



# CATALOG 2018

MICROSCOPES  
FOR LABORATORIES

PART 2

 **euromex**  
microscopes holland

PART 1 MICROSCOPES FOR EDUCATION

PART 2 MICROSCOPES FOR LABORATORIES

PART 3 MICROSCOPES FOR INDUSTRY



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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 • USB cameras • HD cameras • WiFi cameras  
Tablet cameras • CCD camera • Software • Adapters

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## LABORATORIES | LIFE SCIENCE MICROSCOPES

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

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## LABORATORIES | DIGITAL SOLUTIONS

Digital microscope • USB cameras • HD cameras • WiFi camera  
Tablet camera • CCD cameras • Software • Adapters

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StereoBlue • DZ series • Z series • BE-50 series • P series

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## INDUSTRY | MATERIALS SCIENCE MICROSCOPES

iScope (material & polarization) • bScope (material)  
Oxion (material) • Oxion Inverso (material)

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## INDUSTRY | DIGITAL SOLUTIONS

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## OTHER OPTICAL PRODUCTS

Magnifiers & measuring microscopes • Refractometer  
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## USB MICROSCOPES

Q-scope USB microscopes • Q-scope WiFi microscopes  
Q-scope stands

**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

Euromex Microscopen bv is a subsidiary of **Euromex Optics Group bv**, a group holding company with active subsidiaries in the field of optical instruments and high level optical and opto-mechanical components

The broad product offering of Euromex can be found in this grand catalog and online at **[www.euromex.com](http://www.euromex.com)**

**Physix Photonics bv** is also a subsidiary of the Euromex Optics Group. Physix manufactures optical components and optical assemblies for OEM customers. The offering varies from plan optics, curved optics, specials optics to optical coatings. Detailed information about Physix Photonics can be found on **[www.physix.com](http://www.physix.com)**

## Choose the right microscope

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, laboratories and industry can simplify your selection

[SEE APPENDIX](#)

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

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# LifeScience

Laboratories



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# LifeScience

## Laboratories

Euromex offers a wide range of life science microscopes that are used by researchers and biologists worldwide

On the next pages you will find details about our different models and we will get you introduced to new technologies in microscopy such as the iCare sensor, CSS system and new LED technology, which brings Euromex users to the next level of microscopy

# LIFE SCIENCE MICROSCOPES

iscope®

NeoLED™  
euromex optical technology

FEATURED



IS.1153-PLi ●

iScope®

The iScope® is available in various configurations suitable for Life and Biomedical Sciences, high schools, universities but also for routine medical applications

Besides the brightfield contrast method, configurations for phase contrast, cardioid mirror darkfield, basic polarization and several epillumination sources for fluorescence applications can be used. iScope® models with multiheads are also available for teaching purposes



<b>IS.1152-PLi</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 407 x (w) 210 x (d) 255 mm	9.0 kg



IS.1152-EPL ●

## SPECIFICATIONS

### EYEPIECES

- Extended plan wide field EWF 10x/20 mm eyepieces with 20 mm field of view and adjustable diopter on the left eyepiece for finity corrected systems (Ø 23.2 mm tube)
- Extended plan wide field EWF 10x/22 mm eyepieces with 22 mm field of view and adjustable diopter on both eyepieces for infinity corrected IOS plan and plan phase systems and adjustable diopter on the left tube for EPLi systems (Ø 30 mm tube)

### HEAD

Binocular and trinocular Siedentopf type heads with 30° inclined tubes. Interpupillary distance from 48 to 76 mm. The trinocular head of the Plan infinity corrected models (IS.1153-PLi) has an optical path selector (100:0 / 50:50) and ± 5 diopter adjustments on both Ø 30 mm tubes. The trinocular head of the E-Plan infinity corrected models (IS.1153-EPLi) has a fixed built-in beamsplitter (50:50) and ± 5 diopter adjustment on the Ø 30 mm left tube. The trinocular head of the E-plan finite models (IS.1153-EPL) has a fixed built-in 50:50 beamsplitter and one ± 5 diopter adjustment on the Ø 23.2 mm left tube. A unique rotating

## HIGHLIGHTS

- EWF 10x/22 mm and EWF 10x/20 mm eyepieces
- Binocular and trinocular models
- Multihead and face-to-face dual head systems
- Optional tilting head
- Quintuple reversed nosepiece
- E-plan, plan and plan phase objectives
- E-plan, plan and plan phase infinity corrected IOS objectives
- 156 x 138 mm stage
- 187/230 x 140 mm rackless stage
- Cardioid mirror darkfield condenser with 5 W NeoLED™ illumination
- 3 W NeoLED™ Köhler illumination
- iCare sensor for energy saving
- CSS - Cable Storage System
- 10 years warranty

system allows the ergonomic positioning of both tubes in a high (431 mm) and in a low position (397 mm). The trinocular head comes with a Ø 23.2 mm photo port

### ERGONOMIC TILTING HEAD

Optional ergonomic 5 to 35° tilting head supplied with EWF 10x/22 mm eyepieces, interpupillary distance 48-75 mm and optional photo attachment with standard Ø 23.2 mm tube (only infinity corrected models)

To order an iScope® with tilting head use reference IS.1158-xxx

To order an iScope® with tilting head and photo tube attachment use reference IS.1159-xxx

### FACE-TO-FACE HEADS

The iScope® can be supplied with two heads in a face-to-face configuration allowing simultaneous observation by two operators. The 30 mm diameter tubes of the head are equipped with EWF 10x/20 mm eyepieces. The main binocular head has one diopter adjustment, the second head has two adjustments. Only available for the model with plan infinity corrected objectives (IS.1154-PLi).

The face-to-face head is equipped with a 2-color laser pointer

## MULTIHEAD SYSTEM

The iScope® can be extended with a unique multihead system for in total two, three or five heads, allowing simultaneous observation of specimens.

The central attachment is equipped with a joystick to move a green and red laser pointer across the entire field of view

of all heads. Configurations with one, two or four additional viewing binocular heads, 30° inclined tubes and plan 4x, 10x, S40x, S100x oil immersion infinity corrected IOS objectives.

All heads are equipped with extended wide field plan EWF 10x/22 mm eyepieces

(references: IS.1156-PLi-x, x = total number of heads)

## OBJECTIVES

E-Plan EPL	4x/0.10	10x/0.25	20x/0.40 <sup>(1)</sup>	S40x/0.65	S100x/1.25 oil
E-Plan EPLi IOS	4x/0.10	10x/0.25		S40x/0.65	S100x/1.25 oil
Plan PLi IOS	4x/0.10	10x/0.25	20x/0.40 <sup>(1)</sup>	S40x/0.65	S60x/0.85 <sup>(1)</sup>
Plan phase PLPH		10x/0.25	20x/0.40	S40x/0.65	S100x/1.25 oil
Plan phase PLPHi IOS		10x/0.25	20x/0.40	S40x/0.65	S100x/1.25 oil

<sup>(1)</sup> optional

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

## NOSEPIECE

Revolving quintuple reversed nosepiece for max. 5 objectives

## STAGE

The iScope® can be equipped with three types of stages:

- 156 x 138 mm stage equipped with integrated 79 x 52 mm X-Y mechanical stage
- 187/230 x 140 mm rackless stage equipped with double slide holder and integrated 79 x 52 mm X-Y mechanical stage. The iScope® rackless stage has no protruding parts, enables more smooth movements and is safer
- 220 x 157 mm ceramic stage with integrated 75 x 50 mm X-Y mechanical stage. The ceramic coating protects the stage effectively against marks and scratches. The surface also ensures stray light not to be reflected from the stage into the objective

The iScope® can be supplied with a heating stage which can be set up to 50° Celsius by a PID temperature controller. Only available with newly purchased microscopes. Higher temperatures can be achieved on special request

## CONDENSER FOR BRIGHTFIELD

The standard height adjustable Abbe N.A. 1.25 condenser for brightfield accepts sliders with phase annuli suitable for plan phase 10x/20x or S40x/S100x oil immersion IOS objectives for economical phase contrast. With magnification indication.

A slider with a simple dark stop for darkfield up to 400x magnification is also available

## CONDENSER FOR ZERNIKE PHASE CONTRAST

An optional height adjustable Zernike NA. 1.25 phase contrast disc condenser with plan phase 10/20/S40x and S100x oil immersion objectives and darkfield stop position for darkfield contrast up to 400x magnification. Supplied with alignment telescope and green filter

## CONDENSER FOR DARKFIELD

A state-of-the-art condenser equipped with reflective cardioid mirrors, a high powered 5 W LED and a S100x objective with built-in iris diaphragm enable a real 1000x magnification darkfield solution. By using IS.9150 and 86.521 an existing brightfield microscope can be upgraded to darkfield

## FOCUSING

Coaxial coarse and fine adjustments, 200 graduations, 1 µm per graduation, 200 µm per rotation, total travel range is approximately 24 mm. Supplied with an adjustable rack stop to prevent damage to sample and objectives. The coarse adjustments are equipped with friction control

## ILLUMINATION

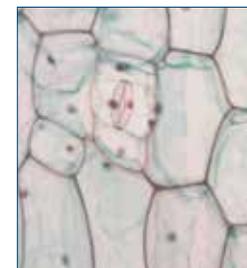
3 W adjustable Köhler NeoLED™ diasopic illumination with internal 100-240 V power supply.

The innovative NeoLED™ design offers larger apertures, allowing the optical system of the iScope® 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 lifetime.

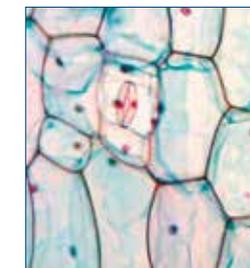
The Köhler illumination on models with IOS plan and plan phase infinity corrected system provides high contrast and a maximum achievable resolving power of the optics. Also available for other models as option

## ICARE SENSOR

The unique iCare Sensor is developed to avoid unnecessary loss of energy. The illumination of the microscope



● Normal LED



● NeoLED™

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, a spare fuse, user manual and 5 ml immersion oil for models with S100x objective. Phase contrast models are supplied with green filter and alignment telescope. All packed in polystyrene boxes



Check out the product video on YouTube and learn more about this microscope. YouTube channel: **Euromex Optics Group B.V.**



● IS.1153-EPL

● IS.1153-PLi

## ISCOPE® FOR LIFE SCIENCE (FINITY MODELS)

MODELS	Binocular	Trinocular	Phase contrast	EWF 10x20 mm	E-plan objectives	Plan phase objectives	Mechanical stage	iCare Sensor
IS.1152-EPL	•			•	•		•	•
IS.1153-EPL		•		•	•		•	•
IS.1152-PLPH	•		•	•		•	•	•
IS.1153-PLPH		•	•	•		•	•	•

## ISCOPE® FOR LIFE SCIENCE (INFINITY MODELS)

MODELS	Binocular	Trinocular	Phase contrast	EWF 10x22 mm	E-plan IOS objectives	Plan IOS objectives	Plan phase IOS objectives	Mechanical stage	iCare Sensor	Köhler LED
IS.1152-EPLi	•			•	•			•	•	
IS.1153-EPLi		•		•	•			•	•	
IS.1152-PLi	•			• <sup>(1)</sup>		•		•	•	•
IS.1153-PLi		•		• <sup>(1)</sup>		•		•	•	•
IS.1152-PLPHi	•		•	• <sup>(1)</sup>			•	•	•	•
IS.1153-PLPHi		•	•	• <sup>(1)</sup>			•	•	•	•

<sup>(1)</sup> Two tubes with diopter adjustments

## ISCOPE® FOR LIFE SCIENCE (INFINITY - ERGONOMIC TILTING HEAD)

MODELS	Binocular	Phase contrast	EWF 10x20 mm	EWF 10x22 mm	E-plan IOS objective	Plan IOS objectives	Plan phase IOS objectives	Mechanical rackless stage	iCare Sensor	Köhler LED
IS.1158-EPLi	•		•		•			•	•	
IS.1159-EPLi	•		•		•			•	•	
IS.1158-PLi	•		•			•		•	•	•
IS.1159-PLi	•		•			•		•	•	•
IS.1158-PLPHi	•	•	•	•			•	•	•	•
IS.1159-PLPHi	•	•	•	•			•	•	•	•

## ISCOPE® FOR LIFE SCIENCE (MULTIHEAD SYSTEMS)

MODELS	Total users	Binocular	Trinocular	EWF 10x20 mm	Plan IOS objectives	Mechanical rackless stage	iCare sensor	Köhler LED
IS.1156-PLi2	2	1x	•	•	•	•	•	•
IS.1156-PLi3	3	2x	•	•	•	•	•	•
IS.1156-PLi5	5	4x	•	•	•	•	•	•
IS.1156-PLi9	9	8	•	•	•	•	•	•

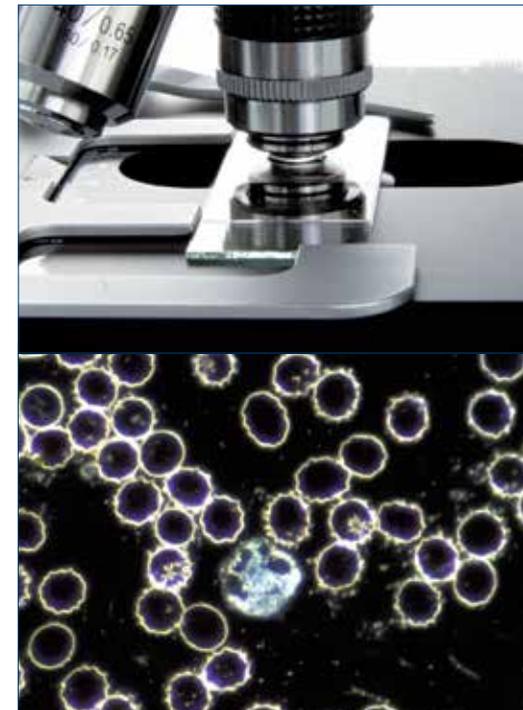
## ISCOPE® FOR LIFE SCIENCE (FACE-TO-FACE DUAL HEAD SYSTEM)

MODELS	Total users	Binocular	EWF 10x/20 mm	E-Plan IOS objectives	Plan IOS objectives	Mechanical rackless stage	iCare sensor	Köhler LED
IS.1154-PLi	2	2x	•		•	•	•	•
IS.1154-EPLi	2	2x	•	•		•	•	

## ISCOPE® FOR LIFE SCIENCE (DARKFIELD CONTRAST APPLICATION)

MODELS	Trinocular	Darkfield	EWF 10x20 mm	EWF 10x22 mm	E-plan objective	Plan IOS objectives	Mechanical rackless stage	iCare sensor	Köhler LED
IS.1153-PLi-DF	•	•		•		•	•	•	•
IS.1153-PLi-DFi	•	•		•		•	•	•	•
IS.1153-EPL/DF	•	•	•		•			•	•

Models for darkfield observation IS.1152-PLi/DF and IS.1153-PLi/DF are supplied with a state-of-the-art condenser equipped with reflective cardioid mirrors and a high powered 5 W LED. Together with a S100x objective with built-in iris diaphragm real 1000x magnification darkfield solution can be achieved. All other specifications are identical to models IS.1152-PLi and IS.1153-PLi



### DARKFIELD

Darkfield contrast is typically used for unstained samples. The image seen has the appearance of a dark, almost black background with highlighted bright objects on it, producing very recognizable, often even called spectacular images. These objects, because they are unstained, are hard to see with brightfield contrast. The applications are mostly biological samples, smears from tissue culture or water-borne, single-celled organisms

In the past darkfield microscopy was limited due to low light levels.. Euromex has overcome this issue by developing very strong illumination methods, without causing damage to the samples. A 5 W build in high power LED is used to power the specially designed cardioid-shaped lens condenser system. Combined with a special 100x objective with built-in iris diaphragm for extra contrast this system is unique in its class

## ACCESSORIES AND SPARE PARTS

**IS.6010** EWF 10x/20 mm eyepiece (Ø23.2 mm tube)

**IS.6010-P** EWF 10x/20 mm eyepiece with pointer (Ø23.2 mm tube)

**IS.6010-C** EWF 10x/20 mm eyepiece with crosshair (Ø23.2 mm tube)

**IS.6010-CM** EWF 10x/20 mm eyepiece with 10/100 micrometer and cross (Ø23.2 mm tube)

**IS.6015** WF 15x/16 mm eyepiece (Ø23.2 mm tube)

**IS.6020** WF 20x/12 mm eyepiece (Ø23.2 mm tube)

**IS.6210** EWF 10x/22 mm eyepiece (Ø 30mm tube)

**IS.6210-C** EWF 10x/22 mm eyepiece with crosshair (Ø30 mm tube)

**IS.6210-P** EWF 10x/22 mm eyepiece with pointer (Ø30 mm tube)

**IS.6210-CM** EWF 10x/22 mm eyepiece with 10/100 micrometer and cross hair (Ø30 mm tube)

**IS.6212** WF 12.5x/17 mm eyepiece (Ø30 mm tube)

**IS.6212-W** WF 12.5x/17 mm eyepiece with Walton Beckett reticle (Ø30 mm tube)

**IS.6215** WF 15x/16 mm eyepiece (Ø30 mm tube)

**IS.6220** WF 20x/12 mm eyepiece (Ø30 mm tube)

**IS.6299** Pair of eyecups infinity models (Ø30 mm tube)

**IS.7104** E-plan EPL 4x/0.10 objective. WD 15.2 mm

**IS.7110** E-plan EPL 10x/0.25 objective. WD 5.5 mm

**IS.7120** E-plan EPL 20x/0.40 objective. WD 3.5 mm

**IS.7140** E-plan EPL S40x/0.65 objective. WD 0.45 mm

**IS.7160** E-plan EPL S60x/0.85 objective. WD 0.19 mm

**IS.7100** E-plan EPL S100x/1.25 objective. WD 0.13 mm

**IS.7710** Plan PLPH 10x/0.25 phase contrast objective. WD 12.2 mm

**IS.7720** Plan PLPH 20x/0.40 phase contrast objective. WD 5 mm

**IS.7740** Plan PLPH S40x/0.65 phase contrast objective. WD 0.37 mm

**IS.7700** Plan PLPH S100x/1.25 phase contrast objective. WD 0.13 mm

**IS.8804** E-plan EPLi 4x/0.10 IOS objective. WD 15.4 mm

**IS.8810** E-plan EPLi 10x/0.25 IOS objective. WD 5.8 mm

**IS.8840** E-plan EPLi S40x/0.65 IOS objective. WD 0.43 mm

**IS.8800** E-plan EPLi S100x/1.25 IOS objective . WD 0.13 mm

**IS.7202** Plan PLi 2x IOS objective, WD 18.3 mm. Best to be used together with swing-out condenser

**IS.7204** Plan PLi 4x/0.10 IOS objective. WD 15.4 mm

**IS.7210** Plan PLi 10x/0.25 IOS objective. WD 10 mm

**IS.7220** Plan PLi 20x/0.40 IOS objective. WD 5.1 mm

**IS.7240** Plan PLi S40x/0.65 IOS objective. WD 0.54 mm

**IS.7250** Plan PLi S50x/0.90 IOS objective. WD 0.12 mm

**IS.7260** Plan PLi S60x/0.85 IOS objective. WD 0.14 mm

**IS.7200** Plan PLi S100x/1.25 IOS objective. WD 0.13 mm

**IS.7200-I** Plan Super Contrast PLi S100x/1.25 IOS objective with built-in iris diaphragm. WD 0.13 mm

**IS.8910** Plan PLPHi 10x/0.25 phase contrast IOS infinity corrected objective. WD 10.2 mm

**IS.8920** Plan PLPHi 20x/0.40 phase contrast IOS infinity corrected objective. WD 5.1 mm

**IS.8940** Plan PLPHi S40x/0.65 phase contrast IOS infinity corrected objective. WD 0.5 mm

**IS.8900** Plan PLPHi S100x/1.25 phase contrast IOS infinity corrected objective. WD 0.13 mm

**IS.9124** Zernike phase contrast set including rotating disc with PLPH 10/20/40/100, brightfield and darkfield position

**IS.9127** Zernike phase contrast set including rotating disc with PLPH 10/20/40/100, brightfield and darkfield position

**IS.9148** Alignment telescope for phase contrast diameter 30mm tube

**IS.9149** Alignment telescope for phase contrast diameter 23.2mm tube

**IS.9102** Standard Abbe condenser 1.25 NA with slot for darkfield and phase contrast sliders

**IS.9105** Swing-out 0.9/1.25 N.A. condenser

**IS.9150** Cardiod darkfield condenser with integrated 5 W LED light source and external 100-240 V mains adapter

**86.521** Plan PL S100x/1.25 oil immersion objective with built-in iris diaphragm. WD 0.33 mm

**IS.9160** Phase contrast slider set with 10x and S40x PLPH objectives and annuli for 10/S40x PLPH objectives. Also suitable for optional 20x PLPH objective

**IS.9161** Phase contrast slider set with 20x and S100x PLPH objectives and annuli for 20x/S100x PLPH objectives

**IS.9162** Phase contrast slider set with 10x and S40x PLPHi IOS infinity corrected objectives and annuli for 10x/S40x PLPHi IOS infinity corrected objectives.

Also suitable for optional 20x PLPHi infinity corrected objective

**IS.9163** Phase contrast slider set with 20x and S100x PLPHi IOS infinity corrected objectives and annuli for 20x/S100x PLPHi IOS infinity corrected objectives

**IS.9170** Slider with darkfield stop

**IS.9194** Slider with phase contrast annuli for S40x phase contrast objective

**IS.9503** Large ceramic stage. Only with new microscopes, add /C suffix after iScope® model part number

**IS.9600** Polarization filter 45 mm for lamphouse

**IS.9601** Polarization set: simple rotating polarizer for lamphouse and fix polarizer mounted under head

**IS.9626** Polarization filter for mounting under the head

**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

**IS.9800** Single photo tube attachment with one 23.2 mm tube for IS.5700 ergonomic tilting head of iScope® infinity systems

**IS.9880** Köhler attachment

**AE.3684** Glass fuses 500 mA 250 V, 10 pieces

**AE.5168-I** Heating stage series with controller, only with new microscopes

**SL.5500** NeoLED™ replacement unit

**AE.5130** Universal SLR adapter with built-in 2x lens for standard 23.2 mm tube. Needs T2 adapter

**AE.5025** T2 ring for Nikon D SLR digital camera

**AE.5040** T2 ring for Canon EOS SLR digital camera

**PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces per pack

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

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

**PB.5245** Lens cleaning paper, 100 sheets per pack

**PB.5255** Immersion oil, 25 ml. Refraction index n = 1.482

**PB.5274** Iso propyl alcohol 99%, 200 ml

**PB.5275** Cleaning kit: lens fluid, lint free lens tissue/paper, brush, air blower, cotton swabs

# BIOLOGICAL MICROSCOPES

bscope®

FEATURED

LABORATORIES  
LIFE SCIENCE MICROSCOPES

LABORATORIES  
LIFE SCIENCE MICROSCOPES

4

4

## bScope®

### Versatile and evolutive!

The well-equipped microscopes of the bScope® series are intensively used in universities, small and mid-sized laboratories and in veterinary applications

The design of the bScope® is both ergonomic and evolutive. Height adjustable eyetubes and low stage controls to minimize fatigue during long working sessions and so providing more comfort for microscopists. The robust, compact size of the bScope® and the Cable Storage System allows more working space, safer operation and enables easy storage

BINOCULAR MODELS BS.1152-EPL / BS.1152-EPLI / BS.1152-PLI	
<b>Dimensions</b>	<b>Weight</b>
(h) 409 x (w) 195 x (d) 235	6.5 kg

TRINOCULAR MODELS BS.1153-EPL / BS.1153-EPLI / BS.1153-PLI	
<b>Dimensions</b>	<b>Weight</b>
(h) 459 x (w) 195 x (d) 235	6.6 kg



BS.1152-PLI ●



● BS.1153-PLI

● BS.1153-PLPHI

## HIGHLIGHTS

- Versatile and evolutive microscopes
- Binocular and trinocular models
- HWF 10x/20 mm eyepieces
- Reversed ball-bearing quadruple or quintuple nosepiece with slot for polarization filter
- E-plan, E-plan IOS and Plan IOS objectives
- E-plan Phase, E-plan Phase IOS, Plan Phase IOS objectives
- Rackless integrated X-Y mechanical stage
- 3 W NeoLED™ adjustable illumination system
- Darkfield cardioid condenser with 5 W NeoLED™
- Integrated carrying grip
- Cable Storage System and anti-theft system
- 10 years warranty

## SPECIFICATIONS

### EYEPIECES

High wide field HWF 10x/20 mm secured eyepieces with 20 mm field of view (Ø 23.2 mm tube)

### HEAD

The bScope® is equipped with a Siedentopf type head, 360° rotatable and equipped with 30° inclined Ø 23.2 mm tubes. Binocular and trinocular models are equipped with a diopter ± 5 adjustment on left eyepiece. The interpupillary distance is adjustable between 48 to 76 mm

The models equipped with plan infinity corrected PLI objectives have a unique swiveling system of the eyepiece tubes for ergonomic positioning of the eyepieces in a high and in a low position

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

### NOSEPIECE

Revolving and reversed ball-bearing quadruple or quintuple 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 the perfect centering of the objectives

- Brightfield models: E-Plan, E-plan IOS infinity corrected, Plan IOS infinity corrected 4x/0.10, 10x/0.25, 20x/0.40, S40x/0.65, S60x/0.85 and S100x/1.25 oil immersion objectives

- Phase contrast models: E-plan Phase, E-plan Phase IOS infinity corrected, Plan Phase IOS infinity corrected 10x/0.25, 20x/0.40, S40x/0.65 and S100x/1.25 oil immersion objectives

All S40x, S60x and S100x oil immersion 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  $\mu\text{m}$ , 200  $\mu\text{m}$  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 152/197 x 131 mm stage with integrated 75 x 36 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. The bScope® can be equipped with a heating stage which can be set up to 50° Celsius by a PID temperature controller. Only available with newly purchased microscopes

## 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

## CONDENSER FOR ZERNIKE PHASE CONTRAST

The height adjustable Zernike NA. 1.25 phase contrast disc condenser comes with phase annuli for 10/20/S40x and S100x phase contrast objectives, an iris diaphragm, a swing-out filter holder and also a BF position for brightfield contrast. Phase contrast objectives exist in either EPL-PH, EPL-PHi or PL-PHi phase contrast versions. Supplied with alignment telescope and green filter

## CONDENSER FOR SIMPLE PHASE CONTRAST

The height adjustable NA. 1.25 simple phase contrast condenser has a free slot for either a slider for 10/S40x phase contrast objectives or a slider for 20/S100x phase contrast objectives. The condenser has an iris diaphragm and filter holder. The condenser includes a BF position for brightfield contrast with an iris diaphragm and filter holder. Phase contrast objectives exist in either EPL-PH, EPL-PHi or PL-PHi versions. Supplied with alignment telescope and green filter

## CARDIOID MIRROR CONDENSER FOR DARKFIELD

The bScope models for darkfield are supplied with a condenser with cardioid mirrors, a 5 W integrated NeoLED™ illumination and a S100x objective with built-in iris diaphragm for real 1,000x darkfield observations. By using AE.3612-BS and 86.521 an existing brightfield microscope can be upgraded to darkfield

## POLARIZATION

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

Swing-out  
Abbe condenser  
0.9/1.25 NA



Zernike phase  
contrast condenser  
with filter holder



Ergonomic carrying  
grip for easy  
transportation



## NEOLED™ ILLUMINATION

The 3 W adjustable Köhler NeoLED™ diascopic 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 lifetime

## KÖHLER ILLUMINATION

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

*The Köhler illumination is optional for non-IOS models*

## CORDLESS USE

The optional rechargeable batteries turn the bScope® into a cordless system

## CSS – CABLE STORAGE 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 Styrofoam packaging ensures a low environmental footprint while maintaining maximum safety during transport. Supplied with power cord, dust cover, tools, a spare fuse, white filter, user manual and 5 ml immersion oil

*Phase contrast models are supplied with green filter and alignment telescope.*

*An optional aluminum case can be supplied*



BS.1152-PLi ●

## BSCOPE® FOR BRIGHTFIELD AND DARKFIELD

MODELS	Bino	Trino	HWF 10x/20 mm eyepieces	Quadruple nosepiece E-plan 4/10/ S40/S100x	Quintuple nosepiece E-plan IOS 4/10/S40/ S100x	Quintuple nosepiece Plan IOS 4/10/ S40/S100x	Köhler NeoLED™	NeoLED™	Darkfield with cardioid condenser	2-position swiveling ergo head	Recharge- able batteries
BS.1152-EPL	•		•	•				•			o
BS.1153-EPL		•	•	•				•			o
BS.1152-EPL/DF	•		•	•				•	•		o
BS.1153-EPL/DF		•	•	•				•	•		o
BS.1152-EPLi	•		•		•			•		•	o
BS.1153-EPLi		•	•		•			•		•	o
BS.1152-PLi	•		•			•		•		•	o
BS.1153-PLi		•	•			•		•		•	o

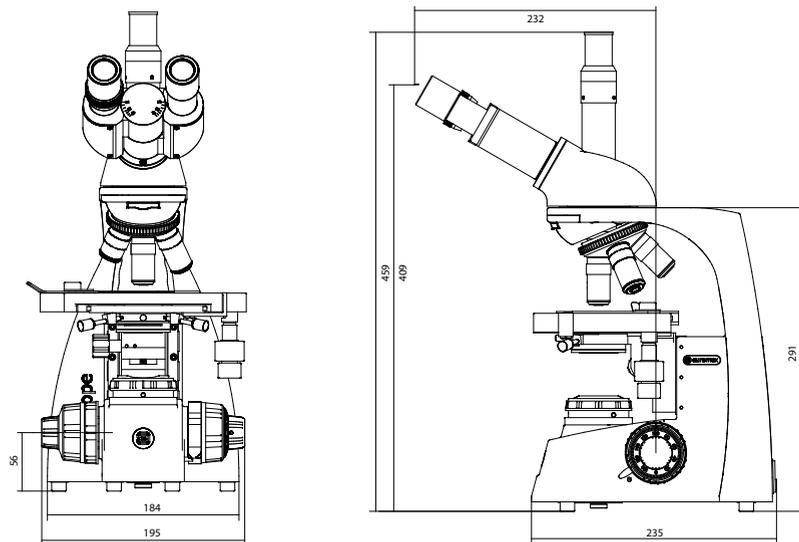
## BSCOPE® FOR PHASE CONTRAST

MODELS	Bino	Trino	HWF 10x/20 mm eyepieces	Quadruple nosepiece E-plan Phase 10/20/ S40/S100x	Quintuple nosepiece E-plan Phase IOS 10/20/ S40/S100x	Quintuple nosepiece Plan Phase IOS 10/20/ S40/S100x	Köhler NeoLED™	NeoLED™	2-position swiveling ergo head	Rechargeable batteries
BS.1152-EPLPH	•		•	•				•		o
BS.1153-EPLPH		•	•	•				•		o
BS.1152-EPLPHi	•		•		•			•	•	o
BS.1153-EPLPHi		•	•		•			•	•	o
BS.1152-PLPHi	•		•			•		•	•	o
BS.1153-PLPHi		•	•			•		•	•	o

o = optional

All models are equipped with a 152/197 x 131 mm stage with integrated 75 x 36 mm X-Y rackless mechanical stage

## DIMENSIONS



## ACCESSORIES AND SPARE PARTS

- BS.6010** HWF 10x/20 mm eyepiece, Ø 23.2 mm tube
- BS.6010-P** HWF 10x/20 mm with pointer, Ø 23.2 mm tube
- BS.6010-C** HWF 10x/20 mm eyepiece with cross hair, Ø 23.2 mm tube
- BS.6010-CM** HWF 10x/20 mm eyepiece, Ø 23.2 mm tube with 10/100 micrometer and cross hair
- BS.6012** WF 12.5x/14 mm eyepiece, Ø 23.2 mm tube
- BS.6015** WF 15x/11 mm eyepiece, Ø 23.2 mm tube
- BS.6020** WF 20x/11 mm eyepiece, Ø 23.2 mm tube
- BS.6099** Pair of eyecups for finity models
- BS.7104** E-plan EPL 4x/0.10 objective. WD 37.0 mm
- BS.7110** E-plan EPL 10x/0.25 objective. WD 6.61 mm
- BS.7120** E-plan EPL 20x/0.40 objective. WD 1.85 mm
- BS.7140** E-plan EPL S40x/0.65 objective. WD 0.64 mm
- BS.7160** E-plan EPL S60x/0.85 objective. WD 0.20 mm
- BS.7100** E-plan EPL S100x/1.25 objective. WD 0.19 mm
- BS.7510** E-Plan Phase EPLPH 10x/0.25 objective. WD 5.95 mm
- BS.7520** E-Plan Phase EPLPH 20x/0.40 objective. WD 2.61 mm
- BS.7540** E-Plan Phase EPLPH S40x/0.65 objective. WD 0.66 mm
- BS.7500** E-Plan Phase EPLPH S100x/1.25 objective. WD 0.36 mm
- BS.8204** E-plan EPLi 4x/0.10 IOS objective. WD 18.9 mm
- BS.8210** E-plan EPLi 10x/0.25 IOS objective. WD 5.95 mm
- BS.8220** E-plan EPLi 20x/0.40 IOS objective. WD 2.61 mm
- BS.8240** E-plan EPLi S40x/0.65 IOS objective. WD 0.78 mm
- BS.8200** E-plan EPLi S100x/1.25 IOS objective. WD 0.36 mm
- BS.8404** Plan PLi 4x/0.10 IOS objective. WD 21.0 mm
- BS.8410** Plan PLi 10x/0.25 IOS objective. WD 5.0 mm
- BS.8420** Plan PLi 20x/0.40 IOS objective. WD 8.8 mm
- BS.8440** Plan PLi S40x/0.65 IOS objective. WD 0.66 mm
- BS.8400** Plan PLi S100x/1.25 IOS objective. WD 0.36 mm
- BS.8510** E-Plan Phase EPLPHi 10x/0.25 IOS objective. WD 5.95 mm
- BS.8520** E-Plan Phase EPLPHi 20x/0.40 IOS objective. WD 2.61 mm
- BS.8540** E-Plan Phase EPLPHi S40x/0.65 IOS objective. WD 0.76 mm
- BS.8500** E-Plan Phase EPLPHi S IOS objective. WD 0.36 mm
- BS.8710** Plan Phase PLPHi 10x/0.25 IOS objective. WD 5.00 mm
- BS.8720** Plan Phase PLPHi 20x/0.40 IOS objective. WD 8.80 mm
- BS.8740** Plan Phase PLPHi S40x/0.65 IOS objective. WD 0.66 mm
- BS.8700** Plan Phase PLPHi S100x/1.25 IOS objective. WD 0.36 mm
- BS.9105** Swing-out Abbe condenser 0.9/1.25 NA
- BS.9170** Darkfield stop for standard Abbe condenser
- BS.9118** Zernike phase contrast kit with E-plan EPLPH 10/20/S40 and S100x oil phase contrast objectives, Zernike rotating condenser, telescope and green filter
- AE.3612-BS** Cardioid darkfield condenser with integrated 5 W LED light source and external 100-240 V mains adapter
- 86.521** Plan PL S100x/1.25 oil immersion objective with iris diaphragm. WD 0.33 mm
- BS.9120** Zernike phase contrast kit with E-plan EPLPHi 10/20/S40 and S100x oil phase contrast IOS infinity corrected objectives, Zernike rotating condenser, telescope and green filter
- BS.9123** Zernike phase contrast kit with plan PLPH 10/20/S40 and S100x oil phase contrast objectives, Zernike rotating condenser, telescope and green filter
- BS.9126** Zernike phase contrast kit with plan PLPHi 10/20/S40 and S100x oil phase contrast IOS infinity corrected objectives, Zernike rotating condenser, telescope and green filter



● BS.1153-PLPHi

- BS.9149** Alignment telescope for bScope®
- BS.9156** Phase contrast kit with Abbe condenser with slot for slider. E-plan EPLPH 10/S40x phase contrast objectives, slider with 10 and 40x annuli, telescope and green filter
- BS.9157** Phase contrast kit with Abbe condenser with slot for slider. E-plan EPLPH 20/S100x phase contrast objectives, slider with 20 and 100x annuli, telescope and green filter
- BS.9158** Phase contrast kit with Abbe condenser with slot for slider. E-plan EPLPH i 10/S40x phase contrast infinity corrected objectives, slider with 10 and 40x annuli, telescope and green filter
- BS.9159** Phase contrast kit with Abbe condenser with slot for slider. E-plan EPLPHi 20/S100x phase contrast infinity corrected objectives, slider with 20 and 100x annuli, telescope and green filter
- BS.9162** Phase contrast kit with Abbe condenser with slot for slider. Plan PLPH i 10/S40x phase contrast infinity corrected objectives, slider with 10 and 40x annuli, telescope and green filter
- BS.9163** Phase contrast kit with Abbe condenser with slot for slider. Plan PLPHi 20/S100x phase contrast infinity corrected objectives, slider with 20 and 100x annuli, telescope and green filter
- BS.9660** Polarization kit: analyzer under head and polarizer on lamphouse
- BS.9880** Köhler attachment
- BS.9900** Aluminum transport case
- BS.9993** NeoLED™ replacement unit
- AE.1370** Set of rechargeable batteries, 3 pieces
- 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 ring for Nikon D SLR digital camera
- AE.5040** T2 ring for Canon EOS SLR digital camera
- 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 = 1.482
- PB.5274** Isopropyl alcohol 99% (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue/paper, brush, air blower, cotton swabs

# BIOLOGICAL MICROSCOPES

Delphi-X  
observer

FEATURED



DX.2153-APLi ●

## Delphi-X Observer

State-of-the-art microscopes for advanced Life Science applications. The outstanding optical performance of the Delphi-X Observer™ with 25 mm fields of view and high numerical aperture of the Plan 60 parafoveal EIS objectives enables perfect observations and color rendering at high resolving power. This is the perfect microscope anatomo-pathologists

<b>DX.1153-PLI</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 454 x (w) 260 x (d) 367	18 kg
<b>DX.2153-PLI</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 454 x (w) 260 x (d) 480	18.5 kg



## HIGHLIGHTS

- Trinocular model
- Sextuple reversed nosepiece
- Super Wide field SWF 10x/25mm eyepieces, Ø 30 mm tubes
- Enhanced infinity corrected EIS optical system
- Ergonomic tilting head
- 60 mm parafoveal Plan EIS objectives
- 60 mm parafoveal Plan Semi-Apochromatic EIS objectives
- M25 mm objective thread mounting
- 3 W NeoLED™ illumination
- 100 W halogen illumination
- Face-to-face dual head system
- Multihead systems

## SPECIFICATIONS

### EYEPIECES

- Super Wide field SWF 10x/25 mm, Ø 30 mm tubes
- Extended Wide Field EWF 10x/22 mm, Ø 30 mm tubes

### STANDARD HEAD

Siedentopf trinocular head 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 ± 5 adjustments 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 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

### FACE-TO-FACE DUAL HEAD SYSTEM

The Delphi-X Observer™ can be supplied with two binocular



DX.1158-PLi ●

heads in a face-to-face configuration allowing simultaneous observation by two operators. The main binocular head is equipped with Super wide field SWF 10x/25 mm eyepieces and the second head with EWF 10x/22 mm eyepieces. A joystick enables the operator to move a green or red laser pointer across the entire field of view of both heads

### MULTIHEAD SYSTEM

The Delphi-X-Observer™ can be extended with a multihead system for two, three, five or ten users. The central attachment is equipped with a joystick to move a green and red laser pointer across the entire field of view of all heads. The multihead systems with two, three or five heads and 30° inclined tubes are supplied with Super wide field SWF 10x/25 mm eyepieces. The multihead systems with ten heads and 30° inclined tubes have the trinocular main head equipped with Super wide field SWF 10x/25 mm eyepieces and the other nine binocular other heads with Extended wide field EWF 10x/22 mm eyepieces. The Delphi-X Observer™ multihead system with ten heads is supplied without the iCare sensor



● DX.2156-PLi/10

### NOSEPIECE

Revolving sextuple reversed nosepiece on ball-bearings with 25 mm objectives mounting threads

### 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 60 mm parafoal objectives and a 200 mm focal length tube lens. The 200 mm focal length tube

lens reduces the angle of the light rays passing the optics and as a direct result improving significantly 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

### OBJECTIVES

Plan PLi	2x/0.06 <sup>(1)</sup>	4x/0.10	10x/0.25	20x/0.40	S40x/0.65	S50x/ 0.95 oil <sup>(1)</sup>	S60x/ 0.80 <sup>(1)</sup>	S100x/1.25 oil	S100x/ 1.25 oil iris <sup>(1)</sup>
Plan Phase PLPHi EIS			10x/0.26	20x/0.41	S40x/0.66			S100x/1.25 oil	
Plan Semi-Apo PLi-Apo EIS		4x/0.13	10x/0.30	20x/0.50	S40x/0.75			S100x/1.30 oil	

All objectives are 60 mm parafoal and have a M25 mm mounting thread

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

All S40x, S50x, S60x and S100x objectives are spring loaded

<sup>(1)</sup> Optional

### PLAN ACHROMATIC EIS OBJECTIVES (CLINICAL ROUTINE APPLICATIONS)

The Delphi-X Observer™ is standard supplied with Plan Achromatic 4x/0.10, 10x/0.25, 20x/0.40, S40x/0.65 and S100x/1.25 oil immersion infinity corrected EIS objectives

As an option available: 2x/0.06, S50x/0.95 (oil immersion) and S60x/0.80

### PLAN SEMI-APOCHROMATIC OBJECTIVES (ANATOMO- AND HISTOPATHOLOGY APPLICATIONS)

The Delphi-X Observer™ can also be supplied with Plan Semi-Apochromatic Fluarex 4x/0.13, 10x/0.30, 20x/0.50, S40x/0.75 and S100x/1.30 (oil immersion) 0.15 mm infinity corrected EIS objectives

### PLAN PHASE CONTRAST OBJECTIVES

Plan Phase EIS 10x/0.25, 20x/0.40, S40x/0.65 and S100x/1.25 (oil immersion) infinity corrected EIS objectives

### STAGE

190 x 152 mm stage with 78 x 32 mm integrated right-handed mechanical stage. Standard supplied with scratch-resistant Gorilla glass. Sapphire scratch-resistant glass is available on request. Left-handed mechanical stage is available on request

### FOCUSING

Coaxial coarse and fine adjustment, 100 graduations, 1 µm precision, 100 µm per rotation, total travel range is approx. 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

### CONDENSER FOR BRIGHTFIELD

In height adjustable N.A. 0.90/1.25 Abbe swing-out condenser with numerical aperture identification marks

### CONDENSER FOR PHASE CONTRAST

In height adjustable N.A. 1.25 Zernike phase contrast



● Sextuple nosepiece

condenser with phase annuli for 10/20/40x and S100x-oil objectives. To be used with the phase contrast objectives

### DIASCOPIIC ILLUMINATION

Two Köhler illuminations are available for the Delphi-X Observer™ microscope:

- Diascopic intensity adjustable 3 W NeoLED™ Köhler illumination with internal 100-240 V power supply
- Diascopic intensity adjustable 100 W halogen Köhler illumination with internal 100-240 V power supply

The diascopic halogen illumination comes with two push-in/push-out neutral density filters for smooth attenuation of the light intensity for all kind of samples. The diascopic NeoLED™ illumination comes with one neutral density filter

### NEOLED™

The innovative NeoLED™ design is a combination of a custom LED and a specially designed thin lens with a short focal length in order to obtain three main benefits:

- More oblique light from the LED light source can be captured, which increases the light output significantly
- Less energy is required to achieve this level of light intensity
- The larger aperture of NeoLED™ allows the optical system to produce images at higher resolutions, very close to the theoretical diffraction limit of the optics

## ICARE SENSOR

The unique iCare Sensor is developed to avoid unnecessary loss of energy. The illumination of the microscope automatically switches off shortly after the microscopist steps away from the microscope



iCare sensor ●

## CARRYING GRIP

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

## PACKAGE CONTENT

Supplied with power cord, dust cover, a spare fuse, user manual and 5 ml immersion oil. All packed in a polystyrene box

## DELPHI-X OBSERVER WITH TRINOCULAR HEAD

MODELS	SWF 10x/25 mm eyepieces	Sextuple noise-piece	Plan 4/10/20/ S40/ S100x oil EIS objectives	Plan Semi-Apo 4/10/20/S40/S100x oil EIS objectives	Plan Phase 10/20/ S40/ S100x oil EIS objectives	3 W NeoLED™ Köhler	100 W 24 V halogen Köhler
DX.1153-PLi	•	•	•			•	
DX.1153-APLi	•	•		•		•	
DX.1153-PLPHi	•	•			•	•	
DX.2153-PLi	•	•	•				•
DX.2153-APLi	•	•		•			•
DX.2153-PLPHi	•	•			•		•

## DELPHI-X OBSERVER WITH ERGONOMIC TRINOCULAR TILTING HEAD

MODELS	SWF 10x/25 mm eyepieces	Sextuple noise-piece	Plan 4/10/20/ S40/ S100x oil EIS objectives	Plan Semi-Apo 4/10/20/S40/S100x oil EIS objectives	Plan Phase 10/20/ S40/ S100x oil EIS objectives	3 W NeoLED™ Köhler	100 W 24 V halogen Köhler
DX.1158-PLi	•	•	•			•	
DX.1158-APLi	•	•		•		•	
DX.1158-PLPHi	•	•			•	•	
DX.2158-PLi	•	•	•				•
DX.2158-APLi	•	•		•			•
DX.2158-PLPHi	•	•			•		•

## FACE-TO-FACE DUAL HEAD SYSTEMS

MODELS	Total users	Trinocular head SWF 10x/25 mm eyepieces	Binocular head SWF 10x/22 mm eyepieces	Sextuple noise-piece	Plan 4/10/20/ S40/ S100x oil EIS objectives	Plan Semi-Apo Fluarex 4/10/20/ S40/S100x oil EIS objectives	Plan Phase 10/20/S40/ S100x oil EIS objectives	3 W NeoLED™ Köhler	100 W 24 V halogen Köhler
DX.1154-PLi	2	1x	1x	•	•			•	
DX.1154-APLi	2	1x	1x	•		•		•	
DX.1154-PLPHi	2	1x	1x	•			•	•	
DX.2154-PLi	2	1x	1x	•	•				•
DX.2154-APLi	2	1x	1x	•		•			•
DX.2154-PLPHi	2	1x	1x	•			•		•

## MULTIHEAD SYSTEMS

MODELS	Total users	Trinocular head SWF 10x/25 mm eyepieces	Number of binocular heads	Binocular head SWF 10x/22 mm eyepieces	Sextuple noise-piece	Plan 4/10/20/ S40/ S100x oil EIS objectives	Plan Semi-Apo Fluarex 4/10/20/S40/ S100x oil EIS objectives	Plan Phase 10/20/S40/ S100x oil EIS objectives	3 W NeoLED™ Köhler	100 W 24 V halogen Köhler
DX.1156-PLi/2	2	1x	1	•	•	•			•	
DX.1156-PLi/3	3	1x	2	•	•	•			•	
DX.1156-PLi/5	5	1x	4	•	•	•			•	
DX.1156-APLi/2	2	1x	1	•	•		•		•	
DX.1156-APLi/3	3	1x	2	•	•		•		•	
DX.1156-APLi/5	5	1x	4	•	•		•		•	
DX.1156-PLPHi/2	2	1x	1	•	•			•	•	
DX.1156-PLPHi/3	3	1x	2	•	•			•	•	
DX.1156-PLPHi/5	5	1x	4	•	•			•	•	
DX.2156-PLi/2	2	1x	1	•	•	•				•
DX.2156-PLi/3	3	1x	2	•	•	•				•
DX.2156-PLi/5	5	1x	4	•	•	•				•
DX.2156-APLi/2	2	1x	1	•	•		•		•	
DX.2156-APLi/3	3	1x	2	•	•		•		•	
DX.2156-APLi/5	5	1x	4	•	•		•		•	
DX.2156-PLPHi/2	2	1x	1	•	•			•	•	
DX.2156-PLPHi/3	3	1x	2	•	•			•	•	
DX.2156-PLPHi/5	5	1x	4	•	•			•	•	
DX.2156-PLi/10	10	1x	9 <sup>(1)</sup>	•	•	•				•
DX.2156-APLi/10	10	1x	9 <sup>(1)</sup>	•	•		•			•
DX.2156-PLPHi/10	10	1x	9 <sup>(1)</sup>	•	•			•		•
DX.1156-PLi/10	10	1x	9 <sup>(1)</sup>	•	•	•			• <sup>(2)</sup>	
DX.1156-APLi/10	10	1x	9 <sup>(1)</sup>	•	•		•		• <sup>(2)</sup>	
DX.1156-PLPHi/10	10	1x	9 <sup>(1)</sup>	•	•			•	• <sup>(2)</sup>	

<sup>(1)</sup> The model with 9 binocular heads (10 users) is supplied with EWF 10x/22 mm eyepieces

<sup>(2)</sup> Supplied with 10 W NeoLED™ Köhler, without iCare sensor

## ACCESSORIES AND SPARE PARTS

**DX.6010** Super wide field SWF 10x/25 mm eyepiece

**DX.6010-C** Super wide field SWF 10x/25 mm eyepiece with cross-hair

**DX.6010-M** Super wide field SWF 10x/25 mm eyepiece with micrometer

**DX.6010-CM** Super wide field SWF 10x/25 mm eyepiece with micrometer and cross-hair

**DX.6010-SG** Super wide field SWF 10x/25 mm eyepiece with 20 x 20 square grid reticle.

**DX.6210** Super wide field SWF 10x/22 mm eyepiece

**DX.6210-C** Super wide field SWF 10x/22 mm eyepiece with cross-hair

**DX.6210-M** Super wide field SWF 10x/22 mm eyepiece with micrometer

**DX.6210-CM** Super wide field SWF 10x/22 mm eyepiece with micrometer and cross-hair

**DX.6210-SG** Super wide field SWF 10x/22 mm eyepiece with 20 x 20 square grid reticle

**DX.6012** Wide field WF 12.5x/17.5 mm eyepiece

**DX.6015** Wide field WF 15x/16 mm eyepiece

**DX.6020** Wide field WF 20x/12 mm eyepiece

**DX.6099-L** Eyecups for eyepiece

**DX.7202** Infinity EIS 60 mm Plan PLi 2x/0.06 objective. WD 7.5 mm

**DX.7204** Infinity EIS 60 mm Plan PLi 4x/0.10 objective. WD 30 mm

**DX.7210** Infinity EIS 60 mm Plan PLi 10x/0.25 objective. WD 10.2 mm

**DX.7220** Infinity EIS 60 mm Plan PLi 20x/0.40 objective. WD 12 mm

**DX.7240** Infinity EIS 60 mm Plan PLi S40x/0.65 objective. WD 0.7 mm

**DX.7250** Infinity EIS 60 mm Plan PLi S50x/0.95 oil objective. WD 0.19 mm

**DX.7260** Infinity EIS 60 mm Plan PLi S60x/0.80 objectives. WD 0.3 mm

**DX.7200** Infinity EIS 60 mm Plan PLi S100x/1.25 oil immersion objective. WD 0.2 mm

**DX.7200-I** Infinity EIS 60 mm Plan PLi S100x/1.25 oil immersion objective with built-in iris diaphragm. WD 0.2 mm

**DX.7304** Infinity EIS 60 mm Plan Semi-Apochromatic PLi-Apo Fluarex 4x/0.13 objective. WD 16.5 mm

**DX.7310** Infinity EIS 60 mm Plan Semi-Apochromatic PLi-Apo Fluarex 10x/0.30 objective. WD 8.1 mm

**DX.7320** Infinity EIS 60 mm Plan Semi-Apochromatic PLi-Apo Fluarex 20x/0.50 objective. WD 2.1 mm

**DX.7340** Infinity EIS 60 mm Plan Semi-Apochromatic PLi-Apo Fluarex S40x/0.75 objective. WD 0.7 mm

**DX.7300** Infinity EIS 60 mm Plan Semi-Apochromatic PLi-Apo Fluarex S100x/1.30 oil immersion objective. WD 0.15 mm

**DX.9501-R** Stage with Gorilla glass. Right handed

**DX.9501-L** Stage with Gorilla glass. Left handed

**DX.9504-R** Stage with Sapphire glass. Right handed

**DX.9504-L** Stage with Sapphire glass. Left handed

**DX.9501-LG** Option for left handed stage with Gorilla glass.<sup>(1)</sup>

**DX.9504-RS** Option for right handed stage with Sapphire glass.<sup>(1)</sup>

**DX.9504-LS** Option for left handed stage with Sapphire glass.<sup>(1)</sup>

<sup>(1)</sup> Only with new Delphi-X Observer microscopes (resp. DX.xx5x-xxx/LG, DX.xx5x-xxx/RS and DX.xx5x-xxx/LS)

**DX.9105** Abbe condenser with 0.9/1.25 swing-out front lens

**DX.9110** Dry darkfield condenser

**DX.9112** Oil immersion darkfield condenser

**DX.9660** Simple polarization kit

**DX.9662** Special polarization kit for gout

**DX.9704** Yellow filter for lamphouse, diameter 45 mm

**DX.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.9960** 100 Watt 24 V halogen bulb (revision 1 models)

**DX.9961** 100 Watt 12 V halogen bulb for (revision 2 models)

**DX.9993** 3 Watt LED replacement

**AE.5214** 500 mA 250 V fuses for LED models, 10pcs

**AE.5216** 5 A 250 V fuses for Halogen models, 10pcs

**AE.5130** Universal SLR adapter with built-in 2x lens for standard 23.2 mm tube. Needs T2 adapter

**AE.5025** T2 ring for Nikon D SLR digital camera

**AE.5040** T2 ring for Canon EOS SLR digital camera

**PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces per pack

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

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

**PB.5245** Lens cleaning paper, 100 sheets per pack

**PB.5255** Immersion oil, 25 ml. Refraction index n = 1.482

**PB.5274** Iso propyl alcohol 99%, 200 ml

**PB.5275** Cleaning kit: lens fluid, lint free lens tissue/paper, brush, air blower, cotton swabs



DX.1153-PLi ●

# LIFE SCIENCE MICROSCOPES

# Oxion

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4

## Oxion

The microscopes of the Oxion series are dedicated to professionals in Life Sciences applications, laboratories of universities or research centers

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



OX.3035 ●



<b>OX.3025 TO OX.3065</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 397 x (w) 185 x (d) 294 mm	7.5 kg

## HIGHLIGHTS

- HWF 10x/22 mm eyepieces
- Binocular, trinocular and multihead systems
- Optional tilting head
- Reversed nosepiece for maximum 5 objectives
- Semi plan, plan and plan phase contrast IOS objectives
- 150 x 140 mm stage
- Optional ceramic stage
- Abbe condenser and Zernike condenser for phase contrast
- 3 W LED illumination for brightfield and phase contrast
- 5 W LED illumination for darkfield applications
- Ergonomic stand and head
- 10 years warranty

## SPECIFICATIONS

### EYEPIECES

HWF 10X/22 mm eyepieces with  $\pm 5^\circ$  diopter adjustments on both eyepieces. The multihead systems OX.56xx are supplied with WF 10x/20 mm eyepieces and a joystick for the positioning of a pointer in the field of view of the eyepieces. All eyepieces can be secured with an Allen screw

### HEAD

Binocular and trinocular Siedentopf type heads with 30° inclined tubes. Interpupillary distance from 50 to 75 mm. A unique rotating system allows an ergonomic positioning of both tubes in an upper (431 mm) and in a lower position (397 mm). An ergonomic tilting head is also available. (OX.5700-ADD)

### MULTIHEAD SYSTEM

The Oxion can be extended with a unique multihead system for in total 2, 3 or 5 heads that allows simultaneous observation of specimens. The central attachment is equipped with a joystick to move a green and red laser pointer across the entire field of view of all heads. Configurations with one, two or four viewing binocular heads,



Ceramic stage (mounted on an OX.3035) ●

30° inclined tubes and plan 4x, 10x, S40, S100x oil immersion infinity corrected IOS objectives. Each extra viewing binocular head is equipped with high wide field plan HWF 10x/20 mm eyepieces (reference models OX.5602, OX.5603 and OX.5605)

### NOSEPIECE

Reversed nosepiece for a maximum of 5 objectives on ball-bearings



● Ergonomic tilting head

## OBJECTIVES – IOS

Infinity corrected system

- Semi plan 4x/0.10, 10x/0.25, S40x/0.65 and S100x/1.25 oil immersion IOS objectives
- Plan 4x/0.10, 10x/0.25, S40x/0.65 and S100x/1.25 oil immersion IOS objectives
- Plan phase contrast 10x/0.25, 20x/0.45, S40x/0.65 and S100x/1.25 oil immersion IOS objectives
- Plan semi apochromatic Fluarex 4x/0.10, 10x/0.25, S40x/0.65 and S100x/1.25 oil immersion IOS objectives

All S40x, S60x and S100x oil immersion objectives are spring loaded.

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

## STAGE

150 x 140 mm stage with integrated X-Y mechanical stage  
A ceramic stage is also available on request. (AE.3197-ADD, only with new microscopes)

The Oxion can be supplied with a heating stage which can be set up to 50° Celsius by a PID temperature controller.  
Only available with new microscopes.

## CONDENSER FOR BRIGHTFIELD

Height adjustable Abbe condenser N.A. 1.25 with iris diaphragm. Phase contrast rings mounted in slider can be inserted in the condenser for 10x and S40x or 20x and S100x phase contrast objectives. A darkfield stop in slider for the 10x, 20x and S40x objectives can also be inserted with magnification indication

## CONDENSERS FOR ZERNIKE

### PHASE CONTRAST

Two optional height adjustable Zernike NA. 1.25 phase contrast disc condensers are available:

- with plan phase 10/20/S40x and S100x oil immersion objectives
- with plan phase 10/S40x/S100x oil immersion objectives and darkfield position for darkfield contrast up to 400x magnification

## FOCUSING

Coaxial coarse and fine adjustments, 200 graduations, 1 µm per graduation, 200 µm 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

## CARDIOID MIRROR CONDENSER FOR DARKFIELD

The OX.3064 model is supplied with a condenser with cardioid mirrors, a 5 W integrated NeoLED™ illumination and a S100x objective with built-in iris diaphragm for real 1,000x darkfield observations. By using AE.3612-O and 86.521 an existing brightfield microscope can be upgraded to darkfield

## ILLUMINATION FOR DARKFIELD

5 W NeoLED™ adjustable illumination  
(for model OX.3064)

## ILLUMINATION FOR BRIGHTFIELD AND PHASE CONTRAST

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

## PACKAGE CONTENT

Supplied with power cord, dust cover, a spare fuse, user manual and 5 ml immersion oil for models with an S100x objective. All packed in a polystyrene box. An optional aluminum case can be supplied

MODELS	Bino	Trino	Semi plan 4x/ 10x/S40x/S100x IOS objectives	Plan4x/10x/ S40x IOS objectives	Plan S100x IOS objective	Plan semi apo 4x/10x/ S40x objectives	Plan semi apo S100x IOS objectives	Plan phase 10x/ 20x/S40x/ S100x IOS objectives	Plan phase 10x/ S40x/ S100x IOS objectives
OX.3012	•		•						
OX.3015		•	•						
OX.3020	•			•					
OX.3025		•		•					
OX.3030	•			•	•				
OX.3035		•		•	•				
OX.3040	•							• <sup>(1)</sup>	
OX.3045	•							• <sup>(1)</sup>	
OX.3042	•								• <sup>(2)</sup>
OX.3047	•								• <sup>(2)</sup>
OX.3050	•					•			
OX.3055	•					•			
OX.3060	•					•	•		
OX.3065	•					•	•		
OX.3064	•			•					• <sup>(3)</sup>
OX.5602		• <sup>(4)</sup>		•	•				
OX.5603		• <sup>(5)</sup>		•	•				
OX.5605		• <sup>(6)</sup>		•	•				

<sup>(1)</sup> Plan phase objectives supplied with AE.3184 condenser with 4 phase contrast rings

<sup>(2)</sup> Plan phase objectives supplied with AE.3183 condenser with 3 phase contrast rings and one stop for darkfield

<sup>(3)</sup> Supplied with cardioid mirror darkfield oil immersion condenser and S100x objective with built-in iris diaphragm

<sup>(4)</sup> Multihead system, supplied with a trinocular and one binocular head

<sup>(5)</sup> Multihead system, supplied with a trinocular and two binocular heads

<sup>(6)</sup> Multihead system, supplied with a trinocular and four binocular heads



● Oxion Multihead - OX.5603

## ACCESSORIES AND SPARE PARTS

- AE.3210** HWF 10x/22mm eyepiece
- AE.3215** HWF 15x/13mm eyepiece
- AE.3223** HWF 10x/22mm eyepiece with 10mm/100 micrometer
- AE.3225** Pair of eyecups
- AE.3160** Semi plan 4x/0.10 infinity corrected IOS objective. WD 15 mm
- AE.3162** Semi plan 10x/0.25 infinity corrected IOS objective. WD 15 mm
- AE.3166** Semi plan S40x/0.65 infinity corrected IOS objective. WD 0.42 mm
- AE.3270** Semi plan S100x/1.25 oil immersion infinity corrected IOS objective. WD 0.19 mm
- AE.3102** Plan 2x/0.06 infinity corrected IOS objective WD 4.1 mm
- AE.3104** Plan 4x/0.10 infinity corrected IOS objective. WD 11.9 mm
- AE.3106** Plan 10x/0.25 infinity corrected IOS objective. WD 12.1 mm
- AE.3108** Plan 20x/0.40 infinity corrected IOS objective. WD 1.5 mm
- AE.3110** Plan S40x/0.65 infinity corrected IOS objective. WD 0.36 mm
- AE.3112** Plan S60x/0.85 infinity corrected IOS objective. WD 0.30 mm
- AE.3114** Plan S100x/1.25 oil immersion infinity corrected IOS objective. WD 0.18 mm
- 86.521** Plan S100x/1.25 oil immersion infinity corrected IOS objective with built-in iris diaphragm
- AE.3144** Plan semi apochromatic Fluarex 4x/0.13

- infinity corrected IOS objective. WD 18.5 mm
- AE.3146** Plan semi apochromatic Fluarex 10x/0.30 infinity corrected IOS objective. WD 10.6 mm
- AE.3148** Plan semi apochromatic Fluarex 20x/0.50 infinity corrected IOS objective. WD 2.33 mm
- AE.3152** Plan semi apochromatic Fluarex S40x/0.75 infinity corrected IOS objective. WD 0.6 mm
- AE.3156** Plan semi apochromatic Fluarex S100x/1.28 oil immersion infinity corrected IOS objective. WD 0.21 mm
- AE.3126** Plan phase 10x/0.25 infinity corrected IOS objective. WD 12.1 mm
- AE.3128** Plan phase 20x/0.45 infinity corrected IOS objective. WD 1.5 mm
- AE.3130** Plan phase S40x/0.65 infinity corrected IOS objective. WD 0.36 mm
- AE.3134** Plan phase S100x/1.25 oil immersion infinity corrected IOS objective. WD 0.18 mm
- AE.3180** Telescope for alignment of phase contrast rings
- AE.3183** Phase contrast Zernike condenser with 3 phase rings and one darkfield stop and plan phase PLPH 10x, S40x, S100x oil objectives
- AE.3184** Phase contrast Zernike condenser with 4 phase rings and plan phase PLPH 10x, 20x, S40x, S100x oil objectives
- AE.3185** Slider with darkfield stop (only for objectives 10x, 20x and S40x)
- AE.3186** Slider phase contrast kit with plan phase 10x/20x/40x/S100x oil objectives and 2 sliders with phase contrast rings for PLPH 10x/S40x and 20x/S100x objectives
- AE.3187** Slider with phase rings for 10x and S40x plan phase contrast objectives

- AE.3189** Slider with phase rings for 20x and S100x oil plan phase contrast objectives
- AE.3190** Polarizer/Analyzer set
- AE.3192** Polarizer slider for nosepiece
- AE.3194** Polarizer for lamphouse
- AE.3196** Frosted filter 45 mm, to be mounted on lamphouse
- AE.3198** Blue glass filter 45 mm, to be mounted on lamphouse
- AE.3200** Yellow glass filter 45 mm, to be mounted on lamphouse
- AE.3202** Green glass filter 45 mm, to be mounted on lamphouse
- AE.5120** Trinocular 23.2 mm tube for Oxion revision 1 photo port
- AE.5120-2** Trinocular 23.2 mm tube for Oxion revision 2 photo port
- AE.5130** Universal SLR camera adapter for 23.2 mm tubus with built-in 2x magnification lens Needs T2 adapter and OX.5120
- AE.5025** T2 adapter for Nikon D digital SLR cameras
- AE.5040** T2 adapter for Canon EOS digital SLR cameras
- OX.9810** CS/C mount with 1.0x objective
- 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

- AE.5168-O** Heating stage and temperature controller up to 50°C. Only supplied with newly purchased microscopes
- AE.3612-O** Cardioid darkfield condenser with integrated 5 W LED light source and external 100-240 V mains adapter
- SL.5510** LED replacement for Oxion
- AE.3199** Glass fuses 3.15 A 250 V, 10 pieces
- OX.3010** Aluminum transport case with flight case locks
- OX.3011** Aluminum transport case with classical locks
- 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 = 1.482 (25 ml)
- PB.5274** Isopropyl alcohol 99% (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue, brush, air blower, cotton swabs



● AE.3184

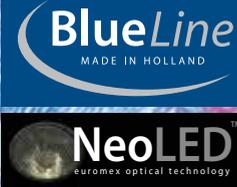


OX.3010 ●



OX.3035 ●

# LIFE SCIENCE MICROSCOPES



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## BioBlue.Lab

The BlueLine flagship BioBlue.Lab is the ideal laboratory instrument. With a very steady base, infinity corrected optical objectives, phase contrast possibilities it is a high quality all round microscope

All models are equipped with NeoLED™ illumination system for high resolution images and are available in binocular and trinocular versions

● BB.1153-PLi



<b>BB.1152-PLi</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 378 x (w) 190 x (d) 260 mm	5.4 kg
<b>BB.1153-PLi</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 448 x (w) 190 x (d) 260 mm	5.6 kg

## HIGHLIGHTS

- Binocular and trinocular models
- Reversed quadruple nosepiece
- Plan and plan phase objectives
- Finitiy and infinity optical system
- Integrated rackless mechanical stage
- NeoLED™ illumination
- Ergonomic carrying grip
- 10 years warranty



BB.1152-PLi ●

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These ergonomic easy-to-use microscopes have been specifically designed for laboratory and university applications.

The 150 x 140 mm mechanical stage has an integrated rackless X-Y stage with 75 x 30 mm travel range

An important feature of the BioBlue.Lab is the rackless stage, which provides a smooth translation of the specimen and highly precise positioning. This plays an integral part in most demanding cytology and histopathology applications

The BioBlue.Lab microscope models offer great functionality and are equipped with WF 10x/20 mm eyepieces, plan and IOS plan 4x/ 10x/ S40x/ S100x infinity corrected objectives

BioBlue.Lab microscopes can also be supplied with plan phase and IOS plan phase contrast objectives 10x / 20x / S40x / S100x, which are finity or infinity corrected. This enhancement is suitable for a wide variety of routine applications in laboratories and field microscopy



Check out the product video on YouTube and learn more about the BlueLine. YouTube channel: **Euromex Optics Group B.V.**



● BioBlue

● BioBlue.Lab

## SPECIFICATIONS

### EYEPIECES

Wide field WF 10x/20 mm eyepieces

### HEAD

Binocular and trinocular models have 30° inclined Ø 30 mm tubes. The interpupillary distance is adjustable between 48 to 75 mm. All models have a ±5 diopter adjustment on left tube. All heads are 360° rotatable and secured with a screw

### NOSEPIECE

Reversed quadruple nosepiece on ball bearings

### OBJECTIVES

BioBlue.Lab microscopes are equipped with plan, plan IOS, plan phase and plan phase IOS objectives. Optional 20x/0.40 and S60x/0.85 objectives are also available. The S40x, S60x and S100x objectives are spring loaded.

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

### FOCUSING

Coaxial coarse and fine adjustments with 200 graduations. Precision 1.5 µm per graduation, 0.3 mm 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



### STAGE

Rackless 150 x 140 mm stage with mechanical 75 x 30 mm X-Y translation stage

### CONDENSER

Height adjustable Abbe condenser N.A. 1.25 with iris diaphragm and filter holder. Supplied with white filter. Height adjustable Zernike N.A. 1.25 phase contrast condenser with filter holder. Supplied with green filter

### ILLUMINATION

Binocular and trinocular models are supplied with an adjustable 3 W NeoLED™ illumination system for increased light output. Integrated 100-240V power supply

### PACKAGE CONTENT

Supplied with power cord, dust cover, a spare fuse, user manual and 5 ml immersion oil and white filter. All packed in a polystyrene box

MODELS	Bino	Trino	4x/10x/S40x/S100x plan objectives	4x/10x/S40x/S100x plan IOS objectives	10x/20x/S40x/S100x plan phase objective	10x/20x/S40x/S100x plan phase IOS objectives	Rackless mechanical stage	Neo LED	Weight (kg)
BB.1152-PL	•		•				•	•	5.4
BB.1153-PL		•	•				•	•	5.5
BB.1152-PLi	•			•			•	•	5.4
BB.1153-PLi		•		•			•	•	5.5
BB.1152-PLPH	•				•		•	•	5.6
BB.1153-PLPH		•			•		•	•	5.7
BB.1152-PLPHi	•					•	•	•	5.6
BB.1153-PLPHi		•				•	•	•	5.7

## ACCESSORIES AND SPARE PARTS

**BB.6010** WF 10x/20 mm eyepiece, Ø 30 mm tube

**BB.6015** WF 15x/15 mm eyepiece, Ø 30 mm tube

**BB.6110** WF 10x/20 mm eyepiece, Ø 30 mm tube with micrometer reticle

**BB.6020** WF 20x/11 mm eyepiece, Ø 30 mm tube

**BB.6099** Pair of eyecups

**BB.8804** Plan DIN 4x/0.10 objective. WD 17.92 mm

**BB.8810** Plan DIN 10x/0.25 objective. WD 2.04 mm

**BB.8820** Plan DIN 20x/0.40 objective. WD 1.20 mm

**BB.8840** Plan DIN S40x/0.65 objective. WD 0.65 mm

**BB.8860** Plan DIN S60x/0.85 objective. WD 0.19 mm

**BB.8800** Plan DIN S100x/1.25 oil immersion objective. WD 0.18 mm

**BB.7204** Plan DIN 4x/0.10 IOS objective. WD 7.18 mm

**BB.7210** Plan DIN 10x/0.25 IOS objective. WD 4.80 mm

**BB.7220** Plan DIN 20x/0.40 IOS objective. WD 5.27 mm

**BB.7240** Plan DIN S40x/0.65 IOS objective. WD 0.68 mm

**BB.7260** Plan DIN S60x/0.85 IOS objective. WD 0.50 mm

**BB.7200** Plan DIN S100x/1.25 oil immersion IOS objective. WD 0.20 mm

**BB.8910** Plan phase DIN 10x/0.25 objective. WD 2.04 mm

**BB.8920** Plan phase DIN 20x/0.40 objective. WD 1.20 mm

**BB.8940** Plan phase DIN S40x/0.65 objective. WD 0.65 mm

**BB.8900** Plan phase DIN S100x/1.25 oil immersion IOS objective. WD 0.18 mm

**BB.7710** Plan phase DIN 10x/0.25 IOS objective. WD 4.7 mm

**BB.7720** Plan phase DIN 20x/0.40 IOS objective. WD 1.75 mm

**BB.7740** Plan phase DIN S40x/0.65 IOS objective. WD 0.72 mm

**BB.7700** Plan phase DIN S100x/1.25 oil immersion objective. WD 0.50 mm

**BB.9880** Köhler attachment

**BB.9900** Aluminum case

**SL.5503** 3 W NeoLED™ replacement unit

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

**AE.5040** T2 ring for Canon EOS SLR digital camera

**AE.5025** T2 ring for Nikon D SLR digital camera

**BB.9732** Polarization glass filter, 32 mm diameter. Fits in filter holder

**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 = 1.482 (25 ml)

**PB.5274** Isopropyl alcohol 99% (200 ml)

**PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue, brush, air blower, cotton swabs

## Oxion Inverso

The Oxion Inverso inverted microscopes are useful for observation of living organisms and tissues cultures in cell culture dishes and flasks

The Oxion Inverso series are available with brightfield and phase contrast as well as for fluorescence microscopy. Dedicated objectives are suitable for 1.2 mm thick glass bottoms of cell culture dishes and flasks

<b>BRIGHTFIELD</b> OX.2003-PL / OX.2053-PL	
<b>Dimensions</b>	<b>Weight</b>
(h) 488 x (w) 231 x (d) 555 mm	9.0 kg

<b>PHASE CONTRAST</b> OX.2203-PLPH / OX.2253-PLPH	
<b>Dimensions</b>	<b>Weight</b>
(h) 488 x (w) 231 x (d) 555 mm	9.0 kg



OX.2053-PLPH ●



OX.2453-PLPH ●

## HIGHLIGHTS

- Life Science applications
- Observation of tissue cultures, living cells
- Brightfield, phase contrast and fluorescence
- Long working distance IOS plan achromatic objectives
- Revolving quintuple nosepiece
- 5 W LED transmitted illumination
- 100 W mercury vapor lamp for fluorescence
- 10 years warranty

## SPECIFICATIONS

### EYEPIECES

Pair of DIN HWF plan 10x/22 mm eyepieces

### HEAD

Trinocular 45° inclined tubes with extended low and high positions for eyepieces. One diopter adjustment on left eyepiece. Interpupillary distance of 54 to 75 mm. Trinocular head with 100-0 % and 80-20 % positions

### NOSEPIECE

Revolving quintuple nosepiece on ball-bearings

### OBJECTIVES FOR BRIGHTFIELD

(models OX.2003-PL and OX.2053-PL)

Infinity color corrected long working distance plan 10x/0.25, 20x/0.40, 40x/0.60 IOS objectives. An optional 60x/0.70 IOS objective is also available

### OBJECTIVES FOR PHASE CONTRAST

(models OX.2003-PLPH and OX.2053-PLPH)

Infinity color corrected long working distance plan phase 10x/0.25, 20x/0.40, 40x/0.60 IOS objectives

### OBJECTIVES FOR BRIGHTFIELD AND FLUORESCENCE MICROSCOPY

(models OX.2253-PLF and OX.2453-PLF)

Infinity color corrected long working distance plan Fluarex 10x/0.30, 20x/0.45, 40x/0.65 IOS objectives. An optional plan Fluarex 60x/0.75 IOS objective is also available

### OBJECTIVES FOR PHASE CONTRAST AND FLUORESCENCE MICROSCOPY

(models OX.2253-PLPH and OX.2453-PLPH)

Infinity color corrected long working distance plan Fluarex 10x/0.30 and plan phase Fluarex 20x/0.45 and S40x/0.65 IOS objectives

All objectives corrected for 1.2 mm thickness.

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

## STAGE

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

- metallic insert for Ø 35 mm cell culture dish dishes
- 76 x 26 mm slide holder
- glass insert with hole
- optional universal cell culture holder

## CONDENSER

N.A. 0.30 condenser with iris diaphragm.

Working distance 72 mm

The models for the phase contrast OX.2003-PLPH, OX.2053-PLPH, OX.2253-PLPHF and OX.2453-PLPHF are delivered with a slider with 4x/10x and 20x/40x pre-centered phase rings

## FOCUSING ADJUSTMENT

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

## ILLUMINATION

Transmitted 5 W LED Intensity adjustable with internal 100-240 V power supply. Fuse holder 3.15 A / 250 V

The fluorescence models are equipped with a reflected 100 W HBO mercury vapor light source with external 100-240 V power supply, fuse holder 3.15 A / 250 V, UV protection shield

## FILTERS FOR PHASE CONTRAST MODELS

Interference filter 550 nm green and blue filter, 45 mm diameter



OX.9190 ●



● OX.9599

## STANDARD FLUORESCENCE FILTERS

(for fluorescence models)

The fluorescence models OX.2253-PLF and OX.2253-PLPHF are standard supplied with 2 filter sets for excitation:

- in the blue spectrum,  
OX.9745, EX465-495 (BP) DM505 (LP) EM515-558 (BP)
- in the green spectrum,  
OX.9746, EX520-600 (BP) DM600 (LP) EM605-665 (BP)

The fluorescence models OX.2453-PLF and OX.2453-PLPHF equipped with a 4 positions filter rail equipped with three standard filter sets for excitation:

- in the blue spectrum,  
OX.9745, EX465-495 (BP) DM505 (LP) EM515-558 (BP)
- in the green spectrum,  
OX.9746, EX520-600 (BP) DM600(LP) EM605-665 (BP)
- in the UV spectrum,  
OX.9747, EX361-381 (BP) DM415 (LP) EM435-495 (BP)

## PACKAGE CONTENT

Supplied with power cord, dust cover and user manual. Phase contrast models are supplied with green filter and alignment telescope

## MODELS

MODELS	LWD Plan 10x/20x/40x objectives	LWD Plan phase 10x/20x/40x objectives	LWD Plan Fluarex 10x/ 20x/40x objectives	LWD Plan Fluarex 10x and plan phase Fluarex 20x/40x objectives	2-position filter block	4-position filter block	Mechanical stage
OX.2003-PL	•						
OX.2053-PL	•						•
OX.2003-PLPH		•					
OX.2053-PLPH		•					•
OX.2253-PLF			•		•		•
OX.2453-PLF			•			•	•
OX.2253-PLPHF				•	•		•
OX.2453-PLPHF				•		•	•

Fluarex™ objectives are made of low-absorption glass for fluorescence applications  
Fluarex™ is a trademark of Euromex microscopen bv  
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 FOR BRIGHTFIELD MICROSCOPY FOR INVERTED MODELS <sup>(1)</sup>

- OX.8304** Plan LWD 4x/0.10 infinity corrected IOS objective, WD 22 mm
- OX.8310** Plan LWD 10x/0.25 infinity corrected IOS objective, WD 7.94 mm
- OX.8320** Plan LWD 20x/0.40 infinity corrected IOS objective, WD 7.66 mm
- OX.8340** Plan LWD 40x/0.60 infinity corrected IOS objective, WD 3.71 mm
- OX.8360** Plan LWD 60x/0.70 infinity corrected IOS objective, WD 2.5 mm

### OBJECTIVES FOR BRIGHTFIELD AND FLUORESCENCE MICROSCOPY FOR INVERTED MODELS <sup>(1)</sup>

- OX.8604** Plan Fluarex LWD 4x/0.13 infinity corrected IOS objective, WD 18.5 mm
- OX.8610** Plan Fluarex LWD 10x/0.30 infinity corrected IOS objective, WD 7.1 mm

- OX.8620** Plan Fluarex LWD 20x/0.45 infinity corrected IOS objective, WD 5.91 mm
- OX.8640** Plan Fluarex LWD 40x/0.65 infinity corrected IOS objective, WD 1.61 mm
- OX.8660** Plan Fluarex LWD 60x/0.75 infinity corrected IOS objective, WD 1.04 mm

### OBJECTIVES FOR PHASE CONTRAST MICROSCOPY FOR INVERTED MODELS <sup>(2)</sup>

- OX.8404** Plan phase LWD 4x/0.13 infinity corrected IOS objective, WD 10.4 mm <sup>(1)</sup>
- OX.8410** Plan phase LWD 10x/0.25 infinity corrected IOS objective, WD 7.94 mm <sup>(1)</sup>
- OX.8420** Plan phase LWD 20x/0.40 infinity corrected IOS objective, WD 7.66 mm <sup>(1)</sup>
- OX.8440** Plan phase LWD 40x/0.60 infinity corrected IOS objective, WD 3.71 mm <sup>(1)</sup>

All optical parts are anti-fungus treated

<sup>(1)</sup> All objectives corrected for 1.2 mm cover glass thickness except OX.8304

<sup>(2)</sup> Phase contrast objectives require slider with phase contrast annuli OX.9163

# ACCESSORIES AND SPARE PARTS

## OBJECTIVES FOR FLUORESCENCE AND PHASE CONTRAST (\*\*) MICROSCOPY FOR INVERTED MODELS (\*)

- OX.8720** Plan phase Fluorex LWD 20x/0.45 infinity corrected IOS objective. WD 5.91 mm (\*)
- OX.8740** Plan phase Fluorex LWD 40x/0.65 infinity corrected IOS objective. WD 1.1 mm (\*)

## STANDARD GENERAL PURPOSE FLUORESCENCE FILTER SETS:

- OX.9745** Fluorescence filter block for Blue excitation 465-495 nm
- OX.9746** Fluorescence filter block for Green excitation 520-600 nm
- OX.9747** Fluorescence filter block for Violet excitation 410-440 nm
- OX.9748** Fluorescence filter block for Ultra Violet excitation 361-389 nm

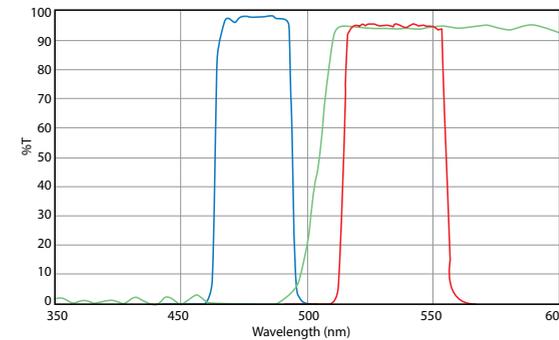
## ALL MODELS

- OX.9148** Telescope for phase contrast fluorescence alignment
- OX.9149** Telescope for phase contrast alignment
- OX.9190** Slider with 4x/10x and 20x/40x phase contrast annuli
- OX.9500** Mechanical coaxial X-Y 120 x 78 mm stage
- OX.9506** Transparent glass insert with hole
- OX.9512** Insert with 76 x 26 mm slide holder and Ø 54 mm cell culture dish holder
- OX.9535** Metal insert for Ø35 mm cell culture dish holder
- OX.9550** Stage extension plate
- OX.9599** Universal cell culture dish holder
- OX.9985** 5 W NeoLED™ replacement unit

For transmitted illumination:

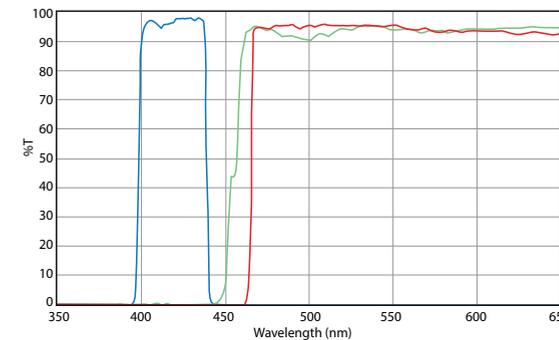
- OX.9703** IR cut-off filter
- OX.9749** Empty Filter block
- OX.9753** Filter block rail, three positions
- OX.9754** Filter block rail, four positions
- OX.9810** CS/C mount with 1.0x objective
- OX.9833** C-mount adapter with 0.33x objective for Oxion microscopes and 1/3" cameras
- OX.9850** C-mount adapter with 0.5x objective for Oxion and Oxion Inverso microscopes and 1/2" cameras
- AE.5120-2** Trinocular 23.2 mm tube for Oxion revision 2 photo port
- AE.5130** Universal SLR camera adapter with 2x projection lens for 23.2 mm tubes  
Need T2 adapter and AE.5120
- 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 = 1.482 (25 ml)
- PB.5274** Isopropyl alcohol 99% (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue, brush, air blower, cotton swabs

## STANDARD GENERAL PURPOSE FLUORESCENCE FILTER SETS



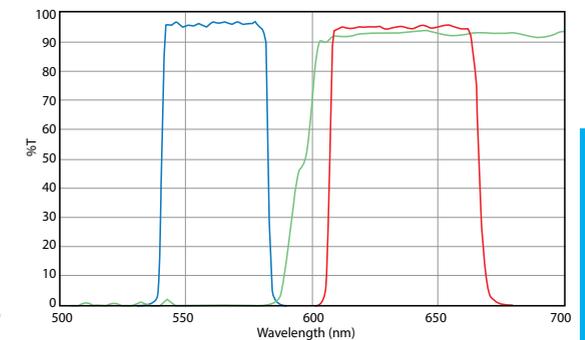
**OX.9745 Blue excitation 465-495 nm**  
FITC  
EX465-495 (BP) DM505 (LP) EM515-558 (BP)

Also suitable for: Acridine Orange + DNA, Alexa Fluor 488™, Atto 488, Azami Green, BODIPY FL/pH7.2, Calcein, Calcium Green™-1, Cy2™, DiO, DyLight 488, EGFP, Emerald GFP, FAM, FITC, Fluo-4, GFP LysoTracker Green/pH 5.2, MitoTracker Green FM/MeOH, mWasabi, Oregon Green™ 488, SYBR® Green I, SYTO 9/DNA, ZsGreen



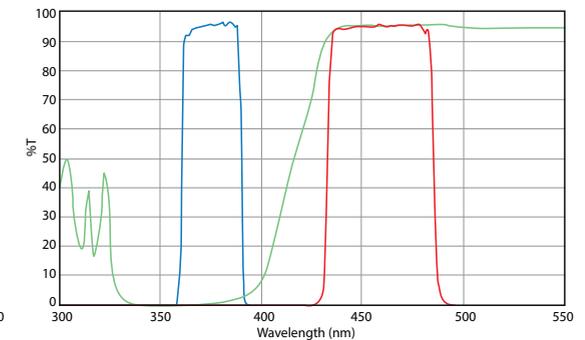
**OX.9747 Violet excitation 410-440 nm**  
DAPI / Hoechst / Alexa Fluor 350  
EX410-440 (BP) DM455 (LP) EM465 (LP)

Also suitable for: Alexa Fluor 350™, Biosearch Blue, Coumarin, DAPI, DyLight 350, Hoechst 33258, LysoTracker Blue/MeOH



**OX.9746 Green excitation 520-600 nm**  
Texas Red / mCherry / Alexa Fluor 594  
EX520-600 (BP) DM600 (LP) EM605-665 (BP)

Also suitable for: Alexa Fluor 568™, Alexa Fluor 594™, CAL Fluor® Red 610, Cy3.5™, DyLight 594, FusionRed, Killer Red, mCherry, MitoTracker Red/MeOH, mKate2, mRFP1, ReAsH-CCPGCC, Rhodamine Red™-X, ROX, Sulforhodamine 101, Texas Red®, Texas Red®-X, X-rhod-1/Ca2+



**OX.9748 Ultra-Violet excitation 361-389 nm**  
UV/DAPI/Hoechst/AlexaFluor 350  
EX 361-389 (BP) DM 415 (LP) EM 435-485 (BP)

The fluorescence microscopes can be equipped with more specific, optimized and application related fluorescence filters sets, see accessories section and/or separate fluorescence filter catalog

(\*) All objectives corrected for 1.2 mm cover glass thickness. All optical parts are anti-fungus treated

(\*\*) Phase contrast objectives require slider with phase contrast annuli OX.9163



IS.3152 PLi-3 ●



## iScope® fluorescence

The excellent optics and mechanical components make the iScope® a state-of-the-art microscope that is suitable for fluorescence applications in Life Science and Biotechnical fields

The iScope® fluorescence microscope can be supplied with:

- 6-position rotating attachment with 100 W mercury vapor light source
- 3-position slider attachment with 100 W mercury vapor light source
- 1-position slider attachment with a 3 W NeoLED™ 465-475 nm blue light source
- 1-position slider attachment with a 3 W NeoLED™ 520-530 nm green light source

IS.3153-EPLi / IS.3153-PLi / IS.3153-PLFi	
<b>Dimensions</b>	<b>Weight</b>
(h) 407 x (w) 210 x (d) 255 mm	11.3 kg

## HIGHLIGHTS

- HWF 10x/22 mm eyepieces
- Binocular and trinocular models
- Optional ergonomic tilting head
- Quintuple revolving nosepiece
- E-Plan, plan and plan Fluarex corrected IOS objectives
- 187/230 x 140 mm rackless stage with integrated X-Y stage
- Optional ceramic stage
- Height adjustable Abbe condenser N.A. 1.25
- Coarse and fine adjustment
- Diascopic intensity adjustable 3 W NeoLED™ Köhler illumination
- Epi-fluorescence 100 W HBO mercury vapor
- Epi-fluorescence 460-495 nm or 510-550 nm 3 W LED
- iCare sensor for energy saving
- CSS - Cable Storage System
- 10 years warranty



IS.3153-PLFi/6 ●

## SPECIFICATIONS

### EYEPIECES

Extended plan EWF 10x/22 mm eyepieces, Ø 30 mm tubes. Eyepieces can be secured to the tubes. The trinocular head of the Plan infinity corrected models (IS.1153-PLi) has a light path selector (100:0 / 50:50) and ± 5 diopter adjustments on both Ø 30 mm tubes. The trinocular head of the E-Plan infinity corrected models (IS.1153-EPLi) has a fixed built-in light path beamsplitter (50:50) and ± 5 diopter adjustment on one Ø 30 mm left tube

(only infinity corrected models)

To order an iScope® with tilting head use reference IS.3158-xxx

### NOSEPIECE

Revolving and reversed nosepiece for maximum 5 objectives

### OBJECTIVES

See table below

### HEAD

Binocular and trinocular Siedentopf type heads are with 30° inclined tubes, interpupillary distance from 48 to 76 mm and is equipped with diopter adjustment(s). A unique rotating system allows the ergonomic positioning of both tubes in a high (431 mm) and in a low position (397 mm). The trinocular head comes with a Ø 23.2 mm photo port. An optional ergonomic tilting head and corresponding Ø 23.2 mm photo tube attachment is also available

### STAGE

- 187/230 x 140 mm rackless stage equipped with double slide holder and integrated 79 x 52 mm mechanical stage. The iScope® rackless stage has no protruding parts, enabling more smooth movements and is safer
- 220 x 157 mm ceramic stage with integrated 75 x 50 mm mechanical stage protects with a very tough ceramic surface, against marks and scratches. The surface also ensures stray light not to be reflected from the stage into the objective

### OBJECTIVES

E-Plan EPLi IOS	4x/0.10	10x/0.25		S40x/0.65		S100x/1.25 oil
Plan PLi IOS	4x/0.10	10x/0.25	20x/0.40 <sup>(1)</sup>	S40x/0.65	S60x/0.85 <sup>(1)</sup>	S100x/1.25 oil
Plan PLFi IOS	4x/0.10	10x/0.25	20x/0.40 <sup>(1)</sup>	S40x/0.65		S100x/1.25 oil

<sup>(1)</sup> optional: The plan Fluarex PLFi™ objectives are suitable for Violet and Ultra Violet excitation  
All optics are anti-fungus treated and anti-reflection coated for maximum light throughput

## CONDENSER FOR BRIGHTFIELD

The standard height adjustable Abbe N.A. 1.25 condenser for brightfield accepts sliders with phase annuli suitable for plan phase 10x/20x or S40x/S100x oil immersion IOS objectives for economical phase contrast. With magnification indication.

A slider with a simple dark stop for darkfield up to 400x magnification is also available

## CONDENSER FOR ZERNIKE PHASE CONTRAST

An optional height adjustable Zernike NA. 1.25 phase contrast disc condenser with plan phase 10/20/S40x and S100x oil immersion objectives and darkfield stop position for darkfield contrast observation up to 400x magnification

## FOCUSING

Coaxial coarse and fine adjustments, 200 graduations, 1 µm per graduation, 200 µm per rotation, total travel range is approximately 24 mm. Supplied with an adjustable rack stop to prevent damage to sample and objectives. The coarse adjustments are equipped with friction control

## ILLUMINATION

3 W adjustable Köhler NeoLED™ diascope illumination with internal 100-240 V power supply

The innovative NeoLED™ design offers larger apertures, allowing the optical system of the iScope® 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 lifetime

The Köhler illumination on models with IOS plan and plan phase infinity corrected system provides high contrast and a maximum achievable resolving power of the optics. Also available for other models as an option

## ILLUMINATION FOR FLUORESCENCE

The 6-position rotating or 3-position slider fluorescence attachments are supplied with standard 100 W HBO mercury

vapor light source for broad powerful light spectrum and 100-240 V external power supply with indication of the life span of 100 W HBO lamp.

Supplied with standard fluorescence filters sets for blue excitation (EX460-490 (BP) DM520 EM500 (LP)) and green excitation (EX510-550 (BP) DM580 EM570 (LP)) and a UV protection shield

The iScope® fluorescence microscopes equipped with a 100 W mercury vapor light source can be supplied with more specific, optimized and application related fluorescence filters sets

Two single position fluorescence attachments are supplied with EX 460-495 DM 505 EM 510-560 LP filter set and a 3 W 466-475 nm LED for blue excitation or EX 510-550 DM580 EM 5170 LP filter set and a 3 W 520-530 nm LED light source for green excitation. Supplied with a 100-240 Vac/7.5 Vdc external power supply

## 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, a spare fuse, user manual and 5 ml immersion oil for models with S100x objective. Models with 100 W mercury vapor light source have a UV protection shield. All packed in polystyrene boxes

## 3-POSITIONS SLIDER ATTACHMENT

With 100 W mercury vapor light source. The 3-positions slider fluorescence attachments are supplied with standard 100 W HBO mercury vapor light source for broad powerful light spectrum. Supplied with standard fluorescence filters sets for blue and green excitation and a UV protection shield

MODELS	Bino	Trino	WF 10x/22 mm	Diopter adjustable on left side	Diopter adjustable on both sides	E-plan EPLi 4x/10x/S40x and S100x objectives	Plan PLi 4x/10x/S40x and S100x objectives	Plan PLF 4x/10x/S40x and S100x objectives	100 W HBO light source	Filter sets (blue & green)	NeoLED™ illumination
IS.3152-EPLi/3	•	•	•	•	•	•	•	•	•	•	•
IS.3153-EPLi/3	•	•	•	•	•	•	•	•	•	•	•
IS.3152-PLi/3	•	•	•	•	•	•	•	•	•	•	•
IS.3153-PLi/3	•	•	•	•	•	•	•	•	•	•	•
IS.3152-PLFi/3	•	•	•	•	•	•	•	•	•	•	•
IS.3153-PLFi/3	•	•	•	•	•	•	•	•	•	•	•

## 6-POSITIONS ROTATING ATTACHMENT

With 100 W mercury vapor light source. The 6-positions rotating fluorescence attachments are supplied with a standard 100 W HBO mercury vapor light source for broad powerful light spectrum. Supplied with standard fluorescence filters sets for excitation in the blue and green light spectrum and a UV protection shield

MODELS	Bino	Trino	WF 10x/22 mm	Diopter adjustable on left side	Diopter adjustable on both sides	E-plan EPLi 4x/10x/S40x and S100x objectives	Plan PLi 4x/10x/S40x and S100x objectives	Plan PLF 4x/10x/S40x and S100x objectives	100 W HBO light source	Filter sets (blue & green)	NeoLED™ illumination
IS.3152-EPLi/6	•	•	•	•	•	•	•	•	•	•	•
IS.3153-EPLi/6	•	•	•	•	•	•	•	•	•	•	•
IS.3152-PLi/6	•	•	•	•	•	•	•	•	•	•	•
IS.3153-PLi/6	•	•	•	•	•	•	•	•	•	•	•
IS.3152-PLFi/6	•	•	•	•	•	•	•	•	•	•	•
IS.3153-PLFi/6	•	•	•	•	•	•	•	•	•	•	•

## 1-POSITION SLIDER ATTACHMENT

With a 3 W NeoLED™ 465-475 nm blue light source (/LB), with a 3 W NeoLED™ 520-530 nm green light source (/LG) Single position slider fluorescence attachments are supplied with either with a 460-495 nm 3 W LED for blue excitation or a 510-550 nm 3 W LED light source for green excitation. Supplied with standard fluorescence filters sets for blue (/LB) or green excitation (/LG)

MODELS	Bino	Trino	WF 10x/22 mm	Diopter adjustable on left side	Diopter adjustable on both sides	E-plan EPLi 4x/10x/S40x and S100x objectives	Plan PLi 4x/10x/S40x and 100x objectives	Plan PLF 4x/10x/S40x and S100x objectives	Blue excitation 460-495 nm	Green excitation 520-530 nm	NeoLED™ illumination
IS.3152-EPLi/LB	•	•	•	•	•	•	•	•	•	•	•
IS.3153-EPLi/LB	•	•	•	•	•	•	•	•	•	•	•
IS.3152-PLi/LB	•	•	•	•	•	•	•	•	•	•	•
IS.3153-PLi/LB	•	•	•	•	•	•	•	•	•	•	•
IS.3152-PLFi/LB	•	•	•	•	•	•	•	•	•	•	•
IS.3153-PLFi/LB	•	•	•	•	•	•	•	•	•	•	•
IS.3152-EPLi/LG	•	•	•	•	•	•	•	•	•	•	•
IS.3153-EPLi/LG	•	•	•	•	•	•	•	•	•	•	•
IS.3152-PLi/LG	•	•	•	•	•	•	•	•	•	•	•
IS.3153-PLi/LG	•	•	•	•	•	•	•	•	•	•	•
IS.3152-PLFi/LG	•	•	•	•	•	•	•	•	•	•	•
IS.3153-PLFi/LG	•	•	•	•	•	•	•	•	•	•	•

## ACCESSORIES AND SPARE PARTS

- IS.9749-6** Empty filter cube for 6-position fluorescence attachment
- IS.9749-3** Empty filter cube for 3-position fluorescence attachment
- IS.9749-1** Empty filter cube for 1-position fluorescence attachment
- IS.9753** Filter rail, 3-position
- IS.9102** Standard Abbe condenser 1.25 NA condenser with slot for darkfield and phase contrast sliders
- IS.9105** Swing-out 0.9/1.25 NA condenser
- IS.6210** EWF 10x/22 mm eyepiece (Ø 30mm tube)
- IS.6210-C** EWF 10x/22 mm eyepiece with crosshair (Ø30 mm tube)
- IS.6210-P** EWF 10x/22 mm eyepiece with pointer (Ø30 mm tube)
- IS.6210-CM** EWF 10x/22 mm eyepiece with 10/100 micrometer and cross hair (Ø30 mm tube)
- IS.6210** EWF 10x/22 mm eyepiece (Ø30mm) with 10/100 micrometer and cross hair
- IS.6212** WF 12.5x/17 mm eyepiece (Ø30 mm tube)
- IS.6215** WF 15x/16 mm eyepiece (Ø30 mm tube)
- IS.6220** WF 20x/12 mm eyepiece (Ø30 mm tube)
- IS.6299** Pair of eyecups infinity models
- IS.7104** E-plan EPL 4x/0.10 objective. WD 15.2 mm
- IS.7110** E-plan EPL 10x/0.25 objective. WD 5.5 mm
- IS.7120** E-plan EPL 20x/0.40 objective. WD 3.5 mm
- IS.7140** E-plan EPL S40x/0.65 objective. WD 0.45 mm
- IS.7160** E-plan EPL S60x/0.85 objective. WD 0.19 mm
- IS.7100** E-plan EPL S100x/1.25 objective. WD 0.13 mm
- IS.7710** Plan PLPH 10x/0.25 phase contrast objective. WD 12.2 mm
- IS.7720** Plan PLPH 20x/0.40 phase contrast objective. WD 5 mm
- IS.7740** Plan PLPH S40x/0.65 phase contrast objective. WD 0.37 mm
- IS.7700** Plan PLPH S100x/1.25 phase contrast objective. WD 0.13 mm
- IS.8804** E-plan EPLi 4x/0.10 IOS objective. WD 15.4 mm
- IS.8810** E-plan EPLi 10x/0.25 IOS objective. WD 5.8 mm
- IS.8840** E-plan EPLi S40x/0.65 IOS objective. WD 0.43 mm
- IS.8800** E-plan EPLi S100x/1.25 IOS objective. WD 0.13 mm
- IS.7202** Plan PLi 2x IOS objective, WD 18.3 mm. Best to be used together with swing-out condenser
- IS.7204** Plan PLi 4x/0.10 IOS objective. WD 15.4 mm
- IS.7210** Plan PLi 10x/0.25 IOS objective. WD 10 mm
- IS.7220** Plan PLi 20x/0.40 IOS objective. WD 5.1 mm
- IS.7240** Plan PLi S40x/0.65 IOS objective. WD 0.54 mm
- IS.7250** Plan PLi S50x/0.90 IOS objective. WD 0.12 mm
- IS.7260** Plan PLi S60x/0.85 IOS objective. WD 0.14 mm
- IS.7200** Plan PLi S100x/1.25 IOS objective. WD 0.13 mm
- IS.7200-I** Plan Super Contrast PLi S100x/1.25 IOS objective with built-in iris diaphragm. WD 0.13 mm
- IS.7404** Plan Fluarex PLFi 4x/0.15 IOS objective. WD 21.6 mm
- IS.7410** Plan Fluarex PLFi 10x/0.35 IOS objective. WD 2.9 mm
- IS.7420** Plan Fluarex PLFi 20x/0.60 IOS objective. WD 1.5 mm
- IS.7440** Plan Fluarex PLFi S40x/0.75 IOS objective. WD 0.6 mm
- IS.7400** Plan Fluarex PLFi S100x/1.30 IOS objective. WD 0.13 mm
- IS.8910** Plan PLPHi 10x/0.25 phase contrast IOS infinity corrected objective. WD 10.2 mm
- IS.8920** Plan PLPHi 20x/0.40 phase contrast IOS infinity corrected objective. WD 5.1 mm
- IS.8940** Plan PLPHi S40x/0.65 phase contrast IOS infinity corrected objective. WD 0.5 mm
- IS.8900** Plan PLPHi S100x/1.25 phase contrast IOS infinity corrected objective. WD 0.13 mm
- IS.9124** Zernike phase contrast set PLPH 10/20/40/100 bright field and darkfield position
- IS.9127** Zernike phase contrast set PLPHi 10/20/40/100 IOS brightfield and darkfield position
- IS.9148** Telescope for phase contrast diameter 30 mm tube
- IS.9149** Telescope for phase contrast diameter 23.2 mm tube
- IS.9102** Standard Abbe condenser 1.25 NA with slot for darkfield and phase contrast sliders
- IS.9105** Swing-out 0.9/1.25 condenser
- IS.9160** Phase contrast slider set with 10x and S40x PLPH objectives and annuli for 10/S40x PLPH objectives. Also suitable for optional 20x PLPH objective
- IS.9161** Phase contrast slider set with 20x and S100x PLPH objectives and annuli for 20x/S100x PLPH objectives
- IS.9162** Phase contrast slider set with 10x and S40x PLPHi IOS infinity corrected objectives and annuli for 10x/S40x PLPHi IOS infinity corrected objectives. Also suitable for optional 20x PLPHi infinity corrected objective
- IS.9163** Phase contrast slider set with 20x and S100x PLPHi IOS infinity corrected objectives and annuli for 20x/S100x PLPHi IOS infinity corrected objectives
- IS.9170** Slider with darkfield stop
- IS.9194** Slider with phase contrast annuli for S40 phase contrast objective
- IS.9503** Large ceramic stage. Only with new microscopes, add /C suffix after iScope® model part number
- IS.9600** Polarization filter 45 mm for lamphouse
- IS.9601** Polarization set: simple rotating polarizer for lamphouse and fix polarizer mounted under head
- IS.9626** Polarization filter for mounting under the head
- 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
- IS.9710** White opaque filter 45 mm for lamphouse
- IS.9800** Single photo tube attachment with one 23.2 mm tube for IS.5700 ergonomic tilting head of iScope® infinity systems
- IS.9880** Köhler attachment
- AE.3684** Glass fuses 500 mA 250 V, 10 pieces
- AE.5168-I** Heating stage series with controller, only with new microscopes
- SL.5500** NeoLED™ replacement unit
- AE.5130** Universal SLR adapter with built-in 2x lens for standard 23.2 mm tube. Needs T2 adapter
- AE.5025** T2 ring for Nikon D SLR digital camera
- AE.5040** T2 ring for Canon EOS SLR digital camera
- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces per pack
- PB.5165** Cover glasses 18 x 18 mm, 0.13-0.17 mm, 100 pieces
- PB.5168** Cover glasses 22 x 22 mm, 0.13-0.17 mm, 100 pieces
- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5255** Immersion oil, 25 ml. Refraction index n = 1.482
- PB.5274** Iso propyl alcohol 99%, 200 ml
- PB.5275** Cleaning kit: lens fluid, lint free lens tissue/paper, brush, air blower, cotton swabs

WD = working distance



● BS.3153-PLi

bScope®

fluorescence

The bScope® microscope for fluorescence microscopy comes in two versions. One version is equipped with four monochromatic LEDs and the second version is equipped with a traditional 100 W mercury vapor light source for a larger excitation light spectrum

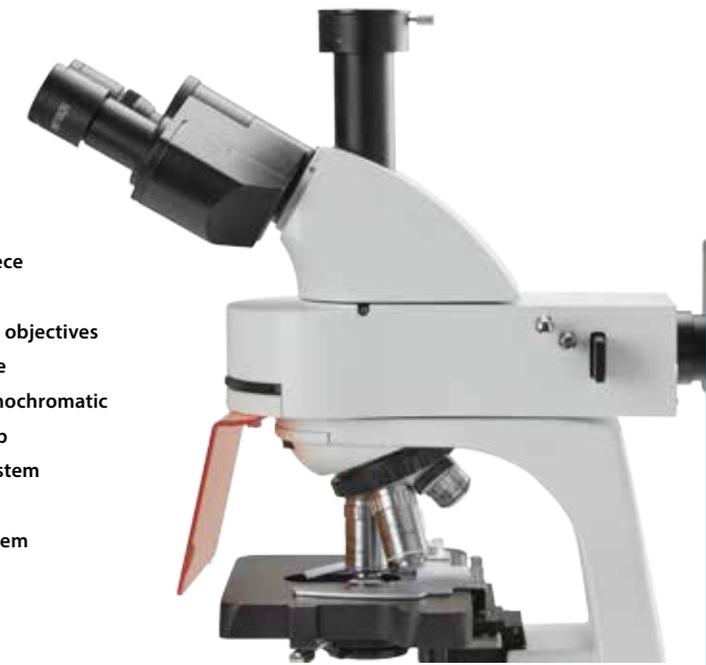
The microscopes are supplied with routine fluorescence filter sets and dichroic mirrors for excitation in the blue, green, violet and ultraviolet spectral regions



TRINOCULAR MODELS BS.3153-EPLI/H, BS.3153-PLI/H AND BS.3153-PLFI/H	
Dimensions	Weight
(h) 505 x (w) 195 x (d) 450 mm	8.8 kg

HIGHLIGHTS

- Trinocular models
- WF 10x/20 mm eyepieces
- Reversed ball-bearing quintuple nosepiece with slot for polarization filter
- E-plan IOS, Plan IOS and Plan Fluarex IOS objectives
- Rackless integrated X-Y mechanical stage
- Epi-fluorescence illumination with 4 monochromatic LEDs or a 100 W HBO mercury vapor lamp
- 3 W NeoLED™ adjustable illumination system
- Integrated carrying grip
- Cable Storage System and anti-theft system
- 10 years warranty



● BS.3153-PLi

SPECIFICATIONS

EYEPIECES

Wide field HWF 10x/22 mm secured 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 Ø 30 mm tubes and with a ± 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

NOSEPIECE

Revolving and reversed ball-bearing quintuple nosepiece

OBJECTIVES

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

- E-plan or Plan infinity corrected EPLI or PLI 4x/0.10, 10x/0.25, 20x/0.40, S40x/0.65, S60x/0.85 and S100x/1.25 oil immersion IOS objectives for applications where violet or ultra-violet excitation is not needed
- Plan Fluarex infinity corrected PLFi 4x/0.10, 10x/0.25, 20x/0.40, S40x/0.65 and S100x/0.90 IOS objectives for applications where either higher resolving power or either violet or ultra-violet excitation is needed

All S40x, S60x and S100x oil immersion 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  $\mu\text{m}$ , 200  $\mu\text{m}$  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 152/197 x 131 mm stage with integrated 75 x 36 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.

The bScope® can be equipped with a heating stage which can be set up to 50° Celsius by a PID temperature controller. Only available with newly purchased microscopes

## 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

## CONDENSER FOR ZERNIKE PHASE CONTRAST

The height adjustable Zernike NA. 1.25 phase contrast disc condenser comes with phase annuli for 10/20/S40x and S100x phase contrast objectives, an iris diaphragm, a swing-out filter holder and also a BF position for brightfield contrast. Phase contrast objectives in either EPL-PHi or PL-PHi phase contrast version. Supplied with alignment telescope and green filter

## CONDENSER FOR SIMPLE PHASE CONTRAST

The height adjustable NA. 1.25 simple phase contrast condenser has a free slot for either a slider for 10/S40x phase contrast objectives OR a slider for 20/S100x phase contrast objectives. The condenser has an iris diaphragm and filter holder. The condenser includes a BF position for

brightfield contrast with an iris diaphragm and filter holder. Phase contrast objectives in either EPL-PHi or PL-PHi version. Supplied with alignment telescope and green filter

## POLARIZATION

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

## FLUORESCENCE ATTACHMENT

- Epi-illumination with four LEDs for fluorescence excitation from 460 to 470 nm (blue), 520 to 530 nm (green), 390 to 400 nm (violet) and 360 to 370 nm (ultraviolet). External 100-240 V power supply
- Epi-illumination with 100 W HBO mercury vapor lamp. External 110 or 230 V power supply

All fluorescence attachments are equipped with dichroic mirrors and routine fluorescence filters for blue, green, violet and ultra-violet excitation

## NEOLED™ TRANSMITTED ILLUMINATION

The 3 W adjustable Köhler NeoLED™ transmitted 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 lifetime

*Ergonomic carrying grip for easy transportation*



## KÖHLER ILLUMINATION

A 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 batteries turn the bScope® into a cordless system for transmitted illumination

## CSS – CABLE STORAGE 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 Styrofoam packaging ensures a low environmental footprint while maintaining maximum safety during transport. Supplied with power cord, dust cover, tools, a spare fuse, white filter, user manual and 5 ml immersion oil

BS.3153-PLi ●



### BSCOPE® WITH EPI-FLUORESCENCE 4 LED ILLUMINATION (BLUE, GREEN, VIOLET AND ULTRA-VIOLET)

MODELS	Trinocular	HWF 10x/20 mm eyepieces	Quintuple nosepiece E-plan EPLi 4/10/S40/S100x	Quintuple nosepiece Plan PLi 4/10/S40/ S100x	Quintuple nosepiece Plan Fluarex PLFi 4/10/S40/ S100x (1)
BS.3153-EPLi	•	•	•		
BS.3153-PLi	•	•		•	
BS.3153-PLFi	•	•		•	•

### BSCOPE® WITH EPI-FLUORESCENCE 100 W HBO MERCURY VAPOR LAMP ILLUMINATION

MODELS	Trinocular	HWF 10x/20 mm eyepieces	Quintuple nosepiece E-plan IOS 4/10/S40/S100x	Quintuple nosepiece Plan IOS 4/10/S40/ S100x	Quintuple nosepiece Plan Fluarex PLFi 4/10/S40/ S100x (1)
BS.3153-EPLi/HBO	•	•	•		
BS.3153-PLi/HBO	•	•		•	
BS.3153-PLFi/HBO	•	•		•	•

<sup>(1)</sup>The Plan Fluarex infinity corrected IOS objectives are recommended for applications where violet or ultra-violet excitation is needed

## ACCESSORIES AND SPARE PARTS

- 86.575** Wide field eyepiece WF 10x/20 mm
- 86.573** Wide field eyepiece WF 15x/12 mm
- 80.882** Wide field eyepiece WF 20x/10 mm
- 86.574** Micrometer eyepiece HWF 10x/18, 10mm/100, with adjustable eye lens
- 80.839** Eyecup, Ø 28 mm, one piece
  
- BS.8204** E-plan EPLi 4x/0.10 IOS objective. WD 18.9 mm
- BS.8210** E-plan EPLi 10x/0.25 IOS objective. WD 5.95 mm
- BS.8220** E-plan EPLi 20x/0.40 IOS objective. WD 2.61 mm
- BS.8240** E-plan EPLi S40x/0.65 IOS objective. WD 0.78 mm
- BS.8200** E-plan EPLi S100x/1.25 IOS objective. WD 0.36 mm
  
- BS.8404** Plan PLi 4x/0.10 IOS objective. WD 21.0 mm
- BS.8410** Plan PLi 10x/0.25 IOS objective. WD 5.0 mm
- BS.8420** Plan PLi 20x/0.40 IOS objective. WD 8.8 mm
- BS.8440** Plan PLi S40x/0.65 IOS objective. WD 0.66 mm
- BS.8400** Plan PLi S100x/1.25 IOS objective. WD 0.36 mm
  
- 86.550** Plan Fluarex 4x /0.15 IOS objective. WD 21.6 mm
- 86.562** Plan Fluarex 10x/0.35 IOS objective. WD 2.9 mm
- 86.564** Plan Fluarex 20x/0.60 IOS objective. WD 1.5 mm
- 86.566** Plan Fluarex S40x/0.75 infinity corrected IOS objective. WD 0.6 mm
- 86.568** Plan Fluarex S100x/0.90 IOS objective. WD 0.62 mm
  
- BS.7400** Plan Fluarex S100x/1.30 oil immersion IOS objective. WD 0.13 mm
  
- BS.9105** Swing-out Abbe condenser 0.9/1.25 NA
- BS.9170** Slider with darkfield stop for standard Abbe condenser with slot
  
- For phase contrast equipment and accessories, see chapter 4 Life Science, bScope®*
  
- BS.9660** Polarization kit: analyzer under head and polarizer on lamphouse
- BS.9880** Köhler attachment
  
- BS.9993** NeoLED™ replacement unit
- AE.1370** Set of rechargeable batteries, 3 pieces
  
- 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 ring for Nikon D SLR digital camera
- AE.5040** T2 ring for Canon EOS SLR digital camera
  
- 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 = 1.482
- PB.5274** Isopropyl alcohol 99% (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue/paper, brush, air blower, cotton swabs

## Delphi-X Observer

### fluorescence

State-of-the-art microscopes for advanced Life Science fluorescence applications. The outstanding optical performance of the Delphi-X Observer™ makes it ideal for Life Science fluorescence applications where a high performance optical system is required. The larger 25 mm fields of view of the Super wide field eyepieces and the high numerical aperture of the Plan Fluarex 60 mm parafoveal EIS objectives enable perfect observations and color rendering at high resolving power



DX.3153-PLI ●

DX.3153-PLI	
<b>Dimensions</b>	<b>Weight</b>
(h) 454 x (w) 260 x (d) 367	26 kg

DX.3153-PLI/HAL	
<b>Dimensions</b>	<b>Weight</b>
(h) 454 x (w) 260 x (d) 480	26.5 kg



## HIGHLIGHTS

- Trinocular model
- Ergonomic tilting head
- Super wide field SWF 10x/25mm, Ø 30 mm tubes
- Sextuple reversed nosepiece
- Enhanced infinity corrected EIS optical system
- 60 mm parafoveal Plan EIS objectives
- 60 mm parafoveal Plan Semi-Apochromatic EIS objectives
- M25 mm objective thread mounting
- 100 W HBO mercury vapor illumination
- 3 W NeoLED™ illumination
- 100 W halogen illumination

## SPECIFICATIONS

### EYEPIECES

- Super wide field SWF 10x/25 mm, Ø 30 mm tubes
- Extended wide Field EWF 10x/22 mm, Ø 30 mm tubes

### STANDARD HEAD

Siedentopf trinocular head with 30° inclined tubes. Interpupillary distance adjustable between 47 and 78 mm. Three position beamsplitter (0:100/ 80:20 / 100:0). Diopter ± 5 adjustments on both eyepieces

### ERGONOMIC TILTING HEAD

Optional ergonomic 0 to 35° tilting trinocular head supplied with SWF 10x/25 mm eyepieces, interpupillary distance 47-78 mm and photo tube with standard Ø 23.2 mm tube

### NOSEPIECE

Revolving sextuple reversed nosepiece on ball-bearings

### ENHANCED INFINITY SYSTEM (EIS)

The enhanced infinity system (EIS) of the Delphi-X Observer™ consists of Super wide field SFWF 10x25 mm eyepieces,



Tilting head ●

high numerical aperture 60 mm parafoveal objectives and a 200 mm focal length tube lens. The 200 mm focal length tube lens reduces the angle of the light rays passing through the optics and as a direct result improving significantly the chromatic aberration corrections and contrast of the images produced. 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

### PLAN ACHROMATIC EIS OBJECTIVES

(clinical routine applications)

The Delphi-X Observer™ is standard supplied with Plan Achromatic 4x/0.10, 10x/0.25, 20x/0.40, S40x/0.65 and S100x/1.25 (oil immersion) infinity corrected EIS objectives

Available as an option:

2x/0.06, S50x/0.95 (oil immersion) and S60x/0.80

## PLAN SEMI-APPOCHROMATIC FLUAREX OBJECTIVES

(anatomy- and histopathology applications)

The Delphi-X Observer™ can also be supplied with Plan Semi-Apochromatic 4x/0.13, 10x/0.30, 20x/0.50, S40x/0.75 and S100x/1.30 (oil immersion) infinity corrected EIS objectives

### STAGE

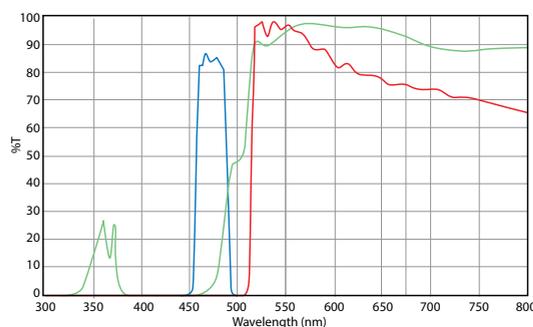
190 x 152 mm stage with 78 x 32 mm integrated right-handed mechanical stage. Standard supplied with scratch-resistant Gorilla glass. Sapphire scratch-resistant glass is available on request. Left-handed mechanical stage is available on request

### 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

## STANDARD GENERAL PURPOSE FLUORESCENCE FILTER SETS

### FILTER SET FOR BLUE EXCITATION (DX.9745)



## CONDENSER FOR BRIGHTFIELD

In height adjustable N.A. 0.90/1.25 Abbe swing-out condenser with numerical aperture identification marks

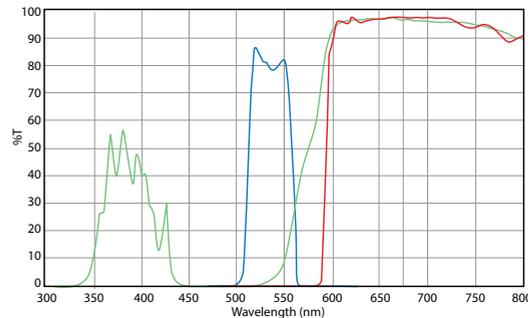
## ILLUMINATION FOR FLUORESCENCE

The attachment for fluorescence of the Delphi-X Observer™ is equipped with a rotating block which can contain up to 6 filter cubes and supplied with 100 W HBO mercury vapor light source for broad powerful light spectrum

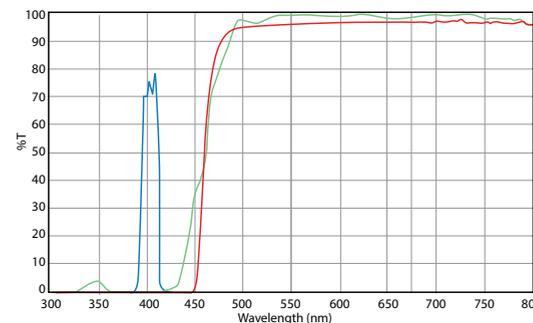
Supplied with standard fluorescence filters sets for Blue excitation (EX460-490 DM500 EM520LP) and Green excitation (EX510-550 DM570 EM590LP), UV shield and external power supply

*Other with more specific and optimized and application related fluorescence filters sets are also available*

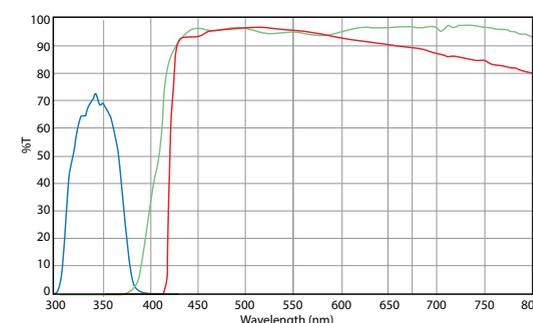
### FILTER SET FOR GREEN EXCITATION (DX.9746)



## FILTER SET FOR VIOLET EXCITATION (DX.9747)



## FILTER SET FOR ULTRA-VIOLET EXCITATION (DX.9748)



## DIASCOPIC ILLUMINATIONS

Two Köhler illuminations are available for the Delphi-X Observer™ microscope:

- Diascopic intensity adjustable 3 W NeoLED™ Köhler illumination with internal 100-240 V power supply
- Diascopic intensity adjustable 100 W halogen Köhler illumination with internal 100-240 V power supply

The diascopic halogen illumination comes with 2 push-in/push-out neutral density filters for smooth attenuation of the light intensity for all kind of samples. The diascopic NeoLED™ illumination comes with 1 neutral density filter

## NEOLED™

The innovative NeoLED™ design is a combination of a custom LED and a specially designed thin lens with a short focal length in order to obtain three main benefits:

- More oblique light from the LED light source can be captured, which increases the light output significantly
- Less energy is required to achieve this level of light intensity
- The larger aperture of NeoLED™ allows the optical system to produce images at higher resolutions, very close to the theoretical diffraction limit of the optics

## 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 & holder makes sure the right tool is always available

## PACKAGE CONTENT

Supplied with power cord, dust cover, a spare fuse, user manual and 5 ml immersion oil. All packed in a polystyrene box

## OBJECTIVES

Plan PLi	2x/0.06 <sup>(1)</sup>	4x/0.10	10x/0.25	20x/0.40	S40x/0.65	S50x/0.95 oil <sup>(1)</sup>	S60x/0.80 <sup>(1)</sup>	S100x/1.25 oil	S100x/1.25 oil iris <sup>(1)</sup>
Plan Semi-Apo Fluarex		4x/0.13	10x/0.30	20x/0.50	S40x/0.75			S100x/1.30 oil	

All objectives are 60 mm parafocal and have a M25 mm mounting thread

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

All S40x, S50x, S60x and S100x objectives are spring loaded

<sup>(1)</sup> Optional

## DELPHI-X OBSERVER FOR FLUORESCENCE WITH TRINOCULAR HEAD

MODELS	SWF 10x/25 mm eyepieces	Plan 4/10/20/ S40/S100x oil EIS objectives	Plan Semi-Apo Fluarex 4/10/20/S40/S100x oil EIS objectives	Plan phase 10/20/ S40/S100x oil EIS objectives	3 W NeoLED™ illumination	100 W Halogen illumination
DX.3153-PLi	•	•			•	
DX.3153-APLi	•		•		•	
DX.3153-PLPHi	•			•	•	
DX.3153-PLi/HAL	•	•				•
DX.3153-APLi/HAL	•		•			•
DX.3153-PLPHi/HAL	•			•		•

## DELPHI-X OBSERVER FOR FLUORESCENCE WITH ERGONOMIC TRINOCULAR TILTING HEAD

MODELS	SWF 10x25 mm eyepieces	Plan 4/10/20/ S40/ S100x oil EIS objectives	Plan Semi-Apo 4/10/20/S40/S100x oil EIS objectives	Plan Phase 10/20/ S40/ S100x oil EIS objectives	3 W NeoLED™ Köhler	100 W 24 V halogen Köhler
DX.3158 -PLi	•	•			•	
DX.3158-APLi	•		•		•	
DX.3158-PLPHi	•			•	•	
DX.3158-PLi/HAL	•	•				•
DX.3158-APLi/HAL	•		•			•
DX.3158-PLPHi/HAL	•			•		•

## ACCESSORIES AND SPARE PARTS

<b>DX.6010</b>	Super wide field SWF 10x/25 mm eyepiece for Ø 30 mm tube	<b>DX.6210</b>	Super wide field SWF 10x/22 mm eyepiece for Ø 30 mm tube
<b>DX.6010-C</b>	Super wide field SWF 10x/25 mm eyepiece with cross-hair for Ø 30 mm tube	<b>DX.6210-C</b>	Super wide field SWF 10x/22 mm eyepiece with cross-hair for Ø 30 mm tube
<b>DX.6010-M</b>	Super wide field SWF 10x/25 mm eyepiece with micrometer for Ø 30 mm tube	<b>DX.6210-M</b>	Super wide field SWF 10x/22 mm eyepiece with micrometer for Ø 30 mm tube
<b>DX.6010-CM</b>	Super wide field SWF 10x/25 mm eyepiece with micrometer and cross-hair for Ø 30 mm tube	<b>DX.6210-CM</b>	Super wide field SWF 10x/22 mm eyepiece with micrometer and cross-hair for Ø 30 mm tube
<b>DX.6010-SG</b>	Super wide field SWF 10x/25 mm eyepiece with 20 x 20 square grid reticle. For Ø 30 mm tube	<b>DX.6210-SG</b>	Super wide field SWF 10x/22 mm eyepiece with 20 x 20 square grid reticle. For Ø 30 mm tube

<b>DX.6012</b>	Wide field WF 12.5x/17.5 mm eyepiece for Ø 30 mm tube	<b>DX.9501-LG</b>	Option for left handed stage with Gorilla glass <sup>(1)</sup>
<b>DX.6015</b>	Wide field WF 15x/16 mm eyepiece for Ø 30 mm tube	<b>DX.9504-RS</b>	Option for right handed stage with Sapphire glass <sup>(1)</sup>
<b>DX.6020</b>	Wide field WF 20x/12 mm eyepiece for Ø 30 mm tube	<b>DX.9504-LS</b>	Option for left handed stage with Sapphire glass <sup>(1)</sup>
<b>DX.6099-L</b>	Eye cup for eyepieces		
<b>DX.7202</b>	Infinity EIS 60 mm Plan PLi 2x/0.06 objective. WD 7.5 mm		
<b>DX.7204</b>	Infinity EIS 60 mm Plan PLi 4x/0.10 objective. WD 30 mm		
<b>DX.7210</b>	Infinity EIS 60 mm Plan PLi 10x/0.25 objective. WD 10.2 mm		
<b>DX.7220</b>	Infinity EIS 60 mm Plan PLi 20x/0.40 objective. WD 12 mm		
<b>DX.7240</b>	Infinity EIS 60 mm Plan PLi S40x/0.65 objective. WD 0.7 mm		
<b>DX.7250</b>	Infinity EIS 60 mm Plan PLi S50x/0.95 oil objective. WD 0.19 mm		
<b>DX.7260</b>	Infinity EIS 60 mm Plan PLi S60x/0.80 objectives. WD 0.3 mm		
<b>DX.7200</b>	Infinity EIS 60 mm Plan PLi S100x/1.25 oil immersion objective. WD 0.2 mm		
<b>DX.7200-I</b>	Infinity EIS 60 mm Plan PLi S100x/1.25 oil immersion objective with built-in iris diaphragm. WD 0.2 mm		
<b>DX.7304</b>	Infinity EIS 60 mm Plan Semi-Apochromatic PLi-Apo Fluarex 4x/0.13 objective. WD 16.5 mm	<b>AE.5130</b>	Universal SLR adapter with built-in 2x lens for standard 23.2 mm tube. Needs T2 adapter
<b>DX.7310</b>	Infinity EIS 60 mm Plan Semi-Apochromatic PLi-Apo Fluarex 10x/0.30 objective. WD 8.1 mm	<b>AE.5025</b>	T2 ring for Nikon D SLR digital camera
<b>DX.7320</b>	Infinity EIS 60 mm Plan Semi-Apochromatic PLi-Apo Fluarex 20x/0.50 objective. WD 2.1 mm	<b>AE.5040</b>	T2 ring for Canon EOS SLR digital camera
<b>DX.7340</b>	Infinity EIS 60 mm Plan Semi-Apochromatic PLi-Apo Fluarex S40x/0.75 objective. WD 0.7 mm	<b>PB.5155</b>	Microscope slides 76 x 26 mm, ground edges, 50 pieces per pack
<b>DX.7300</b>	Infinity EIS 60 mm Plan Semi-Apochromatic PLi-Apo Fluarex S100x/1.30 oil immersion objective. WD 0.15 mm	<b>PB.5165</b>	Cover glasses 18 x 18 mm, 0.13-0.17 mm, 100 pieces
<b>DX.9501-R</b>	Stage with Gorilla glass. Right handed	<b>PB.5168</b>	Cover glasses 22 x 22 mm, 0.13-0.17 mm, 100 pieces
<b>DX.9501-L</b>	Stage with Gorilla glass. Left handed	<b>PB.5245</b>	Lens cleaning paper, 100 sheets per pack
<b>DX.9504-R</b>	Stage with Sapphire glass. Right handed	<b>PB.5255</b>	Immersion oil, 25 ml. Refraction index n = 1.482
<b>DX.9504-L</b>	Stage with Sapphire glass. Left handed	<b>PB.5274</b>	Iso propyl alcohol 99%, 200 ml
		<b>PB.5275</b>	Cleaning kit: lens fluid, lint free lens tissue/paper, brush, air blower, cotton swabs

<sup>(1)</sup> Only with new Delphi-X Observer microscopes (resp. DX.xx5x-xxx/RS and DX.xx5x-xxx/LS)

<b>DX.9105</b>	Abbe condenser with 0.9/1.25 swing-out front lens
<b>DX.9110</b>	Dry darkfield condenser
<b>DX.9112</b>	Oil immersion darkfield condenser
<b>DX.9660</b>	Simple polarization kit
<b>DX.9662</b>	Special polarization kit for gout
<b>DX.9704</b>	Yellow filter for lamphouse, diameter 45 mm
<b>DX.9810</b>	C-mount with 1 magnification for C-mount camera
<b>DX.9835</b>	C-mount with high resolution relay 0.35x objective for 1/3 inch C-mount camera
<b>DX.9850</b>	C-mount with high resolution relay 0.50x objective for 1/2 inch C-mount camera
<b>DX.9863</b>	C-mount with high resolution relay 0.63x objective for 2/3 inch C-mount camera
<b>DX.9960</b>	100 W 24 V halogen bulb (revision 1 models)
<b>DX.9961</b>	100 W 12 V halogen bulb (revision 2 models)
<b>DX.9993</b>	3 Watt LED replacement
<b>AE.5214</b>	500 mA 250 V fuses for LED models, 10pcs
<b>AE.5216</b>	5 A 250 V fuses for Halogen models, 10pcs

## Oxion fluorescence

The Oxion microscopes for fluorescence are equipped with an epi-illumination with a 100 W mercury vapor lamp. The fluorescence attachment has a rail for maximum four filter cubes. The FluLED model is equipped with a 455 nm LED and one filter cube, especially developed for efficient and fast detection of tuberculosis by the Auramine-O fluorochrome. Other FluLED wavelengths are also available. The Oxion fluorescence microscopes are dedicated to professionals in Life Science applications, laboratories of universities and research centers



OX.3085 ●

<b>OX.3085</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 454 x (w) 276 x (d) 578 mm	12.2 kg
<b>OX.3230</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 454 x (w) 185 x (d) 294 mm	8.7 kg



## HIGHLIGHTS

- Binocular and trinocular models
- HWF 10x/22 mm eyepieces
- Reversed nosepiece for maximum 5 objectives
- Plan, plan Fluarex and plan semi apochromatic Fluarex IOS objectives
- Integrated mechanical stage
- Coaxial coarse and fine adjustments
- Height adjustable Abbe N.A. 1.25 condenser with iris diaphragm and filter holder
- 3 W LED transmitted illumination
- Fluorescence attachment for maximum 4 filter blocks and with 100 W mercury vapor incident illumination
- Fluorescence attachment with single filter block and 455 nm (Blue), 560 nm (Green) or 365 nm (UV) incident illumination
- Ergonomic stand and head
- 10 years warranty

## SPECIFICATIONS

### EYEPIECES

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

### HEAD

Binocular and trinocular Siedentopf type heads are with 30° inclined tubes. Interpupillary distance from 50 to 75 mm. Two ± 5 diopter adjustments. A unique rotating system allows the ergonomic positioning of both tubes in a high (431 mm) and in a low position (397 mm)

### NOSEPIECE

Revolving and reversed nosepiece for maximum 5 objectives. The fluorescence models with mercury vapor lamp are equipped with an orange UV protection shield

### OBJECTIVES

- Plan 4x/0.10, 10x/0.25, S40x/0.65 and S100x/1.25 oil immersion IOS objectives
- Plan Fluarex 4x/0.10, 10x/0.25, S40x/0.65 and S100x/1.25 oil immersion IOS objectives



OX.3230 ●

- Plan semi apochromatic Fluarex 4x/0.10, 10x/0.25, S40x/0.65 and S100x/1.25 oil immersion IOS objectives
- All S40x, S60x and S100x oil immersion objectives are spring loaded.

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

### FOCUSING

Coaxial coarse and fine adjustments, 200 graduations, 1 μm per graduation, 200 μm 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

### STAGE

150 x 140 mm stage with integrated X-Y mechanical stage. *A ceramic stage is also available on request*

### CONDENSER FOR BRIGHTFIELD

Height adjustable Abbe condenser N.A. 1.25 with iris diaphragm. Supplied with a white diffusion filter. Phase contrast rings mounted in slider can be inserted in the condenser for 10x and S40x or 20x and S100x phase contrast objectives. A darkfield stop in slider for the 10x, 20x and S40x objectives can also be inserted with magnification indication

### CONDENSER FOR FLUORESCENCE

The fluorescence attachment is equipped with an integrated condenser with iris diaphragm and a field diaphragm

### ILLUMINATION FOR BRIGHTFIELD AND PHASE CONTRAST

All models are supplied with a 3 W adjustable NeoLED™ illumination with built-in 100-240 V power supply. Köhler illumination with field diaphragm

### ILLUMINATION FOR FLUORESCENCE

Fluorescence attachment with 100 W (HBO) mercury vapor incident epi-illumination and rail for maximum 4 filter blocks. Two general purpose filter sets are standard supplied with the attachment: AE.3245 (Blue excitation) and AE.3246 (Green excitation). Two other general purpose filter sets AE.3246 (UV excitation) and AE.3247 (Ultraviolet excitation) are also available

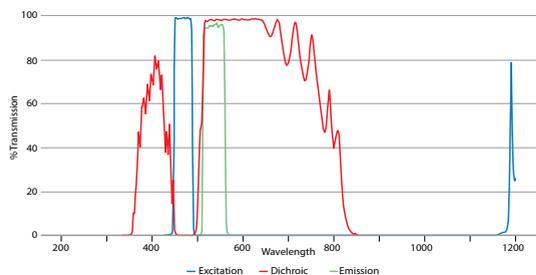
*More specific filter sets are available on request*

### ILLUMINATION OF FLUOLED ATTACHMENT

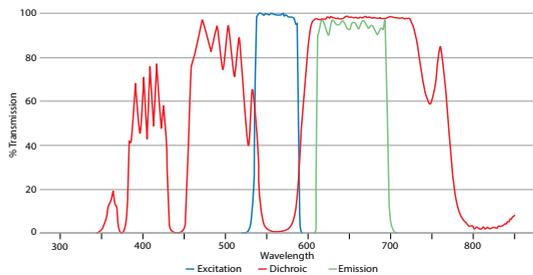
The FluoLed attachment is standard delivered with a 455 nm LED for efficient and fast detection of tuberculosis with Auramine-O fluorochrome. FluoLED attachments are also available with a 560 nm LED and Green filter set or a 365 nm LED together with an Ultraviolet filter set

### PACKAGE CONTENT

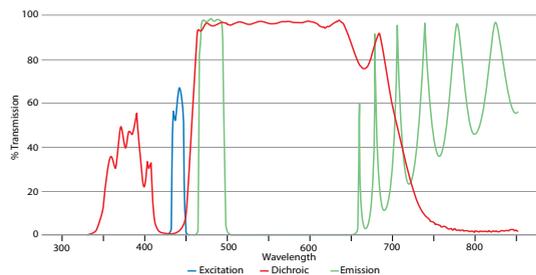
Supplied with power cord, dust cover, white filter, user manual and 5 ml immersion oil for models with S100x objective. All packed in a polystyrene box



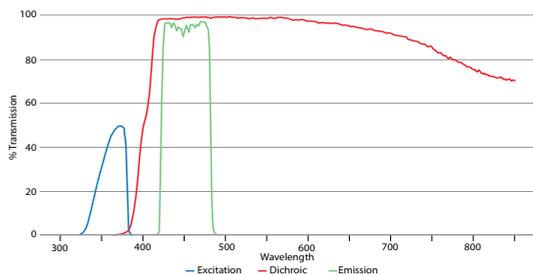
AE.3245 (Blue EX450-490, DM505LP, EM510-560)



AE.3246 (Green EX533-588, DM595LP, EM608-680)



AE.3247 (Violet EX430-450, DM455LP, EM465-495)



AE.3248 (UltraViolet EX348-381, DM400LP, EM420-480)

### MODELS

	Binocular	Trinocular	Plan 4x/10x/ S40x/S100x objectives	Plan Fluorex 4x/10x/ S40x/S100x objectives	Plan semi apo Fluorex 4x/10x/S40x/ objectives	Plan semi apo Fluorex S100x objectives	100 W mercury vapor illumination	455 nm FluoLED illumination
OX.3067		•		•			•	
OX.3070	•				•		•	
OX.3075		•			•		•	
OX.3080	•				•	•	•	
OX.3085		•			•	•	•	
OX.3230	•		•					•
OX.3235		•	•					•
OX.3232	•				•	•		•
OX.3237		•			•	•		•

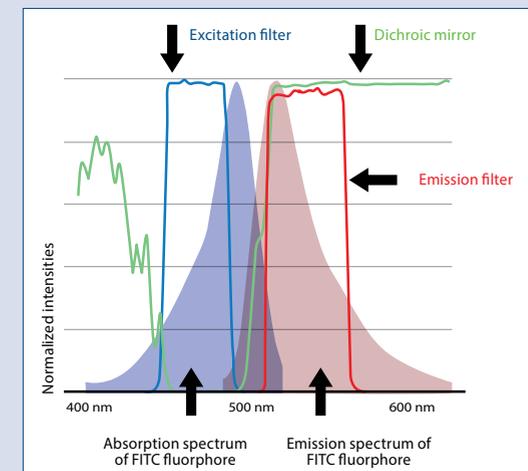
## ACCESSORIES AND SPARE PARTS

- AE.3210** HWF 10x/22 mm eyepiece
- AE.3215** HWF 15x/13 mm eyepiece
- AE.3223** HWF 10x/22 mm eyepiece with 10mm/100 micrometer
- AE.3225** Pair of eyecups
- AE.3102** Plan 2x/0.06 IOS objective. WD 5 mm
- AE.3104** Plan 4x/0.10 IOS objective. WD 11.9 mm
- AE.3106** Plan 10x/0.25 IOS objective. WD 12.1 mm
- AE.3108** Plan 20x/0.40 IOS objective. WD 1.5 mm
- AE.3110** Plan S40x/0.65 IOS objective. WD 0.36 mm
- AE.3112** Plan S60x/0.85 IOS objective. WD 0.30 mm
- AE.3114** Plan S100x/1.25 oil IOS objective. WD 0.18 mm
- 86.550** Plan Fluorex 4x /0.15 IOS objective. WD 21.6 mm
- 86.562** Plan Fluorex 10x/0.35 IOS objective. WD 2.9 mm
- 86.564** Plan Fluorex 20x/0.60 IOS objective. WD 1.5 mm
- 86.566** Plan Fluorex S40x/0.75 infinity corrected IOS objective. WD 0.6 mm
- 86.568** Plan Fluorex S100x/0.90 IOS objective. WD 0.62 mm
- AE.3144** Plan semi apochromatic Fluorex 4x/0.13 IOS objective. WD 18.5 mm
- AE.3146** Plan semi apochromatic Fluorex 10x/0.30 IOS | objective. WD 10.6 mm
- AE.3148** Plan semi apochromatic Fluorex 20x/0.50 IOS objective. WD 2.33 mm
- AE.3152** Plan semi apochromatic Fluorex S40x/0.75 IOS objective. WD 0.6 mm
- AE.3156** Plan semi apochromatic Fluorex S100x/1.28 oil immersion IOS objective. WD 0.21 mm
- AE.3190** Polarizer/Analyzer set
- AE.3192** Polarizer slider for nosepiece
- AE.3194** Polarizer for lamphouse
- AE.3196** Frosted white filter 45 mm, to be mounted on lamphouse
- AE.3198** Blue filter 45 mm, to be mounted on lamphouse
- AE.3199** Glass fuses 3.15 A 250 V, 10 pieces
- AE.3200** Yellow filter 45 mm, to be mounted on lamphouse
- AE.3202** Green filter 45 mm, to be mounted on lamphouse
- AE.3240** Fluorescence attachment with 100 W mercury lamp and 100-240 V power supply
- AE.3249** Empty filter cube for models OX.3066/OX.3067/OX.3070/3075/3080/3085
- AE.5120** Standard 23.2 mm diameter tube for Oxion photo port
- AE.5130** Universal SLR camera adapter with 2x projection lens for 23.2 mm tubes. Needs T2 adapter and AE.5120
- AE.5025** T2 adapter for Nikon D digital SLR cameras
- AE.5040** T2 adapter for Canon EOS digital SLR cameras

WD = working distance

# Fluorescence

It took many years since the discovery around the sixties by Osamu Shimomura of the first proteins aequorin and green fluorescent protein (GFP) in the bioluminescent jellyfish *Aequorea Victoria*, to develop a specific fluorescence microscope for live-cell imaging which permits essential progress in medical and biological sciences. Today it has become an important tool in Life and Materials Sciences



## INTRODUCTION TO FLUORESCENCE MICROSCOPY

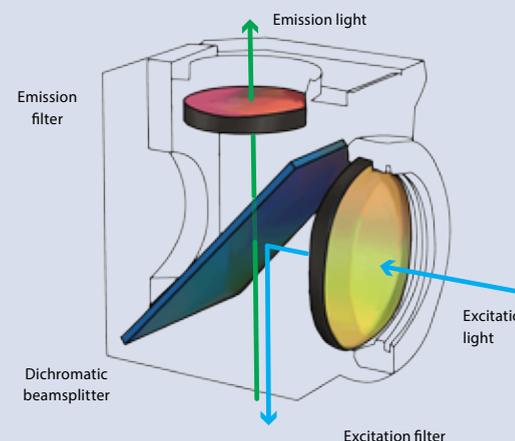
Fluorescence is the phenomenon of subsequent specific emission of photons by a fluorophore (chemical compound) after the absorption of specific excitation photons. Fluorophores are used as a dye for staining cells, tissues or materials that can be observed as markers under a fluorescence microscope

The excitation light of a microscope for fluorescence is provided with either a mercury vapor light source or a monochrome LED. The selection of the specific fluorophore excitation light is done by a so-called emission interference filter that is mounted in a cube together with a dichroic mirror (beamsplitter) and the emission filter. The filtered excitation light is further reflected by the dichroic mirror through the objectives towards the sample

## DESIGN OF A FLUORESCENCE MICROSCOPE

The basic function of a fluorescence microscope is to bring specific "excitation" wavelengths to a stained specimen (with a specific fluorophore) and to catch the subsequent weak emission wavelengths in order to visualize the fluorescent structures on the retina of the eyes or on an imaging camera

The fluorophore(s) inside the specimen will absorb this excitation energy with some efficiency (quantum yield) and will start re-emitting the so-called emission energy, visible light with longer wavelengths than the absorbed light. The emission light from the specimen that fluoresces will be collected by the objective, pass the dichroic mirror and is separated from excitation and other unwanted light wavelengths by the emission filter. The filtered emission light is further projected to the eyepieces or/and camera imaging sensor



- AE.5056** CS/C mount with 1.0x objective
- AE.5057** CS/C mount with 0.5x objective for 1/2" sensor cameras
- AE.5058** CS/C mount with 0.33x objective for 1/3" sensor cameras
- AE.5168-O** Heating stage and temperature controller up to 50°C. Only with new microscopes
- SL.5511** NeoLED™ replacement unit for Oxion
- OX.3011** Aluminum transport case

- 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 = 1.482 (25 ml)
- PB.5274** Isopropyl alcohol 99% (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue, brush, air blower, cotton swabs

# FLUORESCENCE FILTER SETS

For ordering a specific fluorescence filter set, add the filter set reference 'xxxx' as follows:

## FOR ISCOPE:

IS.9750.xxxx/6, iScope with six positions fluorescence attachment, needs also empty block IS.9749/6

IS.9750.xxxx/3 iScope with three positions fluorescence attachment, needs also empty block IS.9749/3

## FOR BSCOPE:

BS.9750.xxxx, bScope with four positions fluorescence attachment, needs also empty block BS.9749

## FOR DELPHI-X OBSERVER:

DX.9750.xxxx, Delphi-X Observer with six positions fluorescence attachment, needs also empty block DX.9749/6

## FOR OXION SERIES:

OX.9750.xxxx Oxion inverso with three positions fluorescence attachment, needs also empty block IS.9749/3

OX.9750.xxxx Oxion inverso with four positions fluorescence attachment, needs also empty block IS.9749/4

AE.3250.xxxx, Oxion upright with four positions fluorescence attachment, needs also empty block AE.3249

**Example: the reference for the bScope with a 39001 filterset is BS.9750.39001**

## OPTIMIZED PREMIUM FLUORESCENCE FILTERS SETS:

**39001** Filter set **EX435 (BP20)** DM455 (LP) **EM480 (BP30)** AmCyan, Atto 425, Cerulean, CFP, ECFP fluorophore

TagRFP, TAMRA tdTomato, Tetramethylrhodamine isothiocyanate, TRITC

**39002** Filter set **EX480 (BP30)** DM505(LP) **EM535 (BP40)** Acridine Orange + DNA, Alexa Fluor 488™, Atto 488, Azami Green, BODIPY FL/pH7.2, Calcein, Calcium Green™-1, Cy2™, DiO, DyLight 488, EGFP, Emerald GFP, FAM, FITC, Fluo-4, GFP, LysoTracker Green/pH 5.2, MitoTracker Green, FM/MeOH, mWasabi, Oregon Green™ 488, SYBR® Green I, SYTO 9/DNA, ZsGreen fluorophore

**39005** Filter set **EX540 (BP25)** DM565 (LP) **EM 620 (BP60)** TRITC-red-shifted, Ethidium homodimer-1/DNA, Propidium Iodide

**39007** Filter set **EX620 (BP50)** DM655 (LP) **EM 690 (BP50)** Alexa Fluor 647™, Allophycocyanin (APC), Atto 647N, Cy5™, DiD, DraQ5, DyLight 649 MitoTracker Deep Red 633/MeOH, Nile Blue, Quasar® 670, SYTO® 60, TO-PRO™-3

**39003** Filter set **EX495 (BP20)** DM515 (LP) **EM540 (BP30)** Alexa Fluor 514™, Citrine, EYFP/pH 7, F/IAsh-CCPFCC, mCitrine, Oregon Green™ 514, Rhodamine 123, Topaz

**39008** Filter set **EX420 (BP40)** DM455 (LP) **EM 535 (BP40)** Lucifer Yellow/Tetracycline/AlexaFluor 430.

**39004** Filter set **EX540 (BP25)** DM565 (LP) **EM605 (BP55)** Alexa Fluor 546™, Alexa Fluor 555™, Atto 550, CAL Fluor® Red 590, Cy3™, Dil, DsRed, DyLight 549, MitoTracker Orange/MeOH, Resorufin, Rhod-2,

**39009** Filter set **EX480 (BP30)** DM505 (LP) **EM 620 (BP60)** for Acridine Orange + RNA, Di-8-ANEPPS non-ratiometric, DiA, Ethidium Bromide, FM™ 1-43, LysoTracker Yellow HCK-123, Pulsar™ 650

## OPTIMIZED FLUORESCENCE FILTERS SETS:

**0401** Premium filter set **EX440 (BP21)**, DM455 (LP), **EM480 (BP30)** for CFP, Cerulean, CyPet, SpectrumAqua

**0402** Premium fluorescence filter set **EX525BP45** DM560LP **EM595BP60** optimized High brightness and contrast set for TRITC and other similar fluorophores. Compatible with Alexa FluorR 555, CoralHue Kusabira Orange, Cy3R, DsRed-Express, DsRed2, MitoTrackerR Orange, mOrange, mTangerine, TRITC. Exhibits greater than OD6 attenuation at the excitation/emission crossover. Needs empty block OX.9749

**0403** Premium filter set **EX380 (BP50)**, DM410 (LP), **EM450 (BP60)** for BFP, BFP2, DAPI, Alexa Fluor 350, Hoechst 33342 & 33258, BFP.

**0404** Premium filter set **EX470 (BP40)**, DM500 (LP), **EM535 (BP50)** for Alexa Fluor 488, CoralHue Azami Green, Cy2, eGFP, FITC, GFP (sapphire), Emerald

**0406** Premium fluorescence filter set **EX555BP50** DM580LP **EM625BP50** optimized for Alexa Fluor 568. Compatible with Alexa FluorR 568, Alexa FluorR 594, HcRed, JRed, mCherry, MitoTracker® Red. Exhibits greater than OD6 attenuation at the excitation/emission crossover

**0407** Premium filter set **EX635 (BP30)**, DM660 (LP), **EM710 (BP80)** Cy5, Alexa Fluor 647. Also compatible with TO-PRO-3, TOTO-3, Kodak, X-Sight 650

**0408** Premium fluorescence filter set **EX365 (BP35)** DM400LP **EM450 (BP60)** optimized for DAPI, Alexa Fluor 350. Compatible with AMCA, AMCA-X, DAPI, Hoechst 33258, Hoechst 33342. Narrow excitation bandwidth. Can decrease phototoxicity of UV light exposure

**0412** Premium filter set **EX500 (BP25)**, DM525 (LP), **EM545 (BP35)** Acridine Orange (+DNA), Rhodamine Green, CL NERF, (hi pH), YFP. Also compatible with Alexa Fluor 532

**0414** Premium filter set **EX560 (BP55)**, DM595 (LP), **EM645 (BP75)** Texas Red, Texas Red-X, CryptoLight CF-6. Also compatible with Cy3.5, HcRed, mRaspberry, MitoTracker Red

*On request, microscopes can be equipped with more specific, optimized and application related fluorescence filters sets*



AE.3248 ●

## NEUTRAL DENSITY SETS:

### OX.9750.ND6

Set of 6 pcs neutral density filters, consisting of the following: ND 0.10 (T 80%), ND 0.30 (T 50%), ND 0.50 (T 32%), ND 1.0 (T 10%), ND 2.0 (T 1%), ND 3.0 (T 0.1%)

### OX.9750.ND12

Set of 12 pcs neutral density filters, diameter 32 mm, consisting of 1 each of the following: ND 0.05 (T 90%), ND 0.10 (T 80%), ND 0.20 (T 63%), ND 0.30 (T 50%), ND 0.40 (T 40%), ND 0.50 (T 32%), ND 0.60 (T 25%), ND 0.70 (T 20%), ND 0.80 (T 16%), ND 1.0 (T 10%), ND 2.0 (T 1%), ND 3.0 (T 0.1%)

# StereoMicroscopes

Laboratories



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P SERIES • PAGE 196



# StereoMicroscopes

## Laboratories

Euromex stereo microscopes enable you to examine and analyze your specimens in both two and three dimensions. Combined with LED illumination, the high-performance digital cameras and easy-to-use ImageFocus software provide perfect solutions for precise analysis and documentation

# STEREO MICROSCOPES

NexiusZoom

FEATURED

## NexiusZoom (EVO)

The NexiusZoom and NexiusZoom EVO stereo microscopes of Euromex allow you to examine your specimen with high precision, generating three-dimensional images, suitable for your highest demanding applications. These top level zoom microscopes are perfect for analyzing all kinds of material surfaces or to observe and prepare biological samples

These stereo microscopes are supplied with a large choice of stands, with or without LED illumination. Ideal for a wide variety of educational and laboratory applications. With additional lenses and objectives magnifications from 3.3 up to 220x can be achieved



NZ.1903-S ●

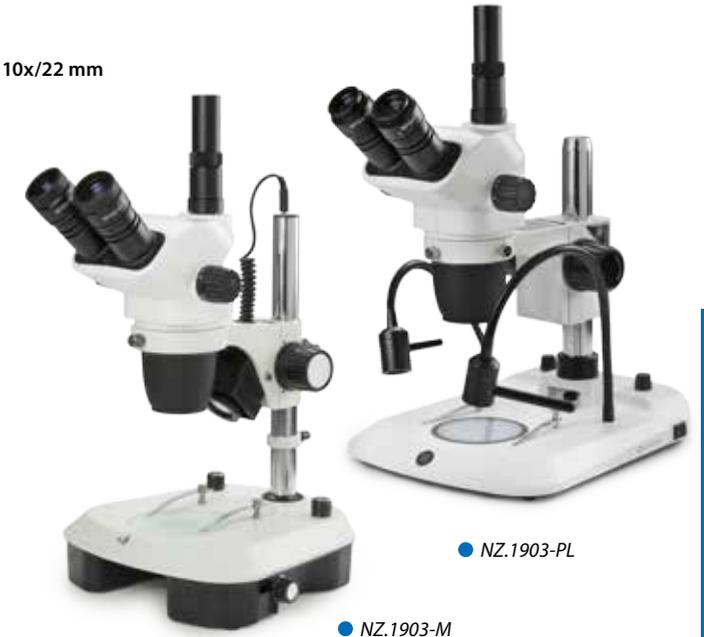
<b>NZ.1903-S / NZ.1703-S</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 339 x (w) 256 x (d) 311 mm	5.1 kg
<b>NZ.1903-P / NZ.1703-P</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 299 x (w) 256 x (d) 311 mm	5.3 kg

For weight of other products see table



## HIGHLIGHTS

- Binocular and trinocular heads with HWF 10x/22 mm or HWF 10x/23 mm eyepieces
- Zoom ratio 1 : 6.7, 6.7x to 45x or 1 : 8.4, 6.5x to 55x
- Ergonomically designed stands
- 3 W LED illuminations
- Configurations up to 220x magnification
- Large working distance (WD)
- 10 years warranty



● NZ.1903-PL

● NZ.1903-M

## 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 ± 5 diopter adjustments. Interpupillary distance adjustable between 54 mm and 75 mm. Trinocular head is supplied with a fixed light path beamsplitter (50:50)

● NZ.8905 / NZ.8907 / NZ.8915



### OBJECTIVES

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

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

Auxiliary lenses 0.3x, 0.5x, 0.75x, 1.5x and 2.0x are available for the standard NexiusZoom and for the NexiusZoom EVO

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

### POLARIZATION

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

### STAND

- Ergonomically designed pillar or rack & pinion stand with 3W incident and 3W transmitted LED illuminations (-P and -S stands)
- Ergonomically designed pillar stand with two 3W gooseneck type incident LED illuminations on each side and a 3W transmitted LED illumination (-PL stand)
- Ergonomic pillar stand with rotating mirror and 3W LED transmitted and incident illuminations (-M stand)
- Ergonomically designed universal or boom stands, without illumination (-U, -B and BC 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

### 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)

### ILLUMINATION

The 3 W LED illuminators operate on an internal power supply of 100-240 V. 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



Check out the product video on YouTube and learn more about this microscope. YouTube channel: **Euromex Optics Group B.V.**



● NZ.9505



NZ.1902-S ●



● NZ.1902-P

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

MODELS	Binocular	Trinocular	Pillar stand	Rack & pinion stand	Universal stand	Boom stand	Articulated arm stand	Gooseneck dual LED	Mirror LED	Weight (kg)
NZ.1902-P	•		•							5.0
NZ.1902-PL	•		•					•		5.1
NZ.1902-M	•		•						•	4.9
NZ.1902-S	•			•						4.9
NZ.1902-U	•				•					15.6
NZ.1902-B	•					•				22.1
NZ.1902-BC <sup>(1)</sup>	•					•				10.5
NZ.1902-A	•						•			8.6
NZ.1902-AP <sup>(2)</sup>	•						•			20.7
NZ.1903-P		•	•							5.2
NZ.1903-PL		•	•					•		5.3
NZ.1903-M		•	•						•	5.1
NZ.1903-S		•		•						5.1
NZ.1903-U		•			•					15.7
NZ.1903-B		•				•				22.2
NZ.1903-BC <sup>(1)</sup>		•				•				10.6
NZ.1903-A		•					•			8.7
NZ.1903-AP <sup>(2)</sup>		•					•			20.8

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

MODELS	Binocular	Trinocular	Pillar stand	Rack & pinion stand	Universal stand	Boom stand	Articulated arm stand	Gooseneck dual LED	Mirror LED	Weight (kg)
NZ.1702-P	•		•							5.0
NZ.1702-PL	•		•					•		5.1
NZ.1702-M	•		•						•	4.9
NZ.1702-S	•			•						4.9
NZ.1702-U	•				•					15.6
NZ.1702-B	•					•				22.1
NZ.1702-BC <sup>(1)</sup>	•					•				10.5
NZ.1702-A	•						•			8.6
NZ.1702-AP <sup>(2)</sup>	•						•			20.7
NZ.1703-P		•	•							5.2
NZ.1703-PL		•	•					•		5.3
NZ.1703-M		•	•						•	5.1
NZ.1703-S		•		•						5.1
NZ.1703-U		•			•					15.7
NZ.1703-B		•				•				22.2
NZ.1703-BC <sup>(1)</sup>		•				•				10.6
NZ.1703-A		•					•			8.7
NZ.1703-AP <sup>(2)</sup>		•					•			20.8

<sup>(1)</sup> Boom stand model with tabletop clamp

<sup>(2)</sup> Articulated stand model with heavy desktop base plate



## MAGNIFICATIONS

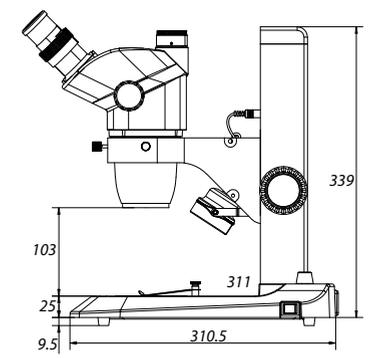
**NexiusZoom** - working distance and field of view with standard High Wide Field (HWF) 10x/22 eyepieces

Zoom indication	Objective 1x (standard) WD 110 mm		Auxiliary lens 0.5x WD 165 mm		Auxiliary lens 0.75x WD 120 mm		Auxiliary lens 1.5x WD 53 mm		Auxiliary lens 2x WD 30 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	Total magnification	Field of view in mm
0.67	6.7	32.8	3.35	65.7	5.0	43.8	10.1	21.9	13.4	16.4
0.7	7.0	31.4	3.5	62.9	5.3	41.9	10.5	21.0	14.0	15.7
0.8	8.0	27.5	4.0	55.0	6.0	36.7	12.0	18.3	16.0	13.8
1.0	10.0	22.0	5.0	44.0	7.5	29.3	15.0	14.7	20.0	11.0
1.5	15.0	14.7	7.5	29.3	11.3	19.6	22.5	9.8	30.0	7.3
2.0	20.0	11.0	10.0	22.0	15.0	14.7	30.0	7.3	40.0	5.5
3.0	30.0	7.3	15.0	14.7	22.5	9.8	45.0	4.9	60.0	3.7
4.0	40.0	5.5	20.0	11.0	30.0	7.3	60.0	3.7	80.0	2.8
4.5	45.0	4.9	22.5	9.8	33.8	6.5	67.5	3.3	90.0	2.4

**NexiusZoom EVO** - working distance and field of view with standard HWF 10x/23 eyepieces

Zoom indication	Objective 1x (standard) WD 110 mm		Auxiliary lens 0.5x WD 165 mm		Auxiliary lens 0.75x WD 120 mm		Auxiliary lens 1.5x WD 53 mm		Auxiliary lens 2x WD 30 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	Total magnification	Field of view in mm
0.65	6.5	35.4	3.25	70.8	4.9	47.2	9.8	23.6	13.0	17.7
0.7	7.0	32.9	3.5	65.7	5.3	43.4	10.5	21.9	14.0	16.4
0.8	8.0	28.8	4.0	57.5	6.0	38.3	12.0	19.2	16.0	14.4
1.0	10.0	23.0	5.0	46.0	7.5	30.7	15.0	15.3	20.0	11.5
1.5	15.0	15.3	7.5	30.7	11.3	20.4	22.5	10.2	30.0	7.7
2.0	20.0	11.5	10.0	23.0	15.0	15.3	30.0	7.7	40.0	5.8
3.0	30.0	7.7	15.0	15.3	22.5	10.2	45.0	5.1	60.0	3.8
4.0	40.0	5.8	20.0	11.5	30.0	7.7	60.0	3.8	80.0	2.9
4.5	45.0	5.1	22.5	10.2	33.8	6.8	67.5	3.4	90.0	2.6
5.5	55.0	4.2	27.5	8.4	41.3	5.6	82.5	2.8	110	2.1

## DIMENSIONS



NZ.5302 / NZ.5303

## ACCESSORIES AND SPARE PARTS

- 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.6015** Pair of HWF 15x / 16 mm eyepieces
- NZ.6020** Pair of HWF 20x / 12 mm eyepieces
- NZ.6110** HWF 10x / 22 mm eyepiece with micrometer
- NZ.6099** Pair of eyecups

- NZ.8903** Auxiliary 0.3x lens for NexiusZoom. WD 278 mm.  
Not suitable for -S, -P -M stand models
- NZ.8905** Auxiliary lens 0.5x. WD 165 mm  
Not suitable for -S and -M stand models
- NZ.8907** Auxiliary lens 0.75x. WD 120 mm\*
- NZ.8915** Auxiliary lens 1.5x. WD 53 mm
- NZ.8920** Auxiliary lens 2.0x. WD 30 mm  
Not suitable for the -S stand model
- NZ.8950** Protection glass for NexiusZoom head.  
Not suitable with auxiliary lenses

- NZ.9010** Ergonomic rack & pinion stand with 3W transmitted and incident LED illuminators
- NZ.9015** Ergonomic pillar stand with 3W transmitted and incident LED illuminators
- NZ.9017** Ergonomically designed pillar stand with two 3W goose-neck type incident LED illuminations on each side and a 3W transmitted LED illumination
- NZ.9020** Universal (single arm) stand without NexiusZoom head holder
- NZ.9030** Boom (double arm) stand with heavy stand (without NexiusZoom head holder NZ.9090)
- NZ.9032** Boom (double arm) stand with table clamp (without NexiusZoom head holder NZ.9090)
- NZ.9042** Ergonomic pillar stand with rotating mirror and transmitted and incident 3W LED illumination
- NZ.9090** NexiusZoom head holder (for NZ.9020, NZ. 9030 and NZ.9032)

- NZ.9025** Articulated arm stand with table clamp (without NexiusZoom head holder NZ.9081)
- NZ.9027** Articulated arm stand with heavy stand (without NexiusZoom head holder NZ.9081)
- NZ.9081** NexiusZoom head holder (for articulated arm stand NZ.9025 and NZ.9027)
- NZ.9520** Polarization kit for NexiusZoom: 360° rotatable round 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 round 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
- AE.5168-NZ** Heating stage with PID controller up to 50°C  
Only with the purchase of a new microscope
- NZ.9950** Standard opaque stage plate
- NZ.9956** Black/white stage plate
- NZ.9570** Pair of object clamps for stage
- NZ.9572** Adjustable GEM object clamp for -P, -PL and -S stands
- 50.876** Darkfield attachment (for -S and -P stands)
- NZ.9833** C-mount adapter with 0.33x lens for 1/3" cameras (suitable for trinocular models)
- 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. Need 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*

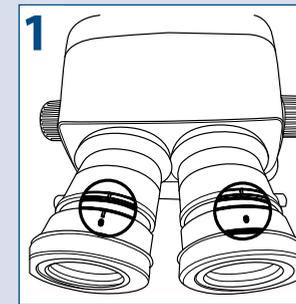
- AE.1112** Object micrometer 50 mm (divided in 500 parts on glass slide 76 x 26 mm)

\* Maximum object height for the -S stand is 2.5 cm  
Working distances (WD) are approximate values

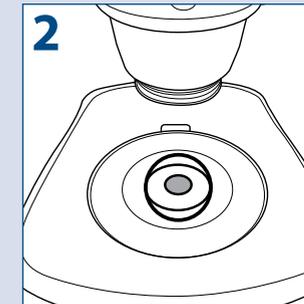
## QUICK INSTALLATION

## How to set up a Stereo Microscope

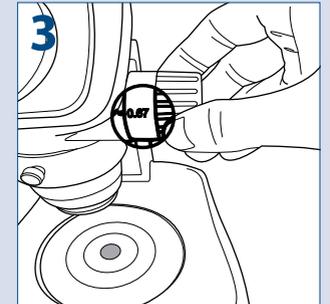
Setting up your stereo microscope properly is essential to getting parfocal images during the entire zoom range. It also prevents head aches, stressful eyes and fatigue. Below you will find a setup guide that will help get the best out of your microscope



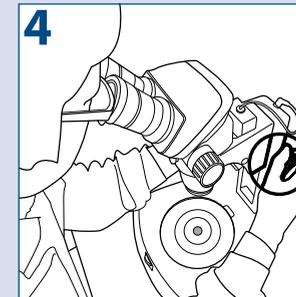
1 Turn the diopter adjustment rings of both eyepieces to position "0"



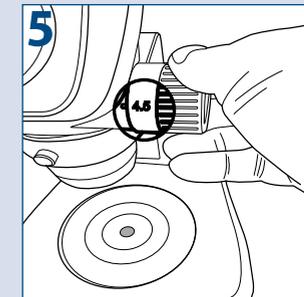
2 Put a specimen on the stage plate



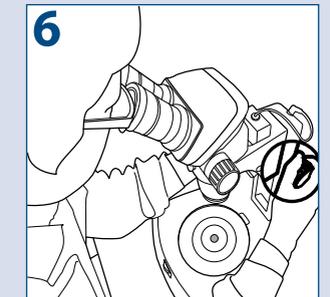
3 Turn the zoom adjustment knob to the lowest magnification



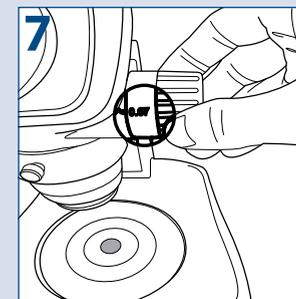
4 Rotate the focus adjustment knob to bring the specimen into focus



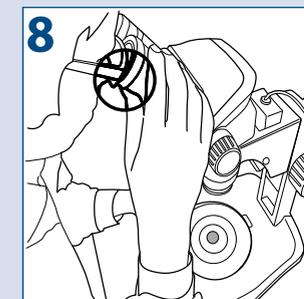
5 Turn the zoom adjustment knob to the highest magnification



6 Rotate the focus adjustment knob to bring the specimen into focus



7 Turn the zoom adjustment knob to the lowest magnification



8 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 focussed during zooming

If not, please repeat steps 3 to 8

# STEREO MICROSCOPES



## StereoBlue

These stereo (zoom) microscopes are especially developed for laboratory applications, education and are greatly appreciated by biologists, entomologists, geologists

Equipped with either a parfocal zoom system with 1:6.4 zoom ratio or a double magnification revolver both with LED illumination, the StereoBlue range guarantees crisp, high resolution images

● SB.1903

<b>SB.1302/SB.1402</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 350 x (w) 220 x (d) 266 mm	4.0 kg

<b>SB.1302-P/SB.1402-P</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 299 x (w) 220 x (d) 266 mm	4.7 kg

For weight of other products see table 'Models'



## HIGHLIGHTS

- Designed for professional use
- Robust and sturdy
- Dual magnification or Zoom models
- Available in ergonomic rack & pinion, pillar and universal stands
- Double 3 W LED illumination
- Ergonomic carrying grip
- 5 years warranty



Model with universal stand (SB.1902-U) ●

## SPECIFICATIONS

### EYEPIECES

Pair of WF 10x/20 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 /1402 , which have diopter adjustment on one side
- Interpupillary distance adjustable between 55 mm and 75 mm
- Trinocular head is supplied with a fixed light path beamsplitter (50:50)

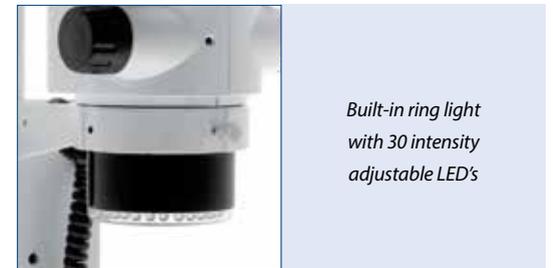
All optics are anti-fungus treated and anti-reflection coated for maximum light throughput

### DUAL MAGNIFICATION OBJECTIVES

- Nosepiece with dual 1x/3x or 2x/4x revolving objectives
- Magnifications 10x/30x or 20x/40x
- Field of view 20 mm/6.6 mm or 10 mm/5.0 mm
- WD 100 mm

### ZOOM OBJECTIVE

- Zoom Stereo 0.7x to 4.5x parfocal objective
- Magnification from 7x to 45x



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

- Field of view 28.5 mm to 4.4 mm
- Working distance 100 mm

### STAND

The rack & pinion and pillar stands of the StereoBlue are equipped with ergonomically designed 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 ergonomically designed universal single arm stand is ideal for observation of large samples or working under the microscope. Standard supplied without illumination. Suitable for e.g. ring illuminators LE.1973 and LE.1974. The stands are alloy metal casted with hardened coating. More illumination options see chapter 10 (Accessories)

### ILLUMINATION

With 3 W transmitted and incident LED illuminators which can be used simultaneously or with 3 W transmitted illuminator and built-in 30 LED ring light incident illuminator.

Model SB.3903 and SB.3903-P are equipped with a built-in LED ring light illuminator in the head.

The light intensities can be adjusted separately

### CAMERAS

Euromex offers a wide range of industrial grade cameras, see chapter 6 (Digital Solutions)

### PACKAGE CONTENT

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



Check out the product video on YouTube and learn more about the BlueLine. YouTube channel: **Euromex Optics Group B.V.**



SB.1302 ●

SB.1402-P ●

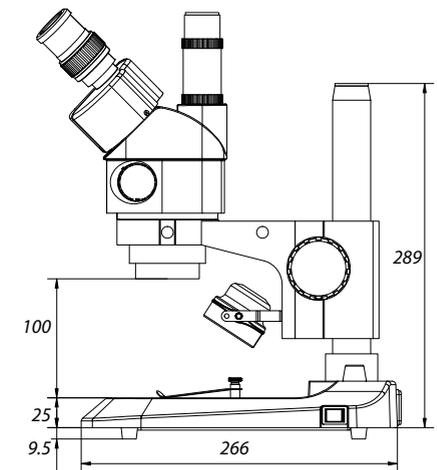
SB.1902 ●

MODELS	Binocular	Trinocular	1x/3x objective	2x/4x objective	0.7 - 4.5x zoom	Rack & pinion stand	Pillar stand	Universal stand	30 LED right light	Weight (kg)
SB.1302	•		•			•				3.3
SB.1302-P	•		•				•			4.2
SB.1402	•			•		•				3.3
SB.1402-P	•			•			•			4.2
SB.1902	•				•	•				3.6
SB.1902-P	•				•		•			4.4
SB.1902-U	•				•			•		15.4
SB.1903		•			•	•				3.7
SB.1903-P		•			•		•			4.5
SB.1903-U		•			•			•		15.5
SB.3903		•			•	•			•	3.7
SB.3903-P		•			•		•		•	4.5

## ACCESSORIES AND SPARE PARTS

- SB.6010** Pair of HWF 10x/20 mm eyepieces
- SB.6010-C** WF 10X/20 mm eyepiece with cross-hair
- SB.6010-M** WF 10X/20 mm eyepiece with micrometer scale
- SB.6015** Pair of HWF 15x/15 mm eyepieces
- SB.6015-C** WF 15X/15 mm eyepiece with cross-hair
- 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 cross-hair
- SB.6020-M** WF 20/10 mm eyepiece with micrometer scale
- SB.6099** Pair of eyecups
  
- SB.8903** Auxiliary 0.3x lens for zoom models, WD 247 mm. Only suitable for boom and articulated stands
- SB.8905** Auxiliary 0.5x lens for zoom models, WD 170 mm. Only suitable for SB.1902-P, SB.1903-P, SB.1902-U and SB.1903-U
- SB.8907** Auxiliary 0.75x lens for zoom models WD 114 mm
- SB.8915** Auxiliary 1.5x lens for zoom models WD 48 mm. Not suitable for SB.3903
  
- SB.8950** Protection glass window for StereoBlue
- SB.9020** Universal single-arm stand with table clamp without StereoBlue holder
- SB.9032** Universal two-arm stand with table clamp without StereoBlue holder
- SB.9090** NexusZoom head holder
- SB.9040** Darkfield attachment for StereoBlue, only for -S and -P models
  
- SB.9520** Polarization kit for StereoBlue: 360° rotatable round stage with built-in polarization filter (SB.9524) + analyzer in mount to be screwed under the head (SB.9525)
- SB.9524** 360° rotatable round stage with built-in polarization filter for StereoBlue
- SB.9525** 360° rotatable analyzer in mount to be screwed under the head of StereoBlue
  
- SB.9570** Pair of object clamps for stage
- SB.9833** C-mount adapter with 0.33x lens for 1/3" cameras. Only for trinocular models
- SB.9850** C-mount adapter with 0.5x lens for 1/2" cameras. Only for trinocular models
- SB.9952** Stage plate transparent, Ø 60 mm
- SB.9956** Stage plate black/white, Ø 60 mm
  
- AE.5130** Universal SLR camera adapter with 2x projection lens for 23.2 mm tubes. Need 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*
  
- AE.1112** Micrometer 76 x 26 mm 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, cotton swabs
  
- SB.9983** 3 W LED replacement unit for StereoBlue, incident illumination
- SB.9983-R** 3 W LED replacement unit for StereoBlue, transmitted illumination

### DIMENSIONS



# DZ series

## STEREO MICROSCOPES

5 LABORATORIES STEREO MICROSCOPES



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



## DZ series

The modular stereomicroscopes of the DZ series combine ergonomics with very high resolution optics. Either standard versions or customized models are available thanks to the large choice of central zoom units, eyepieces, stands and accessories

A fluorescence illumination unit enables scientific research such as for studies of vertebrate development and gene function, teratology, genetics and environmental sciences

<b>DZ.1100 / DZ.1600 / DZ.1800</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 305 x (w) 330 x (d) 285 mm	6.0 kg
<b>DZ.1105 / DZ.1605 / DZ.1805</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 305 x (w) 330 x (d) 285 mm	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 & 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 ± 5 adjustment on both eyepieces
- Interpupillary distance from 55 to 75 mm
- Photo ports for one or two cameras

### 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 (WD 126 mm) and 2x (WD 33 mm) are also available



Customized specification fluorescence model

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

### STAND

Large ergonomic stand with ø 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

5 LABORATORIES STEREO MICROSCOPES

## 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/22mm 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



• DZ.3010 / DZ.3020 / DZ.3015



DZ.9013 •

## 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

### 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

### 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.

### EYEPIECES

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

### DIAPHRAGM

- 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
- 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

### 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)

### 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 for Blue excitation, EM band pass filter (EX 460-500, DM 505, EM 510-560)
- DZ.9061** Filter cube with GFP-L for Blue excitation, EM long pass filter (EX 460-500, DM 505, EM 510)

Other fluorescence filters available on request

## ACCESSORIES AND SPARE PARTS

- 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
- 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
- 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.1900** Glass object plate, ø 100mm
- AE.1903** Acrylic white/black object plate
- 50.875** Adjustable GEM clamp
- 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.1385** 100 W HBO mercury vapor bulb for fluorescence
- SL.5520** LED replacement for incident LED illumination of DZ.5040 stand
- 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, cotton swabs

*Other T2 adapters on request*



DZ.0800 / DZ.2020 ●  
DZ.3010 (2x) / DZ.4005 / DZ.5040



# STEREO MICROSCOPES

# Z series

## Z series

These versatile high-end stereo microscopes are highly appreciated by the professionals of Life Science research and industry because of the excellent optical and mechanical characteristics of this series

Extensively used in research laboratories



ZE.1624 and ST.1735 ●



<b>HEAD + STAND ST.1740</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 290 x (w) 160 x (d) 240 mm	6.9 kg

## HIGHLIGHTS

- Modular system
- Binocular and trinocular models
- Standard HWF 10x/23 mm eyepieces
- Stereo zoom heads with fix 45°, 60° or 90° inclined tubes
- Zoom magnification objectives
- Superior resolution optics
- Multiple stands
- 10 years warranty



ZE.1659, AE.1950, LE.5210 and LE.5218 ●

## SPECIFICATIONS

### EYEPIECES

Pair of SWF 10x/23 mm eyepieces

### HEAD

- Binocular or trinocular heads with 45°, 60° or 90° inclined tubes
  - Diopter ± 6° adjustment on both tubes for Z series
- Interpupillary distance from 55 to 75 mm.

### 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



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

### STANDS WITHOUT ILLUMINATION

- ST.1710** Pillar stand with ST.1790 head holder. Pillar height 210 mm, diameter ø 20 mm. Dimensions(h) 250 x (w)150 x (d) 240 mm
- ST.1715** Pillar stand with ST.1792 head holder. Pillar height 250 mm, diameter ø 20 mm. Dimensions(h) 290 x (w)150 x (d) 240
- ST.1717** Pillar ergonomic flat stand with ST.1790 head holder. Pillar height 250 mm, diameter ø 20 mm. Dimensions(h) 290 x (w) 250 x (d) 350
- ST.1770** Large pillar wooden stand with ST.1790 head holder. Pillar height 360 mm, diameter ø 29 mm. Suitable for SMD inspection. Dimensions(h) 400 x (w) 580 x (d) 500

### STANDS WITH ILLUMINATION

- ST.1735** Rack & pinion stand with 3 W LED illumination and rotatable double-sided coated mirror (one frosted and one aluminum coated side). Especially developed for observation of transparent objects. Very suitable for equine or porcine embryo collection and transfer. Adjustable light intensity. Supplied with external power supply. Dimensions: 240 x 160 x 290 (D x W x H), min/max height 240-290

### 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: 240 x 160 x 290 (D x W x H), min/max height 240-290 mm

### BOOM STANDS

- ST.1720** Articulated one arm boom stand with a 270 x 270 mm base, 610 mm and  $\varnothing$  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. WD between 0 and maximum 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
- 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

*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.1792, 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

## 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		• <sup>(1)</sup>	45°	0.7 - 4.5x	7 - 45x	104	32/5.1
ZE.1670	•		45°	1 - 7x	10 - 70x	104	23/3.3
ZE.1671		• <sup>(1)</sup>	45°	1 - 7x	10 - 70x	104	23/3.3
ZE.1626	•		60°	0.7 - 4.5x	7 - 45x	93	32/5.1
ZE.1629	•		90°	0.7 - 4.5x	7 - 45x	110	32/5.1
ZE.1659		• <sup>(1)</sup>	45°	0.4 - 2.5x	4 - 25x	185	57/9.2

<sup>(1)</sup> When the trinocular tube is engaged, the image is still available in both other tubes  
All zoom stereo heads are supplied with SWF 10x/23 mm eyepieces without eyecups

## 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.1837** Pair of SWF 15x/16 mm eyepieces
- AE.1838** Pair of SWF 20x/11.5 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 spectacles

### MICROMETER EYEPIECES (with adjustable lens)

- AE.1839** SWF 10x/21mm with 10 mm/100 micrometer reticle and cross hair
- AE.1841** SWF 10x/21mm with 10 x 10 mm reticle, 400 squares
- AE.1842** SWF 10x/21mm with photo corners marks



ST.1717 ●

## STANDS

MODELS	Column (mm)	Diameter (mm)	Rack & pinion	l x p base (mm)	Height (mm)	Head holder	Illumination
ST.1710	210	20		240x150	250	ST.1790	
ST.1715	250	20		240x150	290	ST.1792	
ST.1717	250	20		320x250	290	ST.1790	
ST.1720	610	29		780x270	650	ST.1794	
ST.1735			•	240x160	290		3 W LED
ST.1740			•	240x160	290		10 W Hal
ST.1770	360	29		500x580	400	ST.1790	
65.980/65.983			•	$\varnothing$ 1000 <sup>(1)</sup>	0/295	65.983	

<sup>(1)</sup> Length with the two arms totally extended. The stand ST.1760 is not suitable for head holder ZE.1659

# ACCESSORIES AND SPARE PARTS

## MICROMETER SLIDE

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

## ADDITIONAL LENSES

(for ZE.1659)

- AE.1850** Additional 0.7x lens. WD 233 mm
- AE.1822** Additional 0.57x lens. WD 300 mm

## ADDITIONAL LENSES

(for ZE.1624, ZE.1654, ZE.1670, ZE.1671, ZE.1626)

- AE.1855** Additional 0.3x lens. WD 250 mm. Suitable with ST.1720, ST.1770, ST.1780, ST.1785 and 65.980 stands
- AE.1870** Additional 0.44x lens. WD 180 mm. Suitable with ST.1715, 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.1629)

- AE.1805** Additional 0.3x lens. WD 330 mm. Suitable with ST.1720, ST.1770, ST.1780, ST.1785 and 65.980 stands
- AE.1806** Additional 0.5x lens. WD 198 mm. Suitable with ST.1715, ST.1720, ST.1770, ST.1780, ST.1785 and 65.980 stands
- AE.1807** Additional 0.75x lens. WD 125 mm
- AE.1808** Additional 1.5x lens. WD 62 mm
- AE.1809** Additional 2.0x lens. WD 42 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

## 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 all stands with transmitted illumination
- AE.1879** Iris diaphragm suitable with AE.1878
- AE.1871** Object table for AE.1878 with ST.1760 stand. Suitable to observe contact lenses or gems with an object slide

## POLARIZATION

- AE.1890** Analyser, in rotatable mount. Not suitable with ZE.1659
- AE.1891** Polarizer in mount. Suitable with ST.1740 and ST.1760
- AE.1892** Retardation plate gypsum 1st order red. Suitable with polarizer AE.1891

## 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, ST.1715 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, ST.1715 and ST.1740
- AE.1950** Large 390 x 390 mm stage with 360 x 360 mm X-Y mechanical stage. Only for ST.1720, ST.1770, ST.1780 and ST.1785

## OBJECT STAGES

- AE.1884** Round object high-profile table with frosted glass filter. Interchangeable with darkfield ST.1760
- AE.1885** Round object low-profile table with frosted glass filter. Interchangeable with darkfield ST.1740

## OBJECT PLATES - Ø 94 MM

- AE.1880** Acrylic translucent object plate
- AE.1881** Glass transparent object plate
- AE.1882** Acrylic black/white object plate

## FILTERS - Ø 40 MM

- AE.1897** Frosted glass filter
- AE.1898** Blue 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

## ACCESSORIES

- AE.5059** Projection 0.45x objective with C-mount for cameras with 1/2" sensor. To be placed over a 23.2 mm tube of a ZE series photo tube. Optional reticle available

- AE.5063** Projection 0.7x objective with C-mount for cameras with 2/3" sensor. To be placed over a 23.2 mm tube of a ZE series photo tube. Optional reticle available
- 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  
*Other T2 adapters on request*



ZE.1629, ST.1710, LE.5210 and LE.5214 ●

# STEREO MICROSCOPES

## P series

### P series

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

The P series are compact and lightweight, ideal for lab or field work



● P-20 (60.200)

MONO	BINO	TRINO	360°	INCIDENT	TRANSMITTED	POLARIZED	KHGLER	INFINITY
LED	NeoLED	HALOGEN	HG-HBO	ESD	PHASE	ABBE	ZOOM	DARK
DIGITAL	WIFI	USB	BATTERY	100-240V	100-240V	WARRANTY 2	WARRANTY 5	WARRANTY 10

<b>60.100 / 60.200</b>	
<b>Dimensions</b>	<b>Weight</b>
(h) 315 x (w) 120 x (d) 190 mm	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



P-10 (60.100) ●

## SPECIFICATIONS

### EYEPIECES

Secured pair wide field eyepieces WF 10x/20 m. 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 fields of view from 20 to 6.7 mm
- The P-20 and P20-8 LED models are supplied with revolving 2x/4x objectives for total magnification of 20 and 40 times with fields of view from 10 to 5 mm

By using 5x or 20x eyepieces magnifications from 5 to 80x can be achieved

*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 white/black 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. With three rechargeable batteries for maximum 35 hours continuous cordless operation. Both illuminators can be operated independently or simultaneously. Comes with external mains adapter

CAMERAS

Euromex offers a wide range of industrial and laboratory grade cameras, see chapter 6 (Digital Solutions).

For P series, the camera replaces one of the eyepieces

PACKAGE CONTENT

Supplied with power cord, dust cover, a spare fuse and user manual (and spare bulb for halogen models).

All packed in a polystyrene box

ACCESSORIES AND SPARE PARTS

- 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
  
- 50.871** Black/white stage plate 94 mm diameter
- 50.873** Glass stage plate 94 mm diameter
- 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
- 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



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

About  
Microscope optics

RESOLVING POWER

A human eye cannot distinguish two points when these are closer than approximately 0.3 mm or 300 μm to each other. That is what is called “resolving power”, the capacity to resolve two points which are close together or “optical resolution”, the ability of an imaging system to resolve detail

MAGNIFICATION

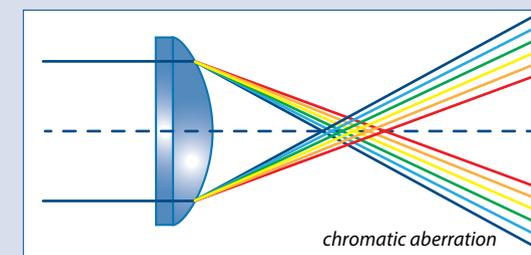
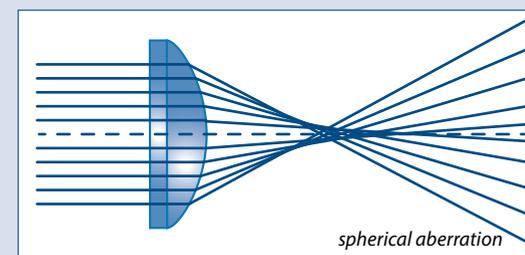
If one needs to detect details of 10 μm, one needs at least 300 μm / 10 μm = 30x magnification in order to resolve this detail. Knowing that conventional stereo microscopes can magnify - without the help of additional lenses and without introducing additional optical aberrations – up to approximately max. 100 times, the smallest detail that a stereo microscope can resolve is 300 μm / 100 = 3 μm

For details smaller than approximately 3 μm, one could better choose an optical compound microscope to resolve these details

OPTICAL RESOLUTION

The resolution of an optical microscope can be defined as the shortest distance between two points that the microscope can reveal for a human eye or camera

The theoretical maximum resolution is limited by the diffraction laws of physics and is equal to  $r = 1.22 \lambda / (N.A. \text{ of objective} + N.A. \text{ of condenser})$  with r = resolution, N.A. = numerical aperture, λ = imaging wavelength



ABERRATIONS

In practice, the resolution of a microscope is lower than the theoretical resolution due to optical aberrations, improper illumination or bad alignment of the optics and components of the microscope. Despite corrections for chromatic and spherical aberrations, coma, astigmatism and distortion, the real maximum resolution of a microscope with a 100x objective is about 0.25 μm for 550 nm light rays

- Chromatic aberration** Difference in focus of different colors caused by difference in refractive indices for each wavelength
- Spherical aberration** Difference in focus caused by defects or irregularities on the surface of a lens
- Astigmatism** Rays traveling through two perpendicular planes having different focal planes
- Coma aberration** Variation in magnification over the entrance pupil
- Distortion** Stretching of an image as a variation in magnification across the lens field

# Digital Solutions

## Laboratories



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# DigitalSolutions

## Laboratories

Get ready to discover the digital world of microscopy with the newest Euromex digital laboratory products. The broad Euromex product range of digital cameras and digital microscopes with built-in camera offer the best suitable solutions for your specific application needs

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

# DIGITAL MICROSCOPES



FEATURED

## BioBlue

digital microscopes with built-in 3.2 MP USB-2 camera

The DIN WF 10x/18 eyepieces and the semi plan achromatic corrected 45 mm DIN objectives of the BioBlue models generate a crisp high-resolution image

The 120 x 120 mm plain stage and 130 x 130 mm stage with double layered 70 x 28 mm mechanical X-Y stage enable precise and stable positioning of the specimen. With Abbe condenser, NeoLED™ or LED illumination with built-in rechargeable batteries for corded and cordless use

Digital cameras come with two years warranty



BB.4225 ●

BB.4225 / BB.4245 / BB.4255	
<b>Dimensions</b>	<b>Weight</b>
(h) 340 x (w) 155 x (d) 230 mm	3.4 kg
BB.4267 / BB.4269	
<b>Dimensions</b>	<b>Weight</b>
(h) 360 x (w) 155 x (d) 230 mm	4.1 kg

## HIGHLIGHTS

- Monocular and binocular models
- Reserved quadruple nosepiece for semi plan objectives
- Built-in digital 3.2 MP USB-2 camera
- Integrated mechanical stage
- LED and NeoLED™ illumination
- Cordless operation
- 10 years warranty (2 years on cameras)



● BioBlue digital (binocular head)



● BioBlue digital (monocular head)

## SPECIFICATIONS

### CAMERA

All the BioBlue digital microscopes are equipped with a 3.2 MP CMOS USB-2 camera, maximum resolution 2048 x 1536, 24 bits color depth, up to 15 frames per second. Delivered with ImageFocus 4 software, USB-2 cable and a micrometer 1mm/100 slide.

### SOFTWARE

The capture and analysis ImageFocus 4 software allows you to save images in .jpg, .tif or .bmp formats as well as .avi format videos. Images can be annotated and measurements can be performed in live or captured images. Compatible with Windows 7, 8 and 10, both 32 and 64 bits configurations. A Mac OS Light version is also available for capturing images

For full microscope specifications and accessories see chapter 1: Biological microscopes

### MODELS

	Mono	Bino	Semi plan 4x, 10x and 540x objectives	Semi plan 560x objective	Semi plan S100x objective	Integrated X-Y stage	1 W LED	NeoLED	Weight (kg)
BB.4205	•		•				•		2.9
BB.4225		•	•				•		3.4
BB.4245		•	•	•			•		3.4
BB.4255		•	•		•		•		3.4
BB.4267		•	•		•			•	4.1
BB.4269		•	•					•	4.1

## ACCESSORIES AND SPARE PARTS

- AE.5572** Wide field eyepieces WF 10x/18 mm
- AE.5573** Wide field eyepiece WF 15x/12 mm
- AE.5574** Wide field micrometer eyepiece 10mm/100
- AE.5581** Wide field eyepiece WF 10x/18 mm with pointer
- AE.5582** Wide field eyepiece WF 20x/11.5 mm
- AE.5365** Eyecup for 28 mm eyepieces
- AE.1110** Stage micrometer 1 mm/ 100 parts
  
- AE.5591** Semi plan objective 4x/0.10,  
WD 37.5 mm
- AE.5593** Semi plan objective 10x/0.25,  
WD 6.54 mm
- AE.5594** Semi plan objective 20x/0.40,  
WD 1.2 mm
- AE.5597** Semi plan objective S40x/0.65,  
WD 0.68 mm
- AE.5599** Semi plan objective S60x/0.75,  
WD 0.2 mm
- AE.5601** Semi plan objective S100x/1.25 oil immersion,  
WD 0.22 mm
  
- AE.5511** Discussion head
  
- AE.5150** Simple polarization attachment.  
Polarizer 18 mm diameter mounted in eyepiece,  
analyzer 32 mm diameter placed in filter holder
- AE.5152** Simple polarization attachment.  
Polarizer mounted over eyepiece and  
analyzer 32 mm diameter in filter holder
- AE.5153** Simple polarization attachment.  
Analyzer mounted over eyepiece and  
360° rotatable polarizer on table
  
- AE.5202** Blue filter, 32 mm diameter
- AE.5203** Yellow filter, 32 mm diameter
- AE.5204** Neutral grey filter, 32 mm diameter
- AE.5205** Green filter, 32 mm diameter
- AE.5207** Blue filter plexiglass, 32 mm diameter
  
- BB.4300** Aluminum case for BioBlue microscopes
- AE.9981** 1 W LED replacement unit
- AE.9991** 1 W NeoLED™ replacement unit
- SL.1379** Spare halogen 20 W 12 V bulb for BioBlue  
polarization models
- AE.5227** Glass fuses 1 A 250 V, 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 = 1.482 (25 ml)
- PB.5274** Isopropyl alcohol 99% (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens  
tissue, brush, air blower, cotton swabs

# MicroscopeCameras

USB-2, USB-3, HDMI and WiFi cameras  
for microscopy



The several USB-2, USB-3 and WiFi cameras in combination with ImageFocus capture and analysis software offer the perfect solution for today's laboratory microscopy needs. The cameras are suitable for Life and Materials Science microscopes as well as stereo microscopes

# USB CAMERAS

CAMERAS FOR LABORATORIES



● CMEX-1

# USB CAMERAS

ADVANCED CAMERAS FOR LABORATORIES

FEATURED



● CMEX-18 Pro

## CMEX USB-2 cameras with CMOS sensor

The CMEX-1, CMEX-3 and CMEX-5 are equipped with a CMOS sensor with 10 bits grayscale conversion and a 24 bits color rendering. The CMEX cameras are equipped with USB-2 data interface and supplied with ImageFocus 4 software

Besides capturing images and videos, the software allows measurements on still and live images and annotations on captured images. Compatible with Windows 7, 8 and 10, both 32 and 64 bits configurations.

A Mac OS Light version is also available for capturing images. PC requirements: Intel Core2 2.8 GHz or higher or equivalent, 2 GB memory, USB-3 port, 17 inch display

MODELS	Number of pixels (MP)	Sensor	Sensor size (inches)	Pixels size (µm)	Resolutions	Max. frames (p/sec)	Grayscale conversion	Color rendering	Signal/ Noise(db)	Dynamic (db)	Sensibility V/lux-sec (at 550 nm)	Product number
CMEX- 1	1.3	CMOS	1/2.5"	2.2x2.2	1272x952	15	10 bits	24 bits	55	72	1.3	DC.1300c
					632x472	30						
CMEX- 3	3.2	CMOS	1/2"	3.2x3.2	2048 x 1536	10	10 bits	24 bits	44	72	1.3	DC.3000c
					1024 x 768	25						
					640 x 480	40						
CMEX- 5	5.0	CMOS	1/2.5"	2.2x2.2	2592x1944	5	10 bits	24 bits	42	65	1.3	DC.5000c
					1280x960	21						
					1024x768	25						
				640x480	38							

The CMEX cameras are supplied with USB-2 cable, 30.0 and 30.5 mm to 23.2 mm conversion adapters for use with stereo microscopes, 1mm/100 (10µm/division) calibration slide. The CMEX-1 (DC.1300c) camera is supplied with a 0.35x C-mount objective, the CMEX-3 with a 0.5x C-mount objective and the CMEX-5 with a 0.45x C-mount objective

## Advanced CMEX USB-3 cameras with CMOS sensor

The CMEX-3 Pro, -5 Pro, -10 Pro and -18 Pro cameras are equipped with a 3, 5, 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 data interface enabling fast frame rate and are supplied with ImageFocus Alpha software

Besides capturing images and videos, the software allows measurements on still and live images and annotations on captured images. Compatible with Windows 7, 8 and 10, both 32 and 64 bits configurations. A 2 GB RAM 2.8 GHz computer and 17 inch display is recommended. A Mac OS Light version is also available for capturing images

MODELS	Sensor	Sensor size (inch)	Pixels size (µm)	Resolutions	Max. frames (p/sec)	Grayscale conversion	Color rendering	Signal/ Noise(db)	Dynamic (db)	Sensibility V/lux-sec	Product number
CMEX-3 Pro	CMOS	1/3"	2.2x2.2	2048x1534	28	12 bits	24 bits	39	100	1.9	DC.3000p
				1024x770	53						
CMEX-5 Pro	CMOS	1/2.5"	2.2x2.2	2560x1922	14	12 bits	24 bits	39	68.	1.76	DC.5000p
				1270x960	39						
				640x480	100						
CMEX-10 Pro	CMOS	1/2.3"	1.67x1.67	3584x2746	8	12 bits	24 bits	35.5	63.5	0.31	DC.10000p
				1792x1372	25						
CMEX-18 Pro	CMOS	1/2.3"	1.25x1.25	4912x3684	6	12 bits	24 bits	42	65	1.3	DC.18000p
				2456x1842	18						
				1228x922	32						

The CMEX-3 Pro, -5 Pro, -10 Pro and -18 Pro cameras are supplied with USB-3 cable, 30.0 and 30.5 mm adapters to use with stereo microscopes, 1mm/100 (10µm/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

SCIENTIFIC GRADE  
CAMERAS FOR  
LABORATORIES

FEATURED

COOLED  
CAMERAS FOR  
LABORATORIES

LABORATORIES  
DIGITAL SOLUTIONS  
6

## sCMEX USB-3 cameras with Scientific grade sCMOS sensor

The sCMEX-3, sCMEX-6 and sCMEX-20 cameras are equipped with a scientific grade back illuminated 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 data interface and supplied with ImageFocus Alpha software

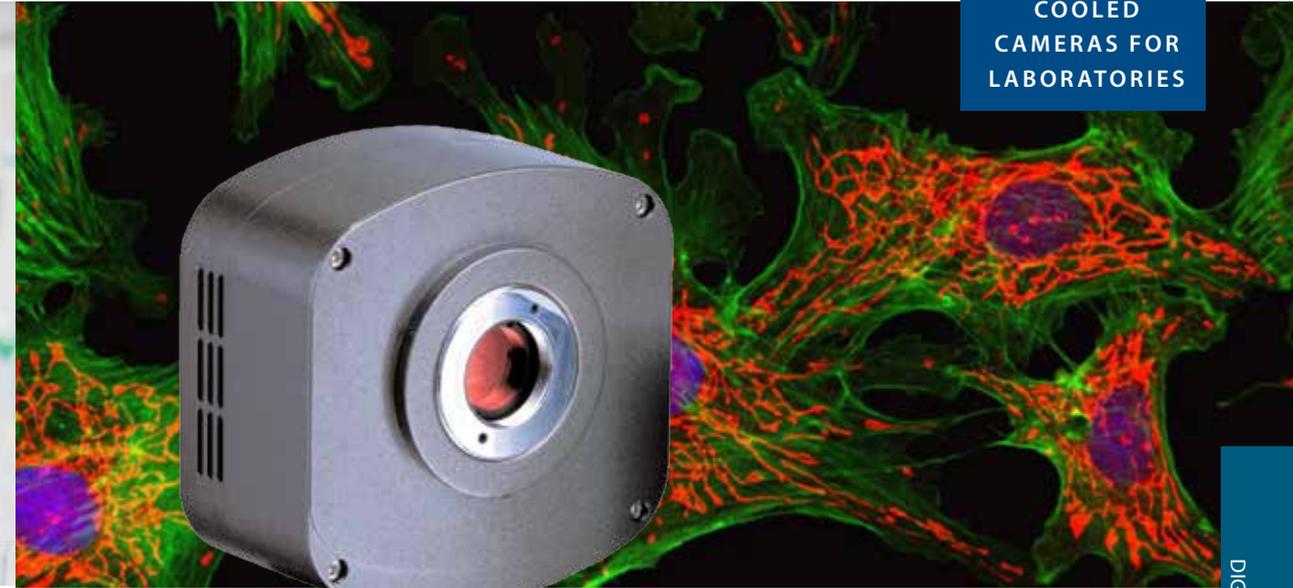
Besides capturing images and videos, the software allows measurements on still and live images and annotations on captured images. Compatible with Windows 7, 8 and 10, both 32 and 64 bits configurations  
PC requirements: Intel Core2 2.8 GHz or higher or equivalent, 2 GB memory, USB-3 port, 17 inch display

MODELS	Number of pixels (MP)	Sensor	Sensor size (inches)	Pixels size (µm)	Resolutions	Max. frames (p/sec)	Grayscale conversion	Color rendering	Sensibility V/lux-sec	Product number
sCMEX- 3	3.1	sCMOS	1/2.8"	2.5x2.5	2048x1536	50	16 bits	36 bits	0.15	DC.3000s
					1920x1080	58				
sCMEX- 6	6.3	sCMOS	1/1.8"	2.5x2.5	3072 x 2048	30	16 bits	36 bits	0.15	DC.6000s
					3072 x 2048	38				
sCMEX-20	20	sCMOS	1"	2.4x2.4	5440x3648	15	16 bits	36 bits	0.21	DC.20000s
					2736x1824	50	16 bits	0.21		
					1824x1246	60	16 bits	0.21		

The sCMEX cameras are supplied in a carton box with USB-2 cable, 30.0 and 30.5 mm to 23.2 mm conversion adapters for use with stereo microscopes, 1mm/100 (10µm/division) calibration slide. The DC.3000s is supplied with a 0.37x objective, the DC.6000s with a 0.5x objective and the DC.20000s is supplied with a 1.0x adapter



● sCMEX



DC.5000i ●

## Euromex 5.0 MP camera CCD cooled color

The Euromex 2/3 inch CCD Peltier cooled camera is equipped with a Peltier cooling element that allows the camera to be suitable for fluorescence applications. The camera has a USB-2 interface for connection with a computer and is supplied with ImageFocus 4 software

Besides capturing images and videos, this software allows measurements on still and live images and annotations on captured images. The software has specific functions for fluorescence such as combining captured fluorescence images. Compatible with Windows 7, 8 and 10, both 32 and 64 bits configurations. A Mac OS Light version is also available for capturing images

MODEL	Number of pixels (MP)	Sensor	Sensor size (inches)	Pixels size (µm)	Resolutions	Max. frames (p/sec)	Grayscale conversion	Color rendering	Signal/ Noise(db)	Dynamic (db)	Sensibility V/lux-sec	Product number
CCD cooled	5.0	CCD	2/3"	3.4 x 3.4	2580 x 1944 1280 x 932	3 12	16 bits	36 bits	55	74	0.5	DC.5000i

The Euromex CCD cooled camera (DC.5000i) is supplied in an aluminum box and with USB-2 cable, 30.0 and 30.5 mm to 23.2 mm conversion adapters for use with stereo microscopes, 1mm/100 (10µm/division) calibration slide and external 5 Vdc/4 A power supply

The Euromex CCD cooled camera (DC.5000i) is equipped with a female C-mount thread and can be mounted directly on microscopes with a C-mount adapter. A 1x C-mount adapter is recommended, see adapter guide

LABORATORIES  
DIGITAL SOLUTIONS  
6

# HD AND HD-AUTOFOCUS CAMERAS

CAMERAS FOR LABORATORIES

FEATURED



## High definition HD1080p and 720p CMOS color cameras with HDMI and USB-2 interfaces

VC.3036

The Euromex HD-Ultra, HD-Lite, HD-Mini and HD-Autofocus 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

The cameras are equipped with high sensitive sensors for low and intense light conditions and are also suitable for coaxial illumination and machine vision applications. The real-time images generated with this camera provide excellent color rendering with frame speeds up to 60 fps

### 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 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 <sup>(1)</sup> to be saved on the integrated SD memory card

With the HD-Ultra, HD-Lite and HD-Autofocus cameras, the captured images or recorded video's (1) can be very easily reviewed or replayed on the HD screen. The HD-Ultra even offers a full range of measuring functions on live and captured images. The HD-Autofocus offers measuring functions on live image only

<sup>(1)</sup> video function only available with HD-Ultra and HD-Lite cameras

### 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 4 software. It runs on Windows 7, 8 and 10, both 32 and 64 bits

## HIGHLIGHTS

- HD 1080p or 720p high definition color cameras
- Real-time images directly on TV, monitor or beamer
- Stand-alone or computer controlled mode
- Built-in mouse-driven software
- C-mount interface
- HDMI, USB-2 and SD memory card
- Autofocus model available
- Compatible with ImageFocus 4 software



Back panel of VC.3036

Euromex supplies free software updates on [www.euromex.com](http://www.euromex.com). 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. Specific functions for fluorescence, such as histogram adjustments and combining captured fluorescence images, are also available with the ImageFocus 4 software

MODELS	HD-Ultra	HD-Lite	HD-Mini	HD-Autofocus
<b>Sensor</b>	Sony sensor	Aptina sensor	Aptina sensor	Sony sensor
<b>Format</b>	1/2.8", HDTV 1080p (50/60 Hz)	1/2.5", HDTV 1080p (50/60 Hz)	1/3", HDTV 720p (50/60 Hz)	1/1.9", HDTV 1080p (50/60Hz)
<b>Pixels</b>	3264 x 1836 (capture mode), 1920 x 1080 pixels (live view), HDMI 60 fps, USB 30 fps	2592 x 1944 pixels (capture mode), 1920 x 1080 pixels (live view), HDMI 15 fps, USB 15fps	1280 x 720 pixels (capture mode), 1280 x 720 pixels (live view), 30 fps	1920 x 1080 pixels, HDMI, 60 fps
<b>Video</b>	1080p pixels video recording mode	1080p pixels video recording mode		1080p pixels video recording mode
<b>Scan mode</b>	Progressive scan	Progressive scan	Progressive scan	Progressive scan
<b>Noise</b>	3D Noise Reduction function	3D Noise Reduction function	Standard noise reduction	Standard noise reduction
<b>Color rendering (bits)</b>	36	24	24	24
<b>Signal/Noise(db)</b>	55	40.5	44	50
<b>Dynamic (db)</b>	69	60	85	65
<b>Interfaces</b>	Digital HDMI, USB 2	Digital HDMI, USB 2	Digital HDMI	Digital HDMI
<b>Storage</b>	High speed 8 GB SD memory card or to USB-2	High speed 4 GB SD memory card or to USB-2	High speed 4 GB SD memory card	High speed 4 GB SD memory card
<b>Camera buttons</b>	On/Off	On/Off		On/off
<b>Mounting</b>	C-mount interface	C-mount interface	C-mount interface	C-mount interface
<b>Power supply</b>	External mains adapter 100-240 Vac to 12Vdc/2A	External mains adapter 100-240 Vac to 12Vdc/2A	External mains adapter 100-240 Vac to 12Vdc/1A	External mains adapter 100-240 Vac to 12Vdc/2A
<b>Operation</b>	0 – 60° C, 45-85 % humidity	0 – 60° C, 45-85 % humidity	-10 – 40° C, 30-80 % humidity	-10-40°C, 45-85% humidity
<b>Storage temperature</b>	-20 to 70° Celsius	-20 to 70° Celsius	-20 to 60° Celsius	-20°C to 60° Celsius
<b>Product number</b>	<b>VC.3036</b>	<b>VC.3031</b>	<b>VC.3020</b>	<b>VC.3034</b>

## PACKAGE CONTENT

MODELS	HD-Ultra	HD-Lite	HD-Mini	HD-Autofocus
Software	ImageFocus 4	ImageFocus 4		
Languages	6 <sup>(1)</sup>	6 <sup>(1)</sup>	English	English
Compatible	Win 7, 8 and 10	Win 7, 8 and 10		
C-mount with objective	0.37x	0.45x	0.37x	0.5x
HDMI & USB cable	•	•	•	•
30 and 30.5 mm conversion adapters (stereomicroscopes)	•	•	•	•
SD card	8 GB	4 GB	4 GB	4 GB
Calibration 10mm/100 slide	•	•	•	•
External power netadapter	12V 2A	12V 2A	12V 1A	12V 1A
Dimensions (wxdxh)	80 x 70 x 90	80 x 70 x 90	50 x 50 x 60	80 x 65 x 80
Weight (grams)	440	280	150	500

<sup>(1)</sup> One language can be selected during initial installation of the ImageFocus 4 software: English, German, French, Dutch, Spanish or Russian

## BUILT-IN SOFTWARE FEATURES

MODELS	HD-Ultra	HD-Lite	HD-Mini	HD-Autofocus
Capture images	JPEG 3261x1840 pixels	JPEG 2592x1944 pixels	JPEG 2592x1944 pixels	JPEG 1920x1080 pixels
Video recording	AVI 1920x1080 pixels	AVI 1920x1080 pixels	no	ASF 1920x1080 pixels
Browse saved images	•	•	no	•
Browse saved video's	•	•		
SD card storage	8 GB	4 GB	4 GB	4 GB
Mouse driven	•	•	•	•
Auto Exposure	•	•	•	•
Exposure time	0.001s - 10 s	0.001s - 10 s	0.2 - 2000 ms	0.06 - 918 ms
Gain	•	•	•	•
RGB & white balance	•	•	•	•
Gamma	•	•	•	•
Sharpness	•	•	•	•
Noise reduction	3D algorithm	3D algorithm	Standard	Standard
Saturation & contrast	•	•	•	•
Horiz. & vert. flip	•	•	•	•
Grids	cross and multi grid	multi grid	multi grid	multi grid
Autofocus				•
Compare function	•	•		
Measurement functions	live and captured images	no	no	live image only
Calibration table	•			•
Line & free curve	•			•
Polygon & rectangle	•			•
Angle	•			•
Circle 3 points	•			•
Circle radius	•			•
Export function	CSV, Txt			CSV

## WiFi CAMERA

WiFi CAMERAS FOR LABORATORIES

FEATURED



● CMEX-WiFi 5

## CMEX-WiFi 5.0 MP

digital WiFi camera with 1/2.5 inch CMOS sensor

The CMEX-WiFi 5 camera is equipped with a 5.0 MP CMOS sensor with 12 bits grayscale conversion and a 24 bits color rendering.

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

Apps for Android for this camera are supplied on cd or can be downloaded from the App store (free of charge). ImageFocus Alpha software can be used for Windows-based devices and WiFi connected PC's

The camera is powered by the included USB charger or a computers USB port. Standard 0.45x C-mount objective is included

MODEL	Sensor	Sensor size (inches)	Pixels size (µm)	Resolutions	Grayscale conversion	Color rendering	Signal/ Noise(db)	Dynamic (db)	Sensibility V/lux-sec	Product number
CMEX-WiFi 5	CMOS	1/2.5"	2.2 x 2.2	1280 x 720	12 bits	24 bits	43	61	1.0	DC. 5000-WiFi

The CMEX-WiFi 5 camera is supplied in a box with USB-2 cable, 30.0 and 30.5 mm adapters to use with stereo microscopes, and a 0.45x C-mount objective

## TABLET CAMERAS

ProPad



### ProPad tablet

with microscope camera and keyboard-docking station

The ProPad Full HD (1280x800) display reveals bright colors and crisp, microscopic 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-1, ProPad-3 and ProPad-5 are supplied with ImageFocus 4. ProPad-WiFi is supplied with ImageFocus Alpha software for image and video capturing and measuring on a Windows-based PC. On IOS and Android systems the WiFi camera can be operated through the app. A Mac OS Light version is also available for capturing images



## HIGHLIGHTS

- 10.1" Tablet with microscope camera
- 1280 x 800 pixels HD touch screen
- Windows 10 Home
- ImageFocus 4 capture 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



ProPad and keyboard-docking station

## 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	Signal/ Noise(db)	Dynamic (db)	Sensibility V/lux-sec	Interface	Product number
ProPad-1	1.3	1/2.5"	1272x952	2.2x2.2	10 bits	24 bits	55 db	72 db	1.3	USB-2	PP.1300c
ProPad-3	3.2	1/2"	632x472	3.2x3.2	10 bits	24 bits	44 db	72 db	1.3	USB-2	PP.3000c
ProPad-5	5	1/2.5"	2592x1944	2.2 x 2.2	10 bits	24 bits	42 db	65 db	1.3	USB-2	PP.5000c
ProPad-WiFi	5	1/2.5"	2592x1944	2.2 x 2.2	12 bits	24 bits	43 db	61 db	1	WiFi	PP.5000-WiFi

# CCD CAMERA

## CCD color camera

580 lines with composite and S-video output



VC.3032

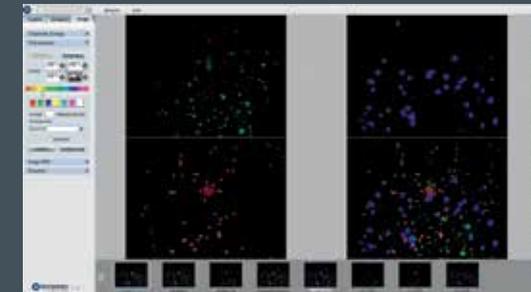
### REALTIME

The real-time images generated with this camera provide extremely well true-to-live colors without any delay. Most camera settings are done automatically, a feature that makes the cameras ideal for real-time inspection, education and demonstrations. Connection is done using BNC (composite), SCART or S-video for connection to TV, monitors or beamers

The Euromex analog camera VC.3032 offers the perfect solution to modern microscopy for industry and laboratories where real-time images are needed. These high resolution cameras can be used for either biological or stereo microscopes. The cameras are equipped with very sensitive sensors with brightfield and darkfield applications and suitable for phase contrast and coaxial illumination

MODEL	Sensor	Sensor size (inches)	Number of pixels	Number of image lines	White balance	Sensitivity	Output	Connection
VC.3032	CCD	1/2"	473.280	580	auto/manual	auto/manual	Composite/S-Video	C-mount

# SOFTWARE



## ImageFocus 4 software

The software is compatible with all mentioned USB-2 cameras Besides live imaging the software captures images in Jpeg, Tiff or Bmp formats or video recording in Avi format

ImageFocus4 has a wide range of functions:

- Measurements can be done on still and live image
- 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 7, 8 and 10, 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

IMAGE FOCUS 4	
DC.1300c	DC.5000i
DC.3000c	VC.3031
DC.5000c	VC.3036

## ImageFocus Alpha software

The ImageFocus Alpha software is compatible with the mentioned USB-3 and WiFi cameras Besides live imaging the software captures images in several formats such as Jpeg, Tiff or Bmp or video recording in Avi format

ImageFocus Alpha has a wide range of functions:

- Measuring, segmentation & counting, stichting of images, extended depth of focus, stacking etc
- 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 7, 8 and 10, 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

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



# ADAPTERS

FOR ALL  
MICROSCOPE  
CAMERAS



OX.9850 ●

## Adapter Guide

### Microscope and camera

Most Euromex cameras are supplied with (a) standard plug & play adapter(s), which means that it can be connected to any Euromex microscope, except for the Oxion and Oxion Inverso series.

These microscopes need an additional adapter, see next page.

Do 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)
Olympus <sup>(2)</sup>	AE.9835-O (0.35x)	AE.9855-O (0.55x)	AE.9863-O (0.63x)	AE.9810-O (1x)
Zeiss <sup>(3)</sup>	AE.9835-Z (0.35x)	AE.9855-Z (0.55x)	AE.9870-Z (0.70x)	AE.9810-Z (1x)
Nikon <sup>(4)</sup>	AE.9835-N (0.35x)	AE.9855-N (0.55x)	AE.9870-N (0.70x)	AE.9810-N (1x)

<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, 35 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> 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-O ●

### STANDARD PLUG & PLAY

C-mount adapters for standard  $\varnothing$  23.2 mm tube

- DC.1321** C-mount adapter without objective, 1x magnification
- DC.1327** C-mount adapter with 0.75x objective for 2/3" camera
- DC.1324** C-mount adapter with 0.45x objective for 1/2" camera
- DC.1326** C-mount adapter with 0.35x objective for 1/3" camera
- DC.1353** C-mount adapter with 0.37x objective, fixed focal length and short barrel<sup>(1)</sup>. For 1/3" camera
- DC.1355** C-mount adapter with 0.50x objective, fixed focal length and short barrel<sup>(1)</sup>. For 1/2" camera
- DC.1357** C-mount adapter with 0.75x objective, fixed focal length and short barrel<sup>(1)</sup>. For 2/3" camera
- DC.1359** C-mount adapter 1.0x, for 1" camera
- DC.1330** 30 mm to 23.2 mm conversion adapters
- DC.1335** 30.5 mm to 23.2 mm conversion adapters

<sup>(1)</sup> for increased light efficiency



● DC.1555



● DC.1330 / DC.1335



● DC.1324



● AE.5130



● AE.5120

### PHOTO PORT ADAPTERS

Suitable for Euromex microscopes with a photo port such as Oxion, NexiusZoom and StereoBlue

- 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

### DIGITAL SLR ADAPTERS

Digital single lens reflex camera with a APS-C sensor can be mounted on a standard 23.2 mm trinocular tube

Choose the universal DC.5130 adapter with built-in 2x objective, together with a brand-specific T-2 adapter

- AE.5130** Universal SLR camera adapter for 23.2 mm tubus with built-in 2x magnification lens. Needs T2 adapter
- AE.5120** Standard 23.2 mm diameter tube for Oxion photo port (revision 2)
- 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

# Accessories

for microscopy



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- PREPARATION ACCESSORIES • PAGE 314
- DISSECTION KITS • PAGE 316
- MICROSCOPE PREPARED SLIDES • PAGE 318
- DISPOSABLES • PAGE 330
- STAINS • PAGE 331



# Accessories

for microscopy

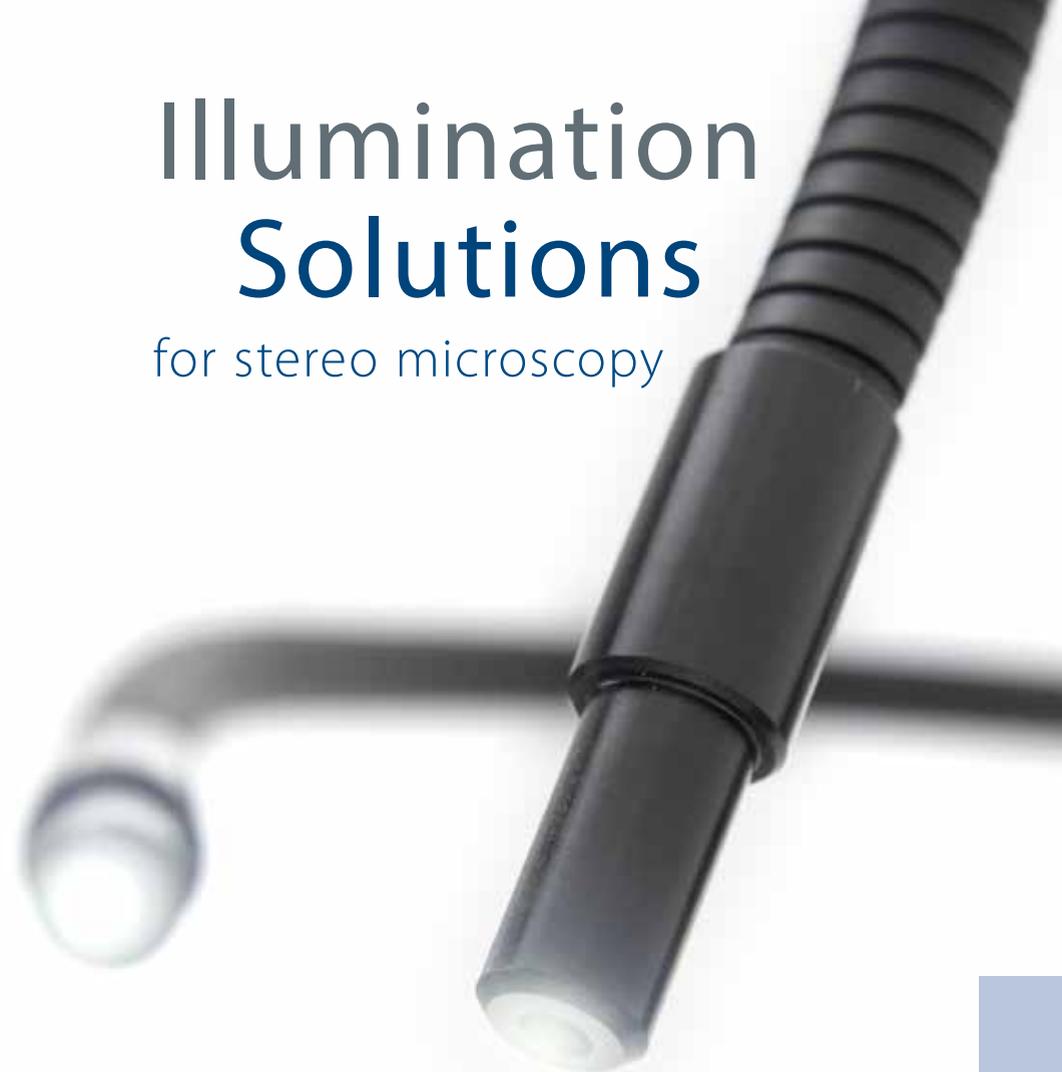
Euromex offers a solution for all microscopy related accessories needed during microscopy sessions. From dissection instruments to stains, cold light sources to LED ring light illuminators, Euromex can provide a wide selection of product accessories

Extend the life of your microscope(s) with our dedicated tools to clean and maintain the mechanical and optical parts



# Illumination Solutions

for stereo microscopy



For stereo microscopes choosing the right illumination is essential to obtain a perfect image with maximum resolution. LED light sources have a much longer lifetime, 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 kind of applications in industry, Life Sciences and Materials Sciences

## ILLUMINATION SOLUTIONS

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



## Multifunctional 150 W halogen or 30 W PowerLED 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 or LE.5240 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 ●

<b>Power</b>	150 W halogen	30 W PowerLED (equivalent to 120 W halogen)
<b>Luminous flux</b>	21,000 lux max <sup>1)</sup>	30,000 lux max. <sup>1)</sup>
<b>Color temperature</b>	3,000 K	6,500 K
<b>Operating voltage</b>	100 and 240 V AC / 12 V DC (50/60 Hz)	100-240 V AC / 12 V DC (50/60 Hz)
<b>Dimensions</b>	(h) 150 x (w) 150 x (d) 230 mm	(h) 150 x (w) 150 x (d) 230 mm
<b>Weight</b>	2.8 kg	3.9 kg
<b>Model</b>	<b>LE.5211</b>	<b>LE.5211-LED</b>

<sup>1)</sup> 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 or LE.5240 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 kind of applications in Life- and Materials sciences, various industrial applications and for stereo microscopy



<b>Power</b>	100 W halogen
<b>Luminous flux</b>	20,000 lux max. <sup>1)</sup>
<b>Color temperature</b>	3,000 K
<b>Operating voltage</b>	100 and 240 V AC / 12 V DC (50/60 Hz)
<b>Dimensions</b>	(h) 115 x (w) 320 x (d) 215 mm
<b>Weight</b>	3.8 kg
<b>Model</b>	<b>LE.5210</b>

<sup>1)</sup> 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



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

## Economical and compact dual 2 W LED light source

Economical dual LED intensity adjustable light source with two 44 cm flexible Gooseneck arms each mounted with a 1 W LED. Ideal for applications in Life and Materials Sciences, various industrial applications and for stereo microscopy



<b>Power</b>	2x 1 W LED = 2x 20 W halogen equivalent
<b>Luminous flux</b>	18,000 lux max. (2 LED's)
<b>Color temperature</b>	6,500 K
<b>Operating voltage</b>	100-240 V AC / 12 V DC (50/60 Hz)
<b>Dimensions</b>	(h) 70 x (w) 120 x (d) 170 mm
<b>Weight</b>	1.6 kg
<b>Model</b>	<b>LE.5208</b>

## 144 LEDs ring light source with segment illumination

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



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

## Compact 72 LEDs ring light source

Compact 20,000 lux LED ring light source



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

## 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	Controls	Required power supply
LE.1980	48	6,000 K	17,000 lux	from 30 to 66 mm	45/90 mm	Analog controller, Intensity adjustable from 0-100 %	LE.1992
LE.1981	48	6,000 K	17,000 lux	from 30 to 66 mm	45/90 mm	Digital segments controller for 8, 4 or 1 segment, intensity adjustable from 0-100 %	LE.1993

## 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	Controls	Required power supply
LE.1990	72	6,000 K	21,000 lux	from 40 to 66 mm	60/110 mm	Analog controller, Intensity adjustable from 0-100 %	LE.1992
LE.1991	72	6,000 K	21,000 lux	from 40 to 66 mm	60/110 mm	Digital segments controller for 8, 4 or 1 segment, intensity adjustable from 0-100 %	LE.1993

## 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



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

## 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.5240** Slit ring shaped fiber light conductor 100 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.5235-3** Dual arm flexible fiber light conductor, 300 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.5223, 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.5223** Set of 3 color filters (red, blue, green), suitable for LE.5222 and LE.5228
- LE.5229** Polarization filter
- LE.5231** Conversion KB12/80B filter

#### HALOGEN BULBS AND FUSES

- SL.5208** Halogen 20 W 12 V bulb with reflector (3,000 hrs nominal), GU4 fits LE.5209
- 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
- AE.5227** Spare fuses 1A/250 V, 10 pieces

#### FOR LE.1863

- SL.1864** Spare fluorescence lamp

#### FOR LE.1980 AND LE.1981

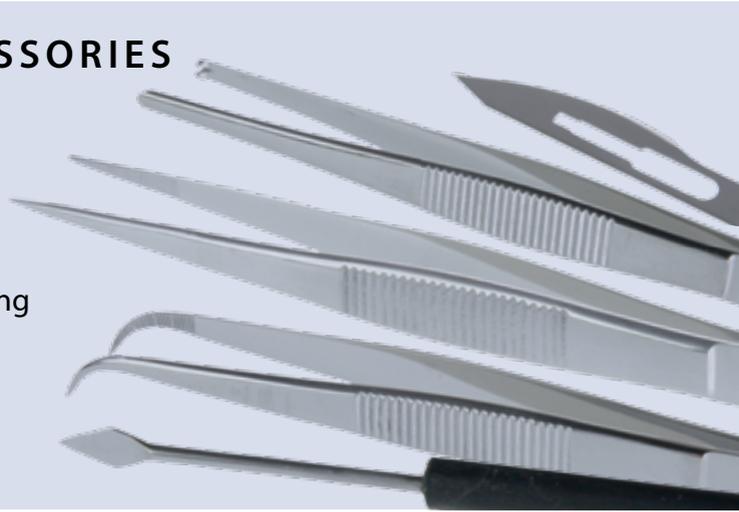
- LE.1984-050** Fresnel lens, WD from 40 to 80 mm
- LE.1984-100** Fresnel lens, WD from 80 to 150 mm
- LE.1984-200** Fresnel lens, WD from 150 to 240 mm
  
- LE.1984** Diffusing filter, for WD from 40 to 300 mm
- LE.1985** Glass protection window
- LE.1987** Polarizing filter
- LE.1888** Rotatable polarizing 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%

## PREPARATION ACCESSORIES

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



## Dissection instruments



## 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. Round 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



## 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 cabinet

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

### 25 Slides

## set of histology, zoology and botany

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

## 25 Slides set of histology, zoology and botany

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 pig, 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** Pieris 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 rhizome
- SB.2310** Cyrtomium, holly fern, section
- SB.2386** Oscillatoria, blue-green algae

#### USED ABBREVIATIONS

<b>c.s.</b>	cross section
<b>l.s.</b>	longitudinal section
<b>w.m.</b>	whole mount

## 25 Slides set of histology, zoology and botany

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** Pieris 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 smea

## 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** Ceratophyllum Demersum, hornwort, leave with air stomas, c.s.
- SB.2100** Pelargonium hortorum, geranium, stem c.s.
- SB.2337** Mniium, antherial branch, l.s.
- SB.2339** Mniium, 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

# 25 Slides set of histology, zoology and botany

## 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 connetive 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** Section through gonads and gills, l.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** Sporophyt w.m.
- SB.2320** Cyrtomium, fern, leaf with sporangia
- SB.2384** Volvox sp. w.m.

# 25 Slides set of histology, zoology and botany

## 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 megaloccephala, 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

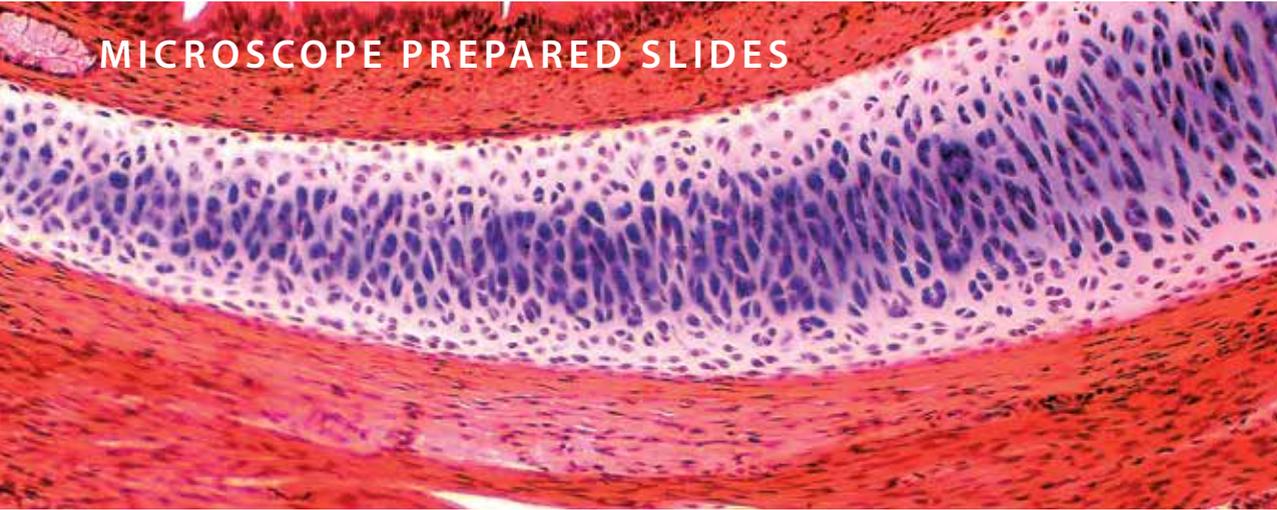
## BOTANY

- 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

<b>c.s.</b>	cross section
<b>l.s.</b>	longitudinal section
<b>w.m.</b>	whole mount

## MICROSCOPE PREPARED SLIDES



## 23 Slides of mammal histology

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.



## 23 Slides of mammal histology

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 epithelial cells of intestine, dog

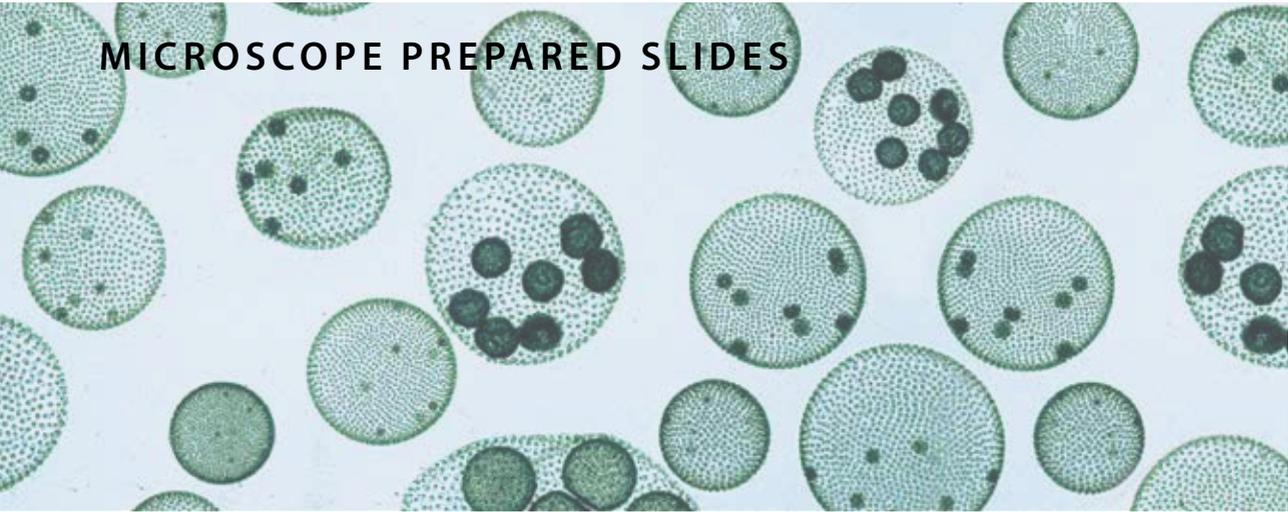
### URINARY AND GENITAL SYSTEM

- SH.1315** Kidney, rat, sec. cortex & medulla
- SH.1360** Sperm, human, smear
- SH.1375** Human chromosomes in blood, male
- SZ.1724** Fruitfly, 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



### 10 Slides of zoology and botany

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*, shepherd's' purse, ovary w. embryo in cotyledon stadium, l.s.
- SB.2374** *Aspergillus*, brown mold, w.m.
- SB.2384** *Volvox* sp., w.m.

#### USED ABBREVIATIONS

<b>c.s.</b>	cross section
<b>l.s.</b>	longitudinal section
<b>w.m.</b>	whole mount



### 25 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, c.s.
- 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 pig, 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** Fruitfly, *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 box.  
Available in: plastic box PB.5181 (for 25 slides)

## Individual EuroSlides for Histology

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

### EPITHELIUM 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

<b>c.s.</b>	cross section
<b>l.s.</b>	longitudinal section
<b>w.m.</b>	whole mount

# Individual EuroSlides 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 megalcephala, horse roundworm, female + male c.s.
- SZ.1636** Ascaris megalcephala, 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 uncleaved 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.

### 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 box.  
Available is: plastic box PB.5181 (for 25 slides)

# Individual EuroSlides 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 cork 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, ovary, 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 stadium, 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.

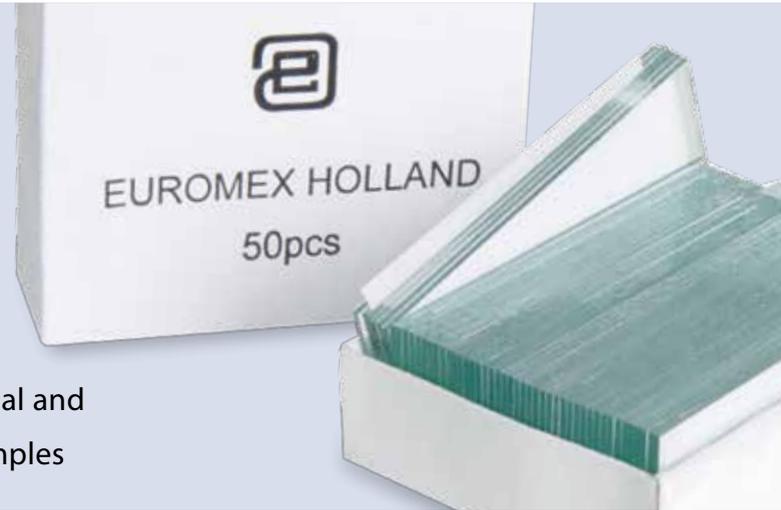
## ALGAE

- 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

## DISPOSABLES



Microscope slides are essential and are the platform for your samples

## 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, grinded edges. 50 pieces
- PB.5157-W** Microscope slides 76 x 26 mm, grounded, White frosted side, 50 pieces
- PB.5157-B** Microscope slides 76 x 26 mm, grounded, Blue frosted side, 50 pieces
- PB.5160** Microscope slides 76 x 26 mm with concavity, grinded 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



● PB.5150



● PB.5180



● PB.5168 / PB.5170

## STAINS

Stained samples/cells enable better visualization under the microscope. Euromex offers a range of common stains



### MISCELLANEOUS ACCESSORIES

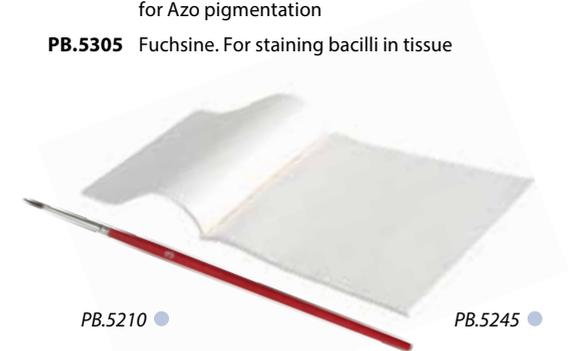
- PB.5200** Staining trough for 10 slides
- PB.5210** Fine pointed brush
- PB.5245** Lens paper. 100 sheets
- PB.5250** Solid paraffin. Melting point 60°C, 200 grams packed
- PB.5255** Immersion oil, refractive index nD = 1.482. In bottle (25 ml)
- PB.5265** Entellan, quick drying Canada balsam. In bottle (25 ml)
- PB.5270** Xylol (bottle), lens cleaner, intermediate agent for section slide preparation. In bottle (100 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.5275



● PB.5280 / PB.5274



● PB.5210

● PB.5245

### (DISSOLVED) STAINS

Supplied in 25 ml bottles

- PB.5280** Azo carmine-G. Biological stains for animal tissues. Also suitable for bacteria pigmentation
- 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

10

# OtherProducts

Magnifiers

Optical instruments

USB microscopes



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

MAGNIFIERS &  
MEASURING MICROSCOPES • PAGE 334  
REFRACTOMETERS • PAGE 339  
POLARIMETERS • PAGE 347  
SPECTROSCOPES • PAGE 348  
PATHOLOGY SCANNER • PAGE 350

# MAGNIFIERS & MEASURING MICROSCOPES



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

## 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.5026** Handheld magnifier 10x with illuminator, aplanatic lens Ø 28 mm. Field of view 30 mm. Supplied without batteries



● PB.5020

● PB.5021

● PB.5026

● 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 21 mm. Field of view 15 mm

**PB.5033** Achromatic magnifier 20x, triplet.  
Lens Ø 21 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



● PB.5039 / PB.xxxx



● PB.5043 / PB.5040

### 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 lens.  
A 25 x 25 mm base with millimeter scale. Metal casing lacquered in black. Supplied with plastic case



● PB.5030



● PB.5049

### 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 cross hair
- PB.5045** Measuring magnifier 7x.  
Eyepiece Ø 18 mm. Field of view 24 mm.  
Measuring scale 10-0-10 mm divided into 0.1 mm and cross hair. 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 mm graduations
- PB.5047** Measuring magnifier 10x.  
Eyepiece Ø 25 mm. Field of view 32 mm.  
Measuring scale 13-0-13 mm



● PB.5044 / PB.5048



● PB.5046 / PB.5047



### MEASURING MICROSCOPES

- 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 cross hair
- PB.5008** Measuring microscope 20x with LED illumination. Field of view 7.2 mm
- PB.5010** Measuring microscope 40x with LED illumination. Field of view 3.6 mm
- PB.5012** Measuring microscope 60x with LED illumination. Field of view 1.75 mm
- PB.5014** Measuring microscope 100x with LED illumination. Field of view 1.1 mm



● PB.5008



● PB.5045

# RefractoMeters



Refractometers are used for the identification of substances and concentration measurement 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)

# REFRACTOMETERS



● RF.5562

## Handheld refractometers

### Sugar concentration

A few drops on the measurement prism of the refractometer are sufficient to read the refraction index of a liquid under test. The reflected light beam projects a shadow line onto a small glass reticle inside the instrument. The line and scale can be read through a magnifying eyepiece. The reading of most refractometers are corrected with an automatic temperature compensation (ATC)

The food industry intensively uses refractometers to determine the exact Brix concentration in marmalades, fruit, fruit juices, honey, treacle, wine and other food products. In the chemistry and oil industry refractometers are used to measure water/oil emulsions

All refractometers are equipped with an ATC (except RF.5190) and are supplied with specific scales

Concentrations of sugar in marmalades, fruits, honey, syrups, wine and monitoring of oil emulsions

MODELS	Scales	Accuracy	ATC	Analog	Model	Scales	Accuracy	ATC	Analog
RF.5190	0-90 Brix	0.2 Brix		•	RF.5562	28-62 Brix	0.2 Brix	•	•
RF.5510	0-10 Brix	0.1 Brix	•	•	RF.5580	0-80 Brix	0.5 Brix	•	•
RF.5520	0-20 Brix	0.1 Brix	•	•	RF.5582	40-82 Brix	0.5 Brix	•	•
RF.5532	0-32 Brix	0.2 Brix	•	•	RF.5592	58-92 Brix	0.5 Brix	•	•

# HIGHLIGHTS

- Portable
- Accurate
- Fast
- Automatic Temperature Correction (ATC)



● RD.6535

## Digital handheld refractometers

### Sugar concentration in juices

A focused light beam of a LED source is reflected by the substance on a linear array of photo diodes. The refractometer correlates the position of the light beam on the array of photo diodes to refractive index or to another unit of measurement related to the substance under observation. The value can be read from a digital LCD readout. The digital refractometers are equipped with an automatic temperature compensation (ATC)

Especially designed to measure sugar concentrations in fresh fruit juices. Latest technology for measuring refractive indices. The sample is illuminated by LED light source while an optical sensor measures the percentage of reflection from the sample. With the refractive index the device calculates the concentration

Units in Brix, °Oe (Oechsle) and °KMW. With ATC

Concentrations of grapes and fruit

MODEL	Scales	Accuracy	Remarks	ATC	Digital
RF.5635	0-140 °Oe	1 °Oe	Oechsle units	•	•
	0-32 Brix	0.2 Brix	Sugar concentration	•	
	0-25 °KMW	0.2 °KMW	Babo units	•	

Concentrations of sugar, nD indices (only for sugar)

MODELS	Scales	Accuracy	ATC	Digital
RD.5635	0-35 Brix	0.1 Brix	•	•
RD.5645	0-45 Brix	0.1 Brix	•	•
	1.33-1.40 R.I.	0.0001 R.I.		
RD.5665	28-65 Brix	0.1 Brix	•	•

# REFRACTOMETERS



● 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. The Abbe refractometer is also suitable for determination of the refractive index of solid samples, such as glass, plastics, and polymer films. The instrument is equipped with a built-in thermometer and water connection to control fluid temperatures. Also equipped with a Brix and a refraction index scale and supplied with a test plate

Abbe refractometers are more accurate with an extended scale to measure concentrations of sugar and refractive indices. 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, thermometer 0-50° Celsius, calibration plate and adjusting tool

*Substance identification of sugar concentration*

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

# HIGHLIGHTS

- Portable
- Accurate
- Fast
- Automatic Temperature Correction (ATC)

## Gemological refractometer Gemstones



● RF.5381

Gemological refractometers are the key instruments for research in gemological laboratories. Gemstones can be examined using the optical principles on which these refractometers are based

Refractive index, one of the principal properties used in determining the type of a gemstone, is a material constant, dependent on the chemical composition of a substance. This allows users to identify gem materials by measuring their refractive index

Determination of the refractive index is done at the wavelength of the sodium line D-line (NaD) of ~589 nm. This is filtered out from daylight with a dedicated optical filter

*Identification of precious stones*

MODEL	Scales	Accuracy	Remarks	Bench-top instrument	Analog
RF.5381	1.30-1.81 I.R.	0.01 I.R.	With filter 590 nm	•	•

## REFRACTOMETERS

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



### Handheld Refractometers

#### Alcohol and alcohol-sugar solutions

Measure concentrations of alcohol, sugar and alcohol-sugar % solutions. Using refractometers permit the growers to choose the moment of the vintage by monitoring the "must". With ATC



*Sugar concentration, % alcohol and alcohol/sugar solutions*

MODEL	Scales	Accuracy	ATC	Analog
RF.5625	0-25% 0-40 Brix	0.2 % 0.2 Brix	•	•

#### Sugar and salt

For concentrations of salt, water-soluble salt solutions of sugar. The handheld refractometers are equipped with a Brix scale. With ATC

*Substance identification of sugar concentration*

MODEL	Scales	Accuracy	ATC	Analog
RF.5610	0-100 ‰ 0-10 Brix	1 ‰ 0.1 Brix	•	•

*Substance identification of sugar concentration*

MODEL	Scales	Accuracy	ATC	Digital
RD.5728	0-28 % 0-35 Brix 1.30-1.39 RI	0.1% 0.1 Brix 0.0001 RI	•	•

## Battery acid and Coolant

Testing water-soluble coolants and battery acid solutions. The refractometer features a coolant temperature scale for ethylene glycol and propylene glycol. It also has a specific acid. With ATC



*For testing water-soluble coolants and battery acid solutions.*

MODEL	Scales	Accuracy	Remarks	ATC	Analog
RF.5650	1.15-1.30 RI 0/-50 °C 0/-50 °C	0.01 RI 5 °C 5 °C	Battery acid Ethylene glycol Propylene glycol	•	•

### Clinical applications

Clinical refractometers are commonly used to measure Serum Protein, Specific Gravity of Urine and Refractive Index. With ATC



*For measuring clinical applications as Serum Protein, Specific Gravity of Urine and Refractive Index*

MODEL	Scales	Accuracy	Remarks	ATC	Analog	MODEL	Scales	Accuracy	Remarks	ATC	Digital
RF.5612	0-12 g/dl 1-1.05 sg 1.333-1.360 RI	0.2 g/dl 0.002 sg 0.0005 RI	Proteins in Serum Urine specific gravity	•	•	RD.5712 <sup>(1)</sup>	0-12 g/dl 1-1.05 sg 1.33-1.39 RL	0.2 g/dl 0.001 sg 0.0001 RL	Proteins in Serum Urine specific gravity	•	•

<sup>(1)</sup> With this model the value can be read from a digital display

### ACCESSORIES AND SPARE PARTS

- RF.5295** Test slide 78.8 Brix for calibration of RF.5190
- RF.5384** 5 ml immersion nD 1.79 liquid for RF.5381
- LE.5209** 20 W 12 V cold light source with single fiber light conductor (for Abbe refractometer 98.490)

- SL.5208** Spare 20 W 12 V halogen bulb
- 98.492** Thermometer 0-50° C (for Abbe refractometer 98.490)
- 98.496** Calibration slide nD 1.5163 (for Abbe refractometer 98.490)

# Polarimeters & Spectroscopes



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

Spectroscopes are used to visualize the light spectrum of light sources



## POLARIMETERS

### Polarimeter

● 99.400

Polarimeters are suitable for fast and accurate measurements of sugars, glucose, perfume, chemical substances and medical drugs. Equipped with a built-in 230 V 589.3 nm sodium lamp with ballast for 230 volt operation with cable and plug

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

Range  $0-180^\circ$  to left and right. Accuracy  $0.1^\circ$ . Polarizing device: Glan Thomson prism and Laurent Quartz plate

#### HIGHLIGHTS

- The polarimeters are delivered with 100 and 200 mm observation tubes
- Equipped with a built-in 230 V 589.3 nm sodium lamp
- Fast and accurate
- Short warm-up time

#### 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)
99.400	$\pm 180^\circ$	$\pm 0.1^\circ$ polar scale	•	•

# SPECTROSCOPES

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



## Euromex handheld spectrometer

SP.5200

Handheld spectrometer 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	h50x115xp23	250	0-1 mm	•	C-F 7°	60 mm	•	•	•

## Euromex handheld spectrometer

SP.5155

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

- Comparison prism
- Mirror
- Five glass cuvettes

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



• 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			•

## Handheld spectrometer

SP.5150

Handheld spectrometer 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			

## Handheld spectrometer

SP.5100

Handheld spectrometer 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			

## PATHOLOGY SCANNER



PS.1001 ●

### PathoScan

#### 10,000 DPI slide scanner

In pathology, histology and other medical fields, medical professionals look at tissue slides under a microscope. Often the tissues are stained to highlight certain structures enabling the specialists to perform their analysis. Euromex offers a digital solution for these specialists

The PathoScan digital microscope slide scanner produces quick, reliable and high-resolution digital images of cells. Once the slides are digitized there are numerous advantages against classic microscopy

The users now have the ability to upload the scanned images onto a network for sharing and collaboration among colleagues, resolving in better and faster diagnostics. The scanned slides can also be used for education purposes. Digitized slides also can be analyzed using the specialists own dedicated software. The software can be used to automate the manual counting of structures, or for classifying the condition of tissue such as is used for grading tumors

#### PATHOVIEW SCANNING SOFTWARE

- Easy Preview and Scan Slide
- Quick setting exposure time
- Scan resolution from 1,000~10,000 dpi
- File format: TIF and JPEG
- Images can also be used with ImageFocus Alpha basic microscopy analysis software, see chapter 9.

PS.1001	
<b>Dimensions</b>	<b>Weight</b>
(h) 70 x (w) 150 x (d) 260 mm	1.0 kg

## HIGHLIGHTS

- Supports standard microscopy slide 76 x 26 mm
- From basic histology research to Life Science education
- Scans full slide
- Simple user interface
- Superior quality, 3-line CCD sensor
- 48-bit, 10,000 dpi, 5 µm resolution
- Industry-leading scanning speeds
- Holder for two slides included
- Polarization attachment available



PS.1001 / PS.3001 ●

## SPECIFICATIONS

<b>Resolution</b>	10,000 x 10,000 dpi
<b>Scan mode</b>	Color
<b>Dynamic Range</b>	3.8
<b>Scanning Area</b>	24.3 x 36.5 mm (H x W)
<b>Scanning medium</b>	76 x 26 mm slides
<b>File Format</b>	Saving in JPG, TIFF format
<b>Light Source</b>	Transmission white LED
<b>Operating System</b>	Windows 7/8/10 Intel-based Mac OS X 10.5/10.6 /10.7/10.8
<b>Power supply</b>	100- 240 AC Adapter, 12 V 1.5 A
<b>Supplied with</b>	Double slide holder, 100-240 V power supply, USB-2 cable, PathoView scanning software and user manual
<b>Model</b>	<b>PS.1001</b>

#### MODELS

PS.1001	PathoScan 10,000 DPI slide scanner
PS.3001	Double slide holder
PS.3002	Polarization slide holder, for one slide

# USB MICROSCOPES



FEATURED



## Q-scope®

### Discover the new world of handheld digital microscopy

Q-scope® is a revolution in handheld microscopy. A digital microscope with up to 500x magnification can now be used from the palm of your hand. These flexible and precise instruments have been designed in such way that it fits perfectly in your hand. This makes the usage of the Q-scope® very easy and effortless. Ease of use is crucial, this is why the Q-scope® only needs one finger to focus, grab a picture and select illumination settings. There is a Q-scope® for every application, use the white power led versions for standard applications, or choose one of the special application models



QS.MS10  
with QS.20200-P

Connect your Q-scope® via USB to your Windows or Mac computer to observe and analyze captured or live images with the powerful user-friendly (free of charge) software for advanced image processing. The WiFi models can also easily be connected to tablet computers. The Q-scope® series consists of models with numerous magnification ranges and a variety of image sensors



## GENERAL APPLICATIONS



MODELS	QS.13200-P	QS.20200-P	QS.20500	QS.90200-P	QS.13100-W
<b>Illumination</b>	White power LEDs	White power LEDs	White high power LEDs	White high power LEDs	White high power LEDs
<b>Connection</b>	USB 2.0	USB 2.0	USB 2.0	USB 2.0	WiFi/USB 2.0
<b>Magnification</b>	10-50, 200x	10-50, 200x	500x	10-40, 200x	WiFi: 10-25x, 100x USB: 10-25, 200x
<b>Zoom</b>	Yes, distance controlled	Yes, distance controlled		Yes, distance controlled	Yes, distance controlled
<b>Focus range</b>	10-500mm	10-500mm	4mm	10-200mm	10-500mm
<b>Polarizer</b>	yes	yes	no	yes	yes
<b>CMOS sensor</b>	1.3 Megapixel	2 Megapixel	2 Megapixel	9 Megapixel	1.3 Megapixel
<b>Resolution</b>	1280x1024, 1280x960, 640x480	1600x1200, 1280x960, 800x600, 640x480	1600x1200, 1280x960, 800x600, 640x480	3488x2616, 2560x1920, 2048x1536, 800x600	1280x960, 1024x768, 640x480
<b>Max. frame rate</b>	30 fps	30 fps	30 fps	15 fps	25 fps

## SPECIAL APPLICATIONS



MODELS	QS.UV-370	QS.UV-400	QS.IR-940	QS.DERMO
<b>Illumination</b>	high power UV 370nm LEDs	high power UV 400nm LEDs	Infrared (940nm) and white power LEDs,	high power CR++ LEDs
<b>Connection</b>	USB 2.0	USB 2.0	USB 2.0	USB 2.0
<b>Magnification</b>	10-50 and 200x	10-50 and 200x	10-50 and 200x	10-50 and 200x
<b>Zoom</b>	distance controlled	distance controlled	distance controlled	distance controlled
<b>Focus range</b>	10-500mm	10-500mm	10-500mm	5-520mm
<b>Polarizer</b>	no	no	yes	no
<b>CMOS sensor</b>	2 Megapixel	2 Megapixel	2 Megapixel	2 Megapixel
<b>Resolution</b>	1600x1200, 1280x960, 800x600, 640x480	1600x1200, 1280x960, 800x600, 640x480	1600x1200, 1280x960, 800x600, 640x480	1600x1200, 1280x960, 800x600, 640x480
<b>Max. frame rate</b>	30 fps	30 fps	30 fps	32 fps
<b>Applications</b>	Industry, medical, scientific, forensic research and counterfeit detection		Industry, scientific and forensic research	Dermatology

# Q-SCOPE® STANDS

## DESIGNED FOR MANY APPLICATIONS

The Q-scope® stands are designed to be stable, well balanced and provide smooth adjustment and positioning of the Q-scope® digital microscopes

The desktop models consist of a black coated metal base with a chromed steel post. **The Q-scope® Metal Gooseneck Stand** has a black coated metal boomerang-shaped base with a chromed flexible gooseneck with holder. With each stand a cable clamp is provided in order to secure the USB cable of the wired Q-scope® models

**The Q-scope® Metal Boom-arm Stand** offers an extra steady and precise positioning of the microscope

The large pillar and long articulated arm of the **Q-scope® Metal Articulated-arm Stand** enables users to place large objects under the Q-scope®. Use the fixed or the 3D-positioning holder to position the Q-scope® in any three dimensional position effortlessly

**The fine focus adjustment system** allows accurate positioning and focusing of the Q-scope® for precise microscope height control

**The Cradle Stand** offers a hands-free usage of the Q-scope® to view at a fixed WD. You can easily put the Q-scope® into the cradle for close inspection at a high magnification  
See [www.qscope.com](http://www.qscope.com) for more models and information

## Q-SCOPE® BASIC STANDS



MODELS	QS.MS10	QS.MS20	QS.CS10
<b>Stand</b>	Metal Positioning Stand with easy 3D positioner	Metal Gooseneck stand with fixed positioner	Cradle Stand
	Stable height adjustable stand with 3D positioner for accurate microscope control, ergonomic stable design	Ergonomic hands-free operation. Large WD and positioning options. Designed for maximum flexibility, ergonomic stable design	Transparent cradle for easy movement across flat surfaces and fast inspection at a fixed working distance
<b>Applications</b>	All	All	Surface inspection such as printing and fabrics
<b>Dimensions</b>	(w) 146 x (l) 176 x(h) 160 mm	(w) 329 x (l) 138 x(h) 265 mm	(d) 98 x(h) 50 mm
<b>Working distance</b>	0 - 105 mm	0 - 120 mm	15 mm
<b>Weight</b>	620 grams	580 grams	35 grams
<b>Compatible with</b>	All Q-scope models	All Q-scope models	All Q-scope models
<b>Package content</b>	Stand, 3D positioner holder, wrench, cable guiding clamp, user manual	Stand, fixed positioner holder, wrench, cable guiding clamp, user manual	Stand, holder, user manual

## 3D POSITIONER

Check out the easy 3D positioner for effortless positioning of the Q-scope® in all possible angles

A unique feature optional of the Q-scope® stands range is the **3D positioner**, which enables very easy and precise three-dimensional positioning and focusing using only one hand! We invite you to experience this fully rotatable state-of-the-art positioning tool while using your Q-scope® digital microscope



## Q-SCOPE® PROFESSIONAL STANDS



MODELS	QS.MS40-B	QS.MS40-D	QS.MS45-B
<b>stand</b>	Metal Boom-arm stand with 3D positioner	Metal Boom-arm Stand with fine focus adjustment 3D positioner	Metal Articulated-arm Stand with 3D positioner
	Extra stable and height adjustable stand with 3D positioner for accurate control, suitable for large objects	Extra stable and height adjustable stand with fine focus adjustment, and fixed positioner for precise control in height, for large objects	Extra stable and height adjustable articulated stand with 3D positioner for accurate control, for large objects
<b>Applications</b>	all	all	all
<b>Dimensions</b>	(w) 220 x (l) 250 x(h) 287 mm	(w) 220 x (l) 250 x(h) 287 mm	(w) 220 x (l) 250 x(h) 287 mm
<b>WD</b>	0 - 230 mm	0 - 235 mm	0 - 230 mm
<b>Working range (X/Y)</b>	190/190 mm	45/137 mm	335/335 mm
<b>Focusing range</b>	-	44 mm	-
<b>Weight</b>	1600 grams	1700 grams	1800 grams
<b>Compatible with</b>	all Q-scope models	all Q-scope models	all Q-scope models
<b>Package content</b>	Stand, fixed position holder, wrench, cable guiding clamp, user manual	Stand, fine focus unit, fixed position holder, wrench, cable guiding clamp, user manual	Stand, fixed positioner holder, wrench, cable guiding clamp, user manual

# Choose the right EuromexMicroscope

## 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
<b>• Anatomopathology</b>	Diagnosis of diseases of organs or tissues. Cytopathology and forensic pathology	BioBlue.Lab, bScope®, iScope®, Oxion, Delphi-X Observer, StereoBlue, NexiusZoom, DZ series
<b>• Bacteriology</b>	Study of bacteria as subdivision of microbiology. Identification, classification	BioBlue.Lab, bScope®, iScope®, Oxion, Delphi-X Observer, Oxion Inverso
<b>• Biochemistry</b>	Study of chemical processes within living organism. Identification and classification of enzymes and structure of biomolecules	BioBlue.Lab, bScope®, iScope®, Oxion, Delphi-X Observer
<b>• Biomedical</b>	Study of medical microbiology, virology, epidemiology, biomedical engineering	BioBlue.Lab, iScope®, Oxion, Delphi-X Observer
<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	BioBlue.Lab, bScope®, iScope®, Oxion, Delphi-X Observer, NexiusZoom, DZ series
<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	Oxion Inverso, NexiusZoom, DZ series
<b>• Chemistry</b>	Study of the composition and properties of chemicals	iScope® (material and polarization), Oxion (material), bScope® (material), NexiusZoom, DZ series
<b>• Cosmetics</b>	Research, development and testing (safety) of substances for make-up or perfume	bScope® (material), iScope® (material), NexiusZoom, Oxion (material), DZ series
<b>• Cytology</b>	Study of cell structure, function and chemistry. Detection of cellular diseases	BioBlue.Lab, iScope®, Oxion
<b>• Dermatology</b>	Study and diagnosis, treatment of skin, nails and hair diseases	iScope®, Oxion, NexiusZoom, StereoBlue, DZ series
<b>• Digital imaging</b>	Observation and perform analysis on microscope images, save and captured the images and videos	CMEX cameras, CCD cameras, HD cameras, Cooled cameras, ProPad
<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

LIFE SCIENCE LABORATORIES	FIELD OF APPLICATION	RECOMMENDED MODELS
<b>• Environmental</b>	Monitoring of environmental conditions such as water, atmosphere, ecosystems, soil and pollution control	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)	iScope® (fluorescence), Oxion (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, bScope®, iScope®, Oxion, Delphi-X Observer, Oxion Inverted, NexiusZoom, DZ series, Z series
<b>• Genetics</b>	Study of genes, heredity in living organism including bacteria, plants, animals and humans	iScope®, Oxion, Delphi-X Observer, DZ series
<b>• Hematology</b>	Study and diagnosis, treatment and prevention of diseases of the blood	iScope®, bScope® (darkfield), iScope® (darkfield), Oxion, Oxion (darkfield), iScope®, Oxion, Delphi-X Observer
<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
<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 sea's 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	iScope®, Oxion, Delphi-X Observer, 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	iScope®, Oxion, NexiusZoom, DZ series
<b>• Oncology</b>	Study and diagnosis, treatment and prevention of cancers	iScope®, Oxion, Delphi-X Observer
<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	iScope®, Oxion, Delphi-X Observer
<b>• Pharmaceuticals</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
<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	BioBlue.Lab, bScope®, iScope®, Oxion, Delphi-X Observer
<b>• Water treatment</b>	Production of drinking water and wastewater treatment. Quality control and disease prevention	BioBlue.Lab, bScope®, iScope®, Oxion
<b>• Embryo collection</b>	Embryo collection and transfer in mares, pigs, cows. Quality control	NexiusZoom, DZ series, Z series
<b>• Zoology</b>	Animal biology. Study of invertebrated and vertebrated animals and related branches	BioBlue.Lab, bScope®, iScope®, Oxion, StereoBlue, NexiusZoom, DZ series

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Since 1966!

# Euromex MICROSCOPE COLLECTION 2018



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