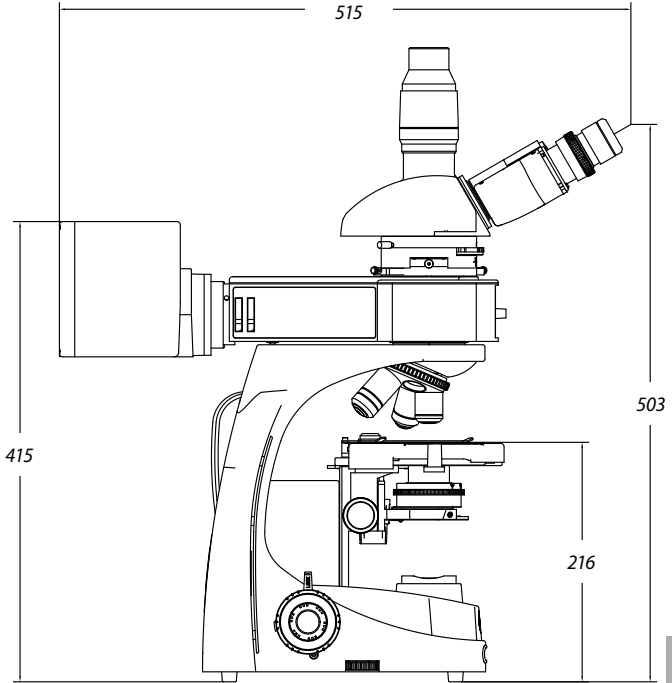
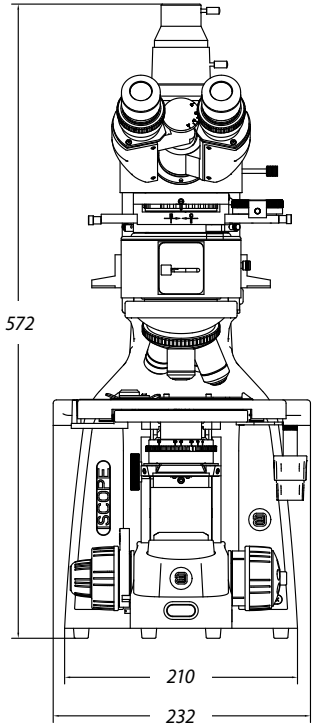
DISPOSABLES

- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces
- PB.5165** Cover glasses 18 x 18 mm, thickness 0.13 - 0.17 mm, 100 pieces

- PB.5168** Cover glasses 22 x 22 mm, thickness 0.13 - 0.17 mm, 100 pieces
- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5255** Immersion oil, n = 1.515 (25 ml)
- PB.5274** Cleaning liquid, isopropanol alcohol 99% (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue, brush, air blower and cotton swabs



DIMENSIONS



# MATERIALS SCIENCE MICROSCOPES

bscope®

NeoLED™  
euromex optical technology



bScope®

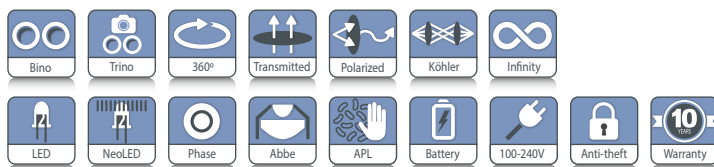
for materials science

The well-equipped microscopes of the bScope® for materials science are especially configured for observation of all kinds of materials such as metals, plastics, wood, glass, etc. These microscopes are extensively used in the materials research and quality assurance laboratories

The design of the bScope® is both ergonomic and evolutive. Wide field WF 10x/22 mm eyepieces and low focusing controls minimize fatigue during long working sessions and therefore provide more comfort for microscopists. The robust and compact size of the bScope® together with the Cable Storage System allow more working space, safer operation and easy storage



product information



TRINOCULAR MODEL BS.1053-PLMi  
515 (h) x 195 (w) x 431 mm (d) | 8.5 kg

## HIGHLIGHTS

- Materials science microscopes
- Trinocular models
- WF 10x/22 mm eyepieces
- Reversed ball-bearing quintuple nosepiece with slot for polarization filter
- Plan M-IOS objectives
- Polarizer and analyzer filters
- Rackless integrated X-Y mechanical stage
- 3 W NeoLED™ adjustable transmitted and reflected NeoLED™ illumination
- Integrated carrying grip
- Cable Storage System and anti-theft system
- 10 Years warranty

## SPECIFICATIONS

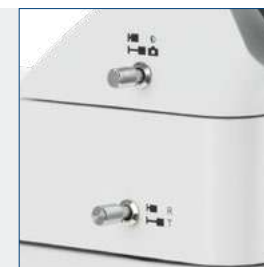
### EYEPIECES

Wide field WF 10x/22 mm eyepieces with 22 mm field of view (Ø 30 mm tube)

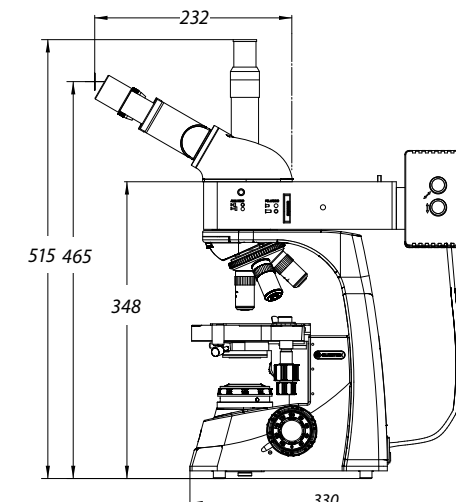
### HEAD

The bScope® is equipped with a Siedentopf type head, 360° rotatable and equipped with 30° inclined tubes, sporting a  $\pm 5$  diopter adjustment on left eyepiece. The interpupillary distance is adjustable between 48 to 76 mm. The trinocular head comes with a Ø 23.2 mm tube, ensuring maximum flexibility. The prisms inside the heads are designed to minimize the light absorption for perfect digital imaging. The trinocular head has a light path selector (100:0 / 0:100) and generates an erect image. Models with an integrated USB-2.0 camera are supplied with a 5.0 MP 1/2.5" CMOS sensor with a resolution of 2592 x 1944 pixels (see chapter 10)

Trinocular  
light path selector  
100-0/0-100



## DIMENSIONS



### NOSEPIECE

Revolving and reversed ball-bearing quadruple nosepiece

### OBJECTIVES

The state-of-the-art production techniques and multi layer coatings used for the manufacturing of the bScope® objectives enable the bScope® to be used for the most demanding applications. World class spherical aberration correction and modern CNC and assembly technology ensure perfect centering of the objectives

Infinity corrected achromatic plan M-IOS 5x/0.12, 10x/0.25, 20x/0.40, 50x/0.70 IOS objectives. Optional plan M-IOS S80x/0.80 and S100x/0.85 IOS objective are also available

*The S80x and S100x objectives are spring loaded*

*All optics are anti-fungus treated and anti-reflection coated for maximum light throughput*

### FOCUSING

Double coaxial, low-positioned coarse and fine adjustments with 180 graduations. Precision 1.1  $\mu$ m, 200  $\mu$ m per rotation, total travel range is approximately 19 mm. Supplied with an adjustable rack stop to prevent damage to sample and objectives. The coarse adjustment is equipped with friction control

STAGE

The bScope® is equipped with a scratch resistant 185 x 140 mm stage with integrated 74 x 48 mm X-Y rackless mechanical stage, Vernier scale, soft-close removable specimen holder

The rackless stage has no protruding parts, enables more smooth movements and is safer in use. Low-positioned X-Y control knobs prevent fatigue during long working sessions

CONDENSER FOR BRIGHTFIELD

The standard height adjustable Abbe N.A. 1.25 condenser for brightfield comes with an iris diaphragm and swing-out filter holder

POLARIZATION

The bScope® has an integrated slot above the nosepiece for an optional polarization filter for transmitted illumination

NEOLED™ REFLECTED ILLUMINATION

Reflected intensity adjustable 3 W NeoLED™ Köhler illumination with external power supply, push-pull type rotatable polarizer and push-pull analyzer, built-in condenser with iris diaphragm and field iris diaphragm. Integrated rotating filter disc with green, blue, yellow and white filters

NEOLED™ TRANSMITTED ILLUMINATION

The 3 W adjustable Köhler NeoLED™ diascope illumination is powered by an internal 100-240 V power supply making it suitable for worldwide use. The innovative NeoLED™ design offers larger apertures, allowing the optical system of the bScope® microscope to produce images at higher resolutions, very close to the theoretical diffraction limit of the optics. Other benefits of the NeoLED™ is the low energy consumption, no heating and a long operating life span

KÖHLER ILLUMINATION

Köhler illumination ensures for all infinity corrected IOS models the highest possible contrast and the maximum achievable resolving power. Generates a uniform illumination of the sample and eliminates all interference from dust on lenses and side glare of the light source

CORDLESS USE

The optional rechargeable AA batteries turn the bScope® into a cordless system (only available for the transmitted illumination)

CSS – CABLE STORAGE SYSTEM

This system allows users to easily stow away excess cable length into the back of the instrument during operation and to roll up the power cable for easy storage

CARRYING GRIP

The integrated carrying grip at the back of the microscope ensures safe transportation of the microscope



ANTI-THEFT SLOT

At the back of the microscope a Kensington Security Slot is placed, which can be used to secure the instrument from theft

PACKAGE CONTENT

Smart polystyrene packaging ensures a low environmental footprint while maintaining maximum safety during transport. Supplied with power cord, dust cover, tools, a spare fuse, white filter and user manual

MODEL	Trinocular	WF 10x/22 mm eyepieces	PLMi 5x/10x/20x/50x IOS objectives	Transmitted NeoLED™ Köhler illumination	Reflected NeoLED™ Köhler illumination
BS.1053-PLMi	•	•	•	•	•

Optional: PLSi 100x IOS objective

ACCESSORIES AND SPARE PARTS

EYEPIECES

- BS.6310** WF 10x/22 mm eyepiece, Ø 30 mm tube
- BS.6310-M** WF 10x/22 mm eyepiece, Ø 30 mm tube with 10/100 micrometer
- BS.6315** WF 15x/12 mm eyepiece, Ø 30 mm tube
- BS.6399** Pair of eyecups, Ø 30 mm tube

OBJECTIVES

- BS.8105** Plan M-IOS 5x/0.12 infinity corrected objective. WD 26.1 mm
- BS.8110** Plan M-IOS 10x/0.25 infinity corrected objective. WD 20.20 mm
- BS.8120** Plan M-IOS 20x/0.40 infinity corrected objective. WD 8.80 mm
- BS.8150** Plan M-IOS 50x/0.70 infinity corrected objective. WD 3.68 mm
- BS.8180** Plan M-IOS 80x/0.80 infinity corrected objective. WD 1.25 mm
- BS.8100** Plan M-IOS 100x/0.85 infinity corrected objective. WD 0.40 mm

WD = working distance

POLARIZATION

- BS.9602** Analyzer in mount for under nosepiece
- BS.9645** Polarizer, for lamphouse
- BS.9601-R** Polarizer in slider for reflected illumination attachment

MISCELLANEOUS

- AE.1370** Set of rechargeable AA batteries, three pieces
- BS.9577-L** Add-on for left handed mechanical stage (only with new purchased microscope)
- BS.9515** Metal plain insert for mechanical stage
- BS.9518** Glass plain insert for mechanical stage
- AE.5226** Glass fuses 3A 250V, 10pcs
- AE.9919** Nylon bag for bScope. 58(h) x 32(w) x 24(d)

CAMERA ACCESSORIES

- AE.5130** Universal Ø 23.2 mm tube adapter with built-in 2x lens for SLR photo camera with APS-C sensor. Needs T2 adapter
- AE.5025** T2 adapter for Nikon D SLR digital camera
- AE.5040** T2 adapter for Canon EOS SLR digital camera

DISPOSABLES

- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces
- PB.5165** Cover glasses 18 x 18 mm, thickness 0.13-0.17 mm, 100 pieces
- PB.5168** Cover glasses 22 x 22 mm, thickness 0.13-0.17 mm, 100 pieces
- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5255** Immersion oil (25 ml). n = 1.515
- PB.5274** Isopropyl alcohol 99% (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue/paper, brush, air blower, cotton swabs

WD = working distance



# MATERIALS SCIENCE MICROSCOPES

Delphi-X  
observer

NeoLED™  
euromex optical technology

## Delphi-X Observer™ for materials science

State-of-the-art microscopes for advanced materials science applications

The ergonomic design and outstanding objectives make the Delphi-X Observer™ the ideal microscope for advanced materials application. The 25 mm field of view of the eyepieces and the plan apochromatic objectives enable observations with perfect color rendering at high resolving power



● DX.2053-PLMRi

**DX.2053-PLMRi**  
510 (h) x 261 (w) x 367 mm (d) | 21.1 kg

## HIGHLIGHTS

- Brightfield and darkfield EPI illumination
- Polarization
- Nomarski DIC (optional)
- Enhanced infinity corrected EIS optical system
- High contrast objectives with minimal aberrations
- Full apo, semi-apo and plan EIS objectives
- Super wide field SWF 10x/25mm eyepieces
- 100 W halogen illumination
- Sextuple reversed nosepiece with slot for DIC
- Quintuple nosepiece for polarization models

## SPECIFICATIONS

### EYEPIECES

Super wide field SWF 10x/25 mm, Ø 30 mm tubes  
Extended wide field EWF 10x/22 mm, Ø 30 mm tubes (optional)

### STANDARD HEAD

Siedentopf trinocular with 30° inclined tubes. Interpupillary distance adjustable between 47 and 78 mm. The trinocular standard head has an optical path selector (100:0 / 80:20 / 0:100). Diopter adjustment on both eyepieces

### ERGONOMIC TILTING HEAD

Optional ergonomic 0 to 35° tilting trinocular head supplied with SWF 10x/25 mm eyepieces, interpupillary distance between 47-78 mm and photo tube with a standard Ø 23.2 mm tube. The trinocular tilting head has an optical path selector (100:0 / 80:20 / 0:100). Diopter ± 5 adjustments on both eyepieces

### NOSEPIECE

Revolving sextuple reversed nosepiece on ball-bearings except the models for polarization applications which are equipped with a quintuple nosepiece

### ENHANCED INFINITY SYSTEM (EIS)

The enhanced infinity system (EIS) of the Delphi-X Observer™ consists of super wide field SFWF 10x25 mm eyepieces, high numerical aperture objectives and a 200 mm focal length

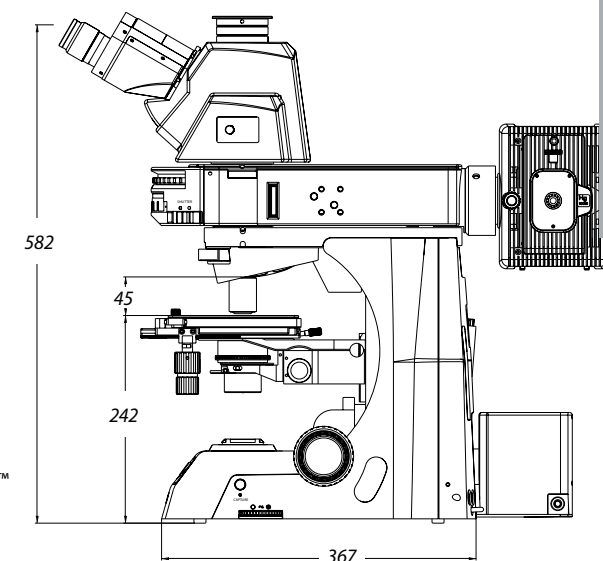


● Revolver with slot for Nomarski DIC slider

tube lens. This tube lens reduces the angle of the light rays passing through the optics and as a direct result significantly improves the chromatic aberration corrections and contrast. The objectives with larger diameter enable much higher numerical apertures improving the overall resolving power of the optical system

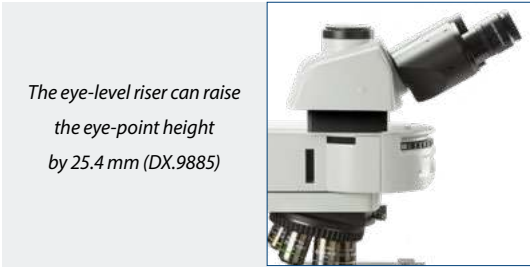
For all these reasons the Delphi-X Observer™ offers superior optical performance for the most demanding applications

## DIMENSIONS



Plan semi-apo PLMi (BF/DF)	DX.81xx		5x/0.15, WD 20 mm	10x/0.30, WD 11 mm	20x/0.45, WD 3.1 mm		
Plan apo PLMi (BF/DF)	DX.81xx					50x/0.80, WD 1 mm	100x/0.90, WD 1 mm <sup>(1)</sup>
Plan semi-apo PLPOLRi <sup>(2)</sup> strain-free	DX.79xx		5x/0.15, WD 20 mm	10x/0.30, WD 11 mm	20x/0.45, WD 3.0 mm	50x/0.80, WD 1 mm	100x/0.90, WD 1 mm <sup>(1)</sup>
Plan PLPOLi (BF/POL) <sup>(3)</sup> strain-free	DX.79xx	2x/0.06, WD 7.5 mm	4x/0.10, WD 20 mm	10x/0.25, WD 10.2 mm	20x/0.45, WD 12 mm	40x/0.65, WD 0.7 mm	60x/0.80, WD 0.3 mm <sup>(1)</sup>

<sup>1)</sup> Optional  
<sup>2)</sup> For models for polarization applications with incident illumination. No cover glass correction  
<sup>3)</sup> For models for polarization applications without incident illumination. With 0.17 mm cover glass correction  
DX.81xx objectives are 45 mm parfocal and have a M26 x 0.7 mounting thread  
DX.79xx objectives are 60 mm parfocal and have a M25 x 0.7 mounting thread  
All optics are anti-fungus treated and anti-reflection coated for maximum light throughput  
WD = working distance



STAGE

- Large 215 x 170 mm stage with 105 x 105 mm integrated right-handed mechanical stage, with glass and metal insert. Stage height can be lowered for large samples (1 to 28 mm standard sample size, lowered to 55 mm sample size)
- Diameter 190 mm circular stage for models for polarization applications. 360° Rotatable with Vernier and two object clamps and an optional 30 x 30 mm X-Y mechanical stage

CONDENSER FOR POLARIZATION

Height adjustable Abbe N.A. 1.25 condenser with iris diaphragm and 306° rotatable polarizer

FOCUSING

Coaxial coarse and fine adjustment, 100 graduations, 1 µm precision, 100 µm per rotation, total travel range is approximately 35 mm. Supplied with an adjustable rack stop to prevent damage to sample and objectives. The coarse

adjustments are equipped with friction control. The focusing knobs can be switched from left to right according to the user's preference

LONG WORKING DISTANCE CONDENSER

In height adjustable long working distance N.A. 0.65 condenser (10.2 mm) with numerical aperture identification marks allows easy setting

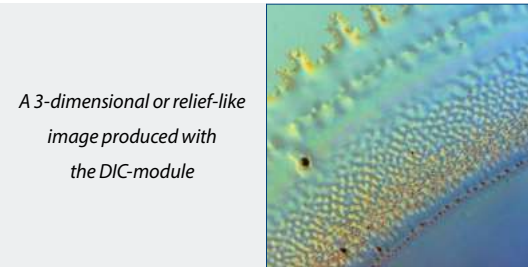
ILLUMINATION

The Delphi-X Observer™ materials science microscope is equipped with epi and diascope intensity adjustable 100 W halogen illumination with internal 100-240 Vac power supply. The diascope halogen illumination comes with two push-in/ push-out neutral density filters for smooth attenuation of the light intensity for all kinds of samples

The microscope comes with an analyzer and a polarizer which can easily be inserted into the free slots of the Epi-Illuminator for high quality polarized images. Furthermore a rotating cassette is implemented for quick changing between darkfield, brightfield and dimmed brightfield

NOMARSKI DIC (OPTIONAL)

With the redesign of the DIC-module visualization of height differences which normally cannot be displayed using



brightfield techniques has greatly improved. These relief-like images are ideal for surface inspections of wafers, LCD screens, etc

ICARE SENSOR

The unique iCare Sensor is developed to avoid unnecessary loss of energy. The illumination of the microscope automatically switches off shortly after microscopists step away from their position

CARRYING GRIP

The carrying grip at the back of the microscope ensures safe transportation of the microscope and the integrated tool and holder makes sure the right tool is always available

PACKAGE CONTENT

Supplied with power cord, dust cover, a spare fuse, user manual and universal tool. All packed in a polystyrene box

MODELS	Fixed 30 degree Siedentopf head	Ergonomic tilting head	Plan EIS 2x/0.06 objective*	Plan EIS 4x/0.10, 10x/0.25 and 40x/0.65 objectives*	Plan semi-apo EIS 5x/0.15, 10x/0.30 and 20x/0.45 objectives*	Plan apo EIS 50x/0.80 objective*	Plan apo EIS 100x/0.90 objective*	100 W 12 V transmitted halogen Köhler illumination	100 W 12 V reflected halogen Köhler illumination	(DIC)
DX.2053-PLMRi	•		o		•	•	o	•	•	o
DX.2058-PLMRi		•	o		•	•	o	•	•	o
DX.2053-PLMi	•		o		•	•	o		•	o
DX.2058-PLMi		•	o		•	•	o		•	o
DX.2053-PLPOLRi	•		o		•	•	o	•	•	o
DX.2058-PLPOLRi		•	o		•	•	o	•	•	o
DX.2053-PLPOLi	•		o	•		o	o	•		o
DX.2058-PLPOLi		•	o	•		o	o	•		o

\* Infinity corrected  
o = optional



● DX.2053-PLPOLRi

## ACCESSORIES AND SPARE PARTS

### EYEPIECES

- DX.6010** Super wide field SWF 10x/25 mm eyepiece for Ø 30 mm tube
- DX.6010-CM** Super wide field SWF 10x/25 mm eyepiece with 10/100 micrometer and crosshairs for Ø 30 mm tube
- DX.6210** Super wide field SWF 10x/22 mm eyepiece for Ø 30 mm tube
- DX.6210-CM** Super wide field SWF 10x/22 mm eyepiece with micrometer and crosshairs for Ø 30 mm tube
- DX.6012** Wide field WF 12.5x/17.5 mm eyepiece for Ø 30 mm tube
- DX.6015** Wide field WF 15x/16 mm eyepiece for Ø 30 mm tube
- DX.6020** Wide field WF 20x/12 mm eyepiece for Ø 30 mm tube
- DX.6099-L** Eyecup for eyepiece
- DX.6099-N** Eshshade for eyepieces

### INFINITY CORRECTED OBJECTIVES

(all DX.81xx below have a M26 x 0.7 thread, 45 mm parfocal)

- DX.8102** Infinity EIS 45 mm plan PLMi 2x/0.06 objective. WD 7.5 mm \*
- DX.8105** Infinity EIS 45 mm plan semi-apochromatic SAMi 5x/0.15 objective. WD 20 mm \*
- DX.8110** Infinity EIS 45 mm plan semi-apochromatic SAMi 10x/0.30 objective. WD 11 mm \*
- DX.8120** Infinity EIS 45 mm plan semi-apochromatic SAMi 20x/0.45 objective. WD 3.0 mm \*
- DX.8150** Infinity EIS 45 mm plan apochromatic PLAMi 50x/0.80 objective. WD 1 mm \*
- DX.8100** Infinity EIS 45 mm plan apochromatic PLAMi 100x/0.90 objective. WD 1 mm

\* No cover glass correction

(all DX.79xx below have a M25 x 0.7 thread, 60 mm parfocal)

- DX.7905-R** Infinity EIS 60 mm plan Semi-apochromatic PLPOLi 5x/0.15 strain-free objective. WD 20 mm. No cover glass correction

- DX.7910-R** Infinity EIS 60 mm plan Semi-apochromatic PLPOLi 10x/0.30 strain-free objective. WD 11 mm. No cover glass correction
- DX.7920-R** Infinity EIS 60 mm plan Semi-apochromatic PLPOLi 20x/0.45 strain-free objective. WD 3.0 mm. No cover glass correction
- DX.7950-R** Infinity EIS 60 mm plan apochromatic PLPOLi 50x/0.80 strain-free objective. WD 1 mm. No cover glass correction
- DX.7904-T** Infinity EIS 60 mm plan PLPOLi 4x/0.10 strain-free objective. WD 20 mm. With 0.17 mm cover glass correction
- DX.7910-T** Infinity EIS 60 mm plan PLPOLi 10x/0.25 strain-free objective. WD 10.2 mm. With 0.17 mm cover glass correction
- DX.7920-T** Infinity EIS 60 mm plan PLPOLi 20x/0.40 strain-free objective. WD 12 mm. With 0.17 mm cover glass correction
- DX.7940-T** Infinity EIS 60 mm plan PLPOLi 40x/0.65 strain-free objective. WD 0.7 mm. With 0.17 mm cover glass correction
- DX.7960-T** Infinity EIS 60 mm plan PLPOLi 60x/0.80 strain-free objective. WD 0.3 mm. With 0.17 mm cover glass correction
- DX.7900-T** Infinity EIS 60 mm plan PLPOLi S100x/1.25 strain-free oil-immersion objective. WD 0.2 mm. With 0.17 mm cover glass correction

WD = working distance

### POLARIZATION ATTACHMENT

with transmitted illumination

- DX.9604** Slider with quartz wedge plate
- DX.9608** Slider with 0-360° rotatable analyzer, 0.1° divisions
- DX.9610** Slider with Lambda plate first red
- DX.9612** Slider with Lambda/4 plate
- DX.9602** Slider with rotatable polarizer to be inserted in condenser of transmitted illumination



## POLARIZATION ATTACHMENT

with incident illumination

- DX.9602-R** Slider with rotatable polarizer to be inserted in reflected illumination attachment
- DX.9604-R** Slider with quartz wedge plate for reflected illumination attachment
- DX.9608-R** Slider with 0-360° rotatable analyzer, 0.1° divisions
- DX.9610-R** Slider with 1 lambda first plate red for reflected illumination attachment

## MATERIALS SCIENCE STAGES

- DX.9502-R** Plain mechanical stage right handed
- DX.9502-L** Plain mechanical stage left handed
- DX.9501-R** Stage with Gorilla glass, hole and specimen holder. Right handed
- DX.9501-L** Stage with Gorilla glass, hole and specimen holder. Left handed
- DX.9504-R** Stage with Sapphire glass, hole and specimen holder. Right handed
- DX.9504-L** Stage with Sapphire glass, hole and specimen holder. Left handed

## CAMERA ACCESSORIES

- DX.9810** C-mount with 1 magnification for C-mount camera
- DX.9835** C-mount with high resolution relay 0.35x objective for 1/3 inch C-mount camera
- DX.9850** C-mount with high resolution relay 0.50x objective for 1/2 inch C-mount camera
- DX.9863** C-mount with high resolution relay 0.63x objective for 2/3 inch C-mount camera
- AE.5130** Universal SLR-adaptor with built-in 2x lens for standard 23.2 mm tube. Needs T2 adapter
- AE.5025** T2 adapter for Nikon D SLR-digital camera
- AE.5040** T2 adapter for Canon EOS SLR-digital camera
- DX.9800** Side single photoport attachment

## MISCELLANEOUS

- DX.9696** DIC attachment for materials sciences Delphi-X Observer™ models
- DX.9704** Yellow filter for lamphouse, diameter 45 mm
- DX.9885** 25.4 mm eye-level riser (1 inch)
- DX.9887** 40 mm nosepiece and stage lowering attachment
- DX.9961** 100 Watt 12 V halogen bulb for Delphi-X Observer™ (revision-2 models)
- AE.5216** Fuses 5A 250 V, per 10 pcs. models with 100 W halogen
- DX.9522** Optional 30 x 30 mm X-Y mechanical stage for polarization microscopes

## DISPOSABLES

- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5255** Immersion oil, 25 ml. Refraction index  $n = 1.515$
- PB.5274** Isopropyl alcohol 99%, 200 ml
- PB.5275** Cleaning kit: lens fluid, lint free lens tissue paper, brush, air blower, cotton swabs
- PB.5276** Microscope maintenance and servicing kit, 16pcs: cleaning brush, 6 pcs screwdriver set, air blower, 3 pcs Allen key, 1.5, 2, 2.5 mm, lens cleaning fluid 20 ml, cleaning cloth 140 x 140 mm, 100 pcs lens tissue sheets, tube of maintenance grease, 10 ml bottle of oil, packed in a nice toolbox

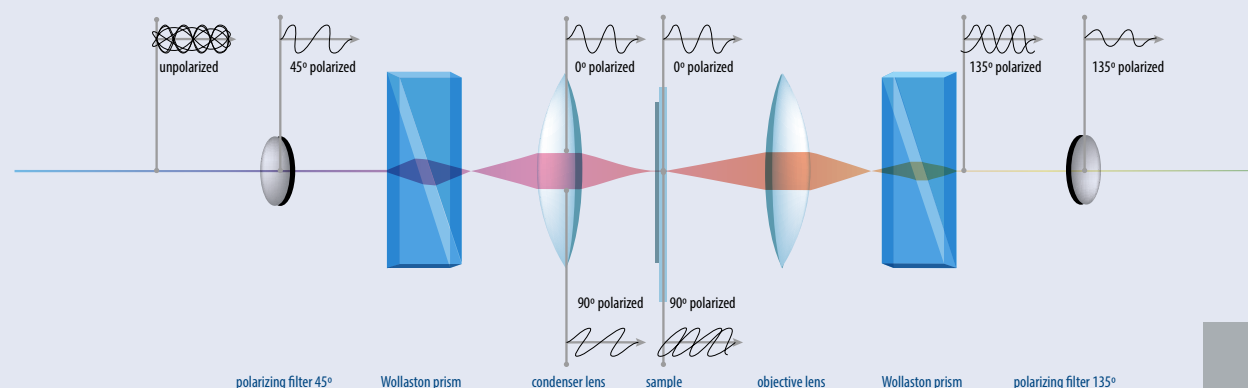


# about differential interference contrast

TECHNICAL  
FACTS

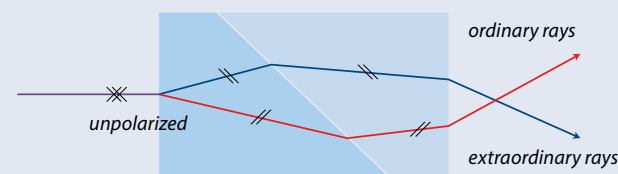
Differential interference contrast (DIC) technique helps in microscopy to enhance the contrast of samples

The technique is based on interferometry to obtain information about the small difference in optical path length between two orthogonally polarized light rays coming from the sample. This results in an image of the sample appearing as a three-dimensional physical relief. Polarized light is split into two orthogonally polarized coherent light rays by means of a Nomarski-modified Wollaston prism. Subsequently the sample spatially shifts the light rays slightly.



By passing a second Nomarski-modified Wollaston prism, the spatially shifted polarized light is recombined. These recombined light rays pass through a second polarization filter that blocks useless direct transmitted light. The interference of the two rays is sensitive to the optical path difference and by introducing an adjustable offset, the contrast is proportional to the path length so that the heights

and depths of the sample appear as three-dimensional objects. Discontinuities on the surface, edges, lines and height differences on the sample create optical path differences that are turned into amplitude / intensity differences in the image, enhancing details in a topographically incorrect way but enables imaging of otherwise invisible details



The Nomarski prism consists of two birefringent crystal wedges cemented together at the hypotenuse. One wedge is a Wollaston wedge, the second wedge of the prism is modified by cutting the crystal so that the optical axis is oriented obliquely with respect to the flat surface of the prism

# MATERIALS SCIENCE MICROSCOPES

Oxion

NeoLED™  
euromex optical technology

Oxion

for materials science

Oxion microscopes for materials science are specifically designed for the observation of many types of materials in university and in industrial research laboratories and by other professionals

Thanks to the high resolution optics and state-of-the-art components, these microscopes can be widely used for routine and fundamental applications



product information



OX.3245

430 (h) x 180 (w) x 430 mm (d) | 9.9 kg



OX.3245

## SPECIFICATIONS

### EYEPIECES

HWF 10x/22mm eyepieces. All eyepieces can be secured with an Allen screw

### HEAD

Trinocular Siedentopf heads with 30° inclined tubes. Interpupillary distance from 48 to 75 mm. Diopter  $\pm 5$  diopter adjustment on both eyepieces. A unique rotating system allows ergonomic positioning of both tubes in an upper (431 mm) and in a lower position (397 mm)

## HIGHLIGHTS

- Trinocular model
- HWF 10x/22 mm eyepieces
- Reversed quintuple nosepiece
- Plan M-IOs objectives
- Transmitted 3 W NeoLED™ illumination
- Reflected 3 W NeoLED™ illumination
- Polarization and analyzer filters
- 10 Years warranty

### NOSEPIECE

Reversed nosepiece for a maximum of five objectives on ball bearings

### OBJECTIVES

(IOS-infinity corrected system)  
Standard configurations equipped with infinity corrected long working distance LWD plan M-IOs 5x/0.14, 10x/0.25, 20x/0.40 and plan semi apochromatic LWD 50x/0.55 and 100x/0.80 objectives

*All optics have an anti-reflection coating for maximum light throughput and are anti-fungus treated*

### FOCUSING

Coaxial coarse and fine adjustments, 200 graduations, 1  $\mu$ m per graduation, 200  $\mu$ m per rotation, total travel range is approximately 28 mm.

Supplied with an adjustable rack stop to prevent damage to sample and objectives. The coarse adjustments are equipped with friction control

Reflected illumination unit  
with oblique lighting feature



STAGE

180 x 145 mm stage with integrated mechanical 78 x 45 mm X-Y stage. Is supplied with plain metal and plain glass inserts  
*A ceramic stage is also available on request*

CONDENSER FOR TRANSMITTED ILLUMINATION

Height adjustable Abbe condenser N.A. 1.25 with iris diaphragm and filter holder

TRANSMITTED ILLUMINATION

All models are supplied with 3 W adjustable NeoLed™ illumination with integrated 100-240 V power supply. Köhler illumination with field diaphragm

REFLECTED EPI-ILLUMINATION

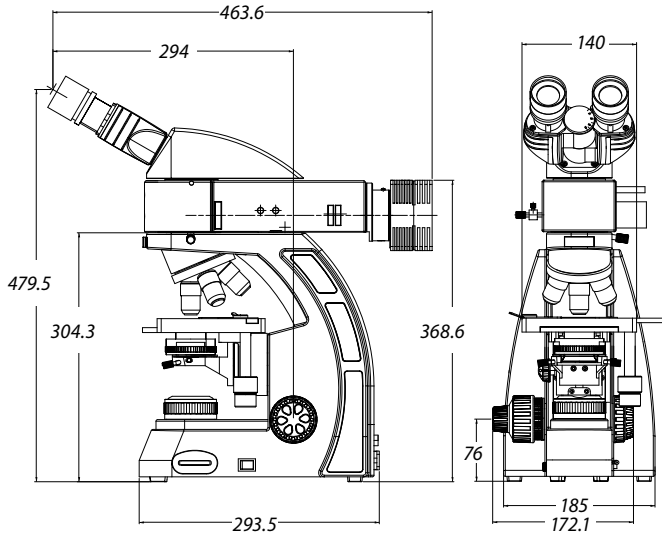
Intensity adjustable 3 W NeoLED™ Köhler illumination with external 110-240 Vac / 5 Vdc power supply. Push-pull type 90° rotatable polarizer and fixed analyzer. Built-in condenser with field and aperture iris diaphragm. Oblique lighting feature. Supplied with blue and green filter

PACKAGE CONTENT

Supplied with power cord, dust cover, a spare fuse and user manual. All packed in a polystyrene box



DIMENSIONS



OX.3240

MODELS	Trinocular	M-IOS 5x/10x/20x/50x objectives	M-IOS 100x objective	Transmitted illumination 3 W NeoLED™	Reflected illumination 3 W NeoLED™
OX.3240	•	•	o	•	•

o = optional

ACCESSORIES AND SPARE PARTS

EYEPIECES

- AE.3210 HWF 10x/22 mm eyepiece
- AE.3215 HWF 15x/13 mm eyepiece
- AE.3223 HWF 10x/22 mm eyepiece with 10 mm/100 micrometer
- AE.3225 Pair of eyecups

OBJECTIVES

- AE.3172 Plan achromatic M-IOS PL 5x/0.15 objective.\* WD 10.8 mm
- AE.3173 Plan achromatic M-IOS PL 10x/0.30 objective.\* WD 12.2 mm
- AE.3175 Plan achromatic M-IOS PL 20x/0.45 objective.\* WD 4 mm
- AE.3177 Plan semi apochromatic M-IOS 50x/0.55 objective.\* WD 7.9 mm
- AE.3179 Plan semi apochromatic M-IOS 100x/0.80 objective.\* WD 2.1 mm

\*No cover glass correction  
WD = working distance

POLARIZATION ATTACHMENTS

- AE.3190 Polarizer/analyzer set for transmitted illumination
- AE.3192 Polarizer slider for nosepiece
- AE.3194 Polarizer for lamphouse
- AE.3193 Analyzer for reflected illumination unit
- AE.3195 Polarizer, 360° rotatable (for reflected illumination unit)

FILTERS

- AE.3196 Frosted filter 45 mm, for lamphouse
- AE.3198 Blue filter 45 mm, for lamphouse
- AE.3200 Yellow filter 45 mm, for lamphouse
- AE.3202 Green filter 45 mm, for lamphouse
- AE.3205 Blue interference 480 nm filter (for reflected illumination unit)
- AE.3206 Green interference 520-570 nm filter (for reflected illumination unit)
- AE.3208 White color balance interference filter (for reflected illumination unit)

CAMERA ACCESSORIES

- AE.5120-2 Standard 23.2 mm diameter tube for Oxion photo port revision-2
- AE.5130 Universal SLR camera adapter with 2x projection lens for 23.2 mm tubes. Needs T2 adapter and AE.5120 or AE.5120-2
- AE.5025 T2 adapter for Nikon D digital SLR cameras
- AE.5040 T2 adapter for Canon EOS digital SLR cameras
- OX.9810 C-mount with 1.0x objective
- OX.9833 C-mount with 0.33x objective for 1/3" sensors cameras
- OX.9850 C-mount with 0.5x objective for 1/2" sensors cameras

MISCELLANEOUS

- OX.9515 Metal plain insert for mechanical stage
- OX.9518 Glass plain insert for mechanical stage
- AE.3185 Slider with darkfield stop for transmitted illumination (only for objectives 10x, 20x and S40x)
- AE.3199 Glass fuses 3.15 A 250 V, 10 pieces

DISPOSABLES

- PB.5245 Lens cleaning paper, 100 sheets
- PB.5274 Cleaning liquid, isopropanol alcohol 99% (200ml)
- PB.5275 Cleaning kit: lens cleaning fluid, lint free lens tissue, brush, air blower and cotton swabs

● Plain stage





# MATERIALS SCIENCE MICROSCOPES

Delphi-X  
inverso

## Delphi-X Inverso™ for materials science

Delphi-X Inverso™ for materials science is an inverted microscope for the professional with demanding applications for materials sciences samples



● DI.1053-PLMI



DI metallurgical



DI.1053-PLMI

414.5 (h) x 385 (w) x 627.5 mm (d) | 29 kg

## HIGHLIGHTS

- Materials science applications
- Observation of materials science samples
- Brightfield, dark field, polarization
- DIC (differential interference contrast)
- Long working distance IOS plan (semi-)apochromatic objectives
- Revolving sextuple nosepiece
- 100 W halogen illumination



● Bertrand lens and trino/eyepieces selector

## SPECIFICATIONS

### EYEPIECES

Pair of HWF plan 10x/22 mm

### HEAD

Trinocular 45° inclined tubes. Interpupillary distance of 47 to 78 mm. Trinocular head with 100-0, 50/50 and 0/100 positions. Built-in Bertrand lens

### NOSEPIECE

Revolving sextuple nosepiece on ball-bearings. With DIC slot

### OBJECTIVES – 45 MM PARFOCAL

High numerical, infinity (semi-)apochromatic bright-/darkfield objectives. Long working distance, IOS, no cover glass correction, M26 mount

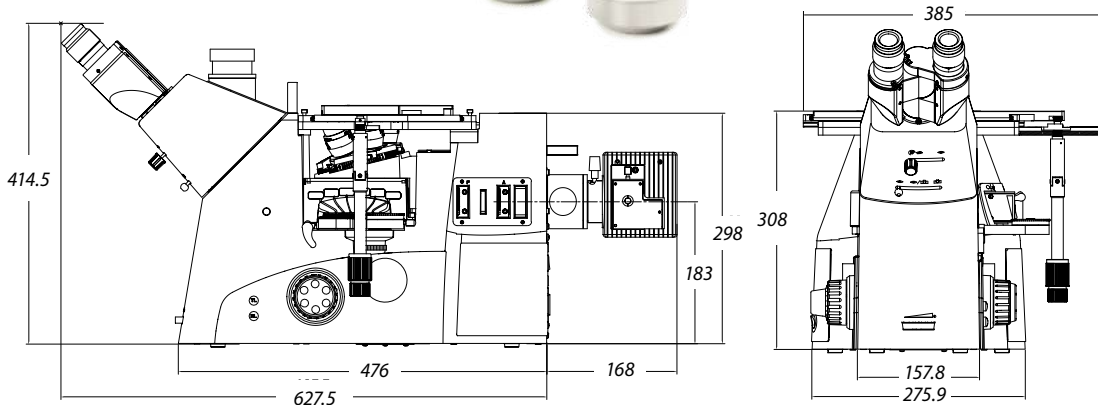
- Plan Semi-Apochromatic (SAMi): 5x/0.15 WD 20 mm, 10x/0.30 WD 11 mm, 20x/0.45 WD 3.1 mm
- Plan Apochromatic (Plan Apo (PLAMi)): 50x/0.80 WD 1 mm and optional 100x/0.90 WD 1 mm

WD = working distance

All optics are anti-fungus treated and anti-reflection coated for maximum light throughput



## DIMENSIONS



STAGE

Stage 340 x 230 mm, equipped with a coaxial mechanical 130 x 85 mm X-Y stage  
Supplied with:

- Metal insert with hole ø 20 mm
- Metal insert with hole ø 28 mm
- Metal insert with drop-shaped hole

Maximum weight for sample: 30 kg

MAGNIFICATION CHANGER

A magnification changer with a 1.5x lens allows intermediary magnifications of 1.5 times the standard objective magnifications. For example, switching from 20x or 50x to 30x to 75x magnification can be done without the need to change objectives

MULTIFUNCTIONAL WHEEL

The Delphi-X Inverso has a 6-position multifunctional wheel, supplied with cubes for two brightfield, one darkfield and one polarization filter. Slider with prisms for the 5x/20x and 50x/100x magnifications and slider with analyzer. See photo 1

ADDITIONAL SLIDER SLOTS

Besides a field diaphragm and condenser aperture, two slots are available. A slider with two neutral density filters is also supplied. See photo 2

FOCUS ADJUSTMENT

Low positioned coaxial with 10 mm coarse and fine adjustments focusing knobs, 1 µm precision and with friction adjustment

CAMERA PORTS

Beside the standard photo port of the head, there are two other photo parts at both both left and right side of the microscope. See photo 3

ILLUMINATION

Reflected 100 W halogen Intensity adjustable with internal 100-240 V power supply. Fuse holder 1 A / 250 V



MODELS	Trino	LWD Plan Semi-Apo 5/10/20x	LWD Plan Apo 50x	LWD Plan Apo 100x	100 W Halogen illumination	DIC
DI.1053-PLMI	•	•	•		•	o
DI.1153-PLMI	•	•	•	•	•	o

o = optional

ACCESSOIRES

EYEPIECES

Ø 30 mm

- DI.6010** Super wide field SWF 10x/25 mm f ocusable eyepiece for Delphi-X Inverso
- DI.6010-C** Super wide field SWF 10x/25 mm eyepiece with crosshairs
- DI.6010-M** Super wide field SWF 10x/25 mm eyepiece with micrometer
- DI.6010-CM** Super wide field SWF 10x/25 mm eyepiece with micrometer and crosshairs
- DI.6010-SG** Super wide field SWF 10x/25 mm eyepiece with 20 x 20 square grid reticle
- DI.6210** Super wide field SWF 10x/22 mm focusable eyepiece for Delphi-X Inverso
- DI.6012** Wide field WF 12.5x/17.5 mm eyepiece for Ø 30 mm tube for Delphi-X Inverso
- DI.6015** Wide field WF 15x/16 mm eyepiece for Ø 30 mm tube for Delphi-X Inverso
- DI.6020** Wide field WF 20x/12 mm eyepiece for Ø 30 mm tube for Delphi-X Inverso
- DI.6099-L** Eyeshade for eyepieces

OBJECTIVES 45 MM PARFOCAL

M26 mounting thread, no cover glass correction

- DI.8105** Infinity Plan Semi-Apochromatic PLMi 5x/0.15 IOS BD objective, working distance 20 mm
- DI.8110** Infinity Plan Semi-Apochromatic PLMi 10x/0.30 IOS BD objective, working distance 11 mm
- DI.8120** Infinity Plan Semi-Apochromatic PLMi 20x/0.40 IOS BD objective, working distance 3.1 mm
- DI.8150** Infinity Plan Apochromatic PLMi 50x/0.80 IOS BD objective, working distance 1 mm
- DI.8100** Infinity Plan Apochromatic PLMi 100x/0.90 IOS BD objective, working distance 1 mm

BD = brightfield/darkfield

DIFFERENTIAL INTERFERENCE CONTRAST (DIC)

- DI.9691-52** DIC prism for nosepiece of materials science Delphi Inverso model. To be used with Plan Semi-Apochromatic 5x/20x objectives
- DI.9691-51** DIC prism for nosepiece of materials science Delphi Inverso models. To be used with Plan Apochromatic 50x/100x objectives
- DI.9698** DIC analyzer for nosepiece for life science Delphi-X Observer DIC

MISCELLANEOUS

- DI.9810** C-mount with 1x magnification for 1 or 2/3 inch C-mount camera
- DI.9840** C-mount with 0,4x magnification for 1/3 inch C-mount camera
- DI.9850** C-mount with 0,5x magnification for 1/2 inch C-mount camera



# MATERIALS SCIENCE MICROSCOPES

Oxion  
inverso

## Oxion Inverso for materials science

The Oxion Inverso inverted microscopes for materials science are intensively used for observation of large pieces of material, made for example of metal, wood or plastics

The Oxion Inverso is available with a powerful 50 W halogen brightfield contrast illumination and a large mechanical stage. The polarization and color filters make this instrument suitable for a wide variety of applications



product information



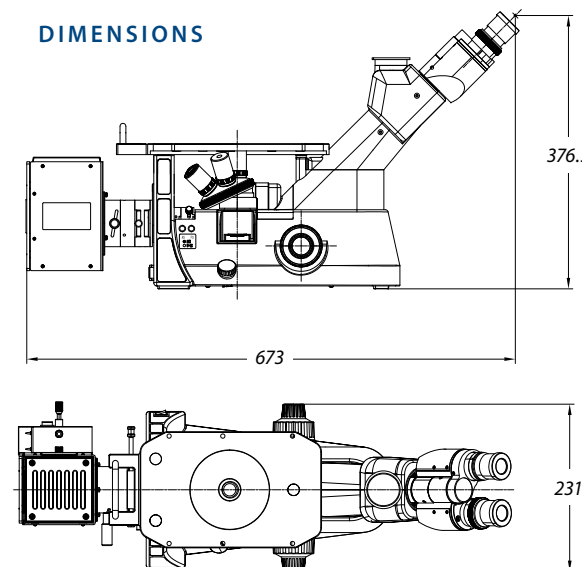
● OX.2153-PLM

OX.2153-PLM / OX.2653-PLM  
376.5 (h) x 231 (w) x 673 mm (d) | 10.8 kg

## HIGHLIGHTS

- Materials science applications
- Observation of all types of materials
- Brightfield with polarization options
- Long working IOS plan achromatic objectives
- Long working IOS plan semi apochromatic objectives
- Revolving quintuple nosepiece
- 50 W halogen Köhler illumination
- 10 Years warranty

## DIMENSIONS



## SPECIFICATIONS

### EYEPIECES

Pair of HWF plan 10x/22 mm eyepieces

### NOSEPIECE

Revolving quintuple nosepiece on ball-bearings

### HEAD

- Trinocular 45° inclined tubes
- One diopter adjustment on left eyepiece. Interpupillary distance of 54 to 75 mm
- Trinocular head with light path selector 100-0/0-100

### OBJECTIVES

Infinity color corrected long working distance 5x/0.15, 10x/0.14, 20x/0.45 plan achromatic IOS objectives and a plan semi apochromatic S50x/0.55 IOS objective. Model OX.2153-PLM also has a plan semi apochromatic S100x/0.80 IOS objective. No cover glass correction

*All optics are anti-fungus treated and anti-reflection coated for maximum light throughout*

### STAGE

Stage 250 x 230 mm equipped with a coaxial mechanical 120 x 78 mm X-Y stage, delivered with:

- metallic insert with Ø 12 mm hole and Ø 25 mm hole
- metallic insert with hole for mechanical stage

### FOCUSING

Coaxial 25 mm coarse and fine adjustments, 2 µm precision and with friction adjustment

### ILLUMINATION

Reflected Köhler 50 W halogen Intensity adjustable with internal 100-240 V power supply. Fuse holder 3.15 A / 250 V

### POLARIZATION

Standard polarization filter and 360° rotating analyzer

### FILTERS - Ø 30 MM

Blue and green filter mounted in slider, that can be inserted at the back of the illumination attachment. Polarization filter in slider, to be inserted under nosepiece

### PACKAGE CONTENT

Supplied with power cord, dust cover, blue and green filters and user manual. Microscope is supplied in an aluminum transport case

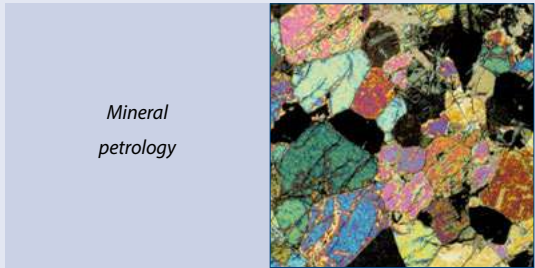


# about petrological microscopy

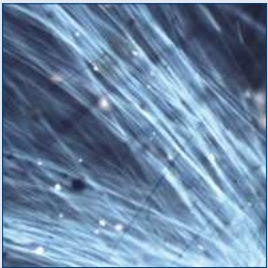
Euromex microscopes for polarization are intensively used in petrology and optical mineralogy to identify rocks, minerals in thin sections and asbestos fibers

Conventional brightfield microscopes are turned into a petrological microscope by:  
replacing the conventional rectangular stage with a circular 360° rotating stage

- adding strain free objectives for correct color rendering
- adding a removable polarization filter into the light path
- adding a second removable 360° rotating polarization filter - called analyzer - into the light path
- adding a Bertrand lens\* for observation of conoscopic interference fringes
- adding compensation wave plates
- adding reflected illumination



Mineral  
petrology



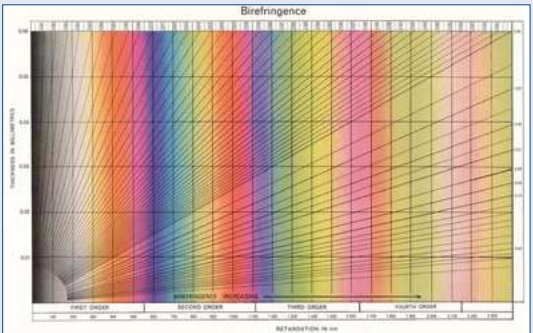
Crocidolite  
asbestos fiber

## The most common compensators are:

1  $\lambda$  Wave plate is often referred to as a first-order red plate or as a sensitive tint because it produces the interference color having a tint similar to the first-order red seen in the Michel-Levy chart. Introduce an optical path difference of circa 540-570 nm

- 1/4  $\lambda$  Wave plate is often referred to as a mica plate and is usually made from quartz or muscovite crystals sandwiched between two glass windows. Introduce an optical path difference of circa 140 nm

Quartz wedge is the simplest compensator, which is utilized to vary the optical path length difference to match that of the specimen



Michel-Levy chart ●

\* A so-called Bertrand lens - positioned between the analyzer and the eyepieces allows the microscopist to observe interference fringes. These images appear in the objective rear focal plane when an optically anisotropic specimen is viewed between crossed polarizers

MODELS	LWD plan 5x/10x/20x objectives	LWD plan apochromatic 50x objective	LWD plan apochromatic 100x objective	Mechanical stage
OX.2653-PLM	•	•		•
OX.2153-PLM	•	•	•	•

LWD = long working distance

## ACCESSORIES AND SPARE PARTS

### EYEPIECES

- OX.6010** HWF 10x/22 mm eyepiece
- OX.6015** HWF 15x/16 mm eyepiece
- OX.6110** HWF 10x/22 mm eyepiece with micrometer reticule
- OX.6099** Pair of eyecups

### OBJECTIVES

- OX.8205** Plan achromatic PLM 5x/0.15 IOS objective\*. WD 10.8 mm
- OX.8210** Plan achromatic PLM 10x/0.30 IOS objective\*. WD 12.2 mm
- OX.8220** Plan achromatic PLM 20x/0.45 IOS objective\*. WD 4 mm
- OX.8250** Plan semi apochromatic PLM S50x/0.55 IOS objective\*. WD 7.9 mm
- OX.8200** Plan semi apochromatic PLM S100x/0.80 IOS objective\*. WD 2.1 mm

\*No cover glass correction

WD = working distance

### STAGE AND ACCESSORIES

- OX.9500** Mechanical coaxial X-Y 120 x 78 mm stage
- OX.9506** Transparent glass insert with hole
- OX.9508** Metal insert with  $\varnothing$  12 mm hole
- OX.9509** Metal insert with  $\varnothing$  25 mm hole
- OX.9535** Metal insert for Petri dish  $\varnothing$  35 mm
- OX.9599** Universal culture-dish holder for translation stage



Large stage with  
X-Y mechanical stage

### FILTERS - $\varnothing$ 30 MM

- OX.9700** Blue filter in slider, for illumination attachment
- OX.9702** Green filter in slider, for illumination attachment
- OX.9710** Polarization filter in slider, fits under nosepiece

### C-MOUNT ADAPTERS

- OX.9810** CS/C mount with 1.0x objective
- OX.9833** CS/C mount with 0.33x objective for 1/3" sensor cameras
- OX.9850** CS/C mount with 0.5x objective for 1/2" sensor cameras

### MISCELLANEOUS

- AE.3199** Glass fuses 3.15 A 250 V, 10 pcs
- SL.3679** Halogen spare bulb 12 V 50 W
- AE.5120-2** Standard 23.2 mm diameter tube for Oxion Inverso photo port revision-2
- AE.5130** Universal SLR camera adapter with 2x projection lens for 23.2 mm tube. Needs T2 adapter and AE.5120 or AE.5120-2
- AE.5025** T2 adapter for Nikon D digital SLR cameras
- AE.5040** T2 adapter for Canon EOS digital SLR cameras
- AE.3199** Glass fuses 3.15 A 250 V packed, per 10 pieces
- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces
- PB.5165** Cover glasses 18 x 18 mm, thickness 0.13 - 0.17 mm, 100 pieces
- PB.5168** Cover glasses 22 x 22 mm, thickness 0.13 - 0.17 mm, 100 pieces
- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5255** Immersion oil, n = 1.515 (25 ml)
- PB.5274** Isopropyl alcohol 99% (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue, brush, air blower and cotton swabs

# industry

## digital solutions



digital solutions

Get ready to discover the digital world of microscopy with the newest Euromex digital products.

The broad product range of digital cameras and digital microscopes with a built-in camera offers the best suitable solutions for your specific application needs

Euromex digital products incorporate all the latest available technology in this field such as WiFi, HDMI and sCMOS sensors. Our digital solutions package includes the powerful ImageFocus software for image analysis



product information

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**COOLED COLOR CAMERAS • PAGE 360**  
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**ADAPTERS • PAGE 366**

## MACROZOOMS

### MZ.4500 macrozoom

The high-end MacroZoom is built around one 0.7 to 4.5 times optical zoom objective and must be used in combination with C-mount types of cameras with a HD screens or computer screens. With a working distance of 105 mm it is highly suitable for repairs, tooling engineers and visual inspections

A standard heavy metal base makes the whole system very stable for adding all kinds of illumination systems and camera systems



● MZ.4500

**MZ.4500**  
313 (h) 320 (w) 285 mm (d) | 3.06 kg



product information



## HIGHLIGHTS

- Stand-alone
- Zoom semi-apochromatic objective
- Zoom up to 0.7x to 4.5x
- C-mount with 0.4x objective
- 105 mm working distance
- Without illumination
- Metal stand
- 3 Years warranty

## SPECIFICATIONS

### CENTRAL ZOOM OBJECTIVE

The MacroZoom MZ.4500 features a single optical zoom objective with a 0.7x to 4.5x zoom magnification. Zoom adjustments engravings on 1, 1.5, 2, 3 and 4.5x. The working distance is 105 mm

### STAND

The MacroZoom is mounted on a 230 mm height pillar (Ø 32 mm) and holder (Ø 39/50 mm) that sits on a metal 320 x 260 x 16/25 mm metal stand

### CAMERA SYSTEMS

Any of our digital C-mount cameras (in this chapter) can be used together with the MacroZoom

### PACKAGING

Supplied with dust cover and packed in polystyrene



- The MZ.4500 in combination with the VC.3036-HDS



## MZ.4600

### digital macrozoom

This entry-level digital MacroZoom is equipped with a 0.7 to 5x zoom objective enables direct inspection of objects on external HD screen (not supplied). The mouse-driven built-in software control the camera parameters and enables measurements on screen, capturing and saving .jpg or .bmp format pictures and .mp4 format video on an USB memory stick

The MZ.4600 have a built-in High Definition 1080p 2MP camera which can deliver up to 60 images per seconds and needs to be connected to an external stand-alone HD screen

● MZ.4600



product information



**MZ.4600**  
323 (h) 320 (w) 260 mm (d) | 4.4 kg

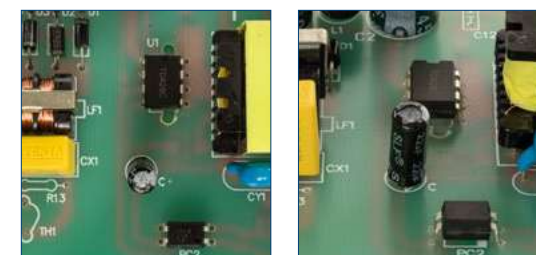
## HIGHLIGHTS

- MonoZoom stand-alone digital microscope
- Optical zoom from 0.7x up to 5x
- Magnification on screen from 2.5 up to 19x
- 100 mm working distance
- Built-in 1080p 2 MP HD camera
- Built-in mouse driven on-screen software
- Measurement function on screen
- .jpg or .bmp saved images
- .mp4 video recording up to max 2 hrs
- Removable 32 GB memory stick
- Metal stand
- 2 Years warranty



● 3-D attachment MZ.4515

Below: view from above and from a 45° angle



## SPECIFICATIONS\*

### MACROZOOM OBJECTIVE

Single 0.7 to 5x zoom objective. Working distance 105 mm  
An optional 3D attachment enables a 45° angle observation

### STAND

- Metal 320 x 260 mm pillar stand (Ø 32 mm), without illumination
- Also suitable for NexiusZoom stands

### ILLUMINATION

An external (not supplied) illumination system should be used, such as LE.1973, LE.1974, LE.5212 or LE.5207

### BUILT-IN CAMERA

Built-in HD 1080p high definition 2 MP 1/2.8" CMOS high speed camera, 1920 x 1080 pixels and 60 images per second

### BUILT-IN SOFTWARE

The built-in on-screen software (only English language) is mouse driven and features camera and measurement functions

\* See for more specifications chapter 7



● MZ.4600-NZ

## MACROZOOMS



### MZ.4700(-HDS)

#### digital autofocus macrozoom 4K/1080p

The MZ.4700 is an integration of a 1080p HDMI camera, an electrically controlled continuous zoom auto-focus objective together with a stand and illumination system. The MZ.4700 enables direct inspection of objects on a HD screen. The mouse-driven built-in software controls the camera parameters and enables measurements on screen, capturing and saving .jpg or .bmp format pictures and .mp4 format video on an USB memory stick

● MZ.4700



product information



MZ.4700

350 (h) x 375 (w) x 250 mm (d) | 5.1 kg

## HIGHLIGHTS

- Stand-alone or PC operated
- Sony 1/2.8" 4K/1080P CMOS sensor
- 18x optical zoom ratio
- Optical zoom factor up to 5.6x
- On-screen magnification from 2.8 to 47x
- 205 - 215 mm Working distance
- Standard LED ring light
- Optional directional LED ring light
- Built-in mouse-driven software
- 2 Years warranty

## SPECIFICATIONS

### ZOOM OBJECTIVE

- The 16 elements objective has a 18x zoom ratio and produces magnifications up to 0.56 magnification with a manual or automatic focusing function
  - Field of views from 255 x 145 mm (1x zoom) to 14 x 8 mm (18x zoom)
  - On-screen magnification 2.8 to 47x @190 mm WD (24" screen)
  - Focusing range is between 205 and 225 mm
- WD = working distance

### CAMERA

- The 2 MP camera is equipped with a Sony 1/2.8 inch 4K UHD/1080P CMOS High Definition sensor with high signal-to-noise ratio generating a 3840 x 8160 pixels video streaming up to 60 images per second
- The 4K/UHD signal fits the HDMI input of a HD screen
- Image and video storage is done with a built-in SD card
- Stand-alone or PC operated (ImageFocus Alpha)

### BUILT-IN SOFTWARE

The built-in intuitive software is controlled by the supplied and to the camera connected mouse. It features a camera-, an autofocus control panel and a measurement toolbar

### ILLUMINATION

A standard LED ring light assures a good standard lighting of the sample. A ring light with 12x 1W, 30° directional LEDs enables very flexible lighting of the sample



- MZ.4700(-HDS) with the directional LEDs ring light (MZ.4735)
- Standard LED ring light (MZ.4730)

### STAND

- The MacroZoom can be mounted on a dedicated pole stand with or without a dedicated HD screen
- With the 30° directional 12x 1W LED ring light (MZ. 4735), the MacroZoom (MZ.4705) can also be mounted on the NexiusZoom stands

### PACKAGE CONTENT

Supplied with a standard ring light, a 32 GB SD card, mouse, HDMI cable and external 100-240 Vac / 12Vdc / 3A power supply

### ORDER PRODUCT REFERENCES

<b>MZ.4700</b>	Stand-alone digital autofocus MacroZoom <sup>(1)</sup> with standard <sup>(2)</sup> stand
<b>MZ.4700-HDS</b>	Stand-alone digital autofocus MacroZoom <sup>(1)</sup> with standard <sup>(2)</sup> stand and HD screen
<b>MZ.4705</b>	Stand-alone digital autofocus MacroZoom <sup>(1)</sup>
<b>MZ.4710</b>	Standard <sup>(2)</sup> stand for MZ.4705
<b>MZ.4712</b>	11 inch HD screen for MZ.4710 inclusief pillar attachment
<b>MZ.4730</b>	Standard LED ring light
<b>MZ.4735</b>	Directional 12 x 1W LEDs ring light <sup>(2)</sup>

<sup>(1)</sup> Supplied with a 32 GB SD card, mouse, HDMI cable and External 100-240 Vac / 12Vdc / 3A power supply

<sup>(2)</sup> With the MZ.4735 a MZ.4705 can also be mounted on NexiusZoom stands





## MZ.5000

### digital macrozoom

The digital MacroZoom microscope is built around one 0.7 to 5x zoom objective and enables inspection of objects directly on an 11.6" LCD screen, -5° to 15° inclination. This kind of microscope is well-suited for inspection and quality control departments

The digital MacroZoom is equipped with a built-in full High Definition 1080p camera which can deliver up to 60 images per second and is connected either to the supplied and attached 11.6" screen or an external stand-alone HD screen



product information



● MZ.5000

MZ.5000

445/635 (h) x 320 (w) x 260 mm (d) | 4.6 kg

## HIGHLIGHTS

- MonoZoom stand-alone digital microscope
- Zoom from 0.7x up to 5x
- 105 mm working distance
- 110 mm working distance with 0.5x lens
- Built-in incident LED ring light
- Built-in 1080p 2 MP HD camera
- HD 11.6 inch screen, -5° to 15°
- Built-in mouse driven on-screen software
- Conveniently built-in capture button
- Removable 32 GB memory stick
- Metal stand
- 2 Years warranty

## SPECIFICATIONS

### CENTRAL ZOOM OBJECTIVE

The Digital MacroZoom MZ.5000 features a single zoom objective with a 0.7 to 5x zoom magnification. Zoom adjustment engravings on 1, 1.5, 2, 3, 4 and 5x. The working distance is 105 mm. Supplied with a 0.5x additional lens with a working distance of 110 mm

### STAND

The Central Zoom Objective with attached screen and LED ring light is mounted on a rack and pinion system that sits on a large 320 x 260 mm metal stand. Travel range is 225 mm

### ILLUMINATION

A supplied 5500 K LED ring light with 56 LED's can be mounted under the microscope body. The intensity is adjustable

### BUILT-IN CAMERA

Built-in HD 1080p high definition 2 MP CMOS high speed camera, 1920 x 1080 pixels, 60 fps with attached 11.6" screen. The standard field of view is 29.8 to 4.18 and with the 0.5x additional lens from 59 to 8.35. The camera has one HDMI output that can be connected either to the attached screen or to an external HD screen



● Adjustable screen

Two other USB ports accept the supplied 32 GB USB memory stick (up to 128 GB) and a supplied wireless mouse that drives the built-in on-screen software. The operator can also take and save images to the SD card by pressing on a capture button at the right side of microscope body

### BUILT-IN SOFTWARE

The built-in on-screen software is mouse driven and features functions such as Capture image, Freeze image, Automatic white balance, Automatic exposition, File manager, Grids and camera settings such as exposure time, gain, saturation, contrast, sharpness, HDR. Measurement functions are also available from the software such as line, area, angle. Images are saved in .jpg format and videos are saved in .avi format. With the digital zoom function, objects can be observed with a magnification up to 70 times

### PACKAGE CONTENT

Supplied with 32 GB memory stick, mouse, short HDMI cable for attached screen, external 100-240 Vac / 12Vdc / 3 A power supply





WIFI  
CAMERA



## CMEX-5 WiFi-3 5.0 MP digital WiFi camera with 1/2.8 inch CMOS sensor

The CMEX-5 WiFi-3 1080p camera is equipped with a 5.0 MP Sony CMOS sensor with 12 bits grayscale conversion and a 24 bits color rendering and it can be used either through the USB data interface or through the WiFi interface

The CMEX camera streams H.264 encoded high resolution images simultaneously to several WiFi enabled smartphones, tablets or computers with iOS, Android or Windows operating systems

Power supply through USB charger or computer USB port. Standard C-mount mounting

Adding a WiFi camera to your microscope is ideal for wireless sharing/viewing of microscope images. Ideal for demonstrations where remote viewing is needed

Android app for this camera is available on [www.euromex.com](http://www.euromex.com). IOS app can be downloaded from the App Store (free of charge). ImageFocus Alpha software can be used by means of WiFi on PC's and Macs and is available on [www.euromex.com](http://www.euromex.com)

The camera is powered by the included USB charger or a computers USB port. Standard 0.37x C-mount objective is included

MODEL	Sensor	Sensor size (inches)	Pixels size (µm)	Resolutions	Grayscale conversion	Color rendering	Signal/ Noise(dB)	Dynamic (dB)	Sensitivity V/lux-sec	Product number
CMEX-5 WiFi-3	CMOS	1/2.8"	3.9 x 3.9	1920 x 1080	12 bits	24 bits	60	66.5	1.3	DC.5000-WiFi-3

The CMEX-5 WiFi-3 camera is supplied in a box with USB cable, 30.0 and 30.5 mm adapters to use with stereo microscopes, and a 0.37x C-mount objective



CAMERAS FOR  
INDUSTRY

## USB CAMERAS



## CMEX USB-2.0 cameras with fast CMOS sensor

The CMEX-2f, CMEX-5f and CMEX-12f are equipped with a fast CMOS sensor. The CMEX cameras are equipped with USB-2.0 data interface

Besides capturing images and videos, the ImageFocus Plus software allows measurements on still and live images and annotations on captured images. Compatible with Windows 10 and higher, both 32 and 64 bits configurations. A Mac OS version is also available. Free software can be downloaded from our website

MODELS	Number of pixels (MP)	Sony Sensor	Pixels size (µm)	Resolutions	Max. frames (p/sec)	Grayscale conversion	Color rendering	Dynamic (dB)	Sensitivity V/lux-sec (at 550 nm)	Product number
CMEX-2f	2.0	1/2.9" CMOS	2.8 x 2.8	1920 x 1080	30	8 bits	24 bits	72	0.51	DC.2000f
CMEX-5f	5.0	1/2.8" CMOS	2.0 x 2.0	2560 x 1920 1600 x 1200	30 50	8 bits	24 bits	72	2.0	DC.5000f
CMEX-12f	12.0	1/2.3" CMOS	1.33 x 1.33	4000 x 3000 2592 x 1944	15 30	8 bits	24 bits	60	1.5	DC.12000f

The CMEX cameras are supplied with USB-2.0 cable, 30.0 and 30.5 mm to 23.2 mm conversion adapters for use with stereo microscopes, 1 mm/100 (10 µm/division) calibration slide. The cameras are supplied with a 0.45x C-mount objective

USB CAMERAS

Free software

ImageFocus

USB-3.0

Windows

Apple

ADVANCED CAMERAS FOR INDUSTRY

● CMEX-18 Pro

Advanced CMEX USB-3.0 cameras with CMOS sensor

The CMEX-3 Pro, -5 Pro, -10 Pro and -18 Pro cameras are equipped with a 3.1, 5.1, 10 or 18 MP CMOS sensor with 12 bits grayscale conversion and a 24 bits color rendering. These cameras are equipped with a USB-3.0 data interface enabling fast frame rate

Besides capturing images and videos, the ImageFocus Alpha software allows measurements on still and live images and annotations on captured images. Compatible with Windows 10 and higher, both 32 and 64 bits configurations. A 2 GB RAM 2.8 GHz computer and 17 inch display is recommended. A Mac OS version is available. Free software can be downloaded from our website

MODELS	Sensor	Sensor size (inch)	Pixels size (µm)	Exposure time	Resolutions	Max. frames (p/sec)	Signal/ Noise (dB)	Dynamic (dB)	Sensitivity V/lux-sec	Product number
CMEX-3 Pro	CMOS	1/3"	2.2 x 2.2	1 ms ~ 2000 ms	2048 x 1534 1024 x 770	28 53	39	100	1.9	DC.3000-PRO
CMEX-5 Pro	CMOS	1/2.5"	2.2 x 2.2	1 ms ~ 2000 ms	2560 x 1922 1270 x 960 640 x 480	14 39 100	39	68.	1.76	DC.5000-PRO
CMEX-10 Pro	CMOS	1/2.3"	1.67 x 1.67	1 ms ~ 2000 ms	3584 x 2746 1792 x 1372	8 25	35.5	63.5	0.31	DC. 10000-PRO
CMEX-18 Pro	CMOS	1/2.3"	1.25 x 1.25	1 ms ~ 2000 ms	4912 x 3684 2456 x 1842 1228 x 922	6 18 32	42	65	1.3	DC. 18000-PRO

The CMEX-3 Pro, -5 Pro, -10 Pro and -18 Pro cameras are supplied with USB-3.0 cable, 30.0 and 30.5 mm adapters to use with stereo microscopes, 1 mm/100 (10 µm/division) calibration slide. The CMEX-5 Pro, -10 Pro and -18 Pro are supplied with a 0.5x C-mount objective. The CMEX-3 Pro is supplied with a 0.37x C-mount objective

USB CAMERAS

Free software

ImageFocus

USB-3.0

Windows

Apple

SCIENTIFIC GRADE CAMERAS FOR INDUSTRY

● sCMEX

sCMEX USB-3.0 cameras with scientific grade sCMOS sensor

The sCMEX-3, sCMEX-6, sCMEX-20 and sCMEX-32 cameras are equipped with a scientific grade back illuminated Sony sCMOS sensor with 16 bits grayscale conversion and an outstanding 36 bits color rendering. Suitable for brightfield, darkfield and fluorescence. The sCMEX cameras are equipped with a USB-3.0 data interface

Besides capturing images and videos, the ImageFocus Alpha software allows measurements on still and live images and annotations on captured images. Compatible with Windows 10 and higher, both 32 and 64 bits configurations. Also compatible with Mac OS. PC requirements: Intel Core2 2.8 GHz or higher or equivalent, 2 GB memory, USB-3.0 port, 17 inch display. Free software can be downloaded from our website

MODELS	Number of pixels (MP)	Sensor and size (inches)	Pixels size (µm)	Exposure time	Resolutions	Max. frames (p/sec)	Color rendering	Dynamic range (dB)	S/N Ratio (dB)	Sensitivity V/lux-sec	Product number
sCMEX- 3	3.1	1/2.8" sCMOS	2.5 x 2.5	0.244 ~ 15000 ms	2048 x 1536 1920 x 1080	50 58	36 bits	--	--	0.15	DC.3000s
sCMEX- 6	6.3	1/1.8" sCMOS	2.5 x 2.5	0.244 ~ 15000 ms	3072 x 2048 1536 x 1024	30 38	36 bits	66.8	44.51	0.15	DC.6000s
sCMEX-20	20	1" sCMOS	2.4 x 2.4	0.264 ~ 15000 ms	5440 x 3648 2736 x 1824 1824 x 1246	15 50 60	36 bits	66.3	44.74	0.21	DC.20000s
sCMEX-32	32	1.15" sCMOS	2.3 x 2.3	0.1 ~ 15000 ms	5600 x 5600 2800 x 2800 1400 x 1400	8.1 30 30	36 bits	88	50	0.43	DC.32000s

The sCMEX cameras are supplied in a carton box with USB-2.0 cable, 30.0 and 30.5 mm to 23.2 mm conversion adapters for use with stereo microscopes, 1 mm/100 (10 µm/division) calibration slide. The DC.3000s is supplied with a 0.37x objective, the DC.6000s is supplied with a 0.5x objective, the DC.20000s and DC.32000s are supplied with a 1.0x adapter



# HD AND HD-AUTOFOCUS CAMERAS

HIGH DEFINITION  
CAMERAS  
FOR INDUSTRY



## High definition 1080p and 4K CMOS color cameras

These UHD-4K and HD cameras offer the perfect solution to modern microscopy where real-time images are needed. These HD image quality cameras can be used with biological, metallurgical or stereo microscopes

### STAND-ALONE MODE

To use these cameras you do not need a computer or have any computer knowledge. Most camera settings are done automatically and therefore these cameras are very user-friendly. This results in faster, more flexible and compact working conditions. Simply connect the camera to a high definition dedicated 11.6" or 13" HD screen, TV-HD or HD-beamer with a HDMI input and the system is ready to go. The mouse driven built-in software of the camera enables captured images and recorded videos to be saved on the integrated SD memory card

Almost all HD cameras offer a full range of measuring functions on live and captured images

### COMPUTER CONTROLLED MODE

Users who want more camera controls and more functions can also connect the camera to a computer and benefit from the extensive functions of the Euromex ImageFocus software. It runs on Windows 10 and higher, both 32 and 64 bits. Besides extended camera settings, the software can save images in JPG, TIFF or BMP formats and record videos in .avi format on the hard disk of the computer. The software offers different measurement functions on live and captured images and also full control over the camera parameters

## HIGHLIGHTS

- UHD 2160p, HD 1080p high definition color cameras
- Real-time images directly on TV, monitor or beamer
- Stand-alone or computer controlled mode
- Built-in mouse-driven software and SD memory card
- HDMI, USB-2.0/3.0
- GbE (Ethernet) (VC.3042)
- WiFi (VC.3042 and VC.3034)
- Autofocus model available
- Compatible with ImageFocus software



VC.3036-HDS on stereo microscope



VC.3034-HDS on the BioBlue

### PACKAGE CONTENT\*

MODELS	UHD-4K	HD-Ultra	HD-Lite	HD-Mini	HD-Mini +HDS	HD-Autofocus	HD-Pro
C-mount with objective	0.5x	0.37x	0.45x	0.37x	0.37x	0.5x	0.37x
Interface(s)	Digital HDMI, USB-2, WiFi	Digital HDMI, USB-2	Digital HDMI, USB-2	Digital HDMI	Digital HDMI	Digital HDMI, WiFi	Digital HDMI, USB-2
30 and 30.5 mm adapters	•	•	•	•	•	•	•
SD card	32 GB	16 GB	8 GB	32 GB	32 GB	32 GB	32 GB
Caillration slide 10mm/100	•	•	•	•	•	•	•
External power supply	12V 1A	12V 2A	12V 2A	12V 1A	12V 1A	12V 1A	12V 1A
Dimensions (w x d x h)	88 x 78 x 65	80 x 70 x 90	80 x 70 x 90	51ø x 60	50 x 50 x 60	81 x 65 x 78	81 x 65 x 78
Weight (grams)	555	440	280	50	130	500	500
Product number	VC.3042	VC.3036	VC.3031	VC.3023	--	VC.3034	VC.3039
With HD screen	13" VC.3042-HDS	11.6" VC.3036-HDS	11.6" VC.3031-HDS	--	13" VC.3024-HDS	13" VC.3034-HDS	13" VC.3039-HDS

\* See for more information chapter 7



COOLED CAMERAS



● DC.20000i and DC.6000i



Cooled color camera  
with CCD or CMOS sensor

The Euromex 6 and 20 Megapixel Peltier cooled cameras are equipped with Peltier cooling elements that allow the camera to be used for fluorescence and other low light applications. These advanced and premium models are supplied with a USB-3.0 interface

The software has specific functions for fluorescence like combining capture fluorescence images. Furthermore it allows capturing of images and videos, doing measurements and annotations, generating reports, live image stitching etc. Compatible with Windows 10 and higher, both 32 and 64 bits configurations. A Mac OS version is also supplied (with a few differences in features)

MODELS	Number of pixels (MP)	Sensor	Pixel size (µm)	Resolutions	Max. frames (p/sec)	USB-3	Dynamic range (dB)	S/N Ratio	Sensitivity @ 1/30 sec	Peltier cooling
DC.6000i	6	1" CCD	4.54 x 4.54	2748 x 2200 2748 x 1092	7.5 14	•	62.34	41.6	880 mV	•
DC.20000i	20	1" CMOS	2.4 x 2.4	5440 x 3648 4096 x 2160 2736 x 1824 1824 x 1216	5 10 15 30	•	66.3	41.74	462 mV	•

about  
field of view

Field of view (FOV) is the visible area when looking through the microscope eyepiece (eyepiece FOV) or camera (camera FOV) and is usually expressed as a diameter

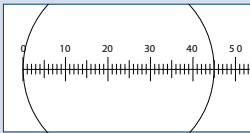
CALCULATING FOV OF AN EYEPIECE

The FOV through an eyepiece is equal to:

$$FOV = \frac{\text{Field Number}}{\text{Object Magnification}}$$

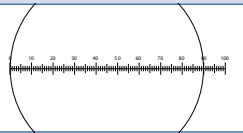
Field number (FN) is usually engraved on the eyepiece as a figure next to the magnification and expressed in mm, e.g. WF 10x/18. A 10x/18 eyepiece with a 40x objective will have a FOV = 18 mm / 40 = 0.45 mm or 450 nm

450 nm FOV with 10x/18 eyepiece and S40x objective



Micrometer stage 1 mm/100

900 nm FOV with 10x/18 eyepiece and S20x objective

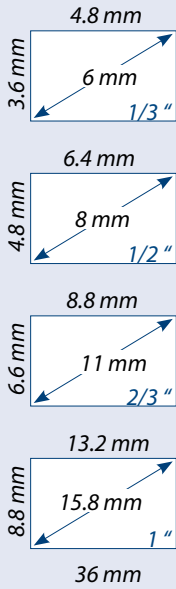


Micrometer stage 1 mm/100

FIELD OF VIEW WITH CAMERA

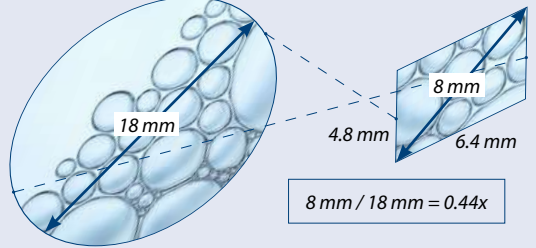
Most commercially available microscope digital cameras use 1/3, 1/2- or 2/3-inch rectangular sensors. A few will use a 1 inch camera sensor

As a consequence, a rectangular camera sensor cannot capture the circular FOV that exits from a eyepiece, microscope third tube or photo port



EYEPIECE VERSUS CAMERA FOV

Circular FOV through a WF10x/18 eyepiece 1/2" camera sensor and its rectangular FOV



Furthermore, the circular eyepiece FOV is much larger than the camera FOV and thus the microscope FOV must be "reduced" with a so-called "relay" lens or "photo-adapter" to fit the camera FOV. However - in order to avoid vignetting (dark shadows in the corners of an image), the circular microscope FOV must just be projected outside the image sensor area. Subsequently the camera FOV will always be smaller than the microscope FOV by 50 to 60%

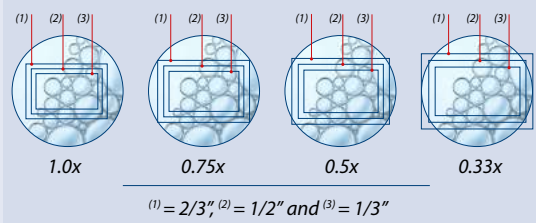
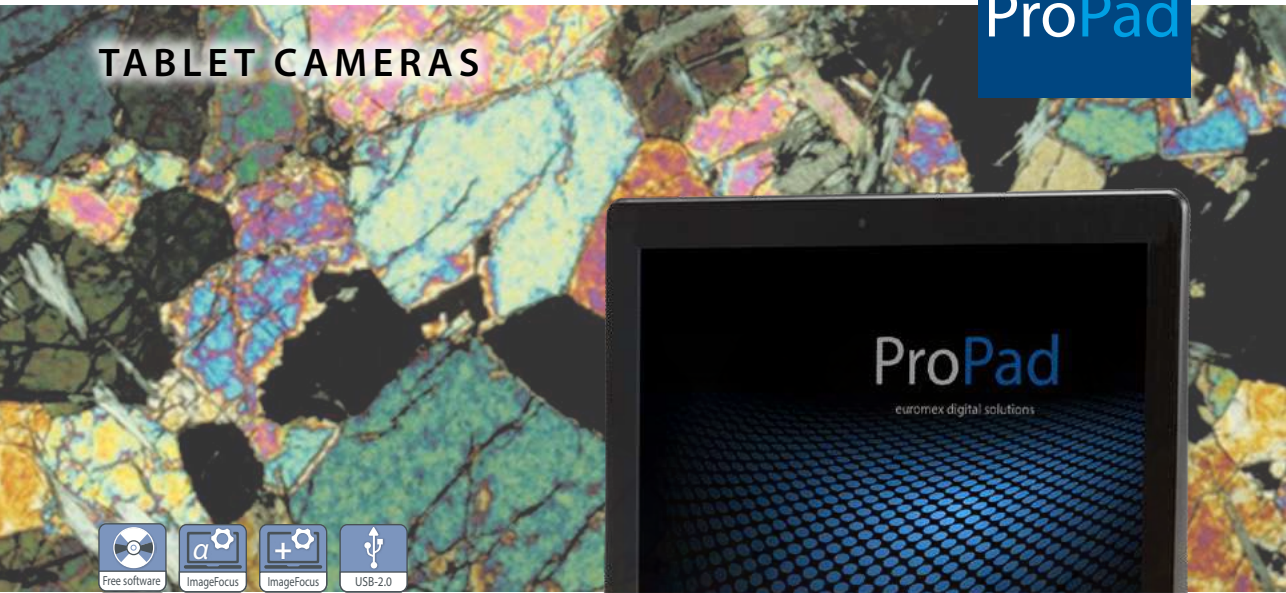


Figure: different camera sensor sizes (2/3, 1/2, 1/3 inch) with different "demagnifying" lenses (C-mount photo-adapters) 0.33x, 0.50x, 0.75x and 1.0x

IN ORDER TO OBTAIN THE DESIRED FIELD OF VIEW WITHOUT VIGNETTING USE:

a 0.33 x photo adapter for cameras with a 1/3" sensor  
a 0.50 x photo adapter for cameras with a 1/2" sensor  
a 0.75 photo adapters for cameras with a 2/3" sensor  
a 1.0x or 1.2x photo adapters for cameras with a 1" or larger camera sensor

TABLET CAMERAS



ProPad tablet  
with microscope camera and  
keyboard-docking station

The ProPad Full HD (1280x800) display reveals bright colors and crisp images. The ProPad consists of a high quality microscope camera system and a fully detachable tablet running the latest ImageFocus version. You can take it anywhere

Together with the included attachable keyboard, you can use it as a microscope imaging system, tablet and laptop. The keyboard connects to the tablet using magnets to provide a latchless docking solution that lets you smoothly remove and re-attach the keyboard to the ProPad



SOFTWARE

ProPad-2, ProPad-5 and ProPad-12 work with ImageFocus Plus. ProPad-WiFi works with ImageFocus Alpha. The WiFi camera can also be operated through IOS and Android apps



HIGHLIGHTS

- 10.1" Tablet with microscope camera
- 1280 x 800 pixels HD touch screen
- Windows 10 Home
- ImageFocus Plus software for PC
- ImageFocus Alpha for WiFi enabled PC and Android devices
- Tablet can be fully detached from camera
- Including keyboard
- The snap-on keyboard uses a magnetic docking system



SPECIFICATIONS

Processor	Quad Core 1.92 GHz with HD graphics processor
Screen	10.1 inch, 1280 x 800 (WGXA) touchscreen, 16:10, LED backlight
Memory	2 GB DDR RAM, 2 MB cache
Storage	32 GB Flash HDD, micro SD/SDHC up to 64 GB
Webcam	2 MP, 1600 x 1200 pixels front and rear cameras
Connectivity	Micro USB 2.0, WiFi 802.11 b/g/n and Bluetooth 4.0
Audio	Stereo with 3.5 mm audio jack, internal microphone and speaker
Battery	Lithium
Housing	246.9 x 174.2 x 9.4 mm (tablet), 246.9 x 174.2 x 8.2 mm (keyboard)
Weight	588 grams (tablet), 551 grams (keyboard)
System	Windows 10 Home
Supplied with	Keyboard-docking station

Specifications can be changed by Euromex microscopen bv without prior notice

MODELS	Camera (MP)	Sensor size	Resolution	Pixels size (µm)	ADC	Color rendering	Dynamic (dB)	Sensitivity V/lux-sec	Interface	Product number
ProPad-2	2.1	1/2.9"	1920 x 1080	2.8 x 2.8	12 bits	24 bits	--	0.51	Windows USB 2.0	PP.2000f
ProPad-5	5.1	1/2.8"	2592 x 1920	2.0 x 2.0	12 bits	24 bits	72 dB	2.0	Windows USB 2.0	PP.5000f
ProPad-12	12.0	1/2.3"	4072 x 3176	1.33 x 1.33	8 bits	24 bits	60 dB	--	Windows USB 2.0	PP.12000f
ProPad-WiFi	5.0	1/2.8"	1920 x 1080	3.9 x 3.9	12 bits	24 bits	61 dB	1.3	Windows Apple WiFi Android	PP.5000-WiFi

All ProPad models are supplied with a C-mount objective that fits the standard 23.2 mm trinocular tubes



SOFTWARE

The software is compatible with all cameras mentioned in table below. Besides live imaging the software captures images in various formats and video in .avi format

IMAGE FOCUS 4	
DC.1300c	

IMAGE FOCUS PLUS	
DC.2000f	VC.3036
DC.5000f	VC.3031
DC.12000f	

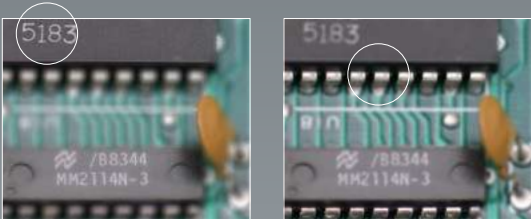
IMAGE FOCUS ALPHA	
DC.3000-Pro	DC.5000-WiFi
DC.5000-Pro	DC.3000s
DC.10000-Pro	DC.6000s
DC.18000-Pro	DC.20000s
VC.3039	VC.3042

IMAGE STITCHING

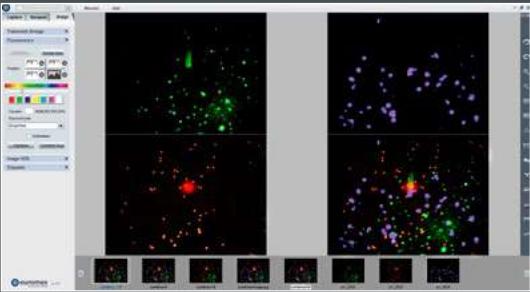
Image stitching is the process of combining multiple images with overlapping fields of view to produce one image

EXTENDED DEPTH OF FOCUS

"The extended depth of focus" function in the ImageFocus Alpha software or "stacking software, allows to combine a number of digital images of a object, focused at different focus planes, into one final image with much greater depth of field (see illustration below)



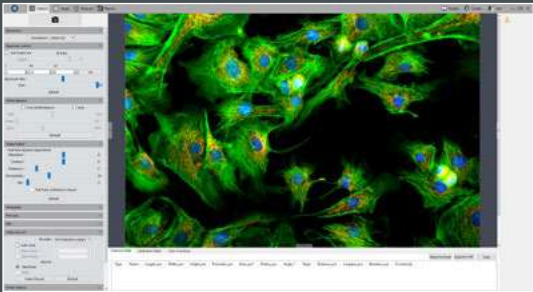
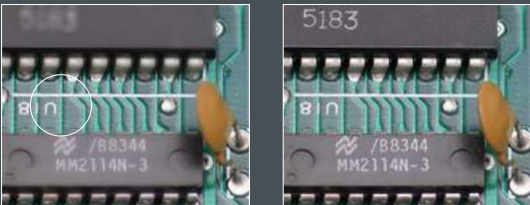
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ImageFocus 4 software

- ImageFocus 4 has a wide range of functions:
- Measurements can be done on still and live image
- Images can be saved in .jpg, .tif, .or .bmp formats as well as .avi format videos
- The brightness, contrast and saturation of captured images can be adjusted
- Camera parameters for exposure time, white balance and color control are easily accessible
- The software also has specific functions for fluorescence such as combining captured fluorescence images
- Compatible with Windows 10 and higher, both 32 and 64 bits configuration. A Mac OS Light version is also available for capturing images\*
- PC requirements: Intel Core2 2.8 GHz or higher or equivalent, 2GB memory or more, 17" screen
- \* Mac version not available for VC Series

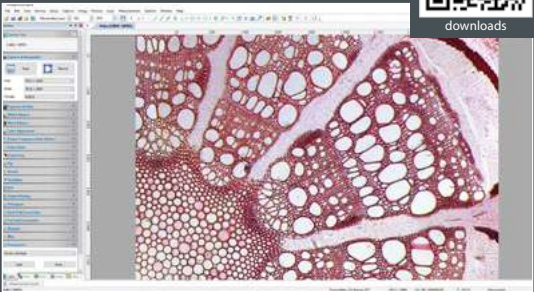
One language can be selected during initial installation of the ImageFocus 4 software: English, German, French, Dutch, Spanish and Russian



ImageFocus Plus software

- ImageFocus Plus has a wide range of functions:
- Measurements on still and live image
- Extended depth of focus and stitching on still and live image (only with VC.3036 and VC.3031 cameras)
- Images can be saved in .jpg, .tif, .bmp or .dicom formats as well as .avi and mpeg-4 format videos
- The brightness, contrast and saturation of captured images can be adjusted
- Camera parameters for exposure time, white balance and color control are easily accessible
- The software also has specific functions for fluorescence such as combining captured fluorescence images
- Compatible with Windows 10 and higher, both 32 and 64 bits configuration. A Mac OS version is also available
- PC requirements: Intel Core2 2.8 GHz or higher or equivalent, 2 GB memory or more, 17" screen

ImageFocus Plus software features English, German, French, Dutch, Spanish and Russian



ImageFocus Alpha software

- ImageFocus Alpha has a wide range of functions:
- Measuring, segmentation & counting, stichting of images, extended depth of focus, etc
- Images can be saved in .jpg, .tif, .bmp or .dicom formats as well as .avi format videos
- The brightness, contrast and saturation of captured images can be adjusted
- Camera parameters for exposure time, white balance and color control are easily accessible
- The software also has specific functions for fluorescence such as combining captured fluorescence images
- Compatible with Windows 10 and higher, both 32 and 64 bits configuration. A Mac OS version is also supplied (with a few differences in features)
- PC requirements: Intel Core2 2.8 GHz or higher or equivalent, 2GB memory or more, 17" screen

One language can be selected during initial installation of the ImageFocus Alpha software English, Catalan, French, German, Indonesian, Italian, Japanese, Korean, Polish, Russian, Simplified Chinese, Spanish, Thai, Traditional Chinese, Turkish



downloads



FOR ALL  
MICROSCOPE  
CAMERAS

# ADAPTERS



adapters

● AE.5130

● NZ.9850

## adapter guide microscope and camera

Most Euromex cameras are supplied with a photo port c-mount adapter to connect it to any Euromex trinocular microscope\*. Monocular microscopes require the removal of the eyepiece so that the camera can be fitted into the 23.2 mm tube. Binocular microscopes require the removal of an eyepiece plus an additional mechanical adapter

*\* Except for the Oxion, Oxion Inverso and Delphi-X Inverso™ series. These microscopes need an additional adapter.*

See next page

Should you want to connect one of our cameras to another microscope brand, see adapter references below:

MODELS	1/3 inch camera	1/2 inch camera	2/3 inch camera	1 inch camera
Leica <sup>(1)</sup>	AE.9835-L (0.35x)	AE.9855-L (0.55x)	AE.9870-L (0.70x)	AE.9810-L (1x) AE.9812-L (1.2x)
Olympus <sup>(2)</sup>	AE.9835-O (0.35x)	AE.9850-O (0.50x)	AE.9863-O (0.63x) AE.9880-O (0.80x)	AE.9810-O (1x) AE.9812-O (1.2x)
Zeiss <sup>(3)</sup>	AE.9835-Z (0.35x)	AE.9850-Z (0.50x)	AE.9865-Z (0.65x)	AE.9810-Z (1x) AE.9812-Z (1.2x)
Zeiss ZA <sup>(4)</sup>	--	AE.9850-ZA (0.50x)	AE.9863-ZA (0.63x) AE.9880-ZA (0.80x)	AE.9810-ZA (1x) AE.9812-ZA (1.2x)
Nikon <sup>(5)</sup>	AE.9835-N (0.35x)	AE.9855-N (0.55x)	AE.9870-N (0.70x) AE.9880-N (0.80x)	AE.9810-N (1x) AE.9812-N (1.2x)

<sup>(1)</sup> Leica DM, 35 mm to 25.4 mm C-mount, stainless steel  
<sup>(2)</sup> Olympus CX, CX2, BX, BX2, IX, MX, GX, SZX, STM, 42 mm to 25.4 mm C-mount, anodized aluminum  
<sup>(3)</sup> Zeiss PrimoStar, PrimoStar Vert, 30 mm to 25.4 mm C-mount, anodized aluminum  
<sup>(4)</sup> Zeiss 60N-C, 60N-T2 photo ports of Axio examiner, Axio Imager, Axio Lab, Axio Observer, Axio Scope, Axio Zoom, Stemy 508 and SteREO Discovery  
<sup>(5)</sup> Nikon E100, E200, 50i, 55i, 80i, 90i, Ni series, Ti Series, SMZ800, SMZ1000, SMZ15000, 38 mm to 25.4 mm C-mount, stainless steel

● AE.9835-L



## 23.2 MM PHOTO PORT C-MOUNT ADAPTERS

Suitable for all Ø 23.2 mm (photo) tubes

- DC.1324** C-mount adapter with 0.45x objective for 1/2" camera
  - DC.1353** C-mount adapter with 0.37x objective, fixed focal length and short barrel\*. For 1/3" camera
  - DC.1355** C-mount adapter with 0.50x objective, fixed focal length and short barrel\*. For 1/2" camera
  - DC.1357** C-mount adapter with 0.75x objective, fixed focal length and short barrel\*. For 2/3" camera
  - DC.1359** C-mount adapter with 1x lens, fixed focal length and short barrel, for standard 23.2 mm tube and 1 inch camera
  - DC.1330** 30 mm to 23.2 mm conversion adapters
  - DC.1335** 30.5 mm to 23.2 mm conversion adapters
- \* for increased light efficiency*



## PHOTO PORT ADAPTERS

Suitable for Euromex microscopes with a photo port such as Oxion, NexusZoom, StereoBlue, Delphi-X Observer™ and Delphi-X Inverso™

- AE.5120-2** Standard 23.2 mm diameter tube for Oxion photo port
- DI.9840** C-mount with high resolution 0.40x objective for 1/3 inch C-mount camera
- DI.9850** C-mount with high resolution 0.50x objective for 1/2 inch C-mount camera
- DI.9810** C-mount with 1x magnification for C-mount camera
- DX.9835** C-mount with high resolution relay 0.35x objective for 1/3 inch C-mount camera
- DX.9850** C-mount with high resolution relay 0.50x objective for 1/2 inch C-mount camera
- DX.9863** C-mount with high resolution relay 0.63x objective for 2/3 inch C-mount camera
- DX.9810** C-mount with 1 magnification for C-mount camera
- NZ.9850** C-mount adapter with 0.5x objective for NexusZoom microscopes and 1/2" cameras
- OX.9810** C-mount adapter with 1x magnification for 1" cameras
- OX.9833** C-mount adapter with 0.33x objective for Oxion microscopes and 1/3" cameras
- OX.9850** C-mount adapter with 0.5x objective for Oxion and Oxion Inverso microscopes and 1/2" cameras
- SB.9850** C-mount adapter with 0.5x objective for StereoBlue microscopes and 1/2" cameras

# accessories

for microscopy



accessories



product information

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- DISPOSABLES • PAGE 394
- STAINS • PAGE 395



## illumination solutions

For stereo microscopes choosing the right illumination is essential to obtain a perfect image with maximum resolution. LED light sources have a much longer life span, less energy consumption and less heating than halogen light sources

The major advantage of LED illumination is the constant light spectrum at all light intensity levels. These light sources are suitable for all kinds of applications in industry, life sciences and materials sciences



education



university



life science



industry



ILLUMINATION SOLUTIONS

The right light source solution can enhance and reveal the details you want to examine



Illumination solutions

MULTIFUNCTIONAL 150 W HALOGEN OR 30 W POWER-LED • COLD LIGHT SOURCE

A powerful multifunctional 150 W halogen (LE.5211) and 30 W PowerLED cold light source is ideal for the advanced requirements of numerous applications in life and materials science. The intensity is adjustable and has a built-in forced air cooling. The LE.5211 and LE.5211-LED light sources require a light fiber conductor such as the single LE.5213, dual LE.5214, triple LE.5215 or the LE.5239 ring light fiber conductors. The LE.5213, LE.5214 and LE.5215 light conductors can be equipped with a lens holder (LE.5222) and a focusing lens (LE.5224)



● LE.5211-LED/LE.5211 + LE.5214 +2x LE.5222 + 2x LE.5224

Power	150 W halogen	30 W PowerLED (equivalent to 120 W halogen)
Luminous flux	21,000 lux max <sup>1)</sup>	30,000 lux max.*
Color temperature	3,000 K	6,500 K
Operating voltage	100 and 240 V AC / 12 V DC (50/60 Hz)	100-240 V AC / 12 V DC (50/60 Hz)
Dimensions	(h) 150 x (w) 150 x (d) 230 mm	150 (h) x 150 (w) x 230 mm (d)
Weight	3,9 kg	2.8 kg
Model	LE.5211	LE.5211-LED

\* with LE.5214 dual arm light conductor

MULTIFUNCTIONAL 100 W HALOGEN • COLD LIGHT SOURCE

This popular multifunctional cold light source contains a 100 W halogen light source. The intensity is adjustable and it has a built-in forced air cooling. The LE.5210 light source requires a light fiber conductor such as the single LE.5213, dual LE.5214, triple LE.5215 or the LE.5239 ring light fiber conductors. The LE.5213, LE.5214 and LE.5215 light conductors can be equipped with a lens holder (LE.5222) and a focusing lens (LE.5224). Ideal for all kinds of applications in Life and Materials sciences, various industrial applications and for stereo microscopy



Power	100 W halogen
Luminous flux	20,000 lux max.*
Color temperature	3,000 K
Operating voltage	100 and 240 V AC / 12 V DC (50/60 Hz)
Dimensions	115 (h) x 320 (w) x 215 mm (d)
Weight	3.8 kg
Model	LE.5210

\* with LE.5214 dual arm light conductor

COMPACT SINGLE 20 W LIGHT SOURCE

Compact cold light source with single 40 cm, 6 mm diameter fiber light conductor. Equipped with a 20 W halogen lamp. Light intensity is factory preset and can not be adjusted



Power	20 W halogen
Color temperature	3,000 K
Operating voltage	110 V AC and 230 V AC versions (50/60 Hz)
Dimensions	80 (h) x 110 (w) x 165 mm (d)
Weight	2.0 kg
Model	LE.5209

ECONOMICAL AND COMPACT DUAL 3 W LED • LIGHT SOURCE

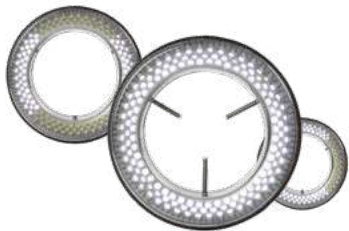
Economical dual LED intensity adjustable light source with two 44 cm flexible gooseneck arms, each mounted with a 3 W LED. Ideal for applications in life and materials sciences, various industrial applications and for stereo microscopy



Power	2x 3 W LED = 2x 28 W halogen equivalent
Luminous flux	25,000 lux
Color temperature	6,500 K
Operating voltage	100-240 V AC / 5 V DC (50/60 Hz)
Dimensions	70 (h) x 106 (w) x 140 mm (d)
Weight	1.5 kg
Model	LE.5207

144 LEDS RING LIGHT SOURCE • LE.1973

LED ring light source with high illuminance and segment illumination for all kinds of demanding applications



Ring illumination	144 LEDs with adjustable intensity and 4 segment illumination
Color temperature	6,500 K
Illuminance	23,000 lux at 100 mm distance
working distance:	from 55 to 200 mm
Mounting	for stereo head with diameter from 25 to 61 mm
Power supply	100-240 V AC / 12 V DC (50/60 Hz) / 4.5 Watt
External diameter	100 mm
Model	LE.1973

COMPACT 72 LEDS • LE.1974

Compact 20,000 lux LED ring light source



Ring illumination	72 LEDs with adjustable intensity and 4 segment illumination
Color temperature	6,500 K
Illuminance	21,000 lux at 100 mm distance
working distance:	from 50 to 180 mm
Mounting	for stereo head with diameter from 25 to 61 mm
Power supply	100-240 V AC / 12 V DC (50/60 Hz) / 4 Watt
External diameter	100 mm
Model	LE.1974

PROFESSIONAL HIGH POWER LED RING LIGHT SOURCES • LE.1980/ LE.1981

LED ring light source with maximum illuminance and metal construction for professional usage. With adjustable intensity, optional power supply/segment controller, diffuser, polarizers and Fresnel focusing lenses for perfect illumination of objects



MODELS	Number of LEDs	Color temperature	Illuminance	For mounting diameters	Internal/external diameter	Required power supply/ controller
LE.1980	48	6,000 K	17,000 lux	from 30 to 66 mm	45/90 mm	LE.1992 Analog controller
LE.1981	48	6,000 K	17,000 lux	from 30 to 66 mm	45/90 mm	LE.1993 Digital segments controller

PROFESSIONAL HIGH POWERLED RING LIGHT SOURCES  
LE.1990/ LE.1991

LED ring light source with maximum illuminance and metal construction for professional usage. With adjustable intensity, optional power supply/segment controller, diffuser, polarizers and Fresnel focusing lenses for perfect illumination of objects



MODELS	Number of LEDs	Color temperature	Illuminance	For mounting diameters	Internal/external diameter	Required power supply/ controller
LE.1990	72	6,000 K	21,000 lux	from 40 to 66 mm	60/110 mm	LE.1992 Analog controller
LE.1991	72	6,000 K	21,000 lux	from 40 to 66 mm	60/110 mm	LE.1993 Digital segments controller

ILLUMINATION STATION LE.5212

Light source station with multiple power supply connections for two self-sustaining gooseneck-type guides, one ring light and one transmitted stage illumination. For stand-alone usage or mounted on stereo microscope pillar stands with diameters up to 44 mm or with 35- and 25-mm pole mounting adapter rings

Each self-sustaining gooseneck-type LED guide is equipped with a 3-lens focusing head and has a length of 56 cm  
White 6,500 K LED ring light generating with 60 LEDs up to 24,000 Lux. Mounting diameters from 21 to 61 mm  
Transmitted light stage illumination with a 6,500 K white LED generating up to 8,000 Lux with 42 LEDs. Stage diameter 94.5 and 15 mm thick

MODELS	3 W gooseneck guide LED	4 W white LED ring light	2 W white LED transmitted light stage
LE.5212	White LED, 6,500 K	•	•
LE.5212-365	365 nm, monochrome	•	•
LE.5212-395	395 nm, monochrome	•	•
LE.5212-420	420 nm, monochrome	•	•



FLUORESCENCE 40 HZ RING LIGHT SOURCE  
FOR Z SERIES STEREO ZOOM MICROSCOPES

Suitable for Z series stereo zoom microscopes,  
except for ZE.1659. Integrated 240 V AC  
power supply

Ring illumination	Fluorescent 40 kHz ring, fixed intensity
Color temperature	5,200 K
Illuminance	6,500 lux at 100 mm distance
working distance:	35-160mm
Mounting	48 mm with adapter for ZE series microscopes
Power supply	230-250 V
External diameter	100 mm
Model	LE.1863



ACCESSORIES AND SPARE PARTS  
FOR LE.5210, LE.5211 AND LE.5211-LED COLD LIGHT SOURCES

FIBER LIGHT CONDUCTORS

- LE.5213 Single arm fiber light conductor, gooseneck self-sustaining, 50 cm long, 4 mm diameter
- LE.5214 Dual arm fiber light conductor, gooseneck self-sustaining, 50 cm long, 4 mm diameter
- LE.5215 Triple arm fiber light conductor, gooseneck self-sustaining, 50 cm long, 4 mm diameter
- LE.5219 Dual arm fiber light conductor, gooseneck self-sustaining, 70 cm long, 4 mm diameter
- LE.5239 Slit ring-shaped fiber light conductor 60 cm long, 8 mm diameter
- LE.5241 Flexible fiber light conductor, curved 90°, 60 cm long, 4 mm diameter
- LE.5216 Single arm flexible fiber light conductor, 100 cm long, 4 mm diameter
- LE.5235 Dual arm flexible fiber light conductor, 100 cm long, 4 mm diameter

- LE.5217 Triple arm flexible fiber light conductor, 100 cm long, 4 mm diameter
- LE.5218 Single arm flexible fiber light conductor, 100 cm long, 8 mm diameter
- LE.5220 Single arm flexible fiber light conductor, 200 cm long, 8 mm diameter
- LE.5222 Focusing head for focusing lens LE.5224, LE.5228 or filters LE.5229 and LE.5231 (for fiber light conductors)
- LE.5224 Focusing lens. Requires LE.5222 or LE.5228 for mounting on LE.5213, LE.5214 and LE.5215
- LE.5228 Focusing head with iris diaphragm (for fiber light conductors)
- LE.5231 Conversion KB12/80B filter

HALOGEN BULBS AND FUSES

- SL.5219 Halogen 100 W 12 V bulb with reflector (50 hrs nominal), MR16 fits LE.5210
- SL.5230 Halogen 100 W 12 V 'Long Life' bulb (1,000 hrs nominal), MR16 fits LE.5210

- SL.5235 Halogen 150 W 15 V bulb (50 hrs nominal), MR16 fits LE.5211
- SL.5240 Halogen 150 W 15 V 'Long Life' bulb (500 hrs nominal), MR16 fits LE.5211

FOR LE.1980 AND LE.1981

- LE.1984-050 Fresnel lens, WD from 40 to 80 mm
- LE.1984-100 Fresnel lens, WD from 80 to 150 mm
- LE.1984-200 Fresnel lens, WD from 150 to 240 mm
- LE.1984 Diffusing filter, for WD from 40 to 300 mm
- LE.1985 Glass protection window
- LE.1987 Polarizing filter
- LE.1888 Rotatable polarizing filter
- LE.1992 100-230 V power supply analog controller. Intensity adjustable from 0-100%
- LE.1993 100-230 V power supply digital segment controller. Intensity adjustable from 0-100%

FOR LE.1990 AND LE.1991

- LE.1994-050 Fresnel lens, WD from 40 to 80mm
- LE.1994-100 Fresnel lens, WD from 80 to 150 mm
- LE.1994-200 Fresnel lens, WD from 150 to 240 mm
- LE.1994 Diffusing filter, for WD from 40 to 300 mm
- LE.1995 Glass protection window
- LE.1997 Polarizing filter
- LE.1998 Rotatable polarizing filter
- LE.1992 100-230 V power supply analog controller. Intensity adjustable from 0-100%
- LE.1993 100-230 V power supply digital segment controller. Intensity adjustable from 0-100%

FOR LE.5212

- LE.5260 Interchangeable self-sustaining gooseneck-type guide with a white 6,500 K high-power LED for NZ.9018, LE.5207 or LE.5212, 1 pc (A)
- LE.5261 Interchangeable self-sustaining gooseneck-type guide with a 365 nm high-power UV-LED for NZ.9018, LE.5207 or LE.5212, 1 pc (B)
- LE.5262 Interchangeable self-sustaining gooseneck-type guide with a 395 nm high-power Violet-LED for

- NZ.9018, LE.5207 or LE.5212, 1 pc (C)
- LE.5263 Interchangeable self-sustaining gooseneck-type guide with a 420 nm high-power Violet-LED for NZ.9018, LE.5207 or LE.5212, 1 pc (D)
- LE.5264 Polarization filter, screw on type for Interchangeable self-sustaining gooseneck-type guides for NZ.9018, LE.5207 or LE.5212, 1 pc

FOR LE.1863

- SL.1864 Spare fluorescence lamp

WD = working distance



Fresnel lens Polarizing filter



Dual arm fiber light conductor



Triple arm fiber light conductor



# PREPARATION ACCESSORIES

Euromex offers the right tools for sample preparing. Before using a microscope good samples are essential to get the most accurate results



product information



## dissection instruments

- PB.5050** Dissecting needle, straight tip with plastic handle
- PB.5054** Dissecting needle, lancet-shaped with plastic handle
- PB.5056** Blunt-pointed probe, Ø 2 mm, length 140 mm
- PB.5058** Section lifter with wooden handle
- PB.5060** Serrated thumb dressing forceps, length 13 mm
- PB.5062** Dressing forceps with blunt tips, length 13 cm
- PB.5064** Dressing forceps with blunt tips, length 20 cm
- PB.5067** Dissecting forceps with sharp tips, length 13 cm
- PB.5069** Dissecting forceps with finely curved sharp tips, length 13 cm
- PB.5077** Cover glass forceps, length 11 cm



## SCISSORS AND BLADES

- PB.5080** Dressing scissors with blunt/sharp tip, length 14 cm
- PB.5084** Dissecting scissors, sharp tips, length 11 cm
- PB.5092** Scalpel with blunt tip, length 15 cm
- PB.5094** Scalpel handle no. 4 (for blades PB.5095 and PB.5096)
- PB.5095** Scalpel blades with sharp tip, 5 pieces per set
- PB.5096** Scalpel blades with blunt tip, 5 pieces per set
- PB.5103** Strop, double sided for stropping of scalpels, microtome knives. Includes stropping paste

- PB.5105** Razor plano/concave, for sectioning. With plastic handle
- PB.5106** Microtome knife plano/concave. With fixed handle, length 17 cm



## HANDHELD MICROTOMES

- MT.5500** Cylinder microtome. Circular stage Ø 70 mm with flat black glass top. Height adjustable with micrometer division 0.01 mm. Complete with plano-concave knife PB.5106 and wooden cabinet
- MT.5501** Cylinder microtome. Identical to MT.5500 but without knife and wooden cabinet
- MT.5503** Handheld microtome. Box type with table clamp and razor blade holder. Thickness adjustment by 0.025 mm intervals. Complete with wooden cabinet



# PREPARATION ACCESSORIES



product information



## dissection kits

### 4-PC DISSECTION KIT PB.5110 IN IMITATION LEATHER CASE

Kit with straight dissecting needle (PB.5050), dissecting forceps (PB.5067), dissecting scissors (PB.5084) and scalpel (PB.5092). Supplied with imitation leather case



PB.5110

### 6-PC DISSECTION KIT PB.5111 IN PLASTIC CASE

Kit with straight dissecting needle (PB.5050), lancet-shaped dissecting needle (PB.5054), dissecting forceps (PB.5067), dissecting scissors (PB.5084), scalpel handle no. 4 (PB.5094) and blades (PB.5096). Supplied with plastic case



PB.5111

### 10-PC DISSECTION KIT PB.5112 IN IMITATION LEATHER CASE

Kit with two straight dissecting needles (PB.5050), lancet-shaped dissecting needle (PB.5054), dressing forceps (PB.5062), dissecting forceps (PB.5067), scissors (PB.5080), dissecting scissors (PB.5084), two scalpels (PB.5094), five scalpel blades with straight tip and five blades with blunt tip (PB.5095/PB.5096). Supplied with imitation leather case



PB.5112

### 9-PC DISSECTION KIT PB.5114 IN WOODEN CASE

Kit with two straight dissecting needles (PB.5050), lancet-shaped dissecting needle (PB.5054), dressing forceps (PB.5062), dissecting forceps (PB.5067), scissors (PB.5080), dissecting scissors (PB.5084), two scalpels (PB.5094), five scalpel blades with straight tip and five blades with blunt tip (PB.5095/PB.5096). Supplied with wooden cabinet



PB.5114

### 6-PC DISSECTION KIT FOR KOI FISH PB.5115 IN PLASTIC CASE

Dissecting set for Koi fish. Consisting of plastic box with forceps with 1 x 2 points (PB.5060), forceps blunt points, 13 cm (PB.5062), scissors, blunt/ sharp points, 14 cm (PB.5080), microscope scissors, sharp points, 11 cm (PB.5084), blunt-pointed probe (PB.5056), scalpel handle no. 4 (PB.5094), five scalpel blades with straight tip and five blades with blunt tip (PB.5095/PB.5096)



PB.5115

### PROFESSIONAL SLIDE PREPARATION KIT PB.5125 IN PLASTIC DELUXE CASE

Kit with three prepared slides, 50 microscope slides (PB.5150) and 100 cover glasses (PB.5165). Two microscope slides with cavity. Canada balsam, dissecting needle (PB.5050 and PB.5054). Dissecting forceps (PB.5067), dissecting scissors (PB.5084) and scalpel (PB.5092). Supplied with plastic deluxe case



PB.5125



MICROSCOPE PREPARED SLIDES



Euromex offers teachers, students and microscopy amateurs a wide range of quality micro-slides, which can be used immediately in biology classes as introduction to histology, zoology and botany

sets with 25 slides for education  
histology, zoology and botany set

PB.5211 FOR EDUCATION

Set with 25 microscopy slides for education: histological samples of mammals, zoology and botany.  
All microscope slides are supplied in a plastic box for 25 slides. The set contains:

HISTOLOGY

- SH.1011 Hard bone grinding, human, section
- SH.1045 Skeletal muscle, dog, l.s and c.s
- SH.1072 Skin section through hair follicle, human
- SH.1078 Stratified flat epithelium, dog, section
- SH.1150 Blood smear, human, Giemsa stained

ZOOLOGY

- SZ.1510 Amoeba proteus, w.m
- SZ.1580 Hydra with bud, w.m
- SZ.1640 Lumbricus - earthworm, c.s
- SZ.1655 Daphnia sp., water flea, w.m
- SZ.1715 Musca domestica, house fly, mouth parts
- SZ.1717 Musca domestica, house fly, leg with clinging pads
- SZ.1719 Musca domestica, house fly, wing w.m

BOTANY

- SB.2006 Allium cepa, onion, scale epidermis, w.m
- SB.2009 Allium cepa, onion, mitosis root tip, l.s
- SB.2055 Zea mays, corn, stem, cs
- SB.2060 Triticum aestivum, wheat, stem, c.s
- SB.2070 Helianthus, sunflower, young stem, c.s
- SB.2130 Helianthus, sunflower, leaf, c.s
- SB.2205 Monocot/dicot flower, zea mays/ranunculus, c.s
- SB.2212 Lilium, lily, ovary, c.s
- SB.2335 Mnium, w.m
- SB.2355 Rhizopus nigricans,bread mold, developed sporangia
- SB.2377 Diatoms, w.m
- SB.2381 Spirogyra sp., vegetative mass, w.m
- SB.2405 Dental plaque, smear

histology, zoology and botany set

PB. 5212 FOR EDUCATION

Set with 25 microscopy slides for education: histological samples of mammals, zoology and botany.  
All microscope slides are supplied in a plastic box for 25 slides. The set contains:

HISTOLOGY

- SH.1001 Loose connective tissue, rabbit
- SH.1005 Hyaline cartilage rabbit, section
- SH.1160 Lymph node, rabbit, section
- SH.1230 Small intestine, dog, c.s
- SH.1250 Liver, pig, section
- SH.1430 Cerebrum section, dog

ZOOLOGY

- SZ.1520 Paramecium, w.m
- SZ.1625 Schistosoma Japonicum, fluke eggs, bilharziose
- SZ.1630 Taenia, tapeworm cattle, mature proglottid, w.m
- SZ.1635 Ascaris megalocephala, horse roundworm, female + male, c.s
- SZ.1708 Apis mellifica, honey bee, mouth parts
- SZ.1725 Periplaneta, cockroach, mouth parts of chewing type
- SZ.1730 Pieres brassicae, cabbage-white butterfly, mouth, w.m
- SZ.1750 Periplaneta, cockroach, spiracle of insect, w.m

BOTANY

- SB.2095 Monocot/dicot stem, zea mays/pumpkin, c.s
- SB.2105 Hibiscus, young stem, c.s
- SB.2110 Cucurbita, pumpkin, stem, l.s
- SB.2115 Sambucus, elderberry or Morus Alba, mulberry, stem with cork cambium + lenticels, c.s
- SB.2160 Lilium, lily leaf, c.s
- SB.2225 Zea mays, corn, corn seed with embryo, l.s
- SB.2235 Pirus, pear, stone cells, section
- SB.2240 Triticum aestivum, wheat, kernel, l.s
- SB.2305 Cyrtomium, holly fern, c.s of rhizom
- SB.2310 Cyrtomium, holly fern, section
- SB.2386 Oscillatoria, blue-green algae

USED ABBREVIATIONS	
c.s	cross section
l.s	longitudinal section
w.m	whole mount

histology, zoology and botany set

PB. 5213 FOR EDUCATION

Set with 25 microscopy slides for education: histological samples of mammals, zoology and botany.  
All microscope slides are supplied in a plastic box for 25 slides. The set contains:

HISTOLOGY

- SH.1006 Elastic cartilage, rabbit
- SH.1040 Smooth muscle, teased preparation, rabbit, l.s+c.s
- SH.1110 Lung with injected blood vessels, rabbit, c.s

- SH.1130 Artery and vein, rabbit, c.s
- SH.1410 Nerve, rabbit, c.s and l.s



ZOOLOGY

- SZ.1535** Euglena virides, a flagellate with eyespot
- SZ.1586** Hydra, w.m of tentacles
- SZ.1620** Schistosoma Japonicum, female, w.m
- SZ.1705** Apis mellifica, honey bee, posterior leg, w.m
- SZ.1733** Pieres brassicae, cabbage-white butterfly, part of wing
- SZ.1738** Locusta, grasshopper, mouth parts, w.m
- SZ.1780** Insects - four types of legs, honey bee, house fly, house mosquito, spider
- SZ.1877** Rana sp, frog, blood smear

BOTANY

- SB.2011** Zea mays, corn root tip with hairs, l.s
- SB.2020** Helianthus, sunflower, old root, c.s
- SB.2025** Monocot/dicot plant roots, zea mays/helantius, c.s
- SB.2040** Solanum tuberosum, potato, starch grains
- SB.2075** Tilia, lime tree, one year stem, c.s
- SB.2091** Hydrilla stem, c.s
- SB.2100** Pelargonium hortorum, geranium, stem c.s
- SB.2337** Mmium, antheridial branch, l.s
- SB.2339** Mmium, archegonial branch, l.s
- SB.2373** Coprinus, ink caps mushroom, section of pleus
- SB.2380** Spirogyra sp. in conjugation
- SB.2420** 3 types of bacteria, cocci, bacilli, spirelli

histology, zoology and botany set

PB. 5214 FOR EDUCATION

Set with 25 microscopy slides for education: histological samples of mammals, zoology and botany.  
All microscope slides are supplied in a plastic box for 25 slides. The set contains:

HISTOLOGY OF MAMMALS

- SH.1060** Tendon l.s (Dense connective tissue), dog
- SH.1075** Skin section with sweat gland, human
- SH.1330** Testis rabbit, c.s
- SH.1340** Ovary rabbit with developed eggs
- SH.1360** Sperm, human, smear
- SH.1490** Retina, rabbit, sec

ZOOLOGY

- SZ.1522** Paramecium conjugation w.m
- SZ.1524** Paramecium in fission, w.m
- SZ.1540** Trachelomonas, a free swimming type euglena
- SZ.1585** Hydra with endoderm + ectoderm, c.s
- SZ.1710** Apis mellifica - honey bee compound eye, w.m
- SZ.1720** Culex pipiens - house mosquito, larva w.m
- SZ.1724** Giant chromosomes of salivary gland, w.m
- SZ.1810** Mya arenaria, clam gill, c.s
- SZ.1860** Lancelet, Section through gonads and gills, c.s

BOTANY

- SB.2015** Ranunculus, buttercup, root c.s
- SB.2076** Tilia, lime tree, 1, 2 & 3 year stem, c.s on one slide
- SB.2080** Pinus - pine tree, stem l.s
- SB.2140** Triticum, wheat, leaf, c.s
- SB.2150** Monocot/dicot leaves,zea mays/ligustrum lucidum, c.s
- SB.2230** Pinus, pine tree, male (cone) globose fruit l.s
- SB.2232** Pinus, pine tree, female (cone) globose fruit l.s
- SB.2315** Fern, prothallium w. young sporophyte w.m
- SB.2320** Cyrtomium, fern, leaf with sporangia
- SB.2384** Volvox sp. w.m

histology, zoology and botany set

PB. 5215 FOR EDUCATION

Set with 25 microscopy slides for education: histological samples of mammals, zoology and botany.  
All microscope slides are supplied in a plastic box for 25 slides. The set contains:

HISTOLOGY

- SH.1043** Cardiac muscle, dog, l.s
- SH.1070** Squamous epithelium, human, isolated cells from mouth, smear
- SH.1315** Kidney rat, sec. cortex & medulla
- SH.1420** Cerebellum section, dog
- SH.1450** Spinal cord, rabbit, c.s
- SH.1470** Taste buds, rabbit, l.s

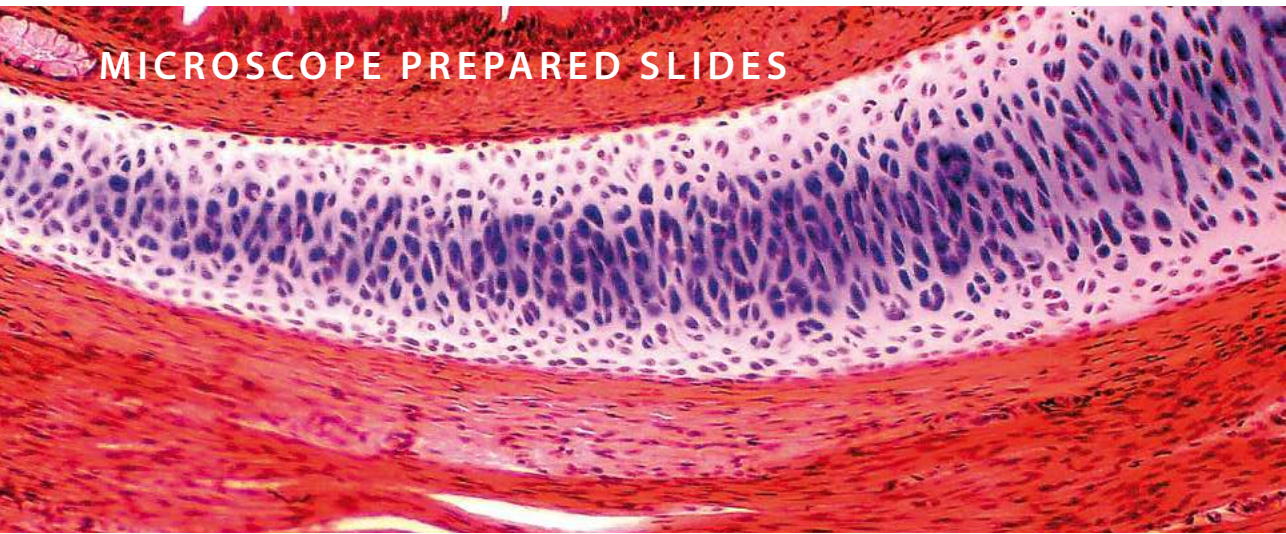
ZOOLOGY

- SZ.1610** Planaria, flat worm, injected intestinal tube, w.m
- SZ.1636** Ascaris megalocephala, horse roundworm, mitosis eggs
- SZ.1760** Ctenocephalus canis, dog flea, w.m
- SZ.1770** Tetranychus, red spider mite, w.m
- SZ.1930** Bird, wing and down feather, section
- SZ.1940** Chicken, embryo 48 hours, sagittal section

BOTANY

- SB.2090** Hydrilla verticillata, hydrilla stem tip, l.s
- SB.2112** Cucurbita, pumpkin, stem, c.s
- SB.2135** Nerium oleander, leaf with sunken stomata, c.s
- SB.2210** Lilium, lily, anther with mature pollen, c.s
- SB.2214** Lilium, lily, pollen, different stages of meiosis
- SB.2220** Capsella, shepherds' purse, ovary w. embryo in pre-cotyledon stadium, l.s
- SB.2222** Capsella, shepherds' purse, ovary w. embryo in cotyledon stadium, l.s
- SB.2234** Pinus, pine tree, pollen, w.m
- SB.2330** Marchantia, liverworts, thallus with gemma cup, c.s
- SB.2360** Saccaromyces sp., yeast, budding, w.m
- SB.2365** Penicillium sp., w.m
- SB.2410** Streptococcus lactis, milk bacteria, smear
- SB.2415** Bacillus subtilis, hay bacteria, smear

USED ABBREVIATIONS	
c.s	cross section
l.s	longitudinal section
w.m	whole mount



# MICROSCOPE PREPARED SLIDES

## sets with 23 slides for education

### mammal histology set

#### PB.5221 SET FOR EDUCATION

Set with 23 microscopy slides for education: histological samples of mammals.  
All microscope slides are supplied in a plastic box for 25 slides. The set contains:

#### EPITHELIUM AND CONNECTIVE TISSUES

- SH.1001** Loose connective tissue, rabbit
- SH.1005** Hyaline cartilage, rabbit, section
- SH.1011** Hard bone grinding, human, section
- SH.1049** Muscle types, striated, smooth, heart muscle, dog, l.s
- SH.1060** Tendon, dog, l.s
- SH.1070** Squamous epithelium, human, isolated cells from mouth, smear
- SH.1072** Skin section through hair follicle, human
- SH.1078** Stratified flat epithelium, dog, section

#### RESPIRATORY, BLOOD CIRCULATION AND ENDOCRINE SYSTEM

- SH.1120** Trachea rabbit, c.s
- SH.1130** Artery and vein, rabbit, c.s
- SH.1150** Blood smear, human, Giemsa stained

#### DIGESTIVE SYSTEM

- SH.1210** Stomach wall, dog, section
- SH.1230** Small intestine, dog, c.s
- SH.1250** Liver, pig, section

#### URINARY AND GENITAL SYSTEM

- SH.1310** Injected kidney, rabbit, sec
- SH.1330** Testis, rabbit, c.s
- SH.1340** Ovary with developed eggs, rabbit
- SH.1376** Human chromosomes in blood, female

#### NERVOUS SYSTEM AND SENSORY ORGANS

- SH.1410** Nerve, rabbit, c.s and l.s
- SH.1430** Cerebrum section, dog
- SH.1450** Spinal cord, rabbit, c.s
- SH.1470** Taste buds, rabbit, l.s
- SH.1490** Retina, rabbit, sec

### mammal histology set

#### PB.5222 SET FOR EDUCATION

Set with 23 microscopy slides for education: histological samples of mammals.  
All microscope slides are supplied in a plastic box for 25 slides. The set contains:

#### EPITHELIUM AND CONNECTIVE TISSUES

- SH.1006** Elastic cartilage, rabbit
- SH.1012** Hard bone grinding of rabbit, tooth, de-calcium
- SH.1040** Smooth muscle, teased preparation, rabbit, l.s+c.s
- SH.1043** Cardiac muscle, dog, l.s
- SH.1045** Skeletal muscle, dog, l.s and c.s
- SH.1075** Skin section with sweat gland, human
- SH.1080** Ciliated epithelium, trachea, rabbit

#### RESPIRATORY, BLOOD CIRCULATION AND ENDOCRINE SYSTEM

- SH.1110** Lung with injected blood vessels, rabbit, c.s
- SH.1140** Pancreas, rabbit, section
- SH.1160** Lymph node, rabbit, section
- SH.1170** Thyroid gland, rabbit, section
- SH.1180** Adrenal gland, rabbit, section

#### DIGESTIVE SYSTEM

- SH.1220** Oesophagus dog, c.s
- SH.1235** Large intestine, dog, c.s
- SH.1260** Gall bladder, dog, section
- SH.1280** Golgi apparatus in Basal spinal ganglion, dog

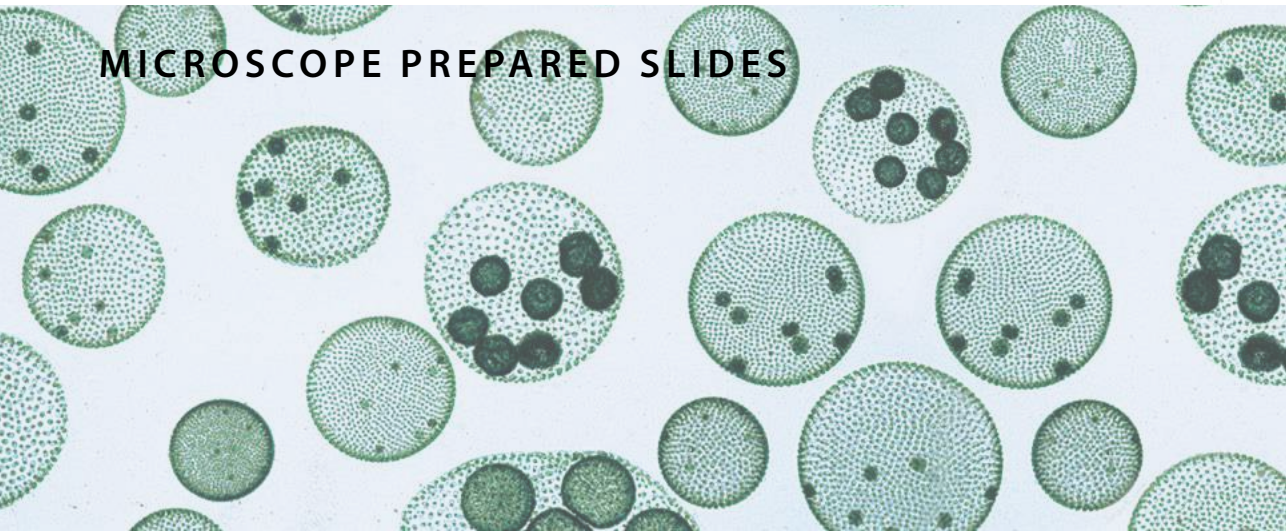
#### URINARY AND GENITAL SYSTEM

- SH.1315** Kidney, rat, sec. cortex & medulla
- SH.1360** Sperm, human, smear
- SH.1375** Human chromosomes in blood, male
- SZ.1724** Fruit fly, drosophila, giant chromosomes of salivary gland, w.m

#### NERVOUS SYSTEM AN SENSORY ORGANS

- SH.1415** Motor nerve cells with end plates, rabbit, w.m
- SH.1420** Cerebellum section, dog
- SH.1480** Eyeball section, rabbit, sagittal section





MICROSCOPE PREPARED SLIDES



set for hobby 10 slides

zoology and botany set

PB.5204 SET FOR HOBBY

Set with 10 prepared microscopy slides for hobby: zoology and botany.  
All microscope slides are supplied in a plastic box with transparent cover for 25 slides. The set contains:

ZOOLOGY

- SH.1040** Smooth muscle, teased preparation, rabbit, l.s and c.s
- SH.1110** Lung with injected blood vessels, rabbit, c.s
- SZ.1708** Apis mellifica, honey bee, mouth parts
- SZ.1733** Pieris brassicae, cabbage-white butterfly, part of wing
- SZ.1877** Rana sp, frog, blood smear
- SB.2015** Ranunculus, buttercup, root, c.s

BOTANY

- SB.2160** Lilium, lily leaf, c.s
- SB.2222** Capsella, shepherds' purse, ovary w. embryo in cotyledon stadium, l.s
- SB.2374** Aspergillus, brown mold, w.m
- SB.2384** Volvox sp., w.m

USED ABBREVIATIONS	
c.s	cross section
l.s	longitudinal section
w.m	whole mount

set for hobby 25 slides

slides of histology, zoology and botany

PB.5218 SET FOR HOBBY

Set with 25 prepared microscopy slides for hobby: zoology and botany.  
All microscope slides are supplied in a plastic box with transparent cover for 25 slides. The set contains:

HISTOLOGY OF HUMAN AND MAMMALS

- SH.1072** Skin section through hair follicle, human
- SH.1150** Blood smear human, Giemsa stained
- SH.1415** Motor nerve cells with end plates, rabbit w.m
- SH.1470** Taste buds, rabbit, l.s

BOTANY

- SB.2009** Allium cepa, onion, mitosis root tip, l.s
- SB.2055** Zea mays, corn, stem, cs
- SB.2075** Tilia, lime tree, one year stem, c.s
- SB.2100** Pelargonium hortorum, geranium, stem c.s
- SB.2112** Cucurbita, pumpkin, stem, c.s
- SB.2130** Helianthus, sunflower, leaf, c.s
- SB.2135** Nerium oleander, leaf with sunken stomata, c.s
- SB.2210** Lilium, lily, anther with mature pollen, c.s
- SB.2225** Zea mays, corn, corn seed with embryo, l.s

ZOOLOGY

- SZ.1520** Paramecium, w.m
- SZ.1535** Euglena virides, a flagellate with eyespot
- SZ.1580** Hydra with bud, w.m
- SZ.1630** Taenia, tapeworm cattle, mature proglottid, w.m
- SZ.1635** Ascaris megalocephala, horse roundworm, female and male, c.s
- SZ.1640** Lumbricus, earthworm, c.s
- SZ.1655** Daphnia sp., water flea, w.m
- SZ.1705** Apis mellifica, honey bee, posterior leg, w.m
- SZ.1710** Apis mellifica, honey bee compound eye, c.s
- SZ.1719** Musca domestica, house fly, wing w.m
- SZ.1722** Culex pipiens, house mosquito, female, mouth parts
- SZ.1724** Fruit fly, drosophila, giant chromosomes of salivary gland, w.m



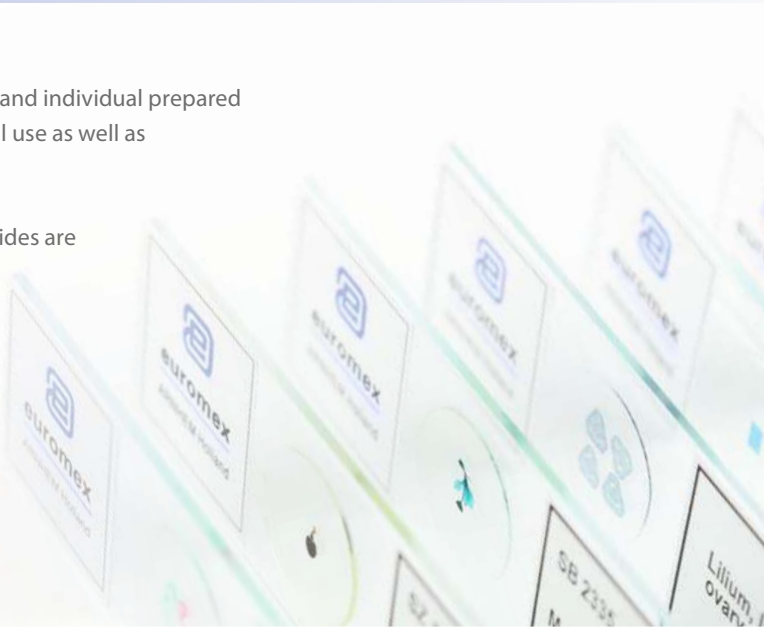
MICROSCOPE PREPARED SLIDES



individual euroslides  
prepared slides

Euromex supplies complete sets and individual prepared microscope slides for educational use as well as for the hobby market

These high quality microscope slides are usually supplied directly from stock, at the very best prices. The slides on the next page are separately available



HOW TO ORDER INDIVIDUAL EUROSLIDES

Minimum purchase quantity is 10 pieces of the same slide  
The individual slides always have to be ordered together with a storage box (e.g. PB.5181 for 25 slides)

individual euroslides for histology

These histological microscope slides consist of sample of ephitelium and connective tissues, the respiratory system, blood circulation, endocrine system, digestive system, urinary and genital systems, nervous system and sensory organs

EPHITELIUM AND CONNECTIVE TISSUES

- SH.1001** Loose connective tissue, rabbit
- SH.1005** Hyaline cartilage rabbit, section
- SH.1006** Elastic cartilage, rabbit
- SH.1011** Hard bone grinding, human, section
- SH.1012** Hard bone grinding of rabbit, tooth, decalcium
- SH.1040** Smooth muscle, teased preparation, rabbit, l.s and c.s
- SH.1045** Skeletal muscle, dog, l.s and c.s
- SH.1049** Muscle types, striated, smooth, heart muscle, dog, l.s
- SH.1060** Tendon, dog, l.s
- SH.1072** Skin section through hair follicle, human
- SH.1078** Stratified flat epithelium, dog, section
- SH.1080** Ciliated epithelium, trachea, rabbit

RESPIRATORY, BLOOD CIRCULATION  
AND ENDOCRINE SYSTEM

- SH.1110** Lung with injected blood vessels, rabbit, c.s
- SH.1120** Trachea, rabbit, c.s
- SH.1130** Artery and vein, rabbit, c.s
- SH.1140** Pancreas, rabbit, section
- SH.1150** Blood smear, human, Giemsa stained
- SH.1160** Lymph node, rabbit, section

DIGESTIVE SYSTEM

- SH.1220** Oesophagus, dog, c.s
- SH.1230** Small intestine, dog, c.s
- SH.1250** Liver, pig, section

URINARY AND GENITAL SYSTEM

- SH.1310** Injected kidney, rabbit, section
- SH.1330** Testis, rabbit, c.s
- SH.1340** Ovary with developed eggs, rabbit
- SH.1360** Sperm, human, smear

NERVOUS SYSTEM  
AND SENSORY ORGANS

- SH.1410** Nerve, rabbit, c.s and l.s
- SH.1415** Motor nerve cells with end plates, rabbit, w.m
- SH.1420** Cerebellum section, dog
- SH.1450** Spinal cord, rabbit, c.s
- SH.1470** Taste buds, rabbit, l.s
- SH.1490** Retina, rabbit, section

USED ABBREVIATIONS	
c.s	cross section
l.s	longitudinal section
w.m	whole mount

# individual euroslices for zoology

This series of zoology microscopy slides consists of samples with single-cell organisms (protozoa), coelenterate, worms (helminthes), Crustaceans (crustaceae), insects and amphibians

## PROTOZOA

- SZ.1510** Amoeba proteus, w.m
- SZ.1520** Paramecium, w.m
- SZ.1522** Paramecium in conjugation w.m
- SZ.1535** Euglena virides, a flagellate with eyespot
- SZ.1540** Trachelomonas, a free swimming type euglena

## COELENTERATA

- SZ.1580** Hydra with bud, w.m

## HELMINTHES

- SZ.1630** Taenia, tapeworm pig, mature proglottid, w.m
- SZ.1635** Ascaris megalocephala, horse roundworm, female + male c.s
- SZ.1636** Ascaris megalocephala, horse roundworm, mitosis eggs
- SZ.1640** Lumbricus, earthworm, c.s

## CRUSTACEANS

- SZ.1655** Daphnia sp., water flea, w.m

## INSECTS

- SZ.1705** Apis mellifica, honey bee, posterior leg, w.m
- SZ.1708** Apis mellifica, honey bee, mouth parts
- SZ.1710** Apis mellifica, honey bee compound eye, c.s
- SZ.1719** Musca domestica, house fly, wing, w.m
- SZ.1720** Culex pipiens, house mosquito, larva, w.m
- SZ.1722** Culex pipiens, house modquito, female, mouth parts
- SZ.1724** Drosophila, fruit fly, giant chromosomes of salivary gland, w.m
- SZ.1730** Pieres brassicae, cabbage-white butterfly, mouth, w.m
- SZ.1733** Pieres brassicae, cabbage-white butterfly, part of wing
- SZ.1738** Locusta, grasshopper, mouth parts, w.m
- SZ.1760** Ctenocephalus canis, dog flea, w.m
- SZ.1780** Insects- four types of legs, honey bee, house fly, house modquito, spider

## AMPHIBIANS

- SZ.1877** Rana sp, frog, blood smear
- SZ.1880** Frog unclaved egg, c.s
- SZ.1881** Frog egg, two cells stadium, c.s
- SZ.1883** Frog egg, advanced cleavage c.s
- SZ.1885** Frog egg, blastula phase, c.s
- SZ.1887** Frog egg, early gastrula phase, c.s
- SZ.1889** Frog egg, advanced gastrula phase, c.s

# individual euroslices for botany

This series of botanic microscopy slides consists of samples of sections of roots, stems, leaves, flowers, fruits and seeds, ferns and mosses, fungi, algae and bacteria

## ROOTS

- SB.2006** Allium cepa, onion, scale epidermis, w.m
- SB.2009** Allium cepa, onion, mitosis root tip, l.s
- SB.2015** Ranunculus, buttercup, root, c.s
- SB.2020** Helianthus, sunflower, old root, c.s
- SB.2025** Monocot/dicot plant roots, zea mays/helantius, c.s
- SB.2040** Solanum tuberosum, potato, starch grains

## STEMS

- SB.2055** Zea mays, corn, stem, c.s
- SB.2060** Triticum aestivum, wheat, stem, c.s
- SB.2070** Helianthus, sunflower, young stem, c.s
- SB.2076** Tilia, lime tree, 1, 2 and 3 year stems on one slide, c.s
- SB.2095** Monocot/dicot stem, corn/pumpkin, c.s
- SB.2100** Pelargonium hortorum, geranium, stem, c.s
- SB.2105** Hibiscus, young stem, c.s
- SB.2115** Sambucus, elderberry or Morus Alba, mulberry, stem with crok cambium and lenticels, c.s

## LEAVES

- SB.2130** Helianthus, sunflower, leaf, c.s
- SB.2135** Nerium oleander, leaf with sunken stomata, c.s
- SB.2140** Triticum, wheat, leaf, c.s
- SB.2150** Monocot/dicot leaves, zea mays/ligustrum lucidum, c.s
- SB.2160** Lilium, lily leaf, c.s

## FLOWERS, FRUITS AND SEEDS

- SB.2205** Monocot/dicot flower, zea mays/ranunculus, c.s
- SB.2210** Lilium, lily, anther with mature pollen, c.s
- SB.2212** Lilium, lily, overy, c.s
- SB.2214** Lilium, lily, pollen, different stages of meiosis
- SB.2220** Capsella, shepherds' purse, ovary w. embryo in pre-cotyledon stadium, l.s
- SB.2222** Capsella, sheperd's purse, ovary w. embryo in cotyledon statium, l.s
- SB.2225** Zea mays, corn seed with embryo, l.s
- SB.2232** Pinus, pine tree, female (cone) globose fruit, l.s
- SB.2240** Triticum aestivum, wheat, kernel, l.s

## FERNS AND MOSSES

- SB.2315** Cyrtomium, holly fern, prothallium with young sporophyt, w.m
- SB.2337** Mnium, antheridial branch, l.s
- SB.2339** Mnium, archegonial branch, l.s

## FUNGI

- SB.2360** Saccaromyces sp., yeast, budding, w.m
- SB.2365** Penicillium sp., w.m
- SB.2373** Coprinus, ink caps mushroom, section of pileus
- SB.2374** Aspergillus, brown mold, w.m

## ALGAE

- SB.2377** Diatoms, w.m
- SB.2380** Spirogyra sp. in conjugation
- SB.2384** Volvox sp., w.m

## BACTERIA

- SB.2420** 3 types of bacteria, cocci, bacilli, spirelli

### HOW TO ORDER INDIVIDUAL EUROSIDES

Minimum purchase quantity is 10 pieces of the same slide  
The individual slides always have to be ordered together with a storage box (e.g. PB.5181 for 25 slides)

# DISPOSABLES



## disposables

### MICROSCOPE SLIDES AND COVER GLASSES

- PB.5150** Microscope slides 76 x 26 mm, half white glass, cut edges. 50 pieces

**PB.5155** Microscope slides 76 x 26 mm white glass, ground edges. 50 pieces

**PB.5157-W** Microscope slides 76 x 26 mm, ground white frosted side, 50 pieces

**PB.5157-B** Microscope slides 76 x 26 mm, ground blue frosted side, 50 pieces

**PB.5160** Microscope slides 76 x 26 mm with concavity, ground edges. 10 pieces

**PB.5165** Cover glasses 18 x 18 mm, thickness 0.13-0.17 mm. 100 pieces
- PB.5168** Cover glasses 22 x 22 mm, thickness 0.13-0.17 mm. 100 pieces

**PB.5170** Cover glasses Ø18 mm, thickness 0.13-0.17 mm. 100 pieces

### MICROSCOPE SLIDE BOXES

- PB.5181** Black plastic slide box for 25
- PB.5180** Wooden slide box for 25 slides. White interior with index
- PB.5185** Black plastic slide box for 100 slides

11 ACCESSOIRES FOR MICROSCOPY



# STAINS

Staining enables observation of cells and tissues of low contrast. Euromex offers a range of common stains



### MISCELLANEOUS ACCESSORIES

- PB.5200** Staining trough for 10 slides
- PB.5210** Fine pointed brush
- PB.5245** Lens paper. 100 sheets
- PB.5250** Solid paraffin. Melting point 60°C, 200 grams
- PB.5255** Immersion oil, refractive index nD = 1.515. (25 ml)
- PB.5265** Entellan, quick drying Canada balsam. In bottle (25 ml)
- PB.5274** Isopropyl alcohol 99%. In bottle (200 ml)
- PB.5277** Formalin 40%, fixing agent. In bottle (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue, brush, air blower, cotton swabs
- PB.5276** Microscope maintenance and servicing kit, 16pcs: cleaning brush, 6 pcs screwdriver set, air blower, 3 pcs Allen key, 1.5, 2, 2.5 mm, lens cleaning fluid 20 ml, cleaning cloth 140 x 140 mm, 100 pcs lens tissue sheets, tube of maintenance grease, 10 ml bottle of oil, packed in a nice toolbox



### (DISSOLVED) STAINS

Supplied in 25 ml bottles

- PB.5283** Eosin yellow. Stain for general overall-view coloring
- PB.5286** Haematoxylin according to Ehrlich. General purpose nuclear stain
- PB.5289** Astra Blue. Stain for vegetal cells. To be used in combination with safranin
- PB.5292** Orange-G, stain for most elementary structures of animal tissues
- PB.5295** Safranin. A general stain for showing nuclei and cellulose walls. To be used in combination with Astra Blue
- PB.5297** Methylene Blue. Biological and bacteriological stain
- PB.5300** Analin Blue, to be used as third color for Azo pigmentation
- PB.5305** Fuchsin. For staining bacilli in tissue

ACCESSOIRES FOR MICROSCOPY 11

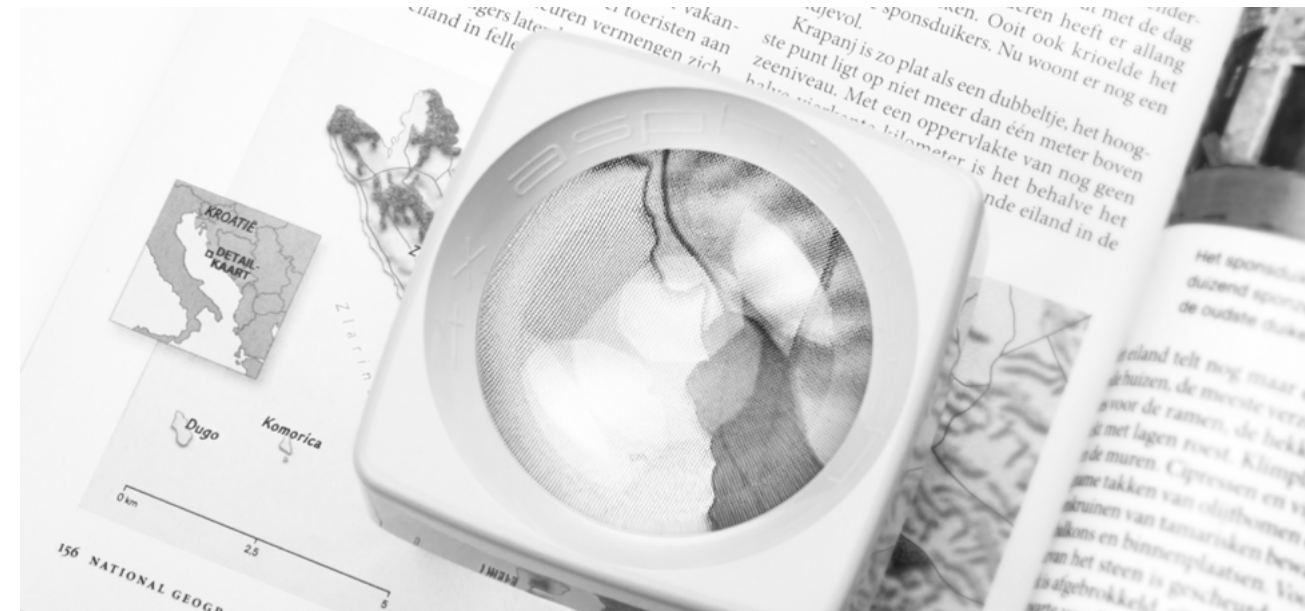


# other products

## optical instruments



optical instruments



product information

Euromex offers a large range of optical products for  
a wide variety of applications in different fields

Our high-quality magnifiers, refractometers and other optical instruments  
all ensure an excellent optical quality and unmatched durability

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MEASURING MICROSCOPES • PAGE 398  
REFRACTOMETERS • PAGE 402  
POLARIMETERS • PAGE 408  
SPECTROMETERS • PAGE 410**

# MAGNIFIERS & MEASURING MICROSCOPES

Magnifiers are widely used by biologists, jewelers, watchmakers and philatelists to accurately observe all details of the object



product information

## handheld magnifiers and magnifiers with handles

- PB.5020** Magnifier with handle 4x, lens Ø 50 mm and handle Ø 8 mm. Fits on PB.5022
- PB.5021** Magnifier with handle 10x, aplanatic lens Ø 25 mm and handle Ø 8 mm. Fits on PB.5022
- PB.5022** Heavy stand with adjustable cross clamp, base Ø 70 mm. Weight 450 grams. For PB.5022 and PB.5021



● PB.5020

● PB.5021

● PB.5022

## FOLDING MAGNIFIERS

- PB.5016** Aplanatic magnifier 6x, doublet. Lens Ø 20 mm. Field of view 25 mm
- PB.5018** Aplanatic magnifier 15x, doublet. Lens Ø 18 mm. Field of view 14 mm
- PB.5032** Achromatic magnifier 10x, triplet. Lens Ø 20 mm. Field of view 15 mm
- PB.5033** Achromatic magnifier 20x, triplet. Lens Ø 20 mm. Field of view 8 mm



● PB.5032

- PB.5036** Aplanatic magnifier 10x, doublet. Lens Ø 20 mm. Field of view 20 mm
- PB.5037** Achromatic diamond magnifier 10x with four lenses Ø 21 mm. Field of view 25 mm



● PB.5016

## FOLDING MAGNIFIERS WHITE LED ILLUMINATION

- PB.5034-LED** Achromatic magnifier 10x triplet. Lens Ø 21 mm. White LED illumination
- PB.5018-LED** Achromatic magnifier 15x triplet. Lens Ø 21mm. White LED illumination
- PB.5033-LED** Achromatic magnifier 20x, triplet. Lens Ø 21 mm. White LED illumination
- PB.5035-LED** Achromatic magnifier 30x triplet. Lens Ø 21 mm. White LED illumination



● PB.5034-LED

## FOLDING MAGNIFIERS WHITE LED AND UV ILLUMINATION

- PB.5034-LUV** Achromatic magnifier 10x triplet. Lens Ø 21 mm. White LED and UV illumination
- PB.5018-LUV** Achromatic magnifier 15x triplet. Lens Ø 21mm. White LED and UV illumination
- PB.5033-LUV** Achromatic magnifier 20x, triplet. Lens Ø 21 mm. White LED and UV illumination
- PB.5035-LUV** Achromatic magnifier 30x triplet. Lens Ø 21 mm. White LED and UV illumination



● PB.5034-LUV

# MAGNIFIERS & MEASURING MICROSCOPES

Measuring microscopes are built with a microscope objective for magnifications from 20 to 100x times



## magnifiers & measuring microscopes

### TABLE MAGNIFIERS

- PB.5039** Table magnifier, 15x magnification.  
Glass achromatic lens Ø 19 mm, field of view 15 mm
- PB.5041** Table magnifier, 10x magnification.  
Glass lens Ø 26 mm, field of view 25 mm
- PB.5043** Table magnifier, 4x magnification.  
Plastic lens Ø 57 mm, field of view 55 mm
- PB.5040** Table magnifier, 8x magnification.  
Plastic lens Ø 23 mm, field of view 30 mm.  
10mm/100 reticle

### MISCELLANEOUS MAGNIFIERS

- PB.5030** Dual sliding magnifier with 3x and 6x magnification.  
Lens aperture 23 x 23 mm. Fields of view  
50 x 50 mm and 25 x 25 mm. Plastic housing
- PB.5049** Linen tester folding magnifier with 6x aplanatic lens.  
A 25 x 25 mm base with millimeter scale. Metal  
casing lacquered in black. Supplied with plastic case



### MEASURING MAGNIFIERS WITH RETICLE

- PB.5044** Measuring magnifier 7x.  
Eyepiece Ø 18 mm. Field of view 24 mm.  
Measuring scale 10-0-10 mm divided into  
0.1 mm and crosshairs
- PB.5045** Measuring magnifier 7x.  
Eyepiece Ø 18 mm. Field of view 24 mm.  
With 5 interchangeable scales for angle, thickness  
and linear measurements
- PB.5046** Measuring magnifier 10x.  
Eyepiece Ø 20 mm. Field of view 35 mm.  
Measuring scale 15-0-15 mm with 0.1, 0.2 and  
0.5 mm graduations
- PB.5048** Measuring magnifier 4x.  
Eyepiece Ø 30 mm. Field of view 65 mm.  
Measuring scale 25-0-25 mm with 0.1, 0.2 and  
0.5 mm graduations
- PB.5047** Measuring magnifier 10x.  
Eyepiece Ø 25 mm. Field of view 30 mm.  
Measuring scale 15-0-15 mm with 0.1, 0.2 and  
0.5 mm graduations. White LED-illumination

### MEASURING MICROSCOPES

- PB.5008** Measuring microscope 20x with LED illumination.  
Measuring scale 7.2 mm with 0.1 mm graduation
- PB.5010** Measuring microscope 40x with LED illumination.  
Measuring scale 3 mm with 0.05 mm graduation
- PB.5012** Measuring microscope 60x with LED illumination.  
Measuring scale 1.75 mm with 0.02 mm graduation
- PB.5014** Measuring microscope 100x with LED illumination.  
Measuring scale 1.1 mm with 0.01 mm graduation





# refractometers



refractometers



Refractometers are used for the identification of substances and concentration measurements of fluids. Because the refractive index (R.I.) of a solution is proportional to the concentration, it is easy to identify the substance or to measure the purity and concentrations of solutions

The Euromex refractometers are calibrated at 20° Celsius. Most refractometers are equipped with Automatic Temperature Compensation (ATC)

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ABBE REFRACTOMETER • PAGE 403

REFRACTOMETERS

The Euromex refractometers are ideal for determining concentrations, testing and measuring of fluids



refractometers  
handheld and table models

A refractometer is an instrument that measures the refractive index of a liquid or refractive material such as sugar concentrations in fruits, juices, soft drinks, energy drinks, wines or must, liquors, jams, honey, industrial lubricants, antifreeze, ethanol, battery acids, salt, propylene glycol, ethylene glycol solutions

A few drops of the liquid that needs to be examined are gently deposited on a measuring prism and covered with a cover-glass. The rays of the light source (ambient light, built-in LED light source or external cold-light source) will be bent (refracted) in function of the composition of the liquid under observation

This results in a shadow line between a dark and a light portion. The measured value can be directly read through a focusable eyepiece on a refraction index scale and/or on a specific built-in scale(s) of the refractometer in Brix, Oechsle, Babo units or % volume, specific gravity, protein in serum or in °C

Euromex offers portable or handheld refractometers, analogue or digital and laboratory Abbe refractometer products used in wine making, distilling, food processing, canning, beekeeping, brewing, pharmaceutical, manufacturing, machining, automotive industries

Most of the refractometers have also an A(utomated) T(emperature) C(ompensation) mechanism in order to compensate for temperature variations. Calibration can be verified with a calibration fluid (in most cases distilled water) and adjusted by a screw if needed

Application	Art no	Range	Accuracy	Remarks	ATC	Handheld model	Table model	Analog	Digital
Concentrations of sugar in marmalades, fruits, syrups, wine and monitoring of oil emulsions	RF.6190	0-90 Brix	0.2	3 scales: 0-42 / 42-71 / 71-90 Brix		•		•	
	RF.6510	0 - 10 Brix	0.1		•	•		•	
	RF.6520	0 - 20 Brix	0.1		•	•		•	
	RF.6532	0 - 32 Brix	0.2		•	•		•	
	RF.6562	28 - 62 Brix	0.2		•	•		•	
	RF.6580	0 - 80 Brix	0.5		•	•		•	
	RF.6582	45 - 82 Brix	0.5		•	•		•	
	RF.6592	58 - 92 Brix	0.2		•	•		•	
	RF.6635	0 - 150 °Oe	1	Oechsle units	•	•		•	
		0 - 35 Brix	0.2	Sugar concentration					
		0 - 27 °KMW	0.2	Babo units					
		0 - 22 %	0.2	% volume					
		0 - 37 CNM	0.5						
	RD.6735	0 - 150 °Oe	1		•	•			•
		0 - 35 Brix	0.1						
		0 - 25 °KMW	0.1						
		0 - 22 %	0.1						
	RD.6645	0 - 45 Brix	0.1		•	•			•
		1.33 - 1.41 R.I.	0.0003						
	RD.6666	0 - 80 Brix	0.5		•	•			•
		1.33 - 1.51 R.I.	0.0005						
	RD.6667	58 - 92 Brix	0.2		•	•			•
		1.43 - 1.52 R.I.	0.0003						
Honey	RF.6642	13 - 25 %	0.1	Honey moisture	•	•		•	
	RF.6644	58 - 92 Brix	0.5		•	•		•	
Concentration of sugar/alcohol %		38 - 43 °Be	0.5						
		12 - 27 %	1	Water					
				% volume	•	•		•	
Salinity and concentration of sugar	RF.6627	0 - 25 %	0.2		•	•		•	
		0 - 40 Brix	0.2						
		0 - 20 Baume	0.2						
	RF.6610	0 - 100 ‰	1		•	•		•	
		0 - 10 Brix	0.1						
		1.00 - 1.07 R.I.	0.005						
	RF.6628	0 - 28 %	0.2		•	•		•	
	RD.6728	0 - 28 %	0.1	% NaCl	•	•			•
		0 - 45 Brix	0.1						
Clinical applications Proteins		1.33 - 1.41 R.I.	0.0003	Only for sugar/salt					
	RF.6612	0 - 12 g/dl	0.2	Proteins in serum	•	•		•	
		1.00 - 1.05 sg	0.002	Urine specific gravity					
		1.333 - 1.360 R.I.	0.0003						

Application	Art no	Range	Accuracy	Remarks	ATC	Handheld model	Table model	Analog	Digital
	RD.6712	0 - 12	g/dl	0.1	Proteins in serum	•	•		•
		1.00 - 1.05	sg	0.001	Urine specific gravity				
		1.33 - 1.39	R.I.	0.0001					
	RD.6714	0 - 14	g/dl	0.1	Proteins in serum (dog)	•	•		•
		0 - 14	g/dl	0.1	Proteins in serum (cat)				
		1.00 - 1.06	sg	0.001	Urine specific gravity (dog)				
		1.00 - 1.06	sg	0.001	Urine specific gravity (cat)				
Battery Acid/Coolant	RF.6650	1.10 - 1.40	sg	0.01	Battery fluids	•	•	•	
		-50 / 0	°C	5	Ethylene glycol G13				
		-50 / 0	°C	5	Propylene glycol G11/12				
		-40 / 0	°C	10	windshield washer fluid				
	RD.6730	1.0 - 1.50	sg	0.01	Battery fluids	•	•		•
		-50 / 0	°C	0.5	Ethylene glycol G13				
AdBlue/Urea	RF.6652	-50 / 0	°C	0.5	Propylene glycol G11/12				
		-40 / 0	°C	0.5	windshield washer fluid				
Identification of precious stones	RF.6381	1.30 - 1.81	R.I.	0.01				•	•

ACCESSORIES AND SPARE PARTS

- RF.5295** Test slide 78.8 Brix for calibration of RF.5190
- RF.5385** 5 ml immersion nD 1.65 liquid for RF.5381 and RF.6381
- LE.5209** 20 W 12 V cold light source with single fiber light conductor (for Abbe refractometer 98.490)
- 98.492** Thermometer 0-50° C (for Abbe refractometer 98.490)
- 98.496** Calibration slide nD 1.5163 (for Abbe refractometer 98.490)



● Digital refractometer



● 98.490

Abbe laboratory refractometer substance identification

The Abbe laboratory refractometer is a bench-top instrument for high-precision measurements of an index of refraction and suitable for determination of the refractive index of solid samples, such as glass, plastics, and polymer films

The instrument is supplied with a thermometer and water connection to control fluid temperatures. Also equipped with a Brix and a refraction index scale and supplied with a test plate

Capable of measuring all kinds of concentrations and identifying several types of substances

The Abbe refractometer can be connected to a water bath for measuring at a controlled temperature. During the use of this type of refractometer the use of a cold light source such as the LE.5209 is recommended.

This Abbe table refractometer has scales for measurement of sugar concentrations and refractive indices. Delivered with carrying case, digital thermometer, calibration plate, adjusting tool and with 0.5 ml calibration liquid



product information

Substance identification of sugar concentration

MODEL	Scales	Accuracy	Remarks	Analog
98.490	0-95 Brix	0.5 Brix	Abbe table refractometer without light source	•
	1.300-1.700 RI	0.0002 RI		



# polarimeters & spectrosopes



## polarimeters & spectrosopes

A polarimeter measures the rotation angle of polarized light traveling through an optically active substance. The rotation angle of the polarization plane of linear polarized light is different for each optical active substance as described in the Law of Biot

Polarimetry is a non-destructive test method for measuring optical activity of organic and inorganic substances. It is very useful to analyze expensive non-reproducible samples. Polarimeters are extensively used for quality and process control in research laboratories in the chemical and food industry

Spectrosopes are used to visualize the light spectrum of light sources

## POLARIMETERS



## polarimeter



99.400-LED

Polarimeters are suitable for fast and accurate measurements of sugars, glucose, perfume, chemical substances and medical drugs. Equipped with a Glan Thomson prism and Laurent Quartz plate, a built-in 230 V 589.3 nm sodium lamp or a high-power LED with 589.3 nm filter

Polar scale, range  $\pm 180^\circ$  with  $0.1^\circ$  readings. Supplied with observation tubes of 100 mm and 200 mm. Bright light measuring field permits reading with accuracy of  $0.1^\circ$  with aid of Vernier



### HIGHLIGHTS

The polarimeters are delivered with 100 and 200 mm observation tubes  
Equipped with a built-in 230 V 589.3 nm sodium lamp or high-power LED with 589.3 nm filter  
Fast and accurate

### ACCESSORIES FOR 99.400

- 99.410 Measuring tube, 100 mm long
- 99.415 Measuring tube, 200 mm long
- 99.430 Cover glass for measuring tube  $\varnothing$  15 mm
- 99.431 Rubber ring (for 99.430)
- 99.197 Spare sodium 589.3 nm lamp

MODEL	Scales	Accuracy	Observation tubes 100 and 200 mm	230 V sodium lamp with 589.3 nm filter	230 V High power LED with 589.3 nm filter
99.400	$\pm 180^\circ$	$\pm 0.1^\circ$ polar scale	•	•	
99.400-LED	$\pm 180^\circ$	$\pm 0.1^\circ$ polar scale	•		•

# SPECTROSCOPES

Euromex handheld spectrosopes are used for optical experiments in natural sciences, industry and education



product information



## handheld spectrosopes

### SP.5200

Handheld spectroscope with adjustable slit, comparison prism, mirror, five glass mini-cuvettes and wavelength scale 400 - 700 nm with 589 nm indication. Divisions 10 nm

- Direct vision type
- Adjustable eye lens
- Adjustable slit 0 - 1 mm
- Angle dispersion C - F 7°
- Linear dispersion 60 mm
- Comparison prism for comparison between products
- Mirror
- 5 Glass cuvettes
- Wavelength scale 400 - 700 nm



SP.5200

MODEL	Dimensions	Weight (grams)	Adjustable slit	Comparison prism	Angle dispersion	Linear dispersion	Wavelength scale	589 nm indication	With 5 glass cuvettes
SP.5200	h50x1115xp23	250	0-1 mm	•	C-F 7°	60 mm	•	•	•

### SP.5155

Handheld spectroscope with adjustable slit and comparison prism, mirror and five glass cuvettes

- Direct vision type
- Adjustable eyelens
- Adjustable slit 0 - 1 mm
- Angle dispersion C - F 7°
- Linear dispersion 60 mm
- Comparison prism
- Mirror
- five Glass cuvettes



SP.5155

MODEL	Dimensions	Weight (grams)	Adjustable slit	Comparison prism	Angle dispersion	Linear dispersion	Wavelength scale	589 nm indication	With 5 glass cuvettes
SP.5155	h45x1105xd23	125	0-1 mm	•	C-F 7°	60 mm	--	--	•

### SP.5150

Handheld spectroscope with adjustable slit from 0 tot 1 mm

- Direct vision type
- Adjustable eye lens
- Adjustable slit 0 - 1 mm
- Angle dispersion C - F 7°
- Linear dispersion 60 mm



SP.5150

MODEL	Dimensions	Weight (grams)	Adjustable slit	Comparison prism	Angle dispersion	Linear dispersion	Wavelength scale	589 nm indication	With 5 glass cuvettes
SP.5150	90 x18 mm Ø	92	0-1 mm	--	C-F 7°	60 mm	--	--	--

### SP.5100

Handheld spectroscope with fixed slit

- Direct vision type
- Adjustable eye lens
- Fixed slit
- Angle dispersion C - F 6°
- Linear dispersion 40 mm



SP.5100

MODEL	Dimensions	Weight (grams)	Adjustable slit	Comparison prism	Angle dispersion	Linear dispersion	Wavelength scale	589 nm indication	With 5 glass cuvettes
SP.5100	90 x18 mm Ø	72	--	--	C-F 6°	40 mm	--	--	--

choose the right  
euromex microscope

Euromex offers a large range of microscope series. Selecting the right microscope for your application might be challenging and time consuming.

To simplify this process we have listed our recommended models for most common applications in education, laboratories and industry



EDUCATION	FIELD OF APPLICATION	RECOMMENDED MODELS
• botany	Study of plants as branch of biology. Plant anatomy and morphology. Plant genetics and ecology. Plant biochemistry	MicroBlue, EcoBlue, BioBlue, BioBlue.Lab, AP series, EduBlue, StereoBlue
• digital imaging	Observation and perform analysis on microscope images, storage and share captured and videos	CMEX cameras, CCD cameras, HD cameras, EduPad, MacroZoom
• electronics	Development, production, assembling and inspection of electronic components or circuitry	bScope® (materials), EduBlue, StereoBlue, NexiusZoom, MacroZoom
• entomology	Study of insects as branch of zoology. Identification and classification of beetles, flies, termites, moths and butterflies, bees, ants, wasps	MicroBlue, EcoBlue, BioBlue, BioBlue.Lab, AP series, EduBlue, StereoBlue, MacroZoom
• geology, mineralogy	Earth Science; Study of solids, rocks and processes. Identification and classification of rocks and minerals	EcoBlue (polarization), BioBlue (polarization), AP series, EduBlue, StereoBlue
• geology, petrology	Identification by means of petrographic microscope	EcoBlue (polarization), BioBlue (polarization), AP series, EduBlue, StereoBlue
• mechanics	Manufacturing and quality inspection of mechanical parts	bScope® (materials), EduBlue, StereoBlue, NexiusZoom, MacroZoom
• microbiology	Study of microscopic uni-, multi- or acellular small organisms such as protozoa, algae, bacteria and more. Identification and classification	EcoBlue, BioBlue, bScope®, Delphi-X Observer
• mycology	Study of fungi as branch of biology. Identification and classification	EcoBlue, BioBlue, BioBlue.Lab, bScope®, AP series, EduBlue, StereoBlue
• petrology	Study of the composition and structure of rocks as branch of geology. Identification by means of polarization microscopes	EcoBlue (polarization), BioBlue (polarization), AP series, EduBlue, StereoBlue
• zoology	Animal biology. Study of invertebrates and vertebrates and related branches	EcoBlue, BioBlue, BioBlue.Lab, bScope®, AP series, EduBlue, StereoBlue, MacroZoom

UNIVERSITY LABS	FIELD OF APPLICATION	RECOMMENDED MODELS
• agronomy & forestry	Selective breeding of plants, fruit and production of food from plants, wood from trees, fuel. Plant physiology and genetics research	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series, MacroZoom
• anatomopathology	Diagnosis of diseases of organs or tissues. Cytopathology and forensic pathology	BioBlue.Lab, bScope®, iScope®, Oxion, Delphi-X Observer, NexiusZoom, DZ series
• asbestos control	Research of asbestos fibers, environmental protection during restoration of older buildings	iScope® (asbestos and polarization), NexiusZoom, DZ series, Z series
• bacteriology	Study of bacteria as subdivision of microbiology. Identification, classification	BioBlue.Lab, bScope®, iScope®, Oxion, Delphi-X Observer
• biochemistry	Study of chemical processes within living organism. Identification and classification of enzymes and structure of biomolecules	BioBlue.Lab, bScope®, iScope®, Oxion, Delphi-X Observer
• biomedical	Study of medical microbiology, virology, epidemiology, biomedical engineering	BioBlue.Lab, iScope®, Oxion, Delphi-X Observer
• biotechnology	Study of living organism in order to make food products, for plant protection (genetically modified organism) and other bio-process engineering. Development of pharmaceutical drugs, genetic testing, enzymes production, biofuels, textile	BioBlue.Lab, bScope®, iScope®, Oxion, Delphi-X Observer, StereoBlue, NexiusZoom, DZ series
• botany	Study of plants as branch of biology. Plant anatomy and morphology. Plant genetics and ecology. Plant biochemistry	BioBlue.Lab, bScope®, StereoBlue, NexiusZoom, DZ series, MacroZoom
• cell culture	Controlled growing of cells and tissues, fungal culture and microbiological culture	Delphi-X Inverso, Oxion Inverso, NexiusZoom, DZ series
• chemistry	Study of the composition and properties of chemicals	iScope® (materials and polarization), Oxion (materials), bScope® (materials), NexiusZoom, DZ series
• cosmetics	Research, development and testing (safety) of substances for make-up or perfume	iScope® (materials), Oxion (materials), bScope® (materials), NexiusZoom, DZ series
• cytology	Study of cell structure, function and chemistry. Detection of cellular diseases	BioBlue.Lab, iScope®, Oxion, Delphi-X Observer
• dermatology	Study and diagnosis, treatment of skin, nails and hair diseases	iScope®, Oxion, NexiusZoom, StereoBlue, DZ series, MacroZoom
• digital imaging	Observation and analysis of microscope images, save and share captured images and videos	CMEX cameras, CCD cameras, HD cameras, Cooled cameras, EduPad, ProPad
• electronics	Development, production, assembly and inspection of electronic components or circuitry	iScope® (materials), Oxion (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series, Z series, MacroZoom
• embryo collection	Embryo collection and transfer in mares, pigs, cows. Quality control	NexiusZoom, DZ series, Z series



• <b>embryology</b>	Study of gametes, embryos and fetuses	BioBlue.Lab, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series
• <b>entomology</b>	Study of insects as branch of zoology. Identification and classification of beetles, flies, termites, moths and butterflies, bees, ants, wasps	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series, MacroZoom
• <b>environmental</b>	Monitoring of environmental conditions such as water, atmosphere, ecosystems, soil and pollution	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series
• <b>fluorescence</b>	Study of living and non living materials with the help of fluorescence markers (fluorochromes)	iScope® (fluorescence), Oxion (fluorescence), Delphi-X Observer (fluorescence), Oxion Inverso (fluorescence), bScope® (fluorescence), DZ series
• <b>food and beverages</b>	Quality and safety controls, before, during and after the production of food and beverages	BioBlue.Lab, bScope®, iScope®, Oxion
• <b>forensics</b>	Analysis of scientific evidence. Toxicology, fingerprints, Forensic anthropology and archeology, forensic botany and entomology	BioBlue.Lab, iScope®, iScope® (materials and polarization), Oxion, Oxion (materials), Oxion Inverted, Oxion Inverted (materials), NexiusZoom, DZ series, Z series
• <b>genetics</b>	Study of genes, heredity in living organisms including bacteria, plants, animals and humans	iScope®, Oxion, Delphi-X Observer, DZ series
• <b>geology, mineralogy</b>	Earth Science; Study of solids, rocks and processes Identification and classification of rocks and minerals	iScope® (materials), Oxion (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series, MacroZoom
• <b>geology, petrology</b>	Identification by means of petrographic microscopy	iScope® (polarization), Delphi-X Observer (polarization), StereoBlue, NexiusZoom, DZ series
• <b>glass industry</b>	Quality control, before, during and after the production of glass and coatings	iScope® (materials), Oxion (materials), Oxion Inverso (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series
• <b>hematology</b>	Study and diagnosis, treatment and prevention of diseases of the blood	iScope®, bScope® (darkfield), iScope® (darkfield), Oxion, Oxion (darkfield)
• <b>histopathology</b>	Microscopic examination of tissue, diagnosis of diseases	iScope®, Oxion, Delphi-X Observer
• <b>horticulture</b>	Selective breeding of plants and fruit for production of food	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series, MacroZoom
• <b>in vitro fertilization</b>	In vitro fertilization IVF. Quality control of collected egg and sperm	StereoBlue, NexiusZoom, DZ series, Z series
• <b>marine Biology</b>	Study of organisms living in the ocean or seas as branch of biology	bScope®, BioBlue.Lab, iScope®, Oxion
• <b>mechanics</b>	Manufacturing and quality inspection of mechanical parts	Delphi-X Observer (materials), iScope® (materials), Oxion (materials), Oxion Inverso (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series, MacroZoom
• <b>metallurgy</b>	Manufacturing and quality inspection of metallic elements, intermetallic compounds and alloys	Delphi-X Observer (materials), iScope® (materials), Oxion (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series, MacroZoom
• <b>microbiology</b>	Study of microscopic uni-, multi- or acellular small organisms such as protozoa, algae, bacteria and more	iScope®, Oxion, StereoBlue, NexiusZoom, DZ series
• <b>mycology</b>	Study of fungi as branch of biology	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series

• <b>mining</b>	Extraction of minerals for identification, quantitative and qualitative evaluation of minerals	iScope® (materials and polarization), Oxion (materials and polarization), Oxion Inverso (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series, MacroZoom
• <b>neuropathology</b>	Study and diagnosis of diseases in nervous system tissue	Delphi-X Observer, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series
• <b>oncology</b>	Study and diagnosis, treatment and prevention of cancers	Delphi-X Observer, iScope®, Oxion
• <b>ornithology</b>	Study of birds as branch of zoology. Diagnosis of diseases in birds such as competition pigeons	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series
• <b>paleontology</b>	Study of fossils in order to determinate organisms evolution	iScope® (materials), Oxion (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series, MacroZoom
• <b>paper industry</b>	Production of paper related products. Quality inspection	iScope® (materials), Oxion (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series, MacroZoom
• <b>parasitology</b>	Study of parasites, medical and veterinary	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series, MacroZoom
• <b>pathology</b>	Study and diagnosis of diseases	Delphi-X Observer, iScope®, Oxion
• <b>petrochemical</b>	Research and transformation of crude oil and natural gas	iScope® (materials), Oxion (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series
• <b>petrology</b>	Study of the composition and structure of rocks as branch of geology. Identification by means of polarization	iScope® (polarization), StereoBlue, NexiusZoom, DZ series
• <b>pharmaceutics</b>	Development and production of drugs for medication. Quality assurance and inspection of produced products	Delphi-X Observer, iScope® (polarization), StereoBlue, NexiusZoom, DZ series
• <b>phytopathology</b>	Study and diagnosis of plant diseases	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series
• <b>plastics</b>	Development and production of plastics and plastic based compounds. Quality assurance and inspection	iScope® (materials), Oxion (materials), Oxion Inverso (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series
• <b>textile</b>	Development and production of all kinds of textile based products. Quality assurance and inspection	iScope® (materials), Oxion (materials), bScope® (materials), AP series, StereoBlue, NexiusZoom, DZ series, MacroZoom
• <b>veterinary medicine</b>	Prevention, diagnosis and treatment of diseases, injuries in animals	BioBlue.Lab, bScope®, iScope®, Oxion, Oxion Inverso, StereoBlue, NexiusZoom, DZ series
• <b>virology</b>	Study and diagnosis of viruses and virus-like agents	Delphi-X Observer, iScope®, Oxion, BioBlue.Lab, bScope®
• <b>water treatment</b>	Production of drinking water and wastewater treatment. Quality control and disease prevention	BioBlue.Lab, bScope®, iScope®, Oxion
• <b>wood production</b>	Wood production for construction material, fuel. Quality control	iScope® (materials), Oxion (materials), Oxion Inverso (materials), bScope® (materials), AP series, StereoBlue, NexiusZoom, DZ series, MacroZoom
• <b>zoology</b>	Animal biology. Study of invertebrates and vertebrates and related branches	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series

LIFE SCIENCE  
LABORATORIES

FIELD OF APPLICATION

RECOMMENDED MODELS

• <b>agronomy &amp; forestry</b>	Selective breeding of plants, fruit and production of food from plants, wood from trees, fuel. Plant physiology and genetics research	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series, MacroZoom
• <b>anatomopathology</b>	Diagnosis of diseases of organs or tissues. Cytopathology and forensic pathology	Delphi-X Observer, iScope®, bScope®, BioBlue.Lab, Oxion, StereoBlue, NexiusZoom, DZ series
• <b>bacteriology</b>	Study of bacteria as subdivision of microbiology. Identification, classification	BioBlue.Lab, bScope®, iScope®, Oxion, Oxion Inverso, Delphi-X Observer
• <b>biochemistry</b>	Study of chemical processes within living organism. Identification and classification of enzymes and structure of biomolecules	BioBlue.Lab, bScope®, iScope®, Oxion
• <b>biomedical</b>	Study of medical microbiology, virology, epidemiology, biomedical engineering	Delphi-X Observer, iScope®, bScope®, BioBlue.Lab, Oxion
• <b>biotechnology</b>	Study of living organism in order to make food products, for plant protection (genetically modified organism) and other bioprocess engineering. Development of pharmaceutical drugs, genetic testing, enzymes production, biofuels, textile	Delphi-X Observer, iScope®, bScope®, BioBlue.Lab, Oxion, NexiusZoom, DZ series, MacroZoom
• <b>botany</b>	Study of plants as branch of biology. Plant anatomy and morphology. Plant genetics and ecology. Plant biochemistry	BioBlue.Lab, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series
• <b>cell culture</b>	Controlled growth of cells and tissues, fungal culture and microbiological culture	Delphi-X Inverso, Oxion Inverso, NexiusZoom, DZ series
• <b>chemistry</b>	Study of the composition and properties of chemicals	iScope® (materials and polarization), Oxion (materials), bScope® (materials), NexiusZoom, DZ series
• <b>cosmetics</b>	Research, development and testing (safety) of substances for make-up or perfume	bScope® (materials), iScope® (materials), NexiusZoom, Oxion (materials), DZ series
• <b>cytology</b>	Study of cell structure, function and chemistry. Detection of cellular diseases	Delphi-X Observer, iScope®, bScope®, BioBlue.Lab, Oxion
• <b>dermatology</b>	Study and diagnosis, treatment of skin, nails and hair diseases	iScope®, Oxion, NexiusZoom, StereoBlue, DZ series, MacroZoom
• <b>digital imaging</b>	Observation and analysis of microscope images, save and captured the images and videos	CMEX cameras, CCD cameras, HD cameras, Cooled cameras, ProPad, MacroZoom
• <b>embryo collection</b>	Embryo collection and transfer in mares, pigs, cows. Quality control	NexiusZoom, DZ series, Z series
• <b>embryology</b>	Study of gametes, embryos and fetuses	BioBlue.Lab, bScope®, iScope®, Oxion, NexiusZoom, DZ series, Z series
• <b>entomology</b>	Study of insects as branch of zoology. Identification and classification of beetles, flies, termites, moths and butterflies, bees, ants, wasps	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series, MacroZoom
• <b>environmental</b>	Monitoring of environmental conditions such as water, atmosphere, ecosystems, soil and pollution	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series
• <b>fluorescence</b>	Study of living and non living material with the help of fluorescence markers (fluorochromes)	Delphi-X Observer (fluorescence), iScope® (fluorescence), Oxion (fluorescence), Oxion Inverso (fluorescence), bScope® (fluorescence), DZ series
• <b>forensics</b>	Analysis of scientific evidence. Toxicology, fingerprints, Forensic anthropology and archeology, forensic botany and entomology	BioBlue.Lab, bScope®, iScope®, Delphi-X Observer, Oxion, Oxion Inverso, NexiusZoom, DZ series, Z series
• <b>food and beverages</b>	Quality and safety controls, before, during and after the production of food and beverages	BioBlue.Lab, bScope®, iScope®, Oxion

LIFE SCIENCE  
LABORATORIES

FIELD OF APPLICATION

RECOMMENDED MODELS

• <b>genetics</b>	Study of genes, heredity in living organism including bacteria, plants, animals and humans	Delphi-X Observer, iScope®, Oxion, DZ series
• <b>hematology</b>	Study and diagnosis, treatment and prevention of diseases of the blood	Delphi-X Observer, iScope®, bScope® (dark field), iScope® (darkfield), Oxion, Oxion (darkfield), iScope®, Oxion
• <b>histopathology</b>	Microscopic examination of tissue, diagnosis of diseases	Delphi-X Observer, iScope®, Oxion
• <b>horticulture</b>	Selective breeding of plants and fruit for production of food	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series, MacroZoom
• <b>histopathology</b>	Microscopic examination of tissue, diagnosis of diseases	iScope®, Oxion
• <b>in vitro fertilization</b>	In vitro fertilization IVF. Quality control of collected egg and sperm	StereoBlue, NexiusZoom, DZ series, Z series
• <b>marine biology</b>	Study of organisms living in the ocean or seas as branch of biology	iScope®, Oxion, NexiusZoom, DZ series
• <b>microbiology</b>	Study of microscopic uni-, multi- or acellular small organisms such as protozoa, algae, bacteria and more. Identification and classification	Delphi-X Observer, iScope®, Oxion, NexiusZoom, DZ series
• <b>mycology</b>	Study of fungi as branch of biology. Identification and classification	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series
• <b>neuropathology</b>	Study and diagnosis of diseases in nervous system tissue	Delphi-X Observer, iScope®, Oxion, NexiusZoom, DZ series
• <b>oncology</b>	Study and diagnosis, treatment and prevention of cancers	Delphi-X Observer, iScope®, Oxion
• <b>parasitology</b>	Study of parasites, medical and veterinary	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series
• <b>pathology</b>	Study and diagnosis of diseases	Delphi-X Observer, iScope®, Oxion
• <b>pharmaceutics</b>	Development and production of drugs for medication. Quality assurance and inspection of produced products	iScope® (polarization), StereoBlue, NexiusZoom, DZ series
• <b>phytopathology</b>	Study and diagnosis of plant diseases	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series, MacroZoom
• <b>veterinary medicine</b>	Prevention, diagnosis and treatment of diseases, injuries on animals	BioBlue.Lab, bScope®, iScope®, Oxion, Oxion Inverso, StereoBlue, NexiusZoom, DZ series
• <b>virology</b>	Study and diagnosis of viruses and virus-such as agents	Delphi-X Observer, BioBlue.Lab, bScope®, iScope®, Oxion
• <b>water treatment</b>	Production of drinking water and wastewater treatment. Quality control and disease prevention	BioBlue.Lab, bScope®, iScope®, Oxion
• <b>zoology</b>	Animal biology. Study of invertebrates and vertebrates and related branches	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series

INDUSTRY	FIELD OF APPLICATION	RECOMMENDED MODELS
• aerospace	Manufacturing and quality inspection of rockets and space vehicles related parts	iScope® (materials), Oxion (materials), NexiusZoom, DZ series, Z series
• agronomy & forestry	Selective breeding of plants, fruit and production of food from plants, wood from trees, fuel. Plant physiology and genetics research	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series, MacroZoom
• asbestos control	Research of asbestos fibers, environmental protection during restoration of older buildings	iScope® (asbestos and polarization), NexiusZoom, DZ series, Z series
• automotive	Manufacturing and quality inspection of automotive related parts	iScope® (materials), Oxion Inverso (materials), NexiusZoom, DZ series, Z series
• avionics	Manufacturing and quality inspection of aircraft related parts	iScope® (materials), NexiusZoom, DZ series
• biochemistry	Study of chemical processes within living organism. Identification and classification of enzymes and structure of biomolecules	BioBlue.Lab, iScope®, Oxion, NexiusZoom, DZ series
• chemistry	Study of the composition and properties of chemicals	iScope® (materials), Oxion (materials)
• cosmetics	Research, development and testing (safety) of substances for make-up or perfume	bScope® (materials), iScope® (materials), Oxion (materials), NexiusZoom, DZ series
• digital imaging	Observation and analysis of microscope images, save and captured the images and videos	CMEX cameras, CCD cameras, HD cameras, ProPad, MacroZoom
• electronics	Development, production, assembling and inspection of electronic components or circuitry	iScope® (materials), Oxion (materials), NexiusZoom, DZ series, Z series, BE-50 LED, MacroZoom
• environmental	Monitoring of environmental conditions such as water, atmosphere, ecosystems, soil and pollution	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series
• food and beverages	Quality and safety controls, before, during and after the production of food and beverages	BioBlue.Lab, bScope®, iScope®, Oxion
• forensics	Analysis of scientific evidence. Toxicology, fingerprints, Forensic anthropology and archeology, forensic botany and entomology	BioBlue.Lab, bScope®, bScope® (materials), iScope®, iScope® (materials and polarization), Oxion, Oxion (materials), Oxion Inverted, Oxion Inverted (materials), NexiusZoom, DZ series, Z series
• geology, mineralogy	Earth science that study the solid, rocks and processes. Identification and classification of rocks and minerals	iScope® (materials), Oxion (materials), Oxion Inverso (materials), B+ (materials), StereoBlue, NexiusZoom, DZ series, MacroZoom
• geology, petrology	Identification by means of an petrographic microscope	iScope® (polarization)
• glass industry	Quality control, before, during and after the production of glass and coatings	iScope® (materials), Oxion (materials), Oxion Inverso (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series
• horticulture	Selective breeding of plants and fruit for production of food	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series, MacroZoom
• jewelry	Precise manufacturing of very small decorative items such as brooches, rings, bracelets and more	BE-50 LED series, StereoBlue, NexiusZoom, DZ series, Z series

INDUSTRY	FIELD OF APPLICATION	RECOMMENDED MODELS
• mechanics	Manufacturing and quality inspection of mechanical parts	iScope® (materials), Oxion (materials), Oxion Inverso (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series, MacroZoom
• metallurgy	Manufacturing and quality inspection of metallic elements, intermetallic compounds and alloys	iScope® (materials), Oxion (materials), Oxion Inverso (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series, MacroZoom
• mining	Extraction of minerals Identification, quantitative and qualitative evaluation of minerals	iScope® (materials and polarization), Oxion (materials and polarization), Oxion Inverso (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series
• paper industry	Production of paper related products. Quality inspection	iScope® (materials), Oxion (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series, MacroZoom
• petrochemical	Research and transformation of crude oil and natural gas	iScope® (materials), Oxion (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series
• petrology	Study of the composition and structure of rocks as branch of geology. Identification by means of polarization microscopy	iScope® (polarization), StereoBlue, NexiusZoom, DZ series
• pharmaceuticals	Development and production of drugs for medication. Quality assurance and inspection of produced products	iScope® (polarization), StereoBlue, NexiusZoom, DZ series
• plastics	Development and production of plastics and plastic based compounds. Quality assurance and inspection	iScope® (materials), Oxion (materials), Oxion Inverso (materials), bScope® (materials), StereoBlue, NexiusZoom, DZ series
• printing industry	Production of relief printing, lithography	iScope® (materials), Oxion (materials), bScope® (materials), AP series, StereoBlue, NexiusZoom, DZ series, MacroZoom
• textile	Development and production of all kinds of textile based products. Quality assurance and inspection	iScope® (materials), Oxion (materials), Oxion Inverso (materials), B+ (materials), AP series, StereoBlue, NexiusZoom, DZ series, MacroZoom
• water treatment	Production of drinking water and wastewater treatment. Quality control and disease prevention	BioBlue.Lab, bScope®, iScope®, Oxion
• wood production	Wood production for construction material, fuel. Quality control	iScope® (materials), Oxion (materials), Oxion Inverso (materials), B+ (materials), AP series, StereoBlue, NexiusZoom, DZ series, MacroZoom



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## MICROSCOPE COLLECTION

### 2023 • 2024



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